

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

Michael Baker
INTERNATIONAL

TECHNICAL APPENDIX E.3

UH Expected Value – Single Area

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

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 119 *
* 2-YR EV JANUARY 2019 CCHIU *

FILE NAME: EVO2119S.DAT
TIME/DATE OF STUDY: 07:20 01/04/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 49495.699 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 5.382 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.595
LOW LOSS FRACTION = 0.931
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) = 0.77
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.15
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.03

*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	529.621
2	0.265	1059.242
3	0.442	1059.242
4	0.619	1059.249
5	0.796	1059.239
6	0.973	1059.246
7	1.150	1059.234
8	1.327	1059.253
9	1.504	1059.238
10	1.681	1059.242
11	1.858	1059.242
12	2.057	1193.797
13	2.323	1586.643
14	2.592	1611.883
15	2.861	1611.898
16	3.130	1611.885
17	3.400	1611.898
18	3.669	1611.883
19	3.947	1661.494
20	4.382	2605.706
21	4.877	2965.924
22	5.373	2965.836
23	5.873	2991.584
24	6.479	3627.758
25	7.131	3902.466
26	7.785	3916.892
27	8.550	4581.554
28	9.376	4943.127
29	10.188	4857.481
30	10.963	4644.289
31	11.738	4634.202
32	12.512	4634.139
33	13.286	4634.202
34	14.138	5098.275
35	15.335	7166.907
36	16.382	6268.090
37	17.208	4944.834
38	18.034	4943.190
39	18.860	4943.190
40	19.687	4951.913
41	20.639	5699.669
42	21.675	6199.787
43	22.845	7000.610
44	24.026	7074.000
45	24.944	5494.502
46	25.829	5296.300
47	26.714	5296.061
48	27.599	5298.664

49	28.677	6451.307
50	29.896	7299.340
51	30.962	6378.637
52	32.057	6556.299
53	33.533	8834.950
54	34.870	8004.146
55	36.038	6987.652
56	36.898	5152.821
57	37.739	5032.507
58	39.269	9155.613
59	40.806	9204.707
60	42.135	7950.804
61	43.579	8644.078
62	44.957	8247.171
63	46.364	8423.201
64	47.983	9695.006
65	49.773	10715.312
66	51.031	7529.853
67	52.158	6741.315
68	53.284	6740.356
69	54.375	6531.285
70	55.408	6183.518
71	56.529	6708.730
72	57.774	7452.468
73	59.117	8043.329
74	60.638	9105.104
75	62.281	9834.706
76	63.600	7896.070
77	64.750	6882.408
78	65.822	6414.258
79	66.848	6140.566
80	67.876	6158.468
81	69.093	7283.562
82	70.249	6921.090
83	71.161	5454.394
84	72.081	5507.233
85	73.080	5980.086
86	74.079	5979.173
87	75.036	5732.836
88	75.958	5514.768
89	76.680	4325.601
90	77.369	4120.731
91	78.057	4118.905
92	78.745	4118.859
93	79.433	4118.859
94	80.131	4175.488
95	80.857	4347.294
96	81.586	4362.364
97	82.281	4162.290
98	82.933	3903.668
99	83.585	3903.714
100	84.214	3762.095
101	84.804	3535.578
102	85.394	3529.916
103	85.971	3454.425
104	86.463	2946.635
105	86.940	2852.238
106	87.416	2852.283

107	87.888	2825.796
108	88.282	2357.692
109	88.647	2180.269
110	89.011	2180.223
111	89.375	2182.141
112	89.739	2178.351
113	90.092	2112.314
114	90.419	1955.579
115	90.745	1951.834
116	91.071	1951.880
117	91.397	1949.916
118	91.723	1951.834
119	92.042	1912.194
120	92.339	1776.329
121	92.634	1764.958
122	92.929	1766.830
123	93.224	1763.085
124	93.519	1766.830
125	93.814	1766.876
126	94.071	1540.313
127	94.269	1185.468
128	94.465	1174.096
129	94.662	1177.887
130	94.859	1177.932
131	95.055	1174.096
132	95.253	1181.677
133	95.449	1174.142
134	95.645	1174.096
135	95.842	1181.677
136	96.020	1064.674
137	96.146	751.250
138	96.267	724.899
139	96.388	724.853
140	96.510	728.644
141	96.631	728.598
142	96.752	724.899
143	96.873	724.853
144	96.995	728.644
145	97.116	724.853
146	97.239	732.389
147	97.360	724.853
148	97.481	724.899
149	97.603	728.598
150	97.724	724.899
151	97.845	728.598
152	97.965	717.318
153	98.021	336.030
154	98.050	173.632
155	98.079	169.888
156	98.108	173.678
157	98.137	177.423
158	98.166	173.678
159	98.195	173.678
160	98.224	173.678
161	98.253	173.632
162	98.282	169.888
163	98.311	177.469
164	98.340	173.632

165	98.370	173.678
166	98.399	177.423
167	98.428	169.888
168	98.457	173.678
169	98.486	173.678
170	98.515	173.678
171	98.544	173.632
172	98.573	177.469
173	98.602	169.888
174	98.631	173.632
175	98.660	177.469
176	98.689	169.888
177	98.718	173.678
178	98.747	173.632
179	98.776	173.678
180	98.805	173.678
181	98.834	173.632
182	98.864	181.213
183	98.892	166.143
184	98.922	181.213
185	98.950	166.097
186	98.979	173.678
187	99.008	173.678
188	99.037	173.678
189	99.066	173.678
190	99.095	173.678
191	99.124	173.678
192	99.153	173.678
193	99.182	173.678
194	99.211	173.678
195	99.240	173.678
196	99.269	173.678
197	99.298	173.678
198	99.327	173.678
199	99.356	173.678
200	99.385	173.678
201	99.414	173.678
202	99.443	173.678
203	99.472	173.678
204	99.501	173.678
205	99.530	173.678
206	99.559	173.678
207	99.588	173.678
208	99.617	173.678
209	99.646	173.678
210	99.675	173.678
211	99.704	173.678
212	99.733	173.678
213	99.762	173.678
214	99.791	173.678
215	99.820	173.678
216	99.849	173.678
217	99.878	173.678
218	99.907	173.678
219	99.936	173.678
220	99.965	173.678
221	99.994	173.678
222	100.000	34.252

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 7342.6523
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 547.4572

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	0.75	Q	.	.	.	.
0.417	0.0185	0.97	Q	.	.	.	.
0.500	0.0267	1.19	Q	.	.	.	.
0.583	0.0364	1.41	Q	.	.	.	.
0.667	0.0476	1.63	Q	.	.	.	.
0.750	0.0603	1.84	Q	.	.	.	.
0.833	0.0745	2.07	Q	.	.	.	.
0.917	0.0903	2.29	Q	.	.	.	.
1.000	0.1077	2.53	Q	.	.	.	.
1.083	0.1275	2.86	Q	.	.	.	.
1.167	0.1495	3.20	Q	.	.	.	.
1.250	0.1738	3.54	Q	.	.	.	.
1.333	0.2005	3.87	Q	.	.	.	.
1.417	0.2295	4.21	Q	.	.	.	.
1.500	0.2609	4.55	Q	.	.	.	.
1.583	0.2946	4.90	Q	.	.	.	.
1.667	0.3321	5.44	Q	.	.	.	.
1.750	0.3739	6.06	Q	.	.	.	.
1.833	0.4199	6.68	Q	.	.	.	.
1.917	0.4702	7.31	Q	.	.	.	.
2.000	0.5257	8.07	Q	.	.	.	.
2.083	0.5869	8.88	Q	.	.	.	.
2.167	0.6537	9.70	Q	.	.	.	.
2.250	0.7271	10.66	Q	.	.	.	.
2.333	0.8077	11.69	Q	.	.	.	.
2.417	0.8953	12.71	Q	.	.	.	.
2.500	0.9896	13.70	Q	.	.	.	.
2.583	1.0907	14.68	Q	.	.	.	.
2.667	1.1985	15.66	VQ	.	.	.	.
2.750	1.3132	16.65	VQ	.	.	.	.
2.833	1.4353	17.73	VQ	.	.	.	.
2.917	1.5678	19.24	VQ	.	.	.	.
3.000	1.7095	20.57	VQ	.	.	.	.
3.083	1.8585	21.64	VQ	.	.	.	.
3.167	2.0149	22.71	VQ	.	.	.	.
3.250	2.1787	23.78	VQ	.	.	.	.
3.333	2.3498	24.86	VQ	.	.	.	.
3.417	2.5295	26.09	VQ	.	.	.	.
3.500	2.7184	27.43	VQ	.	.	.	.
3.583	2.9177	28.93	VQ	.	.	.	.
3.667	3.1275	30.46	V Q	.	.	.	.
3.750	3.3456	31.67	V Q	.	.	.	.
3.833	3.5718	32.84	V Q	.	.	.	.
3.917	3.8061	34.02	V Q	.	.	.	.

4.000	4.0486	35.20	V Q	.	.	.	.
4.083	4.3008	36.62	V Q	.	.	.	.
4.167	4.5640	38.22	V Q	.	.	.	.
4.250	4.8370	39.64	V Q	.	.	.	.
4.333	5.1200	41.09	V Q	.	.	.	.
4.417	5.4163	43.02	V Q	.	.	.	.
4.500	5.7247	44.78	V Q	.	.	.	.
4.583	6.0438	46.34	V Q	.	.	.	.
4.667	6.3712	47.54	V Q	.	.	.	.
4.750	6.7067	48.71	V Q	.	.	.	.
4.833	7.0561	50.73	V Q	.	.	.	.
4.917	7.4194	52.76	V Q	.	.	.	.
5.000	7.7951	54.54	V Q	.	.	.	.
5.083	8.1840	56.48	V Q	.	.	.	.
5.167	8.5858	58.33	V Q	.	.	.	.
5.250	9.0006	60.23	V Q	.	.	.	.
5.333	9.4304	62.40	V Q	.	.	.	.
5.417	9.8765	64.78	V Q	.	.	.	.
5.500	10.3346	66.52	V Q	.	.	.	.
5.583	10.8037	68.11	V Q	.	.	.	.
5.667	11.2838	69.71	V Q	.	.	.	.
5.750	11.7746	71.26	V Q	.	.	.	.
5.833	12.2757	72.76	V Q	.	.	.	.
5.917	12.7878	74.37	V Q	.	.	.	.
6.000	13.3121	76.13	V Q	.	.	.	.
6.083	13.8495	78.02	.V Q	.	.	.	.
6.167	14.4013	80.13	.V Q	.	.	.	.
6.250	14.9688	82.40	.V Q	.	.	.	.
6.333	15.5493	84.29	.V Q	.	.	.	.
6.417	16.1414	85.97	.V Q	.	.	.	.
6.500	16.7445	87.57	.V Q	.	.	.	.
6.583	17.3583	89.12	.V Q	.	.	.	.
6.667	17.9828	90.68	.V Q	.	.	.	.
6.750	18.6197	92.48	.V Q	.	.	.	.
6.833	19.2685	94.20	.V Q	.	.	.	.
6.917	19.9272	95.64	.V Q	.	.	.	.
7.000	20.5959	97.10	.V Q	.	.	.	.
7.083	21.2754	98.66	.V Q	.	.	.	.
7.167	21.9657	100.23	.V Q	.	.	.	.
7.250	22.6664	101.75	.V Q	.	.	.	.
7.333	23.3774	103.23	.V Q	.	.	.	.
7.417	24.0970	104.49	.V Q	.	.	.	.
7.500	24.8250	105.70	.V Q	.	.	.	.
7.583	25.5614	106.93	.V Q	.	.	.	.
7.667	26.3063	108.16	.V Q	.	.	.	.
7.750	27.0597	109.39	.V Q	.	.	.	.
7.833	27.8217	110.65	.V Q	.	.	.	.
7.917	28.5927	111.95	.V Q	.	.	.	.
8.000	29.3727	113.25	.V Q	.	.	.	.
8.083	30.1614	114.53	.V Q	.	.	.	.
8.167	30.9586	115.75	.V Q	.	.	.	.
8.250	31.7643	116.99	.V Q	.	.	.	.
8.333	32.5784	118.20	.V Q	.	.	.	.
8.417	33.4005	119.38	.V Q	.	.	.	.
8.500	34.2308	120.56	.V Q	.	.	.	.
8.583	35.0692	121.73	.V Q	.	.	.	.
8.667	35.9150	122.81	.V Q	.	.	.	.
8.750	36.7681	123.87	.V Q	.	.	.	.

8.833	37.6286	124.95	. V	Q .	.	.	.
8.917	38.4965	126.02	. V	Q .	.	.	.
9.000	39.3713	127.01	. V	Q .	.	.	.
9.083	40.2526	127.97	. V	Q .	.	.	.
9.167	41.1406	128.94	. V	Q .	.	.	.
9.250	42.0353	129.91	. V	Q .	.	.	.
9.333	42.9367	130.89	. V	Q .	.	.	.
9.417	43.8449	131.87	. V	Q .	.	.	.
9.500	44.7597	132.82	. V	Q .	.	.	.
9.583	45.6810	133.78	. V	Q .	.	.	.
9.667	46.6090	134.75	. V	Q .	.	.	.
9.750	47.5438	135.72	. V	Q .	.	.	.
9.833	48.4853	136.71	. V	Q .	.	.	.
9.917	49.4336	137.69	. V	Q .	.	.	.
10.000	50.3885	138.66	. V	Q .	.	.	.
10.083	51.3502	139.63	. V	Q .	.	.	.
10.167	52.3186	140.61	. V	Q .	.	.	.
10.250	53.2938	141.61	. V	Q .	.	.	.
10.333	54.2760	142.61	. V	Q .	.	.	.
10.417	55.2651	143.62	. V	Q .	.	.	.
10.500	56.2609	144.59	. V	Q .	.	.	.
10.583	57.2630	145.51	. V	Q .	.	.	.
10.667	58.2714	146.43	. V	Q .	.	.	.
10.750	59.2863	147.36	. V	Q .	.	.	.
10.833	60.3076	148.30	. V	Q .	.	.	.
10.917	61.3356	149.25	. V	Q .	.	.	.
11.000	62.3701	150.22	. V	Q .	.	.	.
11.083	63.4114	151.19	. V	Q .	.	.	.
11.167	64.4594	152.18	. V	Q .	.	.	.
11.250	65.5144	153.18	. V	Q .	.	.	.
11.333	66.5761	154.16	. V	Q .	.	.	.
11.417	67.6443	155.10	. V	Q .	.	.	.
11.500	68.7190	156.04	. V	Q .	.	.	.
11.583	69.8002	157.00	. V	Q .	.	.	.
11.667	70.8882	157.97	. V	Q .	.	.	.
11.750	71.9829	158.96	. V	Q .	.	.	.
11.833	73.0845	159.95	. V	Q .	.	.	.
11.917	74.1931	160.96	. V	Q .	.	.	.
12.000	75.3087	161.99	. V	Q .	.	.	.
12.083	76.4327	163.20	. V	Q .	.	.	.
12.167	77.5664	164.61	. V	Q .	.	.	.
12.250	78.7098	166.02	. V	.Q	.	.	.
12.333	79.8630	167.45	. V	.Q	.	.	.
12.417	81.0262	168.90	. V	.Q	.	.	.
12.500	82.1995	170.36	. V	.Q	.	.	.
12.583	83.3829	171.84	. V	.Q	.	.	.
12.667	84.5767	173.33	. V	.Q	.	.	.
12.750	85.7803	174.76	. V	.Q	.	.	.
12.833	86.9936	176.18	. V	.Q	.	.	.
12.917	88.2169	177.61	. V	.Q	.	.	.
13.000	89.4504	179.11	. V	.Q	.	.	.
13.083	90.6953	180.76	. V	.Q	.	.	.
13.167	91.9517	182.43	. V	.Q	.	.	.
13.250	93.2197	184.12	. V	.Q	.	.	.
13.333	94.4995	185.83	. V	.Q	.	.	.
13.417	95.7912	187.56	. V	.Q	.	.	.
13.500	97.0951	189.31	. V	.Q	.	.	.
13.583	98.4112	191.11	. V	.Q	.	.	.

13.667	99.7420	193.23	. V	. Q	.	.	.
13.750	101.0884	195.50	. V	. Q	.	.	.
13.833	102.4505	197.78	. V	. Q	.	.	.
13.917	103.8286	200.10	. V	. Q	.	.	.
14.000	105.2243	202.65	. V	. Q	.	.	.
14.083	106.6397	205.52	. V	. Q	.	.	.
14.167	108.0765	208.62	. V	. Q	.	.	.
14.250	109.5361	211.95	. V	. Q	.	.	.
14.333	111.0196	215.40	. V	. Q	.	.	.
14.417	112.5267	218.83	. V	. Q	.	.	.
14.500	114.0571	222.21	. V	. Q	.	.	.
14.583	115.6108	225.60	. V	. Q	.	.	.
14.667	117.1879	228.99	. V	. Q	.	.	.
14.750	118.7884	232.40	. V	. Q	.	.	.
14.833	120.4135	235.97	. V	. Q	.	.	.
14.917	122.0680	240.23	. V	. Q	.	.	.
15.000	123.7502	244.25	. V	. Q	.	.	.
15.083	125.4583	248.01	. V	. Q	.	.	.
15.167	127.1923	251.78	. V	. Q	.	.	.
15.250	128.9523	255.56	. V	. Q	.	.	.
15.333	130.7384	259.34	. V	. Q	.	.	.
15.417	132.5505	263.11	. V	. Q	.	.	.
15.500	134.3880	266.81	. V	. Q	.	.	.
15.583	136.2533	270.85	. V	. Q	.	.	.
15.667	138.1496	275.34	. V	. Q	.	.	.
15.750	140.0738	279.40	. V	. Q	.	.	.
15.833	142.0252	283.35	. V	. Q	.	.	.
15.917	144.0053	287.50	. V	. Q	.	.	.
16.000	146.0178	292.22	. V	. Q	.	.	.
16.083	148.0792	299.32	. V	. Q	.	.	.
16.167	150.1894	306.40	. V	. Q	.	.	.
16.250	152.3345	311.47	. V	. Q	.	.	.
16.333	154.5148	316.58	. V	. Q	.	.	.
16.417	156.7351	322.38	. V	. Q	.	.	.
16.500	158.9943	328.04	. V	. Q	.	.	.
16.583	161.2905	333.41	. V	. Q	.	.	.
16.667	163.6194	338.16	. V	. Q	.	.	.
16.750	165.9805	342.83	. V	. Q	.	.	.
16.833	168.3846	349.07	. V	. Q	.	.	.
16.917	170.8380	356.24	. V	. Q	.	.	.
17.000	173.3361	362.72	. V	. Q	.	.	.
17.083	175.8794	369.29	. V	. Q	.	.	.
17.167	178.4564	374.17	. V	. Q	.	.	.
17.250	181.0667	379.01	. V	. Q	.	.	.
17.333	183.7099	383.80	. V	. Q	.	.	.
17.417	186.3908	389.27	. V	. Q	.	.	.
17.500	189.1058	394.21	. V	. Q	.	.	.
17.583	191.8570	399.47	. V	. Q	.	.	.
17.667	194.6632	407.46	. V	. Q	.	.	.
17.750	197.5040	412.48	. V	. Q	.	.	.
17.833	200.3711	416.30	. V	. Q	.	.	.
17.917	203.2670	420.49	. V	. Q	.	.	.
18.000	206.2097	427.28	. V	. Q	.	.	.
18.083	209.1937	433.27	. V	. Q	.	.	.
18.167	212.2164	438.89	. V	. Q	.	.	.
18.250	215.2846	445.50	. V	. Q	.	.	.
18.333	218.3899	450.90	. V	. Q	.	.	.
18.417	221.5308	456.06	. V	. Q	.	.	.

18.500	224.7001	460.18	.	.	V	.	Q	.
18.583	227.8983	464.38	.	.	V	.	Q	.
18.667	231.1220	468.08	.	.	V	.	.Q	.
18.750	234.3757	472.44	.	.	V	.	.Q	.
18.833	237.6802	479.82	.	.	V	.	.Q	.
18.917	241.0590	490.61	.	.	V	.	.Q	.
19.000	244.4304	489.52	.	.	V	.	.Q	.
19.083	247.7939	488.38	.	.	V	.	.Q	.
19.167	251.1821	491.96	.	.	V	.	.Q	.
19.250	254.5996	496.22	.	.	V	.	.Q	.
19.333	258.0490	500.86	.	.	V	.	.Q	.
19.417	261.5428	507.30	.	.	V.	.	.Q	.
19.500	265.0623	511.03	.	.	V.	.	.Q	.
19.583	268.6105	515.20	.	.	V.	.	.Q	.
19.667	272.1611	515.55	.	.	V.	.	.Q	.
19.750	275.6678	509.18	.	.	V	.	.Q	.
19.833	279.1684	508.28	.	.	V	.	.Q	.
19.917	282.6739	509.00	.	.	V	.	.Q	.
20.000	286.1982	511.73	.	.	V	.	.Q	.
20.083	289.7631	517.61	.	.	.V	.	.Q	.
20.167	293.3438	519.92	.	.	.V	.	.Q	.
20.250	296.9036	516.88	.	.	.V	.	.Q	.
20.333	300.4736	518.36	.	.	.V	.	.Q	.
20.417	304.0909	525.23	.	.	.V	.	.Q	.
20.500	307.6699	519.66	.	.	.V	.	.Q	.
20.583	311.2001	512.60	.	.	.V	.	.Q	.
20.667	314.6689	503.66	.	.	.V	.	.Q	.
20.750	318.1399	503.99	.	.	.V	.	.Q	.
20.833	321.7150	519.11	.	.	.V	.	.Q	.
20.917	325.2794	517.56	.	.	.V	.	.Q	.
21.000	328.7985	510.96	.	.	.V	.	.Q	.
21.083	332.3150	510.60	.	.	.V	.	.Q	.
21.167	335.8196	508.87	.	.	.V	.	.Q	.
21.250	339.3315	509.92	.	.	.V	.	.Q	.
21.333	342.8622	512.67	.	.	.V	.	.Q	.
21.417	346.3824	511.12	.	.	.V	.	.Q	.
21.500	349.7888	494.62	.	.	.V	.	.Q	.
21.583	353.1436	487.12	.	.	.V	.	.Q	.
21.667	356.4803	484.49	.	.	.V	.	.Q	.
21.750	359.8078	483.15	.	.	.V	.	.Q	.
21.833	363.1072	479.07	.	.	.V	.	.Q	.
21.917	366.3987	477.93	.	.	.V	.	.Q	.
22.000	369.6931	478.35	.	.	.V	.	.Q	.
22.083	372.9785	477.03	.	.	.V	.	.Q	.
22.167	376.2591	476.34	.	.	.V	.	.Q	.
22.250	379.5249	474.20	.	.	.V	.	.Q	.
22.333	382.7075	462.12	.	.	.V	.	.Q	.
22.417	385.8214	452.14	.	.	.V	.	.Q	.
22.500	388.8942	446.16	.	.	.VQ.	.	.	.
22.583	391.9436	442.78	.	.	.VQ.	.	.	.
22.667	394.9771	440.46	.	.	.VQ.	.	.	.
22.750	398.0168	441.37	.	.	.Q.	.	.	.
22.833	401.0133	435.09	.	.	.Q.	.	.	.
22.917	403.9415	425.17	.	.	.QV.	.	.	.
23.000	406.8395	420.80	.	.	.QV.	.	.	.
23.083	409.7168	417.78	.	.	.Q V.	.	.	.
23.167	412.5573	412.44	.	.	.Q V	.	.	.
23.250	415.3448	404.75	.	.	.Q V	.	.	.

23.333	418.0788	396.97	.	.	.	.	Q	V	.
23.417	420.7392	386.29	.	.	.	.	Q	V	.
23.500	423.3610	380.69	.	.	.	.	Q	V	.
23.583	425.9509	376.06	.	.	.	.	Q	.V	.
23.667	428.5098	371.55	.	.	.	.	Q	.V	.
23.750	431.0329	366.35	.	.	.	.	Q	.V	.
23.833	433.5226	361.52	.	.	.	.	Q	.V	.
23.917	435.9835	357.32	.	.	.	.	Q	.V	.
24.000	438.4100	352.33	.	.	.	.	Q	.V	.
24.083	440.7936	346.09	.	.	.	.	Q	.V	.
24.167	443.1298	339.22	.	.	.	.	Q	.V	.
24.250	445.4240	333.11	.	.	.	.	Q	.V	.
24.333	447.6794	327.49	.	.	.	.	.Q	.V	.
24.417	449.9000	322.43	.	.	.	.	.Q	.V	.
24.500	452.0903	318.04	.	.	.	.	.Q	.V	.
24.583	454.2473	313.19	.	.	.	.	Q	.V	.
24.667	456.3615	306.99	.	.	.	.	Q	.V	.
24.750	458.4402	301.83	.	.	.	.	Q	.V	.
24.833	460.4857	297.00	.	.	.	.	Q.	.V	.
24.917	462.4987	292.29	.	.	.	.	Q.	.V	.
25.000	464.4674	285.85	.	.	.	.	Q.	.V	.
25.083	466.3984	280.38	.	.	.	.	Q.	.V	.
25.167	468.2971	275.68	.	.	.	.	Q.	.V	.
25.250	470.1642	271.10	.	.	.	.	Q.	.V	.
25.333	471.9988	266.39	.	.	.	.	Q.	.V	.
25.417	473.8012	261.71	.	.	.	.	Q.	.V	.
25.500	475.5699	256.81	.	.	.	.	Q.	.V	.
25.583	477.3091	252.53	.	.	.	.	Q.	.V	.
25.667	479.0191	248.30	.	.	.	.	Q.	.V	.
25.750	480.6997	244.02	.	.	.	.	Q.	.V	.
25.833	482.3509	239.76	.	.	.	.	Q.	.V	.
25.917	483.9724	235.44	.	.	.	.	Q.	.V	.
26.000	485.5625	230.88	.	.	.	.	Q.	.V	.
26.083	487.1250	226.87	.	.	.	.	Q.	.V	.
26.167	488.6611	223.05	.	.	.	.	Q.	.V	.
26.250	490.1704	219.14	.	.	.	.	Q.	.V	.
26.333	491.6519	215.11	.	.	.	.	Q.	.V	.
26.417	493.1053	211.03	.	.	.	.	Q.	.V	.
26.500	494.5256	206.23	.	.	.	.	Q.	.V	.
26.583	495.9111	201.18	.	.	.	.	Q.	.V	.
26.667	497.2725	197.67	.	.	.	.	Q.	.V	.
26.750	498.6105	194.29	.	.	.	.	Q.	.V	.
26.833	499.9239	190.70	.	.	.	.	Q.	.V	.
26.917	501.2086	186.55	.	.	.	.	Q.	.V	.
27.000	502.4678	182.83	.	.	.	.	Q.	.V	.
27.083	503.7038	179.47	.	.	.	.	.Q	.V	.
27.167	504.9166	176.10	.	.	.	.	.Q	.V	.
27.250	506.1057	172.65	.	.	.	.	.Q	.V	.
27.333	507.2675	168.69	.	.	.	.	.Q	.V	.
27.417	508.3972	164.05	.	.	.	.	Q	.V	.
27.500	509.5029	160.54	.	.	.	.	Q	.V	.
27.583	510.5852	157.16	.	.	.	.	Q	.V	.
27.667	511.6444	153.79	.	.	.	.	Q	.V	.
27.750	512.6818	150.62	.	.	.	.	Q	.V	.
27.833	513.6976	147.50	.	.	.	.	Q.	.V	.
27.917	514.6922	144.42	.	.	.	.	Q.	.V	.
28.000	515.6663	141.43	.	.	.	.	Q.	.V	.
28.083	516.6194	138.40	.	.	.	.	Q.	.V	.

28.167	517.5513	135.31	.	Q.	.	.	V	.
28.250	518.4629	132.36	.	Q	.	.	V	.
28.333	519.3544	129.44	.	Q	.	.	V	.
28.417	520.2239	126.26	.	Q	.	.	V	.
28.500	521.0734	123.34	.	Q	.	.	V	.
28.583	521.9044	120.67	.	Q	.	.	V	.
28.667	522.7183	118.17	.	Q	.	.	V	.
28.750	523.5067	114.48	.	Q	.	.	V	.
28.833	524.2703	110.88	.	Q	.	.	V	.
28.917	525.0133	107.88	.	Q	.	.	V	.
29.000	525.7380	105.23	.	Q	.	.	V	.
29.083	526.4425	102.30	.	Q	.	.	V	.
29.167	527.1268	99.36	.	Q	.	.	V	.
29.250	527.7908	96.41	.	Q	.	.	V	.
29.333	528.4331	93.25	.	Q	.	.	V	.
29.417	529.0529	90.00	.	Q	.	.	V	.
29.500	529.6549	87.41	.	Q	.	.	V	.
29.583	530.2405	85.02	.	Q	.	.	V	.
29.667	530.8094	82.61	.	Q	.	.	V	.
29.750	531.3632	80.41	.	Q	.	.	V	.
29.833	531.9030	78.38	.	Q	.	.	V	.
29.917	532.4279	76.23	.	Q	.	.	V	.
30.000	532.9375	73.99	.	Q	.	.	V	.
30.083	533.4309	71.64	.	Q	.	.	V	.
30.167	533.9068	69.10	.	Q	.	.	V	.
30.250	534.3643	66.43	.	Q	.	.	V	.
30.333	534.8063	64.18	.	Q	.	.	V	.
30.417	535.2341	62.13	.	Q	.	.	V	.
30.500	535.6486	60.18	.	Q	.	.	V	.
30.583	536.0500	58.29	.	Q	.	.	V	.
30.667	536.4382	56.37	.	Q	.	.	V	.
30.750	536.8130	54.41	.	Q	.	.	V	.
30.833	537.1750	52.57	.	Q	.	.	V	.
30.917	537.5267	51.06	.	Q	.	.	V	.
31.000	537.8679	49.54	.	Q	.	.	V	.
31.083	538.1981	47.94	.	Q	.	.	V	.
31.167	538.5175	46.38	.	Q	.	.	V	.
31.250	538.8260	44.80	.	Q	.	.	V	.
31.333	539.1248	43.38	.	Q	.	.	V	.
31.417	539.4148	42.12	.	Q	.	.	V	.
31.500	539.6971	40.99	.	Q	.	.	V	.
31.583	539.9714	39.82	.	Q	.	.	V	.
31.667	540.2378	38.68	.	Q	.	.	V	.
31.750	540.4963	37.54	.	Q	.	.	V	.
31.833	540.7470	36.40	.	Q	.	.	V	.
31.917	540.9897	35.23	.	Q	.	.	V	.
32.000	541.2243	34.07	.	Q	.	.	V	.
32.083	541.4513	32.96	.	Q	.	.	V	.
32.167	541.6710	31.90	.	Q	.	.	V	.
32.250	541.8834	30.85	.	Q	.	.	V	.
32.333	542.0889	29.83	.	Q	.	.	V	.
32.417	542.2877	28.87	.	Q	.	.	V	.
32.500	542.4796	27.86	.	Q	.	.	V	.
32.583	542.6646	26.86	.	Q	.	.	V	.
32.667	542.8434	25.97	.	Q	.	.	V	.
32.750	543.0164	25.10	.	Q	.	.	V	.
32.833	543.1833	24.25	.	Q	.	.	V	.
32.917	543.3445	23.40	.	Q	.	.	V	.

33.000	543.5005	22.65	.	Q	.	.	V	.
33.083	543.6516	21.95	.	Q	.	.	V	.
33.167	543.7979	21.24	.	Q	.	.	V	.
33.250	543.9395	20.55	.	Q	.	.	V	.
33.333	544.0762	19.86	.	Q	.	.	V	.
33.417	544.2084	19.19	.	Q	.	.	V	.
33.500	544.3363	18.56	.	Q	.	.	V	.
33.583	544.4598	17.94	.	Q	.	.	V	.
33.667	544.5791	17.31	.	Q	.	.	V	.
33.750	544.6941	16.70	.	Q	.	.	V	.
33.833	544.8054	16.16	.	Q	.	.	V	.
33.917	544.9131	15.64	.	Q	.	.	V	.
34.000	545.0174	15.14	.	Q	.	.	V	.
34.083	545.1183	14.65	Q	.	.	.	V	.
34.167	545.2159	14.17	Q	.	.	.	V	.
34.250	545.3102	13.70	Q	.	.	.	V	.
34.333	545.4010	13.18	Q	.	.	.	V	.
34.417	545.4879	12.61	Q	.	.	.	V	.
34.500	545.5679	11.63	Q	.	.	.	V	.
34.583	545.6446	11.13	Q	.	.	.	V	.
34.667	545.7187	10.76	Q	.	.	.	V	.
34.750	545.7904	10.41	Q	.	.	.	V	.
34.833	545.8593	10.00	Q	.	.	.	V	.
34.917	545.9252	9.57	Q	.	.	.	V	.
35.000	545.9881	9.14	Q	.	.	.	V	.
35.083	546.0481	8.71	Q	.	.	.	V	.
35.167	546.1051	8.28	Q	.	.	.	V	.
35.250	546.1591	7.84	Q	.	.	.	V	.
35.333	546.2103	7.43	Q	.	.	.	V	.
35.417	546.2590	7.08	Q	.	.	.	V	.
35.500	546.3058	6.79	Q	.	.	.	V	.
35.583	546.3506	6.51	Q	.	.	.	V	.
35.667	546.3936	6.24	Q	.	.	.	V	.
35.750	546.4347	5.97	Q	.	.	.	V	.
35.833	546.4739	5.70	Q	.	.	.	V	.
35.917	546.5114	5.44	Q	.	.	.	V	.
36.000	546.5471	5.18	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

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
5 Hutton Centre Drive Suite 500
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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 126 *
* 2-YR EV JANUARY 2019 ROKAMOTO *

FILE NAME: EVO2126S.DAT
TIME/DATE OF STUDY: 13:43 01/07/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 126.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 50405.801 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) = 0.594
LOW LOSS FRACTION = 0.930
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) = 0.77
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.14
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.02

*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 = 1.500

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.086	522.655
2	0.257	1045.317
3	0.429	1045.309
4	0.600	1045.313
5	0.772	1045.313
6	0.943	1045.313
7	1.115	1045.313
8	1.286	1045.314
9	1.458	1045.306
10	1.629	1045.313
11	1.801	1045.317
12	1.977	1076.198
13	2.218	1470.691
14	2.479	1590.685
15	2.740	1590.701
16	3.001	1590.684
17	3.262	1590.685
18	3.523	1590.716
19	3.784	1590.685
20	4.094	1892.441
21	4.563	2855.050
22	5.043	2926.885
23	5.523	2926.853
24	6.023	3045.450
25	6.636	3738.663
26	7.268	3851.150
27	7.909	3910.791
28	8.673	4654.963
29	9.473	4878.140
30	10.256	4770.182
31	11.006	4577.068
32	11.757	4573.225
33	12.507	4573.225
34	13.257	4573.289
35	14.066	4929.625
36	15.212	6987.204
37	16.270	6449.723
38	17.075	4907.929
39	17.875	4878.175
40	18.675	4878.047
41	19.476	4878.175
42	20.347	5313.366
43	21.345	6083.336
44	22.417	6533.037
45	23.609	7269.021
46	24.582	5930.951
47	25.440	5226.581
48	26.297	5226.337

49	27.155	5226.825
50	28.057	5502.330
51	29.217	7070.268
52	30.345	6879.095
53	31.348	6111.601
54	32.528	7194.503
55	33.983	8868.597
56	35.219	7532.015
57	36.275	6438.184
58	37.080	4905.940
59	37.944	5269.985
60	39.552	9804.439
61	40.971	8646.915
62	42.268	7906.454
63	43.671	8555.642
64	45.001	8107.789
65	46.367	8323.564
66	47.933	9546.550
67	49.681	10656.985
68	50.930	7611.358
69	52.021	6652.192
70	53.112	6651.704
71	54.182	6521.736
72	55.187	6124.507
73	56.234	6385.373
74	57.425	7257.731
75	58.694	7740.814
76	60.080	8445.045
77	61.723	10015.238
78	63.082	8288.335
79	64.281	7306.356
80	65.329	6386.861
81	66.348	6214.222
82	67.330	5983.168
83	68.393	6483.087
84	69.613	7433.301
85	70.604	6042.652
86	71.479	5335.445
87	72.396	5589.381
88	73.373	5955.356
89	74.330	5837.364
90	75.254	5632.030
91	76.116	5255.079
92	76.795	4137.203
93	77.462	4067.812
94	78.129	4062.836
95	78.796	4064.789
96	79.463	4066.789
97	80.139	4122.367
98	80.843	4292.959
99	81.549	4304.819
100	82.228	4134.272
101	82.860	3856.524
102	83.492	3852.525
103	84.109	3761.275
104	84.684	3501.433
105	85.255	3485.527
106	85.825	3469.714

107	86.322	3031.233
108	86.784	2815.015
109	87.245	2813.015
110	87.707	2817.015
111	88.128	2565.079
112	88.482	2158.363
113	88.835	2152.409
114	89.188	2150.456
115	89.541	2154.409
116	89.893	2146.457
117	90.221	1999.676
118	90.537	1924.332
119	90.853	1924.286
120	91.169	1928.239
121	91.485	1924.286
122	91.801	1926.286
123	92.105	1854.849
124	92.392	1747.740
125	92.677	1739.787
126	92.963	1741.787
127	93.249	1745.740
128	93.534	1737.833
129	93.820	1741.740
130	94.070	1523.569
131	94.261	1166.478
132	94.452	1162.524
133	94.643	1162.478
134	94.833	1158.571
135	95.024	1162.524
136	95.214	1162.478
137	95.404	1158.571
138	95.596	1166.478
139	95.786	1158.525
140	95.971	1130.759
141	96.103	801.480
142	96.221	722.090
143	96.338	714.183
144	96.457	722.090
145	96.574	714.183
146	96.691	714.137
147	96.809	722.136
148	96.927	714.137
149	97.044	718.136
150	97.162	718.136
151	97.280	718.136
152	97.397	714.183
153	97.516	722.090
154	97.633	714.183
155	97.751	718.136
156	97.868	718.136
157	97.979	674.512
158	98.025	281.701
159	98.053	170.593
160	98.081	170.593
161	98.109	170.639
162	98.138	174.546
163	98.166	170.593
164	98.195	174.593

165	98.221	162.686
166	98.251	182.499
167	98.278	166.640
168	98.306	166.640
169	98.335	178.546
170	98.362	166.640
171	98.391	174.593
172	98.419	170.593
173	98.447	170.593
174	98.475	170.593
175	98.504	174.593
176	98.532	170.593
177	98.560	170.639
178	98.588	170.593
179	98.616	170.593
180	98.644	174.593
181	98.673	174.593
182	98.700	166.640
183	98.729	174.546
184	98.756	166.640
185	98.785	174.593
186	98.812	166.640
187	98.841	174.546
188	98.869	174.593
189	98.898	174.593
190	98.925	166.640
191	98.953	166.640
192	98.981	174.546
193	99.011	182.499
194	99.040	174.546
195	99.069	174.546
196	99.097	174.546
197	99.126	174.546
198	99.154	174.546
199	99.183	174.546
200	99.212	174.546
201	99.240	174.546
202	99.269	174.546
203	99.298	174.546
204	99.326	174.546
205	99.355	174.546
206	99.384	174.546
207	99.412	174.546
208	99.441	174.546
209	99.469	174.546
210	99.498	174.546
211	99.527	174.546
212	99.555	174.546
213	99.584	174.546
214	99.613	174.546
215	99.641	174.546
216	99.670	174.546
217	99.699	174.546
218	99.727	174.546
219	99.756	174.546
220	99.784	174.546
221	99.813	174.546
222	99.842	174.546

223	99.870	174.546
224	99.899	174.546
225	99.928	174.546
226	99.956	174.546
227	99.985	174.546
228	100.000	92.319

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 7426.2896
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 558.8685

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	0.0029	0.32	Q	.	.	.	.
0.250	0.0066	0.54	Q	.	.	.	.
0.333	0.0118	0.75	Q	.	.	.	.
0.417	0.0185	0.97	Q	.	.	.	.
0.500	0.0266	1.18	Q	.	.	.	.
0.583	0.0363	1.40	Q	.	.	.	.
0.667	0.0474	1.62	Q	.	.	.	.
0.750	0.0601	1.84	Q	.	.	.	.
0.833	0.0742	2.06	Q	.	.	.	.
0.917	0.0899	2.28	Q	.	.	.	.
1.000	0.1071	2.50	Q	.	.	.	.
1.083	0.1265	2.81	Q	.	.	.	.
1.167	0.1482	3.14	Q	.	.	.	.
1.250	0.1721	3.48	Q	.	.	.	.
1.333	0.1984	3.82	Q	.	.	.	.
1.417	0.2270	4.15	Q	.	.	.	.
1.500	0.2579	4.49	Q	.	.	.	.
1.583	0.2912	4.83	Q	.	.	.	.
1.667	0.3272	5.23	Q	.	.	.	.
1.750	0.3673	5.83	Q	.	.	.	.
1.833	0.4117	6.45	Q	.	.	.	.
1.917	0.4604	7.06	Q	.	.	.	.
2.000	0.5135	7.71	Q	.	.	.	.
2.083	0.5720	8.50	Q	.	.	.	.
2.167	0.6361	9.31	Q	.	.	.	.
2.250	0.7059	10.14	Q	.	.	.	.
2.333	0.7825	11.12	Q	.	.	.	.
2.417	0.8662	12.15	Q	.	.	.	.
2.500	0.9569	13.17	Q	.	.	.	.
2.583	1.0543	14.14	Q	.	.	.	.
2.667	1.1584	15.12	VQ	.	.	.	.
2.750	1.2693	16.10	VQ	.	.	.	.
2.833	1.3870	17.09	VQ	.	.	.	.
2.917	1.5120	18.15	VQ	.	.	.	.
3.000	1.6472	19.63	VQ	.	.	.	.
3.083	1.7920	21.01	VQ	.	.	.	.
3.167	1.9440	22.08	VQ	.	.	.	.
3.250	2.1035	23.15	VQ	.	.	.	.
3.333	2.2703	24.22	VQ	.	.	.	.
3.417	2.4445	25.29	VQ	.	.	.	.
3.500	2.6267	26.46	VQ	.	.	.	.
3.583	2.8181	27.79	VQ	.	.	.	.
3.667	3.0192	29.21	VQ	.	.	.	.
3.750	3.2313	30.79	V Q	.	.	.	.
3.833	3.4523	32.10	V Q	.	.	.	.
3.917	3.6815	33.27	V Q	.	.	.	.

4.000	3.9187	34.44	V Q	.	.	.	.
4.083	4.1640	35.62	V Q	.	.	.	.
4.167	4.4179	36.86	V Q	.	.	.	.
4.250	4.6826	38.43	V Q	.	.	.	.
4.333	4.9578	39.96	V Q	.	.	.	.
4.417	5.2425	41.34	V Q	.	.	.	.
4.500	5.5382	42.94	V Q	.	.	.	.
4.583	5.8474	44.90	V Q	.	.	.	.
4.667	6.1682	46.58	V Q	.	.	.	.
4.750	6.4991	48.05	V Q	.	.	.	.
4.833	6.8380	49.21	V Q	.	.	.	.
4.917	7.1855	50.45	V Q	.	.	.	.
5.000	7.5479	52.62	V Q	.	.	.	.
5.083	7.9237	54.56	V Q	.	.	.	.
5.167	8.3118	56.36	V Q	.	.	.	.
5.250	8.7133	58.30	V Q	.	.	.	.
5.333	9.1276	60.15	V Q	.	.	.	.
5.417	9.5549	62.05	V Q	.	.	.	.
5.500	9.9971	64.21	V Q	.	.	.	.
5.583	10.4558	66.60	V Q	.	.	.	.
5.667	10.9268	68.38	V Q	.	.	.	.
5.750	11.4087	69.97	V Q	.	.	.	.
5.833	11.9016	71.57	V Q	.	.	.	.
5.917	12.4053	73.15	V Q	.	.	.	.
6.000	12.9194	74.65	V Q	.	.	.	.
6.083	13.4443	76.21	V Q	.	.	.	.
6.167	13.9811	77.95	.V Q	.	.	.	.
6.250	14.5307	79.80	.V Q	.	.	.	.
6.333	15.0941	81.80	.V Q	.	.	.	.
6.417	15.6736	84.14	.V Q	.	.	.	.
6.500	16.2667	86.12	.V Q	.	.	.	.
6.583	16.8722	87.92	.V Q	.	.	.	.
6.667	17.4887	89.53	.V Q	.	.	.	.
6.750	18.1162	91.11	.V Q	.	.	.	.
6.833	18.7544	92.66	.V Q	.	.	.	.
6.917	19.4039	94.31	.V Q	.	.	.	.
7.000	20.0662	96.16	.V Q	.	.	.	.
7.083	20.7393	97.74	.V Q	.	.	.	.
7.167	21.4224	99.18	.V Q	.	.	.	.
7.250	22.1158	100.68	.V Q	.	.	.	.
7.333	22.8201	102.26	.V Q	.	.	.	.
7.417	23.5351	103.83	.V Q	.	.	.	.
7.500	24.2607	105.36	.V Q	.	.	.	.
7.583	24.9964	106.82	.V Q	.	.	.	.
7.667	25.7406	108.05	.V Q	.	.	.	.
7.750	26.4932	109.29	.V Q	.	.	.	.
7.833	27.2544	110.52	.V Q	.	.	.	.
7.917	28.0241	111.77	.V Q	.	.	.	.
8.000	28.8025	113.02	.V Q	.	.	.	.
8.083	29.5896	114.29	.V Q	.	.	.	.
8.167	30.3857	115.60	.V Q	.	.	.	.
8.250	31.1909	116.92	.V Q	.	.	.	.
8.333	32.0051	118.21	.V Q	.	.	.	.
8.417	32.8278	119.46	.V Q	.	.	.	.
8.500	33.6591	120.71	.V Q	.	.	.	.
8.583	34.4989	121.95	.V Q	.	.	.	.
8.667	35.3470	123.14	.V Q	.	.	.	.
8.750	36.2033	124.34	.V Q	.	.	.	.

8.833	37.0680	125.54	. V	Q .	.	.	.
8.917	37.9403	126.66	. V	Q .	.	.	.
9.000	38.8201	127.75	. V	Q .	.	.	.
9.083	39.7074	128.84	. V	Q .	.	.	.
9.167	40.6023	129.94	. V	Q .	.	.	.
9.250	41.5045	131.00	. V	Q .	.	.	.
9.333	42.4134	131.98	. V	Q .	.	.	.
9.417	43.3291	132.97	. V	Q .	.	.	.
9.500	44.2517	133.96	. V	Q .	.	.	.
9.583	45.1812	134.97	. V	Q .	.	.	.
9.667	46.1177	135.98	. V	Q .	.	.	.
9.750	47.0610	136.97	. V	Q .	.	.	.
9.833	48.0110	137.95	. V	Q .	.	.	.
9.917	48.9679	138.94	. V	Q .	.	.	.
10.000	49.9317	139.94	. V	Q .	.	.	.
10.083	50.9024	140.95	. V	Q .	.	.	.
10.167	51.8801	141.97	. V	Q .	.	.	.
10.250	52.8648	142.98	. V	Q .	.	.	.
10.333	53.8564	143.98	. V	Q .	.	.	.
10.417	54.8550	144.99	. V	Q .	.	.	.
10.500	55.8605	146.01	. V	Q .	.	.	.
10.583	56.8732	147.04	. V	Q .	.	.	.
10.667	57.8930	148.07	. V	Q .	.	.	.
10.750	58.9200	149.12	. V	Q .	.	.	.
10.833	59.9540	150.14	. V	Q .	.	.	.
10.917	60.9946	151.09	. V	Q .	.	.	.
11.000	62.0418	152.06	. V	Q .	.	.	.
11.083	63.0958	153.03	. V	Q .	.	.	.
11.167	64.1565	154.02	. V	Q .	.	.	.
11.250	65.2241	155.02	. V	Q .	.	.	.
11.333	66.2986	156.02	. V	Q .	.	.	.
11.417	67.3802	157.05	. V	Q .	.	.	.
11.500	68.4689	158.08	. V	Q .	.	.	.
11.583	69.5649	159.13	. V	Q .	.	.	.
11.667	70.6681	160.18	. V	Q .	.	.	.
11.750	71.7782	161.19	. V	Q .	.	.	.
11.833	72.8951	162.18	. V	Q .	.	.	.
11.917	74.0190	163.19	. V	Q .	.	.	.
12.000	75.1500	164.22	. V	Q .	.	.	.
12.083	76.2894	165.43	. V	.Q	.	.	.
12.167	77.4384	166.83	. V	.Q	.	.	.
12.250	78.5971	168.24	. V	.Q	.	.	.
12.333	79.7656	169.67	. V	.Q	.	.	.
12.417	80.9440	171.11	. V	.Q	.	.	.
12.500	82.1325	172.57	. V	.Q	.	.	.
12.583	83.3312	174.04	. V	.Q	.	.	.
12.667	84.5401	175.53	. V	.Q	.	.	.
12.750	85.7594	177.04	. V	.Q	.	.	.
12.833	86.9891	178.56	. V	.Q	.	.	.
12.917	88.2295	180.11	. V	.Q	.	.	.
13.000	89.4808	181.68	. V	.Q	.	.	.
13.083	90.7438	183.39	. V	.Q	.	.	.
13.167	92.0184	185.08	. V	.Q	.	.	.
13.250	93.3046	186.76	. V	.Q	.	.	.
13.333	94.6026	188.47	. V	.Q	.	.	.
13.417	95.9125	190.19	. V	.Q	.	.	.
13.500	97.2344	191.94	. V	.Q	.	.	.
13.583	98.5685	193.71	. V	.Q	.	.	.

13.667	99.9156	195.60	. V	. Q	.	.	.
13.750	101.2781	197.83	. V	. Q	.	.	.
13.833	102.6563	200.11	. V	. Q	.	.	.
13.917	104.0503	202.41	. V	. Q	.	.	.
14.000	105.4606	204.77	. V	. Q	.	.	.
14.083	106.8903	207.59	. V	. Q	.	.	.
14.167	108.3412	210.67	. V	. Q	.	.	.
14.250	109.8136	213.79	. V	. Q	.	.	.
14.333	111.3091	217.15	. V	. Q	.	.	.
14.417	112.8284	220.60	. V	. Q	.	.	.
14.500	114.3713	224.02	. V	. Q	.	.	.
14.583	115.9374	227.40	. V	. Q	.	.	.
14.667	117.5268	230.78	. V	. Q	.	.	.
14.750	119.1395	234.17	. V	. Q	.	.	.
14.833	120.7757	237.57	. V	. Q	.	.	.
14.917	122.4362	241.11	. V	. Q	.	.	.
15.000	124.1258	245.33	. V	. Q	.	.	.
15.083	125.8445	249.56	. V	. Q	.	.	.
15.167	127.5891	253.32	. V	. Q	.	.	.
15.250	129.3596	257.08	. V	. Q	.	.	.
15.333	131.1560	260.84	. V	. Q	.	.	.
15.417	132.9766	264.34	. V	. Q	.	.	.
15.500	134.8206	267.75	. V	. Q	.	.	.
15.583	136.6903	271.48	. V	. Q	.	.	.
15.667	138.5879	275.53	. V	. Q	.	.	.
15.750	140.5174	280.17	. V	. Q	.	.	.
15.833	142.4758	284.35	. V	. Q	.	.	.
15.917	144.4626	288.49	. V	. Q	.	.	.
16.000	146.4806	293.00	. V	. Q	.	.	.
16.083	148.5415	299.25	. V	. Q	.	.	.
16.167	150.6445	305.35	. V	. Q	.	.	.
16.250	152.7825	310.43	. V	. Q	.	.	.
16.333	154.9565	315.66	. V	. Q	.	.	.
16.417	157.1651	320.69	. V	. Q	.	.	.
16.500	159.4116	326.20	. V	. Q	.	.	.
16.583	161.6996	332.21	. V	. Q	.	.	.
16.667	164.0260	337.80	. V	. Q	.	.	.
16.750	166.3881	342.97	. V	. Q	.	.	.
16.833	168.7824	347.66	. V	. Q	.	.	.
16.917	171.2116	352.72	. V	. Q	.	.	.
17.000	173.6920	360.15	. V	. Q	.	.	.
17.083	176.2208	367.19	. V	. Q	.	.	.
17.167	178.7844	372.23	. V	. Q	.	.	.
17.250	181.3820	377.17	. V	. Q	.	.	.
17.333	184.0115	381.81	. V	. Q	.	.	.
17.417	186.6713	386.20	. V	. Q	.	.	.
17.500	189.3663	391.31	. V	. Q	.	.	.
17.583	192.1037	397.47	. V	. Q	.	.	.
17.667	194.8825	403.49	. V	. Q	.	.	.
17.750	197.7116	410.79	. V	. Q	.	.	.
17.833	200.5698	415.01	. V	. Q	.	.	.
17.917	203.4557	419.03	. V	. Q	.	.	.
18.000	206.3714	423.37	. V	. Q	.	.	.
18.083	209.3281	429.31	. V	. Q	.	.	.
18.167	212.3166	433.93	. V	. Q	.	.	.
18.250	215.3421	439.29	. V	. Q	.	.	.
18.333	218.4098	445.43	. V	. Q	.	.	.
18.417	221.5136	450.67	. V	. Q	.	.	.

18.500	224.6523	455.74	.	.	V	.	Q	.
18.583	227.8264	460.89	.	.	V	.	Q	.
18.667	231.0327	465.55	.	.	V	.	.Q	.
18.750	234.2677	469.72	.	.	V	.	.Q	.
18.833	237.5308	473.80	.	.	V	.	.Q	.
18.917	240.8299	479.02	.	.	V	.	.Q	.
19.000	244.2008	489.46	.	.	V	.	.Q	.
19.083	247.5773	490.26	.	.	V	.	.Q	.
19.167	250.9439	488.84	.	.	V	.	.Q	.
19.250	254.3350	492.39	.	.	V	.	.Q	.
19.333	257.7552	496.61	.	.	V	.	.Q	.
19.417	261.2048	500.88	.	.	V	.	.Q	.
19.500	264.6921	506.36	.	.	V	.	.Q	.
19.583	268.2203	512.30	.	.	V	.	.Q	.
19.667	271.7688	515.24	.	.	V	.	.Q	.
19.750	275.3338	517.64	.	.	V	.	.Q	.
19.833	278.8724	513.81	.	.	V	.	.Q	.
19.917	282.3932	511.22	.	.	V	.	.Q	.
20.000	285.9109	510.76	.	.	V	.	.Q	.
20.083	289.4377	512.10	.	.	V	.	.Q	.
20.167	292.9878	515.48	.	.	V	.	.Q	.
20.250	296.5754	520.91	.	.	.V	.	.Q	.
20.333	300.1503	519.08	.	.	.V	.	.Q	.
20.417	303.7169	517.87	.	.	.V	.	.Q	.
20.500	307.3092	521.59	.	.	.V	.	.Q	.
20.583	310.9250	525.01	.	.	.V	.	.Q	.
20.667	314.4942	518.26	.	.	.V	.	.Q	.
20.750	318.0196	511.89	.	.	.V	.	.Q	.
20.833	321.5078	506.48	.	.	.V	.	.Q	.
20.917	325.0075	508.16	.	.	.V	.	.Q	.
21.000	328.5903	520.23	.	.	.V	.	.Q	.
21.083	332.1417	515.67	.	.	.V	.	.Q	.
21.167	335.6671	511.88	.	.	.V	.	.Q	.
21.250	339.1834	510.57	.	.	.V	.	.Q	.
21.333	342.6925	509.52	.	.	.V	.	.Q	.
21.417	346.2094	510.64	.	.	.V	.	.Q	.
21.500	349.7359	512.06	.	.	.V	.	.Q	.
21.583	353.2502	510.28	.	.	.V	.	.Q	.
21.667	356.6721	496.85	.	.	.V	.	.Q	.
21.750	360.0424	489.37	.	.	.V	.	.Q	.
21.833	363.3958	486.90	.	.	.V	.	.Q	.
21.917	366.7403	485.63	.	.	.V	.	.Q	.
22.000	370.0559	481.43	.	.	.V	.	.Q	.
22.083	373.3559	479.16	.	.	.V	.	.Q	.
22.167	376.6562	479.19	.	.	.V	.	.Q	.
22.250	379.9436	477.33	.	.	.V	.	.Q	.
22.333	383.2166	475.24	.	.	.V	.	.Q	.
22.417	386.4863	474.76	.	.	.V	.	.Q	.
22.500	389.6863	464.64	.	.	.V	.Q	.	.
22.583	392.8243	455.63	.	.	.V	.Q	.	.
22.667	395.9122	448.37	.	.	.V	.Q	.	.
22.750	398.9801	445.45	.	.	.V	.Q	.	.
22.833	402.0302	442.88	.	.	.V	.Q	.	.
22.917	405.0713	441.57	.	.	.V	.Q	.	.
23.000	408.0955	439.12	.	.	.V	.Q	.	.
23.083	411.0603	430.49	.	.	.V	.Q	.	.
23.167	413.9810	424.08	.	.	.V	.Q	.	.
23.250	416.8737	420.03	.	.	.V	.Q	.	.

23.333	419.7413	416.38	.	.	.	.	Q	V	.
23.417	422.5636	409.79	.	.	.	.	Q	V	.
23.500	425.3346	402.35	.	.	.	.	Q	V	.
23.583	428.0496	394.22	.	.	.	.	Q	V	.
23.667	430.7082	386.03	.	.	.	.	Q	V	.
23.750	433.3343	381.31	.	.	.	.	Q	.V	.
23.833	435.9288	376.73	.	.	.	.	Q	.V	.
23.917	438.4910	372.03	.	.	.	.	Q	.V	.
24.000	441.0169	366.77	.	.	.	.	Q	.V	.
24.083	443.5099	361.99	.	.	.	.	Q	.V	.
24.167	445.9703	357.25	.	.	.	.	Q	.V	.
24.250	448.3934	351.83	.	.	.	.	Q	.V	.
24.333	450.7733	345.55	.	.	.	.	Q	.V	.
24.417	453.1048	338.54	.	.	.	.	Q	.V	.
24.500	455.3975	332.90	.	.	.	.	Q	.V	.
24.583	457.6539	327.63	.	.	.	.	Q	.V	.
24.667	459.8776	322.88	.	.	.	.	Q	.V	.
24.750	462.0725	318.69	.	.	.	.	Q	.V	.
24.833	464.2369	314.28	.	.	.	.	Q	.V	.
24.917	466.3615	308.48	.	.	.	.	Q	.V	.
25.000	468.4489	303.09	.	.	.	.	Q	.V	.
25.083	470.5056	298.64	.	.	.	.	Q	.V	.
25.167	472.5310	294.10	.	.	.	.	Q	.V	.
25.250	474.5178	288.48	.	.	.	.	Q	.V	.
25.333	476.4631	282.45	.	.	.	.	Q	.V	.
25.417	478.3761	277.76	.	.	.	.	Q	.V	.
25.500	480.2576	273.19	.	.	.	.	Q	.V	.
25.583	482.1082	268.71	.	.	.	.	Q	.V	.
25.667	483.9292	264.40	.	.	.	.	Q	.V	.
25.750	485.7158	259.42	.	.	.	.	Q	.V	.
25.833	487.4696	254.65	.	.	.	.	Q	.V	.
25.917	489.1935	250.30	.	.	.	.	Q	.V	.
26.000	490.8881	246.06	.	.	.	.	Q	.V	.
26.083	492.5519	241.59	.	.	.	.	Q	.V	.
26.167	494.1848	237.09	.	.	.	.	Q	.V	.
26.250	495.7872	232.66	.	.	.	.	Q	.V	.
26.333	497.3591	228.24	.	.	.	.	Q	.V	.
26.417	498.9030	224.18	.	.	.	.	Q	.V	.
26.500	500.4197	220.22	.	.	.	.	Q	.V	.
26.583	501.9099	216.38	.	.	.	.	Q	.V	.
26.667	503.3734	212.49	.	.	.	.	Q	.V	.
26.750	504.8096	208.55	.	.	.	.	Q	.V	.
26.833	506.2145	203.99	.	.	.	.	Q	.V	.
26.917	507.5872	199.31	.	.	.	.	Q	.V	.
27.000	508.9326	195.36	.	.	.	.	Q	.V	.
27.083	510.2532	191.74	.	.	.	.	Q	.V	.
27.167	511.5497	188.26	.	.	.	.	Q	.V	.
27.250	512.8218	184.71	.	.	.	.	Q	.V	.
27.333	514.0706	181.33	.	.	.	.	Q	.V	.
27.417	515.2965	178.00	.	.	.	.	Q	.V	.
27.500	516.4991	174.62	.	.	.	.	Q	.V	.
27.583	517.6763	170.94	.	.	.	.	Q	.V	.
27.667	518.8266	167.02	.	.	.	.	Q	.V	.
27.750	519.9441	162.26	.	.	.	.	Q	.V	.
27.833	521.0370	158.70	.	.	.	.	Q	.V	.
27.917	522.1090	155.65	.	.	.	.	Q	.V	.
28.000	523.1607	152.71	.	.	.	.	Q	.V	.
28.083	524.1912	149.62	.	.	.	.	Q	.V	.

28.167	525.2000	146.49	.	Q.	.	.	V	.
28.250	526.1855	143.09	.	Q.	.	.	V	.
28.333	527.1480	139.76	.	Q.	.	.	V	.
28.417	528.0892	136.66	.	Q.	.	.	V	.
28.500	529.0089	133.54	.	Q	.	.	V	.
28.583	529.9052	130.14	.	Q	.	.	V	.
28.667	530.7799	127.02	.	Q	.	.	V	.
28.750	531.6358	124.28	.	Q	.	.	V	.
28.833	532.4760	121.99	.	Q	.	.	V	.
28.917	533.3009	119.78	.	Q	.	.	V	.
29.000	534.1034	116.52	.	Q	.	.	V	.
29.083	534.8835	113.27	.	Q	.	.	V	.
29.167	535.6363	109.31	.	Q	.	.	V	.
29.250	536.3673	106.14	.	Q	.	.	V	.
29.333	537.0795	103.42	.	Q	.	.	V	.
29.417	537.7730	100.70	.	Q	.	.	V	.
29.500	538.4451	97.58	.	Q	.	.	V	.
29.583	539.0938	94.19	.	Q	.	.	V	.
29.667	539.7236	91.46	.	Q	.	.	V	.
29.750	540.3365	89.00	.	Q	.	.	V	.
29.833	540.9333	86.65	.	Q	.	.	V	.
29.917	541.5135	84.25	.	Q	.	.	V	.
30.000	542.0782	81.98	.	Q	.	.	V	.
30.083	542.6272	79.72	.	Q	.	.	V	.
30.167	543.1602	77.39	.	Q	.	.	V	.
30.250	543.6772	75.07	.	Q	.	.	V	.
30.333	544.1772	72.60	.	Q	.	.	V	.
30.417	544.6582	69.85	.	Q	.	.	V	.
30.500	545.1229	67.47	.	Q	.	.	V	.
30.583	545.5728	65.32	.	Q	.	.	V	.
30.667	546.0092	63.36	.	Q	.	.	V	.
30.750	546.4325	61.47	.	Q	.	.	V	.
30.833	546.8432	59.64	.	Q	.	.	V	.
30.917	547.2407	57.72	.	Q	.	.	V	.
31.000	547.6237	55.61	.	Q	.	.	V	.
31.083	547.9940	53.76	.	Q	.	.	V	.
31.167	548.3534	52.19	.	Q	.	.	V	.
31.250	548.7023	50.66	.	Q	.	.	V	.
31.333	549.0399	49.02	.	Q	.	.	V	.
31.417	549.3668	47.47	.	Q	.	.	V	.
31.500	549.6831	45.92	.	Q	.	.	V	.
31.583	549.9897	44.52	.	Q	.	.	V	.
31.667	550.2880	43.32	.	Q	.	.	V	.
31.750	550.5783	42.15	.	Q	.	.	V	.
31.833	550.8605	40.97	.	Q	.	.	V	.
31.917	551.1348	39.83	.	Q	.	.	V	.
32.000	551.4014	38.71	.	Q	.	.	V	.
32.083	551.6603	37.59	.	Q	.	.	V	.
32.167	551.9109	36.40	.	Q	.	.	V	.
32.250	552.1536	35.23	.	Q	.	.	V	.
32.333	552.3885	34.11	.	Q	.	.	V	.
32.417	552.6161	33.06	.	Q	.	.	V	.
32.500	552.8366	32.01	.	Q	.	.	V	.
32.583	553.0500	30.99	.	Q	.	.	V	.
32.667	553.2568	30.03	.	Q	.	.	V	.
32.750	553.4570	29.07	.	Q	.	.	V	.
32.833	553.6508	28.13	.	Q	.	.	V	.
32.917	553.8386	27.28	.	Q	.	.	V	.

33.000	554.0208	26.44	.	Q	.	.	V	.
33.083	554.1968	25.57	.	Q	.	.	V	.
33.167	554.3670	24.71	.	Q	.	.	V	.
33.250	554.5316	23.91	.	Q	.	.	V	.
33.333	554.6913	23.19	.	Q	.	.	V	.
33.417	554.8462	22.48	.	Q	.	.	V	.
33.500	554.9962	21.78	.	Q	.	.	V	.
33.583	555.1414	21.08	.	Q	.	.	V	.
33.667	555.2819	20.39	.	Q	.	.	V	.
33.750	555.4178	19.73	.	Q	.	.	V	.
33.833	555.5493	19.10	.	Q	.	.	V	.
33.917	555.6765	18.47	.	Q	.	.	V	.
34.000	555.7994	17.84	.	Q	.	.	V	.
34.083	555.9180	17.22	.	Q	.	.	V	.
34.167	556.0324	16.60	.	Q	.	.	V	.
34.250	556.1426	16.01	.	Q	.	.	V	.
34.333	556.2493	15.48	.	Q	.	.	V	.
34.417	556.3526	15.00	Q	.	.	.	V	.
34.500	556.4526	14.52	Q	.	.	.	V	.
34.583	556.5492	14.03	Q	.	.	.	V	.
34.667	556.6425	13.55	Q	.	.	.	V	.
34.750	556.7326	13.08	Q	.	.	.	V	.
34.833	556.8196	12.63	Q	.	.	.	V	.
34.917	556.9036	12.20	Q	.	.	.	V	.
35.000	556.9831	11.54	Q	.	.	.	V	.
35.083	557.0582	10.90	Q	.	.	.	V	.
35.167	557.1307	10.53	Q	.	.	.	V	.
35.250	557.2008	10.18	Q	.	.	.	V	.
35.333	557.2682	9.80	Q	.	.	.	V	.
35.417	557.3328	9.37	Q	.	.	.	V	.
35.500	557.3943	8.94	Q	.	.	.	V	.
35.583	557.4530	8.51	Q	.	.	.	V	.
35.667	557.5087	8.09	Q	.	.	.	V	.
35.750	557.5620	7.73	Q	.	.	.	V	.
35.833	557.6128	7.38	Q	.	.	.	V	.
35.917	557.6613	7.04	Q	.	.	.	V	.
36.000	557.7076	6.72	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%	1570.0
20%	1310.0
30%	985.0
40%	755.0
50%	620.0
60%	510.0
70%	410.0
80%	320.0
90%	220.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 127 *
* 2-YR EV JANUARY 2019 CCHIU *

FILE NAME: EVO2127S.DAT
TIME/DATE OF STUDY: 10:38 01/03/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 127.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 53500.199 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) = 0.586
LOW LOSS FRACTION = 0.922
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) = 0.76
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.12
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 1.98

*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 = 1.443

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.082	533.331
2	0.247	1066.654
3	0.412	1066.654
4	0.577	1066.662
5	0.742	1066.658
6	0.907	1066.654
7	1.072	1066.654
8	1.236	1066.662
9	1.401	1066.659
10	1.566	1066.658
11	1.731	1066.658
12	1.896	1066.649
13	2.093	1276.439
14	2.343	1618.344
15	2.594	1623.179
16	2.845	1623.168
17	3.096	1623.187
18	3.347	1623.145
19	3.598	1623.194
20	3.848	1623.160
21	4.184	2170.523
22	4.644	2979.245
23	5.106	2986.721
24	5.568	2986.588
25	6.052	3136.230
26	6.646	3839.850
27	7.253	3929.778
28	7.866	3968.176
29	8.593	4698.720
30	9.362	4977.753
31	10.121	4907.744
32	10.844	4683.460
33	11.566	4666.621
34	12.287	4666.689
35	13.008	4666.621
36	13.733	4688.249
37	14.721	6394.358
38	15.846	7275.751
39	16.686	5438.093
40	17.455	4977.760
41	18.225	4977.760
42	18.994	4977.612
43	19.767	5000.899
44	20.666	5816.299
45	21.629	6229.965
46	22.707	6977.206
47	23.837	7312.718
48	24.725	5743.882

49	25.549	5333.523
50	26.374	5333.239
51	27.198	5333.239
52	28.068	5629.741
53	29.185	7227.702
54	30.279	7074.391
55	31.244	6248.995
56	32.329	7015.253
57	33.736	9106.294
58	34.955	7888.025
59	36.041	7027.322
60	36.842	5181.570
61	37.611	4978.167
62	38.881	8216.836
63	40.446	10123.874
64	41.667	7897.059
65	42.983	8514.128
66	44.312	8599.552
67	45.567	8120.997
68	46.968	9066.605
69	48.547	10215.863
70	50.147	10351.662
71	51.234	7033.049
72	52.283	6787.218
73	53.332	6788.304
74	54.349	6577.521
75	55.311	6225.979
76	56.332	6605.437
77	57.482	7438.792
78	58.706	7920.605
79	60.032	8583.114
80	61.617	10250.911
81	62.946	8603.921
82	64.120	7596.484
83	65.137	6574.782
84	66.126	6402.849
85	67.073	6125.771
86	68.048	6307.577
87	69.202	7468.361
88	70.268	6898.903
89	71.114	5473.135
90	71.966	5509.270
91	72.890	5982.370
92	73.828	6063.375
93	74.727	5821.346
94	75.614	5740.340
95	76.363	4843.454
96	77.004	4148.119
97	77.645	4145.947
98	78.287	4152.463
99	78.927	4145.947
100	79.569	4148.069
101	80.223	4231.346
102	80.901	4389.013
103	81.580	4393.406
104	82.231	4211.650
105	82.838	3931.265
106	83.446	3933.486

107	84.044	3863.390
108	84.598	3585.226
109	85.148	3558.965
110	85.697	3554.571
111	86.199	3245.802
112	86.643	2875.625
113	87.087	2871.281
114	87.531	2871.231
115	87.964	2805.578
116	88.320	2301.823
117	88.659	2194.506
118	88.999	2196.728
119	89.338	2196.678
120	89.678	2196.678
121	90.012	2159.508
122	90.319	1988.611
123	90.623	1966.743
124	90.926	1962.350
125	91.230	1966.743
126	91.534	1964.571
127	91.837	1964.522
128	92.128	1879.123
129	92.402	1774.028
130	92.678	1782.765
131	92.952	1774.028
132	93.227	1778.372
133	93.502	1782.765
134	93.776	1773.978
135	94.029	1638.229
136	94.217	1213.356
137	94.400	1187.046
138	94.583	1182.652
139	94.767	1187.046
140	94.950	1187.046
141	95.133	1182.702
142	95.316	1187.046
143	95.499	1182.652
144	95.683	1187.046
145	95.866	1187.095
146	96.028	1046.853
147	96.143	744.649
148	96.257	735.863
149	96.370	731.519
150	96.483	731.519
151	96.596	731.519
152	96.709	731.469
153	96.823	735.912
154	96.935	727.125
155	97.049	735.863
156	97.161	727.125
157	97.275	735.863
158	97.388	731.519
159	97.501	731.519
160	97.614	731.519
161	97.728	735.863
162	97.840	727.125
163	97.954	735.863
164	98.016	403.004

165	98.043	175.191
166	98.070	175.241
167	98.097	170.798
168	98.124	175.241
169	98.152	179.585
170	98.179	175.191
171	98.205	170.847
172	98.232	175.191
173	98.260	179.585
174	98.286	170.847
175	98.313	175.241
176	98.341	179.585
177	98.367	166.454
178	98.394	175.191
179	98.422	183.978
180	98.448	166.454
181	98.476	179.585
182	98.503	175.191
183	98.529	170.847
184	98.558	183.978
185	98.584	166.454
186	98.612	183.978
187	98.638	166.405
188	98.665	175.241
189	98.693	183.978
190	98.719	166.454
191	98.746	175.191
192	98.773	175.191
193	98.800	175.241
194	98.827	175.191
195	98.856	183.978
196	98.881	166.454
197	98.909	175.191
198	98.936	175.241
199	98.963	175.191
200	98.990	175.241
201	99.017	175.191
202	99.044	175.191
203	99.071	175.191
204	99.098	175.191
205	99.125	175.191
206	99.152	175.191
207	99.179	175.191
208	99.206	175.191
209	99.233	175.191
210	99.261	175.191
211	99.288	175.191
212	99.315	175.191
213	99.342	175.191
214	99.369	175.191
215	99.396	175.191
216	99.423	175.191
217	99.450	175.191
218	99.477	175.191
219	99.504	175.191
220	99.531	175.191
221	99.558	175.191
222	99.585	175.191

223	99.613	175.191
224	99.640	175.191
225	99.667	175.191
226	99.694	175.191
227	99.721	175.191
228	99.748	175.191
229	99.775	175.191
230	99.802	175.191
231	99.829	175.191
232	99.856	175.191
233	99.883	175.191
234	99.910	175.191
235	99.937	175.191
236	99.965	175.191
237	99.992	175.191
238	100.000	54.102

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 7666.8232
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 648.2679

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	0.0008	0.12	Q	.	.	.	.
0.167	0.0033	0.36	Q	.	.	.	.
0.250	0.0074	0.60	Q	.	.	.	.
0.333	0.0132	0.84	Q	.	.	.	.
0.417	0.0206	1.08	Q	.	.	.	.
0.500	0.0297	1.32	Q	.	.	.	.
0.583	0.0404	1.56	Q	.	.	.	.
0.667	0.0529	1.80	Q	.	.	.	.
0.750	0.0670	2.05	Q	.	.	.	.
0.833	0.0828	2.29	Q	.	.	.	.
0.917	0.1002	2.54	Q	.	.	.	.
1.000	0.1194	2.78	Q	.	.	.	.
1.083	0.1406	3.08	Q	.	.	.	.
1.167	0.1644	3.45	Q	.	.	.	.
1.250	0.1907	3.82	Q	.	.	.	.
1.333	0.2196	4.20	Q	.	.	.	.
1.417	0.2510	4.57	Q	.	.	.	.
1.500	0.2851	4.95	Q	.	.	.	.
1.583	0.3218	5.32	Q	.	.	.	.
1.667	0.3611	5.70	Q	.	.	.	.
1.750	0.4038	6.21	Q	.	.	.	.
1.833	0.4513	6.89	Q	.	.	.	.
1.917	0.5035	7.58	Q	.	.	.	.
2.000	0.5604	8.27	Q	.	.	.	.
2.083	0.6224	9.00	Q	.	.	.	.
2.167	0.6904	9.88	Q	.	.	.	.
2.250	0.7647	10.79	Q	.	.	.	.
2.333	0.8454	11.71	Q	.	.	.	.
2.417	0.9335	12.80	Q	.	.	.	.
2.500	1.0296	13.95	Q	.	.	.	.
2.583	1.1335	15.09	VQ	.	.	.	.
2.667	1.2449	16.18	VQ	.	.	.	.
2.750	1.3639	17.27	VQ	.	.	.	.
2.833	1.4904	18.37	VQ	.	.	.	.
2.917	1.6244	19.47	VQ	.	.	.	.
3.000	1.7661	20.58	VQ	.	.	.	.
3.083	1.9181	22.07	VQ	.	.	.	.
3.167	2.0818	23.76	VQ	.	.	.	.
3.250	2.2543	25.05	VQ	.	.	.	.
3.333	2.4351	26.24	VQ	.	.	.	.
3.417	2.6241	27.44	VQ	.	.	.	.
3.500	2.8213	28.64	VQ	.	.	.	.
3.583	3.0268	29.84	VQ	.	.	.	.
3.667	3.2420	31.24	V Q	.	.	.	.
3.750	3.4674	32.73	V Q	.	.	.	.
3.833	3.7042	34.39	V Q	.	.	.	.
3.917	3.9531	36.14	V Q	.	.	.	.

4.000	4.2116	37.53	V Q	.	.	.	.
4.083	4.4791	38.85	V Q	.	.	.	.
4.167	4.7557	40.16	V Q	.	.	.	.
4.250	5.0414	41.48	V Q	.	.	.	.
4.333	5.3367	42.88	V Q	.	.	.	.
4.417	5.6441	44.63	V Q	.	.	.	.
4.500	5.9633	46.35	V Q	.	.	.	.
4.583	6.2932	47.90	V Q	.	.	.	.
4.667	6.6350	49.62	V Q	.	.	.	.
4.750	6.9919	51.82	V Q	.	.	.	.
4.833	7.3621	53.75	V Q	.	.	.	.
4.917	7.7443	55.50	V Q	.	.	.	.
5.000	8.1358	56.84	V Q	.	.	.	.
5.083	8.5362	58.14	V Q	.	.	.	.
5.167	8.9506	60.17	V Q	.	.	.	.
5.250	9.3819	62.63	V Q	.	.	.	.
5.333	9.8268	64.60	V Q	.	.	.	.
5.417	10.2864	66.72	V Q	.	.	.	.
5.500	10.7606	68.87	V Q	.	.	.	.
5.583	11.2490	70.91	V Q	.	.	.	.
5.667	11.7530	73.17	V Q	.	.	.	.
5.750	12.2743	75.70	V Q	.	.	.	.
5.833	12.8134	78.27	V Q	.	.	.	.
5.917	13.3651	80.11	V Q	.	.	.	.
6.000	13.9291	81.90	V Q	.	.	.	.
6.083	14.5055	83.69	V Q	.	.	.	.
6.167	15.0940	85.45	V Q	.	.	.	.
6.250	15.6941	87.13	V Q	.	.	.	.
6.333	16.3064	88.91	.V Q	.	.	.	.
6.417	16.9323	90.88	.V Q	.	.	.	.
6.500	17.5725	92.96	.V Q	.	.	.	.
6.583	18.2282	95.20	.V Q	.	.	.	.
6.667	18.9019	97.83	.V Q	.	.	.	.
6.750	19.5913	100.09	.V Q	.	.	.	.
6.833	20.2947	102.14	.V Q	.	.	.	.
6.917	21.0107	103.97	.V Q	.	.	.	.
7.000	21.7391	105.77	.V Q	.	.	.	.
7.083	22.4796	107.51	.V Q	.	.	.	.
7.167	23.2323	109.30	.V Q	.	.	.	.
7.250	23.9993	111.36	.V Q	.	.	.	.
7.333	24.7796	113.31	.V Q	.	.	.	.
7.417	25.5712	114.94	.V Q	.	.	.	.
7.500	26.3741	116.58	.V Q	.	.	.	.
7.583	27.1892	118.35	.V Q	.	.	.	.
7.667	28.0166	120.13	.V Q	.	.	.	.
7.750	28.8559	121.88	.V Q	.	.	.	.
7.833	29.7072	123.61	.V Q	.	.	.	.
7.917	30.5692	125.15	.V Q	.	.	.	.
8.000	31.4407	126.54	.V Q	.	.	.	.
8.083	32.3218	127.94	.V Q	.	.	.	.
8.167	33.2127	129.35	. V Q	.	.	.	.
8.250	34.1133	130.77	. V Q	.	.	.	.
8.333	35.0238	132.20	. V Q	.	.	.	.
8.417	35.9442	133.65	. V Q	.	.	.	.
8.500	36.8749	135.14	. V Q.	.	.	.	.
8.583	37.8161	136.65	. V Q.	.	.	.	.
8.667	38.7673	138.12	. V Q.	.	.	.	.
8.750	39.7283	139.54	. V Q.	.	.	.	.

8.833	40.6992	140.97	. V	Q.	.	.	.
8.917	41.6799	142.39	. V	Q.	.	.	.
9.000	42.6700	143.76	. V	Q.	.	.	.
9.083	43.6695	145.13	. V	Q.	.	.	.
9.167	44.6785	146.51	. V	Q.	.	.	.
9.250	45.6967	147.83	. V	Q.	.	.	.
9.333	46.7234	149.08	. V	Q.	.	.	.
9.417	47.7587	150.33	. V	Q	.	.	.
9.500	48.8028	151.60	. V	Q	.	.	.
9.583	49.8555	152.86	. V	Q	.	.	.
9.667	50.9162	154.01	. V	Q	.	.	.
9.750	51.9848	155.15	. V	Q	.	.	.
9.833	53.0613	156.30	. V	Q	.	.	.
9.917	54.1457	157.47	. V	Q	.	.	.
10.000	55.2383	158.64	. V	Q	.	.	.
10.083	56.3389	159.81	. V	Q	.	.	.
10.167	57.4474	160.95	. V	Q	.	.	.
10.250	58.5638	162.10	. V	Q	.	.	.
10.333	59.6882	163.26	. V	Q	.	.	.
10.417	60.8207	164.44	. V	Q	.	.	.
10.500	61.9613	165.62	. V	.Q	.	.	.
10.583	63.1101	166.81	. V	.Q	.	.	.
10.667	64.2672	168.00	. V	.Q	.	.	.
10.750	65.4322	169.17	. V	.Q	.	.	.
10.833	66.6055	170.36	. V	.Q	.	.	.
10.917	67.7870	171.56	. V	.Q	.	.	.
11.000	68.9769	172.77	. V	.Q	.	.	.
11.083	70.1752	173.99	. V	.Q	.	.	.
11.167	71.3820	175.23	. V	.Q	.	.	.
11.250	72.5973	176.45	. V	.Q	.	.	.
11.333	73.8203	177.59	. V	.Q	.	.	.
11.417	75.0513	178.73	. V	.Q	.	.	.
11.500	76.2902	179.89	. V	.Q	.	.	.
11.583	77.5372	181.07	. V	.Q	.	.	.
11.667	78.7924	182.26	. V	.Q	.	.	.
11.750	80.0559	183.46	. V	.Q	.	.	.
11.833	81.3278	184.68	. V	.Q	.	.	.
11.917	82.6082	185.91	. V	.Q	.	.	.
12.000	83.8973	187.17	. V	.Q	.	.	.
12.083	85.1964	188.63	. V	.Q	.	.	.
12.167	86.5068	190.28	. V	.Q	.	.	.
12.250	87.8282	191.87	. V	.Q	.	.	.
12.333	89.1607	193.48	. V	.Q	.	.	.
12.417	90.5044	195.10	. V	.Q	.	.	.
12.500	91.8593	196.74	. V	.Q	.	.	.
12.583	93.2257	198.40	. V	.Q	.	.	.
12.667	94.6036	200.07	. V	.Q	.	.	.
12.750	95.9932	201.77	. V	.Q	.	.	.
12.833	97.3946	203.48	. V	.Q	.	.	.
12.917	98.8079	205.21	. V	.Q	.	.	.
13.000	100.2333	206.97	. V	.Q	.	.	.
13.083	101.6714	208.82	. V	.Q	.	.	.
13.167	103.1233	210.82	. V	.Q	.	.	.
13.250	104.5891	212.84	. V	.Q	.	.	.
13.333	106.0690	214.88	. V	.Q	.	.	.
13.417	107.5632	216.95	. V	.Q	.	.	.
13.500	109.0717	219.04	. V	.Q	.	.	.
13.583	110.5947	221.15	. V	.Q	.	.	.

13.667	112.1321	223.22	. V	. Q	.	.	.
13.750	113.6848	225.46	. V	. Q	.	.	.
13.833	115.2552	228.02	. V	. Q	.	.	.
13.917	116.8435	230.61	. V	. Q	.	.	.
14.000	118.4498	233.23	. V	. Q	.	.	.
14.083	120.0762	236.16	. V	. Q	.	.	.
14.167	121.7263	239.59	. V	. Q	.	.	.
14.250	123.4003	243.07	. V	. Q	.	.	.
14.333	125.0984	246.57	. V	. Q	.	.	.
14.417	126.8226	250.35	. V	. Q	.	.	.
14.500	128.5736	254.24	. V	. Q	.	.	.
14.583	130.3512	258.11	. V	. Q	.	.	.
14.667	132.1551	261.92	. V	. Q	.	.	.
14.750	133.9852	265.73	. V	. Q	.	.	.
14.833	135.8416	269.55	. V	. Q	.	.	.
14.917	137.7244	273.39	. V	. Q	.	.	.
15.000	139.6338	277.24	. V	. Q	.	.	.
15.083	141.5747	281.82	. V	. Q	.	.	.
15.167	143.5504	286.87	. V	. Q	.	.	.
15.250	145.5563	291.25	. V	. Q	.	.	.
15.333	147.5912	295.47	. V	. Q	.	.	.
15.417	149.6532	299.40	. V	. Q	.	.	.
15.500	151.7403	303.06	. V	. Q	.	.	.
15.583	153.8532	306.79	. V	. Q	.	.	.
15.667	155.9944	310.90	. V	. Q	.	.	.
15.750	158.1663	315.36	. V	.Q	.	.	.
15.833	160.3730	320.40	. V	.Q	.	.	.
15.917	162.6166	325.78	. V	.Q	.	.	.
16.000	164.8958	330.93	. V	.Q	.	.	.
16.083	167.2206	337.57	. V	.Q	.	.	.
16.167	169.5911	344.20	. V	.Q	.	.	.
16.250	171.9960	349.20	. V	.Q	.	.	.
16.333	174.4357	354.24	. V	.Q	.	.	.
16.417	176.9167	360.25	. V	.Q	.	.	.
16.500	179.4401	366.39	.V	.Q	.	.	.
16.583	182.0037	372.23	.V	.Q	.	.	.
16.667	184.6089	378.27	.V	.Q	.	.	.
16.750	187.2608	385.06	.V	.Q	.	.	.
16.833	189.9560	391.35	.V	.Q	.	.	.
16.917	192.6929	397.40	.V	.Q	.	.	.
17.000	195.4681	402.95	. V	.Q	.	.	.
17.083	198.2868	409.28	. V	.Q	.	.	.
17.167	201.1565	416.68	. V	.Q	.	.	.
17.250	204.0691	422.92	. V	.Q	.	.	.
17.333	207.0176	428.12	. V	.Q	.	.	.
17.417	210.0028	433.45	. V	.Q	.	.	.
17.500	213.0226	438.48	. V	.Q	.	.	.
17.583	216.0774	443.55	. V	.Q	.	.	.
17.667	219.1749	449.77	. V	.Q	.	.	.
17.750	222.3284	457.88	. V	.Q	.	.	.
17.833	225.5410	466.47	. V	.Q	.	.	.
17.917	228.7891	471.64	. V	.Q	.	.	.
18.000	232.0698	476.35	. V	.Q	.	.	.
18.083	235.3848	481.34	. V	.Q	.	.	.
18.167	238.7435	487.68	. V	.Q	.	.	.
18.250	242.1333	492.20	. V	.Q	.	.	.
18.333	245.5572	497.15	. V	.Q	.	.	.
18.417	249.0280	503.96	. V	.Q	.	.	.

18.500	252.5344	509.13	.	.	V	.	Q	.
18.583	256.0761	514.25	.	.	V	.	Q	.
18.667	259.6589	520.22	.	.	V	.	Q	.
18.750	263.2873	526.85	.	.	V	.	Q	.
18.833	266.9535	532.33	.	.	V	.	Q	.
18.917	270.6575	537.83	.	.	V	.	Q	.
19.000	274.3957	542.79	.	.	V	.	Q	.
19.083	278.1919	551.21	.	.	V	.	Q	.
19.167	282.0242	556.44	.	.	V	.	Q	.
19.250	285.8469	555.06	.	.	V	.	Q	.
19.333	289.6871	557.60	.	.	V	.	Q	.
19.417	293.5568	561.88	.	.	V	.	Q	.
19.500	297.4603	566.79	.	.	V	.	Q	.
19.583	301.3940	571.17	.	.	V	.	Q	.
19.667	305.3764	578.25	.	.	V	.	Q	.
19.750	309.3939	583.35	.	.	V	.	Q	.
19.833	313.4466	588.44	.	.	V	.	Q	.
19.917	317.5095	589.94	.	.	V	.	Q	.
20.000	321.5434	585.71	.	.	V	.	Q	.
20.083	325.5599	583.21	.	.	V	.	Q	.
20.167	329.5717	582.52	.	.	V	.	Q	.
20.250	333.5939	584.02	.	.	V	.	Q	.
20.333	337.6382	587.24	.	.	V	.	Q	.
20.417	341.7213	592.85	.	.	V	.	Q	.
20.500	345.7950	591.52	.	.	V	.	Q	.
20.583	349.8489	588.62	.	.	V	.	Q	.
20.667	353.9302	592.61	.	.	V	.	Q	.
20.750	358.0509	598.32	.	.	V	.	Q	.
20.833	362.1288	592.12	.	.	V	.	Q	.
20.917	366.1632	585.80	.	.	V	.	Q	.
21.000	370.1498	578.85	.	.	V	.	Q	.
21.083	374.1348	578.62	.	.	V	.	Q	.
21.167	378.1755	586.71	.	.	V	.	Q	.
21.250	382.2517	591.86	.	.	V	.	Q	.
21.333	386.2755	584.25	.	.	V	.	Q	.
21.417	390.2896	582.86	.	.	V	.	Q	.
21.500	394.2926	581.23	.	.	V	.	Q	.
21.583	398.2955	581.22	.	.	V	.	Q	.
21.667	402.3121	583.20	.	.	V	.	Q	.
21.750	406.3257	582.77	.	.	V	.	Q	.
21.833	410.3052	577.83	.	.	V	.	Q	.
21.917	414.1834	563.11	.	.	V	.	Q	.
22.000	418.0300	558.52	.	.	V	.	Q	.
22.083	421.8615	556.33	.	.	V	.	Q	.
22.167	425.6723	553.34	.	.	V	.	Q	.
22.250	429.4498	548.49	.	.	V	.	Q	.
22.333	433.2134	546.48	.	.	V	.	Q	.
22.417	436.9692	545.34	.	.	V	.	Q	.
22.500	440.7114	543.37	.	.	V	.	Q	.
22.583	444.4395	541.32	.	.	V	.	Q	.
22.667	448.1590	540.07	.	.	V	.	Q	.
22.750	451.7984	528.44	.	.	V	.	Q	.
22.833	455.3748	519.29	.	.	V	.	Q	.
22.917	458.8991	511.74	.	.	V	.	Q	.
23.000	462.4026	508.71	.	.	V	.	Q	.
23.083	465.8857	505.73	.	.	V	.	Q	.
23.167	469.3487	502.83	.	.	V	.	Q	.
23.250	472.7984	500.89	.	.	V	.	Q	.

23.333	476.2004	493.98	.	.	.	.	V.	Q	.
23.417	479.5374	484.52	.	.	.	.	V.	Q	.
23.500	482.8386	479.34	.	.	.	.	V.	Q	.
23.583	486.1151	475.75	.	.	.	.	V.	Q	.
23.667	489.3477	469.37	.	.	.	.	VQ	.	.
23.750	492.5236	461.14	.	.	.	.	Q	.	.
23.833	495.6440	453.08	.	.	.	.	Q	.	.
23.917	498.7056	444.55	.	.	.	.	QV	.	.
24.000	501.7180	437.39	.	.	.	.	QV	.	.
24.083	504.6961	432.43	.	.	.	.	Q	.	V
24.167	507.6388	427.28	.	.	.	.	Q	.	V
24.250	510.5403	421.30	.	.	.	.	Q	.	V
24.333	513.4005	415.29	.	.	.	.	Q	.	V
24.417	516.2230	409.83	.	.	.	.	Q	.	V
24.500	519.0069	404.23	.	.	.	.	Q	.	V
24.583	521.7458	397.70	.	.	.	.	Q	.	V
24.667	524.4325	390.10	.	.	.	.	Q	.	V
24.750	527.0698	382.93	.	.	.	.	Q	.	V
24.833	529.6660	376.97	.	.	.	.	Q	.	V
24.917	532.2249	371.56	.	.	.	.	Q	.	V
25.000	534.7475	366.28	.	.	.	.	Q	.	V
25.083	537.2383	361.66	.	.	.	.	Q	.	V
25.167	539.6951	356.73	.	.	.	.	Q	.	V
25.250	542.1084	350.41	.	.	.	.	Q	.	V
25.333	544.4780	344.06	.	.	.	.	Q	.	V
25.417	546.8148	339.31	.	.	.	.	Q	.	V
25.500	549.1181	334.44	.	.	.	.	Q	.	V
25.583	551.3834	328.91	.	.	.	.	Q	.	V
25.667	553.6010	321.99	.	.	.	.	Q	.	V
25.750	555.7797	316.35	.	.	.	.	Q	.	V
25.833	557.9211	310.93	.	.	.	.	Q	.	V
25.917	560.0276	305.87	.	.	.	.	Q	.	V
26.000	562.1002	300.94	.	.	.	.	Q	.	V
26.083	564.1375	295.83	.	.	.	.	Q	.	V
26.167	566.1358	290.15	.	.	.	.	Q	.	V
26.250	568.0982	284.94	.	.	.	.	Q	.	V
26.333	570.0264	279.97	.	.	.	.	Q	.	V
26.417	571.9194	274.87	.	.	.	.	Q	.	V
26.500	573.7758	269.55	.	.	.	.	Q	.	V
26.583	575.5961	264.30	.	.	.	.	Q	.	V
26.667	577.3824	259.38	.	.	.	.	Q	.	V
26.750	579.1362	254.64	.	.	.	.	Q	.	V
26.833	580.8597	250.26	.	.	.	.	Q	.	V
26.917	582.5532	245.90	.	.	.	.	Q	.	V
27.000	584.2178	241.71	.	.	.	.	Q	.	V
27.083	585.8506	237.09	.	.	.	.	Q	.	V
27.167	587.4495	232.15	.	.	.	.	Q	.	V
27.250	589.0148	227.29	.	.	.	.	Q	.	V
27.333	590.5438	222.02	.	.	.	.	Q	.	V
27.417	592.0455	218.05	.	.	.	.	Q	.	V
27.500	593.5212	214.26	.	.	.	.	Q	.	V
27.583	594.9722	210.69	.	.	.	.	Q	.	V
27.667	596.3965	206.80	.	.	.	.	Q	.	V
27.750	597.7930	202.78	.	.	.	.	Q	.	V
27.833	599.1610	198.63	.	.	.	.	Q	.	V
27.917	600.5002	194.45	.	.	.	.	Q	.	V
28.000	601.8128	190.60	.	.	.	.	Q	.	V
28.083	603.0987	186.71	.	.	.	.	Q	.	V

28.167	604.3552	182.44	.	.	Q	.	.	V	.
28.250	605.5804	177.91	.	.	.Q	.	.	V	.
28.333	606.7819	174.45	.	.	.Q	.	.	V	.
28.417	607.9575	170.71	.	.	.Q	.	.	V	.
28.500	609.1078	167.02	.	.	.Q	.	.	V	.
28.583	610.2332	163.40	.	.	Q	.	.	V	.
28.667	611.3328	159.66	.	.	Q	.	.	V	.
28.750	612.4039	155.52	.	.	Q	.	.	V	.
28.833	613.4483	151.65	.	.	Q	.	.	V	.
28.917	614.4680	148.05	.	.	Q.	.	.	V	.
29.000	615.4667	145.01	.	.	Q.	.	.	V	.
29.083	616.4460	142.21	.	.	Q.	.	.	V	.
29.167	617.4012	138.69	.	.	Q.	.	.	V	.
29.250	618.3305	134.93	.	.	Q	.	.	V	.
29.333	619.2390	131.91	.	.	Q	.	.	V	.
29.417	620.1261	128.81	.	.	Q	.	.	V	.
29.500	620.9909	125.57	.	.	Q	.	.	V	.
29.583	621.8333	122.32	.	.	Q	.	.	V	.
29.667	622.6454	117.92	.	.	Q	.	.	V	.
29.750	623.4289	113.75	.	.	Q	.	.	V	.
29.833	624.1884	110.28	.	.	Q	.	.	V	.
29.917	624.9296	107.62	.	.	Q	.	.	V	.
30.000	625.6521	104.91	.	.	Q	.	.	V	.
30.083	626.3553	102.10	.	.	Q	.	.	V	.
30.167	627.0397	99.37	.	.	Q	.	.	V	.
30.250	627.7065	96.83	.	.	Q	.	.	V	.
30.333	628.3557	94.25	.	.	Q	.	.	V	.
30.417	628.9857	91.48	.	.	Q	.	.	V	.
30.500	629.5958	88.59	.	.	Q	.	.	V	.
30.583	630.1853	85.59	.	.	Q	.	.	V	.
30.667	630.7526	82.37	.	.	Q	.	.	V	.
30.750	631.3008	79.60	.	.	Q	.	.	V	.
30.833	631.8320	77.14	.	.	Q	.	.	V	.
30.917	632.3481	74.93	.	.	Q	.	.	V	.
31.000	632.8489	72.71	.	.	Q	.	.	V	.
31.083	633.3354	70.65	.	.	Q	.	.	V	.
31.167	633.8074	68.53	.	.	Q	.	.	V	.
31.250	634.2631	66.17	.	.	Q	.	.	V	.
31.333	634.7039	64.00	.	.	Q	.	.	V	.
31.417	635.1315	62.08	.	.	Q	.	.	V	.
31.500	635.5466	60.27	.	.	Q	.	.	V	.
31.583	635.9478	58.26	.	.	Q	.	.	V	.
31.667	636.3367	56.47	.	.	Q	.	.	V	.
31.750	636.7142	54.80	.	.	Q	.	.	V	.
31.833	637.0797	53.07	.	.	Q	.	.	V	.
31.917	637.4350	51.59	.	.	Q	.	.	V	.
32.000	637.7812	50.27	.	.	Q	.	.	V	.
32.083	638.1184	48.96	.	.	Q	.	.	V	.
32.167	638.4466	47.65	.	.	Q	.	.	V	.
32.250	638.7661	46.38	.	.	Q	.	.	V	.
32.333	639.0763	45.05	.	.	Q	.	.	V	.
32.417	639.3779	43.79	.	.	Q	.	.	V	.
32.500	639.6703	42.47	.	.	Q	.	.	V	.
32.583	639.9539	41.17	.	.	Q	.	.	V	.
32.667	640.2288	39.91	.	.	Q	.	.	V	.
32.750	640.4955	38.72	.	.	Q	.	.	V	.
32.833	640.7541	37.55	.	.	Q	.	.	V	.
32.917	641.0048	36.39	.	.	Q	.	.	V	.

33.000	641.2480	35.31	.	Q	.	.	.	V	.
33.083	641.4838	34.24	.	.Q	.	.	.	V	.
33.167	641.7123	33.18	.	.Q	.	.	.	V	.
33.250	641.9340	32.19	.	.Q	.	.	.	V	.
33.333	642.1495	31.29	.	.Q	.	.	.	V	.
33.417	642.3589	30.40	.	.Q	.	.	.	V	.
33.500	642.5621	29.51	.	.Q	.	.	.	V	.
33.583	642.7594	28.64	.	.Q	.	.	.	V	.
33.667	642.9515	27.89	.	.Q	.	.	.	V	.
33.750	643.1385	27.16	.	.Q	.	.	.	V	.
33.833	643.3203	26.39	.	.Q	.	.	.	V	.
33.917	643.4966	25.60	.	.Q	.	.	.	V	.
34.000	643.6675	24.82	.	.Q	.	.	.	V	.
34.083	643.8331	24.04	.	.Q	.	.	.	V	.
34.167	643.9937	23.32	.	.Q	.	.	.	V	.
34.250	644.1494	22.60	.	.Q	.	.	.	V	.
34.333	644.3001	21.89	.	.Q	.	.	.	V	.
34.417	644.4460	21.18	.	.Q	.	.	.	V	.
34.500	644.5870	20.48	.	.Q	.	.	.	V	.
34.583	644.7233	19.78	.	.Q	.	.	.	V	.
34.667	644.8549	19.11	.	.Q	.	.	.	V	.
34.750	644.9821	18.47	.	.Q	.	.	.	V	.
34.833	645.1048	17.83	.	.Q	.	.	.	V	.
34.917	645.2232	17.19	.	.Q	.	.	.	V	.
35.000	645.3373	16.56	.	.Q	.	.	.	V	.
35.083	645.4471	15.94	.	.Q	.	.	.	V	.
35.167	645.5531	15.39	.	.Q	.	.	.	V	.
35.250	645.6557	14.90	.	Q	.	.	.	V	.
35.333	645.7556	14.50	.	Q	.	.	.	V	.
35.417	645.8527	14.10	.	Q	.	.	.	V	.
35.500	645.9471	13.71	.	Q	.	.	.	V	.
35.583	646.0389	13.33	.	Q	.	.	.	V	.
35.667	646.1277	12.91	.	Q	.	.	.	V	.
35.750	646.2133	12.42	.	Q	.	.	.	V	.
35.833	646.2933	11.61	.	Q	.	.	.	V	.
35.917	646.3694	11.04	.	Q	.	.	.	V	.
36.000	646.4427	10.65	.	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%	1585.0
20%	1320.0
30%	1005.0
40%	775.0
50%	640.0
60%	525.0
70%	425.0
80%	330.0
90%	225.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

***** DESCRIPTION OF STUDY *****

- * RANCHO MISSION VIEJO *
- * PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 132C
- * 2-YR EV SEPTEMBER 2018 ROKAMOTO *

FILE NAME: EV0232CS.DAT
TIME/DATE OF STUDY: 06:31 09/28/2018

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

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

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 4924.400 ACRES
 BASEFLOW = 0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME = 1.262 HOURS
 VALLEY (DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.487
 LOW LOSS FRACTION = 0.830
 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 = 0.788
 30-MINUTE FACTOR = 0.788
 1-HOUR FACTOR = 0.788
 3-HOUR FACTOR = 0.968
 6-HOUR FACTOR = 0.984
 24-HOUR FACTOR = 0.990

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 6.603

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.377	224.717
2	1.132	449.434
3	1.911	463.780
4	2.976	634.355
5	4.303	790.190
6	6.488	1301.338
7	9.544	1819.956
8	12.914	2006.852
9	16.961	2410.163
10	20.725	2241.910
11	25.165	2644.456
12	29.333	2481.743
13	34.493	3073.013
14	39.423	2936.183
15	45.485	3610.378
16	51.675	3686.475
17	56.456	2846.918
18	62.294	3476.779
19	67.301	2982.083
20	71.799	2678.747
21	75.788	2375.749
22	78.877	1839.476
23	81.880	1788.683
24	84.631	1638.025
25	86.932	1370.413
26	88.737	1075.090
27	90.252	902.381
28	91.646	830.151
29	92.942	771.411
30	94.108	694.914
31	94.971	513.923
32	95.798	492.163
33	96.400	358.907
34	96.918	308.441
35	97.436	308.441
36	97.921	288.626
37	98.113	114.232
38	98.237	73.807
39	98.361	73.807
40	98.484	73.721
41	98.608	73.630
42	98.732	73.721
43	98.856	73.807
44	98.979	73.630
45	99.104	73.984
46	99.227	73.630
47	99.351	73.630

48	99.474	73.630
49	99.598	73.630
50	99.722	73.630
51	99.845	73.630
52	99.969	73.630
53	100.000	18.452

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 467.3455
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 117.6563

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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.	100.0	200.0	300.0	400.0
0.083	0.0005	0.07	Q	.	.	.	.
0.167	0.0020	0.22	Q	.	.	.	.
0.250	0.0046	0.37	Q	.	.	.	.
0.333	0.0085	0.58	Q	.	.	.	.
0.417	0.0143	0.83	Q	.	.	.	.
0.500	0.0230	1.26	Q	.	.	.	.
0.583	0.0357	1.85	Q	.	.	.	.
0.667	0.0530	2.51	Q	.	.	.	.
0.750	0.0757	3.30	Q	.	.	.	.
0.833	0.1035	4.04	Q	.	.	.	.
0.917	0.1373	4.91	Q	.	.	.	.
1.000	0.1768	5.73	Q	.	.	.	.
1.083	0.2232	6.74	Q	.	.	.	.
1.167	0.2764	7.72	Q	.	.	.	.
1.250	0.3377	8.91	Q	.	.	.	.
1.333	0.4076	10.14	VQ	.	.	.	.
1.417	0.4840	11.09	VQ	.	.	.	.
1.500	0.5684	12.26	VQ	.	.	.	.
1.583	0.6597	13.26	VQ	.	.	.	.
1.667	0.7574	14.18	VQ	.	.	.	.
1.750	0.8607	14.99	VQ	.	.	.	.
1.833	0.9684	15.64	VQ	.	.	.	.
1.917	1.0805	16.27	VQ	.	.	.	.
2.000	1.1966	16.86	VQ	.	.	.	.
2.083	1.3161	17.36	VQ	.	.	.	.
2.167	1.4385	17.77	VQ	.	.	.	.
2.250	1.5633	18.12	VQ	.	.	.	.
2.333	1.6904	18.45	VQ	.	.	.	.
2.417	1.8197	18.77	VQ	.	.	.	.
2.500	1.9509	19.06	VQ	.	.	.	.
2.583	2.0838	19.29	VQ	.	.	.	.
2.667	2.2182	19.52	VQ	.	.	.	.
2.750	2.3539	19.70	VQ	.	.	.	.
2.833	2.4907	19.87	VQ	.	.	.	.
2.917	2.6288	20.04	V Q	.	.	.	.
3.000	2.7680	20.21	V Q	.	.	.	.
3.083	2.9079	20.32	V Q	.	.	.	.
3.167	3.0485	20.42	.VQ	.	.	.	.
3.250	3.1898	20.51	.VQ	.	.	.	.
3.333	3.3317	20.61	.VQ	.	.	.	.
3.417	3.4744	20.71	.VQ	.	.	.	.
3.500	3.6177	20.81	.VQ	.	.	.	.
3.583	3.7618	20.91	.VQ	.	.	.	.
3.667	3.9065	21.02	.VQ	.	.	.	.
3.750	4.0520	21.12	.VQ	.	.	.	.
3.833	4.1981	21.22	.VQ	.	.	.	.
3.917	4.3450	21.33	.VQ	.	.	.	.

4.000	4.4926	21.43	.VQ	.	.	.	.
4.083	4.6410	21.54	.VQ	.	.	.	.
4.167	4.7901	21.65	.VQ	.	.	.	.
4.250	4.9399	21.76	.VQ	.	.	.	.
4.333	5.0905	21.87	.VQ	.	.	.	.
4.417	5.2417	21.96	.VQ	.	.	.	.
4.500	5.3936	22.05	.VQ	.	.	.	.
4.583	5.5460	22.13	.VQ	.	.	.	.
4.667	5.6991	22.22	.VQ	.	.	.	.
4.750	5.8527	22.31	.VQ	.	.	.	.
4.833	6.0071	22.41	. Q	.	.	.	.
4.917	6.1620	22.50	. Q	.	.	.	.
5.000	6.3176	22.59	. Q	.	.	.	.
5.083	6.4738	22.68	. Q	.	.	.	.
5.167	6.6307	22.78	. Q	.	.	.	.
5.250	6.7882	22.88	. Q	.	.	.	.
5.333	6.9465	22.97	. Q	.	.	.	.
5.417	7.1054	23.07	. Q	.	.	.	.
5.500	7.2650	23.17	. Q	.	.	.	.
5.583	7.4252	23.27	. Q	.	.	.	.
5.667	7.5862	23.37	. Q	.	.	.	.
5.750	7.7479	23.48	. Q	.	.	.	.
5.833	7.9103	23.58	. Q	.	.	.	.
5.917	8.0735	23.69	. Q	.	.	.	.
6.000	8.2373	23.79	. Q	.	.	.	.
6.083	8.4019	23.90	. Q	.	.	.	.
6.167	8.5673	24.01	. Q	.	.	.	.
6.250	8.7334	24.12	. Q	.	.	.	.
6.333	8.9004	24.23	. QV	.	.	.	.
6.417	9.0680	24.35	. QV	.	.	.	.
6.500	9.2365	24.46	. QV	.	.	.	.
6.583	9.4058	24.58	. QV	.	.	.	.
6.667	9.5759	24.70	. QV	.	.	.	.
6.750	9.7468	24.82	. QV	.	.	.	.
6.833	9.9185	24.94	. QV	.	.	.	.
6.917	10.0911	25.06	. QV	.	.	.	.
7.000	10.2646	25.18	. QV	.	.	.	.
7.083	10.4389	25.31	. QV	.	.	.	.
7.167	10.6140	25.44	. QV	.	.	.	.
7.250	10.7901	25.57	. QV	.	.	.	.
7.333	10.9671	25.70	. QV	.	.	.	.
7.417	11.1450	25.83	. QV	.	.	.	.
7.500	11.3238	25.96	. QV	.	.	.	.
7.583	11.5035	26.10	. QV	.	.	.	.
7.667	11.6842	26.24	. QV	.	.	.	.
7.750	11.8659	26.38	. Q V	.	.	.	.
7.833	12.0485	26.52	. Q V	.	.	.	.
7.917	12.2321	26.66	. Q V	.	.	.	.
8.000	12.4168	26.81	. Q V	.	.	.	.
8.083	12.6024	26.96	. Q V	.	.	.	.
8.167	12.7891	27.11	. Q V	.	.	.	.
8.250	12.9768	27.26	. Q V	.	.	.	.
8.333	13.1656	27.41	. Q V	.	.	.	.
8.417	13.3555	27.57	. Q V	.	.	.	.
8.500	13.5465	27.73	. Q V	.	.	.	.
8.583	13.7386	27.89	. Q V	.	.	.	.
8.667	13.9319	28.06	. Q V	.	.	.	.
8.750	14.1263	28.23	. Q V	.	.	.	.

8.833	14.3218	28.40	. Q V	.	.	.	.
8.917	14.5186	28.57	. Q V	.	.	.	.
9.000	14.7165	28.74	. Q V	.	.	.	.
9.083	14.9157	28.92	. Q V	.	.	.	.
9.167	15.1162	29.10	. Q V	.	.	.	.
9.250	15.3179	29.29	. Q V	.	.	.	.
9.333	15.5209	29.47	. Q V	.	.	.	.
9.417	15.7252	29.67	. Q V	.	.	.	.
9.500	15.9308	29.86	. Q V	.	.	.	.
9.583	16.1378	30.06	. Q V	.	.	.	.
9.667	16.3462	30.26	. Q V	.	.	.	.
9.750	16.5560	30.46	. Q V	.	.	.	.
9.833	16.7672	30.67	. Q V	.	.	.	.
9.917	16.9799	30.88	. Q V	.	.	.	.
10.000	17.1941	31.10	. Q V	.	.	.	.
10.083	17.4098	31.32	. Q V	.	.	.	.
10.167	17.6270	31.54	. Q V	.	.	.	.
10.250	17.8458	31.77	. Q V	.	.	.	.
10.333	18.0662	32.00	. Q V	.	.	.	.
10.417	18.2882	32.24	. Q V	.	.	.	.
10.500	18.5119	32.48	. Q V	.	.	.	.
10.583	18.7373	32.73	. Q V	.	.	.	.
10.667	18.9645	32.98	. Q V	.	.	.	.
10.750	19.1934	33.24	. Q V	.	.	.	.
10.833	19.4241	33.50	. Q V	.	.	.	.
10.917	19.6567	33.77	. Q V	.	.	.	.
11.000	19.8911	34.04	. Q V	.	.	.	.
11.083	20.1275	34.32	. Q V	.	.	.	.
11.167	20.3658	34.61	. Q V	.	.	.	.
11.250	20.6062	34.90	. Q V	.	.	.	.
11.333	20.8486	35.20	. Q V	.	.	.	.
11.417	21.0931	35.50	. Q V	.	.	.	.
11.500	21.3398	35.82	. Q V	.	.	.	.
11.583	21.5887	36.14	. Q V	.	.	.	.
11.667	21.8398	36.47	. Q V	.	.	.	.
11.750	22.0933	36.80	. Q V	.	.	.	.
11.833	22.3491	37.15	. Q V	.	.	.	.
11.917	22.6074	37.50	. Q V	.	.	.	.
12.000	22.8681	37.86	. Q V	.	.	.	.
12.083	23.1317	38.28	. Q V	.	.	.	.
12.167	23.3985	38.74	. Q V	.	.	.	.
12.250	23.6686	39.22	. Q V	.	.	.	.
12.333	23.9423	39.74	. Q V	.	.	.	.
12.417	24.2199	40.30	. Q V	.	.	.	.
12.500	24.5020	40.97	. Q V	.	.	.	.
12.583	24.7895	41.75	. Q V	.	.	.	.
12.667	25.0827	42.57	. Q V	.	.	.	.
12.750	25.3822	43.49	. Q V	.	.	.	.
12.833	25.6879	44.39	. Q V	.	.	.	.
12.917	26.0005	45.38	. Q V	.	.	.	.
13.000	26.3197	46.35	. Q V	.	.	.	.
13.083	26.6466	47.46	. Q V	.	.	.	.
13.167	26.9810	48.56	. Q V	.	.	.	.
13.250	27.3239	49.80	. Q V	.	.	.	.
13.333	27.6757	51.08	. Q V	.	.	.	.
13.417	28.0354	52.23	. Q V	.	.	.	.
13.500	28.4039	53.51	. Q V	.	.	.	.
13.583	28.7809	54.73	. Q V	.	.	.	.

13.667	29.1660	55.92	.	Q	V.	.	.	.
13.750	29.5591	57.08	.	Q	V	.	.	.
13.833	29.9597	58.17	.	Q	V	.	.	.
13.917	30.3680	59.28	.	Q	V	.	.	.
14.000	30.7839	60.40	.	Q	V	.	.	.
14.083	31.2083	61.61	.	Q	V	.	.	.
14.167	31.6416	62.92	.	Q	V	.	.	.
14.250	32.0840	64.24	.	Q	V	.	.	.
14.333	32.5364	65.68	.	Q	.V	.	.	.
14.417	32.9993	67.23	.	Q	.V	.	.	.
14.500	33.4750	69.06	.	Q	.V	.	.	.
14.583	33.9652	71.18	.	Q	.V	.	.	.
14.667	34.4708	73.43	.	Q	.V	.	.	.
14.750	34.9937	75.92	.	Q	.V	.	.	.
14.833	35.5334	78.36	.	Q	.V	.	.	.
14.917	36.0918	81.09	.	Q	.V	.	.	.
15.000	36.6689	83.79	.	Q	.V	.	.	.
15.083	37.2669	86.84	.	Q	.V	.	.	.
15.167	37.8860	89.89	.	Q	.V	.	.	.
15.250	38.5291	93.38	.	Q.	V	.	.	.
15.333	39.1972	97.01	.	Q.	V	.	.	.
15.417	39.8866	100.11	.	Q	V	.	.	.
15.500	40.5989	103.42	.	Q	V	.	.	.
15.583	41.3334	106.66	.	Q	V	.	.	.
15.667	42.0893	109.75	.	Q	V	.	.	.
15.750	42.8665	112.86	.	.Q	V	.	.	.
15.833	43.6622	115.53	.	.Q	V	.	.	.
15.917	44.4766	118.24	.	.Q	V	.	.	.
16.000	45.3142	121.63	.	.Q	V	.	.	.
16.083	46.2634	137.82	.	.	Q V	.	.	.
16.167	47.3255	154.22	.	.	QV	.	.	.
16.250	48.4179	158.63	.	.	QV	.	.	.
16.333	49.6071	172.67	.	.	vQ	.	.	.
16.417	50.8928	186.69	.	.	vQ	.	.	.
16.500	52.4169	221.29	.	.	v	.Q	.	.
16.583	54.1727	254.95	.	.	v	.Q	.	.
16.667	56.0223	268.56	.	.	v.	Q	.	.
16.750	58.0485	294.20	.	.	v.	Q.	.	.
16.833	60.0220	286.56	.	.	v	Q	.	.
16.917	62.1699	311.87	.	.	.v	.Q	.	.
17.000	64.2750	305.66	.	.	.v	Q	.	.
17.083	66.6282	341.69	.	.	.v	Q	.	.
17.167	68.9462	336.57	.	.	.v	Q	.	.
17.250	71.5308	375.28	.	.	.v	Q	.	.
17.333	74.1298	377.38	.	.	.v	Q	.	.
17.417	76.3864	327.66	.	.	.v	Q	.	.
17.500	78.8627	359.55	.	.	.v	Q	.	.
17.583	81.1152	327.07	.	.	.v	Q	.	.
17.667	83.2114	304.36	.	.	.v Q	.	.	.
17.750	85.1423	280.37	.	.	.Q	.	.	.
17.833	86.8270	244.61	.	.	.Q	v.	.	.
17.917	88.4545	236.32	.	.	.Q	v	.	.
18.000	89.9849	222.21	.	.	.Q	v	.	.
18.083	91.3688	200.94	.	.	.Q	.v	.	.
18.167	92.5958	178.16	.	.	Q	.v	.	.
18.250	93.7162	162.69	.	.	Q	.v	.	.
18.333	94.7722	153.33	.	.	Q	.v	.	.
18.417	95.7723	145.22	.	.	Q	.v	.	.

18.500	96.7056	135.51	.	.	Q	.	.	V	.
18.583	97.5331	120.15	.	.	.Q	.	.	V	.
18.667	98.3191	114.13	.	.	.Q	.	.	V	.
18.750	99.0227	102.15	.	.	Q	.	.	V	.
18.833	99.6803	95.49	.	.	Q.	.	.	V	.
18.917	100.3112	91.60	.	.	Q.	.	.	V	.
19.000	100.9077	86.62	.	.	Q	.	.	V	.
19.083	101.4108	73.05	.	.	Q	.	.	V	.
19.167	101.8768	67.65	.	.	Q	.	.	V	.
19.250	102.3238	64.92	.	.	Q	.	.	V	.
19.333	102.7537	62.41	.	.	Q	.	.	V	.
19.417	103.1673	60.06	.	.	Q	.	.	V	.
19.500	103.5648	57.72	.	.	Q	.	.	V	.
19.583	103.9481	55.65	.	.	Q	.	.	V	.
19.667	104.3181	53.72	.	.	Q	.	.	V	.
19.750	104.6767	52.07	.	.	Q	.	.	V	.
19.833	105.0250	50.57	.	.	Q	.	.	V	.
19.917	105.3635	49.16	.	.	Q	.	.	V	.
20.000	105.6928	47.82	.	.	Q	.	.	V	.
20.083	106.0139	46.62	.	.	Q	.	.	V	.
20.167	106.3274	45.52	.	.	Q	.	.	V	.
20.250	106.6333	44.41	.	.	Q	.	.	V	.
20.333	106.9311	43.24	.	.	Q	.	.	V	.
20.417	107.1998	39.01	.	.	Q	.	.	V	.
20.500	107.4546	37.00	.	.	Q	.	.	V	.
20.583	107.7038	36.19	.	.	Q	.	.	V	.
20.667	107.9481	35.46	.	.	Q	.	.	V	.
20.750	108.1874	34.75	.	.	Q	.	.	V	.
20.833	108.4221	34.07	.	.	Q	.	.	V	.
20.917	108.6522	33.42	.	.	Q	.	.	V	.
21.000	108.8781	32.80	.	.	Q	.	.	V	.
21.083	109.1001	32.23	.	.	Q	.	.	V	.
21.167	109.3184	31.70	.	.	Q	.	.	V	.
21.250	109.5332	31.19	.	.	Q	.	.	V	.
21.333	109.7446	30.70	.	.	Q	.	.	V	.
21.417	109.9529	30.25	.	.	Q	.	.	V	.
21.500	110.1583	29.83	.	.	Q	.	.	V	.
21.583	110.3609	29.42	.	.	Q	.	.	V	.
21.667	110.5608	29.03	.	.	Q	.	.	V	.
21.750	110.7581	28.65	.	.	Q	.	.	V	.
21.833	110.9529	28.28	.	.	Q	.	.	V	.
21.917	111.1452	27.93	.	.	Q	.	.	V	.
22.000	111.3352	27.58	.	.	Q	.	.	V	.
22.083	111.5229	27.25	.	.	Q	.	.	V	.
22.167	111.7084	26.93	.	.	Q	.	.	V	.
22.250	111.8917	26.62	.	.	Q	.	.	V	.
22.333	112.0729	26.31	.	.	Q	.	.	V	.
22.417	112.2521	26.03	.	.	Q	.	.	V	.
22.500	112.4295	25.75	.	.	Q	.	.	V	.
22.583	112.6050	25.49	.	.	Q	.	.	V	.
22.667	112.7788	25.23	.	.	Q	.	.	V	.
22.750	112.9508	24.98	.	.	Q	.	.	V	.
22.833	113.1211	24.73	.	.	Q	.	.	V	.
22.917	113.2898	24.49	.	.	Q	.	.	V	.
23.000	113.4569	24.26	.	.	Q	.	.	V	.
23.083	113.6224	24.03	.	.	Q	.	.	V	.
23.167	113.7864	23.81	.	.	Q	.	.	V	.
23.250	113.9489	23.60	.	.	Q	.	.	V	.

23.333	114.1100	23.39	. Q	.	.	.	V .
23.417	114.2697	23.18	. Q	.	.	.	V .
23.500	114.4280	22.98	. Q	.	.	.	V .
23.583	114.5849	22.79	. Q	.	.	.	V .
23.667	114.7405	22.59	. Q	.	.	.	V .
23.750	114.8948	22.41	. Q	.	.	.	V .
23.833	115.0479	22.22	. Q	.	.	.	V .
23.917	115.1997	22.04	. Q	.	.	.	V .
24.000	115.3503	21.87	. Q	.	.	.	V .
24.083	115.4992	21.62	. Q	.	.	.	V .
24.167	115.6460	21.31	. Q	.	.	.	V .
24.250	115.7906	21.00	. Q	.	.	.	V .
24.333	115.9327	20.63	. Q	.	.	.	V .
24.417	116.0720	20.22	. Q	.	.	.	V .
24.500	116.2073	19.65	.Q	.	.	.	V .
24.583	116.3376	18.92	.Q	.	.	.	V .
24.667	116.4624	18.13	.Q	.	.	.	V .
24.750	116.5810	17.22	.Q	.	.	.	V .
24.833	116.6938	16.37	.Q	.	.	.	V .
24.917	116.7998	15.40	.Q	.	.	.	V .
25.000	116.8996	14.48	.Q	.	.	.	V .
25.083	116.9918	13.39	.Q	.	.	.	V .
25.167	117.0768	12.34	.Q	.	.	.	V .
25.250	117.1532	11.09	.Q	.	.	.	V .
25.333	117.2208	9.82	Q	.	.	.	V .
25.417	117.2816	8.83	Q	.	.	.	V .
25.500	117.3342	7.64	Q	.	.	.	V .
25.583	117.3798	6.62	Q	.	.	.	V .
25.667	117.4192	5.71	Q	.	.	.	V .
25.750	117.4530	4.90	Q	.	.	.	V .
25.833	117.4824	4.27	Q	.	.	.	V .
25.917	117.5076	3.67	Q	.	.	.	V .
26.000	117.5291	3.11	Q	.	.	.	V .
26.083	117.5473	2.65	Q	.	.	.	V .
26.167	117.5630	2.28	Q	.	.	.	V .
26.250	117.5766	1.97	Q	.	.	.	V .
26.333	117.5882	1.69	Q	.	.	.	V .
26.417	117.5980	1.43	Q	.	.	.	V .
26.500	117.6063	1.19	Q	.	.	.	V .
26.583	117.6133	1.02	Q	.	.	.	V .
26.667	117.6191	0.85	Q	.	.	.	V .
26.750	117.6242	0.73	Q	.	.	.	V .
26.833	117.6285	0.63	Q	.	.	.	V .
26.917	117.6321	0.52	Q	.	.	.	V .
27.000	117.6350	0.42	Q	.	.	.	V .
27.083	117.6376	0.38	Q	.	.	.	V .
27.167	117.6401	0.36	Q	.	.	.	V .
27.250	117.6424	0.33	Q	.	.	.	V .
27.333	117.6445	0.31	Q	.	.	.	V .
27.417	117.6464	0.28	Q	.	.	.	V .
27.500	117.6482	0.25	Q	.	.	.	V .
27.583	117.6497	0.23	Q	.	.	.	V .
27.667	117.6511	0.20	Q	.	.	.	V .
27.750	117.6524	0.18	Q	.	.	.	V .
27.833	117.6534	0.15	Q	.	.	.	V .
27.917	117.6543	0.13	Q	.	.	.	V .
28.000	117.6550	0.10	Q	.	.	.	V .
28.083	117.6555	0.08	Q	.	.	.	V .

28.167	117.6559	0.05	Q	.	.	.	V .
28.250	117.6561	0.03	Q	.	.	.	V .
28.333	117.6562	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%	1700.0
10%	510.0
20%	260.0
30%	175.0
40%	135.0
50%	100.0
60%	85.0
70%	70.0
80%	50.0
90%	20.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Michael Baker International
5 Hutton Centre Drive Suite 500
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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 132T *
* 2-YR EV JANUARY 2019 CCHIU *

FILE NAME: EVO232TS.DAT
TIME/DATE OF STUDY: 09:56 01/03/2019

FLOW PROCESS FROM NODE 13200.00 TO NODE 132.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1127.605 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.706 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496
LOW LOSS FRACTION = 0.844
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) = 1.43

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.950
30-MINUTE FACTOR = 0.950
1-HOUR FACTOR = 0.950
3-HOUR FACTOR = 0.992
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 11.804

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

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.674	91.980
2	2.118	196.807
3	4.343	303.460
4	8.783	605.523
5	15.098	861.079
6	22.240	974.016
7	30.008	1059.284
8	39.118	1242.376
9	49.739	1448.366
10	59.250	1296.959
11	68.535	1266.302
12	75.866	999.728
13	81.396	754.018
14	86.097	641.109
15	89.377	447.350
16	91.911	345.559
17	94.064	293.535
18	95.609	210.712
19	96.695	148.161
20	97.618	125.856
21	98.131	69.883
22	98.352	30.192
23	98.573	30.170
24	98.795	30.169
25	99.016	30.215
26	99.237	30.169
27	99.459	30.169
28	99.680	30.169
29	99.901	30.169
30	100.000	13.489

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 107.4164
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 27.1069

=====

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	0.0002	0.03	Q	.	.	.	.
0.167	0.0008	0.08	Q	.	.	.	.
0.250	0.0020	0.17	Q	.	.	.	.
0.333	0.0044	0.35	Q	.	.	.	.
0.417	0.0085	0.60	Q	.	.	.	.
0.500	0.0146	0.89	Q	.	.	.	.
0.583	0.0229	1.20	Q	.	.	.	.
0.667	0.0337	1.57	Q	.	.	.	.
0.750	0.0474	1.99	Q	.	.	.	.
0.833	0.0638	2.38	Q	.	.	.	.
0.917	0.0827	2.75	Q	.	.	.	.
1.000	0.1038	3.05	Q	.	.	.	.
1.083	0.1264	3.28	Q	.	.	.	.
1.167	0.1503	3.48	Q	.	.	.	.
1.250	0.1753	3.62	Q	.	.	.	.
1.333	0.2010	3.74	Q	.	.	.	.
1.417	0.2275	3.83	Q	.	.	.	.
1.500	0.2544	3.91	Q	.	.	.	.
1.583	0.2817	3.97	Q	.	.	.	.
1.667	0.3093	4.02	Q	.	.	.	.
1.750	0.3372	4.05	Q	.	.	.	.
1.833	0.3653	4.07	Q	.	.	.	.
1.917	0.3935	4.10	Q	.	.	.	.
2.000	0.4219	4.12	Q	.	.	.	.
2.083	0.4504	4.14	Q	.	.	.	.
2.167	0.4791	4.17	Q	.	.	.	.
2.250	0.5080	4.19	Q	.	.	.	.
2.333	0.5370	4.21	Q	.	.	.	.
2.417	0.5662	4.24	Q	.	.	.	.
2.500	0.5955	4.26	Q	.	.	.	.
2.583	0.6249	4.27	Q	.	.	.	.
2.667	0.6545	4.29	Q	.	.	.	.
2.750	0.6841	4.30	QV	.	.	.	.
2.833	0.7139	4.32	QV	.	.	.	.
2.917	0.7437	4.34	QV	.	.	.	.
3.000	0.7737	4.35	QV	.	.	.	.
3.083	0.8038	4.37	QV	.	.	.	.
3.167	0.8340	4.39	QV	.	.	.	.
3.250	0.8643	4.40	QV	.	.	.	.
3.333	0.8948	4.42	QV	.	.	.	.
3.417	0.9253	4.44	QV	.	.	.	.
3.500	0.9560	4.45	QV	.	.	.	.
3.583	0.9868	4.47	QV	.	.	.	.
3.667	1.0177	4.49	QV	.	.	.	.
3.750	1.0488	4.51	QV	.	.	.	.
3.833	1.0799	4.53	QV	.	.	.	.
3.917	1.1112	4.54	QV	.	.	.	.

4.000	1.1426	4.56	QV	.	.	.	.
4.083	1.1742	4.58	QV	.	.	.	.
4.167	1.2059	4.60	QV	.	.	.	.
4.250	1.2377	4.62	QV	.	.	.	.
4.333	1.2696	4.64	QV	.	.	.	.
4.417	1.3017	4.66	QV	.	.	.	.
4.500	1.3339	4.68	QV	.	.	.	.
4.583	1.3663	4.70	Q V	.	.	.	.
4.667	1.3987	4.72	Q V	.	.	.	.
4.750	1.4314	4.74	Q V	.	.	.	.
4.833	1.4641	4.76	Q V	.	.	.	.
4.917	1.4971	4.78	Q V	.	.	.	.
5.000	1.5301	4.80	Q V	.	.	.	.
5.083	1.5633	4.82	Q V	.	.	.	.
5.167	1.5967	4.84	Q V	.	.	.	.
5.250	1.6302	4.86	Q V	.	.	.	.
5.333	1.6638	4.89	Q V	.	.	.	.
5.417	1.6976	4.91	Q V	.	.	.	.
5.500	1.7316	4.93	Q V	.	.	.	.
5.583	1.7657	4.95	Q V	.	.	.	.
5.667	1.8000	4.98	Q V	.	.	.	.
5.750	1.8344	5.00	.QV	.	.	.	.
5.833	1.8691	5.02	.QV	.	.	.	.
5.917	1.9038	5.05	.QV	.	.	.	.
6.000	1.9388	5.07	.QV	.	.	.	.
6.083	1.9739	5.10	.QV	.	.	.	.
6.167	2.0091	5.12	.QV	.	.	.	.
6.250	2.0446	5.15	.Q V	.	.	.	.
6.333	2.0802	5.17	.Q V	.	.	.	.
6.417	2.1160	5.20	.Q V	.	.	.	.
6.500	2.1520	5.23	.Q V	.	.	.	.
6.583	2.1882	5.25	.Q V	.	.	.	.
6.667	2.2245	5.28	.Q V	.	.	.	.
6.750	2.2611	5.31	.Q V	.	.	.	.
6.833	2.2978	5.33	.Q V	.	.	.	.
6.917	2.3348	5.36	.Q V	.	.	.	.
7.000	2.3719	5.39	.Q V	.	.	.	.
7.083	2.4092	5.42	.Q V	.	.	.	.
7.167	2.4467	5.45	.Q V	.	.	.	.
7.250	2.4845	5.48	.Q V	.	.	.	.
7.333	2.5224	5.51	.Q V	.	.	.	.
7.417	2.5605	5.54	.Q V	.	.	.	.
7.500	2.5989	5.57	.Q V	.	.	.	.
7.583	2.6375	5.60	.Q V	.	.	.	.
7.667	2.6763	5.63	.Q V	.	.	.	.
7.750	2.7153	5.67	.Q V	.	.	.	.
7.833	2.7545	5.70	.Q V	.	.	.	.
7.917	2.7940	5.73	.Q V	.	.	.	.
8.000	2.8337	5.77	.Q V	.	.	.	.
8.083	2.8736	5.80	.Q V	.	.	.	.
8.167	2.9138	5.83	.Q V	.	.	.	.
8.250	2.9543	5.87	.Q V	.	.	.	.
8.333	2.9949	5.91	.Q V	.	.	.	.
8.417	3.0359	5.94	.Q V	.	.	.	.
8.500	3.0770	5.98	.Q V	.	.	.	.
8.583	3.1185	6.02	.Q V	.	.	.	.
8.667	3.1602	6.06	.Q V	.	.	.	.
8.750	3.2022	6.10	.Q V	.	.	.	.

8.833	3.2444	6.14	.Q	V	.	.	.	.
8.917	3.2870	6.18	.Q	V	.	.	.	.
9.000	3.3298	6.22	.Q	V	.	.	.	.
9.083	3.3729	6.26	.Q	V	.	.	.	.
9.167	3.4163	6.30	.Q	V	.	.	.	.
9.250	3.4600	6.34	.Q	V	.	.	.	.
9.333	3.5040	6.39	.Q	V	.	.	.	.
9.417	3.5483	6.43	.Q	V	.	.	.	.
9.500	3.5929	6.48	.Q	V	.	.	.	.
9.583	3.6379	6.53	.Q	V	.	.	.	.
9.667	3.6831	6.57	.Q	V	.	.	.	.
9.750	3.7288	6.62	.Q	V	.	.	.	.
9.833	3.7747	6.67	.Q	V	.	.	.	.
9.917	3.8210	6.72	.Q	V	.	.	.	.
10.000	3.8677	6.77	.Q	V	.	.	.	.
10.083	3.9147	6.83	.Q	V	.	.	.	.
10.167	3.9621	6.88	.Q	V	.	.	.	.
10.250	4.0098	6.93	.Q	V	.	.	.	.
10.333	4.0580	6.99	.Q	V	.	.	.	.
10.417	4.1065	7.05	.Q	V	.	.	.	.
10.500	4.1554	7.11	.Q	V	.	.	.	.
10.583	4.2048	7.17	.Q	V	.	.	.	.
10.667	4.2545	7.23	.Q	V	.	.	.	.
10.750	4.3047	7.29	.Q	V	.	.	.	.
10.833	4.3554	7.35	.Q	V	.	.	.	.
10.917	4.4064	7.42	.Q	V	.	.	.	.
11.000	4.4580	7.48	.Q	V	.	.	.	.
11.083	4.5100	7.55	.Q	V	.	.	.	.
11.167	4.5625	7.62	.Q	V	.	.	.	.
11.250	4.6155	7.69	.Q	V	.	.	.	.
11.333	4.6689	7.77	.Q	V	.	.	.	.
11.417	4.7229	7.84	.Q	V	.	.	.	.
11.500	4.7775	7.92	.Q	V	.	.	.	.
11.583	4.8326	8.00	.Q	V	.	.	.	.
11.667	4.8882	8.08	.Q	V	.	.	.	.
11.750	4.9444	8.16	.Q	V	.	.	.	.
11.833	5.0012	8.25	.Q	V	.	.	.	.
11.917	5.0586	8.34	.Q	V	.	.	.	.
12.000	5.1166	8.43	.Q	V	.	.	.	.
12.083	5.1754	8.53	.Q	V	.	.	.	.
12.167	5.2351	8.66	.Q	V	.	.	.	.
12.250	5.2957	8.81	.Q	V	.	.	.	.
12.333	5.3577	9.00	.Q	V	.	.	.	.
12.417	5.4214	9.25	.Q	V	.	.	.	.
12.500	5.4869	9.51	.Q	V	.	.	.	.
12.583	5.5543	9.79	.Q	V	.	.	.	.
12.667	5.6238	10.10	.Q	V	.	.	.	.
12.750	5.6958	10.45	.Q	V	.	.	.	.
12.833	5.7700	10.78	.Q	V	.	.	.	.
12.917	5.8466	11.11	.Q	V	.	.	.	.
13.000	5.9251	11.40	.Q	V	.	.	.	.
13.083	6.0054	11.67	.Q	V	.	.	.	.
13.167	6.0875	11.91	.Q	V	.	.	.	.
13.250	6.1711	12.14	.Q	V	.	.	.	.
13.333	6.2562	12.35	.Q	V	.	.	.	.
13.417	6.3427	12.57	.Q	V	.	.	.	.
13.500	6.4307	12.77	.Q	V	.	.	.	.
13.583	6.5201	12.98	.Q	V	.	.	.	.

13.667	6.6109	13.19	.Q	V.	.	.	.	.
13.750	6.7031	13.39	.Q	V.	.	.	.	.
13.833	6.7968	13.60	.Q	V	.	.	.	.
13.917	6.8920	13.82	.Q	V	.	.	.	.
14.000	6.9888	14.05	.Q	V	.	.	.	.
14.083	7.0873	14.31	.Q	V	.	.	.	.
14.167	7.1878	14.58	.Q	V	.	.	.	.
14.250	7.2903	14.89	.Q	V	.	.	.	.
14.333	7.3954	15.25	.Q	V	.	.	.	.
14.417	7.5033	15.67	.Q	.V	.	.	.	.
14.500	7.6143	16.11	.Q	.V	.	.	.	.
14.583	7.7285	16.58	.Q	.V	.	.	.	.
14.667	7.8463	17.10	.Q	.V	.	.	.	.
14.750	7.9679	17.67	.Q	.V	.	.	.	.
14.833	8.0936	18.24	.Q	.V	.	.	.	.
14.917	8.2233	18.84	.Q	.V	.	.	.	.
15.000	8.3571	19.43	.Q	.V	.	.	.	.
15.083	8.4950	20.02	.Q	.V	.	.	.	.
15.167	8.6372	20.64	.Q	.V	.	.	.	.
15.250	8.7838	21.28	.Q	.V	.	.	.	.
15.333	8.9350	21.96	.Q	.V	.	.	.	.
15.417	9.0911	22.66	.Q	.V	.	.	.	.
15.500	9.2519	23.36	.Q	.V	.	.	.	.
15.583	9.4180	24.11	.Q	.V	.	.	.	.
15.667	9.5888	24.81	.Q	.V	.	.	.	.
15.750	9.7648	25.55	.Q	.V	.	.	.	.
15.833	9.9469	26.44	.Q	.V	.	.	.	.
15.917	10.1372	27.63	.Q	.V	.	.	.	.
16.000	10.3390	29.30	.Q	.V	.	.	.	.
16.083	10.6053	38.67	.Q	.V	.	.	.	.
16.167	10.9471	49.62	.Q.	V	.	.	.	.
16.250	11.3693	61.29	.Q	V	.	.	.	.
16.333	11.9792	88.57	.	.Q	.	.	.	.
16.417	12.7483	111.68	.	.V	.Q	.	.	.
16.500	13.5939	122.77	.	.V	.Q	.	.	.
16.583	14.4983	131.33	.	.V	.Q	.	.	.
16.667	15.5103	146.93	.	.V	.Q.	.	.	.
16.750	16.6327	162.97	.	.V	.Q	.	.	.
16.833	17.6616	149.40	.	.V	.Q.	.	.	.
16.917	18.6548	144.21	.	.V	.Q.	.	.	.
17.000	19.4800	119.82	.	.Q	.V	.	.	.
17.083	20.1493	97.19	.	.Q.	.V.	.	.	.
17.167	20.7362	85.21	.	.Q	.V	.	.	.
17.250	21.1989	67.18	.	.Q	.V	.	.	.
17.333	21.5895	56.72	.	.Q	.V	.	.	.
17.417	21.9364	50.36	.	.Q	.V	.	.	.
17.500	22.2242	41.78	.	.Q	.V	.	.	.
17.583	22.4652	35.00	.	.Q	.V	.	.	.
17.667	22.6824	31.54	.	.Q	.V	.	.	.
17.750	22.8587	25.60	.	.Q	.V	.	.	.
17.833	23.0049	21.22	.Q	.	.V	.	.	.
17.917	23.1441	20.21	.Q	.	.V	.	.	.
18.000	23.2775	19.38	.Q	.	.V	.	.	.
18.083	23.4059	18.63	.Q	.	.V	.	.	.
18.167	23.5293	17.92	.Q	.	.V	.	.	.
18.250	23.6483	17.27	.Q	.	.V	.	.	.
18.333	23.7627	16.61	.Q	.	.V	.	.	.
18.417	23.8722	15.90	.Q	.	.V	.	.	.

18.500	23.9679	13.89	. Q	.	.	.	V	.
18.583	24.0519	12.20	. Q	.	.	.	V	.
18.667	24.1319	11.62	. Q	.	.	.	V	.
18.750	24.2082	11.07	. Q	.	.	.	V	.
18.833	24.2810	10.57	. Q	.	.	.	V	.
18.917	24.3505	10.09	. Q	.	.	.	V	.
19.000	24.4172	9.68	.Q	.	.	.	V	.
19.083	24.4814	9.33	.Q	.	.	.	V	.
19.167	24.5435	9.01	.Q	.	.	.	V	.
19.250	24.6036	8.73	.Q	.	.	.	V	.
19.333	24.6620	8.49	.Q	.	.	.	V	.
19.417	24.7189	8.26	.Q	.	.	.	V	.
19.500	24.7744	8.06	.Q	.	.	.	V	.
19.583	24.8286	7.87	.Q	.	.	.	V	.
19.667	24.8817	7.71	.Q	.	.	.	V	.
19.750	24.9337	7.55	.Q	.	.	.	V	.
19.833	24.9848	7.41	.Q	.	.	.	V	.
19.917	25.0349	7.28	.Q	.	.	.	V	.
20.000	25.0841	7.15	.Q	.	.	.	V	.
20.083	25.1325	7.03	.Q	.	.	.	V	.
20.167	25.1801	6.91	.Q	.	.	.	V	.
20.250	25.2270	6.80	.Q	.	.	.	V	.
20.333	25.2730	6.69	.Q	.	.	.	V	.
20.417	25.3184	6.59	.Q	.	.	.	V	.
20.500	25.3631	6.49	.Q	.	.	.	V	.
20.583	25.4071	6.40	.Q	.	.	.	V	.
20.667	25.4506	6.31	.Q	.	.	.	V	.
20.750	25.4934	6.22	.Q	.	.	.	V	.
20.833	25.5357	6.14	.Q	.	.	.	V	.
20.917	25.5775	6.06	.Q	.	.	.	V	.
21.000	25.6187	5.98	.Q	.	.	.	V	.
21.083	25.6594	5.91	.Q	.	.	.	V	.
21.167	25.6996	5.84	.Q	.	.	.	V	.
21.250	25.7393	5.77	.Q	.	.	.	V	.
21.333	25.7785	5.70	.Q	.	.	.	V	.
21.417	25.8173	5.63	.Q	.	.	.	V	.
21.500	25.8557	5.57	.Q	.	.	.	V	.
21.583	25.8936	5.51	.Q	.	.	.	V	.
21.667	25.9312	5.45	.Q	.	.	.	V	.
21.750	25.9683	5.39	.Q	.	.	.	V	.
21.833	26.0050	5.33	.Q	.	.	.	V	.
21.917	26.0414	5.28	.Q	.	.	.	V	.
22.000	26.0773	5.22	.Q	.	.	.	V	.
22.083	26.1130	5.17	.Q	.	.	.	V	.
22.167	26.1482	5.12	.Q	.	.	.	V	.
22.250	26.1831	5.07	.Q	.	.	.	V	.
22.333	26.2177	5.02	.Q	.	.	.	V	.
22.417	26.2520	4.98	Q	.	.	.	V	.
22.500	26.2860	4.93	Q	.	.	.	V	.
22.583	26.3196	4.88	Q	.	.	.	V	.
22.667	26.3529	4.84	Q	.	.	.	V	.
22.750	26.3860	4.80	Q	.	.	.	V	.
22.833	26.4187	4.76	Q	.	.	.	V	.
22.917	26.4512	4.71	Q	.	.	.	V	.
23.000	26.4834	4.67	Q	.	.	.	V	.
23.083	26.5153	4.64	Q	.	.	.	V	.
23.167	26.5470	4.60	Q	.	.	.	V	.
23.250	26.5784	4.56	Q	.	.	.	V	.

23.333	26.6095	4.52	Q	.	.	.	V	.
23.417	26.6404	4.49	Q	.	.	.	V	.
23.500	26.6711	4.45	Q	.	.	.	V	.
23.583	26.7015	4.42	Q	.	.	.	V	.
23.667	26.7317	4.38	Q	.	.	.	V	.
23.750	26.7617	4.35	Q	.	.	.	V	.
23.833	26.7914	4.32	Q	.	.	.	V	.
23.917	26.8209	4.29	Q	.	.	.	V	.
24.000	26.8502	4.25	Q	.	.	.	V	.
24.083	26.8791	4.20	Q	.	.	.	V	.
24.167	26.9074	4.11	Q	.	.	.	V	.
24.250	26.9349	3.99	Q	.	.	.	V	.
24.333	26.9610	3.79	Q	.	.	.	V	.
24.417	26.9852	3.51	Q	.	.	.	V	.
24.500	27.0073	3.20	Q	.	.	.	V	.
24.583	27.0271	2.87	Q	.	.	.	V	.
24.667	27.0442	2.49	Q	.	.	.	V	.
24.750	27.0584	2.05	Q	.	.	.	V	.
24.833	27.0699	1.66	Q	.	.	.	V	.
24.917	27.0787	1.28	Q	.	.	.	V	.
25.000	27.0855	0.98	Q	.	.	.	V	.
25.083	27.0907	0.76	Q	.	.	.	V	.
25.167	27.0946	0.57	Q	.	.	.	V	.
25.250	27.0976	0.43	Q	.	.	.	V	.
25.333	27.0999	0.33	Q	.	.	.	V	.
25.417	27.1015	0.24	Q	.	.	.	V	.
25.500	27.1028	0.18	Q	.	.	.	V	.
25.583	27.1037	0.14	Q	.	.	.	V	.
25.667	27.1044	0.10	Q	.	.	.	V	.
25.750	27.1049	0.08	Q	.	.	.	V	.
25.833	27.1054	0.07	Q	.	.	.	V	.
25.917	27.1058	0.06	Q	.	.	.	V	.
26.000	27.1061	0.05	Q	.	.	.	V	.
26.083	27.1064	0.04	Q	.	.	.	V	.
26.167	27.1066	0.03	Q	.	.	.	V	.
26.250	27.1067	0.02	Q	.	.	.	V	.
26.333	27.1068	0.01	Q	.	.	.	V	.
26.417	27.1069	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%	1585.0
10%	230.0
20%	95.0
30%	80.0
40%	60.0
50%	55.0
60%	40.0
70%	35.0
80%	25.0
90%	15.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133C *
* 2-YR EV APRIL 2019 FKAZI *

FILE NAME: EVO233CS.DAT
TIME/DATE OF STUDY: 13:31 04/10/2019

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 = 60992.500 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 5.933 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.573
LOW LOSS FRACTION = 0.910
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.15
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.29
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.41
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 0.75
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.09
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 1.91

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.308
30-MINUTE FACTOR = 0.363
1-HOUR FACTOR = 0.408
3-HOUR FACTOR = 0.754
6-HOUR FACTOR = 0.891
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 1.405

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.080	592.035
2	0.241	1184.050
3	0.401	1184.070
4	0.562	1184.055
5	0.722	1184.060
6	0.883	1184.060
7	1.043	1184.065
8	1.204	1184.060
9	1.364	1184.060
10	1.525	1184.055
11	1.685	1184.065
12	1.846	1184.050
13	2.019	1274.391
14	2.254	1736.649
15	2.498	1801.836
16	2.743	1801.828
17	2.987	1801.819
18	3.231	1801.866
19	3.476	1801.798
20	3.720	1801.858
21	3.977	1896.195
22	4.383	2998.749
23	4.833	3315.357
24	5.282	3315.315
25	5.732	3315.396
26	6.239	3742.546
27	6.830	4357.448
28	7.421	4362.298
29	8.034	4520.636
30	8.765	5392.413
31	9.514	5525.591
32	10.246	5400.348
33	10.949	5184.062
34	11.652	5180.299
35	12.354	5180.222
36	13.056	5180.215
37	13.764	5218.040
38	14.737	7181.627
39	15.834	8092.822
40	16.656	6063.377
41	17.405	5525.500
42	18.155	5525.514
43	18.904	5525.837
44	19.653	5526.315
45	20.502	6265.775
46	21.439	6907.497
47	22.451	7466.661
48	23.571	8264.311

49	24.498	6836.012
50	25.301	5920.251
51	26.103	5920.251
52	26.906	5920.251
53	27.712	5942.678
54	28.716	7406.248
55	29.827	8200.521
56	30.802	7192.439
57	31.750	6991.152
58	33.013	9313.418
59	34.328	9701.572
60	35.458	8330.984
61	36.387	6859.409
62	37.137	5525.345
63	37.945	5964.499
64	39.459	11166.731
65	40.819	10032.703
66	42.018	8839.640
67	43.324	9640.371
68	44.596	9380.739
69	45.826	9072.372
70	47.224	10314.114
71	48.800	11625.104
72	50.297	11038.506
73	51.332	7634.478
74	52.353	7534.446
75	53.375	7535.093
76	54.363	7287.645
77	55.300	6910.705
78	56.289	7297.888
79	57.407	8245.416
80	58.590	8724.893
81	59.863	9387.773
82	61.394	11296.899
83	62.740	9928.816
84	63.905	8595.428
85	64.914	7440.239
86	65.885	7163.274
87	66.814	6850.433
88	67.737	6809.407
89	68.815	7953.059
90	69.930	8219.754
91	70.795	6385.025
92	71.614	6041.401
93	72.484	6414.515
94	73.399	6750.429
95	74.296	6615.815
96	75.161	6381.199
97	75.992	6127.279
98	76.643	4801.572
99	77.267	4604.154
100	77.891	4605.448
101	78.515	4602.859
102	79.139	4605.392
103	79.764	4607.980
104	80.411	4769.551
105	81.072	4874.675
106	81.733	4874.675

107	82.352	4572.076
108	82.944	4361.827
109	83.535	4364.359
110	84.112	4254.114
111	84.650	3964.346
112	85.185	3946.450
113	85.720	3946.394
114	86.206	3584.817
115	86.638	3189.980
116	87.070	3187.392
117	87.502	3187.335
118	87.928	3141.245
119	88.280	2597.613
120	88.611	2438.632
121	88.941	2436.043
122	89.272	2441.165
123	89.602	2433.511
124	89.931	2428.333
125	90.236	2246.279
126	90.531	2179.647
127	90.827	2179.647
128	91.123	2184.712
129	91.418	2177.059
130	91.714	2184.769
131	92.006	2151.453
132	92.276	1995.004
133	92.544	1971.874
134	92.811	1974.519
135	93.079	1974.463
136	93.347	1974.519
137	93.614	1969.342
138	93.881	1974.463
139	94.100	1610.354
140	94.278	1312.932
141	94.456	1312.876
142	94.634	1318.053
143	94.813	1318.053
144	94.991	1312.876
145	95.170	1318.053
146	95.348	1312.876
147	95.526	1318.053
148	95.704	1312.876
149	95.883	1318.053
150	96.037	1133.410
151	96.148	820.568
152	96.259	815.447
153	96.368	810.270
154	96.478	810.326
155	96.588	810.326
156	96.699	820.568
157	96.808	805.149
158	96.919	815.447
159	97.030	815.447
160	97.139	810.270
161	97.249	810.326
162	97.360	815.447
163	97.470	810.326
164	97.580	815.391

165	97.691	815.447
166	97.801	810.326
167	97.910	810.326
168	98.002	671.830
169	98.031	215.370
170	98.058	200.007
171	98.084	194.886
172	98.110	189.765
173	98.136	194.886
174	98.163	194.886
175	98.189	194.886
176	98.216	194.886
177	98.241	189.765
178	98.268	194.886
179	98.295	200.007
180	98.321	189.765
181	98.347	194.886
182	98.374	200.007
183	98.401	194.886
184	98.426	189.765
185	98.453	194.886
186	98.479	189.765
187	98.505	194.886
188	98.532	200.007
189	98.558	189.708
190	98.584	194.886
191	98.611	194.886
192	98.638	200.063
193	98.662	179.466
194	98.690	205.128
195	98.716	194.886
196	98.741	184.643
197	98.769	205.128
198	98.796	194.886
199	98.821	184.643
200	98.847	194.886
201	98.875	205.128
202	98.900	184.643
203	98.926	194.886
204	98.954	205.128
205	98.979	184.643
206	99.006	194.886
207	99.031	184.643
208	99.056	184.643
209	99.081	184.643
210	99.106	184.643
211	99.131	184.643
212	99.156	184.643
213	99.181	184.643
214	99.206	184.643
215	99.231	184.643
216	99.256	184.643
217	99.281	184.643
218	99.306	184.643
219	99.331	184.643
220	99.356	184.643
221	99.381	184.643
222	99.406	184.643

223	99.431	184.643
224	99.456	184.643
225	99.481	184.643
226	99.506	184.643
227	99.531	184.643
228	99.556	184.643
229	99.581	184.643
230	99.606	184.643
231	99.631	184.643
232	99.656	184.643
233	99.681	184.643
234	99.706	184.643
235	99.731	184.643
236	99.757	184.643
237	99.782	184.643
238	99.807	184.643
239	99.832	184.643
240	99.857	184.643
241	99.882	184.643
242	99.907	184.643
243	99.932	184.643
244	99.957	184.643
245	99.982	184.643
246	100.000	134.276

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 8294.1377
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 819.8754

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.	200.0	400.0	600.0	800.0
0.083	0.0010	0.15	Q	.	.	.	.
0.167	0.0040	0.44	Q	.	.	.	.
0.250	0.0091	0.73	Q	.	.	.	.
0.333	0.0162	1.03	Q	.	.	.	.
0.417	0.0253	1.33	Q	.	.	.	.
0.500	0.0365	1.62	Q	.	.	.	.
0.583	0.0497	1.92	Q	.	.	.	.
0.667	0.0650	2.22	Q	.	.	.	.
0.750	0.0823	2.52	Q	.	.	.	.
0.833	0.1018	2.82	Q	.	.	.	.
0.917	0.1233	3.12	Q	.	.	.	.
1.000	0.1468	3.42	Q	.	.	.	.
1.083	0.1727	3.75	Q	.	.	.	.
1.167	0.2015	4.19	Q	.	.	.	.
1.250	0.2335	4.65	Q	.	.	.	.
1.333	0.2687	5.11	Q	.	.	.	.
1.417	0.3071	5.57	Q	.	.	.	.
1.500	0.3486	6.03	Q	.	.	.	.
1.583	0.3934	6.50	Q	.	.	.	.
1.667	0.4413	6.96	Q	.	.	.	.
1.750	0.4927	7.45	Q	.	.	.	.
1.833	0.5493	8.22	Q	.	.	.	.
1.917	0.6117	9.06	Q	.	.	.	.
2.000	0.6799	9.91	Q	.	.	.	.
2.083	0.7541	10.76	Q	.	.	.	.
2.167	0.8348	11.72	Q	.	.	.	.
2.250	0.9232	12.84	Q	.	.	.	.
2.333	1.0194	13.96	Q	.	.	.	.
2.417	1.1235	15.12	Q	.	.	.	.
2.500	1.2371	16.50	Q	.	.	.	.
2.583	1.3605	17.92	Q	.	.	.	.
2.667	1.4935	19.31	Q	.	.	.	.
2.750	1.6358	20.65	VQ	.	.	.	.
2.833	1.7873	22.00	VQ	.	.	.	.
2.917	1.9481	23.35	VQ	.	.	.	.
3.000	2.1182	24.71	VQ	.	.	.	.
3.083	2.2978	26.07	VQ	.	.	.	.
3.167	2.4902	27.93	VQ	.	.	.	.
3.250	2.6969	30.02	VQ	.	.	.	.
3.333	2.9147	31.62	VQ	.	.	.	.
3.417	3.1426	33.08	VQ	.	.	.	.
3.500	3.3806	34.56	VQ	.	.	.	.
3.583	3.6287	36.03	VQ	.	.	.	.
3.667	3.8871	37.52	VQ	.	.	.	.
3.750	4.1570	39.19	VQ	.	.	.	.
3.833	4.4395	41.02	V Q	.	.	.	.
3.917	4.7356	43.00	V Q	.	.	.	.

4.000	5.0468	45.18	V Q	.	.	.	.
4.083	5.3706	47.02	V Q	.	.	.	.
4.167	5.7055	48.63	V Q	.	.	.	.
4.250	6.0516	50.26	V Q	.	.	.	.
4.333	6.4090	51.88	V Q	.	.	.	.
4.417	6.7776	53.52	V Q	.	.	.	.
4.500	7.1600	55.53	V Q	.	.	.	.
4.583	7.5577	57.74	V Q	.	.	.	.
4.667	7.9689	59.71	V Q	.	.	.	.
4.750	8.3934	61.63	V Q	.	.	.	.
4.833	8.8351	64.14	V Q	.	.	.	.
4.917	9.2949	66.75	V Q	.	.	.	.
5.000	9.7703	69.04	V Q	.	.	.	.
5.083	10.2590	70.96	V Q	.	.	.	.
5.167	10.7588	72.56	V Q	.	.	.	.
5.250	11.2703	74.28	V Q	.	.	.	.
5.333	11.8027	77.29	V Q	.	.	.	.
5.417	12.3539	80.03	V Q	.	.	.	.
5.500	12.9220	82.49	V Q	.	.	.	.
5.583	13.5084	85.15	V Q	.	.	.	.
5.667	14.1128	87.76	V Q	.	.	.	.
5.750	14.7347	90.30	V Q	.	.	.	.
5.833	15.3763	93.16	V Q	.	.	.	.
5.917	16.0399	96.35	V Q	.	.	.	.
6.000	16.7246	99.41	V Q	.	.	.	.
6.083	17.4246	101.64	V Q	.	.	.	.
6.167	18.1398	103.85	V Q	.	.	.	.
6.250	18.8703	106.07	V Q	.	.	.	.
6.333	19.6158	108.24	V Q	.	.	.	.
6.417	20.3756	110.33	V Q	.	.	.	.
6.500	21.1505	112.52	.V Q	.	.	.	.
6.583	21.9422	114.95	.V Q	.	.	.	.
6.667	22.7515	117.51	.V Q	.	.	.	.
6.750	23.5796	120.24	.V Q	.	.	.	.
6.833	24.4299	123.46	.V Q	.	.	.	.
6.917	25.3001	126.35	.V Q	.	.	.	.
7.000	26.1880	128.93	.V Q	.	.	.	.
7.083	27.0918	131.23	.V Q	.	.	.	.
7.167	28.0110	133.47	.V Q	.	.	.	.
7.250	28.9451	135.64	.V Q	.	.	.	.
7.333	29.8943	137.81	.V Q	.	.	.	.
7.417	30.8604	140.28	.V Q	.	.	.	.
7.500	31.8440	142.82	.V Q	.	.	.	.
7.583	32.8421	144.92	.V Q	.	.	.	.
7.667	33.8541	146.95	.V Q	.	.	.	.
7.750	34.8807	149.07	.V Q	.	.	.	.
7.833	35.9227	151.29	.V Q	.	.	.	.
7.917	36.9798	153.49	.V Q	.	.	.	.
8.000	38.0517	155.64	.V Q	.	.	.	.
8.083	39.1381	157.74	.V Q	.	.	.	.
8.167	40.2367	159.52	.V Q	.	.	.	.
8.250	41.3473	161.26	. V Q	.	.	.	.
8.333	42.4700	163.02	. V Q	.	.	.	.
8.417	43.6048	164.78	. V Q	.	.	.	.
8.500	44.7519	166.55	. V Q	.	.	.	.
8.583	45.9112	168.33	. V Q	.	.	.	.
8.667	47.0831	170.17	. V Q	.	.	.	.
8.750	48.2680	172.04	. V Q	.	.	.	.

8.833	49.4658	173.92	. V	Q .	.	.	.
8.917	50.6761	175.74	. V	Q .	.	.	.
9.000	51.8986	177.52	. V	Q .	.	.	.
9.083	53.1335	179.30	. V	Q .	.	.	.
9.167	54.3806	181.08	. V	Q .	.	.	.
9.250	55.6395	182.79	. V	Q .	.	.	.
9.333	56.9103	184.51	. V	Q .	.	.	.
9.417	58.1929	186.24	. V	Q .	.	.	.
9.500	59.4870	187.90	. V	Q .	.	.	.
9.583	60.7919	189.47	. V	Q .	.	.	.
9.667	62.1076	191.05	. V	Q .	.	.	.
9.750	63.4343	192.64	. V	Q .	.	.	.
9.833	64.7720	194.23	. V	Q .	.	.	.
9.917	66.1199	195.70	. V	Q .	.	.	.
10.000	67.4776	197.15	. V	Q .	.	.	.
10.083	68.8454	198.60	. V	Q .	.	.	.
10.167	70.2233	200.07	. V	Q .	.	.	.
10.250	71.6114	201.55	. V	Q .	.	.	.
10.333	73.0098	203.04	. V	Q .	.	.	.
10.417	74.4182	204.50	. V	Q .	.	.	.
10.500	75.8366	205.96	. V	Q .	.	.	.
10.583	77.2652	207.43	. V	Q .	.	.	.
10.667	78.7041	208.92	. V	Q .	.	.	.
10.750	80.1532	210.42	. V	Q .	.	.	.
10.833	81.6129	211.94	. V	Q .	.	.	.
10.917	83.0829	213.46	. V	Q .	.	.	.
11.000	84.5634	214.96	. V	Q .	.	.	.
11.083	86.0542	216.47	. V	Q .	.	.	.
11.167	87.5555	218.00	. V	Q .	.	.	.
11.250	89.0675	219.53	. V	Q .	.	.	.
11.333	90.5902	221.10	. V	.Q	.	.	.
11.417	92.1237	222.67	. V	.Q	.	.	.
11.500	93.6683	224.27	. V	.Q	.	.	.
11.583	95.2233	225.79	. V	.Q	.	.	.
11.667	96.7884	227.26	. V	.Q	.	.	.
11.750	98.3637	228.74	. V	.Q	.	.	.
11.833	99.9495	230.25	. V	.Q	.	.	.
11.917	101.5457	231.77	. V	.Q	.	.	.
12.000	103.1526	233.32	. V	.Q	.	.	.
12.083	104.7719	235.13	. V	.Q	.	.	.
12.167	106.4057	237.22	. V	.Q	.	.	.
12.250	108.0540	239.33	. V	.Q	.	.	.
12.333	109.7169	241.45	. V	.Q	.	.	.
12.417	111.3945	243.60	. V	.Q	.	.	.
12.500	113.0869	245.72	. V	.Q	.	.	.
12.583	114.7934	247.79	. V	.Q	.	.	.
12.667	116.5143	249.88	. V	.Q	.	.	.
12.750	118.2497	251.98	. V	.Q	.	.	.
12.833	119.9998	254.12	. V	.Q	.	.	.
12.917	121.7647	256.27	. V	.Q	.	.	.
13.000	123.5447	258.45	. V	.Q	.	.	.
13.083	125.3401	260.69	. V	.Q	.	.	.
13.167	127.1526	263.16	. V	.Q	.	.	.
13.250	128.9823	265.68	. V	.Q	.	.	.
13.333	130.8296	268.23	. V	.Q	.	.	.
13.417	132.6946	270.80	. V	.Q	.	.	.
13.500	134.5775	273.40	. V	.Q	.	.	.
13.583	136.4785	276.03	. V	.Q	.	.	.

13.667	138.3979	278.70	. V	. Q	.	.	.
13.750	140.3361	281.42	. V	. Q	.	.	.
13.833	142.2966	284.66	. V	. Q	.	.	.
13.917	144.2804	288.05	. V	. Q	.	.	.
14.000	146.2876	291.45	. V	. Q	.	.	.
14.083	148.3195	295.03	. V	. Q	.	.	.
14.167	150.3793	299.08	. V	. Q	.	.	.
14.250	152.4688	303.40	. V	. Q	.	.	.
14.333	154.5881	307.74	. V	. Q	.	.	.
14.417	156.7379	312.15	. V	. Q	.	.	.
14.500	158.9207	316.95	. V	. Q	.	.	.
14.583	161.1371	321.81	. V	. Q	.	.	.
14.667	163.3866	326.64	. V	. Q	.	.	.
14.750	165.6688	331.37	. V	. Q	.	.	.
14.833	167.9838	336.14	. V	. Q	.	.	.
14.917	170.3316	340.90	. V	. Q	.	.	.
15.000	172.7124	345.69	. V	. Q	.	.	.
15.083	175.1265	350.53	. V	. Q	.	.	.
15.167	177.5813	356.44	. V	. Q	.	.	.
15.250	180.0796	362.75	. V	. Q	.	.	.
15.333	182.6155	368.21	. V	. Q	.	.	.
15.417	185.1850	373.09	. V	. Q	.	.	.
15.500	187.7860	377.66	. V	. Q	.	.	.
15.583	190.4189	382.30	. V	. Q	.	.	.
15.667	193.0845	387.04	. V	. Q	.	.	.
15.750	195.7847	392.08	. V	. Q	.	.	.
15.833	198.5249	397.87	. V	. Q	.	.	.
15.917	201.3092	404.28	. V	. Q	.	.	.
16.000	204.1430	411.46	. V	. Q	.	.	.
16.083	207.0343	419.82	. V	. Q	.	.	.
16.167	209.9795	427.64	. V	.Q	.	.	.
16.250	212.9672	433.81	. V	.Q	.	.	.
16.333	215.9967	439.89	. V	.Q	.	.	.
16.417	219.0698	446.21	. V	.Q	.	.	.
16.500	222.1938	453.60	. V	.Q	.	.	.
16.583	225.3713	461.36	. V	.Q	.	.	.
16.667	228.5991	468.68	. V	.Q	.	.	.
16.750	231.8761	475.81	. V	.Q	.	.	.
16.833	235.2084	483.86	. V	.Q	.	.	.
16.917	238.5975	492.10	. V	.Q	.	.	.
17.000	242.0407	499.95	. V	.Q	.	.	.
17.083	245.5343	507.27	. V	.Q	.	.	.
17.167	249.0806	514.92	. V	.Q	.	.	.
17.250	252.6730	521.62	. V	.Q	.	.	.
17.333	256.3190	529.39	. V	.Q	.	.	.
17.417	260.0132	536.41	. V	.Q	.	.	.
17.500	263.7509	542.71	. V	.Q	.	.	.
17.583	267.5324	549.08	. V	.Q	.	.	.
17.667	271.3603	555.80	. V	.Q	.	.	.
17.750	275.2408	563.45	. V	.Q	.	.	.
17.833	279.1946	574.09	. V	.Q	.	.	.
17.917	283.2073	582.65	. V	.Q	.	.	.
18.000	287.2747	590.60	. V	.Q	.	.	.
18.083	291.3830	596.52	. V	.Q	.	.	.
18.167	295.5378	603.28	. V	.Q	.	.	.
18.250	299.7423	610.49	. V	.Q	.	.	.
18.333	303.9849	616.02	. V	.Q	.	.	.
18.417	308.2694	622.12	. V	.Q	.	.	.

18.500	312.6072	629.85	.	.	V	.	.Q	.
18.583	316.9846	635.60	.	.	V	.	.Q	.
18.667	321.4035	641.63	.	.	V	.	.Q	.
18.750	325.8663	647.99	.	.	V	.	.Q	.
18.833	330.3871	656.42	.	.	V	.	.Q	.
18.917	334.9618	664.25	.	.	V	.	.Q	.
19.000	339.5889	671.85	.	.	V	.	.Q	.
19.083	344.2633	678.72	.	.	V	.	.Q	.
19.167	349.0073	688.83	.	.	V	.	.Q	.
19.250	353.7833	693.47	.	.	V	.	.Q	.
19.333	358.5460	691.54	.	.	V	.	.Q	.
19.417	363.3333	695.13	.	.	V	.	.Q	.
19.500	368.1609	700.96	.	.	V	.	.Q	.
19.583	373.0309	707.12	.	.	V	.	.Q	.
19.667	377.9366	712.31	.	.	V	.	.Q	.
19.750	382.8939	719.80	.	.	V	.	.Q	.
19.833	387.8962	726.34	.	.	V	.	.Q	.
19.917	392.9369	731.91	.	.	V	.	.Q	.
20.000	398.0127	737.00	.	.	V	.	.Q	.
20.083	403.0685	734.11	.	.	V	.	.Q	.
20.167	408.0980	730.28	.	.	V	.	.Q	.
20.250	413.1157	728.57	.	.	V	.	.Q	.
20.333	418.1424	729.88	.	.	V	.	.Q	.
20.417	423.1862	732.36	.	.	V	.	.Q	.
20.500	428.2695	738.09	.	.	V	.	.Q	.
20.583	433.3704	740.65	.	.	.V	.	.Q	.
20.667	438.4389	735.96	.	.	.V	.	.Q	.
20.750	443.5065	735.81	.	.	.V	.	.Q	.
20.833	448.6333	744.41	.	.	.V	.	.Q	.
20.917	453.7599	744.39	.	.	.V	.	.Q	.
21.000	458.8292	736.06	.	.	.V	.	.Q	.
21.083	463.8452	728.32	.	.	.V	.	.Q	.
21.167	468.8287	723.60	.	.	.V	.	.Q	.
21.250	473.8208	724.86	.	.	.V	.	.Q	.
21.333	478.9070	738.51	.	.	.V	.	.Q	.
21.417	483.9651	734.44	.	.	.V	.	.Q	.
21.500	488.9879	729.31	.	.	.V	.	.Q	.
21.583	493.9990	727.62	.	.	.V	.	.Q	.
21.667	499.0003	726.19	.	.	.V	.	.Q	.
21.750	504.0004	726.01	.	.	.V	.	.Q	.
21.833	509.0138	727.94	.	.	.V	.	.Q	.
21.917	514.0208	727.02	.	.	.V	.	.Q	.
22.000	518.9702	718.65	.	.	.V	.	.Q	.
22.083	523.8168	703.72	.	.	.V	.	.Q	.
22.167	528.6326	699.25	.	.	.V	.	.Q	.
22.250	533.4281	696.30	.	.	.V	.	.Q	.
22.333	538.1903	691.47	.	.	.V	.	.Q	.
22.417	542.9152	686.05	.	.	.V	.	.Q	.
22.500	547.6177	682.81	.	.	.V	.	.Q	.
22.583	552.3070	680.88	.	.	.V	.	.Q	.
22.667	556.9799	678.50	.	.	.V	.	.Q	.
22.750	561.6349	675.91	.	.	.V	.	.Q	.
22.833	566.2732	673.48	.	.	.V	.	.Q	.
22.917	570.8251	660.94	.	.	.V	.	.Q	.
23.000	575.2996	649.69	.	.	.V	.	.Q	.
23.083	579.7153	641.15	.	.	.V	.	.Q	.
23.167	584.1027	637.06	.	.	.V	.	.Q	.
23.250	588.4626	633.06	.	.	.V	.	.Q	.

23.333	592.7877	627.99	.	.	.	.	V	.Q	.
23.417	597.0968	625.69	.	.	.	.	V	.Q	.
23.500	601.3689	620.31	.	.	.	.	V	.Q	.
23.583	605.5562	608.00	.	.	.	.	VQ	.	.
23.667	609.6912	600.40	.	.	.	.	VQ	.	.
23.750	613.7906	595.23	.	.	.	.	Q	.	.
23.833	617.8450	588.69	.	.	.	.	QV	.	.
23.917	621.8342	579.23	.	.	.	.	Q	V	.
24.000	625.7554	569.36	.	.	.	.	Q	V	.
24.083	629.6180	560.85	.	.	.	.	Q	V	.
24.167	633.4046	549.81	.	.	.	.	Q	V	.
24.250	637.1432	542.85	.	.	.	.	Q	.V	.
24.333	640.8393	536.67	.	.	.	.	Q	.V	.
24.417	644.4897	530.05	.	.	.	.	Q	.V	.
24.500	648.0878	522.44	.	.	.	.	Q	.V	.
24.583	651.6364	515.25	.	.	.	.	Q	.V	.
24.667	655.1382	508.46	.	.	.	.	Q	.V	.
24.750	658.5873	500.82	.	.	.	.	Q	.V	.
24.833	661.9749	491.87	.	.	.	.	Q	.V	.
24.917	665.3005	482.88	.	.	.	.	Q	.V	.
25.000	668.5708	474.85	.	.	.	.	Q	.V	.
25.083	671.7936	467.95	.	.	.	.	Q	.V	.
25.167	674.9710	461.36	.	.	.	.	Q	.V	.
25.250	678.1035	454.83	.	.	.	.	Q	.V	.
25.333	681.1960	449.04	.	.	.	.	Q	.V	.
25.417	684.2440	442.55	.	.	.	.	Q	.V	.
25.500	687.2385	434.81	.	.	.	.	.Q	.V	.
25.583	690.1844	427.74	.	.	.	.	.Q	.V	.
25.667	693.0897	421.85	.	.	.	.	.Q	.V	.
25.750	695.9526	415.69	.	.	.	.	Q	.V	.
25.833	698.7669	408.63	.	.	.	.	Q	.V	.
25.917	701.5225	400.10	.	.	.	.	Q	.V	.
26.000	704.2292	393.03	.	.	.	.	Q	.V	.
26.083	706.8905	386.41	.	.	.	.	Q	.V	.
26.167	709.5101	380.36	.	.	.	.	Q	.V	.
26.250	712.0861	374.03	.	.	.	.	Q	.V	.
26.333	714.6180	367.63	.	.	.	.	Q	.V	.
26.417	717.1023	360.72	.	.	.	.	Q	.V	.
26.500	719.5409	354.08	.	.	.	.	Q	.V	.
26.583	721.9354	347.68	.	.	.	.	Q	.V	.
26.667	724.2861	341.33	.	.	.	.	Q	.V	.
26.750	726.5924	334.88	.	.	.	.	Q	.V	.
26.833	728.8543	328.43	.	.	.	.	Q	.V	.
26.917	731.0748	322.41	.	.	.	.	Q	.V	.
27.000	733.2542	316.46	.	.	.	.	Q	.V	.
27.083	735.3956	310.94	.	.	.	.	Q	.V	.
27.167	737.4967	305.07	.	.	.	.	Q	.V	.
27.250	739.5573	299.19	.	.	.	.	Q	.V	.
27.333	741.5806	293.79	.	.	.	.	Q	.V	.
27.417	743.5673	288.47	.	.	.	.	Q	.V	.
27.500	745.5175	283.16	.	.	.	.	Q	.V	.
27.583	747.4249	276.96	.	.	.	.	Q	.V	.
27.667	749.2927	271.20	.	.	.	.	Q	.V	.
27.750	751.1263	266.24	.	.	.	.	Q	.V	.
27.833	752.9262	261.35	.	.	.	.	Q	.V	.
27.917	754.6935	256.60	.	.	.	.	Q	.V	.
28.000	756.4260	251.57	.	.	.	.	Q	.V	.
28.083	758.1251	246.70	.	.	.	.	Q	.V	.

28.167	759.7922	242.07	.	.	Q	.	.	V	.
28.250	761.4281	237.53	.	.	.Q	.	.	V	.
28.333	763.0320	232.88	.	.	.Q	.	.	V	.
28.417	764.6037	228.21	.	.	.Q	.	.	V	.
28.500	766.1367	222.58	.	.	.Q	.	.	V	.
28.583	767.6292	216.72	.	.	Q	.	.	V	.
28.667	769.0912	212.28	.	.	Q	.	.	V	.
28.750	770.5235	207.97	.	.	Q	.	.	V	.
28.833	771.9221	203.08	.	.	Q	.	.	V	.
28.917	773.2857	197.99	.	.	Q.	.	.	V	.
29.000	774.6174	193.35	.	.	Q.	.	.	V	.
29.083	775.9193	189.04	.	.	Q.	.	.	V	.
29.167	777.1946	185.17	.	.	Q.	.	.	V	.
29.250	778.4423	181.17	.	.	Q.	.	.	V	.
29.333	779.6544	175.99	.	.	Q	.	.	V	.
29.417	780.8348	171.40	.	.	Q	.	.	V	.
29.500	781.9864	167.21	.	.	Q	.	.	V	.
29.583	783.1096	163.09	.	.	Q	.	.	V	.
29.667	784.2062	159.23	.	.	Q	.	.	V	.
29.750	785.2773	155.52	.	.	Q	.	.	V	.
29.833	786.3203	151.45	.	.	Q	.	.	V	.
29.917	787.3320	146.90	.	.	Q	.	.	V	.
30.000	788.3099	141.98	.	.	Q	.	.	V	.
30.083	789.2546	137.17	.	.	Q	.	.	V	.
30.167	790.1764	133.85	.	.	Q	.	.	V	.
30.250	791.0758	130.60	.	.	Q	.	.	V	.
30.333	791.9534	127.43	.	.	Q	.	.	V	.
30.417	792.8085	124.16	.	.	Q	.	.	V	.
30.500	793.6408	120.85	.	.	Q	.	.	V	.
30.583	794.4496	117.44	.	.	Q	.	.	V	.
30.667	795.2343	113.93	.	.	Q	.	.	V	.
30.750	795.9936	110.26	.	.	Q	.	.	V	.
30.833	796.7247	106.15	.	.	Q	.	.	V	.
30.917	797.4299	102.39	.	.	Q	.	.	V	.
31.000	798.1117	99.00	.	.	Q	.	.	V	.
31.083	798.7740	96.17	.	.	Q	.	.	V	.
31.167	799.4175	93.44	.	.	Q	.	.	V	.
31.250	800.0427	90.78	.	.	Q	.	.	V	.
31.333	800.6498	88.16	.	.	Q	.	.	V	.
31.417	801.2374	85.32	.	.	Q	.	.	V	.
31.500	801.8049	82.40	.	.	Q	.	.	V	.
31.583	802.3558	79.99	.	.	Q	.	.	V	.
31.667	802.8909	77.69	.	.	Q	.	.	V	.
31.750	803.4092	75.27	.	.	Q	.	.	V	.
31.833	803.9108	72.83	.	.	Q	.	.	V	.
31.917	804.3959	70.43	.	.	Q	.	.	V	.
32.000	804.8654	68.18	.	.	Q	.	.	V	.
32.083	805.3209	66.13	.	.	Q	.	.	V	.
32.167	805.7656	64.57	.	.	Q	.	.	V	.
32.250	806.1992	62.96	.	.	Q	.	.	V	.
32.333	806.6220	61.39	.	.	Q	.	.	V	.
32.417	807.0345	59.90	.	.	Q	.	.	V	.
32.500	807.4363	58.33	.	.	Q	.	.	V	.
32.583	807.8269	56.72	.	.	Q	.	.	V	.
32.667	808.2066	55.13	.	.	Q	.	.	V	.
32.750	808.5753	53.54	.	.	Q	.	.	V	.
32.833	808.9326	51.87	.	.	Q	.	.	V	.
32.917	809.2795	50.37	.	.	Q	.	.	V	.

33.000	809.6165	48.93	.	Q	.	.	.	V	.
33.083	809.9431	47.43	.	Q	.	.	.	V	.
33.167	810.2601	46.03	.	Q	.	.	.	V	.
33.250	810.5677	44.66	.	Q	.	.	.	V	.
33.333	810.8663	43.36	.	Q	.	.	.	V	.
33.417	811.1558	42.03	.	Q	.	.	.	V	.
33.500	811.4370	40.82	.	Q	.	.	.	V	.
33.583	811.7106	39.72	.	Q	.	.	.	V	.
33.667	811.9765	38.61	.	.Q	.	.	.	V	.
33.750	812.2348	37.51	.	.Q	.	.	.	V	.
33.833	812.4857	36.43	.	.Q	.	.	.	V	.
33.917	812.7302	35.49	.	.Q	.	.	.	V	.
34.000	812.9684	34.59	.	.Q	.	.	.	V	.
34.083	813.2006	33.71	.	.Q	.	.	.	V	.
34.167	813.4266	32.82	.	.Q	.	.	.	V	.
34.250	813.6465	31.94	.	.Q	.	.	.	V	.
34.333	813.8605	31.07	.	.Q	.	.	.	V	.
34.417	814.0688	30.24	.	.Q	.	.	.	V	.
34.500	814.2714	29.42	.	.Q	.	.	.	V	.
34.583	814.4680	28.54	.	.Q	.	.	.	V	.
34.667	814.6584	27.66	.	.Q	.	.	.	V	.
34.750	814.8430	26.79	.	.Q	.	.	.	V	.
34.833	815.0215	25.93	.	.Q	.	.	.	V	.
34.917	815.1943	25.08	.	.Q	.	.	.	V	.
35.000	815.3614	24.27	.	.Q	.	.	.	V	.
35.083	815.5231	23.48	.	.Q	.	.	.	V	.
35.167	815.6793	22.69	.	.Q	.	.	.	V	.
35.250	815.8302	21.91	.	.Q	.	.	.	V	.
35.333	815.9758	21.13	.	.Q	.	.	.	V	.
35.417	816.1160	20.37	.	.Q	.	.	.	V	.
35.500	816.2510	19.61	.	Q	.	.	.	V	.
35.583	816.3815	18.94	.	Q	.	.	.	V	.
35.667	816.5079	18.35	.	Q	.	.	.	V	.
35.750	816.6302	17.77	.	Q	.	.	.	V	.
35.833	816.7489	17.22	.	Q	.	.	.	V	.
35.917	816.8643	16.76	.	Q	.	.	.	V	.
36.000	816.9765	16.29	.	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%	1590.0
20%	1330.0
30%	1020.0
40%	790.0
50%	655.0
60%	535.0
70%	440.0
80%	340.0
90%	235.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133T *
* 2-YR EV JANUARY 2018 ROKAMOTO *

FILE NAME: EVO233TS.DAT
TIME/DATE OF STUDY: 06:42 01/03/2019

FLOW PROCESS FROM NODE 13010.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 6640.500 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) = 0.477
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 = 0.986

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

UNIT HYDROGRAPH DETERMINATION

Table with 3 columns: INTERVAL NUMBER, "S" GRAPH MEAN VALUES, UNIT HYDROGRAPH ORDINATES (CFS). Rows 1-48.

49	96.676	283.382
50	97.028	283.382
51	97.381	283.033
52	97.734	283.382
53	98.012	223.392
54	98.105	74.811
55	98.189	67.661
56	98.274	67.667
57	98.358	68.010
58	98.443	67.661
59	98.527	67.661
60	98.611	67.667
61	98.696	68.010
62	98.780	67.661
63	98.864	67.661
64	98.948	67.667
65	99.033	67.661
66	99.117	67.661
67	99.201	67.661
68	99.285	67.661
69	99.370	67.661
70	99.454	67.661
71	99.538	67.661
72	99.622	67.661
73	99.707	67.661
74	99.791	67.661
75	99.875	67.661
76	99.959	67.661
77	100.000	32.535

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 615.4011
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 170.6122

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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.	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	0.0133	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	0.0969	3.45	Q	.	.	.	.
1.000	0.1255	4.16	Q	.	.	.	.
1.083	0.1601	5.02	Q	.	.	.	.
1.167	0.1996	5.74	Q	.	.	.	.
1.250	0.2452	6.62	Q	.	.	.	.
1.333	0.2969	7.51	Q	.	.	.	.
1.417	0.3541	8.32	Q	.	.	.	.
1.500	0.4181	9.29	Q	.	.	.	.
1.583	0.4898	10.41	Q	.	.	.	.
1.667	0.5678	11.33	Q	.	.	.	.
1.750	0.6543	12.56	VQ	.	.	.	.
1.833	0.7493	13.80	VQ	.	.	.	.
1.917	0.8536	15.14	VQ	.	.	.	.
2.000	0.9648	16.15	VQ	.	.	.	.
2.083	1.0829	17.15	VQ	.	.	.	.
2.167	1.2098	18.42	VQ	.	.	.	.
2.250	1.3446	19.57	VQ	.	.	.	.
2.333	1.4860	20.54	VQ	.	.	.	.
2.417	1.6341	21.50	VQ	.	.	.	.
2.500	1.7883	22.39	VQ	.	.	.	.
2.583	1.9480	23.19	VQ	.	.	.	.
2.667	2.1123	23.85	VQ	.	.	.	.
2.750	2.2813	24.53	VQ	.	.	.	.
2.833	2.4548	25.20	V Q	.	.	.	.
2.917	2.6327	25.82	V Q	.	.	.	.
3.000	2.8144	26.39	V Q	.	.	.	.
3.083	2.9996	26.88	V Q	.	.	.	.
3.167	3.1877	27.31	V Q	.	.	.	.
3.250	3.3785	27.71	V Q	.	.	.	.
3.333	3.5720	28.09	V Q	.	.	.	.
3.417	3.7681	28.47	V Q	.	.	.	.
3.500	3.9666	28.83	V Q	.	.	.	.
3.583	4.1676	29.18	V Q	.	.	.	.
3.667	4.3707	29.50	.VQ	.	.	.	.
3.750	4.5758	29.77	.VQ	.	.	.	.
3.833	4.7827	30.05	.VQ	.	.	.	.
3.917	4.9916	30.32	.VQ	.	.	.	.

4.000	5.2019	30.54	.VQ	.	.	.	.
4.083	5.4138	30.76	.VQ	.	.	.	.
4.167	5.6271	30.98	.VQ	.	.	.	.
4.250	5.8420	31.20	.VQ	.	.	.	.
4.333	6.0583	31.42	.VQ	.	.	.	.
4.417	6.2761	31.62	.VQ	.	.	.	.
4.500	6.4948	31.76	.VQ	.	.	.	.
4.583	6.7146	31.91	.VQ	.	.	.	.
4.667	6.9354	32.06	.VQ	.	.	.	.
4.750	7.1572	32.21	.VQ	.	.	.	.
4.833	7.3801	32.36	.VQ	.	.	.	.
4.917	7.6040	32.51	.VQ	.	.	.	.
5.000	7.8289	32.66	.VQ	.	.	.	.
5.083	8.0550	32.82	.VQ	.	.	.	.
5.167	8.2821	32.97	.VQ	.	.	.	.
5.250	8.5103	33.13	.VQ	.	.	.	.
5.333	8.7396	33.29	.Q	.	.	.	.
5.417	8.9700	33.45	.Q	.	.	.	.
5.500	9.2015	33.62	.Q	.	.	.	.
5.583	9.4341	33.78	.Q	.	.	.	.
5.667	9.6679	33.94	.Q	.	.	.	.
5.750	9.9028	34.11	.Q	.	.	.	.
5.833	10.1389	34.28	.Q	.	.	.	.
5.917	10.3762	34.45	.Q	.	.	.	.
6.000	10.6146	34.62	.Q	.	.	.	.
6.083	10.8543	34.80	.Q	.	.	.	.
6.167	11.0952	34.97	.Q	.	.	.	.
6.250	11.3372	35.15	.Q	.	.	.	.
6.333	11.5806	35.33	.Q	.	.	.	.
6.417	11.8251	35.50	.Q	.	.	.	.
6.500	12.0706	35.66	.Q	.	.	.	.
6.583	12.3173	35.82	.Q	.	.	.	.
6.667	12.5651	35.98	.Q	.	.	.	.
6.750	12.8141	36.15	.QV	.	.	.	.
6.833	13.0642	36.31	.QV	.	.	.	.
6.917	13.3154	36.48	.QV	.	.	.	.
7.000	13.5679	36.65	.QV	.	.	.	.
7.083	13.8215	36.83	.QV	.	.	.	.
7.167	14.0763	37.00	.QV	.	.	.	.
7.250	14.3324	37.18	.QV	.	.	.	.
7.333	14.5897	37.36	.QV	.	.	.	.
7.417	14.8482	37.54	.Q	.	.	.	.
7.500	15.1080	37.72	.Q	.	.	.	.
7.583	15.3691	37.91	.Q	.	.	.	.
7.667	15.6315	38.10	.Q	.	.	.	.
7.750	15.8952	38.29	.Q	.	.	.	.
7.833	16.1603	38.49	.Q	.	.	.	.
7.917	16.4267	38.68	.Q	.	.	.	.
8.000	16.6945	38.88	.Q	.	.	.	.
8.083	16.9636	39.09	.Q	.	.	.	.
8.167	17.2342	39.29	.QV	.	.	.	.
8.250	17.5063	39.50	.QV	.	.	.	.
8.333	17.7797	39.71	.QV	.	.	.	.
8.417	18.0547	39.92	.QV	.	.	.	.
8.500	18.3311	40.14	.QV	.	.	.	.
8.583	18.6091	40.36	.QV	.	.	.	.
8.667	18.8886	40.58	.QV	.	.	.	.
8.750	19.1697	40.81	.QV	.	.	.	.

8.833	19.4523	41.04	.QV	.	.	.	.
8.917	19.7366	41.28	.QV	.	.	.	.
9.000	20.0225	41.51	.QV	.	.	.	.
9.083	20.3100	41.75	.QV	.	.	.	.
9.167	20.5993	42.00	.QV	.	.	.	.
9.250	20.8902	42.25	.QV	.	.	.	.
9.333	21.1829	42.50	.QV	.	.	.	.
9.417	21.4774	42.76	.Q V	.	.	.	.
9.500	21.7736	43.02	.Q V	.	.	.	.
9.583	22.0717	43.28	.Q V	.	.	.	.
9.667	22.3716	43.55	.Q V	.	.	.	.
9.750	22.6735	43.82	.Q V	.	.	.	.
9.833	22.9772	44.10	.Q V	.	.	.	.
9.917	23.2829	44.39	.Q V	.	.	.	.
10.000	23.5906	44.67	.Q V	.	.	.	.
10.083	23.9003	44.97	.Q V	.	.	.	.
10.167	24.2120	45.26	.Q V	.	.	.	.
10.250	24.5258	45.57	.Q V	.	.	.	.
10.333	24.8418	45.88	.Q V	.	.	.	.
10.417	25.1599	46.19	.Q V	.	.	.	.
10.500	25.4803	46.51	.Q V	.	.	.	.
10.583	25.8029	46.84	.Q V	.	.	.	.
10.667	26.1278	47.17	.Q V	.	.	.	.
10.750	26.4550	47.51	.Q V	.	.	.	.
10.833	26.7846	47.86	.Q V	.	.	.	.
10.917	27.1167	48.21	.Q V	.	.	.	.
11.000	27.4512	48.57	.Q V	.	.	.	.
11.083	27.7882	48.94	.Q V	.	.	.	.
11.167	28.1278	49.31	.Q V	.	.	.	.
11.250	28.4701	49.70	.Q V	.	.	.	.
11.333	28.8150	50.08	.Q V	.	.	.	.
11.417	29.1627	50.49	.Q V	.	.	.	.
11.500	29.5132	50.89	.Q V	.	.	.	.
11.583	29.8666	51.31	.Q V	.	.	.	.
11.667	30.2229	51.73	.Q V	.	.	.	.
11.750	30.5822	52.17	.Q V	.	.	.	.
11.833	30.9445	52.61	.Q V	.	.	.	.
11.917	31.3100	53.07	.Q V	.	.	.	.
12.000	31.6787	53.53	.Q V	.	.	.	.
12.083	32.0510	54.06	.Q V	.	.	.	.
12.167	32.4273	54.63	.Q V	.	.	.	.
12.250	32.8076	55.23	.Q V	.	.	.	.
12.333	33.1921	55.83	.Q V	.	.	.	.
12.417	33.5811	56.48	.Q V	.	.	.	.
12.500	33.9747	57.15	.Q V	.	.	.	.
12.583	34.3732	57.86	.Q V	.	.	.	.
12.667	34.7772	58.67	.Q V	.	.	.	.
12.750	35.1874	59.56	.Q V	.	.	.	.
12.833	35.6043	60.54	.Q V	.	.	.	.
12.917	36.0283	61.56	.Q V	.	.	.	.
13.000	36.4595	62.62	.Q V	.	.	.	.
13.083	36.8988	63.78	.Q V	.	.	.	.
13.167	37.3456	64.88	.Q V	.	.	.	.
13.250	37.8009	66.10	.Q V	.	.	.	.
13.333	38.2646	67.34	.Q V	.	.	.	.
13.417	38.7368	68.56	.Q V	.	.	.	.
13.500	39.2182	69.90	.Q V	.	.	.	.
13.583	39.7096	71.35	.Q V	.	.	.	.

13.667	40.2103	72.70	.	Q	V.	.	.	.
13.750	40.7219	74.28	.	Q	V.	.	.	.
13.833	41.2445	75.88	.	Q	V.	.	.	.
13.917	41.7789	77.59	.	Q	V.	.	.	.
14.000	42.3237	79.12	.	Q	V.	.	.	.
14.083	42.8804	80.83	.	Q	V	.	.	.
14.167	43.4511	82.87	.	Q	V	.	.	.
14.250	44.0357	84.88	.	Q	V	.	.	.
14.333	44.6336	86.82	.	Q	V	.	.	.
14.417	45.2458	88.89	.	Q	V	.	.	.
14.500	45.8727	91.02	.	Q	V	.	.	.
14.583	46.5147	93.21	.	Q	V	.	.	.
14.667	47.1733	95.63	.	Q	.V	.	.	.
14.750	47.8504	98.32	.	Q	.V	.	.	.
14.833	48.5480	101.29	.	Q	.V	.	.	.
14.917	49.2668	104.37	.	Q	.V	.	.	.
15.000	50.0073	107.53	.	Q	.V	.	.	.
15.083	50.7718	111.00	.	Q	.V	.	.	.
15.167	51.5585	114.23	.	Q	.V	.	.	.
15.250	52.3700	117.83	.	Q	.V	.	.	.
15.333	53.2069	121.52	.	Q	.V	.	.	.
15.417	54.0670	124.90	.	Q	.V	.	.	.
15.500	54.9514	128.41	.	Q	V	.	.	.
15.583	55.8629	132.36	.	Q	V	.	.	.
15.667	56.7998	136.04	.	Q	V	.	.	.
15.750	57.7668	140.40	.	.Q	V	.	.	.
15.833	58.7651	144.96	.	.Q	V	.	.	.
15.917	59.7990	150.11	.	.Q	V	.	.	.
16.000	60.8653	154.84	.	.Q	V	.	.	.
16.083	62.0378	170.24	.	.	QV	.	.	.
16.167	63.3146	185.40	.	.	Q	.	.	.
16.250	64.6196	189.49	.	.	Q	.	.	.
16.333	65.9525	193.53	.	.	Q	.	.	.
16.417	67.3596	204.31	.	.	VQ	.	.	.
16.500	68.8341	214.09	.	.	VQ	.	.	.
16.583	70.3754	223.80	.	.	VQ	.	.	.
16.667	72.0966	249.91	.	.	V	Q.	.	.
16.750	73.9608	270.69	.	.	V	.Q	.	.
16.833	75.9835	293.69	.	.	V	Q	.	.
16.917	78.0561	300.94	.	.	V	Q	.	.
17.000	80.1889	309.69	.	.	V	Q	.	.
17.083	82.4704	331.27	.	.	V.	Q	.	.
17.167	84.6288	313.40	.	.	V.	Q	.	.
17.250	86.9436	336.11	.	.	V	Q	.	.
17.333	89.2828	339.65	.	.	V	Q	.	.
17.417	91.5592	330.53	.	.	.V	Q	.	.
17.500	94.0039	354.98	.	.	.V	Q	.	.
17.583	96.5974	376.57	.	.	.V	Q	.	.
17.667	98.9963	348.31	.	.	.V	Q	.	.
17.750	101.7037	393.11	.	.	.V	.Q	.	.
17.833	104.4099	392.94	.	.	.V	.Q	.	.
17.917	107.1890	403.53	.	.	.V	.Q	.	.
18.000	109.6139	352.09	.	.	.V	Q	.	.
18.083	112.0223	349.71	.	.	.VQ	.	.	.
18.167	114.6627	383.39	.	.	.V	Q	.	.
18.250	117.1471	360.73	.	.	.VQ	.	.	.
18.333	119.4191	329.89	.	.	.QV	.	.	.
18.417	121.6345	321.68	.	.	Q	V	.	.

18.500	123.7445	306.37	.	.	.	Q	V.	.
18.583	125.7182	286.58	.	.	.	Q	V.	.
18.667	127.5159	261.03	.	.	.	Q	V.	.
18.750	129.2856	256.95	.	.	.	Q	V	.
18.833	131.0074	250.02	.	.	.	Q	V	.
18.917	132.6275	235.24	.	.	.	Q	.V	.
19.000	134.1467	220.58	.	.	.	Q	.V	.
19.083	135.5522	204.09	.	.	.	Q	.V	.
19.167	136.8468	187.97	.	.	.	Q	.V	.
19.250	138.0745	178.26	.	.	.	Q	.V	.
19.333	139.2451	169.97	.	.	.	Q	.V	.
19.417	140.3750	164.06	.	.	.	Q	.V	.
19.500	141.4530	156.54	.	.	.	Q	.V	.
19.583	142.4892	150.46	.	.	.	Q	.V	.
19.667	143.4585	140.75	.	.	.	Q	.V	.
19.750	144.3498	129.41	.	.	.	Q	.V	.
19.833	145.2119	125.17	.	.	.	Q	.V	.
19.917	146.0405	120.31	.	.	.	Q.	.V	.
20.000	146.7973	109.89	.	.	.	Q	.V	.
20.083	147.5202	104.96	.	.	.	Q	.V	.
20.167	148.2210	101.76	.	.	.	Q	.V	.
20.250	148.9007	98.70	.	.	.	Q	.V	.
20.333	149.5584	95.50	.	.	.	Q	.V	.
20.417	150.1717	89.05	.	.	.	Q	.V	.
20.500	150.7117	78.40	.	.	.	Q	.V	.
20.583	151.2317	75.50	.	.	.	Q	.V	.
20.667	151.7374	73.43	.	.	.	Q	.V	.
20.750	152.2300	71.54	.	.	.	Q	.V	.
20.833	152.7089	69.54	.	.	.	Q	.V	.
20.917	153.1750	67.67	.	.	.	Q	.V	.
21.000	153.6296	66.01	.	.	.	Q	.V	.
21.083	154.0737	64.48	.	.	.	Q	.V	.
21.167	154.5078	63.02	.	.	.	Q	.V	.
21.250	154.9323	61.65	.	.	.	Q	.V	.
21.333	155.3478	60.33	.	.	.	Q	.V	.
21.417	155.7548	59.09	.	.	.	Q	.V	.
21.500	156.1542	58.00	.	.	.	Q	.V	.
21.583	156.5465	56.96	.	.	.	Q	.V	.
21.667	156.9319	55.96	.	.	.	Q	.V	.
21.750	157.3111	55.06	.	.	.	Q	.V	.
21.833	157.6846	54.23	.	.	.	Q	.V	.
21.917	158.0525	53.41	.	.	.	Q	.V	.
22.000	158.4149	52.63	.	.	.	Q	.V	.
22.083	158.7721	51.86	.	.	.	Q	.V	.
22.167	159.1238	51.07	.	.	.	Q	.V	.
22.250	159.4698	50.24	.	.	.	Q	.V	.
22.333	159.8096	49.33	.	.	.	Q	.V	.
22.417	160.1307	46.62	.	.	.	Q	.V	.
22.500	160.4349	44.18	.	.	.	Q	.V	.
22.583	160.7346	43.52	.	.	.	Q	.V	.
22.667	161.0304	42.95	.	.	.	Q	.V	.
22.750	161.3222	42.37	.	.	.	Q	.V	.
22.833	161.6099	41.77	.	.	.	Q	.V	.
22.917	161.8936	41.20	.	.	.	Q	.V	.
23.000	162.1736	40.65	.	.	.	Q	.V	.
23.083	162.4499	40.12	.	.	.	Q	.V	.
23.167	162.7227	39.61	.	.	.	Q	.V	.
23.250	162.9921	39.11	.	.	.	Q	.V	.

23.333	163.2581	38.63	. Q	.	.	.	V .
23.417	163.5210	38.18	. Q	.	.	.	V .
23.500	163.7811	37.77	. Q	.	.	.	V .
23.583	164.0385	37.37	. Q	.	.	.	V .
23.667	164.2932	36.98	. Q	.	.	.	V .
23.750	164.5452	36.60	. Q	.	.	.	V .
23.833	164.7948	36.24	. Q	.	.	.	V .
23.917	165.0419	35.88	. Q	.	.	.	V .
24.000	165.2867	35.53	. Q	.	.	.	V .
24.083	165.5285	35.12	. Q	.	.	.	V .
24.167	165.7671	34.64	. Q	.	.	.	V .
24.250	166.0025	34.17	. Q	.	.	.	V .
24.333	166.2346	33.71	. Q	.	.	.	V .
24.417	166.4634	33.22	. Q	.	.	.	V .
24.500	166.6887	32.71	. Q	.	.	.	V .
24.583	166.9103	32.18	. Q	.	.	.	V .
24.667	167.1274	31.52	. Q	.	.	.	V .
24.750	167.3392	30.75	. Q	.	.	.	V .
24.833	167.5449	29.87	. Q	.	.	.	V .
24.917	167.7444	28.97	. Q	.	.	.	V .
25.000	167.9375	28.04	. Q	.	.	.	V .
25.083	168.1233	26.98	. Q	.	.	.	V .
25.167	168.3027	26.06	. Q	.	.	.	V .
25.250	168.4750	25.01	. Q	.	.	.	V .
25.333	168.6399	23.95	.Q	.	.	.	V .
25.417	168.7982	22.98	.Q	.	.	.	V .
25.500	168.9487	21.86	.Q	.	.	.	V .
25.583	169.0907	20.61	.Q	.	.	.	V .
25.667	169.2255	19.58	.Q	.	.	.	V .
25.750	169.3512	18.24	.Q	.	.	.	V .
25.833	169.4676	16.91	.Q	.	.	.	V .
25.917	169.5743	15.49	.Q	.	.	.	V .
26.000	169.6737	14.42	.Q	.	.	.	V .
26.083	169.7657	13.37	.Q	.	.	.	V .
26.167	169.8488	12.06	Q	.	.	.	V .
26.250	169.9238	10.90	Q	.	.	.	V .
26.333	169.9921	9.91	Q	.	.	.	V .
26.417	170.0537	8.95	Q	.	.	.	V .
26.500	170.1093	8.07	Q	.	.	.	V .
26.583	170.1594	7.28	Q	.	.	.	V .
26.667	170.2052	6.65	Q	.	.	.	V .
26.750	170.2466	6.01	Q	.	.	.	V .
26.833	170.2836	5.38	Q	.	.	.	V .
26.917	170.3167	4.81	Q	.	.	.	V .
27.000	170.3463	4.30	Q	.	.	.	V .
27.083	170.3730	3.86	Q	.	.	.	V .
27.167	170.3971	3.50	Q	.	.	.	V .
27.250	170.4189	3.17	Q	.	.	.	V .
27.333	170.4387	2.87	Q	.	.	.	V .
27.417	170.4564	2.57	Q	.	.	.	V .
27.500	170.4722	2.30	Q	.	.	.	V .
27.583	170.4862	2.03	Q	.	.	.	V .
27.667	170.4986	1.80	Q	.	.	.	V .
27.750	170.5098	1.63	Q	.	.	.	V .
27.833	170.5198	1.45	Q	.	.	.	V .
27.917	170.5286	1.28	Q	.	.	.	V .
28.000	170.5365	1.15	Q	.	.	.	V .
28.083	170.5437	1.04	Q	.	.	.	V .

28.167	170.5501	0.93	Q	.	.	.	V .
28.250	170.5558	0.82	Q	.	.	.	V .
28.333	170.5607	0.72	Q	.	.	.	V .
28.417	170.5651	0.63	Q	.	.	.	V .
28.500	170.5692	0.60	Q	.	.	.	V .
28.583	170.5731	0.57	Q	.	.	.	V .
28.667	170.5768	0.54	Q	.	.	.	V .
28.750	170.5804	0.51	Q	.	.	.	V .
28.833	170.5837	0.48	Q	.	.	.	V .
28.917	170.5868	0.46	Q	.	.	.	V .
29.000	170.5898	0.43	Q	.	.	.	V .
29.083	170.5925	0.40	Q	.	.	.	V .
29.167	170.5951	0.37	Q	.	.	.	V .
29.250	170.5975	0.35	Q	.	.	.	V .
29.333	170.5997	0.32	Q	.	.	.	V .
29.417	170.6017	0.29	Q	.	.	.	V .
29.500	170.6035	0.27	Q	.	.	.	V .
29.583	170.6052	0.24	Q	.	.	.	V .
29.667	170.6067	0.21	Q	.	.	.	V .
29.750	170.6080	0.19	Q	.	.	.	V .
29.833	170.6091	0.16	Q	.	.	.	V .
29.917	170.6100	0.14	Q	.	.	.	V .
30.000	170.6108	0.11	Q	.	.	.	V .
30.083	170.6114	0.09	Q	.	.	.	V .
30.167	170.6118	0.06	Q	.	.	.	V .
30.250	170.6120	0.04	Q	.	.	.	V .
30.333	170.6121	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

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133U *
* 2-YR EV APRIL 2019 FKAZI *

FILE NAME: EVO233US.DAT
TIME/DATE OF STUDY: 13:30 04/10/2019

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 = 54351.898 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 5.933 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.585
LOW LOSS FRACTION = 0.922
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.15
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.29
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.41
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 0.76
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.12
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 1.97

*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 = 1.405

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.080	527.577
2	0.241	1055.135
3	0.401	1055.153
4	0.562	1055.140
5	0.722	1055.144
6	0.883	1055.145
7	1.043	1055.149
8	1.204	1055.144
9	1.364	1055.144
10	1.525	1055.140
11	1.685	1055.149
12	1.846	1055.136
13	2.019	1135.640
14	2.254	1547.570
15	2.498	1605.660
16	2.743	1605.652
17	2.987	1605.645
18	3.231	1605.687
19	3.476	1605.626
20	3.720	1605.679
21	3.977	1689.745
22	4.383	2672.258
23	4.833	2954.396
24	5.282	2954.358
25	5.732	2954.430
26	6.239	3335.073
27	6.830	3883.028
28	7.421	3887.350
29	8.034	4028.448
30	8.765	4805.310
31	9.514	4923.988
32	10.246	4812.381
33	10.949	4619.645
34	11.652	4616.291
35	12.354	4616.222
36	13.056	4616.215
37	13.764	4649.922
38	14.737	6399.723
39	15.834	7211.710
40	16.656	5403.223
41	17.405	4923.907
42	18.155	4923.919
43	18.904	4924.208
44	19.653	4924.634
45	20.502	5583.585
46	21.439	6155.438
47	22.451	6653.723
48	23.571	7364.528

49	24.498	6091.736
50	25.301	5275.680
51	26.103	5275.680
52	26.906	5275.680
53	27.712	5295.665
54	28.716	6599.888
55	29.827	7307.684
56	30.802	6409.357
57	31.750	6229.986
58	33.013	8299.413
59	34.328	8645.307
60	35.458	7423.943
61	36.387	6112.586
62	37.137	4923.769
63	37.945	5315.110
64	39.459	9950.946
65	40.819	8940.386
66	42.018	7877.218
67	43.324	8590.769
68	44.596	8359.404
69	45.826	8084.611
70	47.224	9191.157
71	48.800	10359.413
72	50.297	9836.681
73	51.332	6803.269
74	52.353	6714.128
75	53.375	6714.705
76	54.363	6494.198
77	55.300	6158.297
78	56.289	6503.325
79	57.407	7347.690
80	58.590	7774.963
81	59.863	8365.674
82	61.394	10066.941
83	62.740	8847.810
84	63.905	7659.595
85	64.914	6630.178
86	65.885	6383.368
87	66.814	6104.587
88	67.737	6068.028
89	68.815	7087.165
90	69.930	7324.822
91	70.795	5689.852
92	71.614	5383.639
93	72.484	5716.130
94	73.399	6015.472
95	74.296	5895.514
96	75.161	5686.441
97	75.992	5460.167
98	76.643	4278.797
99	77.267	4102.874
100	77.891	4104.027
101	78.515	4101.720
102	79.139	4103.977
103	79.764	4106.284
104	80.411	4250.263
105	81.072	4343.942
106	81.733	4343.942

107	82.352	4074.288
108	82.944	3886.930
109	83.535	3889.187
110	84.112	3790.944
111	84.650	3532.725
112	85.185	3516.777
113	85.720	3516.727
114	86.206	3194.517
115	86.638	2842.669
116	87.070	2840.362
117	87.502	2840.312
118	87.928	2799.240
119	88.280	2314.796
120	88.611	2173.124
121	88.941	2170.817
122	89.272	2175.381
123	89.602	2168.561
124	89.931	2163.947
125	90.236	2001.714
126	90.531	1942.337
127	90.827	1942.337
128	91.123	1946.850
129	91.418	1940.030
130	91.714	1946.900
131	92.006	1917.212
132	92.276	1777.797
133	92.544	1757.185
134	92.811	1759.542
135	93.079	1759.492
136	93.347	1759.542
137	93.614	1754.928
138	93.881	1759.492
139	94.100	1435.025
140	94.278	1169.986
141	94.456	1169.936
142	94.634	1174.549
143	94.813	1174.549
144	94.991	1169.936
145	95.170	1174.549
146	95.348	1169.936
147	95.526	1174.549
148	95.704	1169.936
149	95.883	1174.549
150	96.037	1010.009
151	96.148	731.229
152	96.259	726.665
153	96.368	722.051
154	96.478	722.101
155	96.588	722.101
156	96.699	731.229
157	96.808	717.488
158	96.919	726.665
159	97.030	726.665
160	97.139	722.051
161	97.249	722.101
162	97.360	726.665
163	97.470	722.101
164	97.580	726.615

165	97.691	726.665
166	97.801	722.101
167	97.910	722.101
168	98.002	598.684
169	98.031	191.922
170	98.058	178.231
171	98.084	173.667
172	98.110	169.104
173	98.136	173.667
174	98.163	173.667
175	98.189	173.667
176	98.216	173.667
177	98.241	169.104
178	98.268	173.667
179	98.295	178.231
180	98.321	169.104
181	98.347	173.667
182	98.374	178.231
183	98.401	173.667
184	98.426	169.104
185	98.453	173.667
186	98.479	169.104
187	98.505	173.667
188	98.532	178.231
189	98.558	169.054
190	98.584	173.667
191	98.611	173.667
192	98.638	178.281
193	98.662	159.926
194	98.690	182.795
195	98.716	173.667
196	98.741	164.540
197	98.769	182.795
198	98.796	173.667
199	98.821	164.540
200	98.847	173.667
201	98.875	182.795
202	98.900	164.540
203	98.926	173.667
204	98.954	182.795
205	98.979	164.540
206	99.006	173.667
207	99.031	164.540
208	99.056	164.540
209	99.081	164.540
210	99.106	164.540
211	99.131	164.540
212	99.156	164.540
213	99.181	164.540
214	99.206	164.540
215	99.231	164.540
216	99.256	164.540
217	99.281	164.540
218	99.306	164.540
219	99.331	164.540
220	99.356	164.540
221	99.381	164.540
222	99.406	164.540

223	99.431	164.540
224	99.456	164.540
225	99.481	164.540
226	99.506	164.540
227	99.531	164.540
228	99.556	164.540
229	99.581	164.540
230	99.606	164.540
231	99.631	164.540
232	99.656	164.540
233	99.681	164.540
234	99.706	164.540
235	99.731	164.540
236	99.757	164.540
237	99.782	164.540
238	99.807	164.540
239	99.832	164.540
240	99.857	164.540
241	99.882	164.540
242	99.907	164.540
243	99.932	164.540
244	99.957	164.540
245	99.982	164.540
246	100.000	119.656

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 7749.1377
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 655.2281

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	0.0008	0.12	Q	.	.	.	.
0.167	0.0032	0.35	Q	.	.	.	.
0.250	0.0073	0.59	Q	.	.	.	.
0.333	0.0130	0.82	Q	.	.	.	.
0.417	0.0203	1.06	Q	.	.	.	.
0.500	0.0292	1.30	Q	.	.	.	.
0.583	0.0398	1.54	Q	.	.	.	.
0.667	0.0521	1.78	Q	.	.	.	.
0.750	0.0659	2.02	Q	.	.	.	.
0.833	0.0815	2.26	Q	.	.	.	.
0.917	0.0987	2.50	Q	.	.	.	.
1.000	0.1176	2.74	Q	.	.	.	.
1.083	0.1383	3.00	Q	.	.	.	.
1.167	0.1614	3.36	Q	.	.	.	.
1.250	0.1870	3.72	Q	.	.	.	.
1.333	0.2152	4.09	Q	.	.	.	.
1.417	0.2459	4.46	Q	.	.	.	.
1.500	0.2792	4.83	Q	.	.	.	.
1.583	0.3150	5.20	Q	.	.	.	.
1.667	0.3534	5.58	Q	.	.	.	.
1.750	0.3945	5.97	Q	.	.	.	.
1.833	0.4398	6.58	Q	.	.	.	.
1.917	0.4898	7.26	Q	.	.	.	.
2.000	0.5445	7.94	Q	.	.	.	.
2.083	0.6038	8.62	Q	.	.	.	.
2.167	0.6685	9.39	Q	.	.	.	.
2.250	0.7393	10.28	Q	.	.	.	.
2.333	0.8162	11.18	Q	.	.	.	.
2.417	0.8996	12.11	Q	.	.	.	.
2.500	0.9906	13.21	Q	.	.	.	.
2.583	1.0894	14.35	Q	.	.	.	.
2.667	1.1959	15.46	VQ	.	.	.	.
2.750	1.3098	16.54	VQ	.	.	.	.
2.833	1.4311	17.62	VQ	.	.	.	.
2.917	1.5599	18.70	VQ	.	.	.	.
3.000	1.6962	19.78	VQ	.	.	.	.
3.083	1.8399	20.88	VQ	.	.	.	.
3.167	1.9940	22.37	VQ	.	.	.	.
3.250	2.1596	24.04	VQ	.	.	.	.
3.333	2.3339	25.32	VQ	.	.	.	.
3.417	2.5164	26.49	VQ	.	.	.	.
3.500	2.7069	27.67	VQ	.	.	.	.
3.583	2.9056	28.85	VQ	.	.	.	.
3.667	3.1125	30.04	V Q	.	.	.	.
3.750	3.3286	31.38	V Q	.	.	.	.
3.833	3.5548	32.85	V Q	.	.	.	.
3.917	3.7919	34.43	V Q	.	.	.	.

4.000	4.0411	36.18	V Q	.	.	.	.
4.083	4.3004	37.65	V Q	.	.	.	.
4.167	4.5686	38.94	V Q	.	.	.	.
4.250	4.8457	40.24	V Q	.	.	.	.
4.333	5.1318	41.54	V Q	.	.	.	.
4.417	5.4270	42.86	V Q	.	.	.	.
4.500	5.7332	44.46	V Q	.	.	.	.
4.583	6.0516	46.23	V Q	.	.	.	.
4.667	6.3809	47.81	V Q	.	.	.	.
4.750	6.7207	49.35	V Q	.	.	.	.
4.833	7.0745	51.36	V Q	.	.	.	.
4.917	7.4426	53.45	V Q	.	.	.	.
5.000	7.8232	55.28	V Q	.	.	.	.
5.083	8.2146	56.82	V Q	.	.	.	.
5.167	8.6147	58.10	V Q	.	.	.	.
5.250	9.0243	59.48	V Q	.	.	.	.
5.333	9.4505	61.89	V Q	.	.	.	.
5.417	9.8919	64.08	V Q	.	.	.	.
5.500	10.3467	66.05	V Q	.	.	.	.
5.583	10.8163	68.18	V Q	.	.	.	.
5.667	11.3002	70.27	V Q	.	.	.	.
5.750	11.7982	72.30	V Q	.	.	.	.
5.833	12.3119	74.59	V Q	.	.	.	.
5.917	12.8432	77.15	V Q	.	.	.	.
6.000	13.3914	79.60	V Q	.	.	.	.
6.083	13.9519	81.38	V Q	.	.	.	.
6.167	14.5245	83.15	V Q	.	.	.	.
6.250	15.1095	84.93	V Q	.	.	.	.
6.333	15.7063	86.67	V Q	.	.	.	.
6.417	16.3147	88.33	V Q	.	.	.	.
6.500	16.9351	90.09	.V Q	.	.	.	.
6.583	17.5689	92.03	.V Q	.	.	.	.
6.667	18.2169	94.08	.V Q	.	.	.	.
6.750	18.8799	96.27	.V Q	.	.	.	.
6.833	19.5607	98.85	.V Q	.	.	.	.
6.917	20.2575	101.16	.V Q	.	.	.	.
7.000	20.9684	103.23	.V Q	.	.	.	.
7.083	21.6920	105.07	.V Q	.	.	.	.
7.167	22.4279	106.86	.V Q	.	.	.	.
7.250	23.1758	108.60	.V Q	.	.	.	.
7.333	23.9358	110.34	.V Q	.	.	.	.
7.417	24.7092	112.31	.V Q	.	.	.	.
7.500	25.4968	114.35	.V Q	.	.	.	.
7.583	26.2958	116.03	.V Q	.	.	.	.
7.667	27.1061	117.65	.V Q	.	.	.	.
7.750	27.9281	119.35	.V Q	.	.	.	.
7.833	28.7623	121.13	.V Q	.	.	.	.
7.917	29.6086	122.89	.V Q	.	.	.	.
8.000	30.4668	124.61	.V Q	.	.	.	.
8.083	31.3365	126.29	.V Q	.	.	.	.
8.167	32.2161	127.71	.V Q	.	.	.	.
8.250	33.1053	129.11	.V Q	.	.	.	.
8.333	34.0041	130.51	.V Q	.	.	.	.
8.417	34.9126	131.92	.V Q	.	.	.	.
8.500	35.8309	133.34	.V Q	.	.	.	.
8.583	36.7591	134.76	.V Q	.	.	.	.
8.667	37.6973	136.23	.V Q	.	.	.	.
8.750	38.6459	137.73	.V Q	.	.	.	.

8.833	39.6048	139.24	. V	Q.	.	.	.
8.917	40.5737	140.69	. V	Q.	.	.	.
9.000	41.5525	142.11	. V	Q.	.	.	.
9.083	42.5411	143.54	. V	Q.	.	.	.
9.167	43.5395	144.97	. V	Q.	.	.	.
9.250	44.5473	146.33	. V	Q.	.	.	.
9.333	45.5646	147.71	. V	Q.	.	.	.
9.417	46.5914	149.10	. V	Q.	.	.	.
9.500	47.6274	150.42	. V	Q	.	.	.
9.583	48.6720	151.68	. V	Q	.	.	.
9.667	49.7253	152.94	. V	Q	.	.	.
9.750	50.7874	154.21	. V	Q	.	.	.
9.833	51.8582	155.49	. V	Q	.	.	.
9.917	52.9372	156.66	. V	Q	.	.	.
10.000	54.0241	157.82	. V	Q	.	.	.
10.083	55.1190	158.98	. V	Q	.	.	.
10.167	56.2220	160.16	. V	Q	.	.	.
10.250	57.3332	161.34	. V	Q	.	.	.
10.333	58.4526	162.54	. V	Q	.	.	.
10.417	59.5800	163.70	. V	Q	.	.	.
10.500	60.7155	164.87	. V	Q	.	.	.
10.583	61.8591	166.05	. V	.Q	.	.	.
10.667	63.0108	167.24	. V	.Q	.	.	.
10.750	64.1708	168.43	. V	.Q	.	.	.
10.833	65.3392	169.65	. V	.Q	.	.	.
10.917	66.5160	170.86	. V	.Q	.	.	.
11.000	67.7010	172.07	. V	.Q	.	.	.
11.083	68.8943	173.27	. V	.Q	.	.	.
11.167	70.0960	174.49	. V	.Q	.	.	.
11.250	71.3063	175.72	. V	.Q	.	.	.
11.333	72.5251	176.97	. V	.Q	.	.	.
11.417	73.7526	178.23	. V	.Q	.	.	.
11.500	74.9889	179.51	. V	.Q	.	.	.
11.583	76.2335	180.72	. V	.Q	.	.	.
11.667	77.4863	181.90	. V	.Q	.	.	.
11.750	78.7472	183.08	. V	.Q	.	.	.
11.833	80.0164	184.29	. V	.Q	.	.	.
11.917	81.2940	185.51	. V	.Q	.	.	.
12.000	82.5801	186.75	. V	.Q	.	.	.
12.083	83.8762	188.19	. V	.Q	.	.	.
12.167	85.1836	189.84	. V	.Q	.	.	.
12.250	86.5025	191.51	. V	.Q	.	.	.
12.333	87.8330	193.19	. V	.Q	.	.	.
12.417	89.1752	194.89	. V	.Q	.	.	.
12.500	90.5291	196.57	. V	.Q	.	.	.
12.583	91.8941	198.21	. V	.Q	.	.	.
12.667	93.2706	199.86	. V	.Q	.	.	.
12.750	94.6585	201.53	. V	.Q	.	.	.
12.833	96.0582	203.22	. V	.Q	.	.	.
12.917	97.4695	204.93	. V	.Q	.	.	.
13.000	98.8928	206.66	. V	.Q	.	.	.
13.083	100.3283	208.43	. V	.Q	.	.	.
13.167	101.7772	210.39	. V	.Q	.	.	.
13.250	103.2399	212.38	. V	.Q	.	.	.
13.333	104.7164	214.39	. V	.Q	.	.	.
13.417	106.2069	216.42	. V	.Q	.	.	.
13.500	107.7117	218.49	. V	.Q	.	.	.
13.583	109.2307	220.56	. V	.Q	.	.	.

13.667	110.7643	222.68	. V	. Q	.	.	.
13.750	112.3128	224.84	. V	. Q	.	.	.
13.833	113.8788	227.39	. V	. Q	.	.	.
13.917	115.4632	230.06	. V	. Q	.	.	.
14.000	117.0661	232.74	. V	. Q	.	.	.
14.083	118.6885	235.57	. V	. Q	.	.	.
14.167	120.3329	238.78	. V	. Q	.	.	.
14.250	122.0010	242.20	. V	. Q	.	.	.
14.333	123.6926	245.63	. V	. Q	.	.	.
14.417	125.4083	249.12	. V	. Q	.	.	.
14.500	127.1502	252.91	. V	. Q	.	.	.
14.583	128.9184	256.75	. V	. Q	.	.	.
14.667	130.7130	260.57	. V	. Q	.	.	.
14.750	132.5333	264.31	. V	. Q	.	.	.
14.833	134.3795	268.08	. V	. Q	.	.	.
14.917	136.2518	271.85	. V	. Q	.	.	.
15.000	138.1501	275.64	. V	. Q	.	.	.
15.083	140.0748	279.47	. V	. Q	.	.	.
15.167	142.0317	284.14	. V	. Q	.	.	.
15.250	144.0229	289.12	. V	. Q	.	.	.
15.333	146.0439	293.45	. V	. Q	.	.	.
15.417	148.0916	297.32	. V	. Q	.	.	.
15.500	150.1641	300.93	. V	. Q	.	.	.
15.583	152.2620	304.61	. V	. Q	.	.	.
15.667	154.3857	308.36	. V	. Q	.	.	.
15.750	156.5368	312.34	. V	. Q	.	.	.
15.833	158.7195	316.93	. V	.Q	.	.	.
15.917	160.9373	322.02	. V	.Q	.	.	.
16.000	163.1943	327.72	. V	.Q	.	.	.
16.083	165.4977	334.46	. V	.Q	.	.	.
16.167	167.8448	340.79	. V	.Q	.	.	.
16.250	170.2258	345.72	. V	. Q	.	.	.
16.333	172.6404	350.59	. V	. Q	.	.	.
16.417	175.0898	355.66	. V	. Q	.	.	.
16.500	177.5800	361.57	. V	. Q	.	.	.
16.583	180.1128	367.77	. V	. Q	.	.	.
16.667	182.6861	373.64	.V	. Q	.	.	.
16.750	185.2987	379.35	.V	. Q	.	.	.
16.833	187.9554	385.75	.V	. Q	.	.	.
16.917	190.6573	392.32	.V	. Q	.	.	.
17.000	193.4024	398.59	.V	. Q	.	.	.
17.083	196.1879	404.46	.V	. Q	.	.	.
17.167	199.0163	410.68	. V	. Q	.	.	.
17.250	201.8819	416.08	. V	. Q	.	.	.
17.333	204.7898	422.23	. V	. Q	.	.	.
17.417	207.7360	427.79	. V	. Q	.	.	.
17.500	210.7166	432.79	. V	. Q	.	.	.
17.583	213.7319	437.82	. V	. Q	.	.	.
17.667	216.7839	443.15	. V	. Q	.	.	.
17.750	219.8779	449.25	. V	. Q	.	.	.
17.833	223.0312	457.86	. V	. Q	.	.	.
17.917	226.2314	464.67	. V	. Q	.	.	.
18.000	229.4752	470.99	. V	. Q	.	.	.
18.083	232.7515	475.73	. V	. Q	.	.	.
18.167	236.0655	481.19	. V	. Q	.	.	.
18.250	239.4198	487.04	. V	. Q	.	.	.
18.333	242.8045	491.46	. V	. Q	.	.	.
18.417	246.2230	496.38	. V	. Q	.	.	.

18.500	249.6851	502.69	.	.	V	.	Q	.
18.583	253.1789	507.30	.	.	V	.	Q	.
18.667	256.7058	512.11	.	.	V	.	Q	.
18.750	260.2675	517.17	.	.	V	.	Q	.
18.833	263.8755	523.89	.	.	V	.	Q	.
18.917	267.5266	530.14	.	.	V	.	Q	.
19.000	271.2197	536.23	.	.	V	.	Q	.
19.083	274.9508	541.76	.	.	V	.	Q	.
19.167	278.7393	550.09	.	.	V	.	Q	.
19.250	282.5539	553.88	.	.	V	.	Q	.
19.333	286.3561	552.08	.	.	V	.	Q	.
19.417	290.1777	554.90	.	.	V	.	Q	.
19.500	294.0315	559.56	.	.	V	.	Q	.
19.583	297.9194	564.53	.	.	V	.	Q	.
19.667	301.8360	568.70	.	.	V	.	Q	.
19.750	305.7947	574.81	.	.	V	.	Q	.
19.833	309.7904	580.18	.	.	V	.	Q	.
19.917	313.8177	584.76	.	.	V	.	Q	.
20.000	317.8740	588.98	.	.	V	.	Q	.
20.083	321.9131	586.47	.	.	V	.	Q	.
20.167	325.9300	583.26	.	.	V	.	Q	.
20.250	329.9374	581.87	.	.	V	.	Q	.
20.333	333.9522	582.95	.	.	V	.	Q	.
20.417	337.9811	584.99	.	.	V	.	Q	.
20.500	342.0433	589.83	.	.	V	.	Q	.
20.583	346.1206	592.02	.	.	.V	.	Q	.
20.667	350.1712	588.15	.	.	.V	.	Q	.
20.750	354.2212	588.06	.	.	.V	.	Q	.
20.833	358.3214	595.35	.	.	.V	.	Q	.
20.917	362.4221	595.42	.	.	.V	.	Q	.
21.000	366.4753	588.52	.	.	.V	.	Q	.
21.083	370.4843	582.11	.	.	.V	.	Q	.
21.167	374.4664	578.21	.	.	.V	.	Q	.
21.250	378.4566	579.38	.	.	.V	.	Q	.
21.333	382.5270	591.02	.	.	.V	.	Q	.
21.417	386.5740	587.62	.	.	.V	.	Q	.
21.500	390.5918	583.39	.	.	.V	.	Q	.
21.583	394.6010	582.12	.	.	.V	.	Q	.
21.667	398.6022	580.98	.	.	.V	.	Q	.
21.750	402.6027	580.88	.	.	.V	.	Q	.
21.833	406.6154	582.64	.	.	.V	.	Q	.
21.917	410.6244	582.10	.	.	.V	.	Q	.
22.000	414.5868	575.34	.	.	.V	.	Q	.
22.083	418.4640	562.97	.	.	.V	.	Q	.
22.167	422.3165	559.39	.	.	.V	.	Q	.
22.250	426.1529	557.04	.	.	.V	.	Q	.
22.333	429.9620	553.09	.	.	.V	.	Q	.
22.417	433.7405	548.65	.	.	.V	.	Q	.
22.500	437.5015	546.09	.	.	.V	.	Q	.
22.583	441.2527	544.67	.	.	.V	.	Q	.
22.667	444.9911	542.82	.	.	.V	.	Q	.
22.750	448.7159	540.83	.	.	.V	.	Q	.
22.833	452.4289	539.13	.	.	.V	.	Q	.
22.917	456.0714	528.89	.	.	.V	.	Q	.
23.000	459.6505	519.69	.	.	.V	.	Q	.
23.083	463.1815	512.70	.	.	.V	.	Q	.
23.167	466.6897	509.38	.	.	.V	.	Q	.
23.250	470.1755	506.14	.	.	.V	.	Q	.

23.333	473.6339	502.16	.	.	.	.	V	.	Q	.
23.417	477.0810	500.52	.	.	.	.	V	.	Q	.
23.500	480.4987	496.25	.	.	.	.	V	.	Q	.
23.583	483.8470	486.17	.	.	.	.	V	.	Q	.
23.667	487.1532	480.07	.	.	.	.	V	.	Q	.
23.750	490.4315	476.00	.	.	.	.	V	.	Q	.
23.833	493.6741	470.83	.	.	.	.	VQ	.	.	.
23.917	496.8646	463.26	.	.	.	.	Q	.	.	.
24.000	500.0006	455.35	.	.	.	.	Q	.	.	.
24.083	503.0894	448.49	.	.	.	.	QV	.	.	.
24.167	506.1160	439.47	.	.	.	.	QV	.	.	.
24.250	509.1042	433.88	.	.	.	.	Q	.	.V	.
24.333	512.0583	428.93	.	.	.	.	Q	.	.V	.
24.417	514.9757	423.61	.	.	.	.	Q	.	.V	.
24.500	517.8510	417.49	.	.	.	.	Q	.	.V	.
24.583	520.6867	411.75	.	.	.	.	Q	.	.V	.
24.667	523.4854	406.37	.	.	.	.	Q	.	.V	.
24.750	526.2423	400.30	.	.	.	.	Q	.	.V	.
24.833	528.9503	393.20	.	.	.	.	Q	.	.V	.
24.917	531.6088	386.01	.	.	.	.	Q	.	.V	.
25.000	534.2230	379.59	.	.	.	.	Q	.	.V	.
25.083	536.7994	374.09	.	.	.	.	Q	.	.V	.
25.167	539.3395	368.83	.	.	.	.	Q	.	.V	.
25.250	541.8437	363.60	.	.	.	.	Q	.	.V	.
25.333	544.3162	359.01	.	.	.	.	Q	.	.V	.
25.417	546.7533	353.87	.	.	.	.	Q	.	.V	.
25.500	549.1477	347.67	.	.	.	.	Q	.	.V	.
25.583	551.5030	341.99	.	.	.	.	Q	.	.V	.
25.667	553.8259	337.29	.	.	.	.	Q	.	.V	.
25.750	556.1151	332.39	.	.	.	.	Q	.	.V	.
25.833	558.3654	326.74	.	.	.	.	Q	.	.V	.
25.917	560.5684	319.87	.	.	.	.	Q	.	.V	.
26.000	562.7324	314.21	.	.	.	.	Q	.	.V	.
26.083	564.8601	308.95	.	.	.	.	Q	.	.V	.
26.167	566.9545	304.11	.	.	.	.	Q	.	.V	.
26.250	569.0142	299.05	.	.	.	.	Q	.	.V	.
26.333	571.0386	293.94	.	.	.	.	Q	.	.V	.
26.417	573.0248	288.39	.	.	.	.	Q	.	.V	.
26.500	574.9744	283.08	.	.	.	.	Q	.	.V	.
26.583	576.8887	277.97	.	.	.	.	Q	.	.V	.
26.667	578.7682	272.91	.	.	.	.	Q	.	.V	.
26.750	580.6124	267.77	.	.	.	.	Q	.	.V	.
26.833	582.4210	262.62	.	.	.	.	Q	.	.V	.
26.917	584.1967	257.83	.	.	.	.	Q	.	.V	.
27.000	585.9395	253.07	.	.	.	.	Q	.	.V	.
27.083	587.6522	248.67	.	.	.	.	Q	.	.V	.
27.167	589.3326	244.01	.	.	.	.	Q	.	.V	.
27.250	590.9809	239.32	.	.	.	.	Q	.	.V	.
27.333	592.5995	235.03	.	.	.	.	Q	.	.V	.
27.417	594.1891	230.80	.	.	.	.	Q	.	.V	.
27.500	595.7495	226.57	.	.	.	.	Q	.	.V	.
27.583	597.2755	221.57	.	.	.	.	Q	.	.V	.
27.667	598.7696	216.94	.	.	.	.	Q	.	.V	.
27.750	600.2365	212.99	.	.	.	.	Q	.	.V	.
27.833	601.6765	209.09	.	.	.	.	Q	.	.V	.
27.917	603.0905	205.30	.	.	.	.	Q	.	.V	.
28.000	604.4767	201.28	.	.	.	.	Q	.	.V	.
28.083	605.8361	197.38	.	.	.	.	Q	.	.V	.

28.167	607.1699	193.68	.	.	Q	.	.	V	.
28.250	608.4788	190.05	.	.	Q	.	.	V	.
28.333	609.7620	186.33	.	.	Q	.	.	V	.
28.417	611.0195	182.59	.	.	Q	.	.	V	.
28.500	612.2457	178.05	.	.	Q	.	.	V	.
28.583	613.4394	173.32	.	.	Q	.	.	V	.
28.667	614.6086	169.77	.	.	Q	.	.	V	.
28.750	615.7542	166.33	.	.	Q	.	.	V	.
28.833	616.8727	162.42	.	.	Q	.	.	V	.
28.917	617.9633	158.35	.	.	Q	.	.	V	.
29.000	619.0283	154.64	.	.	Q	.	.	V	.
29.083	620.0696	151.19	.	.	Q	.	.	V	.
29.167	621.0895	148.09	.	.	Q	.	.	V	.
29.250	622.0874	144.90	.	.	Q	.	.	V	.
29.333	623.0568	140.75	.	.	Q	.	.	V	.
29.417	624.0009	137.08	.	.	Q	.	.	V	.
29.500	624.9219	133.74	.	.	Q	.	.	V	.
29.583	625.8204	130.45	.	.	Q	.	.	V	.
29.667	626.6976	127.37	.	.	Q	.	.	V	.
29.750	627.5544	124.41	.	.	Q	.	.	V	.
29.833	628.3889	121.16	.	.	Q	.	.	V	.
29.917	629.1982	117.53	.	.	Q	.	.	V	.
30.000	629.9804	113.57	.	.	Q	.	.	V	.
30.083	630.7357	109.67	.	.	Q	.	.	V	.
30.167	631.4728	107.02	.	.	Q	.	.	V	.
30.250	632.1920	104.42	.	.	Q	.	.	V	.
30.333	632.8937	101.89	.	.	Q	.	.	V	.
30.417	633.5775	99.28	.	.	Q	.	.	V	.
30.500	634.2430	96.63	.	.	Q	.	.	V	.
30.583	634.8896	93.90	.	.	Q	.	.	V	.
30.667	635.5169	91.08	.	.	Q	.	.	V	.
30.750	636.1239	88.14	.	.	Q	.	.	V	.
30.833	636.7083	84.85	.	.	Q	.	.	V	.
30.917	637.2719	81.84	.	.	Q	.	.	V	.
31.000	637.8168	79.13	.	.	Q	.	.	V	.
31.083	638.3462	76.87	.	.	Q	.	.	V	.
31.167	638.8605	74.68	.	.	Q	.	.	V	.
31.250	639.3603	72.56	.	.	Q	.	.	V	.
31.333	639.8456	70.47	.	.	Q	.	.	V	.
31.417	640.3154	68.21	.	.	Q	.	.	V	.
31.500	640.7690	65.88	.	.	Q	.	.	V	.
31.583	641.2095	63.96	.	.	Q	.	.	V	.
31.667	641.6374	62.12	.	.	Q	.	.	V	.
31.750	642.0519	60.19	.	.	Q	.	.	V	.
31.833	642.4531	58.25	.	.	Q	.	.	V	.
31.917	642.8411	56.33	.	.	Q	.	.	V	.
32.000	643.2167	54.54	.	.	Q	.	.	V	.
32.083	643.5811	52.90	.	.	Q	.	.	V	.
32.167	643.9368	51.65	.	.	Q	.	.	V	.
32.250	644.2836	50.37	.	.	Q	.	.	V	.
32.333	644.6218	49.10	.	.	Q	.	.	V	.
32.417	644.9518	47.92	.	.	Q	.	.	V	.
32.500	645.2732	46.66	.	.	Q	.	.	V	.
32.583	645.5856	45.37	.	.	Q	.	.	V	.
32.667	645.8893	44.10	.	.	Q	.	.	V	.
32.750	646.1843	42.83	.	.	Q	.	.	V	.
32.833	646.4701	41.50	.	.	Q	.	.	V	.
32.917	646.7477	40.30	.	.	Q	.	.	V	.

33.000	647.0173	39.15	.	Q	.	.	.	V	.
33.083	647.2787	37.95	.	Q	.	.	.	V	.
33.167	647.5323	36.83	.	Q	.	.	.	V	.
33.250	647.7785	35.74	.	Q	.	.	.	V	.
33.333	648.0175	34.70	.	Q	.	.	.	V	.
33.417	648.2491	33.64	.	Q	.	.	.	V	.
33.500	648.4742	32.67	.	Q	.	.	.	V	.
33.583	648.6931	31.79	.	Q	.	.	.	V	.
33.667	648.9059	30.91	.	Q	.	.	.	V	.
33.750	649.1127	30.03	.	Q	.	.	.	V	.
33.833	649.3136	29.17	.	Q	.	.	.	V	.
33.917	649.5093	28.42	.	Q	.	.	.	V	.
34.000	649.7000	27.70	.	Q	.	.	.	V	.
34.083	649.8859	26.99	.	Q	.	.	.	V	.
34.167	650.0669	26.28	.	Q	.	.	.	V	.
34.250	650.2430	25.58	.	Q	.	.	.	V	.
34.333	650.4144	24.89	.	Q	.	.	.	V	.
34.417	650.5813	24.23	.	Q	.	.	.	V	.
34.500	650.7436	23.57	.	Q	.	.	.	V	.
34.583	650.9011	22.86	.	Q	.	.	.	V	.
34.667	651.0536	22.16	.	Q	.	.	.	V	.
34.750	651.2014	21.46	.	Q	.	.	.	V	.
34.833	651.3445	20.77	.	Q	.	.	.	V	.
34.917	651.4828	20.09	.	Q	.	.	.	V	.
35.000	651.6167	19.44	.	Q	.	.	.	V	.
35.083	651.7462	18.81	.	Q	.	.	.	V	.
35.167	651.8713	18.17	.	Q	.	.	.	V	.
35.250	651.9922	17.55	.	Q	.	.	.	V	.
35.333	652.1088	16.93	.	Q	.	.	.	V	.
35.417	652.2211	16.31	.	Q	.	.	.	V	.
35.500	652.3293	15.70	.	Q	.	.	.	V	.
35.583	652.4337	15.17	.	Q	.	.	.	V	.
35.667	652.5349	14.70	.	Q	.	.	.	V	.
35.750	652.6329	14.23	.	Q	.	.	.	V	.
35.833	652.7279	13.79	.	Q	.	.	.	V	.
35.917	652.8203	13.42	.	Q	.	.	.	V	.
36.000	652.9102	13.04	.	Q	.	.	.	V	.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	2165.0
10%	1590.0
20%	1330.0
30%	1020.0
40%	790.0
50%	650.0
60%	535.0
70%	435.0
80%	335.0
90%	235.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA 92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134C *
* 2-YR EV APRIL 2019 FKAZI *

FILE NAME: EVO234CS.DAT
TIME/DATE OF STUDY: 13:33 04/10/2019

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

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

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 66557.797 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 6.123 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.571
LOW LOSS FRACTION = 0.908
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.15
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.29
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.40
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 0.74
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.07
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 1.88

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.294
30-MINUTE FACTOR = 0.352
1-HOUR FACTOR = 0.397
3-HOUR FACTOR = 0.741
6-HOUR FACTOR = 0.887
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 1.361

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.078	625.999
2	0.233	1252.010
3	0.389	1252.010
4	0.544	1252.004
5	0.700	1252.004
6	0.855	1252.010
7	1.011	1251.999
8	1.167	1252.010
9	1.322	1252.004
10	1.478	1252.010
11	1.633	1252.014
12	1.789	1251.993
13	1.945	1258.569
14	2.152	1664.613
15	2.389	1905.239
16	2.625	1905.218
17	2.862	1905.216
18	3.099	1905.241
19	3.335	1905.218
20	3.572	1905.239
21	3.809	1905.195
22	4.093	2288.399
23	4.519	3429.689
24	4.955	3505.567
25	5.390	3505.674
26	5.826	3511.090
27	6.344	4164.018
28	6.917	4612.675
29	7.490	4612.629
30	8.091	4841.214
31	8.805	5748.911
32	9.531	5842.810
33	10.241	5709.385
34	10.922	5481.326
35	11.602	5477.542
36	12.283	5477.633
37	12.963	5477.449
38	13.644	5477.542
39	14.519	7043.566
40	15.604	8734.595
41	16.464	6924.896
42	17.190	5842.679
43	17.916	5842.664
44	18.642	5842.679
45	19.367	5842.848
46	20.129	6131.098
47	21.024	7202.500
48	21.948	7435.142

49	23.006	8522.434
50	24.042	8331.996
51	24.846	6473.130
52	25.623	6260.155
53	26.401	6260.139
54	27.179	6260.155
55	27.987	6506.707
56	29.028	8377.303
57	30.083	8494.982
58	31.005	7415.659
59	31.949	7600.108
60	33.229	10304.243
61	34.471	10000.624
62	35.559	8755.628
63	36.433	7034.447
64	37.159	5842.878
65	37.940	6289.740
66	39.407	11807.721
67	40.744	10763.049
68	41.900	9298.168
69	43.158	10133.488
70	44.405	10031.668
71	45.587	9515.504
72	46.908	10635.251
73	48.381	11853.195
74	49.947	12606.931
75	51.014	8587.760
76	52.004	7967.595
77	52.993	7966.889
78	53.974	7890.339
79	54.892	7392.906
80	55.806	7359.713
81	56.848	8383.443
82	57.948	8858.492
83	59.139	9586.220
84	60.457	10604.208
85	61.953	12042.374
86	63.152	9649.750
87	64.241	8770.429
88	65.192	7655.686
89	66.126	7514.255
90	67.019	7187.853
91	67.926	7303.368
92	69.001	8649.141
93	70.058	8507.648
94	70.877	6591.485
95	71.670	6390.854
96	72.518	6821.103
97	73.405	7137.311
98	74.274	7000.179
99	75.113	6747.471
100	75.927	6559.797
101	76.569	5163.483
102	77.174	4868.892
103	77.778	4866.066
104	78.384	4871.778
105	78.988	4868.953
106	79.593	4868.892

107	80.210	4967.150
108	80.851	5151.938
109	81.491	5151.938
110	82.114	5021.990
111	82.690	4634.975
112	83.264	4614.832
113	83.835	4603.225
114	84.371	4308.695
115	84.889	4172.915
116	85.408	4172.976
117	85.920	4123.847
118	86.359	3534.726
119	86.778	3370.143
120	87.197	3373.029
121	87.615	3370.081
122	88.018	3237.310
123	88.346	2645.302
124	88.667	2578.855
125	88.987	2578.855
126	89.307	2575.969
127	89.627	2578.855
128	89.946	2561.476
129	90.240	2368.091
130	90.526	2304.468
131	90.813	2307.416
132	91.099	2304.530
133	91.386	2307.354
134	91.672	2307.416
135	91.957	2287.212
136	92.222	2139.885
137	92.481	2079.272
138	92.740	2090.756
139	93.000	2090.817
140	93.259	2079.272
141	93.518	2090.817
142	93.777	2085.045
143	94.019	1946.377
144	94.198	1438.135
145	94.371	1391.954
146	94.543	1386.181
147	94.716	1391.954
148	94.889	1391.954
149	95.061	1386.181
150	95.235	1397.727
151	95.407	1386.181
152	95.580	1391.893
153	95.753	1397.727
154	95.926	1386.181
155	96.061	1091.590
156	96.167	854.849
157	96.274	860.560
158	96.381	860.560
159	96.488	860.621
160	96.594	854.787
161	96.701	860.560
162	96.808	860.621
163	96.915	860.560
164	97.022	860.560

165	97.128	854.849
166	97.235	860.560
167	97.342	860.560
168	97.448	854.849
169	97.555	860.560
170	97.662	860.560
171	97.769	860.621
172	97.876	860.560
173	97.979	825.924
174	98.022	346.545
175	98.047	202.167
176	98.073	207.939
177	98.098	202.105
178	98.123	207.939
179	98.149	207.939
180	98.175	207.939
181	98.200	196.333
182	98.226	213.712
183	98.251	202.167
184	98.276	202.167
185	98.303	213.651
186	98.327	196.394
187	98.353	207.939
188	98.379	207.939
189	98.405	207.878
190	98.429	196.394
191	98.456	213.712
192	98.481	202.167
193	98.506	202.105
194	98.532	213.712
195	98.557	196.394
196	98.583	213.712
197	98.608	196.333
198	98.634	213.712
199	98.660	207.939
200	98.685	196.394
201	98.710	207.878
202	98.736	207.939
203	98.761	196.394
204	98.788	219.485
205	98.812	196.333
206	98.838	207.939
207	98.864	207.939
208	98.888	196.394
209	98.916	219.423
210	98.940	196.394
211	98.964	196.394
212	98.992	219.485
213	99.018	207.878
214	99.043	207.878
215	99.069	207.878
216	99.095	207.878
217	99.121	207.878
218	99.147	207.878
219	99.172	207.878
220	99.198	207.878
221	99.224	207.878
222	99.250	207.878

223	99.276	207.878
224	99.302	207.878
225	99.327	207.878
226	99.353	207.878
227	99.379	207.878
228	99.405	207.878
229	99.431	207.878
230	99.457	207.878
231	99.482	207.878
232	99.508	207.878
233	99.534	207.878
234	99.560	207.878
235	99.586	207.878
236	99.612	207.878
237	99.637	207.878
238	99.663	207.878
239	99.689	207.878
240	99.715	207.878
241	99.741	207.878
242	99.766	207.878
243	99.792	207.878
244	99.818	207.878
245	99.844	207.878
246	99.870	207.878
247	99.896	207.878
248	99.921	207.878
249	99.947	207.878
250	99.973	207.878
251	99.999	207.878
252	100.000	8.966

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 8814.0020
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 892.5875

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

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)

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

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	200.0	400.0	600.0	800.0
0.083	0.0011	0.15	Q	.	.	.	.
0.167	0.0043	0.46	Q	.	.	.	.
0.250	0.0096	0.77	Q	.	.	.	.
0.333	0.0170	1.08	Q	.	.	.	.
0.417	0.0266	1.39	Q	.	.	.	.
0.500	0.0384	1.71	Q	.	.	.	.
0.583	0.0523	2.02	Q	.	.	.	.
0.667	0.0684	2.33	Q	.	.	.	.
0.750	0.0866	2.65	Q	.	.	.	.
0.833	0.1071	2.97	Q	.	.	.	.
0.917	0.1297	3.28	Q	.	.	.	.
1.000	0.1545	3.60	Q	.	.	.	.
1.083	0.1815	3.92	Q	.	.	.	.
1.167	0.2114	4.34	Q	.	.	.	.
1.250	0.2446	4.83	Q	.	.	.	.
1.333	0.2812	5.31	Q	.	.	.	.
1.417	0.3211	5.79	Q	.	.	.	.
1.500	0.3644	6.28	Q	.	.	.	.
1.583	0.4110	6.77	Q	.	.	.	.
1.667	0.4610	7.26	Q	.	.	.	.
1.750	0.5144	7.75	Q	.	.	.	.
1.833	0.5718	8.34	Q	.	.	.	.
1.917	0.6352	9.21	Q	.	.	.	.
2.000	0.7048	10.10	Q	.	.	.	.
2.083	0.7805	10.99	Q	.	.	.	.
2.167	0.8624	11.89	Q	.	.	.	.
2.250	0.9516	12.95	Q	.	.	.	.
2.333	1.0489	14.13	Q	.	.	.	.
2.417	1.1544	15.31	Q	.	.	.	.
2.500	1.2684	16.55	Q	.	.	.	.
2.583	1.3924	18.02	Q	.	.	.	.
2.667	1.5268	19.51	Q	.	.	.	.
2.750	1.6713	20.98	VQ	.	.	.	.
2.833	1.8255	22.39	VQ	.	.	.	.
2.917	1.9895	23.81	VQ	.	.	.	.
3.000	2.1633	25.23	VQ	.	.	.	.
3.083	2.3469	26.66	VQ	.	.	.	.
3.167	2.5404	28.09	VQ	.	.	.	.
3.250	2.7464	29.92	VQ	.	.	.	.
3.333	2.9679	32.16	VQ	.	.	.	.
3.417	3.2018	33.97	VQ	.	.	.	.
3.500	3.4464	35.51	VQ	.	.	.	.
3.583	3.7017	37.06	VQ	.	.	.	.
3.667	3.9677	38.62	VQ	.	.	.	.
3.750	4.2444	40.18	V Q	.	.	.	.
3.833	4.5324	41.82	V Q	.	.	.	.
3.917	4.8336	43.73	V Q	.	.	.	.

4.000	5.1483	45.70	V Q	.	.	.	.
4.083	5.4785	47.94	V Q	.	.	.	.
4.167	5.8239	50.15	V Q	.	.	.	.
4.250	6.1814	51.90	V Q	.	.	.	.
4.333	6.5506	53.61	V Q	.	.	.	.
4.417	6.9317	55.33	V Q	.	.	.	.
4.500	7.3246	57.05	V Q	.	.	.	.
4.583	7.7298	58.84	V Q	.	.	.	.
4.667	8.1506	61.09	V Q	.	.	.	.
4.750	8.5871	63.39	V Q	.	.	.	.
4.833	9.0377	65.42	V Q	.	.	.	.
4.917	9.5026	67.51	V Q	.	.	.	.
5.000	9.9865	70.27	V Q	.	.	.	.
5.083	10.4890	72.96	V Q	.	.	.	.
5.167	11.0080	75.36	V Q	.	.	.	.
5.250	11.5407	77.34	V Q	.	.	.	.
5.333	12.0850	79.04	V Q	.	.	.	.
5.417	12.6419	80.85	V Q	.	.	.	.
5.500	13.2206	84.03	V Q	.	.	.	.
5.583	13.8196	86.97	V Q	.	.	.	.
5.667	14.4363	89.55	V Q	.	.	.	.
5.750	15.0723	92.35	V Q	.	.	.	.
5.833	15.7274	95.13	V Q	.	.	.	.
5.917	16.4010	97.80	V Q	.	.	.	.
6.000	17.0948	100.75	V Q	.	.	.	.
6.083	17.8111	104.01	V Q	.	.	.	.
6.167	18.5513	107.47	V Q	.	.	.	.
6.250	19.3086	109.95	V Q	.	.	.	.
6.333	20.0819	112.29	V Q	.	.	.	.
6.417	20.8715	114.64	V Q	.	.	.	.
6.500	21.6772	116.98	V Q	.	.	.	.
6.583	22.4982	119.21	.V Q	.	.	.	.
6.667	23.3345	121.44	.V Q	.	.	.	.
6.750	24.1880	123.93	.V Q	.	.	.	.
6.833	25.0596	126.55	.V Q	.	.	.	.
6.917	25.9504	129.35	.V Q	.	.	.	.
7.000	26.8625	132.42	.V Q	.	.	.	.
7.083	27.7981	135.86	.V Q	.	.	.	.
7.167	28.7535	138.72	.V Q	.	.	.	.
7.250	29.7272	141.37	.V Q	.	.	.	.
7.333	30.7173	143.77	.V Q	.	.	.	.
7.417	31.7237	146.14	.V Q	.	.	.	.
7.500	32.7460	148.44	.V Q	.	.	.	.
7.583	33.7844	150.77	.V Q	.	.	.	.
7.667	34.8413	153.45	.V Q	.	.	.	.
7.750	35.9164	156.11	.V Q	.	.	.	.
7.833	37.0067	158.31	.V Q	.	.	.	.
7.917	38.1118	160.47	.V Q	.	.	.	.
8.000	39.2327	162.74	.V Q	.	.	.	.
8.083	40.3698	165.11	.V Q	.	.	.	.
8.167	41.5230	167.45	.V Q	.	.	.	.
8.250	42.6920	169.74	.V Q	.	.	.	.
8.333	43.8766	172.00	.V Q	.	.	.	.
8.417	45.0745	173.93	.V Q	.	.	.	.
8.500	46.2852	175.79	.V Q	.	.	.	.
8.583	47.5088	177.67	.V Q	.	.	.	.
8.667	48.7454	179.55	.V Q	.	.	.	.
8.750	49.9951	181.45	.V Q	.	.	.	.

8.833	51.2579	183.36	. V	Q.	.	.	.
8.917	52.5341	185.31	. V	Q.	.	.	.
9.000	53.8241	187.31	. V	Q.	.	.	.
9.083	55.1280	189.32	. V	Q.	.	.	.
9.167	56.4456	191.32	. V	Q.	.	.	.
9.250	57.7764	193.23	. V	Q.	.	.	.
9.333	59.1204	195.15	. V	Q.	.	.	.
9.417	60.4776	197.08	. V	Q.	.	.	.
9.500	61.8478	198.95	. V	Q.	.	.	.
9.583	63.2307	200.80	. V	Q	.	.	.
9.667	64.6264	202.66	. V	Q	.	.	.
9.750	66.0349	204.52	. V	Q	.	.	.
9.833	67.4554	206.25	. V	Q	.	.	.
9.917	68.8876	207.95	. V	Q	.	.	.
10.000	70.3316	209.67	. V	Q	.	.	.
10.083	71.7876	211.40	. V	Q	.	.	.
10.167	73.2553	213.12	. V	Q	.	.	.
10.250	74.7340	214.70	. V	Q	.	.	.
10.333	76.2235	216.27	. V	Q	.	.	.
10.417	77.7239	217.87	. V	Q	.	.	.
10.500	79.2354	219.47	. V	Q	.	.	.
10.583	80.7581	221.09	. V	.Q	.	.	.
10.667	82.2920	222.73	. V	.Q	.	.	.
10.750	83.8370	224.32	. V	.Q	.	.	.
10.833	85.3929	225.92	. V	.Q	.	.	.
10.917	86.9600	227.54	. V	.Q	.	.	.
11.000	88.5383	229.17	. V	.Q	.	.	.
11.083	90.1280	230.82	. V	.Q	.	.	.
11.167	91.7291	232.49	. V	.Q	.	.	.
11.250	93.3418	234.16	. V	.Q	.	.	.
11.333	94.9660	235.83	. V	.Q	.	.	.
11.417	96.6016	237.49	. V	.Q	.	.	.
11.500	98.2488	239.17	. V	.Q	.	.	.
11.583	99.9077	240.88	. V	.Q	.	.	.
11.667	101.5785	242.60	. V	.Q	.	.	.
11.750	103.2613	244.34	. V	.Q	.	.	.
11.833	104.9562	246.10	. V	.Q	.	.	.
11.917	106.6631	247.85	. V	.Q	.	.	.
12.000	108.3814	249.50	. V	.Q	.	.	.
12.083	110.1130	251.43	. V	.Q	.	.	.
12.167	111.8600	253.65	. V	.Q	.	.	.
12.250	113.6224	255.90	. V	.Q	.	.	.
12.333	115.4004	258.17	. V	.Q	.	.	.
12.417	117.1942	260.46	. V	.Q	.	.	.
12.500	119.0039	262.77	. V	.Q	.	.	.
12.583	120.8296	265.10	. V	.Q	.	.	.
12.667	122.6716	267.46	. V	.Q	.	.	.
12.750	124.5300	269.84	. V	.Q	.	.	.
12.833	126.4049	272.24	. V	.Q	.	.	.
12.917	128.2961	274.59	. V	.Q	.	.	.
13.000	130.2033	276.92	. V	.Q	.	.	.
13.083	132.1266	279.27	. V	.Q	.	.	.
13.167	134.0676	281.83	. V	.Q	.	.	.
13.250	136.0271	284.52	. V	.Q	.	.	.
13.333	138.0053	287.24	. V	.Q	.	.	.
13.417	140.0024	289.98	. V	.Q	.	.	.
13.500	142.0187	292.76	. V	.Q	.	.	.
13.583	144.0543	295.56	. V	.Q	.	.	.

13.667	146.1094	298.40	. V	. Q	.	.	.
13.750	148.1843	301.27	. V	. Q	.	.	.
13.833	150.2803	304.34	. V	. Q	.	.	.
13.917	152.4011	307.95	. V	. Q	.	.	.
14.000	154.5473	311.62	. V	. Q	.	.	.
14.083	156.7208	315.59	. V	. Q	.	.	.
14.167	158.9238	319.87	. V	. Q	.	.	.
14.250	161.1582	324.44	. V	. Q	.	.	.
14.333	163.4256	329.23	. V	. Q	.	.	.
14.417	165.7260	334.02	. V	. Q	.	.	.
14.500	168.0594	338.81	. V	. Q	.	.	.
14.583	170.4283	343.96	. V	. Q	.	.	.
14.667	172.8331	349.18	. V	. Q	.	.	.
14.750	175.2735	354.34	. V	. Q	.	.	.
14.833	177.7489	359.43	. V	. Q	.	.	.
14.917	180.2593	364.51	. V	. Q	.	.	.
15.000	182.8048	369.61	. V	. Q	.	.	.
15.083	185.3855	374.72	. V	. Q	.	.	.
15.167	188.0028	380.03	. V	. Q	.	.	.
15.250	190.6620	386.12	. V	. Q	.	.	.
15.333	193.3684	392.96	. V	. Q	.	.	.
15.417	196.1139	398.64	. V	. Q	.	.	.
15.500	198.8929	403.51	. V	. Q	.	.	.
15.583	201.7059	408.45	. V	. Q	.	.	.
15.667	204.5536	413.49	. V	. Q	.	.	.
15.750	207.4358	418.48	. V	. Q	.	.	.
15.833	210.3542	423.76	. V	.Q	.	.	.
15.917	213.3175	430.27	. V	.Q	.	.	.
16.000	216.3296	437.36	. V	.Q	.	.	.
16.083	219.4062	446.72	. V	.Q	.	.	.
16.167	222.5443	455.65	. V	.Q	.	.	.
16.250	225.7266	462.07	. V	. Q	.	.	.
16.333	228.9533	468.52	. V	. Q	.	.	.
16.417	232.2258	475.16	. V	. Q	.	.	.
16.500	235.5455	482.02	. V	. Q	.	.	.
16.583	238.9150	489.26	. V	. Q	.	.	.
16.667	242.3407	497.41	. V	. Q	.	.	.
16.750	245.8225	505.56	.V	. Q	.	.	.
16.833	249.3561	513.09	.V	. Q	.	.	.
16.917	252.9420	520.67	.V	. Q	.	.	.
17.000	256.5894	529.60	.V	. Q	.	.	.
17.083	260.2968	538.32	.V	. Q	.	.	.
17.167	264.0644	547.06	.V	. Q	.	.	.
17.250	267.8822	554.34	. V	. Q	.	.	.
17.333	271.7462	561.05	. V	. Q	.	.	.
17.417	275.6519	567.11	. V	. Q	.	.	.
17.500	279.6137	575.26	. V	. Q	.	.	.
17.583	283.6255	582.51	. V	. Q	.	.	.
17.667	287.6825	589.08	. V	. Q	.	.	.
17.750	291.7911	596.56	. V	. Q	.	.	.
17.833	295.9610	605.47	. V	. Q	.	.	.
17.917	300.2012	615.69	. V	. Q	.	.	.
18.000	304.4928	623.13	. V	. Q	.	.	.
18.083	308.8409	631.35	. V	. Q	.	.	.
18.167	313.2482	639.93	. V	. Q	.	.	.
18.250	317.7111	648.01	. V	. Q	.	.	.
18.333	322.2221	655.01	. V	. Q	.	.	.
18.417	326.7745	661.00	. V	. Q	.	.	.

18.500	331.3741	667.86	.	.	V	.	.	Q	.
18.583	336.0264	675.52	.	.	V	.	.	Q	.
18.667	340.7140	680.63	.	.	V	.	.	Q	.
18.750	345.4434	686.72	.	.	V	.	.	Q	.
18.833	350.2161	693.00	.	.	V	.	.	Q	.
18.917	355.0371	700.00	.	.	V	.	.	Q	.
19.000	359.9159	708.40	.	.	V	.	.	Q	.
19.083	364.8611	718.06	.	.	V	.	.	Q	.
19.167	369.8662	726.73	.	.	V	.	.	Q	.
19.250	374.9426	737.10	.	.	V	.	.	Q	.
19.333	380.0700	744.50	.	.	V	.	.	Q	.
19.417	385.1752	741.27	.	.	V	.	.	Q	.
19.500	390.2921	742.97	.	.	V	.	.	Q	.
19.583	395.4489	748.78	.	.	V	.	.	Q	.
19.667	400.6539	755.76	.	.	V	.	.	Q	.
19.750	405.9050	762.46	.	.	V	.	.	Q	.
19.833	411.1993	768.74	.	.	V	.	.	Q	.
19.917	416.5465	776.41	.	.	V	.	.	Q	.
20.000	421.9254	781.00	.	.	V	.	.	Q	.
20.083	427.3484	787.42	.	.	V	.	.	Q	.
20.167	432.7898	790.09	.	.	V	.	.	Q	.
20.250	438.2037	786.10	.	.	V	.	.	Q	.
20.333	443.6031	783.99	.	.	V	.	.	Q	.
20.417	449.0007	783.73	.	.	V	.	.	Q	.
20.500	454.4107	785.53	.	.	V	.	.	Q	.
20.583	459.8385	788.12	.	.	V	.	.	Q	.
20.667	465.3080	794.17	.	.	V	.	.	Q	.
20.750	470.7807	794.64	.	.	V	.	.	Q	.
20.833	476.2201	789.79	.	.	V	.	.	Q	.
20.917	481.6631	790.32	.	.	V	.	.	Q	.
21.000	487.1656	798.97	.	.	V	.	.	Q	.
21.083	492.6563	797.25	.	.	V	.	.	Q	.
21.167	498.0949	789.68	.	.	V	.	.	Q	.
21.250	503.4770	781.48	.	.	V	.	.	Q	.
21.333	508.8304	777.31	.	.	V	.	.	Q	.
21.417	514.1997	779.63	.	.	V	.	.	Q	.
21.500	519.6619	793.12	.	.	V	.	.	Q	.
21.583	525.0914	788.35	.	.	V	.	.	Q	.
21.667	530.4805	782.50	.	.	V	.	.	Q	.
21.750	535.8658	781.94	.	.	V	.	.	Q	.
21.833	541.2424	780.68	.	.	V	.	.	Q	.
21.917	546.6085	779.16	.	.	V	.	.	Q	.
22.000	551.9841	780.54	.	.	V	.	.	Q	.
22.083	557.3554	779.92	.	.	V	.	.	Q	.
22.167	562.6988	775.86	.	.	V	.	.	Q	.
22.250	567.9302	759.60	.	.	V	.	.	Q	.
22.333	573.1273	754.62	.	.	V	.	.	Q	.
22.417	578.2952	750.37	.	.	V	.	.	Q	.
22.500	583.4316	745.81	.	.	V	.	.	Q	.
22.583	588.5236	739.36	.	.	V	.	.	Q	.
22.667	593.5836	734.71	.	.	V	.	.	Q	.
22.750	598.6271	732.31	.	.	V	.	.	Q	.
22.833	603.6511	729.48	.	.	V	.	.	Q	.
22.917	608.6611	727.45	.	.	V	.	.	Q	.
23.000	613.6400	722.94	.	.	V	.	.	Q	.
23.083	618.5826	717.66	.	.	V	.	.	Q	.
23.167	623.4219	702.66	.	.	V	.	.	Q	.
23.250	628.2076	694.88	.	.	V	.	.	Q	.

23.333	632.9420	687.43	.	.	.	.	.	V	.	Q	.
23.417	637.6512	683.78	.	.	.	.	.	V	.	Q	.
23.500	642.3143	677.08	.	.	.	.	.	V	.	Q	.
23.583	646.9459	672.51	.	.	.	.	.	V	.	Q	.
23.667	651.5630	670.40	.	.	.	.	.	V	.	Q	.
23.750	656.1281	662.85	.	.	.	.	.	V	.	Q	.
23.833	660.6076	650.43	.	.	.	.	.	V	.	Q	.
23.917	665.0373	643.19	.	.	.	.	.	V	.	Q	.
24.000	669.4253	637.14	.	.	.	.	.	V	.	Q	.
24.083	673.7595	629.33	.	.	.	.	.	VQ	.	.	.
24.167	678.0250	619.35	.	.	.	.	.	Q	.	.	.
24.250	682.2274	610.19	.	.	.	.	.	Q	.	.	.
24.333	686.3697	601.46	.	.	.	.	.	Q	.	.	.
24.417	690.4328	589.97	.	.	.	.	.	QV	.	.	.
24.500	694.4432	582.30	.	.	.	.	.	Q.V	.	.	.
24.583	698.4091	575.86	.	.	.	.	.	Q.V	.	.	.
24.667	702.3273	568.92	.	.	.	.	.	Q.V	.	.	.
24.750	706.1893	560.77	.	.	.	.	.	Q.V	.	.	.
24.833	709.9997	553.26	.	.	.	.	.	Q.V	.	.	.
24.917	713.7587	545.81	.	.	.	.	.	Q.V	.	.	.
25.000	717.4615	537.66	.	.	.	.	.	Q.V	.	.	.
25.083	721.0977	527.96	.	.	.	.	.	Q.V	.	.	.
25.167	724.6729	519.12	.	.	.	.	.	Q.V	.	.	.
25.250	728.1867	510.21	.	.	.	.	.	Q.V	.	.	.
25.333	731.6500	502.86	.	.	.	.	.	Q.V	.	.	.
25.417	735.0663	496.05	.	.	.	.	.	Q.V	.	.	.
25.500	738.4337	488.95	.	.	.	.	.	Q.V	.	.	.
25.583	741.7568	482.51	.	.	.	.	.	Q.V	.	.	.
25.667	745.0329	475.69	.	.	.	.	.	Q.V	.	.	.
25.750	748.2598	468.54	.	.	.	.	.	Q.V	.	.	.
25.833	751.4321	460.62	.	.	.	.	.	Q.V	.	.	.
25.917	754.5576	453.82	.	.	.	.	.	Q.V	.	.	.
26.000	757.6359	446.98	.	.	.	.	.	Q.V	.	.	.
26.083	760.6654	439.88	.	.	.	.	.	Q.V	.	.	.
26.167	763.6411	432.07	.	.	.	.	.	Q.V	.	.	.
26.250	766.5554	423.16	.	.	.	.	.	Q.V	.	.	.
26.333	769.4197	415.90	.	.	.	.	.	Q.V	.	.	.
26.417	772.2399	409.49	.	.	.	.	.	Q.V	.	.	.
26.500	775.0160	403.08	.	.	.	.	.	Q.V	.	.	.
26.583	777.7440	396.11	.	.	.	.	.	Q.V	.	.	.
26.667	780.4233	389.03	.	.	.	.	.	Q.V	.	.	.
26.750	783.0512	381.57	.	.	.	.	.	Q.V	.	.	.
26.833	785.6329	374.86	.	.	.	.	.	Q.V	.	.	.
26.917	788.1692	368.27	.	.	.	.	.	Q.V	.	.	.
27.000	790.6593	361.56	.	.	.	.	.	Q.V	.	.	.
27.083	793.1028	354.79	.	.	.	.	.	Q.V	.	.	.
27.167	795.5000	348.07	.	.	.	.	.	Q.V	.	.	.
27.250	797.8511	341.38	.	.	.	.	.	Q.V	.	.	.
27.333	800.1536	334.32	.	.	.	.	.	Q.V	.	.	.
27.417	802.4131	328.08	.	.	.	.	.	Q.V	.	.	.
27.500	804.6339	322.45	.	.	.	.	.	Q.V	.	.	.
27.583	806.8163	316.89	.	.	.	.	.	Q.V	.	.	.
27.667	808.9604	311.33	.	.	.	.	.	Q.V	.	.	.
27.750	811.0670	305.86	.	.	.	.	.	Q.V	.	.	.
27.833	813.1356	300.37	.	.	.	.	.	Q.V	.	.	.
27.917	815.1618	294.20	.	.	.	.	.	Q.V	.	.	.
28.000	817.1393	287.14	.	.	.	.	.	Q.V	.	.	.
28.083	819.0767	281.30	.	.	.	.	.	Q.V	.	.	.

28.167	820.9759	275.77	.	.	Q	.	.	V	.
28.250	822.8436	271.19	.	.	Q	.	.	V	.
28.333	824.6801	266.65	.	.	Q	.	.	V	.
28.417	826.4848	262.05	.	.	Q	.	.	V	.
28.500	828.2567	257.27	.	.	Q	.	.	V	.
28.583	829.9947	252.36	.	.	Q	.	.	V	.
28.667	831.6964	247.09	.	.	Q	.	.	V	.
28.750	833.3615	241.77	.	.	Q	.	.	V	.
28.833	834.9905	236.54	.	.	Q	.	.	V	.
28.917	836.5782	230.55	.	.	Q	.	.	V	.
29.000	838.1243	224.48	.	.	Q	.	.	V	.
29.083	839.6346	219.30	.	.	Q	.	.	V	.
29.167	841.1118	214.50	.	.	Q	.	.	V	.
29.250	842.5583	210.04	.	.	Q	.	.	V	.
29.333	843.9760	205.84	.	.	Q	.	.	V	.
29.417	845.3645	201.62	.	.	Q	.	.	V	.
29.500	846.7145	196.03	.	.	Q	.	.	V	.
29.583	848.0281	190.73	.	.	Q	.	.	V	.
29.667	849.3080	185.85	.	.	Q	.	.	V	.
29.750	850.5531	180.78	.	.	Q	.	.	V	.
29.833	851.7657	176.08	.	.	Q	.	.	V	.
29.917	852.9488	171.78	.	.	Q	.	.	V	.
30.000	854.1024	167.50	.	.	Q	.	.	V	.
30.083	855.2250	162.99	.	.	Q	.	.	V	.
30.167	856.3159	158.39	.	.	Q	.	.	V	.
30.250	857.3818	154.78	.	.	Q	.	.	V	.
30.333	858.4230	151.17	.	.	Q	.	.	V	.
30.417	859.4373	147.28	.	.	Q	.	.	V	.
30.500	860.4172	142.29	.	.	Q	.	.	V	.
30.583	861.3716	138.57	.	.	Q	.	.	V	.
30.667	862.3037	135.35	.	.	Q	.	.	V	.
30.750	863.2122	131.91	.	.	Q	.	.	V	.
30.833	864.0951	128.20	.	.	Q	.	.	V	.
30.917	864.9514	124.33	.	.	Q	.	.	V	.
31.000	865.7802	120.34	.	.	Q	.	.	V	.
31.083	866.5788	115.97	.	.	Q	.	.	V	.
31.167	867.3521	112.29	.	.	Q	.	.	V	.
31.250	868.1010	108.74	.	.	Q	.	.	V	.
31.333	868.8278	105.52	.	.	Q	.	.	V	.
31.417	869.5329	102.39	.	.	Q	.	.	V	.
31.500	870.2180	99.48	.	.	Q	.	.	V	.
31.583	870.8840	96.71	.	.	Q	.	.	V	.
31.667	871.5286	93.60	.	.	Q	.	.	V	.
31.750	872.1524	90.57	.	.	Q	.	.	V	.
31.833	872.7584	87.99	.	.	Q	.	.	V	.
31.917	873.3477	85.56	.	.	Q	.	.	V	.
32.000	873.9192	82.98	.	.	Q	.	.	V	.
32.083	874.4728	80.38	.	.	Q	.	.	V	.
32.167	875.0089	77.85	.	.	Q	.	.	V	.
32.250	875.5278	75.34	.	.	Q	.	.	V	.
32.333	876.0303	72.97	.	.	Q	.	.	V	.
32.417	876.5186	70.90	.	.	Q	.	.	V	.
32.500	876.9954	69.22	.	.	Q	.	.	V	.
32.583	877.4606	67.55	.	.	Q	.	.	V	.
32.667	877.9144	65.89	.	.	Q	.	.	V	.
32.750	878.3572	64.29	.	.	Q	.	.	V	.
32.833	878.7890	62.70	.	.	Q	.	.	V	.
32.917	879.2095	61.06	.	.	Q	.	.	V	.

33.000	879.6185	59.38	.	Q	.	.	.	V	.
33.083	880.0151	57.60	.	Q	.	.	.	V	.
33.167	880.4005	55.95	.	Q	.	.	.	V	.
33.250	880.7751	54.39	.	Q	.	.	.	V	.
33.333	881.1388	52.81	.	Q	.	.	.	V	.
33.417	881.4923	51.33	.	Q	.	.	.	V	.
33.500	881.8354	49.81	.	Q	.	.	.	V	.
33.583	882.1688	48.42	.	Q	.	.	.	V	.
33.667	882.4930	47.08	.	Q	.	.	.	V	.
33.750	882.8076	45.67	.	Q	.	.	.	V	.
33.833	883.1138	44.45	.	Q	.	.	.	V	.
33.917	883.4117	43.27	.	Q	.	.	.	V	.
34.000	883.7017	42.10	.	Q	.	.	.	V	.
34.083	883.9838	40.95	.	Q	.	.	.	V	.
34.167	884.2581	39.83	.	Q	.	.	.	V	.
34.250	884.5258	38.87	.	Q	.	.	.	V	.
34.333	884.7869	37.92	.	Q	.	.	.	V	.
34.417	885.0416	36.98	.	Q	.	.	.	V	.
34.500	885.2899	36.05	.	Q	.	.	.	V	.
34.583	885.5318	35.12	.	Q	.	.	.	V	.
34.667	885.7673	34.20	.	Q	.	.	.	V	.
34.750	885.9969	33.33	.	Q	.	.	.	V	.
34.833	886.2206	32.48	.	Q	.	.	.	V	.
34.917	886.4384	31.63	.	Q	.	.	.	V	.
35.000	886.6498	30.70	.	Q	.	.	.	V	.
35.083	886.8549	29.77	.	Q	.	.	.	V	.
35.167	887.0535	28.85	.	Q	.	.	.	V	.
35.250	887.2460	27.94	.	Q	.	.	.	V	.
35.333	887.4324	27.08	.	Q	.	.	.	V	.
35.417	887.6130	26.22	.	Q	.	.	.	V	.
35.500	887.7878	25.38	.	Q	.	.	.	V	.
35.583	887.9569	24.55	.	Q	.	.	.	V	.
35.667	888.1202	23.72	.	Q	.	.	.	V	.
35.750	888.2779	22.89	.	Q	.	.	.	V	.
35.833	888.4299	22.07	.	Q	.	.	.	V	.
35.917	888.5765	21.29	.	Q	.	.	.	V	.
36.000	888.7188	20.65	.	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%	1605.0
20%	1335.0
30%	1035.0
40%	805.0
50%	665.0
60%	550.0
70%	450.0
80%	350.0
90%	235.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134T *
* 2-YR EV JUNE 2019 ROKAMOTO *

FILE NAME: EVO234TS.DAT
TIME/DATE OF STUDY: 14:53 06/25/2019

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

Table with 3 columns: INTERVAL NUMBER, "S" GRAPH MEAN VALUES, UNIT HYDROGRAPH ORDINATES (CFS). Rows 1-48.

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

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134U *
* 2-YR EV APRIL 2019 FKAZI *

FILE NAME: EVO234US.DAT
TIME/DATE OF STUDY: 13:32 04/10/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 62698.000 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 6.123 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.571
LOW LOSS FRACTION = 0.908
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.15
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.29
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.41
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 0.74
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.09
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 1.90

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.304
30-MINUTE FACTOR = 0.358
1-HOUR FACTOR = 0.405
3-HOUR FACTOR = 0.750
6-HOUR FACTOR = 0.890
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 1.361

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.078	589.696
2	0.233	1179.403
3	0.389	1179.403
4	0.544	1179.398
5	0.700	1179.398
6	0.855	1179.403
7	1.011	1179.393
8	1.167	1179.403
9	1.322	1179.398
10	1.478	1179.403
11	1.633	1179.408
12	1.789	1179.388
13	1.945	1185.583
14	2.152	1568.079
15	2.389	1794.751
16	2.625	1794.732
17	2.862	1794.730
18	3.099	1794.753
19	3.335	1794.732
20	3.572	1794.751
21	3.809	1794.710
22	4.093	2155.691
23	4.519	3230.795
24	4.955	3302.273
25	5.390	3302.374
26	5.826	3307.476
27	6.344	3922.539
28	6.917	4345.178
29	7.490	4345.135
30	8.091	4560.464
31	8.805	5415.522
32	9.531	5503.975
33	10.241	5378.289
34	10.922	5163.455
35	11.602	5159.890
36	12.283	5159.976
37	12.963	5159.803
38	13.644	5159.890
39	14.519	6635.098
40	15.604	8228.061
41	16.464	6523.310
42	17.190	5503.852
43	17.916	5503.838
44	18.642	5503.852
45	19.367	5504.011
46	20.129	5775.545
47	21.024	6784.814
48	21.948	7003.965

49	23.006	8028.203
50	24.042	7848.810
51	24.846	6097.742
52	25.623	5897.118
53	26.401	5897.104
54	27.179	5897.118
55	27.987	6129.372
56	29.028	7891.488
57	30.083	8002.344
58	31.005	6985.612
59	31.949	7159.365
60	33.229	9706.683
61	34.471	9420.671
62	35.559	8247.875
63	36.433	6626.507
64	37.159	5504.040
65	37.940	5924.987
66	39.407	11122.971
67	40.744	10138.882
68	41.900	8758.952
69	43.158	9545.830
70	44.405	9449.915
71	45.587	8963.684
72	46.908	10018.495
73	48.381	11165.809
74	49.947	11875.833
75	51.014	8089.741
76	52.004	7505.541
77	52.993	7504.875
78	53.974	7432.766
79	54.892	6964.179
80	55.806	6932.911
81	56.848	7897.273
82	57.948	8344.773
83	59.139	9030.298
84	60.457	9989.252
85	61.953	11344.017
86	63.152	9090.145
87	64.241	8261.816
88	65.192	7211.720
89	66.126	7078.491
90	67.019	6771.017
91	67.926	6879.833
92	69.001	8147.562
93	70.058	8014.275
94	70.877	6209.234
95	71.670	6020.237
96	72.518	6425.536
97	73.405	6723.406
98	74.274	6594.227
99	75.113	6356.173
100	75.927	6179.383
101	76.569	4864.043
102	77.174	4586.536
103	77.778	4583.875
104	78.384	4589.255
105	78.988	4586.594
106	79.593	4586.536

107	80.210	4679.097
108	80.851	4853.168
109	81.491	4853.168
110	82.114	4730.757
111	82.690	4366.185
112	83.264	4347.210
113	83.835	4336.276
114	84.371	4058.827
115	84.889	3930.920
116	85.408	3930.978
117	85.920	3884.698
118	86.359	3329.741
119	86.778	3174.702
120	87.197	3177.421
121	87.615	3174.645
122	88.018	3049.573
123	88.346	2491.897
124	88.667	2429.303
125	88.987	2429.303
126	89.307	2426.584
127	89.627	2429.303
128	89.946	2412.931
129	90.240	2230.761
130	90.526	2170.828
131	90.813	2173.605
132	91.099	2170.886
133	91.386	2173.547
134	91.672	2173.605
135	91.957	2154.572
136	92.222	2015.790
137	92.481	1958.692
138	92.740	1969.510
139	93.000	1969.567
140	93.259	1958.692
141	93.518	1969.567
142	93.777	1964.130
143	94.019	1833.504
144	94.198	1354.736
145	94.371	1311.232
146	94.543	1305.794
147	94.716	1311.232
148	94.889	1311.232
149	95.061	1305.794
150	95.235	1316.670
151	95.407	1305.794
152	95.580	1311.174
153	95.753	1316.670
154	95.926	1305.794
155	96.061	1028.287
156	96.167	805.275
157	96.274	810.655
158	96.381	810.655
159	96.488	810.713
160	96.594	805.217
161	96.701	810.655
162	96.808	810.713
163	96.915	810.655
164	97.022	810.655

165	97.128	805.275
166	97.235	810.655
167	97.342	810.655
168	97.448	805.275
169	97.555	810.655
170	97.662	810.655
171	97.769	810.713
172	97.876	810.655
173	97.979	778.027
174	98.022	326.449
175	98.047	190.443
176	98.073	195.881
177	98.098	190.385
178	98.123	195.881
179	98.149	195.881
180	98.175	195.881
181	98.200	184.947
182	98.226	201.319
183	98.251	190.443
184	98.276	190.443
185	98.303	201.261
186	98.327	185.005
187	98.353	195.881
188	98.379	195.881
189	98.405	195.823
190	98.429	185.005
191	98.456	201.319
192	98.481	190.443
193	98.506	190.385
194	98.532	201.319
195	98.557	185.005
196	98.583	201.319
197	98.608	184.947
198	98.634	201.319
199	98.660	195.881
200	98.685	185.005
201	98.710	195.823
202	98.736	195.881
203	98.761	185.005
204	98.788	206.757
205	98.812	184.947
206	98.838	195.881
207	98.864	195.881
208	98.888	185.005
209	98.916	206.699
210	98.940	185.005
211	98.964	185.005
212	98.992	206.757
213	99.018	195.823
214	99.043	195.823
215	99.069	195.823
216	99.095	195.823
217	99.121	195.823
218	99.147	195.823
219	99.172	195.823
220	99.198	195.823
221	99.224	195.823
222	99.250	195.823

223	99.276	195.823
224	99.302	195.823
225	99.327	195.823
226	99.353	195.823
227	99.379	195.823
228	99.405	195.823
229	99.431	195.823
230	99.457	195.823
231	99.482	195.823
232	99.508	195.823
233	99.534	195.823
234	99.560	195.823
235	99.586	195.823
236	99.612	195.823
237	99.637	195.823
238	99.663	195.823
239	99.689	195.823
240	99.715	195.823
241	99.741	195.823
242	99.766	195.823
243	99.792	195.823
244	99.818	195.823
245	99.844	195.823
246	99.870	195.823
247	99.896	195.823
248	99.921	195.823
249	99.947	195.823
250	99.973	195.823
251	99.999	195.823
252	100.000	8.446

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 8442.3545
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 854.9503

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.	200.0	400.0	600.0	800.0
0.083	0.0010	0.15	Q	.	.	.	.
0.167	0.0041	0.44	Q	.	.	.	.
0.250	0.0092	0.74	Q	.	.	.	.
0.333	0.0163	1.04	Q	.	.	.	.
0.417	0.0256	1.34	Q	.	.	.	.
0.500	0.0368	1.64	Q	.	.	.	.
0.583	0.0502	1.94	Q	.	.	.	.
0.667	0.0656	2.24	Q	.	.	.	.
0.750	0.0831	2.54	Q	.	.	.	.
0.833	0.1027	2.85	Q	.	.	.	.
0.917	0.1244	3.15	Q	.	.	.	.
1.000	0.1482	3.46	Q	.	.	.	.
1.083	0.1741	3.76	Q	.	.	.	.
1.167	0.2028	4.17	Q	.	.	.	.
1.250	0.2347	4.63	Q	.	.	.	.
1.333	0.2698	5.09	Q	.	.	.	.
1.417	0.3081	5.56	Q	.	.	.	.
1.500	0.3496	6.03	Q	.	.	.	.
1.583	0.3943	6.50	Q	.	.	.	.
1.667	0.4423	6.97	Q	.	.	.	.
1.750	0.4935	7.44	Q	.	.	.	.
1.833	0.5486	8.00	Q	.	.	.	.
1.917	0.6095	8.84	Q	.	.	.	.
2.000	0.6762	9.69	Q	.	.	.	.
2.083	0.7489	10.55	Q	.	.	.	.
2.167	0.8274	11.41	Q	.	.	.	.
2.250	0.9131	12.43	Q	.	.	.	.
2.333	1.0064	13.56	Q	.	.	.	.
2.417	1.1076	14.69	Q	.	.	.	.
2.500	1.2170	15.88	Q	.	.	.	.
2.583	1.3360	17.29	Q	.	.	.	.
2.667	1.4649	18.72	Q	.	.	.	.
2.750	1.6035	20.13	VQ	.	.	.	.
2.833	1.7515	21.48	VQ	.	.	.	.
2.917	1.9088	22.85	VQ	.	.	.	.
3.000	2.0756	24.21	VQ	.	.	.	.
3.083	2.2518	25.58	VQ	.	.	.	.
3.167	2.4374	26.95	VQ	.	.	.	.
3.250	2.6351	28.70	VQ	.	.	.	.
3.333	2.8476	30.86	VQ	.	.	.	.
3.417	3.0721	32.59	VQ	.	.	.	.
3.500	3.3067	34.07	VQ	.	.	.	.
3.583	3.5516	35.56	VQ	.	.	.	.
3.667	3.8068	37.05	VQ	.	.	.	.
3.750	4.0724	38.55	VQ	.	.	.	.
3.833	4.3487	40.12	V Q	.	.	.	.
3.917	4.6376	41.95	V Q	.	.	.	.

4.000	4.9396	43.84	V Q	.	.	.	.
4.083	5.2564	46.00	V Q	.	.	.	.
4.167	5.5878	48.11	V Q	.	.	.	.
4.250	5.9307	49.80	V Q	.	.	.	.
4.333	6.2850	51.44	V Q	.	.	.	.
4.417	6.6506	53.08	V Q	.	.	.	.
4.500	7.0276	54.74	V Q	.	.	.	.
4.583	7.4163	56.45	V Q	.	.	.	.
4.667	7.8200	58.62	V Q	.	.	.	.
4.750	8.2389	60.81	V Q	.	.	.	.
4.833	8.6711	62.77	V Q	.	.	.	.
4.917	9.1172	64.77	V Q	.	.	.	.
5.000	9.5815	67.42	V Q	.	.	.	.
5.083	10.0636	70.00	V Q	.	.	.	.
5.167	10.5615	72.30	V Q	.	.	.	.
5.250	11.0726	74.20	V Q	.	.	.	.
5.333	11.5948	75.83	V Q	.	.	.	.
5.417	12.1291	77.57	V Q	.	.	.	.
5.500	12.6843	80.62	V Q	.	.	.	.
5.583	13.2590	83.43	V Q	.	.	.	.
5.667	13.8506	85.91	V Q	.	.	.	.
5.750	14.4608	88.60	V Q	.	.	.	.
5.833	15.0894	91.27	V Q	.	.	.	.
5.917	15.7356	93.82	V Q	.	.	.	.
6.000	16.4012	96.66	V Q	.	.	.	.
6.083	17.0885	99.79	V Q	.	.	.	.
6.167	17.7986	103.11	V Q	.	.	.	.
6.250	18.5251	105.49	V Q	.	.	.	.
6.333	19.2670	107.73	V Q	.	.	.	.
6.417	20.0245	109.99	V Q	.	.	.	.
6.500	20.7975	112.23	V Q	.	.	.	.
6.583	21.5851	114.37	.V Q	.	.	.	.
6.667	22.3875	116.51	.V Q	.	.	.	.
6.750	23.2064	118.89	.V Q	.	.	.	.
6.833	24.0425	121.41	.V Q	.	.	.	.
6.917	24.8972	124.10	.V Q	.	.	.	.
7.000	25.7721	127.04	.V Q	.	.	.	.
7.083	26.6698	130.34	.V Q	.	.	.	.
7.167	27.5863	133.08	.V Q	.	.	.	.
7.250	28.5204	135.63	.V Q	.	.	.	.
7.333	29.4703	137.93	.V Q	.	.	.	.
7.417	30.4359	140.20	.V Q	.	.	.	.
7.500	31.4166	142.40	.V Q	.	.	.	.
7.583	32.4128	144.64	.V Q	.	.	.	.
7.667	33.4266	147.22	.V Q	.	.	.	.
7.750	34.4581	149.76	.V Q	.	.	.	.
7.833	35.5040	151.87	.V Q	.	.	.	.
7.917	36.5642	153.94	.V Q	.	.	.	.
8.000	37.6395	156.13	.V Q	.	.	.	.
8.083	38.7303	158.39	.V Q	.	.	.	.
8.167	39.8367	160.64	.V Q	.	.	.	.
8.250	40.9582	162.84	.V Q	.	.	.	.
8.333	42.0946	165.01	.V Q	.	.	.	.
8.417	43.2437	166.85	.V Q	.	.	.	.
8.500	44.4051	168.64	.V Q	.	.	.	.
8.583	45.5789	170.44	.V Q	.	.	.	.
8.667	46.7652	172.25	.V Q	.	.	.	.
8.750	47.9640	174.07	.V Q	.	.	.	.

8.833	49.1754	175.90	. V	Q .	.	.	.
8.917	50.3997	177.76	. V	Q .	.	.	.
9.000	51.6372	179.68	. V	Q .	.	.	.
9.083	52.8880	181.61	. V	Q.	.	.	.
9.167	54.1520	183.53	. V	Q.	.	.	.
9.250	55.4285	185.36	. V	Q.	.	.	.
9.333	56.7178	187.20	. V	Q.	.	.	.
9.417	58.0198	189.05	. V	Q.	.	.	.
9.500	59.3342	190.84	. V	Q.	.	.	.
9.583	60.6607	192.61	. V	Q.	.	.	.
9.667	61.9996	194.40	. V	Q.	.	.	.
9.750	63.3507	196.19	. V	Q.	.	.	.
9.833	64.7133	197.85	. V	Q.	.	.	.
9.917	66.0871	199.48	. V	Q.	.	.	.
10.000	67.4723	201.13	. V	Q	.	.	.
10.083	68.8689	202.79	. V	Q	.	.	.
10.167	70.2768	204.43	. V	Q	.	.	.
10.250	71.6951	205.94	. V	Q	.	.	.
10.333	73.1238	207.45	. V	Q	.	.	.
10.417	74.5631	208.98	. V	Q	.	.	.
10.500	76.0130	210.52	. V	Q	.	.	.
10.583	77.4735	212.07	. V	Q	.	.	.
10.667	78.9449	213.64	. V	Q	.	.	.
10.750	80.4267	215.17	. V	Q	.	.	.
10.833	81.9192	216.70	. V	Q	.	.	.
10.917	83.4223	218.25	. V	Q	.	.	.
11.000	84.9362	219.82	. V	Q	.	.	.
11.083	86.4610	221.40	. V	.Q	.	.	.
11.167	87.9967	222.99	. V	.Q	.	.	.
11.250	89.5436	224.60	. V	.Q	.	.	.
11.333	91.1014	226.19	. V	.Q	.	.	.
11.417	92.6702	227.79	. V	.Q	.	.	.
11.500	94.2501	229.40	. V	.Q	.	.	.
11.583	95.8412	231.03	. V	.Q	.	.	.
11.667	97.4437	232.68	. V	.Q	.	.	.
11.750	99.0577	234.35	. V	.Q	.	.	.
11.833	100.6833	236.04	. V	.Q	.	.	.
11.917	102.3205	237.72	. V	.Q	.	.	.
12.000	103.9685	239.29	. V	.Q	.	.	.
12.083	105.6292	241.14	. V	.Q	.	.	.
12.167	107.3046	243.26	. V	.Q	.	.	.
12.250	108.9946	245.40	. V	.Q	.	.	.
12.333	110.6996	247.56	. V	.Q	.	.	.
12.417	112.4195	249.74	. V	.Q	.	.	.
12.500	114.1547	251.94	. V	.Q	.	.	.
12.583	115.9051	254.16	. V	.Q	.	.	.
12.667	117.6710	256.41	. V	.Q	.	.	.
12.750	119.4525	258.68	. V	.Q	.	.	.
12.833	121.2498	260.97	. V	.Q	.	.	.
12.917	123.0626	263.21	. V	.Q	.	.	.
13.000	124.8906	265.43	. V	.Q	.	.	.
13.083	126.7341	267.67	. V	.Q	.	.	.
13.167	128.5943	270.11	. V	.Q	.	.	.
13.250	130.4722	272.67	. V	.Q	.	.	.
13.333	132.3679	275.25	. V	.Q	.	.	.
13.417	134.2816	277.87	. V	.Q	.	.	.
13.500	136.2135	280.51	. V	.Q	.	.	.
13.583	138.1637	283.18	. V	.Q	.	.	.

13.667	140.1327	285.89	. V	. Q	.	.	.
13.750	142.1204	288.62	. V	. Q	.	.	.
13.833	144.1282	291.54	. V	. Q	.	.	.
13.917	146.1597	294.96	. V	. Q	.	.	.
14.000	148.2151	298.45	. V	. Q	.	.	.
14.083	150.2966	302.23	. V	. Q	.	.	.
14.167	152.4062	306.31	. V	. Q	.	.	.
14.250	154.5458	310.66	. V	. Q	.	.	.
14.333	156.7167	315.22	. V	. Q	.	.	.
14.417	158.9190	319.78	. V	. Q	.	.	.
14.500	161.1527	324.33	. V	. Q	.	.	.
14.583	163.4201	329.23	. V	. Q	.	.	.
14.667	165.7217	334.19	. V	. Q	.	.	.
14.750	168.0571	339.10	. V	. Q	.	.	.
14.833	170.4258	343.93	. V	. Q	.	.	.
14.917	172.8278	348.77	. V	. Q	.	.	.
15.000	175.2633	353.63	. V	. Q	.	.	.
15.083	177.7322	358.49	. V	. Q	.	.	.
15.167	180.2360	363.55	. V	. Q	.	.	.
15.250	182.7797	369.35	. V	. Q	.	.	.
15.333	185.3681	375.84	. V	. Q	.	.	.
15.417	187.9939	381.26	. V	. Q	.	.	.
15.500	190.6516	385.91	. V	. Q	.	.	.
15.583	193.3419	390.63	. V	. Q	.	.	.
15.667	196.0655	395.45	. V	. Q	.	.	.
15.750	198.8217	400.21	. V	. Q	.	.	.
15.833	201.6124	405.21	. V	. Q	.	.	.
15.917	204.4457	411.40	. V	. Q	.	.	.
16.000	207.3255	418.14	. V	. Q	.	.	.
16.083	210.2672	427.13	. V	.Q	.	.	.
16.167	213.2678	435.69	. V	.Q	.	.	.
16.250	216.3107	441.83	. V	. Q	.	.	.
16.333	219.3963	448.02	. V	. Q	.	.	.
16.417	222.5258	454.40	. V	. Q	.	.	.
16.500	225.7006	460.98	. V	. Q	.	.	.
16.583	228.9232	467.93	. V	. Q	.	.	.
16.667	232.1996	475.73	. V	. Q	.	.	.
16.750	235.5298	483.54	. V	. Q	.	.	.
16.833	238.9096	490.75	. V	. Q	.	.	.
16.917	242.3393	497.99	. V	. Q	.	.	.
17.000	245.8277	506.51	. V	. Q	.	.	.
17.083	249.3733	514.83	. V	. Q	.	.	.
17.167	252.9767	523.22	. V	. Q	.	.	.
17.250	256.6285	530.24	. V	. Q	.	.	.
17.333	260.3249	536.71	. V	. Q	.	.	.
17.417	264.0615	542.56	. V	. Q	.	.	.
17.500	267.8517	550.33	. V	. Q	.	.	.
17.583	271.6893	557.22	. V	. Q	.	.	.
17.667	275.5699	563.47	. V	. Q	.	.	.
17.750	279.4997	570.60	. V	. Q	.	.	.
17.833	283.4883	579.14	. V	. Q	.	.	.
17.917	287.5448	589.01	. V	. Q	.	.	.
18.000	291.6501	596.09	. V	. Q	.	.	.
18.083	295.8096	603.95	. V	. Q	.	.	.
18.167	300.0255	612.15	. V	. Q	.	.	.
18.250	304.2949	619.92	. V	. Q	.	.	.
18.333	308.6105	626.63	. V	.Q	.	.	.
18.417	312.9655	632.35	. V	.Q	.	.	.

18.500	317.3660	638.95	.	.	V	.	.Q	.
18.583	321.8179	646.41	.	.	V	.	.Q	.
18.667	326.3039	651.36	.	.	V	.	.Q	.
18.750	330.8302	657.23	.	.	V	.	.Q	.
18.833	335.3980	663.24	.	.	V	.	.Q	.
18.917	340.0116	669.89	.	.	V	.	.Q	.
19.000	344.6798	677.82	.	.	V	.	.Q	.
19.083	349.4112	687.00	.	.	V	.	.Q	.
19.167	354.1999	695.32	.	.	V	.	.Q	.
19.250	359.0582	705.42	.	.	V	.	.Q	.
19.333	363.9664	712.68	.	.	V	.	.Q	.
19.417	368.8524	709.44	.	.	V	.	.Q	.
19.500	373.7497	711.09	.	.	V	.	.Q	.
19.583	378.6853	716.65	.	.	V	.	.Q	.
19.667	383.6664	723.25	.	.	V	.	.Q	.
19.750	388.6909	729.57	.	.	V	.	.Q	.
19.833	393.7568	735.56	.	.	V	.	.Q	.
19.917	398.8742	743.04	.	.	V	.	.Q	.
20.000	404.0224	747.53	.	.	V	.	.Q	.
20.083	409.2144	753.88	.	.	V	.	.Q	.
20.167	414.4245	756.50	.	.	V	.	.Q	.
20.250	419.6073	752.55	.	.	V	.	.Q	.
20.333	424.7763	750.53	.	.	V	.	.Q	.
20.417	429.9434	750.26	.	.	V	.	.Q	.
20.500	435.1223	751.99	.	.	V	.	.Q	.
20.583	440.3186	754.50	.	.	V	.	.Q	.
20.667	445.5556	760.40	.	.	V	.	.Q	.
20.750	450.7952	760.79	.	.	.V	.	.Q	.
20.833	456.0027	756.13	.	.	.V	.	.Q	.
20.917	461.2148	756.80	.	.	.V	.	.Q	.
21.000	466.4867	765.49	.	.	.V	.	.Q	.
21.083	471.7476	763.89	.	.	.V	.	.Q	.
21.167	476.9576	756.49	.	.	.V	.	.Q	.
21.250	482.1124	748.48	.	.	.V	.	.Q	.
21.333	487.2393	744.42	.	.	.V	.	.Q	.
21.417	492.3817	746.68	.	.	.V	.	.Q	.
21.500	497.6166	760.11	.	.	.V	.	.Q	.
21.583	502.8188	755.36	.	.	.V	.	.Q	.
21.667	507.9818	749.67	.	.	.V	.	.Q	.
21.750	513.1417	749.22	.	.	.V	.	.Q	.
21.833	518.2923	747.87	.	.	.V	.	.Q	.
21.917	523.4328	746.40	.	.	.V	.	.Q	.
22.000	528.5837	747.92	.	.	.V	.	.Q	.
22.083	533.7319	747.51	.	.	.V	.	.Q	.
22.167	538.8543	743.78	.	.	.V	.	.Q	.
22.250	543.8676	727.93	.	.	.V	.	.Q	.
22.333	548.8489	723.28	.	.	.V	.	.Q	.
22.417	553.8022	719.23	.	.	.V	.	.Q	.
22.500	558.7247	714.74	.	.	.V	.	.Q	.
22.583	563.6038	708.43	.	.	.V	.	.Q	.
22.667	568.4514	703.88	.	.	.V	.	.Q	.
22.750	573.2828	701.53	.	.	.V	.	.Q	.
22.833	578.0953	698.78	.	.	.V	.	.Q	.
22.917	582.8949	696.90	.	.	.V	.	.Q	.
23.000	587.6660	692.76	.	.	.V	.	.Q	.
23.083	592.4036	687.90	.	.	.V	.	.Q	.
23.167	597.0408	673.33	.	.	.V	.	.Q	.
23.250	601.6268	665.88	.	.	.V	.	.Q	.

23.333	606.1625	658.59	.	.	.	.	V . Q	.
23.417	610.6736	655.01	.	.	.	.	V . Q	.
23.500	615.1405	648.60	.	.	.	.	V . Q	.
23.583	619.5776	644.28	.	.	.	.	V . Q	.
23.667	624.0019	642.40	.	.	.	.	V . Q	.
23.750	628.3760	635.12	.	.	.	.	V.Q	.
23.833	632.6669	623.05	.	.	.	.	V.Q	.
23.917	636.9102	616.11	.	.	.	.	VQ	.
24.000	641.1135	610.32	.	.	.	.	VQ	.
24.083	645.2656	602.88	.	.	.	.	Q	.
24.167	649.3522	593.38	.	.	.	.	QV	.
24.250	653.3785	584.62	.	.	.	.	QV	.
24.333	657.3472	576.26	.	.	.	.	Q V	.
24.417	661.2393	565.13	.	.	.	.	Q V	.
24.500	665.0808	557.78	.	.	.	.	Q .V	.
24.583	668.8796	551.58	.	.	.	.	Q .V	.
24.667	672.6322	544.88	.	.	.	.	Q .V	.
24.750	676.3309	537.04	.	.	.	.	Q .V	.
24.833	679.9800	529.85	.	.	.	.	Q .V	.
24.917	683.5801	522.73	.	.	.	.	Q .V	.
25.000	687.1268	514.98	.	.	.	.	Q .V	.
25.083	690.6098	505.74	.	.	.	.	Q .V	.
25.167	694.0347	497.29	.	.	.	.	Q .V	.
25.250	697.4006	488.73	.	.	.	.	Q .V	.
25.333	700.7181	481.71	.	.	.	.	Q .V	.
25.417	703.9908	475.19	.	.	.	.	Q .V	.
25.500	707.2166	468.38	.	.	.	.	Q .V	.
25.583	710.4000	462.23	.	.	.	.	Q .V	.
25.667	713.5387	455.74	.	.	.	.	Q .V	.
25.750	716.6304	448.91	.	.	.	.	Q .V	.
25.833	719.6695	441.28	.	.	.	.	Q .V	.
25.917	722.6639	434.79	.	.	.	.	Q .V	.
26.000	725.6132	428.25	.	.	.	.	Q .V	.
26.083	728.5159	421.46	.	.	.	.	Q .V	.
26.167	731.3670	413.98	.	.	.	.	Q .V	.
26.250	734.1591	405.41	.	.	.	.	Q .V	.
26.333	736.9034	398.47	.	.	.	.	Q .V	.
26.417	739.6053	392.32	.	.	.	.	Q .V	.
26.500	742.2650	386.18	.	.	.	.	Q .V	.
26.583	744.8787	379.51	.	.	.	.	Q .V	.
26.667	747.4457	372.73	.	.	.	.	Q .V	.
26.750	749.9635	365.58	.	.	.	.	Q .V	.
26.833	752.4370	359.15	.	.	.	.	Q .V	.
26.917	754.8671	352.85	.	.	.	.	Q .V	.
27.000	757.2531	346.44	.	.	.	.	Q .V	.
27.083	759.5944	339.97	.	.	.	.	Q .V	.
27.167	761.8916	333.55	.	.	.	.	Q .V	.
27.250	764.1447	327.15	.	.	.	.	Q .V	.
27.333	766.3512	320.38	.	.	.	.	Q .V	.
27.417	768.5165	314.41	.	.	.	.	Q .V	.
27.500	770.6448	309.02	.	.	.	.	Q .V	.
27.583	772.7363	303.69	.	.	.	.	Q .V	.
27.667	774.7914	298.40	.	.	.	.	Q .V	.
27.750	776.8105	293.19	.	.	.	.	Q .V	.
27.833	778.7936	287.95	.	.	.	.	Q .V	.
27.917	780.7361	282.04	.	.	.	.	Q .V	.
28.000	782.6317	275.23	.	.	.	.	Q .V	.
28.083	784.4888	269.65	.	.	.	.	Q .V	.

28.167	786.3094	264.36	.	.	Q	.	.	V	.
28.250	788.0997	259.96	.	.	Q	.	.	V	.
28.333	789.8600	255.60	.	.	Q	.	.	V	.
28.417	791.5900	251.18	.	.	Q	.	.	V	.
28.500	793.2883	246.60	.	.	Q	.	.	V	.
28.583	794.9543	241.90	.	.	Q	.	.	V	.
28.667	796.5855	236.86	.	.	Q	.	.	V	.
28.750	798.1817	231.76	.	.	Q	.	.	V	.
28.833	799.7434	226.76	.	.	Q	.	.	V	.
28.917	801.2654	220.99	.	.	Q	.	.	V	.
29.000	802.7473	215.17	.	.	Q	.	.	V	.
29.083	804.1949	210.20	.	.	Q	.	.	V	.
29.167	805.6109	205.60	.	.	Q	.	.	V	.
29.250	806.9974	201.32	.	.	Q	.	.	V	.
29.333	808.3562	197.29	.	.	Q	.	.	V	.
29.417	809.6871	193.26	.	.	Q	.	.	V	.
29.500	810.9812	187.89	.	.	Q	.	.	V	.
29.583	812.2403	182.82	.	.	Q	.	.	V	.
29.667	813.4672	178.14	.	.	Q	.	.	V	.
29.750	814.6606	173.28	.	.	Q	.	.	V	.
29.833	815.8229	168.77	.	.	Q	.	.	V	.
29.917	816.9568	164.64	.	.	Q	.	.	V	.
30.000	818.0625	160.54	.	.	Q	.	.	V	.
30.083	819.1383	156.21	.	.	Q	.	.	V	.
30.167	820.1838	151.81	.	.	Q	.	.	V	.
30.250	821.2056	148.36	.	.	Q	.	.	V	.
30.333	822.2036	144.92	.	.	Q	.	.	V	.
30.417	823.1760	141.20	.	.	Q	.	.	V	.
30.500	824.1152	136.37	.	.	Q	.	.	V	.
30.583	825.0298	132.80	.	.	Q	.	.	V	.
30.667	825.9232	129.71	.	.	Q	.	.	V	.
30.750	826.7939	126.42	.	.	Q	.	.	V	.
30.833	827.6400	122.85	.	.	Q	.	.	V	.
30.917	828.4605	119.15	.	.	Q	.	.	V	.
31.000	829.2547	115.32	.	.	Q	.	.	V	.
31.083	830.0200	111.12	.	.	Q	.	.	V	.
31.167	830.7609	107.59	.	.	Q	.	.	V	.
31.250	831.4785	104.19	.	.	Q	.	.	V	.
31.333	832.1747	101.10	.	.	Q	.	.	V	.
31.417	832.8503	98.10	.	.	Q	.	.	V	.
31.500	833.5067	95.31	.	.	Q	.	.	V	.
31.583	834.1448	92.66	.	.	Q	.	.	V	.
31.667	834.7625	89.68	.	.	Q	.	.	V	.
31.750	835.3601	86.78	.	.	Q	.	.	V	.
31.833	835.9407	84.31	.	.	Q	.	.	V	.
31.917	836.5054	81.99	.	.	Q	.	.	V	.
32.000	837.0531	79.52	.	.	Q	.	.	V	.
32.083	837.5836	77.03	.	.	Q	.	.	V	.
32.167	838.0974	74.61	.	.	Q	.	.	V	.
32.250	838.5947	72.21	.	.	Q	.	.	V	.
32.333	839.0765	69.95	.	.	Q	.	.	V	.
32.417	839.5446	67.96	.	.	Q	.	.	V	.
32.500	840.0016	66.36	.	.	Q	.	.	V	.
32.583	840.4475	64.75	.	.	Q	.	.	V	.
32.667	840.8825	63.16	.	.	Q	.	.	V	.
32.750	841.3069	61.63	.	.	Q	.	.	V	.
32.833	841.7209	60.10	.	.	Q	.	.	V	.
32.917	842.1240	58.53	.	.	Q	.	.	V	.

33.000	842.5160	56.92	.	Q	.	.	.	V	.
33.083	842.8962	55.21	.	Q	.	.	.	V	.
33.167	843.2656	53.64	.	Q	.	.	.	V	.
33.250	843.6247	52.13	.	Q	.	.	.	V	.
33.333	843.9733	50.62	.	Q	.	.	.	V	.
33.417	844.3122	49.21	.	Q	.	.	.	V	.
33.500	844.6411	47.75	.	Q	.	.	.	V	.
33.583	844.9607	46.41	.	Q	.	.	.	V	.
33.667	845.2715	45.14	.	Q	.	.	.	V	.
33.750	845.5731	43.79	.	Q	.	.	.	V	.
33.833	845.8666	42.62	.	Q	.	.	.	V	.
33.917	846.1523	41.49	.	Q	.	.	.	V	.
34.000	846.4304	40.37	.	Q	.	.	.	V	.
34.083	846.7009	39.27	.	Q	.	.	.	V	.
34.167	846.9639	38.19	.	Q	.	.	.	V	.
34.250	847.2206	37.27	.	Q	.	.	.	V	.
34.333	847.4711	36.37	.	Q	.	.	.	V	.
34.417	847.7154	35.47	.	Q	.	.	.	V	.
34.500	847.9535	34.57	.	Q	.	.	.	V	.
34.583	848.1855	33.69	.	Q	.	.	.	V	.
34.667	848.4114	32.80	.	Q	.	.	.	V	.
34.750	848.6316	31.97	.	Q	.	.	.	V	.
34.833	848.8461	31.15	.	Q	.	.	.	V	.
34.917	849.0551	30.35	.	Q	.	.	.	V	.
35.000	849.2579	29.45	.	Q	.	.	.	V	.
35.083	849.4547	28.56	.	Q	.	.	.	V	.
35.167	849.6453	27.68	.	Q	.	.	.	V	.
35.250	849.8298	26.80	.	Q	.	.	.	V	.
35.333	850.0087	25.98	.	Q	.	.	.	V	.
35.417	850.1820	25.16	.	Q	.	.	.	V	.
35.500	850.3497	24.35	.	Q	.	.	.	V	.
35.583	850.5120	23.55	.	Q	.	.	.	V	.
35.667	850.6686	22.75	.	Q	.	.	.	V	.
35.750	850.8199	21.96	.	Q	.	.	.	V	.
35.833	850.9657	21.17	.	Q	.	.	.	V	.
35.917	851.1064	20.43	.	Q	.	.	.	V	.
36.000	851.2428	19.81	.	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%	1605.0
20%	1335.0
30%	1035.0
40%	805.0
50%	665.0
60%	550.0
70%	450.0
80%	345.0
90%	235.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA 92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 137 *
* 2-YR EV APRIL 2019 FKAZI *

FILE NAME: EVO2137S.DAT
TIME/DATE OF STUDY: 13:34 04/10/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 137.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 67798.398 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 6.293 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.569
LOW LOSS FRACTION = 0.905
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.15
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.29
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.40
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 0.73
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.07
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 1.87

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.291
30-MINUTE FACTOR = 0.350
1-HOUR FACTOR = 0.394
3-HOUR FACTOR = 0.738
6-HOUR FACTOR = 0.886
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 1.324

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.076	620.450
2	0.227	1240.887
3	0.378	1240.887
4	0.530	1240.887
5	0.681	1240.893
6	0.832	1240.893
7	0.984	1240.888
8	1.135	1240.899
9	1.286	1240.876
10	1.438	1240.898
11	1.589	1240.894
12	1.740	1240.876
13	1.892	1240.923
14	2.067	1440.199
15	2.296	1873.289
16	2.526	1888.322
17	2.756	1888.310
18	2.987	1888.324
19	3.217	1888.299
20	3.447	1888.322
21	3.678	1888.299
22	3.909	1896.261
23	4.254	2832.673
24	4.678	3474.451
25	5.102	3474.545
26	5.526	3474.502
27	5.959	3553.909
28	6.491	4361.240
29	7.049	4571.695
30	7.606	4571.691
31	8.211	4955.665
32	8.914	5764.736
33	9.620	5790.955
34	10.306	5623.351
35	10.968	5429.200
36	11.630	5428.911
37	12.292	5428.809
38	12.954	5428.911
39	13.616	5428.911
40	14.447	6808.979
41	15.505	8674.108
42	16.376	7145.899
43	17.082	5790.861
44	17.789	5790.673
45	18.495	5790.861
46	19.201	5790.861
47	19.919	5889.309
48	20.767	6950.325

49	21.651	7246.231
50	22.639	8104.862
51	23.692	8628.474
52	24.542	6968.466
53	25.298	6204.311
54	26.055	6204.295
55	26.812	6204.686
56	27.568	6204.686
57	28.456	7276.086
58	29.514	8678.925
59	30.478	7903.431
60	31.361	7238.678
61	32.377	8328.595
62	33.680	10690.201
63	34.811	9271.521
64	35.845	8480.121
65	36.620	6350.583
66	37.326	5791.236
67	38.171	6925.756
68	39.683	12396.517
69	40.915	10106.333
70	42.047	9279.434
71	43.281	10116.905
72	44.486	9884.102
73	45.637	9431.383
74	46.929	10591.582
75	48.360	11736.673
76	49.897	12601.325
77	50.948	8618.089
78	51.911	7896.253
79	52.874	7897.786
80	53.833	7859.970
81	54.734	7386.044
82	55.617	7241.696
83	56.599	8052.706
84	57.660	8702.759
85	58.797	9324.005
86	60.013	9968.021
87	61.476	11992.153
88	62.734	10317.210
89	63.838	9053.449
90	64.798	7866.789
91	65.716	7531.144
92	66.599	7240.945
93	67.465	7097.316
94	68.416	7795.756
95	69.499	8887.175
96	70.416	7517.569
97	71.188	6327.875
98	71.969	6405.006
99	72.818	6961.256
100	73.680	7070.104
101	74.513	6829.763
102	75.328	6680.129
103	76.091	6258.312
104	76.692	4923.550
105	77.280	4825.274
106	77.869	4825.274

107	78.458	4828.339
108	79.046	4822.271
109	79.635	4828.277
110	80.236	4934.122
111	80.859	5106.464
112	81.482	5109.467
113	82.091	4991.549
114	82.652	4598.508
115	83.210	4571.358
116	83.767	4571.296
117	84.294	4320.383
118	84.798	4135.967
119	85.302	4132.902
120	85.807	4132.902
121	86.252	3652.220
122	86.659	3337.812
123	87.067	3343.818
124	87.474	3337.812
125	87.880	3325.677
126	88.221	2796.638
127	88.533	2557.736
128	88.844	2554.734
129	89.156	2554.734
130	89.467	2554.734
131	89.779	2554.734
132	90.080	2470.095
133	90.360	2291.685
134	90.638	2285.679
135	90.917	2285.679
136	91.196	2285.617
137	91.475	2288.682
138	91.753	2282.677
139	92.027	2246.331
140	92.281	2083.060
141	92.534	2067.984
142	92.786	2067.984
143	93.038	2067.984
144	93.290	2067.984
145	93.542	2067.984
146	93.795	2067.984
147	94.027	1904.712
148	94.200	1414.897
149	94.367	1372.609
150	94.536	1384.745
151	94.704	1378.614
152	94.872	1378.677
153	95.040	1378.614
154	95.208	1378.677
155	95.377	1378.677
156	95.545	1378.614
157	95.713	1378.677
158	95.881	1378.614
159	96.028	1209.337
160	96.134	864.715
161	96.238	852.579
162	96.342	852.579
163	96.445	846.573
164	96.550	858.584

165	96.653	846.573
166	96.757	852.579
167	96.861	852.579
168	96.965	852.579
169	97.068	846.573
170	97.173	858.584
171	97.276	846.573
172	97.380	852.579
173	97.485	858.647
174	97.587	840.505
175	97.692	858.584
176	97.796	852.641
177	97.899	846.511
178	97.992	761.872
179	98.026	272.120
180	98.051	205.560
181	98.076	211.690
182	98.100	193.486
183	98.124	199.492
184	98.149	205.622
185	98.175	211.628
186	98.199	193.486
187	98.224	205.622
188	98.249	205.560
189	98.274	205.622
190	98.299	205.560
191	98.323	193.486
192	98.348	205.622
193	98.374	211.628
194	98.398	199.492
195	98.422	199.554
196	98.448	211.628
197	98.472	199.554
198	98.497	199.554
199	98.523	211.628
200	98.547	199.554
201	98.572	205.560
202	98.596	199.554
203	98.621	205.622
204	98.646	199.492
205	98.671	205.622
206	98.696	205.560
207	98.721	205.622
208	98.746	205.560
209	98.770	193.486
210	98.795	205.622
211	98.821	217.696
212	98.845	193.486
213	98.870	205.560
214	98.894	193.486
215	98.920	217.696
216	98.944	193.486
217	98.969	205.622
218	98.994	205.560
219	99.019	205.622
220	99.044	205.560
221	99.069	205.560
222	99.094	205.560

223	99.119	205.560
224	99.144	205.560
225	99.169	205.560
226	99.194	205.560
227	99.219	205.560
228	99.245	205.560
229	99.270	205.560
230	99.295	205.560
231	99.320	205.560
232	99.345	205.560
233	99.370	205.560
234	99.395	205.560
235	99.420	205.560
236	99.445	205.560
237	99.470	205.560
238	99.495	205.560
239	99.520	205.560
240	99.545	205.560
241	99.570	205.560
242	99.595	205.560
243	99.621	205.560
244	99.646	205.560
245	99.671	205.560
246	99.696	205.560
247	99.721	205.560
248	99.746	205.560
249	99.771	205.560
250	99.796	205.560
251	99.821	205.560
252	99.846	205.560
253	99.871	205.560
254	99.896	205.560
255	99.921	205.560
256	99.946	205.560
257	99.972	205.560
258	99.997	205.560
259	100.000	27.712

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 8903.0449
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 934.0912

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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.	225.0	450.0	675.0	900.0
0.083	0.0011	0.16	Q	.	.	.	.
0.167	0.0043	0.47	Q	.	.	.	.
0.250	0.0097	0.79	Q	.	.	.	.
0.333	0.0173	1.10	Q	.	.	.	.
0.417	0.0271	1.42	Q	.	.	.	.
0.500	0.0391	1.74	Q	.	.	.	.
0.583	0.0532	2.06	Q	.	.	.	.
0.667	0.0696	2.38	Q	.	.	.	.
0.750	0.0882	2.70	Q	.	.	.	.
0.833	0.1090	3.02	Q	.	.	.	.
0.917	0.1320	3.34	Q	.	.	.	.
1.000	0.1572	3.67	Q	.	.	.	.
1.083	0.1847	3.99	Q	.	.	.	.
1.167	0.2148	4.37	Q	.	.	.	.
1.250	0.2482	4.85	Q	.	.	.	.
1.333	0.2850	5.35	Q	.	.	.	.
1.417	0.3252	5.84	Q	.	.	.	.
1.500	0.3689	6.33	Q	.	.	.	.
1.583	0.4159	6.83	Q	.	.	.	.
1.667	0.4664	7.33	Q	.	.	.	.
1.750	0.5203	7.83	Q	.	.	.	.
1.833	0.5777	8.33	Q	.	.	.	.
1.917	0.6402	9.08	Q	.	.	.	.
2.000	0.7090	9.98	Q	.	.	.	.
2.083	0.7840	10.89	Q	.	.	.	.
2.167	0.8653	11.80	Q	.	.	.	.
2.250	0.9530	12.74	Q	.	.	.	.
2.333	1.0486	13.88	Q	.	.	.	.
2.417	1.1525	15.08	Q	.	.	.	.
2.500	1.2646	16.28	Q	.	.	.	.
2.583	1.3858	17.59	Q	.	.	.	.
2.667	1.5173	19.10	Q	.	.	.	.
2.750	1.6593	20.62	Q	.	.	.	.
2.833	1.8116	22.11	Q	.	.	.	.
2.917	1.9738	23.55	VQ	.	.	.	.
3.000	2.1460	25.00	VQ	.	.	.	.
3.083	2.3281	26.45	VQ	.	.	.	.
3.167	2.5203	27.91	VQ	.	.	.	.
3.250	2.7225	29.37	VQ	.	.	.	.
3.333	2.9373	31.18	VQ	.	.	.	.
3.417	3.1678	33.47	VQ	.	.	.	.
3.500	3.4115	35.38	VQ	.	.	.	.
3.583	3.6661	36.96	VQ	.	.	.	.
3.667	3.9315	38.54	VQ	.	.	.	.
3.750	4.2079	40.13	VQ	.	.	.	.
3.833	4.4952	41.72	VQ	.	.	.	.
3.917	4.7937	43.34	VQ	.	.	.	.

4.000	5.1053	45.24	V Q	.	.	.	.
4.083	5.4305	47.22	V Q	.	.	.	.
4.167	5.7709	49.42	V Q	.	.	.	.
4.250	6.1273	51.76	V Q	.	.	.	.
4.333	6.4971	53.69	V Q	.	.	.	.
4.417	6.8789	55.43	V Q	.	.	.	.
4.500	7.2727	57.18	V Q	.	.	.	.
4.583	7.6786	58.94	V Q	.	.	.	.
4.667	8.0967	60.70	V Q	.	.	.	.
4.750	8.5288	62.74	V Q	.	.	.	.
4.833	8.9774	65.14	V Q	.	.	.	.
4.917	9.4413	67.35	V Q	.	.	.	.
5.000	9.9193	69.41	V Q	.	.	.	.
5.083	10.4134	71.74	V Q	.	.	.	.
5.167	10.9277	74.68	V Q	.	.	.	.
5.250	11.4599	77.28	V Q	.	.	.	.
5.333	12.0087	79.68	V Q	.	.	.	.
5.417	12.5704	81.55	V Q	.	.	.	.
5.500	13.1440	83.29	V Q	.	.	.	.
5.583	13.7316	85.32	V Q	.	.	.	.
5.667	14.3428	88.75	V Q	.	.	.	.
5.750	14.9737	91.60	V Q	.	.	.	.
5.833	15.6228	94.26	V Q	.	.	.	.
5.917	16.2918	97.14	V Q	.	.	.	.
6.000	16.9803	99.97	V Q	.	.	.	.
6.083	17.6876	102.69	V Q	.	.	.	.
6.167	18.4157	105.73	V Q	.	.	.	.
6.250	19.1668	109.06	V Q	.	.	.	.
6.333	19.9424	112.62	V Q	.	.	.	.
6.417	20.7357	115.18	V Q	.	.	.	.
6.500	21.5454	117.58	V Q	.	.	.	.
6.583	22.3718	119.99	V Q	.	.	.	.
6.667	23.2147	122.39	V Q	.	.	.	.
6.750	24.0735	124.69	.V Q	.	.	.	.
6.833	24.9478	126.96	.V Q	.	.	.	.
6.917	25.8393	129.44	.V Q	.	.	.	.
7.000	26.7491	132.10	.V Q	.	.	.	.
7.083	27.6784	134.93	.V Q	.	.	.	.
7.167	28.6283	137.93	.V Q	.	.	.	.
7.250	29.6025	141.46	.V Q	.	.	.	.
7.333	30.5982	144.57	.V Q	.	.	.	.
7.417	31.6132	147.38	.V Q	.	.	.	.
7.500	32.6456	149.91	.V Q	.	.	.	.
7.583	33.6949	152.35	.V Q	.	.	.	.
7.667	34.7606	154.74	.V Q	.	.	.	.
7.750	35.8425	157.10	.V Q	.	.	.	.
7.833	36.9421	159.65	.V Q	.	.	.	.
7.917	38.0611	162.48	.V Q	.	.	.	.
8.000	39.1974	164.99	.V Q	.	.	.	.
8.083	40.3489	167.20	.V Q	.	.	.	.
8.167	41.5159	169.45	.V Q	.	.	.	.
8.250	42.6994	171.84	.V Q	.	.	.	.
8.333	43.8997	174.28	.V Q	.	.	.	.
8.417	45.1164	176.67	.V Q	.	.	.	.
8.500	46.3494	179.03	.V Q	.	.	.	.
8.583	47.5980	181.30	. V Q	.	.	.	.
8.667	48.8601	183.24	. V Q	.	.	.	.
8.750	50.1354	185.17	. V Q	.	.	.	.

8.833	51.4240	187.12	. V	Q .	.	.	.
8.917	52.7262	189.07	. V	Q .	.	.	.
9.000	54.0418	191.03	. V	Q .	.	.	.
9.083	55.3711	193.01	. V	Q .	.	.	.
9.167	56.7143	195.03	. V	Q .	.	.	.
9.250	58.0717	197.10	. V	Q .	.	.	.
9.333	59.4436	199.19	. V	Q .	.	.	.
9.417	60.8297	201.26	. V	Q .	.	.	.
9.500	62.2294	203.24	. V	Q .	.	.	.
9.583	63.6429	205.23	. V	Q .	.	.	.
9.667	65.0701	207.24	. V	Q .	.	.	.
9.750	66.5108	209.19	. V	Q .	.	.	.
9.833	67.9648	211.11	. V	Q .	.	.	.
9.917	69.4321	213.05	. V	Q .	.	.	.
10.000	70.9128	215.00	. V	Q .	.	.	.
10.083	72.4061	216.84	. V	Q .	.	.	.
10.167	73.9117	218.61	. V	Q .	.	.	.
10.250	75.4297	220.41	. V	Q .	.	.	.
10.333	76.9601	222.21	. V	Q .	.	.	.
10.417	78.5030	224.03	. V	Q .	.	.	.
10.500	80.0576	225.73	. V	Q .	.	.	.
10.583	81.6235	227.38	. V	Q .	.	.	.
10.667	83.2010	229.05	. V	Q .	.	.	.
10.750	84.7900	230.73	. V	Q .	.	.	.
10.833	86.3908	232.43	. V	Q .	.	.	.
10.917	88.0034	234.14	. V	Q .	.	.	.
11.000	89.6277	235.86	. V	Q .	.	.	.
11.083	91.2636	237.54	. V	Q .	.	.	.
11.167	92.9113	239.24	. V	Q .	.	.	.
11.250	94.5707	240.95	. V	Q .	.	.	.
11.333	96.2421	242.69	. V	Q .	.	.	.
11.417	97.9256	244.44	. V	Q .	.	.	.
11.500	99.6212	246.21	. V	Q .	.	.	.
11.583	101.3292	247.99	. V	.Q	.	.	.
11.667	103.0492	249.75	. V	.Q	.	.	.
11.750	104.7815	251.52	. V	.Q	.	.	.
11.833	106.5261	253.32	. V	.Q	.	.	.
11.917	108.2833	255.14	. V	.Q	.	.	.
12.000	110.0531	256.98	. V	.Q	.	.	.
12.083	111.8377	259.13	. V	.Q	.	.	.
12.167	113.6392	261.58	. V	.Q	.	.	.
12.250	115.4575	264.01	. V	.Q	.	.	.
12.333	117.2918	266.34	. V	.Q	.	.	.
12.417	119.1422	268.68	. V	.Q	.	.	.
12.500	121.0089	271.05	. V	.Q	.	.	.
12.583	122.8920	273.43	. V	.Q	.	.	.
12.667	124.7917	275.84	. V	.Q	.	.	.
12.750	126.7082	278.27	. V	.Q	.	.	.
12.833	128.6416	280.73	. V	.Q	.	.	.
12.917	130.5921	283.21	. V	.Q	.	.	.
13.000	132.5598	285.72	. V	.Q	.	.	.
13.083	134.5450	288.25	. V	.Q	.	.	.
13.167	136.5485	290.91	. V	.Q	.	.	.
13.250	138.5715	293.74	. V	.Q	.	.	.
13.333	140.6137	296.53	. V	.Q	.	.	.
13.417	142.6752	299.33	. V	.Q	.	.	.
13.500	144.7563	302.17	. V	.Q	.	.	.
13.583	146.8571	305.04	. V	.Q	.	.	.

13.667	148.9779	307.94	. V	. Q	.	.	.
13.750	151.1189	310.87	. V	. Q	.	.	.
13.833	153.2803	313.84	. V	. Q	.	.	.
13.917	155.4654	317.27	. V	. Q	.	.	.
14.000	157.6763	321.03	. V	. Q	.	.	.
14.083	159.9152	325.09	. V	. Q	.	.	.
14.167	162.1842	329.45	. V	. Q	.	.	.
14.250	164.4835	333.86	. V	. Q	.	.	.
14.333	166.8158	338.65	. V	. Q	.	.	.
14.417	169.1819	343.55	. V	. Q	.	.	.
14.500	171.5818	348.47	. V	. Q	.	.	.
14.583	174.0169	353.57	. V	. Q	.	.	.
14.667	176.4898	359.06	. V	. Q	.	.	.
14.750	179.0005	364.56	. V	. Q	.	.	.
14.833	181.5487	369.99	. V	. Q	.	.	.
14.917	184.1327	375.20	. V	. Q	.	.	.
15.000	186.7527	380.42	. V	. Q	.	.	.
15.083	189.4086	385.64	. V	. Q	.	.	.
15.167	192.1011	390.96	. V	. Q	.	.	.
15.250	194.8317	396.47	. V	. Q	.	.	.
15.333	197.6046	402.63	. V	. Q	.	.	.
15.417	200.4233	409.27	. V	. Q	.	.	.
15.500	203.2805	414.87	. V	. Q	.	.	.
15.583	206.1725	419.91	. V	. Q	.	.	.
15.667	209.0999	425.06	. V	. Q	.	.	.
15.750	212.0624	430.16	. V	. Q	.	.	.
15.833	215.0601	435.26	. V	. Q	.	.	.
15.917	218.0979	441.09	. V	. Q	.	.	.
16.000	221.1844	448.16	. V	. Q	.	.	.
16.083	224.3328	457.15	. V	. Q	.	.	.
16.167	227.5434	466.18	. V	. Q	.	.	.
16.250	230.8045	473.51	. V	.Q	.	.	.
16.333	234.1126	480.34	. V	.Q	.	.	.
16.417	237.4675	487.13	. V	.Q	.	.	.
16.500	240.8708	494.16	. V	.Q	.	.	.
16.583	244.3220	501.11	. V	.Q	.	.	.
16.667	247.8237	508.45	. V	.Q	.	.	.
16.750	251.3796	516.32	. V	.Q	.	.	.
16.833	254.9936	524.75	. V	. Q	.	.	.
16.917	258.6621	532.67	. V	. Q	.	.	.
17.000	262.3838	540.38	. V	. Q	.	.	.
17.083	266.1614	548.51	. V	. Q	.	.	.
17.167	270.0049	558.08	. V	. Q	.	.	.
17.250	273.9089	566.85	. V	. Q	.	.	.
17.333	277.8630	574.14	. V	. Q	.	.	.
17.417	281.8658	581.20	. V	. Q	.	.	.
17.500	285.9111	587.39	. V	. Q	.	.	.
17.583	289.9987	593.52	. V	. Q	.	.	.
17.667	294.1425	601.67	. V	. Q	.	.	.
17.750	298.3367	609.01	. V	. Q	.	.	.
17.833	302.5835	616.62	. V	. Q	.	.	.
17.917	306.9019	627.04	. V	. Q	.	.	.
18.000	311.2816	635.94	. V	. Q	.	.	.
18.083	315.7067	642.52	. V	. Q	.	.	.
18.167	320.1830	649.96	. V	. Q	.	.	.
18.250	324.7216	659.00	. V	. Q	.	.	.
18.333	329.3345	669.79	. V	. Q	.	.	.
18.417	333.9942	676.58	. V	. Q	.	.	.

18.500	338.6967	682.80	.	.	V	.	Q	.
18.583	343.4504	690.24	.	.	V	.	Q	.
18.667	348.2580	698.06	.	.	V	.	.Q	.
18.750	353.0969	702.61	.	.	V	.	.Q	.
18.833	357.9742	708.19	.	.	V	.	.Q	.
18.917	362.8947	714.45	.	.	V	.	.Q	.
19.000	367.8618	721.22	.	.	V	.	.Q	.
19.083	372.8788	728.47	.	.	V	.	.Q	.
19.167	377.9590	737.64	.	.	V	.	.Q	.
19.250	383.1094	747.83	.	.	V	.	.Q	.
19.333	388.3397	759.44	.	.	V	.	.Q	.
19.417	393.6329	768.57	.	.	V	.	.Q	.
19.500	398.9099	766.23	.	.	V	.	.Q	.
19.583	404.1780	764.92	.	.	V	.	.Q	.
19.667	409.4891	771.17	.	.	V	.	.Q	.
19.750	414.8476	778.05	.	.	V	.	.Q	.
19.833	420.2499	784.42	.	.	V	.	.Q	.
19.917	425.6987	791.16	.	.	V	.	.Q	.
20.000	431.2064	799.71	.	.	V	.	.Q	.
20.083	436.7482	804.68	.	.	V	.	.Q	.
20.167	442.3269	810.03	.	.	V	.	.Q	.
20.250	447.9346	814.23	.	.	V	.	.Q	.
20.333	453.5311	812.61	.	.	V	.	.Q	.
20.417	459.1136	810.58	.	.	V	.	.Q	.
20.500	464.6914	809.91	.	.	V	.	.Q	.
20.583	470.2807	811.57	.	.	V	.	.Q	.
20.667	475.8795	812.94	.	.	V	.	.Q	.
20.750	481.5108	817.67	.	.	V	.	.Q	.
20.833	487.1708	821.83	.	.	V	.	.Q	.
20.917	492.8156	819.62	.	.	.V	.	.Q	.
21.000	498.4319	815.49	.	.	.V	.	.Q	.
21.083	504.0722	818.97	.	.	.V	.	.Q	.
21.167	509.7584	825.63	.	.	.V	.	.Q	.
21.250	515.4059	820.02	.	.	.V	.	.Q	.
21.333	521.0107	813.80	.	.	.V	.	.Q	.
21.417	526.5551	805.05	.	.	.V	.	.Q	.
21.500	532.0952	804.42	.	.	.V	.	.Q	.
21.583	537.6658	808.85	.	.	.V	.	.Q	.
21.667	543.3257	821.83	.	.	.V	.	.Q	.
21.750	548.9235	812.79	.	.	.V	.	.Q	.
21.833	554.4893	808.15	.	.	.V	.	.Q	.
21.917	560.0553	808.19	.	.	.V	.	.Q	.
22.000	565.6157	807.37	.	.	.V	.	.Q	.
22.083	571.1628	805.43	.	.	.V	.	.Q	.
22.167	576.7155	806.24	.	.	.V	.	.Q	.
22.250	582.2646	805.74	.	.	.V	.	.Q	.
22.333	587.7927	802.67	.	.	.V	.	.Q	.
22.417	593.2131	787.05	.	.	.V	.	.Q	.
22.500	598.5998	782.15	.	.	.V	.	.Q	.
22.583	603.9579	778.00	.	.	.V	.	.Q	.
22.667	609.2798	772.75	.	.	.V	.	.Q	.
22.750	614.5544	765.86	.	.	.V	.	.Q	.
22.833	619.7917	760.47	.	.	.V	.	.Q	.
22.917	625.0099	757.68	.	.	.V	.	.Q	.
23.000	630.2111	755.20	.	.	.V	.	.Q	.
23.083	635.3932	752.46	.	.	.V	.	.Q	.
23.167	640.5405	747.39	.	.	.V	.	.Q	.
23.250	645.6648	744.04	.	.	.V	.	.Q	.

23.333	650.6944	730.30	.	.	.	.	V	.Q	.
23.417	655.6636	721.53	.	.	.	.	V	.Q	.
23.500	660.5797	713.81	.	.	.	.	V	.Q	.
23.583	665.4631	709.07	.	.	.	.	V	.Q	.
23.667	670.2969	701.87	.	.	.	.	V	.Q	.
23.750	675.0953	696.73	.	.	.	.	V	.Q	.
23.833	679.8719	693.56	.	.	.	.	VQ	.	.
23.917	684.6191	689.30	.	.	.	.	VQ	.	.
24.000	689.2895	678.13	.	.	.	.	VQ	.	.
24.083	693.8883	667.75	.	.	.	.	Q.	.	.
24.167	698.4368	660.45	.	.	.	.	Q.	.	.
24.250	702.9373	653.46	.	.	.	.	QV	.	.
24.333	707.3755	644.43	.	.	.	.	Q	V	.
24.417	711.7538	635.74	.	.	.	.	Q	V	.
24.500	716.0737	627.25	.	.	.	.	Q	V	.
24.583	720.3287	617.82	.	.	.	.	Q	V	.
24.667	724.5061	606.56	.	.	.	.	Q	.V	.
24.750	728.6350	599.51	.	.	.	.	Q	.V	.
24.833	732.7175	592.78	.	.	.	.	Q	.V	.
24.917	736.7473	585.12	.	.	.	.	Q	.V	.
25.000	740.7209	576.97	.	.	.	.	Q	.V	.
25.083	744.6406	569.14	.	.	.	.	Q	.V	.
25.167	748.5068	561.37	.	.	.	.	Q	.V	.
25.250	752.3101	552.24	.	.	.	.	Q	.V	.
25.333	756.0490	542.89	.	.	.	.	Q	.V	.
25.417	759.7267	534.01	.	.	.	.	Q	.V	.
25.500	763.3445	525.30	.	.	.	.	Q	.V	.
25.583	766.9121	518.01	.	.	.	.	Q	.V	.
25.667	770.4335	511.31	.	.	.	.	Q	.V	.
25.750	773.9053	504.10	.	.	.	.	Q	.V	.
25.833	777.3286	497.05	.	.	.	.	Q	.V	.
25.917	780.7017	489.77	.	.	.	.	.Q	.V	.
26.000	784.0260	482.70	.	.	.	.	.Q	.V	.
26.083	787.2953	474.70	.	.	.	.	.Q	.V	.
26.167	790.5137	467.31	.	.	.	.	Q	.V	.
26.250	793.6850	460.47	.	.	.	.	Q	.V	.
26.333	796.8052	453.06	.	.	.	.	Q	.V	.
26.417	799.8723	445.34	.	.	.	.	Q.	.V	.
26.500	802.8770	436.28	.	.	.	.	Q.	.V	.
26.583	805.8271	428.36	.	.	.	.	Q.	.V	.
26.667	808.7307	421.61	.	.	.	.	Q.	.V	.
26.750	811.5896	415.11	.	.	.	.	Q.	.V	.
26.833	814.4025	408.43	.	.	.	.	Q.	.V	.
26.917	817.1667	401.38	.	.	.	.	Q.	.V	.
27.000	819.8810	394.11	.	.	.	.	Q	.V	.
27.083	822.5453	386.87	.	.	.	.	Q	.V	.
27.167	825.1642	380.26	.	.	.	.	Q	.V	.
27.250	827.7369	373.56	.	.	.	.	Q	.V	.
27.333	830.2602	366.39	.	.	.	.	Q	.V	.
27.417	832.7307	358.72	.	.	.	.	Q	.V	.
27.500	835.1535	351.79	.	.	.	.	Q	.V	.
27.583	837.5317	345.31	.	.	.	.	Q	.V	.
27.667	839.8656	338.88	.	.	.	.	Q	.V	.
27.750	842.1595	333.07	.	.	.	.	Q	.V	.
27.833	844.4143	327.40	.	.	.	.	Q	.V	.
27.917	846.6301	321.73	.	.	.	.	Q	.V	.
28.000	848.8053	315.85	.	.	.	.	Q	.V	.
28.083	850.9411	310.12	.	.	.	.	Q	.V	.

28.167	853.0356	304.13	.	.	Q	.	.	V	.
28.250	855.0840	297.43	.	.	Q	.	.	V	.
28.333	857.0844	290.45	.	.	Q	.	.	V	.
28.417	859.0482	285.14	.	.	Q	.	.	V	.
28.500	860.9785	280.29	.	.	Q	.	.	V	.
28.583	862.8769	275.64	.	.	Q	.	.	V	.
28.667	864.7436	271.05	.	.	Q	.	.	V	.
28.750	866.5767	266.16	.	.	Q	.	.	V	.
28.833	868.3733	260.87	.	.	Q	.	.	V	.
28.917	870.1335	255.59	.	.	Q	.	.	V	.
29.000	871.8589	250.53	.	.	Q	.	.	V	.
29.083	873.5479	245.23	.	.	Q	.	.	V	.
29.167	875.1950	239.16	.	.	Q	.	.	V	.
29.250	876.7997	233.00	.	.	Q	.	.	V	.
29.333	878.3627	226.94	.	.	Q	.	.	V	.
29.417	879.8953	222.54	.	.	Q	.	.	V	.
29.500	881.3992	218.37	.	.	Q	.	.	V	.
29.583	882.8726	213.94	.	.	Q	.	.	V	.
29.667	884.3057	208.08	.	.	Q	.	.	V	.
29.750	885.7021	202.77	.	.	Q	.	.	V	.
29.833	887.0641	197.75	.	.	Q	.	.	V	.
29.917	888.3900	192.53	.	.	Q	.	.	V	.
30.000	889.6807	187.40	.	.	Q	.	.	V	.
30.083	890.9369	182.41	.	.	Q	.	.	V	.
30.167	892.1576	177.25	.	.	Q	.	.	V	.
30.250	893.3436	172.20	.	.	Q	.	.	V	.
30.333	894.4966	167.42	.	.	Q	.	.	V	.
30.417	895.6238	163.66	.	.	Q	.	.	V	.
30.500	896.7261	160.06	.	.	Q	.	.	V	.
30.583	897.8050	156.65	.	.	Q	.	.	V	.
30.667	898.8596	153.12	.	.	Q	.	.	V	.
30.750	899.8896	149.57	.	.	Q	.	.	V	.
30.833	900.8928	145.66	.	.	Q	.	.	V	.
30.917	901.8610	140.58	.	.	Q	.	.	V	.
31.000	902.8026	136.72	.	.	Q	.	.	V	.
31.083	903.7184	132.97	.	.	Q	.	.	V	.
31.167	904.6071	129.05	.	.	Q	.	.	V	.
31.250	905.4648	124.54	.	.	Q	.	.	V	.
31.333	906.2952	120.57	.	.	Q	.	.	V	.
31.417	907.1005	116.92	.	.	Q	.	.	V	.
31.500	907.8824	113.53	.	.	Q	.	.	V	.
31.583	908.6422	110.33	.	.	Q	.	.	V	.
31.667	909.3801	107.15	.	.	Q	.	.	V	.
31.750	910.0966	104.03	.	.	Q	.	.	V	.
31.833	910.7906	100.77	.	.	Q	.	.	V	.
31.917	911.4617	97.44	.	.	Q	.	.	V	.
32.000	912.1131	94.59	.	.	Q	.	.	V	.
32.083	912.7469	92.04	.	.	Q	.	.	V	.
32.167	913.3630	89.45	.	.	Q	.	.	V	.
32.250	913.9606	86.78	.	.	Q	.	.	V	.
32.333	914.5400	84.13	.	.	Q	.	.	V	.
32.417	915.1014	81.50	.	.	Q	.	.	V	.
32.500	915.6453	78.98	.	.	Q	.	.	V	.
32.583	916.1729	76.60	.	.	Q	.	.	V	.
32.667	916.6860	74.51	.	.	Q	.	.	V	.
32.750	917.1855	72.53	.	.	Q	.	.	V	.
32.833	917.6714	70.55	.	.	Q	.	.	V	.
32.917	918.1457	68.86	.	.	Q	.	.	V	.

33.000	918.6084	67.18	.	Q	.	.	.	V	.
33.083	919.0599	65.55	.	Q	.	.	.	V	.
33.167	919.4999	63.90	.	Q	.	.	.	V	.
33.250	919.9283	62.21	.	Q	.	.	.	V	.
33.333	920.3452	60.53	.	Q	.	.	.	V	.
33.417	920.7507	58.87	.	Q	.	.	.	V	.
33.500	921.1461	57.41	.	Q	.	.	.	V	.
33.583	921.5307	55.85	.	Q	.	.	.	V	.
33.667	921.9040	54.20	.	Q	.	.	.	V	.
33.750	922.2672	52.73	.	Q	.	.	.	V	.
33.833	922.6202	51.26	.	Q	.	.	.	V	.
33.917	922.9639	49.90	.	Q	.	.	.	V	.
34.000	923.2972	48.41	.	Q	.	.	.	V	.
34.083	923.6219	47.15	.	Q	.	.	.	V	.
34.167	923.9384	45.94	.	Q	.	.	.	V	.
34.250	924.2466	44.76	.	Q	.	.	.	V	.
34.333	924.5466	43.56	.	Q	.	.	.	V	.
34.417	924.8385	42.39	.	Q	.	.	.	V	.
34.500	925.1234	41.36	.	Q	.	.	.	V	.
34.583	925.4014	40.38	.	Q	.	.	.	V	.
34.667	925.6730	39.43	.	Q	.	.	.	V	.
34.750	925.9379	38.47	.	Q	.	.	.	V	.
34.833	926.1964	37.53	.	Q	.	.	.	V	.
34.917	926.4482	36.57	.	Q	.	.	.	V	.
35.000	926.6938	35.66	.	Q	.	.	.	V	.
35.083	926.9335	34.79	.	Q	.	.	.	V	.
35.167	927.1671	33.93	.	Q	.	.	.	V	.
35.250	927.3948	33.07	.	Q	.	.	.	V	.
35.333	927.6166	32.21	.	Q	.	.	.	V	.
35.417	927.8326	31.36	.	Q	.	.	.	V	.
35.500	928.0427	30.51	.	Q	.	.	.	V	.
35.583	928.2465	29.59	.	Q	.	.	.	V	.
35.667	928.4442	28.71	.	Q	.	.	.	V	.
35.750	928.6360	27.84	.	Q	.	.	.	V	.
35.833	928.8218	26.98	.	Q	.	.	.	V	.
35.917	929.0017	26.12	.	Q	.	.	.	V	.
36.000	929.1757	25.27	.	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%	1615.0
20%	1340.0
30%	1050.0
40%	815.0
50%	680.0
60%	560.0
70%	455.0
80%	350.0
90%	245.0

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA 92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 138 *
* 2-YR EV APRIL 2019 FKAZI *

FILE NAME: EVO2138S.DAT
TIME/DATE OF STUDY: 13:35 04/10/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 138.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69101.797 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 6.469 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.568
LOW LOSS FRACTION = 0.904
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.15
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.29
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.40
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 0.73
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.06
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 1.86

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.287
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.392
3-HOUR FACTOR = 0.734
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 1.288

UNIT HYDROGRAPH DETERMINATION

Table with 3 columns: INTERVAL NUMBER, "S" GRAPH MEAN VALUES, UNIT HYDROGRAPH ORDINATES (CFS). Rows 1-48.

49	20.485	6549.340
50	21.344	7176.536
51	22.249	7565.369
52	23.274	8562.382
53	24.211	7834.416
54	24.953	6203.082
55	25.689	6151.995
56	26.426	6151.198
57	27.162	6151.995
58	27.917	6312.365
59	28.887	8109.997
60	29.903	8485.378
61	30.790	7417.863
62	31.651	7192.189
63	32.762	9285.216
64	34.013	10452.465
65	35.071	8840.546
66	36.040	8098.935
67	36.755	5972.609
68	37.442	5741.388
69	38.342	7525.583
70	39.841	12528.899
71	41.006	9736.581
72	42.111	9235.341
73	43.315	10058.914
74	44.486	9788.863
75	45.604	9342.200
76	46.854	10445.388
77	48.234	11527.120
78	49.753	12698.339
79	50.817	8890.055
80	51.754	7828.885
81	52.691	7829.649
82	53.627	7824.932
83	54.517	7441.613
84	55.376	7174.750
85	56.286	7608.725
86	57.312	8574.863
87	58.383	8943.899
88	59.527	9564.751
89	60.863	11162.834
90	62.233	11452.682
91	63.334	9202.059
92	64.346	8449.736
93	65.242	7488.349
94	66.125	7380.660
95	66.970	7062.312
96	67.820	7106.625
97	68.820	8356.298
98	69.854	8636.646
99	70.663	6764.558
100	71.415	6279.863
101	72.188	6465.210
102	73.024	6983.124
103	73.860	6991.030
104	74.663	6710.682
105	75.456	6625.181
106	76.176	6015.392

107	76.752	4816.407
108	77.325	4784.719
109	77.897	4786.376
110	78.470	4783.125
111	79.042	4783.188
112	79.615	4783.188
113	80.199	4884.501
114	80.805	5061.942
115	81.410	5061.942
116	82.008	4995.378
117	82.557	4589.936
118	83.100	4536.123
119	83.642	4529.747
120	84.166	4380.870
121	84.658	4105.304
122	85.149	4105.304
123	85.639	4095.740
124	86.103	3874.051
125	86.501	3332.420
126	86.898	3313.356
127	87.294	3310.232
128	87.691	3316.544
129	88.063	3107.415
130	88.369	2562.659
131	88.673	2534.159
132	88.975	2530.971
133	89.279	2537.283
134	89.582	2530.971
135	89.885	2530.907
136	90.168	2369.470
137	90.440	2268.030
138	90.711	2264.842
139	90.982	2268.093
140	91.253	2264.842
141	91.524	2264.905
142	91.795	2268.030
143	92.059	2204.717
144	92.306	2058.964
145	92.551	2049.464
146	92.797	2052.652
147	93.042	2052.652
148	93.287	2046.276
149	93.533	2052.652
150	93.778	2046.340
151	94.009	1938.588
152	94.179	1419.144
153	94.343	1368.392
154	94.506	1362.080
155	94.670	1368.456
156	94.834	1368.456
157	94.997	1362.080
158	95.161	1374.768
159	95.324	1362.080
160	95.488	1368.456
161	95.651	1362.080
162	95.815	1374.768
163	95.974	1324.080
164	96.087	950.262

165	96.189	848.949
166	96.289	836.261
167	96.391	855.261
168	96.491	836.261
169	96.593	848.949
170	96.694	842.573
171	96.795	842.637
172	96.896	848.949
173	96.996	836.261
174	97.099	855.261
175	97.200	842.573
176	97.300	836.261
177	97.401	848.949
178	97.503	848.949
179	97.603	836.261
180	97.704	848.885
181	97.805	842.637
182	97.906	842.573
183	97.994	734.884
184	98.026	266.129
185	98.050	202.689
186	98.074	196.441
187	98.099	209.065
188	98.122	196.377
189	98.147	209.065
190	98.171	196.377
191	98.195	202.753
192	98.219	202.753
193	98.243	196.377
194	98.268	209.065
195	98.291	196.377
196	98.316	209.065
197	98.339	190.065
198	98.365	215.377
199	98.389	202.753
200	98.413	202.753
201	98.437	202.689
202	98.462	202.753
203	98.486	202.753
204	98.510	202.689
205	98.534	202.753
206	98.557	190.065
207	98.583	215.377
208	98.607	202.753
209	98.630	190.065
210	98.656	215.377
211	98.679	190.065
212	98.703	202.753
213	98.729	215.377
214	98.751	190.065
215	98.776	202.753
216	98.800	202.689
217	98.824	202.753
218	98.848	202.689
219	98.873	202.753
220	98.895	190.065
221	98.921	215.377
222	98.944	190.065

223	98.970	215.441
224	98.994	202.689
225	99.017	190.065
226	99.039	190.065
227	99.062	190.065
228	99.085	190.065
229	99.108	190.065
230	99.130	190.065
231	99.153	190.065
232	99.176	190.065
233	99.199	190.065
234	99.221	190.065
235	99.244	190.065
236	99.267	190.065
237	99.290	190.065
238	99.312	190.065
239	99.335	190.065
240	99.358	190.065
241	99.381	190.065
242	99.403	190.065
243	99.426	190.065
244	99.449	190.065
245	99.471	190.065
246	99.494	190.065
247	99.517	190.065
248	99.540	190.065
249	99.562	190.065
250	99.585	190.065
251	99.608	190.065
252	99.631	190.065
253	99.653	190.065
254	99.676	190.065
255	99.699	190.065
256	99.722	190.065
257	99.744	190.065
258	99.767	190.065
259	99.790	190.065
260	99.813	190.065
261	99.835	190.065
262	99.858	190.065
263	99.881	190.065
264	99.904	190.065
265	99.926	190.065
266	99.949	190.065
267	99.972	190.065
268	99.995	190.065
269	100.000	45.205

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9018.0605
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 957.1755

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	0.0011	0.16	Q	.	.	.	.
0.167	0.0043	0.47	Q	.	.	.	.
0.250	0.0097	0.78	Q	.	.	.	.
0.333	0.0173	1.10	Q	.	.	.	.
0.417	0.0270	1.41	Q	.	.	.	.
0.500	0.0389	1.73	Q	.	.	.	.
0.583	0.0531	2.05	Q	.	.	.	.
0.667	0.0694	2.37	Q	.	.	.	.
0.750	0.0879	2.69	Q	.	.	.	.
0.833	0.1086	3.01	Q	.	.	.	.
0.917	0.1315	3.33	Q	.	.	.	.
1.000	0.1567	3.65	Q	.	.	.	.
1.083	0.1841	3.98	Q	.	.	.	.
1.167	0.2138	4.32	Q	.	.	.	.
1.250	0.2467	4.78	Q	.	.	.	.
1.333	0.2830	5.27	Q	.	.	.	.
1.417	0.3226	5.76	Q	.	.	.	.
1.500	0.3657	6.25	Q	.	.	.	.
1.583	0.4121	6.75	Q	.	.	.	.
1.667	0.4620	7.24	Q	.	.	.	.
1.750	0.5153	7.74	Q	.	.	.	.
1.833	0.5721	8.24	Q	.	.	.	.
1.917	0.6326	8.79	Q	.	.	.	.
2.000	0.6990	9.64	Q	.	.	.	.
2.083	0.7717	10.55	Q	.	.	.	.
2.167	0.8505	11.45	Q	.	.	.	.
2.250	0.9357	12.36	Q	.	.	.	.
2.333	1.0275	13.33	Q	.	.	.	.
2.417	1.1275	14.51	Q	.	.	.	.
2.500	1.2356	15.71	Q	.	.	.	.
2.583	1.3521	16.91	Q	.	.	.	.
2.667	1.4778	18.25	Q	.	.	.	.
2.750	1.6139	19.77	Q	.	.	.	.
2.833	1.7605	21.29	Q	.	.	.	.
2.917	1.9173	22.76	VQ	.	.	.	.
3.000	2.0840	24.20	VQ	.	.	.	.
3.083	2.2606	25.65	VQ	.	.	.	.
3.167	2.4472	27.10	VQ	.	.	.	.
3.250	2.6438	28.55	VQ	.	.	.	.
3.333	2.8505	30.01	VQ	.	.	.	.
3.417	3.0692	31.75	VQ	.	.	.	.
3.500	3.3035	34.03	VQ	.	.	.	.
3.583	3.5517	36.04	VQ	.	.	.	.
3.667	3.8108	37.62	VQ	.	.	.	.
3.750	4.0807	39.19	VQ	.	.	.	.
3.833	4.3616	40.78	VQ	.	.	.	.
3.917	4.6534	42.37	VQ	.	.	.	.

4.000	4.9562	43.96	VQ	.	.	.	.
4.083	5.2714	45.77	V Q	.	.	.	.
4.167	5.6002	47.74	V Q	.	.	.	.
4.250	5.9433	49.82	V Q	.	.	.	.
4.333	6.3025	52.16	V Q	.	.	.	.
4.417	6.6766	54.32	V Q	.	.	.	.
4.500	7.0627	56.07	V Q	.	.	.	.
4.583	7.4609	57.82	V Q	.	.	.	.
4.667	7.8712	59.57	V Q	.	.	.	.
4.750	8.2935	61.33	V Q	.	.	.	.
4.833	8.7283	63.13	V Q	.	.	.	.
4.917	9.1787	65.40	V Q	.	.	.	.
5.000	9.6455	67.78	V Q	.	.	.	.
5.083	10.1268	69.89	V Q	.	.	.	.
5.167	10.6223	71.95	V Q	.	.	.	.
5.250	11.1357	74.55	V Q	.	.	.	.
5.333	11.6691	77.45	V Q	.	.	.	.
5.417	12.2198	79.96	V Q	.	.	.	.
5.500	12.7865	82.28	V Q	.	.	.	.
5.583	13.3655	84.08	V Q	.	.	.	.
5.667	13.9565	85.82	V Q	.	.	.	.
5.750	14.5628	88.02	V Q	.	.	.	.
5.833	15.1930	91.51	V Q	.	.	.	.
5.917	15.8424	94.29	V Q	.	.	.	.
6.000	16.5102	96.96	V Q	.	.	.	.
6.083	17.1978	99.85	V Q	.	.	.	.
6.167	17.9050	102.68	V Q	.	.	.	.
6.250	18.6310	105.41	V Q	.	.	.	.
6.333	19.3777	108.43	V Q	.	.	.	.
6.417	20.1472	111.73	V Q	.	.	.	.
6.500	20.9416	115.34	V Q	.	.	.	.
6.583	21.7543	118.00	V Q	.	.	.	.
6.667	22.5835	120.41	V Q	.	.	.	.
6.750	23.4293	122.81	V Q	.	.	.	.
6.833	24.2918	125.24	.V Q	.	.	.	.
6.917	25.1704	127.57	.V Q	.	.	.	.
7.000	26.0646	129.84	.V Q	.	.	.	.
7.083	26.9753	132.24	.V Q	.	.	.	.
7.167	27.9043	134.89	.V Q	.	.	.	.
7.250	28.8522	137.64	.V Q	.	.	.	.
7.333	29.8203	140.57	.V Q	.	.	.	.
7.417	30.8115	143.91	.V Q	.	.	.	.
7.500	31.8262	147.34	.V Q	.	.	.	.
7.583	32.8607	150.21	.V Q	.	.	.	.
7.667	33.9138	152.91	.V Q	.	.	.	.
7.750	34.9838	155.37	.V Q	.	.	.	.
7.833	36.0707	157.81	.V Q	.	.	.	.
7.917	37.1739	160.19	.V Q	.	.	.	.
8.000	38.2937	162.59	.V Q	.	.	.	.
8.083	39.4322	165.31	.V Q	.	.	.	.
8.167	40.5901	168.13	.V Q	.	.	.	.
8.250	41.7642	170.48	.V Q	.	.	.	.
8.333	42.9537	172.72	.V Q	.	.	.	.
8.417	44.1590	175.01	.V Q	.	.	.	.
8.500	45.3811	177.45	.V Q	.	.	.	.
8.583	46.6201	179.90	.V Q	.	.	.	.
8.667	47.8757	182.30	. V Q	.	.	.	.
8.750	49.1476	184.69	. V Q	.	.	.	.

8.833	50.4350	186.93	. V	Q .	.	.	.
8.917	51.7359	188.88	. V	Q .	.	.	.
9.000	53.0503	190.84	. V	Q .	.	.	.
9.083	54.3781	192.81	. V	Q .	.	.	.
9.167	55.7197	194.79	. V	Q .	.	.	.
9.250	57.0750	196.78	. V	Q .	.	.	.
9.333	58.4440	198.79	. V	Q .	.	.	.
9.417	59.8272	200.83	. V	Q .	.	.	.
9.500	61.2248	202.94	. V	Q .	.	.	.
9.583	62.6370	205.05	. V	Q .	.	.	.
9.667	64.0638	207.17	. V	Q .	.	.	.
9.750	65.5045	209.19	. V	Q .	.	.	.
9.833	66.9591	211.21	. V	Q .	.	.	.
9.917	68.4277	213.25	. V	Q .	.	.	.
10.000	69.9102	215.26	. V	Q .	.	.	.
10.083	71.4062	217.21	. V	Q .	.	.	.
10.167	72.9158	219.19	. V	Q .	.	.	.
10.250	74.4390	221.17	. V	Q .	.	.	.
10.333	75.9756	223.11	. V	Q .	.	.	.
10.417	77.5247	224.93	. V	Q .	.	.	.
10.500	79.0864	226.77	. V	Q .	.	.	.
10.583	80.6609	228.61	. V	Q .	.	.	.
10.667	82.2482	230.47	. V	Q .	.	.	.
10.750	83.8480	232.29	. V	Q .	.	.	.
10.833	85.4595	234.00	. V	Q .	.	.	.
10.917	87.0829	235.71	. V	Q .	.	.	.
11.000	88.7181	237.44	. V	Q .	.	.	.
11.083	90.3654	239.18	. V	Q .	.	.	.
11.167	92.0248	240.95	. V	Q .	.	.	.
11.250	93.6965	242.72	. V	Q .	.	.	.
11.333	95.3802	244.48	. V	Q .	.	.	.
11.417	97.0760	246.23	. V	Q .	.	.	.
11.500	98.7840	248.00	. V	.Q	.	.	.
11.583	100.5043	249.78	. V	.Q	.	.	.
11.667	102.2370	251.59	. V	.Q	.	.	.
11.750	103.9823	253.42	. V	.Q	.	.	.
11.833	105.7403	255.27	. V	.Q	.	.	.
11.917	107.5111	257.12	. V	.Q	.	.	.
12.000	109.2946	258.96	. V	.Q	.	.	.
12.083	111.0927	261.10	. V	.Q	.	.	.
12.167	112.9078	263.55	. V	.Q	.	.	.
12.250	114.7399	266.02	. V	.Q	.	.	.
12.333	116.5892	268.51	. V	.Q	.	.	.
12.417	118.4558	271.03	. V	.Q	.	.	.
12.500	120.3398	273.56	. V	.Q	.	.	.
12.583	122.2413	276.09	. V	.Q	.	.	.
12.667	124.1594	278.51	. V	.Q	.	.	.
12.750	126.0943	280.94	. V	.Q	.	.	.
12.833	128.0461	283.40	. V	.Q	.	.	.
12.917	130.0149	285.88	. V	.Q	.	.	.
13.000	132.0010	288.39	. V	.Q	.	.	.
13.083	134.0045	290.91	. V	.Q	.	.	.
13.167	136.0259	293.50	. V	.Q	.	.	.
13.250	138.0668	296.33	. V	.Q	.	.	.
13.333	140.1277	299.25	. V	.Q	.	.	.
13.417	142.2088	302.18	. V	.Q	.	.	.
13.500	144.3105	305.16	. V	.Q	.	.	.
13.583	146.4327	308.14	. V	.Q	.	.	.

13.667	148.5750	311.07	. V	. Q	.	.	.
13.750	150.7375	314.00	. V	. Q	.	.	.
13.833	152.9204	316.96	. V	. Q	.	.	.
13.917	155.1246	320.04	. V	. Q	.	.	.
14.000	157.3540	323.71	. V	. Q	.	.	.
14.083	159.6113	327.77	. V	. Q	.	.	.
14.167	161.8987	332.12	. V	. Q	.	.	.
14.250	164.2160	336.48	. V	. Q	.	.	.
14.333	166.5643	340.97	. V	. Q	.	.	.
14.417	168.9461	345.83	. V	. Q	.	.	.
14.500	171.3618	350.75	. V	. Q	.	.	.
14.583	173.8113	355.67	. V	. Q	.	.	.
14.667	176.2965	360.86	. V	. Q	.	.	.
14.750	178.8197	366.36	. V	. Q	.	.	.
14.833	181.3809	371.89	. V	. Q	.	.	.
14.917	183.9795	377.32	. V	. Q	.	.	.
15.000	186.6152	382.70	. V	. Q	.	.	.
15.083	189.2879	388.07	. V	. Q	.	.	.
15.167	191.9979	393.50	. V	. Q	.	.	.
15.250	194.7465	399.09	. V	. Q	.	.	.
15.333	197.5332	404.64	. V	. Q	.	.	.
15.417	200.3589	410.29	. V	. Q	.	.	.
15.500	203.2279	416.58	. V	. Q	.	.	.
15.583	206.1372	422.42	. V	. Q	.	.	.
15.667	209.0818	427.57	. V	. Q	.	.	.
15.750	212.0616	432.66	. V	. Q	.	.	.
15.833	215.0765	437.76	. V	. Q	.	.	.
15.917	218.1289	443.22	. V	. Q	.	.	.
16.000	221.2258	449.67	. V	. Q	.	.	.
16.083	224.3825	458.35	. V	. Q	.	.	.
16.167	227.5985	466.97	. V	. Q	.	.	.
16.250	230.8618	473.82	. V	.Q	.	.	.
16.333	234.1754	481.14	. V	.Q	.	.	.
16.417	237.5410	488.68	. V	.Q	.	.	.
16.500	240.9557	495.83	. V	.Q	.	.	.
16.583	244.4176	502.66	. V	.Q	.	.	.
16.667	247.9281	509.72	. V	.Q	.	.	.
16.750	251.4893	517.09	. V	.Q	.	.	.
16.833	255.1021	524.57	. V	.Q	.	.	.
16.917	258.7710	532.73	. V	.Q	.	.	.
17.000	262.4970	541.03	. V	.Q	.	.	.
17.083	266.2760	548.71	. V	.Q	.	.	.
17.167	270.1076	556.35	. V	.Q	.	.	.
17.250	274.0045	565.84	. V	.Q	.	.	.
17.333	277.9572	573.92	. V	.Q	.	.	.
17.417	281.9600	581.21	. V	.Q	.	.	.
17.500	286.0170	589.09	. V	.Q	.	.	.
17.583	290.1195	595.68	. V	.Q	.	.	.
17.667	294.2600	601.20	. V	.Q	.	.	.
17.750	298.4416	607.16	. V	.Q	.	.	.
17.833	302.6835	615.93	. V	.Q	.	.	.
17.917	306.9839	624.42	. V	.Q	.	.	.
18.000	311.3560	634.83	. V	.Q	.	.	.
18.083	315.7777	642.04	. V	.Q	.	.	.
18.167	320.2444	648.57	. V	.Q	.	.	.
18.250	324.7574	655.27	. V	.Q	.	.	.
18.333	329.3332	664.41	. V	.Q	.	.	.
18.417	333.9825	675.08	. V	.Q	.	.	.

18.500	338.6897	683.49	.	.	V	.	Q	.
18.583	343.4435	690.26	.	.	V	.	Q	.
18.667	348.2519	698.18	.	.	V	.	.Q	.
18.750	353.1124	705.74	.	.	V	.	.Q	.
18.833	358.0026	710.07	.	.	V	.	.Q	.
18.917	362.9275	715.09	.	.	V	.	.Q	.
19.000	367.8950	721.28	.	.	V	.	.Q	.
19.083	372.9072	727.77	.	.	V	.	.Q	.
19.167	377.9644	734.30	.	.	V	.	.Q	.
19.250	383.0758	742.18	.	.	V	.	.Q	.
19.333	388.2537	751.83	.	.	V	.	.Q	.
19.417	393.5128	763.62	.	.	V	.	.Q	.
19.500	398.8540	775.54	.	.	V	.	.Q	.
19.583	404.1939	775.36	.	.	V	.	.Q	.
19.667	409.5161	772.78	.	.	V	.	.Q	.
19.750	414.8624	776.28	.	.	V	.	.Q	.
19.833	420.2643	784.36	.	.	V	.	.Q	.
19.917	425.7111	790.87	.	.	V	.	.Q	.
20.000	431.1931	795.98	.	.	V	.	.Q	.
20.083	436.7322	804.29	.	.	V	.	.Q	.
20.167	442.3248	812.05	.	.	V	.	.Q	.
20.250	447.9484	816.54	.	.	V	.	.Q	.
20.333	453.6043	821.25	.	.	V	.	.Q	.
20.417	459.2593	821.10	.	.	V	.	.Q	.
20.500	464.9011	819.18	.	.	V	.	.Q	.
20.583	470.5444	819.40	.	.	V	.	.Q	.
20.667	476.1901	819.76	.	.	V	.	.Q	.
20.750	481.8488	821.64	.	.	V	.	.Q	.
20.833	487.5239	824.03	.	.	V	.	.Q	.
20.917	493.2429	830.41	.	.	V	.	.Q	.
21.000	498.9691	831.44	.	.	V	.	.Q	.
21.083	504.6714	827.96	.	.	.V	.	.Q	.
21.167	510.3543	825.16	.	.	.V	.	.Q	.
21.250	516.0795	831.30	.	.	.V	.	.Q	.
21.333	521.8205	833.59	.	.	.V	.	.Q	.
21.417	527.5115	826.34	.	.	.V	.	.Q	.
21.500	533.1607	820.26	.	.	.V	.	.Q	.
21.583	538.7617	813.26	.	.	.V	.	.Q	.
21.667	544.3754	815.11	.	.	.V	.	.Q	.
21.750	550.0310	821.19	.	.	.V	.	.Q	.
21.833	555.7629	832.26	.	.	.V	.	.Q	.
21.917	561.4191	821.27	.	.	.V	.	.Q	.
22.000	567.0490	817.46	.	.	.V	.	.Q	.
22.083	572.6792	817.52	.	.	.V	.	.Q	.
22.167	578.3074	817.21	.	.	.V	.	.Q	.
22.250	583.9193	814.86	.	.	.V	.	.Q	.
22.333	589.5366	815.63	.	.	.V	.	.Q	.
22.417	595.1546	815.73	.	.	.V	.	.Q	.
22.500	600.7610	814.05	.	.	.V	.	.Q	.
22.583	606.2651	799.19	.	.	.V	.	.Q	.
22.667	611.7307	793.61	.	.	.V	.	.Q	.
22.750	617.1717	790.03	.	.	.V	.	.Q	.
22.833	622.5745	784.49	.	.	.V	.	.Q	.
22.917	627.9292	777.50	.	.	.V	.	.Q	.
23.000	633.2411	771.30	.	.	.V	.	.Q	.
23.083	638.5293	767.84	.	.	.V	.	.Q	.
23.167	643.8044	765.94	.	.	.V	.	.Q	.
23.250	649.0529	762.08	.	.	.V	.	.Q	.

23.333	654.2711	757.69	.	.	.	V	.	Q	.
23.417	659.4656	754.25	.	.	.	V	.	Q	.
23.500	664.5996	745.46	.	.	.	V	.	Q	.
23.583	669.6505	733.39	.	.	.	V	.	Q	.
23.667	674.6571	726.96	.	.	.	V	.	Q	.
23.750	679.6150	719.89	.	.	.	V	.	Q	.
23.833	684.5275	713.30	.	.	.	V	.	Q	.
23.917	689.3992	707.37	.	.	.	V	.	Q	.
24.000	694.2421	703.18	.	.	.	V	.	Q	.
24.083	699.0638	700.13	.	.	.	V	.	Q	.
24.167	703.8350	692.77	.	.	.	VQ	.	.	.
24.250	708.5195	680.19	.	.	.	VQ	.	.	.
24.333	713.1426	671.27	.	.	.	Q	.	.	.
24.417	717.7126	663.56	.	.	.	Q	.	.	.
24.500	722.2313	656.12	.	.	.	QV	.	.	.
24.583	726.6989	648.69	.	.	.	Q V	.	.	.
24.667	731.1093	640.39	.	.	.	Q V	.	.	.
24.750	735.4641	632.32	.	.	.	Q V	.	.	.
24.833	739.7512	622.49	.	.	.	Q V	.	.	.
24.917	743.9655	611.93	.	.	.	Q .V	.	.	.
25.000	748.1327	605.08	.	.	.	Q .V	.	.	.
25.083	752.2505	597.91	.	.	.	Q .V	.	.	.
25.167	756.3135	589.94	.	.	.	Q .V	.	.	.
25.250	760.3205	581.82	.	.	.	Q .V	.	.	.
25.333	764.2712	573.64	.	.	.	Q .V	.	.	.
25.417	768.1631	565.10	.	.	.	Q .V	.	.	.
25.500	771.9939	556.23	.	.	.	Q .V	.	.	.
25.583	775.7653	547.61	.	.	.	Q .V	.	.	.
25.667	779.4777	539.03	.	.	.	Q .V	.	.	.
25.750	783.1307	530.42	.	.	.	Q .V	.	.	.
25.833	786.7343	523.24	.	.	.	Q .V	.	.	.
25.917	790.2926	516.67	.	.	.	Q .V	.	.	.
26.000	793.8005	509.34	.	.	.	Q .V	.	.	.
26.083	797.2520	501.16	.	.	.	Q .V	.	.	.
26.167	800.6536	493.90	.	.	.	Q .V	.	.	.
26.250	804.0093	487.26	.	.	.	Q .V	.	.	.
26.333	807.3149	479.97	.	.	.	Q .V	.	.	.
26.417	810.5623	471.53	.	.	.	Q .V	.	.	.
26.500	813.7610	464.45	.	.	.	Q .V	.	.	.
26.583	816.9105	457.31	.	.	.	Q .V	.	.	.
26.667	820.0080	449.76	.	.	.	Q .V	.	.	.
26.750	823.0468	441.24	.	.	.	Q .V	.	.	.
26.833	826.0239	432.27	.	.	.	Q .V	.	.	.
26.917	828.9545	425.53	.	.	.	Q .V	.	.	.
27.000	831.8407	419.07	.	.	.	Q .V	.	.	.
27.083	834.6832	412.73	.	.	.	Q .V	.	.	.
27.167	837.4796	406.02	.	.	.	Q .V	.	.	.
27.250	840.2289	399.20	.	.	.	Q .V	.	.	.
27.333	842.9280	391.91	.	.	.	Q .V	.	.	.
27.417	845.5778	384.75	.	.	.	Q .V	.	.	.
27.500	848.1763	377.32	.	.	.	Q .V	.	.	.
27.583	850.7260	370.22	.	.	.	Q .V	.	.	.
27.667	853.2285	363.37	.	.	.	Q .V	.	.	.
27.750	855.6852	356.71	.	.	.	Q .V	.	.	.
27.833	858.0975	350.28	.	.	.	Q .V	.	.	.
27.917	860.4650	343.76	.	.	.	Q .V	.	.	.
28.000	862.7894	337.49	.	.	.	Q .V	.	.	.
28.083	865.0732	331.62	.	.	.	Q .V	.	.	.

28.167	867.3160	325.66	.	.	Q	.	.	V	.
28.250	869.5170	319.59	.	.	Q	.	.	V	.
28.333	871.6757	313.44	.	.	Q	.	.	V	.
28.417	873.7952	307.76	.	.	Q	.	.	V	.
28.500	875.8771	302.30	.	.	Q	.	.	V	.
28.583	877.9185	296.41	.	.	Q	.	.	V	.
28.667	879.9127	289.56	.	.	Q	.	.	V	.
28.750	881.8710	284.34	.	.	Q	.	.	V	.
28.833	883.7963	279.54	.	.	Q	.	.	V	.
28.917	885.6863	274.43	.	.	Q	.	.	V	.
29.000	887.5406	269.26	.	.	Q	.	.	V	.
29.083	889.3614	264.37	.	.	Q	.	.	V	.
29.167	891.1490	259.57	.	.	Q	.	.	V	.
29.250	892.8992	254.12	.	.	Q	.	.	V	.
29.333	894.6097	248.37	.	.	Q	.	.	V	.
29.417	896.2831	242.98	.	.	Q	.	.	V	.
29.500	897.9203	237.73	.	.	Q	.	.	V	.
29.583	899.5231	232.73	.	.	Q	.	.	V	.
29.667	901.0880	227.22	.	.	Q	.	.	V	.
29.750	902.6187	222.25	.	.	Q	.	.	V	.
29.833	904.1085	216.33	.	.	Q	.	.	V	.
29.917	905.5640	211.33	.	.	Q	.	.	V	.
30.000	906.9846	206.27	.	.	Q	.	.	V	.
30.083	908.3693	201.06	.	.	Q	.	.	V	.
30.167	909.7184	195.89	.	.	Q	.	.	V	.
30.250	911.0331	190.89	.	.	Q	.	.	V	.
30.333	912.3116	185.65	.	.	Q	.	.	V	.
30.417	913.5521	180.12	.	.	Q	.	.	V	.
30.500	914.7532	174.40	.	.	Q	.	.	V	.
30.583	915.9222	169.74	.	.	Q	.	.	V	.
30.667	917.0661	166.09	.	.	Q	.	.	V	.
30.750	918.1859	162.59	.	.	Q	.	.	V	.
30.833	919.2814	159.08	.	.	Q	.	.	V	.
30.917	920.3532	155.62	.	.	Q	.	.	V	.
31.000	921.4028	152.40	.	.	Q	.	.	V	.
31.083	922.4287	148.96	.	.	Q	.	.	V	.
31.167	923.4282	145.13	.	.	Q	.	.	V	.
31.250	924.3976	140.76	.	.	Q	.	.	V	.
31.333	925.3301	135.39	.	.	Q	.	.	V	.
31.417	926.2319	130.95	.	.	Q	.	.	V	.
31.500	927.1042	126.66	.	.	Q	.	.	V	.
31.583	927.9518	123.06	.	.	Q	.	.	V	.
31.667	928.7750	119.53	.	.	Q	.	.	V	.
31.750	929.5762	116.33	.	.	Q	.	.	V	.
31.833	930.3549	113.08	.	.	Q	.	.	V	.
31.917	931.1124	109.98	.	.	Q	.	.	V	.
32.000	931.8483	106.85	.	.	Q	.	.	V	.
32.083	932.5604	103.41	.	.	Q	.	.	V	.
32.167	933.2487	99.94	.	.	Q	.	.	V	.
32.250	933.9164	96.94	.	.	Q	.	.	V	.
32.333	934.5662	94.35	.	.	Q	.	.	V	.
32.417	935.1976	91.69	.	.	Q	.	.	V	.
32.500	935.8109	89.05	.	.	Q	.	.	V	.
32.583	936.4053	86.30	.	.	Q	.	.	V	.
32.667	936.9818	83.71	.	.	Q	.	.	V	.
32.750	937.5406	81.14	.	.	Q	.	.	V	.
32.833	938.0831	78.76	.	.	Q	.	.	V	.
32.917	938.6113	76.71	.	.	Q	.	.	V	.

33.000	939.1255	74.67	.	Q	.	.	.	V	.
33.083	939.6259	72.64	.	Q	.	.	.	V	.
33.167	940.1122	70.62	.	Q	.	.	.	V	.
33.250	940.5857	68.76	.	Q	.	.	.	V	.
33.333	941.0472	67.01	.	Q	.	.	.	V	.
33.417	941.4969	65.30	.	Q	.	.	.	V	.
33.500	941.9353	63.65	.	Q	.	.	.	V	.
33.583	942.3616	61.90	.	Q	.	.	.	V	.
33.667	942.7768	60.29	.	Q	.	.	.	V	.
33.750	943.1815	58.75	.	Q	.	.	.	V	.
33.833	943.5753	57.19	.	Q	.	.	.	V	.
33.917	943.9590	55.71	.	Q	.	.	.	V	.
34.000	944.3327	54.26	.	Q	.	.	.	V	.
34.083	944.6971	52.91	.	Q	.	.	.	V	.
34.167	945.0522	51.56	.	Q	.	.	.	V	.
34.250	945.3981	50.22	.	Q	.	.	.	V	.
34.333	945.7349	48.91	.	Q	.	.	.	V	.
34.417	946.0641	47.81	.	Q	.	.	.	V	.
34.500	946.3846	46.53	.	Q	.	.	.	V	.
34.583	946.6974	45.42	.	Q	.	.	.	V	.
34.667	947.0017	44.18	.	Q	.	.	.	V	.
34.750	947.2980	43.02	.	Q	.	.	.	V	.
34.833	947.5875	42.04	.	Q	.	.	.	V	.
34.917	947.8705	41.09	.	Q	.	.	.	V	.
35.000	948.1469	40.13	.	Q	.	.	.	V	.
35.083	948.4167	39.18	.	Q	.	.	.	V	.
35.167	948.6801	38.23	.	Q	.	.	.	V	.
35.250	948.9368	37.28	.	Q	.	.	.	V	.
35.333	949.1874	36.39	.	Q	.	.	.	V	.
35.417	949.4321	35.52	.	Q	.	.	.	V	.
35.500	949.6708	34.66	.	Q	.	.	.	V	.
35.583	949.9036	33.80	.	Q	.	.	.	V	.
35.667	950.1305	32.95	.	Q	.	.	.	V	.
35.750	950.3516	32.10	.	Q	.	.	.	V	.
35.833	950.5668	31.26	.	Q	.	.	.	V	.
35.917	950.7764	30.44	.	Q	.	.	.	V	.
36.000	950.9807	29.65	.	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%	1630.0
20%	1350.0
30%	1060.0
40%	830.0
50%	690.0
60%	575.0
70%	465.0
80%	360.0
90%	250.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 139 *
* 2-YR EV APRIL 2019 FKAZI *

FILE NAME: EVO2139S.DAT
TIME/DATE OF STUDY: 13:36 04/10/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 139.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69530.102 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 6.557 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.567
LOW LOSS FRACTION = 0.902
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.15
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.29
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.40
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 0.73
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.06
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 1.86

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.286
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.391
3-HOUR FACTOR = 0.733
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 1.271

UNIT HYDROGRAPH DETERMINATION

Table with 3 columns: INTERVAL NUMBER, "S" GRAPH MEAN VALUES, UNIT HYDROGRAPH ORDINATES (CFS). Rows 1-48.

49	19.955	5820.839
50	20.773	6878.868
51	21.621	7126.213
52	22.561	7909.454
53	23.577	8540.634
54	24.425	7128.844
55	25.151	6107.143
56	25.877	6106.742
57	26.603	6106.742
58	27.330	6106.341
59	28.104	6513.799
60	29.095	8331.042
61	30.080	8284.210
62	30.940	7232.629
63	31.801	7235.452
64	32.952	9683.489
65	34.165	10198.759
66	35.195	8662.173
67	36.127	7832.726
68	36.819	5820.823
69	37.497	5699.701
70	38.431	7852.902
71	39.915	12481.615
72	41.050	9543.361
73	42.143	9185.574
74	43.332	9998.053
75	44.487	9714.588
76	45.589	9267.113
77	46.819	10342.143
78	48.173	11391.285
79	49.681	12677.862
80	50.754	9022.430
81	51.678	7771.331
82	52.603	7772.132
83	53.527	7772.165
84	54.414	7456.334
85	55.261	7124.401
86	56.141	7404.658
87	57.147	8451.396
88	58.188	8756.672
89	59.311	9444.820
90	60.569	10575.535
91	61.969	11774.125
92	63.087	9397.988
93	64.119	8682.350
94	65.013	7519.365
95	65.892	7390.095
96	66.733	7068.684
97	67.564	6984.706
98	68.494	7826.214
99	69.536	8756.704
100	70.411	7361.033
101	71.152	6231.922
102	71.899	6278.819
103	72.709	6810.207
104	73.537	6962.060
105	74.344	6790.832
106	75.126	6575.980

107	75.892	6441.898
108	76.499	5098.000
109	77.063	4745.858
110	77.629	4755.481
111	78.193	4745.858
112	78.758	4752.274
113	79.323	4749.066
114	79.889	4761.961
115	80.479	4962.314
116	81.077	5026.853
117	81.675	5030.125
118	82.245	4787.879
119	82.780	4497.069
120	83.315	4503.484
121	83.849	4487.382
122	84.348	4199.843
123	84.833	4073.909
124	85.316	4067.365
125	85.801	4070.637
126	86.230	3615.080
127	86.621	3285.584
128	87.012	3288.792
129	87.403	3288.792
130	87.795	3288.856
131	88.141	2917.276
132	88.441	2519.906
133	88.740	2510.219
134	89.039	2516.634
135	89.338	2513.491
136	89.637	2516.634
137	89.935	2500.531
138	90.210	2319.617
139	90.478	2248.535
140	90.746	2251.806
141	91.013	2248.535
142	91.280	2248.535
143	91.548	2251.742
144	91.816	2248.535
145	92.075	2180.660
146	92.317	2038.558
147	92.559	2032.079
148	92.801	2035.351
149	93.044	2041.766
150	93.285	2028.807
151	93.528	2041.766
152	93.770	2035.351
153	94.000	1931.934
154	94.169	1421.461
155	94.331	1363.337
156	94.492	1356.858
157	94.654	1356.922
158	94.815	1356.858
159	94.976	1356.858
160	95.138	1356.858
161	95.299	1356.922
162	95.460	1350.378
163	95.622	1363.337
164	95.783	1356.922

165	95.944	1350.378
166	96.065	1020.883
167	96.165	839.969
168	96.265	839.969
169	96.364	833.489
170	96.464	839.969
171	96.564	839.969
172	96.664	840.033
173	96.763	833.489
174	96.863	839.969
175	96.963	839.969
176	97.062	833.489
177	97.162	839.969
178	97.262	839.969
179	97.361	839.969
180	97.461	833.553
181	97.560	839.969
182	97.660	839.969
183	97.759	833.489
184	97.859	839.969
185	97.959	833.489
186	98.014	465.245
187	98.038	206.768
188	98.061	193.809
189	98.085	200.289
190	98.109	200.289
191	98.133	200.353
192	98.157	200.289
193	98.181	206.768
194	98.204	193.809
195	98.229	206.768
196	98.252	193.873
197	98.276	200.289
198	98.300	206.768
199	98.323	187.330
200	98.348	213.248
201	98.371	193.809
202	98.396	213.248
203	98.420	193.809
204	98.443	193.873
205	98.467	206.768
206	98.490	193.809
207	98.515	206.768
208	98.538	193.873
209	98.562	206.768
210	98.586	193.809
211	98.610	206.768
212	98.633	193.809
213	98.658	206.768
214	98.681	193.873
215	98.705	206.768
216	98.728	193.809
217	98.753	206.768
218	98.776	193.809
219	98.801	206.768
220	98.824	193.873
221	98.848	206.768
222	98.871	193.809

223	98.896	206.768
224	98.919	193.873
225	98.944	206.704
226	98.968	206.768
227	98.990	180.914
228	99.016	219.728
229	99.037	180.914
230	99.059	180.914
231	99.080	180.914
232	99.102	180.914
233	99.123	180.914
234	99.145	180.914
235	99.166	180.914
236	99.188	180.914
237	99.209	180.914
238	99.231	180.914
239	99.252	180.914
240	99.274	180.914
241	99.296	180.914
242	99.317	180.914
243	99.339	180.914
244	99.360	180.914
245	99.382	180.914
246	99.403	180.914
247	99.425	180.914
248	99.446	180.914
249	99.468	180.914
250	99.489	180.914
251	99.511	180.914
252	99.532	180.914
253	99.554	180.914
254	99.575	180.914
255	99.597	180.914
256	99.618	180.914
257	99.640	180.914
258	99.661	180.914
259	99.683	180.914
260	99.704	180.914
261	99.726	180.914
262	99.747	180.914
263	99.769	180.914
264	99.790	180.914
265	99.812	180.914
266	99.833	180.914
267	99.855	180.914
268	99.876	180.914
269	99.898	180.914
270	99.919	180.914
271	99.941	180.914
272	99.962	180.914
273	99.984	180.914
274	100.000	134.531

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9037.5410
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 981.3989

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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.	225.0	450.0	675.0	900.0
0.083	0.0011	0.16	Q	.	.	.	.
0.167	0.0044	0.48	Q	.	.	.	.
0.250	0.0098	0.79	Q	.	.	.	.
0.333	0.0175	1.11	Q	.	.	.	.
0.417	0.0273	1.43	Q	.	.	.	.
0.500	0.0394	1.75	Q	.	.	.	.
0.583	0.0537	2.07	Q	.	.	.	.
0.667	0.0702	2.40	Q	.	.	.	.
0.750	0.0889	2.72	Q	.	.	.	.
0.833	0.1099	3.05	Q	.	.	.	.
0.917	0.1331	3.37	Q	.	.	.	.
1.000	0.1586	3.70	Q	.	.	.	.
1.083	0.1863	4.02	Q	.	.	.	.
1.167	0.2163	4.36	Q	.	.	.	.
1.250	0.2494	4.80	Q	.	.	.	.
1.333	0.2859	5.30	Q	.	.	.	.
1.417	0.3258	5.80	Q	.	.	.	.
1.500	0.3692	6.30	Q	.	.	.	.
1.583	0.4160	6.80	Q	.	.	.	.
1.667	0.4663	7.30	Q	.	.	.	.
1.750	0.5201	7.80	Q	.	.	.	.
1.833	0.5773	8.31	Q	.	.	.	.
1.917	0.6381	8.82	Q	.	.	.	.
2.000	0.7042	9.60	Q	.	.	.	.
2.083	0.7766	10.52	Q	.	.	.	.
2.167	0.8554	11.44	Q	.	.	.	.
2.250	0.9405	12.36	Q	.	.	.	.
2.333	1.0320	13.29	Q	.	.	.	.
2.417	1.1314	14.42	Q	.	.	.	.
2.500	1.2391	15.63	Q	.	.	.	.
2.583	1.3551	16.85	Q	.	.	.	.
2.667	1.4798	18.11	Q	.	.	.	.
2.750	1.6149	19.61	Q	.	.	.	.
2.833	1.7605	21.15	Q	.	.	.	.
2.917	1.9167	22.68	VQ	.	.	.	.
3.000	2.0829	24.14	VQ	.	.	.	.
3.083	2.2593	25.60	VQ	.	.	.	.
3.167	2.4457	27.06	VQ	.	.	.	.
3.250	2.6422	28.53	VQ	.	.	.	.
3.333	2.8488	30.01	VQ	.	.	.	.
3.417	3.0659	31.52	VQ	.	.	.	.
3.500	3.2975	33.62	VQ	.	.	.	.
3.583	3.5448	35.91	VQ	.	.	.	.
3.667	3.8042	37.67	VQ	.	.	.	.
3.750	4.0747	39.27	VQ	.	.	.	.
3.833	4.3562	40.87	VQ	.	.	.	.
3.917	4.6487	42.48	VQ	.	.	.	.

4.000	4.9524	44.09	VQ	.	.	.	.
4.083	5.2674	45.74	V Q	.	.	.	.
4.167	5.5957	47.67	V Q	.	.	.	.
4.250	5.9378	49.67	V Q	.	.	.	.
4.333	6.2952	51.88	V Q	.	.	.	.
4.417	6.6689	54.26	V Q	.	.	.	.
4.500	7.0565	56.29	V Q	.	.	.	.
4.583	7.4563	58.05	V Q	.	.	.	.
4.667	7.8684	59.83	V Q	.	.	.	.
4.750	8.2926	61.60	V Q	.	.	.	.
4.833	8.7292	63.39	V Q	.	.	.	.
4.917	9.1788	65.29	V Q	.	.	.	.
5.000	9.6448	67.66	V Q	.	.	.	.
5.083	10.1271	70.03	V Q	.	.	.	.
5.167	10.6239	72.14	V Q	.	.	.	.
5.250	11.1353	74.25	V Q	.	.	.	.
5.333	11.6657	77.01	V Q	.	.	.	.
5.417	12.2160	79.91	V Q	.	.	.	.
5.500	12.7837	82.42	V Q	.	.	.	.
5.583	13.3672	84.73	V Q	.	.	.	.
5.667	13.9631	86.52	V Q	.	.	.	.
5.750	14.5712	88.29	V Q	.	.	.	.
5.833	15.1954	90.63	V Q	.	.	.	.
5.917	15.8439	94.17	V Q	.	.	.	.
6.000	16.5118	96.97	V Q	.	.	.	.
6.083	17.1982	99.68	V Q	.	.	.	.
6.167	17.9049	102.61	V Q	.	.	.	.
6.250	18.6314	105.48	V Q	.	.	.	.
6.333	19.3769	108.25	V Q	.	.	.	.
6.417	20.1434	111.30	V Q	.	.	.	.
6.500	20.9329	114.64	V Q	.	.	.	.
6.583	21.7478	118.32	V Q	.	.	.	.
6.667	22.5816	121.07	V Q	.	.	.	.
6.750	23.4322	123.51	V Q	.	.	.	.
6.833	24.2996	125.95	V Q	.	.	.	.
6.917	25.1840	128.41	.V Q	.	.	.	.
7.000	26.0848	130.79	.V Q	.	.	.	.
7.083	27.0015	133.11	.V Q	.	.	.	.
7.167	27.9347	135.50	.V Q	.	.	.	.
7.250	28.8863	138.17	.V Q	.	.	.	.
7.333	29.8569	140.94	.V Q	.	.	.	.
7.417	30.8479	143.89	.V Q	.	.	.	.
7.500	31.8613	147.15	.V Q	.	.	.	.
7.583	32.8995	150.74	.V Q	.	.	.	.
7.667	33.9581	153.72	.V Q	.	.	.	.
7.750	35.0361	156.53	.V Q	.	.	.	.
7.833	36.1315	159.05	.V Q	.	.	.	.
7.917	37.2441	161.55	.V Q	.	.	.	.
8.000	38.3734	163.98	.V Q	.	.	.	.
8.083	39.5194	166.40	.V Q	.	.	.	.
8.167	40.6836	169.04	.V Q	.	.	.	.
8.250	41.8678	171.95	.V Q	.	.	.	.
8.333	43.0695	174.50	.V Q	.	.	.	.
8.417	44.2870	176.77	.V Q	.	.	.	.
8.500	45.5202	179.07	.V Q	.	.	.	.
8.583	46.7704	181.52	.V Q	.	.	.	.
8.667	48.0377	184.01	.V Q	.	.	.	.
8.750	49.3220	186.48	.V Q	.	.	.	.

8.833	50.6230	188.91	. V Q	.	.	.	.
8.917	51.9406	191.31	. V Q	.	.	.	.
9.000	53.2724	193.38	. V Q	.	.	.	.
9.083	54.6180	195.37	. V Q	.	.	.	.
9.167	55.9773	197.37	. V Q	.	.	.	.
9.250	57.3505	199.39	. V Q	.	.	.	.
9.333	58.7377	201.42	. V Q	.	.	.	.
9.417	60.1389	203.46	. V Q	.	.	.	.
9.500	61.5544	205.52	. V Q	.	.	.	.
9.583	62.9844	207.64	. V Q	.	.	.	.
9.667	64.4293	209.79	. V Q	.	.	.	.
9.750	65.8891	211.97	. V Q	.	.	.	.
9.833	67.3635	214.08	. V Q	.	.	.	.
9.917	68.8521	216.14	. V Q	.	.	.	.
10.000	70.3550	218.22	. V Q	.	.	.	.
10.083	71.8722	220.31	. V Q	.	.	.	.
10.167	73.4034	222.33	. V Q	.	.	.	.
10.250	74.9485	224.34	. V Q	.	.	.	.
10.333	76.5074	226.36	. V Q	.	.	.	.
10.417	78.0804	228.40	. V Q	.	.	.	.
10.500	79.6667	230.33	. V Q	.	.	.	.
10.583	81.2659	232.20	. V Q	.	.	.	.
10.667	82.8781	234.08	. V Q	.	.	.	.
10.750	84.5033	235.99	. V Q	.	.	.	.
10.833	86.1418	237.90	. V Q	.	.	.	.
10.917	87.7928	239.74	. V Q	.	.	.	.
11.000	89.4560	241.49	. V Q	.	.	.	.
11.083	91.1313	243.25	. V Q	.	.	.	.
11.167	92.8188	245.04	. V Q	.	.	.	.
11.250	94.5188	246.84	. V Q	.	.	.	.
11.333	96.2313	248.66	. V .Q	.	.	.	.
11.417	97.9565	250.49	. V .Q	.	.	.	.
11.500	99.6941	252.30	. V .Q	.	.	.	.
11.583	101.4442	254.11	. V .Q	.	.	.	.
11.667	103.2068	255.94	. V .Q	.	.	.	.
11.750	104.9822	257.79	. V .Q	.	.	.	.
11.833	106.7704	259.65	. V .Q	.	.	.	.
11.917	108.5717	261.55	. V .Q	.	.	.	.
12.000	110.3862	263.46	. V .Q	.	.	.	.
12.083	112.2158	265.67	. V .Q	.	.	.	.
12.167	114.0625	268.14	. V .Q	.	.	.	.
12.250	115.9264	270.64	. V .Q	.	.	.	.
12.333	117.8077	273.16	. V .Q	.	.	.	.
12.417	119.7065	275.70	. V .Q	.	.	.	.
12.500	121.6228	278.26	. V .Q	.	.	.	.
12.583	123.5571	280.85	. V .Q	.	.	.	.
12.667	125.5092	283.45	. V .Q	.	.	.	.
12.750	127.4794	286.07	. V .Q	.	.	.	.
12.833	129.4667	288.56	. V .Q	.	.	.	.
12.917	131.4713	291.07	. V .Q	.	.	.	.
13.000	133.4934	293.60	. V .Q	.	.	.	.
13.083	135.5331	296.16	. V .Q	.	.	.	.
13.167	137.5906	298.75	. V .Q	.	.	.	.
13.250	139.6676	301.58	. V .Q	.	.	.	.
13.333	141.7649	304.52	. V .Q	.	.	.	.
13.417	143.8826	307.50	. V .Q	.	.	.	.
13.500	146.0210	310.49	. V .Q	.	.	.	.
13.583	148.1803	313.53	. V .Q	.	.	.	.

13.667	150.3606	316.58	.	V	.	Q	.	.	.
13.750	152.5623	319.68	.	V	.	Q	.	.	.
13.833	154.7848	322.72	.	V	.	Q	.	.	.
13.917	157.0284	325.76	.	V	.	Q	.	.	.
14.000	159.2963	329.31	.	V	.	Q	.	.	.
14.083	161.5925	333.41	.	V	.	Q	.	.	.
14.167	163.9190	337.81	.	V	.	Q	.	.	.
14.250	166.2760	342.23	.	V	.	Q	.	.	.
14.333	168.6635	346.67	.	V	.	Q	.	.	.
14.417	171.0842	351.49	.	V	.	Q	.	.	.
14.500	173.5391	356.45	.	V	.	Q	.	.	.
14.583	176.0283	361.43	.	V	.	Q	.	.	.
14.667	178.5523	366.49	.	V	.	Q	.	.	.
14.750	181.1142	371.99	.	V	.	Q	.	.	.
14.833	183.7145	377.56	.	V	.	Q	.	.	.
14.917	186.3531	383.13	.	V	.	Q	.	.	.
15.000	189.0291	388.56	.	V	.	Q	.	.	.
15.083	191.7426	394.00	.	V	.	Q	.	.	.
15.167	194.4937	399.45	.	V	.	Q	.	.	.
15.250	197.2837	405.11	.	V	.	Q	.	.	.
15.333	200.1133	410.85	.	V	.	Q	.	.	.
15.417	202.9803	416.29	.	V	.	Q	.	.	.
15.500	205.8889	422.33	.	V	.	Q	.	.	.
15.583	208.8414	428.71	.	V	.	Q	.	.	.
15.667	211.8318	434.20	.	V	.	Q	.	.	.
15.750	214.8577	439.36	.	V	.	Q	.	.	.
15.833	217.9191	444.51	.	V	.	Q	.	.	.
15.917	221.0180	449.97	.	V	.	Q	.	.	.
16.000	224.1608	456.33	.	V	.	Q	.	.	.
16.083	227.3620	464.81	.	V	.	Q	.	.	.
16.167	230.6224	473.40	.	V	.	Q	.	.	.
16.250	233.9294	480.18	.	V	.	Q	.	.	.
16.333	237.2848	487.20	.	V	.	Q	.	.	.
16.417	240.6947	495.13	.	V	.	Q	.	.	.
16.500	244.1578	502.84	.	V	.	Q	.	.	.
16.583	247.6691	509.83	.	V	.	Q	.	.	.
16.667	251.2283	516.80	.	V	.	Q	.	.	.
16.750	254.8388	524.24	.	V	.	Q	.	.	.
16.833	258.5009	531.75	.	V	.	Q	.	.	.
16.917	262.2156	539.38	.	V	.	Q	.	.	.
17.000	265.9879	547.73	.	V	.	Q	.	.	.
17.083	269.8167	555.94	.	V	.	Q	.	.	.
17.167	273.6981	563.59	.	.V	.	Q	.	.	.
17.250	277.6396	572.30	.	.V	.	Q	.	.	.
17.333	281.6382	580.59	.	.V	.	Q	.	.	.
17.417	285.6894	588.24	.	.V	.	Q	.	.	.
17.500	289.7950	596.14	.	.V	.	Q	.	.	.
17.583	293.9561	604.19	.	.V	.	Q	.	.	.
17.667	298.1590	610.26	.	.V	.	Q	.	.	.
17.750	302.3983	615.54	.	.V	.	Q	.	.	.
17.833	306.6823	622.05	.	.V	.	Q	.	.	.
17.917	311.0311	631.45	.	.V	.	Q	.	.	.
18.000	315.4531	642.07	.	.V	.	Q	.	.	.
18.083	319.9284	649.81	.	.V	.	Q	.	.	.
18.167	324.4489	656.38	.	.V	.	Q	.	.	.
18.250	329.0150	663.00	.	.V	.	Q	.	.	.
18.333	333.6347	670.77	.	.V	.	Q	.	.	.
18.417	338.3278	681.44	.	.V	.	Q	.	.	.

18.500	343.0826	690.39	.	.	V	.	Q	.	.
18.583	347.8961	698.92	.	.	V	.	.Q	.	.
18.667	352.7614	706.44	.	.	V	.	.Q	.	.
18.750	357.6889	715.48	.	.	V	.	.Q	.	.
18.833	362.6525	720.71	.	.	V	.	.Q	.	.
18.917	367.6462	725.09	.	.	V	.	.Q	.	.
19.000	372.6781	730.62	.	.	V	.	.Q	.	.
19.083	377.7570	737.46	.	.	V	.	.Q	.	.
19.167	382.8788	743.68	.	.	V	.	.Q	.	.
19.250	388.0457	750.24	.	.	V	.	.Q	.	.
19.333	393.2718	758.83	.	.	V	.	.Q	.	.
19.417	398.5669	768.85	.	.	V	.	.Q	.	.
19.500	403.9571	782.65	.	.	V	.	.Q	.	.
19.583	409.3984	790.09	.	.	V	.	.Q	.	.
19.667	414.8200	787.21	.	.	V	.	.Q	.	.
19.750	420.2448	787.68	.	.	V	.	.Q	.	.
19.833	425.7037	792.63	.	.	V	.	.Q	.	.
19.917	431.2208	801.08	.	.	V	.	.Q	.	.
20.000	436.7773	806.80	.	.	V	.	.Q	.	.
20.083	442.3714	812.27	.	.	V	.	.Q	.	.
20.167	448.0271	821.21	.	.	V	.	.Q	.	.
20.250	453.7289	827.91	.	.	V	.	.Q	.	.
20.333	459.4680	833.32	.	.	V	.	.Q	.	.
20.417	465.2286	836.43	.	.	V	.	.Q	.	.
20.500	470.9730	834.08	.	.	V	.	.Q	.	.
20.583	476.7161	833.91	.	.	V	.	.Q	.	.
20.667	482.4646	834.68	.	.	V	.	.Q	.	.
20.750	488.2170	835.25	.	.	V	.	.Q	.	.
20.833	493.9822	837.10	.	.	V	.	.Q	.	.
20.917	499.7710	840.54	.	.	V	.	.Q	.	.
21.000	505.6046	847.03	.	.	V	.	.Q	.	.
21.083	511.4364	846.78	.	.	V	.	.Q	.	.
21.167	517.2422	843.02	.	.	.V	.	.Q	.	.
21.250	523.0345	841.03	.	.	.V	.	.Q	.	.
21.333	528.8749	848.03	.	.	.V	.	.Q	.	.
21.417	534.7161	848.14	.	.	.V	.	.Q	.	.
21.500	540.5027	840.22	.	.	.V	.	.Q	.	.
21.583	546.2474	834.13	.	.	.V	.	.Q	.	.
21.667	551.9536	828.54	.	.	.V	.	.Q	.	.
21.750	557.6770	831.04	.	.	.V	.	.Q	.	.
21.833	563.4504	838.29	.	.	.V	.	.Q	.	.
21.917	569.2912	848.09	.	.	.V	.	.Q	.	.
22.000	575.0505	836.25	.	.	.V	.	.Q	.	.
22.083	580.7860	832.80	.	.	.V	.	.Q	.	.
22.167	586.5215	832.79	.	.	.V	.	.Q	.	.
22.250	592.2550	832.51	.	.	.V	.	.Q	.	.
22.333	597.9703	829.86	.	.	.V	.	.Q	.	.
22.417	603.6918	830.76	.	.	.V	.	.Q	.	.
22.500	609.4182	831.47	.	.	.V	.	.Q	.	.
22.583	615.1367	830.33	.	.	.V	.	.Q	.	.
22.667	620.7551	815.79	.	.	.V	.	.Q	.	.
22.750	626.3313	809.67	.	.	.V	.	.Q	.	.
22.833	631.8843	806.30	.	.	.V	.	.Q	.	.
22.917	637.3987	800.69	.	.	.V	.	.Q	.	.
23.000	642.8651	793.71	.	.	.V	.	.Q	.	.
23.083	648.2853	787.02	.	.	.V	.	.Q	.	.
23.167	653.6789	783.15	.	.	.V	.	.Q	.	.
23.250	659.0598	781.31	.	.	.V	.	.Q	.	.

23.333	664.4103	776.90	.	.	.	V	.	Q	.
23.417	669.7331	772.87	.	.	.	V	.	Q	.
23.500	675.0278	768.80	.	.	.	V	.	Q	.
23.583	680.2799	762.60	.	.	.	V	.	Q	.
23.667	685.4413	749.44	.	.	.	V	.	Q	.
23.750	690.5583	742.98	.	.	.	V	.	Q	.
23.833	695.6198	734.92	.	.	.	V	.	Q	.
23.917	700.6357	728.31	.	.	.	V	.	Q	.
24.000	705.6091	722.13	.	.	.	V	.	Q	.
24.083	710.5504	717.47	.	.	.	V	.	Q	.
24.167	715.4657	713.71	.	.	.	V	.	Q	.
24.250	720.3435	708.26	.	.	.	V	.	Q	.
24.333	725.1404	696.51	.	.	.	V	.	Q	.
24.417	729.8620	685.57	.	.	.	V	.	Q	.
24.500	734.5281	677.53	.	.	.	V	.	Q	.
24.583	739.1420	669.94	.	.	.	V	.	Q	.
24.667	743.7090	663.13	.	.	.	V	.	Q	.
24.750	748.2222	655.32	.	.	.	V	.	Q	.
24.833	752.6790	647.13	.	.	.	V	.	Q	.
24.917	757.0771	638.61	.	.	.	V	.	Q	.
25.000	761.3964	627.16	.	.	.	V	.	Q	.
25.083	765.6611	619.23	.	.	.	V	.	Q	.
25.167	769.8763	612.06	.	.	.	V	.	Q	.
25.250	774.0365	604.05	.	.	.	V	.	Q	.
25.333	778.1396	595.77	.	.	.	V	.	Q	.
25.417	782.1853	587.44	.	.	.	V	.	Q	.
25.500	786.1715	578.80	.	.	.	V	.	Q	.
25.583	790.0963	569.87	.	.	.	V	.	Q	.
25.667	793.9624	561.37	.	.	.	V	.	Q	.
25.750	797.7697	552.82	.	.	.	V	.	Q	.
25.833	801.5182	544.29	.	.	.	V	.	Q	.
25.917	805.2102	536.08	.	.	.	V	.	Q	.
26.000	808.8548	529.20	.	.	.	V	.	Q	.
26.083	812.4511	522.18	.	.	.	V	.	Q	.
26.167	815.9908	513.97	.	.	.	V	.	Q	.
26.250	819.4758	506.02	.	.	.	V	.	Q	.
26.333	822.9137	499.18	.	.	.	V	.	Q	.
26.417	826.3052	492.44	.	.	.	V	.	Q	.
26.500	829.6394	484.13	.	.	.	V	.	Q	.
26.583	832.9180	476.05	.	.	.	V	.	Q	.
26.667	836.1474	468.90	.	.	.	V	.	Q	.
26.750	839.3256	461.47	.	.	.	V	.	Q	.
26.833	842.4495	453.60	.	.	.	V	.	Q	.
26.917	845.5119	444.66	.	.	.	V	.	Q	.
27.000	848.5185	436.55	.	.	.	V	.	Q	.
27.083	851.4791	429.88	.	.	.	V	.	Q	.
27.167	854.3956	423.47	.	.	.	V	.	Q	.
27.250	857.2672	416.95	.	.	.	V	.	Q	.
27.333	860.0920	410.17	.	.	.	V	.	Q	.
27.417	862.8692	403.24	.	.	.	V	.	Q	.
27.500	865.5924	395.41	.	.	.	V	.	Q	.
27.583	868.2628	387.73	.	.	.	V	.	Q	.
27.667	870.8854	380.81	.	.	.	V	.	Q	.
27.750	873.4617	374.08	.	.	.	V	.	Q	.
27.833	875.9911	367.28	.	.	.	V	.	Q	.
27.917	878.4750	360.66	.	.	.	V	.	Q	.
28.000	880.9142	354.16	.	.	.	V	.	Q	.
28.083	883.3077	347.54	.	.	.	V	.	Q	.

28.167	885.6561	340.99	.	.	.	Q	.	.	V	.
28.250	887.9628	334.93	.	.	.	Q	.	.	V	.
28.333	890.2266	328.70	.	.	.	Q	.	.	V	.
28.417	892.4465	322.34	.	.	.	Q	.	.	V	.
28.500	894.6270	316.60	.	.	.	Q	.	.	V	.
28.583	896.7711	311.33	.	.	.	Q	.	.	V	.
28.667	898.8774	305.84	.	.	.	Q	.	.	V	.
28.750	900.9429	299.91	.	.	.	Q	.	.	V	.
28.833	902.9611	293.03	.	.	.	Q	.	.	V	.
28.917	904.9425	287.70	.	.	.	Q	.	.	V	.
29.000	906.8869	282.33	.	.	.	Q	.	.	V	.
29.083	908.7952	277.09	.	.	.	Q	.	.	V	.
29.167	910.6694	272.14	.	.	.	Q	.	.	V	.
29.250	912.5101	267.27	.	.	.	Q	.	.	V	.
29.333	914.3128	261.75	.	.	.	Q	.	.	V	.
29.417	916.0765	256.09	.	.	.	Q	.	.	V	.
29.500	917.8037	250.78	.	.	.	Q	.	.	V	.
29.583	919.4957	245.67	.	.	.	Q	.	.	V	.
29.667	921.1548	240.91	.	.	.	Q	.	.	V	.
29.750	922.7806	236.07	.	.	.	Q	.	.	V	.
29.833	924.3647	230.02	.	.	.	Q	.	.	V	.
29.917	925.9036	223.44	.	.	.	Q	.	.	V	.
30.000	927.4067	218.25	.	.	.	Q	.	.	V	.
30.083	928.8755	213.27	.	.	.	Q	.	.	V	.
30.167	930.3083	208.05	.	.	.	Q	.	.	V	.
30.250	931.7053	202.84	.	.	.	Q	.	.	V	.
30.333	933.0673	197.75	.	.	.	Q	.	.	V	.
30.417	934.3923	192.40	.	.	.	Q	.	.	V	.
30.500	935.6792	186.85	.	.	.	Q	.	.	V	.
30.583	936.9255	180.97	.	.	.	Q	.	.	V	.
30.667	938.1381	176.06	.	.	.	Q	.	.	V	.
30.750	939.3198	171.59	.	.	.	Q	.	.	V	.
30.833	940.4752	167.76	.	.	.	Q	.	.	V	.
30.917	941.6060	164.19	.	.	.	Q	.	.	V	.
31.000	942.7129	160.72	.	.	.	Q	.	.	V	.
31.083	943.7967	157.37	.	.	.	Q	.	.	V	.
31.167	944.8571	153.97	.	.	.	Q	.	.	V	.
31.250	945.8924	150.32	.	.	.	Q	.	.	V	.
31.333	946.9014	146.51	.	.	.	Q	.	.	V	.
31.417	947.8813	142.28	.	.	.	Q	.	.	V	.
31.500	948.8232	136.77	.	.	.	Q	.	.	V	.
31.583	949.7286	131.46	.	.	.	Q	.	.	V	.
31.667	950.6074	127.61	.	.	.	Q	.	.	V	.
31.750	951.4620	124.09	.	.	.	Q	.	.	V	.
31.833	952.2943	120.84	.	.	.	Q	.	.	V	.
31.917	953.1042	117.61	.	.	.	Q	.	.	V	.
32.000	953.8923	114.43	.	.	.	Q	.	.	V	.
32.083	954.6589	111.31	.	.	.	Q	.	.	V	.
32.167	955.4021	107.90	.	.	.	Q	.	.	V	.
32.250	956.1208	104.36	.	.	.	Q	.	.	V	.
32.333	956.8171	101.10	.	.	.	Q	.	.	V	.
32.417	957.4935	98.21	.	.	.	Q	.	.	V	.
32.500	958.1510	95.47	.	.	.	Q	.	.	V	.
32.583	958.7892	92.67	.	.	.	Q	.	.	V	.
32.667	959.4089	89.98	.	.	.	Q	.	.	V	.
32.750	960.0096	87.23	.	.	.	Q	.	.	V	.
32.833	960.5928	84.68	.	.	.	Q	.	.	V	.
32.917	961.1578	82.04	.	.	.	Q	.	.	V	.

33.000	961.7080	79.88	. Q	.	.	.	V.
33.083	962.2440	77.82	. Q	.	.	.	V.
33.167	962.7655	75.73	. Q	.	.	.	V.
33.250	963.2731	73.71	. Q	.	.	.	V.
33.333	963.7665	71.64	. Q	.	.	.	V.
33.417	964.2463	69.66	. Q	.	.	.	V.
33.500	964.7133	67.80	. Q	.	.	.	V.
33.583	965.1685	66.10	. Q	.	.	.	V.
33.667	965.6115	64.32	. Q	.	.	.	V.
33.750	966.0428	62.64	. Q	.	.	.	V.
33.833	966.4626	60.96	. Q	.	.	.	V.
33.917	966.8720	59.44	. Q	.	.	.	V.
34.000	967.2706	57.87	. Q	.	.	.	V.
34.083	967.6589	56.38	. Q	.	.	.	V.
34.167	968.0370	54.91	. Q	.	.	.	V.
34.250	968.4059	53.57	. Q	.	.	.	V.
34.333	968.7651	52.15	. Q	.	.	.	V.
34.417	969.1151	50.83	. Q	.	.	.	V.
34.500	969.4565	49.56	. Q	.	.	.	V.
34.583	969.7903	48.48	. Q	.	.	.	V.
34.667	970.1162	47.31	. Q	.	.	.	V.
34.750	970.4347	46.24	. Q	.	.	.	V.
34.833	970.7453	45.10	. Q	.	.	.	V.
34.917	971.0480	43.95	.Q	.	.	.	V.
35.000	971.3446	43.07	.Q	.	.	.	V.
35.083	971.6337	41.97	.Q	.	.	.	V.
35.167	971.9161	41.02	.Q	.	.	.	V.
35.250	972.1919	40.04	.Q	.	.	.	V.
35.333	972.4612	39.11	.Q	.	.	.	V.
35.417	972.7240	38.15	.Q	.	.	.	V.
35.500	972.9806	37.25	.Q	.	.	.	V.
35.583	973.2311	36.37	.Q	.	.	.	V.
35.667	973.4756	35.50	.Q	.	.	.	V.
35.750	973.7141	34.63	.Q	.	.	.	V.
35.833	973.9467	33.77	.Q	.	.	.	V.
35.917	974.1733	32.91	.Q	.	.	.	V.
36.000	974.3940	32.05	.Q	.	.	.	V.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	2165.0
10%	1630.0
20%	1355.0
30%	1070.0
40%	840.0
50%	695.0
60%	580.0
70%	475.0
80%	365.0
90%	250.0

=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 119 *
* 5-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV05119S.DAT
TIME/DATE OF STUDY: 15:23 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 = 49495.699 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.308 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496
LOW LOSS FRACTION = 0.845
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	861.677
2	0.432	1723.350
3	0.720	1723.347
4	1.008	1723.356
5	1.296	1723.347
6	1.583	1723.351
7	1.872	1724.623
8	2.242	2219.490
9	2.680	2622.489
10	3.119	2622.484
11	3.557	2622.499
12	4.039	2884.965
13	4.797	4536.802
14	5.603	4825.445
15	6.538	5598.162
16	7.601	6361.703
17	8.835	7389.128
18	10.162	7941.579
19	11.427	7573.530
20	12.687	7539.667
21	14.025	8012.714
22	15.857	10962.717
23	17.296	8617.995
24	18.640	8042.302
25	20.023	8281.445
26	21.674	9877.360
27	23.579	11406.680
28	25.158	9450.541
29	26.597	8616.757
30	28.117	9093.035
31	30.019	11389.873
32	31.785	10566.387
33	34.046	13538.745
34	36.009	11749.252
35	37.423	8462.316
36	39.675	13483.635
37	41.987	13835.489
38	44.288	13777.192
39	46.590	13779.521
40	49.336	16437.600
41	51.473	12788.671
42	53.304	10959.846
43	55.042	10406.136
44	56.867	10921.850
45	58.980	12651.186
46	61.521	15207.171
47	63.774	13489.457
48	65.586	10843.551

49	67.261	10024.962
50	69.135	11220.614
51	70.855	10296.508
52	72.369	9060.257
53	73.992	9715.191
54	75.544	9289.422
55	76.797	7501.493
56	77.917	6702.062
57	79.037	6702.702
58	80.169	6781.572
59	81.351	7071.614
60	82.479	6756.043
61	83.540	6349.957
62	84.544	6007.670
63	85.504	5744.299
64	86.374	5210.615
65	87.149	4640.943
66	87.910	4551.570
67	88.535	3741.773
68	89.128	3548.000
69	89.721	3549.142
70	90.280	3350.757
71	90.811	3174.385
72	91.341	3174.385
73	91.869	3163.972
74	92.363	2956.271
75	92.843	2872.743
76	93.323	2872.743
77	93.802	2868.085
78	94.188	2311.201
79	94.509	1916.715
80	94.828	1914.386
81	95.148	1914.386
82	95.468	1914.386
83	95.788	1914.340
84	96.065	1659.143
85	96.264	1192.729
86	96.462	1183.458
87	96.660	1183.413
88	96.857	1181.129
89	97.054	1181.129
90	97.252	1185.742
91	97.450	1181.129
92	97.647	1181.084
93	97.845	1183.458
94	98.004	953.699
95	98.058	320.229
96	98.105	280.771
97	98.152	283.100
98	98.200	285.429
99	98.246	278.442
100	98.294	287.758
101	98.341	278.442
102	98.388	280.771
103	98.435	283.100
104	98.482	280.771
105	98.530	287.758
106	98.576	278.442

107	98.624	283.100
108	98.671	283.100
109	98.718	283.100
110	98.766	283.100
111	98.813	283.100
112	98.860	283.100
113	98.907	278.442
114	98.955	287.758
115	99.001	278.442
116	99.048	278.442
117	99.094	278.442
118	99.141	278.442
119	99.187	278.442
120	99.234	278.442
121	99.280	278.442
122	99.327	278.442
123	99.373	278.442
124	99.420	278.442
125	99.466	278.442
126	99.513	278.442
127	99.559	278.442
128	99.606	278.442
129	99.652	278.442
130	99.699	278.442
131	99.745	278.442
132	99.792	278.442
133	99.839	278.442
134	99.885	278.442
135	99.932	278.442
136	99.978	278.442
137	100.000	131.389

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9835.5820
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 1926.9926

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	4.09	Q	.	.	.	.
0.417	0.1007	5.27	Q	.	.	.	.
0.500	0.1451	6.45	Q	.	.	.	.
0.583	0.1977	7.64	Q	.	.	.	.
0.667	0.2608	9.16	Q	.	.	.	.
0.750	0.3363	10.96	Q	.	.	.	.
0.833	0.4242	12.77	Q	.	.	.	.
0.917	0.5246	14.58	Q	.	.	.	.
1.000	0.6387	16.57	Q	.	.	.	.
1.083	0.7743	19.69	Q	.	.	.	.
1.167	0.9328	23.01	Q	.	.	.	.
1.250	1.1178	26.87	Q	.	.	.	.
1.333	1.3330	31.25	Q	.	.	.	.
1.417	1.5833	36.34	Q	.	.	.	.
1.500	1.8713	41.82	Q	.	.	.	.
1.583	2.1954	47.06	Q	.	.	.	.
1.667	2.5556	52.30	Q	.	.	.	.
1.750	2.9542	57.88	Q	.	.	.	.
1.833	3.4051	65.47	VQ	.	.	.	.
1.917	3.8975	71.49	VQ	.	.	.	.
2.000	4.4288	77.15	VQ	.	.	.	.
2.083	5.0003	82.98	VQ	.	.	.	.
2.167	5.6196	89.91	VQ	.	.	.	.
2.250	6.2938	97.90	VQ	.	.	.	.
2.333	7.0142	104.59	VQ	.	.	.	.
2.417	7.7768	110.74	VQ	.	.	.	.
2.500	8.5842	117.23	VQ	.	.	.	.
2.583	9.4471	125.29	V Q	.	.	.	.
2.667	10.3619	132.83	V Q	.	.	.	.
2.750	11.3425	142.39	V Q	.	.	.	.
2.833	12.3809	150.78	V Q	.	.	.	.
2.917	13.4620	156.97	V Q	.	.	.	.
3.000	14.6092	166.58	V Q	.	.	.	.
3.083	15.8245	176.45	V Q	.	.	.	.
3.167	17.1077	186.32	V Q	.	.	.	.
3.250	18.4591	196.23	V Q	.	.	.	.
3.333	19.8914	207.96	V Q	.	.	.	.
3.417	21.3877	217.26	V Q	.	.	.	.
3.500	22.9397	225.36	V Q	.	.	.	.
3.583	24.5452	233.11	V Q	.	.	.	.
3.667	26.2066	241.24	V Q	.	.	.	.
3.750	27.9322	250.56	V Q	.	.	.	.
3.833	29.7342	261.65	V Q	.	.	.	.
3.917	31.6048	271.61	V Q	.	.	.	.

4.000	33.5319	279.82	V Q	.	.	.	.
4.083	35.5119	287.50	V Q	.	.	.	.
4.167	37.5506	296.02	V Q	.	.	.	.
4.250	39.6439	303.94	V Q	.	.	.	.
4.333	41.7862	311.06	V Q	.	.	.	.
4.417	43.9807	318.65	V Q	.	.	.	.
4.500	46.2257	325.98	V Q	.	.	.	.
4.583	48.5131	332.12	.V Q	.	.	.	.
4.667	50.8392	337.76	.V Q	.	.	.	.
4.750	53.2043	343.41	.V Q	.	.	.	.
4.833	55.6089	349.15	.V Q	.	.	.	.
4.917	58.0545	355.10	.V Q	.	.	.	.
5.000	60.5398	360.87	.V Q	.	.	.	.
5.083	63.0631	366.38	.V Q	.	.	.	.
5.167	65.6229	371.69	.V Q	.	.	.	.
5.250	68.2183	376.84	.V Q	.	.	.	.
5.333	70.8468	381.66	.V Q	.	.	.	.
5.417	73.5060	386.12	.V Q	.	.	.	.
5.500	76.1957	390.54	.V Q	.	.	.	.
5.583	78.9121	394.42	.V Q	.	.	.	.
5.667	81.6546	398.21	.V Q	.	.	.	.
5.750	84.4232	402.01	.V Q	.	.	.	.
5.833	87.2173	405.70	.V Q	.	.	.	.
5.917	90.0361	409.29	.V Q	.	.	.	.
6.000	92.8799	412.91	.V Q	.	.	.	.
6.083	95.7485	416.53	.V Q	.	.	.	.
6.167	98.6413	420.04	. V Q	.	.	.	.
6.250	101.5581	423.51	. V Q	.	.	.	.
6.333	104.4989	427.01	. V Q	.	.	.	.
6.417	107.4639	430.52	. V Q	.	.	.	.
6.500	110.4506	433.68	. V Q	.	.	.	.
6.583	113.4574	436.59	. V Q	.	.	.	.
6.667	116.4844	439.52	. V Q	.	.	.	.
6.750	119.5318	442.47	. V Q	.	.	.	.
6.833	122.5996	445.45	. V Q	.	.	.	.
6.917	125.6881	448.44	. V Q	.	.	.	.
7.000	128.7962	451.30	. V Q	.	.	.	.
7.083	131.9218	453.84	. V Q	.	.	.	.
7.167	135.0652	456.42	. V Q	.	.	.	.
7.250	138.2263	459.00	. V Q	.	.	.	.
7.333	141.4055	461.62	. V Q	.	.	.	.
7.417	144.6029	464.25	. V Q	.	.	.	.
7.500	147.8185	466.92	. V Q	.	.	.	.
7.583	151.0526	469.59	. V Q	.	.	.	.
7.667	154.3054	472.30	. V Q	.	.	.	.
7.750	157.5769	475.03	. V Q	.	.	.	.
7.833	160.8664	477.63	. V Q	.	.	.	.
7.917	164.1710	479.83	. V Q	.	.	.	.
8.000	167.4907	482.03	. V Q	.	.	.	.
8.083	170.8257	484.24	. V Q	.	.	.	.
8.167	174.1762	486.49	. V Q	.	.	.	.
8.250	177.5423	488.76	. V Q	.	.	.	.
8.333	180.9243	491.06	. V Q	.	.	.	.
8.417	184.3222	493.38	. V Q	.	.	.	.
8.500	187.7364	495.73	. V Q	.	.	.	.
8.583	191.1668	498.11	. V Q	.	.	.	.
8.667	194.6139	500.52	. V Q	.	.	.	.
8.750	198.0778	502.95	. V Q	.	.	.	.

8.833	201.5586	505.42	.	V	Q	.	.	.	.
8.917	205.0566	507.91	.	V	Q	.	.	.	.
9.000	208.5720	510.44	.	V	Q	.	.	.	.
9.083	212.1050	512.99	.	V	Q	.	.	.	.
9.167	215.6558	515.58	.	V	Q	.	.	.	.
9.250	219.2247	518.20	.	V	Q	.	.	.	.
9.333	222.8119	520.86	.	V	Q	.	.	.	.
9.417	226.4176	523.54	.	V	Q	.	.	.	.
9.500	230.0421	526.28	.	V	Q	.	.	.	.
9.583	233.6855	529.03	.	V	Q	.	.	.	.
9.667	237.3483	531.83	.	V	Q	.	.	.	.
9.750	241.0305	534.66	.	V	Q	.	.	.	.
9.833	244.7325	537.53	.	V	Q	.	.	.	.
9.917	248.4545	540.44	.	V	Q	.	.	.	.
10.000	252.1969	543.39	.	V	Q	.	.	.	.
10.083	255.9598	546.38	.	V	Q	.	.	.	.
10.167	259.7437	549.42	.	V	Q	.	.	.	.
10.250	263.5487	552.49	.	V	Q	.	.	.	.
10.333	267.3753	555.62	.	V	Q	.	.	.	.
10.417	271.2237	558.78	.	V	Q	.	.	.	.
10.500	275.0942	562.01	.	V	Q	.	.	.	.
10.583	278.9872	565.26	.	V	Q	.	.	.	.
10.667	282.9031	568.58	.	V	Q	.	.	.	.
10.750	286.8420	571.94	.	V	Q	.	.	.	.
10.833	290.8046	575.36	.	V	Q	.	.	.	.
10.917	294.7910	578.82	.	V	Q	.	.	.	.
11.000	298.8017	582.36	.	V	Q	.	.	.	.
11.083	302.8370	585.93	.	V	Q	.	.	.	.
11.167	306.8975	589.58	.	V	Q	.	.	.	.
11.250	310.9834	593.27	.	V	Q	.	.	.	.
11.333	315.0952	597.04	.	V	Q	.	.	.	.
11.417	319.2327	600.76	.	V	Q	.	.	.	.
11.500	323.3957	604.47	.	V	Q	.	.	.	.
11.583	327.5846	608.23	.	V	Q	.	.	.	.
11.667	331.8001	612.08	.	V	Q	.	.	.	.
11.750	336.0424	615.98	.	V	Q	.	.	.	.
11.833	340.3122	619.98	.	V	Q	.	.	.	.
11.917	344.6100	624.03	.	V	Q	.	.	.	.
12.000	348.9363	628.18	.	V	Q	.	.	.	.
12.083	353.2982	633.35	.	V	Q	.	.	.	.
12.167	357.7031	639.59	.	V	Q	.	.	.	.
12.250	362.1514	645.89	.	V	Q	.	.	.	.
12.333	366.6437	652.29	.	V	Q	.	.	.	.
12.417	371.1806	658.75	.	V	Q	.	.	.	.
12.500	375.7626	665.32	.	V	Q	.	.	.	.
12.583	380.3904	671.95	.	V	Q	.	.	.	.
12.667	385.0685	679.26	.	V	Q	.	.	.	.
12.750	389.8004	687.08	.	V	Q	.	.	.	.
12.833	394.5871	695.03	.	V	Q	.	.	.	.
12.917	399.4290	703.05	.	V	Q	.	.	.	.
13.000	404.3291	711.48	.	V	Q	.	.	.	.
13.083	409.3005	721.85	.	V	Q	.	.	.	.
13.167	414.3463	732.66	.	V	Q	.	.	.	.
13.250	419.4732	744.41	.	V	Q	.	.	.	.
13.333	424.6877	757.15	.	V	Q	.	.	.	.
13.417	429.9984	771.11	.	V	Q	.	.	.	.
13.500	435.4104	785.82	.	V	Q	.	.	.	.
13.583	440.9213	800.19	.	V	Q	.	.	.	.

13.667	446.5320	814.66	.	V.	Q	.	.	.	.
13.750	452.2464	829.74	.	V.	Q	.	.	.	.
13.833	458.0885	848.27	.	V.	Q	.	.	.	.
13.917	464.0406	864.25	.	V.	Q	.	.	.	.
14.000	470.0995	879.74	.	V.	Q	.	.	.	.
14.083	476.2750	896.69	.	V.	Q	.	.	.	.
14.167	482.5880	916.65	.	V	Q	.	.	.	.
14.250	489.0505	938.35	.	V	Q	.	.	.	.
14.333	495.6478	957.93	.	V	Q	.	.	.	.
14.417	502.3737	976.60	.	V	Q	.	.	.	.
14.500	509.2326	995.91	.	V	Q	.	.	.	.
14.583	516.2423	1017.81	.	V	Q	.	.	.	.
14.667	523.4015	1039.51	.	V	Q	.	.	.	.
14.750	530.7366	1065.06	.	.V	Q	.	.	.	.
14.833	538.2342	1088.66	.	.V	Q	.	.	.	.
14.917	545.8688	1108.55	.	.V	Q	.	.	.	.
15.000	553.6820	1134.47	.	.V	Q	.	.	.	.
15.083	561.6906	1162.84	.	.V	Q	.	.	.	.
15.167	569.8965	1191.50	.	.V	Q	.	.	.	.
15.250	578.3054	1220.97	.	.V	Q	.	.	.	.
15.333	586.9440	1254.32	.	.V	Q	.	.	.	.
15.417	595.7816	1283.21	.	.V	Q	.	.	.	.
15.500	604.7986	1309.28	.	.V	Q	.	.	.	.
15.583	613.9875	1334.23	.	.V	Q	.	.	.	.
15.667	623.3532	1359.89	.	.V	Q	.	.	.	.
15.750	632.9094	1387.55	.	.V	Q	.	.	.	.
15.833	642.6994	1421.51	.	.V	Q	.	.	.	.
15.917	652.6937	1451.17	.	.V	Q	.	.	.	.
16.000	662.8716	1477.83	.	.V	Q	.	.	.	.
16.083	673.4265	1532.57	.	.V	Q	.	.	.	.
16.167	684.3708	1589.12	.	.V	Q	.	.	.	.
16.250	695.5027	1616.35	.	.V	Q	.	.	.	.
16.333	706.7863	1638.38	.	.V	Q	.	.	.	.
16.417	718.2047	1657.96	.	.V	Q	.	.	.	.
16.500	729.7687	1679.10	.	.V	Q	.	.	.	.
16.583	741.4846	1701.14	.	.V	Q	.	.	.	.
16.667	753.4464	1736.85	.	.V	Q	.	.	.	.
16.750	765.6373	1770.13	.	.V	Q	.	.	.	.
16.833	777.9440	1786.93	.	.V	Q	.	.	.	.
16.917	790.3539	1801.91	.	.V	Q	.	.	.	.
17.000	802.9882	1834.50	.	.V	Q	.	.	.	.
17.083	816.1560	1911.97	.	.V	Q	.	.	.	.
17.167	829.4908	1936.22	.	.V	Q	.	.	.	.
17.250	843.1384	1981.63	.	.V	Q	.	.	.	.
17.333	857.1237	2030.66	.	.V	Q	.	.	.	.
17.417	871.4710	2083.24	.	.V	Q	.	.	.	.
17.500	886.0105	2111.13	.	.V	Q	.	.	.	.
17.583	900.5180	2106.49	.	.V	Q	.	.	.	.
17.667	915.1242	2120.82	.	.V	Q	.	.	.	.
17.750	929.9841	2157.65	.	.V	Q	.	.	.	.
17.833	945.6509	2274.83	.	.V	Q	.	.	.	.
17.917	960.8250	2203.28	.	.V	Q	.	.	.	.
18.000	975.9404	2194.75	.	.V	Q	.	.	.	.
18.083	991.1492	2208.33	.	.V	Q	.	.	.	.
18.167	1006.8131	2274.39	.	.V	Q	.	.	.	.
18.250	1022.8733	2331.94	.	.V	Q	.	.	.	.
18.333	1038.4314	2259.03	.	.V	Q	.	.	.	.
18.417	1053.7609	2225.84	.	.V	Q	.	.	.	.

18.500	1069.1960	2241.20	.	.	.	V	.	Q	.
18.583	1085.1765	2320.36	.	.	.	V	.	Q	.
18.667	1100.8937	2282.13	.	.	.	V	.	Q	.
18.750	1117.2234	2371.07	.	.	.	V	.	Q	.
18.833	1133.0438	2297.13	.	.	.	V	.	Q	.
18.917	1148.1238	2189.61	.	.	.	V	.	Q	.
19.000	1164.3645	2358.15	.	.	.	V	.	Q	.
19.083	1180.6470	2364.22	.	.	.	V	.	Q	.
19.167	1196.8326	2350.17	.	.	.	V	.	Q	.
19.250	1212.8871	2331.11	.	.	.	V	.	Q	.
19.333	1229.4636	2406.92	.	.	.	V	.	Q	.
19.417	1245.0747	2266.72	.	.	.	V	.	Q	.
19.500	1260.1451	2188.23	.	.	.	V	.	Q	.
19.583	1274.9904	2155.53	.	.	.	V	.	Q	.
19.667	1289.9534	2172.64	.	.	.	V	.	Q	.
19.750	1305.2424	2219.96	.	.	.	V	.	Q	.
19.833	1320.9630	2282.63	.	.	.	V	.	Q	.
19.917	1336.1392	2203.57	.	.	.	V	.	Q	.
20.000	1350.5498	2092.43	.	.	.	V	.	Q	.
20.083	1364.6429	2046.33	.	.	.	V	.	Q	.
20.167	1378.8878	2068.35	.	.	.	V	.	Q	.
20.250	1392.7570	2013.80	.	.	.	V	.	Q	.
20.333	1406.1598	1946.08	.	.	.	V	.	Q	.
20.417	1419.5544	1944.91	.	.	.	V	.	Q	.
20.500	1432.6908	1907.41	.	.	.	V	.	Q	.
20.583	1445.2345	1821.34	.	.	.	V	.	Q	.
20.667	1457.4260	1770.21	.	.	.	V	.	Q	.
20.750	1469.4344	1743.62	.	.	.	V	.	Q	.
20.833	1481.2666	1718.03	.	.	.	V	.	Q	.
20.917	1492.9932	1702.70	.	.	.	V	.	Q	.
21.000	1504.4401	1662.09	.	.	.	V	.	Q	.
21.083	1515.5833	1618.00	.	.	.	V	.	Q	.
21.167	1526.4255	1574.30	.	.	.	V	.	Q	.
21.250	1536.9951	1534.70	.	.	.	V	.	Q	.
21.333	1547.2141	1483.79	.	.	.	V	.	Q	.
21.417	1557.0922	1434.29	.	.	.	V	.	Q	.
21.500	1566.7550	1403.05	.	.	.	V	.	Q	.
21.583	1576.0564	1350.57	.	.	.	V	.	Q	.
21.667	1585.1439	1319.52	.	.	.	V	.	Q	.
21.750	1594.0428	1292.12	.	.	.	V	.	Q	.
21.833	1602.6915	1255.78	.	.	.	V	.	Q	.
21.917	1611.0979	1220.61	.	.	.	V	.	Q	.
22.000	1619.3219	1194.13	.	.	.	V	.	Q	.
22.083	1627.3682	1168.31	.	.	.	V	.	Q	.
22.167	1635.1844	1134.92	.	.	.	V	.	Q	.
22.250	1642.8094	1107.14	.	.	.	V	.	Q	.
22.333	1650.2764	1084.19	.	.	.	V	.	Q	.
22.417	1657.5834	1060.98	.	.	.	V	.	Q	.
22.500	1664.6035	1019.33	.	.	.	V	.	Q	.
22.583	1671.4004	986.91	.	.	.	V	.	Q	.
22.667	1678.0778	969.55	.	.	.	V	.	Q	.
22.750	1684.6396	952.79	.	.	.	V	.	Q	.
22.833	1691.0812	935.31	.	.	.	V	.	Q	.
22.917	1697.3934	916.54	.	.	.	V	.	Q	.
23.000	1703.5176	889.23	.	.	.	V	.	Q	.
23.083	1709.4122	855.90	.	.	.	V	.	Q	.
23.167	1715.1951	839.67	.	.	.	V	.	Q	.
23.250	1720.8799	825.43	.	.	.	V	.	Q	.

23.333	1726.4691	811.56	.	.	.	Q	.	V	.
23.417	1731.9613	797.47	.	.	.	Q	.	V	.
23.500	1737.3624	784.25	.	.	.	Q	.	V	.
23.583	1742.6824	772.45	.	.	.	Q	.	V	.
23.667	1747.9219	760.78	.	.	.	Q	.	V	.
23.750	1753.0767	748.48	.	.	.	Q	.	V	.
23.833	1758.0908	728.05	.	.	.	Q	.	V	.
23.917	1762.8765	694.88	.	.	.	Q	.	V	.
24.000	1767.5798	682.93	.	.	.	Q	.	V	.
24.083	1772.2126	672.69	.	.	.	Q	.	V	.
24.167	1776.7729	662.16	.	.	.	Q	.	V	.
24.250	1781.2537	650.59	.	.	.	Q	.	V	.
24.333	1785.6586	639.59	.	.	.	Q	.	V	.
24.417	1789.9838	628.03	.	.	.	Q	.	V	.
24.500	1794.2371	617.57	.	.	.	Q	.	V	.
24.583	1798.4219	607.63	.	.	.	Q	.	V	.
24.667	1802.5354	597.29	.	.	.	Q	.	V	.
24.750	1806.5784	587.05	.	.	.	Q	.	V	.
24.833	1810.5496	576.62	.	.	.	Q	.	V	.
24.917	1814.4587	567.61	.	.	.	Q	.	V	.
25.000	1818.3068	558.73	.	.	.	Q	.	V	.
25.083	1822.0907	549.42	.	.	.	Q	.	V	.
25.167	1825.8099	540.04	.	.	.	Q	.	V	.
25.250	1829.4622	530.30	.	.	.	Q	.	V	.
25.333	1833.0446	520.16	.	.	.	Q	.	V	.
25.417	1836.5510	509.13	.	.	.	Q	.	V	.
25.500	1839.9818	498.15	.	.	.	Q	.	V	.
25.583	1843.3352	486.92	.	.	.	Q	.	V	.
25.667	1846.6146	476.17	.	.	.	Q	.	V	.
25.750	1849.8185	465.21	.	.	.	Q	.	V	.
25.833	1852.9359	452.66	.	.	.	Q	.	V	.
25.917	1855.9835	442.51	.	.	.	Q	.	V	.
26.000	1858.9651	432.93	.	.	.	Q	.	V	.
26.083	1861.8804	423.30	.	.	.	Q	.	V	.
26.167	1864.7227	412.70	.	.	.	Q	.	V	.
26.250	1867.4857	401.20	.	.	.	Q	.	V	.
26.333	1870.1794	391.12	.	.	.	Q	.	V	.
26.417	1872.8085	381.74	.	.	.	Q	.	V	.
26.500	1875.3713	372.12	.	.	.	Q	.	V	.
26.583	1877.8580	361.07	.	.	.	Q	.	V	.
26.667	1880.2732	350.69	.	.	.	Q	.	V	.
26.750	1882.6055	338.64	.	.	.	Q	.	V	.
26.833	1884.8652	328.12	.	.	.	Q	.	V	.
26.917	1887.0682	319.88	.	.	.	Q	.	V	.
27.000	1889.1913	308.27	.	.	.	Q	.	V	.
27.083	1891.2338	296.58	.	.	.	Q	.	V	.
27.167	1893.1968	285.03	.	.	.	Q	.	V	.
27.250	1895.0798	273.41	.	.	.	Q	.	V	.
27.333	1896.8691	259.80	.	.	.	Q	.	V	.
27.417	1898.5476	243.72	.	.	.	Q	.	V	.
27.500	1900.1296	229.72	.	.	.	Q	.	V	.
27.583	1901.6500	220.76	.	.	.	Q	.	V	.
27.667	1903.1071	211.57	.	.	.	Q	.	V	.
27.750	1904.4921	201.11	.	.	.	Q	.	V	.
27.833	1905.7922	188.78	.	.	.	Q	.	V	.
27.917	1907.0159	177.68	.	.	.	Q	.	V	.
28.000	1908.1757	168.41	.	.	.	Q	.	V	.
28.083	1909.2758	159.74	.	.	.	Q	.	V	.

28.167	1910.3109	150.31	. Q	.	.	.	V.
28.250	1911.2858	141.54	. Q	.	.	.	V.
28.333	1912.2063	133.66	. Q	.	.	.	V.
28.417	1913.0710	125.56	. Q	.	.	.	V.
28.500	1913.8835	117.97	.Q	.	.	.	V.
28.583	1914.6525	111.65	.Q	.	.	.	V.
28.667	1915.3820	105.93	.Q	.	.	.	V.
28.750	1916.0724	100.25	.Q	.	.	.	V.
28.833	1916.7236	94.56	.Q	.	.	.	V.
28.917	1917.3347	88.73	.Q	.	.	.	V.
29.000	1917.9073	83.15	.Q	.	.	.	V.
29.083	1918.4437	77.89	.Q	.	.	.	V.
29.167	1918.9458	72.90	.Q	.	.	.	V.
29.250	1919.4149	68.12	.Q	.	.	.	V.
29.333	1919.8539	63.74	.Q	.	.	.	V.
29.417	1920.2667	59.94	Q	.	.	.	V.
29.500	1920.6550	56.38	Q	.	.	.	V.
29.583	1921.0228	53.40	Q	.	.	.	V.
29.667	1921.3711	50.58	Q	.	.	.	V.
29.750	1921.7001	47.77	Q	.	.	.	V.
29.833	1922.0109	45.13	Q	.	.	.	V.
29.917	1922.3044	42.63	Q	.	.	.	V.
30.000	1922.5809	40.15	Q	.	.	.	V.
30.083	1922.8406	37.70	Q	.	.	.	V.
30.167	1923.0844	35.40	Q	.	.	.	V.
30.250	1923.3129	33.19	Q	.	.	.	V.
30.333	1923.5262	30.99	Q	.	.	.	V.
30.417	1923.7246	28.81	Q	.	.	.	V.
30.500	1923.9106	27.02	Q	.	.	.	V.
30.583	1924.0863	25.51	Q	.	.	.	V.
30.667	1924.2517	24.02	Q	.	.	.	V.
30.750	1924.4070	22.54	Q	.	.	.	V.
30.833	1924.5521	21.08	Q	.	.	.	V.
30.917	1924.6873	19.62	Q	.	.	.	V.
31.000	1924.8136	18.35	Q	.	.	.	V.
31.083	1924.9335	17.40	Q	.	.	.	V.
31.167	1925.0469	16.46	Q	.	.	.	V.
31.250	1925.1539	15.54	Q	.	.	.	V.
31.333	1925.2546	14.62	Q	.	.	.	V.
31.417	1925.3491	13.71	Q	.	.	.	V.
31.500	1925.4373	12.81	Q	.	.	.	V.
31.583	1925.5193	11.91	Q	.	.	.	V.
31.667	1925.5952	11.02	Q	.	.	.	V.
31.750	1925.6650	10.14	Q	.	.	.	V.
31.833	1925.7299	9.41	Q	.	.	.	V.
31.917	1925.7927	9.13	Q	.	.	.	V.
32.000	1925.8538	8.87	Q	.	.	.	V.
32.083	1925.9131	8.61	Q	.	.	.	V.
32.167	1925.9706	8.35	Q	.	.	.	V.
32.250	1926.0264	8.10	Q	.	.	.	V.
32.333	1926.0804	7.84	Q	.	.	.	V.
32.417	1926.1328	7.60	Q	.	.	.	V.
32.500	1926.1835	7.35	Q	.	.	.	V.
32.583	1926.2324	7.11	Q	.	.	.	V.
32.667	1926.2798	6.87	Q	.	.	.	V.
32.750	1926.3254	6.63	Q	.	.	.	V.
32.833	1926.3695	6.39	Q	.	.	.	V.
32.917	1926.4119	6.15	Q	.	.	.	V.

33.000	1926.4526	5.92	Q	.	.	.	V.
33.083	1926.4918	5.69	Q	.	.	.	V.
33.167	1926.5294	5.46	Q	.	.	.	V.
33.250	1926.5654	5.23	Q	.	.	.	V.
33.333	1926.5999	5.00	Q	.	.	.	V.
33.417	1926.6328	4.78	Q	.	.	.	V.
33.500	1926.6642	4.56	Q	.	.	.	V.
33.583	1926.6941	4.34	Q	.	.	.	V.
33.667	1926.7224	4.12	Q	.	.	.	V.
33.750	1926.7493	3.91	Q	.	.	.	V.
33.833	1926.7747	3.69	Q	.	.	.	V.
33.917	1926.7986	3.48	Q	.	.	.	V.
34.000	1926.8212	3.27	Q	.	.	.	V.
34.083	1926.8423	3.06	Q	.	.	.	V.
34.167	1926.8619	2.85	Q	.	.	.	V.
34.250	1926.8801	2.65	Q	.	.	.	V.
34.333	1926.8970	2.44	Q	.	.	.	V.
34.417	1926.9124	2.24	Q	.	.	.	V.
34.500	1926.9264	2.04	Q	.	.	.	V.
34.583	1926.9391	1.84	Q	.	.	.	V.
34.667	1926.9503	1.64	Q	.	.	.	V.
34.750	1926.9602	1.44	Q	.	.	.	V.
34.833	1926.9688	1.24	Q	.	.	.	V.
34.917	1926.9760	1.05	Q	.	.	.	V.
35.000	1926.9818	0.85	Q	.	.	.	V.
35.083	1926.9863	0.66	Q	.	.	.	V.
35.167	1926.9895	0.47	Q	.	.	.	V.
35.250	1926.9915	0.28	Q	.	.	.	V.
35.333	1926.9921	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

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

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 126 *
* 5-YR EV APRIL 2019 FKAZI *

FILE NAME: EV05126S.DAT
TIME/DATE OF STUDY: 11:26 04/02/2019

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 = 50405.801 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) = 0.495
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) = 3.01

*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 = 2.432

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.139	847.293
2	0.417	1694.596
3	0.695	1694.584
4	0.973	1694.596
5	1.251	1694.589
6	1.529	1694.587
7	1.807	1694.586
8	2.132	1981.362
9	2.552	2561.980
10	2.975	2578.730
11	3.398	2578.729
12	3.822	2585.221
13	4.450	3823.211
14	5.228	4744.867
15	6.038	4938.206
16	7.032	6061.898
17	8.099	6499.839
18	9.369	7743.361
19	10.625	7654.314
20	11.841	7413.837
21	13.057	7413.837
22	14.465	8581.529
23	16.225	10733.509
24	17.553	8089.976
25	18.850	7908.105
26	20.208	8279.951
27	21.829	9880.051
28	23.678	11271.931
29	25.184	9184.133
30	26.574	8473.008
31	28.027	8854.180
32	29.864	11196.843
33	31.553	10300.312
34	33.698	13070.946
35	35.691	12151.649
36	37.120	8709.794
37	38.981	11345.356
38	41.344	14403.122
39	43.545	13417.725
40	45.722	13270.270
41	48.220	15230.646
42	50.679	14988.059
43	52.455	10830.484
44	54.195	10607.175
45	55.852	10100.535
46	57.753	11586.734
47	59.932	13280.362
48	62.426	15204.043

49	64.405	12067.074
50	66.090	10272.453
51	67.708	9863.133
52	69.578	11399.538
53	71.137	9500.879
54	72.621	9047.562
55	74.187	9548.038
56	75.672	9052.398
57	76.857	7222.385
58	77.938	6590.335
59	79.020	6590.894
60	80.112	6657.029
61	81.251	6945.799
62	82.353	6715.722
63	83.378	6250.778
64	84.364	6007.213
65	85.291	5651.098
66	86.169	5356.188
67	86.924	4599.961
68	87.672	4560.755
69	88.322	3961.168
70	88.894	3488.829
71	89.466	3487.573
72	90.029	3430.089
73	90.547	3157.177
74	91.059	3120.482
75	91.571	3121.691
76	92.072	3058.068
77	92.538	2840.222
78	93.001	2823.107
79	93.465	2824.363
80	93.919	2768.042
81	94.261	2085.205
82	94.570	1882.056
83	94.879	1884.521
84	95.188	1882.056
85	95.496	1882.103
86	95.805	1882.056
87	96.070	1612.865
88	96.261	1167.408
89	96.452	1162.524
90	96.643	1164.989
91	96.833	1160.106
92	97.024	1164.943
93	97.215	1162.524
94	97.406	1162.524
95	97.597	1164.989
96	97.787	1160.106
97	97.967	1098.901
98	98.040	442.946
99	98.086	279.004
100	98.132	279.051
101	98.177	279.004
102	98.223	276.539
103	98.268	276.539
104	98.314	279.051
105	98.359	276.539
106	98.405	281.469

107	98.450	274.074
108	98.496	279.051
109	98.542	279.004
110	98.587	276.539
111	98.633	279.004
112	98.679	281.469
113	98.723	269.191
114	98.770	283.934
115	98.816	279.004
116	98.862	279.004
117	98.906	274.121
118	98.952	279.004
119	98.998	279.004
120	99.043	274.121
121	99.088	274.121
122	99.133	274.121
123	99.178	274.121
124	99.223	274.121
125	99.268	274.121
126	99.313	274.121
127	99.358	274.121
128	99.403	274.121
129	99.448	274.121
130	99.493	274.121
131	99.538	274.121
132	99.583	274.121
133	99.628	274.121
134	99.673	274.121
135	99.718	274.121
136	99.762	274.121
137	99.807	274.121
138	99.852	274.121
139	99.897	274.121
140	99.942	274.121
141	99.987	274.121
142	100.000	77.343

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9958.2275
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 1947.6371

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.	600.0	1200.0	1800.0	2400.0
0.083	0.0039	0.57	Q	.	.	.	.
0.167	0.0157	1.71	Q	.	.	.	.
0.250	0.0354	2.85	Q	.	.	.	.
0.333	0.0629	4.00	Q	.	.	.	.
0.417	0.0984	5.15	Q	.	.	.	.
0.500	0.1418	6.31	Q	.	.	.	.
0.583	0.1932	7.46	Q	.	.	.	.
0.667	0.2539	8.82	Q	.	.	.	.
0.750	0.3267	10.57	Q	.	.	.	.
0.833	0.4116	12.33	Q	.	.	.	.
0.917	0.5087	14.10	Q	.	.	.	.
1.000	0.6181	15.88	Q	.	.	.	.
1.083	0.7455	18.50	Q	.	.	.	.
1.167	0.8952	21.74	Q	.	.	.	.
1.250	1.0682	25.12	Q	.	.	.	.
1.333	1.2698	29.27	Q	.	.	.	.
1.417	1.5021	33.73	Q	.	.	.	.
1.500	1.7710	39.04	Q	.	.	.	.
1.583	2.0761	44.30	Q	.	.	.	.
1.667	2.4164	49.41	Q	.	.	.	.
1.750	2.7920	54.55	Q	.	.	.	.
1.833	3.2086	60.48	VQ	.	.	.	.
1.917	3.6760	67.88	VQ	.	.	.	.
2.000	4.1824	73.52	VQ	.	.	.	.
2.083	4.7268	79.06	VQ	.	.	.	.
2.167	5.3113	84.86	VQ	.	.	.	.
2.250	5.9433	91.76	VQ	.	.	.	.
2.333	6.6294	99.62	VQ	.	.	.	.
2.417	7.3601	106.10	VQ	.	.	.	.
2.500	8.1323	112.12	VQ	.	.	.	.
2.583	8.9478	118.42	VQ	.	.	.	.
2.667	9.8177	126.31	V Q	.	.	.	.
2.750	10.7380	133.62	V Q	.	.	.	.
2.833	11.7216	142.82	V Q	.	.	.	.
2.917	12.7645	151.43	V Q	.	.	.	.
3.000	13.8511	157.76	V Q	.	.	.	.
3.083	14.9935	165.88	V Q	.	.	.	.
3.167	16.2062	176.08	V Q	.	.	.	.
3.250	17.4848	185.65	V Q	.	.	.	.
3.333	18.8288	195.16	V Q	.	.	.	.
3.417	20.2476	206.01	V Q	.	.	.	.
3.500	21.7403	216.73	V Q	.	.	.	.
3.583	23.2878	224.70	V Q	.	.	.	.
3.667	24.8893	232.54	V Q	.	.	.	.
3.750	26.5427	240.07	V Q	.	.	.	.
3.833	28.2550	248.63	V Q	.	.	.	.
3.917	30.0343	258.35	V Q	.	.	.	.

4.000	31.8897	269.40	V Q	.	.	.	.
4.083	33.8069	278.38	V Q	.	.	.	.
4.167	35.7778	286.19	V Q	.	.	.	.
4.250	37.8008	293.74	V Q	.	.	.	.
4.333	39.8832	302.36	V Q	.	.	.	.
4.417	42.0164	309.73	V Q	.	.	.	.
4.500	44.1984	316.83	V Q	.	.	.	.
4.583	46.4318	324.29	V Q	.	.	.	.
4.667	48.7145	331.45	.V Q	.	.	.	.
4.750	51.0382	337.40	.V Q	.	.	.	.
4.833	53.4001	342.96	.V Q	.	.	.	.
4.917	55.8005	348.53	.V Q	.	.	.	.
5.000	58.2397	354.18	.V Q	.	.	.	.
5.083	60.7193	360.04	.V Q	.	.	.	.
5.167	63.2385	365.78	.V Q	.	.	.	.
5.250	65.7951	371.22	.V Q	.	.	.	.
5.333	68.3883	376.53	.V Q	.	.	.	.
5.417	71.0165	381.62	.V Q	.	.	.	.
5.500	73.6787	386.54	.V Q	.	.	.	.
5.583	76.3713	390.97	.V Q	.	.	.	.
5.667	79.0945	395.41	.V Q	.	.	.	.
5.750	81.8455	399.45	.V Q	.	.	.	.
5.833	84.6224	403.21	.V Q	.	.	.	.
5.917	87.4253	406.98	.V Q	.	.	.	.
6.000	90.2540	410.74	.V Q	.	.	.	.
6.083	93.1075	414.32	.V Q	.	.	.	.
6.167	95.9857	417.92	.V Q	.	.	.	.
6.250	98.8888	421.53	. V Q	.	.	.	.
6.333	101.8167	425.12	. V Q	.	.	.	.
6.417	104.7683	428.58	. V Q	.	.	.	.
6.500	107.7440	432.07	. V Q	.	.	.	.
6.583	110.7437	435.56	. V Q	.	.	.	.
6.667	113.7675	439.05	. V Q	.	.	.	.
6.750	116.8122	442.09	. V Q	.	.	.	.
6.833	119.8772	445.03	. V Q	.	.	.	.
6.917	122.9625	447.98	. V Q	.	.	.	.
7.000	126.0683	450.97	. V Q	.	.	.	.
7.083	129.1948	453.96	. V Q	.	.	.	.
7.167	132.3421	456.99	. V Q	.	.	.	.
7.250	135.5091	459.85	. V Q	.	.	.	.
7.333	138.6939	462.44	. V Q	.	.	.	.
7.417	141.8967	465.04	. V Q	.	.	.	.
7.500	145.1176	467.68	. V Q	.	.	.	.
7.583	148.3568	470.32	. V Q	.	.	.	.
7.667	151.6144	473.01	. V Q	.	.	.	.
7.750	154.8906	475.70	. V Q	.	.	.	.
7.833	158.1856	478.44	. V Q	.	.	.	.
7.917	161.4995	481.18	. V Q	.	.	.	.
8.000	164.8326	483.96	. V Q	.	.	.	.
8.083	168.1846	486.71	. V Q	.	.	.	.
8.167	171.5529	489.07	. V Q	.	.	.	.
8.250	174.9366	491.32	. V Q	.	.	.	.
8.333	178.3361	493.61	. V Q	.	.	.	.
8.417	181.7515	495.92	. V Q	.	.	.	.
8.500	185.1831	498.26	. V Q	.	.	.	.
8.583	188.6309	500.62	. V Q	.	.	.	.
8.667	192.0952	503.02	. V Q	.	.	.	.
8.750	195.5761	505.43	. V Q	.	.	.	.

8.833	199.0740	507.89	.	V	Q	.	.	.	.
8.917	202.5889	510.36	.	V	Q	.	.	.	.
9.000	206.1212	512.88	.	V	Q	.	.	.	.
9.083	209.6709	515.42	.	V	Q	.	.	.	.
9.167	213.2384	518.00	.	V	Q	.	.	.	.
9.250	216.8237	520.60	.	V	Q	.	.	.	.
9.333	220.4274	523.25	.	V	Q	.	.	.	.
9.417	224.0493	525.90	.	V	Q	.	.	.	.
9.500	227.6899	528.62	.	V	Q	.	.	.	.
9.583	231.3494	531.36	.	V	Q	.	.	.	.
9.667	235.0281	534.15	.	V	Q	.	.	.	.
9.750	238.7261	536.95	.	V	Q	.	.	.	.
9.833	242.4438	539.81	.	V	Q	.	.	.	.
9.917	246.1814	542.70	.	V	Q	.	.	.	.
10.000	249.9393	545.64	.	V	Q	.	.	.	.
10.083	253.7175	548.60	.	V	Q	.	.	.	.
10.167	257.5166	551.62	.	V	Q	.	.	.	.
10.250	261.3366	554.67	.	V	Q	.	.	.	.
10.333	265.1780	557.78	.	V	Q	.	.	.	.
10.417	269.0411	560.91	.	V	Q	.	.	.	.
10.500	272.9261	564.11	.	V	Q	.	.	.	.
10.583	276.8334	567.34	.	V	Q	.	.	.	.
10.667	280.7634	570.64	.	V	Q	.	.	.	.
10.750	284.7163	573.96	.	V	Q	.	.	.	.
10.833	288.6927	577.36	.	V	Q	.	.	.	.
10.917	292.6926	580.79	.	V	Q	.	.	.	.
11.000	296.7167	584.30	.	V	Q	.	.	.	.
11.083	300.7651	587.84	.	V	Q	.	.	.	.
11.167	304.8385	591.46	.	V	Q	.	.	.	.
11.250	308.9371	595.11	.	V	Q	.	.	.	.
11.333	313.0614	598.85	.	V	Q	.	.	.	.
11.417	317.2118	602.63	.	V	Q	.	.	.	.
11.500	321.3888	606.50	.	V	Q	.	.	.	.
11.583	325.5927	610.41	.	V	Q	.	.	.	.
11.667	329.8242	614.41	.	V	Q	.	.	.	.
11.750	334.0836	618.46	.	V	Q	.	.	.	.
11.833	338.3706	622.47	.	V	Q	.	.	.	.
11.917	342.6852	626.49	.	V	Q	.	.	.	.
12.000	347.0282	630.60	.	V	Q	.	.	.	.
12.083	351.4064	635.71	.	V	Q	.	.	.	.
12.167	355.8270	641.88	.	V	Q	.	.	.	.
12.250	360.2905	648.09	.	V	Q	.	.	.	.
12.333	364.7974	654.41	.	V	Q	.	.	.	.
12.417	369.3483	660.78	.	V	.Q	.	.	.	.
12.500	373.9438	667.27	.	V	.Q	.	.	.	.
12.583	378.5844	673.81	.	V	.Q	.	.	.	.
12.667	383.2731	680.80	.	V	.Q	.	.	.	.
12.750	388.0147	688.49	.	V	.Q	.	.	.	.
12.833	392.8104	696.33	.	V	.Q	.	.	.	.
12.917	397.6605	704.23	.	V	.Q	.	.	.	.
13.000	402.5659	712.27	.	V	.Q	.	.	.	.
13.083	407.5367	721.76	.	V	.Q	.	.	.	.
13.167	412.5808	732.41	.	V	.Q	.	.	.	.
13.250	417.7003	743.34	.	V	.Q	.	.	.	.
13.333	422.9046	755.67	.	V	.Q	.	.	.	.
13.417	428.1977	768.55	.	V	.Q	.	.	.	.
13.500	433.5899	782.96	.	V	.Q	.	.	.	.
13.583	439.0812	797.33	.	V	.Q	.	.	.	.

13.667	444.6705	811.57	.	V.	Q	.	.	.	.
13.750	450.3584	825.89	.	V.	Q	.	.	.	.
13.833	456.1550	841.66	.	V.	Q	.	.	.	.
13.917	462.0772	859.91	.	V.	Q	.	.	.	.
14.000	468.1058	875.36	.	V.	Q	.	.	.	.
14.083	474.2474	891.75	.	V.	Q	.	.	.	.
14.167	480.5131	909.79	.	V.	Q	.	.	.	.
14.250	486.9154	929.61	.	V	Q	.	.	.	.
14.333	493.4656	951.09	.	V	Q	.	.	.	.
14.417	500.1476	970.23	.	V	Q	.	.	.	.
14.500	506.9567	988.68	.	V	Q	.	.	.	.
14.583	513.8959	1007.57	.	V	Q	.	.	.	.
14.667	520.9866	1029.56	.	V	Q	.	.	.	.
14.750	528.2267	1051.27	.	V	Q	.	.	.	.
14.833	535.6384	1076.17	.	.V	Q	.	.	.	.
14.917	543.2142	1100.01	.	.V	Q	.	.	.	.
15.000	550.9282	1120.08	.	.V	Q	.	.	.	.
15.083	558.8113	1144.62	.	.V	Q.	.	.	.	.
15.167	566.8952	1173.78	.	.V	Q.	.	.	.	.
15.250	575.1729	1201.92	.	.V	Q	.	.	.	.
15.333	583.6527	1231.27	.	.V	Q	.	.	.	.
15.417	592.3423	1261.73	.	.V	.Q	.	.	.	.
15.500	601.2408	1292.05	.	.V	.Q	.	.	.	.
15.583	610.3152	1317.60	.	.V	.Q	.	.	.	.
15.667	619.5626	1342.73	.	.V	.Q	.	.	.	.
15.750	628.9761	1366.83	.	.V	.Q	.	.	.	.
15.833	638.5752	1393.80	.	.V	.Q	.	.	.	.
15.917	648.3967	1426.09	.	.V	.Q	.	.	.	.
16.000	658.4390	1458.13	.	.V	.Q	.	.	.	.
16.083	668.8618	1513.39	.	.V	.Q	.	.	.	.
16.167	679.6444	1565.64	.	.V	.Q	.	.	.	.
16.250	690.5983	1590.51	.	.V	.Q	.	.	.	.
16.333	701.7433	1618.25	.	.V	.Q	.	.	.	.
16.417	713.0346	1639.49	.	.V	.Q	.	.	.	.
16.500	724.4633	1659.45	.	.V	.Q	.	.	.	.
16.583	736.0415	1681.15	.	.V	.Q	.	.	.	.
16.667	747.8434	1713.64	.	.V	.Q	.	.	.	.
16.750	759.9005	1750.70	.	.V	.Q	.	.	.	.
16.833	772.0870	1769.47	.	.V	.Q	.	.	.	.
16.917	784.4004	1787.91	.	.V	.Q	.	.	.	.
17.000	796.8302	1804.81	.	.V	.Q	.	.	.	.
17.083	809.6822	1866.11	.	.V	.Q	.	.	.	.
17.167	822.8809	1916.45	.	.V	.Q	.	.	.	.
17.250	836.2280	1938.00	.	.V	.Q	.	.	.	.
17.333	849.9643	1994.52	.	.V	.Q	.	.	.	.
17.417	863.9600	2032.17	.	.V	.Q	.	.	.	.
17.500	878.3792	2093.67	.	.V	.Q	.	.	.	.
17.583	892.8403	2099.74	.	.V	.Q	.	.	.	.
17.667	907.3194	2102.37	.	.V	.Q	.	.	.	.
17.750	921.9062	2118.00	.	.V	.Q	.	.	.	.
17.833	936.8904	2175.71	.	.V	.Q	.	.	.	.
17.917	952.4593	2260.60	.	.V	.Q	.	.	.	.
18.000	967.5067	2184.88	.	.V	.Q	.	.	.	.
18.083	982.5899	2190.08	.	.V	.Q	.	.	.	.
18.167	997.7994	2208.42	.	.V	.Q	.	.	.	.
18.250	1013.4349	2270.27	.	.V	.Q	.	.	.	.
18.333	1029.4226	2321.41	.	.V	.Q	.	.	.	.
18.417	1044.9186	2250.01	.	.V	.Q	.	.	.	.

18.500	1060.2029	2219.27	.	.	.V	.	Q	.
18.583	1075.5769	2232.30	.	.	.V	.	Q	.
18.667	1091.5110	2313.63	.	.	.V	.	Q	.
18.750	1107.1952	2277.35	.	.	.V	.	Q	.
18.833	1123.3953	2352.25	.	.	.V	.	Q	.
18.917	1139.2872	2307.52	.	.	.V	.	Q	.
19.000	1154.4084	2195.60	.	.	.V	.	Q	.
19.083	1170.1373	2283.83	.	.	.V	.	Q	.
19.167	1186.5298	2380.19	.	.	.V	.	Q	.
19.250	1202.6346	2338.43	.	.	.V	.	Q	.
19.333	1218.5659	2313.22	.	.	.V	.	Q	.
19.417	1234.8362	2362.44	.	.	.V	.	Q	.
19.500	1250.9467	2339.24	.	.	.V	.	Q	.
19.583	1266.0082	2186.93	.	.	.V	.	Q	.
19.667	1280.8966	2161.79	.	.	.V	.	Q	.
19.750	1295.6316	2139.52	.	.	.V	.	Q	.
19.833	1310.6631	2182.58	.	.	.V	.	Q	.
19.917	1325.9541	2220.26	.	.	.V	.	Q	.
20.000	1341.5452	2263.83	.	.	.V	.	Q	.
20.083	1356.2694	2137.97	.	.	.V	.	Q	.
20.167	1370.4443	2058.19	.	.	.V	.	Q	.
20.250	1384.3982	2026.10	.	.	.V	.	Q	.
20.333	1398.5660	2057.17	.	.	.V	.	Q	.
20.417	1412.1368	1970.48	.	.	.V	.	Q	.
20.500	1425.4414	1931.82	.	.	.V	.	Q	.
20.583	1438.7085	1926.39	.	.	.V	.	Q	.
20.667	1451.6987	1886.19	.	.	.V	.	Q	.
20.750	1464.1060	1801.53	.	.	.Q	.	.	.
20.833	1476.1780	1752.86	.	.	.QV	.	.	.
20.917	1488.0706	1726.80	.	.	.QV	.	.	.
21.000	1499.8044	1703.76	.	.	.QV	.	.	.
21.083	1511.4163	1686.03	.	.	.Q	.V	.	.
21.167	1522.7697	1648.52	.	.	.Q	.V	.	.
21.250	1533.8181	1604.24	.	.	.Q	.V	.	.
21.333	1544.5918	1564.34	.	.	.Q	.V	.	.
21.417	1555.0690	1521.28	.	.	.Q	.V	.	.
21.500	1565.2656	1480.55	.	.	.Q	.V	.	.
21.583	1575.1002	1427.98	.	.	.Q	.V	.	.
21.667	1584.7371	1399.27	.	.	.Q	.V	.	.
21.750	1594.0685	1354.93	.	.	.Q	.V	.	.
21.833	1603.1222	1314.59	.	.	.Q	.V	.	.
21.917	1611.9851	1286.90	.	.	.Q	.V	.	.
22.000	1620.6287	1255.04	.	.	.Q	.V	.	.
22.083	1629.0292	1219.76	.	.	.Q	.V	.	.
22.167	1637.2479	1193.36	.	.	.Q	.V	.	.
22.250	1645.2960	1168.59	.	.	.Q	.V	.	.
22.333	1653.1471	1139.97	.	.	.Q	.V	.	.
22.417	1660.7841	1108.88	.	.	.Q	.V	.	.
22.500	1668.2589	1085.35	.	.	.Q	.V	.	.
22.583	1675.5774	1062.65	.	.	.Q	.V	.	.
22.667	1682.7300	1038.56	.	.	.Q	.V	.	.
22.750	1689.5940	996.66	.	.	.Q	.V	.	.
22.833	1696.2928	972.67	.	.	.Q	.V	.	.
22.917	1702.8763	955.93	.	.	.Q	.V	.	.
23.000	1709.3466	939.47	.	.	.Q	.V	.	.
23.083	1715.6962	921.96	.	.	.Q	.V	.	.
23.167	1721.9209	903.83	.	.	.Q	.V	.	.
23.250	1727.9619	877.15	.	.	.Q	.V	.	.

23.333	1733.7864	845.71	.	.	.Q	.	.	V	.
23.417	1739.5033	830.09	.	.	.Q	.	.	V	.
23.500	1745.1260	816.42	.	.	.Q	.	.	V	.
23.583	1750.6591	803.41	.	.	.Q	.	.	V	.
23.667	1756.1003	790.08	.	.	.Q	.	.	V	.
23.750	1761.4585	778.00	.	.	.Q	.	.	V	.
23.833	1766.7404	766.93	.	.	.Q	.	.	V	.
23.917	1771.9456	755.80	.	.	.Q	.	.	V	.
24.000	1777.0687	743.89	.	.	.Q	.	.	V	.
24.083	1782.0903	729.14	.	.	.Q	.	.	V	.
24.167	1786.8749	694.72	.	.	.Q	.	.	V	.
24.250	1791.5425	677.73	.	.	.Q	.	.	V	.
24.333	1796.1368	667.10	.	.	.Q	.	.	V	.
24.417	1800.6617	657.02	.	.	.Q	.	.	V	.
24.500	1805.1115	646.09	.	.	.Q	.	.	V	.
24.583	1809.4852	635.08	.	.	.Q	.	.	V	.
24.667	1813.7832	624.07	.	.	.Q	.	.	V	.
24.750	1818.0074	613.36	.	.	.Q	.	.	V	.
24.833	1822.1614	603.15	.	.	.Q	.	.	V	.
24.917	1826.2427	592.61	.	.	.Q	.	.	V	.
25.000	1830.2549	582.57	.	.	.Q	.	.	V	.
25.083	1834.1921	571.68	.	.	.Q	.	.	V	.
25.167	1838.0559	561.02	.	.	.Q	.	.	V	.
25.250	1841.8510	551.03	.	.	.Q	.	.	V	.
25.333	1845.5764	540.94	.	.	.Q	.	.	V	.
25.417	1849.2283	530.25	.	.	.Q	.	.	V	.
25.500	1852.8077	519.74	.	.	.Q	.	.	V	.
25.583	1856.3116	508.77	.	.	.Q	.	.	V	.
25.667	1859.7432	498.26	.	.	.Q	.	.	V	.
25.750	1863.1021	487.70	.	.	.Q	.	.	V	.
25.833	1866.3842	476.57	.	.	.Q	.	.	V	.
25.917	1869.5786	463.84	.	.	.Q	.	.	V	.
26.000	1872.6975	452.87	.	.	.Q	.	.	V	.
26.083	1875.7440	442.36	.	.	.Q	.	.	V	.
26.167	1878.7224	432.46	.	.	.Q	.	.	V	.
26.250	1881.6273	421.79	.	.	.Q	.	.	V	.
26.333	1884.4530	410.29	.	.	.Q	.	.	V	.
26.417	1887.2101	400.34	.	.	.Q	.	.	V	.
26.500	1889.9026	390.95	.	.	.Q	.	.	V	.
26.583	1892.5295	381.43	.	.	.Q	.	.	V	.
26.667	1895.0807	370.43	.	.	.Q	.	.	V	.
26.750	1897.5610	360.15	.	.	.Q	.	.	V	.
26.833	1899.9585	348.11	.	.	.Q	.	.	V	.
26.917	1902.2781	336.81	.	.	.Q	.	.	V	.
27.000	1904.5365	327.93	.	.	.Q	.	.	V	.
27.083	1906.7222	317.36	.	.	.Q	.	.	V	.
27.167	1908.8240	305.18	.	.	.Q	.	.	V	.
27.250	1910.8479	293.87	.	.	.Q	.	.	V	.
27.333	1912.7949	282.71	.	.	.Q	.	.	V	.
27.417	1914.6565	270.29	.	.	.Q	.	.	V	.
27.500	1916.4347	258.19	.	.	.Q	.	.	V	.
27.583	1918.1493	248.95	.	.	.Q	.	.	V	.
27.667	1919.8004	239.74	.	.	.Q	.	.	V	.
27.750	1921.3889	230.66	.	.	.Q	.	.	V	.
27.833	1922.8643	214.21	.	.	.Q	.	.	V	.
27.917	1924.2477	200.88	.	.	.Q	.	.	V	.
28.000	1925.5491	188.96	.	.	.Q	.	.	V	.
28.083	1926.7839	179.31	.	.	.Q	.	.	V	.

28.167	1927.9592	170.66	. Q	.	.	.	V.
28.250	1929.0763	162.21	. Q	.	.	.	V.
28.333	1930.1283	152.76	. Q	.	.	.	V.
28.417	1931.1244	144.62	. Q	.	.	.	V.
28.500	1932.0668	136.83	. Q	.	.	.	V.
28.583	1932.9534	128.74	. Q	.	.	.	V.
28.667	1933.7869	121.02	. Q	.	.	.	V.
28.750	1934.5758	114.56	.Q	.	.	.	V.
28.833	1935.3251	108.80	.Q	.	.	.	V.
28.917	1936.0358	103.19	.Q	.	.	.	V.
29.000	1936.7079	97.59	.Q	.	.	.	V.
29.083	1937.3403	91.83	.Q	.	.	.	V.
29.167	1937.9346	86.28	.Q	.	.	.	V.
29.250	1938.4930	81.08	.Q	.	.	.	V.
29.333	1939.0171	76.09	.Q	.	.	.	V.
29.417	1939.5087	71.38	.Q	.	.	.	V.
29.500	1939.9694	66.90	.Q	.	.	.	V.
29.583	1940.4030	62.96	.Q	.	.	.	V.
29.667	1940.8098	59.08	Q	.	.	.	V.
29.750	1941.1929	55.63	Q	.	.	.	V.
29.833	1941.5560	52.74	Q	.	.	.	V.
29.917	1941.9001	49.96	Q	.	.	.	V.
30.000	1942.2256	47.25	Q	.	.	.	V.
30.083	1942.5337	44.75	Q	.	.	.	V.
30.167	1942.8250	42.29	Q	.	.	.	V.
30.250	1943.0994	39.85	Q	.	.	.	V.
30.333	1943.3574	37.48	Q	.	.	.	V.
30.417	1943.6003	35.27	Q	.	.	.	V.
30.500	1943.8282	33.09	Q	.	.	.	V.
30.583	1944.0413	30.93	Q	.	.	.	V.
30.667	1944.2397	28.83	Q	.	.	.	V.
30.750	1944.4270	27.20	Q	.	.	.	V.
30.833	1944.6041	25.72	Q	.	.	.	V.
30.917	1944.7711	24.25	Q	.	.	.	V.
31.000	1944.9281	22.79	Q	.	.	.	V.
31.083	1945.0752	21.35	Q	.	.	.	V.
31.167	1945.2124	19.92	Q	.	.	.	V.
31.250	1945.3411	18.68	Q	.	.	.	V.
31.333	1945.4633	17.75	Q	.	.	.	V.
31.417	1945.5791	16.83	Q	.	.	.	V.
31.500	1945.6887	15.91	Q	.	.	.	V.
31.583	1945.7921	15.01	Q	.	.	.	V.
31.667	1945.8893	14.11	Q	.	.	.	V.
31.750	1945.9803	13.22	Q	.	.	.	V.
31.833	1946.0653	12.34	Q	.	.	.	V.
31.917	1946.1443	11.46	Q	.	.	.	V.
32.000	1946.2173	10.59	Q	.	.	.	V.
32.083	1946.2845	9.77	Q	.	.	.	V.
32.167	1946.3492	9.40	Q	.	.	.	V.
32.250	1946.4121	9.14	Q	.	.	.	V.
32.333	1946.4733	8.88	Q	.	.	.	V.
32.417	1946.5326	8.62	Q	.	.	.	V.
32.500	1946.5902	8.37	Q	.	.	.	V.
32.583	1946.6461	8.12	Q	.	.	.	V.
32.667	1946.7003	7.87	Q	.	.	.	V.
32.750	1946.7529	7.63	Q	.	.	.	V.
32.833	1946.8038	7.39	Q	.	.	.	V.
32.917	1946.8530	7.15	Q	.	.	.	V.

33.000	1946.9006	6.91	Q	.	.	.	V.
33.083	1946.9465	6.67	Q	.	.	.	V.
33.167	1946.9908	6.44	Q	.	.	.	V.
33.250	1947.0336	6.21	Q	.	.	.	V.
33.333	1947.0747	5.97	Q	.	.	.	V.
33.417	1947.1144	5.75	Q	.	.	.	V.
33.500	1947.1525	5.52	Q	.	.	.	V.
33.583	1947.1890	5.30	Q	.	.	.	V.
33.667	1947.2239	5.07	Q	.	.	.	V.
33.750	1947.2573	4.85	Q	.	.	.	V.
33.833	1947.2893	4.64	Q	.	.	.	V.
33.917	1947.3197	4.42	Q	.	.	.	V.
34.000	1947.3486	4.20	Q	.	.	.	V.
34.083	1947.3761	3.99	Q	.	.	.	V.
34.167	1947.4021	3.78	Q	.	.	.	V.
34.250	1947.4268	3.57	Q	.	.	.	V.
34.333	1947.4500	3.37	Q	.	.	.	V.
34.417	1947.4717	3.16	Q	.	.	.	V.
34.500	1947.4921	2.96	Q	.	.	.	V.
34.583	1947.5110	2.75	Q	.	.	.	V.
34.667	1947.5286	2.55	Q	.	.	.	V.
34.750	1947.5448	2.35	Q	.	.	.	V.
34.833	1947.5597	2.15	Q	.	.	.	V.
34.917	1947.5731	1.96	Q	.	.	.	V.
35.000	1947.5852	1.76	Q	.	.	.	V.
35.083	1947.5959	1.57	Q	.	.	.	V.
35.167	1947.6053	1.37	Q	.	.	.	V.
35.250	1947.6135	1.18	Q	.	.	.	V.
35.333	1947.6204	0.99	Q	.	.	.	V.
35.417	1947.6259	0.80	Q	.	.	.	V.
35.500	1947.6301	0.61	Q	.	.	.	V.
35.583	1947.6331	0.42	Q	.	.	.	V.
35.667	1947.6346	0.24	Q	.	.	.	V.
35.750	1947.6350	0.05	Q	.	.	.	V.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	2145.0
10%	1440.0
20%	1085.0
30%	665.0
40%	515.0
50%	420.0
60%	335.0
70%	275.0
80%	210.0
90%	130.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 127 *
* 5-YR EV APRIL 2019 FKAZI *

FILE NAME: EV05127S.DAT
TIME/DATE OF STUDY: 11:30 04/02/2019

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 = 53500.199 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) = 0.489
LOW LOSS FRACTION = 0.838
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) = 0.61
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.13
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.68
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.95

*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 = 2.328

UNIT HYDROGRAPH DETERMINATION

Table with 3 columns: INTERVAL NUMBER, "S" GRAPH MEAN VALUES, UNIT HYDROGRAPH ORDINATES (CFS). Rows 1-48.

49	59.721	13304.146
50	62.132	15599.230
51	64.095	12700.898
52	65.737	10624.321
53	67.279	9977.609
54	69.003	11159.077
55	70.648	10643.327
56	72.026	8912.887
57	73.521	9674.912
58	74.982	9448.976
59	76.290	8466.394
60	77.334	6751.454
61	78.368	6693.847
62	79.403	6692.465
63	80.463	6862.078
64	81.558	7083.375
65	82.585	6644.928
66	83.565	6340.947
67	84.493	6005.719
68	85.380	5738.316
69	86.212	5382.751
70	86.932	4656.613
71	87.648	4633.560
72	88.278	4079.800
73	88.826	3543.711
74	89.374	3543.711
75	89.918	3520.609
76	90.420	3247.826
77	90.910	3170.473
78	91.400	3170.473
79	91.888	3158.281
80	92.344	2949.226
81	92.787	2869.158
82	93.230	2866.443
83	93.674	2871.923
84	94.074	2586.848
85	94.374	1938.112
86	94.669	1913.677
87	94.965	1910.962
88	95.260	1913.677
89	95.556	1913.677
90	95.852	1910.962
91	96.091	1549.966
92	96.274	1180.776
93	96.456	1180.776
94	96.639	1180.776
95	96.821	1180.826
96	97.004	1180.776
97	97.187	1183.491
98	97.369	1178.061
99	97.551	1183.491
100	97.734	1180.776
101	97.917	1183.491
102	98.023	689.461
103	98.068	285.025
104	98.111	282.310
105	98.154	279.595
106	98.198	282.310

107	98.242	282.310
108	98.286	284.976
109	98.329	282.310
110	98.373	285.025
111	98.417	282.310
112	98.461	282.310
113	98.504	282.310
114	98.548	282.261
115	98.592	282.310
116	98.636	287.740
117	98.679	276.880
118	98.722	282.310
119	98.766	282.310
120	98.811	287.691
121	98.853	276.880
122	98.897	282.310
123	98.941	282.310
124	98.984	282.310
125	99.029	287.740
126	99.072	282.310
127	99.116	282.310
128	99.160	282.310
129	99.203	282.310
130	99.247	282.310
131	99.290	282.310
132	99.334	282.310
133	99.378	282.310
134	99.421	282.310
135	99.465	282.310
136	99.509	282.310
137	99.552	282.310
138	99.596	282.310
139	99.640	282.310
140	99.683	282.310
141	99.727	282.310
142	99.770	282.310
143	99.814	282.310
144	99.858	282.310
145	99.901	282.310
146	99.945	282.310
147	99.989	282.310
148	100.000	73.848

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 10286.3203
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 2103.9609

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	0.0041	0.59	Q	.	.	.	.
0.167	0.0163	1.78	Q	.	.	.	.
0.250	0.0368	2.97	Q	.	.	.	.
0.333	0.0655	4.16	Q	.	.	.	.
0.417	0.1024	5.36	Q	.	.	.	.
0.500	0.1476	6.56	Q	.	.	.	.
0.583	0.2010	7.77	Q	.	.	.	.
0.667	0.2633	9.05	Q	.	.	.	.
0.750	0.3377	10.79	Q	.	.	.	.
0.833	0.4246	12.63	Q	.	.	.	.
0.917	0.5243	14.47	Q	.	.	.	.
1.000	0.6366	16.32	Q	.	.	.	.
1.083	0.7633	18.39	Q	.	.	.	.
1.167	0.9121	21.60	Q	.	.	.	.
1.250	1.0842	24.99	Q	.	.	.	.
1.333	1.2823	28.76	Q	.	.	.	.
1.417	1.5110	33.21	Q	.	.	.	.
1.500	1.7731	38.06	Q	.	.	.	.
1.583	2.0739	43.68	Q	.	.	.	.
1.667	2.4120	49.10	Q	.	.	.	.
1.750	2.7869	54.44	Q	.	.	.	.
1.833	3.1987	59.78	Q	.	.	.	.
1.917	3.6537	66.07	VQ	.	.	.	.
2.000	4.1621	73.81	VQ	.	.	.	.
2.083	4.7109	79.70	VQ	.	.	.	.
2.167	5.2996	85.47	VQ	.	.	.	.
2.250	5.9292	91.42	VQ	.	.	.	.
2.333	6.6071	98.44	VQ	.	.	.	.
2.417	7.3410	106.56	VQ	.	.	.	.
2.500	8.1245	113.76	VQ	.	.	.	.
2.583	8.9511	120.03	VQ	.	.	.	.
2.667	9.8213	126.34	V Q	.	.	.	.
2.750	10.7446	134.07	V Q	.	.	.	.
2.833	11.7230	142.05	V Q	.	.	.	.
2.917	12.7584	150.35	V Q	.	.	.	.
3.000	13.8623	160.27	V Q	.	.	.	.
3.083	15.0205	168.18	V Q	.	.	.	.
3.167	16.2219	174.43	V Q	.	.	.	.
3.250	17.4954	184.92	V Q	.	.	.	.
3.333	18.8373	194.85	V Q	.	.	.	.
3.417	20.2490	204.97	V Q	.	.	.	.
3.500	21.7294	214.95	V Q	.	.	.	.
3.583	23.2909	226.72	V Q	.	.	.	.
3.667	24.9252	237.30	V Q	.	.	.	.
3.750	26.6166	245.60	V Q	.	.	.	.
3.833	28.3644	253.78	V Q	.	.	.	.
3.917	30.1664	261.64	V Q	.	.	.	.

4.000	32.0298	270.57	V	Q	.	.	.	.
4.083	33.9623	280.60	V	Q	.	.	.	.
4.167	35.9750	292.25	V	Q	.	.	.	.
4.250	38.0545	301.94	V	Q	.	.	.	.
4.333	40.1911	310.23	V	Q	.	.	.	.
4.417	42.3820	318.12	V	Q	.	.	.	.
4.500	44.6329	326.84	V	Q	.	.	.	.
4.583	46.9417	335.24	V	Q	.	.	.	.
4.667	49.3004	342.48	V	Q	.	.	.	.
4.750	51.7128	350.28	V	Q	.	.	.	.
4.833	54.1780	357.95	.V	Q	.	.	.	.
4.917	56.6916	364.97	.V	Q	.	.	.	.
5.000	59.2455	370.84	.V	Q	.	.	.	.
5.083	61.8399	376.69	.V	Q	.	.	.	.
5.167	64.4747	382.57	.V	Q	.	.	.	.
5.250	67.1510	388.60	.V	Q	.	.	.	.
5.333	69.8699	394.80	.V	Q	.	.	.	.
5.417	72.6298	400.73	.V	Q	.	.	.	.
5.500	75.4291	406.47	.V	Q	.	.	.	.
5.583	78.2667	412.01	.V	Q	.	.	.	.
5.667	81.1412	417.39	.V	Q	.	.	.	.
5.750	84.0514	422.55	.V	Q	.	.	.	.
5.833	86.9938	427.24	.V	Q	.	.	.	.
5.917	89.9685	431.93	.V	Q	.	.	.	.
6.000	92.9732	436.27	.V	Q	.	.	.	.
6.083	96.0053	440.27	.V	Q	.	.	.	.
6.167	99.0651	444.28	.V	Q	.	.	.	.
6.250	102.1526	448.31	.V	Q	.	.	.	.
6.333	105.2666	452.16	.V	Q	.	.	.	.
6.417	108.4071	455.99	.V	Q	.	.	.	.
6.500	111.5741	459.84	.V	Q	.	.	.	.
6.583	114.7677	463.71	.V	Q	.	.	.	.
6.667	117.9871	467.46	.V	Q	.	.	.	.
6.750	121.2321	471.18	.V	Q	.	.	.	.
6.833	124.5029	474.92	.V	Q	.	.	.	.
6.917	127.7996	478.68	.V	Q	.	.	.	.
7.000	131.1211	482.28	.V	Q	.	.	.	.
7.083	134.4644	485.46	.V	Q	.	.	.	.
7.167	137.8297	488.64	.V	Q	.	.	.	.
7.250	141.2170	491.84	.V	Q	.	.	.	.
7.333	144.6266	495.07	.V	Q	.	.	.	.
7.417	148.0586	498.33	.V	Q	.	.	.	.
7.500	151.5132	501.60	.V	Q	.	.	.	.
7.583	154.9888	504.66	.V	Q	.	.	.	.
7.667	158.4839	507.49	.V	Q	.	.	.	.
7.750	161.9987	510.34	.V	Q	.	.	.	.
7.833	165.5333	513.22	.V	Q	.	.	.	.
7.917	169.0879	516.13	.V	Q	.	.	.	.
8.000	172.6627	519.06	.V	Q	.	.	.	.
8.083	176.2579	522.02	.V	Q	.	.	.	.
8.167	179.8737	525.01	.V	Q	.	.	.	.
8.250	183.5103	528.03	.V	Q	.	.	.	.
8.333	187.1678	531.07	.V	Q	.	.	.	.
8.417	190.8465	534.15	.V	Q	.	.	.	.
8.500	194.5442	536.91	.V	Q	.	.	.	.
8.583	198.2593	539.43	.V	Q	.	.	.	.
8.667	201.9919	541.98	.V	Q	.	.	.	.
8.750	205.7423	544.55	.V	Q	.	.	.	.

8.833	209.5106	547.15	.	V	Q	.	.	.
8.917	213.2970	549.79	.	V	Q	.	.	.
9.000	217.1018	552.46	.	V	Q	.	.	.
9.083	220.9253	555.16	.	V	Q	.	.	.
9.167	224.7675	557.90	.	V	Q	.	.	.
9.250	228.6289	560.67	.	V	Q	.	.	.
9.333	232.5095	563.47	.	V	Q	.	.	.
9.417	236.4097	566.31	.	V	Q	.	.	.
9.500	240.3297	569.18	.	V	Q	.	.	.
9.583	244.2698	572.10	.	V	Q	.	.	.
9.667	248.2302	575.05	.	V	Q	.	.	.
9.750	252.2112	578.04	.	V	Q	.	.	.
9.833	256.2131	581.07	.	V	Q	.	.	.
9.917	260.2361	584.14	.	V	Q	.	.	.
10.000	264.2805	587.25	.	V	Q	.	.	.
10.083	268.3467	590.41	.	V	Q	.	.	.
10.167	272.4349	593.61	.	V	Q	.	.	.
10.250	276.5454	596.85	.	V	Q	.	.	.
10.333	280.6786	600.14	.	V	Q	.	.	.
10.417	284.8349	603.48	.	V	Q	.	.	.
10.500	289.0144	606.87	.	V	Q	.	.	.
10.583	293.2176	610.31	.	V	Q	.	.	.
10.667	297.4448	613.79	.	V	Q	.	.	.
10.750	301.6964	617.33	.	V	Q	.	.	.
10.833	305.9727	620.92	.	V	Q	.	.	.
10.917	310.2742	624.57	.	V	Q	.	.	.
11.000	314.6012	628.28	.	V	Q	.	.	.
11.083	318.9542	632.04	.	V	Q	.	.	.
11.167	323.3334	635.87	.	V	Q	.	.	.
11.250	327.7394	639.75	.	V	Q	.	.	.
11.333	332.1726	643.70	.	V	Q	.	.	.
11.417	336.6335	647.72	.	V	Q	.	.	.
11.500	341.1225	651.80	.	V	Q	.	.	.
11.583	345.6400	655.95	.	V	Q	.	.	.
11.667	350.1867	660.17	.	V	Q	.	.	.
11.750	354.7630	664.47	.	V	Q	.	.	.
11.833	359.3693	668.84	.	V	Q	.	.	.
11.917	364.0063	673.30	.	V	Q	.	.	.
12.000	368.6746	677.83	.	V	Q	.	.	.
12.083	373.3815	683.45	.	V	Q	.	.	.
12.167	378.1346	690.15	.	V	.Q	.	.	.
12.250	382.9344	696.93	.	V	.Q	.	.	.
12.333	387.7805	703.65	.	V	.Q	.	.	.
12.417	392.6732	710.41	.	V	.Q	.	.	.
12.500	397.6129	717.25	.	V	.Q	.	.	.
12.583	402.6004	724.18	.	V	.Q	.	.	.
12.667	407.6371	731.33	.	V	.Q	.	.	.
12.750	412.7291	739.36	.	V	.Q	.	.	.
12.833	417.8780	747.62	.	V	.Q	.	.	.
12.917	423.0845	755.98	.	V	.Q	.	.	.
13.000	428.3493	764.45	.	V	.Q	.	.	.
13.083	433.6757	773.39	.	V	.Q	.	.	.
13.167	439.0776	784.36	.	V	.Q	.	.	.
13.250	444.5577	795.71	.	V	.Q	.	.	.
13.333	450.1211	807.81	.	V	.Q	.	.	.
13.417	455.7762	821.12	.	V	.Q	.	.	.
13.500	461.5283	835.21	.	V	.Q	.	.	.
13.583	467.3870	850.68	.	V	.Q	.	.	.

13.667	473.3504	865.89	.	V	.Q	.	.	.
13.750	479.4182	881.04	.	V	.Q	.	.	.
13.833	485.5910	896.29	.	V	.Q	.	.	.
13.917	491.8804	913.23	.	V	.Q	.	.	.
14.000	498.3041	932.72	.	V	.Q	.	.	.
14.083	504.8486	950.25	.	V	.Q	.	.	.
14.167	511.5204	968.75	.	V	.Q	.	.	.
14.250	518.3220	987.58	.	V	.Q	.	.	.
14.333	525.2658	1008.25	.	V	.Q	.	.	.
14.417	532.3650	1030.80	.	V	.Q	.	.	.
14.500	539.6085	1051.76	.	V	.Q	.	.	.
14.583	546.9860	1071.21	.	V	.Q	.	.	.
14.667	554.4987	1090.85	.	V	.Q	.	.	.
14.750	562.1696	1113.81	.	V	.Q	.	.	.
14.833	570.0024	1137.33	.	V	.Q	.	.	.
14.917	578.0007	1161.35	.	V	.Q	.	.	.
15.000	586.1831	1188.08	.	.V	.Q	.	.	.
15.083	594.5287	1211.78	.	.V	.Q	.	.	.
15.167	603.0323	1234.73	.	.V	.Q	.	.	.
15.250	611.7449	1265.06	.	.V	.Q	.	.	.
15.333	620.6635	1294.98	.	.V	.Q	.	.	.
15.417	629.7875	1324.81	.	.V	.Q	.	.	.
15.500	639.1093	1353.53	.	.V	.Q	.	.	.
15.583	648.6597	1386.71	.	.V	.Q	.	.	.
15.667	658.4220	1417.49	.	.V	.Q	.	.	.
15.750	668.3648	1443.70	.	.V	.Q	.	.	.
15.833	678.4844	1469.36	.	.V	.Q	.	.	.
15.917	688.7940	1496.96	.	.V	.Q	.	.	.
16.000	699.3337	1530.36	.	.V	.Q	.	.	.
16.083	710.2631	1586.94	.	.V	.Q	.	.	.
16.167	721.5858	1644.07	.	.V	.Q	.	.	.
16.250	733.0950	1671.14	.	.V	.Q	.	.	.
16.333	744.7833	1697.13	.	.V	.Q	.	.	.
16.417	756.6591	1724.37	.	.V	.Q	.	.	.
16.500	768.7087	1749.61	.	.V	.Q	.	.	.
16.583	780.9193	1772.98	.	.V	.Q	.	.	.
16.667	793.2994	1797.59	.	.V	.Q	.	.	.
16.750	805.9783	1840.99	.	.V	.Q	.	.	.
16.833	818.8264	1865.55	.	.V	.Q	.	.	.
16.917	831.8058	1884.62	.	.V	.Q	.	.	.
17.000	844.9390	1906.93	.	.V	.Q	.	.	.
17.083	858.2790	1936.97	.	.V	.Q	.	.	.
17.167	872.0669	2002.00	.	.V	.Q	.	.	.
17.250	886.0433	2029.37	.	.V	.Q	.	.	.
17.333	900.2519	2063.09	.	.V	.Q	.	.	.
17.417	914.8074	2113.47	.	.V	.Q	.	.	.
17.500	929.6446	2154.36	.	.V	.Q	.	.	.
17.583	944.8671	2210.31	.	.V	.Q	.	.	.
17.667	960.1368	2217.16	.	.V	.Q	.	.	.
17.750	975.4564	2224.40	.	.V	.Q	.	.	.
17.833	990.8945	2241.61	.	.V	.Q	.	.	.
17.917	1006.7457	2301.60	.	.V	.Q	.	.	.
18.000	1023.1285	2378.78	.	.V	.Q	.	.	.
18.083	1039.0028	2304.95	.	.V	.Q	.	.	.
18.167	1054.9271	2312.21	.	.V	.Q	.	.	.
18.250	1070.9873	2331.94	.	.V	.Q	.	.	.
18.333	1087.4269	2387.02	.	.V	.Q	.	.	.
18.417	1104.2009	2435.59	.	.V	.Q	.	.	.

18.500	1120.7135	2397.62	.	.	.V	.	Q	.
18.583	1136.9020	2350.56	.	.	.V	.	Q	.
18.667	1153.0789	2348.88	.	.	.V	.	Q	.
18.750	1169.6968	2412.92	.	.	.V	.	Q	.
18.833	1186.3969	2424.85	.	.	.V	.	Q	.
18.917	1203.1055	2426.09	.	.	.V	.	Q	.
19.000	1220.1538	2475.43	.	.	.V	.	Q	.
19.083	1236.5380	2378.98	.	.	.V	.	Q	.
19.167	1252.4274	2307.15	.	.	.V	.	Q	.
19.250	1269.5802	2490.59	.	.	.V	.	Q	.
19.333	1286.5103	2458.24	.	.	.V	.	Q	.
19.417	1303.3975	2452.03	.	.	.V	.	Q	.
19.500	1320.0818	2422.56	.	.	.V	.	Q	.
19.583	1337.2012	2485.74	.	.	.V	.	Q	.
19.667	1353.8309	2414.64	.	.	.V	.	Q	.
19.750	1369.6503	2296.96	.	.	.V	.	Q	.
19.833	1385.3058	2273.19	.	.	.V	.	Q	.
19.917	1400.7961	2249.20	.	.	.V	.	Q	.
20.000	1416.5316	2284.80	.	.	.V	.	Q	.
20.083	1432.5027	2318.99	.	.	.V	.	Q	.
20.167	1448.8199	2369.26	.	.	.V	.	Q	.
20.250	1464.3275	2251.70	.	.	.V	.	Q	.
20.333	1479.2524	2167.11	.	.	.V	.	Q	.
20.417	1493.9031	2127.27	.	.	.V	.	Q	.
20.500	1508.6830	2146.04	.	.	.V	.	Q	.
20.583	1523.1827	2105.37	.	.	.V	.	Q	.
20.667	1537.1561	2028.93	.	.	.V	.	Q	.
20.750	1551.1250	2028.29	.	.	.V	.	Q	.
20.833	1564.8774	1996.85	.	.	.V	.	Q	.
20.917	1578.2507	1941.80	.	.	.V	.	Q	.
21.000	1591.0536	1858.97	.	.	.V	.	Q	.
21.083	1603.6594	1830.37	.	.	.V	.	Q	.
21.167	1616.0881	1804.65	.	.	.V	.	Q	.
21.250	1628.3400	1778.97	.	.	.V	.	Q	.
21.333	1640.4282	1755.21	.	.	.V	.	Q	.
21.417	1652.2184	1711.92	.	.	.V	.	Q	.
21.500	1663.7277	1671.15	.	.	.V	.	Q	.
21.583	1674.9269	1626.12	.	.	.V	.	Q	.
21.667	1685.8589	1587.32	.	.	.V	.	Q	.
21.750	1696.5203	1548.04	.	.	.V	.	Q	.
21.833	1706.8354	1497.77	.	.	.V	.	Q	.
21.917	1716.9574	1469.71	.	.	.V	.	Q	.
22.000	1726.7788	1426.08	.	.	.V	.	Q	.
22.083	1736.2968	1382.00	.	.	.V	.	Q	.
22.167	1745.5983	1350.57	.	.	.V	.	Q	.
22.250	1754.6985	1321.35	.	.	.V	.	Q	.
22.333	1763.5599	1286.67	.	.	.V	.	Q	.
22.417	1772.2356	1259.70	.	.	.V	.	Q	.
22.500	1780.7283	1233.14	.	.	.V	.	Q	.
22.583	1789.0360	1206.28	.	.	.V	.	Q	.
22.667	1797.1320	1175.52	.	.	.V	.	Q	.
22.750	1805.0425	1148.60	.	.	.V	.	Q	.
22.833	1812.7903	1124.98	.	.	.V	.	Q	.
22.917	1820.3842	1102.64	.	.	.V	.	Q	.
23.000	1827.7815	1074.10	.	.	.V	.	Q	.
23.083	1834.9161	1035.96	.	.	.V	.	Q	.
23.167	1841.9232	1017.43	.	.	.V	.	Q	.
23.250	1848.8091	999.83	.	.	.V	.	Q	.

23.333	1855.5756	982.50	.	.	Q	.	V	.
23.417	1862.2175	964.41	.	.	Q	.	V	.
23.500	1868.7319	945.90	.	.	Q	.	V	.
23.583	1875.0466	916.89	.	.	Q	.	V	.
23.667	1881.1688	888.95	.	.	Q	.	V	.
23.750	1887.1825	873.19	.	.	Q	.	V	.
23.833	1893.1013	859.41	.	.	Q	.	V	.
23.917	1898.9277	845.99	.	.	Q	.	V	.
24.000	1904.6644	832.96	.	.	Q	.	V	.
24.083	1910.3173	820.79	.	.	Q	.	V	.
24.167	1915.8826	808.09	.	.	Q	.	V	.
24.250	1921.3640	795.90	.	.	Q	.	V	.
24.333	1926.7572	783.09	.	.	Q	.	V	.
24.417	1932.0577	769.64	.	.	Q	.	V	.
24.500	1937.1621	741.15	.	.	Q	.	V	.
24.583	1942.0984	716.74	.	.	Q	.	V	.
24.667	1946.9585	705.69	.	.	Q	.	V	.
24.750	1951.7427	694.66	.	.	Q	.	V	.
24.833	1956.4482	683.25	.	.	Q	.	V	.
24.917	1961.0709	671.22	.	.	Q	.	V	.
25.000	1965.6139	659.64	.	.	Q	.	V	.
25.083	1970.0802	648.51	.	.	Q	.	V	.
25.167	1974.4639	636.51	.	.	Q	.	V	.
25.250	1978.7632	624.27	.	.	Q	.	V	.
25.333	1982.9766	611.79	.	.	Q	.	V	.
25.417	1987.1002	598.76	.	.	Q	.	V	.
25.500	1991.1365	586.06	.	.	Q	.	V	.
25.583	1995.0874	573.68	.	.	Q	.	V	.
25.667	1998.9596	562.25	.	.	Q	.	V	.
25.750	2002.7517	550.61	.	.	Q	.	V	.
25.833	2006.4681	539.62	.	.	Q	.	V	.
25.917	2010.1023	527.68	.	.	Q	.	V	.
26.000	2013.6464	514.60	.	.	Q	.	V	.
26.083	2017.1108	503.04	.	.	Q	.	V	.
26.167	2020.5010	492.24	.	.	Q	.	V	.
26.250	2023.8153	481.24	.	.	Q	.	V	.
26.333	2027.0455	469.04	.	.	Q	.	V	.
26.417	2030.1854	455.92	.	.	Q	.	V	.
26.500	2033.2443	444.14	.	.	Q	.	V	.
26.583	2036.2338	434.07	.	.	Q	.	V	.
26.667	2039.1545	424.10	.	.	Q	.	V	.
26.750	2041.9979	412.87	.	.	Q	.	V	.
26.833	2044.7632	401.52	.	.	Q	.	V	.
26.917	2047.4491	389.99	.	.	Q	.	V	.
27.000	2050.0454	376.98	.	.	Q	.	V	.
27.083	2052.5671	366.15	.	.	Q	.	V	.
27.167	2055.0266	357.10	.	.	Q	.	V	.
27.250	2057.3953	343.94	.	.	Q	.	V	.
27.333	2059.6782	331.49	.	.	Q	.	V	.
27.417	2061.8750	318.98	.	.	Q	.	V	.
27.500	2063.9878	306.76	.	.	Q	.	V	.
27.583	2066.0051	292.90	.	.	Q	.	V	.
27.667	2067.9385	280.74	.	.	Q	.	V	.
27.750	2069.8057	271.10	.	.	Q	.	V	.
27.833	2071.6077	261.64	.	.	Q	.	V	.
27.917	2073.3469	252.56	.	.	Q	.	V	.
28.000	2075.0176	242.58	.	.	Q	.	V	.
28.083	2076.6125	231.60	.	.	Q	.	V	.

28.167	2078.1201	218.90	. Q	.	.	.	V.
28.250	2079.5525	207.97	. Q	.	.	.	V.
28.333	2080.8770	192.31	. Q	.	.	.	V.
28.417	2082.1270	181.48	. Q	.	.	.	V.
28.500	2083.3130	172.23	. Q	.	.	.	V.
28.583	2084.4387	163.47	. Q	.	.	.	V.
28.667	2085.5107	155.67	. Q	.	.	.	V.
28.750	2086.5249	147.26	. Q	.	.	.	V.
28.833	2087.4824	139.04	. Q	.	.	.	V.
28.917	2088.3882	131.53	. Q	.	.	.	V.
29.000	2089.2505	125.22	. Q	.	.	.	V.
29.083	2090.0698	118.98	.Q	.	.	.	V.
29.167	2090.8464	112.76	.Q	.	.	.	V.
29.250	2091.5796	106.45	.Q	.	.	.	V.
29.333	2092.2703	100.28	.Q	.	.	.	V.
29.417	2092.9214	94.56	.Q	.	.	.	V.
29.500	2093.5349	89.09	.Q	.	.	.	V.
29.583	2094.1128	83.90	.Q	.	.	.	V.
29.667	2094.6565	78.94	.Q	.	.	.	V.
29.750	2095.1680	74.26	.Q	.	.	.	V.
29.833	2095.6509	70.12	.Q	.	.	.	V.
29.917	2096.1057	66.02	.Q	.	.	.	V.
30.000	2096.5352	62.34	Q	.	.	.	V.
30.083	2096.9419	59.06	Q	.	.	.	V.
30.167	2097.3262	55.80	Q	.	.	.	V.
30.250	2097.6882	52.58	Q	.	.	.	V.
30.333	2098.0312	49.82	Q	.	.	.	V.
30.417	2098.3564	47.22	Q	.	.	.	V.
30.500	2098.6638	44.65	Q	.	.	.	V.
30.583	2098.9539	42.10	Q	.	.	.	V.
30.667	2099.2275	39.73	Q	.	.	.	V.
30.750	2099.4854	37.43	Q	.	.	.	V.
30.833	2099.7273	35.15	Q	.	.	.	V.
30.917	2099.9539	32.88	Q	.	.	.	V.
31.000	2100.1663	30.84	Q	.	.	.	V.
31.083	2100.3677	29.25	Q	.	.	.	V.
31.167	2100.5583	27.69	Q	.	.	.	V.
31.250	2100.7385	26.16	Q	.	.	.	V.
31.333	2100.9082	24.63	Q	.	.	.	V.
31.417	2101.0674	23.11	Q	.	.	.	V.
31.500	2101.2163	21.61	Q	.	.	.	V.
31.583	2101.3567	20.37	Q	.	.	.	V.
31.667	2101.4902	19.39	Q	.	.	.	V.
31.750	2101.6172	18.43	Q	.	.	.	V.
31.833	2101.7375	17.47	Q	.	.	.	V.
31.917	2101.8513	16.52	Q	.	.	.	V.
32.000	2101.9585	15.57	Q	.	.	.	V.
32.083	2102.0593	14.64	Q	.	.	.	V.
32.167	2102.1538	13.71	Q	.	.	.	V.
32.250	2102.2419	12.79	Q	.	.	.	V.
32.333	2102.3237	11.87	Q	.	.	.	V.
32.417	2102.3992	10.97	Q	.	.	.	V.
32.500	2102.4707	10.40	Q	.	.	.	V.
32.583	2102.5405	10.13	Q	.	.	.	V.
32.667	2102.6084	9.85	Q	.	.	.	V.
32.750	2102.6743	9.58	Q	.	.	.	V.
32.833	2102.7385	9.31	Q	.	.	.	V.
32.917	2102.8008	9.05	Q	.	.	.	V.

33.000	2102.8613	8.78	Q	.	.	.	V.
33.083	2102.9199	8.52	Q	.	.	.	V.
33.167	2102.9768	8.26	Q	.	.	.	V.
33.250	2103.0320	8.01	Q	.	.	.	V.
33.333	2103.0854	7.75	Q	.	.	.	V.
33.417	2103.1372	7.50	Q	.	.	.	V.
33.500	2103.1873	7.26	Q	.	.	.	V.
33.583	2103.2356	7.01	Q	.	.	.	V.
33.667	2103.2822	6.76	Q	.	.	.	V.
33.750	2103.3271	6.52	Q	.	.	.	V.
33.833	2103.3704	6.28	Q	.	.	.	V.
33.917	2103.4121	6.05	Q	.	.	.	V.
34.000	2103.4521	5.81	Q	.	.	.	V.
34.083	2103.4905	5.58	Q	.	.	.	V.
34.167	2103.5273	5.34	Q	.	.	.	V.
34.250	2103.5625	5.11	Q	.	.	.	V.
34.333	2103.5962	4.89	Q	.	.	.	V.
34.417	2103.6282	4.66	Q	.	.	.	V.
34.500	2103.6587	4.43	Q	.	.	.	V.
34.583	2103.6877	4.21	Q	.	.	.	V.
34.667	2103.7151	3.99	Q	.	.	.	V.
34.750	2103.7410	3.77	Q	.	.	.	V.
34.833	2103.7654	3.55	Q	.	.	.	V.
34.917	2103.7883	3.33	Q	.	.	.	V.
35.000	2103.8098	3.12	Q	.	.	.	V.
35.083	2103.8298	2.90	Q	.	.	.	V.
35.167	2103.8484	2.69	Q	.	.	.	V.
35.250	2103.8655	2.48	Q	.	.	.	V.
35.333	2103.8811	2.27	Q	.	.	.	V.
35.417	2103.8953	2.06	Q	.	.	.	V.
35.500	2103.9080	1.85	Q	.	.	.	V.
35.583	2103.9194	1.65	Q	.	.	.	V.
35.667	2103.9294	1.44	Q	.	.	.	V.
35.750	2103.9380	1.24	Q	.	.	.	V.
35.833	2103.9451	1.04	Q	.	.	.	V.
35.917	2103.9509	0.84	Q	.	.	.	V.
36.000	2103.9553	0.64	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%	1450.0
20%	1125.0
30%	700.0
40%	540.0
50%	435.0
60%	360.0
70%	295.0
80%	225.0
90%	150.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 132T *
* 5-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV0532TS.DAT
TIME/DATE OF STUDY: 15:17 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 132.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1127.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.553 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.414
LOW LOSS FRACTION = 0.804
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 = 0.950
30-MINUTE FACTOR = 0.950
1-HOUR FACTOR = 0.950
3-HOUR FACTOR = 0.992
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 15.069

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.861	117.428
2	2.906	278.809
3	7.207	586.525
4	14.899	1048.958
5	24.060	1249.266
6	34.630	1441.446
7	47.570	1764.580
8	60.019	1697.659
9	71.274	1534.954
10	79.431	1112.295
11	85.670	850.883
12	89.852	570.270
13	92.961	423.924
14	95.226	308.954
15	96.706	201.810
16	97.814	151.084
17	98.256	60.217
18	98.538	38.532
19	98.821	38.513
20	99.103	38.531
21	99.386	38.513
22	99.668	38.513
23	99.951	38.513
24	100.000	6.738

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 148.0197
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 50.8059

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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	0.0004	0.06	Q	.	.	.	.
0.167	0.0019	0.21	Q	.	.	.	.
0.250	0.0055	0.53	Q	.	.	.	.
0.333	0.0131	1.09	Q	.	.	.	.
0.417	0.0253	1.77	Q	.	.	.	.
0.500	0.0428	2.55	Q	.	.	.	.
0.583	0.0670	3.51	Q	.	.	.	.
0.667	0.0975	4.43	Q	.	.	.	.
0.750	0.1337	5.27	Q	.	.	.	.
0.833	0.1743	5.88	Q	.	.	.	.
0.917	0.2180	6.36	Q	.	.	.	.
1.000	0.2641	6.69	Q	.	.	.	.
1.083	0.3119	6.94	Q	.	.	.	.
1.167	0.3610	7.13	Q	.	.	.	.
1.250	0.4110	7.26	Q	.	.	.	.
1.333	0.4617	7.37	Q	.	.	.	.
1.417	0.5128	7.42	Q	.	.	.	.
1.500	0.5642	7.47	Q	.	.	.	.
1.583	0.6160	7.52	Q	.	.	.	.
1.667	0.6681	7.56	Q	.	.	.	.
1.750	0.7205	7.61	Q	.	.	.	.
1.833	0.7732	7.66	Q	.	.	.	.
1.917	0.8263	7.71	Q	.	.	.	.
2.000	0.8796	7.74	Q	.	.	.	.
2.083	0.9330	7.76	Q	.	.	.	.
2.167	0.9867	7.79	Q	.	.	.	.
2.250	1.0406	7.82	Q	.	.	.	.
2.333	1.0946	7.85	Q	.	.	.	.
2.417	1.1489	7.88	Q	.	.	.	.
2.500	1.2033	7.91	Q	.	.	.	.
2.583	1.2580	7.94	Q	.	.	.	.
2.667	1.3128	7.97	QV	.	.	.	.
2.750	1.3679	8.00	QV	.	.	.	.
2.833	1.4232	8.03	QV	.	.	.	.
2.917	1.4787	8.06	QV	.	.	.	.
3.000	1.5344	8.09	QV	.	.	.	.
3.083	1.5903	8.12	QV	.	.	.	.
3.167	1.6464	8.15	QV	.	.	.	.
3.250	1.7028	8.18	QV	.	.	.	.
3.333	1.7593	8.21	QV	.	.	.	.
3.417	1.8161	8.25	QV	.	.	.	.
3.500	1.8731	8.28	QV	.	.	.	.
3.583	1.9304	8.31	QV	.	.	.	.
3.667	1.9878	8.35	QV	.	.	.	.
3.750	2.0456	8.38	QV	.	.	.	.
3.833	2.1035	8.41	QV	.	.	.	.
3.917	2.1617	8.45	QV	.	.	.	.

4.000	2.2201	8.48	QV	.	.	.	.
4.083	2.2788	8.52	QV	.	.	.	.
4.167	2.3377	8.55	QV	.	.	.	.
4.250	2.3968	8.59	QV	.	.	.	.
4.333	2.4562	8.63	QV	.	.	.	.
4.417	2.5159	8.66	QV	.	.	.	.
4.500	2.5758	8.70	Q V	.	.	.	.
4.583	2.6360	8.74	Q V	.	.	.	.
4.667	2.6964	8.78	Q V	.	.	.	.
4.750	2.7571	8.81	Q V	.	.	.	.
4.833	2.8181	8.85	Q V	.	.	.	.
4.917	2.8793	8.89	Q V	.	.	.	.
5.000	2.9409	8.93	Q V	.	.	.	.
5.083	3.0027	8.97	Q V	.	.	.	.
5.167	3.0647	9.01	Q V	.	.	.	.
5.250	3.1271	9.05	Q V	.	.	.	.
5.333	3.1898	9.10	Q V	.	.	.	.
5.417	3.2527	9.14	Q V	.	.	.	.
5.500	3.3159	9.18	Q V	.	.	.	.
5.583	3.3795	9.23	Q V	.	.	.	.
5.667	3.4433	9.27	Q V	.	.	.	.
5.750	3.5074	9.31	Q V	.	.	.	.
5.833	3.5719	9.36	Q V	.	.	.	.
5.917	3.6367	9.40	Q V	.	.	.	.
6.000	3.7017	9.45	Q V	.	.	.	.
6.083	3.7671	9.50	Q V	.	.	.	.
6.167	3.8329	9.54	Q V	.	.	.	.
6.250	3.8989	9.59	Q V	.	.	.	.
6.333	3.9653	9.64	Q V	.	.	.	.
6.417	4.0321	9.69	Q V	.	.	.	.
6.500	4.0991	9.74	Q V	.	.	.	.
6.583	4.1666	9.79	Q V	.	.	.	.
6.667	4.2343	9.84	Q V	.	.	.	.
6.750	4.3025	9.89	Q V	.	.	.	.
6.833	4.3710	9.95	Q V	.	.	.	.
6.917	4.4398	10.00	Q V	.	.	.	.
7.000	4.5091	10.05	.Q V	.	.	.	.
7.083	4.5787	10.11	.Q V	.	.	.	.
7.167	4.6487	10.16	.Q V	.	.	.	.
7.250	4.7191	10.22	.Q V	.	.	.	.
7.333	4.7899	10.28	.Q V	.	.	.	.
7.417	4.8610	10.34	.Q V	.	.	.	.
7.500	4.9326	10.39	.Q V	.	.	.	.
7.583	5.0046	10.45	.Q V	.	.	.	.
7.667	5.0770	10.52	.Q V	.	.	.	.
7.750	5.1499	10.58	.Q V	.	.	.	.
7.833	5.2232	10.64	.Q V	.	.	.	.
7.917	5.2969	10.70	.Q V	.	.	.	.
8.000	5.3710	10.77	.Q V	.	.	.	.
8.083	5.4456	10.83	.Q V	.	.	.	.
8.167	5.5207	10.90	.Q V	.	.	.	.
8.250	5.5963	10.97	.Q V	.	.	.	.
8.333	5.6723	11.04	.Q V	.	.	.	.
8.417	5.7488	11.11	.Q V	.	.	.	.
8.500	5.8257	11.18	.Q V	.	.	.	.
8.583	5.9032	11.25	.Q V	.	.	.	.
8.667	5.9812	11.32	.Q V	.	.	.	.
8.750	6.0597	11.40	.Q V	.	.	.	.

8.833	6.1387	11.48	.Q	V	.	.	.	.
8.917	6.2183	11.55	.Q	V	.	.	.	.
9.000	6.2984	11.63	.Q	V	.	.	.	.
9.083	6.3791	11.71	.Q	V	.	.	.	.
9.167	6.4603	11.79	.Q	V	.	.	.	.
9.250	6.5421	11.88	.Q	V	.	.	.	.
9.333	6.6245	11.96	.Q	V	.	.	.	.
9.417	6.7075	12.05	.Q	V	.	.	.	.
9.500	6.7910	12.14	.Q	V	.	.	.	.
9.583	6.8752	12.23	.Q	V	.	.	.	.
9.667	6.9601	12.32	.Q	V	.	.	.	.
9.750	7.0455	12.41	.Q	V	.	.	.	.
9.833	7.1317	12.51	.Q	V	.	.	.	.
9.917	7.2185	12.60	.Q	V	.	.	.	.
10.000	7.3059	12.70	.Q	V	.	.	.	.
10.083	7.3941	12.80	.Q	V	.	.	.	.
10.167	7.4830	12.91	.Q	V	.	.	.	.
10.250	7.5726	13.01	.Q	V	.	.	.	.
10.333	7.6630	13.12	.Q	V	.	.	.	.
10.417	7.7541	13.23	.Q	V	.	.	.	.
10.500	7.8460	13.34	.Q	V	.	.	.	.
10.583	7.9386	13.46	.Q	V	.	.	.	.
10.667	8.0321	13.57	.Q	V	.	.	.	.
10.750	8.1264	13.69	.Q	V	.	.	.	.
10.833	8.2216	13.82	.Q	V	.	.	.	.
10.917	8.3176	13.94	.Q	V	.	.	.	.
11.000	8.4146	14.07	.Q	V	.	.	.	.
11.083	8.5124	14.21	.Q	V	.	.	.	.
11.167	8.6111	14.34	.Q	V	.	.	.	.
11.250	8.7109	14.48	.Q	V	.	.	.	.
11.333	8.8116	14.62	.Q	V	.	.	.	.
11.417	8.9133	14.77	.Q	V	.	.	.	.
11.500	9.0160	14.92	.Q	V	.	.	.	.
11.583	9.1198	15.07	.Q	V	.	.	.	.
11.667	9.2247	15.23	.Q	V	.	.	.	.
11.750	9.3307	15.39	.Q	V	.	.	.	.
11.833	9.4379	15.56	.Q	V	.	.	.	.
11.917	9.5462	15.73	.Q	V	.	.	.	.
12.000	9.6558	15.91	.Q	V	.	.	.	.
12.083	9.7669	16.13	.Q	V	.	.	.	.
12.167	9.8799	16.41	.Q	V	.	.	.	.
12.250	9.9957	16.81	.Q	V	.	.	.	.
12.333	10.1153	17.37	.Q	V	.	.	.	.
12.417	10.2393	18.00	.Q	V	.	.	.	.
12.500	10.3681	18.71	.Q	V	.	.	.	.
12.583	10.5027	19.54	.Q	V	.	.	.	.
12.667	10.6428	20.35	.Q	V	.	.	.	.
12.750	10.7882	21.12	.Q	V	.	.	.	.
12.833	10.9380	21.75	.Q	V	.	.	.	.
12.917	11.0917	22.31	.Q	V	.	.	.	.
13.000	11.2485	22.78	.Q	V	.	.	.	.
13.083	11.4084	23.21	.Q	V	.	.	.	.
13.167	11.5710	23.61	.Q	V	.	.	.	.
13.250	11.7362	23.99	.Q	V	.	.	.	.
13.333	11.9039	24.36	.Q	V	.	.	.	.
13.417	12.0741	24.71	.Q	V	.	.	.	.
13.500	12.2468	25.07	.Q	V	.	.	.	.
13.583	12.4221	25.45	.Q	V	.	.	.	.

13.667	12.6000	25.84	.Q	V.	.	.	.	.
13.750	12.7808	26.25	.Q	V	.	.	.	.
13.833	12.9645	26.67	.Q	V	.	.	.	.
13.917	13.1513	27.12	.Q	V	.	.	.	.
14.000	13.3412	27.57	.Q	V	.	.	.	.
14.083	13.5346	28.08	.Q	V	.	.	.	.
14.167	13.7318	28.63	.Q	V	.	.	.	.
14.250	13.9334	29.28	.Q	V	.	.	.	.
14.333	14.1403	30.05	.Q	.V	.	.	.	.
14.417	14.3531	30.89	.Q	.V	.	.	.	.
14.500	14.5721	31.80	.Q	.V	.	.	.	.
14.583	14.7981	32.82	.Q	.V	.	.	.	.
14.667	15.0313	33.87	.Q	.V	.	.	.	.
14.750	15.2719	34.93	.Q	.V	.	.	.	.
14.833	15.5196	35.97	.Q	.V	.	.	.	.
14.917	15.7745	37.02	.Q	.V	.	.	.	.
15.000	16.0367	38.07	.Q	.V	.	.	.	.
15.083	16.3066	39.18	.Q	.V	.	.	.	.
15.167	16.5845	40.36	.Q	.V	.	.	.	.
15.250	16.8712	41.63	.Q	.V	.	.	.	.
15.333	17.1673	43.00	.Q	.V	.	.	.	.
15.417	17.4732	44.41	.Q	.V	.	.	.	.
15.500	17.7888	45.83	.Q	.V	.	.	.	.
15.583	18.1139	47.20	.Q	.V	.	.	.	.
15.667	18.4473	48.41	.Q	.V	.	.	.	.
15.750	18.7912	49.92	.Q	.V	.	.	.	.
15.833	19.1483	51.86	.Q	.V	.	.	.	.
15.917	19.5278	55.10	.Q	.V	.	.	.	.
16.000	19.9572	62.35	.Q	.V	.	.	.	.
16.083	20.5619	87.81	.Q	.V	.	.	.	.
16.167	21.4173	124.21	.Q	.V	.	.	.	.
16.250	22.6702	181.92	.Q	.V	.	.	.	.
16.333	24.4159	253.47	.Q	.V	.	.	.	.
16.417	26.4137	290.09	.Q	.V	.	.	.	.
16.500	28.6414	323.46	.Q	.V	.	.	.	.
16.583	31.1386	362.60	.Q	.V	.	.	.	.
16.667	33.5158	345.17	.Q	.V	.	.	.	.
16.750	35.6387	308.25	.Q	.V	.	.	.	.
16.833	37.2903	239.81	.Q	.V	.	.	.	.
16.917	38.6168	192.60	.Q	.V	.	.	.	.
17.000	39.6269	146.67	.Q	.V	.	.	.	.
17.083	40.4499	119.50	.Q	.V	.	.	.	.
17.167	41.1214	97.50	.Q	.V	.	.	.	.
17.250	41.6585	77.99	.Q	.V	.	.	.	.
17.333	42.1113	65.74	.Q	.V	.	.	.	.
17.417	42.4587	50.43	.Q	.V	.	.	.	.
17.500	42.7684	44.97	.Q	.V	.	.	.	.
17.583	43.0626	42.72	.Q	.V	.	.	.	.
17.667	43.3432	40.75	.Q	.V	.	.	.	.
17.750	43.6112	38.92	.Q	.V	.	.	.	.
17.833	43.8667	37.10	.Q	.V	.	.	.	.
17.917	44.1072	34.91	.Q	.V	.	.	.	.
18.000	44.3093	29.34	.Q	.V	.	.	.	.
18.083	44.4971	27.27	.Q	.V	.	.	.	.
18.167	44.6776	26.21	.Q	.V	.	.	.	.
18.250	44.8511	25.19	.Q	.V	.	.	.	.
18.333	45.0168	24.07	.Q	.V	.	.	.	.
18.417	45.1749	22.96	.Q	.V	.	.	.	.

18.500	45.3254	21.85	. Q	.	.	.	V	.
18.583	45.4678	20.68	. Q	.	.	.	V	.
18.667	45.6027	19.58	.Q	.	.	.	V	.
18.750	45.7306	18.57	.Q	.	.	.	V	.
18.833	45.8528	17.74	.Q	.	.	.	V	.
18.917	45.9701	17.03	.Q	.	.	.	V	.
19.000	46.0834	16.45	.Q	.	.	.	V	.
19.083	46.1932	15.95	.Q	.	.	.	V	.
19.167	46.2999	15.50	.Q	.	.	.	V	.
19.250	46.4040	15.11	.Q	.	.	.	V	.
19.333	46.5057	14.76	.Q	.	.	.	V	.
19.417	46.6052	14.45	.Q	.	.	.	V	.
19.500	46.7028	14.17	.Q	.	.	.	V	.
19.583	46.7985	13.90	.Q	.	.	.	V	.
19.667	46.8924	13.64	.Q	.	.	.	V	.
19.750	46.9846	13.39	.Q	.	.	.	V	.
19.833	47.0751	13.15	.Q	.	.	.	V	.
19.917	47.1641	12.92	.Q	.	.	.	V	.
20.000	47.2517	12.71	.Q	.	.	.	V	.
20.083	47.3379	12.51	.Q	.	.	.	V	.
20.167	47.4227	12.32	.Q	.	.	.	V	.
20.250	47.5064	12.14	.Q	.	.	.	V	.
20.333	47.5888	11.97	.Q	.	.	.	V	.
20.417	47.6700	11.80	.Q	.	.	.	V	.
20.500	47.7501	11.63	.Q	.	.	.	V	.
20.583	47.8292	11.48	.Q	.	.	.	V	.
20.667	47.9072	11.33	.Q	.	.	.	V	.
20.750	47.9842	11.18	.Q	.	.	.	V	.
20.833	48.0602	11.04	.Q	.	.	.	V	.
20.917	48.1353	10.90	.Q	.	.	.	V	.
21.000	48.2094	10.77	.Q	.	.	.	V	.
21.083	48.2827	10.64	.Q	.	.	.	V	.
21.167	48.3551	10.51	.Q	.	.	.	V	.
21.250	48.4267	10.39	.Q	.	.	.	V	.
21.333	48.4974	10.28	.Q	.	.	.	V	.
21.417	48.5674	10.16	.Q	.	.	.	V	.
21.500	48.6366	10.05	.Q	.	.	.	V	.
21.583	48.7051	9.94	Q	.	.	.	V	.
21.667	48.7728	9.84	Q	.	.	.	V	.
21.750	48.8399	9.74	Q	.	.	.	V	.
21.833	48.9063	9.64	Q	.	.	.	V	.
21.917	48.9720	9.54	Q	.	.	.	V	.
22.000	49.0370	9.45	Q	.	.	.	V	.
22.083	49.1014	9.35	Q	.	.	.	V	.
22.167	49.1653	9.26	Q	.	.	.	V	.
22.250	49.2285	9.18	Q	.	.	.	V	.
22.333	49.2911	9.09	Q	.	.	.	V	.
22.417	49.3531	9.01	Q	.	.	.	V	.
22.500	49.4146	8.93	Q	.	.	.	V	.
22.583	49.4756	8.85	Q	.	.	.	V	.
22.667	49.5360	8.77	Q	.	.	.	V	.
22.750	49.5958	8.70	Q	.	.	.	V	.
22.833	49.6552	8.62	Q	.	.	.	V	.
22.917	49.7141	8.55	Q	.	.	.	V	.
23.000	49.7725	8.48	Q	.	.	.	V	.
23.083	49.8304	8.41	Q	.	.	.	V	.
23.167	49.8878	8.34	Q	.	.	.	V	.
23.250	49.9448	8.27	Q	.	.	.	V	.

23.333	50.0014	8.21	Q	.	.	.	V	.
23.417	50.0574	8.15	Q	.	.	.	V	.
23.500	50.1131	8.08	Q	.	.	.	V	.
23.583	50.1684	8.02	Q	.	.	.	V	.
23.667	50.2232	7.96	Q	.	.	.	V	.
23.750	50.2776	7.90	Q	.	.	.	V	.
23.833	50.3316	7.84	Q	.	.	.	V	.
23.917	50.3853	7.79	Q	.	.	.	V	.
24.000	50.4385	7.73	Q	.	.	.	V	.
24.083	50.4910	7.61	Q	.	.	.	V	.
24.167	50.5420	7.41	Q	.	.	.	V	.
24.250	50.5905	7.05	Q	.	.	.	V	.
24.333	50.6348	6.43	Q	.	.	.	V	.
24.417	50.6742	5.72	Q	.	.	.	V	.
24.500	50.7080	4.91	Q	.	.	.	V	.
24.583	50.7351	3.93	Q	.	.	.	V	.
24.667	50.7557	2.99	Q	.	.	.	V	.
24.750	50.7705	2.15	Q	.	.	.	V	.
24.833	50.7811	1.54	Q	.	.	.	V	.
24.917	50.7885	1.07	Q	.	.	.	V	.
25.000	50.7937	0.76	Q	.	.	.	V	.
25.083	50.7974	0.53	Q	.	.	.	V	.
25.167	50.7998	0.36	Q	.	.	.	V	.
25.250	50.8015	0.25	Q	.	.	.	V	.
25.333	50.8026	0.16	Q	.	.	.	V	.
25.417	50.8035	0.13	Q	.	.	.	V	.
25.500	50.8043	0.11	Q	.	.	.	V	.
25.583	50.8049	0.09	Q	.	.	.	V	.
25.667	50.8054	0.07	Q	.	.	.	V	.
25.750	50.8057	0.05	Q	.	.	.	V	.
25.833	50.8058	0.02	Q	.	.	.	V	.
25.917	50.8059	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%	1555.0
10%	180.0
20%	75.0
30%	60.0
40%	50.0
50%	45.0
60%	35.0
70%	25.0
80%	25.0
90%	10.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 132C *
* 5-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV0532CS.DAT
TIME/DATE OF STUDY: 15:16 01/02/2019

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

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

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 4924.400 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.986 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.406
LOW LOSS FRACTION = 0.789
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 = 0.788
30-MINUTE FACTOR = 0.788
1-HOUR FACTOR = 0.788
3-HOUR FACTOR = 0.968
6-HOUR FACTOR = 0.984
24-HOUR FACTOR = 0.990

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 8.452

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.483	287.619
2	1.449	575.239
3	2.632	704.860
4	4.301	993.530
5	7.218	1737.327
6	11.363	2468.400
7	16.187	2873.247
8	21.207	2989.700
9	26.667	3251.397
10	32.713	3600.828
11	39.164	3841.879
12	46.947	4634.997
13	54.052	4231.546
14	60.943	4103.863
15	67.597	3962.565
16	73.191	3331.305
17	77.756	2718.781
18	81.570	2271.200
19	85.069	2084.043
20	87.803	1627.988
21	89.864	1227.766
22	91.667	1073.936
23	93.315	981.346
24	94.618	775.664
25	95.682	633.702
26	96.472	470.617
27	97.135	394.847
28	97.788	389.004
29	98.110	191.783
30	98.269	94.344
31	98.427	94.412
32	98.586	94.408
33	98.744	94.344
34	98.902	94.276
35	99.061	94.549
36	99.219	94.276
37	99.378	94.276
38	99.536	94.276
39	99.694	94.276
40	99.853	94.276
41	100.000	87.770

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 643.8845
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 217.7516

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	0.0011	0.17	Q	.	.	.	.
0.167	0.0046	0.50	Q	.	.	.	.
0.250	0.0109	0.91	Q	.	.	.	.
0.333	0.0211	1.49	Q	.	.	.	.
0.417	0.0383	2.50	Q	.	.	.	.
0.500	0.0655	3.94	Q	.	.	.	.
0.583	0.1042	5.62	Q	.	.	.	.
0.667	0.1549	7.37	Q	.	.	.	.
0.750	0.2188	9.28	Q	.	.	.	.
0.833	0.2973	11.39	Q	.	.	.	.
0.917	0.3913	13.66	Q	.	.	.	.
1.000	0.5042	16.39	Q	.	.	.	.
1.083	0.6343	18.89	Q	.	.	.	.
1.167	0.7812	21.33	Q	.	.	.	.
1.250	0.9445	23.70	VQ	.	.	.	.
1.333	1.1215	25.71	VQ	.	.	.	.
1.417	1.3100	27.37	VQ	.	.	.	.
1.500	1.5083	28.78	VQ	.	.	.	.
1.583	1.7155	30.09	VQ	.	.	.	.
1.667	1.9299	31.13	VQ	.	.	.	.
1.750	2.1499	31.95	VQ	.	.	.	.
1.833	2.3750	32.68	VQ	.	.	.	.
1.917	2.6047	33.36	VQ	.	.	.	.
2.000	2.8384	33.93	VQ	.	.	.	.
2.083	3.0754	34.41	VQ	.	.	.	.
2.167	3.3151	34.80	VQ	.	.	.	.
2.250	3.5572	35.15	VQ	.	.	.	.
2.333	3.8017	35.50	VQ	.	.	.	.
2.417	4.0479	35.74	VQ	.	.	.	.
2.500	4.2953	35.92	VQ	.	.	.	.
2.583	4.5439	36.11	VQ	.	.	.	.
2.667	4.7939	36.29	VQ	.	.	.	.
2.750	5.0451	36.48	VQ	.	.	.	.
2.833	5.2976	36.67	VQ	.	.	.	.
2.917	5.5515	36.86	.Q	.	.	.	.
3.000	5.8066	37.05	.Q	.	.	.	.
3.083	6.0631	37.24	.Q	.	.	.	.
3.167	6.3208	37.43	.Q	.	.	.	.
3.250	6.5800	37.63	.Q	.	.	.	.
3.333	6.8405	37.82	.Q	.	.	.	.
3.417	7.1023	38.02	.Q	.	.	.	.
3.500	7.3651	38.16	.Q	.	.	.	.
3.583	7.6290	38.31	.Q	.	.	.	.
3.667	7.8938	38.46	.Q	.	.	.	.
3.750	8.1597	38.61	.Q	.	.	.	.
3.833	8.4267	38.76	.Q	.	.	.	.
3.917	8.6947	38.91	.Q	.	.	.	.

4.000	8.9637	39.07	.Q	.	.	.	.
4.083	9.2338	39.22	.Q	.	.	.	.
4.167	9.5051	39.38	.Q	.	.	.	.
4.250	9.7774	39.54	.Q	.	.	.	.
4.333	10.0508	39.70	.Q	.	.	.	.
4.417	10.3253	39.86	.Q	.	.	.	.
4.500	10.6010	40.03	.Q	.	.	.	.
4.583	10.8778	40.19	.Q	.	.	.	.
4.667	11.1558	40.36	.QV	.	.	.	.
4.750	11.4349	40.53	.QV	.	.	.	.
4.833	11.7152	40.70	.QV	.	.	.	.
4.917	11.9968	40.88	.QV	.	.	.	.
5.000	12.2795	41.05	.QV	.	.	.	.
5.083	12.5634	41.23	.QV	.	.	.	.
5.167	12.8486	41.41	.QV	.	.	.	.
5.250	13.1351	41.59	.QV	.	.	.	.
5.333	13.4228	41.77	.QV	.	.	.	.
5.417	13.7118	41.96	.QV	.	.	.	.
5.500	14.0020	42.15	.QV	.	.	.	.
5.583	14.2936	42.34	.QV	.	.	.	.
5.667	14.5865	42.53	.QV	.	.	.	.
5.750	14.8808	42.73	.QV	.	.	.	.
5.833	15.1764	42.92	.QV	.	.	.	.
5.917	15.4734	43.12	.QV	.	.	.	.
6.000	15.7718	43.33	.QV	.	.	.	.
6.083	16.0716	43.53	.QV	.	.	.	.
6.167	16.3728	43.74	.Q V	.	.	.	.
6.250	16.6755	43.95	.Q V	.	.	.	.
6.333	16.9796	44.16	.Q V	.	.	.	.
6.417	17.2852	44.37	.Q V	.	.	.	.
6.500	17.5923	44.59	.Q V	.	.	.	.
6.583	17.9009	44.81	.Q V	.	.	.	.
6.667	18.2111	45.03	.QV	.	.	.	.
6.750	18.5228	45.26	.QV	.	.	.	.
6.833	18.8361	45.49	.QV	.	.	.	.
6.917	19.1510	45.72	.QV	.	.	.	.
7.000	19.4675	45.96	.QV	.	.	.	.
7.083	19.7856	46.20	.QV	.	.	.	.
7.167	20.1055	46.44	.QV	.	.	.	.
7.250	20.4270	46.68	.QV	.	.	.	.
7.333	20.7502	46.93	.QV	.	.	.	.
7.417	21.0752	47.18	.QV	.	.	.	.
7.500	21.4019	47.44	.QV	.	.	.	.
7.583	21.7304	47.70	.QV	.	.	.	.
7.667	22.0607	47.96	.Q V	.	.	.	.
7.750	22.3929	48.23	.Q V	.	.	.	.
7.833	22.7269	48.50	.Q V	.	.	.	.
7.917	23.0628	48.78	.Q V	.	.	.	.
8.000	23.4007	49.05	.Q V	.	.	.	.
8.083	23.7405	49.34	.Q V	.	.	.	.
8.167	24.0822	49.63	.Q V	.	.	.	.
8.250	24.4260	49.92	.Q V	.	.	.	.
8.333	24.7718	50.21	.Q V	.	.	.	.
8.417	25.1197	50.51	.Q V	.	.	.	.
8.500	25.4697	50.82	.Q V	.	.	.	.
8.583	25.8219	51.13	.Q V	.	.	.	.
8.667	26.1762	51.45	.Q V	.	.	.	.
8.750	26.5327	51.77	.Q V	.	.	.	.

8.833	26.8915	52.09	. Q V	.	.	.
8.917	27.2526	52.43	. Q V	.	.	.
9.000	27.6159	52.76	. Q V	.	.	.
9.083	27.9817	53.11	. Q V	.	.	.
9.167	28.3498	53.45	. Q V	.	.	.
9.250	28.7204	53.81	. Q V	.	.	.
9.333	29.0935	54.17	. Q V	.	.	.
9.417	29.4691	54.54	. Q V	.	.	.
9.500	29.8473	54.91	. Q V	.	.	.
9.583	30.2281	55.29	. Q V	.	.	.
9.667	30.6115	55.68	. Q V	.	.	.
9.750	30.9977	56.07	. Q V	.	.	.
9.833	31.3867	56.48	. Q V	.	.	.
9.917	31.7785	56.89	. Q V	.	.	.
10.000	32.1731	57.31	. Q V	.	.	.
10.083	32.5707	57.73	. Q V	.	.	.
10.167	32.9713	58.17	. Q V	.	.	.
10.250	33.3750	58.61	. Q V	.	.	.
10.333	33.7817	59.06	. Q V	.	.	.
10.417	34.1917	59.52	. Q V	.	.	.
10.500	34.6048	59.99	. Q V	.	.	.
10.583	35.0213	60.47	. Q V	.	.	.
10.667	35.4412	60.97	. Q V	.	.	.
10.750	35.8645	61.47	. Q V	.	.	.
10.833	36.2914	61.98	. Q V	.	.	.
10.917	36.7218	62.50	. Q V	.	.	.
11.000	37.1560	63.04	. Q V	.	.	.
11.083	37.5939	63.59	. Q V	.	.	.
11.167	38.0357	64.15	. Q V	.	.	.
11.250	38.4814	64.72	. Q V	.	.	.
11.333	38.9312	65.31	. Q V	.	.	.
11.417	39.3851	65.91	. Q V	.	.	.
11.500	39.8433	66.53	. Q V	.	.	.
11.583	40.3058	67.16	. Q V	.	.	.
11.667	40.7727	67.80	. Q V	.	.	.
11.750	41.2443	68.47	. Q V	.	.	.
11.833	41.7205	69.15	. Q V	.	.	.
11.917	42.2015	69.85	. Q V	.	.	.
12.000	42.6876	70.57	. Q V	.	.	.
12.083	43.1795	71.42	. Q V	.	.	.
12.167	43.6782	72.42	. Q V	.	.	.
12.250	44.1844	73.50	. Q V	.	.	.
12.333	44.6990	74.71	. Q V	.	.	.
12.417	45.2242	76.26	. Q V	.	.	.
12.500	45.7624	78.15	. Q V	.	.	.
12.583	46.3149	80.22	. Q V	.	.	.
12.667	46.8823	82.38	. Q V	.	.	.
12.750	47.4655	84.68	. Q V	.	.	.
12.833	48.0657	87.16	. Q V	.	.	.
12.917	48.6839	89.77	. Q V	.	.	.
13.000	49.3227	92.75	. Q V.	.	.	.
13.083	49.9811	95.60	. Q V.	.	.	.
13.167	50.6591	98.45	. Q V.	.	.	.
13.250	51.3566	101.27	. Q V.	.	.	.
13.333	52.0721	103.89	. Q V.	.	.	.
13.417	52.8041	106.29	. Q V.	.	.	.
13.500	53.5518	108.56	. Q V.	.	.	.
13.583	54.3149	110.81	. Q V.	.	.	.

13.667	55.0926	112.92	. Q V	.	.	.
13.750	55.8841	114.92	. Q V	.	.	.
13.833	56.6894	116.93	. Q V	.	.	.
13.917	57.5087	118.96	. Q V	.	.	.
14.000	58.3419	120.98	. Q V	.	.	.
14.083	59.1907	123.26	. Q V	.	.	.
14.167	60.0572	125.81	. Q .V	.	.	.
14.250	60.9423	128.52	. Q .V	.	.	.
14.333	61.8485	131.57	. Q .V	.	.	.
14.417	62.7802	135.29	. Q .V	.	.	.
14.500	63.7424	139.71	. Q .V	.	.	.
14.583	64.7382	144.58	. Q .V	.	.	.
14.667	65.7689	149.67	. Q . V	.	.	.
14.750	66.8371	155.10	. Q . V	.	.	.
14.833	67.9458	160.97	. Q . V	.	.	.
14.917	69.0972	167.19	. Q . V	.	.	.
15.000	70.2974	174.26	. Q . V	.	.	.
15.083	71.5450	181.15	. Q . V	.	.	.
15.167	72.8405	188.11	. Q . V	.	.	.
15.250	74.1846	195.16	. Q . V	.	.	.
15.333	75.5751	201.91	. Q . V	.	.	.
15.417	77.0066	207.85	. Q. V	.	.	.
15.500	78.4746	213.15	. Q. V	.	.	.
15.583	79.9791	218.46	. Q. V	.	.	.
15.667	81.5172	223.33	. Q. V	.	.	.
15.750	83.0826	227.30	. Q V	.	.	.
15.833	84.6722	230.80	. Q V	.	.	.
15.917	86.2909	235.04	. Q V	.	.	.
16.000	87.9704	243.87	. Q V	.	.	.
16.083	89.9197	283.04	. Q V	.	.	.
16.167	92.1342	321.54	. Q V	.	.	.
16.250	94.5233	346.90	. Q V	.	.	.
16.333	97.2294	392.92	. Q	.	.	.
16.417	100.5773	486.11	. V .Q	.	.	.
16.500	104.5282	573.68	. V.	. Q	.	.
16.583	108.8171	622.75	. V.	. Q	. Q	.
16.667	113.2518	643.92	. V	. Q	.	.
16.750	117.9398	680.70	. .V	. Q	.	.
16.833	122.9406	726.12	. . V	. Q	.	.
16.917	128.2007	763.76	. . V	. Q	.	.
17.000	133.9905	840.68	. . V	. Q	. Q	.
17.083	139.4705	795.70	. . V	. Q	. Q	.
17.167	144.7992	773.72	. . V	. Q	. Q	.
17.250	149.9144	742.73	. . V	. Q	. Q	.
17.333	154.4720	661.76	. . VQ.	.	.	.
17.417	158.4848	582.66	. . Q	. V.	.	.
17.500	162.0866	522.98	. . Q	. V.	.	.
17.583	165.4421	487.23	. . .Q	. V	.	.
17.667	168.3670	424.69	. . Q	. V	.	.
17.750	170.9196	370.64	. . Q	. .V	.	.
17.833	173.2791	342.60	. . Q	. .V	.	.
17.917	175.4845	320.23	. . Q	. . V	.	.
18.000	177.4566	286.34	. . Q	. . V	.	.
18.083	179.2388	258.78	. . .Q	. . V	.	.
18.167	180.8279	230.74	. . Q	. . V	.	.
18.250	182.2938	212.85	. . Q.	. . V	.	.
18.333	183.6763	200.73	. . Q.	. . V	.	.
18.417	184.8544	171.06	. . Q.	. . V	.	.

18.500	185.9088	153.10	.	Q	.	.	.	V	.
18.583	186.9134	145.87	.	Q	.	.	.	V	.
18.667	187.8753	139.67	.	Q	.	.	.	V	.
18.750	188.7966	133.77	.	Q	.	.	.	V	.
18.833	189.6792	128.15	.	Q	.	.	.	V	.
18.917	190.5249	122.80	.	Q	.	.	.	V	.
19.000	191.3337	117.44	.	Q	.	.	.	V	.
19.083	192.1089	112.56	.	Q	.	.	.	V	.
19.167	192.8523	107.93	.	Q	.	.	.	V	.
19.250	193.5652	103.52	.	Q	.	.	.	V	.
19.333	194.2486	99.23	.	Q	.	.	.	V	.
19.417	194.8955	93.93	.	Q	.	.	.	V	.
19.500	195.4587	81.78	.	Q	.	.	.	V	.
19.583	196.0017	78.84	.	Q	.	.	.	V	.
19.667	196.5280	76.42	.	Q	.	.	.	V	.
19.750	197.0398	74.32	.	Q	.	.	.	V	.
19.833	197.5373	72.23	.	Q	.	.	.	V	.
19.917	198.0214	70.29	.	Q	.	.	.	V	.
20.000	198.4932	68.51	.	Q	.	.	.	V	.
20.083	198.9538	66.88	.	Q	.	.	.	V	.
20.167	199.4041	65.38	.	Q	.	.	.	V	.
20.250	199.8446	63.97	.	Q	.	.	.	V	.
20.333	200.2759	62.62	.	Q	.	.	.	V	.
20.417	200.6989	61.42	.	Q	.	.	.	V	.
20.500	201.1147	60.37	.	Q	.	.	.	V	.
20.583	201.5236	59.37	.	Q	.	.	.	V	.
20.667	201.9259	58.42	.	Q	.	.	.	V	.
20.750	202.3219	57.50	.	Q	.	.	.	V	.
20.833	202.7118	56.62	.	Q	.	.	.	V	.
20.917	203.0959	55.76	.	Q	.	.	.	V	.
21.000	203.4743	54.95	.	Q	.	.	.	V	.
21.083	203.8473	54.16	.	Q	.	.	.	V	.
21.167	204.2150	53.39	.	Q	.	.	.	V	.
21.250	204.5776	52.66	.	Q	.	.	.	V	.
21.333	204.9354	51.94	.	Q	.	.	.	V	.
21.417	205.2884	51.26	.	Q	.	.	.	V	.
21.500	205.6370	50.63	.	Q	.	.	.	V	.
21.583	205.9815	50.02	.	Q	.	.	.	V	.
21.667	206.3219	49.43	.	Q	.	.	.	V	.
21.750	206.6584	48.86	.	Q	.	.	.	V	.
21.833	206.9910	48.30	.	Q	.	.	.	V	.
21.917	207.3200	47.76	.	Q	.	.	.	V	.
22.000	207.6453	47.24	.	Q	.	.	.	V	.
22.083	207.9672	46.73	.	Q	.	.	.	V	.
22.167	208.2856	46.24	.	Q	.	.	.	V	.
22.250	208.6008	45.76	.	Q	.	.	.	V	.
22.333	208.9127	45.29	.	Q	.	.	.	V	.
22.417	209.2215	44.84	.	Q	.	.	.	V	.
22.500	209.5273	44.40	.	Q	.	.	.	V	.
22.583	209.8300	43.96	.	Q	.	.	.	V	.
22.667	210.1299	43.54	.	Q	.	.	.	V	.
22.750	210.4270	43.13	.	Q	.	.	.	V	.
22.833	210.7213	42.73	.	Q	.	.	.	V	.
22.917	211.0129	42.34	.	Q	.	.	.	V	.
23.000	211.3019	41.96	.	Q	.	.	.	V	.
23.083	211.5884	41.59	.	Q	.	.	.	V	.
23.167	211.8723	41.23	.	Q	.	.	.	V	.
23.250	212.1538	40.87	.	Q	.	.	.	V	.

23.333	212.4329	40.52	.	Q	.	.	.	V	.
23.417	212.7096	40.18	.	Q	.	.	.	V	.
23.500	212.9841	39.85	.	Q	.	.	.	V	.
23.583	213.2563	39.53	.	Q	.	.	.	V	.
23.667	213.5264	39.21	.	Q	.	.	.	V	.
23.750	213.7943	38.90	.	Q	.	.	.	V	.
23.833	214.0601	38.59	.	Q	.	.	.	V	.
23.917	214.3238	38.29	.	Q	.	.	.	V	.
24.000	214.5855	38.00	.	Q	.	.	.	V	.
24.083	214.8441	37.55	.	Q	.	.	.	V	.
24.167	215.0985	36.93	.	Q	.	.	.	V	.
24.250	215.3481	36.25	.	Q	.	.	.	V	.
24.333	215.5920	35.41	.	Q	.	.	.	V	.
24.417	215.8273	34.15	.	Q	.	.	.	V	.
24.500	216.0509	32.48	.	Q	.	.	.	V	.
24.583	216.2616	30.59	.	Q	.	.	.	V	.
24.667	216.4588	28.64	.	Q	.	.	.	V	.
24.750	216.6418	26.56	.	Q	.	.	.	V	.
24.833	216.8090	24.29	.	Q	.	.	.	V	.
24.917	216.9599	21.90	.	Q	.	.	.	V	.
25.000	217.0912	19.07	.	Q	.	.	.	V	.
25.083	217.2047	16.49	.	Q	.	.	.	V	.
25.167	217.3011	14.00	.	Q	.	.	.	V	.
25.250	217.3811	11.61	.	Q	.	.	.	V	.
25.333	217.4472	9.60	.	Q	.	.	.	V	.
25.417	217.5021	7.97	.	Q	.	.	.	V	.
25.500	217.5475	6.60	.	Q	.	.	.	V	.
25.583	217.5844	5.35	.	Q	.	.	.	V	.
25.667	217.6144	4.37	.	Q	.	.	.	V	.
25.750	217.6394	3.63	.	Q	.	.	.	V	.
25.833	217.6600	2.98	.	Q	.	.	.	V	.
25.917	217.6765	2.39	.	Q	.	.	.	V	.
26.000	217.6897	1.93	.	Q	.	.	.	V	.
26.083	217.7004	1.55	.	Q	.	.	.	V	.
26.167	217.7091	1.27	.	Q	.	.	.	V	.
26.250	217.7162	1.03	.	Q	.	.	.	V	.
26.333	217.7217	0.80	.	Q	.	.	.	V	.
26.417	217.7264	0.68	.	Q	.	.	.	V	.
26.500	217.7307	0.62	.	Q	.	.	.	V	.
26.583	217.7345	0.56	.	Q	.	.	.	V	.
26.667	217.7380	0.50	.	Q	.	.	.	V	.
26.750	217.7411	0.45	.	Q	.	.	.	V	.
26.833	217.7437	0.39	.	Q	.	.	.	V	.
26.917	217.7460	0.33	.	Q	.	.	.	V	.
27.000	217.7479	0.27	.	Q	.	.	.	V	.
27.083	217.7494	0.22	.	Q	.	.	.	V	.
27.167	217.7505	0.16	.	Q	.	.	.	V	.
27.250	217.7512	0.11	.	Q	.	.	.	V	.
27.333	217.7516	0.05	.	Q	.	.	.	V	.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1640.0

10%	405.0
20%	210.0
30%	125.0
40%	100.0
50%	80.0
60%	65.0
70%	50.0
80%	35.0
90%	20.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133U *
* 5-YR EV APRIL 2019 CCHIU *

FILE NAME: EV0533US.DAT
TIME/DATE OF STUDY: 08:10 04/09/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 54351.898 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) = 0.487
LOW LOSS FRACTION = 0.839
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.22
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.61
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.13
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.67
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.94

*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 = 2.258

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.129	848.264
2	0.387	1696.517
3	0.645	1696.531
4	0.903	1696.523
5	1.161	1696.525
6	1.420	1696.523
7	1.678	1696.526
8	1.940	1724.397
9	2.295	2333.398
10	2.688	2581.667
11	3.080	2581.660
12	3.473	2581.677
13	3.870	2609.001
14	4.476	3983.007
15	5.199	4750.274
16	5.939	4865.069
17	6.848	5972.437
18	7.809	6319.471
19	8.949	7494.603
20	10.139	7819.722
21	11.273	7456.603
22	12.402	7422.275
23	13.534	7438.398
24	15.057	10011.777
25	16.576	9982.208
26	17.780	7918.002
27	18.985	7917.112
28	20.254	8344.372
29	21.758	9887.244
30	23.484	11345.928
31	24.931	9510.358
32	26.222	8482.571
33	27.516	8507.984
34	29.124	10567.821
35	30.775	10856.318
36	32.459	11063.122
37	34.535	13649.139
38	36.206	10980.864
39	37.439	8108.081
40	39.443	13172.694
41	41.557	13895.373
42	43.615	13527.627
43	45.627	13227.057
44	47.908	14988.278
45	50.317	15837.784
46	52.004	11087.081
47	53.641	10759.856
48	55.181	10126.018

49	56.824	10801.781
50	58.703	12349.467
51	60.915	14537.386
52	63.101	14371.115
53	64.829	11356.760
54	66.371	10135.947
55	67.880	9916.394
56	69.636	11544.394
57	71.077	9474.376
58	72.443	8979.803
59	73.904	9598.747
60	75.306	9217.862
61	76.503	7867.038
62	77.506	6595.750
63	78.510	6598.609
64	79.514	6598.609
65	80.548	6796.147
66	81.610	6979.494
67	82.603	6526.093
68	83.554	6251.826
69	84.456	5933.527
70	85.317	5654.897
71	86.136	5384.943
72	86.838	4614.598
73	87.533	4567.708
74	88.172	4201.066
75	88.706	3507.500
76	89.237	3493.307
77	89.768	3491.853
78	90.268	3285.789
79	90.744	3125.211
80	91.219	3126.615
81	91.694	3123.807
82	92.153	3015.785
83	92.584	2832.438
84	93.014	2825.317
85	93.445	2831.034
86	93.871	2802.600
87	94.204	2185.762
88	94.490	1884.514
89	94.776	1881.656
90	95.064	1887.373
91	95.350	1884.514
92	95.637	1884.464
93	95.921	1864.605
94	96.130	1378.557
95	96.307	1162.564
96	96.484	1162.513
97	96.662	1168.230
98	96.839	1162.564
99	97.016	1162.513
100	97.193	1165.372
101	97.370	1165.372
102	97.547	1162.564
103	97.724	1165.372
104	97.902	1165.372
105	98.018	767.436
106	98.061	281.388

107	98.104	278.580
108	98.146	278.530
109	98.189	281.438
110	98.230	272.863
111	98.273	281.388
112	98.315	278.530
113	98.358	278.580
114	98.400	278.530
115	98.443	278.580
116	98.485	278.530
117	98.527	275.721
118	98.569	278.580
119	98.612	281.388
120	98.654	278.530
121	98.696	272.863
122	98.739	284.247
123	98.781	272.863
124	98.824	284.247
125	98.865	272.863
126	98.909	284.247
127	98.950	272.863
128	98.993	278.580
129	99.036	284.247
130	99.078	278.580
131	99.121	278.580
132	99.163	278.580
133	99.205	278.580
134	99.248	278.580
135	99.290	278.580
136	99.333	278.580
137	99.375	278.580
138	99.417	278.580
139	99.460	278.580
140	99.502	278.580
141	99.544	278.580
142	99.587	278.580
143	99.629	278.580
144	99.672	278.580
145	99.714	278.580
146	99.756	278.580
147	99.799	278.580
148	99.841	278.580
149	99.883	278.580
150	99.926	278.580
151	99.968	278.580
152	100.000	208.722

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 10412.6807
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 2112.3811

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	0.0159	1.73	Q	.	.	.	.
0.250	0.0359	2.90	Q	.	.	.	.
0.333	0.0638	4.06	Q	.	.	.	.
0.417	0.0998	5.23	Q	.	.	.	.
0.500	0.1439	6.40	Q	.	.	.	.
0.583	0.1960	7.57	Q	.	.	.	.
0.667	0.2564	8.77	Q	.	.	.	.
0.750	0.3279	10.38	Q	.	.	.	.
0.833	0.4117	12.17	Q	.	.	.	.
0.917	0.5079	13.97	Q	.	.	.	.
1.000	0.6165	15.77	Q	.	.	.	.
1.083	0.7377	17.59	Q	.	.	.	.
1.167	0.8778	20.36	Q	.	.	.	.
1.250	1.0407	23.65	Q	.	.	.	.
1.333	1.2269	27.04	Q	.	.	.	.
1.417	1.4417	31.19	Q	.	.	.	.
1.500	1.6868	35.58	Q	.	.	.	.
1.583	1.9677	40.79	Q	.	.	.	.
1.667	2.2862	46.24	Q	.	.	.	.
1.750	2.6406	51.46	Q	.	.	.	.
1.833	3.0309	56.67	Q	.	.	.	.
1.917	3.4573	61.91	Q	.	.	.	.
2.000	3.9319	68.92	VQ	.	.	.	.
2.083	4.4548	75.92	VQ	.	.	.	.
2.167	5.0164	81.55	VQ	.	.	.	.
2.250	5.6169	87.19	VQ	.	.	.	.
2.333	6.2583	93.14	VQ	.	.	.	.
2.417	6.9481	100.16	VQ	.	.	.	.
2.500	7.6932	108.19	VQ	.	.	.	.
2.583	8.4853	115.00	VQ	.	.	.	.
2.667	9.3195	121.14	VQ	.	.	.	.
2.750	10.1963	127.30	V Q	.	.	.	.
2.833	11.1254	134.90	V Q	.	.	.	.
2.917	12.1082	142.71	V Q	.	.	.	.
3.000	13.1460	150.69	V Q	.	.	.	.
3.083	14.2511	160.46	V Q	.	.	.	.
3.167	15.4112	168.44	V Q	.	.	.	.
3.250	16.6129	174.49	V Q	.	.	.	.
3.333	17.8802	184.01	V Q	.	.	.	.
3.417	19.2167	194.06	V Q	.	.	.	.
3.500	20.6208	203.88	V Q	.	.	.	.
3.583	22.0915	213.54	V Q	.	.	.	.
3.667	23.6371	224.43	V Q	.	.	.	.
3.750	25.2619	235.92	V Q	.	.	.	.
3.833	26.9439	244.23	V Q	.	.	.	.
3.917	28.6818	252.34	V Q	.	.	.	.

4.000	30.4727	260.04	V	Q	.	.	.	.
4.083	32.3201	268.24	V	Q	.	.	.	.
4.167	34.2313	277.51	V	Q	.	.	.	.
4.250	36.2170	288.31	V	Q	.	.	.	.
4.333	38.2765	299.04	V	Q	.	.	.	.
4.417	40.3959	307.75	V	Q	.	.	.	.
4.500	42.5699	315.65	V	Q	.	.	.	.
4.583	44.7974	323.44	V	Q	.	.	.	.
4.667	47.0865	332.37	V	Q	.	.	.	.
4.750	49.4275	339.92	V	Q	.	.	.	.
4.833	51.8184	347.16	V	Q	.	.	.	.
4.917	54.2623	354.85	.V	Q	.	.	.	.
5.000	56.7576	362.32	.V	Q	.	.	.	.
5.083	59.2982	368.89	.V	Q	.	.	.	.
5.167	61.8782	374.62	.V	Q	.	.	.	.
5.250	64.4980	380.38	.V	Q	.	.	.	.
5.333	67.1575	386.17	.V	Q	.	.	.	.
5.417	69.8581	392.12	.V	Q	.	.	.	.
5.500	72.6006	398.21	.V	Q	.	.	.	.
5.583	75.3831	404.03	.V	Q	.	.	.	.
5.667	78.2047	409.69	.V	Q	.	.	.	.
5.750	81.0638	415.15	.V	Q	.	.	.	.
5.833	83.9595	420.45	.V	Q	.	.	.	.
5.917	86.8906	425.59	.V	Q	.	.	.	.
6.000	89.8536	430.24	.V	Q	.	.	.	.
6.083	92.8486	434.87	.V	Q	.	.	.	.
6.167	95.8740	439.28	.V	Q	.	.	.	.
6.250	98.9267	443.25	.V	Q	.	.	.	.
6.333	102.0067	447.22	.V	Q	.	.	.	.
6.417	105.1143	451.22	.V	Q	.	.	.	.
6.500	108.2486	455.10	.V	Q	.	.	.	.
6.583	111.4090	458.90	.V	Q	.	.	.	.
6.667	114.5958	462.72	.V	Q	.	.	.	.
6.750	117.8090	466.56	.V	Q	.	.	.	.
6.833	121.0484	470.35	.V	Q	.	.	.	.
6.917	124.3131	474.04	.V	Q	.	.	.	.
7.000	127.6035	477.76	.V	Q	.	.	.	.
7.083	130.9196	481.50	.V	Q	.	.	.	.
7.167	134.2615	485.25	.V	Q	.	.	.	.
7.250	137.6265	488.60	.V	Q	.	.	.	.
7.333	141.0133	491.77	.V	Q	.	.	.	.
7.417	144.4221	494.96	.V	Q	.	.	.	.
7.500	147.8532	498.19	.V	Q	.	.	.	.
7.583	151.3066	501.43	.V	Q	.	.	.	.
7.667	154.7825	504.71	.V	Q	.	.	.	.
7.750	158.2811	507.99	.V	Q	.	.	.	.
7.833	161.8002	510.98	.V	Q	.	.	.	.
7.917	165.3390	513.83	.V	Q	.	.	.	.
8.000	168.8977	516.72	.V	Q	.	.	.	.
8.083	172.4765	519.64	.V	Q	.	.	.	.
8.167	176.0755	522.58	.V	Q	.	.	.	.
8.250	179.6950	525.55	.V	Q	.	.	.	.
8.333	183.3352	528.55	.V	Q	.	.	.	.
8.417	186.9962	531.58	.V	Q	.	.	.	.
8.500	190.6782	534.63	.V	Q	.	.	.	.
8.583	194.3815	537.72	.V	Q	.	.	.	.
8.667	198.1063	540.84	.V	Q	.	.	.	.
8.750	201.8509	543.71	.V	Q	.	.	.	.

8.833	205.6133	546.30	.	V	Q	.	.	.	.
8.917	209.3936	548.90	.	V	Q	.	.	.	.
9.000	213.1921	551.54	.	V	Q	.	.	.	.
9.083	217.0089	554.21	.	V	Q	.	.	.	.
9.167	220.8444	556.91	.	V	Q	.	.	.	.
9.250	224.6988	559.65	.	V	Q	.	.	.	.
9.333	228.5722	562.42	.	V	Q	.	.	.	.
9.417	232.4650	565.23	.	V	Q	.	.	.	.
9.500	236.3773	568.07	.	V	Q	.	.	.	.
9.583	240.3094	570.95	.	V	Q	.	.	.	.
9.667	244.2617	573.86	.	V	Q	.	.	.	.
9.750	248.2342	576.81	.	V	Q	.	.	.	.
9.833	252.2274	579.81	.	V	Q	.	.	.	.
9.917	256.2415	582.84	.	V	Q	.	.	.	.
10.000	260.2767	585.92	.	V	Q	.	.	.	.
10.083	264.3334	589.03	.	V	Q	.	.	.	.
10.167	268.4118	592.19	.	V	Q	.	.	.	.
10.250	272.5123	595.39	.	V	Q	.	.	.	.
10.333	276.6352	598.65	.	V	Q	.	.	.	.
10.417	280.7808	601.93	.	V	Q	.	.	.	.
10.500	284.9494	605.28	.	V	Q	.	.	.	.
10.583	289.1413	608.67	.	V	Q	.	.	.	.
10.667	293.3569	612.11	.	V	Q	.	.	.	.
10.750	297.5966	615.60	.	V	Q	.	.	.	.
10.833	301.8607	619.15	.	V	Q	.	.	.	.
10.917	306.1497	622.75	.	V	Q	.	.	.	.
11.000	310.4637	626.41	.	V	Q	.	.	.	.
11.083	314.8034	630.11	.	V	Q	.	.	.	.
11.167	319.1690	633.89	.	V	Q	.	.	.	.
11.250	323.5610	637.72	.	V	Q	.	.	.	.
11.333	327.9798	641.61	.	V	Q	.	.	.	.
11.417	332.4259	645.57	.	V	Q	.	.	.	.
11.500	336.8997	649.59	.	V	Q	.	.	.	.
11.583	341.4016	653.68	.	V	Q	.	.	.	.
11.667	345.9322	657.84	.	V	Q	.	.	.	.
11.750	350.4919	662.07	.	V	Q	.	.	.	.
11.833	355.0814	666.38	.	V	Q	.	.	.	.
11.917	359.7010	670.77	.	V	Q	.	.	.	.
12.000	364.3513	675.23	.	V	Q	.	.	.	.
12.083	369.0397	680.75	.	V	Q	.	.	.	.
12.167	373.7735	687.35	.	V	Q	.	.	.	.
12.250	378.5532	694.01	.	V	.Q	.	.	.	.
12.333	383.3793	700.76	.	V	.Q	.	.	.	.
12.417	388.2524	707.58	.	V	.Q	.	.	.	.
12.500	393.1732	714.50	.	V	.Q	.	.	.	.
12.583	398.1422	721.50	.	V	.Q	.	.	.	.
12.667	403.1600	728.58	.	V	.Q	.	.	.	.
12.750	408.2310	736.31	.	V	.Q	.	.	.	.
12.833	413.3579	744.43	.	V	.Q	.	.	.	.
12.917	418.5413	752.64	.	V	.Q	.	.	.	.
13.000	423.7820	760.95	.	V	.Q	.	.	.	.
13.083	429.0809	769.39	.	V	.Q	.	.	.	.
13.167	434.4496	779.54	.	V	.Q	.	.	.	.
13.250	439.8950	790.67	.	V	.Q	.	.	.	.
13.333	445.4186	802.04	.	V	.Q	.	.	.	.
13.417	451.0302	814.79	.	V	.Q	.	.	.	.
13.500	456.7330	828.06	.	V	.Q	.	.	.	.
13.583	462.5373	842.78	.	V	.Q	.	.	.	.

13.667	468.4464	858.00	.	V	.Q	.	.	.	.
13.750	474.4579	872.88	.	V	.Q	.	.	.	.
13.833	480.5727	887.86	.	V	.Q	.	.	.	.
13.917	486.7914	902.96	.	V	.Q	.	.	.	.
14.000	493.1355	921.17	.	V	.Q	.	.	.	.
14.083	499.6129	940.51	.	V	.Q	.	.	.	.
14.167	506.2150	958.63	.	V	.Q	.	.	.	.
14.250	512.9423	976.79	.	V	.Q	.	.	.	.
14.333	519.7984	995.52	.	V	.Q	.	.	.	.
14.417	526.7961	1016.06	.	V	.Q	.	.	.	.
14.500	533.9474	1038.37	.	V	.Q	.	.	.	.
14.583	541.2379	1058.57	.	V	.Q	.	.	.	.
14.667	548.6600	1077.69	.	V	.Q	.	.	.	.
14.750	556.2196	1097.66	.	V	.Q	.	.	.	.
14.833	563.9357	1120.38	.	V	.Q	.	.	.	.
14.917	571.8105	1143.43	.	V	.Q	.	.	.	.
15.000	579.8459	1166.75	.	V	.Q	.	.	.	.
15.083	588.0628	1193.09	.	.V	.Q	.	.	.	.
15.167	596.4518	1218.09	.	.V	.Q	.	.	.	.
15.250	604.9964	1240.67	.	.V	.Q	.	.	.	.
15.333	613.7374	1269.19	.	.V	.Q	.	.	.	.
15.417	622.6795	1298.40	.	.V	.Q	.	.	.	.
15.500	631.8127	1326.15	.	.V	.Q	.	.	.	.
15.583	641.1455	1355.12	.	.V	.Q	.	.	.	.
15.667	650.6955	1386.66	.	.V	.Q	.	.	.	.
15.750	660.4633	1418.28	.	.V	.Q	.	.	.	.
15.833	670.4087	1444.08	.	.V	.Q	.	.	.	.
15.917	680.5347	1470.29	.	.V	.Q	.	.	.	.
16.000	690.8688	1500.52	.	.V	.Q	.	.	.	.
16.083	701.5820	1555.55	.	.V	.Q	.	.	.	.
16.167	712.6541	1607.67	.	.V	.Q	.	.	.	.
16.250	723.9235	1636.31	.	.V	.Q	.	.	.	.
16.333	735.3890	1664.80	.	.V	.Q	.	.	.	.
16.417	747.0433	1692.19	.	.V	.Q	.	.	.	.
16.500	758.8813	1718.88	.	.V	.Q	.	.	.	.
16.583	770.8802	1742.24	.	.V	.Q	.	.	.	.
16.667	783.0560	1767.92	.	.V	.Q	.	.	.	.
16.750	795.4978	1806.55	.	.V	.Q	.	.	.	.
16.833	808.1344	1834.84	.	.V	.Q	.	.	.	.
16.917	820.9086	1854.82	.	.V	.Q	.	.	.	.
17.000	833.8249	1875.44	.	.V	.Q	.	.	.	.
17.083	846.9166	1900.92	.	.V	.Q	.	.	.	.
17.167	860.4197	1960.66	.	.V	.Q	.	.	.	.
17.250	874.1762	1997.44	.	.V	.Q	.	.	.	.
17.333	888.0720	2017.66	.	.V	.Q	.	.	.	.
17.417	902.3187	2068.63	.	.V	.Q	.	.	.	.
17.500	916.7990	2102.54	.	.V	.Q	.	.	.	.
17.583	931.6738	2159.81	.	.V	.Q	.	.	.	.
17.667	946.7527	2189.46	.	.V	.Q	.	.	.	.
17.750	961.8889	2197.77	.	.V	.Q	.	.	.	.
17.833	977.1108	2210.22	.	.V	.Q	.	.	.	.
17.917	992.4760	2231.03	.	.V	.Q	.	.	.	.
18.000	1008.4842	2324.39	.	.V	.Q	.	.	.	.
18.083	1024.5627	2334.61	.	.V	.Q	.	.	.	.
18.167	1040.2726	2281.07	.	.V	.Q	.	.	.	.
18.250	1056.0624	2292.68	.	.V	.Q	.	.	.	.
18.333	1072.0614	2323.06	.	.V	.Q	.	.	.	.
18.417	1088.4237	2375.81	.	.V	.Q	.	.	.	.

18.500	1105.0834	2418.99	.	.	V	.	Q	.
18.583	1121.3823	2366.61	.	.	.V	.	Q	.
18.667	1137.4609	2334.61	.	.	.V	.	Q	.
18.750	1153.5305	2333.30	.	.	.V	.	Q	.
18.833	1170.0311	2395.89	.	.	.V	.	Q	.
18.917	1186.6041	2406.40	.	.	.V	.	Q	.
19.000	1203.1553	2403.22	.	.	.V	.	Q	.
19.083	1220.0929	2459.34	.	.	.V	.	Q	.
19.167	1236.4294	2372.06	.	.	.V	.	Q	.
19.250	1252.1925	2288.80	.	.	.V	.	Q	.
19.333	1268.9791	2437.42	.	.	.V	.	Q	.
19.417	1285.8674	2452.18	.	.	.V	.	Q	.
19.500	1302.5990	2429.43	.	.	.V	.	Q	.
19.583	1319.1365	2401.24	.	.	.V	.	Q	.
19.667	1335.9290	2438.27	.	.	.V	.	Q	.
19.750	1352.7838	2447.32	.	.	.V	.	Q	.
19.833	1368.5582	2290.44	.	.	.V	.	Q	.
19.917	1384.1638	2265.93	.	.	.V	.	Q	.
20.000	1399.5289	2231.02	.	.	.V	.	Q	.
20.083	1414.9766	2243.00	.	.	.V	.	Q	.
20.167	1430.6794	2280.06	.	.	.V	.	Q	.
20.250	1446.7312	2330.72	.	.	.V	.	Q	.
20.333	1462.5493	2296.78	.	.	.V	.	Q	.
20.417	1477.5640	2180.12	.	.	.V	.	Q	.
20.500	1492.1833	2122.74	.	.	.V	.	Q	.
20.583	1506.6533	2101.05	.	.	.V	.	Q	.
20.667	1521.3220	2129.90	.	.	.V	.	Q	.
20.750	1535.3959	2043.52	.	.	.V	.	Q	.
20.833	1549.2162	2006.71	.	.	.V	.	Q	.
20.917	1562.9939	2000.52	.	.	.V	.	Q	.
21.000	1576.5338	1966.00	.	.	.V	.	Q	.
21.083	1589.5936	1896.29	.	.	.Q	.		.
21.167	1602.2062	1831.34	.	.	.QV	.		.
21.250	1614.6477	1806.51	.	.	.Q	.	V	.
21.333	1626.8839	1776.70	.	.	.Q	.	V	.
21.417	1638.9590	1753.30	.	.	.Q	.	.V	.
21.500	1650.8640	1728.61	.	.	.Q	.	.V	.
21.583	1662.4761	1686.07	.	.	.Q	.	.V	.
21.667	1673.8015	1644.45	.	.	.Q	.	.V	.
21.750	1684.8390	1602.65	.	.	.Q	.	.V	.
21.833	1695.6360	1567.72	.	.	.Q	.	.V	.
21.917	1706.1852	1531.73	.	.	.Q	.	.V	.
22.000	1716.3917	1481.99	.	.	.Q	.	.V	.
22.083	1726.4039	1453.76	.	.	.Q	.	.V	.
22.167	1736.1521	1415.43	.	.	.Q	.	.V	.
22.250	1745.5596	1365.97	.	.	.Q	.	.V	.
22.333	1754.7611	1336.07	.	.	.Q	.	.V	.
22.417	1763.7792	1309.42	.	.	.Q	.	.V	.
22.500	1772.5782	1277.62	.	.	.Q	.	.V	.
22.583	1781.1750	1248.26	.	.	.Q	.	.V	.
22.667	1789.5945	1222.50	.	.	.Q	.	.V	.
22.750	1797.8486	1198.50	.	.	.Q	.	.V	.
22.833	1805.9146	1171.17	.	.	.Q	.	.V	.
22.917	1813.7758	1141.45	.	.	.Q	.	.V	.
23.000	1821.4791	1118.53	.	.	.Q	.	.V	.
23.083	1829.0353	1097.15	.	.	.Q	.	.V	.
23.167	1836.4497	1076.58	.	.	.Q	.	.V	.
23.250	1843.6112	1039.85	.	.	.Q	.	.V	.

23.333	1850.5898	1013.30	.	.	.Q	.	.	V	.
23.417	1857.4476	995.75	.	.	.Q	.	.	V	.
23.500	1864.1902	979.02	.	.	.Q	.	.	V	.
23.583	1870.8157	962.02	.	.	.Q	.	.	V	.
23.667	1877.3208	944.55	.	.	.Q	.	.	V	.
23.750	1883.6996	926.20	.	.	.Q	.	.	V	.
23.833	1889.8622	894.80	.	.	.Q	.	.	V	.
23.917	1895.8722	872.65	.	.	.Q	.	.	V	.
24.000	1901.7823	858.15	.	.	.Q	.	.	V	.
24.083	1907.5966	844.23	.	.	.Q	.	.	V	.
24.167	1913.3136	830.11	.	.	.Q	.	.	V	.
24.250	1918.9427	817.35	.	.	.Q	.	.	V	.
24.333	1924.4871	805.03	.	.	.Q	.	.	V	.
24.417	1929.9474	792.84	.	.	.Q	.	.	V	.
24.500	1935.3263	781.01	.	.	.Q	.	.	V	.
24.583	1940.6233	769.13	.	.	.Q	.	.	V	.
24.667	1945.8319	756.29	.	.	.Q	.	.	V	.
24.750	1950.8658	730.93	.	.	.Q	.	.	V	.
24.833	1955.7168	704.37	.	.	.Q	.	.	V	.
24.917	1960.4908	693.20	.	.	.Q	.	.	V	.
25.000	1965.1910	682.46	.	.	.Q	.	.	V	.
25.083	1969.8157	671.49	.	.	.Q	.	.	V	.
25.167	1974.3518	658.65	.	.	.Q	.	.	V	.
25.250	1978.8047	646.55	.	.	.Q	.	.	V	.
25.333	1983.1742	634.45	.	.	.Q	.	.	V	.
25.417	1987.4565	621.79	.	.	.Q	.	.	V	.
25.500	1991.6503	608.92	.	.	.Q	.	.	V	.
25.583	1995.7506	595.37	.	.	.Q	.	.	V	.
25.667	1999.7565	581.65	.	.	.Q	.	.	V	.
25.750	2003.6735	568.74	.	.	.Q	.	.	V	.
25.833	2007.5116	557.30	.	.	.Q	.	.	V	.
25.917	2011.2738	546.27	.	.	.Q	.	.	V	.
26.000	2014.9478	533.46	.	.	.Q	.	.	V	.
26.083	2018.5341	520.73	.	.	.Q	.	.	V	.
26.167	2022.0470	510.07	.	.	.Q	.	.	V	.
26.250	2025.4828	498.87	.	.	.Q	.	.	V	.
26.333	2028.8448	488.17	.	.	.Q	.	.	V	.
26.417	2032.1221	475.85	.	.	.Q	.	.	V	.
26.500	2035.3132	463.35	.	.	.Q	.	.	V	.
26.583	2038.4230	451.54	.	.	.Q	.	.	V	.
26.667	2041.4600	440.97	.	.	.Q	.	.	V	.
26.750	2044.4259	430.66	.	.	.Q	.	.	V	.
26.833	2047.3137	419.30	.	.	.Q	.	.	V	.
26.917	2050.1238	408.03	.	.	.Q	.	.	V	.
27.000	2052.8562	396.74	.	.	.Q	.	.	V	.
27.083	2055.4995	383.82	.	.	.Q	.	.	V	.
27.167	2058.0671	372.84	.	.	.Q	.	.	V	.
27.250	2060.5735	363.92	.	.	.Q	.	.	V	.
27.333	2062.9951	351.64	.	.	.Q	.	.	V	.
27.417	2065.3298	338.99	.	.	.Q	.	.	V	.
27.500	2067.5798	326.70	.	.	.Q	.	.	V	.
27.583	2069.7473	314.73	.	.	.Q	.	.	V	.
27.667	2071.8250	301.67	.	.	.Q	.	.	V	.
27.750	2073.8093	288.14	.	.	.Q	.	.	V	.
27.833	2075.7236	277.95	.	.	.Q	.	.	V	.
27.917	2077.5698	268.07	.	.	.Q	.	.	V	.
28.000	2079.3525	258.84	.	.	.Q	.	.	V	.
28.083	2081.0713	249.57	.	.	.Q	.	.	V	.

28.167	2082.7192	239.29	. Q	.	.	.	V.
28.250	2084.2864	227.56	. Q	.	.	.	V.
28.333	2085.7742	216.02	. Q	.	.	.	V.
28.417	2087.1975	206.68	. Q	.	.	.	V.
28.500	2088.5620	198.11	. Q	.	.	.	V.
28.583	2089.8672	189.50	. Q	.	.	.	V.
28.667	2091.0903	177.59	. Q	.	.	.	V.
28.750	2092.2146	163.26	. Q	.	.	.	V.
28.833	2093.2869	155.70	. Q	.	.	.	V.
28.917	2094.3049	147.81	. Q	.	.	.	V.
29.000	2095.2705	140.20	. Q	.	.	.	V.
29.083	2096.1882	133.24	. Q	.	.	.	V.
29.167	2097.0640	127.16	. Q	.	.	.	V.
29.250	2097.8979	121.09	.Q	.	.	.	V.
29.333	2098.6902	115.05	.Q	.	.	.	V.
29.417	2099.4402	108.89	.Q	.	.	.	V.
29.500	2100.1470	102.63	.Q	.	.	.	V.
29.583	2100.8130	96.70	.Q	.	.	.	V.
29.667	2101.4402	91.07	.Q	.	.	.	V.
29.750	2102.0322	85.95	.Q	.	.	.	V.
29.833	2102.5906	81.06	.Q	.	.	.	V.
29.917	2103.1167	76.40	.Q	.	.	.	V.
30.000	2103.6147	72.30	.Q	.	.	.	V.
30.083	2104.0850	68.27	.Q	.	.	.	V.
30.167	2104.5293	64.52	.Q	.	.	.	V.
30.250	2104.9512	61.27	Q	.	.	.	V.
30.333	2105.3511	58.06	Q	.	.	.	V.
30.417	2105.7290	54.87	Q	.	.	.	V.
30.500	2106.0862	51.85	Q	.	.	.	V.
30.583	2106.4233	48.97	Q	.	.	.	V.
30.667	2106.7415	46.18	Q	.	.	.	V.
30.750	2107.0422	43.66	Q	.	.	.	V.
30.833	2107.3262	41.24	Q	.	.	.	V.
30.917	2107.5945	38.96	Q	.	.	.	V.
31.000	2107.8474	36.71	Q	.	.	.	V.
31.083	2108.0850	34.47	Q	.	.	.	V.
31.167	2108.3074	32.28	Q	.	.	.	V.
31.250	2108.5176	30.52	Q	.	.	.	V.
31.333	2108.7173	28.98	Q	.	.	.	V.
31.417	2108.9065	27.46	Q	.	.	.	V.
31.500	2109.0852	25.95	Q	.	.	.	V.
31.583	2109.2537	24.46	Q	.	.	.	V.
31.667	2109.4119	22.97	Q	.	.	.	V.
31.750	2109.5601	21.51	Q	.	.	.	V.
31.833	2109.7004	20.40	Q	.	.	.	V.
31.917	2109.8342	19.44	Q	.	.	.	V.
32.000	2109.9617	18.49	Q	.	.	.	V.
32.083	2110.0825	17.55	Q	.	.	.	V.
32.167	2110.1970	16.61	Q	.	.	.	V.
32.250	2110.3052	15.69	Q	.	.	.	V.
32.333	2110.4070	14.77	Q	.	.	.	V.
32.417	2110.5024	13.86	Q	.	.	.	V.
32.500	2110.5916	12.96	Q	.	.	.	V.
32.583	2110.6746	12.06	Q	.	.	.	V.
32.667	2110.7515	11.17	Q	.	.	.	V.
32.750	2110.8242	10.56	Q	.	.	.	V.
32.833	2110.8950	10.28	Q	.	.	.	V.
32.917	2110.9639	10.01	Q	.	.	.	V.

33.000	2111.0310	9.74	Q	.	.	.	V.
33.083	2111.0962	9.47	Q	.	.	.	V.
33.167	2111.1597	9.21	Q	.	.	.	V.
33.250	2111.2212	8.95	Q	.	.	.	V.
33.333	2111.2810	8.69	Q	.	.	.	V.
33.417	2111.3391	8.44	Q	.	.	.	V.
33.500	2111.3955	8.18	Q	.	.	.	V.
33.583	2111.4502	7.93	Q	.	.	.	V.
33.667	2111.5032	7.69	Q	.	.	.	V.
33.750	2111.5544	7.44	Q	.	.	.	V.
33.833	2111.6040	7.20	Q	.	.	.	V.
33.917	2111.6519	6.95	Q	.	.	.	V.
34.000	2111.6980	6.72	Q	.	.	.	V.
34.083	2111.7427	6.48	Q	.	.	.	V.
34.167	2111.7856	6.24	Q	.	.	.	V.
34.250	2111.8271	6.01	Q	.	.	.	V.
34.333	2111.8669	5.78	Q	.	.	.	V.
34.417	2111.9053	5.55	Q	.	.	.	V.
34.500	2111.9419	5.32	Q	.	.	.	V.
34.583	2111.9771	5.10	Q	.	.	.	V.
34.667	2112.0107	4.88	Q	.	.	.	V.
34.750	2112.0427	4.65	Q	.	.	.	V.
34.833	2112.0732	4.43	Q	.	.	.	V.
34.917	2112.1023	4.21	Q	.	.	.	V.
35.000	2112.1299	4.00	Q	.	.	.	V.
35.083	2112.1560	3.78	Q	.	.	.	V.
35.167	2112.1807	3.57	Q	.	.	.	V.
35.250	2112.2039	3.35	Q	.	.	.	V.
35.333	2112.2256	3.14	Q	.	.	.	V.
35.417	2112.2458	2.93	Q	.	.	.	V.
35.500	2112.2646	2.73	Q	.	.	.	V.
35.583	2112.2820	2.52	Q	.	.	.	V.
35.667	2112.2979	2.31	Q	.	.	.	V.
35.750	2112.3125	2.11	Q	.	.	.	V.
35.833	2112.3257	1.91	Q	.	.	.	V.
35.917	2112.3374	1.71	Q	.	.	.	V.
36.000	2112.3479	1.51	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%	1455.0
20%	1135.0
30%	715.0
40%	550.0
50%	445.0
60%	365.0
70%	300.0
80%	225.0
90%	150.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133T *
* 5-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV0533TS.DAT
TIME/DATE OF STUDY: 15:18 01/02/2019

FLOW PROCESS FROM NODE 13010.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 6640.500 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 = 0.763
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	259.093
2	0.968	518.187
3	1.613	518.187
4	2.395	627.779
5	3.375	787.203
6	4.664	1035.503
7	6.627	1575.866
8	9.247	2103.973
9	12.120	2307.631
10	15.417	2647.632
11	18.685	2624.706
12	22.220	2838.594
13	25.899	2954.930
14	29.528	2914.461
15	33.973	3569.260
16	38.060	3282.340
17	43.093	4042.175
18	48.517	4355.396
19	53.219	3776.267
20	57.323	3295.817
21	62.494	4152.918
22	66.744	3413.613
23	70.701	3177.393
24	74.245	2846.416
25	77.255	2417.221
26	79.777	2024.906
27	82.348	2064.947
28	84.667	1862.625
29	86.661	1601.202
30	88.292	1309.701
31	89.632	1075.984
32	90.862	988.196
33	92.034	941.036
34	93.121	873.253
35	94.113	796.499
36	94.848	590.366
37	95.565	575.772
38	96.173	487.714
39	96.617	356.993
40	97.060	355.467
41	97.503	355.743
42	97.921	336.302
43	98.093	137.657
44	98.199	84.872
45	98.305	85.289
46	98.411	85.013
47	98.516	85.013
48	98.623	85.289

49	98.728	84.737
50	98.834	85.013
51	98.940	85.013
52	99.046	85.289
53	99.152	85.013
54	99.258	85.013
55	99.364	85.013
56	99.469	85.013
57	99.575	85.013
58	99.681	85.013
59	99.787	85.013
60	99.893	85.013
61	99.999	85.013
62	100.000	0.980

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 841.6693
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 316.0295

=====
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	0.51	Q	.	.	.	.
0.250	0.0105	0.85	Q	.	.	.	.
0.333	0.0191	1.26	Q	.	.	.	.
0.417	0.0313	1.77	Q	.	.	.	.
0.500	0.0482	2.45	Q	.	.	.	.
0.583	0.0722	3.49	Q	.	.	.	.
0.667	0.1058	4.87	Q	.	.	.	.
0.750	0.1497	6.38	Q	.	.	.	.
0.833	0.2057	8.13	Q	.	.	.	.
0.917	0.2736	9.86	Q	.	.	.	.
1.000	0.3545	11.74	Q	.	.	.	.
1.083	0.4489	13.71	Q	.	.	.	.
1.167	0.5567	15.65	Q	.	.	.	.
1.250	0.6808	18.02	Q	.	.	.	.
1.333	0.8200	20.22	Q	.	.	.	.
1.417	0.9779	22.92	VQ	.	.	.	.
1.500	1.1557	25.83	VQ	.	.	.	.
1.583	1.3511	28.37	VQ	.	.	.	.
1.667	1.5620	30.61	VQ	.	.	.	.
1.750	1.7921	33.42	VQ	.	.	.	.
1.833	2.0383	35.75	VQ	.	.	.	.
1.917	2.2996	37.94	VQ	.	.	.	.
2.000	2.5746	39.92	VQ	.	.	.	.
2.083	2.8613	41.63	VQ	.	.	.	.
2.167	3.1580	43.09	VQ	.	.	.	.
2.250	3.4651	44.58	VQ	.	.	.	.
2.333	3.7815	45.95	V Q	.	.	.	.
2.417	4.1063	47.15	V Q	.	.	.	.
2.500	4.4380	48.17	V Q	.	.	.	.
2.583	4.7757	49.04	V Q	.	.	.	.
2.667	5.1190	49.85	V Q	.	.	.	.
2.750	5.4678	50.64	V Q	.	.	.	.
2.833	5.8217	51.39	V Q	.	.	.	.
2.917	6.1804	52.09	V Q	.	.	.	.
3.000	6.5431	52.66	V Q	.	.	.	.
3.083	6.9096	53.22	V Q	.	.	.	.
3.167	7.2797	53.73	V Q	.	.	.	.
3.250	7.6527	54.16	V Q	.	.	.	.
3.333	8.0286	54.59	.VQ	.	.	.	.
3.417	8.4076	55.02	.VQ	.	.	.	.
3.500	8.7894	55.44	.VQ	.	.	.	.
3.583	9.1733	55.74	.VQ	.	.	.	.
3.667	9.5590	56.00	.VQ	.	.	.	.
3.750	9.9465	56.27	.VQ	.	.	.	.
3.833	10.3359	56.54	.VQ	.	.	.	.
3.917	10.7271	56.81	.VQ	.	.	.	.

4.000	11.1202	57.08	.VQ	.	.	.	.
4.083	11.5152	57.36	.VQ	.	.	.	.
4.167	11.9121	57.63	.VQ	.	.	.	.
4.250	12.3110	57.91	.VQ	.	.	.	.
4.333	12.7118	58.19	.VQ	.	.	.	.
4.417	13.1145	58.48	.VQ	.	.	.	.
4.500	13.5192	58.77	.VQ	.	.	.	.
4.583	13.9260	59.06	.VQ	.	.	.	.
4.667	14.3347	59.35	.VQ	.	.	.	.
4.750	14.7455	59.65	.VQ	.	.	.	.
4.833	15.1583	59.94	.VQ	.	.	.	.
4.917	15.5732	60.24	.VQ	.	.	.	.
5.000	15.9902	60.55	. Q	.	.	.	.
5.083	16.4093	60.86	. Q	.	.	.	.
5.167	16.8302	61.11	. Q	.	.	.	.
5.250	17.2528	61.37	. Q	.	.	.	.
5.333	17.6773	61.63	. Q	.	.	.	.
5.417	18.1035	61.89	. Q	.	.	.	.
5.500	18.5316	62.15	. Q	.	.	.	.
5.583	18.9615	62.42	. Q	.	.	.	.
5.667	19.3933	62.69	. Q	.	.	.	.
5.750	19.8269	62.97	. Q	.	.	.	.
5.833	20.2625	63.25	. Q	.	.	.	.
5.917	20.7001	63.53	. Q	.	.	.	.
6.000	21.1396	63.81	. Q	.	.	.	.
6.083	21.5811	64.10	. Q	.	.	.	.
6.167	22.0245	64.39	. Q	.	.	.	.
6.250	22.4701	64.69	. Q	.	.	.	.
6.333	22.9176	64.99	. Q	.	.	.	.
6.417	23.3673	65.29	. Q	.	.	.	.
6.500	23.8190	65.59	. QV	.	.	.	.
6.583	24.2729	65.91	. QV	.	.	.	.
6.667	24.7290	66.22	. QV	.	.	.	.
6.750	25.1872	66.54	. QV	.	.	.	.
6.833	25.6477	66.86	. QV	.	.	.	.
6.917	26.1104	67.18	. QV	.	.	.	.
7.000	26.5753	67.51	. Q	.	.	.	.
7.083	27.0426	67.85	. Q	.	.	.	.
7.167	27.5122	68.18	. Q	.	.	.	.
7.250	27.9842	68.53	. Q	.	.	.	.
7.333	28.4585	68.87	. Q	.	.	.	.
7.417	28.9353	69.23	. Q	.	.	.	.
7.500	29.4145	69.58	. Q	.	.	.	.
7.583	29.8963	69.95	. Q	.	.	.	.
7.667	30.3805	70.31	. Q	.	.	.	.
7.750	30.8673	70.69	. Q	.	.	.	.
7.833	31.3567	71.06	. Q	.	.	.	.
7.917	31.8487	71.44	. QV	.	.	.	.
8.000	32.3434	71.83	. QV	.	.	.	.
8.083	32.8409	72.23	. QV	.	.	.	.
8.167	33.3410	72.62	. QV	.	.	.	.
8.250	33.8440	73.03	. QV	.	.	.	.
8.333	34.3497	73.44	. QV	.	.	.	.
8.417	34.8584	73.86	. QV	.	.	.	.
8.500	35.3699	74.28	. QV	.	.	.	.
8.583	35.8845	74.71	. QV	.	.	.	.
8.667	36.4020	75.14	. QV	.	.	.	.
8.750	36.9226	75.59	. QV	.	.	.	.

8.833	37.4462	76.04	. QV	.	.	.	.
8.917	37.9731	76.49	. QV	.	.	.	.
9.000	38.5031	76.96	. QV	.	.	.	.
9.083	39.0363	77.43	. QV	.	.	.	.
9.167	39.5729	77.91	. Q V	.	.	.	.
9.250	40.1128	78.40	. Q V	.	.	.	.
9.333	40.6561	78.89	. Q V	.	.	.	.
9.417	41.2029	79.40	. Q V	.	.	.	.
9.500	41.7532	79.91	. Q V	.	.	.	.
9.583	42.3071	80.43	. Q V	.	.	.	.
9.667	42.8647	80.96	. Q V	.	.	.	.
9.750	43.4260	81.50	. Q V	.	.	.	.
9.833	43.9910	82.04	. Q V	.	.	.	.
9.917	44.5599	82.61	. Q V	.	.	.	.
10.000	45.1327	83.17	. Q V	.	.	.	.
10.083	45.7095	83.75	. Q V	.	.	.	.
10.167	46.2904	84.34	. Q V	.	.	.	.
10.250	46.8754	84.94	. Q V	.	.	.	.
10.333	47.4646	85.55	. Q V	.	.	.	.
10.417	48.0581	86.18	. Q V	.	.	.	.
10.500	48.6560	86.81	. Q V	.	.	.	.
10.583	49.2584	87.46	. Q V	.	.	.	.
10.667	49.8653	88.12	. Q V	.	.	.	.
10.750	50.4769	88.80	. Q V	.	.	.	.
10.833	51.0932	89.49	. Q V	.	.	.	.
10.917	51.7143	90.19	. Q V	.	.	.	.
11.000	52.3404	90.91	. Q V	.	.	.	.
11.083	52.9716	91.64	. Q V	.	.	.	.
11.167	53.6079	92.39	. Q V	.	.	.	.
11.250	54.2494	93.16	. Q V	.	.	.	.
11.333	54.8964	93.94	. Q V	.	.	.	.
11.417	55.5489	94.74	. Q V	.	.	.	.
11.500	56.2070	95.55	. Q V	.	.	.	.
11.583	56.8708	96.40	. Q V	.	.	.	.
11.667	57.5406	97.25	. Q V	.	.	.	.
11.750	58.2164	98.13	. Q V	.	.	.	.
11.833	58.8984	99.02	. Q V	.	.	.	.
11.917	59.5867	99.95	. Q V	.	.	.	.
12.000	60.2816	100.89	. Q V	.	.	.	.
12.083	60.9839	101.98	. Q V	.	.	.	.
12.167	61.6948	103.22	. Q V	.	.	.	.
12.250	62.4145	104.50	. Q V	.	.	.	.
12.333	63.1434	105.84	. Q V	.	.	.	.
12.417	63.8824	107.30	. Q V	.	.	.	.
12.500	64.6324	108.90	. Q V	.	.	.	.
12.583	65.3955	110.80	. Q V	.	.	.	.
12.667	66.1736	112.98	. Q V	.	.	.	.
12.750	66.9677	115.31	. Q V	.	.	.	.
12.833	67.7792	117.82	. Q V	.	.	.	.
12.917	68.6082	120.38	. Q V	.	.	.	.
13.000	69.4558	123.07	. Q V	.	.	.	.
13.083	70.3228	125.88	. Q V	.	.	.	.
13.167	71.2091	128.70	. Q V	.	.	.	.
13.250	72.1175	131.89	. Q V	.	.	.	.
13.333	73.0472	134.99	. Q V	.	.	.	.
13.417	74.0012	138.53	. Q V	.	.	.	.
13.500	74.9809	142.25	. Q V	.	.	.	.
13.583	75.9849	145.78	. Q V	.	.	.	.

13.667	77.0119	149.12	.	Q	V.	.	.	.		
13.750	78.0654	152.96	.	Q	V.	.	.	.		
13.833	79.1432	156.51	.	Q	V	.	.	.		
13.917	80.2454	160.03	.	Q	V	.	.	.		
14.000	81.3711	163.45	.	Q	V	.	.	.		
14.083	82.5219	167.09	.	Q	V	.	.	.		
14.167	83.6989	170.91	.	Q	V	.	.	.		
14.250	84.9033	174.87	.	Q	V	.	.	.		
14.333	86.1357	178.94	.	Q	V	.	.	.		
14.417	87.3973	183.20	.	Q	.V	.	.	.		
14.500	88.6900	187.70	.	Q	.V	.	.	.		
14.583	90.0183	192.87	.	Q	.V	.	.	.		
14.667	91.3869	198.73	.	Q	.V	.	.	.		
14.750	92.7985	204.96	.	Q	.V	.	.	.		
14.833	94.2562	211.66	.	Q	.V	.	.	.		
14.917	95.7608	218.47	.	Q	.V	.	.	.		
15.000	97.3141	225.55	.	Q	V	.	.	.		
15.083	98.9185	232.96	.	Q	V	.	.	.		
15.167	100.5743	240.42	.	Q	V	.	.	.		
15.250	102.2880	248.84	.	.	.QV	.	.	.		
15.333	104.0586	257.09	.	.	.Q	V	.	.		
15.417	105.8900	265.91	.	.	.Q	V	.	.		
15.500	107.7820	274.73	.	.	.	.QV	.	.
15.583	109.7320	283.14	.	.	.	.QV	.	.
15.667	111.7366	291.06	.	.	.	.Q	V	.
15.750	113.8055	300.41	.	.	.	.	.QV	.
15.833	115.9344	309.11	.	.	.	.	.QV	.
15.917	118.1208	317.47	.	.	.	.	.Q	.
16.000	120.3765	327.53	.	.	.	.	.QV	.
16.083	122.8668	361.59	.	.	.	.	.VQ	.
16.167	125.5733	392.98	.	.	.	.	.V	Q
16.250	128.3411	401.88	.	.	.	.	.	.VQ
16.333	131.2446	421.59V	Q	
16.417	134.3325	448.36V	Q.	
16.500	137.6887	487.33V	.Q	
16.583	141.4860	551.37V	.	Q
16.667	145.6977	611.54V	.	Q
16.750	150.0971	638.78V	.	Q
16.833	154.7338	673.25V.	.	Q.
16.917	159.4005	677.60V	.	Q
17.000	164.2444	703.34V	.	.Q
17.083	169.1877	717.76V	.	.Q
17.167	174.1714	723.64V	.	.Q
17.250	179.5898	786.76V	.	Q
17.333	184.8906	769.67V	.	Q
17.417	190.7067	844.51V	.	Q
17.500	196.6780	867.03V	.	Q
17.583	202.2249	805.42V	.	Q
17.667	207.4535	759.18V	.	Q
17.750	213.1413	825.87V	.	Q
17.833	218.2845	746.79V	.	Q
17.917	223.1759	710.23V	.	.Q
18.000	227.7401	662.73VQ.	.	.
18.083	231.9329	608.79Q	V.	.
18.167	235.7940	560.63Q	V.	.
18.250	239.5840	550.31Q	V	.
18.333	243.1464	517.26Q	V	.
18.417	246.4275	476.43Q	.V	.

18.500	249.4081	432.77	.	.	.	.	.	Q.	.	.V	.
18.583	252.1470	397.70	.	.	.	.	.	Q	.	.V	.
18.667	254.7465	377.44	.	.	.	.	.	Q	.	.V	.
18.750	257.2255	359.95	.	.	.	.	.	Q	.	.V	.
18.833	259.5720	340.71	.	.	.	.	.	Q	.	.V	.
18.917	261.7768	320.13	.	.	.	.	.	Q	.	.V	.
19.000	263.7715	289.64	.	.	.	.	.	Q	.	.V	.
19.083	265.6806	277.20	.	.	.	.	.	Q	.	.V	.
19.167	267.4618	258.63	.	.	.	.	.	.Q	.	.V	.
19.250	269.0936	236.94	.	.	.	.	.	Q	.	.V	.
19.333	270.6620	227.72	.	.	.	.	.	Q	.	.V	.
19.417	272.1677	218.63	.	.	.	.	.	Q.	.	.V	.
19.500	273.5896	206.46	.	.	.	.	.	Q.	.	.V	.
19.583	274.8251	179.39	.	.	.	.	.	Q	.	.V	.
19.667	275.9773	167.31	.	.	.	.	.	Q	.	.V	.
19.750	277.0840	160.69	.	.	.	.	.	Q	.	.V	.
19.833	278.1509	154.92	.	.	.	.	.	Q	.	.V	.
19.917	279.1787	149.24	.	.	.	.	.	Q	.	.V	.
20.000	280.1711	144.10	.	.	.	.	.	Q	.	.V	.
20.083	281.1306	139.31	.	.	.	.	.	Q	.	.V	.
20.167	282.0609	135.07	.	.	.	.	.	Q	.	.V	.
20.250	282.9637	131.10	.	.	.	.	.	Q	.	.V	.
20.333	283.8409	127.37	.	.	.	.	.	Q	.	.V	.
20.417	284.6938	123.84	.	.	.	.	.	Q	.	.V	.
20.500	285.5256	120.79	.	.	.	.	.	Q	.	.V	.
20.583	286.3395	118.18	.	.	.	.	.	Q	.	.V	.
20.667	287.1367	115.74	.	.	.	.	.	Q	.	.V	.
20.750	287.9175	113.38	.	.	.	.	.	Q	.	.V	.
20.833	288.6821	111.01	.	.	.	.	.	Q	.	.V	.
20.917	289.4307	108.70	.	.	.	.	.	Q	.	.V	.
21.000	290.1631	106.34	.	.	.	.	.	Q	.	.V	.
21.083	290.8748	103.35	.	.	.	.	.	Q	.	.V	.
21.167	291.5175	93.32	.	.	.	.	.	Q	.	.V	.
21.250	292.1463	91.29	.	.	.	.	.	Q	.	.V	.
21.333	292.7636	89.63	.	.	.	.	.	Q	.	.V	.
21.417	293.3704	88.11	.	.	.	.	.	Q	.	.V	.
21.500	293.9660	86.48	.	.	.	.	.	Q	.	.V	.
21.583	294.5515	85.02	.	.	.	.	.	Q	.	.V	.
21.667	295.1276	83.64	.	.	.	.	.	Q	.	.V	.
21.750	295.6945	82.32	.	.	.	.	.	Q	.	.V	.
21.833	296.2527	81.05	.	.	.	.	.	Q	.	.V	.
21.917	296.8024	79.82	.	.	.	.	.	Q	.	.V	.
22.000	297.3440	78.63	.	.	.	.	.	Q	.	.V	.
22.083	297.8776	77.48	.	.	.	.	.	Q	.	.V	.
22.167	298.4043	76.47	.	.	.	.	.	Q	.	.V	.
22.250	298.9242	75.50	.	.	.	.	.	Q	.	.V	.
22.333	299.4376	74.55	.	.	.	.	.	Q	.	.V	.
22.417	299.9448	73.64	.	.	.	.	.	Q	.	.V	.
22.500	300.4458	72.75	.	.	.	.	.	Q	.	.V	.
22.583	300.9410	71.90	.	.	.	.	.	Q	.	.V	.
22.667	301.4304	71.06	.	.	.	.	.	Q	.	.V	.
22.750	301.9142	70.26	.	.	.	.	.	Q	.	.V	.
22.833	302.3927	69.47	.	.	.	.	.	Q	.	.V	.
22.917	302.8659	68.71	.	.	.	.	.	Q	.	.V	.
23.000	303.3340	67.96	.	.	.	.	.	Q	.	.V	.
23.083	303.7971	67.24	.	.	.	.	.	Q	.	.V	.
23.167	304.2556	66.58	.	.	.	.	.	Q	.	.V	.
23.250	304.7097	65.93	.	.	.	.	.	Q	.	.V	.

23.333	305.1594	65.30	. Q	.	.	.	V .
23.417	305.6049	64.69	. Q	.	.	.	V .
23.500	306.0463	64.09	. Q	.	.	.	V .
23.583	306.4836	63.51	. Q	.	.	.	V .
23.667	306.9171	62.94	. Q	.	.	.	V .
23.750	307.3467	62.38	. Q	.	.	.	V .
23.833	307.7726	61.84	. Q	.	.	.	V .
23.917	308.1948	61.31	. Q	.	.	.	V .
24.000	308.6135	60.79	. Q	.	.	.	V .
24.083	309.0275	60.12	. Q	.	.	.	V .
24.167	309.4358	59.28	. Q	.	.	.	V .
24.250	309.8384	58.47	. Q	.	.	.	V .
24.333	310.2351	57.59	. Q	.	.	.	V .
24.417	310.6250	56.62	. Q	.	.	.	V .
24.500	311.0073	55.51	. Q	.	.	.	V .
24.583	311.3795	54.05	. Q	.	.	.	V .
24.667	311.7395	52.27	. Q	.	.	.	V .
24.750	312.0865	50.37	. Q	.	.	.	V .
24.833	312.4189	48.27	. Q	.	.	.	V .
24.917	312.7372	46.21	. Q	.	.	.	V .
25.000	313.0403	44.02	.Q	.	.	.	V .
25.083	313.3280	41.77	.Q	.	.	.	V .
25.167	313.6006	39.57	.Q	.	.	.	V .
25.250	313.8552	36.97	.Q	.	.	.	V .
25.333	314.0932	34.57	.Q	.	.	.	V .
25.417	314.3115	31.69	.Q	.	.	.	V .
25.500	314.5087	28.63	.Q	.	.	.	V .
25.583	314.6876	25.98	.Q	.	.	.	V .
25.667	314.8505	23.65	.Q	.	.	.	V .
25.750	314.9936	20.78	Q	.	.	.	V .
25.833	315.1204	18.42	Q	.	.	.	V .
25.917	315.2321	16.22	Q	.	.	.	V .
26.000	315.3304	14.26	Q	.	.	.	V .
26.083	315.4170	12.59	Q	.	.	.	V .
26.167	315.4940	11.18	Q	.	.	.	V .
26.250	315.5612	9.76	Q	.	.	.	V .
26.333	315.6197	8.48	Q	.	.	.	V .
26.417	315.6705	7.38	Q	.	.	.	V .
26.500	315.7151	6.48	Q	.	.	.	V .
26.583	315.7546	5.73	Q	.	.	.	V .
26.667	315.7893	5.05	Q	.	.	.	V .
26.750	315.8196	4.40	Q	.	.	.	V .
26.833	315.8458	3.80	Q	.	.	.	V .
26.917	315.8683	3.26	Q	.	.	.	V .
27.000	315.8879	2.85	Q	.	.	.	V .
27.083	315.9049	2.46	Q	.	.	.	V .
27.167	315.9195	2.12	Q	.	.	.	V .
27.250	315.9324	1.88	Q	.	.	.	V .
27.333	315.9437	1.63	Q	.	.	.	V .
27.417	315.9532	1.39	Q	.	.	.	V .
27.500	315.9612	1.16	Q	.	.	.	V .
27.583	315.9686	1.06	Q	.	.	.	V .
27.667	315.9755	1.00	Q	.	.	.	V .
27.750	315.9819	0.94	Q	.	.	.	V .
27.833	315.9880	0.88	Q	.	.	.	V .
27.917	315.9936	0.82	Q	.	.	.	V .
28.000	315.9988	0.75	Q	.	.	.	V .
28.083	316.0036	0.69	Q	.	.	.	V .

28.167	316.0079	0.63	Q	.	.	.	V .
28.250	316.0119	0.57	Q	.	.	.	V .
28.333	316.0154	0.51	Q	.	.	.	V .
28.417	316.0186	0.46	Q	.	.	.	V .
28.500	316.0213	0.40	Q	.	.	.	V .
28.583	316.0237	0.34	Q	.	.	.	V .
28.667	316.0256	0.28	Q	.	.	.	V .
28.750	316.0272	0.23	Q	.	.	.	V .
28.833	316.0284	0.17	Q	.	.	.	V .
28.917	316.0291	0.11	Q	.	.	.	V .
29.000	316.0295	0.06	Q	.	.	.	V .
29.083	316.0295	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%	660.0
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

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

Analysis prepared by:

Michael Baker International
5 Hutton Centre Drive Suite 500
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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133C *
* 5-YR EV APRIL 2019 CCHIU *

FILE NAME: EV0533CS.DAT
TIME/DATE OF STUDY: 08:12 04/09/2019

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 = 60992.500 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 = 0.832
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.22
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.60
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.11
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.63
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.85

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.308
30-MINUTE FACTOR = 0.363
1-HOUR FACTOR = 0.408
3-HOUR FACTOR = 0.754
6-HOUR FACTOR = 0.891
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.258

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.129	951.903
2	0.387	1903.794
3	0.645	1903.810
4	0.903	1903.800
5	1.161	1903.803
6	1.420	1903.801
7	1.678	1903.803
8	1.940	1935.080
9	2.295	2618.488
10	2.688	2897.089
11	3.080	2897.082
12	3.473	2897.101
13	3.870	2927.763
14	4.476	4469.643
15	5.199	5330.652
16	5.939	5459.473
17	6.848	6702.137
18	7.809	7091.571
19	8.949	8410.278
20	10.139	8775.119
21	11.273	8367.635
22	12.402	8329.113
23	13.534	8347.206
24	15.057	11234.995
25	16.576	11201.813
26	17.780	8885.407
27	18.985	8884.408
28	20.254	9363.870
29	21.758	11095.247
30	23.484	12732.148
31	24.931	10672.314
32	26.222	9518.954
33	27.516	9547.473
34	29.124	11858.976
35	30.775	12182.721
36	32.459	12414.791
37	34.535	15316.762
38	36.206	12322.483
39	37.439	9098.709
40	39.443	14782.106
41	41.557	15593.080
42	43.615	15180.404
43	45.627	14843.110
44	47.908	16819.516
45	50.317	17772.812
46	52.004	12441.678
47	53.641	12074.473
48	55.181	11363.193

49	56.824	12121.520
50	58.703	13858.299
51	60.915	16313.532
52	63.101	16126.947
53	64.829	12744.305
54	66.371	11374.336
55	67.880	11127.957
56	69.636	12954.863
57	71.077	10631.936
58	72.443	10076.937
59	73.904	10771.502
60	75.306	10344.081
61	76.503	8828.216
62	77.506	7401.605
63	78.510	7404.813
64	79.514	7404.813
65	80.548	7626.486
66	81.610	7832.233
67	82.603	7323.437
68	83.554	7015.661
69	84.456	6658.473
70	85.317	6345.801
71	86.136	6042.864
72	86.838	5178.400
73	87.533	5125.781
74	88.172	4714.343
75	88.706	3936.039
76	89.237	3920.112
77	89.768	3918.480
78	90.268	3687.240
79	90.744	3507.042
80	91.219	3508.618
81	91.694	3505.467
82	92.153	3384.247
83	92.584	3178.500
84	93.014	3170.509
85	93.445	3176.924
86	93.871	3145.015
87	94.204	2452.814
88	94.490	2114.760
89	94.776	2111.553
90	95.064	2117.968
91	95.350	2114.760
92	95.637	2114.704
93	95.921	2092.419
94	96.130	1546.986
95	96.307	1304.603
96	96.484	1304.547
97	96.662	1310.962
98	96.839	1304.603
99	97.016	1304.547
100	97.193	1307.755
101	97.370	1307.755
102	97.547	1304.603
103	97.724	1307.755
104	97.902	1307.755
105	98.018	861.200
106	98.061	315.768

107	98.104	312.616
108	98.146	312.560
109	98.189	315.824
110	98.230	306.201
111	98.273	315.768
112	98.315	312.560
113	98.358	312.616
114	98.400	312.560
115	98.443	312.616
116	98.485	312.560
117	98.527	309.409
118	98.569	312.616
119	98.612	315.768
120	98.654	312.560
121	98.696	306.201
122	98.739	318.976
123	98.781	306.201
124	98.824	318.976
125	98.865	306.201
126	98.909	318.976
127	98.950	306.201
128	98.993	312.616
129	99.036	318.976
130	99.078	312.616
131	99.121	312.616
132	99.163	312.616
133	99.205	312.616
134	99.248	312.616
135	99.290	312.616
136	99.333	312.616
137	99.375	312.616
138	99.417	312.616
139	99.460	312.616
140	99.502	312.616
141	99.544	312.616
142	99.587	312.616
143	99.629	312.616
144	99.672	312.616
145	99.714	312.616
146	99.756	312.616
147	99.799	312.616
148	99.841	312.616
149	99.883	312.616
150	99.926	312.616
151	99.968	312.616
152	100.000	234.223

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11209.1250
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 2363.7339

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.	700.0	1400.0	2100.0	2800.0
0.083	0.0045	0.65	Q	.	.	.	.
0.167	0.0180	1.96	Q	.	.	.	.
0.250	0.0405	3.27	Q	.	.	.	.
0.333	0.0720	4.58	Q	.	.	.	.
0.417	0.1126	5.89	Q	.	.	.	.
0.500	0.1623	7.22	Q	.	.	.	.
0.583	0.2211	8.54	Q	.	.	.	.
0.667	0.2892	9.89	Q	.	.	.	.
0.750	0.3699	11.71	Q	.	.	.	.
0.833	0.4644	13.73	Q	.	.	.	.
0.917	0.5729	15.75	Q	.	.	.	.
1.000	0.6954	17.78	Q	.	.	.	.
1.083	0.8320	19.84	Q	.	.	.	.
1.167	0.9902	22.96	Q	.	.	.	.
1.250	1.1739	26.68	Q	.	.	.	.
1.333	1.3839	30.50	Q	.	.	.	.
1.417	1.6262	35.18	Q	.	.	.	.
1.500	1.9026	40.14	Q	.	.	.	.
1.583	2.2195	46.01	Q	.	.	.	.
1.667	2.5787	52.16	Q	.	.	.	.
1.750	2.9785	58.05	Q	.	.	.	.
1.833	3.4187	63.92	Q	.	.	.	.
1.917	3.8997	69.83	Q	.	.	.	.
2.000	4.4350	77.73	VQ	.	.	.	.
2.083	5.0248	85.64	VQ	.	.	.	.
2.167	5.6583	91.98	VQ	.	.	.	.
2.250	6.3356	98.35	VQ	.	.	.	.
2.333	7.0591	105.06	VQ	.	.	.	.
2.417	7.8372	112.98	VQ	.	.	.	.
2.500	8.6777	122.04	VQ	.	.	.	.
2.583	9.5711	129.72	VQ	.	.	.	.
2.667	10.5121	136.64	VQ	.	.	.	.
2.750	11.5011	143.60	V Q	.	.	.	.
2.833	12.5490	152.16	V Q	.	.	.	.
2.917	13.6577	160.98	V Q	.	.	.	.
3.000	14.8284	169.98	V Q	.	.	.	.
3.083	16.0749	181.00	V Q	.	.	.	.
3.167	17.3834	190.00	V Q	.	.	.	.
3.250	18.7390	196.83	V Q	.	.	.	.
3.333	20.1685	207.57	V Q	.	.	.	.
3.417	21.6760	218.90	V Q	.	.	.	.
3.500	23.2599	229.98	V Q	.	.	.	.
3.583	24.9188	240.87	V Q	.	.	.	.
3.667	26.6623	253.15	V Q	.	.	.	.
3.750	28.4951	266.13	V Q	.	.	.	.
3.833	30.3925	275.49	V Q	.	.	.	.
3.917	32.3528	284.64	V Q	.	.	.	.

4.000	34.3730	293.34	V Q	.	.	.	.
4.083	36.4569	302.58	V Q	.	.	.	.
4.167	38.6129	313.05	V Q	.	.	.	.
4.250	40.8527	325.23	V Q	.	.	.	.
4.333	43.1759	337.33	V Q	.	.	.	.
4.417	45.5668	347.15	V Q	.	.	.	.
4.500	48.0191	356.07	V Q	.	.	.	.
4.583	50.5319	364.86	V Q	.	.	.	.
4.667	53.1141	374.93	V Q	.	.	.	.
4.750	55.7549	383.45	V Q	.	.	.	.
4.833	58.4520	391.62	V Q	.	.	.	.
4.917	61.2089	400.30	.V Q	.	.	.	.
5.000	64.0238	408.72	.V Q	.	.	.	.
5.083	66.8897	416.13	.V Q	.	.	.	.
5.167	69.8002	422.61	.V Q	.	.	.	.
5.250	72.7555	429.11	.V Q	.	.	.	.
5.333	75.7558	435.64	.V Q	.	.	.	.
5.417	78.8022	442.35	.V Q	.	.	.	.
5.500	81.8961	449.23	.V Q	.	.	.	.
5.583	85.0351	455.79	.V Q	.	.	.	.
5.667	88.2182	462.17	.V Q	.	.	.	.
5.750	91.4436	468.34	.V Q	.	.	.	.
5.833	94.7103	474.32	.V Q	.	.	.	.
5.917	98.0170	480.13	.V Q	.	.	.	.
6.000	101.3597	485.37	.V Q	.	.	.	.
6.083	104.7385	490.60	.V Q	.	.	.	.
6.167	108.1516	495.58	.V Q	.	.	.	.
6.250	111.5955	500.05	.V Q	.	.	.	.
6.333	115.0703	504.54	.V Q	.	.	.	.
6.417	118.5762	509.05	.V Q	.	.	.	.
6.500	122.1123	513.44	.V Q	.	.	.	.
6.583	125.6778	517.72	.V Q	.	.	.	.
6.667	129.2731	522.04	.V Q	.	.	.	.
6.750	132.8983	526.37	.V Q	.	.	.	.
6.833	136.5530	530.66	.V Q	.	.	.	.
6.917	140.2363	534.83	.V Q	.	.	.	.
7.000	143.9486	539.02	.V Q	.	.	.	.
7.083	147.6899	543.24	.V Q	.	.	.	.
7.167	151.4604	547.47	.V Q	.	.	.	.
7.250	155.2569	551.26	.V Q	.	.	.	.
7.333	159.0782	554.84	.V Q	.	.	.	.
7.417	162.9242	558.45	.V Q	.	.	.	.
7.500	166.7954	562.09	.V Q	.	.	.	.
7.583	170.6918	565.76	.V Q	.	.	.	.
7.667	174.6137	569.46	.V Q	.	.	.	.
7.750	178.5611	573.17	.V Q	.	.	.	.
7.833	182.5317	576.54	.V Q	.	.	.	.
7.917	186.5246	579.77	.V Q	.	.	.	.
8.000	190.5399	583.03	.V Q	.	.	.	.
8.083	194.5780	586.32	.V Q	.	.	.	.
8.167	198.6389	589.65	.V Q	.	.	.	.
8.250	202.7230	593.00	.V Q	.	.	.	.
8.333	206.8304	596.39	.V Q	.	.	.	.
8.417	210.9613	599.81	.V Q	.	.	.	.
8.500	215.1160	603.27	.V Q	.	.	.	.
8.583	219.2948	606.75	.V Q	.	.	.	.
8.667	223.4978	610.28	.V Q	.	.	.	.
8.750	227.7232	613.53	.V Q	.	.	.	.

8.833	231.9687	616.45	.	V	Q	.	.	.	.
8.917	236.2345	619.39	.	V	Q	.	.	.	.
9.000	240.5208	622.38	.	V	Q	.	.	.	.
9.083	244.8280	625.40	.	V	Q	.	.	.	.
9.167	249.1561	628.45	.	V	Q	.	.	.	.
9.250	253.5056	631.54	.	V	Q	.	.	.	.
9.333	257.8767	634.68	.	V	Q	.	.	.	.
9.417	262.2696	637.85	.	V	Q	.	.	.	.
9.500	266.6846	641.06	.	V	Q	.	.	.	.
9.583	271.1221	644.32	.	V	Q	.	.	.	.
9.667	275.5822	647.62	.	V	Q	.	.	.	.
9.750	280.0654	650.95	.	V	Q	.	.	.	.
9.833	284.5718	654.34	.	V	Q	.	.	.	.
9.917	289.1019	657.77	.	V	Q	.	.	.	.
10.000	293.6559	661.24	.	V	Q	.	.	.	.
10.083	298.2341	664.76	.	V	Q	.	.	.	.
10.167	302.8370	668.34	.	V	Q	.	.	.	.
10.250	307.4648	671.95	.	V	Q	.	.	.	.
10.333	312.1179	675.63	.	V	Q	.	.	.	.
10.417	316.7967	679.35	.	V	Q	.	.	.	.
10.500	321.5015	683.14	.	V	Q	.	.	.	.
10.583	326.2326	686.97	.	V	Q	.	.	.	.
10.667	330.9906	690.86	.	V	Q	.	.	.	.
10.750	335.7758	694.81	.	V	Q	.	.	.	.
10.833	340.5887	698.82	.	V	Q	.	.	.	.
10.917	345.4295	702.89	.	V	Q	.	.	.	.
11.000	350.2988	707.02	.	V	Q	.	.	.	.
11.083	355.1970	711.22	.	V	Q	.	.	.	.
11.167	360.1246	715.49	.	V	Q	.	.	.	.
11.250	365.0820	719.82	.	V	Q	.	.	.	.
11.333	370.0697	724.22	.	V	Q	.	.	.	.
11.417	375.0883	728.69	.	V	Q	.	.	.	.
11.500	380.1382	733.25	.	V	Q	.	.	.	.
11.583	385.2199	737.87	.	V	Q	.	.	.	.
11.667	390.3341	742.58	.	V	Q	.	.	.	.
11.750	395.4813	747.36	.	V	Q	.	.	.	.
11.833	400.6620	752.24	.	V	Q	.	.	.	.
11.917	405.8768	757.19	.	V	Q	.	.	.	.
12.000	411.1264	762.24	.	V	Q	.	.	.	.
12.083	416.4193	768.54	.	V	Q	.	.	.	.
12.167	421.7643	776.09	.	V	.Q	.	.	.	.
12.250	427.1618	783.72	.	V	.Q	.	.	.	.
12.333	432.6125	791.44	.	V	.Q	.	.	.	.
12.417	438.1170	799.25	.	V	.Q	.	.	.	.
12.500	443.6760	807.17	.	V	.Q	.	.	.	.
12.583	449.2901	815.17	.	V	.Q	.	.	.	.
12.667	454.9600	823.27	.	V	.Q	.	.	.	.
12.750	460.6909	832.14	.	V	.Q	.	.	.	.
12.833	466.4861	841.46	.	V	.Q	.	.	.	.
12.917	472.3461	850.87	.	V	.Q	.	.	.	.
13.000	478.2718	860.41	.	V	.Q	.	.	.	.
13.083	484.2642	870.09	.	V	.Q	.	.	.	.
13.167	490.3369	881.77	.	V	.Q	.	.	.	.
13.250	496.4981	894.60	.	V	.Q	.	.	.	.
13.333	502.7496	907.72	.	V	.Q	.	.	.	.
13.417	509.1026	922.44	.	V	.Q	.	.	.	.
13.500	515.5610	937.77	.	V	.Q	.	.	.	.
13.583	522.1368	954.81	.	V	.Q	.	.	.	.

13.667	528.8339	972.41	.	V	.Q	.	.	.	.
13.750	535.6494	989.62	.	V	.Q	.	.	.	.
13.833	542.5841	1006.91	.	V	.Q	.	.	.	.
13.917	549.6388	1024.34	.	V	.Q	.	.	.	.
14.000	556.8387	1045.43	.	V	.Q	.	.	.	.
14.083	564.1923	1067.74	.	V	.Q	.	.	.	.
14.167	571.6888	1088.49	.	V	.Q	.	.	.	.
14.250	579.3284	1109.28	.	V	.Q	.	.	.	.
14.333	587.1157	1130.72	.	V	.Q	.	.	.	.
14.417	595.0655	1154.30	.	V	.Q	.	.	.	.
14.500	603.1918	1179.94	.	V	.Q	.	.	.	.
14.583	611.4777	1203.11	.	V	.Q	.	.	.	.
14.667	619.9141	1224.97	.	V	.Q	.	.	.	.
14.750	628.5074	1247.75	.	V	.Q	.	.	.	.
14.833	637.2797	1273.73	.	V	.Q	.	.	.	.
14.917	646.2335	1300.10	.	V	.Q	.	.	.	.
15.000	655.3710	1326.77	.	.V	.Q	.	.	.	.
15.083	664.7167	1356.99	.	.V	.Q	.	.	.	.
15.167	674.2584	1385.45	.	.V	.Q	.	.	.	.
15.250	683.9757	1410.96	.	.V	.Q	.	.	.	.
15.333	693.9168	1443.45	.	.V	.Q	.	.	.	.
15.417	704.0872	1476.75	.	.V	.Q	.	.	.	.
15.500	714.4756	1508.39	.	.V	.Q	.	.	.	.
15.583	725.0908	1541.32	.	.V	.Q	.	.	.	.
15.667	735.9532	1577.22	.	.V	.Q	.	.	.	.
15.750	747.0639	1613.28	.	.V	.Q	.	.	.	.
15.833	758.3758	1642.48	.	.V	.Q	.	.	.	.
15.917	769.8917	1672.11	.	.V	.Q	.	.	.	.
16.000	781.6411	1706.02	.	.V	.Q	.	.	.	.
16.083	793.7818	1762.83	.	.V	.Q	.	.	.	.
16.167	806.2931	1816.64	.	.V	.Q	.	.	.	.
16.250	819.0287	1849.22	.	.V	.Q	.	.	.	.
16.333	831.9874	1881.60	.	.V	.Q	.	.	.	.
16.417	845.1584	1912.43	.	.V	.Q	.	.	.	.
16.500	858.5354	1942.34	.	.V	.Q	.	.	.	.
16.583	872.0934	1968.62	.	.V	.Q	.	.	.	.
16.667	885.8500	1997.47	.	.V	.Q	.	.	.	.
16.750	899.8813	2037.34	.	.V	.Q	.	.	.	.
16.833	914.1213	2067.64	.	.V	.Q	.	.	.	.
16.917	928.5164	2090.16	.	.V	.Q	.	.	.	.
17.000	943.0712	2113.36	.	.V	.Q	.	.	.	.
17.083	957.8203	2141.57	.	.V	.Q	.	.	.	.
17.167	972.9743	2200.37	.	.V	.Q	.	.	.	.
17.250	988.3818	2237.18	.	.V	.Q	.	.	.	.
17.333	1003.9403	2259.09	.	.V	.Q	.	.	.	.
17.417	1019.8469	2309.64	.	.V	.Q	.	.	.	.
17.500	1035.9995	2345.36	.	.V	.Q	.	.	.	.
17.583	1052.5450	2402.41	.	.V	.Q	.	.	.	.
17.667	1069.3046	2433.48	.	.V	.Q	.	.	.	.
17.750	1086.1410	2444.64	.	.V	.Q	.	.	.	.
17.833	1103.0745	2458.74	.	.V	.Q	.	.	.	.
17.917	1120.1661	2481.70	.	.V	.Q	.	.	.	.
18.000	1137.8730	2571.04	.	.V	.Q	.	.	.	.
18.083	1155.6588	2582.49	.	.V	.Q	.	.	.	.
18.167	1173.1129	2534.33	.	.V	.Q	.	.	.	.
18.250	1190.6541	2546.97	.	.V	.Q	.	.	.	.
18.333	1208.4088	2577.99	.	.V	.Q	.	.	.	.
18.417	1226.5074	2627.92	.	.V	.Q	.	.	.	.

18.500	1244.8809	2667.82	.	.	.V	.	Q	.
18.583	1262.9235	2619.79	.	.	.V	.	Q	.
18.667	1280.7609	2589.98	.	.	.V	.	Q	.
18.750	1298.5874	2588.42	.	.	.V	.	Q	.
18.833	1316.8138	2646.49	.	.	.V	.	Q	.
18.917	1335.1095	2656.53	.	.	.V	.	Q	.
19.000	1353.3741	2652.03	.	.	.V	.	Q	.
19.083	1371.9720	2700.42	.	.	.V	.	Q	.
19.167	1390.0045	2618.32	.	.	.V	.	Q	.
19.250	1407.5078	2541.48	.	.	.V	.	Q	.
19.333	1425.9530	2678.24	.	.	.V	.	Q	.
19.417	1444.4821	2690.41	.	.	.V	.	Q	.
19.500	1462.8501	2667.05	.	.	.V	.	Q	.
19.583	1481.0132	2637.27	.	.	.V	.	Q	.
19.667	1499.3901	2668.33	.	.	.V	.	Q	.
19.750	1517.8021	2673.43	.	.	.V	.	Q	.
19.833	1535.1936	2525.25	.	.	.V	.	Q	.
19.917	1552.4082	2499.56	.	.	.V	.	Q	.
20.000	1569.3770	2463.87	.	.	.V	.	Q	.
20.083	1586.4080	2472.91	.	.	.V	.	Q	.
20.167	1603.6614	2505.20	.	.	.V	.	Q	.
20.250	1621.2169	2549.07	.	.	.V	.	Q	.
20.333	1638.5192	2512.29	.	.	.V	.	Q	.
20.417	1655.0426	2399.21	.	.	.V	.	Q	.
20.500	1671.1705	2341.77	.	.	.V	.	Q	.
20.583	1687.1381	2318.48	.	.	.V	.	Q	.
20.667	1703.2628	2341.32	.	.	.V	.	Q	.
20.750	1718.8053	2256.76	.	.	.V	.	Q	.
20.833	1734.0818	2218.15	.	.	.V	.	Q	.
20.917	1749.2841	2207.38	.	.	.V	.	Q	.
21.000	1764.2330	2170.60	.	.	.V	.	Q	.
21.083	1778.6958	2100.00	.	.	.V	.	Q	.
21.167	1792.7073	2034.47	.	.	.V	.	Q	.
21.250	1806.5277	2006.73	.	.	.V	.	Q	.
21.333	1820.1162	1973.05	.	.	.V	.	Q	.
21.417	1833.5134	1945.28	.	.	.V	.	Q	.
21.500	1846.7101	1916.16	.	.	.V	.	Q	.
21.583	1859.5939	1870.72	.	.	.V	.	Q	.
21.667	1872.1643	1825.22	.	.	.V	.	Q	.
21.750	1884.4205	1779.60	.	.	.V	.	Q	.
21.833	1896.4160	1741.75	.	.	.V	.	Q	.
21.917	1908.1429	1702.75	.	.	.V	.	Q	.
22.000	1919.5153	1651.27	.	.	.V	.	Q	.
22.083	1930.6693	1619.58	.	.	.V	.	Q	.
22.167	1941.5389	1578.28	.	.	.V	.	Q	.
22.250	1952.0502	1526.22	.	.	.V	.	Q	.
22.333	1962.3267	1492.15	.	.	.V	.	Q	.
22.417	1972.3947	1461.87	.	.	.V	.	Q	.
22.500	1982.2231	1427.09	.	.	.V	.	Q	.
22.583	1991.8290	1394.76	.	.	.V	.	Q	.
22.667	2001.2324	1365.39	.	.	.V	.	Q	.
22.750	2010.4482	1338.14	.	.	.V	.	Q	.
22.833	2019.4554	1307.84	.	.	.V	.	Q	.
22.917	2028.2380	1275.23	.	.	.V	.	Q	.
23.000	2036.8413	1249.20	.	.	.V	.	Q	.
23.083	2045.2772	1224.89	.	.	.V	.	Q	.
23.167	2053.5540	1201.77	.	.	.V	.	Q	.
23.250	2061.5701	1163.93	.	.	.V	.	Q	.

23.333	2069.3914	1135.64	.	.	Q	.	V	.
23.417	2077.0750	1115.67	.	.	Q	.	V	.
23.500	2084.6267	1096.52	.	.	Q	.	V	.
23.583	2092.0454	1077.18	.	.	Q	.	V	.
23.667	2099.3271	1057.32	.	.	Q	.	V	.
23.750	2106.4666	1036.64	.	.	Q	.	V	.
23.833	2113.3816	1004.06	.	.	Q	.	V	.
23.917	2120.1326	980.25	.	.	Q	.	V	.
24.000	2126.7703	963.80	.	.	Q	.	V	.
24.083	2133.2988	947.95	.	.	Q	.	V	.
24.167	2139.7173	931.95	.	.	Q	.	V	.
24.250	2146.0359	917.47	.	.	Q	.	V	.
24.333	2152.2581	903.47	.	.	Q	.	V	.
24.417	2158.3848	889.60	.	.	Q	.	V	.
24.500	2164.4189	876.18	.	.	Q	.	V	.
24.583	2170.3604	862.68	.	.	Q	.	V	.
24.667	2176.2014	848.13	.	.	Q	.	V	.
24.750	2181.8616	821.86	.	.	Q	.	V	.
24.833	2187.3350	794.72	.	.	Q	.	V	.
24.917	2192.7207	782.01	.	.	Q	.	V	.
25.000	2198.0220	769.76	.	.	Q	.	V	.
25.083	2203.2371	757.24	.	.	Q	.	V	.
25.167	2208.3521	742.71	.	.	Q	.	V	.
25.250	2213.3723	728.95	.	.	Q	.	V	.
25.333	2218.2986	715.28	.	.	Q	.	V	.
25.417	2223.1260	700.95	.	.	Q	.	V	.
25.500	2227.8530	686.39	.	.	Q	.	V	.
25.583	2232.4746	671.05	.	.	Q	.	V	.
25.667	2236.9893	655.52	.	.	Q	.	V	.
25.750	2241.4033	640.91	.	.	Q	.	V	.
25.833	2245.7278	627.91	.	.	Q	.	V	.
25.917	2249.9661	615.39	.	.	Q	.	V	.
26.000	2254.1045	600.89	.	.	Q	.	V	.
26.083	2258.1438	586.50	.	.	Q	.	V	.
26.167	2262.0994	574.34	.	.	Q	.	V	.
26.250	2265.9678	561.71	.	.	Q	.	V	.
26.333	2269.7522	549.50	.	.	Q	.	V	.
26.417	2273.4409	535.60	.	.	Q	.	V	.
26.500	2277.0315	521.37	.	.	Q	.	V	.
26.583	2280.5303	508.04	.	.	Q	.	V	.
26.667	2283.9463	496.02	.	.	Q	.	V	.
26.750	2287.2817	484.32	.	.	Q	.	V	.
26.833	2290.5293	471.54	.	.	Q	.	V	.
26.917	2293.6892	458.82	.	.	Q	.	V	.
27.000	2296.7615	446.09	.	.	Q	.	V	.
27.083	2299.7334	431.52	.	.	Q	.	V	.
27.167	2302.6199	419.12	.	.	Q	.	V	.
27.250	2305.4370	409.06	.	.	Q	.	V	.
27.333	2308.1589	395.21	.	.	Q	.	V	.
27.417	2310.7825	380.95	.	.	Q	.	V	.
27.500	2313.3105	367.08	.	.	Q	.	V	.
27.583	2315.7456	353.59	.	.	Q	.	V	.
27.667	2318.0793	338.85	.	.	Q	.	V	.
27.750	2320.3079	323.59	.	.	Q	.	V	.
27.833	2322.4573	312.10	.	.	Q	.	V	.
27.917	2324.5300	300.96	.	.	Q	.	V	.
28.000	2326.5310	290.54	.	.	Q	.	V	.
28.083	2328.4600	280.08	.	.	Q	.	V	.

28.167	2330.3088	268.47	. Q	.	.	.	V.
28.250	2332.0667	255.23	. Q	.	.	.	V.
28.333	2333.7346	242.19	. Q	.	.	.	V.
28.417	2335.3301	231.65	. Q	.	.	.	V.
28.500	2336.8589	221.97	. Q	.	.	.	V.
28.583	2338.3208	212.26	. Q	.	.	.	V.
28.667	2339.6931	199.25	. Q	.	.	.	V.
28.750	2340.9626	184.34	. Q	.	.	.	V.
28.833	2342.1733	175.80	. Q	.	.	.	V.
28.917	2343.3228	166.90	. Q	.	.	.	V.
29.000	2344.4131	158.31	. Q	.	.	.	V.
29.083	2345.4492	150.46	. Q	.	.	.	V.
29.167	2346.4382	143.61	. Q	.	.	.	V.
29.250	2347.3801	136.77	.Q	.	.	.	V.
29.333	2348.2751	129.96	.Q	.	.	.	V.
29.417	2349.1223	123.01	.Q	.	.	.	V.
29.500	2349.9209	115.95	.Q	.	.	.	V.
29.583	2350.6733	109.27	.Q	.	.	.	V.
29.667	2351.3821	102.92	.Q	.	.	.	V.
29.750	2352.0510	97.13	.Q	.	.	.	V.
29.833	2352.6819	91.60	.Q	.	.	.	V.
29.917	2353.2764	86.33	.Q	.	.	.	V.
30.000	2353.8391	81.70	.Q	.	.	.	V.
30.083	2354.3704	77.13	.Q	.	.	.	V.
30.167	2354.8723	72.89	.Q	.	.	.	V.
30.250	2355.3489	69.21	Q	.	.	.	V.
30.333	2355.8005	65.57	Q	.	.	.	V.
30.417	2356.2273	61.96	Q	.	.	.	V.
30.500	2356.6304	58.54	Q	.	.	.	V.
30.583	2357.0110	55.26	Q	.	.	.	V.
30.667	2357.3699	52.10	Q	.	.	.	V.
30.750	2357.7092	49.26	Q	.	.	.	V.
30.833	2358.0298	46.53	Q	.	.	.	V.
30.917	2358.3325	43.96	Q	.	.	.	V.
31.000	2358.6177	41.42	Q	.	.	.	V.
31.083	2358.8855	38.90	Q	.	.	.	V.
31.167	2359.1362	36.42	Q	.	.	.	V.
31.250	2359.3733	34.44	Q	.	.	.	V.
31.333	2359.5986	32.70	Q	.	.	.	V.
31.417	2359.8120	30.99	Q	.	.	.	V.
31.500	2360.0137	29.28	Q	.	.	.	V.
31.583	2360.2036	27.59	Q	.	.	.	V.
31.667	2360.3821	25.92	Q	.	.	.	V.
31.750	2360.5493	24.28	Q	.	.	.	V.
31.833	2360.7078	23.02	Q	.	.	.	V.
31.917	2360.8589	21.94	Q	.	.	.	V.
32.000	2361.0027	20.86	Q	.	.	.	V.
32.083	2361.1392	19.80	Q	.	.	.	V.
32.167	2361.2683	18.75	Q	.	.	.	V.
32.250	2361.3901	17.70	Q	.	.	.	V.
32.333	2361.5049	16.67	Q	.	.	.	V.
32.417	2361.6125	15.64	Q	.	.	.	V.
32.500	2361.7131	14.62	Q	.	.	.	V.
32.583	2361.8069	13.61	Q	.	.	.	V.
32.667	2361.8938	12.60	Q	.	.	.	V.
32.750	2361.9758	11.91	Q	.	.	.	V.
32.833	2362.0557	11.60	Q	.	.	.	V.
32.917	2362.1335	11.29	Q	.	.	.	V.

33.000	2362.2092	10.99	Q	.	.	.	V.
33.083	2362.2827	10.69	Q	.	.	.	V.
33.167	2362.3542	10.39	Q	.	.	.	V.
33.250	2362.4238	10.10	Q	.	.	.	V.
33.333	2362.4915	9.81	Q	.	.	.	V.
33.417	2362.5571	9.52	Q	.	.	.	V.
33.500	2362.6206	9.23	Q	.	.	.	V.
33.583	2362.6821	8.95	Q	.	.	.	V.
33.667	2362.7419	8.67	Q	.	.	.	V.
33.750	2362.7998	8.40	Q	.	.	.	V.
33.833	2362.8557	8.12	Q	.	.	.	V.
33.917	2362.9097	7.85	Q	.	.	.	V.
34.000	2362.9619	7.58	Q	.	.	.	V.
34.083	2363.0122	7.31	Q	.	.	.	V.
34.167	2363.0608	7.04	Q	.	.	.	V.
34.250	2363.1074	6.79	Q	.	.	.	V.
34.333	2363.1523	6.52	Q	.	.	.	V.
34.417	2363.1956	6.27	Q	.	.	.	V.
34.500	2363.2368	6.00	Q	.	.	.	V.
34.583	2363.2764	5.75	Q	.	.	.	V.
34.667	2363.3142	5.50	Q	.	.	.	V.
34.750	2363.3503	5.25	Q	.	.	.	V.
34.833	2363.3848	5.00	Q	.	.	.	V.
34.917	2363.4175	4.75	Q	.	.	.	V.
35.000	2363.4485	4.51	Q	.	.	.	V.
35.083	2363.4778	4.26	Q	.	.	.	V.
35.167	2363.5054	4.02	Q	.	.	.	V.
35.250	2363.5315	3.78	Q	.	.	.	V.
35.333	2363.5559	3.55	Q	.	.	.	V.
35.417	2363.5786	3.31	Q	.	.	.	V.
35.500	2363.5999	3.07	Q	.	.	.	V.
35.583	2363.6194	2.84	Q	.	.	.	V.
35.667	2363.6375	2.61	Q	.	.	.	V.
35.750	2363.6538	2.38	Q	.	.	.	V.
35.833	2363.6687	2.15	Q	.	.	.	V.
35.917	2363.6819	1.93	Q	.	.	.	V.
36.000	2363.6936	1.70	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%	1460.0
20%	1160.0
30%	735.0
40%	565.0
50%	460.0
60%	375.0
70%	310.0
80%	235.0
90%	165.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134U *
* 5-YR EV APRIL 2019 CCHIU *

FILE NAME: EV0534US.DAT
TIME/DATE OF STUDY: 08:13 04/09/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 62698.000 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.828 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.476
LOW LOSS FRACTION = 0.830
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.22
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.60
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.10
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.62
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.83

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.304
30-MINUTE FACTOR = 0.358
1-HOUR FACTOR = 0.405
3-HOUR FACTOR = 0.750
6-HOUR FACTOR = 0.890
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.177

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.124	943.240
2	0.373	1886.492
3	0.622	1886.483
4	0.871	1886.483
5	1.120	1886.489
6	1.368	1886.483
7	1.617	1886.485
8	1.866	1886.486
9	2.175	2341.155
10	2.553	2869.998
11	2.932	2870.736
12	3.310	2870.730
13	3.689	2870.741
14	4.141	3425.890
15	4.821	5157.572
16	5.518	5282.181
17	6.286	5826.042
18	7.199	6919.302
19	8.163	7312.914
20	9.307	8673.645
21	10.438	8579.327
22	11.527	8255.923
23	12.616	8253.319
24	13.721	8382.312
25	15.266	11716.072
26	16.673	10667.676
27	17.834	8803.569
28	18.995	8803.555
29	20.215	9246.614
30	21.656	10929.910
31	23.314	12574.953
32	24.756	10933.193
33	26.000	9432.517
34	27.244	9432.517
35	28.686	10934.914
36	30.345	12574.418
37	31.854	11445.124
38	33.842	15070.696
39	35.624	13512.993
40	36.928	9885.556
41	38.342	10725.309
42	40.595	17086.486
43	42.498	14427.778
44	44.495	15139.567
45	46.473	15002.665
46	48.841	17949.178
47	50.893	15561.758
48	52.476	12004.694

49	54.040	11860.937
50	55.509	11138.591
51	57.148	12428.158
52	58.989	13955.402
53	61.178	16600.920
54	63.236	15604.307
55	64.884	12497.028
56	66.370	11266.555
57	67.818	10981.701
58	69.514	12854.195
59	70.934	10768.233
60	72.235	9869.357
61	73.642	10668.731
62	75.004	10326.085
63	76.237	9350.673
64	77.216	7418.592
65	78.183	7335.288
66	79.151	7338.701
67	80.129	7418.650
68	81.150	7738.330
69	82.150	7583.639
70	83.073	6995.129
71	83.979	6870.982
72	84.819	6374.396
73	85.648	6285.885
74	86.386	5593.766
75	87.056	5078.378
76	87.725	5075.023
77	88.303	4377.697
78	88.815	3884.524
79	89.327	3882.789
80	89.838	3877.640
81	90.314	3610.719
82	90.773	3474.598
83	91.231	3476.333
84	91.689	3472.862
85	92.133	3364.104
86	92.548	3151.447
87	92.963	3139.587
88	93.378	3149.769
89	93.792	3139.530
90	94.138	2622.580
91	94.414	2095.276
92	94.691	2095.334
93	94.967	2098.689
94	95.244	2095.334
95	95.520	2095.334
96	95.797	2098.689
97	96.042	1860.635
98	96.216	1316.323
99	96.386	1292.604
100	96.558	1299.315
101	96.728	1292.604
102	96.898	1292.547
103	97.070	1299.373
104	97.240	1289.134
105	97.411	1299.373
106	97.582	1292.604

107	97.752	1292.547
108	97.924	1299.373
109	98.022	748.292
110	98.063	312.970
111	98.104	306.085
112	98.145	312.970
113	98.186	306.143
114	98.227	312.912
115	98.267	306.143
116	98.308	312.912
117	98.349	306.143
118	98.390	312.970
119	98.431	309.499
120	98.471	306.143
121	98.513	312.970
122	98.553	306.085
123	98.594	309.556
124	98.635	312.912
125	98.675	306.143
126	98.717	312.970
127	98.757	306.085
128	98.797	306.143
129	98.840	319.738
130	98.879	299.375
131	98.920	312.912
132	98.962	312.912
133	99.002	306.143
134	99.042	306.143
135	99.083	306.143
136	99.123	306.143
137	99.163	306.143
138	99.204	306.143
139	99.244	306.143
140	99.285	306.143
141	99.325	306.143
142	99.365	306.143
143	99.406	306.143
144	99.446	306.143
145	99.486	306.143
146	99.527	306.143
147	99.567	306.143
148	99.608	306.143
149	99.648	306.143
150	99.688	306.143
151	99.729	306.143
152	99.769	306.143
153	99.809	306.143
154	99.850	306.143
155	99.890	306.143
156	99.931	306.143
157	99.971	306.143
158	100.000	220.351

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11409.3555
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 2433.3591

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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.	700.0	1400.0	2100.0	2800.0
0.083	0.0045	0.65	Q	.	.	.	.
0.167	0.0179	1.95	Q	.	.	.	.
0.250	0.0402	3.25	Q	.	.	.	.
0.333	0.0716	4.55	Q	.	.	.	.
0.417	0.1120	5.86	Q	.	.	.	.
0.500	0.1614	7.18	Q	.	.	.	.
0.583	0.2199	8.49	Q	.	.	.	.
0.667	0.2874	9.81	Q	.	.	.	.
0.750	0.3663	11.45	Q	.	.	.	.
0.833	0.4590	13.46	Q	.	.	.	.
0.917	0.5655	15.47	Q	.	.	.	.
1.000	0.6859	17.49	Q	.	.	.	.
1.083	0.8203	19.51	Q	.	.	.	.
1.167	0.9713	21.92	Q	.	.	.	.
1.250	1.1472	25.53	Q	.	.	.	.
1.333	1.3485	29.24	Q	.	.	.	.
1.417	1.5781	33.33	Q	.	.	.	.
1.500	1.8410	38.18	Q	.	.	.	.
1.583	2.1394	43.32	Q	.	.	.	.
1.667	2.4797	49.41	Q	.	.	.	.
1.750	2.8616	55.45	Q	.	.	.	.
1.833	3.2837	61.29	Q	.	.	.	.
1.917	3.7462	67.15	Q	.	.	.	.
2.000	4.2497	73.11	VQ	.	.	.	.
2.083	4.8102	81.38	VQ	.	.	.	.
2.167	5.4229	88.96	VQ	.	.	.	.
2.250	6.0791	95.28	VQ	.	.	.	.
2.333	6.7789	101.62	VQ	.	.	.	.
2.417	7.5247	108.29	VQ	.	.	.	.
2.500	8.3245	116.13	VQ	.	.	.	.
2.583	9.1862	125.13	VQ	.	.	.	.
2.667	10.1024	133.02	VQ	.	.	.	.
2.750	11.0660	139.92	VQ	.	.	.	.
2.833	12.0772	146.83	V Q	.	.	.	.
2.917	13.1433	154.80	V Q	.	.	.	.
3.000	14.2723	163.92	V Q	.	.	.	.
3.083	15.4589	172.30	V Q	.	.	.	.
3.167	16.7206	183.19	V Q	.	.	.	.
3.250	18.0501	193.05	V Q	.	.	.	.
3.333	19.4306	200.45	V Q	.	.	.	.
3.417	20.8663	208.45	V Q	.	.	.	.
3.500	22.3873	220.86	V Q	.	.	.	.
3.583	23.9814	231.47	V Q	.	.	.	.
3.667	25.6523	242.61	V Q	.	.	.	.
3.750	27.3994	253.68	V Q	.	.	.	.
3.833	29.2371	266.83	V Q	.	.	.	.
3.917	31.1542	278.37	V Q	.	.	.	.

4.000	33.1344	287.51	V	Q	.	.	.	.
4.083	35.1770	296.59	V	Q	.	.	.	.
4.167	37.2789	305.20	V	Q	.	.	.	.
4.250	39.4464	314.73	V	Q	.	.	.	.
4.333	41.6871	325.34	V	Q	.	.	.	.
4.417	44.0135	337.80	V	Q	.	.	.	.
4.500	46.4214	349.63	V	Q	.	.	.	.
4.583	48.8964	359.36	V	Q	.	.	.	.
4.667	51.4328	368.28	V	Q	.	.	.	.
4.750	54.0295	377.04	V	Q	.	.	.	.
4.833	56.6956	387.12	V	Q	.	.	.	.
4.917	59.4215	395.81	V	Q	.	.	.	.
5.000	62.2033	403.91	.V	Q	.	.	.	.
5.083	65.0448	412.59	.V	Q	.	.	.	.
5.167	67.9448	421.08	.V	Q	.	.	.	.
5.250	70.8988	428.92	.V	Q	.	.	.	.
5.333	73.8979	435.47	.V	Q	.	.	.	.
5.417	76.9419	441.99	.V	Q	.	.	.	.
5.500	80.0311	448.55	.V	Q	.	.	.	.
5.583	83.1660	455.19	.V	Q	.	.	.	.
5.667	86.3483	462.08	.V	Q	.	.	.	.
5.750	89.5776	468.89	.V	Q	.	.	.	.
5.833	92.8512	475.33	.V	Q	.	.	.	.
5.917	96.1688	481.71	.V	Q	.	.	.	.
6.000	99.5282	487.79	.V	Q	.	.	.	.
6.083	102.9292	493.83	.V	Q	.	.	.	.
6.167	106.3688	499.43	.V	Q	.	.	.	.
6.250	109.8447	504.70	.V	Q	.	.	.	.
6.333	113.3571	510.00	.V	Q	.	.	.	.
6.417	116.9029	514.84	.V	Q	.	.	.	.
6.500	120.4799	519.39	.V	Q	.	.	.	.
6.583	124.0884	523.95	.V	Q	.	.	.	.
6.667	127.7284	528.54	.V	Q	.	.	.	.
6.750	131.3990	532.96	.V	Q	.	.	.	.
6.833	135.0996	537.33	.V	Q	.	.	.	.
6.917	138.8305	541.72	.V	Q	.	.	.	.
7.000	142.5919	546.15	.V	Q	.	.	.	.
7.083	146.3834	550.52	.V	Q	.	.	.	.
7.167	150.2042	554.78	.V	Q	.	.	.	.
7.250	154.0544	559.06	.V	Q	.	.	.	.
7.333	157.9344	563.38	.V	Q	.	.	.	.
7.417	161.8443	567.71	.V	Q	.	.	.	.
7.500	165.7818	571.73	.V	Q	.	.	.	.
7.583	169.7447	575.41	.V	Q	.	.	.	.
7.667	173.7331	579.12	.V	Q	.	.	.	.
7.750	177.7473	582.86	.V	Q	.	.	.	.
7.833	181.7875	586.63	.V	Q	.	.	.	.
7.917	185.8538	590.43	.V	Q	.	.	.	.
8.000	189.9466	594.27	.V	Q	.	.	.	.
8.083	194.0648	597.97	.V	Q	.	.	.	.
8.167	198.2063	601.34	.V	Q	.	.	.	.
8.250	202.3709	604.71	.V	Q	.	.	.	.
8.333	206.5591	608.13	.V	Q	.	.	.	.
8.417	210.7710	611.57	.V	Q	.	.	.	.
8.500	215.0069	615.05	.V	Q	.	.	.	.
8.583	219.2669	618.55	.V	Q	.	.	.	.
8.667	223.5513	622.10	.V	Q	.	.	.	.
8.750	227.8604	625.68	.V	Q	.	.	.	.

8.833	232.1945	629.30	.V	Q	.	.	.	.
8.917	236.5536	632.95	.V	Q	.	.	.	.
9.000	240.9383	636.65	.V	Q	.	.	.	.
9.083	245.3460	640.00	.V	Q	.	.	.	.
9.167	249.7750	643.10	.V	Q	.	.	.	.
9.250	254.2256	646.22	.V	Q	.	.	.	.
9.333	258.6980	649.40	.V	Q	.	.	.	.
9.417	263.1925	652.60	.V	Q	.	.	.	.
9.500	267.7094	655.85	.V	Q	.	.	.	.
9.583	272.2488	659.13	.V	Q	.	.	.	.
9.667	276.8113	662.47	.V	Q	.	.	.	.
9.750	281.3970	665.84	.V	Q	.	.	.	.
9.833	286.0063	669.27	.V	Q	.	.	.	.
9.917	290.6395	672.73	.V	Q	.	.	.	.
10.000	295.2968	676.25	.V	Q	.	.	.	.
10.083	299.9786	679.80	.V	Q	.	.	.	.
10.167	304.6853	683.41	.V	Q	.	.	.	.
10.250	309.4172	687.06	.V	Q	.	.	.	.
10.333	314.1746	690.78	.V	Q	.	.	.	.
10.417	318.9579	694.54	.V	Q	.	.	.	.
10.500	323.7676	698.36	.V	Q	.	.	.	.
10.583	328.6038	702.22	.V	Q	.	.	.	.
10.667	333.4672	706.16	.V	Q	.	.	.	.
10.750	338.3579	710.14	.V	Q	.	.	.	.
10.833	343.2766	714.19	.V	Q	.	.	.	.
10.917	348.2234	718.29	.V	Q	.	.	.	.
11.000	353.1991	722.47	.V	Q	.	.	.	.
11.083	358.2039	726.69	.V	Q	.	.	.	.
11.167	363.2383	731.00	.V	Q	.	.	.	.
11.250	368.3027	735.35	.V	Q	.	.	.	.
11.333	373.3977	739.80	.V	Q	.	.	.	.
11.417	378.5237	744.30	.V	Q	.	.	.	.
11.500	383.6814	748.89	.V	Q	.	.	.	.
11.583	388.8711	753.54	.V	Q	.	.	.	.
11.667	394.0934	758.29	.V	Q	.	.	.	.
11.750	399.3489	763.10	.V	Q	.	.	.	.
11.833	404.6383	768.01	.V	Q	.	.	.	.
11.917	409.9619	772.99	.V	.Q	.	.	.	.
12.000	415.3206	778.08	.V	.Q	.	.	.	.
12.083	420.7228	784.40	.V	.Q	.	.	.	.
12.167	426.1774	792.00	.V	.Q	.	.	.	.
12.250	431.6847	799.66	.V	.Q	.	.	.	.
12.333	437.2455	807.43	.V	.Q	.	.	.	.
12.417	442.8604	815.28	.V	.Q	.	.	.	.
12.500	448.5300	823.23	.V	.Q	.	.	.	.
12.583	454.2550	831.27	.V	.Q	.	.	.	.
12.667	460.0361	839.42	.V	.Q	.	.	.	.
12.750	465.8779	848.22	.V	.Q	.	.	.	.
12.833	471.7856	857.80	.V	.Q	.	.	.	.
12.917	477.7599	867.47	.V	.Q	.	.	.	.
13.000	483.8017	877.26	.V	.Q	.	.	.	.
13.083	489.9116	887.15	.V	.Q	.	.	.	.
13.167	496.0948	897.80	.V	.Q	.	.	.	.
13.250	502.3657	910.53	.V	.Q	.	.	.	.
13.333	508.7263	923.56	.V	.Q	.	.	.	.
13.417	515.1818	937.34	.V	.Q	.	.	.	.
13.500	521.7425	952.61	.V	.Q	.	.	.	.
13.583	528.4123	968.45	.V	.Q	.	.	.	.

13.667	535.2037	986.12	.	V	.	Q	.	.	.
13.750	542.1166	1003.75	.	V	.	Q	.	.	.
13.833	549.1492	1021.13	.	V	.	Q	.	.	.
13.917	556.3021	1038.60	.	V	.	Q	.	.	.
14.000	563.5775	1056.39	.	V	.	Q	.	.	.
14.083	571.0122	1079.52	.	V	.	Q	.	.	.
14.167	578.6060	1102.62	.	V	.	Q	.	.	.
14.250	586.3431	1123.43	.	V	.	Q	.	.	.
14.333	594.2241	1144.32	.	V	.	Q	.	.	.
14.417	602.2529	1165.78	.	V	.	Q	.	.	.
14.500	610.4445	1189.41	.	V	.	Q	.	.	.
14.583	618.8127	1215.07	.	V	.	Q	.	.	.
14.667	627.3444	1238.80	.	V	.	Q	.	.	.
14.750	636.0305	1261.22	.	V	.	Q	.	.	.
14.833	644.8762	1284.38	.	V	.	Q	.	.	.
14.917	653.8939	1309.37	.	V	.	Q	.	.	.
15.000	663.0980	1336.43	.	V	.	Q	.	.	.
15.083	672.4785	1362.06	.	.V	.	Q	.	.	.
15.167	682.0714	1392.88	.	.V	.	Q	.	.	.
15.250	691.8770	1423.78	.	.V	.	Q	.	.	.
15.333	701.8652	1450.30	.	.V	.	Q	.	.	.
15.417	712.0363	1476.83	.	.V	.	Q	.	.	.
15.500	722.4429	1511.05	.	.V	.	Q	.	.	.
15.583	733.0664	1542.53	.	.V	.	Q	.	.	.
15.667	743.9252	1576.70	.	.V	.	Q	.	.	.
15.750	755.0140	1610.09	.	.V	.	Q	.	.	.
15.833	766.3528	1646.39	.	.V	.	Q	.	.	.
15.917	777.9270	1680.57	.	.V	.	Q	.	.	.
16.000	789.7188	1712.16	.	.V	.	Q	.	.	.
16.083	801.9002	1768.74	.	.V	.	Q	.	.	.
16.167	814.4383	1820.53	.	.V	.	Q	.	.	.
16.250	827.1701	1848.65	.	.V	.	Q	.	.	.
16.333	840.1057	1878.25	.	.V	.	Q	.	.	.
16.417	853.2751	1912.21	.	.V	.	Q	.	.	.
16.500	866.6859	1947.24	.	.V	.	Q	.	.	.
16.583	880.3081	1977.94	.	.V	.	Q	.	.	.
16.667	894.1235	2005.99	.	.V	.	Q	.	.	.
16.750	908.1860	2041.88	.	.V	.	Q	.	.	.
16.833	922.5062	2079.29	.	.V	.	Q	.	.	.
16.917	936.9833	2102.07	.	.V	.	Q	.	.	.
17.000	951.6149	2124.50	.	.V	.	Q	.	.	.
17.083	966.4084	2148.02	.	.V	.	Q	.	.	.
17.167	981.4908	2189.97	.	.V	.	Q	.	.	.
17.250	997.0189	2254.69	.	.V	.	Q	.	.	.
17.333	1012.6828	2274.39	.	.V	.	Q	.	.	.
17.417	1028.5242	2300.17	.	.V	.	Q	.	.	.
17.500	1044.7014	2348.93	.	.V	.	Q	.	.	.
17.583	1061.1211	2384.14	.	.V	.	Q	.	.	.
17.667	1077.9318	2440.91	.	.V	.	Q	.	.	.
17.750	1094.8699	2459.41	.	.V	.	Q	.	.	.
17.833	1111.9126	2474.61	.	.V	.	Q	.	.	.
17.917	1129.1001	2495.62	.	.V	.	Q	.	.	.
18.000	1146.4677	2521.78	.	.V	.	Q	.	.	.
18.083	1164.4983	2618.05	.	.V	.	Q	.	.	.
18.167	1182.4304	2603.75	.	.V	.	Q	.	.	.
18.250	1200.1212	2568.70	.	.V	.	Q	.	.	.
18.333	1217.8834	2579.07	.	.V	.	Q	.	.	.
18.417	1235.8719	2611.93	.	.V	.	Q	.	.	.

18.500	1254.2053	2662.01	.	.	.	V	.	Q	.
18.583	1272.8029	2700.36	.	.	.	V	.	Q	.
18.667	1291.1418	2662.83	.	.	.	.V	.	Q	.
18.750	1309.2557	2630.14	.	.	.	.V	.	Q	.
18.833	1327.3489	2627.13	.	.	.	.V	.	Q	.
18.917	1345.7032	2665.05	.	.	.	.V	.	Q	.
19.000	1364.3215	2703.37	.	.	.	.V	.	Q	.
19.083	1382.7322	2673.22	.	.	.	.V	.	Q	.
19.167	1401.5885	2737.94	.	.	.	.V	.	Q	.
19.250	1420.0779	2684.65	.	.	.	.V	.	Q	.
19.333	1437.9796	2599.34	.	.	.	.V	.	Q	.
19.417	1456.0264	2620.39	.	.	.	.V	.	Q	.
19.500	1475.0514	2762.43	.	.	.	.V	.	Q	.
19.583	1493.5623	2687.78	.	.	.	.V	.	Q	.
19.667	1512.0752	2688.08	.	.	.	.V	.	Q	.
19.750	1530.4293	2665.03	.	.	.	.V	.	Q	.
19.833	1549.1470	2717.81	.	.	.	.V	.	Q	.
19.917	1567.3414	2641.83	.	.	.	.V	.	Q	.
20.000	1584.8514	2542.45	.	.	.	.V	.	Q	.
20.083	1602.2097	2520.42	.	.	.	.V	.	Q	.
20.167	1619.3346	2486.54	.	.	.	.V	.	Q	.
20.250	1636.6108	2508.51	.	.	.	.V	.	Q	.
20.333	1654.0782	2536.26	.	.	.	.V	.	Q	.
20.417	1671.8354	2578.35	.	.	.	.V	.	Q	.
20.500	1689.1721	2517.28	.	.	.	.V	.	Q	.
20.583	1705.7942	2413.52	.	.	.	.V	.	Q	.
20.667	1722.0703	2363.29	.	.	.	.V	.	Q	.
20.750	1738.1962	2341.47	.	.	.	.V	.	Q	.
20.833	1754.4575	2361.14	.	.	.	.V	.	Q	.
20.917	1770.1973	2285.41	.	.	.	.V	.	Q	.
21.000	1785.6262	2240.28	.	.	.	.V	.	Q	.
21.083	1801.0040	2232.85	.	.	.	.V	.	Q	.
21.167	1816.1262	2195.74	.	.	.	.V	.	Q	.
21.250	1830.8683	2140.55	.	.	.	.V	.	Q	.
21.333	1845.1024	2066.80	.	.	.	.V	.	Q	.
21.417	1859.1136	2034.43	.	.	.	.V	.	Q	.
21.500	1872.8733	1997.89	.	.	.	.V	.	Q	.
21.583	1886.4344	1969.09	.	.	.	.V	.	Q	.
21.667	1899.8118	1942.38	.	.	.	.V	.	Q	.
21.750	1912.9296	1904.71	.	.	.	.V	.	Q	.
21.833	1925.6820	1851.65	.	.	.	.V	.	Q	.
21.917	1938.1768	1814.24	.	.	.	.V	.	Q	.
22.000	1950.3912	1773.54	.	.	.	.V	.	Q	.
22.083	1962.3821	1741.07	.	.	.	.V	.	Q	.
22.167	1974.0529	1694.61	.	.	.	.V	.	Q	.
22.250	1985.4293	1651.87	.	.	.	.V	.	Q	.
22.333	1996.5863	1619.99	.	.	.	.V	.	Q	.
22.417	2007.3944	1569.33	.	.	.	.V	.	Q	.
22.500	2017.8981	1525.12	.	.	.	.V	.	Q	.
22.583	2028.1971	1495.42	.	.	.	.V	.	Q	.
22.667	2038.2971	1466.52	.	.	.	.V	.	Q	.
22.750	2048.1548	1431.33	.	.	.	.V	.	Q	.
22.833	2057.7825	1397.96	.	.	.	.V	.	Q	.
22.917	2067.2261	1371.21	.	.	.	.V	.	Q	.
23.000	2076.4937	1345.65	.	.	.	.V	.	Q	.
23.083	2085.5530	1315.42	.	.	.	.V	.	Q	.
23.167	2094.3940	1283.72	.	.	.	.V	.	Q	.
23.250	2103.0637	1258.84	.	.	.	.V	.	Q	.

23.333	2111.5791	1236.45	.	.	Q	.	.	V	.
23.417	2119.9395	1213.94	.	.	Q	.	.	V	.
23.500	2128.0723	1180.88	.	.	Q	.	.	V	.
23.583	2135.9814	1148.43	.	.	Q	.	.	V	.
23.667	2143.7524	1128.33	.	.	Q	.	.	V	.
23.750	2151.3916	1109.21	.	.	Q	.	.	V	.
23.833	2158.9026	1090.59	.	.	Q	.	.	V	.
23.917	2166.2800	1071.20	.	.	Q	.	.	V	.
24.000	2173.5242	1051.83	.	.	Q	.	.	V	.
24.083	2180.5913	1026.14	.	.	Q	.	.	V	.
24.167	2187.4407	994.54	.	.	Q	.	.	V	.
24.250	2194.1646	976.29	.	.	Q	.	.	V	.
24.333	2200.7693	959.01	.	.	Q	.	.	V	.
24.417	2207.2649	943.17	.	.	Q	.	.	V	.
24.500	2213.6609	928.70	.	.	Q	.	.	V	.
24.583	2219.9622	914.95	.	.	Q	.	.	V	.
24.667	2226.1660	900.79	.	.	Q	.	.	V	.
24.750	2232.2776	887.41	.	.	Q	.	.	V	.
24.833	2238.2937	873.55	.	.	Q	.	.	V	.
24.917	2244.2126	859.42	.	.	Q	.	.	V	.
25.000	2250.0291	844.54	.	.	Q	.	.	V	.
25.083	2255.6572	817.23	.	.	Q	.	.	V	.
25.167	2261.1252	793.95	.	.	Q	.	.	V	.
25.250	2266.4956	779.77	.	.	Q	.	.	V	.
25.333	2271.7725	766.21	.	.	Q	.	.	V	.
25.417	2276.9480	751.48	.	.	Q	.	.	V	.
25.500	2282.0198	736.42	.	.	Q	.	.	V	.
25.583	2286.9885	721.48	.	.	Q	.	.	V	.
25.667	2291.8508	706.02	.	.	Q	.	.	V	.
25.750	2296.6055	690.38	.	.	Q	.	.	V	.
25.833	2301.2568	675.38	.	.	Q	.	.	V	.
25.917	2305.8040	660.23	.	.	Q	.	.	V	.
26.000	2310.2466	645.08	.	.	Q	.	.	V	.
26.083	2314.5779	628.90	.	.	Q	.	.	V	.
26.167	2318.8101	614.52	.	.	Q	.	.	V	.
26.250	2322.9551	601.85	.	.	Q	.	.	V	.
26.333	2327.0137	589.31	.	.	Q	.	.	V	.
26.417	2330.9836	576.43	.	.	Q	.	.	V	.
26.500	2334.8599	562.84	.	.	Q	.	.	V	.
26.583	2338.6338	547.96	.	.	Q	.	.	V	.
26.667	2342.3152	534.53	.	.	Q	.	.	V	.
26.750	2345.9138	522.54	.	.	Q	.	.	V	.
26.833	2349.4255	509.92	.	.	Q	.	.	V	.
26.917	2352.8496	497.16	.	.	Q	.	.	V	.
27.000	2356.1765	483.06	.	.	Q	.	.	V	.
27.083	2359.4163	470.41	.	.	Q	.	.	V	.
27.167	2362.5564	455.95	.	.	Q	.	.	V	.
27.250	2365.6038	442.46	.	.	Q	.	.	V	.
27.333	2368.5762	431.59	.	.	Q	.	.	V	.
27.417	2371.4705	420.26	.	.	Q	.	.	V	.
27.500	2374.2576	404.68	.	.	Q	.	.	V	.
27.583	2376.9509	391.07	.	.	Q	.	.	V	.
27.667	2379.5479	377.09	.	.	Q	.	.	V	.
27.750	2382.0500	363.32	.	.	Q	.	.	V	.
27.833	2384.4443	347.67	.	.	Q	.	.	V	.
27.917	2386.7432	333.77	.	.	Q	.	.	V	.
28.000	2388.9639	322.44	.	.	Q	.	.	V	.
28.083	2391.1079	311.31	.	.	Q	.	.	V	.

28.167	2393.1794	300.78	.	Q	.	.	.	V	.
28.250	2395.1729	289.45	.	Q	.	.	.	V	.
28.333	2397.0818	277.18	.	Q	.	.	.	V	.
28.417	2398.8945	263.20	.	Q	.	.	.	V	.
28.500	2400.6174	250.15	.	Q	.	.	.	V	.
28.583	2402.2681	239.69	.	Q	.	.	.	V	.
28.667	2403.8528	230.12	.	Q	.	.	.	V	.
28.750	2405.3730	220.75	.	Q	.	.	.	V	.
28.833	2406.8206	210.19	.	Q	.	.	.	V	.
28.917	2408.2061	201.19	.	Q	.	.	.	V	.
29.000	2409.5334	192.74	.	Q	.	.	.	V	.
29.083	2410.7974	183.51	.	Q	.	.	.	V	.
29.167	2411.9849	172.43	.	Q	.	.	.	V	.
29.250	2413.0813	159.20	.	Q	.	.	.	V	.
29.333	2414.1326	152.64	.	Q	.	.	.	V	.
29.417	2415.1396	146.24	.	Q	.	.	.	V	.
29.500	2416.1025	139.83	.	Q	.	.	.	V	.
29.583	2417.0190	133.07	.	Q	.	.	.	V	.
29.667	2417.8875	126.11	.	Q	.	.	.	V	.
29.750	2418.7090	119.27	.	Q	.	.	.	V	.
29.833	2419.4863	112.86	.	Q	.	.	.	V	.
29.917	2420.2202	106.55	.	Q	.	.	.	V	.
30.000	2420.9131	100.60	.	Q	.	.	.	V	.
30.083	2421.5654	94.74	.	Q	.	.	.	V	.
30.167	2422.1816	89.47	.	Q	.	.	.	V	.
30.250	2422.7659	84.85	.	Q	.	.	.	V	.
30.333	2423.3186	80.27	.	Q	.	.	.	V	.
30.417	2423.8435	76.21	.	Q	.	.	.	V	.
30.500	2424.3430	72.53	.	Q	.	.	.	V	.
30.583	2424.8174	68.87	.	Q	.	.	.	V	.
30.667	2425.2668	65.25	.	Q	.	.	.	V	.
30.750	2425.6929	61.85	.	Q	.	.	.	V	.
30.833	2426.0962	58.56	.	Q	.	.	.	V	.
30.917	2426.4771	55.30	.	Q	.	.	.	V	.
31.000	2426.8357	52.06	.	Q	.	.	.	V	.
31.083	2427.1726	48.92	.	Q	.	.	.	V	.
31.167	2427.4897	46.06	.	Q	.	.	.	V	.
31.250	2427.7893	43.50	.	Q	.	.	.	V	.
31.333	2428.0715	40.96	.	Q	.	.	.	V	.
31.417	2428.3364	38.45	.	Q	.	.	.	V	.
31.500	2428.5864	36.32	.	Q	.	.	.	V	.
31.583	2428.8245	34.56	.	Q	.	.	.	V	.
31.667	2429.0505	32.83	.	Q	.	.	.	V	.
31.750	2429.2649	31.11	.	Q	.	.	.	V	.
31.833	2429.4673	29.40	.	Q	.	.	.	V	.
31.917	2429.6582	27.72	.	Q	.	.	.	V	.
32.000	2429.8376	26.04	.	Q	.	.	.	V	.
32.083	2430.0066	24.54	.	Q	.	.	.	V	.
32.167	2430.1680	23.43	.	Q	.	.	.	V	.
32.250	2430.3218	22.35	.	Q	.	.	.	V	.
32.333	2430.4683	21.27	.	Q	.	.	.	V	.
32.417	2430.6074	20.21	.	Q	.	.	.	V	.
32.500	2430.7393	19.15	.	Q	.	.	.	V	.
32.583	2430.8640	18.10	.	Q	.	.	.	V	.
32.667	2430.9814	17.07	.	Q	.	.	.	V	.
32.750	2431.0918	16.04	.	Q	.	.	.	V	.
32.833	2431.1953	15.02	.	Q	.	.	.	V	.
32.917	2431.2917	14.01	.	Q	.	.	.	V	.

33.000	2431.3813	13.00	Q	.	.	.	V.
33.083	2431.4666	12.38	Q	.	.	.	V.
33.167	2431.5496	12.06	Q	.	.	.	V.
33.250	2431.6304	11.75	Q	.	.	.	V.
33.333	2431.7092	11.44	Q	.	.	.	V.
33.417	2431.7859	11.14	Q	.	.	.	V.
33.500	2431.8606	10.84	Q	.	.	.	V.
33.583	2431.9331	10.54	Q	.	.	.	V.
33.667	2432.0037	10.24	Q	.	.	.	V.
33.750	2432.0723	9.95	Q	.	.	.	V.
33.833	2432.1389	9.66	Q	.	.	.	V.
33.917	2432.2036	9.38	Q	.	.	.	V.
34.000	2432.2664	9.10	Q	.	.	.	V.
34.083	2432.3271	8.82	Q	.	.	.	V.
34.167	2432.3860	8.54	Q	.	.	.	V.
34.250	2432.4429	8.26	Q	.	.	.	V.
34.333	2432.4978	7.99	Q	.	.	.	V.
34.417	2432.5510	7.72	Q	.	.	.	V.
34.500	2432.6023	7.45	Q	.	.	.	V.
34.583	2432.6519	7.19	Q	.	.	.	V.
34.667	2432.6995	6.93	Q	.	.	.	V.
34.750	2432.7454	6.66	Q	.	.	.	V.
34.833	2432.7896	6.41	Q	.	.	.	V.
34.917	2432.8320	6.15	Q	.	.	.	V.
35.000	2432.8726	5.89	Q	.	.	.	V.
35.083	2432.9114	5.64	Q	.	.	.	V.
35.167	2432.9485	5.40	Q	.	.	.	V.
35.250	2432.9839	5.15	Q	.	.	.	V.
35.333	2433.0176	4.91	Q	.	.	.	V.
35.417	2433.0498	4.66	Q	.	.	.	V.
35.500	2433.0803	4.42	Q	.	.	.	V.
35.583	2433.1091	4.18	Q	.	.	.	V.
35.667	2433.1362	3.95	Q	.	.	.	V.
35.750	2433.1619	3.71	Q	.	.	.	V.
35.833	2433.1858	3.48	Q	.	.	.	V.
35.917	2433.2083	3.25	Q	.	.	.	V.
36.000	2433.2290	3.02	Q	.	.	.	V.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	2165.0
10%	1470.0
20%	1165.0
30%	750.0
40%	575.0
50%	465.0
60%	380.0
70%	315.0
80%	235.0
90%	160.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134T *
* 5-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV0534TS.DAT
TIME/DATE OF STUDY: 15:22 01/02/2019

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

>>>>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

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

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134C *
* 5-YR EV AUGUST 2019 ROKAMOTO *

FILE NAME: EV0534CS.DAT
TIME/DATE OF STUDY: 09:40 08/19/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 66557.898 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.828 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.475
LOW LOSS FRACTION = 0.830
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.22
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.60
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.09
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.60
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.79

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.294
30-MINUTE FACTOR = 0.352
1-HOUR FACTOR = 0.397
3-HOUR FACTOR = 0.741
6-HOUR FACTOR = 0.887
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.177

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.124	1001.309
2	0.373	2002.631
3	0.622	2002.621
4	0.871	2002.621
5	1.120	2002.628
6	1.368	2002.621
7	1.617	2002.624
8	1.866	2002.625
9	2.175	2485.284
10	2.553	3046.685
11	2.932	3047.468
12	3.310	3047.462
13	3.689	3047.474
14	4.141	3636.799
15	4.821	5475.089
16	5.518	5607.370
17	6.286	6184.712
18	7.199	7345.277
19	8.163	7763.122
20	9.307	9207.623
21	10.438	9107.499
22	11.527	8764.186
23	12.616	8761.422
24	13.721	8898.354
25	15.266	12437.354
26	16.673	11324.413
27	17.834	9345.546
28	18.995	9345.531
29	20.215	9815.867
30	21.656	11602.792
31	23.314	13349.109
32	24.756	11606.277
33	26.000	10013.214
34	27.244	10013.214
35	28.686	11608.104
36	30.345	13348.541
37	31.854	12149.725
38	33.842	15998.499
39	35.624	14344.898
40	36.928	10494.144
41	38.342	11385.595
42	40.595	18138.389
43	42.498	15316.001
44	44.495	16071.609
45	46.473	15926.279
46	48.841	19054.189
47	50.893	16519.791
48	52.476	12743.744

49	54.040	12591.136
50	55.509	11824.319
51	57.148	13193.277
52	58.989	14814.544
53	61.178	17622.930
54	63.236	16564.961
55	64.884	13266.388
56	66.370	11960.162
57	67.818	11657.771
58	69.514	13645.543
59	70.934	11431.162
60	72.235	10476.948
61	73.642	11325.534
62	75.004	10961.793
63	76.237	9926.331
64	77.216	7875.306
65	78.183	7786.873
66	79.151	7790.496
67	80.129	7875.367
68	81.150	8214.728
69	82.150	8050.513
70	83.073	7425.772
71	83.979	7293.983
72	84.819	6766.826
73	85.648	6672.866
74	86.386	5938.137
75	87.056	5391.021
76	87.725	5387.459
77	88.303	4647.203
78	88.815	4123.668
79	89.327	4121.826
80	89.838	4116.361
81	90.314	3833.007
82	90.773	3688.506
83	91.231	3690.348
84	91.689	3686.663
85	92.133	3571.209
86	92.548	3345.460
87	92.963	3332.871
88	93.378	3343.679
89	93.792	3332.810
90	94.138	2784.035
91	94.414	2224.268
92	94.691	2224.330
93	94.967	2227.891
94	95.244	2224.330
95	95.520	2224.330
96	95.797	2227.891
97	96.042	1975.182
98	96.216	1397.360
99	96.386	1372.182
100	96.558	1379.305
101	96.728	1372.182
102	96.898	1372.120
103	97.070	1379.367
104	97.240	1368.497
105	97.411	1379.367
106	97.582	1372.182

107	97.752	1372.120
108	97.924	1379.367
109	98.022	794.360
110	98.063	332.237
111	98.104	324.929
112	98.145	332.237
113	98.186	324.990
114	98.227	332.176
115	98.267	324.990
116	98.308	332.176
117	98.349	324.990
118	98.390	332.237
119	98.431	328.552
120	98.471	324.990
121	98.513	332.237
122	98.553	324.929
123	98.594	328.614
124	98.635	332.176
125	98.675	324.990
126	98.717	332.237
127	98.757	324.929
128	98.797	324.990
129	98.840	339.422
130	98.879	317.805
131	98.920	332.176
132	98.962	332.176
133	99.002	324.990
134	99.042	324.990
135	99.083	324.990
136	99.123	324.990
137	99.163	324.990
138	99.204	324.990
139	99.244	324.990
140	99.285	324.990
141	99.325	324.990
142	99.365	324.990
143	99.406	324.990
144	99.446	324.990
145	99.486	324.990
146	99.527	324.990
147	99.567	324.990
148	99.608	324.990
149	99.648	324.990
150	99.688	324.990
151	99.729	324.990
152	99.769	324.990
153	99.809	324.990
154	99.850	324.990
155	99.890	324.990
156	99.931	324.990
157	99.971	324.990
158	100.000	233.917

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11919.1572
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 2528.8306

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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	0.0047	0.68	Q	.	.	.	.
0.167	0.0186	2.03	Q	.	.	.	.
0.250	0.0419	3.38	Q	.	.	.	.
0.333	0.0746	4.74	Q	.	.	.	.
0.417	0.1167	6.11	Q	.	.	.	.
0.500	0.1682	7.48	Q	.	.	.	.
0.583	0.2291	8.85	Q	.	.	.	.
0.667	0.2995	10.23	Q	.	.	.	.
0.750	0.3817	11.93	Q	.	.	.	.
0.833	0.4783	14.02	Q	.	.	.	.
0.917	0.5893	16.12	Q	.	.	.	.
1.000	0.7148	18.22	Q	.	.	.	.
1.083	0.8548	20.33	Q	.	.	.	.
1.167	1.0122	22.85	Q	.	.	.	.
1.250	1.1954	26.61	Q	.	.	.	.
1.333	1.4052	30.47	Q	.	.	.	.
1.417	1.6444	34.73	Q	.	.	.	.
1.500	1.9184	39.79	Q	.	.	.	.
1.583	2.2294	45.14	Q	.	.	.	.
1.667	2.5840	51.49	Q	.	.	.	.
1.750	2.9819	57.79	Q	.	.	.	.
1.833	3.4218	63.87	Q	.	.	.	.
1.917	3.9037	69.97	Q	.	.	.	.
2.000	4.4285	76.19	VQ	.	.	.	.
2.083	5.0125	84.81	VQ	.	.	.	.
2.167	5.6510	92.70	VQ	.	.	.	.
2.250	6.3348	99.29	VQ	.	.	.	.
2.333	7.0641	105.90	VQ	.	.	.	.
2.417	7.8412	112.84	VQ	.	.	.	.
2.500	8.6747	121.01	VQ	.	.	.	.
2.583	9.5727	130.39	VQ	.	.	.	.
2.667	10.5274	138.62	VQ	.	.	.	.
2.750	11.5315	145.80	V Q	.	.	.	.
2.833	12.5853	153.01	V Q	.	.	.	.
2.917	13.6963	161.32	V Q	.	.	.	.
3.000	14.8727	170.82	V Q	.	.	.	.
3.083	16.1093	179.55	V Q	.	.	.	.
3.167	17.4241	190.90	V Q	.	.	.	.
3.250	18.8096	201.18	V Q	.	.	.	.
3.333	20.2483	208.89	V Q	.	.	.	.
3.417	21.7443	217.23	V Q	.	.	.	.
3.500	23.3294	230.15	V Q	.	.	.	.
3.583	24.9906	241.21	V Q	.	.	.	.
3.667	26.7318	252.82	V Q	.	.	.	.
3.750	28.5525	264.36	V Q	.	.	.	.
3.833	30.4676	278.06	V Q	.	.	.	.
3.917	32.4654	290.09	V Q	.	.	.	.

4.000	34.5289	299.62	V	Q	.	.	.	.
4.083	36.6576	309.07	V	Q	.	.	.	.
4.167	38.8480	318.05	V	Q	.	.	.	.
4.250	41.1068	327.98	V	Q	.	.	.	.
4.333	43.4418	339.04	V	Q	.	.	.	.
4.417	45.8663	352.03	V	Q	.	.	.	.
4.500	48.3756	364.36	V	Q	.	.	.	.
4.583	50.9548	374.50	V	Q	.	.	.	.
4.667	53.5980	383.80	V	Q	.	.	.	.
4.750	56.3041	392.92	V	Q	.	.	.	.
4.833	59.0826	403.43	V	Q	.	.	.	.
4.917	61.9234	412.48	V	Q	.	.	.	.
5.000	64.8223	420.93	.V	Q	.	.	.	.
5.083	67.7836	429.98	.V	Q	.	.	.	.
5.167	70.8058	438.82	.V	Q	.	.	.	.
5.250	73.8842	446.99	.V	Q	.	.	.	.
5.333	77.0098	453.83	.V	Q	.	.	.	.
5.417	80.1821	460.62	.V	Q	.	.	.	.
5.500	83.4015	467.46	.V	Q	.	.	.	.
5.583	86.6685	474.37	.V	Q	.	.	.	.
5.667	89.9851	481.56	.V	Q	.	.	.	.
5.750	93.3504	488.66	.V	Q	.	.	.	.
5.833	96.7621	495.37	.V	Q	.	.	.	.
5.917	100.2196	502.02	.V	Q	.	.	.	.
6.000	103.7207	508.36	.V	Q	.	.	.	.
6.083	107.2651	514.66	.V	Q	.	.	.	.
6.167	110.8498	520.50	.V	Q	.	.	.	.
6.250	114.4723	525.99	.V	Q	.	.	.	.
6.333	118.1329	531.52	.V	Q	.	.	.	.
6.417	121.8283	536.57	.V	Q	.	.	.	.
6.500	125.5562	541.30	.V	Q	.	.	.	.
6.583	129.3170	546.06	.V	Q	.	.	.	.
6.667	133.1106	550.84	.V	Q	.	.	.	.
6.750	136.9361	555.46	.V	Q	.	.	.	.
6.833	140.7930	560.02	.V	Q	.	.	.	.
6.917	144.6814	564.59	.V	Q	.	.	.	.
7.000	148.6015	569.21	.V	Q	.	.	.	.
7.083	152.5531	573.77	.V	Q	.	.	.	.
7.167	156.5352	578.21	.V	Q	.	.	.	.
7.250	160.5481	582.67	.V	Q	.	.	.	.
7.333	164.5920	587.17	.V	Q	.	.	.	.
7.417	168.6670	591.69	.V	Q	.	.	.	.
7.500	172.7709	595.88	.V	Q	.	.	.	.
7.583	176.9011	599.72	.V	Q	.	.	.	.
7.667	181.0581	603.59	.V	Q	.	.	.	.
7.750	185.2419	607.49	.V	Q	.	.	.	.
7.833	189.4529	611.43	.V	Q	.	.	.	.
7.917	193.6911	615.39	.V	Q	.	.	.	.
8.000	197.9568	619.39	.V	Q	.	.	.	.
8.083	202.2492	623.25	.V	Q	.	.	.	.
8.167	206.5658	626.76	.V	Q	.	.	.	.
8.250	210.9066	630.28	.V	Q	.	.	.	.
8.333	215.2719	633.85	.V	Q	.	.	.	.
8.417	219.6620	637.43	.V	Q	.	.	.	.
8.500	224.0770	641.07	.V	Q	.	.	.	.
8.583	228.5173	644.73	.V	Q	.	.	.	.
8.667	232.9830	648.43	.V	Q	.	.	.	.
8.750	237.4745	652.16	.V	Q	.	.	.	.

8.833	241.9920	655.94	.	V	Q.	.	.	.
8.917	246.5357	659.74	.	V	Q.	.	.	.
9.000	251.1060	663.60	.	V	Q.	.	.	.
9.083	255.7003	667.10	.	V	Q.	.	.	.
9.167	260.3169	670.33	.	V	Q.	.	.	.
9.250	264.9560	673.59	.	V	Q.	.	.	.
9.333	269.6179	676.91	.	V	Q.	.	.	.
9.417	274.3027	680.24	.	V	Q.	.	.	.
9.500	279.0110	683.64	.	V	Q.	.	.	.
9.583	283.7429	687.07	.	V	Q.	.	.	.
9.667	288.4988	690.55	.	V	Q.	.	.	.
9.750	293.2789	694.07	.	V	Q.	.	.	.
9.833	298.0836	697.65	.	V	Q.	.	.	.
9.917	302.9132	701.26	.	V	Q.	.	.	.
10.000	307.7681	704.93	.	V	Q.	.	.	.
10.083	312.6485	708.64	.	V	Q.	.	.	.
10.167	317.5549	712.41	.	V	Q.	.	.	.
10.250	322.4875	716.22	.	V	Q.	.	.	.
10.333	327.4469	720.10	.	V	Q.	.	.	.
10.417	332.4332	724.02	.	V	Q.	.	.	.
10.500	337.4471	728.01	.	V	Q	.	.	.
10.583	342.4886	732.04	.	V	Q	.	.	.
10.667	347.5585	736.14	.	V	Q	.	.	.
10.750	352.6570	740.30	.	V	Q	.	.	.
10.833	357.7846	744.53	.	V	Q	.	.	.
10.917	362.9417	748.81	.	V	Q	.	.	.
11.000	368.1288	753.17	.	V	Q	.	.	.
11.083	373.3463	757.58	.	V	Q	.	.	.
11.167	378.5947	762.07	.	V	Q	.	.	.
11.250	383.8744	766.62	.	V	Q	.	.	.
11.333	389.1861	771.26	.	V	Q	.	.	.
11.417	394.5302	775.96	.	V	Q	.	.	.
11.500	399.9072	780.75	.	V	Q	.	.	.
11.583	405.3177	785.60	.	V	Q	.	.	.
11.667	410.7623	790.56	.	V	Q	.	.	.
11.750	416.2415	795.58	.	V	Q	.	.	.
11.833	421.7560	800.71	.	V	.Q	.	.	.
11.917	427.3064	805.91	.	V	.Q	.	.	.
12.000	432.8933	811.22	.	V	.Q	.	.	.
12.083	438.5259	817.86	.	V	.Q	.	.	.
12.167	444.2136	825.86	.	V	.Q	.	.	.
12.250	449.9569	833.92	.	V	.Q	.	.	.
12.333	455.7565	842.11	.	V	.Q	.	.	.
12.417	461.6130	850.36	.	V	.Q	.	.	.
12.500	467.5271	858.74	.	V	.Q	.	.	.
12.583	473.4995	867.19	.	V	.Q	.	.	.
12.667	479.5310	875.77	.	V	.Q	.	.	.
12.750	485.6263	885.04	.	V	.Q	.	.	.
12.833	491.7912	895.14	.	V	.Q	.	.	.
12.917	498.0262	905.33	.	V	.Q	.	.	.
13.000	504.3324	915.65	.	V	.Q	.	.	.
13.083	510.7103	926.07	.	V	.Q	.	.	.
13.167	517.1656	937.31	.	V	.Q	.	.	.
13.250	523.7136	950.78	.	V	.Q	.	.	.
13.333	530.3566	964.55	.	V	.Q	.	.	.
13.417	537.1000	979.14	.	V	.Q	.	.	.
13.500	543.9548	995.32	.	V	.Q	.	.	.
13.583	550.9252	1012.11	.	V	.Q	.	.	.

13.667	558.0247	1030.84	.	V	.	Q	.	.	.
13.750	565.2529	1049.54	.	V	.	Q	.	.	.
13.833	572.6080	1067.95	.	V	.	Q	.	.	.
13.917	580.0905	1086.45	.	V	.	Q	.	.	.
14.000	587.7026	1105.29	.	V	.	Q	.	.	.
14.083	595.4835	1129.78	.	V	.	Q	.	.	.
14.167	603.4323	1154.17	.	V	.	Q	.	.	.
14.250	611.5320	1176.07	.	V	.	Q	.	.	.
14.333	619.7831	1198.07	.	V	.	Q	.	.	.
14.417	628.1899	1220.66	.	V	.	Q	.	.	.
14.500	636.7682	1245.58	.	V	.	Q	.	.	.
14.583	645.5333	1272.68	.	V	.	Q	.	.	.
14.667	654.4705	1297.69	.	V	.	Q	.	.	.
14.750	663.5701	1321.26	.	V	.	Q	.	.	.
14.833	672.8370	1345.56	.	V	.	Q	.	.	.
14.917	682.2849	1371.82	.	V	.	Q	.	.	.
15.000	691.9289	1400.31	.	V	.	Q	.	.	.
15.083	701.7584	1427.25	.	.V	.	Q	.	.	.
15.167	711.8115	1459.71	.	.V	.	Q	.	.	.
15.250	722.0879	1492.12	.	.V	.	Q	.	.	.
15.333	732.5549	1519.82	.	.V	.	Q	.	.	.
15.417	743.2127	1547.51	.	.V	.	Q	.	.	.
15.500	754.1177	1583.41	.	.V	.	Q	.	.	.
15.583	765.2495	1616.32	.	.V	.	Q	.	.	.
15.667	776.6270	1652.02	.	.V	.	Q	.	.	.
15.750	788.2452	1686.96	.	.V	.	Q	.	.	.
15.833	800.1263	1725.15	.	.V	.	Q	.	.	.
15.917	812.2545	1761.00	.	.V	.	Q	.	.	.
16.000	824.6098	1793.99	.	.V	.	Q	.	.	.
16.083	837.3551	1850.62	.	.V	.	Q	.	.	.
16.167	850.4561	1902.27	.	.V	.	Q	.	.	.
16.250	863.7589	1931.56	.	.V	.	Q	.	.	.
16.333	877.2737	1962.36	.	.V	.	Q	.	.	.
16.417	891.0330	1997.85	.	.V	.	Q	.	.	.
16.500	905.0439	2034.39	.	.V	.	Q	.	.	.
16.583	919.2740	2066.20	.	.V	.	Q	.	.	.
16.667	933.7040	2095.25	.	.V	.	Q	.	.	.
16.750	948.3831	2131.40	.	.V	.	Q	.	.	.
16.833	963.3217	2169.07	.	.V	.	Q	.	.	.
16.917	978.4231	2192.73	.	.V	.	Q	.	.	.
17.000	993.6838	2215.86	.	.V	.	Q	.	.	.
17.083	1009.1127	2240.27	.	.V	.	Q	.	.	.
17.167	1024.8325	2282.53	.	.V	.	Q	.	.	.
17.250	1040.9880	2345.79	.	.V	.	Q	.	.	.
17.333	1057.2834	2366.10	.	.V	.	Q	.	.	.
17.417	1073.7537	2391.48	.	.V	.	Q	.	.	.
17.500	1090.5531	2439.27	.	.V	.	Q	.	.	.
17.583	1107.5967	2474.73	.	.V	.	Q	.	.	.
17.667	1125.0228	2530.28	.	.V	.	Q	.	.	.
17.750	1142.5829	2549.73	.	.V	.	Q	.	.	.
17.833	1160.2548	2565.95	.	.V	.	Q	.	.	.
17.917	1178.0741	2587.36	.	.V	.	Q	.	.	.
18.000	1196.0767	2613.97	.	.V	.	Q	.	.	.
18.083	1214.7137	2706.11	.	.V	.	Q	.	.	.
18.167	1233.2650	2693.65	.	.V	.	Q	.	.	.
18.250	1251.5938	2661.33	.	.V	.	Q	.	.	.
18.333	1269.9940	2671.72	.	.V	.	Q	.	.	.
18.417	1288.6198	2704.46	.	.V	.	Q	.	.	.

18.500	1307.5742	2752.20	.	.	.	V	.	Q	.
18.583	1326.7761	2788.12	.	.	.	V	.	Q	.
18.667	1345.7362	2753.00	.	.	.	.V	.	Q	.
18.750	1364.4849	2722.30	.	.	.	.V	.	Q	.
18.833	1383.2118	2719.15	.	.	.	.V	.	Q	.
18.917	1402.1871	2755.23	.	.	.	.V	.	Q	.
19.000	1421.4098	2791.13	.	.	.	.V	.	Q	.
19.083	1440.4337	2762.28	.	.	.	.V	.	Q	.
19.167	1459.8645	2821.35	.	.	.	.V	.	Q	.
19.250	1478.9397	2769.72	.	.	.	.V	.	Q	.
19.333	1497.4623	2689.47	.	.	.	.V	.	Q	.
19.417	1516.1219	2709.39	.	.	.	.V	.	Q	.
19.500	1535.7015	2842.95	.	.	.	.V	.	Q	.
19.583	1554.7922	2771.97	.	.	.	.V	.	Q	.
19.667	1573.8694	2770.01	.	.	.	.V	.	Q	.
19.750	1592.7802	2745.84	.	.	.	.V	.	Q	.
19.833	1612.0190	2793.49	.	.	.	.V	.	Q	.
19.917	1630.7515	2719.95	.	.	.	.V	.	Q	.
20.000	1648.8284	2624.77	.	.	.	.V	.	Q	.
20.083	1666.7502	2602.26	.	.	.	.V	.	Q	.
20.167	1684.4441	2569.14	.	.	.	.V	.	Q	.
20.250	1702.2760	2589.19	.	.	.	.V	.	Q	.
20.333	1720.2821	2614.48	.	.	.	.V	.	Q	.
20.417	1738.5468	2652.02	.	.	.	.V	.	Q	.
20.500	1756.3916	2591.07	.	.	.	.V	.	Q	.
20.583	1773.5413	2490.12	.	.	.	.V	.	Q	.
20.667	1790.3496	2440.58	.	.	.	.V	.	Q	.
20.750	1807.0079	2418.79	.	.	.	.V	.	Q	.
20.833	1823.7803	2435.34	.	.	.	.V	.	Q	.
20.917	1840.0453	2361.68	.	.	.	.V	.	Q	.
21.000	1855.9991	2316.49	.	.	.	.V	.	Q	.
21.083	1871.8857	2306.73	.	.	.	.V	.	Q	.
21.167	1887.5106	2268.74	.	.	.	.V	.	Q	.
21.250	1902.7548	2213.46	.	.	.	.V	.	Q	.
21.333	1917.5022	2141.32	.	.	.	.V	.	Q	.
21.417	1932.0204	2108.04	.	.	.	.V	.	Q	.
21.500	1946.2769	2070.03	.	.	.	.V	.	Q	.
21.583	1960.3258	2039.90	.	.	.	.V	.	Q	.
21.667	1974.1774	2011.25	.	.	.	.V	.	Q	.
21.750	1987.7607	1972.30	.	.	.	.V	.	Q	.
21.833	2000.9714	1918.20	.	.	.	.V	.	Q	.
21.917	2013.9143	1879.30	.	.	.	.V	.	Q	.
22.000	2026.5728	1838.00	.	.	.	.V	.	Q	.
22.083	2038.9991	1804.31	.	.	.	.V	.	Q	.
22.167	2051.1033	1757.51	.	.	.	.V	.	Q	.
22.250	2062.9082	1714.07	.	.	.	.V	.	Q	.
22.333	2074.4829	1680.65	.	.	.	.V	.	Q	.
22.417	2085.7034	1629.22	.	.	.	.V	.	Q	.
22.500	2096.6125	1584.01	.	.	.	.V	.	Q	.
22.583	2107.3076	1552.91	.	.	.	.V	.	Q	.
22.667	2117.7949	1522.75	.	.	.	.V	.	Q	.
22.750	2128.0334	1486.65	.	.	.	.V	.	Q	.
22.833	2138.0334	1452.00	.	.	.	.V	.	Q	.
22.917	2147.8408	1424.03	.	.	.	.V	.	Q	.
23.000	2157.4644	1397.34	.	.	.	.V	.	Q	.
23.083	2166.8721	1366.01	.	.	.	.V	.	Q	.
23.167	2176.0549	1333.34	.	.	.	.V	.	Q	.
23.250	2185.0583	1307.28	.	.	.	.V	.	Q	.

23.333	2193.9001	1283.84	.	.	Q	.	.	V	.
23.417	2202.5801	1260.33	.	.	Q	.	.	V	.
23.500	2211.0305	1227.02	.	.	Q	.	.	V	.
23.583	2219.2561	1194.34	.	.	Q	.	.	V	.
23.667	2227.3367	1173.31	.	.	Q	.	.	V	.
23.750	2235.2795	1153.29	.	.	Q	.	.	V	.
23.833	2243.0879	1133.76	.	.	Q	.	.	V	.
23.917	2250.7561	1113.42	.	.	Q	.	.	V	.
24.000	2258.2844	1093.13	.	.	Q	.	.	V	.
24.083	2265.6316	1066.82	.	.	Q	.	.	V	.
24.167	2272.7603	1035.09	.	.	Q	.	.	V	.
24.250	2279.7578	1016.06	.	.	Q	.	.	V	.
24.333	2286.6311	998.02	.	.	Q	.	.	V	.
24.417	2293.3909	981.53	.	.	Q	.	.	V	.
24.500	2300.0469	966.46	.	.	Q	.	.	V	.
24.583	2306.6040	952.10	.	.	Q	.	.	V	.
24.667	2313.0596	937.35	.	.	Q	.	.	V	.
24.750	2319.4185	923.32	.	.	Q	.	.	V	.
24.833	2325.6775	908.80	.	.	Q	.	.	V	.
24.917	2331.8345	893.99	.	.	Q	.	.	V	.
25.000	2337.8840	878.38	.	.	Q	.	.	V	.
25.083	2343.7458	851.15	.	.	Q	.	.	V	.
25.167	2349.4470	827.82	.	.	Q	.	.	V	.
25.250	2355.0461	812.98	.	.	Q	.	.	V	.
25.333	2360.5474	798.78	.	.	Q	.	.	V	.
25.417	2365.9426	783.38	.	.	Q	.	.	V	.
25.500	2371.2292	767.63	.	.	Q	.	.	V	.
25.583	2376.4087	752.04	.	.	Q	.	.	V	.
25.667	2381.4768	735.88	.	.	Q	.	.	V	.
25.750	2386.4326	719.57	.	.	Q	.	.	V	.
25.833	2391.2803	703.89	.	.	Q	.	.	V	.
25.917	2396.0190	688.06	.	.	Q	.	.	V	.
26.000	2400.6489	672.25	.	.	Q	.	.	V	.
26.083	2405.1621	655.32	.	.	Q	.	.	V	.
26.167	2409.5720	640.31	.	.	Q	.	.	V	.
26.250	2413.8906	627.05	.	.	Q	.	.	V	.
26.333	2418.1189	613.93	.	.	Q	.	.	V	.
26.417	2422.2544	600.48	.	.	Q	.	.	V	.
26.500	2426.2920	586.25	.	.	Q	.	.	V	.
26.583	2430.2224	570.71	.	.	Q	.	.	V	.
26.667	2434.0562	556.66	.	.	Q	.	.	V	.
26.750	2437.8032	544.08	.	.	Q	.	.	V	.
26.833	2441.4597	530.93	.	.	Q	.	.	V	.
26.917	2445.0242	517.55	.	.	Q	.	.	V	.
27.000	2448.4871	502.81	.	.	Q	.	.	V	.
27.083	2451.8589	489.60	.	.	Q	.	.	V	.
27.167	2455.1270	474.53	.	.	Q	.	.	V	.
27.250	2458.2983	460.48	.	.	Q	.	.	V	.
27.333	2461.3916	449.14	.	.	Q	.	.	V	.
27.417	2464.4036	437.34	.	.	Q	.	.	V	.
27.500	2467.3037	421.10	.	.	Q	.	.	V	.
27.583	2470.1062	406.91	.	.	Q	.	.	V	.
27.667	2472.8083	392.35	.	.	Q	.	.	V	.
27.750	2475.4116	378.00	.	.	Q	.	.	V	.
27.833	2477.9026	361.69	.	.	Q	.	.	V	.
27.917	2480.2939	347.21	.	.	Q	.	.	V	.
28.000	2482.6040	335.40	.	.	Q	.	.	V	.
28.083	2484.8340	323.80	.	.	Q	.	.	V	.

28.167	2486.9885	312.83	.	Q	.	.	.	V	.
28.250	2489.0618	301.04	.	Q	.	.	.	V	.
28.333	2491.0469	288.25	.	Q	.	.	.	V	.
28.417	2492.9319	273.69	.	Q	.	.	.	V	.
28.500	2494.7231	260.09	.	Q	.	.	.	V	.
28.583	2496.4395	249.20	.	Q	.	.	.	V	.
28.667	2498.0872	239.23	.	Q	.	.	.	V	.
28.750	2499.6675	229.48	.	Q	.	.	.	V	.
28.833	2501.1721	218.48	.	Q	.	.	.	V	.
28.917	2502.6121	209.08	.	Q	.	.	.	V	.
29.000	2503.9912	200.26	.	Q	.	.	.	V	.
29.083	2505.3042	190.63	.	Q	.	.	.	V	.
29.167	2506.5388	179.28	.	Q	.	.	.	V	.
29.250	2507.6821	166.00	.	Q	.	.	.	V	.
29.333	2508.7783	159.16	.	Q	.	.	.	V	.
29.417	2509.8286	152.50	.	Q	.	.	.	V	.
29.500	2510.8330	145.82	.	Q	.	.	.	V	.
29.583	2511.7888	138.79	.	Q	.	.	.	V	.
29.667	2512.6948	131.54	.	Q	.	.	.	V	.
29.750	2513.5518	124.42	.	Q	.	.	.	V	.
29.833	2514.3625	117.74	.	Q	.	.	.	V	.
29.917	2515.1282	111.17	.	Q	.	.	.	V	.
30.000	2515.8511	104.97	.	Q	.	.	.	V	.
30.083	2516.5320	98.86	.	Q	.	.	.	V	.
30.167	2517.1750	93.37	.	Q	.	.	.	V	.
30.250	2517.7849	88.55	.	Q	.	.	.	V	.
30.333	2518.3618	83.77	.	Q	.	.	.	V	.
30.417	2518.9094	79.53	.	Q	.	.	.	V	.
30.500	2519.4307	75.68	.	Q	.	.	.	V	.
30.583	2519.9255	71.86	.	Q	.	.	.	V	.
30.667	2520.3943	68.08	.	Q	.	.	.	V	.
30.750	2520.8386	64.52	.	Q	.	.	.	V	.
30.833	2521.2593	61.08	.	Q	.	.	.	V	.
30.917	2521.6565	57.67	.	Q	.	.	.	V	.
31.000	2522.0303	54.28	.	Q	.	.	.	V	.
31.083	2522.3816	51.00	.	Q	.	.	.	V	.
31.167	2522.7122	48.01	.	Q	.	.	.	V	.
31.250	2523.0244	45.34	.	Q	.	.	.	V	.
31.333	2523.3184	42.70	.	Q	.	.	.	V	.
31.417	2523.5945	40.08	.	Q	.	.	.	V	.
31.500	2523.8552	37.85	.	Q	.	.	.	V	.
31.583	2524.1033	36.03	.	Q	.	.	.	V	.
31.667	2524.3389	34.22	.	Q	.	.	.	V	.
31.750	2524.5623	32.42	.	Q	.	.	.	V	.
31.833	2524.7734	30.65	.	Q	.	.	.	V	.
31.917	2524.9724	28.89	.	Q	.	.	.	V	.
32.000	2525.1594	27.14	.	Q	.	.	.	V	.
32.083	2525.3357	25.58	.	Q	.	.	.	V	.
32.167	2525.5039	24.42	.	Q	.	.	.	V	.
32.250	2525.6643	23.29	.	Q	.	.	.	V	.
32.333	2525.8169	22.17	.	Q	.	.	.	V	.
32.417	2525.9619	21.06	.	Q	.	.	.	V	.
32.500	2526.0994	19.96	.	Q	.	.	.	V	.
32.583	2526.2292	18.87	.	Q	.	.	.	V	.
32.667	2526.3518	17.79	.	Q	.	.	.	V	.
32.750	2526.4668	16.71	.	Q	.	.	.	V	.
32.833	2526.5747	15.65	.	Q	.	.	.	V	.
32.917	2526.6753	14.60	.	Q	.	.	.	V	.

33.000	2526.7686	13.55	Q	.	.	.	V.
33.083	2526.8574	12.90	Q	.	.	.	V.
33.167	2526.9441	12.57	Q	.	.	.	V.
33.250	2527.0286	12.25	Q	.	.	.	V.
33.333	2527.1106	11.92	Q	.	.	.	V.
33.417	2527.1907	11.61	Q	.	.	.	V.
33.500	2527.2686	11.29	Q	.	.	.	V.
33.583	2527.3442	10.99	Q	.	.	.	V.
33.667	2527.4177	10.68	Q	.	.	.	V.
33.750	2527.4893	10.38	Q	.	.	.	V.
33.833	2527.5586	10.07	Q	.	.	.	V.
33.917	2527.6260	9.77	Q	.	.	.	V.
34.000	2527.6912	9.48	Q	.	.	.	V.
34.083	2527.7544	9.19	Q	.	.	.	V.
34.167	2527.8157	8.90	Q	.	.	.	V.
34.250	2527.8750	8.61	Q	.	.	.	V.
34.333	2527.9324	8.33	Q	.	.	.	V.
34.417	2527.9878	8.05	Q	.	.	.	V.
34.500	2528.0413	7.77	Q	.	.	.	V.
34.583	2528.0928	7.49	Q	.	.	.	V.
34.667	2528.1426	7.22	Q	.	.	.	V.
34.750	2528.1904	6.94	Q	.	.	.	V.
34.833	2528.2363	6.68	Q	.	.	.	V.
34.917	2528.2805	6.41	Q	.	.	.	V.
35.000	2528.3228	6.14	Q	.	.	.	V.
35.083	2528.3633	5.88	Q	.	.	.	V.
35.167	2528.4021	5.62	Q	.	.	.	V.
35.250	2528.4390	5.37	Q	.	.	.	V.
35.333	2528.4741	5.11	Q	.	.	.	V.
35.417	2528.5076	4.86	Q	.	.	.	V.
35.500	2528.5393	4.61	Q	.	.	.	V.
35.583	2528.5693	4.36	Q	.	.	.	V.
35.667	2528.5977	4.11	Q	.	.	.	V.
35.750	2528.6243	3.87	Q	.	.	.	V.
35.833	2528.6492	3.62	Q	.	.	.	V.
35.917	2528.6724	3.38	Q	.	.	.	V.
36.000	2528.6941	3.14	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%	1470.0
20%	1180.0
30%	755.0
40%	580.0
50%	475.0
60%	390.0
70%	320.0
80%	240.0
90%	165.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA 92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 137 *
* 5-YR EV APRIL 2019 FKAZI *

FILE NAME: EV05137S.DAT
TIME/DATE OF STUDY: 15:30 04/11/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 137.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 67798.398 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 = 0.828
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.22
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.60
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.09
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.59
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.78

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.291
30-MINUTE FACTOR = 0.350
1-HOUR FACTOR = 0.394
3-HOUR FACTOR = 0.738
6-HOUR FACTOR = 0.886
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.109

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.121	988.221
2	0.362	1976.442
3	0.603	1976.445
4	0.844	1976.438
5	1.085	1976.442
6	1.326	1976.445
7	1.567	1976.445
8	1.808	1976.441
9	2.080	2231.170
10	2.441	2962.133
11	2.808	3007.625
12	3.175	3007.639
13	3.542	3007.615
14	3.918	3086.911
15	4.507	4824.477
16	5.181	5534.013
17	5.865	5606.113
18	6.699	6837.771
19	7.587	7282.776
20	8.602	8319.688
21	9.725	9204.304
22	10.799	8805.922
23	11.853	8646.896
24	12.908	8646.943
25	14.031	9206.149
26	15.605	12911.104
27	16.876	10422.109
28	18.001	9223.398
29	19.126	9223.289
30	20.324	9826.190
31	21.733	11545.485
32	23.348	13244.466
33	24.742	11428.990
34	25.947	9882.194
35	27.152	9881.943
36	28.510	11136.431
37	30.135	13322.646
38	31.575	11806.251
39	33.441	15297.248
40	35.249	14825.543
41	36.625	11280.451
42	37.806	9690.240
43	39.916	17299.580
44	41.805	15483.510
45	43.741	15878.802
46	45.613	15346.354
47	47.724	17310.496
48	50.045	19033.105

49	51.669	13310.557
50	53.203	12577.397
51	54.675	12073.883
52	56.125	11888.341
53	57.798	13716.296
54	59.661	15275.635
55	61.871	18119.129
56	63.718	15143.735
57	65.249	12550.812
58	66.671	11666.235
59	68.100	11714.653
60	69.755	13573.011
61	71.082	10873.772
62	72.352	10420.053
63	73.719	11202.130
64	75.036	10796.892
65	76.230	9794.678
66	77.178	7774.925
67	78.116	7685.783
68	79.053	7685.720
69	79.997	7740.832
70	80.983	8080.575
71	81.963	8040.727
72	82.866	7401.027
73	83.752	7262.465
74	84.581	6799.298
75	85.384	6588.609
76	86.146	6246.927
77	86.801	5364.259
78	87.450	5324.410
79	88.066	5052.979
80	88.572	4145.664
81	89.068	4069.657
82	89.564	4069.720
83	90.050	3984.331
84	90.498	3672.989
85	90.942	3640.709
86	91.386	3640.709
87	91.830	3638.833
88	92.248	3428.144
89	92.650	3295.212
90	93.052	3291.458
91	93.454	3299.028
92	93.854	3280.073
93	94.172	2604.341
94	94.439	2194.285
95	94.707	2194.285
96	94.975	2201.917
97	95.243	2194.285
98	95.511	2194.347
99	95.779	2198.101
100	96.023	2004.489
101	96.194	1400.822
102	96.359	1355.343
103	96.525	1359.096
104	96.690	1355.281
105	96.856	1355.281
106	97.021	1355.343

107	97.187	1359.096
108	97.352	1355.281
109	97.518	1359.096
110	97.683	1355.343
111	97.848	1355.281
112	97.992	1180.686
113	98.043	413.809
114	98.083	326.481
115	98.122	326.481
116	98.161	318.912
117	98.202	330.297
118	98.241	318.849
119	98.281	330.297
120	98.320	318.912
121	98.360	326.481
122	98.398	318.912
123	98.438	326.481
124	98.477	318.912
125	98.517	326.481
126	98.557	326.481
127	98.596	318.912
128	98.635	326.481
129	98.675	326.481
130	98.715	326.481
131	98.754	318.912
132	98.793	318.849
133	98.834	334.113
134	98.873	326.481
135	98.912	318.912
136	98.951	318.849
137	98.992	334.113
138	99.031	318.912
139	99.070	318.912
140	99.109	318.912
141	99.148	318.912
142	99.186	318.912
143	99.225	318.912
144	99.264	318.912
145	99.303	318.912
146	99.342	318.912
147	99.381	318.912
148	99.420	318.912
149	99.459	318.912
150	99.498	318.912
151	99.537	318.912
152	99.575	318.912
153	99.614	318.912
154	99.653	318.912
155	99.692	318.912
156	99.731	318.912
157	99.770	318.912
158	99.809	318.912
159	99.848	318.912
160	99.887	318.912
161	99.925	318.912
162	99.964	318.912
163	100.000	292.200

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12054.1475
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 2587.6572

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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	0.0046	0.67	Q	.	.	.	.
0.167	0.0185	2.01	Q	.	.	.	.
0.250	0.0416	3.36	Q	.	.	.	.
0.333	0.0741	4.71	Q	.	.	.	.
0.417	0.1159	6.07	Q	.	.	.	.
0.500	0.1670	7.42	Q	.	.	.	.
0.583	0.2275	8.79	Q	.	.	.	.
0.667	0.2975	10.15	Q	.	.	.	.
0.750	0.3780	11.70	Q	.	.	.	.
0.833	0.4727	13.74	Q	.	.	.	.
0.917	0.5817	15.83	Q	.	.	.	.
1.000	0.7050	17.91	Q	.	.	.	.
1.083	0.8428	20.01	Q	.	.	.	.
1.167	0.9955	22.16	Q	.	.	.	.
1.250	1.1711	25.50	Q	.	.	.	.
1.333	1.3732	29.34	Q	.	.	.	.
1.417	1.6020	33.23	Q	.	.	.	.
1.500	1.8635	37.97	Q	.	.	.	.
1.583	2.1598	43.02	Q	.	.	.	.
1.667	2.4959	48.80	Q	.	.	.	.
1.750	2.8760	55.19	Q	.	.	.	.
1.833	3.2984	61.34	Q	.	.	.	.
1.917	3.7626	67.39	Q	.	.	.	.
2.000	4.2685	73.46	VQ	.	.	.	.
2.083	4.8190	79.93	VQ	.	.	.	.
2.167	5.4315	88.94	VQ	.	.	.	.
2.250	6.0946	96.28	VQ	.	.	.	.
2.333	6.8029	102.84	VQ	.	.	.	.
2.417	7.5564	109.41	VQ	.	.	.	.
2.500	8.3582	116.42	VQ	.	.	.	.
2.583	9.2164	124.61	VQ	.	.	.	.
2.667	10.1391	133.98	VQ	.	.	.	.
2.750	11.1181	142.15	VQ	.	.	.	.
2.833	12.1464	149.30	V Q	.	.	.	.
2.917	13.2240	156.47	V Q	.	.	.	.
3.000	14.3571	164.52	V Q	.	.	.	.
3.083	15.5560	174.08	V Q	.	.	.	.
3.167	16.8138	182.64	V Q	.	.	.	.
3.250	18.1471	193.59	V Q	.	.	.	.
3.333	19.5538	204.26	V Q	.	.	.	.
3.417	21.0178	212.56	V Q	.	.	.	.
3.500	22.5316	219.81	V Q	.	.	.	.
3.583	24.1312	232.25	V Q	.	.	.	.
3.667	25.8081	243.50	V Q	.	.	.	.
3.750	27.5647	255.05	V Q	.	.	.	.
3.833	29.3986	266.28	V Q	.	.	.	.
3.917	31.3192	278.88	V Q	.	.	.	.

4.000	33.3350	292.69	V	Q	.	.	.	.
4.083	35.4195	302.67	V	Q	.	.	.	.
4.167	37.5695	312.18	V	Q	.	.	.	.
4.250	39.7829	321.39	V	Q	.	.	.	.
4.333	42.0591	330.50	V	Q	.	.	.	.
4.417	44.4068	340.89	V	Q	.	.	.	.
4.500	46.8335	352.37	V	Q	.	.	.	.
4.583	49.3530	365.82	V	Q	.	.	.	.
4.667	51.9514	377.30	V	Q	.	.	.	.
4.750	54.6171	387.06	V	Q	.	.	.	.
4.833	57.3462	396.26	V	Q	.	.	.	.
4.917	60.1391	405.53	V	Q	.	.	.	.
5.000	63.0047	416.09	V	Q	.	.	.	.
5.083	65.9307	424.86	.V	Q	.	.	.	.
5.167	68.9153	433.36	.V	Q	.	.	.	.
5.250	71.9623	442.42	.V	Q	.	.	.	.
5.333	75.0700	451.25	.V	Q	.	.	.	.
5.417	78.2342	459.43	.V	Q	.	.	.	.
5.500	81.4454	466.27	.V	Q	.	.	.	.
5.583	84.7036	473.09	.V	Q	.	.	.	.
5.667	88.0089	479.93	.V	Q	.	.	.	.
5.750	91.3619	486.85	.V	Q	.	.	.	.
5.833	94.7643	494.03	.V	Q	.	.	.	.
5.917	98.2161	501.21	.V	Q	.	.	.	.
6.000	101.7147	507.99	.V	Q	.	.	.	.
6.083	105.2596	514.71	.V	Q	.	.	.	.
6.167	108.8487	521.15	.V	Q	.	.	.	.
6.250	112.4815	527.48	.V	Q	.	.	.	.
6.333	116.1565	533.60	.V	Q	.	.	.	.
6.417	119.8697	539.17	.V	Q	.	.	.	.
6.500	123.6213	544.73	.V	Q	.	.	.	.
6.583	127.4101	550.14	.V	Q	.	.	.	.
6.667	131.2322	554.96	.V	Q	.	.	.	.
6.750	135.0874	559.77	.V	Q	.	.	.	.
6.833	138.9758	564.60	.V	Q	.	.	.	.
6.917	142.8973	569.40	.V	Q	.	.	.	.
7.000	146.8506	574.02	.V	Q	.	.	.	.
7.083	150.8359	578.66	.V	Q	.	.	.	.
7.167	154.8532	583.32	.V	Q	.	.	.	.
7.250	158.9028	588.01	.V	Q	.	.	.	.
7.333	162.9840	592.59	.V	Q	.	.	.	.
7.417	167.0964	597.11	.V	Q	.	.	.	.
7.500	171.2400	601.66	.V	Q	.	.	.	.
7.583	175.4153	606.25	.V	Q	.	.	.	.
7.667	179.6222	610.85	.V	Q	.	.	.	.
7.750	183.8580	615.04	.V	Q	.	.	.	.
7.833	188.1209	618.97	.V	Q	.	.	.	.
7.917	192.4111	622.94	.V	Q	.	.	.	.
8.000	196.7289	626.94	.V	Q	.	.	.	.
8.083	201.0745	630.98	.V	Q	.	.	.	.
8.167	205.4481	635.05	.V	Q	.	.	.	.
8.250	209.8500	639.15	.V	Q	.	.	.	.
8.333	214.2794	643.16	.V	Q	.	.	.	.
8.417	218.7340	646.80	.V	Q	.	.	.	.
8.500	223.2136	650.44	.V	Q	.	.	.	.
8.583	227.7185	654.12	.V	Q	.	.	.	.
8.667	232.2490	657.82	.V	Q	.	.	.	.
8.750	236.8053	661.57	.V	Q	.	.	.	.

8.833	241.3876	665.36	.V	Q	.	.	.	.
8.917	245.9964	669.19	.V	Q	.	.	.	.
9.000	250.6317	673.05	.V	Q	.	.	.	.
9.083	255.2939	676.96	.V	Q	.	.	.	.
9.167	259.9833	680.90	.V	Q	.	.	.	.
9.250	264.7001	684.89	.V	Q	.	.	.	.
9.333	269.4439	688.79	.V	Q	.	.	.	.
9.417	274.2113	692.23	.V	Q	.	.	.	.
9.500	279.0022	695.64	.V	Q	.	.	.	.
9.583	283.8170	699.10	.V	Q	.	.	.	.
9.667	288.6558	702.60	.V	Q	.	.	.	.
9.750	293.5191	706.15	.V	Q	.	.	.	.
9.833	298.4071	709.74	.V	Q	.	.	.	.
9.917	303.3203	713.39	.V	Q	.	.	.	.
10.000	308.2588	717.07	.V	Q	.	.	.	.
10.083	313.2231	720.81	.V	Q	.	.	.	.
10.167	318.2134	724.60	.V	Q	.	.	.	.
10.250	323.2303	728.44	.V	Q	.	.	.	.
10.333	328.2739	732.33	.V	Q	.	.	.	.
10.417	333.3447	736.29	.V	Q	.	.	.	.
10.500	338.4431	740.29	.V	Q	.	.	.	.
10.583	343.5695	744.36	.V	Q	.	.	.	.
10.667	348.7243	748.47	.V	Q	.	.	.	.
10.750	353.9080	752.66	.V	Q	.	.	.	.
10.833	359.1208	756.91	.V	Q	.	.	.	.
10.917	364.3633	761.22	.V	Q	.	.	.	.
11.000	369.6359	765.58	.V	Q	.	.	.	.
11.083	374.9392	770.03	.V	Q	.	.	.	.
11.167	380.2735	774.54	.V	Q	.	.	.	.
11.250	385.6394	779.12	.V	Q	.	.	.	.
11.333	391.0372	783.77	.V	Q	.	.	.	.
11.417	396.4677	788.51	.V	Q	.	.	.	.
11.500	401.9313	793.31	.V	Q	.	.	.	.
11.583	407.4285	798.20	.V	.Q	.	.	.	.
11.667	412.9599	803.16	.V	.Q	.	.	.	.
11.750	418.5261	808.21	.V	.Q	.	.	.	.
11.833	424.1276	813.34	.V	.Q	.	.	.	.
11.917	429.7652	818.57	.V	.Q	.	.	.	.
12.000	435.4393	823.89	.V	.Q	.	.	.	.
12.083	441.1594	830.56	.V	.Q	.	.	.	.
12.167	446.9346	838.56	.V	.Q	.	.	.	.
12.250	452.7656	846.67	.V	.Q	.	.	.	.
12.333	458.6530	854.85	.V	.Q	.	.	.	.
12.417	464.5975	863.14	.V	.Q	.	.	.	.
12.500	470.5996	871.51	.V	.Q	.	.	.	.
12.583	476.6602	880.00	.V	.Q	.	.	.	.
12.667	482.7799	888.57	.V	.Q	.	.	.	.
12.750	488.9616	897.59	.V	.Q	.	.	.	.
12.833	495.2126	907.63	.V	.Q	.	.	.	.
12.917	501.5339	917.86	.V	.Q	.	.	.	.
13.000	507.9262	928.17	.V	.Q	.	.	.	.
13.083	514.3906	938.62	.V	.Q	.	.	.	.
13.167	520.9283	949.27	.V	.Q	.	.	.	.
13.250	527.5554	962.26	.V	.Q	.	.	.	.
13.333	534.2789	976.26	.V	.Q	.	.	.	.
13.417	541.1003	990.47	.V	.Q	.	.	.	.
13.500	548.0311	1006.35	.V	.Q	.	.	.	.
13.583	555.0759	1022.91	.V	.Q	.	.	.	.

13.667	562.2431	1040.68	.	V	.	Q	.	.	.
13.750	569.5413	1059.70	.	V	.	Q	.	.	.
13.833	576.9678	1078.32	.	V	.	Q	.	.	.
13.917	584.5220	1096.87	.	V	.	Q	.	.	.
14.000	592.2047	1115.54	.	V	.	Q	.	.	.
14.083	600.0297	1136.19	.	V	.	Q	.	.	.
14.167	608.0375	1162.75	.	V	.	Q	.	.	.
14.250	616.2070	1186.20	.	V	.	Q	.	.	.
14.333	624.5275	1208.15	.	V	.	Q	.	.	.
14.417	632.9998	1230.17	.	V	.	Q	.	.	.
14.500	641.6291	1252.98	.	V	.	Q	.	.	.
14.583	650.4311	1278.05	.	V	.	Q	.	.	.
14.667	659.4207	1305.29	.	V	.	Q	.	.	.
14.750	668.5845	1330.58	.	V	.	Q	.	.	.
14.833	677.9148	1354.76	.	V	.	Q	.	.	.
14.917	687.4123	1379.04	.	V	.	Q	.	.	.
15.000	697.0877	1404.87	.	V	.	Q	.	.	.
15.083	706.9605	1433.53	.	V	.	Q	.	.	.
15.167	717.0176	1460.30	.	.V	.	Q	.	.	.
15.250	727.3035	1493.51	.	.V	.	Q	.	.	.
15.333	737.8187	1526.81	.	.V	.	Q	.	.	.
15.417	748.5212	1554.00	.	.V	.	Q	.	.	.
15.500	759.3955	1578.96	.	.V	.	Q	.	.	.
15.583	770.5131	1614.27	.	.V	.	Q	.	.	.
15.667	781.8671	1648.60	.	.V	.	Q	.	.	.
15.750	793.4657	1684.12	.	.V	.	Q	.	.	.
15.833	805.2992	1718.22	.	.V	.	Q	.	.	.
15.917	817.3895	1755.51	.	.V	.	Q	.	.	.
16.000	829.7628	1796.61	.	.V	.	Q	.	.	.
16.083	842.5044	1850.08	.	.V	.	Q	.	.	.
16.167	855.6164	1903.87	.	.V	.	Q	.	.	.
16.250	868.9326	1933.52	.	.V	.	Q	.	.	.
16.333	882.4368	1960.81	.	.V	.	Q	.	.	.
16.417	896.1514	1991.37	.	.V	.	Q	.	.	.
16.500	910.1012	2025.51	.	.V	.	Q	.	.	.
16.583	924.3076	2062.77	.	.V	.	Q	.	.	.
16.667	938.7554	2097.82	.	.V	.	Q	.	.	.
16.750	953.4470	2133.22	.	.V	.	Q	.	.	.
16.833	968.4080	2172.33	.	.V	.	Q	.	.	.
16.917	983.5350	2196.45	.	.V	.	Q	.	.	.
17.000	998.8375	2221.92	.	.V	.	Q	.	.	.
17.083	1014.3064	2246.09	.	.V	.	Q	.	.	.
17.167	1029.9541	2272.05	.	.V	.	Q	.	.	.
17.250	1046.0393	2335.57	.	.V	.	Q	.	.	.
17.333	1062.4061	2376.47	.	.V	.	Q	.	.	.
17.417	1078.9282	2399.00	.	.V	.	Q	.	.	.
17.500	1095.6895	2433.72	.	.V	.	Q	.	.	.
17.583	1112.6927	2468.88	.	.V	.	Q	.	.	.
17.667	1130.0211	2516.07	.	.V	.	Q	.	.	.
17.750	1147.6346	2557.48	.	.V	.	Q	.	.	.
17.833	1165.3420	2571.12	.	.V	.	Q	.	.	.
17.917	1183.1869	2591.07	.	.V	.	Q	.	.	.
18.000	1201.2153	2617.73	.	.V	.	Q	.	.	.
18.083	1219.4862	2652.93	.	.V	.	Q	.	.	.
18.167	1238.3730	2742.36	.	.V	.	Q	.	.	.
18.250	1256.9965	2704.11	.	.V	.	Q	.	.	.
18.333	1275.5198	2689.58	.	.V	.	Q	.	.	.
18.417	1294.1106	2699.39	.	.V	.	Q	.	.	.

18.500	1312.9355	2733.39	.	.	.	V	.	Q	.
18.583	1332.0887	2781.04	.	.	.	V	.	Q	.
18.667	1351.4762	2815.07	.	.	.	V	.	Q	.
18.750	1370.6141	2778.84	.	.	.	.V	.	Q	.
18.833	1389.5757	2753.21	.	.	.	.V	.	Q	.
18.917	1408.5127	2749.66	.	.	.	.V	.	Q	.
19.000	1427.6561	2779.62	.	.	.	.V	.	Q	.
19.083	1447.0909	2821.94	.	.	.	.V	.	Q	.
19.167	1466.2897	2787.66	.	.	.	.V	.	Q	.
19.250	1485.8553	2840.93	.	.	.	.V	.	Q	.
19.333	1505.2040	2809.42	.	.	.	.V	.	Q	.
19.417	1524.0516	2736.67	.	.	.	.V	.	Q	.
19.500	1542.6897	2706.25	.	.	.	.V	.	Q	.
19.583	1562.3336	2852.30	.	.	.	.V	.	Q	.
19.667	1581.6576	2805.83	.	.	.	.V	.	Q	.
19.750	1600.9263	2797.82	.	.	.	.V	.	Q	.
19.833	1619.9950	2768.78	.	.	.	.V	.	Q	.
19.917	1639.2227	2791.86	.	.	.	.V	.	Q	.
20.000	1658.5190	2801.84	.	.	.	.V	.	Q	.
20.083	1676.9010	2669.06	.	.	.	.V	.	Q	.
20.167	1695.0433	2634.26	.	.	.	.V	.	Q	.
20.250	1712.9984	2607.08	.	.	.	.V	.	Q	.
20.333	1730.8632	2593.97	.	.	.	.V	.	Q	.
20.417	1748.9213	2622.04	.	.	.	.V	.	Q	.
20.500	1767.1238	2643.00	.	.	.	.V	.	Q	.
20.583	1785.4847	2666.01	.	.	.	.V	.	Q	.
20.667	1803.1733	2568.39	.	.	.	.V	.	Q	.
20.750	1820.3051	2487.53	.	.	.	.V	.	Q	.
20.833	1837.1880	2451.40	.	.	.	.V	.	Q	.
20.917	1853.9673	2436.36	.	.	.	.V	.	Q	.
21.000	1870.8033	2444.59	.	.	.	.V	.	Q	.
21.083	1887.0844	2364.01	.	.	.	.V	.	Q	.
21.167	1903.1384	2331.05	.	.	.	.V	.	Q	.
21.250	1919.0906	2316.25	.	.	.	.V	.	Q	.
21.333	1934.7937	2280.09	.	.	.	.V	.	Q	.
21.417	1950.1426	2228.66	.	.	.	.V	.	Q	.
21.500	1965.0116	2158.98	.	.	.	.V	.	Q	.
21.583	1979.5929	2117.21	.	.	.	.V	.	Q	.
21.667	1993.9415	2083.42	.	.	.	.V	.	Q	.
21.750	2008.0792	2052.80	.	.	.	.V	.	Q	.
21.833	2022.0248	2024.90	.	.	.	.V	.	Q	.
21.917	2035.7004	1985.70	.	.	.	.V	.	Q	.
22.000	2049.0015	1931.32	.	.	.	.V	.	Q	.
22.083	2062.0647	1896.77	.	.	.	.V	.	Q	.
22.167	2074.8562	1857.33	.	.	.	.V	.	Q	.
22.250	2087.4055	1822.18	.	.	.	.V	.	Q	.
22.333	2099.6929	1784.14	.	.	.	.V	.	Q	.
22.417	2111.6350	1734.00	.	.	.	.V	.	Q	.
22.500	2123.3408	1699.67	.	.	.	.V	.	Q	.
22.583	2134.7493	1656.52	.	.	.	.V	.	Q	.
22.667	2145.8081	1605.74	.	.	.	.V	.	Q	.
22.750	2156.6489	1574.10	.	.	.	.V	.	Q	.
22.833	2167.2859	1544.48	.	.	.	.V	.	Q	.
22.917	2177.7039	1512.69	.	.	.	.V	.	Q	.
23.000	2187.8542	1473.84	.	.	.	.V	.	Q	.
23.083	2197.8076	1445.21	.	.	.	.V	.	Q	.
23.167	2207.5786	1418.75	.	.	.	.V	.	Q	.
23.250	2217.1582	1390.95	.	.	.	.V	.	Q	.

23.333	2226.5188	1359.16	.	.	Q	.	.	V	.
23.417	2235.6833	1330.70	.	.	Q	.	.	V	.
23.500	2244.6877	1307.44	.	.	Q	.	.	V	.
23.583	2253.5332	1284.37	.	.	Q	.	.	V	.
23.667	2262.2175	1260.98	.	.	Q	.	.	V	.
23.750	2270.6599	1225.83	.	.	Q	.	.	V	.
23.833	2278.8999	1196.45	.	.	Q	.	.	V	.
23.917	2286.9973	1175.76	.	.	Q	.	.	V	.
24.000	2294.9641	1156.77	.	.	Q	.	.	V	.
24.083	2302.7910	1136.47	.	.	Q	.	.	V	.
24.167	2310.4731	1115.45	.	.	Q	.	.	V	.
24.250	2318.0083	1094.11	.	.	Q	.	.	V	.
24.333	2325.3716	1069.16	.	.	Q	.	.	V	.
24.417	2332.5212	1038.15	.	.	Q	.	.	V	.
24.500	2339.5378	1018.83	.	.	Q	.	.	V	.
24.583	2346.4329	1001.15	.	.	Q	.	.	V	.
24.667	2353.2158	984.87	.	.	Q	.	.	V	.
24.750	2359.8953	969.86	.	.	Q	.	.	V	.
24.833	2366.4717	954.91	.	.	Q	.	.	V	.
24.917	2372.9458	940.05	.	.	Q	.	.	V	.
25.000	2379.3198	925.50	.	.	Q	.	.	V	.
25.083	2385.5967	911.42	.	.	Q	.	.	V	.
25.167	2391.7739	896.93	.	.	Q	.	.	V	.
25.250	2397.8384	880.55	.	.	Q	.	.	V	.
25.333	2403.7622	860.15	.	.	Q	.	.	V	.
25.417	2409.4768	829.75	.	.	Q	.	.	V	.
25.500	2415.0745	812.76	.	.	Q	.	.	V	.
25.583	2420.5674	797.56	.	.	Q	.	.	V	.
25.667	2425.9487	781.38	.	.	Q	.	.	V	.
25.750	2431.2163	764.86	.	.	Q	.	.	V	.
25.833	2436.3723	748.64	.	.	Q	.	.	V	.
25.917	2441.4209	733.06	.	.	Q	.	.	V	.
26.000	2446.3594	717.08	.	.	Q	.	.	V	.
26.083	2451.1885	701.20	.	.	Q	.	.	V	.
26.167	2455.8896	682.59	.	.	Q	.	.	V	.
26.250	2460.4771	666.09	.	.	Q	.	.	V	.
26.333	2464.9580	650.63	.	.	Q	.	.	V	.
26.417	2469.3464	637.21	.	.	Q	.	.	V	.
26.500	2473.6409	623.56	.	.	Q	.	.	V	.
26.583	2477.8337	608.80	.	.	Q	.	.	V	.
26.667	2481.9202	593.35	.	.	Q	.	.	V	.
26.750	2485.9084	579.11	.	.	Q	.	.	V	.
26.833	2489.8071	566.10	.	.	Q	.	.	V	.
26.917	2493.6162	553.08	.	.	Q	.	.	V	.
27.000	2497.3320	539.52	.	.	Q	.	.	V	.
27.083	2500.9468	524.87	.	.	Q	.	.	V	.
27.167	2504.4658	510.95	.	.	Q	.	.	V	.
27.250	2507.8735	494.78	.	.	Q	.	.	V	.
27.333	2511.1755	479.45	.	.	Q	.	.	V	.
27.417	2514.3982	467.92	.	.	Q	.	.	V	.
27.500	2517.5461	457.09	.	.	Q	.	.	V	.
27.583	2520.5867	441.48	.	.	Q	.	.	V	.
27.667	2523.5269	426.91	.	.	Q	.	.	V	.
27.750	2526.3657	412.22	.	.	Q	.	.	V	.
27.833	2529.1069	398.02	.	.	Q	.	.	V	.
27.917	2531.7419	382.60	.	.	Q	.	.	V	.
28.000	2534.2639	366.18	.	.	Q	.	.	V	.
28.083	2536.7002	353.73	.	.	Q	.	.	V	.

28.167	2539.0549	341.92	.	Q	.	.	.	.	V.
28.250	2541.3315	330.55	.	Q	.	.	.	.	V.
28.333	2543.5315	319.42	.	Q	.	.	.	.	V.
28.417	2545.6467	307.12	.	Q	.	.	.	.	V.
28.500	2547.6707	293.89	.	Q	.	.	.	.	V.
28.583	2549.5911	278.85	.	Q	.	.	.	.	V.
28.667	2551.4226	265.94	.	Q	.	.	.	.	V.
28.750	2553.1780	254.89	.	Q	.	.	.	.	V.
28.833	2554.8621	244.53	.	Q	.	.	.	.	V.
28.917	2556.4756	234.28	.	Q	.	.	.	.	V.
29.000	2558.0137	223.33	.	Q	.	.	.	.	V.
29.083	2559.4893	214.24	.	Q	.	.	.	.	V.
29.167	2560.9043	205.48	.	Q	.	.	.	.	V.
29.250	2562.2559	196.23	.	Q	.	.	.	.	V.
29.333	2563.5464	187.40	.	Q	.	.	.	.	V.
29.417	2564.7805	179.19	.	Q	.	.	.	.	V.
29.500	2565.9661	172.14	.	Q	.	.	.	.	V.
29.583	2567.0984	164.40	.	Q	.	.	.	.	V.
29.667	2568.1436	151.74	.	Q	.	.	.	.	V.
29.750	2569.1426	145.06	.	Q	.	.	.	.	V.
29.833	2570.0947	138.25	.	Q	.	.	.	.	V.
29.917	2571.0010	131.58	.	Q	.	.	.	.	V.
30.000	2571.8616	124.95	.	Q	.	.	.	.	V.
30.083	2572.6772	118.43	.	Q	.	.	.	.	V.
30.167	2573.4502	112.23	.	Q	.	.	.	.	V.
30.250	2574.1816	106.19	.	Q	.	.	.	.	V.
30.333	2574.8730	100.40	.	Q	.	.	.	.	V.
30.417	2575.5288	95.22	.	Q	.	.	.	.	V.
30.500	2576.1492	90.07	.	Q	.	.	.	.	V.
30.583	2576.7356	85.16	.	Q	.	.	.	.	V.
30.667	2577.2949	81.22	.	Q	.	.	.	.	V.
30.750	2577.8276	77.37	.	Q	.	.	.	.	V.
30.833	2578.3342	73.55	.	Q	.	.	.	.	V.
30.917	2578.8152	69.82	.	Q	.	.	.	.	V.
31.000	2579.2720	66.33	.	Q	.	.	.	.	V.
31.083	2579.7051	62.89	.	Q	.	.	.	.	V.
31.167	2580.1147	59.49	.	Q	.	.	.	.	V.
31.250	2580.5012	56.10	.	Q	.	.	.	.	V.
31.333	2580.8655	52.89	.	Q	.	.	.	.	V.
31.417	2581.2085	49.79	.	Q	.	.	.	.	V.
31.500	2581.5303	46.72	.	Q	.	.	.	.	V.
31.583	2581.8313	43.70	.	Q	.	.	.	.	V.
31.667	2582.1143	41.08	.	Q	.	.	.	.	V.
31.750	2582.3826	38.94	.	Q	.	.	.	.	V.
31.833	2582.6382	37.11	.	Q	.	.	.	.	V.
31.917	2582.8813	35.29	.	Q	.	.	.	.	V.
32.000	2583.1121	33.49	.	Q	.	.	.	.	V.
32.083	2583.3303	31.71	.	Q	.	.	.	.	V.
32.167	2583.5366	29.94	.	Q	.	.	.	.	V.
32.250	2583.7307	28.19	.	Q	.	.	.	.	V.
32.333	2583.9138	26.59	.	Q	.	.	.	.	V.
32.417	2584.0889	25.41	.	Q	.	.	.	.	V.
32.500	2584.2561	24.27	.	Q	.	.	.	.	V.
32.583	2584.4155	23.14	.	Q	.	.	.	.	V.
32.667	2584.5671	22.02	.	Q	.	.	.	.	V.
32.750	2584.7112	20.92	.	Q	.	.	.	.	V.
32.833	2584.8477	19.82	.	Q	.	.	.	.	V.
32.917	2584.9766	18.73	.	Q	.	.	.	.	V.

33.000	2585.0981	17.66	Q	.	.	.	V.
33.083	2585.2124	16.59	Q	.	.	.	V.
33.167	2585.3193	15.53	Q	.	.	.	V.
33.250	2585.4189	14.48	Q	.	.	.	V.
33.333	2585.5122	13.56	Q	.	.	.	V.
33.417	2585.6028	13.16	Q	.	.	.	V.
33.500	2585.6912	12.83	Q	.	.	.	V.
33.583	2585.7773	12.50	Q	.	.	.	V.
33.667	2585.8613	12.18	Q	.	.	.	V.
33.750	2585.9431	11.86	Q	.	.	.	V.
33.833	2586.0227	11.55	Q	.	.	.	V.
33.917	2586.1001	11.23	Q	.	.	.	V.
34.000	2586.1753	10.93	Q	.	.	.	V.
34.083	2586.2485	10.62	Q	.	.	.	V.
34.167	2586.3196	10.32	Q	.	.	.	V.
34.250	2586.3887	10.02	Q	.	.	.	V.
34.333	2586.4556	9.73	Q	.	.	.	V.
34.417	2586.5205	9.43	Q	.	.	.	V.
34.500	2586.5835	9.14	Q	.	.	.	V.
34.583	2586.6445	8.86	Q	.	.	.	V.
34.667	2586.7036	8.57	Q	.	.	.	V.
34.750	2586.7607	8.29	Q	.	.	.	V.
34.833	2586.8159	8.01	Q	.	.	.	V.
34.917	2586.8691	7.73	Q	.	.	.	V.
35.000	2586.9207	7.46	Q	.	.	.	V.
35.083	2586.9702	7.18	Q	.	.	.	V.
35.167	2587.0178	6.91	Q	.	.	.	V.
35.250	2587.0637	6.65	Q	.	.	.	V.
35.333	2587.1077	6.39	Q	.	.	.	V.
35.417	2587.1499	6.12	Q	.	.	.	V.
35.500	2587.1902	5.86	Q	.	.	.	V.
35.583	2587.2288	5.60	Q	.	.	.	V.
35.667	2587.2656	5.35	Q	.	.	.	V.
35.750	2587.3008	5.10	Q	.	.	.	V.
35.833	2587.3342	4.85	Q	.	.	.	V.
35.917	2587.3660	4.60	Q	.	.	.	V.
36.000	2587.3960	4.35	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%	1475.0
20%	1190.0
30%	780.0
40%	595.0
50%	485.0
60%	400.0
70%	325.0
80%	245.0
90%	175.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 138 *
* 5-YR EV APRIL 2019 CCHIU *

FILE NAME: EV05138S.DAT
TIME/DATE OF STUDY: 08:15 04/09/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 138.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69101.797 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) = 0.473
LOW LOSS FRACTION = 0.827
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.22
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.60
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.09
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.59
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.77

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.287
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.392
3-HOUR FACTOR = 0.734
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.042

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.117	975.133
2	0.350	1950.273
3	0.583	1950.265
4	0.817	1950.273
5	1.050	1950.265
6	1.284	1950.269
7	1.517	1950.272
8	1.750	1950.261
9	1.995	2044.289
10	2.330	2802.452
11	2.685	2967.793
12	3.040	2967.809
13	3.396	2967.777
14	3.751	2967.823
15	4.201	3761.788
16	4.848	5409.990
17	5.502	5460.762
18	6.211	5929.561
19	7.064	7125.748
20	7.943	7347.159
21	8.992	8769.192
22	10.070	9007.275
23	11.097	8583.845
24	12.118	8532.447
25	13.139	8532.455
26	14.293	9637.341
27	15.839	12924.794
28	17.016	9833.431
29	18.105	9101.288
30	19.194	9101.288
31	20.362	9757.988
32	21.727	11407.126
33	23.291	13070.850
34	24.661	11451.455
35	25.828	9751.134
36	26.995	9751.612
37	28.256	10545.968
38	29.836	13201.491
39	31.244	11767.443
40	32.909	13915.670
41	34.760	15465.854
42	36.244	12404.155
43	37.352	9253.799
44	39.022	13955.344
45	41.049	16942.893
46	42.859	15126.881
47	44.720	15551.037
48	46.590	15630.002

49	48.823	18660.938
50	50.784	16388.350
51	52.269	12411.137
52	53.747	12352.702
53	55.136	11605.353
54	56.599	12229.297
55	58.268	13942.369
56	60.147	15700.934
57	62.283	17856.109
58	63.996	14311.055
59	65.448	12137.931
60	66.816	11429.474
61	68.214	11684.254
62	69.820	13423.787
63	71.093	10634.146
64	72.321	10266.449
65	73.645	11059.800
66	74.923	10682.093
67	76.107	9897.731
68	77.037	7770.545
69	77.945	7584.625
70	78.852	7583.732
71	79.761	7597.631
72	80.706	7899.402
73	81.666	8021.373
74	82.562	7485.734
75	83.422	7186.004
76	84.254	6950.224
77	85.033	6512.583
78	85.806	6458.580
79	86.475	5595.349
80	87.104	5251.625
81	87.731	5245.631
82	88.275	4546.197
83	88.756	4016.680
84	89.236	4012.663
85	89.717	4016.616
86	90.176	3840.833
87	90.606	3593.002
88	91.036	3593.002
89	91.466	3591.026
90	91.894	3581.015
91	92.295	3347.212
92	92.684	3249.278
93	93.073	3249.278
94	93.461	3249.278
95	93.850	3245.325
96	94.160	2589.820
97	94.419	2166.207
98	94.678	2166.207
99	94.938	2170.160
100	95.197	2166.207
101	95.456	2162.190
102	95.715	2170.223
103	95.967	2102.193
104	96.144	1482.776
105	96.305	1338.872
106	96.465	1338.936

107	96.625	1338.872
108	96.785	1338.872
109	96.945	1338.872
110	97.105	1334.919
111	97.265	1338.872
112	97.426	1338.872
113	97.586	1338.872
114	97.746	1338.936
115	97.906	1338.872
116	98.015	907.225
117	98.054	327.720
118	98.092	319.751
119	98.131	319.751
120	98.169	319.687
121	98.207	319.751
122	98.245	319.751
123	98.284	319.751
124	98.322	319.687
125	98.360	319.751
126	98.398	319.751
127	98.438	327.720
128	98.476	319.751
129	98.514	319.687
130	98.553	323.767
131	98.590	311.717
132	98.629	327.720
133	98.668	319.751
134	98.705	315.734
135	98.744	319.751
136	98.782	319.687
137	98.820	319.751
138	98.858	319.751
139	98.898	327.720
140	98.936	319.751
141	98.973	311.717
142	99.011	319.751
143	99.049	311.717
144	99.086	311.717
145	99.123	311.717
146	99.161	311.717
147	99.198	311.717
148	99.235	311.717
149	99.273	311.717
150	99.310	311.717
151	99.347	311.717
152	99.384	311.717
153	99.422	311.717
154	99.459	311.717
155	99.496	311.717
156	99.534	311.717
157	99.571	311.717
158	99.608	311.717
159	99.646	311.717
160	99.683	311.717
161	99.720	311.717
162	99.757	311.717
163	99.795	311.717
164	99.832	311.717

165	99.869	311.717
166	99.907	311.717
167	99.944	311.717
168	99.981	311.717
169	100.000	156.847

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12210.9863
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 2635.8748

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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.	725.0	1450.0	2175.0	2900.0
0.083	0.0046	0.66	Q	.	.	.	.
0.167	0.0183	1.99	Q	.	.	.	.
0.250	0.0411	3.32	Q	.	.	.	.
0.333	0.0732	4.66	Q	.	.	.	.
0.417	0.1145	5.99	Q	.	.	.	.
0.500	0.1650	7.34	Q	.	.	.	.
0.583	0.2248	8.68	Q	.	.	.	.
0.667	0.2939	10.03	Q	.	.	.	.
0.750	0.3728	11.45	Q	.	.	.	.
0.833	0.4650	13.39	Q	.	.	.	.
0.917	0.5714	15.45	Q	.	.	.	.
1.000	0.6920	17.51	Q	.	.	.	.
1.083	0.8268	19.58	Q	.	.	.	.
1.167	0.9760	21.65	Q	.	.	.	.
1.250	1.1432	24.28	Q	.	.	.	.
1.333	1.3362	28.03	Q	.	.	.	.
1.417	1.5553	31.82	Q	.	.	.	.
1.500	1.8029	35.95	Q	.	.	.	.
1.583	2.0845	40.90	Q	.	.	.	.
1.667	2.4014	46.01	Q	.	.	.	.
1.750	2.7603	52.11	Q	.	.	.	.
1.833	3.1624	58.39	Q	.	.	.	.
1.917	3.6059	64.40	Q	.	.	.	.
2.000	4.0907	70.39	Q	.	.	.	.
2.083	4.6169	76.40	VQ	.	.	.	.
2.167	5.1898	83.19	VQ	.	.	.	.
2.250	5.8249	92.22	VQ	.	.	.	.
2.333	6.5080	99.19	VQ	.	.	.	.
2.417	7.2358	105.68	VQ	.	.	.	.
2.500	8.0084	112.18	VQ	.	.	.	.
2.583	8.8291	119.16	VQ	.	.	.	.
2.667	9.7057	127.28	VQ	.	.	.	.
2.750	10.6462	136.56	VQ	.	.	.	.
2.833	11.6432	144.76	VQ	.	.	.	.
2.917	12.6889	151.84	V Q	.	.	.	.
3.000	13.7836	158.94	V Q	.	.	.	.
3.083	14.9310	166.61	V Q	.	.	.	.
3.167	16.1438	176.10	V Q	.	.	.	.
3.250	17.4155	184.65	V Q	.	.	.	.
3.333	18.7563	194.69	V Q	.	.	.	.
3.417	20.1737	205.81	V Q	.	.	.	.
3.500	21.6537	214.89	V Q	.	.	.	.
3.583	23.1817	221.86	V Q	.	.	.	.
3.667	24.7799	232.05	V Q	.	.	.	.
3.750	26.4624	244.31	V Q	.	.	.	.
3.833	28.2212	255.37	V Q	.	.	.	.
3.917	30.0583	266.75	V Q	.	.	.	.

4.000	31.9745	278.23	V	Q	.	.	.	.
4.083	33.9842	291.81	V	Q	.	.	.	.
4.167	36.0771	303.88	V	Q	.	.	.	.
4.250	38.2348	313.30	V	Q	.	.	.	.
4.333	40.4573	322.71	V	Q	.	.	.	.
4.417	42.7414	331.65	V	Q	.	.	.	.
4.500	45.0902	341.04	V	Q	.	.	.	.
4.583	47.5119	351.64	V	Q	.	.	.	.
4.667	50.0151	363.46	V	Q	.	.	.	.
4.750	52.6101	376.79	V	Q	.	.	.	.
4.833	55.2806	387.76	V	Q	.	.	.	.
4.917	58.0168	397.30	V	Q	.	.	.	.
5.000	60.8156	406.38	V	Q	.	.	.	.
5.083	63.6784	415.68	V	Q	.	.	.	.
5.167	66.6136	426.19	.V	Q	.	.	.	.
5.250	69.6085	434.86	.V	Q	.	.	.	.
5.333	72.6615	443.30	.V	Q	.	.	.	.
5.417	75.7767	452.32	.V	Q	.	.	.	.
5.500	78.9524	461.12	.V	Q	.	.	.	.
5.583	82.1853	469.42	.V	Q	.	.	.	.
5.667	85.4657	476.31	.V	Q	.	.	.	.
5.750	88.7928	483.11	.V	Q	.	.	.	.
5.833	92.1670	489.93	.V	Q	.	.	.	.
5.917	95.5885	496.80	.V	Q	.	.	.	.
6.000	99.0589	503.90	.V	Q	.	.	.	.
6.083	102.5791	511.13	.V	Q	.	.	.	.
6.167	106.1467	518.02	.V	Q	.	.	.	.
6.250	109.7606	524.74	.V	Q	.	.	.	.
6.333	113.4198	531.33	.V	Q	.	.	.	.
6.417	117.1227	537.66	.V	Q	.	.	.	.
6.500	120.8691	543.98	.V	Q	.	.	.	.
6.583	124.6553	549.75	.V	Q	.	.	.	.
6.667	128.4798	555.32	.V	Q	.	.	.	.
6.750	132.3428	560.91	.V	Q	.	.	.	.
6.833	136.2413	566.06	.V	Q	.	.	.	.
6.917	140.1731	570.89	.V	Q	.	.	.	.
7.000	144.1382	575.73	.V	Q	.	.	.	.
7.083	148.1369	580.62	.V	Q	.	.	.	.
7.167	152.1687	585.41	.V	Q	.	.	.	.
7.250	156.2325	590.07	.V	Q	.	.	.	.
7.333	160.3286	594.76	.V	Q	.	.	.	.
7.417	164.4573	599.48	.V	Q	.	.	.	.
7.500	168.6185	604.22	.V	Q	.	.	.	.
7.583	172.8116	608.84	.V	Q	.	.	.	.
7.667	177.0363	613.42	.V	Q	.	.	.	.
7.750	181.2927	618.04	.V	Q	.	.	.	.
7.833	185.5811	622.68	.V	Q	.	.	.	.
7.917	189.9019	627.37	.V	Q	.	.	.	.
8.000	194.2520	631.63	.V	Q	.	.	.	.
8.083	198.6297	635.65	.V	Q	.	.	.	.
8.167	203.0354	639.70	.V	Q	.	.	.	.
8.250	207.4692	643.79	.V	Q	.	.	.	.
8.333	211.9314	647.91	.V	Q	.	.	.	.
8.417	216.4222	652.06	.V	Q	.	.	.	.
8.500	220.9418	656.25	.V	Q	.	.	.	.
8.583	225.4903	660.44	.V	Q	.	.	.	.
8.667	230.0650	664.24	.V	Q	.	.	.	.
8.750	234.6654	667.98	.V	Q	.	.	.	.

8.833	239.2918	671.76	.V	Q	.	.	.	.
8.917	243.9446	675.58	.V	Q	.	.	.	.
9.000	248.6238	679.43	.V	Q	.	.	.	.
9.083	253.3299	683.33	.V	Q	.	.	.	.
9.167	258.0631	687.26	.V	Q	.	.	.	.
9.250	262.8237	691.24	.V	Q	.	.	.	.
9.333	267.6119	695.25	.V	Q	.	.	.	.
9.417	272.4281	699.32	.V	Q	.	.	.	.
9.500	277.2726	703.42	.V	Q	.	.	.	.
9.583	282.1457	707.57	.V	Q	.	.	.	.
9.667	287.0456	711.47	.V	Q	.	.	.	.
9.750	291.9701	715.03	.V	Q	.	.	.	.
9.833	296.9193	718.62	.V	Q	.	.	.	.
9.917	301.8936	722.27	.V	Q	.	.	.	.
10.000	306.8933	725.96	.V	Q	.	.	.	.
10.083	311.9189	729.70	.V	Q	.	.	.	.
10.167	316.9705	733.49	.V	Q	.	.	.	.
10.250	322.0486	737.34	.V	Q	.	.	.	.
10.333	327.1534	741.23	.V	Q	.	.	.	.
10.417	332.2856	745.18	.V	Q	.	.	.	.
10.500	337.4452	749.18	.V	Q	.	.	.	.
10.583	342.6329	753.26	.V	Q	.	.	.	.
10.667	347.8490	757.37	.V	Q	.	.	.	.
10.750	353.0939	761.56	.V	Q	.	.	.	.
10.833	358.3680	765.80	.V	Q	.	.	.	.
10.917	363.6718	770.10	.V	Q	.	.	.	.
11.000	369.0056	774.47	.V	Q	.	.	.	.
11.083	374.3700	778.91	.V	Q	.	.	.	.
11.167	379.7654	783.41	.V	Q	.	.	.	.
11.250	385.1924	787.99	.V	Q	.	.	.	.
11.333	390.6513	792.64	.V	Q	.	.	.	.
11.417	396.1427	797.36	.V	Q	.	.	.	.
11.500	401.6672	802.15	.V	.Q	.	.	.	.
11.583	407.2253	807.04	.V	.Q	.	.	.	.
11.667	412.8176	811.99	.V	.Q	.	.	.	.
11.750	418.4445	817.03	.V	.Q	.	.	.	.
11.833	424.1068	822.16	.V	.Q	.	.	.	.
11.917	429.8049	827.37	.V	.Q	.	.	.	.
12.000	435.5396	832.67	.V	.Q	.	.	.	.
12.083	441.3199	839.31	.V	.Q	.	.	.	.
12.167	447.1552	847.28	.V	.Q	.	.	.	.
12.250	453.0459	855.34	.V	.Q	.	.	.	.
12.333	458.9927	863.48	.V	.Q	.	.	.	.
12.417	464.9963	871.72	.V	.Q	.	.	.	.
12.500	471.0573	880.05	.V	.Q	.	.	.	.
12.583	477.1763	888.49	.V	.Q	.	.	.	.
12.667	483.3541	897.01	.V	.Q	.	.	.	.
12.750	489.5922	905.78	.V	.Q	.	.	.	.
12.833	495.8980	915.60	.V	.Q	.	.	.	.
12.917	502.2737	925.76	.V	.Q	.	.	.	.
13.000	508.7200	936.01	.V	.Q	.	.	.	.
13.083	515.2379	946.39	.V	.Q	.	.	.	.
13.167	521.8278	956.87	.V	.Q	.	.	.	.
13.250	528.4979	968.49	.V	.Q	.	.	.	.
13.333	535.2632	982.32	.V	.Q	.	.	.	.
13.417	542.1251	996.35	.V	.Q	.	.	.	.
13.500	549.0884	1011.07	.V	.Q	.	.	.	.
13.583	556.1645	1027.45	.V	.Q	.	.	.	.

13.667	563.3560	1044.21	.	V	.	Q	.	.	.
13.750	570.6764	1062.92	.	V	.	Q	.	.	.
13.833	578.1284	1082.03	.	V	.	Q	.	.	.
13.917	585.7091	1100.73	.	V	.	Q	.	.	.
14.000	593.4189	1119.47	.	V	.	Q	.	.	.
14.083	601.2658	1139.36	.	V	.	Q	.	.	.
14.167	609.2668	1161.75	.	V	.	Q	.	.	.
14.250	617.4514	1188.39	.	V	.	Q	.	.	.
14.333	625.7922	1211.10	.	V	.	Q	.	.	.
14.417	634.2834	1232.92	.	V	.	Q	.	.	.
14.500	642.9252	1254.79	.	V	.	Q	.	.	.
14.583	651.7238	1277.56	.	V	.	Q	.	.	.
14.667	660.6939	1302.46	.	V	.	Q	.	.	.
14.750	669.8512	1329.64	.	V	.	Q	.	.	.
14.833	679.1876	1355.65	.	V	.	Q	.	.	.
14.917	688.6896	1379.69	.	V	.	Q	.	.	.
15.000	698.3572	1403.73	.	V	.	Q	.	.	.
15.083	708.1976	1428.81	.	V	.	Q	.	.	.
15.167	718.2338	1457.25	.	V	.	Q	.	.	.
15.250	728.4595	1484.78	.	.V	.	Q	.	.	.
15.333	738.9062	1516.85	.	.V	.	Q	.	.	.
15.417	749.5762	1549.29	.	.V	.	Q	.	.	.
15.500	760.4351	1576.71	.	.V	.	Q	.	.	.
15.583	771.4662	1601.71	.	.V	.	Q	.	.	.
15.667	782.7135	1633.11	.	.V	.	Q	.	.	.
15.750	794.2130	1669.73	.	.V	.	Q	.	.	.
15.833	805.9489	1704.05	.	.V	.	Q	.	.	.
15.917	817.9276	1739.31	.	.V	.	Q	.	.	.
16.000	830.1605	1776.21	.	.V	.	Q	.	.	.
16.083	842.8007	1835.35	.	.V	.	Q	.	.	.
16.167	855.8159	1889.82	.	.V	.	Q	.	.	.
16.250	869.0601	1923.05	.	.V	.	Q	.	.	.
16.333	882.5028	1951.89	.	.V	.	Q	.	.	.
16.417	896.1379	1979.81	.	.V	.	Q	.	.	.
16.500	909.9789	2009.71	.	.V	.	Q	.	.	.
16.583	924.0377	2041.34	.	.V	.	Q	.	.	.
16.667	938.3295	2075.18	.	.V	.	Q	.	.	.
16.750	952.9042	2116.25	.	.V	.	Q	.	.	.
16.833	967.7974	2162.49	.	.V	.	Q	.	.	.
16.917	982.8788	2189.83	.	.V	.	Q	.	.	.
17.000	998.1160	2212.43	.	.V	.	Q	.	.	.
17.083	1013.5007	2233.87	.	.V	.	Q	.	.	.
17.167	1029.0828	2262.50	.	.V	.	Q	.	.	.
17.250	1044.9430	2302.91	.	.V	.	Q	.	.	.
17.333	1061.1990	2360.37	.	.V	.	Q	.	.	.
17.417	1077.6567	2389.66	.	.V	.	Q	.	.	.
17.500	1094.3330	2421.40	.	.V	.	Q	.	.	.
17.583	1111.2595	2457.73	.	.V	.	Q	.	.	.
17.667	1128.3849	2486.61	.	.V	.	Q	.	.	.
17.750	1145.8870	2541.31	.	.V	.	Q	.	.	.
17.833	1163.5742	2568.19	.	.V	.	Q	.	.	.
17.917	1181.3569	2582.05	.	.V	.	Q	.	.	.
18.000	1199.2852	2603.18	.	.V	.	Q	.	.	.
18.083	1217.4031	2630.73	.	.V	.	Q	.	.	.
18.167	1235.8462	2677.93	.	.V	.	Q	.	.	.
18.250	1254.8246	2755.67	.	.V	.	Q	.	.	.
18.333	1273.4757	2708.14	.	.V	.	Q	.	.	.
18.417	1292.1008	2704.37	.	.V	.	Q	.	.	.

18.500	1310.7953	2714.43	.	.	.	V.	.	Q	.
18.583	1329.7195	2747.78	.	.	.	V	.	Q	.
18.667	1348.9480	2791.98	.	.	.	V	.	Q	.
18.750	1368.4193	2827.24	.	.	.	V	.	Q	.
18.833	1387.6746	2795.86	.	.	.	.V	.	Q	.
18.917	1406.7458	2769.15	.	.	.	.V	.	Q	.
19.000	1425.8303	2771.06	.	.	.	.V	.	Q	.
19.083	1445.0253	2787.11	.	.	.	.V	.	Q	.
19.167	1464.5831	2839.80	.	.	.	.V	.	Q	.
19.250	1483.9106	2806.36	.	.	.	.V	.	Q	.
19.333	1503.4491	2836.97	.	.	.	.V	.	Q	.
19.417	1523.0411	2844.76	.	.	.	.V	.	Q	.
19.500	1542.1532	2775.08	.	.	.	.V	.	Q	.
19.583	1560.8575	2715.87	.	.	.	.V	.	Q	.
19.667	1580.1694	2804.09	.	.	.	.V	.	Q	.
19.750	1599.8092	2851.69	.	.	.	.V	.	Q	.
19.833	1619.1238	2804.47	.	.	.	.V	.	Q	.
19.917	1638.3826	2796.37	.	.	.	.V	.	Q	.
20.000	1657.5590	2784.41	.	.	.	.V	.	Q	.
20.083	1676.9894	2821.29	.	.	.	.V	.	Q	.
20.167	1695.9384	2751.38	.	.	.	.V	.	Q	.
20.250	1714.2167	2654.00	.	.	.	.V	.	Q	.
20.333	1732.3655	2635.20	.	.	.	.V	.	Q	.
20.417	1750.3362	2609.34	.	.	.	.V	.	Q	.
20.500	1768.3300	2612.69	.	.	.	.V	.	Q	.
20.583	1786.5051	2639.03	.	.	.	.V	.	Q	.
20.667	1804.7849	2654.23	.	.	.	.V	.	Q	.
20.750	1823.0940	2658.48	.	.	.	.V	.	Q	.
20.833	1840.6929	2555.35	.	.	.	.V	.	Q	.
20.917	1857.8198	2486.83	.	.	.	.V	.	Q	.
21.000	1874.7296	2455.30	.	.	.	.V	.	Q	.
21.083	1891.5457	2441.70	.	.	.	.V	.	Q	.
21.167	1908.3900	2445.80	.	.	.	.V	.	Q	.
21.250	1924.6962	2367.65	.	.	.	.V	.	Q	.
21.333	1940.7698	2333.88	.	.	.	.V	.	Q	.
21.417	1956.7416	2319.11	.	.	.	.V	.	Q	.
21.500	1972.4901	2286.69	.	.	.	.V	.	Q	.
21.583	1987.9393	2243.22	.	.	.	.Q	.	.	.
21.667	2002.8619	2166.76	.	.	.	QV	.	.	.
21.750	2017.4863	2123.46	.	.	.	QV	.	.	.
21.833	2031.8816	2090.20	.	.	.	Q	.	V	.
21.917	2046.0701	2060.17	.	.	.	Q	.	.V	.
22.000	2060.0654	2032.11	.	.	.	Q	.	.V	.
22.083	2073.7988	1994.09	.	.	.	Q	.	.V	.
22.167	2087.1924	1944.73	.	.	.	Q	.	.V	.
22.250	2100.3372	1908.62	.	.	.	Q	.	.V	.
22.333	2113.2451	1874.23	.	.	.	Q	.	.V	.
22.417	2125.8887	1835.84	.	.	.	Q	.	.V	.
22.500	2138.3074	1803.20	.	.	.	Q	.	.V	.
22.583	2150.3884	1754.16	.	.	.	Q	.	.V	.
22.667	2162.1951	1714.34	.	.	.	Q	.	.V	.
22.750	2173.7437	1676.84	.	.	.	Q	.	.V	.
22.833	2184.9768	1631.05	.	.	.	Q	.	.V	.
22.917	2195.9373	1591.46	.	.	.	.Q	.	.V	.
23.000	2206.6975	1562.40	.	.	.	.Q	.	.V	.
23.083	2217.2544	1532.85	.	.	.	.Q	.	.V	.
23.167	2227.5659	1497.22	.	.	.	Q	.	.V	.
23.250	2237.6460	1463.64	.	.	.	Q	.	.V	.

23.333	2247.5408	1436.71	.	.	Q.	.	V	.
23.417	2257.2495	1409.70	.	.	Q.	.	V	.
23.500	2266.7703	1382.42	.	.	Q.	.	V	.
23.583	2276.0845	1352.43	.	.	Q.	.	V	.
23.667	2285.2307	1328.04	.	.	Q.	.	V	.
23.750	2294.2202	1305.26	.	.	Q.	.	V	.
23.833	2303.0552	1282.83	.	.	Q.	.	V	.
23.917	2311.7317	1259.84	.	.	Q.	.	V	.
24.000	2320.1702	1225.25	.	.	Q.	.	V	.
24.083	2328.4031	1195.42	.	.	Q.	.	V	.
24.167	2336.4907	1174.33	.	.	Q.	.	V	.
24.250	2344.4409	1154.38	.	.	Q.	.	V	.
24.333	2352.2512	1134.04	.	.	Q.	.	V	.
24.417	2359.9207	1113.59	.	.	Q.	.	V	.
24.500	2367.4473	1092.87	.	.	Q.	.	V	.
24.583	2374.8264	1071.47	.	.	Q.	.	V	.
24.667	2381.9934	1040.64	.	.	Q.	.	V	.
24.750	2389.0149	1019.53	.	.	Q.	.	V	.
24.833	2395.9153	1001.95	.	.	Q.	.	V	.
24.917	2402.7004	985.21	.	.	Q.	.	V	.
25.000	2409.3755	969.22	.	.	Q.	.	V	.
25.083	2415.9495	954.53	.	.	Q.	.	V	.
25.167	2422.4233	940.00	.	.	Q.	.	V	.
25.250	2428.7961	925.34	.	.	Q.	.	V	.
25.333	2435.0608	909.64	.	.	Q.	.	V	.
25.417	2441.2183	894.06	.	.	Q.	.	V	.
25.500	2447.2634	877.76	.	.	Q.	.	V	.
25.583	2453.1875	860.19	.	.	Q.	.	V	.
25.667	2458.9380	834.96	.	.	Q.	.	V	.
25.750	2464.4963	807.07	.	.	Q.	.	V	.
25.833	2469.9412	790.60	.	.	Q.	.	V	.
25.917	2475.2786	775.01	.	.	Q.	.	V	.
26.000	2480.5129	760.02	.	.	Q.	.	V	.
26.083	2485.6414	744.64	.	.	Q.	.	V	.
26.167	2490.6577	728.36	.	.	Q.	.	V	.
26.250	2495.5471	709.93	.	.	Q.	.	V	.
26.333	2500.3245	693.68	.	.	Q.	.	V	.
26.417	2504.9941	678.02	.	.	Q.	.	V	.
26.500	2509.5564	662.45	.	.	Q.	.	V	.
26.583	2514.0105	646.72	.	.	Q.	.	V	.
26.667	2518.3560	630.95	.	.	Q.	.	V	.
26.750	2522.5928	615.19	.	.	Q.	.	V	.
26.833	2526.7305	600.79	.	.	Q.	.	V	.
26.917	2530.7761	587.43	.	.	Q.	.	V	.
27.000	2534.7344	574.73	.	.	Q.	.	V	.
27.083	2538.5994	561.20	.	.	Q.	.	V	.
27.167	2542.3604	546.09	.	.	Q.	.	V	.
27.250	2546.0259	532.24	.	.	Q.	.	V	.
27.333	2549.5867	517.01	.	.	Q.	.	V	.
27.417	2553.0361	500.87	.	.	Q.	.	V	.
27.500	2556.3896	486.93	.	.	Q.	.	V	.
27.583	2559.6636	475.38	.	.	Q.	.	V	.
27.667	2562.8384	461.00	.	.	Q.	.	V	.
27.750	2565.9062	445.46	.	.	Q.	.	V	.
27.833	2568.8787	431.60	.	.	Q.	.	V	.
27.917	2571.7527	417.30	.	.	Q.	.	V	.
28.000	2574.5295	403.20	.	.	Q.	.	V	.
28.083	2577.1948	386.98	.	.	Q.	.	V	.

28.167	2579.7588	372.28	.	Q	.	.	.	V.
28.250	2582.2407	360.39	.	Q	.	.	.	V.
28.333	2584.6418	348.65	.	Q	.	.	.	V.
28.417	2586.9663	337.52	.	Q	.	.	.	V.
28.500	2589.2119	326.07	.	Q	.	.	.	V.
28.583	2591.3713	313.53	.	Q	.	.	.	V.
28.667	2593.4370	299.93	.	Q	.	.	.	V.
28.750	2595.3997	284.99	.	Q	.	.	.	V.
28.833	2597.2766	272.55	.	Q	.	.	.	V.
28.917	2599.0791	261.71	.	Q	.	.	.	V.
29.000	2600.8108	251.43	.	Q	.	.	.	V.
29.083	2602.4709	241.06	.	Q	.	.	.	V.
29.167	2604.0522	229.62	.	Q	.	.	.	V.
29.250	2605.5684	220.15	.	Q	.	.	.	V.
29.333	2607.0215	211.01	.	Q	.	.	.	V.
29.417	2608.4104	201.66	.	Q	.	.	.	V.
29.500	2609.7388	192.89	.	Q	.	.	.	V.
29.583	2611.0105	184.66	.	Q	.	.	.	V.
29.667	2612.2356	177.89	.	Q	.	.	.	V.
29.750	2613.4155	171.33	.	Q	.	.	.	V.
29.833	2614.5505	164.81	.	Q	.	.	.	V.
29.917	2615.6396	158.15	.	Q	.	.	.	V.
30.000	2616.6799	151.04	.	Q	.	.	.	V.
30.083	2617.6504	140.91	.	Q	.	.	.	V.
30.167	2618.5554	131.40	.	Q	.	.	.	V.
30.250	2619.4182	125.26	.	Q	.	.	.	V.
30.333	2620.2407	119.41	.	Q	.	.	.	V.
30.417	2621.0239	113.72	.	Q	.	.	.	V.
30.500	2621.7668	107.86	.	Q	.	.	.	V.
30.583	2622.4734	102.58	.	Q	.	.	.	V.
30.667	2623.1453	97.55	.	Q	.	.	.	V.
30.750	2623.7825	92.53	.	Q	.	.	.	V.
30.833	2624.3884	87.98	.	Q	.	.	.	V.
30.917	2624.9656	83.81	.	Q	.	.	.	V.
31.000	2625.5142	79.65	.	Q	.	.	.	V.
31.083	2626.0354	75.67	.	Q	.	.	.	V.
31.167	2626.5312	72.01	.	Q	.	.	.	V.
31.250	2627.0034	68.56	.	Q	.	.	.	V.
31.333	2627.4519	65.13	.	Q	.	.	.	V.
31.417	2627.8772	61.74	.	Q	.	.	.	V.
31.500	2628.2793	58.38	.	Q	.	.	.	V.
31.583	2628.6594	55.20	.	Q	.	.	.	V.
31.667	2629.0183	52.12	.	Q	.	.	.	V.
31.750	2629.3562	49.06	.	Q	.	.	.	V.
31.833	2629.6731	46.03	.	Q	.	.	.	V.
31.917	2629.9692	43.01	.	Q	.	.	.	V.
32.000	2630.2480	40.47	.	Q	.	.	.	V.
32.083	2630.5127	38.43	.	Q	.	.	.	V.
32.167	2630.7649	36.60	.	Q	.	.	.	V.
32.250	2631.0046	34.79	.	Q	.	.	.	V.
32.333	2631.2319	33.01	.	Q	.	.	.	V.
32.417	2631.4470	31.24	.	Q	.	.	.	V.
32.500	2631.6501	29.49	.	Q	.	.	.	V.
32.583	2631.8416	27.80	.	Q	.	.	.	V.
32.667	2632.0244	26.54	.	Q	.	.	.	V.
32.750	2632.1992	25.40	.	Q	.	.	.	V.
32.833	2632.3662	24.26	.	Q	.	.	.	V.
32.917	2632.5256	23.14	.	Q	.	.	.	V.

33.000	2632.6772	22.03	Q	.	.	.	V.
33.083	2632.8213	20.93	Q	.	.	.	V.
33.167	2632.9580	19.84	Q	.	.	.	V.
33.250	2633.0872	18.76	Q	.	.	.	V.
33.333	2633.2090	17.69	Q	.	.	.	V.
33.417	2633.3235	16.63	Q	.	.	.	V.
33.500	2633.4309	15.58	Q	.	.	.	V.
33.583	2633.5310	14.54	Q	.	.	.	V.
33.667	2633.6260	13.80	Q	.	.	.	V.
33.750	2633.7188	13.46	Q	.	.	.	V.
33.833	2633.8091	13.12	Q	.	.	.	V.
33.917	2633.8972	12.80	Q	.	.	.	V.
34.000	2633.9832	12.47	Q	.	.	.	V.
34.083	2634.0669	12.15	Q	.	.	.	V.
34.167	2634.1484	11.84	Q	.	.	.	V.
34.250	2634.2278	11.52	Q	.	.	.	V.
34.333	2634.3049	11.21	Q	.	.	.	V.
34.417	2634.3801	10.91	Q	.	.	.	V.
34.500	2634.4531	10.61	Q	.	.	.	V.
34.583	2634.5242	10.30	Q	.	.	.	V.
34.667	2634.5930	10.00	Q	.	.	.	V.
34.750	2634.6599	9.71	Q	.	.	.	V.
34.833	2634.7249	9.42	Q	.	.	.	V.
34.917	2634.7878	9.14	Q	.	.	.	V.
35.000	2634.8489	8.85	Q	.	.	.	V.
35.083	2634.9080	8.56	Q	.	.	.	V.
35.167	2634.9651	8.29	Q	.	.	.	V.
35.250	2635.0203	8.01	Q	.	.	.	V.
35.333	2635.0735	7.73	Q	.	.	.	V.
35.417	2635.1248	7.46	Q	.	.	.	V.
35.500	2635.1743	7.19	Q	.	.	.	V.
35.583	2635.2219	6.92	Q	.	.	.	V.
35.667	2635.2678	6.65	Q	.	.	.	V.
35.750	2635.3118	6.40	Q	.	.	.	V.
35.833	2635.3540	6.14	Q	.	.	.	V.
35.917	2635.3945	5.88	Q	.	.	.	V.
36.000	2635.4333	5.63	Q	.	.	.	V.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	2165.0
10%	1480.0
20%	1210.0
30%	800.0
40%	610.0
50%	500.0
60%	410.0
70%	335.0
80%	260.0
90%	180.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 139 *
* 5-YR EV APRIL 2019 FKAZI *

FILE NAME: EV05139S.DAT
TIME/DATE OF STUDY: 13:15 04/10/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 139.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69530.102 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 4.145 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.473
LOW LOSS FRACTION = 0.826
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.22
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.60
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.09
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.59
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.76

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.286
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.391
3-HOUR FACTOR = 0.733
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.010

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.115	966.026
2	0.345	1932.060
3	0.574	1932.064
4	0.804	1932.052
5	1.034	1932.051
6	1.264	1932.064
7	1.493	1932.060
8	1.723	1932.056
9	1.958	1976.060
10	2.278	2689.943
11	2.628	2940.087
12	2.977	2940.079
13	3.327	2940.089
14	3.677	2940.095
15	4.075	3348.913
16	4.692	5187.182
17	5.335	5409.752
18	6.001	5595.807
19	6.818	6875.119
20	7.666	7128.391
21	8.648	8254.342
22	9.718	9000.217
23	10.743	8616.070
24	11.748	8452.767
25	12.753	8452.759
26	13.779	8623.608
27	15.222	12133.540
28	16.553	11198.623
29	17.626	9016.175
30	18.698	9016.287
31	19.781	9108.204
32	21.053	10694.766
33	22.478	11979.610
34	24.011	12892.361
35	25.206	10051.461
36	26.355	9660.378
37	27.505	9669.295
38	28.914	11846.090
39	30.431	12758.472
40	31.812	11615.841
41	33.650	15457.288
42	35.345	14246.012
43	36.637	10866.313
44	37.746	9326.456
45	39.738	16749.045
46	41.565	15365.916
47	43.399	15422.083
48	45.192	15074.882

49	47.111	16138.396
50	49.374	19026.160
51	51.111	14608.226
52	52.573	12294.382
53	54.019	12154.976
54	55.373	11386.603
55	56.856	12468.978
56	58.520	13991.480
57	60.417	15955.107
58	62.495	17472.479
59	64.146	13882.227
60	65.562	11910.452
61	66.903	11277.316
62	68.291	11671.479
63	69.872	13290.982
64	71.116	10459.416
65	72.326	10178.550
66	73.630	10961.807
67	74.889	10589.071
68	76.064	9878.373
69	76.985	7742.236
70	77.878	7513.399
71	78.772	7515.516
72	79.666	7515.516
73	80.592	7787.080
74	81.538	7954.586
75	82.433	7527.770
76	83.280	7117.248
77	84.109	6976.302
78	84.880	6480.070
79	85.646	6441.321
80	86.333	5775.466
81	86.951	5199.556
82	87.570	5203.662
83	88.141	4803.405
84	88.617	4002.826
85	89.090	3978.320
86	89.563	3976.267
87	90.028	3908.841
88	90.456	3596.411
89	90.879	3557.597
90	91.302	3561.703
91	91.725	3557.597
92	92.134	3433.074
93	92.518	3228.744
94	92.900	3216.555
95	93.283	3222.713
96	93.666	3218.608
97	94.024	3010.235
98	94.288	2217.933
99	94.543	2148.390
100	94.798	2144.413
101	95.054	2148.454
102	95.309	2144.348
103	95.564	2148.454
104	95.820	2148.454
105	96.044	1887.027
106	96.204	1343.834

107	96.362	1323.369
108	96.519	1327.475
109	96.677	1327.411
110	96.835	1323.433
111	96.993	1327.411
112	97.150	1323.433
113	97.308	1331.517
114	97.466	1323.369
115	97.623	1327.475
116	97.781	1323.369
117	97.938	1319.328
118	98.023	714.804
119	98.061	318.589
120	98.099	318.589
121	98.135	310.377
122	98.174	326.801
123	98.211	310.377
124	98.249	318.653
125	98.287	318.589
126	98.324	310.377
127	98.362	322.695
128	98.400	318.589
129	98.438	318.589
130	98.476	318.589
131	98.513	314.483
132	98.552	326.801
133	98.589	310.441
134	98.626	310.377
135	98.665	326.801
136	98.702	310.377
137	98.740	318.589
138	98.778	318.589
139	98.815	318.589
140	98.853	318.653
141	98.890	310.377
142	98.929	326.801
143	98.965	302.230
144	99.004	326.736
145	99.040	302.230
146	99.076	302.230
147	99.112	302.230
148	99.148	302.230
149	99.184	302.230
150	99.220	302.230
151	99.256	302.230
152	99.292	302.230
153	99.327	302.230
154	99.363	302.230
155	99.399	302.230
156	99.435	302.230
157	99.471	302.230
158	99.507	302.230
159	99.543	302.230
160	99.579	302.230
161	99.615	302.230
162	99.651	302.230
163	99.687	302.230
164	99.723	302.230

165	99.759	302.230
166	99.795	302.230
167	99.831	302.230
168	99.867	302.230
169	99.903	302.230
170	99.938	302.230
171	99.974	302.230
172	100.000	215.237

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12253.0020
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 2661.4280

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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	0.0045	0.66	Q	.	.	.	.
0.167	0.0182	1.98	Q	.	.	.	.
0.250	0.0409	3.30	Q	.	.	.	.
0.333	0.0728	4.63	Q	.	.	.	.
0.417	0.1139	5.96	Q	.	.	.	.
0.500	0.1641	7.30	Q	.	.	.	.
0.583	0.2236	8.64	Q	.	.	.	.
0.667	0.2923	9.98	Q	.	.	.	.
0.750	0.3706	11.36	Q	.	.	.	.
0.833	0.4616	13.23	Q	.	.	.	.
0.917	0.5668	15.27	Q	.	.	.	.
1.000	0.6861	17.32	Q	.	.	.	.
1.083	0.8196	19.38	Q	.	.	.	.
1.167	0.9673	21.44	Q	.	.	.	.
1.250	1.1312	23.79	Q	.	.	.	.
1.333	1.3199	27.41	Q	.	.	.	.
1.417	1.5346	31.18	Q	.	.	.	.
1.500	1.7763	35.09	Q	.	.	.	.
1.583	2.0510	39.89	Q	.	.	.	.
1.667	2.3600	44.87	Q	.	.	.	.
1.750	2.7088	50.64	Q	.	.	.	.
1.833	3.1008	56.93	Q	.	.	.	.
1.917	3.5346	62.98	Q	.	.	.	.
2.000	4.0094	68.94	Q	.	.	.	.
2.083	4.5253	74.92	VQ	.	.	.	.
2.167	5.0834	81.03	VQ	.	.	.	.
2.250	5.7001	89.55	VQ	.	.	.	.
2.333	6.3714	97.47	VQ	.	.	.	.
2.417	7.0871	103.92	VQ	.	.	.	.
2.500	7.8473	110.39	VQ	.	.	.	.
2.583	8.6527	116.94	VQ	.	.	.	.
2.667	9.5109	124.60	VQ	.	.	.	.
2.750	10.4280	133.16	VQ	.	.	.	.
2.833	11.4085	142.37	VQ	.	.	.	.
2.917	12.4393	149.67	V Q	.	.	.	.
3.000	13.5187	156.73	V Q	.	.	.	.
3.083	14.6469	163.82	V Q	.	.	.	.
3.167	15.8343	172.41	V Q	.	.	.	.
3.250	17.0854	181.66	V Q	.	.	.	.
3.333	18.3951	190.16	V Q	.	.	.	.
3.417	19.7815	201.31	V Q	.	.	.	.
3.500	21.2392	211.66	V Q	.	.	.	.
3.583	22.7526	219.75	V Q	.	.	.	.
3.667	24.3147	226.81	V Q	.	.	.	.
3.750	25.9604	238.96	V Q	.	.	.	.
3.833	27.6836	250.21	V Q	.	.	.	.
3.917	29.4848	261.54	V Q	.	.	.	.

4.000	31.3626	272.66	V	Q	.	.	.	.
4.083	33.3223	284.55	V	Q	.	.	.	.
4.167	35.3778	298.45	V	Q	.	.	.	.
4.250	37.5085	309.38	V	Q	.	.	.	.
4.333	39.7038	318.77	V	Q	.	.	.	.
4.417	41.9635	328.10	V	Q	.	.	.	.
4.500	44.2840	336.94	V	Q	.	.	.	.
4.583	46.6707	346.55	V	Q	.	.	.	.
4.667	49.1310	357.23	V	Q	.	.	.	.
4.750	51.6744	369.30	V	Q	.	.	.	.
4.833	54.3082	382.44	V	Q	.	.	.	.
4.917	57.0161	393.18	V	Q	.	.	.	.
5.000	59.7889	402.61	V	Q	.	.	.	.
5.083	62.6239	411.65	V	Q	.	.	.	.
5.167	65.5233	420.99	V	Q	.	.	.	.
5.250	68.4948	431.47	.V	Q	.	.	.	.
5.333	71.5256	440.06	.V	Q	.	.	.	.
5.417	74.6144	448.50	.V	Q	.	.	.	.
5.500	77.7652	457.50	.V	Q	.	.	.	.
5.583	80.9766	466.29	.V	Q	.	.	.	.
5.667	84.2453	474.62	.V	Q	.	.	.	.
5.750	87.5617	481.54	.V	Q	.	.	.	.
5.833	90.9249	488.33	.V	Q	.	.	.	.
5.917	94.3351	495.16	.V	Q	.	.	.	.
6.000	97.7924	502.01	.V	Q	.	.	.	.
6.083	101.2985	509.09	.V	Q	.	.	.	.
6.167	104.8544	516.30	.V	Q	.	.	.	.
6.250	108.4581	523.27	.V	Q	.	.	.	.
6.333	112.1082	529.98	.V	Q	.	.	.	.
6.417	115.8041	536.64	.V	Q	.	.	.	.
6.500	119.5436	542.99	.V	Q	.	.	.	.
6.583	123.3270	549.34	.V	Q	.	.	.	.
6.667	127.1512	555.27	.V	Q	.	.	.	.
6.750	131.0138	560.85	.V	Q	.	.	.	.
6.833	134.9150	566.45	.V	Q	.	.	.	.
6.917	138.8532	571.82	.V	Q	.	.	.	.
7.000	142.8248	576.67	.V	Q	.	.	.	.
7.083	146.8298	581.54	.V	Q	.	.	.	.
7.167	150.8686	586.43	.V	Q	.	.	.	.
7.250	154.9411	591.31	.V	Q	.	.	.	.
7.333	159.0458	596.01	.V	Q	.	.	.	.
7.417	163.1830	600.72	.V	Q	.	.	.	.
7.500	167.3527	605.45	.V	Q	.	.	.	.
7.583	171.5554	610.22	.V	Q	.	.	.	.
7.667	175.7905	614.93	.V	Q	.	.	.	.
7.750	180.0573	619.55	.V	Q	.	.	.	.
7.833	184.3561	624.18	.V	Q	.	.	.	.
7.917	188.6870	628.86	.V	Q	.	.	.	.
8.000	193.0504	633.56	.V	Q	.	.	.	.
8.083	197.4454	638.16	.V	Q	.	.	.	.
8.167	201.8686	642.25	.V	Q	.	.	.	.
8.250	206.3199	646.33	.V	Q	.	.	.	.
8.333	210.7995	650.44	.V	Q	.	.	.	.
8.417	215.3077	654.59	.V	Q	.	.	.	.
8.500	219.8447	658.77	.V	Q	.	.	.	.
8.583	224.4108	663.00	.V	Q	.	.	.	.
8.667	229.0062	667.25	.V	Q	.	.	.	.
8.750	233.6300	671.38	.V	Q	.	.	.	.

8.833	238.2799	675.16	.V	Q.	.	.	.	.
8.917	242.9561	678.98	.V	Q.	.	.	.	.
9.000	247.6587	682.83	.V	Q.	.	.	.	.
9.083	252.3882	686.73	.V	Q.	.	.	.	.
9.167	257.1448	690.65	.V	Q.	.	.	.	.
9.250	261.9288	694.63	.V	Q.	.	.	.	.
9.333	266.7404	698.64	.V	Q.	.	.	.	.
9.417	271.5800	702.71	.V	Q.	.	.	.	.
9.500	276.4478	706.80	.V	Q.	.	.	.	.
9.583	281.3441	710.96	.V	Q.	.	.	.	.
9.667	286.2694	715.14	.V	Q.	.	.	.	.
9.750	291.2238	719.38	.V	Q.	.	.	.	.
9.833	296.2049	723.25	.V	Q.	.	.	.	.
9.917	301.2111	726.90	.V	Q	.	.	.	.
10.000	306.2427	730.60	.V	Q	.	.	.	.
10.083	311.3002	734.34	.V	Q	.	.	.	.
10.167	316.3838	738.14	.V	Q	.	.	.	.
10.250	321.4938	741.98	.V	Q	.	.	.	.
10.333	326.6307	745.88	.V	Q	.	.	.	.
10.417	331.7949	749.84	.V	Q	.	.	.	.
10.500	336.9866	753.84	.V	Q	.	.	.	.
10.583	342.2064	757.91	.V	Q	.	.	.	.
10.667	347.4545	762.03	.V	Q	.	.	.	.
10.750	352.7315	766.22	.V	Q	.	.	.	.
10.833	358.0377	770.46	.V	Q	.	.	.	.
10.917	363.3736	774.77	.V	Q	.	.	.	.
11.000	368.7396	779.14	.V	Q	.	.	.	.
11.083	374.1362	783.58	.V	Q	.	.	.	.
11.167	379.5637	788.08	.V	Q	.	.	.	.
11.250	385.0228	792.67	.V	Q	.	.	.	.
11.333	390.5139	797.30	.V	Q	.	.	.	.
11.417	396.0375	802.03	.V	.Q	.	.	.	.
11.500	401.5942	806.82	.V	.Q	.	.	.	.
11.583	407.1844	811.71	.V	.Q	.	.	.	.
11.667	412.8088	816.66	.V	.Q	.	.	.	.
11.750	418.4679	821.70	.V	.Q	.	.	.	.
11.833	424.1623	826.83	.V	.Q	.	.	.	.
11.917	429.8926	832.04	.V	.Q	.	.	.	.
12.000	435.6594	837.34	.V	.Q	.	.	.	.
12.083	441.4718	843.97	.V	.Q	.	.	.	.
12.167	447.3390	851.92	.V	.Q	.	.	.	.
12.250	453.2617	859.97	.V	.Q	.	.	.	.
12.333	459.2402	868.09	.V	.Q	.	.	.	.
12.417	465.2754	876.32	.V	.Q	.	.	.	.
12.500	471.3679	884.62	.V	.Q	.	.	.	.
12.583	477.5183	893.04	.V	.Q	.	.	.	.
12.667	483.7273	901.55	.V	.Q	.	.	.	.
12.750	489.9961	910.23	.V	.Q	.	.	.	.
12.833	496.3316	919.92	.V	.Q	.	.	.	.
12.917	502.7369	930.05	.V	.Q	.	.	.	.
13.000	509.2126	940.27	.V	.Q	.	.	.	.
13.083	515.7596	950.63	.V	.Q	.	.	.	.
13.167	522.3786	961.08	.V	.Q	.	.	.	.
13.250	529.0741	972.19	.V	.Q	.	.	.	.
13.333	535.8630	985.76	.V	.Q	.	.	.	.
13.417	542.7484	999.75	.V	.Q	.	.	.	.
13.500	549.7323	1014.07	.V	.Q	.	.	.	.
13.583	556.8272	1030.18	.V	.Q	.	.	.	.

13.667	564.0359	1046.70	.	V	.	Q	.	.	.
13.750	571.3693	1064.81	.	V	.	Q	.	.	.
13.833	578.8346	1083.96	.	V	.	Q	.	.	.
13.917	586.4294	1102.76	.	V	.	Q	.	.	.
14.000	594.1529	1121.45	.	V	.	Q	.	.	.
14.083	602.0137	1141.40	.	V	.	Q	.	.	.
14.167	610.0216	1162.74	.	V	.	Q	.	.	.
14.250	618.2079	1188.66	.	V	.	Q	.	.	.
14.333	626.5641	1213.32	.	V	.	Q	.	.	.
14.417	635.0703	1235.10	.	V	.	Q	.	.	.
14.500	643.7266	1256.89	.	V	.	Q	.	.	.
14.583	652.5344	1278.88	.	V	.	Q	.	.	.
14.667	661.5078	1302.93	.	V	.	Q	.	.	.
14.750	670.6589	1328.75	.	V	.	Q	.	.	.
14.833	680.0016	1356.56	.	V	.	Q	.	.	.
14.917	689.5131	1381.06	.	V	.	Q	.	.	.
15.000	699.1895	1405.01	.	V	.	Q	.	.	.
15.083	709.0312	1429.03	.	V	.	Q	.	.	.
15.167	719.0574	1455.80	.	V	.	Q	.	.	.
15.250	729.2794	1484.24	.	V	.	Q	.	.	.
15.333	739.7011	1513.23	.	.V	.	Q	.	.	.
15.417	750.3470	1545.79	.	.V	.	Q	.	.	.
15.500	761.1964	1575.33	.	.V	.	Q	.	.	.
15.583	772.2312	1602.26	.	.V	.	Q	.	.	.
15.667	783.4409	1627.64	.	.V	.	Q	.	.	.
15.750	794.8986	1663.66	.	.V	.	Q	.	.	.
15.833	806.5966	1698.55	.	.V	.	Q	.	.	.
15.917	818.5383	1733.94	.	.V	.	Q	.	.	.
16.000	830.7303	1770.28	.	.V	.	Q	.	.	.
16.083	843.3065	1826.05	.	.V	.	Q	.	.	.
16.167	856.2730	1882.75	.	.V	.	Q	.	.	.
16.250	869.4835	1918.16	.	.V	.	Q	.	.	.
16.333	882.9047	1948.76	.	.V	.	Q	.	.	.
16.417	896.5242	1977.54	.	.V	.	Q	.	.	.
16.500	910.3429	2006.48	.	.V	.	Q	.	.	.
16.583	924.3671	2036.31	.	.V	.	Q	.	.	.
16.667	938.6063	2067.54	.	.V	.	Q	.	.	.
16.750	953.0983	2104.23	.	.V	.	Q	.	.	.
16.833	967.9467	2155.98	.	.V	.	Q	.	.	.
16.917	983.0171	2188.23	.	.V	.	Q	.	.	.
17.000	998.2491	2211.68	.	.V	.	Q	.	.	.
17.083	1013.6219	2232.14	.	.V	.	Q	.	.	.
17.167	1029.1616	2256.37	.	.V	.	Q	.	.	.
17.250	1044.9613	2294.11	.	.V	.	Q	.	.	.
17.333	1061.1648	2352.74	.	.V	.	Q	.	.	.
17.417	1077.5863	2384.41	.	.V	.	Q	.	.	.
17.500	1094.2188	2415.03	.	.V	.	Q	.	.	.
17.583	1111.1334	2456.01	.	.V	.	Q	.	.	.
17.667	1128.2134	2480.02	.	.V	.	Q	.	.	.
17.750	1145.6364	2529.82	.	.V	.	Q	.	.	.
17.833	1163.3180	2567.37	.	.V	.	Q	.	.	.
17.917	1181.1067	2582.91	.	.V	.	Q	.	.	.
18.000	1199.0178	2600.70	.	.V	.	Q	.	.	.
18.083	1217.0953	2624.86	.	.V	.	Q	.	.	.
18.167	1235.3938	2656.93	.	.V	.	Q	.	.	.
18.250	1254.2924	2744.07	.	.V	.	Q	.	.	.
18.333	1273.1510	2738.28	.	.V	.	Q	.	.	.
18.417	1291.8113	2709.47	.	.V	.	Q	.	.	.

18.500	1310.5314	2718.16	.	.	.	V.	.	Q	.
18.583	1329.3756	2736.19	.	.	.	V.	.	Q	.
18.667	1348.5553	2784.90	.	.	.	V	.	Q	.
18.750	1367.9397	2814.61	.	.	.	V	.	Q	.
18.833	1387.4519	2833.17	.	.	.	V	.	Q	.
18.917	1406.6177	2782.86	.	.	.	.V	.	Q	.
19.000	1425.7909	2783.95	.	.	.	.V	.	Q	.
19.083	1444.9558	2782.75	.	.	.	.V	.	Q	.
19.167	1464.4219	2826.47	.	.	.	.V	.	Q	.
19.250	1483.9867	2840.81	.	.	.	.V	.	Q	.
19.333	1503.3656	2813.82	.	.	.	.V	.	Q	.
19.417	1523.1340	2870.38	.	.	.	.V	.	Q	.
19.500	1542.5999	2826.43	.	.	.	.V	.	Q	.
19.583	1561.5841	2756.52	.	.	.	.V	.	Q	.
19.667	1580.3840	2729.74	.	.	.	.V	.	Q	.
19.750	1600.1155	2865.00	.	.	.	.V	.	Q	.
19.833	1619.5892	2827.58	.	.	.	.V	.	Q	.
19.917	1638.9817	2815.79	.	.	.	.V	.	Q	.
20.000	1658.2167	2792.92	.	.	.	.V	.	Q	.
20.083	1677.5203	2802.89	.	.	.	.V	.	Q	.
20.167	1697.0138	2830.45	.	.	.	.V	.	Q	.
20.250	1715.7465	2719.99	.	.	.	.V	.	Q	.
20.333	1734.0476	2657.33	.	.	.	.V	.	Q	.
20.417	1752.2120	2637.48	.	.	.	.V	.	Q	.
20.500	1770.2196	2614.69	.	.	.	.V	.	Q	.
20.583	1788.3057	2626.10	.	.	.	.V	.	Q	.
20.667	1806.5374	2647.24	.	.	.	.V	.	Q	.
20.750	1824.8635	2660.97	.	.	.	.V	.	Q	.
20.833	1843.1377	2653.41	.	.	.	.V	.	Q	.
20.917	1860.7163	2552.41	.	.	.	.V	.	Q	.
21.000	1877.8580	2488.97	.	.	.	.V	.	Q	.
21.083	1894.7941	2459.11	.	.	.	.V	.	Q	.
21.167	1911.6353	2445.34	.	.	.	.V	.	Q	.
21.250	1928.4994	2448.67	.	.	.	.V	.	Q	.
21.333	1944.8250	2370.48	.	.	.	.V	.	Q	.
21.417	1960.9160	2336.42	.	.	.	.V	.	Q	.
21.500	1976.9147	2323.01	.	.	.	.V	.	Q	.
21.583	1992.7012	2292.20	.	.	.	.V	.	Q	.
21.667	2008.1968	2249.97	.	.	.	VQ	.	.	.
21.750	2023.1420	2170.05	.	.	.	QV	.	.	.
21.833	2037.8010	2128.50	.	.	.	QV	.	.	.
21.917	2052.2292	2094.99	.	.	.	Q	V	.	.
22.000	2066.4514	2065.06	.	.	.	Q	.V	.	.
22.083	2080.4763	2036.40	.	.	.	Q	.V	.	.
22.167	2094.2422	1998.79	.	.	.	Q	.V	.	.
22.250	2107.6948	1953.31	.	.	.	Q	.V	.	.
22.333	2120.8860	1915.34	.	.	.	Q	.V	.	.
22.417	2133.8542	1882.99	.	.	.	Q	.V	.	.
22.500	2146.5540	1844.00	.	.	.	Q	.V	.	.
22.583	2159.0291	1811.40	.	.	.	Q	.V	.	.
22.667	2171.1907	1765.88	.	.	.	Q	.V	.	.
22.750	2183.0503	1722.03	.	.	.	Q	.V	.	.
22.833	2194.6580	1685.44	.	.	.	Q	.V	.	.
22.917	2205.9912	1645.59	.	.	.	Q	.V	.	.
23.000	2217.0190	1601.24	.	.	.	Q	.V	.	.
23.083	2227.8455	1571.98	.	.	.	Q	.V	.	.
23.167	2238.4678	1542.35	.	.	.	Q	.V	.	.
23.250	2248.8616	1509.20	.	.	.	Q	.V	.	.

23.333	2259.0171	1474.57	.	.	Q	.	V	.
23.417	2268.9768	1446.16	.	.	Q.	.	V	.
23.500	2278.7517	1419.32	.	.	Q.	.	V	.
23.583	2288.3423	1392.54	.	.	Q.	.	V	.
23.667	2297.7393	1364.42	.	.	Q.	.	V	.
23.750	2306.9565	1338.35	.	.	Q.	.	V	.
23.833	2316.0193	1315.92	.	.	Q.	.	V	.
23.917	2324.9287	1293.64	.	.	Q.	.	V	.
24.000	2333.6838	1271.26	.	.	Q.	.	V	.
24.083	2342.2488	1243.64	.	.	Q.	.	V	.
24.167	2350.5544	1205.98	.	.	Q.	.	V	.
24.250	2358.7039	1183.29	.	.	Q.	.	V	.
24.333	2366.7139	1163.04	.	.	Q.	.	V	.
24.417	2374.5879	1143.32	.	.	Q.	.	V	.
24.500	2382.3230	1123.13	.	.	Q.	.	V	.
24.583	2389.9177	1102.77	.	.	Q.	.	V	.
24.667	2397.3740	1082.65	.	.	Q.	.	V	.
24.750	2404.6626	1058.31	.	.	Q.	.	V	.
24.833	2411.7490	1028.96	.	.	Q.	.	V	.
24.917	2418.7075	1010.37	.	.	Q.	.	V	.
25.000	2425.5510	993.66	.	.	Q.	.	V	.
25.083	2432.2803	977.08	.	.	Q.	.	V	.
25.167	2438.9033	961.68	.	.	Q.	.	V	.
25.250	2445.4255	947.03	.	.	Q.	.	V	.
25.333	2451.8398	931.35	.	.	Q.	.	V	.
25.417	2458.1467	915.77	.	.	Q.	.	V	.
25.500	2464.3445	899.93	.	.	Q.	.	V	.
25.583	2470.4294	883.53	.	.	Q.	.	V	.
25.667	2476.3965	866.43	.	.	Q.	.	V	.
25.750	2482.2385	848.27	.	.	Q.	.	V	.
25.833	2487.8806	819.23	.	.	Q.	.	V	.
25.917	2493.3579	795.30	.	.	Q.	.	V	.
26.000	2498.7266	779.54	.	.	Q.	.	V	.
26.083	2503.9905	764.34	.	.	Q.	.	V	.
26.167	2509.1550	749.88	.	.	Q.	.	V	.
26.250	2514.1965	732.02	.	.	Q.	.	V	.
26.333	2519.1223	715.21	.	.	Q.	.	V	.
26.417	2523.9399	699.53	.	.	Q.	.	V	.
26.500	2528.6494	683.83	.	.	Q.	.	V	.
26.583	2533.2532	668.45	.	.	Q.	.	V	.
26.667	2537.7422	651.80	.	.	Q.	.	V	.
26.750	2542.1138	634.77	.	.	Q.	.	V	.
26.833	2546.3740	618.59	.	.	Q.	.	V	.
26.917	2550.5403	604.94	.	.	Q.	.	V	.
27.000	2554.6174	592.00	.	.	Q.	.	V	.
27.083	2558.6030	578.70	.	.	Q.	.	V	.
27.167	2562.4897	564.35	.	.	Q.	.	V	.
27.250	2566.2766	549.87	.	.	Q.	.	V	.
27.333	2569.9658	535.68	.	.	Q.	.	V	.
27.417	2573.5435	519.49	.	.	Q.	.	V	.
27.500	2577.0154	504.12	.	.	Q.	.	V	.
27.583	2580.3982	491.19	.	.	Q.	.	V	.
27.667	2583.7000	479.41	.	.	Q.	.	V	.
27.750	2586.8855	462.55	.	.	Q.	.	V	.
27.833	2589.9707	447.99	.	.	Q.	.	V	.
27.917	2592.9546	433.28	.	.	Q.	.	V	.
28.000	2595.8459	419.81	.	.	Q.	.	V	.
28.083	2598.6340	404.85	.	.	Q.	.	V	.

28.167	2601.3098	388.52	.	.	Q	.	.	V.
28.250	2603.8945	375.30	.	.	Q	.	.	V.
28.333	2606.3994	363.72	.	.	Q	.	.	V.
28.417	2608.8240	352.04	.	.	Q	.	.	V.
28.500	2611.1724	341.00	.	.	Q	.	.	V.
28.583	2613.4404	329.31	.	.	Q	.	.	V.
28.667	2615.6213	316.68	.	.	Q	.	.	V.
28.750	2617.7070	302.84	.	.	Q	.	.	V.
28.833	2619.6909	288.05	.	.	Q	.	.	V.
28.917	2621.5908	275.85	.	.	Q	.	.	V.
29.000	2623.4163	265.05	.	.	Q	.	.	V.
29.083	2625.1711	254.83	.	.	Q	.	.	V.
29.167	2626.8545	244.42	.	.	Q	.	.	V.
29.250	2628.4590	232.97	.	.	Q	.	.	V.
29.333	2629.9985	223.56	.	.	Q	.	.	V.
29.417	2631.4751	214.41	.	.	Q	.	.	V.
29.500	2632.8857	204.81	.	.	Q	.	.	V.
29.583	2634.2324	195.54	.	.	Q	.	.	V.
29.667	2635.5200	186.98	.	.	Q	.	.	V.
29.750	2636.7617	180.29	.	.	Q	.	.	V.
29.833	2637.9585	173.76	.	.	Q	.	.	V.
29.917	2639.1104	167.25	.	.	Q	.	.	V.
30.000	2640.2175	160.75	.	.	Q	.	.	V.
30.083	2641.2793	154.18	.	.	Q	.	.	V.
30.167	2642.2944	147.40	.	.	Q	.	.	V.
30.250	2643.2634	140.68	.	.	Q	.	.	V.
30.333	2644.1760	132.50	.	.	Q	.	.	V.
30.417	2645.0183	122.29	.	.	Q	.	.	V.
30.500	2645.8218	116.67	.	.	Q	.	.	V.
30.583	2646.5876	111.20	.	.	Q	.	.	V.
30.667	2647.3188	106.16	.	.	Q	.	.	V.
30.750	2648.0159	101.21	.	.	Q	.	.	V.
30.833	2648.6787	96.26	.	.	Q	.	.	V.
30.917	2649.3096	91.59	.	.	Q	.	.	V.
31.000	2649.9119	87.47	.	.	Q	.	.	V.
31.083	2650.4861	83.36	.	.	Q	.	.	V.
31.167	2651.0320	79.27	.	.	Q	.	.	V.
31.250	2651.5500	75.22	.	.	Q	.	.	V.
31.333	2652.0425	71.50	.	.	Q	.	.	V.
31.417	2652.5112	68.06	.	.	Q	.	.	V.
31.500	2652.9565	64.66	.	.	Q	.	.	V.
31.583	2653.3787	61.29	.	.	Q	.	.	V.
31.667	2653.7783	58.03	.	.	Q	.	.	V.
31.750	2654.1567	54.94	.	.	Q	.	.	V.
31.833	2654.5139	51.88	.	.	Q	.	.	V.
31.917	2654.8503	48.84	.	.	Q	.	.	V.
32.000	2655.1660	45.82	.	.	Q	.	.	V.
32.083	2655.4619	42.98	.	.	Q	.	.	V.
32.167	2655.7422	40.69	.	.	Q	.	.	V.
32.250	2656.0071	38.46	.	.	Q	.	.	V.
32.333	2656.2576	36.37	.	.	Q	.	.	V.
32.417	2656.4956	34.56	.	.	Q	.	.	V.
32.500	2656.7214	32.78	.	.	Q	.	.	V.
32.583	2656.9351	31.02	.	.	Q	.	.	V.
32.667	2657.1367	29.27	.	.	Q	.	.	V.
32.750	2657.3276	27.72	.	.	Q	.	.	V.
32.833	2657.5105	26.55	.	.	Q	.	.	V.
32.917	2657.6855	25.40	.	.	Q	.	.	V.

33.000	2657.8528	24.27	Q	.	.	.	V.
33.083	2658.0122	23.15	Q	.	.	.	V.
33.167	2658.1641	22.04	Q	.	.	.	V.
33.250	2658.3083	20.94	Q	.	.	.	V.
33.333	2658.4451	19.86	Q	.	.	.	V.
33.417	2658.5745	18.78	Q	.	.	.	V.
33.500	2658.6965	17.71	Q	.	.	.	V.
33.583	2658.8113	16.65	Q	.	.	.	V.
33.667	2658.9187	15.61	Q	.	.	.	V.
33.750	2659.0190	14.57	Q	.	.	.	V.
33.833	2659.1152	13.96	Q	.	.	.	V.
33.917	2659.2090	13.62	Q	.	.	.	V.
34.000	2659.3005	13.28	Q	.	.	.	V.
34.083	2659.3899	12.96	Q	.	.	.	V.
34.167	2659.4768	12.62	Q	.	.	.	V.
34.250	2659.5615	12.31	Q	.	.	.	V.
34.333	2659.6440	11.99	Q	.	.	.	V.
34.417	2659.7244	11.67	Q	.	.	.	V.
34.500	2659.8027	11.37	Q	.	.	.	V.
34.583	2659.8789	11.06	Q	.	.	.	V.
34.667	2659.9529	10.75	Q	.	.	.	V.
34.750	2660.0249	10.45	Q	.	.	.	V.
34.833	2660.0947	10.15	Q	.	.	.	V.
34.917	2660.1626	9.86	Q	.	.	.	V.
35.000	2660.2285	9.56	Q	.	.	.	V.
35.083	2660.2925	9.28	Q	.	.	.	V.
35.167	2660.3545	9.00	Q	.	.	.	V.
35.250	2660.4146	8.71	Q	.	.	.	V.
35.333	2660.4727	8.43	Q	.	.	.	V.
35.417	2660.5288	8.15	Q	.	.	.	V.
35.500	2660.5830	7.88	Q	.	.	.	V.
35.583	2660.6353	7.60	Q	.	.	.	V.
35.667	2660.6858	7.33	Q	.	.	.	V.
35.750	2660.7344	7.07	Q	.	.	.	V.
35.833	2660.7812	6.79	Q	.	.	.	V.
35.917	2660.8264	6.54	Q	.	.	.	V.
36.000	2660.8696	6.27	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%	1485.0
20%	1210.0
30%	805.0
40%	615.0
50%	500.0
60%	410.0
70%	335.0
80%	255.0
90%	175.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5- REGIONAL NODE 119 *
* 10-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV10119S.DAT
TIME/DATE OF STUDY: 15:07 01/02/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 49495.699 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298
LOW LOSS FRACTION = 0.746
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

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.205	1228.630
2	0.616	2457.261
3	1.026	2457.261
4	1.437	2457.258
5	1.849	2467.763
6	2.392	3251.878
7	3.017	3739.312
8	3.642	3739.302
9	4.492	5087.152
10	5.646	6909.555
11	7.038	8333.941
12	8.701	9954.133
13	10.573	11203.939
14	12.371	10762.129
15	14.356	11883.826
16	16.755	14360.438
17	18.676	11497.777
18	20.748	12404.951
19	23.329	15451.019
20	25.596	13567.688
21	27.693	12552.027
22	30.286	15519.716
23	33.073	16682.510
24	35.987	17442.402
25	38.316	13941.234
26	41.687	20182.363
27	44.925	19380.238
28	48.531	21586.014
29	51.724	19113.350
30	54.294	15379.867
31	56.855	15335.317
32	60.009	18879.207
33	63.439	20527.777
34	66.036	15546.261
35	68.534	14955.901
36	71.029	14932.337
37	73.253	13310.596
38	75.483	13350.510
39	77.240	10517.134
40	78.836	9555.762
41	80.461	9723.822
42	82.118	9918.234
43	83.640	9114.328
44	85.047	8421.854
45	86.331	7683.026
46	87.441	6645.525
47	88.418	5845.684
48	89.263	5059.634

49	90.090	4953.043
50	90.853	4564.083
51	91.609	4526.635
52	92.330	4317.518
53	93.015	4096.207
54	93.698	4092.919
55	94.255	3332.947
56	94.711	2730.805
57	95.167	2729.161
58	95.624	2730.805
59	96.040	2493.191
60	96.331	1741.347
61	96.613	1685.997
62	96.894	1685.997
63	97.176	1685.997
64	97.458	1685.997
65	97.740	1687.641
66	97.986	1476.058
67	98.072	514.275
68	98.140	403.574
69	98.207	405.218
70	98.274	401.976
71	98.342	403.620
72	98.409	401.976
73	98.476	403.574
74	98.544	403.620
75	98.611	403.574
76	98.679	403.620
77	98.746	400.332
78	98.813	403.620
79	98.881	406.817
80	98.948	400.377
81	99.015	403.574
82	99.082	400.377
83	99.149	400.377
84	99.216	400.377
85	99.283	400.377
86	99.350	400.377
87	99.417	400.377
88	99.483	400.377
89	99.550	400.377
90	99.617	400.377
91	99.684	400.377
92	99.751	400.377
93	99.818	400.377
94	99.885	400.377
95	99.952	400.377
96	100.000	289.402

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11932.6064
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 4873.3203

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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.	1800.0	3600.0	5400.0	7200.0
0.083	0.0134	1.95	Q	.	.	.	.
0.167	0.0536	5.84	Q	.	.	.	.
0.250	0.1208	9.75	Q	.	.	.	.
0.333	0.2149	13.67	Q	.	.	.	.
0.417	0.3362	17.62	Q	.	.	.	.
0.500	0.4934	22.82	Q	.	.	.	.
0.583	0.6917	28.80	Q	.	.	.	.
0.667	0.9315	34.81	Q	.	.	.	.
0.750	1.2274	42.97	Q	.	.	.	.
0.833	1.5995	54.03	Q	.	.	.	.
0.917	2.0636	67.39	Q	.	.	.	.
1.000	2.6377	83.35	Q	.	.	.	.
1.083	3.3356	101.34	Q	.	.	.	.
1.167	4.1529	118.68	Q	.	.	.	.
1.250	5.1023	137.85	Q	.	.	.	.
1.333	6.2111	161.00	Q	.	.	.	.
1.417	7.4486	179.68	Q	.	.	.	.
1.500	8.8250	199.86	VQ	.	.	.	.
1.583	10.3741	224.93	VQ	.	.	.	.
1.667	12.0758	247.09	VQ	.	.	.	.
1.750	13.9195	267.70	VQ	.	.	.	.
1.833	15.9380	293.09	VQ	.	.	.	.
1.917	18.1446	320.39	VQ	.	.	.	.
2.000	20.5481	348.98	VQ	.	.	.	.
2.083	23.1108	372.12	V Q	.	.	.	.
2.167	25.9016	405.22	V Q	.	.	.	.
2.250	28.9122	437.13	V Q	.	.	.	.
2.333	32.1674	472.66	V Q	.	.	.	.
2.417	35.6410	504.36	V Q	.	.	.	.
2.500	39.2931	530.28	V Q	.	.	.	.
2.583	43.1236	556.19	V Q	.	.	.	.
2.667	47.1719	587.82	V Q	.	.	.	.
2.750	51.4566	622.13	V Q	.	.	.	.
2.833	55.9242	648.70	V Q	.	.	.	.
2.917	60.5688	674.39	V Q	.	.	.	.
3.000	65.3908	700.16	V Q	.	.	.	.
3.083	70.3731	723.43	V Q	.	.	.	.
3.167	75.5168	746.86	V Q	.	.	.	.
3.250	80.7913	765.87	V Q	.	.	.	.
3.333	86.1870	783.45	V Q	.	.	.	.
3.417	91.7058	801.33	V Q	.	.	.	.
3.500	97.3506	819.62	V Q	.	.	.	.
3.583	103.1128	836.68	V Q	.	.	.	.
3.667	108.9856	852.73	V Q	.	.	.	.
3.750	114.9612	867.65	V Q	.	.	.	.
3.833	121.0289	881.02	V Q	.	.	.	.
3.917	127.1801	893.15	.V Q	.	.	.	.

4.000	133.4068	904.12	.V	Q	.	.	.	.
4.083	139.7080	914.94	.V	Q	.	.	.	.
4.167	146.0801	925.23	.V	Q	.	.	.	.
4.250	152.5228	935.47	.V	Q	.	.	.	.
4.333	159.0342	945.47	.V	Q	.	.	.	.
4.417	165.6123	955.13	.V	Q	.	.	.	.
4.500	172.2574	964.87	.V	Q	.	.	.	.
4.583	178.9614	973.43	.V	Q	.	.	.	.
4.667	185.7184	981.11	.V	Q	.	.	.	.
4.750	192.5283	988.80	.V	Q	.	.	.	.
4.833	199.3917	996.57	.V	Q	.	.	.	.
4.917	206.3061	1003.98	.V	Q	.	.	.	.
5.000	213.2639	1010.27	.V	Q	.	.	.	.
5.083	220.2646	1016.49	.V	Q	.	.	.	.
5.167	227.3086	1022.79	.V	Q	.	.	.	.
5.250	234.3961	1029.10	.V	Q	.	.	.	.
5.333	241.5275	1035.48	.V	Q	.	.	.	.
5.417	248.7029	1041.88	.V	Q	.	.	.	.
5.500	255.9207	1048.02	.V	Q	.	.	.	.
5.583	263.1704	1052.66	.V	Q	.	.	.	.
5.667	270.4514	1057.19	.V	Q	.	.	.	.
5.750	277.7636	1061.73	.V	Q	.	.	.	.
5.833	285.1076	1066.35	.V	Q	.	.	.	.
5.917	292.4835	1070.98	.V	Q	.	.	.	.
6.000	299.8918	1075.68	.V	Q	.	.	.	.
6.083	307.3326	1080.40	.V	Q	.	.	.	.
6.167	314.8064	1085.20	.V	Q	.	.	.	.
6.250	322.3134	1090.01	.V	Q	.	.	.	.
6.333	329.8541	1094.91	.V	Q	.	.	.	.
6.417	337.4285	1099.81	.V	Q	.	.	.	.
6.500	345.0373	1104.80	.V	Q	.	.	.	.
6.583	352.6806	1109.81	.V	Q	.	.	.	.
6.667	360.3589	1114.90	.V	Q	.	.	.	.
6.750	368.0725	1120.00	.V	Q	.	.	.	.
6.833	375.8218	1125.20	.V	Q	.	.	.	.
6.917	383.6070	1130.41	.V	Q	.	.	.	.
7.000	391.4287	1135.71	.V	Q	.	.	.	.
7.083	399.2870	1141.03	.V	Q	.	.	.	.
7.167	407.1827	1146.45	.V	Q	.	.	.	.
7.250	415.1158	1151.88	.V	Q	.	.	.	.
7.333	423.0869	1157.42	.V	Q	.	.	.	.
7.417	431.0964	1162.97	.V	Q	.	.	.	.
7.500	439.1448	1168.63	.V	Q	.	.	.	.
7.583	447.2323	1174.31	.V	Q	.	.	.	.
7.667	455.3597	1180.09	.V	Q	.	.	.	.
7.750	463.5271	1185.90	.V	Q	.	.	.	.
7.833	471.7352	1191.82	.V	Q	.	.	.	.
7.917	479.9843	1197.76	.V	Q	.	.	.	.
8.000	488.2738	1203.64	.V	Q	.	.	.	.
8.083	496.6009	1209.09	.V	Q	.	.	.	.
8.167	504.9662	1214.66	.V	Q	.	.	.	.
8.250	513.3701	1220.24	.V	Q	.	.	.	.
8.333	521.8134	1225.96	.V	Q	.	.	.	.
8.417	530.2961	1231.69	.V	Q	.	.	.	.
8.500	538.8192	1237.56	.V	Q	.	.	.	.
8.583	547.3829	1243.45	.V	Q	.	.	.	.
8.667	555.9882	1249.48	.V	Q	.	.	.	.
8.750	564.6351	1255.53	.V	Q	.	.	.	.

8.833	573.3246	1261.73	.V	Q	.	.	.	.
8.917	582.0571	1267.95	.V	Q	.	.	.	.
9.000	590.8335	1274.32	.V	Q	.	.	.	.
9.083	599.6539	1280.73	.V	Q	.	.	.	.
9.167	608.5195	1287.28	.V	Q	.	.	.	.
9.250	617.4305	1293.87	.V	Q	.	.	.	.
9.333	626.3879	1300.62	.V	Q	.	.	.	.
9.417	635.3920	1307.40	.V	Q	.	.	.	.
9.500	644.4440	1314.35	.V	Q	.	.	.	.
9.583	653.5442	1321.34	.V	Q	.	.	.	.
9.667	662.6937	1328.51	.V	Q	.	.	.	.
9.750	671.8928	1335.71	.V	Q	.	.	.	.
9.833	681.1428	1343.10	.V	Q	.	.	.	.
9.917	690.4440	1350.54	.V	Q	.	.	.	.
10.000	699.7977	1358.16	.V	Q	.	.	.	.
10.083	709.2043	1365.84	.V	Q	.	.	.	.
10.167	718.6651	1373.71	.V	Q	.	.	.	.
10.250	728.1805	1381.64	.V	Q	.	.	.	.
10.333	737.7520	1389.77	.V	Q	.	.	.	.
10.417	747.3798	1397.97	.V	Q	.	.	.	.
10.500	757.0657	1406.38	.V	Q	.	.	.	.
10.583	766.8099	1414.86	.V	Q	.	.	.	.
10.667	776.6141	1423.57	.V	Q	.	.	.	.
10.750	786.4788	1432.35	.V	Q	.	.	.	.
10.833	796.4056	1441.37	.V	Q	.	.	.	.
10.917	806.3951	1450.47	.V	Q	.	.	.	.
11.000	816.4489	1459.82	.V	Q	.	.	.	.
11.083	826.5677	1469.26	.V	Q	.	.	.	.
11.167	836.7534	1478.96	.V	Q	.	.	.	.
11.250	847.0065	1488.75	.V	Q	.	.	.	.
11.333	857.3290	1498.83	.V	Q	.	.	.	.
11.417	867.7217	1509.01	.V	Q	.	.	.	.
11.500	878.1865	1519.49	.V	Q	.	.	.	.
11.583	888.7242	1530.08	.V	Q	.	.	.	.
11.667	899.3370	1540.98	.V	Q	.	.	.	.
11.750	910.0257	1552.01	.V	Q	.	.	.	.
11.833	920.7927	1563.37	.V	Q	.	.	.	.
11.917	931.6388	1574.86	.V	Q	.	.	.	.
12.000	942.5666	1586.71	.V	Q	.	.	.	.
12.083	953.5992	1601.93	.V	Q	.	.	.	.
12.167	964.7612	1620.73	.V	Q	.	.	.	.
12.250	976.0536	1639.66	.V	Q	.	.	.	.
12.333	987.4790	1658.97	.V	Q	.	.	.	.
12.417	999.0385	1678.44	.V	Q	.	.	.	.
12.500	1010.7491	1700.37	.V	Q	.	.	.	.
12.583	1022.6205	1723.73	.V	Q	.	.	.	.
12.667	1034.6556	1747.50	.V	Q	.	.	.	.
12.750	1046.8799	1774.96	.V	Q	.	.	.	.
12.833	1059.3291	1807.62	.V	Q	.	.	.	.
12.917	1072.0298	1844.15	.V	Q	.	.	.	.
13.000	1085.0142	1885.33	.V	Q	.	.	.	.
13.083	1098.3055	1929.91	.V	Q	.	.	.	.
13.167	1111.8988	1973.74	.V	Q	.	.	.	.
13.250	1125.8149	2020.63	.V	Q	.	.	.	.
13.333	1140.1017	2074.43	.V	Q	.	.	.	.
13.417	1154.7080	2120.84	.V	Q	.	.	.	.
13.500	1169.6534	2170.08	.V	Q	.	.	.	.
13.583	1184.9940	2227.45	.V	Q	.	.	.	.

13.667	1200.6987	2280.33	.	V.	Q	.	.	.
13.750	1216.7504	2330.69	.	V.	Q	.	.	.
13.833	1233.2059	2389.35	.	V	Q	.	.	.
13.917	1250.0875	2451.21	.	V	Q	.	.	.
14.000	1267.4124	2515.56	.	V	Q	.	.	.
14.083	1285.1837	2580.40	.	V	Q	.	.	.
14.167	1303.5819	2671.42	.	V	Q	.	.	.
14.250	1322.5896	2759.91	.	V	Q	.	.	.
14.333	1342.2457	2854.07	.	.V	Q	.	.	.
14.417	1362.5031	2941.36	.	.V	Q	.	.	.
14.500	1383.3351	3024.81	.	.V	Q	.	.	.
14.583	1404.7631	3111.34	.	.V	Q	.	.	.
14.667	1426.8479	3206.73	.	.V	Q	.	.	.
14.750	1449.6857	3316.04	.	.V	Q	.	.	.
14.833	1473.2781	3425.62	.	.V	Q.	.	.	.
14.917	1497.6792	3543.03	.	.V	Q.	.	.	.
15.000	1522.9635	3671.29	.	.V	Q	.	.	.
15.083	1549.1509	3802.42	.	.V	.Q	.	.	.
15.167	1576.2012	3927.70	.	.V	.Q	.	.	.
15.250	1604.1013	4051.10	.	.V	.Q	.	.	.
15.333	1632.9460	4188.25	.	.V	.Q	.	.	.
15.417	1662.5122	4293.00	.	.V	.Q	.	.	.
15.500	1692.7864	4395.81	.	.V	.Q	.	.	.
15.583	1723.9030	4518.13	.	.V	.Q	.	.	.
15.667	1755.7310	4621.42	.	.V	.Q	.	.	.
15.750	1788.1705	4710.23	.	.V	.Q	.	.	.
15.833	1821.3066	4811.37	.	.V	.Q	.	.	.
15.917	1855.1653	4916.27	.	.V	.Q	.	.	.
16.000	1889.8351	5034.05	.	.V	.Q	.	.	.
16.083	1925.7271	5211.51	.	.V	.Q	.	.	.
16.167	1962.9885	5410.36	.	.V	.Q	.	.	.
16.250	2000.8141	5492.27	.	.V	.Q	.	.	.
16.333	2039.2413	5579.63	.	.V	.Q	.	.	.
16.417	2078.1628	5651.41	.	.V	.Q	.	.	.
16.500	2117.8293	5759.57	.	.V	.Q	.	.	.
16.583	2158.0139	5834.79	.	.V	.Q	.	.	.
16.667	2198.6172	5895.58	.	.V	.Q	.	.	.
16.750	2240.6296	6100.20	.	.V	.Q	.	.	.
16.833	2284.0205	6300.34	.	.V	.Q	.	.	.
16.917	2328.4409	6449.86	.	.V	.Q	.	.	.
17.000	2373.9922	6614.06	.	.V	.Q	.	.	.
17.083	2420.3450	6730.43	.	.V	.Q	.	.	.
17.167	2466.5342	6706.67	.	.V	.Q	.	.	.
17.250	2513.3103	6791.89	.	.V	.Q	.	.	.
17.333	2561.1438	6945.43	.	.V	.Q	.	.	.
17.417	2607.5645	6740.28	.	.V	.Q	.	.	.
17.500	2654.4817	6812.39	.	.V	.Q	.	.	.
17.583	2702.7874	7013.97	.	.V	.Q	.	.	.
17.667	2749.8604	6834.98	.	.V	.Q	.	.	.
17.750	2796.4116	6759.25	.	.V	.Q	.	.	.
17.833	2844.5334	6987.30	.	.V	.Q	.	.	.
17.917	2893.1746	7062.71	.	.V	.Q	.	.	.
18.000	2941.6309	7035.86	.	.V	.Q	.	.	.
18.083	2987.9226	6721.58	.	.V	.Q	.	.	.
18.167	3037.4155	7186.36	.	.V	.Q	.	.	.
18.250	3086.3203	7100.96	.	.V	.Q	.	.	.
18.333	3135.8777	7195.74	.	.V	.Q	.	.	.
18.417	3183.4756	6911.21	.	.V	.Q	.	.	.

18.500	3228.9155	6597.88	.	.	.	V	.	Q	.
18.583	3274.3738	6600.54	.	.	.	V	.	Q	.
18.667	3321.8652	6895.76	.	.	.	V	.	Q	.
18.750	3369.9246	6978.21	.	.	.	V	.	Q	.
18.833	3414.7981	6515.63	.	.	.	V	.	Q	.
18.917	3458.8833	6401.18	.	.	.	V	.	Q	.
19.000	3502.4314	6323.17	.	.	.	V	.	Q	.
19.083	3544.8967	6165.96	.	.	.	V	.	Q	.
19.167	3586.5938	6054.40	.	.	.	V	.	Q	.
19.250	3626.0554	5729.82	.	.	.	V.Q	.	.	.
19.333	3664.2573	5546.93	.	.	.	Q	.	.	.
19.417	3701.9236	5469.15	.	.	.	Q	.	.	.
19.500	3739.1841	5410.22	.	.	.	Q	.	.	.
19.583	3775.2712	5239.86	.	.	.	QV	.	.	.
19.667	3810.0217	5045.78	.	.	.	Q	.V	.	.
19.750	3843.2913	4830.72	.	.	.	Q	.V	.	.
19.833	3875.1182	4621.25	.	.	.	Q	.V	.	.
19.917	3905.6401	4431.78	.	.	.	Q	.V	.	.
20.000	3934.8752	4244.95	.	.	.	Q	.V	.	.
20.083	3963.2927	4126.22	.	.	.	Q	.V	.	.
20.167	3990.5864	3963.05	.	.	.	Q	.V	.	.
20.250	4017.0771	3846.47	.	.	.	Q	.V	.	.
20.333	4042.6692	3715.98	.	.	.	Q	.V	.	.
20.417	4067.3752	3587.32	.	.	.	Q.	.V	.	.
20.500	4091.2915	3472.65	.	.	.	Q.	.V	.	.
20.583	4114.0396	3303.00	.	.	.	Q	.V	.	.
20.667	4135.7075	3146.19	.	.	.	Q	.V	.	.
20.750	4156.6216	3036.69	.	.	.	Q	.V	.	.
20.833	4176.9097	2945.82	.	.	.	Q	.V	.	.
20.917	4196.4736	2840.72	.	.	.	Q	.V	.	.
21.000	4215.0894	2703.01	.	.	.	Q	.V	.	.
21.083	4233.1763	2626.24	.	.	.	Q	.V	.	.
21.167	4250.7822	2556.37	.	.	.	Q	.V	.	.
21.250	4267.9590	2494.03	.	.	.	Q	.V	.	.
21.333	4284.6987	2430.60	.	.	.	Q	.V	.	.
21.417	4300.9761	2363.44	.	.	.	Q	.V	.	.
21.500	4316.6201	2271.52	.	.	.	Q	.V	.	.
21.583	4331.3184	2134.16	.	.	.	.Q	.V	.	.
21.667	4345.5991	2073.57	.	.	.	.Q	.V	.	.
21.750	4359.5410	2024.39	.	.	.	.Q	.V	.	.
21.833	4373.1592	1977.37	.	.	.	Q	.V	.	.
21.917	4386.4492	1929.70	.	.	.	Q	.V	.	.
22.000	4399.4497	1887.69	.	.	.	Q	.V	.	.
22.083	4412.1504	1844.12	.	.	.	Q	.V	.	.
22.167	4424.5562	1801.32	.	.	.	Q	.V	.	.
22.250	4436.6675	1758.58	.	.	.	Q.	.V	.	.
22.333	4448.4883	1716.35	.	.	.	Q.	.V	.	.
22.417	4460.0205	1674.51	.	.	.	Q.	.V	.	.
22.500	4471.2803	1634.90	.	.	.	Q.	.V	.	.
22.583	4482.3335	1604.95	.	.	.	Q.	.V	.	.
22.667	4493.1968	1577.35	.	.	.	Q.	.V	.	.
22.750	4503.8794	1551.12	.	.	.	Q.	.V	.	.
22.833	4514.3823	1525.04	.	.	.	Q.	.V	.	.
22.917	4524.7163	1500.46	.	.	.	Q.	.V	.	.
23.000	4534.8979	1478.40	.	.	.	Q.	.V	.	.
23.083	4544.9331	1457.09	.	.	.	Q.	.V	.	.
23.167	4554.8252	1436.30	.	.	.	Q.	.V	.	.
23.250	4564.5776	1416.08	.	.	.	Q.	.V	.	.

23.333	4574.1987	1396.98	.	Q	.	.	.	V	.
23.417	4583.7021	1379.92	.	Q	.	.	.	V	.
23.500	4593.0938	1363.64	.	Q	.	.	.	V	.
23.583	4602.3916	1350.01	.	Q	.	.	.	V	.
23.667	4611.6001	1337.10	.	Q	.	.	.	V	.
23.750	4620.7236	1324.70	.	Q	.	.	.	V	.
23.833	4629.7612	1312.23	.	Q	.	.	.	V	.
23.917	4638.7041	1298.51	.	Q	.	.	.	V	.
24.000	4647.4829	1274.69	.	Q	.	.	.	V	.
24.083	4656.0049	1237.41	.	Q	.	.	.	V	.
24.167	4664.4214	1222.04	.	Q	.	.	.	V	.
24.250	4672.7344	1207.05	.	Q	.	.	.	V	.
24.333	4680.9434	1191.97	.	Q	.	.	.	V	.
24.417	4689.0391	1175.53	.	Q	.	.	.	V	.
24.500	4697.0127	1157.76	.	Q	.	.	.	V	.
24.583	4704.8584	1139.17	.	Q	.	.	.	V	.
24.667	4712.5762	1120.59	.	Q	.	.	.	V	.
24.750	4720.1514	1099.89	.	Q	.	.	.	V	.
24.833	4727.5645	1076.35	.	Q	.	.	.	V	.
24.917	4734.8003	1050.62	.	Q	.	.	.	V	.
25.000	4741.8477	1023.29	.	Q	.	.	.	V	.
25.083	4748.7100	996.42	.	Q	.	.	.	V	.
25.167	4755.3940	970.54	.	Q	.	.	.	V	.
25.250	4761.8896	943.17	.	Q	.	.	.	V	.
25.333	4768.1719	912.17	.	Q	.	.	.	V	.
25.417	4774.2734	885.98	.	Q	.	.	.	V	.
25.500	4780.1870	858.62	.	Q	.	.	.	V	.
25.583	4785.8804	826.70	.	Q	.	.	.	V	.
25.667	4791.3765	798.04	.	Q	.	.	.	V	.
25.750	4796.6880	771.24	.	Q	.	.	.	V	.
25.833	4801.7842	739.98	.	Q	.	.	.	V	.
25.917	4806.6543	707.14	.	Q	.	.	.	V	.
26.000	4811.2939	673.66	.	Q	.	.	.	V	.
26.083	4815.7480	646.74	.	Q	.	.	.	V	.
26.167	4819.9502	610.18	.	Q	.	.	.	V	.
26.250	4823.9116	575.17	.	Q	.	.	.	V	.
26.333	4827.6099	536.95	.	Q	.	.	.	V	.
26.417	4831.0737	502.92	.	Q	.	.	.	V	.
26.500	4834.3452	475.05	.	Q	.	.	.	V	.
26.583	4837.4268	447.46	.	Q	.	.	.	V	.
26.667	4840.2812	414.47	.	Q	.	.	.	V	.
26.750	4842.8921	379.12	.	Q	.	.	.	V	.
26.833	4845.3154	351.89	.	Q	.	.	.	V	.
26.917	4847.5591	325.79	.	Q	.	.	.	V	.
27.000	4849.6245	299.91	.	Q	.	.	.	V	.
27.083	4851.5308	276.78	.	Q	.	.	.	V	.
27.167	4853.2783	253.75	.	Q	.	.	.	V	.
27.250	4854.8994	235.36	.	Q	.	.	.	V	.
27.333	4856.4048	218.62	.	Q	.	.	.	V	.
27.417	4857.7939	201.73	.	Q	.	.	.	V	.
27.500	4859.0654	184.65	.	Q	.	.	.	V	.
27.583	4860.2290	168.97	.	Q	.	.	.	V	.
27.667	4861.2930	154.49	.	Q	.	.	.	V	.
27.750	4862.2661	141.27	.	Q	.	.	.	V	.
27.833	4863.1602	129.79	.	Q	.	.	.	V	.
27.917	4863.9844	119.65	.	Q	.	.	.	V	.
28.000	4864.7476	110.83	.	Q	.	.	.	V	.
28.083	4865.4517	102.23	.	Q	.	.	.	V	.

28.167	4866.1011	94.32	Q	.	.	.	.	V	.
28.250	4866.6968	86.51	Q	.	.	.	.	V	.
28.333	4867.2417	79.09	Q	.	.	.	.	V	.
28.417	4867.7383	72.07	Q	.	.	.	.	V	.
28.500	4868.1865	65.11	Q	.	.	.	.	V	.
28.583	4868.5957	59.39	Q	.	.	.	.	V	.
28.667	4868.9722	54.67	Q	.	.	.	.	V	.
28.750	4869.3164	49.98	Q	.	.	.	.	V	.
28.833	4869.6284	45.31	Q	.	.	.	.	V	.
28.917	4869.9111	41.06	Q	.	.	.	.	V	.
29.000	4870.1729	38.02	Q	.	.	.	.	V	.
29.083	4870.4146	35.10	Q	.	.	.	.	V	.
29.167	4870.6362	32.19	Q	.	.	.	.	V	.
29.250	4870.8379	29.30	Q	.	.	.	.	V	.
29.333	4871.0200	26.44	Q	.	.	.	.	V	.
29.417	4871.1826	23.59	Q	.	.	.	.	V	.
29.500	4871.3276	21.09	Q	.	.	.	.	V	.
29.583	4871.4663	20.13	Q	.	.	.	.	V	.
29.667	4871.5996	19.35	Q	.	.	.	.	V	.
29.750	4871.7275	18.58	Q	.	.	.	.	V	.
29.833	4871.8501	17.82	Q	.	.	.	.	V	.
29.917	4871.9678	17.06	Q	.	.	.	.	V	.
30.000	4872.0801	16.31	Q	.	.	.	.	V	.
30.083	4872.1870	15.56	Q	.	.	.	.	V	.
30.167	4872.2891	14.82	Q	.	.	.	.	V	.
30.250	4872.3862	14.08	Q	.	.	.	.	V	.
30.333	4872.4780	13.35	Q	.	.	.	.	V	.
30.417	4872.5649	12.63	Q	.	.	.	.	V	.
30.500	4872.6470	11.91	Q	.	.	.	.	V	.
30.583	4872.7241	11.19	Q	.	.	.	.	V	.
30.667	4872.7964	10.49	Q	.	.	.	.	V	.
30.750	4872.8638	9.78	Q	.	.	.	.	V	.
30.833	4872.9263	9.09	Q	.	.	.	.	V	.
30.917	4872.9839	8.40	Q	.	.	.	.	V	.
31.000	4873.0371	7.71	Q	.	.	.	.	V	.
31.083	4873.0854	7.03	Q	.	.	.	.	V	.
31.167	4873.1294	6.36	Q	.	.	.	.	V	.
31.250	4873.1685	5.69	Q	.	.	.	.	V	.
31.333	4873.2031	5.02	Q	.	.	.	.	V	.
31.417	4873.2329	4.36	Q	.	.	.	.	V	.
31.500	4873.2583	3.70	Q	.	.	.	.	V	.
31.583	4873.2793	3.04	Q	.	.	.	.	V	.
31.667	4873.2959	2.39	Q	.	.	.	.	V	.
31.750	4873.3081	1.74	Q	.	.	.	.	V	.
31.833	4873.3159	1.10	Q	.	.	.	.	V	.
31.917	4873.3188	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

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5- REGIONAL NODE 126 *
* 10-YR EV APRIL 2019 CCHIU *

FILE NAME: EV10126S.DAT
TIME/DATE OF STUDY: 07:41 04/09/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 126.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 50405.801 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) = 0.297
LOW LOSS FRACTION = 0.747
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) = 1.64
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.44
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.29

*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 = 3.436

=====

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.196	1197.044
2	0.589	2394.091
3	0.982	2394.089
4	1.375	2394.088
5	1.767	2394.093
6	2.244	2908.439
7	2.841	3637.834
8	3.439	3643.176
9	4.115	4124.756
10	5.167	6408.555
11	6.362	7286.610
12	7.822	8902.374
13	9.572	10665.484
14	11.321	10660.840
15	13.039	10474.114
16	15.193	13128.012
17	17.307	12890.302
18	19.140	11173.682
19	21.222	12688.298
20	23.736	15324.697
21	25.827	12747.573
22	27.851	12340.694
23	30.354	15258.283
24	33.015	16222.647
25	35.847	17261.320
26	37.987	13046.727
27	41.219	19703.686
28	44.310	18842.070
29	47.603	20072.033
30	50.991	20653.248
31	53.490	15230.576
32	55.873	14531.346
33	58.622	16758.703
34	61.990	20530.885
35	64.818	17235.973
36	67.143	14174.510
37	69.670	15404.425
38	71.837	13207.414
39	74.018	13296.198
40	76.052	12399.655
41	77.633	9641.381
42	79.161	9311.357
43	80.729	9557.340
44	82.302	9592.872
45	83.749	8816.786
46	85.089	8167.994
47	86.316	7484.600
48	87.379	6475.506

49	88.333	5814.622
50	89.142	4934.589
51	89.942	4879.151
52	90.679	4491.085
53	91.403	4410.579
54	92.110	4313.516
55	92.769	4013.862
56	93.424	3991.306
57	94.036	3734.951
58	94.488	2756.182
59	94.925	2659.119
60	95.361	2660.886
61	95.797	2659.165
62	96.145	2116.924
63	96.414	1642.259
64	96.684	1643.979
65	96.953	1642.259
66	97.223	1644.026
67	97.492	1642.259
68	97.762	1642.259
69	97.993	1410.135
70	98.072	481.595
71	98.137	394.949
72	98.201	391.508
73	98.265	393.275
74	98.330	391.508
75	98.394	391.508
76	98.459	394.949
77	98.523	393.275
78	98.587	391.508
79	98.652	396.717
80	98.716	388.020
81	98.781	394.996
82	98.845	391.508
83	98.909	391.508
84	98.974	394.949
85	99.038	391.508
86	99.103	391.508
87	99.167	391.508
88	99.231	391.508
89	99.295	391.508
90	99.359	391.508
91	99.424	391.508
92	99.488	391.508
93	99.552	391.508
94	99.616	391.508
95	99.681	391.508
96	99.745	391.508
97	99.809	391.508
98	99.873	391.508
99	99.937	391.508
100	100.000	381.229

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12098.4102
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 4907.7354

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	0.0129	1.88	Q	.	.	.	.
0.167	0.0517	5.63	Q	.	.	.	.
0.250	0.1165	9.40	Q	.	.	.	.
0.333	0.2072	13.18	Q	.	.	.	.
0.417	0.3241	16.97	Q	.	.	.	.
0.500	0.4727	21.58	Q	.	.	.	.
0.583	0.6610	27.34	Q	.	.	.	.
0.667	0.8892	33.13	Q	.	.	.	.
0.750	1.1626	39.69	Q	.	.	.	.
0.833	1.5059	49.85	Q	.	.	.	.
0.917	1.9289	61.42	Q	.	.	.	.
1.000	2.4493	75.55	Q	.	.	.	.
1.083	3.0862	92.49	Q	.	.	.	.
1.167	3.8402	109.47	Q	.	.	.	.
1.250	4.7094	126.21	Q	.	.	.	.
1.333	5.7229	147.16	Q	.	.	.	.
1.417	6.8785	167.80	Q	.	.	.	.
1.500	8.1582	185.81	VQ	.	.	.	.
1.583	9.5787	206.25	VQ	.	.	.	.
1.667	11.1689	230.89	VQ	.	.	.	.
1.750	12.9014	251.56	VQ	.	.	.	.
1.833	14.7724	271.67	VQ	.	.	.	.
1.917	16.8137	296.40	VQ	.	.	.	.
2.000	19.0363	322.72	VQ	.	.	.	.
2.083	21.4520	350.75	VQ	.	.	.	.
2.167	24.0158	372.27	V Q	.	.	.	.
2.250	26.8002	404.29	V Q	.	.	.	.
2.333	29.7964	435.05	V Q	.	.	.	.
2.417	33.0185	467.85	V Q	.	.	.	.
2.500	36.4734	501.65	V Q	.	.	.	.
2.583	40.1033	527.07	V Q	.	.	.	.
2.667	43.9013	551.47	V Q	.	.	.	.
2.750	47.8920	579.45	V Q	.	.	.	.
2.833	52.1167	613.42	V Q	.	.	.	.
2.917	56.5406	642.35	V Q	.	.	.	.
3.000	61.1313	666.57	V Q	.	.	.	.
3.083	65.9027	692.81	V Q	.	.	.	.
3.167	70.8316	715.68	V Q	.	.	.	.
3.250	75.9197	738.79	V Q	.	.	.	.
3.333	81.1577	760.56	V Q	.	.	.	.
3.417	86.5165	778.09	V Q	.	.	.	.
3.500	91.9929	795.17	V Q	.	.	.	.
3.583	97.5900	812.71	V Q	.	.	.	.
3.667	103.3088	830.36	V Q	.	.	.	.
3.750	109.1412	846.87	V Q	.	.	.	.
3.833	115.0807	862.42	V Q	.	.	.	.
3.917	121.1204	876.97	V Q	.	.	.	.

4.000	127.2498	889.99	.V Q	.	.	.	.
4.083	133.4622	902.04	.V Q	.	.	.	.
4.167	139.7485	912.76	.V Q	.	.	.	.
4.250	146.1083	923.45	.V Q	.	.	.	.
4.333	152.5378	933.57	.V Q	.	.	.	.
4.417	159.0367	943.63	.V Q	.	.	.	.
4.500	165.6040	953.57	.V Q	.	.	.	.
4.583	172.2370	963.11	.V Q	.	.	.	.
4.667	178.9356	972.65	.V Q	.	.	.	.
4.750	185.6976	981.85	.V Q	.	.	.	.
4.833	192.5127	989.55	.V Q	.	.	.	.
4.917	199.3802	997.16	.V Q	.	.	.	.
5.000	206.3003	1004.80	.V Q	.	.	.	.
5.083	213.2734	1012.50	.V Q	.	.	.	.
5.167	220.2940	1019.39	.V Q	.	.	.	.
5.250	227.3573	1025.59	.V Q	.	.	.	.
5.333	234.4635	1031.82	.V Q	.	.	.	.
5.417	241.6130	1038.11	.V Q	.	.	.	.
5.500	248.8060	1044.43	. V Q	.	.	.	.
5.583	256.0430	1050.81	. V Q	.	.	.	.
5.667	263.3242	1057.22	. V Q	.	.	.	.
5.750	270.6474	1063.33	. V Q	.	.	.	.
5.833	278.0029	1068.02	. V Q	.	.	.	.
5.917	285.3902	1072.63	. V Q	.	.	.	.
6.000	292.8094	1077.26	. V Q	.	.	.	.
6.083	300.2609	1081.96	. V Q	.	.	.	.
6.167	307.7449	1086.68	. V Q	.	.	.	.
6.250	315.2619	1091.47	. V Q	.	.	.	.
6.333	322.8121	1096.29	. V Q	.	.	.	.
6.417	330.3959	1101.17	. V Q	.	.	.	.
6.500	338.0136	1106.09	. V Q	.	.	.	.
6.583	345.6656	1111.07	. V Q	.	.	.	.
6.667	353.3521	1116.08	. V Q	.	.	.	.
6.750	361.0736	1121.16	. V Q	.	.	.	.
6.833	368.8304	1126.28	. V Q	.	.	.	.
6.917	376.6228	1131.46	. V Q	.	.	.	.
7.000	384.4513	1136.69	. V Q	.	.	.	.
7.083	392.3162	1141.99	. V Q	.	.	.	.
7.167	400.2179	1147.32	. V Q	.	.	.	.
7.250	408.1568	1152.73	. V Q	.	.	.	.
7.333	416.1332	1158.18	. V Q	.	.	.	.
7.417	424.1477	1163.71	. V Q	.	.	.	.
7.500	432.2006	1169.28	. V Q	.	.	.	.
7.583	440.2924	1174.93	. V Q	.	.	.	.
7.667	448.4234	1180.62	. V Q	.	.	.	.
7.750	456.5942	1186.40	. V Q	.	.	.	.
7.833	464.8051	1192.22	. V Q	.	.	.	.
7.917	473.0567	1198.14	. V Q	.	.	.	.
8.000	481.3494	1204.10	. V Q	.	.	.	.
8.083	489.6837	1210.15	. V Q	.	.	.	.
8.167	498.0601	1216.25	. V Q	.	.	.	.
8.250	506.4791	1222.44	. V Q	.	.	.	.
8.333	514.9410	1228.67	. V Q	.	.	.	.
8.417	523.4424	1234.40	. V Q	.	.	.	.
8.500	531.9836	1240.19	. V Q	.	.	.	.
8.583	540.5654	1246.08	. V Q	.	.	.	.
8.667	549.1882	1252.02	. V Q	.	.	.	.
8.750	557.8525	1258.07	. V Q	.	.	.	.

8.833	566.5590	1264.17	.	V	Q	.	.	.	.
8.917	575.3082	1270.39	.	V	Q	.	.	.	.
9.000	584.1006	1276.67	.	V	Q	.	.	.	.
9.083	592.9371	1283.06	.	V	Q	.	.	.	.
9.167	601.8181	1289.52	.	V	Q	.	.	.	.
9.250	610.7444	1296.09	.	V	Q	.	.	.	.
9.333	619.7164	1302.74	.	V	Q	.	.	.	.
9.417	628.7350	1309.51	.	V	Q	.	.	.	.
9.500	637.8008	1316.35	.	V	Q	.	.	.	.
9.583	646.9147	1323.33	.	V	Q	.	.	.	.
9.667	656.0770	1330.38	.	V	Q	.	.	.	.
9.750	665.2889	1337.56	.	V	Q	.	.	.	.
9.833	674.5508	1344.83	.	V	Q	.	.	.	.
9.917	683.8638	1352.25	.	V	Q	.	.	.	.
10.000	693.2285	1359.75	.	V	Q	.	.	.	.
10.083	702.6458	1367.40	.	V	Q	.	.	.	.
10.167	712.1164	1375.14	.	V	Q	.	.	.	.
10.250	721.6414	1383.04	.	V	Q	.	.	.	.
10.333	731.2216	1391.04	.	V	Q	.	.	.	.
10.417	740.8579	1399.20	.	V	Q	.	.	.	.
10.500	750.5512	1407.47	.	V	Q	.	.	.	.
10.583	760.3027	1415.91	.	V	Q	.	.	.	.
10.667	770.1130	1424.47	.	V	Q	.	.	.	.
10.750	779.9836	1433.21	.	V	Q	.	.	.	.
10.833	789.9152	1442.06	.	V	Q	.	.	.	.
10.917	799.9091	1451.12	.	V	Q	.	.	.	.
11.000	809.9662	1460.30	.	V	Q	.	.	.	.
11.083	820.0880	1469.68	.	V	Q	.	.	.	.
11.167	830.2753	1479.20	.	V	Q	.	.	.	.
11.250	840.5297	1488.94	.	V	Q	.	.	.	.
11.333	850.8522	1498.82	.	V	Q	.	.	.	.
11.417	861.2443	1508.94	.	V	Q	.	.	.	.
11.500	871.7072	1519.21	.	V	Q	.	.	.	.
11.583	882.2425	1529.73	.	V	Q	.	.	.	.
11.667	892.8514	1540.41	.	V	Q	.	.	.	.
11.750	903.5357	1551.36	.	V	Q	.	.	.	.
11.833	914.2966	1562.49	.	V	Q	.	.	.	.
11.917	925.1361	1573.89	.	V	Q	.	.	.	.
12.000	936.0555	1585.50	.	V	Q	.	.	.	.
12.083	947.0783	1600.51	.	V	Q	.	.	.	.
12.167	958.2274	1618.84	.	V	Q	.	.	.	.
12.250	969.5046	1637.46	.	V	Q	.	.	.	.
12.333	980.9114	1656.28	.	V	Q	.	.	.	.
12.417	992.4500	1675.40	.	V	Q	.	.	.	.
12.500	1004.1310	1696.08	.	V	Q	.	.	.	.
12.583	1015.9697	1718.98	.	V	Q	.	.	.	.
12.667	1027.9678	1742.12	.	V	Q	.	.	.	.
12.750	1040.1361	1766.84	.	V	Q	.	.	.	.
12.833	1052.5173	1797.75	.	V	Q	.	.	.	.
12.917	1065.1294	1831.27	.	V	Q	.	.	.	.
13.000	1078.0028	1869.22	.	V	Q	.	.	.	.
13.083	1091.1714	1912.07	.	V	Q	.	.	.	.
13.167	1104.6364	1955.12	.	V	Q	.	.	.	.
13.250	1118.3966	1997.99	.	V	Q	.	.	.	.
13.333	1132.5012	2048.00	.	V	Q	.	.	.	.
13.417	1146.9482	2097.71	.	V	Q	.	.	.	.
13.500	1161.7083	2143.16	.	V	Q	.	.	.	.
13.583	1176.8110	2192.92	.	V	Q	.	.	.	.

13.667	1192.3054	2249.78	.	V	Q	.	.	.	.
13.750	1208.1477	2300.30	.	V	Q	.	.	.	.
13.833	1224.3323	2350.00	.	V	Q	.	.	.	.
13.917	1240.9144	2407.72	.	V	Q	.	.	.	.
14.000	1257.9131	2468.21	.	V	Q	.	.	.	.
14.083	1275.4128	2540.96	.	V	Q	.	.	.	.
14.167	1293.4015	2611.96	.	V	Q	.	.	.	.
14.250	1311.9974	2700.13	.	V	Q	.	.	.	.
14.333	1331.1831	2785.76	.	V	Q	.	.	.	.
14.417	1350.9789	2874.34	.	V	Q	.	.	.	.
14.500	1371.4199	2968.03	.	V	Q	.	.	.	.
14.583	1392.4449	3052.83	.	V	Q	.	.	.	.
14.667	1414.0375	3135.24	.	V	Q	.	.	.	.
14.750	1436.2590	3226.57	.	V	Q	.	.	.	.
14.833	1459.2920	3344.39	.	V	Q	.	.	.	.
14.917	1483.1152	3459.13	.	V	Q	.	.	.	.
15.000	1507.7465	3576.46	.	V	Q	.	.	.	.
15.083	1533.2878	3708.60	.	V	Q	.	.	.	.
15.167	1559.6805	3832.22	.	V	Q	.	.	.	.
15.250	1586.8981	3951.98	.	V	Q	.	.	.	.
15.333	1615.0431	4086.65	.	V	Q	.	.	.	.
15.417	1643.9879	4202.78	.	V	Q	.	.	.	.
15.500	1673.5687	4295.14	.	V	Q	.	.	.	.
15.583	1703.8600	4398.29	.	V	Q	.	.	.	.
15.667	1734.9852	4519.38	.	V	Q	.	.	.	.
15.750	1766.7659	4614.54	.	V	Q	.	.	.	.
15.833	1799.1194	4697.74	.	V	Q	.	.	.	.
15.917	1832.1658	4798.33	.	V	Q	.	.	.	.
16.000	1865.9948	4911.97	.	V	Q	.	.	.	.
16.083	1901.2603	5120.56	.	V	Q	.	.	.	.
16.167	1937.5287	5266.18	.	V	Q	.	.	.	.
16.250	1974.4374	5359.13	.	V	Q	.	.	.	.
16.333	2011.8625	5434.13	.	V	Q	.	.	.	.
16.417	2049.8552	5516.54	.	V	Q	.	.	.	.
16.500	2088.7627	5649.37	.	V	Q	.	.	.	.
16.583	2128.3757	5751.83	.	V	Q	.	.	.	.
16.667	2168.2139	5784.49	.	V	Q	.	.	.	.
16.750	2208.7605	5887.37	.	V	Q	.	.	.	.
16.833	2251.2090	6163.51	.	V	Q	.	.	.	.
16.917	2294.6228	6303.69	.	V	Q	.	.	.	.
17.000	2339.1189	6460.85	.	V	Q	.	.	.	.
17.083	2384.7771	6629.58	.	V	Q	.	.	.	.
17.167	2430.5706	6649.21	.	V	Q	.	.	.	.
17.250	2476.4419	6660.51	.	V	Q	.	.	.	.
17.333	2523.7236	6865.30	.	V	Q	.	.	.	.
17.417	2570.6926	6819.90	.	V	Q	.	.	.	.
17.500	2616.9216	6712.45	.	V	Q	.	.	.	.
17.583	2663.9167	6823.71	.	V	Q	.	.	.	.
17.667	2712.1414	7002.20	.	V	Q	.	.	.	.
17.750	2758.8445	6781.29	.	V	Q	.	.	.	.
17.833	2805.2510	6738.22	.	V	Q	.	.	.	.
17.917	2853.2012	6962.35	.	V	Q	.	.	.	.
18.000	2901.5930	7026.48	.	V	Q	.	.	.	.
18.083	2949.9453	7020.75	.	V	Q	.	.	.	.
18.167	2995.7561	6651.74	.	V	Q	.	.	.	.
18.250	3044.8706	7131.44	.	V	Q	.	.	.	.
18.333	3093.2798	7029.02	.	V	Q	.	.	.	.
18.417	3142.0334	7079.04	.	V	Q	.	.	.	.

18.500	3190.3979	7022.54	.	.	.	V	.	Q.
18.583	3235.5676	6558.62	.	.	.	V	.	Q
18.667	3280.2783	6491.99	.	.	.	V	.	Q
18.750	3326.4250	6700.50	.	.	.	V	.	Q
18.833	3374.4290	6970.18	.	.	.	V	.	Q
18.917	3420.0864	6629.46	.	.	.	V	.	Q
19.000	3463.6350	6323.24	.	.	.	V	.	Q
19.083	3507.2495	6332.82	.	.	.	V	.	Q
19.167	3549.5378	6140.28	.	.	.	V	.	Q
19.250	3591.2446	6055.83	.	.	.	V	.	Q
19.333	3631.6370	5864.96	.	.	.	V	.	Q
19.417	3669.8452	5547.82	.	.	.	VQ	.	
19.500	3707.1819	5421.27	.	.	.	Q	.	
19.583	3744.1807	5372.24	.	.	.	QV	.	
19.667	3780.6506	5295.43	.	.	.	QV	.	
19.750	3815.9556	5126.28	.	.	.	Q.V	.	
19.833	3849.8718	4924.66	.	.	.	Q.V	.	
19.917	3882.4541	4730.94	.	.	.	Q.V	.	
20.000	3913.6704	4532.59	.	.	.	Q.V	.	
20.083	3943.5935	4344.85	.	.	.	Q.V	.	
20.167	3972.3435	4174.51	.	.	.	Q.V	.	
20.250	4000.2029	4045.19	.	.	.	Q.V	.	
20.333	4027.0173	3893.47	.	.	.	Q.V	.	
20.417	4053.0342	3777.66	.	.	.	Q.V	.	
20.500	4078.2251	3657.72	.	.	.	Q.V	.	
20.583	4102.5762	3535.76	.	.	.	Q.V	.	
20.667	4126.1938	3429.32	.	.	.	Q.V	.	
20.750	4148.8931	3295.92	.	.	.	Q.V	.	
20.833	4170.2900	3106.84	.	.	.	Q.V	.	
20.917	4190.9565	3000.77	.	.	.	Q.V	.	
21.000	4211.0420	2916.40	.	.	.	Q.V	.	
21.083	4230.5234	2828.72	.	.	.	Q.V	.	
21.167	4249.1968	2711.33	.	.	.	Q.V	.	
21.250	4267.1230	2602.88	.	.	.	Q.V	.	
21.333	4284.5938	2536.78	.	.	.	Q.V	.	
21.417	4301.6606	2478.14	.	.	.	Q.V	.	
21.500	4318.3237	2419.45	.	.	.	Q.V	.	
21.583	4334.5640	2358.12	.	.	.	Q.V	.	
21.667	4350.3506	2292.23	.	.	.	Q.V	.	
21.750	4365.5396	2205.47	.	.	.	Q.V	.	
21.833	4379.8623	2079.69	.	.	.	Q.V	.	
21.917	4393.8071	2024.78	.	.	.	Q.V	.	
22.000	4407.4404	1979.59	.	.	.	Q.V	.	
22.083	4420.7749	1936.19	.	.	.	Q.V	.	
22.167	4433.8213	1894.34	.	.	.	Q.V	.	
22.250	4446.6001	1855.48	.	.	.	Q.V	.	
22.333	4459.1167	1817.44	.	.	.	Q.V	.	
22.417	4471.3491	1776.11	.	.	.	Q.V	.	
22.500	4483.2979	1734.96	.	.	.	Q.V	.	
22.583	4494.9717	1695.03	.	.	.	Q.V	.	
22.667	4506.3638	1654.16	.	.	.	Q.V	.	
22.750	4517.5000	1616.97	.	.	.	Q.V	.	
22.833	4528.4429	1588.88	.	.	.	Q.V	.	
22.917	4539.2051	1562.68	.	.	.	Q.V	.	
23.000	4549.7920	1537.25	.	.	.	Q.V	.	
23.083	4560.2046	1511.93	.	.	.	Q.V	.	
23.167	4570.4580	1488.83	.	.	.	Q.V	.	
23.250	4580.5649	1467.54	.	.	.	Q.V	.	

23.333	4590.5288	1446.75	.	.	.	Q	.	V
23.417	4600.3535	1426.53	.	.	.	Q	.	V
23.500	4610.0420	1406.78	.	.	.	Q	.	V
23.583	4619.5981	1387.55	.	.	.	Q	.	V
23.667	4629.0259	1368.88	.	.	.	Q	.	V
23.750	4638.3462	1353.29	.	.	.	Q	.	V
23.833	4647.5776	1340.37	.	.	.	Q	.	V
23.917	4656.7227	1327.83	.	.	.	Q	.	V
24.000	4665.7822	1315.48	.	.	.	Q	.	V
24.083	4674.7485	1301.94	.	.	.	Q	.	V
24.167	4683.6094	1286.57	.	.	.	Q	.	V
24.250	4692.3599	1270.59	.	.	.	Q	.	V
24.333	4700.9761	1251.06	.	.	.	Q	.	V
24.417	4709.2793	1205.60	.	.	.	Q	.	V
24.500	4717.4761	1190.19	.	.	.	Q	.	V
24.583	4725.5605	1173.90	.	.	.	Q	.	V
24.667	4733.5366	1158.13	.	.	.	Q	.	V
24.750	4741.3872	1139.88	.	.	.	Q	.	V
24.833	4749.0869	1117.97	.	.	.	Q	.	V
24.917	4756.6260	1094.65	.	.	.	Q	.	V
25.000	4763.9868	1068.80	.	.	.	Q	.	V
25.083	4771.1509	1040.24	.	.	.	Q	.	V
25.167	4778.1191	1011.76	.	.	.	Q	.	V
25.250	4784.8936	983.64	.	.	.	Q	.	V
25.333	4791.4468	951.54	.	.	.	Q	.	V
25.417	4797.8027	922.90	.	.	.	Q	.	V
25.500	4803.9819	897.24	.	.	.	Q	.	V
25.583	4809.9702	869.48	.	.	.	Q	.	V
25.667	4815.7407	837.87	.	.	.	Q	.	V
25.750	4821.3232	810.57	.	.	.	Q	.	V
25.833	4826.7236	784.16	.	.	.	Q	.	V
25.917	4831.9126	753.43	.	.	.	Q	.	V
26.000	4836.8813	721.46	.	.	.	Q	.	V
26.083	4841.6206	688.12	.	.	.	Q	.	V
26.167	4846.1772	661.65	.	.	.	Q	.	V
26.250	4850.4814	624.97	.	.	.	Q	.	V
26.333	4854.5444	589.95	.	.	.	Q	.	V
26.417	4858.3618	554.26	.	.	.	Q	.	V
26.500	4861.9287	517.94	.	.	.	Q	.	V
26.583	4865.3062	490.37	.	.	.	Q	.	V
26.667	4868.5024	464.12	.	.	.	Q	.	V
26.750	4871.4956	434.59	.	.	.	Q	.	V
26.833	4874.2461	399.38	.	.	.	Q	.	V
26.917	4876.7915	369.57	.	.	.	Q	.	V
27.000	4879.1660	344.77	.	.	.	Q	.	V
27.083	4881.3574	318.22	.	.	.	Q	.	V
27.167	4883.3911	295.31	.	.	.	Q	.	V
27.250	4885.2671	272.42	.	.	.	Q	.	V
27.333	4886.9966	251.10	.	.	.	Q	.	V
27.417	4888.6099	234.24	.	.	.	Q	.	V
27.500	4890.1113	218.02	.	.	.	Q	.	V
27.583	4891.4995	201.54	.	.	.	Q	.	V
27.667	4892.7744	185.12	.	.	.	Q	.	V
27.750	4893.9453	170.03	.	.	.	Q	.	V
27.833	4895.0200	156.06	.	.	.	Q	.	V
27.917	4896.0068	143.25	.	.	.	Q	.	V
28.000	4896.9165	132.12	.	.	.	Q	.	V
28.083	4897.7573	122.10	.	.	.	Q	.	V

28.167	4898.5391	113.52	Q	.	.	.	V.
28.250	4899.2627	105.10	Q	.	.	.	V.
28.333	4899.9331	97.34	Q	.	.	.	V.
28.417	4900.5513	89.76	Q	.	.	.	V.
28.500	4901.1187	82.39	Q	.	.	.	V.
28.583	4901.6387	75.54	Q	.	.	.	V.
28.667	4902.1123	68.77	Q	.	.	.	V.
28.750	4902.5425	62.45	Q	.	.	.	V.
28.833	4902.9399	57.70	Q	.	.	.	V.
28.917	4903.3057	53.14	Q	.	.	.	V.
29.000	4903.6406	48.60	Q	.	.	.	V.
29.083	4903.9443	44.10	Q	.	.	.	V.
29.167	4904.2231	40.49	Q	.	.	.	V.
29.250	4904.4824	37.63	Q	.	.	.	V.
29.333	4904.7222	34.80	Q	.	.	.	V.
29.417	4904.9424	31.99	Q	.	.	.	V.
29.500	4905.1436	29.19	Q	.	.	.	V.
29.583	4905.3257	26.42	Q	.	.	.	V.
29.667	4905.4888	23.67	Q	.	.	.	V.
29.750	4905.6353	21.29	Q	.	.	.	V.
29.833	4905.7759	20.39	Q	.	.	.	V.
29.917	4905.9111	19.63	Q	.	.	.	V.
30.000	4906.0410	18.88	Q	.	.	.	V.
30.083	4906.1660	18.14	Q	.	.	.	V.
30.167	4906.2856	17.40	Q	.	.	.	V.
30.250	4906.4004	16.67	Q	.	.	.	V.
30.333	4906.5103	15.94	Q	.	.	.	V.
30.417	4906.6152	15.22	Q	.	.	.	V.
30.500	4906.7153	14.50	Q	.	.	.	V.
30.583	4906.8101	13.79	Q	.	.	.	V.
30.667	4906.9004	13.09	Q	.	.	.	V.
30.750	4906.9858	12.39	Q	.	.	.	V.
30.833	4907.0664	11.69	Q	.	.	.	V.
30.917	4907.1421	11.00	Q	.	.	.	V.
31.000	4907.2134	10.32	Q	.	.	.	V.
31.083	4907.2798	9.64	Q	.	.	.	V.
31.167	4907.3413	8.97	Q	.	.	.	V.
31.250	4907.3984	8.30	Q	.	.	.	V.
31.333	4907.4512	7.63	Q	.	.	.	V.
31.417	4907.4990	6.97	Q	.	.	.	V.
31.500	4907.5425	6.32	Q	.	.	.	V.
31.583	4907.5815	5.67	Q	.	.	.	V.
31.667	4907.6162	5.02	Q	.	.	.	V.
31.750	4907.6465	4.38	Q	.	.	.	V.
31.833	4907.6724	3.74	Q	.	.	.	V.
31.917	4907.6938	3.10	Q	.	.	.	V.
32.000	4907.7109	2.47	Q	.	.	.	V.
32.083	4907.7236	1.84	Q	.	.	.	V.
32.167	4907.7319	1.22	Q	.	.	.	V.
32.250	4907.7358	0.60	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%	1935.0
10%	1375.0
20%	765.0
30%	500.0
40%	400.0
50%	335.0
60%	280.0
70%	225.0
80%	170.0
90%	120.0

=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5- REGIONAL NODE 127 *
* 10-YR EV APRIL 2019 CCHIU *

FILE NAME: EV10127S.DAT
TIME/DATE OF STUDY: 07:42 04/09/2019

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 = 53500.199 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.568 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.293
LOW LOSS FRACTION = 0.742
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.32
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.63
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.87
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.62
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.40
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.22

*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 = 3.245

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.185	1199.780
2	0.556	2399.565
3	0.927	2399.561
4	1.298	2399.565
5	1.669	2399.557
6	2.075	2630.354
7	2.625	3554.932
8	3.189	3651.508
9	3.755	3657.661
10	4.585	5373.314
11	5.627	6738.792
12	6.871	8051.067
13	8.320	9375.325
14	10.017	10978.512
15	11.652	10579.346
16	13.276	10506.873
17	15.400	13747.672
18	17.354	12639.910
19	19.085	11197.951
20	21.020	12520.895
21	23.391	15340.442
22	25.439	13254.659
23	27.299	12031.862
24	29.581	14764.765
25	31.933	15221.007
26	34.787	18461.490
27	36.930	13868.865
28	39.452	16317.348
29	42.477	19574.404
30	45.415	19006.551
31	48.746	21549.021
32	51.614	18560.451
33	53.951	15117.911
34	56.209	14609.738
35	58.859	17146.828
36	62.075	20810.812
37	64.739	17237.879
38	66.941	14243.164
39	69.308	15317.020
40	71.421	13671.683
41	73.459	13186.390
42	75.473	13029.166
43	77.074	10356.229
44	78.516	9331.589
45	79.968	9392.898
46	81.481	9790.127
47	82.903	9206.008
48	84.238	8636.451

49	85.480	8031.846
50	86.579	7111.857
51	87.577	6455.668
52	88.440	5588.251
53	89.204	4940.799
54	89.959	4886.301
55	90.654	4495.885
56	91.337	4420.951
57	92.011	4361.567
58	92.636	4044.159
59	93.255	3999.386
60	93.864	3942.915
61	94.327	2998.590
62	94.739	2665.583
63	95.151	2665.632
64	95.564	2667.508
65	95.960	2566.313
66	96.240	1806.953
67	96.494	1647.262
68	96.748	1645.287
69	97.003	1647.262
70	97.258	1647.262
71	97.512	1647.311
72	97.766	1645.287
73	97.988	1435.048
74	98.066	502.324
75	98.127	393.329
76	98.188	397.229
77	98.248	389.429
78	98.310	397.179
79	98.370	389.429
80	98.431	393.329
81	98.491	393.329
82	98.552	393.329
83	98.613	393.279
84	98.674	393.329
85	98.735	397.229
86	98.795	389.429
87	98.857	397.179
88	98.918	393.329
89	98.978	389.429
90	99.039	397.229
91	99.099	389.429
92	99.160	389.429
93	99.220	389.429
94	99.280	389.429
95	99.340	389.429
96	99.400	389.429
97	99.460	389.429
98	99.521	389.429
99	99.581	389.429
100	99.641	389.429
101	99.701	389.429
102	99.761	389.429
103	99.822	389.429
104	99.882	389.429
105	99.942	389.429
106	100.000	375.509

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12557.6562
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 5139.8472

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.	1825.0	3650.0	5475.0	7300.0
0.083	0.0129	1.88	Q	.	.	.	.
0.167	0.0518	5.64	Q	.	.	.	.
0.250	0.1167	9.42	Q	.	.	.	.
0.333	0.2076	13.20	Q	.	.	.	.
0.417	0.3247	17.00	Q	.	.	.	.
0.500	0.4705	21.17	Q	.	.	.	.
0.583	0.6551	26.80	Q	.	.	.	.
0.667	0.8796	32.60	Q	.	.	.	.
0.750	1.1443	38.43	Q	.	.	.	.
0.833	1.4677	46.96	Q	.	.	.	.
0.917	1.8648	57.65	Q	.	.	.	.
1.000	2.3499	70.44	Q	.	.	.	.
1.083	2.9375	85.33	Q	.	.	.	.
1.167	3.6454	102.78	Q	.	.	.	.
1.250	4.4695	119.66	Q	.	.	.	.
1.333	5.4094	136.48	Q	.	.	.	.
1.417	6.5005	158.42	Q	.	.	.	.
1.500	7.7311	178.69	Q	.	.	.	.
1.583	9.0863	196.77	VQ	.	.	.	.
1.667	10.5806	216.97	VQ	.	.	.	.
1.750	12.2449	241.66	VQ	.	.	.	.
1.833	14.0572	263.15	VQ	.	.	.	.
1.917	16.0049	282.80	VQ	.	.	.	.
2.000	18.1177	306.78	VQ	.	.	.	.
2.083	20.4012	331.56	VQ	.	.	.	.
2.167	22.8909	361.50	VQ	.	.	.	.
2.250	25.5377	384.32	V Q	.	.	.	.
2.333	28.3687	411.07	V Q	.	.	.	.
2.417	31.4196	442.99	V Q	.	.	.	.
2.500	34.6849	474.13	V Q	.	.	.	.
2.583	38.1928	509.34	V Q	.	.	.	.
2.667	41.9118	539.99	V Q	.	.	.	.
2.750	45.8054	565.35	V Q	.	.	.	.
2.833	49.8687	589.99	V Q	.	.	.	.
2.917	54.1296	618.69	V Q	.	.	.	.
3.000	58.6285	653.23	V Q	.	.	.	.
3.083	63.3273	682.27	V Q	.	.	.	.
3.167	68.1946	706.73	V Q	.	.	.	.
3.250	73.2425	732.95	V Q	.	.	.	.
3.333	78.4539	756.69	V Q	.	.	.	.
3.417	83.8241	779.75	V Q	.	.	.	.
3.500	89.3520	802.65	V Q	.	.	.	.
3.583	95.0093	821.44	V Q	.	.	.	.
3.667	100.7854	838.70	V Q	.	.	.	.
3.750	106.6815	856.12	V Q	.	.	.	.
3.833	112.7024	874.23	V Q	.	.	.	.
3.917	118.8421	891.49	V Q	.	.	.	.

4.000	125.0951	907.94	V Q	.	.	.	.
4.083	131.4553	923.49	.V Q	.	.	.	.
4.167	137.9131	937.68	.V Q	.	.	.	.
4.250	144.4620	950.89	.V Q	.	.	.	.
4.333	151.0930	962.82	.V Q	.	.	.	.
4.417	157.7994	973.77	.V Q	.	.	.	.
4.500	164.5811	984.70	.V Q	.	.	.	.
4.583	171.4341	995.07	.V Q	.	.	.	.
4.667	178.3582	1005.37	.V Q	.	.	.	.
4.750	185.3529	1015.63	.V Q	.	.	.	.
4.833	192.4153	1025.46	.V Q	.	.	.	.
4.917	199.5452	1035.25	.V Q	.	.	.	.
5.000	206.7423	1045.02	.V Q	.	.	.	.
5.083	213.9969	1053.36	.V Q	.	.	.	.
5.167	221.3056	1061.23	.V Q	.	.	.	.
5.250	228.6689	1069.14	.V Q	.	.	.	.
5.333	236.0870	1077.12	.V Q	.	.	.	.
5.417	243.5593	1084.98	.V Q	.	.	.	.
5.500	251.0779	1091.70	.V Q	.	.	.	.
5.583	258.6414	1098.22	. V Q	.	.	.	.
5.667	266.2501	1104.79	. V Q	.	.	.	.
5.750	273.9043	1111.40	. V Q	.	.	.	.
5.833	281.6045	1118.07	. V Q	.	.	.	.
5.917	289.3509	1124.78	. V Q	.	.	.	.
6.000	297.1439	1131.54	. V Q	.	.	.	.
6.083	304.9815	1138.02	. V Q	.	.	.	.
6.167	312.8542	1143.10	. V Q	.	.	.	.
6.250	320.7609	1148.05	. V Q	.	.	.	.
6.333	328.7021	1153.07	. V Q	.	.	.	.
6.417	336.6780	1158.11	. V Q	.	.	.	.
6.500	344.6891	1163.22	. V Q	.	.	.	.
6.583	352.7357	1168.36	. V Q	.	.	.	.
6.667	360.8181	1173.57	. V Q	.	.	.	.
6.750	368.9367	1178.82	. V Q	.	.	.	.
6.833	377.0919	1184.13	. V Q	.	.	.	.
6.917	385.2840	1189.49	. V Q	.	.	.	.
7.000	393.5134	1194.92	. V Q	.	.	.	.
7.083	401.7806	1200.40	. V Q	.	.	.	.
7.167	410.0860	1205.93	. V Q	.	.	.	.
7.250	418.4298	1211.53	. V Q	.	.	.	.
7.333	426.8127	1217.19	. V Q	.	.	.	.
7.417	435.2348	1222.89	. V Q	.	.	.	.
7.500	443.6968	1228.68	. V Q	.	.	.	.
7.583	452.1990	1234.51	. V Q	.	.	.	.
7.667	460.7419	1240.42	. V Q	.	.	.	.
7.750	469.3257	1246.38	. V Q	.	.	.	.
7.833	477.9513	1252.42	. V Q	.	.	.	.
7.917	486.6188	1258.52	. V Q	.	.	.	.
8.000	495.3289	1264.70	. V Q	.	.	.	.
8.083	504.0819	1270.94	. V Q	.	.	.	.
8.167	512.8785	1277.27	. V Q	.	.	.	.
8.250	521.7192	1283.66	. V Q	.	.	.	.
8.333	530.6044	1290.13	. V Q	.	.	.	.
8.417	539.5347	1296.68	. V Q	.	.	.	.
8.500	548.5106	1303.31	. V Q	.	.	.	.
8.583	557.5328	1310.01	. V Q	.	.	.	.
8.667	566.6017	1316.81	. V Q	.	.	.	.
8.750	575.7180	1323.69	. V Q	.	.	.	.

8.833	584.8821	1330.64	.	V	Q	.	.	.	.
8.917	594.0906	1337.07	.	V	Q	.	.	.	.
9.000	603.3442	1343.61	.	V	Q	.	.	.	.
9.083	612.6433	1350.23	.	V	Q	.	.	.	.
9.167	621.9888	1356.96	.	V	Q	.	.	.	.
9.250	631.3811	1363.76	.	V	Q	.	.	.	.
9.333	640.8210	1370.68	.	V	Q	.	.	.	.
9.417	650.3093	1377.69	.	V	Q	.	.	.	.
9.500	659.8465	1384.81	.	V	Q	.	.	.	.
9.583	669.4334	1392.02	.	V	Q	.	.	.	.
9.667	679.0709	1399.36	.	V	Q	.	.	.	.
9.750	688.7595	1406.79	.	V	Q	.	.	.	.
9.833	698.5002	1414.35	.	V	Q	.	.	.	.
9.917	708.2937	1422.01	.	V	Q	.	.	.	.
10.000	718.1409	1429.81	.	V	Q	.	.	.	.
10.083	728.0425	1437.71	.	V	Q	.	.	.	.
10.167	737.9995	1445.76	.	V	Q	.	.	.	.
10.250	748.0126	1453.91	.	V	Q	.	.	.	.
10.333	758.0830	1462.22	.	V	Q	.	.	.	.
10.417	768.2114	1470.65	.	V	Q	.	.	.	.
10.500	778.3990	1479.23	.	V	Q	.	.	.	.
10.583	788.6465	1487.94	.	V	Q	.	.	.	.
10.667	798.9552	1496.82	.	V	Q	.	.	.	.
10.750	809.3259	1505.83	.	V	Q	.	.	.	.
10.833	819.7599	1515.02	.	V	Q	.	.	.	.
10.917	830.2582	1524.35	.	V	Q	.	.	.	.
11.000	840.8221	1533.87	.	V	Q	.	.	.	.
11.083	851.4525	1543.53	.	V	Q	.	.	.	.
11.167	862.1508	1553.40	.	V	Q	.	.	.	.
11.250	872.9182	1563.43	.	V	Q	.	.	.	.
11.333	883.7561	1573.66	.	V	Q	.	.	.	.
11.417	894.6657	1584.07	.	V	Q	.	.	.	.
11.500	905.6485	1594.70	.	V	Q	.	.	.	.
11.583	916.7058	1605.52	.	V	Q	.	.	.	.
11.667	927.8392	1616.57	.	V	Q	.	.	.	.
11.750	939.0502	1627.82	.	V	Q	.	.	.	.
11.833	950.3403	1639.33	.	V	Q	.	.	.	.
11.917	961.7111	1651.04	.	V	Q	.	.	.	.
12.000	973.1645	1663.03	.	V	Q	.	.	.	.
12.083	984.7239	1678.42	.	V	Q	.	.	.	.
12.167	996.4130	1697.27	.	V	Q	.	.	.	.
12.250	1008.2335	1716.33	.	V	Q	.	.	.	.
12.333	1020.1872	1735.67	.	V	Q	.	.	.	.
12.417	1032.2756	1755.24	.	V	Q	.	.	.	.
12.500	1044.5051	1775.73	.	V	Q	.	.	.	.
12.583	1056.8943	1798.91	.	V	Q	.	.	.	.
12.667	1069.4469	1822.65	.	V	Q	.	.	.	.
12.750	1082.1649	1846.66	.	V	Q	.	.	.	.
12.833	1095.0819	1875.54	.	V	Q	.	.	.	.
12.917	1108.2245	1908.30	.	V	Q	.	.	.	.
13.000	1121.6188	1944.84	.	V	Q	.	.	.	.
13.083	1135.2905	1985.14	.	V	Q	.	.	.	.
13.167	1149.2711	2029.99	.	V	Q	.	.	.	.
13.250	1163.5549	2074.01	.	V	Q	.	.	.	.
13.333	1178.1427	2118.14	.	V	Q	.	.	.	.
13.417	1193.0953	2171.12	.	V	Q	.	.	.	.
13.500	1208.3947	2221.46	.	V	Q	.	.	.	.
13.583	1224.0160	2268.22	.	V	Q	.	.	.	.

13.667	1239.9860	2318.85	.	V	Q	.	.	.	.
13.750	1256.3580	2377.22	.	V	Q	.	.	.	.
13.833	1273.0963	2430.40	.	V	Q	.	.	.	.
13.917	1290.1805	2480.63	.	V	Q	.	.	.	.
14.000	1307.6635	2538.52	.	V	Q	.	.	.	.
14.083	1325.6145	2606.49	.	V	Q	.	.	.	.
14.167	1344.1532	2691.83	.	V	Q	.	.	.	.
14.250	1363.1938	2764.70	.	V	Q	.	.	.	.
14.333	1382.7797	2843.85	.	V	Q	.	.	.	.
14.417	1402.9681	2931.37	.	V	Q	.	.	.	.
14.500	1423.7584	3018.76	.	V	Q	.	.	.	.
14.583	1445.2399	3119.11	.	V	Q	.	.	.	.
14.667	1467.3590	3211.70	.	V	Q	.	.	.	.
14.750	1490.0481	3294.46	.	V	Q	.	.	.	.
14.833	1513.3787	3387.60	.	V	Q	.	.	.	.
14.917	1537.4569	3496.16	.	V	Q	.	.	.	.
15.000	1562.4044	3622.37	.	V	Q	.	.	.	.
15.083	1588.2079	3746.66	.	V	Q	.	.	.	.
15.167	1614.8757	3872.18	.	V	Q	.	.	.	.
15.250	1642.3888	3994.90	.	V	Q	.	.	.	.
15.333	1670.6929	4109.76	.	V	Q	.	.	.	.
15.417	1699.8793	4237.87	.	V	Q	.	.	.	.
15.500	1729.8295	4348.77	.	V	Q	.	.	.	.
15.583	1760.4078	4439.99	.	V	Q	.	.	.	.
15.667	1791.6503	4536.41	.	V	Q	.	.	.	.
15.750	1823.6707	4649.36	.	V	Q	.	.	.	.
15.833	1856.3386	4743.38	.	V	Q	.	.	.	.
15.917	1889.5483	4822.06	.	V	Q	.	.	.	.
16.000	1923.4844	4927.52	.	V	Q	.	.	.	.
16.083	1958.7498	5120.53	.	V	Q	.	.	.	.
16.167	1995.3307	5311.55	.	V	Q	.	.	.	.
16.250	2032.2841	5365.62	.	V	Q	.	.	.	.
16.333	2069.6538	5426.07	.	V	Q	.	.	.	.
16.417	2107.5935	5508.86	.	V	Q	.	.	.	.
16.500	2146.1948	5604.91	.	V	Q	.	.	.	.
16.583	2185.9009	5765.30	.	V	Q	.	.	.	.
16.667	2226.1431	5843.17	.	V	Q	.	.	.	.
16.750	2266.6895	5887.35	.	V	Q	.	.	.	.
16.833	2308.4221	6059.57	.	V	Q	.	.	.	.
16.917	2351.3818	6237.75	.	V	Q	.	.	.	.
17.000	2395.6836	6432.62	.	V	Q	.	.	.	.
17.083	2440.9409	6571.36	.	V	Q	.	.	.	.
17.167	2487.0942	6701.48	.	V	Q	.	.	.	.
17.250	2533.3167	6711.49	.	V	Q	.	.	.	.
17.333	2579.7771	6746.07	.	V	Q	.	.	.	.
17.417	2627.9231	6990.78	.	V	Q	.	.	.	.
17.500	2675.4617	6902.61	.	V	Q	.	.	.	.
17.583	2722.4182	6818.10	.	V	Q	.	.	.	.
17.667	2770.1204	6926.37	.	V	Q	.	.	.	.
17.750	2819.0803	7108.99	.	V	Q	.	.	.	.
17.833	2866.8049	6929.61	.	V	Q	.	.	.	.
17.917	2913.8191	6826.46	.	V	Q	.	.	.	.
18.000	2962.1243	7013.91	.	V	Q	.	.	.	.
18.083	3010.7224	7056.46	.	V	Q	.	.	.	.
18.167	3060.4866	7225.77	.	V	Q	.	.	.	.
18.250	3107.6099	6842.29	.	V	Q	.	.	.	.
18.333	3155.7312	6987.23	.	V	Q	.	.	.	.
18.417	3205.0662	7163.43	.	V	Q	.	.	.	.

18.500	3254.0469	7112.02	.	.	.	V	.	Q	.
18.583	3303.7842	7221.87	.	.	.	V	.	Q	.
18.667	3351.4207	6916.83	.	.	.	V	.	Q	.
18.750	3396.9756	6614.58	.	.	.	V	.	Q	.
18.833	3442.2634	6575.81	.	.	.	V	.	Q	.
18.917	3489.0942	6799.85	.	.	.	V	.	Q	.
19.000	3537.4495	7021.17	.	.	.	V	.	Q	.
19.083	3583.4250	6675.67	.	.	.	V	.	Q	.
19.167	3627.2639	6365.39	.	.	.	V	.	Q	.
19.250	3671.2502	6386.82	.	.	.	V	.	Q	.
19.333	3714.0894	6220.26	.	.	.	V	.	Q	.
19.417	3756.0857	6097.88	.	.	.	V	.	Q	.
19.500	3797.1943	5968.97	.	.	.	V	.	Q	.
19.583	3836.1504	5656.41	.	.	.	VQ	.	.	.
19.667	3873.9668	5490.93	.	.	.	Q	.	.	.
19.750	3911.3274	5424.77	.	.	.	QV	.	.	.
19.833	3948.4092	5384.28	.	.	.	QV	.	.	.
19.917	3984.5149	5242.56	.	.	.	Q	.	V	.
20.000	4019.3474	5057.68	.	.	.	Q	.	V	.
20.083	4052.9866	4884.40	.	.	.	Q	.	V	.
20.167	4085.3196	4694.75	.	.	.	Q	.	V	.
20.250	4116.4707	4523.17	.	.	.	Q	.	V	.
20.333	4146.3574	4339.57	.	.	.	Q	.	V	.
20.417	4175.0952	4172.73	.	.	.	Q	.	V	.
20.500	4202.9663	4046.91	.	.	.	Q	.	V	.
20.583	4229.8638	3905.54	.	.	.	Q	.	V	.
20.667	4256.0186	3797.65	.	.	.	Q	.	V	.
20.750	4281.4614	3694.29	.	.	.	Q	.	V	.
20.833	4306.0752	3573.95	.	.	.	Q	.	V	.
20.917	4329.9414	3465.37	.	.	.	Q	.	V	.
21.000	4352.9473	3340.47	.	.	.	Q	.	V	.
21.083	4374.7539	3166.29	.	.	.	Q	.	V	.
21.167	4395.7881	3054.17	.	.	.	Q	.	V	.
21.250	4416.2290	2968.04	.	.	.	Q	.	V	.
21.333	4436.1367	2890.64	.	.	.	Q	.	V	.
21.417	4455.4429	2803.24	.	.	.	Q	.	V	.
21.500	4473.8657	2675.03	.	.	.	Q	.	V	.
21.583	4491.7925	2602.99	.	.	.	Q	.	V	.
21.667	4509.3228	2545.41	.	.	.	Q	.	V	.
21.750	4526.4585	2488.10	.	.	.	Q	.	V	.
21.833	4543.1855	2428.79	.	.	.	Q	.	V	.
21.917	4559.5005	2368.90	.	.	.	Q	.	V	.
22.000	4575.3843	2306.31	.	.	.	Q	.	V	.
22.083	4590.7446	2230.35	.	.	.	Q	.	V	.
22.167	4605.2891	2111.87	.	.	.	Q	.	V	.
22.250	4619.4668	2058.59	.	.	.	Q	.	V	.
22.333	4633.3545	2016.47	.	.	.	Q	.	V	.
22.417	4646.9629	1975.93	.	.	.	Q	.	V	.
22.500	4660.3096	1937.93	.	.	.	Q	.	V	.
22.583	4673.3955	1900.07	.	.	.	Q	.	V	.
22.667	4686.2261	1862.97	.	.	.	Q	.	V	.
22.750	4698.7979	1825.43	.	.	.	Q	.	V	.
22.833	4711.1147	1788.45	.	.	.	Q	.	V	.
22.917	4723.1582	1748.72	.	.	.	Q	.	V	.
23.000	4734.9292	1709.15	.	.	.	Q	.	V	.
23.083	4746.4570	1673.84	.	.	.	Q	.	V	.
23.167	4757.7900	1645.54	.	.	.	Q	.	V	.
23.250	4768.9453	1619.72	.	.	.	Q	.	V	.

23.333	4779.9204	1593.55	.	.	.	Q	.	.	V	.
23.417	4790.7222	1568.39	.	.	.	Q	.	.	V	.
23.500	4801.3726	1546.42	.	.	.	Q	.	.	V	.
23.583	4811.8711	1524.41	.	.	.	Q	.	.	V	.
23.667	4822.2256	1503.45	.	.	.	Q	.	.	V	.
23.750	4832.4390	1482.99	.	.	.	Q	.	.	V	.
23.833	4842.5151	1463.03	.	.	.	Q	.	.	V	.
23.917	4852.4570	1443.54	.	.	.	Q	.	.	V	.
24.000	4862.2676	1424.49	.	.	.	Q	.	.	V	.
24.083	4871.9409	1404.59	.	.	.	Q	.	.	V	.
24.167	4881.4854	1385.84	.	.	.	Q	.	.	V	.
24.250	4890.9180	1369.64	.	.	.	Q	.	.	V	.
24.333	4900.2412	1353.70	.	.	.	Q	.	.	V	.
24.417	4909.4556	1337.95	.	.	.	Q	.	.	V	.
24.500	4918.5601	1321.96	.	.	.	Q	.	.	V	.
24.583	4927.5493	1305.21	.	.	.	Q	.	.	V	.
24.667	4936.4219	1288.32	.	.	.	Q	.	.	V	.
24.750	4945.1738	1270.80	.	.	.	Q	.	.	V	.
24.833	4953.7622	1247.06	.	.	.	Q	.	.	V	.
24.917	4962.0088	1197.41	.	.	.	Q	.	.	V	.
25.000	4970.0972	1174.41	.	.	.	Q	.	.	V	.
25.083	4978.0151	1149.67	.	.	.	Q	.	.	V	.
25.167	4985.7490	1122.97	.	.	.	Q	.	.	V	.
25.250	4993.2930	1095.40	.	.	.	Q	.	.	V	.
25.333	5000.6475	1067.89	.	.	.	Q	.	.	V	.
25.417	5007.7778	1035.32	.	.	.	Q	.	.	V	.
25.500	5014.6958	1004.49	.	.	.	Q	.	.	V	.
25.583	5021.4175	976.00	.	.	.	Q	.	.	V	.
25.667	5027.9292	945.49	.	.	.	Q	.	.	V	.
25.750	5034.2007	910.64	.	.	.	Q	.	.	V	.
25.833	5040.2563	879.27	.	.	.	Q	.	.	V	.
25.917	5046.1284	852.66	.	.	.	Q	.	.	V	.
26.000	5051.7900	822.04	.	.	.	Q	.	.	V	.
26.083	5057.2378	790.99	.	.	.	Q	.	.	V	.
26.167	5062.4385	755.14	.	.	.	Q	.	.	V	.
26.250	5067.4438	726.78	.	.	.	Q	.	.	V	.
26.333	5072.2290	694.84	.	.	.	Q	.	.	V	.
26.417	5076.7612	658.06	.	.	.	Q	.	.	V	.
26.500	5081.0483	622.46	.	.	.	Q	.	.	V	.
26.583	5085.0645	583.15	.	.	.	Q	.	.	V	.
26.667	5088.8442	548.81	.	.	.	Q	.	.	V	.
26.750	5092.4263	520.10	.	.	.	Q	.	.	V	.
26.833	5095.8179	492.45	.	.	.	Q	.	.	V	.
26.917	5099.0000	462.03	.	.	.	Q	.	.	V	.
27.000	5101.9346	426.12	.	.	.	Q	.	.	V	.
27.083	5104.6621	396.05	.	.	.	Q	.	.	V	.
27.167	5107.2163	370.90	.	.	.	Q	.	.	V	.
27.250	5109.5874	344.26	.	.	.	Q	.	.	V	.
27.333	5111.7939	320.38	.	.	.	Q	.	.	V	.
27.417	5113.8423	297.45	.	.	.	Q	.	.	V	.
27.500	5115.7358	274.92	.	.	.	Q	.	.	V	.
27.583	5117.5039	256.75	.	.	.	Q	.	.	V	.
27.667	5119.1587	240.31	.	.	.	Q	.	.	V	.
27.750	5120.7007	223.89	.	.	.	Q	.	.	V	.
27.833	5122.1260	206.98	.	.	.	Q	.	.	V	.
27.917	5123.4419	191.11	.	.	.	Q	.	.	V	.
28.000	5124.6558	176.23	.	.	.	Q	.	.	V	.
28.083	5125.7744	162.41	.	.	.	Q	.	.	V	.

28.167	5126.8086	150.13	Q	.	.	.	V.
28.250	5127.7656	138.97	Q	.	.	.	V.
28.333	5128.6558	129.24	Q	.	.	.	V.
28.417	5129.4863	120.59	Q	.	.	.	V.
28.500	5130.2583	112.09	Q	.	.	.	V.
28.583	5130.9766	104.26	Q	.	.	.	V.
28.667	5131.6421	96.61	Q	.	.	.	V.
28.750	5132.2559	89.11	Q	.	.	.	V.
28.833	5132.8218	82.16	Q	.	.	.	V.
28.917	5133.3403	75.32	Q	.	.	.	V.
29.000	5133.8130	68.62	Q	.	.	.	V.
29.083	5134.2500	63.45	Q	.	.	.	V.
29.167	5134.6553	58.83	Q	.	.	.	V.
29.250	5135.0288	54.24	Q	.	.	.	V.
29.333	5135.3711	49.69	Q	.	.	.	V.
29.417	5135.6831	45.32	Q	.	.	.	V.
29.500	5135.9736	42.18	Q	.	.	.	V.
29.583	5136.2441	39.30	Q	.	.	.	V.
29.667	5136.4951	36.45	Q	.	.	.	V.
29.750	5136.7266	33.62	Q	.	.	.	V.
29.833	5136.9385	30.80	Q	.	.	.	V.
29.917	5137.1313	28.01	Q	.	.	.	V.
30.000	5137.3052	25.24	Q	.	.	.	V.
30.083	5137.4624	22.82	Q	.	.	.	V.
30.167	5137.6128	21.87	Q	.	.	.	V.
30.250	5137.7583	21.10	Q	.	.	.	V.
30.333	5137.8984	20.33	Q	.	.	.	V.
30.417	5138.0332	19.57	Q	.	.	.	V.
30.500	5138.1626	18.82	Q	.	.	.	V.
30.583	5138.2871	18.08	Q	.	.	.	V.
30.667	5138.4067	17.34	Q	.	.	.	V.
30.750	5138.5210	16.61	Q	.	.	.	V.
30.833	5138.6304	15.88	Q	.	.	.	V.
30.917	5138.7349	15.16	Q	.	.	.	V.
31.000	5138.8345	14.44	Q	.	.	.	V.
31.083	5138.9292	13.73	Q	.	.	.	V.
31.167	5139.0190	13.03	Q	.	.	.	V.
31.250	5139.1040	12.32	Q	.	.	.	V.
31.333	5139.1841	11.63	Q	.	.	.	V.
31.417	5139.2593	10.94	Q	.	.	.	V.
31.500	5139.3301	10.25	Q	.	.	.	V.
31.583	5139.3960	9.58	Q	.	.	.	V.
31.667	5139.4575	8.91	Q	.	.	.	V.
31.750	5139.5142	8.24	Q	.	.	.	V.
31.833	5139.5664	7.58	Q	.	.	.	V.
31.917	5139.6143	6.93	Q	.	.	.	V.
32.000	5139.6572	6.27	Q	.	.	.	V.
32.083	5139.6958	5.63	Q	.	.	.	V.
32.167	5139.7300	4.98	Q	.	.	.	V.
32.250	5139.7598	4.34	Q	.	.	.	V.
32.333	5139.7852	3.71	Q	.	.	.	V.
32.417	5139.8062	3.08	Q	.	.	.	V.
32.500	5139.8232	2.45	Q	.	.	.	V.
32.583	5139.8359	1.83	Q	.	.	.	V.
32.667	5139.8442	1.21	Q	.	.	.	V.
32.750	5139.8481	0.59	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%	1965.0
10%	1385.0
20%	825.0
30%	525.0
40%	420.0
50%	350.0
60%	295.0
70%	235.0
80%	175.0
90%	125.0

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5- UH SINGLE AREA MODEL - NODE 132T *
* 10-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV1032TS.DAT
TIME/DATE OF STUDY: 14:53 01/02/2019

FLOW PROCESS FROM NODE 13200.00 TO NODE 132.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1127.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.486 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.248
LOW LOSS FRACTION = 0.742
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 = 0.950
30-MINUTE FACTOR = 0.950
1-HOUR FACTOR = 0.950
3-HOUR FACTOR = 0.992
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 17.147

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.980	133.617
2	3.549	350.382
3	9.581	822.535
4	19.241	1317.278
5	30.467	1530.904
6	44.248	1879.367
7	58.774	1980.896
8	71.576	1745.840
9	80.582	1228.130
10	87.152	895.847
11	91.304	566.223
12	94.388	420.553
13	96.359	268.873
14	97.680	180.031
15	98.256	78.544
16	98.577	43.850
17	98.899	43.850
18	99.220	43.836
19	99.542	43.836
20	99.863	43.836
21	100.000	18.684

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 181.7845
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 102.2367

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	0.0009	0.14	Q	.	.	.	.
0.167	0.0043	0.49	Q	.	.	.	.
0.250	0.0134	1.32	Q	.	.	.	.
0.333	0.0317	2.66	Q	.	.	.	.
0.417	0.0607	4.21	Q	.	.	.	.
0.500	0.1029	6.12	Q	.	.	.	.
0.583	0.1590	8.15	Q	.	.	.	.
0.667	0.2274	9.94	Q	.	.	.	.
0.750	0.3046	11.21	Q	.	.	.	.
0.833	0.3883	12.15	Q	.	.	.	.
0.917	0.4762	12.76	Q	.	.	.	.
1.000	0.5673	13.23	Q	.	.	.	.
1.083	0.6606	13.55	Q	.	.	.	.
1.167	0.7555	13.78	Q	.	.	.	.
1.250	0.8513	13.90	Q	.	.	.	.
1.333	0.9476	13.99	Q	.	.	.	.
1.417	1.0446	14.09	Q	.	.	.	.
1.500	1.1423	14.18	Q	.	.	.	.
1.583	1.2406	14.27	Q	.	.	.	.
1.667	1.3395	14.37	Q	.	.	.	.
1.750	1.4390	14.44	Q	.	.	.	.
1.833	1.5387	14.49	Q	.	.	.	.
1.917	1.6389	14.54	Q	.	.	.	.
2.000	1.7394	14.59	Q	.	.	.	.
2.083	1.8402	14.64	Q	.	.	.	.
2.167	1.9415	14.70	Q	.	.	.	.
2.250	2.0430	14.75	Q	.	.	.	.
2.333	2.1450	14.81	Q	.	.	.	.
2.417	2.2473	14.86	Q	.	.	.	.
2.500	2.3501	14.91	Q	.	.	.	.
2.583	2.4532	14.97	Q	.	.	.	.
2.667	2.5567	15.03	QV	.	.	.	.
2.750	2.6605	15.08	QV	.	.	.	.
2.833	2.7648	15.14	QV	.	.	.	.
2.917	2.8695	15.20	QV	.	.	.	.
3.000	2.9746	15.26	QV	.	.	.	.
3.083	3.0800	15.32	QV	.	.	.	.
3.167	3.1859	15.38	QV	.	.	.	.
3.250	3.2922	15.44	QV	.	.	.	.
3.333	3.3990	15.50	QV	.	.	.	.
3.417	3.5061	15.56	QV	.	.	.	.
3.500	3.6137	15.62	QV	.	.	.	.
3.583	3.7217	15.68	QV	.	.	.	.
3.667	3.8301	15.75	QV	.	.	.	.
3.750	3.9390	15.81	QV	.	.	.	.
3.833	4.0484	15.88	QV	.	.	.	.
3.917	4.1581	15.94	QV	.	.	.	.

4.000	4.2684	16.01	QV	.	.	.	.
4.083	4.3791	16.07	QV	.	.	.	.
4.167	4.4903	16.14	QV	.	.	.	.
4.250	4.6019	16.21	QV	.	.	.	.
4.333	4.7140	16.28	QV	.	.	.	.
4.417	4.8266	16.35	QV	.	.	.	.
4.500	4.9397	16.42	QV	.	.	.	.
4.583	5.0533	16.49	QV	.	.	.	.
4.667	5.1673	16.56	Q V	.	.	.	.
4.750	5.2819	16.64	Q V	.	.	.	.
4.833	5.3970	16.71	Q V	.	.	.	.
4.917	5.5126	16.78	Q V	.	.	.	.
5.000	5.6287	16.86	Q V	.	.	.	.
5.083	5.7454	16.94	Q V	.	.	.	.
5.167	5.8625	17.02	Q V	.	.	.	.
5.250	5.9803	17.09	Q V	.	.	.	.
5.333	6.0985	17.17	Q V	.	.	.	.
5.417	6.2173	17.25	Q V	.	.	.	.
5.500	6.3367	17.33	Q V	.	.	.	.
5.583	6.4567	17.42	Q V	.	.	.	.
5.667	6.5772	17.50	Q V	.	.	.	.
5.750	6.6983	17.58	Q V	.	.	.	.
5.833	6.8200	17.67	Q V	.	.	.	.
5.917	6.9423	17.76	Q V	.	.	.	.
6.000	7.0652	17.84	Q V	.	.	.	.
6.083	7.1887	17.93	Q V	.	.	.	.
6.167	7.3128	18.02	Q V	.	.	.	.
6.250	7.4375	18.11	Q V	.	.	.	.
6.333	7.5629	18.21	Q V	.	.	.	.
6.417	7.6890	18.30	Q V	.	.	.	.
6.500	7.8156	18.39	Q V	.	.	.	.
6.583	7.9430	18.49	Q V	.	.	.	.
6.667	8.0710	18.59	Q V	.	.	.	.
6.750	8.1997	18.69	Q V	.	.	.	.
6.833	8.3291	18.79	Q V	.	.	.	.
6.917	8.4591	18.89	Q V	.	.	.	.
7.000	8.5899	18.99	Q V	.	.	.	.
7.083	8.7214	19.09	Q V	.	.	.	.
7.167	8.8537	19.20	Q V	.	.	.	.
7.250	8.9867	19.31	Q V	.	.	.	.
7.333	9.1204	19.42	Q V	.	.	.	.
7.417	9.2549	19.53	Q V	.	.	.	.
7.500	9.3901	19.64	Q V	.	.	.	.
7.583	9.5262	19.75	Q V	.	.	.	.
7.667	9.6630	19.87	Q V	.	.	.	.
7.750	9.8007	19.99	Q V	.	.	.	.
7.833	9.9392	20.11	Q V	.	.	.	.
7.917	10.0785	20.23	Q V	.	.	.	.
8.000	10.2187	20.35	Q V	.	.	.	.
8.083	10.3597	20.48	Q V	.	.	.	.
8.167	10.5016	20.60	Q V	.	.	.	.
8.250	10.6444	20.73	Q V	.	.	.	.
8.333	10.7880	20.86	Q V	.	.	.	.
8.417	10.9327	21.00	Q V	.	.	.	.
8.500	11.0782	21.13	Q V	.	.	.	.
8.583	11.2247	21.27	Q V	.	.	.	.
8.667	11.3722	21.41	Q V	.	.	.	.
8.750	11.5206	21.55	Q V	.	.	.	.

8.833	11.6700	21.70	Q	V	.	.	.	.
8.917	11.8205	21.85	Q	V	.	.	.	.
9.000	11.9720	22.00	Q	V	.	.	.	.
9.083	12.1246	22.15	Q	V	.	.	.	.
9.167	12.2782	22.31	Q	V	.	.	.	.
9.250	12.4329	22.47	Q	V	.	.	.	.
9.333	12.5888	22.63	.Q	V	.	.	.	.
9.417	12.7457	22.79	.Q	V	.	.	.	.
9.500	12.9039	22.96	.Q	V	.	.	.	.
9.583	13.0632	23.13	.Q	V	.	.	.	.
9.667	13.2237	23.31	.Q	V	.	.	.	.
9.750	13.3854	23.48	.Q	V	.	.	.	.
9.833	13.5484	23.67	.Q	V	.	.	.	.
9.917	13.7127	23.85	.Q	V	.	.	.	.
10.000	13.8783	24.04	.Q	V	.	.	.	.
10.083	14.0452	24.24	.Q	V	.	.	.	.
10.167	14.2135	24.43	.Q	V	.	.	.	.
10.250	14.3831	24.63	.Q	V	.	.	.	.
10.333	14.5542	24.84	.Q	V	.	.	.	.
10.417	14.7267	25.05	.Q	V	.	.	.	.
10.500	14.9007	25.27	.Q	V	.	.	.	.
10.583	15.0763	25.49	.Q	V	.	.	.	.
10.667	15.2533	25.71	.Q	V	.	.	.	.
10.750	15.4320	25.94	.Q	V	.	.	.	.
10.833	15.6123	26.18	.Q	V	.	.	.	.
10.917	15.7942	26.42	.Q	V	.	.	.	.
11.000	15.9779	26.67	.Q	V	.	.	.	.
11.083	16.1633	26.92	.Q	V	.	.	.	.
11.167	16.3505	27.18	.Q	V	.	.	.	.
11.250	16.5395	27.45	.Q	V	.	.	.	.
11.333	16.7304	27.72	.Q	V	.	.	.	.
11.417	16.9233	28.00	.Q	V	.	.	.	.
11.500	17.1181	28.29	.Q	V	.	.	.	.
11.583	17.3149	28.58	.Q	V	.	.	.	.
11.667	17.5139	28.89	.Q	V	.	.	.	.
11.750	17.7150	29.20	.Q	V	.	.	.	.
11.833	17.9183	29.52	.Q	V	.	.	.	.
11.917	18.1239	29.85	.Q	V	.	.	.	.
12.000	18.3319	30.20	.Q	V	.	.	.	.
12.083	18.5428	30.63	.Q	V	.	.	.	.
12.167	18.7579	31.22	.Q	V	.	.	.	.
12.250	18.9791	32.12	.Q	V	.	.	.	.
12.333	19.2088	33.35	.Q	V	.	.	.	.
12.417	19.4480	34.74	.Q	V	.	.	.	.
12.500	19.6984	36.36	.Q	V	.	.	.	.
12.583	19.9606	38.07	.Q	V	.	.	.	.
12.667	20.2336	39.65	.Q	V	.	.	.	.
12.750	20.5154	40.91	.Q	V	.	.	.	.
12.833	20.8045	41.98	.Q	V	.	.	.	.
12.917	21.0996	42.85	.Q	V	.	.	.	.
13.000	21.4003	43.66	.Q	V	.	.	.	.
13.083	21.7059	44.38	.Q	V	.	.	.	.
13.167	22.0164	45.08	.Q	V	.	.	.	.
13.250	22.3313	45.72	.Q	V	.	.	.	.
13.333	22.6506	46.37	.Q	V	.	.	.	.
13.417	22.9747	47.05	.Q	V	.	.	.	.
13.500	23.3035	47.75	.Q	V.	.	.	.	.
13.583	23.6374	48.48	.Q	V.	.	.	.	.

13.667	23.9766	49.25	.Q	V.	.	.	.	.
13.750	24.3211	50.02	.Q	V.	.	.	.	.
13.833	24.6712	50.83	.Q	V.	.	.	.	.
13.917	25.0271	51.67	.Q	V.	.	.	.	.
14.000	25.3891	52.56	.Q	V.	.	.	.	.
14.083	25.7578	53.54	.Q	V	.	.	.	.
14.167	26.1342	54.66	.Q	V	.	.	.	.
14.250	26.5199	55.99	.Q	V	.	.	.	.
14.333	26.9165	57.59	.Q	V	.	.	.	.
14.417	27.3250	59.32	.Q	V	.	.	.	.
14.500	27.7469	61.26	.Q	V	.	.	.	.
14.583	28.1829	63.31	.Q	.V	.	.	.	.
14.667	28.6331	65.37	.Q	.V	.	.	.	.
14.750	29.0968	67.33	.Q	.V	.	.	.	.
14.833	29.5739	69.28	.Q	.V	.	.	.	.
14.917	30.0644	71.22	.Q	.V	.	.	.	.
15.000	30.5690	73.27	.Q	.V	.	.	.	.
15.083	31.0883	75.40	.Q	.V	.	.	.	.
15.167	31.6235	77.71	.Q	.V	.	.	.	.
15.250	32.1764	80.28	.Q	.V	.	.	.	.
15.333	32.7506	83.38	.Q	.V	.	.	.	.
15.417	33.3487	86.84	.Q	.V	.	.	.	.
15.500	33.9735	90.73	.Q	.V	.	.	.	.
15.583	34.6233	94.34	.Q	.V	.	.	.	.
15.667	35.2987	98.07	.Q	.V	.	.	.	.
15.750	36.0213	104.93	.Q	.V	.	.	.	.
15.833	36.8220	116.26	.Q	.V	.	.	.	.
15.917	37.7683	137.40	.Q	.V	.	.	.	.
16.000	38.9746	175.16	.Q	.V	.	.	.	.
16.083	40.7254	254.22	.Q	V	.	.	.	.
16.167	43.2509	366.70	.Q	V	.	.	.	.
16.250	46.8670	525.06	.	V	.Q	.	.	.
16.333	51.4944	671.89	.	V	.Q.	.	.	.
16.417	56.6430	747.58	.	V	.Q	.	.	.
16.500	62.2406	812.78	.	V	.Q	.	.	.
16.583	67.7385	798.30	.	V	.Q	.	.	.
16.667	72.5345	696.37	.	V	.Q	.	.	.
16.750	76.2236	535.66	.	V	.Q	.	.	.
16.833	79.0672	412.89	.	V	.Q	.	.	.
16.917	81.1706	305.42	.Q	V	.	.	.	.
17.000	82.8304	241.00	.Q	V	.	.	.	.
17.083	84.1035	184.86	.Q	V	.	.	.	.
17.167	85.1131	146.59	.Q	V	.	.	.	.
17.250	85.8908	112.92	.Q	V	.	.	.	.
17.333	86.5563	96.63	.Q	V	.	.	.	.
17.417	87.1739	89.68	.Q	V	.	.	.	.
17.500	87.7542	84.25	.Q	V	.	.	.	.
17.583	88.2969	78.80	.Q	V	.	.	.	.
17.667	88.7997	73.01	.Q	V	.	.	.	.
17.750	89.2370	63.49	.Q	V	.	.	.	.
17.833	89.6241	56.21	.Q	V	.	.	.	.
17.917	89.9914	53.34	.Q	V	.	.	.	.
18.000	90.3446	51.28	.Q	V	.	.	.	.
18.083	90.6848	49.40	.Q	V	.	.	.	.
18.167	91.0125	47.58	.Q	V	.	.	.	.
18.250	91.3270	45.66	.Q	V	.	.	.	.
18.333	91.6270	43.56	.Q	V	.	.	.	.
18.417	91.9123	41.43	.Q	V	.	.	.	.

18.500	92.1820	39.16	.Q	.	.	.	V	.
18.583	92.4362	36.91	.Q	.	.	.	V	.
18.667	92.6764	34.88	.Q	.	.	.	V	.
18.750	92.9055	33.26	.Q	.	.	.	V	.
18.833	93.1253	31.92	.Q	.	.	.	V	.
18.917	93.3377	30.83	.Q	.	.	.	V	.
19.000	93.5435	29.89	.Q	.	.	.	V	.
19.083	93.7438	29.08	.Q	.	.	.	V	.
19.167	93.9391	28.36	.Q	.	.	.	V	.
19.250	94.1302	27.75	.Q	.	.	.	V	.
19.333	94.3174	27.18	.Q	.	.	.	V	.
19.417	94.5009	26.64	.Q	.	.	.	V	.
19.500	94.6808	26.13	.Q	.	.	.	V	.
19.583	94.8573	25.63	.Q	.	.	.	V	.
19.667	95.0306	25.16	.Q	.	.	.	V	.
19.750	95.2009	24.73	.Q	.	.	.	V	.
19.833	95.3684	24.32	.Q	.	.	.	V	.
19.917	95.5333	23.93	.Q	.	.	.	V	.
20.000	95.6955	23.56	.Q	.	.	.	V	.
20.083	95.8554	23.20	.Q	.	.	.	V	.
20.167	96.0128	22.86	.Q	.	.	.	V	.
20.250	96.1680	22.53	.Q	.	.	.	V	.
20.333	96.3210	22.21	Q	.	.	.	V	.
20.417	96.4718	21.91	Q	.	.	.	V	.
20.500	96.6206	21.61	Q	.	.	.	V	.
20.583	96.7675	21.32	Q	.	.	.	V	.
20.667	96.9124	21.05	Q	.	.	.	V	.
20.750	97.0555	20.78	Q	.	.	.	V	.
20.833	97.1969	20.52	Q	.	.	.	V	.
20.917	97.3365	20.27	Q	.	.	.	V	.
21.000	97.4744	20.03	Q	.	.	.	V	.
21.083	97.6107	19.79	Q	.	.	.	V	.
21.167	97.7455	19.57	Q	.	.	.	V	.
21.250	97.8787	19.34	Q	.	.	.	V	.
21.333	98.0105	19.13	Q	.	.	.	V	.
21.417	98.1408	18.92	Q	.	.	.	V	.
21.500	98.2697	18.72	Q	.	.	.	V	.
21.583	98.3972	18.52	Q	.	.	.	V	.
21.667	98.5234	18.33	Q	.	.	.	V	.
21.750	98.6484	18.14	Q	.	.	.	V	.
21.833	98.7721	17.96	Q	.	.	.	V	.
21.917	98.8945	17.78	Q	.	.	.	V	.
22.000	99.0158	17.61	Q	.	.	.	V	.
22.083	99.1359	17.44	Q	.	.	.	V	.
22.167	99.2549	17.28	Q	.	.	.	V	.
22.250	99.3727	17.11	Q	.	.	.	V	.
22.333	99.4895	16.96	Q	.	.	.	V	.
22.417	99.6053	16.81	Q	.	.	.	V	.
22.500	99.7200	16.66	Q	.	.	.	V	.
22.583	99.8337	16.51	Q	.	.	.	V	.
22.667	99.9464	16.37	Q	.	.	.	V	.
22.750	100.0582	16.23	Q	.	.	.	V	.
22.833	100.1690	16.09	Q	.	.	.	V	.
22.917	100.2789	15.96	Q	.	.	.	V	.
23.000	100.3879	15.83	Q	.	.	.	V	.
23.083	100.4960	15.70	Q	.	.	.	V	.
23.167	100.6033	15.57	Q	.	.	.	V	.
23.250	100.7097	15.45	Q	.	.	.	V	.

23.333	100.8152	15.33	Q	.	.	.	V	.
23.417	100.9200	15.21	Q	.	.	.	V	.
23.500	101.0240	15.10	Q	.	.	.	V	.
23.583	101.1272	14.98	Q	.	.	.	V	.
23.667	101.2296	14.87	Q	.	.	.	V	.
23.750	101.3313	14.76	Q	.	.	.	V	.
23.833	101.4322	14.66	Q	.	.	.	V	.
23.917	101.5324	14.55	Q	.	.	.	V	.
24.000	101.6320	14.45	Q	.	.	.	V	.
24.083	101.7298	14.21	Q	.	.	.	V	.
24.167	101.8246	13.76	Q	.	.	.	V	.
24.250	101.9130	12.84	Q	.	.	.	V	.
24.333	101.9917	11.42	Q	.	.	.	V	.
24.417	102.0592	9.80	Q	.	.	.	V	.
24.500	102.1132	7.84	Q	.	.	.	V	.
24.583	102.1530	5.79	Q	.	.	.	V	.
24.667	102.1805	3.99	Q	.	.	.	V	.
24.750	102.1993	2.72	Q	.	.	.	V	.
24.833	102.2117	1.80	Q	.	.	.	V	.
24.917	102.2201	1.22	Q	.	.	.	V	.
25.000	102.2255	0.79	Q	.	.	.	V	.
25.083	102.2291	0.51	Q	.	.	.	V	.
25.167	102.2313	0.33	Q	.	.	.	V	.
25.250	102.2330	0.25	Q	.	.	.	V	.
25.333	102.2344	0.20	Q	.	.	.	V	.
25.417	102.2354	0.15	Q	.	.	.	V	.
25.500	102.2362	0.11	Q	.	.	.	V	.
25.583	102.2366	0.06	Q	.	.	.	V	.
25.667	102.2367	0.02	Q	.	.	.	V	.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1540.0
10%	135.0
20%	70.0
30%	55.0
40%	45.0
50%	40.0
60%	35.0
70%	25.0
80%	25.0
90%	15.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5- UH SINGLE AREA MODEL - NODE 132C *
* 10-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV1032CS.DAT
TIME/DATE OF STUDY: 14:51 01/02/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 4924.400 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.938 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244
LOW LOSS FRACTION = 0.727
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 = 0.788
30-MINUTE FACTOR = 0.788
1-HOUR FACTOR = 0.788
3-HOUR FACTOR = 0.968
6-HOUR FACTOR = 0.984
24-HOUR FACTOR = 0.990

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 8.884

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UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES (CFS)

1	0.508	302.338
2	1.523	604.819
3	2.819	771.800
4	4.716	1129.648
5	8.114	2023.451
6	12.597	2670.161
7	17.853	3130.103
8	23.366	3283.224
9	29.066	3394.346
10	35.795	4007.575
11	43.214	4418.483
12	51.431	4893.746
13	58.237	4053.149
14	65.724	4458.599
15	71.827	3634.834
16	76.932	3039.875
17	80.977	2408.986
18	84.732	2236.623
19	87.674	1751.966
20	89.859	1301.150
21	91.751	1126.819
22	93.468	1022.475
23	94.780	781.630
24	95.870	649.332
25	96.640	458.377
26	97.337	415.035
27	97.954	367.513
28	98.175	131.320
29	98.341	99.306
30	98.508	99.115
31	98.674	99.242
32	98.841	99.111
33	99.008	99.374
34	99.174	99.111
35	99.341	99.111
36	99.507	99.111
37	99.673	99.111
38	99.840	99.111
39	100.000	95.385

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 799.0910
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 431.7545

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.	475.0	950.0	1425.0	1900.0
0.083	0.0022	0.32	Q	.	.	.	.
0.167	0.0089	0.97	Q	.	.	.	.
0.250	0.0213	1.80	Q	.	.	.	.
0.333	0.0421	3.02	Q	.	.	.	.
0.417	0.0779	5.20	Q	.	.	.	.
0.500	0.1335	8.07	Q	.	.	.	.
0.583	0.2124	11.45	Q	.	.	.	.
0.667	0.3157	15.00	Q	.	.	.	.
0.750	0.4444	18.69	Q	.	.	.	.
0.833	0.6031	23.04	Q	.	.	.	.
0.917	0.7949	27.85	Q	.	.	.	.
1.000	1.0235	33.18	Q	.	.	.	.
1.083	1.2827	37.64	Q	.	.	.	.
1.167	1.5756	42.54	Q	.	.	.	.
1.250	1.8964	46.57	Q	.	.	.	.
1.333	2.2406	49.98	VQ	.	.	.	.
1.417	2.6037	52.73	VQ	.	.	.	.
1.500	2.9846	55.30	VQ	.	.	.	.
1.583	3.3797	57.37	VQ	.	.	.	.
1.667	3.7857	58.96	VQ	.	.	.	.
1.750	4.2014	60.36	VQ	.	.	.	.
1.833	4.6261	61.67	VQ	.	.	.	.
1.917	5.0581	62.71	VQ	.	.	.	.
2.000	5.4963	63.63	VQ	.	.	.	.
2.083	5.9394	64.34	VQ	.	.	.	.
2.167	6.3871	65.01	VQ	.	.	.	.
2.250	6.8391	65.63	VQ	.	.	.	.
2.333	7.2937	66.01	VQ	.	.	.	.
2.417	7.7506	66.34	VQ	.	.	.	.
2.500	8.2099	66.69	VQ	.	.	.	.
2.583	8.6716	67.03	VQ	.	.	.	.
2.667	9.1357	67.38	VQ	.	.	.	.
2.750	9.6022	67.73	VQ	.	.	.	.
2.833	10.0711	68.09	VQ	.	.	.	.
2.917	10.5425	68.45	VQ	.	.	.	.
3.000	11.0164	68.81	.Q	.	.	.	.
3.083	11.4927	69.17	.Q	.	.	.	.
3.167	11.9716	69.53	.Q	.	.	.	.
3.250	12.4530	69.90	.Q	.	.	.	.
3.333	12.9362	70.16	.Q	.	.	.	.
3.417	13.4212	70.43	.Q	.	.	.	.
3.500	13.9081	70.70	.Q	.	.	.	.
3.583	14.3969	70.97	.Q	.	.	.	.
3.667	14.8876	71.25	.Q	.	.	.	.
3.750	15.3802	71.52	.Q	.	.	.	.
3.833	15.8747	71.81	.Q	.	.	.	.
3.917	16.3712	72.09	.Q	.	.	.	.

4.000	16.8697	72.38	.Q	.	.	.	.
4.083	17.3702	72.67	.Q	.	.	.	.
4.167	17.8727	72.96	.Q	.	.	.	.
4.250	18.3772	73.26	.Q	.	.	.	.
4.333	18.8838	73.56	.Q	.	.	.	.
4.417	19.3925	73.86	.Q	.	.	.	.
4.500	19.9033	74.17	.Q	.	.	.	.
4.583	20.4162	74.47	.Q	.	.	.	.
4.667	20.9312	74.79	.Q	.	.	.	.
4.750	21.4485	75.10	.Q	.	.	.	.
4.833	21.9679	75.42	.QV	.	.	.	.
4.917	22.4896	75.74	.QV	.	.	.	.
5.000	23.0135	76.07	.QV	.	.	.	.
5.083	23.5397	76.40	.QV	.	.	.	.
5.167	24.0682	76.74	.QV	.	.	.	.
5.250	24.5990	77.07	.QV	.	.	.	.
5.333	25.1322	77.42	.QV	.	.	.	.
5.417	25.6677	77.76	.QV	.	.	.	.
5.500	26.2057	78.11	.QV	.	.	.	.
5.583	26.7461	78.47	.QV	.	.	.	.
5.667	27.2890	78.83	.QV	.	.	.	.
5.750	27.8343	79.19	.QV	.	.	.	.
5.833	28.3822	79.56	.QV	.	.	.	.
5.917	28.9327	79.93	.QV	.	.	.	.
6.000	29.4857	80.30	.QV	.	.	.	.
6.083	30.0414	80.68	.QV	.	.	.	.
6.167	30.5997	81.07	.QV	.	.	.	.
6.250	31.1607	81.46	.QV	.	.	.	.
6.333	31.7245	81.85	.QV	.	.	.	.
6.417	32.2909	82.25	.QV	.	.	.	.
6.500	32.8602	82.66	.Q V	.	.	.	.
6.583	33.4323	83.07	.Q V	.	.	.	.
6.667	34.0073	83.49	.Q V	.	.	.	.
6.750	34.5852	83.91	.Q V	.	.	.	.
6.833	35.1660	84.33	.Q V	.	.	.	.
6.917	35.7498	84.76	.Q V	.	.	.	.
7.000	36.3366	85.21	.Q V	.	.	.	.
7.083	36.9264	85.65	.Q V	.	.	.	.
7.167	37.5194	86.10	.Q V	.	.	.	.
7.250	38.1155	86.56	.Q V	.	.	.	.
7.333	38.7149	87.02	.Q V	.	.	.	.
7.417	39.3174	87.49	.Q V	.	.	.	.
7.500	39.9232	87.97	.Q V	.	.	.	.
7.583	40.5324	88.45	.Q V	.	.	.	.
7.667	41.1449	88.94	.Q V	.	.	.	.
7.750	41.7609	89.44	.Q V	.	.	.	.
7.833	42.3803	89.94	.Q V	.	.	.	.
7.917	43.0033	90.45	.Q V	.	.	.	.
8.000	43.6298	90.98	.Q V	.	.	.	.
8.083	44.2600	91.50	.Q V	.	.	.	.
8.167	44.8939	92.04	.Q V	.	.	.	.
8.250	45.5315	92.58	.Q V	.	.	.	.
8.333	46.1729	93.14	.Q V	.	.	.	.
8.417	46.8182	93.70	.Q V	.	.	.	.
8.500	47.4675	94.27	.Q V	.	.	.	.
8.583	48.1207	94.84	.Q V	.	.	.	.
8.667	48.7779	95.44	. Q V	.	.	.	.
8.750	49.4393	96.03	. Q V	.	.	.	.

8.833	50.1049	96.64	. Q V	.	.	.
8.917	50.7747	97.26	. Q V	.	.	.
9.000	51.4489	97.89	. Q V	.	.	.
9.083	52.1275	98.53	. Q V	.	.	.
9.167	52.8106	99.18	. Q V	.	.	.
9.250	53.4982	99.84	. Q V	.	.	.
9.333	54.1905	100.52	. Q V	.	.	.
9.417	54.8875	101.20	. Q V	.	.	.
9.500	55.5893	101.90	. Q V	.	.	.
9.583	56.2959	102.61	. Q V	.	.	.
9.667	57.0076	103.34	. Q V	.	.	.
9.750	57.7244	104.07	. Q V	.	.	.
9.833	58.4464	104.83	. Q V	.	.	.
9.917	59.1736	105.59	. Q V	.	.	.
10.000	59.9062	106.38	. Q V	.	.	.
10.083	60.6442	107.17	. Q V	.	.	.
10.167	61.3879	107.98	. Q V	.	.	.
10.250	62.1373	108.81	. Q V	.	.	.
10.333	62.8925	109.66	. Q V	.	.	.
10.417	63.6536	110.51	. Q V	.	.	.
10.500	64.4208	111.40	. Q V	.	.	.
10.583	65.1942	112.29	. Q V	.	.	.
10.667	65.9740	113.22	. Q V	.	.	.
10.750	66.7601	114.15	. Q V	.	.	.
10.833	67.5529	115.11	. Q V	.	.	.
10.917	68.3524	116.09	. Q V	.	.	.
11.000	69.1589	117.10	. Q V	.	.	.
11.083	69.9723	118.12	. Q V	.	.	.
11.167	70.7931	119.17	. Q V	.	.	.
11.250	71.6212	120.24	. Q V	.	.	.
11.333	72.4569	121.34	. Q V	.	.	.
11.417	73.3003	122.46	. Q V	.	.	.
11.500	74.1517	123.63	. Q V	.	.	.
11.583	75.0112	124.80	. Q V	.	.	.
11.667	75.8791	126.02	. Q V	.	.	.
11.750	76.7556	127.26	. Q V	.	.	.
11.833	77.6409	128.54	. Q V	.	.	.
11.917	78.5351	129.85	. Q V	.	.	.
12.000	79.4387	131.20	. Q V	.	.	.
12.083	80.3534	132.81	. Q V	.	.	.
12.167	81.2812	134.71	. Q V	.	.	.
12.250	82.2230	136.76	. Q V	.	.	.
12.333	83.1813	139.15	. Q V	.	.	.
12.417	84.1610	142.25	. Q V	.	.	.
12.500	85.1659	145.91	. Q V	.	.	.
12.583	86.1988	149.97	. Q V	.	.	.
12.667	87.2609	154.22	. Q V	.	.	.
12.750	88.3532	158.60	. Q V	.	.	.
12.833	89.4795	163.54	. Q V	.	.	.
12.917	90.6423	168.83	. Q V	.	.	.
13.000	91.8447	174.59	. Q V	.	.	.
13.083	93.0827	179.76	. Q V	.	.	.
13.167	94.3591	185.34	. Q V	.	.	.
13.250	95.6701	190.35	. Q V	.	.	.
13.333	97.0132	195.01	. Q V	.	.	.
13.417	98.3855	199.26	. Q V	.	.	.
13.500	99.7870	203.50	. Q V	.	.	.
13.583	101.2156	207.43	. Q V	.	.	.

13.667	102.6698	211.16	. Q V	.	.	.
13.750	104.1493	214.83	. Q V	.	.	.
13.833	105.6546	218.57	. Q V	.	.	.
13.917	107.1851	222.22	. Q V	.	.	.
14.000	108.7411	225.93	. Q V	.	.	.
14.083	110.3258	230.10	. Q V	.	.	.
14.167	111.9436	234.91	. Q V	.	.	.
14.250	113.5971	240.08	. Q V	.	.	.
14.333	115.2903	245.86	. Q V	.	.	.
14.417	117.0341	253.20	. Q V	.	.	.
14.500	118.8372	261.81	. Q .V	.	.	.
14.583	120.7058	271.32	. Q .V	.	.	.
14.667	122.6434	281.34	. Q .V	.	.	.
14.750	124.6524	291.71	. Q .V	.	.	.
14.833	126.7418	303.37	. Q .V	.	.	.
14.917	128.9177	315.95	. Q .V	.	.	.
15.000	131.1888	329.77	. Q . V	.	.	.
15.083	133.5501	342.86	. Q . V	.	.	.
15.167	136.0122	357.49	. Q . V	.	.	.
15.250	138.5736	371.92	. Q . V	.	.	.
15.333	141.2393	387.06	. Q . V	.	.	.
15.417	144.0016	401.09	. Q . V	.	.	.
15.500	146.8601	415.04	. Q . V	.	.	.
15.583	149.8191	429.64	. Q . V	.	.	.
15.667	152.8751	443.74	. Q . V	.	.	.
15.750	156.0183	456.39	. Q . V	.	.	.
15.833	159.2609	470.82	. Q . V	.	.	.
15.917	162.6442	491.26	. Q V	.	.	.
16.000	166.2754	527.25	. .Q V	.	.	.
16.083	170.5463	620.13	. . Q V	.	.	.
16.167	175.5017	719.53	. . QV	.	.	.
16.250	181.0869	810.97	. . VQ	.	.	.
16.333	187.5749	942.06	. . V Q.	.	.	.
16.417	195.5287	1154.89	. . V . Q	.	.	.
16.500	204.6004	1317.22	. . V . Q	.	.	.
16.583	214.4725	1433.43	. . V . Q	.	.	.
16.667	224.8264	1503.39	. . V . Q	.	.	.
16.750	235.6517	1571.83	. . .V . Q	.	.	.
16.833	247.4462	1712.55	. . . V . Q	.	.	.
16.917	259.8239	1797.25	. . . V . Q	.	.	.
17.000	272.5439	1846.95	. . . V . Q	.	.	.
17.083	284.1719	1688.38	. . . V . Q	.	.	.
17.167	295.7141	1675.93	. . . V . Q	.	.	.
17.250	305.9140	1481.03	. . . V . Q	.	.	.
17.333	314.9560	1312.89	. . . Q V.	.	.	.
17.417	322.8535	1146.72	. . . Q V.	.	.	.
17.500	330.1093	1053.54	. . . Q V.	.	.	.
17.583	336.4246	916.99	. . . Q .V	.	.	.
17.667	341.8996	794.96	. . . Q .V	.	.	.
17.750	346.8590	720.12	. . . Q Q . V	.	.	.
17.833	351.4143	661.42	. . . Q . V	.	.	.
17.917	355.4395	584.46	. . . Q . V	.	.	.
18.000	359.0372	522.40	. . . Q . V	.	.	.
18.083	362.2090	460.54	. . . Q . V	.	.	.
18.167	365.1139	421.79	. . . Q . V	.	.	.
18.250	367.7548	383.46	. . . Q . V	.	.	.
18.333	369.9863	324.02	. . . Q . V	.	.	.
18.417	372.0447	298.88	. . . Q . V	.	.	.

18.500	373.9992	283.80	.	Q	.	.	.	V	.
18.583	375.8662	271.09	.	Q	.	.	.	V	.
18.667	377.6494	258.92	.	Q	.	.	.	V	.
18.750	379.3564	247.84	.	Q	.	.	.	V	.
18.833	380.9901	237.22	.	Q	.	.	.	V	.
18.917	382.5555	227.30	.	Q	.	.	.	V	.
19.000	384.0482	216.73	.	Q	.	.	.	V	.
19.083	385.4737	206.99	.	Q	.	.	.	V	.
19.167	386.8217	195.72	.	Q	.	.	.	V	.
19.250	388.0829	183.13	.	Q	.	.	.	V	.
19.333	389.1844	159.94	.	Q	.	.	.	V	.
19.417	390.2353	152.59	.	Q	.	.	.	V	.
19.500	391.2496	147.27	.	Q	.	.	.	V	.
19.583	392.2328	142.76	.	Q	.	.	.	V	.
19.667	393.1843	138.15	.	Q	.	.	.	V	.
19.750	394.1074	134.04	.	Q	.	.	.	V	.
19.833	395.0050	130.32	.	Q	.	.	.	V	.
19.917	395.8798	127.02	.	Q	.	.	.	V	.
20.000	396.7336	123.97	.	Q	.	.	.	V	.
20.083	397.5681	121.18	.	Q	.	.	.	V	.
20.167	398.3846	118.54	.	Q	.	.	.	V	.
20.250	399.1839	116.05	.	Q	.	.	.	V	.
20.333	399.9690	114.00	.	Q	.	.	.	V	.
20.417	400.7407	112.05	.	Q	.	.	.	V	.
20.500	401.4995	110.19	.	Q	.	.	.	V	.
20.583	402.2461	108.40	.	Q	.	.	.	V	.
20.667	402.9809	106.69	.	Q	.	.	.	V	.
20.750	403.7043	105.04	.	Q	.	.	.	V	.
20.833	404.4168	103.45	.	Q	.	.	.	V	.
20.917	405.1188	101.92	.	Q	.	.	.	V	.
21.000	405.8106	100.45	.	Q	.	.	.	V	.
21.083	406.4926	99.02	.	Q	.	.	.	V	.
21.167	407.1651	97.65	.	Q	.	.	.	V	.
21.250	407.8284	96.32	.	Q	.	.	.	V	.
21.333	408.4834	95.11	.	Q	.	.	.	V	.
21.417	409.1304	93.93	.	Q	.	.	.	V	.
21.500	409.7695	92.80	.	Q	.	.	.	V	.
21.583	410.4010	91.70	.	Q	.	.	.	V	.
21.667	411.0252	90.63	.	Q	.	.	.	V	.
21.750	411.6423	89.60	.	Q	.	.	.	V	.
21.833	412.2525	88.60	.	Q	.	.	.	V	.
21.917	412.8560	87.62	.	Q	.	.	.	V	.
22.000	413.4529	86.68	.	Q	.	.	.	V	.
22.083	414.0435	85.76	.	Q	.	.	.	V	.
22.167	414.6280	84.87	.	Q	.	.	.	V	.
22.250	415.2065	84.00	.	Q	.	.	.	V	.
22.333	415.7792	83.15	.	Q	.	.	.	V	.
22.417	416.3462	82.33	.	Q	.	.	.	V	.
22.500	416.9076	81.52	.	Q	.	.	.	V	.
22.583	417.4637	80.74	.	Q	.	.	.	V	.
22.667	418.0145	79.98	.	Q	.	.	.	V	.
22.750	418.5602	79.23	.	Q	.	.	.	V	.
22.833	419.1009	78.51	.	Q	.	.	.	V	.
22.917	419.6367	77.80	.	Q	.	.	.	V	.
23.000	420.1677	77.10	.	Q	.	.	.	V	.
23.083	420.6940	76.43	.	Q	.	.	.	V	.
23.167	421.2159	75.77	.	Q	.	.	.	V	.
23.250	421.7332	75.12	.	Q	.	.	.	V	.

23.333	422.2462	74.49	.	Q	.	.	.	V	.
23.417	422.7550	73.87	.	Q	.	.	.	V	.
23.500	423.2596	73.26	.	Q	.	.	.	V	.
23.583	423.7600	72.67	.	Q	.	.	.	V	.
23.667	424.2566	72.09	.	Q	.	.	.	V	.
23.750	424.7491	71.53	.	Q	.	.	.	V	.
23.833	425.2379	70.97	.	Q	.	.	.	V	.
23.917	425.7229	70.42	.	Q	.	.	.	V	.
24.000	426.2043	69.89	.	Q	.	.	.	V	.
24.083	426.6797	69.04	.	Q	.	.	.	V	.
24.167	427.1473	67.88	.	Q	.	.	.	V	.
24.250	427.6057	66.56	.	Q	.	.	.	V	.
24.333	428.0525	64.87	.	Q	.	.	.	V	.
24.417	428.4811	62.24	.	Q	.	.	.	V	.
24.500	428.8871	58.94	.	Q	.	.	.	V	.
24.583	429.2671	55.18	.	Q	.	.	.	V	.
24.667	429.6203	51.28	.	Q	.	.	.	V	.
24.750	429.9460	47.30	Q	.	.	.	.	V	.
24.833	430.2400	42.68	Q	.	.	.	.	V	.
24.917	430.4994	37.66	Q	.	.	.	.	V	.
25.000	430.7209	32.17	Q	.	.	.	.	V	.
25.083	430.9111	27.62	Q	.	.	.	.	V	.
25.167	431.0672	22.66	Q	.	.	.	.	V	.
25.250	431.1954	18.62	Q	.	.	.	.	V	.
25.333	431.3004	15.24	Q	.	.	.	.	V	.
25.417	431.3869	12.56	Q	.	.	.	.	V	.
25.500	431.4564	10.09	Q	.	.	.	.	V	.
25.583	431.5125	8.14	Q	.	.	.	.	V	.
25.667	431.5586	6.70	Q	.	.	.	.	V	.
25.750	431.5961	5.45	Q	.	.	.	.	V	.
25.833	431.6258	4.32	Q	.	.	.	.	V	.
25.917	431.6496	3.45	Q	.	.	.	.	V	.
26.000	431.6684	2.73	Q	.	.	.	.	V	.
26.083	431.6837	2.22	Q	.	.	.	.	V	.
26.167	431.6959	1.77	Q	.	.	.	.	V	.
26.250	431.7053	1.36	Q	.	.	.	.	V	.
26.333	431.7136	1.21	Q	.	.	.	.	V	.
26.417	431.7211	1.10	Q	.	.	.	.	V	.
26.500	431.7279	0.98	Q	.	.	.	.	V	.
26.583	431.7339	0.87	Q	.	.	.	.	V	.
26.667	431.7391	0.76	Q	.	.	.	.	V	.
26.750	431.7436	0.65	Q	.	.	.	.	V	.
26.833	431.7473	0.54	Q	.	.	.	.	V	.
26.917	431.7502	0.43	Q	.	.	.	.	V	.
27.000	431.7524	0.32	Q	.	.	.	.	V	.
27.083	431.7538	0.21	Q	.	.	.	.	V	.
27.167	431.7545	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%	1630.0
10%	365.0
20%	185.0

30%	115.0
40%	90.0
50%	75.0
60%	65.0
70%	55.0
80%	40.0
90%	25.0

=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5- REGIONAL NODE 133U *
* 10-YR EV APRIL 2019 CCHIU *

FILE NAME: EV1033US.DAT
TIME/DATE OF STUDY: 07:45 04/09/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 54351.898 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.730 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.292
LOW LOSS FRACTION = 0.743
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.32
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.63
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.87
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.62
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.39
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.20

*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 = 3.053

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.174	1146.552
2	0.523	2293.105
3	0.872	2293.103
4	1.221	2293.107
5	1.570	2293.103
6	1.925	2335.755
7	2.407	3168.095
8	2.938	3489.509
9	3.469	3489.504
10	4.055	3855.330
11	4.976	6053.708
12	5.985	6627.880
13	7.224	8143.941
14	8.647	9352.573
15	10.250	10540.008
16	11.782	10069.236
17	13.309	10038.939
18	15.314	13177.785
19	17.185	12296.897
20	18.813	10701.094
21	20.562	11495.661
22	22.712	14136.654
23	24.818	13838.955
24	26.562	11467.665
25	28.466	12512.553
26	30.722	14828.892
27	33.135	15861.831
28	35.690	16796.014
29	37.496	11871.167
30	40.283	18316.293
31	43.039	18117.326
32	45.803	18170.936
33	48.998	20996.980
34	51.643	17387.877
35	53.845	14475.877
36	55.951	13845.248
37	58.388	16016.793
38	61.348	19458.697
39	64.059	17815.828
40	66.202	14087.871
41	68.299	13785.069
42	70.528	14649.344
43	72.370	12108.022
44	74.323	12836.644
45	76.110	11746.847
46	77.506	9178.144
47	78.863	8917.367
48	80.237	9034.064

49	81.663	9374.729
50	82.989	8714.463
51	84.243	8242.306
52	85.411	7677.724
53	86.464	6918.562
54	87.403	6173.091
55	88.260	5631.578
56	88.980	4733.603
57	89.698	4721.065
58	90.372	4433.960
59	91.015	4223.684
60	91.658	4224.736
61	92.272	4035.473
62	92.853	3822.037
63	93.435	3823.090
64	93.989	3644.307
65	94.398	2689.613
66	94.786	2546.637
67	95.174	2548.693
68	95.561	2548.743
69	95.939	2481.443
70	96.208	1768.519
71	96.447	1572.986
72	96.687	1575.093
73	96.926	1572.936
74	97.165	1572.986
75	97.405	1575.093
76	97.644	1572.936
77	97.884	1575.093
78	98.029	954.744
79	98.087	378.528
80	98.144	376.371
81	98.201	374.365
82	98.259	378.478
83	98.316	374.315
84	98.373	380.634
85	98.429	368.047
86	98.487	378.478
87	98.544	374.315
88	98.602	378.528
89	98.658	372.209
90	98.716	382.740
91	98.773	370.103
92	98.830	378.528
93	98.888	378.528
94	98.945	374.315
95	99.002	374.315
96	99.059	374.315
97	99.116	374.315
98	99.173	374.315
99	99.230	374.315
100	99.286	374.315
101	99.343	374.315
102	99.400	374.315
103	99.457	374.315
104	99.514	374.315
105	99.571	374.315
106	99.628	374.315

107	99.685	374.315
108	99.742	374.315
109	99.799	374.315
110	99.856	374.315
111	99.913	374.315
112	99.970	374.315
113	100.000	198.391

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12717.1201
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 5171.0664

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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.	1800.0	3600.0	5400.0	7200.0
0.083	0.0123	1.78	Q	.	.	.	.
0.167	0.0491	5.34	Q	.	.	.	.
0.250	0.1105	8.92	Q	.	.	.	.
0.333	0.1965	12.50	Q	.	.	.	.
0.417	0.3074	16.09	Q	.	.	.	.
0.500	0.4435	19.77	Q	.	.	.	.
0.583	0.6139	24.74	Q	.	.	.	.
0.667	0.8220	30.23	Q	.	.	.	.
0.750	1.0681	35.73	Q	.	.	.	.
0.833	1.3561	41.82	Q	.	.	.	.
0.917	1.7097	51.34	Q	.	.	.	.
1.000	2.1351	61.77	Q	.	.	.	.
1.083	2.6488	74.59	Q	.	.	.	.
1.167	3.2640	89.32	Q	.	.	.	.
1.250	3.9937	105.95	Q	.	.	.	.
1.333	4.8331	121.88	Q	.	.	.	.
1.417	5.7823	137.83	Q	.	.	.	.
1.500	6.8752	158.69	Q	.	.	.	.
1.583	8.1028	178.24	Q	.	.	.	.
1.667	9.4484	195.38	VQ	.	.	.	.
1.750	10.9209	213.81	VQ	.	.	.	.
1.833	12.5489	236.39	VQ	.	.	.	.
1.917	14.3298	258.58	VQ	.	.	.	.
2.000	16.2386	277.16	VQ	.	.	.	.
2.083	18.2869	297.42	VQ	.	.	.	.
2.167	20.5000	321.34	VQ	.	.	.	.
2.250	22.8893	346.93	VQ	.	.	.	.
2.333	25.4655	374.06	V Q	.	.	.	.
2.417	28.1764	393.62	V Q	.	.	.	.
2.500	31.0914	423.26	V Q	.	.	.	.
2.583	34.2090	452.67	V Q	.	.	.	.
2.667	37.5305	482.28	V Q	.	.	.	.
2.750	41.0866	516.34	V Q	.	.	.	.
2.833	44.8396	544.93	V Q	.	.	.	.
2.917	48.7589	569.09	V Q	.	.	.	.
3.000	52.8384	592.35	V Q	.	.	.	.
3.083	57.1019	619.06	V Q	.	.	.	.
3.167	61.5868	651.20	V Q	.	.	.	.
3.250	66.2761	680.89	V Q	.	.	.	.
3.333	71.1309	704.91	V Q	.	.	.	.
3.417	76.1482	728.52	V Q	.	.	.	.
3.500	81.3382	753.58	V Q	.	.	.	.
3.583	86.6740	774.76	V Q	.	.	.	.
3.667	92.1642	797.17	V Q	.	.	.	.
3.750	97.7975	817.95	V Q	.	.	.	.
3.833	103.5471	834.84	V Q	.	.	.	.
3.917	109.4105	851.38	V Q	.	.	.	.

4.000	115.3897	868.17	V Q	.	.	.	.
4.083	121.4885	885.55	V Q	.	.	.	.
4.167	127.7005	901.98	V Q	.	.	.	.
4.250	134.0210	917.74	.V Q	.	.	.	.
4.333	140.4446	932.70	.V Q	.	.	.	.
4.417	146.9634	946.53	.V Q	.	.	.	.
4.500	153.5699	959.28	.V Q	.	.	.	.
4.583	160.2589	971.23	.V Q	.	.	.	.
4.667	167.0210	981.86	.V Q	.	.	.	.
4.750	173.8564	992.50	.V Q	.	.	.	.
4.833	180.7625	1002.77	.V Q	.	.	.	.
4.917	187.7375	1012.76	.V Q	.	.	.	.
5.000	194.7816	1022.81	.V Q	.	.	.	.
5.083	201.8932	1032.60	.V Q	.	.	.	.
5.167	209.0704	1042.14	.V Q	.	.	.	.
5.250	216.3136	1051.71	.V Q	.	.	.	.
5.333	223.6212	1061.07	.V Q	.	.	.	.
5.417	230.9834	1068.99	.V Q	.	.	.	.
5.500	238.3991	1076.75	.V Q	.	.	.	.
5.583	245.8684	1084.55	.V Q	.	.	.	.
5.667	253.3920	1092.42	.V Q	.	.	.	.
5.750	260.9693	1100.22	. V Q	.	.	.	.
5.833	268.5931	1106.98	. V Q	.	.	.	.
5.917	276.2616	1113.47	. V Q	.	.	.	.
6.000	283.9753	1120.03	. V Q	.	.	.	.
6.083	291.7343	1126.61	. V Q	.	.	.	.
6.167	299.5392	1133.27	. V Q	.	.	.	.
6.250	307.3902	1139.96	. V Q	.	.	.	.
6.333	315.2877	1146.72	. V Q	.	.	.	.
6.417	323.2321	1153.52	. V Q	.	.	.	.
6.500	331.2172	1159.43	. V Q	.	.	.	.
6.583	339.2370	1164.48	. V Q	.	.	.	.
6.667	347.2921	1169.60	. V Q	.	.	.	.
6.750	355.3826	1174.74	. V Q	.	.	.	.
6.833	363.5091	1179.96	. V Q	.	.	.	.
6.917	371.6717	1185.22	. V Q	.	.	.	.
7.000	379.8711	1190.55	. V Q	.	.	.	.
7.083	388.1073	1195.90	. V Q	.	.	.	.
7.167	396.3810	1201.34	. V Q	.	.	.	.
7.250	404.6924	1206.81	. V Q	.	.	.	.
7.333	413.0421	1212.37	. V Q	.	.	.	.
7.417	421.4302	1217.96	. V Q	.	.	.	.
7.500	429.8576	1223.65	. V Q	.	.	.	.
7.583	438.3242	1229.36	. V Q	.	.	.	.
7.667	446.8308	1235.16	. V Q	.	.	.	.
7.750	455.3777	1241.01	. V Q	.	.	.	.
7.833	463.9654	1246.94	. V Q	.	.	.	.
7.917	472.5943	1252.91	. V Q	.	.	.	.
8.000	481.2649	1258.97	. V Q	.	.	.	.
8.083	489.9776	1265.08	. V Q	.	.	.	.
8.167	498.7330	1271.29	. V Q	.	.	.	.
8.250	507.5316	1277.55	. V Q	.	.	.	.
8.333	516.3738	1283.90	. V Q	.	.	.	.
8.417	525.2603	1290.30	. V Q	.	.	.	.
8.500	534.1915	1296.81	. V Q	.	.	.	.
8.583	543.1678	1303.37	. V Q	.	.	.	.
8.667	552.1901	1310.04	. V Q	.	.	.	.
8.750	561.2587	1316.76	. V Q	.	.	.	.

8.833	570.3744	1323.59	.	V	Q	.	.	.	.
8.917	579.5375	1330.49	.	V	Q	.	.	.	.
9.000	588.7490	1337.50	.	V	Q	.	.	.	.
9.083	598.0091	1344.57	.	V	Q	.	.	.	.
9.167	607.3187	1351.76	.	V	Q	.	.	.	.
9.250	616.6783	1359.02	.	V	Q	.	.	.	.
9.333	626.0888	1366.40	.	V	Q	.	.	.	.
9.417	635.5487	1373.58	.	V	Q	.	.	.	.
9.500	645.0568	1380.58	.	V	Q	.	.	.	.
9.583	654.6137	1387.66	.	V	Q	.	.	.	.
9.667	664.2202	1394.87	.	V	Q	.	.	.	.
9.750	673.8769	1402.15	.	V	Q	.	.	.	.
9.833	683.5847	1409.58	.	V	Q	.	.	.	.
9.917	693.3442	1417.09	.	V	Q	.	.	.	.
10.000	703.1565	1424.74	.	V	Q	.	.	.	.
10.083	713.0221	1432.48	.	V	Q	.	.	.	.
10.167	722.9421	1440.38	.	V	Q	.	.	.	.
10.250	732.9171	1448.36	.	V	Q	.	.	.	.
10.333	742.9481	1456.51	.	V	Q	.	.	.	.
10.417	753.0360	1464.76	.	V	Q	.	.	.	.
10.500	763.1819	1473.18	.	V	Q	.	.	.	.
10.583	773.3864	1481.70	.	V	Q	.	.	.	.
10.667	783.6509	1490.40	.	V	Q	.	.	.	.
10.750	793.9760	1499.21	.	V	Q	.	.	.	.
10.833	804.3631	1508.21	.	V	Q	.	.	.	.
10.917	814.8130	1517.32	.	V	Q	.	.	.	.
11.000	825.3270	1526.64	.	V	Q	.	.	.	.
11.083	835.9061	1536.08	.	V	Q	.	.	.	.
11.167	846.5517	1545.73	.	V	Q	.	.	.	.
11.250	857.2646	1555.52	.	V	Q	.	.	.	.
11.333	868.0465	1565.53	.	V	Q	.	.	.	.
11.417	878.8983	1575.68	.	V	Q	.	.	.	.
11.500	889.8217	1586.07	.	V	Q	.	.	.	.
11.583	900.8176	1596.62	.	V	Q	.	.	.	.
11.667	911.8879	1607.41	.	V	Q	.	.	.	.
11.750	923.0338	1618.37	.	V	Q	.	.	.	.
11.833	934.2569	1629.60	.	V	Q	.	.	.	.
11.917	945.5586	1641.01	.	V	Q	.	.	.	.
12.000	956.9408	1652.69	.	V	Q	.	.	.	.
12.083	968.4257	1667.61	.	V	Q	.	.	.	.
12.167	980.0362	1685.84	.	V	Q	.	.	.	.
12.250	991.7735	1704.25	.	V	Q	.	.	.	.
12.333	1003.6396	1722.96	.	V	Q	.	.	.	.
12.417	1015.6359	1741.86	.	V	Q	.	.	.	.
12.500	1027.7651	1761.18	.	V	Q	.	.	.	.
12.583	1040.0442	1782.91	.	V	Q	.	.	.	.
12.667	1052.4810	1805.82	.	V	Q	.	.	.	.
12.750	1065.0769	1828.94	.	V	Q	.	.	.	.
12.833	1077.8412	1853.37	.	V	Q	.	.	.	.
12.917	1090.8152	1883.83	.	V	Q	.	.	.	.
13.000	1104.0118	1916.15	.	V	Q	.	.	.	.
13.083	1117.4601	1952.69	.	V	Q	.	.	.	.
13.167	1131.1843	1992.76	.	V	Q	.	.	.	.
13.250	1145.2074	2036.15	.	V	Q	.	.	.	.
13.333	1159.5231	2078.64	.	V	Q	.	.	.	.
13.417	1174.1322	2121.24	.	V	Q	.	.	.	.
13.500	1189.0944	2172.51	.	V	Q	.	.	.	.
13.583	1204.3948	2221.63	.	V	Q	.	.	.	.

13.667	1220.0070	2266.89	.	V.	Q	.	.	.	.
13.750	1235.9469	2314.48	.	V.	Q	.	.	.	.
13.833	1252.2655	2369.46	.	V.	Q	.	.	.	.
13.917	1268.9589	2423.88	.	V.	Q	.	.	.	.
14.000	1285.9866	2472.43	.	V.	Q	.	.	.	.
14.083	1303.4250	2532.07	.	V	Q	.	.	.	.
14.167	1321.3738	2606.16	.	V	Q	.	.	.	.
14.250	1339.8495	2682.67	.	V	Q	.	.	.	.
14.333	1358.8683	2761.53	.	V	Q	.	.	.	.
14.417	1378.3381	2827.02	.	V	Q	.	.	.	.
14.500	1398.3776	2909.72	.	V	Q	.	.	.	.
14.583	1419.0208	2997.40	.	V	Q	.	.	.	.
14.667	1440.2817	3087.09	.	.V	Q	.	.	.	.
14.750	1462.2069	3183.53	.	.V	Q	.	.	.	.
14.833	1484.7445	3272.46	.	.V	Q	.	.	.	.
14.917	1507.9421	3368.29	.	.V	Q	.	.	.	.
15.000	1531.8091	3465.47	.	.V	Q	.	.	.	.
15.083	1556.4462	3577.31	.	.V	Q	.	.	.	.
15.167	1581.9636	3705.14	.	.V	Q	.	.	.	.
15.250	1608.3704	3834.27	.	.V	Q	.	.	.	.
15.333	1635.5591	3947.80	.	.V	Q	.	.	.	.
15.417	1663.4636	4051.75	.	.V	Q	.	.	.	.
15.500	1692.2020	4172.82	.	.V	Q	.	.	.	.
15.583	1721.6693	4278.64	.	.V	Q	.	.	.	.
15.667	1751.7896	4373.45	.	.V	Q	.	.	.	.
15.750	1782.5573	4467.48	.	.V	Q	.	.	.	.
15.833	1814.0330	4570.28	.	.V	Q	.	.	.	.
15.917	1846.1661	4665.75	.	.V	Q	.	.	.	.
16.000	1878.8887	4751.30	.	.V	Q	.	.	.	.
16.083	1912.8182	4926.57	.	.V	Q	.	.	.	.
16.167	1947.9567	5102.09	.	.V	Q	.	.	.	.
16.250	1983.6516	5182.91	.	.V	Q	.	.	.	.
16.333	2019.8953	5262.59	.	.V	Q	.	.	.	.
16.417	2056.4150	5302.67	.	.V	Q	.	.	.	.
16.500	2093.5696	5394.83	.	.V	Q	.	.	.	.
16.583	2131.6667	5531.72	.	.V	Q	.	.	.	.
16.667	2170.4292	5628.32	.	.V	Q	.	.	.	.
16.750	2209.8745	5727.48	.	.V	Q	.	.	.	.
16.833	2249.9819	5823.58	.	.V	Q	.	.	.	.
16.917	2291.5193	6031.24	.	.V	Q	.	.	.	.
17.000	2333.7568	6132.89	.	.V	Q	.	.	.	.
17.083	2377.1851	6305.78	.	.V	Q	.	.	.	.
17.167	2421.6091	6450.36	.	.V	Q	.	.	.	.
17.250	2466.9307	6580.69	.	.V	Q	.	.	.	.
17.333	2512.2822	6585.05	.	.V	Q	.	.	.	.
17.417	2558.0142	6640.29	.	.V	Q	.	.	.	.
17.500	2605.4773	6891.65	.	.V	Q	.	.	.	.
17.583	2652.4695	6823.26	.	.V	Q	.	.	.	.
17.667	2698.8123	6728.98	.	.V	Q	.	.	.	.
17.750	2745.9290	6841.36	.	.V	Q	.	.	.	.
17.833	2794.2932	7022.50	.	.V	Q	.	.	.	.
17.917	2842.2075	6957.14	.	.V	Q	.	.	.	.
18.000	2888.7939	6764.34	.	.V	Q	.	.	.	.
18.083	2935.7834	6822.88	.	.V	Q	.	.	.	.
18.167	2983.8164	6974.38	.	.V	Q	.	.	.	.
18.250	3032.2244	7028.82	.	.V	Q	.	.	.	.
18.333	3080.6736	7034.84	.	.V	Q	.	.	.	.
18.417	3126.6599	6677.20	.	.V	Q	.	.	.	.

18.500	3175.4243	7080.59	.	.	.	V	.	Q.
18.583	3223.7258	7013.38	.	.	.	V	.	Q.
18.667	3272.0254	7013.11	.	.	.	V	.	Q.
18.750	3321.1484	7132.66	.	.	.	V	.	Q.
18.833	3367.8398	6779.58	.	.	.	V	.	Q.
18.917	3412.7244	6517.24	.	.	.	V	.	Q.
19.000	3457.2927	6471.33	.	.	.	V	.	Q.
19.083	3503.0835	6648.83	.	.	.	V	.	Q.
19.167	3550.2798	6852.92	.	.	.	V	.	Q.
19.250	3596.0337	6643.47	.	.	.	V	.	Q.
19.333	3639.3723	6292.77	.	.	.	V	.	Q.
19.417	3682.3081	6234.29	.	.	.	V	.	Q.
19.500	3725.0586	6207.36	.	.	.	V	.	Q.
19.583	3766.0669	5954.39	.	.	.	V	.	Q.
19.667	3806.8086	5915.68	.	.	.	V	.	Q.
19.750	3846.1106	5706.65	.	.	.	V	.	Q.
19.833	3883.4932	5427.93	.	.	.	Q	.	.
19.917	3920.2339	5334.75	.	.	.	QV	.	.
20.000	3956.6492	5287.49	.	.	.	QV	.	.
20.083	3992.6406	5225.97	.	.	.	QV	.	.
20.167	4027.3999	5047.06	.	.	.	Q.V	.	.
20.250	4061.0305	4883.16	.	.	.	Q.V	.	.
20.333	4093.6082	4730.27	.	.	.	Q.V	.	.
20.417	4125.1372	4578.05	.	.	.	Q.V	.	.
20.500	4155.4185	4396.87	.	.	.	Q.V	.	.
20.583	4184.6167	4239.60	.	.	.	Q.V	.	.
20.667	4212.5444	4055.08	.	.	.	Q.V	.	.
20.750	4239.6421	3934.59	.	.	.	Q.V	.	.
20.833	4265.9390	3818.29	.	.	.	Q.V	.	.
20.917	4291.5254	3715.17	.	.	.	Q.V	.	.
21.000	4316.4668	3621.53	.	.	.	Q.V	.	.
21.083	4340.6055	3504.90	.	.	.	Q.V	.	.
21.167	4363.9102	3383.87	.	.	.	Q.V	.	.
21.250	4386.5083	3281.28	.	.	.	Q.V	.	.
21.333	4408.3516	3171.66	.	.	.	Q.V	.	.
21.417	4429.1182	3015.31	.	.	.	Q.V	.	.
21.500	4449.2456	2922.47	.	.	.	Q.V	.	.
21.583	4468.8774	2850.53	.	.	.	Q.V	.	.
21.667	4488.0303	2780.98	.	.	.	Q.V	.	.
21.750	4506.6279	2700.36	.	.	.	Q.V	.	.
21.833	4524.4448	2587.04	.	.	.	Q.V	.	.
21.917	4541.7905	2518.58	.	.	.	Q.V	.	.
22.000	4558.7598	2463.90	.	.	.	Q.V	.	.
22.083	4575.3501	2408.93	.	.	.	Q.V	.	.
22.167	4591.5649	2354.41	.	.	.	Q.V	.	.
22.250	4607.4038	2299.83	.	.	.	Q.V	.	.
22.333	4622.8672	2245.31	.	.	.	Q.V	.	.
22.417	4637.9746	2193.58	.	.	.	Q.V	.	.
22.500	4652.4331	2099.36	.	.	.	Q.V	.	.
22.583	4666.3101	2014.97	.	.	.	Q.V	.	.
22.667	4679.9185	1975.96	.	.	.	Q.V	.	.
22.750	4693.2676	1938.26	.	.	.	Q.V	.	.
22.833	4706.3843	1904.55	.	.	.	Q.V	.	.
22.917	4719.2607	1869.64	.	.	.	Q.V	.	.
23.000	4731.8979	1834.89	.	.	.	Q.V	.	.
23.083	4744.2886	1799.12	.	.	.	Q.V	.	.
23.167	4756.4463	1765.29	.	.	.	Q.V	.	.
23.250	4768.3623	1730.23	.	.	.	Q.V	.	.

23.333	4780.0430	1696.07	.	.	.	Q.	.	V
23.417	4791.4912	1662.32	.	.	.	Q.	.	V
23.500	4802.7383	1633.08	.	.	.	Q.	.	V
23.583	4813.8037	1606.69	.	.	.	Q.	.	V
23.667	4824.7017	1582.37	.	.	.	Q.	.	V
23.750	4835.4321	1558.08	.	.	.	Q.	.	V
23.833	4846.0103	1535.91	.	.	.	Q.	.	V
23.917	4856.4443	1515.05	.	.	.	Q.	.	V
24.000	4866.7383	1494.65	.	.	.	Q.	.	V
24.083	4876.8833	1473.03	.	.	.	Q.	.	V
24.167	4886.8696	1450.00	.	.	.	Q.	.	V
24.250	4896.7007	1427.46	.	.	.	Q.	.	V
24.333	4906.3794	1405.33	.	.	.	Q.	.	V
24.417	4915.9087	1383.67	.	.	.	Q.	.	V
24.500	4925.3022	1363.94	.	.	.	Q.	.	V
24.583	4934.5654	1344.98	.	.	.	Q.	.	V
24.667	4943.6973	1325.93	.	.	.	Q.	.	V
24.750	4952.7065	1308.15	.	.	.	Q.	.	V
24.833	4961.5986	1291.11	.	.	.	Q.	.	V
24.917	4970.3511	1270.85	.	.	.	Q.	.	V
25.000	4978.9585	1249.83	.	.	.	Q.	.	V
25.083	4987.4082	1226.88	.	.	.	Q.	.	V
25.167	4995.6890	1202.39	.	.	.	Q.	.	V
25.250	5003.7871	1175.89	.	.	.	Q.	.	V
25.333	5011.6978	1148.65	.	.	.	Q.	.	V
25.417	5019.3330	1108.66	.	.	.	Q.	.	V
25.500	5026.6616	1064.11	.	.	.	Q.	.	V
25.583	5033.7974	1036.09	.	.	.	Q.	.	V
25.667	5040.7598	1010.96	.	.	.	Q.	.	V
25.750	5047.5381	984.22	.	.	.	Q.	.	V
25.833	5054.0986	952.60	.	.	.	Q.	.	V
25.917	5060.4443	921.42	.	.	.	Q.	.	V
26.000	5066.6006	893.92	.	.	.	Q.	.	V
26.083	5072.5566	864.82	.	.	.	Q.	.	V
26.167	5078.2876	832.16	.	.	.	Q.	.	V
26.250	5083.7832	797.99	.	.	.	Q.	.	V
26.333	5089.0342	762.45	.	.	.	Q.	.	V
26.417	5094.1025	735.91	.	.	.	Q.	.	V
26.500	5098.9302	700.97	.	.	.	Q.	.	V
26.583	5103.5210	666.62	.	.	.	Q.	.	V
26.667	5107.8770	632.47	.	.	.	Q.	.	V
26.750	5111.9692	594.22	.	.	.	Q.	.	V
26.833	5115.8389	561.86	.	.	.	Q.	.	V
26.917	5119.5181	534.25	.	.	.	Q.	.	V
27.000	5123.0156	507.84	.	.	.	Q.	.	V
27.083	5126.3096	478.28	.	.	.	Q.	.	V
27.167	5129.3647	443.60	.	.	.	Q.	.	V
27.250	5132.2002	411.72	.	.	.	Q.	.	V
27.333	5134.8574	385.84	.	.	.	Q.	.	V
27.417	5137.3442	361.08	.	.	.	Q.	.	V
27.500	5139.6562	335.70	.	.	.	Q.	.	V
27.583	5141.8218	314.44	.	.	.	Q.	.	V
27.667	5143.8345	292.22	.	.	.	Q.	.	V
27.750	5145.7065	271.86	.	.	.	Q.	.	V
27.833	5147.4673	255.63	.	.	.	Q.	.	V
27.917	5149.1196	239.93	.	.	.	Q.	.	V
28.000	5150.6636	224.17	.	.	.	Q.	.	V
28.083	5152.0962	208.01	.	.	.	Q.	.	V

28.167	5153.4253	192.98	.Q	.	.	.	V.
28.250	5154.6567	178.80	Q	.	.	.	V.
28.333	5155.7974	165.60	Q	.	.	.	V.
28.417	5156.8560	153.67	Q	.	.	.	V.
28.500	5157.8408	142.99	Q	.	.	.	V.
28.583	5158.7583	133.22	Q	.	.	.	V.
28.667	5159.6187	124.92	Q	.	.	.	V.
28.750	5160.4224	116.70	Q	.	.	.	V.
28.833	5161.1729	108.98	Q	.	.	.	V.
28.917	5161.8730	101.65	Q	.	.	.	V.
29.000	5162.5229	94.37	Q	.	.	.	V.
29.083	5163.1250	87.44	Q	.	.	.	V.
29.167	5163.6821	80.89	Q	.	.	.	V.
29.250	5164.1943	74.39	Q	.	.	.	V.
29.333	5164.6641	68.20	Q	.	.	.	V.
29.417	5165.1016	63.55	Q	.	.	.	V.
29.500	5165.5088	59.14	Q	.	.	.	V.
29.583	5165.8857	54.77	Q	.	.	.	V.
29.667	5166.2329	50.43	Q	.	.	.	V.
29.750	5166.5513	46.22	Q	.	.	.	V.
29.833	5166.8486	43.14	Q	.	.	.	V.
29.917	5167.1270	40.40	Q	.	.	.	V.
30.000	5167.3862	37.67	Q	.	.	.	V.
30.083	5167.6270	34.96	Q	.	.	.	V.
30.167	5167.8491	32.27	Q	.	.	.	V.
30.250	5168.0527	29.60	Q	.	.	.	V.
30.333	5168.2383	26.95	Q	.	.	.	V.
30.417	5168.4058	24.32	Q	.	.	.	V.
30.500	5168.5620	22.66	Q	.	.	.	V.
30.583	5168.7129	21.91	Q	.	.	.	V.
30.667	5168.8589	21.17	Q	.	.	.	V.
30.750	5168.9995	20.44	Q	.	.	.	V.
30.833	5169.1353	19.71	Q	.	.	.	V.
30.917	5169.2661	18.99	Q	.	.	.	V.
31.000	5169.3921	18.27	Q	.	.	.	V.
31.083	5169.5132	17.57	Q	.	.	.	V.
31.167	5169.6294	16.86	Q	.	.	.	V.
31.250	5169.7407	16.17	Q	.	.	.	V.
31.333	5169.8472	15.47	Q	.	.	.	V.
31.417	5169.9492	14.79	Q	.	.	.	V.
31.500	5170.0464	14.10	Q	.	.	.	V.
31.583	5170.1387	13.43	Q	.	.	.	V.
31.667	5170.2266	12.76	Q	.	.	.	V.
31.750	5170.3096	12.09	Q	.	.	.	V.
31.833	5170.3882	11.43	Q	.	.	.	V.
31.917	5170.4624	10.78	Q	.	.	.	V.
32.000	5170.5322	10.13	Q	.	.	.	V.
32.083	5170.5977	9.48	Q	.	.	.	V.
32.167	5170.6587	8.84	Q	.	.	.	V.
32.250	5170.7153	8.21	Q	.	.	.	V.
32.333	5170.7676	7.57	Q	.	.	.	V.
32.417	5170.8154	6.95	Q	.	.	.	V.
32.500	5170.8589	6.32	Q	.	.	.	V.
32.583	5170.8979	5.71	Q	.	.	.	V.
32.667	5170.9331	5.09	Q	.	.	.	V.
32.750	5170.9639	4.48	Q	.	.	.	V.
32.833	5170.9907	3.87	Q	.	.	.	V.
32.917	5171.0132	3.27	Q	.	.	.	V.

33.000	5171.0317	2.67	Q	.	.	.	V.
33.083	5171.0459	2.08	Q	.	.	.	V.
33.167	5171.0562	1.48	Q	.	.	.	V.
33.250	5171.0625	0.89	Q	.	.	.	V.
33.333	5171.0645	0.31	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%	2000.0
10%	1385.0
20%	855.0
30%	540.0
40%	425.0
50%	360.0
60%	295.0
70%	245.0
80%	185.0
90%	130.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5- REGIONAL NODE 133T *
* 10-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV1033TS.DAT
TIME/DATE OF STUDY: 14:55 01/02/2019

FLOW PROCESS FROM NODE 13010.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 6640.500 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 = 0.698
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

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.358	287.751
2	1.075	575.503
3	1.800	582.067
4	2.773	781.854
5	3.928	927.513
6	5.801	1504.183
7	8.455	2130.849
8	11.639	2557.325
9	15.197	2857.805
10	18.846	2930.303
11	22.862	3224.607
12	26.795	3158.755
13	31.145	3493.731
14	36.053	3941.746
15	41.024	3992.043
16	46.914	4730.090
17	52.511	4495.047
18	57.048	3643.631
19	62.703	4540.917
20	67.376	3752.981
21	71.660	3440.575
22	75.495	3079.421
23	78.482	2398.797
24	81.331	2288.486
25	84.018	2158.029
26	86.329	1855.665
27	88.187	1492.012
28	89.684	1202.404
29	91.043	1091.584
30	92.326	1029.738
31	93.521	960.195
32	94.479	768.707
33	95.275	639.383
34	96.018	597.100
35	96.536	415.500
36	97.028	395.109
37	97.519	394.858
38	97.960	353.960
39	98.120	128.827
40	98.238	94.308
41	98.355	94.430
42	98.473	94.553
43	98.590	94.185
44	98.708	94.553
45	98.826	94.308
46	98.943	94.559
47	99.061	94.302
48	99.178	94.302

49	99.296	94.302
50	99.413	94.302
51	99.530	94.302
52	99.648	94.302
53	99.765	94.302
54	99.883	94.302
55	100.000	94.185

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 1042.3370
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 611.4360

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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.	500.0	1000.0	1500.0	2000.0
0.083	0.0023	0.34	Q	.	.	.	.
0.167	0.0094	1.02	Q	.	.	.	.
0.250	0.0212	1.72	Q	.	.	.	.
0.333	0.0395	2.65	Q	.	.	.	.
0.417	0.0653	3.76	Q	.	.	.	.
0.500	0.1036	5.55	Q	.	.	.	.
0.583	0.1593	8.09	Q	.	.	.	.
0.667	0.2361	11.15	Q	.	.	.	.
0.750	0.3364	14.57	Q	.	.	.	.
0.833	0.4610	18.09	Q	.	.	.	.
0.917	0.6123	21.97	Q	.	.	.	.
1.000	0.7899	25.78	Q	.	.	.	.
1.083	0.9966	30.01	Q	.	.	.	.
1.167	1.2361	34.78	Q	.	.	.	.
1.250	1.5090	39.62	Q	.	.	.	.
1.333	1.8214	45.36	Q	.	.	.	.
1.417	2.1715	50.83	VQ	.	.	.	.
1.500	2.5525	55.32	VQ	.	.	.	.
1.583	2.9718	60.89	VQ	.	.	.	.
1.667	3.4231	65.54	VQ	.	.	.	.
1.750	3.9041	69.83	VQ	.	.	.	.
1.833	4.4118	73.72	VQ	.	.	.	.
1.917	4.9408	76.81	VQ	.	.	.	.
2.000	5.4902	79.78	VQ	.	.	.	.
2.083	6.0592	82.61	VQ	.	.	.	.
2.167	6.6452	85.09	VQ	.	.	.	.
2.250	7.2455	87.16	VQ	.	.	.	.
2.333	7.8576	88.88	VQ	.	.	.	.
2.417	8.4808	90.49	VQ	.	.	.	.
2.500	9.1145	92.02	VQ	.	.	.	.
2.583	9.7583	93.48	VQ	.	.	.	.
2.667	10.4107	94.72	VQ	.	.	.	.
2.750	11.0706	95.82	VQ	.	.	.	.
2.833	11.7377	96.87	VQ	.	.	.	.
2.917	12.4106	97.71	VQ	.	.	.	.
3.000	13.0892	98.53	VQ	.	.	.	.
3.083	13.7734	99.35	VQ	.	.	.	.
3.167	14.4630	100.13	V Q	.	.	.	.
3.250	15.1562	100.65	V Q	.	.	.	.
3.333	15.8527	101.13	.VQ	.	.	.	.
3.417	16.5526	101.62	.VQ	.	.	.	.
3.500	17.2558	102.11	.VQ	.	.	.	.
3.583	17.9625	102.61	.VQ	.	.	.	.
3.667	18.6726	103.10	.VQ	.	.	.	.
3.750	19.3862	103.61	.VQ	.	.	.	.
3.833	20.1032	104.12	.VQ	.	.	.	.
3.917	20.8238	104.63	.VQ	.	.	.	.

4.000	21.5479	105.14	.VQ	.	.	.	.
4.083	22.2756	105.66	.VQ	.	.	.	.
4.167	23.0069	106.19	.VQ	.	.	.	.
4.250	23.7419	106.72	.VQ	.	.	.	.
4.333	24.4806	107.25	.VQ	.	.	.	.
4.417	25.2230	107.79	.VQ	.	.	.	.
4.500	25.9691	108.34	.VQ	.	.	.	.
4.583	26.7190	108.89	.VQ	.	.	.	.
4.667	27.4719	109.33	.VQ	.	.	.	.
4.750	28.2279	109.77	.VQ	.	.	.	.
4.833	28.9870	110.22	.VQ	.	.	.	.
4.917	29.7493	110.68	.VQ	.	.	.	.
5.000	30.5148	111.14	.VQ	.	.	.	.
5.083	31.2834	111.61	.Q	.	.	.	.
5.167	32.0553	112.08	.Q	.	.	.	.
5.250	32.8305	112.56	.Q	.	.	.	.
5.333	33.6091	113.04	.Q	.	.	.	.
5.417	34.3909	113.53	.Q	.	.	.	.
5.500	35.1762	114.02	.Q	.	.	.	.
5.583	35.9649	114.52	.Q	.	.	.	.
5.667	36.7571	115.03	.Q	.	.	.	.
5.750	37.5528	115.54	.Q	.	.	.	.
5.833	38.3521	116.05	.Q	.	.	.	.
5.917	39.1550	116.58	.Q	.	.	.	.
6.000	39.9615	117.10	.Q	.	.	.	.
6.083	40.7717	117.64	.Q	.	.	.	.
6.167	41.5856	118.18	.Q	.	.	.	.
6.250	42.4033	118.73	.Q	.	.	.	.
6.333	43.2248	119.28	.Q	.	.	.	.
6.417	44.0502	119.85	.Q	.	.	.	.
6.500	44.8795	120.42	.Q	.	.	.	.
6.583	45.7128	120.99	.Q	.	.	.	.
6.667	46.5501	121.57	.QV	.	.	.	.
6.750	47.3915	122.17	.QV	.	.	.	.
6.833	48.2369	122.76	.QV	.	.	.	.
6.917	49.0866	123.37	.QV	.	.	.	.
7.000	49.9404	123.98	.QV	.	.	.	.
7.083	50.7986	124.60	.QV	.	.	.	.
7.167	51.6611	125.23	.QV	.	.	.	.
7.250	52.5280	125.87	.QV	.	.	.	.
7.333	53.3993	126.52	.QV	.	.	.	.
7.417	54.2752	127.18	.QV	.	.	.	.
7.500	55.1556	127.84	.QV	.	.	.	.
7.583	56.0407	128.51	.QV	.	.	.	.
7.667	56.9305	129.20	.QV	.	.	.	.
7.750	57.8251	129.89	.QV	.	.	.	.
7.833	58.7244	130.59	.QV	.	.	.	.
7.917	59.6287	131.31	.QV	.	.	.	.
8.000	60.5380	132.03	.QV	.	.	.	.
8.083	61.4524	132.76	.Q V	.	.	.	.
8.167	62.3718	133.51	.Q V	.	.	.	.
8.250	63.2965	134.26	.Q V	.	.	.	.
8.333	64.2264	135.03	.Q V	.	.	.	.
8.417	65.1617	135.81	.Q V	.	.	.	.
8.500	66.1025	136.60	.Q V	.	.	.	.
8.583	67.0488	137.40	.Q V	.	.	.	.
8.667	68.0006	138.21	.Q V	.	.	.	.
8.750	68.9582	139.04	.Q V	.	.	.	.

8.833	69.9216	139.88	. Q V	.	.	.	.
8.917	70.8908	140.74	. Q V	.	.	.	.
9.000	71.8661	141.60	. Q V	.	.	.	.
9.083	72.8474	142.49	. Q V	.	.	.	.
9.167	73.8348	143.38	. Q V	.	.	.	.
9.250	74.8286	144.29	. Q V	.	.	.	.
9.333	75.8288	145.22	. Q V	.	.	.	.
9.417	76.8354	146.16	. Q V	.	.	.	.
9.500	77.8486	147.12	. Q V	.	.	.	.
9.583	78.8686	148.10	. Q V	.	.	.	.
9.667	79.8954	149.09	. Q V	.	.	.	.
9.750	80.9292	150.10	. Q V	.	.	.	.
9.833	81.9700	151.13	. Q V	.	.	.	.
9.917	83.0181	152.18	. Q V	.	.	.	.
10.000	84.0735	153.24	. Q V	.	.	.	.
10.083	85.1364	154.33	. Q V	.	.	.	.
10.167	86.2069	155.44	. Q V	.	.	.	.
10.250	87.2852	156.57	. Q V	.	.	.	.
10.333	88.3714	157.72	. Q V	.	.	.	.
10.417	89.4657	158.89	. Q V	.	.	.	.
10.500	90.5682	160.08	. Q V	.	.	.	.
10.583	91.6791	161.31	. Q V	.	.	.	.
10.667	92.7986	162.55	. Q V	.	.	.	.
10.750	93.9268	163.82	. Q V	.	.	.	.
10.833	95.0640	165.12	. Q V	.	.	.	.
10.917	96.2103	166.44	. Q V	.	.	.	.
11.000	97.3659	167.79	. Q V	.	.	.	.
11.083	98.5310	169.18	. Q V	.	.	.	.
11.167	99.7058	170.59	. Q V	.	.	.	.
11.250	100.8906	172.03	. Q V	.	.	.	.
11.333	102.0856	173.51	. Q V	.	.	.	.
11.417	103.2909	175.02	. Q V	.	.	.	.
11.500	104.5069	176.56	. Q V	.	.	.	.
11.583	105.7338	178.15	. Q V	.	.	.	.
11.667	106.9718	179.76	. Q V	.	.	.	.
11.750	108.2213	181.42	. Q V	.	.	.	.
11.833	109.4825	183.12	. Q V	.	.	.	.
11.917	110.7557	184.87	. Q V	.	.	.	.
12.000	112.0412	186.65	. Q V	.	.	.	.
12.083	113.3410	188.74	. Q V	.	.	.	.
12.167	114.6573	191.12	. Q V	.	.	.	.
12.250	115.9904	193.57	. Q V	.	.	.	.
12.333	117.3420	196.24	. Q V	.	.	.	.
12.417	118.7132	199.10	. Q V	.	.	.	.
12.500	120.1080	202.52	. Q V	.	.	.	.
12.583	121.5306	206.56	. Q V	.	.	.	.
12.667	122.9839	211.03	. Q V	.	.	.	.
12.750	124.4705	215.85	. Q V	.	.	.	.
12.833	125.9911	220.79	. Q V	.	.	.	.
12.917	127.5482	226.09	. Q V	.	.	.	.
13.000	129.1418	231.40	. Q V	.	.	.	.
13.083	130.7747	237.10	. Q V	.	.	.	.
13.167	132.4501	243.27	. Q V	.	.	.	.
13.250	134.1692	249.60	. Q V	.	.	.	.
13.333	135.9369	256.67	. Q V	.	.	.	.
13.417	137.7527	263.66	. Q V	.	.	.	.
13.500	139.6122	270.00	. Q V	.	.	.	.
13.583	141.5217	277.26	. Q V	.	.	.	.

13.667	143.4773	283.95	.	Q	V.	.	.	.
13.750	145.4781	290.51	.	Q	V.	.	.	.
13.833	147.5228	296.89	.	Q	V.	.	.	.
13.917	149.6084	302.83	.	Q	V.	.	.	.
14.000	151.7353	308.82	.	Q	V.	.	.	.
14.083	153.9082	315.51	.	Q	V	.	.	.
14.167	156.1309	322.72	.	Q	V	.	.	.
14.250	158.4024	329.83	.	Q	V	.	.	.
14.333	160.7253	337.29	.	Q	V	.	.	.
14.417	163.1027	345.19	.	Q	V	.	.	.
14.500	165.5441	354.50	.	Q	V	.	.	.
14.583	168.0603	365.35	.	Q	V	.	.	.
14.667	170.6579	377.17	.	Q	.V	.	.	.
14.750	173.3425	389.80	.	Q	.V	.	.	.
14.833	176.1164	402.77	.	Q	.V	.	.	.
14.917	178.9857	416.62	.	Q	.V	.	.	.
15.000	181.9524	430.76	.	Q	.V	.	.	.
15.083	185.0258	446.26	.	Q	.V	.	.	.
15.167	188.2172	463.40	.	Q	.V	.	.	.
15.250	191.5321	481.32	.	Q	.V	.	.	.
15.333	194.9893	501.98	.	Q	V	.	.	.
15.417	198.5790	521.22	.	Q	V	.	.	.
15.500	202.2839	537.95	.	Q	V	.	.	.
15.583	206.1299	558.44	.	.Q	V	.	.	.
15.667	210.1089	577.75	.	.Q	V	.	.	.
15.750	214.2373	599.45	.	.Q	V	.	.	.
15.833	218.5139	620.97	.	.Q	V	.	.	.
15.917	222.9459	643.53	.	.Q	V	.	.	.
16.000	227.5956	675.13	.	.	QV	.	.	.
16.083	232.7475	748.07	.	.	QV	.	.	.
16.167	238.4043	821.35	.	.	VQ	.	.	.
16.250	244.3195	858.90	.	.	V	Q	.	.
16.333	250.7384	932.03	.	.	V	Q	.	.
16.417	257.7367	1016.14	.	.	V	Q	.	.
16.500	265.7436	1162.60	.	.	V	Q	.	.
16.583	274.7650	1309.90	.	.	V	Q	.	.
16.667	284.4531	1406.72	.	.	V	Q	.	.
16.750	294.6057	1474.15	.	.	V	Q	.	.
16.833	305.0374	1514.69	.	.	V	Q	.	.
16.917	315.8785	1574.12	.	.	V	.Q	.	.
17.000	326.9125	1602.14	.	.	.V	.Q	.	.
17.083	338.5148	1684.64	.	.	.V	.Q	.	.
17.167	350.7392	1774.99	.	.	.V	.Q	.	.
17.250	363.2396	1815.05	.	.	.V	.Q	.	.
17.333	376.3677	1906.21	.	.	.V	.Q	.	.
17.417	389.1088	1850.00	.	.	.V	.Q	.	.
17.500	400.9178	1714.67	.	.	.V	.Q	.	.
17.583	413.2466	1790.14	.	.	.V	.Q	.	.
17.667	424.5421	1640.10	.	.	.V	.Q	.	.
17.750	435.0948	1532.25	.	.	.V	.Q	.	.
17.833	444.8303	1413.59	.	.	.QV	.	.	.
17.917	453.5798	1270.44	.	.	.Q	V.	.	.
18.000	461.8820	1205.47	.	.	.Q	V	.	.
18.083	469.7184	1137.84	.	.	.Q	V	.	.
18.167	476.8848	1040.56	.	.	.Q	.V	.	.
18.250	483.3333	936.32	.	.	.Q	.V	.	.
18.333	489.1933	850.88	.	.	.Q	.V	.	.
18.417	494.6905	798.20	.	.	.Q	.V	.	.

18.500	499.8931	755.42	.	.	Q	.	.	V	.
18.583	504.7584	706.44	.	.	Q	.	.	V	.
18.667	509.1848	642.72	.	.	Q	.	.	V	.
18.750	513.2524	590.62	.	.	.Q	.	.	V	.
18.833	517.0645	553.52	.	.	.Q	.	.	V	.
18.917	520.5266	502.70	.	.	Q	.	.	V	.
19.000	523.7996	475.25	.	.	Q.	.	.	V	.
19.083	526.8966	449.68	.	.	Q.	.	.	V	.
19.167	529.7631	416.22	.	.	Q.	.	.	V	.
19.250	532.2516	361.33	.	.	Q.	.	.	V	.
19.333	534.5737	337.17	.	.	Q	.	.	V	.
19.417	536.7991	323.13	.	.	Q	.	.	V	.
19.500	538.9423	311.19	.	.	Q	.	.	V	.
19.583	540.9912	297.51	.	.	Q	.	.	V	.
19.667	542.9578	285.56	.	.	Q	.	.	V	.
19.750	544.8505	274.82	.	.	Q	.	.	V	.
19.833	546.6760	265.06	.	.	Q	.	.	V	.
19.917	548.4427	256.54	.	.	Q	.	.	V	.
20.000	550.1586	249.15	.	.	Q	.	.	V	.
20.083	551.8260	242.11	.	.	Q	.	.	V	.
20.167	553.4485	235.59	.	.	Q	.	.	V	.
20.250	555.0328	230.04	.	.	Q	.	.	V	.
20.333	556.5778	224.33	.	.	Q	.	.	V	.
20.417	558.0828	218.52	.	.	Q	.	.	V	.
20.500	559.5396	211.53	.	.	Q	.	.	V	.
20.583	560.9379	203.03	.	.	Q	.	.	V	.
20.667	562.2013	183.45	.	.	Q	.	.	V	.
20.750	563.4278	178.09	.	.	Q	.	.	V	.
20.833	564.6292	174.45	.	.	Q	.	.	V	.
20.917	565.8085	171.23	.	.	Q	.	.	V	.
21.000	566.9620	167.49	.	.	Q	.	.	V	.
21.083	568.0918	164.04	.	.	Q	.	.	V	.
21.167	569.1997	160.87	.	.	Q	.	.	V	.
21.250	570.2885	158.10	.	.	Q	.	.	V	.
21.333	571.3592	155.47	.	.	Q	.	.	V	.
21.417	572.4125	152.93	.	.	Q	.	.	V	.
21.500	573.4489	150.49	.	.	Q	.	.	V	.
21.583	574.4691	148.13	.	.	Q	.	.	V	.
21.667	575.4750	146.06	.	.	Q	.	.	V	.
21.750	576.4672	144.06	.	.	Q	.	.	V	.
21.833	577.4461	142.13	.	.	Q	.	.	V	.
21.917	578.4122	140.27	.	.	Q	.	.	V	.
22.000	579.3658	138.47	.	.	Q	.	.	V	.
22.083	580.3075	136.73	.	.	Q	.	.	V	.
22.167	581.2375	135.04	.	.	Q	.	.	V	.
22.250	582.1563	133.40	.	.	Q	.	.	V	.
22.333	583.0641	131.82	.	.	Q	.	.	V	.
22.417	583.9614	130.27	.	.	Q	.	.	V	.
22.500	584.8483	128.78	.	.	Q	.	.	V	.
22.583	585.7252	127.32	.	.	Q	.	.	V	.
22.667	586.5928	125.99	.	.	Q	.	.	V	.
22.750	587.4516	124.69	.	.	Q	.	.	V	.
22.833	588.3016	123.43	.	.	Q	.	.	V	.
22.917	589.1432	122.20	.	.	Q	.	.	V	.
23.000	589.9766	121.01	.	.	Q	.	.	V	.
23.083	590.8020	119.84	.	.	Q	.	.	V	.
23.167	591.6196	118.71	.	.	Q	.	.	V	.
23.250	592.4295	117.60	.	.	Q	.	.	V	.

23.333	593.2320	116.52	. Q	.	.	.	V .
23.417	594.0272	115.47	. Q	.	.	.	V .
23.500	594.8154	114.44	. Q	.	.	.	V .
23.583	595.5966	113.44	. Q	.	.	.	V .
23.667	596.3712	112.46	. Q	.	.	.	V .
23.750	597.1390	111.50	. Q	.	.	.	V .
23.833	597.9005	110.56	. Q	.	.	.	V .
23.917	598.6556	109.65	. Q	.	.	.	V .
24.000	599.4046	108.75	. Q	.	.	.	V .
24.083	600.1452	107.53	. Q	.	.	.	V .
24.167	600.8752	106.00	. Q	.	.	.	V .
24.250	601.5948	104.48	. Q	.	.	.	V .
24.333	602.3024	102.74	. Q	.	.	.	V .
24.417	602.9969	100.85	. Q	.	.	.	V .
24.500	603.6740	98.31	.Q	.	.	.	V .
24.583	604.3286	95.05	.Q	.	.	.	V .
24.667	604.9575	91.31	.Q	.	.	.	V .
24.750	605.5584	87.26	.Q	.	.	.	V .
24.833	606.1310	83.15	.Q	.	.	.	V .
24.917	606.6733	78.73	.Q	.	.	.	V .
25.000	607.1859	74.42	.Q	.	.	.	V .
25.083	607.6663	69.75	.Q	.	.	.	V .
25.167	608.1111	64.59	.Q	.	.	.	V .
25.250	608.5203	59.41	.Q	.	.	.	V .
25.333	608.8880	53.40	.Q	.	.	.	V .
25.417	609.2166	47.70	Q	.	.	.	V .
25.500	609.5131	43.06	Q	.	.	.	V .
25.583	609.7705	37.38	Q	.	.	.	V .
25.667	609.9956	32.68	Q	.	.	.	V .
25.750	610.1911	28.38	Q	.	.	.	V .
25.833	610.3601	24.54	Q	.	.	.	V .
25.917	610.5084	21.53	Q	.	.	.	V .
26.000	610.6370	18.67	Q	.	.	.	V .
26.083	610.7471	15.99	Q	.	.	.	V .
26.167	610.8414	13.68	Q	.	.	.	V .
26.250	610.9228	11.82	Q	.	.	.	V .
26.333	610.9938	10.32	Q	.	.	.	V .
26.417	611.0555	8.96	Q	.	.	.	V .
26.500	611.1083	7.67	Q	.	.	.	V .
26.583	611.1530	6.49	Q	.	.	.	V .
26.667	611.1911	5.53	Q	.	.	.	V .
26.750	611.2237	4.74	Q	.	.	.	V .
26.833	611.2512	4.00	Q	.	.	.	V .
26.917	611.2751	3.48	Q	.	.	.	V .
27.000	611.2957	2.98	Q	.	.	.	V .
27.083	611.3129	2.50	Q	.	.	.	V .
27.167	611.3271	2.06	Q	.	.	.	V .
27.250	611.3402	1.89	Q	.	.	.	V .
27.333	611.3524	1.77	Q	.	.	.	V .
27.417	611.3638	1.64	Q	.	.	.	V .
27.500	611.3743	1.52	Q	.	.	.	V .
27.583	611.3839	1.40	Q	.	.	.	V .
27.667	611.3927	1.28	Q	.	.	.	V .
27.750	611.4007	1.16	Q	.	.	.	V .
27.833	611.4078	1.04	Q	.	.	.	V .
27.917	611.4142	0.92	Q	.	.	.	V .
28.000	611.4197	0.80	Q	.	.	.	V .
28.083	611.4244	0.68	Q	.	.	.	V .

28.167	611.4283	0.57	Q	.	.	.	V .
28.250	611.4314	0.45	Q	.	.	.	V .
28.333	611.4337	0.34	Q	.	.	.	V .
28.417	611.4352	0.23	Q	.	.	.	V .
28.500	611.4360	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%	510.0
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

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

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5- REGIONAL NODE 133C *
* 10-YR EV APRIL 2019 CCHIU *

FILE NAME: EV1033CS.DAT
TIME/DATE OF STUDY: 07:57 04/09/2019

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 = 60992.500 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.730 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.287
LOW LOSS FRACTION = 0.739
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.31
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.62
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.86
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.58
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.33
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.07

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.308
30-MINUTE FACTOR = 0.363
1-HOUR FACTOR = 0.408
3-HOUR FACTOR = 0.754
6-HOUR FACTOR = 0.891
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.053

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.174	1286.635
2	0.523	2573.272
3	0.872	2573.269
4	1.221	2573.274
5	1.570	2573.269
6	1.925	2621.133
7	2.407	3555.167
8	2.938	3915.849
9	3.469	3915.844
10	4.055	4326.366
11	4.976	6793.336
12	5.985	7437.661
13	7.224	9138.950
14	8.647	10495.251
15	10.250	11827.764
16	11.782	11299.475
17	13.309	11265.477
18	15.314	14787.818
19	17.185	13799.307
20	18.813	12008.530
21	20.562	12900.177
22	22.712	15863.841
23	24.818	15529.769
24	26.562	12868.760
25	28.466	14041.311
26	30.722	16640.654
27	33.135	17799.797
28	35.690	18848.115
29	37.496	13321.562
30	40.283	20554.141
31	43.039	20330.863
32	45.803	20391.021
33	48.998	23562.348
34	51.643	19512.291
35	53.845	16244.510
36	55.951	15536.832
37	58.388	17973.691
38	61.348	21836.119
39	64.059	19992.527
40	66.202	15809.098
41	68.299	15469.300
42	70.528	16439.170
43	72.370	13587.355
44	74.323	14404.997
45	76.110	13182.052
46	77.506	10299.510
47	78.863	10006.872
48	80.237	10137.828

49	81.663	10520.114
50	82.989	9779.177
51	84.243	9249.333
52	85.411	8615.771
53	86.464	7763.857
54	87.403	6927.307
55	88.260	6319.632
56	88.980	5311.944
57	89.698	5297.875
58	90.372	4975.692
59	91.015	4739.724
60	91.658	4740.906
61	92.272	4528.518
62	92.853	4289.005
63	93.435	4290.187
64	93.989	4089.561
65	94.398	3018.224
66	94.786	2857.780
67	95.174	2860.087
68	95.561	2860.143
69	95.939	2784.620
70	96.208	1984.593
71	96.447	1765.170
72	96.687	1767.534
73	96.926	1765.114
74	97.165	1765.170
75	97.405	1767.534
76	97.644	1765.114
77	97.884	1767.534
78	98.029	1071.393
79	98.087	424.775
80	98.144	422.356
81	98.201	420.104
82	98.259	424.719
83	98.316	420.048
84	98.373	427.139
85	98.429	413.014
86	98.487	424.719
87	98.544	420.048
88	98.602	424.775
89	98.658	417.685
90	98.716	429.503
91	98.773	415.321
92	98.830	424.775
93	98.888	424.775
94	98.945	420.048
95	99.002	420.048
96	99.059	420.048
97	99.116	420.048
98	99.173	420.048
99	99.230	420.048
100	99.286	420.048
101	99.343	420.048
102	99.400	420.048
103	99.457	420.048
104	99.514	420.048
105	99.571	420.048
106	99.628	420.048

107	99.685	420.048
108	99.742	420.048
109	99.799	420.048
110	99.856	420.048
111	99.913	420.048
112	99.970	420.048
113	100.000	222.630

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 13824.5479
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 5567.5303

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.	1875.0	3750.0	5625.0	7500.0
0.083	0.0135	1.96	Q	.	.	.	.
0.167	0.0539	5.87	Q	.	.	.	.
0.250	0.1214	9.80	Q	.	.	.	.
0.333	0.2160	13.74	Q	.	.	.	.
0.417	0.3378	17.69	Q	.	.	.	.
0.500	0.4874	21.72	Q	.	.	.	.
0.583	0.6746	27.19	Q	.	.	.	.
0.667	0.9034	33.22	Q	.	.	.	.
0.750	1.1738	39.27	Q	.	.	.	.
0.833	1.4903	45.96	Q	.	.	.	.
0.917	1.8788	56.42	Q	.	.	.	.
1.000	2.3464	67.88	Q	.	.	.	.
1.083	2.9109	81.97	Q	.	.	.	.
1.167	3.5870	98.16	Q	.	.	.	.
1.250	4.3889	116.43	Q	.	.	.	.
1.333	5.3113	133.95	Q	.	.	.	.
1.417	6.3545	151.47	Q	.	.	.	.
1.500	7.5555	174.39	Q	.	.	.	.
1.583	8.9046	195.88	VQ	.	.	.	.
1.667	10.3834	214.72	VQ	.	.	.	.
1.750	12.0016	234.97	VQ	.	.	.	.
1.833	13.7908	259.79	VQ	.	.	.	.
1.917	15.7479	284.17	VQ	.	.	.	.
2.000	17.8456	304.59	VQ	.	.	.	.
2.083	20.0967	326.86	VQ	.	.	.	.
2.167	22.5288	353.14	VQ	.	.	.	.
2.250	25.1546	381.27	V Q	.	.	.	.
2.333	27.9858	411.08	V Q	.	.	.	.
2.417	30.9650	432.58	V Q	.	.	.	.
2.500	34.1686	465.16	V Q	.	.	.	.
2.583	37.5948	497.48	V Q	.	.	.	.
2.667	41.2450	530.02	V Q	.	.	.	.
2.750	45.1531	567.46	V Q	.	.	.	.
2.833	49.2776	598.88	V Q	.	.	.	.
2.917	53.5849	625.42	V Q	.	.	.	.
3.000	58.0683	650.99	V Q	.	.	.	.
3.083	62.7539	680.34	V Q	.	.	.	.
3.167	67.6828	715.67	V Q	.	.	.	.
3.250	72.8363	748.30	V Q	.	.	.	.
3.333	78.1717	774.70	V Q	.	.	.	.
3.417	83.6859	800.65	V Q	.	.	.	.
3.500	89.3897	828.19	V Q	.	.	.	.
3.583	95.2538	851.48	V Q	.	.	.	.
3.667	101.2876	876.11	V Q	.	.	.	.
3.750	107.4787	898.95	V Q	.	.	.	.
3.833	113.7976	917.51	V Q	.	.	.	.
3.917	120.2418	935.69	V Q	.	.	.	.

4.000	126.8130	954.15	V	Q	.	.	.	.
4.083	133.5159	973.25	V	Q	.	.	.	.
4.167	140.3431	991.32	.V	Q	.	.	.	.
4.250	147.2896	1008.64	.V	Q	.	.	.	.
4.333	154.3494	1025.08	.V	Q	.	.	.	.
4.417	161.5139	1040.28	.V	Q	.	.	.	.
4.500	168.7749	1054.30	.V	Q	.	.	.	.
4.583	176.1264	1067.44	.V	Q	.	.	.	.
4.667	183.5584	1079.12	.V	Q	.	.	.	.
4.750	191.0710	1090.83	.V	Q	.	.	.	.
4.833	198.6613	1102.12	.V	Q	.	.	.	.
4.917	206.3273	1113.10	.V	Q	.	.	.	.
5.000	214.0694	1124.15	.V	Q	.	.	.	.
5.083	221.8857	1134.92	.V	Q	.	.	.	.
5.167	229.7741	1145.40	.V	Q	.	.	.	.
5.250	237.7350	1155.93	.V	Q	.	.	.	.
5.333	245.7669	1166.22	.V	Q	.	.	.	.
5.417	253.8587	1174.93	.V	Q	.	.	.	.
5.500	262.0093	1183.47	.V	Q	.	.	.	.
5.583	270.2190	1192.05	.V	Q	.	.	.	.
5.667	278.4883	1200.70	.V	Q	.	.	.	.
5.750	286.8166	1209.28	.V	Q	.	.	.	.
5.833	295.1962	1216.71	.V	Q	.	.	.	.
5.917	303.6249	1223.85	.V	Q	.	.	.	.
6.000	312.1033	1231.07	.V	Q	.	.	.	.
6.083	320.6317	1238.31	.V	Q	.	.	.	.
6.167	329.2104	1245.64	.V	Q	.	.	.	.
6.250	337.8399	1253.00	.V	Q	.	.	.	.
6.333	346.5206	1260.44	.V	Q	.	.	.	.
6.417	355.2528	1267.92	.V	Q	.	.	.	.
6.500	364.0298	1274.42	.V	Q	.	.	.	.
6.583	372.8450	1279.97	.V	Q	.	.	.	.
6.667	381.6991	1285.60	.V	Q	.	.	.	.
6.750	390.5921	1291.27	.V	Q	.	.	.	.
6.833	399.5247	1297.01	.V	Q	.	.	.	.
6.917	408.4970	1302.79	.V	Q	.	.	.	.
7.000	417.5099	1308.66	.V	Q	.	.	.	.
7.083	426.5632	1314.55	.V	Q	.	.	.	.
7.167	435.6579	1320.54	.V	Q	.	.	.	.
7.250	444.7940	1326.56	.V	Q	.	.	.	.
7.333	453.9722	1332.68	.V	Q	.	.	.	.
7.417	463.1928	1338.83	.V	Q	.	.	.	.
7.500	472.4565	1345.09	.V	Q	.	.	.	.
7.583	481.7635	1351.37	.V	Q	.	.	.	.
7.667	491.1145	1357.76	.V	Q	.	.	.	.
7.750	500.5098	1364.20	.V	Q	.	.	.	.
7.833	509.9500	1370.72	.V	Q	.	.	.	.
7.917	519.4355	1377.30	.V	Q	.	.	.	.
8.000	528.9670	1383.97	.V	Q	.	.	.	.
8.083	538.5449	1390.70	.V	Q	.	.	.	.
8.167	548.1697	1397.53	.V	Q	.	.	.	.
8.250	557.8420	1404.41	.V	Q	.	.	.	.
8.333	567.5624	1411.41	.V	Q	.	.	.	.
8.417	577.3314	1418.46	.V	Q	.	.	.	.
8.500	587.1497	1425.62	.V	Q	.	.	.	.
8.583	597.0177	1432.84	.V	Q	.	.	.	.
8.667	606.9363	1440.18	.V	Q	.	.	.	.
8.750	616.9058	1447.58	.V	Q	.	.	.	.

8.833	626.9272	1455.10	.	V	Q	.	.	.	.
8.917	637.0008	1462.69	.	V	Q	.	.	.	.
9.000	647.1276	1470.40	.	V	Q	.	.	.	.
9.083	657.3079	1478.19	.	V	Q	.	.	.	.
9.167	667.5428	1486.11	.	V	Q	.	.	.	.
9.250	677.8327	1494.09	.	V	Q	.	.	.	.
9.333	688.1786	1502.22	.	V	Q	.	.	.	.
9.417	698.5789	1510.13	.	V	Q	.	.	.	.
9.500	709.0323	1517.84	.	V	Q	.	.	.	.
9.583	719.5394	1525.62	.	V	Q	.	.	.	.
9.667	730.1011	1533.56	.	V	Q	.	.	.	.
9.750	740.7181	1541.58	.	V	Q	.	.	.	.
9.833	751.3914	1549.76	.	V	Q	.	.	.	.
9.917	762.1216	1558.03	.	V	Q	.	.	.	.
10.000	772.9099	1566.46	.	V	Q	.	.	.	.
10.083	783.7568	1574.98	.	V	Q	.	.	.	.
10.167	794.6637	1583.67	.	V	Q	.	.	.	.
10.250	805.6311	1592.47	.	V	Q	.	.	.	.
10.333	816.6603	1601.44	.	V	Q	.	.	.	.
10.417	827.7521	1610.52	.	V	Q	.	.	.	.
10.500	838.9077	1619.79	.	V	Q	.	.	.	.
10.583	850.1279	1629.17	.	V	Q	.	.	.	.
10.667	861.4140	1638.75	.	V	Q	.	.	.	.
10.750	872.7670	1648.45	.	V	Q	.	.	.	.
10.833	884.1882	1658.36	.	V	Q	.	.	.	.
10.917	895.6785	1668.40	.	V	Q	.	.	.	.
11.000	907.2396	1678.66	.	V	Q	.	.	.	.
11.083	918.8722	1689.06	.	V	Q	.	.	.	.
11.167	930.5780	1699.68	.	V	Q	.	.	.	.
11.250	942.3580	1710.46	.	V	Q	.	.	.	.
11.333	954.2140	1721.48	.	V	Q	.	.	.	.
11.417	966.1470	1732.67	.	V	Q	.	.	.	.
11.500	978.1587	1744.11	.	V	Q	.	.	.	.
11.583	990.2504	1755.72	.	V	Q	.	.	.	.
11.667	1002.4240	1767.60	.	V	Q	.	.	.	.
11.750	1014.6807	1779.68	.	V	Q	.	.	.	.
11.833	1027.0226	1792.04	.	V	Q	.	.	.	.
11.917	1039.4509	1804.60	.	V	Q	.	.	.	.
12.000	1051.9680	1817.48	.	V	Q	.	.	.	.
12.083	1064.5991	1834.04	.	V	Q	.	.	.	.
12.167	1077.3704	1854.39	.	V	Q	.	.	.	.
12.250	1090.2832	1874.94	.	V	Q	.	.	.	.
12.333	1103.3397	1895.81	.	V	Q	.	.	.	.
12.417	1116.5415	1916.89	.	V	Q	.	.	.	.
12.500	1129.8916	1938.44	.	V	Q	.	.	.	.
12.583	1143.4091	1962.74	.	V	Q	.	.	.	.
12.667	1157.1030	1988.36	.	V	Q	.	.	.	.
12.750	1170.9751	2014.22	.	V	Q	.	.	.	.
12.833	1185.0354	2041.55	.	V	Q	.	.	.	.
12.917	1199.3314	2075.79	.	V	.Q	.	.	.	.
13.000	1213.8778	2112.14	.	V	.Q	.	.	.	.
13.083	1228.7076	2153.29	.	V	.Q	.	.	.	.
13.167	1243.8486	2198.47	.	V	.Q	.	.	.	.
13.250	1259.3269	2247.44	.	V	.Q	.	.	.	.
13.333	1275.1351	2295.35	.	V	.Q	.	.	.	.
13.417	1291.2739	2343.35	.	V	.Q	.	.	.	.
13.500	1307.8114	2401.25	.	V	.Q	.	.	.	.
13.583	1324.7306	2456.66	.	V	.Q	.	.	.	.

13.667	1342.0006	2507.61	.	V.	Q	.	.	.	.
13.750	1359.6398	2561.20	.	V.	Q	.	.	.	.
13.833	1377.7061	2623.22	.	V.	Q	.	.	.	.
13.917	1396.1947	2684.55	.	V	Q	.	.	.	.
14.000	1415.0591	2739.11	.	V	Q	.	.	.	.
14.083	1434.3759	2804.79	.	V	Q	.	.	.	.
14.167	1454.2482	2885.46	.	V	Q	.	.	.	.
14.250	1474.6951	2968.89	.	V	Q	.	.	.	.
14.333	1495.7349	3054.98	.	V	Q	.	.	.	.
14.417	1517.2620	3125.74	.	V	Q	.	.	.	.
14.500	1539.4119	3216.17	.	.V	Q	.	.	.	.
14.583	1562.2159	3311.15	.	.V	Q	.	.	.	.
14.667	1585.6870	3408.00	.	.V	Q	.	.	.	.
14.750	1609.8785	3512.60	.	.V	Q	.	.	.	.
14.833	1634.7275	3608.08	.	.V	Q	.	.	.	.
14.917	1660.2682	3708.50	.	.V	Q	.	.	.	.
15.000	1686.5059	3809.71	.	.V	Q	.	.	.	.
15.083	1713.5427	3925.76	.	.V	Q	.	.	.	.
15.167	1741.4943	4058.57	.	.V	.Q	.	.	.	.
15.250	1770.3605	4191.38	.	.V	.Q	.	.	.	.
15.333	1800.0233	4307.05	.	.V	.Q	.	.	.	.
15.417	1830.4181	4413.33	.	.V	.Q	.	.	.	.
15.500	1861.6609	4536.45	.	.V	.Q	.	.	.	.
15.583	1893.6401	4643.39	.	.V	.Q	.	.	.	.
15.667	1926.2842	4739.91	.	.V	.Q	.	.	.	.
15.750	1959.5807	4834.66	.	.V	.Q	.	.	.	.
15.833	1993.5757	4936.07	.	.V	.Q	.	.	.	.
15.917	2028.2208	5030.48	.	.V	.Q	.	.	.	.
16.000	2063.4514	5115.47	.	.V	.Q	.	.	.	.
16.083	2099.8853	5290.20	.	.V	.Q	.	.	.	.
16.167	2137.5188	5464.40	.	.V	.Q	.	.	.	.
16.250	2175.6970	5543.49	.	.V	.Q	.	.	.	.
16.333	2214.4084	5620.90	.	.V	.Q	.	.	.	.
16.417	2253.3894	5660.05	.	.V	.Q	.	.	.	.
16.500	2292.9807	5748.66	.	.V	.Q	.	.	.	.
16.583	2333.4966	5882.91	.	.V	.Q	.	.	.	.
16.667	2374.6541	5976.07	.	.V	.Q	.	.	.	.
16.750	2416.4644	6070.86	.	.V	.Q	.	.	.	.
16.833	2458.9202	6164.57	.	.V	.Q	.	.	.	.
16.917	2502.7998	6371.33	.	.V	.Q	.	.	.	.
17.000	2547.3618	6470.39	.	.V	.Q	.	.	.	.
17.083	2593.1011	6641.34	.	.V	.Q	.	.	.	.
17.167	2639.8191	6783.45	.	.V	.Q	.	.	.	.
17.250	2687.4163	6911.10	.	.V	.Q	.	.	.	.
17.333	2735.0190	6911.93	.	.V	.Q	.	.	.	.
17.417	2782.9673	6962.10	.	.V	.Q	.	.	.	.
17.500	2832.6294	7210.95	.	.V	.Q	.	.	.	.
17.583	2881.8025	7139.95	.	.V	.Q	.	.	.	.
17.667	2930.3118	7043.53	.	.V	.Q	.	.	.	.
17.750	2979.5696	7152.25	.	.V	.Q	.	.	.	.
17.833	3030.0757	7333.48	.	.V	.Q	.	.	.	.
17.917	3080.1394	7269.27	.	.V	.Q	.	.	.	.
18.000	3128.8821	7077.43	.	.V	.Q	.	.	.	.
18.083	3178.0557	7140.01	.	.V	.Q	.	.	.	.
18.167	3228.2842	7293.20	.	.V	.Q	.	.	.	.
18.250	3278.8896	7347.90	.	.V	.Q	.	.	.	.
18.333	3329.5645	7357.97	.	.V	.Q	.	.	.	.
18.417	3377.7620	6998.29	.	.V	.Q	.	.	.	.

18.500	3428.7903	7409.31	.	.	.	V	.	Q.
18.583	3479.3767	7345.16	.	.	.	V	.	Q.
18.667	3529.9587	7344.52	.	.	.	V	.	Q.
18.750	3581.3999	7469.27	.	.	.	V	.	Q.
18.833	3630.4050	7115.56	.	.	.	V	.	Q.
18.917	3677.5911	6851.40	.	.	.	V	.	Q.
19.000	3724.4534	6804.42	.	.	.	V	.	Q.
19.083	3772.5227	6979.67	.	.	.	V	.	Q.
19.167	3822.0032	7184.58	.	.	.	V	.	Q.
19.250	3870.0444	6975.60	.	.	.	V	.	Q.
19.333	3915.6638	6623.94	.	.	.	V	.	Q.
19.417	3960.8640	6563.07	.	.	.	V	.	Q.
19.500	4005.8691	6534.73	.	.	.	V	.	Q.
19.583	4049.1116	6278.79	.	.	.	V	.	Q.
19.667	4092.0962	6241.36	.	.	.	V	.	Q.
19.750	4133.6479	6033.30	.	.	.	V	.	Q.
19.833	4173.2578	5751.33	.	.	.	VQ	.	.
19.917	4212.2124	5656.24	.	.	.	Q	.	.
20.000	4250.8271	5606.87	.	.	.	QV	.	.
20.083	4289.0127	5544.51	.	.	.	QV	.	.
20.167	4325.9639	5365.29	.	.	.	Q.V	.	.
20.250	4361.7744	5199.68	.	.	.	Q.V	.	.
20.333	4396.5063	5043.04	.	.	.	Q.V	.	.
20.417	4430.1719	4888.25	.	.	.	Q.V	.	.
20.500	4462.5581	4702.46	.	.	.	Q.V	.	.
20.583	4493.8281	4540.38	.	.	.	Q.V	.	.
20.667	4523.7930	4350.90	.	.	.	Q.V	.	.
20.750	4552.8862	4224.31	.	.	.	Q.V	.	.
20.833	4581.1401	4102.49	.	.	.	Q.V	.	.
20.917	4608.6538	3995.01	.	.	.	Q.V	.	.
21.000	4635.4980	3897.77	.	.	.	Q.V	.	.
21.083	4661.5078	3776.60	.	.	.	Q.V	.	.
21.167	4686.6382	3648.95	.	.	.	Q.V	.	.
21.250	4711.0186	3540.06	.	.	.	Q.V	.	.
21.333	4734.6094	3425.40	.	.	.	Q.V	.	.
21.417	4757.0830	3263.21	.	.	.	Q.V	.	.
21.500	4778.8760	3164.34	.	.	.	Q.V	.	.
21.583	4800.1377	3087.21	.	.	.	Q.V	.	.
21.667	4820.8809	3011.94	.	.	.	Q.V	.	.
21.750	4841.0371	2926.70	.	.	.	Q.V	.	.
21.833	4860.3823	2808.91	.	.	.	Q.V	.	.
21.917	4879.2246	2735.89	.	.	.	Q.V	.	.
22.000	4897.6587	2676.64	.	.	.	Q.V	.	.
22.083	4915.6816	2616.90	.	.	.	Q.V	.	.
22.167	4933.2998	2558.19	.	.	.	Q.V	.	.
22.250	4950.5151	2499.63	.	.	.	Q.V	.	.
22.333	4967.3271	2441.10	.	.	.	Q.V	.	.
22.417	4983.7554	2385.40	.	.	.	Q.V	.	.
22.500	4999.5073	2287.15	.	.	.	Q.V	.	.
22.583	5014.6509	2198.83	.	.	.	Q.V	.	.
22.667	5029.5029	2156.55	.	.	.	Q.V	.	.
22.750	5044.0732	2115.60	.	.	.	Q.V	.	.
22.833	5058.3911	2078.92	.	.	.	Q.V	.	.
22.917	5072.4497	2041.33	.	.	.	Q.V	.	.
23.000	5086.2505	2003.87	.	.	.	Q.V	.	.
23.083	5099.7866	1965.41	.	.	.	Q.V	.	.
23.167	5113.0718	1928.98	.	.	.	Q.V	.	.
23.250	5126.0972	1891.26	.	.	.	Q.V	.	.

23.333	5138.8691	1854.52	.	.	.	Q.	.	V	.
23.417	5151.3940	1818.59	.	.	.	Q.	.	V	.
23.500	5163.7017	1787.10	.	.	.	Q.	.	V	.
23.583	5175.8110	1758.29	.	.	.	Q.	.	V	.
23.667	5187.7368	1731.61	.	.	.	Q.	.	V	.
23.750	5199.4795	1705.01	.	.	.	Q.	.	V	.
23.833	5211.0557	1680.86	.	.	.	Q.	.	V	.
23.917	5222.4751	1658.13	.	.	.	Q.	.	V	.
24.000	5233.7417	1635.91	.	.	.	Q.	.	V	.
24.083	5244.8457	1612.33	.	.	.	Q.	.	V	.
24.167	5255.7769	1587.22	.	.	.	Q.	.	V	.
24.250	5266.5386	1562.62	.	.	.	Q.	.	V	.
24.333	5277.1343	1538.49	.	.	.	Q.	.	V	.
24.417	5287.5674	1514.86	.	.	.	Q.	.	V	.
24.500	5297.8530	1493.44	.	.	.	Q.	.	V	.
24.583	5307.9971	1472.92	.	.	.	Q.	.	V	.
24.667	5317.9990	1452.31	.	.	.	Q.	.	V	.
24.750	5327.8677	1432.93	.	.	.	Q.	.	V	.
24.833	5337.6069	1414.15	.	.	.	Q.	.	V	.
24.917	5347.1924	1391.84	.	.	.	Q.	.	V	.
25.000	5356.6187	1368.70	.	.	.	Q.	.	V	.
25.083	5365.8711	1343.45	.	.	.	Q.	.	V	.
25.167	5374.9380	1316.50	.	.	.	Q.	.	V	.
25.250	5383.8037	1287.34	.	.	.	Q.	.	V	.
25.333	5392.4648	1257.57	.	.	.	Q.	.	V	.
25.417	5400.8330	1215.03	.	.	.	Q.	.	V	.
25.500	5408.8730	1167.41	.	.	.	Q.	.	V	.
25.583	5416.7007	1136.59	.	.	.	Q.	.	V	.
25.667	5424.3379	1108.94	.	.	.	Q.	.	V	.
25.750	5431.7739	1079.69	.	.	.	Q.	.	V	.
25.833	5438.9727	1045.27	.	.	.	Q.	.	V	.
25.917	5445.9380	1011.33	.	.	.	Q.	.	V	.
26.000	5452.6973	981.45	.	.	.	Q.	.	V	.
26.083	5459.2388	949.80	.	.	.	Q.	.	V	.
26.167	5465.5352	914.26	.	.	.	Q.	.	V	.
26.250	5471.5752	877.04	.	.	.	Q.	.	V	.
26.333	5477.3486	838.33	.	.	.	Q.	.	V	.
26.417	5482.9224	809.33	.	.	.	Q.	.	V	.
26.500	5488.2314	770.89	.	.	.	Q.	.	V	.
26.583	5493.2803	733.10	.	.	.	Q.	.	V	.
26.667	5498.0703	695.54	.	.	.	Q.	.	V	.
26.750	5502.5708	653.46	.	.	.	Q.	.	V	.
26.833	5506.8257	617.84	.	.	.	Q.	.	V	.
26.917	5510.8716	587.46	.	.	.	Q.	.	V	.
27.000	5514.7173	558.39	.	.	.	Q.	.	V	.
27.083	5518.3389	525.85	.	.	.	Q.	.	V	.
27.167	5521.6978	487.69	.	.	.	Q.	.	V	.
27.250	5524.8149	452.61	.	.	.	Q.	.	V	.
27.333	5527.7358	424.11	.	.	.	Q.	.	V	.
27.417	5530.4692	396.88	.	.	.	Q.	.	V	.
27.500	5533.0103	368.97	.	.	.	Q.	.	V	.
27.583	5535.3906	345.61	.	.	.	Q.	.	V	.
27.667	5537.6025	321.19	.	.	.	Q.	.	V	.
27.750	5539.6606	298.81	.	.	.	Q.	.	V	.
27.833	5541.5957	280.97	.	.	.	Q.	.	V	.
27.917	5543.4121	263.71	.	.	.	Q.	.	V	.
28.000	5545.1089	246.39	.	.	.	Q.	.	V	.
28.083	5546.6836	228.62	.	.	.	Q.	.	V	.

28.167	5548.1445	212.11	.Q	.	.	.	V.
28.250	5549.4980	196.53	.Q	.	.	.	V.
28.333	5550.7515	182.02	Q	.	.	.	V.
28.417	5551.9146	168.90	Q	.	.	.	V.
28.500	5552.9971	157.16	Q	.	.	.	V.
28.583	5554.0054	146.43	Q	.	.	.	V.
28.667	5554.9512	137.30	Q	.	.	.	V.
28.750	5555.8345	128.26	Q	.	.	.	V.
28.833	5556.6597	119.78	Q	.	.	.	V.
28.917	5557.4292	111.73	Q	.	.	.	V.
29.000	5558.1436	103.73	Q	.	.	.	V.
29.083	5558.8057	96.11	Q	.	.	.	V.
29.167	5559.4180	88.91	Q	.	.	.	V.
29.250	5559.9810	81.76	Q	.	.	.	V.
29.333	5560.4971	74.96	Q	.	.	.	V.
29.417	5560.9780	69.84	Q	.	.	.	V.
29.500	5561.4258	65.00	Q	.	.	.	V.
29.583	5561.8403	60.20	Q	.	.	.	V.
29.667	5562.2222	55.42	Q	.	.	.	V.
29.750	5562.5723	50.80	Q	.	.	.	V.
29.833	5562.8989	47.42	Q	.	.	.	V.
29.917	5563.2046	44.40	Q	.	.	.	V.
30.000	5563.4897	41.40	Q	.	.	.	V.
30.083	5563.7544	38.42	Q	.	.	.	V.
30.167	5563.9985	35.47	Q	.	.	.	V.
30.250	5564.2227	32.53	Q	.	.	.	V.
30.333	5564.4268	29.62	Q	.	.	.	V.
30.417	5564.6108	26.73	Q	.	.	.	V.
30.500	5564.7822	24.91	Q	.	.	.	V.
30.583	5564.9482	24.08	Q	.	.	.	V.
30.667	5565.1084	23.27	Q	.	.	.	V.
30.750	5565.2632	22.46	Q	.	.	.	V.
30.833	5565.4121	21.66	Q	.	.	.	V.
30.917	5565.5557	20.87	Q	.	.	.	V.
31.000	5565.6938	20.08	Q	.	.	.	V.
31.083	5565.8267	19.31	Q	.	.	.	V.
31.167	5565.9541	18.53	Q	.	.	.	V.
31.250	5566.0767	17.77	Q	.	.	.	V.
31.333	5566.1938	17.00	Q	.	.	.	V.
31.417	5566.3057	16.26	Q	.	.	.	V.
31.500	5566.4126	15.50	Q	.	.	.	V.
31.583	5566.5142	14.76	Q	.	.	.	V.
31.667	5566.6108	14.02	Q	.	.	.	V.
31.750	5566.7021	13.28	Q	.	.	.	V.
31.833	5566.7886	12.56	Q	.	.	.	V.
31.917	5566.8701	11.84	Q	.	.	.	V.
32.000	5566.9468	11.13	Q	.	.	.	V.
32.083	5567.0186	10.42	Q	.	.	.	V.
32.167	5567.0854	9.72	Q	.	.	.	V.
32.250	5567.1475	9.02	Q	.	.	.	V.
32.333	5567.2046	8.32	Q	.	.	.	V.
32.417	5567.2573	7.64	Q	.	.	.	V.
32.500	5567.3052	6.95	Q	.	.	.	V.
32.583	5567.3481	6.27	Q	.	.	.	V.
32.667	5567.3867	5.60	Q	.	.	.	V.
32.750	5567.4204	4.92	Q	.	.	.	V.
32.833	5567.4497	4.26	Q	.	.	.	V.
32.917	5567.4746	3.59	Q	.	.	.	V.

33.000	5567.4946	2.94	Q	.	.	.	V.
33.083	5567.5103	2.28	Q	.	.	.	V.
33.167	5567.5215	1.63	Q	.	.	.	V.
33.250	5567.5283	0.98	Q	.	.	.	V.
33.333	5567.5308	0.34	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%	2000.0
10%	1400.0
20%	915.0
30%	560.0
40%	445.0
50%	370.0
60%	310.0
70%	250.0
80%	190.0
90%	130.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5- REGIONAL NODE 134U *
* 10-YR EV APRIL 2019 CCHIU *

FILE NAME: EV1034US.DAT
TIME/DATE OF STUDY: 07:58 04/09/2019

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

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

=====

(UNIT-HYDROGRAPH 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) = 0.285
LOW LOSS FRACTION = 0.737
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.31
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.62
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.86
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.58
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.31
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.05

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.304
30-MINUTE FACTOR = 0.358
1-HOUR FACTOR = 0.405
3-HOUR FACTOR = 0.750
6-HOUR FACTOR = 0.890
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.928

=====

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.167	1268.705
2	0.502	2537.408
3	0.837	2537.408
4	1.171	2537.413
5	1.506	2537.403
6	1.841	2537.776
7	2.267	3229.963
8	2.776	3861.267
9	3.285	3861.269
10	3.796	3876.183
11	4.558	5779.219
12	5.495	7104.733
13	6.569	8141.640
14	7.821	9490.095
15	9.310	11295.704
16	10.818	11429.165
17	12.282	11101.140
18	13.793	11455.819
19	15.848	15589.453
20	17.519	12664.787
21	19.080	11841.312
22	20.804	13069.962
23	22.908	15950.612
24	24.891	15041.873
25	26.565	12686.835
26	28.376	13733.489
27	30.554	16516.994
28	32.798	17012.047
29	35.340	19279.037
30	37.135	13610.500
31	39.527	18135.021
32	42.248	20632.963
33	44.902	20121.133
34	47.759	21667.902
35	50.724	22481.566
36	52.871	16275.340
37	54.917	15514.783
38	57.044	16132.450
39	59.578	19209.473
40	62.523	22335.842
41	64.844	17595.424
42	66.827	15036.188
43	68.931	15956.701
44	70.946	15275.168
45	72.731	13535.902
46	74.600	14174.452
47	76.272	12679.257
48	77.593	10012.536

49	78.894	9867.737
50	80.212	9990.380
51	81.582	10391.224
52	82.862	9700.840
53	84.075	9200.146
54	85.201	8537.530
55	86.251	7959.723
56	87.157	6869.768
57	88.024	6575.079
58	88.733	5376.480
59	89.422	5224.682
60	90.095	5103.312
61	90.716	4706.286
62	91.332	4674.642
63	91.944	4636.750
64	92.511	4302.897
65	93.069	4229.601
66	93.627	4228.270
67	94.120	3742.791
68	94.495	2839.924
69	94.867	2819.734
70	95.238	2819.734
71	95.610	2819.676
72	95.967	2708.488
73	96.219	1904.255
74	96.448	1742.390
75	96.678	1739.902
76	96.907	1739.844
77	97.137	1742.448
78	97.367	1742.390
79	97.596	1739.902
80	97.826	1742.390
81	98.008	1378.223
82	98.068	457.769
83	98.123	414.728
84	98.178	417.273
85	98.233	414.728
86	98.288	419.819
87	98.343	414.728
88	98.398	417.273
89	98.453	419.761
90	98.508	417.273
91	98.563	414.728
92	98.617	412.240
93	98.673	424.852
94	98.727	409.695
95	98.783	419.761
96	98.837	414.786
97	98.892	414.728
98	98.947	414.728
99	99.003	424.852
100	99.057	414.728
101	99.112	414.728
102	99.167	414.728
103	99.222	414.728
104	99.276	414.728
105	99.331	414.728
106	99.386	414.728

107	99.440	414.728
108	99.495	414.728
109	99.550	414.728
110	99.604	414.728
111	99.659	414.728
112	99.714	414.728
113	99.769	414.728
114	99.823	414.728
115	99.878	414.728
116	99.933	414.728
117	99.987	414.728
118	100.000	96.378

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 14084.3945
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 5691.1509

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.	1875.0	3750.0	5625.0	7500.0
0.083	0.0133	1.93	Q	.	.	.	.
0.167	0.0531	5.79	Q	.	.	.	.
0.250	0.1196	9.66	Q	.	.	.	.
0.333	0.2129	13.54	Q	.	.	.	.
0.417	0.3329	17.43	Q	.	.	.	.
0.500	0.4799	21.34	Q	.	.	.	.
0.583	0.6611	26.31	Q	.	.	.	.
0.667	0.8832	32.25	Q	.	.	.	.
0.750	1.1463	38.21	Q	.	.	.	.
0.833	1.4508	44.21	Q	.	.	.	.
0.917	1.8166	53.12	Q	.	.	.	.
1.000	2.2579	64.07	Q	.	.	.	.
1.083	2.7856	76.63	Q	.	.	.	.
1.167	3.4142	91.27	Q	.	.	.	.
1.250	4.1628	108.70	Q	.	.	.	.
1.333	5.0332	126.38	Q	.	.	.	.
1.417	6.0223	143.62	Q	.	.	.	.
1.500	7.1342	161.45	Q	.	.	.	.
1.583	8.4125	185.62	Q	.	.	.	.
1.667	9.8272	205.41	VQ	.	.	.	.
1.750	11.3700	224.02	VQ	.	.	.	.
1.833	13.0542	244.54	VQ	.	.	.	.
1.917	14.9104	269.52	VQ	.	.	.	.
2.000	16.9295	293.18	VQ	.	.	.	.
2.083	19.0875	313.35	VQ	.	.	.	.
2.167	21.3958	335.16	VQ	.	.	.	.
2.250	23.8839	361.28	VQ	.	.	.	.
2.333	26.5576	388.22	V Q	.	.	.	.
2.417	29.4412	418.70	V Q	.	.	.	.
2.500	32.4760	440.66	V Q	.	.	.	.
2.583	35.7101	469.58	V Q	.	.	.	.
2.667	39.1698	502.36	V Q	.	.	.	.
2.750	42.8509	534.49	V Q	.	.	.	.
2.833	46.7700	569.05	V Q	.	.	.	.
2.917	50.9366	604.99	V Q	.	.	.	.
3.000	55.2863	631.58	V Q	.	.	.	.
3.083	59.8121	657.14	V Q	.	.	.	.
3.167	64.5208	683.69	V Q	.	.	.	.
3.250	69.4453	715.05	V Q	.	.	.	.
3.333	74.6190	751.22	V Q	.	.	.	.
3.417	79.9932	780.34	V Q	.	.	.	.
3.500	85.5417	805.64	V Q	.	.	.	.
3.583	91.2750	832.47	V Q	.	.	.	.
3.667	97.1862	858.31	V Q	.	.	.	.
3.750	103.2581	881.65	V Q	.	.	.	.
3.833	109.4978	906.00	V Q	.	.	.	.
3.917	115.8904	928.21	V Q	.	.	.	.

4.000	122.4084	946.41	V Q	.	.	.	.
4.083	129.0511	964.51	V Q	.	.	.	.
4.167	135.8198	982.82	V Q	.	.	.	.
4.250	142.7197	1001.86	.V Q	.	.	.	.
4.333	149.7437	1019.89	.V Q	.	.	.	.
4.417	156.8874	1037.26	.V Q	.	.	.	.
4.500	164.1441	1053.67	.V Q	.	.	.	.
4.583	171.5085	1069.31	.V Q	.	.	.	.
4.667	178.9693	1083.32	.V Q	.	.	.	.
4.750	186.5244	1096.99	.V Q	.	.	.	.
4.833	194.1611	1108.86	.V Q	.	.	.	.
4.917	201.8788	1120.60	.V Q	.	.	.	.
5.000	209.6762	1132.18	.V Q	.	.	.	.
5.083	217.5498	1143.26	.V Q	.	.	.	.
5.167	225.4996	1154.30	.V Q	.	.	.	.
5.250	233.5257	1165.39	.V Q	.	.	.	.
5.333	241.6248	1175.99	.V Q	.	.	.	.
5.417	249.7968	1186.58	.V Q	.	.	.	.
5.500	258.0419	1197.18	.V Q	.	.	.	.
5.583	266.3557	1207.16	.V Q	.	.	.	.
5.667	274.7288	1215.77	.V Q	.	.	.	.
5.750	283.1617	1224.46	.V Q	.	.	.	.
5.833	291.6546	1233.16	. V Q	.	.	.	.
5.917	300.2081	1241.97	. V Q	.	.	.	.
6.000	308.8211	1250.61	. V Q	.	.	.	.
6.083	317.4860	1258.15	. V Q	.	.	.	.
6.167	326.2012	1265.44	. V Q	.	.	.	.
6.250	334.9673	1272.84	. V Q	.	.	.	.
6.333	343.7844	1280.24	. V Q	.	.	.	.
6.417	352.6533	1287.76	. V Q	.	.	.	.
6.500	361.5740	1295.29	. V Q	.	.	.	.
6.583	370.5473	1302.93	. V Q	.	.	.	.
6.667	379.5733	1310.57	. V Q	.	.	.	.
6.750	388.6490	1317.79	. V Q	.	.	.	.
6.833	397.7647	1323.61	. V Q	.	.	.	.
6.917	406.9209	1329.48	. V Q	.	.	.	.
7.000	416.1176	1335.36	. V Q	.	.	.	.
7.083	425.3555	1341.35	. V Q	.	.	.	.
7.167	434.6348	1347.36	. V Q	.	.	.	.
7.250	443.9563	1353.48	. V Q	.	.	.	.
7.333	453.3199	1359.60	. V Q	.	.	.	.
7.417	462.7267	1365.86	. V Q	.	.	.	.
7.500	472.1766	1372.12	. V Q	.	.	.	.
7.583	481.6704	1378.51	. V Q	.	.	.	.
7.667	491.2083	1384.90	. V Q	.	.	.	.
7.750	500.7913	1391.45	. V Q	.	.	.	.
7.833	510.4192	1397.97	. V Q	.	.	.	.
7.917	520.0932	1404.66	. V Q	.	.	.	.
8.000	529.8132	1411.35	. V Q	.	.	.	.
8.083	539.5803	1418.18	. V Q	.	.	.	.
8.167	549.3944	1425.02	. V Q	.	.	.	.
8.250	559.2568	1432.02	. V Q	.	.	.	.
8.333	569.1675	1439.02	. V Q	.	.	.	.
8.417	579.1274	1446.18	. V Q	.	.	.	.
8.500	589.1367	1453.35	. V Q	.	.	.	.
8.583	599.1964	1460.68	. V Q	.	.	.	.
8.667	609.3068	1468.02	. V Q	.	.	.	.
8.750	619.4688	1475.53	. V Q	.	.	.	.

8.833	629.6827	1483.06	.	V	Q	.	.	.	.
8.917	639.9497	1490.76	.	V	Q	.	.	.	.
9.000	650.2698	1498.48	.	V	Q	.	.	.	.
9.083	660.6443	1506.38	.	V	Q	.	.	.	.
9.167	671.0734	1514.30	.	V	Q	.	.	.	.
9.250	681.5582	1522.40	.	V	Q	.	.	.	.
9.333	692.0991	1530.53	.	V	Q	.	.	.	.
9.417	702.6972	1538.85	.	V	Q	.	.	.	.
9.500	713.3528	1547.19	.	V	Q	.	.	.	.
9.583	724.0673	1555.74	.	V	Q	.	.	.	.
9.667	734.8409	1564.32	.	V	Q	.	.	.	.
9.750	745.6749	1573.11	.	V	Q	.	.	.	.
9.833	756.5664	1581.44	.	V	Q	.	.	.	.
9.917	767.5157	1589.85	.	V	Q	.	.	.	.
10.000	778.5232	1598.28	.	V	Q	.	.	.	.
10.083	789.5903	1606.95	.	V	Q	.	.	.	.
10.167	800.7174	1615.65	.	V	Q	.	.	.	.
10.250	811.9060	1624.59	.	V	Q	.	.	.	.
10.333	823.1564	1633.56	.	V	Q	.	.	.	.
10.417	834.4704	1642.79	.	V	Q	.	.	.	.
10.500	845.8482	1652.05	.	V	Q	.	.	.	.
10.583	857.2916	1661.58	.	V	Q	.	.	.	.
10.667	868.8010	1671.16	.	V	Q	.	.	.	.
10.750	880.3782	1681.01	.	V	Q	.	.	.	.
10.833	892.0236	1690.91	.	V	Q	.	.	.	.
10.917	903.7391	1701.10	.	V	Q	.	.	.	.
11.000	915.5253	1711.35	.	V	Q	.	.	.	.
11.083	927.3840	1721.90	.	V	Q	.	.	.	.
11.167	939.3159	1732.51	.	V	Q	.	.	.	.
11.250	951.3231	1743.44	.	V	Q	.	.	.	.
11.333	963.4059	1754.44	.	V	Q	.	.	.	.
11.417	975.5669	1765.77	.	V	Q	.	.	.	.
11.500	987.8065	1777.18	.	V	Q	.	.	.	.
11.583	1000.1271	1788.95	.	V	Q	.	.	.	.
11.667	1012.5293	1800.80	.	V	Q	.	.	.	.
11.750	1025.0157	1813.03	.	V	Q	.	.	.	.
11.833	1037.5870	1825.35	.	V	Q	.	.	.	.
11.917	1050.2460	1838.07	.	V	Q	.	.	.	.
12.000	1062.9932	1850.90	.	V	Q	.	.	.	.
12.083	1075.8553	1867.60	.	V	Q	.	.	.	.
12.167	1088.8572	1887.86	.	V	Q	.	.	.	.
12.250	1102.0013	1908.53	.	V	Q	.	.	.	.
12.333	1115.2886	1929.30	.	V	Q	.	.	.	.
12.417	1128.7218	1950.50	.	V	Q	.	.	.	.
12.500	1142.3018	1971.81	.	V	Q	.	.	.	.
12.583	1156.0446	1995.46	.	V	Q	.	.	.	.
12.667	1169.9629	2020.95	.	V	Q	.	.	.	.
12.750	1184.0601	2046.91	.	V	Q	.	.	.	.
12.833	1198.3370	2073.02	.	V	Q	.	.	.	.
12.917	1212.8330	2104.82	.	V	Q	.	.	.	.
13.000	1227.5736	2140.34	.	V	Q	.	.	.	.
13.083	1242.5818	2179.18	.	V	Q	.	.	.	.
13.167	1257.8833	2221.78	.	V	Q	.	.	.	.
13.250	1273.5155	2269.79	.	V	Q	.	.	.	.
13.333	1289.4812	2318.22	.	V	Q	.	.	.	.
13.417	1305.7777	2366.25	.	V	Q	.	.	.	.
13.500	1322.4121	2415.32	.	V	Q	.	.	.	.
13.583	1339.4657	2476.17	.	V	Q	.	.	.	.

13.667	1356.8838	2529.10	.	V.	Q	.	.	.	.
13.750	1374.6544	2580.30	.	V.	Q	.	.	.	.
13.833	1392.8015	2634.96	.	V.	Q	.	.	.	.
13.917	1411.3829	2698.02	.	V.	Q	.	.	.	.
14.000	1430.3822	2758.70	.	V	Q	.	.	.	.
14.083	1449.8093	2820.83	.	V	Q	.	.	.	.
14.167	1469.7340	2893.06	.	V	Q	.	.	.	.
14.250	1490.2085	2972.90	.	V	Q	.	.	.	.
14.333	1511.2388	3053.59	.	V	Q	.	.	.	.
14.417	1532.8672	3140.44	.	V	Q	.	.	.	.
14.500	1554.9834	3211.27	.	V	Q	.	.	.	.
14.583	1577.6997	3298.40	.	.V	Q	.	.	.	.
14.667	1601.0835	3395.33	.	.V	Q	.	.	.	.
14.750	1625.1221	3490.40	.	.V	Q	.	.	.	.
14.833	1649.8385	3588.82	.	.V	Q	.	.	.	.
14.917	1675.3199	3699.90	.	.V	Q	.	.	.	.
15.000	1701.4929	3800.32	.	.V	Q	.	.	.	.
15.083	1728.3750	3903.27	.	.V	Q	.	.	.	.
15.167	1756.0175	4013.68	.	.V	Q	.	.	.	.
15.250	1784.5353	4140.79	.	.V	Q	.	.	.	.
15.333	1813.9718	4274.19	.	.V	Q	.	.	.	.
15.417	1844.1741	4385.38	.	.V	Q	.	.	.	.
15.500	1875.0593	4484.54	.	.V	Q	.	.	.	.
15.583	1906.7998	4608.72	.	.V	Q	.	.	.	.
15.667	1939.2507	4711.87	.	.V	Q	.	.	.	.
15.750	1972.3196	4801.60	.	.V	Q	.	.	.	.
15.833	2006.0479	4897.34	.	.V	Q	.	.	.	.
15.917	2040.5037	5002.98	.	.V	Q	.	.	.	.
16.000	2075.6348	5101.03	.	.V	Q	.	.	.	.
16.083	2111.8779	5262.52	.	.V	Q	.	.	.	.
16.167	2149.1970	5418.74	.	.V	Q	.	.	.	.
16.250	2187.0649	5498.42	.	.V	Q	.	.	.	.
16.333	2225.4275	5570.23	.	.V	Q	.	.	.	.
16.417	2264.3552	5652.29	.	.V	Q	.	.	.	.
16.500	2303.6406	5704.23	.	.V	Q	.	.	.	.
16.583	2343.6980	5816.33	.	.V	Q	.	.	.	.
16.667	2384.5562	5932.60	.	.V	Q	.	.	.	.
16.750	2425.9268	6007.02	.	.V	Q	.	.	.	.
16.833	2467.9373	6099.92	.	.V	Q	.	.	.	.
16.917	2511.3198	6299.16	.	.V	Q	.	.	.	.
17.000	2555.6624	6438.55	.	.V	Q	.	.	.	.
17.083	2600.7969	6553.52	.	.V	Q	.	.	.	.
17.167	2646.8013	6679.82	.	.V	Q	.	.	.	.
17.250	2693.8298	6828.56	.	.V	Q	.	.	.	.
17.333	2741.3320	6897.30	.	.V	Q	.	.	.	.
17.417	2789.0664	6931.03	.	.V	Q	.	.	.	.
17.500	2837.3508	7010.91	.	.V	Q	.	.	.	.
17.583	2887.4924	7280.57	.	.V	Q	.	.	.	.
17.667	2936.4326	7106.12	.	.V	Q	.	.	.	.
17.750	2985.1409	7072.45	.	.V	Q	.	.	.	.
17.833	3034.7605	7204.77	.	.V	Q	.	.	.	.
17.917	3085.6760	7392.93	.	.V	Q	.	.	.	.
18.000	3135.9009	7292.63	.	.V	Q	.	.	.	.
18.083	3184.9023	7115.03	.	.V	Q	.	.	.	.
18.167	3234.2524	7165.65	.	.V	Q	.	.	.	.
18.250	3284.6155	7312.72	.	.V	Q	.	.	.	.
18.333	3335.1118	7332.05	.	.V	Q	.	.	.	.
18.417	3386.2163	7420.37	.	.V	Q	.	.	.	.

18.500	3434.8076	7055.48	.	.	.	V	.	Q	.
18.583	3485.1038	7302.99	.	.	.	V	.	Q	.
18.667	3536.1250	7408.27	.	.	.	V	.	Q	.
18.750	3586.8711	7368.34	.	.	.	V	.	Q	.
18.833	3637.9739	7420.12	.	.	.	V	.	Q	.
18.917	3688.6753	7361.83	.	.	.	V	.	Q	.
19.000	3736.2061	6901.47	.	.	.	V	.	Q	.
19.083	3783.2710	6833.83	.	.	.	V	.	Q	.
19.167	3830.6155	6874.41	.	.	.	V	.	Q	.
19.250	3879.2124	7056.27	.	.	.	V	.	Q	.
19.333	3928.6162	7173.43	.	.	.	V	.	Q	.
19.417	3975.3232	6781.87	.	.	.	V	.	Q	.
19.500	4020.6475	6581.06	.	.	.	V	.	Q	.
19.583	4065.8269	6560.04	.	.	.	V	.	Q	.
19.667	4110.1709	6438.78	.	.	.	V	.	Q	.
19.750	4153.2622	6256.89	.	.	.	V	.	Q	.
19.833	4195.8926	6189.90	.	.	.	V	.	Q	.
19.917	4236.9883	5967.13	.	.	.	V	.	Q	.
20.000	4276.4248	5726.16	.	.	.	Q	.	.	.
20.083	4315.3496	5651.87	.	.	.	Q	.	.	.
20.167	4353.8765	5594.11	.	.	.	Q	.	.	.
20.250	4391.8691	5516.54	.	.	.	Q	.	.	.
20.333	4428.6240	5336.84	.	.	.	Q	.	.	.
20.417	4464.3213	5183.25	.	.	.	Q	.	.	.
20.500	4499.0728	5045.94	.	.	.	Q	.	.	.
20.583	4532.7676	4892.51	.	.	.	Q	.	.	.
20.667	4565.1641	4704.00	.	.	.	Q	.	.	.
20.750	4596.6274	4568.48	.	.	.	Q	.	.	.
20.833	4626.6890	4364.97	.	.	.	Q	.	.	.
20.917	4655.8496	4234.15	.	.	.	Q	.	.	.
21.000	4684.3276	4134.99	.	.	.	Q	.	.	.
21.083	4712.0264	4021.84	.	.	.	Q	.	.	.
21.167	4739.0503	3923.86	.	.	.	Q	.	.	.
21.250	4765.2949	3810.70	.	.	.	Q	.	.	.
21.333	4790.6030	3674.70	.	.	.	Q	.	.	.
21.417	4815.1943	3570.67	.	.	.	Q	.	.	.
21.500	4839.1353	3476.25	.	.	.	Q	.	.	.
21.583	4862.1919	3347.81	.	.	.	Q	.	.	.
21.667	4884.2651	3205.03	.	.	.	Q	.	.	.
21.750	4905.7964	3126.35	.	.	.	Q	.	.	.
21.833	4926.8237	3053.18	.	.	.	Q	.	.	.
21.917	4947.3599	2981.85	.	.	.	Q	.	.	.
22.000	4967.3599	2904.00	.	.	.	Q	.	.	.
22.083	4986.5713	2789.49	.	.	.	Q	.	.	.
22.167	5005.3101	2720.89	.	.	.	Q	.	.	.
22.250	5023.6396	2661.47	.	.	.	Q	.	.	.
22.333	5041.5835	2605.42	.	.	.	Q	.	.	.
22.417	5059.1353	2548.52	.	.	.	Q	.	.	.
22.500	5076.3008	2492.45	.	.	.	Q	.	.	.
22.583	5093.0962	2438.70	.	.	.	Q	.	.	.
22.667	5109.5493	2388.98	.	.	.	Q	.	.	.
22.750	5125.4810	2313.24	.	.	.	Q	.	.	.
22.833	5140.7090	2211.14	.	.	.	Q	.	.	.
22.917	5155.6333	2166.99	.	.	.	Q	.	.	.
23.000	5170.2842	2127.27	.	.	.	Q	.	.	.
23.083	5184.6963	2092.67	.	.	.	Q	.	.	.
23.167	5198.8608	2056.72	.	.	.	Q	.	.	.
23.250	5212.7700	2019.64	.	.	.	Q	.	.	.

23.333	5226.4312	1983.60	.	.	.	Q	.	.	V	.
23.417	5239.8428	1947.38	.	.	.	Q	.	.	V	.
23.500	5253.0015	1910.65	.	.	.	Q	.	.	V	.
23.583	5265.9146	1875.01	.	.	.	Q	.	.	V	.
23.667	5278.5991	1841.80	.	.	.	Q	.	.	V	.
23.750	5291.0752	1811.51	.	.	.	Q	.	.	V	.
23.833	5303.3564	1783.24	.	.	.	Q	.	.	V	.
23.917	5315.4551	1756.69	.	.	.	Q	.	.	V	.
24.000	5327.3701	1730.05	.	.	.	Q	.	.	V	.
24.083	5339.1099	1704.59	.	.	.	Q	.	.	V	.
24.167	5350.6675	1678.15	.	.	.	Q	.	.	V	.
24.250	5362.0503	1652.82	.	.	.	Q	.	.	V	.
24.333	5373.2539	1626.74	.	.	.	Q	.	.	V	.
24.417	5384.2852	1601.76	.	.	.	Q	.	.	V	.
24.500	5395.1479	1577.28	.	.	.	Q	.	.	V	.
24.583	5405.8384	1552.26	.	.	.	Q	.	.	V	.
24.667	5416.3530	1526.74	.	.	.	Q	.	.	V	.
24.750	5426.7012	1502.57	.	.	.	Q	.	.	V	.
24.833	5436.9043	1481.47	.	.	.	Q	.	.	V	.
24.917	5446.9453	1457.98	.	.	.	Q	.	.	V	.
25.000	5456.8145	1433.03	.	.	.	Q	.	.	V	.
25.083	5466.5044	1406.98	.	.	.	Q	.	.	V	.
25.167	5476.0122	1380.52	.	.	.	Q	.	.	V	.
25.250	5485.3232	1351.93	.	.	.	Q	.	.	V	.
25.333	5494.4375	1323.38	.	.	.	Q	.	.	V	.
25.417	5503.3599	1295.53	.	.	.	Q	.	.	V	.
25.500	5512.0908	1267.71	.	.	.	Q	.	.	V	.
25.583	5520.5884	1233.85	.	.	.	Q	.	.	V	.
25.667	5528.8809	1204.07	.	.	.	Q	.	.	V	.
25.750	5536.9639	1173.66	.	.	.	Q	.	.	V	.
25.833	5544.6963	1122.74	.	.	.	Q	.	.	V	.
25.917	5552.1538	1082.86	.	.	.	Q	.	.	V	.
26.000	5559.3921	1051.00	.	.	.	Q	.	.	V	.
26.083	5566.4395	1023.25	.	.	.	Q	.	.	V	.
26.167	5573.2793	993.17	.	.	.	Q	.	.	V	.
26.250	5579.8809	958.52	.	.	.	Q	.	.	V	.
26.333	5586.2388	923.13	.	.	.	Q	.	.	V	.
26.417	5592.3291	884.33	.	.	.	Q	.	.	V	.
26.500	5598.2119	854.20	.	.	.	Q	.	.	V	.
26.583	5603.8403	817.23	.	.	.	Q	.	.	V	.
26.667	5609.1885	776.57	.	.	.	Q	.	.	V	.
26.750	5614.2627	736.80	.	.	.	Q	.	.	V	.
26.833	5619.0605	696.68	.	.	.	Q	.	.	V	.
26.917	5623.5796	656.17	.	.	.	Q	.	.	V	.
27.000	5627.8867	625.40	.	.	.	Q	.	.	V	.
27.083	5631.9917	596.03	.	.	.	Q	.	.	V	.
27.167	5635.8896	565.96	.	.	.	Q	.	.	V	.
27.250	5639.5498	531.47	.	.	.	Q	.	.	V	.
27.333	5642.9414	492.49	.	.	.	Q	.	.	V	.
27.417	5646.1162	460.99	.	.	.	Q	.	.	V	.
27.500	5649.1025	433.59	.	.	.	Q	.	.	V	.
27.583	5651.8916	405.01	.	.	.	Q	.	.	V	.
27.667	5654.4927	377.66	.	.	.	Q	.	.	V	.
27.750	5656.9248	353.14	.	.	.	Q	.	.	V	.
27.833	5659.1885	328.71	.	.	.	Q	.	.	V	.
27.917	5661.3027	306.98	.	.	.	Q	.	.	V	.
28.000	5663.2964	289.48	.	.	.	Q	.	.	V	.
28.083	5665.1719	272.33	.	.	.	Q	.	.	V	.

28.167	5666.9292	255.14	.Q	.	.	.	V.
28.250	5668.5645	237.47	.Q	.	.	.	V.
28.333	5670.0864	220.98	.Q	.	.	.	V.
28.417	5671.5010	205.38	.Q	.	.	.	V.
28.500	5672.8159	190.90	.Q	.	.	.	V.
28.583	5674.0376	177.41	Q	.	.	.	V.
28.667	5675.1787	165.67	Q	.	.	.	V.
28.750	5676.2427	154.47	Q	.	.	.	V.
28.833	5677.2427	145.17	Q	.	.	.	V.
28.917	5678.1807	136.17	Q	.	.	.	V.
29.000	5679.0581	127.43	Q	.	.	.	V.
29.083	5679.8799	119.36	Q	.	.	.	V.
29.167	5680.6470	111.39	Q	.	.	.	V.
29.250	5681.3599	103.54	Q	.	.	.	V.
29.333	5682.0229	96.26	Q	.	.	.	V.
29.417	5682.6367	89.14	Q	.	.	.	V.
29.500	5683.2021	82.08	Q	.	.	.	V.
29.583	5683.7241	75.80	Q	.	.	.	V.
29.667	5684.2129	70.94	Q	.	.	.	V.
29.750	5684.6685	66.14	Q	.	.	.	V.
29.833	5685.0913	61.38	Q	.	.	.	V.
29.917	5685.4814	56.66	Q	.	.	.	V.
30.000	5685.8403	52.14	Q	.	.	.	V.
30.083	5686.1768	48.87	Q	.	.	.	V.
30.167	5686.4927	45.87	Q	.	.	.	V.
30.250	5686.7881	42.89	Q	.	.	.	V.
30.333	5687.0630	39.94	Q	.	.	.	V.
30.417	5687.3179	37.01	Q	.	.	.	V.
30.500	5687.5527	34.10	Q	.	.	.	V.
30.583	5687.7676	31.21	Q	.	.	.	V.
30.667	5687.9629	28.34	Q	.	.	.	V.
30.750	5688.1421	26.04	Q	.	.	.	V.
30.833	5688.3154	25.16	Q	.	.	.	V.
30.917	5688.4829	24.34	Q	.	.	.	V.
31.000	5688.6450	23.54	Q	.	.	.	V.
31.083	5688.8018	22.74	Q	.	.	.	V.
31.167	5688.9526	21.94	Q	.	.	.	V.
31.250	5689.0981	21.15	Q	.	.	.	V.
31.333	5689.2383	20.37	Q	.	.	.	V.
31.417	5689.3730	19.59	Q	.	.	.	V.
31.500	5689.5029	18.83	Q	.	.	.	V.
31.583	5689.6274	18.07	Q	.	.	.	V.
31.667	5689.7466	17.32	Q	.	.	.	V.
31.750	5689.8608	16.56	Q	.	.	.	V.
31.833	5689.9697	15.83	Q	.	.	.	V.
31.917	5690.0737	15.08	Q	.	.	.	V.
32.000	5690.1724	14.35	Q	.	.	.	V.
32.083	5690.2661	13.63	Q	.	.	.	V.
32.167	5690.3550	12.91	Q	.	.	.	V.
32.250	5690.4390	12.18	Q	.	.	.	V.
32.333	5690.5181	11.48	Q	.	.	.	V.
32.417	5690.5923	10.77	Q	.	.	.	V.
32.500	5690.6616	10.08	Q	.	.	.	V.
32.583	5690.7261	9.38	Q	.	.	.	V.
32.667	5690.7861	8.70	Q	.	.	.	V.
32.750	5690.8413	8.01	Q	.	.	.	V.
32.833	5690.8916	7.33	Q	.	.	.	V.
32.917	5690.9375	6.66	Q	.	.	.	V.

33.000	5690.9785	5.99	Q	.	.	.	V.
33.083	5691.0151	5.32	Q	.	.	.	V.
33.167	5691.0474	4.66	Q	.	.	.	V.
33.250	5691.0747	4.01	Q	.	.	.	V.
33.333	5691.0977	3.35	Q	.	.	.	V.
33.417	5691.1162	2.70	Q	.	.	.	V.
33.500	5691.1304	2.06	Q	.	.	.	V.
33.583	5691.1401	1.42	Q	.	.	.	V.
33.667	5691.1455	0.78	Q	.	.	.	V.
33.750	5691.1465	0.15	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%	2025.0
10%	1405.0
20%	955.0
30%	575.0
40%	465.0
50%	380.0
60%	320.0
70%	260.0
80%	195.0
90%	140.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5- REGIONAL NODE 134T *
* 10-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV1034TS.DAT
TIME/DATE OF STUDY: 14:58 01/02/2019

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

>>>>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 = 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

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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

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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.	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

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5- REGIONAL NODE 134C *
* 10-YR EV APRIL 2019 CCHIU *

FILE NAME: EV1034CS.DAT
TIME/DATE OF STUDY: 08:04 04/09/2019

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

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 66557.797 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) = 0.285
LOW LOSS FRACTION = 0.738
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.31
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.62
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.86
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.56
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.29
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 3.99

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.294
30-MINUTE FACTOR = 0.352
1-HOUR FACTOR = 0.397
3-HOUR FACTOR = 0.741
6-HOUR FACTOR = 0.887
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.928

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.167	1346.809
2	0.502	2693.615
3	0.837	2693.615
4	1.171	2693.621
5	1.506	2693.610
6	1.841	2694.006
7	2.267	3428.805
8	2.776	4098.973
9	3.285	4098.975
10	3.796	4114.808
11	4.558	6134.998
12	5.495	7542.113
13	6.569	8642.854
14	7.821	10074.322
15	9.310	11991.088
16	10.818	12132.764
17	12.282	11784.545
18	13.793	12161.060
19	15.848	16549.168
20	17.519	13444.453
21	19.080	12570.283
22	20.804	13874.572
23	22.908	16932.561
24	24.891	15967.877
25	26.565	13467.858
26	28.376	14578.947
27	30.554	17533.811
28	32.798	18059.340
29	35.340	20465.889
30	37.135	14448.387
31	39.527	19251.445
32	42.248	21903.164
33	44.902	21359.826
34	47.759	23001.816
35	50.724	23865.570
36	52.871	17277.279
37	54.917	16469.900
38	57.044	17125.592
39	59.578	20392.041
40	62.523	23710.875
41	64.844	18678.629
42	66.827	15961.843
43	68.931	16939.023
44	70.946	16215.534
45	72.731	14369.196
46	74.600	15047.057
47	76.272	13459.813
48	77.593	10628.926

49	78.894	10475.213
50	80.212	10605.405
51	81.582	11030.926
52	82.862	10298.040
53	84.075	9766.523
54	85.201	9063.116
55	86.251	8449.737
56	87.157	7292.682
57	88.024	6979.852
58	88.733	5707.466
59	89.422	5546.322
60	90.095	5417.481
61	90.716	4996.013
62	91.332	4962.421
63	91.944	4922.197
64	92.511	4567.791
65	93.069	4489.982
66	93.627	4488.570
67	94.120	3973.204
68	94.495	3014.754
69	94.867	2993.322
70	95.238	2993.322
71	95.610	2993.260
72	95.967	2875.227
73	96.219	2021.484
74	96.448	1849.654
75	96.678	1847.014
76	96.907	1846.952
77	97.137	1849.716
78	97.367	1849.654
79	97.596	1847.014
80	97.826	1849.654
81	98.008	1463.069
82	98.068	485.950
83	98.123	440.259
84	98.178	442.961
85	98.233	440.259
86	98.288	445.664
87	98.343	440.259
88	98.398	442.961
89	98.453	445.602
90	98.508	442.961
91	98.563	440.259
92	98.617	437.619
93	98.673	451.006
94	98.727	434.917
95	98.783	445.602
96	98.837	440.321
97	98.892	440.259
98	98.947	440.259
99	99.003	451.006
100	99.057	440.259
101	99.112	440.259
102	99.167	440.259
103	99.222	440.259
104	99.276	440.259
105	99.331	440.259
106	99.386	440.259

107	99.440	440.259
108	99.495	440.259
109	99.550	440.259
110	99.604	440.259
111	99.659	440.259
112	99.714	440.259
113	99.769	440.259
114	99.823	440.259
115	99.878	440.259
116	99.933	440.259
117	99.987	440.259
118	100.000	102.312

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 14790.9990
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 5847.0474

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.	1900.0	3800.0	5700.0	7600.0
0.083	0.0138	2.00	Q	.	.	.	.
0.167	0.0552	6.01	Q	.	.	.	.
0.250	0.1242	10.03	Q	.	.	.	.
0.333	0.2210	14.05	Q	.	.	.	.
0.417	0.3456	18.10	Q	.	.	.	.
0.500	0.4982	22.15	Q	.	.	.	.
0.583	0.6863	27.31	Q	.	.	.	.
0.667	0.9168	33.48	Q	.	.	.	.
0.750	1.1900	39.67	Q	.	.	.	.
0.833	1.5061	45.90	Q	.	.	.	.
0.917	1.8859	55.15	Q	.	.	.	.
1.000	2.3439	66.51	Q	.	.	.	.
1.083	2.8918	79.55	Q	.	.	.	.
1.167	3.5443	94.75	Q	.	.	.	.
1.250	4.3215	112.84	Q	.	.	.	.
1.333	5.2250	131.20	Q	.	.	.	.
1.417	6.2519	149.10	Q	.	.	.	.
1.500	7.4062	167.61	Q	.	.	.	.
1.583	8.7333	192.70	VQ	.	.	.	.
1.667	10.2019	213.24	VQ	.	.	.	.
1.750	11.8035	232.56	VQ	.	.	.	.
1.833	13.5519	253.87	VQ	.	.	.	.
1.917	15.4789	279.80	VQ	.	.	.	.
2.000	17.5750	304.36	VQ	.	.	.	.
2.083	19.8154	325.30	VQ	.	.	.	.
2.167	22.2117	347.94	VQ	.	.	.	.
2.250	24.7947	375.06	VQ	.	.	.	.
2.333	27.5704	403.03	V Q	.	.	.	.
2.417	30.5640	434.68	V Q	.	.	.	.
2.500	33.7146	457.47	V Q	.	.	.	.
2.583	37.0720	487.49	V Q	.	.	.	.
2.667	40.6638	521.52	V Q	.	.	.	.
2.750	44.4853	554.89	V Q	.	.	.	.
2.833	48.5539	590.76	V Q	.	.	.	.
2.917	52.8795	628.07	V Q	.	.	.	.
3.000	57.3952	655.68	V Q	.	.	.	.
3.083	62.0937	682.22	V Q	.	.	.	.
3.167	66.9820	709.79	V Q	.	.	.	.
3.250	72.0945	742.34	V Q	.	.	.	.
3.333	77.4656	779.88	V Q	.	.	.	.
3.417	83.0449	810.12	V Q	.	.	.	.
3.500	88.8052	836.39	V Q	.	.	.	.
3.583	94.7573	864.24	V Q	.	.	.	.
3.667	100.8941	891.08	V Q	.	.	.	.
3.750	107.1979	915.30	V Q	.	.	.	.
3.833	113.6758	940.59	V Q	.	.	.	.
3.917	120.3125	963.65	V Q	.	.	.	.

4.000	127.0793	982.55	V Q	.	.	.	.
4.083	133.9756	1001.34	V Q	.	.	.	.
4.167	141.0029	1020.36	V Q	.	.	.	.
4.250	148.1662	1040.12	.V Q	.	.	.	.
4.333	155.4585	1058.84	.V Q	.	.	.	.
4.417	162.8751	1076.88	.V Q	.	.	.	.
4.500	170.4089	1093.92	.V Q	.	.	.	.
4.583	178.0546	1110.16	.V Q	.	.	.	.
4.667	185.8006	1124.71	.V Q	.	.	.	.
4.750	193.6443	1138.90	.V Q	.	.	.	.
4.833	201.5729	1151.23	.V Q	.	.	.	.
4.917	209.5855	1163.43	.V Q	.	.	.	.
5.000	217.6808	1175.45	.V Q	.	.	.	.
5.083	225.8555	1186.95	.V Q	.	.	.	.
5.167	234.1091	1198.42	.V Q	.	.	.	.
5.250	242.4420	1209.94	.V Q	.	.	.	.
5.333	250.8508	1220.95	.V Q	.	.	.	.
5.417	259.3353	1231.95	.V Q	.	.	.	.
5.500	267.8956	1242.96	.V Q	.	.	.	.
5.583	276.5273	1253.33	.V Q	.	.	.	.
5.667	285.2207	1262.28	.V Q	.	.	.	.
5.750	293.9762	1271.30	. V Q	.	.	.	.
5.833	302.7940	1280.34	. V Q	.	.	.	.
5.917	311.6747	1289.48	. V Q	.	.	.	.
6.000	320.6173	1298.47	. V Q	.	.	.	.
6.083	329.6138	1306.29	. V Q	.	.	.	.
6.167	338.6625	1313.87	. V Q	.	.	.	.
6.250	347.7642	1321.56	. V Q	.	.	.	.
6.333	356.9188	1329.25	. V Q	.	.	.	.
6.417	366.1273	1337.06	. V Q	.	.	.	.
6.500	375.3896	1344.88	. V Q	.	.	.	.
6.583	384.7065	1352.82	. V Q	.	.	.	.
6.667	394.0781	1360.76	. V Q	.	.	.	.
6.750	403.5014	1368.26	. V Q	.	.	.	.
6.833	412.9663	1374.31	. V Q	.	.	.	.
6.917	422.4733	1380.41	. V Q	.	.	.	.
7.000	432.0223	1386.52	. V Q	.	.	.	.
7.083	441.6143	1392.75	. V Q	.	.	.	.
7.167	451.2492	1398.99	. V Q	.	.	.	.
7.250	460.9279	1405.35	. V Q	.	.	.	.
7.333	470.6505	1411.72	. V Q	.	.	.	.
7.417	480.4179	1418.23	. V Q	.	.	.	.
7.500	490.2302	1424.74	. V Q	.	.	.	.
7.583	500.0881	1431.38	. V Q	.	.	.	.
7.667	509.9918	1438.02	. V Q	.	.	.	.
7.750	519.9423	1444.82	. V Q	.	.	.	.
7.833	529.9396	1451.61	. V Q	.	.	.	.
7.917	539.9848	1458.56	. V Q	.	.	.	.
8.000	550.0778	1465.50	. V Q	.	.	.	.
8.083	560.2197	1472.60	. V Q	.	.	.	.
8.167	570.4106	1479.71	. V Q	.	.	.	.
8.250	580.6516	1487.00	. V Q	.	.	.	.
8.333	590.9427	1494.27	. V Q	.	.	.	.
8.417	601.2852	1501.71	. V Q	.	.	.	.
8.500	611.6788	1509.16	. V Q	.	.	.	.
8.583	622.1250	1516.79	. V Q	.	.	.	.
8.667	632.6238	1524.42	. V Q	.	.	.	.
8.750	643.1763	1532.23	. V Q	.	.	.	.

8.833	653.7828	1540.05	.	V	Q	.	.	.	.
8.917	664.4443	1548.06	.	V	Q	.	.	.	.
9.000	675.1611	1556.08	.	V	Q	.	.	.	.
9.083	685.9345	1564.29	.	V	Q	.	.	.	.
9.167	696.7645	1572.52	.	V	Q	.	.	.	.
9.250	707.6526	1580.95	.	V	Q	.	.	.	.
9.333	718.5988	1589.40	.	V	Q	.	.	.	.
9.417	729.6047	1598.05	.	V	Q	.	.	.	.
9.500	740.6702	1606.72	.	V	Q	.	.	.	.
9.583	751.7970	1615.61	.	V	Q	.	.	.	.
9.667	762.9852	1624.52	.	V	Q	.	.	.	.
9.750	774.2363	1633.66	.	V	Q	.	.	.	.
9.833	785.5471	1642.32	.	V	Q	.	.	.	.
9.917	796.9180	1651.06	.	V	Q	.	.	.	.
10.000	808.3494	1659.84	.	V	Q	.	.	.	.
10.083	819.8428	1668.84	.	V	Q	.	.	.	.
10.167	831.3986	1677.89	.	V	Q	.	.	.	.
10.250	843.0182	1687.18	.	V	Q	.	.	.	.
10.333	854.7022	1696.52	.	V	Q	.	.	.	.
10.417	866.4523	1706.11	.	V	Q	.	.	.	.
10.500	878.2687	1715.74	.	V	Q	.	.	.	.
10.583	890.1533	1725.65	.	V	Q	.	.	.	.
10.667	902.1066	1735.61	.	V	Q	.	.	.	.
10.750	914.1303	1745.85	.	V	Q	.	.	.	.
10.833	926.2250	1756.14	.	V	Q	.	.	.	.
10.917	938.3926	1766.74	.	V	Q	.	.	.	.
11.000	950.6336	1777.39	.	V	Q	.	.	.	.
11.083	962.9501	1788.36	.	V	Q	.	.	.	.
11.167	975.3427	1799.40	.	V	Q	.	.	.	.
11.250	987.8135	1810.76	.	V	Q	.	.	.	.
11.333	1000.3630	1822.20	.	V	Q	.	.	.	.
11.417	1012.9938	1833.99	.	V	Q	.	.	.	.
11.500	1025.7063	1845.85	.	V	Q	.	.	.	.
11.583	1038.5031	1858.09	.	V	Q	.	.	.	.
11.667	1051.3846	1870.41	.	V	Q	.	.	.	.
11.750	1064.3539	1883.13	.	V	Q	.	.	.	.
11.833	1077.4114	1895.94	.	V	Q	.	.	.	.
11.917	1090.5599	1909.17	.	V	Q	.	.	.	.
12.000	1103.8003	1922.50	.	V	Q	.	.	.	.
12.083	1117.1609	1939.97	.	V	Q	.	.	.	.
12.167	1130.6680	1961.23	.	V	Q	.	.	.	.
12.250	1144.3245	1982.92	.	V	Q	.	.	.	.
12.333	1158.1310	2004.70	.	V	Q	.	.	.	.
12.417	1172.0906	2026.93	.	V	Q	.	.	.	.
12.500	1186.2040	2049.27	.	V	Q	.	.	.	.
12.583	1200.4884	2074.10	.	V	Q	.	.	.	.
12.667	1214.9573	2100.88	.	V	Q	.	.	.	.
12.750	1229.6139	2128.14	.	V	Q	.	.	.	.
12.833	1244.4594	2155.57	.	V	Q	.	.	.	.
12.917	1259.5354	2189.05	.	V	Q	.	.	.	.
13.000	1274.8694	2226.49	.	V	Q	.	.	.	.
13.083	1290.4855	2267.45	.	V	Q	.	.	.	.
13.167	1306.4113	2312.42	.	V	Q	.	.	.	.
13.250	1322.6863	2363.14	.	V	Q	.	.	.	.
13.333	1339.3136	2414.30	.	V	Q	.	.	.	.
13.417	1356.2902	2465.00	.	V	Q	.	.	.	.
13.500	1373.6234	2516.79	.	V	Q	.	.	.	.
13.583	1391.3999	2581.14	.	V	Q	.	.	.	.

13.667	1409.5612	2637.01	.	V	Q	.	.	.	.
13.750	1428.0942	2691.00	.	V	Q	.	.	.	.
13.833	1447.0244	2748.66	.	V	Q	.	.	.	.
13.917	1466.4133	2815.27	.	V	Q	.	.	.	.
14.000	1486.2433	2879.31	.	V	Q	.	.	.	.
14.083	1506.5188	2944.01	.	V	Q	.	.	.	.
14.167	1527.3082	3018.63	.	V	Q	.	.	.	.
14.250	1548.6674	3101.35	.	V	Q	.	.	.	.
14.333	1570.6023	3184.95	.	V	Q	.	.	.	.
14.417	1593.1580	3275.08	.	V	Q	.	.	.	.
14.500	1616.2166	3348.11	.	V	Q	.	.	.	.
14.583	1639.8944	3438.03	.	V	Q	.	.	.	.
14.667	1664.2605	3537.96	.	V	Q	.	.	.	.
14.750	1689.3010	3635.88	.	V	Q	.	.	.	.
14.833	1715.0403	3737.35	.	V	Q	.	.	.	.
14.917	1741.5624	3851.01	.	V	Q	.	.	.	.
15.000	1768.7827	3952.39	.	V	Q	.	.	.	.
15.083	1796.7148	4055.75	.	V	Q	.	.	.	.
15.167	1825.4073	4166.16	.	V	Q	.	.	.	.
15.250	1854.9746	4293.16	.	V	Q	.	.	.	.
15.333	1885.4636	4427.01	.	V	Q	.	.	.	.
15.417	1916.7178	4538.11	.	V	Q	.	.	.	.
15.500	1948.6508	4636.67	.	V	Q	.	.	.	.
15.583	1981.4271	4759.14	.	V	Q	.	.	.	.
15.667	2014.9058	4861.09	.	V	Q	.	.	.	.
15.750	2048.9934	4949.52	.	V	Q	.	.	.	.
15.833	2083.7310	5043.91	.	V	Q	.	.	.	.
15.917	2119.1799	5147.21	.	V	Q	.	.	.	.
16.000	2155.2856	5242.55	.	V	Q	.	.	.	.
16.083	2192.4854	5401.39	.	V	Q	.	.	.	.
16.167	2230.7424	5554.94	.	V	Q	.	.	.	.
16.250	2269.5286	5631.74	.	V	Q	.	.	.	.
16.333	2308.7883	5700.51	.	V	Q	.	.	.	.
16.417	2348.5891	5779.06	.	V	Q	.	.	.	.
16.500	2388.7336	5828.99	.	V	Q	.	.	.	.
16.583	2429.6265	5937.65	.	V	Q	.	.	.	.
16.667	2471.2930	6049.97	.	V	Q	.	.	.	.
16.750	2513.4465	6120.71	.	V	Q	.	.	.	.
16.833	2556.2156	6210.06	.	V	Q	.	.	.	.
16.917	2600.3308	6405.54	.	V	Q	.	.	.	.
17.000	2645.3877	6542.26	.	V	Q	.	.	.	.
17.083	2691.2180	6654.56	.	V	Q	.	.	.	.
17.167	2737.9036	6778.75	.	V	Q	.	.	.	.
17.250	2785.5977	6925.16	.	V	Q	.	.	.	.
17.333	2833.7339	6989.37	.	V	Q	.	.	.	.
17.417	2882.0732	7018.87	.	V	Q	.	.	.	.
17.500	2930.9377	7095.13	.	V	Q	.	.	.	.
17.583	2981.6357	7361.35	.	V	Q	.	.	.	.
17.667	3031.1208	7185.22	.	V	Q	.	.	.	.
17.750	3080.3523	7148.41	.	V	Q	.	.	.	.
17.833	3130.4727	7277.47	.	V	Q	.	.	.	.
17.917	3181.8855	7465.15	.	V	Q	.	.	.	.
18.000	3232.6121	7365.51	.	V	Q	.	.	.	.
18.083	3282.1311	7190.16	.	V	Q	.	.	.	.
18.167	3332.0112	7242.59	.	V	Q	.	.	.	.
18.250	3382.9185	7391.74	.	V	Q	.	.	.	.
18.333	3433.9634	7411.73	.	V	Q	.	.	.	.
18.417	3485.6245	7501.19	.	V	Q	.	.	.	.

18.500	3534.8010	7140.44	.	.	.	V	.	Q	.
18.583	3585.7078	7391.64	.	.	.	V	.	Q	.
18.667	3637.3591	7499.79	.	.	.	V	.	Q.	.
18.750	3688.7454	7461.28	.	.	.	V	.	Q.	.
18.833	3740.4866	7512.84	.	.	.	V	.	Q.	.
18.917	3791.8533	7458.46	.	.	.	V	.	Q.	.
19.000	3840.0710	7001.21	.	.	.	V	.	Q	.
19.083	3887.8201	6933.17	.	.	.	V	.	Q	.
19.167	3935.8516	6974.16	.	.	.	V	.	Q	.
19.250	3985.1316	7155.45	.	.	.	V	.	Q	.
19.333	4035.2134	7271.87	.	.	.	V	.	Q	.
19.417	4082.6201	6883.45	.	.	.	V	.	Q	.
19.500	4128.6470	6683.08	.	.	.	V	.	Q	.
19.583	4174.5337	6662.73	.	.	.	V	.	Q	.
19.667	4219.5967	6543.14	.	.	.	V	.	Q	.
19.750	4263.4082	6361.46	.	.	.	V	.	Q	.
19.833	4306.7695	6296.04	.	.	.	V	.	Q	.
19.917	4348.6157	6076.06	.	.	.	V.Q	.	.	.
20.000	4388.8057	5835.61	.	.	.	Q	.	.	.
20.083	4428.4873	5761.79	.	.	.	Q	.	.	.
20.167	4467.7793	5705.16	.	.	.	Q	.	.	.
20.250	4506.5439	5628.64	.	.	.	QV	.	.	.
20.333	4544.0850	5450.93	.	.	.	Q.V	.	.	.
20.417	4580.5728	5298.01	.	.	.	Q.V	.	.	.
20.500	4616.1196	5161.42	.	.	.	Q.V	.	.	.
20.583	4650.6099	5007.97	.	.	.	Q.V	.	.	.
20.667	4683.7954	4818.51	.	.	.	Q.V	.	.	.
20.750	4716.0396	4681.83	.	.	.	Q.V	.	.	.
20.833	4746.8770	4477.61	.	.	.	Q.V	.	.	.
20.917	4776.8027	4345.21	.	.	.	Q.V	.	.	.
21.000	4806.0381	4244.98	.	.	.	Q.V	.	.	.
21.083	4834.4902	4131.24	.	.	.	Q.V	.	.	.
21.167	4862.2622	4032.47	.	.	.	Q.V	.	.	.
21.250	4889.2485	3918.38	.	.	.	Q.V	.	.	.
21.333	4915.2842	3780.35	.	.	.	Q.V	.	.	.
21.417	4940.5918	3674.65	.	.	.	Q.V	.	.	.
21.500	4965.2397	3578.87	.	.	.	Q.V	.	.	.
21.583	4988.9917	3448.82	.	.	.	Q.V	.	.	.
21.667	5011.7480	3304.20	.	.	.	Q.V	.	.	.
21.750	5033.9502	3223.75	.	.	.	Q.V	.	.	.
21.833	5055.6338	3148.43	.	.	.	Q.V	.	.	.
21.917	5076.8125	3075.13	.	.	.	Q.V	.	.	.
22.000	5097.4458	2995.93	.	.	.	Q.V	.	.	.
22.083	5117.2817	2880.18	.	.	.	Q.V	.	.	.
22.167	5136.6343	2809.97	.	.	.	Q.V	.	.	.
22.250	5155.5659	2748.89	.	.	.	Q.V	.	.	.
22.333	5174.1001	2691.19	.	.	.	Q.V	.	.	.
22.417	5192.2310	2632.63	.	.	.	Q.V	.	.	.
22.500	5209.9658	2575.10	.	.	.	Q.V	.	.	.
22.583	5227.3198	2519.81	.	.	.	Q.V	.	.	.
22.667	5244.3203	2468.44	.	.	.	Q.V	.	.	.
22.750	5260.7886	2391.21	.	.	.	Q.V	.	.	.
22.833	5276.5454	2287.89	.	.	.	Q.V	.	.	.
22.917	5291.9888	2242.40	.	.	.	Q.V	.	.	.
23.000	5307.1504	2201.48	.	.	.	Q.V	.	.	.
23.083	5322.0645	2165.55	.	.	.	Q.V	.	.	.
23.167	5336.7227	2128.35	.	.	.	Q.V	.	.	.
23.250	5351.1187	2090.32	.	.	.	Q.V	.	.	.

23.333	5365.2603	2053.36	.	.	.	Q	.	.	V	.
23.417	5379.1460	2016.21	.	.	.	Q	.	.	V	.
23.500	5392.7720	1978.50	.	.	.	Q	.	.	V	.
23.583	5406.1465	1941.96	.	.	.	Q	.	.	V	.
23.667	5419.2866	1907.97	.	.	.	Q	.	.	V	.
23.750	5432.2124	1876.80	.	.	.	Q.	.	.	V	.
23.833	5444.9360	1847.47	.	.	.	Q.	.	.	V	.
23.917	5457.4697	1819.89	.	.	.	Q.	.	.	V	.
24.000	5469.8130	1792.26	.	.	.	Q.	.	.	V	.
24.083	5481.9746	1765.90	.	.	.	Q.	.	.	V	.
24.167	5493.9482	1738.54	.	.	.	Q.	.	.	V	.
24.250	5505.7412	1712.31	.	.	.	Q.	.	.	V	.
24.333	5517.3481	1685.35	.	.	.	Q.	.	.	V	.
24.417	5528.7773	1659.51	.	.	.	Q.	.	.	V	.
24.500	5540.0322	1634.18	.	.	.	Q.	.	.	V	.
24.583	5551.1084	1608.30	.	.	.	Q.	.	.	V	.
24.667	5562.0029	1581.89	.	.	.	Q.	.	.	V	.
24.750	5572.7256	1556.93	.	.	.	Q.	.	.	V	.
24.833	5583.2988	1535.21	.	.	.	Q.	.	.	V	.
24.917	5593.7056	1511.05	.	.	.	Q.	.	.	V	.
25.000	5603.9351	1485.36	.	.	.	Q.	.	.	V	.
25.083	5613.9795	1458.48	.	.	.	Q.	.	.	V	.
25.167	5623.8350	1431.05	.	.	.	Q.	.	.	V	.
25.250	5633.4863	1401.40	.	.	.	Q.	.	.	V	.
25.333	5642.9341	1371.78	.	.	.	Q.	.	.	V	.
25.417	5652.1826	1342.88	.	.	.	Q.	.	.	V	.
25.500	5661.2319	1313.97	.	.	.	Q.	.	.	V	.
25.583	5670.0386	1278.76	.	.	.	Q.	.	.	V	.
25.667	5678.6323	1247.80	.	.	.	Q.	.	.	V	.
25.750	5687.0088	1216.29	.	.	.	Q.	.	.	V	.
25.833	5695.0273	1164.27	.	.	.	Q.	.	.	V	.
25.917	5702.7622	1123.09	.	.	.	Q.	.	.	V	.
26.000	5710.2690	1090.01	.	.	.	Q.	.	.	V	.
26.083	5717.5776	1061.23	.	.	.	Q.	.	.	V	.
26.167	5724.6719	1030.06	.	.	.	Q.	.	.	V	.
26.250	5731.5195	994.27	.	.	.	Q.	.	.	V	.
26.333	5738.1157	957.75	.	.	.	Q.	.	.	V	.
26.417	5744.4360	917.68	.	.	.	Q.	.	.	V	.
26.500	5750.5420	886.59	.	.	.	Q.	.	.	V	.
26.583	5756.3853	848.41	.	.	.	Q.	.	.	V	.
26.667	5761.9390	806.38	.	.	.	Q.	.	.	V	.
26.750	5767.2095	765.28	.	.	.	Q.	.	.	V	.
26.833	5772.1934	723.65	.	.	.	Q.	.	.	V	.
26.917	5776.8872	681.58	.	.	.	Q.	.	.	V	.
27.000	5781.3608	649.60	.	.	.	Q.	.	.	V	.
27.083	5785.6245	619.08	.	.	.	Q.	.	.	V	.
27.167	5789.6729	587.84	.	.	.	Q.	.	.	V	.
27.250	5793.4746	552.00	.	.	.	Q.	.	.	V	.
27.333	5796.9976	511.50	.	.	.	Q.	.	.	V	.
27.417	5800.2949	478.76	.	.	.	Q.	.	.	V	.
27.500	5803.3960	450.29	.	.	.	Q.	.	.	V	.
27.583	5806.2925	420.57	.	.	.	Q.	.	.	V	.
27.667	5808.9932	392.15	.	.	.	Q.	.	.	V	.
27.750	5811.5186	366.66	.	.	.	Q.	.	.	V	.
27.833	5813.8691	341.28	.	.	.	Q.	.	.	V	.
27.917	5816.0645	318.73	.	.	.	Q.	.	.	V	.
28.000	5818.1343	300.55	.	.	.	Q.	.	.	V	.
28.083	5820.0815	282.75	.	.	.	Q.	.	.	V	.

28.167	5821.9058	264.90	.Q	.	.	.	V.
28.250	5823.6040	246.55	.Q	.	.	.	V.
28.333	5825.1841	229.44	.Q	.	.	.	V.
28.417	5826.6528	213.24	.Q	.	.	.	V.
28.500	5828.0181	198.21	.Q	.	.	.	V.
28.583	5829.2866	184.20	Q	.	.	.	V.
28.667	5830.4712	172.01	Q	.	.	.	V.
28.750	5831.5757	160.38	Q	.	.	.	V.
28.833	5832.6138	150.72	Q	.	.	.	V.
28.917	5833.5874	141.38	Q	.	.	.	V.
29.000	5834.4985	132.30	Q	.	.	.	V.
29.083	5835.3521	123.92	Q	.	.	.	V.
29.167	5836.1484	115.65	Q	.	.	.	V.
29.250	5836.8887	107.50	Q	.	.	.	V.
29.333	5837.5771	99.94	Q	.	.	.	V.
29.417	5838.2144	92.55	Q	.	.	.	V.
29.500	5838.8013	85.22	Q	.	.	.	V.
29.583	5839.3433	78.70	Q	.	.	.	V.
29.667	5839.8506	73.65	Q	.	.	.	V.
29.750	5840.3237	68.67	Q	.	.	.	V.
29.833	5840.7627	63.73	Q	.	.	.	V.
29.917	5841.1680	58.82	Q	.	.	.	V.
30.000	5841.5405	54.13	Q	.	.	.	V.
30.083	5841.8901	50.74	Q	.	.	.	V.
30.167	5842.2183	47.62	Q	.	.	.	V.
30.250	5842.5249	44.53	Q	.	.	.	V.
30.333	5842.8105	41.47	Q	.	.	.	V.
30.417	5843.0752	38.43	Q	.	.	.	V.
30.500	5843.3188	35.40	Q	.	.	.	V.
30.583	5843.5420	32.41	Q	.	.	.	V.
30.667	5843.7446	29.43	Q	.	.	.	V.
30.750	5843.9307	27.04	Q	.	.	.	V.
30.833	5844.1104	26.12	Q	.	.	.	V.
30.917	5844.2847	25.28	Q	.	.	.	V.
31.000	5844.4531	24.44	Q	.	.	.	V.
31.083	5844.6157	23.61	Q	.	.	.	V.
31.167	5844.7725	22.78	Q	.	.	.	V.
31.250	5844.9238	21.96	Q	.	.	.	V.
31.333	5845.0693	21.15	Q	.	.	.	V.
31.417	5845.2095	20.34	Q	.	.	.	V.
31.500	5845.3442	19.55	Q	.	.	.	V.
31.583	5845.4736	18.76	Q	.	.	.	V.
31.667	5845.5977	17.98	Q	.	.	.	V.
31.750	5845.7158	17.19	Q	.	.	.	V.
31.833	5845.8291	16.43	Q	.	.	.	V.
31.917	5845.9370	15.66	Q	.	.	.	V.
32.000	5846.0396	14.90	Q	.	.	.	V.
32.083	5846.1372	14.15	Q	.	.	.	V.
32.167	5846.2295	13.41	Q	.	.	.	V.
32.250	5846.3164	12.65	Q	.	.	.	V.
32.333	5846.3984	11.92	Q	.	.	.	V.
32.417	5846.4756	11.19	Q	.	.	.	V.
32.500	5846.5479	10.46	Q	.	.	.	V.
32.583	5846.6147	9.74	Q	.	.	.	V.
32.667	5846.6768	9.03	Q	.	.	.	V.
32.750	5846.7339	8.32	Q	.	.	.	V.
32.833	5846.7861	7.61	Q	.	.	.	V.
32.917	5846.8340	6.91	Q	.	.	.	V.

33.000	5846.8770	6.22	Q	.	.	.	V.
33.083	5846.9150	5.53	Q	.	.	.	V.
33.167	5846.9482	4.84	Q	.	.	.	V.
33.250	5846.9771	4.16	Q	.	.	.	V.
33.333	5847.0010	3.48	Q	.	.	.	V.
33.417	5847.0205	2.81	Q	.	.	.	V.
33.500	5847.0352	2.14	Q	.	.	.	V.
33.583	5847.0454	1.47	Q	.	.	.	V.
33.667	5847.0508	0.81	Q	.	.	.	V.
33.750	5847.0518	0.15	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%	2025.0
10%	1410.0
20%	990.0
30%	590.0
40%	470.0
50%	390.0
60%	325.0
70%	265.0
80%	200.0
90%	140.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5- REGIONAL NODE 137 *
* 10-YR EV APRIL 2019 CCHIU *

FILE NAME: EV10137S.DAT
TIME/DATE OF STUDY: 08:04 04/09/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 137.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 67798.398 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.975 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.736
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.31
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.62
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.85
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.56
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.28
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 3.97

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.291
30-MINUTE FACTOR = 0.350
1-HOUR FACTOR = 0.394
3-HOUR FACTOR = 0.738
6-HOUR FACTOR = 0.886
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.801

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.160	1312.424
2	0.480	2624.847
3	0.800	2624.851
4	1.120	2624.845
5	1.441	2624.850
6	1.761	2624.844
7	2.128	3012.597
8	2.610	3952.384
9	3.097	3994.336
10	3.584	3994.332
11	4.157	4696.606
12	5.028	7140.496
13	5.949	7550.204
14	7.080	9274.339
15	8.341	10338.948
16	9.816	12092.556
17	11.234	11630.266
18	12.635	11483.720
19	14.151	12434.198
20	16.148	16371.292
21	17.692	12662.396
22	19.186	12249.321
23	20.851	13646.452
24	22.864	16505.381
25	24.787	15771.878
26	26.388	13124.232
27	28.066	13761.681
28	30.157	17146.598
29	32.185	16628.648
30	34.697	20592.414
31	36.629	15845.053
32	38.460	15013.212
33	41.194	22411.893
34	43.716	20682.807
35	46.257	20832.535
36	49.253	24569.051
37	51.630	19484.012
38	53.657	16624.723
39	55.575	15725.696
40	57.733	17690.242
41	60.289	20960.463
42	63.048	22625.584
43	65.165	17350.812
44	67.045	15416.980
45	69.094	16804.791
46	70.992	15559.171
47	72.700	14002.021
48	74.492	14695.207

49	76.124	13381.651
50	77.402	10481.670
51	78.647	10207.925
52	79.898	10259.408
53	81.204	10705.371
54	82.466	10350.865
55	83.644	9657.680
56	84.747	9044.504
57	85.803	8658.595
58	86.712	7450.884
59	87.574	7064.912
60	88.333	6227.409
61	88.992	5402.730
62	89.651	5405.546
63	90.278	5133.989
64	90.867	4836.659
65	91.457	4835.283
66	92.037	4758.089
67	92.576	4415.093
68	93.109	4373.556
69	93.643	4376.496
70	94.115	3870.479
71	94.474	2938.641
72	94.829	2912.868
73	95.185	2918.623
74	95.541	2918.561
75	95.893	2890.035
76	96.155	2149.619
77	96.375	1803.809
78	96.595	1797.991
79	96.815	1803.746
80	97.034	1800.931
81	97.254	1803.746
82	97.474	1798.053
83	97.694	1803.746
84	97.912	1792.298
85	98.031	977.691
86	98.084	434.453
87	98.137	428.823
88	98.189	431.638
89	98.242	428.760
90	98.294	431.638
91	98.347	431.638
92	98.399	428.823
93	98.452	431.638
94	98.504	431.638
95	98.557	428.760
96	98.609	431.638
97	98.662	428.823
98	98.715	434.516
99	98.767	428.760
100	98.819	428.760
101	98.872	434.516
102	98.925	428.823
103	98.977	428.760
104	99.029	428.760
105	99.081	428.760
106	99.134	428.760

107	99.186	428.760
108	99.238	428.760
109	99.291	428.760
110	99.343	428.760
111	99.395	428.760
112	99.447	428.760
113	99.500	428.760
114	99.552	428.760
115	99.604	428.760
116	99.657	428.760
117	99.709	428.760
118	99.761	428.760
119	99.814	428.760
120	99.866	428.760
121	99.918	428.760
122	99.970	428.760
123	100.000	242.718

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 14969.0566
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 5946.6426

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.	1900.0	3800.0	5700.0	7600.0
0.083	0.0135	1.95	Q	.	.	.	.
0.167	0.0539	5.87	Q	.	.	.	.
0.250	0.1213	9.79	Q	.	.	.	.
0.333	0.2159	13.73	Q	.	.	.	.
0.417	0.3376	17.68	Q	.	.	.	.
0.500	0.4867	21.64	Q	.	.	.	.
0.583	0.6670	26.19	Q	.	.	.	.
0.667	0.8885	32.15	Q	.	.	.	.
0.750	1.1515	38.19	Q	.	.	.	.
0.833	1.4563	44.26	Q	.	.	.	.
0.917	1.8102	51.38	Q	.	.	.	.
1.000	2.2383	62.17	Q	.	.	.	.
1.083	2.7452	73.59	Q	.	.	.	.
1.167	3.3487	87.63	Q	.	.	.	.
1.250	4.0600	103.28	Q	.	.	.	.
1.333	4.8975	121.60	Q	.	.	.	.
1.417	5.8567	139.28	Q	.	.	.	.
1.500	6.9366	156.80	Q	.	.	.	.
1.583	8.1472	175.78	Q	.	.	.	.
1.667	9.5294	200.70	VQ	.	.	.	.
1.750	11.0456	220.15	VQ	.	.	.	.
1.833	12.6920	239.07	VQ	.	.	.	.
1.917	14.4834	260.10	VQ	.	.	.	.
2.000	16.4495	285.48	VQ	.	.	.	.
2.083	18.5833	309.83	VQ	.	.	.	.
2.167	20.8583	330.33	VQ	.	.	.	.
2.250	23.2813	351.82	VQ	.	.	.	.
2.333	25.8877	378.45	VQ	.	.	.	.
2.417	28.6726	404.36	V Q	.	.	.	.
2.500	31.6773	436.29	V Q	.	.	.	.
2.583	34.8538	461.22	V Q	.	.	.	.
2.667	38.1941	485.02	V Q	.	.	.	.
2.750	41.7746	519.89	V Q	.	.	.	.
2.833	45.5784	552.32	V Q	.	.	.	.
2.917	49.6077	585.05	V Q	.	.	.	.
3.000	53.9016	623.48	V Q	.	.	.	.
3.083	58.4087	654.43	V Q	.	.	.	.
3.167	63.1005	681.26	V Q	.	.	.	.
3.250	67.9683	706.81	V Q	.	.	.	.
3.333	73.0331	735.40	V Q	.	.	.	.
3.417	78.3287	768.93	V Q	.	.	.	.
3.500	83.8734	805.08	V Q	.	.	.	.
3.583	89.6135	833.47	V Q	.	.	.	.
3.667	95.5302	859.11	V Q	.	.	.	.
3.750	101.6381	886.87	V Q	.	.	.	.
3.833	107.9254	912.91	V Q	.	.	.	.
3.917	114.3765	936.70	V Q	.	.	.	.

4.000	120.9993	961.63	V	Q	.	.	.	.
4.083	127.7808	984.67	V	Q	.	.	.	.
4.167	134.6921	1003.52	V	Q	.	.	.	.
4.250	141.7306	1021.99	V	Q	.	.	.	.
4.333	148.8977	1040.66	.V	Q	.	.	.	.
4.417	156.1982	1060.03	.V	Q	.	.	.	.
4.500	163.6292	1078.99	.V	Q	.	.	.	.
4.583	171.1840	1096.95	.V	Q	.	.	.	.
4.667	178.8570	1114.12	.V	Q	.	.	.	.
4.750	186.6445	1130.75	.V	Q	.	.	.	.
4.833	194.5349	1145.69	.V	Q	.	.	.	.
4.917	202.5245	1160.09	.V	Q	.	.	.	.
5.000	210.6053	1173.34	.V	Q	.	.	.	.
5.083	218.7693	1185.40	.V	Q	.	.	.	.
5.167	227.0170	1197.57	.V	Q	.	.	.	.
5.250	235.3458	1209.35	.V	Q	.	.	.	.
5.333	243.7535	1220.79	.V	Q	.	.	.	.
5.417	252.2401	1232.25	.V	Q	.	.	.	.
5.500	260.8055	1243.71	.V	Q	.	.	.	.
5.583	269.4465	1254.67	.V	Q	.	.	.	.
5.667	278.1634	1265.68	.V	Q	.	.	.	.
5.750	286.9562	1276.72	.V	Q	.	.	.	.
5.833	295.8205	1287.11	.V	Q	.	.	.	.
5.917	304.7470	1296.13	.V	Q	.	.	.	.
6.000	313.7361	1305.22	.V	Q	.	.	.	.
6.083	322.7880	1314.33	.V	Q	.	.	.	.
6.167	331.9034	1323.55	.V	Q	.	.	.	.
6.250	341.0822	1332.75	.V	Q	.	.	.	.
6.333	350.3174	1340.96	.V	Q	.	.	.	.
6.417	359.6057	1348.66	.V	Q	.	.	.	.
6.500	368.9478	1356.47	.V	Q	.	.	.	.
6.583	378.3438	1364.30	.V	Q	.	.	.	.
6.667	387.7944	1372.24	.V	Q	.	.	.	.
6.750	397.2999	1380.19	.V	Q	.	.	.	.
6.833	406.8609	1388.26	.V	Q	.	.	.	.
6.917	416.4776	1396.35	.V	Q	.	.	.	.
7.000	426.1507	1404.54	.V	Q	.	.	.	.
7.083	435.8720	1411.53	.V	Q	.	.	.	.
7.167	445.6367	1417.84	.V	Q	.	.	.	.
7.250	455.4449	1424.15	.V	Q	.	.	.	.
7.333	465.2974	1430.58	.V	Q	.	.	.	.
7.417	475.1943	1437.03	.V	Q	.	.	.	.
7.500	485.1365	1443.60	.V	Q	.	.	.	.
7.583	495.1241	1450.19	.V	Q	.	.	.	.
7.667	505.1578	1456.91	.V	Q	.	.	.	.
7.750	515.2380	1463.64	.V	Q	.	.	.	.
7.833	525.3654	1470.51	.V	Q	.	.	.	.
7.917	535.5403	1477.39	.V	Q	.	.	.	.
8.000	545.7635	1484.41	.V	Q	.	.	.	.
8.083	556.0352	1491.44	.V	Q	.	.	.	.
8.167	566.3563	1498.63	.V	Q	.	.	.	.
8.250	576.7271	1505.83	.V	Q	.	.	.	.
8.333	587.1484	1513.18	.V	Q	.	.	.	.
8.417	597.6205	1520.56	.V	Q	.	.	.	.
8.500	608.1445	1528.08	.V	Q	.	.	.	.
8.583	618.7205	1535.63	.V	Q	.	.	.	.
8.667	629.3495	1543.33	.V	Q	.	.	.	.
8.750	640.0317	1551.07	.V	Q	.	.	.	.

8.833	650.7684	1558.96	.	V	Q	.	.	.	.
8.917	661.5596	1566.89	.	V	Q	.	.	.	.
9.000	672.4066	1574.99	.	V	Q	.	.	.	.
9.083	683.3096	1583.11	.	V	Q	.	.	.	.
9.167	694.2697	1591.42	.	V	Q	.	.	.	.
9.250	705.2873	1599.75	.	V	Q	.	.	.	.
9.333	716.3636	1608.28	.	V	Q	.	.	.	.
9.417	727.4988	1616.83	.	V	Q	.	.	.	.
9.500	738.6943	1625.58	.	V	Q	.	.	.	.
9.583	749.9503	1634.37	.	V	Q	.	.	.	.
9.667	761.2682	1643.36	.	V	Q	.	.	.	.
9.750	772.6483	1652.39	.	V	Q	.	.	.	.
9.833	784.0921	1661.63	.	V	Q	.	.	.	.
9.917	795.5998	1670.92	.	V	Q	.	.	.	.
10.000	807.1730	1680.43	.	V	Q	.	.	.	.
10.083	818.8120	1689.98	.	V	Q	.	.	.	.
10.167	830.5183	1699.76	.	V	Q	.	.	.	.
10.250	842.2905	1709.32	.	V	Q	.	.	.	.
10.333	854.1276	1718.75	.	V	Q	.	.	.	.
10.417	866.0301	1728.24	.	V	Q	.	.	.	.
10.500	877.9996	1737.98	.	V	Q	.	.	.	.
10.583	890.0367	1747.78	.	V	Q	.	.	.	.
10.667	902.1430	1757.83	.	V	Q	.	.	.	.
10.750	914.3190	1767.96	.	V	Q	.	.	.	.
10.833	926.5667	1778.36	.	V	Q	.	.	.	.
10.917	938.8864	1788.82	.	V	Q	.	.	.	.
11.000	951.2802	1799.58	.	V	Q	.	.	.	.
11.083	963.7485	1810.41	.	V	Q	.	.	.	.
11.167	976.2936	1821.54	.	V	Q	.	.	.	.
11.250	988.9159	1832.76	.	V	Q	.	.	.	.
11.333	1001.6177	1844.30	.	V	Q	.	.	.	.
11.417	1014.3995	1855.93	.	V	Q	.	.	.	.
11.500	1027.2638	1867.90	.	V	Q	.	.	.	.
11.583	1040.2112	1879.96	.	V	Q	.	.	.	.
11.667	1053.2441	1892.38	.	V	Q	.	.	.	.
11.750	1066.3634	1904.91	.	V	Q	.	.	.	.
11.833	1079.5715	1917.82	.	V	Q	.	.	.	.
11.917	1092.8694	1930.85	.	V	Q	.	.	.	.
12.000	1106.2598	1944.28	.	V	Q	.	.	.	.
12.083	1119.7684	1961.47	.	V	Q	.	.	.	.
12.167	1133.4233	1982.69	.	V	Q	.	.	.	.
12.250	1147.2252	2004.03	.	V	Q	.	.	.	.
12.333	1161.1768	2025.77	.	V	Q	.	.	.	.
12.417	1175.2788	2047.62	.	V	Q	.	.	.	.
12.500	1189.5344	2069.92	.	V	Q	.	.	.	.
12.583	1203.9519	2093.41	.	V	.Q	.	.	.	.
12.667	1218.5522	2119.97	.	V	.Q	.	.	.	.
12.750	1233.3370	2146.76	.	V	.Q	.	.	.	.
12.833	1248.3097	2174.03	.	V	.Q	.	.	.	.
12.917	1263.4844	2203.37	.	V	.Q	.	.	.	.
13.000	1278.9111	2239.97	.	V	.Q	.	.	.	.
13.083	1294.5985	2277.81	.	V	.Q	.	.	.	.
13.167	1310.5828	2320.91	.	V	.Q	.	.	.	.
13.250	1326.8846	2367.04	.	V	.Q	.	.	.	.
13.333	1343.5409	2418.50	.	V	.Q	.	.	.	.
13.417	1360.5432	2468.74	.	V	.Q	.	.	.	.
13.500	1377.8921	2519.06	.	V	.Q	.	.	.	.
13.583	1395.6063	2572.10	.	V	.Q	.	.	.	.

13.667	1413.7643	2636.53	.	V.	Q	.	.	.	.
13.750	1432.2957	2690.76	.	V.	Q	.	.	.	.
13.833	1451.1960	2744.34	.	V.	Q	.	.	.	.
13.917	1470.4930	2801.93	.	V.	Q	.	.	.	.
14.000	1490.2449	2867.96	.	V	Q	.	.	.	.
14.083	1510.4834	2938.64	.	V	Q	.	.	.	.
14.167	1531.2058	3008.90	.	V	Q	.	.	.	.
14.250	1552.4211	3080.46	.	V	Q	.	.	.	.
14.333	1574.1936	3161.37	.	V	Q	.	.	.	.
14.417	1596.5098	3240.31	.	V	Q	.	.	.	.
14.500	1619.4445	3330.13	.	V	Q	.	.	.	.
14.583	1642.9166	3408.16	.	.V	Q	.	.	.	.
14.667	1666.9415	3488.42	.	.V	Q	.	.	.	.
14.750	1691.6559	3588.53	.	.V	Q	.	.	.	.
14.833	1717.0228	3683.28	.	.V	Q	.	.	.	.
14.917	1743.0624	3780.94	.	.V	Q	.	.	.	.
15.000	1769.9249	3900.44	.	.V	Q	.	.	.	.
15.083	1797.5155	4006.15	.	.V	.Q	.	.	.	.
15.167	1825.8274	4110.89	.	.V	.Q	.	.	.	.
15.250	1854.8657	4216.36	.	.V	.Q	.	.	.	.
15.333	1884.7134	4333.87	.	.V	.Q	.	.	.	.
15.417	1915.3688	4451.17	.	.V	.Q	.	.	.	.
15.500	1946.8113	4565.46	.	.V	.Q	.	.	.	.
15.583	1978.9635	4668.51	.	.V	.Q	.	.	.	.
15.667	2011.9125	4784.19	.	.V	.Q	.	.	.	.
15.750	2045.5322	4881.58	.	.V	.Q	.	.	.	.
15.833	2079.7610	4970.01	.	.V	.Q	.	.	.	.
15.917	2114.6169	5061.07	.	.V	.Q	.	.	.	.
16.000	2150.2336	5171.56	.	.V	.Q	.	.	.	.
16.083	2187.0732	5349.10	.	.V	.Q	.	.	.	.
16.167	2224.9011	5492.60	.	.V	.Q	.	.	.	.
16.250	2263.1606	5555.27	.	.V	.Q	.	.	.	.
16.333	2301.8777	5621.72	.	.V	.Q	.	.	.	.
16.417	2341.0559	5688.67	.	.V	.Q	.	.	.	.
16.500	2380.8303	5775.23	.	.V	.Q	.	.	.	.
16.583	2421.1785	5858.57	.	.V	.Q	.	.	.	.
16.667	2462.1917	5955.11	.	.V	.Q	.	.	.	.
16.750	2503.7905	6040.15	.	.V	.Q	.	.	.	.
16.833	2545.9182	6116.96	.	.V	.Q	.	.	.	.
16.917	2588.9124	6242.75	.	.V	.Q	.	.	.	.
17.000	2633.4368	6464.94	.	.V	.Q	.	.	.	.
17.083	2678.5728	6553.76	.	.V	.Q	.	.	.	.
17.167	2724.6951	6696.97	.	.V	.Q	.	.	.	.
17.250	2771.4668	6791.27	.	.V	.Q	.	.	.	.
17.333	2819.0837	6913.99	.	.V	.Q	.	.	.	.
17.417	2866.8289	6932.59	.	.V	.Q	.	.	.	.
17.500	2915.0703	7004.65	.	.V	.Q	.	.	.	.
17.583	2964.1179	7121.71	.	.V	.Q	.	.	.	.
17.667	3014.7200	7347.42	.	.V	.Q	.	.	.	.
17.750	3063.9902	7154.04	.	.V	.Q	.	.	.	.
17.833	3113.2651	7154.70	.	.V	.Q	.	.	.	.
17.917	3163.3713	7275.43	.	.V	.Q	.	.	.	.
18.000	3214.7925	7466.36	.	.V	.Q	.	.	.	.
18.083	3265.6731	7387.88	.	.V	.Q	.	.	.	.
18.167	3315.2551	7199.31	.	.V	.Q	.	.	.	.
18.250	3365.0288	7227.13	.	.V	.Q	.	.	.	.
18.333	3415.9126	7388.34	.	.V	.Q	.	.	.	.
18.417	3466.5459	7351.96	.	.V	.Q	.	.	.	.

18.500	3518.4392	7534.90	.	.	.	V	.	Q.
18.583	3568.2410	7231.22	.	.	.	V	.	Q.
18.667	3617.6860	7179.43	.	.	.	V	.	Q.
18.750	3669.8110	7568.55	.	.	.	V	.	Q.
18.833	3721.0657	7442.19	.	.	.	V	.	Q.
18.917	3772.2668	7434.43	.	.	.	V	.	Q.
19.000	3824.3201	7558.13	.	.	.	V	.	Q.
19.083	3873.7998	7184.47	.	.	.	V	.	Q.
19.167	3921.7927	6968.56	.	.	.	V	.	Q.
19.250	3969.3206	6901.04	.	.	.	V	.	Q.
19.333	4017.5762	7006.71	.	.	.	V	.	Q.
19.417	4066.9062	7162.74	.	.	.	V	.	Q.
19.500	4116.2363	7162.76	.	.	.	V	.	Q.
19.583	4162.9863	6788.10	.	.	.	V	.	Q.
19.667	4208.6128	6624.95	.	.	.	V	.	Q.
19.750	4254.2285	6623.41	.	.	.	V	.	Q.
19.833	4298.8867	6484.34	.	.	.	V	.	Q.
19.917	4342.3857	6316.04	.	.	.	V	.	Q.
20.000	4385.3135	6233.08	.	.	.	V	.	Q.
20.083	4427.0010	6053.02	.	.	.	V	.	Q.
20.167	4467.0679	5817.73	.	.	.	Q	.	.
20.250	4506.6074	5741.17	.	.	.	Q	.	.
20.333	4545.6436	5668.06	.	.	.	QV	.	.
20.417	4584.1646	5593.28	.	.	.	QV	.	.
20.500	4621.6006	5435.69	.	.	.	Q	.	V
20.583	4658.0503	5292.48	.	.	.	Q	.	V
20.667	4693.6113	5163.47	.	.	.	Q	.	V
20.750	4728.1494	5014.96	.	.	.	Q	.	V
20.833	4761.4102	4829.43	.	.	.	Q	.	V
20.917	4793.7441	4694.92	.	.	.	Q	.	V
21.000	4824.8599	4518.00	.	.	.	Q	.	V
21.083	4854.8955	4361.15	.	.	.	Q	.	V
21.167	4884.2944	4268.70	.	.	.	Q	.	V
21.250	4912.9893	4166.47	.	.	.	Q	.	V
21.333	4940.9194	4055.49	.	.	.	Q	.	V
21.417	4968.0918	3945.43	.	.	.	Q	.	V
21.500	4994.4351	3825.06	.	.	.	Q	.	V
21.583	5019.9644	3706.84	.	.	.	Q	.	V
21.667	5044.8560	3614.23	.	.	.	Q	.	V
21.750	5069.0835	3517.82	.	.	.	Q	.	V
21.833	5092.4810	3397.32	.	.	.	Q	.	V
21.917	5114.9468	3262.05	.	.	.	Q	.	V
22.000	5136.8735	3183.74	.	.	.	Q	.	V
22.083	5158.3315	3115.71	.	.	.	Q	.	V
22.167	5179.3584	3053.13	.	.	.	Q	.	V
22.250	5199.9033	2983.14	.	.	.	Q	.	V
22.333	5219.6978	2874.15	.	.	.	Q	.	V
22.417	5238.9287	2792.37	.	.	.	Q	.	V
22.500	5257.7578	2733.99	.	.	.	Q	.	V
22.583	5276.2134	2679.72	.	.	.	Q	.	V
22.667	5294.2856	2624.11	.	.	.	Q	.	V
22.750	5311.9761	2568.68	.	.	.	Q	.	V
22.833	5329.3164	2517.85	.	.	.	Q	.	V
22.917	5346.3350	2471.09	.	.	.	Q	.	V
23.000	5363.0024	2420.11	.	.	.	Q	.	V
23.083	5379.0205	2325.80	.	.	.	Q	.	V
23.167	5394.5264	2251.43	.	.	.	Q	.	V
23.250	5409.7510	2210.59	.	.	.	Q	.	V

23.333	5424.7354	2175.72	.	.	.	Q	.	V
23.417	5439.4771	2140.50	.	.	.	Q	.	V
23.500	5453.9697	2104.33	.	.	.	Q	.	V
23.583	5468.2168	2068.67	.	.	.	Q	.	V
23.667	5482.2153	2032.62	.	.	.	Q	.	V
23.750	5495.9653	1996.51	.	.	.	Q	.	V
23.833	5509.4736	1961.42	.	.	.	Q	.	V
23.917	5522.7554	1928.53	.	.	.	Q	.	V
24.000	5535.8125	1895.93	.	.	.	Q	.	V
24.083	5548.6577	1865.13	.	.	.	Q	.	V
24.167	5561.3013	1835.87	.	.	.	Q	.	V
24.250	5573.7368	1805.61	.	.	.	Q	.	V
24.333	5585.9751	1777.03	.	.	.	Q	.	V
24.417	5598.0288	1750.22	.	.	.	Q	.	V
24.500	5609.8975	1723.32	.	.	.	Q	.	V
24.583	5621.5825	1696.64	.	.	.	Q	.	V
24.667	5633.0776	1669.10	.	.	.	Q	.	V
24.750	5644.3857	1641.97	.	.	.	Q	.	V
24.833	5655.5103	1615.31	.	.	.	Q	.	V
24.917	5666.4473	1588.06	.	.	.	Q	.	V
25.000	5677.1748	1557.65	.	.	.	Q	.	V
25.083	5687.7075	1529.37	.	.	.	Q	.	V
25.167	5698.0415	1500.50	.	.	.	Q	.	V
25.250	5708.1694	1470.59	.	.	.	Q	.	V
25.333	5718.0771	1438.58	.	.	.	Q	.	V
25.417	5727.7725	1407.74	.	.	.	Q	.	V
25.500	5737.2603	1377.60	.	.	.	Q	.	V
25.583	5746.5376	1347.08	.	.	.	Q	.	V
25.667	5755.5728	1311.91	.	.	.	Q	.	V
25.750	5764.4053	1282.50	.	.	.	Q	.	V
25.833	5773.0410	1253.88	.	.	.	Q	.	V
25.917	5781.4678	1223.53	.	.	.	Q	.	V
26.000	5789.6582	1189.28	.	.	.	Q	.	V
26.083	5797.6191	1155.95	.	.	.	Q	.	V
26.167	5805.3691	1125.33	.	.	.	Q	.	V
26.250	5812.8267	1082.81	.	.	.	Q	.	V
26.333	5819.9468	1033.81	.	.	.	Q	.	V
26.417	5826.8369	1000.45	.	.	.	Q	.	V
26.500	5833.4604	961.74	.	.	.	Q	.	V
26.583	5839.8652	929.98	.	.	.	Q	.	V
26.667	5846.0557	898.87	.	.	.	Q	.	V
26.750	5851.9565	856.82	.	.	.	Q	.	V
26.833	5857.5859	817.36	.	.	.	Q	.	V
26.917	5862.9424	777.73	.	.	.	Q	.	V
27.000	5867.9878	732.61	.	.	.	Q	.	V
27.083	5872.7754	695.16	.	.	.	Q	.	V
27.167	5877.3350	662.05	.	.	.	Q	.	V
27.250	5881.6826	631.29	.	.	.	Q	.	V
27.333	5885.8081	599.00	.	.	.	Q	.	V
27.417	5889.6792	562.11	.	.	.	Q	.	V
27.500	5893.2812	523.03	.	.	.	Q	.	V
27.583	5896.6704	492.08	.	.	.	Q	.	V
27.667	5899.8677	464.24	.	.	.	Q	.	V
27.750	5902.8604	434.56	.	.	.	Q	.	V
27.833	5905.6631	406.94	.	.	.	Q	.	V
27.917	5908.2930	381.84	.	.	.	Q	.	V
28.000	5910.7441	355.89	.	.	.	Q	.	V
28.083	5913.0312	332.08	.	.	.	Q	.	V

28.167	5915.1851	312.76	.Q	.	.	.	V.
28.250	5917.2134	294.49	.Q	.	.	.	V.
28.333	5919.1211	276.97	.Q	.	.	.	V.
28.417	5920.9043	258.92	.Q	.	.	.	V.
28.500	5922.5679	241.55	.Q	.	.	.	V.
28.583	5924.1196	225.34	.Q	.	.	.	V.
28.667	5925.5669	210.17	.Q	.	.	.	V.
28.750	5926.9146	195.69	.Q	.	.	.	V.
28.833	5928.1758	183.12	Q	.	.	.	V.
28.917	5929.3550	171.22	Q	.	.	.	V.
29.000	5930.4614	160.66	Q	.	.	.	V.
29.083	5931.5044	151.41	Q	.	.	.	V.
29.167	5932.4839	142.23	Q	.	.	.	V.
29.250	5933.4033	133.53	Q	.	.	.	V.
29.333	5934.2666	125.34	Q	.	.	.	V.
29.417	5935.0737	117.21	Q	.	.	.	V.
29.500	5935.8262	109.26	Q	.	.	.	V.
29.583	5936.5278	101.88	Q	.	.	.	V.
29.667	5937.1797	94.62	Q	.	.	.	V.
29.750	5937.7817	87.40	Q	.	.	.	V.
29.833	5938.3394	81.00	Q	.	.	.	V.
29.917	5938.8628	76.02	Q	.	.	.	V.
30.000	5939.3525	71.13	Q	.	.	.	V.
30.083	5939.8091	66.26	Q	.	.	.	V.
30.167	5940.2319	61.43	Q	.	.	.	V.
30.250	5940.6221	56.67	Q	.	.	.	V.
30.333	5940.9873	53.05	Q	.	.	.	V.
30.417	5941.3315	49.98	Q	.	.	.	V.
30.500	5941.6548	46.93	Q	.	.	.	V.
30.583	5941.9570	43.90	Q	.	.	.	V.
30.667	5942.2388	40.90	Q	.	.	.	V.
30.750	5942.5000	37.92	Q	.	.	.	V.
30.833	5942.7407	34.96	Q	.	.	.	V.
30.917	5942.9614	32.02	Q	.	.	.	V.
31.000	5943.1621	29.12	Q	.	.	.	V.
31.083	5943.3511	27.45	Q	.	.	.	V.
31.167	5943.5342	26.60	Q	.	.	.	V.
31.250	5943.7114	25.77	Q	.	.	.	V.
31.333	5943.8833	24.93	Q	.	.	.	V.
31.417	5944.0493	24.12	Q	.	.	.	V.
31.500	5944.2100	23.30	Q	.	.	.	V.
31.583	5944.3647	22.49	Q	.	.	.	V.
31.667	5944.5142	21.69	Q	.	.	.	V.
31.750	5944.6582	20.90	Q	.	.	.	V.
31.833	5944.7969	20.11	Q	.	.	.	V.
31.917	5944.9302	19.33	Q	.	.	.	V.
32.000	5945.0581	18.56	Q	.	.	.	V.
32.083	5945.1807	17.80	Q	.	.	.	V.
32.167	5945.2979	17.03	Q	.	.	.	V.
32.250	5945.4102	16.28	Q	.	.	.	V.
32.333	5945.5171	15.53	Q	.	.	.	V.
32.417	5945.6187	14.78	Q	.	.	.	V.
32.500	5945.7153	14.04	Q	.	.	.	V.
32.583	5945.8071	13.32	Q	.	.	.	V.
32.667	5945.8940	12.59	Q	.	.	.	V.
32.750	5945.9756	11.87	Q	.	.	.	V.
32.833	5946.0522	11.16	Q	.	.	.	V.
32.917	5946.1240	10.45	Q	.	.	.	V.

33.000	5946.1909	9.75	Q	.	.	.	V.
33.083	5946.2534	9.05	Q	.	.	.	V.
33.167	5946.3110	8.35	Q	.	.	.	V.
33.250	5946.3638	7.66	Q	.	.	.	V.
33.333	5946.4116	6.98	Q	.	.	.	V.
33.417	5946.4551	6.30	Q	.	.	.	V.
33.500	5946.4937	5.62	Q	.	.	.	V.
33.583	5946.5278	4.95	Q	.	.	.	V.
33.667	5946.5571	4.28	Q	.	.	.	V.
33.750	5946.5820	3.62	Q	.	.	.	V.
33.833	5946.6025	2.96	Q	.	.	.	V.
33.917	5946.6187	2.30	Q	.	.	.	V.
34.000	5946.6299	1.65	Q	.	.	.	V.
34.083	5946.6367	1.01	Q	.	.	.	V.
34.167	5946.6392	0.36	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%	2050.0
10%	1415.0
20%	1005.0
30%	605.0
40%	480.0
50%	395.0
60%	330.0
70%	270.0
80%	195.0
90%	135.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5- UH SINGLE AREA MODEL - NODE 138 *
* 10-YR EV APRIL 2019 CCHIU *

FILE NAME: EV10138S.DAT
TIME/DATE OF STUDY: 08:05 04/09/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 138.00 IS CODE = 1

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

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69102.102 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.071 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.736
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.31
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.62
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.85
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.55
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.27
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 3.95

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.287
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.392
3-HOUR FACTOR = 0.734
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.714

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.155	1295.844
2	0.465	2591.692
3	0.775	2591.691
4	1.085	2591.683
5	1.396	2591.698
6	1.706	2591.687
7	2.040	2796.872
8	2.496	3807.515
9	2.968	3943.872
10	3.440	3943.878
11	3.931	4106.073
12	4.706	6474.792
13	5.574	7256.840
14	6.582	8424.604
15	7.735	9633.852
16	9.099	11395.902
17	10.511	11803.733
18	11.869	11344.349
19	13.225	11338.667
20	14.934	14274.742
21	16.735	15054.157
22	18.182	12094.595
23	19.640	12184.447
24	21.349	14282.601
25	23.371	16897.377
26	25.112	14546.962
27	26.662	12958.610
28	28.339	14011.258
29	30.376	17025.947
30	32.368	16648.686
31	34.806	20373.908
32	36.654	15436.273
33	38.411	14687.009
34	41.080	22304.789
35	43.516	20355.480
36	45.963	20449.111
37	48.830	23961.920
38	51.279	20465.273
39	53.251	16482.529
40	55.124	15649.421
41	57.120	16685.539
42	59.458	19532.574
43	62.217	23058.135
44	64.452	18680.688
45	66.323	15639.283
46	68.173	15453.553
47	70.214	17056.584
48	71.848	13658.032

49	73.578	14461.078
50	75.274	14168.615
51	76.682	11771.527
52	77.888	10078.340
53	79.094	10079.807
54	80.320	10243.731
55	81.593	10634.702
56	82.780	9924.936
57	83.912	9461.726
58	84.964	8786.580
59	85.973	8433.228
60	86.833	7186.545
61	87.667	6969.956
62	88.385	5998.585
63	89.023	5333.896
64	89.662	5336.893
65	90.269	5072.229
66	90.840	4773.008
67	91.411	4776.004
68	91.976	4723.339
69	92.501	4383.503
70	93.018	4320.382
71	93.535	4318.852
72	94.020	4060.181
73	94.379	2995.531
74	94.724	2881.211
75	95.068	2878.278
76	95.413	2881.211
77	95.757	2878.214
78	96.060	2532.385
79	96.276	1801.514
80	96.489	1780.473
81	96.701	1774.480
82	96.914	1780.473
83	97.127	1780.473
84	97.340	1777.413
85	97.553	1777.477
86	97.765	1777.477
87	97.966	1675.207
88	98.046	667.685
89	98.097	427.059
90	98.148	424.062
91	98.198	424.062
92	98.249	427.059
93	98.300	424.062
94	98.351	427.122
95	98.401	418.005
96	98.453	430.119
97	98.504	424.062
98	98.554	424.062
99	98.606	430.055
100	98.656	424.062
101	98.707	424.062
102	98.758	427.122
103	98.809	421.001
104	98.860	427.122
105	98.911	427.059
106	98.962	427.059

107	99.012	421.065
108	99.063	421.065
109	99.113	421.065
110	99.164	421.065
111	99.214	421.065
112	99.264	421.065
113	99.315	421.065
114	99.365	421.065
115	99.415	421.065
116	99.466	421.065
117	99.516	421.065
118	99.567	421.065
119	99.617	421.065
120	99.667	421.065
121	99.718	421.065
122	99.768	421.065
123	99.819	421.065
124	99.869	421.065
125	99.919	421.065
126	99.970	421.065
127	100.000	253.124

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 15199.4521
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 6004.6772

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.	1900.0	3800.0	5700.0	7600.0
0.083	0.0132	1.92	Q	.	.	.	.
0.167	0.0529	5.76	Q	.	.	.	.
0.250	0.1190	9.61	Q	.	.	.	.
0.333	0.2118	13.47	Q	.	.	.	.
0.417	0.3312	17.34	Q	.	.	.	.
0.500	0.4774	21.23	Q	.	.	.	.
0.583	0.6526	25.43	Q	.	.	.	.
0.667	0.8670	31.14	Q	.	.	.	.
0.750	1.1223	37.06	Q	.	.	.	.
0.833	1.4185	43.01	Q	.	.	.	.
0.917	1.7574	49.21	Q	.	.	.	.
1.000	2.1634	58.94	Q	.	.	.	.
1.083	2.6444	69.85	Q	.	.	.	.
1.167	3.2128	82.53	Q	.	.	.	.
1.250	3.8810	97.02	Q	.	.	.	.
1.333	4.6673	114.18	Q	.	.	.	.
1.417	5.5763	131.98	Q	.	.	.	.
1.500	6.6036	149.16	Q	.	.	.	.
1.583	7.7495	166.39	Q	.	.	.	.
1.667	9.0443	188.01	Q	.	.	.	.
1.750	10.4965	210.85	VQ	.	.	.	.
1.833	12.0762	229.38	VQ	.	.	.	.
1.917	13.7849	248.10	VQ	.	.	.	.
2.000	15.6444	269.99	VQ	.	.	.	.
2.083	17.6817	295.82	VQ	.	.	.	.
2.167	19.8734	318.24	VQ	.	.	.	.
2.250	22.2039	338.39	VQ	.	.	.	.
2.333	24.6844	360.16	VQ	.	.	.	.
2.417	27.3460	386.46	V Q	.	.	.	.
2.500	30.1854	412.29	V Q	.	.	.	.
2.583	33.2412	443.71	V Q	.	.	.	.
2.667	36.4638	467.92	V Q	.	.	.	.
2.750	39.8461	491.11	V Q	.	.	.	.
2.833	43.4662	525.64	V Q	.	.	.	.
2.917	47.3050	557.40	V Q	.	.	.	.
3.000	51.3642	589.40	V Q	.	.	.	.
3.083	55.6803	626.70	V Q	.	.	.	.
3.167	60.2185	658.94	V Q	.	.	.	.
3.250	64.9389	685.41	V Q	.	.	.	.
3.333	69.8338	710.73	V Q	.	.	.	.
3.417	74.9141	737.67	V Q	.	.	.	.
3.500	80.2097	768.91	V Q	.	.	.	.
3.583	85.7571	805.49	V Q	.	.	.	.
3.667	91.5126	835.69	V Q	.	.	.	.
3.750	97.4459	861.52	V Q	.	.	.	.
3.833	103.5557	887.15	V Q	.	.	.	.
3.917	109.8591	915.25	V Q	.	.	.	.

4.000	116.3220	938.42	V Q	.	.	.	.
4.083	122.9534	962.88	V Q	.	.	.	.
4.167	129.7507	986.97	V Q	.	.	.	.
4.250	136.6904	1007.63	V Q	.	.	.	.
4.333	143.7554	1025.85	V Q	.	.	.	.
4.417	150.9467	1044.16	.V Q	.	.	.	.
4.500	158.2661	1062.78	.V Q	.	.	.	.
4.583	165.7183	1082.06	.V Q	.	.	.	.
4.667	173.2965	1100.36	.V Q	.	.	.	.
4.750	180.9967	1118.07	.V Q	.	.	.	.
4.833	188.8124	1134.83	.V Q	.	.	.	.
4.917	196.7405	1151.17	.V Q	.	.	.	.
5.000	204.7689	1165.72	.V Q	.	.	.	.
5.083	212.8959	1180.04	.V Q	.	.	.	.
5.167	221.1119	1192.96	.V Q	.	.	.	.
5.250	229.4107	1204.99	.V Q	.	.	.	.
5.333	237.7928	1217.07	.V Q	.	.	.	.
5.417	246.2559	1228.84	.V Q	.	.	.	.
5.500	254.7973	1240.21	.V Q	.	.	.	.
5.583	263.4177	1251.68	.V Q	.	.	.	.
5.667	272.1167	1263.10	.V Q	.	.	.	.
5.750	280.8916	1274.11	.V Q	.	.	.	.
5.833	289.7419	1285.07	.V Q	.	.	.	.
5.917	298.6684	1296.12	.V Q	.	.	.	.
6.000	307.6685	1306.82	.V Q	.	.	.	.
6.083	316.7322	1316.04	.V Q	.	.	.	.
6.167	325.8584	1325.13	.V Q	.	.	.	.
6.250	335.0479	1334.31	.V Q	.	.	.	.
6.333	344.3008	1343.52	.V Q	.	.	.	.
6.417	353.6177	1352.82	.V Q	.	.	.	.
6.500	362.9955	1361.65	.V Q	.	.	.	.
6.583	372.4272	1369.49	.V Q	.	.	.	.
6.667	381.9131	1377.34	.V Q	.	.	.	.
6.750	391.4535	1385.27	.V Q	.	.	.	.
6.833	401.0488	1393.24	.V Q	.	.	.	.
6.917	410.6997	1401.31	.V Q	.	.	.	.
7.000	420.4065	1409.42	.V Q	.	.	.	.
7.083	430.1697	1417.62	.V Q	.	.	.	.
7.167	439.9897	1425.86	.V Q	.	.	.	.
7.250	449.8661	1434.05	.V Q	.	.	.	.
7.333	459.7890	1440.80	.V Q	.	.	.	.
7.417	469.7565	1447.29	.V Q	.	.	.	.
7.500	479.7690	1453.81	.V Q	.	.	.	.
7.583	489.8270	1460.43	.V Q	.	.	.	.
7.667	499.9310	1467.10	.V Q	.	.	.	.
7.750	510.0815	1473.86	.V Q	.	.	.	.
7.833	520.2791	1480.68	.V Q	.	.	.	.
7.917	530.5242	1487.59	.V Q	.	.	.	.
8.000	540.8173	1494.56	.V Q	.	.	.	.
8.083	551.1592	1501.64	.V Q	.	.	.	.
8.167	561.5501	1508.76	.V Q	.	.	.	.
8.250	571.9909	1516.01	.V Q	.	.	.	.
8.333	582.4819	1523.30	.V Q	.	.	.	.
8.417	593.0240	1530.70	.V Q	.	.	.	.
8.500	603.6174	1538.17	.V Q	.	.	.	.
8.583	614.2631	1545.75	.V Q	.	.	.	.
8.667	624.9615	1553.40	.V Q	.	.	.	.
8.750	635.7134	1561.17	.V Q	.	.	.	.

8.833	646.5192	1569.01	.	V	Q	.	.	.
8.917	657.3799	1576.97	.	V	Q	.	.	.
9.000	668.2958	1584.99	.	V	Q	.	.	.
9.083	679.2679	1593.15	.	V	Q	.	.	.
9.167	690.2967	1601.38	.	V	Q	.	.	.
9.250	701.3831	1609.75	.	V	Q	.	.	.
9.333	712.5277	1618.19	.	V	Q	.	.	.
9.417	723.7314	1626.78	.	V	Q	.	.	.
9.500	734.9949	1635.45	.	V	Q	.	.	.
9.583	746.3191	1644.27	.	V	Q	.	.	.
9.667	757.7046	1653.18	.	V	Q	.	.	.
9.750	769.1525	1662.24	.	V	Q	.	.	.
9.833	780.6635	1671.39	.	V	Q	.	.	.
9.917	792.2386	1680.71	.	V	Q	.	.	.
10.000	803.8786	1690.12	.	V	Q	.	.	.
10.083	815.5845	1699.70	.	V	Q	.	.	.
10.167	827.3572	1709.39	.	V	Q	.	.	.
10.250	839.1978	1719.25	.	V	Q	.	.	.
10.333	851.1070	1729.22	.	V	Q	.	.	.
10.417	863.0862	1739.38	.	V	Q	.	.	.
10.500	875.1361	1749.65	.	V	Q	.	.	.
10.583	887.2565	1759.87	.	V	Q	.	.	.
10.667	899.4454	1769.84	.	V	Q	.	.	.
10.750	911.7045	1780.01	.	V	Q	.	.	.
10.833	924.0344	1790.31	.	V	Q	.	.	.
10.917	936.4368	1800.83	.	V	Q	.	.	.
11.000	948.9126	1811.48	.	V	Q	.	.	.
11.083	961.4633	1822.36	.	V	Q	.	.	.
11.167	974.0899	1833.38	.	V	Q	.	.	.
11.250	986.7941	1844.65	.	V	Q	.	.	.
11.333	999.5769	1856.07	.	V	Q	.	.	.
11.417	1012.4401	1867.74	.	V	Q	.	.	.
11.500	1025.3849	1879.58	.	V	Q	.	.	.
11.583	1038.4131	1891.69	.	V	Q	.	.	.
11.667	1051.5259	1903.97	.	V	Q	.	.	.
11.750	1064.7252	1916.55	.	V	Q	.	.	.
11.833	1078.0125	1929.31	.	V	Q	.	.	.
11.917	1091.3896	1942.37	.	V	Q	.	.	.
12.000	1104.8583	1955.64	.	V	Q	.	.	.
12.083	1118.4453	1972.85	.	V	Q	.	.	.
12.167	1132.1771	1993.86	.	V	Q	.	.	.
12.250	1146.0558	2015.19	.	V	Q	.	.	.
12.333	1160.0826	2036.71	.	V	Q	.	.	.
12.417	1174.2600	2058.55	.	V	Q	.	.	.
12.500	1188.5892	2080.61	.	V	Q	.	.	.
12.583	1203.0767	2103.58	.	V	.Q	.	.	.
12.667	1217.7433	2129.60	.	V	.Q	.	.	.
12.750	1232.5942	2156.35	.	V	.Q	.	.	.
12.833	1247.6309	2183.33	.	V	.Q	.	.	.
12.917	1262.8590	2211.13	.	V	.Q	.	.	.
13.000	1278.3258	2245.78	.	V	.Q	.	.	.
13.083	1294.0488	2282.98	.	V	.Q	.	.	.
13.167	1310.0519	2323.64	.	V	.Q	.	.	.
13.250	1326.3607	2368.04	.	V	.Q	.	.	.
13.333	1343.0105	2417.54	.	V	.Q	.	.	.
13.417	1360.0115	2468.54	.	V	.Q	.	.	.
13.500	1377.3560	2518.43	.	V	.Q	.	.	.
13.583	1395.0466	2568.68	.	V	.Q	.	.	.

13.667	1413.1410	2627.31	.	V.	Q	.	.	.
13.750	1431.6567	2688.49	.	V.	Q	.	.	.
13.833	1450.5382	2741.58	.	V.	Q	.	.	.
13.917	1469.7899	2795.35	.	V.	Q	.	.	.
14.000	1489.4539	2855.20	.	V.	Q	.	.	.
14.083	1509.6260	2928.98	.	V	Q	.	.	.
14.167	1530.3038	3002.43	.	V	Q	.	.	.
14.250	1551.4559	3071.28	.	V	Q	.	.	.
14.333	1573.1000	3142.72	.	V	Q	.	.	.
14.417	1595.2927	3222.39	.	V	Q	.	.	.
14.500	1618.0240	3300.59	.	V	Q	.	.	.
14.583	1641.3706	3389.91	.	V	Q	.	.	.
14.667	1665.2675	3469.82	.	.V	Q	.	.	.
14.750	1689.7013	3547.79	.	.V	Q	.	.	.
14.833	1714.8127	3646.18	.	.V	Q	.	.	.
14.917	1740.5651	3739.24	.	.V	Q	.	.	.
15.000	1767.0312	3842.90	.	.V	Q	.	.	.
15.083	1794.2968	3958.95	.	.V	Q	.	.	.
15.167	1822.3187	4068.79	.	.V	.Q	.	.	.
15.250	1851.0511	4171.95	.	.V	.Q	.	.	.
15.333	1880.5215	4279.09	.	.V	.Q	.	.	.
15.417	1910.7196	4384.77	.	.V	.Q	.	.	.
15.500	1941.6361	4489.08	.	.V	.Q	.	.	.
15.583	1973.3315	4602.17	.	.V	.Q	.	.	.
15.667	2005.8057	4715.25	.	.V	.Q	.	.	.
15.750	2039.0077	4820.93	.	.V	.Q	.	.	.
15.833	2072.8110	4908.25	.	.V	.Q	.	.	.
15.917	2107.2520	5000.82	.	.V	.Q	.	.	.
16.000	2142.3557	5097.07	.	.V	.Q	.	.	.
16.083	2178.7175	5279.74	.	.V	.Q	.	.	.
16.167	2216.1731	5438.54	.	.V	.Q	.	.	.
16.250	2254.0764	5503.56	.	.V	.Q	.	.	.
16.333	2292.3435	5556.37	.	.V	.Q	.	.	.
16.417	2331.0742	5623.71	.	.V	.Q	.	.	.
16.500	2370.2769	5692.21	.	.V	.Q	.	.	.
16.583	2410.1660	5791.92	.	.V	.Q	.	.	.
16.667	2450.7983	5899.81	.	.V	.Q	.	.	.
16.750	2491.7791	5950.40	.	.V	.Q	.	.	.
16.833	2533.3521	6036.41	.	.V	.Q	.	.	.
16.917	2575.5959	6133.81	.	.V	.Q	.	.	.
17.000	2619.2551	6339.33	.	.V	.Q	.	.	.
17.083	2663.7634	6462.60	.	.V	.Q	.	.	.
17.167	2709.1799	6594.48	.	.V	.Q	.	.	.
17.250	2755.3684	6706.57	.	.V	.Q	.	.	.
17.333	2802.4255	6832.71	.	.V	.Q	.	.	.
17.417	2849.7415	6870.27	.	.V	.Q	.	.	.
17.500	2897.2151	6893.16	.	.V	.Q	.	.	.
17.583	2945.3176	6984.48	.	.V	.Q	.	.	.
17.667	2994.9175	7201.90	.	.V	.Q	.	.	.
17.750	3044.8269	7246.83	.	.V	.Q	.	.	.
17.833	3093.7258	7100.14	.	.V	.Q	.	.	.
17.917	3142.9170	7142.56	.	.V	.Q	.	.	.
18.000	3193.1963	7300.54	.	.V	.Q	.	.	.
18.083	3244.5579	7457.71	.	.V	.Q	.	.	.
18.167	3294.7573	7288.96	.	.V	.Q	.	.	.
18.250	3344.1685	7174.51	.	.V	.Q	.	.	.
18.333	3393.9050	7221.75	.	.V	.Q	.	.	.
18.417	3444.6250	7364.55	.	.V	.Q	.	.	.

18.500	3495.0989	7328.79	.	.	.	V	.	Q	.
18.583	3546.7083	7493.68	.	.	.	V	.	Q	.
18.667	3596.1462	7178.41	.	.	.	V	.	Q	.
18.750	3645.3596	7145.78	.	.	.	V	.	Q	.
18.833	3697.3250	7545.38	.	.	.	V	.	Q	.
18.917	3748.3562	7409.75	.	.	.	V	.	Q	.
19.000	3799.2158	7384.82	.	.	.	V	.	Q	.
19.083	3850.8730	7500.64	.	.	.	V	.	Q	.
19.167	3900.6965	7234.38	.	.	.	V	.	Q	.
19.250	3948.5640	6950.35	.	.	.	V	.	Q	.
19.333	3995.9150	6875.39	.	.	.	V	.	Q	.
19.417	4043.5979	6923.56	.	.	.	V	.	Q	.
19.500	4092.2585	7065.54	.	.	.	V	.	Q	.
19.583	4141.6577	7172.77	.	.	.	V	.	Q	.
19.667	4188.8237	6848.50	.	.	.	V	.	Q	.
19.750	4234.4180	6620.28	.	.	.	V	.	Q	.
19.833	4279.4634	6540.57	.	.	.	V	.	Q	.
19.917	4324.6436	6560.16	.	.	.	V	.	Q	.
20.000	4368.0142	6297.42	.	.	.	V	.	Q	.
20.083	4410.9268	6230.94	.	.	.	V	.	Q	.
20.167	4452.9961	6108.46	.	.	.	V	.	Q	.
20.250	4493.6255	5899.36	.	.	.	V	.	Q	.
20.333	4533.1362	5736.96	.	.	.	Q	.	.	.
20.417	4572.1567	5665.76	.	.	.	QV	.	.	.
20.500	4610.6685	5591.92	.	.	.	QV	.	.	.
20.583	4648.4438	5485.01	.	.	.	Q V	.	.	.
20.667	4685.2178	5339.56	.	.	.	Q .V	.	.	.
20.750	4721.1724	5220.60	.	.	.	Q .V	.	.	.
20.833	4756.0771	5068.18	.	.	.	Q .V	.	.	.
20.917	4790.0059	4926.42	.	.	.	Q .V	.	.	.
21.000	4822.7148	4749.35	.	.	.	Q Q	.	.	.
21.083	4854.4863	4613.22	.	.	.	Q Q	.	.	.
21.167	4885.0918	4443.94	.	.	.	Q	.	.	.
21.250	4914.8223	4316.89	.	.	.	Q	.	.	.
21.333	4943.9487	4229.14	.	.	.	Q	.	.	.
21.417	4972.3623	4125.64	.	.	.	Q	.	.	.
21.500	4999.9775	4009.75	.	.	.	Q	.	.	.
21.583	5026.8027	3895.03	.	.	.	Q	.	.	.
21.667	5052.9009	3789.43	.	.	.	Q	.	.	.
21.750	5078.2295	3677.74	.	.	.	Q	.	.	.
21.833	5102.9165	3584.53	.	.	.	Q	.	.	.
21.917	5126.9541	3490.26	.	.	.	Q	.	.	.
22.000	5150.3096	3391.23	.	.	.	Q	.	.	.
22.083	5172.6821	3248.51	.	.	.	Q	.	.	.
22.167	5194.4971	3167.49	.	.	.	Q	.	.	.
22.250	5215.8740	3103.94	.	.	.	Q	.	.	.
22.333	5236.8442	3044.90	.	.	.	Q	.	.	.
22.417	5257.3711	2980.53	.	.	.	Q	.	.	.
22.500	5277.3096	2895.04	.	.	.	Q	.	.	.
22.583	5296.5254	2790.14	.	.	.	Q	.	.	.
22.667	5315.3394	2731.79	.	.	.	Q	.	.	.
22.750	5333.7842	2678.18	.	.	.	Q	.	.	.
22.833	5351.8706	2626.18	.	.	.	Q	.	.	.
22.917	5369.5835	2571.88	.	.	.	Q	.	.	.
23.000	5386.9526	2522.00	.	.	.	Q	.	.	.
23.083	5404.0117	2476.95	.	.	.	Q	.	.	.
23.167	5420.7642	2432.43	.	.	.	Q	.	.	.
23.250	5437.1445	2378.45	.	.	.	Q	.	.	.

23.333	5452.8247	2276.79	.	.	.	.Q	.	.	V	.
23.417	5468.1309	2222.48	.	.	.	.Q	.	.	V	.
23.500	5483.1807	2185.23	.	.	.	.Q	.	.	V	.
23.583	5498.0049	2152.51	.	.	.	.Q	.	.	V	.
23.667	5512.5889	2117.58	.	.	.	.Q	.	.	V	.
23.750	5526.9326	2082.72	.	.	.	Q	.	.	V	.
23.833	5541.0376	2048.05	.	.	.	Q	.	.	V	.
23.917	5554.8975	2012.45	.	.	.	Q	.	.	V	.
24.000	5568.5229	1978.39	.	.	.	Q	.	.	V	.
24.083	5581.9121	1944.11	.	.	.	Q	.	.	V	.
24.167	5595.0557	1908.44	.	.	.	Q	.	.	V	.
24.250	5607.9580	1873.42	.	.	.	Q	.	.	V	.
24.333	5620.6484	1842.68	.	.	.	Q	.	.	V	.
24.417	5633.1406	1813.83	.	.	.	Q	.	.	V	.
24.500	5645.4448	1786.55	.	.	.	Q	.	.	V	.
24.583	5657.5674	1760.19	.	.	.	Q	.	.	V	.
24.667	5669.4976	1732.28	.	.	.	Q	.	.	V	.
24.750	5681.2354	1704.33	.	.	.	Q	.	.	V	.
24.833	5692.7837	1676.83	.	.	.	Q	.	.	V	.
24.917	5704.1421	1649.26	.	.	.	Q	.	.	V	.
25.000	5715.2920	1618.99	.	.	.	Q	.	.	V	.
25.083	5726.2290	1588.05	.	.	.	Q	.	.	V	.
25.167	5736.9443	1555.86	.	.	.	Q	.	.	V	.
25.250	5747.4302	1522.58	.	.	.	Q	.	.	V	.
25.333	5757.6919	1490.01	.	.	.	Q	.	.	V	.
25.417	5767.7334	1458.00	.	.	.	Q	.	.	V	.
25.500	5777.5625	1427.18	.	.	.	Q	.	.	V	.
25.583	5787.1831	1396.88	.	.	.	Q	.	.	V	.
25.667	5796.5679	1362.70	.	.	.	Q	.	.	V	.
25.750	5805.7129	1327.83	.	.	.	Q	.	.	V	.
25.833	5814.6504	1297.74	.	.	.	Q	.	.	V	.
25.917	5823.3867	1268.53	.	.	.	Q	.	.	V	.
26.000	5831.9087	1237.39	.	.	.	Q	.	.	V	.
26.083	5840.1914	1202.62	.	.	.	Q	.	.	V	.
26.167	5848.2598	1171.51	.	.	.	Q	.	.	V	.
26.250	5856.1318	1143.05	.	.	.	Q	.	.	V	.
26.333	5863.7998	1113.38	.	.	.	Q	.	.	V	.
26.417	5871.2314	1079.07	.	.	.	Q	.	.	V	.
26.500	5878.4229	1044.21	.	.	.	Q	.	.	V	.
26.583	5885.2686	994.03	.	.	.	Q	.	.	V	.
26.667	5891.7983	948.14	.	.	.	Q	.	.	V	.
26.750	5898.1245	918.53	.	.	.	Q	.	.	V	.
26.833	5904.1724	878.15	.	.	.	Q	.	.	V	.
26.917	5909.9619	840.63	.	.	.	Q	.	.	V	.
27.000	5915.4883	802.40	.	.	.	Q	.	.	V	.
27.083	5920.7163	759.11	.	.	.	Q	.	.	V	.
27.167	5925.6821	721.04	.	.	.	Q	.	.	V	.
27.250	5930.4263	688.88	.	.	.	Q	.	.	V	.
27.333	5934.9575	657.96	.	.	.	Q	.	.	V	.
27.417	5939.2656	625.54	.	.	.	Q	.	.	V	.
27.500	5943.3218	588.96	.	.	.	Q	.	.	V	.
27.583	5947.0967	548.08	.	.	.	Q	.	.	V	.
27.667	5950.6440	515.11	.	.	.	Q	.	.	V	.
27.750	5953.9971	486.88	.	.	.	Q	.	.	V	.
27.833	5957.1592	459.15	.	.	.	Q	.	.	V	.
27.917	5960.1157	429.27	.	.	.	Q	.	.	V	.
28.000	5962.9023	404.64	.	.	.	Q	.	.	V	.
28.083	5965.5127	379.00	.	.	.	Q	.	.	V	.

28.167	5967.9507	353.99	.Q	.	.	.	V.
28.250	5970.2422	332.70	.Q	.	.	.	V.
28.333	5972.4053	314.07	.Q	.	.	.	V.
28.417	5974.4409	295.57	.Q	.	.	.	V.
28.500	5976.3486	276.97	.Q	.	.	.	V.
28.583	5978.1279	258.39	.Q	.	.	.	V.
28.667	5979.7925	241.70	.Q	.	.	.	V.
28.750	5981.3477	225.83	.Q	.	.	.	V.
28.833	5982.8013	211.09	.Q	.	.	.	V.
28.917	5984.1582	196.99	.Q	.	.	.	V.
29.000	5985.4312	184.84	Q	.	.	.	V.
29.083	5986.6235	173.12	Q	.	.	.	V.
29.167	5987.7456	162.91	Q	.	.	.	V.
29.250	5988.8047	153.78	Q	.	.	.	V.
29.333	5989.8013	144.71	Q	.	.	.	V.
29.417	5990.7388	136.11	Q	.	.	.	V.
29.500	5991.6206	128.02	Q	.	.	.	V.
29.583	5992.4468	119.99	Q	.	.	.	V.
29.667	5993.2188	112.11	Q	.	.	.	V.
29.750	5993.9404	104.78	Q	.	.	.	V.
29.833	5994.6128	97.60	Q	.	.	.	V.
29.917	5995.2358	90.49	Q	.	.	.	V.
30.000	5995.8130	83.80	Q	.	.	.	V.
30.083	5996.3555	78.74	Q	.	.	.	V.
30.167	5996.8643	73.89	Q	.	.	.	V.
30.250	5997.3398	69.08	Q	.	.	.	V.
30.333	5997.7827	64.30	Q	.	.	.	V.
30.417	5998.1929	59.57	Q	.	.	.	V.
30.500	5998.5742	55.38	Q	.	.	.	V.
30.583	5998.9346	52.30	Q	.	.	.	V.
30.667	5999.2739	49.27	Q	.	.	.	V.
30.750	5999.5928	46.28	Q	.	.	.	V.
30.833	5999.8911	43.31	Q	.	.	.	V.
30.917	6000.1689	40.35	Q	.	.	.	V.
31.000	6000.4268	37.42	Q	.	.	.	V.
31.083	6000.6646	34.52	Q	.	.	.	V.
31.167	6000.8823	31.63	Q	.	.	.	V.
31.250	6001.0815	28.92	Q	.	.	.	V.
31.333	6001.2725	27.72	Q	.	.	.	V.
31.417	6001.4575	26.88	Q	.	.	.	V.
31.500	6001.6367	26.05	Q	.	.	.	V.
31.583	6001.8105	25.23	Q	.	.	.	V.
31.667	6001.9785	24.41	Q	.	.	.	V.
31.750	6002.1411	23.61	Q	.	.	.	V.
31.833	6002.2983	22.81	Q	.	.	.	V.
31.917	6002.4502	22.03	Q	.	.	.	V.
32.000	6002.5967	21.24	Q	.	.	.	V.
32.083	6002.7378	20.46	Q	.	.	.	V.
32.167	6002.8735	19.69	Q	.	.	.	V.
32.250	6003.0039	18.92	Q	.	.	.	V.
32.333	6003.1289	18.16	Q	.	.	.	V.
32.417	6003.2490	17.41	Q	.	.	.	V.
32.500	6003.3638	16.66	Q	.	.	.	V.
32.583	6003.4736	15.93	Q	.	.	.	V.
32.667	6003.5781	15.19	Q	.	.	.	V.
32.750	6003.6777	14.46	Q	.	.	.	V.
32.833	6003.7725	13.73	Q	.	.	.	V.
32.917	6003.8623	13.02	Q	.	.	.	V.

33.000	6003.9473	12.31	Q	.	.	.	V.
33.083	6004.0273	11.61	Q	.	.	.	V.
33.167	6004.1025	10.91	Q	.	.	.	V.
33.250	6004.1729	10.22	Q	.	.	.	V.
33.333	6004.2383	9.53	Q	.	.	.	V.
33.417	6004.2993	8.85	Q	.	.	.	V.
33.500	6004.3555	8.17	Q	.	.	.	V.
33.583	6004.4072	7.50	Q	.	.	.	V.
33.667	6004.4541	6.83	Q	.	.	.	V.
33.750	6004.4966	6.17	Q	.	.	.	V.
33.833	6004.5347	5.51	Q	.	.	.	V.
33.917	6004.5679	4.85	Q	.	.	.	V.
34.000	6004.5967	4.20	Q	.	.	.	V.
34.083	6004.6211	3.55	Q	.	.	.	V.
34.167	6004.6411	2.91	Q	.	.	.	V.
34.250	6004.6567	2.27	Q	.	.	.	V.
34.333	6004.6680	1.64	Q	.	.	.	V.
34.417	6004.6748	1.00	Q	.	.	.	V.
34.500	6004.6772	0.38	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%	2070.0
10%	1420.0
20%	1025.0
30%	620.0
40%	490.0
50%	405.0
60%	335.0
70%	275.0
80%	205.0
90%	145.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5- UH SINGLE AREA MODEL - NODE 139 *
* 10-YR EV APRIL 2019 CHIU *

FILE NAME: EV10139S.DAT
TIME/DATE OF STUDY: 08:05 04/09/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 139.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69529.898 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.129 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.735
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.31
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.62
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.85
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.55
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.27
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 3.95

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.286
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.391
3-HOUR FACTOR = 0.733
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.663

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.152	1279.700
2	0.457	2559.392
3	0.761	2559.404
4	1.065	2559.390
5	1.370	2559.403
6	1.674	2559.392
7	1.993	2682.349
8	2.430	3677.107
9	2.894	3894.733
10	3.357	3894.733
11	3.822	3914.922
12	4.521	5873.745
13	5.373	7166.373
14	6.304	7827.289
15	7.418	9366.516
16	8.683	10638.799
17	10.089	11820.938
18	11.429	11265.510
19	12.760	11197.338
20	14.221	12284.642
21	16.136	16105.563
22	17.605	12352.180
23	19.026	11943.840
24	20.564	12933.301
25	22.417	15584.281
26	24.360	16334.882
27	25.901	12958.064
28	27.427	12834.344
29	29.316	15887.216
30	31.212	15940.592
31	33.455	18857.250
32	35.667	18599.576
33	37.230	13144.607
34	39.443	18607.082
35	41.930	20913.061
36	44.357	20407.752
37	46.814	20660.197
38	49.707	24332.074
39	51.844	17967.309
40	53.769	16185.531
41	55.587	15286.352
42	57.633	17201.889
43	60.022	20095.580
44	62.706	22565.311
45	64.794	17560.283
46	66.606	15231.660
47	68.456	15556.920
48	70.426	16563.623

49	72.015	13368.505
50	73.721	14346.722
51	75.378	13928.183
52	76.737	11426.761
53	77.920	9952.249
54	79.104	9952.954
55	80.307	10114.814
56	81.557	10508.014
57	82.726	9832.730
58	83.840	9368.642
59	84.876	8715.042
60	85.876	8405.179
61	86.731	7190.298
62	87.551	6891.212
63	88.283	6157.421
64	88.910	5270.943
65	89.536	5269.403
66	90.144	5107.543
67	90.706	4731.345
68	91.267	4714.409
69	91.827	4706.710
70	92.352	4412.244
71	92.859	4264.241
72	93.366	4267.321
73	93.868	4221.066
74	94.254	3240.539
75	94.592	2845.928
76	94.930	2845.928
77	95.269	2842.785
78	95.607	2842.849
79	95.937	2781.133
80	96.175	1994.928
81	96.384	1757.494
82	96.592	1754.415
83	96.801	1757.494
84	97.010	1757.494
85	97.219	1754.415
86	97.428	1760.574
87	97.637	1751.336
88	97.846	1760.574
89	98.008	1365.899
90	98.063	459.470
91	98.113	419.309
92	98.163	419.309
93	98.213	419.374
94	98.263	422.389
95	98.312	416.230
96	98.363	425.532
97	98.413	419.309
98	98.463	419.309
99	98.513	422.453
100	98.563	419.309
101	98.613	422.453
102	98.663	419.309
103	98.712	416.230
104	98.762	419.374
105	98.813	425.468
106	98.863	419.374

107	98.912	413.151
108	98.962	425.468
109	99.012	419.374
110	99.062	419.374
111	99.112	419.374
112	99.162	419.374
113	99.212	419.374
114	99.262	419.374
115	99.312	419.374
116	99.361	419.374
117	99.411	419.374
118	99.461	419.374
119	99.511	419.374
120	99.561	419.374
121	99.611	419.374
122	99.661	419.374
123	99.711	419.374
124	99.760	419.374
125	99.810	419.374
126	99.860	419.374
127	99.910	419.374
128	99.960	419.374
129	100.000	337.128

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 15264.1670
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 6040.1611

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.	1875.0	3750.0	5625.0	7500.0
0.083	0.0131	1.90	Q	.	.	.	.
0.167	0.0523	5.70	Q	.	.	.	.
0.250	0.1178	9.51	Q	.	.	.	.
0.333	0.2097	13.34	Q	.	.	.	.
0.417	0.3280	17.17	Q	.	.	.	.
0.500	0.4727	21.02	Q	.	.	.	.
0.583	0.6453	25.06	Q	.	.	.	.
0.667	0.8560	30.59	Q	.	.	.	.
0.750	1.1070	36.46	Q	.	.	.	.
0.833	1.3986	42.34	Q	.	.	.	.
0.917	1.7311	48.27	Q	.	.	.	.
1.000	2.1246	57.13	Q	.	.	.	.
1.083	2.5924	67.93	Q	.	.	.	.
1.167	3.1417	79.75	Q	.	.	.	.
1.250	3.7882	93.88	Q	.	.	.	.
1.333	4.5454	109.94	Q	.	.	.	.
1.417	5.4256	127.80	Q	.	.	.	.
1.500	6.4235	144.90	Q	.	.	.	.
1.583	7.5388	161.94	Q	.	.	.	.
1.667	8.7830	180.66	Q	.	.	.	.
1.750	10.1955	205.09	VQ	.	.	.	.
1.833	11.7384	224.03	VQ	.	.	.	.
1.917	13.4081	242.43	VQ	.	.	.	.
2.000	15.2149	262.35	VQ	.	.	.	.
2.083	17.1865	286.28	VQ	.	.	.	.
2.167	19.3310	311.38	VQ	.	.	.	.
2.250	21.6144	331.55	VQ	.	.	.	.
2.333	24.0359	351.61	VQ	.	.	.	.
2.417	26.6273	376.26	V Q	.	.	.	.
2.500	29.3894	401.07	V Q	.	.	.	.
2.583	32.3528	430.29	V Q	.	.	.	.
2.667	35.5154	459.20	V Q	.	.	.	.
2.750	38.8221	480.13	V Q	.	.	.	.
2.833	42.3292	509.23	V Q	.	.	.	.
2.917	46.0609	541.84	V Q	.	.	.	.
3.000	50.0127	573.81	V Q	.	.	.	.
3.083	54.1881	606.26	V Q	.	.	.	.
3.167	58.6251	644.26	V Q	.	.	.	.
3.250	63.2596	672.93	V Q	.	.	.	.
3.333	68.0741	699.07	V Q	.	.	.	.
3.417	73.0601	723.96	V Q	.	.	.	.
3.500	78.2376	751.78	V Q	.	.	.	.
3.583	83.6370	783.98	V Q	.	.	.	.
3.667	89.2841	819.97	V Q	.	.	.	.
3.750	95.1287	848.63	V Q	.	.	.	.
3.833	101.1477	873.96	V Q	.	.	.	.
3.917	107.3451	899.85	V Q	.	.	.	.

4.000	113.7317	927.35	V Q	.	.	.	.
4.083	120.2757	950.18	V Q	.	.	.	.
4.167	126.9876	974.57	V Q	.	.	.	.
4.250	133.8636	998.41	V Q	.	.	.	.
4.333	140.8791	1018.65	V Q	.	.	.	.
4.417	148.0193	1036.76	V Q	.	.	.	.
4.500	155.2850	1054.97	.V Q	.	.	.	.
4.583	162.6780	1073.47	.V Q	.	.	.	.
4.667	170.2032	1092.66	.V Q	.	.	.	.
4.750	177.8541	1110.90	.V Q	.	.	.	.
4.833	185.6265	1128.56	.V Q	.	.	.	.
4.917	193.5142	1145.29	.V Q	.	.	.	.
5.000	201.5147	1161.67	.V Q	.	.	.	.
5.083	209.6159	1176.29	.V Q	.	.	.	.
5.167	217.8154	1190.57	.V Q	.	.	.	.
5.250	226.1060	1203.80	.V Q	.	.	.	.
5.333	234.4794	1215.81	.V Q	.	.	.	.
5.417	242.9357	1227.86	.V Q	.	.	.	.
5.500	251.4739	1239.75	.V Q	.	.	.	.
5.583	260.0905	1251.13	.V Q	.	.	.	.
5.667	268.7859	1262.57	.V Q	.	.	.	.
5.750	277.5602	1274.04	.V Q	.	.	.	.
5.833	286.4112	1285.16	.V Q	.	.	.	.
5.917	295.3375	1296.10	.V Q	.	.	.	.
6.000	304.3399	1307.15	. V Q	.	.	.	.
6.083	313.4181	1318.16	. V Q	.	.	.	.
6.167	322.5628	1327.81	. V Q	.	.	.	.
6.250	331.7702	1336.91	. V Q	.	.	.	.
6.333	341.0409	1346.11	. V Q	.	.	.	.
6.417	350.3752	1355.34	. V Q	.	.	.	.
6.500	359.7737	1364.66	. V Q	.	.	.	.
6.583	369.2359	1373.92	. V Q	.	.	.	.
6.667	378.7547	1382.12	. V Q	.	.	.	.
6.750	388.3277	1390.00	. V Q	.	.	.	.
6.833	397.9556	1397.97	. V Q	.	.	.	.
6.917	407.6386	1405.98	. V Q	.	.	.	.
7.000	417.3776	1414.09	. V Q	.	.	.	.
7.083	427.1726	1422.24	. V Q	.	.	.	.
7.167	437.0244	1430.49	. V Q	.	.	.	.
7.250	446.9333	1438.77	. V Q	.	.	.	.
7.333	456.8999	1447.16	. V Q	.	.	.	.
7.417	466.9207	1455.01	. V Q	.	.	.	.
7.500	476.9870	1461.62	. V Q	.	.	.	.
7.583	487.0986	1468.21	. V Q	.	.	.	.
7.667	497.2564	1474.91	. V Q	.	.	.	.
7.750	507.4606	1481.64	. V Q	.	.	.	.
7.833	517.7119	1488.49	. V Q	.	.	.	.
7.917	528.0106	1495.37	. V Q	.	.	.	.
8.000	538.3575	1502.37	. V Q	.	.	.	.
8.083	548.7529	1509.41	. V Q	.	.	.	.
8.167	559.1976	1516.57	. V Q	.	.	.	.
8.250	569.6919	1523.78	. V Q	.	.	.	.
8.333	580.2366	1531.10	. V Q	.	.	.	.
8.417	590.8322	1538.47	. V Q	.	.	.	.
8.500	601.4793	1545.97	. V Q	.	.	.	.
8.583	612.1784	1553.51	. V Q	.	.	.	.
8.667	622.9304	1561.18	. V Q	.	.	.	.
8.750	633.7356	1568.92	. V Q	.	.	.	.

8.833	644.5950	1576.78	.	V	Q	.	.	.	.
8.917	655.5089	1584.70	.	V	Q	.	.	.	.
9.000	666.4783	1592.76	.	V	Q	.	.	.	.
9.083	677.5037	1600.89	.	V	Q	.	.	.	.
9.167	688.5860	1609.15	.	V	Q	.	.	.	.
9.250	699.7256	1617.48	.	V	Q	.	.	.	.
9.333	710.9237	1625.96	.	V	Q	.	.	.	.
9.417	722.1807	1634.51	.	V	Q	.	.	.	.
9.500	733.4976	1643.21	.	V	Q	.	.	.	.
9.583	744.8749	1651.99	.	V	Q	.	.	.	.
9.667	756.3138	1660.93	.	V	Q	.	.	.	.
9.750	767.8148	1669.94	.	V	Q	.	.	.	.
9.833	779.3790	1679.13	.	V	Q	.	.	.	.
9.917	791.0071	1688.40	.	V	Q	.	.	.	.
10.000	802.7002	1697.84	.	V	Q	.	.	.	.
10.083	814.4590	1707.38	.	V	Q	.	.	.	.
10.167	826.2847	1717.09	.	V	Q	.	.	.	.
10.250	838.1779	1726.90	.	V	Q	.	.	.	.
10.333	850.1401	1736.91	.	V	Q	.	.	.	.
10.417	862.1718	1747.01	.	V	Q	.	.	.	.
10.500	874.2745	1757.31	.	V	Q	.	.	.	.
10.583	886.4490	1767.72	.	V	Q	.	.	.	.
10.667	898.6965	1778.35	.	V	Q	.	.	.	.
10.750	911.0172	1788.96	.	V	Q	.	.	.	.
10.833	923.4091	1799.30	.	V	Q	.	.	.	.
10.917	935.8729	1809.75	.	V	Q	.	.	.	.
11.000	948.4104	1820.44	.	V	Q	.	.	.	.
11.083	961.0223	1831.25	.	V	Q	.	.	.	.
11.167	973.7104	1842.31	.	V	Q	.	.	.	.
11.250	986.4756	1853.51	.	V	Q	.	.	.	.
11.333	999.3197	1864.96	.	V	Q	.	.	.	.
11.417	1012.2437	1876.56	.	V	Q	.	.	.	.
11.500	1025.2494	1888.43	.	V	Q	.	.	.	.
11.583	1038.3379	1900.46	.	V	Q	.	.	.	.
11.667	1051.5112	1912.78	.	V	Q	.	.	.	.
11.750	1064.7706	1925.26	.	V	Q	.	.	.	.
11.833	1078.1182	1938.05	.	V	Q	.	.	.	.
11.917	1091.5551	1951.03	.	V	Q	.	.	.	.
12.000	1105.0835	1964.33	.	V	Q	.	.	.	.
12.083	1118.7295	1981.40	.	V	Q	.	.	.	.
12.167	1132.5201	2002.39	.	V	Q	.	.	.	.
12.250	1146.4565	2023.56	.	V	Q	.	.	.	.
12.333	1160.5409	2045.05	.	V	Q	.	.	.	.
12.417	1174.7745	2066.73	.	V	Q	.	.	.	.
12.500	1189.1599	2088.75	.	V	Q	.	.	.	.
12.583	1203.7007	2111.32	.	V	Q	.	.	.	.
12.667	1218.4186	2137.04	.	V	Q	.	.	.	.
12.750	1233.3193	2163.59	.	V	Q	.	.	.	.
12.833	1248.4054	2190.50	.	V	Q	.	.	.	.
12.917	1263.6787	2217.69	.	V	Q	.	.	.	.
13.000	1279.1798	2250.76	.	V	Q	.	.	.	.
13.083	1294.9351	2287.67	.	V	Q	.	.	.	.
13.167	1310.9598	2326.79	.	V	Q	.	.	.	.
13.250	1327.2852	2370.44	.	V	Q	.	.	.	.
13.333	1343.9381	2418.01	.	V	Q	.	.	.	.
13.417	1360.9429	2469.08	.	V	Q	.	.	.	.
13.500	1378.2910	2518.94	.	V	Q	.	.	.	.
13.583	1395.9825	2568.81	.	V	Q	.	.	.	.

13.667	1414.0410	2622.10	.	V.	Q	.	.	.	.
13.750	1432.5416	2686.28	.	V.	Q	.	.	.	.
13.833	1451.4143	2740.32	.	V.	Q	.	.	.	.
13.917	1470.6526	2793.39	.	V.	Q	.	.	.	.
14.000	1490.2786	2849.70	.	V.	Q	.	.	.	.
14.083	1510.3860	2919.61	.	V	Q	.	.	.	.
14.167	1531.0322	2997.84	.	V	Q	.	.	.	.
14.250	1552.1492	3066.19	.	V	Q	.	.	.	.
14.333	1573.7338	3134.08	.	V	Q	.	.	.	.
14.417	1595.8422	3210.13	.	V	Q	.	.	.	.
14.500	1618.4744	3286.20	.	V	Q	.	.	.	.
14.583	1641.6873	3370.52	.	V	Q	.	.	.	.
14.667	1665.5065	3458.55	.	.V	Q	.	.	.	.
14.750	1689.8285	3531.56	.	.V	Q	.	.	.	.
14.833	1714.7550	3619.33	.	.V	Q	.	.	.	.
14.917	1740.3253	3712.81	.	.V	Q	.	.	.	.
15.000	1766.5875	3813.28	.	.V	Q	.	.	.	.
15.083	1793.5792	3919.19	.	.V	Q	.	.	.	.
15.167	1821.3812	4036.85	.	.V	Q	.	.	.	.
15.250	1849.9097	4142.33	.	.V	Q	.	.	.	.
15.333	1879.1600	4247.16	.	.V	Q	.	.	.	.
15.417	1909.1083	4348.49	.	.V	Q	.	.	.	.
15.500	1939.7289	4446.11	.	.V	Q	.	.	.	.
15.583	1971.0656	4550.08	.	.V	Q	.	.	.	.
15.667	2003.1919	4664.75	.	.V	Q	.	.	.	.
15.750	2036.1145	4780.36	.	.V	Q	.	.	.	.
15.833	2069.6479	4869.06	.	.V	Q	.	.	.	.
15.917	2103.7827	4956.37	.	.V	Q	.	.	.	.
16.000	2138.5979	5055.15	.	.V	Q	.	.	.	.
16.083	2174.5933	5226.51	.	.V	Q	.	.	.	.
16.167	2211.7427	5394.10	.	.V	Q	.	.	.	.
16.250	2249.3879	5466.09	.	.V	Q	.	.	.	.
16.333	2287.4055	5520.14	.	.V	Q	.	.	.	.
16.417	2325.8467	5581.64	.	.V	Q	.	.	.	.
16.500	2364.7461	5648.19	.	.V	Q	.	.	.	.
16.583	2404.2429	5734.95	.	.V	Q	.	.	.	.
16.667	2444.6179	5862.44	.	.V	Q	.	.	.	.
16.750	2485.3271	5910.96	.	.V	Q	.	.	.	.
16.833	2526.5059	5979.14	.	.V	Q	.	.	.	.
16.917	2568.3113	6070.15	.	.V	Q	.	.	.	.
17.000	2611.4524	6264.10	.	.V	Q	.	.	.	.
17.083	2655.4922	6394.59	.	.V	Q	.	.	.	.
17.167	2700.3826	6518.10	.	.V	Q	.	.	.	.
17.250	2746.2395	6658.44	.	.V	Q	.	.	.	.
17.333	2792.8516	6768.06	.	.V	Q	.	.	.	.
17.417	2840.0149	6848.12	.	.V	Q	.	.	.	.
17.500	2887.1426	6842.93	.	.V	Q	.	.	.	.
17.583	2934.7239	6908.82	.	.V	Q	.	.	.	.
17.667	2983.3364	7058.56	.	.V	Q	.	.	.	.
17.750	3033.5437	7290.10	.	.V	Q	.	.	.	.
17.833	3082.3882	7092.22	.	.V	Q	.	.	.	.
17.917	3131.2625	7096.56	.	.V	Q	.	.	.	.
18.000	3180.7915	7191.63	.	.V	Q	.	.	.	.
18.083	3231.5930	7376.37	.	.V	Q	.	.	.	.
18.167	3282.5083	7392.90	.	.V	Q	.	.	.	.
18.250	3331.9336	7176.56	.	.V	Q	.	.	.	.
18.333	3381.2190	7156.23	.	.V	Q	.	.	.	.
18.417	3431.5566	7309.04	.	.V	Q	.	.	.	.

18.500	3481.7766	7291.94	.	.	.	V	.	Q	.
18.583	3532.9270	7427.05	.	.	.	V	.	Q	.
18.667	3583.6052	7358.49	.	.	.	V	.	Q	.
18.750	3632.1333	7046.29	.	.	.	V	.	Q	.
18.833	3682.7383	7347.85	.	.	.	V	.	Q	.
18.917	3734.0903	7456.31	.	.	.	V	.	Q	.
19.000	3785.0176	7394.65	.	.	.	V	.	Q	.
19.083	3835.7222	7362.30	.	.	.	V	.	Q	.
19.167	3887.2727	7485.13	.	.	.	V	.	Q	.
19.250	3935.9492	7067.83	.	.	.	V	.	Q	.
19.333	3983.5745	6915.18	.	.	.	V	.	Q	.
19.417	4030.6665	6837.75	.	.	.	V	.	Q	.
19.500	4078.4993	6945.30	.	.	.	V	.	Q	.
19.583	4127.1411	7062.81	.	.	.	V	.	Q	.
19.667	4176.1035	7109.34	.	.	.	V	.	Q	.
19.750	4222.6509	6758.66	.	.	.	V	.	Q	.
19.833	4267.8677	6565.46	.	.	.	V	.	Q	.
19.917	4312.7749	6520.56	.	.	.	V	.	Q	.
20.000	4357.5659	6503.64	.	.	.	V	.	Q	.
20.083	4400.5898	6247.09	.	.	.	V	.	Q	.
20.167	4443.2124	6188.78	.	.	.	V	.	Q	.
20.250	4485.0498	6074.76	.	.	.	V	.	Q	.
20.333	4525.4194	5861.64	.	.	.	V	.	Q	.
20.417	4564.7261	5707.29	.	.	.	Q	.	.	.
20.500	4603.5400	5635.76	.	.	.	Q	.	.	.
20.583	4641.7808	5552.56	.	.	.	QV	.	.	.
20.667	4679.3364	5453.12	.	.	.	QV	.	.	.
20.750	4715.9834	5321.12	.	.	.	Q	.	V	.
20.833	4751.7461	5192.76	.	.	.	Q	.	V	.
20.917	4786.4912	5044.98	.	.	.	Q	.	V	.
21.000	4820.2939	4908.19	.	.	.	Q	.	V	.
21.083	4852.8940	4733.55	.	.	.	Q	.	V	.
21.167	4884.5254	4592.85	.	.	.	Q	.	V	.
21.250	4915.1333	4444.30	.	.	.	Q	.	V	.
21.333	4944.7998	4307.56	.	.	.	Q	.	V	.
21.417	4973.8931	4224.36	.	.	.	Q	.	V	.
21.500	5002.2979	4124.39	.	.	.	Q	.	V	.
21.583	5029.8730	4003.90	.	.	.	Q	.	V	.
21.667	5056.6680	3890.59	.	.	.	Q	.	V	.
21.750	5082.7798	3791.46	.	.	.	Q	.	V	.
21.833	5108.1528	3684.19	.	.	.	Q	.	V	.
21.917	5132.8491	3585.88	.	.	.	Q	.	V	.
22.000	5156.9165	3494.59	.	.	.	Q	.	V	.
22.083	5180.3970	3409.38	.	.	.	Q	.	V	.
22.167	5202.9263	3271.27	.	.	.	Q	.	V	.
22.250	5224.7832	3173.59	.	.	.	Q	.	V	.
22.333	5246.2090	3111.02	.	.	.	Q	.	V	.
22.417	5267.2368	3053.22	.	.	.	Q	.	V	.
22.500	5287.8433	2992.05	.	.	.	Q	.	V	.
22.583	5307.9756	2923.20	.	.	.	Q	.	V	.
22.667	5327.3618	2814.88	.	.	.	Q	.	V	.
22.750	5346.2515	2742.81	.	.	.	Q	.	V	.
22.833	5364.7729	2689.32	.	.	.	Q	.	V	.
22.917	5382.9463	2638.76	.	.	.	Q	.	V	.
23.000	5400.7554	2585.90	.	.	.	Q	.	V	.
23.083	5418.2163	2535.36	.	.	.	Q	.	V	.
23.167	5435.3687	2490.51	.	.	.	Q	.	V	.
23.250	5452.2241	2447.41	.	.	.	Q	.	V	.

23.333	5468.7793	2403.84	.	.	.	Q	.	.	V	.
23.417	5484.8560	2334.37	.	.	.	Q	.	.	V	.
23.500	5500.2925	2241.36	.	.	.	Q	.	.	V	.
23.583	5515.4478	2200.57	.	.	.	Q	.	.	V	.
23.667	5530.3706	2166.77	.	.	.	Q	.	.	V	.
23.750	5545.0674	2133.98	.	.	.	Q	.	.	V	.
23.833	5559.5278	2099.65	.	.	.	Q	.	.	V	.
23.917	5573.7510	2065.23	.	.	.	Q	.	.	V	.
24.000	5587.7412	2031.35	.	.	.	Q	.	.	V	.
24.083	5601.4775	1994.49	.	.	.	Q	.	.	V	.
24.167	5614.9663	1958.59	.	.	.	Q	.	.	V	.
24.250	5628.2158	1923.80	.	.	.	Q	.	.	V	.
24.333	5641.2217	1888.46	.	.	.	Q	.	.	V	.
24.417	5653.9985	1855.22	.	.	.	Q	.	.	V	.
24.500	5666.5747	1826.04	.	.	.	Q	.	.	V	.
24.583	5678.9546	1797.55	.	.	.	Q	.	.	V	.
24.667	5691.1484	1770.56	.	.	.	Q	.	.	V	.
24.750	5703.1602	1744.08	.	.	.	Q	.	.	V	.
24.833	5714.9766	1715.76	.	.	.	Q	.	.	V	.
24.917	5726.6016	1687.98	.	.	.	Q	.	.	V	.
25.000	5738.0254	1658.72	.	.	.	Q	.	.	V	.
25.083	5749.2310	1627.03	.	.	.	Q	.	.	V	.
25.167	5760.2168	1595.17	.	.	.	Q	.	.	V	.
25.250	5770.9707	1561.46	.	.	.	Q	.	.	V	.
25.333	5781.4829	1526.39	.	.	.	Q	.	.	V	.
25.417	5791.7520	1491.08	.	.	.	Q	.	.	V	.
25.500	5801.8047	1459.65	.	.	.	Q	.	.	V	.
25.583	5811.6460	1428.93	.	.	.	Q	.	.	V	.
25.667	5821.2676	1397.09	.	.	.	Q	.	.	V	.
25.750	5830.6343	1360.02	.	.	.	Q	.	.	V	.
25.833	5839.7876	1329.06	.	.	.	Q	.	.	V	.
25.917	5848.7354	1299.18	.	.	.	Q	.	.	V	.
26.000	5857.4688	1268.12	.	.	.	Q	.	.	V	.
26.083	5865.9663	1233.83	.	.	.	Q	.	.	V	.
26.167	5874.2305	1199.97	.	.	.	Q	.	.	V	.
26.250	5882.2974	1171.34	.	.	.	Q	.	.	V	.
26.333	5890.1694	1143.04	.	.	.	Q	.	.	V	.
26.417	5897.8174	1110.45	.	.	.	Q	.	.	V	.
26.500	5905.2432	1078.21	.	.	.	Q	.	.	V	.
26.583	5912.4170	1041.61	.	.	.	Q	.	.	V	.
26.667	5919.3359	1004.61	.	.	.	Q	.	.	V	.
26.750	5926.0156	969.88	.	.	.	Q	.	.	V	.
26.833	5932.3154	914.71	.	.	.	Q	.	.	V	.
26.917	5938.3491	876.08	.	.	.	Q	.	.	V	.
27.000	5944.1250	838.69	.	.	.	Q	.	.	V	.
27.083	5949.6431	801.22	.	.	.	Q	.	.	V	.
27.167	5954.8599	757.48	.	.	.	Q	.	.	V	.
27.250	5959.8418	723.36	.	.	.	Q	.	.	V	.
27.333	5964.6069	691.91	.	.	.	Q	.	.	V	.
27.417	5969.1646	661.78	.	.	.	Q	.	.	V	.
27.500	5973.4951	628.82	.	.	.	Q	.	.	V	.
27.583	5977.5693	591.60	.	.	.	Q	.	.	V	.
27.667	5981.3628	550.79	.	.	.	Q	.	.	V	.
27.750	5984.9297	517.89	.	.	.	Q	.	.	V	.
27.833	5988.3052	490.16	.	.	.	Q	.	.	V	.
27.917	5991.4883	462.17	.	.	.	Q	.	.	V	.
28.000	5994.4697	432.91	.	.	.	Q	.	.	V	.
28.083	5997.2837	408.60	.	.	.	Q	.	.	V	.

28.167	5999.9219	383.03	. Q	.	.	.	V.
28.250	6002.3892	358.28	.Q	.	.	.	V.
28.333	6004.7129	337.41	.Q	.	.	.	V.
28.417	6006.9092	318.88	.Q	.	.	.	V.
28.500	6008.9785	300.49	.Q	.	.	.	V.
28.583	6010.9204	281.99	.Q	.	.	.	V.
28.667	6012.7319	263.05	.Q	.	.	.	V.
28.750	6014.4224	245.47	.Q	.	.	.	V.
28.833	6016.0039	229.65	.Q	.	.	.	V.
28.917	6017.4844	214.94	.Q	.	.	.	V.
29.000	6018.8672	200.79	.Q	.	.	.	V.
29.083	6020.1660	188.57	.Q	.	.	.	V.
29.167	6021.3843	176.88	Q	.	.	.	V.
29.250	6022.5303	166.38	Q	.	.	.	V.
29.333	6023.6133	157.28	Q	.	.	.	V.
29.417	6024.6343	148.25	Q	.	.	.	V.
29.500	6025.5952	139.54	Q	.	.	.	V.
29.583	6026.5005	131.46	Q	.	.	.	V.
29.667	6027.3506	123.47	Q	.	.	.	V.
29.750	6028.1465	115.55	Q	.	.	.	V.
29.833	6028.8911	108.13	Q	.	.	.	V.
29.917	6029.5864	100.99	Q	.	.	.	V.
30.000	6030.2329	93.90	Q	.	.	.	V.
30.083	6030.8315	86.93	Q	.	.	.	V.
30.167	6031.3926	81.47	Q	.	.	.	V.
30.250	6031.9204	76.63	Q	.	.	.	V.
30.333	6032.4150	71.83	Q	.	.	.	V.
30.417	6032.8770	67.08	Q	.	.	.	V.
30.500	6033.3066	62.36	Q	.	.	.	V.
30.583	6033.7046	57.76	Q	.	.	.	V.
30.667	6034.0791	54.37	Q	.	.	.	V.
30.750	6034.4326	51.35	Q	.	.	.	V.
30.833	6034.7656	48.37	Q	.	.	.	V.
30.917	6035.0781	45.40	Q	.	.	.	V.
31.000	6035.3706	42.46	Q	.	.	.	V.
31.083	6035.6431	39.54	Q	.	.	.	V.
31.167	6035.8955	36.63	Q	.	.	.	V.
31.250	6036.1279	33.76	Q	.	.	.	V.
31.333	6036.3408	30.90	Q	.	.	.	V.
31.417	6036.5381	28.64	Q	.	.	.	V.
31.500	6036.7290	27.74	Q	.	.	.	V.
31.583	6036.9146	26.91	Q	.	.	.	V.
31.667	6037.0942	26.09	Q	.	.	.	V.
31.750	6037.2686	25.28	Q	.	.	.	V.
31.833	6037.4370	24.47	Q	.	.	.	V.
31.917	6037.6001	23.67	Q	.	.	.	V.
32.000	6037.7578	22.87	Q	.	.	.	V.
32.083	6037.9097	22.08	Q	.	.	.	V.
32.167	6038.0566	21.31	Q	.	.	.	V.
32.250	6038.1982	20.53	Q	.	.	.	V.
32.333	6038.3345	19.76	Q	.	.	.	V.
32.417	6038.4653	19.00	Q	.	.	.	V.
32.500	6038.5908	18.25	Q	.	.	.	V.
32.583	6038.7114	17.51	Q	.	.	.	V.
32.667	6038.8267	16.77	Q	.	.	.	V.
32.750	6038.9370	16.02	Q	.	.	.	V.
32.833	6039.0425	15.30	Q	.	.	.	V.
32.917	6039.1431	14.58	Q	.	.	.	V.

33.000	6039.2383	13.85	Q	.	.	.	V.
33.083	6039.3286	13.14	Q	.	.	.	V.
33.167	6039.4141	12.44	Q	.	.	.	V.
33.250	6039.4951	11.73	Q	.	.	.	V.
33.333	6039.5713	11.04	Q	.	.	.	V.
33.417	6039.6426	10.35	Q	.	.	.	V.
33.500	6039.7090	9.66	Q	.	.	.	V.
33.583	6039.7710	8.98	Q	.	.	.	V.
33.667	6039.8281	8.30	Q	.	.	.	V.
33.750	6039.8809	7.63	Q	.	.	.	V.
33.833	6039.9287	6.96	Q	.	.	.	V.
33.917	6039.9722	6.29	Q	.	.	.	V.
34.000	6040.0107	5.63	Q	.	.	.	V.
34.083	6040.0449	4.98	Q	.	.	.	V.
34.167	6040.0747	4.33	Q	.	.	.	V.
34.250	6040.1001	3.68	Q	.	.	.	V.
34.333	6040.1211	3.04	Q	.	.	.	V.
34.417	6040.1377	2.40	Q	.	.	.	V.
34.500	6040.1499	1.76	Q	.	.	.	V.
34.583	6040.1577	1.13	Q	.	.	.	V.
34.667	6040.1611	0.50	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%	2080.0
10%	1425.0
20%	1045.0
30%	630.0
40%	500.0
50%	410.0
60%	340.0
70%	280.0
80%	205.0
90%	150.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 119 *
* 25-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV25119S.DAT
TIME/DATE OF STUDY: 14:41 01/02/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 49495.699 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.119 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298
LOW LOSS FRACTION = 0.433
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	1345.173
2	0.674	2690.348
3	1.124	2690.344
4	1.573	2690.350
5	2.058	2902.728
6	2.718	3951.946
7	3.402	4094.002
8	4.199	4767.580
9	5.417	7293.895
10	6.889	8807.938
11	8.696	10819.629
12	10.737	12215.654
13	12.704	11776.396
14	15.066	14135.504
15	17.479	14447.877
16	19.600	12694.560
17	22.168	15370.437
18	24.894	16316.075
19	27.152	13517.292
20	29.888	16380.045
21	32.903	18045.570
22	36.067	18942.230
23	38.760	16116.297
24	42.425	21938.598
25	46.006	21435.420
26	50.026	24063.812
27	53.062	18176.092
28	55.810	16445.523
29	58.990	19038.225
30	62.814	22887.479
31	65.775	17723.652
32	68.507	16356.926
33	71.205	16150.274
34	73.661	14698.422
35	76.009	14056.319
36	77.827	10879.104
37	79.578	10482.928
38	81.397	10889.516
39	83.119	10308.290
40	84.701	9469.220
41	86.142	8623.436
42	87.371	7358.504
43	88.444	6425.036
44	89.370	5539.155
45	90.262	5342.917
46	91.092	4966.150
47	91.914	4917.787
48	92.677	4567.006

49	93.426	4484.528
50	94.108	4081.685
51	94.616	3042.722
52	95.115	2989.198
53	95.615	2990.660
54	96.063	2684.451
55	96.379	1889.268
56	96.687	1846.111
57	96.996	1846.111
58	97.304	1846.157
59	97.613	1846.111
60	97.914	1804.507
61	98.055	844.277
62	98.129	440.018
63	98.202	439.972
64	98.276	442.941
65	98.350	442.941
66	98.423	437.004
67	98.497	442.986
68	98.571	442.941
69	98.645	442.941
70	98.718	437.004
71	98.793	445.955
72	98.866	437.004
73	98.940	445.909
74	99.013	437.004
75	99.086	437.004
76	99.159	437.004
77	99.232	437.004
78	99.305	437.004
79	99.378	437.004
80	99.451	437.004
81	99.524	437.004
82	99.597	437.004
83	99.670	437.004
84	99.743	437.004
85	99.816	437.004
86	99.889	437.004
87	99.962	437.004
88	100.000	225.512

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 8777.2588
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 11843.7471

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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.	3750.0	7500.0	11250.0	15000.0
0.083	0.0403	5.85	Q	.	.	.	.
0.167	0.1612	17.55	Q	.	.	.	.
0.250	0.3629	29.29	Q	.	.	.	.
0.333	0.6458	41.07	Q	.	.	.	.
0.417	1.0163	53.80	Q	.	.	.	.
0.500	1.5062	71.13	Q	.	.	.	.
0.583	2.1201	89.13	Q	.	.	.	.
0.667	2.8784	110.11	Q	.	.	.	.
0.750	3.8573	142.13	Q	.	.	.	.
0.833	5.1027	180.83	Q	.	.	.	.
0.917	6.6755	228.38	Q	.	.	.	.
1.000	8.6186	282.13	Q	.	.	.	.
1.083	10.9198	334.14	Q	.	.	.	.
1.167	13.6510	396.56	VQ	.	.	.	.
1.250	16.8226	460.52	VQ	.	.	.	.
1.333	20.3835	517.05	VQ	.	.	.	.
1.417	24.4152	585.39	VQ	.	.	.	.
1.500	28.9471	658.04	VQ	.	.	.	.
1.583	33.8972	718.75	VQ	.	.	.	.
1.667	39.3525	792.10	V Q	.	.	.	.
1.750	45.3642	872.90	V Q	.	.	.	.
1.833	51.9610	957.86	V Q	.	.	.	.
1.917	59.0601	1030.78	V Q	.	.	.	.
2.000	66.8374	1129.27	V Q	.	.	.	.
2.083	75.2797	1225.82	V Q	.	.	.	.
2.167	84.4681	1334.16	V Q	.	.	.	.
2.250	94.2282	1417.17	V Q	.	.	.	.
2.333	104.5107	1493.02	V Q	.	.	.	.
2.417	115.3944	1580.30	V Q	.	.	.	.
2.500	126.9968	1684.67	V Q	.	.	.	.
2.583	139.1651	1766.84	V Q	.	.	.	.
2.667	151.8610	1843.45	V Q	.	.	.	.
2.750	165.0794	1919.30	V Q	.	.	.	.
2.833	178.7792	1989.22	V Q	.	.	.	.
2.917	192.9423	2056.47	V Q	.	.	.	.
3.000	207.4757	2110.26	V Q	.	.	.	.
3.083	222.3684	2162.42	V Q	.	.	.	.
3.167	237.6346	2216.64	V Q	.	.	.	.
3.250	253.2574	2268.44	V Q	.	.	.	.
3.333	269.2138	2316.88	V Q	.	.	.	.
3.417	285.4792	2361.73	V Q	.	.	.	.
3.500	302.0176	2401.37	.V Q	.	.	.	.
3.583	318.8014	2437.01	.V Q	.	.	.	.
3.667	335.8059	2469.06	.V Q	.	.	.	.
3.750	353.0255	2500.29	.V Q	.	.	.	.
3.833	370.4507	2530.13	.V Q	.	.	.	.
3.917	388.0802	2559.80	.V Q	.	.	.	.

4.000	405.9052	2588.19	.V	Q	.	.	.	.
4.083	423.9236	2616.26	.V	Q	.	.	.	.
4.167	442.1247	2642.81	.V	Q	.	.	.	.
4.250	460.4779	2664.88	.V	Q	.	.	.	.
4.333	478.9830	2686.95	.V	Q	.	.	.	.
4.417	497.6403	2709.04	.V	Q	.	.	.	.
4.500	516.4422	2730.03	.V	Q	.	.	.	.
4.583	535.3649	2747.58	.V	Q	.	.	.	.
4.667	554.4089	2765.18	.V	Q	.	.	.	.
4.750	573.5740	2782.77	.V	Q	.	.	.	.
4.833	592.8619	2800.60	.V	Q	.	.	.	.
4.917	612.2726	2818.44	.V	Q	.	.	.	.
5.000	631.8065	2836.32	.V	Q	.	.	.	.
5.083	651.4349	2850.04	.V	Q	.	.	.	.
5.167	671.1474	2862.25	.V	Q	.	.	.	.
5.250	690.9437	2874.43	.V	Q	.	.	.	.
5.333	710.8257	2886.86	.V	Q	.	.	.	.
5.417	730.7932	2899.28	.V	Q	.	.	.	.
5.500	750.8478	2911.92	.V	Q	.	.	.	.
5.583	770.9894	2924.57	.V	Q	.	.	.	.
5.667	791.2200	2937.47	.V	Q	.	.	.	.
5.750	811.5392	2950.36	.V	Q	.	.	.	.
5.833	831.9489	2963.48	.V	Q	.	.	.	.
5.917	852.4490	2976.62	.V	Q	.	.	.	.
6.000	873.0413	2990.00	.V	Q	.	.	.	.
6.083	893.7258	3003.40	.V	Q	.	.	.	.
6.167	914.5043	3017.03	.V	Q	.	.	.	.
6.250	935.3765	3030.66	.V	Q	.	.	.	.
6.333	956.3446	3044.56	.V	Q	.	.	.	.
6.417	977.4084	3058.46	.V	Q	.	.	.	.
6.500	998.5699	3072.65	.V	Q	.	.	.	.
6.583	1019.8290	3086.83	.V	Q	.	.	.	.
6.667	1041.1879	3101.31	.V	Q	.	.	.	.
6.750	1062.6464	3115.78	.V	Q	.	.	.	.
6.833	1084.2067	3130.56	.V	Q	.	.	.	.
6.917	1105.8688	3145.34	.V	Q	.	.	.	.
7.000	1127.6349	3160.44	.V	Q	.	.	.	.
7.083	1149.5050	3175.53	.V	Q	.	.	.	.
7.167	1171.4813	3190.95	.V	Q	.	.	.	.
7.250	1193.5638	3206.38	.V	Q	.	.	.	.
7.333	1215.7485	3221.22	.V	Q	.	.	.	.
7.417	1238.0287	3235.08	.V	Q	.	.	.	.
7.500	1260.4067	3249.29	.V	Q	.	.	.	.
7.583	1282.8826	3263.50	.V	Q	.	.	.	.
7.667	1305.4587	3278.06	.V	Q	.	.	.	.
7.750	1328.1353	3292.62	.V	Q	.	.	.	.
7.833	1350.9146	3307.55	.V	Q	.	.	.	.
7.917	1373.7968	3322.49	.V	Q	.	.	.	.
8.000	1396.7844	3337.81	.V	Q	.	.	.	.
8.083	1419.8777	3353.14	.V	Q	.	.	.	.
8.167	1443.0792	3368.86	.V	Q	.	.	.	.
8.250	1466.3892	3384.60	.V	Q	.	.	.	.
8.333	1489.8103	3400.74	.V	Q	.	.	.	.
8.417	1513.3427	3416.90	.V	Q	.	.	.	.
8.500	1536.9893	3433.49	.V	Q	.	.	.	.
8.583	1560.7502	3450.09	.V	Q	.	.	.	.
8.667	1584.6287	3467.14	.V	Q	.	.	.	.
8.750	1608.6246	3484.21	.V	Q	.	.	.	.

8.833	1632.7413	3501.74	.	V	Q	.	.	.
8.917	1656.9789	3519.30	.	V	Q	.	.	.
9.000	1681.3407	3537.34	.	V	Q	.	.	.
9.083	1705.8269	3555.40	.	V	Q	.	.	.
9.167	1730.4410	3573.97	.	V	Q	.	.	.
9.250	1755.1832	3592.57	.	V	Q	.	.	.
9.333	1780.0571	3611.70	.	V	Q	.	.	.
9.417	1805.0631	3630.86	.	V	Q	.	.	.
9.500	1830.2048	3650.58	.	V	Q	.	.	.
9.583	1855.4827	3670.33	.	V	Q	.	.	.
9.667	1880.9004	3690.66	.	V	Q	.	.	.
9.750	1906.4585	3711.04	.	V	Q	.	.	.
9.833	1932.1611	3732.02	.	V	Q	.	.	.
9.917	1958.0087	3753.06	.	V	Q	.	.	.
10.000	1984.0054	3774.71	.	V	Q	.	.	.
10.083	2010.1517	3796.45	.	V	Q	.	.	.
10.167	2036.4521	3818.82	.	V	Q	.	.	.
10.250	2062.9072	3841.29	.	V	Q	.	.	.
10.333	2089.5217	3864.43	.	V	Q	.	.	.
10.417	2116.2964	3887.67	.	V	Q	.	.	.
10.500	2143.2358	3911.62	.	V	Q	.	.	.
10.583	2170.3411	3935.68	.	V	Q	.	.	.
10.667	2197.6172	3960.48	.	V	Q	.	.	.
10.750	2225.0649	3985.40	.	V	Q	.	.	.
10.833	2252.6897	4011.11	.	V	Q	.	.	.
10.917	2280.4924	4036.96	.	V	Q	.	.	.
11.000	2308.4788	4063.63	.	V	Q	.	.	.
11.083	2336.6499	4090.46	.	V	Q	.	.	.
11.167	2365.0120	4118.16	.	V	Q	.	.	.
11.250	2393.5659	4146.03	.	V	Q	.	.	.
11.333	2422.3181	4174.82	.	V	Q	.	.	.
11.417	2451.2700	4203.81	.	V	Q	.	.	.
11.500	2480.4282	4233.77	.	V	Q	.	.	.
11.583	2509.7942	4263.95	.	V	Q	.	.	.
11.667	2539.3752	4295.16	.	V	Q	.	.	.
11.750	2569.1729	4326.62	.	V	Q	.	.	.
11.833	2599.1946	4359.16	.	V	Q	.	.	.
11.917	2629.4424	4391.99	.	V	Q	.	.	.
12.000	2659.9243	4425.97	.	V	Q	.	.	.
12.083	2690.7087	4469.88	.	V	Q	.	.	.
12.167	2721.8699	4524.59	.	V	Q	.	.	.
12.250	2753.4097	4579.57	.	V	Q	.	.	.
12.333	2785.3364	4635.76	.	V	Q	.	.	.
12.417	2817.6628	4693.78	.	V	Q	.	.	.
12.500	2850.4492	4760.57	.	V	Q	.	.	.
12.583	2883.7046	4828.69	.	V	Q	.	.	.
12.667	2917.4714	4902.95	.	V	Q	.	.	.
12.750	2951.8762	4995.58	.	V	Q	.	.	.
12.833	2987.0027	5100.36	.	V	Q	.	.	.
12.917	3022.9512	5219.72	.	V	Q	.	.	.
13.000	3059.7996	5350.37	.	V	Q	.	.	.
13.083	3097.5271	5478.02	.	V	Q	.	.	.
13.167	3136.2590	5623.88	.	V	Q	.	.	.
13.250	3176.0117	5772.10	.	V	Q	.	.	.
13.333	3216.7083	5909.14	.	V	Q	.	.	.
13.417	3258.4817	6065.49	.	.V	Q	.	.	.
13.500	3301.3884	6230.06	.	.V	Q	.	.	.
13.583	3345.2915	6374.73	.	.V	Q	.	.	.

13.667	3390.3428	6541.44	.	.V	Q	.	.	.
13.750	3436.6255	6720.25	.	.V	Q	.	.	.
13.833	3484.1946	6907.02	.	.V	Q	.	.	.
13.917	3532.9119	7073.77	.	.V	Q	.	.	.
14.000	3583.0759	7283.81	.	.V	Q	.	.	.
14.083	3634.7385	7501.42	.	.V	Q	.	.	.
14.167	3688.1138	7750.10	.	.V	Q	.	.	.
14.250	3742.9080	7956.11	.	.V	.Q	.	.	.
14.333	3799.0420	8150.67	.	.V	.Q	.	.	.
14.417	3856.6533	8365.16	.	.V	.Q	.	.	.
14.500	3915.9966	8616.64	.	.V	.Q	.	.	.
14.583	3976.8203	8831.61	.	.V	.Q	.	.	.
14.667	4039.0989	9042.84	.	.V	.Q	.	.	.
14.750	4102.9585	9272.42	.	.V	.Q	.	.	.
14.833	4168.4116	9503.82	.	.V	.Q	.	.	.
14.917	4235.5254	9744.89	.	.V	.Q	.	.	.
15.000	4304.2134	9973.51	.	.V	.Q	.	.	.
15.083	4374.4087	10192.38	.	.V	.Q	.	.	.
15.167	4446.2529	10431.78	.	.V	.Q	.	.	.
15.250	4519.7080	10665.65	.	.V	.Q	.	.	.
15.333	4594.6143	10876.40	.	.V	.Q	.	.	.
15.417	4670.9541	11084.55	.	.V	.Q	.	.	.
15.500	4748.6064	11275.13	.	.V	.Q	.	.	.
15.583	4827.3516	11433.78	.	.V	.Q	.	.	.
15.667	4907.3110	11610.08	.	.V	.Q	.	.	.
15.750	4988.4976	11788.26	.	.V	.Q	.	.	.
15.833	5070.8247	11953.88	.	.V	.Q	.	.	.
15.917	5154.1572	12099.92	.	.V	.Q	.	.	.
16.000	5238.8652	12299.63	.	.V	.Q	.	.	.
16.083	5325.6050	12594.65	.	.V	.Q	.	.	.
16.167	5414.2471	12870.82	.	.V	.Q	.	.	.
16.250	5503.3291	12934.72	.	.V	.Q	.	.	.
16.333	5592.6709	12972.45	.	.V	.Q	.	.	.
16.417	5682.6768	13068.87	.	.V	.Q	.	.	.
16.500	5773.9966	13259.63	.	.V	.Q	.	.	.
16.583	5865.7344	13320.36	.	.V	.Q	.	.	.
16.667	5958.4385	13460.60	.	.V	.Q	.	.	.
16.750	6053.1968	13758.88	.	.V	.Q	.	.	.
16.833	6149.1748	13936.00	.	.V	.Q	.	.	.
16.917	6246.8408	14181.12	.	.V	.Q	.	.	.
17.000	6345.3838	14308.45	.	.V	.Q	.	.	.
17.083	6443.4849	14244.28	.	.V	.Q	.	.	.
17.167	6542.8315	14425.17	.	.V	.Q	.	.	.
17.250	6642.3984	14457.13	.	.V	.Q	.	.	.
17.333	6740.5864	14256.92	.	.V	.Q	.	.	.
17.417	6840.1782	14460.71	.	.V	.Q	.	.	.
17.500	6939.7334	14455.38	.	.V	.Q	.	.	.
17.583	7037.6284	14214.33	.	.V	.Q	.	.	.
17.667	7137.4819	14498.75	.	.V	.Q	.	.	.
17.750	7238.1162	14612.13	.	.V	.Q	.	.	.
17.833	7338.6562	14598.43	.	.V	.Q	.	.	.
17.917	7437.2236	14311.97	.	.V	.Q	.	.	.
18.000	7539.7061	14880.44	.	.V	.Q	.	.	.
18.083	7641.5439	14786.85	.	.V	.Q	.	.	.
18.167	7744.2856	14918.11	.	.V	.Q	.	.	.
18.250	7842.2451	14223.71	.	.V	.Q	.	.	.
18.333	7939.4561	14115.03	.	.V	.Q	.	.	.
18.417	8038.4990	14381.06	.	.V	.Q	.	.	.

18.500	8139.7646	14703.74	.	.	.	.	V	.	Q
18.583	8237.0117	14120.28	.	.	.	.	V	.	Q
18.667	8332.7188	13896.68	.	.	.	.	V	.	Q
18.750	8427.5049	13762.98	.	.	.	.	V	.	Q
18.833	8520.7080	13533.09	.	.	.	.	V	.	Q
18.917	8612.5703	13338.35	.	.	.	.	V	.	Q
19.000	8701.0918	12853.28	.	.	.	.	V	.	Q
19.083	8788.2197	12650.92	.	.	.	.	V	.	Q
19.167	8874.0332	12460.06	.	.	.	.	V	.	Q
19.250	8958.0879	12204.69	.	.	.	.	V	.	Q
19.333	9040.1455	11914.79	.	.	.	.	VQ	.	.
19.417	9119.8066	11566.76	.	.	.	.	Q	.	.
19.500	9196.5498	11143.04	.	.	.	.	Q.V	.	.
19.583	9271.0547	10818.09	.	.	.	.	Q	.	V
19.667	9343.2646	10484.91	.	.	.	.	Q	.	V
19.750	9413.5127	10200.05	.	.	.	.	Q	.	V
19.833	9481.6504	9893.54	.	.	.	.	Q	.	V
19.917	9548.0723	9644.47	.	.	.	.	Q	.	V
20.000	9612.3750	9336.76	.	.	.	.	Q	.	V
20.083	9674.7090	9050.90	.	.	.	.	Q	.	V
20.167	9734.6367	8701.53	.	.	.	.	Q	.	V
20.250	9792.1152	8345.82	.	.	.	.	Q	.	V
20.333	9847.9248	8103.54	.	.	.	.	Q	.	V
20.417	9902.0410	7857.63	.	.	.	.	Q	.	V
20.500	9954.1230	7562.26	.	.	.	.	Q	.	V
20.583	10004.1113	7258.31	.	.	.	.	Q	.	V
20.667	10052.6426	7046.77	.	.	.	.	Q	.	V
20.750	10099.7939	6846.41	.	.	.	.	Q	.	V
20.833	10145.6523	6658.60	.	.	.	.	Q	.	V
20.917	10190.1562	6461.92	.	.	.	.	Q	.	V
21.000	10233.3887	6277.37	.	.	.	.	Q	.	V
21.083	10274.7852	6010.75	.	.	.	.	Q	.	V
21.167	10314.7744	5806.42	.	.	.	.	Q	.	V
21.250	10353.7314	5656.50	.	.	.	.	Q	.	V
21.333	10391.7109	5514.66	.	.	.	.	Q	.	V
21.417	10428.6904	5369.45	.	.	.	.	Q	.	V
21.500	10464.7256	5232.29	.	.	.	.	Q	.	V
21.583	10499.9209	5110.33	.	.	.	.	Q	.	V
21.667	10534.3271	4995.79	.	.	.	.	Q	.	V
21.750	10567.9629	4883.94	.	.	.	.	Q	.	V
21.833	10600.8516	4775.49	.	.	.	.	Q	.	V
21.917	10633.0146	4670.05	.	.	.	.	Q	.	V
22.000	10664.4668	4566.89	.	.	.	.	Q	.	V
22.083	10695.2871	4475.14	.	.	.	.	Q	.	V
22.167	10725.5176	4389.46	.	.	.	.	Q	.	V
22.250	10755.2285	4314.03	.	.	.	.	Q	.	V
22.333	10784.4336	4240.57	.	.	.	.	Q	.	V
22.417	10813.1445	4168.84	.	.	.	.	Q	.	V
22.500	10841.3867	4100.82	.	.	.	.	Q	.	V
22.583	10869.2100	4039.92	.	.	.	.	Q	.	V
22.667	10896.6416	3983.05	.	.	.	.	Q	.	V
22.750	10923.7061	3929.82	.	.	.	.	Q	.	V
22.833	10950.4102	3877.45	.	.	.	.	Q	.	V
22.917	10976.7578	3825.69	.	.	.	.	Q	.	V
23.000	11002.7627	3775.89	.	.	.	.	Q	.	V
23.083	11028.4814	3734.32	.	.	.	.	Q	.	V
23.167	11053.9297	3695.10	.	.	.	.	Q	.	V
23.250	11079.0947	3653.98	.	.	.	.	Q	.	V

23.333	11103.8389	3592.86	.	Q.	.	.	V	.
23.417	11128.1758	3533.69	.	Q.	.	.	V	.
23.500	11152.2686	3498.34	.	Q.	.	.	V	.
23.583	11176.1260	3464.16	.	Q.	.	.	V	.
23.667	11199.7432	3429.21	.	Q.	.	.	V	.
23.750	11223.1084	3392.66	.	Q.	.	.	V	.
23.833	11246.2256	3356.63	.	Q.	.	.	V	.
23.917	11269.0977	3321.00	.	Q.	.	.	V	.
24.000	11291.7275	3285.91	.	Q.	.	.	V	.
24.083	11314.0781	3245.37	.	Q.	.	.	V	.
24.167	11336.1133	3199.55	.	Q.	.	.	V	.
24.250	11357.8369	3154.23	.	Q.	.	.	V	.
24.333	11379.2637	3111.17	.	Q.	.	.	V	.
24.417	11400.4043	3069.67	.	Q.	.	.	V	.
24.500	11421.2334	3024.32	.	Q.	.	.	V	.
24.583	11441.7500	2979.06	.	Q.	.	.	V	.
24.667	11461.9395	2931.55	.	Q.	.	.	V	.
24.750	11481.7314	2873.75	.	Q.	.	.	V	.
24.833	11501.0850	2810.08	.	Q.	.	.	V	.
24.917	11519.9443	2738.40	.	Q.	.	.	V	.
25.000	11538.2734	2661.41	.	Q.	.	.	V	.
25.083	11556.0908	2587.08	.	Q.	.	.	V	.
25.167	11573.3311	2503.23	.	Q.	.	.	V	.
25.250	11589.9893	2418.79	.	Q.	.	.	V	.
25.333	11606.1338	2344.22	.	Q.	.	.	V	.
25.417	11621.7012	2260.35	.	Q.	.	.	V	.
25.500	11636.6680	2173.13	.	Q.	.	.	V	.
25.583	11651.1230	2098.81	.	Q.	.	.	V	.
25.667	11664.9854	2012.74	.	Q.	.	.	V	.
25.750	11678.2100	1920.17	.	Q.	.	.	V	.
25.833	11690.7754	1824.46	.	Q.	.	.	V	.
25.917	11702.7705	1741.76	.	Q.	.	.	V	.
26.000	11714.0273	1634.46	.	Q.	.	.	V	.
26.083	11724.5654	1530.14	.	Q.	.	.	V	.
26.167	11734.3115	1415.17	.	Q.	.	.	V	.
26.250	11743.4473	1326.56	.	Q.	.	.	V	.
26.333	11752.0293	1246.11	.	Q.	.	.	V	.
26.417	11759.9834	1155.00	.	Q.	.	.	V	.
26.500	11767.2002	1047.83	.	Q.	.	.	V	.
26.583	11773.8379	963.80	.	Q.	.	.	V	.
26.667	11779.9414	886.27	.	Q.	.	.	V	.
26.750	11785.5215	810.18	.	Q.	.	.	V	.
26.833	11790.6240	740.91	.	Q.	.	.	V	.
26.917	11795.2725	674.90	.	Q.	.	.	V	.
27.000	11799.5635	623.12	.	Q.	.	.	V	.
27.083	11803.5127	573.43	.	Q.	.	.	V	.
27.167	11807.1094	522.31	.	Q.	.	.	V	.
27.250	11810.3740	474.06	.	Q.	.	.	V	.
27.333	11813.3340	429.77	.	Q.	.	.	V	.
27.417	11816.0166	389.46	.	Q.	.	.	V	.
27.500	11818.4609	354.90	.	Q.	.	.	V	.
27.583	11820.6963	324.63	.	Q.	.	.	V	.
27.667	11822.7510	298.41	.	Q.	.	.	V	.
27.750	11824.6328	273.22	.	Q.	.	.	V	.
27.833	11826.3535	249.83	.	Q.	.	.	V	.
27.917	11827.9160	226.82	.	Q.	.	.	V	.
28.000	11829.3311	205.48	.	Q.	.	.	V	.
28.083	11830.6025	184.64	.	Q.	.	.	V	.

28.167	11831.7432	165.69	Q	.	.	.	V	.
28.250	11832.7861	151.37	Q	.	.	.	V	.
28.333	11833.7324	137.38	Q	.	.	.	V	.
28.417	11834.5830	123.48	Q	.	.	.	V	.
28.500	11835.3477	111.00	Q	.	.	.	V	.
28.583	11836.0508	102.05	Q	.	.	.	V	.
28.667	11836.6934	93.36	Q	.	.	.	V	.
28.750	11837.2764	84.72	Q	.	.	.	V	.
28.833	11837.8008	76.14	Q	.	.	.	V	.
28.917	11838.2666	67.61	Q	.	.	.	V	.
29.000	11838.6748	59.32	Q	.	.	.	V	.
29.083	11839.0557	55.26	Q	.	.	.	V	.
29.167	11839.4209	52.97	Q	.	.	.	V	.
29.250	11839.7705	50.70	Q	.	.	.	V	.
29.333	11840.1045	48.44	Q	.	.	.	V	.
29.417	11840.4229	46.20	Q	.	.	.	V	.
29.500	11840.7256	44.00	Q	.	.	.	V	.
29.583	11841.0137	41.79	Q	.	.	.	V	.
29.667	11841.2861	39.59	Q	.	.	.	V	.
29.750	11841.5439	37.41	Q	.	.	.	V	.
29.833	11841.7871	35.27	Q	.	.	.	V	.
29.917	11842.0156	33.11	Q	.	.	.	V	.
30.000	11842.2295	31.01	Q	.	.	.	V	.
30.083	11842.4287	28.88	Q	.	.	.	V	.
30.167	11842.6133	26.80	Q	.	.	.	V	.
30.250	11842.7832	24.74	Q	.	.	.	V	.
30.333	11842.9395	22.69	Q	.	.	.	V	.
30.417	11843.0820	20.65	Q	.	.	.	V	.
30.500	11843.2100	18.63	Q	.	.	.	V	.
30.583	11843.3242	16.62	Q	.	.	.	V	.
30.667	11843.4248	14.62	Q	.	.	.	V	.
30.750	11843.5117	12.64	Q	.	.	.	V	.
30.833	11843.5850	10.66	Q	.	.	.	V	.
30.917	11843.6445	8.70	Q	.	.	.	V	.
31.000	11843.6914	6.76	Q	.	.	.	V	.
31.083	11843.7246	4.82	Q	.	.	.	V	.
31.167	11843.7441	2.90	Q	.	.	.	V	.
31.250	11843.7510	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%	595.0
40%	465.0
50%	390.0
60%	330.0
70%	270.0
80%	210.0
90%	135.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 126 *
* 25-YR EV JANUARY 2019 CCHI *

FILE NAME: EV25126S.DAT
TIME/DATE OF STUDY: 14:45 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 126.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 50405.801 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) = 0.297
LOW LOSS FRACTION = 0.434
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.41
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.78
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.08
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.01
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.99
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.27

*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 = 3.769

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.215	1312.904
2	0.646	2625.814
3	1.077	2625.810
4	1.508	2625.811
5	1.953	2713.066
6	2.562	3712.498
7	3.217	3995.792
8	3.898	4152.666
9	4.972	6543.314
10	6.258	7838.956
11	7.853	9723.146
12	9.774	11710.517
13	11.681	11629.395
14	13.607	11738.573
15	16.136	15416.075
16	18.224	12728.458
17	20.330	12835.916
18	22.964	16058.321
19	25.416	14944.700
20	27.608	13365.484
21	30.310	16472.990
22	33.264	18005.164
23	36.232	18095.611
24	38.830	15835.372
25	42.354	21484.539
26	45.777	20863.234
27	49.649	23606.580
28	52.653	18312.178
29	55.290	16070.704
30	58.200	17739.426
31	61.816	22044.291
32	64.934	19009.688
33	67.492	15588.226
34	70.240	16753.820
35	72.564	14170.230
36	74.953	14559.925
37	76.920	11989.776
38	78.595	10211.295
39	80.292	10343.146
40	82.033	10615.639
41	83.635	9763.466
42	85.110	8995.100
43	86.439	8101.115
44	87.597	7061.001
45	88.582	5998.842
46	89.468	5405.720
47	90.317	5175.922
48	91.111	4839.526

49	91.899	4803.947
50	92.632	4464.390
51	93.350	4376.674
52	94.025	4117.716
53	94.524	3038.906
54	95.002	2917.240
55	95.481	2917.287
56	95.943	2820.968
57	96.270	1993.258
58	96.566	1802.201
59	96.862	1802.155
60	97.157	1802.201
61	97.453	1802.155
62	97.748	1800.620
63	97.996	1511.524
64	98.081	518.057
65	98.152	429.645
66	98.222	429.598
67	98.293	432.807
68	98.364	429.598
69	98.435	432.761
70	98.505	429.645
71	98.576	432.761
72	98.647	432.761
73	98.717	426.482
74	98.788	432.761
75	98.859	432.761
76	98.929	426.482
77	99.001	435.923
78	99.071	426.482
79	99.141	426.482
80	99.211	426.482
81	99.280	426.482
82	99.350	426.482
83	99.420	426.482
84	99.490	426.482
85	99.560	426.482
86	99.630	426.482
87	99.700	426.482
88	99.770	426.482
89	99.840	426.482
90	99.910	426.482
91	99.980	426.482
92	100.000	121.340

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 8905.2168
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 11963.2568

=====
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	0.0390	5.66	Q	.	.	.	.
0.167	0.1560	16.99	Q	.	.	.	.
0.250	0.3513	28.36	Q	.	.	.	.
0.333	0.6251	39.75	Q	.	.	.	.
0.417	0.9802	51.56	Q	.	.	.	.
0.500	1.4465	67.71	Q	.	.	.	.
0.583	2.0328	85.13	Q	.	.	.	.
0.667	2.7441	103.28	Q	.	.	.	.
0.750	3.6516	131.78	Q	.	.	.	.
0.833	4.7946	165.95	Q	.	.	.	.
0.917	6.2294	208.35	Q	.	.	.	.
1.000	8.0161	259.43	Q	.	.	.	.
1.083	10.1532	310.31	Q	.	.	.	.
1.167	12.6451	361.82	Q	.	.	.	.
1.250	15.6020	429.33	VQ	.	.	.	.
1.333	18.9453	485.45	VQ	.	.	.	.
1.417	22.6797	542.23	VQ	.	.	.	.
1.500	26.9018	613.05	VQ	.	.	.	.
1.583	31.5802	679.30	VQ	.	.	.	.
1.667	36.6693	738.94	VQ	.	.	.	.
1.750	42.2628	812.17	V Q	.	.	.	.
1.833	48.4074	892.21	V Q	.	.	.	.
1.917	55.1079	972.90	V Q	.	.	.	.
2.000	62.2985	1044.08	V Q	.	.	.	.
2.083	70.1489	1139.88	V Q	.	.	.	.
2.167	78.6423	1233.23	V Q	.	.	.	.
2.250	87.8624	1338.77	V Q	.	.	.	.
2.333	97.6540	1421.74	V Q	.	.	.	.
2.417	107.9529	1495.41	V Q	.	.	.	.
2.500	118.8098	1576.42	V Q	.	.	.	.
2.583	130.3549	1676.34	V Q	.	.	.	.
2.667	142.4995	1763.40	V Q	.	.	.	.
2.750	155.1448	1836.10	V Q	.	.	.	.
2.833	168.3264	1913.97	V Q	.	.	.	.
2.917	181.9701	1981.07	V Q	.	.	.	.
3.000	196.0885	2049.99	V Q	.	.	.	.
3.083	210.6074	2108.15	V Q	.	.	.	.
3.167	225.4751	2158.78	V Q	.	.	.	.
3.250	240.6971	2210.25	V Q	.	.	.	.
3.333	256.2825	2263.00	V Q	.	.	.	.
3.417	272.2078	2312.35	V Q	.	.	.	.
3.500	288.4510	2358.51	V Q	.	.	.	.
3.583	304.9873	2401.07	.V Q	.	.	.	.
3.667	321.7865	2439.24	.V Q	.	.	.	.
3.750	338.8187	2473.08	.V Q	.	.	.	.
3.833	356.0669	2504.43	.V Q	.	.	.	.
3.917	373.5256	2535.01	.V Q	.	.	.	.

4.000	391.1854	2564.20	.V	Q	.	.	.	.
4.083	409.0467	2593.47	.V	Q	.	.	.	.
4.167	427.0999	2621.32	.V	Q	.	.	.	.
4.250	445.3438	2649.02	.V	Q	.	.	.	.
4.333	463.7712	2675.65	.V	Q	.	.	.	.
4.417	482.3515	2697.86	.V	Q	.	.	.	.
4.500	501.0815	2719.59	.V	Q	.	.	.	.
4.583	519.9625	2741.53	.V	Q	.	.	.	.
4.667	538.9921	2763.09	.V	Q	.	.	.	.
4.750	558.1470	2781.30	.V	Q	.	.	.	.
4.833	577.4219	2798.72	.V	Q	.	.	.	.
4.917	596.8182	2816.34	.V	Q	.	.	.	.
5.000	616.3361	2833.99	.V	Q	.	.	.	.
5.083	635.9771	2851.86	.V	Q	.	.	.	.
5.167	655.7412	2869.75	.V	Q	.	.	.	.
5.250	675.6215	2886.62	.V	Q	.	.	.	.
5.333	695.5887	2899.23	.V	Q	.	.	.	.
5.417	715.6415	2911.67	.V	Q	.	.	.	.
5.500	735.7802	2924.13	.V	Q	.	.	.	.
5.583	756.0062	2936.82	.V	Q	.	.	.	.
5.667	776.3196	2949.51	.V	Q	.	.	.	.
5.750	796.7220	2962.43	.V	Q	.	.	.	.
5.833	817.2134	2975.36	.V	Q	.	.	.	.
5.917	837.7956	2988.53	.V	Q	.	.	.	.
6.000	858.4686	3001.72	.V	Q	.	.	.	.
6.083	879.2338	3015.11	.V	Q	.	.	.	.
6.167	900.0917	3028.56	.V	Q	.	.	.	.
6.250	921.0438	3042.25	.V	Q	.	.	.	.
6.333	942.0902	3055.93	.V	Q	.	.	.	.
6.417	963.2328	3069.91	.V	Q	.	.	.	.
6.500	984.4716	3083.87	.V	Q	.	.	.	.
6.583	1005.8083	3098.09	.V	Q	.	.	.	.
6.667	1027.2430	3112.33	.V	Q	.	.	.	.
6.750	1048.7777	3126.84	.V	Q	.	.	.	.
6.833	1070.4126	3141.38	.V	Q	.	.	.	.
6.917	1092.1495	3156.20	.V	Q	.	.	.	.
7.000	1113.9886	3171.05	.V	Q	.	.	.	.
7.083	1135.9320	3186.18	.V	Q	.	.	.	.
7.167	1157.9799	3201.35	.V	Q	.	.	.	.
7.250	1180.1342	3216.81	.V	Q	.	.	.	.
7.333	1202.3953	3232.31	.V	Q	.	.	.	.
7.417	1224.7651	3248.11	.V	Q	.	.	.	.
7.500	1247.2441	3263.95	.V	Q	.	.	.	.
7.583	1269.8345	3280.11	.V	Q	.	.	.	.
7.667	1292.5272	3294.99	.V	Q	.	.	.	.
7.750	1315.3212	3309.68	.V	Q	.	.	.	.
7.833	1338.2166	3324.41	.V	Q	.	.	.	.
7.917	1361.2157	3339.47	.V	Q	.	.	.	.
8.000	1384.3188	3354.57	.V	Q	.	.	.	.
8.083	1407.5284	3370.03	.V	Q	.	.	.	.
8.167	1430.8447	3385.52	.V	Q	.	.	.	.
8.250	1454.2703	3401.38	.V	Q	.	.	.	.
8.333	1477.8053	3417.29	.V	Q	.	.	.	.
8.417	1501.4525	3433.58	.V	Q	.	.	.	.
8.500	1525.2123	3449.92	.V	Q	.	.	.	.
8.583	1549.0873	3466.65	.V	Q	.	.	.	.
8.667	1573.0780	3483.45	.V	Q	.	.	.	.
8.750	1597.1871	3500.64	.V	Q	.	.	.	.

8.833	1621.4152	3517.90	.V	Q	.	.	.	.
8.917	1645.7649	3535.59	.V	Q	.	.	.	.
9.000	1670.2369	3553.34	.V	Q	.	.	.	.
9.083	1694.8344	3571.54	.V	Q	.	.	.	.
9.167	1719.5576	3589.81	.V	Q	.	.	.	.
9.250	1744.4099	3608.55	.V	Q	.	.	.	.
9.333	1769.3917	3627.36	.V	Q	.	.	.	.
9.417	1794.5065	3646.66	.V	Q	.	.	.	.
9.500	1819.7548	3666.04	.V	Q	.	.	.	.
9.583	1845.1399	3685.93	.V	Q	.	.	.	.
9.667	1870.6627	3705.92	.V	Q	.	.	.	.
9.750	1896.3268	3726.42	.V	Q	.	.	.	.
9.833	1922.1328	3747.04	.V	Q	.	.	.	.
9.917	1948.0846	3768.21	.V	Q	.	.	.	.
10.000	1974.1830	3789.49	.V	Q	.	.	.	.
10.083	2000.4319	3811.34	.V	Q	.	.	.	.
10.167	2026.8323	3833.33	.V	Q	.	.	.	.
10.250	2053.3882	3855.91	.V	Q	.	.	.	.
10.333	2080.1006	3878.64	.V	Q	.	.	.	.
10.417	2106.9739	3902.00	.V	Q	.	.	.	.
10.500	2134.0090	3925.51	.V	Q	.	.	.	.
10.583	2161.2107	3949.68	.V	Q	.	.	.	.
10.667	2188.5801	3974.02	.V	Q	.	.	.	.
10.750	2216.1218	3999.06	.V	Q	.	.	.	.
10.833	2243.8374	4024.28	.V	Q	.	.	.	.
10.917	2271.7317	4050.24	.V	Q	.	.	.	.
11.000	2299.8062	4076.40	.V	Q	.	.	.	.
11.083	2328.0659	4103.33	.V	Q	.	.	.	.
11.167	2356.5127	4130.48	.V	.Q	.	.	.	.
11.250	2385.1521	4158.45	.V	.Q	.	.	.	.
11.333	2413.9858	4186.67	.V	.Q	.	.	.	.
11.417	2443.0198	4215.74	.V	.Q	.	.	.	.
11.500	2472.2559	4245.09	.V	.Q	.	.	.	.
11.583	2501.7004	4275.35	.V	.Q	.	.	.	.
11.667	2531.3555	4305.90	.V	.Q	.	.	.	.
11.750	2561.2275	4337.43	.V	.Q	.	.	.	.
11.833	2591.3191	4369.28	.V	.Q	.	.	.	.
11.917	2621.6370	4402.16	.V	.Q	.	.	.	.
12.000	2652.1838	4435.41	.V	.Q	.	.	.	.
12.083	2683.0317	4479.11	.V	.Q	.	.	.	.
12.167	2714.2476	4532.55	.V	.Q	.	.	.	.
12.250	2745.8389	4587.07	.V	.Q	.	.	.	.
12.333	2777.8081	4641.94	.V	.Q	.	.	.	.
12.417	2810.1675	4698.58	.V	.Q	.	.	.	.
12.500	2842.9688	4762.74	.V	.Q	.	.	.	.
12.583	2876.2339	4830.12	.V	.Q	.	.	.	.
12.667	2909.9736	4899.00	.V	.Q	.	.	.	.
12.750	2944.3137	4986.20	.V	.Q	.	.	.	.
12.833	2979.3206	5083.00	.V	.Q	.	.	.	.
12.917	3015.0950	5194.46	.V	.Q	.	.	.	.
13.000	3051.7368	5320.40	.V	.Q	.	.	.	.
13.083	3089.2502	5446.94	.V	.Q	.	.	.	.
13.167	3127.6423	5574.52	.V	.Q	.	.	.	.
13.250	3167.1023	5729.59	.V	.Q	.	.	.	.
13.333	3207.4998	5865.70	.V	.Q	.	.	.	.
13.417	3248.8486	6003.84	.V	.Q	.	.	.	.
13.500	3291.3096	6165.32	.V	.Q	.	.	.	.
13.583	3334.8367	6320.14	.V	.Q	.	.	.	.

13.667	3379.3545	6463.99	.	.V	Q	.	.	.
13.750	3425.0259	6631.48	.	.V	Q	.	.	.
13.833	3471.9282	6810.23	.	.V	Q	.	.	.
13.917	3520.0762	6991.07	.	.V	Q	.	.	.
14.000	3569.3606	7156.11	.	.V	Q	.	.	.
14.083	3620.1431	7373.62	.	.V	Q	.	.	.
14.167	3672.4666	7597.38	.	.V	Q	.	.	.
14.250	3726.4707	7841.39	.	.V	Q	.	.	.
14.333	3781.8921	8047.20	.	.V	.Q	.	.	.
14.417	3838.6309	8238.47	.	.V	.Q	.	.	.
14.500	3896.8232	8449.54	.	.V	.Q	.	.	.
14.583	3956.7009	8694.24	.	.V	.Q	.	.	.
14.667	4018.1182	8917.78	.	.V	.Q	.	.	.
14.750	4081.0427	9136.63	.	.V	.Q	.	.	.
14.833	4145.5957	9373.08	.	.V	.Q	.	.	.
14.917	4211.7505	9605.64	.	.V	.Q	.	.	.
15.000	4279.6211	9854.82	.	.V	.Q	.	.	.
15.083	4349.0649	10083.25	.	.V	.Q	.	.	.
15.167	4419.9790	10296.73	.	.V	.Q	.	.	.
15.250	4492.5615	10539.00	.	.V	.Q	.	.	.
15.333	4566.6484	10757.40	.	.V	.Q	.	.	.
15.417	4642.0869	10953.67	.	.V	.Q	.	.	.
15.500	4718.9053	11154.04	.	.V	.Q	.	.	.
15.583	4796.9922	11338.22	.	.V	.Q	.	.	.
15.667	4876.1997	11500.93	.	.V	.Q	.	.	.
15.750	4956.6025	11674.48	.	.V	.Q	.	.	.
15.833	5038.1401	11839.27	.	.V	.Q	.	.	.
15.917	5120.8291	12006.42	.	.V	.Q	.	.	.
16.000	5204.6113	12165.16	.	.V	.Q	.	.	.
16.083	5290.4751	12467.45	.	.V	.Q	.	.	.
16.167	5378.1328	12727.90	.	.V	.Q	.	.	.
16.250	5466.6870	12858.06	.	.V	.Q	.	.	.
16.333	5555.7090	12926.02	.	.V	.Q	.	.	.
16.417	5645.1553	12987.62	.	.V	.Q	.	.	.
16.500	5735.7856	13159.57	.	.V	.Q	.	.	.
16.583	5827.1211	13261.93	.	.V	.Q	.	.	.
16.667	5919.2397	13375.64	.	.V	.Q	.	.	.
16.750	6013.4121	13673.81	.	.V	.Q	.	.	.
16.833	6108.8315	13854.91	.	.V	.Q	.	.	.
16.917	6205.7192	14068.08	.	.V	.Q	.	.	.
17.000	6304.2349	14304.50	.	.V	.Q	.	.	.
17.083	6402.7632	14306.29	.	.V	.Q	.	.	.
17.167	6501.2080	14294.21	.	.V	.Q	.	.	.
17.250	6601.7886	14604.33	.	.V	.Q	.	.	.
17.333	6700.7925	14375.39	.	.V	.Q	.	.	.
17.417	6799.7090	14362.71	.	.V	.Q	.	.	.
17.500	6900.2441	14597.71	.	.V	.Q	.	.	.
17.583	6999.6245	14430.05	.	.V	.Q	.	.	.
17.667	7098.1357	14303.83	.	.V	.Q	.	.	.
17.750	7198.6514	14594.84	.	.V	.Q	.	.	.
17.833	7299.9277	14705.36	.	.V	.Q	.	.	.
17.917	7400.5117	14604.76	.	.V	.Q	.	.	.
18.000	7499.3213	14347.13	.	.V	.Q	.	.	.
18.083	7601.8677	14889.75	.	.V	.Q	.	.	.
18.167	7703.6450	14778.08	.	.V	.Q	.	.	.
18.250	7806.3384	14911.09	.	.V	.Q	.	.	.
18.333	7904.7109	14283.70	.	.V	.Q	.	.	.
18.417	8001.8340	14102.30	.	.V	.Q	.	.	.

18.500	8100.1050	14268.96	.	.	.	V	.	Q	.
18.583	8201.0762	14661.07	.	.	.	V	.	Q	.
18.667	8299.4775	14287.82	.	.	.	V	.	Q	.
18.750	8394.8555	13848.88	.	.	.	V	.	Q	.
18.833	8490.0938	13828.66	.	.	.	V	.	Q	.
18.917	8582.9668	13485.16	.	.	.	V	.	Q	.
19.000	8675.2344	13397.23	.	.	.	V	.	Q	.
19.083	8764.4697	12956.97	.	.	.	V	.	Q	.
19.167	8851.5088	12638.12	.	.	.	V	.	Q	.
19.250	8937.0801	12424.91	.	.	.	V	.	Q	.
19.333	9021.5996	12272.28	.	.	.	V	.	Q	.
19.417	9104.2402	11999.40	.	.	.	VQ	.	.	.
19.500	9184.6543	11676.16	.	.	.	VQ	.	.	.
19.583	9262.5078	11304.37	.	.	.	Q	.	.	.
19.667	9337.9395	10952.73	.	.	.	Q.V	.	.	.
19.750	9411.0088	10609.63	.	.	.	Q	.	.	.
19.833	9481.8662	10288.52	.	.	.	Q	.	.	.
19.917	9550.8203	10012.11	.	.	.	Q	.	.	.
20.000	9617.8291	9729.70	.	.	.	Q	.	.	.
20.083	9682.9473	9455.22	.	.	.	Q	.	.	.
20.167	9746.0566	9163.43	.	.	.	Q	.	.	.
20.250	9807.1064	8864.47	.	.	.	Q	.	.	.
20.333	9866.1465	8572.59	.	.	.	Q	.	.	.
20.417	9922.8525	8233.73	.	.	.	Q	.	.	.
20.500	9977.8193	7981.20	.	.	.	Q	.	.	.
20.583	10030.9424	7713.46	.	.	.	Q	.	.	.
20.667	10082.3906	7470.28	.	.	.	Q	.	.	.
20.750	10131.8711	7184.51	.	.	.	Q	.	.	.
20.833	10179.7949	6958.57	.	.	.	Q	.	.	.
20.917	10226.4375	6772.46	.	.	.	Q	.	.	.
21.000	10271.8271	6590.53	.	.	.	Q	.	.	.
21.083	10316.0234	6417.23	.	.	.	Q	.	.	.
21.167	10359.0654	6249.68	.	.	.	Q	.	.	.
21.250	10400.7246	6048.93	.	.	.	Q	.	.	.
21.333	10440.5908	5788.51	.	.	.	Q	.	.	.
21.417	10479.4014	5635.31	.	.	.	Q	.	.	.
21.500	10517.2734	5499.03	.	.	.	Q	.	.	.
21.583	10554.2578	5370.13	.	.	.	Q	.	.	.
21.667	10590.3320	5238.01	.	.	.	Q	.	.	.
21.750	10625.5908	5119.56	.	.	.	Q	.	.	.
21.833	10660.0781	5007.54	.	.	.	Q	.	.	.
21.917	10693.8174	4899.00	.	.	.	Q	.	.	.
22.000	10726.8320	4793.70	.	.	.	Q	.	.	.
22.083	10759.1270	4689.28	.	.	.	Q	.	.	.
22.167	10790.7354	4589.55	.	.	.	Q	.	.	.
22.250	10821.6807	4493.27	.	.	.	Q	.	.	.
22.333	10852.0371	4407.69	.	.	.	Q	.	.	.
22.417	10881.8828	4333.55	.	.	.	Q	.	.	.
22.500	10911.2236	4260.27	.	.	.	Q	.	.	.
22.583	10940.0771	4189.50	.	.	.	Q	.	.	.
22.667	10968.4580	4120.90	.	.	.	Q	.	.	.
22.750	10996.4180	4059.72	.	.	.	Q	.	.	.
22.833	11023.9746	4001.27	.	.	.	Q	.	.	.
22.917	11051.1377	3944.14	.	.	.	Q	.	.	.
23.000	11077.9395	3891.56	.	.	.	Q	.	.	.
23.083	11104.3945	3841.31	.	.	.	Q	.	.	.
23.167	11130.5078	3791.64	.	.	.	Q	.	.	.
23.250	11156.2979	3744.65	.	.	.	Q	.	.	.

23.333	11181.8262	3706.65	.	Q.	.	.	V	.
23.417	11207.1025	3670.07	.	Q.	.	.	V	.
23.500	11232.1201	3632.51	.	Q.	.	.	V	.
23.583	11256.8643	3592.87	.	Q.	.	.	V	.
23.667	11281.1475	3525.98	.	Q.	.	.	V	.
23.750	11305.1113	3479.59	.	Q.	.	.	V	.
23.833	11328.8447	3446.06	.	Q.	.	.	V	.
23.917	11352.3564	3413.92	.	Q.	.	.	V	.
24.000	11375.6328	3379.78	.	Q.	.	.	V	.
24.083	11398.6309	3339.34	.	Q.	.	.	V	.
24.167	11421.3145	3293.66	.	Q.	.	.	V	.
24.250	11443.6865	3248.46	.	Q.	.	.	V	.
24.333	11465.7510	3203.79	.	Q.	.	.	V	.
24.417	11487.5078	3159.16	.	Q.	.	.	V	.
24.500	11508.9316	3110.76	.	Q.	.	.	V	.
24.583	11530.0176	3061.62	.	Q.	.	.	V	.
24.667	11550.7803	3014.80	.	Q.	.	.	V	.
24.750	11571.1611	2959.34	.	Q.	.	.	V	.
24.833	11591.1270	2899.05	.	Q.	.	.	V	.
24.917	11610.6270	2831.39	.	Q.	.	.	V	.
25.000	11629.6074	2755.95	.	Q.	.	.	V	.
25.083	11648.0762	2681.65	.	Q.	.	.	V	.
25.167	11666.0352	2607.63	.	Q.	.	.	V	.
25.250	11683.3809	2518.53	.	Q.	.	.	V	.
25.333	11700.1973	2441.80	.	Q.	.	.	V	.
25.417	11716.4873	2365.32	.	Q.	.	.	V	.
25.500	11732.1602	2275.68	.	Q.	.	.	V	.
25.583	11747.2539	2191.58	.	Q.	.	.	V	.
25.667	11761.8350	2117.18	.	Q.	.	.	V	.
25.750	11775.8223	2030.94	.	Q.	.	.	V	.
25.833	11789.1748	1938.85	.	Q.	.	.	V	.
25.917	11801.8965	1847.13	.	Q.	.	.	V	.
26.000	11814.0586	1765.87	.	Q.	.	.	V	.
26.083	11825.4980	1660.98	.	Q.	.	.	V	.
26.167	11836.2383	1559.55	.	Q.	.	.	V	.
26.250	11846.2041	1447.07	.	Q.	.	.	V	.
26.333	11855.5576	1358.17	.	Q.	.	.	V	.
26.417	11864.3701	1279.59	.	Q.	.	.	V	.
26.500	11872.5957	1194.41	.	Q.	.	.	V	.
26.583	11880.1113	1091.32	.	Q.	.	.	V	.
26.667	11887.0117	1002.01	.	Q.	.	.	V	.
26.750	11893.4033	928.03	.	Q.	.	.	V	.
26.833	11899.2539	849.57	.	Q.	.	.	V	.
26.917	11904.6445	782.76	.	Q.	.	.	V	.
27.000	11909.5674	714.75	.	Q.	.	.	V	.
27.083	11914.1006	658.26	.	Q.	.	.	V	.
27.167	11918.3008	609.81	.	Q.	.	.	V	.
27.250	11922.1650	561.14	.	Q.	.	.	V	.
27.333	11925.6885	511.63	.	Q.	.	.	V	.
27.417	11928.8984	466.14	.	Q.	.	.	V	.
27.500	11931.8203	424.25	.	Q.	.	.	V	.
27.583	11934.4824	386.50	.	Q.	.	.	V	.
27.667	11936.9170	353.48	.	Q.	.	.	V	.
27.750	11939.1572	325.26	.	Q.	.	.	V	.
27.833	11941.2217	299.78	.	Q.	.	.	V	.
27.917	11943.1191	275.47	.	Q.	.	.	V	.
28.000	11944.8604	252.78	.	Q.	.	.	V	.
28.083	11946.4473	230.39	.	Q.	.	.	V	.

28.167	11947.8906	209.62	Q	.	.	.	V.	.
28.250	11949.1943	189.37	Q	.	.	.	V.	.
28.333	11950.3672	170.37	Q	.	.	.	V.	.
28.417	11951.4424	156.13	Q	.	.	.	V.	.
28.500	11952.4238	142.52	Q	.	.	.	V.	.
28.583	11953.3125	129.00	Q	.	.	.	V.	.
28.667	11954.1113	115.98	Q	.	.	.	V.	.
28.750	11954.8457	106.61	Q	.	.	.	V.	.
28.833	11955.5215	98.13	Q	.	.	.	V.	.
28.917	11956.1396	89.71	Q	.	.	.	V.	.
29.000	11956.7002	81.35	Q	.	.	.	V.	.
29.083	11957.2031	73.04	Q	.	.	.	V.	.
29.167	11957.6494	64.79	Q	.	.	.	V.	.
29.250	11958.0479	57.84	Q	.	.	.	V.	.
29.333	11958.4277	55.22	Q	.	.	.	V.	.
29.417	11958.7930	52.99	Q	.	.	.	V.	.
29.500	11959.1426	50.78	Q	.	.	.	V.	.
29.583	11959.4775	48.58	Q	.	.	.	V.	.
29.667	11959.7969	46.40	Q	.	.	.	V.	.
29.750	11960.1016	44.23	Q	.	.	.	V.	.
29.833	11960.3916	42.09	Q	.	.	.	V.	.
29.917	11960.6670	39.95	Q	.	.	.	V.	.
30.000	11960.9277	37.83	Q	.	.	.	V.	.
30.083	11961.1738	35.75	Q	.	.	.	V.	.
30.167	11961.4053	33.66	Q	.	.	.	V.	.
30.250	11961.6230	31.58	Q	.	.	.	V.	.
30.333	11961.8262	29.54	Q	.	.	.	V.	.
30.417	11962.0156	27.48	Q	.	.	.	V.	.
30.500	11962.1914	25.47	Q	.	.	.	V.	.
30.583	11962.3535	23.48	Q	.	.	.	V.	.
30.667	11962.5020	21.50	Q	.	.	.	V.	.
30.750	11962.6367	19.53	Q	.	.	.	V.	.
30.833	11962.7578	17.58	Q	.	.	.	V.	.
30.917	11962.8652	15.63	Q	.	.	.	V.	.
31.000	11962.9600	13.70	Q	.	.	.	V.	.
31.083	11963.0410	11.79	Q	.	.	.	V.	.
31.167	11963.1094	9.88	Q	.	.	.	V.	.
31.250	11963.1641	7.99	Q	.	.	.	V.	.
31.333	11963.2061	6.10	Q	.	.	.	V.	.
31.417	11963.2354	4.23	Q	.	.	.	V.	.
31.500	11963.2520	2.37	Q	.	.	.	V.	.
31.583	11963.2559	0.53	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%	1895.0
10%	1430.0
20%	1130.0
30%	615.0
40%	475.0
50%	395.0
60%	330.0
70%	275.0

80%
90%

215.0
135.0

=====

END OF FLOODSCx ROUTING ANALYSIS

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

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 PA5 - REGIONAL NODE 127 *
* 25-YR EV JANUARY 2019 FKAZI *

FILE NAME: EV25127S.DAT
TIME/DATE OF STUDY: 14:23 01/07/2019

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 = 53500.199 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.337 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.293
LOW LOSS FRACTION = 0.437
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.41
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.77
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.07
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.99
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.94
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.18

*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 = 3.566

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.204	1318.373
2	0.611	2636.747
3	1.019	2636.745
4	1.426	2636.749
5	1.835	2642.605
6	2.367	3445.711
7	2.987	4012.434
8	3.608	4012.438
9	4.424	5279.931
10	5.562	7368.462
11	6.923	8800.268
12	8.547	10507.229
13	10.407	12038.144
14	12.194	11563.655
15	14.104	12357.359
16	16.522	15646.163
17	18.446	12445.541
18	20.459	13021.823
19	22.972	16263.751
20	25.305	15093.365
21	27.355	13266.519
22	29.878	16324.061
23	32.558	17340.160
24	35.571	19495.324
25	37.789	14349.074
26	41.094	21386.146
27	44.303	20757.082
28	47.741	22245.961
29	51.181	22257.734
30	53.757	16670.914
31	56.250	16124.928
32	59.205	19123.098
33	62.715	22709.139
34	65.442	17647.053
35	67.863	15661.527
36	70.458	16791.213
37	72.640	14116.843
38	74.903	14643.108
39	76.793	12227.502
40	78.378	10254.392
41	79.973	10321.724
42	81.631	10729.269
43	83.178	10006.290
44	84.614	9294.023
45	85.943	8595.825
46	87.076	7327.971
47	88.117	6737.040
48	88.971	5527.633

49	89.807	5406.297
50	90.581	5008.476
51	91.332	4857.868
52	92.069	4770.100
53	92.753	4429.047
54	93.433	4396.270
55	94.062	4070.223
56	94.527	3012.362
57	94.980	2929.036
58	95.433	2930.863
59	95.881	2895.370
60	96.209	2126.385
61	96.489	1807.397
62	96.769	1810.952
63	97.048	1809.175
64	97.328	1809.224
65	97.608	1810.952
66	97.886	1803.843
67	98.040	992.306
68	98.107	434.153
69	98.174	432.326
70	98.241	432.375
71	98.307	432.375
72	98.374	428.821
73	98.441	435.880
74	98.508	434.153
75	98.575	432.326
76	98.641	430.598
77	98.708	432.375
78	98.776	435.880
79	98.842	428.821
80	98.909	435.930
81	98.976	432.375
82	99.043	432.326
83	99.110	432.326
84	99.177	432.326
85	99.243	432.326
86	99.310	432.326
87	99.377	432.326
88	99.444	432.326
89	99.511	432.326
90	99.578	432.326
91	99.644	432.326
92	99.711	432.326
93	99.778	432.326
94	99.845	432.326
95	99.912	432.326
96	99.978	432.326
97	100.000	139.600

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9332.6279
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 12374.1758

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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.	3800.0	7600.0	11400.0	15200.0
0.083	0.0382	5.54	Q	.	.	.	.
0.167	0.1527	16.63	Q	.	.	.	.
0.250	0.3439	27.76	Q	.	.	.	.
0.333	0.6119	38.91	Q	.	.	.	.
0.417	0.9571	50.13	Q	.	.	.	.
0.500	1.4031	64.75	Q	.	.	.	.
0.583	1.9664	81.80	Q	.	.	.	.
0.667	2.6475	98.90	Q	.	.	.	.
0.750	3.4834	121.37	Q	.	.	.	.
0.833	4.5349	152.68	Q	.	.	.	.
0.917	5.8442	190.10	Q	.	.	.	.
1.000	7.4613	234.81	Q	.	.	.	.
1.083	9.4315	286.08	Q	.	.	.	.
1.167	11.7422	335.50	Q	.	.	.	.
1.250	14.4172	388.42	VQ	.	.	.	.
1.333	17.5529	455.31	VQ	.	.	.	.
1.417	21.0580	508.94	VQ	.	.	.	.
1.500	24.9504	565.18	VQ	.	.	.	.
1.583	29.3250	635.19	VQ	.	.	.	.
1.667	34.1495	700.51	VQ	.	.	.	.
1.750	39.3723	758.35	VQ	.	.	.	.
1.833	45.0833	829.23	V Q	.	.	.	.
1.917	51.3132	904.58	V Q	.	.	.	.
2.000	58.1261	989.24	V Q	.	.	.	.
2.083	65.3748	1052.51	V Q	.	.	.	.
2.167	73.2646	1145.60	V Q	.	.	.	.
2.250	81.7788	1236.26	V Q	.	.	.	.
2.333	90.9631	1333.55	V Q	.	.	.	.
2.417	100.8191	1431.10	V Q	.	.	.	.
2.500	111.1881	1505.58	V Q	.	.	.	.
2.583	122.0553	1577.92	V Q	.	.	.	.
2.667	133.5098	1663.19	V Q	.	.	.	.
2.750	145.6566	1763.71	V Q	.	.	.	.
2.833	158.3519	1843.36	V Q	.	.	.	.
2.917	171.5398	1914.88	V Q	.	.	.	.
3.000	185.2550	1991.45	V Q	.	.	.	.
3.083	199.4214	2056.97	V Q	.	.	.	.
3.167	214.0565	2125.01	V Q	.	.	.	.
3.250	229.0913	2183.06	V Q	.	.	.	.
3.333	244.4709	2233.11	V Q	.	.	.	.
3.417	260.1978	2283.55	V Q	.	.	.	.
3.500	276.2859	2335.98	V Q	.	.	.	.
3.583	292.7148	2385.49	V Q	.	.	.	.
3.667	309.4661	2432.28	.V Q	.	.	.	.
3.750	326.5200	2476.23	.V Q	.	.	.	.
3.833	343.8418	2515.13	.V Q	.	.	.	.
3.917	361.4149	2551.62	.V Q	.	.	.	.

4.000	379.2061	2583.27	.V	Q	.	.	.	.
4.083	397.2121	2614.48	.V	Q	.	.	.	.
4.167	415.4231	2644.24	.V	Q	.	.	.	.
4.250	433.8351	2673.43	.V	Q	.	.	.	.
4.333	452.4472	2702.48	.V	Q	.	.	.	.
4.417	471.2499	2730.15	.V	Q	.	.	.	.
4.500	490.2439	2757.92	.V	Q	.	.	.	.
4.583	509.4200	2784.37	.V	Q	.	.	.	.
4.667	528.7491	2806.60	.V	Q	.	.	.	.
4.750	548.2294	2828.53	.V	Q	.	.	.	.
4.833	567.8621	2850.68	.V	Q	.	.	.	.
4.917	587.6467	2872.72	.V	Q	.	.	.	.
5.000	607.5624	2891.76	.V	Q	.	.	.	.
5.083	627.6003	2909.49	.V	Q	.	.	.	.
5.167	647.7618	2927.46	.V	Q	.	.	.	.
5.250	668.0473	2945.45	.V	Q	.	.	.	.
5.333	688.4581	2963.66	.V	Q	.	.	.	.
5.417	708.9947	2981.91	.V	Q	.	.	.	.
5.500	729.6583	3000.35	.V	Q	.	.	.	.
5.583	750.4257	3015.43	.V	Q	.	.	.	.
5.667	771.2823	3028.39	.V	Q	.	.	.	.
5.750	792.2283	3041.36	.V	Q	.	.	.	.
5.833	813.2651	3054.55	.V	Q	.	.	.	.
5.917	834.3929	3067.76	.V	Q	.	.	.	.
6.000	855.6133	3081.19	.V	Q	.	.	.	.
6.083	876.9265	3094.67	.V	Q	.	.	.	.
6.167	898.3341	3108.39	.V	Q	.	.	.	.
6.250	919.8363	3122.12	.V	Q	.	.	.	.
6.333	941.4347	3136.09	.V	Q	.	.	.	.
6.417	963.1296	3150.09	.V	Q	.	.	.	.
6.500	984.9227	3164.36	.V	Q	.	.	.	.
6.583	1006.8141	3178.64	.V	Q	.	.	.	.
6.667	1028.8059	3193.20	.V	Q	.	.	.	.
6.750	1050.8981	3207.78	.V	Q	.	.	.	.
6.833	1073.0924	3222.62	.V	Q	.	.	.	.
6.917	1095.3893	3237.51	.V	Q	.	.	.	.
7.000	1117.7905	3252.67	.V	Q	.	.	.	.
7.083	1140.2965	3267.87	.V	Q	.	.	.	.
7.167	1162.9091	3283.35	.V	Q	.	.	.	.
7.250	1185.6285	3298.87	.V	Q	.	.	.	.
7.333	1208.4570	3314.70	.V	Q	.	.	.	.
7.417	1231.3948	3330.56	.V	Q	.	.	.	.
7.500	1254.4440	3346.73	.V	Q	.	.	.	.
7.583	1277.6047	3362.95	.V	Q	.	.	.	.
7.667	1300.8794	3379.49	.V	Q	.	.	.	.
7.750	1324.2683	3396.07	.V	Q	.	.	.	.
7.833	1347.7738	3412.99	.V	Q	.	.	.	.
7.917	1371.3961	3429.96	.V	Q	.	.	.	.
8.000	1395.1377	3447.27	.V	Q	.	.	.	.
8.083	1418.9904	3463.41	.V	Q	.	.	.	.
8.167	1442.9525	3479.31	.V	Q	.	.	.	.
8.250	1467.0247	3495.28	.V	Q	.	.	.	.
8.333	1491.2092	3511.60	.V	Q	.	.	.	.
8.417	1515.5066	3527.98	.V	Q	.	.	.	.
8.500	1539.9194	3544.74	.V	Q	.	.	.	.
8.583	1564.4481	3561.57	.V	Q	.	.	.	.
8.667	1589.0953	3578.78	.V	Q	.	.	.	.
8.750	1613.8617	3596.07	.V	Q	.	.	.	.

8.833	1638.7499	3613.77	.	V	Q.	.	.	.
8.917	1663.7605	3631.54	.	V	Q.	.	.	.
9.000	1688.8964	3649.73	.	V	Q.	.	.	.
9.083	1714.1582	3668.01	.	V	Q.	.	.	.
9.167	1739.5490	3686.73	.	V	Q.	.	.	.
9.250	1765.0692	3705.55	.	V	Q.	.	.	.
9.333	1790.7222	3724.81	.	V	Q.	.	.	.
9.417	1816.5085	3744.18	.	V	Q.	.	.	.
9.500	1842.4316	3764.03	.	V	Q.	.	.	.
9.583	1868.4922	3783.99	.	V	Q.	.	.	.
9.667	1894.6936	3804.44	.	V	Q	.	.	.
9.750	1921.0367	3825.02	.	V	Q	.	.	.
9.833	1947.5251	3846.11	.	V	Q	.	.	.
9.917	1974.1597	3867.33	.	V	Q	.	.	.
10.000	2000.9441	3889.10	.	V	Q	.	.	.
10.083	2027.8794	3911.01	.	V	Q	.	.	.
10.167	2054.9695	3933.48	.	V	Q	.	.	.
10.250	2082.2153	3956.11	.	V	Q	.	.	.
10.333	2109.6213	3979.34	.	V	Q	.	.	.
10.417	2137.1882	4002.73	.	V	Q	.	.	.
10.500	2164.9207	4026.75	.	V	Q	.	.	.
10.583	2192.8198	4050.94	.	V	Q	.	.	.
10.667	2220.8901	4075.80	.	V	Q	.	.	.
10.750	2249.1328	4100.85	.	V	Q	.	.	.
10.833	2277.5530	4126.59	.	V	Q	.	.	.
10.917	2306.1519	4152.55	.	V	Q	.	.	.
11.000	2334.9346	4179.24	.	V	Q	.	.	.
11.083	2363.9026	4206.16	.	V	.Q	.	.	.
11.167	2393.0613	4233.85	.	V	.Q	.	.	.
11.250	2422.4124	4261.79	.	V	.Q	.	.	.
11.333	2451.9617	4290.55	.	V	.Q	.	.	.
11.417	2481.7109	4319.58	.	V	.Q	.	.	.
11.500	2511.6660	4349.47	.	V	.Q	.	.	.
11.583	2541.8291	4379.67	.	V	.Q	.	.	.
11.667	2572.2063	4410.78	.	V	.Q	.	.	.
11.750	2602.8000	4442.23	.	V	.Q	.	.	.
11.833	2633.6172	4474.63	.	V	.Q	.	.	.
11.917	2664.6599	4507.42	.	V	.Q	.	.	.
12.000	2695.9355	4541.22	.	V	.Q	.	.	.
12.083	2727.5110	4584.75	.	V	.Q	.	.	.
12.167	2759.4575	4638.65	.	V	.Q	.	.	.
12.250	2791.7778	4692.91	.	V	.Q	.	.	.
12.333	2824.4792	4748.25	.	V	.Q	.	.	.
12.417	2857.5647	4804.01	.	V	.Q	.	.	.
12.500	2891.0813	4866.60	.	V	.Q	.	.	.
12.583	2925.0593	4933.60	.	V	.Q	.	.	.
12.667	2959.5068	5001.78	.	V	.Q	.	.	.
12.750	2994.4885	5079.35	.	V	.Q	.	.	.
12.833	3030.1145	5172.91	.	V	.Q	.	.	.
12.917	3066.4570	5276.95	.	V	.Q	.	.	.
13.000	3103.6074	5394.25	.	V	Q	.	.	.
13.083	3141.6423	5522.67	.	V	Q	.	.	.
13.167	3180.5466	5648.90	.	V	Q	.	.	.
13.250	3220.3608	5781.03	.	V	Q	.	.	.
13.333	3261.2537	5937.65	.	V	Q	.	.	.
13.417	3303.0708	6071.86	.	V	Q	.	.	.
13.500	3345.8491	6211.42	.	V	Q	.	.	.
13.583	3389.7490	6374.27	.	V	Q	.	.	.

13.667	3434.7224	6530.13	.	.V	Q	.	.	.
13.750	3480.6824	6673.40	.	.V	Q	.	.	.
13.833	3527.7881	6839.74	.	.V	Q	.	.	.
13.917	3576.0916	7013.65	.	.V	Q	.	.	.
14.000	3625.7075	7204.24	.	.V	Q	.	.	.
14.083	3676.4585	7369.04	.	.V	Q	.	.	.
14.167	3728.7666	7595.12	.	.V	Q	.	.	.
14.250	3782.5989	7816.45	.	.V	Q	.	.	.
14.333	3838.0320	8048.89	.	.V	.Q	.	.	.
14.417	3895.0647	8281.15	.	.V	.Q	.	.	.
14.500	3953.4722	8480.76	.	.V	.Q	.	.	.
14.583	4013.2559	8680.58	.	.V	.Q	.	.	.
14.667	4074.5649	8902.06	.	.V	Q	.	.	.
14.750	4137.6372	9158.13	.	.V	.Q	.	.	.
14.833	4202.3389	9394.72	.	.V	.Q	.	.	.
14.917	4268.6392	9626.77	.	.V	.Q	.	.	.
15.000	4336.6782	9879.28	.	.V	.Q	.	.	.
15.083	4406.3901	10122.18	.	.V	.Q	.	.	.
15.167	4477.7627	10363.26	.	.V	.Q	.	.	.
15.250	4550.6978	10590.18	.	.V	.Q	.	.	.
15.333	4625.2617	10826.71	.	.V	.Q	.	.	.
15.417	4701.1636	11020.95	.	.V	.Q	.	.	.
15.500	4778.3477	11207.12	.	.V	.Q	.	.	.
15.583	4856.9482	11412.80	.	.V	.Q	.	.	.
15.667	4936.8643	11603.79	.	.V	.Q	.	.	.
15.750	5017.9155	11768.62	.	.V	.Q	.	.	.
15.833	5100.1167	11935.61	.	.V	.Q	.	.	.
15.917	5183.4937	12106.30	.	.V	.Q	.	.	.
16.000	5268.2002	12299.37	.	.V	.Q	.	.	.
16.083	5354.6709	12555.58	.	.V	.Q	.	.	.
16.167	5442.9854	12823.28	.	.V	.Q	.	.	.
16.250	5532.1265	12943.27	.	.V	.Q	.	.	.
16.333	5622.0557	13057.75	.	.V	.Q	.	.	.
16.417	5712.7583	13170.01	.	.V	.Q	.	.	.
16.500	5804.5068	13321.91	.	.V	.Q	.	.	.
16.583	5897.0630	13439.16	.	.V	.Q	.	.	.
16.667	5990.0435	13500.76	.	.V	.Q	.	.	.
16.750	6084.7456	13750.72	.	.V	.Q	.	.	.
16.833	6181.4375	14039.70	.	.V	.Q	.	.	.
16.917	6279.3882	14222.45	.	.V	.Q	.	.	.
17.000	6378.7295	14424.34	.	.V	.Q	.	.	.
17.083	6479.3149	14605.02	.	.V	.Q	.	.	.
17.167	6579.8247	14594.02	.	.V	.Q	.	.	.
17.250	6680.8652	14671.10	.	.V	.Q	.	.	.
17.333	6783.6045	14917.75	.	.V	.Q	.	.	.
17.417	6884.7354	14684.17	.	.V	.Q	.	.	.
17.500	6986.1714	14728.52	.	.V	.Q	.	.	.
17.583	7089.2534	14967.51	.	.V	.Q	.	.	.
17.667	7191.3130	14819.05	.	.V	.Q	.	.	.
17.750	7292.1152	14636.49	.	.V	.Q	.	.	.
17.833	7394.7998	14909.77	.	.V	.Q	.	.	.
17.917	7498.0933	14998.20	.	.V	.Q	.	.	.
18.000	7602.1230	15105.14	.	.V	.Q	.	.	.
18.083	7702.2163	14533.57	.	.V	.Q	.	.	.
18.167	7806.5068	15142.97	.	.V	.Q	.	.	.
18.250	7910.1982	15055.97	.	.V	.Q	.	.	.
18.333	8014.2217	15104.21	.	.V	.Q	.	.	.
18.417	8117.1470	14944.73	.	.V	.Q	.	.	.

18.500	8216.2832	14394.53	.	.	.	V	.	Q	.
18.583	8315.1357	14353.42	.	.	.	V	.	Q	.
18.667	8415.9639	14640.22	.	.	.	V	.	Q	.
18.750	8518.7383	14922.90	.	.	.	V	.	Q	.
18.833	8617.4053	14326.50	.	.	.	V	.	Q	.
18.917	8713.9443	14017.54	.	.	.	V	.	Q	.
19.000	8810.1426	13967.98	.	.	.	V	.	Q	.
19.083	8904.1348	13647.60	.	.	.	V	.	Q	.
19.167	8997.2148	13515.17	.	.	.	V	.	Q	.
19.250	9087.3965	13094.33	.	.	.	V	.	Q	.
19.333	9175.0459	12726.65	.	.	.	V	.	Q	.
19.417	9261.4189	12541.37	.	.	.	V	.	Q	.
19.500	9346.9844	12424.10	.	.	.	V	.	Q	.
19.583	9430.6768	12152.13	.	.	.	V	.	Q	.
19.667	9512.2021	11837.51	.	.	.	V	.	Q	.
19.750	9591.3984	11499.25	.	.	.	V	.	Q	.
19.833	9668.0322	11127.29	.	.	.	V	.	Q	.
19.917	9742.5459	10819.36	.	.	.	V	.	Q	.
20.000	9814.4512	10440.63	.	.	.	V	.	Q	.
20.083	9884.7822	10212.04	.	.	.	V	.	Q	.
20.167	9952.8945	9889.98	.	.	.	V	.	Q	.
20.250	10019.0674	9608.37	.	.	.	V	.	Q	.
20.333	10083.3486	9333.62	.	.	.	V	.	Q	.
20.417	10145.5752	9035.34	.	.	.	V	.	Q	.
20.500	10206.1025	8788.54	.	.	.	V	.	Q	.
20.583	10264.7480	8515.34	.	.	.	V	.	Q	.
20.667	10321.0049	8168.42	.	.	.	V	.	Q	.
20.750	10375.3496	7890.84	.	.	.	V	.	Q	.
20.833	10428.1172	7661.83	.	.	.	V	.	Q	.
20.917	10479.4209	7449.27	.	.	.	V	.	Q	.
21.000	10528.8037	7170.38	.	.	.	V	.	Q	.
21.083	10576.7080	6955.76	.	.	.	V	.	Q	.
21.167	10623.3359	6770.37	.	.	.	V	.	Q	.
21.250	10668.8369	6606.70	.	.	.	V	.	Q	.
21.333	10713.2754	6452.49	.	.	.	V	.	Q	.
21.417	10756.6113	6292.42	.	.	.	V	.	Q	.
21.500	10798.7637	6120.56	.	.	.	V	.	Q	.
21.583	10839.2930	5884.87	.	.	.	V	.	Q	.
21.667	10878.5020	5693.21	.	.	.	V	.	Q	.
21.750	10916.8018	5561.16	.	.	.	V	.	Q	.
21.833	10954.2744	5441.08	.	.	.	V	.	Q	.
21.917	10990.9160	5320.30	.	.	.	V	.	Q	.
22.000	11026.7930	5209.28	.	.	.	V	.	Q	.
22.083	11061.9248	5101.12	.	.	.	V	.	Q	.
22.167	11096.3242	4994.86	.	.	.	V	.	Q	.
22.250	11130.0078	4890.84	.	.	.	V	.	Q	.
22.333	11162.9863	4788.47	.	.	.	V	.	Q	.
22.417	11195.2861	4689.90	.	.	.	V	.	Q	.
22.500	11226.9160	4592.71	.	.	.	V	.	Q	.
22.583	11257.9375	4504.32	.	.	.	V	.	Q	.
22.667	11288.4502	4430.46	.	.	.	V	.	Q	.
22.750	11318.4629	4357.90	.	.	.	V	.	Q	.
22.833	11347.9893	4287.26	.	.	.	V	.	Q	.
22.917	11377.0410	4218.29	.	.	.	V	.	Q	.
23.000	11405.6650	4156.25	.	.	.	V	.	Q	.
23.083	11433.8867	4097.78	.	.	.	V	.	Q	.
23.167	11461.7148	4040.61	.	.	.	V	.	Q	.
23.250	11489.1582	3984.74	.	.	.	V	.	Q	.

23.333	11516.2246	3930.08	.	Q	.	.	V	.
23.417	11542.9434	3879.58	.	Q	.	.	V	.
23.500	11569.3311	3831.42	.	Q	.	.	V	.
23.583	11595.4307	3789.60	.	Q.	.	.	V	.
23.667	11621.2725	3752.23	.	Q.	.	.	V	.
23.750	11646.8691	3716.59	.	Q.	.	.	V	.
23.833	11672.2256	3681.78	.	Q.	.	.	V	.
23.917	11697.3350	3645.93	.	Q.	.	.	V	.
24.000	11722.1836	3608.06	.	Q.	.	.	V	.
24.083	11746.5615	3539.61	.	Q.	.	.	V	.
24.167	11770.5449	3482.43	.	Q.	.	.	V	.
24.250	11794.2314	3439.26	.	Q.	.	.	V	.
24.333	11817.6299	3397.47	.	Q	.	.	V	.
24.417	11840.7285	3353.88	.	Q	.	.	V	.
24.500	11863.4980	3306.08	.	Q	.	.	V	.
24.583	11885.9248	3256.39	.	Q	.	.	V	.
24.667	11908.0127	3207.11	.	Q	.	.	V	.
24.750	11929.7275	3152.99	.	Q	.	.	V	.
24.833	11951.0127	3090.60	.	Q	.	.	V	.
24.917	11971.8301	3022.73	.	Q	.	.	V	.
25.000	11992.1348	2948.25	.	Q	.	.	V	.
25.083	12011.9023	2870.26	.	Q	.	.	V	.
25.167	12031.1592	2796.14	.	Q	.	.	V	.
25.250	12049.8887	2719.50	.	Q	.	.	V	.
25.333	12068.0010	2629.87	.	Q	.	.	V	.
25.417	12085.5938	2554.51	.	Q	.	.	V	.
25.500	12102.6562	2477.48	.	Q	.	.	V	.
25.583	12119.0996	2387.59	.	Q	.	.	V	.
25.667	12134.9629	2303.40	.	Q	.	.	V	.
25.750	12150.3047	2227.62	.	Q	.	.	V	.
25.833	12165.0410	2139.69	.	Q	.	.	V	.
25.917	12179.1475	2048.22	.	Q	.	.	V	.
26.000	12192.5664	1948.46	.	Q	.	.	V	.
26.083	12205.4668	1873.13	.	Q	.	.	V	.
26.167	12217.6562	1769.91	.	Q	.	.	V	.
26.250	12229.1582	1670.15	.	Q	.	.	V	.
26.333	12239.9355	1564.91	.	Q	.	.	V	.
26.417	12249.9932	1460.42	.	Q	.	.	V	.
26.500	12259.4980	1380.12	.	Q	.	.	V	.
26.583	12268.4697	1302.74	.	Q	.	.	V	.
26.667	12276.8262	1213.38	.	Q	.	.	V	.
26.750	12284.4678	1109.63	.	Q	.	.	V	.
26.833	12291.5469	1027.83	.	Q	.	.	V	.
26.917	12298.1240	954.94	.	Q	.	.	V	.
27.000	12304.1699	877.85	.	Q	.	.	V	.
27.083	12309.7656	812.51	.	Q	.	.	V	.
27.167	12314.8994	745.43	.	Q	.	.	V	.
27.250	12319.6445	688.95	.	Q	.	.	V	.
27.333	12324.0605	641.15	.	Q	.	.	V	.
27.417	12328.1475	593.41	.	Q	.	.	V	.
27.500	12331.8965	544.30	.	Q	.	.	V	.
27.583	12335.3301	498.56	.	Q	.	.	V	.
27.667	12338.4717	456.13	.	Q	.	.	V	.
27.750	12341.3428	416.92	.	Q	.	.	V	.
27.833	12343.9824	383.30	.	Q	.	.	V	.
27.917	12346.4092	352.39	Q	.	.	.	V	.
28.000	12348.6592	326.76	Q	.	.	.	V	.
28.083	12350.7383	301.83	Q	.	.	.	V	.

28.167	12352.6582	278.75	Q	.	.	.	V	.
28.250	12354.4248	256.46	Q	.	.	.	V	.
28.333	12356.0410	234.69	Q	.	.	.	V	.
28.417	12357.5186	214.50	Q	.	.	.	V	.
28.500	12358.8584	194.58	Q	.	.	.	V	.
28.583	12360.0713	176.17	Q	.	.	.	V	.
28.667	12361.1895	162.32	Q	.	.	.	V	.
28.750	12362.2148	148.92	Q	.	.	.	V	.
28.833	12363.1484	135.60	Q	.	.	.	V	.
28.917	12363.9922	122.53	Q	.	.	.	V	.
29.000	12364.7686	112.76	Q	.	.	.	V	.
29.083	12365.4873	104.40	Q	.	.	.	V	.
29.167	12366.1494	96.09	Q	.	.	.	V	.
29.250	12366.7539	87.84	Q	.	.	.	V	.
29.333	12367.3027	79.64	Q	.	.	.	V	.
29.417	12367.7949	71.50	Q	.	.	.	V	.
29.500	12368.2314	63.44	Q	.	.	.	V	.
29.583	12368.6367	58.83	Q	.	.	.	V	.
29.667	12369.0264	56.60	Q	.	.	.	V	.
29.750	12369.4014	54.40	Q	.	.	.	V	.
29.833	12369.7607	52.21	Q	.	.	.	V	.
29.917	12370.1055	50.05	Q	.	.	.	V	.
30.000	12370.4355	47.91	Q	.	.	.	V	.
30.083	12370.7510	45.76	Q	.	.	.	V	.
30.167	12371.0518	43.63	Q	.	.	.	V	.
30.250	12371.3379	41.53	Q	.	.	.	V	.
30.333	12371.6094	39.45	Q	.	.	.	V	.
30.417	12371.8672	37.38	Q	.	.	.	V	.
30.500	12372.1104	35.31	Q	.	.	.	V	.
30.583	12372.3398	33.29	Q	.	.	.	V	.
30.667	12372.5547	31.24	Q	.	.	.	V	.
30.750	12372.7559	29.23	Q	.	.	.	V	.
30.833	12372.9434	27.23	Q	.	.	.	V	.
30.917	12373.1172	25.25	Q	.	.	.	V	.
31.000	12373.2773	23.28	Q	.	.	.	V	.
31.083	12373.4238	21.32	Q	.	.	.	V	.
31.167	12373.5576	19.38	Q	.	.	.	V	.
31.250	12373.6777	17.44	Q	.	.	.	V	.
31.333	12373.7842	15.52	Q	.	.	.	V	.
31.417	12373.8779	13.62	Q	.	.	.	V	.
31.500	12373.9590	11.72	Q	.	.	.	V	.
31.583	12374.0264	9.84	Q	.	.	.	V	.
31.667	12374.0811	7.96	Q	.	.	.	V	.
31.750	12374.1230	6.10	Q	.	.	.	V	.
31.833	12374.1523	4.25	Q	.	.	.	V	.
31.917	12374.1689	2.42	Q	.	.	.	V	.
32.000	12374.1729	0.59	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%	1920.0
10%	1430.0
20%	1150.0

30%	630.0
40%	490.0
50%	405.0
60%	340.0
70%	280.0
80%	220.0
90%	145.0

=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 132T *
* 25-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV2532TS.DAT
TIME/DATE OF STUDY: 14:34 01/02/2019

FLOW PROCESS FROM NODE 13200.00 TO NODE 132.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1127.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.455 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.248
LOW LOSS FRACTION = 0.546
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 = 0.950
30-MINUTE FACTOR = 0.950
1-HOUR FACTOR = 0.950
3-HOUR FACTOR = 0.992
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 18.315

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.048	142.868
2	3.972	398.762
3	11.088	970.369
4	21.775	1457.460
5	34.298	1707.797
6	49.880	2124.808
7	64.804	2035.203
8	76.568	1604.257
9	84.695	1108.321
10	89.997	722.969
11	93.622	494.346
12	96.002	324.614
13	97.509	205.428
14	98.230	98.307
15	98.573	46.827
16	98.917	46.827
17	99.260	46.812
18	99.603	46.812
19	99.946	46.812
20	100.000	7.313

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 164.5546
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 180.3663

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	300.0	600.0	900.0	1200.0
0.083	0.0021	0.31	Q	.	.	.	.
0.167	0.0102	1.17	Q	.	.	.	.
0.250	0.0327	3.26	Q	.	.	.	.
0.333	0.0768	6.42	Q	.	.	.	.
0.417	0.1465	10.12	Q	.	.	.	.
0.500	0.2480	14.73	Q	.	.	.	.
0.583	0.3800	19.17	Q	.	.	.	.
0.667	0.5363	22.69	Q	.	.	.	.
0.750	0.7095	25.15	Q	.	.	.	.
0.833	0.8941	26.80	Q	.	.	.	.
0.917	1.0866	27.95	Q	.	.	.	.
1.000	1.2845	28.74	Q	.	.	.	.
1.083	1.4862	29.28	Q	.	.	.	.
1.167	1.6900	29.60	Q	.	.	.	.
1.250	1.8953	29.80	Q	.	.	.	.
1.333	2.1019	30.00	VQ	.	.	.	.
1.417	2.3099	30.21	VQ	.	.	.	.
1.500	2.5194	30.41	VQ	.	.	.	.
1.583	2.7303	30.62	VQ	.	.	.	.
1.667	2.9420	30.74	VQ	.	.	.	.
1.750	3.1545	30.85	VQ	.	.	.	.
1.833	3.3677	30.96	VQ	.	.	.	.
1.917	3.5817	31.07	VQ	.	.	.	.
2.000	3.7964	31.18	VQ	.	.	.	.
2.083	4.0120	31.30	VQ	.	.	.	.
2.167	4.2283	31.41	VQ	.	.	.	.
2.250	4.4454	31.52	VQ	.	.	.	.
2.333	4.6633	31.64	.Q	.	.	.	.
2.417	4.8820	31.76	.Q	.	.	.	.
2.500	5.1016	31.88	.Q	.	.	.	.
2.583	5.3219	32.00	.Q	.	.	.	.
2.667	5.5431	32.12	.Q	.	.	.	.
2.750	5.7651	32.24	.Q	.	.	.	.
2.833	5.9880	32.36	.Q	.	.	.	.
2.917	6.2117	32.48	.Q	.	.	.	.
3.000	6.4363	32.61	.Q	.	.	.	.
3.083	6.6617	32.74	.Q	.	.	.	.
3.167	6.8881	32.86	.Q	.	.	.	.
3.250	7.1153	32.99	.Q	.	.	.	.
3.333	7.3434	33.12	.Q	.	.	.	.
3.417	7.5725	33.26	.Q	.	.	.	.
3.500	7.8024	33.39	.Q	.	.	.	.
3.583	8.0333	33.52	.Q	.	.	.	.
3.667	8.2651	33.66	.Q	.	.	.	.
3.750	8.4979	33.80	.Q	.	.	.	.
3.833	8.7316	33.94	.Q	.	.	.	.
3.917	8.9663	34.08	.Q	.	.	.	.

4.000	9.2019	34.22	.QV	.	.	.	.
4.083	9.4386	34.36	.QV	.	.	.	.
4.167	9.6762	34.51	.QV	.	.	.	.
4.250	9.9149	34.65	.QV	.	.	.	.
4.333	10.1546	34.80	.QV	.	.	.	.
4.417	10.3953	34.95	.QV	.	.	.	.
4.500	10.6370	35.10	.QV	.	.	.	.
4.583	10.8798	35.26	.QV	.	.	.	.
4.667	11.1237	35.41	.QV	.	.	.	.
4.750	11.3687	35.57	.QV	.	.	.	.
4.833	11.6147	35.73	.QV	.	.	.	.
4.917	11.8619	35.89	.QV	.	.	.	.
5.000	12.1102	36.05	.QV	.	.	.	.
5.083	12.3596	36.21	.QV	.	.	.	.
5.167	12.6101	36.38	.QV	.	.	.	.
5.250	12.8618	36.55	.QV	.	.	.	.
5.333	13.1147	36.72	.QV	.	.	.	.
5.417	13.3688	36.89	.QV	.	.	.	.
5.500	13.6241	37.07	.Q V	.	.	.	.
5.583	13.8806	37.24	.Q V	.	.	.	.
5.667	14.1383	37.42	.Q V	.	.	.	.
5.750	14.3973	37.60	.Q V	.	.	.	.
5.833	14.6575	37.79	.Q V	.	.	.	.
5.917	14.9190	37.97	.Q V	.	.	.	.
6.000	15.1818	38.16	.Q V	.	.	.	.
6.083	15.4460	38.35	.Q V	.	.	.	.
6.167	15.7114	38.54	.Q V	.	.	.	.
6.250	15.9782	38.74	.Q V	.	.	.	.
6.333	16.2464	38.94	.Q V	.	.	.	.
6.417	16.5159	39.14	.Q V	.	.	.	.
6.500	16.7869	39.34	.Q V	.	.	.	.
6.583	17.0592	39.55	.Q V	.	.	.	.
6.667	17.3330	39.76	.Q V	.	.	.	.
6.750	17.6083	39.97	.Q V	.	.	.	.
6.833	17.8851	40.18	.Q V	.	.	.	.
6.917	18.1633	40.40	.Q V	.	.	.	.
7.000	18.4431	40.62	.Q V	.	.	.	.
7.083	18.7244	40.85	.Q V	.	.	.	.
7.167	19.0073	41.08	.Q V	.	.	.	.
7.250	19.2918	41.31	.Q V	.	.	.	.
7.333	19.5779	41.54	.Q V	.	.	.	.
7.417	19.8656	41.78	.Q V	.	.	.	.
7.500	20.1550	42.02	.Q V	.	.	.	.
7.583	20.4460	42.26	.Q V	.	.	.	.
7.667	20.7388	42.51	.Q V	.	.	.	.
7.750	21.0334	42.77	.Q V	.	.	.	.
7.833	21.3297	43.02	.Q V	.	.	.	.
7.917	21.6277	43.28	.Q V	.	.	.	.
8.000	21.9276	43.55	.Q V	.	.	.	.
8.083	22.2294	43.82	.Q V	.	.	.	.
8.167	22.5330	44.09	.Q V	.	.	.	.
8.250	22.8386	44.37	.Q V	.	.	.	.
8.333	23.1461	44.65	.Q V	.	.	.	.
8.417	23.4556	44.94	.Q V	.	.	.	.
8.500	23.7671	45.23	.Q V	.	.	.	.
8.583	24.0806	45.52	.Q V	.	.	.	.
8.667	24.3962	45.83	.Q V	.	.	.	.
8.750	24.7139	46.13	.Q V	.	.	.	.

8.833	25.0338	46.45	.Q	V	.	.	.	.
8.917	25.3559	46.76	.Q	V	.	.	.	.
9.000	25.6802	47.09	.Q	V	.	.	.	.
9.083	26.0067	47.42	.Q	V	.	.	.	.
9.167	26.3356	47.75	.Q	V	.	.	.	.
9.250	26.6668	48.09	.Q	V	.	.	.	.
9.333	27.0005	48.44	.Q	V	.	.	.	.
9.417	27.3365	48.80	.Q	V	.	.	.	.
9.500	27.6751	49.16	.Q	V	.	.	.	.
9.583	28.0162	49.53	.Q	V	.	.	.	.
9.667	28.3599	49.91	.Q	V	.	.	.	.
9.750	28.7063	50.29	.Q	V	.	.	.	.
9.833	29.0553	50.68	.Q	V	.	.	.	.
9.917	29.4071	51.08	.Q	V	.	.	.	.
10.000	29.7617	51.49	.Q	V	.	.	.	.
10.083	30.1192	51.90	.Q	V	.	.	.	.
10.167	30.4796	52.33	.Q	V	.	.	.	.
10.250	30.8430	52.76	.Q	V	.	.	.	.
10.333	31.2094	53.21	.Q	V	.	.	.	.
10.417	31.5790	53.66	.Q	V	.	.	.	.
10.500	31.9517	54.13	.Q	V	.	.	.	.
10.583	32.3278	54.60	.Q	V	.	.	.	.
10.667	32.7071	55.09	.Q	V	.	.	.	.
10.750	33.0899	55.58	.Q	V	.	.	.	.
10.833	33.4762	56.09	.Q	V	.	.	.	.
10.917	33.8661	56.61	.Q	V	.	.	.	.
11.000	34.2597	57.14	.Q	V	.	.	.	.
11.083	34.6570	57.69	.Q	V	.	.	.	.
11.167	35.0582	58.25	.Q	V	.	.	.	.
11.250	35.4633	58.83	.Q	V	.	.	.	.
11.333	35.8725	59.42	.Q	V	.	.	.	.
11.417	36.2859	60.02	.Q	V	.	.	.	.
11.500	36.7035	60.64	.Q	V	.	.	.	.
11.583	37.1256	61.28	.Q	V	.	.	.	.
11.667	37.5522	61.94	.Q	V	.	.	.	.
11.750	37.9834	62.61	.Q	V	.	.	.	.
11.833	38.4194	63.31	.Q	V	.	.	.	.
11.917	38.8604	64.02	.Q	V	.	.	.	.
12.000	39.3064	64.76	.Q	V	.	.	.	.
12.083	39.7590	65.72	.Q	V	.	.	.	.
12.167	40.2209	67.07	.Q	V	.	.	.	.
12.250	40.6977	69.24	.Q	V	.	.	.	.
12.333	41.1945	72.13	.Q	V	.	.	.	.
12.417	41.7138	75.41	.Q	V	.	.	.	.
12.500	42.2601	79.31	.Q	V	.	.	.	.
12.583	42.8325	83.12	.Q	V	.	.	.	.
12.667	43.4274	86.37	.Q	V	.	.	.	.
12.750	44.0401	88.97	.Q	V	.	.	.	.
12.833	44.6672	91.06	.Q	V	.	.	.	.
12.917	45.3068	92.87	.Q	V	.	.	.	.
13.000	45.9575	94.48	.Q	V	.	.	.	.
13.083	46.6185	95.98	.Q	V	.	.	.	.
13.167	47.2891	97.36	.Q	V	.	.	.	.
13.250	47.9690	98.73	.Q	V	.	.	.	.
13.333	48.6587	100.14	.Q	V	.	.	.	.
13.417	49.3585	101.61	.Q	V	.	.	.	.
13.500	50.0689	103.15	.Q	.V	.	.	.	.
13.583	50.7902	104.74	.Q	.V	.	.	.	.

13.667	51.5226	106.35	.Q	.V	.	.	.	.
13.750	52.2665	108.01	.Q	.V	.	.	.	.
13.833	53.0225	109.76	.Q	.V	.	.	.	.
13.917	53.7910	111.60	.Q	.V	.	.	.	.
14.000	54.5729	113.52	.Q	.V	.	.	.	.
14.083	55.3694	115.65	.Q	.V	.	.	.	.
14.167	56.1825	118.06	.Q	.V	.	.	.	.
14.250	57.0158	121.00	.Q	.V	.	.	.	.
14.333	57.8726	124.40	.Q	.V	.	.	.	.
14.417	58.7549	128.12	.Q	.V	.	.	.	.
14.500	59.6660	132.29	.Q	.V	.	.	.	.
14.583	60.6066	136.58	.Q	.V	.	.	.	.
14.667	61.5761	140.76	.Q	.V	.	.	.	.
14.750	62.5734	144.82	.Q	.V	.	.	.	.
14.833	63.5986	148.85	.Q	.V	.	.	.	.
14.917	64.6524	153.01	.Q	.V	.	.	.	.
15.000	65.7361	157.36	.Q	.V	.	.	.	.
15.083	66.8518	162.00	.Q	.V	.	.	.	.
15.167	68.0019	166.99	.Q	.V	.	.	.	.
15.250	69.1894	172.44	.Q	.V	.	.	.	.
15.333	70.4186	178.47	.Q	.V	.	.	.	.
15.417	71.6906	184.69	.Q	.V	.	.	.	.
15.500	73.0048	190.82	.Q	.V	.	.	.	.
15.583	74.3540	195.91	.Q	.V	.	.	.	.
15.667	75.7362	200.68	.Q	.V	.	.	.	.
15.750	77.1663	207.65	.Q	.V	.	.	.	.
15.833	78.6710	218.49	.Q	.V	.	.	.	.
15.917	80.3319	241.16	.Q	.V	.	.	.	.
16.000	82.2874	283.94	.Q	.V	.	.	.	.
16.083	84.9369	384.70	.Q	.V	.	.	.	.
16.167	88.6301	536.25	.Q	.V	.	.	.	.
16.250	93.8688	760.67	.Q	.V	.Q	.	.	.
16.333	100.3809	945.55	.Q	.V	.Q	.	.	.
16.417	107.5795	1045.23	.Q	.V	.Q	.	.	.
16.500	115.3931	1134.54	.Q	.V	.Q	.	.	.
16.583	122.6866	1059.02	.Q	.V	.Q	.	.	.
16.667	128.7159	875.46	.Q	.V	.Q	.	.	.
16.750	133.3639	674.90	.Q	.V	.Q	.	.	.
16.833	136.9152	515.65	.Q	.V	.Q	.	.	.
16.917	139.7344	409.34	.Q	.V	.Q	.	.	.
17.000	142.0013	329.15	.Q	.V	.Q	.	.	.
17.083	143.8554	269.22	.Q	.V	.Q	.	.	.
17.167	145.3732	220.39	.Q	.V	.Q	.	.	.
17.250	146.6945	191.85	.Q	.V	.Q	.	.	.
17.333	147.9317	179.64	.Q	.V	.Q	.	.	.
17.417	149.0995	169.57	.Q	.V	.Q	.	.	.
17.500	150.1969	159.33	.Q	.V	.Q	.	.	.
17.583	151.2204	148.61	.Q	.V	.Q	.	.	.
17.667	152.1175	130.26	.Q	.V	.Q	.	.	.
17.750	152.9539	121.45	.Q	.V	.Q	.	.	.
17.833	153.7536	116.12	.Q	.V	.Q	.	.	.
17.917	154.5235	111.79	.Q	.V	.Q	.	.	.
18.000	155.2666	107.90	.Q	.V	.Q	.	.	.
18.083	155.9845	104.23	.Q	.V	.Q	.	.	.
18.167	156.6771	100.57	.Q	.V	.Q	.	.	.
18.250	157.3411	96.41	.Q	.V	.Q	.	.	.
18.333	157.9732	91.79	.Q	.V	.Q	.	.	.
18.417	158.5725	87.02	.Q	.V	.Q	.	.	.

18.500	159.1362	81.84	.Q	.	.	.	V	.
18.583	159.6662	76.96	.Q	.	.	.	V	.
18.667	160.1680	72.86	.Q	.	.	.	V	.
18.750	160.6473	69.60	.Q	.	.	.	V	.
18.833	161.1087	66.99	.Q	.	.	.	V	.
18.917	161.5549	64.80	.Q	.	.	.	V	.
19.000	161.9884	62.94	.Q	.	.	.	V	.
19.083	162.4108	61.33	.Q	.	.	.	V	.
19.167	162.8236	59.94	.Q	.	.	.	V	.
19.250	163.2278	58.69	.Q	.	.	.	V	.
19.333	163.6238	57.50	.Q	.	.	.	V	.
19.417	164.0119	56.37	.Q	.	.	.	V	.
19.500	164.3927	55.28	.Q	.	.	.	V	.
19.583	164.7663	54.25	.Q	.	.	.	V	.
19.667	165.1334	53.31	.Q	.	.	.	V	.
19.750	165.4944	52.42	.Q	.	.	.	V	.
19.833	165.8496	51.57	.Q	.	.	.	V	.
19.917	166.1992	50.76	.Q	.	.	.	V	.
20.000	166.5434	49.98	.Q	.	.	.	V	.
20.083	166.8824	49.23	.Q	.	.	.	V	.
20.167	167.2165	48.51	.Q	.	.	.	V	.
20.250	167.5458	47.81	.Q	.	.	.	V	.
20.333	167.8704	47.14	.Q	.	.	.	V	.
20.417	168.1907	46.50	.Q	.	.	.	V	.
20.500	168.5066	45.87	.Q	.	.	.	V	.
20.583	168.8184	45.27	.Q	.	.	.	V	.
20.667	169.1261	44.69	.Q	.	.	.	V	.
20.750	169.4300	44.13	.Q	.	.	.	V	.
20.833	169.7302	43.58	.Q	.	.	.	V	.
20.917	170.0267	43.05	.Q	.	.	.	V	.
21.000	170.3197	42.54	.Q	.	.	.	V	.
21.083	170.6093	42.05	.Q	.	.	.	V	.
21.167	170.8956	41.57	.Q	.	.	.	V	.
21.250	171.1786	41.10	.Q	.	.	.	V	.
21.333	171.4585	40.65	.Q	.	.	.	V	.
21.417	171.7354	40.21	.Q	.	.	.	V	.
21.500	172.0094	39.78	.Q	.	.	.	V	.
21.583	172.2805	39.36	.Q	.	.	.	V	.
21.667	172.5487	38.95	.Q	.	.	.	V	.
21.750	172.8143	38.56	.Q	.	.	.	V	.
21.833	173.0772	38.17	.Q	.	.	.	V	.
21.917	173.3375	37.80	.Q	.	.	.	V	.
22.000	173.5954	37.43	.Q	.	.	.	V	.
22.083	173.8507	37.08	.Q	.	.	.	V	.
22.167	174.1037	36.73	.Q	.	.	.	V	.
22.250	174.3543	36.39	.Q	.	.	.	V	.
22.333	174.6026	36.06	.Q	.	.	.	V	.
22.417	174.8488	35.74	.Q	.	.	.	V	.
22.500	175.0927	35.42	.Q	.	.	.	V	.
22.583	175.3345	35.11	.Q	.	.	.	V	.
22.667	175.5742	34.81	.Q	.	.	.	V	.
22.750	175.8120	34.51	.Q	.	.	.	V	.
22.833	176.0477	34.22	.Q	.	.	.	V	.
22.917	176.2814	33.94	.Q	.	.	.	V	.
23.000	176.5133	33.66	.Q	.	.	.	V	.
23.083	176.7433	33.39	.Q	.	.	.	V	.
23.167	176.9714	33.13	.Q	.	.	.	V	.
23.250	177.1978	32.87	.Q	.	.	.	V	.

23.333	177.4224	32.61	.Q	.	.	.	V	.
23.417	177.6453	32.36	.Q	.	.	.	V	.
23.500	177.8665	32.12	.Q	.	.	.	V	.
23.583	178.0861	31.88	.Q	.	.	.	V	.
23.667	178.3040	31.64	.Q	.	.	.	V	.
23.750	178.5203	31.41	.Q	.	.	.	V	.
23.833	178.7351	31.19	.Q	.	.	.	V	.
23.917	178.9484	30.96	.Q	.	.	.	V	.
24.000	179.1601	30.75	.Q	.	.	.	V	.
24.083	179.3683	30.22	.Q	.	.	.	V	.
24.167	179.5691	29.16	Q	.	.	.	V	.
24.250	179.7542	26.87	Q	.	.	.	V	.
24.333	179.9164	23.55	Q	.	.	.	V	.
24.417	180.0521	19.72	Q	.	.	.	V	.
24.500	180.1555	15.01	Q	.	.	.	V	.
24.583	180.2281	10.53	Q	.	.	.	V	.
24.667	180.2764	7.01	Q	.	.	.	V	.
24.750	180.3079	4.58	Q	.	.	.	V	.
24.833	180.3285	2.99	Q	.	.	.	V	.
24.917	180.3416	1.91	Q	.	.	.	V	.
25.000	180.3499	1.20	Q	.	.	.	V	.
25.083	180.3550	0.75	Q	.	.	.	V	.
25.167	180.3586	0.53	Q	.	.	.	V	.
25.250	180.3616	0.43	Q	.	.	.	V	.
25.333	180.3638	0.32	Q	.	.	.	V	.
25.417	180.3653	0.22	Q	.	.	.	V	.
25.500	180.3661	0.12	Q	.	.	.	V	.
25.583	180.3662	0.02	Q	.	.	.	V	.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1535.0
10%	235.0
20%	75.0
30%	55.0
40%	45.0
50%	35.0
60%	30.0
70%	25.0
80%	20.0
90%	15.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 132C *
* 25-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV2532CS.DAT
TIME/DATE OF STUDY: 14:31 01/02/2019

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

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 4924.400 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.856 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244
LOW LOSS FRACTION = 0.567
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 = 0.788
30-MINUTE FACTOR = 0.788
1-HOUR FACTOR = 0.788
3-HOUR FACTOR = 0.968
6-HOUR FACTOR = 0.984
24-HOUR FACTOR = 0.990

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 9.735

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.556	331.300
2	1.681	669.681
3	3.190	898.530
4	5.694	1491.595
5	9.996	2562.006
6	15.343	3184.527
7	21.165	3467.137
8	27.440	3736.834
9	34.550	4234.553
10	42.448	4703.686
11	51.437	5353.104
12	59.048	4532.599
13	66.996	4733.692
14	73.451	3844.114
15	78.519	3018.107
16	82.874	2593.681
17	86.545	2186.207
18	89.201	1581.784
19	91.334	1270.321
20	93.252	1141.972
21	94.739	886.011
22	95.921	703.742
23	96.748	492.799
24	97.512	454.687
25	98.060	326.543
26	98.248	112.074
27	98.431	108.729
28	98.613	108.666
29	98.796	108.729
30	98.978	108.607
31	99.161	108.966
32	99.344	108.607
33	99.526	108.607
34	99.708	108.607
35	99.891	108.607
36	100.000	65.051

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 762.7112
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 732.0699

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.	675.0	1350.0	2025.0	2700.0
0.083	0.0047	0.68	Q	.	.	.	.
0.167	0.0189	2.06	Q	.	.	.	.
0.250	0.0459	3.92	Q	.	.	.	.
0.333	0.0942	7.01	Q	.	.	.	.
0.417	0.1790	12.31	Q	.	.	.	.
0.500	0.3092	18.91	Q	.	.	.	.
0.583	0.4890	26.11	Q	.	.	.	.
0.667	0.7225	33.90	Q	.	.	.	.
0.750	1.0168	42.73	Q	.	.	.	.
0.833	1.3788	52.56	Q	.	.	.	.
0.917	1.8179	63.76	Q	.	.	.	.
1.000	2.3228	73.31	VQ	.	.	.	.
1.083	2.8965	83.31	VQ	.	.	.	.
1.167	3.5267	91.50	VQ	.	.	.	.
1.250	4.2018	98.03	VQ	.	.	.	.
1.333	4.9160	103.70	VQ	.	.	.	.
1.417	5.6636	108.55	VQ	.	.	.	.
1.500	6.4361	112.17	VQ	.	.	.	.
1.583	7.2293	115.17	VQ	.	.	.	.
1.667	8.0414	117.92	VQ	.	.	.	.
1.750	8.8689	120.15	VQ	.	.	.	.
1.833	9.7092	122.01	VQ	.	.	.	.
1.917	10.5594	123.45	VQ	.	.	.	.
2.000	11.4190	124.82	VQ	.	.	.	.
2.083	12.2863	125.93	VQ	.	.	.	.
2.167	13.1582	126.60	VQ	.	.	.	.
2.250	14.0347	127.27	VQ	.	.	.	.
2.333	14.9159	127.95	VQ	.	.	.	.
2.417	15.8018	128.63	VQ	.	.	.	.
2.500	16.6924	129.32	VQ	.	.	.	.
2.583	17.5878	130.01	VQ	.	.	.	.
2.667	18.4880	130.71	.Q	.	.	.	.
2.750	19.3931	131.41	.Q	.	.	.	.
2.833	20.3029	132.12	.Q	.	.	.	.
2.917	21.2178	132.83	.Q	.	.	.	.
3.000	22.1369	133.46	.Q	.	.	.	.
3.083	23.0595	133.96	.Q	.	.	.	.
3.167	23.9855	134.46	.Q	.	.	.	.
3.250	24.9151	134.98	.Q	.	.	.	.
3.333	25.8482	135.49	.VQ	.	.	.	.
3.417	26.7849	136.01	.VQ	.	.	.	.
3.500	27.7252	136.53	.VQ	.	.	.	.
3.583	28.6692	137.07	.VQ	.	.	.	.
3.667	29.6169	137.60	.VQ	.	.	.	.
3.750	30.5683	138.14	.VQ	.	.	.	.
3.833	31.5234	138.69	.VQ	.	.	.	.
3.917	32.4824	139.24	.VQ	.	.	.	.

4.000	33.4452	139.80	.VQ	.	.	.	.
4.083	34.4119	140.37	.VQ	.	.	.	.
4.167	35.3825	140.93	.VQ	.	.	.	.
4.250	36.3571	141.51	.VQ	.	.	.	.
4.333	37.3357	142.09	.Q	.	.	.	.
4.417	38.3183	142.68	.Q	.	.	.	.
4.500	39.3051	143.28	.Q	.	.	.	.
4.583	40.2960	143.88	.Q	.	.	.	.
4.667	41.2911	144.49	.Q	.	.	.	.
4.750	42.2904	145.10	.Q	.	.	.	.
4.833	43.2940	145.72	.Q	.	.	.	.
4.917	44.3020	146.36	.Q	.	.	.	.
5.000	45.3143	146.99	.Q	.	.	.	.
5.083	46.3310	147.63	.Q	.	.	.	.
5.167	47.3523	148.28	.Q	.	.	.	.
5.250	48.3781	148.94	.Q	.	.	.	.
5.333	49.4084	149.61	.Q	.	.	.	.
5.417	50.4434	150.28	.Q	.	.	.	.
5.500	51.4831	150.96	.Q	.	.	.	.
5.583	52.5275	151.66	.Q	.	.	.	.
5.667	53.5768	152.35	.Q	.	.	.	.
5.750	54.6309	153.06	.Q	.	.	.	.
5.833	55.6899	153.77	.QV	.	.	.	.
5.917	56.7540	154.50	.QV	.	.	.	.
6.000	57.8230	155.23	.QV	.	.	.	.
6.083	58.8972	155.97	.QV	.	.	.	.
6.167	59.9766	156.72	.QV	.	.	.	.
6.250	61.0612	157.49	.QV	.	.	.	.
6.333	62.1511	158.25	.QV	.	.	.	.
6.417	63.2464	159.04	.QV	.	.	.	.
6.500	64.3471	159.82	.QV	.	.	.	.
6.583	65.4533	160.63	.QV	.	.	.	.
6.667	66.5651	161.43	.QV	.	.	.	.
6.750	67.6827	162.26	.QV	.	.	.	.
6.833	68.8059	163.09	.QV	.	.	.	.
6.917	69.9349	163.94	.QV	.	.	.	.
7.000	71.0698	164.79	.QV	.	.	.	.
7.083	72.2108	165.66	.QV	.	.	.	.
7.167	73.3577	166.54	.Q V	.	.	.	.
7.250	74.5108	167.43	.Q V	.	.	.	.
7.333	75.6702	168.33	.Q V	.	.	.	.
7.417	76.8359	169.26	.Q V	.	.	.	.
7.500	78.0079	170.18	.Q V	.	.	.	.
7.583	79.1865	171.13	.Q V	.	.	.	.
7.667	80.3716	172.08	.Q V	.	.	.	.
7.750	81.5635	173.06	.Q V	.	.	.	.
7.833	82.7621	174.04	.Q V	.	.	.	.
7.917	83.9677	175.05	.Q V	.	.	.	.
8.000	85.1802	176.06	.Q V	.	.	.	.
8.083	86.3999	177.10	.Q V	.	.	.	.
8.167	87.6267	178.14	.Q V	.	.	.	.
8.250	88.8609	179.21	.Q V	.	.	.	.
8.333	90.1025	180.28	.Q V	.	.	.	.
8.417	91.3518	181.39	.Q V	.	.	.	.
8.500	92.6086	182.50	.Q V	.	.	.	.
8.583	93.8733	183.64	.Q V	.	.	.	.
8.667	95.1459	184.78	.Q V	.	.	.	.
8.750	96.4266	185.96	.Q V	.	.	.	.

8.833	97.7155	187.14	. Q	V	.	.	.
8.917	99.0128	188.36	. Q	V	.	.	.
9.000	100.3185	189.59	. Q	V	.	.	.
9.083	101.6328	190.85	. Q	V	.	.	.
9.167	102.9559	192.11	. Q	V	.	.	.
9.250	104.2880	193.42	. Q	V	.	.	.
9.333	105.6291	194.73	. Q	V	.	.	.
9.417	106.9795	196.08	. Q	V	.	.	.
9.500	108.3393	197.44	. Q	V	.	.	.
9.583	109.7088	198.85	. Q	V	.	.	.
9.667	111.0880	200.26	. Q	V	.	.	.
9.750	112.4772	201.71	. Q	V	.	.	.
9.833	113.8765	203.18	. Q	V	.	.	.
9.917	115.2862	204.69	. Q	V	.	.	.
10.000	116.7064	206.21	. Q	V	.	.	.
10.083	118.1374	207.78	. Q	V	.	.	.
10.167	119.5793	209.37	. Q	V	.	.	.
10.250	121.0325	211.00	. Q	V	.	.	.
10.333	122.4971	212.65	. Q	V	.	.	.
10.417	123.9734	214.36	. Q	V	.	.	.
10.500	125.4615	216.08	. Q	V	.	.	.
10.583	126.9619	217.86	. Q	V	.	.	.
10.667	128.4746	219.65	. Q	V	.	.	.
10.750	130.0002	221.51	. Q	V	.	.	.
10.833	131.5386	223.38	. Q	V	.	.	.
10.917	133.0904	225.32	. Q	V	.	.	.
11.000	134.6557	227.28	. Q	V	.	.	.
11.083	136.2349	229.31	. Q	V	.	.	.
11.167	137.8283	231.36	. Q	V	.	.	.
11.250	139.4364	233.49	. Q	V	.	.	.
11.333	141.0593	235.65	. Q	V	.	.	.
11.417	142.6976	237.88	. Q	V	.	.	.
11.500	144.3515	240.14	. Q	V	.	.	.
11.583	146.0215	242.49	. Q	V	.	.	.
11.667	147.7079	244.87	. Q	V	.	.	.
11.750	149.4113	247.34	. Q	V	.	.	.
11.833	151.1320	249.85	. Q	V	.	.	.
11.917	152.8707	252.45	. Q	V	.	.	.
12.000	154.6276	255.10	. Q	V	.	.	.
12.083	156.4069	258.35	. Q	V	.	.	.
12.167	158.2124	262.17	. Q	V	.	.	.
12.250	160.0475	266.45	. Q	V	.	.	.
12.333	161.9185	271.68	. Q	V	.	.	.
12.417	163.8377	278.66	. Q	V	.	.	.
12.500	165.8119	286.65	. Q	V	.	.	.
12.583	167.8451	295.22	. Q	V	.	.	.
12.667	169.9407	304.28	. Q	V	.	.	.
12.750	172.1050	314.26	. Q	V	.	.	.
12.833	174.3436	325.04	. Q	V	.	.	.
12.917	176.6645	336.99	. Q	V	.	.	.
13.000	179.0598	347.80	. Q	V	.	.	.
13.083	181.5330	359.11	. Q	V	.	.	.
13.167	184.0757	369.20	. Q	V	.	.	.
13.250	186.6807	378.25	. Q	V	.	.	.
13.333	189.3445	386.78	. Q	V	.	.	.
13.417	192.0644	394.93	. Q	V	.	.	.
13.500	194.8351	402.30	. Q	V	.	.	.
13.583	197.6551	409.46	. Q	V	.	.	.

13.667	200.5240	416.57	. Q	V	.	.	.
13.750	203.4413	423.59	. Q	.V	.	.	.
13.833	206.4062	430.50	. Q	.V	.	.	.
13.917	209.4187	437.42	. Q	.V	.	.	.
14.000	212.4798	444.48	. Q	.V	.	.	.
14.083	215.5977	452.71	. Q	.V	.	.	.
14.167	218.7786	461.87	. Q	.V	.	.	.
14.250	222.0303	472.13	. Q	. V	.	.	.
14.333	225.3666	484.44	. Q	. V	.	.	.
14.417	228.8132	500.44	. Q	. V	.	.	.
14.500	232.3848	518.60	. Q	. V	.	.	.
14.583	236.0909	538.12	. Q	. V	.	.	.
14.667	239.9392	558.77	. Q	. V	.	.	.
14.750	243.9441	581.51	. Q	. V	.	.	.
14.833	248.1180	606.04	. Q	. V	.	.	.
14.917	252.4789	633.21	. Q	. V	.	.	.
15.000	257.0127	658.30	. Q	. V	.	.	.
15.083	261.7284	684.73	. Q	. V	.	.	.
15.167	266.6129	709.23	. Q	. V	.	.	.
15.250	271.6595	732.76	. Q	. V	.	.	.
15.333	276.8693	756.46	. Q	. V	.	.	.
15.417	282.2281	778.10	. Q	. V	.	.	.
15.500	287.7192	797.31	. Q	. V	.	.	.
15.583	293.3472	817.19	. Q	. V	.	.	.
15.667	299.0958	834.69	. Q	. V	.	.	.
15.750	304.9315	847.34	. Q	. V	.	.	.
15.833	310.8583	860.58	. Q	. V	.	.	.
15.917	316.9466	884.02	. Q	. V	.	.	.
16.000	323.3335	927.39	. Q	. V	.	.	.
16.083	330.5617	1049.53	. Q	. V	.	.	.
16.167	338.7055	1182.48	. QV	.	.	.	.
16.250	347.7397	1311.76	. Q	.	.	.	.
16.333	358.3228	1536.67	. V	. Q	.	.	.
16.417	371.0200	1843.63	. V	. Q	.	.	.
16.500	385.0994	2044.33	. V	. Q	.	.	.
16.583	400.0253	2167.24	. V	. Q	.	.	.
16.667	415.7552	2283.99	. V	. Q	.	.	.
16.750	432.6277	2449.89	. V	. Q	.	.	.
16.833	450.4196	2583.37	. V	. Q	.	.	.
16.917	468.9674	2693.15	. V	. Q	.	.	.
17.000	486.0839	2485.31	. V	. Q	.	.	.
17.083	502.8346	2432.20	. V	. Q	.	.	.
17.167	517.6788	2155.38	. V	. Q	.	.	.
17.250	530.7520	1898.24	. QV	.	.	.	.
17.333	542.5989	1720.17	. Q	. V	.	.	.
17.417	553.2944	1552.99	. Q	. V	.	.	.
17.500	562.6240	1354.65	. Q	. V	.	.	.
17.583	571.0385	1221.80	. Q	. V	.	.	.
17.667	578.8353	1132.09	. Q	. V	.	.	.
17.750	585.8581	1019.72	. Q	. V	.	.	.
17.833	592.2009	920.98	. Q	. V	.	.	.
17.917	597.8663	822.62	. Q	. V	.	.	.
18.000	603.1239	763.40	. Q	. V	.	.	.
18.083	607.8580	687.39	. Q	. V	.	.	.
18.167	612.0210	604.47	. Q	. V	.	.	.
18.250	615.9568	571.48	. Q	. V	.	.	.
18.333	619.7154	545.75	. Q	. V	.	.	.
18.417	623.3060	521.35	. Q	. V	.	.	.

18.500	626.7321	497.46	.	Q	.	.	.	V	.
18.583	630.0083	475.71	.	Q	.	.	.	V	.
18.667	633.1396	454.67	.	Q	.	.	.	V	.
18.750	636.1282	433.95	.	Q	.	.	.	V	.
18.833	638.9704	412.68	.	Q	.	.	.	V	.
18.917	641.6526	389.47	.	Q	.	.	.	V	.
19.000	644.1246	358.93	.	Q	.	.	.	V	.
19.083	646.3752	326.79	.	Q	.	.	.	V	.
19.167	648.5229	311.84	.	Q	.	.	.	V	.
19.250	650.5886	299.94	.	Q	.	.	.	V	.
19.333	652.5788	288.97	.	Q	.	.	.	V	.
19.417	654.4976	278.61	.	Q	.	.	.	V	.
19.500	656.3555	269.76	.	Q	.	.	.	V	.
19.583	658.1587	261.83	.	Q	.	.	.	V	.
19.667	659.9110	254.43	.	Q	.	.	.	V	.
19.750	661.6171	247.73	.	Q	.	.	.	V	.
19.833	663.2809	241.58	.	Q	.	.	.	V	.
19.917	664.9062	236.00	.	Q	.	.	.	V	.
20.000	666.4960	230.84	.	Q	.	.	.	V	.
20.083	668.0544	226.27	.	Q	.	.	.	V	.
20.167	669.5848	222.22	.	Q	.	.	.	V	.
20.250	671.0887	218.36	.	Q	.	.	.	V	.
20.333	672.5671	214.66	.	Q	.	.	.	V	.
20.417	674.0210	211.11	.	Q	.	.	.	V	.
20.500	675.4515	207.70	.	Q	.	.	.	V	.
20.583	676.8594	204.43	.	Q	.	.	.	V	.
20.667	678.2455	201.27	.	Q	.	.	.	V	.
20.750	679.6108	198.23	.	Q	.	.	.	V	.
20.833	680.9559	195.31	.	Q	.	.	.	V	.
20.917	682.2815	192.48	.	Q	.	.	.	V	.
21.000	683.5887	189.81	.	Q	.	.	.	V	.
21.083	684.8789	187.33	.	Q	.	.	.	V	.
21.167	686.1526	184.94	.	Q	.	.	.	V	.
21.250	687.4103	182.62	.	Q	.	.	.	V	.
21.333	688.6526	180.38	.	Q	.	.	.	V	.
21.417	689.8800	178.21	.	Q	.	.	.	V	.
21.500	691.0929	176.11	.	Q	.	.	.	V	.
21.583	692.2917	174.07	.	Q	.	.	.	V	.
21.667	693.4770	172.10	.	Q	.	.	.	V	.
21.750	694.6490	170.18	.	Q	.	.	.	V	.
21.833	695.8083	168.32	.	Q	.	.	.	V	.
21.917	696.9551	166.51	.	Q	.	.	.	V	.
22.000	698.0897	164.75	.	Q	.	.	.	V	.
22.083	699.2126	163.04	.	Q	.	.	.	V	.
22.167	700.3240	161.37	.	Q	.	.	.	V	.
22.250	701.4242	159.75	.	Q	.	.	.	V	.
22.333	702.5135	158.17	.	Q	.	.	.	V	.
22.417	703.5923	156.64	.	Q	.	.	.	V	.
22.500	704.6607	155.14	.	Q	.	.	.	V	.
22.583	705.7191	153.67	.	Q	.	.	.	V	.
22.667	706.7676	152.25	.	Q	.	.	.	V	.
22.750	707.8065	150.85	.	Q	.	.	.	V	.
22.833	708.8361	149.49	.	Q	.	.	.	V	.
22.917	709.8566	148.17	.	Q	.	.	.	V	.
23.000	710.8680	146.87	.	Q	.	.	.	V	.
23.083	711.8708	145.60	.	Q	.	.	.	V	.
23.167	712.8650	144.36	.	Q	.	.	.	V	.
23.250	713.8509	143.15	.	Q	.	.	.	V	.

23.333	714.8286	141.96	.	Q	.	.	.	V	.
23.417	715.7983	140.80	.	Q	.	.	.	V	.
23.500	716.7603	139.67	.	Q	.	.	.	V	.
23.583	717.7145	138.55	.	Q	.	.	.	V	.
23.667	718.6612	137.46	.	Q	.	.	.	V	.
23.750	719.6006	136.40	.	Q	.	.	.	V	.
23.833	720.5328	135.35	.	Q	.	.	.	V	.
23.917	721.4579	134.33	.	Q	.	.	.	V	.
24.000	722.3761	133.32	.	Q	.	.	.	V	.
24.083	723.2828	131.65	.	Q	.	.	.	V	.
24.167	724.1735	129.32	.	Q	.	.	.	V	.
24.250	725.0449	126.53	.	Q	.	.	.	V	.
24.333	725.8890	122.56	.	Q	.	.	.	V	.
24.417	726.6908	116.42	.	Q	.	.	.	V	.
24.500	727.4418	109.05	.	Q	.	.	.	V	.
24.583	728.1385	101.16	.	Q	.	.	.	V	.
24.667	728.7775	92.77	.	Q	.	.	.	V	.
24.750	729.3520	83.42	.	Q	.	.	.	V	.
24.833	729.8560	73.18	.	Q	.	.	.	V	.
24.917	730.2806	61.67	.	Q	.	.	.	V	.
25.000	730.6382	51.92	.	Q	.	.	.	V	.
25.083	730.9264	41.84	.	Q	.	.	.	V	.
25.167	731.1581	33.65	.	Q	.	.	.	V	.
25.250	731.3455	27.21	.	Q	.	.	.	V	.
25.333	731.4948	21.69	.	Q	.	.	.	V	.
25.417	731.6122	17.05	.	Q	.	.	.	V	.
25.500	731.7064	13.68	.	Q	.	.	.	V	.
25.583	731.7820	10.97	.	Q	.	.	.	V	.
25.667	731.8409	8.55	.	Q	.	.	.	V	.
25.750	731.8868	6.67	.	Q	.	.	.	V	.
25.833	731.9225	5.18	.	Q	.	.	.	V	.
25.917	731.9509	4.13	.	Q	.	.	.	V	.
26.000	731.9727	3.16	.	Q	.	.	.	V	.
26.083	731.9897	2.47	.	Q	.	.	.	V	.
26.167	732.0051	2.22	.	Q	.	.	.	V	.
26.250	732.0187	1.99	.	Q	.	.	.	V	.
26.333	732.0308	1.75	.	Q	.	.	.	V	.
26.417	732.0412	1.51	.	Q	.	.	.	V	.
26.500	732.0500	1.28	.	Q	.	.	.	V	.
26.583	732.0572	1.05	.	Q	.	.	.	V	.
26.667	732.0628	0.82	.	Q	.	.	.	V	.
26.750	732.0668	0.59	.	Q	.	.	.	V	.
26.833	732.0693	0.36	.	Q	.	.	.	V	.
26.917	732.0703	0.13	.	Q	.	.	.	V	.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1615.0
10%	435.0
20%	225.0
30%	145.0
40%	95.0
50%	75.0

60%	60.0
70%	50.0
80%	40.0
90%	25.0

=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133U *
* 25-YR EV JANUARY 2019 CCHI *

FILE NAME: EV2533US.DAT
TIME/DATE OF STUDY: 14:37 01/02/2019

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 = 54351.898 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) = 0.292
LOW LOSS FRACTION = 0.440
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.41
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.77
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.07
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.98
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.93
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.15

*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 = 3.360

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.192	1262.132
2	0.576	2524.264
3	0.960	2524.260
4	1.344	2524.268
5	1.728	2524.264
6	2.112	2937.313
7	2.755	3812.787
8	3.339	3841.269
9	3.957	4061.641
10	4.935	6426.803
11	6.054	7357.736
12	7.430	9042.957
13	9.068	10766.542
14	10.806	11426.360
15	12.487	11043.802
16	14.348	12233.171
17	16.627	14983.777
18	18.429	11841.667
19	20.308	12351.724
20	22.636	15301.574
21	24.934	15106.544
22	26.854	12621.791
23	29.082	14643.176
24	31.516	16003.440
25	34.424	19111.188
26	36.763	15376.736
27	39.261	16419.768
28	42.408	20683.170
29	45.451	20001.164
30	48.905	22703.088
31	51.808	19087.566
32	54.215	15820.183
33	56.584	15573.021
34	59.431	18710.242
35	62.756	21858.020
36	65.329	16908.826
37	67.593	14883.392
38	70.079	16344.294
39	72.145	13581.513
40	74.287	14074.832
41	76.231	12782.983
42	77.755	10014.436
43	79.248	9817.198
44	80.786	10103.752
45	82.322	10099.940
46	83.736	9294.691
47	85.048	8620.382
48	86.257	7951.740

49	87.299	6843.790
50	88.250	6257.292
51	89.045	5221.857
52	89.832	5173.212
53	90.560	4787.262
54	91.268	4650.706
55	91.968	4602.011
56	92.618	4270.523
57	93.258	4208.488
58	93.885	4124.388
59	94.358	3110.015
60	94.785	2804.355
61	95.212	2804.405
62	95.639	2806.260
63	96.030	2575.122
64	96.304	1797.605
65	96.567	1732.712
66	96.831	1730.756
67	97.095	1734.568
68	97.358	1730.756
69	97.622	1732.662
70	97.885	1730.756
71	98.036	993.359
72	98.098	410.724
73	98.162	414.585
74	98.225	414.535
75	98.288	414.535
76	98.350	412.629
77	98.413	414.535
78	98.477	418.346
79	98.540	412.629
80	98.603	414.535
81	98.666	414.585
82	98.729	412.629
83	98.792	416.441
84	98.855	412.629
85	98.918	416.441
86	98.981	412.629
87	99.044	412.629
88	99.107	412.629
89	99.169	412.629
90	99.232	412.629
91	99.295	412.629
92	99.358	412.629
93	99.420	412.629
94	99.483	412.629
95	99.546	412.629
96	99.609	412.629
97	99.672	412.629
98	99.734	412.629
99	99.797	412.629
100	99.860	412.629
101	99.923	412.629
102	99.985	412.629
103	100.000	95.585

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9497.5312
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 12440.2354

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.	3800.0	7600.0	11400.0	15200.0
0.083	0.0361	5.24	Q	.	.	.	.
0.167	0.1445	15.74	Q	.	.	.	.
0.250	0.3255	26.27	Q	.	.	.	.
0.333	0.5792	36.83	Q	.	.	.	.
0.417	0.9058	47.43	Q	.	.	.	.
0.500	1.3174	59.77	Q	.	.	.	.
0.583	1.8393	75.78	Q	.	.	.	.
0.667	2.4726	91.96	Q	.	.	.	.
0.750	3.2240	109.10	Q	.	.	.	.
0.833	4.1615	136.12	Q	.	.	.	.
0.917	5.3122	167.08	Q	.	.	.	.
1.000	6.7250	205.14	Q	.	.	.	.
1.083	8.4500	250.47	Q	.	.	.	.
1.167	10.5070	298.68	Q	.	.	.	.
1.250	12.8860	345.43	Q	.	.	.	.
1.333	15.6221	397.28	VQ	.	.	.	.
1.417	18.7950	460.71	VQ	.	.	.	.
1.500	22.3161	511.27	VQ	.	.	.	.
1.583	26.2012	564.11	VQ	.	.	.	.
1.667	30.5357	629.37	VQ	.	.	.	.
1.750	35.3154	694.01	VQ	.	.	.	.
1.833	40.4706	748.53	VQ	.	.	.	.
1.917	46.0603	811.63	V Q	.	.	.	.
2.000	52.1248	880.56	V Q	.	.	.	.
2.083	58.7545	962.64	V Q	.	.	.	.
2.167	65.8442	1029.42	V Q	.	.	.	.
2.250	73.4255	1100.80	V Q	.	.	.	.
2.333	81.6216	1190.07	V Q	.	.	.	.
2.417	90.4151	1276.82	V Q	.	.	.	.
2.500	99.8850	1375.04	V Q	.	.	.	.
2.583	109.9302	1458.56	V Q	.	.	.	.
2.667	120.4589	1528.78	V Q	.	.	.	.
2.750	131.4659	1598.21	V Q	.	.	.	.
2.833	143.0424	1680.90	V Q	.	.	.	.
2.917	155.2802	1776.94	V Q	.	.	.	.
3.000	168.0399	1852.71	V Q	.	.	.	.
3.083	181.2655	1920.36	V Q	.	.	.	.
3.167	195.0002	1994.28	V Q	.	.	.	.
3.250	209.1668	2056.99	V Q	.	.	.	.
3.333	223.7809	2121.97	V Q	.	.	.	.
3.417	238.8072	2181.81	V Q	.	.	.	.
3.500	254.1679	2230.37	V Q	.	.	.	.
3.583	269.8587	2278.30	V Q	.	.	.	.
3.667	285.8890	2327.60	V Q	.	.	.	.
3.750	302.2601	2377.08	V Q	.	.	.	.
3.833	318.9501	2423.40	.V Q	.	.	.	.
3.917	335.9413	2467.11	.V Q	.	.	.	.

4.000	353.2154	2508.20	.V	Q	.	.	.	.
4.083	370.7422	2544.88	.V	Q	.	.	.	.
4.167	388.5058	2579.28	.V	Q	.	.	.	.
4.250	406.4778	2609.53	.V	Q	.	.	.	.
4.333	424.6577	2639.73	.V	Q	.	.	.	.
4.417	443.0356	2668.47	.V	Q	.	.	.	.
4.500	461.6083	2696.77	.V	Q	.	.	.	.
4.583	480.3757	2725.03	.V	Q	.	.	.	.
4.667	499.3292	2752.04	.V	Q	.	.	.	.
4.750	518.4680	2778.95	.V	Q	.	.	.	.
4.833	537.7905	2805.63	.V	Q	.	.	.	.
4.917	557.2689	2828.26	.V	Q	.	.	.	.
5.000	576.8953	2849.75	.V	Q	.	.	.	.
5.083	596.6705	2871.37	.V	Q	.	.	.	.
5.167	616.5956	2893.12	.V	Q	.	.	.	.
5.250	636.6649	2914.06	.V	Q	.	.	.	.
5.333	656.8570	2931.89	.V	Q	.	.	.	.
5.417	677.1710	2949.59	.V	Q	.	.	.	.
5.500	697.6077	2967.40	.V	Q	.	.	.	.
5.583	718.1680	2985.36	.V	Q	.	.	.	.
5.667	738.8528	3003.43	.V	Q	.	.	.	.
5.750	759.6630	3021.65	.V	Q	.	.	.	.
5.833	780.5995	3039.98	.V	Q	.	.	.	.
5.917	801.6423	3055.41	.V	Q	.	.	.	.
6.000	822.7754	3068.53	.V	Q	.	.	.	.
6.083	843.9999	3081.80	.V	Q	.	.	.	.
6.167	865.3167	3095.19	.V	Q	.	.	.	.
6.250	886.7267	3108.73	.V	Q	.	.	.	.
6.333	908.2307	3122.38	.V	Q	.	.	.	.
6.417	929.8297	3136.18	.V	Q	.	.	.	.
6.500	951.5247	3150.12	.V	Q	.	.	.	.
6.583	973.3166	3164.19	.V	Q	.	.	.	.
6.667	995.2064	3178.40	.V	Q	.	.	.	.
6.750	1017.1951	3192.76	.V	Q	.	.	.	.
6.833	1039.2836	3207.25	.V	Q	.	.	.	.
6.917	1061.4731	3221.93	.V	Q	.	.	.	.
7.000	1083.7645	3236.72	.V	Q	.	.	.	.
7.083	1106.1592	3251.70	.V	Q	.	.	.	.
7.167	1128.6578	3266.81	.V	Q	.	.	.	.
7.250	1151.2618	3282.09	.V	Q	.	.	.	.
7.333	1173.9720	3297.53	.V	Q	.	.	.	.
7.417	1196.7899	3313.15	.V	Q	.	.	.	.
7.500	1219.7164	3328.92	.V	Q	.	.	.	.
7.583	1242.7528	3344.89	.V	Q	.	.	.	.
7.667	1265.9003	3361.02	.V	Q	.	.	.	.
7.750	1289.1602	3377.34	.V	Q	.	.	.	.
7.833	1312.5337	3393.83	.V	Q	.	.	.	.
7.917	1336.0222	3410.53	.V	Q	.	.	.	.
8.000	1359.6270	3427.41	.V	Q	.	.	.	.
8.083	1383.3494	3444.50	.V	Q	.	.	.	.
8.167	1407.1908	3461.78	.V	Q	.	.	.	.
8.250	1431.1527	3479.27	.V	Q	.	.	.	.
8.333	1455.2365	3496.96	.V	Q	.	.	.	.
8.417	1479.4436	3514.88	.V	Q	.	.	.	.
8.500	1503.7756	3533.01	.V	Q	.	.	.	.
8.583	1528.2251	3550.05	.V	Q	.	.	.	.
8.667	1552.7906	3566.91	.V	Q	.	.	.	.
8.750	1577.4740	3584.02	.V	Q	.	.	.	.

8.833	1602.2766	3601.34	.	V	Q.	.	.	.
8.917	1627.2003	3618.92	.	V	Q.	.	.	.
9.000	1652.2466	3636.72	.	V	Q.	.	.	.
9.083	1677.4174	3654.80	.	V	Q.	.	.	.
9.167	1702.7142	3673.11	.	V	Q.	.	.	.
9.250	1728.1392	3691.70	.	V	Q.	.	.	.
9.333	1753.6938	3710.54	.	V	Q.	.	.	.
9.417	1779.3804	3729.68	.	V	Q.	.	.	.
9.500	1805.2006	3749.08	.	V	Q.	.	.	.
9.583	1831.1565	3768.80	.	V	Q.	.	.	.
9.667	1857.2500	3788.78	.	V	Q.	.	.	.
9.750	1883.4834	3809.09	.	V	Q	.	.	.
9.833	1909.8588	3829.70	.	V	Q	.	.	.
9.917	1936.3783	3850.64	.	V	Q	.	.	.
10.000	1963.0442	3871.89	.	V	Q	.	.	.
10.083	1989.8590	3893.51	.	V	Q	.	.	.
10.167	2016.8248	3915.44	.	V	Q	.	.	.
10.250	2043.9443	3937.76	.	V	Q	.	.	.
10.333	2071.2200	3960.41	.	V	Q	.	.	.
10.417	2098.6543	3983.47	.	V	Q	.	.	.
10.500	2126.2500	4006.89	.	V	Q	.	.	.
10.583	2154.0098	4030.73	.	V	Q	.	.	.
10.667	2181.9365	4054.95	.	V	Q	.	.	.
10.750	2210.0332	4079.62	.	V	Q	.	.	.
10.833	2238.3025	4104.70	.	V	Q	.	.	.
10.917	2266.7478	4130.25	.	V	Q	.	.	.
11.000	2295.3721	4156.23	.	V	Q	.	.	.
11.083	2324.1787	4182.71	.	V	.Q	.	.	.
11.167	2353.1709	4209.65	.	V	.Q	.	.	.
11.250	2382.3523	4237.13	.	V	.Q	.	.	.
11.333	2411.7263	4265.09	.	V	.Q	.	.	.
11.417	2441.2966	4293.62	.	V	.Q	.	.	.
11.500	2471.0671	4322.67	.	V	.Q	.	.	.
11.583	2501.0420	4352.34	.	V	.Q	.	.	.
11.667	2531.2249	4382.55	.	V	.Q	.	.	.
11.750	2561.6204	4413.42	.	V	.Q	.	.	.
11.833	2592.2324	4444.87	.	V	.Q	.	.	.
11.917	2623.0659	4477.03	.	V	.Q	.	.	.
12.000	2654.1252	4509.82	.	V	.Q	.	.	.
12.083	2685.4768	4552.26	.	V	.Q	.	.	.
12.167	2717.1865	4604.26	.	V	.Q	.	.	.
12.250	2749.2593	4656.97	.	V	.Q	.	.	.
12.333	2781.6995	4710.32	.	V	.Q	.	.	.
12.417	2814.5125	4764.45	.	V	.Q	.	.	.
12.500	2847.7231	4822.18	.	V	.Q	.	.	.
12.583	2881.3794	4886.90	.	V	.Q	.	.	.
12.667	2915.4878	4952.53	.	V	.Q	.	.	.
12.750	2950.0647	5020.56	.	V	.Q	.	.	.
12.833	2985.2302	5106.03	.	V	.Q	.	.	.
12.917	3021.0354	5198.90	.	V	.Q	.	.	.
13.000	3057.5669	5304.36	.	V	.Q	.	.	.
13.083	3094.9141	5422.80	.	V	.Q	.	.	.
13.167	3133.1133	5546.52	.	V	.Q	.	.	.
13.250	3172.1514	5668.34	.	V	.Q	.	.	.
13.333	3212.0908	5799.22	.	V	.Q	.	.	.
13.417	3253.0713	5950.35	.	V	.Q	.	.	.
13.500	3294.9441	6079.92	.	V	.Q	.	.	.
13.583	3337.7400	6213.96	.	V	.Q	.	.	.

13.667	3381.6077	6369.60	.	V	Q	.	.	.
13.750	3426.5439	6524.74	.	.V	Q	.	.	.
13.833	3472.4329	6663.08	.	.V	Q	.	.	.
13.917	3519.3799	6816.70	.	.V	Q	.	.	.
14.000	3567.4570	6980.80	.	.V	Q	.	.	.
14.083	3616.8882	7177.41	.	.V	Q	.	.	.
14.167	3667.5623	7357.87	.	.V	Q.	.	.	.
14.250	3719.5317	7545.96	.	.V	Q.	.	.	.
14.333	3773.0059	7764.43	.	.V	Q	.	.	.
14.417	3827.9526	7978.26	.	.V	Q	.	.	.
14.500	3884.5261	8214.46	.	.V	.Q	.	.	.
14.583	3942.5972	8431.92	.	.V	.Q	.	.	.
14.667	4002.0076	8626.37	.	.V	.Q	.	.	.
14.750	4062.7568	8820.78	.	.V	.Q	.	.	.
14.833	4125.1206	9055.24	.	.V	.Q	.	.	.
14.917	4189.2969	9318.40	.	.V	.Q	.	.	.
15.000	4255.1235	9558.07	.	.V	.Q	.	.	.
15.083	4322.5835	9795.18	.	.V	.Q	.	.	.
15.167	4391.7666	10045.36	.	.V	.Q	.	.	.
15.250	4462.5029	10270.88	.	.V	.Q	.	.	.
15.333	4534.8599	10506.24	.	.V	.Q	.	.	.
15.417	4608.8145	10738.21	.	.V	.Q	.	.	.
15.500	4683.9590	10910.95	.	.V	.Q	.	.	.
15.583	4760.3091	11086.01	.	.V	.Q.	.	.	.
15.667	4838.0342	11285.70	.	.V	.Q.	.	.	.
15.750	4917.0830	11477.92	.	.V	.Q	.	.	.
15.833	4997.2207	11636.02	.	.V	.Q	.	.	.
15.917	5078.5034	11802.23	.	.V	.Q	.	.	.
16.000	5161.0620	11987.50	.	.V	.Q	.	.	.
16.083	5245.7593	12298.06	.	.V	.Q	.	.	.
16.167	5332.0840	12534.35	.	.V	.Q	.	.	.
16.250	5419.1279	12638.78	.	.V	.Q	.	.	.
16.333	5507.0083	12760.25	.	.V	.Q	.	.	.
16.417	5595.6523	12871.10	.	.V	.Q	.	.	.
16.500	5685.4727	13041.92	.	.V	.Q	.	.	.
16.583	5776.5571	13225.45	.	.V	.Q	.	.	.
16.667	5868.1606	13300.81	.	.V	.Q	.	.	.
16.750	5960.2998	13378.57	.	.V	.Q	.	.	.
16.833	6054.7134	13708.85	.	.V	.Q	.	.	.
16.917	6150.7051	13937.97	.	.V	.Q	.	.	.
17.000	6248.2134	14158.23	.	.V	.Q	.	.	.
17.083	6346.9170	14331.73	.	.V	.Q	.	.	.
17.167	6446.5410	14465.43	.	.V	.Q	.	.	.
17.250	6546.2852	14482.87	.	.V	.Q	.	.	.
17.333	6646.9946	14623.03	.	.V	.Q	.	.	.
17.417	6749.2119	14841.92	.	.V	.Q.	.	.	.
17.500	6849.7207	14593.88	.	.V	.Q	.	.	.
17.583	6950.7783	14673.56	.	.V	.Q	.	.	.
17.667	7053.3813	14897.99	.	.V	.Q	.	.	.
17.750	7155.7051	14857.43	.	.V	.Q.	.	.	.
17.833	7256.1997	14591.79	.	.V	.Q	.	.	.
17.917	7357.9136	14768.88	.	.V	.Q	.	.	.
18.000	7460.5249	14899.20	.	.V	.Q.	.	.	.
18.083	7564.6748	15122.54	.	.V	.Q	.	.	.
18.167	7665.7720	14679.28	.	.V	.Q	.	.	.
18.250	7766.9512	14691.20	.	.V	.Q	.	.	.
18.333	7870.4531	15028.48	.	.V	.Q	.	.	.
18.417	7973.3501	14940.62	.	.V	.Q.	.	.	.

18.500	8077.0347	15055.02	.	.	.	V	.	Q.
18.583	8177.5718	14597.96	.	.	.	V	.	Q.
18.667	8275.7295	14252.57	.	.	.	V	.	Q.
18.750	8373.7363	14230.52	.	.	.	V	.	Q.
18.833	8473.8877	14541.96	.	.	.	V	.	Q.
18.917	8575.3506	14732.38	.	.	.	V	.	Q.
19.000	8672.7314	14139.66	.	.	.	V	.	Q.
19.083	8767.7139	13791.44	.	.	.	V	.	Q.
19.167	8862.7227	13795.23	.	.	.	V	.	Q.
19.250	8955.4414	13462.72	.	.	.	V	.	Q.
19.333	9047.1963	13322.84	.	.	.	V	.	Q.
19.417	9136.5693	12976.99	.	.	.	V	.	Q.
19.500	9222.9580	12543.58	.	.	.	V	.	Q.
19.583	9308.0654	12357.55	.	.	.	V	.	Q.
19.667	9392.1973	12215.92	.	.	.	V	.	Q.
19.750	9475.0996	12037.37	.	.	.	V	.	Q.
19.833	9556.0156	11749.00	.	.	.	Q	.	.
19.917	9634.6562	11418.65	.	.	.	Q	.	.
20.000	9711.1475	11106.53	.	.	.	Q.V	.	.
20.083	9785.1719	10748.37	.	.	.	Q.V	.	.
20.167	9857.1064	10444.96	.	.	.	Q.V	.	.
20.250	9926.8301	10123.80	.	.	.	Q.V	.	.
20.333	9994.7100	9856.15	.	.	.	Q.V	.	.
20.417	10060.5566	9560.99	.	.	.	Q.V	.	.
20.500	10124.5000	9284.59	.	.	.	Q.V	.	.
20.583	10186.7139	9033.49	.	.	.	Q.V	.	.
20.667	10247.2168	8784.97	.	.	.	Q.V	.	.
20.750	10306.1221	8552.99	.	.	.	Q.V	.	.
20.833	10363.2266	8291.58	.	.	.	Q.V	.	.
20.917	10417.8643	7933.46	.	.	.	Q.V	.	.
21.000	10470.7812	7683.52	.	.	.	Q.V	.	.
21.083	10522.3125	7482.33	.	.	.	Q.V	.	.
21.167	10572.3916	7271.46	.	.	.	Q.V	.	.
21.250	10621.0312	7062.41	.	.	.	Q.V	.	.
21.333	10667.9316	6809.94	.	.	.	Q.V	.	.
21.417	10713.6367	6636.31	.	.	.	Q.V	.	.
21.500	10758.3271	6489.08	.	.	.	Q.V	.	.
21.583	10802.0342	6346.21	.	.	.	Q.V	.	.
21.667	10844.7158	6197.39	.	.	.	Q.V	.	.
21.750	10886.3428	6044.24	.	.	.	Q.V	.	.
21.833	10926.9004	5889.01	.	.	.	Q.V	.	.
21.917	10966.0293	5681.51	.	.	.	Q.V	.	.
22.000	11003.9268	5502.67	.	.	.	Q.V	.	.
22.083	11041.0322	5387.77	.	.	.	Q.V	.	.
22.167	11077.3906	5279.30	.	.	.	Q.V	.	.
22.250	11113.0342	5175.44	.	.	.	Q.V	.	.
22.333	11147.9736	5073.23	.	.	.	Q.V	.	.
22.417	11182.2393	4975.41	.	.	.	Q.V	.	.
22.500	11215.8457	4879.61	.	.	.	Q.V	.	.
22.583	11248.7773	4781.73	.	.	.	Q.V	.	.
22.667	11281.0576	4687.06	.	.	.	Q.V	.	.
22.750	11312.6934	4593.55	.	.	.	Q.V	.	.
22.833	11343.6953	4501.42	.	.	.	Q.V	.	.
22.917	11374.1602	4423.51	.	.	.	Q.V	.	.
23.000	11404.1387	4352.89	.	.	.	Q.V	.	.
23.083	11433.6455	4284.44	.	.	.	Q.V	.	.
23.167	11462.6865	4216.70	.	.	.	Q.V	.	.
23.250	11491.2842	4152.35	.	.	.	Q.V	.	.

23.333	11519.4854	4094.76	.	.	.	Q	.	V.
23.417	11547.3018	4038.95	.	.	.	Q	.	V.
23.500	11574.7422	3984.29	.	.	.	Q	.	V.
23.583	11601.8145	3930.82	.	.	.	Q	.	V.
23.667	11628.5254	3878.46	.	.	.	Q	.	V.
23.750	11654.8828	3827.16	.	.	.	Q	.	V.
23.833	11680.8945	3776.89	.	.	.	Q	.	V.
23.917	11706.6250	3736.02	.	.	.	Q	.	V.
24.000	11732.1143	3701.02	.	.	.	Q	.	V.
24.083	11757.3291	3661.19	.	.	.	Q	.	V.
24.167	11782.2373	3616.66	.	.	.	Q	.	V.
24.250	11806.8506	3573.82	.	.	.	Q	.	V.
24.333	11831.1729	3531.60	.	.	.	Q	.	V.
24.417	11855.1963	3488.22	.	.	.	Q	.	V.
24.500	11878.8955	3441.10	.	.	.	Q	.	V.
24.583	11902.0635	3363.95	.	.	.	Q	.	V.
24.667	11924.8535	3309.16	.	.	.	Q	.	V.
24.750	11947.3262	3263.08	.	.	.	Q	.	V.
24.833	11969.4238	3208.56	.	.	.	Q	.	V.
24.917	11991.1055	3148.12	.	.	.	Q	.	V.
25.000	12012.3203	3080.33	.	.	.	Q	.	V.
25.083	12033.0215	3005.87	.	.	.	Q	.	V.
25.167	12053.1953	2929.25	.	.	.	Q	.	V.
25.250	12072.8564	2854.78	.	.	.	Q	.	V.
25.333	12091.9746	2775.93	.	.	.	Q	.	V.
25.417	12110.4746	2686.25	.	.	.	Q	.	V.
25.500	12128.4512	2610.23	.	.	.	Q	.	V.
25.583	12145.9102	2535.10	.	.	.	Q	.	V.
25.667	12162.7783	2449.21	.	.	.	Q	.	V.
25.750	12179.0654	2364.94	.	.	.	Q	.	V.
25.833	12194.8486	2291.77	.	.	.	Q	.	V.
25.917	12210.0752	2210.91	.	.	.	Q	.	V.
26.000	12224.7109	2125.13	.	.	.	Q	.	V.
26.083	12238.6729	2027.20	.	.	.	Q	.	V.
26.167	12252.0723	1945.55	.	.	.	Q	.	V.
26.250	12264.8838	1860.26	.	.	.	Q	.	V.
26.333	12276.9912	1757.97	.	.	.	Q	.	V.
26.417	12288.4189	1659.28	.	.	.	Q	.	V.
26.500	12299.0947	1550.12	.	.	.	Q	.	V.
26.583	12309.1426	1458.99	.	.	.	Q	.	V.
26.667	12318.6660	1382.78	.	.	.	Q	.	V.
26.750	12327.6758	1308.21	.	.	.	Q	.	V.
26.833	12336.0859	1221.21	.	.	.	Q	.	V.
26.917	12343.8115	1121.81	.	.	.	Q	.	V.
27.000	12350.9990	1043.65	.	.	.	Q	.	V.
27.083	12357.7100	974.46	.	.	.	Q	.	V.
27.167	12363.9062	899.73	.	.	.	Q	.	V.
27.250	12369.6709	836.99	.	.	.	Q	.	V.
27.333	12374.9922	772.67	.	.	.	Q	.	V.
27.417	12379.9111	714.17	.	.	.	Q	.	V.
27.500	12384.5088	667.57	.	.	.	Q	.	V.
27.583	12388.7930	622.13	.	.	.	Q	.	V.
27.667	12392.7588	575.83	.	.	.	Q	.	V.
27.750	12396.4082	529.89	.	.	.	Q	.	V.
27.833	12399.7666	487.60	.	.	.	Q	.	V.
27.917	12402.8545	448.42	.	.	.	Q	.	V.
28.000	12405.6943	412.28	.	.	.	Q	.	V.
28.083	12408.3184	380.99	.	.	.	Q	.	V.

28.167	12410.7451	352.36	Q	.	.	.	V.
28.250	12413.0059	328.23	Q	.	.	.	V.
28.333	12415.1025	304.47	Q	.	.	.	V.
28.417	12417.0479	282.48	Q	.	.	.	V.
28.500	12418.8467	261.22	Q	.	.	.	V.
28.583	12420.5020	240.31	Q	.	.	.	V.
28.667	12422.0234	220.92	Q	.	.	.	V.
28.750	12423.4141	201.93	Q	.	.	.	V.
28.833	12424.6768	183.41	Q	.	.	.	V.
28.917	12425.8418	169.23	Q	.	.	.	V.
29.000	12426.9189	156.42	Q	.	.	.	V.
29.083	12427.9082	143.69	Q	.	.	.	V.
29.167	12428.8105	131.05	Q	.	.	.	V.
29.250	12429.6328	119.46	Q	.	.	.	V.
29.333	12430.3984	111.16	Q	.	.	.	V.
29.417	12431.1094	103.20	Q	.	.	.	V.
29.500	12431.7656	95.30	Q	.	.	.	V.
29.583	12432.3682	87.44	Q	.	.	.	V.
29.667	12432.9170	79.65	Q	.	.	.	V.
29.750	12433.4121	71.91	Q	.	.	.	V.
29.833	12433.8545	64.23	Q	.	.	.	V.
29.917	12434.2656	59.65	Q	.	.	.	V.
30.000	12434.6621	57.53	Q	.	.	.	V.
30.083	12435.0439	55.41	Q	.	.	.	V.
30.167	12435.4111	53.30	Q	.	.	.	V.
30.250	12435.7637	51.22	Q	.	.	.	V.
30.333	12436.1025	49.15	Q	.	.	.	V.
30.417	12436.4268	47.10	Q	.	.	.	V.
30.500	12436.7373	45.05	Q	.	.	.	V.
30.583	12437.0332	43.03	Q	.	.	.	V.
30.667	12437.3154	41.03	Q	.	.	.	V.
30.750	12437.5840	39.04	Q	.	.	.	V.
30.833	12437.8389	37.07	Q	.	.	.	V.
30.917	12438.0811	35.10	Q	.	.	.	V.
31.000	12438.3096	33.16	Q	.	.	.	V.
31.083	12438.5244	31.22	Q	.	.	.	V.
31.167	12438.7266	29.31	Q	.	.	.	V.
31.250	12438.9150	27.41	Q	.	.	.	V.
31.333	12439.0908	25.53	Q	.	.	.	V.
31.417	12439.2539	23.66	Q	.	.	.	V.
31.500	12439.4043	21.80	Q	.	.	.	V.
31.583	12439.5420	19.95	Q	.	.	.	V.
31.667	12439.6670	18.12	Q	.	.	.	V.
31.750	12439.7793	16.29	Q	.	.	.	V.
31.833	12439.8789	14.48	Q	.	.	.	V.
31.917	12439.9658	12.69	Q	.	.	.	V.
32.000	12440.0410	10.90	Q	.	.	.	V.
32.083	12440.1035	9.12	Q	.	.	.	V.
32.167	12440.1543	7.36	Q	.	.	.	V.
32.250	12440.1924	5.60	Q	.	.	.	V.
32.333	12440.2188	3.86	Q	.	.	.	V.
32.417	12440.2334	2.12	Q	.	.	.	V.
32.500	12440.2363	0.40	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%	1950.0
10%	1435.0
20%	1155.0
30%	645.0
40%	495.0
50%	405.0
60%	340.0
70%	285.0
80%	220.0
90%	145.0

END OF FLOODSCx ROUTING ANALYSIS

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

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133T *
* 25-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV2533TS.DAT
TIME/DATE OF STUDY: 14:36 01/02/2019

FLOW PROCESS FROM NODE 13010.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 6640.500 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 = 0.986

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

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

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.395	317.099
2	1.185	634.198
3	2.019	670.342
4	3.163	918.154
5	4.690	1226.527
6	7.181	2000.355
7	10.570	2721.542
8	14.287	2985.502
9	18.393	3297.748
10	22.722	3476.194
11	27.082	3501.484
12	32.026	3970.735
13	37.267	4208.595
14	43.209	4771.849
15	49.794	5288.409
16	55.095	4257.091
17	60.875	4641.836
18	66.431	4461.967
19	71.204	3833.527
20	75.442	3402.973
21	78.735	2645.056
22	81.874	2520.346
23	84.745	2305.893
24	87.116	1904.111
25	88.951	1473.894
26	90.515	1255.464
27	91.955	1156.886
28	93.290	1072.051
29	94.404	894.372
30	95.282	705.053
31	96.081	642.177
32	96.640	448.886
33	97.182	435.150
34	97.724	435.382
35	98.063	272.507
36	98.193	104.197
37	98.323	104.074
38	98.452	103.737
39	98.582	104.080
40	98.711	104.191
41	98.841	103.854
42	98.970	104.191
43	99.100	103.964
44	99.229	103.964
45	99.359	103.964
46	99.488	103.964
47	99.618	103.964
48	99.747	103.964

49	99.877	103.964
50	100.000	99.117

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 965.1652
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 1043.2218

=====
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.	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	3.67	Q	.	.	.	.
0.333	0.0846	5.75	Q	.	.	.	.
0.417	0.1433	8.53	Q	.	.	.	.
0.500	0.2334	13.07	Q	.	.	.	.
0.583	0.3659	19.25	Q	.	.	.	.
0.667	0.5453	26.05	Q	.	.	.	.
0.750	0.7765	33.57	Q	.	.	.	.
0.833	1.0624	41.52	Q	.	.	.	.
0.917	1.4037	49.55	Q	.	.	.	.
1.000	1.8077	58.67	Q	.	.	.	.
1.083	2.2784	68.35	Q	.	.	.	.
1.167	2.8249	79.34	VQ	.	.	.	.
1.250	3.4552	91.53	VQ	.	.	.	.
1.333	4.1537	101.43	VQ	.	.	.	.
1.417	4.9267	112.24	VQ	.	.	.	.
1.500	5.7716	122.67	VQ	.	.	.	.
1.583	6.6788	131.73	VQ	.	.	.	.
1.667	7.6419	139.85	VQ	.	.	.	.
1.750	8.6494	146.28	V Q	.	.	.	.
1.833	9.6994	152.46	V Q	.	.	.	.
1.917	10.7888	158.18	V Q	.	.	.	.
2.000	11.9115	163.02	V Q	.	.	.	.
2.083	13.0610	166.90	V Q	.	.	.	.
2.167	14.2339	170.31	V Q	.	.	.	.
2.250	15.4289	173.51	V Q	.	.	.	.
2.333	16.6447	176.53	V Q	.	.	.	.
2.417	17.8786	179.17	V Q	.	.	.	.
2.500	19.1278	181.39	V Q	.	.	.	.
2.583	20.3914	183.48	V Q	.	.	.	.
2.667	21.6665	185.14	V Q	.	.	.	.
2.750	22.9529	186.78	V Q	.	.	.	.
2.833	24.2507	188.44	V Q	.	.	.	.
2.917	25.5574	189.73	V Q	.	.	.	.
3.000	26.8705	190.66	.VQ	.	.	.	.
3.083	28.1899	191.59	.VQ	.	.	.	.
3.167	29.5159	192.53	.VQ	.	.	.	.
3.250	30.8483	193.47	.VQ	.	.	.	.
3.333	32.1874	194.43	.VQ	.	.	.	.
3.417	33.5330	195.39	.VQ	.	.	.	.
3.500	34.8853	196.36	.VQ	.	.	.	.
3.583	36.2444	197.34	.VQ	.	.	.	.
3.667	37.6102	198.32	.VQ	.	.	.	.
3.750	38.9829	199.32	.VQ	.	.	.	.
3.833	40.3625	200.32	.VQ	.	.	.	.
3.917	41.7491	201.33	.VQ	.	.	.	.

4.000	43.1427	202.35	.VQ	.	.	.	.
4.083	44.5433	203.38	.VQ	.	.	.	.
4.167	45.9510	204.40	.VQ	.	.	.	.
4.250	47.3644	205.21	.VQ	.	.	.	.
4.333	48.7833	206.03	.VQ	.	.	.	.
4.417	50.2080	206.86	.VQ	.	.	.	.
4.500	51.6384	207.70	.VQ	.	.	.	.
4.583	53.0747	208.55	. Q	.	.	.	.
4.667	54.5169	209.40	. Q	.	.	.	.
4.750	55.9650	210.27	. Q	.	.	.	.
4.833	57.4192	211.14	. Q	.	.	.	.
4.917	58.8794	212.03	. Q	.	.	.	.
5.000	60.3458	212.92	. Q	.	.	.	.
5.083	61.8184	213.82	. Q	.	.	.	.
5.167	63.2973	214.74	. Q	.	.	.	.
5.250	64.7826	215.66	. Q	.	.	.	.
5.333	66.2743	216.60	. Q	.	.	.	.
5.417	67.7725	217.54	. VQ	.	.	.	.
5.500	69.2773	218.50	. VQ	.	.	.	.
5.583	70.7888	219.46	. VQ	.	.	.	.
5.667	72.3070	220.44	. VQ	.	.	.	.
5.750	73.8320	221.43	. VQ	.	.	.	.
5.833	75.3639	222.43	. VQ	.	.	.	.
5.917	76.9028	223.45	. VQ	.	.	.	.
6.000	78.4487	224.47	. Q	.	.	.	.
6.083	80.0018	225.51	. Q	.	.	.	.
6.167	81.5622	226.56	. Q	.	.	.	.
6.250	83.1298	227.62	. Q	.	.	.	.
6.333	84.7049	228.70	. Q	.	.	.	.
6.417	86.2874	229.79	. Q	.	.	.	.
6.500	87.8776	230.89	. Q	.	.	.	.
6.583	89.4754	232.01	. Q	.	.	.	.
6.667	91.0811	233.14	. Q	.	.	.	.
6.750	92.6946	234.29	. Q	.	.	.	.
6.833	94.3162	235.45	. Q	.	.	.	.
6.917	95.9458	236.62	. Q	.	.	.	.
7.000	97.5837	237.81	. Q	.	.	.	.
7.083	99.2298	239.02	. Q	.	.	.	.
7.167	100.8844	240.25	. Q	.	.	.	.
7.250	102.5475	241.49	. Q	.	.	.	.
7.333	104.2193	242.74	. Q	.	.	.	.
7.417	105.8999	244.02	. QV	.	.	.	.
7.500	107.5894	245.31	. QV	.	.	.	.
7.583	109.2879	246.62	. QV	.	.	.	.
7.667	110.9955	247.95	. QV	.	.	.	.
7.750	112.7124	249.30	. QV	.	.	.	.
7.833	114.4387	250.66	. QV	.	.	.	.
7.917	116.1746	252.05	. QV	.	.	.	.
8.000	117.9202	253.46	. QV	.	.	.	.
8.083	119.6756	254.88	. QV	.	.	.	.
8.167	121.4409	256.33	. QV	.	.	.	.
8.250	123.2164	257.80	. QV	.	.	.	.
8.333	125.0022	259.29	. QV	.	.	.	.
8.417	126.7984	260.81	. QV	.	.	.	.
8.500	128.6052	262.35	. QV	.	.	.	.
8.583	130.4228	263.91	. Q V	.	.	.	.
8.667	132.2513	265.50	. Q V	.	.	.	.
8.750	134.0909	267.11	. Q V	.	.	.	.

8.833	135.9418	268.75	. Q V	.	.	.	.
8.917	137.8042	270.42	. Q V	.	.	.	.
9.000	139.6782	272.11	. Q V	.	.	.	.
9.083	141.5641	273.83	. Q V	.	.	.	.
9.167	143.4620	275.58	. Q V	.	.	.	.
9.250	145.3722	277.36	. Q V	.	.	.	.
9.333	147.2949	279.17	. Q V	.	.	.	.
9.417	149.2302	281.01	. Q V	.	.	.	.
9.500	151.1784	282.88	. Q V	.	.	.	.
9.583	153.1397	284.79	. Q V	.	.	.	.
9.667	155.1144	286.73	. Q V	.	.	.	.
9.750	157.1028	288.70	. Q V	.	.	.	.
9.833	159.1049	290.71	. Q V	.	.	.	.
9.917	161.1212	292.76	. Q V	.	.	.	.
10.000	163.1518	294.85	. Q V	.	.	.	.
10.083	165.1971	296.98	. Q V	.	.	.	.
10.167	167.2573	299.14	. Q V	.	.	.	.
10.250	169.3327	301.35	. Q V	.	.	.	.
10.333	171.4236	303.60	. Q V	.	.	.	.
10.417	173.5304	305.90	. Q V	.	.	.	.
10.500	175.6532	308.24	. Q V	.	.	.	.
10.583	177.7926	310.63	. Q V	.	.	.	.
10.667	179.9487	313.07	. Q V	.	.	.	.
10.750	182.1221	315.57	. Q V	.	.	.	.
10.833	184.3129	318.11	. Q V	.	.	.	.
10.917	186.5216	320.71	. Q V	.	.	.	.
11.000	188.7486	323.36	. Q V	.	.	.	.
11.083	190.9944	326.08	. Q V	.	.	.	.
11.167	193.2592	328.85	. Q V	.	.	.	.
11.250	195.5435	331.69	. Q V	.	.	.	.
11.333	197.8479	334.59	. Q V	.	.	.	.
11.417	200.1727	337.56	. Q V	.	.	.	.
11.500	202.5184	340.60	. Q V	.	.	.	.
11.583	204.8856	343.72	. Q V	.	.	.	.
11.667	207.2747	346.90	. Q V	.	.	.	.
11.750	209.6864	350.18	. Q V	.	.	.	.
11.833	212.1212	353.53	. Q V	.	.	.	.
11.917	214.5796	356.97	. Q V	.	.	.	.
12.000	217.0623	360.49	. Q V	.	.	.	.
12.083	219.5737	364.66	. Q V	.	.	.	.
12.167	222.1181	369.45	. Q V	.	.	.	.
12.250	224.6968	374.43	. Q V	.	.	.	.
12.333	227.3134	379.92	. Q V	.	.	.	.
12.417	229.9723	386.07	. Q V	.	.	.	.
12.500	232.6833	393.65	. Q V	.	.	.	.
12.583	235.4561	402.60	. Q V	.	.	.	.
12.667	238.2944	412.13	. Q V	.	.	.	.
12.750	241.2032	422.35	. Q V	.	.	.	.
12.833	244.1855	433.03	. Q V	.	.	.	.
12.917	247.2428	443.92	. Q V	.	.	.	.
13.000	250.3817	455.77	. Q V	.	.	.	.
13.083	253.6063	468.22	. Q V	.	.	.	.
13.167	256.9246	481.81	. Q V	.	.	.	.
13.250	260.3440	496.50	. Q V	.	.	.	.
13.333	263.8539	509.63	. Q V	.	.	.	.
13.417	267.4603	523.65	. Q V	.	.	.	.
13.500	271.1627	537.59	. Q V	.	.	.	.
13.583	274.9555	550.72	. Q V	.	.	.	.

13.667	278.8354	563.36	.	Q	V	.	.	.
13.750	282.7955	574.99	.	Q	V	.	.	.
13.833	286.8360	586.69	.	Q	V	.	.	.
13.917	290.9568	598.33	.	Q	.V	.	.	.
14.000	295.1552	609.60	.	Q	.V	.	.	.
14.083	299.4374	621.78	.	Q	.V	.	.	.
14.167	303.8121	635.22	.	Q	.V	.	.	.
14.250	308.2819	649.01	.	Q	.V	.	.	.
14.333	312.8552	664.05	.	Q	.V	.	.	.
14.417	317.5416	680.46	.	Q	.V	.	.	.
14.500	322.3633	700.11	.	Q	.V	.	.	.
14.583	327.3429	723.04	.	Q	.V	.	.	.
14.667	332.4886	747.16	.	Q	V	.	.	.
14.750	337.8124	773.02	.	Q	V	.	.	.
14.833	343.3227	800.10	.	.Q	V	.	.	.
14.917	349.0224	827.59	.	.Q	V	.	.	.
15.000	354.9265	857.29	.	.Q	V	.	.	.
15.083	361.0467	888.64	.	.	QV	.	.	.
15.167	367.4033	922.98	.	.	Q V	.	.	.
15.250	374.0177	960.42	.	.	QV	.	.	.
15.333	380.8694	994.86	.	.	QV	.	.	.
15.417	387.9570	1029.12	.	.	Q	.	.	.
15.500	395.2646	1061.06	.	.	QV	.	.	.
15.583	402.7849	1091.95	.	.	Q	.	.	.
15.667	410.5068	1121.22	.	.	Q	.	.	.
15.750	418.4153	1148.32	.	.	QV	.	.	.
15.833	426.4922	1172.76	.	.	Q	.	.	.
15.917	434.7522	1199.35	.	.	Q	.	.	.
16.000	443.2818	1238.49	.	.	VQ	.	.	.
16.083	452.5029	1338.91	.	.	VQ	.	.	.
16.167	462.4055	1437.85	.	.	V Q.	.	.	.
16.250	472.6852	1492.62	.	.	V Q	.	.	.
16.333	483.6879	1597.59	.	.	V . Q	.	.	.
16.417	495.6459	1736.30	.	.	V . Q	.	.	.
16.500	509.1270	1957.45	.	.	V .	Q	.	.
16.583	523.8973	2144.65	.	.	V	Q.	.	.
16.667	539.3248	2240.08	.	.	V	Q	.	.
16.750	555.3421	2325.71	.	.	.V	Q	.	.
16.833	571.7892	2388.13	.	.	.V	Q	.	.
16.917	588.5809	2438.15	.	.	.V	Q	.	.
17.000	606.2894	2571.27	.	.	.V	Q	Q	.
17.083	624.6775	2669.95	.	.	.V	Q	Q	.
17.167	643.9421	2797.22	.	.	.V	Q	Q	.
17.250	663.6984	2868.61	.	.	.V	Q	Q.	.
17.333	681.9907	2656.05	.	.	.V	Q	Q	.
17.417	700.4835	2685.14	.	.	.V	Q	Q	.
17.500	718.3416	2593.01	.	.	.V	Q	Q	.
17.583	734.8771	2400.95	.	.	.V	Q	Q	.
17.667	750.2271	2228.82	.	.	.V Q	Q	Q	.
17.750	764.1280	2018.41	.	.	Q V.	Q	Q	.
17.833	777.4194	1929.91	.	.	Q V.	Q	Q	.
17.917	789.9441	1818.59	.	.	Q V	Q	Q	.
18.000	801.4386	1669.00	.	.	Q V	Q	Q	.
18.083	811.8832	1516.56	.	.	Q .V	Q	Q	.
18.167	821.6132	1412.79	.	.	Q .V	Q	Q	.
18.250	830.8118	1335.64	.	.	Q .V	Q	Q	.
18.333	839.5103	1263.02	.	.	Q .V	Q	Q	.
18.417	847.5623	1169.15	.	.	Q .V	Q	Q	.

18.500	854.9663	1075.07	.	.	Q	.	.	V	.
18.583	861.9095	1008.16	.	.	Q	.	.	V	.
18.667	868.2804	925.04	.	.	Q	.	.	V	.
18.750	874.3320	878.70	.	.	Q	.	.	V	.
18.833	880.0594	831.61	.	.	Q	.	.	V	.
18.917	885.2657	755.95	.	.	Q	.	.	V	.
19.000	889.9862	685.42	.	.	Q.	.	.	V	.
19.083	894.4897	653.91	.	.	Q.	.	.	V	.
19.167	898.8041	626.45	.	.	Q	.	.	V	.
19.250	902.9276	598.74	.	.	Q	.	.	V	.
19.333	906.8733	572.92	.	.	Q	.	.	V	.
19.417	910.6491	548.25	.	.	Q	.	.	V	.
19.500	914.2694	525.66	.	.	Q	.	.	V	.
19.583	917.7538	505.94	.	.	Q	.	.	V	.
19.667	921.1176	488.41	.	.	Q	.	.	V	.
19.750	924.3730	472.69	.	.	Q	.	.	V	.
19.833	927.5247	457.62	.	.	Q	.	.	V	.
19.917	930.5797	443.60	.	.	Q	.	.	V	.
20.000	933.5469	430.83	.	.	Q	.	.	V	.
20.083	936.4209	417.30	.	.	Q	.	.	V	.
20.167	939.1859	401.47	.	.	Q	.	.	V	.
20.250	941.7377	370.52	.	.	Q	.	.	V	.
20.333	944.2176	360.09	.	.	Q	.	.	V	.
20.417	946.6403	351.77	.	.	Q	.	.	V	.
20.500	949.0117	344.33	.	.	Q	.	.	V	.
20.583	951.3290	336.47	.	.	Q	.	.	V	.
20.667	953.5978	329.43	.	.	Q	.	.	V	.
20.750	955.8204	322.72	.	.	Q	.	.	V	.
20.833	957.9987	316.29	.	.	Q	.	.	V	.
20.917	960.1364	310.39	.	.	Q	.	.	V	.
21.000	962.2369	304.99	.	.	Q	.	.	V	.
21.083	964.3016	299.80	.	.	Q	.	.	V	.
21.167	966.3321	294.82	.	.	Q	.	.	V	.
21.250	968.3322	290.42	.	.	Q	.	.	V	.
21.333	970.3032	286.18	.	.	Q	.	.	V	.
21.417	972.2460	282.10	.	.	Q	.	.	V	.
21.500	974.1618	278.17	.	.	Q	.	.	V	.
21.583	976.0514	274.37	.	.	Q	.	.	V	.
21.667	977.9157	270.70	.	.	Q	.	.	V	.
21.750	979.7556	267.15	.	.	Q	.	.	V	.
21.833	981.5719	263.72	.	.	Q	.	.	V	.
21.917	983.3652	260.39	.	.	Q	.	.	V	.
22.000	985.1364	257.17	.	.	Q	.	.	V	.
22.083	986.8859	254.04	.	.	Q	.	.	V	.
22.167	988.6146	251.01	.	.	Q	.	.	V	.
22.250	990.3242	248.23	.	.	Q	.	.	V	.
22.333	992.0153	245.54	.	.	Q	.	.	V	.
22.417	993.6883	242.92	.	.	Q	.	.	V	.
22.500	995.3438	240.38	.	.	Q	.	.	V	.
22.583	996.9823	237.91	.	.	Q	.	.	V	.
22.667	998.6042	235.50	.	.	Q	.	.	V	.
22.750	1000.2100	233.16	.	.	Q	.	.	V	.
22.833	1001.8001	230.88	.	.	Q	.	.	V	.
22.917	1003.3749	228.66	.	.	Q	.	.	V	.
23.000	1004.9348	226.49	.	.	Q	.	.	V	.
23.083	1006.4801	224.38	.	.	Q	.	.	V	.
23.167	1008.0112	222.32	.	.	Q	.	.	V	.
23.250	1009.5285	220.31	.	.	Q	.	.	V	.

23.333	1011.0323	218.35	. Q	.	.	.	V .
23.417	1012.5229	216.43	. Q	.	.	.	V .
23.500	1014.0005	214.56	. Q	.	.	.	V .
23.583	1015.4656	212.73	. Q	.	.	.	V .
23.667	1016.9184	210.94	. Q	.	.	.	V .
23.750	1018.3591	209.19	. Q	.	.	.	V .
23.833	1019.7880	207.48	. Q	.	.	.	V .
23.917	1021.2053	205.80	. Q	.	.	.	V .
24.000	1022.6114	204.16	. Q	.	.	.	V .
24.083	1024.0015	201.84	. Q	.	.	.	V .
24.167	1025.3708	198.84	. Q	.	.	.	V .
24.250	1026.7194	195.81	. Q	.	.	.	V .
24.333	1028.0435	192.25	. Q	.	.	.	V .
24.417	1029.3385	188.05	. Q	.	.	.	V .
24.500	1030.5929	182.14	. Q	.	.	.	V .
24.583	1031.7959	174.68	. Q	.	.	.	V .
24.667	1032.9438	166.68	. Q	.	.	.	V .
24.750	1034.0323	158.04	. Q	.	.	.	V .
24.833	1035.0591	149.08	. Q	.	.	.	V .
24.917	1036.0242	140.13	.Q	.	.	.	V .
25.000	1036.9208	130.19	.Q	.	.	.	V .
25.083	1037.7458	119.80	.Q	.	.	.	V .
25.167	1038.4911	108.21	.Q	.	.	.	V .
25.250	1039.1492	95.55	.Q	.	.	.	V .
25.333	1039.7366	85.29	.Q	.	.	.	V .
25.417	1040.2479	74.25	.Q	.	.	.	V .
25.500	1040.6865	63.69	Q	.	.	.	V .
25.583	1041.0626	54.62	Q	.	.	.	V .
25.667	1041.3834	46.57	Q	.	.	.	V .
25.750	1041.6609	40.30	Q	.	.	.	V .
25.833	1041.8975	34.34	Q	.	.	.	V .
25.917	1042.0966	28.91	Q	.	.	.	V .
26.000	1042.2648	24.43	Q	.	.	.	V .
26.083	1042.4089	20.94	Q	.	.	.	V .
26.167	1042.5327	17.97	Q	.	.	.	V .
26.250	1042.6377	15.24	Q	.	.	.	V .
26.333	1042.7253	12.72	Q	.	.	.	V .
26.417	1042.7985	10.62	Q	.	.	.	V .
26.500	1042.8601	8.96	Q	.	.	.	V .
26.583	1042.9114	7.45	Q	.	.	.	V .
26.667	1042.9553	6.38	Q	.	.	.	V .
26.750	1042.9922	5.36	Q	.	.	.	V .
26.833	1043.0221	4.34	Q	.	.	.	V .
26.917	1043.0476	3.70	Q	.	.	.	V .
27.000	1043.0713	3.44	Q	.	.	.	V .
27.083	1043.0931	3.18	Q	.	.	.	V .
27.167	1043.1133	2.92	Q	.	.	.	V .
27.250	1043.1317	2.67	Q	.	.	.	V .
27.333	1043.1483	2.42	Q	.	.	.	V .
27.417	1043.1632	2.17	Q	.	.	.	V .
27.500	1043.1764	1.92	Q	.	.	.	V .
27.583	1043.1879	1.67	Q	.	.	.	V .
27.667	1043.1976	1.43	Q	.	.	.	V .
27.750	1043.2058	1.18	Q	.	.	.	V .
27.833	1043.2123	0.94	Q	.	.	.	V .
27.917	1043.2172	0.70	Q	.	.	.	V .
28.000	1043.2203	0.46	Q	.	.	.	V .
28.083	1043.2219	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

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

Analysis prepared by:

Michael Baker International
5 Hutton Centre Drive Suite 500
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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133C *
* 25-YR EV JANUARY 2019 CCHI *

FILE NAME: EV2533CS.DAT
TIME/DATE OF STUDY: 14:35 01/02/2019

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 = 60992.500 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) = 0.287
LOW LOSS FRACTION = 0.449
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.40
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.77
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.05
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.94
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.85
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.99

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.308
30-MINUTE FACTOR = 0.363
1-HOUR FACTOR = 0.408
3-HOUR FACTOR = 0.754
6-HOUR FACTOR = 0.891
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.360

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.192	1416.337
2	0.576	2832.673
3	0.960	2832.669
4	1.344	2832.677
5	1.728	2832.673
6	2.175	3296.188
7	2.755	4278.625
8	3.339	4310.587
9	3.957	4557.884
10	4.935	7212.017
11	6.054	8256.688
12	7.430	10147.807
13	9.068	12081.976
14	10.806	12822.409
15	12.487	12393.110
16	14.348	13727.794
17	16.627	16814.465
18	18.429	13288.457
19	20.308	13860.831
20	22.636	17171.088
21	24.934	16952.229
22	26.854	14163.895
23	29.082	16432.248
24	31.516	17958.707
25	34.424	21446.152
26	36.763	17255.434
27	39.261	18425.900
28	42.408	23210.197
29	45.451	22444.863
30	48.905	25476.904
31	51.808	21419.645
32	54.215	17753.059
33	56.584	17475.699
34	59.431	20996.221
35	62.756	24528.588
36	65.329	18974.711
37	67.593	16701.812
38	70.079	18341.205
39	72.145	15240.873
40	74.287	15794.466
41	76.231	14344.781
42	77.755	11237.979
43	79.248	11016.643
44	80.786	11338.207
45	82.322	11333.930
46	83.736	10430.297
47	85.048	9673.603
48	86.257	8923.267

49	87.299	7679.949
50	88.250	7021.795
51	89.045	5859.853
52	89.832	5805.265
53	90.560	5372.160
54	91.268	5218.919
55	91.968	5164.274
56	92.618	4792.287
57	93.258	4722.672
58	93.885	4628.296
59	94.358	3489.991
60	94.785	3146.985
61	95.212	3147.041
62	95.639	3149.124
63	96.030	2889.745
64	96.304	2017.233
65	96.567	1944.411
66	96.831	1942.217
67	97.095	1946.494
68	97.358	1942.217
69	97.622	1944.355
70	97.885	1942.217
71	98.036	1114.726
72	98.098	460.905
73	98.162	465.238
74	98.225	465.182
75	98.288	465.182
76	98.350	463.044
77	98.413	465.182
78	98.477	469.459
79	98.540	463.044
80	98.603	465.182
81	98.666	465.238
82	98.729	463.044
83	98.792	467.321
84	98.855	463.044
85	98.918	467.321
86	98.981	463.044
87	99.044	463.044
88	99.107	463.044
89	99.169	463.044
90	99.232	463.044
91	99.295	463.044
92	99.358	463.044
93	99.420	463.044
94	99.483	463.044
95	99.546	463.044
96	99.609	463.044
97	99.672	463.044
98	99.734	463.044
99	99.797	463.044
100	99.860	463.044
101	99.923	463.044
102	99.985	463.044
103	100.000	107.263

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 10510.8223
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 13251.2578

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.	4025.0	8050.0	12075.0	16100.0
0.083	0.0384	5.58	Q	.	.	.	.
0.167	0.1538	16.75	Q	.	.	.	.
0.250	0.3463	27.96	Q	.	.	.	.
0.333	0.6163	39.19	Q	.	.	.	.
0.417	0.9638	50.46	Q	.	.	.	.
0.500	1.4018	63.60	Q	.	.	.	.
0.583	1.9571	80.63	Q	.	.	.	.
0.667	2.6310	97.85	Q	.	.	.	.
0.750	3.4305	116.09	Q	.	.	.	.
0.833	4.4281	144.84	Q	.	.	.	.
0.917	5.6525	177.79	Q	.	.	.	.
1.000	7.1559	218.29	Q	.	.	.	.
1.083	8.9914	266.52	Q	.	.	.	.
1.167	11.1802	317.81	Q	.	.	.	.
1.250	13.7116	367.57	Q	.	.	.	.
1.333	16.6230	422.74	VQ	.	.	.	.
1.417	19.9992	490.22	VQ	.	.	.	.
1.500	23.7460	544.02	VQ	.	.	.	.
1.583	27.8800	600.26	VQ	.	.	.	.
1.667	32.4922	669.69	VQ	.	.	.	.
1.750	37.5782	738.48	VQ	.	.	.	.
1.833	43.0637	796.50	VQ	.	.	.	.
1.917	49.0116	863.64	V Q	.	.	.	.
2.000	55.4647	936.99	V Q	.	.	.	.
2.083	62.5193	1024.33	V Q	.	.	.	.
2.167	70.0634	1095.40	V Q	.	.	.	.
2.250	78.1305	1171.35	V Q	.	.	.	.
2.333	86.8518	1266.34	V Q	.	.	.	.
2.417	96.2089	1358.65	V Q	.	.	.	.
2.500	106.2858	1463.16	V Q	.	.	.	.
2.583	116.9748	1552.04	V Q	.	.	.	.
2.667	128.1784	1626.76	V Q	.	.	.	.
2.750	139.8909	1700.65	V Q	.	.	.	.
2.833	152.2093	1788.64	V Q	.	.	.	.
2.917	165.2316	1890.84	V Q	.	.	.	.
3.000	178.8093	1971.47	V Q	.	.	.	.
3.083	192.8827	2043.46	V Q	.	.	.	.
3.167	207.4979	2122.12	V Q	.	.	.	.
3.250	222.5727	2188.86	V Q	.	.	.	.
3.333	238.1237	2258.01	V Q	.	.	.	.
3.417	254.1134	2321.70	V Q	.	.	.	.
3.500	270.4590	2373.37	V Q	.	.	.	.
3.583	287.1558	2424.39	V Q	.	.	.	.
3.667	304.2140	2476.85	V Q	.	.	.	.
3.750	321.6349	2529.51	V Q	.	.	.	.
3.833	339.3953	2578.81	.V Q	.	.	.	.
3.917	357.4760	2625.33	.V Q	.	.	.	.

4.000	375.8580	2669.07	.V Q	.	.	.	.
4.083	394.5089	2708.11	.V Q	.	.	.	.
4.167	413.4119	2744.72	.V Q	.	.	.	.
4.250	432.5367	2776.92	.V Q	.	.	.	.
4.333	451.8829	2809.06	.V Q	.	.	.	.
4.417	471.4397	2839.66	.V Q	.	.	.	.
4.500	491.2041	2869.79	.V Q	.	.	.	.
4.583	511.1756	2899.87	.V Q	.	.	.	.
4.667	531.3452	2928.62	.V Q	.	.	.	.
4.750	551.7120	2957.27	.V Q	.	.	.	.
4.833	572.2745	2985.68	.V Q	.	.	.	.
4.917	593.0030	3009.77	.V Q	.	.	.	.
5.000	613.8890	3032.64	.V Q	.	.	.	.
5.083	634.9335	3055.67	.V Q	.	.	.	.
5.167	656.1376	3078.83	.V Q	.	.	.	.
5.250	677.4952	3101.12	.V Q	.	.	.	.
5.333	698.9836	3120.11	.V Q	.	.	.	.
5.417	720.6017	3138.96	.V Q	.	.	.	.
5.500	742.3505	3157.92	.V Q	.	.	.	.
5.583	764.2311	3177.05	.V Q	.	.	.	.
5.667	786.2441	3196.29	.V Q	.	.	.	.
5.750	808.3907	3215.70	.V Q	.	.	.	.
5.833	830.6719	3235.23	.V Q	.	.	.	.
5.917	853.0662	3251.65	.V Q	.	.	.	.
6.000	875.5568	3265.63	.V Q	.	.	.	.
6.083	898.1447	3279.77	.V Q	.	.	.	.
6.167	920.8309	3294.04	.V Q	.	.	.	.
6.250	943.6165	3308.46	.V Q	.	.	.	.
6.333	966.5021	3323.00	.V Q	.	.	.	.
6.417	989.4891	3337.70	.V Q	.	.	.	.
6.500	1012.5783	3352.55	.V Q	.	.	.	.
6.583	1035.7708	3367.54	.V Q	.	.	.	.
6.667	1059.0675	3382.68	.V Q	.	.	.	.
6.750	1082.4696	3397.99	.V Q	.	.	.	.
6.833	1105.9780	3413.43	.V Q	.	.	.	.
6.917	1129.5941	3429.06	.V Q	.	.	.	.
7.000	1153.3187	3444.82	.V Q	.	.	.	.
7.083	1177.1533	3460.78	.V Q	.	.	.	.
7.167	1201.0988	3476.88	.V Q	.	.	.	.
7.250	1225.1564	3493.17	.V Q	.	.	.	.
7.333	1249.3273	3509.61	.V Q	.	.	.	.
7.417	1273.6128	3526.25	.V Q	.	.	.	.
7.500	1298.0140	3543.06	.V Q	.	.	.	.
7.583	1322.5325	3560.07	.V Q	.	.	.	.
7.667	1347.1692	3577.25	.V Q	.	.	.	.
7.750	1371.9258	3594.65	.V Q	.	.	.	.
7.833	1396.8033	3612.22	.V Q	.	.	.	.
7.917	1421.8035	3630.02	.V Q	.	.	.	.
8.000	1446.9274	3648.00	.V Q	.	.	.	.
8.083	1472.1768	3666.21	.V Q	.	.	.	.
8.167	1497.5530	3684.62	.V Q	.	.	.	.
8.250	1523.0575	3703.26	.V Q	.	.	.	.
8.333	1548.6919	3722.11	.V Q	.	.	.	.
8.417	1574.4578	3741.21	.V Q	.	.	.	.
8.500	1600.3567	3760.52	.V Q	.	.	.	.
8.583	1626.3807	3778.69	.V Q	.	.	.	.
8.667	1652.5284	3796.65	.V Q	.	.	.	.
8.750	1678.8018	3814.89	.V Q	.	.	.	.

8.833	1705.2021	3833.34	.	V	Q.	.	.	.
8.917	1731.7316	3852.08	.	V	Q.	.	.	.
9.000	1758.3917	3871.05	.	V	Q.	.	.	.
9.083	1785.1846	3890.32	.	V	Q.	.	.	.
9.167	1812.1118	3909.83	.	V	Q.	.	.	.
9.250	1839.1755	3929.65	.	V	Q.	.	.	.
9.333	1866.3776	3949.73	.	V	Q.	.	.	.
9.417	1893.7201	3970.13	.	V	Q.	.	.	.
9.500	1921.2050	3990.81	.	V	Q.	.	.	.
9.583	1948.8346	4011.82	.	V	Q.	.	.	.
9.667	1976.6110	4033.12	.	V	Q	.	.	.
9.750	2004.5364	4054.77	.	V	Q	.	.	.
9.833	2032.6130	4076.73	.	V	Q	.	.	.
9.917	2060.8435	4099.06	.	V	Q	.	.	.
10.000	2089.2300	4121.71	.	V	Q	.	.	.
10.083	2117.7751	4144.74	.	V	Q	.	.	.
10.167	2146.4812	4168.12	.	V	Q	.	.	.
10.250	2175.3511	4191.91	.	V	Q	.	.	.
10.333	2204.3872	4216.06	.	V	Q	.	.	.
10.417	2233.5928	4240.63	.	V	Q	.	.	.
10.500	2262.9702	4265.59	.	V	Q	.	.	.
10.583	2292.5227	4291.01	.	V	Q	.	.	.
10.667	2322.2529	4316.83	.	V	Q	.	.	.
10.750	2352.1643	4343.13	.	V	Q	.	.	.
10.833	2382.2598	4369.85	.	V	Q	.	.	.
10.917	2412.5427	4397.09	.	V	Q	.	.	.
11.000	2443.0164	4424.79	.	V	Q	.	.	.
11.083	2473.6846	4453.02	.	V	.Q	.	.	.
11.167	2504.5505	4481.74	.	V	.Q	.	.	.
11.250	2535.6182	4511.03	.	V	.Q	.	.	.
11.333	2566.8911	4540.83	.	V	.Q	.	.	.
11.417	2598.3735	4571.25	.	V	.Q	.	.	.
11.500	2630.0693	4602.22	.	V	.Q	.	.	.
11.583	2661.9829	4633.84	.	V	.Q	.	.	.
11.667	2694.1182	4666.05	.	V	.Q	.	.	.
11.750	2726.4802	4698.96	.	V	.Q	.	.	.
11.833	2759.0732	4732.49	.	V	.Q	.	.	.
11.917	2791.9023	4766.77	.	V	.Q	.	.	.
12.000	2824.9722	4801.73	.	V	.Q	.	.	.
12.083	2858.3562	4847.36	.	V	.Q	.	.	.
12.167	2892.1272	4903.55	.	V	.Q	.	.	.
12.250	2926.2905	4960.50	.	V	.Q	.	.	.
12.333	2960.8506	5018.13	.	V	.Q	.	.	.
12.417	2995.8130	5076.56	.	V	.Q	.	.	.
12.500	3031.2053	5138.96	.	V	.Q	.	.	.
12.583	3067.0803	5209.06	.	V	.Q	.	.	.
12.667	3103.4448	5280.13	.	V	.Q	.	.	.
12.750	3140.3167	5353.80	.	V	.Q	.	.	.
12.833	3177.8289	5446.76	.	V	.Q	.	.	.
12.917	3216.0374	5547.89	.	V	.Q	.	.	.
13.000	3255.0381	5662.89	.	V	.Q	.	.	.
13.083	3294.9294	5792.24	.	V	.Q	.	.	.
13.167	3335.7515	5927.36	.	V	.Q	.	.	.
13.250	3377.4890	6060.30	.	V	.Q	.	.	.
13.333	3420.2107	6203.19	.	V	.Q	.	.	.
13.417	3464.0708	6368.47	.	V	.Q	.	.	.
13.500	3508.9038	6509.74	.	V	.Q	.	.	.
13.583	3554.7432	6655.87	.	V	.Q	.	.	.

13.667	3601.7532	6825.86	.	V	Q	.	.	.
13.750	3649.9294	6995.18	.	.V	Q	.	.	.
13.833	3699.1428	7145.77	.	.V	Q	.	.	.
13.917	3749.5090	7313.18	.	.V	Q	.	.	.
14.000	3801.1074	7492.10	.	.V	Q	.	.	.
14.083	3854.1794	7706.07	.	.V	Q.	.	.	.
14.167	3908.5952	7901.16	.	.V	Q.	.	.	.
14.250	3964.4121	8104.62	.	.V	Q	.	.	.
14.333	4021.8618	8341.69	.	.V	Q	.	.	.
14.417	4080.9080	8573.49	.	.V	.Q	.	.	.
14.500	4141.7188	8829.73	.	.V	.Q	.	.	.
14.583	4204.1460	9064.45	.	.V	.Q	.	.	.
14.667	4268.0137	9273.56	.	.V	.Q	.	.	.
14.750	4333.3193	9482.36	.	.V	.Q	.	.	.
14.833	4400.3569	9733.89	.	.V	.Q	.	.	.
14.917	4469.3413	10016.56	.	.V	.Q	.	.	.
15.000	4540.0850	10271.99	.	.V	.Q	.	.	.
15.083	4612.5601	10523.41	.	.V	.Q	.	.	.
15.167	4686.8638	10788.91	.	.V	.Q	.	.	.
15.250	4762.8101	11027.37	.	.V	.Q	.	.	.
15.333	4840.4683	11276.00	.	.V	.Q	.	.	.
15.417	4919.8076	11520.08	.	.V	.Q	.	.	.
15.500	5000.3979	11701.71	.	.V	.Q	.	.	.
15.583	5082.2539	11885.48	.	.V	.Q	.	.	.
15.667	5165.5493	12094.48	.	.V	.Q	.	.	.
15.750	5250.2300	12295.65	.	.V	.Q	.	.	.
15.833	5336.0518	12461.33	.	.V	.Q	.	.	.
15.917	5423.0684	12634.83	.	.V	.Q	.	.	.
16.000	5511.4121	12827.52	.	.V	.Q	.	.	.
16.083	5601.9478	13145.80	.	.V	.Q	.	.	.
16.167	5694.1470	13387.35	.	.V	.Q	.	.	.
16.250	5787.0854	13494.67	.	.V	.Q	.	.	.
16.333	5880.8809	13619.10	.	.V	.Q	.	.	.
16.417	5975.4570	13732.43	.	.V	.Q	.	.	.
16.500	6071.2314	13906.45	.	.V	.Q	.	.	.
16.583	6168.2905	14092.96	.	.V	.Q	.	.	.
16.667	6265.8794	14169.92	.	.V	.Q	.	.	.
16.750	6364.0137	14249.08	.	.V	.Q	.	.	.
16.833	6464.4546	14584.04	.	.V	.Q	.	.	.
16.917	6566.4990	14816.86	.	.V	.Q	.	.	.
17.000	6670.0747	15039.18	.	.V	.Q	.	.	.
17.083	6774.8501	15213.36	.	.V	.Q	.	.	.
17.167	6880.5571	15348.67	.	.V	.Q	.	.	.
17.250	6986.3862	15366.41	.	.V	.Q	.	.	.
17.333	7093.1831	15506.88	.	.V	.Q	.	.	.
17.417	7201.4858	15725.56	.	.V	.Q	.	.	.
17.500	7308.0654	15475.39	.	.V	.Q	.	.	.
17.583	7415.1997	15555.89	.	.V	.Q	.	.	.
17.667	7523.8823	15780.74	.	.V	.Q	.	.	.
17.750	7632.2778	15739.03	.	.V	.Q	.	.	.
17.833	7738.8252	15470.68	.	.V	.Q	.	.	.
17.917	7846.6055	15649.69	.	.V	.Q	.	.	.
18.000	7955.2949	15781.69	.	.V	.Q	.	.	.
18.083	8065.5269	16005.68	.	.V	.Q	.	.	.
18.167	8172.6621	15556.06	.	.V	.Q	.	.	.
18.250	8279.8682	15566.29	.	.V	.Q	.	.	.
18.333	8389.4121	15905.81	.	.V	.Q	.	.	.
18.417	8498.3447	15817.07	.	.V	.Q	.	.	.

18.500	8608.0498	15929.14	.	.	.	V	.	Q.
18.583	8714.5547	15464.50	.	.	.	V	.	Q.
18.667	8818.6523	15114.99	.	.	.	V	.	Q.
18.750	8922.6006	15093.25	.	.	.	V	.	Q.
18.833	9028.7080	15406.86	.	.	.	V	.	Q.
18.917	9136.1133	15595.30	.	.	.	V	.	Q.
19.000	9239.3633	14991.90	.	.	.	V	.	Q.
19.083	9340.1475	14633.81	.	.	.	V	.	Q.
19.167	9440.9121	14631.02	.	.	.	V	.	Q.
19.250	9539.3311	14290.44	.	.	.	V	.	Q.
19.333	9636.7246	14141.56	.	.	.	V	.	Q.
19.417	9731.6445	13782.44	.	.	.	V	.	Q.
19.500	9823.5039	13338.00	.	.	.	V	.	Q.
19.583	9914.0195	13142.91	.	.	.	V	.	Q.
19.667	10003.4873	12990.67	.	.	.	V	.	Q.
19.750	10091.6475	12800.91	.	.	.	V	.	Q.
19.833	10177.7422	12501.01	.	.	.	V	.	Q.
19.917	10261.4648	12156.55	.	.	.	Q	.	.
20.000	10342.9355	11829.56	.	.	.	Q.V	.	.
20.083	10421.8193	11454.00	.	.	.	Q.V	.	.
20.167	10498.5127	11135.92	.	.	.	Q.V	.	.
20.250	10572.8896	10799.59	.	.	.	Q.V	.	.
20.333	10645.3008	10514.03	.	.	.	Q.V	.	.
20.417	10715.5557	10200.95	.	.	.	Q.V	.	.
20.500	10783.7705	9904.80	.	.	.	Q.V	.	.
20.583	10850.1357	9636.21	.	.	.	Q.V	.	.
20.667	10914.6846	9372.44	.	.	.	Q.V	.	.
20.750	10977.5293	9125.12	.	.	.	Q.V	.	.
20.833	11038.4492	8845.55	.	.	.	Q.V	.	.
20.917	11096.7568	8466.26	.	.	.	Q.V	.	.
21.000	11153.2285	8199.62	.	.	.	Q.V	.	.
21.083	11208.2119	7983.59	.	.	.	Q.V	.	.
21.167	11261.6318	7756.61	.	.	.	Q.V	.	.
21.250	11313.5146	7533.34	.	.	.	Q.V	.	.
21.333	11363.5566	7266.07	.	.	.	Q.V	.	.
21.417	11412.3115	7079.27	.	.	.	Q.V	.	.
21.500	11459.9775	6921.07	.	.	.	Q.V	.	.
21.583	11506.5850	6767.42	.	.	.	Q.V	.	.
21.667	11552.0908	6607.43	.	.	.	Q.V	.	.
21.750	11596.4629	6442.84	.	.	.	Q.V	.	.
21.833	11639.6895	6276.45	.	.	.	Q.V	.	.
21.917	11681.4111	6057.92	.	.	.	Q.V	.	.
22.000	11721.8311	5869.00	.	.	.	Q.V	.	.
22.083	11761.4004	5745.45	.	.	.	Q.V	.	.
22.167	11800.1670	5628.91	.	.	.	Q.V	.	.
22.250	11838.1680	5517.70	.	.	.	Q.V	.	.
22.333	11875.4141	5408.15	.	.	.	Q.V	.	.
22.417	11911.9385	5303.32	.	.	.	Q.V	.	.
22.500	11947.7559	5200.64	.	.	.	Q.V	.	.
22.583	11982.8516	5095.88	.	.	.	Q.V	.	.
22.667	12017.2500	4994.61	.	.	.	Q.V	.	.
22.750	12050.9590	4894.59	.	.	.	Q.V	.	.
22.833	12083.9893	4796.05	.	.	.	Q.V	.	.
22.917	12116.4453	4712.65	.	.	.	Q.V	.	.
23.000	12148.3799	4636.93	.	.	.	Q.V	.	.
23.083	12179.8086	4563.46	.	.	.	Q.V	.	.
23.167	12210.7363	4490.75	.	.	.	Q.V	.	.
23.250	12241.1885	4421.69	.	.	.	Q.V	.	.

23.333	12271.2168	4360.05	.	.	.	Q	.	V.
23.417	12300.8330	4300.31	.	.	.	Q	.	V.
23.500	12330.0469	4241.78	.	.	.	Q	.	V.
23.583	12358.8662	4184.52	.	.	.	Q	.	V.
23.667	12387.2988	4128.41	.	.	.	Q	.	V.
23.750	12415.3525	4073.44	.	.	.	Q	.	V.
23.833	12443.0352	4019.55	.	.	.	Q	.	V.
23.917	12470.4170	3975.79	.	.	.	Q	.	V.
24.000	12497.5410	3938.43	.	.	.	Q	.	V.
24.083	12524.3721	3895.93	.	.	.	Q	.	V.
24.167	12550.8770	3848.45	.	.	.	Q	.	V.
24.250	12577.0664	3802.74	.	.	.	Q	.	V.
24.333	12602.9463	3757.70	.	.	.	Q	.	V.
24.417	12628.5068	3711.45	.	.	.	Q	.	V.
24.500	12653.7227	3661.31	.	.	.	Q	.	V.
24.583	12678.3838	3580.75	.	.	.	Q	.	V.
24.667	12702.6455	3522.84	.	.	.	Q	.	V.
24.750	12726.5693	3473.73	.	.	.	Q	.	V.
24.833	12750.0928	3415.62	.	.	.	Q	.	V.
24.917	12773.1738	3351.31	.	.	.	Q	.	V.
25.000	12795.7578	3279.21	.	.	.	Q	.	V.
25.083	12817.7969	3200.01	.	.	.	Q	.	V.
25.167	12839.2744	3118.51	.	.	.	Q	.	V.
25.250	12860.2061	3039.31	.	.	.	Q	.	V.
25.333	12880.5605	2955.44	.	.	.	Q	.	V.
25.417	12900.2578	2860.05	.	.	.	Q	.	V.
25.500	12919.3984	2779.19	.	.	.	Q	.	V.
25.583	12937.9883	2699.18	.	.	.	Q	.	V.
25.667	12955.9473	2607.67	.	.	.	Q	.	V.
25.750	12973.2881	2517.89	.	.	.	Q	.	V.
25.833	12990.0918	2439.90	.	.	.	Q	.	V.
25.917	13006.3018	2353.74	.	.	.	Q	.	V.
26.000	13021.8828	2262.33	.	.	.	Q	.	V.
26.083	13036.7451	2158.00	.	.	.	Q	.	V.
26.167	13051.0078	2070.99	.	.	.	Q	.	V.
26.250	13064.6445	1980.09	.	.	.	Q	.	V.
26.333	13077.5312	1871.11	.	.	.	Q	.	V.
26.417	13089.6934	1765.95	.	.	.	Q	.	V.
26.500	13101.0547	1649.66	.	.	.	Q	.	V.
26.583	13111.7480	1552.64	.	.	.	Q	.	V.
26.667	13121.8828	1471.53	.	.	.	Q	.	V.
26.750	13131.4707	1392.17	.	.	.	Q	.	V.
26.833	13140.4209	1299.59	.	.	.	Q	.	V.
26.917	13148.6426	1193.81	.	.	.	Q	.	V.
27.000	13156.2920	1110.63	.	.	.	Q	.	V.
27.083	13163.4336	1037.00	.	.	.	Q	.	V.
27.167	13170.0273	957.47	.	.	.	Q	.	V.
27.250	13176.1621	890.71	.	.	.	Q	.	V.
27.333	13181.8252	822.26	.	.	.	Q	.	V.
27.417	13187.0596	760.00	.	.	.	Q	.	V.
27.500	13191.9521	710.41	.	.	.	Q	.	V.
27.583	13196.5117	662.05	.	.	.	Q	.	V.
27.667	13200.7324	612.78	.	.	.	Q	.	V.
27.750	13204.6162	563.89	.	.	.	Q	.	V.
27.833	13208.1895	518.90	.	.	.	Q	.	V.
27.917	13211.4756	477.19	.	.	.	Q	.	V.
28.000	13214.4971	438.74	.	.	.	Q	.	V.
28.083	13217.2891	405.44	.	.	.	Q	.	V.

28.167	13219.8711	374.97	Q	.	.	.	V.
28.250	13222.2764	349.29	Q	.	.	.	V.
28.333	13224.5078	324.01	Q	.	.	.	V.
28.417	13226.5781	300.61	Q	.	.	.	V.
28.500	13228.4922	277.98	Q	.	.	.	V.
28.583	13230.2539	255.73	Q	.	.	.	V.
28.667	13231.8730	235.10	Q	.	.	.	V.
28.750	13233.3525	214.89	Q	.	.	.	V.
28.833	13234.6963	195.18	Q	.	.	.	V.
28.917	13235.9365	180.09	Q	.	.	.	V.
29.000	13237.0830	166.45	Q	.	.	.	V.
29.083	13238.1357	152.92	Q	.	.	.	V.
29.167	13239.0967	139.46	Q	.	.	.	V.
29.250	13239.9727	127.12	Q	.	.	.	V.
29.333	13240.7871	118.30	Q	.	.	.	V.
29.417	13241.5430	109.82	Q	.	.	.	V.
29.500	13242.2412	101.42	Q	.	.	.	V.
29.583	13242.8818	93.05	Q	.	.	.	V.
29.667	13243.4658	84.76	Q	.	.	.	V.
29.750	13243.9932	76.52	Q	.	.	.	V.
29.833	13244.4639	68.35	Q	.	.	.	V.
29.917	13244.9014	63.48	Q	.	.	.	V.
30.000	13245.3232	61.22	Q	.	.	.	V.
30.083	13245.7295	58.96	Q	.	.	.	V.
30.167	13246.1201	56.72	Q	.	.	.	V.
30.250	13246.4951	54.50	Q	.	.	.	V.
30.333	13246.8555	52.31	Q	.	.	.	V.
30.417	13247.2002	50.12	Q	.	.	.	V.
30.500	13247.5303	47.94	Q	.	.	.	V.
30.583	13247.8457	45.79	Q	.	.	.	V.
30.667	13248.1465	43.66	Q	.	.	.	V.
30.750	13248.4326	41.54	Q	.	.	.	V.
30.833	13248.7041	39.45	Q	.	.	.	V.
30.917	13248.9609	37.35	Q	.	.	.	V.
31.000	13249.2041	35.29	Q	.	.	.	V.
31.083	13249.4326	33.22	Q	.	.	.	V.
31.167	13249.6475	31.19	Q	.	.	.	V.
31.250	13249.8486	29.17	Q	.	.	.	V.
31.333	13250.0361	27.17	Q	.	.	.	V.
31.417	13250.2100	25.17	Q	.	.	.	V.
31.500	13250.3701	23.20	Q	.	.	.	V.
31.583	13250.5166	21.23	Q	.	.	.	V.
31.667	13250.6494	19.28	Q	.	.	.	V.
31.750	13250.7686	17.34	Q	.	.	.	V.
31.833	13250.8750	15.41	Q	.	.	.	V.
31.917	13250.9678	13.50	Q	.	.	.	V.
32.000	13251.0479	11.60	Q	.	.	.	V.
32.083	13251.1143	9.71	Q	.	.	.	V.
32.167	13251.1680	7.83	Q	.	.	.	V.
32.250	13251.2090	5.96	Q	.	.	.	V.
32.333	13251.2373	4.10	Q	.	.	.	V.
32.417	13251.2529	2.26	Q	.	.	.	V.
32.500	13251.2559	0.42	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%	1950.0
10%	1435.0
20%	1160.0
30%	650.0
40%	500.0
50%	410.0
60%	350.0
70%	290.0
80%	225.0
90%	145.0

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134U *
* 25-YR EV JANUARY 2019 CCHI *

FILE NAME: EV2534US.DAT
TIME/DATE OF STUDY: 14:40 01/02/2019

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

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 62698.000 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.582 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.285
LOW LOSS FRACTION = 0.449
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.40
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.77
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.05
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.93
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.83
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.96

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.304
30-MINUTE FACTOR = 0.358
1-HOUR FACTOR = 0.405
3-HOUR FACTOR = 0.750
6-HOUR FACTOR = 0.890
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.227

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.184	1398.427
2	0.553	2796.845
3	0.922	2796.852
4	1.291	2796.852
5	1.660	2796.848
6	2.061	3040.433
7	2.605	4126.018
8	3.166	4256.085
9	3.728	4256.452
10	4.532	6095.587
11	5.565	7838.747
12	6.786	9253.329
13	8.211	10809.380
14	9.894	12758.512
15	11.524	12362.071
16	13.138	12236.204
17	15.187	15540.874
18	17.190	15182.203
19	18.911	13051.971
20	20.794	14279.437
21	23.122	17646.838
22	25.223	15935.918
23	27.067	13984.400
24	29.266	16670.746
25	31.594	17651.697
26	34.405	21317.461
27	36.677	17223.822
28	38.978	17451.088
29	42.026	23111.148
30	44.945	22128.910
31	48.156	24346.656
32	51.211	23168.826
33	53.549	17725.557
34	55.778	16905.039
35	58.331	19357.105
36	61.452	23665.816
37	64.268	21351.404
38	66.505	16964.740
39	68.788	17304.264
40	71.012	16866.049
41	72.999	15064.420
42	75.040	15479.727
43	76.741	12899.203
44	78.176	10876.761
45	79.612	10892.206
46	81.106	11327.009
47	82.558	11012.708
48	83.906	10214.260

49	85.155	9476.670
50	86.307	8730.981
51	87.304	7560.904
52	88.222	6964.353
53	88.987	5794.274
54	89.745	5749.557
55	90.452	5364.101
56	91.132	5151.906
57	91.809	5139.237
58	92.444	4810.012
59	93.059	4663.188
60	93.673	4659.774
61	94.192	3932.424
62	94.602	3111.067
63	95.012	3104.241
64	95.422	3111.067
65	95.831	3099.613
66	96.149	2415.882
67	96.402	1918.081
68	96.655	1918.023
69	96.909	1920.337
70	97.162	1920.337
71	97.415	1920.337
72	97.668	1918.081
73	97.918	1892.800
74	98.042	940.644
75	98.102	461.182
76	98.163	456.554
77	98.223	458.868
78	98.284	461.124
79	98.345	458.868
80	98.405	456.612
81	98.465	458.810
82	98.526	461.182
83	98.586	456.554
84	98.647	458.868
85	98.708	461.182
86	98.768	458.868
87	98.828	454.240
88	98.889	463.438
89	98.949	454.298
90	99.010	463.438
91	99.070	454.298
92	99.130	454.298
93	99.190	454.298
94	99.250	454.298
95	99.310	454.298
96	99.370	454.298
97	99.430	454.298
98	99.490	454.298
99	99.549	454.298
100	99.609	454.298
101	99.669	454.298
102	99.729	454.298
103	99.789	454.298
104	99.849	454.298
105	99.909	454.298
106	99.969	454.298

107

100.000

236.318

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 10720.7139
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 13509.0303

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.	4050.0	8100.0	12150.0	16200.0
0.083	0.0376	5.46	Q	.	.	.	.
0.167	0.1506	16.40	Q	.	.	.	.
0.250	0.3391	27.37	Q	.	.	.	.
0.333	0.6033	38.37	Q	.	.	.	.
0.417	0.9435	49.40	Q	.	.	.	.
0.500	1.3666	61.42	Q	.	.	.	.
0.583	1.9018	77.72	Q	.	.	.	.
0.667	2.5530	94.56	Q	.	.	.	.
0.750	3.3207	111.47	Q	.	.	.	.
0.833	4.2546	135.60	Q	.	.	.	.
0.917	5.4021	166.61	Q	.	.	.	.
1.000	6.8018	203.25	Q	.	.	.	.
1.083	8.4965	246.06	Q	.	.	.	.
1.167	10.5393	296.62	Q	.	.	.	.
1.250	12.9207	345.77	Q	.	.	.	.
1.333	15.6382	394.59	Q	.	.	.	.
1.417	18.7819	456.46	VQ	.	.	.	.
1.500	22.3433	517.12	VQ	.	.	.	.
1.583	26.2665	569.64	VQ	.	.	.	.
1.667	30.5855	627.12	VQ	.	.	.	.
1.750	35.3921	697.93	VQ	.	.	.	.
1.833	40.6419	762.27	VQ	.	.	.	.
1.917	46.2837	819.19	V Q	.	.	.	.
2.000	52.3911	886.79	V Q	.	.	.	.
2.083	58.9918	958.43	V Q	.	.	.	.
2.167	66.1861	1044.61	V Q	.	.	.	.
2.250	73.8655	1115.05	V Q	.	.	.	.
2.333	82.0380	1186.64	V Q	.	.	.	.
2.417	90.8571	1280.54	V Q	.	.	.	.
2.500	100.2986	1370.90	V Q	.	.	.	.
2.583	110.4240	1470.21	V Q	.	.	.	.
2.667	121.2039	1565.24	V Q	.	.	.	.
2.750	132.4939	1639.31	V Q	.	.	.	.
2.833	144.2737	1710.43	V Q	.	.	.	.
2.917	156.6109	1791.36	V Q	.	.	.	.
3.000	169.6233	1889.40	V Q	.	.	.	.
3.083	183.2507	1978.70	V Q	.	.	.	.
3.167	197.3772	2051.18	V Q	.	.	.	.
3.250	212.0138	2125.22	V Q	.	.	.	.
3.333	227.1503	2197.82	V Q	.	.	.	.
3.417	242.7401	2263.64	V Q	.	.	.	.
3.500	258.7960	2331.31	V Q	.	.	.	.
3.583	275.2501	2389.14	V Q	.	.	.	.
3.667	292.0497	2439.31	V Q	.	.	.	.
3.750	309.1964	2489.71	V Q	.	.	.	.
3.833	326.7035	2542.02	V Q	.	.	.	.
3.917	344.5637	2593.30	.V Q	.	.	.	.

4.000	362.7570	2641.67	.V Q	.	.	.	.
4.083	381.2649	2687.34	.V Q	.	.	.	.
4.167	400.0686	2730.31	.V Q	.	.	.	.
4.250	419.1380	2768.87	.V Q	.	.	.	.
4.333	438.4582	2805.29	.V Q	.	.	.	.
4.417	457.9987	2837.29	.V Q	.	.	.	.
4.500	477.7597	2869.29	.V Q	.	.	.	.
4.583	497.7316	2899.92	.V Q	.	.	.	.
4.667	517.9100	2929.90	.V Q	.	.	.	.
4.750	538.2954	2959.96	.V Q	.	.	.	.
4.833	558.8802	2988.91	.V Q	.	.	.	.
4.917	579.6613	3017.42	.V Q	.	.	.	.
5.000	600.6399	3046.09	.V Q	.	.	.	.
5.083	621.7973	3072.06	.V Q	.	.	.	.
5.167	643.1127	3094.99	.V Q	.	.	.	.
5.250	664.5865	3118.01	.V Q	.	.	.	.
5.333	686.2203	3141.23	. V Q	.	.	.	.
5.417	708.0146	3164.53	. V Q	.	.	.	.
5.500	729.9520	3185.32	. V Q	.	.	.	.
5.583	752.0201	3204.29	. V Q	.	.	.	.
5.667	774.2200	3223.43	. V Q	.	.	.	.
5.750	796.5526	3242.69	. V Q	.	.	.	.
5.833	819.0189	3262.12	. V Q	.	.	.	.
5.917	841.6199	3281.66	. V Q	.	.	.	.
6.000	864.3568	3301.38	. V Q	.	.	.	.
6.083	887.2295	3321.12	. V Q	.	.	.	.
6.167	910.2138	3337.32	. V Q	.	.	.	.
6.250	933.2976	3351.77	. V Q	.	.	.	.
6.333	956.4819	3366.36	. V Q	.	.	.	.
6.417	979.7676	3381.09	. V Q	.	.	.	.
6.500	1003.1560	3395.99	. V Q	.	.	.	.
6.583	1026.6478	3411.01	. V Q	.	.	.	.
6.667	1050.2443	3426.20	. V Q	.	.	.	.
6.750	1073.9462	3441.52	. V Q	.	.	.	.
6.833	1097.7549	3457.03	. V Q	.	.	.	.
6.917	1121.6713	3472.66	. V Q	.	.	.	.
7.000	1145.6968	3488.50	. V Q	.	.	.	.
7.083	1169.8323	3504.47	. V Q	.	.	.	.
7.167	1194.0791	3520.63	. V Q	.	.	.	.
7.250	1218.4381	3536.92	. V Q	.	.	.	.
7.333	1242.9109	3553.45	. V Q	.	.	.	.
7.417	1267.4983	3570.10	. V Q	.	.	.	.
7.500	1292.2020	3586.99	. V Q	.	.	.	.
7.583	1317.0229	3604.00	. V Q	.	.	.	.
7.667	1341.9625	3621.23	. V Q	.	.	.	.
7.750	1367.0219	3638.62	. V Q	.	.	.	.
7.833	1392.2026	3656.25	. V Q	.	.	.	.
7.917	1417.5059	3674.03	. V Q	.	.	.	.
8.000	1442.9332	3692.06	. V Q	.	.	.	.
8.083	1468.4861	3710.27	. V Q	.	.	.	.
8.167	1494.1660	3728.72	. V Q	.	.	.	.
8.250	1519.9742	3747.36	. V Q	.	.	.	.
8.333	1545.9126	3766.25	. V Q	.	.	.	.
8.417	1571.9824	3785.34	. V Q	.	.	.	.
8.500	1598.1855	3804.69	. V Q	.	.	.	.
8.583	1624.5233	3824.25	. V Q	.	.	.	.
8.667	1650.9977	3844.08	. V Q	.	.	.	.
8.750	1677.6101	3864.13	. V Q	.	.	.	.

8.833	1704.3627	3884.47	.	V	Q.	.	.	.
8.917	1731.2510	3904.17	.	V	Q.	.	.	.
9.000	1758.2706	3923.26	.	V	Q.	.	.	.
9.083	1785.4233	3942.57	.	V	Q.	.	.	.
9.167	1812.7112	3962.20	.	V	Q.	.	.	.
9.250	1840.1359	3982.06	.	V	Q.	.	.	.
9.333	1867.6996	4002.25	.	V	Q.	.	.	.
9.417	1895.4041	4022.69	.	V	Q.	.	.	.
9.500	1923.2517	4043.48	.	V	Q.	.	.	.
9.583	1951.2443	4064.53	.	V	Q	.	.	.
9.667	1979.3843	4085.93	.	V	Q	.	.	.
9.750	2007.6736	4107.62	.	V	Q	.	.	.
9.833	2036.1149	4129.68	.	V	Q	.	.	.
9.917	2064.7102	4152.03	.	V	Q	.	.	.
10.000	2093.4622	4174.78	.	V	Q	.	.	.
10.083	2122.3728	4197.83	.	V	Q	.	.	.
10.167	2151.4453	4221.31	.	V	Q	.	.	.
10.250	2180.6816	4245.11	.	V	Q	.	.	.
10.333	2210.0850	4269.35	.	V	Q	.	.	.
10.417	2239.6575	4293.94	.	V	Q	.	.	.
10.500	2269.4026	4318.98	.	V	Q	.	.	.
10.583	2299.3228	4344.40	.	V	Q	.	.	.
10.667	2329.4211	4370.30	.	V	Q	.	.	.
10.750	2359.7007	4396.59	.	V	Q	.	.	.
10.833	2390.1648	4423.39	.	V	Q	.	.	.
10.917	2420.8164	4450.60	.	V	Q	.	.	.
11.000	2451.6592	4478.37	.	V	.Q	.	.	.
11.083	2482.6963	4506.57	.	V	.Q	.	.	.
11.167	2513.9314	4535.35	.	V	.Q	.	.	.
11.250	2545.3679	4564.60	.	V	.Q	.	.	.
11.333	2577.0103	4594.46	.	V	.Q	.	.	.
11.417	2608.8616	4624.82	.	V	.Q	.	.	.
11.500	2640.9265	4655.83	.	V	.Q	.	.	.
11.583	2673.2087	4687.38	.	V	.Q	.	.	.
11.667	2705.7129	4719.62	.	V	.Q	.	.	.
11.750	2738.4431	4752.43	.	V	.Q	.	.	.
11.833	2771.4045	4785.98	.	V	.Q	.	.	.
11.917	2804.6013	4820.15	.	V	.Q	.	.	.
12.000	2838.0388	4855.11	.	V	.Q	.	.	.
12.083	2871.7888	4900.50	.	V	.Q	.	.	.
12.167	2905.9241	4956.45	.	V	.Q	.	.	.
12.250	2940.4490	5013.02	.	V	.Q	.	.	.
12.333	2975.3689	5070.39	.	V	.Q	.	.	.
12.417	3010.6885	5128.42	.	V	.Q	.	.	.
12.500	3046.4253	5189.00	.	V	.Q	.	.	.
12.583	3082.6365	5257.87	.	V	.Q	.	.	.
12.667	3119.3342	5328.52	.	V	.Q	.	.	.
12.750	3156.5237	5399.89	.	V	.Q	.	.	.
12.833	3194.2993	5485.03	.	V	.Q	.	.	.
12.917	3232.7502	5583.07	.	V	.Q	.	.	.
13.000	3271.9504	5691.86	.	V	.Q	.	.	.
13.083	3311.9792	5812.18	.	V	.Q	.	.	.
13.167	3352.9363	5946.95	.	V	.Q	.	.	.
13.250	3394.8064	6079.55	.	V	.Q	.	.	.
13.333	3437.5894	6212.09	.	V	.Q	.	.	.
13.417	3481.4487	6368.38	.	V	.Q	.	.	.
13.500	3526.3728	6522.97	.	V	.Q	.	.	.
13.583	3572.2632	6663.30	.	V	.Q	.	.	.

13.667	3619.1855	6813.14	.	V	Q	.	.	.
13.750	3667.3069	6987.21	.	V	Q	.	.	.
13.833	3716.5510	7150.24	.	.V	Q	.	.	.
13.917	3766.8289	7300.33	.	.V	Q	.	.	.
14.000	3818.2771	7470.28	.	.V	Q	.	.	.
14.083	3871.0139	7657.38	.	.V	Q	.	.	.
14.167	3925.2866	7880.38	.	.V	Q.	.	.	.
14.250	3980.8982	8074.79	.	.V	Q.	.	.	.
14.333	4037.8616	8271.08	.	.V	Q	.	.	.
14.417	4096.4502	8507.07	.	.V	.Q	.	.	.
14.500	4156.6294	8738.05	.	.V	.Q	.	.	.
14.583	4218.5566	8991.83	.	.V	.Q	.	.	.
14.667	4282.1807	9238.22	.	.V	.Q	.	.	.
14.750	4347.2363	9446.06	.	.V	.Q	.	.	.
14.833	4413.7705	9660.78	.	.V	.Q	.	.	.
14.917	4481.9790	9903.85	.	.V	.Q	.	.	.
15.000	4552.1284	10185.71	.	.V	.Q	.	.	.
15.083	4624.1685	10460.24	.	.V	.Q	.	.	.
15.167	4697.9663	10715.44	.	.V	.Q	.	.	.
15.250	4773.5015	10967.68	.	.V	.Q	.	.	.
15.333	4850.7290	11213.42	.	.V	.Q	.	.	.
15.417	4929.6104	11453.57	.	.V	.Q	.	.	.
15.500	5010.0444	11679.02	.	.V	.Q	.	.	.
15.583	5091.7998	11870.85	.	.V	.Q.	.	.	.
15.667	5174.8379	12057.12	.	.V	.Q.	.	.	.
15.750	5259.2788	12260.81	.	.V	.Q	.	.	.
15.833	5345.0122	12448.52	.	.V	.Q	.	.	.
15.917	5431.9004	12616.17	.	.V	.Q	.	.	.
16.000	5520.1206	12809.59	.	.V	.Q	.	.	.
16.083	5610.4331	13113.37	.	.V	.Q	.	.	.
16.167	5702.7427	13403.33	.	.V	.Q	.	.	.
16.250	5795.8535	13519.69	.	.V	.Q	.	.	.
16.333	5889.6499	13619.26	.	.V	.Q	.	.	.
16.417	5984.3628	13752.31	.	.V	.Q	.	.	.
16.500	6080.0415	13892.58	.	.V	.Q	.	.	.
16.583	6177.2046	14108.08	.	.V	.Q	.	.	.
16.667	6275.2993	14243.38	.	.V	.Q	.	.	.
16.750	6373.8926	14315.78	.	.V	.Q	.	.	.
16.833	6473.9819	14532.95	.	.V.	.Q	.	.	.
16.917	6575.8608	14792.79	.	.V.	.Q	.	.	.
17.000	6679.5132	15050.32	.	.V.	.Q	.	.	.
17.083	6784.4473	15236.43	.	.V	.Q	.	.	.
17.167	6890.6450	15419.89	.	.V	.Q	.	.	.
17.250	6997.1821	15469.21	.	.V	.Q	.	.	.
17.333	7104.1655	15534.02	.	.V	.Q	.	.	.
17.417	7213.0923	15816.14	.	.V	.Q.	.	.	.
17.500	7321.7974	15784.01	.	.V	.Q	.	.	.
17.583	7429.6914	15666.24	.	.V	.Q	.	.	.
17.667	7538.4780	15795.82	.	.V	.Q	.	.	.
17.750	7648.8525	16026.38	.	.V	.Q.	.	.	.
17.833	7758.0205	15851.19	.	.V	.Q.	.	.	.
17.917	7865.9141	15666.14	.	.V	.Q	.	.	.
18.000	7975.1475	15860.71	.	.V	.Q.	.	.	.
18.083	8084.9956	15949.97	.	.V	.Q.	.	.	.
18.167	8196.3818	16173.26	.	.V	.Q.	.	.	.
18.250	8304.8955	15756.22	.	.V	.Q	.	.	.
18.333	8413.0498	15704.05	.	.V	.Q	.	.	.
18.417	8523.6709	16062.18	.	.V	.Q.	.	.	.

18.500	8633.6484	15968.70	.	.	.	V	.	Q.
18.583	8744.1406	16043.46	.	.	.	V	.	Q.
18.667	8852.8184	15780.00	.	.	.	V	.	Q.
18.750	8958.0215	15275.55	.	.	.	V	.	Q.
18.833	9062.6162	15187.16	.	.	.	V	.	Q.
18.917	9168.6650	15398.23	.	.	.	V	.	Q.
19.000	9276.6445	15678.56	.	.	.	V	.	Q.
19.083	9382.3076	15342.22	.	.	.	V	.	Q.
19.167	9484.2676	14804.65	.	.	.	V	.	Q.
19.250	9585.4365	14689.79	.	.	.	V	.	Q.
19.333	9685.6709	14553.98	.	.	.	V	.	Q.
19.417	9783.7666	14243.52	.	.	.	V	.	Q.
19.500	9880.5566	14053.87	.	.	.	V	.	Q.
19.583	9974.4531	13633.72	.	.	.	V	.	Q.
19.667	10065.9189	13280.78	.	.	.	V	.	Q.
19.750	10156.1426	13100.47	.	.	.	V	.	Q.
19.833	10245.4492	12967.33	.	.	.	V	.	Q.
19.917	10333.2422	12747.58	.	.	.	V	.	Q.
20.000	10418.7637	12417.71	.	.	.	Q	.	.
20.083	10502.0420	12092.07	.	.	.	Q.V	.	.
20.167	10583.0381	11760.57	.	.	.	Q.V	.	.
20.250	10661.6641	11416.55	.	.	.	Q.V	.	.
20.333	10738.1895	11111.46	.	.	.	Q.V	.	.
20.417	10812.1533	10739.51	.	.	.	Q.V	.	.
20.500	10884.2148	10463.37	.	.	.	Q.V	.	.
20.583	10954.1260	10151.17	.	.	.	Q.V	.	.
20.667	11022.0986	9869.67	.	.	.	Q.V	.	.
20.750	11088.4258	9630.75	.	.	.	Q.V	.	.
20.833	11153.0078	9377.36	.	.	.	Q.V	.	.
20.917	11215.8115	9119.16	.	.	.	Q.V	.	.
21.000	11276.6494	8833.65	.	.	.	Q.V	.	.
21.083	11335.2559	8509.60	.	.	.	Q.V	.	.
21.167	11391.8662	8219.82	.	.	.	Q.V	.	.
21.250	11446.9766	8002.09	.	.	.	Q.V	.	.
21.333	11500.6289	7790.28	.	.	.	Q.V	.	.
21.417	11552.8838	7587.43	.	.	.	Q.V	.	.
21.500	11603.3848	7332.69	.	.	.	Q.V	.	.
21.583	11652.4404	7122.88	.	.	.	Q.V	.	.
21.667	11700.4375	6969.22	.	.	.	Q.V	.	.
21.750	11747.3838	6816.61	.	.	.	Q.V	.	.
21.833	11793.2598	6661.19	.	.	.	Q.V	.	.
21.917	11838.0605	6505.06	.	.	.	Q.V	.	.
22.000	11881.7861	6348.91	.	.	.	Q.V	.	.
22.083	11924.4385	6193.19	.	.	.	Q.V	.	.
22.167	11965.6123	5978.46	.	.	.	Q.V	.	.
22.250	12005.6719	5816.71	.	.	.	Q.V	.	.
22.333	12044.9238	5699.45	.	.	.	Q.V	.	.
22.417	12083.4482	5593.71	.	.	.	Q.V	.	.
22.500	12121.2383	5487.08	.	.	.	Q.V	.	.
22.583	12158.3125	5383.13	.	.	.	Q.V	.	.
22.667	12194.6855	5281.39	.	.	.	Q.V	.	.
22.750	12230.3672	5180.98	.	.	.	Q.V	.	.
22.833	12265.3779	5083.59	.	.	.	Q.V	.	.
22.917	12299.7178	4986.10	.	.	.	Q.V	.	.
23.000	12333.3838	4888.34	.	.	.	Q.V	.	.
23.083	12366.4189	4796.67	.	.	.	Q.V	.	.
23.167	12398.9111	4717.90	.	.	.	Q.V	.	.
23.250	12430.8926	4643.72	.	.	.	Q.V	.	.

23.333	12462.3809	4572.08	.	.	.	.Q	.	V
23.417	12493.3760	4500.54	.	.	.	.Q	.	V
23.500	12523.9297	4436.47	.	.	.	Q	.	V
23.583	12554.0654	4375.73	.	.	.	Q	.	V
23.667	12583.7979	4317.15	.	.	.	Q	.	V
23.750	12613.1348	4259.66	.	.	.	Q	.	V
23.833	12642.0840	4203.41	.	.	.	Q	.	V
23.917	12670.6533	4148.23	.	.	.	Q	.	V
24.000	12698.8496	4094.12	.	.	.	Q	.	V
24.083	12726.6436	4035.74	.	.	.	Q.	.	V
24.167	12754.0518	3979.61	.	.	.	Q.	.	V
24.250	12781.1172	3929.94	.	.	.	Q.	.	V
24.333	12807.8623	3883.34	.	.	.	Q.	.	V
24.417	12834.2900	3837.36	.	.	.	Q.	.	V
24.500	12860.3975	3790.82	.	.	.	Q.	.	V
24.583	12886.1641	3741.38	.	.	.	Q.	.	V
24.667	12911.5947	3692.60	.	.	.	Q.	.	V
24.750	12936.6855	3643.14	.	.	.	Q.	.	V
24.833	12961.3730	3584.67	.	.	.	Q.	.	V
24.917	12985.4971	3502.77	.	.	.	Q.	.	V
25.000	13009.0293	3416.83	.	.	.	Q.	.	V
25.083	13032.0674	3345.09	.	.	.	Q.	.	V
25.167	13054.5674	3266.98	.	.	.	Q.	.	V
25.250	13076.5361	3189.91	.	.	.	Q.	.	V
25.333	13097.9678	3111.94	.	.	.	Q.	.	V
25.417	13118.7783	3021.67	.	.	.	Q.	.	V
25.500	13138.9805	2933.34	.	.	.	Q.	.	V
25.583	13158.6357	2853.99	.	.	.	Q.	.	V
25.667	13177.7158	2770.41	.	.	.	Q.	.	V
25.750	13196.1338	2674.27	.	.	.	Q.	.	V
25.833	13213.9395	2585.44	.	.	.	Q.	.	V
25.917	13231.2012	2506.35	.	.	.	Q.	.	V
26.000	13247.8613	2419.07	.	.	.	Q.	.	V
26.083	13263.8994	2328.78	.	.	.	Q.	.	V
26.167	13279.2236	2225.01	.	.	.	Q.	.	V
26.250	13293.9482	2138.06	.	.	.	Q.	.	V
26.333	13308.0732	2050.96	.	.	.	Q.	.	V
26.417	13321.4512	1942.53	.	.	.	Q.	.	V
26.500	13334.1152	1838.77	.	.	.	Q.	.	V
26.583	13346.0098	1727.15	.	.	.	Q.	.	V
26.667	13357.1729	1620.95	.	.	.	Q.	.	V
26.750	13367.7568	1536.75	.	.	.	Q.	.	V
26.833	13377.7871	1456.39	.	.	.	Q.	.	V
26.917	13387.2129	1368.59	.	.	.	Q.	.	V
27.000	13395.9336	1266.31	.	.	.	Q.	.	V
27.083	13404.0176	1173.81	.	.	.	Q.	.	V
27.167	13411.5869	1099.10	.	.	.	Q.	.	V
27.250	13418.6367	1023.63	.	.	.	Q.	.	V
27.333	13425.1826	950.44	.	.	.	Q.	.	V
27.417	13431.2764	884.82	.	.	.	Q.	.	V
27.500	13436.9102	818.06	.	.	.	Q.	.	V
27.583	13442.1572	761.86	.	.	.	Q.	.	V
27.667	13447.0742	713.95	.	.	.	Q.	.	V
27.750	13451.6631	666.35	.	.	.	Q.	.	V
27.833	13455.9150	617.41	.	.	.	Q.	.	V
27.917	13459.8408	570.04	.	.	.	Q.	.	V
28.000	13463.4648	526.14	.	.	.	Q.	.	V
28.083	13466.8076	485.42	.	.	.	Q.	.	V

28.167	13469.8926	447.91	.Q	.	.	.	V.
28.250	13472.7520	415.22	.Q	.	.	.	V.
28.333	13475.4043	385.10	Q	.	.	.	V.
28.417	13477.8818	359.76	Q	.	.	.	V.
28.500	13480.1875	334.78	Q	.	.	.	V.
28.583	13482.3330	311.49	Q	.	.	.	V.
28.667	13484.3242	289.19	Q	.	.	.	V.
28.750	13486.1641	267.10	Q	.	.	.	V.
28.833	13487.8613	246.46	Q	.	.	.	V.
28.917	13489.4219	226.53	Q	.	.	.	V.
29.000	13490.8457	206.76	Q	.	.	.	V.
29.083	13492.1543	189.96	Q	.	.	.	V.
29.167	13493.3701	176.48	Q	.	.	.	V.
29.250	13494.4932	163.13	Q	.	.	.	V.
29.333	13495.5254	149.85	Q	.	.	.	V.
29.417	13496.4668	136.70	Q	.	.	.	V.
29.500	13497.3369	126.31	Q	.	.	.	V.
29.583	13498.1494	117.93	Q	.	.	.	V.
29.667	13498.9043	109.62	Q	.	.	.	V.
29.750	13499.6025	101.36	Q	.	.	.	V.
29.833	13500.2441	93.15	Q	.	.	.	V.
29.917	13500.8291	85.01	Q	.	.	.	V.
30.000	13501.3594	76.93	Q	.	.	.	V.
30.083	13501.8350	69.00	Q	.	.	.	V.
30.167	13502.2812	64.84	Q	.	.	.	V.
30.250	13502.7119	62.58	Q	.	.	.	V.
30.333	13503.1279	60.35	Q	.	.	.	V.
30.417	13503.5283	58.14	Q	.	.	.	V.
30.500	13503.9131	55.94	Q	.	.	.	V.
30.583	13504.2832	53.76	Q	.	.	.	V.
30.667	13504.6387	51.61	Q	.	.	.	V.
30.750	13504.9795	49.47	Q	.	.	.	V.
30.833	13505.3057	47.34	Q	.	.	.	V.
30.917	13505.6172	45.24	Q	.	.	.	V.
31.000	13505.9141	43.15	Q	.	.	.	V.
31.083	13506.1973	41.06	Q	.	.	.	V.
31.167	13506.4658	39.00	Q	.	.	.	V.
31.250	13506.7207	36.98	Q	.	.	.	V.
31.333	13506.9609	34.93	Q	.	.	.	V.
31.417	13507.1875	32.93	Q	.	.	.	V.
31.500	13507.4004	30.91	Q	.	.	.	V.
31.583	13507.5996	28.94	Q	.	.	.	V.
31.667	13507.7852	26.99	Q	.	.	.	V.
31.750	13507.9580	25.05	Q	.	.	.	V.
31.833	13508.1172	23.12	Q	.	.	.	V.
31.917	13508.2637	21.20	Q	.	.	.	V.
32.000	13508.3965	19.30	Q	.	.	.	V.
32.083	13508.5166	17.41	Q	.	.	.	V.
32.167	13508.6240	15.53	Q	.	.	.	V.
32.250	13508.7178	13.67	Q	.	.	.	V.
32.333	13508.7988	11.81	Q	.	.	.	V.
32.417	13508.8672	9.97	Q	.	.	.	V.
32.500	13508.9229	8.14	Q	.	.	.	V.
32.583	13508.9668	6.32	Q	.	.	.	V.
32.667	13508.9980	4.51	Q	.	.	.	V.
32.750	13509.0166	2.71	Q	.	.	.	V.
32.833	13509.0234	0.93	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%	1970.0
10%	1440.0
20%	1170.0
30%	665.0
40%	510.0
50%	415.0
60%	350.0
70%	295.0
80%	230.0
90%	145.0

=====
 END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134C *
* 25-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV2534CS.DAT
TIME/DATE OF STUDY: 14:38 01/02/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 66557.797 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.582 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.285
LOW LOSS FRACTION = 0.449
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.40
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.76
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.05
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.91
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.80
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.88

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.294
30-MINUTE FACTOR = 0.352
1-HOUR FACTOR = 0.397
3-HOUR FACTOR = 0.741
6-HOUR FACTOR = 0.887
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.227

UNIT HYDROGRAPH DETERMINATION

Table with 3 columns: INTERVAL NUMBER, "S" GRAPH MEAN VALUES, UNIT HYDROGRAPH ORDINATES (CFS). Rows 1-48.

49	85.155	10060.070
50	86.307	9268.476
51	87.304	8026.366
52	88.222	7393.090
53	88.987	6150.980
54	89.745	6103.509
55	90.452	5694.324
56	91.132	5469.066
57	91.809	5455.617
58	92.444	5106.125
59	93.059	4950.262
60	93.673	4946.639
61	94.192	4174.511
62	94.602	3302.590
63	95.012	3295.344
64	95.422	3302.590
65	95.831	3290.431
66	96.149	2564.607
67	96.402	2036.161
68	96.655	2036.100
69	96.909	2038.556
70	97.162	2038.556
71	97.415	2038.556
72	97.668	2036.161
73	97.918	2009.324
74	98.042	998.552
75	98.102	489.573
76	98.163	484.660
77	98.223	487.116
78	98.284	489.511
79	98.345	487.116
80	98.405	484.721
81	98.465	487.055
82	98.526	489.573
83	98.586	484.660
84	98.647	487.116
85	98.708	489.573
86	98.768	487.116
87	98.828	482.203
88	98.889	491.968
89	98.949	482.265
90	99.010	491.968
91	99.070	482.265
92	99.130	482.265
93	99.190	482.265
94	99.250	482.265
95	99.310	482.265
96	99.370	482.265
97	99.430	482.265
98	99.490	482.265
99	99.549	482.265
100	99.609	482.265
101	99.669	482.265
102	99.729	482.265
103	99.789	482.265
104	99.849	482.265
105	99.909	482.265
106	99.969	482.265

107

100.000

250.866

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11194.3809
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 14083.2744

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.	4200.0	8400.0	12600.0	16800.0
0.083	0.0392	5.69	Q	.	.	.	.
0.167	0.1568	17.08	Q	.	.	.	.
0.250	0.3531	28.50	Q	.	.	.	.
0.333	0.6283	39.96	Q	.	.	.	.
0.417	0.9826	51.45	Q	.	.	.	.
0.500	1.4232	63.97	Q	.	.	.	.
0.583	1.9806	80.94	Q	.	.	.	.
0.667	2.6588	98.48	Q	.	.	.	.
0.750	3.4583	116.09	Q	.	.	.	.
0.833	4.4309	141.22	Q	.	.	.	.
0.917	5.6260	173.52	Q	.	.	.	.
1.000	7.0838	211.67	Q	.	.	.	.
1.083	8.8486	256.26	Q	.	.	.	.
1.167	10.9761	308.91	Q	.	.	.	.
1.250	13.4562	360.10	Q	.	.	.	.
1.333	16.2864	410.95	Q	.	.	.	.
1.417	19.5604	475.38	VQ	.	.	.	.
1.500	23.2694	538.55	VQ	.	.	.	.
1.583	27.3552	593.25	VQ	.	.	.	.
1.667	31.8533	653.12	VQ	.	.	.	.
1.750	36.8592	726.86	VQ	.	.	.	.
1.833	42.3266	793.87	VQ	.	.	.	.
1.917	48.2024	853.16	V Q	.	.	.	.
2.000	54.5630	923.56	V Q	.	.	.	.
2.083	61.4374	998.16	V Q	.	.	.	.
2.167	68.9299	1087.92	V Q	.	.	.	.
2.250	76.9278	1161.29	V Q	.	.	.	.
2.333	85.4391	1235.84	V Q	.	.	.	.
2.417	94.6239	1333.64	V Q	.	.	.	.
2.500	104.4569	1427.75	V Q	.	.	.	.
2.583	115.0023	1531.19	V Q	.	.	.	.
2.667	126.2292	1630.15	V Q	.	.	.	.
2.750	137.9875	1707.30	V Q	.	.	.	.
2.833	150.2559	1781.38	V Q	.	.	.	.
2.917	163.1049	1865.67	V Q	.	.	.	.
3.000	176.6570	1967.77	V Q	.	.	.	.
3.083	190.8497	2060.78	V Q	.	.	.	.
3.167	205.5623	2136.27	V Q	.	.	.	.
3.250	220.8060	2213.39	V Q	.	.	.	.
3.333	236.5706	2289.01	V Q	.	.	.	.
3.417	252.8072	2357.56	V Q	.	.	.	.
3.500	269.5293	2428.05	V Q	.	.	.	.
3.583	286.6662	2488.28	V Q	.	.	.	.
3.667	304.1630	2540.54	V Q	.	.	.	.
3.750	322.0214	2593.04	V Q	.	.	.	.
3.833	340.2551	2647.53	V Q	.	.	.	.
3.917	358.8566	2700.94	.V Q	.	.	.	.

4.000	377.8052	2751.33	.V Q	.	.	.	.
4.083	397.0815	2798.91	.V Q	.	.	.	.
4.167	416.6659	2843.67	.V Q	.	.	.	.
4.250	436.5271	2883.84	.V Q	.	.	.	.
4.333	456.6496	2921.79	.V Q	.	.	.	.
4.417	477.0016	2955.12	.V Q	.	.	.	.
4.500	497.5834	2988.47	.V Q	.	.	.	.
4.583	518.3849	3020.38	.V Q	.	.	.	.
4.667	539.4016	3051.62	.V Q	.	.	.	.
4.750	560.6339	3082.94	.V Q	.	.	.	.
4.833	582.0740	3113.10	.V Q	.	.	.	.
4.917	603.7187	3142.81	.V Q	.	.	.	.
5.000	625.5692	3172.68	.V Q	.	.	.	.
5.083	647.6059	3199.74	.V Q	.	.	.	.
5.167	669.8073	3223.64	.V Q	.	.	.	.
5.250	692.1738	3247.63	.V Q	.	.	.	.
5.333	714.7071	3271.83	. V Q	.	.	.	.
5.417	737.4075	3296.10	. V Q	.	.	.	.
5.500	760.2573	3317.78	. V Q	.	.	.	.
5.583	783.2432	3337.56	. V Q	.	.	.	.
5.667	806.3665	3357.50	. V Q	.	.	.	.
5.750	829.6281	3377.58	. V Q	.	.	.	.
5.833	853.0291	3397.83	. V Q	.	.	.	.
5.917	876.5705	3418.21	. V Q	.	.	.	.
6.000	900.2534	3438.76	. V Q	.	.	.	.
6.083	924.0781	3459.34	. V Q	.	.	.	.
6.167	948.0190	3476.23	. V Q	.	.	.	.
6.250	972.0638	3491.30	. V Q	.	.	.	.
6.333	996.2134	3506.52	. V Q	.	.	.	.
6.417	1020.4688	3521.88	. V Q	.	.	.	.
6.500	1044.8312	3537.42	. V Q	.	.	.	.
6.583	1069.3014	3553.08	. V Q	.	.	.	.
6.667	1093.8807	3568.92	. V Q	.	.	.	.
6.750	1118.5701	3584.90	. V Q	.	.	.	.
6.833	1143.3708	3601.08	. V Q	.	.	.	.
6.917	1168.2839	3617.38	. V Q	.	.	.	.
7.000	1193.3107	3633.89	. V Q	.	.	.	.
7.083	1218.4521	3650.55	. V Q	.	.	.	.
7.167	1243.7097	3667.41	. V Q	.	.	.	.
7.250	1269.0844	3684.40	. V Q	.	.	.	.
7.333	1294.5778	3701.64	. V Q	.	.	.	.
7.417	1320.1907	3718.99	. V Q	.	.	.	.
7.500	1345.9249	3736.61	. V Q	.	.	.	.
7.583	1371.7814	3754.35	. V Q	.	.	.	.
7.667	1397.7616	3772.33	. V Q	.	.	.	.
7.750	1423.8667	3790.46	. V Q	.	.	.	.
7.833	1450.0984	3808.85	. V Q	.	.	.	.
7.917	1476.4579	3827.40	. V Q	.	.	.	.
8.000	1502.9469	3846.21	. V Q	.	.	.	.
8.083	1529.5667	3865.19	. V Q	.	.	.	.
8.167	1556.3190	3884.44	. V Q	.	.	.	.
8.250	1583.2052	3903.88	. V Q	.	.	.	.
8.333	1610.2272	3923.58	. V Q	.	.	.	.
8.417	1637.3862	3943.50	. V Q	.	.	.	.
8.500	1664.6843	3963.68	. V Q	.	.	.	.
8.583	1692.1229	3984.08	. V Q	.	.	.	.
8.667	1719.7040	4004.77	. V Q	.	.	.	.
8.750	1747.4291	4025.68	. V Q	.	.	.	.

8.833	1775.3003	4046.90	.	V	Q.	.	.	.
8.917	1803.3130	4067.45	.	V	Q.	.	.	.
9.000	1831.4629	4087.36	.	V	Q.	.	.	.
9.083	1859.7516	4107.51	.	V	Q.	.	.	.
9.167	1888.1813	4127.99	.	V	Q.	.	.	.
9.250	1916.7537	4148.71	.	V	Q.	.	.	.
9.333	1945.4711	4169.78	.	V	Q.	.	.	.
9.417	1974.3354	4191.10	.	V	Q.	.	.	.
9.500	2003.3491	4212.79	.	V	Q	.	.	.
9.583	2032.5140	4234.75	.	V	Q	.	.	.
9.667	2061.8328	4257.08	.	V	Q	.	.	.
9.750	2091.3074	4279.70	.	V	Q	.	.	.
9.833	2120.9404	4302.72	.	V	Q	.	.	.
9.917	2150.7341	4326.04	.	V	Q	.	.	.
10.000	2180.6912	4349.78	.	V	Q	.	.	.
10.083	2210.8140	4373.84	.	V	Q	.	.	.
10.167	2241.1055	4398.33	.	V	Q	.	.	.
10.250	2271.5681	4423.16	.	V	Q	.	.	.
10.333	2302.2048	4448.46	.	V	Q	.	.	.
10.417	2333.0183	4474.11	.	V	Q	.	.	.
10.500	2364.0117	4500.24	.	V	Q	.	.	.
10.583	2395.1877	4526.76	.	V	Q	.	.	.
10.667	2426.5498	4553.78	.	V	Q	.	.	.
10.750	2458.1008	4581.22	.	V	Q	.	.	.
10.833	2489.8445	4609.18	.	V	Q	.	.	.
10.917	2521.7837	4637.58	.	V	.Q	.	.	.
11.000	2553.9224	4666.55	.	V	.Q	.	.	.
11.083	2586.2639	4695.98	.	V	.Q	.	.	.
11.167	2618.8123	4726.01	.	V	.Q	.	.	.
11.250	2651.5708	4756.53	.	V	.Q	.	.	.
11.333	2684.5439	4787.69	.	V	.Q	.	.	.
11.417	2717.7351	4819.37	.	V	.Q	.	.	.
11.500	2751.1492	4851.73	.	V	.Q	.	.	.
11.583	2784.7900	4884.66	.	V	.Q	.	.	.
11.667	2818.6626	4918.30	.	V	.Q	.	.	.
11.750	2852.7710	4952.54	.	V	.Q	.	.	.
11.833	2887.1206	4987.56	.	V	.Q	.	.	.
11.917	2921.7158	5023.22	.	V	.Q	.	.	.
12.000	2956.5623	5059.70	.	V	.Q	.	.	.
12.083	2991.7371	5107.37	.	V	.Q	.	.	.
12.167	3027.3181	5166.37	.	V	.Q	.	.	.
12.250	3063.3098	5226.00	.	V	.Q	.	.	.
12.333	3099.7180	5286.46	.	V	.Q	.	.	.
12.417	3136.5471	5347.60	.	V	.Q	.	.	.
12.500	3173.8162	5411.45	.	V	.Q	.	.	.
12.583	3211.5859	5484.18	.	V	.Q	.	.	.
12.667	3249.8696	5558.79	.	V	.Q	.	.	.
12.750	3288.6721	5634.13	.	V	.Q	.	.	.
12.833	3328.0952	5724.23	.	V	.Q	.	.	.
12.917	3368.2341	5828.16	.	V	.Q	.	.	.
13.000	3409.1680	5943.59	.	V	.Q	.	.	.
13.083	3450.9817	6071.36	.	V	.Q	.	.	.
13.167	3493.7820	6214.59	.	V	.Q	.	.	.
13.250	3537.5522	6355.45	.	V	.Q	.	.	.
13.333	3582.2917	6496.17	.	V	.Q	.	.	.
13.417	3628.1758	6662.36	.	V	.Q	.	.	.
13.500	3675.1914	6826.66	.	V	.Q	.	.	.
13.583	3723.2324	6975.54	.	V	.Q	.	.	.

13.667	3772.3687	7134.57	.	V	Q	.	.	.
13.750	3822.7791	7319.58	.	V	Q	.	.	.
13.833	3874.3811	7492.62	.	.V	Q	.	.	.
13.917	3927.0786	7651.68	.	.V	Q	.	.	.
14.000	3981.0178	7831.98	.	.V	Q	.	.	.
14.083	4036.3210	8030.03	.	.V	Q.	.	.	.
14.167	4093.2493	8265.98	.	.V	Q.	.	.	.
14.250	4151.5903	8471.13	.	.V	Q	.	.	.
14.333	4211.3574	8678.21	.	.V	Q	.	.	.
14.417	4272.8442	8927.90	.	.V	.Q	.	.	.
14.500	4336.0122	9172.00	.	.V	.Q	.	.	.
14.583	4401.0264	9440.06	.	.V	.Q	.	.	.
14.667	4467.8311	9700.02	.	.V	.Q	.	.	.
14.750	4536.1401	9918.49	.	.V	.Q	.	.	.
14.833	4605.9990	10143.48	.	.V	.Q	.	.	.
14.917	4677.6118	10398.15	.	.V	.Q	.	.	.
15.000	4751.2607	10693.85	.	.V	.Q	.	.	.
15.083	4826.8872	10980.97	.	.V	.Q	.	.	.
15.167	4904.3423	11246.49	.	.V	.Q	.	.	.
15.250	4983.6055	11509.01	.	.V	.Q	.	.	.
15.333	5064.6289	11764.62	.	.V	.Q	.	.	.
15.417	5147.3643	12013.17	.	.V	.Q	.	.	.
15.500	5231.7061	12246.41	.	.V	.Q	.	.	.
15.583	5317.4116	12444.42	.	.V	.Q	.	.	.
15.667	5404.4355	12635.88	.	.V	.Q	.	.	.
15.750	5492.9023	12845.38	.	.V	.Q	.	.	.
15.833	5582.7041	13039.21	.	.V	.Q	.	.	.
15.917	5673.6982	13212.32	.	.V	.Q	.	.	.
16.000	5766.0625	13411.29	.	.V	.Q	.	.	.
16.083	5860.5493	13719.51	.	.V	.Q	.	.	.
16.167	5957.0547	14012.55	.	.V	.Q	.	.	.
16.250	6054.3716	14130.40	.	.V	.Q	.	.	.
16.333	6152.3740	14229.92	.	.V	.Q	.	.	.
16.417	6251.2915	14362.84	.	.V	.Q	.	.	.
16.500	6351.1763	14503.24	.	.V	.Q	.	.	.
16.583	6452.5483	14719.22	.	.V	.Q	.	.	.
16.667	6554.8623	14856.02	.	.V	.Q	.	.	.
16.750	6657.6772	14928.70	.	.V	.Q	.	.	.
16.833	6761.9893	15146.12	.	.V	.Q	.	.	.
16.917	6868.1045	15407.95	.	.V	.Q	.	.	.
17.000	6976.0029	15666.85	.	.V	.Q	.	.	.
17.083	7085.1763	15851.99	.	.V	.Q	.	.	.
17.167	7195.6011	16033.68	.	.V	.Q	.	.	.
17.250	7306.3667	16083.16	.	.V	.Q	.	.	.
17.333	7417.5737	16147.28	.	.V	.Q	.	.	.
17.417	7530.7095	16427.29	.	.V	.Q	.	.	.
17.500	7643.6104	16393.21	.	.V	.Q	.	.	.
17.583	7755.6968	16274.98	.	.V	.Q	.	.	.
17.667	7868.6675	16403.36	.	.V	.Q	.	.	.
17.750	7983.2036	16630.65	.	.V	.Q	.	.	.
17.833	8096.5381	16456.15	.	.V	.Q	.	.	.
17.917	8208.5830	16268.88	.	.V	.Q	.	.	.
18.000	8321.9512	16460.99	.	.V	.Q	.	.	.
18.083	8435.9600	16554.10	.	.V	.Q	.	.	.
18.167	8551.4961	16775.88	.	.V	.Q	.	.	.
18.250	8664.1689	16360.09	.	.V	.Q	.	.	.
18.333	8776.4658	16305.45	.	.V	.Q	.	.	.
18.417	8891.1953	16658.77	.	.V	.Q	.	.	.

18.500	9005.2930	16566.99	.	.	.	V	.	Q.
18.583	9119.8711	16636.75	.	.	.	V	.	Q.
18.667	9232.6143	16370.31	.	.	.	V	.	Q.
18.750	9341.8975	15867.86	.	.	.	V	.	Q.
18.833	9450.5654	15778.65	.	.	.	V	.	Q.
18.917	9560.6963	15991.01	.	.	.	V	.	Q.
19.000	9672.7480	16269.87	.	.	.	V	.	Q.
19.083	9782.4570	15929.71	.	.	.	V	.	Q.
19.167	9888.4219	15386.13	.	.	.	V	.	Q.
19.250	9993.5479	15264.33	.	.	.	V	.	Q.
19.333	10097.7168	15125.27	.	.	.	V	.	Q.
19.417	10199.7109	14809.59	.	.	.	V	.	Q.
19.500	10300.3438	14611.86	.	.	.	V	.	Q.
19.583	10398.0518	14187.20	.	.	.	V	.	Q.
19.667	10493.2939	13829.19	.	.	.	V	.	Q.
19.750	10587.2471	13642.06	.	.	.	V	.	Q.
19.833	10680.2451	13503.35	.	.	.	V	.	Q.
19.917	10771.6885	13277.60	.	.	.	V	.	Q.
20.000	10860.7979	12938.68	.	.	.	Q	.	.
20.083	10947.5947	12602.87	.	.	.	Q	.	.
20.167	11032.0293	12259.84	.	.	.	Q	.	.
20.250	11114.0303	11906.54	.	.	.	Q	.	.
20.333	11193.8623	11591.61	.	.	.	Q	.	.
20.417	11271.0518	11207.86	.	.	.	Q	.	.
20.500	11346.2578	10919.98	.	.	.	Q	.	.
20.583	11419.2266	10595.03	.	.	.	Q	.	.
20.667	11490.1709	10301.12	.	.	.	Q	.	.
20.750	11559.3975	10051.73	.	.	.	Q	.	.
20.833	11626.8105	9788.41	.	.	.	Q	.	.
20.917	11692.3662	9518.65	.	.	.	Q	.	.
21.000	11755.8564	9218.81	.	.	.	Q	.	.
21.083	11817.0264	8881.91	.	.	.	Q	.	.
21.167	11876.1270	8581.42	.	.	.	Q	.	.
21.250	11933.6514	8352.55	.	.	.	Q	.	.
21.333	11989.6436	8130.07	.	.	.	Q	.	.
21.417	12044.1689	7917.13	.	.	.	Q	.	.
21.500	12096.8721	7652.50	.	.	.	Q	.	.
21.583	12148.0732	7434.38	.	.	.	Q	.	.
21.667	12198.1660	7273.50	.	.	.	Q	.	.
21.750	12247.1592	7113.83	.	.	.	Q	.	.
21.833	12295.0283	6950.56	.	.	.	Q	.	.
21.917	12341.7656	6786.30	.	.	.	Q	.	.
22.000	12387.3730	6622.20	.	.	.	Q	.	.
22.083	12431.8545	6458.71	.	.	.	Q	.	.
22.167	12474.8105	6237.20	.	.	.	Q	.	.
22.250	12516.6094	6069.24	.	.	.	Q	.	.
22.333	12557.5615	5946.30	.	.	.	Q	.	.
22.417	12597.7529	5835.81	.	.	.	Q	.	.
22.500	12637.1758	5724.15	.	.	.	Q	.	.
22.583	12675.8486	5615.23	.	.	.	Q	.	.
22.667	12713.7871	5508.62	.	.	.	Q	.	.
22.750	12751.0000	5403.36	.	.	.	Q	.	.
22.833	12787.5107	5301.29	.	.	.	Q	.	.
22.917	12823.3184	5199.21	.	.	.	Q	.	.
23.000	12858.4209	5096.83	.	.	.	Q	.	.
23.083	12892.8623	5000.94	.	.	.	Q	.	.
23.167	12926.7363	4918.49	.	.	.	Q	.	.
23.250	12960.0742	4840.72	.	.	.	Q	.	.

23.333	12992.8945	4765.52	.	.	.	.Q	.	V
23.417	13025.1982	4690.48	.	.	.	.Q	.	V
23.500	13057.0391	4623.29	.	.	.	.Q	.	V
23.583	13088.4424	4559.75	.	.	.	Q	.	V
23.667	13119.4229	4498.41	.	.	.	Q	.	V
23.750	13149.9893	4438.20	.	.	.	Q	.	V
23.833	13180.1494	4379.28	.	.	.	Q	.	V
23.917	13209.9111	4321.47	.	.	.	Q	.	V
24.000	13239.2832	4264.77	.	.	.	Q	.	V
24.083	13268.2334	4203.62	.	.	.	Q	.	V
24.167	13296.7803	4145.04	.	.	.	Q.	.	V
24.250	13324.9707	4093.31	.	.	.	Q.	.	V
24.333	13352.8271	4044.80	.	.	.	Q.	.	V
24.417	13380.3545	3996.93	.	.	.	Q.	.	V
24.500	13407.5479	3948.49	.	.	.	Q.	.	V
24.583	13434.3867	3896.93	.	.	.	Q.	.	V
24.667	13460.8740	3845.96	.	.	.	Q.	.	V
24.750	13487.0059	3794.30	.	.	.	Q.	.	V
24.833	13512.7168	3733.27	.	.	.	Q.	.	V
24.917	13537.8457	3648.67	.	.	.	Q.	.	V
25.000	13562.3633	3559.92	.	.	.	Q.	.	V
25.083	13586.3652	3485.14	.	.	.	Q.	.	V
25.167	13609.8076	3403.83	.	.	.	Q.	.	V
25.250	13632.6973	3323.59	.	.	.	Q.	.	V
25.333	13655.0273	3242.39	.	.	.	Q.	.	V
25.417	13676.7109	3148.39	.	.	.	Q.	.	V
25.500	13697.7607	3056.41	.	.	.	Q.	.	V
25.583	13718.2412	2973.77	.	.	.	Q.	.	V
25.667	13738.1221	2886.72	.	.	.	Q.	.	V
25.750	13757.3135	2786.60	.	.	.	Q.	.	V
25.833	13775.8682	2694.09	.	.	.	Q.	.	V
25.917	13793.8545	2611.67	.	.	.	Q.	.	V
26.000	13811.2148	2520.68	.	.	.	Q.	.	V
26.083	13827.9268	2426.55	.	.	.	Q.	.	V
26.167	13843.8936	2318.37	.	.	.	Q.	.	V
26.250	13859.2363	2227.71	.	.	.	Q.	.	V
26.333	13873.9531	2136.90	.	.	.	Q.	.	V
26.417	13887.8916	2023.87	.	.	.	Q.	.	V
26.500	13901.0850	1915.69	.	.	.	Q.	.	V
26.583	13913.4766	1799.33	.	.	.	Q.	.	V
26.667	13925.1064	1688.61	.	.	.	Q.	.	V
26.750	13936.1309	1600.80	.	.	.	Q.	.	V
26.833	13946.5781	1516.99	.	.	.	Q.	.	V
26.917	13956.3955	1425.49	.	.	.	Q.	.	V
27.000	13965.4795	1318.96	.	.	.	Q.	.	V
27.083	13973.8994	1222.61	.	.	.	Q.	.	V
27.167	13981.7832	1144.79	.	.	.	Q.	.	V
27.250	13989.1260	1066.19	.	.	.	Q.	.	V
27.333	13995.9443	989.96	.	.	.	Q.	.	V
27.417	14002.2910	921.60	.	.	.	Q.	.	V
27.500	14008.1592	852.07	.	.	.	Q.	.	V
27.583	14013.6240	793.53	.	.	.	.Q	.	V
27.667	14018.7451	743.63	.	.	.	.Q	.	V
27.750	14023.5254	694.05	.	.	.	.Q	.	V
27.833	14027.9541	643.07	.	.	.	.Q	.	V
27.917	14032.0430	593.74	.	.	.	.Q	.	V
28.000	14035.8174	548.01	.	.	.	.Q	.	V
28.083	14039.2998	505.60	.	.	.	.Q	.	V

28.167	14042.5127	466.52	.Q	.	.	.	V.
28.250	14045.4912	432.48	.Q	.	.	.	V.
28.333	14048.2539	401.11	Q	.	.	.	V.
28.417	14050.8350	374.71	Q	.	.	.	V.
28.500	14053.2363	348.69	Q	.	.	.	V.
28.583	14055.4707	324.43	Q	.	.	.	V.
28.667	14057.5449	301.21	Q	.	.	.	V.
28.750	14059.4609	278.20	Q	.	.	.	V.
28.833	14061.2285	256.70	Q	.	.	.	V.
28.917	14062.8535	235.95	Q	.	.	.	V.
29.000	14064.3369	215.35	Q	.	.	.	V.
29.083	14065.6992	197.86	Q	.	.	.	V.
29.167	14066.9648	183.82	Q	.	.	.	V.
29.250	14068.1348	169.91	Q	.	.	.	V.
29.333	14069.2100	156.07	Q	.	.	.	V.
29.417	14070.1904	142.38	Q	.	.	.	V.
29.500	14071.0967	131.56	Q	.	.	.	V.
29.583	14071.9424	122.84	Q	.	.	.	V.
29.667	14072.7285	114.18	Q	.	.	.	V.
29.750	14073.4561	105.57	Q	.	.	.	V.
29.833	14074.1240	97.03	Q	.	.	.	V.
29.917	14074.7334	88.54	Q	.	.	.	V.
30.000	14075.2852	80.12	Q	.	.	.	V.
30.083	14075.7803	71.87	Q	.	.	.	V.
30.167	14076.2451	67.53	Q	.	.	.	V.
30.250	14076.6943	65.18	Q	.	.	.	V.
30.333	14077.1270	62.86	Q	.	.	.	V.
30.417	14077.5439	60.56	Q	.	.	.	V.
30.500	14077.9453	58.26	Q	.	.	.	V.
30.583	14078.3311	55.99	Q	.	.	.	V.
30.667	14078.7012	53.75	Q	.	.	.	V.
30.750	14079.0557	51.52	Q	.	.	.	V.
30.833	14079.3955	49.30	Q	.	.	.	V.
30.917	14079.7197	47.12	Q	.	.	.	V.
31.000	14080.0293	44.94	Q	.	.	.	V.
31.083	14080.3242	42.77	Q	.	.	.	V.
31.167	14080.6035	40.62	Q	.	.	.	V.
31.250	14080.8691	38.51	Q	.	.	.	V.
31.333	14081.1201	36.38	Q	.	.	.	V.
31.417	14081.3564	34.30	Q	.	.	.	V.
31.500	14081.5781	32.19	Q	.	.	.	V.
31.583	14081.7861	30.14	Q	.	.	.	V.
31.667	14081.9795	28.11	Q	.	.	.	V.
31.750	14082.1592	26.09	Q	.	.	.	V.
31.833	14082.3252	24.08	Q	.	.	.	V.
31.917	14082.4775	22.08	Q	.	.	.	V.
32.000	14082.6162	20.10	Q	.	.	.	V.
32.083	14082.7412	18.13	Q	.	.	.	V.
32.167	14082.8525	16.18	Q	.	.	.	V.
32.250	14082.9502	14.23	Q	.	.	.	V.
32.333	14083.0352	12.30	Q	.	.	.	V.
32.417	14083.1064	10.38	Q	.	.	.	V.
32.500	14083.1650	8.48	Q	.	.	.	V.
32.583	14083.2100	6.58	Q	.	.	.	V.
32.667	14083.2422	4.70	Q	.	.	.	V.
32.750	14083.2617	2.83	Q	.	.	.	V.
32.833	14083.2686	0.97	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%	1970.0
10%	1440.0
20%	1175.0
30%	665.0
40%	510.0
50%	420.0
60%	355.0
70%	300.0
80%	230.0
90%	155.0

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 END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134T *
* 25-YR EV JANUARY 2019 CCHI *

FILE NAME: EV2534TS.DAT
TIME/DATE OF STUDY: 14:39 01/02/2019

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

>>>>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 = 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

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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

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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.	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

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 137 *
* 25-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV25137S.DAT
TIME/DATE OF STUDY: 14:46 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 137.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 67798.398 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.696 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.450
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.40
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.76
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.04
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.90
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.79
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.86

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.291
30-MINUTE FACTOR = 0.350
1-HOUR FACTOR = 0.394
3-HOUR FACTOR = 0.738
6-HOUR FACTOR = 0.886
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.091

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.177	1448.245
2	0.530	2896.480
3	0.883	2896.487
4	1.236	2896.488
5	1.590	2896.479
6	1.953	2983.016
7	2.451	4076.961
8	2.988	4407.696
9	3.526	4407.694
10	4.150	5114.558
11	5.106	7839.890
12	6.150	8564.920
13	7.427	10467.153
14	8.922	12257.587
15	10.534	13214.643
16	12.080	12682.102
17	13.657	12924.874
18	15.791	17500.088
19	17.565	14542.766
20	19.213	13517.728
21	21.078	15286.802
22	23.344	18585.531
23	25.313	16140.929
24	27.079	14482.453
25	29.178	17207.793
26	31.401	18226.850
27	34.067	21863.055
28	36.374	18915.750
29	38.354	16237.343
30	41.324	24344.441
31	44.110	22850.037
32	46.985	23567.307
33	50.237	26667.123
34	52.581	19216.584
35	54.758	17852.982
36	56.987	18280.430
37	59.670	21997.145
38	62.750	25254.666
39	65.134	19541.969
40	67.208	17011.102
41	69.500	18792.703
42	71.478	16212.571
43	73.423	15947.082
44	75.352	15821.407
45	76.911	12781.425
46	78.285	11264.124
47	79.661	11285.455
48	81.093	11740.052

49	82.489	11446.100
50	83.784	10620.983
51	84.989	9877.564
52	86.120	9272.646
53	87.085	7917.804
54	88.004	7531.894
55	88.755	6160.162
56	89.483	5961.983
57	90.186	5769.060
58	90.839	5349.308
59	91.489	5336.421
60	92.124	5204.302
61	92.715	4848.107
62	93.304	4828.652
63	93.883	4745.765
64	94.321	3593.042
65	94.714	3217.392
66	95.106	3217.392
67	95.499	3219.956
68	95.888	3188.866
69	96.175	2359.934
70	96.418	1986.911
71	96.660	1986.911
72	96.903	1989.476
73	97.145	1986.911
74	97.387	1986.911
75	97.630	1986.911
76	97.872	1989.476
77	98.027	1269.391
78	98.086	479.243
79	98.143	474.051
80	98.201	474.051
81	98.259	476.616
82	98.317	474.051
83	98.375	476.678
84	98.433	476.678
85	98.491	471.424
86	98.549	476.678
87	98.607	476.616
88	98.665	471.486
89	98.723	476.678
90	98.782	481.808
91	98.839	466.294
92	98.897	481.808
93	98.955	471.486
94	99.012	471.486
95	99.070	471.486
96	99.127	471.486
97	99.185	471.486
98	99.242	471.486
99	99.300	471.486
100	99.357	471.486
101	99.415	471.486
102	99.472	471.486
103	99.530	471.486
104	99.587	471.486
105	99.645	471.486
106	99.702	471.486

107	99.760	471.486
108	99.817	471.486
109	99.875	471.486
110	99.932	471.486
111	99.990	471.486
112	100.000	83.325

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11369.7393
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 14241.8105

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.	4200.0	8400.0	12600.0	16800.0
0.083	0.0379	5.51	Q	.	.	.	.
0.167	0.1518	16.54	Q	.	.	.	.
0.250	0.3419	27.60	Q	.	.	.	.
0.333	0.6083	38.69	Q	.	.	.	.
0.417	0.9514	49.82	Q	.	.	.	.
0.500	1.3736	61.30	Q	.	.	.	.
0.583	1.9038	76.99	Q	.	.	.	.
0.667	2.5510	93.97	Q	.	.	.	.
0.750	3.3156	111.01	Q	.	.	.	.
0.833	4.2163	130.79	Q	.	.	.	.
0.917	5.3250	160.99	Q	.	.	.	.
1.000	6.6613	194.03	Q	.	.	.	.
1.083	8.2757	234.41	Q	.	.	.	.
1.167	10.2159	281.71	Q	.	.	.	.
1.250	12.5079	332.80	Q	.	.	.	.
1.333	15.1388	382.01	Q	.	.	.	.
1.417	18.1161	432.31	VQ	.	.	.	.
1.500	21.5606	500.14	VQ	.	.	.	.
1.583	25.3963	556.94	VQ	.	.	.	.
1.667	29.5975	610.02	VQ	.	.	.	.
1.750	34.2117	669.98	VQ	.	.	.	.
1.833	39.3267	742.69	VQ	.	.	.	.
1.917	44.8797	806.30	VQ	.	.	.	.
2.000	50.8290	863.84	V Q	.	.	.	.
2.083	57.2470	931.90	V Q	.	.	.	.
2.167	64.1620	1004.06	V Q	.	.	.	.
2.250	71.6707	1090.26	V Q	.	.	.	.
2.333	79.6978	1165.53	V Q	.	.	.	.
2.417	88.1748	1230.86	V Q	.	.	.	.
2.500	97.3155	1327.24	V Q	.	.	.	.
2.583	107.0828	1418.21	V Q	.	.	.	.
2.667	117.4977	1512.23	V Q	.	.	.	.
2.750	128.6431	1618.31	V Q	.	.	.	.
2.833	140.3264	1696.41	V Q	.	.	.	.
2.917	152.5136	1769.59	V Q	.	.	.	.
3.000	165.2178	1844.65	V Q	.	.	.	.
3.083	178.5380	1934.09	V Q	.	.	.	.
3.167	192.5614	2036.20	V Q	.	.	.	.
3.250	207.1408	2116.92	V Q	.	.	.	.
3.333	222.2118	2188.32	V Q	.	.	.	.
3.417	237.8229	2266.72	V Q	.	.	.	.
3.500	253.9083	2335.60	V Q	.	.	.	.
3.583	270.4628	2403.71	V Q	.	.	.	.
3.667	287.4847	2471.59	V Q	.	.	.	.
3.750	304.8962	2528.15	V Q	.	.	.	.
3.833	322.6590	2579.16	V Q	.	.	.	.
3.917	340.7751	2630.46	V Q	.	.	.	.

4.000	359.2578	2683.69	.V	Q	.	.	.	.
4.083	378.1008	2736.00	.V	Q	.	.	.	.
4.167	397.2839	2785.39	.V	Q	.	.	.	.
4.250	416.7891	2832.15	.V	Q	.	.	.	.
4.333	436.6019	2876.82	.V	Q	.	.	.	.
4.417	456.6882	2916.52	.V	Q	.	.	.	.
4.500	477.0390	2954.94	.V	Q	.	.	.	.
4.583	497.6197	2988.31	.V	Q	.	.	.	.
4.667	518.4261	3021.10	.V	Q	.	.	.	.
4.750	539.4545	3053.31	.V	Q	.	.	.	.
4.833	560.6948	3084.10	.V	Q	.	.	.	.
4.917	582.1479	3114.99	.V	Q	.	.	.	.
5.000	603.8115	3145.55	.V	Q	.	.	.	.
5.083	625.6773	3174.91	.V	Q	.	.	.	.
5.167	647.7459	3204.36	.V	Q	.	.	.	.
5.250	670.0163	3233.66	.V	Q	.	.	.	.
5.333	692.4594	3258.74	.V	Q	.	.	.	.
5.417	715.0665	3282.55	.V	Q	.	.	.	.
5.500	737.8386	3306.51	.V	Q	.	.	.	.
5.583	760.7767	3330.62	.V	Q	.	.	.	.
5.667	783.8813	3354.79	.V	Q	.	.	.	.
5.750	807.1317	3375.95	.V	Q	.	.	.	.
5.833	830.5192	3395.86	.V	Q	.	.	.	.
5.917	854.0446	3415.90	.V	Q	.	.	.	.
6.000	877.7094	3436.12	.V	Q	.	.	.	.
6.083	901.5142	3456.47	.V	Q	.	.	.	.
6.167	925.4604	3476.99	.V	Q	.	.	.	.
6.250	949.5489	3497.65	.V	Q	.	.	.	.
6.333	973.7810	3518.51	.V	Q	.	.	.	.
6.417	998.1389	3536.77	.V	Q	.	.	.	.
6.500	1022.6031	3552.20	.V	Q	.	.	.	.
6.583	1047.1744	3567.76	.V	Q	.	.	.	.
6.667	1071.8540	3583.48	.V	Q	.	.	.	.
6.750	1096.6429	3599.36	.V	Q	.	.	.	.
6.833	1121.5425	3615.41	.V	Q	.	.	.	.
6.917	1146.5536	3631.61	.V	Q	.	.	.	.
7.000	1171.6776	3648.00	.V	Q	.	.	.	.
7.083	1196.9154	3664.52	.V	Q	.	.	.	.
7.167	1222.2684	3681.26	.V	Q	.	.	.	.
7.250	1247.7378	3698.15	.V	Q	.	.	.	.
7.333	1273.3247	3715.22	.V	Q	.	.	.	.
7.417	1299.0305	3732.48	.V	Q	.	.	.	.
7.500	1324.8567	3749.97	.V	Q	.	.	.	.
7.583	1350.8041	3767.56	.V	Q	.	.	.	.
7.667	1376.8745	3785.44	.V	Q	.	.	.	.
7.750	1403.0691	3803.45	.V	Q	.	.	.	.
7.833	1429.3892	3821.68	.V	Q	.	.	.	.
7.917	1455.8362	3840.10	.V	Q	.	.	.	.
8.000	1482.4116	3858.76	.V	Q	.	.	.	.
8.083	1509.1168	3877.60	.V	Q	.	.	.	.
8.167	1535.9535	3896.69	.V	Q	.	.	.	.
8.250	1562.9231	3915.98	.V	Q	.	.	.	.
8.333	1590.0272	3935.52	.V	Q	.	.	.	.
8.417	1617.2675	3955.28	.V	Q	.	.	.	.
8.500	1644.6455	3975.30	.V	Q	.	.	.	.
8.583	1672.1630	3995.53	.V	Q	.	.	.	.
8.667	1699.8217	4016.05	.V	Q	.	.	.	.
8.750	1727.6233	4036.79	.V	Q	.	.	.	.

8.833	1755.5697	4057.82	.	V	Q.	.	.	.
8.917	1783.6626	4079.09	.	V	Q.	.	.	.
9.000	1811.9041	4100.65	.	V	Q.	.	.	.
9.083	1840.2958	4122.47	.	V	Q.	.	.	.
9.167	1868.8398	4144.60	.	V	Q.	.	.	.
9.250	1897.5382	4167.00	.	V	Q.	.	.	.
9.333	1926.3829	4188.25	.	V	Q.	.	.	.
9.417	1955.3737	4209.45	.	V	Q	.	.	.
9.500	1984.5127	4230.99	.	V	Q	.	.	.
9.583	2013.8021	4252.82	.	V	Q	.	.	.
9.667	2043.2443	4275.00	.	V	Q	.	.	.
9.750	2072.8413	4297.48	.	V	Q	.	.	.
9.833	2102.5957	4320.33	.	V	Q	.	.	.
9.917	2132.5095	4343.50	.	V	Q	.	.	.
10.000	2162.5857	4367.06	.	V	Q	.	.	.
10.083	2192.8264	4390.95	.	V	Q	.	.	.
10.167	2223.2344	4415.25	.	V	Q	.	.	.
10.250	2253.8123	4439.91	.	V	Q	.	.	.
10.333	2284.5627	4464.99	.	V	Q	.	.	.
10.417	2315.4888	4490.45	.	V	Q	.	.	.
10.500	2346.5933	4516.36	.	V	Q	.	.	.
10.583	2377.8789	4542.67	.	V	Q	.	.	.
10.667	2409.3489	4569.45	.	V	Q	.	.	.
10.750	2441.0063	4596.66	.	V	Q	.	.	.
10.833	2472.8545	4624.37	.	V	.Q	.	.	.
10.917	2504.8967	4652.53	.	V	.Q	.	.	.
11.000	2537.1365	4681.21	.	V	.Q	.	.	.
11.083	2569.5771	4710.38	.	V	.Q	.	.	.
11.167	2602.2224	4740.10	.	V	.Q	.	.	.
11.250	2635.0759	4770.34	.	V	.Q	.	.	.
11.333	2668.1418	4801.17	.	V	.Q	.	.	.
11.417	2701.4238	4832.55	.	V	.Q	.	.	.
11.500	2734.9263	4864.55	.	V	.Q	.	.	.
11.583	2768.6531	4897.14	.	V	.Q	.	.	.
11.667	2802.6089	4930.40	.	V	.Q	.	.	.
11.750	2836.7981	4964.28	.	V	.Q	.	.	.
11.833	2871.2256	4998.88	.	V	.Q	.	.	.
11.917	2905.8960	5034.14	.	V	.Q	.	.	.
12.000	2940.8145	5070.17	.	V	.Q	.	.	.
12.083	2976.0566	5117.18	.	V	.Q	.	.	.
12.167	3011.6987	5175.21	.	V	.Q	.	.	.
12.250	3047.7449	5233.91	.	V	.Q	.	.	.
12.333	3084.2007	5293.37	.	V	.Q	.	.	.
12.417	3121.0708	5353.53	.	V	.Q	.	.	.
12.500	3158.3650	5415.13	.	V	.Q	.	.	.
12.583	3196.1421	5485.22	.	V	.Q	.	.	.
12.667	3234.4238	5558.51	.	V	.Q	.	.	.
12.750	3273.2156	5632.54	.	V	.Q	.	.	.
12.833	3312.5576	5712.48	.	V	.Q	.	.	.
12.917	3352.5886	5812.51	.	V	.Q	.	.	.
13.000	3393.3499	5918.53	.	V	.Q	.	.	.
13.083	3434.9387	6038.72	.	V	.Q	.	.	.
13.167	3477.4485	6172.42	.	V	.Q	.	.	.
13.250	3520.9299	6313.51	.	V	.Q	.	.	.
13.333	3565.3625	6451.61	.	V	.Q	.	.	.
13.417	3610.7625	6592.06	.	V	.Q	.	.	.
13.500	3657.3589	6765.79	.	V	.Q	.	.	.
13.583	3705.0112	6919.13	.	V	.Q	.	.	.

13.667	3753.6750	7065.99	.	V	Q	.	.	.
13.750	3803.4421	7226.17	.	V	Q	.	.	.
13.833	3854.4792	7410.58	.	V	Q	.	.	.
13.917	3906.6719	7578.38	.	V	Q	.	.	.
14.000	3959.9451	7735.26	.	.V	Q	.	.	.
14.083	4014.5017	7921.61	.	.V	Q	.	.	.
14.167	4070.4595	8125.06	.	.V	Q.	.	.	.
14.250	4127.9966	8354.38	.	.V	Q.	.	.	.
14.333	4186.9702	8562.95	.	.V	Q	.	.	.
14.417	4247.2495	8752.57	.	.V	Q	.	.	.
14.500	4309.2363	9000.51	.	.V	.Q	.	.	.
14.583	4372.9058	9244.81	.	.V	.Q	.	.	.
14.667	4438.3057	9496.09	.	.V	.Q	.	.	.
14.750	4505.5850	9768.94	.	.V	.Q	.	.	.
14.833	4574.4077	9993.10	.	.V	.Q	.	.	.
14.917	4644.8237	10224.44	.	.V	.Q	.	.	.
15.000	4716.8809	10462.68	.	.V	.Q	.	.	.
15.083	4790.8325	10737.79	.	.V	.Q	.	.	.
15.167	4866.9058	11045.85	.	.V	.Q	.	.	.
15.250	4944.8438	11316.59	.	.V	.Q	.	.	.
15.333	5024.4824	11563.55	.	.V	.Q	.	.	.
15.417	5105.8086	11808.55	.	.V	.Q	.	.	.
15.500	5188.7964	12049.82	.	.V	.Q	.	.	.
15.583	5273.2939	12269.07	.	.V	.Q	.	.	.
15.667	5359.2485	12480.59	.	.V	.Q	.	.	.
15.750	5446.5576	12677.31	.	.V	.Q	.	.	.
15.833	5535.2603	12879.61	.	.V	.Q	.	.	.
15.917	5625.2202	13062.16	.	.V	.Q	.	.	.
16.000	5716.4546	13247.26	.	.V	.Q	.	.	.
16.083	5809.7891	13552.13	.	.V	.Q	.	.	.
16.167	5905.0737	13835.33	.	.V	.Q	.	.	.
16.250	6001.4634	13995.74	.	.V	.Q	.	.	.
16.333	6098.7222	14121.98	.	.V	.Q	.	.	.
16.417	6196.6553	14219.91	.	.V	.Q	.	.	.
16.500	6295.6689	14376.80	.	.V	.Q	.	.	.
16.583	6396.0225	14571.35	.	.V	.Q	.	.	.
16.667	6497.3921	14718.86	.	.V	.Q	.	.	.
16.750	6599.8149	14871.82	.	.V	.Q	.	.	.
16.833	6703.0757	14993.45	.	.V	.Q	.	.	.
16.917	6808.3472	15285.44	.	.V	.Q	.	.	.
17.000	6914.8052	15457.67	.	.V	.Q	.	.	.
17.083	7022.9854	15707.75	.	.V	.Q	.	.	.
17.167	7132.5176	15904.07	.	.V	.Q	.	.	.
17.250	7243.0068	16043.05	.	.V	.Q	.	.	.
17.333	7353.8203	16090.15	.	.V	.Q	.	.	.
17.417	7465.3599	16195.55	.	.V	.Q	.	.	.
17.500	7579.3184	16546.80	.	.V	.Q	.	.	.
17.583	7691.8164	16334.70	.	.V	.Q	.	.	.
17.667	7804.2710	16328.44	.	.V	.Q	.	.	.
17.750	7918.0137	16515.42	.	.V	.Q	.	.	.
17.833	8033.1670	16720.26	.	.V	.Q	.	.	.
17.917	8146.6904	16483.61	.	.V	.Q	.	.	.
18.000	8259.2246	16340.03	.	.V	.Q	.	.	.
18.083	8372.8018	16491.46	.	.V	.Q	.	.	.
18.167	8486.8955	16566.43	.	.V	.Q	.	.	.
18.250	8602.4238	16774.73	.	.V	.Q	.	.	.
18.333	8716.0469	16498.09	.	.V	.Q	.	.	.
18.417	8828.0576	16264.00	.	.V	.Q	.	.	.

18.500	8943.2627	16727.76	.	.	.	V	.	Q.
18.583	9057.4814	16584.59	.	.	.	V	.	Q.
18.667	9171.7480	16591.51	.	.	.	V	.	Q.
18.750	9286.2314	16623.04	.	.	.	V	.	Q.
18.833	9396.2129	15969.26	.	.	.	V	.	Q.
18.917	9505.1152	15812.67	.	.	.	V	.	Q.
19.000	9614.1611	15833.46	.	.	.	V	.	Q.
19.083	9724.9775	16090.52	.	.	.	V	.	Q.
19.167	9836.4082	16179.67	.	.	.	V	.	Q.
19.250	9943.6885	15577.09	.	.	.	V	.	Q.
19.333	10048.6094	15234.53	.	.	.	V	.	Q.
19.417	10153.5195	15232.98	.	.	.	V	.	Q.
19.500	10256.0176	14882.79	.	.	.	V	.	Q.
19.583	10357.1582	14685.66	.	.	.	V	.	Q.
19.667	10456.6982	14453.18	.	.	.	V	.	Q.
19.750	10553.1602	14006.30	.	.	.	V	.	Q.
19.833	10647.4512	13691.12	.	.	.	V	.	Q.
19.917	10740.6172	13527.77	.	.	.	V	.	Q.
20.000	10832.9043	13400.06	.	.	.	V	.	Q.
20.083	10923.4238	13143.46	.	.	.	V	.	Q.
20.167	11011.5859	12801.21	.	.	.	V	.	Q.
20.250	11097.4453	12466.79	.	.	.	V	.	Q.
20.333	11181.2979	12175.37	.	.	.	V	.	Q.
20.417	11262.7930	11833.11	.	.	.	V	.	Q.
20.500	11342.0322	11505.55	.	.	.	V	.	Q.
20.583	11418.6084	11118.83	.	.	.	V	.	Q.
20.667	11493.1377	10821.71	.	.	.	V	.	Q.
20.750	11565.5420	10513.08	.	.	.	V	.	Q.
20.833	11636.1270	10248.96	.	.	.	V	.	Q.
20.917	11705.0693	10010.48	.	.	.	V	.	Q.
21.000	11772.2588	9755.97	.	.	.	V	.	Q.
21.083	11837.4600	9467.23	.	.	.	V	.	Q.
21.167	11900.6689	9177.88	.	.	.	V	.	Q.
21.250	11962.0938	8918.88	.	.	.	V	.	Q.
21.333	12021.3496	8603.92	.	.	.	V	.	Q.
21.417	12078.8252	8345.48	.	.	.	V	.	Q.
21.500	12134.8633	8136.74	.	.	.	V	.	Q.
21.583	12189.5225	7936.44	.	.	.	V	.	Q.
21.667	12242.7021	7721.70	.	.	.	V	.	Q.
21.750	12294.2061	7478.35	.	.	.	V	.	Q.
21.833	12344.4404	7293.99	.	.	.	V	.	Q.
21.917	12393.6006	7138.06	.	.	.	V	.	Q.
22.000	12441.6777	6980.81	.	.	.	V	.	Q.
22.083	12488.6680	6823.03	.	.	.	V	.	Q.
22.167	12534.5996	6669.33	.	.	.	V	.	Q.
22.250	12579.4824	6517.00	.	.	.	V	.	Q.
22.333	12623.3438	6368.73	.	.	.	V	.	Q.
22.417	12665.9072	6180.26	.	.	.	V	.	Q.
22.500	12707.2109	5997.37	.	.	.	V	.	Q.
22.583	12747.7432	5885.35	.	.	.	V	.	Q.
22.667	12787.5381	5778.27	.	.	.	V	.	Q.
22.750	12826.6201	5674.76	.	.	.	V	.	Q.
22.833	12864.9854	5570.69	.	.	.	V	.	Q.
22.917	12902.6436	5467.92	.	.	.	V	.	Q.
23.000	12939.6025	5366.45	.	.	.	V	.	Q.
23.083	12975.8838	5268.05	.	.	.	V	.	Q.
23.167	13011.4980	5171.21	.	.	.	V	.	Q.
23.250	13046.4521	5075.32	.	.	.	V	.	Q.

23.333	13080.7871	4985.47	.	.	.	.Q	.	V
23.417	13114.5605	4903.93	.	.	.	.Q	.	V
23.500	13147.8164	4828.69	.	.	.	.Q	.	V
23.583	13180.5547	4753.55	.	.	.	.Q	.	V
23.667	13212.8008	4682.14	.	.	.	.Q	.	V
23.750	13244.5918	4616.08	.	.	.	.Q	.	V
23.833	13275.9609	4554.86	.	.	.	.Q	.	V
23.917	13306.9160	4494.72	.	.	.	.Q	.	V
24.000	13337.4668	4435.93	.	.	.	.Q	.	V
24.083	13367.5820	4372.75	.	.	.	.Q	.	V
24.167	13397.2324	4305.18	.	.	.	.Q	.	V
24.250	13426.4248	4238.70	.	.	.	.Q	.	V
24.333	13455.1670	4173.34	.	.	.	.Q	.	V
24.417	13483.5010	4114.07	.	.	.	.Q	.	V
24.500	13511.4697	4061.13	.	.	.	.Q	.	V
24.583	13539.0537	4005.22	.	.	.	.Q	.	V
24.667	13566.2754	3952.54	.	.	.	.Q	.	V
24.750	13593.1445	3901.42	.	.	.	.Q	.	V
24.833	13619.6465	3848.07	.	.	.	.Q	.	V
24.917	13645.7129	3784.86	.	.	.	.Q	.	V
25.000	13671.3359	3720.51	.	.	.	.Q	.	V
25.083	13696.4697	3649.46	.	.	.	.Q	.	V
25.167	13721.0596	3570.41	.	.	.	.Q	.	V
25.250	13745.0664	3485.85	.	.	.	.Q	.	V
25.333	13768.3291	3377.71	.	.	.	.Q	.	V
25.417	13791.0107	3293.36	.	.	.	.Q	.	V
25.500	13813.0420	3198.94	.	.	.	.Q	.	V
25.583	13834.5127	3117.53	.	.	.	.Q	.	V
25.667	13855.4336	3037.65	.	.	.	.Q	.	V
25.750	13875.7568	2950.97	.	.	.	.Q	.	V
25.833	13895.4004	2852.31	.	.	.	.Q	.	V
25.917	13914.4336	2763.56	.	.	.	.Q	.	V
26.000	13932.9023	2681.67	.	.	.	.Q	.	V
26.083	13950.7393	2589.98	.	.	.	.Q	.	V
26.167	13967.9229	2495.01	.	.	.	.Q	.	V
26.250	13984.3613	2386.83	.	.	.	.Q	.	V
26.333	14000.1533	2293.06	.	.	.	.Q	.	V
26.417	14015.3789	2210.78	.	.	.	.Q	.	V
26.500	14029.8311	2098.46	.	.	.	.Q	.	V
26.583	14043.5547	1992.72	.	.	.	.Q	.	V
26.667	14056.5371	1885.09	.	.	.	.Q	.	V
26.750	14068.7031	1766.53	.	.	.	.Q	.	V
26.833	14080.2539	1677.13	.	.	.	.Q	.	V
26.917	14091.2295	1593.59	.	.	.	.Q	.	V
27.000	14101.6230	1509.08	.	.	.	.Q	.	V
27.083	14111.3418	1411.10	.	.	.	.Q	.	V
27.167	14120.3047	1301.45	.	.	.	.Q	.	V
27.250	14128.6670	1214.25	.	.	.	.Q	.	V
27.333	14136.5186	1140.04	.	.	.	.Q	.	V
27.417	14143.8203	1060.22	.	.	.	.Q	.	V
27.500	14150.6445	990.81	.	.	.	.Q	.	V
27.583	14157.0010	922.94	.	.	.	.Q	.	V
27.667	14162.8965	856.07	.	.	.	.Q	.	V
27.750	14168.4150	801.23	.	.	.	.Q	.	V
27.833	14173.5977	752.57	.	.	.	.Q	.	V
27.917	14178.4473	704.21	.	.	.	.Q	.	V
28.000	14182.9551	654.50	.	.	.	.Q	.	V
28.083	14187.1309	606.27	.	.	.	.Q	.	V

28.167	14190.9980	561.53	.Q	.	.	.	V.
28.250	14194.5791	519.94	.Q	.	.	.	V.
28.333	14197.8916	480.95	.Q	.	.	.	V.
28.417	14200.9727	447.39	.Q	.	.	.	V.
28.500	14203.8350	415.54	Q	.	.	.	V.
28.583	14206.5146	389.14	Q	.	.	.	V.
28.667	14209.0195	363.68	Q	.	.	.	V.
28.750	14211.3555	339.15	Q	.	.	.	V.
28.833	14213.5342	316.40	Q	.	.	.	V.
28.917	14215.5576	293.86	Q	.	.	.	V.
29.000	14217.4307	271.99	Q	.	.	.	V.
29.083	14219.1641	251.63	Q	.	.	.	V.
29.167	14220.7588	231.49	Q	.	.	.	V.
29.250	14222.2178	211.81	Q	.	.	.	V.
29.333	14223.5723	196.65	Q	.	.	.	V.
29.417	14224.8330	183.02	Q	.	.	.	V.
29.500	14226.0000	169.49	Q	.	.	.	V.
29.583	14227.0752	156.05	Q	.	.	.	V.
29.667	14228.0586	142.82	Q	.	.	.	V.
29.750	14228.9736	132.83	Q	.	.	.	V.
29.833	14229.8301	124.33	Q	.	.	.	V.
29.917	14230.6279	115.90	Q	.	.	.	V.
30.000	14231.3682	107.52	Q	.	.	.	V.
30.083	14232.0518	99.20	Q	.	.	.	V.
30.167	14232.6777	90.95	Q	.	.	.	V.
30.250	14233.2480	82.75	Q	.	.	.	V.
30.333	14233.7617	74.60	Q	.	.	.	V.
30.417	14234.2383	69.24	Q	.	.	.	V.
30.500	14234.6992	66.92	Q	.	.	.	V.
30.583	14235.1445	64.64	Q	.	.	.	V.
30.667	14235.5742	62.38	Q	.	.	.	V.
30.750	14235.9883	60.13	Q	.	.	.	V.
30.833	14236.3867	57.91	Q	.	.	.	V.
30.917	14236.7705	55.70	Q	.	.	.	V.
31.000	14237.1387	53.50	Q	.	.	.	V.
31.083	14237.4922	51.34	Q	.	.	.	V.
31.167	14237.8311	49.18	Q	.	.	.	V.
31.250	14238.1553	47.04	Q	.	.	.	V.
31.333	14238.4648	44.94	Q	.	.	.	V.
31.417	14238.7598	42.83	Q	.	.	.	V.
31.500	14239.0400	40.71	Q	.	.	.	V.
31.583	14239.3066	38.68	Q	.	.	.	V.
31.667	14239.5586	36.59	Q	.	.	.	V.
31.750	14239.7969	34.57	Q	.	.	.	V.
31.833	14240.0215	32.55	Q	.	.	.	V.
31.917	14240.2314	30.55	Q	.	.	.	V.
32.000	14240.4277	28.57	Q	.	.	.	V.
32.083	14240.6113	26.60	Q	.	.	.	V.
32.167	14240.7812	24.64	Q	.	.	.	V.
32.250	14240.9375	22.70	Q	.	.	.	V.
32.333	14241.0801	20.77	Q	.	.	.	V.
32.417	14241.2100	18.85	Q	.	.	.	V.
32.500	14241.3262	16.94	Q	.	.	.	V.
32.583	14241.4297	15.05	Q	.	.	.	V.
32.667	14241.5205	13.17	Q	.	.	.	V.
32.750	14241.5986	11.30	Q	.	.	.	V.
32.833	14241.6641	9.44	Q	.	.	.	V.
32.917	14241.7168	7.59	Q	.	.	.	V.

33.000	14241.7568	5.76	Q	.	.	.	V.
33.083	14241.7842	3.93	Q	.	.	.	V.
33.167	14241.7988	2.12	Q	.	.	.	V.
33.250	14241.8008	0.32	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%	1995.0
10%	1440.0
20%	1180.0
30%	685.0
40%	520.0
50%	425.0
60%	360.0
70%	305.0
80%	235.0
90%	155.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
5 Hutton Centre Drive Suite 500
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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 138 *
* 25-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV25138S.DAT
TIME/DATE OF STUDY: 14:48 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 138.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69102.102 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.782 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.450
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.40
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.76
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.04
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.90
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.78
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.84

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.287
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.392
3-HOUR FACTOR = 0.734
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.995

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.171	1430.460
2	0.514	2860.920
3	0.856	2860.920
4	1.198	2860.923
5	1.541	2860.918
6	1.885	2879.500
7	2.343	3824.212
8	2.864	4353.576
9	3.385	4353.566
10	3.928	4539.227
11	4.785	7161.701
12	5.751	8078.723
13	6.923	9794.429
14	8.255	11127.469
15	9.824	13110.262
16	11.340	12669.503
17	12.837	12516.505
18	14.571	14483.529
19	16.617	17101.033
20	18.219	13391.965
21	19.847	13598.784
22	21.797	16304.322
23	24.015	18529.562
24	25.796	14885.953
25	27.523	14433.502
26	29.679	18013.529
27	31.824	17925.510
28	34.474	22152.914
29	36.591	17689.330
30	38.597	16767.756
31	41.476	24053.797
32	44.184	22634.646
33	46.967	23257.572
34	50.142	26534.123
35	52.431	19128.564
36	54.554	17744.131
37	56.677	17736.990
38	59.196	21052.400
39	62.205	25148.732
40	64.652	20449.559
41	66.695	17072.588
42	68.827	17817.678
43	70.908	17385.900
44	72.733	15252.584
45	74.643	15968.407
46	76.338	14164.088
47	77.684	11244.111
48	79.015	11125.647

49	80.369	11314.948
50	81.768	11689.533
51	83.061	10809.529
52	84.288	10253.805
53	85.433	9565.780
54	86.464	8614.940
55	87.385	7700.890
56	88.232	7075.541
57	88.940	5914.997
58	89.645	5890.386
59	90.313	5582.557
60	90.943	5269.245
61	91.574	5271.923
62	92.184	5098.944
63	92.755	4774.729
64	93.326	4767.907
65	93.887	4688.909
66	94.312	3550.044
67	94.692	3176.798
68	95.072	3176.798
69	95.453	3182.281
70	95.833	3174.056
71	96.132	2501.143
72	96.367	1964.355
73	96.602	1961.677
74	96.837	1964.355
75	97.071	1961.677
76	97.307	1967.096
77	97.541	1958.935
78	97.777	1967.096
79	97.984	1735.523
80	98.059	626.625
81	98.115	465.888
82	98.171	471.371
83	98.228	468.630
84	98.284	468.630
85	98.340	471.307
86	98.396	468.630
87	98.452	468.630
88	98.508	468.630
89	98.564	468.566
90	98.621	474.113
91	98.677	468.630
92	98.733	463.146
93	98.789	474.049
94	98.845	468.630
95	98.901	468.630
96	98.958	474.049
97	99.014	463.146
98	99.069	463.146
99	99.124	463.146
100	99.180	463.146
101	99.235	463.146
102	99.291	463.146
103	99.346	463.146
104	99.401	463.146
105	99.457	463.146
106	99.512	463.146

107	99.568	463.146
108	99.623	463.146
109	99.679	463.146
110	99.734	463.146
111	99.789	463.146
112	99.845	463.146
113	99.900	463.146
114	99.956	463.146
115	100.000	370.313

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11529.8604
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 14435.1123

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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.	4225.0	8450.0	12675.0	16900.0
0.083	0.0373	5.41	Q	.	.	.	.
0.167	0.1491	16.24	Q	.	.	.	.
0.250	0.3358	27.10	Q	.	.	.	.
0.333	0.5974	38.00	Q	.	.	.	.
0.417	0.9344	48.92	Q	.	.	.	.
0.500	1.3473	59.95	Q	.	.	.	.
0.583	1.8610	74.59	Q	.	.	.	.
0.667	2.4895	91.27	Q	.	.	.	.
0.750	3.2333	108.00	Q	.	.	.	.
0.833	4.0975	125.48	Q	.	.	.	.
0.917	5.1507	152.93	Q	.	.	.	.
1.000	6.4174	183.92	Q	.	.	.	.
1.083	7.9429	221.51	Q	.	.	.	.
1.167	9.7627	264.23	Q	.	.	.	.
1.250	11.9293	314.59	Q	.	.	.	.
1.333	14.4322	363.42	Q	.	.	.	.
1.417	17.2686	411.84	Q	.	.	.	.
1.500	20.4905	467.83	VQ	.	.	.	.
1.583	24.1675	533.89	VQ	.	.	.	.
1.667	28.2041	586.12	VQ	.	.	.	.
1.750	32.6071	639.32	VQ	.	.	.	.
1.833	37.4479	702.88	VQ	.	.	.	.
1.917	42.7860	775.09	VQ	.	.	.	.
2.000	48.5277	833.70	VQ	.	.	.	.
2.083	54.6629	890.84	V Q	.	.	.	.
2.167	61.2859	961.65	V Q	.	.	.	.
2.250	68.3960	1032.38	V Q	.	.	.	.
2.333	76.1046	1119.30	V Q	.	.	.	.
2.417	84.2976	1189.62	V Q	.	.	.	.
2.500	92.9525	1256.69	V Q	.	.	.	.
2.583	102.2605	1351.53	V Q	.	.	.	.
2.667	112.1867	1441.28	V Q	.	.	.	.
2.750	122.7494	1533.70	V Q	.	.	.	.
2.833	134.0357	1638.77	V Q	.	.	.	.
2.917	145.8553	1716.21	V Q	.	.	.	.
3.000	158.1739	1788.66	V Q	.	.	.	.
3.083	170.9931	1861.34	V Q	.	.	.	.
3.167	184.4008	1946.80	V Q	.	.	.	.
3.250	198.5056	2048.02	V Q	.	.	.	.
3.333	213.1875	2131.80	V Q	.	.	.	.
3.417	228.3605	2203.12	V Q	.	.	.	.
3.500	244.0457	2277.50	V Q	.	.	.	.
3.583	260.2339	2350.52	V Q	.	.	.	.
3.667	276.8710	2415.71	V Q	.	.	.	.
3.750	293.9775	2483.87	V Q	.	.	.	.
3.833	311.5080	2545.43	V Q	.	.	.	.
3.917	329.3882	2596.21	V Q	.	.	.	.

4.000	347.6163	2646.72	V	Q	.	.	.	.
4.083	366.1987	2698.16	.V	Q	.	.	.	.
4.167	385.1465	2751.21	.V	Q	.	.	.	.
4.250	404.4382	2801.16	.V	Q	.	.	.	.
4.333	424.0608	2849.20	.V	Q	.	.	.	.
4.417	443.9978	2894.85	.V	Q	.	.	.	.
4.500	464.2257	2937.09	.V	Q	.	.	.	.
4.583	484.7221	2976.08	.V	Q	.	.	.	.
4.667	505.4718	3012.86	.V	Q	.	.	.	.
4.750	526.4460	3045.45	.V	Q	.	.	.	.
4.833	547.6450	3078.09	.V	Q	.	.	.	.
4.917	569.0620	3109.75	.V	Q	.	.	.	.
5.000	590.6899	3140.38	.V	Q	.	.	.	.
5.083	612.5301	3171.19	.V	Q	.	.	.	.
5.167	634.5790	3201.50	.V	Q	.	.	.	.
5.250	656.8294	3230.76	.V	Q	.	.	.	.
5.333	679.2822	3260.15	.V	Q	.	.	.	.
5.417	701.9366	3289.42	.V	Q	.	.	.	.
5.500	724.7639	3314.52	.V	Q	.	.	.	.
5.583	747.7557	3338.41	.V	Q	.	.	.	.
5.667	770.9128	3362.42	.V	Q	.	.	.	.
5.750	794.2368	3386.63	.V	Q	.	.	.	.
5.833	817.7281	3410.95	.V	Q	.	.	.	.
5.917	841.3708	3432.91	.V	Q	.	.	.	.
6.000	865.1516	3452.97	.V	Q	.	.	.	.
6.083	889.0718	3473.21	.V	Q	.	.	.	.
6.167	913.1323	3493.58	.V	Q	.	.	.	.
6.250	937.3342	3514.12	.V	Q	.	.	.	.
6.333	961.6788	3534.83	.V	Q	.	.	.	.
6.417	986.1670	3555.69	.V	Q	.	.	.	.
6.500	1010.8001	3576.73	.V	Q	.	.	.	.
6.583	1035.5734	3597.08	.V	Q	.	.	.	.
6.667	1060.4589	3613.38	.V	Q	.	.	.	.
6.750	1085.4539	3629.27	.V	Q	.	.	.	.
6.833	1110.5592	3645.30	.V	Q	.	.	.	.
6.917	1135.7762	3661.52	.V	Q	.	.	.	.
7.000	1161.1061	3677.89	.V	Q	.	.	.	.
7.083	1186.5499	3694.45	.V	Q	.	.	.	.
7.167	1212.1089	3711.16	.V	Q	.	.	.	.
7.250	1237.7843	3728.06	.V	Q	.	.	.	.
7.333	1263.5771	3745.12	.V	Q	.	.	.	.
7.417	1289.4889	3762.39	.V	Q	.	.	.	.
7.500	1315.5209	3779.84	.V	Q	.	.	.	.
7.583	1341.6744	3797.50	.V	Q	.	.	.	.
7.667	1367.9506	3815.29	.V	Q	.	.	.	.
7.750	1394.3511	3833.35	.V	Q	.	.	.	.
7.833	1420.8770	3851.56	.V	Q	.	.	.	.
7.917	1447.5299	3870.02	.V	Q	.	.	.	.
8.000	1474.3114	3888.67	.V	Q	.	.	.	.
8.083	1501.2227	3907.52	.V	Q	.	.	.	.
8.167	1528.2651	3926.56	.V	Q	.	.	.	.
8.250	1555.4404	3945.86	.V	Q	.	.	.	.
8.333	1582.7500	3965.35	.V	Q	.	.	.	.
8.417	1610.1957	3985.11	.V	Q	.	.	.	.
8.500	1637.7788	4005.07	.V	Q	.	.	.	.
8.583	1665.5013	4025.31	.V	Q	.	.	.	.
8.667	1693.3647	4045.76	.V	Q	.	.	.	.
8.750	1721.3710	4066.51	.V	Q	.	.	.	.

8.833	1749.5216	4087.47	.	V	Q.	.	.	.
8.917	1777.8187	4108.74	.	V	Q.	.	.	.
9.000	1806.2639	4130.24	.	V	Q.	.	.	.
9.083	1834.8594	4152.06	.	V	Q.	.	.	.
9.167	1863.6067	4174.12	.	V	Q.	.	.	.
9.250	1892.5083	4196.51	.	V	Q.	.	.	.
9.333	1921.5658	4219.15	.	V	Q.	.	.	.
9.417	1950.7816	4242.14	.	V	Q	.	.	.
9.500	1980.1576	4265.40	.	V	Q	.	.	.
9.583	2009.6938	4288.67	.	V	Q	.	.	.
9.667	2039.3827	4310.82	.	V	Q	.	.	.
9.750	2069.2266	4333.35	.	V	Q	.	.	.
9.833	2099.2278	4356.16	.	V	Q	.	.	.
9.917	2129.3887	4379.37	.	V	Q	.	.	.
10.000	2159.7117	4402.89	.	V	Q	.	.	.
10.083	2190.1995	4426.82	.	V	Q	.	.	.
10.167	2220.8542	4451.07	.	V	Q	.	.	.
10.250	2251.6790	4475.76	.	V	Q	.	.	.
10.333	2282.6760	4500.79	.	V	Q	.	.	.
10.417	2313.8486	4526.27	.	V	Q	.	.	.
10.500	2345.1992	4552.12	.	V	Q	.	.	.
10.583	2376.7312	4578.45	.	V	Q	.	.	.
10.667	2408.4473	4605.16	.	V	Q	.	.	.
10.750	2440.3508	4632.38	.	V	Q	.	.	.
10.833	2472.4446	4660.01	.	V	.Q	.	.	.
10.917	2504.7322	4688.17	.	V	.Q	.	.	.
11.000	2537.2168	4716.77	.	V	.Q	.	.	.
11.083	2569.9023	4745.93	.	V	.Q	.	.	.
11.167	2602.7917	4775.55	.	V	.Q	.	.	.
11.250	2635.8894	4805.78	.	V	.Q	.	.	.
11.333	2669.1985	4836.49	.	V	.Q	.	.	.
11.417	2702.7236	4867.84	.	V	.Q	.	.	.
11.500	2736.4683	4899.72	.	V	.Q	.	.	.
11.583	2770.4370	4932.27	.	V	.Q	.	.	.
11.667	2804.6338	4965.38	.	V	.Q	.	.	.
11.750	2839.0637	4999.22	.	V	.Q	.	.	.
11.833	2873.7307	5033.65	.	V	.Q	.	.	.
11.917	2908.6401	5068.86	.	V	.Q	.	.	.
12.000	2943.7964	5104.70	.	V	.Q	.	.	.
12.083	2979.2754	5151.55	.	V	.Q	.	.	.
12.167	3015.1514	5209.21	.	V	.Q	.	.	.
12.250	3051.4299	5267.65	.	V	.Q	.	.	.
12.333	3088.1152	5326.70	.	V	.Q	.	.	.
12.417	3125.2129	5386.58	.	V	.Q	.	.	.
12.500	3162.7285	5447.25	.	V	.Q	.	.	.
12.583	3200.7144	5515.55	.	V	.Q	.	.	.
12.667	3239.2012	5588.28	.	V	.Q	.	.	.
12.750	3278.1951	5661.92	.	V	.Q	.	.	.
12.833	3317.7102	5737.58	.	V	.Q	.	.	.
12.917	3357.8813	5832.86	.	V	.Q	.	.	.
13.000	3398.7583	5935.35	.	V	.Q	.	.	.
13.083	3440.4312	6050.91	.	V	.Q	.	.	.
13.167	3482.9697	6176.60	.	V	.Q	.	.	.
13.250	3526.4766	6317.20	.	V	.Q	.	.	.
13.333	3570.9343	6455.26	.	V	.Q	.	.	.
13.417	3616.3408	6593.02	.	V	Q	.	.	.
13.500	3662.7969	6745.43	.	V	Q	.	.	.
13.583	3710.4365	6917.27	.	V	Q	.	.	.

13.667	3759.0818	7063.29	.	V	Q	.	.	.
13.750	3808.7485	7211.62	.	V	Q	.	.	.
13.833	3859.5750	7379.99	.	V	Q	.	.	.
13.917	3911.6758	7565.03	.	V	Q	.	.	.
14.000	3964.8772	7724.84	.	V	Q	.	.	.
14.083	4019.2249	7891.29	.	.V	Q	.	.	.
14.167	4074.9607	8092.85	.	.V	Q.	.	.	.
14.250	4132.0820	8293.99	.	.V	Q.	.	.	.
14.333	4190.7959	8525.28	.	.V	Q	.	.	.
14.417	4250.8853	8724.96	.	.V	Q	.	.	.
14.500	4312.3057	8918.22	.	.V	.Q	.	.	.
14.583	4375.4570	9169.61	.	.V	.Q	.	.	.
14.667	4440.2915	9413.95	.	.V	.Q	.	.	.
14.750	4506.8369	9662.42	.	.V	.Q	.	.	.
14.833	4575.2593	9934.94	.	.V	.Q	.	.	.
14.917	4645.3057	10170.77	.	.V	.Q	.	.	.
15.000	4716.9419	10401.58	.	.V	.Q	.	.	.
15.083	4790.2334	10641.95	.	.V	.Q	.	.	.
15.167	4865.3896	10912.71	.	.V	.Q	.	.	.
15.250	4942.6821	11222.86	.	.V	.Q	.	.	.
15.333	5021.8423	11494.06	.	.V	.Q	.	.	.
15.417	5102.5889	11724.40	.	.V	.Q	.	.	.
15.500	5184.9434	11957.91	.	.V	.Q	.	.	.
15.583	5268.9941	12204.18	.	.V	.Q	.	.	.
15.667	5354.4727	12411.46	.	.V	.Q	.	.	.
15.750	5441.3896	12620.33	.	.V	.Q	.	.	.
15.833	5529.7539	12830.48	.	.V	.Q	.	.	.
15.917	5619.4951	13030.44	.	.V	.Q	.	.	.
16.000	5710.5063	13214.87	.	.V	.Q	.	.	.
16.083	5803.4634	13497.39	.	.V	.Q	.	.	.
16.167	5898.4346	13789.80	.	.V	.Q	.	.	.
16.250	5994.4297	13938.46	.	.V	.Q	.	.	.
16.333	6091.5142	14096.68	.	.V	.Q	.	.	.
16.417	6189.4468	14219.78	.	.V	.Q	.	.	.
16.500	6288.2104	14340.49	.	.V	.Q	.	.	.
16.583	6388.3726	14543.57	.	.V	.Q	.	.	.
16.667	6489.6519	14705.76	.	.V	.Q	.	.	.
16.750	6591.8325	14836.66	.	.V	.Q	.	.	.
16.833	6695.1309	14998.89	.	.V	.Q	.	.	.
16.917	6800.2432	15262.34	.	.V	.Q	.	.	.
17.000	6906.5776	15439.77	.	.V	.Q	.	.	.
17.083	7014.4795	15667.33	.	.V	.Q	.	.	.
17.167	7123.5542	15837.62	.	.V	.Q	.	.	.
17.250	7234.1040	16051.85	.	.V	.Q	.	.	.
17.333	7345.1016	16116.82	.	.V	.Q	.	.	.
17.417	7456.7930	16217.62	.	.V	.Q	.	.	.
17.500	7569.8735	16419.33	.	.V	.Q	.	.	.
17.583	7684.4131	16631.14	.	.V	.Q	.	.	.
17.667	7797.1807	16373.82	.	.V	.Q	.	.	.
17.750	7910.6294	16472.78	.	.V	.Q	.	.	.
17.833	8025.8730	16733.36	.	.V	.Q	.	.	.
17.917	8141.8589	16841.13	.	.V	.Q	.	.	.
18.000	8255.6553	16523.26	.	.V	.Q	.	.	.
18.083	8369.0059	16458.45	.	.V	.Q	.	.	.
18.167	8483.7119	16655.36	.	.V	.Q	.	.	.
18.250	8598.3486	16645.29	.	.V	.Q	.	.	.
18.333	8714.6123	16881.50	.	.V	.Q	.	.	.
18.417	8828.3555	16515.57	.	.V	.Q	.	.	.

18.500	8941.4639	16423.35	.	.	.	V	.	Q	.
18.583	9057.2822	16816.81	.	.	.	V	.	Q	.
18.667	9172.2109	16687.63	.	.	.	V	.	Q	.
18.750	9287.0547	16675.30	.	.	.	V	.	Q	.
18.833	9402.2383	16724.61	.	.	.	V	.	Q	.
18.917	9512.8281	16057.60	.	.	.	V	.	Q	.
19.000	9622.3418	15901.41	.	.	.	V	.	Q	.
19.083	9731.6855	15876.68	.	.	.	V	.	Q	.
19.167	9842.5000	16090.29	.	.	.	V	.	Q	.
19.250	9954.3164	16235.79	.	.	.	V	.	Q	.
19.333	10062.5342	15713.21	.	.	.	V	.	Q	.
19.417	10168.0889	15326.61	.	.	.	V	.	Q	.
19.500	10272.9844	15230.82	.	.	.	V	.	Q	.
19.583	10376.5049	15031.18	.	.	.	V	.	Q	.
19.667	10477.8994	14722.42	.	.	.	V	.	Q	.
19.750	10578.1885	14561.92	.	.	.	V	.	Q	.
19.833	10675.8594	14181.80	.	.	.	V	.	Q	.
19.917	10770.7344	13775.87	.	.	.	V	.	Q	.
20.000	10864.3818	13597.66	.	.	.	V	Q	.	.
20.083	10957.0820	13460.09	.	.	.	V	Q	.	.
20.167	11048.4502	13266.63	.	.	.	V	Q	.	.
20.250	11137.4893	12928.46	.	.	.	V	Q	.	.
20.333	11224.2900	12603.48	.	.	.	V	Q	.	.
20.417	11309.1064	12315.39	.	.	.	V	Q	.	.
20.500	11391.8320	12011.76	.	.	.	V	Q	.	.
20.583	11472.0938	11654.01	.	.	.	V	Q	.	.
20.667	11550.1064	11327.46	.	.	.	V	Q	.	.
20.750	11625.5508	10954.58	.	.	.	V	Q	.	.
20.833	11698.9248	10653.87	.	.	.	V	Q	.	.
20.917	11770.5498	10399.97	.	.	.	V	Q	.	.
21.000	11840.4736	10153.01	.	.	.	V	Q	.	.
21.083	11908.7568	9914.72	.	.	.	V	Q	.	.
21.167	11975.1348	9638.10	.	.	.	V	Q	.	.
21.250	12039.3975	9330.91	.	.	.	V	Q	.	.
21.333	12101.9219	9078.54	.	.	.	V	Q	.	.
21.417	12162.8037	8840.01	.	.	.	V	Q	.	.
21.500	12221.5449	8529.24	.	.	.	V	Q	.	.
21.583	12278.6064	8285.34	.	.	.	V	Q	.	.
21.667	12334.3018	8086.98	.	.	.	V	Q	.	.
21.750	12388.6396	7889.91	.	.	.	V	Q	.	.
21.833	12441.6064	7690.74	.	.	.	V	Q	.	.
21.917	12493.0342	7467.33	.	.	.	V	Q	.	.
22.000	12543.1201	7272.45	.	.	.	V	Q	.	.
22.083	12592.1416	7117.86	.	.	.	V	Q	.	.
22.167	12640.0947	6962.83	.	.	.	V	Q	.	.
22.250	12687.0059	6811.45	.	.	.	V	Q	.	.
22.333	12732.8887	6662.24	.	.	.	V	Q	.	.
22.417	12777.7598	6515.33	.	.	.	V	Q	.	.
22.500	12821.6777	6376.92	.	.	.	V	Q	.	.
22.583	12864.5508	6225.15	.	.	.	V	Q	.	.
22.667	12906.0293	6022.61	.	.	.	V	Q	.	.
22.750	12946.6729	5901.49	.	.	.	V	Q	.	.
22.833	12986.5840	5795.13	.	.	.	V	Q	.	.
22.917	13025.8135	5696.12	.	.	.	V	Q	.	.
23.000	13064.3486	5595.33	.	.	.	V	Q	.	.
23.083	13102.1865	5494.01	.	.	.	V	Q	.	.
23.167	13139.3369	5394.28	.	.	.	V	Q	.	.
23.250	13175.8232	5297.77	.	.	.	V	Q	.	.

23.333	13211.6494	5201.93	.	.	.	Q	.	.	V	.
23.417	13246.8252	5107.49	.	.	.	Q	.	.	V	.
23.500	13281.4121	5022.06	.	.	.	Q	.	.	V	.
23.583	13315.4355	4940.15	.	.	.	Q	.	.	V	.
23.667	13348.9336	4863.89	.	.	.	Q	.	.	V	.
23.750	13381.9297	4791.10	.	.	.	Q	.	.	V	.
23.833	13414.4268	4718.62	.	.	.	Q	.	.	V	.
23.917	13446.4697	4652.59	.	.	.	Q	.	.	V	.
24.000	13478.0947	4591.90	.	.	.	Q	.	.	V	.
24.083	13509.2656	4526.03	.	.	.	Q	.	.	V	.
24.167	13539.9600	4456.75	.	.	.	Q	.	.	V	.
24.250	13570.1846	4388.67	.	.	.	Q	.	.	V	.
24.333	13599.9492	4321.76	.	.	.	Q	.	.	V	.
24.417	13629.2598	4255.90	.	.	.	Q	.	.	V	.
24.500	13658.1230	4190.94	.	.	.	Q	.	.	V	.
24.583	13686.5332	4125.09	.	.	.	Q	.	.	V	.
24.667	13714.5371	4066.22	.	.	.	Q	.	.	V	.
24.750	13742.1504	4009.48	.	.	.	Q	.	.	V	.
24.833	13769.3760	3953.10	.	.	.	Q	.	.	V	.
24.917	13796.1572	3888.67	.	.	.	Q	.	.	V	.
25.000	13822.5010	3825.08	.	.	.	Q	.	.	V	.
25.083	13848.3662	3755.70	.	.	.	Q	.	.	V	.
25.167	13873.7227	3681.79	.	.	.	Q	.	.	V	.
25.250	13898.5244	3601.21	.	.	.	Q	.	.	V	.
25.333	13922.7930	3523.78	.	.	.	Q	.	.	V	.
25.417	13946.5312	3446.84	.	.	.	Q	.	.	V	.
25.500	13969.6777	3360.90	.	.	.	Q	.	.	V	.
25.583	13992.1133	3257.69	.	.	.	Q	.	.	V	.
25.667	14013.8213	3152.05	.	.	.	Q	.	.	V	.
25.750	14034.9922	3073.97	.	.	.	Q	.	.	V	.
25.833	14055.5635	2986.89	.	.	.	Q	.	.	V	.
25.917	14075.4824	2892.16	.	.	.	Q	.	.	V	.
26.000	14094.8271	2808.86	.	.	.	Q	.	.	V	.
26.083	14113.6143	2727.83	.	.	.	Q	.	.	V	.
26.167	14131.7529	2633.77	.	.	.	Q	.	.	V	.
26.250	14149.2500	2540.63	.	.	.	Q	.	.	V	.
26.333	14166.0000	2432.09	.	.	.	Q	.	.	V	.
26.417	14182.1230	2341.07	.	.	.	Q	.	.	V	.
26.500	14197.6475	2254.09	.	.	.	Q	.	.	V	.
26.583	14212.3906	2140.74	.	.	.	Q	.	.	V	.
26.667	14226.4121	2035.85	.	.	.	Q	.	.	V	.
26.750	14239.7002	1929.47	.	.	.	Q	.	.	V	.
26.833	14252.1768	1811.57	.	.	.	Q	.	.	V	.
26.917	14264.0400	1722.51	.	.	.	Q	.	.	V	.
27.000	14275.3311	1639.39	.	.	.	Q	.	.	V	.
27.083	14286.0537	1556.95	.	.	.	Q	.	.	V	.
27.167	14296.1270	1462.64	.	.	.	Q	.	.	V	.
27.250	14305.4492	1353.57	.	.	.	Q	.	.	V	.
27.333	14314.1475	1263.00	.	.	.	Q	.	.	V	.
27.417	14322.3145	1185.82	.	.	.	Q	.	.	V	.
27.500	14329.9346	1106.39	.	.	.	Q	.	.	V	.
27.583	14337.0273	1029.82	.	.	.	Q	.	.	V	.
27.667	14343.6699	964.49	.	.	.	Q	.	.	V	.
27.750	14349.8477	896.97	.	.	.	Q	.	.	V	.
27.833	14355.6104	836.78	.	.	.	Q	.	.	V	.
27.917	14361.0381	788.07	.	.	.	Q	.	.	V	.
28.000	14366.1357	740.20	.	.	.	Q	.	.	V	.
28.083	14370.9014	691.99	.	.	.	Q	.	.	V	.

28.167	14375.3281	642.74	.Q	.	.	.	V.
28.250	14379.4414	597.18	.Q	.	.	.	V.
28.333	14383.2568	554.06	.Q	.	.	.	V.
28.417	14386.7959	513.86	.Q	.	.	.	V.
28.500	14390.0850	477.55	.Q	.	.	.	V.
28.583	14393.1494	444.95	.Q	.	.	.	V.
28.667	14396.0078	414.97	Q	.	.	.	V.
28.750	14398.6914	389.59	Q	.	.	.	V.
28.833	14401.2021	364.50	Q	.	.	.	V.
28.917	14403.5488	340.76	Q	.	.	.	V.
29.000	14405.7412	318.38	Q	.	.	.	V.
29.083	14407.7812	296.16	Q	.	.	.	V.
29.167	14409.6738	274.76	Q	.	.	.	V.
29.250	14411.4287	254.74	Q	.	.	.	V.
29.333	14413.0469	234.89	Q	.	.	.	V.
29.417	14414.5312	215.49	Q	.	.	.	V.
29.500	14415.9121	200.52	Q	.	.	.	V.
29.583	14417.2002	187.07	Q	.	.	.	V.
29.667	14418.3965	173.72	Q	.	.	.	V.
29.750	14419.5020	160.44	Q	.	.	.	V.
29.833	14420.5166	147.30	Q	.	.	.	V.
29.917	14421.4590	136.78	Q	.	.	.	V.
30.000	14422.3428	128.38	Q	.	.	.	V.
30.083	14423.1699	120.04	Q	.	.	.	V.
30.167	14423.9395	111.75	Q	.	.	.	V.
30.250	14424.6523	103.54	Q	.	.	.	V.
30.333	14425.3096	95.37	Q	.	.	.	V.
30.417	14425.9111	87.28	Q	.	.	.	V.
30.500	14426.4570	79.22	Q	.	.	.	V.
30.583	14426.9531	72.09	Q	.	.	.	V.
30.667	14427.4297	69.20	Q	.	.	.	V.
30.750	14427.8906	66.94	Q	.	.	.	V.
30.833	14428.3359	64.67	Q	.	.	.	V.
30.917	14428.7656	62.44	Q	.	.	.	V.
31.000	14429.1807	60.23	Q	.	.	.	V.
31.083	14429.5801	58.03	Q	.	.	.	V.
31.167	14429.9648	55.85	Q	.	.	.	V.
31.250	14430.3350	53.69	Q	.	.	.	V.
31.333	14430.6904	51.55	Q	.	.	.	V.
31.417	14431.0312	49.43	Q	.	.	.	V.
31.500	14431.3574	47.31	Q	.	.	.	V.
31.583	14431.6689	45.22	Q	.	.	.	V.
31.667	14431.9658	43.17	Q	.	.	.	V.
31.750	14432.2490	41.09	Q	.	.	.	V.
31.833	14432.5176	39.05	Q	.	.	.	V.
31.917	14432.7725	37.02	Q	.	.	.	V.
32.000	14433.0137	34.99	Q	.	.	.	V.
32.083	14433.2412	33.02	Q	.	.	.	V.
32.167	14433.4551	31.06	Q	.	.	.	V.
32.250	14433.6553	29.11	Q	.	.	.	V.
32.333	14433.8428	27.18	Q	.	.	.	V.
32.417	14434.0166	25.26	Q	.	.	.	V.
32.500	14434.1777	23.35	Q	.	.	.	V.
32.583	14434.3252	21.45	Q	.	.	.	V.
32.667	14434.4600	19.57	Q	.	.	.	V.
32.750	14434.5820	17.70	Q	.	.	.	V.
32.833	14434.6914	15.85	Q	.	.	.	V.
32.917	14434.7881	14.00	Q	.	.	.	V.

33.000	14434.8721	12.17	Q	.	.	.	V.
33.083	14434.9434	10.35	Q	.	.	.	V.
33.167	14435.0020	8.54	Q	.	.	.	V.
33.250	14435.0488	6.74	Q	.	.	.	V.
33.333	14435.0830	4.95	Q	.	.	.	V.
33.417	14435.1045	3.17	Q	.	.	.	V.
33.500	14435.1143	1.41	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%	2010.0
10%	1445.0
20%	1185.0
30%	695.0
40%	525.0
50%	435.0
60%	370.0
70%	305.0
80%	235.0
90%	160.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 139 *
* 25-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV25139S.DAT
TIME/DATE OF STUDY: 14:49 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 139.00 IS CODE = 1

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

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69529.898 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.833 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.451
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.40
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.76
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.04
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.89
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.77
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.83

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.286
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.391
3-HOUR FACTOR = 0.733
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 2.942

UNIT HYDROGRAPH DETERMINATION

Table with 3 columns: INTERVAL NUMBER, "S" GRAPH MEAN VALUES, UNIT HYDROGRAPH ORDINATES (CFS). Rows 1-48.

49	79.184	10993.529
50	80.521	11240.521
51	81.891	11521.131
52	83.153	10613.867
53	84.352	10083.443
54	85.475	9438.568
55	86.481	8461.441
56	87.386	7610.056
57	88.219	7005.599
58	88.915	5849.932
59	89.607	5819.138
60	90.268	5553.990
61	90.887	5207.816
62	91.506	5209.227
63	92.111	5083.614
64	92.674	4734.617
65	93.234	4712.292
66	93.793	4695.547
67	94.237	3732.406
68	94.610	3137.828
69	94.984	3143.410
70	95.357	3140.587
71	95.731	3140.587
72	96.061	2777.733
73	96.295	1968.111
74	96.526	1940.204
75	96.757	1942.963
76	96.988	1940.204
77	97.218	1937.382
78	97.449	1940.204
79	97.679	1940.204
80	97.909	1929.042
81	98.034	1052.444
82	98.089	463.383
83	98.145	466.206
84	98.199	460.625
85	98.254	463.447
86	98.310	466.142
87	98.365	460.625
88	98.420	463.447
89	98.475	466.206
90	98.530	460.625
91	98.585	466.206
92	98.640	460.625
93	98.696	468.965
94	98.751	463.447
95	98.806	457.802
96	98.861	469.029
97	98.916	463.383
98	98.972	463.447
99	99.027	463.383
100	99.082	463.383
101	99.137	463.383
102	99.192	463.383
103	99.247	463.383
104	99.302	463.383
105	99.357	463.383
106	99.412	463.383

107	99.467	463.383
108	99.523	463.383
109	99.578	463.383
110	99.633	463.383
111	99.688	463.383
112	99.743	463.383
113	99.798	463.383
114	99.853	463.383
115	99.908	463.383
116	99.963	463.383
117	100.000	307.361

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11606.0859

TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 14471.4707

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.	4225.0	8450.0	12675.0	16900.0
0.083	0.0367	5.32	Q	.	.	.	.
0.167	0.1468	15.99	Q	.	.	.	.
0.250	0.3305	26.68	Q	.	.	.	.
0.333	0.5881	37.40	Q	.	.	.	.
0.417	0.9197	48.15	Q	.	.	.	.
0.500	1.3257	58.95	Q	.	.	.	.
0.583	1.8272	72.82	Q	.	.	.	.
0.667	2.4418	89.24	Q	.	.	.	.
0.750	3.1698	105.70	Q	.	.	.	.
0.833	4.0124	122.35	Q	.	.	.	.
0.917	5.0283	147.51	Q	.	.	.	.
1.000	6.2525	177.76	Q	.	.	.	.
1.083	7.7192	212.96	Q	.	.	.	.
1.167	9.4662	253.66	Q	.	.	.	.
1.250	11.5474	302.20	Q	.	.	.	.
1.333	13.9638	350.86	Q	.	.	.	.
1.417	16.7083	398.49	Q	.	.	.	.
1.500	19.7977	448.58	VQ	.	.	.	.
1.583	23.3493	515.69	VQ	.	.	.	.
1.667	27.2704	569.35	VQ	.	.	.	.
1.750	31.5457	620.77	VQ	.	.	.	.
1.833	36.2194	678.62	VQ	.	.	.	.
1.917	41.3755	748.66	VQ	.	.	.	.
2.000	46.9682	812.06	VQ	.	.	.	.
2.083	52.9447	867.79	V Q	.	.	.	.
2.167	59.3481	929.77	V Q	.	.	.	.
2.250	66.2450	1001.43	V Q	.	.	.	.
2.333	73.6726	1078.48	V Q	.	.	.	.
2.417	81.6643	1160.40	V Q	.	.	.	.
2.500	90.0594	1218.97	V Q	.	.	.	.
2.583	99.0481	1305.15	V Q	.	.	.	.
2.667	108.6484	1393.96	V Q	.	.	.	.
2.750	118.8590	1482.58	V Q	.	.	.	.
2.833	129.7496	1581.33	V Q	.	.	.	.
2.917	141.2879	1675.35	V Q	.	.	.	.
3.000	153.3281	1748.24	V Q	.	.	.	.
3.083	165.8494	1818.08	V Q	.	.	.	.
3.167	178.8914	1893.70	V Q	.	.	.	.
3.250	192.5501	1983.25	V Q	.	.	.	.
3.333	206.8856	2081.51	V Q	.	.	.	.
3.417	221.7520	2158.60	V Q	.	.	.	.
3.500	237.0952	2227.83	V Q	.	.	.	.
3.583	252.9638	2304.12	V Q	.	.	.	.
3.667	269.2998	2371.99	V Q	.	.	.	.
3.750	286.0883	2437.69	V Q	.	.	.	.
3.833	303.3361	2504.38	V Q	.	.	.	.
3.917	320.9869	2562.90	V Q	.	.	.	.

4.000	338.9802	2612.62	V	Q	.	.	.	.
4.083	357.3177	2662.61	V	Q	.	.	.	.
4.167	376.0067	2713.63	.V	Q	.	.	.	.
4.250	395.0564	2766.02	.V	Q	.	.	.	.
4.333	414.4440	2815.09	.V	Q	.	.	.	.
4.417	434.1581	2862.48	.V	Q	.	.	.	.
4.500	454.1823	2907.52	.V	Q	.	.	.	.
4.583	474.4936	2949.19	.V	Q	.	.	.	.
4.667	495.0702	2987.73	.V	Q	.	.	.	.
4.750	515.8987	3024.29	.V	Q	.	.	.	.
4.833	536.9493	3056.55	.V	Q	.	.	.	.
4.917	558.2233	3088.98	.V	Q	.	.	.	.
5.000	579.7141	3120.46	.V	Q	.	.	.	.
5.083	601.4146	3150.92	.V	Q	.	.	.	.
5.167	623.3251	3181.42	.V	Q	.	.	.	.
5.250	645.4445	3211.74	.V	Q	.	.	.	.
5.333	667.7639	3240.78	.V	Q	.	.	.	.
5.417	690.2848	3270.03	.V	Q	.	.	.	.
5.500	713.0070	3299.26	.V	Q	.	.	.	.
5.583	735.9075	3325.15	.V	Q	.	.	.	.
5.667	758.9711	3348.84	.V	Q	.	.	.	.
5.750	782.2001	3372.84	.V	Q	.	.	.	.
5.833	805.5944	3396.85	.V	Q	.	.	.	.
5.917	829.1560	3421.15	.V	Q	.	.	.	.
6.000	852.8758	3444.12	.V	Q	.	.	.	.
6.083	876.7348	3464.33	.V	Q	.	.	.	.
6.167	900.7324	3484.46	.V	Q	.	.	.	.
6.250	924.8708	3504.89	.V	Q	.	.	.	.
6.333	949.1500	3525.34	.V	Q	.	.	.	.
6.417	973.5720	3546.07	.V	Q	.	.	.	.
6.500	998.1370	3566.84	.V	Q	.	.	.	.
6.583	1022.8472	3587.92	.V	Q	.	.	.	.
6.667	1047.7024	3608.98	.V	Q	.	.	.	.
6.750	1072.6823	3627.07	.V	Q	.	.	.	.
6.833	1097.7714	3642.95	.V	Q	.	.	.	.
6.917	1122.9722	3659.16	.V	Q	.	.	.	.
7.000	1148.2845	3675.35	.V	Q	.	.	.	.
7.083	1173.7108	3691.89	.V	Q	.	.	.	.
7.167	1199.2511	3708.44	.V	Q	.	.	.	.
7.250	1224.9076	3725.32	.V	Q	.	.	.	.
7.333	1250.6804	3742.21	.V	Q	.	.	.	.
7.417	1276.5721	3759.47	.V	Q	.	.	.	.
7.500	1302.5826	3776.73	.V	Q	.	.	.	.
7.583	1328.7146	3794.36	.V	Q	.	.	.	.
7.667	1354.9680	3811.99	.V	Q	.	.	.	.
7.750	1381.3456	3830.03	.V	Q	.	.	.	.
7.833	1407.8474	3848.06	.V	Q	.	.	.	.
7.917	1434.4760	3866.47	.V	Q	.	.	.	.
8.000	1461.2317	3884.93	.V	Q	.	.	.	.
8.083	1488.1172	3903.78	.V	Q	.	.	.	.
8.167	1515.1327	3922.65	.V	Q	.	.	.	.
8.250	1542.2810	3941.94	.V	Q	.	.	.	.
8.333	1569.5624	3961.26	.V	Q	.	.	.	.
8.417	1596.9797	3981.01	.V	Q	.	.	.	.
8.500	1624.5333	4000.79	.V	Q	.	.	.	.
8.583	1652.2263	4021.02	.V	Q	.	.	.	.
8.667	1680.0588	4041.28	.V	Q	.	.	.	.
8.750	1708.0341	4062.01	.V	Q	.	.	.	.

8.833	1736.1523	4082.78	.	V	Q.	.	.	.
8.917	1764.4170	4104.03	.	V	Q.	.	.	.
9.000	1792.8284	4125.33	.	V	Q.	.	.	.
9.083	1821.3898	4147.12	.	V	Q.	.	.	.
9.167	1850.1017	4168.97	.	V	Q.	.	.	.
9.250	1878.9677	4191.34	.	V	Q.	.	.	.
9.333	1907.9880	4213.76	.	V	Q.	.	.	.
9.417	1937.1666	4236.73	.	V	Q.	.	.	.
9.500	1966.5038	4259.76	.	V	Q	.	.	.
9.583	1996.0035	4283.36	.	V	Q	.	.	.
9.667	2025.6663	4307.02	.	V	Q	.	.	.
9.750	2055.4919	4330.69	.	V	Q	.	.	.
9.833	2085.4731	4353.27	.	V	Q	.	.	.
9.917	2115.6140	4376.46	.	V	Q	.	.	.
10.000	2145.9153	4399.74	.	V	Q	.	.	.
10.083	2176.3811	4423.64	.	V	Q	.	.	.
10.167	2207.0122	4447.64	.	V	Q	.	.	.
10.250	2237.8132	4472.30	.	V	Q	.	.	.
10.333	2268.7847	4497.07	.	V	Q	.	.	.
10.417	2299.9316	4522.52	.	V	Q	.	.	.
10.500	2331.2546	4548.09	.	V	Q	.	.	.
10.583	2362.7588	4574.39	.	V	Q	.	.	.
10.667	2394.4448	4600.81	.	V	Q	.	.	.
10.750	2426.3181	4627.99	.	V	Q	.	.	.
10.833	2458.3794	4655.31	.	V	.Q	.	.	.
10.917	2490.6345	4683.43	.	V	.Q	.	.	.
11.000	2523.0842	4711.71	.	V	.Q	.	.	.
11.083	2555.7344	4740.82	.	V	.Q	.	.	.
11.167	2588.5864	4770.10	.	V	.Q	.	.	.
11.250	2621.6462	4800.27	.	V	.Q	.	.	.
11.333	2654.9150	4830.63	.	V	.Q	.	.	.
11.417	2688.3992	4861.91	.	V	.Q	.	.	.
11.500	2722.1003	4893.41	.	V	.Q	.	.	.
11.583	2756.0251	4925.89	.	V	.Q	.	.	.
11.667	2790.1753	4958.61	.	V	.Q	.	.	.
11.750	2824.5579	4992.36	.	V	.Q	.	.	.
11.833	2859.1748	5026.38	.	V	.Q	.	.	.
11.917	2894.0334	5061.48	.	V	.Q	.	.	.
12.000	2929.1360	5096.89	.	V	.Q	.	.	.
12.083	2964.5596	5143.49	.	V	.Q	.	.	.
12.167	3000.3750	5200.42	.	V	.Q	.	.	.
12.250	3036.5903	5258.46	.	V	.Q	.	.	.
12.333	3073.2070	5316.75	.	V	.Q	.	.	.
12.417	3110.2334	5376.23	.	V	.Q	.	.	.
12.500	3147.6714	5436.00	.	V	.Q	.	.	.
12.583	3185.5693	5502.77	.	V	.Q	.	.	.
12.667	3223.9617	5574.55	.	V	.Q	.	.	.
12.750	3262.8572	5647.62	.	V	.Q	.	.	.
12.833	3302.2595	5721.23	.	V	.Q	.	.	.
12.917	3342.2881	5812.15	.	V	.Q	.	.	.
13.000	3383.0100	5912.81	.	V	.Q	.	.	.
13.083	3424.4971	6023.94	.	V	.Q	.	.	.
13.167	3466.8210	6145.43	.	V	.Q	.	.	.
13.250	3510.0908	6282.78	.	V	.Q	.	.	.
13.333	3554.3069	6420.18	.	V	.Q	.	.	.
13.417	3599.4626	6556.63	.	V	.Q	.	.	.
13.500	3645.5891	6697.58	.	V	.Q	.	.	.
13.583	3692.9148	6871.69	.	V	.Q	.	.	.

13.667	3741.2627	7020.11	.	V	Q	.	.	.
13.750	3790.6104	7165.26	.	V	Q	.	.	.
13.833	3841.0413	7322.55	.	V	Q	.	.	.
13.917	3892.7207	7503.84	.	V	Q	.	.	.
14.000	3945.5610	7672.42	.	V	Q	.	.	.
14.083	3999.5300	7836.29	.	.V	Q	.	.	.
14.167	4054.7681	8020.57	.	.V	Q	.	.	.
14.250	4111.4038	8223.51	.	.V	Q.	.	.	.
14.333	4169.5015	8435.77	.	.V	Q.	.	.	.
14.417	4229.1260	8657.45	.	.V	Q	.	.	.
14.500	4289.9668	8834.10	.	.V	Q	.	.	.
14.583	4352.4204	9068.28	.	.V	.Q	.	.	.
14.667	4416.5425	9310.54	.	.V	.Q	.	.	.
14.750	4482.3276	9552.01	.	.V	.Q	.	.	.
14.833	4549.8999	9811.48	.	.V	.Q	.	.	.
14.917	4619.2900	10075.47	.	.V	.Q	.	.	.
15.000	4690.2681	10306.01	.	.V	.Q	.	.	.
15.083	4762.8413	10537.61	.	.V	.Q	.	.	.
15.167	4837.1304	10786.79	.	.V	.Q	.	.	.
15.250	4913.3906	11073.01	.	.V	.Q	.	.	.
15.333	4991.7109	11372.09	.	.V	.Q	.	.	.
15.417	5071.6934	11613.45	.	.V	.Q	.	.	.
15.500	5153.1558	11828.37	.	.V	.Q	.	.	.
15.583	5236.3818	12084.40	.	.V	.Q	.	.	.
15.667	5321.0952	12300.42	.	.V	.Q	.	.	.
15.750	5407.2065	12503.40	.	.V	.Q	.	.	.
15.833	5494.7769	12715.24	.	.V	.Q	.	.	.
15.917	5583.8232	12929.55	.	.V	.Q	.	.	.
16.000	5674.1938	13121.83	.	.V	.Q	.	.	.
16.083	5766.4746	13399.19	.	.V	.Q	.	.	.
16.167	5860.6484	13674.06	.	.V	.Q	.	.	.
16.250	5955.9409	13836.48	.	.V	.Q	.	.	.
16.333	6052.2417	13982.88	.	.V	.Q	.	.	.
16.417	6149.5869	14134.55	.	.V	.Q	.	.	.
16.500	6247.7280	14250.12	.	.V	.Q	.	.	.
16.583	6347.1748	14439.69	.	.V	.Q	.	.	.
16.667	6447.8213	14613.88	.	.V	.Q	.	.	.
16.750	6549.3784	14746.09	.	.V	.Q	.	.	.
16.833	6651.9961	14900.06	.	.V	.Q	.	.	.
16.917	6756.4194	15162.26	.	.V	.Q	.	.	.
17.000	6862.2368	15364.65	.	.V	.Q	.	.	.
17.083	6969.4004	15560.14	.	.V	.Q	.	.	.
17.167	7077.8193	15742.43	.	.V	.Q	.	.	.
17.250	7187.6372	15945.54	.	.V	.Q	.	.	.
17.333	7298.1587	16047.70	.	.V	.Q	.	.	.
17.417	7409.3281	16141.83	.	.V	.Q	.	.	.
17.500	7521.4683	16282.72	.	.V	.Q	.	.	.
17.583	7636.0166	16632.43	.	.V	.Q	.	.	.
17.667	7748.9268	16394.53	.	.V	.Q	.	.	.
17.750	7861.8188	16391.92	.	.V	.Q	.	.	.
17.833	7976.2256	16611.88	.	.V	.Q	.	.	.
17.917	8092.2100	16840.96	.	.V	.Q	.	.	.
18.000	8206.8936	16652.06	.	.V	.Q	.	.	.
18.083	8320.2031	16452.50	.	.V	.Q	.	.	.
18.167	8433.9893	16521.73	.	.V	.Q	.	.	.
18.250	8548.7295	16660.29	.	.V	.Q	.	.	.
18.333	8663.9199	16725.61	.	.V	.Q	.	.	.
18.417	8779.2695	16748.70	.	.V	.Q	.	.	.

18.500	8891.4746	16292.12	.	.	.	V	.	Q	.
18.583	9006.6309	16720.70	.	.	.	V	.	Q	.
18.667	9121.5225	16682.29	.	.	.	V	.	Q	.
18.750	9236.2656	16660.69	.	.	.	V	.	Q	.
18.833	9351.4033	16717.97	.	.	.	V	.	Q	.
18.917	9464.6797	16447.69	.	.	.	V	.	Q	.
19.000	9574.4053	15932.17	.	.	.	V	.	Q	.
19.083	9683.3711	15821.86	.	.	.	V	.	Q	.
19.167	9792.9512	15911.02	.	.	.	V	.	Q	.
19.250	9903.7871	16093.33	.	.	.	V	.	Q	.
19.333	10014.5430	16081.69	.	.	.	V	.	Q	.
19.417	10121.2754	15497.51	.	.	.	V	.	Q	.
19.500	10226.1348	15225.63	.	.	.	V	.	Q	.
19.583	10330.5156	15156.14	.	.	.	V	.	Q	.
19.667	10432.8633	14860.93	.	.	.	V	.	Q	.
19.750	10533.7129	14643.30	.	.	.	V	.	Q	.
19.833	10633.0117	14418.12	.	.	.	V	.	Q	.
19.917	10729.5781	14021.46	.	.	.	V	.	Q	.
20.000	10823.7451	13672.99	.	.	.	V	.	Q	.
20.083	10916.8203	13514.50	.	.	.	VQ	.		.
20.167	11008.8594	13364.07	.	.	.	VQ	.		.
20.250	11099.4102	13148.03	.	.	.	VQ	.		.
20.333	11187.5479	12797.60	.	.	.	Q	.		.
20.417	11273.5908	12493.44	.	.	.	Q.V	.		.
20.500	11357.8457	12233.76	.	.	.	Q.V	.		.
20.583	11439.7236	11888.63	.	.	.	Q.V	.		.
20.667	11519.3047	11555.20	.	.	.	Q.V	.		.
20.750	11596.6719	11233.78	.	.	.	Q.V	.		.
20.833	11671.4014	10850.79	.	.	.	Q.V	.		.
20.917	11744.2168	10572.77	.	.	.	Q.V	.		.
21.000	11815.3730	10331.91	.	.	.	Q.V	.		.
21.083	11884.8574	10089.18	.	.	.	Q.V	.		.
21.167	11952.6699	9846.35	.	.	.	Q.V	.		.
21.250	12018.5527	9566.12	.	.	.	Q.V	.		.
21.333	12082.3398	9261.91	.	.	.	Q.V	.		.
21.417	12144.4873	9023.81	.	.	.	Q.V	.		.
21.500	12205.0664	8796.07	.	.	.	Q.V	.		.
21.583	12263.5732	8495.15	.	.	.	Q.V	.		.
21.667	12320.3623	8245.70	.	.	.	Q.V	.		.
21.750	12375.8037	8050.13	.	.	.	Q.V	.		.
21.833	12429.9180	7857.42	.	.	.	Q.V	.		.
21.917	12482.7383	7669.50	.	.	.	Q.V	.		.
22.000	12534.1680	7467.63	.	.	.	Q.V	.		.
22.083	12584.1035	7250.68	.	.	.	Q.V	.		.
22.167	12632.9736	7096.01	.	.	.	Q.V	.		.
22.250	12680.7900	6942.98	.	.	.	Q.V	.		.
22.333	12727.5967	6796.32	.	.	.	Q.V	.		.
22.417	12773.3867	6648.75	.	.	.	Q.V	.		.
22.500	12818.1934	6505.98	.	.	.	Q.V	.		.
22.583	12862.0723	6371.26	.	.	.	Q.V	.		.
22.667	12905.0361	6238.33	.	.	.	Q.V	.		.
22.750	12946.7090	6050.88	.	.	.	Q.V	.		.
22.833	12987.3379	5899.31	.	.	.	Q.V	.		.
22.917	13027.2373	5793.37	.	.	.	Q.V	.		.
23.000	13066.4531	5694.10	.	.	.	Q.V	.		.
23.083	13105.0068	5597.99	.	.	.	Q.V	.		.
23.167	13142.8730	5498.15	.	.	.	Q.V	.		.
23.250	13180.0586	5399.36	.	.	.	Q.V	.		.

23.333	13216.5889	5304.15	.	.	.	Q	.	V	.
23.417	13252.4688	5209.80	.	.	.	Q	.	V	.
23.500	13287.7012	5115.68	.	.	.	Q	.	V	.
23.583	13322.3418	5029.79	.	.	.	Q	.	V	.
23.667	13356.4199	4948.10	.	.	.	Q	.	V	.
23.750	13389.9775	4872.63	.	.	.	Q	.	V	.
23.833	13423.0293	4799.07	.	.	.	Q	.	V	.
23.917	13455.5840	4727.00	.	.	.	Q	.	V	.
24.000	13487.6768	4659.90	.	.	.	Q	.	V	.
24.083	13519.3115	4593.36	.	.	.	Q	.	V	.
24.167	13550.4639	4523.35	.	.	.	Q	.	V	.
24.250	13581.1426	4454.53	.	.	.	Q	.	V	.
24.333	13611.3564	4387.00	.	.	.	Q	.	V	.
24.417	13641.1123	4320.55	.	.	.	Q	.	V	.
24.500	13670.4180	4255.20	.	.	.	Q	.	V	.
24.583	13699.2598	4187.81	.	.	.	Q	.	V	.
24.667	13727.6279	4119.07	.	.	.	Q	.	V	.
24.750	13755.5723	4057.51	.	.	.	Q	.	V	.
24.833	13783.1279	4001.08	.	.	.	Q	.	V	.
24.917	13810.2441	3937.26	.	.	.	Q	.	V	.
25.000	13836.8936	3869.46	.	.	.	Q	.	V	.
25.083	13863.0596	3799.26	.	.	.	Q	.	V	.
25.167	13888.7305	3727.37	.	.	.	Q	.	V	.
25.250	13913.8574	3648.45	.	.	.	Q	.	V	.
25.333	13938.4443	3570.04	.	.	.	Q	.	V	.
25.417	13962.5059	3493.78	.	.	.	Q	.	V	.
25.500	13986.0352	3416.45	.	.	.	Q	.	V	.
25.583	14008.9131	3321.92	.	.	.	Q	.	V	.
25.667	14031.2236	3239.52	.	.	.	Q	.	V	.
25.750	14052.9062	3148.32	.	.	.	Q	.	V	.
25.833	14073.8643	3043.16	.	.	.	Q	.	V	.
25.917	14094.1797	2949.74	.	.	.	Q	.	V	.
26.000	14113.9072	2864.37	.	.	.	Q	.	V	.
26.083	14133.1016	2787.03	.	.	.	Q	.	V	.
26.167	14151.7080	2701.66	.	.	.	Q	.	V	.
26.250	14169.6650	2607.37	.	.	.	Q	.	V	.
26.333	14186.9404	2508.40	.	.	.	Q	.	V	.
26.417	14203.5068	2405.47	.	.	.	Q	.	V	.
26.500	14219.5303	2326.66	.	.	.	Q	.	V	.
26.583	14234.8271	2221.04	.	.	.	Q	.	V	.
26.667	14249.3838	2113.61	.	.	.	Q	.	V	.
26.750	14263.2158	2008.37	.	.	.	Q	.	V	.
26.833	14276.2725	1895.88	.	.	.	Q	.	V	.
26.917	14288.5957	1789.39	.	.	.	Q	.	V	.
27.000	14300.3389	1705.05	.	.	.	Q	.	V	.
27.083	14311.5293	1624.79	.	.	.	Q	.	V	.
27.167	14322.1318	1539.54	.	.	.	Q	.	V	.
27.250	14332.0586	1441.40	.	.	.	Q	.	V	.
27.333	14341.2559	1335.47	.	.	.	Q	.	V	.
27.417	14349.8770	1251.85	.	.	.	Q	.	V	.
27.500	14357.9824	1176.86	.	.	.	Q	.	V	.
27.583	14365.5283	1095.73	.	.	.	Q	.	V	.
27.667	14372.5791	1023.72	.	.	.	Q	.	V	.
27.750	14379.1621	955.87	.	.	.	Q	.	V	.
27.833	14385.2900	889.84	.	.	.	Q	.	V	.
27.917	14391.0254	832.83	.	.	.	Q	.	V	.
28.000	14396.4326	785.17	.	.	.	Q	.	V	.
28.083	14401.5146	737.93	.	.	.	Q	.	V	.

28.167	14406.2676	690.13	.Q	.	.	.	V.
28.250	14410.6865	641.66	.Q	.	.	.	V.
28.333	14414.7979	596.96	.Q	.	.	.	V.
28.417	14418.6172	554.59	.Q	.	.	.	V.
28.500	14422.1641	514.97	.Q	.	.	.	V.
28.583	14425.4648	479.32	.Q	.	.	.	V.
28.667	14428.5439	447.14	.Q	.	.	.	V.
28.750	14431.4189	417.48	Q	.	.	.	V.
28.833	14434.1211	392.39	Q	.	.	.	V.
28.917	14436.6533	367.62	Q	.	.	.	V.
29.000	14439.0225	344.02	Q	.	.	.	V.
29.083	14441.2393	321.91	Q	.	.	.	V.
29.167	14443.3047	299.96	Q	.	.	.	V.
29.250	14445.2236	278.65	Q	.	.	.	V.
29.333	14447.0059	258.81	Q	.	.	.	V.
29.417	14448.6533	239.20	Q	.	.	.	V.
29.500	14450.1670	219.79	Q	.	.	.	V.
29.583	14451.5732	204.15	Q	.	.	.	V.
29.667	14452.8877	190.85	Q	.	.	.	V.
29.750	14454.1113	177.64	Q	.	.	.	V.
29.833	14455.2441	164.53	Q	.	.	.	V.
29.917	14456.2881	151.52	Q	.	.	.	V.
30.000	14457.2520	139.97	Q	.	.	.	V.
30.083	14458.1582	131.55	Q	.	.	.	V.
30.167	14459.0068	123.29	Q	.	.	.	V.
30.250	14459.7998	115.09	Q	.	.	.	V.
30.333	14460.5361	106.95	Q	.	.	.	V.
30.417	14461.2168	98.89	Q	.	.	.	V.
30.500	14461.8428	90.88	Q	.	.	.	V.
30.583	14462.4141	82.92	Q	.	.	.	V.
30.667	14462.9307	75.06	Q	.	.	.	V.
30.750	14463.4170	70.55	Q	.	.	.	V.
30.833	14463.8877	68.29	Q	.	.	.	V.
30.917	14464.3428	66.04	Q	.	.	.	V.
31.000	14464.7822	63.83	Q	.	.	.	V.
31.083	14465.2070	61.63	Q	.	.	.	V.
31.167	14465.6162	59.44	Q	.	.	.	V.
31.250	14466.0107	57.29	Q	.	.	.	V.
31.333	14466.3906	55.14	Q	.	.	.	V.
31.417	14466.7559	53.01	Q	.	.	.	V.
31.500	14467.1064	50.91	Q	.	.	.	V.
31.583	14467.4424	48.81	Q	.	.	.	V.
31.667	14467.7646	46.74	Q	.	.	.	V.
31.750	14468.0723	44.67	Q	.	.	.	V.
31.833	14468.3662	42.62	Q	.	.	.	V.
31.917	14468.6455	40.62	Q	.	.	.	V.
32.000	14468.9111	38.59	Q	.	.	.	V.
32.083	14469.1631	36.59	Q	.	.	.	V.
32.167	14469.4014	34.61	Q	.	.	.	V.
32.250	14469.6260	32.64	Q	.	.	.	V.
32.333	14469.8369	30.69	Q	.	.	.	V.
32.417	14470.0352	28.75	Q	.	.	.	V.
32.500	14470.2197	26.82	Q	.	.	.	V.
32.583	14470.3916	24.91	Q	.	.	.	V.
32.667	14470.5498	23.01	Q	.	.	.	V.
32.750	14470.6953	21.13	Q	.	.	.	V.
32.833	14470.8281	19.25	Q	.	.	.	V.
32.917	14470.9482	17.39	Q	.	.	.	V.

33.000	14471.0557	15.54	Q	.	.	.	V.
33.083	14471.1504	13.71	Q	.	.	.	V.
33.167	14471.2324	11.88	Q	.	.	.	V.
33.250	14471.3018	10.07	Q	.	.	.	V.
33.333	14471.3584	8.26	Q	.	.	.	V.
33.417	14471.4033	6.47	Q	.	.	.	V.
33.500	14471.4355	4.69	Q	.	.	.	V.
33.583	14471.4561	2.92	Q	.	.	.	V.
33.667	14471.4639	1.16	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%	2020.0
10%	1445.0
20%	1190.0
30%	700.0
40%	530.0
50%	440.0
60%	365.0
70%	310.0
80%	240.0
90%	160.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 119 *
* 50-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV50119S.DAT
TIME/DATE OF STUDY: 14:20 01/02/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 49495.699 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.043 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298
LOW LOSS FRACTION = 0.399
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	1395.215
2	0.699	2790.427
3	1.165	2790.428
4	1.632	2790.430
5	2.159	3157.066
6	2.858	4184.957
7	3.568	4246.297
8	4.513	5660.116
9	5.841	7949.957
10	7.482	9823.601
11	9.504	12100.033
12	11.579	12422.426
13	13.678	12566.875
14	16.386	16208.730
15	18.611	13314.900
16	20.992	14255.629
17	23.920	17523.658
18	26.361	14614.003
19	28.979	15669.029
20	31.997	18064.832
21	35.430	20548.764
22	38.098	15970.705
23	41.854	22486.143
24	45.545	22095.789
25	49.687	24788.598
26	52.917	19335.461
27	55.772	17091.027
28	59.079	19792.262
29	63.017	23575.660
30	66.033	18051.760
31	68.904	17189.010
32	71.611	16203.753
33	74.182	15385.142
34	76.492	13830.534
35	78.322	10952.858
36	80.152	10956.786
37	82.034	11260.620
38	83.762	10346.333
39	85.348	9491.460
40	86.729	8268.271
41	87.949	7302.423
42	88.947	5977.483
43	89.899	5695.844
44	90.776	5248.063
45	91.634	5138.367
46	92.446	4860.381
47	93.223	4651.858
48	93.968	4455.528

49	94.518	3294.722
50	95.036	3099.808
51	95.554	3099.808
52	96.032	2860.458
53	96.364	1990.607
54	96.684	1916.030
55	97.004	1914.660
56	97.324	1914.614
57	97.644	1916.075
58	97.945	1804.279
59	98.068	730.882
60	98.144	460.021
61	98.221	455.728
62	98.297	458.605
63	98.374	461.436
64	98.450	455.728
65	98.527	458.605
66	98.604	458.605
67	98.680	455.728
68	98.756	458.559
69	98.833	458.605
70	98.910	458.605
71	98.986	455.728
72	99.062	458.605
73	99.138	455.728
74	99.215	455.728
75	99.291	455.728
76	99.367	455.728
77	99.443	455.728
78	99.519	455.728
79	99.595	455.728
80	99.671	455.728
81	99.748	455.728
82	99.824	455.728
83	99.900	455.728
84	99.976	455.728
85	100.000	143.902

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9142.8164
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 14162.9131

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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.	4475.0	8950.0	13425.0	17900.0
0.083	0.0499	7.25	Q	.	.	.	.
0.167	0.1999	21.77	Q	.	.	.	.
0.250	0.4501	36.33	Q	.	.	.	.
0.333	0.8008	50.93	Q	.	.	.	.
0.417	1.2656	67.48	Q	.	.	.	.
0.500	1.8814	89.42	Q	.	.	.	.
0.583	2.6510	111.75	Q	.	.	.	.
0.667	3.6254	141.49	Q	.	.	.	.
0.750	4.8872	183.21	Q	.	.	.	.
0.833	6.5042	234.79	Q	.	.	.	.
0.917	8.5589	298.35	Q	.	.	.	.
1.000	11.0642	363.77	Q	.	.	.	.
1.083	14.0265	430.13	Q	.	.	.	.
1.167	17.5777	515.63	VQ	.	.	.	.
1.250	21.6158	586.33	VQ	.	.	.	.
1.333	26.1761	662.16	VQ	.	.	.	.
1.417	31.3770	755.17	VQ	.	.	.	.
1.500	37.1165	833.37	VQ	.	.	.	.
1.583	43.4338	917.28	V Q	.	.	.	.
1.667	50.4167	1013.91	V Q	.	.	.	.
1.750	58.1559	1123.73	V Q	.	.	.	.
1.833	66.4899	1210.09	V Q	.	.	.	.
1.917	75.6539	1330.62	V Q	.	.	.	.
2.000	85.6363	1449.43	V Q	.	.	.	.
2.083	96.5362	1582.67	V Q	.	.	.	.
2.167	108.1609	1687.91	V Q	.	.	.	.
2.250	120.4332	1781.93	V Q	.	.	.	.
2.333	133.4510	1890.19	V Q	.	.	.	.
2.417	147.3528	2018.55	V Q	.	.	.	.
2.500	161.9431	2118.50	V Q	.	.	.	.
2.583	177.1940	2214.43	V Q	.	.	.	.
2.667	193.0717	2305.43	V Q	.	.	.	.
2.750	209.5498	2392.62	V Q	.	.	.	.
2.833	226.5738	2471.90	V Q	.	.	.	.
2.917	244.0437	2536.63	V Q	.	.	.	.
3.000	261.9603	2601.49	V Q	.	.	.	.
3.083	280.3370	2668.30	V Q	.	.	.	.
3.167	299.1419	2730.47	V Q	.	.	.	.
3.250	318.3469	2788.57	V Q	.	.	.	.
3.333	337.9089	2840.40	V Q	.	.	.	.
3.417	357.7956	2887.55	.V Q	.	.	.	.
3.500	377.9601	2927.88	.V Q	.	.	.	.
3.583	398.3944	2967.06	.V Q	.	.	.	.
3.667	419.0828	3003.95	.V Q	.	.	.	.
3.750	440.0235	3040.58	.V Q	.	.	.	.
3.833	461.2067	3075.80	.V Q	.	.	.	.
3.917	482.6270	3110.24	.V Q	.	.	.	.

4.000	504.2777	3143.68	.V	Q	.	.	.	.
4.083	526.1193	3171.40	.V	Q	.	.	.	.
4.167	548.1449	3198.11	.V	Q	.	.	.	.
4.250	570.3564	3225.12	.V	Q	.	.	.	.
4.333	592.7455	3250.89	.V	Q	.	.	.	.
4.417	615.2829	3272.43	.V	Q	.	.	.	.
4.500	637.9660	3293.58	.V	Q	.	.	.	.
4.583	660.7966	3315.01	.V	Q	.	.	.	.
4.667	683.7748	3336.43	.V	Q	.	.	.	.
4.750	706.9026	3358.15	.V	Q	.	.	.	.
4.833	730.1759	3379.28	.V	Q	.	.	.	.
4.917	753.5583	3395.13	.V	Q	.	.	.	.
5.000	777.0402	3409.56	.V	Q	.	.	.	.
5.083	800.6231	3424.24	.V	Q	.	.	.	.
5.167	824.3071	3438.92	.V	Q	.	.	.	.
5.250	848.0943	3453.90	.V	Q	.	.	.	.
5.333	871.9843	3468.83	.V	Q	.	.	.	.
5.417	895.9792	3484.06	.V	Q	.	.	.	.
5.500	920.0789	3499.28	.V	Q	.	.	.	.
5.583	944.2854	3514.78	.V	Q	.	.	.	.
5.667	968.5987	3530.29	.V	Q	.	.	.	.
5.750	993.0209	3546.10	.V	Q	.	.	.	.
5.833	1017.5518	3561.89	.V	Q	.	.	.	.
5.917	1042.1937	3578.00	.V	Q	.	.	.	.
6.000	1066.9464	3594.10	.V	Q	.	.	.	.
6.083	1091.8121	3610.51	.V	Q	.	.	.	.
6.167	1116.7909	3626.91	.V	Q	.	.	.	.
6.250	1141.8849	3643.65	.V	Q	.	.	.	.
6.333	1167.0941	3660.38	.V	Q	.	.	.	.
6.417	1192.4209	3677.46	.V	Q	.	.	.	.
6.500	1217.8652	3694.52	.V	Q	.	.	.	.
6.583	1243.4296	3711.94	.V	Q	.	.	.	.
6.667	1269.1139	3729.37	.V	Q	.	.	.	.
6.750	1294.9207	3747.15	.V	Q	.	.	.	.
6.833	1320.8500	3764.93	.V	Q	.	.	.	.
6.917	1346.9043	3783.10	.V	Q	.	.	.	.
7.000	1373.0837	3801.26	.V	Q	.	.	.	.
7.083	1399.3798	3818.19	.V	Q	.	.	.	.
7.167	1425.7872	3834.37	.V	Q	.	.	.	.
7.250	1452.3090	3850.95	.V	Q	.	.	.	.
7.333	1478.9448	3867.53	.V	Q	.	.	.	.
7.417	1505.6976	3884.52	.V	Q	.	.	.	.
7.500	1532.5675	3901.50	.V	Q	.	.	.	.
7.583	1559.5573	3918.92	.V	Q	.	.	.	.
7.667	1586.6670	3936.33	.V	Q	.	.	.	.
7.750	1613.8997	3954.18	.V	Q	.	.	.	.
7.833	1641.2554	3972.05	.V	Q	.	.	.	.
7.917	1668.7372	3990.36	.V	Q	.	.	.	.
8.000	1696.3452	4008.69	.V	Q	.	.	.	.
8.083	1724.0828	4027.49	.V	Q	.	.	.	.
8.167	1751.9498	4046.30	.V	Q	.	.	.	.
8.250	1779.9498	4065.61	.V	Q	.	.	.	.
8.333	1808.0830	4084.93	.V	Q	.	.	.	.
8.417	1836.3527	4104.76	.V	Q	.	.	.	.
8.500	1864.7590	4124.61	.V	Q	.	.	.	.
8.583	1893.3058	4144.99	.V	Q	.	.	.	.
8.667	1921.9930	4165.40	.V	Q	.	.	.	.
8.750	1950.8247	4186.35	.V	Q	.	.	.	.

8.833	1979.8009	4207.34	.V	Q	.	.	.	.
8.917	2008.9255	4228.89	.V	Q	.	.	.	.
9.000	2038.1989	4250.49	.V	Q	.	.	.	.
9.083	2067.6250	4272.69	.V	Q	.	.	.	.
9.167	2097.2043	4294.92	.V	Q	.	.	.	.
9.250	2126.9412	4317.78	.V	Q	.	.	.	.
9.333	2156.8357	4340.69	.V	Q	.	.	.	.
9.417	2186.8926	4364.24	.V	Q	.	.	.	.
9.500	2217.1121	4387.86	.V	Q	.	.	.	.
9.583	2247.4988	4412.14	.V	Q	.	.	.	.
9.667	2278.0532	4436.50	.V	Q	.	.	.	.
9.750	2308.7803	4461.56	.V	Q	.	.	.	.
9.833	2339.6804	4486.71	.V	Q	.	.	.	.
9.917	2370.7588	4512.58	.V	Q	.	.	.	.
10.000	2402.0159	4538.55	.V	Q	.	.	.	.
10.083	2433.4573	4565.28	.V	Q	.	.	.	.
10.167	2465.0835	4592.12	.V	Q	.	.	.	.
10.250	2496.8999	4619.76	.V	Q	.	.	.	.
10.333	2528.9077	4647.52	.V	Q	.	.	.	.
10.417	2561.1123	4676.12	.V	Q	.	.	.	.
10.500	2593.5149	4704.86	.V	Q	.	.	.	.
10.583	2626.1216	4734.48	.V	Q	.	.	.	.
10.667	2658.9331	4764.25	.V	Q	.	.	.	.
10.750	2691.9561	4794.95	.V	Q	.	.	.	.
10.833	2725.1917	4825.82	.V	Q	.	.	.	.
10.917	2758.6467	4857.66	.V	Q	.	.	.	.
11.000	2792.3223	4889.70	.V	Q	.	.	.	.
11.083	2826.2256	4922.76	.V	Q	.	.	.	.
11.167	2860.3582	4956.04	.V	Q	.	.	.	.
11.250	2894.7273	4990.40	.V	Q	.	.	.	.
11.333	2929.3347	5025.01	.V	Q	.	.	.	.
11.417	2964.1885	5060.76	.V	Q	.	.	.	.
11.500	2999.2903	5096.78	.V	Q	.	.	.	.
11.583	3034.6484	5134.01	.V	Q	.	.	.	.
11.667	3070.2651	5171.55	.V	Q	.	.	.	.
11.750	3106.1492	5210.37	.V	Q	.	.	.	.
11.833	3142.3030	5249.54	.V	Q	.	.	.	.
11.917	3178.7358	5290.07	.V	Q	.	.	.	.
12.000	3215.4507	5330.99	.V	Q	.	.	.	.
12.083	3252.5403	5385.41	.V	Q	.	.	.	.
12.167	3290.0906	5452.30	.V	Q	.	.	.	.
12.250	3328.1113	5520.60	.V	Q	.	.	.	.
12.333	3366.6050	5589.29	.V	Q	.	.	.	.
12.417	3405.6040	5662.65	.V	Q	.	.	.	.
12.500	3445.1724	5745.32	.V	Q	.	.	.	.
12.583	3485.3245	5830.09	.V	Q	.	.	.	.
12.667	3526.1475	5927.49	.V	Q	.	.	.	.
12.750	3567.7888	6046.32	.V	Q	.	.	.	.
12.833	3610.3623	6181.67	.V	Q	.	.	.	.
12.917	3654.0144	6338.27	.V	Q	.	.	.	.
13.000	3698.7656	6497.87	.V	Q	.	.	.	.
13.083	3744.6353	6660.26	.V	Q	.	.	.	.
13.167	3791.8416	6854.37	.V	Q	.	.	.	.
13.250	3840.2231	7025.02	.V	Q	.	.	.	.
13.333	3889.8372	7203.94	.V	Q	.	.	.	.
13.417	3940.8904	7412.93	.V	Q	.	.	.	.
13.500	3993.2100	7596.80	.V	Q	.	.	.	.
13.583	4046.8716	7791.66	.V	Q	.	.	.	.

13.667	4102.0190	8007.43	.	.V	Q	.	.	.
13.750	4158.8135	8246.56	.	.V	Q	.	.	.
13.833	4216.9829	8446.19	.	.V	Q	.	.	.
13.917	4276.9287	8704.16	.	.V	Q.	.	.	.
14.000	4338.6294	8958.97	.	.V	Q	.	.	.
14.083	4402.3525	9252.61	.	.V	Q	.	.	.
14.167	4467.8672	9512.71	.	.V	.Q	.	.	.
14.250	4535.0459	9754.34	.	.V	.Q	.	.	.
14.333	4604.0464	10018.89	.	.V	.Q	.	.	.
14.417	4675.1265	10320.83	.	.V	.Q	.	.	.
14.500	4748.0215	10584.37	.	.V	.Q	.	.	.
14.583	4822.6895	10841.76	.	.V	.Q	.	.	.
14.667	4899.1602	11103.55	.	.V	.Q	.	.	.
14.750	4977.5435	11381.24	.	.V	.Q	.	.	.
14.833	5057.8579	11661.67	.	.V	.Q	.	.	.
14.917	5140.0791	11938.55	.	.V	.Q	.	.	.
15.000	5224.2036	12214.87	.	.V	.Q	.	.	.
15.083	5310.2437	12492.99	.	.V	.Q	.	.	.
15.167	5398.3613	12794.71	.	.V	.Q	.	.	.
15.250	5488.2866	13057.15	.	.V	.Q.	.	.	.
15.333	5579.9702	13312.48	.	.V	.Q.	.	.	.
15.417	5673.4370	13571.39	.	.V	.Q	.	.	.
15.500	5768.2456	13766.20	.	.V	.Q	.	.	.
15.583	5864.4531	13969.33	.	.V	.Q	.	.	.
15.667	5962.1782	14189.67	.	.V	.Q	.	.	.
15.750	6061.4956	14420.86	.	.V	.Q	.	.	.
15.833	6161.9155	14580.96	.	.V	.Q	.	.	.
15.917	6263.9277	14812.18	.	.V	.Q	.	.	.
16.000	6367.4819	15036.09	.	.V	.Q	.	.	.
16.083	6473.4951	15393.09	.	.V	.Q	.	.	.
16.167	6581.2461	15645.46	.	.V	.Q	.	.	.
16.250	6689.3198	15692.32	.	.V	.Q	.	.	.
16.333	6797.8887	15764.17	.	.V	.Q	.	.	.
16.417	6907.5063	15916.49	.	.V	.Q	.	.	.
16.500	7018.0527	16051.34	.	.V	.Q	.	.	.
16.583	7129.1167	16126.50	.	.V	.Q	.	.	.
16.667	7241.7490	16354.24	.	.V	.Q	.	.	.
16.750	7356.2866	16630.87	.	.V	.Q	.	.	.
16.833	7472.5342	16879.12	.	.V	.Q	.	.	.
16.917	7590.3887	17112.49	.	.V	.Q	.	.	.
17.000	7708.2729	17116.83	.	.V	.Q	.	.	.
17.083	7825.8955	17078.81	.	.V	.Q	.	.	.
17.167	7946.0884	17451.99	.	.V	.Q	.	.	.
17.250	8063.7075	17078.28	.	.V	.Q	.	.	.
17.333	8181.7036	17133.04	.	.V	.Q	.	.	.
17.417	8301.1191	17339.19	.	.V	.Q	.	.	.
17.500	8418.4795	17040.76	.	.V	.Q	.	.	.
17.583	8536.7998	17180.07	.	.V	.Q	.	.	.
17.667	8656.5605	17389.20	.	.V	.Q	.	.	.
17.750	8777.3701	17541.61	.	.V	.Q.	.	.	.
17.833	8894.8252	17054.46	.	.V	.Q	.	.	.
17.917	9017.1104	17755.83	.	.V	.Q.	.	.	.
18.000	9138.8008	17669.43	.	.V	.Q.	.	.	.
18.083	9261.7334	17849.79	.	.V	.Q.	.	.	.
18.167	9379.5078	17100.83	.	.V	.Q	.	.	.
18.250	9496.0850	16927.05	.	.V	.Q	.	.	.
18.333	9614.8838	17249.52	.	.V	.Q	.	.	.
18.417	9736.0010	17586.28	.	.V	.Q.	.	.	.

18.500	9852.3965	16900.58	.	.	.	.	V	.Q
18.583	9967.5244	16716.59	.	.	.	.	V	.Q
18.667	10081.1748	16502.10	.	.	.	.	V	.Q
18.750	10193.4600	16303.78	.	.	.	.	V	.Q
18.833	10303.6494	15999.51	.	.	.	.	V	.Q
18.917	10410.2598	15479.77	.	.	.	.	V	.Q
19.000	10515.4307	15270.79	.	.	.	.	V	.Q
19.083	10618.9736	15034.40	.	.	.	.	V	.Q
19.167	10719.9648	14663.99	.	.	.	.	V	.Q
19.250	10818.4707	14303.05	.	.	.	.	VQ	.
19.333	10913.9209	13859.31	.	.	.	.	Q	.
19.417	11006.1416	13390.44	.	.	.	.	Q.V	.
19.500	11095.3809	12957.50	.	.	.	.	Q	.V
19.583	11182.3525	12628.25	.	.	.	.	Q	.V
19.667	11266.7705	12257.44	.	.	.	.	Q	.V
19.750	11348.8086	11911.96	.	.	.	.	Q	.V
19.833	11428.5742	11581.96	.	.	.	.	Q	.V
19.917	11505.8281	11217.29	.	.	.	.	Q	.V
20.000	11580.4912	10841.12	.	.	.	.	Q	.V
20.083	11651.7188	10342.28	.	.	.	.	Q	.V
20.167	11720.6260	10005.36	.	.	.	.	Q	.V
20.250	11787.5693	9720.20	.	.	.	.	Q	.V
20.333	11852.2676	9394.13	.	.	.	.	Q	.V
20.417	11914.0342	8968.47	.	.	.	.	Q	.V
20.500	11973.8896	8690.99	.	.	.	.	Q.	.V
20.583	12031.9912	8436.37	.	.	.	.	Q	.V
20.667	12088.4189	8193.28	.	.	.	.	Q	.V
20.750	12143.1025	7940.06	.	.	.	.	Q	.V
20.833	12195.9922	7679.58	.	.	.	.	Q	.V
20.917	12246.6035	7348.73	.	.	.	.	Q	.V
21.000	12295.6064	7115.25	.	.	.	.	Q	.V
21.083	12343.2568	6918.88	.	.	.	.	Q	.V
21.167	12389.6406	6734.91	.	.	.	.	Q	.V
21.250	12434.7383	6548.18	.	.	.	.	Q	.V
21.333	12478.6172	6371.19	.	.	.	.	Q	.V
21.417	12521.4072	6213.13	.	.	.	.	Q	.V
21.500	12563.2012	6068.54	.	.	.	.	Q	.V
21.583	12604.0264	5927.85	.	.	.	.	Q	.V
21.667	12643.9238	5793.11	.	.	.	.	Q	.V
21.750	12682.9082	5660.55	.	.	.	.	Q	.V
21.833	12721.0137	5532.94	.	.	.	.	Q	.V
21.917	12758.3350	5419.09	.	.	.	.	Q	.V
22.000	12794.9219	5312.42	.	.	.	.	Q	.V
22.083	12830.8545	5217.46	.	.	.	.	Q	.V
22.167	12866.1621	5126.65	.	.	.	.	Q	.V
22.250	12900.8584	5037.84	.	.	.	.	Q	.V
22.333	12934.9707	4953.13	.	.	.	.	Q	.V
22.417	12968.5918	4881.75	.	.	.	.	Q	.V
22.500	13001.7490	4814.38	.	.	.	.	Q	.V
22.583	13034.4492	4748.08	.	.	.	.	Q	.V
22.667	13066.6992	4682.74	.	.	.	.	Q	.V
22.750	13098.5166	4619.85	.	.	.	.	Q	.V
22.833	13129.9160	4559.20	.	.	.	.	Q	.V
22.917	13160.9541	4506.67	.	.	.	.	Q	.V
23.000	13191.6289	4453.99	.	.	.	.	Q	.V
23.083	13221.7246	4369.96	.	.	.	.	Q	.V
23.167	13251.3945	4308.03	.	.	.	.	Q	.V
23.250	13280.7568	4263.46	.	.	.	.	Q	.V

23.333	13309.8262	4220.81	.	Q.	.	.	V	.
23.417	13338.5859	4175.89	.	Q.	.	.	V	.
23.500	13367.0293	4130.02	.	Q.	.	.	V	.
23.583	13395.1611	4084.79	.	Q.	.	.	V	.
23.667	13422.9854	4040.14	.	Q.	.	.	V	.
23.750	13450.5068	3996.11	.	Q	.	.	V	.
23.833	13477.7295	3952.67	.	Q	.	.	V	.
23.917	13504.6562	3909.83	.	Q	.	.	V	.
24.000	13531.2920	3867.54	.	Q	.	.	V	.
24.083	13557.6123	3821.72	.	Q	.	.	V	.
24.167	13583.5830	3770.90	.	Q	.	.	V	.
24.250	13609.2100	3720.98	.	Q	.	.	V	.
24.333	13634.4990	3671.91	.	Q	.	.	V	.
24.417	13659.4424	3621.75	.	Q	.	.	V	.
24.500	13684.0088	3567.06	.	Q	.	.	V	.
24.583	13708.2021	3512.83	.	Q	.	.	V	.
24.667	13731.9766	3452.05	.	Q	.	.	V	.
24.750	13755.2559	3380.16	.	Q	.	.	V	.
24.833	13777.9785	3299.36	.	Q	.	.	V	.
24.917	13800.0693	3207.61	.	Q	.	.	V	.
25.000	13821.5234	3115.08	.	Q	.	.	V	.
25.083	13842.3594	3025.38	.	Q	.	.	V	.
25.167	13862.4619	2918.91	.	Q	.	.	V	.
25.250	13881.9414	2828.42	.	Q	.	.	V	.
25.333	13900.7695	2733.91	.	Q	.	.	V	.
25.417	13918.8369	2623.32	.	Q	.	.	V	.
25.500	13936.2529	2528.75	.	Q	.	.	V	.
25.583	13952.9854	2429.54	.	Q	.	.	V	.
25.667	13968.9551	2318.74	.	Q	.	.	V	.
25.750	13984.0791	2195.94	.	Q	.	.	V	.
25.833	13998.5273	2097.83	.	Q	.	.	V	.
25.917	14012.0723	1966.71	.	Q	.	.	V	.
26.000	14024.7344	1838.57	.	Q	.	.	V	.
26.083	14036.4248	1697.40	.	Q	.	.	V	.
26.167	14047.3438	1585.50	.	Q	.	.	V	.
26.250	14057.5781	1486.04	.	Q	.	.	V	.
26.333	14067.0361	1373.30	.	Q	.	.	V	.
26.417	14075.5879	1241.72	.	Q	.	.	V	.
26.500	14083.4365	1139.68	.	Q	.	.	V	.
26.583	14090.6182	1042.82	.	Q	.	.	V	.
26.667	14097.1729	951.73	.	Q	.	.	V	.
26.750	14103.1338	865.51	.	Q	.	.	V	.
26.833	14108.5605	787.93	.	Q	.	.	V	.
26.917	14113.5596	725.81	.	Q	.	.	V	.
27.000	14118.1328	664.10	.	Q	.	.	V	.
27.083	14122.2734	601.23	.	Q	.	.	V	.
27.167	14126.0166	543.53	.	Q	.	.	V	.
27.250	14129.3955	490.64	.	Q	.	.	V	.
27.333	14132.4561	444.46	.	Q	.	.	V	.
27.417	14135.2354	403.60	.	Q	.	.	V	.
27.500	14137.7832	369.88	.	Q	.	.	V	.
27.583	14140.1104	337.86	.	Q	.	.	V	.
27.667	14142.2344	308.37	.	Q	.	.	V	.
27.750	14144.1602	279.66	.	Q	.	.	V	.
27.833	14145.8994	252.58	.	Q	.	.	V	.
27.917	14147.4609	226.76	.	Q	.	.	V	.
28.000	14148.8525	202.13	.	Q	.	.	V	.
28.083	14150.1172	183.68	.	Q	.	.	V	.

28.167	14151.2627	166.37	Q	.	.	.	V	.
28.250	14152.2900	149.18	Q	.	.	.	V	.
28.333	14153.2080	133.34	Q	.	.	.	V	.
28.417	14154.0488	122.12	Q	.	.	.	V	.
28.500	14154.8154	111.36	Q	.	.	.	V	.
28.583	14155.5088	100.68	Q	.	.	.	V	.
28.667	14156.1289	90.08	Q	.	.	.	V	.
28.750	14156.6768	79.53	Q	.	.	.	V	.
28.833	14157.1562	69.63	Q	.	.	.	V	.
28.917	14157.6064	65.37	Q	.	.	.	V	.
29.000	14158.0371	62.54	Q	.	.	.	V	.
29.083	14158.4482	59.76	Q	.	.	.	V	.
29.167	14158.8408	56.98	Q	.	.	.	V	.
29.250	14159.2139	54.21	Q	.	.	.	V	.
29.333	14159.5684	51.49	Q	.	.	.	V	.
29.417	14159.9043	48.77	Q	.	.	.	V	.
29.500	14160.2217	46.08	Q	.	.	.	V	.
29.583	14160.5205	43.42	Q	.	.	.	V	.
29.667	14160.8008	40.76	Q	.	.	.	V	.
29.750	14161.0635	38.12	Q	.	.	.	V	.
29.833	14161.3076	35.50	Q	.	.	.	V	.
29.917	14161.5342	32.91	Q	.	.	.	V	.
30.000	14161.7432	30.33	Q	.	.	.	V	.
30.083	14161.9346	27.78	Q	.	.	.	V	.
30.167	14162.1084	25.24	Q	.	.	.	V	.
30.250	14162.2646	22.72	Q	.	.	.	V	.
30.333	14162.4043	20.22	Q	.	.	.	V	.
30.417	14162.5264	17.73	Q	.	.	.	V	.
30.500	14162.6318	15.26	Q	.	.	.	V	.
30.583	14162.7197	12.81	Q	.	.	.	V	.
30.667	14162.7910	10.37	Q	.	.	.	V	.
30.750	14162.8457	7.94	Q	.	.	.	V	.
30.833	14162.8838	5.53	Q	.	.	.	V	.
30.917	14162.9053	3.13	Q	.	.	.	V	.
31.000	14162.9102	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

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 126 *
* 50-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV50126S.DAT
TIME/DATE OF STUDY: 14:22 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 126.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 50405.801 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) = 0.297
LOW LOSS FRACTION = 0.401
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) = 2.27
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.38
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.95

*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 = 3.912

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.224	1362.834
2	0.671	2725.664
3	1.118	2725.666
4	1.565	2725.667
5	2.044	2923.136
6	2.699	3988.678
7	3.379	4147.747
8	4.158	4749.245
9	5.362	7335.575
10	6.807	8813.142
11	8.587	10848.067
12	10.619	12386.912
13	12.577	11938.024
14	14.875	14003.894
15	17.322	14921.400
16	19.421	12794.431
17	21.922	15245.924
18	24.679	16806.293
19	26.931	13727.075
20	29.595	16238.019
21	32.545	17987.281
22	35.779	19715.383
23	38.361	15737.495
24	41.997	22166.189
25	45.540	21595.787
26	49.531	24326.297
27	52.674	19165.025
28	55.412	16687.639
29	58.472	18653.201
30	62.259	23086.568
31	65.353	18862.977
32	68.029	16311.618
33	70.808	16940.039
34	73.225	14732.610
35	75.633	14679.684
36	77.506	11419.258
37	79.245	10601.454
38	81.042	10950.965
39	82.790	10656.566
40	84.391	9762.628
41	85.860	8954.684
42	87.112	7628.589
43	88.233	6837.342
44	89.162	5660.354
45	90.066	5508.968
46	90.898	5070.766
47	91.720	5015.235
48	92.493	4710.884

49	93.238	4541.965
50	93.955	4370.070
51	94.486	3236.474
52	94.983	3027.977
53	95.479	3028.023
54	95.957	2910.822
55	96.292	2045.022
56	96.599	1868.522
57	96.906	1871.592
58	97.213	1870.057
59	97.520	1871.592
60	97.827	1871.545
61	98.032	1249.263
62	98.105	448.853
63	98.179	448.899
64	98.252	445.830
65	98.325	447.364
66	98.399	445.830
67	98.472	445.830
68	98.545	447.318
69	98.619	448.899
70	98.692	444.295
71	98.765	450.388
72	98.838	444.341
73	98.912	450.388
74	98.985	444.295
75	99.058	447.364
76	99.131	444.295
77	99.204	444.295
78	99.277	444.295
79	99.350	444.295
80	99.423	444.295
81	99.496	444.295
82	99.569	444.295
83	99.642	444.295
84	99.714	444.295
85	99.787	444.295
86	99.860	444.295
87	99.933	444.295
88	100.000	407.879

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9298.1523
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 14282.4287

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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.	4475.0	8950.0	13425.0	17900.0
0.083	0.0483	7.01	Q	.	.	.	.
0.167	0.1933	21.05	Q	.	.	.	.
0.250	0.4353	35.14	Q	.	.	.	.
0.333	0.7746	49.26	Q	.	.	.	.
0.417	1.2184	64.44	Q	.	.	.	.
0.500	1.8048	85.15	Q	.	.	.	.
0.583	2.5400	106.74	Q	.	.	.	.
0.667	3.4455	131.49	Q	.	.	.	.
0.750	4.6137	169.62	Q	.	.	.	.
0.833	6.0975	215.46	Q	.	.	.	.
0.917	7.9702	271.90	Q	.	.	.	.
1.000	10.2872	336.43	Q	.	.	.	.
1.083	13.0340	398.84	Q	.	.	.	.
1.167	16.2852	472.07	VQ	.	.	.	.
1.250	20.0747	550.24	VQ	.	.	.	.
1.333	24.3289	617.70	VQ	.	.	.	.
1.417	29.1360	697.99	VQ	.	.	.	.
1.500	34.5529	786.54	VQ	.	.	.	.
1.583	40.4725	859.52	VQ	.	.	.	.
1.667	46.9852	945.66	V Q	.	.	.	.
1.750	54.1550	1041.04	V Q	.	.	.	.
1.833	62.0450	1145.63	V Q	.	.	.	.
1.917	70.5164	1230.05	V Q	.	.	.	.
2.000	79.7992	1347.86	V Q	.	.	.	.
2.083	89.8751	1463.03	V Q	.	.	.	.
2.167	100.8441	1592.69	V Q	.	.	.	.
2.250	112.5252	1696.10	V Q	.	.	.	.
2.333	124.8338	1787.21	V Q	.	.	.	.
2.417	137.8409	1888.63	V Q	.	.	.	.
2.500	151.7065	2013.28	V Q	.	.	.	.
2.583	166.2829	2116.49	V Q	.	.	.	.
2.667	181.4828	2207.04	V Q	.	.	.	.
2.750	197.3299	2301.00	V Q	.	.	.	.
2.833	213.7489	2384.04	V Q	.	.	.	.
2.917	230.7390	2466.97	V Q	.	.	.	.
3.000	248.1876	2533.53	V Q	.	.	.	.
3.083	266.0666	2596.03	V Q	.	.	.	.
3.167	284.3907	2660.66	V Q	.	.	.	.
3.250	303.1503	2723.90	V Q	.	.	.	.
3.333	322.3162	2782.89	V Q	.	.	.	.
3.417	341.8606	2837.84	V Q	.	.	.	.
3.500	361.7386	2886.29	.V Q	.	.	.	.
3.583	381.9230	2930.77	.V Q	.	.	.	.
3.667	402.3740	2969.49	.V Q	.	.	.	.
3.750	423.0867	3007.49	.V Q	.	.	.	.
3.833	444.0476	3043.52	.V Q	.	.	.	.
3.917	465.2551	3079.32	.V Q	.	.	.	.

4.000	486.7002	3113.83	.V	Q	.	.	.	.
4.083	508.3775	3147.54	.V	Q	.	.	.	.
4.167	530.2827	3180.64	.V	Q	.	.	.	.
4.250	552.3760	3207.95	.V	Q	.	.	.	.
4.333	574.6519	3234.46	.V	Q	.	.	.	.
4.417	597.1106	3261.01	.V	Q	.	.	.	.
4.500	619.7498	3287.22	.V	Q	.	.	.	.
4.583	642.5391	3309.00	.V	Q	.	.	.	.
4.667	665.4740	3330.15	.V	Q	.	.	.	.
4.750	688.5547	3351.32	.V	Q	.	.	.	.
4.833	711.7831	3372.76	.V	Q	.	.	.	.
4.917	735.1592	3394.22	.V	Q	.	.	.	.
5.000	758.6851	3415.96	.V	Q	.	.	.	.
5.083	782.3387	3434.51	.V	Q	.	.	.	.
5.167	806.0937	3449.22	.V	Q	.	.	.	.
5.250	829.9499	3463.92	.V	Q	.	.	.	.
5.333	853.9091	3478.88	.V	Q	.	.	.	.
5.417	877.9714	3493.85	.V	Q	.	.	.	.
5.500	902.1387	3509.09	.V	Q	.	.	.	.
5.583	926.4109	3524.33	.V	Q	.	.	.	.
5.667	950.7901	3539.86	.V	Q	.	.	.	.
5.750	975.2763	3555.40	.V	Q	.	.	.	.
5.833	999.8714	3571.21	.V	Q	.	.	.	.
5.917	1024.5756	3587.05	.V	Q	.	.	.	.
6.000	1049.3907	3603.17	.V	Q	.	.	.	.
6.083	1074.3171	3619.32	.V	Q	.	.	.	.
6.167	1099.3567	3635.74	.V	Q	.	.	.	.
6.250	1124.5095	3652.20	.V	Q	.	.	.	.
6.333	1149.7778	3668.95	.V	Q	.	.	.	.
6.417	1175.1616	3685.72	.V	Q	.	.	.	.
6.500	1200.6631	3702.81	.V	Q	.	.	.	.
6.583	1226.2825	3719.93	.V	Q	.	.	.	.
6.667	1252.0220	3737.37	.V	Q	.	.	.	.
6.750	1277.8817	3754.84	.V	Q	.	.	.	.
6.833	1303.8641	3772.65	.V	Q	.	.	.	.
6.917	1329.9694	3790.48	.V	Q	.	.	.	.
7.000	1356.1998	3808.66	.V	Q	.	.	.	.
7.083	1382.5558	3826.88	.V	Q	.	.	.	.
7.167	1409.0397	3845.46	.V	Q	.	.	.	.
7.250	1435.6517	3864.07	.V	Q	.	.	.	.
7.333	1462.3933	3882.87	.V	Q	.	.	.	.
7.417	1489.2501	3899.60	.V	Q	.	.	.	.
7.500	1516.2249	3916.73	.V	Q	.	.	.	.
7.583	1543.3176	3933.88	.V	Q	.	.	.	.
7.667	1570.5314	3951.43	.V	Q	.	.	.	.
7.750	1597.8661	3969.01	.V	Q	.	.	.	.
7.833	1625.3248	3987.01	.V	Q	.	.	.	.
7.917	1652.9077	4005.04	.V	Q	.	.	.	.
8.000	1680.6178	4023.51	.V	Q	.	.	.	.
8.083	1708.4553	4042.01	.V	Q	.	.	.	.
8.167	1736.4233	4060.96	.V	Q	.	.	.	.
8.250	1764.5222	4079.95	.V	Q	.	.	.	.
8.333	1792.7551	4099.41	.V	Q	.	.	.	.
8.417	1821.1223	4118.92	.V	Q	.	.	.	.
8.500	1849.6272	4138.91	.V	Q	.	.	.	.
8.583	1878.2701	4158.95	.V	Q	.	.	.	.
8.667	1907.0546	4179.50	.V	Q	.	.	.	.
8.750	1935.9808	4200.10	.V	Q	.	.	.	.

8.833	1965.0526	4221.23	.	V	Q	.	.	.
8.917	1994.2704	4242.42	.	V	Q	.	.	.
9.000	2023.6378	4264.16	.	V	Q	.	.	.
9.083	2053.1555	4285.97	.	V	Q	.	.	.
9.167	2082.8274	4308.34	.	V	Q	.	.	.
9.250	2112.6538	4330.80	.	V	Q	.	.	.
9.333	2142.6389	4353.84	.	V	Q	.	.	.
9.417	2172.7834	4376.98	.	V	Q	.	.	.
9.500	2203.0916	4400.73	.	V	Q	.	.	.
9.583	2233.5640	4424.58	.	V	Q	.	.	.
9.667	2264.2048	4449.07	.	V	Q	.	.	.
9.750	2295.0154	4473.67	.	V	Q	.	.	.
9.833	2326.0000	4498.95	.	V	Q	.	.	.
9.917	2357.1594	4524.34	.	V	Q	.	.	.
10.000	2388.4985	4550.44	.	V	Q	.	.	.
10.083	2420.0183	4576.67	.	V	Q	.	.	.
10.167	2451.7239	4603.63	.	V	Q	.	.	.
10.250	2483.6160	4630.75	.	V	Q	.	.	.
10.333	2515.7002	4658.63	.	V	Q	.	.	.
10.417	2547.9775	4686.68	.	V	Q	.	.	.
10.500	2580.4536	4715.53	.	V	Q	.	.	.
10.583	2613.1296	4744.57	.	V	Q	.	.	.
10.667	2646.0115	4774.45	.	V	Q	.	.	.
10.750	2679.1006	4804.53	.	V	Q	.	.	.
10.833	2712.4031	4835.51	.	V	Q	.	.	.
10.917	2745.9204	4866.71	.	V	Q	.	.	.
11.000	2779.6589	4898.84	.	V	Q	.	.	.
11.083	2813.6204	4931.22	.	V	.Q	.	.	.
11.167	2847.8118	4964.58	.	V	.Q	.	.	.
11.250	2882.2349	4998.23	.	V	.Q	.	.	.
11.333	2916.8967	5032.91	.	V	.Q	.	.	.
11.417	2951.7996	5067.89	.	V	.Q	.	.	.
11.500	2986.9509	5103.99	.	V	.Q	.	.	.
11.583	3022.3533	5140.41	.	V	.Q	.	.	.
11.667	3058.0144	5178.00	.	V	.Q	.	.	.
11.750	3093.9370	5215.96	.	V	.Q	.	.	.
11.833	3130.1296	5255.17	.	V	.Q	.	.	.
11.917	3166.5950	5294.78	.	V	.Q	.	.	.
12.000	3203.3423	5335.72	.	V	.Q	.	.	.
12.083	3240.4553	5388.83	.	V	.Q	.	.	.
12.167	3278.0244	5455.03	.	V	.Q	.	.	.
12.250	3316.0520	5521.62	.	V	.Q	.	.	.
12.333	3354.5479	5589.60	.	V	.Q	.	.	.
12.417	3393.5266	5659.72	.	V	.Q	.	.	.
12.500	3433.0615	5740.47	.	V	.Q	.	.	.
12.583	3473.1650	5823.04	.	V	.Q	.	.	.
12.667	3513.8833	5912.30	.	V	.Q	.	.	.
12.750	3555.3728	6024.27	.	V	.Q	.	.	.
12.833	3597.7314	6150.48	.	V	.Q	.	.	.
12.917	3641.0823	6294.53	.	V	.Q	.	.	.
13.000	3685.5266	6453.31	.	V	.Q	.	.	.
13.083	3731.0393	6608.46	.	V	.Q	.	.	.
13.167	3777.7537	6782.91	.	V	.Q	.	.	.
13.250	3825.7253	6965.50	.	V	.Q	.	.	.
13.333	3874.8391	7131.31	.	V	.Q	.	.	.
13.417	3925.2419	7318.49	.	V	.Q	.	.	.
13.500	3977.0378	7520.77	.	.V	.Q	.	.	.
13.583	4030.0457	7696.73	.	.V	.Q	.	.	.

13.667	4084.4265	7896.10	.	.V	Q	.	.	.
13.750	4140.2861	8110.83	.	.V	Q	.	.	.
13.833	4197.7393	8342.19	.	.V	Q	.	.	.
13.917	4256.5518	8539.59	.	.V	Q.	.	.	.
14.000	4317.1182	8794.21	.	.V	Q.	.	.	.
14.083	4379.4976	9057.51	.	.V	Q	.	.	.
14.167	4443.9531	9358.96	.	.V	Q	.	.	.
14.250	4510.1748	9615.38	.	.V	.Q	.	.	.
14.333	4578.0215	9851.36	.	.V	.Q	.	.	.
14.417	4647.6211	10105.85	.	.V	.Q	.	.	.
14.500	4719.3140	10409.80	.	.V	.Q	.	.	.
14.583	4792.8545	10678.11	.	.V	.Q	.	.	.
14.667	4868.1348	10930.70	.	.V	.Q	.	.	.
14.750	4945.3594	11213.00	.	.V	.Q	.	.	.
14.833	5024.4937	11490.28	.	.V	.Q	.	.	.
14.917	5105.6528	11784.34	.	.V	.Q	.	.	.
15.000	5188.7368	12063.76	.	.V	.Q	.	.	.
15.083	5273.6387	12327.73	.	.V	.Q	.	.	.
15.167	5360.5024	12612.60	.	.V	.Q	.	.	.
15.250	5449.3398	12899.18	.	.V	.Q	.	.	.
15.333	5539.9302	13153.71	.	.V	.Q	.	.	.
15.417	5632.2368	13402.90	.	.V	.Q	.	.	.
15.500	5726.1509	13636.31	.	.V	.Q	.	.	.
15.583	5821.3975	13829.83	.	.V	.Q	.	.	.
15.667	5918.0786	14038.13	.	.V	.Q	.	.	.
15.750	6016.2212	14250.32	.	.V	.Q	.	.	.
15.833	6115.7739	14455.09	.	.V	.Q	.	.	.
15.917	6216.4951	14624.74	.	.V	.Q	.	.	.
16.000	6318.8730	14865.24	.	.V	.Q	.	.	.
16.083	6423.6040	15206.94	.	.V	.Q	.	.	.
16.167	6530.5552	15529.34	.	.V	.Q	.	.	.
16.250	6638.0977	15615.18	.	.V	.Q	.	.	.
16.333	6745.9399	15658.69	.	.V	.Q	.	.	.
16.417	6854.5034	15763.45	.	.V	.Q	.	.	.
16.500	6964.6118	15987.74	.	.V	.Q	.	.	.
16.583	7075.2622	16066.42	.	.V	.Q	.	.	.
16.667	7186.9453	16216.38	.	.V	.Q	.	.	.
16.750	7301.0176	16563.29	.	.V	.Q	.	.	.
16.833	7416.3892	16751.94	.	.V	.Q	.	.	.
16.917	7533.6831	17031.05	.	.V	.Q	.	.	.
17.000	7652.0752	17190.52	.	.V	.Q	.	.	.
17.083	7769.9946	17121.91	.	.V	.Q	.	.	.
17.167	7888.9727	17275.62	.	.V	.Q	.	.	.
17.250	8008.6597	17378.58	.	.V	.Q	.	.	.
17.333	8126.5396	17116.17	.	.V	.Q	.	.	.
17.417	8245.8135	17318.61	.	.V	.Q	.	.	.
17.500	8365.3779	17360.79	.	.V	.Q	.	.	.
17.583	8482.8770	17060.86	.	.V	.Q	.	.	.
17.667	8602.2959	17339.68	.	.V	.Q	.	.	.
17.750	8722.6777	17479.49	.	.V	.Q	.	.	.
17.833	8843.4922	17542.29	.	.V	.Q	.	.	.
17.917	8961.1943	17090.28	.	.V	.Q	.	.	.
18.000	9083.6572	17781.58	.	.V	.Q	.	.	.
18.083	9205.3145	17664.62	.	.V	.Q	.	.	.
18.167	9328.1143	17830.54	.	.V	.Q	.	.	.
18.250	9445.9434	17108.75	.	.V	.Q	.	.	.
18.333	9562.3516	16902.45	.	.V	.Q	.	.	.
18.417	9680.3906	17139.21	.	.V	.Q	.	.	.

18.500	9801.3398	17561.87	.	.	.	.	V	.	Q.
18.583	9918.5293	17015.90	.	.	.	.	V	.	Q.
18.667	10033.1201	16638.62	.	.	.	.	V	.	Q.
18.750	10147.1953	16563.68	.	.	.	.	V	.	Q.
18.833	10258.8877	16217.67	.	.	.	.	V	.	Q.
18.917	10369.5518	16068.44	.	.	.	.	V	.	Q.
19.000	10476.3047	15500.54	.	.	.	.	V	.	Q.
19.083	10581.1738	15226.97	.	.	.	.	V	.	Q.
19.167	10684.4248	14992.05	.	.	.	.	V	.	Q.
19.250	10785.7842	14717.44	.	.	.	.	V	.	Q.
19.333	10884.8135	14379.06	.	.	.	.	V	.	Q.
19.417	10981.1230	13984.13	.	.	.	.	V	.	Q.
19.500	11073.9375	13476.65	.	.	.	.	V	.	Q.
19.583	11164.1592	13100.21	.	.	.	.	V	.	Q.
19.667	11251.5137	12683.85	.	.	.	.	V	.	Q.
19.750	11336.5498	12347.31	.	.	.	.	V	.	Q.
19.833	11418.9932	11970.83	.	.	.	.	V	.	Q.
19.917	11499.3916	11673.81	.	.	.	.	V	.	Q.
20.000	11577.2832	11309.89	.	.	.	.	V	.	Q.
20.083	11652.7773	10961.77	.	.	.	.	V	.	Q.
20.167	11725.5713	10569.65	.	.	.	.	V	.	Q.
20.250	11795.3398	10130.34	.	.	.	.	V	.	Q.
20.333	11862.9785	9821.13	.	.	.	.	V	.	Q.
20.417	11928.5713	9524.08	.	.	.	.	V	.	Q.
20.500	11991.8760	9191.78	.	.	.	.	V	.	Q.
20.583	12052.5850	8814.88	.	.	.	.	V	.	Q.
20.667	12111.4463	8546.67	.	.	.	.	V	.	Q.
20.750	12168.5859	8296.66	.	.	.	.	V	.	Q.
20.833	12224.1836	8072.80	.	.	.	.	V	.	Q.
20.917	12278.1475	7835.58	.	.	.	.	V	.	Q.
21.000	12330.6025	7616.43	.	.	.	.	V	.	Q.
21.083	12381.1387	7337.78	.	.	.	.	V	.	Q.
21.167	12429.6846	7048.82	.	.	.	.	V	.	Q.
21.250	12476.9570	6863.89	.	.	.	.	V	.	Q.
21.333	12523.0391	6691.12	.	.	.	.	V	.	Q.
21.417	12567.9307	6518.23	.	.	.	.	V	.	Q.
21.500	12611.6602	6349.56	.	.	.	.	V	.	Q.
21.583	12654.3408	6197.20	.	.	.	.	V	.	Q.
21.667	12696.0645	6058.27	.	.	.	.	V	.	Q.
21.750	12736.8506	5922.16	.	.	.	.	V	.	Q.
21.833	12776.7314	5790.68	.	.	.	.	V	.	Q.
21.917	12815.7275	5662.21	.	.	.	.	V	.	Q.
22.000	12853.8574	5536.45	.	.	.	.	V	.	Q.
22.083	12891.1914	5420.95	.	.	.	.	V	.	Q.
22.167	12927.7979	5315.20	.	.	.	.	V	.	Q.
22.250	12963.7656	5222.46	.	.	.	.	V	.	Q.
22.333	12999.1162	5132.88	.	.	.	.	V	.	Q.
22.417	13033.8662	5045.74	.	.	.	.	V	.	Q.
22.500	13068.0352	4961.40	.	.	.	.	V	.	Q.
22.583	13101.6885	4886.41	.	.	.	.	V	.	Q.
22.667	13134.8506	4815.08	.	.	.	.	V	.	Q.
22.750	13167.5684	4750.57	.	.	.	.	V	.	Q.
22.833	13199.8496	4687.26	.	.	.	.	V	.	Q.
22.917	13231.7002	4624.64	.	.	.	.	V	.	Q.
23.000	13263.1270	4563.12	.	.	.	.	V	.	Q.
23.083	13294.1846	4509.58	.	.	.	.	V	.	Q.
23.167	13324.9229	4463.19	.	.	.	.	V	.	Q.
23.250	13355.3281	4414.81	.	.	.	.	V	.	Q.

23.333	13385.3594	4360.51	.	Q.	.	.	V	.
23.417	13414.7734	4270.87	.	Q.	.	.	V	.
23.500	13443.8916	4228.02	.	Q.	.	.	V	.
23.583	13472.7217	4186.16	.	Q.	.	.	V	.
23.667	13501.2754	4145.93	.	Q.	.	.	V	.
23.750	13529.5244	4101.82	.	Q.	.	.	V	.
23.833	13557.4736	4058.29	.	Q.	.	.	V	.
23.917	13585.1270	4015.26	.	Q	.	.	V	.
24.000	13612.4883	3972.82	.	Q	.	.	V	.
24.083	13639.5127	3923.88	.	Q	.	.	V	.
24.167	13666.1553	3868.56	.	Q	.	.	V	.
24.250	13692.4209	3813.82	.	Q	.	.	V	.
24.333	13718.3164	3760.04	.	Q	.	.	V	.
24.417	13743.8672	3709.91	.	Q	.	.	V	.
24.500	13769.0410	3655.17	.	Q	.	.	V	.
24.583	13793.8379	3600.47	.	Q	.	.	V	.
24.667	13818.2422	3543.50	.	Q	.	.	V	.
24.750	13842.1680	3474.05	.	Q	.	.	V	.
24.833	13865.5693	3397.86	.	Q	.	.	V	.
24.917	13888.3799	3312.09	.	Q	.	.	V	.
25.000	13910.5518	3219.31	.	Q	.	.	V	.
25.083	13932.1064	3129.75	.	Q	.	.	V	.
25.167	13952.9775	3030.45	.	Q	.	.	V	.
25.250	13973.1387	2927.35	.	Q	.	.	V	.
25.333	13992.6729	2836.41	.	Q	.	.	V	.
25.417	14011.5244	2737.21	.	Q	.	.	V	.
25.500	14029.6436	2630.90	.	Q	.	.	V	.
25.583	14047.1455	2541.34	.	Q	.	.	V	.
25.667	14063.9482	2439.69	.	Q	.	.	V	.
25.750	14079.9941	2329.93	.	Q	.	.	V	.
25.833	14095.2295	2212.17	.	Q	.	.	V	.
25.917	14109.8008	2115.78	.	Q	.	.	V	.
26.000	14123.4863	1987.15	.	Q	.	.	V	.
26.083	14136.3125	1862.41	.	Q	.	.	V	.
26.167	14148.1895	1724.56	.	Q	.	.	V	.
26.250	14159.3066	1614.20	.	Q	.	.	V	.
26.333	14169.7568	1517.37	.	Q	.	.	V	.
26.417	14179.4756	1411.16	.	Q	.	.	V	.
26.500	14188.3115	1282.93	.	Q	.	.	V	.
26.583	14196.4199	1177.28	.	Q	.	.	V	.
26.667	14203.8955	1085.45	.	Q	.	.	V	.
26.750	14210.7207	991.05	.	Q	.	.	V	.
26.833	14216.9785	908.62	.	Q	.	.	V	.
26.917	14222.6748	827.04	.	Q	.	.	V	.
27.000	14227.9277	762.76	.	Q	.	.	V	.
27.083	14232.7705	703.13	.	Q	.	.	V	.
27.167	14237.1924	642.11	.	Q	.	.	V	.
27.250	14241.2080	583.03	.	Q	.	.	V	.
27.333	14244.8506	528.94	.	Q	.	.	V	.
27.417	14248.1523	479.36	.	Q	.	.	V	.
27.500	14251.1611	436.93	.	Q	.	.	V	.
27.583	14253.9082	398.85	.	Q	.	.	V	.
27.667	14256.4365	367.08	.	Q	.	.	V	.
27.750	14258.7529	336.30	.	Q	.	.	V	.
27.833	14260.8740	307.98	.	Q	.	.	V	.
27.917	14262.8037	280.15	.	Q	.	.	V	.
28.000	14264.5537	254.06	.	Q	.	.	V	.
28.083	14266.1309	229.02	.	Q	.	.	V	.

28.167	14267.5430	205.03	Q	.	.	.	V	.
28.250	14268.8311	187.02	Q	.	.	.	V	.
28.333	14270.0029	170.21	Q	.	.	.	V	.
28.417	14271.0605	153.50	Q	.	.	.	V	.
28.500	14272.0078	137.51	Q	.	.	.	V	.
28.583	14272.8760	126.08	Q	.	.	.	V	.
28.667	14273.6719	115.63	Q	.	.	.	V	.
28.750	14274.3965	105.23	Q	.	.	.	V	.
28.833	14275.0498	94.91	Q	.	.	.	V	.
28.917	14275.6328	84.66	Q	.	.	.	V	.
29.000	14276.1455	74.47	Q	.	.	.	V	.
29.083	14276.6104	67.54	Q	.	.	.	V	.
29.167	14277.0566	64.78	Q	.	.	.	V	.
29.250	14277.4834	62.03	Q	.	.	.	V	.
29.333	14277.8916	59.32	Q	.	.	.	V	.
29.417	14278.2812	56.63	Q	.	.	.	V	.
29.500	14278.6533	53.96	Q	.	.	.	V	.
29.583	14279.0068	51.32	Q	.	.	.	V	.
29.667	14279.3418	48.68	Q	.	.	.	V	.
29.750	14279.6592	46.06	Q	.	.	.	V	.
29.833	14279.9590	43.48	Q	.	.	.	V	.
29.917	14280.2402	40.89	Q	.	.	.	V	.
30.000	14280.5039	38.34	Q	.	.	.	V	.
30.083	14280.7500	35.78	Q	.	.	.	V	.
30.167	14280.9795	33.28	Q	.	.	.	V	.
30.250	14281.1914	30.77	Q	.	.	.	V	.
30.333	14281.3867	28.30	Q	.	.	.	V	.
30.417	14281.5645	25.84	Q	.	.	.	V	.
30.500	14281.7256	23.40	Q	.	.	.	V	.
30.583	14281.8701	20.97	Q	.	.	.	V	.
30.667	14281.9980	18.56	Q	.	.	.	V	.
30.750	14282.1094	16.17	Q	.	.	.	V	.
30.833	14282.2041	13.79	Q	.	.	.	V	.
30.917	14282.2832	11.42	Q	.	.	.	V	.
31.000	14282.3457	9.07	Q	.	.	.	V	.
31.083	14282.3926	6.74	Q	.	.	.	V	.
31.167	14282.4229	4.42	Q	.	.	.	V	.
31.250	14282.4375	2.11	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%	1875.0
10%	1430.0
20%	1130.0
30%	605.0
40%	465.0
50%	390.0
60%	330.0
70%	275.0
80%	215.0
90%	145.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
5 Hutton Centre Drive, Suite 500
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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 127 *
* 50-YR EV JANUARY 2019 FKAZI *

FILE NAME: EV50127S.DAT
TIME/DATE OF STUDY: 14:22 01/07/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 127.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 53500.199 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.249 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.293
LOW LOSS FRACTION = 0.404
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.45
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.87
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.20
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.24
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.33
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.85

*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 = 3.705

UNIT HYDROGRAPH DETERMINATION

Table with 3 columns: INTERVAL NUMBER, "S" GRAPH MEAN VALUES, UNIT HYDROGRAPH ORDINATES (CFS). Rows 1-48.

49	91.255	5046.684
50	92.024	4977.575
51	92.737	4615.246
52	93.443	4566.672
53	94.089	4181.242
54	94.570	3108.670
55	95.040	3045.584
56	95.511	3042.177
57	95.962	2922.767
58	96.279	2049.723
59	96.570	1879.172
60	96.860	1880.900
61	97.151	1880.900
62	97.441	1879.172
63	97.732	1880.850
64	97.986	1642.178
65	98.075	576.369
66	98.144	448.468
67	98.214	450.196
68	98.283	448.468
69	98.353	448.517
70	98.422	451.874
71	98.492	448.468
72	98.562	451.874
73	98.631	446.790
74	98.700	450.196
75	98.770	450.196
76	98.839	450.196
77	98.908	446.740
78	98.978	453.602
79	99.048	446.790
80	99.117	446.790
81	99.186	446.790
82	99.255	446.790
83	99.324	446.790
84	99.393	446.790
85	99.462	446.790
86	99.531	446.790
87	99.600	446.790
88	99.669	446.790
89	99.738	446.790
90	99.807	446.790
91	99.876	446.790
92	99.945	446.790
93	100.000	354.282

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9747.2266
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 14772.0762

=====

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.	4525.0	9050.0	13575.0	18100.0
0.083	0.0473	6.87	Q	.	.	.	.
0.167	0.1893	20.62	Q	.	.	.	.
0.250	0.4263	34.41	Q	.	.	.	.
0.333	0.7585	48.24	Q	.	.	.	.
0.417	1.1882	62.39	Q	.	.	.	.
0.500	1.7502	81.60	Q	.	.	.	.
0.583	2.4577	102.73	Q	.	.	.	.
0.667	3.3130	124.20	Q	.	.	.	.
0.750	4.3945	157.02	Q	.	.	.	.
0.833	5.7538	197.37	Q	.	.	.	.
0.917	7.4565	247.23	Q	.	.	.	.
1.000	9.5757	307.71	Q	.	.	.	.
1.083	12.1239	370.00	Q	.	.	.	.
1.167	15.0935	431.20	Q	.	.	.	.
1.250	18.6040	509.72	VQ	.	.	.	.
1.333	22.6115	581.89	VQ	.	.	.	.
1.417	27.0786	648.63	VQ	.	.	.	.
1.500	32.1016	729.34	VQ	.	.	.	.
1.583	37.7209	815.92	VQ	.	.	.	.
1.667	43.8320	887.33	VQ	.	.	.	.
1.750	50.5174	970.73	V Q	.	.	.	.
1.833	57.8340	1062.37	V Q	.	.	.	.
1.917	65.8824	1168.63	V Q	.	.	.	.
2.000	74.4749	1247.63	V Q	.	.	.	.
2.083	83.8460	1360.68	V Q	.	.	.	.
2.167	93.9909	1473.03	V Q	.	.	.	.
2.250	104.9704	1594.22	V Q	.	.	.	.
2.333	116.7624	1712.20	V Q	.	.	.	.
2.417	129.1858	1803.88	V Q	.	.	.	.
2.500	142.2330	1894.46	V Q	.	.	.	.
2.583	156.0385	2004.56	V Q	.	.	.	.
2.667	170.6774	2125.56	V Q	.	.	.	.
2.750	185.9601	2219.04	V Q	.	.	.	.
2.833	201.8698	2310.09	V Q	.	.	.	.
2.917	218.3933	2399.21	V Q	.	.	.	.
3.000	235.4850	2481.72	V Q	.	.	.	.
3.083	253.1342	2562.66	V Q	.	.	.	.
3.167	271.2294	2627.43	V Q	.	.	.	.
3.250	289.7503	2689.24	V Q	.	.	.	.
3.333	308.7086	2752.74	V Q	.	.	.	.
3.417	328.1024	2815.97	V Q	.	.	.	.
3.500	347.9016	2874.84	V Q	.	.	.	.
3.583	368.0826	2930.28	V Q	.	.	.	.
3.667	388.6048	2979.84	.V Q	.	.	.	.
3.750	409.4441	3025.87	.V Q	.	.	.	.
3.833	430.5566	3065.53	.V Q	.	.	.	.
3.917	451.9336	3103.93	.V Q	.	.	.	.

4.000	473.5632	3140.62	.V	Q	.	.	.	.
4.083	495.4392	3176.40	.V	Q	.	.	.	.
4.167	517.5597	3211.90	.V	Q	.	.	.	.
4.250	539.9141	3245.86	.V	Q	.	.	.	.
4.333	562.5012	3279.64	.V	Q	.	.	.	.
4.417	585.3096	3311.78	.V	Q	.	.	.	.
4.500	608.3027	3338.59	.V	Q	.	.	.	.
4.583	631.4800	3365.35	.V	Q	.	.	.	.
4.667	654.8419	3392.14	.V	Q	.	.	.	.
4.750	678.3860	3418.61	.V	Q	.	.	.	.
4.833	702.0825	3440.72	.V	Q	.	.	.	.
4.917	725.9273	3462.27	.V	Q	.	.	.	.
5.000	749.9207	3483.84	.V	Q	.	.	.	.
5.083	774.0646	3505.69	.V	Q	.	.	.	.
5.167	798.3590	3527.55	.V	Q	.	.	.	.
5.250	822.8060	3549.70	.V	Q	.	.	.	.
5.333	847.3975	3570.68	.V	Q	.	.	.	.
5.417	872.0986	3586.61	.V	Q	.	.	.	.
5.500	896.9051	3601.90	.V	Q	.	.	.	.
5.583	921.8189	3617.49	.V	Q	.	.	.	.
5.667	946.8400	3633.06	.V	Q	.	.	.	.
5.750	971.9704	3648.93	.V	Q	.	.	.	.
5.833	997.2102	3664.82	.V	Q	.	.	.	.
5.917	1022.5613	3680.99	.V	Q	.	.	.	.
6.000	1048.0240	3697.18	.V	Q	.	.	.	.
6.083	1073.6002	3713.65	.V	Q	.	.	.	.
6.167	1099.2899	3730.15	.V	Q	.	.	.	.
6.250	1125.0955	3746.97	.V	Q	.	.	.	.
6.333	1151.0168	3763.79	.V	Q	.	.	.	.
6.417	1177.0563	3780.92	.V	Q	.	.	.	.
6.500	1203.2140	3798.10	.V	Q	.	.	.	.
6.583	1229.4921	3815.58	.V	Q	.	.	.	.
6.667	1255.8907	3833.08	.V	Q	.	.	.	.
6.750	1282.4122	3850.93	.V	Q	.	.	.	.
6.833	1309.0568	3868.79	.V	Q	.	.	.	.
6.917	1335.8267	3887.00	.V	Q	.	.	.	.
7.000	1362.7222	3905.24	.V	Q	.	.	.	.
7.083	1389.7458	3923.84	.V	Q	.	.	.	.
7.167	1416.8978	3942.47	.V	Q	.	.	.	.
7.250	1444.1807	3961.47	.V	Q	.	.	.	.
7.333	1471.5946	3980.51	.V	Q	.	.	.	.
7.417	1499.1425	3999.94	.V	Q	.	.	.	.
7.500	1526.8242	4019.39	.V	Q	.	.	.	.
7.583	1554.6428	4039.26	.V	Q	.	.	.	.
7.667	1582.5984	4059.16	.V	Q	.	.	.	.
7.750	1610.6908	4079.01	.V	Q	.	.	.	.
7.833	1638.9080	4097.12	.V	Q	.	.	.	.
7.917	1667.2528	4115.67	.V	Q	.	.	.	.
8.000	1695.7256	4134.25	.V	Q	.	.	.	.
8.083	1724.3293	4153.27	.V	Q	.	.	.	.
8.167	1753.0645	4172.34	.V	Q	.	.	.	.
8.250	1781.9340	4191.86	.V	Q	.	.	.	.
8.333	1810.9382	4211.43	.V	Q	.	.	.	.
8.417	1840.0807	4231.48	.V	Q	.	.	.	.
8.500	1869.3615	4251.57	.V	Q	.	.	.	.
8.583	1898.7841	4272.16	.V	Q	.	.	.	.
8.667	1928.3489	4292.81	.V	Q	.	.	.	.
8.750	1958.0594	4313.98	.V	Q	.	.	.	.

8.833	1987.9163	4335.20	.	V	Q	.	.	.
8.917	2017.9230	4356.97	.	V	Q	.	.	.
9.000	2048.0801	4378.80	.	V	Q	.	.	.
9.083	2078.3914	4401.19	.	V	Q	.	.	.
9.167	2108.8572	4423.65	.	V	Q	.	.	.
9.250	2139.4819	4446.71	.	V	Q	.	.	.
9.333	2170.2659	4469.83	.	V	Q	.	.	.
9.417	2201.2134	4493.57	.	V	Q	.	.	.
9.500	2232.3250	4517.40	.	V	Q	.	.	.
9.583	2263.6050	4541.87	.	V	Q	.	.	.
9.667	2295.0542	4566.43	.	V	Q	.	.	.
9.750	2326.6772	4591.66	.	V	Q	.	.	.
9.833	2358.4749	4617.00	.	V	Q	.	.	.
9.917	2390.4517	4643.03	.	V	Q	.	.	.
10.000	2422.6086	4669.19	.	V	Q	.	.	.
10.083	2454.9507	4696.07	.	V	Q	.	.	.
10.167	2487.4788	4723.08	.	V	Q	.	.	.
10.250	2520.1982	4750.86	.	V	Q	.	.	.
10.333	2553.1099	4778.78	.	V	Q	.	.	.
10.417	2586.2192	4807.50	.	V	Q	.	.	.
10.500	2619.5276	4836.38	.	V	Q	.	.	.
10.583	2653.0408	4866.10	.	V	Q	.	.	.
10.667	2686.7598	4896.00	.	V	Q	.	.	.
10.750	2720.6907	4926.78	.	V	Q	.	.	.
10.833	2754.8350	4957.76	.	V	Q	.	.	.
10.917	2789.1990	4989.66	.	V	.Q	.	.	.
11.000	2823.7842	5021.79	.	V	.Q	.	.	.
11.083	2858.5974	5054.89	.	V	.Q	.	.	.
11.167	2893.6404	5088.22	.	V	.Q	.	.	.
11.250	2928.9199	5122.60	.	V	.Q	.	.	.
11.333	2964.4380	5157.24	.	V	.Q	.	.	.
11.417	3000.2021	5192.96	.	V	.Q	.	.	.
11.500	3036.2144	5228.99	.	V	.Q	.	.	.
11.583	3072.4827	5266.17	.	V	.Q	.	.	.
11.667	3109.0093	5303.67	.	V	.Q	.	.	.
11.750	3145.8027	5342.40	.	V	.Q	.	.	.
11.833	3182.8652	5381.48	.	V	.Q	.	.	.
11.917	3220.2061	5421.87	.	V	.Q	.	.	.
12.000	3257.8276	5462.66	.	V	.Q	.	.	.
12.083	3295.8206	5516.56	.	V	.Q	.	.	.
12.167	3334.2683	5582.60	.	V	.Q	.	.	.
12.250	3373.1802	5649.99	.	V	.Q	.	.	.
12.333	3412.5586	5717.75	.	V	.Q	.	.	.
12.417	3452.4170	5787.44	.	V	.Q	.	.	.
12.500	3492.8171	5866.11	.	V	.Q	.	.	.
12.583	3533.7917	5949.50	.	V	.Q	.	.	.
12.667	3575.3464	6033.74	.	V	.Q	.	.	.
12.750	3617.6250	6138.86	.	V	.Q	.	.	.
12.833	3660.7178	6257.07	.	V	.Q	.	.	.
12.917	3704.7456	6392.85	.	V	.Q	.	.	.
13.000	3749.8337	6546.80	.	V	.Q	.	.	.
13.083	3796.0117	6705.06	.	V	.Q	.	.	.
13.167	3843.2661	6861.32	.	V	.Q	.	.	.
13.250	3891.8091	7048.44	.	V	.Q	.	.	.
13.333	3941.5647	7224.51	.	V	.Q	.	.	.
13.417	3992.4768	7392.42	.	V	.Q	.	.	.
13.500	4044.7095	7584.20	.	V	.Q	.	.	.
13.583	4098.3403	7787.23	.	.V	.Q	.	.	.

13.667	4153.1895	7964.10	.	.V	Q	.	.	.
13.750	4209.4072	8162.82	.	.V	Q	.	.	.
13.833	4267.0903	8375.58	.	.V	Q	.	.	.
13.917	4326.4194	8614.57	.	.V	Q.	.	.	.
14.000	4387.0723	8806.77	.	.V	Q.	.	.	.
14.083	4449.5464	9071.24	.	.V	Q	.	.	.
14.167	4513.9194	9346.97	.	.V	Q	.	.	.
14.250	4580.2949	9637.72	.	.V	.Q	.	.	.
14.333	4648.6279	9921.96	.	.V	.Q	.	.	.
14.417	4718.6123	10161.72	.	.V	.Q	.	.	.
14.500	4790.2939	10408.17	.	.V	.Q	.	.	.
14.583	4863.9277	10691.61	.	.V	.Q	.	.	.
14.667	4939.6348	10992.69	.	.V	.Q	.	.	.
14.750	5017.2339	11267.41	.	.V	.Q	.	.	.
14.833	5096.7778	11549.78	.	.V	.Q	.	.	.
14.917	5178.3550	11845.02	.	.V	.Q	.	.	.
15.000	5261.9990	12145.14	.	.V	.Q	.	.	.
15.083	5347.6943	12442.95	.	.V	.Q	.	.	.
15.167	5435.2031	12706.28	.	.V	.Q	.	.	.
15.250	5524.6904	12993.56	.	.V	.Q	.	.	.
15.333	5616.0557	13266.25	.	.V	.Q	.	.	.
15.417	5709.0771	13506.70	.	.V	.Q	.	.	.
15.500	5803.7388	13744.84	.	.V	.Q	.	.	.
15.583	5900.0645	13986.52	.	.V	.Q	.	.	.
15.667	5997.7705	14186.89	.	.V	.Q	.	.	.
15.750	6096.9116	14395.28	.	.V	.Q	.	.	.
15.833	6197.3823	14588.34	.	.V	.Q	.	.	.
15.917	6299.3682	14808.32	.	.V	.Q	.	.	.
16.000	6402.6006	14989.34	.	.V	.Q	.	.	.
16.083	6508.2407	15338.92	.	.V	.Q	.	.	.
16.167	6615.9839	15644.31	.	.V	.Q	.	.	.
16.250	6724.7397	15791.33	.	.V	.Q	.	.	.
16.333	6834.3149	15910.29	.	.V	.Q	.	.	.
16.417	6944.4404	15990.23	.	.V	.Q	.	.	.
16.500	7055.8120	16171.17	.	.V	.Q	.	.	.
16.583	7167.9673	16284.95	.	.V	.Q	.	.	.
16.667	7281.0933	16425.90	.	.V	.Q	.	.	.
16.750	7396.4980	16756.80	.	.V	.Q	.	.	.
16.833	7513.4497	16981.39	.	.V	.Q	.	.	.
16.917	7631.9927	17212.46	.	.V	.Q	.	.	.
17.000	7752.3472	17475.44	.	.V	.Q	.	.	.
17.083	7873.1826	17545.31	.	.V	.Q	.	.	.
17.167	7993.7876	17511.84	.	.V	.Q	.	.	.
17.250	8116.2651	17783.72	.	.V	.Q	.	.	.
17.333	8238.1221	17693.62	.	.V	.Q	.	.	.
17.417	8359.1133	17567.97	.	.V	.Q	.	.	.
17.500	8481.5781	17781.89	.	.V	.Q	.	.	.
17.583	8604.2510	17812.10	.	.V	.Q	.	.	.
17.667	8724.6836	17486.83	.	.V	.Q	.	.	.
17.750	8846.7969	17730.84	.	.V	.Q	.	.	.
17.833	8969.9365	17879.88	.	.V	.Q	.	.	.
17.917	9094.3701	18067.81	.	.V	.Q	.	.	.
18.000	9214.2637	17408.52	.	.V	.Q	.	.	.
18.083	9338.6973	18067.76	.	.V	.Q	.	.	.
18.167	9462.7227	18008.51	.	.V	.Q	.	.	.
18.250	9587.2559	18082.17	.	.V	.Q	.	.	.
18.333	9709.9336	17812.77	.	.V	.Q	.	.	.
18.417	9828.7139	17246.84	.	.V	.Q	.	.	.

18.500	9947.5195	17250.58	.	.	.	V	.	Q	.
18.583	10068.9492	17631.58	.	.	.	V	.	Q	.
18.667	10191.4600	17788.60	.	.	.	V	.	Q	.
18.750	10309.1328	17086.13	.	.	.	V	.	Q	.
18.833	10425.4004	16882.00	.	.	.	V	.	Q	.
18.917	10540.2129	16670.81	.	.	.	V	.	Q	.
19.000	10653.4209	16437.82	.	.	.	V	.	Q	.
19.083	10764.7354	16162.88	.	.	.	V	.	Q	.
19.167	10872.3740	15629.08	.	.	.	V	.	Q	.
19.250	10977.9453	15328.97	.	.	.	V	.	Q	.
19.333	11082.0742	15119.51	.	.	.	V	.	Q	.
19.417	11184.7041	14901.89	.	.	.	V	.	Q	.
19.500	11284.8496	14541.08	.	.	.	V	.	Q	.
19.583	11382.1875	14133.40	.	.	.	V	.	Q	.
19.667	11476.4111	13681.29	.	.	.	V	.	Q	.
19.750	11568.0205	13301.68	.	.	.	V	.	Q	.
19.833	11656.6357	12866.91	.	.	.	V	.	Q	.
19.917	11742.7646	12505.86	.	.	.	V	.	Q	.
20.000	11826.6797	12184.50	.	.	.	V	.	Q	.
20.083	11908.0479	11814.68	.	.	.	V	.	Q	.
20.167	11987.1719	11488.85	.	.	.	V	.	Q	.
20.250	12063.7568	11120.13	.	.	.	V	.	Q	.
20.333	12137.9346	10770.66	.	.	.	V	.	Q	.
20.417	12209.7158	10422.63	.	.	.	V	.	Q	.
20.500	12278.7676	10026.33	.	.	.	V	.	Q	.
20.583	12345.6094	9705.38	.	.	.	V	.	Q	.
20.667	12410.2051	9379.23	.	.	.	V	.	Q	.
20.750	12472.8809	9100.46	.	.	.	V	.	Q	.
20.833	12533.1895	8756.75	.	.	.	V	.	Q	.
20.917	12591.6895	8494.18	.	.	.	V	.	Q	.
21.000	12648.6123	8265.23	.	.	.	V	.	Q	.
21.083	12704.0273	8046.29	.	.	.	V	.	Q	.
21.167	12758.0488	7843.92	.	.	.	V	.	Q	.
21.250	12810.6660	7640.04	.	.	.	V	.	Q	.
21.333	12861.6455	7402.18	.	.	.	V	.	Q	.
21.417	12910.5029	7094.09	.	.	.	V	.	Q	.
21.500	12958.0625	6905.59	.	.	.	V	.	Q	.
21.583	13004.4814	6740.02	.	.	.	V	.	Q	.
21.667	13049.8398	6585.98	.	.	.	V	.	Q	.
21.750	13094.1143	6428.61	.	.	.	V	.	Q	.
21.833	13137.4102	6286.57	.	.	.	V	.	Q	.
21.917	13179.7627	6149.56	.	.	.	V	.	Q	.
22.000	13221.2061	6017.64	.	.	.	V	.	Q	.
22.083	13261.7588	5888.28	.	.	.	V	.	Q	.
22.167	13301.4404	5761.73	.	.	.	V	.	Q	.
22.250	13340.2773	5639.13	.	.	.	V	.	Q	.
22.333	13378.2979	5520.52	.	.	.	V	.	Q	.
22.417	13415.6006	5416.33	.	.	.	V	.	Q	.
22.500	13452.2783	5325.58	.	.	.	V	.	Q	.
22.583	13488.3389	5236.00	.	.	.	V	.	Q	.
22.667	13523.8018	5149.16	.	.	.	V	.	Q	.
22.750	13558.6855	5065.08	.	.	.	V	.	Q	.
22.833	13593.0537	4990.31	.	.	.	V	.	Q	.
22.917	13626.9287	4918.66	.	.	.	V	.	Q	.
23.000	13660.3213	4848.63	.	.	.	V	.	Q	.
23.083	13693.2510	4781.33	.	.	.	V	.	Q	.
23.167	13725.7568	4719.81	.	.	.	V	.	Q	.
23.250	13757.8447	4659.20	.	.	.	V	.	Q	.

23.333	13789.5342	4601.28	.	Q	.	.	V	.
23.417	13820.8955	4553.67	.	Q	.	.	V	.
23.500	13851.9512	4509.30	.	Q	.	.	V	.
23.583	13882.7002	4464.82	.	Q	.	.	V	.
23.667	13913.1289	4418.28	.	Q	.	.	V	.
23.750	13943.1641	4361.17	.	Q	.	.	V	.
23.833	13972.6523	4281.66	.	Q	.	.	V	.
23.917	14001.8584	4240.66	.	Q	.	.	V	.
24.000	14030.7891	4200.79	.	Q	.	.	V	.
24.083	14059.4033	4154.84	.	Q	.	.	V	.
24.167	14087.6318	4098.80	.	Q	.	.	V	.
24.250	14115.4785	4043.29	.	Q	.	.	V	.
24.333	14142.9463	3988.34	.	Q	.	.	V	.
24.417	14170.0381	3933.71	.	Q	.	.	V	.
24.500	14196.7227	3874.56	.	Q	.	.	V	.
24.583	14222.9912	3814.18	.	Q	.	.	V	.
24.667	14248.8457	3754.11	.	Q	.	.	V	.
24.750	14274.2188	3684.21	.	Q	.	.	V	.
24.833	14299.0879	3610.96	.	Q	.	.	V	.
24.917	14323.3945	3529.27	.	Q	.	.	V	.
25.000	14347.0732	3438.09	.	Q	.	.	V	.
25.083	14370.1191	3346.25	.	Q	.	.	V	.
25.167	14392.5479	3256.65	.	Q	.	.	V	.
25.250	14414.2480	3150.86	.	Q	.	.	V	.
25.333	14435.2715	3052.61	.	Q	.	.	V	.
25.417	14455.6641	2960.96	.	Q	.	.	V	.
25.500	14475.3359	2856.40	.	Q	.	.	V	.
25.583	14494.2559	2747.15	.	Q	.	.	V	.
25.667	14512.5352	2654.22	.	Q	.	.	V	.
25.750	14530.1055	2551.17	.	Q	.	.	V	.
25.833	14546.9375	2444.02	.	Q	.	.	V	.
25.917	14562.9395	2323.51	.	Q	.	.	V	.
26.000	14578.3076	2231.46	.	Q	.	.	V	.
26.083	14592.8154	2106.54	.	Q	.	.	V	.
26.167	14606.4766	1983.53	.	Q	.	.	V	.
26.250	14619.2393	1853.09	.	Q	.	.	V	.
26.333	14631.1338	1727.08	.	Q	.	.	V	.
26.417	14642.3506	1628.73	.	Q	.	.	V	.
26.500	14652.9043	1532.44	.	Q	.	.	V	.
26.583	14662.6689	1417.77	.	Q	.	.	V	.
26.667	14671.5762	1293.27	.	Q	.	.	V	.
26.750	14679.8242	1197.61	.	Q	.	.	V	.
26.833	14687.4365	1105.27	.	Q	.	.	V	.
26.917	14694.4336	1015.91	.	Q	.	.	V	.
27.000	14700.8662	934.00	.	Q	.	.	V	.
27.083	14706.7520	854.60	.	Q	.	.	V	.
27.167	14712.2070	792.07	.	Q	.	.	V	.
27.250	14717.2568	733.29	.	Q	.	.	V	.
27.333	14721.8945	673.36	.	Q	.	.	V	.
27.417	14726.1260	614.46	.	Q	.	.	V	.
27.500	14729.9863	560.46	.	Q	.	.	V	.
27.583	14733.5029	510.58	.	Q	.	.	V	.
27.667	14736.7197	467.04	.	Q	.	.	V	.
27.750	14739.6650	427.62	.	Q	.	.	V	.
27.833	14742.3848	394.91	.	Q	.	.	V	.
27.917	14744.8916	363.99	.	Q	.	.	V	.
28.000	14747.1992	335.07	.	Q	.	.	V	.
28.083	14749.3174	307.53	.	Q	.	.	V	.

28.167	14751.2490	280.53	Q	.	.	.	V	.
28.250	14753.0088	255.52	Q	.	.	.	V	.
28.333	14754.5996	230.92	Q	.	.	.	V	.
28.417	14756.0352	208.42	Q	.	.	.	V	.
28.500	14757.3535	191.44	Q	.	.	.	V	.
28.583	14758.5576	174.89	Q	.	.	.	V	.
28.667	14759.6494	158.48	Q	.	.	.	V	.
28.750	14760.6328	142.77	Q	.	.	.	V	.
28.833	14761.5391	131.53	Q	.	.	.	V	.
28.917	14762.3740	121.23	Q	.	.	.	V	.
29.000	14763.1387	110.98	Q	.	.	.	V	.
29.083	14763.8330	100.81	Q	.	.	.	V	.
29.167	14764.4580	90.72	Q	.	.	.	V	.
29.250	14765.0137	80.69	Q	.	.	.	V	.
29.333	14765.5088	71.91	Q	.	.	.	V	.
29.417	14765.9805	68.53	Q	.	.	.	V	.
29.500	14766.4336	65.81	Q	.	.	.	V	.
29.583	14766.8682	63.11	Q	.	.	.	V	.
29.667	14767.2842	60.44	Q	.	.	.	V	.
29.750	14767.6826	57.79	Q	.	.	.	V	.
29.833	14768.0625	55.14	Q	.	.	.	V	.
29.917	14768.4238	52.53	Q	.	.	.	V	.
30.000	14768.7676	49.92	Q	.	.	.	V	.
30.083	14769.0938	47.36	Q	.	.	.	V	.
30.167	14769.4023	44.80	Q	.	.	.	V	.
30.250	14769.6934	42.25	Q	.	.	.	V	.
30.333	14769.9668	39.73	Q	.	.	.	V	.
30.417	14770.2236	37.24	Q	.	.	.	V	.
30.500	14770.4629	34.74	Q	.	.	.	V	.
30.583	14770.6855	32.28	Q	.	.	.	V	.
30.667	14770.8906	29.84	Q	.	.	.	V	.
30.750	14771.0791	27.42	Q	.	.	.	V	.
30.833	14771.2510	25.01	Q	.	.	.	V	.
30.917	14771.4072	22.62	Q	.	.	.	V	.
31.000	14771.5469	20.25	Q	.	.	.	V	.
31.083	14771.6699	17.89	Q	.	.	.	V	.
31.167	14771.7773	15.55	Q	.	.	.	V	.
31.250	14771.8682	13.22	Q	.	.	.	V	.
31.333	14771.9434	10.90	Q	.	.	.	V	.
31.417	14772.0029	8.60	Q	.	.	.	V	.
31.500	14772.0469	6.32	Q	.	.	.	V	.
31.583	14772.0752	4.04	Q	.	.	.	V	.
31.667	14772.0879	1.78	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%	1900.0
10%	1430.0
20%	1155.0
30%	625.0
40%	480.0
50%	405.0
60%	340.0

70%	285.0
80%	225.0
90%	150.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 132T *
* 50-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV5032TS.DAT
TIME/DATE OF STUDY: 14:07 01/02/2019

FLOW PROCESS FROM NODE 13200.00 TO NODE 132.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1127.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.443 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.248
LOW LOSS FRACTION = 0.515
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 = 0.950
30-MINUTE FACTOR = 0.950
1-HOUR FACTOR = 0.950
3-HOUR FACTOR = 0.992
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 18.811

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.078	146.958
2	4.168	421.370
3	11.764	1035.870
4	22.834	1509.681
5	36.074	1805.545
6	52.158	2193.326
7	67.246	2057.581
8	78.436	1525.899
9	86.178	1055.807
10	91.018	659.970
11	94.425	464.611
12	96.527	286.684
13	97.866	182.650
14	98.355	66.675
15	98.708	48.098
16	99.061	48.090
17	99.413	48.090
18	99.766	48.090
19	100.000	31.919

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 172.9443
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 213.2112

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.	350.0	700.0	1050.0	1400.0
0.083	0.0026	0.38	Q	.	.	.	.
0.167	0.0126	1.46	Q	.	.	.	.
0.250	0.0410	4.12	Q	.	.	.	.
0.333	0.0961	8.00	Q	.	.	.	.
0.417	0.1833	12.66	Q	.	.	.	.
0.500	0.3095	18.32	Q	.	.	.	.
0.583	0.4725	23.66	Q	.	.	.	.
0.667	0.6629	27.65	Q	.	.	.	.
0.750	0.8726	30.45	Q	.	.	.	.
0.833	1.0947	32.24	Q	.	.	.	.
0.917	1.3257	33.54	Q	.	.	.	.
1.000	1.5626	34.39	Q	.	.	.	.
1.083	1.8035	34.98	Q	.	.	.	.
1.167	2.0464	35.27	VQ	.	.	.	.
1.250	2.2910	35.51	VQ	.	.	.	.
1.333	2.5372	35.76	VQ	.	.	.	.
1.417	2.7852	36.01	VQ	.	.	.	.
1.500	3.0349	36.26	VQ	.	.	.	.
1.583	3.2860	36.46	VQ	.	.	.	.
1.667	3.5380	36.59	VQ	.	.	.	.
1.750	3.7910	36.72	VQ	.	.	.	.
1.833	4.0448	36.85	VQ	.	.	.	.
1.917	4.2995	36.99	VQ	.	.	.	.
2.000	4.5551	37.12	VQ	.	.	.	.
2.083	4.8117	37.25	VQ	.	.	.	.
2.167	5.0692	37.39	VQ	.	.	.	.
2.250	5.3277	37.53	VQ	.	.	.	.
2.333	5.5871	37.67	.Q	.	.	.	.
2.417	5.8474	37.81	.Q	.	.	.	.
2.500	6.1088	37.95	.Q	.	.	.	.
2.583	6.3711	38.09	.Q	.	.	.	.
2.667	6.6344	38.23	.Q	.	.	.	.
2.750	6.8987	38.38	.Q	.	.	.	.
2.833	7.1641	38.53	.Q	.	.	.	.
2.917	7.4304	38.67	.Q	.	.	.	.
3.000	7.6978	38.82	.Q	.	.	.	.
3.083	7.9662	38.98	.Q	.	.	.	.
3.167	8.2357	39.13	.Q	.	.	.	.
3.250	8.5062	39.28	.Q	.	.	.	.
3.333	8.7779	39.44	.Q	.	.	.	.
3.417	9.0506	39.60	.Q	.	.	.	.
3.500	9.3244	39.76	.Q	.	.	.	.
3.583	9.5993	39.92	.Q	.	.	.	.
3.667	9.8753	40.08	.Q	.	.	.	.
3.750	10.1525	40.24	.Q	.	.	.	.
3.833	10.4308	40.41	.Q	.	.	.	.
3.917	10.7102	40.58	.QV	.	.	.	.

4.000	10.9908	40.75	.QV	.	.	.	.
4.083	11.2727	40.92	.QV	.	.	.	.
4.167	11.5557	41.09	.QV	.	.	.	.
4.250	11.8399	41.27	.QV	.	.	.	.
4.333	12.1253	41.44	.QV	.	.	.	.
4.417	12.4120	41.62	.QV	.	.	.	.
4.500	12.6999	41.81	.QV	.	.	.	.
4.583	12.9891	41.99	.QV	.	.	.	.
4.667	13.2795	42.17	.QV	.	.	.	.
4.750	13.5713	42.36	.QV	.	.	.	.
4.833	13.8643	42.55	.QV	.	.	.	.
4.917	14.1587	42.74	.QV	.	.	.	.
5.000	14.4544	42.94	.QV	.	.	.	.
5.083	14.7515	43.14	.QV	.	.	.	.
5.167	15.0499	43.33	.QV	.	.	.	.
5.250	15.3498	43.54	.QV	.	.	.	.
5.333	15.6510	43.74	.QV	.	.	.	.
5.417	15.9536	43.95	.QV	.	.	.	.
5.500	16.2577	44.15	.Q V	.	.	.	.
5.583	16.5633	44.37	.Q V	.	.	.	.
5.667	16.8703	44.58	.Q V	.	.	.	.
5.750	17.1788	44.80	.Q V	.	.	.	.
5.833	17.4888	45.01	.Q V	.	.	.	.
5.917	17.8004	45.24	.Q V	.	.	.	.
6.000	18.1135	45.46	.Q V	.	.	.	.
6.083	18.4282	45.69	.Q V	.	.	.	.
6.167	18.7444	45.92	.Q V	.	.	.	.
6.250	19.0623	46.16	.Q V	.	.	.	.
6.333	19.3818	46.39	.Q V	.	.	.	.
6.417	19.7030	46.63	.Q V	.	.	.	.
6.500	20.0258	46.88	.Q V	.	.	.	.
6.583	20.3504	47.12	.Q V	.	.	.	.
6.667	20.6766	47.37	.Q V	.	.	.	.
6.750	21.0046	47.63	.Q V	.	.	.	.
6.833	21.3344	47.88	.Q V	.	.	.	.
6.917	21.6660	48.15	.Q V	.	.	.	.
7.000	21.9994	48.41	.Q V	.	.	.	.
7.083	22.3347	48.68	.Q V	.	.	.	.
7.167	22.6718	48.95	.Q V	.	.	.	.
7.250	23.0109	49.23	.Q V	.	.	.	.
7.333	23.3518	49.51	.Q V	.	.	.	.
7.417	23.6947	49.79	.Q V	.	.	.	.
7.500	24.0397	50.08	.Q V	.	.	.	.
7.583	24.3866	50.38	.Q V	.	.	.	.
7.667	24.7356	50.67	.Q V	.	.	.	.
7.750	25.0867	50.98	.Q V	.	.	.	.
7.833	25.4398	51.28	.Q V	.	.	.	.
7.917	25.7952	51.60	.Q V	.	.	.	.
8.000	26.1527	51.91	.Q V	.	.	.	.
8.083	26.5124	52.23	.Q V	.	.	.	.
8.167	26.8744	52.56	.Q V	.	.	.	.
8.250	27.2387	52.89	.Q V	.	.	.	.
8.333	27.6053	53.23	.Q V	.	.	.	.
8.417	27.9743	53.58	.Q V	.	.	.	.
8.500	28.3457	53.92	.Q V	.	.	.	.
8.583	28.7195	54.28	.Q V	.	.	.	.
8.667	29.0958	54.64	.Q V	.	.	.	.
8.750	29.4747	55.01	.Q V	.	.	.	.

8.833	29.8561	55.38	.Q	V	.	.	.	.
8.917	30.2402	55.77	.Q	V	.	.	.	.
9.000	30.6269	56.15	.Q	V	.	.	.	.
9.083	31.0164	56.55	.Q	V	.	.	.	.
9.167	31.4086	56.95	.Q	V	.	.	.	.
9.250	31.8037	57.36	.Q	V	.	.	.	.
9.333	32.2016	57.78	.Q	V	.	.	.	.
9.417	32.6024	58.20	.Q	V	.	.	.	.
9.500	33.0063	58.64	.Q	V	.	.	.	.
9.583	33.4132	59.08	.Q	V	.	.	.	.
9.667	33.8231	59.53	.Q	V	.	.	.	.
9.750	34.2363	59.99	.Q	V	.	.	.	.
9.833	34.6527	60.46	.Q	V	.	.	.	.
9.917	35.0724	60.94	.Q	V	.	.	.	.
10.000	35.4955	61.43	.Q	V	.	.	.	.
10.083	35.9220	61.93	.Q	V	.	.	.	.
10.167	36.3520	62.44	.Q	V	.	.	.	.
10.250	36.7856	62.96	.Q	V	.	.	.	.
10.333	37.2228	63.49	.Q	V	.	.	.	.
10.417	37.6639	64.04	.Q	V	.	.	.	.
10.500	38.1087	64.59	.Q	V	.	.	.	.
10.583	38.5575	65.16	.Q	V	.	.	.	.
10.667	39.0102	65.74	.Q	V	.	.	.	.
10.750	39.4671	66.34	.Q	V	.	.	.	.
10.833	39.9282	66.95	.Q	V	.	.	.	.
10.917	40.3936	67.57	.Q	V	.	.	.	.
11.000	40.8634	68.21	.Q	V	.	.	.	.
11.083	41.3377	68.87	.Q	V	.	.	.	.
11.167	41.8166	69.54	.Q	V	.	.	.	.
11.250	42.3003	70.23	.Q	V	.	.	.	.
11.333	42.7889	70.94	.Q	V	.	.	.	.
11.417	43.2825	71.67	.Q	V	.	.	.	.
11.500	43.7812	72.41	.Q	V	.	.	.	.
11.583	44.2852	73.18	.Q	V	.	.	.	.
11.667	44.7946	73.97	.Q	V	.	.	.	.
11.750	45.3097	74.78	.Q	V	.	.	.	.
11.833	45.8304	75.61	.Q	V	.	.	.	.
11.917	46.3571	76.48	.Q	V	.	.	.	.
12.000	46.8899	77.36	.Q	V	.	.	.	.
12.083	47.4308	78.54	.Q	V	.	.	.	.
12.167	47.9833	80.23	.Q	V	.	.	.	.
12.250	48.5554	83.06	.Q	V	.	.	.	.
12.333	49.1530	86.77	.Q	V	.	.	.	.
12.417	49.7801	91.06	.Q	V	.	.	.	.
12.500	50.4418	96.08	.Q	V	.	.	.	.
12.583	51.1368	100.91	.Q	V	.	.	.	.
12.667	51.8589	104.84	.Q	V	.	.	.	.
12.750	52.6025	107.98	.Q	V	.	.	.	.
12.833	53.3632	110.45	.Q	V	.	.	.	.
12.917	54.1390	112.64	.Q	V	.	.	.	.
13.000	54.9278	114.54	.Q	V	.	.	.	.
13.083	55.7290	116.32	.Q	V	.	.	.	.
13.167	56.5413	117.95	.Q	V	.	.	.	.
13.250	57.3650	119.60	.Q	V	.	.	.	.
13.333	58.2004	121.31	.Q	V	.	.	.	.
13.417	59.0482	123.10	.Q	.V	.	.	.	.
13.500	59.9087	124.94	.Q	.V	.	.	.	.
13.583	60.7823	126.85	.Q	.V	.	.	.	.

13.667	61.6692	128.77	.Q	.V	.	.	.	.
13.750	62.5699	130.79	.Q	.V	.	.	.	.
13.833	63.4851	132.89	.Q	.V	.	.	.	.
13.917	64.4156	135.11	.Q	.V	.	.	.	.
14.000	65.3621	137.43	.Q	.V	.	.	.	.
14.083	66.3263	140.00	.Q	.V	.	.	.	.
14.167	67.3105	142.91	.Q	.V	.	.	.	.
14.250	68.3193	146.47	.Q	.V	.	.	.	.
14.333	69.3562	150.56	.Q	.V	.	.	.	.
14.417	70.4242	155.08	.Q	.V	.	.	.	.
14.500	71.5268	160.09	.Q	.V	.	.	.	.
14.583	72.6646	165.22	.Q	.V	.	.	.	.
14.667	73.8363	170.13	.Q	.V	.	.	.	.
14.750	75.0413	174.96	.Q	.V	.	.	.	.
14.833	76.2792	179.74	.Q	.V	.	.	.	.
14.917	77.5514	184.73	.Q	.V	.	.	.	.
15.000	78.8594	189.93	.Q	.V	.	.	.	.
15.083	80.2060	195.52	.Q	.V	.	.	.	.
15.167	81.5937	201.50	.Q	.V	.	.	.	.
15.250	83.0269	208.10	.Q	.V	.	.	.	.
15.333	84.5105	215.41	.Q	.V	.	.	.	.
15.417	86.0465	223.04	.Q	.V	.	.	.	.
15.500	87.6343	230.54	.Q	.V	.	.	.	.
15.583	89.2657	236.87	.Q	.V	.	.	.	.
15.667	90.9405	243.18	.Q	.V	.	.	.	.
15.750	92.6815	252.80	.Q	.V	.	.	.	.
15.833	94.5261	267.84	.Q	.V	.	.	.	.
15.917	96.5771	297.81	.Q	.V	.	.	.	.
16.000	99.0018	352.07	.Q	.V	.	.	.	.
16.083	102.2559	472.50	.	.Q	.V	.	.	.
16.167	106.7451	651.83	.	.	.Q	.V	.	.
16.250	113.0306	912.65	.	.	.	.V	.Q	.
16.333	120.6943	1112.77	.	.	.	.V	.	.Q
16.417	129.1595	1229.15	.	.	.	.V	.	.Q
16.500	138.1652	1307.63	.	.	.	.V	.	.Q
16.583	146.4347	1200.73	.	.	.	.	.V	.Q
16.667	153.0886	966.14	.	.	.	.	.Q	.V
16.750	158.2407	748.10	.	.	.Q	.	.V	.
16.833	162.1621	569.39	.	.	.Q	.	.V	.
16.917	165.3274	459.60	.	.Q	.	.	.V	.
17.000	167.8626	368.12	.	.Q	.	.	.V	.
17.083	169.9649	305.25	.	.Q	.	.	.V	.
17.167	171.6860	249.90	.	.Q	.	.	.V	.
17.250	173.2483	226.85	.	.Q	.	.	.V	.
17.333	174.7137	212.77	.	.Q	.	.	.V	.
17.417	176.0940	200.41	.	.Q	.	.	.V	.
17.500	177.3848	187.43	.	.Q	.	.	.V	.
17.583	178.5620	170.93	.Q	.	.	.	.V	.
17.667	179.6148	152.87	.Q	.	.	.	.V	.
17.750	180.6142	145.11	.Q	.	.	.	.V	.
17.833	181.5727	139.17	.Q	.	.	.	.V	.
17.917	182.4962	134.10	.Q	.	.	.	.V	.
18.000	183.3882	129.52	.Q	.	.	.	.V	.
18.083	184.2505	125.20	.Q	.	.	.	.V	.
18.167	185.0826	120.83	.Q	.	.	.	.V	.
18.250	185.8793	115.68	.Q	.	.	.	.V	.
18.333	186.6365	109.94	.Q	.	.	.	.V	.
18.417	187.3521	103.91	.Q	.	.	.	.V	.

18.500	188.0230	97.41	. Q	.	.	.	V	.
18.583	188.6521	91.35	. Q	.	.	.	V	.
18.667	189.2475	86.45	. Q	.	.	.	V	.
18.750	189.8160	82.54	. Q	.	.	.	V	.
18.833	190.3634	79.48	. Q	.	.	.	V	.
18.917	190.8929	76.88	. Q	.	.	.	V	.
19.000	191.4074	74.71	. Q	.	.	.	V	.
19.083	191.9089	72.82	. Q	.	.	.	V	.
19.167	192.3994	71.22	. Q	.	.	.	V	.
19.250	192.8796	69.73	.Q	.	.	.	V	.
19.333	193.3501	68.31	.Q	.	.	.	V	.
19.417	193.8112	66.96	.Q	.	.	.	V	.
19.500	194.2634	65.66	.Q	.	.	.	V	.
19.583	194.7073	64.45	.Q	.	.	.	V	.
19.667	195.1436	63.35	.Q	.	.	.	V	.
19.750	195.5727	62.30	.Q	.	.	.	V	.
19.833	195.9948	61.30	.Q	.	.	.	V	.
19.917	196.4103	60.33	.Q	.	.	.	V	.
20.000	196.8194	59.40	.Q	.	.	.	V	.
20.083	197.2224	58.51	.Q	.	.	.	V	.
20.167	197.6195	57.65	.Q	.	.	.	V	.
20.250	198.0108	56.83	.Q	.	.	.	V	.
20.333	198.3967	56.03	.Q	.	.	.	V	.
20.417	198.7774	55.27	.Q	.	.	.	V	.
20.500	199.1529	54.52	.Q	.	.	.	V	.
20.583	199.5235	53.81	.Q	.	.	.	V	.
20.667	199.8893	53.12	.Q	.	.	.	V	.
20.750	200.2505	52.45	.Q	.	.	.	V	.
20.833	200.6073	51.80	.Q	.	.	.	V	.
20.917	200.9597	51.18	.Q	.	.	.	V	.
21.000	201.3080	50.57	.Q	.	.	.	V	.
21.083	201.6522	49.98	.Q	.	.	.	V	.
21.167	201.9925	49.41	.Q	.	.	.	V	.
21.250	202.3289	48.85	.Q	.	.	.	V	.
21.333	202.6617	48.31	.Q	.	.	.	V	.
21.417	202.9908	47.79	.Q	.	.	.	V	.
21.500	203.3164	47.28	.Q	.	.	.	V	.
21.583	203.6386	46.78	.Q	.	.	.	V	.
21.667	203.9575	46.30	.Q	.	.	.	V	.
21.750	204.2731	45.83	.Q	.	.	.	V	.
21.833	204.5856	45.37	.Q	.	.	.	V	.
21.917	204.8951	44.93	.Q	.	.	.	V	.
22.000	205.2015	44.49	.Q	.	.	.	V	.
22.083	205.5050	44.07	.Q	.	.	.	V	.
22.167	205.8057	43.66	.Q	.	.	.	V	.
22.250	206.1036	43.25	.Q	.	.	.	V	.
22.333	206.3987	42.86	.Q	.	.	.	V	.
22.417	206.6913	42.47	.Q	.	.	.	V	.
22.500	206.9812	42.10	.Q	.	.	.	V	.
22.583	207.2686	41.73	.Q	.	.	.	V	.
22.667	207.5535	41.37	.Q	.	.	.	V	.
22.750	207.8360	41.02	.Q	.	.	.	V	.
22.833	208.1161	40.68	.Q	.	.	.	V	.
22.917	208.3940	40.34	.Q	.	.	.	V	.
23.000	208.6695	40.01	.Q	.	.	.	V	.
23.083	208.9428	39.69	.Q	.	.	.	V	.
23.167	209.2140	39.37	.Q	.	.	.	V	.
23.250	209.4830	39.06	.Q	.	.	.	V	.

23.333	209.7500	38.76	.Q	.	.	.	V	.
23.417	210.0148	38.46	.Q	.	.	.	V	.
23.500	210.2777	38.17	.Q	.	.	.	V	.
23.583	210.5386	37.89	.Q	.	.	.	V	.
23.667	210.7976	37.60	.Q	.	.	.	V	.
23.750	211.0547	37.33	.Q	.	.	.	V	.
23.833	211.3100	37.06	.Q	.	.	.	V	.
23.917	211.5634	36.80	.Q	.	.	.	V	.
24.000	211.8150	36.54	.Q	.	.	.	V	.
24.083	212.0623	35.90	.Q	.	.	.	V	.
24.167	212.3004	34.58	Q	.	.	.	V	.
24.250	212.5187	31.69	Q	.	.	.	V	.
24.333	212.7088	27.61	Q	.	.	.	V	.
24.417	212.8659	22.80	Q	.	.	.	V	.
24.500	212.9832	17.04	Q	.	.	.	V	.
24.583	213.0635	11.65	Q	.	.	.	V	.
24.667	213.1163	7.67	Q	.	.	.	V	.
24.750	213.1502	4.92	Q	.	.	.	V	.
24.833	213.1722	3.19	Q	.	.	.	V	.
24.917	213.1858	1.98	Q	.	.	.	V	.
25.000	213.1943	1.24	Q	.	.	.	V	.
25.083	213.1996	0.76	Q	.	.	.	V	.
25.167	213.2036	0.59	Q	.	.	.	V	.
25.250	213.2068	0.46	Q	.	.	.	V	.
25.333	213.2090	0.33	Q	.	.	.	V	.
25.417	213.2105	0.21	Q	.	.	.	V	.
25.500	213.2110	0.08	Q	.	.	.	V	.

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

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1530.0
10%	255.0
20%	80.0
30%	55.0
40%	45.0
50%	35.0
60%	30.0
70%	25.0
80%	20.0
90%	15.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 132C *
* 50-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV5032CS.DAT
TIME/DATE OF STUDY: 14:01 01/02/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 4924.400 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.821 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244
LOW LOSS FRACTION = 0.538
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 = 0.788
30-MINUTE FACTOR = 0.788
1-HOUR FACTOR = 0.788
3-HOUR FACTOR = 0.968
6-HOUR FACTOR = 0.984
24-HOUR FACTOR = 0.990

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 10.150

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.580	345.423
2	1.763	704.566
3	3.385	965.815
4	6.233	1696.091
5	10.947	2807.365
6	16.695	3423.111
7	22.920	3707.788
8	29.521	3930.894
9	37.286	4624.335
10	46.219	5319.988
11	54.738	5073.336
12	63.175	5024.953
13	70.521	4374.467
14	76.573	3604.496
15	81.238	2778.116
16	85.407	2483.066
17	88.495	1839.204
18	90.815	1381.282
19	92.862	1219.414
20	94.528	992.055
21	95.788	750.029
22	96.685	534.246
23	97.481	474.138
24	98.059	344.417
25	98.257	117.576
26	98.447	113.337
27	98.637	113.450
28	98.828	113.332
29	99.018	113.223
30	99.208	113.223
31	99.398	113.223
32	99.588	113.223
33	99.778	113.223
34	99.968	113.223
35	100.000	18.833

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 803.6531
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 869.8262

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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.	800.0	1600.0	2400.0	3200.0
0.083	0.0058	0.85	Q	.	.	.	.
0.167	0.0235	2.57	Q	.	.	.	.
0.250	0.0576	4.95	Q	.	.	.	.
0.333	0.1204	9.11	Q	.	.	.	.
0.417	0.2307	16.01	Q	.	.	.	.
0.500	0.3990	24.44	Q	.	.	.	.
0.583	0.6304	33.60	Q	.	.	.	.
0.667	0.9288	43.33	Q	.	.	.	.
0.750	1.3062	54.79	Q	.	.	.	.
0.833	1.7745	67.99	Q	.	.	.	.
0.917	2.3298	80.64	VQ	.	.	.	.
1.000	2.9717	93.20	VQ	.	.	.	.
1.083	3.6894	104.22	VQ	.	.	.	.
1.167	4.4703	113.39	VQ	.	.	.	.
1.250	5.3007	120.57	VQ	.	.	.	.
1.333	6.1757	127.05	VQ	.	.	.	.
1.417	7.0846	131.98	VQ	.	.	.	.
1.500	8.0200	135.81	VQ	.	.	.	.
1.583	8.9791	139.26	VQ	.	.	.	.
1.667	9.9582	142.17	VQ	.	.	.	.
1.750	10.9533	144.49	VQ	.	.	.	.
1.833	11.9609	146.30	VQ	.	.	.	.
1.917	12.9799	147.97	VQ	.	.	.	.
2.000	14.0084	149.33	VQ	.	.	.	.
2.083	15.0424	150.14	VQ	.	.	.	.
2.167	16.0820	150.95	VQ	.	.	.	.
2.250	17.1272	151.77	VQ	.	.	.	.
2.333	18.1781	152.59	VQ	.	.	.	.
2.417	19.2347	153.41	VQ	.	.	.	.
2.500	20.2970	154.25	VQ	.	.	.	.
2.583	21.3650	155.08	VQ	.	.	.	.
2.667	22.4389	155.93	.Q	.	.	.	.
2.750	23.5187	156.78	.Q	.	.	.	.
2.833	24.6043	157.64	.Q	.	.	.	.
2.917	25.6943	158.27	.Q	.	.	.	.
3.000	26.7884	158.86	.Q	.	.	.	.
3.083	27.8866	159.46	.Q	.	.	.	.
3.167	28.9890	160.07	.VQ	.	.	.	.
3.250	30.0956	160.67	.VQ	.	.	.	.
3.333	31.2064	161.29	.VQ	.	.	.	.
3.417	32.3215	161.91	.VQ	.	.	.	.
3.500	33.4410	162.54	.VQ	.	.	.	.
3.583	34.5648	163.18	.VQ	.	.	.	.
3.667	35.6931	163.82	.VQ	.	.	.	.
3.750	36.8258	164.47	.VQ	.	.	.	.
3.833	37.9630	165.13	.VQ	.	.	.	.
3.917	39.1048	165.79	.VQ	.	.	.	.

4.000	40.2512	166.46	.VQ	.	.	.	.
4.083	41.4022	167.13	.VQ	.	.	.	.
4.167	42.5580	167.82	.VQ	.	.	.	.
4.250	43.7185	168.50	.Q	.	.	.	.
4.333	44.8838	169.20	.Q	.	.	.	.
4.417	46.0539	169.91	.Q	.	.	.	.
4.500	47.2290	170.62	.Q	.	.	.	.
4.583	48.4091	171.34	.Q	.	.	.	.
4.667	49.5941	172.07	.Q	.	.	.	.
4.750	50.7843	172.81	.Q	.	.	.	.
4.833	51.9796	173.55	.Q	.	.	.	.
4.917	53.1800	174.31	.Q	.	.	.	.
5.000	54.3857	175.07	.Q	.	.	.	.
5.083	55.5967	175.84	.Q	.	.	.	.
5.167	56.8131	176.62	.Q	.	.	.	.
5.250	58.0350	177.41	.Q	.	.	.	.
5.333	59.2623	178.21	.Q	.	.	.	.
5.417	60.4952	179.01	.Q	.	.	.	.
5.500	61.7337	179.83	.Q	.	.	.	.
5.583	62.9779	180.66	.Q	.	.	.	.
5.667	64.2279	181.50	.Q	.	.	.	.
5.750	65.4837	182.34	.QV	.	.	.	.
5.833	66.7454	183.20	.QV	.	.	.	.
5.917	68.0131	184.07	.QV	.	.	.	.
6.000	69.2868	184.95	.QV	.	.	.	.
6.083	70.5667	185.84	.QV	.	.	.	.
6.167	71.8528	186.74	.QV	.	.	.	.
6.250	73.1452	187.65	.QV	.	.	.	.
6.333	74.4439	188.58	.QV	.	.	.	.
6.417	75.7491	189.51	.QV	.	.	.	.
6.500	77.0608	190.46	.QV	.	.	.	.
6.583	78.3791	191.42	.QV	.	.	.	.
6.667	79.7041	192.39	.QV	.	.	.	.
6.750	81.0359	193.38	.QV	.	.	.	.
6.833	82.3747	194.38	.QV	.	.	.	.
6.917	83.7203	195.39	.QV	.	.	.	.
7.000	85.0731	196.42	.QV	.	.	.	.
7.083	86.4330	197.46	.QV	.	.	.	.
7.167	87.8002	198.52	.Q V	.	.	.	.
7.250	89.1748	199.59	.Q V	.	.	.	.
7.333	90.5568	200.67	.Q V	.	.	.	.
7.417	91.9465	201.77	.Q V	.	.	.	.
7.500	93.3438	202.89	.Q V	.	.	.	.
7.583	94.7489	204.02	.Q V	.	.	.	.
7.667	96.1620	205.18	.Q V	.	.	.	.
7.750	97.5830	206.34	.Q V	.	.	.	.
7.833	99.0123	207.53	.Q V	.	.	.	.
7.917	100.4498	208.73	.Q V	.	.	.	.
8.000	101.8957	209.95	.Q V	.	.	.	.
8.083	103.3502	211.19	.Q V	.	.	.	.
8.167	104.8133	212.45	.Q V	.	.	.	.
8.250	106.2852	213.72	.Q V	.	.	.	.
8.333	107.7661	215.02	.Q V	.	.	.	.
8.417	109.2560	216.34	.Q V	.	.	.	.
8.500	110.7552	217.68	.Q V	.	.	.	.
8.583	112.2638	219.04	.Q V	.	.	.	.
8.667	113.7819	220.43	.Q V	.	.	.	.
8.750	115.3097	221.84	.Q V	.	.	.	.

8.833	116.8474	223.27	. Q V
8.917	118.3951	224.72	. Q V
9.000	119.9530	226.21	. Q V
9.083	121.5212	227.71	. Q V
9.167	123.1000	229.25	. Q V
9.250	124.6896	230.80	. Q V
9.333	126.2901	232.39	. Q V
9.417	127.9017	234.01	. Q V
9.500	129.5247	235.66	. Q V
9.583	131.1592	237.33	. Q V
9.667	132.8055	239.04	. Q V
9.750	134.4637	240.78	. Q V
9.833	136.1342	242.56	. Q V
9.917	137.8171	244.36	. Q V
10.000	139.5128	246.21	. Q V
10.083	141.2214	248.09	. Q V
10.167	142.9432	250.01	. Q V
10.250	144.6785	251.96	. Q V
10.333	146.4276	253.97	. Q V
10.417	148.1906	256.00	. Q V
10.500	149.9681	258.09	. Q V
10.583	151.7602	260.21	. Q V
10.667	153.5673	262.39	. Q V
10.750	155.3897	264.61	. Q V
10.833	157.2278	266.89	. Q V
10.917	159.0818	269.21	. Q V
11.000	160.9523	271.59	. Q V
11.083	162.8395	274.02	. Q V
11.167	164.7439	276.51	. Q V
11.250	166.6658	279.06	. Q V
11.333	168.6057	281.68	. Q V
11.417	170.5640	284.35	. Q V
11.500	172.5413	287.10	. Q V
11.583	174.5380	289.91	. Q V
11.667	176.5546	292.81	. Q V
11.750	178.5916	295.77	. Q V
11.833	180.6496	298.82	. Q V
11.917	182.7291	301.94	. Q V
12.000	184.8308	305.17	. Q V
12.083	186.9597	309.13	. Q V
12.167	189.1215	313.88	. Q V
12.250	191.3200	319.23	. Q V
12.333	193.5658	326.09	. Q V
12.417	195.8742	335.18	. Q V
12.500	198.2543	345.59	. Q V
12.583	200.7107	356.67	. Q V
12.667	203.2474	368.33	. Q V
12.750	205.8745	381.46	. Q V
12.833	208.6024	396.09	. Q V
12.917	211.4290	410.41	. Q V
13.000	214.3549	424.85	. Q V
13.083	217.3729	438.21	. Q V
13.167	220.4743	450.32	. Q V
13.250	223.6494	461.03	. Q V
13.333	226.8961	471.42	. Q V
13.417	230.2072	480.77	. Q V
13.500	233.5785	489.51	. Q V
13.583	237.0092	498.15	. Q V

13.667	240.4985	506.64	. Q .V
13.750	244.0448	514.92	. Q .V
13.833	247.6474	523.10	. Q .V
13.917	251.3076	531.46	. Q .V
14.000	255.0261	539.93	. Q .V
14.083	258.8108	549.53	. Q .V
14.167	262.6732	560.82	. Q .V
14.250	266.6223	573.41	. Q .V
14.333	270.6793	589.08	. Q .V
14.417	274.8744	609.13	. Q .V
14.500	279.2262	631.88	. Q .V
14.583	283.7448	656.10	. Q .V
14.667	288.4395	681.68	. Q .V
14.750	293.3311	710.26	. Q .V
14.833	298.4411	741.98	. Q .V
14.917	303.7670	773.32	. Q .V
15.000	309.3139	805.42	. Q V
15.083	315.0744	836.42	. Q V
15.167	321.0409	866.33	. Q V
15.250	327.2085	895.54	. .Q V
15.333	333.5912	926.77	. .Q V
15.417	340.1692	955.12	. .Q V
15.500	346.9292	981.56	. . Q V
15.583	353.8773	1008.87	. . Q V
15.667	360.9828	1031.72	. . Q V
15.750	368.2032	1048.40	. . Q V
15.833	375.5505	1066.82	. . Q V
15.917	383.1097	1097.60	. . Q V
16.000	391.0563	1153.85	. . Q V
16.083	399.9898	1297.14	. . Q V
16.167	410.0115	1455.15	. . Q
16.250	421.1897	1623.08	. . VQ
16.333	434.3109	1905.19	. . V. Q
16.417	449.8767	2260.17	. . V . Q
16.500	467.0224	2489.55	. . .V . .Q
16.583	485.1437	2631.22	. . . V . . Q
16.667	504.1861	2764.95	. . . V . . Q
16.750	524.7488	2985.71	. . . V . . Q
16.833	546.4779	3155.07	. . . V . . Q
16.917	567.6077	3068.05	. . . V . . Q
17.000	588.0260	2964.74	. . . V . . Q
17.083	606.6608	2705.77	. . . V . . Q
17.167	623.3058	2416.85	. . . V Q
17.250	637.9421	2125.20	. . . Q V
17.333	651.3724	1950.08	. . . Q V
17.417	663.1564	1711.03	. . . .Q V
17.500	673.6295	1520.69	. . . Q. V
17.583	683.2654	1399.14	. . . Q . .V
17.667	692.0244	1271.80	. . . Q . .V
17.750	699.8815	1140.86	. . . Q . . V
17.833	706.9141	1021.12	. . . Q . . V
17.917	713.3902	940.34	. . . .Q . . V
18.000	719.2393	849.28	. . . Q . . V
18.083	724.3970	748.91	. . . Q. . . V
18.167	729.2541	705.25	. . . Q . . V
18.250	733.8919	673.41	. . . Q . . V
18.333	738.3231	643.41	. . . Q . . V
18.417	742.5458	613.13	. . . Q . . V

18.500	746.5769	585.32	.	Q	.	.	.	V	.
18.583	750.4222	558.34	.	Q	.	.	.	V	.
18.667	754.0887	532.37	.	Q	.	.	.	V	.
18.750	757.5652	504.80	.	Q	.	.	.	V	.
18.833	760.8341	474.64	.	Q	.	.	.	V	.
18.917	763.7784	427.50	.	Q	.	.	.	V	.
19.000	766.5316	399.76	.	Q	.	.	.	V	.
19.083	769.1556	381.02	.	Q	.	.	.	V	.
19.167	771.6710	365.24	.	Q	.	.	.	V	.
19.250	774.0864	350.71	.	Q	.	.	.	V	.
19.333	776.4095	337.31	.	Q	.	.	.	V	.
19.417	778.6536	325.85	.	Q	.	.	.	V	.
19.500	780.8289	315.85	.	Q	.	.	.	V	.
19.583	782.9404	306.59	.	Q	.	.	.	V	.
19.667	784.9938	298.15	.	Q	.	.	.	V	.
19.750	786.9945	290.51	.	Q	.	.	.	V	.
19.833	788.9475	283.58	.	Q	.	.	.	V	.
19.917	790.8579	277.39	.	Q	.	.	.	V	.
20.000	792.7296	271.77	.	Q	.	.	.	V	.
20.083	794.5673	266.82	.	Q	.	.	.	V	.
20.167	796.3724	262.10	.	Q	.	.	.	V	.
20.250	798.1464	257.58	.	Q	.	.	.	V	.
20.333	799.8905	253.25	.	Q	.	.	.	V	.
20.417	801.6060	249.09	.	Q	.	.	.	V	.
20.500	803.2939	245.09	.	Q	.	.	.	V	.
20.583	804.9553	241.24	.	Q	.	.	.	V	.
20.667	806.5912	237.53	.	Q	.	.	.	V	.
20.750	808.2025	233.96	.	Q	.	.	.	V	.
20.833	809.7900	230.51	.	Q	.	.	.	V	.
20.917	811.3558	227.36	.	Q	.	.	.	V	.
21.000	812.9009	224.35	.	Q	.	.	.	V	.
21.083	814.4260	221.45	.	Q	.	.	.	V	.
21.167	815.9318	218.64	.	Q	.	.	.	V	.
21.250	817.4189	215.92	.	Q	.	.	.	V	.
21.333	818.8879	213.30	.	Q	.	.	.	V	.
21.417	820.3394	210.75	.	Q	.	.	.	V	.
21.500	821.7738	208.28	.	Q	.	.	.	V	.
21.583	823.1918	205.89	.	Q	.	.	.	V	.
21.667	824.5938	203.57	.	Q	.	.	.	V	.
21.750	825.9802	201.32	.	Q	.	.	.	V	.
21.833	827.3516	199.13	.	Q	.	.	.	V	.
21.917	828.7084	197.00	.	Q	.	.	.	V	.
22.000	830.0509	194.93	.	Q	.	.	.	V	.
22.083	831.3795	192.92	.	Q	.	.	.	V	.
22.167	832.6946	190.96	.	Q	.	.	.	V	.
22.250	833.9966	189.05	.	Q	.	.	.	V	.
22.333	835.2858	187.19	.	Q	.	.	.	V	.
22.417	836.5626	185.38	.	Q	.	.	.	V	.
22.500	837.8271	183.62	.	Q	.	.	.	V	.
22.583	839.0798	181.89	.	Q	.	.	.	V	.
22.667	840.3210	180.21	.	Q	.	.	.	V	.
22.750	841.5508	178.57	.	Q	.	.	.	V	.
22.833	842.7696	176.97	.	Q	.	.	.	V	.
22.917	843.9776	175.40	.	Q	.	.	.	V	.
23.000	845.1750	173.87	.	Q	.	.	.	V	.
23.083	846.3622	172.38	.	Q	.	.	.	V	.
23.167	847.5392	170.91	.	Q	.	.	.	V	.
23.250	848.7065	169.48	.	Q	.	.	.	V	.

23.333	849.8641	168.08	.	Q	.	.	.	V	.
23.417	851.0123	166.71	.	Q	.	.	.	V	.
23.500	852.1512	165.37	.	Q	.	.	.	V	.
23.583	853.2811	164.06	.	Q	.	.	.	V	.
23.667	854.4021	162.78	.	Q	.	.	.	V	.
23.750	855.5145	161.52	.	Q	.	.	.	V	.
23.833	856.6183	160.28	.	Q	.	.	.	V	.
23.917	857.7139	159.07	.	Q	.	.	.	V	.
24.000	858.8012	157.88	.	Q	.	.	.	V	.
24.083	859.8748	155.88	.	Q	.	.	.	V	.
24.167	860.9286	153.02	.	Q	.	.	.	V	.
24.250	861.9586	149.55	.	Q	.	.	.	V	.
24.333	862.9526	144.34	.	Q	.	.	.	V	.
24.417	863.8925	136.46	.	Q	.	.	.	V	.
24.500	864.7681	127.14	.	Q	.	.	.	V	.
24.583	865.5752	117.19	.	Q	.	.	.	V	.
24.667	866.3105	106.77	.	Q	.	.	.	V	.
24.750	866.9630	94.74	.	Q	.	.	.	V	.
24.833	867.5215	81.09	.	Q	.	.	.	V	.
24.917	867.9908	68.14	.	Q	.	.	.	V	.
25.000	868.3723	55.40	.	Q	.	.	.	V	.
25.083	868.6776	44.33	.	Q	.	.	.	V	.
25.167	868.9202	35.22	.	Q	.	.	.	V	.
25.250	869.1143	28.19	.	Q	.	.	.	V	.
25.333	869.2654	21.94	.	Q	.	.	.	V	.
25.417	869.3845	17.29	.	Q	.	.	.	V	.
25.500	869.4795	13.80	.	Q	.	.	.	V	.
25.583	869.5533	10.73	.	Q	.	.	.	V	.
25.667	869.6100	8.23	.	Q	.	.	.	V	.
25.750	869.6537	6.34	.	Q	.	.	.	V	.
25.833	869.6881	4.99	.	Q	.	.	.	V	.
25.917	869.7143	3.80	.	Q	.	.	.	V	.
26.000	869.7345	2.93	.	Q	.	.	.	V	.
26.083	869.7526	2.63	.	Q	.	.	.	V	.
26.167	869.7686	2.33	.	Q	.	.	.	V	.
26.250	869.7827	2.04	.	Q	.	.	.	V	.
26.333	869.7947	1.75	.	Q	.	.	.	V	.
26.417	869.8047	1.46	.	Q	.	.	.	V	.
26.500	869.8128	1.17	.	Q	.	.	.	V	.
26.583	869.8189	0.89	.	Q	.	.	.	V	.
26.667	869.8231	0.61	.	Q	.	.	.	V	.
26.750	869.8253	0.33	.	Q	.	.	.	V	.
26.833	869.8256	0.05	.	Q	.	.	.	V	.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1610.0
10%	440.0
20%	235.0
30%	150.0
40%	100.0
50%	75.0
60%	65.0

70%	50.0
80%	35.0
90%	20.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133U *
* 50-YR EV JANUARY 2019 CCHI *

FILE NAME: EV5033US.DAT
TIME/DATE OF STUDY: 14:11 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 54351.898 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.384 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.292
LOW LOSS FRACTION = 0.407
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.45
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.87
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.20
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.23
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.31
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.82

*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 = 3.496

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.200	1312.957
2	0.599	2625.911
3	0.999	2625.913
4	1.398	2625.907
5	1.798	2625.920
6	2.300	3302.187
7	2.908	3995.930
8	3.516	3995.947
9	4.250	4826.982
10	5.346	7205.216
11	6.613	8325.939
12	8.144	10066.058
13	9.957	11911.187
14	11.720	11590.330
15	13.488	11619.888
16	15.837	15443.636
17	17.827	13082.106
18	19.718	12425.770
19	21.998	14986.962
20	24.499	16440.443
21	26.519	13279.350
22	28.746	14637.696
23	31.286	16697.771
24	34.264	19570.682
25	36.737	16256.582
26	39.350	17176.598
27	42.613	21451.709
28	45.787	20860.850
29	49.410	23811.465
30	52.268	18787.348
31	54.739	16243.970
32	57.297	16814.596
33	60.471	20859.947
34	63.726	21396.621
35	66.215	16359.865
36	68.662	16089.484
37	71.071	15834.224
38	73.238	14240.225
39	75.416	14318.258
40	77.144	11358.038
41	78.697	10211.222
42	80.271	10344.318
43	81.893	10663.870
44	83.391	9846.686
45	84.781	9136.921
46	86.069	8465.771
47	87.167	7215.146
48	88.176	6631.156

49	89.008	5469.695
50	89.827	5381.483
51	90.584	4979.385
52	91.320	4837.011
53	92.044	4759.931
54	92.716	4419.216
55	93.382	4376.138
56	94.012	4137.376
57	94.476	3052.043
58	94.920	2917.993
59	95.364	2918.043
60	95.807	2912.477
61	96.155	2289.972
62	96.429	1801.517
63	96.704	1803.323
64	96.978	1801.467
65	97.252	1803.373
66	97.526	1801.467
67	97.800	1801.517
68	98.013	1397.463
69	98.083	462.779
70	98.149	431.536
71	98.215	431.536
72	98.280	431.586
73	98.346	429.680
74	98.410	426.069
75	98.476	433.391
76	98.542	429.680
77	98.607	431.586
78	98.673	433.391
79	98.738	424.164
80	98.804	437.052
81	98.869	426.069
82	98.935	433.391
83	99.001	433.391
84	99.067	433.391
85	99.133	433.391
86	99.199	433.391
87	99.265	433.391
88	99.331	433.391
89	99.397	433.391
90	99.463	433.391
91	99.528	433.391
92	99.594	433.391
93	99.660	433.391
94	99.726	433.391
95	99.792	433.391
96	99.858	433.391
97	99.924	433.391
98	99.990	433.391
99	100.000	65.696

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9925.0361
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 14855.6270

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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.	4525.0	9050.0	13575.0	18100.0
0.083	0.0449	6.52	Q	.	.	.	.
0.167	0.1796	19.56	Q	.	.	.	.
0.250	0.4044	32.64	Q	.	.	.	.
0.333	0.7196	45.76	Q	.	.	.	.
0.417	1.1254	58.92	Q	.	.	.	.
0.500	1.6452	75.48	Q	.	.	.	.
0.583	2.3031	95.52	Q	.	.	.	.
0.667	3.0995	115.63	Q	.	.	.	.
0.750	4.0631	139.92	Q	.	.	.	.
0.833	5.2757	176.08	Q	.	.	.	.
0.917	6.7765	217.90	Q	.	.	.	.
1.000	8.6255	268.49	Q	.	.	.	.
1.083	10.8871	328.37	Q	.	.	.	.
1.167	13.5513	386.85	Q	.	.	.	.
1.250	16.6205	445.64	Q	.	.	.	.
1.333	20.2265	523.60	VQ	.	.	.	.
1.417	24.2902	590.05	VQ	.	.	.	.
1.500	28.7907	653.47	VQ	.	.	.	.
1.583	33.8167	729.78	VQ	.	.	.	.
1.667	39.4197	813.55	VQ	.	.	.	.
1.750	45.4931	881.86	VQ	.	.	.	.
1.833	52.0851	957.17	V Q	.	.	.	.
1.917	59.2676	1042.89	V Q	.	.	.	.
2.000	67.1407	1143.17	V Q	.	.	.	.
2.083	75.5930	1227.27	V Q	.	.	.	.
2.167	84.6582	1316.27	V Q	.	.	.	.
2.250	94.4839	1426.69	V Q	.	.	.	.
2.333	105.0527	1534.58	V Q	.	.	.	.
2.417	116.4673	1657.41	V Q	.	.	.	.
2.500	128.5591	1755.72	V Q	.	.	.	.
2.583	141.2431	1841.72	V Q	.	.	.	.
2.667	154.5410	1930.86	V Q	.	.	.	.
2.750	168.5929	2040.34	V Q	.	.	.	.
2.833	183.4197	2152.84	V Q	.	.	.	.
2.917	198.8516	2240.71	V Q	.	.	.	.
3.000	214.8817	2327.57	V Q	.	.	.	.
3.083	231.5031	2413.43	V Q	.	.	.	.
3.167	248.6635	2491.70	V Q	.	.	.	.
3.250	266.3674	2570.60	V Q	.	.	.	.
3.333	284.5157	2635.13	V Q	.	.	.	.
3.417	303.0706	2694.19	V Q	.	.	.	.
3.500	322.0386	2754.14	V Q	.	.	.	.
3.583	341.4318	2815.90	V Q	.	.	.	.
3.667	361.2242	2873.85	V Q	.	.	.	.
3.750	381.3929	2928.50	.V Q	.	.	.	.
3.833	401.9166	2980.04	.V Q	.	.	.	.
3.917	422.7539	3025.58	.V Q	.	.	.	.

4.000	443.8864	3068.43	.V	Q	.	.	.	.
4.083	465.2754	3105.69	.V	Q	.	.	.	.
4.167	486.9195	3142.71	.V	Q	.	.	.	.
4.250	508.8058	3177.89	.V	Q	.	.	.	.
4.333	530.9308	3212.55	.V	Q	.	.	.	.
4.417	553.2930	3246.98	.V	Q	.	.	.	.
4.500	575.8820	3279.92	.V	Q	.	.	.	.
4.583	598.6973	3312.79	.V	Q	.	.	.	.
4.667	621.7322	3344.67	.V	Q	.	.	.	.
4.750	644.9506	3371.31	.V	Q	.	.	.	.
4.833	668.3491	3397.46	.V	Q	.	.	.	.
4.917	691.9286	3423.75	.V	Q	.	.	.	.
5.000	715.6903	3450.20	.V	Q	.	.	.	.
5.083	739.6138	3473.69	.V	Q	.	.	.	.
5.167	763.6836	3494.93	.V	Q	.	.	.	.
5.250	787.9006	3516.31	.V	Q	.	.	.	.
5.333	812.2661	3537.86	.V	Q	.	.	.	.
5.417	836.7808	3559.55	.V	Q	.	.	.	.
5.500	861.4462	3581.41	.V	Q	.	.	.	.
5.583	886.2629	3603.39	.V	Q	.	.	.	.
5.667	911.2186	3623.57	.V	Q	.	.	.	.
5.750	936.2822	3639.23	.V	Q	.	.	.	.
5.833	961.4539	3654.92	.V	Q	.	.	.	.
5.917	986.7343	3670.72	.V	Q	.	.	.	.
6.000	1012.1249	3686.72	.V	Q	.	.	.	.
6.083	1037.6265	3702.81	.V	Q	.	.	.	.
6.167	1063.2400	3719.09	.V	Q	.	.	.	.
6.250	1088.9667	3735.52	.V	Q	.	.	.	.
6.333	1114.8079	3752.13	.V	Q	.	.	.	.
6.417	1140.7644	3768.88	.V	Q	.	.	.	.
6.500	1166.8376	3785.84	.V	Q	.	.	.	.
6.583	1193.0283	3802.89	.V	Q	.	.	.	.
6.667	1219.3384	3820.22	.V	Q	.	.	.	.
6.750	1245.7683	3837.63	.V	Q	.	.	.	.
6.833	1272.3199	3855.29	.V	Q	.	.	.	.
6.917	1298.9941	3873.10	.V	Q	.	.	.	.
7.000	1325.7926	3891.14	.V	Q	.	.	.	.
7.083	1352.7163	3909.32	.V	Q	.	.	.	.
7.167	1379.7668	3927.74	.V	Q	.	.	.	.
7.250	1406.9453	3946.32	.V	Q	.	.	.	.
7.333	1434.2534	3965.14	.V	Q	.	.	.	.
7.417	1461.6923	3984.12	.V	Q	.	.	.	.
7.500	1489.2635	4003.35	.V	Q	.	.	.	.
7.583	1516.9685	4022.76	.V	Q	.	.	.	.
7.667	1544.8090	4042.43	.V	Q	.	.	.	.
7.750	1572.7860	4062.27	.V	Q	.	.	.	.
7.833	1600.9016	4082.39	.V	Q	.	.	.	.
7.917	1629.1571	4102.69	.V	Q	.	.	.	.
8.000	1657.5543	4123.28	.V	Q	.	.	.	.
8.083	1686.0947	4144.06	.V	Q	.	.	.	.
8.167	1714.7803	4165.13	.V	Q	.	.	.	.
8.250	1743.5997	4184.58	.V	Q	.	.	.	.
8.333	1772.5530	4204.01	.V	Q	.	.	.	.
8.417	1801.6414	4223.64	.V	Q	.	.	.	.
8.500	1830.8672	4243.59	.V	Q	.	.	.	.
8.583	1860.2318	4263.75	.V	Q	.	.	.	.
8.667	1889.7375	4284.24	.V	Q	.	.	.	.
8.750	1919.3860	4304.96	.V	Q	.	.	.	.

8.833	1949.1794	4326.01	.	V	Q.	.	.	.
8.917	1979.1195	4347.30	.	V	Q.	.	.	.
9.000	2009.2087	4368.95	.	V	Q.	.	.	.
9.083	2039.4487	4390.85	.	V	Q.	.	.	.
9.167	2069.8420	4413.13	.	V	Q.	.	.	.
9.250	2100.3906	4435.66	.	V	Q.	.	.	.
9.333	2131.0972	4458.58	.	V	Q.	.	.	.
9.417	2161.9634	4481.78	.	V	Q.	.	.	.
9.500	2192.9922	4505.39	.	V	Q.	.	.	.
9.583	2224.1855	4529.29	.	V	Q	.	.	.
9.667	2255.5466	4553.62	.	V	Q	.	.	.
9.750	2287.0774	4578.25	.	V	Q	.	.	.
9.833	2318.7808	4603.34	.	V	Q	.	.	.
9.917	2350.6592	4628.75	.	V	Q	.	.	.
10.000	2382.7158	4654.64	.	V	Q	.	.	.
10.083	2414.9531	4680.86	.	V	Q	.	.	.
10.167	2447.3745	4707.59	.	V	Q	.	.	.
10.250	2479.9824	4734.67	.	V	Q	.	.	.
10.333	2512.7805	4762.29	.	V	Q	.	.	.
10.417	2545.7715	4790.28	.	V	Q	.	.	.
10.500	2578.9590	4818.83	.	V	Q	.	.	.
10.583	2612.3459	4847.79	.	V	Q	.	.	.
10.667	2645.9363	4877.33	.	V	Q	.	.	.
10.750	2679.7332	4907.30	.	V	Q	.	.	.
10.833	2713.7407	4937.90	.	V	Q	.	.	.
10.917	2747.9622	4968.95	.	V	Q	.	.	.
11.000	2782.4021	5000.66	.	V	.Q	.	.	.
11.083	2817.0637	5032.86	.	V	.Q	.	.	.
11.167	2851.9519	5065.76	.	V	.Q	.	.	.
11.250	2887.0701	5099.17	.	V	.Q	.	.	.
11.333	2922.4236	5133.33	.	V	.Q	.	.	.
11.417	2958.0161	5168.05	.	V	.Q	.	.	.
11.500	2993.8533	5203.55	.	V	.Q	.	.	.
11.583	3029.9390	5239.65	.	V	.Q	.	.	.
11.667	3066.2791	5276.59	.	V	.Q	.	.	.
11.750	3102.8779	5314.17	.	V	.Q	.	.	.
11.833	3139.7419	5352.66	.	V	.Q	.	.	.
11.917	3176.8757	5391.83	.	V	.Q	.	.	.
12.000	3214.2859	5431.96	.	V	.Q	.	.	.
12.083	3252.0544	5483.99	.	V	.Q	.	.	.
12.167	3290.2651	5548.19	.	V	.Q	.	.	.
12.250	3328.9226	5613.07	.	V	.Q	.	.	.
12.333	3368.0339	5678.95	.	V	.Q	.	.	.
12.417	3407.6040	5745.57	.	V	.Q	.	.	.
12.500	3447.6799	5819.01	.	V	.Q	.	.	.
12.583	3488.3076	5899.13	.	V	.Q	.	.	.
12.667	3529.4946	5980.34	.	V	.Q	.	.	.
12.750	3571.2952	6069.42	.	V	.Q	.	.	.
12.833	3613.8564	6179.89	.	V	.Q	.	.	.
12.917	3657.2493	6300.65	.	V	.Q	.	.	.
13.000	3701.5833	6437.29	.	V	.Q	.	.	.
13.083	3746.9712	6590.33	.	V	.Q	.	.	.
13.167	3793.4014	6741.66	.	V	.Q	.	.	.
13.250	3840.8801	6893.92	.	V	.Q	.	.	.
13.333	3889.6392	7079.82	.	V	.Q	.	.	.
13.417	3939.5447	7246.28	.	V	.Q	.	.	.
13.500	3990.5654	7408.22	.	V	.Q	.	.	.
13.583	4042.8574	7592.79	.	V	.Q	.	.	.

13.667	4096.5132	7790.84	.	.V	Q	.	.	.
13.750	4151.3530	7962.77	.	.V	Q	.	.	.
13.833	4207.4653	8147.48	.	.V	Q	.	.	.
13.917	4264.9771	8350.69	.	.V	Q	.	.	.
14.000	4324.0649	8579.55	.	.V	Q	.	.	.
14.083	4384.6240	8793.17	.	.V	Q	.	.	.
14.167	4446.7979	9027.61	.	.V	Q	.	.	.
14.250	4510.8379	9298.60	.	.V	Q	.	.	.
14.333	4576.7114	9564.81	.	.V	.Q	.	.	.
14.417	4644.5913	9856.13	.	.V	.Q	.	.	.
14.500	4714.2275	10111.18	.	.V	.Q	.	.	.
14.583	4785.5142	10350.83	.	.V	.Q	.	.	.
14.667	4858.4858	10595.49	.	.V	Q	.	.	.
14.750	4933.4297	10881.84	.	.V	.Q	.	.	.
14.833	5010.5264	11194.44	.	.V	.Q	.	.	.
14.917	5089.5410	11472.93	.	.V	.Q	.	.	.
15.000	5170.5576	11763.63	.	.V	.Q	.	.	.
15.083	5253.6616	12066.73	.	.V	.Q	.	.	.
15.167	5338.7202	12350.47	.	.V	.Q	.	.	.
15.250	5425.7163	12631.81	.	.V	.Q	.	.	.
15.333	5514.6982	12920.14	.	.V	.Q	.	.	.
15.417	5605.3091	13156.70	.	.V	.Q	.	.	.
15.500	5697.3843	13369.32	.	.V	.Q	.	.	.
15.583	5791.1045	13608.17	.	.V	.Q	.	.	.
15.667	5886.5068	13852.43	.	.V	.Q	.	.	.
15.750	5983.2983	14054.12	.	.V	.Q	.	.	.
15.833	6081.4268	14248.24	.	.V	.Q	.	.	.
15.917	6180.9473	14450.40	.	.V	.Q	.	.	.
16.000	6282.1143	14689.45	.	.V	.Q	.	.	.
16.083	6385.4673	15006.87	.	.V	.Q	.	.	.
16.167	6490.7007	15279.87	.	.V	.Q	.	.	.
16.250	6597.0093	15436.02	.	.V	.Q	.	.	.
16.333	6704.2036	15564.62	.	.V	.Q	.	.	.
16.417	6812.4429	15716.35	.	.V	.Q	.	.	.
16.500	6921.9360	15898.38	.	.V	.Q	.	.	.
16.583	7032.5249	16057.52	.	.V	.Q	.	.	.
16.667	7143.5342	16118.55	.	.V	.Q	.	.	.
16.750	7256.0415	16336.07	.	.V	.Q	.	.	.
16.833	7371.2598	16729.68	.	.V	.Q	.	.	.
16.917	7487.8560	16929.79	.	.V	.Q	.	.	.
17.000	7605.9570	17148.26	.	.V	.Q	.	.	.
17.083	7725.7354	17391.83	.	.V	.Q	.	.	.
17.167	7845.6514	17411.79	.	.V	.Q	.	.	.
17.250	7965.8594	17454.19	.	.V	.Q	.	.	.
17.333	8088.2866	17776.45	.	.V	.Q	.	.	.
17.417	8209.2471	17563.50	.	.V	.Q	.	.	.
17.500	8330.0830	17545.40	.	.V	.Q	.	.	.
17.583	8452.3555	17754.02	.	.V	.Q	.	.	.
17.667	8575.3301	17855.95	.	.V	.Q	.	.	.
17.750	8695.7334	17482.59	.	.V	.Q	.	.	.
17.833	8817.0830	17620.01	.	.V	.Q	.	.	.
17.917	8939.8740	17829.29	.	.V	.Q	.	.	.
18.000	9064.3154	18068.91	.	.V	.Q	.	.	.
18.083	9185.4795	17593.02	.	.V	.Q	.	.	.
18.167	9306.6670	17596.45	.	.V	.Q	.	.	.
18.250	9430.5898	17993.54	.	.V	.Q	.	.	.
18.333	9553.7471	17882.48	.	.V	.Q	.	.	.
18.417	9677.8193	18015.29	.	.V	.Q	.	.	.

18.500	9797.4775	17374.33	.	.	.	V	.	Q	.
18.583	9915.1797	17090.29	.	.	.	V	.	Q	.
18.667	10033.3623	17160.06	.	.	.	V	.	Q	.
18.750	10154.4707	17584.97	.	.	.	V	.	Q	.
18.833	10275.0771	17512.08	.	.	.	V	.	Q	.
18.917	10391.0713	16842.34	.	.	.	V	.	Q	.
19.000	10505.6123	16631.42	.	.	.	V	.	Q	.
19.083	10619.0322	16468.63	.	.	.	V	.	Q	.
19.167	10730.4629	16179.75	.	.	.	V	.	Q	.
19.250	10840.3125	15950.21	.	.	.	V	.	Q	.
19.333	10946.3896	15402.37	.	.	.	V	.	Q	.
19.417	11050.1211	15061.80	.	.	.	V	.	Q	.
19.500	11152.5830	14877.45	.	.	.	V	.	Q	.
19.583	11253.8838	14708.90	.	.	.	V	.	Q	.
19.667	11352.8281	14366.70	.	.	.	VQ	.	.	.
19.750	11449.2168	13995.66	.	.	.	Q	.	.	.
19.833	11542.8857	13600.71	.	.	.	QV	.	.	.
19.917	11633.6406	13177.66	.	.	.	Q.V	.	.	.
20.000	11721.7344	12791.26	.	.	.	Q.V	.	.	.
20.083	11807.0586	12389.09	.	.	.	Q.V	.	.	.
20.167	11890.3721	12097.14	.	.	.	Q.V	.	.	.
20.250	11971.0742	11718.01	.	.	.	Q.V	.	.	.
20.333	12049.5146	11389.61	.	.	.	Q.V	.	.	.
20.417	12125.6006	11047.71	.	.	.	Q.V	.	.	.
20.500	12199.4580	10724.14	.	.	.	Q.V	.	.	.
20.583	12271.3213	10434.51	.	.	.	Q.V	.	.	.
20.667	12340.9912	10116.10	.	.	.	Q.V	.	.	.
20.750	12407.7520	9693.71	.	.	.	Q.V	.	.	.
20.833	12472.2842	9370.14	.	.	.	Q.V	.	.	.
20.917	12535.0234	9109.77	.	.	.	Q.V	.	.	.
21.000	12596.0010	8853.98	.	.	.	Q.V	.	.	.
21.083	12654.8877	8550.37	.	.	.	Q.V	.	.	.
21.167	12711.9072	8279.30	.	.	.	Q.V	.	.	.
21.250	12767.4268	8061.41	.	.	.	Q.V	.	.	.
21.333	12821.6445	7872.44	.	.	.	Q.V	.	.	.
21.417	12874.6191	7691.90	.	.	.	Q.V	.	.	.
21.500	12926.2988	7503.89	.	.	.	Q.V	.	.	.
21.583	12976.6055	7304.46	.	.	.	Q.V	.	.	.
21.667	13025.2930	7069.46	.	.	.	Q.V	.	.	.
21.750	13072.1729	6806.92	.	.	.	Q.V	.	.	.
21.833	13117.9561	6647.68	.	.	.	Q.V	.	.	.
21.917	13162.7559	6504.91	.	.	.	Q.V	.	.	.
22.000	13206.6016	6366.33	.	.	.	Q.V	.	.	.
22.083	13249.5361	6234.15	.	.	.	Q.V	.	.	.
22.167	13291.5996	6107.58	.	.	.	Q.V	.	.	.
22.250	13332.8066	5983.21	.	.	.	Q.V	.	.	.
22.333	13373.1611	5859.52	.	.	.	Q.V	.	.	.
22.417	13412.6807	5738.27	.	.	.	Q.V	.	.	.
22.500	13451.3926	5620.96	.	.	.	Q.V	.	.	.
22.583	13489.3008	5504.26	.	.	.	Q.V	.	.	.
22.667	13526.4668	5396.54	.	.	.	Q.V	.	.	.
22.750	13563.0088	5305.91	.	.	.	Q.V	.	.	.
22.833	13598.9629	5220.50	.	.	.	Q.V	.	.	.
22.917	13634.3350	5136.08	.	.	.	Q.V	.	.	.
23.000	13669.1396	5053.60	.	.	.	Q.V	.	.	.
23.083	13703.4238	4977.99	.	.	.	Q.V	.	.	.
23.167	13737.2275	4908.25	.	.	.	Q.V	.	.	.
23.250	13770.5615	4840.04	.	.	.	Q.V	.	.	.

23.333	13803.4355	4773.35	.	Q	.	.	V	.
23.417	13835.8604	4708.09	.	Q	.	.	V	.
23.500	13867.8447	4644.18	.	Q	.	.	V	.
23.583	13899.4297	4586.15	.	Q	.	.	V	.
23.667	13930.6494	4533.17	.	Q	.	.	V	.
23.750	13961.5645	4488.81	.	Q.	.	.	V	.
23.833	13992.1797	4445.34	.	Q.	.	.	V	.
23.917	14022.5107	4404.07	.	Q.	.	.	V	.
24.000	14052.5615	4363.34	.	Q.	.	.	V	.
24.083	14082.2754	4314.50	.	Q.	.	.	V	.
24.167	14111.5918	4256.69	.	Q.	.	.	V	.
24.250	14140.2783	4165.22	.	Q.	.	.	V	.
24.333	14168.5645	4107.11	.	Q.	.	.	V	.
24.417	14196.5029	4056.73	.	Q	.	.	V	.
24.500	14224.0840	4004.79	.	Q	.	.	V	.
24.583	14251.2627	3946.39	.	Q.	.	.	V	.
24.667	14278.0371	3887.69	.	Q.	.	.	V	.
24.750	14304.3838	3825.47	.	Q	.	.	V	.
24.833	14330.2236	3751.95	.	Q.	.	.	V	.
24.917	14355.5234	3673.48	.	Q.	.	.	V	.
25.000	14380.2275	3587.02	.	Q	.	.	V	.
25.083	14404.2773	3492.10	.	Q.	.	.	V	.
25.167	14427.6895	3399.49	.	Q	.	.	V	.
25.250	14450.4912	3310.87	.	Q	.	.	V	.
25.333	14472.5635	3204.86	.	Q	.	.	V	.
25.417	14493.9932	3111.58	.	Q	.	.	V	.
25.500	14514.8096	3022.50	.	Q	.	.	V	.
25.583	14534.9307	2921.61	.	Q	.	.	V	.
25.667	14554.3145	2814.46	.	Q	.	.	V	.
25.750	14573.0742	2723.92	.	Q	.	.	V	.
25.833	14591.1699	2627.47	.	Q	.	.	V	.
25.917	14608.5371	2521.67	.	Q	.	.	V	.
26.000	14625.0830	2402.51	.	Q	.	.	V	.
26.083	14640.9277	2300.71	.	Q	.	.	V	.
26.167	14656.0459	2195.17	.	Q	.	.	V	.
26.250	14670.3184	2072.41	.	Q	.	.	V	.
26.333	14683.7764	1954.10	.	Q	.	.	V	.
26.417	14696.3252	1822.10	.	Q	.	.	V	.
26.500	14708.1436	1715.97	.	Q	.	.	V	.
26.583	14719.3232	1623.25	.	Q	.	.	V	.
26.667	14729.8496	1528.42	.	Q	.	.	V	.
26.750	14739.5898	1414.29	.	Q	.	.	V	.
26.833	14748.5312	1298.32	.	Q	.	.	V	.
26.917	14756.8516	1208.11	.	Q	.	.	V	.
27.000	14764.5645	1119.90	.	Q	.	.	V	.
27.083	14771.6826	1033.59	.	Q	.	.	V	.
27.167	14778.2656	955.80	.	Q	.	.	V	.
27.250	14784.3135	878.17	.	Q	.	.	V	.
27.333	14789.9316	815.75	.	Q	.	.	V	.
27.417	14795.1621	759.46	.	Q	.	.	V	.
27.500	14800.0029	702.92	.	Q	.	.	V	.
27.583	14804.4463	645.20	.	Q	.	.	V	.
27.667	14808.5225	591.93	.	Q	.	.	V	.
27.750	14812.2588	542.55	.	Q	.	.	V	.
27.833	14815.6807	496.84	.	Q	.	.	V	.
27.917	14818.8320	457.63	.	Q	.	.	V	.
28.000	14821.7354	421.60	.	Q	.	.	V	.
28.083	14824.4326	391.58	.	Q	.	.	V	.

28.167	14826.9268	362.20	Q	.	.	.	V	.
28.250	14829.2344	335.03	Q	.	.	.	V	.
28.333	14831.3604	308.75	Q	.	.	.	V	.
28.417	14833.3096	283.04	Q	.	.	.	V	.
28.500	14835.0947	259.19	Q	.	.	.	V	.
28.583	14836.7178	235.73	Q	.	.	.	V	.
28.667	14838.1885	213.60	Q	.	.	.	V	.
28.750	14839.5449	197.00	Q	.	.	.	V	.
28.833	14840.7930	181.19	Q	.	.	.	V	.
28.917	14841.9326	165.48	Q	.	.	.	V	.
29.000	14842.9648	149.91	Q	.	.	.	V	.
29.083	14843.9121	137.52	Q	.	.	.	V	.
29.167	14844.7910	127.65	Q	.	.	.	V	.
29.250	14845.6025	117.83	Q	.	.	.	V	.
29.333	14846.3467	108.09	Q	.	.	.	V	.
29.417	14847.0244	98.41	Q	.	.	.	V	.
29.500	14847.6357	88.81	Q	.	.	.	V	.
29.583	14848.1816	79.27	Q	.	.	.	V	.
29.667	14848.6758	71.79	Q	.	.	.	V	.
29.750	14849.1514	69.00	Q	.	.	.	V	.
29.833	14849.6084	66.38	Q	.	.	.	V	.
29.917	14850.0479	63.78	Q	.	.	.	V	.
30.000	14850.4697	61.21	Q	.	.	.	V	.
30.083	14850.8740	58.66	Q	.	.	.	V	.
30.167	14851.2607	56.16	Q	.	.	.	V	.
30.250	14851.6299	53.63	Q	.	.	.	V	.
30.333	14851.9824	51.15	Q	.	.	.	V	.
30.417	14852.3174	48.67	Q	.	.	.	V	.
30.500	14852.6357	46.20	Q	.	.	.	V	.
30.583	14852.9375	43.80	Q	.	.	.	V	.
30.667	14853.2227	41.35	Q	.	.	.	V	.
30.750	14853.4912	38.97	Q	.	.	.	V	.
30.833	14853.7432	36.58	Q	.	.	.	V	.
30.917	14853.9785	34.20	Q	.	.	.	V	.
31.000	14854.1982	31.84	Q	.	.	.	V	.
31.083	14854.4014	29.49	Q	.	.	.	V	.
31.167	14854.5889	27.16	Q	.	.	.	V	.
31.250	14854.7598	24.84	Q	.	.	.	V	.
31.333	14854.9150	22.54	Q	.	.	.	V	.
31.417	14855.0547	20.26	Q	.	.	.	V	.
31.500	14855.1787	17.99	Q	.	.	.	V	.
31.583	14855.2871	15.73	Q	.	.	.	V	.
31.667	14855.3799	13.49	Q	.	.	.	V	.
31.750	14855.4570	11.26	Q	.	.	.	V	.
31.833	14855.5195	9.05	Q	.	.	.	V	.
31.917	14855.5664	6.85	Q	.	.	.	V	.
32.000	14855.5986	4.66	Q	.	.	.	V	.
32.083	14855.6162	2.49	Q	.	.	.	V	.
32.167	14855.6182	0.33	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%	1930.0

10%	1435.0
20%	1160.0
30%	640.0
40%	495.0
50%	405.0
60%	345.0
70%	285.0
80%	220.0
90%	145.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133T *
* 50-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV5033TS.DAT
TIME/DATE OF STUDY: 14:08 01/02/2019

FLOW PROCESS FROM NODE 13010.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 6640.500 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 = 0.497
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 = 0.986

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	331.675
2	1.239	663.351
3	2.137	721.304
4	3.356	978.732
5	5.133	1427.354
6	7.983	2288.840
7	11.614	2915.866
8	15.758	3327.737
9	19.933	3352.697
10	24.730	3852.644
11	29.303	3672.586
12	34.911	4503.951
13	40.486	4477.165
14	47.306	5476.476
15	53.455	4938.293
16	59.046	4490.075
17	65.258	4989.105
18	70.297	4046.522
19	74.847	3654.231
20	78.416	2866.420
21	81.693	2631.381
22	84.712	2424.672
23	87.186	1986.502
24	89.082	1522.567
25	90.700	1299.469
26	92.191	1197.852
27	93.569	1106.050
28	94.636	857.126
29	95.554	737.005
30	96.291	592.468
31	96.858	455.093
32	97.425	455.308
33	97.941	414.293
34	98.134	154.849
35	98.269	108.725
36	98.404	108.835
37	98.540	108.731
38	98.675	108.725
39	98.811	108.945
40	98.947	108.945
41	99.082	108.731
42	99.217	108.731
43	99.353	108.731
44	99.488	108.731
45	99.624	108.731
46	99.759	108.731
47	99.894	108.731
48	100.000	84.866

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 1014.7770
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 1233.7084

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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	0.0244	2.65	Q	.	.	.	.
0.250	0.0559	4.59	Q	.	.	.	.
0.333	0.1056	7.21	Q	.	.	.	.
0.417	0.1816	11.04	Q	.	.	.	.
0.500	0.2998	17.17	Q	.	.	.	.
0.583	0.4720	25.00	Q	.	.	.	.
0.667	0.7058	33.95	Q	.	.	.	.
0.750	1.0019	42.99	Q	.	.	.	.
0.833	1.3696	53.40	Q	.	.	.	.
0.917	1.8060	63.36	Q	.	.	.	.
1.000	2.3264	75.57	Q	.	.	.	.
1.083	2.9308	87.75	VQ	.	.	.	.
1.167	3.6377	102.64	VQ	.	.	.	.
1.250	4.4375	116.13	VQ	.	.	.	.
1.333	5.3224	128.49	VQ	.	.	.	.
1.417	6.3018	142.21	VQ	.	.	.	.
1.500	7.3588	153.47	VQ	.	.	.	.
1.583	8.4864	163.73	VQ	.	.	.	.
1.667	9.6704	171.92	VQ	.	.	.	.
1.750	10.9067	179.51	V Q	.	.	.	.
1.833	12.1918	186.59	V Q	.	.	.	.
1.917	13.5177	192.52	V Q	.	.	.	.
2.000	14.8761	197.24	V Q	.	.	.	.
2.083	16.2630	201.38	V Q	.	.	.	.
2.167	17.6767	205.27	V Q	.	.	.	.
2.250	19.1157	208.94	V Q	.	.	.	.
2.333	20.5754	211.95	V Q	.	.	.	.
2.417	22.0538	214.66	V Q	.	.	.	.
2.500	23.5483	217.00	V Q	.	.	.	.
2.583	25.0565	218.98	V Q	.	.	.	.
2.667	26.5784	220.98	V Q	.	.	.	.
2.750	28.1134	222.88	V Q	.	.	.	.
2.833	29.6568	224.10	V Q	.	.	.	.
2.917	31.2078	225.20	.VQ	.	.	.	.
3.000	32.7664	226.32	.VQ	.	.	.	.
3.083	34.3328	227.44	.VQ	.	.	.	.
3.167	35.9070	228.57	.VQ	.	.	.	.
3.250	37.4890	229.71	.VQ	.	.	.	.
3.333	39.0790	230.86	.VQ	.	.	.	.
3.417	40.6769	232.02	.VQ	.	.	.	.
3.500	42.2829	233.19	.VQ	.	.	.	.
3.583	43.8970	234.37	.VQ	.	.	.	.
3.667	45.5193	235.56	.VQ	.	.	.	.
3.750	47.1498	236.75	.VQ	.	.	.	.
3.833	48.7887	237.96	.VQ	.	.	.	.
3.917	50.4359	239.18	.VQ	.	.	.	.

4.000	52.0912	240.35	.VQ	.	.	.	.
4.083	53.7530	241.29	.VQ	.	.	.	.
4.167	55.4214	242.25	.VQ	.	.	.	.
4.250	57.0965	243.22	.VQ	.	.	.	.
4.333	58.7783	244.20	.VQ	.	.	.	.
4.417	60.4670	245.19	.VQ	.	.	.	.
4.500	62.1625	246.19	. Q	.	.	.	.
4.583	63.8650	247.20	. Q	.	.	.	.
4.667	65.5746	248.23	. Q	.	.	.	.
4.750	67.2912	249.26	. Q	.	.	.	.
4.833	69.0150	250.30	. Q	.	.	.	.
4.917	70.7461	251.36	. Q	.	.	.	.
5.000	72.4846	252.43	. Q	.	.	.	.
5.083	74.2305	253.50	. Q	.	.	.	.
5.167	75.9839	254.60	. Q	.	.	.	.
5.250	77.7449	255.70	. Q	.	.	.	.
5.333	79.5136	256.82	. Q	.	.	.	.
5.417	81.2901	257.94	. Q	.	.	.	.
5.500	83.0744	259.09	. Q	.	.	.	.
5.583	84.8667	260.24	. Q	.	.	.	.
5.667	86.6671	261.41	. Q	.	.	.	.
5.750	88.4756	262.59	.VQ	.	.	.	.
5.833	90.2923	263.79	.VQ	.	.	.	.
5.917	92.1174	265.00	.VQ	.	.	.	.
6.000	93.9509	266.23	. Q	.	.	.	.
6.083	95.7930	267.47	. Q	.	.	.	.
6.167	97.6437	268.73	. Q	.	.	.	.
6.250	99.5032	269.99	. Q	.	.	.	.
6.333	101.3715	271.28	. Q	.	.	.	.
6.417	103.2488	272.58	. Q	.	.	.	.
6.500	105.1352	273.91	. Q	.	.	.	.
6.583	107.0308	275.24	. Q	.	.	.	.
6.667	108.9357	276.60	. Q	.	.	.	.
6.750	110.8500	277.96	. Q	.	.	.	.
6.833	112.7740	279.36	. Q	.	.	.	.
6.917	114.7076	280.76	. Q	.	.	.	.
7.000	116.6510	282.19	. Q	.	.	.	.
7.083	118.6044	283.63	. Q	.	.	.	.
7.167	120.5679	285.10	. Q	.	.	.	.
7.250	122.5416	286.58	. Q	.	.	.	.
7.333	124.5256	288.09	.QV	.	.	.	.
7.417	126.5202	289.61	.QV	.	.	.	.
7.500	128.5254	291.16	.QV	.	.	.	.
7.583	130.5414	292.72	.QV	.	.	.	.
7.667	132.5684	294.32	.QV	.	.	.	.
7.750	134.6064	295.92	.QV	.	.	.	.
7.833	136.6558	297.57	.QV	.	.	.	.
7.917	138.7165	299.22	.QV	.	.	.	.
8.000	140.7889	300.91	.QV	.	.	.	.
8.083	142.8730	302.62	.QV	.	.	.	.
8.167	144.9691	304.36	.QV	.	.	.	.
8.250	147.0774	306.11	.QV	.	.	.	.
8.333	149.1979	307.91	.QV	.	.	.	.
8.417	151.3309	309.72	.QV	.	.	.	.
8.500	153.4767	311.57	.QV	.	.	.	.
8.583	155.6353	313.43	. Q V	.	.	.	.
8.667	157.8071	315.34	. Q V	.	.	.	.
8.750	159.9922	317.27	. Q V	.	.	.	.

8.833	162.1908	319.24	. Q V	.	.	.	.
8.917	164.4032	321.23	. Q V	.	.	.	.
9.000	166.6295	323.27	. Q V	.	.	.	.
9.083	168.8700	325.33	. Q V	.	.	.	.
9.167	171.1251	327.43	. Q V	.	.	.	.
9.250	173.3947	329.56	. Q V	.	.	.	.
9.333	175.6794	331.74	. Q V	.	.	.	.
9.417	177.9793	333.94	. Q V	.	.	.	.
9.500	180.2946	336.19	. Q V	.	.	.	.
9.583	182.6257	338.47	. Q V	.	.	.	.
9.667	184.9729	340.81	. Q V	.	.	.	.
9.750	187.3363	343.17	. Q V	.	.	.	.
9.833	189.7165	345.59	. Q V	.	.	.	.
9.917	192.1135	348.05	. Q V	.	.	.	.
10.000	194.5278	350.56	. Q V	.	.	.	.
10.083	196.9597	353.11	. Q V	.	.	.	.
10.167	199.4095	355.72	. Q V	.	.	.	.
10.250	201.8776	358.36	. Q V	.	.	.	.
10.333	204.3644	361.08	. Q V	.	.	.	.
10.417	206.8701	363.83	. Q V	.	.	.	.
10.500	209.3953	366.66	. Q V	.	.	.	.
10.583	211.9402	369.52	. Q V	.	.	.	.
10.667	214.5054	372.46	. Q V	.	.	.	.
10.750	217.0911	375.45	. Q V	.	.	.	.
10.833	219.6980	378.52	. Q V	.	.	.	.
10.917	222.3264	381.64	. Q V	.	.	.	.
11.000	224.9768	384.84	. Q V	.	.	.	.
11.083	227.6496	388.10	. Q V	.	.	.	.
11.167	230.3456	391.45	. Q V	.	.	.	.
11.250	233.0649	394.85	. Q V	.	.	.	.
11.333	235.8085	398.36	. Q V	.	.	.	.
11.417	238.5766	401.93	. Q V	.	.	.	.
11.500	241.3700	405.60	. Q V	.	.	.	.
11.583	244.1891	409.34	. Q V	.	.	.	.
11.667	247.0349	413.20	. Q V	.	.	.	.
11.750	249.9077	417.13	. Q V	.	.	.	.
11.833	252.8084	421.18	. Q V	.	.	.	.
11.917	255.7375	425.32	. Q V	.	.	.	.
12.000	258.6961	429.58	. Q V	.	.	.	.
12.083	261.6895	434.65	. Q V	.	.	.	.
12.167	264.7238	440.57	. Q V	.	.	.	.
12.250	267.8003	446.71	. Q V	.	.	.	.
12.333	270.9241	453.57	. Q V	.	.	.	.
12.417	274.1025	461.50	. Q V	.	.	.	.
12.500	277.3494	471.46	. Q V	.	.	.	.
12.583	280.6750	482.87	. Q V	.	.	.	.
12.667	284.0868	495.38	. Q V	.	.	.	.
12.750	287.5860	508.09	. Q V	.	.	.	.
12.833	291.1817	522.10	. Q V	.	.	.	.
12.917	294.8723	535.88	. Q V	.	.	.	.
13.000	298.6718	551.69	. Q V	.	.	.	.
13.083	302.5811	567.62	. Q V	.	.	.	.
13.167	306.6167	585.98	. Q V	.	.	.	.
13.250	310.7723	603.38	. Q V	.	.	.	.
13.333	315.0433	620.15	. Q V	.	.	.	.
13.417	319.4386	638.20	. Q V	.	.	.	.
13.500	323.9467	654.58	. Q V	.	.	.	.
13.583	328.5636	670.37	. Q V	.	.	.	.

13.667	333.2802	684.85	.	Q	V	.	.	.
13.750	338.0949	699.10	.	Q	V	.	.	.
13.833	343.0075	713.32	.	Q	.V	.	.	.
13.917	348.0138	726.91	.	Q	.V	.	.	.
14.000	353.1100	739.97	.	Q	.V	.	.	.
14.083	358.3062	754.49	.	Q	.V	.	.	.
14.167	363.6155	770.90	.	Q	.V	.	.	.
14.250	369.0408	787.76	.	Q	.V	.	.	.
14.333	374.5910	805.89	.	Q	.V	.	.	.
14.417	380.2820	826.33	.	Q	.V	.	.	.
14.500	386.1443	851.21	.	Q	.V	.	.	.
14.583	392.1997	879.24	.	Q	V	.	.	.
14.667	398.4663	909.90	.	Q	V	.	.	.
14.750	404.9475	941.07	.	Q	V	.	.	.
14.833	411.6612	974.83	.	.Q	V	.	.	.
14.917	418.6046	1008.18	.	.Q	V	.	.	.
15.000	425.8110	1046.38	.	.Q	V	.	.	.
15.083	433.2857	1085.33	.	.	Q	V	.	.
15.167	441.0708	1130.39	.	.	Q	V	.	.
15.250	449.1571	1174.13	.	.	Q	V	.	.
15.333	457.5425	1217.56	.	.	Q	V	.	.
15.417	466.2277	1261.09	.	.	Q	V	.	.
15.500	475.1719	1298.71	.	.	Q	V	.	.
15.583	484.3777	1336.68	.	.	Q	V	.	.
15.667	493.8248	1371.72	.	.	Q	V	.	.
15.750	503.5042	1405.46	.	.	Q	V	.	.
15.833	513.3893	1435.32	.	.	Q	V	.	.
15.917	523.4924	1466.97	.	.	Q	V	.	.
16.000	533.9095	1512.56	.	.	Q	V	.	.
16.083	545.1540	1632.70	.	.	Q	V	.	.
16.167	557.2210	1752.14	.	.	Q	V	.	.
16.250	569.8291	1830.70	.	.	Q	V	.	.
16.333	583.3289	1960.17	.	.	Q	V	.	.
16.417	598.1475	2151.66	.	.	Q	V	.	.
16.500	614.7587	2411.95	.	.	Q	V	.	.
16.583	632.6974	2604.70	.	.	Q	V	.	.
16.667	651.5509	2737.52	.	.	Q	V	.	.
16.750	670.6807	2777.65	.	.	Q	V	.	.
16.833	690.8097	2922.73	.	.	Q	V	.	.
16.917	711.1295	2950.44	.	.	Q	V	.	.
17.000	732.9955	3174.95	.	.	Q	V	.	.
17.083	755.1947	3223.31	.	.	Q	V	.	.
17.167	778.7059	3413.82	.	.	Q	V	.	.
17.250	801.2614	3275.06	.	.	Q	V	.	.
17.333	822.9370	3147.31	.	.	Q	V	.	.
17.417	844.7596	3168.65	.	.	Q	V	.	.
17.500	864.7033	2895.82	.	.	Q	V	.	.
17.583	883.3387	2705.86	.	.	Q	V	.	.
17.667	900.2255	2451.95	.	.	Q	V	.	.
17.750	916.2342	2324.46	.	.	Q	V	.	.
17.833	931.3240	2191.05	.	.	Q	V	.	.
17.917	945.1785	2011.67	.	.	Q	V	.	.
18.000	957.7616	1827.06	.	.	Q	V	.	.
18.083	969.4999	1704.40	.	.	Q	V	.	.
18.167	980.5908	1610.39	.	.	Q	V	.	.
18.250	991.0399	1517.21	.	.	Q	V	.	.
18.333	1000.6384	1393.70	.	.	Q	V	.	.
18.417	1009.5554	1294.74	.	.	Q	V	.	.

18.500	1017.8161	1199.46	.	.	Q	.	.	V	.
18.583	1025.4817	1113.03	.	.	Q	.	.	V	.
18.667	1032.7479	1055.06	.	.	Q	.	.	V	.
18.750	1039.5466	987.17	.	.	Q	.	.	V	.
18.833	1045.6161	881.29	.	.	Q	.	.	V	.
18.917	1051.3120	827.05	.	.	Q	.	.	V	.
19.000	1056.7535	790.10	.	.	Q	.	.	V	.
19.083	1061.9670	757.01	.	.	Q	.	.	V	.
19.167	1066.9320	720.92	.	.	Q	.	.	V	.
19.250	1071.6675	687.60	.	.	Q	.	.	V	.
19.333	1076.2002	658.15	.	.	Q	.	.	V	.
19.417	1080.5409	630.27	.	.	Q	.	.	V	.
19.500	1084.7145	606.00	.	.	Q	.	.	V	.
19.583	1088.7357	583.88	.	.	Q	.	.	V	.
19.667	1092.6194	563.91	.	.	Q	.	.	V	.
19.750	1096.3699	544.57	.	.	Q	.	.	V	.
19.833	1099.9965	526.58	.	.	Q	.	.	V	.
19.917	1103.4950	507.99	.	.	Q	.	.	V	.
20.000	1106.8317	484.49	.	.	Q	.	.	V	.
20.083	1109.9437	451.87	.	.	Q	.	.	V	.
20.167	1112.9656	438.77	.	.	Q	.	.	V	.
20.250	1115.9127	427.93	.	.	Q	.	.	V	.
20.333	1118.7920	418.07	.	.	Q	.	.	V	.
20.417	1121.6018	407.98	.	.	Q	.	.	V	.
20.500	1124.3483	398.78	.	.	Q	.	.	V	.
20.583	1127.0367	390.37	.	.	Q	.	.	V	.
20.667	1129.6698	382.32	.	.	Q	.	.	V	.
20.750	1132.2501	374.67	.	.	Q	.	.	V	.
20.833	1134.7836	367.86	.	.	Q	.	.	V	.
20.917	1137.2726	361.40	.	.	Q	.	.	V	.
21.000	1139.7196	355.30	.	.	Q	.	.	V	.
21.083	1142.1289	349.83	.	.	Q	.	.	V	.
21.167	1144.5020	344.57	.	.	Q	.	.	V	.
21.250	1146.8402	339.51	.	.	Q	.	.	V	.
21.333	1149.1449	334.64	.	.	Q	.	.	V	.
21.417	1151.4172	329.94	.	.	Q	.	.	V	.
21.500	1153.6582	325.39	.	.	Q	.	.	V	.
21.583	1155.8690	321.01	.	.	Q	.	.	V	.
21.667	1158.0505	316.76	.	.	Q	.	.	V	.
21.750	1160.2037	312.65	.	.	Q	.	.	V	.
21.833	1162.3295	308.66	.	.	Q	.	.	V	.
21.917	1164.4286	304.80	.	.	Q	.	.	V	.
22.000	1166.5023	301.10	.	.	Q	.	.	V	.
22.083	1168.5525	297.69	.	.	Q	.	.	V	.
22.167	1170.5800	294.38	.	.	Q	.	.	V	.
22.250	1172.5852	291.17	.	.	Q	.	.	V	.
22.333	1174.5691	288.05	.	.	Q	.	.	V	.
22.417	1176.5321	285.02	.	.	Q	.	.	V	.
22.500	1178.4747	282.07	.	.	Q	.	.	V	.
22.583	1180.3976	279.21	.	.	Q	.	.	V	.
22.667	1182.3013	276.41	.	.	Q	.	.	V	.
22.750	1184.1863	273.70	.	.	Q	.	.	V	.
22.833	1186.0530	271.05	.	.	Q	.	.	V	.
22.917	1187.9020	268.47	.	.	Q	.	.	V	.
23.000	1189.7336	265.95	.	.	Q	.	.	V	.
23.083	1191.5483	263.49	.	.	Q	.	.	V	.
23.167	1193.3466	261.10	.	.	Q	.	.	V	.
23.250	1195.1287	258.76	.	.	Q	.	.	V	.

23.333	1196.8950	256.47	. Q	.	.	.	V .
23.417	1198.6460	254.24	. Q	.	.	.	V .
23.500	1200.3820	252.06	. Q	.	.	.	V .
23.583	1202.1033	249.93	. Q	.	.	.	V .
23.667	1203.8102	247.84	. Q	.	.	.	V.
23.750	1205.5031	245.80	. Q	.	.	.	V.
23.833	1207.1821	243.80	. Q	.	.	.	V.
23.917	1208.8478	241.85	. Q	.	.	.	V.
24.000	1210.5002	239.94	. Q	.	.	.	V.
24.083	1212.1337	237.18	. Q	.	.	.	V.
24.167	1213.7423	233.58	. Q	.	.	.	V.
24.250	1215.3256	229.88	. Q	.	.	.	V.
24.333	1216.8789	225.54	. Q	.	.	.	V.
24.417	1218.3945	220.06	. Q	.	.	.	V.
24.500	1219.8569	212.35	. Q	.	.	.	V.
24.583	1221.2552	203.03	. Q	.	.	.	V.
24.667	1222.5824	192.70	. Q	.	.	.	V.
24.750	1223.8385	182.39	. Q	.	.	.	V.
24.833	1225.0150	170.84	.Q	.	.	.	V.
24.917	1226.1160	159.85	.Q	.	.	.	V.
25.000	1227.1266	146.74	.Q	.	.	.	V.
25.083	1228.0480	133.79	.Q	.	.	.	V.
25.167	1228.8627	118.29	.Q	.	.	.	V.
25.250	1229.5812	104.32	.Q	.	.	.	V.
25.333	1230.2124	91.65	.Q	.	.	.	V.
25.417	1230.7478	77.74	Q	.	.	.	V.
25.500	1231.2053	66.44	Q	.	.	.	V.
25.583	1231.5928	56.25	Q	.	.	.	V.
25.667	1231.9250	48.24	Q	.	.	.	V.
25.750	1232.2068	40.90	Q	.	.	.	V.
25.833	1232.4421	34.17	Q	.	.	.	V.
25.917	1232.6394	28.65	Q	.	.	.	V.
26.000	1232.8075	24.40	Q	.	.	.	V.
26.083	1232.9506	20.77	Q	.	.	.	V.
26.167	1233.0707	17.44	Q	.	.	.	V.
26.250	1233.1697	14.38	Q	.	.	.	V.
26.333	1233.2523	12.00	Q	.	.	.	V.
26.417	1233.3209	9.96	Q	.	.	.	V.
26.500	1233.3782	8.31	Q	.	.	.	V.
26.583	1233.4266	7.04	Q	.	.	.	V.
26.667	1233.4664	5.78	Q	.	.	.	V.
26.750	1233.4984	4.64	Q	.	.	.	V.
26.833	1233.5273	4.20	Q	.	.	.	V.
26.917	1233.5541	3.88	Q	.	.	.	V.
27.000	1233.5786	3.56	Q	.	.	.	V.
27.083	1233.6010	3.25	Q	.	.	.	V.
27.167	1233.6212	2.94	Q	.	.	.	V.
27.250	1233.6393	2.63	Q	.	.	.	V.
27.333	1233.6553	2.32	Q	.	.	.	V.
27.417	1233.6692	2.01	Q	.	.	.	V.
27.500	1233.6809	1.71	Q	.	.	.	V.
27.583	1233.6907	1.41	Q	.	.	.	V.
27.667	1233.6984	1.11	Q	.	.	.	V.
27.750	1233.7040	0.81	Q	.	.	.	V.
27.833	1233.7075	0.52	Q	.	.	.	V.
27.917	1233.7091	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
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133C *
* 50-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV5033CS.DAT
TIME/DATE OF STUDY: 14:08 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 60992.500 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.384 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.287
LOW LOSS FRACTION = 0.416
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.86
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.18
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.18
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.22
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.64

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.308
30-MINUTE FACTOR = 0.363
1-HOUR FACTOR = 0.408
3-HOUR FACTOR = 0.754
6-HOUR FACTOR = 0.891
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.496

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.200	1473.371
2	0.599	2946.740
3	0.999	2946.742
4	1.398	2946.735
5	1.798	2946.750
6	2.300	3705.642
7	2.908	4484.144
8	3.516	4484.164
9	4.250	5416.733
10	5.346	8085.534
11	6.613	9343.186
12	8.144	11295.908
13	9.957	13366.470
14	11.720	13006.412
15	13.488	13039.580
16	15.837	17330.506
17	17.827	14680.450
18	19.718	13943.924
19	21.998	16818.037
20	24.499	18449.102
21	26.519	14901.793
22	28.746	16426.100
23	31.286	18737.871
24	34.264	21961.785
25	36.737	18242.777
26	39.350	19275.199
27	42.613	24072.635
28	45.787	23409.584
29	49.410	26720.699
30	52.268	21082.746
31	54.739	18228.623
32	57.297	18868.967
33	60.471	23408.570
34	63.726	24010.814
35	66.215	18358.680
36	68.662	18055.264
37	71.071	17768.816
38	73.238	15980.065
39	75.416	16067.632
40	77.144	12745.739
41	78.697	11458.808
42	80.271	11608.165
43	81.893	11966.760
44	83.391	11049.733
45	84.781	10253.251
46	86.069	9500.102
47	87.167	8096.677
48	88.176	7441.336

49	89.008	6137.971
50	89.827	6038.981
51	90.584	5587.755
52	91.320	5427.986
53	92.044	5341.489
54	92.716	4959.146
55	93.382	4910.805
56	94.012	4642.872
57	94.476	3424.935
58	94.920	3274.508
59	95.364	3274.564
60	95.807	3268.317
61	96.155	2569.756
62	96.429	2021.623
63	96.704	2023.649
64	96.978	2021.566
65	97.252	2023.705
66	97.526	2021.566
67	97.800	2021.623
68	98.013	1568.203
69	98.083	519.320
70	98.149	484.260
71	98.215	484.260
72	98.280	484.316
73	98.346	482.178
74	98.410	478.126
75	98.476	486.342
76	98.542	482.178
77	98.607	484.316
78	98.673	486.342
79	98.738	475.987
80	98.804	490.450
81	98.869	478.126
82	98.935	486.342
83	99.001	486.342
84	99.067	486.342
85	99.133	486.342
86	99.199	486.342
87	99.265	486.342
88	99.331	486.342
89	99.397	486.342
90	99.463	486.342
91	99.528	486.342
92	99.594	486.342
93	99.660	486.342
94	99.726	486.342
95	99.792	486.342
96	99.858	486.342
97	99.924	486.342
98	99.990	486.342
99	100.000	73.722

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 10992.9658
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 15828.1367

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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.	4800.0	9600.0	14400.0	19200.0
0.083	0.0477	6.93	Q	.	.	.	.
0.167	0.1910	20.81	Q	.	.	.	.
0.250	0.4302	34.72	Q	.	.	.	.
0.333	0.7654	48.68	Q	.	.	.	.
0.417	1.1971	62.68	Q	.	.	.	.
0.500	1.7501	80.29	Q	.	.	.	.
0.583	2.4499	101.61	Q	.	.	.	.
0.667	3.2970	123.00	Q	.	.	.	.
0.750	4.3220	148.84	Q	.	.	.	.
0.833	5.6120	187.30	Q	.	.	.	.
0.917	7.2083	231.79	Q	.	.	.	.
1.000	9.1753	285.60	Q	.	.	.	.
1.083	11.5809	349.30	Q	.	.	.	.
1.167	14.4150	411.50	Q	.	.	.	.
1.250	17.6798	474.05	Q	.	.	.	.
1.333	21.5157	556.97	VQ	.	.	.	.
1.417	25.8384	627.66	VQ	.	.	.	.
1.500	30.6258	695.13	VQ	.	.	.	.
1.583	35.9722	776.30	VQ	.	.	.	.
1.667	41.9323	865.41	VQ	.	.	.	.
1.750	48.3929	938.08	VQ	.	.	.	.
1.833	55.4052	1018.19	V Q	.	.	.	.
1.917	63.0456	1109.38	V Q	.	.	.	.
2.000	71.4207	1216.06	V Q	.	.	.	.
2.083	80.4119	1305.52	V Q	.	.	.	.
2.167	90.0551	1400.20	V Q	.	.	.	.
2.250	100.5074	1517.67	V Q	.	.	.	.
2.333	111.7500	1632.44	V Q	.	.	.	.
2.417	123.8926	1763.10	V Q	.	.	.	.
2.500	136.7554	1867.68	V Q	.	.	.	.
2.583	150.2484	1959.18	V Q	.	.	.	.
2.667	164.3944	2054.00	V Q	.	.	.	.
2.750	179.3425	2170.47	V Q	.	.	.	.
2.833	195.1150	2290.16	V Q	.	.	.	.
2.917	211.5312	2383.64	V Q	.	.	.	.
3.000	228.5838	2476.04	V Q	.	.	.	.
3.083	246.2655	2567.38	V Q	.	.	.	.
3.167	264.5207	2650.65	V Q	.	.	.	.
3.250	283.3541	2734.61	V Q	.	.	.	.
3.333	302.6603	2803.25	V Q	.	.	.	.
3.417	322.3992	2866.09	V Q	.	.	.	.
3.500	342.5775	2929.89	V Q	.	.	.	.
3.583	363.2083	2995.60	V Q	.	.	.	.
3.667	384.2639	3057.26	V Q	.	.	.	.
3.750	405.7198	3115.40	.V Q	.	.	.	.
3.833	427.5535	3170.25	.V Q	.	.	.	.
3.917	449.7209	3218.71	.V Q	.	.	.	.

4.000	472.2024	3264.31	.V	Q	.	.	.	.
4.083	494.9570	3303.97	.V	Q	.	.	.	.
4.167	517.9829	3343.37	.V	Q	.	.	.	.
4.250	541.2667	3380.80	.V	Q	.	.	.	.
4.333	564.8045	3417.70	.V	Q	.	.	.	.
4.417	588.5947	3454.34	.V	Q	.	.	.	.
4.500	612.6264	3489.40	.V	Q	.	.	.	.
4.583	636.8990	3524.38	.V	Q	.	.	.	.
4.667	661.4053	3558.31	.V	Q	.	.	.	.
4.750	686.1069	3586.67	.V	Q	.	.	.	.
4.833	711.0003	3614.52	.V	Q	.	.	.	.
4.917	736.0864	3642.50	.V	Q	.	.	.	.
5.000	761.3664	3670.65	.V	Q	.	.	.	.
5.083	786.8186	3695.66	.V	Q	.	.	.	.
5.167	812.4266	3718.29	.V	Q	.	.	.	.
5.250	838.1915	3741.05	.V	Q	.	.	.	.
5.333	864.1144	3764.00	.V	Q	.	.	.	.
5.417	890.1963	3787.09	.V	Q	.	.	.	.
5.500	916.4385	3810.37	.V	Q	.	.	.	.
5.583	942.8419	3833.78	.V	Q	.	.	.	.
5.667	969.3934	3855.27	.V	Q	.	.	.	.
5.750	996.0598	3871.96	.V	Q	.	.	.	.
5.833	1022.8412	3888.68	.V	Q	.	.	.	.
5.917	1049.7386	3905.51	.V	Q	.	.	.	.
6.000	1076.7534	3922.55	.V	Q	.	.	.	.
6.083	1103.8864	3939.70	.V	Q	.	.	.	.
6.167	1131.1387	3957.04	.V	Q	.	.	.	.
6.250	1158.5116	3974.54	.V	Q	.	.	.	.
6.333	1186.0063	3992.24	.V	Q	.	.	.	.
6.417	1213.6240	4010.08	.V	Q	.	.	.	.
6.500	1241.3662	4028.16	.V	Q	.	.	.	.
6.583	1269.2334	4046.32	.V	Q	.	.	.	.
6.667	1297.2278	4064.78	.V	Q	.	.	.	.
6.750	1325.3499	4083.33	.V	Q	.	.	.	.
6.833	1353.6016	4102.15	.V	Q	.	.	.	.
6.917	1381.9840	4121.12	.V	Q	.	.	.	.
7.000	1410.4988	4140.34	.V	Q	.	.	.	.
7.083	1439.1470	4159.72	.V	Q	.	.	.	.
7.167	1467.9303	4179.35	.V	Q	.	.	.	.
7.250	1496.8500	4199.13	.V	Q	.	.	.	.
7.333	1525.9077	4219.19	.V	Q	.	.	.	.
7.417	1555.1047	4239.41	.V	Q	.	.	.	.
7.500	1584.4430	4259.91	.V	Q	.	.	.	.
7.583	1613.9236	4280.59	.V	Q	.	.	.	.
7.667	1643.5486	4301.55	.V	Q	.	.	.	.
7.750	1673.3192	4322.69	.V	Q	.	.	.	.
7.833	1703.2374	4344.13	.V	Q	.	.	.	.
7.917	1733.3047	4365.77	.V	Q	.	.	.	.
8.000	1763.5231	4387.70	.V	Q	.	.	.	.
8.083	1793.8939	4409.84	.V	Q	.	.	.	.
8.167	1824.4194	4432.30	.V	Q	.	.	.	.
8.250	1855.0876	4453.03	.V	Q	.	.	.	.
8.333	1885.8986	4473.74	.V	Q	.	.	.	.
8.417	1916.8535	4494.67	.V	Q	.	.	.	.
8.500	1947.9550	4515.93	.V	Q	.	.	.	.
8.583	1979.2043	4537.42	.V	Q	.	.	.	.
8.667	2010.6042	4559.26	.V	Q	.	.	.	.
8.750	2042.1561	4581.34	.V	Q	.	.	.	.

8.833	2073.8625	4603.79	.	V	Q.	.	.	.
8.917	2105.7253	4626.48	.	V	Q.	.	.	.
9.000	2137.7471	4649.56	.	V	Q.	.	.	.
9.083	2169.9297	4672.90	.	V	Q.	.	.	.
9.167	2202.2756	4696.64	.	V	Q.	.	.	.
9.250	2234.7871	4720.67	.	V	Q.	.	.	.
9.333	2267.4668	4745.11	.	V	Q.	.	.	.
9.417	2300.3169	4769.84	.	V	Q.	.	.	.
9.500	2333.3403	4795.00	.	V	Q.	.	.	.
9.583	2366.5393	4820.48	.	V	Q	.	.	.
9.667	2399.9167	4846.42	.	V	Q	.	.	.
9.750	2433.4751	4872.68	.	V	Q	.	.	.
9.833	2467.2178	4899.43	.	V	Q	.	.	.
9.917	2501.1470	4926.52	.	V	Q	.	.	.
10.000	2535.2661	4954.11	.	V	Q	.	.	.
10.083	2569.5779	4982.07	.	V	Q	.	.	.
10.167	2604.0859	5010.56	.	V	Q	.	.	.
10.250	2638.7927	5039.44	.	V	Q	.	.	.
10.333	2673.7024	5068.88	.	V	Q	.	.	.
10.417	2708.8176	5098.72	.	V	Q	.	.	.
10.500	2744.1426	5129.17	.	V	Q	.	.	.
10.583	2779.6799	5160.03	.	V	Q	.	.	.
10.667	2815.4343	5191.54	.	V	Q	.	.	.
10.750	2851.4087	5223.49	.	V	Q	.	.	.
10.833	2887.6079	5256.11	.	V	Q	.	.	.
10.917	2924.0349	5289.22	.	V	.Q	.	.	.
11.000	2960.6948	5323.03	.	V	.Q	.	.	.
11.083	2997.5913	5357.36	.	V	.Q	.	.	.
11.167	3034.7292	5392.44	.	V	.Q	.	.	.
11.250	3072.1125	5428.06	.	V	.Q	.	.	.
11.333	3109.7468	5464.49	.	V	.Q	.	.	.
11.417	3147.6360	5501.50	.	V	.Q	.	.	.
11.500	3185.7859	5539.36	.	V	.Q	.	.	.
11.583	3224.2009	5577.85	.	V	.Q	.	.	.
11.667	3262.8872	5617.24	.	V	.Q	.	.	.
11.750	3301.8494	5657.31	.	V	.Q	.	.	.
11.833	3341.0942	5698.35	.	V	.Q	.	.	.
11.917	3380.6267	5740.12	.	V	.Q	.	.	.
12.000	3420.4539	5782.91	.	V	.Q	.	.	.
12.083	3460.6667	5838.92	.	V	.Q	.	.	.
12.167	3501.3584	5908.41	.	V	.Q	.	.	.
12.250	3542.5334	5978.62	.	V	.Q	.	.	.
12.333	3584.1992	6049.88	.	V	.Q	.	.	.
12.417	3626.3611	6121.92	.	V	.Q	.	.	.
12.500	3669.0710	6201.49	.	V	.Q	.	.	.
12.583	3712.3799	6288.43	.	V	.Q	.	.	.
12.667	3756.2954	6376.53	.	V	.Q	.	.	.
12.750	3800.8774	6473.32	.	V	.Q	.	.	.
12.833	3846.2896	6593.84	.	V	.Q	.	.	.
12.917	3892.6101	6725.73	.	V	.Q	.	.	.
13.000	3939.9600	6875.20	.	V	.Q	.	.	.
13.083	3988.4644	7042.84	.	V	.Q	.	.	.
13.167	4038.1094	7208.47	.	V	.Q	.	.	.
13.250	4088.9016	7375.05	.	V	.Q	.	.	.
13.333	4141.0981	7578.93	.	V	.Q	.	.	.
13.417	4194.5488	7761.07	.	V	.Q	.	.	.
13.500	4249.2188	7938.04	.	V	.Q	.	.	.
13.583	4305.2798	8140.09	.	V	.Q	.	.	.

13.667	4362.8350	8356.99	.	.V	Q	.	.	.
13.750	4421.6826	8544.69	.	.V	Q	.	.	.
13.833	4481.9199	8746.44	.	.V	Q	.	.	.
13.917	4543.6875	8968.65	.	.V	Q	.	.	.
14.000	4607.1807	9219.21	.	.V	Q.	.	.	.
14.083	4672.2734	9451.46	.	.V	Q.	.	.	.
14.167	4739.1157	9705.51	.	.V	Q	.	.	.
14.250	4807.9873	10000.15	.	.V	Q	.	.	.
14.333	4878.8501	10289.30	.	.V	.Q	.	.	.
14.417	4951.8960	10606.29	.	.V	.Q	.	.	.
14.500	5026.8418	10882.12	.	.V	.Q	.	.	.
14.583	5103.5640	11140.06	.	.V	.Q	.	.	.
14.667	5182.1001	11403.46	.	.V	.Q	.	.	.
14.750	5262.7642	11712.41	.	.V	.Q	.	.	.
14.833	5345.7412	12048.27	.	.V	.Q	.	.	.
14.917	5430.7627	12345.13	.	.V	.Q	.	.	.
15.000	5517.9111	12653.97	.	.V	.Q	.	.	.
15.083	5607.2705	12974.99	.	.V	.Q	.	.	.
15.167	5698.6948	13274.83	.	.V	.Q	.	.	.
15.250	5792.1665	13572.10	.	.V	.Q	.	.	.
15.333	5887.7158	13873.77	.	.V	.Q	.	.	.
15.417	5984.9722	14121.63	.	.V	.Q.	.	.	.
15.500	6083.7671	14345.03	.	.V	.Q.	.	.	.
15.583	6184.2852	14595.19	.	.V	.Q	.	.	.
15.667	6286.5581	14850.00	.	.V	.Q	.	.	.
15.750	6390.2808	15060.56	.	.V	.Q	.	.	.
15.833	6495.3936	15262.40	.	.V	.Q	.	.	.
15.917	6601.9458	15471.42	.	.V	.Q	.	.	.
16.000	6710.1938	15717.60	.	.V	.Q	.	.	.
16.083	6820.6724	16041.51	.	.V	.Q	.	.	.
16.167	6933.0649	16319.42	.	.V	.Q	.	.	.
16.250	7046.5547	16478.70	.	.V	.Q	.	.	.
16.333	7160.9478	16609.90	.	.V	.Q	.	.	.
16.417	7276.4048	16764.38	.	.V	.Q	.	.	.
16.500	7393.1309	16948.63	.	.V	.Q	.	.	.
16.583	7510.9653	17109.57	.	.V	.Q	.	.	.
16.667	7629.2222	17170.91	.	.V	.Q	.	.	.
16.750	7748.9893	17390.19	.	.V	.Q	.	.	.
16.833	7871.4937	17787.65	.	.V	.Q	.	.	.
16.917	7995.3872	17989.37	.	.V	.Q	.	.	.
17.000	8120.7905	18208.56	.	.V	.Q	.	.	.
17.083	8247.8799	18453.41	.	.V	.Q	.	.	.
17.167	8375.1025	18472.70	.	.V	.Q	.	.	.
17.250	8502.6113	18514.24	.	.V	.Q	.	.	.
17.333	8632.3418	18836.89	.	.V	.Q	.	.	.
17.417	8760.5859	18621.04	.	.V	.Q	.	.	.
17.500	8888.7080	18603.30	.	.V	.Q	.	.	.
17.583	9018.2715	18812.57	.	.V	.Q	.	.	.
17.667	9148.5273	18913.22	.	.V	.Q	.	.	.
17.750	9276.1787	18534.98	.	.V	.Q	.	.	.
17.833	9404.7900	18674.40	.	.V	.Q	.	.	.
17.917	9534.8535	18885.15	.	.V	.Q	.	.	.
18.000	9666.5771	19126.24	.	.V	.Q	.	.	.
18.083	9794.9727	18643.07	.	.V	.Q	.	.	.
18.167	9923.3867	18645.78	.	.V	.Q	.	.	.
18.250	10054.5635	19046.91	.	.V	.Q	.	.	.
18.333	10184.9648	18934.23	.	.V	.Q	.	.	.
18.417	10316.2695	19065.43	.	.V	.Q	.	.	.

18.500	10443.0928	18414.78	.	.	.	V	.	Q
18.583	10567.9424	18128.17	.	.	.	V	.	Q
18.667	10693.2842	18199.65	.	.	.	V	.	Q
18.750	10821.5781	18628.25	.	.	.	V	.	Q
18.833	10949.3359	18550.38	.	.	.	V	.	Q
18.917	11072.4014	17869.09	.	.	.	V	.	Q
19.000	11193.9619	17650.62	.	.	.	V	.	Q
19.083	11314.3418	17479.09	.	.	.	V	.	Q
19.167	11432.6650	17180.47	.	.	.	V	.	Q
19.250	11549.3359	16940.56	.	.	.	V	.	Q
19.333	11662.1182	16375.93	.	.	.	V	.	Q
19.417	11772.4717	16023.36	.	.	.	V	.	Q
19.500	11881.4854	15828.73	.	.	.	V	.	Q
19.583	11989.2520	15647.65	.	.	.	V	.	Q
19.667	12094.5498	15289.27	.	.	.	VQ	.	.
19.750	12197.1943	14904.00	.	.	.	VQ	.	.
19.833	12297.0068	14492.80	.	.	.	QV	.	.
19.917	12393.7793	14051.37	.	.	.	Q.V	.	.
20.000	12487.7471	13644.15	.	.	.	Q.V	.	.
20.083	12578.8203	13223.81	.	.	.	Q	.	V
20.167	12667.7588	12913.88	.	.	.	Q	.	V
20.250	12753.9248	12511.32	.	.	.	Q	.	V
20.333	12837.6738	12160.29	.	.	.	Q	.	V
20.417	12918.8926	11792.94	.	.	.	Q	.	V
20.500	12997.7373	11448.22	.	.	.	Q	.	V
20.583	13074.4551	11139.49	.	.	.	Q	.	V
20.667	13148.8408	10800.78	.	.	.	Q	.	V
20.750	13220.1475	10353.66	.	.	.	Q	.	V
20.833	13289.0586	10005.90	.	.	.	Q	.	V
20.917	13356.0420	9726.02	.	.	.	Q	.	V
21.000	13421.1299	9450.78	.	.	.	Q	.	V
21.083	13483.9912	9127.43	.	.	.	Q.	.	V
21.167	13544.8613	8838.37	.	.	.	Q	.	V
21.250	13604.1094	8602.84	.	.	.	Q	.	V
21.333	13661.9541	8399.09	.	.	.	Q	.	V
21.417	13718.4619	8204.99	.	.	.	Q	.	V
21.500	13773.5791	8003.00	.	.	.	Q	.	V
21.583	13827.2217	7788.89	.	.	.	Q	.	V
21.667	13879.1455	7539.41	.	.	.	Q	.	V
21.750	13929.1660	7262.95	.	.	.	Q	.	V
21.833	13978.0059	7091.52	.	.	.	Q	.	V
21.917	14025.7861	6937.77	.	.	.	Q	.	V
22.000	14072.5410	6788.78	.	.	.	Q	.	V
22.083	14118.3203	6647.21	.	.	.	Q	.	V
22.167	14163.1650	6511.40	.	.	.	Q	.	V
22.250	14207.0918	6378.16	.	.	.	Q	.	V
22.333	14250.1064	6245.77	.	.	.	Q	.	V
22.417	14292.2275	6115.93	.	.	.	Q	.	V
22.500	14333.4834	5990.40	.	.	.	Q	.	V
22.583	14373.8799	5865.56	.	.	.	Q	.	V
22.667	14413.4805	5750.04	.	.	.	Q	.	V
22.750	14452.4121	5652.83	.	.	.	Q	.	V
22.833	14490.7119	5561.09	.	.	.	Q	.	V
22.917	14528.3867	5470.40	.	.	.	Q	.	V
23.000	14565.4512	5381.73	.	.	.	Q	.	V
23.083	14601.9570	5300.62	.	.	.	Q	.	V
23.167	14637.9482	5225.93	.	.	.	Q	.	V
23.250	14673.4365	5152.85	.	.	.	Q	.	V

23.333	14708.4326	5081.38	.	Q	.	.	V	.
23.417	14742.9463	5011.42	.	Q	.	.	V	.
23.500	14776.9883	4942.88	.	Q	.	.	V	.
23.583	14810.5996	4880.40	.	Q	.	.	V	.
23.667	14843.8184	4823.43	.	Q	.	.	V	.
23.750	14876.7109	4776.02	.	Q	.	.	V	.
23.833	14909.2842	4729.59	.	Q	.	.	V	.
23.917	14941.5537	4685.53	.	Q	.	.	V	.
24.000	14973.5234	4642.06	.	Q	.	.	V	.
24.083	15005.1357	4590.04	.	Q	.	.	V	.
24.167	15036.3242	4528.58	.	Q	.	.	V	.
24.250	15066.8555	4433.21	.	Q	.	.	V	.
24.333	15096.9629	4371.64	.	Q	.	.	V	.
24.417	15126.7002	4317.93	.	Q	.	.	V	.
24.500	15156.0566	4262.50	.	Q	.	.	V	.
24.583	15184.9844	4200.37	.	Q	.	.	V	.
24.667	15213.4824	4137.95	.	Q	.	.	V	.
24.750	15241.5254	4071.79	.	Q	.	.	V	.
24.833	15269.0293	3993.61	.	Q	.	.	V	.
24.917	15295.9590	3910.17	.	Q	.	.	V	.
25.000	15322.2559	3818.24	.	Q	.	.	V	.
25.083	15347.8574	3717.30	.	Q	.	.	V	.
25.167	15372.7803	3618.82	.	Q	.	.	V	.
25.250	15397.0527	3524.43	.	Q	.	.	V	.
25.333	15420.5479	3411.49	.	Q	.	.	V	.
25.417	15443.3584	3312.09	.	Q	.	.	V	.
25.500	15465.5146	3217.15	.	Q	.	.	V	.
25.583	15486.9307	3109.65	.	Q	.	.	V	.
25.667	15507.5605	2995.49	.	Q	.	.	V	.
25.750	15527.5264	2898.97	.	Q	.	.	V	.
25.833	15546.7842	2796.19	.	Q	.	.	V	.
25.917	15565.2646	2683.43	.	Q	.	.	V	.
26.000	15582.8711	2556.48	.	Q	.	.	V	.
26.083	15599.7305	2447.98	.	Q	.	.	V	.
26.167	15615.8154	2335.50	.	Q	.	.	V	.
26.250	15631.0010	2204.87	.	Q	.	.	V	.
26.333	15645.3193	2079.00	.	Q	.	.	V	.
26.417	15658.6699	1938.56	.	Q	.	.	V	.
26.500	15671.2432	1825.63	.	Q	.	.	V	.
26.583	15683.1367	1726.98	.	Q	.	.	V	.
26.667	15694.3359	1626.09	.	Q	.	.	V	.
26.750	15704.6982	1504.66	.	Q	.	.	V	.
26.833	15714.2109	1381.28	.	Q	.	.	V	.
26.917	15723.0625	1285.31	.	Q	.	.	V	.
27.000	15731.2686	1191.46	.	Q	.	.	V	.
27.083	15738.8418	1099.64	.	Q	.	.	V	.
27.167	15745.8447	1016.87	.	Q	.	.	V	.
27.250	15752.2793	934.28	.	Q	.	.	V	.
27.333	15758.2568	867.87	.	Q	.	.	V	.
27.417	15763.8213	807.98	.	Q	.	.	V	.
27.500	15768.9717	747.83	.	Q	.	.	V	.
27.583	15773.6992	686.42	.	Q	.	.	V	.
27.667	15778.0361	629.75	.	Q	.	.	V	.
27.750	15782.0117	577.21	.	Q	.	.	V	.
27.833	15785.6523	528.58	.	Q	.	.	V	.
27.917	15789.0059	486.87	.	Q	.	.	V	.
28.000	15792.0947	448.54	.	Q	.	.	V	.
28.083	15794.9639	416.59	.	Q	.	.	V	.

28.167	15797.6182	385.34	Q	.	.	.	V	.
28.250	15800.0732	356.43	Q	.	.	.	V	.
28.333	15802.3359	328.48	Q	.	.	.	V	.
28.417	15804.4102	301.12	Q	.	.	.	V	.
28.500	15806.3096	275.75	Q	.	.	.	V	.
28.583	15808.0371	250.79	Q	.	.	.	V	.
28.667	15809.6025	227.25	Q	.	.	.	V	.
28.750	15811.0459	209.59	Q	.	.	.	V	.
28.833	15812.3730	192.76	Q	.	.	.	V	.
28.917	15813.5859	176.05	Q	.	.	.	V	.
29.000	15814.6846	159.49	Q	.	.	.	V	.
29.083	15815.6924	146.31	Q	.	.	.	V	.
29.167	15816.6279	135.80	Q	.	.	.	V	.
29.250	15817.4912	125.36	Q	.	.	.	V	.
29.333	15818.2832	115.00	Q	.	.	.	V	.
29.417	15819.0039	104.70	Q	.	.	.	V	.
29.500	15819.6543	94.48	Q	.	.	.	V	.
29.583	15820.2354	84.33	Q	.	.	.	V	.
29.667	15820.7617	76.38	Q	.	.	.	V	.
29.750	15821.2676	73.40	Q	.	.	.	V	.
29.833	15821.7539	70.62	Q	.	.	.	V	.
29.917	15822.2217	67.86	Q	.	.	.	V	.
30.000	15822.6699	65.12	Q	.	.	.	V	.
30.083	15823.0996	62.41	Q	.	.	.	V	.
30.167	15823.5107	59.74	Q	.	.	.	V	.
30.250	15823.9033	57.06	Q	.	.	.	V	.
30.333	15824.2783	54.41	Q	.	.	.	V	.
30.417	15824.6348	51.78	Q	.	.	.	V	.
30.500	15824.9736	49.15	Q	.	.	.	V	.
30.583	15825.2949	46.60	Q	.	.	.	V	.
30.667	15825.5977	43.99	Q	.	.	.	V	.
30.750	15825.8828	41.46	Q	.	.	.	V	.
30.833	15826.1504	38.91	Q	.	.	.	V	.
30.917	15826.4014	36.38	Q	.	.	.	V	.
31.000	15826.6348	33.87	Q	.	.	.	V	.
31.083	15826.8506	31.37	Q	.	.	.	V	.
31.167	15827.0498	28.89	Q	.	.	.	V	.
31.250	15827.2314	26.43	Q	.	.	.	V	.
31.333	15827.3965	23.98	Q	.	.	.	V	.
31.417	15827.5449	21.55	Q	.	.	.	V	.
31.500	15827.6768	19.14	Q	.	.	.	V	.
31.583	15827.7920	16.74	Q	.	.	.	V	.
31.667	15827.8906	14.35	Q	.	.	.	V	.
31.750	15827.9736	11.98	Q	.	.	.	V	.
31.833	15828.0400	9.63	Q	.	.	.	V	.
31.917	15828.0898	7.29	Q	.	.	.	V	.
32.000	15828.1240	4.96	Q	.	.	.	V	.
32.083	15828.1426	2.65	Q	.	.	.	V	.
32.167	15828.1445	0.35	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%	1930.0

10%	1435.0
20%	1165.0
30%	650.0
40%	495.0
50%	410.0
60%	345.0
70%	290.0
80%	225.0
90%	145.0

=====
END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134U *
* 50-YR EV JANUARY 2019 CCHI *

FILE NAME: EV5034US.DAT
TIME/DATE OF STUDY: 14:15 01/02/2019

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

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 62698.000 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.481 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.285
LOW LOSS FRACTION = 0.416
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.86
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.18
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.17
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.20
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.59

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.304
30-MINUTE FACTOR = 0.358
1-HOUR FACTOR = 0.405
3-HOUR FACTOR = 0.750
6-HOUR FACTOR = 0.890
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.359

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.192	1455.353
2	0.576	2910.711
3	0.960	2910.707
4	1.344	2910.705
5	1.727	2910.711
6	2.174	3384.474
7	2.753	4395.815
8	3.338	4429.335
9	3.955	4678.704
10	4.931	7402.486
11	6.049	8478.643
12	7.423	10420.717
13	9.059	12402.378
14	10.797	13179.986
15	12.477	12734.598
16	14.333	14077.727
17	16.614	17296.143
18	18.416	13661.003
19	20.292	14227.212
20	22.615	17615.295
21	24.918	17458.361
22	26.837	14555.078
23	29.059	16843.154
24	31.492	18453.299
25	34.395	22010.361
26	36.744	17810.943
27	39.226	18821.760
28	42.374	23868.264
29	45.415	23059.461
30	48.863	26138.682
31	51.778	22109.850
32	54.186	18253.787
33	56.551	17934.137
34	59.387	21507.195
35	62.714	25224.619
36	65.296	19575.404
37	67.558	17154.836
38	70.045	18853.953
39	72.113	15684.400
40	74.253	16226.109
41	76.204	14791.020
42	77.730	11573.913
43	79.223	11319.372
44	80.758	11637.896
45	82.296	11664.333
46	83.711	10728.490
47	85.023	9952.546
48	86.236	9196.328

49	87.278	7900.021
50	88.234	7245.331
51	89.029	6027.295
52	89.816	5969.966
53	90.545	5529.032
54	91.252	5362.597
55	91.953	5311.920
56	92.603	4930.456
57	93.243	4850.044
58	93.872	4770.673
59	94.348	3613.323
60	94.775	3234.057
61	95.201	3231.916
62	95.628	3234.115
63	96.022	2991.549
64	96.297	2083.359
65	96.560	1997.336
66	96.824	1997.336
67	97.087	1997.336
68	97.351	1997.336
69	97.614	1997.336
70	97.877	1995.079
71	98.033	1183.846
72	98.097	480.619
73	98.160	476.165
74	98.223	478.421
75	98.286	478.363
76	98.348	476.223
77	98.412	480.561
78	98.475	476.223
79	98.537	473.967
80	98.601	480.619
81	98.663	476.165
82	98.726	476.165
83	98.790	480.619
84	98.852	476.165
85	98.915	476.223
86	98.979	480.561
87	99.041	476.165
88	99.104	476.165
89	99.167	476.165
90	99.230	476.165
91	99.293	476.165
92	99.355	476.165
93	99.418	476.165
94	99.481	476.165
95	99.544	476.165
96	99.606	476.165
97	99.669	476.165
98	99.732	476.165
99	99.795	476.165
100	99.858	476.165
101	99.920	476.165
102	99.983	476.165
103	100.000	126.750

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11210.0830
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 16131.5527

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.	4850.0	9700.0	14550.0	19400.0
0.083	0.0467	6.78	Q	.	.	.	.
0.167	0.1869	20.36	Q	.	.	.	.
0.250	0.4210	33.98	Q	.	.	.	.
0.333	0.7491	47.64	Q	.	.	.	.
0.417	1.1715	61.34	Q	.	.	.	.
0.500	1.7038	77.29	Q	.	.	.	.
0.583	2.3787	97.99	Q	.	.	.	.
0.667	3.1977	118.92	Q	.	.	.	.
0.750	4.1692	141.07	Q	.	.	.	.
0.833	5.3812	175.98	Q	.	.	.	.
0.917	6.8687	216.00	Q	.	.	.	.
1.000	8.6951	265.19	Q	.	.	.	.
1.083	10.9249	323.76	Q	.	.	.	.
1.167	13.5842	386.13	Q	.	.	.	.
1.250	16.6599	446.60	Q	.	.	.	.
1.333	20.1967	513.53	VQ	.	.	.	.
1.417	24.2989	595.65	VQ	.	.	.	.
1.500	28.8518	661.07	VQ	.	.	.	.
1.583	33.8749	729.36	VQ	.	.	.	.
1.667	39.4784	813.62	VQ	.	.	.	.
1.750	45.6589	897.42	VQ	.	.	.	.
1.833	52.3252	967.94	VQ	.	.	.	.
1.917	59.5523	1049.37	V Q	.	.	.	.
2.000	67.3934	1138.53	V Q	.	.	.	.
2.083	75.9648	1244.57	V Q	.	.	.	.
2.167	85.1337	1331.33	V Q	.	.	.	.
2.250	94.9349	1423.13	V Q	.	.	.	.
2.333	105.5319	1538.68	V Q	.	.	.	.
2.417	116.9015	1650.87	V Q	.	.	.	.
2.500	129.1449	1777.74	V Q	.	.	.	.
2.583	142.1356	1886.24	V Q	.	.	.	.
2.667	155.7521	1977.13	V Q	.	.	.	.
2.750	169.9866	2066.85	V Q	.	.	.	.
2.833	184.9556	2173.49	V Q	.	.	.	.
2.917	200.7808	2297.82	V Q	.	.	.	.
3.000	217.2836	2396.21	V Q	.	.	.	.
3.083	234.3889	2483.69	V Q	.	.	.	.
3.167	252.1530	2579.36	V Q	.	.	.	.
3.250	270.4767	2660.60	V Q	.	.	.	.
3.333	289.3793	2744.66	V Q	.	.	.	.
3.417	308.8168	2822.32	V Q	.	.	.	.
3.500	328.6879	2885.28	V Q	.	.	.	.
3.583	348.9861	2947.30	V Q	.	.	.	.
3.667	369.7233	3011.04	V Q	.	.	.	.
3.750	390.9020	3075.15	V Q	.	.	.	.
3.833	412.4939	3135.14	.V Q	.	.	.	.
3.917	434.4758	3191.77	.V Q	.	.	.	.

4.000	456.8249	3245.09	.V Q	.	.	.	.
4.083	479.5013	3292.61	.V Q	.	.	.	.
4.167	502.4853	3337.28	.V Q	.	.	.	.
4.250	525.7393	3376.48	.V Q	.	.	.	.
4.333	549.2627	3415.60	.V Q	.	.	.	.
4.417	573.0427	3452.85	.V Q	.	.	.	.
4.500	597.0751	3489.51	.V Q	.	.	.	.
4.583	621.3597	3526.13	.V Q	.	.	.	.
4.667	645.8854	3561.14	.V Q	.	.	.	.
4.750	670.6511	3595.98	.V Q	.	.	.	.
4.833	695.6553	3630.61	.V Q	.	.	.	.
4.917	720.8623	3660.05	.V Q	.	.	.	.
5.000	746.2610	3687.89	.V Q	.	.	.	.
5.083	771.8526	3715.90	.V Q	.	.	.	.
5.167	797.6383	3744.09	.V Q	.	.	.	.
5.250	823.6116	3771.32	.V Q	.	.	.	.
5.333	849.7444	3794.49	.V Q	.	.	.	.
5.417	876.0353	3817.43	.V Q	.	.	.	.
5.500	902.4852	3840.53	.V Q	.	.	.	.
5.583	929.0955	3863.81	.V Q	.	.	.	.
5.667	955.8672	3887.25	.V Q	.	.	.	.
5.750	982.8015	3910.86	.V Q	.	.	.	.
5.833	1009.8996	3934.64	.V Q	.	.	.	.
5.917	1037.1367	3954.82	.V Q	.	.	.	.
6.000	1064.4913	3971.89	.V Q	.	.	.	.
6.083	1091.9646	3989.12	.V Q	.	.	.	.
6.167	1119.5576	4006.51	.V Q	.	.	.	.
6.250	1147.2717	4024.08	.V Q	.	.	.	.
6.333	1175.1078	4041.80	.V Q	.	.	.	.
6.417	1203.0674	4059.73	.V Q	.	.	.	.
6.500	1231.1515	4077.81	.V Q	.	.	.	.
6.583	1259.3613	4096.07	.V Q	.	.	.	.
6.667	1287.6982	4114.52	.V Q	.	.	.	.
6.750	1316.1636	4133.17	.V Q	.	.	.	.
6.833	1344.7585	4151.99	.V Q	.	.	.	.
6.917	1373.4847	4171.04	.V Q	.	.	.	.
7.000	1402.3433	4190.26	.V Q	.	.	.	.
7.083	1431.3356	4209.69	.V Q	.	.	.	.
7.167	1460.4631	4229.33	.V Q	.	.	.	.
7.250	1489.7274	4249.18	.V Q	.	.	.	.
7.333	1519.1299	4269.23	.V Q	.	.	.	.
7.417	1548.6720	4289.51	.V Q	.	.	.	.
7.500	1578.3552	4310.00	.V Q	.	.	.	.
7.583	1608.1813	4330.74	.V Q	.	.	.	.
7.667	1638.1515	4351.68	.V Q	.	.	.	.
7.750	1668.2678	4372.88	.V Q	.	.	.	.
7.833	1698.5316	4394.31	.V Q	.	.	.	.
7.917	1728.9448	4416.00	.V Q	.	.	.	.
8.000	1759.5090	4437.92	.V Q	.	.	.	.
8.083	1790.2261	4460.12	.V Q	.	.	.	.
8.167	1821.0977	4482.56	.V Q	.	.	.	.
8.250	1852.1259	4505.29	.V Q	.	.	.	.
8.333	1883.3123	4528.27	.V Q	.	.	.	.
8.417	1914.6591	4551.55	.V Q	.	.	.	.
8.500	1946.1680	4575.09	.V Q	.	.	.	.
8.583	1977.8300	4597.32	.V Q	.	.	.	.
8.667	2009.6428	4619.23	.V Q	.	.	.	.
8.750	2041.6088	4641.46	.V Q	.	.	.	.

8.833	2073.7297	4663.97	.	V	Q.	.	.	.
8.917	2106.0081	4686.82	.	V	Q.	.	.	.
9.000	2138.4458	4709.96	.	V	Q.	.	.	.
9.083	2171.0454	4733.45	.	V	Q.	.	.	.
9.167	2203.8088	4757.24	.	V	Q.	.	.	.
9.250	2236.7388	4781.41	.	V	Q.	.	.	.
9.333	2269.8374	4805.90	.	V	Q.	.	.	.
9.417	2303.1072	4830.78	.	V	Q.	.	.	.
9.500	2336.5508	4856.00	.	V	Q	.	.	.
9.583	2370.1707	4881.62	.	V	Q	.	.	.
9.667	2403.9695	4907.60	.	V	Q	.	.	.
9.750	2437.9502	4934.00	.	V	Q	.	.	.
9.833	2472.1155	4960.79	.	V	Q	.	.	.
9.917	2506.4683	4988.02	.	V	Q	.	.	.
10.000	2541.0112	5015.64	.	V	Q	.	.	.
10.083	2575.7478	5043.74	.	V	Q	.	.	.
10.167	2610.6807	5072.25	.	V	Q	.	.	.
10.250	2645.8132	5101.26	.	V	Q	.	.	.
10.333	2681.1487	5130.72	.	V	Q	.	.	.
10.417	2716.6907	5160.69	.	V	Q	.	.	.
10.500	2752.4424	5191.14	.	V	Q	.	.	.
10.583	2788.4075	5222.14	.	V	Q	.	.	.
10.667	2824.5894	5253.63	.	V	Q	.	.	.
10.750	2860.9922	5285.71	.	V	Q	.	.	.
10.833	2897.6196	5318.31	.	V	Q	.	.	.
10.917	2934.4758	5351.53	.	V	.Q	.	.	.
11.000	2971.5647	5385.31	.	V	.Q	.	.	.
11.083	3008.8909	5419.75	.	V	.Q	.	.	.
11.167	3046.4583	5454.78	.	V	.Q	.	.	.
11.250	3084.2717	5490.51	.	V	.Q	.	.	.
11.333	3122.3357	5526.87	.	V	.Q	.	.	.
11.417	3160.6550	5563.98	.	V	.Q	.	.	.
11.500	3199.2346	5601.76	.	V	.Q	.	.	.
11.583	3238.0798	5640.33	.	V	.Q	.	.	.
11.667	3277.1958	5679.62	.	V	.Q	.	.	.
11.750	3316.5881	5719.77	.	V	.Q	.	.	.
11.833	3356.2622	5760.68	.	V	.Q	.	.	.
11.917	3396.2244	5802.50	.	V	.Q	.	.	.
12.000	3436.4802	5845.15	.	V	.Q	.	.	.
12.083	3477.1213	5901.09	.	V	.Q	.	.	.
12.167	3518.2385	5970.21	.	V	.Q	.	.	.
12.250	3559.8379	6040.24	.	V	.Q	.	.	.
12.333	3601.9253	6111.09	.	V	.Q	.	.	.
12.417	3644.5073	6182.93	.	V	.Q	.	.	.
12.500	3687.6179	6259.66	.	V	.Q	.	.	.
12.583	3731.3232	6346.00	.	V	.Q	.	.	.
12.667	3775.6311	6433.52	.	V	.Q	.	.	.
12.750	3820.5637	6524.21	.	V	.Q	.	.	.
12.833	3866.2864	6638.92	.	V	.Q	.	.	.
12.917	3912.8691	6763.81	.	V	.Q	.	.	.
13.000	3960.4309	6905.98	.	V	.Q	.	.	.
13.083	4009.0945	7065.94	.	V	.Q	.	.	.
13.167	4058.9102	7233.23	.	V	.Q	.	.	.
13.250	4109.8584	7397.70	.	V	.Q	.	.	.
13.333	4162.0229	7574.31	.	V	.Q	.	.	.
13.417	4215.5986	7779.19	.	V	.Q	.	.	.
13.500	4270.3779	7953.96	.	V	.Q	.	.	.
13.583	4326.4009	8134.53	.	V	.Q	.	.	.

13.667	4383.8716	8344.73	.	V	Q	.	.	.
13.750	4442.7876	8554.59	.	.V	Q	.	.	.
13.833	4502.9849	8740.67	.	.V	Q	.	.	.
13.917	4564.6055	8947.32	.	.V	Q	.	.	.
14.000	4627.7500	9168.62	.	.V	Q	.	.	.
14.083	4692.7153	9432.99	.	.V	Q.	.	.	.
14.167	4759.3423	9674.26	.	.V	Q.	.	.	.
14.250	4827.6909	9924.25	.	.V	Q	.	.	.
14.333	4898.0576	10217.25	.	.V	.Q	.	.	.
14.417	4970.3950	10503.39	.	.V	.Q	.	.	.
14.500	5044.9097	10819.50	.	.V	.Q	.	.	.
14.583	5121.4219	11109.60	.	.V	.Q	.	.	.
14.667	5199.7061	11366.89	.	.V	.Q	.	.	.
14.750	5279.7563	11623.30	.	.V	.Q	.	.	.
14.833	5361.9316	11931.88	.	.V	.Q	.	.	.
14.917	5446.5029	12279.72	.	.V	.Q	.	.	.
15.000	5533.2349	12593.48	.	.V	.Q	.	.	.
15.083	5622.0835	12900.85	.	.V	.Q	.	.	.
15.167	5713.1704	13225.84	.	.V	.Q	.	.	.
15.250	5806.2642	13517.20	.	.V	.Q	.	.	.
15.333	5901.4458	13820.40	.	.V	.Q	.	.	.
15.417	5998.6807	14118.51	.	.V	.Q.	.	.	.
15.500	6097.4399	14339.86	.	.V	.Q.	.	.	.
15.583	6197.7373	14563.15	.	.V	.Q	.	.	.
15.667	6299.7808	14816.68	.	.V	.Q	.	.	.
15.750	6403.5098	15061.48	.	.V	.Q	.	.	.
15.833	6508.6250	15262.71	.	.V	.Q	.	.	.
15.917	6615.1860	15472.65	.	.V	.Q	.	.	.
16.000	6723.3516	15705.66	.	.V	.Q	.	.	.
16.083	6834.0869	16078.75	.	.V	.Q	.	.	.
16.167	6946.7607	16360.24	.	.V	.Q	.	.	.
16.250	7060.3154	16488.17	.	.V	.Q	.	.	.
16.333	7174.9009	16637.84	.	.V	.Q	.	.	.
16.417	7290.4224	16773.72	.	.V	.Q	.	.	.
16.500	7407.3550	16978.64	.	.V	.Q	.	.	.
16.583	7525.7866	17196.27	.	.V	.Q	.	.	.
16.667	7644.8506	17288.12	.	.V	.Q	.	.	.
16.750	7764.5449	17379.61	.	.V	.Q	.	.	.
16.833	7886.8701	17761.65	.	.V	.Q	.	.	.
16.917	8011.0698	18033.82	.	.V	.Q	.	.	.
17.000	8137.0137	18287.06	.	.V	.Q	.	.	.
17.083	8264.2881	18480.25	.	.V	.Q	.	.	.
17.167	8392.6445	18637.37	.	.V	.Q	.	.	.
17.250	8521.1592	18660.29	.	.V	.Q	.	.	.
17.333	8650.7441	18815.71	.	.V	.Q	.	.	.
17.417	8782.0098	19059.78	.	.V	.Q.	.	.	.
17.500	8911.3525	18780.58	.	.V	.Q	.	.	.
17.583	9041.3193	18871.13	.	.V	.Q	.	.	.
17.667	9172.9707	19115.76	.	.V	.Q	.	.	.
17.750	9304.3281	19073.14	.	.V	.Q	.	.	.
17.833	9433.5742	18766.50	.	.V	.Q	.	.	.
17.917	9564.1592	18960.97	.	.V	.Q	.	.	.
18.000	9695.7852	19112.09	.	.V	.Q.	.	.	.
18.083	9829.0820	19354.76	.	.V	.Q	.	.	.
18.167	9958.9238	18853.03	.	.V	.Q	.	.	.
18.250	10088.6650	18838.40	.	.V	.Q	.	.	.
18.333	10221.0527	19222.68	.	.V	.Q	.	.	.
18.417	10352.7236	19118.62	.	.V	.Q	.	.	.

18.500	10485.1680	19230.89	.	.	.	V	.	Q.
18.583	10614.0400	18712.28	.	.	.	V	.	Q.
18.667	10740.1387	18309.49	.	.	.	V	.	Q.
18.750	10866.0410	18281.06	.	.	.	V	.	Q.
18.833	10994.3398	18629.00	.	.	.	V	.	Q.
18.917	11124.0938	18840.25	.	.	.	V	.	Q.
19.000	11249.1543	18158.83	.	.	.	V	.	Q.
19.083	11371.2949	17734.82	.	.	.	V	.	Q.
19.167	11493.3193	17717.99	.	.	.	V	.	Q.
19.250	11612.6836	17331.66	.	.	.	V	.	Q.
19.333	11730.7656	17145.46	.	.	.	V	.	Q.
19.417	11845.9570	16725.78	.	.	.	V	.	Q.
19.500	11957.5889	16208.91	.	.	.	V	.	Q.
19.583	12067.5801	15970.75	.	.	.	V	.	Q.
19.667	12176.2686	15781.51	.	.	.	V	.	Q.
19.750	12283.3857	15553.35	.	.	.	V	.	Q.
19.833	12388.0479	15196.97	.	.	.	V	.	Q.
19.917	12489.8750	14785.29	.	.	.	Q	.	.
20.000	12589.0059	14393.87	.	.	.	Q.V	.	.
20.083	12685.0439	13944.73	.	.	.	Q.V	.	.
20.167	12778.4580	13563.74	.	.	.	Q.V	.	.
20.250	12869.1016	13161.42	.	.	.	Q.V	.	.
20.333	12957.3398	12812.19	.	.	.	Q.V	.	.
20.417	13042.9648	12432.78	.	.	.	Q.V	.	.
20.500	13126.0938	12070.25	.	.	.	Q.V	.	.
20.583	13206.9551	11741.06	.	.	.	Q.V	.	.
20.667	13285.6152	11421.39	.	.	.	Q.V	.	.
20.750	13362.1914	11118.88	.	.	.	Q.V	.	.
20.833	13436.4277	10779.14	.	.	.	Q.V	.	.
20.917	13507.5303	10324.07	.	.	.	Q.V	.	.
21.000	13576.3760	9996.46	.	.	.	Q.V	.	.
21.083	13643.3945	9731.13	.	.	.	Q.V	.	.
21.167	13708.4932	9452.31	.	.	.	Q.V	.	.
21.250	13771.7334	9182.43	.	.	.	Q.V	.	.
21.333	13832.7588	8860.83	.	.	.	Q.V	.	.
21.417	13892.1973	8630.42	.	.	.	Q.V	.	.
21.500	13950.2979	8436.23	.	.	.	Q.V	.	.
21.583	14007.0967	8247.19	.	.	.	Q.V	.	.
21.667	14062.5469	8051.33	.	.	.	Q.V	.	.
21.750	14116.6045	7849.13	.	.	.	Q.V	.	.
21.833	14169.2588	7645.42	.	.	.	Q.V	.	.
21.917	14220.1387	7387.83	.	.	.	Q.V	.	.
22.000	14269.4404	7158.62	.	.	.	Q.V	.	.
22.083	14317.6914	7006.08	.	.	.	Q.V	.	.
22.167	14364.9570	6862.96	.	.	.	Q.V	.	.
22.250	14411.2852	6726.85	.	.	.	Q.V	.	.
22.333	14456.6885	6592.58	.	.	.	Q.V	.	.
22.417	14501.2080	6464.20	.	.	.	Q.V	.	.
22.500	14544.8545	6337.54	.	.	.	Q.V	.	.
22.583	14587.6211	6209.75	.	.	.	Q.V	.	.
22.667	14629.5352	6085.94	.	.	.	Q.V	.	.
22.750	14670.6025	5963.04	.	.	.	Q.V	.	.
22.833	14710.8389	5842.27	.	.	.	Q.V	.	.
22.917	14750.3672	5739.46	.	.	.	Q.V	.	.
23.000	14789.2559	5646.63	.	.	.	Q.V	.	.
23.083	14827.5215	5556.17	.	.	.	Q.V	.	.
23.167	14865.1787	5467.79	.	.	.	Q.V	.	.
23.250	14902.2480	5382.51	.	.	.	Q.V	.	.

23.333	14938.7969	5306.96	.	.	.	Q	.	V.
23.417	14974.8418	5233.74	.	.	.	Q	.	V.
23.500	15010.3936	5162.17	.	.	.	Q	.	V.
23.583	15045.4629	5092.08	.	.	.	Q	.	V.
23.667	15080.0586	5023.35	.	.	.	Q	.	V.
23.750	15114.1914	4956.04	.	.	.	Q	.	V.
23.833	15147.8691	4890.05	.	.	.	Q	.	V.
23.917	15181.1748	4836.01	.	.	.	Q	.	V.
24.000	15214.1660	4790.34	.	.	.	Q	.	V.
24.083	15246.8008	4738.57	.	.	.	Q	.	V.
24.167	15279.0371	4680.65	.	.	.	Q	.	V.
24.250	15310.8887	4624.84	.	.	.	Q	.	V.
24.333	15342.3623	4569.91	.	.	.	Q	.	V.
24.417	15373.4482	4513.61	.	.	.	Q	.	V.
24.500	15404.1143	4452.76	.	.	.	Q	.	V.
24.583	15434.1348	4358.98	.	.	.	Q	.	V.
24.667	15463.6650	4287.77	.	.	.	Q	.	V.
24.750	15492.7832	4227.98	.	.	.	Q	.	V.
24.833	15521.4141	4157.20	.	.	.	Q	.	V.
24.917	15549.5068	4079.10	.	.	.	Q	.	V.
25.000	15576.9961	3991.40	.	.	.	Q	.	V.
25.083	15603.8223	3895.12	.	.	.	Q	.	V.
25.167	15629.9648	3795.89	.	.	.	Q	.	V.
25.250	15655.4434	3699.49	.	.	.	Q	.	V.
25.333	15680.2197	3597.55	.	.	.	Q	.	V.
25.417	15704.1963	3481.37	.	.	.	Q	.	V.
25.500	15727.4941	3382.92	.	.	.	Q	.	V.
25.583	15750.1211	3285.44	.	.	.	Q	.	V.
25.667	15771.9814	3174.17	.	.	.	Q	.	V.
25.750	15793.0879	3064.69	.	.	.	Q	.	V.
25.833	15813.5400	2969.72	.	.	.	Q	.	V.
25.917	15833.2715	2865.01	.	.	.	Q	.	V.
26.000	15852.2363	2753.74	.	.	.	Q	.	V.
26.083	15870.3281	2626.88	.	.	.	Q	.	V.
26.167	15887.6875	2520.56	.	.	.	Q	.	V.
26.250	15904.2881	2410.43	.	.	.	Q	.	V.
26.333	15919.9746	2277.71	.	.	.	Q	.	V.
26.417	15934.7803	2149.74	.	.	.	Q	.	V.
26.500	15948.6123	2008.41	.	.	.	Q	.	V.
26.583	15961.6270	1889.79	.	.	.	Q	.	V.
26.667	15973.9619	1791.10	.	.	.	Q	.	V.
26.750	15985.6338	1694.69	.	.	.	Q	.	V.
26.833	15996.5322	1582.43	.	.	.	Q	.	V.
26.917	16006.5439	1453.71	.	.	.	Q	.	V.
27.000	16015.8564	1352.20	.	.	.	Q	.	V.
27.083	16024.5527	1262.70	.	.	.	Q	.	V.
27.167	16032.5830	1165.96	.	.	.	Q	.	V.
27.250	16040.0527	1084.66	.	.	.	Q	.	V.
27.333	16046.9502	1001.44	.	.	.	Q	.	V.
27.417	16053.3242	925.50	.	.	.	Q	.	V.
27.500	16059.2822	865.07	.	.	.	Q	.	V.
27.583	16064.8350	806.27	.	.	.	Q	.	V.
27.667	16069.9756	746.42	.	.	.	Q	.	V.
27.750	16074.7061	686.88	.	.	.	Q	.	V.
27.833	16079.0596	632.12	.	.	.	Q	.	V.
27.917	16083.0635	581.35	.	.	.	Q	.	V.
28.000	16086.7441	534.46	.	.	.	Q	.	V.
28.083	16090.1455	493.94	.	.	.	Q	.	V.

28.167	16093.2910	456.74	Q	.	.	.	V.
28.250	16096.2217	425.48	Q	.	.	.	V.
28.333	16098.9404	394.72	Q	.	.	.	V.
28.417	16101.4629	366.22	Q	.	.	.	V.
28.500	16103.7959	338.71	Q	.	.	.	V.
28.583	16105.9424	311.63	Q	.	.	.	V.
28.667	16107.9160	286.51	Q	.	.	.	V.
28.750	16109.7197	261.94	Q	.	.	.	V.
28.833	16111.3584	237.91	Q	.	.	.	V.
28.917	16112.8701	219.44	Q	.	.	.	V.
29.000	16114.2676	202.85	Q	.	.	.	V.
29.083	16115.5518	186.40	Q	.	.	.	V.
29.167	16116.7227	170.05	Q	.	.	.	V.
29.250	16117.7900	154.94	Q	.	.	.	V.
29.333	16118.7832	144.15	Q	.	.	.	V.
29.417	16119.7051	133.85	Q	.	.	.	V.
29.500	16120.5566	123.62	Q	.	.	.	V.
29.583	16121.3379	113.46	Q	.	.	.	V.
29.667	16122.0498	103.38	Q	.	.	.	V.
29.750	16122.6924	93.36	Q	.	.	.	V.
29.833	16123.2666	83.42	Q	.	.	.	V.
29.917	16123.7988	77.33	Q	.	.	.	V.
30.000	16124.3125	74.54	Q	.	.	.	V.
30.083	16124.8066	71.80	Q	.	.	.	V.
30.167	16125.2822	69.08	Q	.	.	.	V.
30.250	16125.7393	66.37	Q	.	.	.	V.
30.333	16126.1777	63.70	Q	.	.	.	V.
30.417	16126.5977	61.03	Q	.	.	.	V.
30.500	16127.0000	58.40	Q	.	.	.	V.
30.583	16127.3848	55.81	Q	.	.	.	V.
30.667	16127.7510	53.20	Q	.	.	.	V.
30.750	16128.0996	50.63	Q	.	.	.	V.
30.833	16128.4307	48.08	Q	.	.	.	V.
30.917	16128.7441	45.53	Q	.	.	.	V.
31.000	16129.0400	43.02	Q	.	.	.	V.
31.083	16129.3193	40.53	Q	.	.	.	V.
31.167	16129.5811	38.03	Q	.	.	.	V.
31.250	16129.8262	35.57	Q	.	.	.	V.
31.333	16130.0547	33.13	Q	.	.	.	V.
31.417	16130.2666	30.71	Q	.	.	.	V.
31.500	16130.4619	28.30	Q	.	.	.	V.
31.583	16130.6406	25.91	Q	.	.	.	V.
31.667	16130.8027	23.53	Q	.	.	.	V.
31.750	16130.9482	21.17	Q	.	.	.	V.
31.833	16131.0781	18.83	Q	.	.	.	V.
31.917	16131.1914	16.50	Q	.	.	.	V.
32.000	16131.2891	14.19	Q	.	.	.	V.
32.083	16131.3711	11.89	Q	.	.	.	V.
32.167	16131.4375	9.60	Q	.	.	.	V.
32.250	16131.4883	7.33	Q	.	.	.	V.
32.333	16131.5234	5.07	Q	.	.	.	V.
32.417	16131.5430	2.82	Q	.	.	.	V.
32.500	16131.5469	0.59	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%	1950.0
10%	1435.0
20%	1170.0
30%	655.0
40%	505.0
50%	415.0
60%	355.0
70%	295.0
80%	230.0
90%	145.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134C *
* 50-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV5034CS.DAT
TIME/DATE OF STUDY: 14:11 01/02/2019

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

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 66557.797 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.481 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.285
LOW LOSS FRACTION = 0.416
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.85
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.17
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.15
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.16
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.51

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.294
30-MINUTE FACTOR = 0.352
1-HOUR FACTOR = 0.397
3-HOUR FACTOR = 0.741
6-HOUR FACTOR = 0.887
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.359

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.192	1544.947
2	0.576	3089.900
3	0.960	3089.896
4	1.344	3089.893
5	1.727	3089.900
6	2.174	3592.828
7	2.753	4666.429
8	3.338	4702.013
9	3.955	4966.733
10	4.931	7858.196
11	6.049	9000.603
12	7.423	11062.234
13	9.059	13165.891
14	10.797	13991.369
15	12.477	13518.562
16	14.333	14944.377
17	16.614	18360.924
18	18.416	14501.998
19	20.292	15103.064
20	22.615	18699.723
21	24.918	18533.129
22	26.837	15451.114
23	29.059	17880.049
24	31.492	19589.316
25	34.395	23365.357
26	36.744	18907.418
27	39.226	19980.461
28	42.374	25337.635
29	45.415	24479.041
30	48.863	27747.824
31	51.778	23470.971
32	54.186	19377.521
33	56.551	19038.193
34	59.387	22831.215
35	62.714	26777.490
36	65.296	20780.500
37	67.558	18210.918
38	70.045	20014.637
39	72.113	16649.959
40	74.253	17225.018
41	76.204	15701.581
42	77.730	12286.424
43	79.223	12016.213
44	80.758	12354.345
45	82.296	12382.410
46	83.711	11388.955
47	85.023	10565.242
48	86.236	9762.471

49	87.278	8386.360
50	88.234	7691.366
51	89.029	6398.346
52	89.816	6337.487
53	90.545	5869.408
54	91.252	5692.728
55	91.953	5638.931
56	92.603	5233.983
57	93.243	5148.621
58	93.872	5064.364
59	94.348	3835.765
60	94.775	3433.151
61	95.201	3430.879
62	95.628	3433.212
63	96.022	3175.714
64	96.297	2211.614
65	96.560	2120.295
66	96.824	2120.295
67	97.087	2120.295
68	97.351	2120.295
69	97.614	2120.295
70	97.877	2117.900
71	98.033	1256.726
72	98.097	510.207
73	98.160	505.478
74	98.223	507.873
75	98.286	507.812
76	98.348	505.540
77	98.412	510.146
78	98.475	505.540
79	98.537	503.145
80	98.601	510.207
81	98.663	505.478
82	98.726	505.478
83	98.790	510.207
84	98.852	505.478
85	98.915	505.540
86	98.979	510.146
87	99.041	505.478
88	99.104	505.478
89	99.167	505.478
90	99.230	505.478
91	99.293	505.478
92	99.355	505.478
93	99.418	505.478
94	99.481	505.478
95	99.544	505.478
96	99.606	505.478
97	99.669	505.478
98	99.732	505.478
99	99.795	505.478
100	99.858	505.478
101	99.920	505.478
102	99.983	505.478
103	100.000	134.553

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11701.7422
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 16815.3691

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.	5025.0	10050.0	15075.0	20100.0
0.083	0.0486	7.06	Q	.	.	.	.
0.167	0.1947	21.20	Q	.	.	.	.
0.250	0.4384	35.39	Q	.	.	.	.
0.333	0.7800	49.61	Q	.	.	.	.
0.417	1.2200	63.88	Q	.	.	.	.
0.500	1.7743	80.48	Q	.	.	.	.
0.583	2.4771	102.05	Q	.	.	.	.
0.667	3.3300	123.84	Q	.	.	.	.
0.750	4.3417	146.91	Q	.	.	.	.
0.833	5.6039	183.26	Q	.	.	.	.
0.917	7.1530	224.94	Q	.	.	.	.
1.000	9.0550	276.17	Q	.	.	.	.
1.083	11.3770	337.16	Q	.	.	.	.
1.167	14.1463	402.11	Q	.	.	.	.
1.250	17.3494	465.09	Q	.	.	.	.
1.333	21.0325	534.79	VQ	.	.	.	.
1.417	25.3046	620.30	VQ	.	.	.	.
1.500	30.0459	688.44	VQ	.	.	.	.
1.583	35.2770	759.55	VQ	.	.	.	.
1.667	41.1124	847.30	VQ	.	.	.	.
1.750	47.5488	934.57	VQ	.	.	.	.
1.833	54.4911	1008.02	V Q	.	.	.	.
1.917	62.0173	1092.81	V Q	.	.	.	.
2.000	70.1831	1185.66	V Q	.	.	.	.
2.083	79.1094	1296.09	V Q	.	.	.	.
2.167	88.6579	1386.45	V Q	.	.	.	.
2.250	98.8649	1482.06	V Q	.	.	.	.
2.333	109.9007	1602.40	V Q	.	.	.	.
2.417	121.7411	1719.23	V Q	.	.	.	.
2.500	134.4915	1851.35	V Q	.	.	.	.
2.583	148.0201	1964.35	V Q	.	.	.	.
2.667	162.2005	2059.00	V Q	.	.	.	.
2.750	177.0245	2152.44	V Q	.	.	.	.
2.833	192.6134	2263.51	V Q	.	.	.	.
2.917	209.0940	2392.99	V Q	.	.	.	.
3.000	226.2803	2495.45	V Q	.	.	.	.
3.083	244.0941	2586.56	V Q	.	.	.	.
3.167	262.5941	2686.20	V Q	.	.	.	.
3.250	281.6769	2770.82	V Q	.	.	.	.
3.333	301.3625	2858.36	V Q	.	.	.	.
3.417	321.6053	2939.25	V Q	.	.	.	.
3.500	342.2997	3004.82	V Q	.	.	.	.
3.583	363.4390	3069.42	V Q	.	.	.	.
3.667	385.0354	3135.80	V Q	.	.	.	.
3.750	407.0918	3202.59	V Q	.	.	.	.
3.833	429.5786	3265.07	.V Q	.	.	.	.
3.917	452.4715	3324.06	.V Q	.	.	.	.

4.000	475.7470	3379.60	.V Q	.	.	.	.
4.083	499.3633	3429.10	.V Q	.	.	.	.
4.167	523.3002	3475.62	.V Q	.	.	.	.
4.250	547.5182	3516.47	.V Q	.	.	.	.
4.333	572.0170	3557.21	.V Q	.	.	.	.
4.417	596.7830	3596.03	.V Q	.	.	.	.
4.500	621.8121	3634.22	.V Q	.	.	.	.
4.583	647.1038	3672.36	.V Q	.	.	.	.
4.667	672.6468	3708.84	.V Q	.	.	.	.
4.750	698.4397	3745.13	.V Q	.	.	.	.
4.833	724.4812	3781.22	.V Q	.	.	.	.
4.917	750.7339	3811.90	.V Q	.	.	.	.
5.000	777.1865	3840.91	.V Q	.	.	.	.
5.083	803.8401	3870.10	.V Q	.	.	.	.
5.167	830.6959	3899.46	.V Q	.	.	.	.
5.250	857.7473	3927.85	.V Q	.	.	.	.
5.333	884.9648	3951.99	.V Q	.	.	.	.
5.417	912.3471	3975.91	.V Q	.	.	.	.
5.500	939.8952	3999.98	.V Q	.	.	.	.
5.583	967.6104	4024.24	.V Q	.	.	.	.
5.667	995.4937	4048.67	.V Q	.	.	.	.
5.750	1023.5466	4073.29	.V Q	.	.	.	.
5.833	1051.7703	4098.07	.V Q	.	.	.	.
5.917	1080.1388	4119.11	.V Q	.	.	.	.
6.000	1108.6299	4136.91	.V Q	.	.	.	.
6.083	1137.2446	4154.87	.V Q	.	.	.	.
6.167	1165.9843	4173.00	.V Q	.	.	.	.
6.250	1194.8501	4191.32	.V Q	.	.	.	.
6.333	1223.8431	4209.79	.V Q	.	.	.	.
6.417	1252.9650	4228.49	.V Q	.	.	.	.
6.500	1282.2166	4247.33	.V Q	.	.	.	.
6.583	1311.5992	4266.37	.V Q	.	.	.	.
6.667	1341.1145	4285.62	.V Q	.	.	.	.
6.750	1370.7637	4305.06	.V Q	.	.	.	.
6.833	1400.5480	4324.68	.V Q	.	.	.	.
6.917	1430.4691	4344.55	.V Q	.	.	.	.
7.000	1460.5282	4364.58	.V Q	.	.	.	.
7.083	1490.7269	4384.85	.V Q	.	.	.	.
7.167	1521.0667	4405.33	.V Q	.	.	.	.
7.250	1551.5490	4426.03	.V Q	.	.	.	.
7.333	1582.1752	4446.93	.V Q	.	.	.	.
7.417	1612.9471	4468.08	.V Q	.	.	.	.
7.500	1643.8662	4489.45	.V Q	.	.	.	.
7.583	1674.9342	4511.07	.V Q	.	.	.	.
7.667	1706.1526	4532.91	.V Q	.	.	.	.
7.750	1737.5233	4555.02	.V Q	.	.	.	.
7.833	1769.0479	4577.36	.V Q	.	.	.	.
7.917	1800.7281	4599.98	.V Q	.	.	.	.
8.000	1832.5659	4622.84	.V Q	.	.	.	.
8.083	1864.5631	4645.99	.V Q	.	.	.	.
8.167	1896.7214	4669.39	.V Q	.	.	.	.
8.250	1929.0430	4693.09	.V Q	.	.	.	.
8.333	1961.5295	4717.05	.V Q	.	.	.	.
8.417	1994.1833	4741.33	.V Q	.	.	.	.
8.500	2027.0062	4765.89	.V Q	.	.	.	.
8.583	2059.9888	4789.07	.V Q	.	.	.	.
8.667	2093.1287	4811.92	.V Q	.	.	.	.
8.750	2126.4282	4835.11	.V Q	.	.	.	.

8.833	2159.8896	4858.58	.	V	Q.	.	.	.
8.917	2193.5151	4882.42	.	V	Q.	.	.	.
9.000	2227.3069	4906.55	.	V	Q.	.	.	.
9.083	2261.2673	4931.05	.	V	Q.	.	.	.
9.167	2295.3987	4955.88	.	V	Q.	.	.	.
9.250	2329.7036	4981.08	.	V	Q.	.	.	.
9.333	2364.1846	5006.63	.	V	Q.	.	.	.
9.417	2398.8442	5032.58	.	V	Q	.	.	.
9.500	2433.6851	5058.88	.	V	Q	.	.	.
9.583	2468.7100	5085.60	.	V	Q	.	.	.
9.667	2503.9214	5112.70	.	V	Q	.	.	.
9.750	2539.3225	5140.25	.	V	Q	.	.	.
9.833	2574.9160	5168.18	.	V	Q	.	.	.
9.917	2610.7051	5196.59	.	V	Q	.	.	.
10.000	2646.6926	5225.40	.	V	Q	.	.	.
10.083	2682.8821	5254.71	.	V	Q	.	.	.
10.167	2719.2764	5284.45	.	V	Q	.	.	.
10.250	2755.8792	5314.71	.	V	Q	.	.	.
10.333	2792.6934	5345.44	.	V	Q	.	.	.
10.417	2829.7229	5376.71	.	V	Q	.	.	.
10.500	2866.9712	5408.46	.	V	Q	.	.	.
10.583	2904.4421	5440.80	.	V	Q	.	.	.
10.667	2942.1394	5473.65	.	V	Q	.	.	.
10.750	2980.0671	5507.11	.	V	Q	.	.	.
10.833	3018.2292	5541.12	.	V	.Q	.	.	.
10.917	3056.6299	5575.78	.	V	.Q	.	.	.
11.000	3095.2732	5611.02	.	V	.Q	.	.	.
11.083	3134.1641	5646.94	.	V	.Q	.	.	.
11.167	3173.3066	5683.49	.	V	.Q	.	.	.
11.250	3212.7058	5720.76	.	V	.Q	.	.	.
11.333	3252.3662	5758.69	.	V	.Q	.	.	.
11.417	3292.2932	5797.41	.	V	.Q	.	.	.
11.500	3332.4917	5836.82	.	V	.Q	.	.	.
11.583	3372.9673	5877.06	.	V	.Q	.	.	.
11.667	3413.7253	5918.05	.	V	.Q	.	.	.
11.750	3454.7717	5959.93	.	V	.Q	.	.	.
11.833	3496.1121	6002.61	.	V	.Q	.	.	.
11.917	3537.7529	6046.25	.	V	.Q	.	.	.
12.000	3579.7002	6090.74	.	V	.Q	.	.	.
12.083	3622.0518	6149.44	.	V	.Q	.	.	.
12.167	3664.9045	6222.22	.	V	.Q	.	.	.
12.250	3708.2651	6295.94	.	V	.Q	.	.	.
12.333	3752.1392	6370.52	.	V	.Q	.	.	.
12.417	3796.5337	6446.10	.	V	.Q	.	.	.
12.500	3841.4849	6526.90	.	V	.Q	.	.	.
12.583	3887.0630	6617.94	.	V	.Q	.	.	.
12.667	3933.2766	6710.21	.	V	.Q	.	.	.
12.750	3980.1487	6805.83	.	V	.Q	.	.	.
12.833	4027.8562	6927.14	.	V	.Q	.	.	.
12.917	4076.4739	7059.27	.	V	.Q	.	.	.
13.000	4126.1284	7209.86	.	V	.Q	.	.	.
13.083	4176.9512	7379.44	.	V	.Q	.	.	.
13.167	4228.9951	7556.80	.	V	.Q	.	.	.
13.250	4282.2393	7731.07	.	V	.Q	.	.	.
13.333	4336.7729	7918.27	.	V	.Q	.	.	.
13.417	4392.8037	8135.67	.	V	.Q	.	.	.
13.500	4450.1089	8320.74	.	V	.Q	.	.	.
13.583	4508.7310	8511.96	.	V	.Q	.	.	.

13.667	4568.8882	8734.81	.	V	Q	.	.	.
13.750	4630.5767	8957.20	.	.V	Q	.	.	.
13.833	4693.6211	9154.05	.	.V	Q	.	.	.
13.917	4758.1724	9372.81	.	.V	Q	.	.	.
14.000	4824.3374	9607.17	.	.V	Q.	.	.	.
14.083	4892.4287	9886.89	.	.V	Q.	.	.	.
14.167	4962.2715	10141.16	.	.V	Q	.	.	.
14.250	5033.9292	10404.67	.	.V	Q	.	.	.
14.333	5107.7183	10714.15	.	.V	.Q	.	.	.
14.417	5183.5874	11016.18	.	.V	.Q	.	.	.
14.500	5261.7554	11349.99	.	.V	.Q	.	.	.
14.583	5342.0269	11655.42	.	.V	.Q	.	.	.
14.667	5424.1592	11925.62	.	.V	.Q	.	.	.
14.750	5508.1445	12194.70	.	.V	.Q	.	.	.
14.833	5594.3589	12518.35	.	.V	.Q	.	.	.
14.917	5683.0884	12883.49	.	.V	.Q	.	.	.
15.000	5774.0752	13211.27	.	.V	.Q	.	.	.
15.083	5867.2661	13531.32	.	.V	.Q	.	.	.
15.167	5962.7891	13869.90	.	.V	.Q	.	.	.
15.250	6060.3970	14172.67	.	.V	.Q	.	.	.
15.333	6160.1733	14487.56	.	.V	.Q	.	.	.
15.417	6262.0737	14795.91	.	.V	.Q	.	.	.
15.500	6365.5449	15024.00	.	.V	.Q	.	.	.
15.583	6470.5991	15253.86	.	.V	.Q	.	.	.
15.667	6577.4487	15514.59	.	.V	.Q	.	.	.
15.750	6686.0366	15766.99	.	.V	.Q	.	.	.
15.833	6796.0576	15975.02	.	.V	.Q	.	.	.
15.917	6907.5674	16191.21	.	.V	.Q	.	.	.
16.000	7020.7261	16430.67	.	.V	.Q	.	.	.
16.083	7136.4917	16809.18	.	.V	.Q	.	.	.
16.167	7254.2124	17093.06	.	.V	.Q	.	.	.
16.250	7372.8208	17221.92	.	.V	.Q	.	.	.
16.333	7492.4585	17371.41	.	.V	.Q	.	.	.
16.417	7613.0273	17506.58	.	.V	.Q	.	.	.
16.500	7735.0156	17712.68	.	.V	.Q	.	.	.
16.583	7858.5107	17931.46	.	.V	.Q	.	.	.
16.667	7982.6455	18024.38	.	.V	.Q	.	.	.
16.750	8107.4116	18116.01	.	.V	.Q	.	.	.
16.833	8234.8271	18500.78	.	.V	.Q	.	.	.
16.917	8364.1406	18776.29	.	.V	.Q	.	.	.
17.000	8495.1924	19028.67	.	.V	.Q	.	.	.
17.083	8627.5654	19220.62	.	.V	.Q	.	.	.
17.167	8761.0195	19377.61	.	.V	.Q	.	.	.
17.250	8894.6230	19399.19	.	.V	.Q	.	.	.
17.333	9029.2852	19552.93	.	.V	.Q	.	.	.
17.417	9165.5986	19792.67	.	.V	.Q	.	.	.
17.500	9299.9873	19513.28	.	.V	.Q	.	.	.
17.583	9434.9863	19601.83	.	.V	.Q	.	.	.
17.667	9571.6436	19842.60	.	.V	.Q	.	.	.
17.750	9708.0137	19800.90	.	.V	.Q	.	.	.
17.833	9842.2461	19490.59	.	.V	.Q	.	.	.
17.917	9977.8047	19683.05	.	.V	.Q	.	.	.
18.000	10114.4355	19838.76	.	.V	.Q	.	.	.
18.083	10252.7402	20081.83	.	.V	.Q	.	.	.
18.167	10387.5869	19579.81	.	.V	.Q	.	.	.
18.250	10522.2988	19560.12	.	.V	.Q	.	.	.
18.333	10659.6396	19941.91	.	.V	.Q	.	.	.
18.417	10796.2734	19839.19	.	.V	.Q	.	.	.

18.500	10933.6377	19945.31	.	.	.	V	.	Q.
18.583	11067.4219	19425.48	.	.	.	V	.	Q.
18.667	11198.4258	19021.73	.	.	.	V	.	Q.
18.750	11329.2402	18994.28	.	.	.	V	.	Q.
18.833	11462.4795	19346.33	.	.	.	V	.	Q.
18.917	11597.1572	19555.25	.	.	.	V	.	Q.
19.000	11727.1104	18869.15	.	.	.	V	.	Q.
19.083	11854.0762	18435.47	.	.	.	V	.	Q.
19.167	11980.8721	18410.78	.	.	.	V	.	Q.
19.250	12104.9932	18022.38	.	.	.	V	.	Q.
19.333	12227.7734	17827.71	.	.	.	V	.	Q.
19.417	12347.5986	17398.57	.	.	.	V	.	Q.
19.500	12463.8242	16875.91	.	.	.	V	.	Q.
19.583	12578.3623	16630.90	.	.	.	V	.	Q.
19.667	12691.5469	16434.41	.	.	.	V	.	Q.
19.750	12803.1035	16197.96	.	.	.	V	.	Q.
19.833	12912.1416	15832.29	.	.	.	V	.	Q.
19.917	13018.2578	15408.01	.	.	.	Q	.	.
20.000	13121.5908	15003.96	.	.	.	Q.V	.	.
20.083	13221.7334	14540.67	.	.	.	Q.V	.	.
20.167	13319.1670	14147.32	.	.	.	Q.V	.	.
20.250	13413.7510	13733.62	.	.	.	Q.V	.	.
20.333	13505.8271	13369.53	.	.	.	Q.V	.	.
20.417	13595.1914	12975.71	.	.	.	Q.V	.	.
20.500	13681.9463	12596.79	.	.	.	Q.V	.	.
20.583	13766.3291	12252.34	.	.	.	Q.V	.	.
20.667	13848.4219	11919.93	.	.	.	Q.V	.	.
20.750	13928.3408	11604.20	.	.	.	Q.V	.	.
20.833	14005.8115	11248.81	.	.	.	Q.V	.	.
20.917	14080.0283	10776.21	.	.	.	Q.V	.	.
21.000	14151.8867	10433.82	.	.	.	Q.V	.	.
21.083	14221.8291	10155.61	.	.	.	Q.V	.	.
21.167	14289.7559	9862.93	.	.	.	Q.V	.	.
21.250	14355.7412	9581.00	.	.	.	Q.V	.	.
21.333	14419.4297	9247.56	.	.	.	Q.V	.	.
21.417	14481.4551	9006.08	.	.	.	Q.V	.	.
21.500	14542.0830	8803.14	.	.	.	Q.V	.	.
21.583	14601.3467	8605.13	.	.	.	Q.V	.	.
21.667	14659.1934	8399.30	.	.	.	Q.V	.	.
21.750	14715.5762	8186.82	.	.	.	Q.V	.	.
21.833	14770.4863	7973.02	.	.	.	Q.V	.	.
21.917	14823.5596	7706.20	.	.	.	Q.V	.	.
22.000	14874.9951	7468.47	.	.	.	Q.V	.	.
22.083	14925.3291	7308.51	.	.	.	Q.V	.	.
22.167	14974.6318	7158.82	.	.	.	Q.V	.	.
22.250	15022.9551	7016.56	.	.	.	Q.V	.	.
22.333	15070.3105	6875.95	.	.	.	Q.V	.	.
22.417	15116.7393	6741.50	.	.	.	Q.V	.	.
22.500	15162.2549	6608.86	.	.	.	Q.V	.	.
22.583	15206.8496	6475.08	.	.	.	Q.V	.	.
22.667	15250.5518	6345.51	.	.	.	Q.V	.	.
22.750	15293.3682	6216.93	.	.	.	Q.V	.	.
22.833	15335.3135	6090.52	.	.	.	Q.V	.	.
22.917	15376.5186	5982.92	.	.	.	Q.V	.	.
23.000	15417.0537	5885.67	.	.	.	Q.V	.	.
23.083	15456.9355	5790.86	.	.	.	Q.V	.	.
23.167	15496.1797	5698.18	.	.	.	Q.V	.	.
23.250	15534.8076	5608.80	.	.	.	Q.V	.	.

23.333	15572.8916	5529.74	.	.	.	.Q	.	V
23.417	15610.4473	5453.14	.	.	.	Q	.	V
23.500	15647.4873	5378.23	.	.	.	Q	.	V
23.583	15684.0225	5304.87	.	.	.	Q	.	V
23.667	15720.0615	5232.92	.	.	.	Q	.	V
23.750	15755.6152	5162.45	.	.	.	Q	.	V
23.833	15790.6934	5093.34	.	.	.	Q	.	V
23.917	15825.3828	5036.91	.	.	.	Q	.	V
24.000	15859.7451	4989.40	.	.	.	Q.	.	V
24.083	15893.7363	4935.53	.	.	.	Q.	.	V
24.167	15927.3125	4875.26	.	.	.	Q.	.	V
24.250	15960.4873	4817.01	.	.	.	Q.	.	V
24.333	15993.2666	4759.60	.	.	.	Q.	.	V
24.417	16025.6406	4700.78	.	.	.	Q.	.	V
24.500	16057.5781	4637.26	.	.	.	Q.	.	V
24.583	16088.8506	4540.81	.	.	.	Q.	.	V
24.667	16119.6152	4466.97	.	.	.	Q.	.	V
24.750	16149.9502	4404.70	.	.	.	Q.	.	V
24.833	16179.7783	4331.05	.	.	.	Q.	.	V
24.917	16209.0469	4249.74	.	.	.	Q.	.	V
25.000	16237.6865	4158.41	.	.	.	Q.	.	V
25.083	16265.6348	4058.15	.	.	.	Q.	.	V
25.167	16292.8721	3954.81	.	.	.	Q.	.	V
25.250	16319.4180	3854.41	.	.	.	Q.	.	V
25.333	16345.2324	3748.25	.	.	.	Q.	.	V
25.417	16370.2139	3627.25	.	.	.	Q.	.	V
25.500	16394.4883	3524.71	.	.	.	Q.	.	V
25.583	16418.0625	3423.12	.	.	.	Q.	.	V
25.667	16440.8398	3307.14	.	.	.	Q.	.	V
25.750	16462.8301	3193.00	.	.	.	Q.	.	V
25.833	16484.1387	3093.98	.	.	.	Q.	.	V
25.917	16504.6953	2984.81	.	.	.	Q.	.	V
26.000	16524.4531	2868.82	.	.	.	Q.	.	V
26.083	16543.3008	2736.57	.	.	.	Q.	.	V
26.167	16561.3848	2625.73	.	.	.	Q.	.	V
26.250	16578.6777	2510.91	.	.	.	Q.	.	V
26.333	16595.0176	2372.56	.	.	.	Q.	.	V
26.417	16610.4395	2239.16	.	.	.	Q.	.	V
26.500	16624.8457	2091.84	.	.	.	Q.	.	V
26.583	16638.4004	1968.26	.	.	.	Q.	.	V
26.667	16651.2480	1865.47	.	.	.	Q.	.	V
26.750	16663.4043	1765.05	.	.	.	Q.	.	V
26.833	16674.7559	1648.12	.	.	.	Q.	.	V
26.917	16685.1836	1514.07	.	.	.	Q.	.	V
27.000	16694.8828	1408.34	.	.	.	Q.	.	V
27.083	16703.9395	1315.12	.	.	.	Q.	.	V
27.167	16712.3027	1214.36	.	.	.	Q.	.	V
27.250	16720.0820	1129.69	.	.	.	Q.	.	V
27.333	16727.2656	1043.02	.	.	.	Q.	.	V
27.417	16733.9043	963.92	.	.	.	Q.	.	V
27.500	16740.1094	900.98	.	.	.	Q.	.	V
27.583	16745.8926	839.74	.	.	.	Q.	.	V
27.667	16751.2461	777.40	.	.	.	Q.	.	V
27.750	16756.1738	715.39	.	.	.	Q.	.	V
27.833	16760.7070	658.36	.	.	.	Q.	.	V
27.917	16764.8770	605.48	.	.	.	Q.	.	V
28.000	16768.7109	556.65	.	.	.	Q.	.	V
28.083	16772.2539	514.44	.	.	.	Q.	.	V

28.167	16775.5293	475.70	Q	.	.	.	V.
28.250	16778.5820	443.14	Q	.	.	.	V.
28.333	16781.4141	411.10	Q	.	.	.	V.
28.417	16784.0410	381.42	Q	.	.	.	V.
28.500	16786.4707	352.77	Q	.	.	.	V.
28.583	16788.7051	324.56	Q	.	.	.	V.
28.667	16790.7598	298.40	Q	.	.	.	V.
28.750	16792.6387	272.81	Q	.	.	.	V.
28.833	16794.3457	247.79	Q	.	.	.	V.
28.917	16795.9199	228.54	Q	.	.	.	V.
29.000	16797.3750	211.27	Q	.	.	.	V.
29.083	16798.7129	194.13	Q	.	.	.	V.
29.167	16799.9316	177.10	Q	.	.	.	V.
29.250	16801.0430	161.37	Q	.	.	.	V.
29.333	16802.0762	150.14	Q	.	.	.	V.
29.417	16803.0371	139.41	Q	.	.	.	V.
29.500	16803.9238	128.75	Q	.	.	.	V.
29.583	16804.7383	118.17	Q	.	.	.	V.
29.667	16805.4805	107.67	Q	.	.	.	V.
29.750	16806.1504	97.24	Q	.	.	.	V.
29.833	16806.7480	86.89	Q	.	.	.	V.
29.917	16807.3027	80.54	Q	.	.	.	V.
30.000	16807.8379	77.64	Q	.	.	.	V.
30.083	16808.3535	74.78	Q	.	.	.	V.
30.167	16808.8496	71.94	Q	.	.	.	V.
30.250	16809.3262	69.13	Q	.	.	.	V.
30.333	16809.7832	66.35	Q	.	.	.	V.
30.417	16810.2207	63.56	Q	.	.	.	V.
30.500	16810.6387	60.83	Q	.	.	.	V.
30.583	16811.0391	58.12	Q	.	.	.	V.
30.667	16811.4199	55.40	Q	.	.	.	V.
30.750	16811.7832	52.73	Q	.	.	.	V.
30.833	16812.1289	50.07	Q	.	.	.	V.
30.917	16812.4551	47.42	Q	.	.	.	V.
31.000	16812.7637	44.80	Q	.	.	.	V.
31.083	16813.0547	42.21	Q	.	.	.	V.
31.167	16813.3281	39.61	Q	.	.	.	V.
31.250	16813.5840	37.05	Q	.	.	.	V.
31.333	16813.8223	34.50	Q	.	.	.	V.
31.417	16814.0430	31.98	Q	.	.	.	V.
31.500	16814.2461	29.47	Q	.	.	.	V.
31.583	16814.4316	26.98	Q	.	.	.	V.
31.667	16814.5996	24.51	Q	.	.	.	V.
31.750	16814.7520	22.05	Q	.	.	.	V.
31.833	16814.8867	19.61	Q	.	.	.	V.
31.917	16815.0059	17.18	Q	.	.	.	V.
32.000	16815.1074	14.77	Q	.	.	.	V.
32.083	16815.1934	12.38	Q	.	.	.	V.
32.167	16815.2617	10.00	Q	.	.	.	V.
32.250	16815.3145	7.63	Q	.	.	.	V.
32.333	16815.3516	5.28	Q	.	.	.	V.
32.417	16815.3711	2.94	Q	.	.	.	V.
32.500	16815.3750	0.62	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%	1950.0
10%	1435.0
20%	1175.0
30%	660.0
40%	505.0
50%	420.0
60%	355.0
70%	300.0
80%	235.0
90%	150.0

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134T *
* 50-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV5034TS.DAT
TIME/DATE OF STUDY: 14:13 01/02/2019

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 = 1.294 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

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH 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

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

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

Analysis prepared by:

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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 137 *
* 50-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV50137S.DAT
TIME/DATE OF STUDY: 14:25 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 137.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 67798.398 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.589 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.417
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.85
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.17
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.14
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.15
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.48

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.291
30-MINUTE FACTOR = 0.350
1-HOUR FACTOR = 0.394
3-HOUR FACTOR = 0.738
6-HOUR FACTOR = 0.886
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.219

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.184	1508.095
2	0.552	3016.195
3	0.920	3016.190
4	1.287	3016.196
5	1.655	3016.190
6	2.054	3265.681
7	2.595	4439.672
8	3.155	4589.863
9	3.715	4589.844
10	4.505	6480.287
11	5.535	8448.343
12	6.743	9905.090
13	8.158	11598.400
14	9.833	13732.029
15	11.461	13350.146
16	13.070	13195.844
17	15.081	16488.740
18	17.108	16620.438
19	18.825	14075.572
20	20.684	15245.499
21	22.986	18873.447
22	25.116	17463.477
23	26.955	15080.913
24	29.109	17658.465
25	31.433	19055.281
26	34.211	22781.521
27	36.545	19135.354
28	38.751	18087.568
29	41.806	25044.697
30	44.714	23850.592
31	47.856	25760.809
32	51.007	25838.535
33	53.347	19184.648
34	55.570	18226.287
35	58.075	20539.178
36	61.139	25121.172
37	64.027	23682.691
38	66.287	18532.531
39	68.527	18362.189
40	70.809	18712.256
41	72.770	16080.390
42	74.817	16780.582
43	76.574	14405.510
44	78.007	11751.187
45	79.438	11733.107
46	80.919	12144.853
47	82.385	12016.675
48	83.737	11090.092

49	84.994	10305.199
50	86.166	9607.385
51	87.168	8220.513
52	88.108	7703.111
53	88.879	6319.930
54	89.636	6211.708
55	90.352	5869.713
56	91.030	5554.930
57	91.707	5554.993
58	92.348	5258.977
59	92.961	5025.079
60	93.574	5027.581
61	94.121	4482.841
62	94.534	3383.228
63	94.943	3353.389
64	95.351	3348.384
65	95.760	3353.389
66	96.104	2816.031
67	96.357	2074.740
68	96.609	2072.237
69	96.861	2067.233
70	97.114	2072.237
71	97.366	2067.295
72	97.619	2072.237
73	97.871	2069.735
74	98.030	1296.102
75	98.090	497.510
76	98.150	492.568
77	98.211	495.070
78	98.271	497.510
79	98.331	492.568
80	98.392	492.568
81	98.452	495.007
82	98.513	497.572
83	98.573	495.007
84	98.633	492.568
85	98.694	497.572
86	98.754	497.510
87	98.814	487.563
88	98.875	497.572
89	98.935	497.510
90	98.995	492.568
91	99.056	497.510
92	99.116	492.568
93	99.176	492.568
94	99.236	492.568
95	99.296	492.568
96	99.356	492.568
97	99.416	492.568
98	99.476	492.568
99	99.537	492.568
100	99.597	492.568
101	99.657	492.568
102	99.717	492.568
103	99.777	492.568
104	99.837	492.568
105	99.897	492.568
106	99.957	492.568

107

100.000

352.129

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11884.4062
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 17003.1621

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.	5050.0	10100.0	15150.0	20200.0
0.083	0.0471	6.84	Q	.	.	.	.
0.167	0.1886	20.54	Q	.	.	.	.
0.250	0.4246	34.28	Q	.	.	.	.
0.333	0.7556	48.05	Q	.	.	.	.
0.417	1.1817	61.87	Q	.	.	.	.
0.500	1.7111	76.87	Q	.	.	.	.
0.583	2.3807	97.23	Q	.	.	.	.
0.667	3.1956	118.33	Q	.	.	.	.
0.750	4.1563	139.50	Q	.	.	.	.
0.833	5.3223	169.30	Q	.	.	.	.
0.917	6.7557	208.12	Q	.	.	.	.
1.000	8.5026	253.66	Q	.	.	.	.
1.083	10.6171	307.02	Q	.	.	.	.
1.167	13.1667	370.21	Q	.	.	.	.
1.250	16.1410	431.86	Q	.	.	.	.
1.333	19.5363	493.00	Q	.	.	.	.
1.417	23.4568	569.26	VQ	.	.	.	.
1.500	27.9082	646.34	VQ	.	.	.	.
1.583	32.8126	712.12	VQ	.	.	.	.
1.667	38.2081	783.42	VQ	.	.	.	.
1.750	44.2094	871.39	VQ	.	.	.	.
1.833	50.7743	953.23	VQ	.	.	.	.
1.917	57.8303	1024.53	V Q	.	.	.	.
2.000	65.4593	1107.74	V Q	.	.	.	.
2.083	73.7069	1197.54	V Q	.	.	.	.
2.167	82.6913	1304.54	V Q	.	.	.	.
2.250	92.3009	1395.31	V Q	.	.	.	.
2.333	102.5051	1481.66	V Q	.	.	.	.
2.417	113.5231	1599.81	V Q	.	.	.	.
2.500	125.3200	1712.92	V Q	.	.	.	.
2.583	137.9582	1835.06	V Q	.	.	.	.
2.667	151.4426	1957.93	V Q	.	.	.	.
2.750	165.5681	2051.02	V Q	.	.	.	.
2.833	180.3070	2140.09	V Q	.	.	.	.
2.917	195.7337	2239.95	V Q	.	.	.	.
3.000	211.9935	2360.92	V Q	.	.	.	.
3.083	229.0440	2475.74	V Q	.	.	.	.
3.167	246.7273	2567.61	V Q	.	.	.	.
3.250	265.0400	2659.02	V Q	.	.	.	.
3.333	283.9955	2752.33	V Q	.	.	.	.
3.417	303.5136	2834.03	V Q	.	.	.	.
3.500	323.6184	2919.21	V Q	.	.	.	.
3.583	344.2376	2993.91	V Q	.	.	.	.
3.667	365.2904	3056.87	V Q	.	.	.	.
3.750	386.7778	3119.97	V Q	.	.	.	.
3.833	408.7145	3185.21	V Q	.	.	.	.
3.917	431.0981	3250.10	.V Q	.	.	.	.

4.000	453.9015	3311.06	.V Q	.	.	.	.
4.083	477.1018	3368.69	.V Q	.	.	.	.
4.167	500.6791	3423.42	.V Q	.	.	.	.
4.250	524.5914	3472.06	.V Q	.	.	.	.
4.333	548.8242	3518.60	.V Q	.	.	.	.
4.417	573.3356	3559.06	.V Q	.	.	.	.
4.500	598.1238	3599.25	.V Q	.	.	.	.
4.583	623.1792	3638.04	.V Q	.	.	.	.
4.667	648.4936	3675.65	.V Q	.	.	.	.
4.750	674.0681	3713.41	.V Q	.	.	.	.
4.833	699.8949	3750.06	.V Q	.	.	.	.
4.917	725.9680	3785.81	.V Q	.	.	.	.
5.000	752.2889	3821.80	.V Q	.	.	.	.
5.083	778.8417	3855.47	.V Q	.	.	.	.
5.167	805.5938	3884.39	.V Q	.	.	.	.
5.250	832.5450	3913.32	.V Q	.	.	.	.
5.333	859.6968	3942.44	. V Q	.	.	.	.
5.417	887.0504	3971.74	. V Q	.	.	.	.
5.500	914.5904	3998.82	. V Q	.	.	.	.
5.583	942.2948	4022.68	. V Q	.	.	.	.
5.667	970.1650	4046.75	. V Q	.	.	.	.
5.750	998.2017	4070.93	. V Q	.	.	.	.
5.833	1026.4066	4095.36	. V Q	.	.	.	.
5.917	1054.7806	4119.91	. V Q	.	.	.	.
6.000	1083.3254	4144.70	. V Q	.	.	.	.
6.083	1112.0420	4169.64	. V Q	.	.	.	.
6.167	1140.9077	4191.30	. V Q	.	.	.	.
6.250	1169.8987	4209.48	. V Q	.	.	.	.
6.333	1199.0161	4227.86	. V Q	.	.	.	.
6.417	1228.2612	4246.39	. V Q	.	.	.	.
6.500	1257.6356	4265.16	. V Q	.	.	.	.
6.583	1287.1401	4284.05	. V Q	.	.	.	.
6.667	1316.7764	4303.17	. V Q	.	.	.	.
6.750	1346.5454	4322.46	. V Q	.	.	.	.
6.833	1376.4490	4342.00	. V Q	.	.	.	.
6.917	1406.4882	4361.69	. V Q	.	.	.	.
7.000	1436.6646	4381.61	. V Q	.	.	.	.
7.083	1466.9795	4401.72	. V Q	.	.	.	.
7.167	1497.4347	4422.09	. V Q	.	.	.	.
7.250	1528.0310	4442.59	. V Q	.	.	.	.
7.333	1558.7706	4463.39	. V Q	.	.	.	.
7.417	1589.6548	4484.38	. V Q	.	.	.	.
7.500	1620.6853	4505.62	. V Q	.	.	.	.
7.583	1651.8635	4527.08	. V Q	.	.	.	.
7.667	1683.1913	4548.78	. V Q	.	.	.	.
7.750	1714.6699	4570.70	. V Q	.	.	.	.
7.833	1746.3015	4592.90	. V Q	.	.	.	.
7.917	1778.0874	4615.31	. V Q	.	.	.	.
8.000	1810.0298	4638.03	. V Q	.	.	.	.
8.083	1842.1301	4660.97	. V Q	.	.	.	.
8.167	1874.3906	4684.22	. V Q	.	.	.	.
8.250	1906.8127	4707.70	. V Q	.	.	.	.
8.333	1939.3989	4731.51	. V Q	.	.	.	.
8.417	1972.1506	4755.55	. V Q	.	.	.	.
8.500	2005.0703	4779.94	. V Q	.	.	.	.
8.583	2038.1597	4804.58	. V Q	.	.	.	.
8.667	2071.4211	4829.57	. V Q	.	.	.	.
8.750	2104.8567	4854.83	. V Q	.	.	.	.

8.833	2138.4688	4880.46	.	V	Q.	.	.	.
8.917	2172.2546	4905.72	.	V	Q.	.	.	.
9.000	2206.2063	4929.78	.	V	Q.	.	.	.
9.083	2240.3257	4954.12	.	V	Q.	.	.	.
9.167	2274.6152	4978.85	.	V	Q.	.	.	.
9.250	2309.0771	5003.89	.	V	Q.	.	.	.
9.333	2343.7144	5029.33	.	V	Q.	.	.	.
9.417	2378.5291	5055.09	.	V	Q.	.	.	.
9.500	2413.5242	5081.29	.	V	Q	.	.	.
9.583	2448.7019	5107.82	.	V	Q	.	.	.
9.667	2484.0654	5134.80	.	V	Q	.	.	.
9.750	2519.6172	5162.12	.	V	Q	.	.	.
9.833	2555.3606	5189.93	.	V	Q	.	.	.
9.917	2591.2979	5218.10	.	V	Q	.	.	.
10.000	2627.4326	5246.78	.	V	Q	.	.	.
10.083	2663.7676	5275.84	.	V	Q	.	.	.
10.167	2700.3064	5305.43	.	V	Q	.	.	.
10.250	2737.0518	5335.43	.	V	Q	.	.	.
10.333	2774.0076	5365.98	.	V	Q	.	.	.
10.417	2811.1768	5396.97	.	V	Q	.	.	.
10.500	2848.5635	5428.54	.	V	Q	.	.	.
10.583	2886.1707	5460.57	.	V	Q	.	.	.
10.667	2924.0027	5493.22	.	V	Q	.	.	.
10.750	2962.0630	5526.36	.	V	Q	.	.	.
10.833	3000.3560	5560.15	.	V	.Q	.	.	.
10.917	3038.8853	5594.46	.	V	.Q	.	.	.
11.000	3077.6555	5629.45	.	V	.Q	.	.	.
11.083	3116.6707	5665.00	.	V	.Q	.	.	.
11.167	3155.9358	5701.28	.	V	.Q	.	.	.
11.250	3195.4548	5738.15	.	V	.Q	.	.	.
11.333	3235.2332	5775.80	.	V	.Q	.	.	.
11.417	3275.2749	5814.07	.	V	.Q	.	.	.
11.500	3315.5859	5853.17	.	V	.Q	.	.	.
11.583	3356.1709	5892.94	.	V	.Q	.	.	.
11.667	3397.0359	5933.58	.	V	.Q	.	.	.
11.750	3438.1858	5974.95	.	V	.Q	.	.	.
11.833	3479.6270	6017.25	.	V	.Q	.	.	.
11.917	3521.3647	6060.33	.	V	.Q	.	.	.
12.000	3563.4060	6104.41	.	V	.Q	.	.	.
12.083	3605.8455	6162.22	.	V	.Q	.	.	.
12.167	3648.7791	6233.95	.	V	.Q	.	.	.
12.250	3692.2119	6306.45	.	V	.Q	.	.	.
12.333	3736.1509	6379.93	.	V	.Q	.	.	.
12.417	3780.6016	6454.24	.	V	.Q	.	.	.
12.500	3825.5859	6531.74	.	V	.Q	.	.	.
12.583	3871.1792	6620.16	.	V.	Q	.	.	.
12.667	3917.3979	6710.95	.	V.	Q	.	.	.
12.750	3964.2480	6802.63	.	V.	Q	.	.	.
12.833	4011.8489	6911.63	.	V.	Q	.	.	.
12.917	4060.3223	7038.35	.	V.	Q	.	.	.
13.000	4109.7617	7178.61	.	V.	Q	.	.	.
13.083	4160.2725	7334.14	.	V.	Q	.	.	.
13.167	4211.9868	7508.93	.	V.	Q	.	.	.
13.250	4264.8872	7681.15	.	V	Q	.	.	.
13.333	4318.9712	7852.99	.	V	Q	.	.	.
13.417	4374.4380	8053.80	.	V	Q	.	.	.
13.500	4431.3022	8256.67	.	V	Q	.	.	.
13.583	4489.4180	8438.43	.	V	Q	.	.	.

13.667	4548.8623	8631.28	.	V	Q	.	.	.
13.750	4609.8540	8856.02	.	V	Q	.	.	.
13.833	4672.3174	9069.70	.	V	Q	.	.	.
13.917	4736.1172	9263.74	.	.V	Q	.	.	.
14.000	4801.4141	9481.11	.	.V	Q	.	.	.
14.083	4868.3760	9722.89	.	.V	Q.	.	.	.
14.167	4937.3086	10008.99	.	.V	Q.	.	.	.
14.250	5007.9956	10263.74	.	.V	Q	.	.	.
14.333	5080.3765	10509.72	.	.V	Q	.	.	.
14.417	5154.8623	10815.34	.	.V	.Q	.	.	.
14.500	5231.3965	11112.74	.	.V	.Q	.	.	.
14.583	5310.1514	11435.20	.	.V	.Q	.	.	.
14.667	5391.1382	11759.26	.	.V	.Q	.	.	.
14.750	5473.9580	12025.45	.	.V	.Q	.	.	.
14.833	5558.6543	12297.88	.	.V	.Q	.	.	.
14.917	5645.4604	12604.24	.	.V	.Q	.	.	.
15.000	5734.7144	12959.68	.	.V	.Q	.	.	.
15.083	5826.4043	13313.37	.	.V	.Q	.	.	.
15.167	5920.3213	13636.72	.	.V	.Q	.	.	.
15.250	6016.4102	13952.11	.	.V	.Q	.	.	.
15.333	6114.6602	14265.91	.	.V	.Q	.	.	.
15.417	6214.9531	14562.55	.	.V	.Q	.	.	.
15.500	6317.2046	14846.88	.	.V	.Q.	.	.	.
15.583	6421.1284	15089.74	.	.V	.Q.	.	.	.
15.667	6526.6299	15318.85	.	.V	.Q	.	.	.
15.750	6633.8599	15569.82	.	.V	.Q	.	.	.
15.833	6742.7124	15805.42	.	.V	.Q	.	.	.
15.917	6853.0112	16015.38	.	.V	.Q	.	.	.
16.000	6964.9434	16252.57	.	.V	.Q	.	.	.
16.083	7079.3613	16613.50	.	.V	.Q	.	.	.
16.167	7196.1396	16956.19	.	.V	.Q	.	.	.
16.250	7313.9209	17101.86	.	.V	.Q	.	.	.
16.333	7432.4902	17216.24	.	.V	.Q	.	.	.
16.417	7552.1577	17375.70	.	.V	.Q	.	.	.
16.500	7672.9600	17540.46	.	.V	.Q	.	.	.
16.583	7795.4668	17787.96	.	.V	.Q	.	.	.
16.667	7919.1445	17958.02	.	.V	.Q	.	.	.
16.750	8043.4370	18047.28	.	.V	.Q	.	.	.
16.833	8169.3672	18285.07	.	.V.	.Q	.	.	.
16.917	8297.4004	18590.43	.	.V.	.Q	.	.	.
17.000	8427.4521	18883.49	.	.V.	.Q	.	.	.
17.083	8559.0342	19105.69	.	.V	.Q	.	.	.
17.167	8692.0166	19309.12	.	.V	.Q	.	.	.
17.250	8825.4150	19369.44	.	.V	.Q	.	.	.
17.333	8959.3701	19450.28	.	.V	.Q	.	.	.
17.417	9095.3350	19742.03	.	.V	.Q.	.	.	.
17.500	9231.3301	19746.46	.	.V	.Q.	.	.	.
17.583	9366.2617	19592.06	.	.V	.Q.	.	.	.
17.667	9502.1699	19733.89	.	.V	.Q.	.	.	.
17.750	9639.7783	19980.79	.	.V	.Q.	.	.	.
17.833	9776.2773	19819.64	.	.V	.Q.	.	.	.
17.917	9911.1660	19585.83	.	.V	.Q.	.	.	.
18.000	10047.2832	19764.17	.	.V	.Q.	.	.	.
18.083	10184.3262	19898.61	.	.V	.Q.	.	.	.
18.167	10322.9688	20130.89	.	.V	.Q.	.	.	.
18.250	10458.8076	19723.85	.	.V	.Q.	.	.	.
18.333	10593.4785	19554.17	.	.V	.Q.	.	.	.
18.417	10731.2295	20001.46	.	.V	.Q.	.	.	.

18.500	10868.1504	19880.88	.	.	.	V	.	Q.
18.583	11005.4160	19931.00	.	.	.	V	.	Q.
18.667	11141.2051	19716.51	.	.	.	V	.	Q.
18.750	11272.6514	19085.97	.	.	.	V	.	Q.
18.833	11403.3096	18971.62	.	.	.	V	.	Q.
18.917	11535.3691	19175.01	.	.	.	V	.	Q.
19.000	11669.6328	19495.03	.	.	.	V	.	Q.
19.083	11801.8066	19191.66	.	.	.	V	.	Q.
19.167	11929.4590	18535.13	.	.	.	V	.	Q.
19.250	12055.7344	18335.16	.	.	.	V	.	Q.
19.333	12181.3145	18234.19	.	.	.	V	.	Q.
19.417	12304.0449	17820.42	.	.	.	V	.	Q.
19.500	12425.2861	17604.24	.	.	.	V	.	Q.
19.583	12543.3438	17142.00	.	.	.	V	.	Q.
19.667	12658.2461	16683.84	.	.	.	V	.	Q.
19.750	12771.5654	16453.90	.	.	.	V	.	Q.
19.833	12883.6787	16278.84	.	.	.	V	.	Q.
19.917	12994.1074	16034.29	.	.	.	V	.	Q.
20.000	13101.7764	15633.58	.	.	.	Q	.	.
20.083	13206.6729	15230.94	.	.	.	Q	.	.
20.167	13308.8145	14830.99	.	.	.	Q	.	.
20.250	13408.0049	14402.40	.	.	.	Q	.	.
20.333	13504.6914	14038.87	.	.	.	Q	.	.
20.417	13598.1562	13571.13	.	.	.	Q	.	.
20.500	13689.1982	13219.28	.	.	.	Q	.	.
20.583	13777.5957	12835.31	.	.	.	Q	.	.
20.667	13863.4678	12468.58	.	.	.	Q	.	.
20.750	13947.2695	12168.06	.	.	.	Q	.	.
20.833	14028.9131	11854.67	.	.	.	Q	.	.
20.917	14108.3037	11527.46	.	.	.	Q	.	.
21.000	14185.2246	11168.88	.	.	.	Q	.	.
21.083	14259.4531	10777.92	.	.	.	Q	.	.
21.167	14331.0654	10398.07	.	.	.	Q	.	.
21.250	14400.7637	10120.16	.	.	.	Q	.	.
21.333	14468.5566	9843.58	.	.	.	Q	.	.
21.417	14534.6104	9590.98	.	.	.	Q	.	.
21.500	14598.5664	9286.39	.	.	.	Q	.	.
21.583	14660.5752	9003.70	.	.	.	Q	.	.
21.667	14721.2393	8808.36	.	.	.	Q	.	.
21.750	14780.5645	8614.08	.	.	.	Q	.	.
21.833	14838.5371	8417.66	.	.	.	Q	.	.
21.917	14895.1289	8217.19	.	.	.	Q	.	.
22.000	14950.3613	8019.70	.	.	.	Q	.	.
22.083	15004.2363	7822.62	.	.	.	Q	.	.
22.167	15056.4258	7577.97	.	.	.	Q	.	.
22.250	15107.0674	7353.10	.	.	.	Q	.	.
22.333	15156.6689	7202.11	.	.	.	Q	.	.
22.417	15205.3408	7067.11	.	.	.	Q	.	.
22.500	15253.0869	6932.72	.	.	.	Q	.	.
22.583	15299.9170	6799.79	.	.	.	Q	.	.
22.667	15345.8594	6670.78	.	.	.	Q	.	.
22.750	15390.9209	6542.94	.	.	.	Q	.	.
22.833	15435.1260	6418.56	.	.	.	Q	.	.
22.917	15478.4844	6295.62	.	.	.	Q	.	.
23.000	15520.9834	6170.90	.	.	.	Q	.	.
23.083	15562.6670	6052.42	.	.	.	Q	.	.
23.167	15603.6455	5950.09	.	.	.	Q	.	.
23.250	15643.9697	5855.08	.	.	.	Q	.	.

23.333	15683.6641	5763.59	.	.	.	Q	.	V
23.417	15722.7344	5672.99	.	.	.	Q	.	V
23.500	15761.2217	5588.32	.	.	.	Q	.	V
23.583	15799.1855	5512.32	.	.	.	Q	.	V
23.667	15836.6318	5437.27	.	.	.	Q	.	V
23.750	15873.5752	5364.21	.	.	.	Q	.	V
23.833	15910.0254	5292.50	.	.	.	Q	.	V
23.917	15945.9912	5222.30	.	.	.	Q	.	V
24.000	15981.4834	5153.40	.	.	.	Q	.	V
24.083	16016.4619	5078.92	.	.	.	Q	.	V
24.167	16050.9355	5005.57	.	.	.	Q	.	V
24.250	16084.9717	4941.99	.	.	.	Q	.	V
24.333	16118.6045	4883.43	.	.	.	Q	.	V
24.417	16151.8389	4825.66	.	.	.	Q	.	V
24.500	16184.6719	4767.35	.	.	.	Q	.	V
24.583	16217.0742	4704.82	.	.	.	Q	.	V
24.667	16249.0527	4643.26	.	.	.	Q	.	V
24.750	16280.6045	4581.28	.	.	.	Q	.	V
24.833	16311.6553	4508.63	.	.	.	Q	.	V
24.917	16342.0625	4415.15	.	.	.	Q	.	V
25.000	16371.6895	4301.87	.	.	.	Q	.	V
25.083	16400.6973	4211.85	.	.	.	Q	.	V
25.167	16429.0293	4113.75	.	.	.	Q	.	V
25.250	16456.7012	4017.91	.	.	.	Q	.	V
25.333	16483.6992	3920.10	.	.	.	Q	.	V
25.417	16509.9258	3808.01	.	.	.	Q	.	V
25.500	16535.3809	3696.10	.	.	.	Q	.	V
25.583	16560.1504	3596.43	.	.	.	Q	.	V
25.667	16584.2012	3492.19	.	.	.	Q	.	V
25.750	16607.4258	3372.22	.	.	.	Q	.	V
25.833	16629.8730	3259.44	.	.	.	Q	.	V
25.917	16651.6309	3159.30	.	.	.	Q	.	V
26.000	16672.6426	3051.01	.	.	.	Q	.	V
26.083	16692.8730	2937.41	.	.	.	Q	.	V
26.167	16712.2109	2807.94	.	.	.	Q	.	V
26.250	16730.7793	2696.06	.	.	.	Q	.	V
26.333	16748.6152	2589.87	.	.	.	Q	.	V
26.417	16765.5098	2453.08	.	.	.	Q	.	V
26.500	16781.5059	2322.76	.	.	.	Q	.	V
26.583	16796.5527	2184.77	.	.	.	Q	.	V
26.667	16810.6543	2047.46	.	.	.	Q	.	V
26.750	16824.0234	1941.28	.	.	.	Q	.	V
26.833	16836.6973	1840.23	.	.	.	Q	.	V
26.917	16848.6172	1730.68	.	.	.	Q	.	V
27.000	16859.6660	1604.22	.	.	.	Q	.	V
27.083	16869.8945	1485.21	.	.	.	Q	.	V
27.167	16879.4707	1390.40	.	.	.	Q	.	V
27.250	16888.4043	1297.09	.	.	.	Q	.	V
27.333	16896.6895	1202.91	.	.	.	Q	.	V
27.417	16904.4121	1121.34	.	.	.	Q	.	V
27.500	16911.5547	1037.21	.	.	.	Q	.	V
27.583	16918.1973	964.45	.	.	.	Q	.	V
27.667	16924.4258	904.25	.	.	.	Q	.	V
27.750	16930.2422	844.59	.	.	.	Q	.	V
27.833	16935.6387	783.51	.	.	.	Q	.	V
27.917	16940.6211	723.47	.	.	.	Q	.	V
28.000	16945.2227	668.05	.	.	.	Q	.	V
28.083	16949.4688	616.58	.	.	.	Q	.	V

28.167	16953.3848	568.65	.Q	.	.	.	V.
28.250	16957.0156	527.34	.Q	.	.	.	V.
28.333	16960.3809	488.68	Q	.	.	.	V.
28.417	16963.5254	456.56	Q	.	.	.	V.
28.500	16966.4531	425.16	Q	.	.	.	V.
28.583	16969.1777	395.55	Q	.	.	.	V.
28.667	16971.7090	367.58	Q	.	.	.	V.
28.750	16974.0488	339.81	Q	.	.	.	V.
28.833	16976.2090	313.59	Q	.	.	.	V.
28.917	16978.1973	288.60	Q	.	.	.	V.
29.000	16980.0137	263.79	Q	.	.	.	V.
29.083	16981.6777	241.61	Q	.	.	.	V.
29.167	16983.2246	224.57	Q	.	.	.	V.
29.250	16984.6562	207.79	Q	.	.	.	V.
29.333	16985.9727	191.15	Q	.	.	.	V.
29.417	16987.1758	174.61	Q	.	.	.	V.
29.500	16988.2812	160.62	Q	.	.	.	V.
29.583	16989.3145	150.08	Q	.	.	.	V.
29.667	16990.2754	139.63	Q	.	.	.	V.
29.750	16991.1660	129.27	Q	.	.	.	V.
29.833	16991.9863	118.97	Q	.	.	.	V.
29.917	16992.7363	108.77	Q	.	.	.	V.
30.000	16993.4160	98.61	Q	.	.	.	V.
30.083	16994.0254	88.54	Q	.	.	.	V.
30.167	16994.5898	82.03	Q	.	.	.	V.
30.250	16995.1348	79.19	Q	.	.	.	V.
30.333	16995.6602	76.40	Q	.	.	.	V.
30.417	16996.1680	73.62	Q	.	.	.	V.
30.500	16996.6562	70.85	Q	.	.	.	V.
30.583	16997.1250	68.12	Q	.	.	.	V.
30.667	16997.5762	65.42	Q	.	.	.	V.
30.750	16998.0078	62.73	Q	.	.	.	V.
30.833	16998.4219	60.05	Q	.	.	.	V.
30.917	16998.8164	57.41	Q	.	.	.	V.
31.000	16999.1934	54.79	Q	.	.	.	V.
31.083	16999.5527	52.17	Q	.	.	.	V.
31.167	16999.8945	49.57	Q	.	.	.	V.
31.250	17000.2188	47.04	Q	.	.	.	V.
31.333	17000.5254	44.48	Q	.	.	.	V.
31.417	17000.8145	41.94	Q	.	.	.	V.
31.500	17001.0859	39.44	Q	.	.	.	V.
31.583	17001.3398	36.93	Q	.	.	.	V.
31.667	17001.5781	34.47	Q	.	.	.	V.
31.750	17001.7988	32.02	Q	.	.	.	V.
31.833	17002.0020	29.59	Q	.	.	.	V.
31.917	17002.1895	27.17	Q	.	.	.	V.
32.000	17002.3594	24.77	Q	.	.	.	V.
32.083	17002.5137	22.39	Q	.	.	.	V.
32.167	17002.6523	20.02	Q	.	.	.	V.
32.250	17002.7734	17.67	Q	.	.	.	V.
32.333	17002.8789	15.33	Q	.	.	.	V.
32.417	17002.9688	13.01	Q	.	.	.	V.
32.500	17003.0430	10.70	Q	.	.	.	V.
32.583	17003.1016	8.40	Q	.	.	.	V.
32.667	17003.1445	6.12	Q	.	.	.	V.
32.750	17003.1719	3.86	Q	.	.	.	V
32.833	17003.1836	1.60	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%	1970.0
10%	1440.0
20%	1175.0
30%	675.0
40%	515.0
50%	425.0
60%	360.0
70%	300.0
80%	235.0
90%	155.0

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 END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 138 *
* 50-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV50138S.DAT
TIME/DATE OF STUDY: 14:26 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 138.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69102.102 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.671 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.418
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.85
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.17
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.14
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.13
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.46

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.287
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.392
3-HOUR FACTOR = 0.734
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.120

=====

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.178	1489.907
2	0.535	2979.812
3	0.891	2979.812
4	1.248	2979.815
5	1.605	2979.819
6	1.975	3098.582
7	2.483	4246.107
8	3.026	4534.499
9	3.569	4534.499
10	4.224	5480.863
11	5.203	8177.617
12	6.279	8992.128
13	7.584	10907.998
14	9.130	12919.646
15	10.744	13490.752
16	12.304	13036.946
17	13.944	13704.066
18	16.123	18210.346
19	17.850	14429.661
20	19.523	13980.893
21	21.485	16397.172
22	23.792	19280.854
23	25.685	15816.947
24	27.482	15019.704
25	29.717	18680.035
26	31.972	18843.369
27	34.730	23045.176
28	36.826	17515.842
29	39.133	19283.148
30	42.074	24577.578
31	44.897	23595.018
32	47.973	25699.738
33	51.014	25420.188
34	53.282	18952.908
35	55.435	17993.557
36	57.831	20017.525
37	60.743	24340.203
38	63.652	24306.156
39	65.894	18743.014
40	68.011	17690.096
41	70.319	19290.320
42	72.211	15806.778
43	74.205	16665.357
44	76.047	15394.065
45	77.483	12000.104
46	78.870	11589.367
47	80.276	11747.617
48	81.732	12168.811

49	83.081	11274.143
50	84.354	10643.756
51	85.544	9941.449
52	86.593	8765.604
53	87.553	8021.407
54	88.392	7015.607
55	89.126	6134.074
56	89.857	6105.318
57	90.532	5642.299
58	91.189	5490.617
59	91.843	5468.365
60	92.454	5107.360
61	93.049	4970.087
62	93.643	4962.181
63	94.157	4300.425
64	94.554	3316.877
65	94.951	3311.585
66	95.347	3311.649
67	95.743	3311.649
68	96.084	2851.180
69	96.331	2058.654
70	96.575	2045.584
71	96.820	2045.584
72	97.065	2045.584
73	97.309	2042.906
74	97.554	2045.584
75	97.799	2045.584
76	98.001	1687.194
77	98.069	570.262
78	98.127	486.546
79	98.186	491.774
80	98.244	486.546
81	98.303	491.774
82	98.361	486.546
83	98.420	489.160
84	98.478	486.546
85	98.537	494.388
86	98.596	486.546
87	98.654	486.546
88	98.713	491.774
89	98.771	486.482
90	98.830	491.774
91	98.888	486.546
92	98.946	486.546
93	99.006	497.002
94	99.064	486.546
95	99.122	486.546
96	99.180	486.546
97	99.239	486.546
98	99.297	486.546
99	99.355	486.546
100	99.413	486.546
101	99.471	486.546
102	99.530	486.546
103	99.588	486.546
104	99.646	486.546
105	99.704	486.546
106	99.762	486.546

107	99.821	486.546
108	99.879	486.546
109	99.937	486.546
110	99.995	486.546
111	100.000	38.766

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12080.4570

TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 17204.7598

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.	5075.0	10150.0	15225.0	20300.0
0.083	0.0462	6.71	Q	.	.	.	.
0.167	0.1850	20.15	Q	.	.	.	.
0.250	0.4165	33.62	Q	.	.	.	.
0.333	0.7411	47.13	Q	.	.	.	.
0.417	1.1591	60.69	Q	.	.	.	.
0.500	1.6743	74.82	Q	.	.	.	.
0.583	2.3228	94.16	Q	.	.	.	.
0.667	3.1138	114.85	Q	.	.	.	.
0.750	4.0477	135.61	Q	.	.	.	.
0.833	5.1544	160.69	Q	.	.	.	.
0.917	6.5180	197.99	Q	.	.	.	.
1.000	8.1644	239.06	Q	.	.	.	.
1.083	10.1540	288.90	Q	.	.	.	.
1.167	12.5502	347.92	Q	.	.	.	.
1.250	15.3719	409.71	Q	.	.	.	.
1.333	18.6062	469.63	Q	.	.	.	.
1.417	22.2753	532.75	VQ	.	.	.	.
1.500	26.5201	616.34	VQ	.	.	.	.
1.583	31.2250	683.16	VQ	.	.	.	.
1.667	36.3778	748.18	VQ	.	.	.	.
1.750	42.0546	824.27	VQ	.	.	.	.
1.833	48.3465	913.59	VQ	.	.	.	.
1.917	55.1480	987.57	VQ	.	.	.	.
2.000	62.4361	1058.23	V Q	.	.	.	.
2.083	70.3256	1145.56	V Q	.	.	.	.
2.167	78.8237	1233.92	V Q	.	.	.	.
2.250	88.0625	1341.47	V Q	.	.	.	.
2.333	97.8728	1424.46	V Q	.	.	.	.
2.417	108.3115	1515.69	V Q	.	.	.	.
2.500	119.5445	1631.04	V Q	.	.	.	.
2.583	131.5441	1742.33	V Q	.	.	.	.
2.667	144.3778	1863.46	V Q	.	.	.	.
2.750	158.0397	1983.71	V Q	.	.	.	.
2.833	172.3318	2075.22	V Q	.	.	.	.
2.917	187.2267	2162.74	V Q	.	.	.	.
3.000	202.7891	2259.66	V Q	.	.	.	.
3.083	219.1553	2376.38	V Q	.	.	.	.
3.167	236.3268	2493.30	V Q	.	.	.	.
3.250	254.1339	2585.58	V Q	.	.	.	.
3.333	272.5460	2673.44	V Q	.	.	.	.
3.417	291.6149	2768.82	V Q	.	.	.	.
3.500	311.2349	2848.82	V Q	.	.	.	.
3.583	331.4347	2933.02	V Q	.	.	.	.
3.667	352.1768	3011.75	V Q	.	.	.	.
3.750	373.3582	3075.53	V Q	.	.	.	.
3.833	394.9675	3137.68	V Q	.	.	.	.
3.917	417.0117	3200.82	V Q	.	.	.	.

4.000	439.5053	3266.07	.V	Q	.	.	.	.
4.083	462.4225	3327.58	.V	Q	.	.	.	.
4.167	485.7454	3386.48	.V	Q	.	.	.	.
4.250	509.4539	3442.48	.V	Q	.	.	.	.
4.333	533.5131	3493.39	.V	Q	.	.	.	.
4.417	557.9016	3541.21	.V	Q	.	.	.	.
4.500	582.5895	3584.69	.V	Q	.	.	.	.
4.583	607.5511	3624.43	.V	Q	.	.	.	.
4.667	632.7868	3664.22	.V	Q	.	.	.	.
4.750	658.2836	3702.14	.V	Q	.	.	.	.
4.833	684.0381	3739.55	.V	Q	.	.	.	.
4.917	710.0510	3777.08	.V	Q	.	.	.	.
5.000	736.3124	3813.16	.V	Q	.	.	.	.
5.083	762.8196	3848.84	.V	Q	.	.	.	.
5.167	789.5734	3884.65	.V	Q	.	.	.	.
5.250	816.5549	3917.71	.V	Q	.	.	.	.
5.333	843.7347	3946.51	.V	Q	.	.	.	.
5.417	871.1141	3975.50	.V	Q	.	.	.	.
5.500	898.6943	4004.64	.V	Q	.	.	.	.
5.583	926.4766	4034.00	.V	Q	.	.	.	.
5.667	954.4480	4061.45	.V	Q	.	.	.	.
5.750	982.5853	4085.54	.V	Q	.	.	.	.
5.833	1010.8893	4109.73	.V	Q	.	.	.	.
5.917	1039.3612	4134.13	.V	Q	.	.	.	.
6.000	1068.0022	4158.68	.V	Q	.	.	.	.
6.083	1096.8138	4183.44	.V	Q	.	.	.	.
6.167	1125.7971	4208.38	.V	Q	.	.	.	.
6.250	1154.9537	4233.54	.V	Q	.	.	.	.
6.333	1184.2737	4257.25	.V	Q	.	.	.	.
6.417	1213.7238	4276.16	.V	Q	.	.	.	.
6.500	1243.3026	4294.84	.V	Q	.	.	.	.
6.583	1273.0118	4313.77	.V	Q	.	.	.	.
6.667	1302.8523	4332.83	.V	Q	.	.	.	.
6.750	1332.8258	4352.15	.V	Q	.	.	.	.
6.833	1362.9332	4371.60	.V	Q	.	.	.	.
6.917	1393.1763	4391.29	.V	Q	.	.	.	.
7.000	1423.5562	4411.15	.V	Q	.	.	.	.
7.083	1454.0746	4431.29	.V	Q	.	.	.	.
7.167	1484.7327	4451.56	.V	Q	.	.	.	.
7.250	1515.5321	4472.08	.V	Q	.	.	.	.
7.333	1546.4744	4492.82	.V	Q	.	.	.	.
7.417	1577.5612	4513.80	.V	Q	.	.	.	.
7.500	1608.7938	4534.98	.V	Q	.	.	.	.
7.583	1640.1741	4556.41	.V	Q	.	.	.	.
7.667	1671.7034	4578.05	.V	Q	.	.	.	.
7.750	1703.3839	4600.01	.V	Q	.	.	.	.
7.833	1735.2168	4622.14	.V	Q	.	.	.	.
7.917	1767.2041	4644.55	.V	Q	.	.	.	.
8.000	1799.3472	4667.18	.V	Q	.	.	.	.
8.083	1831.6482	4690.11	.V	Q	.	.	.	.
8.167	1864.1088	4713.27	.V	Q	.	.	.	.
8.250	1896.7310	4736.74	.V	Q	.	.	.	.
8.333	1929.5165	4760.46	.V	Q	.	.	.	.
8.417	1962.4675	4784.50	.V	Q	.	.	.	.
8.500	1995.5858	4808.78	.V	Q	.	.	.	.
8.583	2028.8738	4833.41	.V	Q	.	.	.	.
8.667	2062.3333	4858.30	.V	Q	.	.	.	.
8.750	2095.9666	4883.55	.V	Q	.	.	.	.

8.833	2129.7756	4909.06	.	V	Q.	.	.	.
8.917	2163.7629	4934.95	.	V	Q.	.	.	.
9.000	2197.9304	4961.12	.	V	Q.	.	.	.
9.083	2232.2808	4987.68	.	V	Q.	.	.	.
9.167	2266.8162	5014.54	.	V	Q.	.	.	.
9.250	2301.5254	5039.79	.	V	Q.	.	.	.
9.333	2336.4094	5065.17	.	V	Q.	.	.	.
9.417	2371.4712	5090.96	.	V	Q.	.	.	.
9.500	2406.7129	5117.09	.	V	Q	.	.	.
9.583	2442.1375	5143.65	.	V	Q	.	.	.
9.667	2477.7473	5170.55	.	V	Q	.	.	.
9.750	2513.5457	5197.91	.	V	Q	.	.	.
9.833	2549.5347	5225.62	.	V	Q	.	.	.
9.917	2585.7180	5253.81	.	V	Q	.	.	.
10.000	2622.0981	5282.39	.	V	Q	.	.	.
10.083	2658.6785	5311.47	.	V	Q	.	.	.
10.167	2695.4619	5340.95	.	V	Q	.	.	.
10.250	2732.4519	5370.96	.	V	Q	.	.	.
10.333	2769.6516	5401.39	.	V	Q	.	.	.
10.417	2807.0647	5432.38	.	V	Q	.	.	.
10.500	2844.6943	5463.82	.	V	Q	.	.	.
10.583	2882.5444	5495.85	.	V	Q	.	.	.
10.667	2920.6187	5528.36	.	V	Q	.	.	.
10.750	2958.9209	5561.48	.	V	Q	.	.	.
10.833	2997.4548	5595.11	.	V	.Q	.	.	.
10.917	3036.2249	5629.40	.	V	.Q	.	.	.
11.000	3075.2346	5664.22	.	V	.Q	.	.	.
11.083	3114.4890	5699.74	.	V	.Q	.	.	.
11.167	3153.9919	5735.83	.	V	.Q	.	.	.
11.250	3193.7485	5772.65	.	V	.Q	.	.	.
11.333	3233.7629	5810.08	.	V	.Q	.	.	.
11.417	3274.0405	5848.30	.	V	.Q	.	.	.
11.500	3314.5857	5887.17	.	V	.Q	.	.	.
11.583	3355.4043	5926.86	.	V	.Q	.	.	.
11.667	3396.5012	5967.26	.	V	.Q	.	.	.
11.750	3437.8823	6008.53	.	V	.Q	.	.	.
11.833	3479.5527	6050.56	.	V	.Q	.	.	.
11.917	3521.5193	6093.53	.	V	.Q	.	.	.
12.000	3563.7871	6137.30	.	V	.Q	.	.	.
12.083	3606.4514	6194.85	.	V	.Q	.	.	.
12.167	3649.6055	6265.98	.	V	.Q	.	.	.
12.250	3693.2559	6338.04	.	V	.Q	.	.	.
12.333	3737.4080	6410.89	.	V	.Q	.	.	.
12.417	3782.0686	6484.73	.	V	.Q	.	.	.
12.500	3827.2507	6560.45	.	V	.Q	.	.	.
12.583	3873.0293	6647.05	.	V.	Q	.	.	.
12.667	3919.4275	6737.01	.	V.	Q	.	.	.
12.750	3966.4524	6828.02	.	V.	Q	.	.	.
12.833	4014.1665	6928.08	.	V.	Q	.	.	.
12.917	4062.7363	7052.34	.	V.	Q	.	.	.
13.000	4112.2158	7184.45	.	V.	Q	.	.	.
13.083	4162.7251	7333.97	.	V.	Q	.	.	.
13.167	4214.3887	7501.55	.	V.	Q	.	.	.
13.250	4267.2461	7674.90	.	V.	Q	.	.	.
13.333	4321.2759	7845.11	.	V	Q	.	.	.
13.417	4376.5234	8021.98	.	V	Q	.	.	.
13.500	4433.2607	8238.27	.	V	Q	.	.	.
13.583	4491.2705	8423.00	.	V	Q	.	.	.

13.667	4550.5308	8604.62	.	V	Q	.	.	.
13.750	4611.1924	8808.10	.	V	Q	.	.	.
13.833	4673.4312	9037.04	.	V	Q	.	.	.
13.917	4737.0493	9237.34	.	.V	Q	.	.	.
14.000	4802.0049	9431.56	.	.V	Q	.	.	.
14.083	4868.6011	9669.75	.	.V	Q.	.	.	.
14.167	4936.9277	9921.03	.	.V	Q.	.	.	.
14.250	5007.2354	10208.65	.	.V	Q	.	.	.
14.333	5079.1958	10448.67	.	.V	Q	.	.	.
14.417	5152.9155	10704.11	.	.V	.Q	.	.	.
14.500	5228.7139	11005.90	.	.V	.Q	.	.	.
14.583	5306.5923	11307.94	.	.V	.Q	.	.	.
14.667	5386.6865	11629.71	.	.V	.Q	.	.	.
14.750	5468.9771	11948.59	.	.V	.Q	.	.	.
14.833	5553.1265	12218.46	.	.V	.Q	.	.	.
14.917	5639.2139	12499.92	.	.V	.Q	.	.	.
15.000	5727.3926	12803.58	.	.V	.Q	.	.	.
15.083	5818.0044	13156.87	.	.V	.Q	.	.	.
15.167	5911.1353	13522.63	.	.V	.Q	.	.	.
15.250	6006.4624	13841.49	.	.V	.Q	.	.	.
15.333	6103.8765	14144.51	.	.V	.Q	.	.	.
15.417	6203.3716	14446.73	.	.V	.Q	.	.	.
15.500	6304.8496	14734.59	.	.V	.Q.	.	.	.
15.583	6408.1543	14999.82	.	.V	.Q.	.	.	.
15.667	6513.1816	15249.96	.	.V	.Q	.	.	.
15.750	6619.8247	15484.58	.	.V	.Q	.	.	.
15.833	6728.1670	15731.27	.	.V	.Q	.	.	.
15.917	6837.9995	15947.66	.	.V	.Q	.	.	.
16.000	6949.3872	16173.53	.	.V	.Q	.	.	.
16.083	7063.2744	16536.41	.	.V	.Q	.	.	.
16.167	7179.4229	16864.74	.	.V	.Q	.	.	.
16.250	7296.9111	17059.33	.	.V	.Q	.	.	.
16.333	7415.2803	17187.19	.	.V	.Q	.	.	.
16.417	7534.5732	17321.34	.	.V	.Q	.	.	.
16.500	7655.0811	17497.73	.	.V	.Q	.	.	.
16.583	7777.1587	17725.70	.	.V	.Q	.	.	.
16.667	7900.4985	17908.92	.	.V	.Q	.	.	.
16.750	8024.9629	18072.25	.	.V	.Q	.	.	.
16.833	8150.4590	18222.02	.	.V	.Q	.	.	.
16.917	8278.2334	18552.91	.	.V.	.Q	.	.	.
17.000	8407.4922	18768.44	.	.V.	.Q	.	.	.
17.083	8538.7324	19056.13	.	.V.	.Q	.	.	.
17.167	8671.5020	19278.11	.	.V	.Q	.	.	.
17.250	8805.1289	19402.70	.	.V	.Q	.	.	.
17.333	8939.2188	19469.85	.	.V	.Q	.	.	.
17.417	9074.2676	19609.02	.	.V	.Q	.	.	.
17.500	9211.8535	19977.46	.	.V	.Q.	.	.	.
17.583	9347.4277	19685.38	.	.V	.Q	.	.	.
17.667	9483.4160	19745.50	.	.V	.Q	.	.	.
17.750	9620.8779	19959.45	.	.V	.Q.	.	.	.
17.833	9759.6133	20144.39	.	.V	.Q.	.	.	.
17.917	9896.0176	19805.87	.	.V	.Q.	.	.	.
18.000	10031.7734	19711.79	.	.V	.Q.	.	.	.
18.083	10169.2051	19955.13	.	.V	.Q.	.	.	.
18.167	10306.7646	19973.70	.	.V	.Q.	.	.	.
18.250	10446.0781	20228.37	.	.V	.Q.	.	.	.
18.333	10581.8545	19714.68	.	.V	.Q.	.	.	.
18.417	10718.0840	19780.58	.	.V	.Q.	.	.	.

18.500	10856.2451	20061.05	.	.	.	V	.	Q.
18.583	10993.7705	19968.65	.	.	.	V	.	Q.
18.667	11131.6396	20018.58	.	.	.	V	.	Q.
18.750	11267.8447	19776.97	.	.	.	V	.	Q.
18.833	11399.7822	19157.36	.	.	.	V	.	Q.
18.917	11530.8838	19035.98	.	.	.	V	.	Q.
19.000	11663.1240	19201.32	.	.	.	V	.	Q.
19.083	11797.2852	19480.20	.	.	.	V	.	Q.
19.167	11930.0908	19283.42	.	.	.	V	.	Q.
19.250	12058.2578	18609.90	.	.	.	V	.	Q.
19.333	12184.6436	18351.28	.	.	.	V	.	Q.
19.417	12310.8057	18318.71	.	.	.	V	.	Q.
19.500	12433.6543	17837.61	.	.	.	V	.	Q.
19.583	12555.3330	17667.75	.	.	.	V	.	Q.
19.667	12674.3887	17286.87	.	.	.	V	.	Q.
19.750	12789.8447	16764.15	.	.	.	V	.	Q.
19.833	12903.4102	16489.65	.	.	.	V	.	Q.
19.917	13015.7646	16313.91	.	.	.	V	.	Q.
20.000	13126.8516	16129.77	.	.	.	V	.	Q.
20.083	13235.2461	15738.82	.	.	.	V	.	Q.
20.167	13340.9746	15351.72	.	.	.	V	.	Q.
20.250	13443.9600	14953.48	.	.	.	V	.	Q.
20.333	13544.3369	14574.77	.	.	.	V	.	Q.
20.417	13642.0244	14184.18	.	.	.	V	.	Q.
20.500	13736.7129	13748.79	.	.	.	V	.	Q.
20.583	13828.5352	13332.61	.	.	.	V	.	Q.
20.667	13917.8867	12973.78	.	.	.	V	.	Q.
20.750	14004.6797	12602.31	.	.	.	V	.	Q.
20.833	14089.4141	12303.41	.	.	.	V	.	Q.
20.917	14172.1309	12010.47	.	.	.	V	.	Q.
21.000	14252.5498	11676.76	.	.	.	V	.	Q.
21.083	14330.5781	11329.66	.	.	.	V	.	Q.
21.167	14406.2256	10984.07	.	.	.	V	.	Q.
21.250	14479.4463	10631.63	.	.	.	V	.	Q.
21.333	14550.2256	10277.12	.	.	.	V	.	Q.
21.417	14619.0684	9995.91	.	.	.	V	.	Q.
21.500	14686.2275	9751.50	.	.	.	V	.	Q.
21.583	14751.6240	9495.62	.	.	.	V	.	Q.
21.667	14815.0342	9207.17	.	.	.	V	.	Q.
21.750	14876.6357	8944.53	.	.	.	V	.	Q.
21.833	14936.9131	8752.24	.	.	.	V	.	Q.
21.917	14995.8711	8560.65	.	.	.	V	.	Q.
22.000	15053.4883	8366.05	.	.	.	V	.	Q.
22.083	15109.7852	8174.32	.	.	.	V	.	Q.
22.167	15164.7773	7984.84	.	.	.	V	.	Q.
22.250	15218.4775	7797.34	.	.	.	V	.	Q.
22.333	15270.7783	7594.08	.	.	.	V	.	Q.
22.417	15321.3760	7346.75	.	.	.	V	.	Q.
22.500	15370.9375	7196.33	.	.	.	V	.	Q.
22.583	15419.5869	7063.89	.	.	.	V	.	Q.
22.667	15467.3477	6934.82	.	.	.	V	.	Q.
22.750	15514.2285	6807.04	.	.	.	V	.	Q.
22.833	15560.2334	6679.90	.	.	.	V	.	Q.
22.917	15605.3750	6554.54	.	.	.	V	.	Q.
23.000	15649.6777	6432.70	.	.	.	V	.	Q.
23.083	15693.1602	6313.60	.	.	.	V	.	Q.
23.167	15735.8203	6194.27	.	.	.	V	.	Q.
23.250	15777.6846	6078.75	.	.	.	V	.	Q.

23.333	15818.8379	5975.41	.	.	.	V	.	Q.
23.417	15859.3428	5881.24	.	.	.	V	.	Q.
23.500	15899.2207	5790.24	.	.	.	V	.	Q.
23.583	15938.4785	5700.17	.	.	.	V	.	Q.
23.667	15977.1572	5616.21	.	.	.	V	.	Q.
23.750	16015.3203	5541.26	.	.	.	V	.	Q.
23.833	16052.9678	5466.46	.	.	.	V	.	Q.
23.917	16090.1162	5393.97	.	.	.	V	.	Q.
24.000	16126.7754	5322.89	.	.	.	V	.	Q.
24.083	16162.9092	5246.60	.	.	.	V	.	Q.
24.167	16198.4795	5164.86	.	.	.	V	.	Q.
24.250	16233.4971	5084.50	.	.	.	V	.	Q.
24.333	16267.9902	5008.42	.	.	.	V	.	Q.
24.417	16302.0352	4943.31	.	.	.	V	.	Q.
24.500	16335.6416	4879.64	.	.	.	V	.	Q.
24.583	16368.8164	4816.94	.	.	.	V	.	Q.
24.667	16401.5586	4754.29	.	.	.	V	.	Q.
24.750	16433.8730	4692.05	.	.	.	V	.	Q.
24.833	16465.7344	4626.31	.	.	.	V	.	Q.
24.917	16497.0723	4550.31	.	.	.	V	.	Q.
25.000	16527.8652	4471.07	.	.	.	V	.	Q.
25.083	16558.0410	4381.51	.	.	.	V	.	Q.
25.167	16587.5215	4280.67	.	.	.	V	.	Q.
25.250	16616.0723	4145.65	.	.	.	V	.	Q.
25.333	16643.9512	4047.95	.	.	.	V	.	Q.
25.417	16671.1680	3951.91	.	.	.	V	.	Q.
25.500	16697.5977	3837.62	.	.	.	V	.	Q.
25.583	16723.3359	3737.11	.	.	.	V	.	Q.
25.667	16748.3965	3638.87	.	.	.	V	.	Q.
25.750	16772.7090	3530.29	.	.	.	V	.	Q.
25.833	16796.1914	3409.54	.	.	.	V	.	Q.
25.917	16818.9531	3305.13	.	.	.	V	.	Q.
26.000	16841.0254	3204.99	.	.	.	V	.	Q.
26.083	16862.3008	3089.05	.	.	.	V	.	Q.
26.167	16882.7773	2973.10	.	.	.	V	.	Q.
26.250	16902.3535	2842.47	.	.	.	V	.	Q.
26.333	16921.2109	2738.07	.	.	.	V	.	Q.
26.417	16939.3008	2626.67	.	.	.	V	.	Q.
26.500	16956.4668	2492.42	.	.	.	V	.	Q.
26.583	16972.7461	2363.64	.	.	.	V	.	Q.
26.667	16988.0801	2226.40	.	.	.	V	.	Q.
26.750	17002.4844	2091.45	.	.	.	V	.	Q.
26.833	17016.1660	1986.57	.	.	.	V	.	Q.
26.917	17029.1602	1886.82	.	.	.	V	.	Q.
27.000	17041.4102	1778.73	.	.	.	V	.	Q.
27.083	17052.7871	1652.00	.	.	.	V	.	Q.
27.167	17063.2988	1526.32	.	.	.	V	.	Q.
27.250	17073.1504	1430.37	.	.	.	V	.	Q.
27.333	17082.3809	1340.22	.	.	.	V	.	Q.
27.417	17090.9453	1243.59	.	.	.	V	.	Q.
27.500	17098.9570	1163.34	.	.	.	V	.	Q.
27.583	17106.3945	1079.85	.	.	.	V	.	Q.
27.667	17113.3008	1002.70	.	.	.	V	.	Q.
27.750	17119.7832	941.38	.	.	.	V	.	Q.
27.833	17125.8594	882.38	.	.	.	V	.	Q.
27.917	17131.5273	823.13	.	.	.	V	.	Q.
28.000	17136.7773	762.43	.	.	.	V	.	Q.
28.083	17141.6406	706.19	.	.	.	V	.	Q.

28.167	17146.1387	653.21	.Q	.	.	.	V.
28.250	17150.2969	603.77	.Q	.	.	.	V.
28.333	17154.1543	559.97	.Q	.	.	.	V.
28.417	17157.7344	519.84	.Q	.	.	.	V.
28.500	17161.0723	484.53	Q	.	.	.	V.
28.583	17164.1953	453.45	Q	.	.	.	V.
28.667	17167.1074	422.73	Q	.	.	.	V.
28.750	17169.8223	394.32	Q	.	.	.	V.
28.833	17172.3477	366.80	Q	.	.	.	V.
28.917	17174.6855	339.58	Q	.	.	.	V.
29.000	17176.8496	314.18	Q	.	.	.	V.
29.083	17178.8438	289.59	Q	.	.	.	V.
29.167	17180.6699	265.20	Q	.	.	.	V.
29.250	17182.3496	243.96	Q	.	.	.	V.
29.333	17183.9141	227.30	Q	.	.	.	V.
29.417	17185.3652	210.78	Q	.	.	.	V.
29.500	17186.7031	194.38	Q	.	.	.	V.
29.583	17187.9297	178.10	Q	.	.	.	V.
29.667	17189.0586	164.00	Q	.	.	.	V.
29.750	17190.1152	153.56	Q	.	.	.	V.
29.833	17191.1016	143.27	Q	.	.	.	V.
29.917	17192.0176	133.04	Q	.	.	.	V.
30.000	17192.8633	122.90	Q	.	.	.	V.
30.083	17193.6406	112.83	Q	.	.	.	V.
30.167	17194.3496	102.83	Q	.	.	.	V.
30.250	17194.9902	92.89	Q	.	.	.	V.
30.333	17195.5723	84.64	Q	.	.	.	V.
30.417	17196.1328	81.46	Q	.	.	.	V.
30.500	17196.6738	78.69	Q	.	.	.	V.
30.583	17197.1973	75.92	Q	.	.	.	V.
30.667	17197.7012	73.19	Q	.	.	.	V.
30.750	17198.1855	70.47	Q	.	.	.	V.
30.833	17198.6523	67.79	Q	.	.	.	V.
30.917	17199.1016	65.12	Q	.	.	.	V.
31.000	17199.5312	62.48	Q	.	.	.	V.
31.083	17199.9434	59.83	Q	.	.	.	V.
31.167	17200.3379	57.24	Q	.	.	.	V.
31.250	17200.7148	54.67	Q	.	.	.	V.
31.333	17201.0742	52.09	Q	.	.	.	V.
31.417	17201.4160	49.56	Q	.	.	.	V.
31.500	17201.7402	47.02	Q	.	.	.	V.
31.583	17202.0469	44.53	Q	.	.	.	V.
31.667	17202.3359	42.05	Q	.	.	.	V.
31.750	17202.6074	39.54	Q	.	.	.	V.
31.833	17202.8633	37.10	Q	.	.	.	V.
31.917	17203.1016	34.68	Q	.	.	.	V.
32.000	17203.3242	32.27	Q	.	.	.	V.
32.083	17203.5293	29.88	Q	.	.	.	V.
32.167	17203.7188	27.51	Q	.	.	.	V.
32.250	17203.8926	25.15	Q	.	.	.	V.
32.333	17204.0488	22.80	Q	.	.	.	V.
32.417	17204.1895	20.48	Q	.	.	.	V.
32.500	17204.3145	18.16	Q	.	.	.	V.
32.583	17204.4238	15.87	Q	.	.	.	V.
32.667	17204.5176	13.58	Q	.	.	.	V.
32.750	17204.5957	11.31	Q	.	.	.	V.
32.833	17204.6582	9.06	Q	.	.	.	V.
32.917	17204.7051	6.82	Q	.	.	.	V.

33.000	17204.7363	4.59	Q	.	.	.	V.
33.083	17204.7520	2.38	Q	.	.	.	V.
33.167	17204.7539	0.18	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%	1990.0
10%	1440.0
20%	1185.0
30%	685.0
40%	520.0
50%	430.0
60%	365.0
70%	305.0
80%	235.0
90%	160.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 139 *
* 50-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV50139S.DAT
TIME/DATE OF STUDY: 14:27 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 139.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69529.898 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.719 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.418
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.44
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.85
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.17
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.14
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.13
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.45

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.286
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.391
3-HOUR FACTOR = 0.733
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.065

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.175	1472.663
2	0.525	2945.334
3	0.876	2945.331
4	1.226	2945.330
5	1.576	2945.326
6	1.934	3009.991
7	2.421	4094.814
8	2.954	4482.025
9	3.487	4482.021
10	4.085	5026.647
11	5.018	7844.916
12	6.037	8570.708
13	7.289	10523.911
14	8.734	12153.691
15	10.341	13515.192
16	11.878	12918.217
17	13.416	12936.966
18	15.471	17281.801
19	17.307	15432.028
20	18.941	13744.783
21	20.724	14992.751
22	22.918	18443.955
23	24.977	17314.719
24	26.728	14726.497
25	28.689	16489.812
26	30.935	18889.631
27	33.436	21027.238
28	35.920	20887.078
29	37.741	15312.911
30	40.631	24302.691
31	43.384	23149.238
32	46.171	23429.910
33	49.415	27284.754
34	51.944	21258.977
35	54.142	18482.559
36	56.275	17935.969
37	58.778	21050.701
38	61.818	25558.600
39	64.415	21842.424
40	66.527	17757.781
41	68.683	18130.258
42	70.840	18138.213
43	72.703	15667.971
44	74.658	16434.225
45	76.382	14497.740
46	77.756	11552.502
47	79.118	11454.090
48	80.509	11699.157

49	81.934	11981.884
50	83.246	11033.434
51	84.485	10417.172
52	85.648	9782.112
53	86.663	8530.920
54	87.605	7921.395
55	88.420	6850.988
56	89.141	6063.307
57	89.858	6033.796
58	90.522	5577.021
59	91.167	5426.901
60	91.811	5416.251
61	92.414	5067.896
62	92.998	4909.821
63	93.582	4908.538
64	94.105	4404.738
65	94.499	3311.685
66	94.889	3274.091
67	95.278	3271.461
68	95.667	3274.091
69	96.025	3011.573
70	96.275	2100.525
71	96.515	2020.204
72	96.756	2022.899
73	96.996	2020.204
74	97.237	2022.899
75	97.477	2020.204
76	97.717	2022.835
77	97.948	1937.189
78	98.047	838.619
79	98.104	479.550
80	98.162	487.633
81	98.220	479.614
82	98.277	484.939
83	98.335	482.309
84	98.392	484.939
85	98.449	479.614
86	98.507	487.633
87	98.565	482.244
88	98.621	476.920
89	98.680	493.022
90	98.737	476.920
91	98.795	487.633
92	98.851	476.920
93	98.909	487.633
94	98.967	482.244
95	99.025	487.633
96	99.082	482.244
97	99.139	482.244
98	99.197	482.244
99	99.254	482.244
100	99.311	482.244
101	99.369	482.244
102	99.426	482.244
103	99.484	482.244
104	99.541	482.244
105	99.598	482.244
106	99.656	482.244

107	99.713	482.244
108	99.770	482.244
109	99.828	482.244
110	99.885	482.244
111	99.942	482.244
112	100.000	482.244
113	100.000	2.887

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12133.7041
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 17278.6094

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.	5050.0	10100.0	15150.0	20200.0
0.083	0.0456	6.62	Q	.	.	.	.
0.167	0.1824	19.87	Q	.	.	.	.
0.250	0.4107	33.15	Q	.	.	.	.
0.333	0.7309	46.48	Q	.	.	.	.
0.417	1.1430	59.85	Q	.	.	.	.
0.500	1.6495	73.55	Q	.	.	.	.
0.583	2.2842	92.16	Q	.	.	.	.
0.667	3.0595	112.56	Q	.	.	.	.
0.750	3.9757	133.03	Q	.	.	.	.
0.833	5.0501	156.01	Q	.	.	.	.
0.917	6.3705	191.72	Q	.	.	.	.
1.000	7.9599	230.79	Q	.	.	.	.
1.083	9.8798	278.76	Q	.	.	.	.
1.167	12.1813	334.18	Q	.	.	.	.
1.250	14.9079	395.90	Q	.	.	.	.
1.333	18.0423	455.11	Q	.	.	.	.
1.417	21.5863	514.60	VQ	.	.	.	.
1.500	25.6757	593.78	VQ	.	.	.	.
1.583	30.2549	664.89	VQ	.	.	.	.
1.667	35.2731	728.64	VQ	.	.	.	.
1.750	40.7704	798.21	VQ	.	.	.	.
1.833	46.8550	883.49	VQ	.	.	.	.
1.917	53.4938	963.95	VQ	.	.	.	.
2.000	60.6085	1033.05	V Q	.	.	.	.
2.083	68.2551	1110.29	V Q	.	.	.	.
2.167	76.5096	1198.55	V Q	.	.	.	.
2.250	85.4400	1296.70	V Q	.	.	.	.
2.333	95.0441	1394.52	V Q	.	.	.	.
2.417	105.1516	1467.60	V Q	.	.	.	.
2.500	116.0424	1581.35	V Q	.	.	.	.
2.583	127.6830	1690.21	V Q	.	.	.	.
2.667	140.0848	1800.75	V Q	.	.	.	.
2.750	153.3692	1928.90	V Q	.	.	.	.
2.833	167.3529	2030.43	V Q	.	.	.	.
2.917	181.9520	2119.79	V Q	.	.	.	.
3.000	197.1521	2207.04	V Q	.	.	.	.
3.083	213.0511	2308.55	V Q	.	.	.	.
3.167	229.7913	2430.67	V Q	.	.	.	.
3.250	247.2599	2536.45	V Q	.	.	.	.
3.333	265.3336	2624.29	V Q	.	.	.	.
3.417	284.0256	2714.08	V Q	.	.	.	.
3.500	303.3387	2804.26	V Q	.	.	.	.
3.583	323.1982	2883.60	V Q	.	.	.	.
3.667	343.6303	2966.74	V Q	.	.	.	.
3.750	364.5767	3041.42	V Q	.	.	.	.
3.833	385.9486	3103.20	V Q	.	.	.	.
3.917	407.7443	3164.74	V Q	.	.	.	.

4.000	429.9734	3227.67	V	Q	.	.	.	.
4.083	452.6461	3292.07	.V	Q	.	.	.	.
4.167	475.7350	3352.52	.V	Q	.	.	.	.
4.250	499.2226	3410.39	.V	Q	.	.	.	.
4.333	523.0911	3465.70	.V	Q	.	.	.	.
4.417	547.3030	3515.58	.V	Q	.	.	.	.
4.500	571.8416	3563.00	.V	Q	.	.	.	.
4.583	596.6747	3605.76	.V	Q	.	.	.	.
4.667	621.7797	3645.25	.V	Q	.	.	.	.
4.750	647.1568	3684.75	.V	Q	.	.	.	.
4.833	672.7935	3722.45	.V	Q	.	.	.	.
4.917	698.6863	3759.62	.V	Q	.	.	.	.
5.000	724.8364	3796.99	.V	Q	.	.	.	.
5.083	751.2341	3832.94	.V	Q	.	.	.	.
5.167	777.8762	3868.44	.V	Q	.	.	.	.
5.250	804.7637	3904.06	.V	Q	.	.	.	.
5.333	831.8827	3937.68	.V	Q	.	.	.	.
5.417	859.2004	3966.53	.V	Q	.	.	.	.
5.500	886.7173	3995.45	.V	Q	.	.	.	.
5.583	914.4341	4024.48	.V	Q	.	.	.	.
5.667	942.3527	4053.78	.V	Q	.	.	.	.
5.750	970.4659	4082.03	.V	Q	.	.	.	.
5.833	998.7471	4106.44	.V	Q	.	.	.	.
5.917	1027.1948	4130.61	.V	Q	.	.	.	.
6.000	1055.8108	4155.04	.V	Q	.	.	.	.
6.083	1084.5957	4179.58	.V	Q	.	.	.	.
6.167	1113.5515	4204.38	.V	Q	.	.	.	.
6.250	1142.6790	4229.30	.V	Q	.	.	.	.
6.333	1171.9799	4254.50	.V	Q	.	.	.	.
6.417	1201.4526	4279.44	.V	Q	.	.	.	.
6.500	1231.0649	4299.71	.V	Q	.	.	.	.
6.583	1260.8066	4318.50	.V	Q	.	.	.	.
6.667	1290.6798	4337.58	.V	Q	.	.	.	.
6.750	1320.6849	4356.75	.V	Q	.	.	.	.
6.833	1350.8241	4376.21	.V	Q	.	.	.	.
6.917	1381.0980	4395.78	.V	Q	.	.	.	.
7.000	1411.5088	4415.64	.V	Q	.	.	.	.
7.083	1442.0571	4435.61	.V	Q	.	.	.	.
7.167	1472.7451	4455.90	.V	Q	.	.	.	.
7.250	1503.5737	4476.31	.V	Q	.	.	.	.
7.333	1534.5447	4496.99	.V	Q	.	.	.	.
7.417	1565.6595	4517.89	.V	Q	.	.	.	.
7.500	1596.9199	4539.01	.V	Q	.	.	.	.
7.583	1628.3273	4560.34	.V	Q	.	.	.	.
7.667	1659.8833	4581.94	.V	Q	.	.	.	.
7.750	1691.5896	4603.75	.V	Q	.	.	.	.
7.833	1723.4481	4625.86	.V	Q	.	.	.	.
7.917	1755.4602	4648.15	.V	Q	.	.	.	.
8.000	1787.6281	4670.77	.V	Q	.	.	.	.
8.083	1819.9529	4693.56	.V	Q	.	.	.	.
8.167	1852.4370	4716.70	.V	Q	.	.	.	.
8.250	1885.0819	4740.04	.V	Q	.	.	.	.
8.333	1917.8899	4763.72	.V	Q	.	.	.	.
8.417	1950.8624	4787.61	.V	Q	.	.	.	.
8.500	1984.0021	4811.88	.V	Q	.	.	.	.
8.583	2017.3103	4836.35	.V	Q	.	.	.	.
8.667	2050.7898	4861.22	.V	Q	.	.	.	.
8.750	2084.4419	4886.30	.V	Q	.	.	.	.

8.833	2118.2695	4911.79	.	V	Q.	.	.	.
8.917	2152.2744	4937.51	.	V	Q.	.	.	.
9.000	2186.4595	4963.66	.	V	Q.	.	.	.
9.083	2220.8262	4990.04	.	V	Q.	.	.	.
9.167	2255.3777	5016.87	.	V	Q.	.	.	.
9.250	2290.1157	5043.95	.	V	Q.	.	.	.
9.333	2325.0435	5071.49	.	V	Q	.	.	.
9.417	2360.1477	5097.15	.	V	Q	.	.	.
9.500	2395.4319	5123.27	.	V	Q	.	.	.
9.583	2430.8979	5149.67	.	V	Q	.	.	.
9.667	2466.5493	5176.56	.	V	Q	.	.	.
9.750	2502.3879	5203.75	.	V	Q	.	.	.
9.833	2538.4172	5231.46	.	V	Q	.	.	.
9.917	2574.6396	5259.48	.	V	Q	.	.	.
10.000	2611.0586	5288.04	.	V	Q	.	.	.
10.083	2647.6765	5316.94	.	V	Q	.	.	.
10.167	2684.4976	5346.40	.	V	Q	.	.	.
10.250	2721.5239	5376.21	.	V	Q	.	.	.
10.333	2758.7598	5406.63	.	V	Q	.	.	.
10.417	2796.2075	5437.41	.	V	Q	.	.	.
10.500	2833.8716	5468.83	.	V	Q	.	.	.
10.583	2871.7546	5500.64	.	V	Q	.	.	.
10.667	2909.8616	5533.11	.	V	Q	.	.	.
10.750	2948.1948	5566.00	.	V	.Q	.	.	.
10.833	2986.7595	5599.60	.	V	.Q	.	.	.
10.917	3025.5586	5633.64	.	V	.Q	.	.	.
11.000	3064.5974	5668.42	.	V	.Q	.	.	.
11.083	3103.8789	5703.68	.	V	.Q	.	.	.
11.167	3143.4087	5739.72	.	V	.Q	.	.	.
11.250	3183.1902	5776.27	.	V	.Q	.	.	.
11.333	3223.2290	5813.64	.	V	.Q	.	.	.
11.417	3263.5291	5851.56	.	V	.Q	.	.	.
11.500	3304.0962	5890.36	.	V	.Q	.	.	.
11.583	3344.9346	5929.75	.	V	.Q	.	.	.
11.667	3386.0508	5970.06	.	V	.Q	.	.	.
11.750	3427.4490	6011.01	.	V	.Q	.	.	.
11.833	3469.1360	6052.95	.	V	.Q	.	.	.
11.917	3511.1165	6095.57	.	V	.Q	.	.	.
12.000	3553.3977	6139.23	.	V	.Q	.	.	.
12.083	3596.0718	6196.27	.	V	.Q	.	.	.
12.167	3639.2332	6267.02	.	V	.Q	.	.	.
12.250	3682.8862	6338.41	.	V	.Q	.	.	.
12.333	3727.0381	6410.86	.	V	.Q	.	.	.
12.417	3771.6938	6484.01	.	V	.Q	.	.	.
12.500	3816.8650	6558.84	.	V	.Q	.	.	.
12.583	3862.6208	6643.75	.	V	.Q	.	.	.
12.667	3908.9922	6733.13	.	V	.Q	.	.	.
12.750	3955.9844	6823.27	.	V	.Q	.	.	.
12.833	4003.6379	6919.29	.	V	.Q	.	.	.
12.917	4052.1248	7040.30	.	V	.Q	.	.	.
13.000	4101.4961	7168.70	.	V	.Q	.	.	.
13.083	4151.8716	7314.53	.	V	.Q	.	.	.
13.167	4203.3560	7475.50	.	V	.Q	.	.	.
13.250	4256.0327	7648.70	.	V	.Q	.	.	.
13.333	4309.8750	7817.88	.	V	.Q	.	.	.
13.417	4364.8872	7987.76	.	V	.Q	.	.	.
13.500	4421.3345	8196.13	.	V	.Q	.	.	.
13.583	4479.1108	8389.10	.	V	.Q	.	.	.

13.667	4538.1240	8568.69	.	V	Q	.	.	.
13.750	4598.4521	8759.67	.	V	Q	.	.	.
13.833	4660.3081	8981.52	.	V	Q	.	.	.
13.917	4723.6294	9194.26	.	V	Q	.	.	.
14.000	4788.2710	9385.99	.	.V	Q	.	.	.
14.083	4854.4189	9604.70	.	.V	Q.	.	.	.
14.167	4922.2988	9856.14	.	.V	Q.	.	.	.
14.250	4992.0352	10125.72	.	.V	Q	.	.	.
14.333	5063.6226	10394.47	.	.V	Q	.	.	.
14.417	5136.7290	10615.08	.	.V	.Q	.	.	.
14.500	5211.8936	10913.89	.	.V	.Q	.	.	.
14.583	5289.1021	11210.69	.	.V	.Q	.	.	.
14.667	5368.3906	11512.67	.	.V	.Q	.	.	.
14.750	5449.9814	11847.01	.	.V	.Q	.	.	.
14.833	5533.5444	12133.32	.	.V	.Q	.	.	.
14.917	5619.0542	12416.05	.	.V	.Q	.	.	.
15.000	5706.5112	12698.76	.	.V	.Q	.	.	.
15.083	5796.1855	13020.72	.	.V	.Q	.	.	.
15.167	5888.4165	13391.95	.	.V	.Q	.	.	.
15.250	5983.0288	13737.70	.	.V	.Q	.	.	.
15.333	6079.7300	14041.01	.	.V	.Q	.	.	.
15.417	6178.4058	14327.73	.	.V	.Q	.	.	.
15.500	6279.1626	14629.86	.	.V	.Q	.	.	.
15.583	6381.7451	14894.97	.	.V	.Q	.	.	.
15.667	6486.1094	15153.68	.	.V	.Q	.	.	.
15.750	6592.1675	15399.63	.	.V	.Q	.	.	.
15.833	6699.8931	15641.77	.	.V	.Q	.	.	.
15.917	6809.1841	15869.03	.	.V	.Q	.	.	.
16.000	6919.9976	16090.11	.	.V	.Q	.	.	.
16.083	7033.2256	16440.74	.	.V	.Q	.	.	.
16.167	7148.7734	16777.52	.	.V	.Q	.	.	.
16.250	7265.6147	16965.38	.	.V	.Q	.	.	.
16.333	7383.6123	17133.23	.	.V	.Q	.	.	.
16.417	7502.3804	17245.12	.	.V	.Q	.	.	.
16.500	7622.4341	17431.81	.	.V	.Q	.	.	.
16.583	7744.0493	17658.54	.	.V	.Q	.	.	.
16.667	7866.8569	17831.68	.	.V	.Q	.	.	.
16.750	7990.9512	18018.47	.	.V	.Q	.	.	.
16.833	8116.0537	18164.90	.	.V	.Q	.	.	.
16.917	8243.4170	18493.15	.	.V	.Q	.	.	.
17.000	8372.1211	18687.77	.	.V	.Q	.	.	.
17.083	8502.7881	18972.79	.	.V	.Q	.	.	.
17.167	8634.9336	19187.55	.	.V	.Q	.	.	.
17.250	8768.4014	19379.50	.	.V	.Q	.	.	.
17.333	8902.2715	19437.98	.	.V	.Q	.	.	.
17.417	9036.9092	19549.46	.	.V	.Q	.	.	.
17.500	9174.1523	19927.68	.	.V	.Q	.	.	.
17.583	9310.4219	19786.33	.	.V	.Q	.	.	.
17.667	9446.1621	19709.53	.	.V	.Q	.	.	.
17.750	9583.2998	19912.46	.	.V	.Q	.	.	.
17.833	9722.0869	20151.84	.	.V	.Q	.	.	.
17.917	9859.7881	19994.17	.	.V	.Q	.	.	.
18.000	9995.8242	19752.45	.	.V	.Q	.	.	.
18.083	10132.4355	19835.99	.	.V	.Q	.	.	.
18.167	10270.2256	20007.17	.	.V	.Q	.	.	.
18.250	10408.8555	20129.11	.	.V	.Q	.	.	.
18.333	10546.8906	20042.71	.	.V	.Q	.	.	.
18.417	10681.6748	19570.71	.	.V	.Q	.	.	.

18.500	10820.3740	20139.13	.	.	.	V	.	Q.
18.583	10957.9111	19970.37	.	.	.	V	.	Q.
18.667	11095.4150	19965.63	.	.	.	V	.	Q.
18.750	11233.5811	20061.74	.	.	.	V	.	Q.
18.833	11367.3682	19425.95	.	.	.	V	.	Q.
18.917	11498.9883	19111.25	.	.	.	V	.	Q.
19.000	11630.1299	19041.71	.	.	.	V	.	Q.
19.083	11762.9570	19286.46	.	.	.	V	.	Q.
19.167	11897.2402	19497.95	.	.	.	V	.	Q.
19.250	12028.0068	18987.32	.	.	.	V	.	Q.
19.333	12155.1348	18458.99	.	.	.	V	.	Q.
19.417	12281.3975	18333.34	.	.	.	V	.	Q.
19.500	12406.2539	18129.22	.	.	.	V	.	Q.
19.583	12528.4258	17739.32	.	.	.	V	.	Q.
19.667	12649.2998	17550.88	.	.	.	V	.	Q.
19.750	12767.1250	17108.26	.	.	.	V	.	Q.
19.833	12881.6475	16628.73	.	.	.	V	.	Q.
19.917	12994.5957	16400.12	.	.	.	V	.	Q.
20.000	13106.4277	16238.06	.	.	.	V	.	Q.
20.083	13216.7061	16012.41	.	.	.	V	.	Q.
20.167	13324.1455	15600.28	.	.	.	V	.	Q.
20.250	13428.9072	15211.41	.	.	.	V	.	Q.
20.333	13531.1348	14843.41	.	.	.	V	.	Q.
20.417	13630.8301	14475.77	.	.	.	V	.	Q.
20.500	13727.6748	14061.89	.	.	.	V	.	Q.
20.583	13821.5703	13633.66	.	.	.	V	.	Q.
20.667	13912.6562	13225.65	.	.	.	V	.	Q.
20.750	14001.2051	12857.22	.	.	.	V	.	Q.
20.833	14087.4658	12525.07	.	.	.	V	.	Q.
20.917	14171.6992	12230.69	.	.	.	V	.	Q.
21.000	14253.9258	11939.23	.	.	.	V	.	Q.
21.083	14333.7939	11596.86	.	.	.	V	.	Q.
21.167	14411.2012	11239.53	.	.	.	V	.	Q.
21.250	14486.3994	10918.74	.	.	.	V	.	Q.
21.333	14559.3486	10592.17	.	.	.	V	.	Q.
21.417	14629.7812	10226.79	.	.	.	V	.	Q.
21.500	14698.3330	9953.67	.	.	.	V	.	Q.
21.583	14765.2246	9712.64	.	.	.	V	.	Q.
21.667	14830.3965	9462.99	.	.	.	V	.	Q.
21.750	14893.7285	9195.79	.	.	.	V	.	Q.
21.833	14955.1943	8924.88	.	.	.	V	.	Q.
21.917	15015.3154	8729.52	.	.	.	V	.	Q.
22.000	15074.1270	8539.40	.	.	.	V	.	Q.
22.083	15131.6221	8348.34	.	.	.	V	.	Q.
22.167	15187.8252	8160.75	.	.	.	V	.	Q.
22.250	15242.7559	7975.92	.	.	.	V	.	Q.
22.333	15296.4307	7793.51	.	.	.	V	.	Q.
22.417	15348.8740	7614.81	.	.	.	V	.	Q.
22.500	15399.6201	7368.38	.	.	.	V	.	Q.
22.583	15449.1885	7197.28	.	.	.	V	.	Q.
22.667	15497.8496	7065.62	.	.	.	V	.	Q.
22.750	15545.6328	6938.09	.	.	.	V	.	Q.
22.833	15592.5615	6814.00	.	.	.	V	.	Q.
22.917	15638.6260	6688.54	.	.	.	V	.	Q.
23.000	15683.8369	6564.61	.	.	.	V	.	Q.
23.083	15728.2148	6443.66	.	.	.	V	.	Q.
23.167	15771.7822	6326.03	.	.	.	V	.	Q.
23.250	15814.5381	6208.11	.	.	.	V	.	Q.

23.333	15856.5186	6095.53	.	.	.	Q	.	V
23.417	15897.7832	5991.63	.	.	.	Q	.	V
23.500	15938.3838	5895.14	.	.	.	Q	.	V
23.583	15978.3643	5805.10	.	.	.	Q	.	V
23.667	16017.7236	5715.00	.	.	.	Q	.	V
23.750	16056.5029	5630.70	.	.	.	Q	.	V
23.833	16094.7559	5554.30	.	.	.	Q	.	V
23.917	16132.5049	5481.12	.	.	.	Q	.	V
24.000	16169.7529	5408.40	.	.	.	Q	.	V
24.083	16206.4688	5331.15	.	.	.	Q	.	V
24.167	16242.6152	5248.51	.	.	.	Q	.	V
24.250	16278.2031	5167.41	.	.	.	Q	.	V
24.333	16313.2412	5087.56	.	.	.	Q	.	V
24.417	16347.7432	5009.64	.	.	.	Q	.	V
24.500	16381.7803	4942.20	.	.	.	Q	.	V
24.583	16415.3496	4874.25	.	.	.	Q	.	V
24.667	16448.4473	4805.84	.	.	.	Q	.	V
24.750	16481.1191	4743.85	.	.	.	Q	.	V
24.833	16513.3516	4680.27	.	.	.	Q	.	V
24.917	16545.0625	4604.50	.	.	.	Q	.	V
25.000	16576.2344	4526.18	.	.	.	Q	.	V
25.083	16606.8203	4441.18	.	.	.	Q	.	V
25.167	16636.7734	4349.10	.	.	.	Q	.	V
25.250	16666.0391	4249.24	.	.	.	Q	.	V
25.333	16694.6191	4149.82	.	.	.	Q	.	V
25.417	16722.2812	4016.67	.	.	.	Q	.	V
25.500	16749.1719	3904.47	.	.	.	Q	.	V
25.583	16775.3574	3802.20	.	.	.	Q	.	V
25.667	16800.9062	3709.67	.	.	.	Q	.	V
25.750	16825.7520	3607.67	.	.	.	Q	.	V
25.833	16849.7930	3490.81	.	.	.	Q	.	V
25.917	16873.0684	3379.68	.	.	.	Q	.	V
26.000	16895.6641	3280.90	.	.	.	Q	.	V
26.083	16917.5293	3174.82	.	.	.	Q	.	V
26.167	16938.5938	3058.67	.	.	.	Q	.	V
26.250	16958.7988	2933.64	.	.	.	Q	.	V
26.333	16978.1523	2810.03	.	.	.	Q	.	V
26.417	16996.8574	2715.87	.	.	.	Q	.	V
26.500	17014.6426	2582.29	.	.	.	Q	.	V
26.583	17031.5508	2454.97	.	.	.	Q	.	V
26.667	17047.5801	2327.40	.	.	.	Q	.	V
26.750	17062.6191	2183.55	.	.	.	Q	.	V
26.833	17076.8594	2067.80	.	.	.	Q	.	V
26.917	17090.3945	1965.39	.	.	.	Q	.	V
27.000	17103.2480	1866.23	.	.	.	Q	.	V
27.083	17115.3262	1753.86	.	.	.	Q	.	V
27.167	17126.4980	1622.09	.	.	.	Q	.	V
27.250	17136.8828	1507.91	.	.	.	Q	.	V
27.333	17146.6133	1412.86	.	.	.	Q	.	V
27.417	17155.7109	1320.94	.	.	.	Q	.	V
27.500	17164.1797	1229.72	.	.	.	Q	.	V
27.583	17172.1016	1150.28	.	.	.	Q	.	V
27.667	17179.4570	1068.02	.	.	.	Q	.	V
27.750	17186.3105	995.07	.	.	.	Q	.	V
27.833	17192.7559	935.88	.	.	.	Q	.	V
27.917	17198.8008	877.59	.	.	.	Q	.	V
28.000	17204.4395	818.66	.	.	.	Q	.	V
28.083	17209.6660	758.91	.	.	.	Q	.	V

28.167	17214.5137	703.85	.Q	.	.	.	V.
28.250	17219.0039	651.97	.Q	.	.	.	V.
28.333	17223.1582	603.32	.Q	.	.	.	V.
28.417	17227.0195	560.64	.Q	.	.	.	V.
28.500	17230.6074	521.01	.Q	.	.	.	V.
28.583	17233.9570	486.47	Q	.	.	.	V.
28.667	17237.0957	455.73	Q	.	.	.	V.
28.750	17240.0254	425.35	Q	.	.	.	V.
28.833	17242.7617	397.25	Q	.	.	.	V.
28.917	17245.3105	370.03	Q	.	.	.	V.
29.000	17247.6738	343.06	Q	.	.	.	V.
29.083	17249.8633	317.86	Q	.	.	.	V.
29.167	17251.8848	293.54	Q	.	.	.	V.
29.250	17253.7402	269.40	Q	.	.	.	V.
29.333	17255.4453	247.70	Q	.	.	.	V.
29.417	17257.0371	231.05	Q	.	.	.	V.
29.500	17258.5156	214.70	Q	.	.	.	V.
29.583	17259.8828	198.48	Q	.	.	.	V.
29.667	17261.1387	182.36	Q	.	.	.	V.
29.750	17262.2930	167.54	Q	.	.	.	V.
29.833	17263.3730	156.90	Q	.	.	.	V.
29.917	17264.3828	146.71	Q	.	.	.	V.
30.000	17265.3242	136.58	Q	.	.	.	V.
30.083	17266.1953	126.53	Q	.	.	.	V.
30.167	17266.9980	116.55	Q	.	.	.	V.
30.250	17267.7324	106.65	Q	.	.	.	V.
30.333	17268.3984	96.81	Q	.	.	.	V.
30.417	17269.0000	87.42	Q	.	.	.	V.
30.500	17269.5723	83.02	Q	.	.	.	V.
30.583	17270.1250	80.26	Q	.	.	.	V.
30.667	17270.6582	77.50	Q	.	.	.	V.
30.750	17271.1738	74.80	Q	.	.	.	V.
30.833	17271.6699	72.09	Q	.	.	.	V.
30.917	17272.1484	69.42	Q	.	.	.	V.
31.000	17272.6074	66.76	Q	.	.	.	V.
31.083	17273.0488	64.15	Q	.	.	.	V.
31.167	17273.4727	61.52	Q	.	.	.	V.
31.250	17273.8789	58.94	Q	.	.	.	V.
31.333	17274.2676	56.40	Q	.	.	.	V.
31.417	17274.6387	53.81	Q	.	.	.	V.
31.500	17274.9922	51.31	Q	.	.	.	V.
31.583	17275.3281	48.78	Q	.	.	.	V.
31.667	17275.6465	46.32	Q	.	.	.	V.
31.750	17275.9492	43.83	Q	.	.	.	V.
31.833	17276.2344	41.38	Q	.	.	.	V.
31.917	17276.5020	38.93	Q	.	.	.	V.
32.000	17276.7539	36.51	Q	.	.	.	V.
32.083	17276.9883	34.12	Q	.	.	.	V.
32.167	17277.2070	31.74	Q	.	.	.	V.
32.250	17277.4102	29.38	Q	.	.	.	V.
32.333	17277.5957	27.03	Q	.	.	.	V.
32.417	17277.7656	24.70	Q	.	.	.	V.
32.500	17277.9199	22.38	Q	.	.	.	V.
32.583	17278.0586	20.08	Q	.	.	.	V.
32.667	17278.1816	17.79	Q	.	.	.	V.
32.750	17278.2891	15.52	Q	.	.	.	V.
32.833	17278.3809	13.27	Q	.	.	.	V.
32.917	17278.4570	11.02	Q	.	.	.	V.

33.000	17278.5176	8.79	Q	.	.	.	V.
33.083	17278.5625	6.58	Q	.	.	.	V.
33.167	17278.5918	4.38	Q	.	.	.	V.
33.250	17278.6074	2.19	Q	.	.	.	V.
33.333	17278.6074	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%	2000.0
10%	1445.0
20%	1185.0
30%	695.0
40%	525.0
50%	435.0
60%	370.0
70%	305.0
80%	240.0
90%	160.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 119 *
* 100-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV00119S.DAT
TIME/DATE OF STUDY: 12:51 01/02/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 49495.699 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298
LOW LOSS FRACTION = 0.376
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

Table with 3 columns: INTERVAL NUMBER, "S" GRAPH MEAN VALUES, UNIT HYDROGRAPH ORDINATES (CFS). Rows 1-48.

49	95.529	3226.539
50	96.027	2984.083
51	96.374	2078.930
52	96.707	1990.789
53	97.040	1993.484
54	97.373	1990.789
55	97.706	1993.484
56	97.990	1704.218
57	98.089	588.258
58	98.168	476.690
59	98.248	476.690
60	98.327	475.320
61	98.407	473.904
62	98.487	479.430
63	98.566	475.320
64	98.645	475.274
65	98.726	479.430
66	98.805	473.950
67	98.884	476.690
68	98.964	476.690
69	99.043	473.904
70	99.122	473.904
71	99.201	473.904
72	99.281	473.904
73	99.360	473.904
74	99.439	473.904
75	99.518	473.904
76	99.597	473.904
77	99.676	473.904
78	99.756	473.904
79	99.835	473.904
80	99.914	473.904
81	99.993	473.904
82	100.000	40.828

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9403.4258
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 16050.0771

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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.	5100.0	10200.0	15300.0	20400.0
0.083	0.0587	8.52	Q	.	.	.	.
0.167	0.2348	25.58	Q	.	.	.	.
0.250	0.5288	42.68	Q	.	.	.	.
0.333	0.9409	59.84	Q	.	.	.	.
0.417	1.4951	80.46	Q	.	.	.	.
0.500	2.2289	106.55	Q	.	.	.	.
0.583	3.1454	133.08	Q	.	.	.	.
0.667	4.3409	173.59	Q	.	.	.	.
0.750	5.8932	225.40	Q	.	.	.	.
0.833	7.8964	290.86	Q	.	.	.	.
0.917	10.4343	368.50	Q	.	.	.	.
1.000	13.4947	444.36	Q	.	.	.	.
1.083	17.1705	533.73	VQ	.	.	.	.
1.167	21.4833	626.21	VQ	.	.	.	.
1.250	26.3700	709.56	VQ	.	.	.	.
1.333	31.9697	813.07	VQ	.	.	.	.
1.417	38.2526	912.28	VQ	.	.	.	.
1.500	45.1705	1004.48	VQ	.	.	.	.
1.583	52.8515	1115.28	V Q	.	.	.	.
1.667	61.4165	1243.64	V Q	.	.	.	.
1.750	70.6868	1346.04	V Q	.	.	.	.
1.833	80.9049	1483.68	V Q	.	.	.	.
1.917	92.0804	1622.67	V Q	.	.	.	.
2.000	104.3242	1777.80	V Q	.	.	.	.
2.083	117.4303	1903.01	V Q	.	.	.	.
2.167	131.2972	2013.47	V Q	.	.	.	.
2.250	146.0498	2142.08	V Q	.	.	.	.
2.333	161.8258	2290.68	V Q	.	.	.	.
2.417	178.3891	2404.98	V Q	.	.	.	.
2.500	195.7366	2518.86	V Q	.	.	.	.
2.583	213.7957	2622.18	V Q	.	.	.	.
2.667	232.5604	2724.63	V Q	.	.	.	.
2.750	251.9166	2810.53	V Q	.	.	.	.
2.833	271.7906	2885.70	V Q	.	.	.	.
2.917	292.1949	2962.70	V Q	.	.	.	.
3.000	313.1248	3039.03	V Q	.	.	.	.
3.083	334.5392	3109.37	V Q	.	.	.	.
3.167	356.4014	3174.39	V Q	.	.	.	.
3.250	378.6554	3231.27	V Q	.	.	.	.
3.333	401.2565	3281.68	.V Q	.	.	.	.
3.417	424.1718	3327.30	.V Q	.	.	.	.
3.500	447.3898	3371.26	.V Q	.	.	.	.
3.583	470.8993	3413.58	.V Q	.	.	.	.
3.667	494.6960	3455.28	.V Q	.	.	.	.
3.750	518.7667	3495.06	.V Q	.	.	.	.
3.833	543.1098	3534.61	.V Q	.	.	.	.
3.917	567.6782	3567.32	.V Q	.	.	.	.

4.000	592.4599	3598.31	.V	Q	.	.	.	.
4.083	617.4550	3629.28	.V	Q	.	.	.	.
4.167	642.6561	3659.20	.V	Q	.	.	.	.
4.250	668.0265	3683.78	.V	Q	.	.	.	.
4.333	693.5651	3708.20	.V	Q	.	.	.	.
4.417	719.2715	3732.58	.V	Q	.	.	.	.
4.500	745.1484	3757.32	.V	Q	.	.	.	.
4.583	771.1954	3782.03	.V	Q	.	.	.	.
4.667	797.4034	3805.40	.V	Q	.	.	.	.
4.750	823.7270	3822.18	.V	Q	.	.	.	.
4.833	850.1641	3838.66	.V	Q	.	.	.	.
4.917	876.7141	3855.07	.V	Q	.	.	.	.
5.000	903.3797	3871.84	.V	Q	.	.	.	.
5.083	930.1602	3888.52	.V	Q	.	.	.	.
5.167	957.0583	3905.62	.V	Q	.	.	.	.
5.250	984.0735	3922.61	.V	Q	.	.	.	.
5.333	1011.2085	3939.99	.V	Q	.	.	.	.
5.417	1038.4628	3957.32	.V	Q	.	.	.	.
5.500	1065.8389	3975.02	.V	Q	.	.	.	.
5.583	1093.3364	3992.65	.V	Q	.	.	.	.
5.667	1120.9584	4010.70	.V	Q	.	.	.	.
5.750	1148.7039	4028.65	.V	Q	.	.	.	.
5.833	1176.5759	4047.03	.V	Q	.	.	.	.
5.917	1204.5740	4065.32	.V	Q	.	.	.	.
6.000	1232.7010	4084.05	.V	Q	.	.	.	.
6.083	1260.9567	4102.71	.V	Q	.	.	.	.
6.167	1289.3438	4121.81	.V	Q	.	.	.	.
6.250	1317.8619	4140.84	.V	Q	.	.	.	.
6.333	1346.5143	4160.32	.V	Q	.	.	.	.
6.417	1375.3003	4179.73	.V	Q	.	.	.	.
6.500	1404.2233	4199.61	.V	Q	.	.	.	.
6.583	1433.2826	4219.42	.V	Q	.	.	.	.
6.667	1462.4817	4239.71	.V	Q	.	.	.	.
6.750	1491.8201	4259.93	.V	Q	.	.	.	.
6.833	1521.2837	4278.11	.V	Q	.	.	.	.
6.917	1550.8702	4295.97	.V	Q	.	.	.	.
7.000	1580.5834	4314.34	.V	Q	.	.	.	.
7.083	1610.4225	4332.63	.V	Q	.	.	.	.
7.167	1640.3911	4351.44	.V	Q	.	.	.	.
7.250	1670.4888	4370.18	.V	Q	.	.	.	.
7.333	1700.7191	4389.45	.V	Q	.	.	.	.
7.417	1731.0817	4408.65	.V	Q	.	.	.	.
7.500	1761.5803	4428.40	.V	Q	.	.	.	.
7.583	1792.2145	4448.09	.V	Q	.	.	.	.
7.667	1822.9882	4468.34	.V	Q	.	.	.	.
7.750	1853.9009	4488.53	.V	Q	.	.	.	.
7.833	1884.9568	4509.31	.V	Q	.	.	.	.
7.917	1916.1553	4530.02	.V	Q	.	.	.	.
8.000	1947.5006	4551.35	.V	Q	.	.	.	.
8.083	1978.9924	4572.61	.V	Q	.	.	.	.
8.167	2010.6350	4594.51	.V	Q	.	.	.	.
8.250	2042.4280	4616.34	.V	Q	.	.	.	.
8.333	2074.3757	4638.83	.V	Q	.	.	.	.
8.417	2106.4780	4661.26	.V	Q	.	.	.	.
8.500	2138.7395	4684.38	.V	Q	.	.	.	.
8.583	2171.1599	4707.43	.V	Q	.	.	.	.
8.667	2203.7439	4731.20	.V	Q	.	.	.	.
8.750	2236.4912	4754.92	.V	Q	.	.	.	.

8.833	2269.4070	4779.37	.	V	Q	.	.	.
8.917	2302.4907	4803.77	.	V	Q	.	.	.
9.000	2335.7478	4828.94	.	V	Q	.	.	.
9.083	2369.1780	4854.06	.	V	Q	.	.	.
9.167	2402.7866	4879.98	.	V	Q	.	.	.
9.250	2436.5735	4905.86	.	V	Q	.	.	.
9.333	2470.5444	4932.58	.	V	Q	.	.	.
9.417	2504.6990	4959.25	.	V	Q	.	.	.
9.500	2539.0432	4986.80	.	V	Q	.	.	.
9.583	2573.5771	5014.31	.	V	Q	.	.	.
9.667	2608.3066	5042.73	.	V	Q	.	.	.
9.750	2643.2317	5071.13	.	V	Q	.	.	.
9.833	2678.3589	5100.47	.	V	Q	.	.	.
9.917	2713.6880	5129.80	.	V	Q	.	.	.
10.000	2749.2261	5160.12	.	V	Q	.	.	.
10.083	2784.9729	5190.43	.	V	Q	.	.	.
10.167	2820.9355	5221.77	.	V	Q	.	.	.
10.250	2857.1140	5253.12	.	V	Q	.	.	.
10.333	2893.5159	5285.55	.	V	Q	.	.	.
10.417	2930.1411	5318.00	.	V	Q	.	.	.
10.500	2966.9978	5351.58	.	V	Q	.	.	.
10.583	3004.0859	5385.20	.	V	Q	.	.	.
10.667	3041.4138	5420.00	.	V	Q	.	.	.
10.750	3078.9817	5454.86	.	V	Q	.	.	.
10.833	3116.7981	5490.95	.	V	Q	.	.	.
10.917	3154.8638	5527.12	.	V	Q	.	.	.
11.000	3193.1875	5564.59	.	V	Q	.	.	.
11.083	3231.7700	5602.17	.	V	Q	.	.	.
11.167	3270.6206	5641.10	.	V	Q	.	.	.
11.250	3309.7402	5680.17	.	V	Q	.	.	.
11.333	3349.1389	5720.67	.	V	Q	.	.	.
11.417	3388.8176	5761.34	.	V	Q	.	.	.
11.500	3428.7869	5803.52	.	V	Q	.	.	.
11.583	3469.0479	5845.88	.	V	Q	.	.	.
11.667	3509.6116	5889.86	.	V	Q	.	.	.
11.750	3550.4797	5934.06	.	V	Q	.	.	.
11.833	3591.6641	5979.96	.	V	Q	.	.	.
11.917	3633.1663	6026.12	.	V	Q	.	.	.
12.000	3674.9988	6074.09	.	V	Q	.	.	.
12.083	3717.2639	6136.90	.	V	Q	.	.	.
12.167	3760.0747	6216.12	.	V	Q	.	.	.
12.250	3803.4326	6295.56	.	V	Q	.	.	.
12.333	3847.3506	6376.90	.	V	Q	.	.	.
12.417	3891.8706	6464.32	.	V	Q	.	.	.
12.500	3937.0703	6562.99	.	V	Q	.	.	.
12.583	3982.9553	6662.52	.	V	Q	.	.	.
12.667	4029.7036	6787.84	.	V	Q	.	.	.
12.750	4077.4480	6932.47	.	V	Q	.	.	.
12.833	4126.3608	7102.13	.	V	Q	.	.	.
12.917	4176.5835	7292.32	.	V	Q	.	.	.
13.000	4228.1055	7481.01	.	V	Q	.	.	.
13.083	4281.0830	7692.34	.	V	Q	.	.	.
13.167	4335.5635	7910.56	.	V	Q	.	.	.
13.250	4391.4351	8112.56	.	V	Q	.	.	.
13.333	4448.9468	8350.71	.	.V	Q	.	.	.
13.417	4508.0439	8580.90	.	.V	Q	.	.	.
13.500	4568.6553	8800.73	.	.V	Q	.	.	.
13.583	4630.9956	9051.84	.	.V	Q	.	.	.

13.667	4695.2837	9334.62	.	.V	Q	.	.	.
13.750	4761.2080	9572.22	.	.V	Q	.	.	.
13.833	4829.1953	9871.76	.	.V	Q	.	.	.
13.917	4899.2568	10172.91	.	.V	Q	.	.	.
14.000	4971.5913	10502.97	.	.V	Q	.	.	.
14.083	5045.9521	10797.18	.	.V	.Q	.	.	.
14.167	5122.2837	11083.37	.	.V	.Q	.	.	.
14.250	5200.7905	11399.17	.	.V	.Q	.	.	.
14.333	5281.7109	11749.65	.	.V	.Q	.	.	.
14.417	5364.6738	12046.18	.	.V	.Q	.	.	.
14.500	5449.7471	12352.65	.	.V	.Q	.	.	.
14.583	5536.7993	12639.95	.	.V	.Q	.	.	.
14.667	5626.0005	12952.03	.	.V	.Q	.	.	.
14.750	5717.2847	13254.47	.	.V	.Q	.	.	.
14.833	5810.6899	13562.47	.	.V	.Q	.	.	.
14.917	5906.3662	13892.20	.	.V	.Q	.	.	.
15.000	6004.2568	14213.71	.	.V	.Q	.	.	.
15.083	6104.4263	14544.59	.	.V	.Q	.	.	.
15.167	6206.8223	14867.88	.	.V	.Q	.	.	.
15.250	6311.1782	15152.50	.	.V	.Q	.	.	.
15.333	6417.6489	15459.53	.	.V	.Q	.	.	.
15.417	6525.9214	15721.17	.	.V	.Q	.	.	.
15.500	6635.7061	15940.75	.	.V	.Q	.	.	.
15.583	6747.2026	16189.30	.	.V	.Q	.	.	.
15.667	6860.6177	16467.85	.	.V	.Q	.	.	.
15.750	6975.4312	16670.95	.	.V	.Q	.	.	.
15.833	7091.9370	16916.66	.	.V	.Q	.	.	.
15.917	7210.1152	17159.45	.	.V	.Q	.	.	.
16.000	7330.0391	17412.96	.	.V	.Q	.	.	.
16.083	7452.2944	17751.45	.	.V	.Q	.	.	.
16.167	7576.2505	17998.41	.	.V	.Q	.	.	.
16.250	7700.6562	18063.74	.	.V	.Q	.	.	.
16.333	7825.7920	18169.68	.	.V	.Q	.	.	.
16.417	7951.5713	18263.14	.	.V	.Q	.	.	.
16.500	8078.3511	18408.41	.	.V	.Q	.	.	.
16.583	8205.6494	18483.75	.	.V	.Q	.	.	.
16.667	8335.1543	18804.12	.	.V	.Q	.	.	.
16.750	8466.2793	19039.35	.	.V	.Q	.	.	.
16.833	8599.3428	19320.76	.	.V	.Q	.	.	.
16.917	8733.7676	19518.52	.	.V	.Q	.	.	.
17.000	8867.3916	19402.21	.	.V	.Q	.	.	.
17.083	9002.7793	19658.33	.	.V	.Q	.	.	.
17.167	9137.8379	19610.50	.	.V	.Q	.	.	.
17.250	9271.0850	19347.41	.	.V	.Q	.	.	.
17.333	9406.0596	19598.24	.	.V	.Q	.	.	.
17.417	9540.1514	19470.08	.	.V	.Q	.	.	.
17.500	9673.5039	19362.73	.	.V	.Q	.	.	.
17.583	9809.1387	19694.19	.	.V	.Q	.	.	.
17.667	9946.2988	19915.61	.	.V	.Q	.	.	.
17.750	10079.9863	19411.45	.	.V	.Q	.	.	.
17.833	10218.6777	20137.96	.	.V	.Q	.	.	.
17.917	10357.1289	20103.11	.	.V	.Q	.	.	.
18.000	10497.0820	20321.23	.	.V	.Q	.	.	.
18.083	10631.8594	19569.68	.	.V	.Q	.	.	.
18.167	10764.8398	19308.73	.	.V	.Q	.	.	.
18.250	10900.5947	19711.57	.	.V	.Q	.	.	.
18.333	11038.6650	20047.84	.	.V	.Q	.	.	.
18.417	11171.2139	19246.12	.	.V	.Q	.	.	.

18.500	11303.0293	19139.67	.	.	.	.	V	Q	.
18.583	11432.6562	18821.78	.	.	.	.	V	Q	.
18.667	11561.3330	18683.84	.	.	.	.	V	Q	.
18.750	11686.5840	18186.38	.	.	.	.	V	Q	.
18.833	11808.8066	17746.68	.	.	.	.	V	Q	.
18.917	11929.4990	17524.55	.	.	.	.	V	Q	.
19.000	12047.9316	17196.47	.	.	.	.	V	Q	.
19.083	12163.3096	16752.94	.	.	.	.	V	Q	.
19.167	12275.5586	16298.61	.	.	.	.	VQ	.	.
19.250	12384.2969	15788.83	.	.	.	.	Q	.	.
19.333	12489.2480	15238.85	.	.	.	.	Q.V	.	.
19.417	12591.1182	14791.50	.	.	.	.	Q.V	.	.
19.500	12690.3379	14406.74	.	.	.	.	Q	.V	.
19.583	12786.8652	14015.71	.	.	.	.	Q	.V	.
19.667	12880.4668	13591.00	.	.	.	.	Q	.V	.
19.750	12971.3662	13198.57	.	.	.	.	Q	.V	.
19.833	13059.3574	12776.34	.	.	.	.	Q	.V	.
19.917	13143.5469	12224.32	.	.	.	.	Q	.V	.
20.000	13224.4902	11752.98	.	.	.	.	Q	.V	.
20.083	13302.9326	11389.86	.	.	.	.	Q	.V	.
20.167	13378.8740	11026.67	.	.	.	.	Q	.V	.
20.250	13451.5908	10558.41	.	.	.	.	Q	.V	.
20.333	13521.6309	10169.88	.	.	.	.	Q	.V	.
20.417	13589.5742	9865.35	.	.	.	.	Q	.V	.
20.500	13655.4238	9561.35	.	.	.	.	Q	.V	.
20.583	13719.1719	9256.26	.	.	.	.	Q	.V	.
20.667	13780.5293	8909.14	.	.	.	.	Q	.V	.
20.750	13839.0967	8503.94	.	.	.	.	Q	.V	.
20.833	13895.8818	8245.19	.	.	.	.	Q	.V	.
20.917	13951.0586	8011.71	.	.	.	.	Q	.V	.
21.000	14004.6777	7785.52	.	.	.	.	Q	.V	.
21.083	14056.7227	7556.98	.	.	.	.	Q	.V	.
21.167	14107.2812	7341.15	.	.	.	.	Q	.V	.
21.250	14156.5195	7149.42	.	.	.	.	Q	.V	.
21.333	14204.5420	6972.84	.	.	.	.	Q	.V	.
21.417	14251.4209	6806.80	.	.	.	.	Q	.V	.
21.500	14297.1865	6645.12	.	.	.	.	Q	.V	.
21.583	14341.8760	6488.95	.	.	.	.	Q	.V	.
21.667	14385.5342	6339.10	.	.	.	.	Q	.V	.
21.750	14428.2803	6206.75	.	.	.	.	Q	.V	.
21.833	14470.1514	6079.69	.	.	.	.	Q	.V	.
21.917	14511.2461	5966.90	.	.	.	.	Q	.V	.
22.000	14551.6064	5860.31	.	.	.	.	Q	.V	.
22.083	14591.2490	5756.06	.	.	.	.	Q	.V	.
22.167	14630.2490	5662.82	.	.	.	.	Q	.V	.
22.250	14668.6855	5581.02	.	.	.	.	Q	.V	.
22.333	14706.5732	5501.32	.	.	.	.	Q	.V	.
22.417	14743.9209	5422.86	.	.	.	.	Q	.V	.
22.500	14780.7539	5348.16	.	.	.	.	Q	.V	.
22.583	14817.0781	5274.29	.	.	.	.	Q	.V	.
22.667	14852.8994	5201.31	.	.	.	.	Q	.V	.
22.750	14888.2744	5136.44	.	.	.	.	Q	.V	.
22.833	14922.8799	5024.69	.	.	.	.	Q	.V	.
22.917	14957.0762	4965.29	.	.	.	.	Q	.V	.
23.000	14990.9072	4912.25	.	.	.	.	Q	.V	.
23.083	15024.3916	4861.88	.	.	.	.	Q	.V	.
23.167	15057.4980	4807.03	.	.	.	.	Q	.V	.
23.250	15090.2285	4752.50	.	.	.	.	Q	.V	.

23.333	15122.5889	4698.74	.	Q.	.	.	V	.
23.417	15154.5840	4645.72	.	Q.	.	.	V	.
23.500	15186.2197	4593.52	.	Q.	.	.	V	.
23.583	15217.5010	4542.03	.	Q.	.	.	V	.
23.667	15248.4326	4491.26	.	Q.	.	.	V	.
23.750	15279.0195	4441.22	.	Q.	.	.	V	.
23.833	15309.2998	4396.73	.	Q.	.	.	V	.
23.917	15339.2842	4353.71	.	Q.	.	.	V	.
24.000	15368.9785	4311.65	.	Q.	.	.	V	.
24.083	15398.3311	4262.02	.	Q.	.	.	V	.
24.167	15427.2900	4204.81	.	Q.	.	.	V	.
24.250	15455.8613	4148.55	.	Q.	.	.	V	.
24.333	15484.0518	4093.19	.	Q.	.	.	V	.
24.417	15511.8428	4035.30	.	Q.	.	.	V	.
24.500	15539.2041	3972.85	.	Q.	.	.	V	.
24.583	15566.1387	3910.89	.	Q.	.	.	V	.
24.667	15592.5566	3835.89	.	Q.	.	.	V	.
24.750	15618.3867	3750.59	.	Q.	.	.	V	.
24.833	15643.5732	3657.08	.	Q.	.	.	V	.
24.917	15668.0430	3553.02	.	Q.	.	.	V	.
25.000	15691.8174	3452.01	.	Q.	.	.	V	.
25.083	15714.8115	3338.74	.	Q.	.	.	V	.
25.167	15737.0137	3223.68	.	Q.	.	.	V	.
25.250	15758.4951	3119.06	.	Q.	.	.	V	.
25.333	15779.1260	2995.54	.	Q.	.	.	V	.
25.417	15798.9443	2877.63	.	Q.	.	.	V	.
25.500	15818.0078	2768.05	.	Q.	.	.	V	.
25.583	15836.1973	2641.10	.	Q.	.	.	V	.
25.667	15853.4014	2497.98	.	Q.	.	.	V	.
25.750	15869.8076	2382.23	.	Q.	.	.	V	.
25.833	15885.1836	2232.59	.	Q.	.	.	V	.
25.917	15899.5293	2083.03	.	Q.	.	.	V	.
26.000	15912.7451	1918.95	.	Q.	.	.	V	.
26.083	15925.0469	1786.27	.	Q.	.	.	V	.
26.167	15936.5469	1669.78	.	Q.	.	.	V	.
26.250	15947.1270	1536.25	.	Q.	.	.	V	.
26.333	15956.6602	1384.20	.	Q.	.	.	V	.
26.417	15965.3916	1267.76	.	Q.	.	.	V	.
26.500	15973.3330	1153.08	.	Q.	.	.	V	.
26.583	15980.5635	1049.92	.	Q.	.	.	V	.
26.667	15987.0986	948.85	.	Q.	.	.	V	.
26.750	15993.0566	865.16	.	Q.	.	.	V	.
26.833	15998.5195	793.23	.	Q.	.	.	V	.
26.917	16003.4785	720.05	.	Q.	.	.	V	.
27.000	16007.9443	648.50	.	Q.	.	.	V	.
27.083	16011.9629	583.52	.	Q.	.	.	V	.
27.167	16015.5762	524.71	.	Q.	.	.	V	.
27.250	16018.8438	474.50	.	Q.	.	.	V	.
27.333	16021.8154	431.49	.	Q.	.	.	V	.
27.417	16024.5264	393.60	.	Q.	.	.	V	.
27.500	16026.9922	357.99	.	Q.	.	.	V	.
27.583	16029.2256	324.27	.	Q.	.	.	V	.
27.667	16031.2354	291.78	.	Q.	.	.	V	.
27.750	16033.0361	261.43	.	Q.	.	.	V	.
27.833	16034.6328	231.89	.	Q.	.	.	V	.
27.917	16036.0742	209.36	.	Q.	.	.	V	.
28.000	16037.3760	189.08	.	Q.	.	.	V	.
28.083	16038.5391	168.91	.	Q.	.	.	V	.

28.167	16039.5742	150.30	Q	.	.	.	V	.
28.250	16040.5186	137.11	Q	.	.	.	V	.
28.333	16041.3760	124.53	Q	.	.	.	V	.
28.417	16042.1475	112.02	Q	.	.	.	V	.
28.500	16042.8330	99.61	Q	.	.	.	V	.
28.583	16043.4336	87.26	Q	.	.	.	V	.
28.667	16043.9619	76.69	Q	.	.	.	V	.
28.750	16044.4629	72.72	Q	.	.	.	V	.
28.833	16044.9414	69.44	Q	.	.	.	V	.
28.917	16045.3975	66.18	Q	.	.	.	V	.
29.000	16045.8311	62.96	Q	.	.	.	V	.
29.083	16046.2422	59.77	Q	.	.	.	V	.
29.167	16046.6318	56.57	Q	.	.	.	V	.
29.250	16047.0000	53.41	Q	.	.	.	V	.
29.333	16047.3467	50.28	Q	.	.	.	V	.
29.417	16047.6719	47.15	Q	.	.	.	V	.
29.500	16047.9756	44.07	Q	.	.	.	V	.
29.583	16048.2578	41.00	Q	.	.	.	V	.
29.667	16048.5195	37.95	Q	.	.	.	V	.
29.750	16048.7598	34.94	Q	.	.	.	V	.
29.833	16048.9795	31.94	Q	.	.	.	V	.
29.917	16049.1787	28.97	Q	.	.	.	V	.
30.000	16049.3574	26.01	Q	.	.	.	V	.
30.083	16049.5166	23.08	Q	.	.	.	V	.
30.167	16049.6553	20.16	Q	.	.	.	V	.
30.250	16049.7744	17.26	Q	.	.	.	V	.
30.333	16049.8730	14.38	Q	.	.	.	V	.
30.417	16049.9521	11.52	Q	.	.	.	V	.
30.500	16050.0117	8.67	Q	.	.	.	V	.
30.583	16050.0518	5.85	Q	.	.	.	V	.
30.667	16050.0723	3.04	Q	.	.	.	V	.
30.750	16050.0742	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 Peak Flow Rate	Duration (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

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

Analysis prepared by:

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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 126 *
* 100-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV00126S.DAT
TIME/DATE OF STUDY: 13:15 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 126.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 50405.801 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) = 0.297
LOW LOSS FRACTION = 0.378
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	1418.785
2	0.698	2837.570
3	1.164	2837.570
4	1.629	2837.570
5	2.155	3203.821
6	2.852	4252.923
7	3.561	4318.033
8	4.499	5722.218
9	5.823	8068.716
10	7.457	9961.440
11	9.471	12275.245
12	11.545	12641.871
13	13.634	12737.045
14	16.337	16475.188
15	18.564	13579.864
16	20.931	14425.073
17	23.852	17809.225
18	26.301	14929.376
19	28.898	15830.488
20	31.902	18309.910
21	35.341	20965.633
22	37.992	16161.279
23	41.735	22815.750
24	45.415	22431.357
25	49.545	25178.797
26	52.807	19884.139
27	55.658	17380.986
28	58.927	19923.414
29	62.868	24025.039
30	65.914	18569.973
31	68.769	17403.635
32	71.498	16634.479
33	74.059	15612.782
34	76.395	14241.109
35	78.230	11186.716
36	80.055	11124.255
37	81.936	11468.417
38	83.671	10572.479
39	85.261	9693.331
40	86.656	8506.529
41	87.882	7475.344
42	88.889	6135.809
43	89.841	5806.204
44	90.721	5361.118
45	91.578	5226.709
46	92.394	4974.540
47	93.170	4728.278
48	93.922	4582.102

49	94.481	3411.392
50	94.998	3151.178
51	95.515	3152.666
52	96.001	2962.679
53	96.340	2062.323
54	96.659	1945.401
55	96.978	1948.284
56	97.298	1946.842
57	97.617	1948.331
58	97.926	1879.638
59	98.061	825.803
60	98.138	464.759
61	98.214	466.247
62	98.290	464.805
63	98.367	466.247
64	98.443	467.735
65	98.520	464.759
66	98.596	466.247
67	98.672	464.805
68	98.749	466.247
69	98.825	464.805
70	98.902	467.689
71	98.978	464.805
72	99.054	461.875
73	99.130	461.875
74	99.205	461.875
75	99.281	461.875
76	99.357	461.875
77	99.433	461.875
78	99.508	461.875
79	99.584	461.875
80	99.660	461.875
81	99.736	461.875
82	99.812	461.875
83	99.887	461.875
84	99.963	461.875
85	100.000	224.915

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 9566.2393
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 16187.9629

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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	0.0568	8.25	Q	.	.	.	.
0.167	0.2273	24.76	Q	.	.	.	.
0.250	0.5118	41.31	Q	.	.	.	.
0.333	0.9107	57.92	Q	.	.	.	.
0.417	1.4390	76.71	Q	.	.	.	.
0.500	2.1390	101.64	Q	.	.	.	.
0.583	3.0139	127.03	Q	.	.	.	.
0.667	4.1203	160.66	Q	.	.	.	.
0.750	5.5529	208.01	Q	.	.	.	.
0.833	7.3884	266.51	Q	.	.	.	.
0.917	9.7205	338.62	Q	.	.	.	.
1.000	12.5654	413.08	Q	.	.	.	.
1.083	15.9284	488.31	Q	.	.	.	.
1.167	19.9608	585.50	VQ	.	.	.	.
1.250	24.5485	666.13	VQ	.	.	.	.
1.333	29.7273	751.96	VQ	.	.	.	.
1.417	35.6342	857.68	VQ	.	.	.	.
1.500	42.1563	947.01	VQ	.	.	.	.
1.583	49.3316	1041.85	V Q	.	.	.	.
1.667	57.2613	1151.39	V Q	.	.	.	.
1.750	66.0539	1276.69	V Q	.	.	.	.
1.833	75.5199	1374.46	V Q	.	.	.	.
1.917	85.9279	1511.25	V Q	.	.	.	.
2.000	97.2651	1646.15	V Q	.	.	.	.
2.083	109.6447	1797.52	V Q	.	.	.	.
2.167	122.8575	1918.50	V Q	.	.	.	.
2.250	136.8068	2025.44	V Q	.	.	.	.
2.333	151.5961	2147.40	V Q	.	.	.	.
2.417	167.3928	2293.68	V Q	.	.	.	.
2.500	183.9810	2408.61	V Q	.	.	.	.
2.583	201.3177	2517.29	V Q	.	.	.	.
2.667	219.3736	2621.71	V Q	.	.	.	.
2.750	238.1112	2720.70	V Q	.	.	.	.
2.833	257.4770	2811.92	V Q	.	.	.	.
2.917	277.3520	2885.85	V Q	.	.	.	.
3.000	297.7345	2959.54	V Q	.	.	.	.
3.083	318.6412	3035.65	V Q	.	.	.	.
3.167	340.0372	3106.69	V Q	.	.	.	.
3.250	361.8901	3173.04	V Q	.	.	.	.
3.333	384.1531	3232.60	V Q	.	.	.	.
3.417	406.7878	3286.55	.V Q	.	.	.	.
3.500	429.7409	3332.79	.V Q	.	.	.	.
3.583	453.0017	3377.48	.V Q	.	.	.	.
3.667	476.5529	3419.62	.V Q	.	.	.	.
3.750	500.3912	3461.33	.V Q	.	.	.	.
3.833	524.5070	3501.62	.V Q	.	.	.	.
3.917	548.8928	3540.81	.V Q	.	.	.	.

4.000	573.5429	3579.20	.V	Q	.	.	.
4.083	598.4129	3611.12	.V	Q	.	.	.
4.167	623.4925	3641.56	.V	Q	.	.	.
4.250	648.7840	3672.32	.V	Q	.	.	.
4.333	674.2798	3702.00	.V	Q	.	.	.
4.417	699.9464	3726.78	.V	Q	.	.	.
4.500	725.7788	3750.88	.V	Q	.	.	.
4.583	751.7795	3775.30	.V	Q	.	.	.
4.667	777.9484	3799.72	.V	Q	.	.	.
4.750	804.2878	3824.48	.V	Q	.	.	.
4.833	830.7950	3848.84	.V	Q	.	.	.
4.917	857.4300	3867.40	.V	Q	.	.	.
5.000	884.1783	3883.86	.V	Q	.	.	.
5.083	911.0422	3900.64	.V	Q	.	.	.
5.167	938.0215	3917.39	.V	Q	.	.	.
5.250	965.1183	3934.47	.V	Q	.	.	.
5.333	992.3328	3951.54	.V	Q	.	.	.
5.417	1019.6670	3968.93	.V	Q	.	.	.
5.500	1047.1208	3986.30	.V	Q	.	.	.
5.583	1074.6967	4004.01	.V	Q	.	.	.
5.667	1102.3944	4021.72	.V	Q	.	.	.
5.750	1130.2166	4039.77	.V	Q	.	.	.
5.833	1158.1630	4057.81	.V	Q	.	.	.
5.917	1186.2360	4076.20	.V	Q	.	.	.
6.000	1214.4355	4094.57	.V	Q	.	.	.
6.083	1242.7640	4113.30	.V	Q	.	.	.
6.167	1271.2216	4132.02	.V	Q	.	.	.
6.250	1299.8105	4151.13	.V	Q	.	.	.
6.333	1328.5311	4170.23	.V	Q	.	.	.
6.417	1357.3860	4189.72	.V	Q	.	.	.
6.500	1386.3750	4209.21	.V	Q	.	.	.
6.583	1415.5010	4229.09	.V	Q	.	.	.
6.667	1444.7639	4248.98	.V	Q	.	.	.
6.750	1474.1666	4269.28	.V	Q	.	.	.
6.833	1503.7092	4289.58	.V	Q	.	.	.
6.917	1533.3945	4310.31	.V	Q	.	.	.
7.000	1563.2228	4331.06	.V	Q	.	.	.
7.083	1593.1874	4350.85	.V	Q	.	.	.
7.167	1623.2794	4369.36	.V	Q	.	.	.
7.250	1653.5020	4388.30	.V	Q	.	.	.
7.333	1683.8550	4407.26	.V	Q	.	.	.
7.417	1714.3417	4426.67	.V	Q	.	.	.
7.500	1744.9622	4446.09	.V	Q	.	.	.
7.583	1775.7196	4465.99	.V	Q	.	.	.
7.667	1806.6143	4485.90	.V	Q	.	.	.
7.750	1837.6494	4506.31	.V	Q	.	.	.
7.833	1868.8252	4526.73	.V	Q	.	.	.
7.917	1900.1453	4547.67	.V	Q	.	.	.
8.000	1931.6096	4568.62	.V	Q	.	.	.
8.083	1963.2219	4590.11	.V	Q	.	.	.
8.167	1994.9824	4611.62	.V	Q	.	.	.
8.250	2026.8948	4633.68	.V	Q	.	.	.
8.333	2058.9592	4655.77	.V	Q	.	.	.
8.417	2091.1799	4678.43	.V	Q	.	.	.
8.500	2123.5569	4701.14	.V	Q	.	.	.
8.583	2156.0942	4724.43	.V	Q	.	.	.
8.667	2188.7922	4747.76	.V	Q	.	.	.
8.750	2221.6553	4771.71	.V	Q	.	.	.

8.833	2254.6836	4795.71	.V	Q	.	.	.
8.917	2287.8816	4820.35	.V	Q	.	.	.
9.000	2321.2498	4845.05	.V	Q	.	.	.
9.083	2354.7925	4870.41	.V	Q	.	.	.
9.167	2388.5105	4895.84	.V	Q	.	.	.
9.250	2422.4084	4921.97	.V	Q	.	.	.
9.333	2456.4868	4948.17	.V	Q	.	.	.
9.417	2490.7505	4975.09	.V	Q	.	.	.
9.500	2525.2002	5002.09	.V	Q	.	.	.
9.583	2559.8411	5029.86	.V	Q	.	.	.
9.667	2594.6738	5057.72	.V	Q	.	.	.
9.750	2629.7039	5086.36	.V	Q	.	.	.
9.833	2664.9319	5115.12	.V	Q	.	.	.
9.917	2700.3638	5144.70	.V	Q	.	.	.
10.000	2736.0000	5174.39	.V	Q	.	.	.
10.083	2771.8469	5204.96	.V	Q	.	.	.
10.167	2807.9053	5235.66	.V	Q	.	.	.
10.250	2844.1812	5267.26	.V	Q	.	.	.
10.333	2880.6758	5299.01	.V	Q	.	.	.
10.417	2917.3955	5331.71	.V	Q	.	.	.
10.500	2954.3416	5364.58	.V	Q	.	.	.
10.583	2991.5210	5398.45	.V	Q	.	.	.
10.667	3028.9348	5432.50	.V	Q	.	.	.
10.750	3066.5906	5467.60	.V	Q	.	.	.
10.833	3104.4895	5502.91	.V	Q	.	.	.
10.917	3142.6392	5539.33	.V	Q	.	.	.
11.000	3181.0413	5575.97	.V	Q	.	.	.
11.083	3219.7036	5613.78	.V	Q	.	.	.
11.167	3258.6282	5651.86	.V	Q	.	.	.
11.250	3297.8235	5691.15	.V	Q	.	.	.
11.333	3337.2915	5730.74	.V	Q	.	.	.
11.417	3377.0410	5771.62	.V	Q	.	.	.
11.500	3417.0742	5812.84	.V	Q	.	.	.
11.583	3457.4006	5855.41	.V	Q	.	.	.
11.667	3498.0229	5898.36	.V	Q	.	.	.
11.750	3538.9509	5942.76	.V	Q	.	.	.
11.833	3580.1877	5987.58	.V	Q	.	.	.
11.917	3621.7437	6033.93	.V	Q	.	.	.
12.000	3663.6221	6080.75	.V	Q	.	.	.
12.083	3705.9316	6143.35	.V	Q	.	.	.
12.167	3748.7732	6220.59	.V	Q	.	.	.
12.250	3792.1577	6299.43	.V	Q	.	.	.
12.333	3836.0881	6378.71	.V	Q	.	.	.
12.417	3880.6016	6463.35	.V	Q	.	.	.
12.500	3925.7734	6558.96	.V	Q	.	.	.
12.583	3971.6204	6656.97	.V	Q	.	.	.
12.667	4018.2422	6769.48	.V	Q	.	.	.
12.750	4065.8127	6907.23	.V	Q	.	.	.
12.833	4114.4644	7064.24	.V	Q	.	.	.
12.917	4164.3687	7246.09	.V	Q	.	.	.
13.000	4215.5522	7431.83	.V	Q	.	.	.
13.083	4268.0332	7620.24	.V	Q	.	.	.
13.167	4322.0703	7846.20	.V	Q	.	.	.
13.250	4377.4766	8044.99	.V	Q	.	.	.
13.333	4434.3110	8252.36	.V	Q	.	.	.
13.417	4492.8198	8495.50	.V	Q	.	.	.
13.500	4552.8057	8709.94	.V	Q	.	.	.
13.583	4614.3442	8935.42	.V	Q	.	.	.

13.667	4677.6079	9185.85	.	.V	Q	.	.	.
13.750	4742.7930	9464.86	.	.V	Q	.	.	.
13.833	4809.5698	9695.98	.	.V	Q	.	.	.
13.917	4878.4106	9995.71	.	.V	Q	.	.	.
14.000	4949.2910	10291.81	.	.V	Q	.	.	.
14.083	5022.5190	10632.73	.	.V	Q	.	.	.
14.167	5097.8364	10936.09	.	.V	.Q	.	.	.
14.250	5175.0776	11215.41	.	.V	.Q	.	.	.
14.333	5254.4136	11519.57	.	.V	.Q	.	.	.
14.417	5336.1611	11869.76	.	.V	.Q	.	.	.
14.500	5420.0181	12176.04	.	.V	.Q	.	.	.
14.583	5505.9136	12472.04	.	.V	.Q	.	.	.
14.667	5593.8921	12774.50	.	.V	.Q	.	.	.
14.750	5684.0620	13092.66	.	.V	.Q	.	.	.
14.833	5776.4531	13415.16	.	.V	.Q	.	.	.
14.917	5871.0190	13731.00	.	.V	.Q	.	.	.
15.000	5967.7539	14045.92	.	.V	.Q	.	.	.
15.083	6066.6699	14362.60	.	.V	.Q	.	.	.
15.167	6167.9517	14706.09	.	.V	.Q	.	.	.
15.250	6271.2939	15005.27	.	.V	.Q	.	.	.
15.333	6376.6328	15295.18	.	.V	.Q	.	.	.
15.417	6483.9902	15588.31	.	.V	.Q	.	.	.
15.500	6592.8696	15809.27	.	.V	.Q	.	.	.
15.583	6703.3174	16037.00	.	.V	.Q	.	.	.
15.667	6815.4692	16284.48	.	.V	.Q	.	.	.
15.750	6929.4146	16544.84	.	.V	.Q	.	.	.
15.833	7044.5874	16723.07	.	.V	.Q	.	.	.
15.917	7161.5371	16981.08	.	.V	.Q	.	.	.
16.000	7280.2144	17231.91	.	.V	.Q	.	.	.
16.083	7401.6465	17631.93	.	.V	.Q	.	.	.
16.167	7525.0308	17915.38	.	.V	.Q	.	.	.
16.250	7648.7476	17963.68	.	.V	.Q	.	.	.
16.333	7772.9756	18037.88	.	.V	.Q	.	.	.
16.417	7898.3540	18204.93	.	.V	.Q	.	.	.
16.500	8024.7578	18353.83	.	.V	.Q	.	.	.
16.583	8151.6958	18431.36	.	.V	.Q	.	.	.
16.667	8280.3594	18681.89	.	.V	.Q	.	.	.
16.750	8411.1475	18990.50	.	.V	.Q	.	.	.
16.833	8543.8291	19265.36	.	.V	.Q	.	.	.
16.917	8678.3105	19526.70	.	.V	.Q	.	.	.
17.000	8812.8223	19531.10	.	.V	.Q	.	.	.
17.083	8946.9531	19475.78	.	.V	.Q	.	.	.
17.167	9084.0010	19899.36	.	.V	.Q	.	.	.
17.250	9218.1494	19478.40	.	.V	.Q	.	.	.
17.333	9352.6270	19526.17	.	.V	.Q	.	.	.
17.417	9488.7275	19761.75	.	.V	.Q	.	.	.
17.500	9622.5283	19427.81	.	.V	.Q	.	.	.
17.583	9757.2715	19564.67	.	.V	.Q	.	.	.
17.667	9893.6924	19808.36	.	.V	.Q	.	.	.
17.750	10031.3730	19991.30	.	.V	.Q	.	.	.
17.833	10165.1182	19419.84	.	.V	.Q	.	.	.
17.917	10304.3730	20219.82	.	.V	.Q	.	.	.
18.000	10442.9756	20125.12	.	.V	.Q	.	.	.
18.083	10583.0332	20336.35	.	.V	.Q	.	.	.
18.167	10717.4258	19513.81	.	.V	.Q	.	.	.
18.250	10850.2920	19292.16	.	.V	.Q	.	.	.
18.333	10985.5625	19641.30	.	.V	.Q	.	.	.
18.417	11123.7100	20059.06	.	.V	.Q	.	.	.

18.500	11256.6689	19305.63	.	.	.	.	V	.Q	.
18.583	11388.0049	19070.01	.	.	.	.	V	.Q	.
18.667	11517.8760	18857.35	.	.	.	.	V	.Q	.
18.750	11646.0771	18614.88	.	.	.	.	V	.Q	.
18.833	11772.1221	18301.71	.	.	.	.	V	.Q	.
18.917	11894.0225	17700.00	.	.	.	.	V	.Q	.
19.000	12014.2754	17460.67	.	.	.	.	V	.Q	.
19.083	12132.7402	17201.09	.	.	.	.	V	.Q	.
19.167	12248.3477	16786.27	.	.	.	.	V	.Q	.
19.250	12361.1475	16378.47	.	.	.	.	V	.Q	.
19.333	12470.5518	15885.44	.	.	.	.	V	.Q	.
19.417	12576.2480	15347.07	.	.	.	.	V	.Q	.
19.500	12678.5557	14855.13	.	.	.	.	V	.Q	.
19.583	12778.2695	14478.45	.	.	.	.	V	.Q	.
19.667	12875.0791	14056.74	.	.	.	.	V	.Q	.
19.750	12969.1514	13659.26	.	.	.	.	V	.Q	.
19.833	13060.6611	13287.27	.	.	.	.	V	.Q	.
19.917	13149.2725	12866.31	.	.	.	.	V	.Q	.
20.000	13234.9648	12442.48	.	.	.	.	V	.Q	.
20.083	13316.7285	11872.02	.	.	.	.	V	.Q	.
20.167	13395.7637	11475.91	.	.	.	.	V	.Q	.
20.250	13472.5430	11148.37	.	.	.	.	V	.Q	.
20.333	13546.7988	10782.00	.	.	.	.	V	.Q	.
20.417	13617.6709	10290.64	.	.	.	.	V	.Q	.
20.500	13686.2891	9963.36	.	.	.	.	V	.Q	.
20.583	13752.8926	9670.88	.	.	.	.	V	.Q	.
20.667	13817.5615	9389.97	.	.	.	.	V	.Q	.
20.750	13880.2373	9100.48	.	.	.	.	V	.Q	.
20.833	13940.8770	8804.89	.	.	.	.	V	.Q	.
20.917	13998.9355	8430.15	.	.	.	.	V	.Q	.
21.000	14055.0732	8151.25	.	.	.	.	V	.Q	.
21.083	14109.6582	7925.70	.	.	.	.	V	.Q	.
21.167	14162.7783	7713.03	.	.	.	.	V	.Q	.
21.250	14214.4219	7498.61	.	.	.	.	V	.Q	.
21.333	14264.6582	7294.35	.	.	.	.	V	.Q	.
21.417	14313.6309	7110.85	.	.	.	.	V	.Q	.
21.500	14361.4561	6944.25	.	.	.	.	V	.Q	.
21.583	14408.1670	6782.43	.	.	.	.	V	.Q	.
21.667	14453.8086	6627.22	.	.	.	.	V	.Q	.
21.750	14498.4004	6474.67	.	.	.	.	V	.Q	.
21.833	14541.9785	6327.49	.	.	.	.	V	.Q	.
21.917	14584.6465	6195.39	.	.	.	.	V	.Q	.
22.000	14626.4590	6071.19	.	.	.	.	V	.Q	.
22.083	14667.5166	5961.54	.	.	.	.	V	.Q	.
22.167	14707.8545	5857.02	.	.	.	.	V	.Q	.
22.250	14747.4883	5754.79	.	.	.	.	V	.Q	.
22.333	14786.4453	5656.62	.	.	.	.	V	.Q	.
22.417	14824.8271	5573.00	.	.	.	.	V	.Q	.
22.500	14862.6758	5495.62	.	.	.	.	V	.Q	.
22.583	14900.0000	5419.49	.	.	.	.	V	.Q	.
22.667	14936.8076	5344.43	.	.	.	.	V	.Q	.
22.750	14973.1152	5271.80	.	.	.	.	V	.Q	.
22.833	15008.9404	5201.83	.	.	.	.	V	.Q	.
22.917	15044.3506	5141.52	.	.	.	.	V	.Q	.
23.000	15079.3516	5082.20	.	.	.	.	V	.Q	.
23.083	15113.7559	4995.56	.	.	.	.	V	.Q	.
23.167	15147.6064	4915.10	.	.	.	.	V	.Q	.
23.250	15181.1064	4864.22	.	.	.	.	V	.Q	.

23.333	15214.2686	4815.15	.	Q.	.	.	V	.
23.417	15247.0840	4764.84	.	Q.	.	.	V	.
23.500	15279.5391	4712.44	.	Q.	.	.	V	.
23.583	15311.6377	4660.76	.	Q.	.	.	V	.
23.667	15343.3857	4609.75	.	Q.	.	.	V	.
23.750	15374.7871	4559.45	.	Q.	.	.	V	.
23.833	15405.8467	4509.80	.	Q.	.	.	V	.
23.917	15436.5684	4460.84	.	Q.	.	.	V	.
24.000	15466.9580	4412.55	.	Q.	.	.	V	.
24.083	15496.9805	4359.29	.	Q.	.	.	V	.
24.167	15526.6025	4301.15	.	Q.	.	.	V	.
24.250	15555.8311	4244.02	.	Q.	.	.	V	.
24.333	15584.6729	4187.88	.	Q.	.	.	V	.
24.417	15613.1201	4130.54	.	Q.	.	.	V	.
24.500	15641.1367	4068.02	.	Q.	.	.	V	.
24.583	15668.7266	4006.04	.	Q.	.	.	V	.
24.667	15695.8389	3936.78	.	Q.	.	.	V	.
24.750	15722.3867	3854.79	.	Q.	.	.	V	.
24.833	15748.3008	3762.76	.	Q.	.	.	V	.
24.917	15773.4951	3658.28	.	Q.	.	.	V	.
25.000	15797.9629	3552.68	.	Q.	.	.	V	.
25.083	15821.7227	3449.91	.	Q.	.	.	V	.
25.167	15844.6475	3328.69	.	Q.	.	.	V	.
25.250	15866.8613	3225.39	.	Q.	.	.	V	.
25.333	15888.3359	3118.17	.	Q.	.	.	V	.
25.417	15908.9443	2992.30	.	Q.	.	.	V	.
25.500	15928.8076	2884.20	.	Q.	.	.	V	.
25.583	15947.8975	2771.84	.	Q.	.	.	V	.
25.667	15966.1211	2646.04	.	Q.	.	.	V	.
25.750	15983.3789	2505.85	.	Q.	.	.	V	.
25.833	15999.8711	2394.61	.	Q.	.	.	V	.
25.917	16015.3369	2245.66	.	Q.	.	.	V	.
26.000	16029.7998	2100.04	.	Q.	.	.	V	.
26.083	16043.1572	1939.53	.	Q.	.	.	V	.
26.167	16055.6289	1810.87	.	Q.	.	.	V	.
26.250	16067.3213	1697.66	.	Q.	.	.	V	.
26.333	16078.1377	1570.53	.	Q.	.	.	V	.
26.417	16087.9209	1420.50	.	Q.	.	.	V	.
26.500	16096.8955	1303.13	.	Q.	.	.	V	.
26.583	16105.1143	1193.33	.	Q.	.	.	V	.
26.667	16112.6123	1088.75	.	Q.	.	.	V	.
26.750	16119.4365	990.81	.	Q.	.	.	V	.
26.833	16125.6455	901.50	.	Q.	.	.	V	.
26.917	16131.3652	830.51	.	Q.	.	.	V	.
27.000	16136.6016	760.37	.	Q.	.	.	V	.
27.083	16141.3447	688.72	.	Q.	.	.	V	.
27.167	16145.6338	622.75	.	Q.	.	.	V	.
27.250	16149.5068	562.32	.	Q.	.	.	V	.
27.333	16153.0137	509.19	.	Q.	.	.	V	.
27.417	16156.1982	462.39	.	Q.	.	.	V	.
27.500	16159.1162	423.68	.	Q.	.	.	V	.
27.583	16161.7822	387.15	.	Q.	.	.	V	.
27.667	16164.2168	353.45	.	Q.	.	.	V	.
27.750	16166.4258	320.75	.	Q.	.	.	V	.
27.833	16168.4209	289.75	.	Q.	.	.	V	.
27.917	16170.2139	260.37	.	Q.	.	.	V	.
28.000	16171.8115	232.05	.	Q.	.	.	V	.
28.083	16173.2627	210.69	.	Q.	.	.	V	.

28.167	16174.5781	191.00	Q	.	.	.	V	.
28.250	16175.7588	171.42	Q	.	.	.	V	.
28.333	16176.8135	153.08	Q	.	.	.	V	.
28.417	16177.7783	140.09	Q	.	.	.	V	.
28.500	16178.6592	127.86	Q	.	.	.	V	.
28.583	16179.4561	115.69	Q	.	.	.	V	.
28.667	16180.1699	103.62	Q	.	.	.	V	.
28.750	16180.8008	91.62	Q	.	.	.	V	.
28.833	16181.3525	80.09	Q	.	.	.	V	.
28.917	16181.8672	74.76	Q	.	.	.	V	.
29.000	16182.3604	71.55	Q	.	.	.	V	.
29.083	16182.8311	68.37	Q	.	.	.	V	.
29.167	16183.2803	65.21	Q	.	.	.	V	.
29.250	16183.7080	62.07	Q	.	.	.	V	.
29.333	16184.1143	58.95	Q	.	.	.	V	.
29.417	16184.4990	55.87	Q	.	.	.	V	.
29.500	16184.8623	52.80	Q	.	.	.	V	.
29.583	16185.2051	49.76	Q	.	.	.	V	.
29.667	16185.5273	46.74	Q	.	.	.	V	.
29.750	16185.8281	43.74	Q	.	.	.	V	.
29.833	16186.1084	40.75	Q	.	.	.	V	.
29.917	16186.3691	37.80	Q	.	.	.	V	.
30.000	16186.6094	34.88	Q	.	.	.	V	.
30.083	16186.8301	31.98	Q	.	.	.	V	.
30.167	16187.0303	29.10	Q	.	.	.	V	.
30.250	16187.2109	26.25	Q	.	.	.	V	.
30.333	16187.3721	23.40	Q	.	.	.	V	.
30.417	16187.5137	20.58	Q	.	.	.	V	.
30.500	16187.6357	17.78	Q	.	.	.	V	.
30.583	16187.7393	14.99	Q	.	.	.	V	.
30.667	16187.8232	12.22	Q	.	.	.	V	.
30.750	16187.8887	9.47	Q	.	.	.	V	.
30.833	16187.9346	6.73	Q	.	.	.	V	.
30.917	16187.9619	4.02	Q	.	.	.	V	.
31.000	16187.9707	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

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 127 *
* 100-YR EV JANUARY 2019 CCHIU *

FILE NAME: EV00127S.DAT
TIME/DATE OF STUDY: 08:14 01/03/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 127.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 53500.199 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.159 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.293
LOW LOSS FRACTION = 0.380
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 = 3.860

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.221	1427.067
2	0.662	2854.136
3	1.103	2854.135
4	1.544	2854.133
5	2.010	3015.891
6	2.649	4131.014
7	3.320	4343.245
8	4.058	4775.317
9	5.219	7510.897
10	6.601	8941.009
11	8.310	11061.594
12	10.312	12950.129
13	12.249	12533.457
14	14.382	13802.416
15	16.914	16384.131
16	18.974	13329.371
17	21.304	15074.225
18	24.091	18028.041
19	26.375	14781.646
20	28.834	15911.295
21	31.658	18267.973
22	34.961	21372.336
23	37.439	16033.754
24	40.881	22271.283
25	44.364	22531.529
26	48.149	24491.262
27	51.662	22729.822
28	54.417	17825.576
29	57.217	18116.525
30	60.735	22760.945
31	64.198	22407.750
32	66.871	17294.572
33	69.668	18099.545
34	72.109	15795.056
35	74.557	15839.286
36	76.673	13690.688
37	78.393	11123.881
38	80.124	11202.023
39	81.910	11558.083
40	83.559	10668.354
41	85.075	9808.935
42	86.438	8820.183
43	87.624	7667.741
44	88.624	6473.538
45	89.532	5876.041
46	90.394	5576.454
47	91.207	5258.059
48	92.009	5187.715

49	92.752	4812.799
50	93.488	4758.746
51	94.144	4246.401
52	94.639	3200.338
53	95.129	3172.547
54	95.619	3169.239
55	96.060	2856.571
56	96.370	2005.345
57	96.673	1957.858
58	96.976	1957.858
59	97.278	1959.487
60	97.581	1959.487
61	97.882	1948.034
62	98.045	1050.950
63	98.117	468.213
64	98.189	466.535
65	98.262	469.793
66	98.334	468.213
67	98.406	466.535
68	98.478	464.906
69	98.551	471.471
70	98.623	468.164
71	98.695	464.906
72	98.768	471.471
73	98.841	468.213
74	98.913	468.164
75	98.985	468.164
76	99.058	468.213
77	99.130	468.164
78	99.202	468.164
79	99.275	468.164
80	99.347	468.164
81	99.419	468.164
82	99.492	468.164
83	99.564	468.164
84	99.636	468.164
85	99.709	468.164
86	99.781	468.164
87	99.854	468.164
88	99.926	468.164
89	99.998	468.164
90	100.000	11.255

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 10006.6338
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 16771.8613

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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.	5200.0	10400.0	15600.0	20800.0
0.083	0.0558	8.10	Q	.	.	.	.
0.167	0.2232	24.31	Q	.	.	.	.
0.250	0.5026	40.57	Q	.	.	.	.
0.333	0.8944	56.88	Q	.	.	.	.
0.417	1.4051	74.16	Q	.	.	.	.
0.500	2.0787	97.81	Q	.	.	.	.
0.583	2.9240	122.73	Q	.	.	.	.
0.667	3.9583	150.19	Q	.	.	.	.
0.750	5.2892	193.24	Q	.	.	.	.
0.833	6.9733	244.53	Q	.	.	.	.
0.917	9.0946	308.01	Q	.	.	.	.
1.000	11.7282	382.39	Q	.	.	.	.
1.083	14.8592	454.62	Q	.	.	.	.
1.167	18.5388	534.28	VQ	.	.	.	.
1.250	22.8695	628.82	VQ	.	.	.	.
1.333	27.7339	706.31	VQ	.	.	.	.
1.417	33.2019	793.96	VQ	.	.	.	.
1.500	39.3906	898.60	VQ	.	.	.	.
1.583	46.1755	985.17	VQ	.	.	.	.
1.667	53.6026	1078.41	V Q	.	.	.	.
1.750	61.7659	1185.31	V Q	.	.	.	.
1.833	70.7890	1310.15	V Q	.	.	.	.
1.917	80.4658	1405.08	V Q	.	.	.	.
2.000	91.0426	1535.75	V Q	.	.	.	.
2.083	102.5317	1668.22	V Q	.	.	.	.
2.167	115.0131	1812.30	V Q	.	.	.	.
2.250	128.4206	1946.76	V Q	.	.	.	.
2.333	142.5660	2053.91	V Q	.	.	.	.
2.417	157.4626	2162.99	V Q	.	.	.	.
2.500	173.2949	2298.85	V Q	.	.	.	.
2.583	190.0515	2433.05	V Q	.	.	.	.
2.667	207.5361	2538.77	V Q	.	.	.	.
2.750	225.7823	2649.34	V Q	.	.	.	.
2.833	244.7029	2747.27	V Q	.	.	.	.
2.917	264.3016	2845.73	V Q	.	.	.	.
3.000	284.4972	2932.40	V Q	.	.	.	.
3.083	305.1912	3004.77	V Q	.	.	.	.
3.167	326.3888	3077.90	V Q	.	.	.	.
3.250	348.1055	3153.27	V Q	.	.	.	.
3.333	370.3088	3223.92	V Q	.	.	.	.
3.417	392.9667	3289.92	V Q	.	.	.	.
3.500	416.0426	3350.62	V Q	.	.	.	.
3.583	439.4928	3404.97	.V Q	.	.	.	.
3.667	463.2727	3452.84	.V Q	.	.	.	.
3.750	487.3599	3497.47	.V Q	.	.	.	.
3.833	511.7446	3540.65	.V Q	.	.	.	.
3.917	536.4152	3582.17	.V Q	.	.	.	.

4.000	561.3707	3623.55	.V	Q	.	.	.	.
4.083	586.5976	3662.94	.V	Q	.	.	.	.
4.167	612.0954	3702.28	.V	Q	.	.	.	.
4.250	637.8450	3738.85	.V	Q	.	.	.	.
4.333	663.8074	3769.73	.V	Q	.	.	.	.
4.417	689.9821	3800.57	.V	Q	.	.	.	.
4.500	716.3708	3831.64	.V	Q	.	.	.	.
4.583	742.9620	3861.04	.V	Q	.	.	.	.
4.667	769.7240	3885.85	.V	Q	.	.	.	.
4.750	796.6558	3910.50	.V	Q	.	.	.	.
4.833	823.7589	3935.37	.V	Q	.	.	.	.
4.917	851.0341	3960.36	.V	Q	.	.	.	.
5.000	878.4830	3985.58	.V	Q	.	.	.	.
5.083	906.1060	4010.85	.V	Q	.	.	.	.
5.167	933.8696	4031.27	.V	Q	.	.	.	.
5.250	961.7517	4048.49	.V	Q	.	.	.	.
5.333	989.7538	4065.91	.V	Q	.	.	.	.
5.417	1017.8768	4083.45	.V	Q	.	.	.	.
5.500	1046.1219	4101.21	.V	Q	.	.	.	.
5.583	1074.4901	4119.05	.V	Q	.	.	.	.
5.667	1102.9827	4137.12	.V	Q	.	.	.	.
5.750	1131.6007	4155.33	.V	Q	.	.	.	.
5.833	1160.3456	4173.76	.V	Q	.	.	.	.
5.917	1189.2180	4192.28	.V	Q	.	.	.	.
6.000	1218.2200	4211.09	.V	Q	.	.	.	.
6.083	1247.3522	4229.99	.V	Q	.	.	.	.
6.167	1276.6162	4249.14	.V	Q	.	.	.	.
6.250	1306.0131	4268.42	.V	Q	.	.	.	.
6.333	1335.5444	4287.95	.V	Q	.	.	.	.
6.417	1365.2112	4307.61	.V	Q	.	.	.	.
6.500	1395.0151	4327.54	.V	Q	.	.	.	.
6.583	1424.9573	4347.60	.V	Q	.	.	.	.
6.667	1455.0396	4367.94	.V	Q	.	.	.	.
6.750	1485.2628	4388.42	.V	Q	.	.	.	.
6.833	1515.6290	4409.18	.V	Q	.	.	.	.
6.917	1546.1393	4430.09	.V	Q	.	.	.	.
7.000	1576.7955	4451.29	.V	Q	.	.	.	.
7.083	1607.5989	4472.64	.V	Q	.	.	.	.
7.167	1638.5514	4494.31	.V	Q	.	.	.	.
7.250	1669.6542	4516.12	.V	Q	.	.	.	.
7.333	1700.9094	4538.27	.V	Q	.	.	.	.
7.417	1732.3182	4560.56	.V	Q	.	.	.	.
7.500	1763.8651	4580.60	.V	Q	.	.	.	.
7.583	1795.5507	4600.74	.V	Q	.	.	.	.
7.667	1827.3772	4621.22	.V	Q	.	.	.	.
7.750	1859.3459	4641.87	.V	Q	.	.	.	.
7.833	1891.4594	4662.87	.V	Q	.	.	.	.
7.917	1923.7186	4684.04	.V	Q	.	.	.	.
8.000	1956.1262	4705.58	.V	Q	.	.	.	.
8.083	1988.6835	4727.31	.V	Q	.	.	.	.
8.167	2021.3929	4749.42	.V	Q	.	.	.	.
8.250	2054.2561	4771.72	.V	Q	.	.	.	.
8.333	2087.2754	4794.42	.V	Q	.	.	.	.
8.417	2120.4526	4817.32	.V	Q	.	.	.	.
8.500	2153.7903	4840.64	.V	Q	.	.	.	.
8.583	2187.2900	4864.17	.V	Q	.	.	.	.
8.667	2220.9548	4888.14	.V	Q	.	.	.	.
8.750	2254.7864	4912.33	.V	Q	.	.	.	.

8.833	2288.7876	4936.98	.	V	Q	.	.	.
8.917	2322.9602	4961.86	.	V	Q	.	.	.
9.000	2357.3074	4987.21	.	V	Q	.	.	.
9.083	2391.8308	5012.82	.	V	Q	.	.	.
9.167	2426.5342	5038.92	.	V	Q	.	.	.
9.250	2461.4189	5065.28	.	V	Q	.	.	.
9.333	2496.4888	5092.15	.	V	Q	.	.	.
9.417	2531.7458	5119.32	.	V	Q	.	.	.
9.500	2567.1936	5147.02	.	V	Q	.	.	.
9.583	2602.8342	5175.02	.	V	Q	.	.	.
9.667	2638.6716	5203.58	.	V	Q	.	.	.
9.750	2674.7078	5232.46	.	V	Q	.	.	.
9.833	2710.9470	5261.93	.	V	Q	.	.	.
9.917	2747.3916	5291.74	.	V	Q	.	.	.
10.000	2784.0457	5322.17	.	V	Q	.	.	.
10.083	2820.9119	5352.96	.	V	Q	.	.	.
10.167	2857.9944	5384.40	.	V	Q	.	.	.
10.250	2895.2961	5416.22	.	V	Q	.	.	.
10.333	2932.8218	5448.73	.	V	Q	.	.	.
10.417	2970.5742	5481.65	.	V	Q	.	.	.
10.500	3008.5583	5515.29	.	V	Q	.	.	.
10.583	3046.7771	5549.37	.	V	Q	.	.	.
10.667	3085.2358	5584.21	.	V	Q	.	.	.
10.750	3123.9377	5619.51	.	V	Q	.	.	.
10.833	3162.8882	5655.62	.	V	Q	.	.	.
10.917	3202.0908	5692.22	.	V	Q	.	.	.
11.000	3241.5515	5729.68	.	V	.Q	.	.	.
11.083	3281.2737	5767.67	.	V	.Q	.	.	.
11.167	3321.2637	5806.56	.	V	.Q	.	.	.
11.250	3361.5256	5846.03	.	V	.Q	.	.	.
11.333	3402.0659	5886.45	.	V	.Q	.	.	.
11.417	3442.8889	5927.50	.	V	.Q	.	.	.
11.500	3484.0015	5969.55	.	V	.Q	.	.	.
11.583	3525.4084	6012.29	.	V	.Q	.	.	.
11.667	3567.1169	6056.09	.	V	.Q	.	.	.
11.750	3609.1323	6100.62	.	V	.Q	.	.	.
11.833	3651.4622	6146.30	.	V	.Q	.	.	.
11.917	3694.1121	6192.76	.	V	.Q	.	.	.
12.000	3737.0903	6240.46	.	V	.Q	.	.	.
12.083	3780.5005	6303.14	.	V	.Q	.	.	.
12.167	3824.4485	6381.25	.	V	.Q	.	.	.
12.250	3868.9397	6460.12	.	V	.Q	.	.	.
12.333	3913.9829	6540.28	.	V	.Q	.	.	.
12.417	3959.5950	6622.88	.	V	.Q	.	.	.
12.500	4005.8613	6717.88	.	V	.Q	.	.	.
12.583	4052.8025	6815.87	.	V	.Q	.	.	.
12.667	4100.4575	6919.51	.	V	.Q	.	.	.
12.750	4149.0195	7051.19	.	V	.Q	.	.	.
12.833	4198.5952	7198.42	.	V	.Q	.	.	.
12.917	4249.3350	7367.44	.	V	.Q	.	.	.
13.000	4301.3770	7556.49	.	V	.Q	.	.	.
13.083	4354.6968	7742.06	.	V	.Q	.	.	.
13.167	4409.3901	7941.51	.	V	.Q	.	.	.
13.250	4465.6382	8167.23	.	V	.Q	.	.	.
13.333	4523.2412	8363.93	.	V	.Q	.	.	.
13.417	4582.3228	8578.61	.	V	.Q	.	.	.
13.500	4643.0947	8824.07	.	.V	.Q	.	.	.
13.583	4705.3394	9037.90	.	.V	.Q	.	.	.

13.667	4769.1440	9264.46	.	.V	Q	.	.	.
13.750	4834.6758	9515.19	.	.V	Q	.	.	.
13.833	4902.1567	9798.22	.	.V	Q	.	.	.
13.917	4971.2266	10028.97	.	.V	Q.	.	.	.
14.000	5042.3228	10323.20	.	.V	Q.	.	.	.
14.083	5115.5723	10635.86	.	.V	Q	.	.	.
14.167	5191.2188	10983.90	.	.V	.Q	.	.	.
14.250	5269.1401	11314.21	.	.V	.Q	.	.	.
14.333	5349.0034	11596.12	.	.V	.Q	.	.	.
14.417	5430.8398	11882.65	.	.V	.Q	.	.	.
14.500	5515.0508	12227.45	.	.V	.Q	.	.	.
14.583	5601.6245	12570.50	.	.V	.Q	.	.	.
14.667	5690.2407	12867.05	.	.V	.Q	.	.	.
14.750	5781.1479	13199.73	.	.V	.Q	.	.	.
14.833	5874.2852	13523.55	.	.V	.Q	.	.	.
14.917	5969.7920	13867.59	.	.V	.Q	.	.	.
15.000	6067.6421	14207.82	.	.V	.Q	.	.	.
15.083	6167.6001	14513.93	.	.V	.Q	.	.	.
15.167	6269.7412	14830.87	.	.V	.Q	.	.	.
15.250	6374.2437	15173.78	.	.V	.Q	.	.	.
15.333	6480.7920	15470.80	.	.V	.Q	.	.	.
15.417	6589.2764	15751.94	.	.V	.Q	.	.	.
15.500	6699.6860	16031.50	.	.V	.Q	.	.	.
15.583	6811.6841	16262.13	.	.V	.Q	.	.	.
15.667	6925.2690	16492.54	.	.V	.Q	.	.	.
15.750	7040.4868	16729.59	.	.V	.Q	.	.	.
15.833	7157.3774	16972.54	.	.V	.Q	.	.	.
15.917	7275.5610	17160.26	.	.V	.Q	.	.	.
16.000	7395.5850	17427.47	.	.V	.Q	.	.	.
16.083	7518.2646	17813.06	.	.V	.Q	.	.	.
16.167	7643.3911	18168.33	.	.V	.Q	.	.	.
16.250	7769.4370	18301.87	.	.V	.Q	.	.	.
16.333	7895.8120	18349.62	.	.V	.Q	.	.	.
16.417	8022.8247	18442.25	.	.V	.Q	.	.	.
16.500	8151.5298	18687.96	.	.V	.Q	.	.	.
16.583	8281.0010	18799.16	.	.V	.Q	.	.	.
16.667	8411.4580	18942.32	.	.V	.Q	.	.	.
16.750	8544.6670	19341.88	.	.V	.Q	.	.	.
16.833	8679.2129	19536.06	.	.V	.Q	.	.	.
16.917	8815.8555	19840.53	.	.V	.Q	.	.	.
17.000	8954.1074	20074.18	.	.V	.Q	.	.	.
17.083	9091.9297	20011.78	.	.V	.Q	.	.	.
17.167	9230.1650	20071.75	.	.V	.Q	.	.	.
17.250	9370.3945	20361.36	.	.V	.Q	.	.	.
17.333	9508.0186	19982.98	.	.V	.Q	.	.	.
17.417	9646.6611	20130.97	.	.V	.Q	.	.	.
17.500	9786.6113	20320.75	.	.V	.Q	.	.	.
17.583	9923.9346	19939.33	.	.V	.Q	.	.	.
17.667	10062.3164	20093.11	.	.V	.Q	.	.	.
17.750	10202.3486	20332.66	.	.V	.Q	.	.	.
17.833	10343.9902	20566.31	.	.V	.Q	.	.	.
17.917	10480.8809	19876.46	.	.V	.Q	.	.	.
18.000	10622.6416	20583.71	.	.V	.Q	.	.	.
18.083	10764.2549	20562.21	.	.V	.Q	.	.	.
18.167	10906.8193	20700.34	.	.V	.Q	.	.	.
18.250	11046.3662	20262.23	.	.V	.Q	.	.	.
18.333	11182.0547	19701.96	.	.V	.Q	.	.	.
18.417	11318.4131	19799.25	.	.V	.Q	.	.	.

18.500	11458.2373	20302.49	.	.	.	.	V	.Q.
18.583	11597.2070	20178.37	.	.	.	.	V	.Q.
18.667	11731.3682	19480.23	.	.	.	.	V	.Q.
18.750	11865.0342	19408.34	.	.	.	.	V	.Q.
18.833	11995.8662	18996.84	.	.	.	.	V	.Q.
18.917	12125.9121	18882.62	.	.	.	.	V	.Q.
19.000	12252.4785	18377.46	.	.	.	.	V	.Q.
19.083	12375.6084	17878.39	.	.	.	.	V	.Q.
19.167	12496.9102	17613.00	.	.	.	.	V	.Q.
19.250	12616.3955	17349.25	.	.	.	.	V	.Q.
19.333	12733.4141	16991.16	.	.	.	.	V	.Q.
19.417	12847.5771	16576.51	.	.	.	.	V	.Q.
19.500	12958.1123	16049.72	.	.	.	.	V	.Q.
19.583	13065.1670	15544.38	.	.	.	.	V	.Q.
19.667	13169.0469	15083.39	.	.	.	.	V	.Q.
19.750	13269.9561	14652.07	.	.	.	.	V	.Q.
19.833	13367.9805	14233.12	.	.	.	.	V	.Q.
19.917	13463.3984	13854.68	.	.	.	.	V	.Q.
20.000	13556.1025	13460.61	.	.	.	.	V	.Q.
20.083	13645.9248	13042.15	.	.	.	.	V	.Q.
20.167	13732.8555	12622.36	.	.	.	.	V	.Q.
20.250	13816.5479	12152.14	.	.	.	.	V	.Q.
20.333	13897.0645	11691.01	.	.	.	.	V	.Q.
20.417	13975.2197	11348.11	.	.	.	.	V	.Q.
20.500	14050.8066	10975.26	.	.	.	.	V	.Q.
20.583	14123.6748	10580.51	.	.	.	.	V	.Q.
20.667	14193.7900	10180.73	.	.	.	.	V	.Q.
20.750	14261.7900	9873.66	.	.	.	.	V	.Q.
20.833	14327.9219	9602.34	.	.	.	.	V	.Q.
20.917	14392.2041	9333.74	.	.	.	.	V	.Q.
21.000	14454.6602	9068.59	.	.	.	.	V	.Q.
21.083	14515.3916	8818.18	.	.	.	.	V	.Q.
21.167	14573.7217	8469.52	.	.	.	.	V	.Q.
21.250	14629.9844	8169.29	.	.	.	.	V	.Q.
21.333	14684.8008	7959.28	.	.	.	.	V	.Q.
21.417	14738.2637	7762.83	.	.	.	.	V	.Q.
21.500	14790.3486	7562.70	.	.	.	.	V	.Q.
21.583	14841.1123	7370.82	.	.	.	.	V	.Q.
21.667	14890.7051	7200.88	.	.	.	.	V	.Q.
21.750	14939.1895	7039.92	.	.	.	.	V	.Q.
21.833	14986.5898	6882.52	.	.	.	.	V	.Q.
21.917	15032.9395	6729.93	.	.	.	.	V	.Q.
22.000	15078.2607	6580.66	.	.	.	.	V	.Q.
22.083	15122.5830	6435.66	.	.	.	.	V	.Q.
22.167	15165.9902	6302.70	.	.	.	.	V	.Q.
22.250	15208.5732	6183.08	.	.	.	.	V	.Q.
22.333	15250.4219	6076.46	.	.	.	.	V	.Q.
22.417	15291.5537	5972.37	.	.	.	.	V	.Q.
22.500	15331.9854	5870.63	.	.	.	.	V	.Q.
22.583	15371.7520	5774.11	.	.	.	.	V	.Q.
22.667	15410.9268	5688.18	.	.	.	.	V	.Q.
22.750	15449.5264	5604.62	.	.	.	.	V	.Q.
22.833	15487.6084	5529.49	.	.	.	.	V	.Q.
22.917	15525.1836	5455.88	.	.	.	.	V	.Q.
23.000	15562.2568	5383.04	.	.	.	.	V	.Q.
23.083	15598.8359	5311.32	.	.	.	.	V	.Q.
23.167	15635.0049	5251.74	.	.	.	.	V	.Q.
23.250	15670.8066	5198.44	.	.	.	.	V	.Q.

23.333	15706.2266	5143.03	.	Q.	.	.	V	.
23.417	15741.2441	5084.49	.	Q.	.	.	V	.
23.500	15775.5342	4978.98	.	Q.	.	.	V	.
23.583	15809.4746	4928.08	.	Q.	.	.	V	.
23.667	15843.0811	4879.60	.	Q.	.	.	V	.
23.750	15876.3701	4833.52	.	Q.	.	.	V	.
23.833	15909.3086	4782.63	.	Q.	.	.	V	.
23.917	15941.8994	4732.24	.	Q.	.	.	V	.
24.000	15974.1475	4682.40	.	Q.	.	.	V	.
24.083	16006.0010	4625.12	.	Q	.	.	V	.
24.167	16037.4092	4560.41	.	Q	.	.	V	.
24.250	16068.3760	4496.40	.	Q	.	.	V	.
24.333	16098.9062	4433.06	.	Q	.	.	V	.
24.417	16128.9990	4369.47	.	Q	.	.	V	.
24.500	16158.6484	4305.13	.	Q	.	.	V	.
24.583	16187.8545	4240.72	.	Q	.	.	V	.
24.667	16216.6064	4174.85	.	Q	.	.	V	.
24.750	16244.8047	4094.45	.	Q	.	.	V	.
24.833	16272.4004	4006.95	.	Q	.	.	V	.
24.917	16299.3184	3908.46	.	Q	.	.	V	.
25.000	16325.4912	3800.33	.	Q	.	.	V	.
25.083	16350.9434	3695.64	.	Q	.	.	V	.
25.167	16375.6318	3584.79	.	Q	.	.	V	.
25.250	16399.4629	3460.37	.	Q	.	.	V	.
25.333	16422.5645	3354.35	.	Q	.	.	V	.
25.417	16444.8750	3239.41	.	Q	.	.	V	.
25.500	16466.3164	3113.29	.	Q	.	.	V	.
25.583	16487.0234	3006.78	.	Q	.	.	V	.
25.667	16506.9609	2894.85	.	Q	.	.	V	.
25.750	16526.0410	2770.56	.	Q	.	.	V	.
25.833	16544.1523	2629.72	.	Q	.	.	V	.
25.917	16561.5098	2520.23	.	Q	.	.	V	.
26.000	16577.8750	2376.33	.	Q	.	.	V	.
26.083	16593.2480	2232.04	.	Q	.	.	V	.
26.167	16607.5566	2077.74	.	Q	.	.	V	.
26.250	16620.8789	1934.53	.	Q	.	.	V	.
26.333	16633.4141	1820.13	.	Q	.	.	V	.
26.417	16645.1562	1704.93	.	Q	.	.	V	.
26.500	16655.9297	1564.28	.	Q	.	.	V	.
26.583	16665.7539	1426.61	.	Q	.	.	V	.
26.667	16674.8359	1318.84	.	Q	.	.	V	.
26.750	16683.1504	1207.28	.	Q	.	.	V	.
26.833	16690.7910	1109.54	.	Q	.	.	V	.
26.917	16697.7617	1012.23	.	Q	.	.	V	.
27.000	16704.1504	927.75	.	Q	.	.	V	.
27.083	16710.0625	858.40	.	Q	.	.	V	.
27.167	16715.4961	789.10	.	Q	.	.	V	.
27.250	16720.4434	718.26	.	Q	.	.	V	.
27.333	16724.9395	652.94	.	Q	.	.	V	.
27.417	16729.0234	592.93	.	Q	.	.	V	.
27.500	16732.7344	538.94	.	Q	.	.	V	.
27.583	16736.1211	491.83	.	Q	.	.	V	.
27.667	16739.2324	451.82	.	Q	.	.	V	.
27.750	16742.0938	415.46	.	Q	.	.	V	.
27.833	16744.7188	381.05	.	Q	.	.	V	.
27.917	16747.1211	348.69	.	Q	.	.	V	.
28.000	16749.3047	316.94	.	Q	.	.	V	.
28.083	16751.2852	287.54	.	Q	.	.	V	.

28.167	16753.0664	258.63	Q	.	.	.	V.	.
28.250	16754.6699	232.83	Q	.	.	.	V.	.
28.333	16756.1367	213.12	Q	.	.	.	V.	.
28.417	16757.4707	193.70	Q	.	.	.	V.	.
28.500	16758.6719	174.44	Q	.	.	.	V.	.
28.583	16759.7539	157.07	Q	.	.	.	V.	.
28.667	16760.7500	144.64	Q	.	.	.	V.	.
28.750	16761.6621	132.57	Q	.	.	.	V.	.
28.833	16762.4922	120.58	Q	.	.	.	V.	.
28.917	16763.2402	108.66	Q	.	.	.	V.	.
29.000	16763.9062	96.82	Q	.	.	.	V.	.
29.083	16764.4922	85.13	Q	.	.	.	V.	.
29.167	16765.0332	78.59	Q	.	.	.	V.	.
29.250	16765.5527	75.40	Q	.	.	.	V.	.
29.333	16766.0508	72.24	Q	.	.	.	V.	.
29.417	16766.5273	69.09	Q	.	.	.	V.	.
29.500	16766.9824	65.97	Q	.	.	.	V.	.
29.583	16767.4160	62.89	Q	.	.	.	V.	.
29.667	16767.8281	59.84	Q	.	.	.	V.	.
29.750	16768.2188	56.78	Q	.	.	.	V.	.
29.833	16768.5898	53.75	Q	.	.	.	V.	.
29.917	16768.9395	50.77	Q	.	.	.	V.	.
30.000	16769.2676	47.77	Q	.	.	.	V.	.
30.083	16769.5762	44.81	Q	.	.	.	V.	.
30.167	16769.8652	41.88	Q	.	.	.	V.	.
30.250	16770.1328	38.96	Q	.	.	.	V.	.
30.333	16770.3809	36.06	Q	.	.	.	V.	.
30.417	16770.6094	33.19	Q	.	.	.	V.	.
30.500	16770.8184	30.33	Q	.	.	.	V.	.
30.583	16771.0078	27.49	Q	.	.	.	V.	.
30.667	16771.1777	24.67	Q	.	.	.	V.	.
30.750	16771.3281	21.86	Q	.	.	.	V.	.
30.833	16771.4590	19.08	Q	.	.	.	V.	.
30.917	16771.5723	16.31	Q	.	.	.	V.	.
31.000	16771.6660	13.56	Q	.	.	.	V.	.
31.083	16771.7402	10.83	Q	.	.	.	V.	.
31.167	16771.7969	8.11	Q	.	.	.	V.	.
31.250	16771.8340	5.42	Q	.	.	.	V.	.
31.333	16771.8535	2.73	Q	.	.	.	V.	.
31.417	16771.8535	0.06	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%	1430.0
20%	1140.0
30%	615.0
40%	475.0
50%	395.0
60%	340.0
70%	285.0
80%	225.0
90%	150.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 132T *
* 100-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV0032TS.DAT
TIME/DATE OF STUDY: 12:34 01/02/2019

FLOW PROCESS FROM NODE 13200.00 TO NODE 132.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1127.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.435 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.248
LOW LOSS FRACTION = 0.491
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 = 0.950
30-MINUTE FACTOR = 0.950
1-HOUR FACTOR = 0.950
3-HOUR FACTOR = 0.992
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 19.157

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.099	149.865
2	4.310	437.827
3	12.238	1081.201
4	23.597	1549.005
5	37.338	1873.896
6	53.764	2239.935
7	68.853	2057.637
8	79.652	1472.715
9	87.102	1015.981
10	91.698	626.686
11	94.930	440.751
12	96.848	261.521
13	98.043	163.015
14	98.443	54.536
15	98.802	48.967
16	99.161	48.995
17	99.520	48.967
18	99.879	48.967
19	100.000	16.446

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 178.9633
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 241.8664

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.	375.0	750.0	1125.0	1500.0
0.083	0.0030	0.43	Q	.	.	.	.
0.167	0.0147	1.70	Q	.	.	.	.
0.250	0.0480	4.84	Q	.	.	.	.
0.333	0.1123	9.34	Q	.	.	.	.
0.417	0.2142	14.79	Q	.	.	.	.
0.500	0.3611	21.32	Q	.	.	.	.
0.583	0.5494	27.35	Q	.	.	.	.
0.667	0.7677	31.70	Q	.	.	.	.
0.750	1.0070	34.75	Q	.	.	.	.
0.833	1.2597	36.68	Q	.	.	.	.
0.917	1.5219	38.08	VQ	.	.	.	.
1.000	1.7903	38.96	VQ	.	.	.	.
1.083	2.0628	39.57	VQ	.	.	.	.
1.167	2.3373	39.86	VQ	.	.	.	.
1.250	2.6138	40.14	VQ	.	.	.	.
1.333	2.8922	40.43	VQ	.	.	.	.
1.417	3.1726	40.71	VQ	.	.	.	.
1.500	3.4549	40.99	VQ	.	.	.	.
1.583	3.7386	41.19	VQ	.	.	.	.
1.667	4.0232	41.33	VQ	.	.	.	.
1.750	4.3089	41.48	VQ	.	.	.	.
1.833	4.5956	41.63	VQ	.	.	.	.
1.917	4.8834	41.78	VQ	.	.	.	.
2.000	5.1721	41.93	VQ	.	.	.	.
2.083	5.4620	42.09	VQ	.	.	.	.
2.167	5.7529	42.24	VQ	.	.	.	.
2.250	6.0449	42.40	VQ	.	.	.	.
2.333	6.3380	42.55	.Q	.	.	.	.
2.417	6.6322	42.71	.Q	.	.	.	.
2.500	6.9274	42.87	.Q	.	.	.	.
2.583	7.2238	43.04	.Q	.	.	.	.
2.667	7.5214	43.20	.Q	.	.	.	.
2.750	7.8201	43.37	.Q	.	.	.	.
2.833	8.1199	43.53	.Q	.	.	.	.
2.917	8.4209	43.70	.Q	.	.	.	.
3.000	8.7230	43.87	.Q	.	.	.	.
3.083	9.0264	44.05	.Q	.	.	.	.
3.167	9.3310	44.22	.Q	.	.	.	.
3.250	9.6367	44.40	.Q	.	.	.	.
3.333	9.9437	44.58	.Q	.	.	.	.
3.417	10.2520	44.76	.Q	.	.	.	.
3.500	10.5614	44.94	.Q	.	.	.	.
3.583	10.8722	45.12	.Q	.	.	.	.
3.667	11.1842	45.30	.Q	.	.	.	.
3.750	11.4975	45.49	.Q	.	.	.	.
3.833	11.8121	45.68	.Q	.	.	.	.
3.917	12.1280	45.87	.QV	.	.	.	.

4.000	12.4453	46.07	.QV	.	.	.	.
4.083	12.7639	46.26	.QV	.	.	.	.
4.167	13.0839	46.46	.QV	.	.	.	.
4.250	13.4052	46.66	.QV	.	.	.	.
4.333	13.7280	46.86	.QV	.	.	.	.
4.417	14.0521	47.07	.QV	.	.	.	.
4.500	14.3777	47.27	.QV	.	.	.	.
4.583	14.7047	47.48	.QV	.	.	.	.
4.667	15.0332	47.69	.QV	.	.	.	.
4.750	15.3631	47.91	.QV	.	.	.	.
4.833	15.6946	48.12	.QV	.	.	.	.
4.917	16.0275	48.34	.QV	.	.	.	.
5.000	16.3620	48.56	.QV	.	.	.	.
5.083	16.6980	48.79	.QV	.	.	.	.
5.167	17.0356	49.02	.QV	.	.	.	.
5.250	17.3747	49.25	.QV	.	.	.	.
5.333	17.7155	49.48	.QV	.	.	.	.
5.417	18.0579	49.71	.QV	.	.	.	.
5.500	18.4019	49.95	.Q V	.	.	.	.
5.583	18.7476	50.19	.Q V	.	.	.	.
5.667	19.0949	50.44	.Q V	.	.	.	.
5.750	19.4440	50.68	.Q V	.	.	.	.
5.833	19.7948	50.93	.Q V	.	.	.	.
5.917	20.1473	51.19	.Q V	.	.	.	.
6.000	20.5016	51.44	.Q V	.	.	.	.
6.083	20.8577	51.71	.Q V	.	.	.	.
6.167	21.2156	51.97	.Q V	.	.	.	.
6.250	21.5754	52.24	.Q V	.	.	.	.
6.333	21.9370	52.51	.Q V	.	.	.	.
6.417	22.3005	52.78	.Q V	.	.	.	.
6.500	22.6659	53.06	.Q V	.	.	.	.
6.583	23.0333	53.34	.Q V	.	.	.	.
6.667	23.4026	53.63	.Q V	.	.	.	.
6.750	23.7739	53.92	.Q V	.	.	.	.
6.833	24.1473	54.21	.Q V	.	.	.	.
6.917	24.5227	54.51	.Q V	.	.	.	.
7.000	24.9002	54.81	.Q V	.	.	.	.
7.083	25.2798	55.12	.Q V	.	.	.	.
7.167	25.6615	55.43	.Q V	.	.	.	.
7.250	26.0454	55.74	.Q V	.	.	.	.
7.333	26.4316	56.06	.Q V	.	.	.	.
7.417	26.8199	56.39	.Q V	.	.	.	.
7.500	27.2105	56.72	.Q V	.	.	.	.
7.583	27.6035	57.06	.Q V	.	.	.	.
7.667	27.9988	57.39	.Q V	.	.	.	.
7.750	28.3964	57.74	.Q V	.	.	.	.
7.833	28.7965	58.09	.Q V	.	.	.	.
7.917	29.1990	58.45	.Q V	.	.	.	.
8.000	29.6041	58.81	.Q V	.	.	.	.
8.083	30.0116	59.18	.Q V	.	.	.	.
8.167	30.4217	59.55	.Q V	.	.	.	.
8.250	30.8345	59.93	.Q V	.	.	.	.
8.333	31.2499	60.32	.Q V	.	.	.	.
8.417	31.6680	60.71	.Q V	.	.	.	.
8.500	32.0889	61.11	.Q V	.	.	.	.
8.583	32.5126	61.52	.Q V	.	.	.	.
8.667	32.9391	61.93	.Q V	.	.	.	.
8.750	33.3685	62.35	.Q V	.	.	.	.

8.833	33.8009	62.78	.Q	V	.	.	.
8.917	34.2362	63.22	.Q	V	.	.	.
9.000	34.6746	63.66	.Q	V	.	.	.
9.083	35.1162	64.11	.Q	V	.	.	.
9.167	35.5609	64.57	.Q	V	.	.	.
9.250	36.0088	65.04	.Q	V	.	.	.
9.333	36.4600	65.52	.Q	V	.	.	.
9.417	36.9146	66.01	.Q	V	.	.	.
9.500	37.3726	66.50	.Q	V	.	.	.
9.583	37.8341	67.01	.Q	V	.	.	.
9.667	38.2991	67.52	.Q	V	.	.	.
9.750	38.7678	68.05	.Q	V	.	.	.
9.833	39.2401	68.59	.Q	V	.	.	.
9.917	39.7163	69.14	.Q	V	.	.	.
10.000	40.1963	69.69	.Q	V	.	.	.
10.083	40.6802	70.27	.Q	V	.	.	.
10.167	41.1682	70.85	.Q	V	.	.	.
10.250	41.6602	71.45	.Q	V	.	.	.
10.333	42.1565	72.05	.Q	V	.	.	.
10.417	42.6570	72.68	.Q	V	.	.	.
10.500	43.1619	73.32	.Q	V	.	.	.
10.583	43.6714	73.97	.Q	V	.	.	.
10.667	44.1854	74.63	.Q	V	.	.	.
10.750	44.7041	75.32	.Q	V	.	.	.
10.833	45.2276	76.02	.Q	V	.	.	.
10.917	45.7561	76.73	.Q	V	.	.	.
11.000	46.2896	77.47	.Q	V	.	.	.
11.083	46.8283	78.22	.Q	V	.	.	.
11.167	47.3723	78.99	.Q	V	.	.	.
11.250	47.9218	79.78	.Q	V	.	.	.
11.333	48.4768	80.59	.Q	V	.	.	.
11.417	49.0376	81.43	.Q	V	.	.	.
11.500	49.6043	82.28	.Q	V	.	.	.
11.583	50.1771	83.16	.Q	V	.	.	.
11.667	50.7560	84.07	.Q	V	.	.	.
11.750	51.3414	85.00	.Q	V	.	.	.
11.833	51.9334	85.95	.Q	V	.	.	.
11.917	52.5322	86.94	.Q	V	.	.	.
12.000	53.1379	87.95	.Q	V	.	.	.
12.083	53.7533	89.36	.Q	V	.	.	.
12.167	54.3832	91.46	.Q	V	.	.	.
12.250	55.0382	95.11	.Q	V.	.	.	.
12.333	55.7261	99.88	.Q	V.	.	.	.
12.417	56.4525	105.48	.Q	V.	.	.	.
12.500	57.2237	111.98	.Q	V.	.	.	.
12.583	58.0372	118.12	.Q	V.	.	.	.
12.667	58.8839	122.94	.Q	V.	.	.	.
12.750	59.7569	126.76	.Q	V.	.	.	.
12.833	60.6502	129.71	.Q	V	.	.	.
12.917	61.5614	132.31	.Q	V	.	.	.
13.000	62.4879	134.52	.Q	V	.	.	.
13.083	63.4286	136.59	.Q	V	.	.	.
13.167	64.3821	138.45	.Q	V	.	.	.
13.250	65.3489	140.38	.Q	V	.	.	.
13.333	66.3293	142.37	.Q	V	.	.	.
13.417	67.3241	144.44	.Q	.V	.	.	.
13.500	68.3337	146.59	.Q	.V	.	.	.
13.583	69.3583	148.76	.Q	.V	.	.	.

13.667	70.3980	150.98	.	Q	.V	.	.	.		
13.750	71.4539	153.31	.	Q	.V	.	.	.		
13.833	72.5265	155.73	.	Q	.V	.	.	.		
13.917	73.6166	158.30	.	Q	.V	.	.	.		
14.000	74.7252	160.96	.	Q	.V	.	.	.		
14.083	75.8541	163.91	.	Q	.V	.	.	.		
14.167	77.0057	167.21	.	Q	.V	.	.	.		
14.250	78.1847	171.20	.	Q	.V	.	.	.		
14.333	79.3947	175.70	.	Q	.V	.	.	.		
14.417	80.6391	180.68	.	Q	.V	.	.	.		
14.500	81.9211	186.14	.	Q	.V	.	.	.		
14.583	83.2415	191.73	.	Q	.V	.	.	.		
14.667	84.5990	197.11	.	Q	.V	.	.	.		
14.750	85.9934	202.47	.	Q	.V	.	.	.		
14.833	87.4248	207.84	.	Q	.V	.	.	.		
14.917	88.8951	213.49	.	Q	.V	.	.	.		
15.000	90.4062	219.40	.	Q	.V	.	.	.		
15.083	91.9612	225.80	.	Q	.V	.	.	.		
15.167	93.5635	232.64	.	Q	.V	.	.	.		
15.250	95.2185	240.31	.	Q	.V	.	.	.		
15.333	96.9330	248.94	.	Q	.V	.	.	.		
15.417	98.7109	258.16	.	Q	.V	.	.	.		
15.500	100.5520	267.32	.	Q	.V	.	.	.		
15.583	102.4436	274.66	.	Q	.V	.	.	.		
15.667	104.3848	281.87	.	Q	.V	.	.	.		
15.750	106.4017	292.85	.	Q	.V	.	.	.		
15.833	108.5346	309.69	.	Q	.V	.	.	.		
15.917	110.9040	344.03	.	Q	.V	.	.	.		
16.000	113.7043	406.61	.	Q	.V	.	.	.		
16.083	117.4457	543.25	.	.	Q	.V	.	.		
16.167	122.5887	746.76	.	.	.	QV	.	.		
16.250	129.7525	1040.18	.	.	.	.V	Q	.
16.333	138.4022	1255.94	.	.	.	.V	.	Q
16.417	147.9467	1385.87	V	.	Q	
16.500	157.9775	1456.47	V	.	Q
16.583	167.0660	1319.65	V	.	Q
16.667	174.2695	1045.95	QV	.	.
16.750	179.8560	811.15Q	.	V.	.	.
16.833	184.1214	619.34	.	.	.	Q	.	V	.	.
16.917	187.5844	502.82	.	.	.	Q	.	.V	.	.
17.000	190.3604	403.08	.	.	.	Q	.	.V	.	.
17.083	192.6798	336.78	.	.	.	Q	.	.V	.	.
17.167	194.6051	279.56	.	.	.	Q	.	.V	.	.
17.250	196.3839	258.27	.	.	.	Q	.	.V	.	.
17.333	198.0562	242.83	.	.	.	Q	.	.V	.	.
17.417	199.6310	228.66	.	.	.	Q	.	.V	.	.
17.500	201.1023	213.63	.	.	.	Q	.	.V	.	.
17.583	202.4212	191.50	.	.	.	Q	.	.V	.	.
17.667	203.6362	176.42	.	.	.	Q	.	.V	.	.
17.750	204.7950	168.25	.	.	.	Q	.	.V	.	.
17.833	205.9094	161.81	.	.	.	Q	.	.V	.	.
17.917	206.9841	156.06	.	.	.	Q	.	.V	.	.
18.000	208.0236	150.94	.	.	.	Q	.	.V	.	.
18.083	209.0294	146.03	.	.	.	Q	.	.V	.	.
18.167	209.9999	140.92	.	.	.	Q	.	.V	.	.
18.250	210.9272	134.65	.	.	.	Q	.	.V	.	.
18.333	211.8058	127.58	.	.	.	Q	.	.V	.	.
18.417	212.6324	120.02	.	.	.	Q	.	.V	.	.

18.500	213.4028	111.86	. Q	.	.	.	V	.
18.583	214.1216	104.37	. Q	.	.	.	V	.
18.667	214.7997	98.46	. Q	.	.	.	V	.
18.750	215.4456	93.79	. Q	.	.	.	V	.
18.833	216.0668	90.19	. Q	.	.	.	V	.
18.917	216.6670	87.15	. Q	.	.	.	V	.
19.000	217.2500	84.65	. Q	.	.	.	V	.
19.083	217.8181	82.49	. Q	.	.	.	V	.
19.167	218.3738	80.68	. Q	.	.	.	V	.
19.250	218.9177	78.97	. Q	.	.	.	V	.
19.333	219.4504	77.34	. Q	.	.	.	V	.
19.417	219.9724	75.79	. Q	.	.	.	V	.
19.500	220.4841	74.30	. Q	.	.	.	V	.
19.583	220.9865	72.96	. Q	.	.	.	V	.
19.667	221.4804	71.71	. Q	.	.	.	V	.
19.750	221.9660	70.51	. Q	.	.	.	V	.
19.833	222.4437	69.36	. Q	.	.	.	V	.
19.917	222.9139	68.27	. Q	.	.	.	V	.
20.000	223.3768	67.21	. Q	.	.	.	V	.
20.083	223.8327	66.20	. Q	.	.	.	V	.
20.167	224.2819	65.22	. Q	.	.	.	V	.
20.250	224.7246	64.29	. Q	.	.	.	V	.
20.333	225.1611	63.38	. Q	.	.	.	V	.
20.417	225.5916	62.51	. Q	.	.	.	V	.
20.500	226.0164	61.67	. Q	.	.	.	V	.
20.583	226.4355	60.85	. Q	.	.	.	V	.
20.667	226.8492	60.07	. Q	.	.	.	V	.
20.750	227.2576	59.31	. Q	.	.	.	V	.
20.833	227.6610	58.57	. Q	.	.	.	V	.
20.917	228.0595	57.86	. Q	.	.	.	V	.
21.000	228.4532	57.17	. Q	.	.	.	V	.
21.083	228.8423	56.50	. Q	.	.	.	V	.
21.167	229.2270	55.85	. Q	.	.	.	V	.
21.250	229.6073	55.22	. Q	.	.	.	V	.
21.333	229.9833	54.61	. Q	.	.	.	V	.
21.417	230.3553	54.01	. Q	.	.	.	V	.
21.500	230.7233	53.43	. Q	.	.	.	V	.
21.583	231.0874	52.87	. Q	.	.	.	V	.
21.667	231.4477	52.32	. Q	.	.	.	V	.
21.750	231.8044	51.79	. Q	.	.	.	V	.
21.833	232.1574	51.27	. Q	.	.	.	V	.
21.917	232.5070	50.76	. Q	.	.	.	V	.
22.000	232.8532	50.26	. Q	.	.	.	V	.
22.083	233.1960	49.78	. Q	.	.	.	V	.
22.167	233.5356	49.31	. Q	.	.	.	V	.
22.250	233.8721	48.85	. Q	.	.	.	V	.
22.333	234.2055	48.41	. Q	.	.	.	V	.
22.417	234.5358	47.97	. Q	.	.	.	V	.
22.500	234.8633	47.54	. Q	.	.	.	V	.
22.583	235.1878	47.12	. Q	.	.	.	V	.
22.667	235.5095	46.72	. Q	.	.	.	V	.
22.750	235.8285	46.32	. Q	.	.	.	V	.
22.833	236.1448	45.93	. Q	.	.	.	V	.
22.917	236.4585	45.54	. Q	.	.	.	V	.
23.000	236.7695	45.17	. Q	.	.	.	V	.
23.083	237.0781	44.80	. Q	.	.	.	V	.
23.167	237.3842	44.44	. Q	.	.	.	V	.
23.250	237.6878	44.09	. Q	.	.	.	V	.

23.333	237.9891	43.75	.Q	.	.	.	V.	.
23.417	238.2881	43.41	.Q	.	.	.	V.	.
23.500	238.5848	43.08	.Q	.	.	.	V.	.
23.583	238.8792	42.76	.Q	.	.	.	V.	.
23.667	239.1715	42.44	.Q	.	.	.	V.	.
23.750	239.4616	42.13	.Q	.	.	.	V.	.
23.833	239.7496	41.82	.Q	.	.	.	V.	.
23.917	240.0356	41.52	.Q	.	.	.	V.	.
24.000	240.3195	41.22	.Q	.	.	.	V.	.
24.083	240.5984	40.50	.Q	.	.	.	V.	.
24.167	240.8667	38.95	.Q	.	.	.	V.	.
24.250	241.1116	35.56	Q	.	.	.	V.	.
24.333	241.3240	30.84	Q	.	.	.	V.	.
24.417	241.4977	25.22	Q	.	.	.	V.	.
24.500	241.6257	18.58	Q	.	.	.	V.	.
24.583	241.7118	12.51	Q	.	.	.	V.	.
24.667	241.7681	8.17	Q	.	.	.	V.	.
24.750	241.8037	5.18	Q	.	.	.	V.	.
24.833	241.8267	3.33	Q	.	.	.	V.	.
24.917	241.8407	2.04	Q	.	.	.	V.	.
25.000	241.8494	1.27	Q	.	.	.	V.	.
25.083	241.8548	0.79	Q	.	.	.	V.	.
25.167	241.8591	0.62	Q	.	.	.	V.	.
25.250	241.8624	0.48	Q	.	.	.	V.	.
25.333	241.8647	0.33	Q	.	.	.	V.	.
25.417	241.8660	0.19	Q	.	.	.	V.	.
25.500	241.8664	0.05	Q	.	.	.	V	.

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

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1530.0
10%	280.0
20%	85.0
30%	55.0
40%	45.0
50%	40.0
60%	30.0
70%	30.0
80%	20.0
90%	15.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 132C *
* 100-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV0032CS.DAT
TIME/DATE OF STUDY: 12:32 01/02/2019

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

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 4924.400 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.795 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244
LOW LOSS FRACTION = 0.515
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 = 0.788
30-MINUTE FACTOR = 0.788
1-HOUR FACTOR = 0.788
3-HOUR FACTOR = 0.968
6-HOUR FACTOR = 0.984
24-HOUR FACTOR = 0.990

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 10.482

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.599	356.720
2	1.831	733.770
3	3.556	1027.088
4	6.695	1869.576
5	11.711	2987.196
6	17.780	3614.240
7	24.320	3895.169
8	31.406	4219.920
9	39.536	4841.828
10	49.118	5706.248
11	57.463	4970.213
12	66.163	5181.218
13	73.208	4195.692
14	78.677	3256.871
15	83.329	2770.256
16	87.117	2255.902
17	89.790	1591.898
18	92.011	1323.059
19	93.944	1150.833
20	95.353	839.020
21	96.422	637.114
22	97.244	489.587
23	97.961	426.666
24	98.212	149.804
25	98.409	117.181
26	98.605	116.849
27	98.802	117.181
28	98.999	116.958
29	99.195	117.072
30	99.392	116.958
31	99.588	116.958
32	99.784	116.958
33	99.981	116.958
34	100.000	11.500

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 831.9361
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 991.8080

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.	925.0	1850.0	2775.0	3700.0
0.083	0.0068	0.99	Q	.	.	.	.
0.167	0.0276	3.02	Q	.	.	.	.
0.250	0.0680	5.87	Q	.	.	.	.
0.333	0.1441	11.05	Q	.	.	.	.
0.417	0.2773	19.35	Q	.	.	.	.
0.500	0.4798	29.40	Q	.	.	.	.
0.583	0.7571	40.26	Q	.	.	.	.
0.667	1.1156	52.06	Q	.	.	.	.
0.750	1.5674	65.61	Q	.	.	.	.
0.833	2.1294	81.60	Q	.	.	.	.
0.917	2.7879	95.61	VQ	.	.	.	.
1.000	3.5471	110.25	VQ	.	.	.	.
1.083	4.3888	122.21	VQ	.	.	.	.
1.167	5.2953	131.62	VQ	.	.	.	.
1.250	6.2576	139.72	VQ	.	.	.	.
1.333	7.2661	146.44	VQ	.	.	.	.
1.417	8.3083	151.33	VQ	.	.	.	.
1.500	9.3793	155.51	VQ	.	.	.	.
1.583	10.4759	159.22	VQ	.	.	.	.
1.667	11.5923	162.10	VQ	.	.	.	.
1.750	12.7246	164.42	VQ	.	.	.	.
1.833	13.8703	166.35	VQ	.	.	.	.
1.917	15.0281	168.11	VQ	.	.	.	.
2.000	16.1928	169.12	VQ	.	.	.	.
2.083	17.3639	170.04	VQ	.	.	.	.
2.167	18.5414	170.98	VQ	.	.	.	.
2.250	19.7254	171.91	VQ	.	.	.	.
2.333	20.9159	172.86	VQ	.	.	.	.
2.417	22.1129	173.81	VQ	.	.	.	.
2.500	23.3166	174.77	VQ	.	.	.	.
2.583	24.5268	175.73	VQ	.	.	.	.
2.667	25.7438	176.71	.Q	.	.	.	.
2.750	26.9676	177.69	.Q	.	.	.	.
2.833	28.1961	178.38	.Q	.	.	.	.
2.917	29.4292	179.05	.Q	.	.	.	.
3.000	30.6671	179.73	.Q	.	.	.	.
3.083	31.9096	180.41	.Q	.	.	.	.
3.167	33.1568	181.10	.Q	.	.	.	.
3.250	34.4089	181.80	.Q	.	.	.	.
3.333	35.6658	182.51	.Q	.	.	.	.
3.417	36.9276	183.21	.Q	.	.	.	.
3.500	38.1944	183.94	.Q	.	.	.	.
3.583	39.4662	184.66	.Q	.	.	.	.
3.667	40.7430	185.40	.VQ	.	.	.	.
3.750	42.0249	186.13	.VQ	.	.	.	.
3.833	43.3120	186.88	.VQ	.	.	.	.
3.917	44.6043	187.64	.VQ	.	.	.	.

4.000	45.9018	188.41	.VQ	.	.	.	.
4.083	47.2047	189.18	.VQ	.	.	.	.
4.167	48.5130	189.96	.VQ	.	.	.	.
4.250	49.8266	190.75	.Q	.	.	.	.
4.333	51.1458	191.55	.Q	.	.	.	.
4.417	52.4705	192.35	.Q	.	.	.	.
4.500	53.8009	193.17	.Q	.	.	.	.
4.583	55.1369	193.99	.Q	.	.	.	.
4.667	56.4787	194.83	.Q	.	.	.	.
4.750	57.8262	195.66	.Q	.	.	.	.
4.833	59.1797	196.52	.Q	.	.	.	.
4.917	60.5390	197.38	.Q	.	.	.	.
5.000	61.9044	198.25	.Q	.	.	.	.
5.083	63.2759	199.13	.Q	.	.	.	.
5.167	64.6535	200.03	.Q	.	.	.	.
5.250	66.0373	200.93	.Q	.	.	.	.
5.333	67.4274	201.84	.Q	.	.	.	.
5.417	68.8238	202.76	.Q	.	.	.	.
5.500	70.2268	203.70	.Q	.	.	.	.
5.583	71.6362	204.65	.Q	.	.	.	.
5.667	73.0522	205.61	.Q	.	.	.	.
5.750	74.4749	206.57	.QV	.	.	.	.
5.833	75.9043	207.56	.QV	.	.	.	.
5.917	77.3406	208.55	.QV	.	.	.	.
6.000	78.7839	209.56	.QV	.	.	.	.
6.083	80.2341	210.57	.QV	.	.	.	.
6.167	81.6914	211.61	.QV	.	.	.	.
6.250	83.1559	212.65	.QV	.	.	.	.
6.333	84.6278	213.71	.QV	.	.	.	.
6.417	86.1070	214.78	.QV	.	.	.	.
6.500	87.5937	215.87	.QV	.	.	.	.
6.583	89.0879	216.96	.QV	.	.	.	.
6.667	90.5898	218.08	.QV	.	.	.	.
6.750	92.0995	219.21	.QV	.	.	.	.
6.833	93.6171	220.36	.QV	.	.	.	.
6.917	95.1427	221.51	.QV	.	.	.	.
7.000	96.6764	222.69	.QV	.	.	.	.
7.083	98.2183	223.88	.QV	.	.	.	.
7.167	99.7686	225.10	.Q V	.	.	.	.
7.250	101.3272	226.32	.Q V	.	.	.	.
7.333	102.8945	227.57	.Q V	.	.	.	.
7.417	104.4704	228.82	.Q V	.	.	.	.
7.500	106.0552	230.11	.Q V	.	.	.	.
7.583	107.6488	231.40	.Q V	.	.	.	.
7.667	109.2516	232.73	.Q V	.	.	.	.
7.750	110.8636	234.06	.Q V	.	.	.	.
7.833	112.4850	235.42	.Q V	.	.	.	.
7.917	114.1158	236.79	.Q V	.	.	.	.
8.000	115.7562	238.20	.Q V	.	.	.	.
8.083	117.4065	239.61	.Q V	.	.	.	.
8.167	119.0667	241.06	.Q V	.	.	.	.
8.250	120.7369	242.52	.Q V	.	.	.	.
8.333	122.4175	244.02	.Q V	.	.	.	.
8.417	124.1084	245.52	.Q V	.	.	.	.
8.500	125.8100	247.07	.Q V	.	.	.	.
8.583	127.5223	248.63	.Q V	.	.	.	.
8.667	129.2456	250.22	.Q V	.	.	.	.
8.750	130.9799	251.83	.Q V	.	.	.	.

8.833	132.7257	253.48	. Q V
8.917	134.4828	255.14	. Q V
9.000	136.2518	256.85	. Q V
9.083	138.0326	258.57	. Q V
9.167	139.8255	260.34	. Q V
9.250	141.6308	262.12	. Q V
9.333	143.4487	263.95	. Q V
9.417	145.2793	265.80	. Q V
9.500	147.1229	267.70	. Q V
9.583	148.9798	269.62	. Q V
9.667	150.8503	271.59	. Q V
9.750	152.7345	273.58	. Q V
9.833	154.6328	275.63	. Q V
9.917	156.5453	277.70	. Q V
10.000	158.4725	279.83	. Q V
10.083	160.4145	281.98	. Q V
10.167	162.3718	284.20	. Q V
10.250	164.3446	286.44	. Q V
10.333	166.3332	288.75	. Q V
10.417	168.3379	291.09	. Q V
10.500	170.3592	293.49	. Q V
10.583	172.3973	295.93	. Q V
10.667	174.4527	298.44	. Q V
10.750	176.5257	300.99	. Q V
10.833	178.6167	303.62	. Q V
10.917	180.7261	306.28	. Q V
11.000	182.8544	309.03	. Q V
11.083	185.0020	311.82	. Q V
11.167	187.1694	314.70	. Q V
11.250	189.3569	317.63	. Q V
11.333	191.5653	320.66	. Q V
11.417	193.7948	323.73	. Q V
11.500	196.0462	326.91	. Q V
11.583	198.3199	330.14	. Q V
11.667	200.6167	333.49	. Q V
11.750	202.9369	336.89	. Q V
11.833	205.2814	340.42	. Q V
11.917	207.6506	344.02	. Q V
12.000	210.0456	347.74	. Q V
12.083	212.4727	352.42	. Q V
12.167	214.9395	358.17	. Q V
12.250	217.4514	364.73	. Q V
12.333	220.0239	373.53	. Q V
12.417	222.6767	385.18	. Q V
12.500	225.4215	398.55	. Q V
12.583	228.2641	412.75	. Q V
12.667	231.2115	427.95	. Q V
12.750	234.2751	444.83	. Q V
12.833	237.4711	464.07	. Q V
12.917	240.7884	481.66	. Q V
13.000	244.2322	500.04	. Q V
13.083	247.7870	516.17	. Q V
13.167	251.4390	530.27	. Q V
13.250	255.1811	543.35	. Q V
13.333	259.0067	555.48	. Q V
13.417	262.9059	566.17	. Q V
13.500	266.8765	576.52	. Q V
13.583	270.9170	586.68	. Q V

13.667	275.0246	596.43	. Q .V
13.750	279.1978	605.94	. Q .V
13.833	283.4366	615.49	. Q .V
13.917	287.7422	625.18	. Q .V
14.000	292.1131	634.64	. Q .V
14.083	296.5606	645.78	. Q .V
14.167	301.0987	658.93	. Q . V
14.250	305.7380	673.63	. Q . V
14.333	310.5055	692.24	. Q . V
14.417	315.4345	715.69	. Q . V
14.500	320.5464	742.24	. Q . V
14.583	325.8519	770.36	. Q . V
14.667	331.3647	800.47	. Q . V
14.750	337.1061	833.64	. Q . V
14.833	343.1045	870.97	. Q . V
14.917	349.3470	906.40	. Q . V
15.000	355.8503	944.28	. Q . V
15.083	362.6009	980.20	. Q . V
15.167	369.5929	1015.23	. Q . V
15.250	376.8350	1051.56	. Q . V
15.333	384.3411	1089.88	. Q . V
15.417	392.0867	1124.66	. Q . V
15.500	400.0628	1158.13	. Q . V
15.583	408.2728	1192.09	. Q . V
15.667	416.6679	1218.97	. Q . V
15.750	425.1917	1237.65	. Q . V
15.833	433.8574	1258.27	. Q . V
15.917	442.7566	1292.17	. Q . V
16.000	452.0839	1354.32	. Q . V
16.083	462.5210	1515.46	. Q . V
16.167	474.1875	1693.99	. QV
16.250	487.2400	1895.22	. VQ
16.333	502.6082	2231.46	. V . Q
16.417	520.6853	2624.80	. V . Q
16.500	540.5705	2887.33	. .V . .Q
16.583	561.5244	3042.50	. . V . . Q
16.667	583.6687	3215.36	. . V . . Q
16.750	607.3161	3433.60	. . V . . Q
16.833	632.3170	3630.12	. . V . . Q
16.917	655.8015	3409.95	. . V . . Q
17.000	678.7299	3329.20	. . V . . Q
17.083	699.0954	2957.08	. . V .Q
17.167	717.0429	2605.98	. . Q
17.250	733.2759	2357.02	. . Q . V
17.333	747.8764	2119.99	. . Q . V
17.417	760.6566	1855.68	. . Q . V
17.500	772.2745	1686.92	. . Q . .V
17.583	782.9455	1549.43	. . Q . .V
17.667	792.4832	1384.87	. . Q . .V
17.750	801.0815	1248.48	. . Q . . V
17.833	808.8660	1130.31	. . Q . . V
17.917	816.0209	1038.89	. . Q . . V
18.000	822.2814	909.04	. . Q . . V
18.083	828.1188	847.59	. . Q . . V
18.167	833.6735	806.54	. . Q . . V
18.250	838.9875	771.59	. . Q . . V
18.333	844.0532	735.55	. . Q . . V
18.417	848.8853	701.61	. . Q . . V

18.500	853.4868	668.15	.	Q	.	.	.	V	.
18.583	857.8649	635.70	.	.	.	.	.	V	.
18.667	862.0154	602.64	.	Q	.	.	.	V	.
18.750	865.9179	566.65	.	Q	.	.	.	V	.
18.833	869.4176	508.16	.	Q	.	.	.	V	.
18.917	872.6985	476.39	.	Q	.	.	.	V	.
19.000	875.8068	451.31	.	Q	.	.	.	V	.
19.083	878.7714	430.46	.	Q	.	.	.	V	.
19.167	881.6043	411.35	.	Q	.	.	.	V	.
19.250	884.3193	394.21	.	Q	.	.	.	V	.
19.333	886.9306	379.17	.	Q	.	.	.	V	.
19.417	889.4544	366.46	.	Q	.	.	.	V	.
19.500	891.8994	355.02	.	Q	.	.	.	V	.
19.583	894.2718	344.46	.	Q	.	.	.	V	.
19.667	896.5795	335.09	.	Q	.	.	.	V	.
19.750	898.8287	326.57	.	Q	.	.	.	V	.
19.833	901.0269	319.18	.	Q	.	.	.	V	.
19.917	903.1776	312.29	.	Q	.	.	.	V	.
20.000	905.2876	306.37	.	Q	.	.	.	V	.
20.083	907.3591	300.79	.	Q	.	.	.	V	.
20.167	909.3939	295.45	.	Q	.	.	.	V	.
20.250	911.3935	290.33	.	Q	.	.	.	V	.
20.333	913.3593	285.43	.	Q	.	.	.	V	.
20.417	915.2925	280.71	.	Q	.	.	.	V	.
20.500	917.1945	276.17	.	Q	.	.	.	V	.
20.583	919.0663	271.80	.	Q	.	.	.	V	.
20.667	920.9092	267.59	.	Q	.	.	.	V	.
20.750	922.7241	263.52	.	Q	.	.	.	V	.
20.833	924.5138	259.86	.	Q	.	.	.	V	.
20.917	926.2793	256.35	.	Q	.	.	.	V	.
21.000	928.0215	252.96	.	Q	.	.	.	V	.
21.083	929.7411	249.69	.	Q	.	.	.	V	.
21.167	931.4390	246.53	.	Q	.	.	.	V	.
21.250	933.1157	243.47	.	Q	.	.	.	V	.
21.333	934.7721	240.51	.	Q	.	.	.	V	.
21.417	936.4087	237.64	.	Q	.	.	.	V	.
21.500	938.0261	234.85	.	Q	.	.	.	V	.
21.583	939.6250	232.16	.	Q	.	.	.	V	.
21.667	941.2058	229.54	.	Q	.	.	.	V	.
21.750	942.7691	226.99	.	Q	.	.	.	V	.
21.833	944.3154	224.52	.	Q	.	.	.	V	.
21.917	945.8452	222.12	.	Q	.	.	.	V	.
22.000	947.3589	219.79	.	Q	.	.	.	V	.
22.083	948.8569	217.51	.	Q	.	.	.	V	.
22.167	950.3397	215.30	.	Q	.	.	.	V	.
22.250	951.8077	213.15	.	Q	.	.	.	V	.
22.333	953.2612	211.05	.	Q	.	.	.	V	.
22.417	954.7006	209.00	.	Q	.	.	.	V	.
22.500	956.1262	207.01	.	Q	.	.	.	V	.
22.583	957.5385	205.06	.	Q	.	.	.	V	.
22.667	958.9377	203.16	.	Q	.	.	.	V	.
22.750	960.3241	201.31	.	Q	.	.	.	V	.
22.833	961.6981	199.50	.	Q	.	.	.	V	.
22.917	963.0598	197.73	.	Q	.	.	.	V	.
23.000	964.4097	196.00	.	Q	.	.	.	V	.
23.083	965.7479	194.31	.	Q	.	.	.	V	.
23.167	967.0747	192.66	.	Q	.	.	.	V	.
23.250	968.3904	191.04	.	Q	.	.	.	V	.

23.333	969.6953	189.46	.	Q	.	.	.	V	.
23.417	970.9894	187.91	.	Q	.	.	.	V	.
23.500	972.2731	186.40	.	Q	.	.	.	V	.
23.583	973.5466	184.91	.	Q	.	.	.	V	.
23.667	974.8101	183.46	.	Q	.	.	.	V	.
23.750	976.0637	182.03	.	Q	.	.	.	V	.
23.833	977.3078	180.64	.	Q	.	.	.	V	.
23.917	978.5424	179.27	.	Q	.	.	.	V	.
24.000	979.7678	177.93	.	Q	.	.	.	V	.
24.083	980.9774	175.63	.	Q	.	.	.	V	.
24.167	982.1641	172.32	.	Q	.	.	.	V	.
24.250	983.3228	168.24	.	Q	.	.	.	V	.
24.333	984.4377	161.87	.	Q	.	.	.	V	.
24.417	985.4879	152.48	.	Q	.	.	.	V	.
24.500	986.4619	141.44	.	Q	.	.	.	V	.
24.583	987.3552	129.70	.	Q	.	.	.	V	.
24.667	988.1620	117.15	.	Q	.	.	.	V	.
24.750	988.8712	102.98	.	Q	.	.	.	V	.
24.833	989.4672	86.53	.	Q	.	.	.	V	.
24.917	989.9645	72.22	.	Q	.	.	.	V	.
25.000	990.3600	57.43	.	Q	.	.	.	V	.
25.083	990.6732	45.46	.	Q	.	.	.	V	.
25.167	990.9222	36.16	.	Q	.	.	.	V	.
25.250	991.1169	28.27	.	Q	.	.	.	V	.
25.333	991.2675	21.86	.	Q	.	.	.	V	.
25.417	991.3867	17.31	.	Q	.	.	.	V	.
25.500	991.4800	13.54	.	Q	.	.	.	V	.
25.583	991.5508	10.28	.	Q	.	.	.	V	.
25.667	991.6051	7.89	.	Q	.	.	.	V	.
25.750	991.6470	6.08	.	Q	.	.	.	V	.
25.833	991.6793	4.69	.	Q	.	.	.	V	.
25.917	991.7032	3.48	.	Q	.	.	.	V	.
26.000	991.7241	3.04	.	Q	.	.	.	V	.
26.083	991.7427	2.70	.	Q	.	.	.	V	.
26.167	991.7589	2.36	.	Q	.	.	.	V	.
26.250	991.7728	2.02	.	Q	.	.	.	V	.
26.333	991.7844	1.68	.	Q	.	.	.	V	.
26.417	991.7936	1.35	.	Q	.	.	.	V	.
26.500	991.8006	1.01	.	Q	.	.	.	V	.
26.583	991.8053	0.68	.	Q	.	.	.	V	.
26.667	991.8077	0.36	.	Q	.	.	.	V	.
26.750	991.8080	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%	1605.0
10%	435.0
20%	235.0
30%	155.0
40%	95.0
50%	75.0
60%	60.0
70%	50.0

80%
90%

35.0
20.0

=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133U *
* 100-YR EV JANUARY 2019 CCHI *

FILE NAME: EV0033US.DAT
TIME/DATE OF STUDY: 12:37 01/02/2019

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 = 54351.898 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.287 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.292
LOW LOSS FRACTION = 0.383
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 = 3.644

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.208	1368.645
2	0.625	2737.284
3	1.041	2737.289
4	1.458	2737.284
5	1.878	2765.084
6	2.442	3705.344
7	3.076	4165.427
8	3.710	4168.416
9	4.631	6056.259
10	5.817	7792.989
11	7.267	9535.656
12	9.015	11488.925
13	10.899	12380.196
14	12.721	11975.628
15	14.884	14222.165
16	17.189	15147.315
17	19.133	12778.508
18	21.357	14621.147
19	24.005	17404.428
20	26.174	14255.821
21	28.417	14748.326
22	31.068	17421.754
23	34.119	20056.666
24	36.728	17150.797
25	39.483	18105.064
26	42.872	22279.977
27	46.199	21869.078
28	49.969	24779.373
29	52.798	18597.230
30	55.340	16706.949
31	58.155	18504.955
32	61.645	22942.602
33	64.719	20203.666
34	67.195	16274.687
35	69.864	17547.076
36	72.139	14952.096
37	74.455	15220.345
38	76.497	13421.687
39	78.127	10716.627
40	79.752	10681.874
41	81.443	11117.873
42	83.039	10486.291
43	84.517	9718.203
44	85.882	8968.670
45	87.046	7650.894
46	88.111	7005.271
47	88.985	5742.107
48	89.838	5606.503

49	90.626	5180.183
50	91.393	5043.676
51	92.142	4921.161
52	92.839	4582.101
53	93.533	4562.744
54	94.148	4041.240
55	94.614	3063.527
56	95.077	3042.414
57	95.540	3042.364
58	95.979	2890.913
59	96.287	2022.375
60	96.573	1879.700
61	96.859	1876.190
62	97.145	1879.700
63	97.430	1879.700
64	97.716	1876.140
65	97.974	1696.504
66	98.069	621.853
67	98.137	450.994
68	98.206	449.238
69	98.274	449.188
70	98.342	445.728
71	98.410	450.994
72	98.479	452.749
73	98.548	449.188
74	98.615	445.728
75	98.684	452.749
76	98.753	450.994
77	98.820	443.923
78	98.889	450.994
79	98.958	450.994
80	99.026	447.433
81	99.094	447.433
82	99.162	447.433
83	99.230	447.433
84	99.298	447.433
85	99.366	447.433
86	99.434	447.433
87	99.502	447.433
88	99.570	447.433
89	99.638	447.433
90	99.706	447.433
91	99.774	447.433
92	99.842	447.433
93	99.911	447.433
94	99.979	447.433
95	100.000	140.418

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 10193.0049
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 16868.7422

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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.	5150.0	10300.0	15450.0	20600.0
0.083	0.0529	7.68	Q	.	.	.	.
0.167	0.2118	23.06	Q	.	.	.	.
0.250	0.4769	38.49	Q	.	.	.	.
0.333	0.8485	53.96	Q	.	.	.	.
0.417	1.3281	69.64	Q	.	.	.	.
0.500	1.9524	90.64	Q	.	.	.	.
0.583	2.7394	114.28	Q	.	.	.	.
0.667	3.6899	138.01	Q	.	.	.	.
0.750	4.8772	172.41	Q	.	.	.	.
0.833	6.3693	216.65	Q	.	.	.	.
0.917	8.2344	270.81	Q	.	.	.	.
1.000	10.5490	336.08	Q	.	.	.	.
1.083	13.3490	406.56	Q	.	.	.	.
1.167	16.6201	474.97	Q	.	.	.	.
1.250	20.4507	556.21	VQ	.	.	.	.
1.333	24.8782	642.87	VQ	.	.	.	.
1.417	29.8128	716.50	VQ	.	.	.	.
1.500	35.3273	800.71	VQ	.	.	.	.
1.583	41.5311	900.80	VQ	.	.	.	.
1.667	48.3046	983.51	VQ	.	.	.	.
1.750	55.6687	1069.26	V Q	.	.	.	.
1.833	63.7284	1170.27	V Q	.	.	.	.
1.917	72.5879	1286.40	V Q	.	.	.	.
2.000	82.1371	1386.55	V Q	.	.	.	.
2.083	92.4155	1492.41	V Q	.	.	.	.
2.167	103.5863	1622.00	V Q	.	.	.	.
2.250	115.6367	1749.72	V Q	.	.	.	.
2.333	128.6819	1894.16	V Q	.	.	.	.
2.417	142.4859	2004.35	V Q	.	.	.	.
2.500	156.9784	2104.31	V Q	.	.	.	.
2.583	172.2310	2214.68	V Q	.	.	.	.
2.667	188.4179	2350.34	V Q	.	.	.	.
2.750	205.4360	2471.02	V Q	.	.	.	.
2.833	223.1363	2570.09	V Q	.	.	.	.
2.917	241.5704	2676.62	V Q	.	.	.	.
3.000	260.6404	2768.96	V Q	.	.	.	.
3.083	280.3588	2863.12	V Q	.	.	.	.
3.167	300.6585	2947.52	V Q	.	.	.	.
3.250	321.4370	3017.04	V Q	.	.	.	.
3.333	342.6949	3086.64	V Q	.	.	.	.
3.417	364.4506	3158.93	V Q	.	.	.	.
3.500	386.6818	3227.96	V Q	.	.	.	.
3.583	409.3604	3292.94	V Q	.	.	.	.
3.667	432.4595	3353.98	.V Q	.	.	.	.
3.750	455.9297	3407.87	.V Q	.	.	.	.
3.833	479.7475	3458.36	.V Q	.	.	.	.
3.917	503.8658	3501.97	.V Q	.	.	.	.

4.000	528.2807	3545.04	.V	Q	.	.	.	.
4.083	552.9770	3585.90	.V	Q	.	.	.	.
4.167	577.9509	3626.21	.V	Q	.	.	.	.
4.250	603.1989	3666.01	.V	Q	.	.	.	.
4.333	628.7093	3704.12	.V	Q	.	.	.	.
4.417	654.4827	3742.30	.V	Q	.	.	.	.
4.500	680.5003	3777.76	.V	Q	.	.	.	.
4.583	706.7256	3807.91	.V	Q	.	.	.	.
4.667	733.1590	3838.13	.V	Q	.	.	.	.
4.750	759.8017	3868.52	.V	Q	.	.	.	.
4.833	786.6492	3898.26	.V	Q	.	.	.	.
4.917	813.6690	3923.28	.V	Q	.	.	.	.
5.000	840.8569	3947.69	.V	Q	.	.	.	.
5.083	868.2139	3972.22	.V	Q	.	.	.	.
5.167	895.7412	3996.97	.V	Q	.	.	.	.
5.250	923.4401	4021.88	.V	Q	.	.	.	.
5.333	951.3116	4046.96	.V	Q	.	.	.	.
5.417	979.3501	4071.18	.V	Q	.	.	.	.
5.500	1007.5153	4089.58	.V	Q	.	.	.	.
5.583	1035.8015	4107.17	.V	Q	.	.	.	.
5.667	1064.2101	4124.92	.V	Q	.	.	.	.
5.750	1092.7419	4142.83	.V	Q	.	.	.	.
5.833	1121.3983	4160.90	.V	Q	.	.	.	.
5.917	1150.1804	4179.16	.V	Q	.	.	.	.
6.000	1179.0896	4197.62	.V	Q	.	.	.	.
6.083	1208.1270	4216.22	.V	Q	.	.	.	.
6.167	1237.2936	4235.00	.V	Q	.	.	.	.
6.250	1266.5909	4253.99	.V	Q	.	.	.	.
6.333	1296.0205	4273.17	.V	Q	.	.	.	.
6.417	1325.5830	4292.48	.V	Q	.	.	.	.
6.500	1355.2803	4312.05	.V	Q	.	.	.	.
6.583	1385.1135	4331.79	.V	Q	.	.	.	.
6.667	1415.0842	4351.74	.V	Q	.	.	.	.
6.750	1445.1935	4371.87	.V	Q	.	.	.	.
6.833	1475.4430	4392.24	.V	Q	.	.	.	.
6.917	1505.8341	4412.79	.V	Q	.	.	.	.
7.000	1536.3684	4433.58	.V	Q	.	.	.	.
7.083	1567.0472	4454.57	.V	Q	.	.	.	.
7.167	1597.8723	4475.81	.V	Q	.	.	.	.
7.250	1628.8451	4497.25	.V	Q	.	.	.	.
7.333	1659.9674	4518.95	.V	Q	.	.	.	.
7.417	1691.2406	4540.88	.V	Q	.	.	.	.
7.500	1722.6666	4563.06	.V	Q	.	.	.	.
7.583	1754.2469	4585.47	.V	Q	.	.	.	.
7.667	1785.9835	4608.16	.V	Q	.	.	.	.
7.750	1817.8781	4631.08	.V	Q	.	.	.	.
7.833	1849.9324	4654.29	.V	Q	.	.	.	.
7.917	1882.1364	4676.02	.V	Q	.	.	.	.
8.000	1914.4867	4697.26	.V	Q	.	.	.	.
8.083	1946.9850	4718.75	.V	Q	.	.	.	.
8.167	1979.6333	4740.54	.V	Q	.	.	.	.
8.250	2012.4335	4762.59	.V	Q	.	.	.	.
8.333	2045.3877	4784.96	.V	Q	.	.	.	.
8.417	2078.4978	4807.60	.V	Q	.	.	.	.
8.500	2111.7661	4830.57	.V	Q	.	.	.	.
8.583	2145.1946	4853.83	.V	Q	.	.	.	.
8.667	2178.7856	4877.43	.V	Q	.	.	.	.
8.750	2212.5413	4901.33	.V	Q	.	.	.	.

8.833	2246.4641	4925.60	.	V	Q	.	.	.
8.917	2280.5562	4950.17	.	V	Q	.	.	.
9.000	2314.8201	4975.12	.	V	Q	.	.	.
9.083	2349.2581	5000.40	.	V	Q	.	.	.
9.167	2383.8730	5026.08	.	V	Q	.	.	.
9.250	2418.6672	5052.11	.	V	Q	.	.	.
9.333	2453.6433	5078.54	.	V	Q	.	.	.
9.417	2488.8040	5105.34	.	V	Q	.	.	.
9.500	2524.1523	5132.57	.	V	Q	.	.	.
9.583	2559.6909	5160.19	.	V	Q	.	.	.
9.667	2595.4229	5188.27	.	V	Q	.	.	.
9.750	2631.3508	5216.74	.	V	Q	.	.	.
9.833	2667.4783	5245.70	.	V	Q	.	.	.
9.917	2703.8081	5275.08	.	V	Q	.	.	.
10.000	2740.3438	5304.96	.	V	Q	.	.	.
10.083	2777.0881	5335.30	.	V	Q	.	.	.
10.167	2814.0452	5366.16	.	V	Q	.	.	.
10.250	2851.2180	5397.50	.	V	Q	.	.	.
10.333	2888.6106	5429.41	.	V	Q	.	.	.
10.417	2926.2263	5461.81	.	V	Q	.	.	.
10.500	2964.0693	5494.80	.	V	Q	.	.	.
10.583	3002.1433	5528.33	.	V	Q	.	.	.
10.667	3040.4524	5562.49	.	V	Q	.	.	.
10.750	3079.0007	5597.21	.	V	Q	.	.	.
10.833	3117.7927	5632.60	.	V	Q	.	.	.
10.917	3156.8325	5668.58	.	V	.Q	.	.	.
11.000	3196.1250	5705.27	.	V	.Q	.	.	.
11.083	3235.6746	5742.60	.	V	.Q	.	.	.
11.167	3275.4863	5780.68	.	V	.Q	.	.	.
11.250	3315.5652	5819.44	.	V	.Q	.	.	.
11.333	3355.9165	5859.00	.	V	.Q	.	.	.
11.417	3396.5452	5899.28	.	V	.Q	.	.	.
11.500	3437.4570	5940.41	.	V	.Q	.	.	.
11.583	3478.6577	5982.32	.	V	.Q	.	.	.
11.667	3520.1531	6025.14	.	V	.Q	.	.	.
11.750	3561.9492	6068.80	.	V	.Q	.	.	.
11.833	3604.0527	6113.42	.	V	.Q	.	.	.
11.917	3646.4697	6158.94	.	V	.Q	.	.	.
12.000	3689.2073	6205.50	.	V	.Q	.	.	.
12.083	3732.3655	6266.56	.	V	.Q	.	.	.
12.167	3776.0444	6342.20	.	V	.Q	.	.	.
12.250	3820.2507	6418.76	.	V	.Q	.	.	.
12.333	3864.9915	6496.37	.	V	.Q	.	.	.
12.417	3910.2754	6575.24	.	V	.Q	.	.	.
12.500	3956.1743	6664.53	.	V	.Q	.	.	.
12.583	4002.7266	6759.40	.	V	.Q	.	.	.
12.667	4049.9402	6855.43	.	V	.Q	.	.	.
12.750	4097.9512	6971.22	.	V	.Q	.	.	.
12.833	4146.8857	7105.33	.	V	.Q	.	.	.
12.917	4196.8696	7257.66	.	V	.Q	.	.	.
13.000	4248.0430	7430.38	.	V	Q	.	.	.
13.083	4300.4727	7612.81	.	V	Q	.	.	.
13.167	4354.1382	7792.25	.	V	Q	.	.	.
13.250	4409.1992	7994.84	.	V	Q	.	.	.
13.333	4465.7256	8207.62	.	V	Q	.	.	.
13.417	4523.5620	8397.83	.	V	Q	.	.	.
13.500	4582.8418	8607.41	.	V	Q	.	.	.
13.583	4643.7612	8845.52	.	.V	Q	.	.	.

13.667	4706.1138	9053.56	.	.V	Q	.	.	.
13.750	4769.9399	9267.53	.	.V	Q	.	.	.
13.833	4835.4307	9509.25	.	.V	Q	.	.	.
13.917	4902.7725	9778.05	.	.V	Q	.	.	.
14.000	4971.7764	10019.35	.	.V	Q.	.	.	.
14.083	5042.6118	10285.27	.	.V	Q.	.	.	.
14.167	5115.6675	10607.70	.	.V	Q	.	.	.
14.250	5190.9150	10925.93	.	.V	.Q	.	.	.
14.333	5268.5537	11273.14	.	.V	.Q	.	.	.
14.417	5348.1641	11559.39	.	.V	.Q	.	.	.
14.500	5429.6855	11836.93	.	.V	.Q	.	.	.
14.583	5513.2739	12137.05	.	.V	.Q	.	.	.
14.667	5599.2300	12480.81	.	.V	.Q	.	.	.
14.750	5687.4985	12816.57	.	.V	.Q	.	.	.
14.833	5777.9287	13130.46	.	.V	.Q	.	.	.
14.917	5870.7197	13473.28	.	.V	.Q	.	.	.
15.000	5965.8188	13808.36	.	.V	.Q	.	.	.
15.083	6063.2847	14152.05	.	.V	.Q	.	.	.
15.167	6162.9419	14470.21	.	.V	.Q	.	.	.
15.250	6264.7388	14780.90	.	.V	.Q	.	.	.
15.333	6368.7104	15096.67	.	.V	.Q	.	.	.
15.417	6474.5503	15367.92	.	.V	.Q	.	.	.
15.500	6582.1948	15629.98	.	.V	.Q	.	.	.
15.583	6691.7827	15912.13	.	.V	.Q	.	.	.
15.667	6803.0264	16152.60	.	.V	.Q	.	.	.
15.750	6915.8062	16375.63	.	.V	.Q	.	.	.
15.833	7030.1323	16600.19	.	.V	.Q	.	.	.
15.917	7146.1152	16840.73	.	.V	.Q	.	.	.
16.000	7263.6689	17068.78	.	.V	.Q	.	.	.
16.083	7383.6841	17426.18	.	.V	.Q	.	.	.
16.167	7506.1055	17775.60	.	.V	.Q	.	.	.
16.250	7629.5942	17930.59	.	.V	.Q	.	.	.
16.333	7754.1792	18089.71	.	.V	.Q	.	.	.
16.417	7879.4658	18191.63	.	.V	.Q	.	.	.
16.500	8006.1147	18389.39	.	.V	.Q	.	.	.
16.583	8133.6226	18514.15	.	.V	.Q	.	.	.
16.667	8262.0215	18643.50	.	.V	.Q	.	.	.
16.750	8392.8848	19001.39	.	.V	.Q	.	.	.
16.833	8525.7480	19291.79	.	.V	.Q	.	.	.
16.917	8660.3428	19543.09	.	.V	.Q	.	.	.
17.000	8796.7695	19809.19	.	.V	.Q	.	.	.
17.083	8934.2715	19965.32	.	.V	.Q	.	.	.
17.167	9071.5547	19933.58	.	.V	.Q	.	.	.
17.250	9210.1152	20118.99	.	.V	.Q	.	.	.
17.333	9349.3467	20216.46	.	.V	.Q	.	.	.
17.417	9487.0820	19999.15	.	.V	.Q	.	.	.
17.500	9625.8652	20151.27	.	.V	.Q	.	.	.
17.583	9766.1387	20367.75	.	.V	.Q	.	.	.
17.667	9903.5537	19952.59	.	.V	.Q	.	.	.
17.750	10041.4717	20025.71	.	.V	.Q	.	.	.
17.833	10181.4492	20324.70	.	.V	.Q	.	.	.
17.917	10323.0127	20554.96	.	.V	.Q	.	.	.
18.000	10461.2412	20070.83	.	.V	.Q	.	.	.
18.083	10599.7383	20109.74	.	.V	.Q	.	.	.
18.167	10741.3447	20561.25	.	.V	.Q	.	.	.
18.250	10882.1514	20445.11	.	.V	.Q	.	.	.
18.333	11023.8438	20573.75	.	.V	.Q	.	.	.
18.417	11159.8359	19746.00	.	.V	.Q	.	.	.

18.500	11294.5244	19556.76	.	.	.	V	.	Q	.
18.583	11430.6406	19764.02	.	.	.	V	.	Q	.
18.667	11570.1934	20263.11	.	.	.	V	.	Q	.
18.750	11706.6641	19815.54	.	.	.	V	.	Q	.
18.833	11838.9746	19211.47	.	.	.	V	.	Q	.
18.917	11970.8652	19150.53	.	.	.	V	.	Q	.
19.000	12099.8643	18730.67	.	.	.	V	.	Q	.
19.083	12227.8428	18582.46	.	.	.	V	.	Q	.
19.167	12352.5166	18102.60	.	.	.	V	.	Q	.
19.250	12473.5234	17570.22	.	.	.	V	.	Q	.
19.333	12592.4785	17272.23	.	.	.	V	.	Q	.
19.417	12710.2734	17103.78	.	.	.	V	.	Q	.
19.500	12825.8135	16776.35	.	.	.	V	.	Q	.
19.583	12938.3799	16344.58	.	.	.	V	.	Q	.
19.667	13047.7832	15885.36	.	.	.	V	.	Q	.
19.750	13153.7393	15384.82	.	.	.	V	.	Q	.
19.833	13256.8311	14968.95	.	.	.	V	.	Q	.
19.917	13356.3652	14452.34	.	.	.	V	.	Q	.
20.000	13453.5371	14109.41	.	.	.	V	.	Q	.
20.083	13547.9062	13702.43	.	.	.	V	.	Q	.
20.167	13639.5020	13299.70	.	.	.	V	.	Q	.
20.250	13728.5186	12925.18	.	.	.	V	.	Q	.
20.333	13814.5625	12493.51	.	.	.	V	.	Q	.
20.417	13898.1367	12134.93	.	.	.	V	.	Q	.
20.500	13978.9648	11736.18	.	.	.	V	.	Q	.
20.583	14056.7061	11287.97	.	.	.	V	.	Q	.
20.667	14131.8389	10909.22	.	.	.	V	.	Q	.
20.750	14204.6221	10568.13	.	.	.	V	.	Q	.
20.833	14275.2773	10259.08	.	.	.	V	.	Q	.
20.917	14343.2246	9865.94	.	.	.	V	.	Q	.
21.000	14409.2412	9585.54	.	.	.	V	.	Q	.
21.083	14473.4531	9323.53	.	.	.	V	.	Q	.
21.167	14536.0332	9086.65	.	.	.	V	.	Q	.
21.250	14597.0840	8864.61	.	.	.	V	.	Q	.
21.333	14656.5498	8634.49	.	.	.	V	.	Q	.
21.417	14714.2021	8371.12	.	.	.	V	.	Q	.
21.500	14769.4893	8027.73	.	.	.	V	.	Q	.
21.583	14823.2920	7812.14	.	.	.	V	.	Q	.
21.667	14875.8135	7626.08	.	.	.	V	.	Q	.
21.750	14927.1621	7455.87	.	.	.	V	.	Q	.
21.833	14977.3105	7281.56	.	.	.	V	.	Q	.
21.917	15026.3818	7125.12	.	.	.	V	.	Q	.
22.000	15074.3916	6970.98	.	.	.	V	.	Q	.
22.083	15121.3760	6822.10	.	.	.	V	.	Q	.
22.167	15167.3545	6676.03	.	.	.	V	.	Q	.
22.250	15212.3525	6533.75	.	.	.	V	.	Q	.
22.333	15256.3975	6395.26	.	.	.	V	.	Q	.
22.417	15299.5088	6259.71	.	.	.	V	.	Q	.
22.500	15341.8203	6143.58	.	.	.	V	.	Q	.
22.583	15383.4209	6040.37	.	.	.	V	.	Q	.
22.667	15424.3252	5939.28	.	.	.	V	.	Q	.
22.750	15464.5498	5840.66	.	.	.	V	.	Q	.
22.833	15504.1201	5745.67	.	.	.	V	.	Q	.
22.917	15543.1094	5661.20	.	.	.	V	.	Q	.
23.000	15581.5391	5579.97	.	.	.	V	.	Q	.
23.083	15619.4229	5500.68	.	.	.	V	.	Q	.
23.167	15656.7725	5423.11	.	.	.	V	.	Q	.
23.250	15693.6279	5351.40	.	.	.	V	.	Q	.

23.333	15730.0117	5282.97	.	Q	.	.	V	.
23.417	15765.9424	5217.17	.	Q	.	.	V	.
23.500	15801.4980	5162.73	.	Q	.	.	V	.
23.583	15836.7070	5112.37	.	Q.	.	.	V	.
23.667	15871.5781	5063.27	.	Q.	.	.	V	.
23.750	15906.1016	5012.78	.	Q.	.	.	V	.
23.833	15940.2578	4959.54	.	Q.	.	.	V	.
23.917	15973.8252	4874.05	.	Q.	.	.	V	.
24.000	16006.9600	4811.23	.	Q.	.	.	V	.
24.083	16039.7305	4758.30	.	Q.	.	.	V	.
24.167	16072.0967	4699.62	.	Q.	.	.	V	.
24.250	16104.0420	4638.39	.	Q.	.	.	V	.
24.333	16135.5576	4576.11	.	Q	.	.	V	.
24.417	16166.6484	4514.34	.	Q	.	.	V	.
24.500	16197.2812	4447.84	.	Q	.	.	V	.
24.583	16227.4424	4379.39	.	Q.	.	.	V	.
24.667	16257.1367	4311.61	.	Q.	.	.	V	.
24.750	16286.2959	4233.89	.	Q.	.	.	V	.
24.833	16314.8574	4147.12	.	Q.	.	.	V	.
24.917	16342.7812	4054.56	.	Q	.	.	V	.
25.000	16370.0098	3953.54	.	Q	.	.	V	.
25.083	16396.5156	3848.65	.	Q	.	.	V	.
25.167	16422.3223	3747.15	.	Q	.	.	V	.
25.250	16447.3516	3634.13	.	Q	.	.	V	.
25.333	16471.5742	3517.03	.	Q	.	.	V	.
25.417	16495.0879	3414.30	.	Q	.	.	V	.
25.500	16517.8301	3302.23	.	Q	.	.	V	.
25.583	16539.7012	3175.59	.	Q	.	.	V	.
25.667	16560.8281	3067.67	.	Q	.	.	V	.
25.750	16581.1992	2957.94	.	Q	.	.	V	.
25.833	16600.7188	2834.17	.	Q	.	.	V	.
25.917	16619.3125	2699.68	.	Q	.	.	V	.
26.000	16637.1074	2583.96	.	Q	.	.	V	.
26.083	16654.0762	2463.86	.	Q	.	.	V	.
26.167	16670.0645	2321.37	.	Q	.	.	V	.
26.250	16685.0938	2182.27	.	Q	.	.	V	.
26.333	16699.0605	2027.93	.	Q	.	.	V	.
26.417	16712.2109	1909.35	.	Q	.	.	V	.
26.500	16724.6230	1802.26	.	Q	.	.	V	.
26.583	16736.2344	1685.92	.	Q	.	.	V	.
26.667	16746.8789	1545.58	.	Q	.	.	V	.
26.750	16756.6699	1421.57	.	Q	.	.	V	.
26.833	16765.7637	1320.44	.	Q	.	.	V	.
26.917	16774.1172	1212.92	.	Q	.	.	V	.
27.000	16781.8359	1120.69	.	Q	.	.	V	.
27.083	16788.9141	1027.61	.	Q	.	.	V	.
27.167	16795.4238	945.27	.	Q	.	.	V	.
27.250	16801.4746	878.65	.	Q	.	.	V	.
27.333	16807.0723	812.71	.	Q	.	.	V	.
27.417	16812.2012	744.80	.	Q	.	.	V	.
27.500	16816.8906	680.89	.	Q	.	.	V	.
27.583	16821.1719	621.73	.	Q	.	.	V	.
27.667	16825.0781	567.19	.	Q	.	.	V	.
27.750	16828.6621	520.40	.	Q	.	.	V	.
27.833	16831.9512	477.55	.	Q	.	.	V	.
27.917	16834.9961	442.08	.	Q	.	.	V	.
28.000	16837.8027	407.62	.	Q	.	.	V	.
28.083	16840.3906	375.78	.	Q	.	.	V	.

28.167	16842.7656	344.94	Q	.	.	.	V	.
28.250	16844.9355	315.00	Q	.	.	.	V	.
28.333	16846.9141	287.16	Q	.	.	.	V	.
28.417	16848.7012	259.63	Q	.	.	.	V	.
28.500	16850.3203	235.20	Q	.	.	.	V	.
28.583	16851.8105	216.41	Q	.	.	.	V	.
28.667	16853.1738	197.88	Q	.	.	.	V	.
28.750	16854.4102	179.47	Q	.	.	.	V	.
28.833	16855.5254	162.04	Q	.	.	.	V	.
28.917	16856.5547	149.59	Q	.	.	.	V	.
29.000	16857.5059	138.02	Q	.	.	.	V	.
29.083	16858.3770	126.56	Q	.	.	.	V	.
29.167	16859.1699	115.16	Q	.	.	.	V	.
29.250	16859.8848	103.83	Q	.	.	.	V	.
29.333	16860.5234	92.60	Q	.	.	.	V	.
29.417	16861.0918	82.46	Q	.	.	.	V	.
29.500	16861.6309	78.40	Q	.	.	.	V	.
29.583	16862.1504	75.33	Q	.	.	.	V	.
29.667	16862.6484	72.29	Q	.	.	.	V	.
29.750	16863.1250	69.28	Q	.	.	.	V	.
29.833	16863.5820	66.31	Q	.	.	.	V	.
29.917	16864.0176	63.34	Q	.	.	.	V	.
30.000	16864.4336	60.38	Q	.	.	.	V	.
30.083	16864.8301	57.46	Q	.	.	.	V	.
30.167	16865.2051	54.58	Q	.	.	.	V	.
30.250	16865.5605	51.69	Q	.	.	.	V	.
30.333	16865.8965	48.83	Q	.	.	.	V	.
30.417	16866.2129	46.02	Q	.	.	.	V	.
30.500	16866.5098	43.20	Q	.	.	.	V	.
30.583	16866.7871	40.40	Q	.	.	.	V	.
30.667	16867.0469	37.63	Q	.	.	.	V	.
30.750	16867.2871	34.89	Q	.	.	.	V	.
30.833	16867.5078	32.16	Q	.	.	.	V	.
30.917	16867.7109	29.45	Q	.	.	.	V	.
31.000	16867.8945	26.77	Q	.	.	.	V	.
31.083	16868.0605	24.09	Q	.	.	.	V	.
31.167	16868.2090	21.44	Q	.	.	.	V	.
31.250	16868.3379	18.80	Q	.	.	.	V	.
31.333	16868.4492	16.18	Q	.	.	.	V	.
31.417	16868.5430	13.58	Q	.	.	.	V	.
31.500	16868.6191	10.99	Q	.	.	.	V	.
31.583	16868.6777	8.42	Q	.	.	.	V	.
31.667	16868.7188	5.86	Q	.	.	.	V	.
31.750	16868.7422	3.32	Q	.	.	.	V	.
31.833	16868.7480	0.79	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%	400.0
60%	345.0
70%	290.0
80%	225.0
90%	150.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133T *
* 100-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV0033TS.DAT
TIME/DATE OF STUDY: 12:36 01/02/2019

FLOW PROCESS FROM NODE 13010.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 6640.500 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 = 0.986

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	342.672
2	1.280	685.343
3	2.229	762.375
4	3.509	1027.733
5	5.502	1600.553
6	8.621	2504.871
7	12.399	3033.629
8	16.865	3587.053
9	21.237	3510.990
10	26.110	3913.386
11	31.190	4079.721
12	36.907	4590.862
13	43.262	5104.171
14	50.322	5669.451
15	55.961	4528.832
16	62.428	5193.173
17	68.056	4519.828
18	72.986	3959.126
19	77.161	3352.903
20	80.533	2708.165
21	83.792	2617.570
22	86.533	2201.347
23	88.645	1695.791
24	90.357	1374.979
25	91.920	1255.091
26	93.364	1159.411
27	94.524	932.127
28	95.473	761.458
29	96.259	631.957
30	96.846	470.736
31	97.431	470.319
32	97.955	420.328
33	98.144	152.080
34	98.284	112.591
35	98.424	112.168
36	98.564	112.382
37	98.704	112.591
38	98.844	112.382
39	98.984	112.376
40	99.124	112.382
41	99.264	112.376
42	99.404	112.376
43	99.544	112.376
44	99.684	112.376
45	99.823	112.376
46	99.963	112.376
47	100.000	29.385

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 1052.0483
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 1398.3379

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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.	975.0	1950.0	2925.0	3900.0
0.083	0.0071	1.02	Q	.	.	.	.
0.167	0.0282	3.07	Q	.	.	.	.
0.250	0.0651	5.36	Q	.	.	.	.
0.333	0.1233	8.45	Q	.	.	.	.
0.417	0.2146	13.25	Q	.	.	.	.
0.500	0.3577	20.78	Q	.	.	.	.
0.583	0.5636	29.90	Q	.	.	.	.
0.667	0.8440	40.71	Q	.	.	.	.
0.750	1.1975	51.33	Q	.	.	.	.
0.833	1.6327	63.19	Q	.	.	.	.
0.917	2.1532	75.58	Q	.	.	.	.
1.000	2.7699	89.54	Q	.	.	.	.
1.083	3.4936	105.08	VQ	.	.	.	.
1.167	4.3363	122.36	VQ	.	.	.	.
1.250	5.2750	136.29	VQ	.	.	.	.
1.333	6.3236	152.26	VQ	.	.	.	.
1.417	7.4687	166.27	VQ	.	.	.	.
1.500	8.6991	178.66	VQ	.	.	.	.
1.583	10.0026	189.27	VQ	.	.	.	.
1.667	11.3663	198.01	V Q	.	.	.	.
1.750	12.7885	206.50	V Q	.	.	.	.
1.833	14.2609	213.79	V Q	.	.	.	.
1.917	15.7732	219.58	V Q	.	.	.	.
2.000	17.3190	224.46	V Q	.	.	.	.
2.083	18.8960	228.98	V Q	.	.	.	.
2.167	20.5025	233.25	V Q	.	.	.	.
2.250	22.1337	236.85	V Q	.	.	.	.
2.333	23.7864	239.97	V Q	.	.	.	.
2.417	25.4579	242.70	V Q	.	.	.	.
2.500	27.1451	244.98	V Q	.	.	.	.
2.583	28.8480	247.26	V Q	.	.	.	.
2.667	30.5658	249.42	V Q	.	.	.	.
2.750	32.2929	250.77	V Q	.	.	.	.
2.833	34.0286	252.03	V Q	.	.	.	.
2.917	35.7730	253.28	.VQ	.	.	.	.
3.000	37.5261	254.56	.VQ	.	.	.	.
3.083	39.2881	255.84	.VQ	.	.	.	.
3.167	41.0590	257.14	.VQ	.	.	.	.
3.250	42.8388	258.43	.VQ	.	.	.	.
3.333	44.6278	259.75	.VQ	.	.	.	.
3.417	46.4257	261.07	.VQ	.	.	.	.
3.500	48.2330	262.41	.VQ	.	.	.	.
3.583	50.0494	263.75	.VQ	.	.	.	.
3.667	51.8752	265.11	.VQ	.	.	.	.
3.750	53.7104	266.47	.VQ	.	.	.	.
3.833	55.5552	267.86	.VQ	.	.	.	.
3.917	57.4078	269.00	.VQ	.	.	.	.

4.000	59.2678	270.07	.VQ	.	.	.	.
4.083	61.1351	271.14	.VQ	.	.	.	.
4.167	63.0101	272.24	.VQ	.	.	.	.
4.250	64.8925	273.33	.VQ	.	.	.	.
4.333	66.7827	274.45	.VQ	.	.	.	.
4.417	68.6805	275.57	.VQ	.	.	.	.
4.500	70.5862	276.71	. Q	.	.	.	.
4.583	72.4998	277.85	. Q	.	.	.	.
4.667	74.4214	279.02	. Q	.	.	.	.
4.750	76.3511	280.18	. Q	.	.	.	.
4.833	78.2889	281.38	. Q	.	.	.	.
4.917	80.2350	282.57	. Q	.	.	.	.
5.000	82.1895	283.79	. Q	.	.	.	.
5.083	84.1524	285.01	. Q	.	.	.	.
5.167	86.1238	286.26	. Q	.	.	.	.
5.250	88.1039	287.50	. Q	.	.	.	.
5.333	90.0927	288.78	. Q	.	.	.	.
5.417	92.0904	290.06	. Q	.	.	.	.
5.500	94.0970	291.36	. Q	.	.	.	.
5.583	96.1126	292.67	. VQ	.	.	.	.
5.667	98.1375	294.01	. VQ	.	.	.	.
5.750	100.1715	295.34	. VQ	.	.	.	.
5.833	102.2150	296.71	. VQ	.	.	.	.
5.917	104.2679	298.08	. VQ	.	.	.	.
6.000	106.3304	299.48	. Q	.	.	.	.
6.083	108.4026	300.89	. Q	.	.	.	.
6.167	110.4847	302.32	. Q	.	.	.	.
6.250	112.5768	303.76	. Q	.	.	.	.
6.333	114.6789	305.23	. Q	.	.	.	.
6.417	116.7912	306.71	. Q	.	.	.	.
6.500	118.9139	308.22	. Q	.	.	.	.
6.583	121.0470	309.73	. Q	.	.	.	.
6.667	123.1908	311.28	. Q	.	.	.	.
6.750	125.3453	312.83	. Q	.	.	.	.
6.833	127.5107	314.42	. Q	.	.	.	.
6.917	129.6871	316.01	. Q	.	.	.	.
7.000	131.8748	317.64	. Q	.	.	.	.
7.083	134.0736	319.28	. Q	.	.	.	.
7.167	136.2841	320.96	. Q	.	.	.	.
7.250	138.5061	322.63	. Q	.	.	.	.
7.333	140.7400	324.36	. QV	.	.	.	.
7.417	142.9857	326.08	. QV	.	.	.	.
7.500	145.2437	327.86	. QV	.	.	.	.
7.583	147.5139	329.63	. QV	.	.	.	.
7.667	149.7967	331.46	. QV	.	.	.	.
7.750	152.0920	333.28	. QV	.	.	.	.
7.833	154.4002	335.16	. QV	.	.	.	.
7.917	156.7214	337.04	. QV	.	.	.	.
8.000	159.0560	338.97	. QV	.	.	.	.
8.083	161.4038	340.91	. QV	.	.	.	.
8.167	163.7654	342.90	. QV	.	.	.	.
8.250	166.1406	344.89	. QV	.	.	.	.
8.333	168.5301	346.95	. QV	.	.	.	.
8.417	170.9337	349.00	. QV	.	.	.	.
8.500	173.3519	351.12	. QV	.	.	.	.
8.583	175.7846	353.24	. Q V	.	.	.	.
8.667	178.2325	355.43	. Q V	.	.	.	.
8.750	180.6954	357.62	. Q V	.	.	.	.

8.833	183.1739	359.87	. Q V	.	.	.	.
8.917	185.6679	362.13	. Q V	.	.	.	.
9.000	188.1780	364.47	. Q V	.	.	.	.
9.083	190.7042	366.81	. Q V	.	.	.	.
9.167	193.2470	369.22	. Q V	.	.	.	.
9.250	195.8065	371.64	. Q V	.	.	.	.
9.333	198.3832	374.13	. Q V	.	.	.	.
9.417	200.9771	376.64	. Q V	.	.	.	.
9.500	203.5888	379.22	. Q V	.	.	.	.
9.583	206.2184	381.81	. Q V	.	.	.	.
9.667	208.8664	384.49	. Q V	.	.	.	.
9.750	211.5329	387.18	. Q V	.	.	.	.
9.833	214.2186	389.96	. Q V	.	.	.	.
9.917	216.9235	392.75	. Q V	.	.	.	.
10.000	219.6483	395.64	. Q V	.	.	.	.
10.083	222.3930	398.53	. Q V	.	.	.	.
10.167	225.1584	401.53	. Q V	.	.	.	.
10.250	227.9445	404.54	. Q V	.	.	.	.
10.333	230.7520	407.66	. Q V	.	.	.	.
10.417	233.5812	410.79	. Q V	.	.	.	.
10.500	236.4327	414.04	. Q V	.	.	.	.
10.583	239.3067	417.30	. Q V	.	.	.	.
10.667	242.2040	420.69	. Q V	.	.	.	.
10.750	245.1247	424.09	. Q V	.	.	.	.
10.833	248.0697	427.62	. Q V	.	.	.	.
10.917	251.0392	431.17	. Q V	.	.	.	.
11.000	254.0341	434.85	. Q V	.	.	.	.
11.083	257.0545	438.57	. Q V	.	.	.	.
11.167	260.1015	442.42	. Q V	.	.	.	.
11.250	263.1752	446.31	. Q V	.	.	.	.
11.333	266.2767	450.34	. Q V	.	.	.	.
11.417	269.4063	454.41	. Q V	.	.	.	.
11.500	272.5650	458.64	. Q V	.	.	.	.
11.583	275.7531	462.91	. Q V	.	.	.	.
11.667	278.9717	467.35	. Q V	.	.	.	.
11.750	282.2213	471.84	. Q V	.	.	.	.
11.833	285.5031	476.51	. Q V	.	.	.	.
11.917	288.8174	481.23	. Q V	.	.	.	.
12.000	292.1656	486.16	. Q V	.	.	.	.
12.083	295.5545	492.07	. Q V	.	.	.	.
12.167	298.9920	499.13	. Q V	.	.	.	.
12.250	302.4800	506.47	. Q V	.	.	.	.
12.333	306.0253	514.77	. Q V	.	.	.	.
12.417	309.6389	524.71	. Q V	.	.	.	.
12.500	313.3398	537.37	. Q V	.	.	.	.
12.583	317.1385	551.57	. Q V	.	.	.	.
12.667	321.0475	567.58	. Q V	.	.	.	.
12.750	325.0660	583.49	. Q V	.	.	.	.
12.833	329.2039	600.82	. Q V	.	.	.	.
12.917	333.4653	618.75	. Q V	.	.	.	.
13.000	337.8620	638.41	. Q V	.	.	.	.
13.083	342.4049	659.63	. Q V	.	.	.	.
13.167	347.1072	682.77	. Q V	.	.	.	.
13.250	351.9488	703.00	. Q V	.	.	.	.
13.333	356.9450	725.45	. Q V	.	.	.	.
13.417	362.0846	746.27	. Q V	.	.	.	.
13.500	367.3603	766.03	. Q V	.	.	.	.
13.583	372.7622	784.36	. Q V	.	.	.	.

13.667	378.2817	801.43	.	Q V	.	.	.
13.750	383.9187	818.50	.	Q V	.	.	.
13.833	389.6694	835.00	.	Q .V	.	.	.
13.917	395.5261	850.39	.	Q .V	.	.	.
14.000	401.4871	865.53	.	Q .V	.	.	.
14.083	407.5647	882.47	.	Q.V	.	.	.
14.167	413.7744	901.65	.	Q.V	.	.	.
14.250	420.1171	920.96	.	Q. V	.	.	.
14.333	426.6044	941.96	.	Q. V	.	.	.
14.417	433.2574	966.01	.	Q. V	.	.	.
14.500	440.1117	995.24	.	Q V	.	.	.
14.583	447.1891	1027.64	.	Q V	.	.	.
14.667	454.5149	1063.71	.	Q V	.	.	.
14.750	462.0842	1099.06	.	.Q V	.	.	.
14.833	469.9177	1137.42	.	.Q V	.	.	.
14.917	478.0263	1177.37	.	.QV	.	.	.
15.000	486.4384	1221.44	.	.QV	.	.	.
15.083	495.1797	1269.23	.	.QV	.	.	.
15.167	504.2834	1321.86	.	.QV	.	.	.
15.250	513.7196	1370.13	.	.Q	.	.	.
15.333	523.5328	1424.87	.	.Q	.	.	.
15.417	533.6807	1473.47	.	.Q	.	.	.
15.500	544.1335	1517.76	.	.Q	.	.	.
15.583	554.8845	1561.04	.	.VQ	.	.	.
15.667	565.9174	1601.99	.	.Q	.	.	.
15.750	577.2155	1640.48	.	.Q	.	.	.
15.833	588.7377	1673.04	.	.VQ	.	.	.
15.917	600.5052	1708.65	.	.Q	.	.	.
16.000	612.6210	1759.21	.	.VQ	.	.	.
16.083	625.6843	1896.78	.	.V Q.	.	.	.
16.167	639.7127	2036.93	.	.V Q	.	.	.
16.250	654.3860	2130.57	.	.V .Q	.	.	.
16.333	670.1204	2284.62	.	.V. Q	.	.	.
16.417	687.4559	2517.11	.	.V. Q	.	.	.
16.500	706.7905	2807.38	.	.V	.Q	.	.
16.583	727.4885	3005.35	.	.V	.Q	.	.
16.667	749.2919	3165.85	.	.V	.Q	.	.
16.750	771.3105	3197.10	.	.V	.Q	.	.
16.833	794.3454	3344.67	.	.V	.Q	.	.
16.917	818.1296	3453.47	.	.V	.Q	.	.
17.000	843.2285	3644.36	.	.V	.Q	.Q	.
17.083	869.2944	3784.78	.	.V	.Q	.Q	.
17.167	895.9966	3877.16	.	.V	.Q	.Q	.
17.250	920.7836	3599.07	.	.V	.Q	.Q	.
17.333	946.0182	3664.07	.	.V	.Q	.Q	.
17.417	969.6430	3430.33	.	.V	.Q	.Q	.
17.500	991.6597	3196.83	.	.V .Q	.	.	.
17.583	1011.9123	2940.67	.	.V Q	.	.	.
17.667	1030.5387	2704.56	.	.Q V.	.	.	.
17.750	1048.3156	2581.20	.	.Q V.	.	.	.
17.833	1064.7385	2384.62	.	.Q V	.	.	.
17.917	1079.6780	2169.20	.	.Q V	.	.	.
18.000	1093.4684	2002.37	.	.Q	.V	.	.
18.083	1106.5013	1892.39	.	.Q.	.V	.	.
18.167	1118.7769	1782.40	.	.Q	.V	.	.
18.250	1130.1259	1647.88	.	.Q	.V	.	.
18.333	1140.6152	1523.06	.	.Q	.V	.	.
18.417	1150.3605	1415.01	.	.Q	.V	.	.

18.500	1159.3813	1309.84	.	. Q	.	. V	.
18.583	1167.9180	1239.51	.	. Q	.	. V	.
18.667	1175.8906	1157.63	.	.Q	.	. V	.
18.750	1183.0295	1036.57	.	.Q	.	. V	.
18.833	1189.7305	972.97	.	.Q.	.	. V	.
18.917	1196.1287	929.02	.	.Q.	.	. V	.
19.000	1202.2488	888.64	.	.Q.	.	. V	.
19.083	1208.0735	845.74	.	.Q	.	. V	.
19.167	1213.6051	803.20	.	.Q	.	. V	.
19.250	1218.8939	767.94	.	.Q	.	. V	.
19.333	1223.9468	733.67	.	.Q	.	. V	.
19.417	1228.7881	702.96	.	.Q	.	. V	.
19.500	1233.4399	675.46	.	.Q	.	. V	.
19.583	1237.9143	649.68	.	.Q	.	. V	.
19.667	1242.2253	625.96	.	.Q	.	. V	.
19.750	1246.3756	602.61	.	.Q	.	. V	.
19.833	1250.3589	578.38	.	.Q	.	. V	.
19.917	1254.0731	539.30	.	.Q	.	. V	.
20.000	1257.6226	515.37	.	.Q	.	. V	.
20.083	1261.0728	500.96	.	.Q	.	. V	.
20.167	1264.4355	488.28	.	.Q	.	. V	.
20.250	1267.7118	475.71	.	.Q	.	. V	.
20.333	1270.9065	463.86	.	.Q	.	. V	.
20.417	1274.0264	453.00	.	.Q	.	. V	.
20.500	1277.0782	443.13	.	.Q	.	. V	.
20.583	1280.0652	433.70	.	.Q	.	. V	.
20.667	1282.9906	424.78	.	.Q	.	. V	.
20.750	1285.8618	416.91	.	.Q	.	. V	.
20.833	1288.6816	409.45	.	.Q	.	. V	.
20.917	1291.4551	402.70	.	.Q	.	. V	.
21.000	1294.1849	396.37	.	.Q	.	. V	.
21.083	1296.8729	390.29	.	.Q	.	. V	.
21.167	1299.5205	384.43	.	.Q	.	. V	.
21.250	1302.1293	378.79	.	.Q	.	. V	.
21.333	1304.7006	373.35	.	.Q	.	. V	.
21.417	1307.2356	368.09	.	.Q	.	. V	.
21.500	1309.7357	363.01	.	.Q	.	. V	.
21.583	1312.2020	358.10	.	.Q	.	. V	.
21.667	1314.6355	353.34	.	.Q	.	. V	.
21.750	1317.0372	348.73	.	.Q	.	. V	.
21.833	1319.4082	344.26	.	.Q	.	. V	.
21.917	1321.7507	340.14	.	.Q	.	. V	.
22.000	1324.0664	336.23	.	.Q	.	. V	.
22.083	1326.3560	332.44	.	.Q	.	. V	.
22.167	1328.6201	328.76	.	.Q	.	. V	.
22.250	1330.8597	325.19	.	.Q	.	. V	.
22.333	1333.0754	321.72	.	.Q	.	. V	.
22.417	1335.2678	318.34	.	.Q	.	. V	.
22.500	1337.4376	315.06	.	.Q	.	. V	.
22.583	1339.5854	311.86	.	.Q	.	. V	.
22.667	1341.7118	308.75	.	.Q	.	. V	.
22.750	1343.8173	305.72	.	.Q	.	. V	.
22.833	1345.9025	302.77	.	.Q	.	. V	.
22.917	1347.9678	299.89	.	.Q	.	. V	.
23.000	1350.0138	297.08	.	.Q	.	. V	.
23.083	1352.0409	294.34	.	.Q	.	. V	.
23.167	1354.0496	291.67	.	.Q	.	. V	.
23.250	1356.0403	289.05	.	.Q	.	. V	.

23.333	1358.0134	286.50	. Q	.	.	.	V .
23.417	1359.9694	284.01	. Q	.	.	.	V .
23.500	1361.9086	281.57	. Q	.	.	.	V .
23.583	1363.8314	279.19	. Q	.	.	.	V .
23.667	1365.7382	276.86	. Q	.	.	.	V .
23.750	1367.6292	274.58	. Q	.	.	.	V .
23.833	1369.5049	272.35	. Q	.	.	.	V .
23.917	1371.3655	270.16	. Q	.	.	.	V .
24.000	1373.2114	268.03	. Q	.	.	.	V .
24.083	1375.0359	264.91	. Q	.	.	.	V .
24.167	1376.8322	260.82	. Q	.	.	.	V .
24.250	1378.5991	256.56	. Q	.	.	.	V .
24.333	1380.3315	251.55	. Q	.	.	.	V .
24.417	1382.0182	244.90	. Q	.	.	.	V .
24.500	1383.6410	235.62	. Q	.	.	.	V .
24.583	1385.1896	224.85	. Q	.	.	.	V .
24.667	1386.6532	212.52	. Q	.	.	.	V .
24.750	1388.0342	200.52	. Q	.	.	.	V .
24.833	1389.3248	187.41	.Q	.	.	.	V .
24.917	1390.5226	173.91	.Q	.	.	.	V .
25.000	1391.6176	158.99	.Q	.	.	.	V .
25.083	1392.6000	142.65	.Q	.	.	.	V .
25.167	1393.4591	124.75	.Q	.	.	.	V .
25.250	1394.2192	110.37	.Q	.	.	.	V .
25.333	1394.8674	94.12	Q	.	.	.	V .
25.417	1395.4183	79.99	Q	.	.	.	V .
25.500	1395.8840	67.63	Q	.	.	.	V .
25.583	1396.2777	57.16	Q	.	.	.	V .
25.667	1396.6130	48.69	Q	.	.	.	V .
25.750	1396.8922	40.54	Q	.	.	.	V .
25.833	1397.1243	33.70	Q	.	.	.	V .
25.917	1397.3199	28.41	Q	.	.	.	V .
26.000	1397.4860	24.11	Q	.	.	.	V .
26.083	1397.6251	20.20	Q	.	.	.	V .
26.167	1397.7395	16.61	Q	.	.	.	V .
26.250	1397.8340	13.71	Q	.	.	.	V .
26.333	1397.9121	11.35	Q	.	.	.	V .
26.417	1397.9767	9.38	Q	.	.	.	V .
26.500	1398.0311	7.91	Q	.	.	.	V .
26.583	1398.0756	6.46	Q	.	.	.	V .
26.667	1398.1111	5.16	Q	.	.	.	V .
26.750	1398.1432	4.67	Q	.	.	.	V .
26.833	1398.1729	4.30	Q	.	.	.	V .
26.917	1398.2000	3.94	Q	.	.	.	V .
27.000	1398.2246	3.57	Q	.	.	.	V .
27.083	1398.2467	3.21	Q	.	.	.	V .
27.167	1398.2664	2.86	Q	.	.	.	V .
27.250	1398.2836	2.50	Q	.	.	.	V .
27.333	1398.2983	2.15	Q	.	.	.	V .
27.417	1398.3108	1.80	Q	.	.	.	V .
27.500	1398.3208	1.45	Q	.	.	.	V .
27.583	1398.3285	1.11	Q	.	.	.	V .
27.667	1398.3337	0.77	Q	.	.	.	V .
27.750	1398.3367	0.43	Q	.	.	.	V .
27.833	1398.3373	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

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 133C *
* 100-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV0033CS.DAT
TIME/DATE OF STUDY: 12:34 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 133.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 60992.500 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.287 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) = 0.49
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.94
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.29
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.38
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.53
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 6.16

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.308
30-MINUTE FACTOR = 0.363
1-HOUR FACTOR = 0.408
3-HOUR FACTOR = 0.754
6-HOUR FACTOR = 0.891
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.644

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.208	1535.863
2	0.625	3071.720
3	1.041	3071.726
4	1.458	3071.719
5	1.878	3102.916
6	2.442	4158.056
7	3.076	4674.350
8	3.710	4677.704
9	4.631	6796.200
10	5.817	8745.120
11	7.267	10700.702
12	9.015	12892.618
13	10.899	13892.782
14	12.721	13438.785
15	14.884	15959.799
16	17.189	16997.982
17	19.133	14339.759
18	21.357	16407.529
19	24.005	19530.863
20	26.174	15997.567
21	28.417	16550.246
22	31.068	19550.307
23	34.119	22507.146
24	36.728	19246.244
25	39.483	20317.104
26	42.872	25002.098
27	46.199	24540.996
28	49.969	27806.865
29	52.798	20869.400
30	55.340	18748.168
31	58.155	20765.852
32	61.645	25745.680
33	64.719	22672.107
34	67.195	18263.094
35	69.864	19690.941
36	72.139	16778.912
37	74.455	17079.936
38	76.497	15061.520
39	78.127	12025.962
40	79.752	11986.963
41	81.443	12476.231
42	83.039	11767.484
43	84.517	10905.553
44	85.882	10064.443
45	87.046	8585.664
46	88.111	7861.160
47	88.985	6443.666
48	89.838	6291.494

49	90.626	5813.087
50	91.393	5659.902
51	92.142	5522.418
52	92.839	5141.933
53	93.533	5120.210
54	94.148	4534.990
55	94.614	3437.822
56	95.077	3414.130
57	95.540	3414.073
58	95.979	3244.118
59	96.287	2269.465
60	96.573	2109.358
61	96.859	2105.418
62	97.145	2109.358
63	97.430	2109.358
64	97.716	2105.362
65	97.974	1903.780
66	98.069	697.829
67	98.137	506.095
68	98.206	504.125
69	98.274	504.069
70	98.342	500.186
71	98.410	506.095
72	98.479	508.065
73	98.548	504.069
74	98.615	500.186
75	98.684	508.065
76	98.753	506.095
77	98.820	498.160
78	98.889	506.095
79	98.958	506.095
80	99.026	502.099
81	99.094	502.099
82	99.162	502.099
83	99.230	502.099
84	99.298	502.099
85	99.366	502.099
86	99.434	502.099
87	99.502	502.099
88	99.570	502.099
89	99.638	502.099
90	99.706	502.099
91	99.774	502.099
92	99.842	502.099
93	99.911	502.099
94	99.979	502.099
95	100.000	157.574

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 11332.4717
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 17952.9570

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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.	5450.0	10900.0	16350.0	21800.0
0.083	0.0562	8.16	Q	.	.	.	.
0.167	0.2248	24.49	Q	.	.	.	.
0.250	0.5063	40.87	Q	.	.	.	.
0.333	0.9009	57.30	Q	.	.	.	.
0.417	1.4102	73.94	Q	.	.	.	.
0.500	2.0730	96.24	Q	.	.	.	.
0.583	2.9086	121.34	Q	.	.	.	.
0.667	3.9178	146.54	Q	.	.	.	.
0.750	5.1786	183.06	Q	.	.	.	.
0.833	6.7629	230.04	Q	.	.	.	.
0.917	8.7432	287.54	Q	.	.	.	.
1.000	11.2008	356.85	Q	.	.	.	.
1.083	14.1738	431.68	Q	.	.	.	.
1.167	17.6471	504.32	Q	.	.	.	.
1.250	21.7145	590.58	VQ	.	.	.	.
1.333	26.4156	682.60	VQ	.	.	.	.
1.417	31.6552	760.79	VQ	.	.	.	.
1.500	37.5106	850.21	VQ	.	.	.	.
1.583	44.0980	956.48	VQ	.	.	.	.
1.667	51.2902	1044.31	VQ	.	.	.	.
1.750	59.1095	1135.37	V Q	.	.	.	.
1.833	67.6676	1242.63	V Q	.	.	.	.
1.917	77.0748	1365.94	V Q	.	.	.	.
2.000	87.2145	1472.28	V Q	.	.	.	.
2.083	98.1284	1584.70	V Q	.	.	.	.
2.167	109.9900	1722.30	V Q	.	.	.	.
2.250	122.7856	1857.92	V Q	.	.	.	.
2.333	136.6375	2011.29	V Q	.	.	.	.
2.417	151.2952	2128.30	V Q	.	.	.	.
2.500	166.6841	2234.46	V Q	.	.	.	.
2.583	182.8801	2351.67	V Q	.	.	.	.
2.667	200.0683	2495.72	V Q	.	.	.	.
2.750	218.1390	2623.88	V Q	.	.	.	.
2.833	236.9344	2729.09	V Q	.	.	.	.
2.917	256.5089	2842.21	V Q	.	.	.	.
3.000	276.7588	2940.28	V Q	.	.	.	.
3.083	297.6973	3040.28	V Q	.	.	.	.
3.167	319.2532	3129.92	V Q	.	.	.	.
3.250	341.3176	3203.75	V Q	.	.	.	.
3.333	363.8911	3277.67	V Q	.	.	.	.
3.417	386.9934	3354.46	V Q	.	.	.	.
3.500	410.6007	3427.78	V Q	.	.	.	.
3.583	434.6833	3496.80	V Q	.	.	.	.
3.667	459.2125	3561.63	.V Q	.	.	.	.
3.750	484.1358	3618.87	.V Q	.	.	.	.
3.833	509.4286	3672.51	.V Q	.	.	.	.
3.917	535.0404	3718.84	.V Q	.	.	.	.

4.000	560.9674	3764.60	.V	Q	.	.	.	.
4.083	587.1934	3808.02	.V	Q	.	.	.	.
4.167	613.7144	3850.84	.V	Q	.	.	.	.
4.250	640.5266	3893.13	.V	Q	.	.	.	.
4.333	667.6176	3933.63	.V	Q	.	.	.	.
4.417	694.9881	3974.20	.V	Q	.	.	.	.
4.500	722.6181	4011.88	.V	Q	.	.	.	.
4.583	750.4688	4043.92	.V	Q	.	.	.	.
4.667	778.5408	4076.05	.V	Q	.	.	.	.
4.750	806.8351	4108.34	.V	Q	.	.	.	.
4.833	835.3472	4139.94	.V	Q	.	.	.	.
4.917	864.0424	4166.55	.V	Q	.	.	.	.
5.000	892.9164	4192.50	.V	Q	.	.	.	.
5.083	921.9700	4218.59	.V	Q	.	.	.	.
5.167	951.2049	4244.90	.V	Q	.	.	.	.
5.250	980.6221	4271.38	.V	Q	.	.	.	.
5.333	1010.2230	4298.04	.V	Q	.	.	.	.
5.417	1040.0012	4323.80	.V	Q	.	.	.	.
5.500	1069.9143	4343.38	.V	Q	.	.	.	.
5.583	1099.9562	4362.08	.V	Q	.	.	.	.
5.667	1130.1282	4380.98	.V	Q	.	.	.	.
5.750	1160.4314	4400.03	.V	Q	.	.	.	.
5.833	1190.8671	4419.26	.V	Q	.	.	.	.
5.917	1221.4365	4438.68	.V	Q	.	.	.	.
6.000	1252.1412	4458.33	.V	Q	.	.	.	.
6.083	1282.9822	4478.11	.V	Q	.	.	.	.
6.167	1313.9608	4498.09	.V	Q	.	.	.	.
6.250	1345.0785	4518.29	.V	Q	.	.	.	.
6.333	1376.3368	4538.70	.V	Q	.	.	.	.
6.417	1407.7366	4559.26	.V	Q	.	.	.	.
6.500	1439.2798	4580.08	.V	Q	.	.	.	.
6.583	1470.9677	4601.09	.V	Q	.	.	.	.
6.667	1502.8018	4622.31	.V	Q	.	.	.	.
6.750	1534.7834	4643.74	.V	Q	.	.	.	.
6.833	1566.9143	4665.41	.V	Q	.	.	.	.
6.917	1599.1958	4687.27	.V	Q	.	.	.	.
7.000	1631.6296	4709.40	.V	Q	.	.	.	.
7.083	1664.2174	4731.74	.V	Q	.	.	.	.
7.167	1696.9608	4754.34	.V	Q	.	.	.	.
7.250	1729.8613	4777.16	.V	Q	.	.	.	.
7.333	1762.9209	4800.26	.V	Q	.	.	.	.
7.417	1796.1412	4823.59	.V	Q	.	.	.	.
7.500	1829.5242	4847.20	.V	Q	.	.	.	.
7.583	1863.0713	4871.05	.V	Q	.	.	.	.
7.667	1896.7847	4895.19	.V	Q	.	.	.	.
7.750	1930.6661	4919.59	.V	Q	.	.	.	.
7.833	1964.7178	4944.29	.V	Q	.	.	.	.
7.917	1998.9287	4967.42	.V	Q	.	.	.	.
8.000	2033.2953	4990.04	.V	Q	.	.	.	.
8.083	2067.8196	5012.91	.V	Q	.	.	.	.
8.167	2102.5034	5036.11	.V	Q	.	.	.	.
8.250	2137.3491	5059.59	.V	Q	.	.	.	.
8.333	2172.3586	5083.40	.V	Q	.	.	.	.
8.417	2207.5342	5107.50	.V	Q	.	.	.	.
8.500	2242.8782	5131.96	.V	Q	.	.	.	.
8.583	2278.3928	5156.72	.V	Q	.	.	.	.
8.667	2314.0806	5181.85	.V	Q	.	.	.	.
8.750	2349.9434	5207.29	.V	Q	.	.	.	.

8.833	2385.9841	5233.12	.	V	Q.	.	.	.
8.917	2422.2051	5259.29	.	V	Q.	.	.	.
9.000	2458.6089	5285.85	.	V	Q.	.	.	.
9.083	2495.1982	5312.77	.	V	Q.	.	.	.
9.167	2531.9758	5340.11	.	V	Q.	.	.	.
9.250	2568.9443	5367.81	.	V	Q.	.	.	.
9.333	2606.1067	5395.96	.	V	Q.	.	.	.
9.417	2643.4653	5424.49	.	V	Q.	.	.	.
9.500	2681.0237	5453.49	.	V	Q	.	.	.
9.583	2718.7847	5482.89	.	V	Q	.	.	.
9.667	2756.7515	5512.78	.	V	Q	.	.	.
9.750	2794.9270	5543.10	.	V	Q	.	.	.
9.833	2833.3149	5573.93	.	V	Q	.	.	.
9.917	2871.9185	5605.22	.	V	Q	.	.	.
10.000	2910.7410	5637.04	.	V	Q	.	.	.
10.083	2949.7859	5669.34	.	V	Q	.	.	.
10.167	2989.0574	5702.20	.	V	Q	.	.	.
10.250	3028.5586	5735.58	.	V	Q	.	.	.
10.333	3068.2937	5769.55	.	V	Q	.	.	.
10.417	3108.2666	5804.06	.	V	Q	.	.	.
10.500	3148.4814	5839.19	.	V	Q	.	.	.
10.583	3188.9421	5874.90	.	V	Q	.	.	.
10.667	3229.6533	5911.28	.	V	Q	.	.	.
10.750	3270.6191	5948.25	.	V	Q	.	.	.
10.833	3311.8445	5985.93	.	V	Q	.	.	.
10.917	3353.3337	6024.26	.	V	.Q	.	.	.
11.000	3395.0923	6063.33	.	V	.Q	.	.	.
11.083	3437.1245	6103.09	.	V	.Q	.	.	.
11.167	3479.4360	6143.64	.	V	.Q	.	.	.
11.250	3522.0320	6184.92	.	V	.Q	.	.	.
11.333	3564.9180	6227.05	.	V	.Q	.	.	.
11.417	3608.0996	6269.96	.	V	.Q	.	.	.
11.500	3651.5828	6313.77	.	V	.Q	.	.	.
11.583	3695.3735	6358.41	.	V	.Q	.	.	.
11.667	3739.4783	6404.02	.	V	.Q	.	.	.
11.750	3783.9033	6450.52	.	V	.Q	.	.	.
11.833	3828.6558	6498.04	.	V	.Q	.	.	.
11.917	3873.7422	6546.54	.	V	.Q	.	.	.
12.000	3919.1702	6596.13	.	V	.Q	.	.	.
12.083	3965.0505	6661.82	.	V	.Q	.	.	.
12.167	4011.4946	6743.70	.	V	.Q	.	.	.
12.250	4058.5093	6826.54	.	V	.Q	.	.	.
12.333	4106.1021	6910.48	.	V	.Q	.	.	.
12.417	4154.2822	6995.76	.	V	.Q	.	.	.
12.500	4203.1294	7092.58	.	V	.Q	.	.	.
12.583	4252.6855	7195.54	.	V	.Q	.	.	.
12.667	4302.9590	7299.71	.	V	.Q	.	.	.
12.750	4354.1011	7425.81	.	V	.Q	.	.	.
12.833	4406.2515	7572.21	.	V	.Q	.	.	.
12.917	4459.5488	7738.81	.	V	.Q	.	.	.
13.000	4514.1494	7928.00	.	V	Q	.	.	.
13.083	4570.1265	8127.90	.	V	Q	.	.	.
13.167	4627.4565	8324.33	.	V	Q	.	.	.
13.250	4686.3159	8546.42	.	V	Q	.	.	.
13.333	4746.7822	8779.70	.	V	Q	.	.	.
13.417	4808.6812	8987.72	.	V	Q	.	.	.
13.500	4872.1602	9217.14	.	V	Q	.	.	.
13.583	4937.4370	9478.19	.	.V	Q	.	.	.

13.667	5004.2798	9705.57	.	.V	Q	.	.	.
13.750	5072.7329	9939.37	.	.V	Q	.	.	.
13.833	5143.0078	10203.90	.	.V	Q	.	.	.
13.917	5215.3110	10498.39	.	.V	Q.	.	.	.
14.000	5289.4297	10762.04	.	.V	Q.	.	.	.
14.083	5365.5415	11051.44	.	.V	Q	.	.	.
14.167	5444.0688	11402.14	.	.V	Q	.	.	.
14.250	5524.9780	11748.00	.	.V	.Q	.	.	.
14.333	5608.4902	12125.96	.	.V	.Q	.	.	.
14.417	5694.1362	12435.83	.	.V	.Q	.	.	.
14.500	5781.8418	12734.83	.	.V	.Q	.	.	.
14.583	5871.7754	13058.35	.	.V	.Q	.	.	.
14.667	5964.2705	13430.31	.	.V	Q	.	.	.
14.750	6059.2515	13791.23	.	.V	Q	.	.	.
14.833	6156.5366	14125.83	.	.V	Q	.	.	.
14.917	6256.3354	14490.80	.	.V	Q	.	.	.
15.000	6358.5742	14845.09	.	.V	Q	.	.	.
15.083	6463.3135	15208.12	.	.V	Q	.	.	.
15.167	6570.3608	15543.25	.	.V	Q	.	.	.
15.250	6679.6436	15867.86	.	.V	Q.	.	.	.
15.333	6791.1953	16197.32	.	.V	Q.	.	.	.
15.417	6904.7051	16481.64	.	.V	Q	.	.	.
15.500	7020.1016	16755.57	.	.V	Q	.	.	.
15.583	7137.5181	17048.88	.	.V	.Q	.	.	.
15.667	7256.6577	17299.11	.	.V	.Q	.	.	.
15.750	7377.3872	17529.94	.	.V	.Q	.	.	.
15.833	7499.7095	17761.19	.	.V	.Q	.	.	.
15.917	7623.7275	18007.41	.	.V	.Q	.	.	.
16.000	7749.3555	18241.21	.	.V	.Q	.	.	.
16.083	7877.4844	18604.33	.	.V	.Q	.	.	.
16.167	8008.0508	18958.22	.	.V	.Q	.	.	.
16.250	8139.6978	19115.15	.	.V	.Q	.	.	.
16.333	8272.4502	19275.65	.	.V	.Q	.	.	.
16.417	8405.9092	19378.19	.	.V	.Q	.	.	.
16.500	8540.7373	19576.98	.	.V	.Q	.	.	.
16.583	8676.4180	19700.86	.	.V	.Q	.	.	.
16.667	8812.9883	19829.97	.	.V	.Q	.	.	.
16.750	8952.0410	20190.42	.	.V	.Q	.	.	.
16.833	9093.1055	20482.57	.	.V	.Q	.	.	.
16.917	9235.8984	20733.55	.	.V	.Q	.	.	.
17.000	9380.5225	20999.38	.	.V	.Q	.	.	.
17.083	9526.2178	21154.98	.	.V	.Q	.	.	.
17.167	9671.6777	21120.84	.	.V	.Q	.	.	.
17.250	9818.4023	21304.38	.	.V	.Q	.	.	.
17.333	9965.7910	21400.78	.	.V	.Q	.	.	.
17.417	10111.6670	21181.21	.	.V	.Q	.	.	.
17.500	10258.5781	21331.50	.	.V	.Q	.	.	.
17.583	10406.9658	21545.93	.	.V	.Q	.	.	.
17.667	10552.4570	21125.35	.	.V	.Q	.	.	.
17.750	10698.4609	21199.74	.	.V	.Q	.	.	.
17.833	10846.5420	21501.44	.	.V	.Q	.	.	.
17.917	10996.2197	21733.25	.	.V	.Q	.	.	.
18.000	11142.5293	21244.17	.	.V	.Q	.	.	.
18.083	11289.1143	21284.13	.	.V	.Q	.	.	.
18.167	11438.8379	21739.92	.	.V	.Q	.	.	.
18.250	11587.7500	21622.03	.	.V	.Q	.	.	.
18.333	11737.5312	21748.21	.	.V	.Q	.	.	.
18.417	11881.5508	20911.65	.	.V	.Q	.	.	.

18.500	12024.2676	20722.49	.	.	.	V	.	Q	.
18.583	12168.4336	20932.97	.	.	.	V	.	Q	.
18.667	12316.0693	21436.77	.	.	.	V	.	Q	.
18.750	12460.5742	20982.12	.	.	.	V	.	Q	.
18.833	12600.8525	20368.48	.	.	.	V	.	Q	.
18.917	12740.6660	20300.85	.	.	.	V	.	Q	.
19.000	12877.5146	19870.37	.	.	.	V	.	Q	.
19.083	13013.2734	19712.19	.	.	.	V	.	Q	.
19.167	13145.6348	19218.91	.	.	.	V	.	Q	.
19.250	13274.2275	18671.71	.	.	.	V	.	Q	.
19.333	13400.6699	18359.41	.	.	.	V	.	Q	.
19.417	13525.8770	18180.02	.	.	.	V	.	Q	.
19.500	13648.7266	17837.75	.	.	.	V	.	Q	.
19.583	13768.4678	17386.38	.	.	.	V	.	Q	.
19.667	13884.9268	16909.80	.	.	.	V	.	Q	.
19.750	13997.8115	16390.88	.	.	.	V	.	Q	.
19.833	14107.6904	15954.46	.	.	.	V	.	Q	.
19.917	14213.8428	15413.39	.	.	.	V	.	Q	.
20.000	14317.4941	15050.11	.	.	.	V	.	Q	.
20.083	14418.1875	14620.72	.	.	.	V	.	Q	.
20.167	14515.9219	14191.01	.	.	.	V	.	Q	.
20.250	14610.8936	13789.93	.	.	.	V	.	Q	.
20.333	14702.6826	13327.72	.	.	.	V	.	Q	.
20.417	14791.8350	12944.87	.	.	.	V	.	Q	.
20.500	14878.0820	12523.09	.	.	.	V	.	Q	.
20.583	14961.0693	12049.75	.	.	.	V	.	Q	.
20.667	15041.2461	11641.64	.	.	.	V	.	Q	.
20.750	15118.8906	11273.98	.	.	.	V	.	Q	.
20.833	15194.2529	10942.58	.	.	.	V	.	Q	.
20.917	15266.7393	10524.95	.	.	.	V	.	Q	.
21.000	15337.1504	10223.63	.	.	.	V	.	Q	.
21.083	15405.6113	9940.50	.	.	.	V	.	Q	.
21.167	15472.3096	9684.64	.	.	.	V	.	Q	.
21.250	15537.3662	9446.22	.	.	.	V	.	Q	.
21.333	15600.7217	9199.28	.	.	.	V	.	Q	.
21.417	15662.1406	8918.07	.	.	.	V	.	Q	.
21.500	15721.0732	8556.98	.	.	.	V	.	Q	.
21.583	15778.4131	8325.76	.	.	.	V	.	Q	.
21.667	15834.3711	8125.16	.	.	.	V	.	Q	.
21.750	15889.0674	7941.95	.	.	.	V	.	Q	.
21.833	15942.4775	7755.11	.	.	.	V	.	Q	.
21.917	15994.7334	7587.55	.	.	.	V	.	Q	.
22.000	16045.8525	7422.48	.	.	.	V	.	Q	.
22.083	16095.8740	7263.19	.	.	.	V	.	Q	.
22.167	16144.8193	7106.89	.	.	.	V	.	Q	.
22.250	16192.7158	6954.57	.	.	.	V	.	Q	.
22.333	16239.5928	6806.47	.	.	.	V	.	Q	.
22.417	16285.4697	6661.40	.	.	.	V	.	Q	.
22.500	16330.4873	6536.54	.	.	.	V	.	Q	.
22.583	16374.7422	6425.79	.	.	.	V	.	Q	.
22.667	16418.2500	6317.29	.	.	.	V	.	Q	.
22.750	16461.0273	6211.36	.	.	.	V	.	Q	.
22.833	16503.1035	6109.32	.	.	.	V	.	Q	.
22.917	16544.5566	6018.86	.	.	.	V	.	Q	.
23.000	16585.4102	5931.92	.	.	.	V	.	Q	.
23.083	16625.6797	5847.00	.	.	.	V	.	Q	.
23.167	16665.3770	5763.91	.	.	.	V	.	Q	.
23.250	16704.5430	5686.87	.	.	.	V	.	Q	.

23.333	16743.2012	5613.23	.	Q	.	.	V	.
23.417	16781.3730	5542.48	.	Q	.	.	V	.
23.500	16819.1445	5484.35	.	Q	.	.	V	.
23.583	16856.5449	5430.64	.	Q.	.	.	V	.
23.667	16893.5859	5378.26	.	Q.	.	.	V	.
23.750	16930.2559	5324.45	.	Q.	.	.	V	.
23.833	16966.5352	5267.86	.	Q.	.	.	V	.
23.917	17002.2012	5178.82	.	Q.	.	.	V	.
24.000	17037.4141	5112.79	.	Q.	.	.	V	.
24.083	17072.2383	5056.39	.	Q.	.	.	V	.
24.167	17106.6309	4993.89	.	Q.	.	.	V	.
24.250	17140.5762	4928.80	.	Q.	.	.	V	.
24.333	17174.0664	4862.67	.	Q	.	.	V	.
24.417	17207.1035	4797.07	.	Q	.	.	V	.
24.500	17239.6543	4726.46	.	Q	.	.	V	.
24.583	17271.7051	4653.78	.	Q	.	.	V	.
24.667	17303.2598	4581.82	.	Q	.	.	V	.
24.750	17334.2461	4499.30	.	Q	.	.	V	.
24.833	17364.5977	4407.18	.	Q	.	.	V	.
24.917	17394.2715	4308.75	.	Q	.	.	V	.
25.000	17423.2051	4201.25	.	Q	.	.	V	.
25.083	17451.3711	4089.65	.	Q	.	.	V	.
25.167	17478.7930	3981.63	.	Q	.	.	V	.
25.250	17505.3867	3861.37	.	Q	.	.	V	.
25.333	17531.1230	3736.78	.	Q	.	.	V	.
25.417	17556.1055	3627.44	.	Q	.	.	V	.
25.500	17580.2656	3508.18	.	Q	.	.	V	.
25.583	17603.4980	3373.44	.	Q	.	.	V	.
25.667	17625.9395	3258.58	.	Q	.	.	V	.
25.750	17647.5781	3141.79	.	Q	.	.	V	.
25.833	17668.3086	3010.09	.	Q	.	.	V	.
25.917	17688.0547	2867.17	.	Q	.	.	V	.
26.000	17706.9551	2744.25	.	Q	.	.	V	.
26.083	17724.9766	2616.70	.	Q	.	.	V	.
26.167	17741.9551	2465.35	.	Q	.	.	V	.
26.250	17757.9160	2317.62	.	Q	.	.	V	.
26.333	17772.7480	2153.70	.	Q	.	.	V	.
26.417	17786.7129	2027.76	.	Q	.	.	V	.
26.500	17799.8945	1914.02	.	Q	.	.	V	.
26.583	17812.2246	1790.46	.	Q	.	.	V	.
26.667	17823.5293	1641.41	.	Q	.	.	V	.
26.750	17833.9277	1509.71	.	Q	.	.	V	.
26.833	17843.5859	1402.31	.	Q	.	.	V	.
26.917	17852.4570	1288.12	.	Q	.	.	V	.
27.000	17860.6543	1190.17	.	Q	.	.	V	.
27.083	17868.1699	1091.33	.	Q	.	.	V	.
27.167	17875.0840	1003.87	.	Q	.	.	V	.
27.250	17881.5098	933.13	.	Q	.	.	V	.
27.333	17887.4531	863.10	.	Q	.	.	V	.
27.417	17892.9004	790.97	.	Q	.	.	V	.
27.500	17897.8809	723.11	.	Q	.	.	V	.
27.583	17902.4277	660.28	.	Q	.	.	V	.
27.667	17906.5762	602.35	.	Q	.	.	V	.
27.750	17910.3828	552.66	.	Q	.	.	V	.
27.833	17913.8750	507.15	.	Q	.	.	V	.
27.917	17917.1074	469.48	.	Q	.	.	V	.
28.000	17920.0879	432.88	.	Q	.	.	V	.
28.083	17922.8359	399.08	.	Q	.	.	V	.

28.167	17925.3594	366.33	Q	.	.	.	V.	.
28.250	17927.6641	334.53	Q	.	.	.	V.	.
28.333	17929.7637	304.97	Q	.	.	.	V.	.
28.417	17931.6621	275.72	Q	.	.	.	V.	.
28.500	17933.3828	249.78	Q	.	.	.	V.	.
28.583	17934.9648	229.83	Q	.	.	.	V.	.
28.667	17936.4121	210.15	Q	.	.	.	V.	.
28.750	17937.7246	190.60	Q	.	.	.	V.	.
28.833	17938.9102	172.08	Q	.	.	.	V.	.
28.917	17940.0039	158.86	Q	.	.	.	V.	.
29.000	17941.0137	146.58	Q	.	.	.	V.	.
29.083	17941.9395	134.41	Q	.	.	.	V.	.
29.167	17942.7812	122.30	Q	.	.	.	V.	.
29.250	17943.5410	110.27	Q	.	.	.	V.	.
29.333	17944.2188	98.35	Q	.	.	.	V.	.
29.417	17944.8223	87.57	Q	.	.	.	V.	.
29.500	17945.3965	83.26	Q	.	.	.	V.	.
29.583	17945.9473	80.00	Q	.	.	.	V.	.
29.667	17946.4766	76.77	Q	.	.	.	V.	.
29.750	17946.9824	73.57	Q	.	.	.	V.	.
29.833	17947.4668	70.42	Q	.	.	.	V.	.
29.917	17947.9297	67.26	Q	.	.	.	V.	.
30.000	17948.3711	64.12	Q	.	.	.	V.	.
30.083	17948.7910	61.02	Q	.	.	.	V.	.
30.167	17949.1895	57.96	Q	.	.	.	V.	.
30.250	17949.5684	54.89	Q	.	.	.	V.	.
30.333	17949.9258	51.85	Q	.	.	.	V.	.
30.417	17950.2617	48.87	Q	.	.	.	V.	.
30.500	17950.5781	45.87	Q	.	.	.	V.	.
30.583	17950.8730	42.90	Q	.	.	.	V.	.
30.667	17951.1484	39.96	Q	.	.	.	V.	.
30.750	17951.4043	37.05	Q	.	.	.	V.	.
30.833	17951.6387	34.15	Q	.	.	.	V.	.
30.917	17951.8535	31.28	Q	.	.	.	V.	.
31.000	17952.0488	28.42	Q	.	.	.	V.	.
31.083	17952.2246	25.58	Q	.	.	.	V.	.
31.167	17952.3809	22.77	Q	.	.	.	V.	.
31.250	17952.5176	19.96	Q	.	.	.	V.	.
31.333	17952.6367	17.18	Q	.	.	.	V.	.
31.417	17952.7363	14.42	Q	.	.	.	V.	.
31.500	17952.8164	11.67	Q	.	.	.	V.	.
31.583	17952.8789	8.94	Q	.	.	.	V.	.
31.667	17952.9219	6.22	Q	.	.	.	V.	.
31.750	17952.9453	3.52	Q	.	.	.	V.	.
31.833	17952.9512	0.84	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%	1160.0
30%	640.0
40%	490.0

50%	410.0
60%	350.0
70%	290.0
80%	230.0
90%	160.0

=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134U *
* 100-YR EV JANUARY 2019 CCHI *

FILE NAME: EV0034US.DAT
TIME/DATE OF STUDY: 12:48 01/02/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 62698.000 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.379 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.285
LOW LOSS FRACTION = 0.393
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.49
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.93
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.29
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.37
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.51
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 6.11

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.304
30-MINUTE FACTOR = 0.358
1-HOUR FACTOR = 0.405
3-HOUR FACTOR = 0.750
6-HOUR FACTOR = 0.890
24-HOUR FACTOR = 0.936

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.503

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.200	1517.751
2	0.600	3035.507
3	1.001	3035.503
4	1.401	3035.508
5	1.801	3035.520
6	2.307	3833.853
7	2.916	4619.249
8	3.525	4619.245
9	4.268	5628.008
10	5.369	8348.483
11	6.645	9677.219
12	8.186	11681.092
13	10.004	13788.433
14	11.769	13386.489
15	13.548	13484.524
16	15.913	17933.385
17	17.892	15006.584
18	19.792	14410.250
19	22.097	17478.045
20	24.588	18882.141
21	26.605	15297.050
22	28.863	17121.109
23	31.408	19297.926
24	34.414	22792.250
25	36.836	18367.000
26	39.533	20446.975
27	42.790	24694.654
28	45.977	24166.162
29	49.617	27604.229
30	52.425	21291.762
31	54.890	18691.887
32	57.487	19692.840
33	60.712	24447.055
34	63.916	24298.553
35	66.384	18710.891
36	68.862	18789.162
37	71.229	17950.449
38	73.415	16573.730
39	75.576	16389.246
40	77.273	12862.236
41	78.829	11805.198
42	80.412	11998.707
43	82.032	12288.247
44	83.524	11309.538
45	84.906	10477.652
46	86.181	9668.097
47	87.272	8271.767
48	88.263	7519.251

49	89.091	6279.406
50	89.909	6197.028
51	90.662	5711.838
52	91.399	5591.336
53	92.120	5464.471
54	92.791	5087.172
55	93.458	5060.792
56	94.073	4656.940
57	94.528	3456.317
58	94.973	3373.823
59	95.418	3369.600
60	95.860	3352.650
61	96.190	2502.946
62	96.465	2084.284
63	96.739	2080.119
64	97.014	2086.483
65	97.289	2080.061
66	97.564	2086.483
67	97.838	2080.119
68	98.026	1424.734
69	98.092	503.123
70	98.158	498.900
71	98.224	498.900
72	98.290	496.760
73	98.355	498.900
74	98.421	500.983
75	98.487	494.677
76	98.552	498.900
77	98.618	494.619
78	98.684	503.123
79	98.749	494.677
80	98.815	498.900
81	98.881	498.900
82	98.946	494.619
83	99.012	503.123
84	99.078	494.619
85	99.143	494.619
86	99.208	494.619
87	99.273	494.619
88	99.339	494.619
89	99.404	494.619
90	99.469	494.619
91	99.534	494.619
92	99.600	494.619
93	99.665	494.619
94	99.730	494.619
95	99.795	494.619
96	99.860	494.619
97	99.926	494.619
98	99.991	494.619
99	100.000	68.552

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 11556.6982
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 18297.1289

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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.	5525.0	11050.0	16575.0	22100.0
0.083	0.0550	7.99	Q	.	.	.	.
0.167	0.2202	23.99	Q	.	.	.	.
0.250	0.4959	40.03	Q	.	.	.	.
0.333	0.8824	56.12	Q	.	.	.	.
0.417	1.3801	72.26	Q	.	.	.	.
0.500	2.0182	92.65	Q	.	.	.	.
0.583	2.8256	117.24	Q	.	.	.	.
0.667	3.8028	141.89	Q	.	.	.	.
0.750	4.9870	171.93	Q	.	.	.	.
0.833	6.4772	216.38	Q	.	.	.	.
0.917	8.3226	267.95	Q	.	.	.	.
1.000	10.5969	330.23	Q	.	.	.	.
1.083	13.3778	403.78	Q	.	.	.	.
1.167	16.6521	475.43	Q	.	.	.	.
1.250	20.4250	547.82	Q	.	.	.	.
1.333	24.8593	643.86	VQ	.	.	.	.
1.417	29.8507	724.75	VQ	.	.	.	.
1.500	35.3795	802.79	VQ	.	.	.	.
1.583	41.5585	897.19	VQ	.	.	.	.
1.667	48.4407	999.29	VQ	.	.	.	.
1.750	55.8980	1082.80	VQ	.	.	.	.
1.833	63.9988	1176.23	V Q	.	.	.	.
1.917	72.8236	1281.36	V Q	.	.	.	.
2.000	82.5017	1405.26	V Q	.	.	.	.
2.083	92.8748	1506.18	V Q	.	.	.	.
2.167	104.0213	1618.47	V Q	.	.	.	.
2.250	116.0969	1753.37	V Q	.	.	.	.
2.333	129.0858	1886.00	V Q	.	.	.	.
2.417	143.1153	2037.07	V Q	.	.	.	.
2.500	157.9600	2155.45	V Q	.	.	.	.
2.583	173.5282	2260.50	V Q	.	.	.	.
2.667	189.8589	2371.21	V Q	.	.	.	.
2.750	207.1266	2507.27	V Q	.	.	.	.
2.833	225.3292	2643.01	V Q	.	.	.	.
2.917	244.2669	2749.77	V Q	.	.	.	.
3.000	263.9456	2857.34	V Q	.	.	.	.
3.083	284.3369	2960.82	V Q	.	.	.	.
3.167	305.3939	3057.47	V Q	.	.	.	.
3.250	327.1118	3153.43	V Q	.	.	.	.
3.333	349.3654	3231.22	V Q	.	.	.	.
3.417	372.1182	3303.71	V Q	.	.	.	.
3.500	395.3794	3377.52	V Q	.	.	.	.
3.583	419.1611	3453.11	V Q	.	.	.	.
3.667	443.4301	3523.87	V Q	.	.	.	.
3.750	468.1581	3590.49	.V Q	.	.	.	.
3.833	493.3176	3653.16	.V Q	.	.	.	.
3.917	518.8596	3708.70	.V Q	.	.	.	.

4.000	544.7588	3760.56	.V	Q	.	.	.	.
4.083	570.9716	3806.09	.V	Q	.	.	.	.
4.167	597.4966	3851.45	.V	Q	.	.	.	.
4.250	624.3177	3894.41	.V	Q	.	.	.	.
4.333	651.4321	3937.00	.V	Q	.	.	.	.
4.417	678.8362	3979.09	.V	Q	.	.	.	.
4.500	706.5184	4019.45	.V	Q	.	.	.	.
4.583	734.4788	4059.84	.V	Q	.	.	.	.
4.667	762.7043	4098.35	.V	Q	.	.	.	.
4.750	791.1528	4130.71	.V	Q	.	.	.	.
4.833	819.8228	4162.88	.V	Q	.	.	.	.
4.917	848.7151	4195.17	.V	Q	.	.	.	.
5.000	877.8309	4227.61	.V	Q	.	.	.	.
5.083	907.1403	4255.73	.V	Q	.	.	.	.
5.167	936.6299	4281.89	.V	Q	.	.	.	.
5.250	966.3005	4308.16	.V	Q	.	.	.	.
5.333	996.1537	4334.70	.V	Q	.	.	.	.
5.417	1026.1906	4361.34	.V	Q	.	.	.	.
5.500	1056.4127	4388.27	.V	Q	.	.	.	.
5.583	1086.8210	4415.29	.V	Q	.	.	.	.
5.667	1117.3936	4439.13	.V	Q	.	.	.	.
5.750	1148.0978	4458.25	.V	Q	.	.	.	.
5.833	1178.9352	4477.59	.V	Q	.	.	.	.
5.917	1209.9066	4497.05	.V	Q	.	.	.	.
6.000	1241.0138	4516.75	.V	Q	.	.	.	.
6.083	1272.2576	4536.59	.V	Q	.	.	.	.
6.167	1303.6398	4556.70	.V	Q	.	.	.	.
6.250	1335.1611	4576.90	.V	Q	.	.	.	.
6.333	1366.8236	4597.39	.V	Q	.	.	.	.
6.417	1398.6279	4617.99	.V	Q	.	.	.	.
6.500	1430.5764	4638.92	.V	Q	.	.	.	.
6.583	1462.6697	4659.94	.V	Q	.	.	.	.
6.667	1494.9098	4681.27	.V	Q	.	.	.	.
6.750	1527.2979	4702.75	.V	Q	.	.	.	.
6.833	1559.8357	4724.50	.V	Q	.	.	.	.
6.917	1592.5248	4746.45	.V	Q	.	.	.	.
7.000	1625.3668	4768.66	.V	Q	.	.	.	.
7.083	1658.3629	4791.03	.V	Q	.	.	.	.
7.167	1691.5151	4813.71	.V	Q	.	.	.	.
7.250	1724.8248	4836.56	.V	Q	.	.	.	.
7.333	1758.2941	4859.74	.V	Q	.	.	.	.
7.417	1791.9242	4883.09	.V	Q	.	.	.	.
7.500	1825.7175	4906.79	.V	Q	.	.	.	.
7.583	1859.6753	4930.66	.V	Q	.	.	.	.
7.667	1893.7999	4954.89	.V	Q	.	.	.	.
7.750	1928.0927	4979.31	.V	Q	.	.	.	.
7.833	1962.5562	5004.09	.V	Q	.	.	.	.
7.917	1997.1917	5029.08	.V	Q	.	.	.	.
8.000	2032.0018	5054.44	.V	Q	.	.	.	.
8.083	2066.9880	5080.01	.V	Q	.	.	.	.
8.167	2102.1531	5105.98	.V	Q	.	.	.	.
8.250	2137.4832	5129.93	.V	Q	.	.	.	.
8.333	2172.9785	5153.91	.V	Q	.	.	.	.
8.417	2208.6406	5178.12	.V	Q	.	.	.	.
8.500	2244.4724	5202.76	.V	Q	.	.	.	.
8.583	2280.4753	5227.62	.V	Q	.	.	.	.
8.667	2316.6526	5252.92	.V	Q	.	.	.	.
8.750	2353.0056	5278.47	.V	Q	.	.	.	.

8.833	2389.5378	5304.47	.	V	Q	.	.	.
8.917	2426.2510	5330.73	.	V	Q	.	.	.
9.000	2463.1482	5357.48	.	V	Q	.	.	.
9.083	2500.2314	5384.49	.	V	Q	.	.	.
9.167	2537.5042	5412.00	.	V	Q	.	.	.
9.250	2574.9683	5439.79	.	V	Q	.	.	.
9.333	2612.6274	5468.11	.	V	Q	.	.	.
9.417	2650.4836	5496.73	.	V	Q	.	.	.
9.500	2688.5408	5525.90	.	V	Q	.	.	.
9.583	2726.8010	5555.39	.	V	Q	.	.	.
9.667	2765.2683	5585.45	.	V	Q	.	.	.
9.750	2803.9448	5615.84	.	V	Q	.	.	.
9.833	2842.8350	5646.84	.	V	Q	.	.	.
9.917	2881.9409	5678.20	.	V	Q	.	.	.
10.000	2921.2673	5710.18	.	V	Q	.	.	.
10.083	2960.8167	5742.55	.	V	Q	.	.	.
10.167	3000.5933	5775.57	.	V	Q	.	.	.
10.250	3040.6001	5809.00	.	V	Q	.	.	.
10.333	3080.8420	5843.13	.	V	Q	.	.	.
10.417	3121.3220	5877.68	.	V	Q	.	.	.
10.500	3162.0449	5912.97	.	V	Q	.	.	.
10.583	3203.0139	5948.71	.	V	Q	.	.	.
10.667	3244.2346	5985.23	.	V	Q	.	.	.
10.750	3285.7100	6022.23	.	V	Q	.	.	.
10.833	3327.4458	6060.06	.	V	Q	.	.	.
10.917	3369.4458	6098.40	.	V	.Q	.	.	.
11.000	3411.7158	6137.60	.	V	.Q	.	.	.
11.083	3454.2595	6177.36	.	V	.Q	.	.	.
11.167	3497.0835	6218.04	.	V	.Q	.	.	.
11.250	3540.1917	6259.31	.	V	.Q	.	.	.
11.333	3583.5908	6301.54	.	V	.Q	.	.	.
11.417	3627.2852	6344.42	.	V	.Q	.	.	.
11.500	3671.2820	6388.33	.	V	.Q	.	.	.
11.583	3715.5859	6432.92	.	V	.Q	.	.	.
11.667	3760.2046	6478.61	.	V	.Q	.	.	.
11.750	3805.1428	6525.04	.	V	.Q	.	.	.
11.833	3850.4089	6572.64	.	V	.Q	.	.	.
11.917	3896.0083	6621.03	.	V	.Q	.	.	.
12.000	3941.9497	6670.68	.	V	.Q	.	.	.
12.083	3988.3416	6736.09	.	V	.Q	.	.	.
12.167	4035.2954	6817.69	.	V	.Q	.	.	.
12.250	4082.8164	6900.07	.	V	.Q	.	.	.
12.333	4130.9136	6983.71	.	V	.Q	.	.	.
12.417	4179.5923	7068.18	.	V	.Q	.	.	.
12.500	4228.9165	7161.86	.	V	.Q	.	.	.
12.583	4278.9448	7264.13	.	V	.Q	.	.	.
12.667	4329.6870	7367.78	.	V	.Q	.	.	.
12.750	4381.2173	7482.22	.	V	.Q	.	.	.
12.833	4433.7300	7624.85	.	V	.Q	.	.	.
12.917	4487.3203	7781.32	.	V	.Q	.	.	.
13.000	4542.1328	7958.81	.	V	.Q	.	.	.
13.083	4598.3154	8157.70	.	V	.Q	.	.	.
13.167	4655.8491	8353.87	.	V	.Q	.	.	.
13.250	4714.7446	8551.64	.	V	.Q	.	.	.
13.333	4775.3125	8794.44	.	V	.Q	.	.	.
13.417	4837.3584	9009.05	.	V	.Q	.	.	.
13.500	4900.8506	9219.04	.	V	.Q	.	.	.
13.583	4966.0020	9460.00	.	V	.Q	.	.	.

13.667	5032.9165	9716.03	.	.V	Q	.	.	.
13.750	5101.3564	9937.50	.	.V	Q	.	.	.
13.833	5171.4551	10178.32	.	.V	Q	.	.	.
13.917	5243.3657	10441.46	.	.V	Q	.	.	.
14.000	5317.3345	10740.27	.	.V	Q.	.	.	.
14.083	5393.1626	11010.22	.	.V	Q.	.	.	.
14.167	5471.0928	11315.46	.	.V	Q	.	.	.
14.250	5551.4121	11662.40	.	.V	.Q	.	.	.
14.333	5634.0859	12004.22	.	.V	.Q	.	.	.
14.417	5719.3442	12379.54	.	.V	.Q	.	.	.
14.500	5806.8110	12700.17	.	.V	.Q	.	.	.
14.583	5896.3560	13001.96	.	.V	.Q	.	.	.
14.667	5988.0474	13313.60	.	.V	.Q	.	.	.
14.750	6082.2651	13680.41	.	.V	.Q	.	.	.
14.833	6179.1670	14070.13	.	.V	.Q	.	.	.
14.917	6278.4429	14414.83	.	.V	.Q	.	.	.
15.000	6380.2104	14776.63	.	.V	.Q	.	.	.
15.083	6484.5229	15146.18	.	.V	.Q	.	.	.
15.167	6591.2378	15494.97	.	.V	.Q	.	.	.
15.250	6700.3184	15838.47	.	.V	.Q	.	.	.
15.333	6811.7798	16184.21	.	.V	.Q	.	.	.
15.417	6925.1987	16468.45	.	.V	.Q	.	.	.
15.500	7040.3955	16726.56	.	.V	.Q	.	.	.
15.583	7157.5801	17015.18	.	.V	.Q	.	.	.
15.667	7276.7646	17305.58	.	.V	.Q	.	.	.
15.750	7397.6001	17545.33	.	.V	.Q	.	.	.
15.833	7520.0249	17776.05	.	.V	.Q	.	.	.
15.917	7644.0786	18012.62	.	.V	.Q	.	.	.
16.000	7770.0571	18292.07	.	.V	.Q	.	.	.
16.083	7898.5186	18652.60	.	.V	.Q	.	.	.
16.167	8029.1631	18969.57	.	.V	.Q	.	.	.
16.250	8161.0186	19145.39	.	.V	.Q	.	.	.
16.333	8293.8770	19290.97	.	.V	.Q	.	.	.
16.417	8427.9189	19462.90	.	.V	.Q	.	.	.
16.500	8563.3525	19665.01	.	.V	.Q	.	.	.
16.583	8699.9932	19840.20	.	.V	.Q	.	.	.
16.667	8837.0820	19905.33	.	.V	.Q	.	.	.
16.750	8975.9062	20157.24	.	.V	.Q	.	.	.
16.833	9117.7432	20594.76	.	.V	.Q	.	.	.
16.917	9261.1123	20817.22	.	.V	.Q	.	.	.
17.000	9406.1562	21060.45	.	.V	.Q	.	.	.
17.083	9553.0361	21326.91	.	.V	.Q	.	.	.
17.167	9700.0146	21341.30	.	.V	.Q	.	.	.
17.250	9847.3213	21388.97	.	.V	.Q	.	.	.
17.333	9997.0801	21744.97	.	.V	.Q	.	.	.
17.417	10145.0674	21487.81	.	.V	.Q	.	.	.
17.500	10292.9688	21475.32	.	.V	.Q	.	.	.
17.583	10442.5322	21716.65	.	.V	.Q	.	.	.
17.667	10592.6543	21797.68	.	.V	.Q	.	.	.
17.750	10739.8730	21376.14	.	.V	.Q	.	.	.
17.833	10888.3486	21558.59	.	.V	.Q	.	.	.
17.917	11038.3184	21775.54	.	.V	.Q	.	.	.
18.000	11190.2109	22054.82	.	.V	.Q	.	.	.
18.083	11337.9248	21448.04	.	.V	.Q	.	.	.
18.167	11486.3877	21556.78	.	.V	.Q	.	.	.
18.250	11637.4961	21940.89	.	.V	.Q	.	.	.
18.333	11787.8164	21826.46	.	.V	.Q	.	.	.
18.417	11939.1074	21967.46	.	.V	.Q	.	.	.

18.500	12085.0674	21193.44	.	.	.	.	V	.	Q	.
18.583	12229.1006	20913.61	.	.	.	.	V	.	Q	.
18.667	12373.9512	21032.32	.	.	.	.	V	.	Q	.
18.750	12522.1631	21520.34	.	.	.	.	V	.	Q	.
18.833	12669.1934	21348.83	.	.	.	.	V	.	Q	.
18.917	12811.0986	20604.61	.	.	.	.	V	.	Q	.
19.000	12951.5547	20394.29	.	.	.	.	V	.	Q	.
19.083	13090.3623	20154.93	.	.	.	.	V	.	Q	.
19.167	13227.0879	19852.54	.	.	.	.	V	.	Q	.
19.250	13361.7188	19548.33	.	.	.	.	V	.	Q	.
19.333	13491.9004	18902.32	.	.	.	.	V	.	Q	.
19.417	13619.4883	18525.81	.	.	.	.	V	.	Q	.
19.500	13745.5938	18310.56	.	.	.	.	V	.	Q	.
19.583	13870.1846	18090.59	.	.	.	.	V	.	Q	.
19.667	13991.8740	17669.34	.	.	.	.	VQ	.	.	.
19.750	14110.5000	17224.56	.	.	.	.	VQ	.	.	.
19.833	14225.8750	16752.50	.	.	.	.	VQ	.	.	.
19.917	14337.8057	16252.31	.	.	.	.	V	.	Q	.
20.000	14446.4346	15772.92	.	.	.	.	V	.	Q	.
20.083	14551.8652	15308.60	.	.	.	.	V	.	Q	.
20.167	14654.7812	14943.37	.	.	.	.	V	.	Q	.
20.250	14754.4775	14475.85	.	.	.	.	V	.	Q	.
20.333	14851.3906	14071.84	.	.	.	.	V	.	Q	.
20.417	14945.3242	13639.15	.	.	.	.	V	.	Q	.
20.500	15036.5283	13242.85	.	.	.	.	V	.	Q	.
20.583	15125.2695	12885.20	.	.	.	.	V	.	Q	.
20.667	15211.2012	12477.31	.	.	.	.	V	.	Q	.
20.750	15293.5918	11963.11	.	.	.	.	V	.	Q	.
20.833	15373.2637	11568.40	.	.	.	.	V	.	Q	.
20.917	15450.6934	11242.79	.	.	.	.	V	.	Q	.
21.000	15525.8955	10919.39	.	.	.	.	V	.	Q	.
21.083	15598.4512	10535.08	.	.	.	.	V	.	Q	.
21.167	15668.7861	10212.63	.	.	.	.	V	.	Q	.
21.250	15737.2266	9937.62	.	.	.	.	V	.	Q	.
21.333	15804.0566	9703.67	.	.	.	.	V	.	Q	.
21.417	15869.3096	9474.66	.	.	.	.	V	.	Q	.
21.500	15932.9307	9237.85	.	.	.	.	V	.	Q	.
21.583	15994.8154	8985.62	.	.	.	.	V	.	Q	.
21.667	16054.5996	8680.60	.	.	.	.	V	.	Q	.
21.750	16112.3115	8379.71	.	.	.	.	V	.	Q	.
21.833	16168.6738	8183.81	.	.	.	.	V	.	Q	.
21.917	16223.8066	8005.30	.	.	.	.	V	.	Q	.
22.000	16277.7373	7830.76	.	.	.	.	V	.	Q	.
22.083	16330.5430	7667.37	.	.	.	.	V	.	Q	.
22.167	16382.2617	7509.59	.	.	.	.	V	.	Q	.
22.250	16432.9043	7353.16	.	.	.	.	V	.	Q	.
22.333	16482.4902	7199.74	.	.	.	.	V	.	Q	.
22.417	16531.0312	7048.25	.	.	.	.	V	.	Q	.
22.500	16578.5723	6902.99	.	.	.	.	V	.	Q	.
22.583	16625.1133	6757.66	.	.	.	.	V	.	Q	.
22.667	16670.7402	6625.02	.	.	.	.	V	.	Q	.
22.750	16715.6035	6514.04	.	.	.	.	V	.	Q	.
22.833	16759.7227	6405.98	.	.	.	.	V	.	Q	.
22.917	16803.1191	6301.24	.	.	.	.	V	.	Q	.
23.000	16845.7988	6197.13	.	.	.	.	V	.	Q	.
23.083	16887.8398	6104.28	.	.	.	.	V	.	Q	.
23.167	16929.2812	6017.39	.	.	.	.	V	.	Q	.
23.250	16970.1406	5932.66	.	.	.	.	V	.	Q	.

23.333	17010.4258	5849.51	.	Q	.	.	V	.
23.417	17050.1523	5768.24	.	Q	.	.	V	.
23.500	17089.3281	5688.45	.	Q	.	.	V	.
23.583	17128.0039	5615.69	.	Q	.	.	V	.
23.667	17166.2363	5551.31	.	Q	.	.	V	.
23.750	17204.0918	5496.71	.	Q.	.	.	V	.
23.833	17241.5781	5443.06	.	Q.	.	.	V	.
23.917	17278.7148	5392.15	.	Q.	.	.	V	.
24.000	17315.5059	5342.02	.	Q.	.	.	V	.
24.083	17351.8828	5281.98	.	Q.	.	.	V	.
24.167	17387.7715	5211.05	.	Q.	.	.	V	.
24.250	17422.9102	5102.10	.	Q.	.	.	V	.
24.333	17457.5664	5032.04	.	Q.	.	.	V	.
24.417	17491.7949	4970.08	.	Q	.	.	V	.
24.500	17525.5820	4905.99	.	Q	.	.	V	.
24.583	17558.8750	4834.20	.	Q	.	.	V	.
24.667	17591.6738	4762.26	.	Q	.	.	V	.
24.750	17623.9434	4685.64	.	Q	.	.	V	.
24.833	17655.5918	4595.43	.	Q	.	.	V	.
24.917	17686.5762	4498.90	.	Q	.	.	V	.
25.000	17716.8281	4392.71	.	Q	.	.	V	.
25.083	17746.2793	4276.28	.	Q	.	.	V	.
25.167	17774.9492	4162.83	.	Q	.	.	V	.
25.250	17802.8672	4053.71	.	Q	.	.	V	.
25.333	17829.8848	3922.98	.	Q	.	.	V	.
25.417	17856.1172	3808.90	.	Q	.	.	V	.
25.500	17881.5938	3699.08	.	Q	.	.	V	.
25.583	17906.2090	3574.23	.	Q	.	.	V	.
25.667	17929.9219	3443.15	.	Q	.	.	V	.
25.750	17952.8691	3332.05	.	Q	.	.	V	.
25.833	17974.9922	3212.38	.	Q	.	.	V	.
25.917	17996.2207	3082.30	.	Q	.	.	V	.
26.000	18016.4336	2934.94	.	Q	.	.	V	.
26.083	18035.8008	2811.98	.	Q	.	.	V	.
26.167	18054.2520	2679.08	.	Q	.	.	V	.
26.250	18071.6699	2529.09	.	Q	.	.	V	.
26.333	18088.0859	2383.73	.	Q	.	.	V	.
26.417	18103.3848	2221.44	.	Q	.	.	V	.
26.500	18117.8027	2093.53	.	Q	.	.	V	.
26.583	18131.4414	1980.27	.	Q	.	.	V	.
26.667	18144.2695	1862.64	.	Q	.	.	V	.
26.750	18156.1211	1720.94	.	Q	.	.	V	.
26.833	18167.0098	1581.03	.	Q	.	.	V	.
26.917	18177.1445	1471.48	.	Q	.	.	V	.
27.000	18186.5273	1362.33	.	Q	.	.	V	.
27.083	18195.1934	1258.37	.	Q	.	.	V	.
27.167	18203.1992	1162.39	.	Q	.	.	V	.
27.250	18210.5547	1068.07	.	Q	.	.	V	.
27.333	18217.3926	992.95	.	Q	.	.	V	.
27.417	18223.7559	923.92	.	Q	.	.	V	.
27.500	18229.6406	854.39	.	Q	.	.	V	.
27.583	18235.0391	783.83	.	Q	.	.	V	.
27.667	18239.9902	718.91	.	Q	.	.	V	.
27.750	18244.5273	658.82	.	Q	.	.	V	.
27.833	18248.6836	603.40	.	Q	.	.	V	.
27.917	18252.5117	555.70	.	Q	.	.	V	.
28.000	18256.0391	512.30	.	Q	.	.	V	.
28.083	18259.3145	475.72	.	Q	.	.	V	.

28.167	18262.3438	439.84	Q	.	.	.	V.	.
28.250	18265.1445	406.76	Q	.	.	.	V.	.
28.333	18267.7246	374.55	Q	.	.	.	V.	.
28.417	18270.0879	343.23	Q	.	.	.	V.	.
28.500	18272.2520	314.11	Q	.	.	.	V.	.
28.583	18274.2168	285.33	Q	.	.	.	V.	.
28.667	18276.0000	258.88	Q	.	.	.	V.	.
28.750	18277.6445	238.91	Q	.	.	.	V.	.
28.833	18279.1562	219.52	Q	.	.	.	V.	.
28.917	18280.5352	200.29	Q	.	.	.	V.	.
29.000	18281.7832	181.27	Q	.	.	.	V.	.
29.083	18282.9316	166.86	Q	.	.	.	V.	.
29.167	18283.9980	154.74	Q	.	.	.	V.	.
29.250	18284.9805	142.73	Q	.	.	.	V.	.
29.333	18285.8809	130.77	Q	.	.	.	V.	.
29.417	18286.6992	118.93	Q	.	.	.	V.	.
29.500	18287.4375	107.14	Q	.	.	.	V.	.
29.583	18288.0957	95.46	Q	.	.	.	V.	.
29.667	18288.6973	87.30	Q	.	.	.	V.	.
29.750	18289.2754	84.04	Q	.	.	.	V.	.
29.833	18289.8320	80.83	Q	.	.	.	V.	.
29.917	18290.3672	77.65	Q	.	.	.	V.	.
30.000	18290.8809	74.51	Q	.	.	.	V.	.
30.083	18291.3730	71.38	Q	.	.	.	V.	.
30.167	18291.8438	68.26	Q	.	.	.	V.	.
30.250	18292.2930	65.20	Q	.	.	.	V.	.
30.333	18292.7207	62.14	Q	.	.	.	V.	.
30.417	18293.1270	59.13	Q	.	.	.	V.	.
30.500	18293.5137	56.09	Q	.	.	.	V.	.
30.583	18293.8789	53.13	Q	.	.	.	V.	.
30.667	18294.2246	50.16	Q	.	.	.	V.	.
30.750	18294.5488	47.21	Q	.	.	.	V.	.
30.833	18294.8535	44.31	Q	.	.	.	V.	.
30.917	18295.1387	41.38	Q	.	.	.	V.	.
31.000	18295.4043	38.52	Q	.	.	.	V.	.
31.083	18295.6504	35.68	Q	.	.	.	V.	.
31.167	18295.8770	32.85	Q	.	.	.	V.	.
31.250	18296.0840	30.05	Q	.	.	.	V.	.
31.333	18296.2715	27.26	Q	.	.	.	V.	.
31.417	18296.4395	24.50	Q	.	.	.	V.	.
31.500	18296.5898	21.75	Q	.	.	.	V.	.
31.583	18296.7207	19.01	Q	.	.	.	V.	.
31.667	18296.8320	16.30	Q	.	.	.	V.	.
31.750	18296.9258	13.60	Q	.	.	.	V.	.
31.833	18297.0020	10.92	Q	.	.	.	V.	.
31.917	18297.0586	8.26	Q	.	.	.	V.	.
32.000	18297.0977	5.61	Q	.	.	.	V.	.
32.083	18297.1191	2.98	Q	.	.	.	V.	.
32.167	18297.1211	0.36	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%	1930.0

10%	1435.0
20%	1165.0
30%	650.0
40%	495.0
50%	410.0
60%	355.0
70%	295.0
80%	235.0
90%	155.0

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134T *
* 100-YR EV APRIL 2019 CCHIU *

FILE NAME: EV0034TS.DAT
TIME/DATE OF STUDY: 07:30 04/09/2019

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

>>>>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 = 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

=====

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
=====

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

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END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 134C *
* 100-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV0034CS.DAT
TIME/DATE OF STUDY: 12:41 01/02/2019

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

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 66557.797 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.379 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.285
LOW LOSS FRACTION = 0.394
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.48
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.93
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.28
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.35
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.46
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 6.01

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.294
30-MINUTE FACTOR = 0.352
1-HOUR FACTOR = 0.397
3-HOUR FACTOR = 0.741
6-HOUR FACTOR = 0.887
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.503

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.200	1611.187
2	0.600	3222.378
3	1.001	3222.374
4	1.401	3222.379
5	1.801	3222.391
6	2.307	4069.872
7	2.916	4903.618
8	3.525	4903.614
9	4.268	5974.478
10	5.369	8862.431
11	6.645	10272.966
12	8.186	12400.200
13	10.004	14637.272
14	11.769	14210.585
15	13.548	14314.655
16	15.913	19037.395
17	17.892	15930.416
18	19.792	15297.370
19	22.097	18554.023
20	24.588	20044.559
21	26.605	16238.763
22	28.863	18175.115
23	31.408	20485.939
24	34.414	24195.381
25	36.836	19497.705
26	39.533	21705.727
27	42.790	26214.900
28	45.977	25653.875
29	49.617	29303.594
30	52.425	22602.520
31	54.890	19842.592
32	57.487	20905.166
33	60.712	25952.059
34	63.916	25794.414
35	66.384	19862.766
36	68.862	19945.855
37	71.229	19055.512
38	73.415	17594.039
39	75.576	17398.197
40	77.273	13654.059
41	78.829	12531.947
42	80.412	12737.368
43	82.032	13044.733
44	83.524	12005.772
45	84.906	11122.675
46	86.181	10263.281
47	87.272	8780.991
48	88.263	7982.150

49	89.091	6665.978
50	89.909	6578.527
51	90.662	6063.469
52	91.399	5935.549
53	92.120	5800.873
54	92.791	5400.347
55	93.458	5372.343
56	94.073	4943.629
57	94.528	3669.094
58	94.973	3581.521
59	95.418	3577.038
60	95.860	3559.045
61	96.190	2657.032
62	96.465	2212.596
63	96.739	2208.175
64	97.014	2214.930
65	97.289	2208.114
66	97.564	2214.930
67	97.838	2208.175
68	98.026	1512.443
69	98.092	534.096
70	98.158	529.613
71	98.224	529.613
72	98.290	527.341
73	98.355	529.613
74	98.421	531.824
75	98.487	525.130
76	98.552	529.613
77	98.618	525.069
78	98.684	534.096
79	98.749	525.130
80	98.815	529.613
81	98.881	529.613
82	98.946	525.069
83	99.012	534.096
84	99.078	525.069
85	99.143	525.069
86	99.208	525.069
87	99.273	525.069
88	99.339	525.069
89	99.404	525.069
90	99.469	525.069
91	99.534	525.069
92	99.600	525.069
93	99.665	525.069
94	99.730	525.069
95	99.795	525.069
96	99.860	525.069
97	99.926	525.069
98	99.991	525.069
99	100.000	72.773

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12091.7188
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 19038.6680

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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.	5725.0	11450.0	17175.0	22900.0
0.083	0.0572	8.30	Q	.	.	.	.
0.167	0.2288	24.93	Q	.	.	.	.
0.250	0.5153	41.60	Q	.	.	.	.
0.333	0.9170	58.32	Q	.	.	.	.
0.417	1.4341	75.09	Q	.	.	.	.
0.500	2.0972	96.28	Q	.	.	.	.
0.583	2.9362	121.82	Q	.	.	.	.
0.667	3.9516	147.44	Q	.	.	.	.
0.750	5.1821	178.66	Q	.	.	.	.
0.833	6.7307	224.85	Q	.	.	.	.
0.917	8.6483	278.44	Q	.	.	.	.
1.000	11.0116	343.16	Q	.	.	.	.
1.083	13.9013	419.58	Q	.	.	.	.
1.167	17.3038	494.04	Q	.	.	.	.
1.250	21.2243	569.26	Q	.	.	.	.
1.333	25.8322	669.05	VQ	.	.	.	.
1.417	31.0189	753.12	VQ	.	.	.	.
1.500	36.7642	834.21	VQ	.	.	.	.
1.583	43.1850	932.31	VQ	.	.	.	.
1.667	50.3366	1038.41	VQ	.	.	.	.
1.750	58.0858	1125.19	VQ	.	.	.	.
1.833	66.5037	1222.28	V Q	.	.	.	.
1.917	75.6740	1331.53	V Q	.	.	.	.
2.000	85.7311	1460.28	V Q	.	.	.	.
2.083	96.5104	1565.16	V Q	.	.	.	.
2.167	108.0933	1681.84	V Q	.	.	.	.
2.250	120.6417	1822.03	V Q	.	.	.	.
2.333	134.1394	1959.86	V Q	.	.	.	.
2.417	148.7182	2116.85	V Q	.	.	.	.
2.500	164.1443	2239.87	V Q	.	.	.	.
2.583	180.3223	2349.04	V Q	.	.	.	.
2.667	197.2926	2464.09	V Q	.	.	.	.
2.750	215.2366	2605.48	V Q	.	.	.	.
2.833	234.1523	2746.55	V Q	.	.	.	.
2.917	253.8320	2857.49	V Q	.	.	.	.
3.000	274.2816	2969.29	V Q	.	.	.	.
3.083	295.4719	3076.83	V Q	.	.	.	.
3.167	317.3540	3177.28	V Q	.	.	.	.
3.250	339.9229	3277.01	V Q	.	.	.	.
3.333	363.0486	3357.86	V Q	.	.	.	.
3.417	386.6933	3433.20	V Q	.	.	.	.
3.500	410.8662	3509.92	V Q	.	.	.	.
3.583	435.5803	3588.48	V Q	.	.	.	.
3.667	460.8008	3662.02	V Q	.	.	.	.
3.750	486.4983	3731.27	.V Q	.	.	.	.
3.833	512.6443	3796.41	.V Q	.	.	.	.
3.917	539.1880	3854.14	.V Q	.	.	.	.

4.000	566.1030	3908.06	.V	Q	.	.	.	.
4.083	593.3440	3955.38	.V	Q	.	.	.	.
4.167	620.9096	4002.53	.V	Q	.	.	.	.
4.250	648.7829	4047.20	.V	Q	.	.	.	.
4.333	676.9611	4091.48	.V	Q	.	.	.	.
4.417	705.4407	4135.24	.V	Q	.	.	.	.
4.500	734.2094	4177.20	.V	Q	.	.	.	.
4.583	763.2672	4219.19	.V	Q	.	.	.	.
4.667	792.6007	4259.24	.V	Q	.	.	.	.
4.750	822.1660	4292.88	.V	Q	.	.	.	.
4.833	851.9617	4326.33	.V	Q	.	.	.	.
4.917	881.9886	4359.91	.V	Q	.	.	.	.
5.000	912.2479	4393.65	.V	Q	.	.	.	.
5.083	942.7085	4422.89	.V	Q	.	.	.	.
5.167	973.3565	4450.09	.V	Q	.	.	.	.
5.250	1004.1927	4477.41	.V	Q	.	.	.	.
5.333	1035.2190	4505.02	.V	Q	.	.	.	.
5.417	1066.4362	4532.73	.V	Q	.	.	.	.
5.500	1097.8462	4560.73	.V	Q	.	.	.	.
5.583	1129.4498	4588.84	.V	Q	.	.	.	.
5.667	1161.2242	4613.64	.V	Q	.	.	.	.
5.750	1193.1356	4633.53	.V	Q	.	.	.	.
5.833	1225.1857	4653.66	.V	Q	.	.	.	.
5.917	1257.3751	4673.91	.V	Q	.	.	.	.
6.000	1289.7058	4694.41	.V	Q	.	.	.	.
6.083	1322.1786	4715.05	.V	Q	.	.	.	.
6.167	1354.7955	4735.97	.V	Q	.	.	.	.
6.250	1387.5573	4757.00	.V	Q	.	.	.	.
6.333	1420.4658	4778.32	.V	Q	.	.	.	.
6.417	1453.5220	4799.76	.V	Q	.	.	.	.
6.500	1486.7281	4821.53	.V	Q	.	.	.	.
6.583	1520.0850	4843.41	.V	Q	.	.	.	.
6.667	1553.5946	4865.60	.V	Q	.	.	.	.
6.750	1587.2582	4887.95	.V	Q	.	.	.	.
6.833	1621.0776	4910.58	.V	Q	.	.	.	.
6.917	1655.0544	4933.42	.V	Q	.	.	.	.
7.000	1689.1904	4956.54	.V	Q	.	.	.	.
7.083	1723.4867	4979.81	.V	Q	.	.	.	.
7.167	1757.9456	5003.42	.V	Q	.	.	.	.
7.250	1792.5681	5027.20	.V	Q	.	.	.	.
7.333	1827.3568	5051.32	.V	Q	.	.	.	.
7.417	1862.3129	5075.62	.V	Q	.	.	.	.
7.500	1897.4387	5100.28	.V	Q	.	.	.	.
7.583	1932.7357	5125.13	.V	Q	.	.	.	.
7.667	1968.2064	5150.34	.V	Q	.	.	.	.
7.750	2003.8521	5175.75	.V	Q	.	.	.	.
7.833	2039.6754	5201.55	.V	Q	.	.	.	.
7.917	2075.6777	5227.55	.V	Q	.	.	.	.
8.000	2111.8621	5253.95	.V	Q	.	.	.	.
8.083	2148.2295	5280.56	.V	Q	.	.	.	.
8.167	2184.7832	5307.59	.V	Q	.	.	.	.
8.250	2221.5085	5332.51	.V	Q	.	.	.	.
8.333	2258.4058	5357.48	.V	Q	.	.	.	.
8.417	2295.4766	5382.68	.V	Q	.	.	.	.
8.500	2332.7239	5408.33	.V	Q	.	.	.	.
8.583	2370.1497	5434.21	.V	Q	.	.	.	.
8.667	2407.7568	5460.55	.V	Q	.	.	.	.
8.750	2445.5471	5487.15	.V	Q	.	.	.	.

8.833	2483.5239	5514.22	.	V	Q.	.	.	.
8.917	2521.6890	5541.56	.	V	Q.	.	.	.
9.000	2560.0457	5569.40	.	V	Q.	.	.	.
9.083	2598.5959	5597.52	.	V	Q.	.	.	.
9.167	2637.3435	5626.16	.	V	Q.	.	.	.
9.250	2676.2905	5655.10	.	V	Q.	.	.	.
9.333	2715.4407	5684.59	.	V	Q.	.	.	.
9.417	2754.7959	5714.38	.	V	Q.	.	.	.
9.500	2794.3604	5744.75	.	V	Q	.	.	.
9.583	2834.1362	5775.45	.	V	Q	.	.	.
9.667	2874.1277	5806.74	.	V	Q	.	.	.
9.750	2914.3369	5838.39	.	V	Q	.	.	.
9.833	2954.7686	5870.66	.	V	Q	.	.	.
9.917	2995.4250	5903.31	.	V	Q	.	.	.
10.000	3036.3108	5936.61	.	V	Q	.	.	.
10.083	3077.4287	5970.31	.	V	Q	.	.	.
10.167	3118.7834	6004.70	.	V	Q	.	.	.
10.250	3160.3779	6039.51	.	V	Q	.	.	.
10.333	3202.2170	6075.04	.	V	Q	.	.	.
10.417	3244.3040	6111.02	.	V	Q	.	.	.
10.500	3286.6438	6147.76	.	V	Q	.	.	.
10.583	3329.2400	6184.98	.	V	Q	.	.	.
10.667	3372.0981	6223.00	.	V	Q	.	.	.
10.750	3415.2217	6261.53	.	V	Q	.	.	.
10.833	3458.6165	6300.92	.	V	.Q	.	.	.
10.917	3502.2861	6340.84	.	V	.Q	.	.	.
11.000	3546.2371	6381.66	.	V	.Q	.	.	.
11.083	3590.4731	6423.06	.	V	.Q	.	.	.
11.167	3635.0007	6465.42	.	V	.Q	.	.	.
11.250	3679.8245	6508.39	.	V	.Q	.	.	.
11.333	3724.9509	6552.37	.	V	.Q	.	.	.
11.417	3770.3850	6597.02	.	V	.Q	.	.	.
11.500	3816.1340	6642.75	.	V	.Q	.	.	.
11.583	3862.2029	6689.18	.	V	.Q	.	.	.
11.667	3908.5994	6736.76	.	V	.Q	.	.	.
11.750	3955.3289	6785.11	.	V	.Q	.	.	.
11.833	4002.3997	6834.68	.	V	.Q	.	.	.
11.917	4049.8176	6885.08	.	V	.Q	.	.	.
12.000	4097.5918	6936.78	.	V	.Q	.	.	.
12.083	4145.8379	7005.33	.	V	.Q	.	.	.
12.167	4194.6753	7091.18	.	V	.Q	.	.	.
12.250	4244.1094	7177.82	.	V	.Q	.	.	.
12.333	4294.1494	7265.78	.	V	.Q	.	.	.
12.417	4344.8008	7354.59	.	V	.Q	.	.	.
12.500	4396.1313	7453.20	.	V	.Q	.	.	.
12.583	4448.2041	7560.97	.	V	.Q	.	.	.
12.667	4501.0288	7670.16	.	V	.Q	.	.	.
12.750	4554.6851	7790.87	.	V	.Q	.	.	.
12.833	4609.3799	7941.68	.	V	.Q	.	.	.
12.917	4665.2148	8107.27	.	V	.Q	.	.	.
13.000	4722.3447	8295.27	.	V	.Q	.	.	.
13.083	4780.9268	8506.13	.	V	.Q	.	.	.
13.167	4840.9404	8713.98	.	V	.Q	.	.	.
13.250	4902.3970	8923.48	.	V	.Q	.	.	.
13.333	4965.6274	9181.09	.	V	.Q	.	.	.
13.417	5030.4238	9408.43	.	V	.Q	.	.	.
13.500	5096.7510	9630.70	.	V	.Q	.	.	.
13.583	5164.8369	9886.05	.	V	.Q	.	.	.

13.667	5234.7915	10157.42	.	V	Q	.	.	.
13.750	5306.3594	10391.69	.	.V	Q	.	.	.
13.833	5379.6826	10646.53	.	.V	Q	.	.	.
13.917	5454.9248	10925.16	.	.V	Q.	.	.	.
14.000	5532.3477	11241.83	.	.V	Q.	.	.	.
14.083	5611.7324	11526.68	.	.V	Q	.	.	.
14.167	5693.3325	11848.34	.	.V	Q	.	.	.
14.250	5777.4551	12214.57	.	.V	.Q	.	.	.
14.333	5864.0610	12575.18	.	.V	.Q	.	.	.
14.417	5953.3970	12971.56	.	.V	.Q	.	.	.
14.500	6045.0557	13308.81	.	.V	.Q	.	.	.
14.583	6138.8940	13625.36	.	.V	.Q	.	.	.
14.667	6234.9844	13952.34	.	.V	.Q	.	.	.
14.750	6333.7290	14337.75	.	.V	.Q	.	.	.
14.833	6435.2861	14746.12	.	.V	.Q	.	.	.
14.917	6539.3188	15105.52	.	.V	.Q	.	.	.
15.000	6645.9448	15482.10	.	.V	.Q	.	.	.
15.083	6755.2139	15865.88	.	.V	.Q	.	.	.
15.167	6866.9741	16227.62	.	.V	.Q	.	.	.
15.250	6981.1870	16583.70	.	.V	.Q	.	.	.
15.333	7097.8525	16939.81	.	.V	.Q	.	.	.
15.417	7216.5308	17232.11	.	.V	.Q	.	.	.
15.500	7337.0347	17497.15	.	.V	.Q	.	.	.
15.583	7459.5771	17793.16	.	.V	.Q	.	.	.
15.667	7584.1660	18090.30	.	.V	.Q	.	.	.
15.750	7710.4497	18336.41	.	.V	.Q	.	.	.
15.833	7838.3647	18573.23	.	.V	.Q	.	.	.
15.917	7967.9443	18814.93	.	.V	.Q	.	.	.
16.000	8099.4858	19099.79	.	.V	.Q	.	.	.
16.083	8233.5273	19462.87	.	.V	.Q	.	.	.
16.167	8369.7568	19780.46	.	.V	.Q	.	.	.
16.250	8507.1953	19956.12	.	.V	.Q	.	.	.
16.333	8645.6191	20099.15	.	.V	.Q	.	.	.
16.417	8785.2139	20269.16	.	.V	.Q	.	.	.
16.500	8926.1963	20470.70	.	.V	.Q	.	.	.
16.583	9068.3867	20645.99	.	.V	.Q	.	.	.
16.667	9211.0166	20709.92	.	.V	.Q	.	.	.
16.750	9355.3916	20963.21	.	.V	.Q	.	.	.
16.833	9502.7891	21402.15	.	.V	.Q	.	.	.
16.917	9651.7148	21624.08	.	.V	.Q	.	.	.
17.000	9802.3057	21865.79	.	.V	.Q	.	.	.
17.083	9954.7148	22129.84	.	.V	.Q	.	.	.
17.167	10107.2061	22141.76	.	.V	.Q	.	.	.
17.250	10260.0059	22186.47	.	.V	.Q	.	.	.
17.333	10415.2100	22535.67	.	.V	.Q	.	.	.
17.417	10568.6426	22278.38	.	.V	.Q	.	.	.
17.500	10721.9697	22263.04	.	.V	.Q	.	.	.
17.583	10876.9209	22498.94	.	.V	.Q	.	.	.
17.667	11032.4297	22579.83	.	.V	.Q	.	.	.
17.750	11185.0059	22153.99	.	.V	.Q	.	.	.
17.833	11338.8252	22334.56	.	.V	.Q	.	.	.
17.917	11494.1729	22556.48	.	.V	.Q	.	.	.
18.000	11651.4580	22837.84	.	.V	.Q	.	.	.
18.083	11804.5723	22232.13	.	.V	.Q	.	.	.
18.167	11958.3945	22334.97	.	.V	.Q	.	.	.
18.250	12114.8535	22717.78	.	.V	.Q	.	.	.
18.333	12270.5312	22604.43	.	.V	.Q	.	.	.
18.417	12427.1426	22740.03	.	.V	.Q	.	.	.

18.500	12578.4316	21967.24	.	.	.	V	.	Q
18.583	12727.7881	21686.58	.	.	.	V	.	Q
18.667	12877.9902	21809.28	.	.	.	V	.	Q
18.750	13031.5820	22301.59	.	.	.	V	.	Q
18.833	13183.9775	22127.86	.	.	.	V	.	Q
18.917	13331.2129	21378.51	.	.	.	V	.	Q
19.000	13476.9277	21157.81	.	.	.	V	.	Q
19.083	13620.9590	20913.34	.	.	.	V	.	Q
19.167	13762.8789	20606.82	.	.	.	V	.	Q
19.250	13902.6514	20294.89	.	.	.	V	.	Q
19.333	14037.9189	19640.90	.	.	.	V	.	Q
19.417	14170.5459	19257.43	.	.	.	V	.	Q
19.500	14301.6504	19036.39	.	.	.	V	.	Q
19.583	14431.1855	18808.46	.	.	.	V	.	Q
19.667	14557.7402	18375.68	.	.	.	V	.	Q
19.750	14681.1504	17919.12	.	.	.	V	.	Q
19.833	14801.2207	17434.24	.	.	.	V	.	Q
19.917	14917.7549	16920.80	.	.	.	V	.	Q
20.000	15030.8779	16425.43	.	.	.	V	.	Q
20.083	15140.7236	15949.62	.	.	.	V	.	Q
20.167	15247.9609	15570.84	.	.	.	V	.	Q
20.250	15351.8623	15086.44	.	.	.	V	.	Q
20.333	15452.8623	14665.24	.	.	.	V	.	Q
20.417	15550.7432	14212.25	.	.	.	V	.	Q
20.500	15645.7842	13800.00	.	.	.	V	.	Q
20.583	15738.2578	13427.20	.	.	.	V	.	Q
20.667	15827.8135	13003.46	.	.	.	V	.	Q
20.750	15913.6963	12470.17	.	.	.	V	.	Q
20.833	15996.7246	12055.77	.	.	.	V	.	Q
20.917	16077.4053	11714.88	.	.	.	V	.	Q
21.000	16155.7539	11376.23	.	.	.	V	.	Q
21.083	16231.3574	10977.62	.	.	.	V	.	Q
21.167	16304.6465	10641.62	.	.	.	V	.	Q
21.250	16375.9512	10353.45	.	.	.	V	.	Q
21.333	16445.5703	10108.70	.	.	.	V	.	Q
21.417	16513.5352	9868.61	.	.	.	V	.	Q
21.500	16579.7891	9620.08	.	.	.	V	.	Q
21.583	16644.2207	9355.51	.	.	.	V	.	Q
21.667	16706.4727	9039.05	.	.	.	V	.	Q
21.750	16766.5820	8727.78	.	.	.	V	.	Q
21.833	16825.2754	8522.21	.	.	.	V	.	Q
21.917	16882.6836	8335.66	.	.	.	V	.	Q
22.000	16938.8359	8153.34	.	.	.	V	.	Q
22.083	16993.8125	7982.57	.	.	.	V	.	Q
22.167	17047.6523	7817.51	.	.	.	V	.	Q
22.250	17100.3672	7654.08	.	.	.	V	.	Q
22.333	17151.9766	7493.73	.	.	.	V	.	Q
22.417	17202.4961	7335.44	.	.	.	V	.	Q
22.500	17251.9707	7183.63	.	.	.	V	.	Q
22.583	17300.3984	7031.80	.	.	.	V	.	Q
22.667	17347.8711	6893.03	.	.	.	V	.	Q
22.750	17394.5449	6776.92	.	.	.	V	.	Q
22.833	17440.4395	6663.84	.	.	.	V	.	Q
22.917	17485.5781	6554.13	.	.	.	V	.	Q
23.000	17529.9668	6445.15	.	.	.	V	.	Q
23.083	17573.6855	6348.06	.	.	.	V	.	Q
23.167	17616.7793	6257.29	.	.	.	V	.	Q
23.250	17659.2637	6168.75	.	.	.	V	.	Q

23.333	17701.1504	6081.85	.	Q	.	.	V	.
23.417	17742.4512	5996.90	.	Q	.	.	V	.
23.500	17783.1777	5913.47	.	Q	.	.	V	.
23.583	17823.3809	5837.41	.	Q	.	.	V	.
23.667	17863.1211	5770.27	.	Q	.	.	V	.
23.750	17902.4707	5713.57	.	Q	.	.	V	.
23.833	17941.4375	5657.87	.	Q	.	.	V	.
23.917	17980.0371	5604.73	.	Q	.	.	V	.
24.000	18018.2773	5552.35	.	Q	.	.	V	.
24.083	18056.0859	5489.71	.	Q	.	.	V	.
24.167	18093.3848	5415.80	.	Q	.	.	V	.
24.250	18129.9141	5304.19	.	Q	.	.	V	.
24.333	18165.9434	5231.42	.	Q	.	.	V	.
24.417	18201.5293	5167.04	.	Q	.	.	V	.
24.500	18236.6562	5100.51	.	Q	.	.	V	.
24.583	18271.2695	5025.92	.	Q	.	.	V	.
24.667	18305.3691	4951.16	.	Q	.	.	V	.
24.750	18338.9199	4871.52	.	Q	.	.	V	.
24.833	18371.8242	4777.77	.	Q	.	.	V	.
24.917	18404.0371	4677.44	.	Q	.	.	V	.
25.000	18435.4902	4567.07	.	Q	.	.	V	.
25.083	18466.1113	4446.06	.	Q	.	.	V	.
25.167	18495.9199	4328.15	.	Q	.	.	V	.
25.250	18524.9453	4214.63	.	Q	.	.	V	.
25.333	18553.0352	4078.63	.	Q	.	.	V	.
25.417	18580.3066	3959.93	.	Q	.	.	V	.
25.500	18606.7910	3845.65	.	Q	.	.	V	.
25.583	18632.3809	3715.75	.	Q	.	.	V	.
25.667	18657.0312	3579.37	.	Q	.	.	V	.
25.750	18680.8867	3463.75	.	Q	.	.	V	.
25.833	18703.8848	3339.22	.	Q	.	.	V	.
25.917	18725.9492	3203.87	.	Q	.	.	V	.
26.000	18746.9590	3050.57	.	Q	.	.	V	.
26.083	18767.0879	2922.62	.	Q	.	.	V	.
26.167	18786.2637	2784.34	.	Q	.	.	V	.
26.250	18804.3652	2628.43	.	Q	.	.	V	.
26.333	18821.4277	2477.35	.	Q	.	.	V	.
26.417	18837.3281	2308.68	.	Q	.	.	V	.
26.500	18852.3125	2175.74	.	Q	.	.	V	.
26.583	18866.4863	2058.03	.	Q	.	.	V	.
26.667	18879.8184	1935.78	.	Q	.	.	V	.
26.750	18892.1367	1788.51	.	Q	.	.	V	.
26.833	18903.4531	1643.11	.	Q	.	.	V	.
26.917	18913.9844	1529.26	.	Q	.	.	V	.
27.000	18923.7344	1415.82	.	Q	.	.	V	.
27.083	18932.7402	1307.77	.	Q	.	.	V	.
27.167	18941.0605	1208.02	.	Q	.	.	V	.
27.250	18948.7051	1110.00	.	Q	.	.	V	.
27.333	18955.8125	1031.93	.	Q	.	.	V	.
27.417	18962.4258	960.19	.	Q	.	.	V	.
27.500	18968.5410	887.93	.	Q	.	.	V	.
27.583	18974.1504	814.60	.	Q	.	.	V	.
27.667	18979.2969	747.13	.	Q	.	.	V	.
27.750	18984.0117	684.68	.	Q	.	.	V	.
27.833	18988.3301	627.09	.	Q	.	.	V	.
27.917	18992.3066	577.52	.	Q	.	.	V	.
28.000	18995.9727	532.41	.	Q	.	.	V	.
28.083	18999.3770	494.40	.	Q	.	.	V	.

28.167	19002.5254	457.10	Q	.	.	.	V	.
28.250	19005.4375	422.72	Q	.	.	.	V	.
28.333	19008.1191	389.25	Q	.	.	.	V	.
28.417	19010.5762	356.70	Q	.	.	.	V	.
28.500	19012.8242	326.44	Q	.	.	.	V	.
28.583	19014.8672	296.54	Q	.	.	.	V	.
28.667	19016.7207	269.04	Q	.	.	.	V	.
28.750	19018.4316	248.29	Q	.	.	.	V	.
28.833	19020.0020	228.14	Q	.	.	.	V	.
28.917	19021.4355	208.15	Q	.	.	.	V	.
29.000	19022.7324	188.39	Q	.	.	.	V	.
29.083	19023.9258	173.41	Q	.	.	.	V	.
29.167	19025.0332	160.81	Q	.	.	.	V	.
29.250	19026.0547	148.33	Q	.	.	.	V	.
29.333	19026.9902	135.91	Q	.	.	.	V	.
29.417	19027.8418	123.60	Q	.	.	.	V	.
29.500	19028.6094	111.35	Q	.	.	.	V	.
29.583	19029.2930	99.21	Q	.	.	.	V	.
29.667	19029.9180	90.73	Q	.	.	.	V	.
29.750	19030.5195	87.34	Q	.	.	.	V	.
29.833	19031.0977	84.01	Q	.	.	.	V	.
29.917	19031.6543	80.70	Q	.	.	.	V	.
30.000	19032.1875	77.43	Q	.	.	.	V	.
30.083	19032.6992	74.18	Q	.	.	.	V	.
30.167	19033.1875	70.94	Q	.	.	.	V	.
30.250	19033.6543	67.76	Q	.	.	.	V	.
30.333	19034.0996	64.58	Q	.	.	.	V	.
30.417	19034.5234	61.45	Q	.	.	.	V	.
30.500	19034.9258	58.29	Q	.	.	.	V	.
30.583	19035.3066	55.21	Q	.	.	.	V	.
30.667	19035.6660	52.12	Q	.	.	.	V	.
30.750	19036.0039	49.06	Q	.	.	.	V	.
30.833	19036.3203	46.04	Q	.	.	.	V	.
30.917	19036.6172	43.00	Q	.	.	.	V	.
31.000	19036.8926	40.03	Q	.	.	.	V	.
31.083	19037.1484	37.07	Q	.	.	.	V	.
31.167	19037.3828	34.14	Q	.	.	.	V	.
31.250	19037.5977	31.23	Q	.	.	.	V	.
31.333	19037.7930	28.33	Q	.	.	.	V	.
31.417	19037.9688	25.46	Q	.	.	.	V	.
31.500	19038.1250	22.60	Q	.	.	.	V	.
31.583	19038.2617	19.76	Q	.	.	.	V	.
31.667	19038.3789	16.94	Q	.	.	.	V	.
31.750	19038.4766	14.14	Q	.	.	.	V	.
31.833	19038.5547	11.35	Q	.	.	.	V	.
31.917	19038.6133	8.58	Q	.	.	.	V	.
32.000	19038.6543	5.83	Q	.	.	.	V	.
32.083	19038.6758	3.10	Q	.	.	.	V	.
32.167	19038.6777	0.38	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%	1930.0

10%	1435.0
20%	1165.0
30%	650.0
40%	500.0
50%	415.0
60%	355.0
70%	295.0
80%	240.0
90%	160.0

=====
END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - SINGLE AREA UH *
* PHASE CONDITION NO PA5 - REGIONAL NODE 137 *
* 100-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV00137S.DAT
TIME/DATE OF STUDY: 13:46 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 137.00 IS CODE = 1

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

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 67798.398 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.481 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.394
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.48
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.93
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.28
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.34
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.45
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.99

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.291
30-MINUTE FACTOR = 0.350
1-HOUR FACTOR = 0.394
3-HOUR FACTOR = 0.738
6-HOUR FACTOR = 0.886
24-HOUR FACTOR = 0.933

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.359

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.192	1573.744
2	0.576	3147.494
3	0.960	3147.490
4	1.344	3147.487
5	1.727	3147.494
6	2.174	3659.796
7	2.753	4753.409
8	3.338	4789.656
9	3.955	5059.311
10	4.931	8004.669
11	6.049	9168.369
12	7.423	11268.429
13	9.059	13411.296
14	10.797	14252.160
15	12.477	13770.540
16	14.333	15222.932
17	16.614	18703.160
18	18.416	14772.308
19	20.292	15384.577
20	22.615	19048.275
21	24.918	18878.576
22	26.837	15739.114
23	29.059	18213.322
24	31.492	19954.449
25	34.395	23800.875
26	36.744	19259.842
27	39.226	20352.887
28	42.374	25809.916
29	45.415	24935.316
30	48.863	28265.027
31	51.778	23908.457
32	54.186	19738.709
33	56.551	19393.055
34	59.387	23256.777
35	62.714	27276.609
36	65.296	21167.838
37	67.558	18550.359
38	70.045	20387.699
39	72.113	16960.305
40	74.253	17546.082
41	76.204	15994.250
42	77.730	12515.436
43	79.223	12240.188
44	80.758	12584.623
45	82.296	12613.211
46	83.711	11601.239
47	85.023	10762.173
48	86.236	9944.438

49	87.278	8542.678
50	88.234	7834.729
51	89.029	6517.608
52	89.816	6455.614
53	90.545	5978.811
54	91.252	5798.837
55	91.953	5744.038
56	92.603	5331.542
57	93.243	5244.588
58	93.872	5158.761
59	94.348	3907.262
60	94.775	3497.143
61	95.201	3494.828
62	95.628	3497.206
63	96.022	3234.907
64	96.297	2252.837
65	96.560	2159.816
66	96.824	2159.816
67	97.087	2159.816
68	97.351	2159.816
69	97.614	2159.816
70	97.877	2157.376
71	98.033	1280.151
72	98.097	519.717
73	98.160	514.900
74	98.223	517.340
75	98.286	517.277
76	98.348	514.963
77	98.412	519.655
78	98.475	514.963
79	98.537	512.523
80	98.601	519.717
81	98.663	514.900
82	98.726	514.900
83	98.790	519.717
84	98.852	514.900
85	98.915	514.963
86	98.979	519.655
87	99.041	514.900
88	99.104	514.900
89	99.167	514.900
90	99.230	514.900
91	99.293	514.900
92	99.355	514.900
93	99.418	514.900
94	99.481	514.900
95	99.544	514.900
96	99.606	514.900
97	99.669	514.900
98	99.732	514.900
99	99.795	514.900
100	99.858	514.900
101	99.920	514.900
102	99.983	514.900
103	100.000	137.061

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12254.1680
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 19287.9180

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.	5750.0	11500.0	17250.0	23000.0
0.083	0.0555	8.06	Q	.	.	.	.
0.167	0.2222	24.20	Q	.	.	.	.
0.250	0.5003	40.39	Q	.	.	.	.
0.333	0.8903	56.62	Q	.	.	.	.
0.417	1.3924	72.91	Q	.	.	.	.
0.500	2.0251	91.86	Q	.	.	.	.
0.583	2.8272	116.48	Q	.	.	.	.
0.667	3.8007	141.35	Q	.	.	.	.
0.750	4.9555	167.68	Q	.	.	.	.
0.833	6.3960	209.17	Q	.	.	.	.
0.917	8.1642	256.74	Q	.	.	.	.
1.000	10.3351	315.21	Q	.	.	.	.
1.083	12.9854	384.83	Q	.	.	.	.
1.167	16.1463	458.96	Q	.	.	.	.
1.250	19.8023	530.85	Q	.	.	.	.
1.333	24.0062	610.40	VQ	.	.	.	.
1.417	28.8823	708.01	VQ	.	.	.	.
1.500	34.2940	785.79	VQ	.	.	.	.
1.583	40.2648	866.96	VQ	.	.	.	.
1.667	46.9255	967.13	VQ	.	.	.	.
1.750	54.2722	1066.74	VQ	.	.	.	.
1.833	62.1963	1150.58	V Q	.	.	.	.
1.917	70.7870	1247.38	V Q	.	.	.	.
2.000	80.1077	1353.37	V Q	.	.	.	.
2.083	90.2966	1479.42	V Q	.	.	.	.
2.167	101.1958	1582.57	V Q	.	.	.	.
2.250	112.8467	1691.71	V Q	.	.	.	.
2.333	125.4437	1829.08	V Q	.	.	.	.
2.417	138.9592	1962.45	V Q	.	.	.	.
2.500	153.5134	2113.27	V Q	.	.	.	.
2.583	168.9560	2242.27	V Q	.	.	.	.
2.667	185.1429	2350.33	V Q	.	.	.	.
2.750	202.0644	2457.01	V Q	.	.	.	.
2.833	219.8593	2583.81	V Q	.	.	.	.
2.917	238.6721	2731.63	V Q	.	.	.	.
3.000	258.2906	2848.61	V Q	.	.	.	.
3.083	278.6256	2952.64	V Q	.	.	.	.
3.167	299.7441	3066.40	V Q	.	.	.	.
3.250	321.5280	3163.02	V Q	.	.	.	.
3.333	344.0003	3262.98	V Q	.	.	.	.
3.417	367.1088	3355.35	V Q	.	.	.	.
3.500	390.7331	3430.24	V Q	.	.	.	.
3.583	414.8655	3504.03	V Q	.	.	.	.
3.667	439.5201	3579.84	V Q	.	.	.	.
3.750	464.6999	3656.12	V Q	.	.	.	.
3.833	490.3713	3727.49	.V Q	.	.	.	.
3.917	516.5068	3794.87	.V Q	.	.	.	.

4.000	543.0793	3858.32	.V Q	.	.	.	.
4.083	570.0413	3914.88	.V Q	.	.	.	.
4.167	597.3693	3968.04	.V Q	.	.	.	.
4.250	625.0189	4014.71	.V Q	.	.	.	.
4.333	652.9891	4061.28	.V Q	.	.	.	.
4.417	681.2650	4105.65	.V Q	.	.	.	.
4.500	709.8414	4149.30	.V Q	.	.	.	.
4.583	738.7182	4192.91	.V Q	.	.	.	.
4.667	767.8821	4234.61	.V Q	.	.	.	.
4.750	797.3319	4276.10	.V Q	.	.	.	.
4.833	827.0658	4317.36	.V Q	.	.	.	.
4.917	857.0413	4352.45	.V Q	.	.	.	.
5.000	887.2454	4385.63	.V Q	.	.	.	.
5.083	917.6793	4419.01	.V Q	.	.	.	.
5.167	948.3446	4452.60	.V Q	.	.	.	.
5.250	979.2335	4485.07	.V Q	.	.	.	.
5.333	1010.3128	4512.71	.V Q	.	.	.	.
5.417	1041.5806	4540.08	.V Q	.	.	.	.
5.500	1073.0381	4567.63	.V Q	.	.	.	.
5.583	1104.6869	4595.41	.V Q	.	.	.	.
5.667	1136.5282	4623.37	.V Q	.	.	.	.
5.750	1168.5637	4651.55	.V Q	.	.	.	.
5.833	1200.7946	4679.91	.V Q	.	.	.	.
5.917	1233.1914	4704.02	.V Q	.	.	.	.
6.000	1265.7286	4724.41	.V Q	.	.	.	.
6.083	1298.4077	4745.00	.V Q	.	.	.	.
6.167	1331.2300	4765.79	.V Q	.	.	.	.
6.250	1364.1968	4786.79	.V Q	.	.	.	.
6.333	1397.3094	4807.96	.V Q	.	.	.	.
6.417	1430.5697	4829.40	.V Q	.	.	.	.
6.500	1463.9788	4851.00	.V Q	.	.	.	.
6.583	1497.5382	4872.83	.V Q	.	.	.	.
6.667	1531.2496	4894.89	.V Q	.	.	.	.
6.750	1565.1145	4917.18	.V Q	.	.	.	.
6.833	1599.1343	4939.68	.V Q	.	.	.	.
6.917	1633.3109	4962.45	.V Q	.	.	.	.
7.000	1667.6458	4985.42	.V Q	.	.	.	.
7.083	1702.1406	5008.66	.V Q	.	.	.	.
7.167	1736.7972	5032.14	.V Q	.	.	.	.
7.250	1771.6173	5055.88	.V Q	.	.	.	.
7.333	1806.6024	5079.85	.V Q	.	.	.	.
7.417	1841.7546	5104.10	.V Q	.	.	.	.
7.500	1877.0756	5128.60	.V Q	.	.	.	.
7.583	1912.5673	5153.39	.V Q	.	.	.	.
7.667	1948.2314	5178.44	.V Q	.	.	.	.
7.750	1984.0702	5203.79	.V Q	.	.	.	.
7.833	2020.0854	5229.41	.V Q	.	.	.	.
7.917	2056.2793	5255.35	.V Q	.	.	.	.
8.000	2092.6538	5281.57	.V Q	.	.	.	.
8.083	2129.2112	5308.12	.V Q	.	.	.	.
8.167	2165.9534	5334.96	.V Q	.	.	.	.
8.250	2202.8828	5362.15	.V Q	.	.	.	.
8.333	2240.0015	5389.63	.V Q	.	.	.	.
8.417	2277.3120	5417.48	.V Q	.	.	.	.
8.500	2314.8164	5445.64	.V Q	.	.	.	.
8.583	2352.5042	5472.24	.V Q	.	.	.	.
8.667	2390.3723	5498.47	.V Q	.	.	.	.
8.750	2428.4238	5525.08	.V Q	.	.	.	.

8.833	2466.6609	5552.03	.	V	Q.	.	.	.
8.917	2505.0864	5579.38	.	V	Q.	.	.	.
9.000	2543.7026	5607.08	.	V	Q.	.	.	.
9.083	2582.5127	5635.20	.	V	Q.	.	.	.
9.167	2621.5188	5663.70	.	V	Q.	.	.	.
9.250	2660.7244	5692.63	.	V	Q.	.	.	.
9.333	2700.1318	5721.96	.	V	Q.	.	.	.
9.417	2739.7444	5751.75	.	V	Q	.	.	.
9.500	2779.5649	5781.94	.	V	Q	.	.	.
9.583	2819.5967	5812.62	.	V	Q	.	.	.
9.667	2859.8428	5843.73	.	V	Q	.	.	.
9.750	2900.3066	5875.35	.	V	Q	.	.	.
9.833	2940.9915	5907.42	.	V	Q	.	.	.
9.917	2981.9006	5940.03	.	V	Q	.	.	.
10.000	3023.0378	5973.11	.	V	Q	.	.	.
10.083	3064.4067	6006.76	.	V	Q	.	.	.
10.167	3106.0107	6040.91	.	V	Q	.	.	.
10.250	3147.8542	6075.66	.	V	Q	.	.	.
10.333	3189.9407	6110.94	.	V	Q	.	.	.
10.417	3232.2744	6146.84	.	V	Q	.	.	.
10.500	3274.8591	6183.31	.	V	Q	.	.	.
10.583	3317.6997	6220.44	.	V	Q	.	.	.
10.667	3360.8000	6258.17	.	V	Q	.	.	.
10.750	3404.1650	6296.59	.	V	Q	.	.	.
10.833	3447.7991	6335.65	.	V	.Q	.	.	.
10.917	3491.7073	6375.46	.	V	.Q	.	.	.
11.000	3535.8940	6415.93	.	V	.Q	.	.	.
11.083	3580.3650	6457.19	.	V	.Q	.	.	.
11.167	3625.1250	6499.16	.	V	.Q	.	.	.
11.250	3670.1799	6541.98	.	V	.Q	.	.	.
11.333	3715.5349	6585.55	.	V	.Q	.	.	.
11.417	3761.1963	6630.02	.	V	.Q	.	.	.
11.500	3807.1694	6675.29	.	V	.Q	.	.	.
11.583	3853.4609	6721.52	.	V	.Q	.	.	.
11.667	3900.0767	6768.61	.	V	.Q	.	.	.
11.750	3947.0237	6816.72	.	V	.Q	.	.	.
11.833	3994.3086	6865.76	.	V	.Q	.	.	.
11.917	4041.9387	6915.89	.	V	.Q	.	.	.
12.000	4089.9209	6967.01	.	V	.Q	.	.	.
12.083	4138.3711	7034.96	.	V	.Q	.	.	.
12.167	4187.4038	7119.56	.	V	.Q	.	.	.
12.250	4237.0269	7205.25	.	V	.Q	.	.	.
12.333	4287.2466	7291.91	.	V	.Q	.	.	.
12.417	4338.0713	7379.72	.	V	.Q	.	.	.
12.500	4389.5430	7473.68	.	V	.Q	.	.	.
12.583	4441.7451	7579.74	.	V	.Q	.	.	.
12.667	4494.6875	7687.20	.	V	.Q	.	.	.
12.750	4548.3970	7798.60	.	V	.Q	.	.	.
12.833	4603.0830	7940.40	.	V	.Q	.	.	.
12.917	4658.8335	8095.00	.	V	.Q	.	.	.
13.000	4715.7993	8271.43	.	V	.Q	.	.	.
13.083	4774.1348	8470.32	.	V	.Q	.	.	.
13.167	4833.9033	8678.37	.	V	.Q	.	.	.
13.250	4895.0786	8882.67	.	V	.Q	.	.	.
13.333	4957.7661	9102.24	.	V	.Q	.	.	.
13.417	5022.2119	9357.54	.	V	.Q	.	.	.
13.500	5088.1514	9574.40	.	V	.Q	.	.	.
13.583	5155.6338	9798.44	.	V	.Q	.	.	.

13.667	5224.9170	10059.93	.	V	Q	.	.	.
13.750	5295.9966	10320.75	.	V	Q	.	.	.
13.833	5368.6631	10551.17	.	.V	Q	.	.	.
13.917	5443.0947	10807.46	.	.V	Q	.	.	.
14.000	5519.4180	11082.13	.	.V	Q.	.	.	.
14.083	5597.9971	11409.70	.	.V	Q.	.	.	.
14.167	5678.6182	11706.15	.	.V	Q	.	.	.
14.250	5761.3555	12013.47	.	.V	Q	.	.	.
14.333	5846.5845	12375.24	.	.V	.Q	.	.	.
14.417	5934.2432	12728.05	.	.V	.Q	.	.	.
14.500	6024.5889	13118.22	.	.V	.Q	.	.	.
14.583	6117.3853	13474.03	.	.V	.Q	.	.	.
14.667	6212.3433	13787.92	.	.V	.Q	.	.	.
14.750	6309.4521	14100.23	.	.V	.Q	.	.	.
14.833	6409.1470	14475.72	.	.V	.Q	.	.	.
14.917	6511.7627	14899.77	.	.V	.Q	.	.	.
15.000	6616.9858	15278.39	.	.V	.Q	.	.	.
15.083	6724.7456	15646.70	.	.V	.Q	.	.	.
15.167	6835.1904	16036.62	.	.V	.Q	.	.	.
15.250	6948.0298	16384.30	.	.V	.Q	.	.	.
15.333	7063.3584	16745.70	.	.V	.Q.	.	.	.
15.417	7181.1133	17098.02	.	.V	.Q.	.	.	.
15.500	7300.6562	17357.61	.	.V	.Q	.	.	.
15.583	7421.9990	17618.96	.	.V	.Q	.	.	.
15.667	7545.3809	17915.02	.	.V	.Q	.	.	.
15.750	7670.7373	18201.75	.	.V	.Q	.	.	.
15.833	7797.7207	18438.00	.	.V	.Q	.	.	.
15.917	7926.3887	18682.59	.	.V	.Q	.	.	.
16.000	8056.9199	18953.17	.	.V	.Q	.	.	.
16.083	8190.3828	19378.84	.	.V	.Q	.	.	.
16.167	8326.0322	19696.26	.	.V	.Q	.	.	.
16.250	8462.6572	19837.99	.	.V	.Q	.	.	.
16.333	8600.4102	20001.66	.	.V	.Q	.	.	.
16.417	8739.1768	20148.88	.	.V	.Q	.	.	.
16.500	8879.5098	20376.39	.	.V	.Q	.	.	.
16.583	9021.5107	20618.55	.	.V	.Q	.	.	.
16.667	9164.2051	20719.23	.	.V	.Q	.	.	.
16.750	9307.5781	20817.72	.	.V	.Q	.	.	.
16.833	9453.9092	21247.32	.	.V	.Q	.	.	.
16.917	9602.3516	21553.84	.	.V	.Q	.	.	.
17.000	9752.7129	21832.46	.	.V	.Q	.	.	.
17.083	9904.5244	22043.08	.	.V	.Q	.	.	.
17.167	10057.5283	22216.12	.	.V	.Q	.	.	.
17.250	10210.6738	22236.75	.	.V	.Q	.	.	.
17.333	10364.9814	22405.42	.	.V	.Q	.	.	.
17.417	10521.1045	22669.07	.	.V	.Q.	.	.	.
17.500	10675.0488	22352.77	.	.V	.Q	.	.	.
17.583	10829.6621	22449.85	.	.V	.Q	.	.	.
17.667	10986.1084	22715.98	.	.V	.Q	.	.	.
17.750	11142.2178	22667.08	.	.V	.Q	.	.	.
17.833	11295.8994	22314.54	.	.V	.Q	.	.	.
17.917	11451.0586	22529.12	.	.V	.Q	.	.	.
18.000	11607.4375	22706.16	.	.V	.Q	.	.	.
18.083	11765.6973	22979.30	.	.V	.Q	.	.	.
18.167	11920.0586	22413.28	.	.V	.Q	.	.	.
18.250	12074.2490	22388.41	.	.V	.Q	.	.	.
18.333	12231.3936	22817.33	.	.V	.Q	.	.	.
18.417	12387.7617	22704.72	.	.V	.Q	.	.	.

18.500	12544.9355	22821.67	.	.	.	V	.	Q.
18.583	12698.0820	22236.91	.	.	.	V	.	Q.
18.667	12848.1172	21785.17	.	.	.	V	.	Q.
18.750	12997.9668	21758.13	.	.	.	V	.	Q.
18.833	13150.5762	22158.90	.	.	.	V	.	Q.
18.917	13304.8096	22394.71	.	.	.	V	.	Q.
19.000	13453.7236	21622.27	.	.	.	V	.	Q.
19.083	13599.2598	21131.78	.	.	.	V	.	Q.
19.167	13744.5889	21101.73	.	.	.	V	.	Q.
19.250	13886.9199	20666.45	.	.	.	V	.	Q.
19.333	14027.7295	20445.61	.	.	.	V	.	Q.
19.417	14165.1885	19959.10	.	.	.	V	.	Q.
19.500	14298.5996	19371.24	.	.	.	V	.	Q.
19.583	14430.1035	19094.40	.	.	.	V	.	Q.
19.667	14560.0654	18870.46	.	.	.	V	.	Q.
19.750	14688.1709	18600.91	.	.	.	V	.	Q.
19.833	14813.4209	18186.32	.	.	.	V	.	Q.
19.917	14935.3496	17704.04	.	.	.	Q	.	.
20.000	15054.1064	17243.48	.	.	.	Q.V	.	.
20.083	15169.2188	16714.30	.	.	.	Q.V	.	.
20.167	15281.2422	16265.74	.	.	.	Q.V	.	.
20.250	15390.0176	15794.19	.	.	.	Q.V	.	.
20.333	15495.9082	15375.26	.	.	.	Q.V	.	.
20.417	15598.6826	14922.87	.	.	.	Q.V	.	.
20.500	15698.4414	14484.91	.	.	.	Q.V	.	.
20.583	15795.4600	14087.04	.	.	.	Q.V	.	.
20.667	15889.8467	13705.02	.	.	.	Q.V	.	.
20.750	15981.7295	13341.45	.	.	.	Q.V	.	.
20.833	16070.7852	12930.82	.	.	.	Q.V	.	.
20.917	16156.0898	12386.30	.	.	.	Q.V	.	.
21.000	16238.6729	11991.02	.	.	.	Q.V	.	.
21.083	16319.0391	11669.17	.	.	.	Q.V	.	.
21.167	16397.0684	11329.93	.	.	.	Q.V	.	.
21.250	16472.8555	11004.25	.	.	.	Q.V	.	.
21.333	16546.0000	10620.60	.	.	.	Q.V	.	.
21.417	16617.2188	10341.05	.	.	.	Q.V	.	.
21.500	16686.8242	10106.70	.	.	.	Q.V	.	.
21.583	16754.8535	9877.84	.	.	.	Q.V	.	.
21.667	16821.2402	9639.47	.	.	.	Q.V	.	.
21.750	16885.9336	9393.34	.	.	.	Q.V	.	.
21.833	16948.9219	9145.96	.	.	.	Q.V	.	.
21.917	17009.7988	8839.41	.	.	.	Q.V	.	.
22.000	17068.7949	8566.12	.	.	.	Q.V	.	.
22.083	17126.5156	8381.12	.	.	.	Q.V	.	.
22.167	17183.0449	8208.19	.	.	.	Q.V	.	.
22.250	17238.4453	8044.02	.	.	.	Q.V	.	.
22.333	17292.7246	7881.42	.	.	.	Q.V	.	.
22.417	17345.9336	7725.94	.	.	.	Q.V	.	.
22.500	17398.0859	7572.58	.	.	.	Q.V	.	.
22.583	17449.1738	7417.98	.	.	.	Q.V	.	.
22.667	17499.2305	7268.30	.	.	.	Q.V	.	.
22.750	17548.2656	7119.77	.	.	.	Q.V	.	.
22.833	17596.2949	6973.73	.	.	.	Q.V	.	.
22.917	17643.4668	6849.46	.	.	.	Q.V	.	.
23.000	17689.8652	6737.05	.	.	.	Q.V	.	.
23.083	17735.5078	6627.39	.	.	.	Q.V	.	.
23.167	17780.4121	6520.15	.	.	.	Q.V	.	.
23.250	17824.6055	6416.78	.	.	.	Q.V	.	.

23.333	17868.1699	6325.55	.	.	.	.Q	.	V
23.417	17911.1250	6237.16	.	.	.	Q	.	V
23.500	17953.4844	6150.71	.	.	.	Q	.	V
23.583	17995.2617	6066.02	.	.	.	Q	.	V
23.667	18036.4668	5982.94	.	.	.	Q	.	V
23.750	18077.1113	5901.56	.	.	.	Q	.	V
23.833	18117.2051	5821.75	.	.	.	Q	.	V
23.917	18156.8535	5756.81	.	.	.	Q	.	V
24.000	18196.1270	5702.38	.	.	.	Q	.	V
24.083	18234.9746	5640.71	.	.	.	Q	.	V
24.167	18273.3477	5571.73	.	.	.	Q	.	V
24.250	18311.2617	5505.01	.	.	.	Q	.	V
24.333	18348.7227	5439.23	.	.	.	Q	.	V
24.417	18385.7188	5371.84	.	.	.	Q	.	V
24.500	18422.2129	5299.07	.	.	.	Q	.	V
24.583	18457.9512	5189.30	.	.	.	Q	.	V
24.667	18493.1094	5105.00	.	.	.	Q	.	V
24.750	18527.7773	5033.76	.	.	.	Q	.	V
24.833	18561.8652	4949.59	.	.	.	Q	.	V
24.917	18595.3125	4856.59	.	.	.	Q	.	V
25.000	18628.0410	4752.14	.	.	.	Q	.	V
25.083	18659.9805	4637.48	.	.	.	Q	.	V
25.167	18691.1055	4519.31	.	.	.	Q	.	V
25.250	18721.4395	4404.51	.	.	.	Q	.	V
25.333	18750.9375	4283.12	.	.	.	Q	.	V
25.417	18779.4824	4144.81	.	.	.	Q	.	V
25.500	18807.2207	4027.55	.	.	.	Q	.	V
25.583	18834.1582	3911.32	.	.	.	Q	.	V
25.667	18860.1816	3778.65	.	.	.	Q	.	V
25.750	18885.3066	3648.10	.	.	.	Q	.	V
25.833	18909.6504	3534.78	.	.	.	Q	.	V
25.917	18933.1348	3409.89	.	.	.	Q	.	V
26.000	18955.7051	3277.20	.	.	.	Q	.	V
26.083	18977.2344	3125.97	.	.	.	Q	.	V
26.167	18997.8906	2999.17	.	.	.	Q	.	V
26.250	19017.6406	2867.83	.	.	.	Q	.	V
26.333	19036.3027	2709.64	.	.	.	Q	.	V
26.417	19053.9141	2557.10	.	.	.	Q	.	V
26.500	19070.3652	2388.68	.	.	.	Q	.	V
26.583	19085.8438	2247.50	.	.	.	Q	.	V
26.667	19100.5137	2130.10	.	.	.	Q	.	V
26.750	19114.3945	2015.41	.	.	.	Q	.	V
26.833	19127.3555	1881.89	.	.	.	Q	.	V
26.917	19139.2617	1728.82	.	.	.	Q	.	V
27.000	19150.3359	1608.09	.	.	.	Q	.	V
27.083	19160.6777	1501.64	.	.	.	Q	.	V
27.167	19170.2266	1386.60	.	.	.	Q	.	V
27.250	19179.1094	1289.91	.	.	.	Q	.	V
27.333	19187.3105	1190.94	.	.	.	Q	.	V
27.417	19194.8906	1100.63	.	.	.	Q	.	V
27.500	19201.9766	1028.75	.	.	.	Q	.	V
27.583	19208.5801	958.82	.	.	.	Q	.	V
27.667	19214.6934	887.65	.	.	.	Q	.	V
27.750	19220.3184	816.84	.	.	.	Q	.	V
27.833	19225.4961	751.72	.	.	.	Q	.	V
27.917	19230.2578	691.35	.	.	.	Q	.	V
28.000	19234.6348	635.59	.	.	.	Q	.	V
28.083	19238.6797	587.39	.	.	.	Q	.	V

28.167	19242.4199	543.16	Q	.	.	.	V.
28.250	19245.9043	505.98	Q	.	.	.	V.
28.333	19249.1367	469.40	Q	.	.	.	V.
28.417	19252.1367	435.51	Q	.	.	.	V.
28.500	19254.9102	402.79	Q	.	.	.	V.
28.583	19257.4629	370.58	Q	.	.	.	V.
28.667	19259.8086	340.71	Q	.	.	.	V.
28.750	19261.9531	311.50	Q	.	.	.	V.
28.833	19263.9023	282.93	Q	.	.	.	V.
28.917	19265.6992	260.95	Q	.	.	.	V.
29.000	19267.3613	241.23	Q	.	.	.	V.
29.083	19268.8887	221.66	Q	.	.	.	V.
29.167	19270.2812	202.22	Q	.	.	.	V.
29.250	19271.5508	184.25	Q	.	.	.	V.
29.333	19272.7305	171.43	Q	.	.	.	V.
29.417	19273.8262	159.18	Q	.	.	.	V.
29.500	19274.8379	147.01	Q	.	.	.	V.
29.583	19275.7676	134.93	Q	.	.	.	V.
29.667	19276.6152	122.94	Q	.	.	.	V.
29.750	19277.3809	111.03	Q	.	.	.	V.
29.833	19278.0645	99.21	Q	.	.	.	V.
29.917	19278.6973	91.96	Q	.	.	.	V.
30.000	19279.3086	88.65	Q	.	.	.	V.
30.083	19279.8965	85.39	Q	.	.	.	V.
30.167	19280.4629	82.15	Q	.	.	.	V.
30.250	19281.0059	78.93	Q	.	.	.	V.
30.333	19281.5273	75.75	Q	.	.	.	V.
30.417	19282.0273	72.57	Q	.	.	.	V.
30.500	19282.5059	69.45	Q	.	.	.	V.
30.583	19282.9629	66.36	Q	.	.	.	V.
30.667	19283.3984	63.25	Q	.	.	.	V.
30.750	19283.8125	60.20	Q	.	.	.	V.
30.833	19284.2070	57.17	Q	.	.	.	V.
30.917	19284.5801	54.13	Q	.	.	.	V.
31.000	19284.9316	51.15	Q	.	.	.	V.
31.083	19285.2637	48.18	Q	.	.	.	V.
31.167	19285.5742	45.21	Q	.	.	.	V.
31.250	19285.8652	42.29	Q	.	.	.	V.
31.333	19286.1367	39.39	Q	.	.	.	V.
31.417	19286.3887	36.51	Q	.	.	.	V.
31.500	19286.6211	33.64	Q	.	.	.	V.
31.583	19286.8340	30.80	Q	.	.	.	V.
31.667	19287.0273	27.98	Q	.	.	.	V.
31.750	19287.2012	25.17	Q	.	.	.	V.
31.833	19287.3555	22.38	Q	.	.	.	V.
31.917	19287.4902	19.61	Q	.	.	.	V.
32.000	19287.6055	16.86	Q	.	.	.	V.
32.083	19287.7031	14.13	Q	.	.	.	V.
32.167	19287.7812	11.41	Q	.	.	.	V.
32.250	19287.8418	8.71	Q	.	.	.	V.
32.333	19287.8828	6.03	Q	.	.	.	V.
32.417	19287.9062	3.36	Q	.	.	.	V.
32.500	19287.9102	0.70	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%	1950.0
10%	1435.0
20%	1170.0
30%	660.0
40%	505.0
50%	420.0
60%	360.0
70%	300.0
80%	240.0
90%	155.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

Michael Baker International
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Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 138 *
* 100-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV00138S.DAT
TIME/DATE OF STUDY: 13:48 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 138.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69102.102 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.559 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.395
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.48
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.93
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.27
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.33
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.43
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.96

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.287
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.392
3-HOUR FACTOR = 0.734
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.256

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

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.186	1555.113
2	0.558	3110.236
3	0.930	3110.229
4	1.303	3110.231
5	1.675	3110.229
6	2.085	3428.289
7	2.638	4619.540
8	3.204	4732.955
9	3.773	4750.788
10	4.620	7079.410
11	5.667	8750.971
12	6.926	10523.829
13	8.391	12243.743
14	10.096	14246.983
15	11.734	13692.996
16	13.368	13655.434
17	15.535	18106.330
18	17.460	16090.618
19	19.198	14517.074
20	21.171	16487.678
21	23.561	19977.166
22	25.580	16869.707
23	27.455	15674.749
24	29.781	19439.582
25	32.164	19910.443
26	35.021	23881.393
27	37.092	17299.826
28	39.770	22387.580
29	42.773	25094.186
30	45.725	24671.941
31	49.113	28311.439
32	51.876	23086.189
33	54.208	19492.055
34	56.496	19116.770
35	59.220	22770.709
36	62.462	27093.768
37	65.035	21498.873
38	67.226	18307.920
39	69.635	20136.086
40	71.692	17191.436
41	73.755	17239.062
42	75.739	16576.160
43	77.289	12958.595
44	78.736	12095.232
45	80.201	12236.204
46	81.719	12686.024
47	83.127	11770.061
48	84.449	11050.730

49	85.684	10316.544
50	86.753	8933.099
51	87.747	8307.813
52	88.579	6950.764
53	89.345	6404.412
54	90.094	6261.528
55	90.785	5772.878
56	91.471	5730.287
57	92.139	5583.641
58	92.762	5206.506
59	93.382	5180.173
60	93.976	4967.154
61	94.415	3666.468
62	94.829	3458.486
63	95.242	3455.936
64	95.655	3453.449
65	96.034	3162.707
66	96.298	2210.465
67	96.553	2130.192
68	96.809	2135.229
69	97.064	2135.229
70	97.320	2137.716
71	97.575	2130.192
72	97.831	2137.716
73	98.018	1563.884
74	98.081	531.241
75	98.143	511.284
76	98.204	511.221
77	98.265	511.284
78	98.326	511.221
79	98.387	506.247
80	98.448	511.284
81	98.509	506.247
82	98.570	511.221
83	98.631	511.221
84	98.692	511.284
85	98.753	506.247
86	98.814	516.258
87	98.875	506.247
88	98.936	511.221
89	98.997	511.284
90	99.058	506.247
91	99.118	506.247
92	99.179	506.247
93	99.240	506.247
94	99.300	506.247
95	99.361	506.247
96	99.421	506.247
97	99.482	506.247
98	99.543	506.247
99	99.603	506.247
100	99.664	506.247
101	99.724	506.247
102	99.785	506.247
103	99.845	506.247
104	99.906	506.247
105	99.967	506.247
106	100.000	279.520

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 12454.3213
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 19512.8164

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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.	5775.0	11550.0	17325.0	23100.0
0.083	0.0544	7.90	Q	.	.	.	.
0.167	0.2178	23.72	Q	.	.	.	.
0.250	0.4905	39.59	Q	.	.	.	.
0.333	0.8727	55.50	Q	.	.	.	.
0.417	1.3649	71.47	Q	.	.	.	.
0.500	1.9785	89.09	Q	.	.	.	.
0.583	2.7555	112.82	Q	.	.	.	.
0.667	3.7004	137.20	Q	.	.	.	.
0.750	4.8143	161.74	Q	.	.	.	.
0.833	6.1793	198.19	Q	.	.	.	.
0.917	7.8544	243.23	Q	.	.	.	.
1.000	9.9028	297.42	Q	.	.	.	.
1.083	12.3856	360.51	Q	.	.	.	.
1.167	15.3743	433.96	Q	.	.	.	.
1.250	18.8510	504.81	Q	.	.	.	.
1.333	22.8159	575.70	Q	.	.	.	.
1.417	27.4262	669.42	VQ	.	.	.	.
1.500	32.6132	753.16	VQ	.	.	.	.
1.583	38.3239	829.19	VQ	.	.	.	.
1.667	44.6288	915.46	VQ	.	.	.	.
1.750	51.6518	1019.74	VQ	.	.	.	.
1.833	59.2862	1108.52	VQ	.	.	.	.
1.917	67.4925	1191.55	V Q	.	.	.	.
2.000	76.4040	1293.95	V Q	.	.	.	.
2.083	86.0394	1399.07	V Q	.	.	.	.
2.167	96.5400	1524.69	V Q	.	.	.	.
2.250	107.6782	1617.25	V Q	.	.	.	.
2.333	119.6342	1736.01	V Q	.	.	.	.
2.417	132.5050	1868.84	V Q	.	.	.	.
2.500	146.2791	2000.00	V Q	.	.	.	.
2.583	161.0864	2150.02	V Q	.	.	.	.
2.667	176.7476	2274.00	V Q	.	.	.	.
2.750	193.1396	2380.12	V Q	.	.	.	.
2.833	210.2519	2484.71	V Q	.	.	.	.
2.917	228.2147	2608.20	V Q	.	.	.	.
3.000	247.1821	2754.07	V Q	.	.	.	.
3.083	266.9615	2871.97	V Q	.	.	.	.
3.167	287.4443	2974.10	V Q	.	.	.	.
3.250	308.6966	3085.83	V Q	.	.	.	.
3.333	330.6183	3183.03	V Q	.	.	.	.
3.417	353.2133	3280.80	V Q	.	.	.	.
3.500	376.4610	3375.56	V Q	.	.	.	.
3.583	400.2370	3452.28	V Q	.	.	.	.
3.667	424.5133	3524.92	V Q	.	.	.	.
3.750	449.2967	3598.55	V Q	.	.	.	.
3.833	474.6051	3674.77	V Q	.	.	.	.
3.917	500.4082	3746.62	.V Q	.	.	.	.

4.000	526.6832	3815.12	.V Q	.	.	.	.
4.083	553.4059	3880.14	.V Q	.	.	.	.
4.167	580.5302	3938.44	.V Q	.	.	.	.
4.250	608.0356	3993.80	.V Q	.	.	.	.
4.333	635.8767	4042.53	.V Q	.	.	.	.
4.417	664.0357	4088.69	.V Q	.	.	.	.
4.500	692.5094	4134.38	.V Q	.	.	.	.
4.583	721.2820	4177.78	.V Q	.	.	.	.
4.667	750.3538	4221.23	.V Q	.	.	.	.
4.750	779.7210	4264.11	.V Q	.	.	.	.
4.833	809.3721	4305.35	.V Q	.	.	.	.
4.917	839.3076	4346.64	.V Q	.	.	.	.
5.000	869.5217	4387.08	.V Q	.	.	.	.
5.083	899.9702	4421.13	.V Q	.	.	.	.
5.167	930.6476	4454.36	.V Q	.	.	.	.
5.250	961.5550	4487.75	.V Q	.	.	.	.
5.333	992.6939	4521.37	. V Q	.	.	.	.
5.417	1024.0554	4553.69	. V Q	.	.	.	.
5.500	1055.6079	4581.43	. V Q	.	.	.	.
5.583	1087.3497	4608.92	. V Q	.	.	.	.
5.667	1119.2827	4636.67	. V Q	.	.	.	.
5.750	1151.4081	4664.60	. V Q	.	.	.	.
5.833	1183.7275	4692.78	. V Q	.	.	.	.
5.917	1216.2421	4721.11	. V Q	.	.	.	.
6.000	1248.9536	4749.72	. V Q	.	.	.	.
6.083	1281.8434	4775.60	. V Q	.	.	.	.
6.167	1314.8771	4796.49	. V Q	.	.	.	.
6.250	1348.0551	4817.44	. V Q	.	.	.	.
6.333	1381.3790	4838.64	. V Q	.	.	.	.
6.417	1414.8501	4860.00	. V Q	.	.	.	.
6.500	1448.4701	4881.62	. V Q	.	.	.	.
6.583	1482.2400	4903.39	. V Q	.	.	.	.
6.667	1516.1617	4925.44	. V Q	.	.	.	.
6.750	1550.2366	4947.66	. V Q	.	.	.	.
6.833	1584.4664	4970.17	. V Q	.	.	.	.
6.917	1618.8527	4992.87	. V Q	.	.	.	.
7.000	1653.3971	5015.85	. V Q	.	.	.	.
7.083	1688.1010	5039.01	. V Q	.	.	.	.
7.167	1722.9667	5062.50	. V Q	.	.	.	.
7.250	1757.9952	5086.16	. V Q	.	.	.	.
7.333	1793.1890	5110.13	. V Q	.	.	.	.
7.417	1828.5493	5134.32	. V Q	.	.	.	.
7.500	1864.0782	5158.80	. V Q	.	.	.	.
7.583	1899.7773	5183.51	. V Q	.	.	.	.
7.667	1935.6488	5208.53	. V Q	.	.	.	.
7.750	1971.6942	5233.80	. V Q	.	.	.	.
7.833	2007.9159	5259.39	. V Q	.	.	.	.
7.917	2044.3156	5285.23	. V Q	.	.	.	.
8.000	2080.8955	5311.42	. V Q	.	.	.	.
8.083	2117.6577	5337.87	. V Q	.	.	.	.
8.167	2154.6045	5364.68	. V Q	.	.	.	.
8.250	2191.7378	5391.75	. V Q	.	.	.	.
8.333	2229.0603	5419.21	. V Q	.	.	.	.
8.417	2266.5737	5446.95	. V Q	.	.	.	.
8.500	2304.2808	5475.07	. V Q	.	.	.	.
8.583	2342.1836	5503.49	. V Q	.	.	.	.
8.667	2380.2849	5532.32	. V Q	.	.	.	.
8.750	2418.5869	5561.46	. V Q	.	.	.	.

8.833	2457.0845	5589.86	.	V	Q.	.	.	.
8.917	2495.7703	5617.18	.	V	Q.	.	.	.
9.000	2534.6472	5644.92	.	V	Q.	.	.	.
9.083	2573.7175	5673.00	.	V	Q.	.	.	.
9.167	2612.9844	5701.53	.	V	Q.	.	.	.
9.250	2652.4500	5730.42	.	V	Q.	.	.	.
9.333	2692.1179	5759.78	.	V	Q.	.	.	.
9.417	2731.9905	5789.50	.	V	Q.	.	.	.
9.500	2772.0713	5819.73	.	V	Q	.	.	.
9.583	2812.3630	5850.35	.	V	Q	.	.	.
9.667	2852.8691	5881.48	.	V	Q	.	.	.
9.750	2893.5925	5913.03	.	V	Q	.	.	.
9.833	2934.5369	5945.12	.	V	Q	.	.	.
9.917	2975.7053	5977.64	.	V	Q	.	.	.
10.000	3017.1016	6010.74	.	V	Q	.	.	.
10.083	3058.7290	6044.29	.	V	Q	.	.	.
10.167	3100.5916	6078.45	.	V	Q	.	.	.
10.250	3142.6926	6113.09	.	V	Q	.	.	.
10.333	3185.0369	6148.37	.	V	Q	.	.	.
10.417	3227.6274	6184.16	.	V	Q	.	.	.
10.500	3270.4692	6220.62	.	V	Q	.	.	.
10.583	3313.5657	6257.62	.	V	Q	.	.	.
10.667	3356.9219	6295.32	.	V	Q	.	.	.
10.750	3400.5417	6333.61	.	V	Q	.	.	.
10.833	3444.4304	6372.64	.	V	.Q	.	.	.
10.917	3488.5920	6412.28	.	V	.Q	.	.	.
11.000	3533.0322	6452.71	.	V	.Q	.	.	.
11.083	3577.7554	6493.80	.	V	.Q	.	.	.
11.167	3622.7671	6535.72	.	V	.Q	.	.	.
11.250	3668.0725	6578.33	.	V	.Q	.	.	.
11.333	3713.6775	6621.84	.	V	.Q	.	.	.
11.417	3759.5872	6666.09	.	V	.Q	.	.	.
11.500	3805.8081	6711.27	.	V	.Q	.	.	.
11.583	3852.3457	6757.26	.	V	.Q	.	.	.
11.667	3899.2070	6804.25	.	V	.Q	.	.	.
11.750	3946.3977	6852.10	.	V	.Q	.	.	.
11.833	3993.9253	6901.01	.	V	.Q	.	.	.
11.917	4041.7961	6950.85	.	V	.Q	.	.	.
12.000	4090.0181	7001.83	.	V	.Q	.	.	.
12.083	4138.7046	7069.31	.	V	.Q	.	.	.
12.167	4187.9707	7153.47	.	V	.Q	.	.	.
12.250	4237.8228	7238.51	.	V	.Q	.	.	.
12.333	4288.2681	7324.69	.	V	.Q	.	.	.
12.417	4339.3135	7411.83	.	V	.Q	.	.	.
12.500	4390.9893	7503.34	.	V	.Q	.	.	.
12.583	4443.3843	7607.77	.	V	.Q	.	.	.
12.667	4496.5146	7714.56	.	V	.Q	.	.	.
12.750	4550.3887	7822.54	.	V	.Q	.	.	.
12.833	4605.1758	7955.08	.	V	.Q	.	.	.
12.917	4660.9976	8105.29	.	V	.Q	.	.	.
13.000	4717.9834	8274.38	.	V	.Q	.	.	.
13.083	4776.2583	8461.52	.	V	.Q	.	.	.
13.167	4835.9673	8669.72	.	V	.Q	.	.	.
13.250	4897.0771	8873.18	.	V	.Q	.	.	.
13.333	4959.5928	9077.28	.	V	.Q	.	.	.
13.417	5023.8262	9326.68	.	V	.Q	.	.	.
13.500	5089.6450	9556.92	.	V	.Q	.	.	.
13.583	5156.9463	9772.17	.	V	.Q	.	.	.

13.667	5225.8740	10008.34	.	V	Q	.	.	.
13.750	5296.6738	10280.15	.	V	Q	.	.	.
13.833	5369.1396	10522.04	.	.V	Q	.	.	.
13.917	5443.1948	10752.78	.	.V	Q	.	.	.
14.000	5519.1079	11022.57	.	.V	Q.	.	.	.
14.083	5597.0068	11310.94	.	.V	Q.	.	.	.
14.167	5677.2612	11652.95	.	.V	Q	.	.	.
14.250	5759.4165	11928.94	.	.V	Q	.	.	.
14.333	5843.8237	12255.95	.	.V	.Q	.	.	.
14.417	5930.6689	12609.92	.	.V	.Q	.	.	.
14.500	6019.9399	12962.17	.	.V	.Q	.	.	.
14.583	6111.9541	13360.47	.	.V	.Q	.	.	.
14.667	6206.3540	13706.90	.	.V	.Q	.	.	.
14.750	6302.8877	14016.67	.	.V	.Q	.	.	.
14.833	6401.6621	14342.04	.	.V	.Q	.	.	.
14.917	6503.0166	14716.66	.	.V	.Q	.	.	.
15.000	6607.3379	15147.47	.	.V	.Q	.	.	.
15.083	6714.3208	15533.92	.	.V	.Q	.	.	.
15.167	6823.8389	15902.01	.	.V	.Q	.	.	.
15.250	6935.9580	16279.67	.	.V	.Q	.	.	.
15.333	7050.4434	16623.28	.	.V	.Q	.	.	.
15.417	7167.3975	16981.75	.	.V	.Q	.	.	.
15.500	7286.4990	17293.55	.	.V	.Q	.	.	.
15.583	7407.3960	17554.21	.	.V	.Q	.	.	.
15.667	7530.1445	17823.10	.	.V	.Q	.	.	.
15.750	7654.9072	18115.55	.	.V	.Q	.	.	.
15.833	7781.4653	18376.26	.	.V	.Q	.	.	.
15.917	7909.6372	18610.56	.	.V	.Q	.	.	.
16.000	8039.7207	18888.15	.	.V	.Q	.	.	.
16.083	8172.6182	19296.68	.	.V	.Q	.	.	.
16.167	8308.1045	19672.64	.	.V	.Q	.	.	.
16.250	8444.5518	19812.20	.	.V	.Q	.	.	.
16.333	8581.9990	19957.40	.	.V	.Q	.	.	.
16.417	8720.5928	20123.82	.	.V	.Q	.	.	.
16.500	8860.4551	20308.07	.	.V	.Q	.	.	.
16.583	9002.2988	20595.77	.	.V	.Q	.	.	.
16.667	9145.2080	20750.47	.	.V	.Q	.	.	.
16.750	9288.6914	20833.81	.	.V	.Q	.	.	.
16.833	9434.3281	21146.39	.	.V	.Q	.	.	.
16.917	9582.2246	21474.61	.	.V	.Q	.	.	.
17.000	9732.5254	21823.71	.	.V	.Q	.	.	.
17.083	9884.1699	22018.83	.	.V	.Q	.	.	.
17.167	10037.3389	22240.10	.	.V	.Q	.	.	.
17.250	10190.9609	22305.90	.	.V	.Q	.	.	.
17.333	10345.0400	22372.34	.	.V	.Q	.	.	.
17.417	10501.9180	22778.73	.	.V	.Q	.	.	.
17.500	10657.4561	22584.18	.	.V	.Q	.	.	.
17.583	10812.5889	22525.32	.	.V	.Q	.	.	.
17.667	10968.8711	22692.19	.	.V	.Q	.	.	.
17.750	11126.9736	22956.54	.	.V	.Q	.	.	.
17.833	11282.8174	22628.49	.	.V	.Q	.	.	.
17.917	11437.5576	22468.21	.	.V	.Q	.	.	.
18.000	11594.5508	22795.36	.	.V	.Q	.	.	.
18.083	11751.9443	22853.61	.	.V	.Q	.	.	.
18.167	11910.9570	23088.59	.	.V	.Q	.	.	.
18.250	12065.1328	22386.29	.	.V	.Q	.	.	.
18.333	12221.6143	22721.15	.	.V	.Q	.	.	.
18.417	12379.0479	22859.31	.	.V	.Q	.	.	.

18.500	12536.1836	22816.07	.	.	.	V	.	Q.
18.583	12694.0137	22916.98	.	.	.	V	.	Q.
18.667	12847.4473	22278.60	.	.	.	V	.	Q.
18.750	12998.1025	21875.16	.	.	.	V	.	Q.
18.833	13148.4473	21830.04	.	.	.	V	.	Q.
18.917	13301.3379	22199.78	.	.	.	V	.	Q.
19.000	13455.8662	22437.47	.	.	.	V	.	Q.
19.083	13605.4102	21713.79	.	.	.	V	.	Q.
19.167	13751.1504	21161.54	.	.	.	V	.	Q.
19.250	13896.7529	21141.45	.	.	.	V	.	Q.
19.333	14039.5605	20735.70	.	.	.	V	.	Q.
19.417	14180.4688	20459.84	.	.	.	V	.	Q.
19.500	14318.7393	20076.94	.	.	.	V	.	Q.
19.583	14452.8213	19468.77	.	.	.	V	.	Q.
19.667	14584.5791	19131.21	.	.	.	V	.	Q.
19.750	14714.6260	18882.81	.	.	.	V	.	Q.
19.833	14843.2783	18680.28	.	.	.	V	.	Q.
19.917	14969.2588	18292.39	.	.	.	V	.	Q.
20.000	15092.0186	17824.75	.	.	.	Q	.	.
20.083	15211.7031	17378.17	.	.	.	Q	.	.
20.167	15327.8047	16857.90	.	.	.	Q	.	.
20.250	15441.0352	16441.05	.	.	.	Q	.	.
20.333	15550.7686	15933.28	.	.	.	Q	.	.
20.417	15657.4092	15484.27	.	.	.	Q	.	.
20.500	15761.1680	15065.79	.	.	.	Q	.	.
20.583	15861.7480	14604.22	.	.	.	Q	.	.
20.667	15959.7090	14223.97	.	.	.	Q	.	.
20.750	16055.2051	13866.00	.	.	.	Q	.	.
20.833	16148.1426	13494.48	.	.	.	Q	.	.
20.917	16238.4053	13106.18	.	.	.	Q	.	.
21.000	16325.5303	12650.48	.	.	.	Q	.	.
21.083	16409.3223	12166.51	.	.	.	Q	.	.
21.167	16490.7793	11827.66	.	.	.	Q	.	.
21.250	16569.9316	11493.03	.	.	.	Q	.	.
21.333	16647.0137	11192.36	.	.	.	Q	.	.
21.417	16721.7988	10858.68	.	.	.	Q	.	.
21.500	16794.0605	10492.34	.	.	.	Q	.	.
21.583	16864.6387	10247.96	.	.	.	Q	.	.
21.667	16933.6523	10020.89	.	.	.	Q	.	.
21.750	17001.1035	9793.83	.	.	.	Q	.	.
21.833	17066.9258	9557.38	.	.	.	Q	.	.
21.917	17131.1348	9323.15	.	.	.	Q	.	.
22.000	17193.7246	9088.05	.	.	.	Q	.	.
22.083	17254.4434	8816.32	.	.	.	Q	.	.
22.167	17313.1973	8530.95	.	.	.	Q	.	.
22.250	17370.6934	8348.44	.	.	.	Q	.	.
22.333	17427.0664	8185.31	.	.	.	Q	.	.
22.417	17482.3555	8028.02	.	.	.	Q	.	.
22.500	17536.5566	7869.88	.	.	.	Q	.	.
22.583	17589.7090	7717.81	.	.	.	Q	.	.
22.667	17641.8301	7568.02	.	.	.	Q	.	.
22.750	17692.9316	7419.93	.	.	.	Q	.	.
22.833	17743.0391	7275.64	.	.	.	Q	.	.
22.917	17792.1426	7129.89	.	.	.	Q	.	.
23.000	17840.2656	6987.43	.	.	.	Q	.	.
23.083	17887.5352	6863.62	.	.	.	Q	.	.
23.167	17934.0488	6753.68	.	.	.	Q	.	.
23.250	17979.8086	6644.41	.	.	.	Q	.	.

23.333	18024.8398	6538.54	.	.	.	Q	.	V
23.417	18069.1719	6436.97	.	.	.	Q	.	V
23.500	18112.8809	6346.53	.	.	.	Q	.	V
23.583	18155.9883	6259.17	.	.	.	Q	.	V
23.667	18198.5059	6173.57	.	.	.	Q	.	V
23.750	18240.4473	6089.75	.	.	.	Q	.	V
23.833	18281.8203	6007.45	.	.	.	Q	.	V
23.917	18322.6387	5926.80	.	.	.	Q	.	V
24.000	18362.9121	5847.58	.	.	.	Q	.	V
24.083	18402.6348	5767.74	.	.	.	Q	.	V
24.167	18441.8535	5694.53	.	.	.	Q	.	V
24.250	18480.6035	5626.42	.	.	.	Q	.	V
24.333	18518.8906	5559.16	.	.	.	Q	.	V
24.417	18556.7188	5492.61	.	.	.	Q	.	V
24.500	18594.0879	5426.04	.	.	.	Q	.	V
24.583	18630.9668	5354.94	.	.	.	Q	.	V
24.667	18667.3477	5282.39	.	.	.	Q	.	V
24.750	18703.2109	5207.29	.	.	.	Q	.	V
24.833	18738.3398	5100.76	.	.	.	Q	.	V
24.917	18772.6738	4985.29	.	.	.	Q	.	V
25.000	18806.3398	4888.21	.	.	.	Q	.	V
25.083	18839.2910	4784.42	.	.	.	Q	.	V
25.167	18871.4512	4669.71	.	.	.	Q	.	V
25.250	18902.8262	4555.77	.	.	.	Q	.	V
25.333	18933.4238	4442.73	.	.	.	Q	.	V
25.417	18963.0918	4307.89	.	.	.	Q	.	V
25.500	18991.9082	4184.24	.	.	.	Q	.	V
25.583	19019.9336	4069.41	.	.	.	Q	.	V
25.667	19047.1055	3945.39	.	.	.	Q	.	V
25.750	19073.3066	3804.53	.	.	.	Q	.	V
25.833	19098.6660	3682.31	.	.	.	Q	.	V
25.917	19123.2500	3569.54	.	.	.	Q	.	V
26.000	19146.9336	3438.77	.	.	.	Q	.	V
26.083	19169.7070	3306.78	.	.	.	Q	.	V
26.167	19191.4414	3155.80	.	.	.	Q	.	V
26.250	19212.3750	3039.42	.	.	.	Q	.	V
26.333	19232.3359	2898.25	.	.	.	Q	.	V
26.417	19251.2363	2744.47	.	.	.	Q	.	V
26.500	19269.1016	2594.01	.	.	.	Q	.	V
26.583	19285.8105	2426.22	.	.	.	Q	.	V
26.667	19301.5547	2286.15	.	.	.	Q	.	V
26.750	19316.4668	2165.34	.	.	.	Q	.	V
26.833	19330.5820	2049.61	.	.	.	Q	.	V
26.917	19343.7988	1919.03	.	.	.	Q	.	V
27.000	19355.9727	1767.54	.	.	.	Q	.	V
27.083	19367.3047	1645.54	.	.	.	Q	.	V
27.167	19377.9160	1540.64	.	.	.	Q	.	V
27.250	19387.7461	1427.27	.	.	.	Q	.	V
27.333	19396.9043	1329.68	.	.	.	Q	.	V
27.417	19405.3926	1232.57	.	.	.	Q	.	V
27.500	19413.2402	1139.55	.	.	.	Q	.	V
27.583	19420.5781	1065.55	.	.	.	Q	.	V
27.667	19427.4414	996.50	.	.	.	Q	.	V
27.750	19433.8281	927.25	.	.	.	Q	.	V
27.833	19439.7246	856.23	.	.	.	Q	.	V
27.917	19445.1680	790.37	.	.	.	Q	.	V
28.000	19450.1855	728.64	.	.	.	Q	.	V
28.083	19454.8066	671.08	.	.	.	Q	.	V

28.167	19459.0840	620.94	.Q	.	.	.	V.
28.250	19463.0391	574.34	Q	.	.	.	V.
28.333	19466.7227	534.97	Q	.	.	.	V.
28.417	19470.1562	498.65	Q	.	.	.	V.
28.500	19473.3477	463.33	Q	.	.	.	V.
28.583	19476.3145	430.74	Q	.	.	.	V.
28.667	19479.0605	398.61	Q	.	.	.	V.
28.750	19481.5918	367.46	Q	.	.	.	V.
28.833	19483.9219	338.44	Q	.	.	.	V.
28.917	19486.0547	309.76	Q	.	.	.	V.
29.000	19488.0000	282.36	Q	.	.	.	V.
29.083	19489.8027	261.75	Q	.	.	.	V.
29.167	19491.4727	242.34	Q	.	.	.	V.
29.250	19493.0098	223.09	Q	.	.	.	V.
29.333	19494.4141	203.99	Q	.	.	.	V.
29.417	19495.6992	186.49	Q	.	.	.	V.
29.500	19496.8965	173.95	Q	.	.	.	V.
29.583	19498.0117	161.91	Q	.	.	.	V.
29.667	19499.0449	149.93	Q	.	.	.	V.
29.750	19499.9961	138.03	Q	.	.	.	V.
29.833	19500.8652	126.21	Q	.	.	.	V.
29.917	19501.6543	114.50	Q	.	.	.	V.
30.000	19502.3633	102.84	Q	.	.	.	V.
30.083	19503.0117	94.17	Q	.	.	.	V.
30.167	19503.6367	90.80	Q	.	.	.	V.
30.250	19504.2402	87.56	Q	.	.	.	V.
30.333	19504.8203	84.35	Q	.	.	.	V.
30.417	19505.3789	81.16	Q	.	.	.	V.
30.500	19505.9160	78.00	Q	.	.	.	V.
30.583	19506.4316	74.89	Q	.	.	.	V.
30.667	19506.9258	71.78	Q	.	.	.	V.
30.750	19507.3984	68.73	Q	.	.	.	V.
30.833	19507.8516	65.67	Q	.	.	.	V.
30.917	19508.2832	62.63	Q	.	.	.	V.
31.000	19508.6934	59.62	Q	.	.	.	V.
31.083	19509.0840	56.66	Q	.	.	.	V.
31.167	19509.4531	53.66	Q	.	.	.	V.
31.250	19509.8027	50.75	Q	.	.	.	V.
31.333	19510.1328	47.82	Q	.	.	.	V.
31.417	19510.4414	44.92	Q	.	.	.	V.
31.500	19510.7305	42.06	Q	.	.	.	V.
31.583	19511.0000	39.23	Q	.	.	.	V.
31.667	19511.2500	36.41	Q	.	.	.	V.
31.750	19511.4824	33.61	Q	.	.	.	V.
31.833	19511.6953	30.83	Q	.	.	.	V.
31.917	19511.8887	28.07	Q	.	.	.	V.
32.000	19512.0625	25.33	Q	.	.	.	V.
32.083	19512.2188	22.61	Q	.	.	.	V.
32.167	19512.3555	19.90	Q	.	.	.	V.
32.250	19512.4746	17.21	Q	.	.	.	V.
32.333	19512.5742	14.54	Q	.	.	.	V.
32.417	19512.6562	11.89	Q	.	.	.	V.
32.500	19512.7207	9.25	Q	.	.	.	V.
32.583	19512.7656	6.62	Q	.	.	.	V.
32.667	19512.7930	4.02	Q	.	.	.	V.
32.750	19512.8027	1.43	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%	1965.0
10%	1435.0
20%	1175.0
30%	670.0
40%	515.0
50%	425.0
60%	365.0
70%	305.0
80%	240.0
90%	155.0

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* PHASE CONDITION NO PA5 - UH SINGLE AREA MODEL - NODE 139 *
* 100-YR EV JANUARY 2019 CCHIUI *

FILE NAME: EV00139S.DAT
TIME/DATE OF STUDY: 13:52 01/02/2019

FLOW PROCESS FROM NODE 10100.00 TO NODE 139.00 IS CODE = 1

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

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 69529.898 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.606 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284
LOW LOSS FRACTION = 0.395
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.48
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.93
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.27
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.33
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.43
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.95

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.286
30-MINUTE FACTOR = 0.348
1-HOUR FACTOR = 0.391
3-HOUR FACTOR = 0.733
6-HOUR FACTOR = 0.885
24-HOUR FACTOR = 0.932

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 3.198

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.183	1536.523
2	0.548	3073.043
3	0.914	3073.045
4	1.279	3073.048
5	1.645	3073.043
6	2.037	3296.021
7	2.571	4497.318
8	3.127	4676.370
9	3.684	4676.372
10	4.442	6379.185
11	5.464	8595.242
12	6.642	9900.349
13	8.031	11685.256
14	9.685	13904.582
15	11.309	13652.762
16	12.908	13444.551
17	14.826	16130.760
18	16.912	17544.471
19	18.618	14340.933
20	20.425	15193.168
21	22.656	18765.125
22	24.858	18511.621
23	26.685	15367.955
24	28.735	17237.430
25	31.065	19591.604
26	33.732	22425.053
27	36.210	20838.834
28	38.226	16949.475
29	41.282	25697.910
30	44.162	24213.936
31	47.159	25208.062
32	50.471	27846.934
33	52.856	20052.564
34	55.084	18736.160
35	57.470	20060.264
36	60.378	24455.955
37	63.429	25651.365
38	65.757	19583.246
39	67.922	18204.293
40	70.287	19884.994
41	72.232	16350.183
42	74.274	17171.287
43	76.142	15706.976
44	77.601	12272.886
45	79.022	11949.999
46	80.471	12182.429
47	81.956	12485.427
48	83.324	11500.602

49	84.606	10785.414
50	85.810	10119.049
51	86.842	8682.260
52	87.814	8171.274
53	88.619	6774.260
54	89.372	6326.209
55	90.107	6179.747
56	90.784	5698.336
57	91.458	5661.062
58	92.115	5528.777
59	92.728	5150.078
60	93.337	5120.502
61	93.929	4979.300
62	94.370	3708.092
63	94.776	3417.988
64	95.182	3412.792
65	95.588	3412.856
66	95.976	3263.826
67	96.247	2280.348
68	96.498	2108.352
69	96.749	2110.854
70	97.000	2108.288
71	97.250	2108.288
72	97.501	2108.288
73	97.752	2110.854
74	97.978	1897.735
75	98.061	695.941
76	98.121	505.853
77	98.181	503.351
78	98.241	505.853
79	98.301	503.351
80	98.361	503.287
81	98.420	503.351
82	98.481	505.853
83	98.540	503.351
84	98.600	503.287
85	98.661	508.483
86	98.720	498.155
87	98.780	508.483
88	98.840	503.351
89	98.900	503.287
90	98.960	503.351
91	99.020	503.287
92	99.080	503.287
93	99.140	503.287
94	99.199	503.287
95	99.259	503.287
96	99.319	503.287
97	99.379	503.287
98	99.439	503.287
99	99.499	503.287
100	99.559	503.287
101	99.618	503.287
102	99.678	503.287
103	99.738	503.287
104	99.798	503.287
105	99.858	503.287
106	99.918	503.287

107	99.977	503.287
108	100.000	189.254

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 12510.9717
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 19599.3379

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.	5775.0	11550.0	17325.0	23100.0
0.083	0.0537	7.80	Q	.	.	.	.
0.167	0.2149	23.40	Q	.	.	.	.
0.250	0.4838	39.05	Q	.	.	.	.
0.333	0.8609	54.75	Q	.	.	.	.
0.417	1.3464	70.50	Q	.	.	.	.
0.500	1.9485	87.42	Q	.	.	.	.
0.583	2.7095	110.49	Q	.	.	.	.
0.667	3.6360	134.54	Q	.	.	.	.
0.750	4.7287	158.65	Q	.	.	.	.
0.833	6.0474	191.48	Q	.	.	.	.
0.917	7.6704	235.65	Q	.	.	.	.
1.000	9.6439	286.56	Q	.	.	.	.
1.083	12.0316	346.69	Q	.	.	.	.
1.167	14.9120	418.24	Q	.	.	.	.
1.250	18.2780	488.74	Q	.	.	.	.
1.333	22.1237	558.39	Q	.	.	.	.
1.417	26.5444	641.89	VQ	.	.	.	.
1.500	31.5912	732.80	VQ	.	.	.	.
1.583	37.1543	807.75	VQ	.	.	.	.
1.667	43.2649	887.26	VQ	.	.	.	.
1.750	50.0495	985.13	VQ	.	.	.	.
1.833	57.5014	1082.01	VQ	.	.	.	.
1.917	65.5128	1163.26	V Q	.	.	.	.
2.000	74.1509	1254.26	V Q	.	.	.	.
2.083	83.4998	1357.46	V Q	.	.	.	.
2.167	93.6609	1475.38	V Q	.	.	.	.
2.250	104.5810	1585.61	V Q	.	.	.	.
2.333	116.1271	1676.48	V Q	.	.	.	.
2.417	128.6066	1812.02	V Q	.	.	.	.
2.500	141.9704	1940.44	V Q	.	.	.	.
2.583	156.2566	2074.34	V Q	.	.	.	.
2.667	171.5598	2222.03	V Q	.	.	.	.
2.750	187.6112	2330.67	V Q	.	.	.	.
2.833	204.3674	2433.00	V Q	.	.	.	.
2.917	221.8770	2542.40	V Q	.	.	.	.
3.000	240.2962	2674.46	V Q	.	.	.	.
3.083	259.6694	2813.00	V Q	.	.	.	.
3.167	279.7881	2921.23	V Q	.	.	.	.
3.250	300.6067	3022.86	V Q	.	.	.	.
3.333	322.1862	3133.35	V Q	.	.	.	.
3.417	344.4060	3226.31	V Q	.	.	.	.
3.500	367.2970	3323.77	V Q	.	.	.	.
3.583	390.8104	3414.14	V Q	.	.	.	.
3.667	414.8286	3487.45	V Q	.	.	.	.
3.750	439.3423	3559.39	V Q	.	.	.	.
3.833	464.3616	3632.81	V Q	.	.	.	.
3.917	489.8991	3708.04	V Q	.	.	.	.

4.000	515.9224	3778.58	.V	Q	.	.	.	.
4.083	542.4084	3845.77	.V	Q	.	.	.	.
4.167	569.3358	3909.86	.V	Q	.	.	.	.
4.250	596.6563	3966.94	.V	Q	.	.	.	.
4.333	624.3539	4021.69	.V	Q	.	.	.	.
4.417	652.3813	4069.58	.V	Q	.	.	.	.
4.500	680.7246	4115.45	.V	Q	.	.	.	.
4.583	709.3801	4160.79	.V	Q	.	.	.	.
4.667	738.3328	4203.92	.V	Q	.	.	.	.
4.750	767.5826	4247.07	.V	Q	.	.	.	.
4.833	797.1266	4289.80	.V	Q	.	.	.	.
4.917	826.9532	4330.81	.V	Q	.	.	.	.
5.000	857.0627	4371.91	.V	Q	.	.	.	.
5.083	887.4519	4412.51	.V	Q	.	.	.	.
5.167	918.0779	4446.89	.V	Q	.	.	.	.
5.250	948.9319	4480.00	.V	Q	.	.	.	.
5.333	980.0153	4513.31	. V	Q	.	.	.	.
5.417	1011.3295	4546.82	. V	Q	.	.	.	.
5.500	1042.8708	4579.80	. V	Q	.	.	.	.
5.583	1074.6063	4607.99	. V	Q	.	.	.	.
5.667	1106.5315	4635.53	. V	Q	.	.	.	.
5.750	1138.6477	4663.27	. V	Q	.	.	.	.
5.833	1170.9564	4691.22	. V	Q	.	.	.	.
5.917	1203.4590	4719.37	. V	Q	.	.	.	.
6.000	1236.1570	4747.75	. V	Q	.	.	.	.
6.083	1269.0519	4776.34	. V	Q	.	.	.	.
6.167	1302.1379	4804.09	. V	Q	.	.	.	.
6.250	1335.3745	4825.95	. V	Q	.	.	.	.
6.333	1368.7566	4847.07	. V	Q	.	.	.	.
6.417	1402.2854	4868.37	. V	Q	.	.	.	.
6.500	1435.9625	4889.91	. V	Q	.	.	.	.
6.583	1469.7892	4911.64	. V	Q	.	.	.	.
6.667	1503.7672	4933.60	. V	Q	.	.	.	.
6.750	1537.8979	4955.78	. V	Q	.	.	.	.
6.833	1572.1831	4978.21	. V	Q	.	.	.	.
6.917	1606.6241	5000.84	. V	Q	.	.	.	.
7.000	1641.2228	5023.73	. V	Q	.	.	.	.
7.083	1675.9807	5046.86	. V	Q	.	.	.	.
7.167	1710.8994	5070.20	. V	Q	.	.	.	.
7.250	1745.9808	5093.83	. V	Q	.	.	.	.
7.333	1781.2267	5117.71	. V	Q	.	.	.	.
7.417	1816.6387	5141.82	. V	Q	.	.	.	.
7.500	1852.2188	5166.22	. V	Q	.	.	.	.
7.583	1887.9685	5190.87	. V	Q	.	.	.	.
7.667	1923.8901	5215.81	. V	Q	.	.	.	.
7.750	1959.9852	5241.02	. V	Q	.	.	.	.
7.833	1996.2561	5266.53	. V	Q	.	.	.	.
7.917	2032.7045	5292.31	. V	Q	.	.	.	.
8.000	2069.3328	5318.41	. V	Q	.	.	.	.
8.083	2106.1426	5344.79	. V	Q	.	.	.	.
8.167	2143.1365	5371.50	. V	Q	.	.	.	.
8.250	2180.3164	5398.52	. V	Q	.	.	.	.
8.333	2217.6848	5425.88	. V	Q	.	.	.	.
8.417	2255.2437	5453.54	. V	Q	.	.	.	.
8.500	2292.9954	5481.56	. V	Q	.	.	.	.
8.583	2330.9424	5509.91	. V	Q	.	.	.	.
8.667	2369.0872	5538.63	. V	Q	.	.	.	.
8.750	2407.4321	5567.68	. V	Q	.	.	.	.

8.833	2445.9800	5597.14	.	V	Q.	.	.	.
8.917	2484.7329	5626.93	.	V	Q.	.	.	.
9.000	2523.6831	5655.55	.	V	Q.	.	.	.
9.083	2562.8262	5683.57	.	V	Q.	.	.	.
9.167	2602.1650	5712.02	.	V	Q.	.	.	.
9.250	2641.7026	5740.84	.	V	Q.	.	.	.
9.333	2681.4417	5770.10	.	V	Q.	.	.	.
9.417	2721.3850	5799.76	.	V	Q.	.	.	.
9.500	2761.5359	5829.89	.	V	Q	.	.	.
9.583	2801.8970	5860.43	.	V	Q	.	.	.
9.667	2842.4717	5891.46	.	V	Q	.	.	.
9.750	2883.2632	5922.92	.	V	Q	.	.	.
9.833	2924.2749	5954.90	.	V	Q	.	.	.
9.917	2965.5100	5987.34	.	V	Q	.	.	.
10.000	3006.9722	6020.31	.	V	Q	.	.	.
10.083	3048.6648	6053.77	.	V	Q	.	.	.
10.167	3090.5918	6087.79	.	V	Q	.	.	.
10.250	3132.7566	6122.33	.	V	Q	.	.	.
10.333	3175.1633	6157.47	.	V	Q	.	.	.
10.417	3217.8159	6193.14	.	V	Q	.	.	.
10.500	3260.7185	6229.45	.	V	Q	.	.	.
10.583	3303.8750	6266.33	.	V	Q	.	.	.
10.667	3347.2900	6303.88	.	V	Q	.	.	.
10.750	3390.9680	6342.03	.	V	Q	.	.	.
10.833	3434.9136	6380.89	.	V	.Q	.	.	.
10.917	3479.1311	6420.39	.	V	.Q	.	.	.
11.000	3523.6257	6460.63	.	V	.Q	.	.	.
11.083	3568.4023	6501.56	.	V	.Q	.	.	.
11.167	3613.4663	6543.28	.	V	.Q	.	.	.
11.250	3658.8225	6585.73	.	V	.Q	.	.	.
11.333	3704.4768	6629.02	.	V	.Q	.	.	.
11.417	3750.4348	6673.09	.	V	.Q	.	.	.
11.500	3796.7024	6718.04	.	V	.Q	.	.	.
11.583	3843.2854	6763.84	.	V	.Q	.	.	.
11.667	3890.1902	6810.58	.	V	.Q	.	.	.
11.750	3937.4231	6858.20	.	V	.Q	.	.	.
11.833	3984.9910	6906.85	.	V	.Q	.	.	.
11.917	4032.9004	6956.45	.	V	.Q	.	.	.
12.000	4081.1589	7007.13	.	V	.Q	.	.	.
12.083	4129.8789	7074.17	.	V	.Q	.	.	.
12.167	4179.1738	7157.62	.	V	.Q	.	.	.
12.250	4229.0498	7242.00	.	V	.Q	.	.	.
12.333	4279.5142	7327.44	.	V	.Q	.	.	.
12.417	4330.5742	7413.89	.	V	.Q	.	.	.
12.500	4382.2524	7503.70	.	V	.Q	.	.	.
12.583	4434.6392	7606.55	.	V.	Q	.	.	.
12.667	4487.7544	7712.36	.	V.	Q	.	.	.
12.750	4541.6060	7819.23	.	V.	Q	.	.	.
12.833	4596.3188	7944.32	.	V.	Q	.	.	.
12.917	4652.0527	8092.58	.	V.	Q	.	.	.
13.000	4708.9053	8254.99	.	V.	Q	.	.	.
13.083	4767.0054	8436.14	.	V.	Q	.	.	.
13.167	4826.5127	8640.47	.	V.	Q	.	.	.
13.250	4887.4155	8843.10	.	V.	Q	.	.	.
13.333	4949.7065	9044.64	.	V	Q	.	.	.
13.417	5013.5762	9273.87	.	V	Q	.	.	.
13.500	5079.1284	9518.17	.	V	Q	.	.	.
13.583	5146.1484	9731.28	.	V	Q	.	.	.

13.667	5214.7017	9953.96	.	V	Q	.	.	.
13.750	5285.0410	10213.29	.	V	Q	.	.	.
13.833	5357.1558	10471.06	.	V	Q	.	.	.
13.917	5430.8359	10698.37	.	.V	Q	.	.	.
14.000	5506.2183	10945.54	.	.V	Q	.	.	.
14.083	5583.5610	11230.20	.	.V	Q.	.	.	.
14.167	5663.1528	11556.75	.	.V	Q	.	.	.
14.250	5744.8843	11867.39	.	.V	Q	.	.	.
14.333	5828.4878	12139.20	.	.V	.Q	.	.	.
14.417	5914.5649	12498.43	.	.V	.Q	.	.	.
14.500	6003.0269	12844.69	.	.V	.Q	.	.	.
14.583	6094.0083	13210.50	.	.V	.Q	.	.	.
14.667	6187.6982	13603.79	.	.V	.Q	.	.	.
14.750	6283.5532	13918.17	.	.V	.Q	.	.	.
14.833	6381.5791	14233.37	.	.V	.Q	.	.	.
14.917	6481.9878	14579.32	.	.V	.Q	.	.	.
15.000	6585.1450	14978.44	.	.V	.Q	.	.	.
15.083	6691.2173	15401.71	.	.V	.Q	.	.	.
15.167	6799.8945	15779.94	.	.V	.Q	.	.	.
15.250	6911.0386	16138.09	.	.V	.Q	.	.	.
15.333	7024.7251	16507.30	.	.V	.Q	.	.	.
15.417	7140.7085	16840.76	.	.V	.Q.	.	.	.
15.500	7258.9736	17172.11	.	.V	.Q.	.	.	.
15.583	7379.2222	17460.12	.	.V	.Q	.	.	.
15.667	7501.2646	17720.58	.	.V	.Q	.	.	.
15.750	7625.2427	18001.62	.	.V	.Q	.	.	.
15.833	7751.0962	18273.95	.	.V	.Q	.	.	.
15.917	7878.6147	18515.71	.	.V	.Q	.	.	.
16.000	8007.9531	18779.92	.	.V	.Q	.	.	.
16.083	8140.1191	19190.54	.	.V	.Q	.	.	.
16.167	8274.9248	19573.77	.	.V	.Q	.	.	.
16.250	8410.9512	19751.00	.	.V	.Q	.	.	.
16.333	8547.7959	19869.86	.	.V	.Q	.	.	.
16.417	8685.8916	20051.49	.	.V	.Q	.	.	.
16.500	8825.2256	20231.30	.	.V	.Q	.	.	.
16.583	8966.3945	20497.71	.	.V	.Q	.	.	.
16.667	9108.9609	20700.61	.	.V	.Q	.	.	.
16.750	9252.2705	20808.55	.	.V	.Q	.	.	.
16.833	9397.2188	21046.55	.	.V.	.Q	.	.	.
16.917	9544.5674	21395.03	.	.V.	.Q	.	.	.
17.000	9694.0146	21699.77	.	.V.	.Q	.	.	.
17.083	9845.3652	21976.17	.	.V	.Q	.	.	.
17.167	9998.2520	22199.11	.	.V	.Q	.	.	.
17.250	10151.6182	22268.82	.	.V	.Q	.	.	.
17.333	10305.6641	22367.43	.	.V	.Q	.	.	.
17.417	10461.5635	22636.63	.	.V	.Q.	.	.	.
17.500	10618.2891	22756.53	.	.V	.Q.	.	.	.
17.583	10773.3564	22515.80	.	.V	.Q.	.	.	.
17.667	10929.4834	22669.59	.	.V	.Q.	.	.	.
17.750	11087.3838	22927.11	.	.V	.Q.	.	.	.
17.833	11244.7549	22850.26	.	.V	.Q.	.	.	.
17.917	11399.8936	22526.07	.	.V	.Q.	.	.	.
18.000	11555.8438	22644.00	.	.V	.Q.	.	.	.
18.083	11713.3408	22868.62	.	.V	.Q.	.	.	.
18.167	11872.1865	23064.40	.	.V	.Q.	.	.	.
18.250	12029.2168	22800.78	.	.V	.Q.	.	.	.
18.333	12183.2744	22369.13	.	.V	.Q.	.	.	.
18.417	12341.6777	23000.21	.	.V	.Q.	.	.	.

18.500	12498.8398	22819.98	.	.	.	V	.	Q.
18.583	12656.1592	22842.73	.	.	.	V	.	Q.
18.667	12813.2061	22803.26	.	.	.	V	.	Q.
18.750	12964.7148	21999.11	.	.	.	V	.	Q.
18.833	13115.0127	21823.29	.	.	.	V	.	Q.
18.917	13266.1260	21941.61	.	.	.	V	.	Q.
19.000	13419.8496	22320.62	.	.	.	V	.	Q.
19.083	13572.9014	22223.13	.	.	.	V	.	Q.
19.167	13720.4414	21422.84	.	.	.	V	.	Q.
19.250	13865.5645	21071.84	.	.	.	V	.	Q.
19.333	14010.6328	21063.87	.	.	.	V	.	Q.
19.417	14152.1318	20545.72	.	.	.	V	.	Q.
19.500	14292.0918	20322.18	.	.	.	V	.	Q.
19.583	14429.0195	19881.92	.	.	.	V	.	Q.
19.667	14561.8926	19293.21	.	.	.	V	.	Q.
19.750	14692.7402	18999.04	.	.	.	V	.	Q.
19.833	14822.0635	18777.69	.	.	.	V	.	Q.
19.917	14949.8750	18558.19	.	.	.	V	.	Q.
20.000	15074.7021	18124.88	.	.	.	V	.	Q.
20.083	15196.3584	17664.48	.	.	.	V	.	Q.
20.167	15314.9268	17216.14	.	.	.	V	.	Q.
20.250	15430.0977	16722.87	.	.	.	V	.	Q.
20.333	15542.4912	16319.53	.	.	.	V	.	Q.
20.417	15651.1699	15780.14	.	.	.	V	.	Q.
20.500	15756.8623	15346.60	.	.	.	V	.	Q.
20.583	15859.6670	14927.24	.	.	.	V	.	Q.
20.667	15959.3652	14476.18	.	.	.	V	.	Q.
20.750	16056.6553	14126.54	.	.	.	V	.	Q.
20.833	16151.5303	13775.92	.	.	.	V	.	Q.
20.917	16243.8037	13398.05	.	.	.	V	.	Q.
21.000	16333.3213	12997.93	.	.	.	V	.	Q.
21.083	16419.8633	12565.80	.	.	.	V	.	Q.
21.167	16503.2305	12104.90	.	.	.	V	.	Q.
21.250	16584.2363	11761.98	.	.	.	V	.	Q.
21.333	16662.9688	11431.94	.	.	.	V	.	Q.
21.417	16739.7188	11144.18	.	.	.	V	.	Q.
21.500	16814.2480	10821.61	.	.	.	V	.	Q.
21.583	16886.2852	10459.84	.	.	.	V	.	Q.
21.667	16956.6406	10215.52	.	.	.	V	.	Q.
21.750	17025.4492	9991.07	.	.	.	V	.	Q.
21.833	17092.7090	9766.04	.	.	.	V	.	Q.
21.917	17158.3711	9534.06	.	.	.	V	.	Q.
22.000	17222.4707	9307.28	.	.	.	V	.	Q.
22.083	17285.0000	9079.33	.	.	.	V	.	Q.
22.167	17345.8887	8841.06	.	.	.	V	.	Q.
22.250	17404.7188	8542.02	.	.	.	V	.	Q.
22.333	17462.1973	8345.93	.	.	.	V	.	Q.
22.417	17518.5625	8184.29	.	.	.	V	.	Q.
22.500	17573.8750	8031.35	.	.	.	V	.	Q.
22.583	17628.1191	7876.18	.	.	.	V	.	Q.
22.667	17681.3320	7726.49	.	.	.	V	.	Q.
22.750	17733.5234	7578.13	.	.	.	V	.	Q.
22.833	17784.7109	7432.39	.	.	.	V	.	Q.
22.917	17834.9238	7290.97	.	.	.	V	.	Q.
23.000	17884.1562	7148.43	.	.	.	V	.	Q.
23.083	17932.4141	7007.14	.	.	.	V	.	Q.
23.167	17979.7988	6880.27	.	.	.	V	.	Q.
23.250	18026.4219	6769.68	.	.	.	V	.	Q.

23.333	18072.2988	6661.46	.	.	.	V	.	Q.
23.417	18117.4492	6555.86	.	.	.	V	.	Q.
23.500	18161.8945	6453.56	.	.	.	V	.	Q.
23.583	18205.7168	6363.08	.	.	.	V	.	Q.
23.667	18248.9414	6276.14	.	.	.	V	.	Q.
23.750	18291.5781	6190.95	.	.	.	V	.	Q.
23.833	18333.6406	6107.48	.	.	.	V	.	Q.
23.917	18375.1387	6025.64	.	.	.	V	.	Q.
24.000	18416.0840	5945.38	.	.	.	V	.	Q.
24.083	18456.4336	5858.75	.	.	.	V	.	Q.
24.167	18496.1582	5768.07	.	.	.	V	.	Q.
24.250	18535.3516	5690.82	.	.	.	V	.	Q.
24.333	18574.0625	5620.92	.	.	.	V	.	Q.
24.417	18612.3184	5554.61	.	.	.	V	.	Q.
24.500	18650.1133	5487.90	.	.	.	V	.	Q.
24.583	18687.4121	5415.84	.	.	.	V	.	Q.
24.667	18724.2207	5344.69	.	.	.	V	.	Q.
24.750	18760.5469	5274.60	.	.	.	V	.	Q.
24.833	18796.3223	5194.58	.	.	.	V	.	Q.
24.917	18831.4512	5100.75	.	.	.	V	.	Q.
25.000	18865.7109	4974.58	.	.	.	V	.	Q.
25.083	18899.1426	4854.31	.	.	.	V	.	Q.
25.167	18931.8008	4741.89	.	.	.	V	.	Q.
25.250	18963.7070	4632.83	.	.	.	V	.	Q.
25.333	18994.8574	4523.00	.	.	.	V	.	Q.
25.417	19025.1484	4398.30	.	.	.	V	.	Q.
25.500	19054.5371	4267.25	.	.	.	V	.	Q.
25.583	19083.1406	4153.28	.	.	.	V	.	Q.
25.667	19110.9355	4035.76	.	.	.	V	.	Q.
25.750	19137.8008	3900.95	.	.	.	V	.	Q.
25.833	19163.7539	3768.31	.	.	.	V	.	Q.
25.917	19188.9082	3652.47	.	.	.	V	.	Q.
26.000	19213.2246	3530.63	.	.	.	V	.	Q.
26.083	19236.6367	3399.51	.	.	.	V	.	Q.
26.167	19259.0547	3255.23	.	.	.	V	.	Q.
26.250	19280.5430	3120.19	.	.	.	V	.	Q.
26.333	19301.2461	3005.99	.	.	.	V	.	Q.
26.417	19320.8633	2848.48	.	.	.	V	.	Q.
26.500	19339.4570	2699.70	.	.	.	V	.	Q.
26.583	19356.9980	2547.04	.	.	.	V	.	Q.
26.667	19373.4043	2382.16	.	.	.	V	.	Q.
26.750	19388.9551	2257.94	.	.	.	V	.	Q.
26.833	19403.7031	2141.33	.	.	.	V	.	Q.
26.917	19417.6074	2018.89	.	.	.	V	.	Q.
27.000	19430.5430	1878.24	.	.	.	V	.	Q.
27.083	19442.4883	1734.46	.	.	.	V	.	Q.
27.167	19453.6621	1622.48	.	.	.	V	.	Q.
27.250	19464.1191	1518.34	.	.	.	V	.	Q.
27.333	19473.8066	1406.50	.	.	.	V	.	Q.
27.417	19482.8516	1313.38	.	.	.	V	.	Q.
27.500	19491.2324	1216.82	.	.	.	V	.	Q.
27.583	19499.0039	1128.38	.	.	.	V	.	Q.
27.667	19506.2910	1057.99	.	.	.	V	.	Q.
27.750	19513.1074	989.78	.	.	.	V	.	Q.
27.833	19519.4492	920.90	.	.	.	V	.	Q.
27.917	19525.3105	851.01	.	.	.	V	.	Q.
28.000	19530.7285	786.61	.	.	.	V	.	Q.
28.083	19535.7305	726.31	.	.	.	V	.	Q.

28.167	19540.3438	669.81	.Q	.	.	.	V.
28.250	19544.6211	621.00	.Q	.	.	.	V.
28.333	19548.5820	575.14	Q	.	.	.	V.
28.417	19552.2773	536.68	Q	.	.	.	V.
28.500	19555.7266	500.78	Q	.	.	.	V.
28.583	19558.9355	465.89	Q	.	.	.	V.
28.667	19561.9219	433.69	Q	.	.	.	V.
28.750	19564.6895	401.92	Q	.	.	.	V.
28.833	19567.2441	371.05	Q	.	.	.	V.
28.917	19569.6016	342.32	Q	.	.	.	V.
29.000	19571.7637	313.94	Q	.	.	.	V.
29.083	19573.7363	286.48	Q	.	.	.	V.
29.167	19575.5664	265.65	Q	.	.	.	V.
29.250	19577.2637	246.44	Q	.	.	.	V.
29.333	19578.8301	227.40	Q	.	.	.	V.
29.417	19580.2656	208.49	Q	.	.	.	V.
29.500	19581.5781	190.47	Q	.	.	.	V.
29.583	19582.8008	177.56	Q	.	.	.	V.
29.667	19583.9414	165.61	Q	.	.	.	V.
29.750	19585.0000	153.74	Q	.	.	.	V.
29.833	19585.9785	141.96	Q	.	.	.	V.
29.917	19586.8750	130.28	Q	.	.	.	V.
30.000	19587.6914	118.67	Q	.	.	.	V.
30.083	19588.4297	107.13	Q	.	.	.	V.
30.167	19589.0957	96.75	Q	.	.	.	V.
30.250	19589.7324	92.53	Q	.	.	.	V.
30.333	19590.3477	89.30	Q	.	.	.	V.
30.417	19590.9414	86.11	Q	.	.	.	V.
30.500	19591.5117	82.94	Q	.	.	.	V.
30.583	19592.0605	79.81	Q	.	.	.	V.
30.667	19592.5879	76.71	Q	.	.	.	V.
30.750	19593.0957	73.63	Q	.	.	.	V.
30.833	19593.5820	70.56	Q	.	.	.	V.
30.917	19594.0469	67.53	Q	.	.	.	V.
31.000	19594.4922	64.52	Q	.	.	.	V.
31.083	19594.9160	61.51	Q	.	.	.	V.
31.167	19595.3203	58.58	Q	.	.	.	V.
31.250	19595.7031	55.62	Q	.	.	.	V.
31.333	19596.0664	52.70	Q	.	.	.	V.
31.417	19596.4102	49.81	Q	.	.	.	V.
31.500	19596.7324	46.93	Q	.	.	.	V.
31.583	19597.0352	44.08	Q	.	.	.	V.
31.667	19597.3184	41.25	Q	.	.	.	V.
31.750	19597.5840	38.44	Q	.	.	.	V.
31.833	19597.8301	35.65	Q	.	.	.	V.
31.917	19598.0566	32.87	Q	.	.	.	V.
32.000	19598.2637	30.12	Q	.	.	.	V.
32.083	19598.4531	27.38	Q	.	.	.	V.
32.167	19598.6230	24.67	Q	.	.	.	V.
32.250	19598.7734	21.96	Q	.	.	.	V.
32.333	19598.9062	19.28	Q	.	.	.	V.
32.417	19599.0215	16.62	Q	.	.	.	V.
32.500	19599.1172	13.97	Q	.	.	.	V.
32.583	19599.1953	11.33	Q	.	.	.	V.
32.667	19599.2559	8.72	Q	.	.	.	V.
32.750	19599.2988	6.12	Q	.	.	.	V.
32.833	19599.3223	3.53	Q	.	.	.	V.
32.917	19599.3281	0.96	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%	1975.0
10%	1440.0
20%	1180.0
30%	675.0
40%	520.0
50%	430.0
60%	365.0
70%	305.0
80%	245.0
90%	160.0
=====	=====

END OF FLOODSCx ROUTING ANALYSIS