THE RANCH PLAN PLANNED COMMUNITY

PLANNING AREAS 3 AND 4 RUNOFF MANAGEMENT PLAN

Michael Baker INTERNATIONAL

TECHNICAL APPENDIX B.7

Local Single Area Hydrograph (2-, 5-, 10-, 25-, 50- and 100-year)

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

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 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA A                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 2-YR EV MARCH 2019 CCHIU                                              *
 ************************************************************************

  FILE NAME: 3A02EVS.DAT
  TIME/DATE OF STUDY: 15:01 03/13/2019

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


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    130.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  510.20
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.260
    LOW LOSS FRACTION = 0.480
    TIME OF CONCENTRATION(MIN.) = 16.41
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   2
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.13
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.28
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.37
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.62
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  0.85
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  1.44

--------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    29.69
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    31.53

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	60.9	121.8	182.8	243.7
0.017	0.0000	0.00	Q	.	.	.	.
0.033	0.0000	0.00	Q	.	.	.	.
0.050	0.0000	0.00	Q	.	.	.	.
0.067	0.0000	0.00	Q	.	.	.	.
0.083	0.0000	0.00	Q	.	.	.	.
0.100	0.0000	0.00	Q	.	.	.	.
0.117	0.0000	0.00	Q	.	.	.	.
0.133	0.0000	0.00	Q	.	.	.	.
0.150	0.0001	0.10	Q	.	.	.	.
0.167	0.0007	0.43	Q	.	.	.	.
0.183	0.0018	0.76	Q	.	.	.	.
0.200	0.0033	1.10	Q	.	.	.	.
0.217	0.0053	1.43	Q	.	.	.	.
0.233	0.0077	1.77	Q	.	.	.	.
0.250	0.0106	2.10	Q	.	.	.	.
0.267	0.0140	2.44	Q	.	.	.	.
0.283	0.0178	2.77	Q	.	.	.	.
0.300	0.0221	3.11	Q	.	.	.	.
0.317	0.0268	3.44	Q	.	.	.	.
0.333	0.0320	3.78	Q	.	.	.	.
0.350	0.0377	4.11	Q	.	.	.	.
0.367	0.0438	4.45	Q	.	.	.	.
0.383	0.0504	4.78	Q	.	.	.	.
0.400	0.0574	5.12	Q	.	.	.	.
0.417	0.0649	5.43	Q	.	.	.	.
0.433	0.0725	5.50	Q	.	.	.	.
0.450	0.0801	5.50	Q	.	.	.	.
0.467	0.0877	5.50	Q	.	.	.	.
0.483	0.0952	5.51	Q	.	.	.	.
0.500	0.1028	5.51	Q	.	.	.	.
0.517	0.1104	5.51	Q	.	.	.	.
0.533	0.1180	5.51	Q	.	.	.	.
0.550	0.1256	5.52	Q	.	.	.	.
0.567	0.1332	5.52	Q	.	.	.	.
0.583	0.1408	5.52	Q	.	.	.	.
0.600	0.1484	5.52	Q	.	.	.	.
0.617	0.1560	5.53	Q	.	.	.	.
0.633	0.1636	5.53	Q	.	.	.	.
0.650	0.1713	5.53	Q	.	.	.	.
0.667	0.1789	5.53	Q	.	.	.	.
0.683	0.1865	5.54	Q	.	.	.	.
0.700	0.1941	5.54	Q	.	.	.	.
0.717	0.2018	5.54	Q	.	.	.	.
0.733	0.2094	5.55	Q	.	.	.	.
0.750	0.2171	5.55	Q	.	.	.	.

0.767	0.2247	5.56	Q	.	.	.	.
0.783	0.2324	5.56	Q	.	.	.	.
0.800	0.2401	5.57	Q	.	.	.	.
0.817	0.2477	5.57	Q	.	.	.	.
0.833	0.2554	5.58	Q	.	.	.	.
0.850	0.2631	5.58	Q	.	.	.	.
0.867	0.2708	5.59	Q	.	.	.	.
0.883	0.2785	5.59	Q	.	.	.	.
0.900	0.2862	5.60	Q	.	.	.	.
0.917	0.2939	5.60	Q	.	.	.	.
0.933	0.3017	5.61	Q	.	.	.	.
0.950	0.3094	5.61	Q	.	.	.	.
0.967	0.3171	5.62	Q	.	.	.	.
0.983	0.3249	5.62	Q	.	.	.	.
1.000	0.3326	5.62	Q	.	.	.	.
1.017	0.3404	5.63	Q	.	.	.	.
1.033	0.3481	5.63	Q	.	.	.	.
1.050	0.3559	5.63	Q	.	.	.	.
1.067	0.3636	5.63	Q	.	.	.	.
1.083	0.3714	5.64	Q	.	.	.	.
1.100	0.3792	5.64	Q	.	.	.	.
1.117	0.3869	5.64	Q	.	.	.	.
1.133	0.3947	5.64	Q	.	.	.	.
1.150	0.4025	5.65	Q	.	.	.	.
1.167	0.4103	5.65	Q	.	.	.	.
1.183	0.4181	5.65	Q	.	.	.	.
1.200	0.4259	5.65	Q	.	.	.	.
1.217	0.4336	5.66	Q	.	.	.	.
1.233	0.4414	5.66	Q	.	.	.	.
1.250	0.4492	5.66	Q	.	.	.	.
1.267	0.4570	5.67	Q	.	.	.	.
1.283	0.4649	5.67	Q	.	.	.	.
1.300	0.4727	5.68	Q	.	.	.	.
1.317	0.4805	5.68	Q	.	.	.	.
1.333	0.4884	5.69	Q	.	.	.	.
1.350	0.4962	5.70	Q	.	.	.	.
1.367	0.5041	5.70	Q	.	.	.	.
1.383	0.5119	5.71	Q	.	.	.	.
1.400	0.5198	5.71	Q	.	.	.	.
1.417	0.5277	5.72	Q	.	.	.	.
1.433	0.5355	5.72	Q	.	.	.	.
1.450	0.5434	5.73	Q	.	.	.	.
1.467	0.5513	5.73	Q	.	.	.	.
1.483	0.5592	5.74	Q	.	.	.	.
1.500	0.5671	5.74	Q	.	.	.	.
1.517	0.5750	5.75	Q	.	.	.	.
1.533	0.5830	5.75	Q	.	.	.	.
1.550	0.5909	5.75	Q	.	.	.	.
1.567	0.5988	5.76	Q	.	.	.	.
1.583	0.6068	5.76	Q	.	.	.	.
1.600	0.6147	5.76	Q	.	.	.	.
1.617	0.6226	5.76	Q	.	.	.	.
1.633	0.6306	5.77	Q	.	.	.	.
1.650	0.6385	5.77	Q	.	.	.	.
1.667	0.6465	5.77	Q	.	.	.	.
1.683	0.6544	5.77	Q	.	.	.	.
1.700	0.6624	5.78	Q	.	.	.	.
1.717	0.6703	5.78	Q	.	.	.	.

1.733	0.6783	5.78	Q	.	.	.	.
1.750	0.6863	5.79	Q	.	.	.	.
1.767	0.6943	5.79	Q	.	.	.	.
1.783	0.7022	5.79	Q	.	.	.	.
1.800	0.7102	5.80	Q	.	.	.	.
1.817	0.7182	5.80	Q	.	.	.	.
1.833	0.7262	5.81	Q	.	.	.	.
1.850	0.7342	5.81	Q	.	.	.	.
1.867	0.7422	5.82	Q	.	.	.	.
1.883	0.7503	5.82	QV	.	.	.	.
1.900	0.7583	5.83	QV	.	.	.	.
1.917	0.7663	5.84	QV	.	.	.	.
1.933	0.7744	5.84	QV	.	.	.	.
1.950	0.7824	5.85	QV	.	.	.	.
1.967	0.7905	5.85	QV	.	.	.	.
1.983	0.7986	5.86	QV	.	.	.	.
2.000	0.8066	5.86	QV	.	.	.	.
2.017	0.8147	5.87	QV	.	.	.	.
2.033	0.8228	5.88	QV	.	.	.	.
2.050	0.8309	5.88	QV	.	.	.	.
2.067	0.8390	5.89	QV	.	.	.	.
2.083	0.8471	5.89	QV	.	.	.	.
2.100	0.8552	5.89	QV	.	.	.	.
2.117	0.8634	5.89	QV	.	.	.	.
2.133	0.8715	5.90	QV	.	.	.	.
2.150	0.8796	5.90	QV	.	.	.	.
2.167	0.8877	5.90	QV	.	.	.	.
2.183	0.8959	5.91	QV	.	.	.	.
2.200	0.9040	5.91	QV	.	.	.	.
2.217	0.9121	5.91	QV	.	.	.	.
2.233	0.9203	5.91	QV	.	.	.	.
2.250	0.9284	5.92	QV	.	.	.	.
2.267	0.9366	5.92	QV	.	.	.	.
2.283	0.9448	5.92	QV	.	.	.	.
2.300	0.9529	5.93	QV	.	.	.	.
2.317	0.9611	5.93	QV	.	.	.	.
2.333	0.9693	5.93	QV	.	.	.	.
2.350	0.9774	5.94	QV	.	.	.	.
2.367	0.9856	5.94	QV	.	.	.	.
2.383	0.9938	5.95	QV	.	.	.	.
2.400	1.0020	5.96	QV	.	.	.	.
2.417	1.0102	5.96	QV	.	.	.	.
2.433	1.0184	5.97	QV	.	.	.	.
2.450	1.0267	5.97	QV	.	.	.	.
2.467	1.0349	5.98	QV	.	.	.	.
2.483	1.0432	5.99	QV	.	.	.	.
2.500	1.0514	5.99	QV	.	.	.	.
2.517	1.0597	6.00	QV	.	.	.	.
2.533	1.0679	6.00	QV	.	.	.	.
2.550	1.0762	6.01	QV	.	.	.	.
2.567	1.0845	6.02	QV	.	.	.	.
2.583	1.0928	6.02	QV	.	.	.	.
2.600	1.1011	6.03	QV	.	.	.	.
2.617	1.1094	6.03	QV	.	.	.	.
2.633	1.1177	6.03	QV	.	.	.	.
2.650	1.1260	6.04	QV	.	.	.	.
2.667	1.1344	6.04	QV	.	.	.	.
2.683	1.1427	6.04	QV	.	.	.	.

2.700	1.1510	6.05	QV	.	.	.	.
2.717	1.1593	6.05	QV	.	.	.	.
2.733	1.1677	6.05	QV	.	.	.	.
2.750	1.1760	6.06	QV	.	.	.	.
2.767	1.1844	6.06	QV	.	.	.	.
2.783	1.1927	6.06	QV	.	.	.	.
2.800	1.2011	6.07	QV	.	.	.	.
2.817	1.2094	6.07	QV	.	.	.	.
2.833	1.2178	6.07	QV	.	.	.	.
2.850	1.2262	6.07	QV	.	.	.	.
2.867	1.2345	6.08	QV	.	.	.	.
2.883	1.2429	6.08	QV	.	.	.	.
2.900	1.2513	6.09	QV	.	.	.	.
2.917	1.2597	6.09	.Q	.	.	.	.
2.933	1.2681	6.10	.Q	.	.	.	.
2.950	1.2765	6.11	.Q	.	.	.	.
2.967	1.2849	6.11	.Q	.	.	.	.
2.983	1.2934	6.12	.Q	.	.	.	.
3.000	1.3018	6.13	.Q	.	.	.	.
3.017	1.3102	6.13	.Q	.	.	.	.
3.033	1.3187	6.14	.Q	.	.	.	.
3.050	1.3272	6.15	.Q	.	.	.	.
3.067	1.3356	6.15	.Q	.	.	.	.
3.083	1.3441	6.16	.Q	.	.	.	.
3.100	1.3526	6.16	.Q	.	.	.	.
3.117	1.3611	6.17	.Q	.	.	.	.
3.133	1.3696	6.18	.Q	.	.	.	.
3.150	1.3781	6.18	.Q	.	.	.	.
3.167	1.3867	6.19	.Q	.	.	.	.
3.183	1.3952	6.19	.Q	.	.	.	.
3.200	1.4037	6.19	.Q	.	.	.	.
3.217	1.4123	6.20	.Q	.	.	.	.
3.233	1.4208	6.20	.Q	.	.	.	.
3.250	1.4293	6.20	.Q	.	.	.	.
3.267	1.4379	6.21	.Q	.	.	.	.
3.283	1.4465	6.21	.Q	.	.	.	.
3.300	1.4550	6.21	.Q	.	.	.	.
3.317	1.4636	6.22	.Q	.	.	.	.
3.333	1.4721	6.22	.Q	.	.	.	.
3.350	1.4807	6.22	.Q	.	.	.	.
3.367	1.4893	6.23	.QV	.	.	.	.
3.383	1.4979	6.23	.QV	.	.	.	.
3.400	1.5065	6.23	.QV	.	.	.	.
3.417	1.5151	6.24	.QV	.	.	.	.
3.433	1.5237	6.24	.QV	.	.	.	.
3.450	1.5323	6.25	.QV	.	.	.	.
3.467	1.5409	6.26	.QV	.	.	.	.
3.483	1.5495	6.26	.QV	.	.	.	.
3.500	1.5581	6.27	.QV	.	.	.	.
3.517	1.5668	6.28	.QV	.	.	.	.
3.533	1.5754	6.28	.QV	.	.	.	.
3.550	1.5841	6.29	.QV	.	.	.	.
3.567	1.5928	6.30	.QV	.	.	.	.
3.583	1.6015	6.30	.QV	.	.	.	.
3.600	1.6101	6.31	.QV	.	.	.	.
3.617	1.6189	6.32	.QV	.	.	.	.
3.633	1.6276	6.32	.QV	.	.	.	.
3.650	1.6363	6.33	.QV	.	.	.	.

3.667	1.6450	6.34	.QV	.	.	.	.
3.683	1.6538	6.34	.QV	.	.	.	.
3.700	1.6625	6.35	.QV	.	.	.	.
3.717	1.6713	6.36	.QV	.	.	.	.
3.733	1.6800	6.36	.QV	.	.	.	.
3.750	1.6888	6.36	.QV	.	.	.	.
3.767	1.6975	6.37	.QV	.	.	.	.
3.783	1.7063	6.37	.QV	.	.	.	.
3.800	1.7151	6.37	.QV	.	.	.	.
3.817	1.7239	6.38	.QV	.	.	.	.
3.833	1.7327	6.38	.QV	.	.	.	.
3.850	1.7415	6.38	.QV	.	.	.	.
3.867	1.7503	6.39	.QV	.	.	.	.
3.883	1.7591	6.39	.QV	.	.	.	.
3.900	1.7679	6.39	.QV	.	.	.	.
3.917	1.7767	6.40	.QV	.	.	.	.
3.933	1.7855	6.40	.QV	.	.	.	.
3.950	1.7943	6.40	.QV	.	.	.	.
3.967	1.8031	6.41	.QV	.	.	.	.
3.983	1.8120	6.41	.QV	.	.	.	.
4.000	1.8208	6.42	.QV	.	.	.	.
4.017	1.8297	6.43	.QV	.	.	.	.
4.033	1.8385	6.44	.QV	.	.	.	.
4.050	1.8474	6.44	.QV	.	.	.	.
4.067	1.8563	6.45	.QV	.	.	.	.
4.083	1.8652	6.46	.QV	.	.	.	.
4.100	1.8741	6.47	.QV	.	.	.	.
4.117	1.8830	6.47	.QV	.	.	.	.
4.133	1.8919	6.48	.QV	.	.	.	.
4.150	1.9009	6.49	.QV	.	.	.	.
4.167	1.9098	6.49	.QV	.	.	.	.
4.183	1.9188	6.50	.QV	.	.	.	.
4.200	1.9277	6.51	.QV	.	.	.	.
4.217	1.9367	6.52	.QV	.	.	.	.
4.233	1.9457	6.52	.QV	.	.	.	.
4.250	1.9547	6.53	.QV	.	.	.	.
4.267	1.9637	6.53	.QV	.	.	.	.
4.283	1.9727	6.54	.QV	.	.	.	.
4.300	1.9817	6.54	.QV	.	.	.	.
4.317	1.9907	6.55	.QV	.	.	.	.
4.333	1.9998	6.55	.QV	.	.	.	.
4.350	2.0088	6.55	.QV	.	.	.	.
4.367	2.0178	6.56	.QV	.	.	.	.
4.383	2.0269	6.56	.QV	.	.	.	.
4.400	2.0359	6.57	.QV	.	.	.	.
4.417	2.0449	6.57	.QV	.	.	.	.
4.433	2.0540	6.57	.QV	.	.	.	.
4.450	2.0631	6.58	.QV	.	.	.	.
4.467	2.0721	6.58	.QV	.	.	.	.
4.483	2.0812	6.58	.QV	.	.	.	.
4.500	2.0903	6.59	.QV	.	.	.	.
4.517	2.0993	6.59	.QV	.	.	.	.
4.533	2.1084	6.60	.QV	.	.	.	.
4.550	2.1175	6.61	.QV	.	.	.	.
4.567	2.1267	6.61	.QV	.	.	.	.
4.583	2.1358	6.62	.QV	.	.	.	.
4.600	2.1449	6.63	.QV	.	.	.	.
4.617	2.1540	6.64	.QV	.	.	.	.

4.633	2.1632	6.65	.QV	.	.	.	.
4.650	2.1724	6.65	.QV	.	.	.	.
4.667	2.1815	6.66	.QV	.	.	.	.
4.683	2.1907	6.67	.QV	.	.	.	.
4.700	2.1999	6.68	.QV	.	.	.	.
4.717	2.2091	6.69	.QV	.	.	.	.
4.733	2.2184	6.69	.QV	.	.	.	.
4.750	2.2276	6.70	.Q V	.	.	.	.
4.767	2.2368	6.71	.Q V	.	.	.	.
4.783	2.2461	6.72	.Q V	.	.	.	.
4.800	2.2553	6.72	.Q V	.	.	.	.
4.817	2.2646	6.73	.Q V	.	.	.	.
4.833	2.2739	6.73	.Q V	.	.	.	.
4.850	2.2832	6.74	.Q V	.	.	.	.
4.867	2.2925	6.74	.Q V	.	.	.	.
4.883	2.3017	6.74	.Q V	.	.	.	.
4.900	2.3110	6.75	.Q V	.	.	.	.
4.917	2.3203	6.75	.Q V	.	.	.	.
4.933	2.3296	6.76	.Q V	.	.	.	.
4.950	2.3390	6.76	.Q V	.	.	.	.
4.967	2.3483	6.77	.Q V	.	.	.	.
4.983	2.3576	6.77	.Q V	.	.	.	.
5.000	2.3669	6.77	.Q V	.	.	.	.
5.017	2.3763	6.78	.Q V	.	.	.	.
5.033	2.3856	6.78	.Q V	.	.	.	.
5.050	2.3950	6.79	.Q V	.	.	.	.
5.067	2.4043	6.79	.Q V	.	.	.	.
5.083	2.4137	6.80	.Q V	.	.	.	.
5.100	2.4231	6.81	.Q V	.	.	.	.
5.117	2.4324	6.82	.Q V	.	.	.	.
5.133	2.4418	6.82	.Q V	.	.	.	.
5.150	2.4513	6.83	.Q V	.	.	.	.
5.167	2.4607	6.84	.Q V	.	.	.	.
5.183	2.4701	6.85	.Q V	.	.	.	.
5.200	2.4796	6.86	.Q V	.	.	.	.
5.217	2.4890	6.87	.Q V	.	.	.	.
5.233	2.4985	6.88	.Q V	.	.	.	.
5.250	2.5080	6.88	.Q V	.	.	.	.
5.267	2.5175	6.89	.Q V	.	.	.	.
5.283	2.5270	6.90	.Q V	.	.	.	.
5.300	2.5365	6.91	.Q V	.	.	.	.
5.317	2.5460	6.92	.Q V	.	.	.	.
5.333	2.5556	6.93	.Q V	.	.	.	.
5.350	2.5651	6.93	.Q V	.	.	.	.
5.367	2.5747	6.94	.Q V	.	.	.	.
5.383	2.5842	6.94	.Q V	.	.	.	.
5.400	2.5938	6.95	.Q V	.	.	.	.
5.417	2.6034	6.95	.Q V	.	.	.	.
5.433	2.6129	6.96	.Q V	.	.	.	.
5.450	2.6225	6.96	.Q V	.	.	.	.
5.467	2.6321	6.96	.Q V	.	.	.	.
5.483	2.6417	6.97	.Q V	.	.	.	.
5.500	2.6513	6.97	.Q V	.	.	.	.
5.517	2.6609	6.98	.Q V	.	.	.	.
5.533	2.6706	6.98	.Q V	.	.	.	.
5.550	2.6802	6.99	.Q V	.	.	.	.
5.567	2.6898	6.99	.Q V	.	.	.	.
5.583	2.6994	7.00	.Q V	.	.	.	.

5.600	2.7091	7.00	.Q	V	.	.	.	.
5.617	2.7187	7.01	.Q	V	.	.	.	.
5.633	2.7284	7.01	.Q	V	.	.	.	.
5.650	2.7381	7.02	.Q	V	.	.	.	.
5.667	2.7478	7.03	.Q	V	.	.	.	.
5.683	2.7575	7.04	.Q	V	.	.	.	.
5.700	2.7672	7.05	.Q	V	.	.	.	.
5.717	2.7769	7.06	.Q	V	.	.	.	.
5.733	2.7866	7.07	.Q	V	.	.	.	.
5.750	2.7964	7.08	.Q	V	.	.	.	.
5.767	2.8062	7.09	.Q	V	.	.	.	.
5.783	2.8159	7.10	.Q	V	.	.	.	.
5.800	2.8257	7.11	.Q	V	.	.	.	.
5.817	2.8355	7.12	.Q	V	.	.	.	.
5.833	2.8453	7.13	.Q	V	.	.	.	.
5.850	2.8552	7.14	.Q	V	.	.	.	.
5.867	2.8650	7.14	.Q	V	.	.	.	.
5.883	2.8749	7.15	.Q	V	.	.	.	.
5.900	2.8847	7.16	.Q	V	.	.	.	.
5.917	2.8946	7.16	.Q	V	.	.	.	.
5.933	2.9045	7.17	.Q	V	.	.	.	.
5.950	2.9144	7.17	.Q	V	.	.	.	.
5.967	2.9242	7.18	.Q	V	.	.	.	.
5.983	2.9341	7.18	.Q	V	.	.	.	.
6.000	2.9440	7.19	.Q	V	.	.	.	.
6.017	2.9539	7.19	.Q	V	.	.	.	.
6.033	2.9639	7.20	.Q	V	.	.	.	.
6.050	2.9738	7.20	.Q	V	.	.	.	.
6.067	2.9837	7.21	.Q	V	.	.	.	.
6.083	2.9937	7.21	.Q	V	.	.	.	.
6.100	3.0036	7.22	.Q	V	.	.	.	.
6.117	3.0135	7.22	.Q	V	.	.	.	.
6.133	3.0235	7.23	.Q	V	.	.	.	.
6.150	3.0335	7.23	.Q	V	.	.	.	.
6.167	3.0434	7.24	.Q	V	.	.	.	.
6.183	3.0534	7.25	.Q	V	.	.	.	.
6.200	3.0634	7.26	.Q	V	.	.	.	.
6.217	3.0734	7.27	.Q	V	.	.	.	.
6.233	3.0835	7.28	.Q	V	.	.	.	.
6.250	3.0935	7.29	.Q	V	.	.	.	.
6.267	3.1036	7.30	.Q	V	.	.	.	.
6.283	3.1136	7.31	.Q	V	.	.	.	.
6.300	3.1237	7.32	.Q	V	.	.	.	.
6.317	3.1338	7.33	.Q	V	.	.	.	.
6.333	3.1439	7.34	.Q	V	.	.	.	.
6.350	3.1540	7.35	.Q	V	.	.	.	.
6.367	3.1642	7.36	.Q	V	.	.	.	.
6.383	3.1743	7.37	.Q	V	.	.	.	.
6.400	3.1845	7.38	.Q	V	.	.	.	.
6.417	3.1947	7.39	.Q	V	.	.	.	.
6.433	3.2049	7.40	.Q	V	.	.	.	.
6.450	3.2151	7.41	.Q	V	.	.	.	.
6.467	3.2253	7.41	.Q	V	.	.	.	.
6.483	3.2355	7.42	.Q	V	.	.	.	.
6.500	3.2457	7.42	.Q	V	.	.	.	.
6.517	3.2560	7.43	.Q	V	.	.	.	.
6.533	3.2662	7.43	.Q	V	.	.	.	.
6.550	3.2765	7.44	.Q	V	.	.	.	.

6.567	3.2867	7.44	.Q	V	.	.	.	.
6.583	3.2970	7.45	.Q	V	.	.	.	.
6.600	3.3072	7.46	.Q	V	.	.	.	.
6.617	3.3175	7.46	.Q	V	.	.	.	.
6.633	3.3278	7.47	.Q	V	.	.	.	.
6.650	3.3381	7.47	.Q	V	.	.	.	.
6.667	3.3484	7.48	.Q	V	.	.	.	.
6.683	3.3587	7.48	.Q	V	.	.	.	.
6.700	3.3690	7.49	.Q	V	.	.	.	.
6.717	3.3793	7.50	.Q	V	.	.	.	.
6.733	3.3897	7.51	.Q	V	.	.	.	.
6.750	3.4000	7.52	.Q	V	.	.	.	.
6.767	3.4104	7.53	.Q	V	.	.	.	.
6.783	3.4208	7.54	.Q	V	.	.	.	.
6.800	3.4312	7.55	.Q	V	.	.	.	.
6.817	3.4416	7.56	.Q	V	.	.	.	.
6.833	3.4520	7.57	.Q	V	.	.	.	.
6.850	3.4625	7.58	.Q	V	.	.	.	.
6.867	3.4729	7.60	.Q	V	.	.	.	.
6.883	3.4834	7.61	.Q	V	.	.	.	.
6.900	3.4939	7.62	.Q	V	.	.	.	.
6.917	3.5044	7.63	.Q	V	.	.	.	.
6.933	3.5149	7.64	.Q	V	.	.	.	.
6.950	3.5255	7.65	.Q	V	.	.	.	.
6.967	3.5360	7.66	.Q	V	.	.	.	.
6.983	3.5466	7.67	.Q	V	.	.	.	.
7.000	3.5572	7.68	.Q	V	.	.	.	.
7.017	3.5678	7.68	.Q	V	.	.	.	.
7.033	3.5783	7.69	.Q	V	.	.	.	.
7.050	3.5890	7.70	.Q	V	.	.	.	.
7.067	3.5996	7.70	.Q	V	.	.	.	.
7.083	3.6102	7.71	.Q	V	.	.	.	.
7.100	3.6208	7.71	.Q	V	.	.	.	.
7.117	3.6314	7.72	.Q	V	.	.	.	.
7.133	3.6421	7.73	.Q	V	.	.	.	.
7.150	3.6527	7.73	.Q	V	.	.	.	.
7.167	3.6634	7.74	.Q	V	.	.	.	.
7.183	3.6740	7.74	.Q	V	.	.	.	.
7.200	3.6847	7.75	.Q	V	.	.	.	.
7.217	3.6954	7.75	.Q	V	.	.	.	.
7.233	3.7061	7.76	.Q	V	.	.	.	.
7.250	3.7168	7.77	.Q	V	.	.	.	.
7.267	3.7275	7.78	.Q	V	.	.	.	.
7.283	3.7382	7.79	.Q	V	.	.	.	.
7.300	3.7490	7.80	.Q	V	.	.	.	.
7.317	3.7597	7.81	.Q	V	.	.	.	.
7.333	3.7705	7.82	.Q	V	.	.	.	.
7.350	3.7813	7.84	.Q	V	.	.	.	.
7.367	3.7921	7.85	.Q	V	.	.	.	.
7.383	3.8029	7.86	.Q	V	.	.	.	.
7.400	3.8138	7.87	.Q	V	.	.	.	.
7.417	3.8247	7.89	.Q	V	.	.	.	.
7.433	3.8355	7.90	.Q	V	.	.	.	.
7.450	3.8464	7.91	.Q	V	.	.	.	.
7.467	3.8573	7.92	.Q	V	.	.	.	.
7.483	3.8683	7.94	.Q	V	.	.	.	.
7.500	3.8792	7.95	.Q	V	.	.	.	.
7.517	3.8902	7.96	.Q	V	.	.	.	.

7.533	3.9012	7.97	.Q	V	.	.	.	.
7.550	3.9121	7.98	.Q	V	.	.	.	.
7.567	3.9231	7.98	.Q	V	.	.	.	.
7.583	3.9342	7.99	.Q	V	.	.	.	.
7.600	3.9452	8.00	.Q	V	.	.	.	.
7.617	3.9562	8.00	.Q	V	.	.	.	.
7.633	3.9672	8.01	.Q	V	.	.	.	.
7.650	3.9783	8.02	.Q	V	.	.	.	.
7.667	3.9893	8.02	.Q	V	.	.	.	.
7.683	4.0004	8.03	.Q	V	.	.	.	.
7.700	4.0114	8.04	.Q	V	.	.	.	.
7.717	4.0225	8.04	.Q	V	.	.	.	.
7.733	4.0336	8.05	.Q	V	.	.	.	.
7.750	4.0447	8.05	.Q	V	.	.	.	.
7.767	4.0558	8.06	.Q	V	.	.	.	.
7.783	4.0669	8.07	.Q	V	.	.	.	.
7.800	4.0780	8.07	.Q	V	.	.	.	.
7.817	4.0892	8.09	.Q	V	.	.	.	.
7.833	4.1003	8.10	.Q	V	.	.	.	.
7.850	4.1115	8.11	.Q	V	.	.	.	.
7.867	4.1227	8.13	.Q	V	.	.	.	.
7.883	4.1339	8.14	.Q	V	.	.	.	.
7.900	4.1451	8.15	.Q	V	.	.	.	.
7.917	4.1564	8.17	.Q	V	.	.	.	.
7.933	4.1677	8.18	.Q	V	.	.	.	.
7.950	4.1789	8.19	.Q	V	.	.	.	.
7.967	4.1903	8.21	.Q	V	.	.	.	.
7.983	4.2016	8.22	.Q	V	.	.	.	.
8.000	4.2129	8.24	.Q	V	.	.	.	.
8.017	4.2243	8.25	.Q	V	.	.	.	.
8.033	4.2357	8.26	.Q	V	.	.	.	.
8.050	4.2471	8.28	.Q	V	.	.	.	.
8.067	4.2585	8.29	.Q	V	.	.	.	.
8.083	4.2699	8.30	.Q	V	.	.	.	.
8.100	4.2814	8.31	.Q	V	.	.	.	.
8.117	4.2928	8.32	.Q	V	.	.	.	.
8.133	4.3043	8.32	.Q	V	.	.	.	.
8.150	4.3158	8.33	.Q	V	.	.	.	.
8.167	4.3272	8.34	.Q	V	.	.	.	.
8.183	4.3387	8.34	.Q	V	.	.	.	.
8.200	4.3502	8.35	.Q	V	.	.	.	.
8.217	4.3618	8.36	.Q	V	.	.	.	.
8.233	4.3733	8.37	.Q	V	.	.	.	.
8.250	4.3848	8.37	.Q	V	.	.	.	.
8.267	4.3963	8.38	.Q	V	.	.	.	.
8.283	4.4079	8.39	.Q	V	.	.	.	.
8.300	4.4195	8.39	.Q	V	.	.	.	.
8.317	4.4310	8.40	.Q	V	.	.	.	.
8.333	4.4426	8.41	.Q	V	.	.	.	.
8.350	4.4542	8.42	.Q	V	.	.	.	.
8.367	4.4658	8.43	.Q	V	.	.	.	.
8.383	4.4775	8.45	.Q	V	.	.	.	.
8.400	4.4891	8.46	.Q	V	.	.	.	.
8.417	4.5008	8.48	.Q	V	.	.	.	.
8.433	4.5125	8.49	.Q	V	.	.	.	.
8.450	4.5242	8.51	.Q	V	.	.	.	.
8.467	4.5359	8.52	.Q	V	.	.	.	.
8.483	4.5477	8.54	.Q	V	.	.	.	.

8.500	4.5595	8.55	.Q	V	.	.	.	.
8.517	4.5713	8.57	.Q	V	.	.	.	.
8.533	4.5831	8.58	.Q	V	.	.	.	.
8.550	4.5949	8.60	.Q	V	.	.	.	.
8.567	4.6068	8.61	.Q	V	.	.	.	.
8.583	4.6187	8.63	.Q	V	.	.	.	.
8.600	4.6306	8.64	.Q	V	.	.	.	.
8.617	4.6425	8.66	.Q	V	.	.	.	.
8.633	4.6545	8.67	.Q	V	.	.	.	.
8.650	4.6664	8.68	.Q	V	.	.	.	.
8.667	4.6784	8.69	.Q	V	.	.	.	.
8.683	4.6904	8.69	.Q	V	.	.	.	.
8.700	4.7023	8.70	.Q	V	.	.	.	.
8.717	4.7143	8.71	.Q	V	.	.	.	.
8.733	4.7264	8.72	.Q	V	.	.	.	.
8.750	4.7384	8.73	.Q	V	.	.	.	.
8.767	4.7504	8.73	.Q	V	.	.	.	.
8.783	4.7624	8.74	.Q	V	.	.	.	.
8.800	4.7745	8.75	.Q	V	.	.	.	.
8.817	4.7866	8.76	.Q	V	.	.	.	.
8.833	4.7986	8.77	.Q	V	.	.	.	.
8.850	4.8107	8.77	.Q	V	.	.	.	.
8.867	4.8228	8.78	.Q	V	.	.	.	.
8.883	4.8349	8.79	.Q	V	.	.	.	.
8.900	4.8470	8.80	.Q	V	.	.	.	.
8.917	4.8592	8.82	.Q	V	.	.	.	.
8.933	4.8714	8.83	.Q	V	.	.	.	.
8.950	4.8836	8.85	.Q	V	.	.	.	.
8.967	4.8958	8.87	.Q	V	.	.	.	.
8.983	4.9080	8.89	.Q	V	.	.	.	.
9.000	4.9203	8.90	.Q	V	.	.	.	.
9.017	4.9326	8.92	.Q	V	.	.	.	.
9.033	4.9449	8.94	.Q	V	.	.	.	.
9.050	4.9572	8.95	.Q	V	.	.	.	.
9.067	4.9696	8.97	.Q	V	.	.	.	.
9.083	4.9819	8.99	.Q	V	.	.	.	.
9.100	4.9943	9.01	.Q	V	.	.	.	.
9.117	5.0068	9.02	.Q	V	.	.	.	.
9.133	5.0192	9.04	.Q	V	.	.	.	.
9.150	5.0317	9.06	.Q	V	.	.	.	.
9.167	5.0442	9.07	.Q	V	.	.	.	.
9.183	5.0567	9.08	.Q	V	.	.	.	.
9.200	5.0692	9.09	.Q	V	.	.	.	.
9.217	5.0818	9.10	.Q	V	.	.	.	.
9.233	5.0943	9.11	.Q	V	.	.	.	.
9.250	5.1069	9.12	.Q	V	.	.	.	.
9.267	5.1195	9.13	.Q	V	.	.	.	.
9.283	5.1320	9.14	.Q	V	.	.	.	.
9.300	5.1446	9.15	.Q	V	.	.	.	.
9.317	5.1573	9.16	.Q	V	.	.	.	.
9.333	5.1699	9.17	.Q	V	.	.	.	.
9.350	5.1825	9.18	.Q	V	.	.	.	.
9.367	5.1952	9.18	.Q	V	.	.	.	.
9.383	5.2078	9.19	.Q	V	.	.	.	.
9.400	5.2205	9.20	.Q	V	.	.	.	.
9.417	5.2332	9.21	.Q	V	.	.	.	.
9.433	5.2459	9.22	.Q	V	.	.	.	.
9.450	5.2586	9.23	.Q	V	.	.	.	.

9.467	5.2714	9.25	.Q	V	.	.	.	.
9.483	5.2841	9.27	.Q	V	.	.	.	.
9.500	5.2969	9.29	.Q	V	.	.	.	.
9.517	5.3098	9.31	.Q	V	.	.	.	.
9.533	5.3226	9.33	.Q	V	.	.	.	.
9.550	5.3355	9.35	.Q	V	.	.	.	.
9.567	5.3484	9.37	.Q	V	.	.	.	.
9.583	5.3613	9.39	.Q	V	.	.	.	.
9.600	5.3743	9.41	.Q	V	.	.	.	.
9.617	5.3873	9.43	.Q	V	.	.	.	.
9.633	5.4003	9.45	.Q	V	.	.	.	.
9.650	5.4133	9.47	.Q	V	.	.	.	.
9.667	5.4264	9.49	.Q	V	.	.	.	.
9.683	5.4395	9.51	.Q	V	.	.	.	.
9.700	5.4526	9.52	.Q	V	.	.	.	.
9.717	5.4658	9.54	.Q	V	.	.	.	.
9.733	5.4789	9.56	.Q	V	.	.	.	.
9.750	5.4921	9.57	.Q	V	.	.	.	.
9.767	5.5053	9.58	.Q	V	.	.	.	.
9.783	5.5185	9.59	.Q	V	.	.	.	.
9.800	5.5317	9.60	.Q	V	.	.	.	.
9.817	5.5449	9.61	.Q	V	.	.	.	.
9.833	5.5582	9.62	.Q	V	.	.	.	.
9.850	5.5714	9.63	.Q	V	.	.	.	.
9.867	5.5847	9.64	.Q	V	.	.	.	.
9.883	5.5980	9.65	.Q	V	.	.	.	.
9.900	5.6113	9.66	.Q	V	.	.	.	.
9.917	5.6246	9.67	.Q	V	.	.	.	.
9.933	5.6380	9.68	.Q	V	.	.	.	.
9.950	5.6513	9.69	.Q	V	.	.	.	.
9.967	5.6647	9.70	.Q	V	.	.	.	.
9.983	5.6781	9.71	.Q	V	.	.	.	.
10.000	5.6915	9.73	.Q	V	.	.	.	.
10.017	5.7049	9.75	.Q	V	.	.	.	.
10.033	5.7183	9.77	.Q	V	.	.	.	.
10.050	5.7318	9.79	.Q	V	.	.	.	.
10.067	5.7454	9.82	.Q	V	.	.	.	.
10.083	5.7589	9.84	.Q	V	.	.	.	.
10.100	5.7725	9.86	.Q	V	.	.	.	.
10.117	5.7861	9.88	.Q	V	.	.	.	.
10.133	5.7998	9.91	.Q	V	.	.	.	.
10.150	5.8134	9.93	.Q	V	.	.	.	.
10.167	5.8271	9.95	.Q	V	.	.	.	.
10.183	5.8409	9.97	.Q	V	.	.	.	.
10.200	5.8546	10.00	.Q	V	.	.	.	.
10.217	5.8684	10.02	.Q	V	.	.	.	.
10.233	5.8823	10.04	.Q	V	.	.	.	.
10.250	5.8961	10.06	.Q	V	.	.	.	.
10.267	5.9100	10.08	.Q	V	.	.	.	.
10.283	5.9239	10.10	.Q	V	.	.	.	.
10.300	5.9378	10.11	.Q	V	.	.	.	.
10.317	5.9518	10.12	.Q	V	.	.	.	.
10.333	5.9657	10.13	.Q	V	.	.	.	.
10.350	5.9797	10.14	.Q	V	.	.	.	.
10.367	5.9937	10.16	.Q	V	.	.	.	.
10.383	6.0077	10.17	.Q	V	.	.	.	.
10.400	6.0217	10.18	.Q	V	.	.	.	.
10.417	6.0358	10.19	.Q	V	.	.	.	.

10.433	6.0498	10.20	.Q	V	.	.	.	.
10.450	6.0639	10.22	.Q	V	.	.	.	.
10.467	6.0780	10.23	.Q	V	.	.	.	.
10.483	6.0921	10.24	.Q	V	.	.	.	.
10.500	6.1062	10.25	.Q	V	.	.	.	.
10.517	6.1204	10.26	.Q	V	.	.	.	.
10.533	6.1345	10.28	.Q	V	.	.	.	.
10.550	6.1487	10.30	.Q	V	.	.	.	.
10.567	6.1629	10.32	.Q	V	.	.	.	.
10.583	6.1772	10.35	.Q	V	.	.	.	.
10.600	6.1915	10.38	.Q	V	.	.	.	.
10.617	6.2058	10.40	.Q	V	.	.	.	.
10.633	6.2202	10.43	.Q	V	.	.	.	.
10.650	6.2346	10.45	.Q	V	.	.	.	.
10.667	6.2490	10.48	.Q	V	.	.	.	.
10.683	6.2635	10.51	.Q	V	.	.	.	.
10.700	6.2780	10.53	.Q	V	.	.	.	.
10.717	6.2925	10.56	.Q	V	.	.	.	.
10.733	6.3071	10.58	.Q	V	.	.	.	.
10.750	6.3217	10.61	.Q	V	.	.	.	.
10.767	6.3364	10.64	.Q	V	.	.	.	.
10.783	6.3510	10.66	.Q	V	.	.	.	.
10.800	6.3658	10.69	.Q	V	.	.	.	.
10.817	6.3805	10.71	.Q	V	.	.	.	.
10.833	6.3953	10.72	.Q	V	.	.	.	.
10.850	6.4101	10.74	.Q	V	.	.	.	.
10.867	6.4249	10.75	.Q	V	.	.	.	.
10.883	6.4397	10.77	.Q	V	.	.	.	.
10.900	6.4546	10.78	.Q	V	.	.	.	.
10.917	6.4694	10.80	.Q	V	.	.	.	.
10.933	6.4843	10.81	.Q	V	.	.	.	.
10.950	6.4992	10.82	.Q	V	.	.	.	.
10.967	6.5142	10.84	.Q	V	.	.	.	.
10.983	6.5291	10.85	.Q	V	.	.	.	.
11.000	6.5441	10.87	.Q	V	.	.	.	.
11.017	6.5591	10.88	.Q	V	.	.	.	.
11.033	6.5741	10.89	.Q	V	.	.	.	.
11.050	6.5891	10.91	.Q	V	.	.	.	.
11.067	6.6041	10.92	.Q	V	.	.	.	.
11.083	6.6192	10.94	.Q	V	.	.	.	.
11.100	6.6343	10.96	.Q	V	.	.	.	.
11.117	6.6495	11.00	.Q	V	.	.	.	.
11.133	6.6646	11.03	.Q	V	.	.	.	.
11.150	6.6799	11.06	.Q	V	.	.	.	.
11.167	6.6951	11.09	.Q	V	.	.	.	.
11.183	6.7105	11.12	.Q	V	.	.	.	.
11.200	6.7258	11.15	.Q	V	.	.	.	.
11.217	6.7412	11.18	.Q	V	.	.	.	.
11.233	6.7567	11.21	.Q	V	.	.	.	.
11.250	6.7721	11.24	.Q	V	.	.	.	.
11.267	6.7877	11.27	.Q	V	.	.	.	.
11.283	6.8032	11.30	.Q	V	.	.	.	.
11.300	6.8189	11.33	.Q	V	.	.	.	.
11.317	6.8345	11.36	.Q	V	.	.	.	.
11.333	6.8502	11.40	.Q	V	.	.	.	.
11.350	6.8659	11.43	.Q	V	.	.	.	.
11.367	6.8817	11.45	.Q	V	.	.	.	.
11.383	6.8975	11.47	.Q	V	.	.	.	.

11.400	6.9133	11.48	.Q	V.	.	.	.
11.417	6.9292	11.50	.Q	V.	.	.	.
11.433	6.9450	11.52	.Q	V.	.	.	.
11.450	6.9609	11.53	.Q	V.	.	.	.
11.467	6.9768	11.55	.Q	V.	.	.	.
11.483	6.9928	11.57	.Q	V.	.	.	.
11.500	7.0087	11.58	.Q	V.	.	.	.
11.517	7.0247	11.60	.Q	V.	.	.	.
11.533	7.0407	11.62	.Q	V.	.	.	.
11.550	7.0567	11.64	.Q	V.	.	.	.
11.567	7.0728	11.65	.Q	V.	.	.	.
11.583	7.0889	11.67	.Q	V.	.	.	.
11.600	7.1050	11.69	.Q	V.	.	.	.
11.617	7.1211	11.70	.Q	V.	.	.	.
11.633	7.1372	11.72	.Q	V.	.	.	.
11.650	7.1534	11.76	.Q	V.	.	.	.
11.667	7.1697	11.79	.Q	V.	.	.	.
11.683	7.1860	11.83	.Q	V.	.	.	.
11.700	7.2023	11.87	.Q	V.	.	.	.
11.717	7.2187	11.91	.Q	V.	.	.	.
11.733	7.2352	11.94	.Q	V.	.	.	.
11.750	7.2517	11.98	.Q	V.	.	.	.
11.767	7.2682	12.02	.Q	V.	.	.	.
11.783	7.2848	12.05	.Q	V.	.	.	.
11.800	7.3015	12.09	.Q	V.	.	.	.
11.817	7.3182	12.13	.Q	V.	.	.	.
11.833	7.3349	12.17	.Q	V.	.	.	.
11.850	7.3517	12.20	. Q	V.	.	.	.
11.867	7.3686	12.24	. Q	V.	.	.	.
11.883	7.3855	12.28	. Q	V.	.	.	.
11.900	7.4025	12.31	. Q	V.	.	.	.
11.917	7.4195	12.34	. Q	V.	.	.	.
11.933	7.4365	12.36	. Q	V	.	.	.
11.950	7.4536	12.38	. Q	V	.	.	.
11.967	7.4706	12.40	. Q	V	.	.	.
11.983	7.4877	12.42	. Q	V	.	.	.
12.000	7.5049	12.44	. Q	V	.	.	.
12.017	7.5221	12.46	. Q	V	.	.	.
12.033	7.5392	12.48	. Q	V	.	.	.
12.050	7.5565	12.50	. Q	V	.	.	.
12.067	7.5737	12.53	. Q	V	.	.	.
12.083	7.5910	12.55	. Q	V	.	.	.
12.100	7.6083	12.57	. Q	V	.	.	.
12.117	7.6256	12.59	. Q	V	.	.	.
12.133	7.6430	12.61	. Q	V	.	.	.
12.150	7.6604	12.63	. Q	V	.	.	.
12.167	7.6778	12.65	. Q	V	.	.	.
12.183	7.6953	12.72	. Q	V	.	.	.
12.200	7.7131	12.91	. Q	V	.	.	.
12.217	7.7312	13.12	. Q	V	.	.	.
12.233	7.7495	13.32	. Q	V	.	.	.
12.250	7.7682	13.52	. Q	V	.	.	.
12.267	7.7871	13.72	. Q	V	.	.	.
12.283	7.8063	13.92	. Q	V	.	.	.
12.300	7.8257	14.13	. Q	V	.	.	.
12.317	7.8454	14.33	. Q	V	.	.	.
12.333	7.8655	14.53	. Q	V	.	.	.
12.350	7.8858	14.73	. Q	V	.	.	.

12.367	7.9063	14.93	. Q	V	.	.	.
12.383	7.9272	15.14	. Q	V	.	.	.
12.400	7.9483	15.34	. Q	V	.	.	.
12.417	7.9697	15.54	. Q	V	.	.	.
12.433	7.9914	15.74	. Q	V	.	.	.
12.450	8.0133	15.93	. Q	V	.	.	.
12.467	8.0354	16.00	. Q	V	.	.	.
12.483	8.0574	16.03	. Q	V	.	.	.
12.500	8.0796	16.05	. Q	V	.	.	.
12.517	8.1017	16.08	. Q	V	.	.	.
12.533	8.1239	16.11	. Q	V	.	.	.
12.550	8.1461	16.13	. Q	V	.	.	.
12.567	8.1684	16.16	. Q	.V	.	.	.
12.583	8.1907	16.19	. Q	.V	.	.	.
12.600	8.2130	16.22	. Q	.V	.	.	.
12.617	8.2354	16.24	. Q	.V	.	.	.
12.633	8.2578	16.27	. Q	.V	.	.	.
12.650	8.2802	16.30	. Q	.V	.	.	.
12.667	8.3027	16.32	. Q	.V	.	.	.
12.683	8.3253	16.35	. Q	.V	.	.	.
12.700	8.3478	16.38	. Q	.V	.	.	.
12.717	8.3704	16.40	. Q	.V	.	.	.
12.733	8.3931	16.45	. Q	.V	.	.	.
12.750	8.4158	16.51	. Q	.V	.	.	.
12.767	8.4386	16.57	. Q	.V	.	.	.
12.783	8.4615	16.63	. Q	.V	.	.	.
12.800	8.4845	16.69	. Q	.V	.	.	.
12.817	8.5076	16.75	. Q	.V	.	.	.
12.833	8.5307	16.81	. Q	.V	.	.	.
12.850	8.5540	16.87	. Q	.V	.	.	.
12.867	8.5773	16.93	. Q	.V	.	.	.
12.883	8.6007	16.99	. Q	.V	.	.	.
12.900	8.6242	17.05	. Q	.V	.	.	.
12.917	8.6478	17.11	. Q	.V	.	.	.
12.933	8.6714	17.17	. Q	.V	.	.	.
12.950	8.6951	17.24	. Q	.V	.	.	.
12.967	8.7190	17.30	. Q	.V	.	.	.
12.983	8.7429	17.36	. Q	.V	.	.	.
13.000	8.7669	17.41	. Q	.V	.	.	.
13.017	8.7909	17.45	. Q	.V	.	.	.
13.033	8.8150	17.49	. Q	.V	.	.	.
13.050	8.8391	17.52	. Q	.V	.	.	.
13.067	8.8633	17.56	. Q	.V	.	.	.
13.083	8.8875	17.59	. Q	.V	.	.	.
13.100	8.9118	17.63	. Q	. V	.	.	.
13.117	8.9361	17.66	. Q	. V	.	.	.
13.133	8.9605	17.69	. Q	. V	.	.	.
13.150	8.9849	17.73	. Q	. V	.	.	.
13.167	9.0094	17.76	. Q	. V	.	.	.
13.183	9.0339	17.80	. Q	. V	.	.	.
13.200	9.0585	17.83	. Q	. V	.	.	.
13.217	9.0831	17.87	. Q	. V	.	.	.
13.233	9.1077	17.90	. Q	. V	.	.	.
13.250	9.1324	17.94	. Q	. V	.	.	.
13.267	9.1572	17.97	. Q	. V	.	.	.
13.283	9.1820	18.03	. Q	. V	.	.	.
13.300	9.2070	18.11	. Q	. V	.	.	.
13.317	9.2320	18.19	. Q	. V	.	.	.

13.333	9.2572	18.27	. Q . V . . .
13.350	9.2825	18.35	. Q . V . . .
13.367	9.3079	18.43	. Q . V . . .
13.383	9.3334	18.51	. Q . V . . .
13.400	9.3590	18.59	. Q . V . . .
13.417	9.3847	18.67	. Q . V . . .
13.433	9.4105	18.75	. Q . V . . .
13.450	9.4365	18.83	. Q . V . . .
13.467	9.4625	18.91	. Q . V . . .
13.483	9.4887	18.99	. Q . V . . .
13.500	9.5150	19.07	. Q . V . . .
13.517	9.5413	19.15	. Q . V . . .
13.533	9.5678	19.23	. Q . V . . .
13.550	9.5944	19.30	. Q . V . . .
13.567	9.6211	19.35	. Q . V . . .
13.583	9.6478	19.40	. Q . V . . .
13.600	9.6746	19.45	. Q . V . . .
13.617	9.7014	19.49	. Q . V . . .
13.633	9.7284	19.54	. Q . V . . .
13.650	9.7553	19.59	. Q . V . . .
13.667	9.7824	19.63	. Q . V . . .
13.683	9.8095	19.68	. Q . V . . .
13.700	9.8367	19.73	. Q . V . . .
13.717	9.8639	19.77	. Q . V . . .
13.733	9.8912	19.82	. Q . V . . .
13.750	9.9186	19.87	. Q . V . . .
13.767	9.9460	19.91	. Q . V . . .
13.783	9.9735	19.96	. Q . V . . .
13.800	10.0010	20.01	. Q . V . . .
13.817	10.0287	20.06	. Q . V . . .
13.833	10.0564	20.15	. Q . V . . .
13.850	10.0843	20.26	. Q . V . . .
13.867	10.1124	20.37	. Q . V . . .
13.883	10.1406	20.49	. Q . V . . .
13.900	10.1690	20.60	. Q . V . . .
13.917	10.1975	20.71	. Q . V . . .
13.933	10.2262	20.82	. Q . V . . .
13.950	10.2550	20.93	. Q . V . . .
13.967	10.2840	21.04	. Q . V . . .
13.983	10.3131	21.16	. Q . V . . .
14.000	10.3424	21.27	. Q . V . . .
14.017	10.3719	21.38	. Q . V . . .
14.033	10.4015	21.49	. Q . V . . .
14.050	10.4312	21.60	. Q . V . . .
14.067	10.4612	21.71	. Q . V . . .
14.083	10.4912	21.83	. Q . V . . .
14.100	10.5214	21.94	. Q . V . . .
14.117	10.5518	22.05	. Q . V . . .
14.133	10.5823	22.16	. Q . V . . .
14.150	10.6130	22.27	. Q . V . . .
14.167	10.6438	22.38	. Q . V . . .
14.183	10.6748	22.49	. Q . V . . .
14.200	10.7059	22.60	. Q . V . . .
14.217	10.7372	22.71	. Q . V . . .
14.233	10.7687	22.82	. Q . V . . .
14.250	10.8003	22.94	. Q . V . . .
14.267	10.8320	23.05	. Q . V . . .
14.283	10.8639	23.16	. Q . V . . .

14.300	10.8959	23.27	. Q . V . . .
14.317	10.9282	23.38	. Q . V . . .
14.333	10.9605	23.49	. Q . V . . .
14.350	10.9930	23.60	. Q . V . . .
14.367	11.0257	23.72	. Q . V . . .
14.383	11.0586	23.88	. Q . V . . .
14.400	11.0917	24.05	. Q . V . . .
14.417	11.1251	24.23	. Q . V . . .
14.433	11.1587	24.40	. Q . V . . .
14.450	11.1925	24.57	. Q . V . . .
14.467	11.2266	24.75	. Q . V . . .
14.483	11.2609	24.92	. Q . V . . .
14.500	11.2955	25.09	. Q . V . . .
14.517	11.3303	25.27	. Q . V . . .
14.533	11.3654	25.44	. Q . V . . .
14.550	11.4006	25.61	. Q . V . . .
14.567	11.4361	25.79	. Q . V . . .
14.583	11.4719	25.96	. Q . V . . .
14.600	11.5079	26.13	. Q . V . . .
14.617	11.5441	26.30	. Q . V . . .
14.633	11.5806	26.48	. Q . V . . .
14.650	11.6173	26.62	. Q . V . . .
14.667	11.6541	26.73	. Q . V . . .
14.683	11.6910	26.84	. Q . V . . .
14.700	11.7282	26.95	. Q . V . . .
14.717	11.7654	27.06	. Q . V . . .
14.733	11.8029	27.17	. Q . V . . .
14.750	11.8405	27.28	. Q . V . . .
14.767	11.8782	27.40	. Q . V . . .
14.783	11.9161	27.51	. Q . V . . .
14.800	11.9541	27.62	. Q . V . . .
14.817	11.9923	27.73	. Q . V . . .
14.833	12.0307	27.84	. Q . V . . .
14.850	12.0692	27.95	. Q . V . . .
14.867	12.1078	28.06	. Q . V . . .
14.883	12.1466	28.17	. Q . V . . .
14.900	12.1856	28.29	. Q . V . . .
14.917	12.2248	28.44	. Q . V . . .
14.933	12.2643	28.73	. Q . V . . .
14.950	12.3043	29.04	. Q . V . . .
14.967	12.3448	29.35	. Q . V . . .
14.983	12.3856	29.67	. Q . V . . .
15.000	12.4269	29.98	. Q . V . . .
15.017	12.4686	30.29	. Q . V . . .
15.033	12.5108	30.60	. Q . V . . .
15.050	12.5533	30.91	. Q . V . . .
15.067	12.5963	31.22	. Q . V . . .
15.083	12.6398	31.53	. Q . V . . .
15.100	12.6836	31.84	. Q . V . . .
15.117	12.7279	32.15	. Q . V . . .
15.133	12.7726	32.46	. Q . V . . .
15.150	12.8177	32.77	. Q . V . . .
15.167	12.8633	33.08	. Q . V . . .
15.183	12.9093	33.38	. Q . V . . .
15.200	12.9556	33.64	. Q . V . . .
15.217	13.0023	33.87	. Q . V . . .
15.233	13.0492	34.10	. Q . V . . .
15.250	13.0965	34.33	. Q . V . . .

15.267	13.1441	34.56	. Q . V . . .
15.283	13.1920	34.79	. Q . V . . .
15.300	13.2403	35.02	. Q . V . . .
15.317	13.2888	35.25	. Q . V . . .
15.333	13.3377	35.48	. Q . V . . .
15.350	13.3869	35.71	. Q . V . . .
15.367	13.4364	35.94	. Q . V . . .
15.383	13.4862	36.17	. Q . V . . .
15.400	13.5364	36.40	. Q . V . . .
15.417	13.5868	36.63	. Q . V . . .
15.433	13.6376	36.86	. Q . V . . .
15.450	13.6887	37.09	. Q . V . . .
15.467	13.7402	37.40	. Q . V . . .
15.483	13.7923	37.86	. Q . V . . .
15.500	13.8451	38.33	. Q . V . . .
15.517	13.8986	38.79	. Q . V . . .
15.533	13.9526	39.26	. Q . V . . .
15.550	14.0074	39.72	. Q . V . . .
15.567	14.0627	40.19	. Q . V . . .
15.583	14.1187	40.65	. Q . V. . . .
15.600	14.1753	41.12	. Q . V. . . .
15.617	14.2326	41.58	. Q . V. . . .
15.633	14.2905	42.05	. Q . V. . . .
15.650	14.3491	42.51	. Q . V. . . .
15.667	14.4083	42.98	. Q . V. . . .
15.683	14.4681	43.44	. Q . V. . . .
15.700	14.5286	43.91	. Q . V. . . .
15.717	14.5897	44.37	. Q . V. . . .
15.733	14.6516	44.90	. Q . V. . . .
15.750	14.7149	45.98	. Q . V. . . .
15.767	14.7799	47.18	. Q . V. . . .
15.783	14.8465	48.38	. Q . V . . .
15.800	14.9148	49.59	. Q . V . . .
15.817	14.9848	50.79	. Q . V . . .
15.833	15.0564	52.00	. Q . V . . .
15.850	15.1297	53.20	. Q . V . . .
15.867	15.2046	54.41	. Q . V . . .
15.883	15.2812	55.61	. Q. V . . .
15.900	15.3595	56.82	. Q. V . . .
15.917	15.4394	58.02	. Q. V . . .
15.933	15.5210	59.23	. Q. V . . .
15.950	15.6042	60.43	. Q. .V . . .
15.967	15.6891	61.63	. Q .V . . .
15.983	15.7757	62.84	. Q .V . . .
16.000	15.8639	64.04	. Q .V . . .
16.017	15.9605	70.10	. .Q .V . . .
16.033	16.0720	81.01	. . Q .V . . .
16.050	16.1987	91.92	. . Q .V . . .
16.067	16.3403	102.83	. . Q . V . . .
16.083	16.4970	113.74	. . Q . V . . .
16.100	16.6687	124.65	. . Q V . . .
16.117	16.8554	135.56	. . . Q . . .
16.133	17.0571	146.47	. . . V Q . . .
16.150	17.2739	157.38	. . . V Q . . .
16.167	17.5057	168.29	. . . V Q . . .
16.183	17.7525	179.20	. . . V Q. . .
16.200	18.0144	190.11	. . . V .Q . .
16.217	18.2913	201.02	. . . V . Q . .

16.233	18.5832	211.93	. . . V . Q . .
16.250	18.8902	222.84	. . . V . Q . .
16.267	19.2121	233.75	. . . V . Q . .
16.283	19.5478	243.68	. . . V . Q . .
16.300	19.8647	230.06	. . . V . Q . .
16.317	20.1643	217.56	. . . V . Q . .
16.333	20.4468	205.07	. . . V . Q . .
16.350	20.7121	192.57	. . . V .Q . .
16.367	20.9601	180.08	. . . VQ. . .
16.383	21.1909	167.58	. . . QV . . .
16.400	21.4045	155.09	. . . Q V . . .
16.417	21.6010	142.59	. . . Q V. . .
16.433	21.7802	130.10	. . .Q V. . .
16.450	21.9421	117.60	. . Q. V. . .
16.467	22.0869	105.11	. . Q . V. . .
16.483	22.2145	92.61	. . Q . V. . .
16.500	22.3248	80.11	. . Q . V . .
16.517	22.4180	67.62	. .Q . V . .
16.533	22.4939	55.12	. Q. . V . .
16.550	22.5529	42.82	. Q . V . .
16.567	22.6056	38.30	. Q . V . .
16.583	22.6577	37.81	. Q . V . .
16.600	22.7091	37.32	. Q . V . .
16.617	22.7599	36.83	. Q . V . .
16.633	22.8099	36.35	. Q . V . .
16.650	22.8593	35.86	. Q . V . .
16.667	22.9080	35.37	. Q . V . .
16.683	22.9561	34.88	. Q . V . .
16.700	23.0035	34.39	. Q . V . .
16.717	23.0502	33.91	. Q . .V . .
16.733	23.0962	33.42	. Q . .V . .
16.750	23.1416	32.93	. Q . .V . .
16.767	23.1862	32.44	. Q . .V . .
16.783	23.2303	31.96	. Q . .V . .
16.800	23.2736	31.47	. Q . .V . .
16.817	23.3163	30.98	. Q . .V . .
16.833	23.3583	30.54	. Q . .V . .
16.850	23.3999	30.19	. Q . .V . .
16.867	23.4410	29.85	. Q . .V . .
16.883	23.4817	29.51	. Q . .V . .
16.900	23.5219	29.17	. Q . .V . .
16.917	23.5616	28.83	. Q . .V . .
16.933	23.6008	28.49	. Q . .V . .
16.950	23.6396	28.15	. Q . .V . .
16.967	23.6779	27.81	. Q . .V . .
16.983	23.7157	27.47	. Q . .V . .
17.000	23.7531	27.12	. Q . .V . .
17.017	23.7900	26.78	. Q . . V . .
17.033	23.8264	26.44	. Q . . V . .
17.050	23.8623	26.10	. Q . . V . .
17.067	23.8978	25.76	. Q . . V . .
17.083	23.9328	25.42	. Q . . V . .
17.100	23.9674	25.09	. Q . . V . .
17.117	24.0016	24.82	. Q . . V . .
17.133	24.0354	24.57	. Q . . V . .
17.150	24.0689	24.32	. Q . . V . .
17.167	24.1021	24.07	. Q . . V . .
17.183	24.1349	23.82	. Q . . V . .

17.200	24.1673	23.57	. Q . . .V .
17.217	24.1994	23.31	. Q . . .V .
17.233	24.2312	23.06	. Q . . .V .
17.250	24.2626	22.81	. Q . . .V .
17.267	24.2937	22.56	. Q . . .V .
17.283	24.3244	22.31	. Q . . .V .
17.300	24.3548	22.06	. Q . . .V .
17.317	24.3849	21.81	. Q . . .V .
17.333	24.4146	21.56	. Q . . .V .
17.350	24.4439	21.31	. Q . . .V .
17.367	24.4729	21.06	. Q . . .V .
17.383	24.5017	20.86	. Q . . . V .
17.400	24.5302	20.72	. Q . . . V .
17.417	24.5586	20.58	. Q . . . V .
17.433	24.5867	20.44	. Q . . . V .
17.450	24.6147	20.30	. Q . . . V .
17.467	24.6424	20.15	. Q . . . V .
17.483	24.6700	20.01	. Q . . . V .
17.500	24.6974	19.87	. Q . . . V .
17.517	24.7245	19.73	. Q . . . V .
17.533	24.7515	19.59	. Q . . . V .
17.550	24.7783	19.45	. Q . . . V .
17.567	24.8049	19.31	. Q . . . V .
17.583	24.8313	19.17	. Q . . . V .
17.600	24.8575	19.03	. Q . . . V .
17.617	24.8835	18.88	. Q . . . V .
17.633	24.9094	18.74	. Q . . . V .
17.650	24.9350	18.61	. Q . . . V .
17.667	24.9605	18.50	. Q . . . V .
17.683	24.9858	18.40	. Q . . . V .
17.700	25.0110	18.29	. Q . . . V .
17.717	25.0360	18.19	. Q . . . V .
17.733	25.0610	18.08	. Q . . . V .
17.750	25.0857	17.98	. Q . . . V .
17.767	25.1103	17.87	. Q . . . V .
17.783	25.1348	17.77	. Q . . . V .
17.800	25.1592	17.67	. Q . . . V .
17.817	25.1833	17.56	. Q . . . V .
17.833	25.2074	17.46	. Q . . . V .
17.850	25.2313	17.35	. Q . . . V .
17.867	25.2550	17.25	. Q . . . V .
17.883	25.2787	17.14	. Q . . . V .
17.900	25.3021	17.04	. Q . . . V .
17.917	25.3255	16.94	. Q . . . V .
17.933	25.3487	16.84	. Q . . . V .
17.950	25.3717	16.75	. Q . . . V .
17.967	25.3947	16.66	. Q . . . V .
17.983	25.4175	16.57	. Q . . . V .
18.000	25.4402	16.48	. Q . . . V .
18.017	25.4628	16.39	. Q . . . V .
18.033	25.4852	16.30	. Q . . . V .
18.050	25.5075	16.21	. Q . . . V .
18.067	25.5297	16.12	. Q . . . V .
18.083	25.5518	16.03	. Q . . . V .
18.100	25.5738	15.93	. Q . . . V .
18.117	25.5956	15.84	. Q . . . V .
18.133	25.6173	15.75	. Q . . . V .
18.150	25.6389	15.66	. Q . . . V .

18.167	25.6603	15.57	. Q . . . V .
18.183	25.6816	15.48	. Q . . . V .
18.200	25.7028	15.36	. Q . . . V .
18.217	25.7237	15.16	. Q . . . V .
18.233	25.7443	14.95	. Q . . . V .
18.250	25.7646	14.74	. Q . . . V .
18.267	25.7846	14.54	. Q . . . V .
18.283	25.8043	14.33	. Q . . . V .
18.300	25.8238	14.12	. Q . . . V .
18.317	25.8430	13.92	. Q . . . V .
18.333	25.8618	13.71	. Q . . . V .
18.350	25.8804	13.50	. Q . . . V .
18.367	25.8987	13.29	. Q . . . V .
18.383	25.9168	13.09	. Q . . . V .
18.400	25.9345	12.88	. Q . . . V .
18.417	25.9520	12.67	. Q . . . V .
18.433	25.9691	12.47	. Q . . . V .
18.450	25.9860	12.26	. Q . . . V .
18.467	26.0026	12.06	.Q . . . V .
18.483	26.0191	11.97	.Q . . . V .
18.500	26.0356	11.92	.Q . . . V .
18.517	26.0519	11.87	.Q . . . V .
18.533	26.0682	11.82	.Q . . . V .
18.550	26.0844	11.77	.Q . . . V .
18.567	26.1005	11.72	.Q . . . V .
18.583	26.1166	11.67	.Q . . . V .
18.600	26.1326	11.62	.Q . . . V .
18.617	26.1485	11.57	.Q . . . V .
18.633	26.1644	11.52	.Q . . . V .
18.650	26.1802	11.47	.Q . . . V .
18.667	26.1959	11.42	.Q . . . V .
18.683	26.2116	11.36	.Q . . . V .
18.700	26.2272	11.31	.Q . . . V .
18.717	26.2427	11.26	.Q . . . V .
18.733	26.2581	11.21	.Q . . . V .
18.750	26.2735	11.17	.Q . . . V .
18.767	26.2888	11.12	.Q . . . V .
18.783	26.3041	11.08	.Q . . . V .
18.800	26.3193	11.04	.Q . . . V .
18.817	26.3344	11.00	.Q . . . V .
18.833	26.3495	10.95	.Q . . . V .
18.850	26.3646	10.91	.Q . . . V .
18.867	26.3795	10.87	.Q . . . V .
18.883	26.3944	10.83	.Q . . . V .
18.900	26.4093	10.78	.Q . . . V .
18.917	26.4241	10.74	.Q . . . V .
18.933	26.4388	10.70	.Q . . . V .
18.950	26.4535	10.66	.Q . . . V .
18.967	26.4681	10.62	.Q . . . V .
18.983	26.4827	10.57	.Q . . . V .
19.000	26.4972	10.53	.Q . . . V .
19.017	26.5116	10.49	.Q . . . V .
19.033	26.5260	10.45	.Q . . . V .
19.050	26.5404	10.42	.Q . . . V .
19.067	26.5547	10.38	.Q . . . V .
19.083	26.5689	10.34	.Q . . . V .
19.100	26.5831	10.31	.Q . . . V .
19.117	26.5973	10.27	.Q . . . V .

19.133	26.6114	10.24	.Q	.	.	.	V	.
19.150	26.6254	10.20	.Q	.	.	.	V	.
19.167	26.6394	10.16	.Q	.	.	.	V	.
19.183	26.6534	10.13	.Q	.	.	.	V	.
19.200	26.6673	10.09	.Q	.	.	.	V	.
19.217	26.6811	10.05	.Q	.	.	.	V	.
19.233	26.6949	10.02	.Q	.	.	.	V	.
19.250	26.7087	9.98	.Q	.	.	.	V	.
19.267	26.7224	9.95	.Q	.	.	.	V	.
19.283	26.7360	9.91	.Q	.	.	.	V	.
19.300	26.7496	9.88	.Q	.	.	.	V	.
19.317	26.7632	9.85	.Q	.	.	.	V	.
19.333	26.7767	9.81	.Q	.	.	.	V	.
19.350	26.7902	9.78	.Q	.	.	.	V	.
19.367	26.8036	9.75	.Q	.	.	.	V	.
19.383	26.8170	9.72	.Q	.	.	.	V	.
19.400	26.8304	9.69	.Q	.	.	.	V	.
19.417	26.8437	9.66	.Q	.	.	.	V	.
19.433	26.8569	9.63	.Q	.	.	.	V	.
19.450	26.8701	9.60	.Q	.	.	.	V	.
19.467	26.8833	9.56	.Q	.	.	.	V	.
19.483	26.8964	9.53	.Q	.	.	.	V	.
19.500	26.9095	9.50	.Q	.	.	.	V	.
19.517	26.9226	9.47	.Q	.	.	.	V	.
19.533	26.9356	9.44	.Q	.	.	.	V	.
19.550	26.9485	9.41	.Q	.	.	.	V	.
19.567	26.9615	9.38	.Q	.	.	.	V	.
19.583	26.9743	9.35	.Q	.	.	.	V	.
19.600	26.9872	9.32	.Q	.	.	.	V	.
19.617	27.0000	9.30	.Q	.	.	.	V	.
19.633	27.0128	9.27	.Q	.	.	.	V	.
19.650	27.0255	9.24	.Q	.	.	.	V	.
19.667	27.0382	9.21	.Q	.	.	.	V	.
19.683	27.0508	9.19	.Q	.	.	.	V	.
19.700	27.0634	9.16	.Q	.	.	.	V	.
19.717	27.0760	9.13	.Q	.	.	.	V	.
19.733	27.0886	9.10	.Q	.	.	.	V	.
19.750	27.1011	9.08	.Q	.	.	.	V	.
19.767	27.1135	9.05	.Q	.	.	.	V	.
19.783	27.1260	9.02	.Q	.	.	.	V	.
19.800	27.1384	9.00	.Q	.	.	.	V	.
19.817	27.1507	8.97	.Q	.	.	.	V	.
19.833	27.1630	8.94	.Q	.	.	.	V	.
19.850	27.1753	8.92	.Q	.	.	.	V	.
19.867	27.1876	8.89	.Q	.	.	.	V	.
19.883	27.1998	8.87	.Q	.	.	.	V	.
19.900	27.2119	8.84	.Q	.	.	.	V	.
19.917	27.2241	8.82	.Q	.	.	.	V	.
19.933	27.2362	8.80	.Q	.	.	.	V	.
19.950	27.2483	8.77	.Q	.	.	.	V	.
19.967	27.2603	8.75	.Q	.	.	.	V	.
19.983	27.2724	8.72	.Q	.	.	.	V	.
20.000	27.2843	8.70	.Q	.	.	.	V	.
20.017	27.2963	8.67	.Q	.	.	.	V	.
20.033	27.3082	8.65	.Q	.	.	.	V	.
20.050	27.3201	8.63	.Q	.	.	.	V	.
20.067	27.3319	8.60	.Q	.	.	.	V	.
20.083	27.3438	8.58	.Q	.	.	.	V	.

20.100	27.3555	8.55	.Q	.	.	.	V	.
20.117	27.3673	8.53	.Q	.	.	.	V	.
20.133	27.3790	8.51	.Q	.	.	.	V	.
20.150	27.3907	8.49	.Q	.	.	.	V	.
20.167	27.4024	8.47	.Q	.	.	.	V	.
20.183	27.4140	8.44	.Q	.	.	.	V	.
20.200	27.4256	8.42	.Q	.	.	.	V	.
20.217	27.4372	8.40	.Q	.	.	.	V	.
20.233	27.4487	8.38	.Q	.	.	.	V	.
20.250	27.4602	8.36	.Q	.	.	.	V	.
20.267	27.4717	8.34	.Q	.	.	.	V	.
20.283	27.4832	8.32	.Q	.	.	.	V	.
20.300	27.4946	8.29	.Q	.	.	.	V	.
20.317	27.5060	8.27	.Q	.	.	.	V	.
20.333	27.5173	8.25	.Q	.	.	.	V	.
20.350	27.5287	8.23	.Q	.	.	.	V	.
20.367	27.5400	8.21	.Q	.	.	.	V	.
20.383	27.5513	8.19	.Q	.	.	.	V	.
20.400	27.5625	8.17	.Q	.	.	.	V	.
20.417	27.5737	8.15	.Q	.	.	.	V	.
20.433	27.5849	8.13	.Q	.	.	.	V	.
20.450	27.5961	8.11	.Q	.	.	.	V	.
20.467	27.6072	8.09	.Q	.	.	.	V	.
20.483	27.6183	8.07	.Q	.	.	.	V	.
20.500	27.6294	8.05	.Q	.	.	.	V	.
20.517	27.6405	8.03	.Q	.	.	.	V	.
20.533	27.6515	8.01	.Q	.	.	.	V	.
20.550	27.6625	7.99	.Q	.	.	.	V	.
20.567	27.6735	7.97	.Q	.	.	.	V	.
20.583	27.6845	7.95	.Q	.	.	.	V	.
20.600	27.6954	7.93	.Q	.	.	.	V	.
20.617	27.7063	7.92	.Q	.	.	.	V	.
20.633	27.7172	7.90	.Q	.	.	.	V	.
20.650	27.7280	7.88	.Q	.	.	.	V	.
20.667	27.7389	7.86	.Q	.	.	.	V	.
20.683	27.7497	7.84	.Q	.	.	.	V	.
20.700	27.7604	7.82	.Q	.	.	.	V	.
20.717	27.7712	7.81	.Q	.	.	.	V	.
20.733	27.7819	7.79	.Q	.	.	.	V	.
20.750	27.7926	7.77	.Q	.	.	.	V	.
20.767	27.8033	7.75	.Q	.	.	.	V	.
20.783	27.8140	7.74	.Q	.	.	.	V	.
20.800	27.8246	7.72	.Q	.	.	.	V	.
20.817	27.8352	7.70	.Q	.	.	.	V	.
20.833	27.8458	7.68	.Q	.	.	.	V	.
20.850	27.8563	7.67	.Q	.	.	.	V	.
20.867	27.8669	7.65	.Q	.	.	.	V	.
20.883	27.8774	7.63	.Q	.	.	.	V	.
20.900	27.8879	7.61	.Q	.	.	.	V	.
20.917	27.8983	7.60	.Q	.	.	.	V	.
20.933	27.9088	7.58	.Q	.	.	.	V	.
20.950	27.9192	7.56	.Q	.	.	.	V	.
20.967	27.9296	7.55	.Q	.	.	.	V	.
20.983	27.9399	7.53	.Q	.	.	.	V	.
21.000	27.9503	7.51	.Q	.	.	.	V	.
21.017	27.9606	7.50	.Q	.	.	.	V	.
21.033	27.9709	7.48	.Q	.	.	.	V	.
21.050	27.9812	7.47	.Q	.	.	.	V	.

21.067	27.9915	7.45	.Q	.	.	.	V	.
21.083	28.0017	7.43	.Q	.	.	.	V	.
21.100	28.0119	7.42	.Q	.	.	.	V	.
21.117	28.0221	7.40	.Q	.	.	.	V	.
21.133	28.0323	7.39	.Q	.	.	.	V	.
21.150	28.0425	7.37	.Q	.	.	.	V	.
21.167	28.0526	7.36	.Q	.	.	.	V	.
21.183	28.0627	7.34	.Q	.	.	.	V	.
21.200	28.0728	7.32	.Q	.	.	.	V	.
21.217	28.0829	7.31	.Q	.	.	.	V	.
21.233	28.0929	7.29	.Q	.	.	.	V	.
21.250	28.1029	7.28	.Q	.	.	.	V	.
21.267	28.1129	7.26	.Q	.	.	.	V	.
21.283	28.1229	7.25	.Q	.	.	.	V	.
21.300	28.1329	7.24	.Q	.	.	.	V	.
21.317	28.1428	7.22	.Q	.	.	.	V	.
21.333	28.1528	7.21	.Q	.	.	.	V	.
21.350	28.1627	7.19	.Q	.	.	.	V	.
21.367	28.1726	7.18	.Q	.	.	.	V	.
21.383	28.1824	7.16	.Q	.	.	.	V	.
21.400	28.1923	7.15	.Q	.	.	.	V	.
21.417	28.2021	7.13	.Q	.	.	.	V	.
21.433	28.2119	7.12	.Q	.	.	.	V	.
21.450	28.2217	7.10	.Q	.	.	.	V	.
21.467	28.2315	7.09	.Q	.	.	.	V	.
21.483	28.2412	7.08	.Q	.	.	.	V	.
21.500	28.2509	7.06	.Q	.	.	.	V	.
21.517	28.2606	7.05	.Q	.	.	.	V	.
21.533	28.2703	7.04	.Q	.	.	.	V	.
21.550	28.2800	7.02	.Q	.	.	.	V	.
21.567	28.2897	7.01	.Q	.	.	.	V	.
21.583	28.2993	7.00	.Q	.	.	.	V	.
21.600	28.3089	6.98	.Q	.	.	.	V	.
21.617	28.3185	6.97	.Q	.	.	.	V	.
21.633	28.3281	6.96	.Q	.	.	.	V	.
21.650	28.3376	6.94	.Q	.	.	.	V	.
21.667	28.3472	6.93	.Q	.	.	.	V	.
21.683	28.3567	6.91	.Q	.	.	.	V	.
21.700	28.3662	6.90	.Q	.	.	.	V	.
21.717	28.3757	6.89	.Q	.	.	.	V	.
21.733	28.3852	6.87	.Q	.	.	.	V	.
21.750	28.3946	6.86	.Q	.	.	.	V	.
21.767	28.4041	6.85	.Q	.	.	.	V	.
21.783	28.4135	6.84	.Q	.	.	.	V	.
21.800	28.4229	6.82	.Q	.	.	.	V	.
21.817	28.4323	6.81	.Q	.	.	.	V	.
21.833	28.4416	6.80	.Q	.	.	.	V	.
21.850	28.4510	6.79	.Q	.	.	.	V	.
21.867	28.4603	6.77	.Q	.	.	.	V	.
21.883	28.4696	6.76	.Q	.	.	.	V	.
21.900	28.4789	6.75	.Q	.	.	.	V	.
21.917	28.4882	6.74	.Q	.	.	.	V	.
21.933	28.4975	6.73	.Q	.	.	.	V	.
21.950	28.5067	6.71	.Q	.	.	.	V	.
21.967	28.5159	6.70	.Q	.	.	.	V	.
21.983	28.5252	6.69	.Q	.	.	.	V	.
22.000	28.5343	6.68	.Q	.	.	.	V	.
22.017	28.5435	6.66	.Q	.	.	.	V	.

22.033	28.5527	6.65	.Q	.	.	.	V	.
22.050	28.5618	6.64	.Q	.	.	.	V	.
22.067	28.5710	6.63	.Q	.	.	.	V	.
22.083	28.5801	6.62	.Q	.	.	.	V	.
22.100	28.5892	6.61	.Q	.	.	.	V	.
22.117	28.5983	6.59	.Q	.	.	.	V	.
22.133	28.6073	6.58	.Q	.	.	.	V	.
22.150	28.6164	6.57	.Q	.	.	.	V	.
22.167	28.6254	6.56	.Q	.	.	.	V	.
22.183	28.6344	6.55	.Q	.	.	.	V	.
22.200	28.6434	6.54	.Q	.	.	.	V	.
22.217	28.6524	6.53	.Q	.	.	.	V	.
22.233	28.6614	6.51	.Q	.	.	.	V	.
22.250	28.6704	6.50	.Q	.	.	.	V	.
22.267	28.6793	6.49	.Q	.	.	.	V	.
22.283	28.6882	6.48	.Q	.	.	.	V	.
22.300	28.6971	6.47	.Q	.	.	.	V	.
22.317	28.7060	6.46	.Q	.	.	.	V	.
22.333	28.7149	6.45	.Q	.	.	.	V	.
22.350	28.7238	6.44	.Q	.	.	.	V	.
22.367	28.7326	6.43	.Q	.	.	.	V	.
22.383	28.7415	6.42	.Q	.	.	.	V	.
22.400	28.7503	6.40	.Q	.	.	.	V	.
22.417	28.7591	6.39	.Q	.	.	.	V	.
22.433	28.7679	6.38	.Q	.	.	.	V	.
22.450	28.7767	6.37	.Q	.	.	.	V	.
22.467	28.7854	6.36	.Q	.	.	.	V	.
22.483	28.7942	6.35	.Q	.	.	.	V	.
22.500	28.8029	6.34	.Q	.	.	.	V	.
22.517	28.8116	6.33	.Q	.	.	.	V	.
22.533	28.8203	6.32	.Q	.	.	.	V	.
22.550	28.8290	6.31	.Q	.	.	.	V	.
22.567	28.8377	6.30	.Q	.	.	.	V	.
22.583	28.8464	6.29	.Q	.	.	.	V	.
22.600	28.8550	6.28	.Q	.	.	.	V	.
22.617	28.8637	6.27	.Q	.	.	.	V	.
22.633	28.8723	6.26	.Q	.	.	.	V	.
22.650	28.8809	6.25	.Q	.	.	.	V	.
22.667	28.8895	6.24	.Q	.	.	.	V	.
22.683	28.8981	6.23	.Q	.	.	.	V	.
22.700	28.9066	6.22	.Q	.	.	.	V	.
22.717	28.9152	6.21	.Q	.	.	.	V	.
22.733	28.9237	6.20	.Q	.	.	.	V	.
22.750	28.9322	6.19	.Q	.	.	.	V	.
22.767	28.9408	6.18	.Q	.	.	.	V	.
22.783	28.9492	6.17	.Q	.	.	.	V	.
22.800	28.9577	6.16	.Q	.	.	.	V	.
22.817	28.9662	6.15	.Q	.	.	.	V	.
22.833	28.9747	6.14	.Q	.	.	.	V	.
22.850	28.9831	6.13	.Q	.	.	.	V	.
22.867	28.9915	6.12	.Q	.	.	.	V	.
22.883	29.0000	6.11	.Q	.	.	.	V	.
22.900	29.0084	6.10	.Q	.	.	.	V	.
22.917	29.0168	6.09	.Q	.	.	.	V	.
22.933	29.0251	6.08	Q	.	.	.	V	.
22.950	29.0335	6.07	Q	.	.	.	V	.
22.967	29.0418	6.06	Q	.	.	.	V	.
22.983	29.0502	6.06	Q	.	.	.	V	.

23.000	29.0585	6.05	Q	.	.	.	V.
23.017	29.0668	6.04	Q	.	.	.	V.
23.033	29.0751	6.03	Q	.	.	.	V.
23.050	29.0834	6.02	Q	.	.	.	V.
23.067	29.0917	6.01	Q	.	.	.	V.
23.083	29.1000	6.00	Q	.	.	.	V.
23.100	29.1082	5.99	Q	.	.	.	V.
23.117	29.1165	5.98	Q	.	.	.	V.
23.133	29.1247	5.97	Q	.	.	.	V.
23.150	29.1329	5.96	Q	.	.	.	V.
23.167	29.1411	5.96	Q	.	.	.	V.
23.183	29.1493	5.95	Q	.	.	.	V.
23.200	29.1575	5.94	Q	.	.	.	V.
23.217	29.1656	5.93	Q	.	.	.	V.
23.233	29.1738	5.92	Q	.	.	.	V.
23.250	29.1819	5.91	Q	.	.	.	V.
23.267	29.1901	5.90	Q	.	.	.	V.
23.283	29.1982	5.89	Q	.	.	.	V.
23.300	29.2063	5.89	Q	.	.	.	V.
23.317	29.2144	5.88	Q	.	.	.	V.
23.333	29.2225	5.87	Q	.	.	.	V.
23.350	29.2305	5.86	Q	.	.	.	V.
23.367	29.2386	5.85	Q	.	.	.	V.
23.383	29.2466	5.84	Q	.	.	.	V.
23.400	29.2547	5.83	Q	.	.	.	V.
23.417	29.2627	5.83	Q	.	.	.	V.
23.433	29.2707	5.82	Q	.	.	.	V.
23.450	29.2787	5.81	Q	.	.	.	V.
23.467	29.2867	5.80	Q	.	.	.	V.
23.483	29.2947	5.79	Q	.	.	.	V.
23.500	29.3027	5.78	Q	.	.	.	V.
23.517	29.3106	5.78	Q	.	.	.	V.
23.533	29.3186	5.77	Q	.	.	.	V.
23.550	29.3265	5.76	Q	.	.	.	V.
23.567	29.3344	5.75	Q	.	.	.	V.
23.583	29.3423	5.74	Q	.	.	.	V.
23.600	29.3502	5.74	Q	.	.	.	V.
23.617	29.3581	5.73	Q	.	.	.	V.
23.633	29.3660	5.72	Q	.	.	.	V.
23.650	29.3739	5.71	Q	.	.	.	V.
23.667	29.3817	5.70	Q	.	.	.	V.
23.683	29.3896	5.70	Q	.	.	.	V.
23.700	29.3974	5.69	Q	.	.	.	V.
23.717	29.4052	5.68	Q	.	.	.	V.
23.733	29.4130	5.67	Q	.	.	.	V.
23.750	29.4208	5.66	Q	.	.	.	V.
23.767	29.4286	5.66	Q	.	.	.	V.
23.783	29.4364	5.65	Q	.	.	.	V.
23.800	29.4442	5.64	Q	.	.	.	V.
23.817	29.4519	5.63	Q	.	.	.	V.
23.833	29.4597	5.63	Q	.	.	.	V.
23.850	29.4674	5.62	Q	.	.	.	V.
23.867	29.4752	5.61	Q	.	.	.	V.
23.883	29.4829	5.60	Q	.	.	.	V.
23.900	29.4906	5.60	Q	.	.	.	V.
23.917	29.4983	5.59	Q	.	.	.	V.
23.933	29.5060	5.58	Q	.	.	.	V.
23.950	29.5136	5.57	Q	.	.	.	V.

23.967	29.5213	5.57	Q	.	.	.	V.
23.983	29.5290	5.56	Q	.	.	.	V.
24.000	29.5366	5.55	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%	1441.0
10%	815.0
20%	225.0
30%	145.0
40%	125.0
50%	105.0
60%	85.0
70%	60.0
80%	40.0
90%	20.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

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                            Santa Ana, CA92707


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA B                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 2-YR EV MARCH 2019 CCHIU                                              *
 ************************************************************************

  FILE NAME: 3B02EVS.DAT
  TIME/DATE OF STUDY: 15:02 03/13/2019

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


**************************************************************************
  FLOW PROCESS FROM NODE    210.00 TO NODE    222.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  214.70
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.253
    LOW LOSS FRACTION = 0.493
    TIME OF CONCENTRATION(MIN.) = 18.58
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   2
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.13
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.28
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.37
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.62
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  0.85
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  1.44

--------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    12.22
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    13.54

--------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	23.4	46.7	70.1	93.4
10.000	2.3622	4.00	.Q	V .	.	.	.
10.017	2.3677	4.01	.Q	V .	.	.	.
10.033	2.3732	4.02	.Q	V .	.	.	.
10.050	2.3788	4.03	.Q	V .	.	.	.
10.067	2.3843	4.04	.Q	V .	.	.	.
10.083	2.3899	4.05	.Q	V .	.	.	.
10.100	2.3955	4.05	.Q	V .	.	.	.
10.117	2.4011	4.06	.Q	V .	.	.	.
10.133	2.4067	4.07	.Q	V .	.	.	.
10.150	2.4123	4.07	.Q	V .	.	.	.
10.167	2.4179	4.08	.Q	V .	.	.	.
10.183	2.4235	4.08	.Q	V .	.	.	.
10.200	2.4292	4.09	.Q	V .	.	.	.
10.217	2.4348	4.09	.Q	V .	.	.	.
10.233	2.4405	4.10	.Q	V .	.	.	.
10.250	2.4461	4.10	.Q	V .	.	.	.
10.267	2.4518	4.11	.Q	V .	.	.	.
10.283	2.4574	4.11	.Q	V .	.	.	.
10.300	2.4631	4.12	.Q	V .	.	.	.
10.317	2.4688	4.12	.Q	V .	.	.	.
10.333	2.4745	4.13	.Q	V .	.	.	.
10.350	2.4802	4.13	.Q	V .	.	.	.
10.367	2.4859	4.14	.Q	V .	.	.	.
10.383	2.4916	4.14	.Q	V .	.	.	.
10.400	2.4973	4.15	.Q	V .	.	.	.
10.417	2.5030	4.15	.Q	V .	.	.	.
10.433	2.5087	4.16	.Q	V .	.	.	.
10.450	2.5144	4.16	.Q	V .	.	.	.
10.467	2.5202	4.18	.Q	V .	.	.	.
10.483	2.5260	4.19	.Q	V .	.	.	.
10.500	2.5317	4.20	.Q	V .	.	.	.
10.517	2.5375	4.21	.Q	V .	.	.	.
10.533	2.5433	4.22	.Q	V .	.	.	.
10.550	2.5492	4.23	.Q	V .	.	.	.
10.567	2.5550	4.24	.Q	V .	.	.	.
10.583	2.5609	4.25	.Q	V .	.	.	.
10.600	2.5667	4.26	.Q	V .	.	.	.
10.617	2.5726	4.27	.Q	V .	.	.	.
10.633	2.5785	4.28	.Q	V .	.	.	.
10.650	2.5844	4.29	.Q	V .	.	.	.
10.667	2.5903	4.30	.Q	V .	.	.	.
10.683	2.5963	4.31	.Q	V .	.	.	.
10.700	2.6022	4.32	.Q	V .	.	.	.
10.717	2.6082	4.33	.Q	V .	.	.	.
10.733	2.6142	4.34	.Q	V .	.	.	.

10.750	2.6201	4.35	.Q	V .	.	.	.
10.767	2.6261	4.35	.Q	V .	.	.	.
10.783	2.6321	4.36	.Q	V .	.	.	.
10.800	2.6382	4.37	.Q	V .	.	.	.
10.817	2.6442	4.37	.Q	V .	.	.	.
10.833	2.6502	4.38	.Q	V .	.	.	.
10.850	2.6562	4.38	.Q	V .	.	.	.
10.867	2.6623	4.39	.Q	V .	.	.	.
10.883	2.6683	4.39	.Q	V .	.	.	.
10.900	2.6744	4.40	.Q	V .	.	.	.
10.917	2.6805	4.41	.Q	V .	.	.	.
10.933	2.6865	4.41	.Q	V .	.	.	.
10.950	2.6926	4.42	.Q	V .	.	.	.
10.967	2.6987	4.42	.Q	V .	.	.	.
10.983	2.7048	4.43	.Q	V .	.	.	.
11.000	2.7109	4.43	.Q	V .	.	.	.
11.017	2.7170	4.44	.Q	V .	.	.	.
11.033	2.7232	4.44	.Q	V .	.	.	.
11.050	2.7293	4.45	.Q	V .	.	.	.
11.067	2.7354	4.46	.Q	V .	.	.	.
11.083	2.7416	4.47	.Q	V .	.	.	.
11.100	2.7478	4.49	.Q	V .	.	.	.
11.117	2.7540	4.50	.Q	V.	.	.	.
11.133	2.7602	4.51	.Q	V.	.	.	.
11.150	2.7664	4.52	.Q	V.	.	.	.
11.167	2.7727	4.54	.Q	V.	.	.	.
11.183	2.7789	4.55	.Q	V.	.	.	.
11.200	2.7852	4.56	.Q	V.	.	.	.
11.217	2.7915	4.57	.Q	V.	.	.	.
11.233	2.7978	4.59	.Q	V.	.	.	.
11.250	2.8042	4.60	.Q	V.	.	.	.
11.267	2.8105	4.61	.Q	V.	.	.	.
11.283	2.8169	4.62	.Q	V.	.	.	.
11.300	2.8233	4.64	.Q	V.	.	.	.
11.317	2.8297	4.65	.Q	V.	.	.	.
11.333	2.8361	4.66	.Q	V.	.	.	.
11.350	2.8425	4.67	. Q	V.	.	.	.
11.367	2.8490	4.68	. Q	V.	.	.	.
11.383	2.8555	4.69	. Q	V.	.	.	.
11.400	2.8619	4.70	. Q	V.	.	.	.
11.417	2.8684	4.71	. Q	V.	.	.	.
11.433	2.8749	4.71	. Q	V.	.	.	.
11.450	2.8814	4.72	. Q	V.	.	.	.
11.467	2.8879	4.73	. Q	V.	.	.	.
11.483	2.8944	4.73	. Q	V.	.	.	.
11.500	2.9010	4.74	. Q	V.	.	.	.
11.517	2.9075	4.75	. Q	V.	.	.	.
11.533	2.9140	4.75	. Q	V.	.	.	.
11.550	2.9206	4.76	. Q	V.	.	.	.
11.567	2.9272	4.77	. Q	V.	.	.	.
11.583	2.9337	4.77	. Q	V.	.	.	.
11.600	2.9403	4.78	. Q	V.	.	.	.
11.617	2.9469	4.79	. Q	V.	.	.	.
11.633	2.9535	4.79	. Q	V.	.	.	.
11.650	2.9601	4.80	. Q	V.	.	.	.
11.667	2.9668	4.81	. Q	V.	.	.	.
11.683	2.9734	4.82	. Q	V.	.	.	.
11.700	2.9801	4.84	. Q	V.	.	.	.

11.717	2.9867	4.85	. Q	V.	.	.	.
11.733	2.9934	4.87	. Q	V.	.	.	.
11.750	3.0002	4.88	. Q	V.	.	.	.
11.767	3.0069	4.90	. Q	V.	.	.	.
11.783	3.0137	4.91	. Q	V.	.	.	.
11.800	3.0205	4.93	. Q	V.	.	.	.
11.817	3.0273	4.94	. Q	V.	.	.	.
11.833	3.0341	4.96	. Q	V.	.	.	.
11.850	3.0410	4.97	. Q	V.	.	.	.
11.867	3.0478	4.99	. Q	V.	.	.	.
11.883	3.0547	5.01	. Q	V.	.	.	.
11.900	3.0616	5.02	. Q	V	.	.	.
11.917	3.0686	5.04	. Q	V	.	.	.
11.933	3.0755	5.05	. Q	V	.	.	.
11.950	3.0825	5.07	. Q	V	.	.	.
11.967	3.0895	5.08	. Q	V	.	.	.
11.983	3.0965	5.10	. Q	V	.	.	.
12.000	3.1036	5.13	. Q	V	.	.	.
12.017	3.1107	5.16	. Q	V	.	.	.
12.033	3.1179	5.19	. Q	V	.	.	.
12.050	3.1250	5.22	. Q	V	.	.	.
12.067	3.1323	5.25	. Q	V	.	.	.
12.083	3.1395	5.28	. Q	V	.	.	.
12.100	3.1468	5.31	. Q	V	.	.	.
12.117	3.1542	5.34	. Q	V	.	.	.
12.133	3.1616	5.37	. Q	V	.	.	.
12.150	3.1690	5.39	. Q	V	.	.	.
12.167	3.1765	5.42	. Q	V	.	.	.
12.183	3.1840	5.45	. Q	V	.	.	.
12.200	3.1915	5.48	. Q	V	.	.	.
12.217	3.1991	5.51	. Q	V	.	.	.
12.233	3.2068	5.54	. Q	V	.	.	.
12.250	3.2145	5.57	. Q	V	.	.	.
12.267	3.2222	5.60	. Q	V	.	.	.
12.283	3.2299	5.63	. Q	V	.	.	.
12.300	3.2377	5.67	. Q	V	.	.	.
12.317	3.2456	5.73	. Q	V	.	.	.
12.333	3.2536	5.78	. Q	V	.	.	.
12.350	3.2617	5.84	. Q	V	.	.	.
12.367	3.2698	5.90	. Q	V	.	.	.
12.383	3.2780	5.95	. Q	V	.	.	.
12.400	3.2862	6.01	. Q	V	.	.	.
12.417	3.2946	6.06	. Q	V	.	.	.
12.433	3.3030	6.12	. Q	V	.	.	.
12.450	3.3115	6.17	. Q	V	.	.	.
12.467	3.3201	6.23	. Q	V	.	.	.
12.483	3.3288	6.28	. Q	V	.	.	.
12.500	3.3375	6.34	. Q	V	.	.	.
12.517	3.3463	6.39	. Q	V	.	.	.
12.533	3.3552	6.45	. Q	V	.	.	.
12.550	3.3641	6.51	. Q	.V	.	.	.
12.567	3.3732	6.56	. Q	.V	.	.	.
12.583	3.3823	6.62	. Q	.V	.	.	.
12.600	3.3915	6.67	. Q	.V	.	.	.
12.617	3.4007	6.69	. Q	.V	.	.	.
12.633	3.4099	6.70	. Q	.V	.	.	.
12.650	3.4192	6.71	. Q	.V	.	.	.
12.667	3.4284	6.72	. Q	.V	.	.	.

12.683	3.4377	6.74	. Q	.V	.	.	.
12.700	3.4470	6.75	. Q	.V	.	.	.
12.717	3.4563	6.76	. Q	.V	.	.	.
12.733	3.4656	6.77	. Q	.V	.	.	.
12.750	3.4750	6.78	. Q	.V	.	.	.
12.767	3.4843	6.79	. Q	.V	.	.	.
12.783	3.4937	6.81	. Q	.V	.	.	.
12.800	3.5031	6.82	. Q	.V	.	.	.
12.817	3.5125	6.83	. Q	.V	.	.	.
12.833	3.5219	6.84	. Q	.V	.	.	.
12.850	3.5314	6.85	. Q	.V	.	.	.
12.867	3.5408	6.86	. Q	.V	.	.	.
12.883	3.5503	6.88	. Q	.V	.	.	.
12.900	3.5598	6.89	. Q	.V	.	.	.
12.917	3.5693	6.90	. Q	.V	.	.	.
12.933	3.5788	6.93	. Q	.V	.	.	.
12.950	3.5884	6.96	. Q	.V	.	.	.
12.967	3.5981	6.99	. Q	.V	.	.	.
12.983	3.6077	7.01	. Q	.V	.	.	.
13.000	3.6174	7.04	. Q	.V	.	.	.
13.017	3.6271	7.07	. Q	.V	.	.	.
13.033	3.6369	7.09	. Q	.V	.	.	.
13.050	3.6467	7.12	. Q	.V	.	.	.
13.067	3.6566	7.15	. Q	.V	.	.	.
13.083	3.6665	7.18	. Q	.V	.	.	.
13.100	3.6764	7.20	. Q	. V	.	.	.
13.117	3.6863	7.23	. Q	. V	.	.	.
13.133	3.6963	7.26	. Q	. V	.	.	.
13.150	3.7064	7.28	. Q	. V	.	.	.
13.167	3.7164	7.31	. Q	. V	.	.	.
13.183	3.7265	7.34	. Q	. V	.	.	.
13.200	3.7367	7.36	. Q	. V	.	.	.
13.217	3.7469	7.39	. Q	. V	.	.	.
13.233	3.7571	7.41	. Q	. V	.	.	.
13.250	3.7673	7.43	. Q	. V	.	.	.
13.267	3.7776	7.44	. Q	. V	.	.	.
13.283	3.7878	7.46	. Q	. V	.	.	.
13.300	3.7981	7.47	. Q	. V	.	.	.
13.317	3.8084	7.49	. Q	. V	.	.	.
13.333	3.8188	7.51	. Q	. V	.	.	.
13.350	3.8291	7.52	. Q	. V	.	.	.
13.367	3.8395	7.54	. Q	. V	.	.	.
13.383	3.8499	7.55	. Q	. V	.	.	.
13.400	3.8603	7.57	. Q	. V	.	.	.
13.417	3.8708	7.58	. Q	. V	.	.	.
13.433	3.8813	7.60	. Q	. V	.	.	.
13.450	3.8918	7.62	. Q	. V	.	.	.
13.467	3.9023	7.63	. Q	. V	.	.	.
13.483	3.9128	7.65	. Q	. V	.	.	.
13.500	3.9234	7.66	. Q	. V	.	.	.
13.517	3.9339	7.68	. Q	. V	.	.	.
13.533	3.9445	7.70	. Q	. V	.	.	.
13.550	3.9552	7.74	. Q	. V	.	.	.
13.567	3.9659	7.77	. Q	. V	.	.	.
13.583	3.9767	7.81	. Q	. V	.	.	.
13.600	3.9875	7.85	. Q	. V	.	.	.
13.617	3.9983	7.89	. Q	. V	.	.	.
13.633	4.0093	7.93	. Q	. V	.	.	.

13.650	4.0202	7.96	.	Q	.	V	.	.	.	
13.667	4.0313	8.00	.	Q	.	V	.	.	.	
13.683	4.0423	8.04	.	Q	.	V	.	.	.	
13.700	4.0535	8.08	.	Q	.	V	.	.	.	
13.717	4.0646	8.11	.	Q	.	V	.	.	.	
13.733	4.0759	8.15	.	Q	.	V	.	.	.	
13.750	4.0871	8.19	.	Q	.	V	.	.	.	
13.767	4.0985	8.23	.	Q	.	V	.	.	.	
13.783	4.1099	8.27	.	Q	.	V	.	.	.	
13.800	4.1213	8.30	.	Q	.	V	.	.	.	
13.817	4.1328	8.34	.	Q	.	V	.	.	.	
13.833	4.1443	8.38	.	Q	.	V	.	.	.	
13.850	4.1559	8.41	.	Q	.	V	.	.	.	
13.867	4.1675	8.43	.	Q	.	V	.	.	.	
13.883	4.1792	8.46	.	Q	.	V	.	.	.	
13.900	4.1909	8.48	.	Q	.	V	.	.	.	
13.917	4.2026	8.50	.	Q	.	V	.	.	.	
13.933	4.2143	8.52	.	Q	.	V	.	.	.	
13.950	4.2261	8.55	.	Q	.	V	.	.	.	
13.967	4.2379	8.57	.	Q	.	V	.	.	.	
13.983	4.2497	8.59	.	Q	.	V	.	.	.	
14.000	4.2616	8.62	.	Q	.	V	.	.	.	
14.017	4.2735	8.64	.	Q	.	V	.	.	.	
14.033	4.2854	8.66	.	Q	.	V	.	.	.	
14.050	4.2974	8.69	.	Q	.	V	.	.	.	
14.067	4.3094	8.71	.	Q	.	V	.	.	.	
14.083	4.3214	8.73	.	Q	.	V	.	.	.	
14.100	4.3335	8.75	.	Q	.	V	.	.	.	
14.117	4.3456	8.78	.	Q	.	V	.	.	.	
14.133	4.3577	8.80	.	Q	.	V	.	.	.	
14.150	4.3698	8.83	.	Q	.	V	.	.	.	
14.167	4.3821	8.90	.	Q	.	V	.	.	.	
14.183	4.3944	8.97	.	Q	.	V	.	.	.	
14.200	4.4069	9.04	.	Q	.	V	.	.	.	
14.217	4.4195	9.12	.	Q	.	V	.	.	.	
14.233	4.4321	9.19	.	Q	.	V	.	.	.	
14.250	4.4449	9.27	.	Q	.	V	.	.	.	
14.267	4.4578	9.34	.	Q	.	V	.	.	.	
14.283	4.4707	9.42	.	Q	.	V	.	.	.	
14.300	4.4838	9.49	.	Q	.	V	.	.	.	
14.317	4.4970	9.56	.	Q	.	V	.	.	.	
14.333	4.5102	9.64	.	Q	.	V	.	.	.	
14.350	4.5236	9.71	.	Q	.	V	.	.	.	
14.367	4.5371	9.79	.	Q	.	V	.	.	.	
14.383	4.5507	9.86	.	Q	.	V	.	.	.	
14.400	4.5644	9.93	.	Q	.	V	.	.	.	
14.417	4.5782	10.01	.	Q	.	V	.	.	.	
14.433	4.5920	10.08	.	Q	.	V	.	.	.	
14.450	4.6060	10.16	.	Q	.	V	.	.	.	
14.467	4.6201	10.22	.	Q	.	V	.	.	.	
14.483	4.6342	10.25	.	Q	.	V	.	.	.	
14.500	4.6484	10.29	.	Q	.	V	.	.	.	
14.517	4.6626	10.33	.	Q	.	V	.	.	.	
14.533	4.6769	10.37	.	Q	.	V	.	.	.	
14.550	4.6912	10.41	.	Q	.	V	.	.	.	
14.567	4.7056	10.44	.	Q	.	V	.	.	.	
14.583	4.7201	10.48	.	Q	.	V	.	.	.	
14.600	4.7346	10.52	.	Q	.	V	.	.	.	

14.617	4.7491	10.56	.	Q	.	V	.	.	.	
14.633	4.7637	10.59	.	Q	.	V	.	.	.	
14.650	4.7783	10.63	.	Q	.	V	.	.	.	
14.667	4.7930	10.67	.	Q	.	V	.	.	.	
14.683	4.8078	10.71	.	Q	.	V	.	.	.	
14.700	4.8226	10.74	.	Q	.	V	.	.	.	
14.717	4.8374	10.78	.	Q	.	V	.	.	.	
14.733	4.8523	10.82	.	Q	.	V	.	.	.	
14.750	4.8673	10.86	.	Q	.	V	.	.	.	
14.767	4.8823	10.90	.	Q	.	V	.	.	.	
14.783	4.8974	10.99	.	Q	.	V	.	.	.	
14.800	4.9127	11.09	.	Q	.	V	.	.	.	
14.817	4.9281	11.20	.	Q	.	V	.	.	.	
14.833	4.9437	11.30	.	Q	.	V	.	.	.	
14.850	4.9594	11.41	.	Q	.	V	.	.	.	
14.867	4.9753	11.52	.	Q	.	V	.	.	.	
14.883	4.9913	11.62	.	Q	.	V	.	.	.	
14.900	5.0074	11.73	.	Q	.	V	.	.	.	
14.917	5.0237	11.83	.	Q	.	V	.	.	.	
14.933	5.0402	11.94	.	Q	.	V	.	.	.	
14.950	5.0568	12.04	.	Q	.	V	.	.	.	
14.967	5.0735	12.15	.	Q	.	V	.	.	.	
14.983	5.0904	12.25	.	Q	.	V	.	.	.	
15.000	5.1074	12.36	.	Q	.	V	.	.	.	
15.017	5.1246	12.46	.	Q	.	V	.	.	.	
15.033	5.1419	12.57	.	Q	.	V	.	.	.	
15.050	5.1593	12.67	.	Q	.	V	.	.	.	
15.067	5.1769	12.78	.	Q	.	V	.	.	.	
15.083	5.1947	12.88	.	Q	.	V	.	.	.	
15.100	5.2125	12.95	.	Q	.	V	.	.	.	
15.117	5.2305	13.03	.	Q	.	V	.	.	.	
15.133	5.2485	13.11	.	Q	.	V	.	.	.	
15.150	5.2667	13.19	.	Q	.	V	.	.	.	
15.167	5.2850	13.27	.	Q	.	V	.	.	.	
15.183	5.3033	13.35	.	Q	.	V	.	.	.	
15.200	5.3218	13.42	.	Q	.	V	.	.	.	
15.217	5.3404	13.50	.	Q	.	V	.	.	.	
15.233	5.3591	13.58	.	Q	.	V	.	.	.	
15.250	5.3779	13.66	.	Q	.	V	.	.	.	
15.267	5.3969	13.74	.	Q	.	V	.	.	.	
15.283	5.4159	13.81	.	Q	.	V	.	.	.	
15.300	5.4350	13.89	.	Q	.	V	.	.	.	
15.317	5.4543	13.97	.	Q	.	V	.	.	.	
15.333	5.4736	14.05	.	Q	.	V	.	.	.	
15.350	5.4931	14.13	.	Q	.	V	.	.	.	
15.367	5.5126	14.20	.	Q	.	V	.	.	.	
15.383	5.5323	14.28	.	Q	.	V	.	.	.	
15.400	5.5522	14.41	.	Q	.	V	.	.	.	
15.417	5.5722	14.56	.	Q	.	V	.	.	.	
15.433	5.5925	14.71	.	Q	.	V	.	.	.	
15.450	5.6129	14.86	.	Q	.	V	.	.	.	
15.467	5.6336	15.01	.	Q	.	V	.	.	.	
15.483	5.6545	15.16	.	Q	.	V	.	.	.	
15.500	5.6756	15.31	.	Q	.	V	.	.	.	
15.517	5.6969	15.46	.	Q	.	V	.	.	.	
15.533	5.7184	15.61	.	Q	.	V	.	.	.	
15.550	5.7401	15.76	.	Q	.	V	.	.	.	
15.567	5.7620	15.91	.	Q	.	V	.	.	.	

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15.583      5.7841     16.06  .    Q   .       V .         .         .
15.600      5.8064     16.21  .    Q   .        V.         .         .
15.617      5.8290     16.36  .     Q  .        V.         .         .
15.633      5.8517     16.51  .     Q  .        V.         .         .
15.650      5.8746     16.66  .     Q  .        V.         .         .
15.667      5.8978     16.81  .     Q  .        V.         .         .
15.683      5.9211     16.96  .     Q  .        V.         .         .
15.700      5.9448     17.15  .     Q  .        V.         .         .
15.717      5.9689     17.52  .     Q  .        V.         .         .
15.733      5.9936     17.91  .     Q  .        V.         .         .
15.750      6.0188     18.31  .     Q  .        V.         .         .
15.767      6.0445     18.70  .      Q .        V.         .         .
15.783      6.0708     19.09  .      Q .        V.         .         .
15.800      6.0977     19.48  .      Q .        V.         .         .
15.817      6.1250     19.88  .      Q .         V         .         .
15.833      6.1530     20.27  .      Q .         V         .         .
15.850      6.1814     20.66  .      Q .         V         .         .
15.867      6.2104     21.05  .       Q.         V         .         .
15.883      6.2400     21.45  .       Q.         V         .         .
15.900      6.2701     21.84  .       Q.         V         .         .
15.917      6.3007     22.23  .       Q.         V         .         .
15.933      6.3318     22.62  .       Q.         V         .         .
15.950      6.3635     23.02  .       Q.         V         .         .
15.967      6.3958     23.41  .        Q         V         .         .
15.983      6.4286     23.80  .        Q         .V        .         .
16.000      6.4619     24.20  .        Q         .V        .         .
16.017      6.4981     26.25  .        .Q        .V        .         .
16.033      6.5393     29.96  .        . Q       .V        .         .
16.050      6.5857     33.68  .        .   Q     .V        .         .
16.067      6.6372     37.40  .        .     Q   .V        .         .
16.083      6.6939     41.11  .        .      Q  .V        .         .
16.100      6.7556     44.83  .        .       Q. V        .         .
16.117      6.8225     48.54  .        .        Q V        .         .
16.133      6.8944     52.26  .        .         . Q       .         .
16.150      6.9715     55.97  .        .         . VQ      .         .
16.167      7.0538     59.69  .        .         .  V Q    .         .
16.183      7.1411     63.40  .        .         .  V   Q  .         .
16.200      7.2335     67.12  .        .         .  V    Q .         .
16.217      7.3311     70.83  .        .         .  V      Q         .
16.233      7.4338     74.55  .        .         .   V     .Q        .
16.250      7.5416     78.26  .        .         .   V     .  Q      .
16.267      7.6545     81.98  .        .         .    V    .    Q    .
16.283      7.7726     85.70  .        .         .    V    .     Q   .
16.300      7.8957     89.41  .        .         .    V    .      Q  .
16.317      8.0244     93.42  .        .         .     V   .       Q
16.333      8.1478     89.58  .        .         .     V   .      Q  .
16.350      8.2654     85.40  .        .         .      V  .     Q   .
16.367      8.3773     81.22  .        .         .      V  .   Q     .
16.383      8.4834     77.05  .        .         .      V  . Q       .
16.400      8.5838     72.87  .        .         .       V .Q        .
16.417      8.6784     68.69  .        .         .       VQ.         .
16.433      8.7673     64.51  .        .         .      QV .         .
16.450      8.8504     60.34  .        .         .    Q  V .         .
16.467      8.9277     56.16  .        .         .   Q    V.         .
16.483      8.9993     51.98  .        .         . Q      V.         .
16.500      9.0652     47.80  .        .         Q        V.         .
16.517      9.1252     43.62  .        .       Q .        V.         .
16.533      9.1796     39.45  .        .     Q   .         V         .
```



```
16.550      9.2282     35.27  .         .    Q    .         V         .
16.567      9.2710     31.09  .         .  Q      .         V         .
16.583      9.3081     26.91  .         .Q        .         V         .
16.600      9.3394     22.74  .        Q.         .         V         .
16.617      9.3649     18.56  .      Q  .         .         V         .
16.633      9.3867     15.78  .     Q   .         .         V         .
16.650      9.4080     15.51  .     Q   .         .         V         .
16.667      9.4291     15.29  .     Q   .         .         V         .
16.683      9.4499     15.07  .     Q   .         .         V         .
16.700      9.4703     14.86  .     Q   .         .         V         .
16.717      9.4905     14.64  .     Q   .         .         .V        .
16.733      9.5104     14.42  .     Q   .         .         .V        .
16.750      9.5299     14.21  .     Q   .         .         .V        .
16.767      9.5492     13.99  .    Q    .         .         .V        .
16.783      9.5682     13.77  .    Q    .         .         .V        .
16.800      9.5868     13.55  .    Q    .         .         .V        .
16.817      9.6052     13.34  .    Q    .         .         .V        .
16.833      9.6233     13.12  .    Q    .         .         .V        .
16.850      9.6410     12.90  .    Q    .         .         .V        .
16.867      9.6585     12.69  .    Q    .         .         .V        .
16.883      9.6757     12.47  .    Q    .         .         .V        .
16.900      9.6926     12.25  .    Q    .         .         .V        .
16.917      9.7091     12.03  .    Q    .         .         .V        .
16.933      9.7254     11.82  .    Q    .         .         .V        .
16.950      9.7415     11.67  .   Q     .         .         .V        .
16.967      9.7574     11.55  .   Q     .         .         .V        .
16.983      9.7732     11.43  .   Q     .         .         .V        .
17.000      9.7887     11.31  .   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%	1021.0
10%	905.0
20%	255.0
30%	165.0
40%	145.0
50%	120.0
60%	95.0
70%	70.0
80%	45.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

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

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                          Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA C                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 2-YR EV DECEMBER 2018 CCHIU                                           *
 ************************************************************************

  FILE NAME: 3C02EVS.DAT
  TIME/DATE OF STUDY: 13:26 12/11/2018


**************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE    380.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     870.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.431 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) =  0.301
         LOW LOSS FRACTION = 0.529
         *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 = 0.961
          30-MINUTE FACTOR = 0.961
           1-HOUR FACTOR = 0.961
           3-HOUR FACTOR = 0.994
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998
```



```
         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  19.335


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  10.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
        1                1.110               116.874
        2                4.384               344.731
        3               12.483               852.683
        4               23.996              1212.251
        5               37.993              1473.684
        6               54.605              1749.044
        7               69.638              1582.772
        8               80.251              1117.430
        9               87.547               768.172
       10               92.038               472.866
       11               95.164               329.105
       12               97.008               194.182
       13               98.112               116.201
       14               98.488                39.608
       15               98.850                38.171
       16               99.213                38.172
       17               99.575                38.171
       18               99.938                38.171
       19              100.000                 6.530


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      52.1935
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =      52.0689
--------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 75.0 150.0 225.0 300.0
10.000	9.5549	16.44	. Q V . . . .
10.083	9.6691	16.57	. Q V . . . .
10.167	9.7841	16.71	. Q V . . . .
10.250	9.9001	16.84	. Q V . . . .
10.333	10.0171	16.98	. Q V . . . .
10.417	10.1350	17.13	. Q V . . . .
10.500	10.2540	17.27	. Q V . . . .
10.583	10.3740	17.42	. Q V . . . .
10.667	10.4951	17.58	. Q V . . . .
10.750	10.6172	17.73	. Q V . . . .
10.833	10.7404	17.89	. Q V . . . .
10.917	10.8648	18.06	. Q V . . . .
11.000	10.9903	18.23	. Q V . . . .
11.083	11.1170	18.40	. Q V . . . .
11.167	11.2450	18.58	. Q V . . . .
11.250	11.3742	18.76	. Q V . . . .
11.333	11.5046	18.94	. Q V . . . .
11.417	11.6364	19.14	. Q V . . . .
11.500	11.7696	19.33	. Q V. . . . .
11.583	11.9041	19.53	. Q V. . . . .
11.667	12.0401	19.74	. Q V. . . . .
11.750	12.1775	19.95	. Q V. . . . .
11.833	12.3164	20.17	. Q V. . . . .
11.917	12.4569	20.40	. Q V. . . . .
12.000	12.5990	20.63	. Q V. . . . .
12.083	12.7431	20.92	. Q V. . . . .
12.167	12.8899	21.32	. Q V. . . . .
12.250	13.0411	21.95	. Q V . . . .
12.333	13.1976	22.74	. Q V . . . .
12.417	13.3605	23.65	. Q V . . . .
12.500	13.5306	24.70	. Q V . . . .
12.583	13.7075	25.69	. Q V . . . .
12.667	13.8899	26.48	. Q V . . . .
12.750	14.0768	27.14	. Q V . . . .
12.833	14.2675	27.68	. Q V . . . .
12.917	14.4615	28.17	. Q .V . . . .
13.000	14.6586	28.62	. Q .V . . . .
13.083	14.8586	29.05	. Q .V . . . .
13.167	15.0615	29.45	. Q .V . . . .
13.250	15.2672	29.88	. Q .V . . . .
13.333	15.4760	30.31	. Q .V . . . .
13.417	15.6879	30.77	. Q . V . . . .
13.500	15.9031	31.25	. Q . V . . . .
13.583	16.1217	31.73	. Q . V . . . .
13.667	16.3436	32.23	. Q . V . . . .
13.750	16.5692	32.76	. Q . V . . . .
13.833	16.7986	33.30	. Q . V . . . .
13.917	17.0320	33.88	. Q . V . . . .
14.000	17.2695	34.49	. Q . V . . . .
14.083	17.5117	35.17	. Q . V . . . .
14.167	17.7593	35.95	. Q . V . . . .
14.250	18.0138	36.95	. Q . V . . . .
14.333	18.2763	38.11	. Q . V . . . .
14.417	18.5476	39.41	. Q . V . . . .
14.500	18.8289	40.84	. Q . V . . . .
14.583	19.1201	42.28	. Q . V . . . .
14.667	19.4205	43.63	. Q . V . . . .
14.750	19.7300	44.93	. Q . V . . . .
14.833	20.0483	46.21	. Q . V . . . .
14.917	20.3757	47.55	. Q . V . . . .
15.000	20.7127	48.93	. Q . V . . . .
15.083	21.0599	50.42	. Q . V . . . .
15.167	21.4181	52.00	. Q . V . . . .
15.250	21.7884	53.77	. Q . V . . . .
15.333	22.1721	55.71	. Q . V . . . .
15.417	22.5698	57.75	. Q . V . . . .
15.500	22.9812	59.73	. Q . V . . . .
15.583	23.4040	61.40	. Q . V . . . .
15.667	23.8378	62.99	. Q . V . . . .
15.750	24.2851	64.95	. Q . V . . . .
15.833	24.7500	67.50	. Q . V. . . . .
15.917	25.2467	72.12	. Q. V. . . . .
16.000	25.7982	80.09	. Q V. . . . .
16.083	26.4985	101.69	. . Q V . . . .
16.167	27.4342	135.85	. . Q .V . . . .
16.250	28.7592	192.40	. . . V Q . . . .
16.333	30.3635	232.93	. . . V .Q . . . .
16.417	32.1507	259.50	. . . V . Q . . . .
16.500	34.0698	278.65	. . . V . Q . . . .
16.583	35.8188	253.95	. . . V . Q . . . .
16.667	37.2039	201.13	. . . Q V . . . . .
16.750	38.2947	158.39	. . .Q V. . . . .
16.833	39.1404	122.79	. . Q . V . . . .
16.917	39.8425	101.94	. . Q . V . . . .
17.000	40.4166	83.36	. .Q . .V . . . .
17.083	40.9042	70.80	. Q. . .V . . . .
17.167	41.3154	59.71	. Q . . .V . . . .
17.250	41.6994	55.75	. Q . . . V . . . .
17.333	42.0605	52.43	. Q . . . V . . . .
17.417	42.3999	49.29	. Q . . . V . . . .
17.500	42.7175	46.12	. Q . . . V . . . .
17.583	42.9979	40.71	. Q . . . . V . . .
17.667	43.2591	37.93	. Q . . . . V . . .
17.750	43.5079	36.13	. Q . . . . V . . .
17.833	43.7466	34.65	. Q . . . . V . . .
17.917	43.9761	33.33	. Q . . . . V . . .
18.000	44.1977	32.17	. Q . . . . V . . .
18.083	44.4118	31.09	. Q . . . . . V . .
18.167	44.6186	30.02	. Q . . . . . V . .
18.250	44.8170	28.81	. Q . . . . . V . .
18.333	45.0065	27.51	. Q . . . . . V . .
18.417	45.1866	26.16	. Q . . . . . V . .
18.500	45.3570	24.73	. Q . . . . . V . .
18.583	45.5184	23.44	. Q . . . . . V . .
18.667	45.6727	22.40	. Q . . . . . V . .

18.750	45.8211	21.55	. Q	.	.	.	V	.
18.833	45.9648	20.86	. Q	.	.	.	V	.
18.917	46.1043	20.26	. Q	.	.	.	V	.
19.000	46.2403	19.75	. Q	.	.	.	V	.
19.083	46.3732	19.29	. Q	.	.	.	V	.
19.167	46.5033	18.89	. Q	.	.	.	V	.
19.250	46.6307	18.51	. Q	.	.	.	V	.
19.333	46.7557	18.15	. Q	.	.	.	V	.
19.417	46.8783	17.80	. Q	.	.	.	V	.
19.500	46.9986	17.47	. Q	.	.	.	V	.
19.583	47.1168	17.17	. Q	.	.	.	V	.
19.667	47.2331	16.88	. Q	.	.	.	V	.
19.750	47.3474	16.61	. Q	.	.	.	V	.
19.833	47.4600	16.34	. Q	.	.	.	V	.
19.917	47.5708	16.09	. Q	.	.	.	V	.
20.000	47.6800	15.85	. 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%	1205.0
10%	325.0
20%	115.0
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

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

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                          Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA D                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 2-YR EV SEPTEMBER 2018 CCHIU                                          *
 ************************************************************************

  FILE NAME: 3D02EVS.DAT
  TIME/DATE OF STUDY: 15:32 09/25/2018

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


****************************************************************************
  FLOW PROCESS FROM NODE    430.00 TO NODE    428.00 IS CODE = 1.2
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
============================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  439.50
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.287
    LOW LOSS FRACTION = 0.528
    TIME OF CONCENTRATION(MIN.) = 37.99
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   2
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.13
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.28
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.37
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.62
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  0.85
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  1.44

----------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    22.27
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    30.47

----------------------------------------------------------------------------
```

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	22.7	45.4	68.1	90.8
10.000	4.3252	7.44	. Q	V .	.	.	.
10.017	4.3354	7.45	. Q	V .	.	.	.
10.033	4.3457	7.47	. Q	V .	.	.	.
10.050	4.3560	7.48	. Q	V .	.	.	.
10.067	4.3664	7.50	. Q	V .	.	.	.
10.083	4.3767	7.52	. Q	V .	.	.	.
10.100	4.3871	7.53	. Q	V .	.	.	.
10.117	4.3975	7.55	. Q	V .	.	.	.
10.133	4.4079	7.56	. Q	V .	.	.	.
10.150	4.4183	7.58	. Q	V .	.	.	.
10.167	4.4288	7.59	. Q	V .	.	.	.
10.183	4.4393	7.61	. Q	V .	.	.	.
10.200	4.4498	7.63	. Q	V .	.	.	.
10.217	4.4603	7.64	. Q	V .	.	.	.
10.233	4.4708	7.66	. Q	V .	.	.	.
10.250	4.4814	7.67	. Q	V .	.	.	.
10.267	4.4920	7.69	. Q	V .	.	.	.
10.283	4.5026	7.70	. Q	V .	.	.	.
10.300	4.5132	7.72	. Q	V .	.	.	.
10.317	4.5239	7.73	. Q	V .	.	.	.
10.333	4.5346	7.74	. Q	V .	.	.	.
10.350	4.5452	7.75	. Q	V .	.	.	.
10.367	4.5559	7.76	. Q	V .	.	.	.
10.383	4.5666	7.77	. Q	V .	.	.	.
10.400	4.5773	7.78	. Q	V .	.	.	.
10.417	4.5881	7.79	. Q	V .	.	.	.
10.433	4.5988	7.80	. Q	V .	.	.	.
10.450	4.6096	7.81	. Q	V .	.	.	.
10.467	4.6203	7.82	. Q	V .	.	.	.
10.483	4.6311	7.82	. Q	V .	.	.	.
10.500	4.6419	7.83	. Q	V .	.	.	.
10.517	4.6527	7.84	. Q	V .	.	.	.
10.533	4.6635	7.85	. Q	V .	.	.	.
10.550	4.6743	7.86	. Q	V .	.	.	.
10.567	4.6852	7.87	. Q	V .	.	.	.
10.583	4.6960	7.88	. Q	V .	.	.	.
10.600	4.7069	7.89	. Q	V .	.	.	.
10.617	4.7178	7.90	. Q	V .	.	.	.
10.633	4.7287	7.91	. Q	V .	.	.	.
10.650	4.7396	7.92	. Q	V .	.	.	.
10.667	4.7505	7.93	. Q	V .	.	.	.
10.683	4.7614	7.94	. Q	V .	.	.	.
10.700	4.7724	7.94	. Q	V .	.	.	.
10.717	4.7833	7.95	. Q	V .	.	.	.
10.733	4.7943	7.96	. Q	V .	.	.	.

10.750	4.8053	7.97	.	Q	V	.	.	.	.
10.767	4.8163	7.98	.	Q	V	.	.	.	.
10.783	4.8273	7.99	.	Q	V	.	.	.	.
10.800	4.8383	8.00	.	Q	V	.	.	.	.
10.817	4.8493	8.01	.	Q	V	.	.	.	.
10.833	4.8604	8.02	.	Q	V	.	.	.	.
10.850	4.8714	8.03	.	Q	V	.	.	.	.
10.867	4.8825	8.04	.	Q	V	.	.	.	.
10.883	4.8936	8.05	.	Q	V	.	.	.	.
10.900	4.9047	8.05	.	Q	V	.	.	.	.
10.917	4.9158	8.06	.	Q	V	.	.	.	.
10.933	4.9269	8.07	.	Q	V	.	.	.	.
10.950	4.9380	8.09	.	Q	V	.	.	.	.
10.967	4.9492	8.11	.	Q	V	.	.	.	.
10.983	4.9604	8.13	.	Q	V	.	.	.	.
11.000	4.9716	8.15	.	Q	V	.	.	.	.
11.017	4.9829	8.18	.	Q	V	.	.	.	.
11.033	4.9942	8.20	.	Q	V	.	.	.	.
11.050	5.0055	8.22	.	Q	V	.	.	.	.
11.067	5.0169	8.24	.	Q	V	.	.	.	.
11.083	5.0283	8.27	.	Q	V	.	.	.	.
11.100	5.0397	8.29	.	Q	V	.	.	.	.
11.117	5.0511	8.31	.	Q	V	.	.	.	.
11.133	5.0626	8.33	.	Q	V	.	.	.	.
11.150	5.0741	8.35	.	Q	V	.	.	.	.
11.167	5.0857	8.38	.	Q	V	.	.	.	.
11.183	5.0972	8.40	.	Q	V	.	.	.	.
11.200	5.1088	8.42	.	Q	V	.	.	.	.
11.217	5.1205	8.44	.	Q	V	.	.	.	.
11.233	5.1321	8.47	.	Q	V	.	.	.	.
11.250	5.1438	8.49	.	Q	V	.	.	.	.
11.267	5.1555	8.51	.	Q	V	.	.	.	.
11.283	5.1673	8.53	.	Q	V	.	.	.	.
11.300	5.1791	8.56	.	Q	V	.	.	.	.
11.317	5.1909	8.58	.	Q	V	.	.	.	.
11.333	5.2027	8.60	.	Q	V	.	.	.	.
11.350	5.2146	8.62	.	Q	V	.	.	.	.
11.367	5.2265	8.64	.	Q	V	.	.	.	.
11.383	5.2384	8.67	.	Q	V	.	.	.	.
11.400	5.2504	8.69	.	Q	V	.	.	.	.
11.417	5.2624	8.71	.	Q	V	.	.	.	.
11.433	5.2744	8.73	.	Q	V	.	.	.	.
11.450	5.2865	8.76	.	Q	V	.	.	.	.
11.467	5.2986	8.78	.	Q	V	.	.	.	.
11.483	5.3107	8.80	.	Q	V	.	.	.	.
11.500	5.3229	8.82	.	Q	V	.	.	.	.
11.517	5.3350	8.84	.	Q	V	.	.	.	.
11.533	5.3473	8.87	.	Q	V	.	.	.	.
11.550	5.3595	8.89	.	Q	V	.	.	.	.
11.567	5.3718	8.91	.	Q	V	.	.	.	.
11.583	5.3841	8.93	.	Q	V	.	.	.	.
11.600	5.3964	8.94	.	Q	V	.	.	.	.
11.617	5.4087	8.96	.	Q	V	.	.	.	.
11.633	5.4211	8.97	.	Q	V	.	.	.	.
11.650	5.4335	8.98	.	Q	V	.	.	.	.
11.667	5.4459	9.00	.	Q	V	.	.	.	.
11.683	5.4583	9.01	.	Q	V	.	.	.	.
11.700	5.4707	9.02	.	Q	V	.	.	.	.

11.717	5.4831	9.04	.	Q	V.	.	.	.
11.733	5.4956	9.05	.	Q	V.	.	.	.
11.750	5.5081	9.07	.	Q	V.	.	.	.
11.767	5.5206	9.08	.	Q	V.	.	.	.
11.783	5.5331	9.09	.	Q	V.	.	.	.
11.800	5.5457	9.11	.	Q	V.	.	.	.
11.817	5.5582	9.12	.	Q	V.	.	.	.
11.833	5.5708	9.13	.	Q	V	.	.	.
11.850	5.5834	9.15	.	Q	V	.	.	.
11.867	5.5960	9.16	.	Q	V	.	.	.
11.883	5.6087	9.17	.	Q	V	.	.	.
11.900	5.6213	9.19	.	Q	V	.	.	.
11.917	5.6340	9.20	.	Q	V	.	.	.
11.933	5.6467	9.22	.	Q	V	.	.	.
11.950	5.6594	9.23	.	Q	V	.	.	.
11.967	5.6721	9.24	.	Q	V	.	.	.
11.983	5.6849	9.26	.	Q	V	.	.	.
12.000	5.6977	9.27	.	Q	V	.	.	.
12.017	5.7105	9.28	.	Q	V	.	.	.
12.033	5.7233	9.30	.	Q	V	.	.	.
12.050	5.7361	9.31	.	Q	V	.	.	.
12.067	5.7489	9.32	.	Q	V	.	.	.
12.083	5.7618	9.34	.	Q	V	.	.	.
12.100	5.7747	9.35	.	Q	V	.	.	.
12.117	5.7876	9.37	.	Q	V	.	.	.
12.133	5.8005	9.38	.	Q	V	.	.	.
12.150	5.8134	9.39	.	Q	V	.	.	.
12.167	5.8264	9.41	.	Q	V	.	.	.
12.183	5.8394	9.42	.	Q	V	.	.	.
12.200	5.8524	9.43	.	Q	V	.	.	.
12.217	5.8654	9.48	.	Q	V	.	.	.
12.233	5.8786	9.57	.	Q	V	.	.	.
12.250	5.8919	9.66	.	Q	V	.	.	.
12.267	5.9053	9.74	.	Q	V	.	.	.
12.283	5.9189	9.83	.	Q	V	.	.	.
12.300	5.9325	9.92	.	Q	V	.	.	.
12.317	5.9463	10.01	.	Q	V	.	.	.
12.333	5.9602	10.10	.	Q	V	.	.	.
12.350	5.9742	10.18	.	Q	V	.	.	.
12.367	5.9884	10.27	.	Q	V	.	.	.
12.383	6.0027	10.36	.	Q	V	.	.	.
12.400	6.0171	10.45	.	Q	V	.	.	.
12.417	6.0316	10.53	.	Q	V	.	.	.
12.433	6.0462	10.62	.	Q	V	.	.	.
12.450	6.0609	10.71	.	Q	V	.	.	.
12.467	6.0758	10.80	.	Q	V	.	.	.
12.483	6.0908	10.89	.	Q	V	.	.	.
12.500	6.1059	10.97	.	Q	V	.	.	.
12.517	6.1212	11.06	.	Q	V	.	.	.
12.533	6.1365	11.15	.	Q	.V	.	.	.
12.550	6.1520	11.24	.	Q	.V	.	.	.
12.567	6.1676	11.33	.	Q	.V	.	.	.
12.583	6.1833	11.41	.	Q	.V	.	.	.
12.600	6.1992	11.50	.	Q	.V	.	.	.
12.617	6.2151	11.59	.	Q	.V	.	.	.
12.633	6.2312	11.68	.	Q	.V	.	.	.
12.650	6.2474	11.77	.	Q	.V	.	.	.
12.667	6.2638	11.85	.	Q	.V	.	.	.

12.683	6.2802	11.94	.	Q	.V	.	.	.
12.700	6.2968	12.03	.	Q	.V	.	.	.
12.717	6.3135	12.12	.	Q	.V	.	.	.
12.733	6.3303	12.20	.	Q	.V	.	.	.
12.750	6.3472	12.29	.	Q	.V	.	.	.
12.767	6.3643	12.38	.	Q	.V	.	.	.
12.783	6.3814	12.47	.	Q	.V	.	.	.
12.800	6.3987	12.56	.	Q	.V	.	.	.
12.817	6.4161	12.64	.	Q	.V	.	.	.
12.833	6.4337	12.73	.	Q	.V	.	.	.
12.850	6.4513	12.79	.	Q	.V	.	.	.
12.867	6.4689	12.81	.	Q	.V	.	.	.
12.883	6.4866	12.84	.	Q	.V	.	.	.
12.900	6.5043	12.86	.	Q	.V	.	.	.
12.917	6.5221	12.89	.	Q	.V	.	.	.
12.933	6.5399	12.91	.	Q	.V	.	.	.
12.950	6.5577	12.93	.	Q	.V	.	.	.
12.967	6.5755	12.96	.	Q	.V	.	.	.
12.983	6.5934	12.98	.	Q	.V	.	.	.
13.000	6.6113	13.01	.	Q	.V	.	.	.
13.017	6.6293	13.03	.	Q	.V	.	.	.
13.033	6.6473	13.05	.	Q	.V	.	.	.
13.050	6.6653	13.08	.	Q	.V	.	.	.
13.067	6.6833	13.10	.	Q	. V	.	.	.
13.083	6.7014	13.12	.	Q	. V	.	.	.
13.100	6.7195	13.15	.	Q	. V	.	.	.
13.117	6.7376	13.17	.	Q	. V	.	.	.
13.133	6.7558	13.20	.	Q	. V	.	.	.
13.150	6.7740	13.22	.	Q	. V	.	.	.
13.167	6.7923	13.24	.	Q	. V	.	.	.
13.183	6.8105	13.27	.	Q	. V	.	.	.
13.200	6.8289	13.29	.	Q	. V	.	.	.
13.217	6.8472	13.31	.	Q	. V	.	.	.
13.233	6.8656	13.34	.	Q	. V	.	.	.
13.250	6.8840	13.36	.	Q	. V	.	.	.
13.267	6.9024	13.39	.	Q	. V	.	.	.
13.283	6.9209	13.41	.	Q	. V	.	.	.
13.300	6.9394	13.43	.	Q	. V	.	.	.
13.317	6.9579	13.46	.	Q	. V	.	.	.
13.333	6.9765	13.48	.	Q	. V	.	.	.
13.350	6.9951	13.50	.	Q	. V	.	.	.
13.367	7.0137	13.53	.	Q	. V	.	.	.
13.383	7.0324	13.55	.	Q	. V	.	.	.
13.400	7.0511	13.58	.	Q	. V	.	.	.
13.417	7.0698	13.60	.	Q	. V	.	.	.
13.433	7.0886	13.62	.	Q	. V	.	.	.
13.450	7.1074	13.65	.	Q	. V	.	.	.
13.467	7.1262	13.67	.	Q	. V	.	.	.
13.483	7.1451	13.71	.	Q	. V	.	.	.
13.500	7.1641	13.78	.	Q	. V	.	.	.
13.517	7.1832	13.85	.	Q	. V	.	.	.
13.533	7.2023	13.91	.	Q	. V	.	.	.
13.550	7.2216	13.98	.	Q	. V	.	.	.
13.567	7.2409	14.05	.	Q	. V	.	.	.
13.583	7.2604	14.11	.	Q	. V	.	.	.
13.600	7.2799	14.18	.	Q	. V	.	.	.
13.617	7.2995	14.25	.	Q	. V	.	.	.
13.633	7.3192	14.31	.	Q	. V	.	.	.

13.650	7.3391	14.38	.	Q	.	V	.	.	.	
13.667	7.3590	14.45	.	Q	.	V	.	.	.	
13.683	7.3789	14.51	.	Q	.	V	.	.	.	
13.700	7.3990	14.58	.	Q	.	V	.	.	.	
13.717	7.4192	14.65	.	Q	.	V	.	.	.	
13.733	7.4395	14.71	.	Q	.	V	.	.	.	
13.750	7.4598	14.78	.	Q	.	V	.	.	.	
13.767	7.4803	14.85	.	Q	.	V	.	.	.	
13.783	7.5008	14.91	.	Q	.	V	.	.	.	
13.800	7.5214	14.98	.	Q	.	V	.	.	.	
13.817	7.5422	15.05	.	Q	.	V	.	.	.	
13.833	7.5630	15.11	.	Q	.	V	.	.	.	
13.850	7.5839	15.18	.	Q	.	V	.	.	.	
13.867	7.6049	15.25	.	Q	.	V	.	.	.	
13.883	7.6260	15.31	.	Q	.	V	.	.	.	
13.900	7.6472	15.38	.	Q	.	V	.	.	.	
13.917	7.6684	15.44	.	Q	.	V	.	.	.	
13.933	7.6898	15.51	.	Q	.	V	.	.	.	
13.950	7.7113	15.58	.	Q	.	V	.	.	.	
13.967	7.7328	15.64	.	Q	.	V	.	.	.	
13.983	7.7544	15.71	.	Q	.	V	.	.	.	
14.000	7.7762	15.78	.	Q	.	V	.	.	.	
14.017	7.7980	15.84	.	Q	.	V	.	.	.	
14.033	7.8199	15.91	.	Q	.	V	.	.	.	
14.050	7.8419	15.98	.	Q	.	V	.	.	.	
14.067	7.8640	16.04	.	Q	.	V	.	.	.	
14.083	7.8862	16.11	.	Q	.	V	.	.	.	
14.100	7.9085	16.18	.	Q	.	V	.	.	.	
14.117	7.9309	16.24	.	Q	.	V	.	.	.	
14.133	7.9533	16.30	.	Q	.	V	.	.	.	
14.150	7.9759	16.36	.	Q	.	V	.	.	.	
14.167	7.9985	16.42	.	Q	.	V	.	.	.	
14.183	8.0212	16.48	.	Q	.	V	.	.	.	
14.200	8.0440	16.54	.	Q	.	V	.	.	.	
14.217	8.0668	16.60	.	Q	.	V	.	.	.	
14.233	8.0898	16.66	.	Q	.	V	.	.	.	
14.250	8.1128	16.73	.	Q	.	V	.	.	.	
14.267	8.1360	16.79	.	Q	.	V	.	.	.	
14.283	8.1592	16.85	.	Q	.	V	.	.	.	
14.300	8.1824	16.91	.	Q	.	V	.	.	.	
14.317	8.2058	16.97	.	Q	.	V	.	.	.	
14.333	8.2293	17.03	.	Q	.	V	.	.	.	
14.350	8.2528	17.09	.	Q	.	V	.	.	.	
14.367	8.2764	17.15	.	Q	.	V	.	.	.	
14.383	8.3001	17.21	.	Q	.	V	.	.	.	
14.400	8.3239	17.27	.	Q	.	V	.	.	.	
14.417	8.3478	17.33	.	Q	.	V	.	.	.	
14.433	8.3718	17.39	.	Q	.	V	.	.	.	
14.450	8.3958	17.45	.	Q	.	V	.	.	.	
14.467	8.4199	17.51	.	Q	.	V	.	.	.	
14.483	8.4441	17.57	.	Q	.	V	.	.	.	
14.500	8.4684	17.64	.	Q	.	V	.	.	.	
14.517	8.4928	17.70	.	Q	.	V	.	.	.	
14.533	8.5173	17.76	.	Q	.	V	.	.	.	
14.550	8.5418	17.82	.	Q	.	V	.	.	.	
14.567	8.5664	17.88	.	Q	.	V	.	.	.	
14.583	8.5911	17.94	.	Q	.	V	.	.	.	
14.600	8.6159	18.00	.	Q	.	V	.	.	.	

14.617	8.6408	18.06	.	Q	.	V	.	.	.	
14.633	8.6658	18.12	.	Q	.	V	.	.	.	
14.650	8.6908	18.18	.	Q	.	V	.	.	.	
14.667	8.7159	18.24	.	Q	.	V	.	.	.	
14.683	8.7411	18.30	.	Q	.	V	.	.	.	
14.700	8.7664	18.36	.	Q	.	V	.	.	.	
14.717	8.7918	18.42	.	Q	.	V	.	.	.	
14.733	8.8173	18.48	.	Q	.	V	.	.	.	
14.750	8.8429	18.61	.	Q	.	V	.	.	.	
14.767	8.8688	18.79	.	Q	.	V	.	.	.	
14.783	8.8949	18.98	.	Q	.	V	.	.	.	
14.800	8.9213	19.16	.	Q	.	V	.	.	.	
14.817	8.9480	19.35	.	Q	.	V	.	.	.	
14.833	8.9749	19.54	.	Q	.	V	.	.	.	
14.850	9.0020	19.72	.	Q	.	V	.	.	.	
14.867	9.0295	19.91	.	Q	.	V	.	.	.	
14.883	9.0571	20.09	.	Q	.	V	.	.	.	
14.900	9.0851	20.28	.	Q	.	V	.	.	.	
14.917	9.1133	20.47	.	Q	.	V	.	.	.	
14.933	9.1417	20.65	.	Q	.	V	.	.	.	
14.950	9.1704	20.84	.	Q	.	V	.	.	.	
14.967	9.1994	21.02	.	Q	.	V	.	.	.	
14.983	9.2286	21.21	.	Q	.	V	.	.	.	
15.000	9.2580	21.40	.	Q	.	V	.	.	.	
15.017	9.2878	21.58	.	Q	.	V	.	.	.	
15.033	9.3178	21.77	.	Q	.	V	.	.	.	
15.050	9.3480	21.95	.	Q	.	V	.	.	.	
15.067	9.3785	22.14	.	Q	.	V	.	.	.	
15.083	9.4093	22.33	.	Q	.	V	.	.	.	
15.100	9.4403	22.51	.	Q	.	V	.	.	.	
15.117	9.4715	22.70	.	Q	.	V	.	.	.	
15.133	9.5030	22.88	.	Q	.	V	.	.	.	
15.150	9.5348	23.07	.	Q	.	V	.	.	.	
15.167	9.5669	23.26	.	Q	.	V	.	.	.	
15.183	9.5991	23.44	.	Q	.	V	.	.	.	
15.200	9.6317	23.63	.	Q	.	V	.	.	.	
15.217	9.6645	23.82	.	Q	.	V	.	.	.	
15.233	9.6976	24.00	.	Q	.	V	.	.	.	
15.250	9.7309	24.19	.	Q	.	V	.	.	.	
15.267	9.7644	24.37	.	Q	.	V	.	.	.	
15.283	9.7983	24.56	.	Q	.	V	.	.	.	
15.300	9.8324	24.75	.	Q	.	V	.	.	.	
15.317	9.8667	24.93	.	Q	.	V	.	.	.	
15.333	9.9013	25.12	.	Q	.	V	.	.	.	
15.350	9.9362	25.30	.	Q	.	V	.	.	.	
15.367	9.9713	25.49	.	Q	.	V	.	.	.	
15.383	10.0066	25.66	.	Q	.	V	.	.	.	
15.400	10.0421	25.80	.	Q	.	V	.	.	.	
15.417	10.0779	25.95	.	Q	.	V	.	.	.	
15.433	10.1138	26.09	.	Q	.	V	.	.	.	
15.450	10.1500	26.24	.	Q	.	V	.	.	.	
15.467	10.1863	26.38	.	Q	.	V	.	.	.	
15.483	10.2228	26.53	.	Q	.	V	.	.	.	
15.500	10.2596	26.68	.	Q	.	V	.	.	.	
15.517	10.2965	26.82	.	Q	.	V	.	.	.	
15.533	10.3337	26.97	.	Q	.	V	.	.	.	
15.550	10.3710	27.11	.	Q	.	V	.	.	.	
15.567	10.4086	27.26	.	Q	.	V	.	.	.	

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15.583     10.4463     27.40  .         . Q     V .         .         .
15.600     10.4843     27.55  .         . Q     V .         .         .
15.617     10.5224     27.69  .         . Q     V .         .         .
15.633     10.5608     27.84  .         . Q     V .         .         .
15.650     10.5993     27.99  .         . Q      V.         .         .
15.667     10.6381     28.13  .         . Q      V.         .         .
15.683     10.6770     28.28  .         . Q      V.         .         .
15.700     10.7161     28.42  .         . Q      V.         .         .
15.717     10.7555     28.57  .         . Q      V.         .         .
15.733     10.7951     28.71  .         . Q      V.         .         .
15.750     10.8348     28.86  .         . Q      V.         .         .
15.767     10.8748     29.01  .         . Q      V.         .         .
15.783     10.9149     29.15  .         . Q      V.         .         .
15.800     10.9553     29.30  .         . Q      V.         .         .
15.817     10.9958     29.44  .         . Q      V.         .         .
15.833     11.0366     29.59  .         .  Q     V.         .         .
15.850     11.0775     29.73  .         .  Q     V.         .         .
15.867     11.1187     29.88  .         .  Q     V.         .         .
15.883     11.1600     30.02  .         .  Q      V         .         .
15.900     11.2016     30.17  .         .  Q      V         .         .
15.917     11.2433     30.32  .         .  Q      V         .         .
15.933     11.2853     30.46  .         .  Q      V         .         .
15.950     11.3275     30.61  .         .  Q      V         .         .
15.967     11.3698     30.75  .         .  Q      V         .         .
15.983     11.4124     30.90  .         .  Q      V         .         .
16.000     11.4551     31.04  .         .  Q      V         .         .
16.017     11.4991     31.90  .         .   Q     V         .         .
16.033     11.5452     33.47  .         .   Q     V         .         .
16.050     11.5935     35.04  .         .    Q    V         .         .
16.067     11.6439     36.61  .         .     Q   V         .         .
16.083     11.6965     38.18  .         .     Q   .V        .         .
16.100     11.7512     39.76  .         .      Q  .V        .         .
16.117     11.8082     41.33  .         .       Q .V        .         .
16.133     11.8673     42.90  .         .       Q .V        .         .
16.150     11.9285     44.47  .         .        Q.V        .         .
16.167     11.9919     46.04  .         .         QV        .         .
16.183     12.0575     47.61  .         .         QV        .         .
16.200     12.1252     49.18  .         .         .Q        .         .
16.217     12.1951     50.75  .         .         .VQ       .         .
16.233     12.2672     52.32  .         .         . VQ      .         .
16.250     12.3414     53.89  .         .         . VQ      .         .
16.267     12.4178     55.46  .         .         . V Q     .         .
16.283     12.4964     57.03  .         .         . V  Q    .         .
16.300     12.5771     58.60  .         .         . V  Q    .         .
16.317     12.6600     60.17  .         .         . V   Q   .         .
16.333     12.7450     61.74  .         .         . V    Q  .         .
16.350     12.8322     63.32  .         .         .  V   Q  .         .
16.367     12.9216     64.89  .         .         .  V    Q .         .
16.383     13.0132     66.46  .         .         .  V     Q.         .
16.400     13.1069     68.03  .         .         .  V     Q.         .
16.417     13.2027     69.60  .         .         .  V      Q         .
16.433     13.3008     71.17  .         .         .  V      .Q        .
16.450     13.4009     72.74  .         .         .   V     . Q       .
16.467     13.5033     74.31  .         .         .   V     . Q       .
16.483     13.6078     75.88  .         .         .   V     .  Q      .
16.500     13.7145     77.45  .         .         .   V     .   Q     .
16.517     13.8233     79.02  .         .         .   V     .   Q     .
16.533     13.9344     80.59  .         .         .    V    .    Q    .
```



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16.550     14.0475     82.16  .         .         .    V    .     Q   .
16.567     14.1629     83.73  .         .         .    V    .     Q   .
16.583     14.2804     85.30  .         .         .    V    .      Q  .
16.600     14.4000     86.87  .         .         .    V    .       Q .
16.617     14.5218     88.45  .         .         .     V   .       Q .
16.633     14.6469     90.79  .         .         .     V   .         Q
16.650     14.7707     89.85  .         .         .     V   .        Q.
16.667     14.8919     88.03  .         .         .     V   .       Q .
16.683     15.0106     86.20  .         .         .     V   .      Q  .
16.700     15.1269     84.37  .         .         .      V  .      Q  .
16.717     15.2405     82.54  .         .         .      V  .     Q   .
16.733     15.3517     80.71  .         .         .      V  .    Q    .
16.750     15.4604     78.89  .         .         .      V  .   Q     .
16.767     15.5665     77.06  .         .         .      V  .  Q      .
16.783     15.6702     75.23  .         .         .       V .  Q      .
16.800     15.7713     73.40  .         .         .       V . Q       .
16.817     15.8698     71.58  .         .         .       V .Q        .
16.833     15.9659     69.75  .         .         .       V Q         .
16.850     16.0595     67.92  .         .         .       VQ.         .
16.867     16.1505     66.09  .         .         .        Q.         .
16.883     16.2390     64.26  .         .         .       QV.         .
16.900     16.3250     62.44  .         .         .      Q V.         .
16.917     16.4085     60.61  .         .         .     Q  V.         .
16.933     16.4895     58.78  .         .         .    Q   V.         .
16.950     16.5679     56.95  .         .         .    Q   V.         .
16.967     16.6439     55.13  .         .         .   Q    V.         .
16.983     16.7173     53.30  .         .         .  Q      V         .
17.000     16.7882     51.47  .         .         . Q       V         .
17.017     16.8565     49.64  .         .         .Q        V         .
17.033     16.9224     47.81  .         .         .Q        V         .
17.050     16.9857     45.99  .         .         Q         V         .
17.067     17.0466     44.16  .         .        Q.         V         .
17.083     17.1049     42.33  .         .       Q .         V         .
17.100     17.1607     40.50  .         .      Q  .         V         .
17.117     17.2139     38.67  .         .      Q  .         V         .
17.133     17.2647     36.85  .         .     Q   .         .V        .
17.150     17.3129     35.02  .         .    Q    .         .V        .
17.167     17.3586     33.19  .         .   Q     .         .V        .
17.183     17.4018     31.36  .         .  Q      .         .V        .
17.200     17.4425     29.54  .         .  Q      .         .V        .
17.217     17.4807     27.71  .         . Q       .         .V        .
17.233     17.5163     25.88  .         .Q        .         .V        .
17.250     17.5494     24.05  .         Q         .         .V        .
17.267     17.5801     22.22  .        Q.         .         .V        .
17.283     17.6093     21.26  .        Q.         .         .V        .
17.300     17.6384     21.08  .        Q.         .         .V        .
17.317     17.6672     20.91  .        Q.         .         .V        .
17.333     17.6958     20.74  .        Q.         .         .V        .
17.350     17.7241     20.57  .        Q.         .         .V        .
17.367     17.7522     20.40  .       Q .         .         .V        .
17.383     17.7800     20.22  .       Q .         .         .V        .
17.400     17.8077     20.05  .       Q .         .         .V        .
17.417     17.8350     19.88  .       Q .         .         . V       .
17.433     17.8622     19.71  .       Q .         .         . V       .
17.450     17.8891     19.53  .       Q .         .         . V       .
17.467     17.9157     19.36  .       Q .         .         . V       .
17.483     17.9422     19.19  .       Q .         .         . V       .
17.500     17.9684     19.02  .       Q .         .         . V       .
```

17.517	17.9943	18.84	.		Q	.		.			.	V		.
17.533	18.0200	18.67	.		Q	.		.			.	V		.
17.550	18.0455	18.50	.		Q	.		.			.	V		.
17.567	18.0708	18.33	.		Q	.		.			.	V		.
17.583	18.0958	18.15	.		Q	.		.			.	V		.
17.600	18.1205	17.98	.		Q	.		.			.	V		.
17.617	18.1451	17.81	.		Q	.		.			.	V		.
17.633	18.1694	17.64	.		Q	.		.			.	V		.
17.650	18.1934	17.46	.		Q	.		.			.	V		.
17.667	18.2172	17.29	.		Q	.		.			.	V		.
17.683	18.2408	17.12	.		Q	.		.			.	V		.
17.700	18.2642	16.95	.		Q	.		.			.	V		.
17.717	18.2873	16.77	.		Q	.		.			.	V		.
17.733	18.3101	16.60	.		Q	.		.			.	V		.
17.750	18.3328	16.43	.		Q	.		.			.	V		.
17.767	18.3552	16.26	.		Q	.		.			.	V		.
17.783	18.3773	16.08	.		Q	.		.			.	V		.
17.800	18.3992	15.91	.		Q	.		.			.	V		.
17.817	18.4209	15.74	.		Q	.		.			.	V		.
17.833	18.4423	15.57	.		Q	.		.			.	V		.
17.850	18.4636	15.40	.		Q	.		.			.	V		.
17.867	18.4845	15.22	.		Q	.		.			.	V		.
17.883	18.5053	15.05	.		Q	.		.			.	V		.
17.900	18.5257	14.88	.		Q	.		.			.	V		.
17.917	18.5461	14.74	.		Q	.		.			.	V		.
17.933	18.5662	14.64	.		Q	.		.			.	V		.
17.950	18.5863	14.54	.		Q	.		.			.	V		.
17.967	18.6061	14.44	.		Q	.		.			.	V		.
17.983	18.6259	14.34	.		Q	.		.			.	V		.
18.000	18.6455	14.24	.		Q	.		.			.	V		.
18.017	18.6650	14.14	.		Q	.		.			.	V		.
18.033	18.6843	14.04	.		Q	.		.			.	V		.
18.050	18.7036	13.94	.		Q	.		.			.	V		.
18.067	18.7226	13.84	.		Q	.		.			.	V		.
18.083	18.7416	13.74	.		Q	.		.			.	V		.
18.100	18.7603	13.64	.		Q	.		.			.	V		.
18.117	18.7790	13.54	.	Q		.		.			.	V		.
18.133	18.7975	13.44	.	Q		.		.			.	V		.
18.150	18.8159	13.34	.	Q		.		.			.	V		.
18.167	18.8341	13.24	.	Q		.		.			.	V		.
18.183	18.8522	13.14	.	Q		.		.			.	V		.
18.200	18.8702	13.04	.	Q		.		.			.	V		.
18.217	18.8880	12.94	.	Q		.		.			.	V		.
18.233	18.9057	12.84	.	Q		.		.			.	V		.
18.250	18.9233	12.74	.	Q		.		.			.	V		.
18.267	18.9407	12.64	.	Q		.		.			.	V		.
18.283	18.9580	12.54	.	Q		.		.			.	V		.
18.300	18.9751	12.44	.	Q		.		.			.	V		.
18.317	18.9921	12.34	.	Q		.		.			.	V		.
18.333	19.0089	12.24	.	Q		.		.			.	V		.
18.350	19.0257	12.14	.	Q		.		.			.	V		.
18.367	19.0423	12.04	.	Q		.		.			.	V		.
18.383	19.0587	11.94	.	Q		.		.			.	V		.
18.400	19.0750	11.84	.	Q		.		.			.	V		.
18.417	19.0912	11.74	.	Q		.		.			.	V		.
18.433	19.1072	11.64	.	Q		.		.			.	V		.
18.450	19.1231	11.54	.	Q		.		.			.	V		.
18.467	19.1389	11.44	.	Q		.		.			.	V		.

18.483	19.1545	11.34	.		Q	.		.			.	V		.
18.500	19.1700	11.24	.		Q	.		.			.	V		.
18.517	19.1853	11.14	.		Q	.		.			.	V		.
18.533	19.2005	11.04	.		Q	.		.			.	V		.
18.550	19.2156	10.96	.		Q	.		.			.	V		.
18.567	19.2306	10.89	.		Q	.		.			.	V		.
18.583	19.2455	10.83	.		Q	.		.			.	V		.
18.600	19.2604	10.76	.		Q	.		.			.	V		.
18.617	19.2751	10.69	.		Q	.		.			.	V		.
18.633	19.2897	10.63	.		Q	.		.			.	V		.
18.650	19.3043	10.56	.		Q	.		.			.	V		.
18.667	19.3187	10.49	.		Q	.		.			.	V		.
18.683	19.3331	10.43	.		Q	.		.			.	V		.
18.700	19.3474	10.36	.		Q	.		.			.	V		.
18.717	19.3615	10.30	.		Q	.		.			.	V		.
18.733	19.3756	10.23	.		Q	.		.			.	V		.
18.750	19.3896	10.16	.		Q	.		.			.	V		.
18.767	19.4035	10.10	.		Q	.		.			.	V		.
18.783	19.4174	10.03	.		Q	.		.			.	V		.
18.800	19.4311	9.96	.		Q	.		.			.	V		.
18.817	19.4447	9.90	.		Q	.		.			.	V		.
18.833	19.4582	9.83	.		Q	.		.			.	V		.
18.850	19.4717	9.76	.		Q	.		.			.	V		.
18.867	19.4851	9.70	.		Q	.		.			.	V		.
18.883	19.4983	9.63	.		Q	.		.			.	V		.
18.900	19.5115	9.57	.		Q	.		.			.	V		.
18.917	19.5246	9.50	.		Q	.		.			.	V		.
18.933	19.5376	9.43	.		Q	.		.			.	V		.
18.950	19.5505	9.37	.		Q	.		.			.	V		.
18.967	19.5633	9.30	.		Q	.		.			.	V		.
18.983	19.5760	9.23	.		Q	.		.			.	V		.
19.000	19.5886	9.17	.		Q	.		.			.	V		.
19.017	19.6012	9.10	.		Q	.		.			.	V		.
19.033	19.6136	9.03	.	Q		.		.			.	V		.
19.050	19.6260	8.97	.	Q		.		.			.	V		.
19.067	19.6382	8.90	.	Q		.		.			.	V		.
19.083	19.6504	8.84	.	Q		.		.			.	V		.
19.100	19.6625	8.77	.	Q		.		.			.	V		.
19.117	19.6745	8.70	.	Q		.		.			.	V		.
19.133	19.6864	8.64	.	Q		.		.			.	V		.
19.150	19.6982	8.57	.	Q		.		.			.	V		.
19.167	19.7099	8.50	.	Q		.		.			.	V		.
19.183	19.7215	8.46	.	Q		.		.			.	V		.
19.200	19.7331	8.43	.	Q		.		.			.	V		.
19.217	19.7447	8.40	.	Q		.		.			.	V		.
19.233	19.7562	8.37	.	Q		.		.			.	V		.
19.250	19.7677	8.35	.	Q		.		.			.	V		.
19.267	19.7792	8.32	.	Q		.		.			.	V		.
19.283	19.7906	8.29	.	Q		.		.			.	V		.
19.300	19.8020	8.26	.	Q		.		.			.	V		.
19.317	19.8133	8.24	.	Q		.		.			.	V		.
19.333	19.8247	8.21	.	Q		.		.			.	V		.
19.350	19.8359	8.18	.	Q		.		.			.	V		.
19.367	19.8471	8.15	.	Q		.		.			.	V		.
19.383	19.8583	8.12	.	Q		.		.			.	V		.
19.400	19.8695	8.10	.	Q		.		.			.	V		.
19.417	19.8806	8.07	.	Q		.		.			.	V		.
19.433	19.8917	8.04	.	Q		.		.			.	V		.

19.450	19.9027	8.01	.	Q	.	.	.	V	.
19.467	19.9137	7.98	.	Q	.	.	.	V	.
19.483	19.9247	7.96	.	Q	.	.	.	V	.
19.500	19.9356	7.93	.	Q	.	.	.	V	.
19.517	19.9465	7.90	.	Q	.	.	.	V	.
19.533	19.9573	7.87	.	Q	.	.	.	V	.
19.550	19.9681	7.85	.	Q	.	.	.	V	.
19.567	19.9789	7.82	.	Q	.	.	.	V	.
19.583	19.9896	7.79	.	Q	.	.	.	V	.
19.600	20.0003	7.76	.	Q	.	.	.	V	.
19.617	20.0110	7.73	.	Q	.	.	.	V	.
19.633	20.0216	7.71	.	Q	.	.	.	V	.
19.650	20.0322	7.68	.	Q	.	.	.	V	.
19.667	20.0427	7.65	.	Q	.	.	.	V	.
19.683	20.0532	7.62	.	Q	.	.	.	V	.
19.700	20.0637	7.59	.	Q	.	.	.	V	.
19.717	20.0741	7.57	.	Q	.	.	.	V	.
19.733	20.0845	7.54	.	Q	.	.	.	V	.
19.750	20.0948	7.51	.	Q	.	.	.	V	.
19.767	20.1051	7.48	.	Q	.	.	.	V	.
19.783	20.1154	7.46	.	Q	.	.	.	V	.
19.800	20.1256	7.43	.	Q	.	.	.	V	.
19.817	20.1358	7.40	.	Q	.	.	.	V	.
19.833	20.1460	7.38	.	Q	.	.	.	V	.
19.850	20.1561	7.36	.	Q	.	.	.	V	.
19.867	20.1663	7.34	.	Q	.	.	.	V	.
19.883	20.1763	7.32	.	Q	.	.	.	V	.
19.900	20.1864	7.30	.	Q	.	.	.	V	.
19.917	20.1964	7.28	.	Q	.	.	.	V	.
19.933	20.2064	7.26	.	Q	.	.	.	V	.
19.950	20.2164	7.24	.	Q	.	.	.	V	.
19.967	20.2264	7.22	.	Q	.	.	.	V	.
19.983	20.2363	7.20	.	Q	.	.	.	V	.
20.000	20.2462	7.18	.	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%	1201.0
10%	1201.0
20%	880.0
30%	500.0
40%	325.0
50%	270.0
60%	215.0
70%	160.0
80%	110.0
90%	55.0

END OF FLOODSCx ROUTING ANALYSIS

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

                         Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA E                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 2-YR EV MARCH 2019 CCHIU                                              *
 ************************************************************************

  FILE NAME: 4E02EVS.DAT
  TIME/DATE OF STUDY: 15:02 03/13/2019

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


************************************************************************
  FLOW PROCESS FROM NODE    810.00 TO NODE    817.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  171.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.348
    LOW LOSS FRACTION = 0.587
    TIME OF CONCENTRATION(MIN.) = 10.86
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   2
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.13
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.28
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.37
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.62
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  0.85
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  1.44

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =     8.13
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    12.39

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	25.1	50.3	75.4	100.5
10.000	1.5357	2.63	.Q	V .	.	.	.
10.017	1.5393	2.63	.Q	V .	.	.	.
10.033	1.5429	2.64	.Q	V .	.	.	.
10.050	1.5466	2.64	.Q	V .	.	.	.
10.067	1.5502	2.64	.Q	V .	.	.	.
10.083	1.5538	2.65	.Q	V .	.	.	.
10.100	1.5575	2.65	.Q	V .	.	.	.
10.117	1.5612	2.65	.Q	V .	.	.	.
10.133	1.5648	2.66	.Q	V .	.	.	.
10.150	1.5685	2.66	.Q	V .	.	.	.
10.167	1.5721	2.66	.Q	V .	.	.	.
10.183	1.5758	2.66	.Q	V .	.	.	.
10.200	1.5795	2.67	.Q	V .	.	.	.
10.217	1.5832	2.67	.Q	V .	.	.	.
10.233	1.5868	2.68	.Q	V .	.	.	.
10.250	1.5905	2.68	.Q	V .	.	.	.
10.267	1.5943	2.69	.Q	V .	.	.	.
10.283	1.5980	2.70	.Q	V .	.	.	.
10.300	1.6017	2.70	.Q	V .	.	.	.
10.317	1.6054	2.71	.Q	V .	.	.	.
10.333	1.6092	2.72	.Q	V .	.	.	.
10.350	1.6129	2.72	.Q	V .	.	.	.
10.367	1.6167	2.73	.Q	V .	.	.	.
10.383	1.6204	2.73	.Q	V .	.	.	.
10.400	1.6242	2.74	.Q	V .	.	.	.
10.417	1.6280	2.74	.Q	V .	.	.	.
10.433	1.6318	2.75	.Q	V .	.	.	.
10.450	1.6356	2.75	.Q	V .	.	.	.
10.467	1.6394	2.75	.Q	V .	.	.	.
10.483	1.6431	2.76	.Q	V .	.	.	.
10.500	1.6470	2.76	.Q	V .	.	.	.
10.517	1.6508	2.76	.Q	V .	.	.	.
10.533	1.6546	2.77	.Q	V .	.	.	.
10.550	1.6584	2.77	.Q	V .	.	.	.
10.567	1.6622	2.77	.Q	V .	.	.	.
10.583	1.6660	2.78	.Q	V .	.	.	.
10.600	1.6699	2.79	.Q	V .	.	.	.
10.617	1.6737	2.79	.Q	V .	.	.	.
10.633	1.6776	2.80	.Q	V .	.	.	.
10.650	1.6814	2.81	.Q	V .	.	.	.
10.667	1.6853	2.81	.Q	V .	.	.	.
10.683	1.6892	2.82	.Q	V .	.	.	.
10.700	1.6931	2.83	.Q	V .	.	.	.
10.717	1.6970	2.83	.Q	V .	.	.	.
10.733	1.7009	2.84	.Q	V .	.	.	.

10.750	1.7048	2.85	.Q	V .	.	.	.
10.767	1.7088	2.85	.Q	V .	.	.	.
10.783	1.7127	2.86	.Q	V .	.	.	.
10.800	1.7167	2.86	.Q	V .	.	.	.
10.817	1.7206	2.87	.Q	V .	.	.	.
10.833	1.7246	2.87	.Q	V .	.	.	.
10.850	1.7285	2.87	.Q	V .	.	.	.
10.867	1.7325	2.88	.Q	V .	.	.	.
10.883	1.7364	2.88	.Q	V .	.	.	.
10.900	1.7404	2.88	.Q	V .	.	.	.
10.917	1.7444	2.89	.Q	V .	.	.	.
10.933	1.7484	2.89	.Q	V .	.	.	.
10.950	1.7524	2.90	.Q	V .	.	.	.
10.967	1.7564	2.91	.Q	V .	.	.	.
10.983	1.7604	2.91	.Q	V .	.	.	.
11.000	1.7644	2.92	.Q	V .	.	.	.
11.017	1.7684	2.93	.Q	V .	.	.	.
11.033	1.7725	2.94	.Q	V .	.	.	.
11.050	1.7765	2.95	.Q	V .	.	.	.
11.067	1.7806	2.95	.Q	V .	.	.	.
11.083	1.7847	2.96	.Q	V .	.	.	.
11.100	1.7888	2.97	.Q	V .	.	.	.
11.117	1.7929	2.98	.Q	V .	.	.	.
11.133	1.7970	2.98	.Q	V .	.	.	.
11.150	1.8011	2.99	.Q	V .	.	.	.
11.167	1.8052	2.99	.Q	V .	.	.	.
11.183	1.8093	2.99	.Q	V .	.	.	.
11.200	1.8135	3.00	.Q	V .	.	.	.
11.217	1.8176	3.00	.Q	V .	.	.	.
11.233	1.8218	3.01	.Q	V .	.	.	.
11.250	1.8259	3.01	.Q	V .	.	.	.
11.267	1.8301	3.02	.Q	V.	.	.	.
11.283	1.8342	3.02	.Q	V.	.	.	.
11.300	1.8384	3.02	.Q	V.	.	.	.
11.317	1.8426	3.03	.Q	V.	.	.	.
11.333	1.8467	3.04	.Q	V.	.	.	.
11.350	1.8509	3.05	.Q	V.	.	.	.
11.367	1.8552	3.06	.Q	V.	.	.	.
11.383	1.8594	3.07	.Q	V.	.	.	.
11.400	1.8636	3.08	.Q	V.	.	.	.
11.417	1.8679	3.09	.Q	V.	.	.	.
11.433	1.8721	3.09	.Q	V.	.	.	.
11.450	1.8764	3.10	.Q	V.	.	.	.
11.467	1.8807	3.11	.Q	V.	.	.	.
11.483	1.8850	3.12	.Q	V.	.	.	.
11.500	1.8893	3.13	.Q	V.	.	.	.
11.517	1.8936	3.13	.Q	V.	.	.	.
11.533	1.8979	3.14	.Q	V.	.	.	.
11.550	1.9023	3.14	.Q	V.	.	.	.
11.567	1.9066	3.14	.Q	V.	.	.	.
11.583	1.9109	3.15	.Q	V.	.	.	.
11.600	1.9153	3.15	.Q	V.	.	.	.
11.617	1.9196	3.16	.Q	V.	.	.	.
11.633	1.9240	3.16	.Q	V.	.	.	.
11.650	1.9283	3.17	.Q	V.	.	.	.
11.667	1.9327	3.17	.Q	V.	.	.	.
11.683	1.9371	3.18	.Q	V.	.	.	.
11.700	1.9415	3.19	.Q	V.	.	.	.

11.717	1.9459	3.20	.Q	V.	.	.	.
11.733	1.9503	3.21	.Q	V.	.	.	.
11.750	1.9548	3.22	.Q	V.	.	.	.
11.767	1.9592	3.23	.Q	V.	.	.	.
11.783	1.9637	3.24	.Q	V.	.	.	.
11.800	1.9682	3.25	.Q	V.	.	.	.
11.817	1.9727	3.26	.Q	V.	.	.	.
11.833	1.9772	3.27	.Q	V.	.	.	.
11.850	1.9817	3.28	.Q	V.	.	.	.
11.867	1.9862	3.29	.Q	V.	.	.	.
11.883	1.9908	3.29	.Q	V.	.	.	.
11.900	1.9953	3.30	.Q	V.	.	.	.
11.917	1.9999	3.30	.Q	V.	.	.	.
11.933	2.0044	3.31	.Q	V.	.	.	.
11.950	2.0090	3.32	.Q	V.	.	.	.
11.967	2.0136	3.32	.Q	V.	.	.	.
11.983	2.0182	3.33	.Q	V.	.	.	.
12.000	2.0228	3.33	.Q	V.	.	.	.
12.017	2.0273	3.34	.Q	V.	.	.	.
12.033	2.0320	3.37	.Q	V.	.	.	.
12.050	2.0367	3.45	.Q	V	.	.	.
12.067	2.0416	3.52	.Q	V	.	.	.
12.083	2.0465	3.59	.Q	V	.	.	.
12.100	2.0516	3.67	.Q	V	.	.	.
12.117	2.0567	3.74	.Q	V	.	.	.
12.133	2.0620	3.82	.Q	V	.	.	.
12.150	2.0673	3.89	.Q	V	.	.	.
12.167	2.0728	3.96	.Q	V	.	.	.
12.183	2.0784	4.04	.Q	V	.	.	.
12.200	2.0840	4.11	.Q	V	.	.	.
12.217	2.0897	4.15	.Q	V	.	.	.
12.233	2.0955	4.15	.Q	V	.	.	.
12.250	2.1012	4.16	.Q	V	.	.	.
12.267	2.1069	4.17	.Q	V	.	.	.
12.283	2.1127	4.17	.Q	V	.	.	.
12.300	2.1184	4.18	.Q	V	.	.	.
12.317	2.1242	4.19	.Q	V	.	.	.
12.333	2.1300	4.19	.Q	V	.	.	.
12.350	2.1358	4.20	.Q	V	.	.	.
12.367	2.1416	4.21	.Q	V	.	.	.
12.383	2.1474	4.21	.Q	V	.	.	.
12.400	2.1532	4.22	.Q	V	.	.	.
12.417	2.1590	4.24	.Q	V	.	.	.
12.433	2.1649	4.25	.Q	V	.	.	.
12.450	2.1708	4.27	.Q	V	.	.	.
12.467	2.1766	4.28	.Q	V	.	.	.
12.483	2.1826	4.29	.Q	V	.	.	.
12.500	2.1885	4.31	.Q	V	.	.	.
12.517	2.1945	4.32	.Q	V	.	.	.
12.533	2.2004	4.34	.Q	V	.	.	.
12.550	2.2064	4.35	.Q	V	.	.	.
12.567	2.2124	4.37	.Q	V	.	.	.
12.583	2.2185	4.37	.Q	V	.	.	.
12.600	2.2245	4.38	.Q	V	.	.	.
12.617	2.2305	4.39	.Q	V	.	.	.
12.633	2.2366	4.40	.Q	.V	.	.	.
12.650	2.2427	4.40	.Q	.V	.	.	.
12.667	2.2487	4.41	.Q	.V	.	.	.

12.683	2.2548	4.42	.Q	.V	.	.	.
12.700	2.2609	4.43	.Q	.V	.	.	.
12.717	2.2670	4.44	.Q	.V	.	.	.
12.733	2.2732	4.44	.Q	.V	.	.	.
12.750	2.2793	4.45	.Q	.V	.	.	.
12.767	2.2854	4.47	.Q	.V	.	.	.
12.783	2.2916	4.48	.Q	.V	.	.	.
12.800	2.2978	4.50	.Q	.V	.	.	.
12.817	2.3040	4.52	.Q	.V	.	.	.
12.833	2.3103	4.53	.Q	.V	.	.	.
12.850	2.3166	4.55	.Q	.V	.	.	.
12.867	2.3228	4.57	.Q	.V	.	.	.
12.883	2.3292	4.58	.Q	.V	.	.	.
12.900	2.3355	4.60	.Q	.V	.	.	.
12.917	2.3418	4.62	.Q	.V	.	.	.
12.933	2.3482	4.63	.Q	.V	.	.	.
12.950	2.3546	4.64	.Q	.V	.	.	.
12.967	2.3610	4.65	.Q	.V	.	.	.
12.983	2.3674	4.66	.Q	.V	.	.	.
13.000	2.3739	4.67	.Q	.V	.	.	.
13.017	2.3803	4.68	.Q	.V	.	.	.
13.033	2.3868	4.69	.Q	.V	.	.	.
13.050	2.3932	4.69	.Q	.V	.	.	.
13.067	2.3997	4.70	.Q	.V	.	.	.
13.083	2.4062	4.71	.Q	.V	.	.	.
13.100	2.4127	4.72	.Q	.V	.	.	.
13.117	2.4192	4.73	.Q	.V	.	.	.
13.133	2.4258	4.75	.Q	.V	.	.	.
13.150	2.4324	4.77	.Q	.V	.	.	.
13.167	2.4390	4.79	.Q	. V	.	.	.
13.183	2.4456	4.81	.Q	. V	.	.	.
13.200	2.4522	4.83	.Q	. V	.	.	.
13.217	2.4589	4.85	.Q	. V	.	.	.
13.233	2.4656	4.87	.Q	. V	.	.	.
13.250	2.4724	4.89	.Q	. V	.	.	.
13.267	2.4791	4.91	.Q	. V	.	.	.
13.283	2.4859	4.93	.Q	. V	.	.	.
13.300	2.4928	4.95	.Q	. V	.	.	.
13.317	2.4996	4.96	.Q	. V	.	.	.
13.333	2.5064	4.97	.Q	. V	.	.	.
13.350	2.5133	4.98	.Q	. V	.	.	.
13.367	2.5202	4.99	.Q	. V	.	.	.
13.383	2.5271	5.00	.Q	. V	.	.	.
13.400	2.5340	5.01	.Q	. V	.	.	.
13.417	2.5409	5.02	.Q	. V	.	.	.
13.433	2.5478	5.04	. Q	. V	.	.	.
13.450	2.5548	5.05	. Q	. V	.	.	.
13.467	2.5617	5.06	. Q	. V	.	.	.
13.483	2.5687	5.08	. Q	. V	.	.	.
13.500	2.5758	5.10	. Q	. V	.	.	.
13.517	2.5828	5.12	. Q	. V	.	.	.
13.533	2.5899	5.15	. Q	. V	.	.	.
13.550	2.5970	5.17	. Q	. V	.	.	.
13.567	2.6042	5.20	. Q	. V	.	.	.
13.583	2.6114	5.22	. Q	. V	.	.	.
13.600	2.6186	5.25	. Q	. V	.	.	.
13.617	2.6259	5.27	. Q	. V	.	.	.
13.633	2.6332	5.29	. Q	. V	.	.	.

13.650	2.6405	5.32	. Q	. V	.	.	.	
13.667	2.6478	5.34	. Q	. V	.	.	.	
13.683	2.6552	5.35	. Q	. V	.	.	.	
13.700	2.6626	5.36	. Q	. V	.	.	.	
13.717	2.6700	5.38	. Q	. V	.	.	.	
13.733	2.6774	5.39	. Q	. V	.	.	.	
13.750	2.6849	5.40	. Q	. V	.	.	.	
13.767	2.6923	5.42	. Q	. V	.	.	.	
13.783	2.6998	5.43	. Q	. V	.	.	.	
13.800	2.7073	5.44	. Q	. V	.	.	.	
13.817	2.7148	5.46	. Q	. V	.	.	.	
13.833	2.7223	5.47	. Q	. V	.	.	.	
13.850	2.7299	5.50	. Q	. V	.	.	.	
13.867	2.7375	5.53	. Q	. V	.	.	.	
13.883	2.7452	5.56	. Q	. V	.	.	.	
13.900	2.7529	5.59	. Q	. V	.	.	.	
13.917	2.7606	5.62	. Q	. V	.	.	.	
13.933	2.7684	5.65	. Q	. V	.	.	.	
13.950	2.7762	5.68	. Q	. V	.	.	.	
13.967	2.7841	5.71	. Q	. V	.	.	.	
13.983	2.7920	5.74	. Q	. V	.	.	.	
14.000	2.8000	5.77	. Q	. V	.	.	.	
14.017	2.8080	5.80	. Q	. V	.	.	.	
14.033	2.8160	5.83	. Q	. V	.	.	.	
14.050	2.8241	5.86	. Q	. V	.	.	.	
14.067	2.8322	5.89	. Q	. V	.	.	.	
14.083	2.8403	5.92	. Q	. V	.	.	.	
14.100	2.8485	5.94	. Q	. V	.	.	.	
14.117	2.8567	5.97	. Q	. V	.	.	.	
14.133	2.8650	6.00	. Q	. V	.	.	.	
14.150	2.8733	6.03	. Q	. V	.	.	.	
14.167	2.8816	6.05	. Q	. V	.	.	.	
14.183	2.8900	6.08	. Q	. V	.	.	.	
14.200	2.8984	6.11	. Q	. V	.	.	.	
14.217	2.9069	6.16	. Q	. V	.	.	.	
14.233	2.9155	6.21	. Q	. V	.	.	.	
14.250	2.9241	6.25	. Q	. V	.	.	.	
14.267	2.9328	6.30	. Q	. V	.	.	.	
14.283	2.9415	6.35	. Q	. V	.	.	.	
14.300	2.9503	6.40	. Q	. V	.	.	.	
14.317	2.9592	6.45	. Q	. V	.	.	.	
14.333	2.9681	6.49	. Q	. V	.	.	.	
14.350	2.9772	6.54	. Q	. V	.	.	.	
14.367	2.9862	6.59	. Q	. V	.	.	.	
14.383	2.9954	6.63	. Q	. V	.	.	.	
14.400	3.0045	6.66	. Q	. V	.	.	.	
14.417	3.0137	6.68	. Q	. V	.	.	.	
14.433	3.0230	6.70	. Q	. V	.	.	.	
14.450	3.0322	6.73	. Q	. V	.	.	.	
14.467	3.0415	6.75	. Q	. V	.	.	.	
14.483	3.0509	6.77	. Q	. V	.	.	.	
14.500	3.0602	6.80	. Q	. V	.	.	.	
14.517	3.0696	6.82	. Q	. V	.	.	.	
14.533	3.0791	6.84	. Q	. V	.	.	.	
14.550	3.0885	6.87	. Q	. V	.	.	.	
14.567	3.0980	6.90	. Q	. V	.	.	.	
14.583	3.1076	6.96	. Q	. V	.	.	.	
14.600	3.1173	7.02	. Q	. V	.	.	.	

14.617	3.1270	7.07	. Q	. V	.	.	.	
14.633	3.1368	7.13	. Q	. V	.	.	.	
14.650	3.1467	7.19	. Q	. V	.	.	.	
14.667	3.1567	7.24	. Q	. V	.	.	.	
14.683	3.1668	7.30	. Q	. V	.	.	.	
14.700	3.1769	7.35	. Q	. V	.	.	.	
14.717	3.1871	7.41	. Q	. V	.	.	.	
14.733	3.1974	7.47	. Q	. V	.	.	.	
14.750	3.2077	7.51	. Q	. V	.	.	.	
14.767	3.2181	7.55	. Q	. V	.	.	.	
14.783	3.2286	7.58	. Q	. V	.	.	.	
14.800	3.2391	7.61	. Q	. V	.	.	.	
14.817	3.2496	7.65	. Q	. V	.	.	.	
14.833	3.2602	7.68	. Q	. V	.	.	.	
14.850	3.2708	7.72	. Q	. V	.	.	.	
14.867	3.2815	7.75	. Q	. V	.	.	.	
14.883	3.2922	7.78	. Q	. V	.	.	.	
14.900	3.3030	7.82	. Q	. V	.	.	.	
14.917	3.3138	7.85	. Q	. V	.	.	.	
14.933	3.3247	7.92	. Q	. V	.	.	.	
14.950	3.3357	8.01	. Q	. V	.	.	.	
14.967	3.3469	8.09	. Q	. V	.	.	.	
14.983	3.3581	8.18	. Q	. V	.	.	.	
15.000	3.3695	8.27	. Q	. V	.	.	.	
15.017	3.3810	8.35	. Q	. V	.	.	.	
15.033	3.3927	8.44	. Q	. V	.	.	.	
15.050	3.4044	8.52	. Q	. V	.	.	.	
15.067	3.4162	8.61	. Q	. V	.	.	.	
15.083	3.4282	8.70	. Q	. V	.	.	.	
15.100	3.4403	8.78	. Q	. V	.	.	.	
15.117	3.4525	8.84	. Q	. V	.	.	.	
15.133	3.4648	8.90	. Q	. V	.	.	.	
15.150	3.4771	8.95	. Q	. V	.	.	.	
15.167	3.4895	9.01	. Q	. V	.	.	.	
15.183	3.5020	9.07	. Q	. V	.	.	.	
15.200	3.5146	9.12	. Q	. V	.	.	.	
15.217	3.5272	9.18	. Q	. V	.	.	.	
15.233	3.5399	9.23	. Q	. V	.	.	.	
15.250	3.5527	9.29	. Q	. V	.	.	.	
15.267	3.5656	9.34	. Q	. V	.	.	.	
15.283	3.5785	9.40	. Q	. V	.	.	.	
15.300	3.5916	9.48	. Q	. V	.	.	.	
15.317	3.6047	9.55	. Q	. V	.	.	.	
15.333	3.6180	9.63	. Q	. V	.	.	.	
15.350	3.6314	9.71	. Q	. V	.	.	.	
15.367	3.6449	9.79	. Q	. V	.	.	.	
15.383	3.6584	9.86	. Q	. V	.	.	.	
15.400	3.6721	9.94	. Q	. V	.	.	.	
15.417	3.6859	10.02	. Q	. V	.	.	.	
15.433	3.6999	10.10	. Q	. V	.	.	.	
15.450	3.7139	10.18	. Q	. V	.	.	.	
15.467	3.7280	10.25	. Q	. V	.	.	.	
15.483	3.7422	10.29	. Q	. V	.	.	.	
15.500	3.7564	10.34	. Q	. V	.	.	.	
15.517	3.7707	10.38	. Q	. V	.	.	.	
15.533	3.7851	10.42	. Q	. V	.	.	.	
15.550	3.7995	10.46	. Q	. V	.	.	.	
15.567	3.8139	10.51	. Q	. V	.	.	.	

```
 15.583      3.8285     10.55  .   Q     .       V .         .         .
 15.600      3.8431     10.59  .   Q     .       V .         .         .
 15.617      3.8577     10.64  .   Q     .       V .         .         .
 15.633      3.8724     10.68  .   Q     .        V.         .         .
 15.650      3.8873     10.84  .   Q     .        V.         .         .
 15.667      3.9029     11.31  .   Q     .        V.         .         .
 15.683      3.9192     11.80  .   Q     .        V.         .         .
 15.700      3.9361     12.28  .   Q     .        V.         .         .
 15.717      3.9537     12.77  .    Q    .        V.         .         .
 15.733      3.9720     13.26  .    Q    .        V.         .         .
 15.750      3.9909     13.75  .    Q    .        V.         .         .
 15.767      4.0105     14.24  .    Q    .        V.         .         .
 15.783      4.0308     14.73  .    Q    .        V.         .         .
 15.800      4.0517     15.22  .     Q   .        V.         .         .
 15.817      4.0734     15.70  .     Q   .         V         .         .
 15.833      4.0957     16.21  .     Q   .         V         .         .
 15.850      4.1188     16.76  .     Q   .         V         .         .
 15.867      4.1427     17.31  .     Q   .         V         .         .
 15.883      4.1673     17.86  .      Q  .         V         .         .
 15.900      4.1926     18.41  .      Q  .         V         .         .
 15.917      4.2187     18.96  .      Q  .         V         .         .
 15.933      4.2456     19.51  .      Q  .         V         .         .
 15.950      4.2733     20.07  .      Q  .         .V        .         .
 15.967      4.3017     20.62  .       Q .         .V        .         .
 15.983      4.3308     21.17  .       Q .         .V        .         .
 16.000      4.3607     21.72  .       Q .         .V        .         .
 16.017      4.3960     25.61  .         Q         .V        .         .
 16.033      4.4412     32.84  .          .  Q     .V        .         .
 16.050      4.4964     40.07  .          .    Q   . V       .         .
 16.067      4.5616     47.30  .          .      Q . V       .         .
 16.083      4.6367     54.53  .          .        .QV       .         .
 16.100      4.7218     61.76  .          .        .  VQ     .         .
 16.117      4.8168     69.00  .          .        .  V   Q  .         .
 16.133      4.9218     76.23  .          .        .   V     Q         .
 16.150      5.0367     83.46  .          .        .   V     .  Q      .
 16.167      5.1617     90.69  .          .        .    V    .     Q   .
 16.183      5.3001    100.52  .          .        .     V   .        Q
 16.200      5.4314     95.33  .          .        .     V   .      Q  .
 16.217      5.5516     87.23  .          .        .      V  .   Q     .
 16.233      5.6606     79.12  .          .        .      V  .Q        .
 16.250      5.7584     71.01  .          .        .       Q .         .
 16.267      5.8450     62.90  .          .        .    Q  V .         .
 16.283      5.9205     54.79  .          .       .Q       V.         .
 16.300      5.9848     46.68  .          .     Q .        V.         .
 16.317      6.0379     38.57  .          .   Q   .        V.         .
 16.333      6.0799     30.47  .          . Q     .        V.         .
 16.350      6.1107     22.36  .        Q .         .        V         .
 16.367      6.1307     14.56  .    Q     .         .        V         .
 16.383      6.1477     12.30  .   Q      .         .        V         .
 16.400      6.1643     12.08  .   Q      .         .        V         .
 16.417      6.1807     11.87  .   Q      .         .        V         .
 16.433      6.1967     11.66  .   Q      .         .        V         .
 16.450      6.2125     11.44  .   Q      .         .        V         .
 16.467      6.2280     11.23  .   Q      .         .        V         .
 16.483      6.2431     11.02  .   Q      .         .        V         .
 16.500      6.2580     10.80  .   Q      .         .        V         .
 16.517      6.2726     10.59  .   Q      .         .        V         .
 16.533      6.2869     10.38  .   Q      .         .        V         .
```



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 16.550      6.3009     10.17  .   Q     .         .         .V        .
 16.567      6.3147      9.99  .  Q      .         .         .V        .
 16.583      6.3282      9.82  .  Q      .         .         .V        .
 16.600      6.3415      9.65  .  Q      .         .         .V        .
 16.617      6.3545      9.48  .  Q      .         .         .V        .
 16.633      6.3673      9.31  .  Q      .         .         .V        .
 16.650      6.3799      9.14  .  Q      .         .         .V        .
 16.667      6.3923      8.97  .  Q      .         .         .V        .
 16.683      6.4044      8.80  .  Q      .         .         .V        .
 16.700      6.4163      8.62  .  Q      .         .         .V        .
 16.717      6.4279      8.45  .  Q      .         .         .V        .
 16.733      6.4393      8.29  .  Q      .         .         .V        .
 16.750      6.4506      8.18  .  Q      .         .         .V        .
 16.767      6.4617      8.08  .  Q      .         .         .V        .
 16.783      6.4727      7.98  .  Q      .         .         .V        .
 16.800      6.4836      7.87  .  Q      .         .         .V        .
 16.817      6.4943      7.77  .  Q      .         .         .V        .
 16.833      6.5048      7.67  .  Q      .         .         . V       .
 16.850      6.5153      7.56  .  Q      .         .         . V       .
 16.867      6.5255      7.46  . Q       .         .         . V       .
 16.883      6.5357      7.36  . Q       .         .         . V       .
 16.900      6.5457      7.25  . Q       .         .         . V       .
 16.917      6.5555      7.16  . Q       .         .         . V       .
 16.933      6.5653      7.08  . Q       .         .         . V       .
 16.950      6.5749      7.01  . Q       .         .         . V       .
 16.967      6.5845      6.94  . Q       .         .         . V       .
 16.983      6.5940      6.87  . Q       .         .         . V       .
 17.000      6.6033      6.80  . 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%	1021.0
10%	340.0
20%	120.0
30%	95.0
40%	75.0
50%	65.0
60%	55.0
70%	40.0
80%	25.0
90%	15.0

==========

END OF FLOODSCx ROUTING ANALYSIS

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                         Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA F                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 2-YR EV MARCH 2019 CCHIU                                              *
 ************************************************************************

  FILE NAME: 4F02EVS.DAT
  TIME/DATE OF STUDY: 15:02 03/13/2019

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


************************************************************************
  FLOW PROCESS FROM NODE    920.00 TO NODE    905.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  553.80
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.509
    LOW LOSS FRACTION = 0.744
    TIME OF CONCENTRATION(MIN.) = 11.43
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   2
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.13
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.28
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.37
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.62
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  0.85
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  1.44

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    16.87
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    49.58

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	57.7	115.5	173.2	230.9
10.000	3.0976	5.26	Q	V .	.	.	.
10.017	3.1049	5.27	Q	V .	.	.	.
10.033	3.1122	5.28	Q	V .	.	.	.
10.050	3.1195	5.29	Q	V .	.	.	.
10.067	3.1268	5.30	Q	V .	.	.	.
10.083	3.1341	5.31	Q	V .	.	.	.
10.100	3.1414	5.33	Q	V .	.	.	.
10.117	3.1488	5.33	Q	V .	.	.	.
10.133	3.1561	5.34	Q	V .	.	.	.
10.150	3.1635	5.35	Q	V .	.	.	.
10.167	3.1709	5.35	Q	V .	.	.	.
10.183	3.1782	5.36	Q	V .	.	.	.
10.200	3.1856	5.36	Q	V .	.	.	.
10.217	3.1930	5.37	Q	V .	.	.	.
10.233	3.2004	5.38	Q	V .	.	.	.
10.250	3.2078	5.38	Q	V .	.	.	.
10.267	3.2153	5.39	Q	V .	.	.	.
10.283	3.2227	5.40	Q	V .	.	.	.
10.300	3.2301	5.40	Q	V .	.	.	.
10.317	3.2376	5.42	Q	V .	.	.	.
10.333	3.2451	5.43	Q	V .	.	.	.
10.350	3.2526	5.44	Q	V .	.	.	.
10.367	3.2601	5.46	Q	V .	.	.	.
10.383	3.2676	5.47	Q	V .	.	.	.
10.400	3.2752	5.48	Q	V .	.	.	.
10.417	3.2828	5.50	Q	V .	.	.	.
10.433	3.2903	5.51	Q	V .	.	.	.
10.450	3.2980	5.52	Q	V .	.	.	.
10.467	3.3056	5.54	Q	V .	.	.	.
10.483	3.3132	5.55	Q	V .	.	.	.
10.500	3.3209	5.56	Q	V .	.	.	.
10.517	3.3285	5.56	Q	V .	.	.	.
10.533	3.3362	5.57	Q	V .	.	.	.
10.550	3.3439	5.58	Q	V .	.	.	.
10.567	3.3516	5.58	Q	V .	.	.	.
10.583	3.3593	5.59	Q	V .	.	.	.
10.600	3.3670	5.60	Q	V .	.	.	.
10.617	3.3747	5.60	Q	V .	.	.	.
10.633	3.3824	5.61	Q	V .	.	.	.
10.650	3.3902	5.62	Q	V .	.	.	.
10.667	3.3979	5.62	Q	V .	.	.	.
10.683	3.4057	5.64	Q	V .	.	.	.
10.700	3.4135	5.65	Q	V .	.	.	.
10.717	3.4213	5.66	Q	V .	.	.	.
10.733	3.4291	5.68	Q	V .	.	.	.

10.750	3.4369	5.69	Q	V .	.	.	.
10.767	3.4448	5.71	Q	V .	.	.	.
10.783	3.4527	5.72	Q	V .	.	.	.
10.800	3.4606	5.74	Q	V .	.	.	.
10.817	3.4685	5.75	Q	V .	.	.	.
10.833	3.4764	5.77	Q	V .	.	.	.
10.850	3.4844	5.78	.Q	V .	.	.	.
10.867	3.4924	5.79	.Q	V .	.	.	.
10.883	3.5004	5.80	.Q	V .	.	.	.
10.900	3.5084	5.81	.Q	V .	.	.	.
10.917	3.5164	5.82	.Q	V .	.	.	.
10.933	3.5244	5.83	.Q	V .	.	.	.
10.950	3.5324	5.83	.Q	V .	.	.	.
10.967	3.5405	5.84	.Q	V .	.	.	.
10.983	3.5485	5.85	.Q	V .	.	.	.
11.000	3.5566	5.86	.Q	V .	.	.	.
11.017	3.5647	5.86	.Q	V .	.	.	.
11.033	3.5728	5.87	.Q	V .	.	.	.
11.050	3.5809	5.88	.Q	V .	.	.	.
11.067	3.5890	5.89	.Q	V .	.	.	.
11.083	3.5971	5.91	.Q	V .	.	.	.
11.100	3.6053	5.93	.Q	V .	.	.	.
11.117	3.6135	5.94	.Q	V .	.	.	.
11.133	3.6217	5.96	.Q	V .	.	.	.
11.150	3.6299	5.98	.Q	V .	.	.	.
11.167	3.6382	5.99	.Q	V .	.	.	.
11.183	3.6464	6.01	.Q	V .	.	.	.
11.200	3.6547	6.02	.Q	V .	.	.	.
11.217	3.6631	6.04	.Q	V .	.	.	.
11.233	3.6714	6.06	.Q	V .	.	.	.
11.250	3.6798	6.07	.Q	V .	.	.	.
11.267	3.6881	6.08	.Q	V .	.	.	.
11.283	3.6965	6.09	.Q	V .	.	.	.
11.300	3.7049	6.10	.Q	V .	.	.	.
11.317	3.7133	6.11	.Q	V .	.	.	.
11.333	3.7218	6.12	.Q	V .	.	.	.
11.350	3.7302	6.12	.Q	V .	.	.	.
11.367	3.7387	6.13	.Q	V .	.	.	.
11.383	3.7471	6.14	.Q	V .	.	.	.
11.400	3.7556	6.15	.Q	V .	.	.	.
11.417	3.7641	6.16	.Q	V .	.	.	.
11.433	3.7726	6.17	.Q	V .	.	.	.
11.450	3.7811	6.18	.Q	V .	.	.	.
11.467	3.7896	6.20	.Q	V .	.	.	.
11.483	3.7982	6.22	.Q	V.	.	.	.
11.500	3.8068	6.24	.Q	V.	.	.	.
11.517	3.8154	6.26	.Q	V.	.	.	.
11.533	3.8241	6.28	.Q	V.	.	.	.
11.550	3.8327	6.30	.Q	V.	.	.	.
11.567	3.8414	6.32	.Q	V.	.	.	.
11.583	3.8502	6.33	.Q	V.	.	.	.
11.600	3.8589	6.35	.Q	V.	.	.	.
11.617	3.8677	6.37	.Q	V.	.	.	.
11.633	3.8765	6.39	.Q	V.	.	.	.
11.650	3.8853	6.40	.Q	V.	.	.	.
11.667	3.8941	6.41	.Q	V.	.	.	.
11.683	3.9030	6.42	.Q	V.	.	.	.
11.700	3.9118	6.43	.Q	V.	.	.	.

11.717	3.9207	6.44	.Q	V.	.	.	.
11.733	3.9296	6.45	.Q	V.	.	.	.
11.750	3.9384	6.46	.Q	V.	.	.	.
11.767	3.9474	6.47	.Q	V.	.	.	.
11.783	3.9563	6.48	.Q	V.	.	.	.
11.800	3.9652	6.49	.Q	V.	.	.	.
11.817	3.9742	6.50	.Q	V.	.	.	.
11.833	3.9831	6.52	.Q	V.	.	.	.
11.850	3.9921	6.54	.Q	V.	.	.	.
11.867	4.0012	6.56	.Q	V.	.	.	.
11.883	4.0102	6.58	.Q	V.	.	.	.
11.900	4.0193	6.60	.Q	V.	.	.	.
11.917	4.0285	6.62	.Q	V.	.	.	.
11.933	4.0376	6.65	.Q	V.	.	.	.
11.950	4.0468	6.67	.Q	V.	.	.	.
11.967	4.0560	6.69	.Q	V.	.	.	.
11.983	4.0653	6.71	.Q	V.	.	.	.
12.000	4.0745	6.73	.Q	V.	.	.	.
12.017	4.0839	6.78	.Q	V.	.	.	.
12.033	4.0933	6.85	.Q	V.	.	.	.
12.050	4.1028	6.92	.Q	V.	.	.	.
12.067	4.1125	6.99	.Q	V.	.	.	.
12.083	4.1222	7.06	.Q	V.	.	.	.
12.100	4.1320	7.13	.Q	V.	.	.	.
12.117	4.1419	7.20	.Q	V.	.	.	.
12.133	4.1519	7.27	.Q	V.	.	.	.
12.150	4.1621	7.34	.Q	V.	.	.	.
12.167	4.1723	7.41	.Q	V.	.	.	.
12.183	4.1826	7.48	.Q	V.	.	.	.
12.200	4.1930	7.56	.Q	V.	.	.	.
12.217	4.2035	7.64	.Q	V.	.	.	.
12.233	4.2141	7.73	.Q	V.	.	.	.
12.250	4.2249	7.81	.Q	V	.	.	.
12.267	4.2358	7.90	.Q	V	.	.	.
12.283	4.2468	7.98	.Q	V	.	.	.
12.300	4.2579	8.07	.Q	V	.	.	.
12.317	4.2691	8.16	.Q	V	.	.	.
12.333	4.2805	8.24	.Q	V	.	.	.
12.350	4.2920	8.33	.Q	V	.	.	.
12.367	4.3035	8.41	.Q	V	.	.	.
12.383	4.3152	8.50	.Q	V	.	.	.
12.400	4.3270	8.54	.Q	V	.	.	.
12.417	4.3388	8.55	.Q	V	.	.	.
12.433	4.3506	8.57	.Q	V	.	.	.
12.450	4.3624	8.58	.Q	V	.	.	.
12.467	4.3742	8.59	.Q	V	.	.	.
12.483	4.3861	8.61	.Q	V	.	.	.
12.500	4.3980	8.62	.Q	V	.	.	.
12.517	4.4099	8.64	.Q	V	.	.	.
12.533	4.4218	8.65	.Q	V	.	.	.
12.550	4.4337	8.66	.Q	V	.	.	.
12.567	4.4457	8.68	.Q	V	.	.	.
12.583	4.4576	8.70	.Q	V	.	.	.
12.600	4.4697	8.73	.Q	V	.	.	.
12.617	4.4817	8.76	.Q	V	.	.	.
12.633	4.4938	8.79	.Q	V	.	.	.
12.650	4.5060	8.82	.Q	V	.	.	.
12.667	4.5182	8.85	.Q	V	.	.	.

12.683	4.5304	8.88	.Q	V	.	.	.
12.700	4.5427	8.91	.Q	V	.	.	.
12.717	4.5550	8.94	.Q	V	.	.	.
12.733	4.5674	8.97	.Q	V	.	.	.
12.750	4.5798	9.00	.Q	V	.	.	.
12.767	4.5922	9.03	.Q	V	.	.	.
12.783	4.6047	9.05	.Q	V	.	.	.
12.800	4.6172	9.07	.Q	V	.	.	.
12.817	4.6297	9.09	.Q	V	.	.	.
12.833	4.6422	9.10	.Q	.V	.	.	.
12.850	4.6548	9.12	.Q	.V	.	.	.
12.867	4.6674	9.14	.Q	.V	.	.	.
12.883	4.6800	9.15	.Q	.V	.	.	.
12.900	4.6926	9.17	.Q	.V	.	.	.
12.917	4.7053	9.19	.Q	.V	.	.	.
12.933	4.7179	9.20	.Q	.V	.	.	.
12.950	4.7307	9.22	.Q	.V	.	.	.
12.967	4.7434	9.25	.Q	.V	.	.	.
12.983	4.7562	9.28	.Q	.V	.	.	.
13.000	4.7690	9.32	.Q	.V	.	.	.
13.017	4.7819	9.36	.Q	.V	.	.	.
13.033	4.7948	9.39	.Q	.V	.	.	.
13.050	4.8078	9.43	.Q	.V	.	.	.
13.067	4.8209	9.47	.Q	.V	.	.	.
13.083	4.8340	9.50	.Q	.V	.	.	.
13.100	4.8471	9.54	.Q	.V	.	.	.
13.117	4.8603	9.58	.Q	.V	.	.	.
13.133	4.8735	9.61	.Q	.V	.	.	.
13.150	4.8868	9.65	.Q	.V	.	.	.
13.167	4.9001	9.67	.Q	.V	.	.	.
13.183	4.9135	9.69	.Q	.V	.	.	.
13.200	4.9269	9.71	.Q	.V	.	.	.
13.217	4.9403	9.73	.Q	.V	.	.	.
13.233	4.9537	9.75	.Q	.V	.	.	.
13.250	4.9672	9.77	.Q	.V	.	.	.
13.267	4.9806	9.79	.Q	.V	.	.	.
13.283	4.9942	9.81	.Q	.V	.	.	.
13.300	5.0077	9.83	.Q	.V	.	.	.
13.317	5.0213	9.85	.Q	.V	.	.	.
13.333	5.0349	9.87	.Q	.V	.	.	.
13.350	5.0485	9.91	.Q	.V	.	.	.
13.367	5.0622	9.95	.Q	. V	.	.	.
13.383	5.0760	10.00	.Q	. V	.	.	.
13.400	5.0898	10.04	.Q	. V	.	.	.
13.417	5.1037	10.09	.Q	. V	.	.	.
13.433	5.1177	10.13	.Q	. V	.	.	.
13.450	5.1317	10.18	.Q	. V	.	.	.
13.467	5.1458	10.22	.Q	. V	.	.	.
13.483	5.1599	10.27	.Q	. V	.	.	.
13.500	5.1741	10.31	.Q	. V	.	.	.
13.517	5.1884	10.36	.Q	. V	.	.	.
13.533	5.2027	10.40	.Q	. V	.	.	.
13.550	5.2171	10.43	.Q	. V	.	.	.
13.567	5.2315	10.45	.Q	. V	.	.	.
13.583	5.2459	10.48	.Q	. V	.	.	.
13.600	5.2604	10.50	.Q	. V	.	.	.
13.617	5.2749	10.53	.Q	. V	.	.	.
13.633	5.2894	10.55	.Q	. V	.	.	.

13.650	5.3040	10.58	.Q	. V	.	.	.	
13.667	5.3186	10.60	.Q	. V	.	.	.	
13.683	5.3332	10.63	.Q	. V	.	.	.	
13.700	5.3479	10.65	.Q	. V	.	.	.	
13.717	5.3626	10.68	.Q	. V	.	.	.	
13.733	5.3774	10.72	.Q	. V	.	.	.	
13.750	5.3922	10.78	.Q	. V	.	.	.	
13.767	5.4071	10.84	.Q	. V	.	.	.	
13.783	5.4221	10.89	.Q	. V	.	.	.	
13.800	5.4372	10.95	.Q	. V	.	.	.	
13.817	5.4524	11.01	.Q	. V	.	.	.	
13.833	5.4676	11.06	.Q	. V	.	.	.	
13.850	5.4829	11.12	.Q	. V	.	.	.	
13.867	5.4983	11.18	.Q	. V	.	.	.	
13.883	5.5138	11.23	.Q	. V	.	.	.	
13.900	5.5293	11.29	.Q	. V	.	.	.	
13.917	5.5450	11.34	.Q	. V	.	.	.	
13.933	5.5606	11.37	.Q	. V	.	.	.	
13.950	5.5763	11.41	.Q	. V	.	.	.	
13.967	5.5921	11.44	.Q	. V	.	.	.	
13.983	5.6079	11.47	.Q	. V	.	.	.	
14.000	5.6237	11.50	.Q	. V	.	.	.	
14.017	5.6396	11.54	.Q	. V	.	.	.	
14.033	5.6556	11.57	. Q	. V	.	.	.	
14.050	5.6715	11.60	. Q	. V	.	.	.	
14.067	5.6876	11.63	. Q	. V	.	.	.	
14.083	5.7036	11.66	. Q	. V	.	.	.	
14.100	5.7198	11.70	. Q	. V	.	.	.	
14.117	5.7360	11.79	. Q	. V	.	.	.	
14.133	5.7524	11.90	. Q	. V	.	.	.	
14.150	5.7689	12.01	. Q	. V	.	.	.	
14.167	5.7856	12.12	. Q	. V	.	.	.	
14.183	5.8025	12.23	. Q	. V	.	.	.	
14.200	5.8194	12.33	. Q	. V	.	.	.	
14.217	5.8366	12.44	. Q	. V	.	.	.	
14.233	5.8539	12.55	. Q	. V	.	.	.	
14.250	5.8713	12.66	. Q	. V	.	.	.	
14.267	5.8889	12.77	. Q	. V	.	.	.	
14.283	5.9066	12.88	. Q	. V	.	.	.	
14.300	5.9245	12.96	. Q	. V	.	.	.	
14.317	5.9424	13.01	. Q	. V	.	.	.	
14.333	5.9604	13.05	. Q	. V	.	.	.	
14.350	5.9784	13.09	. Q	. V	.	.	.	
14.367	5.9965	13.14	. Q	. V	.	.	.	
14.383	6.0147	13.18	. Q	. V	.	.	.	
14.400	6.0329	13.23	. Q	. V	.	.	.	
14.417	6.0512	13.27	. Q	. V	.	.	.	
14.433	6.0695	13.31	. Q	. V	.	.	.	
14.450	6.0879	13.36	. Q	. V	.	.	.	
14.467	6.1064	13.40	. Q	. V	.	.	.	
14.483	6.1249	13.45	. Q	. V	.	.	.	
14.500	6.1436	13.55	. Q	. V	.	.	.	
14.517	6.1624	13.65	. Q	. V	.	.	.	
14.533	6.1813	13.75	. Q	. V	.	.	.	
14.550	6.2004	13.86	. Q	. V	.	.	.	
14.567	6.2196	13.96	. Q	. V	.	.	.	
14.583	6.2390	14.07	. Q	. V	.	.	.	
14.600	6.2585	14.17	. Q	. V	.	.	.	

14.617	6.2782	14.28	. Q	. V	.	.	.	
14.633	6.2980	14.38	. Q	. V	.	.	.	
14.650	6.3180	14.49	. Q	. V	.	.	.	
14.667	6.3380	14.59	. Q	. V	.	.	.	
14.683	6.3583	14.67	. Q	. V	.	.	.	
14.700	6.3786	14.74	. Q	. V	.	.	.	
14.717	6.3989	14.80	. Q	. V	.	.	.	
14.733	6.4194	14.86	. Q	. V	.	.	.	
14.750	6.4400	14.93	. Q	. V	.	.	.	
14.767	6.4606	14.99	. Q	. V	.	.	.	
14.783	6.4814	15.05	. Q	. V	.	.	.	
14.800	6.5022	15.12	. Q	. V	.	.	.	
14.817	6.5231	15.18	. Q	. V	.	.	.	
14.833	6.5441	15.24	. Q	. V	.	.	.	
14.850	6.5652	15.31	. Q	. V	.	.	.	
14.867	6.5864	15.39	. Q	. V	.	.	.	
14.883	6.6078	15.54	. Q	. V	.	.	.	
14.900	6.6294	15.70	. Q	. V	.	.	.	
14.917	6.6512	15.86	. Q	. V	.	.	.	
14.933	6.6733	16.02	. Q	. V	.	.	.	
14.950	6.6956	16.18	. Q	. V	.	.	.	
14.967	6.7181	16.34	. Q	. V	.	.	.	
14.983	6.7408	16.50	. Q	. V	.	.	.	
15.000	6.7637	16.66	. Q	. V	.	.	.	
15.017	6.7869	16.81	. Q	. V	.	.	.	
15.033	6.8103	16.97	. Q	. V	.	.	.	
15.050	6.8339	17.13	. Q	. V	.	.	.	
15.067	6.8577	17.26	. Q	. V	.	.	.	
15.083	6.8816	17.36	. Q	. V	.	.	.	
15.100	6.9056	17.46	. Q	. V	.	.	.	
15.117	6.9298	17.57	. Q	. V	.	.	.	
15.133	6.9542	17.67	. Q	. V	.	.	.	
15.150	6.9786	17.77	. Q	. V	.	.	.	
15.167	7.0033	17.88	. Q	. V	.	.	.	
15.183	7.0280	17.98	. Q	. V	.	.	.	
15.200	7.0529	18.08	. Q	. V	.	.	.	
15.217	7.0780	18.19	. Q	. V	.	.	.	
15.233	7.1032	18.29	. Q	. V	.	.	.	
15.250	7.1286	18.42	. Q	. V	.	.	.	
15.267	7.1542	18.64	. Q	. V	.	.	.	
15.283	7.1802	18.86	. Q	. V	.	.	.	
15.300	7.2065	19.07	. Q	. V	.	.	.	
15.317	7.2330	19.29	. Q	. V	.	.	.	
15.333	7.2599	19.51	. Q	. V	.	.	.	
15.350	7.2871	19.73	. Q	. V	.	.	.	
15.367	7.3146	19.95	. Q	. V	.	.	.	
15.383	7.3423	20.16	. Q	. V	.	.	.	
15.400	7.3704	20.38	. Q	. V	.	.	.	
15.417	7.3988	20.60	. Q	. V	.	.	.	
15.433	7.4275	20.81	. Q	. V	.	.	.	
15.450	7.4562	20.86	. Q	. V	.	.	.	
15.467	7.4849	20.86	. Q	. V	.	.	.	
15.483	7.5137	20.86	. Q	. V	.	.	.	
15.500	7.5424	20.86	. Q	. V	.	.	.	
15.517	7.5711	20.86	. Q	. V	.	.	.	
15.533	7.5999	20.86	. Q	. V	.	.	.	
15.550	7.6286	20.86	. Q	. V	.	.	.	
15.567	7.6573	20.86	. Q	. V	.	.	.	

```
15.583     7.6861    20.86  .  Q      .       V .         .         .
15.600     7.7148    20.86  .  Q      .       V .         .         .
15.617     7.7435    20.86  .  Q      .       V .         .         .
15.633     7.7727    21.18  .  Q      .       V .         .         .
15.650     7.8031    22.06  .  Q      .       V .         .         .
15.667     7.8347    22.94  .  Q      .       V .         .         .
15.683     7.8675    23.83  .   Q     .       V .         .         .
15.700     7.9015    24.71  .   Q     .       V .         .         .
15.717     7.9368    25.59  .   Q     .       V .         .         .
15.733     7.9733    26.48  .   Q     .       V .         .         .
15.750     8.0110    27.36  .   Q     .       V .         .         .
15.767     8.0499    28.25  .   Q     .        V.         .         .
15.783     8.0900    29.13  .    Q    .        V.         .         .
15.800     8.1313    30.01  .    Q    .        V.         .         .
15.817     8.1739    30.91  .    Q    .        V.         .         .
15.833     8.2179    31.93  .    Q    .        V.         .         .
15.850     8.2633    32.97  .    Q    .        V.         .         .
15.867     8.3102    34.01  .    Q    .        V.         .         .
15.883     8.3584    35.06  .     Q   .        V.         .         .
15.900     8.4082    36.10  .     Q   .        V.         .         .
15.917     8.4593    37.14  .     Q   .         V         .         .
15.933     8.5119    38.18  .     Q   .         V         .         .
15.950     8.5660    39.22  .     Q   .         V         .         .
15.967     8.6214    40.27  .     Q   .         V         .         .
15.983     8.6783    41.31  .      Q  .         V         .         .
16.000     8.7367    42.35  .      Q  .         V         .         .
16.017     8.8070    51.10  .       Q .         V         .         .
16.033     8.9001    67.55  .         .Q        .V        .         .
16.050     9.0158    84.00  .         .   Q     .V        .         .
16.067     9.1542   100.46  .         .      Q  .V        .         .
16.083     9.3152   116.91  .         .         Q V       .         .
16.100     9.4989   133.36  .         .         . VQ      .         .
16.117     9.7052   149.82  .         .         .  V Q    .         .
16.133     9.9343   166.27  .         .         .  V    Q .         .
16.150    10.1859   182.72  .         .         .   V     .Q        .
16.167    10.4603   199.17  .         .         .   V     .   Q     .
16.183    10.7573   215.63  .         .         .    V    .      Q  .
16.200    11.0754   230.93  .         .         .     V   .        Q
16.217    11.3668   211.58  .         .         .     V   .     Q   .
16.233    11.6333   193.50  .         .         .      V  .  Q      .
16.250    11.8750   175.42  .         .         .       V Q         .
16.267    12.0917   157.34  .         .         .      QV .         .
16.283    12.2835   139.26  .         .         .   Q    V.         .
16.300    12.4504   121.18  .         .        Q        V.         .
16.317    12.5924   103.10  .         .      Q  .        V.         .
16.333    12.7095    85.02  .         .   Q     .         V         .
16.350    12.8017    66.94  .         .Q        .         V         .
16.367    12.8690    48.86  .       Q .         .         V         .
16.383    12.9117    30.95  .    Q    .         .         V         .
16.400    12.9448    24.02  .   Q     .         .         V         .
16.417    12.9773    23.63  .   Q     .         .         V         .
16.433    13.0093    23.24  .   Q     .         .         V         .
16.450    13.0408    22.85  .  Q      .         .         V         .
16.467    13.0717    22.46  .  Q      .         .         V         .
16.483    13.1022    22.08  .  Q      .         .         .V        .
16.500    13.1320    21.69  .  Q      .         .         .V        .
16.517    13.1614    21.30  .  Q      .         .         .V        .
16.533    13.1902    20.91  .  Q      .         .         .V        .
```



```
16.550    13.2184    20.52  .  Q      .         .         .V        .
16.567    13.2462    20.13  .  Q      .         .         .V        .
16.583    13.2734    19.76  .  Q      .         .         .V        .
16.600    13.3001    19.44  .  Q      .         .         .V        .
16.617    13.3265    19.12  .  Q      .         .         .V        .
16.633    13.3524    18.81  .  Q      .         .         .V        .
16.650    13.3779    18.49  .  Q      .         .         .V        .
16.667    13.4029    18.17  .  Q      .         .         .V        .
16.683    13.4275    17.86  .  Q      .         .         .V        .
16.700    13.4516    17.54  .  Q      .         .         .V        .
16.717    13.4754    17.22  . Q       .         .         .V        .
16.733    13.4987    16.91  . Q       .         .         .V        .
16.750    13.5215    16.59  . Q       .         .         . V       .
16.767    13.5439    16.28  . Q       .         .         . V       .
16.783    13.5660    16.05  . Q       .         .         . V       .
16.800    13.5879    15.86  . Q       .         .         . V       .
16.817    13.6095    15.67  . Q       .         .         . V       .
16.833    13.6308    15.48  . Q       .         .         . V       .
16.850    13.6518    15.29  . Q       .         .         . V       .
16.867    13.6726    15.09  . Q       .         .         . V       .
16.883    13.6932    14.90  . Q       .         .         . V       .
16.900    13.7134    14.71  . Q       .         .         . V       .
16.917    13.7334    14.52  . Q       .         .         . V       .
16.933    13.7531    14.32  . Q       .         .         . V       .
16.950    13.7726    14.13  . Q       .         .         . V       .
16.967    13.7918    13.96  . Q       .         .         . V       .
16.983    13.8109    13.82  . Q       .         .         . V       .
17.000    13.8297    13.68  . 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%	1021.0
10%	230.0
20%	110.0
30%	90.0
40%	80.0
50%	70.0
60%	55.0
70%	40.0
80%	25.0
90%	15.0

END OF FLOODSCx ROUTING ANALYSIS

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                          Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA A                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 5-YR EV MARCH 2019 CCHIU                                              *
 ************************************************************************

  FILE NAME: 3A05EVS.DAT
  TIME/DATE OF STUDY: 14:58 03/13/2019

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


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    130.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  510.20
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.217
    LOW LOSS FRACTION = 0.414
    TIME OF CONCENTRATION(MIN.) = 15.30
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   5
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.18
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.41
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.55
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.92
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.27
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  2.12

--------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    49.76
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    40.38

--------------------------------------------------------------------------
```

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	110.6	221.1	331.7	442.2
0.017	0.0000	0.00	Q	.	.	.	.
0.033	0.0000	0.00	Q	.	.	.	.
0.050	0.0000	0.00	Q	.	.	.	.
0.067	0.0000	0.00	Q	.	.	.	.
0.083	0.0000	0.00	Q	.	.	.	.
0.100	0.0000	0.00	Q	.	.	.	.
0.117	0.0000	0.00	Q	.	.	.	.
0.133	0.0000	0.00	Q	.	.	.	.
0.150	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.183	0.0000	0.00	Q	.	.	.	.
0.200	0.0001	0.10	Q	.	.	.	.
0.217	0.0010	0.64	Q	.	.	.	.
0.233	0.0027	1.22	Q	.	.	.	.
0.250	0.0052	1.80	Q	.	.	.	.
0.267	0.0085	2.38	Q	.	.	.	.
0.283	0.0125	2.96	Q	.	.	.	.
0.300	0.0174	3.54	Q	.	.	.	.
0.317	0.0231	4.12	Q	.	.	.	.
0.333	0.0296	4.70	Q	.	.	.	.
0.350	0.0368	5.28	Q	.	.	.	.
0.367	0.0449	5.86	Q	.	.	.	.
0.383	0.0538	6.44	Q	.	.	.	.
0.400	0.0635	7.02	Q	.	.	.	.
0.417	0.0739	7.60	Q	.	.	.	.
0.433	0.0852	8.19	Q	.	.	.	.
0.450	0.0973	8.74	Q	.	.	.	.
0.467	0.1095	8.89	Q	.	.	.	.
0.483	0.1217	8.89	Q	.	.	.	.
0.500	0.1340	8.89	Q	.	.	.	.
0.517	0.1462	8.90	Q	.	.	.	.
0.533	0.1585	8.90	Q	.	.	.	.
0.550	0.1708	8.91	Q	.	.	.	.
0.567	0.1830	8.91	Q	.	.	.	.
0.583	0.1953	8.91	Q	.	.	.	.
0.600	0.2076	8.92	Q	.	.	.	.
0.617	0.2199	8.92	Q	.	.	.	.
0.633	0.2322	8.93	Q	.	.	.	.
0.650	0.2445	8.93	Q	.	.	.	.
0.667	0.2568	8.93	Q	.	.	.	.
0.683	0.2691	8.94	Q	.	.	.	.
0.700	0.2814	8.94	Q	.	.	.	.
0.717	0.2937	8.95	Q	.	.	.	.
0.733	0.3061	8.96	Q	.	.	.	.
0.750	0.3184	8.96	Q	.	.	.	.

0.767	0.3308	8.97	Q	.	.	.	.
0.783	0.3431	8.98	Q	.	.	.	.
0.800	0.3555	8.99	Q	.	.	.	.
0.817	0.3679	9.00	Q	.	.	.	.
0.833	0.3803	9.00	Q	.	.	.	.
0.850	0.3927	9.01	Q	.	.	.	.
0.867	0.4052	9.02	Q	.	.	.	.
0.883	0.4176	9.03	Q	.	.	.	.
0.900	0.4300	9.04	Q	.	.	.	.
0.917	0.4425	9.05	Q	.	.	.	.
0.933	0.4550	9.05	Q	.	.	.	.
0.950	0.4675	9.06	Q	.	.	.	.
0.967	0.4800	9.07	Q	.	.	.	.
0.983	0.4924	9.07	Q	.	.	.	.
1.000	0.5050	9.08	Q	.	.	.	.
1.017	0.5175	9.08	Q	.	.	.	.
1.033	0.5300	9.09	Q	.	.	.	.
1.050	0.5425	9.09	Q	.	.	.	.
1.067	0.5550	9.09	Q	.	.	.	.
1.083	0.5676	9.10	Q	.	.	.	.
1.100	0.5801	9.10	Q	.	.	.	.
1.117	0.5926	9.11	Q	.	.	.	.
1.133	0.6052	9.11	Q	.	.	.	.
1.150	0.6177	9.12	Q	.	.	.	.
1.167	0.6303	9.12	Q	.	.	.	.
1.183	0.6429	9.12	Q	.	.	.	.
1.200	0.6555	9.13	Q	.	.	.	.
1.217	0.6680	9.13	Q	.	.	.	.
1.233	0.6806	9.14	Q	.	.	.	.
1.250	0.6932	9.15	Q	.	.	.	.
1.267	0.7058	9.16	Q	.	.	.	.
1.283	0.7185	9.17	Q	.	.	.	.
1.300	0.7311	9.18	Q	.	.	.	.
1.317	0.7438	9.18	Q	.	.	.	.
1.333	0.7564	9.19	Q	.	.	.	.
1.350	0.7691	9.20	Q	.	.	.	.
1.367	0.7818	9.21	Q	.	.	.	.
1.383	0.7945	9.22	Q	.	.	.	.
1.400	0.8072	9.23	Q	.	.	.	.
1.417	0.8199	9.24	Q	.	.	.	.
1.433	0.8326	9.24	Q	.	.	.	.
1.450	0.8454	9.25	Q	.	.	.	.
1.467	0.8581	9.26	Q	.	.	.	.
1.483	0.8709	9.27	Q	.	.	.	.
1.500	0.8837	9.27	Q	.	.	.	.
1.517	0.8965	9.28	Q	.	.	.	.
1.533	0.9092	9.28	Q	.	.	.	.
1.550	0.9220	9.29	Q	.	.	.	.
1.567	0.9348	9.29	Q	.	.	.	.
1.583	0.9476	9.29	Q	.	.	.	.
1.600	0.9604	9.30	Q	.	.	.	.
1.617	0.9733	9.30	Q	.	.	.	.
1.633	0.9861	9.31	Q	.	.	.	.
1.650	0.9989	9.31	Q	.	.	.	.
1.667	1.0117	9.32	Q	.	.	.	.
1.683	1.0246	9.32	Q	.	.	.	.
1.700	1.0374	9.33	Q	.	.	.	.
1.717	1.0503	9.33	Q	.	.	.	.

1.733	1.0631	9.34	Q	.	.	.	.
1.750	1.0760	9.35	Q	.	.	.	.
1.767	1.0889	9.35	Q	.	.	.	.
1.783	1.1018	9.36	Q	.	.	.	.
1.800	1.1147	9.37	Q	.	.	.	.
1.817	1.1276	9.38	Q	.	.	.	.
1.833	1.1406	9.39	Q	.	.	.	.
1.850	1.1535	9.40	Q	.	.	.	.
1.867	1.1665	9.41	Q	.	.	.	.
1.883	1.1794	9.42	Q	.	.	.	.
1.900	1.1924	9.43	Q	.	.	.	.
1.917	1.2054	9.44	Q	.	.	.	.
1.933	1.2184	9.45	Q	.	.	.	.
1.950	1.2315	9.46	Q	.	.	.	.
1.967	1.2445	9.46	QV	.	.	.	.
1.983	1.2575	9.47	QV	.	.	.	.
2.000	1.2706	9.48	QV	.	.	.	.
2.017	1.2837	9.48	QV	.	.	.	.
2.033	1.2967	9.49	QV	.	.	.	.
2.050	1.3098	9.49	QV	.	.	.	.
2.067	1.3229	9.50	QV	.	.	.	.
2.083	1.3360	9.50	QV	.	.	.	.
2.100	1.3491	9.51	QV	.	.	.	.
2.117	1.3622	9.51	QV	.	.	.	.
2.133	1.3753	9.52	QV	.	.	.	.
2.150	1.3884	9.52	QV	.	.	.	.
2.167	1.4015	9.53	QV	.	.	.	.
2.183	1.4147	9.53	QV	.	.	.	.
2.200	1.4278	9.54	QV	.	.	.	.
2.217	1.4409	9.54	QV	.	.	.	.
2.233	1.4541	9.55	QV	.	.	.	.
2.250	1.4672	9.55	QV	.	.	.	.
2.267	1.4804	9.56	QV	.	.	.	.
2.283	1.4936	9.57	QV	.	.	.	.
2.300	1.5068	9.58	QV	.	.	.	.
2.317	1.5200	9.59	QV	.	.	.	.
2.333	1.5332	9.60	QV	.	.	.	.
2.350	1.5465	9.61	QV	.	.	.	.
2.367	1.5597	9.62	QV	.	.	.	.
2.383	1.5730	9.63	QV	.	.	.	.
2.400	1.5863	9.64	QV	.	.	.	.
2.417	1.5996	9.65	QV	.	.	.	.
2.433	1.6129	9.66	QV	.	.	.	.
2.450	1.6262	9.67	QV	.	.	.	.
2.467	1.6395	9.68	QV	.	.	.	.
2.483	1.6529	9.69	QV	.	.	.	.
2.500	1.6662	9.70	QV	.	.	.	.
2.517	1.6796	9.70	QV	.	.	.	.
2.533	1.6930	9.71	QV	.	.	.	.
2.550	1.7063	9.71	QV	.	.	.	.
2.567	1.7197	9.72	QV	.	.	.	.
2.583	1.7331	9.72	QV	.	.	.	.
2.600	1.7465	9.73	QV	.	.	.	.
2.617	1.7599	9.73	QV	.	.	.	.
2.633	1.7733	9.74	QV	.	.	.	.
2.650	1.7867	9.74	QV	.	.	.	.
2.667	1.8002	9.75	QV	.	.	.	.
2.683	1.8136	9.75	QV	.	.	.	.

2.700	1.8270	9.76	QV	.	.	.	.
2.717	1.8405	9.76	QV	.	.	.	.
2.733	1.8539	9.77	QV	.	.	.	.
2.750	1.8674	9.77	QV	.	.	.	.
2.767	1.8809	9.78	QV	.	.	.	.
2.783	1.8944	9.79	QV	.	.	.	.
2.800	1.9079	9.80	QV	.	.	.	.
2.817	1.9214	9.81	QV	.	.	.	.
2.833	1.9349	9.82	QV	.	.	.	.
2.850	1.9485	9.83	QV	.	.	.	.
2.867	1.9620	9.85	QV	.	.	.	.
2.883	1.9756	9.86	QV	.	.	.	.
2.900	1.9892	9.87	QV	.	.	.	.
2.917	2.0028	9.88	QV	.	.	.	.
2.933	2.0164	9.89	QV	.	.	.	.
2.950	2.0300	9.90	QV	.	.	.	.
2.967	2.0437	9.91	QV	.	.	.	.
2.983	2.0574	9.92	QV	.	.	.	.
3.000	2.0710	9.93	QV	.	.	.	.
3.017	2.0847	9.93	QV	.	.	.	.
3.033	2.0984	9.94	QV	.	.	.	.
3.050	2.1121	9.95	QV	.	.	.	.
3.067	2.1258	9.95	QV	.	.	.	.
3.083	2.1395	9.96	QV	.	.	.	.
3.100	2.1532	9.96	QV	.	.	.	.
3.117	2.1670	9.97	QV	.	.	.	.
3.133	2.1807	9.97	QV	.	.	.	.
3.150	2.1944	9.98	QV	.	.	.	.
3.167	2.2082	9.98	QV	.	.	.	.
3.183	2.2220	9.99	QV	.	.	.	.
3.200	2.2357	9.99	QV	.	.	.	.
3.217	2.2495	10.00	QV	.	.	.	.
3.233	2.2633	10.00	QV	.	.	.	.
3.250	2.2771	10.01	QV	.	.	.	.
3.267	2.2909	10.02	QV	.	.	.	.
3.283	2.3047	10.03	QV	.	.	.	.
3.300	2.3185	10.04	QV	.	.	.	.
3.317	2.3323	10.05	QV	.	.	.	.
3.333	2.3462	10.06	QV	.	.	.	.
3.350	2.3601	10.07	QV	.	.	.	.
3.367	2.3740	10.08	QV	.	.	.	.
3.383	2.3879	10.09	QV	.	.	.	.
3.400	2.4018	10.11	QV	.	.	.	.
3.417	2.4157	10.12	QV	.	.	.	.
3.433	2.4297	10.13	QV	.	.	.	.
3.450	2.4436	10.14	QV	.	.	.	.
3.467	2.4576	10.15	QV	.	.	.	.
3.483	2.4716	10.16	QV	.	.	.	.
3.500	2.4856	10.17	QV	.	.	.	.
3.517	2.4996	10.18	Q V	.	.	.	.
3.533	2.5137	10.19	Q V	.	.	.	.
3.550	2.5277	10.19	Q V	.	.	.	.
3.567	2.5418	10.20	Q V	.	.	.	.
3.583	2.5558	10.20	Q V	.	.	.	.
3.600	2.5699	10.21	Q V	.	.	.	.
3.617	2.5840	10.22	Q V	.	.	.	.
3.633	2.5980	10.22	Q V	.	.	.	.
3.650	2.6121	10.23	Q V	.	.	.	.

3.667	2.6262	10.23	Q	V	.	.	.	.
3.683	2.6403	10.24	Q	V	.	.	.	.
3.700	2.6544	10.24	Q	V	.	.	.	.
3.717	2.6685	10.25	Q	V	.	.	.	.
3.733	2.6827	10.26	Q	V	.	.	.	.
3.750	2.6968	10.26	Q	V	.	.	.	.
3.767	2.7109	10.27	Q	V	.	.	.	.
3.783	2.7251	10.28	Q	V	.	.	.	.
3.800	2.7393	10.29	Q	V	.	.	.	.
3.817	2.7535	10.30	Q	V	.	.	.	.
3.833	2.7677	10.31	Q	V	.	.	.	.
3.850	2.7819	10.32	Q	V	.	.	.	.
3.867	2.7961	10.34	Q	V	.	.	.	.
3.883	2.8104	10.35	Q	V	.	.	.	.
3.900	2.8247	10.36	Q	V	.	.	.	.
3.917	2.8389	10.37	Q	V	.	.	.	.
3.933	2.8532	10.38	Q	V	.	.	.	.
3.950	2.8676	10.40	Q	V	.	.	.	.
3.967	2.8819	10.41	Q	V	.	.	.	.
3.983	2.8962	10.42	Q	V	.	.	.	.
4.000	2.9106	10.43	Q	V	.	.	.	.
4.017	2.9250	10.44	Q	V	.	.	.	.
4.033	2.9394	10.45	Q	V	.	.	.	.
4.050	2.9538	10.46	Q	V	.	.	.	.
4.067	2.9682	10.46	Q	V	.	.	.	.
4.083	2.9826	10.47	Q	V	.	.	.	.
4.100	2.9971	10.48	Q	V	.	.	.	.
4.117	3.0115	10.48	Q	V	.	.	.	.
4.133	3.0259	10.49	Q	V	.	.	.	.
4.150	3.0404	10.49	Q	V	.	.	.	.
4.167	3.0549	10.50	Q	V	.	.	.	.
4.183	3.0693	10.51	Q	V	.	.	.	.
4.200	3.0838	10.51	Q	V	.	.	.	.
4.217	3.0983	10.52	Q	V	.	.	.	.
4.233	3.1128	10.52	Q	V	.	.	.	.
4.250	3.1273	10.53	Q	V	.	.	.	.
4.267	3.1418	10.54	Q	V	.	.	.	.
4.283	3.1563	10.54	Q	V	.	.	.	.
4.300	3.1709	10.56	Q	V	.	.	.	.
4.317	3.1854	10.57	Q	V	.	.	.	.
4.333	3.2000	10.58	Q	V	.	.	.	.
4.350	3.2146	10.59	Q	V	.	.	.	.
4.367	3.2292	10.61	Q	V	.	.	.	.
4.383	3.2438	10.62	Q	V	.	.	.	.
4.400	3.2585	10.63	Q	V	.	.	.	.
4.417	3.2731	10.65	Q	V	.	.	.	.
4.433	3.2878	10.66	Q	V	.	.	.	.
4.450	3.3025	10.67	Q	V	.	.	.	.
4.467	3.3172	10.68	Q	V	.	.	.	.
4.483	3.3320	10.70	Q	V	.	.	.	.
4.500	3.3467	10.71	Q	V	.	.	.	.
4.517	3.3615	10.72	Q	V	.	.	.	.
4.533	3.3763	10.73	Q	V	.	.	.	.
4.550	3.3911	10.74	Q	V	.	.	.	.
4.567	3.4059	10.75	Q	V	.	.	.	.
4.583	3.4207	10.75	Q	V	.	.	.	.
4.600	3.4355	10.76	Q	V	.	.	.	.
4.617	3.4503	10.77	Q	V	.	.	.	.

4.633	3.4652	10.77	Q	V	.	.	.	.
4.650	3.4800	10.78	Q	V	.	.	.	.
4.667	3.4949	10.79	Q	V	.	.	.	.
4.683	3.5097	10.79	Q	V	.	.	.	.
4.700	3.5246	10.80	Q	V	.	.	.	.
4.717	3.5395	10.81	Q	V	.	.	.	.
4.733	3.5544	10.81	Q	V	.	.	.	.
4.750	3.5693	10.82	Q	V	.	.	.	.
4.767	3.5842	10.82	Q	V	.	.	.	.
4.783	3.5991	10.83	Q	V	.	.	.	.
4.800	3.6141	10.84	Q	V	.	.	.	.
4.817	3.6290	10.86	Q	V	.	.	.	.
4.833	3.6440	10.87	Q	V	.	.	.	.
4.850	3.6590	10.88	Q	V	.	.	.	.
4.867	3.6740	10.90	Q	V	.	.	.	.
4.883	3.6890	10.91	Q	V	.	.	.	.
4.900	3.7041	10.92	Q	V	.	.	.	.
4.917	3.7191	10.94	Q	V	.	.	.	.
4.933	3.7342	10.95	Q	V	.	.	.	.
4.950	3.7493	10.97	Q	V	.	.	.	.
4.967	3.7644	10.98	Q	V	.	.	.	.
4.983	3.7796	10.99	Q	V	.	.	.	.
5.000	3.7947	11.01	Q	V	.	.	.	.
5.017	3.8099	11.02	Q	V	.	.	.	.
5.033	3.8251	11.03	Q	V	.	.	.	.
5.050	3.8403	11.04	Q	V	.	.	.	.
5.067	3.8555	11.05	Q	V	.	.	.	.
5.083	3.8708	11.06	.Q	V	.	.	.	.
5.100	3.8860	11.06	.Q	V	.	.	.	.
5.117	3.9013	11.07	.Q	V	.	.	.	.
5.133	3.9165	11.08	.Q	V	.	.	.	.
5.150	3.9318	11.09	.Q	V	.	.	.	.
5.167	3.9471	11.09	.Q	V	.	.	.	.
5.183	3.9624	11.10	.Q	V	.	.	.	.
5.200	3.9777	11.11	.Q	V	.	.	.	.
5.217	3.9930	11.11	.Q	V	.	.	.	.
5.233	4.0083	11.12	.Q	V	.	.	.	.
5.250	4.0236	11.13	.Q	V	.	.	.	.
5.267	4.0390	11.13	.Q	V	.	.	.	.
5.283	4.0543	11.14	.Q	V	.	.	.	.
5.300	4.0697	11.15	.Q	V	.	.	.	.
5.317	4.0850	11.16	.Q	V	.	.	.	.
5.333	4.1004	11.18	.Q	V	.	.	.	.
5.350	4.1159	11.19	.Q	V	.	.	.	.
5.367	4.1313	11.21	.Q	V	.	.	.	.
5.383	4.1468	11.22	.Q	V	.	.	.	.
5.400	4.1622	11.24	.Q	V	.	.	.	.
5.417	4.1777	11.25	.Q	V	.	.	.	.
5.433	4.1932	11.27	.Q	V	.	.	.	.
5.450	4.2088	11.28	.Q	V	.	.	.	.
5.467	4.2243	11.30	.Q	V	.	.	.	.
5.483	4.2399	11.31	.Q	V	.	.	.	.
5.500	4.2555	11.33	.Q	V	.	.	.	.
5.517	4.2711	11.34	.Q	V	.	.	.	.
5.533	4.2868	11.35	.Q	V	.	.	.	.
5.550	4.3024	11.37	.Q	V	.	.	.	.
5.567	4.3181	11.38	.Q	V	.	.	.	.
5.583	4.3338	11.39	.Q	V	.	.	.	.

5.600	4.3495	11.39	.Q V	.	.	.	.
5.617	4.3652	11.40	.Q V	.	.	.	.
5.633	4.3809	11.41	.Q V	.	.	.	.
5.650	4.3966	11.42	.Q V	.	.	.	.
5.667	4.4124	11.42	.Q V	.	.	.	.
5.683	4.4281	11.43	.Q V	.	.	.	.
5.700	4.4439	11.44	.Q V	.	.	.	.
5.717	4.4596	11.45	.Q V	.	.	.	.
5.733	4.4754	11.45	.Q V	.	.	.	.
5.750	4.4912	11.46	.Q V	.	.	.	.
5.767	4.5070	11.47	.Q V	.	.	.	.
5.783	4.5228	11.48	.Q V	.	.	.	.
5.800	4.5386	11.48	.Q V	.	.	.	.
5.817	4.5545	11.50	.Q V	.	.	.	.
5.833	4.5703	11.51	.Q V	.	.	.	.
5.850	4.5862	11.53	.Q V	.	.	.	.
5.867	4.6021	11.54	.Q V	.	.	.	.
5.883	4.6180	11.56	.Q V	.	.	.	.
5.900	4.6340	11.58	.Q V	.	.	.	.
5.917	4.6499	11.59	.Q V	.	.	.	.
5.933	4.6659	11.61	.Q V	.	.	.	.
5.950	4.6819	11.62	.Q V	.	.	.	.
5.967	4.6980	11.64	.Q V	.	.	.	.
5.983	4.7140	11.65	.Q V	.	.	.	.
6.000	4.7301	11.67	.Q V	.	.	.	.
6.017	4.7462	11.69	.Q V	.	.	.	.
6.033	4.7623	11.70	.Q V	.	.	.	.
6.050	4.7784	11.72	.Q V	.	.	.	.
6.067	4.7946	11.73	.Q V	.	.	.	.
6.083	4.8108	11.74	.Q V	.	.	.	.
6.100	4.8270	11.75	.Q V	.	.	.	.
6.117	4.8431	11.76	.Q V	.	.	.	.
6.133	4.8594	11.76	.Q V	.	.	.	.
6.150	4.8756	11.77	.Q V	.	.	.	.
6.167	4.8918	11.78	.Q V	.	.	.	.
6.183	4.9080	11.79	.Q V	.	.	.	.
6.200	4.9243	11.80	.Q V	.	.	.	.
6.217	4.9405	11.81	.Q V	.	.	.	.
6.233	4.9568	11.81	.Q V	.	.	.	.
6.250	4.9731	11.82	.Q V	.	.	.	.
6.267	4.9894	11.83	.Q V	.	.	.	.
6.283	5.0057	11.84	.Q V	.	.	.	.
6.300	5.0220	11.85	.Q V	.	.	.	.
6.317	5.0384	11.86	.Q V	.	.	.	.
6.333	5.0547	11.87	.Q V	.	.	.	.
6.350	5.0711	11.89	.Q V	.	.	.	.
6.367	5.0875	11.91	.Q V	.	.	.	.
6.383	5.1039	11.92	.Q V	.	.	.	.
6.400	5.1204	11.94	.Q V	.	.	.	.
6.417	5.1368	11.96	.Q V	.	.	.	.
6.433	5.1533	11.97	.Q V	.	.	.	.
6.450	5.1698	11.99	.Q V	.	.	.	.
6.467	5.1864	12.01	.Q V	.	.	.	.
6.483	5.2029	12.03	.Q V	.	.	.	.
6.500	5.2195	12.04	.Q V	.	.	.	.
6.517	5.2361	12.06	.Q V	.	.	.	.
6.533	5.2528	12.08	.Q V	.	.	.	.
6.550	5.2694	12.10	.Q V	.	.	.	.

6.567	5.2861	12.11	.Q V	.	.	.	.
6.583	5.3028	12.12	.Q V	.	.	.	.
6.600	5.3195	12.13	.Q V	.	.	.	.
6.617	5.3363	12.14	.Q V	.	.	.	.
6.633	5.3530	12.15	.Q V	.	.	.	.
6.650	5.3698	12.16	.Q V	.	.	.	.
6.667	5.3865	12.17	.Q V	.	.	.	.
6.683	5.4033	12.18	.Q V	.	.	.	.
6.700	5.4201	12.19	.Q V	.	.	.	.
6.717	5.4369	12.20	.Q V	.	.	.	.
6.733	5.4537	12.21	.Q V	.	.	.	.
6.750	5.4705	12.21	.Q V	.	.	.	.
6.767	5.4873	12.22	.Q V	.	.	.	.
6.783	5.5042	12.23	.Q V	.	.	.	.
6.800	5.5211	12.24	.Q V	.	.	.	.
6.817	5.5379	12.25	.Q V	.	.	.	.
6.833	5.5548	12.26	.Q V	.	.	.	.
6.850	5.5717	12.28	.Q V	.	.	.	.
6.867	5.5887	12.30	.Q V	.	.	.	.
6.883	5.6056	12.32	.Q V	.	.	.	.
6.900	5.6226	12.34	.Q V	.	.	.	.
6.917	5.6397	12.36	.Q V	.	.	.	.
6.933	5.6567	12.37	.Q V	.	.	.	.
6.950	5.6738	12.39	.Q V	.	.	.	.
6.967	5.6909	12.41	.Q V	.	.	.	.
6.983	5.7080	12.43	.Q V	.	.	.	.
7.000	5.7251	12.45	.Q V	.	.	.	.
7.017	5.7423	12.47	.Q V	.	.	.	.
7.033	5.7595	12.49	.Q V	.	.	.	.
7.050	5.7767	12.51	.Q V	.	.	.	.
7.067	5.7940	12.52	.Q V	.	.	.	.
7.083	5.8113	12.54	.Q V	.	.	.	.
7.100	5.8286	12.55	.Q V	.	.	.	.
7.117	5.8459	12.56	.Q V	.	.	.	.
7.133	5.8632	12.57	.Q V	.	.	.	.
7.150	5.8805	12.58	.Q V	.	.	.	.
7.167	5.8978	12.59	.Q V	.	.	.	.
7.183	5.9152	12.60	.Q V	.	.	.	.
7.200	5.9326	12.61	.Q V	.	.	.	.
7.217	5.9500	12.62	.Q V	.	.	.	.
7.233	5.9674	12.63	.Q V	.	.	.	.
7.250	5.9848	12.64	.Q V	.	.	.	.
7.267	6.0022	12.65	.Q V	.	.	.	.
7.283	6.0196	12.66	.Q V	.	.	.	.
7.300	6.0371	12.67	.Q V	.	.	.	.
7.317	6.0546	12.68	.Q V	.	.	.	.
7.333	6.0720	12.69	.Q V	.	.	.	.
7.350	6.0895	12.71	.Q V	.	.	.	.
7.367	6.1071	12.73	.Q V	.	.	.	.
7.383	6.1246	12.75	.Q V	.	.	.	.
7.400	6.1422	12.77	.Q V	.	.	.	.
7.417	6.1598	12.79	.Q V	.	.	.	.
7.433	6.1775	12.81	.Q V	.	.	.	.
7.450	6.1952	12.83	.Q V	.	.	.	.
7.467	6.2129	12.85	.Q V	.	.	.	.
7.483	6.2306	12.87	.Q V	.	.	.	.
7.500	6.2484	12.89	.Q V	.	.	.	.
7.517	6.2661	12.91	.Q V	.	.	.	.

7.533	6.2840	12.93	.Q	V	.	.	.	.
7.550	6.3018	12.95	.Q	V	.	.	.	.
7.567	6.3197	12.98	.Q	V	.	.	.	.
7.583	6.3376	13.00	.Q	V	.	.	.	.
7.600	6.3555	13.01	.Q	V	.	.	.	.
7.617	6.3734	13.02	.Q	V	.	.	.	.
7.633	6.3914	13.03	.Q	V	.	.	.	.
7.650	6.4094	13.04	.Q	V	.	.	.	.
7.667	6.4273	13.06	.Q	V	.	.	.	.
7.683	6.4453	13.07	.Q	V	.	.	.	.
7.700	6.4633	13.08	.Q	V	.	.	.	.
7.717	6.4814	13.09	.Q	V	.	.	.	.
7.733	6.4994	13.10	.Q	V	.	.	.	.
7.750	6.5175	13.11	.Q	V	.	.	.	.
7.767	6.5355	13.12	.Q	V	.	.	.	.
7.783	6.5536	13.13	.Q	V	.	.	.	.
7.800	6.5717	13.14	.Q	V	.	.	.	.
7.817	6.5898	13.15	.Q	V	.	.	.	.
7.833	6.6080	13.16	.Q	V	.	.	.	.
7.850	6.6261	13.18	.Q	V	.	.	.	.
7.867	6.6443	13.20	.Q	V	.	.	.	.
7.883	6.6625	13.22	.Q	V	.	.	.	.
7.900	6.6808	13.24	.Q	V	.	.	.	.
7.917	6.6990	13.27	.Q	V	.	.	.	.
7.933	6.7173	13.29	.Q	V	.	.	.	.
7.950	6.7357	13.31	.Q	V	.	.	.	.
7.967	6.7540	13.33	.Q	V	.	.	.	.
7.983	6.7724	13.36	.Q	V	.	.	.	.
8.000	6.7909	13.38	.Q	V	.	.	.	.
8.017	6.8093	13.40	.Q	V	.	.	.	.
8.033	6.8278	13.42	.Q	V	.	.	.	.
8.050	6.8463	13.45	.Q	V	.	.	.	.
8.067	6.8649	13.47	.Q	V	.	.	.	.
8.083	6.8835	13.49	.Q	V	.	.	.	.
8.100	6.9021	13.51	.Q	V	.	.	.	.
8.117	6.9207	13.53	.Q	V	.	.	.	.
8.133	6.9394	13.54	.Q	V	.	.	.	.
8.150	6.9580	13.55	.Q	V	.	.	.	.
8.167	6.9767	13.57	.Q	V	.	.	.	.
8.183	6.9954	13.58	.Q	V	.	.	.	.
8.200	7.0141	13.59	.Q	V	.	.	.	.
8.217	7.0329	13.60	.Q	V	.	.	.	.
8.233	7.0516	13.61	.Q	V	.	.	.	.
8.250	7.0704	13.62	.Q	V	.	.	.	.
8.267	7.0892	13.64	.Q	V	.	.	.	.
8.283	7.1080	13.65	.Q	V	.	.	.	.
8.300	7.1268	13.66	.Q	V	.	.	.	.
8.317	7.1456	13.67	.Q	V	.	.	.	.
8.333	7.1645	13.68	.Q	V	.	.	.	.
8.350	7.1833	13.70	.Q	V	.	.	.	.
8.367	7.2022	13.72	.Q	V	.	.	.	.
8.383	7.2212	13.74	.Q	V	.	.	.	.
8.400	7.2401	13.77	.Q	V	.	.	.	.
8.417	7.2591	13.79	.Q	V	.	.	.	.
8.433	7.2782	13.82	.Q	V	.	.	.	.
8.450	7.2972	13.84	.Q	V	.	.	.	.
8.467	7.3163	13.87	.Q	V	.	.	.	.
8.483	7.3354	13.89	.Q	V	.	.	.	.

8.500	7.3546	13.92	.Q	V	.	.	.	.
8.517	7.3738	13.94	.Q	V	.	.	.	.
8.533	7.3931	13.97	.Q	V	.	.	.	.
8.550	7.4123	13.99	.Q	V	.	.	.	.
8.567	7.4316	14.02	.Q	V	.	.	.	.
8.583	7.4510	14.04	.Q	V	.	.	.	.
8.600	7.4704	14.07	.Q	V	.	.	.	.
8.617	7.4898	14.09	.Q	V	.	.	.	.
8.633	7.5092	14.10	.Q	V	.	.	.	.
8.650	7.5286	14.12	.Q	V	.	.	.	.
8.667	7.5481	14.13	.Q	V	.	.	.	.
8.683	7.5676	14.14	.Q	V	.	.	.	.
8.700	7.5871	14.16	.Q	V	.	.	.	.
8.717	7.6066	14.17	.Q	V	.	.	.	.
8.733	7.6261	14.18	.Q	V	.	.	.	.
8.750	7.6457	14.20	.Q	V	.	.	.	.
8.767	7.6653	14.21	.Q	V	.	.	.	.
8.783	7.6849	14.22	.Q	V	.	.	.	.
8.800	7.7045	14.24	.Q	V	.	.	.	.
8.817	7.7241	14.25	.Q	V	.	.	.	.
8.833	7.7437	14.26	.Q	V	.	.	.	.
8.850	7.7634	14.28	.Q	V	.	.	.	.
8.867	7.7831	14.29	.Q	V	.	.	.	.
8.883	7.8028	14.32	.Q	V	.	.	.	.
8.900	7.8226	14.34	.Q	V	.	.	.	.
8.917	7.8424	14.37	.Q	V	.	.	.	.
8.933	7.8622	14.40	.Q	V	.	.	.	.
8.950	7.8821	14.43	.Q	V	.	.	.	.
8.967	7.9020	14.46	.Q	V	.	.	.	.
8.983	7.9219	14.49	.Q	V	.	.	.	.
9.000	7.9419	14.51	.Q	V	.	.	.	.
9.017	7.9620	14.54	.Q	V	.	.	.	.
9.033	7.9820	14.57	.Q	V	.	.	.	.
9.050	8.0021	14.60	.Q	V	.	.	.	.
9.067	8.0223	14.63	.Q	V	.	.	.	.
9.083	8.0425	14.65	.Q	V	.	.	.	.
9.100	8.0627	14.68	.Q	V	.	.	.	.
9.117	8.0829	14.71	.Q	V	.	.	.	.
9.133	8.1032	14.73	.Q	V	.	.	.	.
9.150	8.1235	14.75	.Q	V	.	.	.	.
9.167	8.1439	14.76	.Q	V	.	.	.	.
9.183	8.1642	14.77	.Q	V	.	.	.	.
9.200	8.1846	14.79	.Q	V	.	.	.	.
9.217	8.2050	14.80	.Q	V	.	.	.	.
9.233	8.2254	14.82	.Q	V	.	.	.	.
9.250	8.2458	14.83	.Q	V	.	.	.	.
9.267	8.2663	14.85	.Q	V	.	.	.	.
9.283	8.2868	14.86	.Q	V	.	.	.	.
9.300	8.3073	14.88	.Q	V	.	.	.	.
9.317	8.3278	14.89	.Q	V	.	.	.	.
9.333	8.3483	14.91	.Q	V	.	.	.	.
9.350	8.3689	14.92	.Q	V	.	.	.	.
9.367	8.3894	14.94	.Q	V	.	.	.	.
9.383	8.4101	14.96	.Q	V	.	.	.	.
9.400	8.4307	14.99	.Q	V	.	.	.	.
9.417	8.4514	15.02	.Q	V	.	.	.	.
9.433	8.4721	15.05	.Q	V	.	.	.	.
9.450	8.4929	15.09	.Q	V	.	.	.	.

9.467	8.5137	15.12	.Q	V	.	.	.	.
9.483	8.5346	15.15	.Q	V	.	.	.	.
9.500	8.5555	15.18	.Q	V	.	.	.	.
9.517	8.5765	15.21	.Q	V	.	.	.	.
9.533	8.5975	15.24	.Q	V	.	.	.	.
9.550	8.6185	15.28	.Q	V	.	.	.	.
9.567	8.6396	15.31	.Q	V	.	.	.	.
9.583	8.6607	15.34	.Q	V	.	.	.	.
9.600	8.6819	15.37	.Q	V	.	.	.	.
9.617	8.7031	15.40	.Q	V	.	.	.	.
9.633	8.7244	15.43	.Q	V	.	.	.	.
9.650	8.7456	15.45	.Q	V	.	.	.	.
9.667	8.7669	15.47	.Q	V	.	.	.	.
9.683	8.7883	15.49	.Q	V	.	.	.	.
9.700	8.8096	15.50	.Q	V	.	.	.	.
9.717	8.8310	15.52	.Q	V	.	.	.	.
9.733	8.8524	15.54	.Q	V	.	.	.	.
9.750	8.8738	15.55	.Q	V	.	.	.	.
9.767	8.8953	15.57	.Q	V	.	.	.	.
9.783	8.9167	15.59	.Q	V	.	.	.	.
9.800	8.9382	15.60	.Q	V	.	.	.	.
9.817	8.9598	15.62	.Q	V	.	.	.	.
9.833	8.9813	15.64	.Q	V	.	.	.	.
9.850	9.0029	15.65	.Q	V	.	.	.	.
9.867	9.0244	15.67	.Q	V	.	.	.	.
9.883	9.0460	15.69	.Q	V	.	.	.	.
9.900	9.0677	15.72	.Q	V	.	.	.	.
9.917	9.0894	15.75	.Q	V	.	.	.	.
9.933	9.1111	15.79	.Q	V	.	.	.	.
9.950	9.1329	15.83	.Q	V	.	.	.	.
9.967	9.1548	15.86	.Q	V	.	.	.	.
9.983	9.1767	15.90	.Q	V	.	.	.	.
10.000	9.1986	15.93	.Q	V	.	.	.	.
10.017	9.2206	15.97	.Q	V	.	.	.	.
10.033	9.2427	16.01	.Q	V	.	.	.	.
10.050	9.2648	16.04	.Q	V	.	.	.	.
10.067	9.2869	16.08	.Q	V	.	.	.	.
10.083	9.3091	16.11	.Q	V	.	.	.	.
10.100	9.3314	16.15	.Q	V	.	.	.	.
10.117	9.3537	16.19	.Q	V	.	.	.	.
10.133	9.3760	16.22	.Q	V	.	.	.	.
10.150	9.3984	16.25	.Q	V	.	.	.	.
10.167	9.4208	16.27	.Q	V	.	.	.	.
10.183	9.4432	16.29	.Q	V	.	.	.	.
10.200	9.4657	16.31	.Q	V	.	.	.	.
10.217	9.4882	16.33	.Q	V	.	.	.	.
10.233	9.5107	16.35	.Q	V	.	.	.	.
10.250	9.5333	16.37	.Q	V	.	.	.	.
10.267	9.5558	16.39	.Q	V	.	.	.	.
10.283	9.5784	16.41	.Q	V	.	.	.	.
10.300	9.6011	16.43	.Q	V	.	.	.	.
10.317	9.6237	16.45	.Q	V	.	.	.	.
10.333	9.6464	16.46	.Q	V	.	.	.	.
10.350	9.6691	16.48	.Q	V	.	.	.	.
10.367	9.6918	16.50	.Q	V	.	.	.	.
10.383	9.7146	16.52	.Q	V	.	.	.	.
10.400	9.7374	16.55	.Q	V	.	.	.	.
10.417	9.7602	16.59	.Q	V	.	.	.	.

10.433	9.7831	16.63	.Q	V	.	.	.	.
10.450	9.8061	16.67	.Q	V	.	.	.	.
10.467	9.8291	16.71	.Q	V	.	.	.	.
10.483	9.8522	16.75	.Q	V	.	.	.	.
10.500	9.8753	16.79	.Q	V	.	.	.	.
10.517	9.8985	16.83	.Q	V	.	.	.	.
10.533	9.9217	16.88	.Q	V	.	.	.	.
10.550	9.9450	16.92	.Q	V	.	.	.	.
10.567	9.9684	16.96	.Q	V	.	.	.	.
10.583	9.9918	17.00	.Q	V	.	.	.	.
10.600	10.0153	17.04	.Q	V	.	.	.	.
10.617	10.0388	17.08	.Q	V	.	.	.	.
10.633	10.0624	17.12	.Q	V	.	.	.	.
10.650	10.0860	17.17	.Q	V	.	.	.	.
10.667	10.1097	17.19	.Q	V	.	.	.	.
10.683	10.1334	17.21	.Q	V	.	.	.	.
10.700	10.1572	17.24	.Q	V	.	.	.	.
10.717	10.1810	17.26	.Q	V	.	.	.	.
10.733	10.2048	17.28	.Q	V	.	.	.	.
10.750	10.2286	17.30	.Q	V	.	.	.	.
10.767	10.2525	17.33	.Q	V	.	.	.	.
10.783	10.2764	17.35	.Q	V	.	.	.	.
10.800	10.3003	17.37	.Q	V	.	.	.	.
10.817	10.3242	17.39	.Q	V	.	.	.	.
10.833	10.3482	17.42	.Q	V	.	.	.	.
10.850	10.3722	17.44	.Q	V	.	.	.	.
10.867	10.3963	17.46	.Q	V	.	.	.	.
10.883	10.4204	17.48	.Q	V	.	.	.	.
10.900	10.4445	17.50	.Q	V	.	.	.	.
10.917	10.4686	17.54	.Q	V	.	.	.	.
10.933	10.4929	17.59	.Q	V	.	.	.	.
10.950	10.5172	17.64	.Q	V	.	.	.	.
10.967	10.5415	17.68	.Q	V	.	.	.	.
10.983	10.5660	17.73	.Q	V	.	.	.	.
11.000	10.5904	17.78	.Q	V	.	.	.	.
11.017	10.6150	17.83	.Q	V	.	.	.	.
11.033	10.6396	17.88	.Q	V	.	.	.	.
11.050	10.6643	17.93	.Q	V	.	.	.	.
11.067	10.6891	17.97	.Q	V	.	.	.	.
11.083	10.7139	18.02	.Q	V	.	.	.	.
11.100	10.7388	18.07	.Q	V	.	.	.	.
11.117	10.7638	18.12	.Q	V	.	.	.	.
11.133	10.7888	18.17	.Q	V	.	.	.	.
11.150	10.8139	18.22	.Q	V	.	.	.	.
11.167	10.8390	18.26	.Q	V	.	.	.	.
11.183	10.8642	18.29	.Q	V	.	.	.	.
11.200	10.8894	18.31	.Q	V	.	.	.	.
11.217	10.9147	18.34	.Q	V	.	.	.	.
11.233	10.9400	18.37	.Q	V	.	.	.	.
11.250	10.9653	18.39	.Q	V	.	.	.	.
11.267	10.9907	18.42	.Q	V	.	.	.	.
11.283	11.0161	18.44	.Q	V	.	.	.	.
11.300	11.0415	18.47	.Q	V	.	.	.	.
11.317	11.0670	18.50	.Q	V	.	.	.	.
11.333	11.0925	18.52	.Q	V	.	.	.	.
11.350	11.1181	18.55	.Q	V	.	.	.	.
11.367	11.1437	18.58	.Q	V	.	.	.	.
11.383	11.1693	18.60	.Q	V	.	.	.	.

11.400	11.1950	18.63	.Q	V .	.	.	.
11.417	11.2207	18.66	.Q	V.	.	.	.
11.433	11.2464	18.71	.Q	V.	.	.	.
11.450	11.2723	18.77	.Q	V.	.	.	.
11.467	11.2982	18.82	.Q	V.	.	.	.
11.483	11.3242	18.88	.Q	V.	.	.	.
11.500	11.3503	18.94	.Q	V.	.	.	.
11.517	11.3764	18.99	.Q	V.	.	.	.
11.533	11.4027	19.05	.Q	V.	.	.	.
11.550	11.4290	19.11	.Q	V.	.	.	.
11.567	11.4554	19.17	.Q	V.	.	.	.
11.583	11.4819	19.22	.Q	V.	.	.	.
11.600	11.5084	19.28	.Q	V.	.	.	.
11.617	11.5351	19.34	.Q	V.	.	.	.
11.633	11.5618	19.40	.Q	V.	.	.	.
11.650	11.5886	19.45	.Q	V.	.	.	.
11.667	11.6155	19.51	.Q	V.	.	.	.
11.683	11.6424	19.55	.Q	V.	.	.	.
11.700	11.6694	19.58	.Q	V.	.	.	.
11.717	11.6964	19.61	.Q	V.	.	.	.
11.733	11.7234	19.65	.Q	V.	.	.	.
11.750	11.7506	19.68	.Q	V.	.	.	.
11.767	11.7777	19.71	.Q	V.	.	.	.
11.783	11.8049	19.74	.Q	V.	.	.	.
11.800	11.8321	19.77	.Q	V.	.	.	.
11.817	11.8594	19.80	.Q	V.	.	.	.
11.833	11.8867	19.83	.Q	V.	.	.	.
11.850	11.9141	19.86	.Q	V.	.	.	.
11.867	11.9415	19.90	.Q	V.	.	.	.
11.883	11.9689	19.93	.Q	V.	.	.	.
11.900	11.9964	19.96	.Q	V.	.	.	.
11.917	12.0240	19.99	.Q	V.	.	.	.
11.933	12.0516	20.09	.Q	V.	.	.	.
11.950	12.0797	20.35	.Q	V.	.	.	.
11.967	12.1080	20.60	.Q	V.	.	.	.
11.983	12.1368	20.86	.Q	V.	.	.	.
12.000	12.1659	21.12	.Q	V.	.	.	.
12.017	12.1953	21.38	.Q	V.	.	.	.
12.033	12.2251	21.64	.Q	V.	.	.	.
12.050	12.2553	21.89	.Q	V.	.	.	.
12.067	12.2858	22.15	. Q	V.	.	.	.
12.083	12.3166	22.41	. Q	V.	.	.	.
12.100	12.3479	22.67	. Q	V.	.	.	.
12.117	12.3794	22.92	. Q	V.	.	.	.
12.133	12.4114	23.18	. Q	V.	.	.	.
12.150	12.4437	23.44	. Q	V	.	.	.
12.167	12.4763	23.70	. Q	V	.	.	.
12.183	12.5093	23.95	. Q	V	.	.	.
12.200	12.5426	24.16	. Q	V	.	.	.
12.217	12.5761	24.37	. Q	V	.	.	.
12.233	12.6100	24.58	. Q	V	.	.	.
12.250	12.6441	24.79	. Q	V	.	.	.
12.267	12.6786	24.99	. Q	V	.	.	.
12.283	12.7133	25.20	. Q	V	.	.	.
12.300	12.7483	25.41	. Q	V	.	.	.
12.317	12.7836	25.62	. Q	V	.	.	.
12.333	12.8191	25.83	. Q	V	.	.	.
12.350	12.8550	26.03	. Q	V	.	.	.

12.367	12.8911	26.24	. Q	V	.	.	.
12.383	12.9276	26.45	. Q	V	.	.	.
12.400	12.9643	26.66	. Q	V	.	.	.
12.417	13.0013	26.86	. Q	V	.	.	.
12.433	13.0386	27.07	. Q	V	.	.	.
12.450	13.0760	27.20	. Q	V	.	.	.
12.467	13.1136	27.29	. Q	V	.	.	.
12.483	13.1513	27.38	. Q	V	.	.	.
12.500	13.1892	27.47	. Q	V	.	.	.
12.517	13.2271	27.56	. Q	V	.	.	.
12.533	13.2652	27.65	. Q	V	.	.	.
12.550	13.3034	27.74	. Q	V	.	.	.
12.567	13.3418	27.83	. Q	V	.	.	.
12.583	13.3802	27.92	. Q	V	.	.	.
12.600	13.4188	28.01	. Q	V	.	.	.
12.617	13.4575	28.10	. Q	V	.	.	.
12.633	13.4964	28.19	. Q	V	.	.	.
12.650	13.5353	28.28	. Q	V	.	.	.
12.667	13.5744	28.38	. Q	V	.	.	.
12.683	13.6136	28.47	. Q	V	.	.	.
12.700	13.6529	28.54	. Q	V	.	.	.
12.717	13.6923	28.59	. Q	.V	.	.	.
12.733	13.7318	28.64	. Q	.V	.	.	.
12.750	13.7713	28.69	. Q	.V	.	.	.
12.767	13.8109	28.74	. Q	.V	.	.	.
12.783	13.8505	28.79	. Q	.V	.	.	.
12.800	13.8903	28.84	. Q	.V	.	.	.
12.817	13.9300	28.89	. Q	.V	.	.	.
12.833	13.9699	28.94	. Q	.V	.	.	.
12.850	14.0099	29.00	. Q	.V	.	.	.
12.867	14.0499	29.05	. Q	.V	.	.	.
12.883	14.0899	29.10	. Q	.V	.	.	.
12.900	14.1301	29.15	. Q	.V	.	.	.
12.917	14.1703	29.20	. Q	.V	.	.	.
12.933	14.2106	29.25	. Q	.V	.	.	.
12.950	14.2510	29.31	. Q	.V	.	.	.
12.967	14.2915	29.42	. Q	.V	.	.	.
12.983	14.3322	29.53	. Q	.V	.	.	.
13.000	14.3730	29.65	. Q	.V	.	.	.
13.017	14.4140	29.76	. Q	.V	.	.	.
13.033	14.4552	29.88	. Q	.V	.	.	.
13.050	14.4965	29.99	. Q	.V	.	.	.
13.067	14.5379	30.10	. Q	.V	.	.	.
13.083	14.5795	30.22	. Q	.V	.	.	.
13.100	14.6213	30.33	. Q	.V	.	.	.
13.117	14.6633	30.45	. Q	.V	.	.	.
13.133	14.7054	30.56	. Q	.V	.	.	.
13.150	14.7476	30.67	. Q	.V	.	.	.
13.167	14.7900	30.79	. Q	.V	.	.	.
13.183	14.8326	30.90	. Q	.V	.	.	.
13.200	14.8753	31.01	. Q	.V	.	.	.
13.217	14.9181	31.09	. Q	.V	.	.	.
13.233	14.9610	31.16	. Q	. V	.	.	.
13.250	15.0041	31.22	. Q	. V	.	.	.
13.267	15.0471	31.29	. Q	. V	.	.	.
13.283	15.0903	31.35	. Q	. V	.	.	.
13.300	15.1336	31.42	. Q	. V	.	.	.
13.317	15.1770	31.48	. Q	. V	.	.	.

13.333	15.2204	31.55	. Q	. V	.	.	.	
13.350	15.2640	31.61	. Q	. V	.	.	.	
13.367	15.3076	31.68	. Q	. V	.	.	.	
13.383	15.3513	31.74	. Q	. V	.	.	.	
13.400	15.3951	31.81	. Q	. V	.	.	.	
13.417	15.4390	31.87	. Q	. V	.	.	.	
13.433	15.4830	31.94	. Q	. V	.	.	.	
13.450	15.5271	32.00	. Q	. V	.	.	.	
13.467	15.5713	32.11	. Q	. V	.	.	.	
13.483	15.6157	32.26	. Q	. V	.	.	.	
13.500	15.6604	32.41	. Q	. V	.	.	.	
13.517	15.7052	32.56	. Q	. V	.	.	.	
13.533	15.7503	32.71	. Q	. V	.	.	.	
13.550	15.7955	32.86	. Q	. V	.	.	.	
13.567	15.8410	33.01	. Q	. V	.	.	.	
13.583	15.8867	33.16	. Q	. V	.	.	.	
13.600	15.9325	33.31	. Q	. V	.	.	.	
13.617	15.9786	33.46	. Q	. V	.	.	.	
13.633	16.0249	33.61	. Q	. V	.	.	.	
13.650	16.0714	33.76	. Q	. V	.	.	.	
13.667	16.1181	33.91	. Q	. V	.	.	.	
13.683	16.1650	34.06	. Q	. V	.	.	.	
13.700	16.2121	34.21	. Q	. V	.	.	.	
13.717	16.2594	34.34	. Q	. V	.	.	.	
13.733	16.3069	34.43	. Q	. V	.	.	.	
13.750	16.3544	34.52	. Q	. V	.	.	.	
13.767	16.4021	34.61	. Q	. V	.	.	.	
13.783	16.4499	34.69	. Q	. V	.	.	.	
13.800	16.4978	34.78	. Q	. V	.	.	.	
13.817	16.5458	34.87	. Q	. V	.	.	.	
13.833	16.5940	34.96	. Q	. V	.	.	.	
13.850	16.6422	35.04	. Q	. V	.	.	.	
13.867	16.6906	35.13	. Q	. V	.	.	.	
13.883	16.7391	35.22	. Q	. V	.	.	.	
13.900	16.7878	35.31	. Q	. V	.	.	.	
13.917	16.8365	35.39	. Q	. V	.	.	.	
13.933	16.8854	35.48	. Q	. V	.	.	.	
13.950	16.9344	35.57	. Q	. V	.	.	.	
13.967	16.9835	35.67	. Q	. V	.	.	.	
13.983	17.0329	35.86	. Q	. V	.	.	.	
14.000	17.0826	36.09	. Q	. V	.	.	.	
14.017	17.1326	36.31	. Q	. V	.	.	.	
14.033	17.1829	36.53	. Q	. V	.	.	.	
14.050	17.2336	36.75	. Q	. V	.	.	.	
14.067	17.2845	36.97	. Q	. V	.	.	.	
14.083	17.3357	37.20	. Q	. V	.	.	.	
14.100	17.3873	37.42	. Q	. V	.	.	.	
14.117	17.4391	37.64	. Q	. V	.	.	.	
14.133	17.4913	37.86	. Q	. V	.	.	.	
14.150	17.5437	38.08	. Q	. V	.	.	.	
14.167	17.5965	38.31	. Q	. V	.	.	.	
14.183	17.6495	38.53	. Q	. V	.	.	.	
14.200	17.7029	38.75	. Q	. V	.	.	.	
14.217	17.7566	38.97	. Q	. V	.	.	.	
14.233	17.8105	39.14	. Q	. V	.	.	.	
14.250	17.8646	39.27	. Q	. V	.	.	.	
14.267	17.9189	39.40	. Q	. V	.	.	.	
14.283	17.9733	39.53	. Q	. V	.	.	.	

14.300	18.0280	39.66	. Q	. V	.	.	.	
14.317	18.0828	39.79	. Q	. V	.	.	.	
14.333	18.1378	39.92	. Q	. V	.	.	.	
14.350	18.1929	40.05	. Q	. V	.	.	.	
14.367	18.2483	40.19	. Q	. V	.	.	.	
14.383	18.3038	40.32	. Q	. V	.	.	.	
14.400	18.3595	40.45	. Q	. V	.	.	.	
14.417	18.4154	40.58	. Q	. V	.	.	.	
14.433	18.4715	40.71	. Q	. V	.	.	.	
14.450	18.5277	40.84	. Q	. V	.	.	.	
14.467	18.5842	40.97	. Q	. V	.	.	.	
14.483	18.6409	41.16	. Q	. V	.	.	.	
14.500	18.6980	41.48	. Q	. V	.	.	.	
14.517	18.7556	41.80	. Q	. V	.	.	.	
14.533	18.8136	42.12	. Q	. V	.	.	.	
14.550	18.8721	42.44	. Q	. V	.	.	.	
14.567	18.9309	42.76	. Q	. V	.	.	.	
14.583	18.9903	43.08	. Q	. V	.	.	.	
14.600	19.0501	43.40	. Q	. V	.	.	.	
14.617	19.1103	43.72	. Q	. V	.	.	.	
14.633	19.1709	44.04	. Q	. V	.	.	.	
14.650	19.2320	44.35	. Q	. V	.	.	.	
14.667	19.2936	44.67	. Q	. V	.	.	.	
14.683	19.3555	44.99	. Q	. V	.	.	.	
14.700	19.4179	45.31	. Q	. V	.	.	.	
14.717	19.4808	45.63	. Q	. V	.	.	.	
14.733	19.5441	45.94	. Q	. V	.	.	.	
14.750	19.6077	46.16	. Q	. V	.	.	.	
14.767	19.6715	46.37	. Q	. V	.	.	.	
14.783	19.7357	46.57	. Q	. V	.	.	.	
14.800	19.8001	46.78	. Q	. V	.	.	.	
14.817	19.8648	46.99	. Q	. V	.	.	.	
14.833	19.9298	47.20	. Q	. V	.	.	.	
14.850	19.9951	47.40	. Q	. V	.	.	.	
14.867	20.0607	47.61	. Q	. V	.	.	.	
14.883	20.1266	47.82	. Q	. V	.	.	.	
14.900	20.1927	48.02	. Q	. V	.	.	.	
14.917	20.2592	48.23	. Q	. V	.	.	.	
14.933	20.3259	48.44	. Q	. V	.	.	.	
14.950	20.3929	48.65	. Q	. V	.	.	.	
14.967	20.4602	48.85	. Q	. V	.	.	.	
14.983	20.5278	49.07	. Q	. V	.	.	.	
15.000	20.5960	49.53	. Q	. V	.	.	.	
15.017	20.6650	50.10	. Q	. V	.	.	.	
15.033	20.7348	50.68	. Q	. V	.	.	.	
15.050	20.8054	51.26	. Q	. V	.	.	.	
15.067	20.8768	51.84	. Q	. V	.	.	.	
15.083	20.9490	52.41	. Q	. V	.	.	.	
15.100	21.0220	52.99	. Q	. V	.	.	.	
15.117	21.0958	53.57	. Q	. V	.	.	.	
15.133	21.1704	54.15	. Q	. V	.	.	.	
15.150	21.2457	54.72	. Q	. V	.	.	.	
15.167	21.3219	55.30	. Q	. V	.	.	.	
15.183	21.3989	55.88	. Q	. V	.	.	.	
15.200	21.4767	56.46	. Q	. V	.	.	.	
15.217	21.5552	57.04	. Q	. V	.	.	.	
15.233	21.6346	57.61	. Q	. V	.	.	.	
15.250	21.7146	58.13	. Q	. V	.	.	.	

15.267	21.7953	58.56	. Q . V . . .
15.283	21.8766	58.99	. Q . V . . .
15.300	21.9584	59.42	. Q . V . . .
15.317	22.0408	59.85	. Q . V . . .
15.333	22.1239	60.28	. Q . V . . .
15.350	22.2075	60.70	. Q . V . . .
15.367	22.2917	61.13	. Q . V . . .
15.383	22.3765	61.56	. Q . V . . .
15.400	22.4619	61.99	. Q . V . . .
15.417	22.5478	62.42	. Q . V . . .
15.433	22.6344	62.85	. Q . V . . .
15.450	22.7216	63.28	. Q . V . . .
15.467	22.8093	63.71	. Q . V . . .
15.483	22.8977	64.14	. Q . V . . .
15.500	22.9868	64.69	. Q . V . . .
15.517	23.0773	65.76	. Q . V . . .
15.533	23.1695	66.89	. Q . V . . .
15.550	23.2632	68.02	. Q . V . . .
15.567	23.3584	69.15	. Q . V . . .
15.583	23.4552	70.28	. Q . V . . .
15.600	23.5536	71.41	. Q . V . . .
15.617	23.6535	72.54	. Q . V. . . .
15.633	23.7550	73.67	. Q . V. . . .
15.650	23.8580	74.80	. Q . V. . . .
15.667	23.9626	75.93	. Q . V. . . .
15.683	24.0687	77.06	. Q . V. . . .
15.700	24.1764	78.18	. Q . V. . . .
15.717	24.2857	79.31	. Q . V. . . .
15.733	24.3965	80.44	. Q . V. . . .
15.750	24.5089	81.63	. Q . V. . . .
15.767	24.6242	83.73	. Q . V. . . .
15.783	24.7429	86.15	. Q . V. . . .
15.800	24.8649	88.56	. Q . V. . . .
15.817	24.9902	90.98	. Q . V . . .
15.833	25.1188	93.39	. Q . V . . .
15.850	25.2508	95.81	. Q . V . . .
15.867	25.3861	98.23	. Q . V . . .
15.883	25.5247	100.64	. Q. V . . .
15.900	25.6667	103.06	. Q. V . . .
15.917	25.8120	105.48	. Q. V . . .
15.933	25.9606	107.89	. Q. V . . .
15.950	26.1125	110.31	. Q. V . . .
15.967	26.2678	112.72	. Q .V . . .
15.983	26.4264	115.14	. Q .V . . .
16.000	26.5883	117.56	. Q .V . . .
16.017	26.7664	129.33	. .Q .V . . .
16.033	26.9737	150.47	. . Q .V . . .
16.050	27.2101	171.61	. . Q .V . . .
16.067	27.4756	192.75	. . Q . V . . .
16.083	27.7702	213.89	. . Q. V . . .
16.100	28.0939	235.03	. . .QV . . .
16.117	28.4468	256.17	. . . VQ . . .
16.133	28.8288	277.31	. . . V Q . . .
16.150	29.2399	298.45	. . . V Q . . .
16.167	29.6801	319.59	. . . V Q . . .
16.183	30.1494	340.73	. . . V Q . . .
16.200	30.6478	361.87	. . . V . Q . .
16.217	31.1754	383.01	. . . V . Q . .

16.233	31.7321	404.15	. . . V . Q . .
16.250	32.3179	425.29	. . . V . Q . .
16.267	32.9270	442.20	. . . V . Q . .
16.283	33.4956	412.83	. . . V . Q . .
16.300	34.0305	388.35	. . . V . Q . .
16.317	34.5317	363.87	. . . V . Q . .
16.333	34.9992	339.39	. . . V Q . . .
16.350	35.4330	314.92	. . . Q . . . .
16.367	35.8330	290.44	. . . Q V . . .
16.383	36.1994	265.96	. . . Q V. . .
16.400	36.5320	241.48	. . .Q V. . .
16.417	36.8309	217.01	. . Q. V. . .
16.433	37.0961	192.53	. . Q . V. . .
16.450	37.3276	168.05	. . Q . V . .
16.467	37.5253	143.57	. . Q . V . .
16.483	37.6894	119.10	. . Q . V . .
16.500	37.8197	94.62	. . Q . V . .
16.517	37.9189	72.02	. Q . V . .
16.533	38.0110	66.83	. Q . V . .
16.550	38.1017	65.87	. Q . V . .
16.567	38.1911	64.91	. Q . V . .
16.583	38.2792	63.95	. Q . V . .
16.600	38.3660	62.99	. Q . V . .
16.617	38.4514	62.03	. Q . V . .
16.633	38.5355	61.07	. Q . V . .
16.650	38.6183	60.11	. Q . .V .
16.667	38.6998	59.16	. Q . .V .
16.683	38.7800	58.20	. Q . .V .
16.700	38.8588	57.24	. Q . .V .
16.717	38.9363	56.28	. Q . .V .
16.733	39.0125	55.32	. Q . .V .
16.750	39.0874	54.36	. Q . .V .
16.767	39.1610	53.40	. Q . .V .
16.783	39.2335	52.64	. Q . .V .
16.800	39.3051	52.00	. Q . .V .
16.817	39.3758	51.37	. Q . .V .
16.833	39.4457	50.73	. Q . .V .
16.850	39.5147	50.10	. Q . .V .
16.867	39.5828	49.46	. Q . .V .
16.883	39.6501	48.83	. Q . .V .
16.900	39.7165	48.19	. Q . .V .
16.917	39.7820	47.56	. Q . .V .
16.933	39.8466	46.93	. Q . . V .
16.950	39.9104	46.29	. Q . . V .
16.967	39.9733	45.66	. Q . . V .
16.983	40.0353	45.02	. Q . . V .
17.000	40.0964	44.39	. Q . . V .
17.017	40.1567	43.75	. Q . . V .
17.033	40.2162	43.19	. Q . . V .
17.050	40.2751	42.79	. Q . . V .
17.067	40.3335	42.39	. Q . . V .
17.083	40.3914	41.98	. Q . . V .
17.100	40.4486	41.58	. Q . . V .
17.117	40.5054	41.18	. Q . . V .
17.133	40.5615	40.78	. Q . . V .
17.150	40.6172	40.38	. Q . . V .
17.167	40.6722	39.98	. Q . . V .
17.183	40.7267	39.57	. Q . . V .

17.200	40.7807	39.17	.	Q	.	.	.	V	.	
17.217	40.8341	38.77	.	Q	.	.	.	V	.	
17.233	40.8869	38.37	.	Q	.	.	.	V	.	
17.250	40.9392	37.97	.	Q	.	.	.	V	.	
17.267	40.9910	37.57	.	Q	.	.	.	V	.	
17.283	41.0422	37.18	.	Q	.	.	.	V	.	
17.300	41.0930	36.90	.	Q	.	.	.	V	.	
17.317	41.1435	36.64	.	Q	.	.	.	V	.	
17.333	41.1936	36.37	.	Q	.	.	.	V	.	
17.350	41.2433	36.11	.	Q	.	.	.	V	.	
17.367	41.2927	35.84	.	Q	.	.	.	V	.	
17.383	41.3417	35.58	.	Q	.	.	.	V	.	
17.400	41.3903	35.32	.	Q	.	.	.	V	.	
17.417	41.4386	35.05	.	Q	.	.	.	V	.	
17.433	41.4865	34.79	.	Q	.	.	.	V	.	
17.450	41.5341	34.52	.	Q	.	.	.	V	.	
17.467	41.5813	34.26	.	Q	.	.	.	V	.	
17.483	41.6281	33.99	.	Q	.	.	.	V	.	
17.500	41.6746	33.73	.	Q	.	.	.	V	.	
17.517	41.7207	33.47	.	Q	.	.	.	V	.	
17.533	41.7664	33.20	.	Q	.	.	.	V	.	
17.550	41.8118	32.99	.	Q	.	.	.	V	.	
17.567	41.8570	32.79	.	Q	.	.	.	V	.	
17.583	41.9019	32.59	.	Q	.	.	.	V	.	
17.600	41.9465	32.40	.	Q	.	.	.	V	.	
17.617	41.9909	32.20	.	Q	.	.	.	V	.	
17.633	42.0350	32.01	.	Q	.	.	.	V	.	
17.650	42.0788	31.81	.	Q	.	.	.	V	.	
17.667	42.1223	31.62	.	Q	.	.	.	V	.	
17.683	42.1656	31.42	.	Q	.	.	.	V	.	
17.700	42.2086	31.23	.	Q	.	.	.	V	.	
17.717	42.2514	31.03	.	Q	.	.	.	V	.	
17.733	42.2938	30.83	.	Q	.	.	.	V	.	
17.750	42.3360	30.64	.	Q	.	.	.	V	.	
17.767	42.3780	30.44	.	Q	.	.	.	V	.	
17.783	42.4196	30.25	.	Q	.	.	.	V	.	
17.800	42.4611	30.07	.	Q	.	.	.	V	.	
17.817	42.5023	29.92	.	Q	.	.	.	V	.	
17.833	42.5433	29.77	.	Q	.	.	.	V	.	
17.850	42.5841	29.61	.	Q	.	.	.	V	.	
17.867	42.6246	29.46	.	Q	.	.	.	V	.	
17.883	42.6650	29.31	.	Q	.	.	.	V	.	
17.900	42.7052	29.16	.	Q	.	.	.	V	.	
17.917	42.7451	29.00	.	Q	.	.	.	V	.	
17.933	42.7849	28.85	.	Q	.	.	.	V	.	
17.950	42.8244	28.70	.	Q	.	.	.	V	.	
17.967	42.8637	28.55	.	Q	.	.	.	V	.	
17.983	42.9028	28.40	.	Q	.	.	.	V	.	
18.000	42.9417	28.24	.	Q	.	.	.	V	.	
18.017	42.9804	28.09	.	Q	.	.	.	V	.	
18.033	43.0189	27.94	.	Q	.	.	.	V	.	
18.050	43.0571	27.73	.	Q	.	.	.	V	.	
18.067	43.0947	27.28	.	Q	.	.	.	V	.	
18.083	43.1316	26.80	.	Q	.	.	.	V	.	
18.100	43.1679	26.33	.	Q	.	.	.	V	.	
18.117	43.2035	25.85	.	Q	.	.	.	V	.	
18.133	43.2384	25.38	.	Q	.	.	.	V	.	
18.150	43.2727	24.90	.	Q	.	.	.	V	.	

18.167	43.3064	24.42	.	Q	.	.	.	V	.	
18.183	43.3393	23.95	.	Q	.	.	.	V	.	
18.200	43.3717	23.47	.	Q	.	.	.	V	.	
18.217	43.4034	23.00	.	Q	.	.	.	V	.	
18.233	43.4344	22.52	.	Q	.	.	.	V	.	
18.250	43.4647	22.05	.	Q	.	.	.	V	.	
18.267	43.4945	21.57	.	Q	.	.	.	V	.	
18.283	43.5235	21.09	.	Q	.	.	.	V	.	
18.300	43.5519	20.64	.	Q	.	.	.	V	.	
18.317	43.5801	20.45	.	Q	.	.	.	V	.	
18.333	43.6081	20.35	.	Q	.	.	.	V	.	
18.350	43.6360	20.26	.	Q	.	.	.	V	.	
18.367	43.6638	20.17	.	Q	.	.	.	V	.	
18.383	43.6915	20.07	.	Q	.	.	.	V	.	
18.400	43.7190	19.98	.	Q	.	.	.	V	.	
18.417	43.7464	19.88	.	Q	.	.	.	V	.	
18.433	43.7736	19.79	.	Q	.	.	.	V	.	
18.450	43.8007	19.69	.	Q	.	.	.	V	.	
18.467	43.8277	19.60	.	Q	.	.	.	V	.	
18.483	43.8546	19.51	.	Q	.	.	.	V	.	
18.500	43.8813	19.41	.	Q	.	.	.	V	.	
18.517	43.9080	19.32	.	Q	.	.	.	V	.	
18.533	43.9344	19.22	.	Q	.	.	.	V	.	
18.550	43.9608	19.13	.	Q	.	.	.	V	.	
18.567	43.9870	19.04	.	Q	.	.	.	V	.	
18.583	44.0131	18.96	.	Q	.	.	.	V	.	
18.600	44.0391	18.88	.	Q	.	.	.	V	.	
18.617	44.0650	18.81	.	Q	.	.	.	V	.	
18.633	44.0908	18.73	.	Q	.	.	.	V	.	
18.650	44.1165	18.65	.	Q	.	.	.	V	.	
18.667	44.1421	18.57	.	Q	.	.	.	V	.	
18.683	44.1676	18.49	.	Q	.	.	.	V	.	
18.700	44.1929	18.41	.	Q	.	.	.	V	.	
18.717	44.2182	18.33	.	Q	.	.	.	V	.	
18.733	44.2433	18.25	.	Q	.	.	.	V	.	
18.750	44.2684	18.18	.	Q	.	.	.	V	.	
18.767	44.2933	18.10	.	Q	.	.	.	V	.	
18.783	44.3181	18.02	.	Q	.	.	.	V	.	
18.800	44.3428	17.94	.	Q	.	.	.	V	.	
18.817	44.3674	17.86	.	Q	.	.	.	V	.	
18.833	44.3919	17.80	.	Q	.	.	.	V	.	
18.850	44.4164	17.73	.	Q	.	.	.	V	.	
18.867	44.4407	17.66	.	Q	.	.	.	V	.	
18.883	44.4649	17.59	.	Q	.	.	.	V	.	
18.900	44.4891	17.53	.	Q	.	.	.	V	.	
18.917	44.5131	17.46	.	Q	.	.	.	V	.	
18.933	44.5371	17.39	.	Q	.	.	.	V	.	
18.950	44.5609	17.33	.	Q	.	.	.	V	.	
18.967	44.5847	17.26	.	Q	.	.	.	V	.	
18.983	44.6084	17.19	.	Q	.	.	.	V	.	
19.000	44.6320	17.12	.	Q	.	.	.	V	.	
19.017	44.6555	17.06	.	Q	.	.	.	V	.	
19.033	44.6789	16.99	.	Q	.	.	.	V	.	
19.050	44.7022	16.92	.	Q	.	.	.	V	.	
19.067	44.7254	16.86	.	Q	.	.	.	V	.	
19.083	44.7485	16.80	.	Q	.	.	.	V	.	
19.100	44.7716	16.74	.	Q	.	.	.	V	.	
19.117	44.7946	16.68	.	Q	.	.	.	V	.	

19.133	44.8175	16.62	.Q	.	.	.	V	.
19.150	44.8403	16.57	.Q	.	.	.	V	.
19.167	44.8630	16.51	.Q	.	.	.	V	.
19.183	44.8857	16.45	.Q	.	.	.	V	.
19.200	44.9083	16.39	.Q	.	.	.	V	.
19.217	44.9308	16.33	.Q	.	.	.	V	.
19.233	44.9532	16.28	.Q	.	.	.	V	.
19.250	44.9755	16.22	.Q	.	.	.	V	.
19.267	44.9978	16.16	.Q	.	.	.	V	.
19.283	45.0200	16.10	.Q	.	.	.	V	.
19.300	45.0420	16.04	.Q	.	.	.	V	.
19.317	45.0641	15.99	.Q	.	.	.	V	.
19.333	45.0860	15.93	.Q	.	.	.	V	.
19.350	45.1079	15.88	.Q	.	.	.	V	.
19.367	45.1297	15.83	.Q	.	.	.	V	.
19.383	45.1514	15.78	.Q	.	.	.	V	.
19.400	45.1731	15.73	.Q	.	.	.	V	.
19.417	45.1947	15.68	.Q	.	.	.	V	.
19.433	45.2162	15.63	.Q	.	.	.	V	.
19.450	45.2377	15.58	.Q	.	.	.	V	.
19.467	45.2591	15.53	.Q	.	.	.	V	.
19.483	45.2804	15.48	.Q	.	.	.	V	.
19.500	45.3016	15.43	.Q	.	.	.	V	.
19.517	45.3228	15.37	.Q	.	.	.	V	.
19.533	45.3439	15.32	.Q	.	.	.	V	.
19.550	45.3649	15.27	.Q	.	.	.	V	.
19.567	45.3859	15.22	.Q	.	.	.	V	.
19.583	45.4068	15.17	.Q	.	.	.	V	.
19.600	45.4277	15.13	.Q	.	.	.	V	.
19.617	45.4484	15.08	.Q	.	.	.	V	.
19.633	45.4691	15.04	.Q	.	.	.	V	.
19.650	45.4898	14.99	.Q	.	.	.	V	.
19.667	45.5104	14.95	.Q	.	.	.	V	.
19.683	45.5309	14.90	.Q	.	.	.	V	.
19.700	45.5514	14.86	.Q	.	.	.	V	.
19.717	45.5718	14.82	.Q	.	.	.	V	.
19.733	45.5921	14.77	.Q	.	.	.	V	.
19.750	45.6124	14.73	.Q	.	.	.	V	.
19.767	45.6326	14.68	.Q	.	.	.	V	.
19.783	45.6528	14.64	.Q	.	.	.	V	.
19.800	45.6729	14.59	.Q	.	.	.	V	.
19.817	45.6929	14.55	.Q	.	.	.	V	.
19.833	45.7129	14.50	.Q	.	.	.	V	.
19.850	45.7328	14.46	.Q	.	.	.	V	.
19.867	45.7527	14.42	.Q	.	.	.	V	.
19.883	45.7725	14.38	.Q	.	.	.	V	.
19.900	45.7923	14.34	.Q	.	.	.	V	.
19.917	45.8120	14.30	.Q	.	.	.	V	.
19.933	45.8316	14.26	.Q	.	.	.	V	.
19.950	45.8512	14.22	.Q	.	.	.	V	.
19.967	45.8707	14.18	.Q	.	.	.	V	.
19.983	45.8902	14.14	.Q	.	.	.	V	.
20.000	45.9096	14.10	.Q	.	.	.	V	.
20.017	45.9290	14.06	.Q	.	.	.	V	.
20.033	45.9483	14.02	.Q	.	.	.	V	.
20.050	45.9676	13.98	.Q	.	.	.	V	.
20.067	45.9868	13.94	.Q	.	.	.	V	.
20.083	46.0060	13.90	.Q	.	.	.	V	.

20.100	46.0251	13.87	.Q	.	.	.	V	.
20.117	46.0441	13.83	.Q	.	.	.	V	.
20.133	46.0631	13.79	.Q	.	.	.	V	.
20.150	46.0821	13.76	.Q	.	.	.	V	.
20.167	46.1010	13.72	.Q	.	.	.	V	.
20.183	46.1198	13.69	.Q	.	.	.	V	.
20.200	46.1386	13.65	.Q	.	.	.	V	.
20.217	46.1574	13.62	.Q	.	.	.	V	.
20.233	46.1761	13.58	.Q	.	.	.	V	.
20.250	46.1947	13.54	.Q	.	.	.	V	.
20.267	46.2133	13.51	.Q	.	.	.	V	.
20.283	46.2319	13.47	.Q	.	.	.	V	.
20.300	46.2504	13.44	.Q	.	.	.	V	.
20.317	46.2689	13.40	.Q	.	.	.	V	.
20.333	46.2873	13.37	.Q	.	.	.	V	.
20.350	46.3056	13.33	.Q	.	.	.	V	.
20.367	46.3240	13.30	.Q	.	.	.	V	.
20.383	46.3422	13.27	.Q	.	.	.	V	.
20.400	46.3605	13.23	.Q	.	.	.	V	.
20.417	46.3786	13.20	.Q	.	.	.	V	.
20.433	46.3968	13.17	.Q	.	.	.	V	.
20.450	46.4149	13.14	.Q	.	.	.	V	.
20.467	46.4329	13.10	.Q	.	.	.	V	.
20.483	46.4509	13.07	.Q	.	.	.	V	.
20.500	46.4689	13.04	.Q	.	.	.	V	.
20.517	46.4868	13.01	.Q	.	.	.	V	.
20.533	46.5047	12.97	.Q	.	.	.	V	.
20.550	46.5225	12.94	.Q	.	.	.	V	.
20.567	46.5403	12.91	.Q	.	.	.	V	.
20.583	46.5580	12.88	.Q	.	.	.	V	.
20.600	46.5757	12.85	.Q	.	.	.	V	.
20.617	46.5934	12.82	.Q	.	.	.	V	.
20.633	46.6110	12.79	.Q	.	.	.	V	.
20.650	46.6285	12.76	.Q	.	.	.	V	.
20.667	46.6461	12.73	.Q	.	.	.	V	.
20.683	46.6636	12.70	.Q	.	.	.	V	.
20.700	46.6810	12.67	.Q	.	.	.	V	.
20.717	46.6984	12.64	.Q	.	.	.	V	.
20.733	46.7158	12.61	.Q	.	.	.	V	.
20.750	46.7331	12.58	.Q	.	.	.	V	.
20.767	46.7504	12.55	.Q	.	.	.	V	.
20.783	46.7677	12.52	.Q	.	.	.	V	.
20.800	46.7849	12.49	.Q	.	.	.	V	.
20.817	46.8020	12.46	.Q	.	.	.	V	.
20.833	46.8192	12.43	.Q	.	.	.	V	.
20.850	46.8362	12.40	.Q	.	.	.	V	.
20.867	46.8533	12.38	.Q	.	.	.	V	.
20.883	46.8703	12.35	.Q	.	.	.	V	.
20.900	46.8873	12.32	.Q	.	.	.	V	.
20.917	46.9042	12.30	.Q	.	.	.	V	.
20.933	46.9211	12.27	.Q	.	.	.	V	.
20.950	46.9380	12.24	.Q	.	.	.	V	.
20.967	46.9548	12.21	.Q	.	.	.	V	.
20.983	46.9716	12.19	.Q	.	.	.	V	.
21.000	46.9883	12.16	.Q	.	.	.	V	.
21.017	47.0050	12.13	.Q	.	.	.	V	.
21.033	47.0217	12.11	.Q	.	.	.	V	.
21.050	47.0384	12.08	.Q	.	.	.	V	.

21.067	47.0550	12.05	.Q	.	.	.	V	.
21.083	47.0715	12.03	.Q	.	.	.	V	.
21.100	47.0881	12.00	.Q	.	.	.	V	.
21.117	47.1045	11.97	.Q	.	.	.	V	.
21.133	47.1210	11.95	.Q	.	.	.	V	.
21.150	47.1374	11.92	.Q	.	.	.	V	.
21.167	47.1538	11.90	.Q	.	.	.	V	.
21.183	47.1702	11.87	.Q	.	.	.	V	.
21.200	47.1865	11.85	.Q	.	.	.	V	.
21.217	47.2028	11.83	.Q	.	.	.	V	.
21.233	47.2190	11.80	.Q	.	.	.	V	.
21.250	47.2353	11.78	.Q	.	.	.	V	.
21.267	47.2514	11.75	.Q	.	.	.	V	.
21.283	47.2676	11.73	.Q	.	.	.	V	.
21.300	47.2837	11.70	.Q	.	.	.	V	.
21.317	47.2998	11.68	.Q	.	.	.	V	.
21.333	47.3158	11.65	.Q	.	.	.	V	.
21.350	47.3319	11.63	.Q	.	.	.	V	.
21.367	47.3478	11.60	.Q	.	.	.	V	.
21.383	47.3638	11.58	.Q	.	.	.	V	.
21.400	47.3797	11.56	.Q	.	.	.	V	.
21.417	47.3956	11.53	.Q	.	.	.	V	.
21.433	47.4115	11.51	.Q	.	.	.	V	.
21.450	47.4273	11.49	.Q	.	.	.	V	.
21.467	47.4431	11.47	.Q	.	.	.	V	.
21.483	47.4588	11.44	.Q	.	.	.	V	.
21.500	47.4746	11.42	.Q	.	.	.	V	.
21.517	47.4903	11.40	.Q	.	.	.	V	.
21.533	47.5059	11.38	.Q	.	.	.	V	.
21.550	47.5216	11.35	.Q	.	.	.	V	.
21.567	47.5372	11.33	.Q	.	.	.	V	.
21.583	47.5528	11.31	.Q	.	.	.	V	.
21.600	47.5683	11.28	.Q	.	.	.	V	.
21.617	47.5838	11.26	.Q	.	.	.	V	.
21.633	47.5993	11.24	.Q	.	.	.	V	.
21.650	47.6147	11.22	.Q	.	.	.	V	.
21.667	47.6302	11.20	.Q	.	.	.	V	.
21.683	47.6456	11.18	.Q	.	.	.	V	.
21.700	47.6609	11.16	.Q	.	.	.	V	.
21.717	47.6763	11.13	.Q	.	.	.	V	.
21.733	47.6916	11.11	.Q	.	.	.	V	.
21.750	47.7068	11.09	.Q	.	.	.	V	.
21.767	47.7221	11.07	.Q	.	.	.	V	.
21.783	47.7373	11.05	Q	.	.	.	V	.
21.800	47.7525	11.03	Q	.	.	.	V	.
21.817	47.7677	11.01	Q	.	.	.	V	.
21.833	47.7828	10.99	Q	.	.	.	V	.
21.850	47.7979	10.97	Q	.	.	.	V	.
21.867	47.8130	10.94	Q	.	.	.	V	.
21.883	47.8280	10.92	Q	.	.	.	V	.
21.900	47.8431	10.90	Q	.	.	.	V	.
21.917	47.8580	10.89	Q	.	.	.	V	.
21.933	47.8730	10.87	Q	.	.	.	V	.
21.950	47.8879	10.85	Q	.	.	.	V	.
21.967	47.9029	10.83	Q	.	.	.	V	.
21.983	47.9177	10.81	Q	.	.	.	V	.
22.000	47.9326	10.79	Q	.	.	.	V	.
22.017	47.9474	10.77	Q	.	.	.	V	.

22.033	47.9622	10.75	Q	.	.	.	V	.
22.050	47.9770	10.73	Q	.	.	.	V	.
22.067	47.9918	10.71	Q	.	.	.	V	.
22.083	48.0065	10.69	Q	.	.	.	V	.
22.100	48.0212	10.67	Q	.	.	.	V	.
22.117	48.0359	10.65	Q	.	.	.	V	.
22.133	48.0505	10.63	Q	.	.	.	V	.
22.150	48.0651	10.61	Q	.	.	.	V	.
22.167	48.0797	10.59	Q	.	.	.	V	.
22.183	48.0943	10.58	Q	.	.	.	V	.
22.200	48.1088	10.56	Q	.	.	.	V	.
22.217	48.1233	10.54	Q	.	.	.	V	.
22.233	48.1378	10.52	Q	.	.	.	V	.
22.250	48.1523	10.50	Q	.	.	.	V	.
22.267	48.1667	10.48	Q	.	.	.	V	.
22.283	48.1812	10.47	Q	.	.	.	V	.
22.300	48.1955	10.45	Q	.	.	.	V	.
22.317	48.2099	10.43	Q	.	.	.	V	.
22.333	48.2242	10.41	Q	.	.	.	V	.
22.350	48.2386	10.39	Q	.	.	.	V	.
22.367	48.2529	10.37	Q	.	.	.	V	.
22.383	48.2671	10.36	Q	.	.	.	V	.
22.400	48.2814	10.34	Q	.	.	.	V	.
22.417	48.2956	10.32	Q	.	.	.	V	.
22.433	48.3098	10.30	Q	.	.	.	V	.
22.450	48.3239	10.29	Q	.	.	.	V	.
22.467	48.3381	10.27	Q	.	.	.	V	.
22.483	48.3522	10.25	Q	.	.	.	V	.
22.500	48.3663	10.24	Q	.	.	.	V	.
22.517	48.3804	10.22	Q	.	.	.	V	.
22.533	48.3944	10.20	Q	.	.	.	V	.
22.550	48.4085	10.19	Q	.	.	.	V	.
22.567	48.4225	10.17	Q	.	.	.	V	.
22.583	48.4365	10.15	Q	.	.	.	V	.
22.600	48.4504	10.13	Q	.	.	.	V	.
22.617	48.4644	10.12	Q	.	.	.	V	.
22.633	48.4783	10.10	Q	.	.	.	V	.
22.650	48.4922	10.08	Q	.	.	.	V	.
22.667	48.5060	10.07	Q	.	.	.	V	.
22.683	48.5199	10.05	Q	.	.	.	V	.
22.700	48.5337	10.04	Q	.	.	.	V	.
22.717	48.5475	10.02	Q	.	.	.	V	.
22.733	48.5613	10.00	Q	.	.	.	V	.
22.750	48.5750	9.99	Q	.	.	.	V	.
22.767	48.5888	9.97	Q	.	.	.	V	.
22.783	48.6025	9.96	Q	.	.	.	V	.
22.800	48.6162	9.94	Q	.	.	.	V	.
22.817	48.6298	9.92	Q	.	.	.	V	.
22.833	48.6435	9.91	Q	.	.	.	V	.
22.850	48.6571	9.89	Q	.	.	.	V	.
22.867	48.6707	9.88	Q	.	.	.	V	.
22.883	48.6843	9.86	Q	.	.	.	V	.
22.900	48.6978	9.84	Q	.	.	.	V	.
22.917	48.7114	9.83	Q	.	.	.	V	.
22.933	48.7249	9.81	Q	.	.	.	V	.
22.950	48.7384	9.80	Q	.	.	.	V	.
22.967	48.7519	9.78	Q	.	.	.	V	.
22.983	48.7653	9.77	Q	.	.	.	V	.

23.000	48.7788	9.75	Q	.	.	.	V.
23.017	48.7922	9.74	Q	.	.	.	V.
23.033	48.8056	9.72	Q	.	.	.	V.
23.050	48.8189	9.71	Q	.	.	.	V.
23.067	48.8323	9.69	Q	.	.	.	V.
23.083	48.8456	9.68	Q	.	.	.	V.
23.100	48.8589	9.66	Q	.	.	.	V.
23.117	48.8722	9.65	Q	.	.	.	V.
23.133	48.8855	9.63	Q	.	.	.	V.
23.150	48.8987	9.62	Q	.	.	.	V.
23.167	48.9120	9.60	Q	.	.	.	V.
23.183	48.9252	9.59	Q	.	.	.	V.
23.200	48.9384	9.58	Q	.	.	.	V.
23.217	48.9515	9.56	Q	.	.	.	V.
23.233	48.9647	9.55	Q	.	.	.	V.
23.250	48.9778	9.53	Q	.	.	.	V.
23.267	48.9909	9.52	Q	.	.	.	V.
23.283	49.0040	9.51	Q	.	.	.	V.
23.300	49.0171	9.49	Q	.	.	.	V.
23.317	49.0302	9.48	Q	.	.	.	V.
23.333	49.0432	9.46	Q	.	.	.	V.
23.350	49.0562	9.45	Q	.	.	.	V.
23.367	49.0692	9.43	Q	.	.	.	V.
23.383	49.0822	9.42	Q	.	.	.	V.
23.400	49.0951	9.41	Q	.	.	.	V.
23.417	49.1081	9.39	Q	.	.	.	V.
23.433	49.1210	9.38	Q	.	.	.	V.
23.450	49.1339	9.37	Q	.	.	.	V.
23.467	49.1468	9.35	Q	.	.	.	V.
23.483	49.1596	9.34	Q	.	.	.	V.
23.500	49.1725	9.33	Q	.	.	.	V.
23.517	49.1853	9.31	Q	.	.	.	V.
23.533	49.1981	9.30	Q	.	.	.	V.
23.550	49.2109	9.29	Q	.	.	.	V.
23.567	49.2237	9.27	Q	.	.	.	V.
23.583	49.2364	9.26	Q	.	.	.	V.
23.600	49.2492	9.25	Q	.	.	.	V.
23.617	49.2619	9.23	Q	.	.	.	V.
23.633	49.2746	9.22	Q	.	.	.	V.
23.650	49.2873	9.21	Q	.	.	.	V.
23.667	49.2999	9.19	Q	.	.	.	V.
23.683	49.3126	9.18	Q	.	.	.	V.
23.700	49.3252	9.17	Q	.	.	.	V.
23.717	49.3378	9.15	Q	.	.	.	V.
23.733	49.3504	9.14	Q	.	.	.	V.
23.750	49.3630	9.13	Q	.	.	.	V.
23.767	49.3755	9.12	Q	.	.	.	V.
23.783	49.3881	9.10	Q	.	.	.	V.
23.800	49.4006	9.09	Q	.	.	.	V.
23.817	49.4131	9.08	Q	.	.	.	V.
23.833	49.4256	9.07	Q	.	.	.	V.
23.850	49.4381	9.05	Q	.	.	.	V.
23.867	49.4505	9.04	Q	.	.	.	V.
23.883	49.4629	9.03	Q	.	.	.	V.
23.900	49.4754	9.02	Q	.	.	.	V.
23.917	49.4878	9.00	Q	.	.	.	V.
23.933	49.5001	8.99	Q	.	.	.	V.
23.950	49.5125	8.98	Q	.	.	.	V.

23.967	49.5249	8.97	Q	.	.	.	V.
23.983	49.5372	8.95	Q	.	.	.	V.
24.000	49.5495	8.94	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%	1441.0
10%	710.0
20%	215.0
30%	135.0
40%	115.0
50%	95.0
60%	80.0
70%	60.0
80%	40.0
90%	20.0

END OF FLOODSCx ROUTING ANALYSIS

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

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                     5 Hutton Centre Drive Suite 500
                           Santa Ana, CA92707


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA B                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 5-YR EV MARCH 2019 CCHIU                                              *
 ************************************************************************

  FILE NAME: 3B05EVS.DAT
  TIME/DATE OF STUDY: 14:58 03/13/2019

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


************************************************************************
  FLOW PROCESS FROM NODE    210.00 TO NODE    222.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  214.70
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.211
    LOW LOSS FRACTION = 0.439
    TIME OF CONCENTRATION(MIN.) = 17.16
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   5
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.18
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.41
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.55
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.92
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.27
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  2.12

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    20.26
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    17.67

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	43.4	86.8	130.1	173.5
10.000	3.7533	6.43	.Q	V .	.	.	.
10.017	3.7622	6.44	.Q	V .	.	.	.
10.033	3.7711	6.45	.Q	V .	.	.	.
10.050	3.7800	6.46	.Q	V .	.	.	.
10.067	3.7889	6.46	.Q	V .	.	.	.
10.083	3.7978	6.47	.Q	V .	.	.	.
10.100	3.8067	6.48	.Q	V .	.	.	.
10.117	3.8157	6.49	.Q	V .	.	.	.
10.133	3.8246	6.49	.Q	V .	.	.	.
10.150	3.8336	6.50	.Q	V .	.	.	.
10.167	3.8425	6.51	.Q	V .	.	.	.
10.183	3.8515	6.52	.Q	V .	.	.	.
10.200	3.8605	6.52	.Q	V .	.	.	.
10.217	3.8695	6.53	.Q	V .	.	.	.
10.233	3.8785	6.54	.Q	V .	.	.	.
10.250	3.8875	6.55	.Q	V .	.	.	.
10.267	3.8965	6.55	.Q	V .	.	.	.
10.283	3.9056	6.56	.Q	V .	.	.	.
10.300	3.9146	6.58	.Q	V .	.	.	.
10.317	3.9237	6.59	.Q	V .	.	.	.
10.333	3.9328	6.61	.Q	V .	.	.	.
10.350	3.9419	6.62	.Q	V .	.	.	.
10.367	3.9511	6.64	.Q	V .	.	.	.
10.383	3.9603	6.66	.Q	V .	.	.	.
10.400	3.9694	6.67	.Q	V .	.	.	.
10.417	3.9787	6.69	.Q	V .	.	.	.
10.433	3.9879	6.70	.Q	V .	.	.	.
10.450	3.9971	6.72	.Q	V .	.	.	.
10.467	4.0064	6.74	.Q	V .	.	.	.
10.483	4.0157	6.75	.Q	V .	.	.	.
10.500	4.0251	6.77	.Q	V .	.	.	.
10.517	4.0344	6.79	.Q	V .	.	.	.
10.533	4.0438	6.80	.Q	V .	.	.	.
10.550	4.0532	6.82	.Q	V .	.	.	.
10.567	4.0626	6.83	.Q	V .	.	.	.
10.583	4.0720	6.85	.Q	V .	.	.	.
10.600	4.0814	6.85	.Q	V .	.	.	.
10.617	4.0909	6.86	.Q	V .	.	.	.
10.633	4.1004	6.87	.Q	V .	.	.	.
10.650	4.1098	6.88	.Q	V .	.	.	.
10.667	4.1193	6.89	.Q	V .	.	.	.
10.683	4.1288	6.90	.Q	V .	.	.	.
10.700	4.1384	6.91	.Q	V .	.	.	.
10.717	4.1479	6.92	.Q	V .	.	.	.
10.733	4.1574	6.93	.Q	V .	.	.	.

10.750	4.1670	6.93	.Q	V .	.	.	.
10.767	4.1765	6.94	.Q	V .	.	.	.
10.783	4.1861	6.95	.Q	V .	.	.	.
10.800	4.1957	6.96	.Q	V .	.	.	.
10.817	4.2053	6.97	.Q	V .	.	.	.
10.833	4.2149	6.98	.Q	V .	.	.	.
10.850	4.2245	6.99	.Q	V .	.	.	.
10.867	4.2342	7.00	.Q	V .	.	.	.
10.883	4.2438	7.02	.Q	V .	.	.	.
10.900	4.2535	7.04	.Q	V .	.	.	.
10.917	4.2632	7.06	.Q	V .	.	.	.
10.933	4.2730	7.08	.Q	V .	.	.	.
10.950	4.2828	7.09	.Q	V .	.	.	.
10.967	4.2926	7.11	.Q	V .	.	.	.
10.983	4.3024	7.13	.Q	V .	.	.	.
11.000	4.3122	7.15	.Q	V .	.	.	.
11.017	4.3221	7.17	.Q	V .	.	.	.
11.033	4.3320	7.19	.Q	V .	.	.	.
11.050	4.3419	7.21	.Q	V .	.	.	.
11.067	4.3519	7.23	.Q	V .	.	.	.
11.083	4.3619	7.25	.Q	V .	.	.	.
11.100	4.3719	7.27	.Q	V .	.	.	.
11.117	4.3819	7.29	.Q	V .	.	.	.
11.133	4.3920	7.31	.Q	V .	.	.	.
11.150	4.4021	7.32	.Q	V .	.	.	.
11.167	4.4122	7.33	.Q	V .	.	.	.
11.183	4.4223	7.34	.Q	V .	.	.	.
11.200	4.4324	7.35	.Q	V .	.	.	.
11.217	4.4426	7.36	.Q	V .	.	.	.
11.233	4.4527	7.37	.Q	V .	.	.	.
11.250	4.4629	7.39	.Q	V .	.	.	.
11.267	4.4731	7.40	.Q	V .	.	.	.
11.283	4.4833	7.41	.Q	V .	.	.	.
11.300	4.4935	7.42	.Q	V .	.	.	.
11.317	4.5037	7.43	.Q	V .	.	.	.
11.333	4.5140	7.44	.Q	V .	.	.	.
11.350	4.5242	7.45	.Q	V .	.	.	.
11.367	4.5345	7.46	.Q	V .	.	.	.
11.383	4.5448	7.47	.Q	V .	.	.	.
11.400	4.5551	7.48	.Q	V .	.	.	.
11.417	4.5654	7.49	.Q	V.	.	.	.
11.433	4.5757	7.50	.Q	V.	.	.	.
11.450	4.5861	7.52	.Q	V.	.	.	.
11.467	4.5965	7.55	.Q	V.	.	.	.
11.483	4.6069	7.57	.Q	V.	.	.	.
11.500	4.6174	7.59	.Q	V.	.	.	.
11.517	4.6279	7.62	.Q	V.	.	.	.
11.533	4.6384	7.64	.Q	V.	.	.	.
11.550	4.6490	7.66	.Q	V.	.	.	.
11.567	4.6596	7.69	.Q	V.	.	.	.
11.583	4.6702	7.71	.Q	V.	.	.	.
11.600	4.6808	7.73	.Q	V.	.	.	.
11.617	4.6915	7.76	.Q	V.	.	.	.
11.633	4.7022	7.78	.Q	V.	.	.	.
11.650	4.7130	7.80	.Q	V.	.	.	.
11.667	4.7237	7.82	.Q	V.	.	.	.
11.683	4.7345	7.85	.Q	V.	.	.	.
11.700	4.7454	7.87	.Q	V.	.	.	.

11.717	4.7563	7.89	.Q	V.	.	.	.
11.733	4.7672	7.91	.Q	V.	.	.	.
11.750	4.7781	7.92	.Q	V.	.	.	.
11.767	4.7890	7.93	.Q	V.	.	.	.
11.783	4.7999	7.95	.Q	V.	.	.	.
11.800	4.8109	7.96	.Q	V.	.	.	.
11.817	4.8219	7.97	.Q	V.	.	.	.
11.833	4.8329	7.98	.Q	V.	.	.	.
11.850	4.8439	8.00	.Q	V.	.	.	.
11.867	4.8549	8.01	.Q	V.	.	.	.
11.883	4.8660	8.02	.Q	V.	.	.	.
11.900	4.8770	8.04	.Q	V.	.	.	.
11.917	4.8881	8.05	.Q	V.	.	.	.
11.933	4.8992	8.06	.Q	V.	.	.	.
11.950	4.9104	8.07	.Q	V.	.	.	.
11.967	4.9215	8.09	.Q	V.	.	.	.
11.983	4.9326	8.10	.Q	V.	.	.	.
12.000	4.9438	8.12	.Q	V.	.	.	.
12.017	4.9552	8.23	.Q	V.	.	.	.
12.033	4.9667	8.38	.Q	V.	.	.	.
12.050	4.9785	8.54	.Q	V.	.	.	.
12.067	4.9904	8.69	. Q	V.	.	.	.
12.083	5.0026	8.85	. Q	V.	.	.	.
12.100	5.0150	9.00	. Q	V.	.	.	.
12.117	5.0276	9.15	. Q	V.	.	.	.
12.133	5.0405	9.31	. Q	V.	.	.	.
12.150	5.0535	9.46	. Q	V.	.	.	.
12.167	5.0667	9.62	. Q	V	.	.	.
12.183	5.0802	9.77	. Q	V	.	.	.
12.200	5.0939	9.92	. Q	V	.	.	.
12.217	5.1077	10.08	. Q	V	.	.	.
12.233	5.1218	10.23	. Q	V	.	.	.
12.250	5.1361	10.39	. Q	V	.	.	.
12.267	5.1507	10.54	. Q	V	.	.	.
12.283	5.1654	10.69	. Q	V	.	.	.
12.300	5.1802	10.77	. Q	V	.	.	.
12.317	5.1951	10.79	. Q	V	.	.	.
12.333	5.2100	10.81	. Q	V	.	.	.
12.350	5.2249	10.83	. Q	V	.	.	.
12.367	5.2398	10.85	. Q	V	.	.	.
12.383	5.2548	10.87	. Q	V	.	.	.
12.400	5.2698	10.89	. Q	V	.	.	.
12.417	5.2848	10.91	. Q	V	.	.	.
12.433	5.2999	10.93	. Q	V	.	.	.
12.450	5.3150	10.95	. Q	V	.	.	.
12.467	5.3301	10.97	. Q	V	.	.	.
12.483	5.3452	10.99	. Q	V	.	.	.
12.500	5.3604	11.01	. Q	V	.	.	.
12.517	5.3756	11.03	. Q	V	.	.	.
12.533	5.3908	11.05	. Q	V	.	.	.
12.550	5.4060	11.07	. Q	V	.	.	.
12.567	5.4213	11.09	. Q	V	.	.	.
12.583	5.4366	11.12	. Q	V	.	.	.
12.600	5.4520	11.15	. Q	V	.	.	.
12.617	5.4674	11.19	. Q	V	.	.	.
12.633	5.4829	11.23	. Q	V	.	.	.
12.650	5.4984	11.27	. Q	V	.	.	.
12.667	5.5140	11.31	. Q	V	.	.	.

12.683	5.5296	11.35	. Q	V	.	.	.
12.700	5.5453	11.38	. Q	V	.	.	.
12.717	5.5610	11.42	. Q	V	.	.	.
12.733	5.5768	11.46	. Q	.V	.	.	.
12.750	5.5926	11.50	. Q	.V	.	.	.
12.767	5.6085	11.54	. Q	.V	.	.	.
12.783	5.6245	11.58	. Q	.V	.	.	.
12.800	5.6405	11.62	. Q	.V	.	.	.
12.817	5.6565	11.65	. Q	.V	.	.	.
12.833	5.6727	11.69	. Q	.V	.	.	.
12.850	5.6888	11.73	. Q	.V	.	.	.
12.867	5.7050	11.77	. Q	.V	.	.	.
12.883	5.7213	11.79	. Q	.V	.	.	.
12.900	5.7375	11.81	. Q	.V	.	.	.
12.917	5.7538	11.83	. Q	.V	.	.	.
12.933	5.7701	11.85	. Q	.V	.	.	.
12.950	5.7865	11.88	. Q	.V	.	.	.
12.967	5.8029	11.90	. Q	.V	.	.	.
12.983	5.8193	11.92	. Q	.V	.	.	.
13.000	5.8358	11.94	. Q	.V	.	.	.
13.017	5.8522	11.96	. Q	.V	.	.	.
13.033	5.8687	11.99	. Q	.V	.	.	.
13.050	5.8853	12.01	. Q	.V	.	.	.
13.067	5.9019	12.03	. Q	.V	.	.	.
13.083	5.9185	12.05	. Q	.V	.	.	.
13.100	5.9351	12.07	. Q	.V	.	.	.
13.117	5.9517	12.10	. Q	.V	.	.	.
13.133	5.9684	12.12	. Q	.V	.	.	.
13.150	5.9852	12.14	. Q	.V	.	.	.
13.167	6.0020	12.19	. Q	.V	.	.	.
13.183	6.0188	12.24	. Q	.V	.	.	.
13.200	6.0358	12.29	. Q	.V	.	.	.
13.217	6.0528	12.34	. Q	.V	.	.	.
13.233	6.0698	12.39	. Q	.V	.	.	.
13.250	6.0870	12.45	. Q	. V	.	.	.
13.267	6.1042	12.50	. Q	. V	.	.	.
13.283	6.1215	12.55	. Q	. V	.	.	.
13.300	6.1388	12.60	. Q	. V	.	.	.
13.317	6.1562	12.65	. Q	. V	.	.	.
13.333	6.1737	12.70	. Q	. V	.	.	.
13.350	6.1913	12.75	. Q	. V	.	.	.
13.367	6.2089	12.80	. Q	. V	.	.	.
13.383	6.2266	12.85	. Q	. V	.	.	.
13.400	6.2444	12.90	. Q	. V	.	.	.
13.417	6.2622	12.95	. Q	. V	.	.	.
13.433	6.2801	13.00	. Q	. V	.	.	.
13.450	6.2981	13.03	. Q	. V	.	.	.
13.467	6.3161	13.06	. Q	. V	.	.	.
13.483	6.3341	13.09	. Q	. V	.	.	.
13.500	6.3522	13.12	. Q	. V	.	.	.
13.517	6.3703	13.15	. Q	. V	.	.	.
13.533	6.3885	13.18	. Q	. V	.	.	.
13.550	6.4067	13.21	. Q	. V	.	.	.
13.567	6.4249	13.24	. Q	. V	.	.	.
13.583	6.4432	13.27	. Q	. V	.	.	.
13.600	6.4615	13.30	. Q	. V	.	.	.
13.617	6.4799	13.33	. Q	. V	.	.	.
13.633	6.4983	13.36	. Q	. V	.	.	.

13.650	6.5167	13.39	.	Q	.	V	.	.	.	.	.	.
13.667	6.5352	13.42	.	Q	.	V	.	.	.	.	.	.
13.683	6.5537	13.45	.	Q	.	V	.	.	.	.	.	.
13.700	6.5723	13.48	.	Q	.	V	.	.	.	.	.	.
13.717	6.5909	13.51	.	Q	.	V	.	.	.	.	.	.
13.733	6.6096	13.57	.	Q	.	V	.	.	.	.	.	.
13.750	6.6283	13.64	.	Q	.	V	.	.	.	.	.	.
13.767	6.6472	13.71	.	Q	.	V	.	.	.	.	.	.
13.783	6.6662	13.78	.	Q	.	V	.	.	.	.	.	.
13.800	6.6853	13.85	.	Q	.	V	.	.	.	.	.	.
13.817	6.7045	13.92	.	Q	.	V	.	.	.	.	.	.
13.833	6.7237	13.99	.	Q	.	V	.	.	.	.	.	.
13.850	6.7431	14.06	.	Q	.	V	.	.	.	.	.	.
13.867	6.7626	14.13	.	Q	.	V	.	.	.	.	.	.
13.883	6.7821	14.20	.	Q	.	V	.	.	.	.	.	.
13.900	6.8018	14.27	.	Q	.	V	.	.	.	.	.	.
13.917	6.8215	14.34	.	Q	.	V	.	.	.	.	.	.
13.933	6.8414	14.41	.	Q	.	V	.	.	.	.	.	.
13.950	6.8614	14.49	.	Q	.	V	.	.	.	.	.	.
13.967	6.8814	14.56	.	Q	.	V	.	.	.	.	.	.
13.983	6.9015	14.63	.	Q	.	V	.	.	.	.	.	.
14.000	6.9218	14.70	.	Q	.	V	.	.	.	.	.	.
14.017	6.9421	14.75	.	Q	.	V	.	.	.	.	.	.
14.033	6.9625	14.80	.	Q	.	V	.	.	.	.	.	.
14.050	6.9829	14.84	.	Q	.	V	.	.	.	.	.	.
14.067	7.0034	14.89	.	Q	.	V	.	.	.	.	.	.
14.083	7.0240	14.94	.	Q	.	V	.	.	.	.	.	.
14.100	7.0447	14.98	.	Q	.	V	.	.	.	.	.	.
14.117	7.0654	15.03	.	Q	.	V	.	.	.	.	.	.
14.133	7.0861	15.07	.	Q	.	V	.	.	.	.	.	.
14.150	7.1069	15.12	.	Q	.	V	.	.	.	.	.	.
14.167	7.1278	15.16	.	Q	.	V	.	.	.	.	.	.
14.183	7.1488	15.21	.	Q	.	V	.	.	.	.	.	.
14.200	7.1698	15.26	.	Q	.	V	.	.	.	.	.	.
14.217	7.1909	15.30	.	Q	.	V	.	.	.	.	.	.
14.233	7.2120	15.35	.	Q	.	V	.	.	.	.	.	.
14.250	7.2332	15.39	.	Q	.	V	.	.	.	.	.	.
14.267	7.2545	15.44	.	Q	.	V	.	.	.	.	.	.
14.283	7.2758	15.49	.	Q	.	V	.	.	.	.	.	.
14.300	7.2972	15.56	.	Q	.	V	.	.	.	.	.	.
14.317	7.3188	15.67	.	Q	.	V	.	.	.	.	.	.
14.333	7.3406	15.78	.	Q	.	V	.	.	.	.	.	.
14.350	7.3625	15.89	.	Q	.	V	.	.	.	.	.	.
14.367	7.3845	16.01	.	Q	.	V	.	.	.	.	.	.
14.383	7.4067	16.12	.	Q	.	V	.	.	.	.	.	.
14.400	7.4291	16.23	.	Q	.	V	.	.	.	.	.	.
14.417	7.4516	16.34	.	Q	.	V	.	.	.	.	.	.
14.433	7.4742	16.45	.	Q	.	V	.	.	.	.	.	.
14.450	7.4970	16.56	.	Q	.	V	.	.	.	.	.	.
14.467	7.5200	16.67	.	Q	.	V	.	.	.	.	.	.
14.483	7.5431	16.78	.	Q	.	V	.	.	.	.	.	.
14.500	7.5664	16.89	.	Q	.	V	.	.	.	.	.	.
14.517	7.5898	17.01	.	Q	.	V	.	.	.	.	.	.
14.533	7.6134	17.12	.	Q	.	V	.	.	.	.	.	.
14.550	7.6371	17.23	.	Q	.	V	.	.	.	.	.	.
14.567	7.6610	17.34	.	Q	.	V	.	.	.	.	.	.
14.583	7.6850	17.44	.	Q	.	V	.	.	.	.	.	.
14.600	7.7091	17.51	.	Q	.	V	.	.	.	.	.	.

14.617	7.7334	17.58	.	Q	.	V	.	.	.	.	.	.
14.633	7.7577	17.65	.	Q	.	V	.	.	.	.	.	.
14.650	7.7821	17.72	.	Q	.	V	.	.	.	.	.	.
14.667	7.8066	17.79	.	Q	.	V	.	.	.	.	.	.
14.683	7.8312	17.86	.	Q	.	V	.	.	.	.	.	.
14.700	7.8559	17.93	.	Q	.	V	.	.	.	.	.	.
14.717	7.8807	18.00	.	Q	.	V	.	.	.	.	.	.
14.733	7.9055	18.07	.	Q	.	V	.	.	.	.	.	.
14.750	7.9305	18.14	.	Q	.	V	.	.	.	.	.	.
14.767	7.9556	18.21	.	Q	.	V	.	.	.	.	.	.
14.783	7.9808	18.28	.	Q	.	V	.	.	.	.	.	.
14.800	8.0061	18.35	.	Q	.	V	.	.	.	.	.	.
14.817	8.0314	18.42	.	Q	.	V	.	.	.	.	.	.
14.833	8.0569	18.49	.	Q	.	V	.	.	.	.	.	.
14.850	8.0825	18.56	.	Q	.	V	.	.	.	.	.	.
14.867	8.1082	18.65	.	Q	.	V	.	.	.	.	.	.
14.883	8.1341	18.84	.	Q	.	V	.	.	.	.	.	.
14.900	8.1603	19.04	.	Q	.	V	.	.	.	.	.	.
14.917	8.1868	19.23	.	Q	.	V	.	.	.	.	.	.
14.933	8.2136	19.43	.	Q	.	V	.	.	.	.	.	.
14.950	8.2406	19.62	.	Q	.	V	.	.	.	.	.	.
14.967	8.2679	19.82	.	Q	.	V	.	.	.	.	.	.
14.983	8.2955	20.01	.	Q	.	V	.	.	.	.	.	.
15.000	8.3233	20.21	.	Q	.	V	.	.	.	.	.	.
15.017	8.3514	20.40	.	Q	.	V	.	.	.	.	.	.
15.033	8.3798	20.60	.	Q	.	V	.	.	.	.	.	.
15.050	8.4084	20.79	.	Q	.	V	.	.	.	.	.	.
15.067	8.4373	20.99	.	Q	.	V	.	.	.	.	.	.
15.083	8.4665	21.18	.	Q	.	V	.	.	.	.	.	.
15.100	8.4959	21.38	.	Q	.	V	.	.	.	.	.	.
15.117	8.5257	21.57	.	Q	.	V	.	.	.	.	.	.
15.133	8.5556	21.77	.	Q	.	V	.	.	.	.	.	.
15.150	8.5859	21.96	.	Q	.	V	.	.	.	.	.	.
15.167	8.6163	22.11	.	Q	.	V	.	.	.	.	.	.
15.183	8.6470	22.25	.	Q	.	V	.	.	.	.	.	.
15.200	8.6778	22.40	.	Q	.	V	.	.	.	.	.	.
15.217	8.7089	22.54	.	Q	.	V	.	.	.	.	.	.
15.233	8.7402	22.69	.	Q	.	V	.	.	.	.	.	.
15.250	8.7716	22.83	.	Q	.	V	.	.	.	.	.	.
15.267	8.8033	22.98	.	Q	.	V	.	.	.	.	.	.
15.283	8.8351	23.12	.	Q	.	V	.	.	.	.	.	.
15.300	8.8672	23.27	.	Q	.	V	.	.	.	.	.	.
15.317	8.8994	23.41	.	Q	.	V	.	.	.	.	.	.
15.333	8.9319	23.56	.	Q	.	V	.	.	.	.	.	.
15.350	8.9645	23.70	.	Q	.	V	.	.	.	.	.	.
15.367	8.9974	23.85	.	Q	.	V	.	.	.	.	.	.
15.383	9.0304	23.99	.	Q	.	V	.	.	.	.	.	.
15.400	9.0637	24.14	.	Q	.	V	.	.	.	.	.	.
15.417	9.0971	24.28	.	Q	.	V	.	.	.	.	.	.
15.433	9.1308	24.44	.	Q	.	V	.	.	.	.	.	.
15.450	9.1649	24.76	.	Q	.	V	.	.	.	.	.	.
15.467	9.1995	25.13	.	Q	.	V	.	.	.	.	.	.
15.483	9.2346	25.51	.	Q	.	V	.	.	.	.	.	.
15.500	9.2703	25.88	.	Q	.	V	.	.	.	.	.	.
15.517	9.3064	26.25	.	Q	.	V	.	.	.	.	.	.
15.533	9.3431	26.62	.	Q	.	V	.	.	.	.	.	.
15.550	9.3803	26.99	.	Q	.	V	.	.	.	.	.	.
15.567	9.4180	27.37	.	Q	.	V	.	.	.	.	.	.

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15.583     9.4562    27.74  .    Q   .       V .         .         .
15.600     9.4949    28.11  .    Q   .       V .         .         .
15.617     9.5341    28.48  .    Q   .       V .         .         .
15.633     9.5739    28.86  .    Q   .       V .         .         .
15.650     9.6142    29.23  .    Q   .       V .         .         .
15.667     9.6549    29.60  .    Q   .        V.         .         .
15.683     9.6962    29.97  .    Q   .        V.         .         .
15.700     9.7380    30.35  .    Q   .        V.         .         .
15.717     9.7803    30.72  .     Q  .        V.         .         .
15.733     9.8235    31.36  .     Q  .        V.         .         .
15.750     9.8678    32.15  .     Q  .        V.         .         .
15.767     9.9132    32.93  .     Q  .        V.         .         .
15.783     9.9596    33.71  .     Q  .        V.         .         .
15.800    10.0071    34.50  .     Q  .        V.         .         .
15.817    10.0557    35.28  .      Q .        V.         .         .
15.833    10.1054    36.06  .      Q .        V.         .         .
15.850    10.1561    36.85  .      Q .         V         .         .
15.867    10.2080    37.63  .      Q .         V         .         .
15.883    10.2609    38.42  .      Q .         V         .         .
15.900    10.3149    39.20  .       Q.         V         .         .
15.917    10.3700    39.98  .       Q.         V         .         .
15.933    10.4261    40.77  .       Q.         V         .         .
15.950    10.4834    41.55  .       Q.         V         .         .
15.967    10.5417    42.34  .       Q.         V         .         .
15.983    10.6011    43.12  .       Q.         V         .         .
16.000    10.6615    43.90  .        Q         .V        .         .
16.017    10.7277    48.06  .        .Q        .V        .         .
16.033    10.8043    55.59  .        . Q       .V        .         .
16.050    10.8912    63.12  .        .   Q     .V        .         .
16.067    10.9886    70.65  .        .     Q   .V        .         .
16.083    11.0963    78.19  .        .       Q .V        .         .
16.100    11.2143    85.72  .        .        Q. V       .         .
16.117    11.3428    93.25  .        .         .QV       .         .
16.133    11.4816   100.78  .        .         . VQ      .         .
16.150    11.6308   108.31  .        .         . V Q     .         .
16.167    11.7903   115.84  .        .         .  V  Q   .         .
16.183    11.9603   123.37  .        .         .  V    Q .         .
16.200    12.1406   130.91  .        .         .  V      Q         .
16.217    12.3313   138.44  .        .         .   V     .Q        .
16.233    12.5323   145.97  .        .         .   V     .  Q      .
16.250    12.7438   153.50  .        .         .    V    .   Q     .
16.267    12.9656   161.03  .        .         .    V    .     Q   .
16.283    13.1977   168.56  .        .         .     V   .      Q  .
16.300    13.4368   173.53  .        .         .     V   .       Q
16.317    13.6600   162.06  .        .         .     V   .     Q   .
16.333    13.8714   153.50  .        .         .      V  .    Q    .
16.350    14.0711   144.94  .        .         .      V  .  Q      .
16.367    14.2589   136.39  .        .         .       V .Q        .
16.383    14.4350   127.83  .        .         .       VQ.         .
16.400    14.5993   119.27  .        .         .      QV .         .
16.417    14.7518   110.71  .        .         .    Q   V.         .
16.433    14.8925   102.15  .        .         .  Q     V.         .
16.450    15.0214    93.59  .        .         .Q       V.         .
16.467    15.1385    85.03  .        .        Q.        V.         .
16.483    15.2438    76.47  .        .     Q   .        V         .
16.500    15.3374    67.91  .        .    Q    .        V         .
16.517    15.4191    59.35  .        .  Q      .        V         .
16.533    15.4891    50.79  .        .Q        .        V         .
```



```
16.550    15.5473    42.23  .         Q.         .         V         .
16.567    15.5937    33.68  .       Q  .         .         V         .
16.583    15.6309    27.01  .      Q   .         .         V         .
16.600    15.6670    26.21  .      Q   .         .         V         .
16.617    15.7025    25.82  .    Q     .         .         V         .
16.633    15.7376    25.44  .    Q     .         .         .V        .
16.650    15.7721    25.06  .    Q     .         .         .V        .
16.667    15.8061    24.68  .    Q     .         .         .V        .
16.683    15.8395    24.29  .    Q     .         .         .V        .
16.700    15.8725    23.91  .    Q     .         .         .V        .
16.717    15.9049    23.53  .    Q     .         .         .V        .
16.733    15.9368    23.15  .    Q     .         .         .V        .
16.750    15.9681    22.76  .    Q     .         .         .V        .
16.767    15.9989    22.38  .    Q     .         .         .V        .
16.783    16.0292    22.00  .    Q     .         .         .V        .
16.800    16.0590    21.62  .   Q      .         .         .V        .
16.817    16.0883    21.23  .   Q      .         .         .V        .
16.833    16.1170    20.85  .   Q      .         .         .V        .
16.850    16.1452    20.47  .   Q      .         .         .V        .
16.867    16.1729    20.11  .   Q      .         .         .V        .
16.883    16.2003    19.88  .   Q      .         .         .V        .
16.900    16.2273    19.66  .   Q      .         .         . V       .
16.917    16.2541    19.45  .   Q      .         .         . V       .
16.933    16.2806    19.23  .   Q      .         .         . V       .
16.950    16.3068    19.02  .   Q      .         .         . V       .
16.967    16.3327    18.80  .   Q      .         .         . V       .
16.983    16.3583    18.59  .   Q      .         .         . V       .
17.000    16.3836    18.37  .   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%	1021.0
10%	750.0
20%	225.0
30%	150.0
40%	130.0
50%	105.0
60%	85.0
70%	65.0
80%	40.0
90%	20.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA C                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 5-YR EV DECEMBER 2018 CCHIU                                           *
 ************************************************************************

  FILE NAME: 3C05EVS.DAT
  TIME/DATE OF STUDY: 13:23 12/11/2018


**************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE    380.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     870.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.391 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) =  0.251
         LOW LOSS FRACTION = 0.461
         *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 = 0.961
          30-MINUTE FACTOR = 0.961
           1-HOUR FACTOR = 0.961
           3-HOUR FACTOR = 0.994
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998
```



```
         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  21.313


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  10.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER         MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
        1               1.238               130.369
        2               5.300               427.640
        3              15.238              1046.416
        4              28.736              1421.163
        5              45.663              1782.148
        6              63.307              1857.785
        7              77.115              1453.788
        8              86.116               947.684
        9              91.519               568.898
       10              95.087               375.643
       11              97.120               214.094
       12              98.189               112.499
       13              98.589                42.131
       14              98.989                42.068
       15              99.379                41.123
       16              99.752                39.222
       17              99.938                19.611
       18             100.000                 6.537


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      65.7471
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =      87.7445
--------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
10.000	15.8141	27.29	. Q V . . . .
10.083	16.0036	27.52	. Q V . . . .
10.167	16.1947	27.74	. Q V . . . .
10.250	16.3874	27.98	. Q V . . . .
10.333	16.5817	28.22	. Q V . . . .
10.417	16.7777	28.46	. Q V . . . .
10.500	16.9754	28.71	. Q V . . . .
10.583	17.1749	28.96	. Q V . . . .
10.667	17.3762	29.22	. Q V . . . .
10.750	17.5793	29.49	. Q V . . . .
10.833	17.7843	29.77	. Q V . . . .
10.917	17.9912	30.05	. Q V . . . .
11.000	18.2001	30.33	. Q V . . . .
11.083	18.4110	30.63	. Q V . . . .
11.167	18.6241	30.93	. Q V . . . .
11.250	18.8392	31.24	. Q V . . . .
11.333	19.0565	31.56	. Q V . . . .
11.417	19.2761	31.88	. Q V . . . .
11.500	19.4980	32.22	. Q V . . . .
11.583	19.7223	32.56	. Q V . . . .
11.667	19.9490	32.92	. Q V. . . . .
11.750	20.1782	33.28	. Q V. . . . .
11.833	20.4100	33.66	. Q V. . . . .
11.917	20.6445	34.05	. Q V. . . . .
12.000	20.8817	34.44	. Q V. . . . .
12.083	21.1226	34.98	. Q V. . . . .
12.167	21.3692	35.80	. Q V. . . . .
12.250	21.6255	37.22	. Q V. . . . .
12.333	21.8942	39.01	. Q V. . . . .
12.417	22.1777	41.16	. Q V . . . .
12.500	22.4766	43.40	. Q V . . . .
12.583	22.7884	45.28	. Q V . . . .
12.667	23.1102	46.71	. Q V . . . .
12.750	23.4394	47.81	. Q V . . . .
12.833	23.7752	48.75	. Q V . . . .
12.917	24.1165	49.56	. Q V . . . .
13.000	24.4629	50.29	. Q .V . . . .
13.083	24.8141	50.99	. Q .V . . . .
13.167	25.1702	51.71	. Q .V . . . .
13.250	25.5315	52.46	. Q .V . . . .
13.333	25.8981	53.23	. Q .V . . . .
13.417	26.2701	54.02	. Q .V . . . .
13.500	26.6477	54.82	. Q . V . . . .
13.583	27.0311	55.66	. Q . V . . . .
13.667	27.4204	56.53	. Q . V . . . .
13.750	27.8161	57.45	. Q . V . . . .
13.833	28.2184	58.41	. Q . V . . . .

13.917	28.6276	59.42	. Q . V . . .
14.000	29.0441	60.48	. Q . V . . .
14.083	29.4687	61.65	. Q . V . . .
14.167	29.9026	63.00	. Q . V . . .
14.250	30.3480	64.68	. Q . V . . .
14.333	30.8065	66.57	. Q . V . . .
14.417	31.2797	68.71	. Q . V . . .
14.500	31.7683	70.95	. Q . V . . .
14.583	32.2721	73.15	. Q . V . . .
14.667	32.7903	75.24	. Q . V . . .
14.750	33.3228	77.32	. Q . V . . .
14.833	33.8700	79.45	. Q . V . . .
14.917	34.4326	81.69	. Q . V . . .
15.000	35.0115	84.05	. Q . V . . .
15.083	35.6081	86.63	. Q . V . . .
15.167	36.2240	89.43	. Q . V . . .
15.250	36.8615	92.56	. Q . V . . .
15.333	37.5227	96.01	. Q . V . . .
15.417	38.2092	99.68	. Q . V . . .
15.500	38.9206	103.30	. Q . V . . .
15.583	39.6544	106.54	. Q . V . . .
15.667	40.4113	109.90	. Q . V . . .
15.750	41.1969	114.07	. Q. V . . .
15.833	42.0237	120.06	. Q. V. . .
15.917	42.9242	130.75	. Q V. . .
16.000	43.9509	149.07	. .Q V . .
16.083	45.2808	193.11	. . Q V . .
16.167	47.1082	265.33	. . .Q . .
16.250	49.6666	371.48	. . . V Q. .
16.333	52.6835	438.04	. . . V . Q .
16.417	56.0180	484.17	. . . V . Q .
16.500	59.2821	473.95	. . . V . Q .
16.583	61.9907	393.30	. . . V .Q .
16.667	64.0521	299.31	. . . Q V. .
16.750	65.6147	226.88	. . Q . V. .
16.833	66.8734	182.77	. . Q . V .
16.917	67.8864	147.08	. .Q . V .
17.000	68.7282	122.24	. Q. . .V .
17.083	69.4495	104.73	. Q . .V .
17.167	70.1231	97.80	. Q . .V .
17.250	70.7541	91.62	. Q . . V .
17.333	71.3431	85.52	. Q . . V .
17.417	71.8781	77.68	. Q . . V .
17.500	72.3695	71.35	. Q . . V .
17.583	72.8291	66.73	. Q . . . V .
17.667	73.2672	63.62	. Q . . . V .
17.750	73.6873	61.00	. Q . . . V .
17.833	74.0916	58.71	. Q . . . V .
17.917	74.4820	56.69	. Q . . . V .
18.000	74.8600	54.89	. Q . . . V .
18.083	75.2261	53.16	. Q . . . V .
18.167	75.5793	51.28	. Q . . . V .
18.250	75.9163	48.93	. Q . . . V .
18.333	76.2354	46.34	. Q . . . V .
18.417	76.5351	43.52	. Q . . . V .
18.500	76.8156	40.72	. Q . . . V .
18.583	77.0799	38.38	. Q . . . V .
18.667	77.3319	36.59	. Q . . . V .

18.750	77.5744	35.21	. Q	.	.	.	V	.
18.833	77.8091	34.07	. Q	.	.	.	V	.
18.917	78.0372	33.13	. Q	.	.	.	V	.
19.000	78.2598	32.32	. Q	.	.	.	V	.
19.083	78.4776	31.62	. Q	.	.	.	V	.
19.167	78.6907	30.95	. Q	.	.	.	V	.
19.250	78.8995	30.32	. Q	.	.	.	V	.
19.333	79.1041	29.71	. Q	.	.	.	V	.
19.417	79.3049	29.15	. Q	.	.	.	V	.
19.500	79.5021	28.63	. Q	.	.	.	V	.
19.583	79.6960	28.14	. Q	.	.	.	V	.
19.667	79.8865	27.67	. Q	.	.	.	V	.
19.750	80.0740	27.22	. Q	.	.	.	V	.
19.833	80.2585	26.79	. Q	.	.	.	V	.
19.917	80.4402	26.38	. Q	.	.	.	V	.
20.000	80.6191	25.98	. 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%	1205.0
10%	330.0
20%	110.0
30%	60.0
40%	40.0
50%	35.0
60%	30.0
70%	25.0
80%	20.0
90%	15.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA D                                                   *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                  *
* 5-YR EV SEPTEMBER 2018 CCHIU                                         *
 ************************************************************************

  FILE NAME: 3D05EVS.DAT
  TIME/DATE OF STUDY: 15:30 09/25/2018

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


************************************************************************
  FLOW PROCESS FROM NODE    430.00 TO NODE    428.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  439.50
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.239
    LOW LOSS FRACTION = 0.464
    TIME OF CONCENTRATION(MIN.) = 32.31
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   5
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.18
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.41
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.55
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.92
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.27
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  2.12

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    39.45
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    38.20

------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	54.1	108.1	162.2	216.2
10.000	7.2150	12.35	. Q	V .	.	.	.
10.017	7.2320	12.38	. Q	V .	.	.	.
10.033	7.2491	12.40	. Q	V .	.	.	.
10.050	7.2662	12.43	. Q	V .	.	.	.
10.067	7.2834	12.45	. Q	V .	.	.	.
10.083	7.3005	12.48	. Q	V .	.	.	.
10.100	7.3178	12.49	. Q	V .	.	.	.
10.117	7.3350	12.51	. Q	V .	.	.	.
10.133	7.3522	12.52	. Q	V .	.	.	.
10.150	7.3695	12.54	. Q	V .	.	.	.
10.167	7.3868	12.55	. Q	V .	.	.	.
10.183	7.4041	12.57	. Q	V .	.	.	.
10.200	7.4214	12.58	. Q	V .	.	.	.
10.217	7.4388	12.60	. Q	V .	.	.	.
10.233	7.4561	12.61	. Q	V .	.	.	.
10.250	7.4735	12.63	. Q	V .	.	.	.
10.267	7.4909	12.64	. Q	V .	.	.	.
10.283	7.5084	12.65	. Q	V .	.	.	.
10.300	7.5258	12.67	. Q	V .	.	.	.
10.317	7.5433	12.68	. Q	V .	.	.	.
10.333	7.5608	12.70	. Q	V .	.	.	.
10.350	7.5783	12.71	. Q	V .	.	.	.
10.367	7.5958	12.73	. Q	V .	.	.	.
10.383	7.6134	12.74	. Q	V .	.	.	.
10.400	7.6310	12.76	. Q	V .	.	.	.
10.417	7.6485	12.77	. Q	V .	.	.	.
10.433	7.6662	12.79	. Q	V .	.	.	.
10.450	7.6838	12.80	. Q	V .	.	.	.
10.467	7.7014	12.82	. Q	V .	.	.	.
10.483	7.7191	12.83	. Q	V .	.	.	.
10.500	7.7368	12.84	. Q	V .	.	.	.
10.517	7.7545	12.86	. Q	V .	.	.	.
10.533	7.7722	12.87	. Q	V .	.	.	.
10.550	7.7900	12.89	. Q	V .	.	.	.
10.567	7.8078	12.90	. Q	V .	.	.	.
10.583	7.8256	12.92	. Q	V .	.	.	.
10.600	7.8434	12.93	. Q	V .	.	.	.
10.617	7.8612	12.95	. Q	V .	.	.	.
10.633	7.8791	12.97	. Q	V .	.	.	.
10.650	7.8970	13.01	. Q	V .	.	.	.
10.667	7.9150	13.04	. Q	V .	.	.	.
10.683	7.9330	13.07	. Q	V .	.	.	.
10.700	7.9510	13.11	. Q	V .	.	.	.
10.717	7.9691	13.14	. Q	V .	.	.	.
10.733	7.9873	13.18	. Q	V .	.	.	.

10.750	8.0055	13.21	. Q	V .	.	.	.
10.767	8.0237	13.25	. Q	V .	.	.	.
10.783	8.0420	13.28	. Q	V .	.	.	.
10.800	8.0603	13.31	. Q	V .	.	.	.
10.817	8.0787	13.35	. Q	V .	.	.	.
10.833	8.0972	13.38	. Q	V .	.	.	.
10.850	8.1156	13.42	. Q	V .	.	.	.
10.867	8.1342	13.45	. Q	V .	.	.	.
10.883	8.1527	13.48	. Q	V .	.	.	.
10.900	8.1714	13.52	. Q	V .	.	.	.
10.917	8.1900	13.55	. Q	V .	.	.	.
10.933	8.2087	13.59	. Q	V .	.	.	.
10.950	8.2275	13.62	. Q	V .	.	.	.
10.967	8.2463	13.65	. Q	V .	.	.	.
10.983	8.2652	13.69	. Q	V .	.	.	.
11.000	8.2841	13.72	. Q	V .	.	.	.
11.017	8.3030	13.76	. Q	V .	.	.	.
11.033	8.3220	13.79	. Q	V .	.	.	.
11.050	8.3410	13.82	. Q	V .	.	.	.
11.067	8.3601	13.86	. Q	V .	.	.	.
11.083	8.3793	13.89	. Q	V .	.	.	.
11.100	8.3984	13.93	. Q	V .	.	.	.
11.117	8.4177	13.96	. Q	V .	.	.	.
11.133	8.4369	13.99	. Q	V .	.	.	.
11.150	8.4563	14.03	. Q	V .	.	.	.
11.167	8.4756	14.06	. Q	V .	.	.	.
11.183	8.4950	14.08	. Q	V .	.	.	.
11.200	8.5144	14.10	. Q	V .	.	.	.
11.217	8.5339	14.12	. Q	V .	.	.	.
11.233	8.5534	14.14	. Q	V .	.	.	.
11.250	8.5729	14.16	. Q	V .	.	.	.
11.267	8.5924	14.18	. Q	V .	.	.	.
11.283	8.6119	14.20	. Q	V .	.	.	.
11.300	8.6315	14.22	. Q	V .	.	.	.
11.317	8.6511	14.24	. Q	V .	.	.	.
11.333	8.6708	14.26	. Q	V .	.	.	.
11.350	8.6905	14.28	. Q	V .	.	.	.
11.367	8.7101	14.30	. Q	V .	.	.	.
11.383	8.7299	14.32	. Q	V .	.	.	.
11.400	8.7496	14.34	. Q	V .	.	.	.
11.417	8.7694	14.36	. Q	V .	.	.	.
11.433	8.7892	14.38	. Q	V .	.	.	.
11.450	8.8090	14.40	. Q	V .	.	.	.
11.467	8.8289	14.42	. Q	V .	.	.	.
11.483	8.8488	14.44	. Q	V .	.	.	.
11.500	8.8687	14.46	. Q	V .	.	.	.
11.517	8.8886	14.48	. Q	V.	.	.	.
11.533	8.9086	14.50	. Q	V.	.	.	.
11.550	8.9286	14.52	. Q	V.	.	.	.
11.567	8.9486	14.54	. Q	V.	.	.	.
11.583	8.9687	14.56	. Q	V.	.	.	.
11.600	8.9888	14.58	. Q	V.	.	.	.
11.617	9.0089	14.60	. Q	V.	.	.	.
11.633	9.0290	14.62	. Q	V.	.	.	.
11.650	9.0492	14.64	. Q	V.	.	.	.
11.667	9.0694	14.66	. Q	V.	.	.	.
11.683	9.0896	14.68	. Q	V.	.	.	.
11.700	9.1099	14.71	. Q	V.	.	.	.

11.717	9.1302	14.77	. Q	V.	.	.	.	
11.733	9.1506	14.83	. Q	V.	.	.	.	
11.750	9.1712	14.90	. Q	V.	.	.	.	
11.767	9.1918	14.97	. Q	V.	.	.	.	
11.783	9.2125	15.04	. Q	V.	.	.	.	
11.800	9.2333	15.10	. Q	V.	.	.	.	
11.817	9.2542	15.17	. Q	V.	.	.	.	
11.833	9.2752	15.24	. Q	V.	.	.	.	
11.850	9.2962	15.30	. Q	V.	.	.	.	
11.867	9.3174	15.37	. Q	V.	.	.	.	
11.883	9.3387	15.44	. Q	V.	.	.	.	
11.900	9.3600	15.51	. Q	V.	.	.	.	
11.917	9.3815	15.57	. Q	V.	.	.	.	
11.933	9.4030	15.64	. Q	V.	.	.	.	
11.950	9.4247	15.71	. Q	V.	.	.	.	
11.967	9.4464	15.78	. Q	V.	.	.	.	
11.983	9.4682	15.84	. Q	V.	.	.	.	
12.000	9.4901	15.91	. Q	V.	.	.	.	
12.017	9.5121	15.98	. Q	V.	.	.	.	
12.033	9.5342	16.04	. Q	V.	.	.	.	
12.050	9.5564	16.11	. Q	V.	.	.	.	
12.067	9.5787	16.18	. Q	V.	.	.	.	
12.083	9.6011	16.25	. Q	V.	.	.	.	
12.100	9.6236	16.31	. Q	V.	.	.	.	
12.117	9.6461	16.38	. Q	V.	.	.	.	
12.133	9.6688	16.45	. Q	V.	.	.	.	
12.150	9.6915	16.52	. Q	V.	.	.	.	
12.167	9.7144	16.58	. Q	V.	.	.	.	
12.183	9.7373	16.65	. Q	V.	.	.	.	
12.200	9.7603	16.72	. Q	V.	.	.	.	
12.217	9.7835	16.79	. Q	V.	.	.	.	
12.233	9.8067	16.85	. Q	V.	.	.	.	
12.250	9.8301	16.97	. Q	V.	.	.	.	
12.267	9.8536	17.12	. Q	V.	.	.	.	
12.283	9.8774	17.26	. Q	V	.	.	.	
12.300	9.9014	17.41	. Q	V	.	.	.	
12.317	9.9256	17.55	. Q	V	.	.	.	
12.333	9.9499	17.70	. Q	V	.	.	.	
12.350	9.9745	17.84	. Q	V	.	.	.	
12.367	9.9993	17.99	. Q	V	.	.	.	
12.383	10.0243	18.13	. Q	V	.	.	.	
12.400	10.0494	18.27	. Q	V	.	.	.	
12.417	10.0748	18.42	. Q	V	.	.	.	
12.433	10.1004	18.56	. Q	V	.	.	.	
12.450	10.1261	18.71	. Q	V	.	.	.	
12.467	10.1521	18.85	. Q	V	.	.	.	
12.483	10.1783	19.00	. Q	V	.	.	.	
12.500	10.2046	19.14	. Q	V	.	.	.	
12.517	10.2312	19.29	. Q	V	.	.	.	
12.533	10.2580	19.43	. Q	V	.	.	.	
12.550	10.2849	19.58	. Q	V	.	.	.	
12.567	10.3121	19.72	. Q	V	.	.	.	
12.583	10.3395	19.87	. Q	V	.	.	.	
12.600	10.3670	20.01	. Q	V	.	.	.	
12.617	10.3948	20.16	. Q	V	.	.	.	
12.633	10.4228	20.30	. Q	V	.	.	.	
12.650	10.4509	20.45	. Q	V	.	.	.	
12.667	10.4793	20.59	. Q	V	.	.	.	

12.683	10.5079	20.74	. Q	V	.	.	.	
12.700	10.5366	20.88	. Q	V	.	.	.	
12.717	10.5656	21.03	. Q	V	.	.	.	
12.733	10.5947	21.17	. Q	V	.	.	.	
12.750	10.6241	21.32	. Q	V	.	.	.	
12.767	10.6537	21.46	. Q	V	.	.	.	
12.783	10.6834	21.58	. Q	V	.	.	.	
12.800	10.7132	21.66	. Q	V	.	.	.	
12.817	10.7432	21.74	. Q	V	.	.	.	
12.833	10.7732	21.82	. Q	V	.	.	.	
12.850	10.8034	21.90	. Q	V	.	.	.	
12.867	10.8337	21.98	. Q	V	.	.	.	
12.883	10.8641	22.06	. Q	.V	.	.	.	
12.900	10.8946	22.14	. Q	.V	.	.	.	
12.917	10.9252	22.22	. Q	.V	.	.	.	
12.933	10.9559	22.30	. Q	.V	.	.	.	
12.950	10.9867	22.38	. Q	.V	.	.	.	
12.967	11.0177	22.46	. Q	.V	.	.	.	
12.983	11.0487	22.54	. Q	.V	.	.	.	
13.000	11.0799	22.62	. Q	.V	.	.	.	
13.017	11.1111	22.70	. Q	.V	.	.	.	
13.033	11.1425	22.78	. Q	.V	.	.	.	
13.050	11.1740	22.86	. Q	.V	.	.	.	
13.067	11.2056	22.94	. Q	.V	.	.	.	
13.083	11.2373	23.02	. Q	.V	.	.	.	
13.100	11.2691	23.10	. Q	.V	.	.	.	
13.117	11.3011	23.18	. Q	.V	.	.	.	
13.133	11.3331	23.26	. Q	.V	.	.	.	
13.150	11.3652	23.34	. Q	.V	.	.	.	
13.167	11.3975	23.42	. Q	.V	.	.	.	
13.183	11.4299	23.50	. Q	.V	.	.	.	
13.200	11.4624	23.58	. Q	.V	.	.	.	
13.217	11.4949	23.66	. Q	.V	.	.	.	
13.233	11.5276	23.74	. Q	.V	.	.	.	
13.250	11.5605	23.82	. Q	.V	.	.	.	
13.267	11.5934	23.90	. Q	.V	.	.	.	
13.283	11.6264	23.98	. Q	.V	.	.	.	
13.300	11.6595	24.06	. Q	.V	.	.	.	
13.317	11.6928	24.14	. Q	.V	.	.	.	
13.333	11.7261	24.19	. Q	.V	.	.	.	
13.350	11.7595	24.24	. Q	.V	.	.	.	
13.367	11.7930	24.29	. Q	.V	.	.	.	
13.383	11.8265	24.35	. Q	.V	.	.	.	
13.400	11.8601	24.40	. Q	. V	.	.	.	
13.417	11.8938	24.45	. Q	. V	.	.	.	
13.433	11.9275	24.50	. Q	. V	.	.	.	
13.450	11.9614	24.55	. Q	. V	.	.	.	
13.467	11.9952	24.61	. Q	. V	.	.	.	
13.483	12.0292	24.66	. Q	. V	.	.	.	
13.500	12.0632	24.71	. Q	. V	.	.	.	
13.517	12.0973	24.76	. Q	. V	.	.	.	
13.533	12.1315	24.81	. Q	. V	.	.	.	
13.550	12.1658	24.86	. Q	. V	.	.	.	
13.567	12.2001	24.92	. Q	. V	.	.	.	
13.583	12.2345	24.97	. Q	. V	.	.	.	
13.600	12.2689	25.02	. Q	. V	.	.	.	
13.617	12.3035	25.07	. Q	. V	.	.	.	
13.633	12.3381	25.12	. Q	. V	.	.	.	

13.650	12.3728	25.18	.	Q	.	V	.	.	.	
13.667	12.4075	25.23	.	Q	.	V	.	.	.	
13.683	12.4423	25.28	.	Q	.	V	.	.	.	
13.700	12.4772	25.33	.	Q	.	V	.	.	.	
13.717	12.5122	25.38	.	Q	.	V	.	.	.	
13.733	12.5472	25.43	.	Q	.	V	.	.	.	
13.750	12.5823	25.49	.	Q	.	V	.	.	.	
13.767	12.6175	25.54	.	Q	.	V	.	.	.	
13.783	12.6527	25.59	.	Q	.	V	.	.	.	
13.800	12.6881	25.64	.	Q	.	V	.	.	.	
13.817	12.7235	25.69	.	Q	.	V	.	.	.	
13.833	12.7589	25.75	.	Q	.	V	.	.	.	
13.850	12.7945	25.80	.	Q	.	V	.	.	.	
13.867	12.8302	25.92	.	Q	.	V	.	.	.	
13.883	12.8661	26.07	.	Q	.	V	.	.	.	
13.900	12.9022	26.22	.	Q	.	V	.	.	.	
13.917	12.9385	26.37	.	Q	.	V	.	.	.	
13.933	12.9750	26.51	.	Q	.	V	.	.	.	
13.950	13.0117	26.66	.	Q	.	V	.	.	.	
13.967	13.0487	26.81	.	Q	.	V	.	.	.	
13.983	13.0858	26.96	.	Q	.	V	.	.	.	
14.000	13.1231	27.11	.	Q	.	V	.	.	.	
14.017	13.1607	27.25	.	Q	.	V	.	.	.	
14.033	13.1984	27.40	.	Q	.	V	.	.	.	
14.050	13.2364	27.55	.	Q	.	V	.	.	.	
14.067	13.2745	27.70	.	Q	.	V	.	.	.	
14.083	13.3129	27.85	.	Q	.	V	.	.	.	
14.100	13.3514	28.00	.	Q	.	V	.	.	.	
14.117	13.3902	28.14	.	Q	.	V	.	.	.	
14.133	13.4292	28.29	.	Q	.	V	.	.	.	
14.150	13.4684	28.44	.	Q	.	V	.	.	.	
14.167	13.5077	28.59	.	Q	.	V	.	.	.	
14.183	13.5473	28.74	.	Q	.	V	.	.	.	
14.200	13.5871	28.89	.	Q	.	V	.	.	.	
14.217	13.6271	29.03	.	Q	.	V	.	.	.	
14.233	13.6673	29.18	.	Q	.	V	.	.	.	
14.250	13.7077	29.33	.	Q	.	V	.	.	.	
14.267	13.7483	29.48	.	Q	.	V	.	.	.	
14.283	13.7891	29.63	.	Q	.	V	.	.	.	
14.300	13.8301	29.78	.	Q	.	V	.	.	.	
14.317	13.8713	29.92	.	Q	.	V	.	.	.	
14.333	13.9128	30.07	.	Q	.	V	.	.	.	
14.350	13.9544	30.22	.	Q	.	V	.	.	.	
14.367	13.9962	30.37	.	Q	.	V	.	.	.	
14.383	14.0382	30.52	.	Q	.	V	.	.	.	
14.400	14.0805	30.65	.	Q	.	V	.	.	.	
14.417	14.1228	30.76	.	Q	.	V	.	.	.	
14.433	14.1654	30.87	.	Q	.	V	.	.	.	
14.450	14.2080	30.98	.	Q	.	V	.	.	.	
14.467	14.2508	31.09	.	Q	.	V	.	.	.	
14.483	14.2938	31.20	.	Q	.	V	.	.	.	
14.500	14.3370	31.31	.	Q	.	V	.	.	.	
14.517	14.3802	31.42	.	Q	.	V	.	.	.	
14.533	14.4237	31.53	.	Q	.	V	.	.	.	
14.550	14.4672	31.64	.	Q	.	V	.	.	.	
14.567	14.5110	31.75	.	Q	.	V	.	.	.	
14.583	14.5549	31.86	.	Q	.	V	.	.	.	
14.600	14.5989	31.97	.	Q	.	V	.	.	.	

14.617	14.6431	32.08	.	Q	.	V	.	.	.	
14.633	14.6874	32.19	.	Q	.	V	.	.	.	
14.650	14.7319	32.30	.	Q	.	V	.	.	.	
14.667	14.7766	32.41	.	Q	.	V	.	.	.	
14.683	14.8214	32.52	.	Q	.	V	.	.	.	
14.700	14.8663	32.63	.	Q	.	V	.	.	.	
14.717	14.9114	32.74	.	Q	.	V	.	.	.	
14.733	14.9567	32.85	.	Q	.	V	.	.	.	
14.750	15.0021	32.96	.	Q	.	V	.	.	.	
14.767	15.0476	33.07	.	Q	.	V	.	.	.	
14.783	15.0934	33.18	.	Q	.	V	.	.	.	
14.800	15.1392	33.30	.	Q	.	V	.	.	.	
14.817	15.1852	33.41	.	Q	.	V	.	.	.	
14.833	15.2314	33.52	.	Q	.	V	.	.	.	
14.850	15.2777	33.63	.	Q	.	V	.	.	.	
14.867	15.3242	33.74	.	Q	.	V	.	.	.	
14.883	15.3708	33.85	.	Q	.	V	.	.	.	
14.900	15.4176	33.96	.	Q	.	V	.	.	.	
14.917	15.4645	34.07	.	Q	.	V	.	.	.	
14.933	15.5116	34.23	.	Q	.	V	.	.	.	
14.950	15.5593	34.60	.	Q	.	V	.	.	.	
14.967	15.6075	35.00	.	Q	.	V	.	.	.	
14.983	15.6563	35.39	.	Q	.	V	.	.	.	
15.000	15.7056	35.79	.	Q	.	V	.	.	.	
15.017	15.7554	36.18	.	Q	.	V	.	.	.	
15.033	15.8058	36.57	.	Q	.	V	.	.	.	
15.050	15.8567	36.97	.	Q	.	V	.	.	.	
15.067	15.9081	37.36	.	Q	.	V	.	.	.	
15.083	15.9601	37.75	.	Q	.	V	.	.	.	
15.100	16.0127	38.15	.	Q	.	V	.	.	.	
15.117	16.0658	38.54	.	Q	.	V	.	.	.	
15.133	16.1194	38.93	.	Q	.	V	.	.	.	
15.150	16.1736	39.33	.	Q	.	V	.	.	.	
15.167	16.2283	39.72	.	Q	.	V	.	.	.	
15.183	16.2835	40.11	.	Q	.	V	.	.	.	
15.200	16.3393	40.51	.	Q	.	V	.	.	.	
15.217	16.3957	40.90	.	Q	.	V	.	.	.	
15.233	16.4525	41.29	.	Q	.	V	.	.	.	
15.250	16.5100	41.69	.	Q	.	V	.	.	.	
15.267	16.5679	42.08	.	Q	.	V	.	.	.	
15.283	16.6264	42.47	.	Q	.	V	.	.	.	
15.300	16.6855	42.87	.	Q	.	V	.	.	.	
15.317	16.7451	43.26	.	Q	.	V	.	.	.	
15.333	16.8052	43.66	.	Q	.	V	.	.	.	
15.350	16.8659	44.05	.	Q	.	V	.	.	.	
15.367	16.9271	44.44	.	Q	.	V	.	.	.	
15.383	16.9888	44.84	.	Q	.	V	.	.	.	
15.400	17.0511	45.23	.	Q	.	V	.	.	.	
15.417	17.1140	45.62	.	Q	.	V	.	.	.	
15.433	17.1774	46.02	.	Q	.	V	.	.	.	
15.450	17.2413	46.41	.	Q	.	V	.	.	.	
15.467	17.3058	46.80	.	Q	.	V	.	.	.	
15.483	17.3707	47.15	.	Q	.	V	.	.	.	
15.500	17.4361	47.48	.	Q	.	V	.	.	.	
15.517	17.5020	47.81	.	Q	.	V	.	.	.	
15.533	17.5683	48.14	.	Q	.	V	.	.	.	
15.550	17.6350	48.48	.	Q	.	V	.	.	.	
15.567	17.7023	48.81	.	Q	.	V	.	.	.	

15.583	17.7700	49.14	. Q. V . . .
15.600	17.8381	49.47	. Q. V . . .
15.617	17.9067	49.81	. Q. V . . .
15.633	17.9758	50.14	. Q. V . . .
15.650	18.0453	50.47	. Q. V . . .
15.667	18.1153	50.80	. Q. V . . .
15.683	18.1857	51.14	. Q. V . . .
15.700	18.2566	51.47	. Q. V . . .
15.717	18.3279	51.80	. Q. V . . .
15.733	18.3998	52.13	. Q. V . . .
15.750	18.4720	52.47	. Q. V . . .
15.767	18.5448	52.80	. Q. V . . .
15.783	18.6179	53.13	. Q. V . . .
15.800	18.6916	53.46	. Q. V . . .
15.817	18.7657	53.80	. Q. V. . .
15.833	18.8402	54.13	. Q V. . .
15.850	18.9152	54.46	. Q V. . .
15.867	18.9907	54.79	. Q V. . .
15.883	19.0666	55.13	. Q V. . .
15.900	19.1430	55.46	. Q V. . .
15.917	19.2199	55.79	. Q V. . .
15.933	19.2972	56.12	. Q V. . .
15.950	19.3749	56.46	. Q V. . .
15.967	19.4532	56.79	. Q V. . .
15.983	19.5318	57.12	. Q V. . .
16.000	19.6110	57.45	. Q V. . .
16.017	19.6937	60.07	. .Q V. . .
16.033	19.7832	64.98	. . Q V . .
16.050	19.8795	69.89	. . Q V . .
16.067	19.9825	74.80	. . Q V . .
16.083	20.0923	79.71	. . Q V . .
16.100	20.2089	84.62	. . Q V . .
16.117	20.3322	89.53	. . Q V . .
16.133	20.4623	94.44	. . Q V . .
16.150	20.5991	99.35	. . Q V . .
16.167	20.7427	104.26	. . Q.V . .
16.183	20.8931	109.17	. . QV . .
16.200	21.0502	114.08	. . .Q . .
16.217	21.2141	118.99	. . .VQ . .
16.233	21.3848	123.90	. . .VQ . .
16.250	21.5622	128.81	. . .V Q . .
16.267	21.7464	133.72	. . . V Q . .
16.283	21.9373	138.62	. . . V Q . .
16.300	22.1350	143.53	. . . V Q . .
16.317	22.3395	148.44	. . . V Q . .
16.333	22.5507	153.35	. . . V Q . .
16.350	22.7687	158.26	. . . V Q. .
16.367	22.9935	163.17	. . . V Q .
16.383	23.2250	168.08	. . . V .Q .
16.400	23.4633	172.99	. . . V .Q .
16.417	23.7083	177.90	. . . V . Q .
16.433	23.9601	182.81	. . . V . Q .
16.450	24.2187	187.72	. . . V . Q .
16.467	24.4840	192.63	. . . V . Q .
16.483	24.7561	197.54	. . . V . Q .
16.500	25.0350	202.45	. . . V . Q .
16.517	25.3206	207.36	. . . V . Q .
16.533	25.6130	212.27	. . . V . Q.

16.550	25.9108	216.24	. . . V . Q
16.567	26.1997	209.72	. . . V . Q .
16.583	26.4810	204.24	. . . V . Q .
16.600	26.7548	198.75	. . . V . Q .
16.617	27.0210	193.27	. . . V . Q .
16.633	27.2796	187.79	. . . V . Q .
16.650	27.5307	182.30	. . . V . Q .
16.667	27.7743	176.82	. . . V . Q .
16.683	28.0103	171.34	. . . V .Q .
16.700	28.2388	165.86	. . . V Q .
16.717	28.4597	160.37	. . . VQ. .
16.733	28.6730	154.89	. . . QV. .
16.750	28.8788	149.41	. . . Q V. .
16.767	29.0770	143.92	. . . Q V. .
16.783	29.2677	138.44	. . . Q V. .
16.800	29.4509	132.96	. . . Q V. .
16.817	29.6265	127.48	. . . Q V .
16.833	29.7945	121.99	. . . Q V .
16.850	29.9550	116.51	. . .Q V .
16.867	30.1079	111.03	. . . Q V .
16.883	30.2533	105.54	. . . Q. V .
16.900	30.3911	100.06	. . . Q . V .
16.917	30.5214	94.58	. . . Q . V .
16.933	30.6441	89.10	. . . Q . .V .
16.950	30.7593	83.61	. . . Q . .V .
16.967	30.8669	78.13	. . . Q . .V .
16.983	30.9669	72.65	. . . Q . .V .
17.000	31.0595	67.16	. . . Q . .V .
17.017	31.1444	61.68	. . .Q . .V .
17.033	31.2218	56.20	. . . Q . .V .
17.050	31.2917	50.72	. . . Q. . .V .
17.067	31.3540	45.23	. . . Q . . .V .
17.083	31.4093	40.12	. . . Q . . .V .
17.100	31.4627	38.79	. . . Q . . .V .
17.117	31.5156	38.44	. . . Q . . .V .
17.133	31.5681	38.09	. . . Q . . . V .
17.150	31.6201	37.74	. . Q . . . . V .
17.167	31.6716	37.40	. . Q . . . . V .
17.183	31.7226	37.05	. . Q . . . . V .
17.200	31.7732	36.70	. . Q . . . . V .
17.217	31.8233	36.35	. . Q . . . . V .
17.233	31.8728	36.01	. . Q . . . . V .
17.250	31.9220	35.66	. . Q . . . . V .
17.267	31.9706	35.31	. . Q . . . . V .
17.283	32.0188	34.97	. . Q . . . . V .
17.300	32.0665	34.62	. . Q . . . . V .
17.317	32.1137	34.27	. . Q . . . . V .
17.333	32.1604	33.92	. . Q . . . . V .
17.350	32.2066	33.58	. . Q . . . . V .
17.367	32.2524	33.23	. . Q . . . . V .
17.383	32.2977	32.88	. . Q . . . . V .
17.400	32.3425	32.53	. . Q . . . . V .
17.417	32.3868	32.19	. Q . . . . V .
17.433	32.4307	31.84	. Q . . . . V .
17.450	32.4741	31.49	. Q . . . . V .
17.467	32.5170	31.14	. Q . . . . V .
17.483	32.5594	30.80	. Q . . . . V .
17.500	32.6013	30.45	. Q . . . . V .

17.517	32.6428	30.10	.	Q	.	.	.	V	.			
17.533	32.6838	29.76	.	Q	.	.	.	V	.			
17.550	32.7243	29.41	.	Q	.	.	.	V	.			
17.567	32.7643	29.06	.	Q	.	.	.	V	.			
17.583	32.8039	28.71	.	Q	.	.	.	V	.			
17.600	32.8429	28.37	.	Q	.	.	.	V	.			
17.617	32.8815	28.02	.	Q	.	.	.	V	.			
17.633	32.9198	27.78	.	Q	.	.	.	V	.			
17.650	32.9578	27.62	.	Q	.	.	.	V	.			
17.667	32.9957	27.46	.	Q	.	.	.	V	.			
17.683	33.0333	27.30	.	Q	.	.	.	V	.			
17.700	33.0707	27.14	.	Q	.	.	.	V	.			
17.717	33.1078	26.99	.	Q	.	.	.	V	.			
17.733	33.1448	26.83	.	Q	.	.	.	V	.			
17.750	33.1815	26.67	.	Q	.	.	.	V	.			
17.767	33.2180	26.51	.	Q	.	.	.	V	.			
17.783	33.2543	26.35	.	Q	.	.	.	V	.			
17.800	33.2904	26.19	.	Q	.	.	.	V	.			
17.817	33.3263	26.03	.	Q	.	.	.	V	.			
17.833	33.3619	25.87	.	Q	.	.	.	V	.			
17.850	33.3973	25.72	.	Q	.	.	.	V	.			
17.867	33.4325	25.56	.	Q	.	.	.	V	.			
17.883	33.4675	25.40	.	Q	.	.	.	V	.			
17.900	33.5023	25.24	.	Q	.	.	.	V	.			
17.917	33.5368	25.08	.	Q	.	.	.	V	.			
17.933	33.5711	24.92	.	Q	.	.	.	V	.			
17.950	33.6052	24.76	.	Q	.	.	.	V	.			
17.967	33.6391	24.60	.	Q	.	.	.	V	.			
17.983	33.6728	24.44	.	Q	.	.	.	V	.			
18.000	33.7063	24.29	.	Q	.	.	.	V	.			
18.017	33.7395	24.13	.	Q	.	.	.	V	.			
18.033	33.7725	23.97	.	Q	.	.	.	V	.			
18.050	33.8053	23.81	.	Q	.	.	.	V	.			
18.067	33.8379	23.65	.	Q	.	.	.	V	.			
18.083	33.8702	23.49	.	Q	.	.	.	V	.			
18.100	33.9024	23.33	.	Q	.	.	.	V	.			
18.117	33.9343	23.17	.	Q	.	.	.	V	.			
18.133	33.9660	23.02	.	Q	.	.	.	V	.			
18.150	33.9975	22.86	.	Q	.	.	.	V	.			
18.167	34.0287	22.68	.	Q	.	.	.	V	.			
18.183	34.0597	22.45	.	Q	.	.	.	V	.			
18.200	34.0903	22.23	.	Q	.	.	.	V	.			
18.217	34.1206	22.00	.	Q	.	.	.	V	.			
18.233	34.1506	21.78	.	Q	.	.	.	V	.			
18.250	34.1803	21.55	.	Q	.	.	.	V	.			
18.267	34.2096	21.32	.	Q	.	.	.	V	.			
18.283	34.2387	21.10	.	Q	.	.	.	V	.			
18.300	34.2674	20.87	.	Q	.	.	.	V	.			
18.317	34.2959	20.65	.	Q	.	.	.	V	.			
18.333	34.3240	20.42	.	Q	.	.	.	V	.			
18.350	34.3518	20.19	.	Q	.	.	.	V	.			
18.367	34.3793	19.97	.	Q	.	.	.	V	.			
18.383	34.4065	19.74	.	Q	.	.	.	V	.			
18.400	34.4334	19.51	.	Q	.	.	.	V	.			
18.417	34.4600	19.29	.	Q	.	.	.	V	.			
18.433	34.4862	19.06	.	Q	.	.	.	V	.			
18.450	34.5122	18.84	.	Q	.	.	.	V	.			
18.467	34.5378	18.61	.	Q	.	.	.	V	.			

18.483	34.5631	18.38	.	Q	.	.	.	V	.			
18.500	34.5881	18.16	.	Q	.	.	.	V	.			
18.517	34.6128	17.93	.	Q	.	.	.	V	.			
18.533	34.6372	17.70	.	Q	.	.	.	V	.			
18.550	34.6613	17.48	.	Q	.	.	.	V	.			
18.567	34.6851	17.25	.	Q	.	.	.	V	.			
18.583	34.7085	17.03	.	Q	.	.	.	V	.			
18.600	34.7316	16.80	.	Q	.	.	.	V	.			
18.617	34.7545	16.57	.	Q	.	.	.	V	.			
18.633	34.7770	16.35	.	Q	.	.	.	V	.			
18.650	34.7992	16.12	.	Q	.	.	.	V	.			
18.667	34.8211	15.90	.	Q	.	.	.	V	.			
18.683	34.8427	15.67	.	Q	.	.	.	V	.			
18.700	34.8640	15.46	.	Q	.	.	.	V	.			
18.717	34.8851	15.37	.	Q	.	.	.	V	.			
18.733	34.9062	15.31	.	Q	.	.	.	V	.			
18.750	34.9272	15.25	.	Q	.	.	.	V	.			
18.767	34.9482	15.19	.	Q	.	.	.	V	.			
18.783	34.9690	15.13	.	Q	.	.	.	V	.			
18.800	34.9898	15.07	.	Q	.	.	.	V	.			
18.817	35.0104	15.01	.	Q	.	.	.	V	.			
18.833	35.0310	14.95	.	Q	.	.	.	V	.			
18.850	35.0515	14.89	.	Q	.	.	.	V	.			
18.867	35.0720	14.83	.	Q	.	.	.	V	.			
18.883	35.0923	14.77	.	Q	.	.	.	V	.			
18.900	35.1126	14.71	.	Q	.	.	.	V	.			
18.917	35.1327	14.65	.	Q	.	.	.	V	.			
18.933	35.1528	14.59	.	Q	.	.	.	V	.			
18.950	35.1728	14.53	.	Q	.	.	.	V	.			
18.967	35.1928	14.46	.	Q	.	.	.	V	.			
18.983	35.2126	14.40	.	Q	.	.	.	V	.			
19.000	35.2324	14.34	.	Q	.	.	.	V	.			
19.017	35.2520	14.28	.	Q	.	.	.	V	.			
19.033	35.2716	14.22	.	Q	.	.	.	V	.			
19.050	35.2911	14.16	.	Q	.	.	.	V	.			
19.067	35.3106	14.10	.	Q	.	.	.	V	.			
19.083	35.3299	14.04	.	Q	.	.	.	V	.			
19.100	35.3492	13.98	.	Q	.	.	.	V	.			
19.117	35.3683	13.92	.	Q	.	.	.	V	.			
19.133	35.3874	13.86	.	Q	.	.	.	V	.			
19.150	35.4064	13.80	.	Q	.	.	.	V	.			
19.167	35.4253	13.74	.	Q	.	.	.	V	.			
19.183	35.4442	13.68	.	Q	.	.	.	V	.			
19.200	35.4629	13.62	.	Q	.	.	.	V	.			
19.217	35.4816	13.56	.	Q	.	.	.	V	.			
19.233	35.5002	13.50	.	Q	.	.	.	V	.			
19.250	35.5187	13.45	.	Q	.	.	.	V	.			
19.267	35.5372	13.40	.	Q	.	.	.	V	.			
19.283	35.5556	13.36	.	Q	.	.	.	V	.			
19.300	35.5739	13.31	.	Q	.	.	.	V	.			
19.317	35.5922	13.27	.	Q	.	.	.	V	.			
19.333	35.6104	13.22	.	Q	.	.	.	V	.			
19.350	35.6286	13.18	.	Q	.	.	.	V	.			
19.367	35.6466	13.14	.	Q	.	.	.	V	.			
19.383	35.6647	13.09	.	Q	.	.	.	V	.			
19.400	35.6827	13.05	.	Q	.	.	.	V	.			
19.417	35.7006	13.00	.	Q	.	.	.	V	.			
19.433	35.7184	12.96	.	Q	.	.	.	V	.			

19.450	35.7362	12.92	. Q	.	.	.	V	.
19.467	35.7539	12.87	. Q	.	.	.	V	.
19.483	35.7716	12.83	. Q	.	.	.	V	.
19.500	35.7892	12.78	. Q	.	.	.	V	.
19.517	35.8068	12.74	. Q	.	.	.	V	.
19.533	35.8243	12.70	. Q	.	.	.	V	.
19.550	35.8417	12.65	. Q	.	.	.	V	.
19.567	35.8591	12.61	. Q	.	.	.	V	.
19.583	35.8764	12.56	. Q	.	.	.	V	.
19.600	35.8936	12.52	. Q	.	.	.	V	.
19.617	35.9108	12.48	. Q	.	.	.	V	.
19.633	35.9279	12.43	. Q	.	.	.	V	.
19.650	35.9450	12.39	. Q	.	.	.	V	.
19.667	35.9620	12.34	. Q	.	.	.	V	.
19.683	35.9789	12.30	. Q	.	.	.	V	.
19.700	35.9958	12.26	. Q	.	.	.	V	.
19.717	36.0126	12.21	. Q	.	.	.	V	.
19.733	36.0294	12.17	. Q	.	.	.	V	.
19.750	36.0461	12.12	. Q	.	.	.	V	.
19.767	36.0627	12.08	. Q	.	.	.	V	.
19.783	36.0793	12.04	. Q	.	.	.	V	.
19.800	36.0959	12.01	. Q	.	.	.	V	.
19.817	36.1124	11.97	. Q	.	.	.	V	.
19.833	36.1288	11.94	. Q	.	.	.	V	.
19.850	36.1452	11.90	. Q	.	.	.	V	.
19.867	36.1615	11.87	. Q	.	.	.	V	.
19.883	36.1778	11.84	. Q	.	.	.	V	.
19.900	36.1941	11.80	. Q	.	.	.	V	.
19.917	36.2103	11.77	. Q	.	.	.	V	.
19.933	36.2265	11.74	. Q	.	.	.	V	.
19.950	36.2426	11.70	. Q	.	.	.	V	.
19.967	36.2587	11.67	. Q	.	.	.	V	.
19.983	36.2747	11.63	. Q	.	.	.	V	.
20.000	36.2907	11.60	. 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%	1201.0
10%	1201.0
20%	530.0
30%	295.0
40%	250.0
50%	210.0
60%	165.0
70%	125.0
80%	80.0
90%	40.0

END OF FLOODSCx ROUTING ANALYSIS

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

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA E                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 5-YR EV MARCH 2019 CCHIU                                              *
 ************************************************************************

  FILE NAME: 4E05EVS.DAT
  TIME/DATE OF STUDY: 14:59 03/13/2019

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


************************************************************************
  FLOW PROCESS FROM NODE    810.00 TO NODE    817.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  171.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.290
    LOW LOSS FRACTION = 0.519
    TIME OF CONCENTRATION(MIN.) = 10.33
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   5
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.18
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.41
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.55
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.92
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.27
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  2.12

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    14.02
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    16.19

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 45.0 90.0 135.0 179.9
10.000	2.5893	4.43	Q V . . . .
10.017	2.5954	4.43	Q V . . . .
10.033	2.6015	4.44	Q V . . . .
10.050	2.6076	4.44	Q V . . . .
10.067	2.6138	4.45	Q V . . . .
10.083	2.6199	4.45	Q V . . . .
10.100	2.6260	4.46	Q V . . . .
10.117	2.6322	4.46	Q V . . . .
10.133	2.6383	4.47	Q V . . . .
10.150	2.6445	4.47	Q V . . . .
10.167	2.6507	4.48	Q V . . . .
10.183	2.6568	4.49	Q V . . . .
10.200	2.6630	4.50	.Q V . . . .
10.217	2.6693	4.51	.Q V . . . .
10.233	2.6755	4.52	.Q V . . . .
10.250	2.6817	4.53	.Q V . . . .
10.267	2.6880	4.55	.Q V . . . .
10.283	2.6943	4.56	.Q V . . . .
10.300	2.7006	4.57	.Q V . . . .
10.317	2.7069	4.58	.Q V . . . .
10.333	2.7132	4.59	.Q V . . . .
10.350	2.7195	4.59	.Q V . . . .
10.367	2.7258	4.60	.Q V . . . .
10.383	2.7322	4.60	.Q V . . . .
10.400	2.7385	4.61	.Q V . . . .
10.417	2.7449	4.61	.Q V . . . .
10.433	2.7513	4.62	.Q V . . . .
10.450	2.7576	4.63	.Q V . . . .
10.467	2.7640	4.63	.Q V . . . .
10.483	2.7704	4.64	.Q V . . . .
10.500	2.7768	4.64	.Q V . . . .
10.517	2.7832	4.65	.Q V . . . .
10.533	2.7896	4.67	.Q V . . . .
10.550	2.7961	4.68	.Q V . . . .
10.567	2.8025	4.69	.Q V . . . .
10.583	2.8090	4.70	.Q V . . . .
10.600	2.8155	4.71	.Q V . . . .
10.617	2.8220	4.73	.Q V . . . .
10.633	2.8285	4.74	.Q V . . . .
10.650	2.8351	4.75	.Q V . . . .
10.667	2.8416	4.76	.Q V . . . .
10.683	2.8482	4.77	.Q V . . . .
10.700	2.8548	4.78	.Q V . . . .
10.717	2.8614	4.78	.Q V . . . .
10.733	2.8680	4.79	.Q V . . . .

10.750	2.8746	4.79	.Q V . . . .
10.767	2.8812	4.80	.Q V . . . .
10.783	2.8878	4.81	.Q V . . . .
10.800	2.8944	4.81	.Q V . . . .
10.817	2.9011	4.82	.Q V . . . .
10.833	2.9077	4.83	.Q V . . . .
10.850	2.9144	4.83	.Q V . . . .
10.867	2.9210	4.85	.Q V . . . .
10.883	2.9277	4.86	.Q V . . . .
10.900	2.9345	4.87	.Q V . . . .
10.917	2.9412	4.89	.Q V . . . .
10.933	2.9479	4.90	.Q V . . . .
10.950	2.9547	4.91	.Q V . . . .
10.967	2.9615	4.93	.Q V . . . .
10.983	2.9683	4.94	.Q V . . . .
11.000	2.9751	4.95	.Q V . . . .
11.017	2.9820	4.96	.Q V . . . .
11.033	2.9888	4.97	.Q V . . . .
11.050	2.9957	4.98	.Q V . . . .
11.067	3.0025	4.99	.Q V . . . .
11.083	3.0094	4.99	.Q V . . . .
11.100	3.0163	5.00	.Q V . . . .
11.117	3.0232	5.01	.Q V . . . .
11.133	3.0301	5.01	.Q V . . . .
11.150	3.0370	5.02	.Q V . . . .
11.167	3.0439	5.03	.Q V . . . .
11.183	3.0509	5.03	.Q V . . . .
11.200	3.0578	5.05	.Q V . . . .
11.217	3.0648	5.06	.Q V . . . .
11.233	3.0718	5.08	.Q V . . . .
11.250	3.0788	5.09	.Q V . . . .
11.267	3.0858	5.11	.Q V . . . .
11.283	3.0929	5.12	.Q V . . . .
11.300	3.1000	5.14	.Q V . . . .
11.317	3.1070	5.15	.Q V . . . .
11.333	3.1142	5.16	.Q V . . . .
11.350	3.1213	5.18	.Q V . . . .
11.367	3.1284	5.19	.Q V . . . .
11.383	3.1356	5.20	.Q V . . . .
11.400	3.1428	5.21	.Q V . . . .
11.417	3.1500	5.21	.Q V . . . .
11.433	3.1572	5.22	.Q V. . . .
11.450	3.1644	5.23	.Q V. . . .
11.467	3.1716	5.24	.Q V. . . .
11.483	3.1788	5.25	.Q V. . . .
11.500	3.1860	5.25	.Q V. . . .
11.517	3.1933	5.26	.Q V. . . .
11.533	3.2005	5.27	.Q V. . . .
11.550	3.2078	5.29	.Q V. . . .
11.567	3.2151	5.30	.Q V. . . .
11.583	3.2224	5.32	.Q V. . . .
11.600	3.2298	5.34	.Q V. . . .
11.617	3.2372	5.35	.Q V. . . .
11.633	3.2446	5.37	.Q V. . . .
11.650	3.2520	5.39	.Q V. . . .
11.667	3.2594	5.40	.Q V. . . .
11.683	3.2669	5.42	.Q V. . . .
11.700	3.2744	5.43	.Q V. . . .

11.717	3.2819	5.45	.Q	V.	.	.	.
11.733	3.2894	5.45	.Q	V.	.	.	.
11.750	3.2969	5.46	.Q	V.	.	.	.
11.767	3.3045	5.47	.Q	V.	.	.	.
11.783	3.3120	5.48	.Q	V.	.	.	.
11.800	3.3196	5.49	.Q	V.	.	.	.
11.817	3.3271	5.50	.Q	V.	.	.	.
11.833	3.3347	5.51	.Q	V.	.	.	.
11.850	3.3423	5.52	.Q	V.	.	.	.
11.867	3.3499	5.53	.Q	V.	.	.	.
11.883	3.3576	5.54	.Q	V.	.	.	.
11.900	3.3652	5.56	.Q	V.	.	.	.
11.917	3.3729	5.58	.Q	V.	.	.	.
11.933	3.3806	5.59	.Q	V.	.	.	.
11.950	3.3883	5.61	.Q	V.	.	.	.
11.967	3.3961	5.63	.Q	V.	.	.	.
11.983	3.4039	5.65	.Q	V.	.	.	.
12.000	3.4117	5.67	.Q	V.	.	.	.
12.017	3.4195	5.69	.Q	V.	.	.	.
12.033	3.4274	5.71	.Q	V.	.	.	.
12.050	3.4353	5.75	.Q	V.	.	.	.
12.067	3.4434	5.87	.Q	V.	.	.	.
12.083	3.4516	6.00	.Q	V.	.	.	.
12.100	3.4601	6.14	.Q	V.	.	.	.
12.117	3.4687	6.27	.Q	V.	.	.	.
12.133	3.4776	6.40	.Q	V.	.	.	.
12.150	3.4866	6.54	.Q	V.	.	.	.
12.167	3.4958	6.67	.Q	V.	.	.	.
12.183	3.5051	6.80	.Q	V	.	.	.
12.200	3.5147	6.94	.Q	V	.	.	.
12.217	3.5244	7.07	.Q	V	.	.	.
12.233	3.5342	7.14	.Q	V	.	.	.
12.250	3.5441	7.18	.Q	V	.	.	.
12.267	3.5541	7.23	.Q	V	.	.	.
12.283	3.5641	7.27	.Q	V	.	.	.
12.300	3.5742	7.32	.Q	V	.	.	.
12.317	3.5843	7.36	.Q	V	.	.	.
12.333	3.5945	7.41	.Q	V	.	.	.
12.350	3.6048	7.45	.Q	V	.	.	.
12.367	3.6151	7.50	.Q	V	.	.	.
12.383	3.6255	7.54	.Q	V	.	.	.
12.400	3.6359	7.57	.Q	V	.	.	.
12.417	3.6464	7.58	.Q	V	.	.	.
12.433	3.6568	7.60	.Q	V	.	.	.
12.450	3.6673	7.61	.Q	V	.	.	.
12.467	3.6778	7.62	.Q	V	.	.	.
12.483	3.6883	7.63	.Q	V	.	.	.
12.500	3.6989	7.64	.Q	V	.	.	.
12.517	3.7094	7.66	.Q	V	.	.	.
12.533	3.7200	7.67	.Q	V	.	.	.
12.550	3.7305	7.68	.Q	V	.	.	.
12.567	3.7411	7.70	.Q	V	.	.	.
12.583	3.7518	7.72	.Q	V	.	.	.
12.600	3.7625	7.75	.Q	V	.	.	.
12.617	3.7732	7.78	.Q	V	.	.	.
12.633	3.7839	7.80	.Q	V	.	.	.
12.650	3.7947	7.83	.Q	V	.	.	.
12.667	3.8055	7.86	.Q	V	.	.	.

12.683	3.8164	7.88	.Q	V	.	.	.
12.700	3.8273	7.91	.Q	V	.	.	.
12.717	3.8382	7.93	.Q	V	.	.	.
12.733	3.8492	7.96	.Q	V	.	.	.
12.750	3.8601	7.98	.Q	.V	.	.	.
12.767	3.8712	7.99	.Q	.V	.	.	.
12.783	3.8822	8.01	.Q	.V	.	.	.
12.800	3.8932	8.02	.Q	.V	.	.	.
12.817	3.9043	8.04	.Q	.V	.	.	.
12.833	3.9154	8.05	.Q	.V	.	.	.
12.850	3.9265	8.06	.Q	.V	.	.	.
12.867	3.9376	8.08	.Q	.V	.	.	.
12.883	3.9488	8.09	.Q	.V	.	.	.
12.900	3.9599	8.11	.Q	.V	.	.	.
12.917	3.9711	8.13	.Q	.V	.	.	.
12.933	3.9824	8.16	.Q	.V	.	.	.
12.950	3.9937	8.19	.Q	.V	.	.	.
12.967	4.0050	8.22	.Q	.V	.	.	.
12.983	4.0164	8.25	.Q	.V	.	.	.
13.000	4.0278	8.29	.Q	.V	.	.	.
13.017	4.0392	8.32	.Q	.V	.	.	.
13.033	4.0507	8.35	.Q	.V	.	.	.
13.050	4.0623	8.38	.Q	.V	.	.	.
13.067	4.0739	8.41	.Q	.V	.	.	.
13.083	4.0855	8.44	.Q	.V	.	.	.
13.100	4.0971	8.46	.Q	.V	.	.	.
13.117	4.1088	8.47	.Q	.V	.	.	.
13.133	4.1205	8.49	.Q	.V	.	.	.
13.150	4.1322	8.51	.Q	.V	.	.	.
13.167	4.1440	8.52	.Q	.V	.	.	.
13.183	4.1557	8.54	.Q	.V	.	.	.
13.200	4.1675	8.56	.Q	.V	.	.	.
13.217	4.1793	8.58	.Q	.V	.	.	.
13.233	4.1912	8.59	.Q	.V	.	.	.
13.250	4.2030	8.61	.Q	.V	.	.	.
13.267	4.2149	8.64	.Q	. V	.	.	.
13.283	4.2269	8.68	.Q	. V	.	.	.
13.300	4.2389	8.72	.Q	. V	.	.	.
13.317	4.2510	8.75	.Q	. V	.	.	.
13.333	4.2631	8.79	.Q	. V	.	.	.
13.350	4.2752	8.83	.Q	. V	.	.	.
13.367	4.2874	8.87	.Q	. V	.	.	.
13.383	4.2997	8.90	.Q	. V	.	.	.
13.400	4.3120	8.94	.Q	. V	.	.	.
13.417	4.3244	8.98	.Q	. V	.	.	.
13.433	4.3368	9.01	. Q	. V	.	.	.
13.450	4.3492	9.03	. Q	. V	.	.	.
13.467	4.3617	9.05	. Q	. V	.	.	.
13.483	4.3742	9.07	. Q	. V	.	.	.
13.500	4.3867	9.09	. Q	. V	.	.	.
13.517	4.3993	9.11	. Q	. V	.	.	.
13.533	4.4118	9.13	. Q	. V	.	.	.
13.550	4.4244	9.15	. Q	. V	.	.	.
13.567	4.4371	9.17	. Q	. V	.	.	.
13.583	4.4497	9.19	. Q	. V	.	.	.
13.600	4.4624	9.22	. Q	. V	.	.	.
13.617	4.4752	9.26	. Q	. V	.	.	.
13.633	4.4880	9.31	. Q	. V	.	.	.

13.650	4.5009	9.35	. Q	. V	.	.	.	
13.667	4.5138	9.40	. Q	. V	.	.	.	
13.683	4.5268	9.44	. Q	. V	.	.	.	
13.700	4.5399	9.49	. Q	. V	.	.	.	
13.717	4.5530	9.53	. Q	. V	.	.	.	
13.733	4.5662	9.58	. Q	. V	.	.	.	
13.750	4.5795	9.63	. Q	. V	.	.	.	
13.767	4.5928	9.67	. Q	. V	.	.	.	
13.783	4.6062	9.70	. Q	. V	.	.	.	
13.800	4.6196	9.73	. Q	. V	.	.	.	
13.817	4.6330	9.75	. Q	. V	.	.	.	
13.833	4.6465	9.78	. Q	. V	.	.	.	
13.850	4.6600	9.80	. Q	. V	.	.	.	
13.867	4.6735	9.83	. Q	. V	.	.	.	
13.883	4.6871	9.85	. Q	. V	.	.	.	
13.900	4.7007	9.88	. Q	. V	.	.	.	
13.917	4.7143	9.90	. Q	. V	.	.	.	
13.933	4.7280	9.93	. Q	. V	.	.	.	
13.950	4.7417	9.97	. Q	. V	.	.	.	
13.967	4.7556	10.03	. Q	. V	.	.	.	
13.983	4.7695	10.09	. Q	. V	.	.	.	
14.000	4.7834	10.15	. Q	. V	.	.	.	
14.017	4.7975	10.21	. Q	. V	.	.	.	
14.033	4.8117	10.27	. Q	. V	.	.	.	
14.050	4.8259	10.33	. Q	. V	.	.	.	
14.067	4.8402	10.39	. Q	. V	.	.	.	
14.083	4.8546	10.45	. Q	. V	.	.	.	
14.100	4.8691	10.51	. Q	. V	.	.	.	
14.117	4.8836	10.57	. Q	. V	.	.	.	
14.133	4.8983	10.61	. Q	. V	.	.	.	
14.150	4.9129	10.64	. Q	. V	.	.	.	
14.167	4.9276	10.68	. Q	. V	.	.	.	
14.183	4.9424	10.72	. Q	. V	.	.	.	
14.200	4.9572	10.75	. Q	. V	.	.	.	
14.217	4.9721	10.79	. Q	. V	.	.	.	
14.233	4.9870	10.83	. Q	. V	.	.	.	
14.250	5.0019	10.86	. Q	. V	.	.	.	
14.267	5.0170	10.90	. Q	. V	.	.	.	
14.283	5.0320	10.94	. Q	. V	.	.	.	
14.300	5.0472	11.00	. Q	. V	.	.	.	
14.317	5.0624	11.08	. Q	. V	.	.	.	
14.333	5.0778	11.16	. Q	. V	.	.	.	
14.350	5.0933	11.23	. Q	. V	.	.	.	
14.367	5.1089	11.31	. Q	. V	.	.	.	
14.383	5.1245	11.38	. Q	. V	.	.	.	
14.400	5.1403	11.46	. Q	. V	.	.	.	
14.417	5.1562	11.53	. Q	. V	.	.	.	
14.433	5.1722	11.61	. Q	. V	.	.	.	
14.450	5.1883	11.68	. Q	. V	.	.	.	
14.467	5.2045	11.74	. Q	. V	.	.	.	
14.483	5.2207	11.79	. Q	. V	.	.	.	
14.500	5.2370	11.83	. Q	. V	.	.	.	
14.517	5.2534	11.88	. Q	. V	.	.	.	
14.533	5.2698	11.92	. Q	. V	.	.	.	
14.550	5.2862	11.96	. Q	. V	.	.	.	
14.567	5.3028	12.01	. Q	. V	.	.	.	
14.583	5.3194	12.05	. Q	. V	.	.	.	
14.600	5.3361	12.10	. Q	. V	.	.	.	

14.617	5.3528	12.14	. Q	. V	.	.	.	
14.633	5.3696	12.20	. Q	. V	.	.	.	
14.650	5.3865	12.30	. Q	. V	.	.	.	
14.667	5.4036	12.40	. Q	. V	.	.	.	
14.683	5.4208	12.51	. Q	. V	.	.	.	
14.700	5.4382	12.61	. Q	. V	.	.	.	
14.717	5.4557	12.72	. Q	. V	.	.	.	
14.733	5.4734	12.82	. Q	. V	.	.	.	
14.750	5.4912	12.93	. Q	. V	.	.	.	
14.767	5.5091	13.03	. Q	. V	.	.	.	
14.783	5.5272	13.14	. Q	. V	.	.	.	
14.800	5.5455	13.24	. Q	. V	.	.	.	
14.817	5.5638	13.31	. Q	. V	.	.	.	
14.833	5.5822	13.38	. Q	. V	.	.	.	
14.850	5.6007	13.44	. Q	. V	.	.	.	
14.867	5.6193	13.51	. Q	. V	.	.	.	
14.883	5.6380	13.57	. Q	. V	.	.	.	
14.900	5.6568	13.63	. Q	. V	.	.	.	
14.917	5.6757	13.70	. Q	. V	.	.	.	
14.933	5.6946	13.76	. Q	. V	.	.	.	
14.950	5.7137	13.82	. Q	. V	.	.	.	
14.967	5.7328	13.89	. Q	. V	.	.	.	
14.983	5.7521	14.00	. Q	. V	.	.	.	
15.000	5.7716	14.16	. Q	. V	.	.	.	
15.017	5.7913	14.32	. Q	. V	.	.	.	
15.033	5.8113	14.48	. Q	. V	.	.	.	
15.050	5.8314	14.64	. Q	. V	.	.	.	
15.067	5.8518	14.80	. Q	. V	.	.	.	
15.083	5.8724	14.96	. Q	. V	.	.	.	
15.100	5.8932	15.12	. Q	. V	.	.	.	
15.117	5.9143	15.28	. Q	. V	.	.	.	
15.133	5.9356	15.44	. Q	. V	.	.	.	
15.150	5.9570	15.59	. Q	. V	.	.	.	
15.167	5.9787	15.70	. Q	. V	.	.	.	
15.183	6.0004	15.80	. Q	. V	.	.	.	
15.200	6.0223	15.91	. Q	. V	.	.	.	
15.217	6.0444	16.01	. Q	. V	.	.	.	
15.233	6.0666	16.11	. Q	. V	.	.	.	
15.250	6.0889	16.22	. Q	. V	.	.	.	
15.267	6.1114	16.32	. Q	. V	.	.	.	
15.283	6.1340	16.43	. Q	. V	.	.	.	
15.300	6.1568	16.53	. Q	. V	.	.	.	
15.317	6.1797	16.64	. Q	. V	.	.	.	
15.333	6.2028	16.77	. Q	. V	.	.	.	
15.350	6.2261	16.92	. Q	. V	.	.	.	
15.367	6.2496	17.07	. Q	. V	.	.	.	
15.383	6.2733	17.22	. Q	. V	.	.	.	
15.400	6.2973	17.36	. Q	. V	.	.	.	
15.417	6.3214	17.51	. Q	. V	.	.	.	
15.433	6.3457	17.66	. Q	. V	.	.	.	
15.450	6.3702	17.80	. Q	. V	.	.	.	
15.467	6.3950	17.95	. Q	. V	.	.	.	
15.483	6.4199	18.10	. Q	. V	.	.	.	
15.500	6.4450	18.26	. Q	. V	.	.	.	
15.517	6.4704	18.44	. Q	. V	.	.	.	
15.533	6.4961	18.62	. Q	. V	.	.	.	
15.550	6.5220	18.80	. Q	. V	.	.	.	
15.567	6.5481	18.98	. Q	. V	.	.	.	

15.583	6.5745	19.16	. Q . V . . .
15.600	6.6012	19.34	. Q . V . . .
15.617	6.6280	19.52	. Q . V . . .
15.633	6.6552	19.70	. Q . V . . .
15.650	6.6825	19.88	. Q . V. . .
15.667	6.7104	20.23	. Q . V. . .
15.683	6.7396	21.17	. Q . V. . .
15.700	6.7701	22.15	. Q . V. . .
15.717	6.8020	23.14	. Q . V. . .
15.733	6.8352	24.13	. Q . V. . .
15.750	6.8698	25.11	. Q . V. . .
15.767	6.9057	26.10	. Q . V. . .
15.783	6.9430	27.08	. Q . V. . .
15.800	6.9817	28.07	. Q . V. . .
15.817	7.0217	29.05	. Q . V . . .
15.833	7.0631	30.04	. Q . V . . .
15.850	7.1058	31.03	. Q . V . . .
15.867	7.1499	32.03	. Q . V . . .
15.883	7.1954	33.03	. Q . V . . .
15.900	7.2423	34.02	. Q . V . . .
15.917	7.2905	35.02	. Q . V . . .
15.933	7.3401	36.02	. Q . V . . .
15.950	7.3911	37.02	. Q . .V . . .
15.967	7.4435	38.01	. Q . .V . . .
15.983	7.4972	39.01	. Q . .V . . .
16.000	7.5523	40.01	. Q . .V . . .
16.017	7.6174	47.26	. Q .V . . .
16.033	7.7011	60.75	. . Q .V . . .
16.050	7.8034	74.25	. . Q . V . . .
16.067	7.9242	87.75	. . Q. V . . .
16.083	8.0637	101.25	. . . QV . . .
16.100	8.2218	114.74	. . . V Q . . .
16.117	8.3984	128.24	. . . V Q . . .
16.133	8.5936	141.74	. . . V .Q . . .
16.150	8.8074	155.23	. . . V . Q . . .
16.167	9.0399	168.73	. . . V . Q . . .
16.183	9.2877	179.94	. . . V . Q . . .
16.200	9.5111	162.18	. . . V . Q . . .
16.217	9.7136	147.00	. . . V . Q . . .
16.233	9.8952	131.83	. . . VQ. . . .
16.250	10.0558	116.65	. . . Q V . . . .
16.267	10.1956	101.48	. . . Q V. . . .
16.283	10.3145	86.30	. . Q. V. . . .
16.300	10.4125	71.13	. . Q . V. . . .
16.317	10.4895	55.95	. . Q . V. . . .
16.333	10.5457	40.78	. Q. . V . . .
16.350	10.5821	26.45	. Q . V . . .
16.367	10.6135	22.75	. Q . V . . .
16.383	10.6441	22.25	. Q . V . . .
16.400	10.6741	21.74	. Q . V . . .
16.417	10.7033	21.24	. Q . V . . .
16.433	10.7319	20.74	. Q . V . . .
16.450	10.7598	20.23	. Q . V . . .
16.467	10.7869	19.73	. Q . V . . .
16.483	10.8134	19.23	. Q . V . . .
16.500	10.8392	18.72	. Q . V . . .
16.517	10.8643	18.22	. Q . .V . . .
16.533	10.8889	17.81	. Q . .V . . .

16.550	10.9129	17.49	. Q . . .V . .
16.567	10.9366	17.17	. Q . . .V . .
16.583	10.9598	16.85	. Q . . .V . .
16.600	10.9826	16.54	. Q . . .V . .
16.617	11.0049	16.22	. Q . . .V . .
16.633	11.0268	15.90	. Q . . .V . .
16.650	11.0483	15.58	. Q . . .V . .
16.667	11.0693	15.26	. Q . . .V . .
16.683	11.0899	14.94	. Q . . .V . .
16.700	11.1101	14.65	. Q . . .V . .
16.717	11.1300	14.45	. Q . . .V . .
16.733	11.1496	14.26	. Q . . .V . .
16.750	11.1690	14.07	. Q . . .V . .
16.767	11.1881	13.87	. Q . . .V . .
16.783	11.2070	13.68	. Q . . .V . .
16.800	11.2256	13.49	. Q . . . V . .
16.817	11.2439	13.30	. Q . . . V . .
16.833	11.2619	13.10	. Q . . . V . .
16.850	11.2797	12.91	. Q . . . V . .
16.867	11.2972	12.72	. Q . . . V . .
16.883	11.3145	12.57	. Q . . . V . .
16.900	11.3317	12.44	. Q . . . V . .
16.917	11.3486	12.31	. Q . . . V . .
16.933	11.3654	12.18	. Q . . . V . .
16.950	11.3820	12.04	. Q . . . V . .
16.967	11.3984	11.91	. Q . . . V . .
16.983	11.4146	11.78	. Q . . . V . .
17.000	11.4306	11.64	. 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%	1021.0
10%	315.0
20%	125.0
30%	90.0
40%	75.0
50%	60.0
60%	50.0
70%	40.0
80%	25.0
90%	15.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

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                     5 Hutton Centre Drive Suite 500
                           Santa Ana, CA92707


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA F                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 5-YR EV MARCH 2019 CCHIU                                              *
 ************************************************************************

  FILE NAME: 4F05EVS.DAT
  TIME/DATE OF STUDY: 14:59 03/13/2019

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


************************************************************************
  FLOW PROCESS FROM NODE    920.00 TO NODE    905.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  553.80
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.424
    LOW LOSS FRACTION = 0.644
    TIME OF CONCENTRATION(MIN.) = 10.96
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   5
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.18
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.41
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.55
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.92
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.27
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  2.12

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    34.76
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    63.08

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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 ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	123.3	246.5	369.8	493.0
10.000	6.1719	10.60	Q	V .	.	.	.
10.017	6.1866	10.61	Q	V .	.	.	.
10.033	6.2012	10.62	Q	V .	.	.	.
10.050	6.2158	10.64	Q	V .	.	.	.
10.067	6.2305	10.65	Q	V .	.	.	.
10.083	6.2452	10.66	Q	V .	.	.	.
10.100	6.2599	10.67	Q	V .	.	.	.
10.117	6.2746	10.69	Q	V .	.	.	.
10.133	6.2893	10.70	Q	V .	.	.	.
10.150	6.3041	10.71	Q	V .	.	.	.
10.167	6.3189	10.73	Q	V .	.	.	.
10.183	6.3337	10.75	Q	V .	.	.	.
10.200	6.3485	10.78	Q	V .	.	.	.
10.217	6.3634	10.80	Q	V .	.	.	.
10.233	6.3783	10.83	Q	V .	.	.	.
10.250	6.3933	10.85	Q	V .	.	.	.
10.267	6.4083	10.88	Q	V .	.	.	.
10.283	6.4233	10.91	Q	V .	.	.	.
10.300	6.4383	10.93	Q	V .	.	.	.
10.317	6.4534	10.96	Q	V .	.	.	.
10.333	6.4686	10.98	Q	V .	.	.	.
10.350	6.4837	11.01	Q	V .	.	.	.
10.367	6.4989	11.02	Q	V .	.	.	.
10.383	6.5141	11.03	Q	V .	.	.	.
10.400	6.5293	11.05	Q	V .	.	.	.
10.417	6.5445	11.06	Q	V .	.	.	.
10.433	6.5598	11.07	Q	V .	.	.	.
10.450	6.5751	11.09	Q	V .	.	.	.
10.467	6.5904	11.10	Q	V .	.	.	.
10.483	6.6057	11.11	Q	V .	.	.	.
10.500	6.6210	11.13	Q	V .	.	.	.
10.517	6.6363	11.14	Q	V .	.	.	.
10.533	6.6517	11.16	Q	V .	.	.	.
10.550	6.6671	11.19	Q	V .	.	.	.
10.567	6.6826	11.22	Q	V .	.	.	.
10.583	6.6981	11.24	Q	V .	.	.	.
10.600	6.7136	11.27	Q	V .	.	.	.
10.617	6.7292	11.30	Q	V .	.	.	.
10.633	6.7448	11.33	Q	V .	.	.	.
10.650	6.7604	11.36	Q	V .	.	.	.
10.667	6.7761	11.39	Q	V .	.	.	.
10.683	6.7918	11.42	Q	V .	.	.	.
10.700	6.8076	11.45	Q	V .	.	.	.
10.717	6.8234	11.47	Q	V .	.	.	.
10.733	6.8392	11.48	Q	V .	.	.	.

10.750	6.8550	11.50	Q	V .	.	.	.
10.767	6.8709	11.51	Q	V .	.	.	.
10.783	6.8868	11.53	Q	V .	.	.	.
10.800	6.9027	11.54	Q	V .	.	.	.
10.817	6.9186	11.56	Q	V .	.	.	.
10.833	6.9345	11.57	Q	V .	.	.	.
10.850	6.9505	11.59	Q	V .	.	.	.
10.867	6.9665	11.60	Q	V .	.	.	.
10.883	6.9825	11.62	Q	V .	.	.	.
10.900	6.9985	11.64	Q	V .	.	.	.
10.917	7.0146	11.67	Q	V .	.	.	.
10.933	7.0307	11.71	Q	V .	.	.	.
10.950	7.0469	11.74	Q	V .	.	.	.
10.967	7.0631	11.77	Q	V .	.	.	.
10.983	7.0794	11.80	Q	V .	.	.	.
11.000	7.0957	11.83	Q	V .	.	.	.
11.017	7.1120	11.87	Q	V .	.	.	.
11.033	7.1284	11.90	Q	V .	.	.	.
11.050	7.1448	11.93	Q	V .	.	.	.
11.067	7.1613	11.96	Q	V .	.	.	.
11.083	7.1778	11.99	Q	V .	.	.	.
11.100	7.1943	12.00	Q	V .	.	.	.
11.117	7.2109	12.02	Q	V .	.	.	.
11.133	7.2275	12.04	Q	V .	.	.	.
11.150	7.2441	12.05	Q	V .	.	.	.
11.167	7.2607	12.07	Q	V .	.	.	.
11.183	7.2774	12.09	Q	V .	.	.	.
11.200	7.2940	12.11	Q	V .	.	.	.
11.217	7.3107	12.12	Q	V .	.	.	.
11.233	7.3275	12.14	Q	V .	.	.	.
11.250	7.3442	12.16	Q	V .	.	.	.
11.267	7.3610	12.18	Q	V .	.	.	.
11.283	7.3778	12.22	Q	V .	.	.	.
11.300	7.3947	12.25	Q	V .	.	.	.
11.317	7.4116	12.29	Q	V .	.	.	.
11.333	7.4286	12.33	Q	V .	.	.	.
11.350	7.4456	12.36	.Q	V .	.	.	.
11.367	7.4627	12.40	.Q	V .	.	.	.
11.383	7.4798	12.43	.Q	V .	.	.	.
11.400	7.4970	12.47	.Q	V .	.	.	.
11.417	7.5142	12.51	.Q	V .	.	.	.
11.433	7.5315	12.54	.Q	V .	.	.	.
11.450	7.5488	12.57	.Q	V .	.	.	.
11.467	7.5662	12.59	.Q	V .	.	.	.
11.483	7.5835	12.61	.Q	V .	.	.	.
11.500	7.6009	12.63	.Q	V .	.	.	.
11.517	7.6183	12.65	.Q	V .	.	.	.
11.533	7.6358	12.67	.Q	V .	.	.	.
11.550	7.6533	12.68	.Q	V .	.	.	.
11.567	7.6707	12.70	.Q	V .	.	.	.
11.583	7.6883	12.72	.Q	V .	.	.	.
11.600	7.7058	12.74	.Q	V .	.	.	.
11.617	7.7234	12.76	.Q	V .	.	.	.
11.633	7.7410	12.79	.Q	V .	.	.	.
11.650	7.7587	12.83	.Q	V .	.	.	.
11.667	7.7764	12.87	.Q	V .	.	.	.
11.683	7.7942	12.92	.Q	V .	.	.	.
11.700	7.8121	12.96	.Q	V .	.	.	.

11.717	7.8300	13.00	.Q	V.	.	.	.
11.733	7.8479	13.04	.Q	V.	.	.	.
11.750	7.8659	13.08	.Q	V.	.	.	.
11.767	7.8840	13.12	.Q	V.	.	.	.
11.783	7.9021	13.16	.Q	V.	.	.	.
11.800	7.9203	13.20	.Q	V.	.	.	.
11.817	7.9386	13.23	.Q	V.	.	.	.
11.833	7.9568	13.25	.Q	V.	.	.	.
11.850	7.9751	13.28	.Q	V.	.	.	.
11.867	7.9934	13.30	.Q	V.	.	.	.
11.883	8.0118	13.32	.Q	V.	.	.	.
11.900	8.0301	13.34	.Q	V.	.	.	.
11.917	8.0485	13.36	.Q	V.	.	.	.
11.933	8.0670	13.39	.Q	V.	.	.	.
11.950	8.0854	13.41	.Q	V.	.	.	.
11.967	8.1039	13.43	.Q	V.	.	.	.
11.983	8.1225	13.45	.Q	V.	.	.	.
12.000	8.1413	13.66	.Q	V.	.	.	.
12.017	8.1606	13.99	.Q	V.	.	.	.
12.033	8.1803	14.31	.Q	V.	.	.	.
12.050	8.2004	14.64	.Q	V.	.	.	.
12.067	8.2210	14.96	.Q	V.	.	.	.
12.083	8.2421	15.28	.Q	V.	.	.	.
12.100	8.2636	15.61	.Q	V.	.	.	.
12.117	8.2855	15.93	.Q	V.	.	.	.
12.133	8.3079	16.26	.Q	V.	.	.	.
12.150	8.3308	16.58	.Q	V.	.	.	.
12.167	8.3541	16.91	.Q	V.	.	.	.
12.183	8.3776	17.07	.Q	V.	.	.	.
12.200	8.4012	17.15	.Q	V.	.	.	.
12.217	8.4249	17.22	.Q	V.	.	.	.
12.233	8.4487	17.30	.Q	V.	.	.	.
12.250	8.4727	17.38	.Q	V.	.	.	.
12.267	8.4967	17.46	.Q	V.	.	.	.
12.283	8.5209	17.53	.Q	V.	.	.	.
12.300	8.5451	17.61	.Q	V.	.	.	.
12.317	8.5695	17.69	.Q	V.	.	.	.
12.333	8.5940	17.76	.Q	V.	.	.	.
12.350	8.6185	17.84	.Q	V.	.	.	.
12.367	8.6432	17.91	.Q	V.	.	.	.
12.383	8.6679	17.96	.Q	V.	.	.	.
12.400	8.6928	18.02	.Q	V	.	.	.
12.417	8.7177	18.08	.Q	V	.	.	.
12.433	8.7427	18.14	.Q	V	.	.	.
12.450	8.7677	18.20	.Q	V	.	.	.
12.467	8.7929	18.26	.Q	V	.	.	.
12.483	8.8181	18.31	.Q	V	.	.	.
12.500	8.8434	18.37	.Q	V	.	.	.
12.517	8.8688	18.43	.Q	V	.	.	.
12.533	8.8942	18.49	.Q	V	.	.	.
12.550	8.9198	18.53	.Q	V	.	.	.
12.567	8.9453	18.56	.Q	V	.	.	.
12.583	8.9709	18.59	.Q	V	.	.	.
12.600	8.9966	18.62	.Q	V	.	.	.
12.617	9.0223	18.65	.Q	V	.	.	.
12.633	9.0480	18.68	.Q	V	.	.	.
12.650	9.0738	18.71	.Q	V	.	.	.
12.667	9.0996	18.75	.Q	V	.	.	.

12.683	9.1255	18.78	.Q	V	.	.	.
12.700	9.1514	18.81	.Q	V	.	.	.
12.717	9.1773	18.84	.Q	V	.	.	.
12.733	9.2034	18.90	.Q	V	.	.	.
12.750	9.2295	18.97	.Q	V	.	.	.
12.767	9.2557	19.04	.Q	V	.	.	.
12.783	9.2820	19.11	.Q	V	.	.	.
12.800	9.3084	19.17	.Q	V	.	.	.
12.817	9.3349	19.24	.Q	V	.	.	.
12.833	9.3615	19.31	.Q	V	.	.	.
12.850	9.3882	19.38	.Q	V	.	.	.
12.867	9.4150	19.45	.Q	V	.	.	.
12.883	9.4419	19.52	.Q	V	.	.	.
12.900	9.4689	19.58	.Q	V	.	.	.
12.917	9.4959	19.63	.Q	V	.	.	.
12.933	9.5230	19.66	.Q	V	.	.	.
12.950	9.5501	19.70	.Q	V	.	.	.
12.967	9.5773	19.74	.Q	.V	.	.	.
12.983	9.6046	19.77	.Q	.V	.	.	.
13.000	9.6318	19.81	.Q	.V	.	.	.
13.017	9.6592	19.85	.Q	.V	.	.	.
13.033	9.6866	19.89	.Q	.V	.	.	.
13.050	9.7140	19.92	.Q	.V	.	.	.
13.067	9.7415	19.96	.Q	.V	.	.	.
13.083	9.7691	20.00	.Q	.V	.	.	.
13.100	9.7967	20.07	.Q	.V	.	.	.
13.117	9.8245	20.15	.Q	.V	.	.	.
13.133	9.8523	20.24	.Q	.V	.	.	.
13.150	9.8803	20.32	.Q	.V	.	.	.
13.167	9.9084	20.40	.Q	.V	.	.	.
13.183	9.9366	20.48	.Q	.V	.	.	.
13.200	9.9650	20.56	.Q	.V	.	.	.
13.217	9.9934	20.64	.Q	.V	.	.	.
13.233	10.0219	20.73	.Q	.V	.	.	.
13.250	10.0506	20.81	.Q	.V	.	.	.
13.267	10.0794	20.89	.Q	.V	.	.	.
13.283	10.1082	20.94	.Q	.V	.	.	.
13.300	10.1371	20.98	.Q	.V	.	.	.
13.317	10.1661	21.03	.Q	.V	.	.	.
13.333	10.1951	21.07	.Q	.V	.	.	.
13.350	10.2242	21.12	.Q	.V	.	.	.
13.367	10.2533	21.16	.Q	.V	.	.	.
13.383	10.2825	21.21	.Q	.V	.	.	.
13.400	10.3118	21.25	.Q	.V	.	.	.
13.417	10.3412	21.30	.Q	.V	.	.	.
13.433	10.3705	21.34	.Q	.V	.	.	.
13.450	10.4000	21.39	.Q	.V	.	.	.
13.467	10.4296	21.48	.Q	. V	.	.	.
13.483	10.4593	21.58	.Q	. V	.	.	.
13.500	10.4892	21.68	.Q	. V	.	.	.
13.517	10.5192	21.78	.Q	. V	.	.	.
13.533	10.5493	21.88	.Q	. V	.	.	.
13.550	10.5796	21.98	.Q	. V	.	.	.
13.567	10.6100	22.08	.Q	. V	.	.	.
13.583	10.6406	22.18	.Q	. V	.	.	.
13.600	10.6713	22.28	.Q	. V	.	.	.
13.617	10.7021	22.38	.Q	. V	.	.	.
13.633	10.7330	22.47	.Q	. V	.	.	.

13.650	10.7641	22.54	.Q	. V	.	.	.	
13.667	10.7952	22.59	.Q	. V	.	.	.	
13.683	10.8264	22.65	.Q	. V	.	.	.	
13.700	10.8577	22.70	.Q	. V	.	.	.	
13.717	10.8890	22.76	.Q	. V	.	.	.	
13.733	10.9204	22.81	.Q	. V	.	.	.	
13.750	10.9519	22.87	.Q	. V	.	.	.	
13.767	10.9835	22.92	.Q	. V	.	.	.	
13.783	11.0152	22.98	.Q	. V	.	.	.	
13.800	11.0469	23.04	.Q	. V	.	.	.	
13.817	11.0787	23.10	.Q	. V	.	.	.	
13.833	11.1107	23.22	.Q	. V	.	.	.	
13.850	11.1428	23.34	.Q	. V	.	.	.	
13.867	11.1752	23.47	.Q	. V	.	.	.	
13.883	11.2077	23.60	.Q	. V	.	.	.	
13.900	11.2403	23.72	.Q	. V	.	.	.	
13.917	11.2732	23.85	.Q	. V	.	.	.	
13.933	11.3062	23.97	.Q	. V	.	.	.	
13.950	11.3394	24.10	.Q	. V	.	.	.	
13.967	11.3728	24.22	.Q	. V	.	.	.	
13.983	11.4063	24.35	.Q	. V	.	.	.	
14.000	11.4400	24.47	.Q	. V	.	.	.	
14.017	11.4738	24.55	.Q	. V	.	.	.	
14.033	11.5077	24.63	.Q	. V	.	.	.	
14.050	11.5418	24.71	. Q	. V	.	.	.	
14.067	11.5759	24.78	. Q	. V	.	.	.	
14.083	11.6102	24.86	. Q	. V	.	.	.	
14.100	11.6445	24.94	. Q	. V	.	.	.	
14.117	11.6790	25.02	. Q	. V	.	.	.	
14.133	11.7135	25.10	. Q	. V	.	.	.	
14.150	11.7482	25.17	. Q	. V	.	.	.	
14.167	11.7830	25.25	. Q	. V	.	.	.	
14.183	11.8179	25.35	. Q	. V	.	.	.	
14.200	11.8531	25.51	. Q	. V	.	.	.	
14.217	11.8884	25.69	. Q	. V	.	.	.	
14.233	11.9241	25.86	. Q	. V	.	.	.	
14.250	11.9599	26.04	. Q	. V	.	.	.	
14.267	11.9960	26.21	. Q	. V	.	.	.	
14.283	12.0324	26.38	. Q	. V	.	.	.	
14.300	12.0689	26.56	. Q	. V	.	.	.	
14.317	12.1058	26.73	. Q	. V	.	.	.	
14.333	12.1428	26.91	. Q	. V	.	.	.	
14.350	12.1801	27.08	. Q	. V	.	.	.	
14.367	12.2176	27.24	. Q	. V	.	.	.	
14.383	12.2553	27.34	. Q	. V	.	.	.	
14.400	12.2931	27.44	. Q	. V	.	.	.	
14.417	12.3310	27.53	. Q	. V	.	.	.	
14.433	12.3691	27.63	. Q	. V	.	.	.	
14.450	12.4073	27.72	. Q	. V	.	.	.	
14.467	12.4456	27.82	. Q	. V	.	.	.	
14.483	12.4840	27.92	. Q	. V	.	.	.	
14.500	12.5226	28.01	. Q	. V	.	.	.	
14.517	12.5613	28.11	. Q	. V	.	.	.	
14.533	12.6002	28.21	. Q	. V	.	.	.	
14.550	12.6392	28.33	. Q	. V	.	.	.	
14.567	12.6786	28.56	. Q	. V	.	.	.	
14.583	12.7182	28.79	. Q	. V	.	.	.	
14.600	12.7582	29.02	. Q	. V	.	.	.	

14.617	12.7985	29.25	. Q	. V	.	.	.	
14.633	12.8391	29.48	. Q	. V	.	.	.	
14.650	12.8800	29.71	. Q	. V	.	.	.	
14.667	12.9212	29.94	. Q	. V	.	.	.	
14.683	12.9628	30.17	. Q	. V	.	.	.	
14.700	13.0046	30.40	. Q	. V	.	.	.	
14.717	13.0468	30.63	. Q	. V	.	.	.	
14.733	13.0893	30.83	. Q	. V	.	.	.	
14.750	13.1319	30.97	. Q	. V	.	.	.	
14.767	13.1748	31.11	. Q	. V	.	.	.	
14.783	13.2179	31.25	. Q	. V	.	.	.	
14.800	13.2611	31.39	. Q	. V	.	.	.	
14.817	13.3045	31.53	. Q	. V	.	.	.	
14.833	13.3482	31.67	. Q	. V	.	.	.	
14.850	13.3920	31.81	. Q	. V	.	.	.	
14.867	13.4360	31.95	. Q	. V	.	.	.	
14.883	13.4802	32.09	. Q	. V	.	.	.	
14.900	13.5246	32.23	. Q	. V	.	.	.	
14.917	13.5692	32.43	. Q	. V	.	.	.	
14.933	13.6144	32.78	. Q	. V	.	.	.	
14.950	13.6600	33.13	. Q	. V	.	.	.	
14.967	13.7061	33.48	. Q	. V	.	.	.	
14.983	13.7527	33.83	. Q	. V	.	.	.	
15.000	13.7998	34.18	. Q	. V	.	.	.	
15.017	13.8474	34.53	. Q	. V	.	.	.	
15.033	13.8954	34.88	. Q	. V	.	.	.	
15.050	13.9440	35.24	. Q	. V	.	.	.	
15.067	13.9930	35.59	. Q	. V	.	.	.	
15.083	14.0425	35.94	. Q	. V	.	.	.	
15.100	14.0924	36.25	. Q	. V	.	.	.	
15.117	14.1427	36.48	. Q	. V	.	.	.	
15.133	14.1932	36.71	. Q	. V	.	.	.	
15.150	14.2441	36.94	. Q	. V	.	.	.	
15.167	14.2953	37.16	. Q	. V	.	.	.	
15.183	14.3468	37.39	. Q	. V	.	.	.	
15.200	14.3986	37.62	. Q	. V	.	.	.	
15.217	14.4507	37.85	. Q	. V	.	.	.	
15.233	14.5032	38.07	. Q	. V	.	.	.	
15.250	14.5559	38.30	. Q	. V	.	.	.	
15.267	14.6090	38.53	. Q	. V	.	.	.	
15.283	14.6625	38.83	. Q	. V	.	.	.	
15.300	14.7166	39.28	. Q	. V	.	.	.	
15.317	14.7713	39.72	. Q	. V	.	.	.	
15.333	14.8266	40.17	. Q	. V	.	.	.	
15.350	14.8826	40.62	. Q	. V	.	.	.	
15.367	14.9391	41.06	. Q	. V	.	.	.	
15.383	14.9963	41.51	. Q	. V	.	.	.	
15.400	15.0541	41.95	. Q	. V	.	.	.	
15.417	15.1125	42.40	. Q	. V	.	.	.	
15.433	15.1715	42.85	. Q	. V	.	.	.	
15.450	15.2312	43.29	. Q	. V	.	.	.	
15.467	15.2913	43.67	. Q	. V	.	.	.	
15.483	15.3518	43.92	. Q	. V	.	.	.	
15.500	15.4127	44.18	. Q	. V	.	.	.	
15.517	15.4739	44.44	. Q	. V	.	.	.	
15.533	15.5354	44.70	. Q	. V	.	.	.	
15.550	15.5974	44.95	. Q	. V	.	.	.	
15.567	15.6596	45.21	. Q	. V	.	.	.	

```
15.583     15.7223     45.47  .  Q      .       V .         .         .
15.600     15.7853     45.73  .  Q      .       V .         .         .
15.617     15.8486     45.99  .  Q      .       V .         .         .
15.633     15.9123     46.24  .  Q      .       V .         .         .
15.650     15.9774     47.27  .  Q      .       V .         .         .
15.667     16.0454     49.35  .   Q     .       V .         .         .
15.683     16.1162     51.44  .   Q     .       V .         .         .
15.700     16.1900     53.52  .   Q     .       V .         .         .
15.717     16.2666     55.61  .   Q     .       V .         .         .
15.733     16.3460     57.69  .   Q     .       V .         .         .
15.750     16.4284     59.78  .   Q     .       V .         .         .
15.767     16.5136     61.87  .    Q    .        V.         .         .
15.783     16.6017     63.95  .    Q    .        V.         .         .
15.800     16.6926     66.04  .    Q    .        V.         .         .
15.817     16.7865     68.12  .    Q    .        V.         .         .
15.833     16.8833     70.29  .    Q    .        V.         .         .
15.850     16.9832     72.55  .    Q    .        V.         .         .
15.867     17.0863     74.81  .     Q   .        V.         .         .
15.883     17.1924     77.07  .     Q   .        V.         .         .
15.900     17.3017     79.33  .     Q   .        V.         .         .
15.917     17.4141     81.60  .     Q   .         V         .         .
15.933     17.5296     83.86  .     Q   .         V         .         .
15.950     17.6482     86.12  .     Q   .         V         .         .
15.967     17.7699     88.38  .      Q  .         V         .         .
15.983     17.8948     90.64  .      Q  .         V         .         .
16.000     18.0228     92.90  .      Q  .         V         .         .
16.017     18.1774    112.24  .        Q.         V         .         .
16.033     18.3821    148.64  .         . Q       .V        .         .
16.050     18.6370    185.05  .         .   Q     .V        .         .
16.067     18.9420    221.46  .         .     Q   .V        .         .
16.083     19.2972    257.86  .         .         Q V       .         .
16.100     19.7025    294.27  .         .         . VQ      .         .
16.117     20.1580    330.67  .         .         .  V  Q   .         .
16.133     20.6636    367.08  .         .         .  V     Q.         .
16.150     21.2194    403.48  .         .         .   V     . Q       .
16.167     21.8253    439.89  .         .         .    V    .    Q    .
16.183     22.5044    493.04  .         .         .    V    .         Q
16.200     23.1537    471.40  .         .         .     V   .       Q .
16.217     23.7478    431.31  .         .         .      V  .   Q     .
16.233     24.2867    391.22  .         .         .      V  .Q       .
16.250     24.7704    351.13  .         .         .       Q .        .
16.267     25.1988    311.05  .         .         .    Q  V .        .
16.283     25.5720    270.96  .         .        .Q       V.         .
16.300     25.8900    230.87  .         .      Q .        V.         .
16.317     26.1528    190.79  .         .    Q    .        V         .
16.333     26.3604    150.70  .         . Q       .        V         .
16.350     26.5128    110.61  .       Q .         .        V         .
16.367     26.6101     70.65  .    Q    .         .        V         .
16.383     26.6831     53.05  .   Q     .         .        V         .
16.400     26.7547     51.97  .   Q     .         .        V         .
16.417     26.8248     50.88  .   Q     .         .        V         .
16.433     26.8934     49.79  .   Q     .         .        V         .
16.450     26.9604     48.70  .  Q      .         .        .V        .
16.467     27.0260     47.61  .  Q      .         .        .V        .
16.483     27.0901     46.52  .  Q      .         .        .V        .
16.500     27.1527     45.43  .  Q      .         .        .V        .
16.517     27.2137     44.34  .  Q      .         .        .V        .
16.533     27.2733     43.25  .  Q      .         .        .V        .
```



```
16.550     27.3314     42.16  .  Q      .         .        .V        .
16.567     27.3883     41.31  .  Q      .         .        .V        .
16.583     27.4442     40.62  .  Q      .         .        .V        .
16.600     27.4992     39.92  .  Q      .         .        .V        .
16.617     27.5532     39.22  .  Q      .         .        .V        .
16.633     27.6063     38.52  .  Q      .         .        .V        .
16.650     27.6584     37.83  .  Q      .         .        .V        .
16.667     27.7095     37.13  .  Q      .         .        .V        .
16.683     27.7597     36.43  . Q       .         .        .V        .
16.700     27.8090     35.73  . Q       .         .        . V       .
16.717     27.8572     35.04  . Q       .         .        . V       .
16.733     27.9045     34.34  . Q       .         .        . V       .
16.750     27.9511     33.82  . Q       .         .        . V       .
16.767     27.9971     33.40  . Q       .         .        . V       .
16.783     28.0425     32.98  . Q       .         .        . V       .
16.800     28.0874     32.55  . Q       .         .        . V       .
16.817     28.1316     32.13  . Q       .         .        . V       .
16.833     28.1753     31.71  . Q       .         .        . V       .
16.850     28.2184     31.29  . Q       .         .        . V       .
16.867     28.2609     30.86  . Q       .         .        . V       .
16.883     28.3028     30.44  . Q       .         .        . V       .
16.900     28.3442     30.02  . Q       .         .        . V       .
16.917     28.3850     29.60  . Q       .         .        . V       .
16.933     28.4253     29.26  . Q       .         .        . V       .
16.950     28.4652     28.97  . Q       .         .        . V       .
16.967     28.5047     28.68  . Q       .         .        . V       .
16.983     28.5438     28.39  . Q       .         .        . V       .
17.000     28.5825     28.10  . 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%	1021.0
10%	235.0
20%	105.0
30%	95.0
40%	75.0
50%	65.0
60%	50.0
70%	40.0
80%	25.0
90%	10.0

END OF FLOODSCx ROUTING ANALYSIS

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                          Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA A                                                    *
* UNIT HYDROGRAPH  - SINGLE AREA MODEL                                  *
* 10-YR EV MARCH 2019 CCHIU                                             *
 ************************************************************************

  FILE NAME: 3A10EVS.DAT
  TIME/DATE OF STUDY: 14:56 03/13/2019

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


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    130.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  510.20
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.130
    LOW LOSS FRACTION = 0.350
    TIME OF CONCENTRATION(MIN.) = 14.40
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   5
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.26
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.59
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.78
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.31
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.81
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  3.03

--------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    80.28
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```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    48.55

--------------------------------------------------------------------------
```

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

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	186.8	373.6	560.4	747.2
0.017	0.0000	0.00	Q	.	.	.	.
0.033	0.0000	0.00	Q	.	.	.	.
0.050	0.0000	0.00	Q	.	.	.	.
0.067	0.0000	0.00	Q	.	.	.	.
0.083	0.0000	0.00	Q	.	.	.	.
0.100	0.0000	0.00	Q	.	.	.	.
0.117	0.0000	0.00	Q	.	.	.	.
0.133	0.0000	0.00	Q	.	.	.	.
0.150	0.0000	0.00	Q	.	.	.	.
0.167	0.0001	0.08	Q	.	.	.	.
0.183	0.0013	0.88	Q	.	.	.	.
0.200	0.0039	1.87	Q	.	.	.	.
0.217	0.0078	2.85	Q	.	.	.	.
0.233	0.0131	3.83	Q	.	.	.	.
0.250	0.0197	4.81	Q	.	.	.	.
0.267	0.0277	5.79	Q	.	.	.	.
0.283	0.0370	6.77	Q	.	.	.	.
0.300	0.0477	7.76	Q	.	.	.	.
0.317	0.0598	8.74	Q	.	.	.	.
0.333	0.0731	9.72	Q	.	.	.	.
0.350	0.0879	10.70	Q	.	.	.	.
0.367	0.1040	11.68	Q	.	.	.	.
0.383	0.1214	12.67	Q	.	.	.	.
0.400	0.1402	13.65	Q	.	.	.	.
0.417	0.1597	14.14	Q	.	.	.	.
0.433	0.1792	14.15	Q	.	.	.	.
0.450	0.1987	14.15	Q	.	.	.	.
0.467	0.2182	14.16	Q	.	.	.	.
0.483	0.2377	14.17	Q	.	.	.	.
0.500	0.2572	14.17	Q	.	.	.	.
0.517	0.2768	14.18	Q	.	.	.	.
0.533	0.2963	14.19	Q	.	.	.	.
0.550	0.3158	14.19	Q	.	.	.	.
0.567	0.3354	14.20	Q	.	.	.	.
0.583	0.3550	14.21	Q	.	.	.	.
0.600	0.3745	14.21	Q	.	.	.	.
0.617	0.3941	14.22	Q	.	.	.	.
0.633	0.4137	14.22	Q	.	.	.	.
0.650	0.4333	14.23	Q	.	.	.	.
0.667	0.4529	14.24	Q	.	.	.	.
0.683	0.4726	14.26	Q	.	.	.	.
0.700	0.4922	14.27	Q	.	.	.	.
0.717	0.5119	14.28	Q	.	.	.	.
0.733	0.5316	14.30	Q	.	.	.	.
0.750	0.5513	14.31	Q	.	.	.	.

0.767	0.5710	14.32	Q	.	.	.	.
0.783	0.5908	14.33	Q	.	.	.	.
0.800	0.6105	14.35	Q	.	.	.	.
0.817	0.6303	14.36	Q	.	.	.	.
0.833	0.6501	14.37	Q	.	.	.	.
0.850	0.6699	14.39	Q	.	.	.	.
0.867	0.6898	14.40	Q	.	.	.	.
0.883	0.7096	14.41	Q	.	.	.	.
0.900	0.7295	14.42	Q	.	.	.	.
0.917	0.7494	14.43	Q	.	.	.	.
0.933	0.7692	14.43	Q	.	.	.	.
0.950	0.7891	14.44	Q	.	.	.	.
0.967	0.8090	14.45	Q	.	.	.	.
0.983	0.8289	14.45	Q	.	.	.	.
1.000	0.8489	14.46	Q	.	.	.	.
1.017	0.8688	14.47	Q	.	.	.	.
1.033	0.8887	14.47	Q	.	.	.	.
1.050	0.9087	14.48	Q	.	.	.	.
1.067	0.9286	14.49	Q	.	.	.	.
1.083	0.9486	14.49	Q	.	.	.	.
1.100	0.9686	14.50	Q	.	.	.	.
1.117	0.9885	14.51	Q	.	.	.	.
1.133	1.0085	14.52	Q	.	.	.	.
1.150	1.0285	14.53	Q	.	.	.	.
1.167	1.0486	14.54	Q	.	.	.	.
1.183	1.0686	14.56	Q	.	.	.	.
1.200	1.0887	14.57	Q	.	.	.	.
1.217	1.1088	14.58	Q	.	.	.	.
1.233	1.1289	14.60	Q	.	.	.	.
1.250	1.1490	14.61	Q	.	.	.	.
1.267	1.1692	14.62	Q	.	.	.	.
1.283	1.1893	14.64	Q	.	.	.	.
1.300	1.2095	14.65	Q	.	.	.	.
1.317	1.2297	14.67	Q	.	.	.	.
1.333	1.2499	14.68	Q	.	.	.	.
1.350	1.2702	14.69	Q	.	.	.	.
1.367	1.2904	14.71	Q	.	.	.	.
1.383	1.3107	14.71	Q	.	.	.	.
1.400	1.3310	14.72	Q	.	.	.	.
1.417	1.3513	14.73	Q	.	.	.	.
1.433	1.3716	14.74	Q	.	.	.	.
1.450	1.3919	14.74	Q	.	.	.	.
1.467	1.4122	14.75	Q	.	.	.	.
1.483	1.4325	14.76	Q	.	.	.	.
1.500	1.4528	14.76	Q	.	.	.	.
1.517	1.4732	14.77	Q	.	.	.	.
1.533	1.4935	14.78	Q	.	.	.	.
1.550	1.5139	14.78	Q	.	.	.	.
1.567	1.5343	14.79	Q	.	.	.	.
1.583	1.5547	14.80	Q	.	.	.	.
1.600	1.5751	14.81	Q	.	.	.	.
1.617	1.5955	14.82	Q	.	.	.	.
1.633	1.6159	14.83	Q	.	.	.	.
1.650	1.6363	14.84	Q	.	.	.	.
1.667	1.6568	14.86	Q	.	.	.	.
1.683	1.6773	14.87	Q	.	.	.	.
1.700	1.6978	14.89	Q	.	.	.	.
1.717	1.7183	14.90	Q	.	.	.	.

1.733	1.7389	14.92	Q	.	.	.	.
1.750	1.7594	14.93	Q	.	.	.	.
1.767	1.7800	14.95	Q	.	.	.	.
1.783	1.8006	14.96	Q	.	.	.	.
1.800	1.8213	14.97	Q	.	.	.	.
1.817	1.8419	14.99	Q	.	.	.	.
1.833	1.8626	15.00	Q	.	.	.	.
1.850	1.8833	15.02	Q	.	.	.	.
1.867	1.9039	15.02	Q	.	.	.	.
1.883	1.9247	15.03	Q	.	.	.	.
1.900	1.9454	15.04	Q	.	.	.	.
1.917	1.9661	15.05	Q	.	.	.	.
1.933	1.9868	15.05	Q	.	.	.	.
1.950	2.0076	15.06	QV	.	.	.	.
1.967	2.0283	15.07	QV	.	.	.	.
1.983	2.0491	15.08	QV	.	.	.	.
2.000	2.0699	15.08	QV	.	.	.	.
2.017	2.0907	15.09	QV	.	.	.	.
2.033	2.1115	15.10	QV	.	.	.	.
2.050	2.1323	15.11	QV	.	.	.	.
2.067	2.1531	15.11	QV	.	.	.	.
2.083	2.1739	15.12	QV	.	.	.	.
2.100	2.1947	15.13	QV	.	.	.	.
2.117	2.2156	15.15	QV	.	.	.	.
2.133	2.2365	15.16	QV	.	.	.	.
2.150	2.2574	15.18	QV	.	.	.	.
2.167	2.2783	15.19	QV	.	.	.	.
2.183	2.2993	15.21	QV	.	.	.	.
2.200	2.3202	15.22	QV	.	.	.	.
2.217	2.3412	15.24	QV	.	.	.	.
2.233	2.3622	15.25	QV	.	.	.	.
2.250	2.3833	15.27	QV	.	.	.	.
2.267	2.4043	15.28	QV	.	.	.	.
2.283	2.4254	15.30	QV	.	.	.	.
2.300	2.4465	15.32	QV	.	.	.	.
2.317	2.4676	15.33	QV	.	.	.	.
2.333	2.4888	15.34	QV	.	.	.	.
2.350	2.5099	15.35	QV	.	.	.	.
2.367	2.5311	15.36	QV	.	.	.	.
2.383	2.5522	15.37	QV	.	.	.	.
2.400	2.5734	15.37	QV	.	.	.	.
2.417	2.5946	15.38	QV	.	.	.	.
2.433	2.6158	15.39	QV	.	.	.	.
2.450	2.6370	15.40	QV	.	.	.	.
2.467	2.6582	15.41	QV	.	.	.	.
2.483	2.6794	15.41	QV	.	.	.	.
2.500	2.7007	15.42	QV	.	.	.	.
2.517	2.7219	15.43	QV	.	.	.	.
2.533	2.7432	15.44	QV	.	.	.	.
2.550	2.7645	15.45	QV	.	.	.	.
2.567	2.7858	15.45	QV	.	.	.	.
2.583	2.8071	15.47	QV	.	.	.	.
2.600	2.8284	15.48	QV	.	.	.	.
2.617	2.8497	15.50	QV	.	.	.	.
2.633	2.8711	15.52	QV	.	.	.	.
2.650	2.8925	15.53	QV	.	.	.	.
2.667	2.9139	15.55	QV	.	.	.	.
2.683	2.9354	15.56	QV	.	.	.	.

2.700	2.9568	15.58	QV	.	.	.	.
2.717	2.9783	15.60	QV	.	.	.	.
2.733	2.9998	15.61	QV	.	.	.	.
2.750	3.0213	15.63	QV	.	.	.	.
2.767	3.0429	15.64	QV	.	.	.	.
2.783	3.0645	15.66	QV	.	.	.	.
2.800	3.0861	15.68	QV	.	.	.	.
2.817	3.1077	15.69	QV	.	.	.	.
2.833	3.1293	15.70	QV	.	.	.	.
2.850	3.1509	15.71	QV	.	.	.	.
2.867	3.1726	15.71	QV	.	.	.	.
2.883	3.1942	15.72	QV	.	.	.	.
2.900	3.2159	15.73	QV	.	.	.	.
2.917	3.2376	15.74	QV	.	.	.	.
2.933	3.2593	15.75	QV	.	.	.	.
2.950	3.2810	15.76	QV	.	.	.	.
2.967	3.3027	15.76	QV	.	.	.	.
2.983	3.3244	15.77	QV	.	.	.	.
3.000	3.3461	15.78	QV	.	.	.	.
3.017	3.3679	15.79	QV	.	.	.	.
3.033	3.3896	15.80	QV	.	.	.	.
3.050	3.4114	15.81	QV	.	.	.	.
3.067	3.4332	15.82	QV	.	.	.	.
3.083	3.4550	15.84	QV	.	.	.	.
3.100	3.4769	15.86	QV	.	.	.	.
3.117	3.4987	15.87	QV	.	.	.	.
3.133	3.5206	15.89	QV	.	.	.	.
3.150	3.5425	15.91	QV	.	.	.	.
3.167	3.5645	15.93	QV	.	.	.	.
3.183	3.5864	15.94	QV	.	.	.	.
3.200	3.6084	15.96	QV	.	.	.	.
3.217	3.6304	15.98	QV	.	.	.	.
3.233	3.6525	15.99	QV	.	.	.	.
3.250	3.6745	16.01	QV	.	.	.	.
3.267	3.6966	16.03	QV	.	.	.	.
3.283	3.7187	16.04	QV	.	.	.	.
3.300	3.7408	16.06	QV	.	.	.	.
3.317	3.7629	16.06	QV	.	.	.	.
3.333	3.7851	16.07	QV	.	.	.	.
3.350	3.8072	16.08	QV	.	.	.	.
3.367	3.8294	16.09	QV	.	.	.	.
3.383	3.8516	16.10	QV	.	.	.	.
3.400	3.8738	16.11	QV	.	.	.	.
3.417	3.8960	16.12	QV	.	.	.	.
3.433	3.9182	16.13	QV	.	.	.	.
3.450	3.9404	16.13	QV	.	.	.	.
3.467	3.9626	16.14	QV	.	.	.	.
3.483	3.9849	16.15	QV	.	.	.	.
3.500	4.0071	16.16	QV	.	.	.	.
3.517	4.0294	16.17	Q V	.	.	.	.
3.533	4.0517	16.18	Q V	.	.	.	.
3.550	4.0740	16.20	Q V	.	.	.	.
3.567	4.0963	16.22	Q V	.	.	.	.
3.583	4.1187	16.24	Q V	.	.	.	.
3.600	4.1411	16.25	Q V	.	.	.	.
3.617	4.1635	16.27	Q V	.	.	.	.
3.633	4.1860	16.29	Q V	.	.	.	.
3.650	4.2084	16.31	Q V	.	.	.	.

3.667	4.2309	16.33	Q	V	.	.	.	.
3.683	4.2534	16.34	Q	V	.	.	.	.
3.700	4.2760	16.36	Q	V	.	.	.	.
3.717	4.2985	16.38	Q	V	.	.	.	.
3.733	4.3211	16.40	Q	V	.	.	.	.
3.750	4.3437	16.42	Q	V	.	.	.	.
3.767	4.3664	16.43	Q	V	.	.	.	.
3.783	4.3890	16.45	Q	V	.	.	.	.
3.800	4.4117	16.46	Q	V	.	.	.	.
3.817	4.4344	16.46	Q	V	.	.	.	.
3.833	4.4570	16.47	Q	V	.	.	.	.
3.850	4.4798	16.48	Q	V	.	.	.	.
3.867	4.5025	16.49	Q	V	.	.	.	.
3.883	4.5252	16.50	Q	V	.	.	.	.
3.900	4.5479	16.51	Q	V	.	.	.	.
3.917	4.5707	16.52	Q	V	.	.	.	.
3.933	4.5935	16.53	Q	V	.	.	.	.
3.950	4.6162	16.54	Q	V	.	.	.	.
3.967	4.6390	16.55	Q	V	.	.	.	.
3.983	4.6618	16.56	Q	V	.	.	.	.
4.000	4.6847	16.57	Q	V	.	.	.	.
4.017	4.7075	16.58	Q	V	.	.	.	.
4.033	4.7304	16.60	Q	V	.	.	.	.
4.050	4.7533	16.62	Q	V	.	.	.	.
4.067	4.7762	16.64	Q	V	.	.	.	.
4.083	4.7991	16.66	Q	V	.	.	.	.
4.100	4.8221	16.68	Q	V	.	.	.	.
4.117	4.8451	16.70	Q	V	.	.	.	.
4.133	4.8681	16.72	Q	V	.	.	.	.
4.150	4.8912	16.74	Q	V	.	.	.	.
4.167	4.9143	16.76	Q	V	.	.	.	.
4.183	4.9374	16.77	Q	V	.	.	.	.
4.200	4.9605	16.79	Q	V	.	.	.	.
4.217	4.9837	16.81	Q	V	.	.	.	.
4.233	5.0068	16.83	Q	V	.	.	.	.
4.250	5.0301	16.85	Q	V	.	.	.	.
4.267	5.0533	16.86	Q	V	.	.	.	.
4.283	5.0765	16.87	Q	V	.	.	.	.
4.300	5.0998	16.88	Q	V	.	.	.	.
4.317	5.1230	16.89	Q	V	.	.	.	.
4.333	5.1463	16.90	Q	V	.	.	.	.
4.350	5.1696	16.91	Q	V	.	.	.	.
4.367	5.1929	16.92	Q	V	.	.	.	.
4.383	5.2162	16.93	Q	V	.	.	.	.
4.400	5.2396	16.94	Q	V	.	.	.	.
4.417	5.2629	16.95	Q	V	.	.	.	.
4.433	5.2863	16.96	Q	V	.	.	.	.
4.450	5.3097	16.97	Q	V	.	.	.	.
4.467	5.3330	16.98	Q	V	.	.	.	.
4.483	5.3565	16.99	Q	V	.	.	.	.
4.500	5.3799	17.01	Q	V	.	.	.	.
4.517	5.4033	17.03	Q	V	.	.	.	.
4.533	5.4268	17.05	Q	V	.	.	.	.
4.550	5.4503	17.07	Q	V	.	.	.	.
4.567	5.4739	17.09	Q	V	.	.	.	.
4.583	5.4974	17.11	Q	V	.	.	.	.
4.600	5.5210	17.13	Q	V	.	.	.	.
4.617	5.5447	17.15	Q	V	.	.	.	.

4.633	5.5683	17.17	Q	V	.	.	.	.
4.650	5.5920	17.19	Q	V	.	.	.	.
4.667	5.6157	17.21	Q	V	.	.	.	.
4.683	5.6395	17.24	Q	V	.	.	.	.
4.700	5.6632	17.26	Q	V	.	.	.	.
4.717	5.6870	17.28	Q	V	.	.	.	.
4.733	5.7108	17.29	Q	V	.	.	.	.
4.750	5.7347	17.30	Q	V	.	.	.	.
4.767	5.7585	17.32	Q	V	.	.	.	.
4.783	5.7824	17.33	Q	V	.	.	.	.
4.800	5.8063	17.34	Q	V	.	.	.	.
4.817	5.8302	17.35	Q	V	.	.	.	.
4.833	5.8541	17.36	Q	V	.	.	.	.
4.850	5.8780	17.37	Q	V	.	.	.	.
4.867	5.9019	17.38	Q	V	.	.	.	.
4.883	5.9259	17.39	Q	V	.	.	.	.
4.900	5.9499	17.40	Q	V	.	.	.	.
4.917	5.9738	17.41	Q	V	.	.	.	.
4.933	5.9978	17.42	Q	V	.	.	.	.
4.950	6.0219	17.43	Q	V	.	.	.	.
4.967	6.0459	17.44	Q	V	.	.	.	.
4.983	6.0699	17.46	Q	V	.	.	.	.
5.000	6.0940	17.49	Q	V	.	.	.	.
5.017	6.1181	17.51	Q	V	.	.	.	.
5.033	6.1423	17.53	Q	V	.	.	.	.
5.050	6.1665	17.55	Q	V	.	.	.	.
5.067	6.1907	17.58	Q	V	.	.	.	.
5.083	6.2149	17.60	Q	V	.	.	.	.
5.100	6.2392	17.62	Q	V	.	.	.	.
5.117	6.2635	17.64	Q	V	.	.	.	.
5.133	6.2878	17.66	Q	V	.	.	.	.
5.150	6.3122	17.69	Q	V	.	.	.	.
5.167	6.3366	17.71	Q	V	.	.	.	.
5.183	6.3610	17.73	Q	V	.	.	.	.
5.200	6.3854	17.75	Q	V	.	.	.	.
5.217	6.4099	17.77	Q	V	.	.	.	.
5.233	6.4344	17.78	Q	V	.	.	.	.
5.250	6.4589	17.79	Q	V	.	.	.	.
5.267	6.4834	17.80	Q	V	.	.	.	.
5.283	6.5080	17.81	Q	V	.	.	.	.
5.300	6.5325	17.83	Q	V	.	.	.	.
5.317	6.5571	17.84	Q	V	.	.	.	.
5.333	6.5817	17.85	Q	V	.	.	.	.
5.350	6.6063	17.86	Q	V	.	.	.	.
5.367	6.6309	17.87	Q	V	.	.	.	.
5.383	6.6555	17.88	Q	V	.	.	.	.
5.400	6.6802	17.89	Q	V	.	.	.	.
5.417	6.7048	17.91	Q	V	.	.	.	.
5.433	6.7295	17.92	Q	V	.	.	.	.
5.450	6.7542	17.93	Q	V	.	.	.	.
5.467	6.7790	17.95	Q	V	.	.	.	.
5.483	6.8037	17.98	Q	V	.	.	.	.
5.500	6.8285	18.00	Q	V	.	.	.	.
5.517	6.8533	18.03	Q	V	.	.	.	.
5.533	6.8782	18.05	Q	V	.	.	.	.
5.550	6.9031	18.07	Q	V	.	.	.	.
5.567	6.9280	18.10	Q	V	.	.	.	.
5.583	6.9530	18.12	Q	V	.	.	.	.

5.600	6.9780	18.14	Q	V	.	.	.	.
5.617	7.0030	18.17	Q	V	.	.	.	.
5.633	7.0281	18.19	Q	V	.	.	.	.
5.650	7.0532	18.22	Q	V	.	.	.	.
5.667	7.0783	18.24	Q	V	.	.	.	.
5.683	7.1034	18.26	Q	V	.	.	.	.
5.700	7.1286	18.28	Q	V	.	.	.	.
5.717	7.1538	18.29	Q	V	.	.	.	.
5.733	7.1790	18.30	Q	V	.	.	.	.
5.750	7.2042	18.32	Q	V	.	.	.	.
5.767	7.2295	18.33	Q	V	.	.	.	.
5.783	7.2547	18.34	Q	V	.	.	.	.
5.800	7.2800	18.35	Q	V	.	.	.	.
5.817	7.3053	18.37	Q	V	.	.	.	.
5.833	7.3306	18.38	Q	V	.	.	.	.
5.850	7.3560	18.39	Q	V	.	.	.	.
5.867	7.3813	18.40	Q	V	.	.	.	.
5.883	7.4067	18.41	Q	V	.	.	.	.
5.900	7.4321	18.43	Q	V	.	.	.	.
5.917	7.4575	18.44	Q	V	.	.	.	.
5.933	7.4829	18.46	Q	V	.	.	.	.
5.950	7.5083	18.48	Q	V	.	.	.	.
5.967	7.5338	18.51	Q	V	.	.	.	.
5.983	7.5594	18.53	Q	V	.	.	.	.
6.000	7.5849	18.56	Q	V	.	.	.	.
6.017	7.6105	18.58	Q	V	.	.	.	.
6.033	7.6361	18.61	Q	V	.	.	.	.
6.050	7.6618	18.63	Q	V	.	.	.	.
6.067	7.6875	18.66	Q	V	.	.	.	.
6.083	7.7133	18.69	.Q	V	.	.	.	.
6.100	7.7390	18.71	.Q	V	.	.	.	.
6.117	7.7648	18.74	.Q	V	.	.	.	.
6.133	7.7907	18.76	.Q	V	.	.	.	.
6.150	7.8166	18.79	.Q	V	.	.	.	.
6.167	7.8425	18.81	.Q	V	.	.	.	.
6.183	7.8684	18.83	.Q	V	.	.	.	.
6.200	7.8944	18.84	.Q	V	.	.	.	.
6.217	7.9203	18.85	.Q	V	.	.	.	.
6.233	7.9463	18.87	.Q	V	.	.	.	.
6.250	7.9723	18.88	.Q	V	.	.	.	.
6.267	7.9983	18.89	.Q	V	.	.	.	.
6.283	8.0244	18.91	.Q	V	.	.	.	.
6.300	8.0505	18.92	.Q	V	.	.	.	.
6.317	8.0765	18.93	.Q	V	.	.	.	.
6.333	8.1026	18.95	.Q	V	.	.	.	.
6.350	8.1288	18.96	.Q	V	.	.	.	.
6.367	8.1549	18.97	.Q	V	.	.	.	.
6.383	8.1810	18.99	.Q	V	.	.	.	.
6.400	8.2072	19.00	.Q	V	.	.	.	.
6.417	8.2334	19.02	.Q	V	.	.	.	.
6.433	8.2597	19.05	.Q	V	.	.	.	.
6.450	8.2859	19.08	.Q	V	.	.	.	.
6.467	8.3123	19.11	.Q	V	.	.	.	.
6.483	8.3386	19.13	.Q	V	.	.	.	.
6.500	8.3650	19.16	.Q	V	.	.	.	.
6.517	8.3914	19.19	.Q	V	.	.	.	.
6.533	8.4179	19.22	.Q	V	.	.	.	.
6.550	8.4444	19.24	.Q	V	.	.	.	.

6.567	8.4709	19.27	.Q	V	.	.	.	.
6.583	8.4975	19.30	.Q	V	.	.	.	.
6.600	8.5242	19.33	.Q	V	.	.	.	.
6.617	8.5508	19.35	.Q	V	.	.	.	.
6.633	8.5775	19.38	.Q	V	.	.	.	.
6.650	8.6042	19.41	.Q	V	.	.	.	.
6.667	8.6310	19.42	.Q	V	.	.	.	.
6.683	8.6578	19.44	.Q	V	.	.	.	.
6.700	8.6846	19.45	.Q	V	.	.	.	.
6.717	8.7114	19.47	.Q	V	.	.	.	.
6.733	8.7382	19.48	.Q	V	.	.	.	.
6.750	8.7651	19.50	.Q	V	.	.	.	.
6.767	8.7919	19.51	.Q	V	.	.	.	.
6.783	8.8188	19.52	.Q	V	.	.	.	.
6.800	8.8457	19.54	.Q	V	.	.	.	.
6.817	8.8727	19.55	.Q	V	.	.	.	.
6.833	8.8996	19.57	.Q	V	.	.	.	.
6.850	8.9266	19.58	.Q	V	.	.	.	.
6.867	8.9536	19.60	.Q	V	.	.	.	.
6.883	8.9806	19.61	.Q	V	.	.	.	.
6.900	9.0076	19.64	.Q	V	.	.	.	.
6.917	9.0347	19.67	.Q	V	.	.	.	.
6.933	9.0619	19.70	.Q	V	.	.	.	.
6.950	9.0890	19.73	.Q	V	.	.	.	.
6.967	9.1163	19.76	.Q	V	.	.	.	.
6.983	9.1435	19.79	.Q	V	.	.	.	.
7.000	9.1708	19.82	.Q	V	.	.	.	.
7.017	9.1981	19.85	.Q	V	.	.	.	.
7.033	9.2255	19.88	.Q	V	.	.	.	.
7.050	9.2529	19.91	.Q	V	.	.	.	.
7.067	9.2804	19.94	.Q	V	.	.	.	.
7.083	9.3079	19.97	.Q	V	.	.	.	.
7.100	9.3354	20.00	.Q	V	.	.	.	.
7.117	9.3630	20.03	.Q	V	.	.	.	.
7.133	9.3907	20.05	.Q	V	.	.	.	.
7.150	9.4183	20.07	.Q	V	.	.	.	.
7.167	9.4460	20.08	.Q	V	.	.	.	.
7.183	9.4736	20.10	.Q	V	.	.	.	.
7.200	9.5014	20.12	.Q	V	.	.	.	.
7.217	9.5291	20.13	.Q	V	.	.	.	.
7.233	9.5568	20.15	.Q	V	.	.	.	.
7.250	9.5846	20.16	.Q	V	.	.	.	.
7.267	9.6124	20.18	.Q	V	.	.	.	.
7.283	9.6402	20.19	.Q	V	.	.	.	.
7.300	9.6681	20.21	.Q	V	.	.	.	.
7.317	9.6959	20.23	.Q	V	.	.	.	.
7.333	9.7238	20.24	.Q	V	.	.	.	.
7.350	9.7517	20.26	.Q	V	.	.	.	.
7.367	9.7796	20.27	.Q	V	.	.	.	.
7.383	9.8076	20.30	.Q	V	.	.	.	.
7.400	9.8356	20.34	.Q	V	.	.	.	.
7.417	9.8637	20.37	.Q	V	.	.	.	.
7.433	9.8918	20.40	.Q	V	.	.	.	.
7.450	9.9199	20.44	.Q	V	.	.	.	.
7.467	9.9481	20.47	.Q	V	.	.	.	.
7.483	9.9763	20.50	.Q	V	.	.	.	.
7.500	10.0046	20.53	.Q	V	.	.	.	.
7.517	10.0330	20.57	.Q	V	.	.	.	.

7.533	10.0613	20.60	.Q	V	.	.	.	.
7.550	10.0898	20.63	.Q	V	.	.	.	.
7.567	10.1182	20.67	.Q	V	.	.	.	.
7.583	10.1467	20.70	.Q	V	.	.	.	.
7.600	10.1753	20.73	.Q	V	.	.	.	.
7.617	10.2039	20.76	.Q	V	.	.	.	.
7.633	10.2325	20.77	.Q	V	.	.	.	.
7.650	10.2611	20.79	.Q	V	.	.	.	.
7.667	10.2898	20.81	.Q	V	.	.	.	.
7.683	10.3185	20.83	.Q	V	.	.	.	.
7.700	10.3472	20.84	.Q	V	.	.	.	.
7.717	10.3759	20.86	.Q	V	.	.	.	.
7.733	10.4047	20.88	.Q	V	.	.	.	.
7.750	10.4335	20.89	.Q	V	.	.	.	.
7.767	10.4623	20.91	.Q	V	.	.	.	.
7.783	10.4911	20.93	.Q	V	.	.	.	.
7.800	10.5199	20.95	.Q	V	.	.	.	.
7.817	10.5488	20.96	.Q	V	.	.	.	.
7.833	10.5777	20.98	.Q	V	.	.	.	.
7.850	10.6066	21.00	.Q	V	.	.	.	.
7.867	10.6356	21.03	.Q	V	.	.	.	.
7.883	10.6646	21.07	.Q	V	.	.	.	.
7.900	10.6937	21.11	.Q	V	.	.	.	.
7.917	10.7228	21.14	.Q	V	.	.	.	.
7.933	10.7520	21.18	.Q	V	.	.	.	.
7.950	10.7812	21.22	.Q	V	.	.	.	.
7.967	10.8105	21.25	.Q	V	.	.	.	.
7.983	10.8398	21.29	.Q	V	.	.	.	.
8.000	10.8692	21.32	.Q	V	.	.	.	.
8.017	10.8986	21.36	.Q	V	.	.	.	.
8.033	10.9281	21.40	.Q	V	.	.	.	.
8.050	10.9576	21.43	.Q	V	.	.	.	.
8.067	10.9872	21.47	.Q	V	.	.	.	.
8.083	11.0168	21.50	.Q	V	.	.	.	.
8.100	11.0464	21.53	.Q	V	.	.	.	.
8.117	11.0761	21.55	.Q	V	.	.	.	.
8.133	11.1058	21.57	.Q	V	.	.	.	.
8.150	11.1355	21.58	.Q	V	.	.	.	.
8.167	11.1653	21.60	.Q	V	.	.	.	.
8.183	11.1951	21.62	.Q	V	.	.	.	.
8.200	11.2249	21.64	.Q	V	.	.	.	.
8.217	11.2547	21.66	.Q	V	.	.	.	.
8.233	11.2846	21.68	.Q	V	.	.	.	.
8.250	11.3145	21.70	.Q	V	.	.	.	.
8.267	11.3444	21.72	.Q	V	.	.	.	.
8.283	11.3743	21.73	.Q	V	.	.	.	.
8.300	11.4043	21.75	.Q	V	.	.	.	.
8.317	11.4343	21.77	.Q	V	.	.	.	.
8.333	11.4643	21.80	.Q	V	.	.	.	.
8.350	11.4944	21.84	.Q	V	.	.	.	.
8.367	11.5245	21.88	.Q	V	.	.	.	.
8.383	11.5547	21.92	.Q	V	.	.	.	.
8.400	11.5849	21.96	.Q	V	.	.	.	.
8.417	11.6152	22.00	.Q	V	.	.	.	.
8.433	11.6456	22.04	.Q	V	.	.	.	.
8.450	11.6760	22.08	.Q	V	.	.	.	.
8.467	11.7065	22.12	.Q	V	.	.	.	.
8.483	11.7370	22.16	.Q	V	.	.	.	.

8.500	11.7676	22.19	.Q	V	.	.	.	.
8.517	11.7982	22.23	.Q	V	.	.	.	.
8.533	11.8289	22.27	.Q	V	.	.	.	.
8.550	11.8596	22.31	.Q	V	.	.	.	.
8.567	11.8904	22.35	.Q	V	.	.	.	.
8.583	11.9212	22.38	.Q	V	.	.	.	.
8.600	11.9521	22.40	.Q	V	.	.	.	.
8.617	11.9829	22.42	.Q	V	.	.	.	.
8.633	12.0138	22.44	.Q	V	.	.	.	.
8.650	12.0448	22.46	.Q	V	.	.	.	.
8.667	12.0757	22.48	.Q	V	.	.	.	.
8.683	12.1067	22.50	.Q	V	.	.	.	.
8.700	12.1378	22.52	.Q	V	.	.	.	.
8.717	12.1688	22.54	.Q	V	.	.	.	.
8.733	12.1999	22.56	.Q	V	.	.	.	.
8.750	12.2310	22.59	.Q	V	.	.	.	.
8.767	12.2621	22.61	.Q	V	.	.	.	.
8.783	12.2933	22.63	.Q	V	.	.	.	.
8.800	12.3245	22.65	.Q	V	.	.	.	.
8.817	12.3558	22.68	.Q	V	.	.	.	.
8.833	12.3871	22.72	.Q	V	.	.	.	.
8.850	12.4184	22.77	.Q	V	.	.	.	.
8.867	12.4498	22.81	.Q	V	.	.	.	.
8.883	12.4813	22.86	.Q	V	.	.	.	.
8.900	12.5129	22.90	.Q	V	.	.	.	.
8.917	12.5445	22.95	.Q	V	.	.	.	.
8.933	12.5761	22.99	.Q	V	.	.	.	.
8.950	12.6079	23.03	.Q	V	.	.	.	.
8.967	12.6397	23.08	.Q	V	.	.	.	.
8.983	12.6715	23.12	.Q	V	.	.	.	.
9.000	12.7034	23.17	.Q	V	.	.	.	.
9.017	12.7354	23.21	.Q	V	.	.	.	.
9.033	12.7674	23.25	.Q	V	.	.	.	.
9.050	12.7995	23.29	.Q	V	.	.	.	.
9.067	12.8316	23.32	.Q	V	.	.	.	.
9.083	12.8638	23.34	.Q	V	.	.	.	.
9.100	12.8960	23.37	.Q	V	.	.	.	.
9.117	12.9282	23.39	.Q	V	.	.	.	.
9.133	12.9604	23.41	.Q	V	.	.	.	.
9.150	12.9927	23.44	.Q	V	.	.	.	.
9.167	13.0250	23.46	.Q	V	.	.	.	.
9.183	13.0574	23.48	.Q	V	.	.	.	.
9.200	13.0897	23.51	.Q	V	.	.	.	.
9.217	13.1221	23.53	.Q	V	.	.	.	.
9.233	13.1546	23.55	.Q	V	.	.	.	.
9.250	13.1871	23.58	.Q	V	.	.	.	.
9.267	13.2196	23.60	.Q	V	.	.	.	.
9.283	13.2521	23.62	.Q	V	.	.	.	.
9.300	13.2847	23.66	.Q	V	.	.	.	.
9.317	13.3174	23.71	.Q	V	.	.	.	.
9.333	13.3501	23.76	.Q	V	.	.	.	.
9.350	13.3829	23.81	.Q	V	.	.	.	.
9.367	13.4157	23.86	.Q	V	.	.	.	.
9.383	13.4487	23.91	.Q	V	.	.	.	.
9.400	13.4817	23.96	.Q	V	.	.	.	.
9.417	13.5147	24.01	.Q	V	.	.	.	.
9.433	13.5479	24.06	.Q	V	.	.	.	.
9.450	13.5811	24.11	.Q	V	.	.	.	.

9.467	13.6144	24.16	.Q	V	.	.	.	.
9.483	13.6477	24.20	.Q	V	.	.	.	.
9.500	13.6811	24.25	.Q	V	.	.	.	.
9.517	13.7146	24.30	.Q	V	.	.	.	.
9.533	13.7481	24.35	.Q	V	.	.	.	.
9.550	13.7817	24.37	.Q	V	.	.	.	.
9.567	13.8153	24.40	.Q	V	.	.	.	.
9.583	13.8489	24.42	.Q	V	.	.	.	.
9.600	13.8826	24.45	.Q	V	.	.	.	.
9.617	13.9163	24.48	.Q	V	.	.	.	.
9.633	13.9501	24.50	.Q	V	.	.	.	.
9.650	13.9839	24.53	.Q	V	.	.	.	.
9.667	14.0177	24.55	.Q	V	.	.	.	.
9.683	14.0515	24.58	.Q	V	.	.	.	.
9.700	14.0854	24.61	.Q	V	.	.	.	.
9.717	14.1194	24.63	.Q	V	.	.	.	.
9.733	14.1533	24.66	.Q	V	.	.	.	.
9.750	14.1873	24.68	.Q	V	.	.	.	.
9.767	14.2214	24.71	.Q	V	.	.	.	.
9.783	14.2555	24.76	.Q	V	.	.	.	.
9.800	14.2897	24.82	.Q	V	.	.	.	.
9.817	14.3239	24.87	.Q	V	.	.	.	.
9.833	14.3583	24.93	.Q	V	.	.	.	.
9.850	14.3927	24.99	.Q	V	.	.	.	.
9.867	14.4272	25.04	.Q	V	.	.	.	.
9.883	14.4617	25.10	.Q	V	.	.	.	.
9.900	14.4964	25.15	.Q	V	.	.	.	.
9.917	14.5311	25.21	.Q	V	.	.	.	.
9.933	14.5659	25.26	.Q	V	.	.	.	.
9.950	14.6008	25.32	.Q	V	.	.	.	.
9.967	14.6357	25.37	.Q	V	.	.	.	.
9.983	14.6708	25.43	.Q	V	.	.	.	.
10.000	14.7059	25.48	.Q	V	.	.	.	.
10.017	14.7410	25.53	.Q	V	.	.	.	.
10.033	14.7762	25.56	.Q	V	.	.	.	.
10.050	14.8115	25.59	.Q	V	.	.	.	.
10.067	14.8467	25.62	.Q	V	.	.	.	.
10.083	14.8821	25.65	.Q	V	.	.	.	.
10.100	14.9174	25.68	.Q	V	.	.	.	.
10.117	14.9528	25.70	.Q	V	.	.	.	.
10.133	14.9883	25.73	.Q	V	.	.	.	.
10.150	15.0238	25.76	.Q	V	.	.	.	.
10.167	15.0593	25.79	.Q	V	.	.	.	.
10.183	15.0949	25.82	.Q	V	.	.	.	.
10.200	15.1305	25.85	.Q	V	.	.	.	.
10.217	15.1661	25.88	.Q	V	.	.	.	.
10.233	15.2018	25.91	.Q	V	.	.	.	.
10.250	15.2376	25.95	.Q	V	.	.	.	.
10.267	15.2734	26.01	.Q	V	.	.	.	.
10.283	15.3093	26.07	.Q	V	.	.	.	.
10.300	15.3453	26.13	.Q	V	.	.	.	.
10.317	15.3814	26.20	.Q	V	.	.	.	.
10.333	15.4176	26.26	.Q	V	.	.	.	.
10.350	15.4538	26.32	.Q	V	.	.	.	.
10.367	15.4902	26.39	.Q	V	.	.	.	.
10.383	15.5266	26.45	.Q	V	.	.	.	.
10.400	15.5631	26.51	.Q	V	.	.	.	.
10.417	15.5997	26.58	.Q	V	.	.	.	.

10.433	15.6364	26.64	.Q	V	.	.	.	.
10.450	15.6732	26.70	.Q	V	.	.	.	.
10.467	15.7101	26.77	.Q	V	.	.	.	.
10.483	15.7470	26.83	.Q	V	.	.	.	.
10.500	15.7840	26.87	.Q	V	.	.	.	.
10.517	15.8211	26.90	.Q	V	.	.	.	.
10.533	15.8582	26.94	.Q	V	.	.	.	.
10.550	15.8953	26.97	.Q	V	.	.	.	.
10.567	15.9325	27.01	.Q	V	.	.	.	.
10.583	15.9698	27.04	.Q	V	.	.	.	.
10.600	16.0071	27.07	.Q	V	.	.	.	.
10.617	16.0444	27.11	.Q	V	.	.	.	.
10.633	16.0818	27.14	.Q	V	.	.	.	.
10.650	16.1192	27.18	.Q	V	.	.	.	.
10.667	16.1567	27.21	.Q	V	.	.	.	.
10.683	16.1942	27.24	.Q	V	.	.	.	.
10.700	16.2318	27.28	.Q	V	.	.	.	.
10.717	16.2694	27.31	.Q	V	.	.	.	.
10.733	16.3071	27.36	.Q	V	.	.	.	.
10.750	16.3449	27.43	.Q	V	.	.	.	.
10.767	16.3828	27.50	.Q	V	.	.	.	.
10.783	16.4207	27.57	.Q	V	.	.	.	.
10.800	16.4588	27.65	.Q	V	.	.	.	.
10.817	16.4970	27.72	.Q	V	.	.	.	.
10.833	16.5353	27.79	.Q	V	.	.	.	.
10.850	16.5737	27.86	.Q	V	.	.	.	.
10.867	16.6121	27.94	.Q	V	.	.	.	.
10.883	16.6507	28.01	.Q	V	.	.	.	.
10.900	16.6894	28.08	.Q	V	.	.	.	.
10.917	16.7282	28.15	.Q	V	.	.	.	.
10.933	16.7671	28.23	.Q	V	.	.	.	.
10.950	16.8060	28.30	.Q	V	.	.	.	.
10.967	16.8451	28.37	.Q	V	.	.	.	.
10.983	16.8843	28.41	.Q	V	.	.	.	.
11.000	16.9234	28.45	.Q	V	.	.	.	.
11.017	16.9627	28.49	.Q	V	.	.	.	.
11.033	17.0020	28.53	.Q	V	.	.	.	.
11.050	17.0413	28.57	.Q	V	.	.	.	.
11.067	17.0808	28.61	.Q	V	.	.	.	.
11.083	17.1202	28.65	.Q	V	.	.	.	.
11.100	17.1597	28.69	.Q	V	.	.	.	.
11.117	17.1993	28.73	.Q	V	.	.	.	.
11.133	17.2389	28.77	.Q	V	.	.	.	.
11.150	17.2786	28.81	.Q	V	.	.	.	.
11.167	17.3183	28.84	.Q	V	.	.	.	.
11.183	17.3581	28.88	.Q	V	.	.	.	.
11.200	17.3980	28.92	.Q	V	.	.	.	.
11.217	17.4379	28.98	.Q	V	.	.	.	.
11.233	17.4779	29.07	.Q	V	.	.	.	.
11.250	17.5181	29.15	.Q	V	.	.	.	.
11.267	17.5583	29.24	.Q	V	.	.	.	.
11.283	17.5987	29.32	.Q	V	.	.	.	.
11.300	17.6392	29.41	.Q	V	.	.	.	.
11.317	17.6799	29.49	.Q	V	.	.	.	.
11.333	17.7206	29.58	.Q	V	.	.	.	.
11.350	17.7615	29.66	.Q	V	.	.	.	.
11.367	17.8024	29.75	.Q	V	.	.	.	.
11.383	17.8435	29.83	.Q	V	.	.	.	.

11.400	17.8847	29.91	.Q	V .	.	.	.
11.417	17.9260	30.00	.Q	V .	.	.	.
11.433	17.9675	30.08	.Q	V .	.	.	.
11.450	18.0090	30.16	.Q	V .	.	.	.
11.467	18.0506	30.21	.Q	V .	.	.	.
11.483	18.0923	30.26	.Q	V.	.	.	.
11.500	18.1340	30.30	.Q	V.	.	.	.
11.517	18.1758	30.35	.Q	V.	.	.	.
11.533	18.2177	30.39	.Q	V.	.	.	.
11.550	18.2596	30.44	.Q	V.	.	.	.
11.567	18.3016	30.49	.Q	V.	.	.	.
11.583	18.3437	30.53	.Q	V.	.	.	.
11.600	18.3858	30.58	.Q	V.	.	.	.
11.617	18.4280	30.62	.Q	V.	.	.	.
11.633	18.4702	30.67	.Q	V.	.	.	.
11.650	18.5125	30.72	.Q	V.	.	.	.
11.667	18.5549	30.76	.Q	V.	.	.	.
11.683	18.5973	30.81	.Q	V.	.	.	.
11.700	18.6399	30.89	.Q	V.	.	.	.
11.717	18.6826	30.99	.Q	V.	.	.	.
11.733	18.7254	31.09	.Q	V.	.	.	.
11.750	18.7684	31.19	.Q	V.	.	.	.
11.767	18.8115	31.29	.Q	V.	.	.	.
11.783	18.8547	31.39	.Q	V.	.	.	.
11.800	18.8981	31.49	.Q	V.	.	.	.
11.817	18.9416	31.59	.Q	V.	.	.	.
11.833	18.9852	31.69	.Q	V.	.	.	.
11.850	19.0290	31.79	.Q	V.	.	.	.
11.867	19.0730	31.89	.Q	V.	.	.	.
11.883	19.1170	31.99	.Q	V.	.	.	.
11.900	19.1612	32.09	.Q	V.	.	.	.
11.917	19.2056	32.19	.Q	V.	.	.	.
11.933	19.2500	32.28	.Q	V.	.	.	.
11.950	19.2946	32.33	.Q	V.	.	.	.
11.967	19.3392	32.39	.Q	V.	.	.	.
11.983	19.3839	32.44	.Q	V.	.	.	.
12.000	19.4286	32.50	.Q	V.	.	.	.
12.017	19.4735	32.55	.Q	V.	.	.	.
12.033	19.5184	32.61	.Q	V.	.	.	.
12.050	19.5634	32.66	.Q	V.	.	.	.
12.067	19.6084	32.72	.Q	V.	.	.	.
12.083	19.6536	32.77	.Q	V.	.	.	.
12.100	19.6988	32.83	.Q	V.	.	.	.
12.117	19.7441	32.88	.Q	V.	.	.	.
12.133	19.7895	32.94	.Q	V.	.	.	.
12.150	19.8349	32.99	.Q	V.	.	.	.
12.167	19.8805	33.10	.Q	V.	.	.	.
12.183	19.9269	33.70	.Q	V.	.	.	.
12.200	19.9743	34.42	.Q	V.	.	.	.
12.217	20.0227	35.14	.Q	V.	.	.	.
12.233	20.0721	35.86	.Q	V	.	.	.
12.250	20.1225	36.58	.Q	V	.	.	.
12.267	20.1739	37.30	.Q	V	.	.	.
12.283	20.2262	38.01	. Q	V	.	.	.
12.300	20.2796	38.73	. Q	V	.	.	.
12.317	20.3339	39.45	. Q	V	.	.	.
12.333	20.3893	40.17	. Q	V	.	.	.
12.350	20.4456	40.89	. Q	V	.	.	.

12.367	20.5029	41.61	. Q	V	.	.	.
12.383	20.5612	42.33	. Q	V	.	.	.
12.400	20.6205	43.05	. Q	V	.	.	.
12.417	20.6803	43.44	. Q	V	.	.	.
12.433	20.7403	43.51	. Q	V	.	.	.
12.450	20.8003	43.58	. Q	V	.	.	.
12.467	20.8604	43.66	. Q	V	.	.	.
12.483	20.9207	43.73	. Q	V	.	.	.
12.500	20.9810	43.80	. Q	V	.	.	.
12.517	21.0414	43.87	. Q	V	.	.	.
12.533	21.1019	43.94	. Q	V	.	.	.
12.550	21.1626	44.01	. Q	V	.	.	.
12.567	21.2233	44.08	. Q	V	.	.	.
12.583	21.2841	44.15	. Q	V	.	.	.
12.600	21.3450	44.22	. Q	V	.	.	.
12.617	21.4060	44.29	. Q	V	.	.	.
12.633	21.4671	44.36	. Q	V	.	.	.
12.650	21.5283	44.45	. Q	V	.	.	.
12.667	21.5898	44.60	. Q	V	.	.	.
12.683	21.6514	44.76	. Q	V	.	.	.
12.700	21.7133	44.91	. Q	V	.	.	.
12.717	21.7754	45.07	. Q	V	.	.	.
12.733	21.8377	45.23	. Q	V	.	.	.
12.750	21.9002	45.39	. Q	V	.	.	.
12.767	21.9629	45.54	. Q	V	.	.	.
12.783	22.0259	45.70	. Q	V	.	.	.
12.800	22.0890	45.86	. Q	.V	.	.	.
12.817	22.1524	46.01	. Q	.V	.	.	.
12.833	22.2160	46.17	. Q	.V	.	.	.
12.850	22.2798	46.33	. Q	.V	.	.	.
12.867	22.3438	46.49	. Q	.V	.	.	.
12.883	22.4081	46.64	. Q	.V	.	.	.
12.900	22.4725	46.75	. Q	.V	.	.	.
12.917	22.5370	46.84	. Q	.V	.	.	.
12.933	22.6016	46.93	. Q	.V	.	.	.
12.950	22.6664	47.01	. Q	.V	.	.	.
12.967	22.7313	47.10	. Q	.V	.	.	.
12.983	22.7963	47.19	. Q	.V	.	.	.
13.000	22.8614	47.28	. Q	.V	.	.	.
13.017	22.9266	47.37	. Q	.V	.	.	.
13.033	22.9920	47.45	. Q	.V	.	.	.
13.050	23.0575	47.54	. Q	.V	.	.	.
13.067	23.1231	47.63	. Q	.V	.	.	.
13.083	23.1888	47.72	. Q	.V	.	.	.
13.100	23.2547	47.80	. Q	.V	.	.	.
13.117	23.3206	47.89	. Q	.V	.	.	.
13.133	23.3868	48.01	. Q	.V	.	.	.
13.150	23.4532	48.21	. Q	.V	.	.	.
13.167	23.5199	48.41	. Q	.V	.	.	.
13.183	23.5868	48.61	. Q	.V	.	.	.
13.200	23.6540	48.80	. Q	.V	.	.	.
13.217	23.7215	49.00	. Q	.V	.	.	.
13.233	23.7893	49.20	. Q	.V	.	.	.
13.250	23.8573	49.40	. Q	.V	.	.	.
13.267	23.9257	49.60	. Q	.V	.	.	.
13.283	23.9942	49.79	. Q	.V	.	.	.
13.300	24.0631	49.99	. Q	.V	.	.	.
13.317	24.1322	50.19	. Q	. V	.	.	.

13.333	24.2016	50.39	. Q	. V	.	.	.	
13.350	24.2713	50.59	. Q	. V	.	.	.	
13.367	24.3413	50.78	. Q	. V	.	.	.	
13.383	24.4114	50.91	. Q	. V	.	.	.	
13.400	24.4817	51.02	. Q	. V	.	.	.	
13.417	24.5521	51.13	. Q	. V	.	.	.	
13.433	24.6227	51.24	. Q	. V	.	.	.	
13.450	24.6934	51.36	. Q	. V	.	.	.	
13.467	24.7643	51.47	. Q	. V	.	.	.	
13.483	24.8353	51.58	. Q	. V	.	.	.	
13.500	24.9066	51.69	. Q	. V	.	.	.	
13.517	24.9779	51.81	. Q	. V	.	.	.	
13.533	25.0494	51.92	. Q	. V	.	.	.	
13.550	25.1211	52.03	. Q	. V	.	.	.	
13.567	25.1929	52.14	. Q	. V	.	.	.	
13.583	25.2649	52.26	. Q	. V	.	.	.	
13.600	25.3370	52.37	. Q	. V	.	.	.	
13.617	25.4094	52.56	. Q	. V	.	.	.	
13.633	25.4822	52.82	. Q	. V	.	.	.	
13.650	25.5553	53.08	. Q	. V	.	.	.	
13.667	25.6287	53.34	. Q	. V	.	.	.	
13.683	25.7026	53.60	. Q	. V	.	.	.	
13.700	25.7768	53.86	. Q	. V	.	.	.	
13.717	25.8513	54.12	. Q	. V	.	.	.	
13.733	25.9262	54.38	. Q	. V	.	.	.	
13.750	26.0014	54.64	. Q	. V	.	.	.	
13.767	26.0771	54.90	. Q	. V	.	.	.	
13.783	26.1530	55.16	. Q	. V	.	.	.	
13.800	26.2294	55.42	. Q	. V	.	.	.	
13.817	26.3060	55.68	. Q	. V	.	.	.	
13.833	26.3831	55.94	. Q	. V	.	.	.	
13.850	26.4605	56.18	. Q	. V	.	.	.	
13.867	26.5381	56.34	. Q	. V	.	.	.	
13.883	26.6159	56.49	. Q	. V	.	.	.	
13.900	26.6939	56.64	. Q	. V	.	.	.	
13.917	26.7721	56.79	. Q	. V	.	.	.	
13.933	26.8506	56.94	. Q	. V	.	.	.	
13.950	26.9292	57.10	. Q	. V	.	.	.	
13.967	27.0081	57.25	. Q	. V	.	.	.	
13.983	27.0871	57.40	. Q	. V	.	.	.	
14.000	27.1664	57.55	. Q	. V	.	.	.	
14.017	27.2459	57.70	. Q	. V	.	.	.	
14.033	27.3256	57.85	. Q	. V	.	.	.	
14.050	27.4055	58.01	. Q	. V	.	.	.	
14.067	27.4856	58.16	. Q	. V	.	.	.	
14.083	27.5659	58.31	. Q	. V	.	.	.	
14.100	27.6467	58.64	. Q	. V	.	.	.	
14.117	27.7280	59.06	. Q	. V	.	.	.	
14.133	27.8099	59.47	. Q	. V	.	.	.	
14.150	27.8924	59.88	. Q	. V	.	.	.	
14.167	27.9754	60.29	. Q	. V	.	.	.	
14.183	28.0591	60.71	. Q	. V	.	.	.	
14.200	28.1432	61.12	. Q	. V	.	.	.	
14.217	28.2280	61.53	. Q	. V	.	.	.	
14.233	28.3133	61.94	. Q	. V	.	.	.	
14.250	28.3992	62.36	. Q	. V	.	.	.	
14.267	28.4857	62.77	. Q	. V	.	.	.	
14.283	28.5727	63.18	. Q	. V	.	.	.	

14.300	28.6603	63.59	. Q	. V	.	.	.	
14.317	28.7484	64.01	. Q	. V	.	.	.	
14.333	28.8371	64.36	. Q	. V	.	.	.	
14.350	28.9260	64.58	. Q	. V	.	.	.	
14.367	29.0153	64.80	. Q	. V	.	.	.	
14.383	29.1049	65.02	. Q	. V	.	.	.	
14.400	29.1947	65.24	. Q	. V	.	.	.	
14.417	29.2849	65.46	. Q	. V	.	.	.	
14.433	29.3754	65.68	. Q	. V	.	.	.	
14.450	29.4661	65.90	. Q	. V	.	.	.	
14.467	29.5572	66.12	. Q	. V	.	.	.	
14.483	29.6486	66.34	. Q	. V	.	.	.	
14.500	29.7403	66.56	. Q	. V	.	.	.	
14.517	29.8322	66.78	. Q	. V	.	.	.	
14.533	29.9245	67.00	. Q	. V	.	.	.	
14.550	30.0171	67.22	. Q	. V	.	.	.	
14.567	30.1101	67.47	. Q	. V	.	.	.	
14.583	30.2037	67.96	. Q	. V	.	.	.	
14.600	30.2980	68.51	. Q	. V	.	.	.	
14.617	30.3932	69.07	. Q	. V	.	.	.	
14.633	30.4891	69.62	. Q	. V	.	.	.	
14.650	30.5857	70.18	. Q	. V	.	.	.	
14.667	30.6832	70.73	. Q	. V	.	.	.	
14.683	30.7813	71.28	. Q	. V	.	.	.	
14.700	30.8803	71.84	. Q	. V	.	.	.	
14.717	30.9800	72.39	. Q	. V	.	.	.	
14.733	31.0805	72.95	. Q	. V	.	.	.	
14.750	31.1817	73.50	. Q	. V	.	.	.	
14.767	31.2837	74.05	. Q	. V	.	.	.	
14.783	31.3865	74.61	. Q	. V	.	.	.	
14.800	31.4900	75.16	. Q	. V	.	.	.	
14.817	31.5942	75.62	. Q	. V	.	.	.	
14.833	31.6988	75.98	. Q	. V	.	.	.	
14.850	31.8040	76.33	. Q	. V	.	.	.	
14.867	31.9096	76.69	. Q	. V	.	.	.	
14.883	32.0157	77.05	. Q	. V	.	.	.	
14.900	32.1223	77.41	. Q	. V	.	.	.	
14.917	32.2295	77.77	. Q	. V	.	.	.	
14.933	32.3371	78.13	. Q	. V	.	.	.	
14.950	32.4452	78.49	. Q	. V	.	.	.	
14.967	32.5538	78.85	. Q	. V	.	.	.	
14.983	32.6629	79.20	. Q	. V	.	.	.	
15.000	32.7725	79.56	. Q	. V	.	.	.	
15.017	32.8826	79.92	. Q	. V	.	.	.	
15.033	32.9931	80.28	. Q	. V	.	.	.	
15.050	33.1044	80.75	. Q	. V	.	.	.	
15.067	33.2169	81.70	. Q	. V	.	.	.	
15.083	33.3308	82.70	. Q	. V	.	.	.	
15.100	33.4461	83.70	. Q	. V	.	.	.	
15.117	33.5628	84.70	. Q	. V	.	.	.	
15.133	33.6808	85.70	. Q	. V	.	.	.	
15.150	33.8002	86.70	. Q	. V	.	.	.	
15.167	33.9210	87.70	. Q	. V	.	.	.	
15.183	34.0432	88.70	. Q	. V	.	.	.	
15.200	34.1668	89.70	. Q	. V	.	.	.	
15.217	34.2917	90.70	. Q	. V	.	.	.	
15.233	34.4180	91.70	. Q	. V	.	.	.	
15.250	34.5457	92.70	. Q	. V	.	.	.	

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15.267    34.6747    93.70  .   Q    .      V  .         .         .
15.283    34.8052    94.69  .   Q    .      V  .         .         .
15.300    34.9365    95.38  .   Q    .      V  .         .         .
15.317    35.0687    95.94  .   Q    .      V  .         .         .
15.333    35.2016    96.49  .   Q    .      V  .         .         .
15.350    35.3353    97.05  .   Q    .      V  .         .         .
15.367    35.4697    97.60  .   Q    .      V  .         .         .
15.383    35.6049    98.16  .   Q    .      V  .         .         .
15.400    35.7409    98.71  .   Q    .      V  .         .         .
15.417    35.8776    99.27  .   Q    .      V  .         .         .
15.433    36.0151    99.82  .   Q    .      V  .         .         .
15.450    36.1534   100.37  .   Q    .       V .         .         .
15.467    36.2924   100.93  .   Q    .       V .         .         .
15.483    36.4322   101.48  .   Q    .       V .         .         .
15.500    36.5727   102.04  .   Q    .       V .         .         .
15.517    36.7140   102.59  .   Q    .       V .         .         .
15.533    36.8570   103.79  .   Q    .       V .         .         .
15.550    37.0034   106.30  .   Q    .       V .         .         .
15.567    37.1533   108.86  .   Q    .       V .         .         .
15.583    37.3068   111.41  .   Q    .       V .         .         .
15.600    37.4638   113.96  .    Q   .       V .         .         .
15.617    37.6243   116.52  .    Q   .       V .         .         .
15.633    37.7883   119.07  .    Q   .       V .         .         .
15.650    37.9558   121.63  .    Q   .       V .         .         .
15.667    38.1268   124.18  .    Q   .       V .         .         .
15.683    38.3014   126.73  .    Q   .        V.         .         .
15.700    38.4795   129.29  .    Q   .        V.         .         .
15.717    38.6611   131.84  .     Q  .        V.         .         .
15.733    38.8462   134.40  .     Q  .        V.         .         .
15.750    39.0348   136.95  .     Q  .        V.         .         .
15.767    39.2275   139.86  .     Q  .        V.         .         .
15.783    39.4287   146.11  .     Q  .        V.         .         .
15.800    39.6397   153.16  .      Q .        V.         .         .
15.817    39.8604   160.21  .      Q .        V.         .         .
15.833    40.0908   167.26  .      Q .        V.         .         .
15.850    40.3309   174.31  .       Q.         V         .         .
15.867    40.5807   181.36  .       Q.         V         .         .
15.883    40.8402   188.42  .        Q         V         .         .
15.900    41.1094   195.47  .        Q         V         .         .
15.917    41.3884   202.52  .        Q         V         .         .
15.933    41.6770   209.57  .        .Q        V         .         .
15.950    41.9754   216.62  .        .Q        V         .         .
15.967    42.2835   223.67  .        .Q        .V        .         .
15.983    42.6013   230.72  .        . Q       .V        .         .
16.000    42.9288   237.78  .        . Q       .V        .         .
16.017    43.2854   258.87  .        .  Q      .V        .         .
16.033    43.6904   294.00  .        .    Q    .V        .         .
16.050    44.1437   329.14  .        .     Q   .V        .         .
16.067    44.6455   364.28  .        .       Q. V        .         .
16.083    45.1956   399.41  .        .        .QV        .         .
16.100    45.7942   434.55  .        .         . VQ      .         .
16.117    46.4411   469.68  .        .         .  V Q    .         .
16.133    47.1365   504.82  .        .         .  V   Q  .         .
16.150    47.8802   539.95  .        .         .  V    Q .         .
16.167    48.6723   575.09  .        .         .   V     Q         .
16.183    49.5129   610.22  .        .         .   V     . Q       .
16.200    50.4018   645.36  .        .         .    V    .   Q     .
16.217    51.3391   680.49  .        .         .    V    .     Q   .
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16.233    52.3248   715.63  .         .         .     V   .       Q .
16.250    53.3541   747.25  .         .         .     V   .         Q
16.267    54.3157   698.14  .         .         .      V  .      Q  .
16.283    55.2159   653.50  .         .         .      V  .   Q     .
16.300    56.0545   608.86  .         .         .      V  . Q        .
16.317    56.8317   564.21  .         .         .       V Q          .
16.333    57.5473   519.57  .         .         .      QV .          .
16.350    58.2015   474.93  .         .         .    Q  V .          .
16.367    58.7942   430.29  .         .         .  Q     V.          .
16.383    59.3254   385.64  .         .         Q        V.          .
16.400    59.7951   341.00  .         .       Q .        V.          .
16.417    60.2033   296.36  .         .    Q    .        V.          .
16.433    60.5500   251.72  .         .  Q      .         V          .
16.450    60.8352   207.07  .        .Q         .         V          .
16.467    61.0589   162.43  .      Q .          .         V          .
16.483    61.2224   118.65  .    Q    .         .         V          .
16.500    61.3650   103.55  .   Q     .         .         V          .
16.517    61.5060   102.34  .   Q     .         .         V          .
16.533    61.6452   101.12  .   Q     .         .         V          .
16.550    61.7829    99.91  .   Q     .         .         V          .
16.567    61.9188    98.70  .   Q     .         .         V          .
16.583    62.0531    97.49  .   Q     .         .         V          .
16.600    62.1857    96.28  .   Q     .         .         V          .
16.617    62.3167    95.06  .   Q     .         .         .V         .
16.633    62.4459    93.85  .   Q     .         .         .V         .
16.650    62.5735    92.64  .  Q      .         .         .V         .
16.667    62.6995    91.43  .  Q      .         .         .V         .
16.683    62.8237    90.22  .  Q      .         .         .V         .
16.700    62.9463    89.01  .  Q      .         .         .V         .
16.717    63.0673    87.79  .  Q      .         .         .V         .
16.733    63.1866    86.62  .  Q      .         .         .V         .
16.750    63.3044    85.52  .  Q      .         .         .V         .
16.767    63.4206    84.42  .  Q      .         .         .V         .
16.783    63.5354    83.32  .  Q      .         .         .V         .
16.800    63.6487    82.22  .  Q      .         .         .V         .
16.817    63.7604    81.12  .  Q      .         .         .V         .
16.833    63.8706    80.03  .  Q      .         .         .V         .
16.850    63.9794    78.93  .  Q      .         .         .V         .
16.867    64.0866    77.83  .  Q      .         .         .V         .
16.883    64.1922    76.73  .  Q      .         .         .V         .
16.900    64.2964    75.63  .  Q      .         .         . V        .
16.917    64.3991    74.53  . Q       .         .         . V        .
16.933    64.5002    73.43  . Q       .         .         . V        .
16.950    64.5999    72.34  . Q       .         .         . V        .
16.967    64.6980    71.27  . Q       .         .         . V        .
16.983    64.7952    70.50  . Q       .         .         . V        .
17.000    64.8913    69.81  . Q       .         .         . V        .
17.017    64.9865    69.12  . Q       .         .         . V        .
17.033    65.0808    68.43  . Q       .         .         . V        .
17.050    65.1741    67.74  . Q       .         .         . V        .
17.067    65.2664    67.04  . Q       .         .         . V        .
17.083    65.3578    66.35  . Q       .         .         . V        .
17.100    65.4483    65.66  . Q       .         .         . V        .
17.117    65.5377    64.97  . Q       .         .         . V        .
17.133    65.6263    64.28  . Q       .         .         . V        .
17.150    65.7139    63.58  . Q       .         .         . V        .
17.167    65.8005    62.89  . Q       .         .         . V        .
17.183    65.8862    62.20  . Q       .         .         . V        .
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17.200	65.9709	61.51	.	Q	.	.	.	V	.	
17.217	66.0548	60.92	.	Q	.	.	.	V	.	
17.233	66.1381	60.44	.	Q	.	.	.	V	.	
17.250	66.2206	59.95	.	Q	.	.	.	V	.	
17.267	66.3026	59.47	.	Q	.	.	.	V	.	
17.283	66.3838	58.99	.	Q	.	.	.	V	.	
17.300	66.4644	58.51	.	Q	.	.	.	V	.	
17.317	66.5443	58.02	.	Q	.	.	.	V	.	
17.333	66.6236	57.54	.	Q	.	.	.	V	.	
17.350	66.7022	57.06	.	Q	.	.	.	V	.	
17.367	66.7801	56.57	.	Q	.	.	.	V	.	
17.383	66.8573	56.09	.	Q	.	.	.	V	.	
17.400	66.9339	55.61	.	Q	.	.	.	V	.	
17.417	67.0099	55.12	.	Q	.	.	.	V	.	
17.433	67.0851	54.64	.	Q	.	.	.	V	.	
17.450	67.1598	54.18	.	Q	.	.	.	V	.	
17.467	67.2339	53.83	.	Q	.	.	.	V	.	
17.483	67.3076	53.49	.	Q	.	.	.	V	.	
17.500	67.3808	53.15	.	Q	.	.	.	V	.	
17.517	67.4536	52.81	.	Q	.	.	.	V	.	
17.533	67.5258	52.48	.	Q	.	.	.	V	.	
17.550	67.5976	52.14	.	Q	.	.	.	V	.	
17.567	67.6690	51.80	.	Q	.	.	.	V	.	
17.583	67.7399	51.46	.	Q	.	.	.	V	.	
17.600	67.8103	51.12	.	Q	.	.	.	V	.	
17.617	67.8802	50.78	.	Q	.	.	.	V	.	
17.633	67.9497	50.44	.	Q	.	.	.	V	.	
17.650	68.0187	50.10	.	Q	.	.	.	V	.	
17.667	68.0872	49.76	.	Q	.	.	.	V	.	
17.683	68.1553	49.42	.	Q	.	.	.	V	.	
17.700	68.2230	49.14	.	Q	.	.	.	V	.	
17.717	68.2903	48.87	.	Q	.	.	.	V	.	
17.733	68.3573	48.61	.	Q	.	.	.	V	.	
17.750	68.4239	48.34	.	Q	.	.	.	V	.	
17.767	68.4901	48.08	.	Q	.	.	.	V	.	
17.783	68.5560	47.82	.	Q	.	.	.	V	.	
17.800	68.6215	47.55	.	Q	.	.	.	V	.	
17.817	68.6866	47.29	.	Q	.	.	.	V	.	
17.833	68.7514	47.02	.	Q	.	.	.	V	.	
17.850	68.8158	46.76	.	Q	.	.	.	V	.	
17.867	68.8798	46.49	.	Q	.	.	.	V	.	
17.883	68.9435	46.23	.	Q	.	.	.	V	.	
17.900	69.0068	45.97	.	Q	.	.	.	V	.	
17.917	69.0698	45.70	.	Q	.	.	.	V	.	
17.933	69.1324	45.46	.	Q	.	.	.	V	.	
17.950	69.1947	45.24	.	Q	.	.	.	V	.	
17.967	69.2567	45.03	.	Q	.	.	.	V	.	
17.983	69.3184	44.82	.	Q	.	.	.	V	.	
18.000	69.3799	44.60	.	Q	.	.	.	V	.	
18.017	69.4410	44.39	.	Q	.	.	.	V	.	
18.033	69.5019	44.18	.	Q	.	.	.	V	.	
18.050	69.5624	43.96	.	Q	.	.	.	V	.	
18.067	69.6227	43.75	.	Q	.	.	.	V	.	
18.083	69.6826	43.54	.	Q	.	.	.	V	.	
18.100	69.7423	43.33	.	Q	.	.	.	V	.	
18.117	69.8017	43.11	.	Q	.	.	.	V	.	
18.133	69.8608	42.90	.	Q	.	.	.	V	.	
18.150	69.9196	42.69	.	Q	.	.	.	V	.	

18.167	69.9780	42.43	.	Q	.	.	.	V	.	
18.183	70.0356	41.77	.	Q	.	.	.	V	.	
18.200	70.0921	41.01	.	Q	.	.	.	V	.	
18.217	70.1475	40.25	.	Q	.	.	.	V	.	
18.233	70.2019	39.49	.	Q	.	.	.	V	.	
18.250	70.2553	38.73	.	Q	.	.	.	V	.	
18.267	70.3076	37.97	.	Q	.	.	.	V	.	
18.283	70.3588	37.21	.	Q	.	.	.	V	.	
18.300	70.4090	36.46	.	Q	.	.	.	V	.	
18.317	70.4582	35.70	.	Q	.	.	.	V	.	
18.333	70.5063	34.94	.	Q	.	.	.	V	.	
18.350	70.5534	34.18	.	Q	.	.	.	V	.	
18.367	70.5994	33.42	.	Q	.	.	.	V	.	
18.383	70.6444	32.66	.	Q	.	.	.	V	.	
18.400	70.6884	31.90	.	Q	.	.	.	V	.	
18.417	70.7317	31.45	.	Q	.	.	.	V	.	
18.433	70.7748	31.31	.	Q	.	.	.	V	.	
18.450	70.8177	31.18	.	Q	.	.	.	V	.	
18.467	70.8605	31.04	.	Q	.	.	.	V	.	
18.483	70.9031	30.90	.	Q	.	.	.	V	.	
18.500	70.9454	30.76	.	Q	.	.	.	V	.	
18.517	70.9876	30.62	.	Q	.	.	.	V	.	
18.533	71.0296	30.49	.	Q	.	.	.	V	.	
18.550	71.0714	30.35	.	Q	.	.	.	V	.	
18.567	71.1130	30.21	.	Q	.	.	.	V	.	
18.583	71.1544	30.07	.	Q	.	.	.	V	.	
18.600	71.1957	29.93	.	Q	.	.	.	V	.	
18.617	71.2367	29.80	.	Q	.	.	.	V	.	
18.633	71.2776	29.66	.	Q	.	.	.	V	.	
18.650	71.3182	29.52	.	Q	.	.	.	V	.	
18.667	71.3587	29.41	.	Q	.	.	.	V	.	
18.683	71.3991	29.29	.	Q	.	.	.	V	.	
18.700	71.4393	29.17	.	Q	.	.	.	V	.	
18.717	71.4793	29.05	.	Q	.	.	.	V	.	
18.733	71.5191	28.94	.	Q	.	.	.	V	.	
18.750	71.5588	28.82	.	Q	.	.	.	V	.	
18.767	71.5984	28.70	.	Q	.	.	.	V	.	
18.783	71.6377	28.58	.	Q	.	.	.	V	.	
18.800	71.6769	28.47	.	Q	.	.	.	V	.	
18.817	71.7160	28.35	.	Q	.	.	.	V	.	
18.833	71.7549	28.23	.	Q	.	.	.	V	.	
18.850	71.7936	28.11	.	Q	.	.	.	V	.	
18.867	71.8322	28.00	.	Q	.	.	.	V	.	
18.883	71.8706	27.88	.	Q	.	.	.	V	.	
18.900	71.9088	27.77	.	Q	.	.	.	V	.	
18.917	71.9469	27.67	.	Q	.	.	.	V	.	
18.933	71.9849	27.57	.	Q	.	.	.	V	.	
18.950	72.0227	27.47	.	Q	.	.	.	V	.	
18.967	72.0604	27.37	.	Q	.	.	.	V	.	
18.983	72.0980	27.27	.	Q	.	.	.	V	.	
19.000	72.1354	27.16	.	Q	.	.	.	V	.	
19.017	72.1727	27.06	.	Q	.	.	.	V	.	
19.033	72.2098	26.96	.	Q	.	.	.	V	.	
19.050	72.2468	26.86	.	Q	.	.	.	V	.	
19.067	72.2837	26.76	.	Q	.	.	.	V	.	
19.083	72.3204	26.66	.	Q	.	.	.	V	.	
19.100	72.3570	26.56	.	Q	.	.	.	V	.	
19.117	72.3934	26.45	.	Q	.	.	.	V	.	

19.133	72.4297	26.36	.Q	.	.	.	V	.
19.150	72.4659	26.27	.Q	.	.	.	V	.
19.167	72.5019	26.18	.Q	.	.	.	V	.
19.183	72.5379	26.09	.Q	.	.	.	V	.
19.200	72.5737	26.00	.Q	.	.	.	V	.
19.217	72.6094	25.91	.Q	.	.	.	V	.
19.233	72.6449	25.82	.Q	.	.	.	V	.
19.250	72.6804	25.74	.Q	.	.	.	V	.
19.267	72.7157	25.65	.Q	.	.	.	V	.
19.283	72.7509	25.56	.Q	.	.	.	V	.
19.300	72.7860	25.47	.Q	.	.	.	V	.
19.317	72.8210	25.38	.Q	.	.	.	V	.
19.333	72.8558	25.29	.Q	.	.	.	V	.
19.350	72.8905	25.20	.Q	.	.	.	V	.
19.367	72.9251	25.12	.Q	.	.	.	V	.
19.383	72.9596	25.04	.Q	.	.	.	V	.
19.400	72.9940	24.96	.Q	.	.	.	V	.
19.417	73.0282	24.88	.Q	.	.	.	V	.
19.433	73.0624	24.80	.Q	.	.	.	V	.
19.450	73.0964	24.72	.Q	.	.	.	V	.
19.467	73.1304	24.64	.Q	.	.	.	V	.
19.483	73.1642	24.56	.Q	.	.	.	V	.
19.500	73.1979	24.49	.Q	.	.	.	V	.
19.517	73.2316	24.41	.Q	.	.	.	V	.
19.533	73.2651	24.33	.Q	.	.	.	V	.
19.550	73.2985	24.25	.Q	.	.	.	V	.
19.567	73.3318	24.17	.Q	.	.	.	V	.
19.583	73.3650	24.09	.Q	.	.	.	V	.
19.600	73.3980	24.02	.Q	.	.	.	V	.
19.617	73.4310	23.94	.Q	.	.	.	V	.
19.633	73.4639	23.87	.Q	.	.	.	V	.
19.650	73.4967	23.80	.Q	.	.	.	V	.
19.667	73.5294	23.73	.Q	.	.	.	V	.
19.683	73.5620	23.66	.Q	.	.	.	V	.
19.700	73.5945	23.59	.Q	.	.	.	V	.
19.717	73.6269	23.52	.Q	.	.	.	V	.
19.733	73.6592	23.45	.Q	.	.	.	V	.
19.750	73.6914	23.38	.Q	.	.	.	V	.
19.767	73.7235	23.31	.Q	.	.	.	V	.
19.783	73.7555	23.24	.Q	.	.	.	V	.
19.800	73.7874	23.17	.Q	.	.	.	V	.
19.817	73.8192	23.10	.Q	.	.	.	V	.
19.833	73.8510	23.03	.Q	.	.	.	V	.
19.850	73.8826	22.96	.Q	.	.	.	V	.
19.867	73.9141	22.90	.Q	.	.	.	V	.
19.883	73.9456	22.84	.Q	.	.	.	V	.
19.900	73.9770	22.78	.Q	.	.	.	V	.
19.917	74.0083	22.71	.Q	.	.	.	V	.
19.933	74.0395	22.65	.Q	.	.	.	V	.
19.950	74.0706	22.59	.Q	.	.	.	V	.
19.967	74.1016	22.53	.Q	.	.	.	V	.
19.983	74.1325	22.46	.Q	.	.	.	V	.
20.000	74.1634	22.40	.Q	.	.	.	V	.
20.017	74.1942	22.34	.Q	.	.	.	V	.
20.033	74.2248	22.27	.Q	.	.	.	V	.
20.050	74.2554	22.21	.Q	.	.	.	V	.
20.067	74.2859	22.15	.Q	.	.	.	V	.
20.083	74.3164	22.09	.Q	.	.	.	V	.

20.100	74.3467	22.03	.Q	.	.	.	V	.
20.117	74.3770	21.97	.Q	.	.	.	V	.
20.133	74.4072	21.91	.Q	.	.	.	V	.
20.150	74.4373	21.86	.Q	.	.	.	V	.
20.167	74.4673	21.80	.Q	.	.	.	V	.
20.183	74.4972	21.74	.Q	.	.	.	V	.
20.200	74.5271	21.69	.Q	.	.	.	V	.
20.217	74.5569	21.63	.Q	.	.	.	V	.
20.233	74.5866	21.57	.Q	.	.	.	V	.
20.250	74.6163	21.52	.Q	.	.	.	V	.
20.267	74.6458	21.46	.Q	.	.	.	V	.
20.283	74.6753	21.40	.Q	.	.	.	V	.
20.300	74.7047	21.35	.Q	.	.	.	V	.
20.317	74.7340	21.29	.Q	.	.	.	V	.
20.333	74.7633	21.23	.Q	.	.	.	V	.
20.350	74.7924	21.18	.Q	.	.	.	V	.
20.367	74.8216	21.13	.Q	.	.	.	V	.
20.383	74.8506	21.08	.Q	.	.	.	V	.
20.400	74.8796	21.03	.Q	.	.	.	V	.
20.417	74.9084	20.98	.Q	.	.	.	V	.
20.433	74.9373	20.93	.Q	.	.	.	V	.
20.450	74.9660	20.87	.Q	.	.	.	V	.
20.467	74.9947	20.82	.Q	.	.	.	V	.
20.483	75.0233	20.77	.Q	.	.	.	V	.
20.500	75.0519	20.72	.Q	.	.	.	V	.
20.517	75.0803	20.67	.Q	.	.	.	V	.
20.533	75.1087	20.62	.Q	.	.	.	V	.
20.550	75.1370	20.56	.Q	.	.	.	V	.
20.567	75.1653	20.51	.Q	.	.	.	V	.
20.583	75.1935	20.47	.Q	.	.	.	V	.
20.600	75.2216	20.42	.Q	.	.	.	V	.
20.617	75.2497	20.37	.Q	.	.	.	V	.
20.633	75.2777	20.32	.Q	.	.	.	V	.
20.650	75.3056	20.28	.Q	.	.	.	V	.
20.667	75.3335	20.23	.Q	.	.	.	V	.
20.683	75.3613	20.18	.Q	.	.	.	V	.
20.700	75.3890	20.14	.Q	.	.	.	V	.
20.717	75.4167	20.09	.Q	.	.	.	V	.
20.733	75.4443	20.04	.Q	.	.	.	V	.
20.750	75.4718	19.99	.Q	.	.	.	V	.
20.767	75.4993	19.95	.Q	.	.	.	V	.
20.783	75.5267	19.90	.Q	.	.	.	V	.
20.800	75.5540	19.85	.Q	.	.	.	V	.
20.817	75.5813	19.81	.Q	.	.	.	V	.
20.833	75.6085	19.76	.Q	.	.	.	V	.
20.850	75.6357	19.72	.Q	.	.	.	V	.
20.867	75.6628	19.68	.Q	.	.	.	V	.
20.883	75.6898	19.63	.Q	.	.	.	V	.
20.900	75.7168	19.59	.Q	.	.	.	V	.
20.917	75.7438	19.55	.Q	.	.	.	V	.
20.933	75.7706	19.50	.Q	.	.	.	V	.
20.950	75.7974	19.46	.Q	.	.	.	V	.
20.967	75.8242	19.42	.Q	.	.	.	V	.
20.983	75.8509	19.37	.Q	.	.	.	V	.
21.000	75.8775	19.33	.Q	.	.	.	V	.
21.017	75.9041	19.29	.Q	.	.	.	V	.
21.033	75.9306	19.24	.Q	.	.	.	V	.
21.050	75.9570	19.20	.Q	.	.	.	V	.

21.067	75.9834	19.16	.Q	.	.	.	V	.
21.083	76.0097	19.12	.Q	.	.	.	V	.
21.100	76.0360	19.08	.Q	.	.	.	V	.
21.117	76.0622	19.04	.Q	.	.	.	V	.
21.133	76.0884	19.00	.Q	.	.	.	V	.
21.150	76.1145	18.96	.Q	.	.	.	V	.
21.167	76.1406	18.92	.Q	.	.	.	V	.
21.183	76.1666	18.88	.Q	.	.	.	V	.
21.200	76.1926	18.84	.Q	.	.	.	V	.
21.217	76.2185	18.80	.Q	.	.	.	V	.
21.233	76.2443	18.76	.Q	.	.	.	V	.
21.250	76.2701	18.72	.Q	.	.	.	V	.
21.267	76.2958	18.68	.Q	.	.	.	V	.
21.283	76.3215	18.64	Q	.	.	.	V	.
21.300	76.3471	18.60	Q	.	.	.	V	.
21.317	76.3727	18.57	Q	.	.	.	V	.
21.333	76.3982	18.53	Q	.	.	.	V	.
21.350	76.4237	18.49	Q	.	.	.	V	.
21.367	76.4491	18.46	Q	.	.	.	V	.
21.383	76.4745	18.42	Q	.	.	.	V	.
21.400	76.4998	18.38	Q	.	.	.	V	.
21.417	76.5251	18.35	Q	.	.	.	V	.
21.433	76.5503	18.31	Q	.	.	.	V	.
21.450	76.5755	18.27	Q	.	.	.	V	.
21.467	76.6006	18.23	Q	.	.	.	V	.
21.483	76.6256	18.20	Q	.	.	.	V	.
21.500	76.6507	18.16	Q	.	.	.	V	.
21.517	76.6756	18.12	Q	.	.	.	V	.
21.533	76.7005	18.09	Q	.	.	.	V	.
21.550	76.7254	18.05	Q	.	.	.	V	.
21.567	76.7502	18.02	Q	.	.	.	V	.
21.583	76.7750	17.98	Q	.	.	.	V	.
21.600	76.7997	17.95	Q	.	.	.	V	.
21.617	76.8244	17.92	Q	.	.	.	V	.
21.633	76.8490	17.88	Q	.	.	.	V	.
21.650	76.8736	17.85	Q	.	.	.	V	.
21.667	76.8981	17.81	Q	.	.	.	V	.
21.683	76.9226	17.78	Q	.	.	.	V	.
21.700	76.9471	17.74	Q	.	.	.	V	.
21.717	76.9714	17.71	Q	.	.	.	V	.
21.733	76.9958	17.67	Q	.	.	.	V	.
21.750	77.0201	17.64	Q	.	.	.	V	.
21.767	77.0443	17.61	Q	.	.	.	V	.
21.783	77.0686	17.57	Q	.	.	.	V	.
21.800	77.0927	17.54	Q	.	.	.	V	.
21.817	77.1168	17.51	Q	.	.	.	V	.
21.833	77.1409	17.48	Q	.	.	.	V	.
21.850	77.1649	17.45	Q	.	.	.	V	.
21.867	77.1889	17.41	Q	.	.	.	V	.
21.883	77.2129	17.38	Q	.	.	.	V	.
21.900	77.2368	17.35	Q	.	.	.	V	.
21.917	77.2606	17.32	Q	.	.	.	V	.
21.933	77.2844	17.29	Q	.	.	.	V	.
21.950	77.3082	17.25	Q	.	.	.	V	.
21.967	77.3319	17.22	Q	.	.	.	V	.
21.983	77.3556	17.19	Q	.	.	.	V	.
22.000	77.3792	17.16	Q	.	.	.	V	.
22.017	77.4028	17.13	Q	.	.	.	V	.

22.033	77.4264	17.10	Q	.	.	.	V	.
22.050	77.4499	17.07	Q	.	.	.	V	.
22.067	77.4733	17.04	Q	.	.	.	V	.
22.083	77.4967	17.01	Q	.	.	.	V	.
22.100	77.5201	16.98	Q	.	.	.	V	.
22.117	77.5435	16.95	Q	.	.	.	V	.
22.133	77.5668	16.92	Q	.	.	.	V	.
22.150	77.5900	16.89	Q	.	.	.	V	.
22.167	77.6133	16.86	Q	.	.	.	V	.
22.183	77.6364	16.83	Q	.	.	.	V	.
22.200	77.6596	16.80	Q	.	.	.	V	.
22.217	77.6827	16.77	Q	.	.	.	V	.
22.233	77.7057	16.74	Q	.	.	.	V	.
22.250	77.7287	16.71	Q	.	.	.	V	.
22.267	77.7517	16.68	Q	.	.	.	V	.
22.283	77.7746	16.65	Q	.	.	.	V	.
22.300	77.7975	16.62	Q	.	.	.	V	.
22.317	77.8204	16.60	Q	.	.	.	V	.
22.333	77.8432	16.57	Q	.	.	.	V	.
22.350	77.8660	16.54	Q	.	.	.	V	.
22.367	77.8887	16.51	Q	.	.	.	V	.
22.383	77.9114	16.48	Q	.	.	.	V	.
22.400	77.9341	16.45	Q	.	.	.	V	.
22.417	77.9567	16.43	Q	.	.	.	V	.
22.433	77.9793	16.40	Q	.	.	.	V	.
22.450	78.0019	16.37	Q	.	.	.	V	.
22.467	78.0244	16.34	Q	.	.	.	V	.
22.483	78.0469	16.31	Q	.	.	.	V	.
22.500	78.0693	16.29	Q	.	.	.	V	.
22.517	78.0917	16.26	Q	.	.	.	V	.
22.533	78.1141	16.23	Q	.	.	.	V	.
22.550	78.1364	16.21	Q	.	.	.	V	.
22.567	78.1587	16.18	Q	.	.	.	V	.
22.583	78.1809	16.16	Q	.	.	.	V	.
22.600	78.2031	16.13	Q	.	.	.	V	.
22.617	78.2253	16.10	Q	.	.	.	V	.
22.633	78.2475	16.08	Q	.	.	.	V	.
22.650	78.2696	16.05	Q	.	.	.	V	.
22.667	78.2916	16.02	Q	.	.	.	V	.
22.683	78.3137	16.00	Q	.	.	.	V	.
22.700	78.3357	15.97	Q	.	.	.	V	.
22.717	78.3576	15.94	Q	.	.	.	V	.
22.733	78.3796	15.92	Q	.	.	.	V	.
22.750	78.4015	15.89	Q	.	.	.	V	.
22.767	78.4233	15.87	Q	.	.	.	V	.
22.783	78.4451	15.84	Q	.	.	.	V	.
22.800	78.4669	15.82	Q	.	.	.	V	.
22.817	78.4887	15.79	Q	.	.	.	V	.
22.833	78.5104	15.77	Q	.	.	.	V	.
22.850	78.5321	15.74	Q	.	.	.	V	.
22.867	78.5537	15.72	Q	.	.	.	V	.
22.883	78.5754	15.70	Q	.	.	.	V	.
22.900	78.5970	15.67	Q	.	.	.	V	.
22.917	78.6185	15.65	Q	.	.	.	V	.
22.933	78.6400	15.62	Q	.	.	.	V	.
22.950	78.6615	15.60	Q	.	.	.	V	.
22.967	78.6830	15.57	Q	.	.	.	V	.
22.983	78.7044	15.55	Q	.	.	.	V	.

23.000	78.7258	15.52	Q	.	.	.	V.
23.017	78.7471	15.50	Q	.	.	.	V.
23.033	78.7684	15.48	Q	.	.	.	V.
23.050	78.7897	15.45	Q	.	.	.	V.
23.067	78.8110	15.43	Q	.	.	.	V.
23.083	78.8322	15.41	Q	.	.	.	V.
23.100	78.8534	15.38	Q	.	.	.	V.
23.117	78.8745	15.36	Q	.	.	.	V.
23.133	78.8956	15.34	Q	.	.	.	V.
23.150	78.9167	15.31	Q	.	.	.	V.
23.167	78.9378	15.29	Q	.	.	.	V.
23.183	78.9588	15.27	Q	.	.	.	V.
23.200	78.9798	15.24	Q	.	.	.	V.
23.217	79.0008	15.22	Q	.	.	.	V.
23.233	79.0217	15.20	Q	.	.	.	V.
23.250	79.0426	15.18	Q	.	.	.	V.
23.267	79.0635	15.15	Q	.	.	.	V.
23.283	79.0843	15.13	Q	.	.	.	V.
23.300	79.1052	15.11	Q	.	.	.	V.
23.317	79.1259	15.09	Q	.	.	.	V.
23.333	79.1467	15.06	Q	.	.	.	V.
23.350	79.1674	15.04	Q	.	.	.	V.
23.367	79.1881	15.02	Q	.	.	.	V.
23.383	79.2088	15.00	Q	.	.	.	V.
23.400	79.2294	14.98	Q	.	.	.	V.
23.417	79.2500	14.95	Q	.	.	.	V.
23.433	79.2706	14.93	Q	.	.	.	V.
23.450	79.2911	14.91	Q	.	.	.	V.
23.467	79.3116	14.89	Q	.	.	.	V.
23.483	79.3321	14.87	Q	.	.	.	V.
23.500	79.3525	14.85	Q	.	.	.	V.
23.517	79.3730	14.83	Q	.	.	.	V.
23.533	79.3933	14.80	Q	.	.	.	V.
23.550	79.4137	14.78	Q	.	.	.	V.
23.567	79.4340	14.76	Q	.	.	.	V.
23.583	79.4543	14.74	Q	.	.	.	V.
23.600	79.4746	14.72	Q	.	.	.	V.
23.617	79.4949	14.70	Q	.	.	.	V.
23.633	79.5151	14.68	Q	.	.	.	V.
23.650	79.5353	14.66	Q	.	.	.	V.
23.667	79.5554	14.64	Q	.	.	.	V.
23.683	79.5756	14.62	Q	.	.	.	V.
23.700	79.5957	14.59	Q	.	.	.	V.
23.717	79.6157	14.57	Q	.	.	.	V.
23.733	79.6358	14.56	Q	.	.	.	V.
23.750	79.6558	14.54	Q	.	.	.	V.
23.767	79.6758	14.52	Q	.	.	.	V.
23.783	79.6958	14.50	Q	.	.	.	V.
23.800	79.7157	14.48	Q	.	.	.	V.
23.817	79.7356	14.46	Q	.	.	.	V.
23.833	79.7555	14.44	Q	.	.	.	V.
23.850	79.7754	14.42	Q	.	.	.	V.
23.867	79.7952	14.40	Q	.	.	.	V.
23.883	79.8150	14.38	Q	.	.	.	V.
23.900	79.8348	14.36	Q	.	.	.	V.
23.917	79.8545	14.34	Q	.	.	.	V.
23.933	79.8742	14.32	Q	.	.	.	V.
23.950	79.8939	14.30	Q	.	.	.	V.

23.967	79.9136	14.28	Q	.	.	.	V.
23.983	79.9332	14.26	Q	.	.	.	V.
24.000	79.9529	14.24	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%	1441.0
10%	635.0
20%	205.0
30%	140.0
40%	110.0
50%	95.0
60%	75.0
70%	55.0
80%	40.0
90%	20.0

END OF FLOODSCx ROUTING ANALYSIS

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

                         Analysis prepared by:

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

 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 SUBAREA B                                                     *
* UNIT HYDROGRAPH  - SINGLE AREA MODEL                                   *
* 10-YR EV ROKAMOTO JUNE 2018                                            *
 ************************************************************************

  FILE NAME: 3B10EVS.DAT
  TIME/DATE OF STUDY: 09:09 06/19/2018

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


************************************************************************
  FLOW PROCESS FROM NODE    210.00 TO NODE    222.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  214.70
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.126
    LOW LOSS FRACTION = 0.383
    TIME OF CONCENTRATION(MIN.) = 18.52
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   5
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.26
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.59
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.78
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.31
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.81
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  3.03

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    32.67
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    21.54

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	68.0	135.9	203.9	271.9
10.000	5.9227	10.09	.Q	V .	.	.	.
10.017	5.9367	10.11	.Q	V .	.	.	.
10.033	5.9506	10.14	.Q	V .	.	.	.
10.050	5.9646	10.16	.Q	V .	.	.	.
10.067	5.9786	10.18	.Q	V .	.	.	.
10.083	5.9927	10.20	.Q	V .	.	.	.
10.100	6.0068	10.23	.Q	V .	.	.	.
10.117	6.0209	10.25	.Q	V .	.	.	.
10.133	6.0351	10.27	.Q	V .	.	.	.
10.150	6.0492	10.29	.Q	V .	.	.	.
10.167	6.0634	10.30	.Q	V .	.	.	.
10.183	6.0776	10.31	.Q	V .	.	.	.
10.200	6.0918	10.33	.Q	V .	.	.	.
10.217	6.1061	10.34	.Q	V .	.	.	.
10.233	6.1203	10.35	.Q	V .	.	.	.
10.250	6.1346	10.36	.Q	V .	.	.	.
10.267	6.1489	10.38	.Q	V .	.	.	.
10.283	6.1632	10.39	.Q	V .	.	.	.
10.300	6.1775	10.40	.Q	V .	.	.	.
10.317	6.1919	10.41	.Q	V .	.	.	.
10.333	6.2062	10.42	.Q	V .	.	.	.
10.350	6.2206	10.44	.Q	V .	.	.	.
10.367	6.2350	10.45	.Q	V .	.	.	.
10.383	6.2494	10.46	.Q	V .	.	.	.
10.400	6.2638	10.47	.Q	V .	.	.	.
10.417	6.2783	10.48	.Q	V .	.	.	.
10.433	6.2927	10.50	.Q	V .	.	.	.
10.450	6.3072	10.51	.Q	V .	.	.	.
10.467	6.3217	10.53	.Q	V .	.	.	.
10.483	6.3363	10.56	.Q	V .	.	.	.
10.500	6.3509	10.59	.Q	V .	.	.	.
10.517	6.3655	10.61	.Q	V .	.	.	.
10.533	6.3801	10.64	.Q	V .	.	.	.
10.550	6.3948	10.67	.Q	V .	.	.	.
10.567	6.4096	10.69	.Q	V .	.	.	.
10.583	6.4243	10.72	.Q	V .	.	.	.
10.600	6.4391	10.75	.Q	V .	.	.	.
10.617	6.4540	10.77	.Q	V .	.	.	.
10.633	6.4688	10.80	.Q	V .	.	.	.
10.650	6.4837	10.83	.Q	V .	.	.	.
10.667	6.4987	10.85	.Q	V .	.	.	.
10.683	6.5137	10.88	.Q	V .	.	.	.
10.700	6.5287	10.91	.Q	V .	.	.	.
10.717	6.5438	10.93	.Q	V .	.	.	.
10.733	6.5589	10.96	.Q	V .	.	.	.
10.750	6.5740	10.99	.Q	V .	.	.	.
10.767	6.5891	11.01	.Q	V .	.	.	.
10.783	6.6043	11.02	.Q	V .	.	.	.
10.800	6.6195	11.04	.Q	V .	.	.	.
10.817	6.6348	11.05	.Q	V .	.	.	.
10.833	6.6500	11.07	.Q	V .	.	.	.
10.850	6.6653	11.08	.Q	V .	.	.	.
10.867	6.6805	11.09	.Q	V .	.	.	.
10.883	6.6958	11.11	.Q	V .	.	.	.
10.900	6.7112	11.12	.Q	V .	.	.	.
10.917	6.7265	11.14	.Q	V .	.	.	.
10.933	6.7419	11.15	.Q	V .	.	.	.
10.950	6.7572	11.17	.Q	V .	.	.	.
10.967	6.7727	11.18	.Q	V .	.	.	.
10.983	6.7881	11.20	.Q	V .	.	.	.
11.000	6.8035	11.21	.Q	V .	.	.	.
11.017	6.8190	11.23	.Q	V .	.	.	.
11.033	6.8345	11.24	.Q	V .	.	.	.
11.050	6.8500	11.25	.Q	V .	.	.	.
11.067	6.8655	11.27	.Q	V .	.	.	.
11.083	6.8811	11.30	.Q	V .	.	.	.
11.100	6.8967	11.33	.Q	V .	.	.	.
11.117	6.9123	11.36	.Q	V .	.	.	.
11.133	6.9280	11.39	.Q	V .	.	.	.
11.150	6.9437	11.43	.Q	V .	.	.	.
11.167	6.9595	11.46	.Q	V .	.	.	.
11.183	6.9754	11.49	.Q	V .	.	.	.
11.200	6.9912	11.52	.Q	V .	.	.	.
11.217	7.0071	11.55	.Q	V .	.	.	.
11.233	7.0231	11.59	.Q	V .	.	.	.
11.250	7.0391	11.62	.Q	V .	.	.	.
11.267	7.0552	11.65	.Q	V .	.	.	.
11.283	7.0712	11.68	.Q	V .	.	.	.
11.300	7.0874	11.72	.Q	V .	.	.	.
11.317	7.1036	11.75	.Q	V .	.	.	.
11.333	7.1198	11.78	.Q	V .	.	.	.
11.350	7.1361	11.81	.Q	V .	.	.	.
11.367	7.1524	11.84	.Q	V .	.	.	.
11.383	7.1687	11.87	.Q	V .	.	.	.
11.400	7.1851	11.89	.Q	V .	.	.	.
11.417	7.2015	11.91	.Q	V .	.	.	.
11.433	7.2179	11.92	.Q	V .	.	.	.
11.450	7.2344	11.94	.Q	V .	.	.	.
11.467	7.2508	11.96	.Q	V .	.	.	.
11.483	7.2673	11.98	.Q	V .	.	.	.
11.500	7.2839	12.00	.Q	V .	.	.	.
11.517	7.3004	12.01	.Q	V .	.	.	.
11.533	7.3170	12.03	.Q	V .	.	.	.
11.550	7.3336	12.05	.Q	V .	.	.	.
11.567	7.3502	12.07	.Q	V .	.	.	.
11.583	7.3668	12.08	.Q	V.	.	.	.
11.600	7.3835	12.10	.Q	V.	.	.	.
11.617	7.4002	12.12	.Q	V.	.	.	.
11.633	7.4169	12.14	.Q	V.	.	.	.
11.650	7.4337	12.15	.Q	V.	.	.	.
11.667	7.4504	12.17	.Q	V.	.	.	.
11.683	7.4672	12.19	.Q	V.	.	.	.
11.700	7.4841	12.23	.Q	V.	.	.	.

11.717	7.5010	12.27	.Q	V.	.	.	.
11.733	7.5179	12.30	.Q	V.	.	.	.
11.750	7.5349	12.34	.Q	V.	.	.	.
11.767	7.5520	12.38	.Q	V.	.	.	.
11.783	7.5691	12.42	.Q	V.	.	.	.
11.800	7.5862	12.46	.Q	V.	.	.	.
11.817	7.6035	12.50	.Q	V.	.	.	.
11.833	7.6207	12.54	.Q	V.	.	.	.
11.850	7.6381	12.58	.Q	V.	.	.	.
11.867	7.6555	12.62	.Q	V.	.	.	.
11.883	7.6729	12.66	.Q	V.	.	.	.
11.900	7.6904	12.70	.Q	V.	.	.	.
11.917	7.7079	12.74	.Q	V.	.	.	.
11.933	7.7256	12.78	.Q	V.	.	.	.
11.950	7.7432	12.82	.Q	V.	.	.	.
11.967	7.7609	12.86	.Q	V.	.	.	.
11.983	7.7787	12.90	.Q	V.	.	.	.
12.000	7.7965	12.96	.Q	V.	.	.	.
12.017	7.8145	13.06	.Q	V.	.	.	.
12.033	7.8327	13.16	.Q	V.	.	.	.
12.050	7.8509	13.27	.Q	V.	.	.	.
12.067	7.8693	13.37	.Q	V.	.	.	.
12.083	7.8879	13.47	.Q	V.	.	.	.
12.100	7.9066	13.57	.Q	V.	.	.	.
12.117	7.9254	13.68	. Q	V.	.	.	.
12.133	7.9444	13.78	. Q	V.	.	.	.
12.150	7.9635	13.88	. Q	V.	.	.	.
12.167	7.9828	13.99	. Q	V.	.	.	.
12.183	8.0022	14.09	. Q	V.	.	.	.
12.200	8.0218	14.19	. Q	V.	.	.	.
12.217	8.0415	14.30	. Q	V.	.	.	.
12.233	8.0613	14.40	. Q	V.	.	.	.
12.250	8.0813	14.50	. Q	V.	.	.	.
12.267	8.1014	14.61	. Q	V.	.	.	.
12.283	8.1217	14.71	. Q	V.	.	.	.
12.300	8.1421	14.81	. Q	V.	.	.	.
12.317	8.1627	14.96	. Q	V.	.	.	.
12.333	8.1835	15.11	. Q	V	.	.	.
12.350	8.2045	15.27	. Q	V	.	.	.
12.367	8.2257	15.43	. Q	V	.	.	.
12.383	8.2472	15.58	. Q	V	.	.	.
12.400	8.2689	15.74	. Q	V	.	.	.
12.417	8.2908	15.90	. Q	V	.	.	.
12.433	8.3129	16.05	. Q	V	.	.	.
12.450	8.3352	16.21	. Q	V	.	.	.
12.467	8.3578	16.37	. Q	V	.	.	.
12.483	8.3805	16.52	. Q	V	.	.	.
12.500	8.4035	16.68	. Q	V	.	.	.
12.517	8.4267	16.84	. Q	V	.	.	.
12.533	8.4501	16.99	. Q	V	.	.	.
12.550	8.4737	17.15	. Q	V	.	.	.
12.567	8.4976	17.31	. Q	V	.	.	.
12.583	8.5216	17.47	. Q	V	.	.	.
12.600	8.5459	17.62	. Q	V	.	.	.
12.617	8.5703	17.75	. Q	V	.	.	.
12.633	8.5948	17.78	. Q	V	.	.	.
12.650	8.6194	17.81	. Q	V	.	.	.
12.667	8.6440	17.84	. Q	V	.	.	.

12.683	8.6686	17.87	. Q	V	.	.	.
12.700	8.6932	17.90	. Q	V	.	.	.
12.717	8.7179	17.93	. Q	V	.	.	.
12.733	8.7427	17.97	. Q	V	.	.	.
12.750	8.7675	18.00	. Q	V	.	.	.
12.767	8.7923	18.03	. Q	V	.	.	.
12.783	8.8172	18.06	. Q	V	.	.	.
12.800	8.8421	18.09	. Q	V	.	.	.
12.817	8.8670	18.12	. Q	V	.	.	.
12.833	8.8920	18.15	. Q	V	.	.	.
12.850	8.9171	18.18	. Q	V	.	.	.
12.867	8.9422	18.21	. Q	V	.	.	.
12.883	8.9673	18.24	. Q	V	.	.	.
12.900	8.9924	18.27	. Q	.V	.	.	.
12.917	9.0177	18.30	. Q	.V	.	.	.
12.933	9.0429	18.36	. Q	.V	.	.	.
12.950	9.0683	18.43	. Q	.V	.	.	.
12.967	9.0938	18.50	. Q	.V	.	.	.
12.983	9.1194	18.57	. Q	.V	.	.	.
13.000	9.1451	18.64	. Q	.V	.	.	.
13.017	9.1709	18.71	. Q	.V	.	.	.
13.033	9.1967	18.78	. Q	.V	.	.	.
13.050	9.2227	18.85	. Q	.V	.	.	.
13.067	9.2488	18.92	. Q	.V	.	.	.
13.083	9.2749	19.00	. Q	.V	.	.	.
13.100	9.3012	19.07	. Q	.V	.	.	.
13.117	9.3275	19.14	. Q	.V	.	.	.
13.133	9.3540	19.21	. Q	.V	.	.	.
13.150	9.3806	19.28	. Q	.V	.	.	.
13.167	9.4072	19.35	. Q	.V	.	.	.
13.183	9.4340	19.42	. Q	.V	.	.	.
13.200	9.4608	19.49	. Q	.V	.	.	.
13.217	9.4877	19.56	. Q	.V	.	.	.
13.233	9.5148	19.62	. Q	.V	.	.	.
13.250	9.5419	19.67	. Q	.V	.	.	.
13.267	9.5690	19.71	. Q	.V	.	.	.
13.283	9.5962	19.75	. Q	.V	.	.	.
13.300	9.6235	19.79	. Q	.V	.	.	.
13.317	9.6508	19.83	. Q	.V	.	.	.
13.333	9.6782	19.87	. Q	.V	.	.	.
13.350	9.7056	19.91	. Q	.V	.	.	.
13.367	9.7331	19.96	. Q	.V	.	.	.
13.383	9.7606	20.00	. Q	.V	.	.	.
13.400	9.7882	20.04	. Q	.V	.	.	.
13.417	9.8159	20.08	. Q	. V	.	.	.
13.433	9.8436	20.12	. Q	. V	.	.	.
13.450	9.8714	20.16	. Q	. V	.	.	.
13.467	9.8992	20.20	. Q	. V	.	.	.
13.483	9.9271	20.24	. Q	. V	.	.	.
13.500	9.9550	20.28	. Q	. V	.	.	.
13.517	9.9830	20.33	. Q	. V	.	.	.
13.533	10.0111	20.37	. Q	. V	.	.	.
13.550	10.0392	20.45	. Q	. V	.	.	.
13.567	10.0675	20.54	. Q	. V	.	.	.
13.583	10.0960	20.64	. Q	. V	.	.	.
13.600	10.1245	20.74	. Q	. V	.	.	.
13.617	10.1532	20.84	. Q	. V	.	.	.
13.633	10.1821	20.94	. Q	. V	.	.	.

13.650	10.2110	21.04	.	Q	.	V	.	.	.	
13.667	10.2402	21.13	.	Q	.	V	.	.	.	
13.683	10.2694	21.23	.	Q	.	V	.	.	.	
13.700	10.2988	21.33	.	Q	.	V	.	.	.	
13.717	10.3283	21.43	.	Q	.	V	.	.	.	
13.733	10.3580	21.53	.	Q	.	V	.	.	.	
13.750	10.3877	21.63	.	Q	.	V	.	.	.	
13.767	10.4177	21.72	.	Q	.	V	.	.	.	
13.783	10.4477	21.82	.	Q	.	V	.	.	.	
13.800	10.4779	21.92	.	Q	.	V	.	.	.	
13.817	10.5083	22.02	.	Q	.	V	.	.	.	
13.833	10.5387	22.12	.	Q	.	V	.	.	.	
13.850	10.5693	22.21	.	Q	.	V	.	.	.	
13.867	10.6000	22.27	.	Q	.	V	.	.	.	
13.883	10.6307	22.33	.	Q	.	V	.	.	.	
13.900	10.6616	22.39	.	Q	.	V	.	.	.	
13.917	10.6925	22.45	.	Q	.	V	.	.	.	
13.933	10.7235	22.51	.	Q	.	V	.	.	.	
13.950	10.7546	22.57	.	Q	.	V	.	.	.	
13.967	10.7858	22.63	.	Q	.	V	.	.	.	
13.983	10.8170	22.69	.	Q	.	V	.	.	.	
14.000	10.8484	22.75	.	Q	.	V	.	.	.	
14.017	10.8798	22.81	.	Q	.	V	.	.	.	
14.033	10.9113	22.87	.	Q	.	V	.	.	.	
14.050	10.9429	22.93	.	Q	.	V	.	.	.	
14.067	10.9745	22.99	.	Q	.	V	.	.	.	
14.083	11.0063	23.05	.	Q	.	V	.	.	.	
14.100	11.0381	23.11	.	Q	.	V	.	.	.	
14.117	11.0700	23.17	.	Q	.	V	.	.	.	
14.133	11.1020	23.23	.	Q	.	V	.	.	.	
14.150	11.1341	23.29	.	Q	.	V	.	.	.	
14.167	11.1663	23.41	.	Q	.	V	.	.	.	
14.183	11.1988	23.58	.	Q	.	V	.	.	.	
14.200	11.2315	23.74	.	Q	.	V	.	.	.	
14.217	11.2644	23.91	.	Q	.	V	.	.	.	
14.233	11.2976	24.08	.	Q	.	V	.	.	.	
14.250	11.3310	24.24	.	Q	.	V	.	.	.	
14.267	11.3646	24.41	.	Q	.	V	.	.	.	
14.283	11.3985	24.57	.	Q	.	V	.	.	.	
14.300	11.4325	24.74	.	Q	.	V	.	.	.	
14.317	11.4668	24.91	.	Q	.	V	.	.	.	
14.333	11.5014	25.07	.	Q	.	V	.	.	.	
14.350	11.5361	25.24	.	Q	.	V	.	.	.	
14.367	11.5711	25.40	.	Q	.	V	.	.	.	
14.383	11.6064	25.57	.	Q	.	V	.	.	.	
14.400	11.6418	25.74	.	Q	.	V	.	.	.	
14.417	11.6775	25.90	.	Q	.	V	.	.	.	
14.433	11.7134	26.07	.	Q	.	V	.	.	.	
14.450	11.7495	26.23	.	Q	.	V	.	.	.	
14.467	11.7859	26.39	.	Q	.	V	.	.	.	
14.483	11.8224	26.49	.	Q	.	V	.	.	.	
14.500	11.8590	26.59	.	Q	.	V	.	.	.	
14.517	11.8957	26.69	.	Q	.	V	.	.	.	
14.533	11.9326	26.78	.	Q	.	V	.	.	.	
14.550	11.9697	26.88	.	Q	.	V	.	.	.	
14.567	12.0068	26.98	.	Q	.	V	.	.	.	
14.583	12.0441	27.08	.	Q	.	V	.	.	.	
14.600	12.0816	27.17	.	Q	.	V	.	.	.	

14.617	12.1191	27.27	.	Q	.	V	.	.	.	
14.633	12.1568	27.37	.	Q	.	V	.	.	.	
14.650	12.1947	27.47	.	Q	.	V	.	.	.	
14.667	12.2326	27.56	.	Q	.	V	.	.	.	
14.683	12.2707	27.66	.	Q	.	V	.	.	.	
14.700	12.3090	27.76	.	Q	.	V	.	.	.	
14.717	12.3473	27.86	.	Q	.	V	.	.	.	
14.733	12.3858	27.95	.	Q	.	V	.	.	.	
14.750	12.4245	28.05	.	Q	.	V	.	.	.	
14.767	12.4633	28.15	.	Q	.	V	.	.	.	
14.783	12.5023	28.35	.	Q	.	V	.	.	.	
14.800	12.5417	28.62	.	Q	.	V	.	.	.	
14.817	12.5815	28.89	.	Q	.	V	.	.	.	
14.833	12.6217	29.16	.	Q	.	V	.	.	.	
14.850	12.6622	29.44	.	Q	.	V	.	.	.	
14.867	12.7032	29.71	.	Q	.	V	.	.	.	
14.883	12.7444	29.98	.	Q	.	V	.	.	.	
14.900	12.7861	30.25	.	Q	.	V	.	.	.	
14.917	12.8282	30.52	.	Q	.	V	.	.	.	
14.933	12.8706	30.79	.	Q	.	V	.	.	.	
14.950	12.9134	31.07	.	Q	.	V	.	.	.	
14.967	12.9565	31.34	.	Q	.	V	.	.	.	
14.983	13.0001	31.61	.	Q	.	V	.	.	.	
15.000	13.0440	31.88	.	Q	.	V	.	.	.	
15.017	13.0883	32.15	.	Q	.	V	.	.	.	
15.033	13.1329	32.43	.	Q	.	V	.	.	.	
15.050	13.1780	32.70	.	Q	.	V	.	.	.	
15.067	13.2234	32.97	.	Q	.	V	.	.	.	
15.083	13.2692	33.23	.	Q	.	V	.	.	.	
15.100	13.3152	33.44	.	Q	.	V	.	.	.	
15.117	13.3616	33.64	.	Q	.	V	.	.	.	
15.133	13.4082	33.84	.	Q	.	V	.	.	.	
15.150	13.4551	34.04	.	Q	.	V	.	.	.	
15.167	13.5022	34.24	.	Q	.	V	.	.	.	
15.183	13.5497	34.45	.	Q	.	V	.	.	.	
15.200	13.5974	34.65	.	Q	.	V	.	.	.	
15.217	13.6454	34.85	.	Q	.	V	.	.	.	
15.233	13.6937	35.05	.	Q	.	V	.	.	.	
15.250	13.7422	35.25	.	Q	.	V	.	.	.	
15.267	13.7911	35.45	.	Q	.	V	.	.	.	
15.283	13.8402	35.66	.	Q	.	V	.	.	.	
15.300	13.8896	35.86	.	Q	.	V	.	.	.	
15.317	13.9392	36.06	.	Q	.	V	.	.	.	
15.333	13.9892	36.26	.	Q	.	V	.	.	.	
15.350	14.0394	36.46	.	Q	.	V	.	.	.	
15.367	14.0899	36.66	.	Q	.	V	.	.	.	
15.383	14.1407	36.87	.	Q	.	V	.	.	.	
15.400	14.1920	37.25	.	Q	.	V	.	.	.	
15.417	14.2441	37.79	.	Q	.	V	.	.	.	
15.433	14.2969	38.33	.	Q	.	V	.	.	.	
15.450	14.3504	38.87	.	Q	.	V	.	.	.	
15.467	14.4047	39.42	.	Q	.	V	.	.	.	
15.483	14.4597	39.96	.	Q	.	V	.	.	.	
15.500	14.5155	40.50	.	Q	.	V	.	.	.	
15.517	14.5721	41.04	.	Q	.	V	.	.	.	
15.533	14.6293	41.58	.	Q	.	V	.	.	.	
15.550	14.6873	42.12	.	Q	.	V	.	.	.	
15.567	14.7461	42.66	.	Q	.	V	.	.	.	

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 15.583     14.8056     43.20  .    Q   .       V .         .         .
 15.600     14.8659     43.74  .    Q   .       V .         .         .
 15.617     14.9269     44.29  .    Q   .       V .         .         .
 15.633     14.9886     44.83  .    Q   .       V .         .         .
 15.650     15.0511     45.37  .    Q   .       V .         .         .
 15.667     15.1143     45.91  .    Q   .       V .         .         .
 15.683     15.1783     46.45  .    Q   .       V .         .         .
 15.700     15.2433     47.17  .    Q   .       V .         .         .
 15.717     15.3106     48.88  .     Q  .       V .         .         .
 15.733     15.3805     50.74  .     Q  .       V .         .         .
 15.750     15.4530     52.61  .     Q  .       V .         .         .
 15.767     15.5280     54.47  .      Q .        V.         .         .
 15.783     15.6056     56.34  .      Q .        V.         .         .
 15.800     15.6858     58.20  .      Q .        V.         .         .
 15.817     15.7685     60.06  .      Q .        V.         .         .
 15.833     15.8538     61.93  .       Q.        V.         .         .
 15.850     15.9417     63.79  .       Q.        V.         .         .
 15.867     16.0321     65.65  .       Q.        V.         .         .
 15.883     16.1251     67.52  .       Q.        V.         .         .
 15.900     16.2207     69.38  .        Q        V.         .         .
 15.917     16.3188     71.25  .        Q        V.         .         .
 15.933     16.4195     73.11  .        Q         V         .         .
 15.950     16.5228     74.97  .        .Q        V         .         .
 15.967     16.6286     76.84  .        .Q        V         .         .
 15.983     16.7370     78.70  .        .Q        V         .         .
 16.000     16.8480     80.57  .        .Q        V         .         .
 16.017     16.9673     86.64  .        . Q       V         .         .
 16.033     17.1008     96.92  .        .   Q     V         .         .
 16.050     17.2485    107.20  .        .    Q    .V         .         .
 16.067     17.4103    117.48  .        .      Q  .V         .         .
 16.083     17.5863    127.76  .        .       Q .V         .         .
 16.100     17.7764    138.04  .        .         QV         .         .
 16.117     17.9807    148.32  .        .         .QV        .         .
 16.133     18.1991    158.60  .        .         . VQ       .         .
 16.150     18.4318    168.88  .        .         . V Q      .         .
 16.167     18.6785    179.16  .        .         . V   Q    .         .
 16.183     18.9395    189.44  .        .         .  V   Q   .         .
 16.200     19.2146    199.72  .        .         .  V     Q.         .
 16.217     19.5038    210.00  .        .         .  V      Q         .
 16.233     19.8072    220.28  .        .         .   V     . Q       .
 16.250     20.1248    230.56  .        .         .   V     .  Q      .
 16.267     20.4565    240.84  .        .         .    V    .   Q     .
 16.283     20.8024    251.12  .        .         .    V    .    Q    .
 16.300     21.1625    261.40  .        .         .    V    .      Q  .
 16.317     21.5370    271.89  .        .         .     V   .       Q
 16.333     21.8947    259.70  .        .         .     V   .      Q  .
 16.350     22.2353    247.27  .        .         .      V  .     Q   .
 16.367     22.5588    234.83  .        .         .      V  .   Q     .
 16.383     22.8651    222.40  .        .         .      V  . Q       .
 16.400     23.1543    209.97  .        .         .       V Q         .
 16.417     23.4264    197.53  .        .         .       VQ.         .
 16.433     23.6814    185.10  .        .         .      QV .         .
 16.450     23.9192    172.67  .        .         .    Q   V.         .
 16.467     24.1399    160.23  .        .         .  Q     V.         .
 16.483     24.3435    147.80  .        .         .Q       V.         .
 16.500     24.5299    135.37  .        .        Q.        V          .
 16.517     24.6993    122.93  .        .       Q .         V         .
 16.533     24.8515    110.50  .        .     Q   .         V         .
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```
 16.550     24.9865     98.07  .         .   Q     .         V         .
 16.567     25.1045     85.63  .         . Q       .         V         .
 16.583     25.2053     73.20  .         Q         .         V         .
 16.600     25.2890     60.77  .       Q .         .         V         .
 16.617     25.3556     48.33  .      Q  .         .         .V        .
 16.633     25.4125     41.35  .     Q   .         .         .V        .
 16.650     25.4686     40.73  .    Q    .         .         .V        .
 16.667     25.5239     40.13  .    Q    .         .         .V        .
 16.683     25.5784     39.52  .    Q    .         .         .V        .
 16.700     25.6320     38.92  .    Q    .         .         .V        .
 16.717     25.6847     38.31  .    Q    .         .         .V        .
 16.733     25.7367     37.71  .    Q    .         .         .V        .
 16.750     25.7878     37.10  .    Q    .         .         .V        .
 16.767     25.8381     36.50  .    Q    .         .         .V        .
 16.783     25.8875     35.89  .    Q    .         .         .V        .
 16.800     25.9361     35.29  .    Q    .         .         .V        .
 16.817     25.9839     34.68  .    Q    .         .         .V        .
 16.833     26.0308     34.08  .    Q    .         .         .V        .
 16.850     26.0769     33.47  .   Q     .         .         .V        .
 16.867     26.1222     32.87  .   Q     .         .         .V        .
 16.883     26.1666     32.26  .   Q     .         .         . V       .
 16.900     26.2102     31.66  .   Q     .         .         . V       .
 16.917     26.2530     31.05  .   Q     .         .         . V       .
 16.933     26.2950     30.48  .   Q     .         .         . V       .
 16.950     26.3365     30.12  .   Q     .         .         . V       .
 16.967     26.3776     29.82  .   Q     .         .         . V       .
 16.983     26.4182     29.52  .   Q     .         .         . V       .
 17.000     26.4585     29.22  .   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%	1021.0
10%	750.0
20%	255.0
30%	170.0
40%	145.0
50%	120.0
60%	95.0
70%	70.0
80%	50.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

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

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                         Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA C                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 10-YR EV DECEMBER 2018 ROKAMOTO                                       *
 ************************************************************************

  FILE NAME: 3C10EVS.DAT
  TIME/DATE OF STUDY: 14:09 12/27/2018


**************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE    380.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     870.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.361 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) =  0.151
         LOW LOSS FRACTION = 0.396
         *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 = 0.961
          30-MINUTE FACTOR = 0.961
           1-HOUR FACTOR = 0.961
           3-HOUR FACTOR = 0.994
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998
```



```
         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  23.084


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  10.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER         MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
        1               1.359              143.124
        2               6.260              516.011
        3              17.872             1222.553
        4              33.161             1609.752
        5              52.465             2032.550
        6              70.416             1889.957
        7              82.384             1260.104
        8              89.768              777.488
        9              94.200              466.567
       10              96.765              270.135
       11              98.116              142.218
       12              98.571               47.926
       13              99.004               45.562
       14              99.437               45.562
       15              99.869               45.562
       16             100.000               13.746


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      75.9089
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     143.4590
--------------------------------------------------------------------------
```

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
10.000	25.5609	44.00	.Q V . . . .
10.083	25.8664	44.37	.Q V . . . .
10.167	26.1745	44.73	.Q V . . . .
10.250	26.4852	45.11	. Q V . . . .
10.333	26.7985	45.49	. Q V . . . .
10.417	27.1146	45.89	. Q V . . . .
10.500	27.4334	46.29	. Q V . . . .
10.583	27.7550	46.71	. Q V . . . .
10.667	28.0796	47.12	. Q V . . . .
10.750	28.4071	47.56	. Q V . . . .
10.833	28.7377	48.00	. Q V . . . .
10.917	29.0714	48.45	. Q V . . . .
11.000	29.4083	48.92	. Q V . . . .
11.083	29.7485	49.39	. Q V . . . .
11.167	30.0920	49.88	. Q V . . . .
11.250	30.4390	50.38	. Q V . . . .
11.333	30.7895	50.89	. Q V . . . .
11.417	31.1437	51.43	. Q V . . . .
11.500	31.5016	51.97	. Q V . . . .
11.583	31.8633	52.53	. Q V . . . .
11.667	32.2290	53.10	. Q V . . . .
11.750	32.5988	53.69	. Q V. . . . .
11.833	32.9727	54.29	. Q V. . . . .
11.917	33.3510	54.92	. Q V. . . . .
12.000	33.7336	55.56	. Q V. . . . .
12.083	34.1224	56.45	. Q V. . . . .
12.167	34.5211	57.89	. Q V. . . . .
12.250	34.9373	60.43	. Q V. . . . .
12.333	35.3750	63.56	. Q V. . . . .
12.417	35.8389	67.36	. Q V. . . . .
12.500	36.3277	70.97	. Q V . . . .
12.583	36.8352	73.69	. Q V . . . .
12.667	37.3567	75.72	. Q V . . . .
12.750	37.8893	77.34	. Q V . . . .
12.833	38.4312	78.68	. Q V . . . .
12.917	38.9814	79.89	. Q V . . . .
13.000	39.5391	80.97	. Q .V . . . .
13.083	40.1045	82.11	. Q .V . . . .
13.167	40.6780	83.27	. Q .V . . . .
13.250	41.2600	84.49	. Q .V . . . .
13.333	41.8502	85.70	. Q .V . . . .
13.417	42.4490	86.95	. Q .V . . . .
13.500	43.0568	88.24	. Q . V . . . .
13.583	43.6739	89.61	. Q . V . . . .
13.667	44.3007	91.02	. Q . V . . . .
13.750	44.9379	92.51	. Q . V . . . .
13.833	45.5857	94.06	. Q . V . . . .

13.917	46.2449	95.71	. Q . V . . . .
14.000	46.9158	97.42	. Q . V . . . .
14.083	47.6000	99.35	. Q . V . . . .
14.167	48.2999	101.62	. Q . V . . . .
14.250	49.0197	104.52	. Q . V . . . .
14.333	49.7620	107.79	. Q . V . . . .
14.417	50.5301	111.52	. Q . V . . . .
14.500	51.3239	115.27	. Q . V . . . .
14.583	52.1420	118.78	. Q . V . . . .
14.667	52.9829	122.10	. Q . V . . . .
14.750	53.8469	125.45	. Q . V . . . .
14.833	54.7344	128.86	. Q . V . . . .
14.917	55.6469	132.50	. Q . V . . . .
15.000	56.5858	136.33	. Q . V . . . .
15.083	57.5539	140.57	. Q . V . . . .
15.167	58.5537	145.17	. Q . V . . . .
15.250	59.5891	150.33	. Q . V . . . .
15.333	60.6634	155.99	. Q . V . . . .
15.417	61.7785	161.91	. Q . V . . . .
15.500	62.9300	167.21	. Q . V . . . .
15.583	64.1083	171.09	. Q . V . . . .
15.667	65.3128	174.89	. Q . V . . . .
15.750	66.5572	180.68	. Q . V . . . .
15.833	67.8891	193.39	. Q . V . . . .
15.917	69.4145	221.48	. Q. V. . . . .
16.000	71.2672	269.03	. .Q V. . . . .
16.083	73.7927	366.70	. . Q V . . . .
16.167	77.3561	517.41	. . .VQ . . . .
16.250	82.2552	711.35	. . . V .Q . . .
16.333	87.8918	818.43	. . . V . Q . . .
16.417	93.9343	877.37	. . . V . Q . . .
16.500	99.3864	791.64	. . . V . Q . . .
16.583	103.5380	602.81	. . . Q V . . . .
16.667	106.6048	445.30	. . Q. V. . . . .
16.750	108.9249	336.89	. . Q . V . . . .
16.833	110.7442	264.17	. .Q . V . . . .
16.917	112.2185	214.07	. Q. . .V . . . .
17.000	113.4492	178.69	. Q . . .V . . . .
17.083	114.5844	164.84	. Q . . .V . . . .
17.167	115.6452	154.03	. Q . . . V . . . .
17.250	116.6314	143.20	. Q . . . V . . . .
17.333	117.5106	127.65	. Q . . . V . . . .
17.417	118.3139	116.65	. Q . . . V . . . .
17.500	119.0700	109.77	. Q . . . . V . . .
17.583	119.7888	104.38	. Q . . . . V . . .
17.667	120.4762	99.81	. Q . . . . V . . .
17.750	121.1365	95.87	. Q . . . . V . . .
17.833	121.7732	92.44	. Q . . . . V . . .
17.917	122.3890	89.41	. Q . . . . V . . .
18.000	122.9862	86.71	. Q . . . . V . . .
18.083	123.5649	84.03	. Q . . . . V . . .
18.167	124.1226	80.98	. Q . . . . V . . .
18.250	124.6533	77.06	. Q . . . . V . . .
18.333	125.1543	72.74	. Q . . . . V . . .
18.417	125.6223	67.96	. Q . . . . V . . .
18.500	126.0598	63.52	. Q . . . . V . . .
18.583	126.4740	60.14	. Q . . . . V . . .
18.667	126.8706	57.59	. Q . . . . V . . .

18.750	127.2534	55.58	. Q	.	.	.	V	.
18.833	127.6249	53.95	. Q	.	.	.	V	.
18.917	127.9871	52.58	. Q	.	.	.	V	.
19.000	128.3412	51.42	. Q	.	.	.	V	.
19.083	128.6877	50.31	. Q	.	.	.	V	.
19.167	129.0269	49.26	. Q	.	.	.	V	.
19.250	129.3593	48.26	. Q	.	.	.	V	.
19.333	129.6854	47.35	. Q	.	.	.	V	.
19.417	130.0057	46.50	. Q	.	.	.	V	.
19.500	130.3204	45.70	. Q	.	.	.	V	.
19.583	130.6298	44.92	.Q	.	.	.	V	.
19.667	130.9341	44.18	.Q	.	.	.	V	.
19.750	131.2335	43.48	.Q	.	.	.	V	.
19.833	131.5282	42.80	.Q	.	.	.	V	.
19.917	131.8185	42.14	.Q	.	.	.	V	.
20.000	132.1044	41.52	.Q	.	.	.	V	.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1205.0
10%	270.0
20%	80.0
30%	55.0
40%	40.0
50%	35.0
60%	25.0
70%	20.0
80%	20.0
90%	15.0

END OF FLOODSCx ROUTING ANALYSIS

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

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                          Analysis prepared by:

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


 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 SUBAREA D                                                      *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                     *
* 10-YR EV SEPTEMBER 2018 CCHIU                                           *
 **************************************************************************

  FILE NAME: 3D10EVS.DAT
  TIME/DATE OF STUDY: 15:27 09/25/2018

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


****************************************************************************
  FLOW PROCESS FROM NODE    430.00 TO NODE    428.00 IS CODE = 1.2
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
============================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  439.50
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.144
    LOW LOSS FRACTION = 0.400
    TIME OF CONCENTRATION(MIN.) = 28.47
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   5
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.26
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.59
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.78
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.31
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.81
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  3.03

----------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    65.08
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    45.90

----------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	105.8	211.6	317.4	423.2
10.000	11.6554	19.86	.Q	V .	.	.	.
10.017	11.6827	19.88	.Q	V .	.	.	.
10.033	11.7101	19.90	.Q	V .	.	.	.
10.050	11.7376	19.92	.Q	V .	.	.	.
10.067	11.7651	19.94	.Q	V .	.	.	.
10.083	11.7926	19.97	.Q	V .	.	.	.
10.100	11.8201	19.99	.Q	V .	.	.	.
10.117	11.8476	20.01	.Q	V .	.	.	.
10.133	11.8752	20.03	.Q	V .	.	.	.
10.150	11.9029	20.05	.Q	V .	.	.	.
10.167	11.9305	20.08	.Q	V .	.	.	.
10.183	11.9582	20.10	.Q	V .	.	.	.
10.200	11.9859	20.12	.Q	V .	.	.	.
10.217	12.0137	20.14	.Q	V .	.	.	.
10.233	12.0414	20.16	.Q	V .	.	.	.
10.250	12.0692	20.19	.Q	V .	.	.	.
10.267	12.0971	20.21	.Q	V .	.	.	.
10.283	12.1249	20.23	.Q	V .	.	.	.
10.300	12.1528	20.25	.Q	V .	.	.	.
10.317	12.1808	20.28	.Q	V .	.	.	.
10.333	12.2088	20.33	.Q	V .	.	.	.
10.350	12.2368	20.38	.Q	V .	.	.	.
10.367	12.2650	20.43	.Q	V .	.	.	.
10.383	12.2932	20.48	.Q	V .	.	.	.
10.400	12.3215	20.53	.Q	V .	.	.	.
10.417	12.3498	20.58	.Q	V .	.	.	.
10.433	12.3782	20.63	.Q	V .	.	.	.
10.450	12.4067	20.68	.Q	V .	.	.	.
10.467	12.4352	20.73	.Q	V .	.	.	.
10.483	12.4639	20.78	.Q	V .	.	.	.
10.500	12.4926	20.83	.Q	V .	.	.	.
10.517	12.5213	20.88	.Q	V .	.	.	.
10.533	12.5501	20.93	.Q	V .	.	.	.
10.550	12.5790	20.98	.Q	V .	.	.	.
10.567	12.6080	21.03	.Q	V .	.	.	.
10.583	12.6371	21.08	.Q	V .	.	.	.
10.600	12.6662	21.13	.Q	V .	.	.	.
10.617	12.6953	21.18	. Q	V .	.	.	.
10.633	12.7246	21.23	. Q	V .	.	.	.
10.650	12.7539	21.28	. Q	V .	.	.	.
10.667	12.7833	21.33	. Q	V .	.	.	.
10.683	12.8127	21.38	. Q	V .	.	.	.
10.700	12.8422	21.43	. Q	V .	.	.	.
10.717	12.8718	21.48	. Q	V .	.	.	.
10.733	12.9015	21.53	. Q	V .	.	.	.

10.750	12.9312	21.58	. Q	V .	.	.	.
10.767	12.9610	21.63	. Q	V .	.	.	.
10.783	12.9909	21.68	. Q	V .	.	.	.
10.800	13.0208	21.72	. Q	V .	.	.	.
10.817	13.0507	21.75	. Q	V .	.	.	.
10.833	13.0807	21.77	. Q	V .	.	.	.
10.850	13.1108	21.80	. Q	V .	.	.	.
10.867	13.1408	21.83	. Q	V .	.	.	.
10.883	13.1709	21.86	. Q	V .	.	.	.
10.900	13.2011	21.89	. Q	V .	.	.	.
10.917	13.2313	21.92	. Q	V .	.	.	.
10.933	13.2615	21.95	. Q	V .	.	.	.
10.950	13.2918	21.98	. Q	V .	.	.	.
10.967	13.3221	22.00	. Q	V .	.	.	.
10.983	13.3524	22.03	. Q	V .	.	.	.
11.000	13.3828	22.06	. Q	V .	.	.	.
11.017	13.4133	22.09	. Q	V .	.	.	.
11.033	13.4437	22.12	. Q	V .	.	.	.
11.050	13.4742	22.15	. Q	V .	.	.	.
11.067	13.5048	22.18	. Q	V .	.	.	.
11.083	13.5354	22.21	. Q	V .	.	.	.
11.100	13.5660	22.23	. Q	V .	.	.	.
11.117	13.5967	22.26	. Q	V .	.	.	.
11.133	13.6274	22.29	. Q	V .	.	.	.
11.150	13.6581	22.32	. Q	V .	.	.	.
11.167	13.6889	22.35	. Q	V .	.	.	.
11.183	13.7197	22.38	. Q	V .	.	.	.
11.200	13.7506	22.41	. Q	V .	.	.	.
11.217	13.7815	22.44	. Q	V .	.	.	.
11.233	13.8124	22.46	. Q	V .	.	.	.
11.250	13.8434	22.49	. Q	V .	.	.	.
11.267	13.8744	22.53	. Q	V .	.	.	.
11.283	13.9056	22.60	. Q	V .	.	.	.
11.300	13.9368	22.66	. Q	V .	.	.	.
11.317	13.9681	22.73	. Q	V .	.	.	.
11.333	13.9995	22.80	. Q	V .	.	.	.
11.350	14.0310	22.86	. Q	V .	.	.	.
11.367	14.0626	22.93	. Q	V .	.	.	.
11.383	14.0942	23.00	. Q	V .	.	.	.
11.400	14.1260	23.06	. Q	V .	.	.	.
11.417	14.1579	23.13	. Q	V .	.	.	.
11.433	14.1898	23.20	. Q	V .	.	.	.
11.450	14.2219	23.27	. Q	V .	.	.	.
11.467	14.2540	23.33	. Q	V .	.	.	.
11.483	14.2862	23.40	. Q	V .	.	.	.
11.500	14.3186	23.47	. Q	V .	.	.	.
11.517	14.3510	23.53	. Q	V .	.	.	.
11.533	14.3835	23.60	. Q	V .	.	.	.
11.550	14.4161	23.67	. Q	V .	.	.	.
11.567	14.4488	23.73	. Q	V .	.	.	.
11.583	14.4815	23.80	. Q	V .	.	.	.
11.600	14.5144	23.87	. Q	V .	.	.	.
11.617	14.5474	23.93	. Q	V .	.	.	.
11.633	14.5804	24.00	. Q	V .	.	.	.
11.650	14.6136	24.07	. Q	V .	.	.	.
11.667	14.6468	24.14	. Q	V.	.	.	.
11.683	14.6802	24.20	. Q	V.	.	.	.
11.700	14.7136	24.27	. Q	V.	.	.	.

11.717	14.7471	24.34	. Q	V.	.	.	.
11.733	14.7807	24.40	. Q	V.	.	.	.
11.750	14.8144	24.45	. Q	V.	.	.	.
11.767	14.8481	24.49	. Q	V.	.	.	.
11.783	14.8819	24.53	. Q	V.	.	.	.
11.800	14.9158	24.57	. Q	V.	.	.	.
11.817	14.9497	24.61	. Q	V.	.	.	.
11.833	14.9836	24.65	. Q	V.	.	.	.
11.850	15.0176	24.69	. Q	V.	.	.	.
11.867	15.0517	24.73	. Q	V.	.	.	.
11.883	15.0858	24.77	. Q	V.	.	.	.
11.900	15.1200	24.80	. Q	V.	.	.	.
11.917	15.1542	24.84	. Q	V.	.	.	.
11.933	15.1884	24.88	. Q	V.	.	.	.
11.950	15.2228	24.92	. Q	V.	.	.	.
11.967	15.2572	24.96	. Q	V.	.	.	.
11.983	15.2916	25.00	. Q	V.	.	.	.
12.000	15.3261	25.04	. Q	V.	.	.	.
12.017	15.3606	25.08	. Q	V.	.	.	.
12.033	15.3952	25.12	. Q	V.	.	.	.
12.050	15.4299	25.16	. Q	V.	.	.	.
12.067	15.4646	25.20	. Q	V.	.	.	.
12.083	15.4994	25.24	. Q	V.	.	.	.
12.100	15.5342	25.28	. Q	V.	.	.	.
12.117	15.5691	25.32	. Q	V.	.	.	.
12.133	15.6040	25.36	. Q	V.	.	.	.
12.150	15.6390	25.40	. Q	V.	.	.	.
12.167	15.6740	25.44	. Q	V.	.	.	.
12.183	15.7091	25.47	. Q	V.	.	.	.
12.200	15.7442	25.51	. Q	V.	.	.	.
12.217	15.7795	25.64	. Q	V.	.	.	.
12.233	15.8153	25.97	. Q	V.	.	.	.
12.250	15.8515	26.30	. Q	V.	.	.	.
12.267	15.8882	26.64	. Q	V.	.	.	.
12.283	15.9254	26.98	. Q	V.	.	.	.
12.300	15.9630	27.32	. Q	V.	.	.	.
12.317	16.0011	27.65	. Q	V.	.	.	.
12.333	16.0397	27.99	. Q	V.	.	.	.
12.350	16.0787	28.33	. Q	V.	.	.	.
12.367	16.1182	28.66	. Q	V.	.	.	.
12.383	16.1581	29.00	. Q	V.	.	.	.
12.400	16.1985	29.34	. Q	V.	.	.	.
12.417	16.2394	29.67	. Q	V.	.	.	.
12.433	16.2807	30.01	. Q	V	.	.	.
12.450	16.3225	30.35	. Q	V	.	.	.
12.467	16.3648	30.69	. Q	V	.	.	.
12.483	16.4075	31.02	. Q	V	.	.	.
12.500	16.4507	31.36	. Q	V	.	.	.
12.517	16.4944	31.70	. Q	V	.	.	.
12.533	16.5385	32.03	. Q	V	.	.	.
12.550	16.5831	32.37	. Q	V	.	.	.
12.567	16.6282	32.71	. Q	V	.	.	.
12.583	16.6737	33.04	. Q	V	.	.	.
12.600	16.7196	33.38	. Q	V	.	.	.
12.617	16.7661	33.72	. Q	V	.	.	.
12.633	16.8130	34.06	. Q	V	.	.	.
12.650	16.8604	34.39	. Q	V	.	.	.
12.667	16.9082	34.73	. Q	V	.	.	.

12.683	16.9565	35.05	. Q	V	.	.	.
12.700	17.0050	35.19	. Q	V	.	.	.
12.717	17.0535	35.25	. Q	V	.	.	.
12.733	17.1021	35.31	. Q	V	.	.	.
12.750	17.1509	35.37	. Q	V	.	.	.
12.767	17.1997	35.43	. Q	V	.	.	.
12.783	17.2486	35.49	. Q	V	.	.	.
12.800	17.2975	35.55	. Q	V	.	.	.
12.817	17.3466	35.62	. Q	V	.	.	.
12.833	17.3957	35.68	. Q	V	.	.	.
12.850	17.4450	35.74	. Q	V	.	.	.
12.867	17.4943	35.80	. Q	V	.	.	.
12.883	17.5437	35.86	. Q	V	.	.	.
12.900	17.5931	35.92	. Q	V	.	.	.
12.917	17.6427	35.98	. Q	V	.	.	.
12.933	17.6924	36.05	. Q	V	.	.	.
12.950	17.7421	36.11	. Q	V	.	.	.
12.967	17.7919	36.17	. Q	V	.	.	.
12.983	17.8418	36.23	. Q	V	.	.	.
13.000	17.8918	36.29	. Q	V	.	.	.
13.017	17.9419	36.35	. Q	.V	.	.	.
13.033	17.9920	36.41	. Q	.V	.	.	.
13.050	18.0423	36.48	. Q	.V	.	.	.
13.067	18.0926	36.54	. Q	.V	.	.	.
13.083	18.1430	36.60	. Q	.V	.	.	.
13.100	18.1935	36.66	. Q	.V	.	.	.
13.117	18.2441	36.72	. Q	.V	.	.	.
13.133	18.2948	36.78	. Q	.V	.	.	.
13.150	18.3455	36.84	. Q	.V	.	.	.
13.167	18.3964	36.94	. Q	.V	.	.	.
13.183	18.4475	37.09	. Q	.V	.	.	.
13.200	18.4988	37.25	. Q	.V	.	.	.
13.217	18.5503	37.40	. Q	.V	.	.	.
13.233	18.6020	37.56	. Q	.V	.	.	.
13.250	18.6540	37.71	. Q	.V	.	.	.
13.267	18.7061	37.87	. Q	.V	.	.	.
13.283	18.7585	38.02	. Q	.V	.	.	.
13.300	18.8111	38.18	. Q	.V	.	.	.
13.317	18.8639	38.33	. Q	.V	.	.	.
13.333	18.9169	38.48	. Q	.V	.	.	.
13.350	18.9701	38.64	. Q	.V	.	.	.
13.367	19.0235	38.79	. Q	.V	.	.	.
13.383	19.0772	38.95	. Q	.V	.	.	.
13.400	19.1311	39.10	. Q	.V	.	.	.
13.417	19.1851	39.26	. Q	.V	.	.	.
13.433	19.2394	39.41	. Q	.V	.	.	.
13.450	19.2939	39.57	. Q	.V	.	.	.
13.467	19.3486	39.72	. Q	.V	.	.	.
13.483	19.4036	39.88	. Q	.V	.	.	.
13.500	19.4587	40.03	. Q	.V	.	.	.
13.517	19.5141	40.19	. Q	.V	.	.	.
13.533	19.5696	40.34	. Q	. V	.	.	.
13.550	19.6254	40.50	. Q	. V	.	.	.
13.567	19.6814	40.65	. Q	. V	.	.	.
13.583	19.7376	40.81	. Q	. V	.	.	.
13.600	19.7940	40.96	. Q	. V	.	.	.
13.617	19.8507	41.12	. Q	. V	.	.	.
13.633	19.9075	41.27	. Q	. V	.	.	.

13.650	19.9645	41.38	.	Q	.	V	.	.	.	.
13.667	20.0217	41.48	.	Q	.	V	.	.	.	.
13.683	20.0789	41.58	.	Q	.	V	.	.	.	.
13.700	20.1363	41.68	.	Q	.	V	.	.	.	.
13.717	20.1939	41.78	.	Q	.	V	.	.	.	.
13.733	20.2516	41.88	.	Q	.	V	.	.	.	.
13.750	20.3094	41.98	.	Q	.	V	.	.	.	.
13.767	20.3674	42.08	.	Q	.	V	.	.	.	.
13.783	20.4255	42.18	.	Q	.	V	.	.	.	.
13.800	20.4837	42.28	.	Q	.	V	.	.	.	.
13.817	20.5421	42.38	.	Q	.	V	.	.	.	.
13.833	20.6006	42.49	.	Q	.	V	.	.	.	.
13.850	20.6593	42.59	.	Q	.	V	.	.	.	.
13.867	20.7181	42.69	.	Q	.	V	.	.	.	.
13.883	20.7770	42.79	.	Q	.	V	.	.	.	.
13.900	20.8361	42.89	.	Q	.	V	.	.	.	.
13.917	20.8953	42.99	.	Q	.	V	.	.	.	.
13.933	20.9547	43.09	.	Q	.	V	.	.	.	.
13.950	21.0141	43.19	.	Q	.	V	.	.	.	.
13.967	21.0738	43.29	.	Q	.	V	.	.	.	.
13.983	21.1335	43.39	.	Q	.	V	.	.	.	.
14.000	21.1934	43.49	.	Q	.	V	.	.	.	.
14.017	21.2535	43.59	.	Q	.	V	.	.	.	.
14.033	21.3137	43.69	.	Q	.	V	.	.	.	.
14.050	21.3740	43.79	.	Q	.	V	.	.	.	.
14.067	21.4344	43.89	.	Q	.	V	.	.	.	.
14.083	21.4950	43.99	.	Q	.	V	.	.	.	.
14.100	21.5558	44.09	.	Q	.	V	.	.	.	.
14.117	21.6167	44.27	.	Q	.	V	.	.	.	.
14.133	21.6781	44.57	.	Q	.	V	.	.	.	.
14.150	21.7399	44.87	.	Q	.	V	.	.	.	.
14.167	21.8021	45.17	.	Q	.	V	.	.	.	.
14.183	21.8648	45.47	.	Q	.	V	.	.	.	.
14.200	21.9278	45.77	.	Q	.	V	.	.	.	.
14.217	21.9913	46.07	.	Q	.	V	.	.	.	.
14.233	22.0551	46.37	.	Q	.	V	.	.	.	.
14.250	22.1194	46.67	.	Q	.	V	.	.	.	.
14.267	22.1841	46.97	.	Q	.	V	.	.	.	.
14.283	22.2492	47.27	.	Q	.	V	.	.	.	.
14.300	22.3148	47.57	.	Q	.	V	.	.	.	.
14.317	22.3807	47.87	.	Q	.	V	.	.	.	.
14.333	22.4471	48.17	.	Q	.	V	.	.	.	.
14.350	22.5138	48.47	.	Q	.	V	.	.	.	.
14.367	22.5810	48.77	.	Q	.	V	.	.	.	.
14.383	22.6486	49.07	.	Q	.	V	.	.	.	.
14.400	22.7166	49.37	.	Q	.	V	.	.	.	.
14.417	22.7850	49.67	.	Q	.	V	.	.	.	.
14.433	22.8539	49.97	.	Q	.	V	.	.	.	.
14.450	22.9231	50.27	.	Q	.	V	.	.	.	.
14.467	22.9928	50.57	.	Q	.	V	.	.	.	.
14.483	23.0628	50.87	.	Q	.	V	.	.	.	.
14.500	23.1333	51.18	.	Q	.	V	.	.	.	.
14.517	23.2042	51.48	.	Q	.	V	.	.	.	.
14.533	23.2755	51.78	.	Q	.	V	.	.	.	.
14.550	23.3473	52.08	.	Q	.	V	.	.	.	.
14.567	23.4194	52.38	.	Q	.	V	.	.	.	.
14.583	23.4920	52.67	.	Q	.	V	.	.	.	.
14.600	23.5648	52.89	.	Q	.	V	.	.	.	.

14.617	23.6380	53.10	.	Q	.	V	.	.	.	.
14.633	23.7114	53.31	.	Q	.	V	.	.	.	.
14.650	23.7851	53.52	.	Q	.	V	.	.	.	.
14.667	23.8591	53.73	.	Q	.	V	.	.	.	.
14.683	23.9334	53.93	.	Q	.	V	.	.	.	.
14.700	24.0080	54.14	.	Q	.	V	.	.	.	.
14.717	24.0828	54.35	.	Q	.	V	.	.	.	.
14.733	24.1580	54.56	.	Q	.	V	.	.	.	.
14.750	24.2334	54.77	.	Q	.	V	.	.	.	.
14.767	24.3091	54.97	.	Q	.	V	.	.	.	.
14.783	24.3851	55.18	.	Q	.	V	.	.	.	.
14.800	24.4614	55.39	.	Q	.	V	.	.	.	.
14.817	24.5380	55.60	.	Q	.	V	.	.	.	.
14.833	24.6149	55.81	.	Q	.	V	.	.	.	.
14.850	24.6920	56.01	.	Q	.	V	.	.	.	.
14.867	24.7695	56.22	.	Q	.	V	.	.	.	.
14.883	24.8472	56.43	.	Q	.	V	.	.	.	.
14.900	24.9252	56.64	.	Q	.	V	.	.	.	.
14.917	25.0035	56.85	.	Q	.	V	.	.	.	.
14.933	25.0821	57.05	.	Q	.	V	.	.	.	.
14.950	25.1610	57.26	.	Q	.	V	.	.	.	.
14.967	25.2401	57.47	.	Q	.	V	.	.	.	.
14.983	25.3196	57.68	.	Q	.	V	.	.	.	.
15.000	25.3993	57.89	.	Q	.	V	.	.	.	.
15.017	25.4793	58.09	.	Q	.	V	.	.	.	.
15.033	25.5597	58.30	.	Q	.	V	.	.	.	.
15.050	25.6402	58.51	.	Q	.	V	.	.	.	.
15.067	25.7214	58.94	.	Q	.	V	.	.	.	.
15.083	25.8036	59.65	.	Q	.	V	.	.	.	.
15.100	25.8867	60.36	.	Q	.	V	.	.	.	.
15.117	25.9709	61.08	.	Q	.	V	.	.	.	.
15.133	26.0560	61.79	.	Q	.	V	.	.	.	.
15.150	26.1421	62.50	.	Q	.	V	.	.	.	.
15.167	26.2291	63.21	.	Q	.	V	.	.	.	.
15.183	26.3172	63.92	.	Q	.	V	.	.	.	.
15.200	26.4062	64.63	.	Q	.	V	.	.	.	.
15.217	26.4962	65.35	.	Q	.	V	.	.	.	.
15.233	26.5872	66.06	.	Q	.	V	.	.	.	.
15.250	26.6792	66.77	.	Q	.	V	.	.	.	.
15.267	26.7721	67.48	.	Q	.	V	.	.	.	.
15.283	26.8660	68.19	.	Q	.	V	.	.	.	.
15.300	26.9609	68.90	.	Q	.	V	.	.	.	.
15.317	27.0568	69.61	.	Q	.	V	.	.	.	.
15.333	27.1537	70.33	.	Q	.	V	.	.	.	.
15.350	27.2516	71.04	.	Q	.	V	.	.	.	.
15.367	27.3504	71.75	.	Q	.	V	.	.	.	.
15.383	27.4502	72.46	.	Q	.	V	.	.	.	.
15.400	27.5510	73.17	.	Q	.	V	.	.	.	.
15.417	27.6528	73.88	.	Q	.	V	.	.	.	.
15.433	27.7555	74.60	.	Q	.	V	.	.	.	.
15.450	27.8592	75.31	.	Q	.	V	.	.	.	.
15.467	27.9639	76.02	.	Q	.	V	.	.	.	.
15.483	28.0696	76.73	.	Q	.	V	.	.	.	.
15.500	28.1763	77.44	.	Q	.	V	.	.	.	.
15.517	28.2840	78.15	.	Q	.	V	.	.	.	.
15.533	28.3926	78.87	.	Q	.	V	.	.	.	.
15.550	28.5022	79.59	.	Q	.	V	.	.	.	.
15.567	28.6128	80.31	.	Q	.	V	.	.	.	.

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15.583    28.7245    81.04  .     Q  .     V  .        .        .
15.600    28.8371    81.76  .     Q  .     V  .        .        .
15.617    28.9507    82.49  .     Q  .     V  .        .        .
15.633    29.0653    83.21  .     Q  .     V  .        .        .
15.650    29.1809    83.93  .     Q  .     V  .        .        .
15.667    29.2975    84.66  .      Q .      V .        .        .
15.683    29.4151    85.38  .      Q .      V .        .        .
15.700    29.5337    86.10  .      Q .      V .        .        .
15.717    29.6533    86.83  .      Q .      V .        .        .
15.733    29.7739    87.55  .      Q .      V .        .        .
15.750    29.8955    88.28  .      Q .      V .        .        .
15.767    30.0181    89.00  .      Q .      V .        .        .
15.783    30.1417    89.72  .      Q .      V .        .        .
15.800    30.2663    90.45  .      Q .      V .        .        .
15.817    30.3919    91.17  .      Q .      V .        .        .
15.833    30.5184    91.90  .      Q .      V .        .        .
15.850    30.6460    92.62  .      Q .      V .        .        .
15.867    30.7746    93.34  .      Q .      V .        .        .
15.883    30.9042    94.07  .      Q .      V .        .        .
15.900    31.0347    94.79  .      Q .       V.        .        .
15.917    31.1663    95.52  .       Q.       V.        .        .
15.933    31.2989    96.24  .       Q.       V.        .        .
15.950    31.4324    96.96  .       Q.       V.        .        .
15.967    31.5670    97.69  .       Q.       V.        .        .
15.983    31.7025    98.41  .       Q.       V.        .        .
16.000    31.8391    99.14  .       Q.       V.        .        .
16.017    31.9840   105.18  .       Q.       V.        .        .
16.033    32.1445   116.55  .        .Q      V.        .        .
16.050    32.3207   127.93  .        . Q     V.        .        .
16.067    32.5126   139.30  .        .  Q    V.        .        .
16.083    32.7201   150.67  .        .   Q    V        .        .
16.100    32.9433   162.04  .        .    Q   V        .        .
16.117    33.1821   173.41  .        .     Q  V        .        .
16.133    33.4367   184.78  .        .      Q V        .        .
16.150    33.7069   196.15  .        .       QV        .        .
16.167    33.9927   207.52  .        .        QV       .        .
16.183    34.2942   218.90  .        .         QV      .        .
16.200    34.6114   230.27  .        .          .Q     .        .
16.217    34.9442   241.64  .        .          .VQ    .        .
16.233    35.2927   253.01  .        .          .V Q   .        .
16.250    35.6569   264.38  .        .          .V  Q  .        .
16.267    36.0367   275.75  .        .          . V   Q.        .
16.283    36.4322   287.12  .        .          . V    Q .      .
16.300    36.8433   298.50  .        .          . V     Q .     .
16.317    37.2702   309.87  .        .          . V      Q.     .
16.333    37.7126   321.24  .        .          .  V     Q      .
16.350    38.1708   332.61  .        .          .  V     .Q     .
16.367    38.6446   343.98  .        .          .  V     . Q    .
16.383    39.1341   355.35  .        .          .   V    .  Q   .
16.400    39.6392   366.72  .        .          .   V    .   Q  .
16.417    40.1600   378.09  .        .          .   V    .    Q .
16.433    40.6964   389.47  .        .          .    V   .    Q  .
16.450    41.2485   400.84  .        .          .    V   .     Q .
16.467    41.8163   412.21  .        .          .    V   .      Q.
16.483    42.3993   423.24  .        .          .     V  .       Q
16.500    42.9645   410.35  .        .          .     V  .      Q .
16.517    43.5125   397.84  .        .          .     V  .     Q  .
16.533    44.0433   385.33  .        .          .      V .    Q   .
```



```
16.550    44.5568   372.81  .        .          .      V .    Q    .
16.567    45.0531   360.30  .        .          .      V .   Q     .
16.583    45.5321   347.79  .        .          .      V . Q       .
16.600    45.9939   335.28  .        .          .       V .Q       .
16.617    46.4385   322.77  .        .          .       V Q        .
16.633    46.8659   310.25  .        .          .       VQ.        .
16.650    47.2760   297.74  .        .          .       QV.        .
16.667    47.6689   285.23  .        .          .     Q  V.        .
16.683    48.0445   272.72  .        .          .    Q   V.        .
16.700    48.4029   260.21  .        .          .   Q    V.        .
16.717    48.7441   247.69  .        .          .  Q     V.        .
16.733    49.0680   235.18  .        .          . Q      V         .
16.750    49.3747   222.67  .        .         .Q        V         .
16.767    49.6642   210.16  .        .        Q.         V         .
16.783    49.9364   197.65  .        .       Q .         V         .
16.800    50.1915   185.13  .        .      Q  .         V         .
16.817    50.4292   172.62  .        .     Q   .         V         .
16.833    50.6498   160.11  .        .    Q    .         .V        .
16.850    50.8531   147.60  .        .  Q      .         .V        .
16.867    51.0391   135.09  .        . Q       .         .V        .
16.883    51.2080   122.57  .        .Q        .         .V        .
16.900    51.3596   110.06  .        Q         .         .V        .
16.917    51.4939    97.55  .       Q.         .         .V        .
16.933    51.6111    85.04  .      Q .         .         .V        .
16.950    51.7110    72.55  .    Q   .         .         .V        .
16.967    51.8028    66.64  .    Q   .         .         .V        .
16.983    51.8937    65.97  .    Q   .         .         .V        .
17.000    51.9836    65.30  .    Q   .         .         .V        .
17.017    52.0726    64.62  .    Q   .         .         . V       .
17.033    52.1607    63.95  .    Q   .         .         . V       .
17.050    52.2479    63.28  .   Q    .         .         . V       .
17.067    52.3341    62.60  .   Q    .         .         . V       .
17.083    52.4194    61.93  .   Q    .         .         . V       .
17.100    52.5038    61.26  .   Q    .         .         . V       .
17.117    52.5872    60.58  .   Q    .         .         . V       .
17.133    52.6697    59.91  .   Q    .         .         . V       .
17.150    52.7513    59.24  .   Q    .         .         . V       .
17.167    52.8320    58.56  .   Q    .         .         . V       .
17.183    52.9117    57.89  .   Q    .         .         . V       .
17.200    52.9906    57.22  .   Q    .         .         . V       .
17.217    53.0684    56.54  .   Q    .         .         . V       .
17.233    53.1454    55.87  .   Q    .         .         . V       .
17.250    53.2214    55.20  .   Q    .         .         . V       .
17.267    53.2965    54.52  .   Q    .         .         . V       .
17.283    53.3707    53.85  .   Q    .         .         . V       .
17.300    53.4440    53.18  .   Q    .         .         . V       .
17.317    53.5163    52.50  .  Q     .         .         . V       .
17.333    53.5877    51.83  .  Q     .         .         . V       .
17.350    53.6581    51.16  .  Q     .         .         . V       .
17.367    53.7277    50.48  .  Q     .         .         .  V      .
17.383    53.7963    49.81  .  Q     .         .         .  V      .
17.400    53.8640    49.14  .  Q     .         .         .  V      .
17.417    53.9307    48.46  .  Q     .         .         .  V      .
17.433    53.9966    47.85  .  Q     .         .         .  V      .
17.450    54.0621    47.51  .  Q     .         .         .  V      .
17.467    54.1271    47.20  .  Q     .         .         .  V      .
17.483    54.1917    46.88  .  Q     .         .         .  V      .
17.500    54.2558    46.57  .  Q     .         .         .  V      .
```

17.517	54.3195	46.25	. Q . . . V .
17.533	54.3828	45.94	. Q . . . V .
17.550	54.4456	45.63	. Q . . . V .
17.567	54.5080	45.31	. Q . . . V .
17.583	54.5700	45.00	. Q . . . V .
17.600	54.6316	44.68	. Q . . . V .
17.617	54.6927	44.37	. Q . . . V .
17.633	54.7534	44.06	. Q . . . V .
17.650	54.8136	43.74	. Q . . . V .
17.667	54.8734	43.43	. Q . . . V .
17.683	54.9328	43.11	. Q . . . V .
17.700	54.9918	42.80	. Q . . . V .
17.717	55.0503	42.49	. Q . . . V .
17.733	55.1084	42.17	. Q . . . V .
17.750	55.1660	41.86	. Q . . . V .
17.767	55.2233	41.54	. Q . . . V .
17.783	55.2800	41.23	. Q . . . V .
17.800	55.3364	40.92	. Q . . . V .
17.817	55.3923	40.60	. Q . . . V .
17.833	55.4478	40.29	. Q . . . V .
17.850	55.5029	39.97	. Q . . . V .
17.867	55.5575	39.66	. Q . . . V .
17.883	55.6117	39.35	. Q . . . V .
17.900	55.6655	39.03	. Q . . . V .
17.917	55.7188	38.74	. Q . . . V .
17.933	55.7718	38.47	. Q . . . V .
17.950	55.8245	38.20	. Q . . . V .
17.967	55.8767	37.93	. Q . . . V .
17.983	55.9286	37.66	. Q . . . V .
18.000	55.9801	37.39	. Q . . . V .
18.017	56.0312	37.12	. Q . . . V .
18.033	56.0820	36.85	. Q . . . V .
18.050	56.1323	36.58	. Q . . . V .
18.067	56.1824	36.31	. Q . . . V .
18.083	56.2320	36.04	. Q . . . V .
18.100	56.2813	35.77	. Q . . . V .
18.117	56.3302	35.50	. Q . . . V .
18.133	56.3787	35.22	. Q . . . V .
18.150	56.4268	34.95	. Q . . . V .
18.167	56.4746	34.68	. Q . . . V .
18.183	56.5220	34.41	. Q . . . V .
18.200	56.5690	34.14	. Q . . . V .
18.217	56.6157	33.87	. Q . . . V .
18.233	56.6619	33.60	. Q . . . V .
18.250	56.7079	33.33	. Q . . . V .
18.267	56.7534	33.06	. Q . . . V .
18.283	56.7985	32.79	. Q . . . V .
18.300	56.8433	32.52	. Q . . . V .
18.317	56.8878	32.25	. Q . . . V .
18.333	56.9318	31.97	. Q . . . V .
18.350	56.9755	31.70	. Q . . . V .
18.367	57.0188	31.43	. Q . . . V .
18.383	57.0617	31.16	. Q . . . V .
18.400	57.1042	30.89	. Q . . . V .
18.417	57.1464	30.62	. Q . . . V .
18.433	57.1882	30.34	. Q . . . V .
18.450	57.2296	30.07	. Q . . . V .
18.467	57.2706	29.79	. Q . . . V .

18.483	57.3113	29.52	. Q . . . V .
18.500	57.3516	29.25	. Q . . . V .
18.517	57.3915	28.97	. Q . . . V .
18.533	57.4310	28.70	. Q . . . V .
18.550	57.4702	28.43	. Q . . . V .
18.567	57.5090	28.15	. Q . . . V .
18.583	57.5474	27.88	. Q . . . V .
18.600	57.5854	27.61	. Q . . . V .
18.617	57.6231	27.33	. Q . . . V .
18.633	57.6603	27.06	. Q . . . V .
18.650	57.6972	26.79	. Q . . . V .
18.667	57.7337	26.51	. Q . . . V .
18.683	57.7699	26.24	. Q . . . V .
18.700	57.8057	25.97	. Q . . . V .
18.717	57.8410	25.69	. Q . . . V .
18.733	57.8761	25.42	. Q . . . V .
18.750	57.9107	25.15	. Q . . . V .
18.767	57.9450	24.87	. Q . . . V .
18.783	57.9788	24.60	. Q . . . V .
18.800	58.0123	24.33	. Q . . . V .
18.817	58.0455	24.05	. Q . . . V .
18.833	58.0782	23.78	. Q . . . V .
18.850	58.1106	23.51	. Q . . . V .
18.867	58.1428	23.36	. Q . . . V .
18.883	58.1748	23.27	. Q . . . V .
18.900	58.2068	23.19	. Q . . . V .
18.917	58.2386	23.10	. Q . . . V .
18.933	58.2703	23.01	. Q . . . V .
18.950	58.3019	22.93	. Q . . . V .
18.967	58.3333	22.84	. Q . . . V .
18.983	58.3647	22.75	. Q . . . V .
19.000	58.3959	22.67	. Q . . . V .
19.017	58.4270	22.58	. Q . . . V .
19.033	58.4580	22.49	. Q . . . V .
19.050	58.4888	22.41	. Q . . . V .
19.067	58.5196	22.32	. Q . . . V .
19.083	58.5502	22.23	. Q . . . V .
19.100	58.5807	22.15	. Q . . . V .
19.117	58.6111	22.06	. Q . . . V .
19.133	58.6414	21.97	. Q . . . V .
19.150	58.6715	21.89	. Q . . . V .
19.167	58.7015	21.80	. Q . . . V .
19.183	58.7315	21.71	. Q . . . V .
19.200	58.7612	21.63	. Q . . . V .
19.217	58.7909	21.54	. Q . . . V .
19.233	58.8205	21.45	. Q . . . V .
19.250	58.8499	21.37	. Q . . . V .
19.267	58.8792	21.28	. Q . . . V .
19.283	58.9084	21.19	. Q . . . V .
19.300	58.9375	21.11	.Q . . . V .
19.317	58.9664	21.02	.Q . . . V .
19.333	58.9953	20.94	.Q . . . V .
19.350	59.0240	20.87	.Q . . . V .
19.367	59.0527	20.81	.Q . . . V .
19.383	59.0813	20.74	.Q . . . V .
19.400	59.1097	20.67	.Q . . . V .
19.417	59.1381	20.61	.Q . . . V .
19.433	59.1664	20.54	.Q . . . V .

19.450	59.1946	20.47	.Q	.	.	.	V	.
19.467	59.2227	20.41	.Q	.	.	.	V	.
19.483	59.2507	20.34	.Q	.	.	.	V	.
19.500	59.2787	20.28	.Q	.	.	.	V	.
19.517	59.3065	20.21	.Q	.	.	.	V	.
19.533	59.3343	20.14	.Q	.	.	.	V	.
19.550	59.3619	20.08	.Q	.	.	.	V	.
19.567	59.3895	20.01	.Q	.	.	.	V	.
19.583	59.4169	19.94	.Q	.	.	.	V	.
19.600	59.4443	19.88	.Q	.	.	.	V	.
19.617	59.4716	19.81	.Q	.	.	.	V	.
19.633	59.4988	19.75	.Q	.	.	.	V	.
19.650	59.5259	19.68	.Q	.	.	.	V	.
19.667	59.5529	19.61	.Q	.	.	.	V	.
19.683	59.5798	19.55	.Q	.	.	.	V	.
19.700	59.6067	19.48	.Q	.	.	.	V	.
19.717	59.6334	19.41	.Q	.	.	.	V	.
19.733	59.6601	19.35	.Q	.	.	.	V	.
19.750	59.6866	19.28	.Q	.	.	.	V	.
19.767	59.7131	19.21	.Q	.	.	.	V	.
19.783	59.7395	19.15	.Q	.	.	.	V	.
19.800	59.7658	19.08	.Q	.	.	.	V	.
19.817	59.7920	19.03	.Q	.	.	.	V	.
19.833	59.8181	18.97	.Q	.	.	.	V	.
19.850	59.8442	18.92	.Q	.	.	.	V	.
19.867	59.8701	18.87	.Q	.	.	.	V	.
19.883	59.8961	18.81	.Q	.	.	.	V	.
19.900	59.9219	18.76	.Q	.	.	.	V	.
19.917	59.9477	18.71	.Q	.	.	.	V	.
19.933	59.9734	18.66	.Q	.	.	.	V	.
19.950	59.9990	18.60	.Q	.	.	.	V	.
19.967	60.0245	18.55	.Q	.	.	.	V	.
19.983	60.0500	18.50	.Q	.	.	.	V	.
20.000	60.0754	18.44	.Q	.	.	.	V	.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1201.0
10%	1175.0
20%	385.0
30%	250.0
40%	215.0
50%	175.0
60%	140.0
70%	110.0
80%	70.0
90%	35.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA E                                                     *
* UNIT HYDROGRAPH  - SINGLE AREA MODEL                                   *
* 10-YR EV MARCH 2019 CCHIU                                              *
 ************************************************************************

  FILE NAME: 4E10EVS.DAT
  TIME/DATE OF STUDY: 14:56 03/13/2019

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


******************************************************************************
  FLOW PROCESS FROM NODE    810.00 TO NODE    817.00 IS CODE = 1.2
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==============================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  171.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.174
    LOW LOSS FRACTION = 0.450
    TIME OF CONCENTRATION(MIN.) =  9.86
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   5
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.26
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.59
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.78
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.31
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.81
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  3.03

------------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    23.53
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    19.65

------------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	76.3	152.7	229.0	305.4
10.000	4.2425	7.25	Q V	.	.	.	.
10.017	4.2525	7.26	Q V	.	.	.	.
10.033	4.2625	7.27	Q V	.	.	.	.
10.050	4.2725	7.27	Q V	.	.	.	.
10.067	4.2826	7.28	Q V	.	.	.	.
10.083	4.2926	7.29	Q V	.	.	.	.
10.100	4.3027	7.30	Q V	.	.	.	.
10.117	4.3127	7.32	Q V	.	.	.	.
10.133	4.3229	7.34	Q V	.	.	.	.
10.150	4.3330	7.35	Q V	.	.	.	.
10.167	4.3431	7.37	Q V	.	.	.	.
10.183	4.3533	7.39	Q V	.	.	.	.
10.200	4.3635	7.41	Q V	.	.	.	.
10.217	4.3737	7.42	Q V	.	.	.	.
10.233	4.3840	7.44	Q V	.	.	.	.
10.250	4.3943	7.46	Q V	.	.	.	.
10.267	4.4046	7.47	Q V	.	.	.	.
10.283	4.4149	7.48	Q V	.	.	.	.
10.300	4.4252	7.49	Q V	.	.	.	.
10.317	4.4355	7.50	Q V	.	.	.	.
10.333	4.4458	7.51	Q V	.	.	.	.
10.350	4.4562	7.52	Q V	.	.	.	.
10.367	4.4666	7.52	Q V	.	.	.	.
10.383	4.4769	7.53	Q V	.	.	.	.
10.400	4.4873	7.54	Q V	.	.	.	.
10.417	4.4977	7.55	Q V	.	.	.	.
10.433	4.5081	7.57	Q V	.	.	.	.
10.450	4.5186	7.59	Q V	.	.	.	.
10.467	4.5291	7.61	Q V	.	.	.	.
10.483	4.5396	7.62	Q V	.	.	.	.
10.500	4.5501	7.64	.Q V	.	.	.	.
10.517	4.5607	7.66	.Q V	.	.	.	.
10.533	4.5712	7.68	.Q V	.	.	.	.
10.550	4.5818	7.70	.Q V	.	.	.	.
10.567	4.5925	7.72	.Q V	.	.	.	.
10.583	4.6031	7.74	.Q V	.	.	.	.
10.600	4.6138	7.75	.Q V	.	.	.	.
10.617	4.6245	7.76	.Q V	.	.	.	.
10.633	4.6352	7.77	.Q V	.	.	.	.
10.650	4.6459	7.78	.Q V	.	.	.	.
10.667	4.6566	7.79	.Q V	.	.	.	.
10.683	4.6674	7.80	.Q V	.	.	.	.
10.700	4.6781	7.81	.Q V	.	.	.	.
10.717	4.6889	7.82	.Q V	.	.	.	.
10.733	4.6997	7.83	.Q V	.	.	.	.

10.750	4.7105	7.84	.Q V	.	.	.	.
10.767	4.7213	7.86	.Q V	.	.	.	.
10.783	4.7322	7.88	.Q V	.	.	.	.
10.800	4.7431	7.90	.Q V	.	.	.	.
10.817	4.7540	7.92	.Q V	.	.	.	.
10.833	4.7649	7.94	.Q V	.	.	.	.
10.850	4.7759	7.96	.Q V	.	.	.	.
10.867	4.7869	7.99	.Q V	.	.	.	.
10.883	4.7979	8.01	.Q V	.	.	.	.
10.900	4.8090	8.03	.Q V	.	.	.	.
10.917	4.8200	8.05	.Q V	.	.	.	.
10.933	4.8311	8.06	.Q V	.	.	.	.
10.950	4.8423	8.07	.Q V	.	.	.	.
10.967	4.8534	8.08	.Q V	.	.	.	.
10.983	4.8645	8.09	.Q V	.	.	.	.
11.000	4.8757	8.10	.Q V	.	.	.	.
11.017	4.8869	8.11	.Q V	.	.	.	.
11.033	4.8981	8.12	.Q V	.	.	.	.
11.050	4.9093	8.13	.Q V	.	.	.	.
11.067	4.9205	8.14	.Q V	.	.	.	.
11.083	4.9317	8.16	.Q V	.	.	.	.
11.100	4.9430	8.18	.Q V	.	.	.	.
11.117	4.9543	8.21	.Q V	.	.	.	.
11.133	4.9656	8.23	.Q V	.	.	.	.
11.150	4.9770	8.25	.Q V	.	.	.	.
11.167	4.9884	8.28	.Q V	.	.	.	.
11.183	4.9998	8.30	.Q V	.	.	.	.
11.200	5.0113	8.32	.Q V	.	.	.	.
11.217	5.0228	8.34	.Q V	.	.	.	.
11.233	5.0343	8.37	.Q V	.	.	.	.
11.250	5.0459	8.39	.Q V	.	.	.	.
11.267	5.0574	8.40	.Q V	.	.	.	.
11.283	5.0690	8.41	.Q V	.	.	.	.
11.300	5.0806	8.42	.Q V	.	.	.	.
11.317	5.0922	8.44	.Q V	.	.	.	.
11.333	5.1039	8.45	.Q V	.	.	.	.
11.350	5.1155	8.46	.Q V	.	.	.	.
11.367	5.1272	8.47	.Q V	.	.	.	.
11.383	5.1389	8.48	.Q V	.	.	.	.
11.400	5.1506	8.50	.Q V	.	.	.	.
11.417	5.1623	8.52	.Q V	.	.	.	.
11.433	5.1741	8.54	.Q V	.	.	.	.
11.450	5.1859	8.57	.Q V	.	.	.	.
11.467	5.1977	8.59	.Q V	.	.	.	.
11.483	5.2096	8.62	.Q V	.	.	.	.
11.500	5.2215	8.65	.Q V	.	.	.	.
11.517	5.2334	8.67	.Q V	.	.	.	.
11.533	5.2454	8.70	.Q V	.	.	.	.
11.550	5.2574	8.72	.Q V	.	.	.	.
11.567	5.2695	8.75	.Q V	.	.	.	.
11.583	5.2816	8.77	.Q V	.	.	.	.
11.600	5.2937	8.78	.Q V	.	.	.	.
11.617	5.3058	8.79	.Q V.	.	.	.	.
11.633	5.3179	8.81	.Q V.	.	.	.	.
11.650	5.3300	8.82	.Q V.	.	.	.	.
11.667	5.3422	8.84	.Q V.	.	.	.	.
11.683	5.3544	8.85	.Q V.	.	.	.	.
11.700	5.3666	8.86	.Q V.	.	.	.	.

11.717	5.3788	8.88	.Q	V.	.	.	.
11.733	5.3911	8.89	.Q	V.	.	.	.
11.750	5.4034	8.92	.Q	V.	.	.	.
11.767	5.4157	8.95	.Q	V.	.	.	.
11.783	5.4281	8.98	.Q	V.	.	.	.
11.800	5.4405	9.00	.Q	V.	.	.	.
11.817	5.4529	9.03	.Q	V.	.	.	.
11.833	5.4654	9.06	.Q	V.	.	.	.
11.850	5.4779	9.09	.Q	V.	.	.	.
11.867	5.4905	9.12	.Q	V.	.	.	.
11.883	5.5031	9.15	.Q	V.	.	.	.
11.900	5.5157	9.18	.Q	V.	.	.	.
11.917	5.5284	9.20	.Q	V.	.	.	.
11.933	5.5411	9.21	.Q	V.	.	.	.
11.950	5.5538	9.23	.Q	V.	.	.	.
11.967	5.5665	9.24	.Q	V.	.	.	.
11.983	5.5793	9.26	.Q	V.	.	.	.
12.000	5.5920	9.27	.Q	V.	.	.	.
12.017	5.6048	9.29	.Q	V.	.	.	.
12.033	5.6176	9.30	.Q	V.	.	.	.
12.050	5.6305	9.32	.Q	V.	.	.	.
12.067	5.6434	9.39	.Q	V.	.	.	.
12.083	5.6567	9.65	.Q	V.	.	.	.
12.100	5.6704	9.93	.Q	V.	.	.	.
12.117	5.6844	10.21	.Q	V.	.	.	.
12.133	5.6989	10.49	.Q	V.	.	.	.
12.150	5.7137	10.77	.Q	V.	.	.	.
12.167	5.7289	11.05	.Q	V.	.	.	.
12.183	5.7446	11.33	.Q	V.	.	.	.
12.200	5.7605	11.61	.Q	V.	.	.	.
12.217	5.7769	11.89	.Q	V.	.	.	.
12.233	5.7936	12.09	.Q	V.	.	.	.
12.250	5.8103	12.11	.Q	V.	.	.	.
12.267	5.8270	12.13	.Q	V.	.	.	.
12.283	5.8437	12.15	.Q	V.	.	.	.
12.300	5.8605	12.17	.Q	V.	.	.	.
12.317	5.8773	12.19	.Q	V.	.	.	.
12.333	5.8941	12.21	.Q	V	.	.	.
12.350	5.9109	12.23	.Q	V	.	.	.
12.367	5.9278	12.25	.Q	V	.	.	.
12.383	5.9447	12.26	.Q	V	.	.	.
12.400	5.9616	12.29	.Q	V	.	.	.
12.417	5.9786	12.33	.Q	V	.	.	.
12.433	5.9956	12.37	.Q	V	.	.	.
12.450	6.0127	12.41	.Q	V	.	.	.
12.467	6.0299	12.45	.Q	V	.	.	.
12.483	6.0471	12.49	.Q	V	.	.	.
12.500	6.0644	12.53	.Q	V	.	.	.
12.517	6.0817	12.57	.Q	V	.	.	.
12.533	6.0991	12.62	.Q	V	.	.	.
12.550	6.1165	12.66	.Q	V	.	.	.
12.567	6.1340	12.69	.Q	V	.	.	.
12.583	6.1515	12.71	.Q	V	.	.	.
12.600	6.1690	12.73	.Q	V	.	.	.
12.617	6.1866	12.75	.Q	V	.	.	.
12.633	6.2042	12.77	.Q	V	.	.	.
12.650	6.2218	12.79	.Q	V	.	.	.
12.667	6.2394	12.82	.Q	V	.	.	.

12.683	6.2571	12.84	.Q	V	.	.	.
12.700	6.2748	12.86	.Q	V	.	.	.
12.717	6.2926	12.88	.Q	V	.	.	.
12.733	6.3104	12.92	.Q	V	.	.	.
12.750	6.3282	12.97	.Q	V	.	.	.
12.767	6.3461	13.01	.Q	V	.	.	.
12.783	6.3641	13.06	.Q	V	.	.	.
12.800	6.3822	13.11	.Q	V	.	.	.
12.817	6.4003	13.15	.Q	V	.	.	.
12.833	6.4185	13.20	.Q	V	.	.	.
12.850	6.4367	13.25	.Q	V	.	.	.
12.867	6.4550	13.29	.Q	V	.	.	.
12.883	6.4734	13.34	.Q	.V	.	.	.
12.900	6.4918	13.37	.Q	.V	.	.	.
12.917	6.5103	13.39	.Q	.V	.	.	.
12.933	6.5287	13.42	.Q	.V	.	.	.
12.950	6.5473	13.44	.Q	.V	.	.	.
12.967	6.5658	13.47	.Q	.V	.	.	.
12.983	6.5844	13.49	.Q	.V	.	.	.
13.000	6.6030	13.52	.Q	.V	.	.	.
13.017	6.6217	13.54	.Q	.V	.	.	.
13.033	6.6404	13.57	.Q	.V	.	.	.
13.050	6.6591	13.60	.Q	.V	.	.	.
13.067	6.6779	13.65	.Q	.V	.	.	.
13.083	6.6967	13.70	.Q	.V	.	.	.
13.100	6.7157	13.76	.Q	.V	.	.	.
13.117	6.7347	13.81	.Q	.V	.	.	.
13.133	6.7538	13.87	.Q	.V	.	.	.
13.150	6.7730	13.92	.Q	.V	.	.	.
13.167	6.7922	13.97	.Q	.V	.	.	.
13.183	6.8116	14.03	.Q	.V	.	.	.
13.200	6.8310	14.08	.Q	.V	.	.	.
13.217	6.8504	14.13	.Q	.V	.	.	.
13.233	6.8699	14.16	.Q	.V	.	.	.
13.250	6.8895	14.19	.Q	.V	.	.	.
13.267	6.9091	14.22	.Q	.V	.	.	.
13.283	6.9287	14.25	.Q	.V	.	.	.
13.300	6.9484	14.28	.Q	.V	.	.	.
13.317	6.9681	14.31	.Q	.V	.	.	.
13.333	6.9879	14.34	.Q	.V	.	.	.
13.350	7.0077	14.37	.Q	.V	.	.	.
13.367	7.0275	14.40	.Q	.V	.	.	.
13.383	7.0474	14.44	.Q	.V	.	.	.
13.400	7.0674	14.51	.Q	. V	.	.	.
13.417	7.0874	14.57	.Q	. V	.	.	.
13.433	7.1076	14.64	.Q	. V	.	.	.
13.450	7.1279	14.70	.Q	. V	.	.	.
13.467	7.1482	14.77	.Q	. V	.	.	.
13.483	7.1686	14.83	.Q	. V	.	.	.
13.500	7.1892	14.90	.Q	. V	.	.	.
13.517	7.2098	14.96	.Q	. V	.	.	.
13.533	7.2305	15.03	.Q	. V	.	.	.
13.550	7.2512	15.08	.Q	. V	.	.	.
13.567	7.2721	15.12	.Q	. V	.	.	.
13.583	7.2929	15.15	.Q	. V	.	.	.
13.600	7.3139	15.19	.Q	. V	.	.	.
13.617	7.3348	15.23	.Q	. V	.	.	.
13.633	7.3558	15.26	.Q	. V	.	.	.

13.650	7.3769	15.30	. Q	. V	.	.	.	
13.667	7.3980	15.33	. Q	. V	.	.	.	
13.683	7.4192	15.37	. Q	. V	.	.	.	
13.700	7.4404	15.40	. Q	. V	.	.	.	
13.717	7.4617	15.46	. Q	. V	.	.	.	
13.733	7.4831	15.54	. Q	. V	.	.	.	
13.750	7.5047	15.62	. Q	. V	.	.	.	
13.767	7.5263	15.70	. Q	. V	.	.	.	
13.783	7.5480	15.78	. Q	. V	.	.	.	
13.800	7.5699	15.86	. Q	. V	.	.	.	
13.817	7.5918	15.94	. Q	. V	.	.	.	
13.833	7.6139	16.02	. Q	. V	.	.	.	
13.850	7.6361	16.10	. Q	. V	.	.	.	
13.867	7.6584	16.18	. Q	. V	.	.	.	
13.883	7.6807	16.24	. Q	. V	.	.	.	
13.900	7.7032	16.28	. Q	. V	.	.	.	
13.917	7.7257	16.33	. Q	. V	.	.	.	
13.933	7.7482	16.37	. Q	. V	.	.	.	
13.950	7.7708	16.41	. Q	. V	.	.	.	
13.967	7.7935	16.46	. Q	. V	.	.	.	
13.983	7.8162	16.50	. Q	. V	.	.	.	
14.000	7.8390	16.55	. Q	. V	.	.	.	
14.017	7.8619	16.59	. Q	. V	.	.	.	
14.033	7.8848	16.64	. Q	. V	.	.	.	
14.050	7.9078	16.74	. Q	. V	.	.	.	
14.067	7.9311	16.87	. Q	. V	.	.	.	
14.083	7.9545	16.99	. Q	. V	.	.	.	
14.100	7.9780	17.11	. Q	. V	.	.	.	
14.117	8.0018	17.23	. Q	. V	.	.	.	
14.133	8.0257	17.35	. Q	. V	.	.	.	
14.150	8.0497	17.47	. Q	. V	.	.	.	
14.167	8.0740	17.59	. Q	. V	.	.	.	
14.183	8.0984	17.71	. Q	. V	.	.	.	
14.200	8.1229	17.83	. Q	. V	.	.	.	
14.217	8.1476	17.89	. Q	. V	.	.	.	
14.233	8.1723	17.95	. Q	. V	.	.	.	
14.250	8.1971	18.01	. Q	. V	.	.	.	
14.267	8.2220	18.07	. Q	. V	.	.	.	
14.283	8.2470	18.12	. Q	. V	.	.	.	
14.300	8.2720	18.18	. Q	. V	.	.	.	
14.317	8.2971	18.24	. Q	. V	.	.	.	
14.333	8.3223	18.29	. Q	. V	.	.	.	
14.350	8.3476	18.35	. Q	. V	.	.	.	
14.367	8.3730	18.42	. Q	. V	.	.	.	
14.383	8.3985	18.55	. Q	. V	.	.	.	
14.400	8.4242	18.68	. Q	. V	.	.	.	
14.417	8.4502	18.81	. Q	. V	.	.	.	
14.433	8.4762	18.94	. Q	. V	.	.	.	
14.450	8.5025	19.08	. Q	. V	.	.	.	
14.467	8.5290	19.21	. Q	. V	.	.	.	
14.483	8.5556	19.34	. Q	. V	.	.	.	
14.500	8.5824	19.47	. Q	. V	.	.	.	
14.517	8.6094	19.60	. Q	. V	.	.	.	
14.533	8.6366	19.72	. Q	. V	.	.	.	
14.550	8.6639	19.80	. Q	. V	.	.	.	
14.567	8.6912	19.88	. Q	. V	.	.	.	
14.583	8.7187	19.95	. Q	. V	.	.	.	
14.600	8.7463	20.03	. Q	. V	.	.	.	

14.617	8.7740	20.11	. Q	. V	.	.	.	
14.633	8.8018	20.18	. Q	. V	.	.	.	
14.650	8.8297	20.26	. Q	. V	.	.	.	
14.667	8.8577	20.34	. Q	. V	.	.	.	
14.683	8.8858	20.41	. Q	. V	.	.	.	
14.700	8.9141	20.53	. Q	. V	.	.	.	
14.717	8.9427	20.71	. Q	. V	.	.	.	
14.733	8.9714	20.90	. Q	. V	.	.	.	
14.750	9.0005	21.08	. Q	. V	.	.	.	
14.767	9.0298	21.27	. Q	. V	.	.	.	
14.783	9.0593	21.45	. Q	. V	.	.	.	
14.800	9.0891	21.63	. Q	. V	.	.	.	
14.817	9.1192	21.82	. Q	. V	.	.	.	
14.833	9.1495	22.00	. Q	. V	.	.	.	
14.850	9.1800	22.18	. Q	. V	.	.	.	
14.867	9.2108	22.33	. Q	. V	.	.	.	
14.883	9.2417	22.44	. Q	. V	.	.	.	
14.900	9.2727	22.55	. Q	. V	.	.	.	
14.917	9.3040	22.66	. Q	. V	.	.	.	
14.933	9.3353	22.77	. Q	. V	.	.	.	
14.950	9.3669	22.88	. Q	. V	.	.	.	
14.967	9.3985	23.00	. Q	. V	.	.	.	
14.983	9.4304	23.11	. Q	. V	.	.	.	
15.000	9.4623	23.22	. Q	. V	.	.	.	
15.017	9.4945	23.33	. Q	. V	.	.	.	
15.033	9.5269	23.55	. Q	. V	.	.	.	
15.050	9.5597	23.83	. Q	. V	.	.	.	
15.067	9.5930	24.11	. Q	. V	.	.	.	
15.083	9.6266	24.39	. Q	. V	.	.	.	
15.100	9.6605	24.67	. Q	. V	.	.	.	
15.117	9.6949	24.95	. Q	. V	.	.	.	
15.133	9.7297	25.23	. Q	. V	.	.	.	
15.150	9.7648	25.51	. Q	. V	.	.	.	
15.167	9.8004	25.79	. Q	. V	.	.	.	
15.183	9.8363	26.07	. Q	. V	.	.	.	
15.200	9.8725	26.28	. Q	. V	.	.	.	
15.217	9.9089	26.46	. Q	. V	.	.	.	
15.233	9.9456	26.64	. Q	. V	.	.	.	
15.250	9.9825	26.82	. Q	. V	.	.	.	
15.267	10.0197	27.00	. Q	. V	.	.	.	
15.283	10.0572	27.18	. Q	. V	.	.	.	
15.300	10.0949	27.36	. Q	. V	.	.	.	
15.317	10.1328	27.55	. Q	. V	.	.	.	
15.333	10.1710	27.73	. Q	. V	.	.	.	
15.350	10.2094	27.89	. Q	. V	.	.	.	
15.367	10.2479	27.95	. Q	. V	.	.	.	
15.383	10.2865	27.99	. Q	. V	.	.	.	
15.400	10.3251	28.03	. Q	. V	.	.	.	
15.417	10.3637	28.07	. Q	. V	.	.	.	
15.433	10.4024	28.10	. Q	. V	.	.	.	
15.450	10.4412	28.14	. Q	. V	.	.	.	
15.467	10.4800	28.18	. Q	. V	.	.	.	
15.483	10.5189	28.21	. Q	. V	.	.	.	
15.500	10.5578	28.25	. Q	. V	.	.	.	
15.517	10.5968	28.34	. Q	. V	.	.	.	
15.533	10.6363	28.68	. Q	. V	.	.	.	
15.550	10.6763	29.05	. Q	. V	.	.	.	
15.567	10.7169	29.42	. Q	. V	.	.	.	

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15.583     10.7579     29.78  .  Q      .       V .         .         .
15.600     10.7994     30.15  .  Q      .       V .         .         .
15.617     10.8414     30.52  .  Q      .       V .         .         .
15.633     10.8840     30.88  .   Q     .       V .         .         .
15.650     10.9270     31.25  .   Q     .       V .         .         .
15.667     10.9706     31.62  .   Q     .       V .         .         .
15.683     11.0158     32.79  .   Q     .       V .         .         .
15.700     11.0655     36.14  .   Q     .       V .         .         .
15.717     11.1201     39.61  .    Q    .       V .         .         .
15.733     11.1794     43.09  .    Q    .        V.         .         .
15.750     11.2436     46.56  .     Q   .        V.         .         .
15.767     11.3125     50.03  .     Q   .        V.         .         .
15.783     11.3862     53.50  .      Q  .        V.         .         .
15.800     11.4647     56.98  .      Q  .        V.         .         .
15.817     11.5479     60.45  .      Q  .        V.         .         .
15.833     11.6360     63.92  .       Q .        V.         .         .
15.850     11.7286     67.27  .       Q .        V.         .         .
15.867     11.8256     70.42  .        Q.         V         .         .
15.883     11.9269     73.56  .        Q.         V         .         .
15.900     12.0326     76.70  .         Q         V         .         .
15.917     12.1426     79.84  .         Q         V         .         .
15.933     12.2569     82.98  .         Q         V         .         .
15.950     12.3755     86.13  .         .Q        .V        .         .
15.967     12.4984     89.27  .         .Q        .V        .         .
15.983     12.6257     92.41  .         . Q       .V        .         .
16.000     12.7573     95.55  .         . Q       .V        .         .
16.017     12.9057    107.68  .         .   Q     .V        .         .
16.033     13.0831    128.81  .         .     Q   . V       .         .
16.050     13.2896    149.93  .         .       Q. V       .         .
16.067     13.5252    171.05  .         .         . Q       .         .
16.083     13.7899    192.17  .         .         .  V Q    .         .
16.100     14.0837    213.30  .         .         .  V   Q  .         .
16.117     14.4066    234.42  .         .         .   V     Q         .
16.133     14.7586    255.54  .         .         .    V    .  Q      .
16.150     15.1397    276.66  .         .         .    V    .     Q   .
16.167     15.5603    305.39  .         .         .     V   .       Q
16.183     15.9573    288.24  .         .         .      V  .      Q  .
16.200     16.3174    261.44  .         .         .      V  .   Q     .
16.217     16.6406    234.64  .         .         .       V Q       .
16.233     16.9269    207.84  .         .         .      QV .       .
16.250     17.1763    181.04  .         .         .  Q    V.         .
16.267     17.3887    154.24  .         .        Q        V.         .
16.283     17.5642    127.44  .         .    Q   .        V.         .
16.300     17.7029    100.64  .         .  Q     .         V         .
16.317     17.8046     73.83  .       Q.         .         V         .
16.333     17.8707     48.04  .     Q   .         .         V         .
16.350     17.9261     40.23  .    Q    .         .         V         .
16.367     17.9800     39.08  .    Q    .         .         V         .
16.383     18.0322     37.92  .   Q     .         .         V         .
16.400     18.0828     36.76  .   Q     .         .         V         .
16.417     18.1319     35.61  .   Q     .         .         V         .
16.433     18.1793     34.45  .   Q     .         .         V         .
16.450     18.2252     33.29  .   Q     .         .         V         .
16.467     18.2695     32.13  .   Q     .         .         .V        .
16.483     18.3121     30.98  .   Q     .         .         .V        .
16.500     18.3533     29.88  .  Q      .         .         .V        .
16.517     18.3936     29.25  .  Q      .         .         .V        .
16.533     18.4332     28.74  .  Q      .         .         .V        .
```



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16.550     18.4720     28.22  .  Q      .         .         .V        .
16.567     18.5102     27.70  .  Q      .         .         .V        .
16.583     18.5476     27.19  .  Q      .         .         .V        .
16.600     18.5844     26.67  .  Q      .         .         .V        .
16.617     18.6204     26.16  .  Q      .         .         .V        .
16.633     18.6557     25.64  .  Q      .         .         .V        .
16.650     18.6903     25.12  .  Q      .         .         .V        .
16.667     18.7243     24.63  .  Q      .         .         .V        .
16.683     18.7577     24.28  .  Q      .         .         .V        .
16.700     18.7907     23.94  .  Q      .         .         .V        .
16.717     18.8232     23.61  .  Q      .         .         .V        .
16.733     18.8552     23.27  .  Q      .         .         . V       .
16.750     18.8868     22.93  .  Q      .         .         . V       .
16.767     18.9179     22.59  . Q       .         .         . V       .
16.783     18.9486     22.26  . Q       .         .         . V       .
16.800     18.9788     21.92  . Q       .         .         . V       .
16.817     19.0085     21.58  . Q       .         .         . V       .
16.833     19.0378     21.27  . Q       .         .         . V       .
16.850     19.0668     21.03  . Q       .         .         . V       .
16.867     19.0954     20.80  . Q       .         .         . V       .
16.883     19.1238     20.57  . Q       .         .         . V       .
16.900     19.1518     20.34  . Q       .         .         . V       .
16.917     19.1795     20.10  . Q       .         .         . V       .
16.933     19.2068     19.87  . Q       .         .         . V       .
16.950     19.2339     19.64  . Q       .         .         . V       .
16.967     19.2606     19.41  . Q       .         .         . V       .
16.983     19.2870     19.17  . Q       .         .         . V       .
17.000     19.3131     18.96  . 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%	1021.0
10%	260.0
20%	150.0
30%	100.0
40%	80.0
50%	65.0
60%	50.0
70%	35.0
80%	25.0
90%	15.0

==========

END OF FLOODSCx ROUTING ANALYSIS

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

              F L O O D   R O U T I N G   A N A L Y S I S
              USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                          Analysis prepared by:

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

 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-4 SUBAREA F                                                      *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                     *
* 10-YR EV ROKAMOTO AUGUST 2018                                           *
 **************************************************************************

  FILE NAME: 4F10EVS.DAT
  TIME/DATE OF STUDY: 08:13 08/15/2018

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


****************************************************************************
  FLOW PROCESS FROM NODE    920.00 TO NODE    905.00 IS CODE = 1.2
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
============================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  553.80
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.254
    LOW LOSS FRACTION = 0.543
    TIME OF CONCENTRATION(MIN.) = 17.80
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   5
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.26
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.59
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.78
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.31
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.81
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  3.03

----------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    65.00
```



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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    74.83

----------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	163.5	327.1	490.6	654.1
10.000	11.3152	19.24	.Q	V	.	.	.
10.017	11.3418	19.26	.Q	V	.	.	.
10.033	11.3683	19.28	.Q	V	.	.	.
10.050	11.3949	19.30	.Q	V	.	.	.
10.067	11.4215	19.32	.Q	V	.	.	.
10.083	11.4482	19.36	.Q	V	.	.	.
10.100	11.4749	19.40	.Q	V	.	.	.
10.117	11.5017	19.45	.Q	V	.	.	.
10.133	11.5285	19.49	.Q	V	.	.	.
10.150	11.5554	19.54	.Q	V	.	.	.
10.167	11.5824	19.58	.Q	V	.	.	.
10.183	11.6095	19.63	.Q	V	.	.	.
10.200	11.6366	19.68	.Q	V	.	.	.
10.217	11.6637	19.72	.Q	V	.	.	.
10.233	11.6910	19.77	.Q	V	.	.	.
10.250	11.7182	19.81	.Q	V	.	.	.
10.267	11.7456	19.86	.Q	V	.	.	.
10.283	11.7730	19.90	.Q	V	.	.	.
10.300	11.8005	19.95	.Q	V	.	.	.
10.317	11.8280	20.00	.Q	V	.	.	.
10.333	11.8556	20.04	.Q	V	.	.	.
10.350	11.8833	20.09	.Q	V	.	.	.
10.367	11.9110	20.13	.Q	V	.	.	.
10.383	11.9388	20.16	.Q	V	.	.	.
10.400	11.9666	20.19	.Q	V	.	.	.
10.417	11.9945	20.21	.Q	V	.	.	.
10.433	12.0223	20.24	.Q	V	.	.	.
10.450	12.0502	20.26	.Q	V	.	.	.
10.467	12.0782	20.29	.Q	V	.	.	.
10.483	12.1062	20.31	.Q	V	.	.	.
10.500	12.1342	20.34	.Q	V	.	.	.
10.517	12.1622	20.36	.Q	V	.	.	.
10.533	12.1903	20.39	.Q	V	.	.	.
10.550	12.2184	20.41	.Q	V	.	.	.
10.567	12.2466	20.44	.Q	V	.	.	.
10.583	12.2748	20.46	.Q	V	.	.	.
10.600	12.3030	20.49	.Q	V	.	.	.
10.617	12.3312	20.51	.Q	V	.	.	.
10.633	12.3595	20.54	.Q	V	.	.	.
10.650	12.3878	20.56	.Q	V	.	.	.
10.667	12.4162	20.59	.Q	V	.	.	.
10.683	12.4446	20.64	.Q	V	.	.	.
10.700	12.4731	20.69	.Q	V	.	.	.
10.717	12.5017	20.74	.Q	V	.	.	.
10.733	12.5303	20.80	.Q	V	.	.	.

10.750	12.5591	20.85	.Q	V	.	.	.
10.767	12.5879	20.91	.Q	V	.	.	.
10.783	12.6167	20.96	.Q	V	.	.	.
10.800	12.6457	21.02	.Q	V	.	.	.
10.817	12.6747	21.07	.Q	V	.	.	.
10.833	12.7038	21.12	.Q	V	.	.	.
10.850	12.7330	21.18	.Q	V	.	.	.
10.867	12.7622	21.23	.Q	V	.	.	.
10.883	12.7915	21.29	.Q	V	.	.	.
10.900	12.8209	21.34	.Q	V	.	.	.
10.917	12.8504	21.39	.Q	V	.	.	.
10.933	12.8799	21.45	.Q	V	.	.	.
10.950	12.9096	21.50	.Q	V	.	.	.
10.967	12.9392	21.55	.Q	V	.	.	.
10.983	12.9690	21.58	.Q	V	.	.	.
11.000	12.9987	21.61	.Q	V	.	.	.
11.017	13.0286	21.64	.Q	V	.	.	.
11.033	13.0584	21.67	.Q	V	.	.	.
11.050	13.0883	21.70	.Q	V	.	.	.
11.067	13.1182	21.73	.Q	V	.	.	.
11.083	13.1482	21.76	.Q	V	.	.	.
11.100	13.1782	21.79	.Q	V	.	.	.
11.117	13.2083	21.82	.Q	V	.	.	.
11.133	13.2384	21.85	.Q	V	.	.	.
11.150	13.2685	21.88	.Q	V	.	.	.
11.167	13.2987	21.91	.Q	V	.	.	.
11.183	13.3289	21.94	.Q	V	.	.	.
11.200	13.3592	21.97	.Q	V	.	.	.
11.217	13.3895	22.00	.Q	V	.	.	.
11.233	13.4198	22.03	.Q	V	.	.	.
11.250	13.4502	22.06	.Q	V	.	.	.
11.267	13.4806	22.10	.Q	V	.	.	.
11.283	13.5112	22.16	.Q	V	.	.	.
11.300	13.5418	22.23	.Q	V	.	.	.
11.317	13.5725	22.29	.Q	V	.	.	.
11.333	13.6033	22.36	.Q	V	.	.	.
11.350	13.6342	22.42	.Q	V	.	.	.
11.367	13.6652	22.49	.Q	V	.	.	.
11.383	13.6962	22.56	.Q	V	.	.	.
11.400	13.7274	22.62	.Q	V	.	.	.
11.417	13.7586	22.69	.Q	V	.	.	.
11.433	13.7900	22.75	.Q	V	.	.	.
11.450	13.8214	22.82	.Q	V	.	.	.
11.467	13.8529	22.88	.Q	V	.	.	.
11.483	13.8845	22.95	.Q	V	.	.	.
11.500	13.9162	23.01	.Q	V	.	.	.
11.517	13.9480	23.08	.Q	V	.	.	.
11.533	13.9799	23.14	.Q	V	.	.	.
11.550	14.0119	23.21	.Q	V	.	.	.
11.567	14.0439	23.26	.Q	V	.	.	.
11.583	14.0760	23.30	.Q	V	.	.	.
11.600	14.1081	23.33	.Q	V	.	.	.
11.617	14.1403	23.37	.Q	V	.	.	.
11.633	14.1726	23.40	.Q	V	.	.	.
11.650	14.2048	23.44	.Q	V	.	.	.
11.667	14.2372	23.48	.Q	V	.	.	.
11.683	14.2696	23.51	.Q	V	.	.	.
11.700	14.3020	23.55	.Q	V	.	.	.

11.717	14.3345	23.59	.Q	V .	.	.	.
11.733	14.3670	23.62	.Q	V .	.	.	.
11.750	14.3996	23.66	.Q	V .	.	.	.
11.767	14.4322	23.69	.Q	V .	.	.	.
11.783	14.4649	23.73	.Q	V .	.	.	.
11.800	14.4977	23.77	.Q	V .	.	.	.
11.817	14.5305	23.80	.Q	V .	.	.	.
11.833	14.5633	23.84	.Q	V .	.	.	.
11.850	14.5962	23.88	.Q	V .	.	.	.
11.867	14.6292	24.00	.Q	V.	.	.	.
11.883	14.6625	24.16	.Q	V.	.	.	.
11.900	14.6960	24.33	.Q	V.	.	.	.
11.917	14.7298	24.49	.Q	V.	.	.	.
11.933	14.7637	24.65	.Q	V.	.	.	.
11.950	14.7979	24.82	.Q	V.	.	.	.
11.967	14.8323	24.98	.Q	V.	.	.	.
11.983	14.8669	25.14	.Q	V.	.	.	.
12.000	14.9018	25.30	.Q	V.	.	.	.
12.017	14.9369	25.47	.Q	V.	.	.	.
12.033	14.9722	25.63	.Q	V.	.	.	.
12.050	15.0077	25.79	.Q	V.	.	.	.
12.067	15.0434	25.96	.Q	V.	.	.	.
12.083	15.0794	26.12	.Q	V.	.	.	.
12.100	15.1156	26.28	.Q	V.	.	.	.
12.117	15.1521	26.45	.Q	V.	.	.	.
12.133	15.1887	26.61	.Q	V.	.	.	.
12.150	15.2256	26.79	.Q	V.	.	.	.
12.167	15.2629	27.09	.Q	V.	.	.	.
12.183	15.3007	27.42	.Q	V.	.	.	.
12.200	15.3389	27.75	.Q	V.	.	.	.
12.217	15.3776	28.08	.Q	V.	.	.	.
12.233	15.4167	28.41	.Q	V.	.	.	.
12.250	15.4563	28.74	.Q	V.	.	.	.
12.267	15.4964	29.07	.Q	V.	.	.	.
12.283	15.5369	29.40	.Q	V.	.	.	.
12.300	15.5778	29.74	.Q	V.	.	.	.
12.317	15.6192	30.07	.Q	V.	.	.	.
12.333	15.6611	30.40	.Q	V.	.	.	.
12.350	15.7034	30.73	.Q	V.	.	.	.
12.367	15.7462	31.06	.Q	V.	.	.	.
12.383	15.7894	31.39	.Q	V.	.	.	.
12.400	15.8331	31.72	.Q	V.	.	.	.
12.417	15.8773	32.05	.Q	V.	.	.	.
12.433	15.9219	32.38	.Q	V.	.	.	.
12.450	15.9669	32.68	.Q	V.	.	.	.
12.467	16.0121	32.80	. Q	V.	.	.	.
12.483	16.0574	32.91	. Q	V.	.	.	.
12.500	16.1029	33.02	. Q	V.	.	.	.
12.517	16.1485	33.13	. Q	V.	.	.	.
12.533	16.1943	33.24	. Q	V.	.	.	.
12.550	16.2403	33.35	. Q	V.	.	.	.
12.567	16.2863	33.46	. Q	V	.	.	.
12.583	16.3326	33.57	. Q	V	.	.	.
12.600	16.3790	33.68	. Q	V	.	.	.
12.617	16.4255	33.79	. Q	V	.	.	.
12.633	16.4722	33.89	. Q	V	.	.	.
12.650	16.5190	34.00	. Q	V	.	.	.
12.667	16.5660	34.11	. Q	V	.	.	.

12.683	16.6131	34.22	. Q	V	.	.	.
12.700	16.6604	34.33	. Q	V	.	.	.
12.717	16.7079	34.44	. Q	V	.	.	.
12.733	16.7555	34.55	. Q	V	.	.	.
12.750	16.8032	34.64	. Q	V	.	.	.
12.767	16.8510	34.71	. Q	V	.	.	.
12.783	16.8989	34.77	. Q	V	.	.	.
12.800	16.9468	34.83	. Q	V	.	.	.
12.817	16.9949	34.89	. Q	V	.	.	.
12.833	17.0431	34.95	. Q	V	.	.	.
12.850	17.0913	35.02	. Q	V	.	.	.
12.867	17.1396	35.08	. Q	V	.	.	.
12.883	17.1880	35.14	. Q	V	.	.	.
12.900	17.2365	35.20	. Q	V	.	.	.
12.917	17.2851	35.27	. Q	V	.	.	.
12.933	17.3337	35.33	. Q	V	.	.	.
12.950	17.3825	35.39	. Q	V	.	.	.
12.967	17.4313	35.45	. Q	V	.	.	.
12.983	17.4802	35.51	. Q	V	.	.	.
13.000	17.5292	35.58	. Q	V	.	.	.
13.017	17.5783	35.64	. Q	V	.	.	.
13.033	17.6275	35.70	. Q	V	.	.	.
13.050	17.6768	35.80	. Q	V	.	.	.
13.067	17.7263	35.95	. Q	V	.	.	.
13.083	17.7760	36.09	. Q	V	.	.	.
13.100	17.8259	36.23	. Q	V	.	.	.
13.117	17.8760	36.38	. Q	.V	.	.	.
13.133	17.9263	36.52	. Q	.V	.	.	.
13.150	17.9768	36.66	. Q	.V	.	.	.
13.167	18.0275	36.81	. Q	.V	.	.	.
13.183	18.0784	36.95	. Q	.V	.	.	.
13.200	18.1295	37.09	. Q	.V	.	.	.
13.217	18.1808	37.24	. Q	.V	.	.	.
13.233	18.2323	37.38	. Q	.V	.	.	.
13.250	18.2840	37.52	. Q	.V	.	.	.
13.267	18.3359	37.67	. Q	.V	.	.	.
13.283	18.3879	37.81	. Q	.V	.	.	.
13.300	18.4402	37.95	. Q	.V	.	.	.
13.317	18.4927	38.10	. Q	.V	.	.	.
13.333	18.5454	38.24	. Q	.V	.	.	.
13.350	18.5982	38.34	. Q	.V	.	.	.
13.367	18.6511	38.42	. Q	.V	.	.	.
13.383	18.7041	38.51	. Q	.V	.	.	.
13.400	18.7573	38.59	. Q	.V	.	.	.
13.417	18.8106	38.68	. Q	.V	.	.	.
13.433	18.8640	38.76	. Q	.V	.	.	.
13.450	18.9175	38.84	. Q	.V	.	.	.
13.467	18.9711	38.93	. Q	.V	.	.	.
13.483	19.0248	39.01	. Q	.V	.	.	.
13.500	19.0787	39.09	. Q	.V	.	.	.
13.517	19.1326	39.18	. Q	.V	.	.	.
13.533	19.1867	39.26	. Q	.V	.	.	.
13.550	19.2409	39.34	. Q	.V	.	.	.
13.567	19.2952	39.43	. Q	.V	.	.	.
13.583	19.3496	39.51	. Q	.V	.	.	.
13.600	19.4042	39.60	. Q	.V	.	.	.
13.617	19.4588	39.68	. Q	.V	.	.	.
13.633	19.5136	39.77	. Q	. V	.	.	.

13.650	19.5686	39.95	. Q	. V	.	.	.	
13.667	19.6239	40.15	. Q	. V	.	.	.	
13.683	19.6795	40.35	. Q	. V	.	.	.	
13.700	19.7354	40.55	. Q	. V	.	.	.	
13.717	19.7915	40.75	. Q	. V	.	.	.	
13.733	19.8479	40.95	. Q	. V	.	.	.	
13.750	19.9046	41.15	. Q	. V	.	.	.	
13.767	19.9615	41.35	. Q	. V	.	.	.	
13.783	20.0188	41.55	. Q	. V	.	.	.	
13.800	20.0763	41.75	. Q	. V	.	.	.	
13.817	20.1341	41.95	. Q	. V	.	.	.	
13.833	20.1921	42.15	. Q	. V	.	.	.	
13.850	20.2504	42.35	. Q	. V	.	.	.	
13.867	20.3090	42.55	. Q	. V	.	.	.	
13.883	20.3679	42.75	. Q	. V	.	.	.	
13.900	20.4271	42.95	. Q	. V	.	.	.	
13.917	20.4865	43.15	. Q	. V	.	.	.	
13.933	20.5462	43.33	. Q	. V	.	.	.	
13.950	20.6061	43.46	. Q	. V	.	.	.	
13.967	20.6661	43.59	. Q	. V	.	.	.	
13.983	20.7263	43.71	. Q	. V	.	.	.	
14.000	20.7867	43.84	. Q	. V	.	.	.	
14.017	20.8473	43.96	. Q	. V	.	.	.	
14.033	20.9080	44.09	. Q	. V	.	.	.	
14.050	20.9689	44.21	. Q	. V	.	.	.	
14.067	21.0300	44.34	. Q	. V	.	.	.	
14.083	21.0912	44.46	. Q	. V	.	.	.	
14.100	21.1526	44.59	. Q	. V	.	.	.	
14.117	21.2142	44.71	. Q	. V	.	.	.	
14.133	21.2759	44.84	. Q	. V	.	.	.	
14.150	21.3379	44.96	. Q	. V	.	.	.	
14.167	21.4000	45.08	. Q	. V	.	.	.	
14.183	21.4622	45.21	. Q	. V	.	.	.	
14.200	21.5247	45.33	. Q	. V	.	.	.	
14.217	21.5873	45.46	. Q	. V	.	.	.	
14.233	21.6502	45.65	. Q	. V	.	.	.	
14.250	21.7135	45.98	. Q	. V	.	.	.	
14.267	21.7773	46.31	. Q	. V	.	.	.	
14.283	21.8416	46.64	. Q	. V	.	.	.	
14.300	21.9063	46.98	. Q	. V	.	.	.	
14.317	21.9714	47.31	. Q	. V	.	.	.	
14.333	22.0371	47.64	. Q	. V	.	.	.	
14.350	22.1031	47.98	. Q	. V	.	.	.	
14.367	22.1697	48.31	. Q	. V	.	.	.	
14.383	22.2367	48.64	. Q	. V	.	.	.	
14.400	22.3041	48.98	. Q	. V	.	.	.	
14.417	22.3721	49.31	. Q	. V	.	.	.	
14.433	22.4404	49.64	. Q	. V	.	.	.	
14.450	22.5093	49.98	. Q	. V	.	.	.	
14.467	22.5786	50.31	. Q	. V	.	.	.	
14.483	22.6483	50.64	. Q	. V	.	.	.	
14.500	22.7185	50.97	. Q	. V	.	.	.	
14.517	22.7892	51.31	. Q	. V	.	.	.	
14.533	22.8603	51.57	. Q	. V	.	.	.	
14.550	22.9316	51.77	. Q	. V	.	.	.	
14.567	23.0031	51.97	. Q	. V	.	.	.	
14.583	23.0750	52.17	. Q	. V	.	.	.	
14.600	23.1471	52.37	. Q	. V	.	.	.	

14.617	23.2195	52.56	. Q	. V	.	.	.	
14.633	23.2922	52.76	. Q	. V	.	.	.	
14.650	23.3651	52.96	. Q	. V	.	.	.	
14.667	23.4384	53.16	. Q	. V	.	.	.	
14.683	23.5119	53.36	. Q	. V	.	.	.	
14.700	23.5856	53.55	. Q	. V	.	.	.	
14.717	23.6597	53.75	. Q	. V	.	.	.	
14.733	23.7340	53.95	. Q	. V	.	.	.	
14.750	23.8086	54.15	. Q	. V	.	.	.	
14.767	23.8834	54.35	. Q	. V	.	.	.	
14.783	23.9585	54.54	. Q	. V	.	.	.	
14.800	24.0339	54.74	. Q	. V	.	.	.	
14.817	24.1096	54.95	. Q	. V	.	.	.	
14.833	24.1859	55.38	. Q	. V	.	.	.	
14.850	24.2630	55.94	. Q	. V	.	.	.	
14.867	24.3408	56.49	. Q	. V	.	.	.	
14.883	24.4193	57.04	. Q	. V	.	.	.	
14.900	24.4987	57.59	. Q	. V	.	.	.	
14.917	24.5788	58.14	. Q	. V	.	.	.	
14.933	24.6596	58.70	. Q	. V	.	.	.	
14.950	24.7412	59.25	. Q	. V	.	.	.	
14.967	24.8236	59.80	. Q	. V	.	.	.	
14.983	24.9067	60.35	. Q	. V	.	.	.	
15.000	24.9906	60.90	. Q	. V	.	.	.	
15.017	25.0752	61.45	. Q	. V	.	.	.	
15.033	25.1606	62.01	. Q	. V	.	.	.	
15.050	25.2468	62.56	. Q	. V	.	.	.	
15.067	25.3337	63.11	. Q	. V	.	.	.	
15.083	25.4214	63.66	. Q	. V	.	.	.	
15.100	25.5099	64.21	. Q	. V	.	.	.	
15.117	25.5991	64.75	. Q	. V	.	.	.	
15.133	25.6889	65.19	. Q	. V	.	.	.	
15.150	25.7792	65.60	. Q	. V	.	.	.	
15.167	25.8701	66.01	. Q	. V	.	.	.	
15.183	25.9616	66.42	. Q	. V	.	.	.	
15.200	26.0537	66.82	. Q	. V	.	.	.	
15.217	26.1463	67.23	. Q	. V	.	.	.	
15.233	26.2394	67.64	. Q	. V	.	.	.	
15.250	26.3332	68.05	. Q	. V	.	.	.	
15.267	26.4275	68.46	. Q	. V	.	.	.	
15.283	26.5223	68.87	. Q	. V	.	.	.	
15.300	26.6178	69.28	. Q	. V	.	.	.	
15.317	26.7138	69.69	. Q	. V	.	.	.	
15.333	26.8103	70.10	. Q	. V	.	.	.	
15.350	26.9074	70.51	. Q	. V	.	.	.	
15.367	27.0051	70.92	. Q	. V	.	.	.	
15.383	27.1034	71.33	. Q	. V	.	.	.	
15.400	27.2022	71.74	. Q	. V	.	.	.	
15.417	27.3016	72.21	. Q	. V	.	.	.	
15.433	27.4022	72.97	. Q	. V	.	.	.	
15.450	27.5037	73.76	. Q	. V	.	.	.	
15.467	27.6064	74.54	. Q	. V	.	.	.	
15.483	27.7102	75.33	. Q	. V	.	.	.	
15.500	27.8150	76.11	. Q	. V	.	.	.	
15.517	27.9209	76.90	. Q	. V	.	.	.	
15.533	28.0279	77.68	. Q	. V	.	.	.	
15.550	28.1360	78.47	. Q	. V	.	.	.	
15.567	28.2452	79.26	. Q	. V	.	.	.	

```
15.583    28.3554    80.04  .  Q     .     V  .        .        .
15.600    28.4668    80.83  .  Q     .     V  .        .        .
15.617    28.5792    81.61  .  Q     .     V  .        .        .
15.633    28.6927    82.40  .   Q    .     V  .        .        .
15.650    28.8073    83.19  .   Q    .     V  .        .        .
15.667    28.9229    83.97  .   Q    .     V  .        .        .
15.683    29.0397    84.76  .   Q    .     V  .        .        .
15.700    29.1575    85.54  .   Q    .     V  .        .        .
15.717    29.2778    87.31  .   Q    .      V .        .        .
15.733    29.4033    91.10  .   Q    .      V .        .        .
15.750    29.5340    94.95  .   Q    .      V .        .        .
15.767    29.6701    98.80  .    Q   .      V .        .        .
15.783    29.8115   102.66  .    Q   .      V .        .        .
15.800    29.9582   106.51  .    Q   .      V .        .        .
15.817    30.1103   110.36  .    Q   .      V .        .        .
15.833    30.2676   114.21  .    Q   .      V .        .        .
15.850    30.4302   118.06  .     Q  .      V .        .        .
15.867    30.5981   121.91  .     Q  .      V .        .        .
15.883    30.7713   125.76  .     Q  .      V .        .        .
15.900    30.9499   129.62  .     Q  .       V.        .        .
15.917    31.1337   133.47  .      Q .       V.        .        .
15.933    31.3229   137.32  .      Q .       V.        .        .
15.950    31.5173   141.17  .      Q .       V.        .        .
15.967    31.7171   145.02  .      Q .       V.        .        .
15.983    31.9221   148.87  .       Q.       V.        .        .
16.000    32.1325   152.73  .       Q.       V.        .        .
16.017    32.3648   168.68  .        Q       V.        .        .
16.033    32.6358   196.74  .         . Q      V        .        .
16.050    32.9455   224.80  .         .  Q     V        .        .
16.067    33.2938   252.86  .         .    Q   V        .        .
16.083    33.6807   280.92  .         .     Q  V        .        .
16.100    34.1063   308.98  .         .      Q V        .        .
16.117    34.5706   337.04  .         .        QV       .        .
16.133    35.0735   365.10  .         .        .VQ      .        .
16.150    35.6150   393.17  .         .        .V  Q    .        .
16.167    36.1952   421.23  .         .        . V  Q   .        .
16.183    36.8141   449.29  .         .        . V   Q  .        .
16.200    37.4716   477.35  .         .        .  V    Q.        .
16.217    38.1677   505.41  .         .        .  V     Q        .
16.233    38.9025   533.47  .         .        .  V      . Q     .
16.250    39.6760   561.53  .         .        .   V     .  Q    .
16.267    40.4881   589.59  .         .        .   V     .    Q  .
16.283    41.3388   617.65  .         .        .    V    .     Q .
16.300    42.2399   654.13  .         .        .    V    .      Q
16.317    43.1096   631.47  .         .        .     V   .     Q .
16.333    43.9348   599.09  .         .        .      V  .    Q  .
16.350    44.7154   566.71  .         .        .      V  .  Q    .
16.367    45.4514   534.34  .         .        .      V  . Q     .
16.383    46.1428   501.96  .         .        .       V Q       .
16.400    46.7897   469.59  .         .        .       Q .       .
16.417    47.3919   437.21  .         .        .     Q  V.       .
16.433    47.9495   404.84  .         .        .   Q    V.       .
16.450    48.4625   372.46  .         .        . Q     V.       .
16.467    48.9310   340.08  .         .        Q       V        .
16.483    49.3548   307.71  .         .      Q .       V        .
16.500    49.7340   275.33  .         .    Q   .       V        .
16.517    50.0687   242.96  .         .   Q    .       V        .
16.533    50.3587   210.58  .         . Q      .       V        .
```



```
16.550    50.6042   178.20  .          Q        .        .V       .
16.567    50.8051   145.83  .        Q .        .        .V       .
16.583    50.9613   113.45  .      Q   .        .        .V       .
16.600    51.0765    83.58  .    Q     .        .        .V       .
16.617    51.1824    76.90  .   Q      .        .        .V       .
16.633    51.2869    75.86  .   Q      .        .        .V       .
16.650    51.3899    74.82  .   Q      .        .        .V       .
16.667    51.4916    73.78  .   Q      .        .        .V       .
16.683    51.5918    72.74  .   Q      .        .        .V       .
16.700    51.6905    71.70  .   Q      .        .        .V       .
16.717    51.7879    70.66  .   Q      .        .        .V       .
16.733    51.8838    69.62  .   Q      .        .        .V       .
16.750    51.9782    68.58  .   Q      .        .        .V       .
16.767    52.0713    67.54  .   Q      .        .        . V      .
16.783    52.1629    66.50  .   Q      .        .        . V      .
16.800    52.2530    65.46  .   Q      .        .        . V      .
16.817    52.3418    64.42  .  Q       .        .        . V      .
16.833    52.4291    63.38  .  Q       .        .        . V      .
16.850    52.5150    62.34  .  Q       .        .        . V      .
16.867    52.5994    61.30  .  Q       .        .        . V      .
16.883    52.6824    60.26  .  Q       .        .        . V      .
16.900    52.7641    59.30  .  Q       .        .        . V      .
16.917    52.8449    58.66  .  Q       .        .        . V      .
16.933    52.9249    58.05  .  Q       .        .        . V      .
16.950    53.0040    57.45  .  Q       .        .        . V      .
16.967    53.0823    56.84  .  Q       .        .        . V      .
16.983    53.1597    56.23  .  Q       .        .        . V      .
17.000    53.2364    55.63  .  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%	1021.0
10%	500.0
20%	200.0
30%	155.0
40%	130.0
50%	110.0
60%	90.0
70%	65.0
80%	45.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

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

              F L O O D   R O U T I N G   A N A L Y S I S
              USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                          Analysis prepared by:

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


 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 SUBAREA A                                                       *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                      *
* 25-YR EV MARCH 2019 CCHIU                                                *
 **************************************************************************

  FILE NAME: 3A25EVS.DAT
  TIME/DATE OF STUDY: 09:57 03/29/2019

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


****************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    130.00 IS CODE = 1.2
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
============================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  510.20
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.130
    LOW LOSS FRACTION = 0.316
    TIME OF CONCENTRATION(MIN.) = 13.97
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  10
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.34
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.72
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.95
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.59
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.20
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  3.68

----------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =   102.02
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    54.45

----------------------------------------------------------------------------
```

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	242.8	485.7	728.5	971.3
0.017	0.0000	0.00	Q	.	.	.	.
0.033	0.0000	0.00	Q	.	.	.	.
0.050	0.0000	0.00	Q	.	.	.	.
0.067	0.0000	0.00	Q	.	.	.	.
0.083	0.0000	0.00	Q	.	.	.	.
0.100	0.0000	0.00	Q	.	.	.	.
0.117	0.0000	0.00	Q	.	.	.	.
0.133	0.0000	0.00	Q	.	.	.	.
0.150	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.183	0.0008	0.60	Q	.	.	.	.
0.200	0.0034	1.89	Q	.	.	.	.
0.217	0.0078	3.18	Q	.	.	.	.
0.233	0.0140	4.47	Q	.	.	.	.
0.250	0.0219	5.76	Q	.	.	.	.
0.267	0.0316	7.05	Q	.	.	.	.
0.283	0.0431	8.34	Q	.	.	.	.
0.300	0.0564	9.64	Q	.	.	.	.
0.317	0.0714	10.93	Q	.	.	.	.
0.333	0.0883	12.22	Q	.	.	.	.
0.350	0.1069	13.51	Q	.	.	.	.
0.367	0.1273	14.80	Q	.	.	.	.
0.383	0.1494	16.10	Q	.	.	.	.
0.400	0.1734	17.39	Q	.	.	.	.
0.417	0.1982	18.05	Q	.	.	.	.
0.433	0.2231	18.06	Q	.	.	.	.
0.450	0.2480	18.07	Q	.	.	.	.
0.467	0.2729	18.07	Q	.	.	.	.
0.483	0.2978	18.08	Q	.	.	.	.
0.500	0.3227	18.09	Q	.	.	.	.
0.517	0.3476	18.10	Q	.	.	.	.
0.533	0.3726	18.11	Q	.	.	.	.
0.550	0.3975	18.11	Q	.	.	.	.
0.567	0.4225	18.12	Q	.	.	.	.
0.583	0.4475	18.13	Q	.	.	.	.
0.600	0.4725	18.14	Q	.	.	.	.
0.617	0.4974	18.15	Q	.	.	.	.
0.633	0.5225	18.15	Q	.	.	.	.
0.650	0.5475	18.17	Q	.	.	.	.
0.667	0.5725	18.18	Q	.	.	.	.
0.683	0.5976	18.20	Q	.	.	.	.
0.700	0.6227	18.22	Q	.	.	.	.
0.717	0.6478	18.23	Q	.	.	.	.
0.733	0.6729	18.25	Q	.	.	.	.
0.750	0.6981	18.27	Q	.	.	.	.

0.767	0.7233	18.28	Q	.	.	.	.
0.783	0.7485	18.30	Q	.	.	.	.
0.800	0.7737	18.32	Q	.	.	.	.
0.817	0.7990	18.33	Q	.	.	.	.
0.833	0.8242	18.35	Q	.	.	.	.
0.850	0.8495	18.37	Q	.	.	.	.
0.867	0.8749	18.38	Q	.	.	.	.
0.883	0.9002	18.39	Q	.	.	.	.
0.900	0.9255	18.40	Q	.	.	.	.
0.917	0.9509	18.41	Q	.	.	.	.
0.933	0.9763	18.42	Q	.	.	.	.
0.950	1.0017	18.43	Q	.	.	.	.
0.967	1.0271	18.44	Q	.	.	.	.
0.983	1.0525	18.45	Q	.	.	.	.
1.000	1.0779	18.45	Q	.	.	.	.
1.017	1.1033	18.46	Q	.	.	.	.
1.033	1.1288	18.47	Q	.	.	.	.
1.050	1.1542	18.48	Q	.	.	.	.
1.067	1.1797	18.49	Q	.	.	.	.
1.083	1.2052	18.50	Q	.	.	.	.
1.100	1.2306	18.50	Q	.	.	.	.
1.117	1.2562	18.52	Q	.	.	.	.
1.133	1.2817	18.54	Q	.	.	.	.
1.150	1.3072	18.55	Q	.	.	.	.
1.167	1.3328	18.57	Q	.	.	.	.
1.183	1.3584	18.59	Q	.	.	.	.
1.200	1.3841	18.61	Q	.	.	.	.
1.217	1.4097	18.62	Q	.	.	.	.
1.233	1.4354	18.64	Q	.	.	.	.
1.250	1.4611	18.66	Q	.	.	.	.
1.267	1.4868	18.68	Q	.	.	.	.
1.283	1.5125	18.69	Q	.	.	.	.
1.300	1.5383	18.71	Q	.	.	.	.
1.317	1.5641	18.73	Q	.	.	.	.
1.333	1.5899	18.74	Q	.	.	.	.
1.350	1.6158	18.76	Q	.	.	.	.
1.367	1.6416	18.77	Q	.	.	.	.
1.383	1.6675	18.77	Q	.	.	.	.
1.400	1.6933	18.78	Q	.	.	.	.
1.417	1.7192	18.79	Q	.	.	.	.
1.433	1.7451	18.80	Q	.	.	.	.
1.450	1.7710	18.81	Q	.	.	.	.
1.467	1.7970	18.82	Q	.	.	.	.
1.483	1.8229	18.83	Q	.	.	.	.
1.500	1.8488	18.84	Q	.	.	.	.
1.517	1.8748	18.85	Q	.	.	.	.
1.533	1.9008	18.85	Q	.	.	.	.
1.550	1.9268	18.86	Q	.	.	.	.
1.567	1.9527	18.87	Q	.	.	.	.
1.583	1.9788	18.89	Q	.	.	.	.
1.600	2.0048	18.91	Q	.	.	.	.
1.617	2.0309	18.92	Q	.	.	.	.
1.633	2.0570	18.94	Q	.	.	.	.
1.650	2.0831	18.96	Q	.	.	.	.
1.667	2.1092	18.98	Q	.	.	.	.
1.683	2.1354	19.00	Q	.	.	.	.
1.700	2.1616	19.02	Q	.	.	.	.
1.717	2.1878	19.03	Q	.	.	.	.

1.733	2.2140	19.05	Q	.	.	.	.
1.750	2.2403	19.07	Q	.	.	.	.
1.767	2.2666	19.09	Q	.	.	.	.
1.783	2.2929	19.11	Q	.	.	.	.
1.800	2.3193	19.12	Q	.	.	.	.
1.817	2.3456	19.14	Q	.	.	.	.
1.833	2.3720	19.15	Q	.	.	.	.
1.850	2.3984	19.16	Q	.	.	.	.
1.867	2.4248	19.17	Q	.	.	.	.
1.883	2.4512	19.17	Q	.	.	.	.
1.900	2.4776	19.18	Q	.	.	.	.
1.917	2.5040	19.19	Q	.	.	.	.
1.933	2.5305	19.20	Q	.	.	.	.
1.950	2.5570	19.21	QV	.	.	.	.
1.967	2.5834	19.22	QV	.	.	.	.
1.983	2.6099	19.23	QV	.	.	.	.
2.000	2.6364	19.24	QV	.	.	.	.
2.017	2.6629	19.25	QV	.	.	.	.
2.033	2.6895	19.26	QV	.	.	.	.
2.050	2.7160	19.28	QV	.	.	.	.
2.067	2.7426	19.30	QV	.	.	.	.
2.083	2.7692	19.31	QV	.	.	.	.
2.100	2.7958	19.33	QV	.	.	.	.
2.117	2.8225	19.35	QV	.	.	.	.
2.133	2.8492	19.37	QV	.	.	.	.
2.150	2.8759	19.39	QV	.	.	.	.
2.167	2.9026	19.41	QV	.	.	.	.
2.183	2.9294	19.43	QV	.	.	.	.
2.200	2.9562	19.45	QV	.	.	.	.
2.217	2.9830	19.47	QV	.	.	.	.
2.233	3.0098	19.49	QV	.	.	.	.
2.250	3.0367	19.51	QV	.	.	.	.
2.267	3.0636	19.53	QV	.	.	.	.
2.283	3.0905	19.54	QV	.	.	.	.
2.300	3.1174	19.55	QV	.	.	.	.
2.317	3.1444	19.56	QV	.	.	.	.
2.333	3.1713	19.57	QV	.	.	.	.
2.350	3.1983	19.58	QV	.	.	.	.
2.367	3.2253	19.59	QV	.	.	.	.
2.383	3.2523	19.60	QV	.	.	.	.
2.400	3.2793	19.61	QV	.	.	.	.
2.417	3.3063	19.62	QV	.	.	.	.
2.433	3.3334	19.63	QV	.	.	.	.
2.450	3.3604	19.64	QV	.	.	.	.
2.467	3.3875	19.65	QV	.	.	.	.
2.483	3.4145	19.66	QV	.	.	.	.
2.500	3.4416	19.67	QV	.	.	.	.
2.517	3.4688	19.69	QV	.	.	.	.
2.533	3.4959	19.71	QV	.	.	.	.
2.550	3.5231	19.73	QV	.	.	.	.
2.567	3.5503	19.75	QV	.	.	.	.
2.583	3.5775	19.77	QV	.	.	.	.
2.600	3.6048	19.79	QV	.	.	.	.
2.617	3.6320	19.81	QV	.	.	.	.
2.633	3.6593	19.83	QV	.	.	.	.
2.650	3.6867	19.85	QV	.	.	.	.
2.667	3.7141	19.87	QV	.	.	.	.
2.683	3.7415	19.89	QV	.	.	.	.

2.700	3.7689	19.91	QV	.	.	.	.
2.717	3.7963	19.93	QV	.	.	.	.
2.733	3.8238	19.95	QV	.	.	.	.
2.750	3.8513	19.96	QV	.	.	.	.
2.767	3.8788	19.97	QV	.	.	.	.
2.783	3.9064	19.98	QV	.	.	.	.
2.800	3.9339	19.99	QV	.	.	.	.
2.817	3.9614	20.01	QV	.	.	.	.
2.833	3.9890	20.02	QV	.	.	.	.
2.850	4.0166	20.03	QV	.	.	.	.
2.867	4.0442	20.04	QV	.	.	.	.
2.883	4.0718	20.05	QV	.	.	.	.
2.900	4.0994	20.06	QV	.	.	.	.
2.917	4.1271	20.07	QV	.	.	.	.
2.933	4.1547	20.08	QV	.	.	.	.
2.950	4.1824	20.09	QV	.	.	.	.
2.967	4.2101	20.10	QV	.	.	.	.
2.983	4.2378	20.12	QV	.	.	.	.
3.000	4.2655	20.14	QV	.	.	.	.
3.017	4.2933	20.16	QV	.	.	.	.
3.033	4.3211	20.18	QV	.	.	.	.
3.050	4.3490	20.21	QV	.	.	.	.
3.067	4.3768	20.23	QV	.	.	.	.
3.083	4.4047	20.25	QV	.	.	.	.
3.100	4.4326	20.27	QV	.	.	.	.
3.117	4.4606	20.29	QV	.	.	.	.
3.133	4.4886	20.31	QV	.	.	.	.
3.150	4.5166	20.34	QV	.	.	.	.
3.167	4.5446	20.36	QV	.	.	.	.
3.183	4.5727	20.38	QV	.	.	.	.
3.200	4.6008	20.40	QV	.	.	.	.
3.217	4.6289	20.41	QV	.	.	.	.
3.233	4.6570	20.42	QV	.	.	.	.
3.250	4.6852	20.44	QV	.	.	.	.
3.267	4.7133	20.45	QV	.	.	.	.
3.283	4.7415	20.46	QV	.	.	.	.
3.300	4.7697	20.47	QV	.	.	.	.
3.317	4.7979	20.48	QV	.	.	.	.
3.333	4.8261	20.49	QV	.	.	.	.
3.350	4.8544	20.50	QV	.	.	.	.
3.367	4.8826	20.51	QV	.	.	.	.
3.383	4.9109	20.52	QV	.	.	.	.
3.400	4.9392	20.54	QV	.	.	.	.
3.417	4.9675	20.55	QV	.	.	.	.
3.433	4.9958	20.56	QV	.	.	.	.
3.450	5.0242	20.58	QV	.	.	.	.
3.467	5.0525	20.60	QV	.	.	.	.
3.483	5.0809	20.62	QV	.	.	.	.
3.500	5.1094	20.65	Q V	.	.	.	.
3.517	5.1379	20.67	Q V	.	.	.	.
3.533	5.1664	20.69	Q V	.	.	.	.
3.550	5.1949	20.72	Q V	.	.	.	.
3.567	5.2235	20.74	Q V	.	.	.	.
3.583	5.2521	20.76	Q V	.	.	.	.
3.600	5.2807	20.78	Q V	.	.	.	.
3.617	5.3094	20.81	Q V	.	.	.	.
3.633	5.3380	20.83	Q V	.	.	.	.
3.650	5.3668	20.85	Q V	.	.	.	.

3.667	5.3955	20.88	Q	V	.	.	.	.
3.683	5.4243	20.89	Q	V	.	.	.	.
3.700	5.4531	20.90	Q	V	.	.	.	.
3.717	5.4819	20.91	Q	V	.	.	.	.
3.733	5.5107	20.92	Q	V	.	.	.	.
3.750	5.5396	20.94	Q	V	.	.	.	.
3.767	5.5684	20.95	Q	V	.	.	.	.
3.783	5.5973	20.96	Q	V	.	.	.	.
3.800	5.6262	20.97	Q	V	.	.	.	.
3.817	5.6551	20.98	Q	V	.	.	.	.
3.833	5.6840	20.99	Q	V	.	.	.	.
3.850	5.7129	21.01	Q	V	.	.	.	.
3.867	5.7419	21.02	Q	V	.	.	.	.
3.883	5.7708	21.03	Q	V	.	.	.	.
3.900	5.7998	21.04	Q	V	.	.	.	.
3.917	5.8288	21.07	Q	V	.	.	.	.
3.933	5.8579	21.09	Q	V	.	.	.	.
3.950	5.8870	21.11	Q	V	.	.	.	.
3.967	5.9161	21.14	Q	V	.	.	.	.
3.983	5.9452	21.16	Q	V	.	.	.	.
4.000	5.9744	21.19	Q	V	.	.	.	.
4.017	6.0036	21.21	Q	V	.	.	.	.
4.033	6.0329	21.24	Q	V	.	.	.	.
4.050	6.0622	21.26	Q	V	.	.	.	.
4.067	6.0915	21.28	Q	V	.	.	.	.
4.083	6.1208	21.31	Q	V	.	.	.	.
4.100	6.1502	21.33	Q	V	.	.	.	.
4.117	6.1796	21.36	Q	V	.	.	.	.
4.133	6.2091	21.38	Q	V	.	.	.	.
4.150	6.2386	21.40	Q	V	.	.	.	.
4.167	6.2680	21.41	Q	V	.	.	.	.
4.183	6.2976	21.42	Q	V	.	.	.	.
4.200	6.3271	21.43	Q	V	.	.	.	.
4.217	6.3566	21.45	Q	V	.	.	.	.
4.233	6.3862	21.46	Q	V	.	.	.	.
4.250	6.4157	21.47	Q	V	.	.	.	.
4.267	6.4453	21.48	Q	V	.	.	.	.
4.283	6.4749	21.50	Q	V	.	.	.	.
4.300	6.5046	21.51	Q	V	.	.	.	.
4.317	6.5342	21.52	Q	V	.	.	.	.
4.333	6.5639	21.53	Q	V	.	.	.	.
4.350	6.5936	21.55	Q	V	.	.	.	.
4.367	6.6233	21.56	Q	V	.	.	.	.
4.383	6.6530	21.58	Q	V	.	.	.	.
4.400	6.6827	21.61	Q	V	.	.	.	.
4.417	6.7126	21.64	Q	V	.	.	.	.
4.433	6.7424	21.66	Q	V	.	.	.	.
4.450	6.7723	21.69	Q	V	.	.	.	.
4.467	6.8022	21.71	Q	V	.	.	.	.
4.483	6.8321	21.74	Q	V	.	.	.	.
4.500	6.8621	21.77	Q	V	.	.	.	.
4.517	6.8921	21.79	Q	V	.	.	.	.
4.533	6.9222	21.82	Q	V	.	.	.	.
4.550	6.9523	21.84	Q	V	.	.	.	.
4.567	6.9824	21.87	Q	V	.	.	.	.
4.583	7.0125	21.90	Q	V	.	.	.	.
4.600	7.0427	21.92	Q	V	.	.	.	.
4.617	7.0729	21.93	Q	V	.	.	.	.

4.633	7.1032	21.95	Q	V	.	.	.	.
4.650	7.1334	21.96	Q	V	.	.	.	.
4.667	7.1637	21.97	Q	V	.	.	.	.
4.683	7.1940	21.99	Q	V	.	.	.	.
4.700	7.2243	22.00	Q	V	.	.	.	.
4.717	7.2546	22.01	Q	V	.	.	.	.
4.733	7.2849	22.03	Q	V	.	.	.	.
4.750	7.3153	22.04	Q	V	.	.	.	.
4.767	7.3457	22.05	Q	V	.	.	.	.
4.783	7.3761	22.07	Q	V	.	.	.	.
4.800	7.4065	22.08	Q	V	.	.	.	.
4.817	7.4369	22.09	Q	V	.	.	.	.
4.833	7.4674	22.11	Q	V	.	.	.	.
4.850	7.4979	22.14	Q	V	.	.	.	.
4.867	7.5284	22.16	Q	V	.	.	.	.
4.883	7.5590	22.19	Q	V	.	.	.	.
4.900	7.5896	22.22	Q	V	.	.	.	.
4.917	7.6202	22.25	Q	V	.	.	.	.
4.933	7.6509	22.28	Q	V	.	.	.	.
4.950	7.6816	22.30	Q	V	.	.	.	.
4.967	7.7124	22.33	Q	V	.	.	.	.
4.983	7.7432	22.36	Q	V	.	.	.	.
5.000	7.7740	22.39	Q	V	.	.	.	.
5.017	7.8049	22.41	Q	V	.	.	.	.
5.033	7.8358	22.44	Q	V	.	.	.	.
5.050	7.8667	22.47	Q	V	.	.	.	.
5.067	7.8977	22.49	Q	V	.	.	.	.
5.083	7.9287	22.51	Q	V	.	.	.	.
5.100	7.9598	22.52	Q	V	.	.	.	.
5.117	7.9908	22.54	Q	V	.	.	.	.
5.133	8.0219	22.55	Q	V	.	.	.	.
5.150	8.0529	22.57	Q	V	.	.	.	.
5.167	8.0841	22.58	Q	V	.	.	.	.
5.183	8.1152	22.60	Q	V	.	.	.	.
5.200	8.1463	22.61	Q	V	.	.	.	.
5.217	8.1775	22.62	Q	V	.	.	.	.
5.233	8.2087	22.64	Q	V	.	.	.	.
5.250	8.2399	22.65	Q	V	.	.	.	.
5.267	8.2711	22.67	Q	V	.	.	.	.
5.283	8.3023	22.68	Q	V	.	.	.	.
5.300	8.3336	22.70	Q	V	.	.	.	.
5.317	8.3649	22.73	Q	V	.	.	.	.
5.333	8.3963	22.76	Q	V	.	.	.	.
5.350	8.4276	22.79	Q	V	.	.	.	.
5.367	8.4591	22.82	Q	V	.	.	.	.
5.383	8.4905	22.85	Q	V	.	.	.	.
5.400	8.5220	22.88	Q	V	.	.	.	.
5.417	8.5536	22.91	Q	V	.	.	.	.
5.433	8.5852	22.94	Q	V	.	.	.	.
5.450	8.6168	22.97	Q	V	.	.	.	.
5.467	8.6485	23.00	Q	V	.	.	.	.
5.483	8.6802	23.02	Q	V	.	.	.	.
5.500	8.7120	23.05	Q	V	.	.	.	.
5.517	8.7438	23.08	Q	V	.	.	.	.
5.533	8.7756	23.11	Q	V	.	.	.	.
5.550	8.8074	23.13	Q	V	.	.	.	.
5.567	8.8393	23.14	Q	V	.	.	.	.
5.583	8.8712	23.16	Q	V	.	.	.	.

5.600	8.9031	23.17	Q	V	.	.	.	.
5.617	8.9351	23.19	Q	V	.	.	.	.
5.633	8.9670	23.20	Q	V	.	.	.	.
5.650	8.9990	23.22	Q	V	.	.	.	.
5.667	9.0310	23.23	Q	V	.	.	.	.
5.683	9.0631	23.25	Q	V	.	.	.	.
5.700	9.0951	23.27	Q	V	.	.	.	.
5.717	9.1272	23.28	Q	V	.	.	.	.
5.733	9.1593	23.30	Q	V	.	.	.	.
5.750	9.1914	23.31	Q	V	.	.	.	.
5.767	9.2235	23.33	Q	V	.	.	.	.
5.783	9.2557	23.36	Q	V	.	.	.	.
5.800	9.2879	23.39	Q	V	.	.	.	.
5.817	9.3202	23.43	Q	V	.	.	.	.
5.833	9.3525	23.46	Q	V	.	.	.	.
5.850	9.3848	23.49	Q	V	.	.	.	.
5.867	9.4172	23.52	Q	V	.	.	.	.
5.883	9.4497	23.55	Q	V	.	.	.	.
5.900	9.4822	23.59	Q	V	.	.	.	.
5.917	9.5147	23.62	Q	V	.	.	.	.
5.933	9.5473	23.65	Q	V	.	.	.	.
5.950	9.5799	23.68	Q	V	.	.	.	.
5.967	9.6126	23.71	Q	V	.	.	.	.
5.983	9.6453	23.74	Q	V	.	.	.	.
6.000	9.6780	23.77	Q	V	.	.	.	.
6.017	9.7108	23.79	Q	V	.	.	.	.
6.033	9.7436	23.81	Q	V	.	.	.	.
6.050	9.7764	23.82	Q	V	.	.	.	.
6.067	9.8092	23.84	Q	V	.	.	.	.
6.083	9.8421	23.86	Q	V	.	.	.	.
6.100	9.8750	23.87	Q	V	.	.	.	.
6.117	9.9079	23.89	Q	V	.	.	.	.
6.133	9.9408	23.91	Q	V	.	.	.	.
6.150	9.9737	23.92	Q	V	.	.	.	.
6.167	10.0067	23.94	Q	V	.	.	.	.
6.183	10.0397	23.95	Q	V	.	.	.	.
6.200	10.0727	23.97	Q	V	.	.	.	.
6.217	10.1058	23.99	Q	V	.	.	.	.
6.233	10.1388	24.01	Q	V	.	.	.	.
6.250	10.1720	24.04	Q	V	.	.	.	.
6.267	10.2051	24.08	Q	V	.	.	.	.
6.283	10.2383	24.11	Q	V	.	.	.	.
6.300	10.2716	24.15	Q	V	.	.	.	.
6.317	10.3049	24.18	Q	V	.	.	.	.
6.333	10.3382	24.21	Q	V	.	.	.	.
6.350	10.3716	24.25	Q	V	.	.	.	.
6.367	10.4051	24.28	Q	V	.	.	.	.
6.383	10.4386	24.32	.Q	V	.	.	.	.
6.400	10.4721	24.35	.Q	V	.	.	.	.
6.417	10.5057	24.39	.Q	V	.	.	.	.
6.433	10.5394	24.42	.Q	V	.	.	.	.
6.450	10.5730	24.46	.Q	V	.	.	.	.
6.467	10.6068	24.48	.Q	V	.	.	.	.
6.483	10.6405	24.50	.Q	V	.	.	.	.
6.500	10.6743	24.52	.Q	V	.	.	.	.
6.517	10.7081	24.54	.Q	V	.	.	.	.
6.533	10.7419	24.56	.Q	V	.	.	.	.
6.550	10.7758	24.57	.Q	V	.	.	.	.

6.567	10.8097	24.59	.Q	V	.	.	.	.
6.583	10.8436	24.61	.Q	V	.	.	.	.
6.600	10.8775	24.63	.Q	V	.	.	.	.
6.617	10.9114	24.65	.Q	V	.	.	.	.
6.633	10.9454	24.66	.Q	V	.	.	.	.
6.650	10.9794	24.68	.Q	V	.	.	.	.
6.667	11.0134	24.70	.Q	V	.	.	.	.
6.683	11.0475	24.72	.Q	V	.	.	.	.
6.700	11.0815	24.74	.Q	V	.	.	.	.
6.717	11.1157	24.78	.Q	V	.	.	.	.
6.733	11.1499	24.82	.Q	V	.	.	.	.
6.750	11.1841	24.85	.Q	V	.	.	.	.
6.767	11.2184	24.89	.Q	V	.	.	.	.
6.783	11.2527	24.93	.Q	V	.	.	.	.
6.800	11.2871	24.97	.Q	V	.	.	.	.
6.817	11.3215	25.00	.Q	V	.	.	.	.
6.833	11.3560	25.04	.Q	V	.	.	.	.
6.850	11.3906	25.08	.Q	V	.	.	.	.
6.867	11.4252	25.11	.Q	V	.	.	.	.
6.883	11.4598	25.15	.Q	V	.	.	.	.
6.900	11.4945	25.19	.Q	V	.	.	.	.
6.917	11.5292	25.23	.Q	V	.	.	.	.
6.933	11.5640	25.26	.Q	V	.	.	.	.
6.950	11.5988	25.28	.Q	V	.	.	.	.
6.967	11.6337	25.30	.Q	V	.	.	.	.
6.983	11.6686	25.31	.Q	V	.	.	.	.
7.000	11.7035	25.33	.Q	V	.	.	.	.
7.017	11.7384	25.35	.Q	V	.	.	.	.
7.033	11.7733	25.37	.Q	V	.	.	.	.
7.050	11.8083	25.39	.Q	V	.	.	.	.
7.067	11.8433	25.41	.Q	V	.	.	.	.
7.083	11.8783	25.43	.Q	V	.	.	.	.
7.100	11.9134	25.45	.Q	V	.	.	.	.
7.117	11.9485	25.47	.Q	V	.	.	.	.
7.133	11.9836	25.49	.Q	V	.	.	.	.
7.150	12.0187	25.51	.Q	V	.	.	.	.
7.167	12.0539	25.54	.Q	V	.	.	.	.
7.183	12.0891	25.58	.Q	V	.	.	.	.
7.200	12.1244	25.62	.Q	V	.	.	.	.
7.217	12.1597	25.66	.Q	V	.	.	.	.
7.233	12.1951	25.70	.Q	V	.	.	.	.
7.250	12.2306	25.74	.Q	V	.	.	.	.
7.267	12.2661	25.78	.Q	V	.	.	.	.
7.283	12.3016	25.82	.Q	V	.	.	.	.
7.300	12.3373	25.86	.Q	V	.	.	.	.
7.317	12.3729	25.90	.Q	V	.	.	.	.
7.333	12.4087	25.94	.Q	V	.	.	.	.
7.350	12.4444	25.98	.Q	V	.	.	.	.
7.367	12.4803	26.02	.Q	V	.	.	.	.
7.383	12.5162	26.06	.Q	V	.	.	.	.
7.400	12.5521	26.09	.Q	V	.	.	.	.
7.417	12.5881	26.11	.Q	V	.	.	.	.
7.433	12.6241	26.14	.Q	V	.	.	.	.
7.450	12.6601	26.16	.Q	V	.	.	.	.
7.467	12.6962	26.18	.Q	V	.	.	.	.
7.483	12.7323	26.20	.Q	V	.	.	.	.
7.500	12.7684	26.22	.Q	V	.	.	.	.
7.517	12.8045	26.24	.Q	V	.	.	.	.

7.533	12.8407	26.26	.Q	V	.	.	.	.
7.550	12.8769	26.28	.Q	V	.	.	.	.
7.567	12.9131	26.30	.Q	V	.	.	.	.
7.583	12.9494	26.33	.Q	V	.	.	.	.
7.600	12.9857	26.35	.Q	V	.	.	.	.
7.617	13.0220	26.37	.Q	V	.	.	.	.
7.633	13.0584	26.40	.Q	V	.	.	.	.
7.650	13.0948	26.44	.Q	V	.	.	.	.
7.667	13.1313	26.49	.Q	V	.	.	.	.
7.683	13.1678	26.53	.Q	V	.	.	.	.
7.700	13.2044	26.57	.Q	V	.	.	.	.
7.717	13.2411	26.62	.Q	V	.	.	.	.
7.733	13.2778	26.66	.Q	V	.	.	.	.
7.750	13.3146	26.71	.Q	V	.	.	.	.
7.767	13.3514	26.75	.Q	V	.	.	.	.
7.783	13.3883	26.79	.Q	V	.	.	.	.
7.800	13.4253	26.84	.Q	V	.	.	.	.
7.817	13.4623	26.88	.Q	V	.	.	.	.
7.833	13.4994	26.93	.Q	V	.	.	.	.
7.850	13.5366	26.97	.Q	V	.	.	.	.
7.867	13.5738	27.01	.Q	V	.	.	.	.
7.883	13.6110	27.03	.Q	V	.	.	.	.
7.900	13.6483	27.05	.Q	V	.	.	.	.
7.917	13.6856	27.07	.Q	V	.	.	.	.
7.933	13.7229	27.10	.Q	V	.	.	.	.
7.950	13.7602	27.12	.Q	V	.	.	.	.
7.967	13.7976	27.14	.Q	V	.	.	.	.
7.983	13.8351	27.17	.Q	V	.	.	.	.
8.000	13.8725	27.19	.Q	V	.	.	.	.
8.017	13.9100	27.21	.Q	V	.	.	.	.
8.033	13.9475	27.24	.Q	V	.	.	.	.
8.050	13.9851	27.26	.Q	V	.	.	.	.
8.067	14.0226	27.28	.Q	V	.	.	.	.
8.083	14.0602	27.31	.Q	V	.	.	.	.
8.100	14.0979	27.34	.Q	V	.	.	.	.
8.117	14.1356	27.39	.Q	V	.	.	.	.
8.133	14.1734	27.44	.Q	V	.	.	.	.
8.150	14.2113	27.49	.Q	V	.	.	.	.
8.167	14.2492	27.53	.Q	V	.	.	.	.
8.183	14.2872	27.58	.Q	V	.	.	.	.
8.200	14.3253	27.63	.Q	V	.	.	.	.
8.217	14.3634	27.68	.Q	V	.	.	.	.
8.233	14.4016	27.73	.Q	V	.	.	.	.
8.250	14.4398	27.78	.Q	V	.	.	.	.
8.267	14.4782	27.82	.Q	V	.	.	.	.
8.283	14.5166	27.87	.Q	V	.	.	.	.
8.300	14.5550	27.92	.Q	V	.	.	.	.
8.317	14.5935	27.97	.Q	V	.	.	.	.
8.333	14.6321	28.01	.Q	V	.	.	.	.
8.350	14.6707	28.03	.Q	V	.	.	.	.
8.367	14.7094	28.06	.Q	V	.	.	.	.
8.383	14.7481	28.08	.Q	V	.	.	.	.
8.400	14.7868	28.11	.Q	V	.	.	.	.
8.417	14.8255	28.13	.Q	V	.	.	.	.
8.433	14.8643	28.16	.Q	V	.	.	.	.
8.450	14.9031	28.18	.Q	V	.	.	.	.
8.467	14.9420	28.21	.Q	V	.	.	.	.
8.483	14.9809	28.23	.Q	V	.	.	.	.

8.500	15.0198	28.26	.Q	V	.	.	.	.
8.517	15.0588	28.29	.Q	V	.	.	.	.
8.533	15.0978	28.31	.Q	V	.	.	.	.
8.550	15.1368	28.34	.Q	V	.	.	.	.
8.567	15.1759	28.38	.Q	V	.	.	.	.
8.583	15.2150	28.43	.Q	V	.	.	.	.
8.600	15.2543	28.48	.Q	V	.	.	.	.
8.617	15.2936	28.54	.Q	V	.	.	.	.
8.633	15.3330	28.59	.Q	V	.	.	.	.
8.650	15.3724	28.64	.Q	V	.	.	.	.
8.667	15.4119	28.70	.Q	V	.	.	.	.
8.683	15.4515	28.75	.Q	V	.	.	.	.
8.700	15.4912	28.80	.Q	V	.	.	.	.
8.717	15.5310	28.86	.Q	V	.	.	.	.
8.733	15.5708	28.91	.Q	V	.	.	.	.
8.750	15.6107	28.96	.Q	V	.	.	.	.
8.767	15.6506	29.02	.Q	V	.	.	.	.
8.783	15.6907	29.07	.Q	V	.	.	.	.
8.800	15.7308	29.11	.Q	V	.	.	.	.
8.817	15.7709	29.14	.Q	V	.	.	.	.
8.833	15.8111	29.17	.Q	V	.	.	.	.
8.850	15.8513	29.19	.Q	V	.	.	.	.
8.867	15.8915	29.22	.Q	V	.	.	.	.
8.883	15.9318	29.25	.Q	V	.	.	.	.
8.900	15.9722	29.28	.Q	V	.	.	.	.
8.917	16.0125	29.31	.Q	V	.	.	.	.
8.933	16.0529	29.33	.Q	V	.	.	.	.
8.950	16.0934	29.36	.Q	V	.	.	.	.
8.967	16.1338	29.39	.Q	V	.	.	.	.
8.983	16.1744	29.42	.Q	V	.	.	.	.
9.000	16.2149	29.45	.Q	V	.	.	.	.
9.017	16.2555	29.47	.Q	V	.	.	.	.
9.033	16.2962	29.52	.Q	V	.	.	.	.
9.050	16.3369	29.58	.Q	V	.	.	.	.
9.067	16.3777	29.64	.Q	V	.	.	.	.
9.083	16.4187	29.70	.Q	V	.	.	.	.
9.100	16.4596	29.76	.Q	V	.	.	.	.
9.117	16.5007	29.82	.Q	V	.	.	.	.
9.133	16.5419	29.88	.Q	V	.	.	.	.
9.150	16.5831	29.93	.Q	V	.	.	.	.
9.167	16.6244	29.99	.Q	V	.	.	.	.
9.183	16.6658	30.05	.Q	V	.	.	.	.
9.200	16.7073	30.11	.Q	V	.	.	.	.
9.217	16.7488	30.17	.Q	V	.	.	.	.
9.233	16.7905	30.23	.Q	V	.	.	.	.
9.250	16.8322	30.29	.Q	V	.	.	.	.
9.267	16.8740	30.33	.Q	V	.	.	.	.
9.283	16.9158	30.36	.Q	V	.	.	.	.
9.300	16.9577	30.39	.Q	V	.	.	.	.
9.317	16.9996	30.42	.Q	V	.	.	.	.
9.333	17.0415	30.46	.Q	V	.	.	.	.
9.350	17.0835	30.49	.Q	V	.	.	.	.
9.367	17.1255	30.52	.Q	V	.	.	.	.
9.383	17.1676	30.55	.Q	V	.	.	.	.
9.400	17.2097	30.58	.Q	V	.	.	.	.
9.417	17.2519	30.61	.Q	V	.	.	.	.
9.433	17.2941	30.64	.Q	V	.	.	.	.
9.450	17.3364	30.67	.Q	V	.	.	.	.

9.467	17.3787	30.71	.Q	V	.	.	.	.
9.483	17.4210	30.74	.Q	V	.	.	.	.
9.500	17.4634	30.79	.Q	V	.	.	.	.
9.517	17.5059	30.86	.Q	V	.	.	.	.
9.533	17.5485	30.92	.Q	V	.	.	.	.
9.550	17.5912	30.99	.Q	V	.	.	.	.
9.567	17.6340	31.06	.Q	V	.	.	.	.
9.583	17.6769	31.12	.Q	V	.	.	.	.
9.600	17.7198	31.19	.Q	V	.	.	.	.
9.617	17.7629	31.25	.Q	V	.	.	.	.
9.633	17.8060	31.32	.Q	V	.	.	.	.
9.650	17.8492	31.39	.Q	V	.	.	.	.
9.667	17.8926	31.45	.Q	V	.	.	.	.
9.683	17.9360	31.52	.Q	V	.	.	.	.
9.700	17.9795	31.58	.Q	V	.	.	.	.
9.717	18.0231	31.65	.Q	V	.	.	.	.
9.733	18.0667	31.70	.Q	V	.	.	.	.
9.750	18.1104	31.73	.Q	V	.	.	.	.
9.767	18.1542	31.77	.Q	V	.	.	.	.
9.783	18.1980	31.80	.Q	V	.	.	.	.
9.800	18.2418	31.84	.Q	V	.	.	.	.
9.817	18.2857	31.87	.Q	V	.	.	.	.
9.833	18.3297	31.91	.Q	V	.	.	.	.
9.850	18.3737	31.94	.Q	V	.	.	.	.
9.867	18.4177	31.98	.Q	V	.	.	.	.
9.883	18.4618	32.01	.Q	V	.	.	.	.
9.900	18.5060	32.05	.Q	V	.	.	.	.
9.917	18.5501	32.08	.Q	V	.	.	.	.
9.933	18.5944	32.12	.Q	V	.	.	.	.
9.950	18.6387	32.15	.Q	V	.	.	.	.
9.967	18.6830	32.21	.Q	V	.	.	.	.
9.983	18.7275	32.29	.Q	V	.	.	.	.
10.000	18.7721	32.36	.Q	V	.	.	.	.
10.017	18.8168	32.44	.Q	V	.	.	.	.
10.033	18.8616	32.51	.Q	V	.	.	.	.
10.050	18.9064	32.59	.Q	V	.	.	.	.
10.067	18.9514	32.66	.Q	V	.	.	.	.
10.083	18.9965	32.74	.Q	V	.	.	.	.
10.100	19.0417	32.81	.Q	V	.	.	.	.
10.117	19.0870	32.89	.Q	V	.	.	.	.
10.133	19.1324	32.96	.Q	V	.	.	.	.
10.150	19.1779	33.03	.Q	V	.	.	.	.
10.167	19.2235	33.11	.Q	V	.	.	.	.
10.183	19.2692	33.18	.Q	V	.	.	.	.
10.200	19.3150	33.23	.Q	V	.	.	.	.
10.217	19.3608	33.27	.Q	V	.	.	.	.
10.233	19.4067	33.31	.Q	V	.	.	.	.
10.250	19.4526	33.35	.Q	V	.	.	.	.
10.267	19.4986	33.39	.Q	V	.	.	.	.
10.283	19.5447	33.43	.Q	V	.	.	.	.
10.300	19.5908	33.47	.Q	V	.	.	.	.
10.317	19.6369	33.51	.Q	V	.	.	.	.
10.333	19.6832	33.55	.Q	V	.	.	.	.
10.350	19.7294	33.59	.Q	V	.	.	.	.
10.367	19.7757	33.63	.Q	V	.	.	.	.
10.383	19.8221	33.67	.Q	V	.	.	.	.
10.400	19.8685	33.71	.Q	V	.	.	.	.
10.417	19.9150	33.75	.Q	V	.	.	.	.

10.433	19.9616	33.82	.Q	V	.	.	.	.
10.450	20.0083	33.91	.Q	V	.	.	.	.
10.467	20.0552	33.99	.Q	V	.	.	.	.
10.483	20.1021	34.08	.Q	V	.	.	.	.
10.500	20.1491	34.16	.Q	V	.	.	.	.
10.517	20.1963	34.25	.Q	V	.	.	.	.
10.533	20.2436	34.33	.Q	V	.	.	.	.
10.550	20.2910	34.42	.Q	V	.	.	.	.
10.567	20.3385	34.50	.Q	V	.	.	.	.
10.583	20.3862	34.59	.Q	V	.	.	.	.
10.600	20.4339	34.67	.Q	V	.	.	.	.
10.617	20.4818	34.75	.Q	V	.	.	.	.
10.633	20.5298	34.84	.Q	V	.	.	.	.
10.650	20.5779	34.92	.Q	V	.	.	.	.
10.667	20.6261	34.98	.Q	V	.	.	.	.
10.683	20.6743	35.02	.Q	V	.	.	.	.
10.700	20.7226	35.07	.Q	V	.	.	.	.
10.717	20.7710	35.11	.Q	V	.	.	.	.
10.733	20.8194	35.16	.Q	V	.	.	.	.
10.750	20.8679	35.20	.Q	V	.	.	.	.
10.767	20.9164	35.25	.Q	V	.	.	.	.
10.783	20.9651	35.29	.Q	V	.	.	.	.
10.800	21.0137	35.34	.Q	V	.	.	.	.
10.817	21.0625	35.38	.Q	V	.	.	.	.
10.833	21.1113	35.43	.Q	V	.	.	.	.
10.850	21.1601	35.48	.Q	V	.	.	.	.
10.867	21.2091	35.52	.Q	V	.	.	.	.
10.883	21.2581	35.57	.Q	V	.	.	.	.
10.900	21.3072	35.66	.Q	V	.	.	.	.
10.917	21.3564	35.75	.Q	V	.	.	.	.
10.933	21.4058	35.85	.Q	V	.	.	.	.
10.950	21.4553	35.95	.Q	V	.	.	.	.
10.967	21.5050	36.05	.Q	V	.	.	.	.
10.983	21.5547	36.14	.Q	V	.	.	.	.
11.000	21.6047	36.24	.Q	V	.	.	.	.
11.017	21.6547	36.34	.Q	V	.	.	.	.
11.033	21.7049	36.44	.Q	V	.	.	.	.
11.050	21.7552	36.53	.Q	V	.	.	.	.
11.067	21.8057	36.63	.Q	V	.	.	.	.
11.083	21.8563	36.73	.Q	V	.	.	.	.
11.100	21.9070	36.83	.Q	V	.	.	.	.
11.117	21.9578	36.92	.Q	V	.	.	.	.
11.133	22.0088	36.98	.Q	V	.	.	.	.
11.150	22.0598	37.03	.Q	V	.	.	.	.
11.167	22.1109	37.09	.Q	V	.	.	.	.
11.183	22.1620	37.14	.Q	V	.	.	.	.
11.200	22.2133	37.19	.Q	V	.	.	.	.
11.217	22.2646	37.24	.Q	V	.	.	.	.
11.233	22.3159	37.30	.Q	V	.	.	.	.
11.250	22.3674	37.35	.Q	V	.	.	.	.
11.267	22.4189	37.40	.Q	V	.	.	.	.
11.283	22.4705	37.45	.Q	V	.	.	.	.
11.300	22.5221	37.51	.Q	V	.	.	.	.
11.317	22.5739	37.56	.Q	V	.	.	.	.
11.333	22.6257	37.61	.Q	V	.	.	.	.
11.350	22.6776	37.67	.Q	V	.	.	.	.
11.367	22.7296	37.77	.Q	V	.	.	.	.
11.383	22.7818	37.88	.Q	V	.	.	.	.

11.400	22.8341	38.00	.Q	V .	.	.	.
11.417	22.8866	38.11	.Q	V .	.	.	.
11.433	22.9393	38.23	.Q	V .	.	.	.
11.450	22.9921	38.34	.Q	V.	.	.	.
11.467	23.0450	38.45	.Q	V.	.	.	.
11.483	23.0982	38.57	.Q	V.	.	.	.
11.500	23.1514	38.68	.Q	V.	.	.	.
11.517	23.2049	38.79	.Q	V.	.	.	.
11.533	23.2585	38.91	.Q	V.	.	.	.
11.550	23.3122	39.02	.Q	V.	.	.	.
11.567	23.3661	39.13	.Q	V.	.	.	.
11.583	23.4202	39.24	.Q	V.	.	.	.
11.600	23.4743	39.31	.Q	V.	.	.	.
11.617	23.5285	39.37	.Q	V.	.	.	.
11.633	23.5829	39.44	.Q	V.	.	.	.
11.650	23.6373	39.50	.Q	V.	.	.	.
11.667	23.6918	39.56	.Q	V.	.	.	.
11.683	23.7463	39.62	.Q	V.	.	.	.
11.700	23.8010	39.68	.Q	V.	.	.	.
11.717	23.8557	39.74	.Q	V.	.	.	.
11.733	23.9106	39.81	.Q	V.	.	.	.
11.750	23.9655	39.87	.Q	V.	.	.	.
11.767	24.0205	39.93	.Q	V.	.	.	.
11.783	24.0756	39.99	.Q	V.	.	.	.
11.800	24.1307	40.05	.Q	V.	.	.	.
11.817	24.1860	40.12	.Q	V.	.	.	.
11.833	24.2414	40.25	.Q	V.	.	.	.
11.850	24.2971	40.38	.Q	V.	.	.	.
11.867	24.3529	40.51	.Q	V.	.	.	.
11.883	24.4088	40.65	.Q	V.	.	.	.
11.900	24.4650	40.78	.Q	V.	.	.	.
11.917	24.5214	40.92	.Q	V.	.	.	.
11.933	24.5779	41.05	.Q	V.	.	.	.
11.950	24.6347	41.19	.Q	V.	.	.	.
11.967	24.6916	41.32	.Q	V.	.	.	.
11.983	24.7487	41.46	.Q	V.	.	.	.
12.000	24.8060	41.59	.Q	V.	.	.	.
12.017	24.8634	41.72	.Q	V.	.	.	.
12.033	24.9211	41.86	.Q	V.	.	.	.
12.050	24.9790	42.06	.Q	V.	.	.	.
12.067	25.0378	42.68	.Q	V.	.	.	.
12.083	25.0976	43.37	.Q	V.	.	.	.
12.100	25.1583	44.07	.Q	V.	.	.	.
12.117	25.2199	44.76	.Q	V.	.	.	.
12.133	25.2825	45.45	.Q	V.	.	.	.
12.150	25.3461	46.14	.Q	V.	.	.	.
12.167	25.4106	46.84	.Q	V.	.	.	.
12.183	25.4761	47.53	.Q	V.	.	.	.
12.200	25.5425	48.22	.Q	V	.	.	.
12.217	25.6099	48.92	. Q	V	.	.	.
12.233	25.6782	49.61	. Q	V	.	.	.
12.250	25.7475	50.30	. Q	V	.	.	.
12.267	25.8177	50.99	. Q	V	.	.	.
12.283	25.8888	51.64	. Q	V	.	.	.
12.300	25.9605	52.04	. Q	V	.	.	.
12.317	26.0327	52.39	. Q	V	.	.	.
12.333	26.1054	52.75	. Q	V	.	.	.
12.350	26.1785	53.11	. Q	V	.	.	.

12.367	26.2521	53.47	. Q	V	.	.	.
12.383	26.3263	53.82	. Q	V	.	.	.
12.400	26.4009	54.18	. Q	V	.	.	.
12.417	26.4760	54.54	. Q	V	.	.	.
12.433	26.5516	54.90	. Q	V	.	.	.
12.450	26.6278	55.25	. Q	V	.	.	.
12.467	26.7043	55.61	. Q	V	.	.	.
12.483	26.7814	55.97	. Q	V	.	.	.
12.500	26.8590	56.32	. Q	V	.	.	.
12.517	26.9370	56.64	. Q	V	.	.	.
12.533	27.0152	56.76	. Q	V	.	.	.
12.550	27.0935	56.86	. Q	V	.	.	.
12.567	27.1720	56.95	. Q	V	.	.	.
12.583	27.2506	57.05	. Q	V	.	.	.
12.600	27.3293	57.14	. Q	V	.	.	.
12.617	27.4081	57.24	. Q	V	.	.	.
12.633	27.4871	57.33	. Q	V	.	.	.
12.650	27.5662	57.43	. Q	V	.	.	.
12.667	27.6454	57.52	. Q	V	.	.	.
12.683	27.7248	57.62	. Q	V	.	.	.
12.700	27.8043	57.71	. Q	V	.	.	.
12.717	27.8839	57.81	. Q	V	.	.	.
12.733	27.9637	57.90	. Q	V	.	.	.
12.750	28.0436	58.02	. Q	V	.	.	.
12.767	28.1238	58.22	. Q	.V	.	.	.
12.783	28.2042	58.43	. Q	.V	.	.	.
12.800	28.2850	58.64	. Q	.V	.	.	.
12.817	28.3661	58.85	. Q	.V	.	.	.
12.833	28.4474	59.06	. Q	.V	.	.	.
12.850	28.5291	59.27	. Q	.V	.	.	.
12.867	28.6110	59.48	. Q	.V	.	.	.
12.883	28.6932	59.69	. Q	.V	.	.	.
12.900	28.7757	59.90	. Q	.V	.	.	.
12.917	28.8585	60.11	. Q	.V	.	.	.
12.933	28.9416	60.32	. Q	.V	.	.	.
12.950	29.0250	60.53	. Q	.V	.	.	.
12.967	29.1087	60.74	. Q	.V	.	.	.
12.983	29.1926	60.94	. Q	.V	.	.	.
13.000	29.2767	61.06	. Q	.V	.	.	.
13.017	29.3610	61.18	. Q	.V	.	.	.
13.033	29.4454	61.30	. Q	.V	.	.	.
13.050	29.5300	61.41	. Q	.V	.	.	.
13.067	29.6147	61.53	. Q	.V	.	.	.
13.083	29.6997	61.65	. Q	.V	.	.	.
13.100	29.7847	61.77	. Q	.V	.	.	.
13.117	29.8700	61.88	. Q	.V	.	.	.
13.133	29.9554	62.00	. Q	.V	.	.	.
13.150	30.0409	62.12	. Q	.V	.	.	.
13.167	30.1267	62.24	. Q	.V	.	.	.
13.183	30.2126	62.35	. Q	.V	.	.	.
13.200	30.2986	62.47	. Q	.V	.	.	.
13.217	30.3849	62.62	. Q	.V	.	.	.
13.233	30.4715	62.88	. Q	.V	.	.	.
13.250	30.5584	63.14	. Q	.V	.	.	.
13.267	30.6458	63.41	. Q	. V	.	.	.
13.283	30.7335	63.67	. Q	. V	.	.	.
13.300	30.8215	63.94	. Q	. V	.	.	.
13.317	30.9100	64.20	. Q	. V	.	.	.

13.333	30.9988	64.47	. Q	. V	.	.	.	
13.350	31.0879	64.73	. Q	. V	.	.	.	
13.367	31.1775	65.00	. Q	. V	.	.	.	
13.383	31.2674	65.26	. Q	. V	.	.	.	
13.400	31.3576	65.53	. Q	. V	.	.	.	
13.417	31.4483	65.79	. Q	. V	.	.	.	
13.433	31.5392	66.06	. Q	. V	.	.	.	
13.450	31.6306	66.30	. Q	. V	.	.	.	
13.467	31.7221	66.46	. Q	. V	.	.	.	
13.483	31.8138	66.61	. Q	. V	.	.	.	
13.500	31.9058	66.76	. Q	. V	.	.	.	
13.517	31.9980	66.91	. Q	. V	.	.	.	
13.533	32.0903	67.06	. Q	. V	.	.	.	
13.550	32.1829	67.21	. Q	. V	.	.	.	
13.567	32.2757	67.36	. Q	. V	.	.	.	
13.583	32.3687	67.51	. Q	. V	.	.	.	
13.600	32.4619	67.66	. Q	. V	.	.	.	
13.617	32.5553	67.81	. Q	. V	.	.	.	
13.633	32.6489	67.96	. Q	. V	.	.	.	
13.650	32.7427	68.11	. Q	. V	.	.	.	
13.667	32.8367	68.27	. Q	. V	.	.	.	
13.683	32.9310	68.46	. Q	. V	.	.	.	
13.700	33.0258	68.80	. Q	. V	.	.	.	
13.717	33.1211	69.15	. Q	. V	.	.	.	
13.733	33.2168	69.50	. Q	. V	.	.	.	
13.750	33.3130	69.85	. Q	. V	.	.	.	
13.767	33.4097	70.20	. Q	. V	.	.	.	
13.783	33.5069	70.54	. Q	. V	.	.	.	
13.800	33.6045	70.89	. Q	. V	.	.	.	
13.817	33.7026	71.24	. Q	. V	.	.	.	
13.833	33.8013	71.59	. Q	. V	.	.	.	
13.850	33.9003	71.94	. Q	. V	.	.	.	
13.867	33.9999	72.29	. Q	. V	.	.	.	
13.883	34.1000	72.63	. Q	. V	.	.	.	
13.900	34.2005	72.98	. Q	. V	.	.	.	
13.917	34.3014	73.29	. Q	. V	.	.	.	
13.933	34.4027	73.50	. Q	. V	.	.	.	
13.950	34.5042	73.70	. Q	. V	.	.	.	
13.967	34.6060	73.91	. Q	. V	.	.	.	
13.983	34.7081	74.11	. Q	. V	.	.	.	
14.000	34.8104	74.31	. Q	. V	.	.	.	
14.017	34.9131	74.52	. Q	. V	.	.	.	
14.033	35.0160	74.72	. Q	. V	.	.	.	
14.050	35.1192	74.92	. Q	. V	.	.	.	
14.067	35.2227	75.13	. Q	. V	.	.	.	
14.083	35.3264	75.33	. Q	. V	.	.	.	
14.100	35.4305	75.53	. Q	. V	.	.	.	
14.117	35.5348	75.73	. Q	. V	.	.	.	
14.133	35.6394	75.94	. Q	. V	.	.	.	
14.150	35.7444	76.22	. Q	. V	.	.	.	
14.167	35.8500	76.70	. Q	. V	.	.	.	
14.183	35.9564	77.19	. Q	. V	.	.	.	
14.200	36.0634	77.68	. Q	. V	.	.	.	
14.217	36.1710	78.17	. Q	. V	.	.	.	
14.233	36.2794	78.66	. Q	. V	.	.	.	
14.250	36.3884	79.15	. Q	. V	.	.	.	
14.267	36.4981	79.64	. Q	. V	.	.	.	
14.283	36.6085	80.13	. Q	. V	.	.	.	

14.300	36.7195	80.61	. Q	. V	.	.	.	
14.317	36.8312	81.10	. Q	. V	.	.	.	
14.333	36.9436	81.59	. Q	. V	.	.	.	
14.350	37.0567	82.08	. Q	. V	.	.	.	
14.367	37.1704	82.57	. Q	. V	.	.	.	
14.383	37.2847	83.00	. Q	. V	.	.	.	
14.400	37.3994	83.30	. Q	. V	.	.	.	
14.417	37.5146	83.59	. Q	. V	.	.	.	
14.433	37.6301	83.88	. Q	. V	.	.	.	
14.450	37.7461	84.18	. Q	. V	.	.	.	
14.467	37.8624	84.47	. Q	. V	.	.	.	
14.483	37.9792	84.77	. Q	. V	.	.	.	
14.500	38.0964	85.06	. Q	. V	.	.	.	
14.517	38.2139	85.36	. Q	. V	.	.	.	
14.533	38.3319	85.65	. Q	. V	.	.	.	
14.550	38.4503	85.94	. Q	. V	.	.	.	
14.567	38.5691	86.24	. Q	. V	.	.	.	
14.583	38.6883	86.53	. Q	. V	.	.	.	
14.600	38.8078	86.83	. Q	. V	.	.	.	
14.617	38.9281	87.27	. Q	. V	.	.	.	
14.633	39.0493	88.00	. Q	. V	.	.	.	
14.650	39.1715	88.75	. Q	. V	.	.	.	
14.667	39.2948	89.49	. Q	. V	.	.	.	
14.683	39.4191	90.23	. Q	. V	.	.	.	
14.700	39.5444	90.97	. Q	. V	.	.	.	
14.717	39.6707	91.71	. Q	. V	.	.	.	
14.733	39.7980	92.45	. Q	. V	.	.	.	
14.750	39.9264	93.19	. Q	. V	.	.	.	
14.767	40.0558	93.93	. Q	. V	.	.	.	
14.783	40.1862	94.67	. Q	. V	.	.	.	
14.800	40.3176	95.42	. Q	. V	.	.	.	
14.817	40.4501	96.16	. Q	. V	.	.	.	
14.833	40.5835	96.90	. Q	. V	.	.	.	
14.850	40.7179	97.55	. Q	. V	.	.	.	
14.867	40.8529	98.03	. Q	. V	.	.	.	
14.883	40.9886	98.51	. Q	. V	.	.	.	
14.900	41.1249	98.99	. Q	. V	.	.	.	
14.917	41.2620	99.47	. Q	. V	.	.	.	
14.933	41.3996	99.95	. Q	. V	.	.	.	
14.950	41.5380	100.43	. Q	. V	.	.	.	
14.967	41.6770	100.91	. Q	. V	.	.	.	
14.983	41.8166	101.39	. Q	. V	.	.	.	
15.000	41.9569	101.87	. Q	. V	.	.	.	
15.017	42.0979	102.35	. Q	. V	.	.	.	
15.033	42.2395	102.83	. Q	. V	.	.	.	
15.050	42.3818	103.31	. Q	. V	.	.	.	
15.067	42.5248	103.79	. Q	. V	.	.	.	
15.083	42.6689	104.60	. Q	. V	.	.	.	
15.100	42.8148	105.94	. Q	. V	.	.	.	
15.117	42.9626	107.28	. Q	. V	.	.	.	
15.133	43.1122	108.61	. Q	. V	.	.	.	
15.150	43.2636	109.95	. Q	. V	.	.	.	
15.167	43.4169	111.29	. Q	. V	.	.	.	
15.183	43.5721	112.63	. Q	. V	.	.	.	
15.200	43.7291	113.97	. Q	. V	.	.	.	
15.217	43.8879	115.31	. Q	. V	.	.	.	
15.233	44.0486	116.65	. Q	. V	.	.	.	
15.250	44.2111	117.99	. Q	. V	.	.	.	

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15.267    44.3754   119.33  .  Q     .      V  .         .         .
15.283    44.5416   120.67  .  Q     .      V  .         .         .
15.300    44.7097   122.01  .   Q    .      V  .         .         .
15.317    44.8792   123.04  .   Q    .      V  .         .         .
15.333    45.0495   123.65  .   Q    .      V  .         .         .
15.350    45.2206   124.25  .   Q    .      V  .         .         .
15.367    45.3926   124.86  .   Q    .      V  .         .         .
15.383    45.5654   125.46  .   Q    .      V  .         .         .
15.400    45.7391   126.06  .   Q    .      V  .         .         .
15.417    45.9135   126.67  .   Q    .       V .         .         .
15.433    46.0888   127.27  .   Q    .       V .         .         .
15.450    46.2650   127.88  .   Q    .       V .         .         .
15.467    46.4420   128.48  .   Q    .       V .         .         .
15.483    46.6198   129.09  .   Q    .       V .         .         .
15.500    46.7984   129.69  .   Q    .       V .         .         .
15.517    46.9779   130.30  .   Q    .       V .         .         .
15.533    47.1582   130.90  .   Q    .       V .         .         .
15.550    47.3413   132.94  .   Q    .       V .         .         .
15.567    47.5297   136.79  .   Q    .       V .         .         .
15.583    47.7234   140.65  .   Q    .       V .         .         .
15.600    47.9225   144.51  .   Q    .       V .         .         .
15.617    48.1268   148.36  .    Q   .       V .         .         .
15.633    48.3365   152.22  .    Q   .       V .         .         .
15.650    48.5515   156.08  .    Q   .        V.         .         .
15.667    48.7718   159.93  .    Q   .        V.         .         .
15.683    48.9974   163.79  .    Q   .        V.         .         .
15.700    49.2283   167.65  .    Q   .        V.         .         .
15.717    49.4645   171.50  .     Q  .        V.         .         .
15.733    49.7061   175.36  .     Q  .        V.         .         .
15.750    49.9529   179.22  .     Q  .        V.         .         .
15.767    50.2051   183.07  .     Q  .        V.         .         .
15.783    50.4648   188.56  .     Q  .        V.         .         .
15.800    50.7346   195.89  .      Q .        V.         .         .
15.817    51.0146   203.22  .      Q .         V         .         .
15.833    51.3046   210.56  .      Q .         V         .         .
15.850    51.6047   217.89  .      Q .         V         .         .
15.867    51.9149   225.22  .       Q.         V         .         .
15.883    52.2352   232.55  .       Q.         V         .         .
15.900    52.5656   239.88  .       Q.         V         .         .
15.917    52.9062   247.21  .        Q         V         .         .
15.933    53.2568   254.54  .        Q         V         .         .
15.950    53.6175   261.87  .        Q         .V        .         .
15.967    53.9883   269.20  .        .Q        .V        .         .
15.983    54.3692   276.54  .        .Q        .V        .         .
16.000    54.7602   283.87  .        .Q        .V        .         .
16.017    55.1899   312.01  .        . Q       .V        .         .
16.033    55.6871   360.95  .        .   Q     .V        .         .
16.050    56.2517   409.90  .        .     Q   . V       .         .
16.067    56.8838   458.85  .        .       Q . V       .         .
16.083    57.5832   507.81  .        .         Q V       .         .
16.100    58.3501   556.75  .        .          . Q      .         .
16.117    59.1844   605.70  .        .          .  VQ    .         .
16.133    60.0861   654.65  .        .          .  V  Q  .         .
16.150    61.0553   703.60  .        .          .  V    Q .        .
16.167    62.0918   752.55  .        .          .   V     Q        .
16.183    63.1958   801.50  .        .          .   V     .  Q     .
16.200    64.3672   850.45  .        .          .    V    .    Q   .
16.217    65.6061   899.40  .        .          .    V    .      Q  .
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16.233    66.9440   971.35  .        .          .     V   .         Q
16.250    68.2384   939.73  .        .          .     V   .       Q .
16.267    69.4507   880.10  .        .          .      V  .     Q   .
16.283    70.5808   820.46  .        .          .      V  .  Q      .
16.300    71.6287   760.82  .        .          .       V .Q        .
16.317    72.5946   701.19  .        .          .       Q .         .
16.333    73.4782   641.55  .        .          .     Q V .         .
16.350    74.2798   581.91  .        .          .  Q     V.         .
16.367    74.9992   522.27  .        .          .Q       V.         .
16.383    75.6364   462.64  .        .         Q.        V.         .
16.400    76.1915   403.00  .        .      Q   .        V.         .
16.417    76.6644   343.36  .        .    Q     .         V         .
16.433    77.0553   283.73  .        .Q         .         V         .
16.450    77.3639   224.09  .       Q.          .         V         .
16.467    77.5906   164.55  .     Q     .       .         V         .
16.483    77.7795   137.18  .    Q      .       .         V         .
16.500    77.9659   135.32  .    Q      .       .         V         .
16.517    78.1498   133.47  .    Q      .       .         V         .
16.533    78.3310   131.62  .    Q      .       .         V         .
16.550    78.5098   129.76  .    Q      .       .         V         .
16.567    78.6860   127.91  .    Q      .       .         V         .
16.583    78.8596   126.06  .    Q      .       .         V         .
16.600    79.0307   124.21  .    Q      .       .         V         .
16.617    79.1992   122.35  .    Q      .       .         .V        .
16.633    79.3652   120.50  .  Q        .       .         .V        .
16.650    79.5286   118.65  .  Q        .       .         .V        .
16.667    79.6895   116.80  .  Q        .       .         .V        .
16.683    79.8478   114.94  .  Q        .       .         .V        .
16.700    80.0036   113.09  .  Q        .       .         .V        .
16.717    80.1571   111.46  .  Q        .       .         .V        .
16.733    80.3086   109.99  .  Q        .       .         .V        .
16.750    80.4581   108.52  .  Q        .       .         .V        .
16.767    80.6056   107.05  .  Q        .       .         .V        .
16.783    80.7510   105.58  .  Q        .       .         .V        .
16.800    80.8944   104.11  .  Q        .       .         .V        .
16.817    81.0358   102.64  .  Q        .       .         .V        .
16.833    81.1751   101.17  .  Q        .       .         .V        .
16.850    81.3125    99.70  .  Q        .       .         .V        .
16.867    81.4478    98.23  .  Q        .       .         .V        .
16.883    81.5810    96.76  . Q         .       .         .V        .
16.900    81.7123    95.29  . Q         .       .         . V       .
16.917    81.8415    93.81  . Q         .       .         . V       .
16.933    81.9687    92.35  . Q         .       .         . V       .
16.950    82.0944    91.23  . Q         .       .         . V       .
16.967    82.2188    90.34  . Q         .       .         . V       .
16.983    82.3420    89.45  . Q         .       .         . V       .
17.000    82.4640    88.55  . Q         .       .         . V       .
17.017    82.5847    87.66  . Q         .       .         . V       .
17.033    82.7042    86.77  . Q         .       .         . V       .
17.050    82.8225    85.88  . Q         .       .         . V       .
17.067    82.9396    84.98  . Q         .       .         . V       .
17.083    83.0554    84.09  . Q         .       .         . V       .
17.100    83.1700    83.20  . Q         .       .         . V       .
17.117    83.2834    82.30  . Q         .       .         . V       .
17.133    83.3955    81.41  . Q         .       .         . V       .
17.150    83.5064    80.52  . Q         .       .         . V       .
17.167    83.6161    79.63  . Q         .       .         . V       .
17.183    83.7248    78.91  . Q         .       .         . V       .
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17.200	83.8326	78.30	.	Q	.	.	.	V	.	
17.217	83.9396	77.68	.	Q	.	.	.	V	.	
17.233	84.0458	77.06	.	Q	.	.	.	V	.	
17.250	84.1511	76.45	.	Q	.	.	.	V	.	
17.267	84.2555	75.83	.	Q	.	.	.	V	.	
17.283	84.3591	75.21	.	Q	.	.	.	V	.	
17.300	84.4619	74.60	.	Q	.	.	.	V	.	
17.317	84.5638	73.98	.	Q	.	.	.	V	.	
17.333	84.6648	73.36	.	Q	.	.	.	V	.	
17.350	84.7650	72.75	.	Q	.	.	.	V	.	
17.367	84.8644	72.13	.	Q	.	.	.	V	.	
17.383	84.9629	71.51	.	Q	.	.	.	V	.	
17.400	85.0605	70.90	.	Q	.	.	.	V	.	
17.417	85.1575	70.39	.	Q	.	.	.	V	.	
17.433	85.2538	69.93	.	Q	.	.	.	V	.	
17.450	85.3495	69.48	.	Q	.	.	.	V	.	
17.467	85.4446	69.03	.	Q	.	.	.	V	.	
17.483	85.5391	68.57	.	Q	.	.	.	V	.	
17.500	85.6329	68.12	.	Q	.	.	.	V	.	
17.517	85.7261	67.66	.	Q	.	.	.	V	.	
17.533	85.8187	67.21	.	Q	.	.	.	V	.	
17.550	85.9106	66.75	.	Q	.	.	.	V	.	
17.567	86.0019	66.30	.	Q	.	.	.	V	.	
17.583	86.0926	65.84	.	Q	.	.	.	V	.	
17.600	86.1827	65.39	.	Q	.	.	.	V	.	
17.617	86.2721	64.94	.	Q	.	.	.	V	.	
17.633	86.3610	64.48	.	Q	.	.	.	V	.	
17.650	86.4492	64.10	.	Q	.	.	.	V	.	
17.667	86.5370	63.74	.	Q	.	.	.	V	.	
17.683	86.6244	63.39	.	Q	.	.	.	V	.	
17.700	86.7112	63.04	.	Q	.	.	.	V	.	
17.717	86.7975	62.68	.	Q	.	.	.	V	.	
17.733	86.8834	62.33	.	Q	.	.	.	V	.	
17.750	86.9688	61.98	.	Q	.	.	.	V	.	
17.767	87.0536	61.62	.	Q	.	.	.	V	.	
17.783	87.1380	61.27	.	Q	.	.	.	V	.	
17.800	87.2219	60.91	.	Q	.	.	.	V	.	
17.817	87.3054	60.56	.	Q	.	.	.	V	.	
17.833	87.3883	60.21	.	Q	.	.	.	V	.	
17.850	87.4707	59.85	.	Q	.	.	.	V	.	
17.867	87.5527	59.50	.	Q	.	.	.	V	.	
17.883	87.6342	59.20	.	Q	.	.	.	V	.	
17.900	87.7154	58.91	.	Q	.	.	.	V	.	
17.917	87.7961	58.63	.	Q	.	.	.	V	.	
17.933	87.8765	58.34	.	Q	.	.	.	V	.	
17.950	87.9564	58.06	.	Q	.	.	.	V	.	
17.967	88.0360	57.77	.	Q	.	.	.	V	.	
17.983	88.1152	57.48	.	Q	.	.	.	V	.	
18.000	88.1940	57.20	.	Q	.	.	.	V	.	
18.017	88.2724	56.91	.	Q	.	.	.	V	.	
18.033	88.3504	56.63	.	Q	.	.	.	V	.	
18.050	88.4280	56.34	.	Q	.	.	.	V	.	
18.067	88.5052	56.06	.	Q	.	.	.	V	.	
18.083	88.5820	55.77	.	Q	.	.	.	V	.	
18.100	88.6584	55.46	.	Q	.	.	.	V	.	
18.117	88.7337	54.63	.	Q	.	.	.	V	.	
18.133	88.8075	53.60	.	Q	.	.	.	V	.	
18.150	88.8799	52.57	.	Q	.	.	.	V	.	

18.167	88.9509	51.54	.	Q	.	.	.	V	.	
18.183	89.0205	50.51	.	Q	.	.	.	V	.	
18.200	89.0886	49.48	.	Q	.	.	.	V	.	
18.217	89.1553	48.45	.	Q	.	.	.	V	.	
18.233	89.2206	47.42	.	Q	.	.	.	V	.	
18.250	89.2845	46.39	.	Q	.	.	.	V	.	
18.267	89.3470	45.36	.	Q	.	.	.	V	.	
18.283	89.4081	44.32	.	Q	.	.	.	V	.	
18.300	89.4677	43.29	.	Q	.	.	.	V	.	
18.317	89.5259	42.26	.	Q	.	.	.	V	.	
18.333	89.5827	41.27	.	Q	.	.	.	V	.	
18.350	89.6391	40.88	.	Q	.	.	.	V	.	
18.367	89.6951	40.69	.	Q	.	.	.	V	.	
18.383	89.7509	40.51	.	Q	.	.	.	V	.	
18.400	89.8064	40.32	.	Q	.	.	.	V	.	
18.417	89.8617	40.14	.	Q	.	.	.	V	.	
18.433	89.9168	39.95	.	Q	.	.	.	V	.	
18.450	89.9715	39.77	.	Q	.	.	.	V	.	
18.467	90.0261	39.58	.	Q	.	.	.	V	.	
18.483	90.0803	39.40	.	Q	.	.	.	V	.	
18.500	90.1343	39.21	.	Q	.	.	.	V	.	
18.517	90.1881	39.03	.	Q	.	.	.	V	.	
18.533	90.2416	38.84	.	Q	.	.	.	V	.	
18.550	90.2948	38.66	.	Q	.	.	.	V	.	
18.567	90.3478	38.47	.	Q	.	.	.	V	.	
18.583	90.4006	38.31	.	Q	.	.	.	V	.	
18.600	90.4532	38.15	.	Q	.	.	.	V	.	
18.617	90.5055	37.99	.	Q	.	.	.	V	.	
18.633	90.5576	37.84	.	Q	.	.	.	V	.	
18.650	90.6095	37.68	.	Q	.	.	.	V	.	
18.667	90.6612	37.52	.	Q	.	.	.	V	.	
18.683	90.7127	37.36	.	Q	.	.	.	V	.	
18.700	90.7639	37.21	.	Q	.	.	.	V	.	
18.717	90.8149	37.05	.	Q	.	.	.	V	.	
18.733	90.8657	36.89	.	Q	.	.	.	V	.	
18.750	90.9163	36.73	.	Q	.	.	.	V	.	
18.767	90.9667	36.58	.	Q	.	.	.	V	.	
18.783	91.0169	36.42	.	Q	.	.	.	V	.	
18.800	91.0668	36.26	.	Q	.	.	.	V	.	
18.817	91.1166	36.12	.	Q	.	.	.	V	.	
18.833	91.1662	35.98	.	Q	.	.	.	V	.	
18.850	91.2155	35.85	.	Q	.	.	.	V	.	
18.867	91.2647	35.71	.	Q	.	.	.	V	.	
18.883	91.3137	35.58	.	Q	.	.	.	V	.	
18.900	91.3625	35.44	.	Q	.	.	.	V	.	
18.917	91.4112	35.30	.	Q	.	.	.	V	.	
18.933	91.4596	35.17	.	Q	.	.	.	V	.	
18.950	91.5079	35.03	.	Q	.	.	.	V	.	
18.967	91.5559	34.89	.	Q	.	.	.	V	.	
18.983	91.6038	34.76	.	Q	.	.	.	V	.	
19.000	91.6515	34.62	.	Q	.	.	.	V	.	
19.017	91.6990	34.49	.	Q	.	.	.	V	.	
19.033	91.7463	34.35	.	Q	.	.	.	V	.	
19.050	91.7934	34.23	.	Q	.	.	.	V	.	
19.067	91.8404	34.11	.	Q	.	.	.	V	.	
19.083	91.8873	33.99	.	Q	.	.	.	V	.	
19.100	91.9339	33.87	.	Q	.	.	.	V	.	
19.117	91.9804	33.75	.	Q	.	.	.	V	.	

19.133	92.0267	33.63	.Q	.	.	.	V	.
19.150	92.0729	33.51	.Q	.	.	.	V	.
19.167	92.1189	33.39	.Q	.	.	.	V	.
19.183	92.1647	33.28	.Q	.	.	.	V	.
19.200	92.2104	33.16	.Q	.	.	.	V	.
19.217	92.2559	33.04	.Q	.	.	.	V	.
19.233	92.3012	32.92	.Q	.	.	.	V	.
19.250	92.3464	32.80	.Q	.	.	.	V	.
19.267	92.3914	32.68	.Q	.	.	.	V	.
19.283	92.4363	32.57	.Q	.	.	.	V	.
19.300	92.4810	32.47	.Q	.	.	.	V	.
19.317	92.5256	32.36	.Q	.	.	.	V	.
19.333	92.5700	32.26	.Q	.	.	.	V	.
19.350	92.6143	32.15	.Q	.	.	.	V	.
19.367	92.6585	32.05	.Q	.	.	.	V	.
19.383	92.7025	31.94	.Q	.	.	.	V	.
19.400	92.7463	31.84	.Q	.	.	.	V	.
19.417	92.7900	31.73	.Q	.	.	.	V	.
19.433	92.8336	31.63	.Q	.	.	.	V	.
19.450	92.8770	31.52	.Q	.	.	.	V	.
19.467	92.9203	31.42	.Q	.	.	.	V	.
19.483	92.9634	31.31	.Q	.	.	.	V	.
19.500	93.0064	31.21	.Q	.	.	.	V	.
19.517	93.0493	31.11	.Q	.	.	.	V	.
19.533	93.0920	31.02	.Q	.	.	.	V	.
19.550	93.1346	30.92	.Q	.	.	.	V	.
19.567	93.1770	30.83	.Q	.	.	.	V	.
19.583	93.2194	30.74	.Q	.	.	.	V	.
19.600	93.2616	30.64	.Q	.	.	.	V	.
19.617	93.3037	30.55	.Q	.	.	.	V	.
19.633	93.3456	30.46	.Q	.	.	.	V	.
19.650	93.3874	30.36	.Q	.	.	.	V	.
19.667	93.4291	30.27	.Q	.	.	.	V	.
19.683	93.4707	30.17	.Q	.	.	.	V	.
19.700	93.5121	30.08	.Q	.	.	.	V	.
19.717	93.5534	29.99	.Q	.	.	.	V	.
19.733	93.5946	29.89	.Q	.	.	.	V	.
19.750	93.6357	29.81	.Q	.	.	.	V	.
19.767	93.6766	29.72	.Q	.	.	.	V	.
19.783	93.7174	29.64	.Q	.	.	.	V	.
19.800	93.7581	29.56	.Q	.	.	.	V	.
19.817	93.7987	29.47	.Q	.	.	.	V	.
19.833	93.8392	29.39	.Q	.	.	.	V	.
19.850	93.8796	29.30	.Q	.	.	.	V	.
19.867	93.9198	29.22	.Q	.	.	.	V	.
19.883	93.9599	29.13	.Q	.	.	.	V	.
19.900	94.0000	29.05	.Q	.	.	.	V	.
19.917	94.0398	28.97	.Q	.	.	.	V	.
19.933	94.0796	28.88	.Q	.	.	.	V	.
19.950	94.1193	28.80	.Q	.	.	.	V	.
19.967	94.1588	28.71	.Q	.	.	.	V	.
19.983	94.1983	28.64	.Q	.	.	.	V	.
20.000	94.2376	28.56	.Q	.	.	.	V	.
20.017	94.2769	28.48	.Q	.	.	.	V	.
20.033	94.3160	28.41	.Q	.	.	.	V	.
20.050	94.3550	28.33	.Q	.	.	.	V	.
20.067	94.3939	28.26	.Q	.	.	.	V	.
20.083	94.4328	28.18	.Q	.	.	.	V	.

20.100	94.4715	28.10	.Q	.	.	.	V	.
20.117	94.5101	28.03	.Q	.	.	.	V	.
20.133	94.5486	27.95	.Q	.	.	.	V	.
20.150	94.5870	27.88	.Q	.	.	.	V	.
20.167	94.6253	27.80	.Q	.	.	.	V	.
20.183	94.6634	27.72	.Q	.	.	.	V	.
20.200	94.7015	27.65	.Q	.	.	.	V	.
20.217	94.7395	27.58	.Q	.	.	.	V	.
20.233	94.7774	27.51	.Q	.	.	.	V	.
20.250	94.8152	27.44	.Q	.	.	.	V	.
20.267	94.8529	27.37	.Q	.	.	.	V	.
20.283	94.8905	27.30	.Q	.	.	.	V	.
20.300	94.9280	27.23	.Q	.	.	.	V	.
20.317	94.9654	27.16	.Q	.	.	.	V	.
20.333	95.0027	27.09	.Q	.	.	.	V	.
20.350	95.0400	27.02	.Q	.	.	.	V	.
20.367	95.0771	26.96	.Q	.	.	.	V	.
20.383	95.1141	26.89	.Q	.	.	.	V	.
20.400	95.1511	26.82	.Q	.	.	.	V	.
20.417	95.1879	26.75	.Q	.	.	.	V	.
20.433	95.2247	26.68	.Q	.	.	.	V	.
20.450	95.2613	26.62	.Q	.	.	.	V	.
20.467	95.2979	26.55	.Q	.	.	.	V	.
20.483	95.3344	26.49	.Q	.	.	.	V	.
20.500	95.3708	26.43	.Q	.	.	.	V	.
20.517	95.4071	26.36	.Q	.	.	.	V	.
20.533	95.4433	26.30	.Q	.	.	.	V	.
20.550	95.4795	26.24	.Q	.	.	.	V	.
20.567	95.5155	26.17	.Q	.	.	.	V	.
20.583	95.5515	26.11	.Q	.	.	.	V	.
20.600	95.5873	26.05	.Q	.	.	.	V	.
20.617	95.6231	25.98	.Q	.	.	.	V	.
20.633	95.6588	25.92	.Q	.	.	.	V	.
20.650	95.6944	25.86	.Q	.	.	.	V	.
20.667	95.7300	25.79	.Q	.	.	.	V	.
20.683	95.7654	25.73	.Q	.	.	.	V	.
20.700	95.8008	25.68	.Q	.	.	.	V	.
20.717	95.8361	25.62	.Q	.	.	.	V	.
20.733	95.8713	25.56	.Q	.	.	.	V	.
20.750	95.9064	25.50	.Q	.	.	.	V	.
20.767	95.9415	25.44	.Q	.	.	.	V	.
20.783	95.9764	25.39	.Q	.	.	.	V	.
20.800	96.0113	25.33	.Q	.	.	.	V	.
20.817	96.0461	25.27	.Q	.	.	.	V	.
20.833	96.0808	25.21	.Q	.	.	.	V	.
20.850	96.1155	25.15	.Q	.	.	.	V	.
20.867	96.1501	25.09	.Q	.	.	.	V	.
20.883	96.1845	25.04	.Q	.	.	.	V	.
20.900	96.2190	24.98	.Q	.	.	.	V	.
20.917	96.2533	24.93	.Q	.	.	.	V	.
20.933	96.2875	24.87	.Q	.	.	.	V	.
20.950	96.3217	24.82	.Q	.	.	.	V	.
20.967	96.3558	24.76	.Q	.	.	.	V	.
20.983	96.3899	24.71	.Q	.	.	.	V	.
21.000	96.4238	24.66	.Q	.	.	.	V	.
21.017	96.4577	24.60	.Q	.	.	.	V	.
21.033	96.4915	24.55	.Q	.	.	.	V	.
21.050	96.5253	24.50	.Q	.	.	.	V	.

21.067	96.5590	24.44	.Q	.	.	.	V	.
21.083	96.5926	24.39	.Q	.	.	.	V	.
21.100	96.6261	24.34	.Q	.	.	.	V	.
21.117	96.6595	24.28	Q	.	.	.	V	.
21.133	96.6929	24.23	Q	.	.	.	V	.
21.150	96.7262	24.18	Q	.	.	.	V	.
21.167	96.7594	24.13	Q	.	.	.	V	.
21.183	96.7926	24.08	Q	.	.	.	V	.
21.200	96.8257	24.03	Q	.	.	.	V	.
21.217	96.8587	23.98	Q	.	.	.	V	.
21.233	96.8917	23.93	Q	.	.	.	V	.
21.250	96.9246	23.88	Q	.	.	.	V	.
21.267	96.9574	23.83	Q	.	.	.	V	.
21.283	96.9902	23.78	Q	.	.	.	V	.
21.300	97.0229	23.73	Q	.	.	.	V	.
21.317	97.0555	23.68	Q	.	.	.	V	.
21.333	97.0881	23.63	Q	.	.	.	V	.
21.350	97.1206	23.58	Q	.	.	.	V	.
21.367	97.1530	23.53	Q	.	.	.	V	.
21.383	97.1853	23.49	Q	.	.	.	V	.
21.400	97.2176	23.44	Q	.	.	.	V	.
21.417	97.2498	23.40	Q	.	.	.	V	.
21.433	97.2820	23.35	Q	.	.	.	V	.
21.450	97.3141	23.30	Q	.	.	.	V	.
21.467	97.3461	23.26	Q	.	.	.	V	.
21.483	97.3781	23.21	Q	.	.	.	V	.
21.500	97.4100	23.17	Q	.	.	.	V	.
21.517	97.4419	23.12	Q	.	.	.	V	.
21.533	97.4736	23.07	Q	.	.	.	V	.
21.550	97.5054	23.03	Q	.	.	.	V	.
21.567	97.5370	22.98	Q	.	.	.	V	.
21.583	97.5686	22.94	Q	.	.	.	V	.
21.600	97.6001	22.89	Q	.	.	.	V	.
21.617	97.6316	22.85	Q	.	.	.	V	.
21.633	97.6630	22.80	Q	.	.	.	V	.
21.650	97.6944	22.76	Q	.	.	.	V	.
21.667	97.7257	22.72	Q	.	.	.	V	.
21.683	97.7569	22.68	Q	.	.	.	V	.
21.700	97.7881	22.63	Q	.	.	.	V	.
21.717	97.8192	22.59	Q	.	.	.	V	.
21.733	97.8503	22.55	Q	.	.	.	V	.
21.750	97.8812	22.50	Q	.	.	.	V	.
21.767	97.9122	22.46	Q	.	.	.	V	.
21.783	97.9431	22.42	Q	.	.	.	V	.
21.800	97.9739	22.37	Q	.	.	.	V	.
21.817	98.0046	22.33	Q	.	.	.	V	.
21.833	98.0353	22.29	Q	.	.	.	V	.
21.850	98.0660	22.25	Q	.	.	.	V	.
21.867	98.0966	22.21	Q	.	.	.	V	.
21.883	98.1271	22.17	Q	.	.	.	V	.
21.900	98.1576	22.13	Q	.	.	.	V	.
21.917	98.1880	22.09	Q	.	.	.	V	.
21.933	98.2184	22.05	Q	.	.	.	V	.
21.950	98.2487	22.01	Q	.	.	.	V	.
21.967	98.2790	21.97	Q	.	.	.	V	.
21.983	98.3092	21.93	Q	.	.	.	V	.
22.000	98.3393	21.89	Q	.	.	.	V	.
22.017	98.3694	21.85	Q	.	.	.	V	.

22.033	98.3994	21.81	Q	.	.	.	V	.
22.050	98.4294	21.77	Q	.	.	.	V	.
22.067	98.4594	21.73	Q	.	.	.	V	.
22.083	98.4892	21.69	Q	.	.	.	V	.
22.100	98.5191	21.65	Q	.	.	.	V	.
22.117	98.5488	21.61	Q	.	.	.	V	.
22.133	98.5785	21.58	Q	.	.	.	V	.
22.150	98.6082	21.54	Q	.	.	.	V	.
22.167	98.6378	21.50	Q	.	.	.	V	.
22.183	98.6674	21.46	Q	.	.	.	V	.
22.200	98.6969	21.43	Q	.	.	.	V	.
22.217	98.7264	21.39	Q	.	.	.	V	.
22.233	98.7558	21.35	Q	.	.	.	V	.
22.250	98.7851	21.31	Q	.	.	.	V	.
22.267	98.8144	21.28	Q	.	.	.	V	.
22.283	98.8437	21.24	Q	.	.	.	V	.
22.300	98.8729	21.20	Q	.	.	.	V	.
22.317	98.9020	21.17	Q	.	.	.	V	.
22.333	98.9312	21.13	Q	.	.	.	V	.
22.350	98.9602	21.09	Q	.	.	.	V	.
22.367	98.9892	21.06	Q	.	.	.	V	.
22.383	99.0182	21.02	Q	.	.	.	V	.
22.400	99.0471	20.99	Q	.	.	.	V	.
22.417	99.0759	20.95	Q	.	.	.	V	.
22.433	99.1048	20.92	Q	.	.	.	V	.
22.450	99.1335	20.88	Q	.	.	.	V	.
22.467	99.1622	20.85	Q	.	.	.	V	.
22.483	99.1909	20.81	Q	.	.	.	V	.
22.500	99.2195	20.78	Q	.	.	.	V	.
22.517	99.2481	20.74	Q	.	.	.	V	.
22.533	99.2766	20.71	Q	.	.	.	V	.
22.550	99.3051	20.67	Q	.	.	.	V	.
22.567	99.3335	20.64	Q	.	.	.	V	.
22.583	99.3619	20.61	Q	.	.	.	V	.
22.600	99.3902	20.57	Q	.	.	.	V	.
22.617	99.4185	20.54	Q	.	.	.	V	.
22.633	99.4467	20.51	Q	.	.	.	V	.
22.650	99.4749	20.47	Q	.	.	.	V	.
22.667	99.5031	20.44	Q	.	.	.	V	.
22.683	99.5312	20.41	Q	.	.	.	V	.
22.700	99.5593	20.37	Q	.	.	.	V	.
22.717	99.5873	20.34	Q	.	.	.	V	.
22.733	99.6152	20.31	Q	.	.	.	V	.
22.750	99.6432	20.27	Q	.	.	.	V	.
22.767	99.6711	20.24	Q	.	.	.	V	.
22.783	99.6989	20.21	Q	.	.	.	V	.
22.800	99.7267	20.18	Q	.	.	.	V	.
22.817	99.7544	20.14	Q	.	.	.	V	.
22.833	99.7821	20.11	Q	.	.	.	V	.
22.850	99.8098	20.08	Q	.	.	.	V	.
22.867	99.8374	20.05	Q	.	.	.	V	.
22.883	99.8650	20.02	Q	.	.	.	V	.
22.900	99.8925	19.99	Q	.	.	.	V	.
22.917	99.9200	19.96	Q	.	.	.	V	.
22.933	99.9474	19.93	Q	.	.	.	V	.
22.950	99.9749	19.89	Q	.	.	.	V	.
22.967	100.0022	19.86	Q	.	.	.	V	.
22.983	100.0295	19.83	Q	.	.	.	V	.

23.000	100.0568	19.80	Q	.	.	.	V.
23.017	100.0840	19.77	Q	.	.	.	V.
23.033	100.1112	19.74	Q	.	.	.	V.
23.050	100.1384	19.71	Q	.	.	.	V.
23.067	100.1655	19.68	Q	.	.	.	V.
23.083	100.1926	19.65	Q	.	.	.	V.
23.100	100.2196	19.62	Q	.	.	.	V.
23.117	100.2466	19.59	Q	.	.	.	V.
23.133	100.2735	19.56	Q	.	.	.	V.
23.150	100.3004	19.53	Q	.	.	.	V.
23.167	100.3273	19.50	Q	.	.	.	V.
23.183	100.3541	19.47	Q	.	.	.	V.
23.200	100.3809	19.44	Q	.	.	.	V.
23.217	100.4076	19.41	Q	.	.	.	V.
23.233	100.4343	19.38	Q	.	.	.	V.
23.250	100.4610	19.36	Q	.	.	.	V.
23.267	100.4876	19.33	Q	.	.	.	V.
23.283	100.5142	19.30	Q	.	.	.	V.
23.300	100.5407	19.27	Q	.	.	.	V.
23.317	100.5672	19.24	Q	.	.	.	V.
23.333	100.5937	19.21	Q	.	.	.	V.
23.350	100.6201	19.19	Q	.	.	.	V.
23.367	100.6465	19.16	Q	.	.	.	V.
23.383	100.6729	19.13	Q	.	.	.	V.
23.400	100.6992	19.10	Q	.	.	.	V.
23.417	100.7254	19.07	Q	.	.	.	V.
23.433	100.7517	19.05	Q	.	.	.	V.
23.450	100.7779	19.02	Q	.	.	.	V.
23.467	100.8040	18.99	Q	.	.	.	V.
23.483	100.8302	18.96	Q	.	.	.	V.
23.500	100.8562	18.94	Q	.	.	.	V.
23.517	100.8823	18.91	Q	.	.	.	V.
23.533	100.9083	18.88	Q	.	.	.	V.
23.550	100.9343	18.86	Q	.	.	.	V.
23.567	100.9602	18.83	Q	.	.	.	V.
23.583	100.9861	18.80	Q	.	.	.	V.
23.600	101.0120	18.78	Q	.	.	.	V.
23.617	101.0378	18.75	Q	.	.	.	V.
23.633	101.0636	18.72	Q	.	.	.	V.
23.650	101.0893	18.70	Q	.	.	.	V.
23.667	101.1150	18.67	Q	.	.	.	V.
23.683	101.1407	18.64	Q	.	.	.	V.
23.700	101.1664	18.62	Q	.	.	.	V.
23.717	101.1920	18.59	Q	.	.	.	V.
23.733	101.2175	18.56	Q	.	.	.	V.
23.750	101.2431	18.54	Q	.	.	.	V.
23.767	101.2686	18.51	Q	.	.	.	V.
23.783	101.2940	18.49	Q	.	.	.	V.
23.800	101.3195	18.46	Q	.	.	.	V.
23.817	101.3449	18.44	Q	.	.	.	V.
23.833	101.3702	18.41	Q	.	.	.	V.
23.850	101.3956	18.39	Q	.	.	.	V.
23.867	101.4209	18.36	Q	.	.	.	V.
23.883	101.4461	18.34	Q	.	.	.	V.
23.900	101.4713	18.31	Q	.	.	.	V.
23.917	101.4965	18.29	Q	.	.	.	V.
23.933	101.5217	18.26	Q	.	.	.	V.
23.950	101.5468	18.24	Q	.	.	.	V.

23.967	101.5719	18.21	Q	.	.	.	V.
23.983	101.5969	18.19	Q	.	.	.	V.
24.000	101.6219	18.16	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%	1441.0
10%	610.0
20%	200.0
30%	125.0
40%	110.0
50%	90.0
60%	70.0
70%	55.0
80%	35.0
90%	20.0

END OF FLOODSCx ROUTING ANALYSIS

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              F L O O D   R O U T I N G   A N A L Y S I S
              USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                          Analysis prepared by:

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

 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 SUBAREA B                                                      *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                     *
* 25-YR EV ROKAMOTO JUNE 2018                                             *
 **************************************************************************

  FILE NAME: 3B25EVS.DAT
  TIME/DATE OF STUDY: 09:01 06/19/2018

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


****************************************************************************
  FLOW PROCESS FROM NODE    210.00 TO NODE    222.00 IS CODE = 1.2
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
============================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  214.70
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.126
    LOW LOSS FRACTION = 0.352
    TIME OF CONCENTRATION(MIN.) = 18.01
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  10
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.34
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.72
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.95
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.59
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.20
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  3.68

----------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    41.57
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    24.28

----------------------------------------------------------------------------
```

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

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

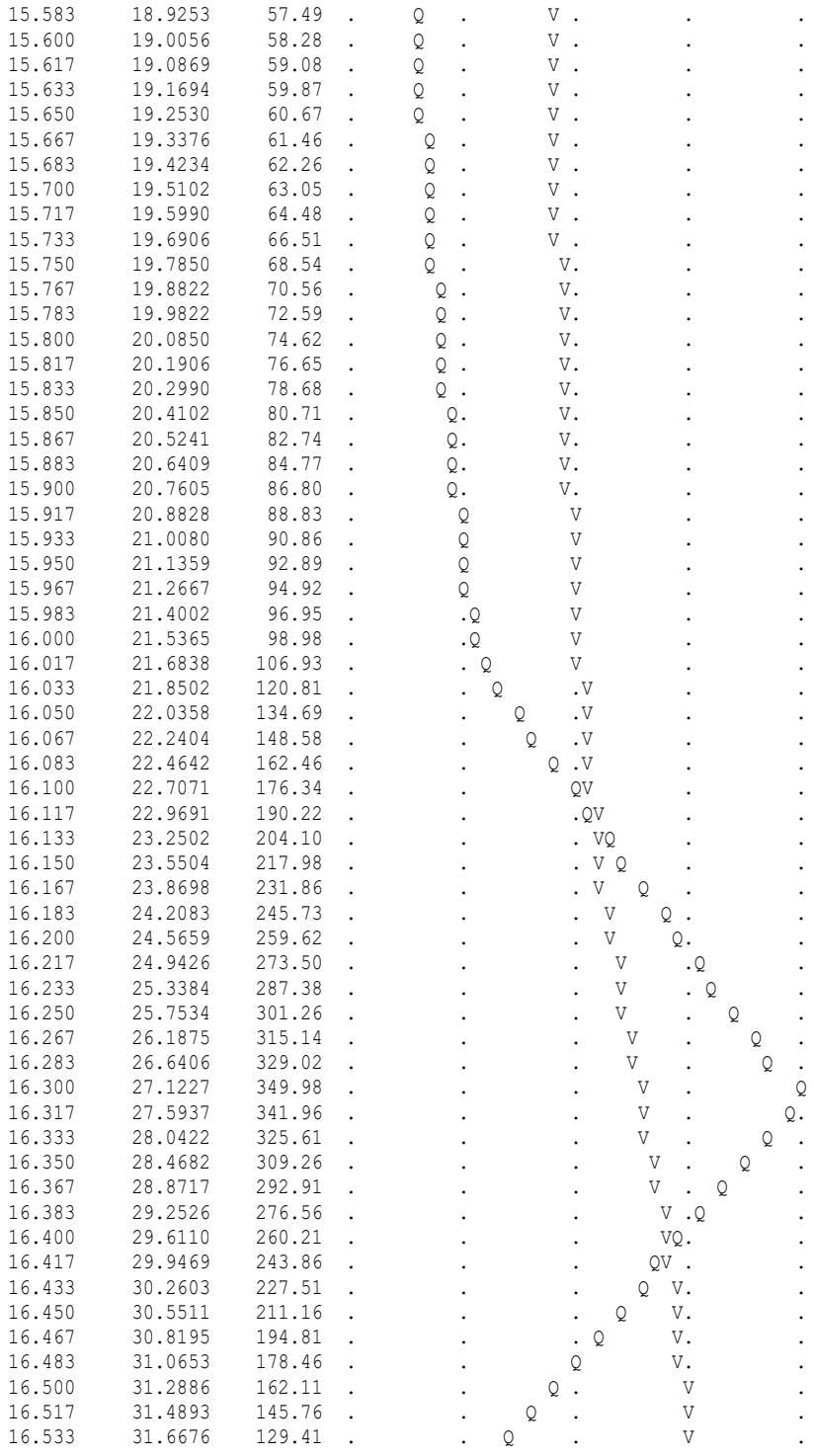
TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	87.5	175.0	262.5	350.0
10.000	7.5094	12.80	.Q V	.	.	.	.
10.017	7.5271	12.82	.Q V	.	.	.	.
10.033	7.5448	12.85	.Q V	.	.	.	.
10.050	7.5625	12.88	.Q V	.	.	.	.
10.067	7.5803	12.91	.Q V	.	.	.	.
10.083	7.5981	12.94	.Q V	.	.	.	.
10.100	7.6160	12.97	.Q V	.	.	.	.
10.117	7.6339	13.00	.Q V	.	.	.	.
10.133	7.6518	13.03	.Q V	.	.	.	.
10.150	7.6698	13.06	.Q V	.	.	.	.
10.167	7.6879	13.09	.Q V	.	.	.	.
10.183	7.7059	13.12	.Q V	.	.	.	.
10.200	7.7240	13.15	.Q V	.	.	.	.
10.217	7.7422	13.18	.Q V	.	.	.	.
10.233	7.7604	13.21	.Q V	.	.	.	.
10.250	7.7786	13.24	.Q V	.	.	.	.
10.267	7.7969	13.27	.Q V	.	.	.	.
10.283	7.8152	13.30	.Q V	.	.	.	.
10.300	7.8336	13.33	.Q V	.	.	.	.
10.317	7.8520	13.35	.Q V	.	.	.	.
10.333	7.8704	13.37	.Q V	.	.	.	.
10.350	7.8888	13.38	.Q V	.	.	.	.
10.367	7.9073	13.40	.Q V	.	.	.	.
10.383	7.9258	13.42	.Q V	.	.	.	.
10.400	7.9443	13.43	.Q V	.	.	.	.
10.417	7.9628	13.45	.Q V	.	.	.	.
10.433	7.9813	13.46	.Q V	.	.	.	.
10.450	7.9999	13.48	.Q V	.	.	.	.
10.467	8.0185	13.50	.Q V	.	.	.	.
10.483	8.0371	13.51	.Q V	.	.	.	.
10.500	8.0557	13.53	.Q V	.	.	.	.
10.517	8.0744	13.55	.Q V	.	.	.	.
10.533	8.0931	13.56	.Q V	.	.	.	.
10.550	8.1118	13.58	.Q V	.	.	.	.
10.567	8.1305	13.59	.Q V	.	.	.	.
10.583	8.1492	13.61	.Q V	.	.	.	.
10.600	8.1680	13.63	.Q V	.	.	.	.
10.617	8.1868	13.66	.Q V	.	.	.	.
10.633	8.2057	13.69	.Q V	.	.	.	.
10.650	8.2246	13.73	.Q V	.	.	.	.
10.667	8.2435	13.76	.Q V	.	.	.	.
10.683	8.2625	13.80	.Q V	.	.	.	.
10.700	8.2816	13.83	.Q V	.	.	.	.
10.717	8.3007	13.87	.Q V	.	.	.	.
10.733	8.3199	13.90	.Q V	.	.	.	.
10.750	8.3391	13.94	.Q V	.	.	.	.
10.767	8.3583	13.97	.Q V	.	.	.	.
10.783	8.3776	14.01	.Q V	.	.	.	.
10.800	8.3969	14.05	.Q V	.	.	.	.
10.817	8.4163	14.08	.Q V	.	.	.	.
10.833	8.4358	14.12	.Q V	.	.	.	.
10.850	8.4553	14.15	.Q V	.	.	.	.
10.867	8.4748	14.19	.Q V	.	.	.	.
10.883	8.4944	14.22	.Q V	.	.	.	.
10.900	8.5141	14.26	.Q V	.	.	.	.
10.917	8.5337	14.28	.Q V	.	.	.	.
10.933	8.5534	14.30	.Q V	.	.	.	.
10.950	8.5732	14.32	.Q V	.	.	.	.
10.967	8.5929	14.34	.Q V	.	.	.	.
10.983	8.6127	14.36	.Q V	.	.	.	.
11.000	8.6325	14.38	.Q V	.	.	.	.
11.017	8.6523	14.40	.Q V	.	.	.	.
11.033	8.6722	14.42	.Q V	.	.	.	.
11.050	8.6921	14.44	.Q V	.	.	.	.
11.067	8.7120	14.46	.Q V	.	.	.	.
11.083	8.7319	14.48	.Q V	.	.	.	.
11.100	8.7519	14.50	.Q V	.	.	.	.
11.117	8.7719	14.52	.Q V	.	.	.	.
11.133	8.7919	14.54	.Q V	.	.	.	.
11.150	8.8120	14.55	.Q V	.	.	.	.
11.167	8.8320	14.57	.Q V	.	.	.	.
11.183	8.8521	14.59	.Q V	.	.	.	.
11.200	8.8723	14.61	.Q V	.	.	.	.
11.217	8.8924	14.65	.Q V	.	.	.	.
11.233	8.9127	14.69	.Q V	.	.	.	.
11.250	8.9330	14.73	.Q V	.	.	.	.
11.267	8.9533	14.78	.Q V	.	.	.	.
11.283	8.9737	14.82	.Q V	.	.	.	.
11.300	8.9942	14.86	.Q V	.	.	.	.
11.317	9.0147	14.90	.Q V	.	.	.	.
11.333	9.0353	14.95	.Q V	.	.	.	.
11.350	9.0560	14.99	.Q V	.	.	.	.
11.367	9.0767	15.03	.Q V	.	.	.	.
11.383	9.0975	15.08	.Q V	.	.	.	.
11.400	9.1183	15.12	.Q V	.	.	.	.
11.417	9.1392	15.16	.Q V	.	.	.	.
11.433	9.1601	15.20	.Q V	.	.	.	.
11.450	9.1811	15.25	.Q V	.	.	.	.
11.467	9.2022	15.29	.Q V	.	.	.	.
11.483	9.2233	15.33	.Q V	.	.	.	.
11.500	9.2445	15.38	.Q V	.	.	.	.
11.517	9.2657	15.41	.Q V	.	.	.	.
11.533	9.2869	15.43	.Q V	.	.	.	.
11.550	9.3082	15.45	.Q V	.	.	.	.
11.567	9.3295	15.48	.Q V	.	.	.	.
11.583	9.3509	15.50	.Q V	.	.	.	.
11.600	9.3723	15.52	.Q V.	.	.	.	.
11.617	9.3937	15.55	.Q V.	.	.	.	.
11.633	9.4151	15.57	.Q V.	.	.	.	.
11.650	9.4366	15.60	.Q V.	.	.	.	.
11.667	9.4581	15.62	.Q V.	.	.	.	.
11.683	9.4797	15.64	.Q V.	.	.	.	.
11.700	9.5013	15.67	.Q V.	.	.	.	.

11.717	9.5229	15.69	.Q	V.	.	.	.
11.733	9.5445	15.71	.Q	V.	.	.	.
11.750	9.5662	15.74	.Q	V.	.	.	.
11.767	9.5879	15.76	.Q	V.	.	.	.
11.783	9.6096	15.78	.Q	V.	.	.	.
11.800	9.6314	15.81	.Q	V.	.	.	.
11.817	9.6532	15.85	.Q	V.	.	.	.
11.833	9.6752	15.90	.Q	V.	.	.	.
11.850	9.6971	15.96	.Q	V.	.	.	.
11.867	9.7192	16.01	.Q	V.	.	.	.
11.883	9.7413	16.06	.Q	V.	.	.	.
11.900	9.7635	16.12	.Q	V.	.	.	.
11.917	9.7858	16.17	.Q	V.	.	.	.
11.933	9.8081	16.22	.Q	V.	.	.	.
11.950	9.8305	16.27	.Q	V.	.	.	.
11.967	9.8530	16.33	.Q	V.	.	.	.
11.983	9.8756	16.38	.Q	V.	.	.	.
12.000	9.8982	16.43	.Q	V.	.	.	.
12.017	9.9209	16.49	.Q	V.	.	.	.
12.033	9.9437	16.54	.Q	V.	.	.	.
12.050	9.9666	16.59	.Q	V.	.	.	.
12.067	9.9895	16.65	.Q	V.	.	.	.
12.083	10.0125	16.70	.Q	V.	.	.	.
12.100	10.0356	16.75	.Q	V.	.	.	.
12.117	10.0589	16.95	.Q	V.	.	.	.
12.133	10.0826	17.22	.Q	V.	.	.	.
12.150	10.1067	17.50	.Q	V.	.	.	.
12.167	10.1312	17.77	. Q	V.	.	.	.
12.183	10.1561	18.05	. Q	V.	.	.	.
12.200	10.1813	18.33	. Q	V.	.	.	.
12.217	10.2070	18.60	. Q	V.	.	.	.
12.233	10.2330	18.88	. Q	V.	.	.	.
12.250	10.2593	19.15	. Q	V.	.	.	.
12.267	10.2861	19.43	. Q	V.	.	.	.
12.283	10.3132	19.71	. Q	V.	.	.	.
12.300	10.3408	19.98	. Q	V.	.	.	.
12.317	10.3687	20.26	. Q	V.	.	.	.
12.333	10.3970	20.54	. Q	V	.	.	.
12.350	10.4256	20.81	. Q	V	.	.	.
12.367	10.4547	21.09	. Q	V	.	.	.
12.383	10.4841	21.36	. Q	V	.	.	.
12.400	10.5139	21.64	. Q	V	.	.	.
12.417	10.5439	21.79	. Q	V	.	.	.
12.433	10.5740	21.87	. Q	V	.	.	.
12.450	10.6043	21.94	. Q	V	.	.	.
12.467	10.6346	22.02	. Q	V	.	.	.
12.483	10.6650	22.09	. Q	V	.	.	.
12.500	10.6956	22.16	. Q	V	.	.	.
12.517	10.7262	22.24	. Q	V	.	.	.
12.533	10.7569	22.31	. Q	V	.	.	.
12.550	10.7878	22.39	. Q	V	.	.	.
12.567	10.8187	22.46	. Q	V	.	.	.
12.583	10.8497	22.54	. Q	V	.	.	.
12.600	10.8809	22.61	. Q	V	.	.	.
12.617	10.9121	22.69	. Q	V	.	.	.
12.633	10.9435	22.76	. Q	V	.	.	.
12.650	10.9749	22.83	. Q	V	.	.	.
12.667	11.0065	22.91	. Q	V	.	.	.

12.683	11.0381	22.98	. Q	V	.	.	.
12.700	11.0699	23.06	. Q	V	.	.	.
12.717	11.1017	23.11	. Q	V	.	.	.
12.733	11.1336	23.15	. Q	V	.	.	.
12.750	11.1656	23.19	. Q	V	.	.	.
12.767	11.1976	23.23	. Q	V	.	.	.
12.783	11.2296	23.27	. Q	V	.	.	.
12.800	11.2617	23.31	. Q	V	.	.	.
12.817	11.2939	23.36	. Q	V	.	.	.
12.833	11.3261	23.40	. Q	V	.	.	.
12.850	11.3584	23.44	. Q	V	.	.	.
12.867	11.3908	23.48	. Q	V	.	.	.
12.883	11.4232	23.52	. Q	V	.	.	.
12.900	11.4556	23.56	. Q	.V	.	.	.
12.917	11.4881	23.60	. Q	.V	.	.	.
12.933	11.5207	23.64	. Q	.V	.	.	.
12.950	11.5533	23.68	. Q	.V	.	.	.
12.967	11.5860	23.72	. Q	.V	.	.	.
12.983	11.6187	23.76	. Q	.V	.	.	.
13.000	11.6515	23.80	. Q	.V	.	.	.
13.017	11.6844	23.88	. Q	.V	.	.	.
13.033	11.7174	23.97	. Q	.V	.	.	.
13.050	11.7505	24.06	. Q	.V	.	.	.
13.067	11.7838	24.16	. Q	.V	.	.	.
13.083	11.8172	24.25	. Q	.V	.	.	.
13.100	11.8508	24.35	. Q	.V	.	.	.
13.117	11.8844	24.44	. Q	.V	.	.	.
13.133	11.9182	24.53	. Q	.V	.	.	.
13.150	11.9521	24.63	. Q	.V	.	.	.
13.167	11.9862	24.72	. Q	.V	.	.	.
13.183	12.0204	24.82	. Q	.V	.	.	.
13.200	12.0547	24.91	. Q	.V	.	.	.
13.217	12.0891	25.01	. Q	.V	.	.	.
13.233	12.1237	25.10	. Q	.V	.	.	.
13.250	12.1584	25.19	. Q	.V	.	.	.
13.267	12.1932	25.29	. Q	.V	.	.	.
13.283	12.2282	25.38	. Q	.V	.	.	.
13.300	12.2633	25.48	. Q	.V	.	.	.
13.317	12.2985	25.55	. Q	.V	.	.	.
13.333	12.3337	25.60	. Q	.V	.	.	.
13.350	12.3691	25.66	. Q	.V	.	.	.
13.367	12.4045	25.71	. Q	.V	.	.	.
13.383	12.4400	25.77	. Q	.V	.	.	.
13.400	12.4756	25.82	. Q	. V	.	.	.
13.417	12.5112	25.88	. Q	. V	.	.	.
13.433	12.5469	25.93	. Q	. V	.	.	.
13.450	12.5827	25.99	. Q	. V	.	.	.
13.467	12.6186	26.04	. Q	. V	.	.	.
13.483	12.6545	26.10	. Q	. V	.	.	.
13.500	12.6905	26.15	. Q	. V	.	.	.
13.517	12.7266	26.21	. Q	. V	.	.	.
13.533	12.7628	26.26	. Q	. V	.	.	.
13.550	12.7991	26.32	. Q	. V	.	.	.
13.567	12.8354	26.37	. Q	. V	.	.	.
13.583	12.8718	26.42	. Q	. V	.	.	.
13.600	12.9082	26.48	. Q	. V	.	.	.
13.617	12.9449	26.58	. Q	. V	.	.	.
13.633	12.9817	26.71	. Q	. V	.	.	.

13.650	13.0186	26.84	.	Q	.	V	.	.	.	.
13.667	13.0558	26.97	.	Q	.	V	.	.	.	.
13.683	13.0931	27.10	.	Q	.	V	.	.	.	.
13.700	13.1306	27.23	.	Q	.	V	.	.	.	.
13.717	13.1683	27.36	.	Q	.	V	.	.	.	.
13.733	13.2062	27.50	.	Q	.	V	.	.	.	.
13.750	13.2442	27.63	.	Q	.	V	.	.	.	.
13.767	13.2825	27.76	.	Q	.	V	.	.	.	.
13.783	13.3209	27.89	.	Q	.	V	.	.	.	.
13.800	13.3595	28.02	.	Q	.	V	.	.	.	.
13.817	13.3983	28.15	.	Q	.	V	.	.	.	.
13.833	13.4372	28.28	.	Q	.	V	.	.	.	.
13.850	13.4763	28.41	.	Q	.	V	.	.	.	.
13.867	13.5157	28.54	.	Q	.	V	.	.	.	.
13.883	13.5552	28.68	.	Q	.	V	.	.	.	.
13.900	13.5948	28.81	.	Q	.	V	.	.	.	.
13.917	13.6347	28.91	.	Q	.	V	.	.	.	.
13.933	13.6746	28.99	.	Q	.	V	.	.	.	.
13.950	13.7146	29.07	.	Q	.	V	.	.	.	.
13.967	13.7548	29.15	.	Q	.	V	.	.	.	.
13.983	13.7950	29.23	.	Q	.	V	.	.	.	.
14.000	13.8354	29.31	.	Q	.	V	.	.	.	.
14.017	13.8759	29.38	.	Q	.	V	.	.	.	.
14.033	13.9164	29.46	.	Q	.	V	.	.	.	.
14.050	13.9571	29.54	.	Q	.	V	.	.	.	.
14.067	13.9979	29.62	.	Q	.	V	.	.	.	.
14.083	14.0389	29.70	.	Q	.	V	.	.	.	.
14.100	14.0799	29.78	.	Q	.	V	.	.	.	.
14.117	14.1210	29.86	.	Q	.	V	.	.	.	.
14.133	14.1623	29.94	.	Q	.	V	.	.	.	.
14.150	14.2036	30.02	.	Q	.	V	.	.	.	.
14.167	14.2451	30.10	.	Q	.	V	.	.	.	.
14.183	14.2866	30.18	.	Q	.	V	.	.	.	.
14.200	14.3283	30.26	.	Q	.	V	.	.	.	.
14.217	14.3702	30.41	.	Q	.	V	.	.	.	.
14.233	14.4124	30.61	.	Q	.	V	.	.	.	.
14.250	14.4548	30.81	.	Q	.	V	.	.	.	.
14.267	14.4975	31.01	.	Q	.	V	.	.	.	.
14.283	14.5405	31.21	.	Q	.	V	.	.	.	.
14.300	14.5838	31.41	.	Q	.	V	.	.	.	.
14.317	14.6273	31.62	.	Q	.	V	.	.	.	.
14.333	14.6711	31.82	.	Q	.	V	.	.	.	.
14.350	14.7152	32.02	.	Q	.	V	.	.	.	.
14.367	14.7596	32.22	.	Q	.	V	.	.	.	.
14.383	14.8043	32.42	.	Q	.	V	.	.	.	.
14.400	14.8492	32.62	.	Q	.	V	.	.	.	.
14.417	14.8944	32.82	.	Q	.	V	.	.	.	.
14.433	14.9399	33.03	.	Q	.	V	.	.	.	.
14.450	14.9857	33.23	.	Q	.	V	.	.	.	.
14.467	15.0317	33.43	.	Q	.	V	.	.	.	.
14.483	15.0781	33.63	.	Q	.	V	.	.	.	.
14.500	15.1247	33.83	.	Q	.	V	.	.	.	.
14.517	15.1715	33.99	.	Q	.	V	.	.	.	.
14.533	15.2185	34.12	.	Q	.	V	.	.	.	.
14.550	15.2657	34.25	.	Q	.	V	.	.	.	.
14.567	15.3130	34.38	.	Q	.	V	.	.	.	.
14.583	15.3606	34.51	.	Q	.	V	.	.	.	.
14.600	15.4083	34.64	.	Q	.	V	.	.	.	.

14.617	15.4562	34.77	.	Q	.	V	.	.	.	.
14.633	15.5042	34.90	.	Q	.	V	.	.	.	.
14.650	15.5525	35.03	.	Q	.	V	.	.	.	.
14.667	15.6009	35.16	.	Q	.	V	.	.	.	.
14.683	15.6495	35.29	.	Q	.	V	.	.	.	.
14.700	15.6983	35.42	.	Q	.	V	.	.	.	.
14.717	15.7473	35.55	.	Q	.	V	.	.	.	.
14.733	15.7964	35.68	.	Q	.	V	.	.	.	.
14.750	15.8458	35.81	.	Q	.	V	.	.	.	.
14.767	15.8953	35.94	.	Q	.	V	.	.	.	.
14.783	15.9449	36.07	.	Q	.	V	.	.	.	.
14.800	15.9948	36.20	.	Q	.	V	.	.	.	.
14.817	16.0450	36.45	.	Q	.	V	.	.	.	.
14.833	16.0957	36.82	.	Q	.	V	.	.	.	.
14.850	16.1469	37.18	.	Q	.	V	.	.	.	.
14.867	16.1986	37.54	.	Q	.	V	.	.	.	.
14.883	16.2509	37.90	.	Q	.	V	.	.	.	.
14.900	16.3036	38.26	.	Q	.	V	.	.	.	.
14.917	16.3568	38.63	.	Q	.	V	.	.	.	.
14.933	16.4105	38.99	.	Q	.	V	.	.	.	.
14.950	16.4647	39.35	.	Q	.	V	.	.	.	.
14.967	16.5194	39.71	.	Q	.	V	.	.	.	.
14.983	16.5746	40.07	.	Q	.	V	.	.	.	.
15.000	16.6302	40.43	.	Q	.	V	.	.	.	.
15.017	16.6864	40.80	.	Q	.	V	.	.	.	.
15.033	16.7431	41.16	.	Q	.	V	.	.	.	.
15.050	16.8003	41.52	.	Q	.	V	.	.	.	.
15.067	16.8580	41.88	.	Q	.	V	.	.	.	.
15.083	16.9162	42.24	.	Q	.	V	.	.	.	.
15.100	16.9749	42.61	.	Q	.	V	.	.	.	.
15.117	17.0341	42.96	.	Q	.	V	.	.	.	.
15.133	17.0937	43.32	.	Q	.	V	.	.	.	.
15.150	17.1539	43.67	.	Q	.	V	.	.	.	.
15.167	17.2145	44.02	.	Q	.	V	.	.	.	.
15.183	17.2756	44.37	.	Q	.	V	.	.	.	.
15.200	17.3372	44.73	.	Q	.	V	.	.	.	.
15.217	17.3993	45.08	.	Q	.	V	.	.	.	.
15.233	17.4619	45.43	.	Q	.	V	.	.	.	.
15.250	17.5250	45.79	.	Q	.	V	.	.	.	.
15.267	17.5885	46.14	.	Q	.	V	.	.	.	.
15.283	17.6526	46.49	.	Q	.	V	.	.	.	.
15.300	17.7171	46.84	.	Q	.	V	.	.	.	.
15.317	17.7821	47.20	.	Q	.	V	.	.	.	.
15.333	17.8476	47.55	.	Q	.	V	.	.	.	.
15.350	17.9136	47.90	.	Q	.	V	.	.	.	.
15.367	17.9800	48.26	.	Q	.	V	.	.	.	.
15.383	18.0470	48.61	.	Q	.	V	.	.	.	.
15.400	18.1144	48.96	.	Q	.	V	.	.	.	.
15.417	18.1827	49.54	.	Q	.	V	.	.	.	.
15.433	18.2520	50.34	.	Q	.	V	.	.	.	.
15.450	18.3224	51.13	.	Q	.	V	.	.	.	.
15.467	18.3940	51.93	.	Q	.	V	.	.	.	.
15.483	18.4666	52.72	.	Q	.	V	.	.	.	.
15.500	18.5403	53.52	.	Q	.	V	.	.	.	.
15.517	18.6151	54.31	.	Q	.	V	.	.	.	.
15.533	18.6910	55.11	.	Q	.	V	.	.	.	.
15.550	18.7680	55.90	.	Q	.	V	.	.	.	.
15.567	18.8461	56.69	.	Q	.	V	.	.	.	.



15.583	18.9253	57.49	. Q . V . . .
15.600	19.0056	58.28	. Q . V . . .
15.617	19.0869	59.08	. Q . V . . .
15.633	19.1694	59.87	. Q . V . . .
15.650	19.2530	60.67	. Q . V . . .
15.667	19.3376	61.46	. Q . V . . .
15.683	19.4234	62.26	. Q . V . . .
15.700	19.5102	63.05	. Q . V . . .
15.717	19.5990	64.48	. Q . V . . .
15.733	19.6906	66.51	. Q . V . . .
15.750	19.7850	68.54	. Q . V. . . .
15.767	19.8822	70.56	. Q . V. . . .
15.783	19.9822	72.59	. Q . V. . . .
15.800	20.0850	74.62	. Q . V. . . .
15.817	20.1906	76.65	. Q . V. . . .
15.833	20.2990	78.68	. Q . V. . . .
15.850	20.4102	80.71	. Q. V. . . .
15.867	20.5241	82.74	. Q. V. . . .
15.883	20.6409	84.77	. Q. V. . . .
15.900	20.7605	86.80	. Q. V. . . .
15.917	20.8828	88.83	. Q V . . .
15.933	21.0080	90.86	. Q V . . .
15.950	21.1359	92.89	. Q V . . .
15.967	21.2667	94.92	. Q V . . .
15.983	21.4002	96.95	. .Q V . . .
16.000	21.5365	98.98	. .Q V . . .
16.017	21.6838	106.93	. . Q V . . .
16.033	21.8502	120.81	. . Q .V . . .
16.050	22.0358	134.69	. . Q .V . . .
16.067	22.2404	148.58	. . Q .V . . .
16.083	22.4642	162.46	. . Q .V . . .
16.100	22.7071	176.34	. . QV . . .
16.117	22.9691	190.22	. . .QV . . .
16.133	23.2502	204.10	. . . VQ . . .
16.150	23.5504	217.98	. . . V Q . . .
16.167	23.8698	231.86	. . . V Q . . .
16.183	24.2083	245.73	. . . V Q . . .
16.200	24.5659	259.62	. . . V Q. . . .
16.217	24.9426	273.50	. . . V .Q . . .
16.233	25.3384	287.38	. . . V . Q . . .
16.250	25.7534	301.26	. . . V . Q . . .
16.267	26.1875	315.14	. . . V . Q . . .
16.283	26.6406	329.02	. . . V . Q . . .
16.300	27.1227	349.98	. . . V . Q . . .
16.317	27.5937	341.96	. . . V . Q. . .
16.333	28.0422	325.61	. . . V . Q . . .
16.350	28.4682	309.26	. . . V . Q . . .
16.367	28.8717	292.91	. . . V . Q . . .
16.383	29.2526	276.56	. . . V .Q . . .
16.400	29.6110	260.21	. . . VQ. . . .
16.417	29.9469	243.86	. . . QV . . .
16.433	30.2603	227.51	. . . Q V. . . .
16.450	30.5511	211.16	. . . Q V. . . .
16.467	30.8195	194.81	. . . Q V. . . .
16.483	31.0653	178.46	. . . Q V. . . .
16.500	31.2886	162.11	. . Q . V . . .
16.517	31.4893	145.76	. . Q . V . . .
16.533	31.6676	129.41	. . Q . V . . .

16.550	31.8233	113.06	. . Q . V . . .
16.567	31.9565	96.70	. .Q . V . . .
16.583	32.0672	80.35	. Q. . V . . .
16.600	32.1553	64.00	. Q . . V . . .
16.617	32.2312	55.07	. Q . . .V . . .
16.633	32.3058	54.15	. Q . . .V . . .
16.650	32.3791	53.25	. Q . . .V . . .
16.667	32.4512	52.34	. Q . . .V . . .
16.683	32.5221	51.43	. Q . . .V . . .
16.700	32.5916	50.52	. Q . . .V . . .
16.717	32.6600	49.61	. Q . . .V . . .
16.733	32.7271	48.70	. Q . . .V . . .
16.750	32.7929	47.79	. Q . . .V . . .
16.767	32.8575	46.88	. Q . . .V . . .
16.783	32.9208	45.97	. Q . . .V . . .
16.800	32.9829	45.07	. Q . . .V . . .
16.817	33.0437	44.16	. Q . . .V . . .
16.833	33.1032	43.25	. Q . . .V . . .
16.850	33.1616	42.34	. Q . . .V . . .
16.867	33.2186	41.43	. Q . . .V . . .
16.883	33.2744	40.52	. Q . . . V . . .
16.900	33.3290	39.61	. Q . . . V . . .
16.917	33.3826	38.94	. Q . . . V . . .
16.933	33.4357	38.55	. Q . . . V . . .
16.950	33.4883	38.15	. Q . . . V . . .
16.967	33.5403	37.75	. Q . . . V . . .
16.983	33.5917	37.35	. Q . . . V . . .
17.000	33.6426	36.96	. 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%	1021.0
10%	730.0
20%	250.0
30%	165.0
40%	140.0
50%	120.0
60%	95.0
70%	70.0
80%	45.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

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

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                        Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA C                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 25-YR EV DECEMBER 2018 CCHIU                                          *
 ************************************************************************

  FILE NAME: 3C25EVS.DAT
  TIME/DATE OF STUDY: 13:21 12/11/2018


**************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE    380.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     870.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.346 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) =  0.151
         LOW LOSS FRACTION = 0.360
         *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 = 0.961
          30-MINUTE FACTOR = 0.961
           1-HOUR FACTOR = 0.961
           3-HOUR FACTOR = 0.994
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998
```



```
         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  24.085


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  10.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER         MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
        1               1.430               150.556
        2               6.846               570.266
        3              19.397              1321.489
        4              35.881              1735.523
        5              56.310              2150.987
        6              73.739              1834.982
        7              84.912              1176.462
        8              91.399               682.963
        9              95.338               414.783
       10              97.472               224.615
       11              98.335                90.941
       12              98.787                47.541
       13              99.239                47.549
       14              99.690                47.541
       15             100.000                32.622


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      82.8218
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     183.6003
--------------------------------------------------------------------------
```

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
10.000	32.9270	56.66	.Q V . . . .
10.083	33.3204	57.13	.Q V . . . .
10.167	33.7171	57.60	.Q V . . . .
10.250	34.1172	58.09	.Q V . . . .
10.333	34.5207	58.58	.Q V . . . .
10.417	34.9277	59.10	.Q V . . . .
10.500	35.3382	59.61	.Q V . . . .
10.583	35.7525	60.15	. Q V . . . .
10.667	36.1705	60.69	. Q V . . . .
10.750	36.5923	61.25	. Q V . . . .
10.833	37.0181	61.82	. Q V . . . .
10.917	37.4479	62.41	. Q V . . . .
11.000	37.8818	63.01	. Q V . . . .
11.083	38.3200	63.63	. Q V . . . .
11.167	38.7625	64.25	. Q V . . . .
11.250	39.2095	64.90	. Q V . . . .
11.333	39.6611	65.56	. Q V . . . .
11.417	40.1174	66.25	. Q V . . . .
11.500	40.5785	66.95	. Q V . . . .
11.583	41.0446	67.68	. Q V . . . .
11.667	41.5157	68.41	. Q V. . . . .
11.750	41.9922	69.18	. Q V. . . . .
11.833	42.4740	69.96	. Q V. . . . .
11.917	42.9614	70.78	. Q V. . . . .
12.000	43.4546	71.60	. Q V. . . . .
12.083	43.9557	72.77	. Q V. . . . .
12.167	44.4707	74.77	. Q V. . . . .
12.250	45.0099	78.30	. Q V. . . . .
12.333	45.5792	82.66	. Q V. . . . .
12.417	46.1846	87.90	. Q V . . . .
12.500	46.8220	92.55	. Q V . . . .
12.583	47.4829	95.97	. Q V . . . .
12.667	48.1609	98.44	. Q V . . . .
12.750	48.8527	100.45	. Q V . . . .
12.833	49.5560	102.12	. Q V . . . .
12.917	50.2694	103.58	. Q V . . . .
13.000	50.9925	104.99	. Q .V . . . .
13.083	51.7258	106.47	. Q .V . . . .
13.167	52.4695	107.99	. Q .V . . . .
13.250	53.2240	109.55	. Q .V . . . .
13.333	53.9890	111.09	. Q .V . . . .
13.417	54.7653	112.71	. Q .V . . . .
13.500	55.5531	114.38	. Q . V . . . .
13.583	56.3531	116.16	. Q . V . . . .
13.667	57.1656	117.99	. Q . V . . . .
13.750	57.9916	119.93	. Q . V . . . .
13.833	58.8314	121.94	. Q . V . . . .

13.917	59.6860	124.08	. Q . V . . . .
14.000	60.5558	126.30	. Q . V . . . .
14.083	61.4428	128.79	. Q . V . . . .
14.167	62.3498	131.70	. Q . V . . . .
14.250	63.2821	135.36	. Q . V . . . .
14.333	64.2424	139.45	. Q . V . . . .
14.417	65.2347	144.07	. Q . V . . . .
14.500	66.2582	148.61	. Q . V . . . .
14.583	67.3114	152.92	. Q . V . . . .
14.667	68.3930	157.05	. Q . V . . . .
14.750	69.5040	161.32	. Q . V . . . .
14.833	70.6450	165.68	. Q . V . . . .
14.917	71.8183	170.37	. Q . V . . . .
15.000	73.0260	175.35	. Q . V . . . .
15.083	74.2718	180.90	. Q . V . . . .
15.167	75.5590	186.90	. Q . V . . . .
15.250	76.8928	193.66	. Q . V . . . .
15.333	78.2779	201.11	. Q . V . . . .
15.417	79.7174	209.02	. Q . V . . . .
15.500	81.2050	216.01	. Q . V . . . .
15.583	82.7276	221.07	. Q . V . . . .
15.667	84.2866	226.37	. Q . V . . . .
15.750	85.9004	234.32	. Q . V . . . .
15.833	87.6289	250.98	. Q . V. . . . .
15.917	89.5921	285.06	. Q. V. . . . .
16.000	91.9527	342.75	. .Q V . . . .
16.083	95.1658	466.54	. . Q V . . . .
16.167	99.7763	669.45	. . .VQ . . . .
16.250	106.2030	933.15	. . . V .Q . . .
16.333	113.5994	1073.96	. . . V . Q . .
16.417	121.4841	1144.86	. . . V . Q .
16.500	128.2905	988.28	. . . V . Q . .
16.583	133.3519	734.91	. . . Q V. . . .
16.667	137.0257	533.44	. . Q . V. . . .
16.750	139.8376	408.28	. . Q . V . . .
16.833	142.0350	319.07	. . Q . V . . .
16.917	143.7991	256.15	. . Q . .V . . .
17.000	145.3434	224.23	. . Q . .V . . .
17.083	146.7789	208.43	. . Q . .V . . .
17.167	148.1170	194.30	. . Q . . V . . .
17.250	149.3360	176.99	. . Q . . V . . .
17.333	150.4207	157.50	. . Q . . V . . .
17.417	151.4375	147.64	. . Q . . V . . .
17.500	152.3997	139.71	. . Q . . . V . .
17.583	153.3171	133.20	. . Q . . . V . .
17.667	154.1958	127.59	. . Q . . . V . .
17.750	155.0412	122.76	. . Q . . . V . .
17.833	155.8575	118.52	. . Q . . . V . .
17.917	156.6479	114.77	. . Q . . . . V .
18.000	157.4149	111.37	. . Q . . . . V .
18.083	158.1583	107.95	. . Q . . . . V .
18.167	158.8742	103.95	. . Q . . . . V .
18.250	159.5540	98.71	. . Q . . . . V .
18.333	160.1936	92.87	. . Q . . . . V .
18.417	160.7888	86.41	. . Q . . . . V .
18.500	161.3449	80.75	. . Q . . . . V .
18.583	161.8720	76.53	. . Q . . . . V .
18.667	162.3775	73.41	. . Q . . . . V .

18.750	162.8661	70.93	. Q	.	.	.	V	.
18.833	163.3408	68.93	. Q	.	.	.	V	.
18.917	163.8041	67.28	. Q	.	.	.	V	.
19.000	164.2573	65.79	. Q	.	.	.	V	.
19.083	164.7007	64.38	. Q	.	.	.	V	.
19.167	165.1348	63.04	. Q	.	.	.	V	.
19.250	165.5603	61.79	. Q	.	.	.	V	.
19.333	165.9781	60.66	. Q	.	.	.	V	.
19.417	166.3884	59.58	.Q	.	.	.	V	.
19.500	166.7916	58.55	.Q	.	.	.	V	.
19.583	167.1880	57.56	.Q	.	.	.	V	.
19.667	167.5780	56.62	.Q	.	.	.	V	.
19.750	167.9617	55.71	.Q	.	.	.	V	.
19.833	168.3394	54.85	.Q	.	.	.	V	.
19.917	168.7114	54.01	.Q	.	.	.	V	.
20.000	169.0779	53.21	.Q	.	.	.	V	.

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

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1205.0
10%	265.0
20%	75.0
30%	45.0
40%	40.0
50%	30.0
60%	25.0
70%	20.0
80%	20.0
90%	10.0

END OF FLOODSCx ROUTING ANALYSIS

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                         Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA D                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 25-YR SEPTEMBER 2018 CCHIU                                            *
 ************************************************************************

  FILE NAME: 3D25EVS.DAT
  TIME/DATE OF STUDY: 09:02 10/11/2018

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


****************************************************************************
  FLOW PROCESS FROM NODE    430.00 TO NODE    428.00 IS CODE = 1.2
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
============================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  439.50
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.144
    LOW LOSS FRACTION = 0.364
    TIME OF CONCENTRATION(MIN.) = 26.93
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  10
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.34
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.72
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.95
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.59
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.20
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  3.68

----------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    83.36
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    51.42

----------------------------------------------------------------------------
```

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	137.4	274.8	412.1	549.5
10.000	15.0317	25.59	.Q	V .	.	.	.
10.017	15.0670	25.64	.Q	V .	.	.	.
10.033	15.1024	25.70	.Q	V .	.	.	.
10.050	15.1379	25.75	.Q	V .	.	.	.
10.067	15.1734	25.81	.Q	V .	.	.	.
10.083	15.2091	25.86	.Q	V .	.	.	.
10.100	15.2448	25.92	.Q	V .	.	.	.
10.117	15.2805	25.97	.Q	V .	.	.	.
10.133	15.3164	26.03	.Q	V .	.	.	.
10.150	15.3523	26.09	.Q	V .	.	.	.
10.167	15.3883	26.14	.Q	V .	.	.	.
10.183	15.4244	26.18	.Q	V .	.	.	.
10.200	15.4605	26.21	.Q	V .	.	.	.
10.217	15.4966	26.24	.Q	V .	.	.	.
10.233	15.5328	26.27	.Q	V .	.	.	.
10.250	15.5691	26.31	.Q	V .	.	.	.
10.267	15.6053	26.34	.Q	V .	.	.	.
10.283	15.6417	26.37	.Q	V .	.	.	.
10.300	15.6780	26.40	.Q	V .	.	.	.
10.317	15.7144	26.43	.Q	V .	.	.	.
10.333	15.7509	26.46	.Q	V .	.	.	.
10.350	15.7874	26.49	.Q	V .	.	.	.
10.367	15.8239	26.52	.Q	V .	.	.	.
10.383	15.8605	26.55	.Q	V .	.	.	.
10.400	15.8971	26.59	.Q	V .	.	.	.
10.417	15.9338	26.62	.Q	V .	.	.	.
10.433	15.9705	26.65	.Q	V .	.	.	.
10.450	16.0072	26.68	.Q	V .	.	.	.
10.467	16.0440	26.71	.Q	V .	.	.	.
10.483	16.0808	26.74	.Q	V .	.	.	.
10.500	16.1177	26.77	.Q	V .	.	.	.
10.517	16.1546	26.80	.Q	V .	.	.	.
10.533	16.1916	26.83	.Q	V .	.	.	.
10.550	16.2286	26.86	.Q	V .	.	.	.
10.567	16.2656	26.90	.Q	V .	.	.	.
10.583	16.3027	26.93	.Q	V .	.	.	.
10.600	16.3399	26.96	.Q	V .	.	.	.
10.617	16.3770	26.99	.Q	V .	.	.	.
10.633	16.4143	27.05	.Q	V .	.	.	.
10.650	16.4516	27.12	.Q	V .	.	.	.
10.667	16.4891	27.19	.Q	V .	.	.	.
10.683	16.5266	27.26	.Q	V .	.	.	.
10.700	16.5643	27.33	.Q	V .	.	.	.
10.717	16.6020	27.40	.Q	V .	.	.	.
10.733	16.6398	27.47	.Q	V .	.	.	.

10.750	16.6778	27.54	. Q	V .	.	.	.
10.767	16.7158	27.61	. Q	V .	.	.	.
10.783	16.7539	27.68	. Q	V .	.	.	.
10.800	16.7922	27.75	. Q	V .	.	.	.
10.817	16.8305	27.82	. Q	V .	.	.	.
10.833	16.8689	27.89	. Q	V .	.	.	.
10.850	16.9074	27.96	. Q	V .	.	.	.
10.867	16.9460	28.03	. Q	V .	.	.	.
10.883	16.9847	28.11	. Q	V .	.	.	.
10.900	17.0236	28.18	. Q	V .	.	.	.
10.917	17.0625	28.25	. Q	V .	.	.	.
10.933	17.1015	28.32	. Q	V .	.	.	.
10.950	17.1406	28.39	. Q	V .	.	.	.
10.967	17.1798	28.46	. Q	V .	.	.	.
10.983	17.2191	28.53	. Q	V .	.	.	.
11.000	17.2585	28.60	. Q	V .	.	.	.
11.017	17.2980	28.67	. Q	V .	.	.	.
11.033	17.3375	28.74	. Q	V .	.	.	.
11.050	17.3772	28.81	. Q	V .	.	.	.
11.067	17.4170	28.88	. Q	V .	.	.	.
11.083	17.4569	28.93	. Q	V .	.	.	.
11.100	17.4968	28.97	. Q	V .	.	.	.
11.117	17.5367	29.01	. Q	V .	.	.	.
11.133	17.5767	29.05	. Q	V .	.	.	.
11.150	17.6168	29.09	. Q	V .	.	.	.
11.167	17.6569	29.13	. Q	V .	.	.	.
11.183	17.6971	29.17	. Q	V .	.	.	.
11.200	17.7374	29.21	. Q	V .	.	.	.
11.217	17.7777	29.25	. Q	V .	.	.	.
11.233	17.8180	29.30	. Q	V .	.	.	.
11.250	17.8584	29.34	. Q	V .	.	.	.
11.267	17.8989	29.38	. Q	V .	.	.	.
11.283	17.9394	29.42	. Q	V .	.	.	.
11.300	17.9800	29.46	. Q	V .	.	.	.
11.317	18.0206	29.50	. Q	V .	.	.	.
11.333	18.0613	29.54	. Q	V .	.	.	.
11.350	18.1020	29.58	. Q	V .	.	.	.
11.367	18.1428	29.62	. Q	V .	.	.	.
11.383	18.1837	29.66	. Q	V .	.	.	.
11.400	18.2246	29.70	. Q	V .	.	.	.
11.417	18.2656	29.74	. Q	V .	.	.	.
11.433	18.3066	29.78	. Q	V .	.	.	.
11.450	18.3477	29.82	. Q	V .	.	.	.
11.467	18.3888	29.86	. Q	V .	.	.	.
11.483	18.4300	29.90	. Q	V .	.	.	.
11.500	18.4712	29.94	. Q	V .	.	.	.
11.517	18.5125	29.99	. Q	V .	.	.	.
11.533	18.5539	30.07	. Q	V .	.	.	.
11.550	18.5955	30.16	. Q	V .	.	.	.
11.567	18.6372	30.26	. Q	V .	.	.	.
11.583	18.6790	30.35	. Q	V .	.	.	.
11.600	18.7209	30.44	. Q	V .	.	.	.
11.617	18.7630	30.54	. Q	V.	.	.	.
11.633	18.8052	30.63	. Q	V.	.	.	.
11.650	18.8475	30.73	. Q	V.	.	.	.
11.667	18.8899	30.82	. Q	V.	.	.	.
11.683	18.9325	30.92	. Q	V.	.	.	.
11.700	18.9752	31.01	. Q	V.	.	.	.

11.717	19.0181	31.10	.	Q	V.	.	.	.
11.733	19.0611	31.20	.	Q	V.	.	.	.
11.750	19.1042	31.29	.	Q	V.	.	.	.
11.767	19.1474	31.39	.	Q	V.	.	.	.
11.783	19.1908	31.48	.	Q	V.	.	.	.
11.800	19.2342	31.58	.	Q	V.	.	.	.
11.817	19.2779	31.67	.	Q	V.	.	.	.
11.833	19.3216	31.76	.	Q	V.	.	.	.
11.850	19.3655	31.86	.	Q	V.	.	.	.
11.867	19.4095	31.95	.	Q	V.	.	.	.
11.883	19.4537	32.05	.	Q	V.	.	.	.
11.900	19.4979	32.14	.	Q	V.	.	.	.
11.917	19.5423	32.24	.	Q	V.	.	.	.
11.933	19.5869	32.33	.	Q	V.	.	.	.
11.950	19.6315	32.43	.	Q	V.	.	.	.
11.967	19.6763	32.53	.	Q	V.	.	.	.
11.983	19.7214	32.69	.	Q	V.	.	.	.
12.000	19.7666	32.87	.	Q	V.	.	.	.
12.017	19.8121	33.04	.	Q	V.	.	.	.
12.033	19.8579	33.22	.	Q	V.	.	.	.
12.050	19.9039	33.40	.	Q	V.	.	.	.
12.067	19.9502	33.58	.	Q	V.	.	.	.
12.083	19.9967	33.76	.	Q	V.	.	.	.
12.100	20.0434	33.94	.	Q	V.	.	.	.
12.117	20.0904	34.12	.	Q	V.	.	.	.
12.133	20.1376	34.29	.	Q	V.	.	.	.
12.150	20.1851	34.47	.	Q	V.	.	.	.
12.167	20.2329	34.65	.	Q	V.	.	.	.
12.183	20.2808	34.83	.	Q	V.	.	.	.
12.200	20.3290	35.01	.	Q	V.	.	.	.
12.217	20.3775	35.19	.	Q	V.	.	.	.
12.233	20.4262	35.37	.	Q	V.	.	.	.
12.250	20.4752	35.54	.	Q	V.	.	.	.
12.267	20.5244	35.72	.	Q	V.	.	.	.
12.283	20.5738	35.90	.	Q	V.	.	.	.
12.300	20.6235	36.08	.	Q	V.	.	.	.
12.317	20.6735	36.26	.	Q	V.	.	.	.
12.333	20.7237	36.44	.	Q	V.	.	.	.
12.350	20.7741	36.62	.	Q	V.	.	.	.
12.367	20.8248	36.79	.	Q	V.	.	.	.
12.383	20.8757	36.97	.	Q	V	.	.	.
12.400	20.9269	37.15	.	Q	V	.	.	.
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12.433	21.0302	37.67	.	Q	V	.	.	.
12.450	21.0826	38.02	.	Q	V	.	.	.
12.467	21.1355	38.38	.	Q	V	.	.	.
12.483	21.1888	38.73	.	Q	V	.	.	.
12.500	21.2426	39.08	.	Q	V	.	.	.
12.517	21.2970	39.43	.	Q	V	.	.	.
12.533	21.3518	39.79	.	Q	V	.	.	.
12.550	21.4070	40.14	.	Q	V	.	.	.
12.567	21.4628	40.49	.	Q	V	.	.	.
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12.617	21.6330	41.55	.	Q	V	.	.	.
12.633	21.6907	41.90	.	Q	V	.	.	.
12.650	21.7489	42.25	.	Q	V	.	.	.
12.667	21.8076	42.60	.	Q	V	.	.	.

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12.700	21.9264	43.31	.	Q	V	.	.	.
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12.750	22.1083	44.36	.	Q	V	.	.	.
12.767	22.1699	44.72	.	Q	V	.	.	.
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12.817	22.3576	45.77	.	Q	V	.	.	.
12.833	22.4211	46.12	.	Q	V	.	.	.
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12.867	22.5496	46.79	.	Q	V	.	.	.
12.883	22.6142	46.91	.	Q	V	.	.	.
12.900	22.6789	47.00	.	Q	V	.	.	.
12.917	22.7438	47.08	.	Q	V	.	.	.
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12.967	22.9391	47.34	.	Q	.V	.	.	.
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14.583	30.3185	67.55	.	Q	.	V	.	.	.	
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15.517	36.4999	101.20	.	Q	.	V	.	.	.	
15.533	36.6407	102.18	.	Q	.	V	.	.	.	
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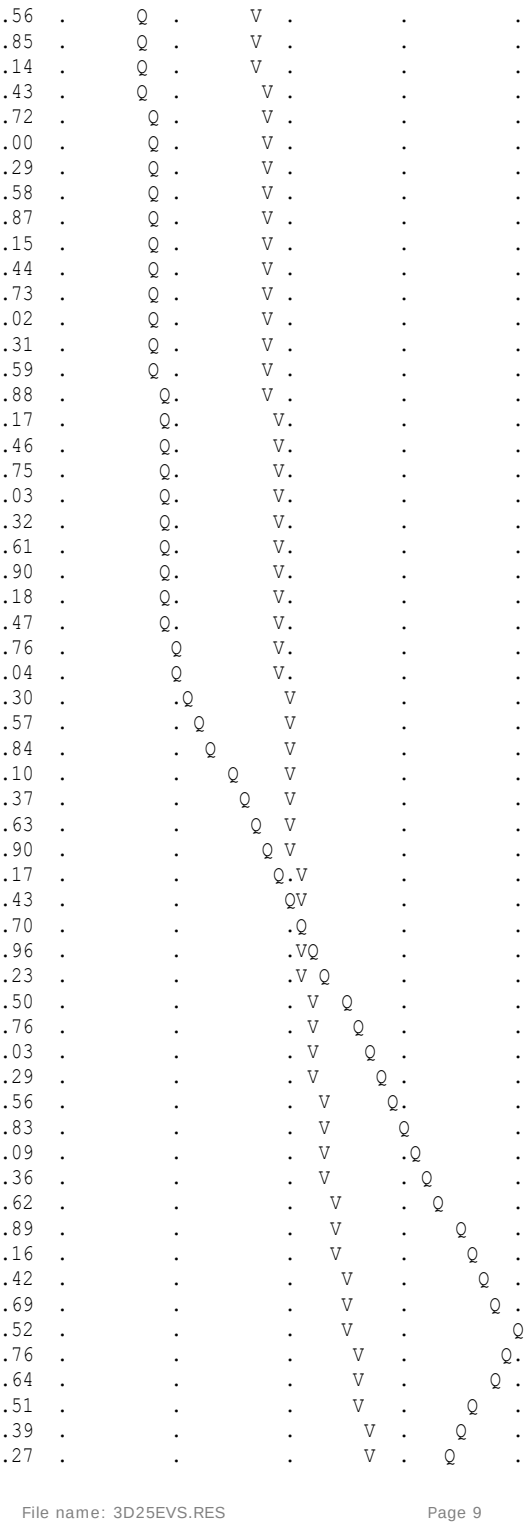
15.583	37.0718	105.56	
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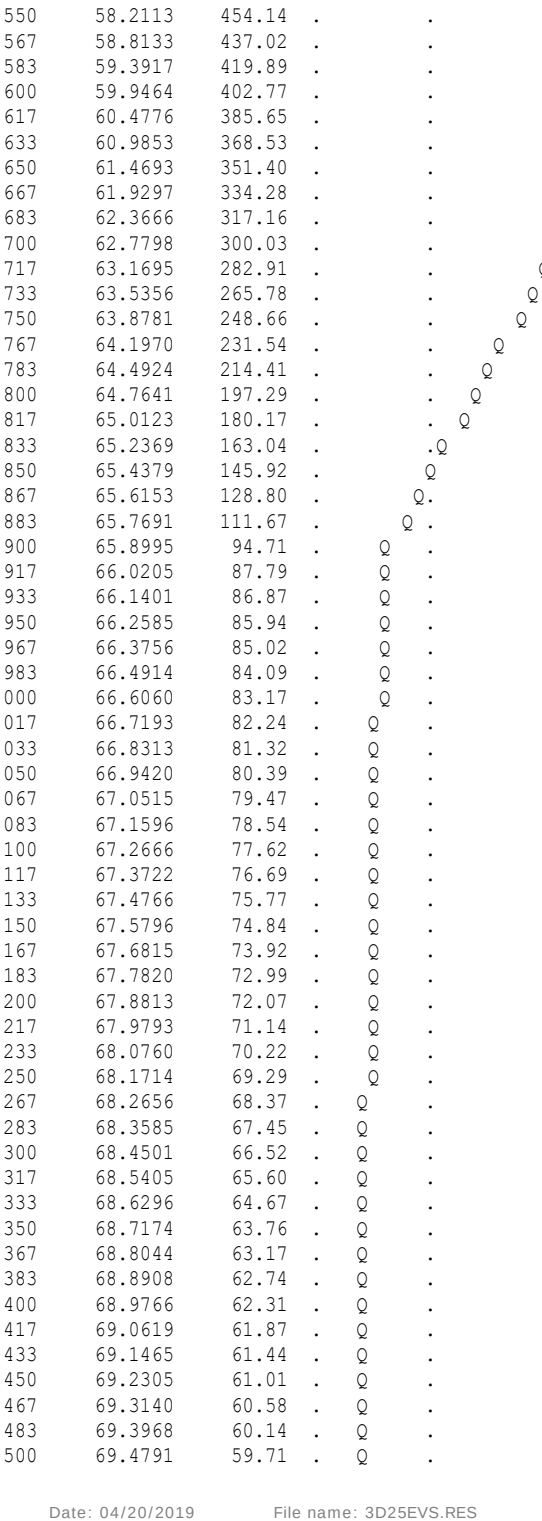
16.550	58.2113	454.14	
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16.900	65.8995	94.71	
16.917	66.0205	87.79	
16.933	66.1401	86.87	
16.950	66.2585	85.94	
16.967	66.3756	85.02	
16.983	66.4914	84.09	
17.000	66.6060	83.17	
17.017	66.7193	82.24	
17.033	66.8313	81.32	
17.050	66.9420	80.39	
17.067	67.0515	79.47	
17.083	67.1596	78.54	
17.100	67.2666	77.62	
17.117	67.3722	76.69	
17.133	67.4766	75.77	
17.150	67.5796	74.84	
17.167	67.6815	73.92	
17.183	67.7820	72.99	
17.200	67.8813	72.07	
17.217	67.9793	71.14	
17.233	68.0760	70.22	
17.250	68.1714	69.29	
17.267	68.2656	68.37	
17.283	68.3585	67.45	
17.300	68.4501	66.52	
17.317	68.5405	65.60	
17.333	68.6296	64.67	
17.350	68.7174	63.76	
17.367	68.8044	63.17	
17.383	68.8908	62.74	
17.400	68.9766	62.31	
17.417	69.0619	61.87	
17.433	69.1465	61.44	
17.450	69.2305	61.01	
17.467	69.3140	60.58	
17.483	69.3968	60.14	
17.500	69.4791	59.71	

```
17.517    69.5607    59.28  .   Q      .         .         .  V      .
17.533    69.6418    58.85  .   Q      .         .         .  V      .
17.550    69.7222    58.42  .   Q      .         .         .  V      .
17.567    69.8021    57.98  .   Q      .         .         .  V      .
17.583    69.8814    57.55  .   Q      .         .         .  V      .
17.600    69.9600    57.12  .   Q      .         .         .  V      .
17.617    70.0381    56.69  .   Q      .         .         .  V      .
17.633    70.1156    56.25  .   Q      .         .         .  V      .
17.650    70.1925    55.82  .   Q      .         .         .  V      .
17.667    70.2688    55.39  .   Q      .         .         .  V      .
17.683    70.3445    54.96  .   Q      .         .         .  V      .
17.700    70.4196    54.52  .  Q       .         .         .  V      .
17.717    70.4941    54.09  .  Q       .         .         .  V      .
17.733    70.5680    53.66  .  Q       .         .         .  V      .
17.750    70.6413    53.23  .  Q       .         .         .  V      .
17.767    70.7140    52.80  .  Q       .         .         .  V      .
17.783    70.7862    52.36  .  Q       .         .         .  V      .
17.800    70.8577    51.94  .  Q       .         .         .  V      .
17.817    70.9288    51.63  .  Q       .         .         .   V     .
17.833    70.9996    51.37  .  Q       .         .         .   V     .
17.850    71.0700    51.11  .  Q       .         .         .   V     .
17.867    71.1400    50.85  .  Q       .         .         .   V     .
17.883    71.2097    50.59  .  Q       .         .         .   V     .
17.900    71.2790    50.32  .  Q       .         .         .   V     .
17.917    71.3480    50.06  .  Q       .         .         .   V     .
17.933    71.4166    49.80  .  Q       .         .         .   V     .
17.950    71.4848    49.54  .  Q       .         .         .   V     .
17.967    71.5527    49.28  .  Q       .         .         .   V     .
17.983    71.6202    49.02  .  Q       .         .         .   V     .
18.000    71.6874    48.76  .  Q       .         .         .   V     .
18.017    71.7542    48.49  .  Q       .         .         .   V     .
18.033    71.8206    48.23  .  Q       .         .         .   V     .
18.050    71.8867    47.97  .  Q       .         .         .   V     .
18.067    71.9524    47.71  .  Q       .         .         .   V     .
18.083    72.0177    47.45  .  Q       .         .         .   V     .
18.100    72.0827    47.19  .  Q       .         .         .   V     .
18.117    72.1474    46.92  .  Q       .         .         .   V     .
18.133    72.2116    46.66  .  Q       .         .         .   V     .
18.150    72.2756    46.40  .  Q       .         .         .   V     .
18.167    72.3391    46.14  .  Q       .         .         .   V     .
18.183    72.4023    45.88  .  Q       .         .         .   V     .
18.200    72.4651    45.62  .  Q       .         .         .   V     .
18.217    72.5276    45.36  .  Q       .         .         .   V     .
18.233    72.5897    45.09  .  Q       .         .         .   V     .
18.250    72.6514    44.82  .  Q       .         .         .   V     .
18.267    72.7125    44.36  .  Q       .         .         .   V     .
18.283    72.7730    43.86  .  Q       .         .         .   V     .
18.300    72.8327    43.35  .  Q       .         .         .   V     .
18.317    72.8917    42.85  .  Q       .         .         .   V     .
18.333    72.9500    42.34  .  Q       .         .         .    V    .
18.350    73.0077    41.84  .  Q       .         .         .    V    .
18.367    73.0646    41.33  .  Q       .         .         .    V    .
18.383    73.1208    40.83  . Q        .         .         .    V    .
18.400    73.1764    40.32  . Q        .         .         .    V    .
18.417    73.2312    39.82  . Q        .         .         .    V    .
18.433    73.2854    39.31  . Q        .         .         .    V    .
18.450    73.3388    38.81  . Q        .         .         .    V    .
18.467    73.3916    38.30  . Q        .         .         .    V    .
```



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18.483    73.4436    37.80  . Q        .         .         .    V    .
18.500    73.4950    37.29  . Q        .         .         .    V    .
18.517    73.5457    36.79  . Q        .         .         .    V    .
18.533    73.5957    36.28  . Q        .         .         .    V    .
18.550    73.6450    35.78  . Q        .         .         .    V    .
18.567    73.6935    35.27  . Q        .         .         .    V    .
18.583    73.7414    34.77  . Q        .         .         .    V    .
18.600    73.7886    34.26  . Q        .         .         .    V    .
18.617    73.8351    33.76  . Q        .         .         .    V    .
18.633    73.8809    33.26  . Q        .         .         .    V    .
18.650    73.9260    32.75  . Q        .         .         .    V    .
18.667    73.9705    32.25  . Q        .         .         .    V    .
18.683    74.0142    31.74  . Q        .         .         .    V    .
18.700    74.0573    31.27  . Q        .         .         .    V    .
18.717    74.1001    31.08  . Q        .         .         .    V    .
18.733    74.1427    30.96  . Q        .         .         .    V    .
18.750    74.1852    30.84  . Q        .         .         .    V    .
18.767    74.2275    30.72  . Q        .         .         .    V    .
18.783    74.2697    30.59  . Q        .         .         .    V    .
18.800    74.3116    30.47  . Q        .         .         .    V    .
18.817    74.3534    30.35  . Q        .         .         .    V    .
18.833    74.3951    30.23  . Q        .         .         .    V    .
18.850    74.4365    30.11  . Q        .         .         .    V    .
18.867    74.4778    29.98  . Q        .         .         .    V    .
18.883    74.5190    29.86  . Q        .         .         .    V    .
18.900    74.5599    29.74  . Q        .         .         .    V    .
18.917    74.6007    29.62  . Q        .         .         .    V    .
18.933    74.6413    29.50  . Q        .         .         .    V    .
18.950    74.6818    29.37  . Q        .         .         .    V    .
18.967    74.7221    29.25  . Q        .         .         .    V    .
18.983    74.7622    29.13  . Q        .         .         .    V    .
19.000    74.8022    29.01  . Q        .         .         .    V    .
19.017    74.8419    28.89  . Q        .         .         .    V    .
19.033    74.8816    28.76  . Q        .         .         .    V    .
19.050    74.9210    28.64  . Q        .         .         .    V    .
19.067    74.9603    28.52  . Q        .         .         .    V    .
19.083    74.9994    28.40  . Q        .         .         .    V    .
19.100    75.0384    28.28  . Q        .         .         .     V   .
19.117    75.0771    28.15  . Q        .         .         .     V   .
19.133    75.1158    28.03  . Q        .         .         .     V   .
19.150    75.1542    27.91  . Q        .         .         .     V   .
19.167    75.1925    27.82  . Q        .         .         .     V   .
19.183    75.2307    27.72  . Q        .         .         .     V   .
19.200    75.2688    27.63  . Q        .         .         .     V   .
19.217    75.3067    27.54  . Q        .         .         .     V   .
19.233    75.3445    27.44  .Q         .         .         .     V   .
19.250    75.3821    27.35  .Q         .         .         .     V   .
19.267    75.4197    27.25  .Q         .         .         .     V   .
19.283    75.4571    27.16  .Q         .         .         .     V   .
19.300    75.4944    27.07  .Q         .         .         .     V   .
19.317    75.5315    26.97  .Q         .         .         .     V   .
19.333    75.5686    26.88  .Q         .         .         .     V   .
19.350    75.6055    26.79  .Q         .         .         .     V   .
19.367    75.6422    26.69  .Q         .         .         .     V   .
19.383    75.6789    26.60  .Q         .         .         .     V   .
19.400    75.7154    26.51  .Q         .         .         .     V   .
19.417    75.7518    26.41  .Q         .         .         .     V   .
19.433    75.7880    26.32  .Q         .         .         .     V   .
```

19.450	75.8242	26.23	.Q	.	.	.	V	.
19.467	75.8601	26.13	.Q	.	.	.	V	.
19.483	75.8960	26.04	.Q	.	.	.	V	.
19.500	75.9317	25.95	.Q	.	.	.	V	.
19.517	75.9674	25.85	.Q	.	.	.	V	.
19.533	76.0028	25.76	.Q	.	.	.	V	.
19.550	76.0382	25.67	.Q	.	.	.	V	.
19.567	76.0734	25.57	.Q	.	.	.	V	.
19.583	76.1085	25.48	.Q	.	.	.	V	.
19.600	76.1435	25.39	.Q	.	.	.	V	.
19.617	76.1784	25.31	.Q	.	.	.	V	.
19.633	76.2131	25.24	.Q	.	.	.	V	.
19.650	76.2478	25.16	.Q	.	.	.	V	.
19.667	76.2823	25.09	.Q	.	.	.	V	.
19.683	76.3168	25.01	.Q	.	.	.	V	.
19.700	76.3511	24.94	.Q	.	.	.	V	.
19.717	76.3854	24.87	.Q	.	.	.	V	.
19.733	76.4195	24.79	.Q	.	.	.	V	.
19.750	76.4536	24.72	.Q	.	.	.	V	.
19.767	76.4875	24.64	.Q	.	.	.	V	.
19.783	76.5214	24.57	.Q	.	.	.	V	.
19.800	76.5551	24.49	.Q	.	.	.	V	.
19.817	76.5887	24.42	.Q	.	.	.	V	.
19.833	76.6223	24.34	.Q	.	.	.	V	.
19.850	76.6557	24.27	.Q	.	.	.	V	.
19.867	76.6890	24.20	.Q	.	.	.	V	.
19.883	76.7223	24.12	.Q	.	.	.	V	.
19.900	76.7554	24.05	.Q	.	.	.	V	.
19.917	76.7884	23.97	.Q	.	.	.	V	.
19.933	76.8213	23.90	.Q	.	.	.	V	.
19.950	76.8541	23.82	.Q	.	.	.	V	.
19.967	76.8869	23.75	.Q	.	.	.	V	.
19.983	76.9195	23.68	.Q	.	.	.	V	.
20.000	76.9520	23.60	.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%	1201.0
10%	1180.0
20%	375.0
30%	235.0
40%	205.0
50%	170.0
60%	135.0
70%	105.0
80%	65.0
90%	35.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA E                                                     *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                    *
* 25-YR EV APRIL 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: 4E25EVS.DAT
  TIME/DATE OF STUDY: 13:41 04/05/2019

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


******************************************************************************
  FLOW PROCESS FROM NODE    810.00 TO NODE    817.00 IS CODE = 1.2
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==============================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  171.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.174
    LOW LOSS FRACTION = 0.412
    TIME OF CONCENTRATION(MIN.) =  9.55
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  10
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.34
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.72
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.95
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.59
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.20
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  3.68

------------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    30.33
```



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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    22.11

------------------------------------------------------------------------------
```

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

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	101.1	202.1	303.2	404.3
10.000	5.4814	9.39	Q	V .	.	.	.
10.017	5.4943	9.41	Q	V .	.	.	.
10.033	5.5073	9.44	Q	V .	.	.	.
10.050	5.5204	9.46	Q	V .	.	.	.
10.067	5.5334	9.48	Q	V .	.	.	.
10.083	5.5465	9.50	Q	V .	.	.	.
10.100	5.5596	9.52	Q	V .	.	.	.
10.117	5.5728	9.54	Q	V .	.	.	.
10.133	5.5859	9.56	Q	V .	.	.	.
10.150	5.5991	9.57	Q	V .	.	.	.
10.167	5.6123	9.58	Q	V .	.	.	.
10.183	5.6255	9.59	Q	V .	.	.	.
10.200	5.6387	9.60	Q	V .	.	.	.
10.217	5.6520	9.61	Q	V .	.	.	.
10.233	5.6652	9.62	Q	V .	.	.	.
10.250	5.6785	9.64	Q	V .	.	.	.
10.267	5.6918	9.65	Q	V .	.	.	.
10.283	5.7051	9.66	Q	V .	.	.	.
10.300	5.7185	9.69	Q	V .	.	.	.
10.317	5.7318	9.71	Q	V .	.	.	.
10.333	5.7452	9.73	Q	V .	.	.	.
10.350	5.7587	9.76	Q	V .	.	.	.
10.367	5.7721	9.78	Q	V .	.	.	.
10.383	5.7856	9.80	Q	V .	.	.	.
10.400	5.7992	9.83	Q	V .	.	.	.
10.417	5.8127	9.85	Q	V .	.	.	.
10.433	5.8263	9.87	Q	V .	.	.	.
10.450	5.8400	9.89	Q	V .	.	.	.
10.467	5.8536	9.90	Q	V .	.	.	.
10.483	5.8673	9.91	Q	V .	.	.	.
10.500	5.8809	9.93	Q	V .	.	.	.
10.517	5.8946	9.94	Q	V .	.	.	.
10.533	5.9083	9.95	Q	V .	.	.	.
10.550	5.9221	9.96	Q	V .	.	.	.
10.567	5.9358	9.98	Q	V .	.	.	.
10.583	5.9496	9.99	Q	V .	.	.	.
10.600	5.9633	10.00	Q	V .	.	.	.
10.617	5.9771	10.03	Q	V .	.	.	.
10.633	5.9910	10.05	Q	V .	.	.	.
10.650	6.0049	10.08	Q	V .	.	.	.
10.667	6.0188	10.11	Q	V .	.	.	.
10.683	6.0328	10.13	.Q	V .	.	.	.
10.700	6.0467	10.16	.Q	V .	.	.	.
10.717	6.0608	10.18	.Q	V .	.	.	.
10.733	6.0748	10.21	.Q	V .	.	.	.
10.750	6.0889	10.24	.Q	V .	.	.	.
10.767	6.1031	10.25	.Q	V .	.	.	.
10.783	6.1172	10.27	.Q	V .	.	.	.
10.800	6.1314	10.28	.Q	V .	.	.	.
10.817	6.1455	10.29	.Q	V .	.	.	.
10.833	6.1597	10.31	.Q	V .	.	.	.
10.850	6.1740	10.32	.Q	V .	.	.	.
10.867	6.1882	10.34	.Q	V .	.	.	.
10.883	6.2025	10.35	.Q	V .	.	.	.
10.900	6.2167	10.36	.Q	V .	.	.	.
10.917	6.2310	10.38	.Q	V .	.	.	.
10.933	6.2454	10.41	.Q	V .	.	.	.
10.950	6.2597	10.44	.Q	V .	.	.	.
10.967	6.2741	10.46	.Q	V .	.	.	.
10.983	6.2886	10.49	.Q	V .	.	.	.
11.000	6.3031	10.52	.Q	V .	.	.	.
11.017	6.3176	10.55	.Q	V .	.	.	.
11.033	6.3322	10.58	.Q	V .	.	.	.
11.050	6.3468	10.61	.Q	V .	.	.	.
11.067	6.3614	10.63	.Q	V .	.	.	.
11.083	6.3761	10.66	.Q	V .	.	.	.
11.100	6.3908	10.67	.Q	V .	.	.	.
11.117	6.4055	10.69	.Q	V .	.	.	.
11.133	6.4203	10.70	.Q	V .	.	.	.
11.150	6.4350	10.72	.Q	V .	.	.	.
11.167	6.4498	10.73	.Q	V .	.	.	.
11.183	6.4646	10.75	.Q	V .	.	.	.
11.200	6.4794	10.76	.Q	V .	.	.	.
11.217	6.4943	10.78	.Q	V .	.	.	.
11.233	6.5092	10.79	.Q	V .	.	.	.
11.250	6.5241	10.82	.Q	V .	.	.	.
11.267	6.5390	10.85	.Q	V .	.	.	.
11.283	6.5540	10.89	.Q	V .	.	.	.
11.300	6.5690	10.92	.Q	V .	.	.	.
11.317	6.5841	10.95	.Q	V .	.	.	.
11.333	6.5993	10.98	.Q	V .	.	.	.
11.350	6.6144	11.01	.Q	V .	.	.	.
11.367	6.6296	11.04	.Q	V .	.	.	.
11.383	6.6449	11.08	.Q	V .	.	.	.
11.400	6.6602	11.10	.Q	V .	.	.	.
11.417	6.6755	11.12	.Q	V .	.	.	.
11.433	6.6908	11.13	.Q	V .	.	.	.
11.450	6.7062	11.15	.Q	V .	.	.	.
11.467	6.7216	11.17	.Q	V .	.	.	.
11.483	6.7370	11.18	.Q	V .	.	.	.
11.500	6.7524	11.20	.Q	V .	.	.	.
11.517	6.7679	11.22	.Q	V .	.	.	.
11.533	6.7833	11.23	.Q	V .	.	.	.
11.550	6.7988	11.25	.Q	V .	.	.	.
11.567	6.8144	11.29	.Q	V .	.	.	.
11.583	6.8300	11.32	.Q	V.	.	.	.
11.600	6.8456	11.36	.Q	V.	.	.	.
11.617	6.8613	11.39	.Q	V.	.	.	.
11.633	6.8771	11.43	.Q	V.	.	.	.
11.650	6.8928	11.46	.Q	V.	.	.	.
11.667	6.9087	11.50	.Q	V.	.	.	.
11.683	6.9246	11.53	.Q	V.	.	.	.
11.700	6.9405	11.57	.Q	V.	.	.	.

11.717	6.9565	11.60	.Q	V.	.	.	.
11.733	6.9725	11.62	.Q	V.	.	.	.
11.750	6.9885	11.64	.Q	V.	.	.	.
11.767	7.0045	11.65	.Q	V.	.	.	.
11.783	7.0206	11.67	.Q	V.	.	.	.
11.800	7.0367	11.69	.Q	V.	.	.	.
11.817	7.0529	11.71	.Q	V.	.	.	.
11.833	7.0690	11.73	.Q	V.	.	.	.
11.850	7.0852	11.75	.Q	V.	.	.	.
11.867	7.1014	11.77	.Q	V.	.	.	.
11.883	7.1177	11.80	.Q	V.	.	.	.
11.900	7.1340	11.84	.Q	V.	.	.	.
11.917	7.1503	11.88	.Q	V.	.	.	.
11.933	7.1668	11.92	.Q	V.	.	.	.
11.950	7.1832	11.96	.Q	V.	.	.	.
11.967	7.1998	12.00	.Q	V.	.	.	.
11.983	7.2164	12.04	.Q	V.	.	.	.
12.000	7.2330	12.08	.Q	V.	.	.	.
12.017	7.2497	12.12	.Q	V.	.	.	.
12.033	7.2665	12.22	.Q	V.	.	.	.
12.050	7.2837	12.47	.Q	V.	.	.	.
12.067	7.3012	12.73	.Q	V.	.	.	.
12.083	7.3191	12.99	.Q	V.	.	.	.
12.100	7.3374	13.24	.Q	V.	.	.	.
12.117	7.3560	13.50	.Q	V.	.	.	.
12.133	7.3749	13.76	.Q	V.	.	.	.
12.150	7.3942	14.02	.Q	V.	.	.	.
12.167	7.4139	14.27	.Q	V.	.	.	.
12.183	7.4339	14.53	.Q	V.	.	.	.
12.200	7.4542	14.71	.Q	V.	.	.	.
12.217	7.4746	14.86	.Q	V.	.	.	.
12.233	7.4953	15.02	.Q	V.	.	.	.
12.250	7.5162	15.17	.Q	V.	.	.	.
12.267	7.5373	15.32	.Q	V.	.	.	.
12.283	7.5586	15.47	.Q	V.	.	.	.
12.300	7.5801	15.62	.Q	V.	.	.	.
12.317	7.6019	15.77	.Q	V	.	.	.
12.333	7.6238	15.92	.Q	V	.	.	.
12.350	7.6459	16.04	.Q	V	.	.	.
12.367	7.6680	16.08	.Q	V	.	.	.
12.383	7.6902	16.10	.Q	V	.	.	.
12.400	7.7124	16.13	.Q	V	.	.	.
12.417	7.7347	16.16	.Q	V	.	.	.
12.433	7.7570	16.18	.Q	V	.	.	.
12.450	7.7793	16.21	.Q	V	.	.	.
12.467	7.8017	16.23	.Q	V	.	.	.
12.483	7.8241	16.26	.Q	V	.	.	.
12.500	7.8465	16.28	.Q	V	.	.	.
12.517	7.8690	16.33	.Q	V	.	.	.
12.533	7.8915	16.38	.Q	V	.	.	.
12.550	7.9142	16.44	.Q	V	.	.	.
12.567	7.9369	16.49	.Q	V	.	.	.
12.583	7.9597	16.55	.Q	V	.	.	.
12.600	7.9826	16.60	.Q	V	.	.	.
12.617	8.0055	16.66	.Q	V	.	.	.
12.633	8.0285	16.71	.Q	V	.	.	.
12.650	8.0516	16.77	.Q	V	.	.	.
12.667	8.0748	16.82	.Q	V	.	.	.

12.683	8.0980	16.85	.Q	V	.	.	.
12.700	8.1212	16.88	.Q	V	.	.	.
12.717	8.1445	16.91	.Q	V	.	.	.
12.733	8.1679	16.94	.Q	V	.	.	.
12.750	8.1912	16.97	.Q	V	.	.	.
12.767	8.2147	17.00	.Q	V	.	.	.
12.783	8.2381	17.03	.Q	V	.	.	.
12.800	8.2616	17.06	.Q	V	.	.	.
12.817	8.2851	17.09	.Q	V	.	.	.
12.833	8.3087	17.13	.Q	V	.	.	.
12.850	8.3324	17.20	.Q	V	.	.	.
12.867	8.3562	17.26	.Q	.V	.	.	.
12.883	8.3801	17.32	.Q	.V	.	.	.
12.900	8.4040	17.39	.Q	.V	.	.	.
12.917	8.4281	17.45	.Q	.V	.	.	.
12.933	8.4522	17.51	.Q	.V	.	.	.
12.950	8.4764	17.58	.Q	.V	.	.	.
12.967	8.5007	17.64	.Q	.V	.	.	.
12.983	8.5251	17.70	.Q	.V	.	.	.
13.000	8.5495	17.74	.Q	.V	.	.	.
13.017	8.5740	17.78	.Q	.V	.	.	.
13.033	8.5985	17.81	.Q	.V	.	.	.
13.050	8.6231	17.84	.Q	.V	.	.	.
13.067	8.6477	17.88	.Q	.V	.	.	.
13.083	8.6724	17.91	.Q	.V	.	.	.
13.100	8.6971	17.95	.Q	.V	.	.	.
13.117	8.7219	17.98	.Q	.V	.	.	.
13.133	8.7467	18.02	.Q	.V	.	.	.
13.150	8.7716	18.07	.Q	.V	.	.	.
13.167	8.7966	18.14	.Q	.V	.	.	.
13.183	8.8217	18.22	.Q	.V	.	.	.
13.200	8.8469	18.29	.Q	.V	.	.	.
13.217	8.8722	18.36	.Q	.V	.	.	.
13.233	8.8976	18.44	.Q	.V	.	.	.
13.250	8.9231	18.51	.Q	.V	.	.	.
13.267	8.9487	18.59	.Q	.V	.	.	.
13.283	8.9744	18.66	.Q	.V	.	.	.
13.300	9.0002	18.73	.Q	.V	.	.	.
13.317	9.0260	18.78	.Q	.V	.	.	.
13.333	9.0520	18.82	.Q	.V	.	.	.
13.350	9.0780	18.86	.Q	.V	.	.	.
13.367	9.1040	18.90	.Q	. V	.	.	.
13.383	9.1301	18.94	.Q	. V	.	.	.
13.400	9.1562	18.98	.Q	. V	.	.	.
13.417	9.1824	19.03	.Q	. V	.	.	.
13.433	9.2087	19.07	.Q	. V	.	.	.
13.450	9.2350	19.11	.Q	. V	.	.	.
13.467	9.2614	19.16	.Q	. V	.	.	.
13.483	9.2879	19.25	.Q	. V	.	.	.
13.500	9.3146	19.34	.Q	. V	.	.	.
13.517	9.3413	19.43	.Q	. V	.	.	.
13.533	9.3682	19.52	.Q	. V	.	.	.
13.550	9.3952	19.61	.Q	. V	.	.	.
13.567	9.4223	19.70	.Q	. V	.	.	.
13.583	9.4496	19.78	.Q	. V	.	.	.
13.600	9.4770	19.87	.Q	. V	.	.	.
13.617	9.5045	19.96	.Q	. V	.	.	.
13.633	9.5320	20.02	.Q	. V	.	.	.

13.650	9.5597	20.07	.Q	. V	.	.	.
13.667	9.5874	20.12	.Q	. V	.	.	.
13.683	9.6152	20.17	.Q	. V	.	.	.
13.700	9.6430	20.22	. Q	. V	.	.	.
13.717	9.6709	20.27	. Q	. V	.	.	.
13.733	9.6989	20.31	. Q	. V	.	.	.
13.750	9.7270	20.36	. Q	. V	.	.	.
13.767	9.7551	20.41	. Q	. V	.	.	.
13.783	9.7833	20.48	. Q	. V	.	.	.
13.800	9.8116	20.58	. Q	. V	.	.	.
13.817	9.8401	20.69	. Q	. V	.	.	.
13.833	9.8688	20.80	. Q	. V	.	.	.
13.850	9.8976	20.91	. Q	. V	.	.	.
13.867	9.9265	21.02	. Q	. V	.	.	.
13.883	9.9556	21.13	. Q	. V	.	.	.
13.900	9.9849	21.23	. Q	. V	.	.	.
13.917	10.0143	21.34	. Q	. V	.	.	.
13.933	10.0438	21.45	. Q	. V	.	.	.
13.950	10.0735	21.53	. Q	. V	.	.	.
13.967	10.1032	21.59	. Q	. V	.	.	.
13.983	10.1330	21.65	. Q	. V	.	.	.
14.000	10.1629	21.71	. Q	. V	.	.	.
14.017	10.1929	21.77	. Q	. V	.	.	.
14.033	10.2230	21.83	. Q	. V	.	.	.
14.050	10.2532	21.89	. Q	. V	.	.	.
14.067	10.2834	21.95	. Q	. V	.	.	.
14.083	10.3137	22.01	. Q	. V	.	.	.
14.100	10.3441	22.09	. Q	. V	.	.	.
14.117	10.3748	22.22	. Q	. V	.	.	.
14.133	10.4055	22.36	. Q	. V	.	.	.
14.150	10.4365	22.50	. Q	. V	.	.	.
14.167	10.4677	22.64	. Q	. V	.	.	.
14.183	10.4991	22.77	. Q	. V	.	.	.
14.200	10.5306	22.91	. Q	. V	.	.	.
14.217	10.5624	23.05	. Q	. V	.	.	.
14.233	10.5943	23.19	. Q	. V	.	.	.
14.250	10.6265	23.33	. Q	. V	.	.	.
14.267	10.6588	23.43	. Q	. V	.	.	.
14.283	10.6911	23.51	. Q	. V	.	.	.
14.300	10.7236	23.59	. Q	. V	.	.	.
14.317	10.7562	23.67	. Q	. V	.	.	.
14.333	10.7889	23.74	. Q	. V	.	.	.
14.350	10.8218	23.82	. Q	. V	.	.	.
14.367	10.8547	23.90	. Q	. V	.	.	.
14.383	10.8877	23.98	. Q	. V	.	.	.
14.400	10.9208	24.06	. Q	. V	.	.	.
14.417	10.9541	24.15	. Q	. V	.	.	.
14.433	10.9876	24.31	. Q	. V	.	.	.
14.450	11.0213	24.49	. Q	. V	.	.	.
14.467	11.0553	24.67	. Q	. V	.	.	.
14.483	11.0895	24.85	. Q	. V	.	.	.
14.500	11.1240	25.03	. Q	. V	.	.	.
14.517	11.1587	25.21	. Q	. V	.	.	.
14.533	11.1937	25.39	. Q	. V	.	.	.
14.550	11.2289	25.57	. Q	. V	.	.	.
14.567	11.2644	25.75	. Q	. V	.	.	.
14.583	11.3001	25.90	. Q	. V	.	.	.
14.600	11.3359	26.00	. Q	. V	.	.	.

14.617	11.3719	26.11	. Q	. V	.	.	.
14.633	11.4080	26.21	. Q	. V	.	.	.
14.650	11.4442	26.32	. Q	. V	.	.	.
14.667	11.4806	26.42	. Q	. V	.	.	.
14.683	11.5171	26.53	. Q	. V	.	.	.
14.700	11.5538	26.63	. Q	. V	.	.	.
14.717	11.5906	26.73	. Q	. V	.	.	.
14.733	11.6276	26.85	. Q	. V	.	.	.
14.750	11.6649	27.08	. Q	. V	.	.	.
14.767	11.7026	27.33	. Q	. V	.	.	.
14.783	11.7405	27.58	. Q	. V	.	.	.
14.800	11.7789	27.83	. Q	. V	.	.	.
14.817	11.8175	28.08	. Q	. V	.	.	.
14.833	11.8566	28.33	. Q	. V	.	.	.
14.850	11.8959	28.58	. Q	. V	.	.	.
14.867	11.9356	28.83	. Q	. V	.	.	.
14.883	11.9757	29.08	. Q	. V	.	.	.
14.900	12.0160	29.29	. Q	. V	.	.	.
14.917	12.0566	29.44	. Q	. V	.	.	.
14.933	12.0973	29.60	. Q	. V	.	.	.
14.950	12.1383	29.75	. Q	. V	.	.	.
14.967	12.1795	29.90	. Q	. V	.	.	.
14.983	12.2209	30.05	. Q	. V	.	.	.
15.000	12.2625	30.20	. Q	. V	.	.	.
15.017	12.3043	30.35	. Q	. V	.	.	.
15.033	12.3463	30.51	. Q	. V	.	.	.
15.050	12.3886	30.67	. Q	. V	.	.	.
15.067	12.4313	30.99	. Q	. V	.	.	.
15.083	12.4745	31.38	. Q	. V	.	.	.
15.100	12.5182	31.76	. Q	. V	.	.	.
15.117	12.5625	32.14	. Q	. V	.	.	.
15.133	12.6073	32.52	. Q	. V	.	.	.
15.150	12.6526	32.91	. Q	. V	.	.	.
15.167	12.6985	33.29	. Q	. V	.	.	.
15.183	12.7449	33.67	. Q	. V	.	.	.
15.200	12.7918	34.05	. Q	. V	.	.	.
15.217	12.8391	34.40	. Q	. V	.	.	.
15.233	12.8869	34.65	. Q	. V	.	.	.
15.250	12.9349	34.90	. Q	. V	.	.	.
15.267	12.9833	35.14	. Q	. V	.	.	.
15.283	13.0321	35.39	. Q	. V	.	.	.
15.300	13.0812	35.64	. Q	. V	.	.	.
15.317	13.1306	35.89	. Q	. V	.	.	.
15.333	13.1804	36.14	. Q	. V	.	.	.
15.350	13.2305	36.38	. Q	. V	.	.	.
15.367	13.2810	36.63	. Q	. V	.	.	.
15.383	13.3316	36.75	. Q	. V	.	.	.
15.400	13.3823	36.81	. Q	. V	.	.	.
15.417	13.4331	36.87	. Q	. V	.	.	.
15.433	13.4839	36.93	. Q	. V	.	.	.
15.450	13.5349	36.99	. Q	. V	.	.	.
15.467	13.5859	37.05	. Q	. V	.	.	.
15.483	13.6370	37.11	. Q	. V	.	.	.
15.500	13.6882	37.18	. Q	. V	.	.	.
15.517	13.7395	37.24	. Q	. V	.	.	.
15.533	13.7911	37.45	. Q	. V	.	.	.
15.550	13.8437	38.19	. Q	. V	.	.	.
15.567	13.8974	38.98	. Q	. V	.	.	.

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15.583     13.9522     39.77  .  Q      .       V .         .         .
15.600     14.0081     40.55  .   Q     .       V .         .         .
15.617     14.0650     41.34  .   Q     .       V .         .         .
15.633     14.1230     42.13  .   Q     .       V .         .         .
15.650     14.1821     42.91  .   Q     .       V .         .         .
15.667     14.2423     43.70  .   Q     .       V .         .         .
15.683     14.3036     44.50  .   Q     .       V .         .         .
15.700     14.3684     47.00  .   Q     .       V .         .         .
15.717     14.4381     50.67  .    Q    .        V.         .         .
15.733     14.5130     54.34  .    Q    .        V.         .         .
15.750     14.5929     58.02  .    Q    .        V.         .         .
15.767     14.6779     61.69  .     Q   .        V.         .         .
15.783     14.7679     65.36  .     Q   .        V.         .         .
15.800     14.8630     69.03  .     Q   .        V.         .         .
15.817     14.9631     72.70  .      Q  .        V.         .         .
15.833     15.0683     76.37  .      Q  .        V.         .         .
15.850     15.1786     80.10  .      Q  .         V         .         .
15.867     15.2945     84.10  .       Q .         V         .         .
15.883     15.4159     88.13  .       Q .         V         .         .
15.900     15.5428     92.17  .        Q.         V         .         .
15.917     15.6753     96.20  .        Q.         V         .         .
15.933     15.8134    100.24  .        Q.         V         .         .
15.950     15.9570    104.27  .         Q         .V        .         .
15.967     16.1062    108.31  .         Q         .V        .         .
15.983     16.2609    112.34  .         .Q        .V        .         .
16.000     16.4212    116.38  .         .Q        .V        .         .
16.017     16.6049    133.36  .         .  Q      .V        .         .
16.033     16.8299    163.30  .         .    Q    . V       .         .
16.050     17.0960    193.24  .         .       Q. V       .         .
16.067     17.4034    223.17  .         .         . Q       .         .
16.083     17.7521    253.11  .         .         .  V Q    .         .
16.100     18.1420    283.05  .         .         .  V    Q .         .
16.117     18.5731    312.99  .         .         .   V     Q         .
16.133     19.0454    342.92  .         .         .    V    .  Q      .
16.150     19.5590    372.86  .         .         .    V    .     Q   .
16.167     20.1159    404.29  .         .         .     V   .        Q
16.183     20.6252    369.76  .         .         .      V  .     Q   .
16.200     21.0844    333.41  .         .         .      V  . Q       .
16.217     21.4936    297.06  .         .         .       VQ.         .
16.233     21.8527    260.71  .         .         .    Q  V .         .
16.250     22.1617    224.36  .         .         . Q     V.         .
16.267     22.4207    188.01  .         .       Q .       V.         .
16.283     22.6296    151.66  .         .    Q    .       V.         .
16.300     22.7884    115.31  .         .Q        .        V         .
16.317     22.8972     78.96  .      Q  .        .        V         .
16.333     22.9750     56.52  .    Q    .        .        V         .
16.350     23.0499     54.33  .    Q    .        .        V         .
16.367     23.1219     52.32  .    Q    .        .        V         .
16.383     23.1912     50.31  .   Q     .        .        V         .
16.400     23.2578     48.30  .   Q     .        .        V         .
16.417     23.3215     46.28  .   Q     .        .        V         .
16.433     23.3825     44.27  .   Q     .        .        V         .
16.450     23.4407     42.26  .   Q     .        .        V         .
16.467     23.4961     40.25  .  Q      .        .        V         .
16.483     23.5489     38.32  .  Q      .        .        .V        .
16.500     23.6005     37.44  .  Q      .        .        .V        .
16.517     23.6513     36.86  .  Q      .        .        .V        .
16.533     23.7012     36.27  .  Q      .        .        .V        .
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16.550     23.7504     35.69  .  Q      .        .        .V        .
16.567     23.7987     35.11  .  Q      .        .        .V        .
16.583     23.8463     34.52  .  Q      .        .        .V        .
16.600     23.8930     33.94  .  Q      .        .        .V        .
16.617     23.9390     33.36  .  Q      .        .        .V        .
16.633     23.9841     32.77  .  Q      .        .        .V        .
16.650     24.0285     32.23  .  Q      .        .        .V        .
16.667     24.0723     31.77  .  Q      .        .        .V        .
16.683     24.1154     31.31  .  Q      .        .        .V        .
16.700     24.1579     30.85  .  Q      .        .        .V        .
16.717     24.1998     30.39  .  Q      .        .        .V        .
16.733     24.2410     29.93  . Q       .        .        .V        .
16.750     24.2816     29.47  . Q       .        .        . V       .
16.767     24.3215     29.01  . Q       .        .        . V       .
16.783     24.3608     28.55  . Q       .        .        . V       .
16.800     24.3995     28.09  . Q       .        .        . V       .
16.817     24.4377     27.73  . Q       .        .        . V       .
16.833     24.4755     27.42  . Q       .        .        . V       .
16.850     24.5128     27.10  . Q       .        .        . V       .
16.867     24.5497     26.78  . Q       .        .        . V       .
16.883     24.5862     26.47  . Q       .        .        . V       .
16.900     24.6222     26.15  . Q       .        .        . V       .
16.917     24.6578     25.84  . Q       .        .        . V       .
16.933     24.6929     25.52  . Q       .        .        . V       .
16.950     24.7277     25.20  . Q       .        .        . V       .
16.967     24.7620     24.91  . Q       .        .        . V       .
16.983     24.7959     24.67  . Q       .        .        . V       .
17.000     24.8296     24.43  . 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%	1021.0
10%	260.0
20%	135.0
30%	85.0
40%	75.0
50%	60.0
60%	50.0
70%	40.0
80%	25.0
90%	15.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

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

 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA F                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 25-YR EV ROKAMOTO JUNE 2018                                           *
 ************************************************************************

  FILE NAME: 4F25EVS.DAT
  TIME/DATE OF STUDY: 08:10 08/15/2018

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


******************************************************************************
  FLOW PROCESS FROM NODE    920.00 TO NODE    905.00 IS CODE = 1.2
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==============================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  553.80
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.254
    LOW LOSS FRACTION = 0.488
    TIME OF CONCENTRATION(MIN.) = 17.15
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  10
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.34
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.72
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.95
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.59
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.20
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  3.68

------------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    86.93
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    82.90

------------------------------------------------------------------------------
```

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	216.7	433.4	650.1	866.8
10.000	15.3836	26.36	.Q	V .	.	.	.
10.017	15.4200	26.40	.Q	V .	.	.	.
10.033	15.4564	26.43	.Q	V .	.	.	.
10.050	15.4928	26.46	.Q	V .	.	.	.
10.067	15.5293	26.49	.Q	V .	.	.	.
10.083	15.5658	26.52	.Q	V .	.	.	.
10.100	15.6024	26.55	.Q	V .	.	.	.
10.117	15.6390	26.58	.Q	V .	.	.	.
10.133	15.6757	26.61	.Q	V .	.	.	.
10.150	15.7124	26.64	.Q	V .	.	.	.
10.167	15.7491	26.67	.Q	V .	.	.	.
10.183	15.7859	26.70	.Q	V .	.	.	.
10.200	15.8227	26.73	.Q	V .	.	.	.
10.217	15.8596	26.77	.Q	V .	.	.	.
10.233	15.8965	26.80	.Q	V .	.	.	.
10.250	15.9335	26.83	.Q	V .	.	.	.
10.267	15.9705	26.86	.Q	V .	.	.	.
10.283	16.0075	26.89	.Q	V .	.	.	.
10.300	16.0446	26.94	.Q	V .	.	.	.
10.317	16.0818	27.00	.Q	V .	.	.	.
10.333	16.1191	27.07	.Q	V .	.	.	.
10.350	16.1564	27.13	.Q	V .	.	.	.
10.367	16.1939	27.20	.Q	V .	.	.	.
10.383	16.2315	27.27	.Q	V .	.	.	.
10.400	16.2691	27.33	.Q	V .	.	.	.
10.417	16.3068	27.40	.Q	V .	.	.	.
10.433	16.3447	27.46	.Q	V .	.	.	.
10.450	16.3826	27.53	.Q	V .	.	.	.
10.467	16.4206	27.60	.Q	V .	.	.	.
10.483	16.4587	27.66	.Q	V .	.	.	.
10.500	16.4969	27.73	.Q	V .	.	.	.
10.517	16.5352	27.79	.Q	V .	.	.	.
10.533	16.5736	27.86	.Q	V .	.	.	.
10.550	16.6120	27.93	.Q	V .	.	.	.
10.567	16.6506	27.99	.Q	V .	.	.	.
10.583	16.6892	28.05	.Q	V .	.	.	.
10.600	16.7279	28.08	.Q	V .	.	.	.
10.617	16.7666	28.12	.Q	V .	.	.	.
10.633	16.8054	28.16	.Q	V .	.	.	.
10.650	16.8442	28.19	.Q	V .	.	.	.
10.667	16.8831	28.23	.Q	V .	.	.	.
10.683	16.9221	28.26	.Q	V .	.	.	.
10.700	16.9610	28.30	.Q	V .	.	.	.
10.717	17.0001	28.34	.Q	V .	.	.	.
10.733	17.0391	28.37	.Q	V .	.	.	.

10.750	17.0783	28.41	.Q	V .	.	.	.
10.767	17.1175	28.44	.Q	V .	.	.	.
10.783	17.1567	28.48	.Q	V .	.	.	.
10.800	17.1960	28.51	.Q	V .	.	.	.
10.817	17.2353	28.55	.Q	V .	.	.	.
10.833	17.2747	28.59	.Q	V .	.	.	.
10.850	17.3141	28.62	.Q	V .	.	.	.
10.867	17.3536	28.67	.Q	V .	.	.	.
10.883	17.3932	28.74	.Q	V .	.	.	.
10.900	17.4329	28.82	.Q	V .	.	.	.
10.917	17.4727	28.90	.Q	V .	.	.	.
10.933	17.5126	28.98	.Q	V .	.	.	.
10.950	17.5526	29.06	.Q	V .	.	.	.
10.967	17.5927	29.14	.Q	V .	.	.	.
10.983	17.6330	29.21	.Q	V .	.	.	.
11.000	17.6733	29.29	.Q	V .	.	.	.
11.017	17.7138	29.37	.Q	V .	.	.	.
11.033	17.7543	29.45	.Q	V .	.	.	.
11.050	17.7950	29.53	.Q	V .	.	.	.
11.067	17.8358	29.60	.Q	V .	.	.	.
11.083	17.8767	29.68	.Q	V .	.	.	.
11.100	17.9177	29.76	.Q	V .	.	.	.
11.117	17.9588	29.84	.Q	V .	.	.	.
11.133	18.0000	29.92	.Q	V .	.	.	.
11.150	18.0413	29.99	.Q	V .	.	.	.
11.167	18.0827	30.04	.Q	V .	.	.	.
11.183	18.1241	30.08	.Q	V .	.	.	.
11.200	18.1656	30.12	.Q	V .	.	.	.
11.217	18.2071	30.17	.Q	V .	.	.	.
11.233	18.2488	30.21	.Q	V .	.	.	.
11.250	18.2904	30.25	.Q	V .	.	.	.
11.267	18.3322	30.29	.Q	V .	.	.	.
11.283	18.3739	30.34	.Q	V .	.	.	.
11.300	18.4158	30.38	.Q	V .	.	.	.
11.317	18.4577	30.42	.Q	V .	.	.	.
11.333	18.4997	30.47	.Q	V .	.	.	.
11.350	18.5417	30.51	.Q	V .	.	.	.
11.367	18.5838	30.55	.Q	V .	.	.	.
11.383	18.6259	30.59	.Q	V .	.	.	.
11.400	18.6681	30.64	.Q	V .	.	.	.
11.417	18.7104	30.68	.Q	V .	.	.	.
11.433	18.7527	30.73	.Q	V .	.	.	.
11.450	18.7951	30.81	.Q	V .	.	.	.
11.467	18.8377	30.91	.Q	V .	.	.	.
11.483	18.8804	31.00	.Q	V .	.	.	.
11.500	18.9232	31.09	.Q	V .	.	.	.
11.517	18.9662	31.19	.Q	V .	.	.	.
11.533	19.0093	31.28	.Q	V .	.	.	.
11.550	19.0525	31.38	.Q	V .	.	.	.
11.567	19.0958	31.47	.Q	V .	.	.	.
11.583	19.1393	31.57	.Q	V .	.	.	.
11.600	19.1829	31.66	.Q	V .	.	.	.
11.617	19.2267	31.76	.Q	V .	.	.	.
11.633	19.2705	31.85	.Q	V .	.	.	.
11.650	19.3145	31.94	.Q	V .	.	.	.
11.667	19.3587	32.04	.Q	V .	.	.	.
11.683	19.4029	32.13	.Q	V .	.	.	.
11.700	19.4473	32.23	.Q	V .	.	.	.

11.717	19.4918	32.32	.Q	V .	.	.	.
11.733	19.5365	32.39	.Q	V .	.	.	.
11.750	19.5811	32.44	.Q	V.	.	.	.
11.767	19.6259	32.49	.Q	V.	.	.	.
11.783	19.6707	32.54	.Q	V.	.	.	.
11.800	19.7156	32.59	.Q	V.	.	.	.
11.817	19.7606	32.65	.Q	V.	.	.	.
11.833	19.8056	32.70	.Q	V.	.	.	.
11.850	19.8507	32.75	.Q	V.	.	.	.
11.867	19.8959	32.80	.Q	V.	.	.	.
11.883	19.9412	32.86	.Q	V.	.	.	.
11.900	19.9865	32.91	.Q	V.	.	.	.
11.917	20.0319	32.96	.Q	V.	.	.	.
11.933	20.0774	33.01	.Q	V.	.	.	.
11.950	20.1229	33.07	.Q	V.	.	.	.
11.967	20.1685	33.12	.Q	V.	.	.	.
11.983	20.2142	33.17	.Q	V.	.	.	.
12.000	20.2600	33.23	.Q	V.	.	.	.
12.017	20.3063	33.63	.Q	V.	.	.	.
12.033	20.3535	34.28	.Q	V.	.	.	.
12.050	20.4016	34.92	.Q	V.	.	.	.
12.067	20.4506	35.57	.Q	V.	.	.	.
12.083	20.5005	36.21	.Q	V.	.	.	.
12.100	20.5513	36.86	.Q	V.	.	.	.
12.117	20.6029	37.50	.Q	V.	.	.	.
12.133	20.6555	38.15	.Q	V.	.	.	.
12.150	20.7089	38.80	.Q	V.	.	.	.
12.167	20.7632	39.44	.Q	V.	.	.	.
12.183	20.8185	40.09	.Q	V.	.	.	.
12.200	20.8746	40.73	.Q	V.	.	.	.
12.217	20.9315	41.38	.Q	V.	.	.	.
12.233	20.9894	42.02	.Q	V.	.	.	.
12.250	21.0482	42.67	.Q	V.	.	.	.
12.267	21.1079	43.31	.Q	V.	.	.	.
12.283	21.1684	43.96	. Q	V.	.	.	.
12.300	21.2295	44.35	. Q	V.	.	.	.
12.317	21.2907	44.42	. Q	V.	.	.	.
12.333	21.3520	44.50	. Q	V.	.	.	.
12.350	21.4134	44.57	. Q	V.	.	.	.
12.367	21.4749	44.65	. Q	V.	.	.	.
12.383	21.5365	44.72	. Q	V.	.	.	.
12.400	21.5982	44.79	. Q	V.	.	.	.
12.417	21.6600	44.87	. Q	V.	.	.	.
12.433	21.7219	44.94	. Q	V.	.	.	.
12.450	21.7839	45.02	. Q	V	.	.	.
12.467	21.8460	45.09	. Q	V	.	.	.
12.483	21.9082	45.17	. Q	V	.	.	.
12.500	21.9705	45.24	. Q	V	.	.	.
12.517	22.0329	45.32	. Q	V	.	.	.
12.533	22.0955	45.39	. Q	V	.	.	.
12.550	22.1581	45.46	. Q	V	.	.	.
12.567	22.2208	45.54	. Q	V	.	.	.
12.583	22.2837	45.64	. Q	V	.	.	.
12.600	22.3467	45.80	. Q	V	.	.	.
12.617	22.4100	45.95	. Q	V	.	.	.
12.633	22.4736	46.11	. Q	V	.	.	.
12.650	22.5373	46.27	. Q	V	.	.	.
12.667	22.6012	46.43	. Q	V	.	.	.

12.683	22.6654	46.58	. Q	V	.	.	.
12.700	22.7298	46.74	. Q	V	.	.	.
12.717	22.7944	46.90	. Q	V	.	.	.
12.733	22.8592	47.05	. Q	V	.	.	.
12.750	22.9242	47.21	. Q	V	.	.	.
12.767	22.9895	47.37	. Q	V	.	.	.
12.783	23.0549	47.53	. Q	V	.	.	.
12.800	23.1206	47.68	. Q	V	.	.	.
12.817	23.1865	47.84	. Q	V	.	.	.
12.833	23.2526	48.00	. Q	V	.	.	.
12.850	23.3190	48.16	. Q	V	.	.	.
12.867	23.3855	48.30	. Q	V	.	.	.
12.883	23.4521	48.39	. Q	V	.	.	.
12.900	23.5189	48.48	. Q	V	.	.	.
12.917	23.5858	48.57	. Q	V	.	.	.
12.933	23.6529	48.66	. Q	V	.	.	.
12.950	23.7200	48.75	. Q	V	.	.	.
12.967	23.7873	48.84	. Q	V	.	.	.
12.983	23.8547	48.93	. Q	V	.	.	.
13.000	23.9222	49.02	. Q	.V	.	.	.
13.017	23.9898	49.11	. Q	.V	.	.	.
13.033	24.0576	49.20	. Q	.V	.	.	.
13.050	24.1255	49.29	. Q	.V	.	.	.
13.067	24.1935	49.38	. Q	.V	.	.	.
13.083	24.2617	49.47	. Q	.V	.	.	.
13.100	24.3299	49.56	. Q	.V	.	.	.
13.117	24.3983	49.65	. Q	.V	.	.	.
13.133	24.4668	49.74	. Q	.V	.	.	.
13.150	24.5355	49.84	. Q	.V	.	.	.
13.167	24.6044	50.03	. Q	.V	.	.	.
13.183	24.6736	50.24	. Q	.V	.	.	.
13.200	24.7431	50.45	. Q	.V	.	.	.
13.217	24.8128	50.65	. Q	.V	.	.	.
13.233	24.8829	50.86	. Q	.V	.	.	.
13.250	24.9532	51.07	. Q	.V	.	.	.
13.267	25.0238	51.27	. Q	.V	.	.	.
13.283	25.0947	51.48	. Q	.V	.	.	.
13.300	25.1659	51.69	. Q	.V	.	.	.
13.317	25.2374	51.89	. Q	.V	.	.	.
13.333	25.3092	52.10	. Q	.V	.	.	.
13.350	25.3812	52.31	. Q	.V	.	.	.
13.367	25.4536	52.51	. Q	.V	.	.	.
13.383	25.5262	52.72	. Q	.V	.	.	.
13.400	25.5991	52.93	. Q	.V	.	.	.
13.417	25.6723	53.13	. Q	.V	.	.	.
13.433	25.7457	53.33	. Q	.V	.	.	.
13.450	25.8194	53.47	. Q	.V	.	.	.
13.467	25.8932	53.59	. Q	.V	.	.	.
13.483	25.9672	53.71	. Q	.V	.	.	.
13.500	26.0413	53.83	. Q	.V	.	.	.
13.517	26.1156	53.95	. Q	. V	.	.	.
13.533	26.1901	54.07	. Q	. V	.	.	.
13.550	26.2648	54.20	. Q	. V	.	.	.
13.567	26.3396	54.32	. Q	. V	.	.	.
13.583	26.4146	54.44	. Q	. V	.	.	.
13.600	26.4897	54.56	. Q	. V	.	.	.
13.617	26.5650	54.68	. Q	. V	.	.	.
13.633	26.6405	54.80	. Q	. V	.	.	.

13.650	26.7162	54.92	. Q	. V	.	.	.	
13.667	26.7920	55.04	. Q	. V	.	.	.	
13.683	26.8679	55.16	. Q	. V	.	.	.	
13.700	26.9441	55.28	. Q	. V	.	.	.	
13.717	27.0204	55.40	. Q	. V	.	.	.	
13.733	27.0970	55.64	. Q	. V	.	.	.	
13.750	27.1741	55.93	. Q	. V	.	.	.	
13.767	27.2515	56.21	. Q	. V	.	.	.	
13.783	27.3293	56.50	. Q	. V	.	.	.	
13.800	27.4076	56.79	. Q	. V	.	.	.	
13.817	27.4862	57.08	. Q	. V	.	.	.	
13.833	27.5652	57.37	. Q	. V	.	.	.	
13.850	27.6446	57.65	. Q	. V	.	.	.	
13.867	27.7244	57.94	. Q	. V	.	.	.	
13.883	27.8046	58.23	. Q	. V	.	.	.	
13.900	27.8852	58.52	. Q	. V	.	.	.	
13.917	27.9662	58.80	. Q	. V	.	.	.	
13.933	28.0476	59.09	. Q	. V	.	.	.	
13.950	28.1294	59.38	. Q	. V	.	.	.	
13.967	28.2116	59.67	. Q	. V	.	.	.	
13.983	28.2942	59.96	. Q	. V	.	.	.	
14.000	28.3772	60.24	. Q	. V	.	.	.	
14.017	28.4604	60.47	. Q	. V	.	.	.	
14.033	28.5440	60.65	. Q	. V	.	.	.	
14.050	28.6278	60.82	. Q	. V	.	.	.	
14.067	28.7118	61.00	. Q	. V	.	.	.	
14.083	28.7960	61.17	. Q	. V	.	.	.	
14.100	28.8805	61.35	. Q	. V	.	.	.	
14.117	28.9653	61.53	. Q	. V	.	.	.	
14.133	29.0503	61.70	. Q	. V	.	.	.	
14.150	29.1355	61.88	. Q	. V	.	.	.	
14.167	29.2210	62.05	. Q	. V	.	.	.	
14.183	29.3067	62.23	. Q	. V	.	.	.	
14.200	29.3926	62.40	. Q	. V	.	.	.	
14.217	29.4788	62.58	. Q	. V	.	.	.	
14.233	29.5653	62.76	. Q	. V	.	.	.	
14.250	29.6520	62.93	. Q	. V	.	.	.	
14.267	29.7389	63.11	. Q	. V	.	.	.	
14.283	29.8261	63.28	. Q	. V	.	.	.	
14.300	29.9136	63.57	. Q	. V	.	.	.	
14.317	30.0018	64.01	. Q	. V	.	.	.	
14.333	30.0906	64.45	. Q	. V	.	.	.	
14.350	30.1799	64.89	. Q	. V	.	.	.	
14.367	30.2699	65.33	. Q	. V	.	.	.	
14.383	30.3605	65.77	. Q	. V	.	.	.	
14.400	30.4517	66.21	. Q	. V	.	.	.	
14.417	30.5435	66.65	. Q	. V	.	.	.	
14.433	30.6359	67.09	. Q	. V	.	.	.	
14.450	30.7290	67.54	. Q	. V	.	.	.	
14.467	30.8226	67.98	. Q	. V	.	.	.	
14.483	30.9168	68.42	. Q	. V	.	.	.	
14.500	31.0117	68.86	. Q	. V	.	.	.	
14.517	31.1071	69.30	. Q	. V	.	.	.	
14.533	31.2032	69.74	. Q	. V	.	.	.	
14.550	31.2999	70.18	. Q	. V	.	.	.	
14.567	31.3972	70.62	. Q	. V	.	.	.	
14.583	31.4950	71.02	. Q	. V	.	.	.	
14.600	31.5932	71.31	. Q	. V	.	.	.	

14.617	31.6918	71.60	. Q	. V	.	.	.	
14.633	31.7908	71.88	. Q	. V	.	.	.	
14.650	31.8902	72.17	. Q	. V	.	.	.	
14.667	31.9900	72.45	. Q	. V	.	.	.	
14.683	32.0902	72.74	. Q	. V	.	.	.	
14.700	32.1908	73.02	. Q	. V	.	.	.	
14.717	32.2918	73.31	. Q	. V	.	.	.	
14.733	32.3931	73.59	. Q	. V	.	.	.	
14.750	32.4949	73.88	. Q	. V	.	.	.	
14.767	32.5970	74.16	. Q	. V	.	.	.	
14.783	32.6996	74.45	. Q	. V	.	.	.	
14.800	32.8025	74.73	. Q	. V	.	.	.	
14.817	32.9059	75.02	. Q	. V	.	.	.	
14.833	33.0096	75.30	. Q	. V	.	.	.	
14.850	33.1137	75.59	. Q	. V	.	.	.	
14.867	33.2183	75.96	. Q	. V	.	.	.	
14.883	33.3240	76.72	. Q	. V	.	.	.	
14.900	33.4308	77.51	. Q	. V	.	.	.	
14.917	33.5386	78.31	. Q	. V	.	.	.	
14.933	33.6476	79.10	. Q	. V	.	.	.	
14.950	33.7576	79.90	. Q	. V	.	.	.	
14.967	33.8688	80.69	. Q	. V	.	.	.	
14.983	33.9810	81.49	. Q	. V	.	.	.	
15.000	34.0943	82.28	. Q	. V	.	.	.	
15.017	34.2088	83.08	. Q	. V	.	.	.	
15.033	34.3243	83.87	. Q	. V	.	.	.	
15.050	34.4409	84.67	. Q	. V	.	.	.	
15.067	34.5586	85.46	. Q	. V	.	.	.	
15.083	34.6774	86.25	. Q	. V	.	.	.	
15.100	34.7973	87.05	. Q	. V	.	.	.	
15.117	34.9183	87.84	. Q	. V	.	.	.	
15.133	35.0404	88.64	. Q	. V	.	.	.	
15.150	35.1636	89.41	. Q	. V	.	.	.	
15.167	35.2876	90.03	. Q	. V	.	.	.	
15.183	35.4124	90.62	. Q	. V	.	.	.	
15.200	35.5381	91.21	. Q	. V	.	.	.	
15.217	35.6645	91.80	. Q	. V	.	.	.	
15.233	35.7918	92.39	. Q	. V	.	.	.	
15.250	35.9199	92.98	. Q	. V	.	.	.	
15.267	36.0488	93.57	. Q	. V	.	.	.	
15.283	36.1785	94.16	. Q	. V	.	.	.	
15.300	36.3090	94.75	. Q	. V	.	.	.	
15.317	36.4403	95.34	. Q	. V	.	.	.	
15.333	36.5725	95.93	. Q	. V	.	.	.	
15.350	36.7054	96.53	. Q	. V	.	.	.	
15.367	36.8392	97.12	. Q	. V	.	.	.	
15.383	36.9738	97.71	. Q	. V	.	.	.	
15.400	37.1091	98.30	. Q	. V	.	.	.	
15.417	37.2453	98.89	. Q	. V	.	.	.	
15.433	37.3824	99.50	. Q	. V	.	.	.	
15.450	37.5209	100.52	. Q	. V	.	.	.	
15.467	37.6609	101.67	. Q	. V	.	.	.	
15.483	37.8025	102.83	. Q	. V	.	.	.	
15.500	37.9458	103.98	. Q	. V	.	.	.	
15.517	38.0906	105.13	. Q	. V	.	.	.	
15.533	38.2370	106.29	. Q	. V	.	.	.	
15.550	38.3850	107.44	. Q	. V	.	.	.	
15.567	38.5346	108.60	. Q	. V	.	.	.	

```
15.583    38.6857   109.75  .   Q    .     V  .        .        .
15.600    38.8385   110.91  .   Q    .     V  .        .        .
15.617    38.9928   112.06  .   Q    .     V  .        .        .
15.633    39.1488   113.22  .   Q    .      V .        .        .
15.650    39.3063   114.37  .   Q    .      V .        .        .
15.667    39.4655   115.52  .   Q    .      V .        .        .
15.683    39.6262   116.68  .   Q    .      V .        .        .
15.700    39.7885   117.83  .   Q    .      V .        .        .
15.717    39.9524   119.03  .   Q    .      V .        .        .
15.733    40.1213   122.62  .   Q    .      V .        .        .
15.750    40.2971   127.59  .   Q    .      V .        .        .
15.767    40.4797   132.56  .    Q   .      V .        .        .
15.783    40.6691   137.53  .    Q   .      V .        .        .
15.800    40.8654   142.50  .    Q   .      V .        .        .
15.817    41.0685   147.46  .    Q   .      V .        .        .
15.833    41.2784   152.43  .     Q  .      V .        .        .
15.850    41.4952   157.40  .     Q  .       V.        .        .
15.867    41.7189   162.37  .     Q  .       V.        .        .
15.883    41.9494   167.34  .     Q  .       V.        .        .
15.900    42.1867   172.31  .     Q  .       V.        .        .
15.917    42.4309   177.28  .      Q .       V.        .        .
15.933    42.6819   182.24  .      Q .       V.        .        .
15.950    42.9398   187.21  .      Q .       V.        .        .
15.967    43.2045   192.18  .      Q .       V.        .        .
15.983    43.4761   197.15  .       Q.        V        .        .
16.000    43.7545   202.12  .       Q.        V        .        .
16.017    44.0629   223.91  .        Q        V        .        .
16.033    44.4245   262.52  .         . Q     V        .        .
16.050    44.8393   301.13  .         .  Q    V        .        .
16.067    45.3072   339.74  .         .    Q  V        .        .
16.083    45.8284   378.35  .         .     Q  .V      .        .
16.100    46.4027   416.97  .         .       Q.V      .        .
16.117    47.0302   455.58  .         .        .Q      .        .
16.133    47.7109   494.19  .         .        .VQ     .        .
16.150    48.4448   532.80  .         .        . V Q   .        .
16.167    49.2319   571.41  .         .        . V  Q  .        .
16.183    50.0721   610.02  .         .        .  V   Q .       .
16.200    50.9655   648.63  .         .        .  V    Q.       .
16.217    51.9122   687.25  .         .        .  V     .Q      .
16.233    52.9120   725.86  .         .        .   V    .  Q    .
16.250    53.9649   764.47  .         .        .   V    .   Q   .
16.267    55.0711   803.08  .         .        .    V   .    Q  .
16.283    56.2305   841.69  .         .        .    V   .     Q .
16.300    57.4244   866.79  .         .        .     V  .      Q
16.317    58.5358   806.86  .         .        .     V  .    Q  .
16.333    59.5860   762.47  .         .        .      V .   Q    .
16.350    60.5751   718.09  .         .        .      V  .  Q    .
16.367    61.5031   673.70  .         .        .       V .Q      .
16.383    62.3699   629.31  .         .        .       VQ.       .
16.400    63.1756   584.93  .         .        .     Q  V.       .
16.417    63.9201   540.54  .         .        .   Q    V.       .
16.433    64.6035   496.15  .         .        . Q     V.       .
16.450    65.2258   451.77  .         .        Q       V        .
16.467    65.7869   407.38  .         .      Q .       V        .
16.483    66.2869   362.99  .         .    Q   .       V        .
16.500    66.7258   318.60  .         .  Q     .       V        .
16.517    67.1035   274.22  .         . Q      .       V        .
16.533    67.4200   229.83  .         Q        .       .V       .
```



```
16.550    67.6755   185.44  .       Q .       .       .V       .
16.567    67.8698   141.05  .     Q   .       .       .V       .
16.583    68.0174   107.20  .   Q     .       .       .V       .
16.600    68.1605   103.89  .   Q     .       .       .V       .
16.617    68.3017   102.50  .   Q     .       .       .V       .
16.633    68.4410   101.12  .   Q     .       .       .V       .
16.650    68.5784    99.74  .   Q     .       .       .V       .
16.667    68.7139    98.36  .   Q     .       .       .V       .
16.683    68.8474    96.98  .   Q     .       .       .V       .
16.700    68.9791    95.60  .   Q     .       .       .V       .
16.717    69.1089    94.21  .   Q     .       .       .V       .
16.733    69.2368    92.83  .   Q     .       .       .V       .
16.750    69.3627    91.45  .   Q     .       .       .V       .
16.767    69.4868    90.07  .   Q     .       .       .V       .
16.783    69.6090    88.69  .   Q     .       .       . V      .
16.800    69.7292    87.31  .   Q     .       .       . V      .
16.817    69.8476    85.93  . Q       .       .       . V      .
16.833    69.9640    84.54  . Q       .       .       . V      .
16.850    70.0786    83.16  . Q       .       .       . V      .
16.867    70.1913    81.86  . Q       .       .       . V      .
16.883    70.3028    80.93  . Q       .       .       . V      .
16.900    70.4131    80.06  . Q       .       .       . V      .
16.917    70.5221    79.19  . Q       .       .       . V      .
16.933    70.6300    78.31  . Q       .       .       . V      .
16.950    70.7367    77.44  . Q       .       .       . V      .
16.967    70.8422    76.57  . Q       .       .       . V      .
16.983    70.9464    75.70  . Q       .       .       . V      .
17.000    71.0495    74.82  . 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%	1021.0
10%	515.0
20%	195.0
30%	150.0
40%	125.0
50%	105.0
60%	85.0
70%	65.0
80%	40.0
90%	20.0

END OF FLOODSCx ROUTING ANALYSIS

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                          Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA A                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 50-YR EV MARCH 2019 CCHIU                                             *
 ************************************************************************

  FILE NAME: 3A50EVS.DAT
  TIME/DATE OF STUDY: 09:32 03/29/2019

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


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    130.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  510.20
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.130
    LOW LOSS FRACTION = 0.296
    TIME OF CONCENTRATION(MIN.) = 13.75
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  15
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.37
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.80
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.06
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.78
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.47
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.12

--------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =   117.22
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    57.95

--------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	271.5	543.0	814.6	1086.1
0.017	0.0013	0.91	Q	.	.	.	.
0.033	0.0050	2.74	Q	.	.	.	.
0.050	0.0113	4.56	Q	.	.	.	.
0.067	0.0201	6.39	Q	.	.	.	.
0.083	0.0314	8.21	Q	.	.	.	.
0.100	0.0452	10.04	Q	.	.	.	.
0.117	0.0616	11.86	Q	.	.	.	.
0.133	0.0804	13.68	Q	.	.	.	.
0.150	0.1018	15.51	Q	.	.	.	.
0.167	0.1257	17.33	Q	.	.	.	.
0.183	0.1521	19.16	Q	.	.	.	.
0.200	0.1803	20.47	Q	.	.	.	.
0.217	0.2085	20.54	Q	.	.	.	.
0.233	0.2368	20.54	Q	.	.	.	.
0.250	0.2651	20.55	Q	.	.	.	.
0.267	0.2935	20.56	Q	.	.	.	.
0.283	0.3218	20.57	Q	.	.	.	.
0.300	0.3501	20.58	Q	.	.	.	.
0.317	0.3785	20.58	Q	.	.	.	.
0.333	0.4069	20.59	Q	.	.	.	.
0.350	0.4352	20.60	Q	.	.	.	.
0.367	0.4636	20.61	Q	.	.	.	.
0.383	0.4920	20.61	Q	.	.	.	.
0.400	0.5204	20.62	Q	.	.	.	.
0.417	0.5488	20.63	Q	.	.	.	.
0.433	0.5773	20.64	Q	.	.	.	.
0.450	0.6057	20.66	Q	.	.	.	.
0.467	0.6342	20.68	Q	.	.	.	.
0.483	0.6627	20.70	Q	.	.	.	.
0.500	0.6912	20.72	Q	.	.	.	.
0.517	0.7198	20.74	Q	.	.	.	.
0.533	0.7484	20.75	Q	.	.	.	.
0.550	0.7770	20.77	Q	.	.	.	.
0.567	0.8056	20.79	Q	.	.	.	.
0.583	0.8343	20.81	Q	.	.	.	.
0.600	0.8630	20.83	Q	.	.	.	.
0.617	0.8917	20.85	Q	.	.	.	.
0.633	0.9205	20.87	Q	.	.	.	.
0.650	0.9492	20.88	Q	.	.	.	.
0.667	0.9780	20.90	Q	.	.	.	.
0.683	1.0068	20.91	Q	.	.	.	.
0.700	1.0356	20.92	Q	.	.	.	.
0.717	1.0644	20.93	Q	.	.	.	.
0.733	1.0933	20.93	Q	.	.	.	.
0.750	1.1221	20.94	Q	.	.	.	.

0.767	1.1510	20.95	Q	.	.	.	.
0.783	1.1799	20.96	Q	.	.	.	.
0.800	1.2087	20.97	Q	.	.	.	.
0.817	1.2376	20.98	Q	.	.	.	.
0.833	1.2666	20.99	Q	.	.	.	.
0.850	1.2955	21.00	Q	.	.	.	.
0.867	1.3244	21.01	Q	.	.	.	.
0.883	1.3534	21.02	Q	.	.	.	.
0.900	1.3824	21.04	Q	.	.	.	.
0.917	1.4114	21.06	Q	.	.	.	.
0.933	1.4404	21.08	Q	.	.	.	.
0.950	1.4695	21.10	Q	.	.	.	.
0.967	1.4986	21.12	Q	.	.	.	.
0.983	1.5277	21.14	Q	.	.	.	.
1.000	1.5568	21.16	Q	.	.	.	.
1.017	1.5860	21.18	Q	.	.	.	.
1.033	1.6152	21.20	Q	.	.	.	.
1.050	1.6444	21.22	Q	.	.	.	.
1.067	1.6736	21.23	Q	.	.	.	.
1.083	1.7029	21.25	Q	.	.	.	.
1.100	1.7322	21.27	Q	.	.	.	.
1.117	1.7615	21.29	Q	.	.	.	.
1.133	1.7909	21.30	Q	.	.	.	.
1.150	1.8202	21.31	Q	.	.	.	.
1.167	1.8496	21.32	Q	.	.	.	.
1.183	1.8790	21.33	Q	.	.	.	.
1.200	1.9084	21.34	Q	.	.	.	.
1.217	1.9378	21.35	Q	.	.	.	.
1.233	1.9672	21.36	Q	.	.	.	.
1.250	1.9967	21.37	Q	.	.	.	.
1.267	2.0261	21.38	Q	.	.	.	.
1.283	2.0556	21.39	Q	.	.	.	.
1.300	2.0851	21.40	Q	.	.	.	.
1.317	2.1145	21.41	Q	.	.	.	.
1.333	2.1441	21.42	Q	.	.	.	.
1.350	2.1736	21.44	Q	.	.	.	.
1.367	2.2031	21.46	Q	.	.	.	.
1.383	2.2327	21.48	Q	.	.	.	.
1.400	2.2623	21.50	Q	.	.	.	.
1.417	2.2920	21.52	Q	.	.	.	.
1.433	2.3216	21.54	Q	.	.	.	.
1.450	2.3513	21.56	Q	.	.	.	.
1.467	2.3811	21.58	Q	.	.	.	.
1.483	2.4108	21.60	Q	.	.	.	.
1.500	2.4406	21.62	Q	.	.	.	.
1.517	2.4704	21.64	Q	.	.	.	.
1.533	2.5002	21.66	Q	.	.	.	.
1.550	2.5301	21.68	Q	.	.	.	.
1.567	2.5600	21.70	Q	.	.	.	.
1.583	2.5899	21.72	Q	.	.	.	.
1.600	2.6198	21.73	Q	.	.	.	.
1.617	2.6498	21.74	Q	.	.	.	.
1.633	2.6797	21.75	Q	.	.	.	.
1.650	2.7097	21.76	Q	.	.	.	.
1.667	2.7397	21.77	Q	.	.	.	.
1.683	2.7697	21.78	Q	.	.	.	.
1.700	2.7997	21.79	Q	.	.	.	.
1.717	2.8297	21.80	Q	.	.	.	.

1.733	2.8598	21.81	Q	.	.	.	.
1.750	2.8898	21.82	Q	.	.	.	.
1.767	2.9199	21.83	Q	.	.	.	.
1.783	2.9500	21.84	QV	.	.	.	.
1.800	2.9801	21.85	QV	.	.	.	.
1.817	3.0102	21.87	QV	.	.	.	.
1.833	3.0404	21.90	QV	.	.	.	.
1.850	3.0706	21.92	QV	.	.	.	.
1.867	3.1008	21.94	QV	.	.	.	.
1.883	3.1310	21.96	QV	.	.	.	.
1.900	3.1613	21.98	QV	.	.	.	.
1.917	3.1916	22.00	QV	.	.	.	.
1.933	3.2220	22.03	QV	.	.	.	.
1.950	3.2523	22.05	QV	.	.	.	.
1.967	3.2827	22.07	QV	.	.	.	.
1.983	3.3131	22.09	QV	.	.	.	.
2.000	3.3436	22.11	QV	.	.	.	.
2.017	3.3741	22.13	QV	.	.	.	.
2.033	3.4046	22.15	QV	.	.	.	.
2.050	3.4351	22.16	QV	.	.	.	.
2.067	3.4657	22.17	QV	.	.	.	.
2.083	3.4962	22.19	QV	.	.	.	.
2.100	3.5268	22.20	QV	.	.	.	.
2.117	3.5574	22.21	QV	.	.	.	.
2.133	3.5880	22.22	QV	.	.	.	.
2.150	3.6186	22.23	QV	.	.	.	.
2.167	3.6493	22.24	QV	.	.	.	.
2.183	3.6799	22.25	QV	.	.	.	.
2.200	3.7106	22.26	QV	.	.	.	.
2.217	3.7413	22.27	QV	.	.	.	.
2.233	3.7720	22.29	QV	.	.	.	.
2.250	3.8027	22.30	QV	.	.	.	.
2.267	3.8334	22.31	QV	.	.	.	.
2.283	3.8642	22.34	QV	.	.	.	.
2.300	3.8950	22.36	QV	.	.	.	.
2.317	3.9258	22.38	QV	.	.	.	.
2.333	3.9567	22.40	QV	.	.	.	.
2.350	3.9875	22.43	QV	.	.	.	.
2.367	4.0185	22.45	QV	.	.	.	.
2.383	4.0494	22.47	QV	.	.	.	.
2.400	4.0804	22.50	QV	.	.	.	.
2.417	4.1114	22.52	QV	.	.	.	.
2.433	4.1425	22.54	QV	.	.	.	.
2.450	4.1736	22.56	QV	.	.	.	.
2.467	4.2047	22.59	QV	.	.	.	.
2.483	4.2358	22.61	QV	.	.	.	.
2.500	4.2670	22.62	QV	.	.	.	.
2.517	4.2982	22.64	QV	.	.	.	.
2.533	4.3293	22.65	QV	.	.	.	.
2.550	4.3606	22.66	QV	.	.	.	.
2.567	4.3918	22.67	QV	.	.	.	.
2.583	4.4230	22.68	QV	.	.	.	.
2.600	4.4543	22.69	QV	.	.	.	.
2.617	4.4856	22.71	QV	.	.	.	.
2.633	4.5169	22.72	QV	.	.	.	.
2.650	4.5482	22.73	QV	.	.	.	.
2.667	4.5795	22.74	QV	.	.	.	.
2.683	4.6108	22.75	QV	.	.	.	.

2.700	4.6422	22.76	QV	.	.	.	.
2.717	4.6736	22.78	QV	.	.	.	.
2.733	4.7050	22.80	QV	.	.	.	.
2.750	4.7364	22.82	QV	.	.	.	.
2.767	4.7679	22.85	QV	.	.	.	.
2.783	4.7994	22.87	QV	.	.	.	.
2.800	4.8309	22.90	QV	.	.	.	.
2.817	4.8625	22.92	QV	.	.	.	.
2.833	4.8941	22.94	QV	.	.	.	.
2.850	4.9257	22.97	QV	.	.	.	.
2.867	4.9574	22.99	QV	.	.	.	.
2.883	4.9891	23.02	QV	.	.	.	.
2.900	5.0208	23.04	QV	.	.	.	.
2.917	5.0526	23.06	QV	.	.	.	.
2.933	5.0844	23.09	QV	.	.	.	.
2.950	5.1162	23.11	QV	.	.	.	.
2.967	5.1481	23.12	QV	.	.	.	.
2.983	5.1800	23.13	QV	.	.	.	.
3.000	5.2118	23.15	QV	.	.	.	.
3.017	5.2437	23.16	QV	.	.	.	.
3.033	5.2757	23.17	QV	.	.	.	.
3.050	5.3076	23.18	QV	.	.	.	.
3.067	5.3395	23.20	QV	.	.	.	.
3.083	5.3715	23.21	QV	.	.	.	.
3.100	5.4035	23.22	QV	.	.	.	.
3.117	5.4355	23.23	QV	.	.	.	.
3.133	5.4675	23.25	QV	.	.	.	.
3.150	5.4996	23.26	QV	.	.	.	.
3.167	5.5316	23.27	QV	.	.	.	.
3.183	5.5637	23.29	QV	.	.	.	.
3.200	5.5958	23.32	QV	.	.	.	.
3.217	5.6280	23.34	QV	.	.	.	.
3.233	5.6601	23.37	QV	.	.	.	.
3.250	5.6924	23.39	QV	.	.	.	.
3.267	5.7246	23.42	QV	.	.	.	.
3.283	5.7569	23.44	QV	.	.	.	.
3.300	5.7892	23.47	QV	.	.	.	.
3.317	5.8216	23.49	QV	.	.	.	.
3.333	5.8540	23.52	QV	.	.	.	.
3.350	5.8864	23.54	Q V	.	.	.	.
3.367	5.9189	23.57	Q V	.	.	.	.
3.383	5.9514	23.60	Q V	.	.	.	.
3.400	5.9839	23.62	Q V	.	.	.	.
3.417	6.0165	23.64	Q V	.	.	.	.
3.433	6.0491	23.65	Q V	.	.	.	.
3.450	6.0816	23.66	Q V	.	.	.	.
3.467	6.1143	23.68	Q V	.	.	.	.
3.483	6.1469	23.69	Q V	.	.	.	.
3.500	6.1795	23.70	Q V	.	.	.	.
3.517	6.2122	23.72	Q V	.	.	.	.
3.533	6.2449	23.73	Q V	.	.	.	.
3.550	6.2776	23.74	Q V	.	.	.	.
3.567	6.3103	23.76	Q V	.	.	.	.
3.583	6.3431	23.77	Q V	.	.	.	.
3.600	6.3758	23.78	Q V	.	.	.	.
3.617	6.4086	23.79	Q V	.	.	.	.
3.633	6.4414	23.81	Q V	.	.	.	.
3.650	6.4742	23.83	Q V	.	.	.	.

3.667	6.5071	23.86	Q	V	.	.	.	.
3.683	6.5400	23.89	Q	V	.	.	.	.
3.700	6.5729	23.92	Q	V	.	.	.	.
3.717	6.6059	23.94	Q	V	.	.	.	.
3.733	6.6389	23.97	Q	V	.	.	.	.
3.750	6.6720	24.00	Q	V	.	.	.	.
3.767	6.7051	24.02	Q	V	.	.	.	.
3.783	6.7382	24.05	Q	V	.	.	.	.
3.800	6.7714	24.08	Q	V	.	.	.	.
3.817	6.8046	24.11	Q	V	.	.	.	.
3.833	6.8378	24.13	Q	V	.	.	.	.
3.850	6.8711	24.16	Q	V	.	.	.	.
3.867	6.9044	24.18	Q	V	.	.	.	.
3.883	6.9377	24.20	Q	V	.	.	.	.
3.900	6.9711	24.21	Q	V	.	.	.	.
3.917	7.0044	24.22	Q	V	.	.	.	.
3.933	7.0378	24.24	Q	V	.	.	.	.
3.950	7.0712	24.25	Q	V	.	.	.	.
3.967	7.1047	24.27	Q	V	.	.	.	.
3.983	7.1381	24.28	Q	V	.	.	.	.
4.000	7.1716	24.29	Q	V	.	.	.	.
4.017	7.2050	24.31	Q	V	.	.	.	.
4.033	7.2385	24.32	Q	V	.	.	.	.
4.050	7.2721	24.34	Q	V	.	.	.	.
4.067	7.3056	24.35	Q	V	.	.	.	.
4.083	7.3392	24.36	Q	V	.	.	.	.
4.100	7.3728	24.39	Q	V	.	.	.	.
4.117	7.4064	24.41	Q	V	.	.	.	.
4.133	7.4400	24.44	Q	V	.	.	.	.
4.150	7.4738	24.47	Q	V	.	.	.	.
4.167	7.5075	24.50	Q	V	.	.	.	.
4.183	7.5413	24.53	Q	V	.	.	.	.
4.200	7.5751	24.56	Q	V	.	.	.	.
4.217	7.6090	24.59	Q	V	.	.	.	.
4.233	7.6429	24.61	Q	V	.	.	.	.
4.250	7.6768	24.64	Q	V	.	.	.	.
4.267	7.7108	24.67	Q	V	.	.	.	.
4.283	7.7448	24.70	Q	V	.	.	.	.
4.300	7.7789	24.73	Q	V	.	.	.	.
4.317	7.8130	24.76	Q	V	.	.	.	.
4.333	7.8471	24.78	Q	V	.	.	.	.
4.350	7.8813	24.79	Q	V	.	.	.	.
4.367	7.9154	24.81	Q	V	.	.	.	.
4.383	7.9496	24.82	Q	V	.	.	.	.
4.400	7.9838	24.84	Q	V	.	.	.	.
4.417	8.0181	24.85	Q	V	.	.	.	.
4.433	8.0523	24.87	Q	V	.	.	.	.
4.450	8.0866	24.88	Q	V	.	.	.	.
4.467	8.1209	24.90	Q	V	.	.	.	.
4.483	8.1552	24.91	Q	V	.	.	.	.
4.500	8.1895	24.93	Q	V	.	.	.	.
4.517	8.2239	24.94	Q	V	.	.	.	.
4.533	8.2583	24.95	Q	V	.	.	.	.
4.550	8.2926	24.97	Q	V	.	.	.	.
4.567	8.3271	25.00	Q	V	.	.	.	.
4.583	8.3616	25.03	Q	V	.	.	.	.
4.600	8.3961	25.06	Q	V	.	.	.	.
4.617	8.4306	25.09	Q	V	.	.	.	.

4.633	8.4652	25.12	Q	V	.	.	.	.
4.650	8.4999	25.15	Q	V	.	.	.	.
4.667	8.5346	25.18	Q	V	.	.	.	.
4.683	8.5693	25.21	Q	V	.	.	.	.
4.700	8.6041	25.24	Q	V	.	.	.	.
4.717	8.6389	25.28	Q	V	.	.	.	.
4.733	8.6738	25.31	Q	V	.	.	.	.
4.750	8.7087	25.34	Q	V	.	.	.	.
4.767	8.7436	25.37	Q	V	.	.	.	.
4.783	8.7786	25.39	Q	V	.	.	.	.
4.800	8.8136	25.41	Q	V	.	.	.	.
4.817	8.8486	25.43	Q	V	.	.	.	.
4.833	8.8836	25.44	Q	V	.	.	.	.
4.850	8.9187	25.46	Q	V	.	.	.	.
4.867	8.9538	25.47	Q	V	.	.	.	.
4.883	8.9889	25.49	Q	V	.	.	.	.
4.900	9.0240	25.51	Q	V	.	.	.	.
4.917	9.0592	25.52	Q	V	.	.	.	.
4.933	9.0944	25.54	Q	V	.	.	.	.
4.950	9.1296	25.55	Q	V	.	.	.	.
4.967	9.1648	25.57	Q	V	.	.	.	.
4.983	9.2000	25.58	Q	V	.	.	.	.
5.000	9.2353	25.60	Q	V	.	.	.	.
5.017	9.2706	25.62	Q	V	.	.	.	.
5.033	9.3059	25.66	Q	V	.	.	.	.
5.050	9.3413	25.69	Q	V	.	.	.	.
5.067	9.3767	25.72	Q	V	.	.	.	.
5.083	9.4122	25.76	Q	V	.	.	.	.
5.100	9.4477	25.79	Q	V	.	.	.	.
5.117	9.4833	25.82	Q	V	.	.	.	.
5.133	9.5189	25.85	Q	V	.	.	.	.
5.150	9.5546	25.89	Q	V	.	.	.	.
5.167	9.5903	25.92	Q	V	.	.	.	.
5.183	9.6260	25.95	Q	V	.	.	.	.
5.200	9.6618	25.98	Q	V	.	.	.	.
5.217	9.6976	26.02	Q	V	.	.	.	.
5.233	9.7335	26.05	Q	V	.	.	.	.
5.250	9.7694	26.07	Q	V	.	.	.	.
5.267	9.8054	26.09	Q	V	.	.	.	.
5.283	9.8413	26.10	Q	V	.	.	.	.
5.300	9.8773	26.12	Q	V	.	.	.	.
5.317	9.9133	26.14	Q	V	.	.	.	.
5.333	9.9493	26.15	Q	V	.	.	.	.
5.350	9.9854	26.17	Q	V	.	.	.	.
5.367	10.0215	26.19	Q	V	.	.	.	.
5.383	10.0576	26.21	Q	V	.	.	.	.
5.400	10.0937	26.22	Q	V	.	.	.	.
5.417	10.1298	26.24	Q	V	.	.	.	.
5.433	10.1660	26.26	Q	V	.	.	.	.
5.450	10.2022	26.27	Q	V	.	.	.	.
5.467	10.2384	26.29	Q	V	.	.	.	.
5.483	10.2746	26.32	Q	V	.	.	.	.
5.500	10.3109	26.36	Q	V	.	.	.	.
5.517	10.3473	26.39	Q	V	.	.	.	.
5.533	10.3837	26.43	Q	V	.	.	.	.
5.550	10.4202	26.46	Q	V	.	.	.	.
5.567	10.4567	26.50	Q	V	.	.	.	.
5.583	10.4932	26.53	Q	V	.	.	.	.

5.600	10.5298	26.57	Q	V	.	.	.	.
5.617	10.5665	26.60	Q	V	.	.	.	.
5.633	10.6031	26.64	Q	V	.	.	.	.
5.650	10.6399	26.68	Q	V	.	.	.	.
5.667	10.6767	26.71	Q	V	.	.	.	.
5.683	10.7135	26.75	Q	V	.	.	.	.
5.700	10.7504	26.78	Q	V	.	.	.	.
5.717	10.7873	26.79	Q	V	.	.	.	.
5.733	10.8242	26.81	Q	V	.	.	.	.
5.750	10.8612	26.83	Q	V	.	.	.	.
5.767	10.8982	26.85	Q	V	.	.	.	.
5.783	10.9352	26.87	Q	V	.	.	.	.
5.800	10.9722	26.89	Q	V	.	.	.	.
5.817	11.0093	26.90	Q	V	.	.	.	.
5.833	11.0464	26.92	Q	V	.	.	.	.
5.850	11.0835	26.94	Q	V	.	.	.	.
5.867	11.1206	26.96	Q	V	.	.	.	.
5.883	11.1578	26.98	Q	V	.	.	.	.
5.900	11.1949	26.99	Q	V	.	.	.	.
5.917	11.2321	27.01	Q	V	.	.	.	.
5.933	11.2694	27.04	Q	V	.	.	.	.
5.950	11.3067	27.08	Q	V	.	.	.	.
5.967	11.3440	27.12	Q	V	.	.	.	.
5.983	11.3814	27.15	.Q	V	.	.	.	.
6.000	11.4189	27.19	.Q	V	.	.	.	.
6.017	11.4564	27.23	.Q	V	.	.	.	.
6.033	11.4940	27.27	.Q	V	.	.	.	.
6.050	11.5316	27.30	.Q	V	.	.	.	.
6.067	11.5692	27.34	.Q	V	.	.	.	.
6.083	11.6069	27.38	.Q	V	.	.	.	.
6.100	11.6447	27.42	.Q	V	.	.	.	.
6.117	11.6825	27.46	.Q	V	.	.	.	.
6.133	11.7204	27.49	.Q	V	.	.	.	.
6.150	11.7583	27.53	.Q	V	.	.	.	.
6.167	11.7963	27.55	.Q	V	.	.	.	.
6.183	11.8343	27.57	.Q	V	.	.	.	.
6.200	11.8723	27.59	.Q	V	.	.	.	.
6.217	11.9103	27.61	.Q	V	.	.	.	.
6.233	11.9484	27.63	.Q	V	.	.	.	.
6.250	11.9864	27.65	.Q	V	.	.	.	.
6.267	12.0246	27.67	.Q	V	.	.	.	.
6.283	12.0627	27.69	.Q	V	.	.	.	.
6.300	12.1009	27.71	.Q	V	.	.	.	.
6.317	12.1391	27.73	.Q	V	.	.	.	.
6.333	12.1773	27.75	.Q	V	.	.	.	.
6.350	12.2155	27.77	.Q	V	.	.	.	.
6.367	12.2538	27.79	.Q	V	.	.	.	.
6.383	12.2921	27.81	.Q	V	.	.	.	.
6.400	12.3305	27.85	.Q	V	.	.	.	.
6.417	12.3689	27.89	.Q	V	.	.	.	.
6.433	12.4074	27.93	.Q	V	.	.	.	.
6.450	12.4459	27.97	.Q	V	.	.	.	.
6.467	12.4845	28.01	.Q	V	.	.	.	.
6.483	12.5231	28.05	.Q	V	.	.	.	.
6.500	12.5618	28.09	.Q	V	.	.	.	.
6.517	12.6005	28.13	.Q	V	.	.	.	.
6.533	12.6393	28.17	.Q	V	.	.	.	.
6.550	12.6782	28.21	.Q	V	.	.	.	.

6.567	12.7171	28.25	.Q	V	.	.	.	.
6.583	12.7561	28.29	.Q	V	.	.	.	.
6.600	12.7951	28.33	.Q	V	.	.	.	.
6.617	12.8342	28.37	.Q	V	.	.	.	.
6.633	12.8733	28.39	.Q	V	.	.	.	.
6.650	12.9124	28.41	.Q	V	.	.	.	.
6.667	12.9516	28.43	.Q	V	.	.	.	.
6.683	12.9908	28.46	.Q	V	.	.	.	.
6.700	13.0300	28.48	.Q	V	.	.	.	.
6.717	13.0693	28.50	.Q	V	.	.	.	.
6.733	13.1086	28.52	.Q	V	.	.	.	.
6.750	13.1479	28.54	.Q	V	.	.	.	.
6.767	13.1872	28.56	.Q	V	.	.	.	.
6.783	13.2266	28.58	.Q	V	.	.	.	.
6.800	13.2660	28.60	.Q	V	.	.	.	.
6.817	13.3054	28.62	.Q	V	.	.	.	.
6.833	13.3449	28.65	.Q	V	.	.	.	.
6.850	13.3844	28.68	.Q	V	.	.	.	.
6.867	13.4239	28.72	.Q	V	.	.	.	.
6.883	13.4635	28.77	.Q	V	.	.	.	.
6.900	13.5032	28.81	.Q	V	.	.	.	.
6.917	13.5430	28.85	.Q	V	.	.	.	.
6.933	13.5828	28.90	.Q	V	.	.	.	.
6.950	13.6226	28.94	.Q	V	.	.	.	.
6.967	13.6626	28.99	.Q	V	.	.	.	.
6.983	13.7025	29.03	.Q	V	.	.	.	.
7.000	13.7426	29.07	.Q	V	.	.	.	.
7.017	13.7827	29.12	.Q	V	.	.	.	.
7.033	13.8229	29.16	.Q	V	.	.	.	.
7.050	13.8631	29.21	.Q	V	.	.	.	.
7.067	13.9034	29.25	.Q	V	.	.	.	.
7.083	13.9437	29.28	.Q	V	.	.	.	.
7.100	13.9841	29.30	.Q	V	.	.	.	.
7.117	14.0245	29.32	.Q	V	.	.	.	.
7.133	14.0649	29.35	.Q	V	.	.	.	.
7.150	14.1053	29.37	.Q	V	.	.	.	.
7.167	14.1458	29.39	.Q	V	.	.	.	.
7.183	14.1863	29.41	.Q	V	.	.	.	.
7.200	14.2269	29.44	.Q	V	.	.	.	.
7.217	14.2675	29.46	.Q	V	.	.	.	.
7.233	14.3081	29.48	.Q	V	.	.	.	.
7.250	14.3487	29.51	.Q	V	.	.	.	.
7.267	14.3894	29.53	.Q	V	.	.	.	.
7.283	14.4301	29.55	.Q	V	.	.	.	.
7.300	14.4708	29.58	.Q	V	.	.	.	.
7.317	14.5116	29.62	.Q	V	.	.	.	.
7.333	14.5525	29.67	.Q	V	.	.	.	.
7.350	14.5934	29.72	.Q	V	.	.	.	.
7.367	14.6344	29.77	.Q	V	.	.	.	.
7.383	14.6755	29.81	.Q	V	.	.	.	.
7.400	14.7166	29.86	.Q	V	.	.	.	.
7.417	14.7578	29.91	.Q	V	.	.	.	.
7.433	14.7991	29.96	.Q	V	.	.	.	.
7.450	14.8404	30.00	.Q	V	.	.	.	.
7.467	14.8818	30.05	.Q	V	.	.	.	.
7.483	14.9233	30.10	.Q	V	.	.	.	.
7.500	14.9648	30.15	.Q	V	.	.	.	.
7.517	15.0064	30.20	.Q	V	.	.	.	.

7.533	15.0481	30.24	.Q	V	.	.	.	.
7.550	15.0897	30.26	.Q	V	.	.	.	.
7.567	15.1315	30.29	.Q	V	.	.	.	.
7.583	15.1732	30.31	.Q	V	.	.	.	.
7.600	15.2150	30.34	.Q	V	.	.	.	.
7.617	15.2568	30.36	.Q	V	.	.	.	.
7.633	15.2987	30.39	.Q	V	.	.	.	.
7.650	15.3406	30.41	.Q	V	.	.	.	.
7.667	15.3825	30.44	.Q	V	.	.	.	.
7.683	15.4244	30.46	.Q	V	.	.	.	.
7.700	15.4664	30.49	.Q	V	.	.	.	.
7.717	15.5085	30.51	.Q	V	.	.	.	.
7.733	15.5505	30.54	.Q	V	.	.	.	.
7.750	15.5926	30.56	.Q	V	.	.	.	.
7.767	15.6348	30.60	.Q	V	.	.	.	.
7.783	15.6770	30.65	.Q	V	.	.	.	.
7.800	15.7193	30.70	.Q	V	.	.	.	.
7.817	15.7616	30.76	.Q	V	.	.	.	.
7.833	15.8041	30.81	.Q	V	.	.	.	.
7.850	15.8466	30.86	.Q	V	.	.	.	.
7.867	15.8892	30.91	.Q	V	.	.	.	.
7.883	15.9318	30.96	.Q	V	.	.	.	.
7.900	15.9745	31.02	.Q	V	.	.	.	.
7.917	16.0173	31.07	.Q	V	.	.	.	.
7.933	16.0602	31.12	.Q	V	.	.	.	.
7.950	16.1031	31.17	.Q	V	.	.	.	.
7.967	16.1461	31.22	.Q	V	.	.	.	.
7.983	16.1892	31.28	.Q	V	.	.	.	.
8.000	16.2323	31.31	.Q	V	.	.	.	.
8.017	16.2755	31.34	.Q	V	.	.	.	.
8.033	16.3187	31.36	.Q	V	.	.	.	.
8.050	16.3619	31.39	.Q	V	.	.	.	.
8.067	16.4052	31.42	.Q	V	.	.	.	.
8.083	16.4485	31.45	.Q	V	.	.	.	.
8.100	16.4919	31.47	.Q	V	.	.	.	.
8.117	16.5353	31.50	.Q	V	.	.	.	.
8.133	16.5787	31.53	.Q	V	.	.	.	.
8.150	16.6222	31.56	.Q	V	.	.	.	.
8.167	16.6657	31.58	.Q	V	.	.	.	.
8.183	16.7092	31.61	.Q	V	.	.	.	.
8.200	16.7528	31.64	.Q	V	.	.	.	.
8.217	16.7964	31.67	.Q	V	.	.	.	.
8.233	16.8401	31.72	.Q	V	.	.	.	.
8.250	16.8839	31.78	.Q	V	.	.	.	.
8.267	16.9277	31.84	.Q	V	.	.	.	.
8.283	16.9717	31.89	.Q	V	.	.	.	.
8.300	17.0157	31.95	.Q	V	.	.	.	.
8.317	17.0597	32.01	.Q	V	.	.	.	.
8.333	17.1039	32.06	.Q	V	.	.	.	.
8.350	17.1482	32.12	.Q	V	.	.	.	.
8.367	17.1925	32.18	.Q	V	.	.	.	.
8.383	17.2369	32.24	.Q	V	.	.	.	.
8.400	17.2814	32.29	.Q	V	.	.	.	.
8.417	17.3259	32.35	.Q	V	.	.	.	.
8.433	17.3706	32.41	.Q	V	.	.	.	.
8.450	17.4153	32.46	.Q	V	.	.	.	.
8.467	17.4600	32.49	.Q	V	.	.	.	.
8.483	17.5048	32.52	.Q	V	.	.	.	.

8.500	17.5496	32.55	.Q	V	.	.	.	.
8.517	17.5945	32.58	.Q	V	.	.	.	.
8.533	17.6394	32.61	.Q	V	.	.	.	.
8.550	17.6844	32.64	.Q	V	.	.	.	.
8.567	17.7294	32.67	.Q	V	.	.	.	.
8.583	17.7744	32.70	.Q	V	.	.	.	.
8.600	17.8195	32.73	.Q	V	.	.	.	.
8.617	17.8646	32.76	.Q	V	.	.	.	.
8.633	17.9098	32.79	.Q	V	.	.	.	.
8.650	17.9550	32.82	.Q	V	.	.	.	.
8.667	18.0002	32.85	.Q	V	.	.	.	.
8.683	18.0455	32.89	.Q	V	.	.	.	.
8.700	18.0909	32.96	.Q	V	.	.	.	.
8.717	18.1364	33.02	.Q	V	.	.	.	.
8.733	18.1820	33.08	.Q	V	.	.	.	.
8.750	18.2276	33.15	.Q	V	.	.	.	.
8.767	18.2734	33.21	.Q	V	.	.	.	.
8.783	18.3192	33.27	.Q	V	.	.	.	.
8.800	18.3651	33.33	.Q	V	.	.	.	.
8.817	18.4111	33.40	.Q	V	.	.	.	.
8.833	18.4572	33.46	.Q	V	.	.	.	.
8.850	18.5034	33.52	.Q	V	.	.	.	.
8.867	18.5496	33.59	.Q	V	.	.	.	.
8.883	18.5960	33.65	.Q	V	.	.	.	.
8.900	18.6424	33.71	.Q	V	.	.	.	.
8.917	18.6889	33.75	.Q	V	.	.	.	.
8.933	18.7354	33.79	.Q	V	.	.	.	.
8.950	18.7820	33.82	.Q	V	.	.	.	.
8.967	18.8287	33.85	.Q	V	.	.	.	.
8.983	18.8753	33.89	.Q	V	.	.	.	.
9.000	18.9221	33.92	.Q	V	.	.	.	.
9.017	18.9688	33.95	.Q	V	.	.	.	.
9.033	19.0156	33.99	.Q	V	.	.	.	.
9.050	19.0625	34.02	.Q	V	.	.	.	.
9.067	19.1094	34.05	.Q	V	.	.	.	.
9.083	19.1563	34.09	.Q	V	.	.	.	.
9.100	19.2033	34.12	.Q	V	.	.	.	.
9.117	19.2504	34.15	.Q	V	.	.	.	.
9.133	19.2975	34.19	.Q	V	.	.	.	.
9.150	19.3447	34.25	.Q	V	.	.	.	.
9.167	19.3919	34.32	.Q	V	.	.	.	.
9.183	19.4393	34.39	.Q	V	.	.	.	.
9.200	19.4868	34.46	.Q	V	.	.	.	.
9.217	19.5343	34.53	.Q	V	.	.	.	.
9.233	19.5820	34.60	.Q	V	.	.	.	.
9.250	19.6298	34.67	.Q	V	.	.	.	.
9.267	19.6776	34.74	.Q	V	.	.	.	.
9.283	19.7256	34.81	.Q	V	.	.	.	.
9.300	19.7736	34.88	.Q	V	.	.	.	.
9.317	19.8218	34.95	.Q	V	.	.	.	.
9.333	19.8700	35.02	.Q	V	.	.	.	.
9.350	19.9184	35.09	.Q	V	.	.	.	.
9.367	19.9668	35.15	.Q	V	.	.	.	.
9.383	20.0152	35.19	.Q	V	.	.	.	.
9.400	20.0638	35.23	.Q	V	.	.	.	.
9.417	20.1124	35.27	.Q	V	.	.	.	.
9.433	20.1610	35.30	.Q	V	.	.	.	.
9.450	20.2097	35.34	.Q	V	.	.	.	.

9.467	20.2584	35.38	.Q	V	.	.	.	.
9.483	20.3072	35.41	.Q	V	.	.	.	.
9.500	20.3560	35.45	.Q	V	.	.	.	.
9.517	20.4049	35.49	.Q	V	.	.	.	.
9.533	20.4538	35.52	.Q	V	.	.	.	.
9.550	20.5028	35.56	.Q	V	.	.	.	.
9.567	20.5518	35.60	.Q	V	.	.	.	.
9.583	20.6009	35.64	.Q	V	.	.	.	.
9.600	20.6501	35.69	.Q	V	.	.	.	.
9.617	20.6993	35.77	.Q	V	.	.	.	.
9.633	20.7487	35.85	.Q	V	.	.	.	.
9.650	20.7982	35.93	.Q	V	.	.	.	.
9.667	20.8478	36.01	.Q	V	.	.	.	.
9.683	20.8975	36.08	.Q	V	.	.	.	.
9.700	20.9473	36.16	.Q	V	.	.	.	.
9.717	20.9972	36.24	.Q	V	.	.	.	.
9.733	21.0473	36.32	.Q	V	.	.	.	.
9.750	21.0974	36.40	.Q	V	.	.	.	.
9.767	21.1476	36.47	.Q	V	.	.	.	.
9.783	21.1980	36.55	.Q	V	.	.	.	.
9.800	21.2484	36.63	.Q	V	.	.	.	.
9.817	21.2990	36.71	.Q	V	.	.	.	.
9.833	21.3496	36.76	.Q	V	.	.	.	.
9.850	21.4003	36.80	.Q	V	.	.	.	.
9.867	21.4511	36.84	.Q	V	.	.	.	.
9.883	21.5019	36.88	.Q	V	.	.	.	.
9.900	21.5527	36.92	.Q	V	.	.	.	.
9.917	21.6036	36.97	.Q	V	.	.	.	.
9.933	21.6546	37.01	.Q	V	.	.	.	.
9.950	21.7056	37.05	.Q	V	.	.	.	.
9.967	21.7567	37.09	.Q	V	.	.	.	.
9.983	21.8079	37.13	.Q	V	.	.	.	.
10.000	21.8591	37.17	.Q	V	.	.	.	.
10.017	21.9103	37.21	.Q	V	.	.	.	.
10.033	21.9617	37.26	.Q	V	.	.	.	.
10.050	22.0130	37.30	.Q	V	.	.	.	.
10.067	22.0645	37.39	.Q	V	.	.	.	.
10.083	22.1161	37.47	.Q	V	.	.	.	.
10.100	22.1679	37.56	.Q	V	.	.	.	.
10.117	22.2197	37.65	.Q	V	.	.	.	.
10.133	22.2717	37.74	.Q	V	.	.	.	.
10.150	22.3238	37.83	.Q	V	.	.	.	.
10.167	22.3761	37.91	.Q	V	.	.	.	.
10.183	22.4284	38.00	.Q	V	.	.	.	.
10.200	22.4809	38.09	.Q	V	.	.	.	.
10.217	22.5335	38.18	.Q	V	.	.	.	.
10.233	22.5862	38.27	.Q	V	.	.	.	.
10.250	22.6390	38.35	.Q	V	.	.	.	.
10.267	22.6919	38.44	.Q	V	.	.	.	.
10.283	22.7450	38.52	.Q	V	.	.	.	.
10.300	22.7981	38.57	.Q	V	.	.	.	.
10.317	22.8513	38.61	.Q	V	.	.	.	.
10.333	22.9046	38.66	.Q	V	.	.	.	.
10.350	22.9579	38.71	.Q	V	.	.	.	.
10.367	23.0113	38.75	.Q	V	.	.	.	.
10.383	23.0647	38.80	.Q	V	.	.	.	.
10.400	23.1182	38.85	.Q	V	.	.	.	.
10.417	23.1718	38.90	.Q	V	.	.	.	.

10.433	23.2254	38.94	.Q	V	.	.	.	.
10.450	23.2791	38.99	.Q	V	.	.	.	.
10.467	23.3329	39.04	.Q	V	.	.	.	.
10.483	23.3867	39.08	.Q	V	.	.	.	.
10.500	23.4406	39.13	.Q	V	.	.	.	.
10.517	23.4946	39.20	.Q	V	.	.	.	.
10.533	23.5488	39.30	.Q	V	.	.	.	.
10.550	23.6031	39.40	.Q	V	.	.	.	.
10.567	23.6575	39.50	.Q	V	.	.	.	.
10.583	23.7120	39.60	.Q	V	.	.	.	.
10.600	23.7667	39.71	.Q	V	.	.	.	.
10.617	23.8215	39.81	.Q	V	.	.	.	.
10.633	23.8765	39.91	.Q	V	.	.	.	.
10.650	23.9316	40.01	.Q	V	.	.	.	.
10.667	23.9869	40.11	.Q	V	.	.	.	.
10.683	24.0422	40.21	.Q	V	.	.	.	.
10.700	24.0978	40.31	.Q	V	.	.	.	.
10.717	24.1534	40.41	.Q	V	.	.	.	.
10.733	24.2092	40.51	.Q	V	.	.	.	.
10.750	24.2651	40.57	.Q	V	.	.	.	.
10.767	24.3210	40.63	.Q	V	.	.	.	.
10.783	24.3771	40.68	.Q	V	.	.	.	.
10.800	24.4332	40.73	.Q	V	.	.	.	.
10.817	24.4894	40.79	.Q	V	.	.	.	.
10.833	24.5456	40.84	.Q	V	.	.	.	.
10.850	24.6019	40.89	.Q	V	.	.	.	.
10.867	24.6583	40.95	.Q	V	.	.	.	.
10.883	24.7148	41.00	.Q	V	.	.	.	.
10.900	24.7714	41.05	.Q	V	.	.	.	.
10.917	24.8280	41.11	.Q	V	.	.	.	.
10.933	24.8847	41.16	.Q	V	.	.	.	.
10.950	24.9415	41.22	.Q	V	.	.	.	.
10.967	24.9983	41.28	.Q	V	.	.	.	.
10.983	25.0553	41.38	.Q	V	.	.	.	.
11.000	25.1125	41.50	.Q	V	.	.	.	.
11.017	25.1698	41.61	.Q	V	.	.	.	.
11.033	25.2273	41.73	.Q	V	.	.	.	.
11.050	25.2849	41.85	.Q	V	.	.	.	.
11.067	25.3427	41.96	.Q	V	.	.	.	.
11.083	25.4007	42.08	.Q	V	.	.	.	.
11.100	25.4588	42.19	.Q	V	.	.	.	.
11.117	25.5170	42.31	.Q	V	.	.	.	.
11.133	25.5755	42.42	.Q	V	.	.	.	.
11.150	25.6341	42.54	.Q	V	.	.	.	.
11.167	25.6928	42.65	.Q	V	.	.	.	.
11.183	25.7517	42.77	.Q	V	.	.	.	.
11.200	25.8108	42.87	.Q	V	.	.	.	.
11.217	25.8699	42.93	.Q	V	.	.	.	.
11.233	25.9291	42.99	.Q	V	.	.	.	.
11.250	25.9884	43.06	.Q	V	.	.	.	.
11.267	26.0478	43.12	.Q	V	.	.	.	.
11.283	26.1073	43.18	.Q	V	.	.	.	.
11.300	26.1669	43.24	.Q	V	.	.	.	.
11.317	26.2265	43.30	.Q	V	.	.	.	.
11.333	26.2862	43.37	.Q	V	.	.	.	.
11.350	26.3461	43.43	.Q	V	.	.	.	.
11.367	26.4060	43.49	.Q	V.	.	.	.	.
11.383	26.4660	43.55	.Q	V.	.	.	.	.

11.400	26.5260	43.61	.Q	V.	.	.	.
11.417	26.5862	43.68	.Q	V.	.	.	.
11.433	26.6465	43.77	.Q	V.	.	.	.
11.450	26.7070	43.91	.Q	V.	.	.	.
11.467	26.7676	44.04	.Q	V.	.	.	.
11.483	26.8285	44.18	.Q	V.	.	.	.
11.500	26.8895	44.31	.Q	V.	.	.	.
11.517	26.9507	44.45	.Q	V.	.	.	.
11.533	27.0121	44.58	.Q	V.	.	.	.
11.550	27.0737	44.71	.Q	V.	.	.	.
11.567	27.1355	44.85	.Q	V.	.	.	.
11.583	27.1975	44.98	.Q	V.	.	.	.
11.600	27.2596	45.12	.Q	V.	.	.	.
11.617	27.3219	45.25	.Q	V.	.	.	.
11.633	27.3845	45.39	.Q	V.	.	.	.
11.650	27.4472	45.52	.Q	V.	.	.	.
11.667	27.5100	45.61	.Q	V.	.	.	.
11.683	27.5729	45.68	.Q	V.	.	.	.
11.700	27.6359	45.76	.Q	V.	.	.	.
11.717	27.6990	45.83	.Q	V.	.	.	.
11.733	27.7623	45.90	.Q	V.	.	.	.
11.750	27.8256	45.97	.Q	V.	.	.	.
11.767	27.8890	46.05	.Q	V.	.	.	.
11.783	27.9525	46.12	.Q	V.	.	.	.
11.800	28.0162	46.19	.Q	V.	.	.	.
11.817	28.0799	46.27	.Q	V.	.	.	.
11.833	28.1437	46.34	.Q	V.	.	.	.
11.850	28.2077	46.41	.Q	V.	.	.	.
11.867	28.2717	46.48	.Q	V.	.	.	.
11.883	28.3359	46.59	.Q	V.	.	.	.
11.900	28.4005	46.90	.Q	V.	.	.	.
11.917	28.4655	47.24	.Q	V.	.	.	.
11.933	28.5311	47.58	.Q	V.	.	.	.
11.950	28.5971	47.92	.Q	V.	.	.	.
11.967	28.6635	48.26	.Q	V.	.	.	.
11.983	28.7305	48.61	.Q	V.	.	.	.
12.000	28.7979	48.95	.Q	V.	.	.	.
12.017	28.8658	49.29	.Q	V.	.	.	.
12.033	28.9342	49.63	.Q	V.	.	.	.
12.050	29.0030	49.97	.Q	V.	.	.	.
12.067	29.0723	50.31	.Q	V.	.	.	.
12.083	29.1421	50.65	.Q	V.	.	.	.
12.100	29.2123	51.00	.Q	V.	.	.	.
12.117	29.2832	51.50	.Q	V.	.	.	.
12.133	29.3554	52.39	.Q	V	.	.	.
12.150	29.4288	53.30	.Q	V	.	.	.
12.167	29.5035	54.21	.Q	V	.	.	.
12.183	29.5794	55.12	. Q	V	.	.	.
12.200	29.6566	56.04	. Q	V	.	.	.
12.217	29.7351	56.95	. Q	V	.	.	.
12.233	29.8148	57.86	. Q	V	.	.	.
12.250	29.8957	58.77	. Q	V	.	.	.
12.267	29.9779	59.68	. Q	V	.	.	.
12.283	30.0614	60.59	. Q	V	.	.	.
12.300	30.1461	61.50	. Q	V	.	.	.
12.317	30.2321	62.41	. Q	V	.	.	.
12.333	30.3193	63.32	. Q	V	.	.	.
12.350	30.4073	63.88	. Q	V	.	.	.

12.367	30.4955	64.09	. Q	V	.	.	.
12.383	30.5841	64.29	. Q	V	.	.	.
12.400	30.6729	64.50	. Q	V	.	.	.
12.417	30.7621	64.70	. Q	V	.	.	.
12.433	30.8514	64.90	. Q	V	.	.	.
12.450	30.9411	65.11	. Q	V	.	.	.
12.467	31.0311	65.31	. Q	V	.	.	.
12.483	31.1213	65.52	. Q	V	.	.	.
12.500	31.2119	65.72	. Q	V	.	.	.
12.517	31.3027	65.92	. Q	V	.	.	.
12.533	31.3938	66.13	. Q	V	.	.	.
12.550	31.4851	66.33	. Q	V	.	.	.
12.567	31.5768	66.53	. Q	V	.	.	.
12.583	31.6686	66.67	. Q	V	.	.	.
12.600	31.7606	66.79	. Q	V	.	.	.
12.617	31.8527	66.90	. Q	V	.	.	.
12.633	31.9450	67.01	. Q	V	.	.	.
12.650	32.0375	67.12	. Q	V	.	.	.
12.667	32.1301	67.23	. Q	V	.	.	.
12.683	32.2229	67.35	. Q	V	.	.	.
12.700	32.3158	67.46	. Q	.V	.	.	.
12.717	32.4089	67.57	. Q	.V	.	.	.
12.733	32.5021	67.68	. Q	.V	.	.	.
12.750	32.5955	67.80	. Q	.V	.	.	.
12.767	32.6890	67.91	. Q	.V	.	.	.
12.783	32.7827	68.02	. Q	.V	.	.	.
12.800	32.8766	68.15	. Q	.V	.	.	.
12.817	32.9708	68.38	. Q	.V	.	.	.
12.833	33.0653	68.63	. Q	.V	.	.	.
12.850	33.1602	68.88	. Q	.V	.	.	.
12.867	33.2554	69.13	. Q	.V	.	.	.
12.883	33.3510	69.38	. Q	.V	.	.	.
12.900	33.4469	69.63	. Q	.V	.	.	.
12.917	33.5431	69.88	. Q	.V	.	.	.
12.933	33.6397	70.13	. Q	.V	.	.	.
12.950	33.7367	70.38	. Q	.V	.	.	.
12.967	33.8340	70.63	. Q	.V	.	.	.
12.983	33.9316	70.88	. Q	.V	.	.	.
13.000	34.0296	71.13	. Q	.V	.	.	.
13.017	34.1279	71.38	. Q	.V	.	.	.
13.033	34.2265	71.59	. Q	.V	.	.	.
13.050	34.3253	71.74	. Q	.V	.	.	.
13.067	34.4243	71.88	. Q	.V	.	.	.
13.083	34.5235	72.02	. Q	.V	.	.	.
13.100	34.6229	72.15	. Q	.V	.	.	.
13.117	34.7225	72.29	. Q	.V	.	.	.
13.133	34.8222	72.43	. Q	.V	.	.	.
13.150	34.9222	72.57	. Q	.V	.	.	.
13.167	35.0223	72.71	. Q	.V	.	.	.
13.183	35.1227	72.85	. Q	.V	.	.	.
13.200	35.2232	72.99	. Q	. V	.	.	.
13.217	35.3239	73.13	. Q	. V	.	.	.
13.233	35.4249	73.27	. Q	. V	.	.	.
13.250	35.5260	73.41	. Q	. V	.	.	.
13.267	35.6274	73.63	. Q	. V	.	.	.
13.283	35.7293	73.95	. Q	. V	.	.	.
13.300	35.8316	74.26	. Q	. V	.	.	.
13.317	35.9343	74.58	. Q	. V	.	.	.

13.333	36.0374	74.89	. Q	. V	.	.	.	
13.350	36.1410	75.20	. Q	. V	.	.	.	
13.367	36.2450	75.52	. Q	. V	.	.	.	
13.383	36.3495	75.83	. Q	. V	.	.	.	
13.400	36.4544	76.15	. Q	. V	.	.	.	
13.417	36.5597	76.46	. Q	. V	.	.	.	
13.433	36.6654	76.77	. Q	. V	.	.	.	
13.450	36.7716	77.09	. Q	. V	.	.	.	
13.467	36.8782	77.40	. Q	. V	.	.	.	
13.483	36.9853	77.71	. Q	. V	.	.	.	
13.500	37.0926	77.93	. Q	. V	.	.	.	
13.517	37.2002	78.11	. Q	. V	.	.	.	
13.533	37.3080	78.28	. Q	. V	.	.	.	
13.550	37.4161	78.46	. Q	. V	.	.	.	
13.567	37.5244	78.64	. Q	. V	.	.	.	
13.583	37.6330	78.82	. Q	. V	.	.	.	
13.600	37.7418	79.00	. Q	. V	.	.	.	
13.617	37.8508	79.18	. Q	. V	.	.	.	
13.633	37.9601	79.35	. Q	. V	.	.	.	
13.650	38.0697	79.53	. Q	. V	.	.	.	
13.667	38.1795	79.71	. Q	. V	.	.	.	
13.683	38.2895	79.89	. Q	. V	.	.	.	
13.700	38.3998	80.07	. Q	. V	.	.	.	
13.717	38.5104	80.28	. Q	. V	.	.	.	
13.733	38.6215	80.66	. Q	. V	.	.	.	
13.750	38.7332	81.07	. Q	. V	.	.	.	
13.767	38.8454	81.48	. Q	. V	.	.	.	
13.783	38.9582	81.89	. Q	. V	.	.	.	
13.800	39.0716	82.31	. Q	. V	.	.	.	
13.817	39.1855	82.72	. Q	. V	.	.	.	
13.833	39.3000	83.13	. Q	. V	.	.	.	
13.850	39.4151	83.54	. Q	. V	.	.	.	
13.867	39.5307	83.95	. Q	. V	.	.	.	
13.883	39.6469	84.36	. Q	. V	.	.	.	
13.900	39.7637	84.78	. Q	. V	.	.	.	
13.917	39.8810	85.19	. Q	. V	.	.	.	
13.933	39.9989	85.60	. Q	. V	.	.	.	
13.950	40.1173	85.96	. Q	. V	.	.	.	
13.967	40.2361	86.21	. Q	. V	.	.	.	
13.983	40.3551	86.45	. Q	. V	.	.	.	
14.000	40.4745	86.69	. Q	. V	.	.	.	
14.017	40.5943	86.92	. Q	. V	.	.	.	
14.033	40.7143	87.16	. Q	. V	.	.	.	
14.050	40.8347	87.40	. Q	. V	.	.	.	
14.067	40.9554	87.64	. Q	. V	.	.	.	
14.083	41.0765	87.88	. Q	. V	.	.	.	
14.100	41.1979	88.12	. Q	. V	.	.	.	
14.117	41.3196	88.36	. Q	. V	.	.	.	
14.133	41.4416	88.60	. Q	. V	.	.	.	
14.150	41.5640	88.84	. Q	. V	.	.	.	
14.167	41.6867	89.08	. Q	. V	.	.	.	
14.183	41.8099	89.48	. Q	. V	.	.	.	
14.200	41.9339	90.04	. Q	. V	.	.	.	
14.217	42.0587	90.60	. Q	. V	.	.	.	
14.233	42.1843	91.16	. Q	. V	.	.	.	
14.250	42.3106	91.73	. Q	. V	.	.	.	
14.267	42.4378	92.29	. Q	. V	.	.	.	
14.283	42.5657	92.85	. Q	. V	.	.	.	

14.300	42.6943	93.41	. Q	. V	.	.	.	
14.317	42.8238	93.98	. Q	. V	.	.	.	
14.333	42.9540	94.54	. Q	. V	.	.	.	
14.350	43.0850	95.10	. Q	. V	.	.	.	
14.367	43.2168	95.66	. Q	. V	.	.	.	
14.383	43.3493	96.23	. Q	. V	.	.	.	
14.400	43.4826	96.78	. Q	. V	.	.	.	
14.417	43.6165	97.19	. Q	. V	.	.	.	
14.433	43.7508	97.54	. Q	. V	.	.	.	
14.450	43.8857	97.89	. Q	. V	.	.	.	
14.467	44.0210	98.23	. Q	. V	.	.	.	
14.483	44.1568	98.58	. Q	. V	.	.	.	
14.500	44.2930	98.93	. Q	. V	.	.	.	
14.517	44.4298	99.28	. Q	. V	.	.	.	
14.533	44.5670	99.62	. Q	. V	.	.	.	
14.550	44.7047	99.97	. Q	. V	.	.	.	
14.567	44.8429	100.32	. Q	. V	.	.	.	
14.583	44.9815	100.66	. Q	. V	.	.	.	
14.600	45.1207	101.01	. Q	. V	.	.	.	
14.617	45.2603	101.36	. Q	. V	.	.	.	
14.633	45.4005	101.77	. Q	. V	.	.	.	
14.650	45.5418	102.58	. Q	. V	.	.	.	
14.667	45.6843	103.46	. Q	. V	.	.	.	
14.683	45.8280	104.33	. Q	. V	.	.	.	
14.700	45.9729	105.21	. Q	. V	.	.	.	
14.717	46.1190	106.08	. Q	. V	.	.	.	
14.733	46.2663	106.96	. Q	. V	.	.	.	
14.750	46.4148	107.83	. Q	. V	.	.	.	
14.767	46.5646	108.70	. Q	. V	.	.	.	
14.783	46.7155	109.58	. Q	. V	.	.	.	
14.800	46.8676	110.45	. Q	. V	.	.	.	
14.817	47.0210	111.33	. Q	. V	.	.	.	
14.833	47.1755	112.20	. Q	. V	.	.	.	
14.850	47.3313	113.08	. Q	. V	.	.	.	
14.867	47.4881	113.87	. Q	. V	.	.	.	
14.883	47.6458	114.44	. Q	. V	.	.	.	
14.900	47.8042	115.01	. Q	. V	.	.	.	
14.917	47.9634	115.58	. Q	. V	.	.	.	
14.933	48.1234	116.14	. Q	. V	.	.	.	
14.950	48.2841	116.71	. Q	. V	.	.	.	
14.967	48.4457	117.28	. Q	. V	.	.	.	
14.983	48.6080	117.84	. Q	. V	.	.	.	
15.000	48.7711	118.41	. Q	. V	.	.	.	
15.017	48.9349	118.97	. Q	. V	.	.	.	
15.033	49.0996	119.54	. Q	. V	.	.	.	
15.050	49.2650	120.11	. Q	. V	.	.	.	
15.067	49.4313	120.67	. Q	. V	.	.	.	
15.083	49.5982	121.24	. Q	. V	.	.	.	
15.100	49.7668	122.33	. Q	. V	.	.	.	
15.117	49.9375	123.95	. Q	. V	.	.	.	
15.133	50.1104	125.57	. Q	. V	.	.	.	
15.150	50.2856	127.18	. Q	. V	.	.	.	
15.167	50.4630	128.80	. Q	. V	.	.	.	
15.183	50.6427	130.42	. Q	. V	.	.	.	
15.200	50.8245	132.03	. Q	. V	.	.	.	
15.217	51.0086	133.65	. Q	. V	.	.	.	
15.233	51.1949	135.27	. Q	. V	.	.	.	
15.250	51.3835	136.88	. Q	. V	.	.	.	

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15.267    51.5743   138.50  .   Q   .     V  .       .       .
15.283    51.7673   140.12  .   Q   .     V  .       .       .
15.300    51.9625   141.74  .   Q   .     V  .       .       .
15.317    52.1599   143.33  .   Q   .     V  .       .       .
15.333    52.3588   144.37  .   Q   .     V  .       .       .
15.350    52.5587   145.18  .   Q   .     V  .       .       .
15.367    52.7598   145.99  .   Q   .      V .       .       .
15.383    52.9620   146.80  .   Q   .      V .       .       .
15.400    53.1653   147.61  .   Q   .      V .       .       .
15.417    53.3698   148.43  .   Q   .      V .       .       .
15.433    53.5754   149.24  .   Q   .      V .       .       .
15.450    53.7820   150.05  .   Q   .      V .       .       .
15.467    53.9898   150.86  .   Q   .      V .       .       .
15.483    54.1987   151.67  .   Q   .      V .       .       .
15.500    54.4088   152.48  .   Q   .      V .       .       .
15.517    54.6199   153.30  .   Q   .      V .       .       .
15.533    54.8322   154.11  .   Q   .      V .       .       .
15.550    55.0463   155.42  .   Q   .      V .       .       .
15.567    55.2662   159.69  .   Q   .      V .       .       .
15.583    55.4927   164.45  .    Q  .      V .       .       .
15.600    55.7258   169.22  .    Q  .       V.       .       .
15.617    55.9655   173.99  .    Q  .       V.       .       .
15.633    56.2117   178.75  .    Q  .       V.       .       .
15.650    56.4645   183.52  .    Q  .       V.       .       .
15.667    56.7238   188.29  .    Q  .       V.       .       .
15.683    56.9897   193.05  .     Q .       V.       .       .
15.700    57.2622   197.82  .     Q .       V.       .       .
15.717    57.5413   202.59  .     Q .       V.       .       .
15.733    57.8269   207.35  .     Q .       V.       .       .
15.750    58.1191   212.12  .     Q .       V.       .       .
15.767    58.4178   216.89  .     Q .       V.       .       .
15.783    58.7246   222.73  .      Q .       V       .       .
15.800    59.0430   231.20  .      Q .       V       .       .
15.817    59.3733   239.79  .      Q .       V       .       .
15.833    59.7154   248.37  .       Q.       V       .       .
15.850    60.0694   256.96  .       Q.       V       .       .
15.867    60.4352   265.55  .       Q.       V       .       .
15.883    60.8128   274.14  .        Q       V       .       .
15.900    61.2022   282.73  .        Q       V       .       .
15.917    61.6035   291.32  .        Q       .V      .       .
15.933    62.0165   299.91  .        .Q      .V      .       .
15.950    62.4415   308.49  .        .Q      .V      .       .
15.967    62.8782   317.08  .        .Q      .V      .       .
15.983    63.3268   325.67  .        .Q      .V      .       .
16.000    63.7872   334.26  .        . Q     .V      .       .
16.017    64.2910   365.74  .        .  Q    .V      .       .
16.033    64.8696   420.10  .        .   Q   . V     .       .
16.050    65.5232   474.47  .        .    Q  . V     .       .
16.067    66.2516   528.84  .        .     Q. V     .       .
16.083    67.0549   583.21  .        .      .QV     .       .
16.100    67.9331   637.57  .        .       .  Q    .       .
16.117    68.8862   691.94  .        .       .  V Q  .       .
16.133    69.9142   746.31  .        .       .  V   Q .      .
16.150    71.0170   800.67  .        .       .   V    Q.    .
16.167    72.1948   855.04  .        .       .   V     .Q   .
16.183    73.4474   909.41  .        .       .    V    .  Q .
16.200    74.7749   963.78  .        .       .    V    .    Q.
16.217    76.1773  1018.14  .        .       .    V    .     Q .
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16.233    77.6733  1086.10  .        .       .     V   .       Q
16.250    79.1002  1035.93  .        .       .     V   .      Q .
16.267    80.4350   969.03  .        .       .      V  .    Q   .
16.283    81.6776   902.14  .        .       .      V  .  Q     .
16.300    82.8281   835.25  .        .       .       V Q        .
16.317    83.8864   768.35  .        .       .       Q .        .
16.333    84.8526   701.46  .        .       .    Q  V .        .
16.350    85.7267   634.56  .        .       .  Q    V.         .
16.367    86.5086   567.67  .        .       Q       V.         .
16.383    87.1984   500.78  .        .     Q .       V.         .
16.400    87.7960   433.89  .        .   Q   .       V.         .
16.417    88.3015   366.99  .        .  Q    .       V          .
16.433    88.7149   300.10  .       .Q       .       V          .
16.450    89.0361   233.20  .     Q  .       .       V          .
16.467    89.2762   174.35  .    Q   .       .       V          .
16.483    89.5018   163.75  .    Q   .       .       V          .
16.500    89.7238   161.19  .   Q    .       .       V          .
16.517    89.9423   158.62  .   Q    .       .       V          .
16.533    90.1572   156.06  .   Q    .       .       V          .
16.550    90.3687   153.50  .   Q    .       .       V          .
16.567    90.5766   150.94  .   Q    .       .       V          .
16.583    90.7810   148.38  .   Q    .       .       V          .
16.600    90.9818   145.82  .   Q    .       .       .V         .
16.617    91.1791   143.26  .   Q    .       .       .V         .
16.633    91.3729   140.70  .   Q    .       .       .V         .
16.650    91.5632   138.13  .   Q    .       .       .V         .
16.667    91.7499   135.57  .  Q     .       .       .V         .
16.683    91.9332   133.01  .  Q     .       .       .V         .
16.700    92.1132   130.68  .  Q     .       .       .V         .
16.717    92.2907   128.92  .  Q     .       .       .V         .
16.733    92.4659   127.19  .  Q     .       .       .V         .
16.750    92.6387   125.45  .  Q     .       .       .V         .
16.767    92.8091   123.72  .  Q     .       .       .V         .
16.783    92.9772   121.98  .  Q     .       .       .V         .
16.800    93.1428   120.25  .  Q     .       .       .V         .
16.817    93.3060   118.51  .  Q     .       .       .V         .
16.833    93.4669   116.78  .  Q     .       .       .V         .
16.850    93.6253   115.04  .  Q     .       .       .V         .
16.867    93.7814   113.31  .  Q     .       .       . V        .
16.883    93.9351   111.57  .  Q     .       .       . V        .
16.900    94.0864   109.84  .  Q     .       .       . V        .
16.917    94.2353   108.10  . Q      .       .       . V        .
16.933    94.3823   106.71  . Q      .       .       . V        .
16.950    94.5278   105.66  . Q      .       .       . V        .
16.967    94.6719   104.60  . Q      .       .       . V        .
16.983    94.8145   103.55  . Q      .       .       . V        .
17.000    94.9557   102.49  . Q      .       .       . V        .
17.017    95.0954   101.44  . Q      .       .       . V        .
17.033    95.2337   100.39  . Q      .       .       . V        .
17.050    95.3705    99.33  . Q      .       .       . V        .
17.067    95.5059    98.28  . Q      .       .       . V        .
17.083    95.6398    97.23  . Q      .       .       . V        .
17.100    95.7723    96.17  . Q      .       .       . V        .
17.117    95.9033    95.12  . Q      .       .       . V        .
17.133    96.0329    94.07  . Q      .       .       . V        .
17.150    96.1610    93.02  . Q      .       .       . V        .
17.167    96.2880    92.22  . Q      .       .       . V        .
17.183    96.4140    91.50  . Q      .       .       . V        .
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17.200	96.5391	90.79	.	Q	.	.	.	V	.
17.217	96.6632	90.07	.	Q	.	.	.	V	.
17.233	96.7863	89.36	.	Q	.	.	.	V	.
17.250	96.9084	88.65	.	Q	.	.	.	V	.
17.267	97.0295	87.93	.	Q	.	.	.	V	.
17.283	97.1496	87.22	.	Q	.	.	.	V	.
17.300	97.2688	86.51	.	Q	.	.	.	V	.
17.317	97.3869	85.79	.	Q	.	.	.	V	.
17.333	97.5041	85.08	.	Q	.	.	.	V	.
17.350	97.6203	84.36	.	Q	.	.	.	V	.
17.367	97.7355	83.65	.	Q	.	.	.	V	.
17.383	97.8498	82.96	.	Q	.	.	.	V	.
17.400	97.9633	82.40	.	Q	.	.	.	V	.
17.417	98.0761	81.86	.	Q	.	.	.	V	.
17.433	98.1881	81.32	.	Q	.	.	.	V	.
17.450	98.2994	80.79	.	Q	.	.	.	V	.
17.467	98.4099	80.25	.	Q	.	.	.	V	.
17.483	98.5197	79.71	.	Q	.	.	.	V	.
17.500	98.6287	79.17	.	Q	.	.	.	V	.
17.517	98.7371	78.64	.	Q	.	.	.	V	.
17.533	98.8446	78.10	.	Q	.	.	.	V	.
17.550	98.9515	77.56	.	Q	.	.	.	V	.
17.567	99.0576	77.02	.	Q	.	.	.	V	.
17.583	99.1629	76.49	.	Q	.	.	.	V	.
17.600	99.2675	75.95	.	Q	.	.	.	V	.
17.617	99.3714	75.44	.	Q	.	.	.	V	.
17.633	99.4748	75.02	.	Q	.	.	.	V	.
17.650	99.5775	74.60	.	Q	.	.	.	V	.
17.667	99.6797	74.18	.	Q	.	.	.	V	.
17.683	99.7813	73.77	.	Q	.	.	.	V	.
17.700	99.8824	73.35	.	Q	.	.	.	V	.
17.717	99.9828	72.93	.	Q	.	.	.	V	.
17.733	100.0827	72.51	.	Q	.	.	.	V	.
17.750	100.1820	72.09	.	Q	.	.	.	V	.
17.767	100.2807	71.67	.	Q	.	.	.	V	.
17.783	100.3789	71.25	.	Q	.	.	.	V	.
17.800	100.4764	70.84	.	Q	.	.	.	V	.
17.817	100.5734	70.42	.	Q	.	.	.	V	.
17.833	100.6698	70.00	.	Q	.	.	.	V	.
17.850	100.7657	69.62	.	Q	.	.	.	V	.
17.867	100.8612	69.28	.	Q	.	.	.	V	.
17.883	100.9561	68.94	.	Q	.	.	.	V	.
17.900	101.0506	68.61	.	Q	.	.	.	V	.
17.917	101.1446	68.27	.	Q	.	.	.	V	.
17.933	101.2382	67.93	.	Q	.	.	.	V	.
17.950	101.3313	67.59	.	Q	.	.	.	V	.
17.967	101.4240	67.25	.	Q	.	.	.	V	.
17.983	101.5161	66.92	.	Q	.	.	.	V	.
18.000	101.6078	66.58	.	Q	.	.	.	V	.
18.017	101.6991	66.24	.	Q	.	.	.	V	.
18.033	101.7898	65.90	.	Q	.	.	.	V	.
18.050	101.8801	65.56	.	Q	.	.	.	V	.
18.067	101.9700	65.20	.	Q	.	.	.	V	.
18.083	102.0584	64.19	.	Q	.	.	.	V	.
18.100	102.1450	62.91	.	Q	.	.	.	V	.
18.117	102.2299	61.64	.	Q	.	.	.	V	.
18.133	102.3131	60.36	.	Q	.	.	.	V	.
18.150	102.3945	59.09	.	Q	.	.	.	V	.

18.167	102.4741	57.81	.	Q	.	.	.	V	.
18.183	102.5520	56.54	.	Q	.	.	.	V	.
18.200	102.6281	55.26	.	Q	.	.	.	V	.
18.217	102.7025	53.99	.	Q	.	.	.	V	.
18.233	102.7751	52.72	.	Q	.	.	.	V	.
18.250	102.8459	51.44	.	Q	.	.	.	V	.
18.267	102.9150	50.17	.	Q	.	.	.	V	.
18.283	102.9824	48.89	.	Q	.	.	.	V	.
18.300	103.0481	47.75	.	Q	.	.	.	V	.
18.317	103.1134	47.40	.	Q	.	.	.	V	.
18.333	103.1784	47.18	.	Q	.	.	.	V	.
18.350	103.2431	46.96	.	Q	.	.	.	V	.
18.367	103.3075	46.74	.	Q	.	.	.	V	.
18.383	103.3716	46.52	.	Q	.	.	.	V	.
18.400	103.4353	46.30	.	Q	.	.	.	V	.
18.417	103.4988	46.08	.	Q	.	.	.	V	.
18.433	103.5620	45.87	.	Q	.	.	.	V	.
18.450	103.6249	45.65	.	Q	.	.	.	V	.
18.467	103.6874	45.43	.	Q	.	.	.	V	.
18.483	103.7497	45.21	.	Q	.	.	.	V	.
18.500	103.8117	44.99	.	Q	.	.	.	V	.
18.517	103.8733	44.77	.	Q	.	.	.	V	.
18.533	103.9347	44.56	.	Q	.	.	.	V	.
18.550	103.9958	44.37	.	Q	.	.	.	V	.
18.567	104.0567	44.19	.	Q	.	.	.	V	.
18.583	104.1173	44.00	.	Q	.	.	.	V	.
18.600	104.1777	43.81	.	Q	.	.	.	V	.
18.617	104.2377	43.63	.	Q	.	.	.	V	.
18.633	104.2976	43.44	.	Q	.	.	.	V	.
18.650	104.3572	43.25	.	Q	.	.	.	V	.
18.667	104.4165	43.07	.	Q	.	.	.	V	.
18.683	104.4755	42.88	.	Q	.	.	.	V	.
18.700	104.5344	42.69	.	Q	.	.	.	V	.
18.717	104.5929	42.51	.	Q	.	.	.	V	.
18.733	104.6512	42.32	.	Q	.	.	.	V	.
18.750	104.7092	42.14	.	Q	.	.	.	V	.
18.767	104.7670	41.96	.	Q	.	.	.	V	.
18.783	104.8246	41.80	.	Q	.	.	.	V	.
18.800	104.8820	41.64	.	Q	.	.	.	V	.
18.817	104.9391	41.48	.	Q	.	.	.	V	.
18.833	104.9960	41.32	.	Q	.	.	.	V	.
18.850	105.0527	41.16	.	Q	.	.	.	V	.
18.867	105.1092	40.99	.	Q	.	.	.	V	.
18.883	105.1654	40.83	.	Q	.	.	.	V	.
18.900	105.2214	40.67	.	Q	.	.	.	V	.
18.917	105.2772	40.51	.	Q	.	.	.	V	.
18.933	105.3328	40.35	.	Q	.	.	.	V	.
18.950	105.3882	40.19	.	Q	.	.	.	V	.
18.967	105.4433	40.03	.	Q	.	.	.	V	.
18.983	105.4982	39.87	.	Q	.	.	.	V	.
19.000	105.5529	39.72	.	Q	.	.	.	V	.
19.017	105.6075	39.58	.	Q	.	.	.	V	.
19.033	105.6618	39.44	.	Q	.	.	.	V	.
19.050	105.7159	39.30	.	Q	.	.	.	V	.
19.067	105.7699	39.16	.	Q	.	.	.	V	.
19.083	105.8236	39.02	.	Q	.	.	.	V	.
19.100	105.8771	38.88	.	Q	.	.	.	V	.
19.117	105.9305	38.74	.	Q	.	.	.	V	.

19.133	105.9837	38.60	.Q	.	.	.	V	.
19.150	106.0366	38.45	.Q	.	.	.	V	.
19.167	106.0894	38.31	.Q	.	.	.	V	.
19.183	106.1420	38.17	.Q	.	.	.	V	.
19.200	106.1944	38.03	.Q	.	.	.	V	.
19.217	106.2466	37.89	.Q	.	.	.	V	.
19.233	106.2986	37.77	.Q	.	.	.	V	.
19.250	106.3504	37.64	.Q	.	.	.	V	.
19.267	106.4021	37.52	.Q	.	.	.	V	.
19.283	106.4536	37.39	.Q	.	.	.	V	.
19.300	106.5050	37.27	.Q	.	.	.	V	.
19.317	106.5561	37.14	.Q	.	.	.	V	.
19.333	106.6071	37.02	.Q	.	.	.	V	.
19.350	106.6579	36.90	.Q	.	.	.	V	.
19.367	106.7086	36.77	.Q	.	.	.	V	.
19.383	106.7591	36.65	.Q	.	.	.	V	.
19.400	106.8094	36.52	.Q	.	.	.	V	.
19.417	106.8595	36.40	.Q	.	.	.	V	.
19.433	106.9095	36.27	.Q	.	.	.	V	.
19.450	106.9593	36.15	.Q	.	.	.	V	.
19.467	107.0089	36.04	.Q	.	.	.	V	.
19.483	107.0584	35.93	.Q	.	.	.	V	.
19.500	107.1077	35.82	.Q	.	.	.	V	.
19.517	107.1569	35.71	.Q	.	.	.	V	.
19.533	107.2060	35.60	.Q	.	.	.	V	.
19.550	107.2548	35.49	.Q	.	.	.	V	.
19.567	107.3036	35.38	.Q	.	.	.	V	.
19.583	107.3521	35.27	.Q	.	.	.	V	.
19.600	107.4006	35.16	.Q	.	.	.	V	.
19.617	107.4488	35.04	.Q	.	.	.	V	.
19.633	107.4970	34.93	.Q	.	.	.	V	.
19.650	107.5449	34.82	.Q	.	.	.	V	.
19.667	107.5927	34.71	.Q	.	.	.	V	.
19.683	107.6404	34.61	.Q	.	.	.	V	.
19.700	107.6879	34.51	.Q	.	.	.	V	.
19.717	107.7353	34.41	.Q	.	.	.	V	.
19.733	107.7826	34.31	.Q	.	.	.	V	.
19.750	107.8297	34.21	.Q	.	.	.	V	.
19.767	107.8767	34.11	.Q	.	.	.	V	.
19.783	107.9235	34.01	.Q	.	.	.	V	.
19.800	107.9702	33.91	.Q	.	.	.	V	.
19.817	108.0168	33.81	.Q	.	.	.	V	.
19.833	108.0632	33.71	.Q	.	.	.	V	.
19.850	108.1095	33.61	.Q	.	.	.	V	.
19.867	108.1557	33.51	.Q	.	.	.	V	.
19.883	108.2017	33.41	.Q	.	.	.	V	.
19.900	108.2476	33.31	.Q	.	.	.	V	.
19.917	108.2934	33.22	.Q	.	.	.	V	.
19.933	108.3390	33.13	.Q	.	.	.	V	.
19.950	108.3845	33.04	.Q	.	.	.	V	.
19.967	108.4299	32.95	.Q	.	.	.	V	.
19.983	108.4752	32.86	.Q	.	.	.	V	.
20.000	108.5203	32.77	.Q	.	.	.	V	.
20.017	108.5653	32.68	.Q	.	.	.	V	.
20.033	108.6102	32.59	.Q	.	.	.	V	.
20.050	108.6550	32.50	.Q	.	.	.	V	.
20.067	108.6996	32.41	.Q	.	.	.	V	.
20.083	108.7441	32.32	.Q	.	.	.	V	.

20.100	108.7885	32.23	.Q	.	.	.	V	.
20.117	108.8328	32.14	.Q	.	.	.	V	.
20.133	108.8769	32.05	.Q	.	.	.	V	.
20.150	108.9210	31.97	.Q	.	.	.	V	.
20.167	108.9649	31.89	.Q	.	.	.	V	.
20.183	109.0087	31.81	.Q	.	.	.	V	.
20.200	109.0524	31.72	.Q	.	.	.	V	.
20.217	109.0960	31.64	.Q	.	.	.	V	.
20.233	109.1395	31.56	.Q	.	.	.	V	.
20.250	109.1828	31.48	.Q	.	.	.	V	.
20.267	109.2261	31.40	.Q	.	.	.	V	.
20.283	109.2692	31.31	.Q	.	.	.	V	.
20.300	109.3122	31.23	.Q	.	.	.	V	.
20.317	109.3551	31.15	.Q	.	.	.	V	.
20.333	109.3979	31.07	.Q	.	.	.	V	.
20.350	109.4406	30.99	.Q	.	.	.	V	.
20.367	109.4832	30.91	.Q	.	.	.	V	.
20.383	109.5256	30.83	.Q	.	.	.	V	.
20.400	109.5680	30.76	.Q	.	.	.	V	.
20.417	109.6103	30.68	.Q	.	.	.	V	.
20.433	109.6524	30.61	.Q	.	.	.	V	.
20.450	109.6945	30.53	.Q	.	.	.	V	.
20.467	109.7364	30.46	.Q	.	.	.	V	.
20.483	109.7783	30.38	.Q	.	.	.	V	.
20.500	109.8200	30.31	.Q	.	.	.	V	.
20.517	109.8617	30.23	.Q	.	.	.	V	.
20.533	109.9032	30.16	.Q	.	.	.	V	.
20.550	109.9446	30.08	.Q	.	.	.	V	.
20.567	109.9860	30.01	.Q	.	.	.	V	.
20.583	110.0272	29.93	.Q	.	.	.	V	.
20.600	110.0683	29.86	.Q	.	.	.	V	.
20.617	110.1094	29.79	.Q	.	.	.	V	.
20.633	110.1503	29.73	.Q	.	.	.	V	.
20.650	110.1912	29.66	.Q	.	.	.	V	.
20.667	110.2319	29.59	.Q	.	.	.	V	.
20.683	110.2726	29.52	.Q	.	.	.	V	.
20.700	110.3132	29.45	.Q	.	.	.	V	.
20.717	110.3536	29.38	.Q	.	.	.	V	.
20.733	110.3940	29.31	.Q	.	.	.	V	.
20.750	110.4343	29.25	.Q	.	.	.	V	.
20.767	110.4745	29.18	.Q	.	.	.	V	.
20.783	110.5146	29.11	.Q	.	.	.	V	.
20.800	110.5546	29.04	.Q	.	.	.	V	.
20.817	110.5945	28.97	.Q	.	.	.	V	.
20.833	110.6343	28.91	.Q	.	.	.	V	.
20.850	110.6740	28.84	.Q	.	.	.	V	.
20.867	110.7137	28.78	.Q	.	.	.	V	.
20.883	110.7532	28.72	.Q	.	.	.	V	.
20.900	110.7927	28.65	.Q	.	.	.	V	.
20.917	110.8321	28.59	.Q	.	.	.	V	.
20.933	110.8713	28.53	.Q	.	.	.	V	.
20.950	110.9106	28.46	.Q	.	.	.	V	.
20.967	110.9497	28.40	.Q	.	.	.	V	.
20.983	110.9887	28.34	.Q	.	.	.	V	.
21.000	111.0276	28.27	.Q	.	.	.	V	.
21.017	111.0665	28.21	.Q	.	.	.	V	.
21.033	111.1053	28.15	.Q	.	.	.	V	.
21.050	111.1440	28.08	.Q	.	.	.	V	.

21.067	111.1826	28.02	.Q	.	.	.	V	.
21.083	111.2211	27.97	.Q	.	.	.	V	.
21.100	111.2595	27.91	.Q	.	.	.	V	.
21.117	111.2979	27.85	.Q	.	.	.	V	.
21.133	111.3362	27.79	.Q	.	.	.	V	.
21.150	111.3744	27.73	.Q	.	.	.	V	.
21.167	111.4125	27.67	.Q	.	.	.	V	.
21.183	111.4505	27.61	.Q	.	.	.	V	.
21.200	111.4885	27.55	.Q	.	.	.	V	.
21.217	111.5263	27.50	.Q	.	.	.	V	.
21.233	111.5641	27.44	.Q	.	.	.	V	.
21.250	111.6018	27.38	.Q	.	.	.	V	.
21.267	111.6395	27.32	.Q	.	.	.	V	.
21.283	111.6770	27.26	.Q	.	.	.	V	.
21.300	111.7145	27.21	.Q	.	.	.	V	.
21.317	111.7519	27.15	.Q	.	.	.	V	.
21.333	111.7892	27.10	Q	.	.	.	V	.
21.350	111.8265	27.04	Q	.	.	.	V	.
21.367	111.8636	26.99	Q	.	.	.	V	.
21.383	111.9007	26.94	Q	.	.	.	V	.
21.400	111.9378	26.88	Q	.	.	.	V	.
21.417	111.9747	26.83	Q	.	.	.	V	.
21.433	112.0116	26.77	Q	.	.	.	V	.
21.450	112.0484	26.72	Q	.	.	.	V	.
21.467	112.0851	26.66	Q	.	.	.	V	.
21.483	112.1218	26.61	Q	.	.	.	V	.
21.500	112.1584	26.55	Q	.	.	.	V	.
21.517	112.1949	26.50	Q	.	.	.	V	.
21.533	112.2313	26.45	Q	.	.	.	V	.
21.550	112.2677	26.40	Q	.	.	.	V	.
21.567	112.3040	26.35	Q	.	.	.	V	.
21.583	112.3402	26.30	Q	.	.	.	V	.
21.600	112.3763	26.25	Q	.	.	.	V	.
21.617	112.4124	26.20	Q	.	.	.	V	.
21.633	112.4484	26.15	Q	.	.	.	V	.
21.650	112.4844	26.10	Q	.	.	.	V	.
21.667	112.5203	26.04	Q	.	.	.	V	.
21.683	112.5561	25.99	Q	.	.	.	V	.
21.700	112.5918	25.94	Q	.	.	.	V	.
21.717	112.6275	25.89	Q	.	.	.	V	.
21.733	112.6631	25.84	Q	.	.	.	V	.
21.750	112.6986	25.79	Q	.	.	.	V	.
21.767	112.7340	25.75	Q	.	.	.	V	.
21.783	112.7694	25.70	Q	.	.	.	V	.
21.800	112.8048	25.65	Q	.	.	.	V	.
21.817	112.8400	25.60	Q	.	.	.	V	.
21.833	112.8752	25.56	Q	.	.	.	V	.
21.850	112.9104	25.51	Q	.	.	.	V	.
21.867	112.9454	25.46	Q	.	.	.	V	.
21.883	112.9805	25.41	Q	.	.	.	V	.
21.900	113.0154	25.37	Q	.	.	.	V	.
21.917	113.0503	25.32	Q	.	.	.	V	.
21.933	113.0851	25.27	Q	.	.	.	V	.
21.950	113.1198	25.22	Q	.	.	.	V	.
21.967	113.1545	25.18	Q	.	.	.	V	.
21.983	113.1891	25.13	Q	.	.	.	V	.
22.000	113.2237	25.09	Q	.	.	.	V	.
22.017	113.2582	25.04	Q	.	.	.	V	.

22.033	113.2926	25.00	Q	.	.	.	V	.
22.050	113.3270	24.95	Q	.	.	.	V	.
22.067	113.3613	24.91	Q	.	.	.	V	.
22.083	113.3955	24.87	Q	.	.	.	V	.
22.100	113.4297	24.82	Q	.	.	.	V	.
22.117	113.4638	24.78	Q	.	.	.	V	.
22.133	113.4979	24.73	Q	.	.	.	V	.
22.150	113.5319	24.69	Q	.	.	.	V	.
22.167	113.5659	24.64	Q	.	.	.	V	.
22.183	113.5997	24.60	Q	.	.	.	V	.
22.200	113.6336	24.56	Q	.	.	.	V	.
22.217	113.6673	24.51	Q	.	.	.	V	.
22.233	113.7010	24.47	Q	.	.	.	V	.
22.250	113.7347	24.43	Q	.	.	.	V	.
22.267	113.7683	24.39	Q	.	.	.	V	.
22.283	113.8018	24.35	Q	.	.	.	V	.
22.300	113.8353	24.30	Q	.	.	.	V	.
22.317	113.8687	24.26	Q	.	.	.	V	.
22.333	113.9021	24.22	Q	.	.	.	V	.
22.350	113.9354	24.18	Q	.	.	.	V	.
22.367	113.9686	24.14	Q	.	.	.	V	.
22.383	114.0018	24.10	Q	.	.	.	V	.
22.400	114.0350	24.05	Q	.	.	.	V	.
22.417	114.0680	24.01	Q	.	.	.	V	.
22.433	114.1010	23.97	Q	.	.	.	V	.
22.450	114.1340	23.93	Q	.	.	.	V	.
22.467	114.1669	23.89	Q	.	.	.	V	.
22.483	114.1998	23.85	Q	.	.	.	V	.
22.500	114.2326	23.81	Q	.	.	.	V	.
22.517	114.2653	23.77	Q	.	.	.	V	.
22.533	114.2980	23.74	Q	.	.	.	V	.
22.550	114.3307	23.70	Q	.	.	.	V	.
22.567	114.3632	23.66	Q	.	.	.	V	.
22.583	114.3958	23.62	Q	.	.	.	V	.
22.600	114.4282	23.58	Q	.	.	.	V	.
22.617	114.4607	23.54	Q	.	.	.	V	.
22.633	114.4930	23.50	Q	.	.	.	V	.
22.650	114.5254	23.46	Q	.	.	.	V	.
22.667	114.5576	23.42	Q	.	.	.	V	.
22.683	114.5898	23.39	Q	.	.	.	V	.
22.700	114.6220	23.35	Q	.	.	.	V	.
22.717	114.6541	23.31	Q	.	.	.	V	.
22.733	114.6862	23.27	Q	.	.	.	V	.
22.750	114.7182	23.24	Q	.	.	.	V	.
22.767	114.7501	23.20	Q	.	.	.	V	.
22.783	114.7820	23.16	Q	.	.	.	V	.
22.800	114.8139	23.13	Q	.	.	.	V	.
22.817	114.8457	23.09	Q	.	.	.	V	.
22.833	114.8774	23.05	Q	.	.	.	V	.
22.850	114.9091	23.02	Q	.	.	.	V	.
22.867	114.9408	22.98	Q	.	.	.	V	.
22.883	114.9724	22.94	Q	.	.	.	V	.
22.900	115.0039	22.91	Q	.	.	.	V	.
22.917	115.0354	22.87	Q	.	.	.	V	.
22.933	115.0669	22.84	Q	.	.	.	V	.
22.950	115.0983	22.80	Q	.	.	.	V	.
22.967	115.1297	22.76	Q	.	.	.	V	.
22.983	115.1610	22.73	Q	.	.	.	V	.

23.000	115.1922	22.69	Q	.	.	.	V.
23.017	115.2234	22.66	Q	.	.	.	V.
23.033	115.2546	22.62	Q	.	.	.	V.
23.050	115.2857	22.59	Q	.	.	.	V.
23.067	115.3168	22.55	Q	.	.	.	V.
23.083	115.3478	22.52	Q	.	.	.	V.
23.100	115.3788	22.48	Q	.	.	.	V.
23.117	115.4097	22.45	Q	.	.	.	V.
23.133	115.4406	22.42	Q	.	.	.	V.
23.150	115.4714	22.38	Q	.	.	.	V.
23.167	115.5022	22.35	Q	.	.	.	V.
23.183	115.5329	22.32	Q	.	.	.	V.
23.200	115.5636	22.28	Q	.	.	.	V.
23.217	115.5943	22.25	Q	.	.	.	V.
23.233	115.6249	22.22	Q	.	.	.	V.
23.250	115.6554	22.18	Q	.	.	.	V.
23.267	115.6859	22.15	Q	.	.	.	V.
23.283	115.7164	22.12	Q	.	.	.	V.
23.300	115.7468	22.08	Q	.	.	.	V.
23.317	115.7772	22.05	Q	.	.	.	V.
23.333	115.8075	22.02	Q	.	.	.	V.
23.350	115.8378	21.98	Q	.	.	.	V.
23.367	115.8680	21.95	Q	.	.	.	V.
23.383	115.8982	21.92	Q	.	.	.	V.
23.400	115.9284	21.89	Q	.	.	.	V.
23.417	115.9585	21.86	Q	.	.	.	V.
23.433	115.9885	21.83	Q	.	.	.	V.
23.450	116.0186	21.79	Q	.	.	.	V.
23.467	116.0485	21.76	Q	.	.	.	V.
23.483	116.0785	21.73	Q	.	.	.	V.
23.500	116.1084	21.70	Q	.	.	.	V.
23.517	116.1382	21.67	Q	.	.	.	V.
23.533	116.1680	21.64	Q	.	.	.	V.
23.550	116.1978	21.60	Q	.	.	.	V.
23.567	116.2275	21.57	Q	.	.	.	V.
23.583	116.2572	21.54	Q	.	.	.	V.
23.600	116.2868	21.51	Q	.	.	.	V.
23.617	116.3164	21.48	Q	.	.	.	V.
23.633	116.3459	21.45	Q	.	.	.	V.
23.650	116.3755	21.42	Q	.	.	.	V.
23.667	116.4049	21.39	Q	.	.	.	V.
23.683	116.4343	21.36	Q	.	.	.	V.
23.700	116.4637	21.33	Q	.	.	.	V.
23.717	116.4931	21.30	Q	.	.	.	V.
23.733	116.5224	21.27	Q	.	.	.	V.
23.750	116.5516	21.24	Q	.	.	.	V.
23.767	116.5808	21.21	Q	.	.	.	V.
23.783	116.6100	21.18	Q	.	.	.	V.
23.800	116.6392	21.15	Q	.	.	.	V.
23.817	116.6683	21.12	Q	.	.	.	V.
23.833	116.6973	21.10	Q	.	.	.	V.
23.850	116.7263	21.07	Q	.	.	.	V.
23.867	116.7553	21.04	Q	.	.	.	V.
23.883	116.7842	21.01	Q	.	.	.	V.
23.900	116.8131	20.98	Q	.	.	.	V.
23.917	116.8420	20.95	Q	.	.	.	V.
23.933	116.8708	20.92	Q	.	.	.	V.
23.950	116.8996	20.90	Q	.	.	.	V.

23.967	116.9284	20.87	Q	.	.	.	V.
23.983	116.9571	20.84	Q	.	.	.	V.
24.000	116.9857	20.81	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%	1441.0
10%	645.0
20%	205.0
30%	130.0
40%	105.0
50%	90.0
60%	70.0
70%	55.0
80%	35.0
90%	15.0

END OF FLOODSCx ROUTING ANALYSIS

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

                         Analysis prepared by:

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

 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 SUBAREA B                                                     *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                    *
* 50-YR EV ROKAMOTO JUNE 2018                                            *
 ************************************************************************

  FILE NAME: 3B50EVS.DAT
  TIME/DATE OF STUDY: 08:58 06/19/2018

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


************************************************************************
  FLOW PROCESS FROM NODE    210.00 TO NODE    222.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  214.70
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.126
    LOW LOSS FRACTION = 0.333
    TIME OF CONCENTRATION(MIN.) = 17.75
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  15
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.37
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.80
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.06
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.78
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.47
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.12

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    47.88
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    25.83

------------------------------------------------------------------------
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24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	98.1	196.3	294.4	392.5
10.000	8.6319	14.74	.Q	V	.	.	.
10.017	8.6522	14.76	.Q	V	.	.	.
10.033	8.6726	14.78	.Q	V	.	.	.
10.050	8.6930	14.79	.Q	V	.	.	.
10.067	8.7134	14.81	.Q	V	.	.	.
10.083	8.7338	14.82	.Q	V	.	.	.
10.100	8.7542	14.85	.Q	V	.	.	.
10.117	8.7747	14.89	.Q	V	.	.	.
10.133	8.7953	14.92	.Q	V	.	.	.
10.150	8.8159	14.96	.Q	V	.	.	.
10.167	8.8366	14.99	.Q	V	.	.	.
10.183	8.8573	15.03	.Q	V	.	.	.
10.200	8.8780	15.06	.Q	V	.	.	.
10.217	8.8988	15.10	.Q	V	.	.	.
10.233	8.9196	15.13	.Q	V	.	.	.
10.250	8.9405	15.17	.Q	V	.	.	.
10.267	8.9615	15.20	.Q	V	.	.	.
10.283	8.9825	15.24	.Q	V	.	.	.
10.300	9.0035	15.27	.Q	V	.	.	.
10.317	9.0246	15.31	.Q	V	.	.	.
10.333	9.0457	15.35	.Q	V	.	.	.
10.350	9.0669	15.38	.Q	V	.	.	.
10.367	9.0881	15.42	.Q	V	.	.	.
10.383	9.1094	15.45	.Q	V	.	.	.
10.400	9.1307	15.47	.Q	V	.	.	.
10.417	9.1521	15.49	.Q	V	.	.	.
10.433	9.1734	15.51	.Q	V	.	.	.
10.450	9.1948	15.53	.Q	V	.	.	.
10.467	9.2163	15.55	.Q	V	.	.	.
10.483	9.2377	15.57	.Q	V	.	.	.
10.500	9.2592	15.59	.Q	V	.	.	.
10.517	9.2807	15.61	.Q	V	.	.	.
10.533	9.3022	15.63	.Q	V	.	.	.
10.550	9.3238	15.65	.Q	V	.	.	.
10.567	9.3453	15.67	.Q	V	.	.	.
10.583	9.3669	15.69	.Q	V	.	.	.
10.600	9.3886	15.70	.Q	V	.	.	.
10.617	9.4102	15.72	.Q	V	.	.	.
10.633	9.4319	15.74	.Q	V	.	.	.
10.650	9.4536	15.76	.Q	V	.	.	.
10.667	9.4754	15.78	.Q	V	.	.	.
10.683	9.4971	15.80	.Q	V	.	.	.
10.700	9.5190	15.84	.Q	V	.	.	.
10.717	9.5408	15.88	.Q	V	.	.	.
10.733	9.5628	15.93	.Q	V	.	.	.

10.750	9.5848	15.97	.Q	V	.	.	.
10.767	9.6068	16.01	.Q	V	.	.	.
10.783	9.6289	16.05	.Q	V	.	.	.
10.800	9.6511	16.09	.Q	V	.	.	.
10.817	9.6733	16.13	.Q	V	.	.	.
10.833	9.6956	16.18	.Q	V	.	.	.
10.850	9.7179	16.22	.Q	V	.	.	.
10.867	9.7403	16.26	.Q	V	.	.	.
10.883	9.7628	16.30	.Q	V	.	.	.
10.900	9.7853	16.34	.Q	V	.	.	.
10.917	9.8079	16.39	.Q	V	.	.	.
10.933	9.8305	16.43	.Q	V	.	.	.
10.950	9.8532	16.47	.Q	V	.	.	.
10.967	9.8759	16.51	.Q	V	.	.	.
10.983	9.8987	16.55	.Q	V	.	.	.
11.000	9.9215	16.57	.Q	V	.	.	.
11.017	9.9444	16.59	.Q	V	.	.	.
11.033	9.9673	16.62	.Q	V	.	.	.
11.050	9.9902	16.64	.Q	V	.	.	.
11.067	10.0132	16.66	.Q	V	.	.	.
11.083	10.0361	16.69	.Q	V	.	.	.
11.100	10.0592	16.71	.Q	V	.	.	.
11.117	10.0822	16.73	.Q	V	.	.	.
11.133	10.1053	16.75	.Q	V	.	.	.
11.150	10.1284	16.78	.Q	V	.	.	.
11.167	10.1515	16.80	.Q	V	.	.	.
11.183	10.1747	16.82	.Q	V	.	.	.
11.200	10.1979	16.85	.Q	V	.	.	.
11.217	10.2211	16.87	.Q	V	.	.	.
11.233	10.2444	16.89	.Q	V	.	.	.
11.250	10.2677	16.91	.Q	V	.	.	.
11.267	10.2910	16.94	.Q	V	.	.	.
11.283	10.3144	16.97	.Q	V	.	.	.
11.300	10.3379	17.02	.Q	V	.	.	.
11.317	10.3614	17.08	.Q	V	.	.	.
11.333	10.3850	17.13	.Q	V	.	.	.
11.350	10.4086	17.18	.Q	V	.	.	.
11.367	10.4324	17.23	.Q	V	.	.	.
11.383	10.4562	17.28	.Q	V	.	.	.
11.400	10.4800	17.33	.Q	V	.	.	.
11.417	10.5040	17.38	.Q	V	.	.	.
11.433	10.5280	17.43	.Q	V	.	.	.
11.450	10.5520	17.48	.Q	V	.	.	.
11.467	10.5762	17.53	.Q	V	.	.	.
11.483	10.6004	17.58	.Q	V	.	.	.
11.500	10.6247	17.63	.Q	V	.	.	.
11.517	10.6490	17.68	.Q	V	.	.	.
11.533	10.6735	17.73	.Q	V	.	.	.
11.550	10.6980	17.78	.Q	V	.	.	.
11.567	10.7225	17.83	.Q	V	.	.	.
11.583	10.7471	17.87	.Q	V	.	.	.
11.600	10.7718	17.89	.Q	V	.	.	.
11.617	10.7965	17.92	.Q	V.	.	.	.
11.633	10.8212	17.95	.Q	V.	.	.	.
11.650	10.8460	17.98	.Q	V.	.	.	.
11.667	10.8708	18.01	.Q	V.	.	.	.
11.683	10.8956	18.03	.Q	V.	.	.	.
11.700	10.9205	18.06	.Q	V.	.	.	.

11.717	10.9454	18.09	.Q	V.	.	.	.
11.733	10.9703	18.12	.Q	V.	.	.	.
11.750	10.9953	18.15	.Q	V.	.	.	.
11.767	11.0204	18.17	.Q	V.	.	.	.
11.783	11.0454	18.20	.Q	V.	.	.	.
11.800	11.0706	18.23	.Q	V.	.	.	.
11.817	11.0957	18.26	.Q	V.	.	.	.
11.833	11.1209	18.29	.Q	V.	.	.	.
11.850	11.1461	18.31	.Q	V.	.	.	.
11.867	11.1714	18.36	.Q	V.	.	.	.
11.883	11.1969	18.49	.Q	V.	.	.	.
11.900	11.2226	18.64	.Q	V.	.	.	.
11.917	11.2484	18.79	.Q	V.	.	.	.
11.933	11.2745	18.94	.Q	V.	.	.	.
11.950	11.3008	19.09	.Q	V.	.	.	.
11.967	11.3273	19.24	.Q	V.	.	.	.
11.983	11.3540	19.39	.Q	V.	.	.	.
12.000	11.3810	19.54	.Q	V.	.	.	.
12.017	11.4081	19.69	. Q	V.	.	.	.
12.033	11.4354	19.84	. Q	V.	.	.	.
12.050	11.4629	19.99	. Q	V.	.	.	.
12.067	11.4907	20.14	. Q	V.	.	.	.
12.083	11.5186	20.29	. Q	V.	.	.	.
12.100	11.5468	20.44	. Q	V.	.	.	.
12.117	11.5751	20.59	. Q	V.	.	.	.
12.133	11.6037	20.74	. Q	V.	.	.	.
12.150	11.6325	20.89	. Q	V.	.	.	.
12.167	11.6615	21.07	. Q	V.	.	.	.
12.183	11.6909	21.33	. Q	V.	.	.	.
12.200	11.7206	21.58	. Q	V.	.	.	.
12.217	11.7507	21.84	. Q	V.	.	.	.
12.233	11.7811	22.10	. Q	V.	.	.	.
12.250	11.8119	22.36	. Q	V.	.	.	.
12.267	11.8431	22.62	. Q	V.	.	.	.
12.283	11.8746	22.88	. Q	V.	.	.	.
12.300	11.9065	23.14	. Q	V.	.	.	.
12.317	11.9387	23.40	. Q	V.	.	.	.
12.333	11.9713	23.66	. Q	V	.	.	.
12.350	12.0043	23.92	. Q	V	.	.	.
12.367	12.0376	24.18	. Q	V	.	.	.
12.383	12.0712	24.44	. Q	V	.	.	.
12.400	12.1052	24.70	. Q	V	.	.	.
12.417	12.1396	24.96	. Q	V	.	.	.
12.433	12.1743	25.22	. Q	V	.	.	.
12.450	12.2094	25.47	. Q	V	.	.	.
12.467	12.2448	25.65	. Q	V	.	.	.
12.483	12.2802	25.73	. Q	V	.	.	.
12.500	12.3158	25.82	. Q	V	.	.	.
12.517	12.3514	25.90	. Q	V	.	.	.
12.533	12.3872	25.99	. Q	V	.	.	.
12.550	12.4231	26.07	. Q	V	.	.	.
12.567	12.4592	26.16	. Q	V	.	.	.
12.583	12.4953	26.24	. Q	V	.	.	.
12.600	12.5316	26.32	. Q	V	.	.	.
12.617	12.5679	26.41	. Q	V	.	.	.
12.633	12.6044	26.49	. Q	V	.	.	.
12.650	12.6410	26.58	. Q	V	.	.	.
12.667	12.6778	26.66	. Q	V	.	.	.

12.683	12.7146	26.75	. Q	V	.	.	.
12.700	12.7516	26.83	. Q	V	.	.	.
12.717	12.7887	26.92	. Q	V	.	.	.
12.733	12.8258	27.00	. Q	V	.	.	.
12.750	12.8632	27.09	. Q	V	.	.	.
12.767	12.9005	27.14	. Q	V	.	.	.
12.783	12.9380	27.19	. Q	V	.	.	.
12.800	12.9755	27.24	. Q	V	.	.	.
12.817	13.0131	27.29	. Q	V	.	.	.
12.833	13.0508	27.34	. Q	V	.	.	.
12.850	13.0885	27.39	. Q	V	.	.	.
12.867	13.1263	27.43	. Q	V	.	.	.
12.883	13.1641	27.48	. Q	V	.	.	.
12.900	13.2020	27.53	. Q	.V	.	.	.
12.917	13.2400	27.58	. Q	.V	.	.	.
12.933	13.2781	27.63	. Q	.V	.	.	.
12.950	13.3162	27.67	. Q	.V	.	.	.
12.967	13.3544	27.72	. Q	.V	.	.	.
12.983	13.3926	27.77	. Q	.V	.	.	.
13.000	13.4310	27.82	. Q	.V	.	.	.
13.017	13.4693	27.87	. Q	.V	.	.	.
13.033	13.5078	27.92	. Q	.V	.	.	.
13.050	13.5463	27.97	. Q	.V	.	.	.
13.067	13.5850	28.07	. Q	.V	.	.	.
13.083	13.6238	28.19	. Q	.V	.	.	.
13.100	13.6628	28.30	. Q	.V	.	.	.
13.117	13.7019	28.41	. Q	.V	.	.	.
13.133	13.7412	28.52	. Q	.V	.	.	.
13.150	13.7806	28.63	. Q	.V	.	.	.
13.167	13.8202	28.74	. Q	.V	.	.	.
13.183	13.8600	28.85	. Q	.V	.	.	.
13.200	13.8999	28.96	. Q	.V	.	.	.
13.217	13.9399	29.07	. Q	.V	.	.	.
13.233	13.9801	29.19	. Q	.V	.	.	.
13.250	14.0205	29.30	. Q	.V	.	.	.
13.267	14.0610	29.41	. Q	.V	.	.	.
13.283	14.1016	29.52	. Q	.V	.	.	.
13.300	14.1424	29.63	. Q	.V	.	.	.
13.317	14.1834	29.74	. Q	.V	.	.	.
13.333	14.2245	29.85	. Q	.V	.	.	.
13.350	14.2658	29.95	. Q	.V	.	.	.
13.367	14.3071	30.02	. Q	.V	.	.	.
13.383	14.3486	30.08	. Q	.V	.	.	.
13.400	14.3901	30.15	. Q	. V	.	.	.
13.417	14.4317	30.21	. Q	. V	.	.	.
13.433	14.4734	30.28	. Q	. V	.	.	.
13.450	14.5152	30.34	. Q	. V	.	.	.
13.467	14.5571	30.41	. Q	. V	.	.	.
13.483	14.5991	30.47	. Q	. V	.	.	.
13.500	14.6411	30.54	. Q	. V	.	.	.
13.517	14.6833	30.60	. Q	. V	.	.	.
13.533	14.7255	30.67	. Q	. V	.	.	.
13.550	14.7678	30.73	. Q	. V	.	.	.
13.567	14.8103	30.80	. Q	. V	.	.	.
13.583	14.8528	30.86	. Q	. V	.	.	.
13.600	14.8954	30.92	. Q	. V	.	.	.
13.617	14.9380	30.99	. Q	. V	.	.	.
13.633	14.9808	31.05	. Q	. V	.	.	.

13.650	15.0237	31.16	.	Q	.	V	.	.	.	
13.667	15.0669	31.32	.	Q	.	V	.	.	.	
13.683	15.1102	31.47	.	Q	.	V	.	.	.	
13.700	15.1538	31.63	.	Q	.	V	.	.	.	
13.717	15.1976	31.78	.	Q	.	V	.	.	.	
13.733	15.2416	31.94	.	Q	.	V	.	.	.	
13.750	15.2858	32.09	.	Q	.	V	.	.	.	
13.767	15.3302	32.25	.	Q	.	V	.	.	.	
13.783	15.3748	32.40	.	Q	.	V	.	.	.	
13.800	15.4197	32.56	.	Q	.	V	.	.	.	
13.817	15.4647	32.71	.	Q	.	V	.	.	.	
13.833	15.5100	32.87	.	Q	.	V	.	.	.	
13.850	15.5555	33.02	.	Q	.	V	.	.	.	
13.867	15.6012	33.17	.	Q	.	V	.	.	.	
13.883	15.6471	33.33	.	Q	.	V	.	.	.	
13.900	15.6932	33.48	.	Q	.	V	.	.	.	
13.917	15.7395	33.64	.	Q	.	V	.	.	.	
13.933	15.7861	33.79	.	Q	.	V	.	.	.	
13.950	15.8328	33.90	.	Q	.	V	.	.	.	
13.967	15.8796	34.00	.	Q	.	V	.	.	.	
13.983	15.9265	34.09	.	Q	.	V	.	.	.	
14.000	15.9736	34.18	.	Q	.	V	.	.	.	
14.017	16.0208	34.28	.	Q	.	V	.	.	.	
14.033	16.0682	34.37	.	Q	.	V	.	.	.	
14.050	16.1156	34.46	.	Q	.	V	.	.	.	
14.067	16.1632	34.55	.	Q	.	V	.	.	.	
14.083	16.2110	34.65	.	Q	.	V	.	.	.	
14.100	16.2588	34.74	.	Q	.	V	.	.	.	
14.117	16.3068	34.83	.	Q	.	V	.	.	.	
14.133	16.3549	34.93	.	Q	.	V	.	.	.	
14.150	16.4032	35.02	.	Q	.	V	.	.	.	
14.167	16.4515	35.11	.	Q	.	V	.	.	.	
14.183	16.5000	35.21	.	Q	.	V	.	.	.	
14.200	16.5486	35.30	.	Q	.	V	.	.	.	
14.217	16.5974	35.39	.	Q	.	V	.	.	.	
14.233	16.6463	35.51	.	Q	.	V	.	.	.	
14.250	16.6955	35.72	.	Q	.	V	.	.	.	
14.267	16.7450	35.95	.	Q	.	V	.	.	.	
14.283	16.7949	36.19	.	Q	.	V	.	.	.	
14.300	16.8450	36.42	.	Q	.	V	.	.	.	
14.317	16.8955	36.65	.	Q	.	V	.	.	.	
14.333	16.9463	36.89	.	Q	.	V	.	.	.	
14.350	16.9974	37.12	.	Q	.	V	.	.	.	
14.367	17.0489	37.35	.	Q	.	V	.	.	.	
14.383	17.1007	37.59	.	Q	.	V	.	.	.	
14.400	17.1528	37.82	.	Q	.	V	.	.	.	
14.417	17.2052	38.05	.	Q	.	V	.	.	.	
14.433	17.2579	38.28	.	Q	.	V	.	.	.	
14.450	17.3110	38.52	.	Q	.	V	.	.	.	
14.467	17.3643	38.75	.	Q	.	V	.	.	.	
14.483	17.4180	38.98	.	Q	.	V	.	.	.	
14.500	17.4720	39.22	.	Q	.	V	.	.	.	
14.517	17.5264	39.45	.	Q	.	V	.	.	.	
14.533	17.5810	39.66	.	Q	.	V	.	.	.	
14.550	17.6359	39.82	.	Q	.	V	.	.	.	
14.567	17.6909	39.97	.	Q	.	V	.	.	.	
14.583	17.7462	40.12	.	Q	.	V	.	.	.	
14.600	17.8016	40.27	.	Q	.	V	.	.	.	

14.617	17.8573	40.43	.	Q	.	V	.	.	.	
14.633	17.9132	40.58	.	Q	.	V	.	.	.	
14.650	17.9693	40.73	.	Q	.	V	.	.	.	
14.667	18.0257	40.89	.	Q	.	V	.	.	.	
14.683	18.0822	41.04	.	Q	.	V	.	.	.	
14.700	18.1389	41.19	.	Q	.	V	.	.	.	
14.717	18.1959	41.34	.	Q	.	V	.	.	.	
14.733	18.2530	41.50	.	Q	.	V	.	.	.	
14.750	18.3104	41.65	.	Q	.	V	.	.	.	
14.767	18.3680	41.80	.	Q	.	V	.	.	.	
14.783	18.4258	41.96	.	Q	.	V	.	.	.	
14.800	18.4838	42.11	.	Q	.	V	.	.	.	
14.817	18.5420	42.26	.	Q	.	V	.	.	.	
14.833	18.6006	42.57	.	Q	.	V	.	.	.	
14.850	18.6599	43.03	.	Q	.	V	.	.	.	
14.867	18.7198	43.48	.	Q	.	V	.	.	.	
14.883	18.7803	43.94	.	Q	.	V	.	.	.	
14.900	18.8414	44.40	.	Q	.	V	.	.	.	
14.917	18.9032	44.86	.	Q	.	V	.	.	.	
14.933	18.9656	45.31	.	Q	.	V	.	.	.	
14.950	19.0287	45.77	.	Q	.	V	.	.	.	
14.967	19.0924	46.23	.	Q	.	V	.	.	.	
14.983	19.1567	46.69	.	Q	.	V	.	.	.	
15.000	19.2216	47.15	.	Q	.	V	.	.	.	
15.017	19.2872	47.60	.	Q	.	V	.	.	.	
15.033	19.3534	48.06	.	Q	.	V	.	.	.	
15.050	19.4202	48.52	.	Q	.	V	.	.	.	
15.067	19.4877	48.98	.	Q	.	V	.	.	.	
15.083	19.5558	49.44	.	Q	.	V	.	.	.	
15.100	19.6245	49.89	.	Q	.	V	.	.	.	
15.117	19.6939	50.35	.	Q	.	V	.	.	.	
15.133	19.7639	50.82	.	Q	.	V	.	.	.	
15.150	19.8345	51.30	.	Q	.	V	.	.	.	
15.167	19.9058	51.77	.	Q	.	V	.	.	.	
15.183	19.9778	52.24	.	Q	.	V	.	.	.	
15.200	20.0504	52.72	.	Q	.	V	.	.	.	
15.217	20.1237	53.19	.	Q	.	V	.	.	.	
15.233	20.1976	53.66	.	Q	.	V	.	.	.	
15.250	20.2721	54.14	.	Q	.	V	.	.	.	
15.267	20.3474	54.61	.	Q	.	V	.	.	.	
15.283	20.4232	55.09	.	Q	.	V	.	.	.	
15.300	20.4998	55.56	.	Q	.	V	.	.	.	
15.317	20.5770	56.03	.	Q	.	V	.	.	.	
15.333	20.6548	56.51	.	Q	.	V	.	.	.	
15.350	20.7333	56.98	.	Q	.	V	.	.	.	
15.367	20.8124	57.46	.	Q	.	V	.	.	.	
15.383	20.8922	57.93	.	Q	.	V	.	.	.	
15.400	20.9727	58.40	.	Q	.	V	.	.	.	
15.417	21.0538	58.94	.	Q	.	V	.	.	.	
15.433	21.1362	59.83	.	Q	.	V	.	.	.	
15.450	21.2200	60.78	.	Q	.	V	.	.	.	
15.467	21.3050	61.73	.	Q	.	V	.	.	.	
15.483	21.3913	62.68	.	Q	.	V	.	.	.	
15.500	21.4790	63.64	.	Q	.	V	.	.	.	
15.517	21.5679	64.59	.	Q	.	V	.	.	.	
15.533	21.6582	65.54	.	Q	.	V	.	.	.	
15.550	21.7498	66.49	.	Q	.	V	.	.	.	
15.567	21.8427	67.44	.	Q	.	V	.	.	.	

```
 15.583     21.9369     68.39  .    Q   .       V .         .         .
 15.600     22.0324     69.35  .     Q  .       V .         .         .
 15.617     22.1293     70.30  .     Q  .       V .         .         .
 15.633     22.2274     71.25  .     Q  .       V .         .         .
 15.650     22.3268     72.20  .     Q  .       V .         .         .
 15.667     22.4276     73.15  .     Q  .       V .         .         .
 15.683     22.5297     74.10  .     Q  .       V .         .         .
 15.700     22.6331     75.06  .     Q  .       V .         .         .
 15.717     22.7383     76.41  .     Q  .       V .         .         .
 15.733     22.8468     78.76  .      Q .        V.         .         .
 15.750     22.9586     81.16  .      Q .        V.         .         .
 15.767     23.0737     83.55  .      Q .        V.         .         .
 15.783     23.1920     85.94  .      Q .        V.         .         .
 15.800     23.3137     88.34  .       Q.        V.         .         .
 15.817     23.4387     90.73  .       Q.        V.         .         .
 15.833     23.5669     93.12  .       Q.        V.         .         .
 15.850     23.6985     95.52  .       Q.        V.         .         .
 15.867     23.8334     97.91  .       Q.        V.         .         .
 15.883     23.9715    100.30  .        Q         V         .         .
 15.900     24.1130    102.70  .        Q         V         .         .
 15.917     24.2577    105.09  .        Q         V         .         .
 15.933     24.4058    107.48  .        Q         V         .         .
 15.950     24.5571    109.88  .        .Q        V         .         .
 15.967     24.7118    112.27  .        .Q        V         .         .
 15.983     24.8697    114.66  .        .Q        V         .         .
 16.000     25.0310    117.06  .        .Q        V         .         .
 16.017     25.2045    125.98  .        . Q       .V        .         .
 16.033     25.3993    141.43  .        .   Q     .V        .         .
 16.050     25.6154    156.89  .        .    Q    .V        .         .
 16.067     25.8528    172.34  .        .      Q  .V        .         .
 16.083     26.1115    187.79  .        .       Q.V        .         .
 16.100     26.3914    203.25  .        .        Q V       .         .
 16.117     26.6927    218.70  .        .         . Q       .         .
 16.133     27.0152    234.15  .        .         . VQ      .         .
 16.150     27.3590    249.61  .        .         . V  Q    .         .
 16.167     27.7241    265.06  .        .         .  V   Q  .         .
 16.183     28.1105    280.51  .        .         .  V    Q .         .
 16.200     28.5181    295.97  .        .         .  V      Q         .
 16.217     28.9471    311.42  .        .         .   V     .Q        .
 16.233     29.3973    326.87  .        .         .   V     .  Q      .
 16.250     29.8688    342.33  .        .         .   V     .   Q     .
 16.267     30.3617    357.78  .        .         .    V    .    Q   .
 16.283     30.8758    373.23  .        .         .    V    .      Q .
 16.300     31.4165    392.55  .        .         .     V   .       Q
 16.317     31.9381    378.74  .        .         .     V   .      Q .
 16.333     32.4344    360.32  .        .         .      V  .    Q   .
 16.350     32.9054    341.90  .        .         .      V  .  Q     .
 16.367     33.3509    323.48  .        .         .      V  . Q      .
 16.383     33.7711    305.06  .        .         .       V .Q       .
 16.400     34.1660    286.65  .        .         .       VQ.        .
 16.417     34.5354    268.23  .        .         .      QV .        .
 16.433     34.8795    249.81  .        .         .    Q   V.        .
 16.450     35.1982    231.39  .        .         .  Q     V.        .
 16.467     35.4916    212.98  .        .         .Q       V.        .
 16.483     35.7596    194.56  .        .        Q.        V.        .
 16.500     36.0022    176.14  .        .     Q   .         V        .
 16.517     36.2195    157.72  .        .    Q    .         V        .
 16.533     36.4113    139.31  .        .   Q     .         V        .
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 16.550     36.5779    120.89  .         . Q       .         V         .
 16.567     36.7190    102.47  .          Q        .         V         .
 16.583     36.8348     84.05  .        Q .        .         V         .
 16.600     36.9281     67.80  .     Q    .        .         V         .
 16.617     37.0170     64.51  .     Q    .        .         V         .
 16.633     37.1043     63.38  .     Q    .        .         V         .
 16.650     37.1901     62.26  .     Q    .        .         .V        .
 16.667     37.2743     61.14  .     Q    .        .         .V        .
 16.683     37.3569     60.01  .     Q    .        .         .V        .
 16.700     37.4380     58.89  .     Q    .        .         .V        .
 16.717     37.5176     57.76  .    Q     .        .         .V        .
 16.733     37.5956     56.64  .    Q     .        .         .V        .
 16.750     37.6721     55.51  .    Q     .        .         .V        .
 16.767     37.7470     54.39  .    Q     .        .         .V        .
 16.783     37.8204     53.26  .    Q     .        .         .V        .
 16.800     37.8922     52.14  .    Q     .        .         .V        .
 16.817     37.9624     51.01  .    Q     .        .         .V        .
 16.833     38.0312     49.89  .    Q     .        .         .V        .
 16.850     38.0983     48.76  .   Q      .        .         .V        .
 16.867     38.1639     47.64  .   Q      .        .         .V        .
 16.883     38.2280     46.51  .   Q      .        .         .V        .
 16.900     38.2908     45.57  .   Q      .        .         .V        .
 16.917     38.3529     45.09  .   Q      .        .         . V       .
 16.933     38.4144     44.62  .   Q      .        .         . V       .
 16.950     38.4752     44.15  .   Q      .        .         . V       .
 16.967     38.5353     43.68  .   Q      .        .         . V       .
 16.983     38.5949     43.21  .   Q      .        .         . V       .
 17.000     38.6537     42.74  .   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%	1021.0
10%	785.0
20%	260.0
30%	165.0
40%	140.0
50%	115.0
60%	90.0
70%	70.0
80%	45.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

                          Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA C                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 50-YR EV DECEMBER 2018 CCHIU                                          *
 ************************************************************************

  FILE NAME: 3C50EVS.DAT
  TIME/DATE OF STUDY: 13:18 12/11/2018


******************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE    380.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     870.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.341 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) =  0.151
         LOW LOSS FRACTION = 0.340
         *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 = 0.961
          30-MINUTE FACTOR = 0.961
           1-HOUR FACTOR = 0.961
           3-HOUR FACTOR = 0.994
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998
```



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         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  24.438


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  10.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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

------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
------------------------------------------------------------------------------
        1                1.455               153.213
        2                7.059               590.052
        3               19.937              1355.823
        4               36.880              1783.991
        5               57.620              2183.594
        6               74.834              1812.495
        7               85.716              1145.714
        8               91.938               655.101
        9               95.666               392.516
       10               97.670               210.976
       11               98.405                77.413
       12               98.863                48.233
       13               99.319                47.969
       14               99.728                43.037
       15               99.932                21.518
       16              100.000                 7.173


------------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      86.9759
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     211.2980
------------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 325.0 650.0 975.0 1300.0
10.000	37.8692	65.21	. Q V . . . .
10.083	38.3220	65.75	. Q V . . . .
10.167	38.7786	66.30	. Q V . . . .
10.250	39.2391	66.87	. Q V . . . .
10.333	39.7035	67.44	. Q V . . . .
10.417	40.1721	68.03	. Q V . . . .
10.500	40.6447	68.63	. Q V . . . .
10.583	41.1216	69.25	. Q V . . . .
10.667	41.6028	69.87	. Q V . . . .
10.750	42.0885	70.52	. Q V . . . .
10.833	42.5787	71.18	. Q V . . . .
10.917	43.0736	71.86	. Q V . . . .
11.000	43.5732	72.55	. Q V . . . .
11.083	44.0778	73.26	. Q V . . . .
11.167	44.5874	73.99	. Q V . . . .
11.250	45.1021	74.74	. Q V . . . .
11.333	45.6221	75.51	. Q V . . . .
11.417	46.1476	76.30	. Q V . . . .
11.500	46.6787	77.11	. Q V . . . .
11.583	47.2155	77.95	. Q V . . . .
11.667	47.7582	78.80	. Q V. . . . .
11.750	48.3071	79.69	. Q V. . . . .
11.833	48.8621	80.59	. Q V. . . . .
11.917	49.4236	81.54	. Q V. . . . .
12.000	49.9918	82.49	. Q V. . . . .
12.083	50.5694	83.87	. Q V. . . . .
12.167	51.1638	86.31	. Q V. . . . .
12.250	51.7882	90.66	. Q V. . . . .
12.333	52.4499	96.08	. Q V. . . . .
12.417	53.1560	102.52	. Q V . . . .
12.500	53.9006	108.11	. Q V . . . .
12.583	54.6730	112.16	. Q V . . . .
12.667	55.4655	115.06	. Q V . . . .
12.750	56.2740	117.40	. Q V . . . .
12.833	57.0958	119.33	. Q V . . . .
12.917	57.9292	121.01	. Q V . . . .
13.000	58.7739	122.65	. Q .V . . . .
13.083	59.6305	124.38	. Q .V . . . .
13.167	60.4991	126.13	. Q .V . . . .
13.250	61.3801	127.92	. Q .V . . . .
13.333	62.2735	129.72	. Q .V . . . .
13.417	63.1799	131.61	. Q .V . . . .
13.500	64.0996	133.55	. Q . V . . . .
13.583	65.0336	135.61	. Q . V . . . .
13.667	65.9821	137.73	. Q . V . . . .
13.750	66.9461	139.98	. Q . V . . . .
13.833	67.9262	142.31	. Q . V . . . .

13.917	68.9235	144.80	. Q . V . . . .
14.000	69.9384	147.37	. Q . V . . . .
14.083	70.9732	150.26	. Q . V . . . .
14.167	72.0312	153.62	. Q . V . . . .
14.250	73.1183	157.84	. Q . V . . . .
14.333	74.2377	162.55	. Q . V . . . .
14.417	75.3937	167.85	. Q . V . . . .
14.500	76.5853	173.02	. Q . V . . . .
14.583	77.8108	177.94	. Q . V . . . .
14.667	79.0689	182.68	. Q . V . . . .
14.750	80.3608	187.58	. Q . V . . . .
14.833	81.6873	192.61	. Q . V . . . .
14.917	83.0512	198.03	. Q . V . . . .
15.000	84.4549	203.81	. Q . V . . . .
15.083	85.9028	210.24	. Q . V . . . .
15.167	87.3986	217.19	. Q . V . . . .
15.250	88.9489	225.11	. Q . V . . . .
15.333	90.5614	234.14	. Q . V . . . .
15.417	92.2427	244.12	. Q . V . . . .
15.500	93.9859	253.10	. Q . V . . . .
15.583	95.7753	259.82	. Q . V . . . .
15.667	97.6122	266.72	. Q . V . . . .
15.750	99.5179	276.71	. Q . V . . . .
15.833	101.5668	297.50	. Q. V. . . .
15.917	103.9017	339.03	. Q V. . . .
16.000	106.7077	407.42	. . Q V . . .
16.083	110.4875	548.83	. . Q V . . .
16.167	115.8478	778.31	. . .V Q . . .
16.250	123.2150	1069.72	. . . V . Q . .
16.333	131.6414	1223.51	. . . V . . Q .
16.417	140.5168	1288.70	. . . V . . Q.
16.500	148.0806	1098.27	. . . V . Q . .
16.583	153.7039	816.50	. . . Q V. . .
16.667	157.8037	595.30	. . Q . V. . .
16.750	160.9595	458.23	. . Q . V . .
16.833	163.4465	361.11	. .Q . V . .
16.917	165.4511	291.07	. Q . .V . .
17.000	167.2314	258.49	. Q . .V . .
17.083	168.8819	239.66	. Q . .V . .
17.167	170.4103	221.92	. Q . . V . .
17.250	171.7955	201.13	. Q . . V . .
17.333	173.0644	184.25	. Q . . V . .
17.417	174.2440	171.27	. Q . . V . .
17.500	175.3606	162.14	. Q . . . V .
17.583	176.4255	154.61	. Q . . . V .
17.667	177.4465	148.26	. Q . . . V .
17.750	178.4295	142.73	. Q . . . V .
17.833	179.3791	137.88	. Q . . . V .
17.917	180.2990	133.58	. Q . . . . V .
18.000	181.1921	129.67	. Q . . . . V .
18.083	182.0579	125.71	. Q . . . . V .
18.167	182.8910	120.98	. Q . . . . V .
18.250	183.6807	114.66	. Q . . . . V .
18.333	184.4215	107.56	. Q . . . . V .
18.417	185.1083	99.72	. Q . . . . . V .
18.500	185.7486	92.97	. Q . . . . . V .
18.583	186.3547	88.01	. Q . . . . . V .
18.667	186.9358	84.38	. Q . . . . . V .

18.750	187.4973	81.52	. Q	.	.	.	V	.
18.833	188.0429	79.22	. Q	.	.	.	V	.
18.917	188.5755	77.34	. Q	.	.	.	V	.
19.000	189.0963	75.62	. Q	.	.	.	V	.
19.083	189.6059	73.99	. Q	.	.	.	V	.
19.167	190.1048	72.45	. Q	.	.	.	V	.
19.250	190.5940	71.03	. Q	.	.	.	V	.
19.333	191.0741	69.71	. Q	.	.	.	V	.
19.417	191.5456	68.47	. Q	.	.	.	V	.
19.500	192.0090	67.28	. Q	.	.	.	V	.
19.583	192.4646	66.15	. Q	.	.	.	V	.
19.667	192.9126	65.06	. Q	.	.	.	V	.
19.750	193.3536	64.02	.Q	.	.	.	V	.
19.833	193.7876	63.02	.Q	.	.	.	V	.
19.917	194.2151	62.07	.Q	.	.	.	V	.
20.000	194.6362	61.14	.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%	1205.0
10%	285.0
20%	90.0
30%	50.0
40%	40.0
50%	30.0
60%	30.0
70%	20.0
80%	20.0
90%	10.0

END OF FLOODSCx ROUTING ANALYSIS

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

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA D                                                   *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                  *
* 50-YR EV SEPTEMBER 2018 CCHIU                                        *
 ************************************************************************

  FILE NAME: 3D50EVS.DAT
  TIME/DATE OF STUDY: 15:23 09/25/2018

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


************************************************************************
  FLOW PROCESS FROM NODE    430.00 TO NODE    428.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  439.50
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.144
    LOW LOSS FRACTION = 0.343
    TIME OF CONCENTRATION(MIN.) = 26.35
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  15
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.37
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.80
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.06
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.78
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.47
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.12

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    96.04
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    54.86

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24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	156.1	312.2	468.3	624.5
10.000	16.9540	29.38	.Q	V .	.	.	.
10.017	16.9945	29.45	.Q	V .	.	.	.
10.033	17.0352	29.51	.Q	V .	.	.	.
10.050	17.0759	29.58	.Q	V .	.	.	.
10.067	17.1168	29.65	.Q	V .	.	.	.
10.083	17.1577	29.71	.Q	V .	.	.	.
10.100	17.1987	29.78	.Q	V .	.	.	.
10.117	17.2398	29.84	.Q	V .	.	.	.
10.133	17.2810	29.91	.Q	V .	.	.	.
10.150	17.3223	29.98	.Q	V .	.	.	.
10.167	17.3637	30.04	.Q	V .	.	.	.
10.183	17.4051	30.11	.Q	V .	.	.	.
10.200	17.4467	30.17	.Q	V .	.	.	.
10.217	17.4884	30.24	.Q	V .	.	.	.
10.233	17.5301	30.31	.Q	V .	.	.	.
10.250	17.5719	30.37	.Q	V .	.	.	.
10.267	17.6139	30.44	.Q	V .	.	.	.
10.283	17.6559	30.51	.Q	V .	.	.	.
10.300	17.6980	30.57	.Q	V .	.	.	.
10.317	17.7401	30.61	.Q	V .	.	.	.
10.333	17.7824	30.64	.Q	V .	.	.	.
10.350	17.8246	30.68	.Q	V .	.	.	.
10.367	17.8669	30.72	.Q	V .	.	.	.
10.383	17.9093	30.76	.Q	V .	.	.	.
10.400	17.9517	30.79	.Q	V .	.	.	.
10.417	17.9942	30.83	.Q	V .	.	.	.
10.433	18.0367	30.87	.Q	V .	.	.	.
10.450	18.0793	30.91	.Q	V .	.	.	.
10.467	18.1219	30.94	.Q	V .	.	.	.
10.483	18.1646	30.98	.Q	V .	.	.	.
10.500	18.2073	31.02	.Q	V .	.	.	.
10.517	18.2501	31.05	.Q	V .	.	.	.
10.533	18.2929	31.09	.Q	V .	.	.	.
10.550	18.3358	31.13	.Q	V .	.	.	.
10.567	18.3787	31.17	.Q	V .	.	.	.
10.583	18.4217	31.20	.Q	V .	.	.	.
10.600	18.4647	31.24	. Q	V .	.	.	.
10.617	18.5078	31.28	. Q	V .	.	.	.
10.633	18.5509	31.31	. Q	V .	.	.	.
10.650	18.5941	31.35	. Q	V .	.	.	.
10.667	18.6373	31.39	. Q	V .	.	.	.
10.683	18.6806	31.43	. Q	V .	.	.	.
10.700	18.7239	31.46	. Q	V .	.	.	.
10.717	18.7673	31.50	. Q	V .	.	.	.
10.733	18.8108	31.54	. Q	V .	.	.	.

10.750	18.8543	31.61	. Q	V .	.	.	.
10.767	18.8980	31.69	. Q	V .	.	.	.
10.783	18.9417	31.78	. Q	V .	.	.	.
10.800	18.9856	31.86	. Q	V .	.	.	.
10.817	19.0296	31.95	. Q	V .	.	.	.
10.833	19.0737	32.03	. Q	V .	.	.	.
10.850	19.1180	32.12	. Q	V .	.	.	.
10.867	19.1623	32.20	. Q	V .	.	.	.
10.883	19.2068	32.28	. Q	V .	.	.	.
10.900	19.2514	32.37	. Q	V .	.	.	.
10.917	19.2961	32.45	. Q	V .	.	.	.
10.933	19.3409	32.54	. Q	V .	.	.	.
10.950	19.3858	32.62	. Q	V .	.	.	.
10.967	19.4309	32.71	. Q	V .	.	.	.
10.983	19.4761	32.79	. Q	V .	.	.	.
11.000	19.5213	32.88	. Q	V .	.	.	.
11.017	19.5667	32.96	. Q	V .	.	.	.
11.033	19.6123	33.05	. Q	V .	.	.	.
11.050	19.6579	33.13	. Q	V .	.	.	.
11.067	19.7037	33.22	. Q	V .	.	.	.
11.083	19.7495	33.30	. Q	V .	.	.	.
11.100	19.7955	33.38	. Q	V .	.	.	.
11.117	19.8416	33.47	. Q	V .	.	.	.
11.133	19.8878	33.55	. Q	V .	.	.	.
11.150	19.9342	33.64	. Q	V .	.	.	.
11.167	19.9806	33.72	. Q	V .	.	.	.
11.183	20.0272	33.79	. Q	V .	.	.	.
11.200	20.0738	33.84	. Q	V .	.	.	.
11.217	20.1205	33.89	. Q	V .	.	.	.
11.233	20.1672	33.94	. Q	V .	.	.	.
11.250	20.2140	33.99	. Q	V .	.	.	.
11.267	20.2609	34.04	. Q	V .	.	.	.
11.283	20.3079	34.09	. Q	V .	.	.	.
11.300	20.3549	34.13	. Q	V .	.	.	.
11.317	20.4020	34.18	. Q	V .	.	.	.
11.333	20.4491	34.23	. Q	V .	.	.	.
11.350	20.4963	34.28	. Q	V .	.	.	.
11.367	20.5436	34.33	. Q	V .	.	.	.
11.383	20.5910	34.38	. Q	V .	.	.	.
11.400	20.6384	34.43	. Q	V .	.	.	.
11.417	20.6859	34.47	. Q	V .	.	.	.
11.433	20.7334	34.52	. Q	V .	.	.	.
11.450	20.7810	34.57	. Q	V .	.	.	.
11.467	20.8287	34.62	. Q	V .	.	.	.
11.483	20.8765	34.67	. Q	V .	.	.	.
11.500	20.9243	34.72	. Q	V .	.	.	.
11.517	20.9722	34.77	. Q	V .	.	.	.
11.533	21.0201	34.81	. Q	V .	.	.	.
11.550	21.0682	34.86	. Q	V .	.	.	.
11.567	21.1163	34.91	. Q	V .	.	.	.
11.583	21.1644	34.96	. Q	V .	.	.	.
11.600	21.2126	35.01	. Q	V .	.	.	.
11.617	21.2609	35.06	. Q	V .	.	.	.
11.633	21.3094	35.17	. Q	V .	.	.	.
11.650	21.3580	35.28	. Q	V .	.	.	.
11.667	21.4067	35.40	. Q	V .	.	.	.
11.683	21.4556	35.51	. Q	V .	.	.	.
11.700	21.5047	35.62	. Q	V .	.	.	.

11.717	21.5539	35.74	.	Q	V	.	.	.
11.733	21.6033	35.85	.	Q	V	.	.	.
11.750	21.6528	35.96	.	Q	V	.	.	.
11.767	21.7025	36.07	.	Q	V	.	.	.
11.783	21.7524	36.19	.	Q	V	.	.	.
11.800	21.8024	36.30	.	Q	V	.	.	.
11.817	21.8525	36.41	.	Q	V	.	.	.
11.833	21.9028	36.53	.	Q	V	.	.	.
11.850	21.9533	36.64	.	Q	V	.	.	.
11.867	22.0039	36.75	.	Q	V	.	.	.
11.883	22.0547	36.87	.	Q	V	.	.	.
11.900	22.1056	36.98	.	Q	V	.	.	.
11.917	22.1567	37.09	.	Q	V	.	.	.
11.933	22.2080	37.21	.	Q	V	.	.	.
11.950	22.2594	37.32	.	Q	V	.	.	.
11.967	22.3109	37.43	.	Q	V	.	.	.
11.983	22.3627	37.54	.	Q	V	.	.	.
12.000	22.4145	37.66	.	Q	V	.	.	.
12.017	22.4666	37.77	.	Q	V	.	.	.
12.033	22.5187	37.88	.	Q	V	.	.	.
12.050	22.5711	38.00	.	Q	V	.	.	.
12.067	22.6238	38.26	.	Q	V	.	.	.
12.083	22.6770	38.61	.	Q	V	.	.	.
12.100	22.7306	38.95	.	Q	V	.	.	.
12.117	22.7847	39.30	.	Q	V	.	.	.
12.133	22.8394	39.65	.	Q	V	.	.	.
12.150	22.8944	39.99	.	Q	V	.	.	.
12.167	22.9500	40.34	.	Q	V	.	.	.
12.183	23.0060	40.68	.	Q	V	.	.	.
12.200	23.0626	41.03	.	Q	V	.	.	.
12.217	23.1196	41.38	.	Q	V	.	.	.
12.233	23.1770	41.72	.	Q	V	.	.	.
12.250	23.2350	42.07	.	Q	V	.	.	.
12.267	23.2934	42.42	.	Q	V	.	.	.
12.283	23.3523	42.76	.	Q	V	.	.	.
12.300	23.4117	43.11	.	Q	V	.	.	.
12.317	23.4715	43.45	.	Q	V	.	.	.
12.333	23.5318	43.80	.	Q	V	.	.	.
12.350	23.5927	44.15	.	Q	V	.	.	.
12.367	23.6539	44.49	.	Q	V	.	.	.
12.383	23.7157	44.84	.	Q	V	.	.	.
12.400	23.7779	45.18	.	Q	V	.	.	.
12.417	23.8406	45.53	.	Q	V	.	.	.
12.433	23.9038	45.88	.	Q	V	.	.	.
12.450	23.9675	46.22	.	Q	V	.	.	.
12.467	24.0316	46.57	.	Q	V	.	.	.
12.483	24.0963	46.92	.	Q	V	.	.	.
12.500	24.1614	47.25	.	Q	V	.	.	.
12.517	24.2269	47.56	.	Q	V	.	.	.
12.533	24.2928	47.88	.	Q	V	.	.	.
12.550	24.3592	48.19	.	Q	V	.	.	.
12.567	24.4260	48.50	.	Q	V	.	.	.
12.583	24.4932	48.81	.	Q	V	.	.	.
12.600	24.5609	49.13	.	Q	V	.	.	.
12.617	24.6290	49.44	.	Q	V	.	.	.
12.633	24.6975	49.75	.	Q	V	.	.	.
12.650	24.7665	50.06	.	Q	V	.	.	.
12.667	24.8359	50.37	.	Q	V	.	.	.

12.683	24.9057	50.69	.	Q	V	.	.	.
12.700	24.9759	51.00	.	Q	V	.	.	.
12.717	25.0466	51.31	.	Q	V	.	.	.
12.733	25.1177	51.62	.	Q	V	.	.	.
12.750	25.1892	51.94	.	Q	V	.	.	.
12.767	25.2612	52.25	.	Q	V	.	.	.
12.783	25.3336	52.56	.	Q	V	.	.	.
12.800	25.4064	52.87	.	Q	V	.	.	.
12.817	25.4797	53.19	.	Q	V	.	.	.
12.833	25.5534	53.50	.	Q	V	.	.	.
12.850	25.6275	53.81	.	Q	V	.	.	.
12.867	25.7020	54.12	.	Q	V	.	.	.
12.883	25.7770	54.43	.	Q	V	.	.	.
12.900	25.8524	54.75	.	Q	V	.	.	.
12.917	25.9283	55.06	.	Q	V	.	.	.
12.933	26.0045	55.35	.	Q	V	.	.	.
12.950	26.0809	55.49	.	Q	V	.	.	.
12.967	26.1575	55.59	.	Q	V	.	.	.
12.983	26.2342	55.69	.	Q	V	.	.	.
13.000	26.3111	55.80	.	Q	V	.	.	.
13.017	26.3881	55.90	.	Q	V	.	.	.
13.033	26.4652	56.00	.	Q	.V	.	.	.
13.050	26.5425	56.11	.	Q	.V	.	.	.
13.067	26.6199	56.21	.	Q	.V	.	.	.
13.083	26.6975	56.31	.	Q	.V	.	.	.
13.100	26.7752	56.42	.	Q	.V	.	.	.
13.117	26.8530	56.52	.	Q	.V	.	.	.
13.133	26.9310	56.62	.	Q	.V	.	.	.
13.150	27.0092	56.73	.	Q	.V	.	.	.
13.167	27.0874	56.83	.	Q	.V	.	.	.
13.183	27.1658	56.93	.	Q	.V	.	.	.
13.200	27.2444	57.04	.	Q	.V	.	.	.
13.217	27.3231	57.14	.	Q	.V	.	.	.
13.233	27.4020	57.24	.	Q	.V	.	.	.
13.250	27.4810	57.35	.	Q	.V	.	.	.
13.267	27.5601	57.45	.	Q	.V	.	.	.
13.283	27.6394	57.55	.	Q	.V	.	.	.
13.300	27.7188	57.66	.	Q	.V	.	.	.
13.317	27.7983	57.76	.	Q	.V	.	.	.
13.333	27.8780	57.86	.	Q	.V	.	.	.
13.350	27.9579	57.97	.	Q	.V	.	.	.
13.367	28.0379	58.07	.	Q	.V	.	.	.
13.383	28.1181	58.27	.	Q	.V	.	.	.
13.400	28.1987	58.53	.	Q	.V	.	.	.
13.417	28.2797	58.79	.	Q	.V	.	.	.
13.433	28.3611	59.05	.	Q	.V	.	.	.
13.450	28.4428	59.31	.	Q	.V	.	.	.
13.467	28.5248	59.57	.	Q	.V	.	.	.
13.483	28.6072	59.83	.	Q	.V	.	.	.
13.500	28.6900	60.09	.	Q	.V	.	.	.
13.517	28.7731	60.35	.	Q	.V	.	.	.
13.533	28.8566	60.61	.	Q	. V	.	.	.
13.550	28.9404	60.87	.	Q	. V	.	.	.
13.567	29.0246	61.13	.	Q	. V	.	.	.
13.583	29.1092	61.39	.	Q	. V	.	.	.
13.600	29.1941	61.65	.	Q	. V	.	.	.
13.617	29.2794	61.91	.	Q	. V	.	.	.
13.633	29.3650	62.17	.	Q	. V	.	.	.

13.650	29.4510	62.43	.	Q	.	V	.	.	.	.
13.667	29.5374	62.69	.	Q	.	V	.	.	.	.
13.683	29.6241	62.95	.	Q	.	V	.	.	.	.
13.700	29.7112	63.22	.	Q	.	V	.	.	.	.
13.717	29.7986	63.48	.	Q	.	V	.	.	.	.
13.733	29.8864	63.74	.	Q	.	V	.	.	.	.
13.750	29.9746	64.00	.	Q	.	V	.	.	.	.
13.767	30.0631	64.26	.	Q	.	V	.	.	.	.
13.783	30.1519	64.52	.	Q	.	V	.	.	.	.
13.800	30.2412	64.78	.	Q	.	V	.	.	.	.
13.817	30.3307	65.01	.	Q	.	V	.	.	.	.
13.833	30.4205	65.18	.	Q	.	V	.	.	.	.
13.850	30.5105	65.35	.	Q	.	V	.	.	.	.
13.867	30.6008	65.52	.	Q	.	V	.	.	.	.
13.883	30.6912	65.69	.	Q	.	V	.	.	.	.
13.900	30.7820	65.86	.	Q	.	V	.	.	.	.
13.917	30.8729	66.03	.	Q	.	V	.	.	.	.
13.933	30.9641	66.20	.	Q	.	V	.	.	.	.
13.950	31.0555	66.36	.	Q	.	V	.	.	.	.
13.967	31.1471	66.53	.	Q	.	V	.	.	.	.
13.983	31.2390	66.70	.	Q	.	V	.	.	.	.
14.000	31.3311	66.87	.	Q	.	V	.	.	.	.
14.017	31.4235	67.04	.	Q	.	V	.	.	.	.
14.033	31.5160	67.21	.	Q	.	V	.	.	.	.
14.050	31.6088	67.38	.	Q	.	V	.	.	.	.
14.067	31.7019	67.54	.	Q	.	V	.	.	.	.
14.083	31.7951	67.71	.	Q	.	V	.	.	.	.
14.100	31.8886	67.88	.	Q	.	V	.	.	.	.
14.117	31.9824	68.05	.	Q	.	V	.	.	.	.
14.133	32.0763	68.22	.	Q	.	V	.	.	.	.
14.150	32.1705	68.39	.	Q	.	V	.	.	.	.
14.167	32.2649	68.56	.	Q	.	V	.	.	.	.
14.183	32.3596	68.72	.	Q	.	V	.	.	.	.
14.200	32.4545	68.89	.	Q	.	V	.	.	.	.
14.217	32.5496	69.06	.	Q	.	V	.	.	.	.
14.233	32.6450	69.23	.	Q	.	V	.	.	.	.
14.250	32.7406	69.42	.	Q	.	V	.	.	.	.
14.267	32.8368	69.83	.	Q	.	V	.	.	.	.
14.283	32.9336	70.30	.	Q	.	V	.	.	.	.
14.300	33.0311	70.76	.	Q	.	V	.	.	.	.
14.317	33.1292	71.23	.	Q	.	V	.	.	.	.
14.333	33.2280	71.69	.	Q	.	V	.	.	.	.
14.350	33.3274	72.16	.	Q	.	V	.	.	.	.
14.367	33.4274	72.62	.	Q	.	V	.	.	.	.
14.383	33.5281	73.09	.	Q	.	V	.	.	.	.
14.400	33.6294	73.55	.	Q	.	V	.	.	.	.
14.417	33.7313	74.02	.	Q	.	V	.	.	.	.
14.433	33.8339	74.48	.	Q	.	V	.	.	.	.
14.450	33.9371	74.95	.	Q	.	V	.	.	.	.
14.467	34.0410	75.41	.	Q	.	V	.	.	.	.
14.483	34.1455	75.88	.	Q	.	V	.	.	.	.
14.500	34.2507	76.34	.	Q	.	V	.	.	.	.
14.517	34.3565	76.81	.	Q	.	V	.	.	.	.
14.533	34.4629	77.27	.	Q	.	V	.	.	.	.
14.550	34.5700	77.74	.	Q	.	V	.	.	.	.
14.567	34.6777	78.20	.	Q	.	V	.	.	.	.
14.583	34.7861	78.67	.	Q	.	V	.	.	.	.
14.600	34.8951	79.13	.	Q	.	V	.	.	.	.

14.617	35.0047	79.60	.	Q	.	V	.	.	.	.
14.633	35.1150	80.06	.	Q	.	V	.	.	.	.
14.650	35.2259	80.53	.	Q	.	V	.	.	.	.
14.667	35.3375	80.99	.	Q	.	V	.	.	.	.
14.683	35.4497	81.46	.	Q	.	V	.	.	.	.
14.700	35.5624	81.86	.	Q	.	V	.	.	.	.
14.717	35.6757	82.21	.	Q	.	V	.	.	.	.
14.733	35.7894	82.55	.	Q	.	V	.	.	.	.
14.750	35.9036	82.90	.	Q	.	V	.	.	.	.
14.767	36.0182	83.25	.	Q	.	V	.	.	.	.
14.783	36.1334	83.60	.	Q	.	V	.	.	.	.
14.800	36.2490	83.95	.	Q	.	V	.	.	.	.
14.817	36.3651	84.30	.	Q	.	V	.	.	.	.
14.833	36.4817	84.65	.	Q	.	V	.	.	.	.
14.850	36.5988	84.99	.	Q	.	V	.	.	.	.
14.867	36.7163	85.34	.	Q	.	V	.	.	.	.
14.883	36.8344	85.69	.	Q	.	V	.	.	.	.
14.900	36.9529	86.04	.	Q	.	V	.	.	.	.
14.917	37.0719	86.39	.	Q	.	V	.	.	.	.
14.933	37.1913	86.74	.	Q	.	V	.	.	.	.
14.950	37.3113	87.08	.	Q	.	V	.	.	.	.
14.967	37.4317	87.43	.	Q	.	V	.	.	.	.
14.983	37.5526	87.78	.	Q	.	V	.	.	.	.
15.000	37.6740	88.13	.	Q	.	V	.	.	.	.
15.017	37.7959	88.48	.	Q	.	V	.	.	.	.
15.033	37.9182	88.83	.	Q	.	V	.	.	.	.
15.050	38.0411	89.17	.	Q	.	V	.	.	.	.
15.067	38.1644	89.52	.	Q	.	V	.	.	.	.
15.083	38.2882	89.87	.	Q	.	V	.	.	.	.
15.100	38.4124	90.22	.	Q	.	V	.	.	.	.
15.117	38.5372	90.57	.	Q	.	V	.	.	.	.
15.133	38.6627	91.15	.	Q	.	V	.	.	.	.
15.150	38.7900	92.39	.	Q	.	V	.	.	.	.
15.167	38.9190	93.67	.	Q	.	V	.	.	.	.
15.183	39.0498	94.96	.	Q	.	V	.	.	.	.
15.200	39.1824	96.24	.	Q	.	V	.	.	.	.
15.217	39.3167	97.52	.	Q	.	V	.	.	.	.
15.233	39.4528	98.81	.	Q	.	V	.	.	.	.
15.250	39.5907	100.09	.	Q	.	V	.	.	.	.
15.267	39.7303	101.37	.	Q	.	V	.	.	.	.
15.283	39.8717	102.66	.	Q	.	V	.	.	.	.
15.300	40.0149	103.94	.	Q	.	V	.	.	.	.
15.317	40.1598	105.22	.	Q	.	V	.	.	.	.
15.333	40.3065	106.51	.	Q	.	V	.	.	.	.
15.350	40.4550	107.79	.	Q	.	V	.	.	.	.
15.367	40.6052	109.08	.	Q	.	V	.	.	.	.
15.383	40.7572	110.36	.	Q	.	V	.	.	.	.
15.400	40.9110	111.64	.	Q	.	V	.	.	.	.
15.417	41.0665	112.93	.	Q	.	V	.	.	.	.
15.433	41.2239	114.21	.	Q	.	V	.	.	.	.
15.450	41.3829	115.49	.	Q	.	V	.	.	.	.
15.467	41.5438	116.78	.	Q	.	V	.	.	.	.
15.483	41.7064	118.06	.	Q	.	V	.	.	.	.
15.500	41.8708	119.34	.	Q	.	V	.	.	.	.
15.517	42.0370	120.63	.	Q	.	V	.	.	.	.
15.533	42.2049	121.91	.	Q	.	V	.	.	.	.
15.550	42.3746	123.20	.	Q	.	V	.	.	.	.
15.567	42.5461	124.50	.	Q	.	V	.	.	.	.

15.583	42.7197	126.05	. Q . V . . .
15.600	42.8955	127.67	. Q . V . . .
15.617	43.0736	129.29	. Q . V . . .
15.633	43.2539	130.91	. Q . V . . .
15.650	43.4365	132.53	. Q . V . . .
15.667	43.6213	134.15	. Q . V . . .
15.683	43.8083	135.77	. Q . V . . .
15.700	43.9975	137.39	. Q . V . . .
15.717	44.1890	139.01	. Q . V . . .
15.733	44.3827	140.63	. Q. V . . .
15.750	44.5786	142.25	. Q. V . . .
15.767	44.7768	143.87	. Q. V . . .
15.783	44.9772	145.49	. Q. V . . .
15.800	45.1799	147.11	. Q. V . . .
15.817	45.3847	148.73	. Q. V . . .
15.833	45.5918	150.35	. Q. V . . .
15.850	45.8011	151.97	. Q. V. . .
15.867	46.0127	153.59	. Q. V. . .
15.883	46.2265	155.21	. Q. V. . .
15.900	46.4425	156.83	. Q V. . .
15.917	46.6608	158.45	. Q V. . .
15.933	46.8812	160.07	. Q V. . .
15.950	47.1040	161.69	. Q V. . .
15.967	47.3289	163.31	. Q V. . .
15.983	47.5561	164.93	. Q V. . .
16.000	47.7855	166.55	. Q V. . .
16.017	48.0280	176.03	. .Q V . .
16.033	48.2943	193.38	. . Q V . .
16.050	48.5846	210.73	. . Q V . .
16.067	48.8987	228.08	. . Q V . .
16.083	49.2368	245.42	. . Q V . .
16.100	49.5987	262.77	. . Q V . .
16.117	49.9846	280.12	. . Q V . .
16.133	50.3943	297.47	. . QV . .
16.150	50.8279	314.81	. . QV . .
16.167	51.2855	332.16	. . .Q . .
16.183	51.7669	349.51	. . .VQ . .
16.200	52.2722	366.85	. . .V Q . .
16.217	52.8014	384.20	. . .V Q . .
16.233	53.3545	401.55	. . . V Q . .
16.250	53.9315	418.90	. . . V Q . .
16.267	54.5324	436.24	. . . V Q . .
16.283	55.1571	453.59	. . . V Q. .
16.300	55.8058	470.94	. . . V Q .
16.317	56.4784	488.29	. . . V .Q .
16.333	57.1748	505.63	. . . V . Q .
16.350	57.8952	522.98	. . . V . Q .
16.367	58.6395	540.33	. . . V . Q .
16.383	59.4076	557.67	. . . V . Q .
16.400	60.1996	575.02	. . . V . Q .
16.417	61.0156	592.37	. . . V . Q .
16.433	61.8554	609.71	. . . V . Q.
16.450	62.7155	624.46	. . . V . Q
16.467	63.5444	601.74	. . . V . Q .
16.483	64.3460	581.98	. . . V . Q .
16.500	65.1204	562.23	. . . V . Q .
16.517	65.8676	542.47	. . . V . Q .
16.533	66.5876	522.71	. . . V . Q .

16.550	67.2804	502.96	. . . V . Q .
16.567	67.9459	483.20	. . . V Q .
16.583	68.5843	463.44	. . . VQ. .
16.600	69.1954	443.68	. . . Q . .
16.617	69.7793	423.93	. . . Q V. .
16.633	70.3360	404.17	. . . Q V. .
16.650	70.8655	384.41	. . . Q V. .
16.667	71.3678	364.65	. . . Q V. .
16.683	71.8429	344.90	. . . Q V. .
16.700	72.2907	325.14	. . . Q V .
16.717	72.7114	305.38	. . . Q. V .
16.733	73.1048	285.62	. . . Q . V .
16.750	73.4710	265.87	. . . Q . V .
16.767	73.8100	246.11	. . . Q . V .
16.783	74.1218	226.35	. . . Q . V .
16.800	74.4064	206.60	. . . Q . V .
16.817	74.6637	186.84	. . .Q . .V .
16.833	74.8939	167.08	. . .Q . .V .
16.850	75.0968	147.32	. . .Q. . .V .
16.867	75.2725	127.57	. . .Q . . .V .
16.883	75.4221	108.65	. . Q . . .V .
16.900	75.5640	102.97	. . Q . . .V .
16.917	75.7043	101.87	. . Q . . .V .
16.933	75.8431	100.77	. . Q . . .V .
16.950	75.9804	99.66	. . Q . . .V .
16.967	76.1161	98.56	. . Q . . .V .
16.983	76.2504	97.45	. . Q . . .V .
17.000	76.3831	96.35	. . Q . . .V .
17.017	76.5143	95.25	. . Q . . .V .
17.033	76.6439	94.14	. . Q . . .V .
17.050	76.7721	93.04	. . Q . . .V .
17.067	76.8987	91.93	. . Q . . . V .
17.083	77.0238	90.83	. . Q . . . V .
17.100	77.1474	89.73	. . Q . . . V .
17.117	77.2695	88.62	. . Q . . . V .
17.133	77.3900	87.52	. . Q . . . V .
17.150	77.5091	86.41	. . Q . . . V .
17.167	77.6266	85.31	. . Q . . . V .
17.183	77.7426	84.21	. . Q . . . V .
17.200	77.8570	83.10	. . Q . . . V .
17.217	77.9700	82.00	. . Q . . . V .
17.233	78.0814	80.89	. . Q . . . V .
17.250	78.1913	79.79	. . Q . . . V .
17.267	78.2997	78.69	. . Q . . . V .
17.283	78.4066	77.58	. . Q . . . V .
17.300	78.5119	76.48	. . Q . . . V .
17.317	78.6157	75.37	. . Q . . . V .
17.333	78.7184	74.54	. . Q . . . V .
17.350	78.8203	74.02	. . Q . . . V .
17.367	78.9216	73.51	. . Q . . . V .
17.383	79.0221	73.00	. . Q . . . V .
17.400	79.1220	72.49	. . Q . . . V .
17.417	79.2211	71.97	. . Q . . . V .
17.433	79.3196	71.46	. . Q . . . V .
17.450	79.4173	70.95	. . Q . . . V .
17.467	79.5143	70.44	. . Q . . . V .
17.483	79.6106	69.92	. . Q . . . V .
17.500	79.7062	69.41	. . Q . . . V .

17.517	79.8011	68.90	.	Q	.	.	.	V	.			
17.533	79.8953	68.39	.	Q	.	.	.	V	.			
17.550	79.9888	67.88	.	Q	.	.	.	V	.			
17.567	80.0816	67.36	.	Q	.	.	.	V	.			
17.583	80.1737	66.85	.	Q	.	.	.	V	.			
17.600	80.2651	66.34	.	Q	.	.	.	V	.			
17.617	80.3557	65.83	.	Q	.	.	.	V	.			
17.633	80.4457	65.31	.	Q	.	.	.	V	.			
17.650	80.5350	64.80	.	Q	.	.	.	V	.			
17.667	80.6235	64.29	.	Q	.	.	.	V	.			
17.683	80.7114	63.78	.	Q	.	.	.	V	.			
17.700	80.7985	63.26	.	Q	.	.	.	V	.			
17.717	80.8849	62.75	.	Q	.	.	.	V	.			
17.733	80.9707	62.24	.	Q	.	.	.	V	.			
17.750	81.0557	61.73	.	Q	.	.	.	V	.			
17.767	81.1401	61.25	.	Q	.	.	.	V	.			
17.783	81.2240	60.92	.	Q	.	.	.	V	.			
17.800	81.3075	60.61	.	Q	.	.	.	V	.			
17.817	81.3905	60.29	.	Q	.	.	.	V	.			
17.833	81.4731	59.98	.	Q	.	.	.	V	.			
17.850	81.5553	59.67	.	Q	.	.	.	V	.			
17.867	81.6371	59.35	.	Q	.	.	.	V	.			
17.883	81.7184	59.04	.	Q	.	.	.	V	.			
17.900	81.7993	58.73	.	Q	.	.	.	V	.			
17.917	81.8797	58.41	.	Q	.	.	.	V	.			
17.933	81.9598	58.10	.	Q	.	.	.	V	.			
17.950	82.0393	57.78	.	Q	.	.	.	V	.			
17.967	82.1185	57.47	.	Q	.	.	.	V	.			
17.983	82.1972	57.16	.	Q	.	.	.	V	.			
18.000	82.2755	56.84	.	Q	.	.	.	V	.			
18.017	82.3534	56.53	.	Q	.	.	.	V	.			
18.033	82.4308	56.22	.	Q	.	.	.	V	.			
18.050	82.5078	55.90	.	Q	.	.	.	V	.			
18.067	82.5844	55.59	.	Q	.	.	.	V	.			
18.083	82.6605	55.28	.	Q	.	.	.	V	.			
18.100	82.7362	54.96	.	Q	.	.	.	V	.			
18.117	82.8115	54.65	.	Q	.	.	.	V	.			
18.133	82.8864	54.34	.	Q	.	.	.	V	.			
18.150	82.9608	54.02	.	Q	.	.	.	V	.			
18.167	83.0347	53.71	.	Q	.	.	.	V	.			
18.183	83.1083	53.39	.	Q	.	.	.	V	.			
18.200	83.1814	53.07	.	Q	.	.	.	V	.			
18.217	83.2537	52.53	.	Q	.	.	.	V	.			
18.233	83.3252	51.90	.	Q	.	.	.	V	.			
18.250	83.3959	51.28	.	Q	.	.	.	V	.			
18.267	83.4656	50.65	.	Q	.	.	.	V	.			
18.283	83.5345	50.02	.	Q	.	.	.	V	.			
18.300	83.6026	49.39	.	Q	.	.	.	V	.			
18.317	83.6697	48.77	.	Q	.	.	.	V	.			
18.333	83.7360	48.14	.	Q	.	.	.	V	.			
18.350	83.8015	47.51	.	Q	.	.	.	V	.			
18.367	83.8661	46.88	.	Q	.	.	.	V	.			
18.383	83.9298	46.26	.	Q	.	.	.	V	.			
18.400	83.9926	45.63	.	Q	.	.	.	V	.			
18.417	84.0546	45.00	.	Q	.	.	.	V	.			
18.433	84.1157	44.37	.	Q	.	.	.	V	.			
18.450	84.1760	43.75	.	Q	.	.	.	V	.			
18.467	84.2354	43.12	.	Q	.	.	.	V	.			

18.483	84.2939	42.49	.	Q	.	.	.	V	.			
18.500	84.3516	41.86	.	Q	.	.	.	V	.			
18.517	84.4084	41.24	.	Q	.	.	.	V	.			
18.533	84.4643	40.61	.	Q	.	.	.	V	.			
18.550	84.5194	39.98	.	Q	.	.	.	V	.			
18.567	84.5736	39.35	.	Q	.	.	.	V	.			
18.583	84.6270	38.73	.	Q	.	.	.	V	.			
18.600	84.6794	38.10	.	Q	.	.	.	V	.			
18.617	84.7310	37.47	.	Q	.	.	.	V	.			
18.633	84.7818	36.84	.	Q	.	.	.	V	.			
18.650	84.8320	36.41	.	Q	.	.	.	V	.			
18.667	84.8819	36.26	.	Q	.	.	.	V	.			
18.683	84.9317	36.12	.	Q	.	.	.	V	.			
18.700	84.9812	35.97	.	Q	.	.	.	V	.			
18.717	85.0305	35.82	.	Q	.	.	.	V	.			
18.733	85.0797	35.68	.	Q	.	.	.	V	.			
18.750	85.1286	35.53	.	Q	.	.	.	V	.			
18.767	85.1774	35.39	.	Q	.	.	.	V	.			
18.783	85.2259	35.24	.	Q	.	.	.	V	.			
18.800	85.2743	35.09	.	Q	.	.	.	V	.			
18.817	85.3224	34.95	.	Q	.	.	.	V	.			
18.833	85.3703	34.80	.	Q	.	.	.	V	.			
18.850	85.4181	34.65	.	Q	.	.	.	V	.			
18.867	85.4656	34.51	.	Q	.	.	.	V	.			
18.883	85.5129	34.36	.	Q	.	.	.	V	.			
18.900	85.5601	34.22	.	Q	.	.	.	V	.			
18.917	85.6070	34.07	.	Q	.	.	.	V	.			
18.933	85.6537	33.92	.	Q	.	.	.	V	.			
18.950	85.7002	33.78	.	Q	.	.	.	V	.			
18.967	85.7466	33.63	.	Q	.	.	.	V	.			
18.983	85.7927	33.48	.	Q	.	.	.	V	.			
19.000	85.8386	33.34	.	Q	.	.	.	V	.			
19.017	85.8843	33.19	.	Q	.	.	.	V	.			
19.033	85.9298	33.05	.	Q	.	.	.	V	.			
19.050	85.9752	32.90	.	Q	.	.	.	V	.			
19.067	86.0203	32.75	.	Q	.	.	.	V	.			
19.083	86.0652	32.61	.	Q	.	.	.	V	.			
19.100	86.1100	32.50	.	Q	.	.	.	V	.			
19.117	86.1546	32.38	.	Q	.	.	.	V	.			
19.133	86.1990	32.27	.	Q	.	.	.	V	.			
19.150	86.2433	32.16	.	Q	.	.	.	V	.			
19.167	86.2875	32.05	.	Q	.	.	.	V	.			
19.183	86.3315	31.94	.	Q	.	.	.	V	.			
19.200	86.3753	31.82	.	Q	.	.	.	V	.			
19.217	86.4190	31.71	.	Q	.	.	.	V	.			
19.233	86.4625	31.60	.	Q	.	.	.	V	.			
19.250	86.5059	31.49	.	Q	.	.	.	V	.			
19.267	86.5491	31.38	.	Q	.	.	.	V	.			
19.283	86.5922	31.26	.	Q	.	.	.	V	.			
19.300	86.6351	31.15	.	Q	.	.	.	V	.			
19.317	86.6778	31.04	.	Q	.	.	.	V	.			
19.333	86.7204	30.93	.	Q	.	.	.	V	.			
19.350	86.7629	30.82	.	Q	.	.	.	V	.			
19.367	86.8052	30.70	.	Q	.	.	.	V	.			
19.383	86.8473	30.59	.	Q	.	.	.	V	.			
19.400	86.8893	30.48	.	Q	.	.	.	V	.			
19.417	86.9311	30.37	.	Q	.	.	.	V	.			
19.433	86.9728	30.26	.	Q	.	.	.	V	.			

19.450	87.0143	30.14	.Q	.	.	.	V	.
19.467	87.0557	30.03	.Q	.	.	.	V	.
19.483	87.0969	29.92	.Q	.	.	.	V	.
19.500	87.1380	29.81	.Q	.	.	.	V	.
19.517	87.1789	29.70	.Q	.	.	.	V	.
19.533	87.2196	29.60	.Q	.	.	.	V	.
19.550	87.2603	29.51	.Q	.	.	.	V	.
19.567	87.3008	29.42	.Q	.	.	.	V	.
19.583	87.3412	29.33	.Q	.	.	.	V	.
19.600	87.3815	29.24	.Q	.	.	.	V	.
19.617	87.4217	29.16	.Q	.	.	.	V	.
19.633	87.4617	29.07	.Q	.	.	.	V	.
19.650	87.5016	28.98	.Q	.	.	.	V	.
19.667	87.5414	28.89	.Q	.	.	.	V	.
19.683	87.5811	28.80	.Q	.	.	.	V	.
19.700	87.6206	28.71	.Q	.	.	.	V	.
19.717	87.6600	28.62	.Q	.	.	.	V	.
19.733	87.6993	28.53	.Q	.	.	.	V	.
19.750	87.7385	28.44	.Q	.	.	.	V	.
19.767	87.7776	28.35	.Q	.	.	.	V	.
19.783	87.8165	28.26	.Q	.	.	.	V	.
19.800	87.8553	28.18	.Q	.	.	.	V	.
19.817	87.8940	28.09	.Q	.	.	.	V	.
19.833	87.9326	28.00	.Q	.	.	.	V	.
19.850	87.9710	27.91	.Q	.	.	.	V	.
19.867	88.0093	27.82	.Q	.	.	.	V	.
19.883	88.0475	27.73	.Q	.	.	.	V	.
19.900	88.0856	27.64	.Q	.	.	.	V	.
19.917	88.1235	27.55	.Q	.	.	.	V	.
19.933	88.1614	27.46	.Q	.	.	.	V	.
19.950	88.1991	27.37	.Q	.	.	.	V	.
19.967	88.2366	27.29	.Q	.	.	.	V	.
19.983	88.2741	27.22	.Q	.	.	.	V	.
20.000	88.3115	27.14	.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%	1201.0
10%	1201.0
20%	390.0
30%	235.0
40%	200.0
50%	170.0
60%	135.0
70%	100.0
80%	70.0
90%	35.0

END OF FLOODSCx ROUTING ANALYSIS

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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                         Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA E                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 50-YR EV MARCH 2019 CCHIU                                             *
 ************************************************************************

  FILE NAME: 4E50EVS.DAT
  TIME/DATE OF STUDY: 14:52 03/13/2019

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


************************************************************************
  FLOW PROCESS FROM NODE    810.00 TO NODE    817.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  171.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.174
    LOW LOSS FRACTION = 0.391
    TIME OF CONCENTRATION(MIN.) =  9.43
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  15
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.37
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.80
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.06
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.78
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.47
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.12

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    35.03
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    23.68

------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	112.3	224.6	337.0	449.3
10.000	6.3767	10.85	Q	V	.	.	.
10.017	6.3917	10.86	Q	V	.	.	.
10.033	6.4066	10.88	Q	V	.	.	.
10.050	6.4217	10.90	Q	V	.	.	.
10.067	6.4367	10.93	Q	V	.	.	.
10.083	6.4518	10.95	Q	V	.	.	.
10.100	6.4669	10.98	Q	V	.	.	.
10.117	6.4821	11.00	Q	V	.	.	.
10.133	6.4973	11.03	Q	V	.	.	.
10.150	6.5125	11.05	Q	V	.	.	.
10.167	6.5277	11.08	Q	V	.	.	.
10.183	6.5430	11.10	Q	V	.	.	.
10.200	6.5584	11.13	Q	V	.	.	.
10.217	6.5737	11.14	Q	V	.	.	.
10.233	6.5891	11.15	Q	V	.	.	.
10.250	6.6044	11.17	Q	V	.	.	.
10.267	6.6198	11.18	Q	V	.	.	.
10.283	6.6353	11.19	Q	V	.	.	.
10.300	6.6507	11.21	Q	V	.	.	.
10.317	6.6661	11.22	Q	V	.	.	.
10.333	6.6816	11.23	Q	V	.	.	.
10.350	6.6971	11.25	.Q	V	.	.	.
10.367	6.7126	11.27	.Q	V	.	.	.
10.383	6.7282	11.30	.Q	V	.	.	.
10.400	6.7438	11.33	.Q	V	.	.	.
10.417	6.7594	11.36	.Q	V	.	.	.
10.433	6.7751	11.38	.Q	V	.	.	.
10.450	6.7909	11.41	.Q	V	.	.	.
10.467	6.8066	11.44	.Q	V	.	.	.
10.483	6.8224	11.47	.Q	V	.	.	.
10.500	6.8382	11.50	.Q	V	.	.	.
10.517	6.8541	11.52	.Q	V	.	.	.
10.533	6.8700	11.53	.Q	V	.	.	.
10.550	6.8859	11.55	.Q	V	.	.	.
10.567	6.9018	11.56	.Q	V	.	.	.
10.583	6.9178	11.58	.Q	V	.	.	.
10.600	6.9337	11.59	.Q	V	.	.	.
10.617	6.9497	11.60	.Q	V	.	.	.
10.633	6.9657	11.62	.Q	V	.	.	.
10.650	6.9817	11.63	.Q	V	.	.	.
10.667	6.9978	11.65	.Q	V	.	.	.
10.683	7.0139	11.68	.Q	V	.	.	.
10.700	7.0300	11.71	.Q	V	.	.	.
10.717	7.0462	11.74	.Q	V	.	.	.
10.733	7.0624	11.77	.Q	V	.	.	.

10.750	7.0787	11.80	.Q	V	.	.	.
10.767	7.0950	11.83	.Q	V	.	.	.
10.783	7.1113	11.87	.Q	V	.	.	.
10.800	7.1277	11.90	.Q	V	.	.	.
10.817	7.1441	11.93	.Q	V	.	.	.
10.833	7.1606	11.95	.Q	V	.	.	.
10.850	7.1770	11.96	.Q	V	.	.	.
10.867	7.1935	11.98	.Q	V	.	.	.
10.883	7.2101	12.00	.Q	V	.	.	.
10.900	7.2266	12.01	.Q	V	.	.	.
10.917	7.2432	12.03	.Q	V	.	.	.
10.933	7.2598	12.04	.Q	V	.	.	.
10.950	7.2764	12.06	.Q	V	.	.	.
10.967	7.2930	12.08	.Q	V	.	.	.
10.983	7.3097	12.10	.Q	V	.	.	.
11.000	7.3264	12.13	.Q	V	.	.	.
11.017	7.3431	12.16	.Q	V	.	.	.
11.033	7.3599	12.20	.Q	V	.	.	.
11.050	7.3768	12.23	.Q	V	.	.	.
11.067	7.3937	12.27	.Q	V	.	.	.
11.083	7.4106	12.30	.Q	V	.	.	.
11.100	7.4276	12.33	.Q	V	.	.	.
11.117	7.4446	12.37	.Q	V	.	.	.
11.133	7.4617	12.40	.Q	V	.	.	.
11.150	7.4788	12.42	.Q	V	.	.	.
11.167	7.4960	12.44	.Q	V	.	.	.
11.183	7.5131	12.46	.Q	V	.	.	.
11.200	7.5303	12.47	.Q	V	.	.	.
11.217	7.5475	12.49	.Q	V	.	.	.
11.233	7.5647	12.51	.Q	V	.	.	.
11.250	7.5820	12.53	.Q	V	.	.	.
11.267	7.5993	12.55	.Q	V	.	.	.
11.283	7.6166	12.56	.Q	V	.	.	.
11.300	7.6339	12.59	.Q	V	.	.	.
11.317	7.6513	12.63	.Q	V	.	.	.
11.333	7.6688	12.66	.Q	V	.	.	.
11.350	7.6863	12.70	.Q	V	.	.	.
11.367	7.7038	12.74	.Q	V	.	.	.
11.383	7.7214	12.78	.Q	V	.	.	.
11.400	7.7390	12.81	.Q	V	.	.	.
11.417	7.7568	12.85	.Q	V	.	.	.
11.433	7.7745	12.89	.Q	V	.	.	.
11.450	7.7923	12.92	.Q	V	.	.	.
11.467	7.8101	12.95	.Q	V	.	.	.
11.483	7.8280	12.97	.Q	V	.	.	.
11.500	7.8459	12.99	.Q	V	.	.	.
11.517	7.8638	13.01	.Q	V	.	.	.
11.533	7.8817	13.03	.Q	V	.	.	.
11.550	7.8997	13.05	.Q	V	.	.	.
11.567	7.9177	13.07	.Q	V	.	.	.
11.583	7.9357	13.09	.Q	V	.	.	.
11.600	7.9538	13.10	.Q	V	.	.	.
11.617	7.9719	13.14	.Q	V	.	.	.
11.633	7.9900	13.18	.Q	V	.	.	.
11.650	8.0082	13.22	.Q	V	.	.	.
11.667	8.0265	13.26	.Q	V	.	.	.
11.683	8.0448	13.30	.Q	V	.	.	.
11.700	8.0632	13.35	.Q	V	.	.	.

11.717	8.0817	13.39	.Q	V.	.	.	.
11.733	8.1002	13.43	.Q	V.	.	.	.
11.750	8.1187	13.47	.Q	V.	.	.	.
11.767	8.1373	13.51	.Q	V.	.	.	.
11.783	8.1560	13.53	.Q	V.	.	.	.
11.800	8.1746	13.56	.Q	V.	.	.	.
11.817	8.1933	13.58	.Q	V.	.	.	.
11.833	8.2121	13.60	.Q	V.	.	.	.
11.850	8.2308	13.62	.Q	V.	.	.	.
11.867	8.2496	13.65	.Q	V.	.	.	.
11.883	8.2685	13.67	.Q	V.	.	.	.
11.900	8.2873	13.69	.Q	V.	.	.	.
11.917	8.3062	13.71	.Q	V.	.	.	.
11.933	8.3252	13.80	.Q	V.	.	.	.
11.950	8.3444	13.92	.Q	V.	.	.	.
11.967	8.3637	14.05	.Q	V.	.	.	.
11.983	8.3833	14.17	.Q	V.	.	.	.
12.000	8.4029	14.29	.Q	V.	.	.	.
12.017	8.4228	14.41	.Q	V.	.	.	.
12.033	8.4428	14.53	.Q	V.	.	.	.
12.050	8.4630	14.66	.Q	V.	.	.	.
12.067	8.4833	14.78	.Q	V.	.	.	.
12.083	8.5040	14.97	.Q	V.	.	.	.
12.100	8.5251	15.34	.Q	V.	.	.	.
12.117	8.5467	15.71	.Q	V.	.	.	.
12.133	8.5689	16.09	.Q	V.	.	.	.
12.150	8.5916	16.46	.Q	V.	.	.	.
12.167	8.6148	16.84	.Q	V.	.	.	.
12.183	8.6385	17.21	.Q	V.	.	.	.
12.200	8.6627	17.59	.Q	V.	.	.	.
12.217	8.6875	17.97	.Q	V.	.	.	.
12.233	8.7127	18.33	.Q	V.	.	.	.
12.250	8.7381	18.46	.Q	V.	.	.	.
12.267	8.7636	18.51	.Q	V	.	.	.
12.283	8.7892	18.57	.Q	V	.	.	.
12.300	8.8149	18.63	.Q	V	.	.	.
12.317	8.8406	18.68	.Q	V	.	.	.
12.333	8.8664	18.74	.Q	V	.	.	.
12.350	8.8923	18.80	.Q	V	.	.	.
12.367	8.9183	18.86	.Q	V	.	.	.
12.383	8.9443	18.91	.Q	V	.	.	.
12.400	8.9704	18.96	.Q	V	.	.	.
12.417	8.9966	18.99	.Q	V	.	.	.
12.433	9.0228	19.02	.Q	V	.	.	.
12.450	9.0490	19.05	.Q	V	.	.	.
12.467	9.0753	19.08	.Q	V	.	.	.
12.483	9.1017	19.11	.Q	V	.	.	.
12.500	9.1280	19.14	.Q	V	.	.	.
12.517	9.1544	19.17	.Q	V	.	.	.
12.533	9.1809	19.21	.Q	V	.	.	.
12.550	9.2074	19.24	.Q	V	.	.	.
12.567	9.2340	19.30	.Q	V	.	.	.
12.583	9.2607	19.36	.Q	V	.	.	.
12.600	9.2874	19.43	.Q	V	.	.	.
12.617	9.3143	19.50	.Q	V	.	.	.
12.633	9.3412	19.56	.Q	V	.	.	.
12.650	9.3682	19.63	.Q	V	.	.	.
12.667	9.3954	19.69	.Q	V	.	.	.

12.683	9.4226	19.76	.Q	V	.	.	.
12.700	9.4499	19.82	.Q	V	.	.	.
12.717	9.4773	19.87	.Q	V	.	.	.
12.733	9.5047	19.91	.Q	V	.	.	.
12.750	9.5321	19.94	.Q	V	.	.	.
12.767	9.5597	19.98	.Q	V	.	.	.
12.783	9.5872	20.01	.Q	V	.	.	.
12.800	9.6148	20.05	.Q	V	.	.	.
12.817	9.6425	20.08	.Q	.V	.	.	.
12.833	9.6702	20.12	.Q	.V	.	.	.
12.850	9.6979	20.15	.Q	.V	.	.	.
12.867	9.7258	20.19	.Q	.V	.	.	.
12.883	9.7537	20.26	.Q	.V	.	.	.
12.900	9.7817	20.34	.Q	.V	.	.	.
12.917	9.8098	20.42	.Q	.V	.	.	.
12.933	9.8380	20.49	.Q	.V	.	.	.
12.950	9.8664	20.57	.Q	.V	.	.	.
12.967	9.8948	20.64	.Q	.V	.	.	.
12.983	9.9233	20.72	.Q	.V	.	.	.
13.000	9.9520	20.79	.Q	.V	.	.	.
13.017	9.9807	20.87	.Q	.V	.	.	.
13.033	10.0095	20.92	.Q	.V	.	.	.
13.050	10.0384	20.96	.Q	.V	.	.	.
13.067	10.0673	21.00	.Q	.V	.	.	.
13.083	10.0963	21.04	.Q	.V	.	.	.
13.100	10.1253	21.08	.Q	.V	.	.	.
13.117	10.1544	21.12	.Q	.V	.	.	.
13.133	10.1836	21.16	.Q	.V	.	.	.
13.150	10.2128	21.20	.Q	.V	.	.	.
13.167	10.2421	21.25	.Q	.V	.	.	.
13.183	10.2714	21.30	.Q	.V	.	.	.
13.200	10.3009	21.39	.Q	.V	.	.	.
13.217	10.3304	21.47	.Q	.V	.	.	.
13.233	10.3601	21.56	.Q	.V	.	.	.
13.250	10.3900	21.65	.Q	.V	.	.	.
13.267	10.4199	21.74	.Q	.V	.	.	.
13.283	10.4500	21.83	.Q	.V	.	.	.
13.300	10.4801	21.92	.Q	.V	.	.	.
13.317	10.5105	22.00	.Q	. V	.	.	.
13.333	10.5409	22.09	.Q	. V	.	.	.
13.350	10.5714	22.15	.Q	. V	.	.	.
13.367	10.6020	22.20	.Q	. V	.	.	.
13.383	10.6326	22.24	.Q	. V	.	.	.
13.400	10.6633	22.29	.Q	. V	.	.	.
13.417	10.6941	22.34	.Q	. V	.	.	.
13.433	10.7249	22.39	.Q	. V	.	.	.
13.450	10.7558	22.44	.Q	. V	.	.	.
13.467	10.7868	22.48	. Q	. V	.	.	.
13.483	10.8178	22.53	. Q	. V	.	.	.
13.500	10.8490	22.60	. Q	. V	.	.	.
13.517	10.8802	22.71	. Q	. V	.	.	.
13.533	10.9116	22.81	. Q	. V	.	.	.
13.550	10.9432	22.92	. Q	. V	.	.	.
13.567	10.9749	23.02	. Q	. V	.	.	.
13.583	11.0068	23.13	. Q	. V	.	.	.
13.600	11.0388	23.23	. Q	. V	.	.	.
13.617	11.0709	23.34	. Q	. V	.	.	.
13.633	11.1032	23.44	. Q	. V	.	.	.

13.650	11.1357	23.54	. Q	. V	.	.	.	
13.667	11.1682	23.61	. Q	. V	.	.	.	
13.683	11.2008	23.67	. Q	. V	.	.	.	
13.700	11.2335	23.73	. Q	. V	.	.	.	
13.717	11.2662	23.78	. Q	. V	.	.	.	
13.733	11.2991	23.84	. Q	. V	.	.	.	
13.750	11.3320	23.90	. Q	. V	.	.	.	
13.767	11.3650	23.96	. Q	. V	.	.	.	
13.783	11.3981	24.02	. Q	. V	.	.	.	
13.800	11.4312	24.07	. Q	. V	.	.	.	
13.817	11.4645	24.17	. Q	. V	.	.	.	
13.833	11.4980	24.30	. Q	. V	.	.	.	
13.850	11.5316	24.43	. Q	. V	.	.	.	
13.867	11.5654	24.55	. Q	. V	.	.	.	
13.883	11.5994	24.68	. Q	. V	.	.	.	
13.900	11.6336	24.81	. Q	. V	.	.	.	
13.917	11.6680	24.94	. Q	. V	.	.	.	
13.933	11.7025	25.07	. Q	. V	.	.	.	
13.950	11.7372	25.20	. Q	. V	.	.	.	
13.967	11.7721	25.32	. Q	. V	.	.	.	
13.983	11.8070	25.39	. Q	. V	.	.	.	
14.000	11.8421	25.46	. Q	. V	.	.	.	
14.017	11.8773	25.53	. Q	. V	.	.	.	
14.033	11.9126	25.61	. Q	. V	.	.	.	
14.050	11.9479	25.68	. Q	. V	.	.	.	
14.067	11.9834	25.75	. Q	. V	.	.	.	
14.083	12.0190	25.82	. Q	. V	.	.	.	
14.100	12.0546	25.89	. Q	. V	.	.	.	
14.117	12.0904	25.96	. Q	. V	.	.	.	
14.133	12.1263	26.09	. Q	. V	.	.	.	
14.150	12.1625	26.25	. Q	. V	.	.	.	
14.167	12.1989	26.41	. Q	. V	.	.	.	
14.183	12.2354	26.56	. Q	. V	.	.	.	
14.200	12.2723	26.72	. Q	. V	.	.	.	
14.217	12.3093	26.88	. Q	. V	.	.	.	
14.233	12.3465	27.04	. Q	. V	.	.	.	
14.250	12.3840	27.19	. Q	. V	.	.	.	
14.267	12.4217	27.35	. Q	. V	.	.	.	
14.283	12.4595	27.49	. Q	. V	.	.	.	
14.300	12.4975	27.59	. Q	. V	.	.	.	
14.317	12.5356	27.68	. Q	. V	.	.	.	
14.333	12.5739	27.77	. Q	. V	.	.	.	
14.350	12.6123	27.86	. Q	. V	.	.	.	
14.367	12.6508	27.95	. Q	. V	.	.	.	
14.383	12.6894	28.05	. Q	. V	.	.	.	
14.400	12.7282	28.14	. Q	. V	.	.	.	
14.417	12.7670	28.23	. Q	. V	.	.	.	
14.433	12.8061	28.33	. Q	. V	.	.	.	
14.450	12.8453	28.51	. Q	. V	.	.	.	
14.467	12.8849	28.72	. Q	. V	.	.	.	
14.483	12.9247	28.93	. Q	. V	.	.	.	
14.500	12.9649	29.15	. Q	. V	.	.	.	
14.517	13.0053	29.36	. Q	. V	.	.	.	
14.533	13.0461	29.57	. Q	. V	.	.	.	
14.550	13.0871	29.78	. Q	. V	.	.	.	
14.567	13.1284	30.00	. Q	. V	.	.	.	
14.583	13.1700	30.21	. Q	. V	.	.	.	
14.600	13.2119	30.39	. Q	. V	.	.	.	

14.617	13.2539	30.51	. Q	. V	.	.	.	
14.633	13.2961	30.64	. Q	. V	.	.	.	
14.650	13.3385	30.76	. Q	. V	.	.	.	
14.667	13.3810	30.88	. Q	. V	.	.	.	
14.683	13.4237	31.01	. Q	. V	.	.	.	
14.700	13.4666	31.13	. Q	. V	.	.	.	
14.717	13.5097	31.26	. Q	. V	.	.	.	
14.733	13.5529	31.38	. Q	. V	.	.	.	
14.750	13.5963	31.52	. Q	. V	.	.	.	
14.767	13.6401	31.79	. Q	. V	.	.	.	
14.783	13.6843	32.08	. Q	. V	.	.	.	
14.800	13.7289	32.38	. Q	. V	.	.	.	
14.817	13.7739	32.68	. Q	. V	.	.	.	
14.833	13.8193	32.97	. Q	. V	.	.	.	
14.850	13.8651	33.27	. Q	. V	.	.	.	
14.867	13.9114	33.56	. Q	. V	.	.	.	
14.883	13.9580	33.86	. Q	. V	.	.	.	
14.900	14.0050	34.15	. Q	. V	.	.	.	
14.917	14.0524	34.39	. Q	. V	.	.	.	
14.933	14.1000	34.57	. Q	. V	.	.	.	
14.950	14.1479	34.75	. Q	. V	.	.	.	
14.967	14.1960	34.93	. Q	. V	.	.	.	
14.983	14.2443	35.11	. Q	. V	.	.	.	
15.000	14.2930	35.29	. Q	. V	.	.	.	
15.017	14.3418	35.47	. Q	. V	.	.	.	
15.033	14.3909	35.64	. Q	. V	.	.	.	
15.050	14.4402	35.82	. Q	. V	.	.	.	
15.067	14.4899	36.05	. Q	. V	.	.	.	
15.083	14.5401	36.48	. Q	. V	.	.	.	
15.100	14.5910	36.93	. Q	. V	.	.	.	
15.117	14.6425	37.38	. Q	. V	.	.	.	
15.133	14.6946	37.83	. Q	. V	.	.	.	
15.150	14.7473	38.28	. Q	. V	.	.	.	
15.167	14.8007	38.73	. Q	. V	.	.	.	
15.183	14.8546	39.18	. Q	. V	.	.	.	
15.200	14.9092	39.63	. Q	. V	.	.	.	
15.217	14.9645	40.09	. Q	. V	.	.	.	
15.233	15.0202	40.49	. Q	. V	.	.	.	
15.250	15.0765	40.87	. Q	. V	.	.	.	
15.267	15.1333	41.25	. Q	. V	.	.	.	
15.283	15.1907	41.63	. Q	. V	.	.	.	
15.300	15.2486	42.01	. Q	. V	.	.	.	
15.317	15.3069	42.39	. Q	. V	.	.	.	
15.333	15.3659	42.77	. Q	. V	.	.	.	
15.350	15.4253	43.15	. Q	. V	.	.	.	
15.367	15.4853	43.53	. Q	. V	.	.	.	
15.383	15.5457	43.86	. Q	. V	.	.	.	
15.400	15.6064	44.05	. Q	. V	.	.	.	
15.417	15.6673	44.23	. Q	. V	.	.	.	
15.433	15.7284	44.41	. Q	. V	.	.	.	
15.450	15.7899	44.59	. Q	. V	.	.	.	
15.467	15.8515	44.77	. Q	. V	.	.	.	
15.483	15.9135	44.95	. Q	. V	.	.	.	
15.500	15.9756	45.13	. Q	. V	.	.	.	
15.517	16.0381	45.32	. Q	. V	.	.	.	
15.533	16.1008	45.53	. Q	. V	.	.	.	
15.550	16.1645	46.31	. Q	. V	.	.	.	
15.567	16.2297	47.28	. Q	. V	.	.	.	

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15.583     16.2961     48.26  .   Q     .       V .         .         .
15.600     16.3640     49.24  .   Q     .       V .         .         .
15.617     16.4331     50.21  .   Q     .       V .         .         .
15.633     16.5036     51.19  .   Q     .       V .         .         .
15.650     16.5755     52.16  .   Q     .       V .         .         .
15.667     16.6487     53.14  .   Q     .        V.         .         .
15.683     16.7232     54.12  .   Q     .        V.         .         .
15.700     16.8008     56.33  .    Q    .        V.         .         .
15.717     16.8843     60.62  .    Q    .        V.         .         .
15.733     16.9738     64.95  .    Q    .        V.         .         .
15.750     17.0692     69.27  .     Q   .        V.         .         .
15.767     17.1706     73.60  .     Q   .        V.         .         .
15.783     17.2779     77.92  .     Q   .        V.         .         .
15.800     17.3912     82.25  .      Q  .        V.         .         .
15.817     17.5104     86.57  .      Q  .        V.         .         .
15.833     17.6357     90.90  .       Q .         V         .         .
15.850     17.7668     95.25  .       Q .         V         .         .
15.867     17.9043     99.78  .       Q .         V         .         .
15.883     18.0480    104.36  .        Q.         V         .         .
15.900     18.1981    108.94  .        Q.         V         .         .
15.917     18.3544    113.51  .         Q         V         .         .
15.933     18.5171    118.09  .         Q         .V        .         .
15.950     18.6861    122.67  .         Q         .V        .         .
15.967     18.8613    127.25  .         .Q        .V        .         .
15.983     19.0429    131.82  .         .Q        .V        .         .
16.000     19.2308    136.40  .         . Q       .V        .         .
16.017     19.4445    155.16  .         .  Q      . V       .         .
16.033     19.7036    188.09  .         .    Q    . V       .         .
16.050     20.0080    221.03  .         .       Q. V       .         .
16.067     20.3578    253.97  .         .         . QV      .         .
16.083     20.7530    286.90  .         .         .  V Q    .         .
16.100     21.1936    319.84  .         .         .   V   Q .         .
16.117     21.6795    352.78  .         .         .   V     .Q        .
16.133     22.2108    385.71  .         .         .    V    .   Q     .
16.150     22.7874    418.65  .         .         .     V   .     Q   .
16.167     23.4063    449.28  .         .         .     V   .       Q
16.183     23.9657    406.15  .         .         .      V  .     Q   .
16.200     24.4696    365.83  .         .         .      V  . Q       .
16.217     24.9180    325.51  .         .         .       Q .         .
16.233     25.3108    285.19  .         .         .    Q  V .         .
16.250     25.6481    244.87  .         .        .Q       V.         .
16.267     25.9298    204.55  .         .      Q .        V.         .
16.283     26.1560    164.23  .         .   Q    .        V.         .
16.300     26.3267    123.92  .         .Q       .         V         .
16.317     26.4424     83.97  .      Q  .        .         V         .
16.333     26.5353     67.48  .     Q   .        .         V         .
16.350     26.6248     64.98  .    Q    .        .         V         .
16.367     26.7109     62.47  .    Q    .        .         V         .
16.383     26.7935     59.97  .    Q    .        .         V         .
16.400     26.8726     57.47  .    Q    .        .         V         .
16.417     26.9484     54.97  .   Q     .        .         V         .
16.433     27.0206     52.46  .   Q     .        .         V         .
16.450     27.0894     49.96  .   Q     .        .         V         .
16.467     27.1548     47.46  .   Q     .        .         .V        .
16.483     27.2173     45.38  .   Q     .        .         .V        .
16.500     27.2786     44.51  .  Q      .        .         .V        .
16.517     27.3389     43.71  .  Q      .        .         .V        .
16.533     27.3980     42.92  .  Q      .        .         .V        .
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16.550     27.4560     42.12  .  Q      .        .         .V        .
16.567     27.5129     41.32  .  Q      .        .         .V        .
16.583     27.5687     40.52  .  Q      .        .         .V        .
16.600     27.6234     39.72  .  Q      .        .         .V        .
16.617     27.6770     38.92  .  Q      .        .         .V        .
16.633     27.7295     38.13  .  Q      .        .         .V        .
16.650     27.7812     37.52  .  Q      .        .         .V        .
16.667     27.8321     36.98  .  Q      .        .         .V        .
16.683     27.8823     36.43  .  Q      .        .         .V        .
16.700     27.9318     35.89  .  Q      .        .         .V        .
16.717     27.9805     35.35  .  Q      .        .         .V        .
16.733     28.0284     34.80  .  Q      .        .         . V       .
16.750     28.0756     34.26  .  Q      .        .         . V       .
16.767     28.1220     33.72  .  Q      .        .         . V       .
16.783     28.1677     33.17  . Q       .        .         . V       .
16.800     28.2127     32.69  . Q       .        .         . V       .
16.817     28.2572     32.31  . Q       .        .         . V       .
16.833     28.3012     31.94  . Q       .        .         . V       .
16.850     28.3447     31.57  . Q       .        .         . V       .
16.867     28.3877     31.19  . Q       .        .         . V       .
16.883     28.4301     30.82  . Q       .        .         . V       .
16.900     28.4721     30.44  . Q       .        .         . V       .
16.917     28.5135     30.07  . Q       .        .         . V       .
16.933     28.5544     29.70  . Q       .        .         . V       .
16.950     28.5948     29.33  . Q       .        .         . V       .
16.967     28.6348     29.04  . Q       .        .         . V       .
16.983     28.6744     28.76  . Q       .        .         . V       .
17.000     28.7136     28.48  . 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%	1021.0
10%	305.0
20%	145.0
30%	90.0
40%	75.0
50%	60.0
60%	50.0
70%	40.0
80%	25.0
90%	15.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

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                                   92707

 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA F                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 50-YR EV ROKAMOTO AUGUST 2018                                         *
 ************************************************************************

  FILE NAME: 4F50EVS.DAT
  TIME/DATE OF STUDY: 08:08 08/15/2018

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


**************************************************************************
  FLOW PROCESS FROM NODE    920.00 TO NODE    905.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  553.80
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.254
    LOW LOSS FRACTION = 0.457
    TIME OF CONCENTRATION(MIN.) = 16.81
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    USER SPECIFIED RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  15
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.37
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.80
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.06
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.78
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.47
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.12

--------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =   102.24
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    87.90

--------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	245.7	491.3	737.0	982.6
10.000	18.1640	31.09	.Q	V .	.	.	.
10.017	18.2069	31.15	.Q	V .	.	.	.
10.033	18.2499	31.22	.Q	V .	.	.	.
10.050	18.2930	31.29	.Q	V .	.	.	.
10.067	18.3362	31.36	.Q	V .	.	.	.
10.083	18.3795	31.43	.Q	V .	.	.	.
10.100	18.4229	31.50	.Q	V .	.	.	.
10.117	18.4664	31.57	.Q	V .	.	.	.
10.133	18.5100	31.62	.Q	V .	.	.	.
10.150	18.5536	31.66	.Q	V .	.	.	.
10.167	18.5972	31.70	.Q	V .	.	.	.
10.183	18.6410	31.74	.Q	V .	.	.	.
10.200	18.6847	31.77	.Q	V .	.	.	.
10.217	18.7286	31.81	.Q	V .	.	.	.
10.233	18.7724	31.85	.Q	V .	.	.	.
10.250	18.8163	31.89	.Q	V .	.	.	.
10.267	18.8603	31.92	.Q	V .	.	.	.
10.283	18.9043	31.96	.Q	V .	.	.	.
10.300	18.9484	32.00	.Q	V .	.	.	.
10.317	18.9925	32.04	.Q	V .	.	.	.
10.333	19.0367	32.07	.Q	V .	.	.	.
10.350	19.0810	32.11	.Q	V .	.	.	.
10.367	19.1252	32.15	.Q	V .	.	.	.
10.383	19.1696	32.19	.Q	V .	.	.	.
10.400	19.2140	32.23	.Q	V .	.	.	.
10.417	19.2584	32.29	.Q	V .	.	.	.
10.433	19.3030	32.37	.Q	V .	.	.	.
10.450	19.3477	32.45	.Q	V .	.	.	.
10.467	19.3926	32.54	.Q	V .	.	.	.
10.483	19.4375	32.62	.Q	V .	.	.	.
10.500	19.4825	32.70	.Q	V .	.	.	.
10.517	19.5277	32.78	.Q	V .	.	.	.
10.533	19.5729	32.86	.Q	V .	.	.	.
10.550	19.6183	32.94	.Q	V .	.	.	.
10.567	19.6638	33.02	.Q	V .	.	.	.
10.583	19.7094	33.10	.Q	V .	.	.	.
10.600	19.7551	33.18	.Q	V .	.	.	.
10.617	19.8009	33.26	.Q	V .	.	.	.
10.633	19.8468	33.35	.Q	V .	.	.	.
10.650	19.8929	33.43	.Q	V .	.	.	.
10.667	19.9390	33.51	.Q	V .	.	.	.
10.683	19.9853	33.59	.Q	V .	.	.	.
10.700	20.0316	33.64	.Q	V .	.	.	.
10.717	20.0780	33.68	.Q	V .	.	.	.
10.733	20.1245	33.72	.Q	V .	.	.	.

10.750	20.1710	33.77	.Q	V .	.	.	.
10.767	20.2176	33.81	.Q	V .	.	.	.
10.783	20.2642	33.86	.Q	V .	.	.	.
10.800	20.3109	33.90	.Q	V .	.	.	.
10.817	20.3577	33.94	.Q	V .	.	.	.
10.833	20.4045	33.99	.Q	V .	.	.	.
10.850	20.4513	34.03	.Q	V .	.	.	.
10.867	20.4983	34.08	.Q	V .	.	.	.
10.883	20.5453	34.12	.Q	V .	.	.	.
10.900	20.5923	34.16	.Q	V .	.	.	.
10.917	20.6395	34.21	.Q	V .	.	.	.
10.933	20.6866	34.25	.Q	V .	.	.	.
10.950	20.7339	34.30	.Q	V .	.	.	.
10.967	20.7812	34.35	.Q	V .	.	.	.
10.983	20.8286	34.44	.Q	V .	.	.	.
11.000	20.8762	34.54	.Q	V .	.	.	.
11.017	20.9239	34.63	.Q	V .	.	.	.
11.033	20.9717	34.73	.Q	V .	.	.	.
11.050	21.0197	34.82	.Q	V .	.	.	.
11.067	21.0678	34.92	.Q	V .	.	.	.
11.083	21.1160	35.02	.Q	V .	.	.	.
11.100	21.1644	35.11	.Q	V .	.	.	.
11.117	21.2129	35.21	.Q	V .	.	.	.
11.133	21.2615	35.30	.Q	V .	.	.	.
11.150	21.3103	35.40	.Q	V .	.	.	.
11.167	21.3592	35.50	.Q	V .	.	.	.
11.183	21.4082	35.59	.Q	V .	.	.	.
11.200	21.4574	35.69	.Q	V .	.	.	.
11.217	21.5067	35.78	.Q	V .	.	.	.
11.233	21.5561	35.88	.Q	V .	.	.	.
11.250	21.6056	35.96	.Q	V .	.	.	.
11.267	21.6552	36.02	.Q	V .	.	.	.
11.283	21.7049	36.07	.Q	V .	.	.	.
11.300	21.7547	36.12	.Q	V .	.	.	.
11.317	21.8045	36.17	.Q	V .	.	.	.
11.333	21.8544	36.23	.Q	V .	.	.	.
11.350	21.9044	36.28	.Q	V .	.	.	.
11.367	21.9544	36.33	.Q	V .	.	.	.
11.383	22.0045	36.39	.Q	V .	.	.	.
11.400	22.0547	36.44	.Q	V .	.	.	.
11.417	22.1050	36.49	.Q	V .	.	.	.
11.433	22.1553	36.54	.Q	V .	.	.	.
11.450	22.2057	36.60	.Q	V .	.	.	.
11.467	22.2562	36.65	.Q	V .	.	.	.
11.483	22.3068	36.70	.Q	V .	.	.	.
11.500	22.3574	36.75	.Q	V .	.	.	.
11.517	22.4081	36.81	.Q	V .	.	.	.
11.533	22.4589	36.89	.Q	V .	.	.	.
11.550	22.5099	37.00	.Q	V .	.	.	.
11.567	22.5610	37.12	.Q	V .	.	.	.
11.583	22.6123	37.23	.Q	V .	.	.	.
11.600	22.6637	37.35	.Q	V .	.	.	.
11.617	22.7153	37.47	.Q	V .	.	.	.
11.633	22.7671	37.58	.Q	V .	.	.	.
11.650	22.8190	37.70	.Q	V .	.	.	.
11.667	22.8711	37.81	.Q	V .	.	.	.
11.683	22.9234	37.93	.Q	V .	.	.	.
11.700	22.9758	38.05	.Q	V .	.	.	.

11.717	23.0283	38.16	.Q	V.	.	.	.
11.733	23.0810	38.28	.Q	V.	.	.	.
11.750	23.1339	38.39	.Q	V.	.	.	.
11.767	23.1870	38.51	.Q	V.	.	.	.
11.783	23.2402	38.63	.Q	V.	.	.	.
11.800	23.2935	38.74	.Q	V.	.	.	.
11.817	23.3470	38.82	.Q	V.	.	.	.
11.833	23.4006	38.89	.Q	V.	.	.	.
11.850	23.4542	38.95	.Q	V.	.	.	.
11.867	23.5080	39.02	.Q	V.	.	.	.
11.883	23.5618	39.08	.Q	V.	.	.	.
11.900	23.6157	39.14	.Q	V.	.	.	.
11.917	23.6697	39.21	.Q	V.	.	.	.
11.933	23.7238	39.27	.Q	V.	.	.	.
11.950	23.7780	39.34	.Q	V.	.	.	.
11.967	23.8323	39.40	.Q	V.	.	.	.
11.983	23.8866	39.47	.Q	V.	.	.	.
12.000	23.9411	39.53	.Q	V.	.	.	.
12.017	23.9956	39.59	.Q	V.	.	.	.
12.033	24.0503	39.66	.Q	V.	.	.	.
12.050	24.1050	39.72	.Q	V.	.	.	.
12.067	24.1598	39.79	.Q	V.	.	.	.
12.083	24.2147	39.90	.Q	V.	.	.	.
12.100	24.2706	40.56	.Q	V.	.	.	.
12.117	24.3276	41.40	.Q	V.	.	.	.
12.133	24.3858	42.23	.Q	V.	.	.	.
12.150	24.4451	43.07	.Q	V.	.	.	.
12.167	24.5056	43.90	.Q	V.	.	.	.
12.183	24.5672	44.74	.Q	V.	.	.	.
12.200	24.6300	45.57	.Q	V.	.	.	.
12.217	24.6939	46.40	.Q	V.	.	.	.
12.233	24.7589	47.24	.Q	V.	.	.	.
12.250	24.8252	48.07	.Q	V.	.	.	.
12.267	24.8925	48.91	.Q	V.	.	.	.
12.283	24.9610	49.74	. Q	V.	.	.	.
12.300	25.0307	50.58	. Q	V.	.	.	.
12.317	25.1015	51.41	. Q	V.	.	.	.
12.333	25.1735	52.25	. Q	V.	.	.	.
12.350	25.2466	53.08	. Q	V.	.	.	.
12.367	25.3207	53.81	. Q	V.	.	.	.
12.383	25.3951	53.98	. Q	V.	.	.	.
12.400	25.4695	54.06	. Q	V.	.	.	.
12.417	25.5441	54.15	. Q	V.	.	.	.
12.433	25.6188	54.24	. Q	V	.	.	.
12.450	25.6937	54.32	. Q	V	.	.	.
12.467	25.7686	54.41	. Q	V	.	.	.
12.483	25.8437	54.49	. Q	V	.	.	.
12.500	25.9188	54.58	. Q	V	.	.	.
12.517	25.9941	54.66	. Q	V	.	.	.
12.533	26.0695	54.75	. Q	V	.	.	.
12.550	26.1451	54.84	. Q	V	.	.	.
12.567	26.2207	54.92	. Q	V	.	.	.
12.583	26.2965	55.01	. Q	V	.	.	.
12.600	26.3724	55.09	. Q	V	.	.	.
12.617	26.4484	55.18	. Q	V	.	.	.
12.633	26.5245	55.26	. Q	V	.	.	.
12.650	26.6008	55.38	. Q	V	.	.	.
12.667	26.6773	55.57	. Q	V	.	.	.

12.683	26.7541	55.76	. Q	V	.	.	.
12.700	26.8312	55.95	. Q	V	.	.	.
12.717	26.9085	56.15	. Q	V	.	.	.
12.733	26.9861	56.34	. Q	V	.	.	.
12.750	27.0640	56.53	. Q	V	.	.	.
12.767	27.1422	56.73	. Q	V	.	.	.
12.783	27.2206	56.92	. Q	V	.	.	.
12.800	27.2992	57.11	. Q	V	.	.	.
12.817	27.3782	57.31	. Q	V	.	.	.
12.833	27.4574	57.50	. Q	V	.	.	.
12.850	27.5368	57.69	. Q	V	.	.	.
12.867	27.6166	57.89	. Q	V	.	.	.
12.883	27.6966	58.08	. Q	V	.	.	.
12.900	27.7768	58.27	. Q	V	.	.	.
12.917	27.8574	58.47	. Q	V	.	.	.
12.933	27.9381	58.63	. Q	V	.	.	.
12.950	28.0190	58.74	. Q	V	.	.	.
12.967	28.1001	58.85	. Q	V	.	.	.
12.983	28.1813	58.96	. Q	.V	.	.	.
13.000	28.2626	59.07	. Q	.V	.	.	.
13.017	28.3442	59.18	. Q	.V	.	.	.
13.033	28.4258	59.29	. Q	.V	.	.	.
13.050	28.5076	59.40	. Q	.V	.	.	.
13.067	28.5896	59.51	. Q	.V	.	.	.
13.083	28.6717	59.62	. Q	.V	.	.	.
13.100	28.7540	59.73	. Q	.V	.	.	.
13.117	28.8364	59.84	. Q	.V	.	.	.
13.133	28.9190	59.95	. Q	.V	.	.	.
13.150	29.0017	60.06	. Q	.V	.	.	.
13.167	29.0846	60.16	. Q	.V	.	.	.
13.183	29.1676	60.27	. Q	.V	.	.	.
13.200	29.2508	60.39	. Q	.V	.	.	.
13.217	29.3342	60.58	. Q	.V	.	.	.
13.233	29.4180	60.83	. Q	.V	.	.	.
13.250	29.5021	61.09	. Q	.V	.	.	.
13.267	29.5866	61.34	. Q	.V	.	.	.
13.283	29.6715	61.60	. Q	.V	.	.	.
13.300	29.7567	61.85	. Q	.V	.	.	.
13.317	29.8422	62.10	. Q	.V	.	.	.
13.333	29.9281	62.36	. Q	.V	.	.	.
13.350	30.0143	62.61	. Q	.V	.	.	.
13.367	30.1009	62.86	. Q	.V	.	.	.
13.383	30.1879	63.12	. Q	.V	.	.	.
13.400	30.2752	63.37	. Q	.V	.	.	.
13.417	30.3628	63.62	. Q	.V	.	.	.
13.433	30.4508	63.88	. Q	.V	.	.	.
13.450	30.5391	64.13	. Q	.V	.	.	.
13.467	30.6278	64.39	. Q	.V	.	.	.
13.483	30.7168	64.63	. Q	. V	.	.	.
13.500	30.8061	64.81	. Q	. V	.	.	.
13.517	30.8956	64.96	. Q	. V	.	.	.
13.533	30.9852	65.11	. Q	. V	.	.	.
13.550	31.0751	65.25	. Q	. V	.	.	.
13.567	31.1652	65.40	. Q	. V	.	.	.
13.583	31.2555	65.55	. Q	. V	.	.	.
13.600	31.3460	65.70	. Q	. V	.	.	.
13.617	31.4367	65.84	. Q	. V	.	.	.
13.633	31.5276	65.99	. Q	. V	.	.	.

13.650	31.6187	66.14	. Q	. V	.	.	.	
13.667	31.7100	66.29	. Q	. V	.	.	.	
13.683	31.8015	66.44	. Q	. V	.	.	.	
13.700	31.8932	66.58	. Q	. V	.	.	.	
13.717	31.9851	66.73	. Q	. V	.	.	.	
13.733	32.0773	66.88	. Q	. V	.	.	.	
13.750	32.1696	67.03	. Q	. V	.	.	.	
13.767	32.2621	67.20	. Q	. V	.	.	.	
13.783	32.3551	67.52	. Q	. V	.	.	.	
13.800	32.4486	67.88	. Q	. V	.	.	.	
13.817	32.5426	68.23	. Q	. V	.	.	.	
13.833	32.6371	68.58	. Q	. V	.	.	.	
13.850	32.7320	68.94	. Q	. V	.	.	.	
13.867	32.8275	69.29	. Q	. V	.	.	.	
13.883	32.9234	69.64	. Q	. V	.	.	.	
13.900	33.0198	69.99	. Q	. V	.	.	.	
13.917	33.1167	70.35	. Q	. V	.	.	.	
13.933	33.2141	70.70	. Q	. V	.	.	.	
13.950	33.3120	71.05	. Q	. V	.	.	.	
13.967	33.4103	71.41	. Q	. V	.	.	.	
13.983	33.5092	71.76	. Q	. V	.	.	.	
14.000	33.6085	72.11	. Q	. V	.	.	.	
14.017	33.7083	72.47	. Q	. V	.	.	.	
14.033	33.8086	72.82	. Q	. V	.	.	.	
14.050	33.9093	73.14	. Q	. V	.	.	.	
14.067	34.0104	73.36	. Q	. V	.	.	.	
14.083	34.1117	73.56	. Q	. V	.	.	.	
14.100	34.2133	73.77	. Q	. V	.	.	.	
14.117	34.3152	73.98	. Q	. V	.	.	.	
14.133	34.4174	74.19	. Q	. V	.	.	.	
14.150	34.5199	74.40	. Q	. V	.	.	.	
14.167	34.6227	74.61	. Q	. V	.	.	.	
14.183	34.7257	74.81	. Q	. V	.	.	.	
14.200	34.8290	75.02	. Q	. V	.	.	.	
14.217	34.9327	75.23	. Q	. V	.	.	.	
14.233	35.0366	75.44	. Q	. V	.	.	.	
14.250	35.1408	75.65	. Q	. V	.	.	.	
14.267	35.2453	75.86	. Q	. V	.	.	.	
14.283	35.3500	76.06	. Q	. V	.	.	.	
14.300	35.4551	76.27	. Q	. V	.	.	.	
14.317	35.5604	76.48	. Q	. V	.	.	.	
14.333	35.6662	76.81	. Q	. V	.	.	.	
14.350	35.7728	77.34	. Q	. V	.	.	.	
14.367	35.8801	77.88	. Q	. V	.	.	.	
14.383	35.9881	78.42	. Q	. V	.	.	.	
14.400	36.0968	78.95	. Q	. V	.	.	.	
14.417	36.2063	79.49	. Q	. V	.	.	.	
14.433	36.3165	80.03	. Q	. V	.	.	.	
14.450	36.4275	80.56	. Q	. V	.	.	.	
14.467	36.5392	81.10	. Q	. V	.	.	.	
14.483	36.6517	81.64	. Q	. V	.	.	.	
14.500	36.7649	82.17	. Q	. V	.	.	.	
14.517	36.8788	82.71	. Q	. V	.	.	.	
14.533	36.9934	83.25	. Q	. V	.	.	.	
14.550	37.1088	83.78	. Q	. V	.	.	.	
14.567	37.2250	84.32	. Q	. V	.	.	.	
14.583	37.3419	84.85	. Q	. V	.	.	.	
14.600	37.4595	85.39	. Q	. V	.	.	.	

14.617	37.5777	85.82	. Q	. V	.	.	.	
14.633	37.6964	86.17	. Q	. V	.	.	.	
14.650	37.8156	86.52	. Q	. V	.	.	.	
14.667	37.9352	86.87	. Q	. V	.	.	.	
14.683	38.0554	87.22	. Q	. V	.	.	.	
14.700	38.1760	87.57	. Q	. V	.	.	.	
14.717	38.2971	87.92	. Q	. V	.	.	.	
14.733	38.4187	88.27	. Q	. V	.	.	.	
14.750	38.5407	88.62	. Q	. V	.	.	.	
14.767	38.6632	88.96	. Q	. V	.	.	.	
14.783	38.7863	89.31	. Q	. V	.	.	.	
14.800	38.9098	89.66	. Q	. V	.	.	.	
14.817	39.0338	90.01	. Q	. V	.	.	.	
14.833	39.1582	90.36	. Q	. V	.	.	.	
14.850	39.2832	90.71	. Q	. V	.	.	.	
14.867	39.4086	91.06	. Q	. V	.	.	.	
14.883	39.5345	91.42	. Q	. V	.	.	.	
14.900	39.6615	92.22	. Q	. V	.	.	.	
14.917	39.7899	93.19	. Q	. V	.	.	.	
14.933	39.9196	94.16	. Q	. V	.	.	.	
14.950	40.0506	95.13	. Q	. V	.	.	.	
14.967	40.1830	96.11	. Q	. V	.	.	.	
14.983	40.3167	97.08	. Q	. V	.	.	.	
15.000	40.4518	98.05	. Q	. V	.	.	.	
15.017	40.5882	99.02	. Q	. V	.	.	.	
15.033	40.7259	99.99	. Q	. V	.	.	.	
15.050	40.8650	100.97	. Q	. V	.	.	.	
15.067	41.0054	101.94	. Q	. V	.	.	.	
15.083	41.1471	102.91	. Q	. V	.	.	.	
15.100	41.2902	103.88	. Q	. V	.	.	.	
15.117	41.4347	104.85	. Q	. V	.	.	.	
15.133	41.5804	105.83	. Q	. V	.	.	.	
15.150	41.7275	106.80	. Q	. V	.	.	.	
15.167	41.8759	107.75	. Q	. V	.	.	.	
15.183	42.0254	108.51	. Q	. V	.	.	.	
15.200	42.1759	109.23	. Q	. V	.	.	.	
15.217	42.3273	109.95	. Q	. V	.	.	.	
15.233	42.4798	110.67	. Q	. V	.	.	.	
15.250	42.6332	111.40	. Q	. V	.	.	.	
15.267	42.7876	112.12	. Q	. V	.	.	.	
15.283	42.9431	112.84	. Q	. V	.	.	.	
15.300	43.0995	113.56	. Q	. V	.	.	.	
15.317	43.2569	114.28	. Q	. V	.	.	.	
15.333	43.4153	115.00	. Q	. V	.	.	.	
15.350	43.5747	115.72	. Q	. V	.	.	.	
15.367	43.7351	116.44	. Q	. V	.	.	.	
15.383	43.8965	117.17	. Q	. V	.	.	.	
15.400	44.0588	117.89	. Q	. V	.	.	.	
15.417	44.2222	118.61	. Q	. V	.	.	.	
15.433	44.3866	119.33	. Q	. V	.	.	.	
15.450	44.5521	120.20	. Q	. V	.	.	.	
15.467	44.7197	121.62	. Q	. V	.	.	.	
15.483	44.8892	123.10	. Q	. V	.	.	.	
15.500	45.0608	124.58	. Q	. V	.	.	.	
15.517	45.2344	126.06	. Q	. V	.	.	.	
15.533	45.4101	127.54	. Q	. V	.	.	.	
15.550	45.5878	129.02	. Q	. V	.	.	.	
15.567	45.7676	130.50	. Q	. V	.	.	.	

```
15.583    45.9494   131.98  .    Q    .      V  .         .         .
15.600    46.1332   133.46  .    Q    .       V .         .         .
15.617    46.3190   134.93  .    Q    .       V .         .         .
15.633    46.5069   136.41  .    Q    .       V .         .         .
15.650    46.6969   137.89  .    Q    .       V .         .         .
15.667    46.8888   139.37  .    Q    .       V .         .         .
15.683    47.0829   140.85  .    Q    .       V .         .         .
15.700    47.2789   142.33  .    Q    .       V .         .         .
15.717    47.4770   143.81  .    Q    .       V .         .         .
15.733    47.6794   146.95  .    Q    .       V .         .         .
15.750    47.8907   153.40  .     Q   .       V .         .         .
15.767    48.1110   159.94  .     Q   .       V .         .         .
15.783    48.3403   166.48  .     Q   .       V .         .         .
15.800    48.5786   173.02  .      Q  .        V.         .         .
15.817    48.8260   179.56  .      Q  .        V.         .         .
15.833    49.0823   186.10  .      Q  .        V.         .         .
15.850    49.3477   192.65  .      Q  .        V.         .         .
15.867    49.6220   199.19  .       Q .        V.         .         .
15.883    49.9054   205.73  .       Q .        V.         .         .
15.900    50.1978   212.27  .       Q .        V.         .         .
15.917    50.4992   218.81  .       Q .        V.         .         .
15.933    50.8096   225.35  .        Q.        V.         .         .
15.950    51.1290   231.89  .        Q.         V         .         .
15.967    51.4574   238.43  .        Q.         V         .         .
15.983    51.7948   244.97  .        Q.         V         .         .
16.000    52.1413   251.51  .         Q         V         .         .
16.017    52.5220   276.43  .        .Q         V         .         .
16.033    52.9624   319.73  .         .  Q      V         .         .
16.050    53.4625   363.02  .         .   Q     V         .         .
16.067    54.0221   406.32  .         .     Q   .V        .         .
16.083    54.6415   449.62  .         .       Q .V        .         .
16.100    55.3204   492.92  .         .         QV        .         .
16.117    56.0590   536.21  .         .         .Q        .         .
16.133    56.8572   579.51  .         .         . VQ      .         .
16.150    57.7151   622.81  .         .         . V  Q    .         .
16.167    58.6326   666.10  .         .         . V    Q  .         .
16.183    59.6097   709.40  .         .         .  V    Q .         .
16.200    60.6465   752.70  .         .         .  V      Q         .
16.217    61.7429   795.99  .         .         .   V     . Q       .
16.233    62.8989   839.29  .         .         .   V     .   Q     .
16.250    64.1146   882.59  .         .         .    V    .    Q    .
16.267    65.3899   925.88  .         .         .    V    .      Q  .
16.283    66.7434   982.60  .         .         .     V   .        Q
16.300    68.0484   947.45  .         .         .     V   .       Q .
16.317    69.2833   896.51  .         .         .      V  .     Q   .
16.333    70.4480   845.57  .         .         .      V  .   Q     .
16.350    71.5425   794.63  .         .         .      V  . Q       .
16.367    72.5669   743.69  .         .         .       V Q         .
16.383    73.5211   692.75  .         .         .       Q .         .
16.400    74.4051   641.81  .         .         .     Q  V.         .
16.417    75.2190   590.87  .         .         .   Q    V.         .
16.433    75.9627   539.93  .         .         .Q       V.         .
16.450    76.6362   488.99  .         .        Q.        V.         .
16.467    77.2396   438.04  .         .     Q  .         V         .
16.483    77.7728   387.10  .         .   Q    .         V         .
16.500    78.2358   336.17  .         .  Q     .         V         .
16.517    78.6287   285.23  .         .Q       .         V         .
16.533    78.9514   234.29  .        Q.        .         V         .
```



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16.550    79.2039   183.35  .      Q  .         .         V         .
16.567    79.3912   135.96  .    Q    .         .         .V        .
16.583    79.5632   124.85  .    Q    .         .         .V        .
16.600    79.7329   123.21  .    Q    .         .         .V        .
16.617    79.9003   121.56  .   Q     .         .         .V        .
16.633    80.0655   119.92  .   Q     .         .         .V        .
16.650    80.2284   118.28  .   Q     .         .         .V        .
16.667    80.3891   116.64  .   Q     .         .         .V        .
16.683    80.5475   115.00  .   Q     .         .         .V        .
16.700    80.7037   113.36  .   Q     .         .         .V        .
16.717    80.8575   111.72  .   Q     .         .         .V        .
16.733    81.0091   110.08  .   Q     .         .         .V        .
16.750    81.1585   108.43  .   Q     .         .         .V        .
16.767    81.3056   106.79  .   Q     .         .         .V        .
16.783    81.4504   105.15  .   Q     .         .         .V        .
16.800    81.5930   103.51  .   Q     .         .         .V        .
16.817    81.7333   101.87  .   Q     .         .         .V        .
16.833    81.8714   100.23  .   Q     .         .         . V       .
16.850    82.0073    98.68  .   Q     .         .         . V       .
16.867    82.1417    97.56  .  Q      .         .         . V       .
16.883    82.2746    96.49  .  Q      .         .         . V       .
16.900    82.4060    95.42  .  Q      .         .         . V       .
16.917    82.5360    94.35  .  Q      .         .         . V       .
16.933    82.6645    93.28  .  Q      .         .         . V       .
16.950    82.7915    92.22  .  Q      .         .         . V       .
16.967    82.9170    91.15  .  Q      .         .         . V       .
16.983    83.0411    90.08  .  Q      .         .         . V       .
17.000    83.1637    89.01  .  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%	1021.0
10%	555.0
20%	205.0
30%	145.0
40%	125.0
50%	105.0
60%	85.0
70%	65.0
80%	45.0
90%	20.0

END OF FLOODSCx ROUTING ANALYSIS

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                         Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA A                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 100-YR EV MARCH 2019 CCHIU                                            *
 ************************************************************************

  FILE NAME: 3A00EVS.DAT
  TIME/DATE OF STUDY: 09:28 03/29/2019

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


************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    130.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  510.20
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.130
    LOW LOSS FRACTION = 0.282
    TIME OF CONCENTRATION(MIN.) = 13.66
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  25
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.40
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.87
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.15
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.94
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.71
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.49

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =   130.15
```



```
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    60.75

------------------------------------------------------------------------
```

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

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS(CFS)

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	296.9	593.9	890.8	1187.8
0.017	0.0000	0.00	Q	.	.	.	.
0.033	0.0000	0.00	Q	.	.	.	.
0.050	0.0000	0.00	Q	.	.	.	.
0.067	0.0000	0.03	Q	.	.	.	.
0.083	0.0016	1.16	Q	.	.	.	.
0.100	0.0055	2.81	Q	.	.	.	.
0.117	0.0117	4.46	Q	.	.	.	.
0.133	0.0201	6.12	Q	.	.	.	.
0.150	0.0308	7.77	Q	.	.	.	.
0.167	0.0438	9.43	Q	.	.	.	.
0.183	0.0590	11.08	Q	.	.	.	.
0.200	0.0766	12.73	Q	.	.	.	.
0.217	0.0964	14.39	Q	.	.	.	.
0.233	0.1185	16.04	Q	.	.	.	.
0.250	0.1429	17.69	Q	.	.	.	.
0.267	0.1695	19.35	Q	.	.	.	.
0.283	0.1984	21.00	Q	.	.	.	.
0.300	0.2293	22.42	Q	.	.	.	.
0.317	0.2604	22.60	Q	.	.	.	.
0.333	0.2916	22.61	Q	.	.	.	.
0.350	0.3227	22.62	Q	.	.	.	.
0.367	0.3539	22.63	Q	.	.	.	.
0.383	0.3851	22.64	Q	.	.	.	.
0.400	0.4163	22.65	Q	.	.	.	.
0.417	0.4475	22.66	Q	.	.	.	.
0.433	0.4787	22.67	Q	.	.	.	.
0.450	0.5100	22.68	Q	.	.	.	.
0.467	0.5412	22.69	Q	.	.	.	.
0.483	0.5725	22.70	Q	.	.	.	.
0.500	0.6038	22.71	Q	.	.	.	.
0.517	0.6351	22.72	Q	.	.	.	.
0.533	0.6664	22.74	Q	.	.	.	.
0.550	0.6978	22.76	Q	.	.	.	.
0.567	0.7291	22.78	Q	.	.	.	.
0.583	0.7605	22.80	Q	.	.	.	.
0.600	0.7920	22.82	Q	.	.	.	.
0.617	0.8234	22.84	Q	.	.	.	.
0.633	0.8549	22.86	Q	.	.	.	.
0.650	0.8864	22.88	Q	.	.	.	.
0.667	0.9180	22.90	Q	.	.	.	.
0.683	0.9496	22.92	Q	.	.	.	.
0.700	0.9812	22.94	Q	.	.	.	.
0.717	1.0128	22.96	Q	.	.	.	.
0.733	1.0444	22.99	Q	.	.	.	.
0.750	1.0761	23.01	Q	.	.	.	.

0.767	1.1078	23.02	Q	.	.	.	.
0.783	1.1396	23.03	Q	.	.	.	.
0.800	1.1713	23.04	Q	.	.	.	.
0.817	1.2031	23.05	Q	.	.	.	.
0.833	1.2348	23.06	Q	.	.	.	.
0.850	1.2666	23.07	Q	.	.	.	.
0.867	1.2984	23.08	Q	.	.	.	.
0.883	1.3302	23.09	Q	.	.	.	.
0.900	1.3620	23.10	Q	.	.	.	.
0.917	1.3939	23.12	Q	.	.	.	.
0.933	1.4257	23.13	Q	.	.	.	.
0.950	1.4576	23.14	Q	.	.	.	.
0.967	1.4895	23.15	Q	.	.	.	.
0.983	1.5214	23.16	Q	.	.	.	.
1.000	1.5533	23.18	Q	.	.	.	.
1.017	1.5853	23.20	Q	.	.	.	.
1.033	1.6173	23.22	Q	.	.	.	.
1.050	1.6493	23.25	Q	.	.	.	.
1.067	1.6813	23.27	Q	.	.	.	.
1.083	1.7134	23.29	Q	.	.	.	.
1.100	1.7455	23.31	Q	.	.	.	.
1.117	1.7776	23.33	Q	.	.	.	.
1.133	1.8098	23.35	Q	.	.	.	.
1.150	1.8420	23.38	Q	.	.	.	.
1.167	1.8742	23.40	Q	.	.	.	.
1.183	1.9065	23.42	Q	.	.	.	.
1.200	1.9388	23.44	Q	.	.	.	.
1.217	1.9711	23.46	Q	.	.	.	.
1.233	2.0034	23.47	Q	.	.	.	.
1.250	2.0358	23.48	Q	.	.	.	.
1.267	2.0681	23.49	Q	.	.	.	.
1.283	2.1005	23.50	Q	.	.	.	.
1.300	2.1329	23.52	Q	.	.	.	.
1.317	2.1653	23.53	Q	.	.	.	.
1.333	2.1977	23.54	Q	.	.	.	.
1.350	2.2302	23.55	Q	.	.	.	.
1.367	2.2626	23.56	Q	.	.	.	.
1.383	2.2951	23.57	Q	.	.	.	.
1.400	2.3276	23.58	Q	.	.	.	.
1.417	2.3601	23.59	Q	.	.	.	.
1.433	2.3926	23.61	Q	.	.	.	.
1.450	2.4251	23.63	Q	.	.	.	.
1.467	2.4577	23.65	Q	.	.	.	.
1.483	2.4903	23.67	Q	.	.	.	.
1.500	2.5230	23.69	Q	.	.	.	.
1.517	2.5556	23.72	Q	.	.	.	.
1.533	2.5883	23.74	Q	.	.	.	.
1.550	2.6210	23.76	Q	.	.	.	.
1.567	2.6538	23.79	Q	.	.	.	.
1.583	2.6866	23.81	Q	.	.	.	.
1.600	2.7194	23.83	Q	.	.	.	.
1.617	2.7523	23.85	Q	.	.	.	.
1.633	2.7852	23.88	Q	.	.	.	.
1.650	2.8181	23.90	Q	.	.	.	.
1.667	2.8510	23.92	Q	.	.	.	.
1.683	2.8840	23.93	Q	.	.	.	.
1.700	2.9170	23.95	Q	.	.	.	.
1.717	2.9500	23.96	Q	.	.	.	.

1.733	2.9830	23.97	Q	.	.	.	.
1.750	3.0160	23.98	Q	.	.	.	.
1.767	3.0491	23.99	Q	.	.	.	.
1.783	3.0822	24.00	Q	.	.	.	.
1.800	3.1152	24.02	Q	.	.	.	.
1.817	3.1483	24.03	Q	.	.	.	.
1.833	3.1814	24.04	Q	.	.	.	.
1.850	3.2146	24.05	Q	.	.	.	.
1.867	3.2477	24.06	Q	.	.	.	.
1.883	3.2809	24.08	QV	.	.	.	.
1.900	3.3141	24.09	QV	.	.	.	.
1.917	3.3473	24.12	QV	.	.	.	.
1.933	3.3805	24.14	QV	.	.	.	.
1.950	3.4138	24.16	QV	.	.	.	.
1.967	3.4471	24.19	QV	.	.	.	.
1.983	3.4805	24.21	QV	.	.	.	.
2.000	3.5139	24.24	QV	.	.	.	.
2.017	3.5473	24.26	QV	.	.	.	.
2.033	3.5807	24.29	QV	.	.	.	.
2.050	3.6142	24.31	QV	.	.	.	.
2.067	3.6477	24.33	QV	.	.	.	.
2.083	3.6813	24.36	QV	.	.	.	.
2.100	3.7149	24.38	QV	.	.	.	.
2.117	3.7485	24.41	QV	.	.	.	.
2.133	3.7821	24.42	QV	.	.	.	.
2.150	3.8158	24.43	QV	.	.	.	.
2.167	3.8495	24.45	QV	.	.	.	.
2.183	3.8831	24.46	QV	.	.	.	.
2.200	3.9169	24.47	QV	.	.	.	.
2.217	3.9506	24.48	QV	.	.	.	.
2.233	3.9843	24.50	QV	.	.	.	.
2.250	4.0181	24.51	QV	.	.	.	.
2.267	4.0518	24.52	QV	.	.	.	.
2.283	4.0856	24.53	QV	.	.	.	.
2.300	4.1194	24.54	QV	.	.	.	.
2.317	4.1533	24.56	QV	.	.	.	.
2.333	4.1871	24.57	QV	.	.	.	.
2.350	4.2210	24.58	QV	.	.	.	.
2.367	4.2549	24.61	QV	.	.	.	.
2.383	4.2888	24.63	QV	.	.	.	.
2.400	4.3228	24.66	QV	.	.	.	.
2.417	4.3568	24.68	QV	.	.	.	.
2.433	4.3908	24.71	QV	.	.	.	.
2.450	4.4249	24.74	QV	.	.	.	.
2.467	4.4590	24.76	QV	.	.	.	.
2.483	4.4931	24.79	QV	.	.	.	.
2.500	4.5273	24.81	QV	.	.	.	.
2.517	4.5615	24.84	QV	.	.	.	.
2.533	4.5958	24.86	QV	.	.	.	.
2.550	4.6300	24.89	QV	.	.	.	.
2.567	4.6644	24.91	QV	.	.	.	.
2.583	4.6987	24.93	QV	.	.	.	.
2.600	4.7331	24.95	QV	.	.	.	.
2.617	4.7674	24.96	QV	.	.	.	.
2.633	4.8018	24.97	QV	.	.	.	.
2.650	4.8363	24.99	QV	.	.	.	.
2.667	4.8707	25.00	QV	.	.	.	.
2.683	4.9051	25.01	QV	.	.	.	.

2.700	4.9396	25.03	QV	.	.	.	.
2.717	4.9741	25.04	QV	.	.	.	.
2.733	5.0086	25.05	QV	.	.	.	.
2.750	5.0431	25.07	QV	.	.	.	.
2.767	5.0777	25.08	QV	.	.	.	.
2.783	5.1122	25.09	QV	.	.	.	.
2.800	5.1468	25.11	QV	.	.	.	.
2.817	5.1814	25.13	QV	.	.	.	.
2.833	5.2161	25.16	QV	.	.	.	.
2.850	5.2508	25.18	QV	.	.	.	.
2.867	5.2855	25.21	QV	.	.	.	.
2.883	5.3203	25.24	QV	.	.	.	.
2.900	5.3551	25.26	QV	.	.	.	.
2.917	5.3899	25.29	QV	.	.	.	.
2.933	5.4248	25.32	QV	.	.	.	.
2.950	5.4597	25.34	QV	.	.	.	.
2.967	5.4946	25.37	QV	.	.	.	.
2.983	5.5296	25.40	QV	.	.	.	.
3.000	5.5646	25.42	QV	.	.	.	.
3.017	5.5997	25.45	QV	.	.	.	.
3.033	5.6348	25.48	QV	.	.	.	.
3.050	5.6699	25.49	QV	.	.	.	.
3.067	5.7050	25.50	QV	.	.	.	.
3.083	5.7402	25.52	QV	.	.	.	.
3.100	5.7753	25.53	QV	.	.	.	.
3.117	5.8105	25.55	QV	.	.	.	.
3.133	5.8457	25.56	QV	.	.	.	.
3.150	5.8809	25.57	QV	.	.	.	.
3.167	5.9162	25.59	QV	.	.	.	.
3.183	5.9514	25.60	QV	.	.	.	.
3.200	5.9867	25.61	QV	.	.	.	.
3.217	6.0220	25.63	QV	.	.	.	.
3.233	6.0574	25.64	QV	.	.	.	.
3.250	6.0927	25.66	QV	.	.	.	.
3.267	6.1281	25.68	QV	.	.	.	.
3.283	6.1635	25.70	QV	.	.	.	.
3.300	6.1989	25.73	QV	.	.	.	.
3.317	6.2344	25.76	QV	.	.	.	.
3.333	6.2699	25.79	QV	.	.	.	.
3.350	6.3055	25.82	QV	.	.	.	.
3.367	6.3411	25.85	QV	.	.	.	.
3.383	6.3767	25.88	QV	.	.	.	.
3.400	6.4124	25.90	QV	.	.	.	.
3.417	6.4481	25.93	QV	.	.	.	.
3.433	6.4839	25.96	QV	.	.	.	.
3.450	6.5197	25.99	Q V	.	.	.	.
3.467	6.5555	26.02	Q V	.	.	.	.
3.483	6.5914	26.05	Q V	.	.	.	.
3.500	6.6273	26.06	Q V	.	.	.	.
3.517	6.6632	26.08	Q V	.	.	.	.
3.533	6.6992	26.09	Q V	.	.	.	.
3.550	6.7351	26.11	Q V	.	.	.	.
3.567	6.7711	26.12	Q V	.	.	.	.
3.583	6.8071	26.14	Q V	.	.	.	.
3.600	6.8431	26.15	Q V	.	.	.	.
3.617	6.8792	26.17	Q V	.	.	.	.
3.633	6.9152	26.18	Q V	.	.	.	.
3.650	6.9513	26.20	Q V	.	.	.	.

3.667	6.9874	26.21	Q	V	.	.	.	.
3.683	7.0236	26.23	Q	V	.	.	.	.
3.700	7.0597	26.24	Q	V	.	.	.	.
3.717	7.0959	26.26	Q	V	.	.	.	.
3.733	7.1321	26.29	Q	V	.	.	.	.
3.750	7.1683	26.32	Q	V	.	.	.	.
3.767	7.2046	26.35	Q	V	.	.	.	.
3.783	7.2409	26.38	Q	V	.	.	.	.
3.800	7.2773	26.41	Q	V	.	.	.	.
3.817	7.3137	26.44	Q	V	.	.	.	.
3.833	7.3502	26.47	Q	V	.	.	.	.
3.850	7.3867	26.50	Q	V	.	.	.	.
3.867	7.4232	26.53	Q	V	.	.	.	.
3.883	7.4598	26.56	Q	V	.	.	.	.
3.900	7.4964	26.59	Q	V	.	.	.	.
3.917	7.5331	26.62	Q	V	.	.	.	.
3.933	7.5698	26.65	Q	V	.	.	.	.
3.950	7.6066	26.67	Q	V	.	.	.	.
3.967	7.6433	26.69	Q	V	.	.	.	.
3.983	7.6801	26.70	Q	V	.	.	.	.
4.000	7.7169	26.72	Q	V	.	.	.	.
4.017	7.7537	26.74	Q	V	.	.	.	.
4.033	7.7906	26.75	Q	V	.	.	.	.
4.050	7.8275	26.77	Q	V	.	.	.	.
4.067	7.8643	26.78	Q	V	.	.	.	.
4.083	7.9013	26.80	Q	V	.	.	.	.
4.100	7.9382	26.81	Q	V	.	.	.	.
4.117	7.9751	26.83	Q	V	.	.	.	.
4.133	8.0121	26.84	Q	V	.	.	.	.
4.150	8.0491	26.86	Q	V	.	.	.	.
4.167	8.0861	26.88	Q	V	.	.	.	.
4.183	8.1232	26.90	Q	V	.	.	.	.
4.200	8.1603	26.94	Q	V	.	.	.	.
4.217	8.1975	26.97	Q	V	.	.	.	.
4.233	8.2346	27.00	Q	V	.	.	.	.
4.250	8.2719	27.03	Q	V	.	.	.	.
4.267	8.3092	27.07	Q	V	.	.	.	.
4.283	8.3465	27.10	Q	V	.	.	.	.
4.300	8.3839	27.13	Q	V	.	.	.	.
4.317	8.4213	27.16	Q	V	.	.	.	.
4.333	8.4587	27.19	Q	V	.	.	.	.
4.350	8.4962	27.23	Q	V	.	.	.	.
4.367	8.5338	27.26	Q	V	.	.	.	.
4.383	8.5714	27.29	Q	V	.	.	.	.
4.400	8.6090	27.32	Q	V	.	.	.	.
4.417	8.6466	27.34	Q	V	.	.	.	.
4.433	8.6843	27.35	Q	V	.	.	.	.
4.450	8.7220	27.37	Q	V	.	.	.	.
4.467	8.7598	27.39	Q	V	.	.	.	.
4.483	8.7975	27.40	Q	V	.	.	.	.
4.500	8.8353	27.42	Q	V	.	.	.	.
4.517	8.8731	27.44	Q	V	.	.	.	.
4.533	8.9109	27.45	Q	V	.	.	.	.
4.550	8.9487	27.47	Q	V	.	.	.	.
4.567	8.9866	27.49	Q	V	.	.	.	.
4.583	9.0245	27.50	Q	V	.	.	.	.
4.600	9.0624	27.52	Q	V	.	.	.	.
4.617	9.1003	27.54	Q	V	.	.	.	.

4.633	9.1383	27.56	Q	V	.	.	.	.
4.650	9.1763	27.60	Q	V	.	.	.	.
4.667	9.2143	27.63	Q	V	.	.	.	.
4.683	9.2524	27.66	Q	V	.	.	.	.
4.700	9.2906	27.70	Q	V	.	.	.	.
4.717	9.3288	27.73	Q	V	.	.	.	.
4.733	9.3670	27.77	Q	V	.	.	.	.
4.750	9.4053	27.80	Q	V	.	.	.	.
4.767	9.4437	27.84	Q	V	.	.	.	.
4.783	9.4821	27.87	Q	V	.	.	.	.
4.800	9.5205	27.90	Q	V	.	.	.	.
4.817	9.5590	27.94	Q	V	.	.	.	.
4.833	9.5975	27.97	Q	V	.	.	.	.
4.850	9.6361	28.01	Q	V	.	.	.	.
4.867	9.6747	28.03	Q	V	.	.	.	.
4.883	9.7133	28.04	Q	V	.	.	.	.
4.900	9.7520	28.06	Q	V	.	.	.	.
4.917	9.7906	28.08	Q	V	.	.	.	.
4.933	9.8293	28.10	Q	V	.	.	.	.
4.950	9.8681	28.12	Q	V	.	.	.	.
4.967	9.9068	28.13	Q	V	.	.	.	.
4.983	9.9456	28.15	Q	V	.	.	.	.
5.000	9.9844	28.17	Q	V	.	.	.	.
5.017	10.0232	28.19	Q	V	.	.	.	.
5.033	10.0621	28.20	Q	V	.	.	.	.
5.050	10.1009	28.22	Q	V	.	.	.	.
5.067	10.1398	28.24	Q	V	.	.	.	.
5.083	10.1788	28.26	Q	V	.	.	.	.
5.100	10.2177	28.30	Q	V	.	.	.	.
5.117	10.2568	28.33	Q	V	.	.	.	.
5.133	10.2959	28.37	Q	V	.	.	.	.
5.150	10.3350	28.41	Q	V	.	.	.	.
5.167	10.3742	28.44	Q	V	.	.	.	.
5.183	10.4134	28.48	Q	V	.	.	.	.
5.200	10.4527	28.52	Q	V	.	.	.	.
5.217	10.4920	28.55	Q	V	.	.	.	.
5.233	10.5314	28.59	Q	V	.	.	.	.
5.250	10.5708	28.63	Q	V	.	.	.	.
5.267	10.6103	28.66	Q	V	.	.	.	.
5.283	10.6498	28.70	Q	V	.	.	.	.
5.300	10.6894	28.74	Q	V	.	.	.	.
5.317	10.7290	28.76	Q	V	.	.	.	.
5.333	10.7687	28.78	Q	V	.	.	.	.
5.350	10.8083	28.80	Q	V	.	.	.	.
5.367	10.8480	28.82	Q	V	.	.	.	.
5.383	10.8878	28.84	Q	V	.	.	.	.
5.400	10.9275	28.86	Q	V	.	.	.	.
5.417	10.9673	28.88	Q	V	.	.	.	.
5.433	11.0071	28.90	Q	V	.	.	.	.
5.450	11.0469	28.92	Q	V	.	.	.	.
5.467	11.0868	28.93	Q	V	.	.	.	.
5.483	11.1267	28.95	Q	V	.	.	.	.
5.500	11.1666	28.97	Q	V	.	.	.	.
5.517	11.2065	28.99	Q	V	.	.	.	.
5.533	11.2465	29.01	Q	V	.	.	.	.
5.550	11.2865	29.05	Q	V	.	.	.	.
5.567	11.3265	29.09	Q	V	.	.	.	.
5.583	11.3666	29.12	Q	V	.	.	.	.

5.600	11.4068	29.16	Q	V	.	.	.	.
5.617	11.4470	29.20	Q	V	.	.	.	.
5.633	11.4873	29.24	Q	V	.	.	.	.
5.650	11.5276	29.28	Q	V	.	.	.	.
5.667	11.5680	29.32	Q	V	.	.	.	.
5.683	11.6085	29.36	Q	V	.	.	.	.
5.700	11.6490	29.40	Q	V	.	.	.	.
5.717	11.6895	29.44	Q	V	.	.	.	.
5.733	11.7301	29.48	Q	V	.	.	.	.
5.750	11.7708	29.52	Q	V	.	.	.	.
5.767	11.8115	29.55	Q	V	.	.	.	.
5.783	11.8522	29.57	Q	V	.	.	.	.
5.800	11.8930	29.59	Q	V	.	.	.	.
5.817	11.9338	29.61	Q	V	.	.	.	.
5.833	11.9746	29.63	Q	V	.	.	.	.
5.850	12.0154	29.65	Q	V	.	.	.	.
5.867	12.0563	29.67	Q	V	.	.	.	.
5.883	12.0972	29.69	Q	V	.	.	.	.
5.900	12.1381	29.71	.Q	V	.	.	.	.
5.917	12.1791	29.74	.Q	V	.	.	.	.
5.933	12.2201	29.76	.Q	V	.	.	.	.
5.950	12.2611	29.78	.Q	V	.	.	.	.
5.967	12.3021	29.80	.Q	V	.	.	.	.
5.983	12.3432	29.82	.Q	V	.	.	.	.
6.000	12.3843	29.85	.Q	V	.	.	.	.
6.017	12.4255	29.89	.Q	V	.	.	.	.
6.033	12.4667	29.93	.Q	V	.	.	.	.
6.050	12.5080	29.97	.Q	V	.	.	.	.
6.067	12.5493	30.02	.Q	V	.	.	.	.
6.083	12.5908	30.06	.Q	V	.	.	.	.
6.100	12.6322	30.10	.Q	V	.	.	.	.
6.117	12.6737	30.14	.Q	V	.	.	.	.
6.133	12.7153	30.19	.Q	V	.	.	.	.
6.150	12.7569	30.23	.Q	V	.	.	.	.
6.167	12.7986	30.27	.Q	V	.	.	.	.
6.183	12.8404	30.31	.Q	V	.	.	.	.
6.200	12.8822	30.35	.Q	V	.	.	.	.
6.217	12.9241	30.39	.Q	V	.	.	.	.
6.233	12.9660	30.42	.Q	V	.	.	.	.
6.250	13.0079	30.44	.Q	V	.	.	.	.
6.267	13.0499	30.46	.Q	V	.	.	.	.
6.283	13.0919	30.49	.Q	V	.	.	.	.
6.300	13.1339	30.51	.Q	V	.	.	.	.
6.317	13.1759	30.53	.Q	V	.	.	.	.
6.333	13.2180	30.55	.Q	V	.	.	.	.
6.350	13.2601	30.57	.Q	V	.	.	.	.
6.367	13.3023	30.60	.Q	V	.	.	.	.
6.383	13.3444	30.62	.Q	V	.	.	.	.
6.400	13.3866	30.64	.Q	V	.	.	.	.
6.417	13.4289	30.66	.Q	V	.	.	.	.
6.433	13.4711	30.68	.Q	V	.	.	.	.
6.450	13.5134	30.71	.Q	V	.	.	.	.
6.467	13.5558	30.76	.Q	V	.	.	.	.
6.483	13.5982	30.80	.Q	V	.	.	.	.
6.500	13.6407	30.85	.Q	V	.	.	.	.
6.517	13.6833	30.89	.Q	V	.	.	.	.
6.533	13.7259	30.94	.Q	V	.	.	.	.
6.550	13.7686	30.98	.Q	V	.	.	.	.

6.567	13.8113	31.03	.Q	V	.	.	.	.
6.583	13.8541	31.07	.Q	V	.	.	.	.
6.600	13.8970	31.12	.Q	V	.	.	.	.
6.617	13.9399	31.17	.Q	V	.	.	.	.
6.633	13.9829	31.21	.Q	V	.	.	.	.
6.650	14.0259	31.26	.Q	V	.	.	.	.
6.667	14.0691	31.30	.Q	V	.	.	.	.
6.683	14.1122	31.33	.Q	V	.	.	.	.
6.700	14.1554	31.36	.Q	V	.	.	.	.
6.717	14.1986	31.38	.Q	V	.	.	.	.
6.733	14.2419	31.41	.Q	V	.	.	.	.
6.750	14.2852	31.43	.Q	V	.	.	.	.
6.767	14.3285	31.45	.Q	V	.	.	.	.
6.783	14.3719	31.48	.Q	V	.	.	.	.
6.800	14.4153	31.50	.Q	V	.	.	.	.
6.817	14.4587	31.52	.Q	V	.	.	.	.
6.833	14.5021	31.55	.Q	V	.	.	.	.
6.850	14.5456	31.57	.Q	V	.	.	.	.
6.867	14.5891	31.59	.Q	V	.	.	.	.
6.883	14.6327	31.62	.Q	V	.	.	.	.
6.900	14.6763	31.64	.Q	V	.	.	.	.
6.917	14.7199	31.69	.Q	V	.	.	.	.
6.933	14.7636	31.74	.Q	V	.	.	.	.
6.950	14.8074	31.79	.Q	V	.	.	.	.
6.967	14.8513	31.84	.Q	V	.	.	.	.
6.983	14.8952	31.89	.Q	V	.	.	.	.
7.000	14.9392	31.93	.Q	V	.	.	.	.
7.017	14.9832	31.98	.Q	V	.	.	.	.
7.033	15.0274	32.03	.Q	V	.	.	.	.
7.050	15.0716	32.08	.Q	V	.	.	.	.
7.067	15.1158	32.13	.Q	V	.	.	.	.
7.083	15.1601	32.18	.Q	V	.	.	.	.
7.100	15.2045	32.23	.Q	V	.	.	.	.
7.117	15.2490	32.28	.Q	V	.	.	.	.
7.133	15.2935	32.32	.Q	V	.	.	.	.
7.150	15.3381	32.35	.Q	V	.	.	.	.
7.167	15.3827	32.37	.Q	V	.	.	.	.
7.183	15.4273	32.40	.Q	V	.	.	.	.
7.200	15.4719	32.43	.Q	V	.	.	.	.
7.217	15.5166	32.45	.Q	V	.	.	.	.
7.233	15.5614	32.48	.Q	V	.	.	.	.
7.250	15.6061	32.50	.Q	V	.	.	.	.
7.267	15.6510	32.53	.Q	V	.	.	.	.
7.283	15.6958	32.55	.Q	V	.	.	.	.
7.300	15.7407	32.58	.Q	V	.	.	.	.
7.317	15.7856	32.60	.Q	V	.	.	.	.
7.333	15.8305	32.63	.Q	V	.	.	.	.
7.350	15.8755	32.66	.Q	V	.	.	.	.
7.367	15.9205	32.70	.Q	V	.	.	.	.
7.383	15.9657	32.75	.Q	V	.	.	.	.
7.400	16.0108	32.80	.Q	V	.	.	.	.
7.417	16.0561	32.86	.Q	V	.	.	.	.
7.433	16.1014	32.91	.Q	V	.	.	.	.
7.450	16.1468	32.97	.Q	V	.	.	.	.
7.467	16.1923	33.02	.Q	V	.	.	.	.
7.483	16.2379	33.07	.Q	V	.	.	.	.
7.500	16.2835	33.13	.Q	V	.	.	.	.
7.517	16.3292	33.18	.Q	V	.	.	.	.

7.533	16.3750	33.23	.Q	V	.	.	.	.
7.550	16.4208	33.29	.Q	V	.	.	.	.
7.567	16.4667	33.34	.Q	V	.	.	.	.
7.583	16.5127	33.39	.Q	V	.	.	.	.
7.600	16.5588	33.42	.Q	V	.	.	.	.
7.617	16.6049	33.45	.Q	V	.	.	.	.
7.633	16.6510	33.48	.Q	V	.	.	.	.
7.650	16.6971	33.51	.Q	V	.	.	.	.
7.667	16.7433	33.53	.Q	V	.	.	.	.
7.683	16.7895	33.56	.Q	V	.	.	.	.
7.700	16.8358	33.59	.Q	V	.	.	.	.
7.717	16.8821	33.62	.Q	V	.	.	.	.
7.733	16.9285	33.65	.Q	V	.	.	.	.
7.750	16.9748	33.67	.Q	V	.	.	.	.
7.767	17.0213	33.70	.Q	V	.	.	.	.
7.783	17.0677	33.73	.Q	V	.	.	.	.
7.800	17.1142	33.76	.Q	V	.	.	.	.
7.817	17.1608	33.79	.Q	V	.	.	.	.
7.833	17.2074	33.85	.Q	V	.	.	.	.
7.850	17.2541	33.91	.Q	V	.	.	.	.
7.867	17.3009	33.97	.Q	V	.	.	.	.
7.883	17.3478	34.03	.Q	V	.	.	.	.
7.900	17.3947	34.09	.Q	V	.	.	.	.
7.917	17.4417	34.14	.Q	V	.	.	.	.
7.933	17.4889	34.20	.Q	V	.	.	.	.
7.950	17.5360	34.26	.Q	V	.	.	.	.
7.967	17.5833	34.32	.Q	V	.	.	.	.
7.983	17.6307	34.38	.Q	V	.	.	.	.
8.000	17.6781	34.44	.Q	V	.	.	.	.
8.017	17.7256	34.49	.Q	V	.	.	.	.
8.033	17.7732	34.55	.Q	V	.	.	.	.
8.050	17.8209	34.59	.Q	V	.	.	.	.
8.067	17.8686	34.63	.Q	V	.	.	.	.
8.083	17.9163	34.66	.Q	V	.	.	.	.
8.100	17.9641	34.69	.Q	V	.	.	.	.
8.117	18.0119	34.72	.Q	V	.	.	.	.
8.133	18.0597	34.75	.Q	V	.	.	.	.
8.150	18.1077	34.78	.Q	V	.	.	.	.
8.167	18.1556	34.81	.Q	V	.	.	.	.
8.183	18.2036	34.84	.Q	V	.	.	.	.
8.200	18.2516	34.87	.Q	V	.	.	.	.
8.217	18.2997	34.90	.Q	V	.	.	.	.
8.233	18.3478	34.93	.Q	V	.	.	.	.
8.250	18.3960	34.96	.Q	V	.	.	.	.
8.267	18.4442	34.99	.Q	V	.	.	.	.
8.283	18.4924	35.05	.Q	V	.	.	.	.
8.300	18.5408	35.12	.Q	V	.	.	.	.
8.317	18.5893	35.18	.Q	V	.	.	.	.
8.333	18.6378	35.25	.Q	V	.	.	.	.
8.350	18.6865	35.31	.Q	V	.	.	.	.
8.367	18.7352	35.37	.Q	V	.	.	.	.
8.383	18.7840	35.44	.Q	V	.	.	.	.
8.400	18.8329	35.50	.Q	V	.	.	.	.
8.417	18.8819	35.57	.Q	V	.	.	.	.
8.433	18.9310	35.63	.Q	V	.	.	.	.
8.450	18.9801	35.69	.Q	V	.	.	.	.
8.467	19.0294	35.76	.Q	V	.	.	.	.
8.483	19.0787	35.82	.Q	V	.	.	.	.

8.500	19.1281	35.88	.Q	V	.	.	.	.
8.517	19.1776	35.91	.Q	V	.	.	.	.
8.533	19.2271	35.95	.Q	V	.	.	.	.
8.550	19.2767	35.98	.Q	V	.	.	.	.
8.567	19.3263	36.01	.Q	V	.	.	.	.
8.583	19.3759	36.05	.Q	V	.	.	.	.
8.600	19.4256	36.08	.Q	V	.	.	.	.
8.617	19.4754	36.11	.Q	V	.	.	.	.
8.633	19.5252	36.15	.Q	V	.	.	.	.
8.650	19.5750	36.18	.Q	V	.	.	.	.
8.667	19.6249	36.21	.Q	V	.	.	.	.
8.683	19.6748	36.25	.Q	V	.	.	.	.
8.700	19.7248	36.28	.Q	V	.	.	.	.
8.717	19.7748	36.31	.Q	V	.	.	.	.
8.733	19.8249	36.37	.Q	V	.	.	.	.
8.750	19.8751	36.44	.Q	V	.	.	.	.
8.767	19.9254	36.51	.Q	V	.	.	.	.
8.783	19.9758	36.58	.Q	V	.	.	.	.
8.800	20.0263	36.65	.Q	V	.	.	.	.
8.817	20.0768	36.72	.Q	V	.	.	.	.
8.833	20.1275	36.80	.Q	V	.	.	.	.
8.850	20.1783	36.87	.Q	V	.	.	.	.
8.867	20.2292	36.94	.Q	V	.	.	.	.
8.883	20.2802	37.01	.Q	V	.	.	.	.
8.900	20.3312	37.08	.Q	V	.	.	.	.
8.917	20.3824	37.15	.Q	V	.	.	.	.
8.933	20.4337	37.22	.Q	V	.	.	.	.
8.950	20.4850	37.29	.Q	V	.	.	.	.
8.967	20.5364	37.33	.Q	V	.	.	.	.
8.983	20.5879	37.37	.Q	V	.	.	.	.
9.000	20.6394	37.40	.Q	V	.	.	.	.
9.017	20.6910	37.44	.Q	V	.	.	.	.
9.033	20.7426	37.48	.Q	V	.	.	.	.
9.050	20.7943	37.51	.Q	V	.	.	.	.
9.067	20.8460	37.55	.Q	V	.	.	.	.
9.083	20.8978	37.59	.Q	V	.	.	.	.
9.100	20.9496	37.63	.Q	V	.	.	.	.
9.117	21.0015	37.66	.Q	V	.	.	.	.
9.133	21.0534	37.70	.Q	V	.	.	.	.
9.150	21.1054	37.74	.Q	V	.	.	.	.
9.167	21.1574	37.77	.Q	V	.	.	.	.
9.183	21.2095	37.82	.Q	V	.	.	.	.
9.200	21.2617	37.90	.Q	V	.	.	.	.
9.217	21.3141	37.98	.Q	V	.	.	.	.
9.233	21.3665	38.06	.Q	V	.	.	.	.
9.250	21.4190	38.14	.Q	V	.	.	.	.
9.267	21.4716	38.22	.Q	V	.	.	.	.
9.283	21.5244	38.29	.Q	V	.	.	.	.
9.300	21.5773	38.37	.Q	V	.	.	.	.
9.317	21.6302	38.45	.Q	V	.	.	.	.
9.333	21.6833	38.53	.Q	V	.	.	.	.
9.350	21.7365	38.61	.Q	V	.	.	.	.
9.367	21.7898	38.69	.Q	V	.	.	.	.
9.383	21.8432	38.77	.Q	V	.	.	.	.
9.400	21.8967	38.84	.Q	V	.	.	.	.
9.417	21.9502	38.90	.Q	V	.	.	.	.
9.433	22.0039	38.94	.Q	V	.	.	.	.
9.450	22.0576	38.98	.Q	V	.	.	.	.

9.467	22.1113	39.02	.Q	V	.	.	.	.
9.483	22.1651	39.06	.Q	V	.	.	.	.
9.500	22.2190	39.11	.Q	V	.	.	.	.
9.517	22.2729	39.15	.Q	V	.	.	.	.
9.533	22.3269	39.19	.Q	V	.	.	.	.
9.550	22.3809	39.23	.Q	V	.	.	.	.
9.567	22.4350	39.27	.Q	V	.	.	.	.
9.583	22.4892	39.31	.Q	V	.	.	.	.
9.600	22.5434	39.35	.Q	V	.	.	.	.
9.617	22.5976	39.40	.Q	V	.	.	.	.
9.633	22.6520	39.44	.Q	V	.	.	.	.
9.650	22.7064	39.52	.Q	V	.	.	.	.
9.667	22.7610	39.61	.Q	V	.	.	.	.
9.683	22.8157	39.70	.Q	V	.	.	.	.
9.700	22.8705	39.79	.Q	V	.	.	.	.
9.717	22.9254	39.87	.Q	V	.	.	.	.
9.733	22.9804	39.96	.Q	V	.	.	.	.
9.750	23.0356	40.05	.Q	V	.	.	.	.
9.767	23.0909	40.14	.Q	V	.	.	.	.
9.783	23.1463	40.23	.Q	V	.	.	.	.
9.800	23.2018	40.31	.Q	V	.	.	.	.
9.817	23.2575	40.40	.Q	V	.	.	.	.
9.833	23.3132	40.49	.Q	V	.	.	.	.
9.850	23.3691	40.58	.Q	V	.	.	.	.
9.867	23.4251	40.65	.Q	V	.	.	.	.
9.883	23.4812	40.70	.Q	V	.	.	.	.
9.900	23.5373	40.74	.Q	V	.	.	.	.
9.917	23.5935	40.79	.Q	V	.	.	.	.
9.933	23.6497	40.84	.Q	V	.	.	.	.
9.950	23.7060	40.88	.Q	V	.	.	.	.
9.967	23.7624	40.93	.Q	V	.	.	.	.
9.983	23.8189	40.98	.Q	V	.	.	.	.
10.000	23.8754	41.02	.Q	V	.	.	.	.
10.017	23.9319	41.07	.Q	V	.	.	.	.
10.033	23.9886	41.12	.Q	V	.	.	.	.
10.050	24.0453	41.16	.Q	V	.	.	.	.
10.067	24.1020	41.21	.Q	V	.	.	.	.
10.083	24.1588	41.26	.Q	V	.	.	.	.
10.100	24.2158	41.34	.Q	V	.	.	.	.
10.117	24.2729	41.44	.Q	V	.	.	.	.
10.133	24.3301	41.53	.Q	V	.	.	.	.
10.150	24.3874	41.63	.Q	V	.	.	.	.
10.167	24.4449	41.73	.Q	V	.	.	.	.
10.183	24.5025	41.83	.Q	V	.	.	.	.
10.200	24.5603	41.93	.Q	V	.	.	.	.
10.217	24.6182	42.03	.Q	V	.	.	.	.
10.233	24.6762	42.13	.Q	V	.	.	.	.
10.250	24.7344	42.23	.Q	V	.	.	.	.
10.267	24.7927	42.33	.Q	V	.	.	.	.
10.283	24.8511	42.42	.Q	V	.	.	.	.
10.300	24.9097	42.52	.Q	V	.	.	.	.
10.317	24.9684	42.62	.Q	V	.	.	.	.
10.333	25.0271	42.68	.Q	V	.	.	.	.
10.350	25.0860	42.73	.Q	V	.	.	.	.
10.367	25.1449	42.78	.Q	V	.	.	.	.
10.383	25.2039	42.83	.Q	V	.	.	.	.
10.400	25.2630	42.89	.Q	V	.	.	.	.
10.417	25.3221	42.94	.Q	V	.	.	.	.

10.433	25.3814	42.99	.Q	V	.	.	.	.
10.450	25.4406	43.04	.Q	V	.	.	.	.
10.467	25.5000	43.10	.Q	V	.	.	.	.
10.483	25.5594	43.15	.Q	V	.	.	.	.
10.500	25.6189	43.20	.Q	V	.	.	.	.
10.517	25.6785	43.25	.Q	V	.	.	.	.
10.533	25.7382	43.31	.Q	V	.	.	.	.
10.550	25.7979	43.38	.Q	V	.	.	.	.
10.567	25.8578	43.49	.Q	V	.	.	.	.
10.583	25.9179	43.60	.Q	V	.	.	.	.
10.600	25.9781	43.72	.Q	V	.	.	.	.
10.617	26.0385	43.83	.Q	V	.	.	.	.
10.633	26.0990	43.94	.Q	V	.	.	.	.
10.650	26.1597	44.05	.Q	V	.	.	.	.
10.667	26.2205	44.17	.Q	V	.	.	.	.
10.683	26.2815	44.28	.Q	V	.	.	.	.
10.700	26.3427	44.39	.Q	V	.	.	.	.
10.717	26.4040	44.50	.Q	V	.	.	.	.
10.733	26.4654	44.62	.Q	V	.	.	.	.
10.750	26.5270	44.73	.Q	V	.	.	.	.
10.767	26.5888	44.84	.Q	V	.	.	.	.
10.783	26.6507	44.92	.Q	V	.	.	.	.
10.800	26.7126	44.98	.Q	V	.	.	.	.
10.817	26.7747	45.04	.Q	V	.	.	.	.
10.833	26.8368	45.10	.Q	V	.	.	.	.
10.850	26.8990	45.16	.Q	V	.	.	.	.
10.867	26.9613	45.22	.Q	V	.	.	.	.
10.883	27.0236	45.28	.Q	V	.	.	.	.
10.900	27.0861	45.34	.Q	V	.	.	.	.
10.917	27.1486	45.40	.Q	V	.	.	.	.
10.933	27.2112	45.46	.Q	V	.	.	.	.
10.950	27.2739	45.52	.Q	V	.	.	.	.
10.967	27.3367	45.58	.Q	V	.	.	.	.
10.983	27.3996	45.64	.Q	V	.	.	.	.
11.000	27.4626	45.71	.Q	V	.	.	.	.
11.017	27.5257	45.83	.Q	V	.	.	.	.
11.033	27.5890	45.96	.Q	V	.	.	.	.
11.050	27.6525	46.09	.Q	V	.	.	.	.
11.067	27.7162	46.22	.Q	V	.	.	.	.
11.083	27.7800	46.35	.Q	V	.	.	.	.
11.100	27.8440	46.48	.Q	V	.	.	.	.
11.117	27.9082	46.61	.Q	V	.	.	.	.
11.133	27.9726	46.74	.Q	V	.	.	.	.
11.150	28.0372	46.87	.Q	V	.	.	.	.
11.167	28.1019	47.00	.Q	V	.	.	.	.
11.183	28.1668	47.13	.Q	V	.	.	.	.
11.200	28.2319	47.26	.Q	V	.	.	.	.
11.217	28.2972	47.39	.Q	V	.	.	.	.
11.233	28.3626	47.50	.Q	V	.	.	.	.
11.250	28.4281	47.57	.Q	V	.	.	.	.
11.267	28.4937	47.64	.Q	V	.	.	.	.
11.283	28.5595	47.70	.Q	V	.	.	.	.
11.300	28.6253	47.77	.Q	V	.	.	.	.
11.317	28.6912	47.84	.Q	V	.	.	.	.
11.333	28.7572	47.91	.Q	V	.	.	.	.
11.350	28.8232	47.98	.Q	V	.	.	.	.
11.367	28.8894	48.05	.Q	V	.	.	.	.
11.383	28.9557	48.12	.Q	V	.	.	.	.

11.400	29.0221	48.19	.Q	V .	.	.	.
11.417	29.0886	48.26	.Q	V .	.	.	.
11.433	29.1552	48.33	.Q	V .	.	.	.
11.450	29.2218	48.40	.Q	V .	.	.	.
11.467	29.2887	48.53	.Q	V.	.	.	.
11.483	29.3557	48.68	.Q	V.	.	.	.
11.500	29.4230	48.83	.Q	V.	.	.	.
11.517	29.4904	48.98	.Q	V.	.	.	.
11.533	29.5581	49.13	.Q	V.	.	.	.
11.550	29.6260	49.28	.Q	V.	.	.	.
11.567	29.6941	49.43	.Q	V.	.	.	.
11.583	29.7624	49.59	.Q	V.	.	.	.
11.600	29.8309	49.74	.Q	V.	.	.	.
11.617	29.8996	49.89	.Q	V.	.	.	.
11.633	29.9686	50.04	.Q	V.	.	.	.
11.650	30.0377	50.19	.Q	V.	.	.	.
11.667	30.1070	50.34	.Q	V.	.	.	.
11.683	30.1766	50.48	.Q	V.	.	.	.
11.700	30.2462	50.57	.Q	V.	.	.	.
11.717	30.3160	50.65	.Q	V.	.	.	.
11.733	30.3859	50.73	.Q	V.	.	.	.
11.750	30.4559	50.82	.Q	V.	.	.	.
11.767	30.5260	50.90	.Q	V.	.	.	.
11.783	30.5962	50.98	.Q	V.	.	.	.
11.800	30.6665	51.06	.Q	V.	.	.	.
11.817	30.7370	51.14	.Q	V.	.	.	.
11.833	30.8075	51.23	.Q	V.	.	.	.
11.850	30.8782	51.31	.Q	V.	.	.	.
11.867	30.9490	51.39	.Q	V.	.	.	.
11.883	31.0199	51.47	.Q	V.	.	.	.
11.900	31.0909	51.55	.Q	V.	.	.	.
11.917	31.1623	51.85	.Q	V.	.	.	.
11.933	31.2346	52.48	.Q	V.	.	.	.
11.950	31.3078	53.12	.Q	V.	.	.	.
11.967	31.3818	53.75	.Q	V.	.	.	.
11.983	31.4567	54.39	.Q	V.	.	.	.
12.000	31.5325	55.02	.Q	V.	.	.	.
12.017	31.6092	55.66	.Q	V.	.	.	.
12.033	31.6867	56.29	.Q	V.	.	.	.
12.050	31.7651	56.93	.Q	V.	.	.	.
12.067	31.8444	57.56	.Q	V.	.	.	.
12.083	31.9246	58.20	.Q	V.	.	.	.
12.100	32.0056	58.83	.Q	V.	.	.	.
12.117	32.0875	59.47	. Q	V.	.	.	.
12.133	32.1703	60.11	. Q	V.	.	.	.
12.150	32.2543	60.95	. Q	V.	.	.	.
12.167	32.3395	61.89	. Q	V.	.	.	.
12.183	32.4260	62.82	. Q	V.	.	.	.
12.200	32.5139	63.76	. Q	V.	.	.	.
12.217	32.6030	64.69	. Q	V	.	.	.
12.233	32.6934	65.63	. Q	V	.	.	.
12.250	32.7850	66.56	. Q	V	.	.	.
12.267	32.8780	67.50	. Q	V	.	.	.
12.283	32.9723	68.43	. Q	V	.	.	.
12.300	33.0678	69.37	. Q	V	.	.	.
12.317	33.1647	70.30	. Q	V	.	.	.
12.333	33.2628	71.24	. Q	V	.	.	.
12.350	33.3622	72.17	. Q	V	.	.	.

12.367	33.4627	73.00	. Q	V	.	.	.
12.383	33.5637	73.29	. Q	V	.	.	.
12.400	33.6650	73.53	. Q	V	.	.	.
12.417	33.7666	73.76	. Q	V	.	.	.
12.433	33.8685	73.99	. Q	V	.	.	.
12.450	33.9707	74.22	. Q	V	.	.	.
12.467	34.0733	74.45	. Q	V	.	.	.
12.483	34.1761	74.68	. Q	V	.	.	.
12.500	34.2793	74.91	. Q	V	.	.	.
12.517	34.3828	75.14	. Q	V	.	.	.
12.533	34.4866	75.37	. Q	V	.	.	.
12.550	34.5908	75.60	. Q	V	.	.	.
12.567	34.6952	75.84	. Q	V	.	.	.
12.583	34.8000	76.07	. Q	V	.	.	.
12.600	34.9050	76.26	. Q	V	.	.	.
12.617	35.0102	76.38	. Q	V	.	.	.
12.633	35.1156	76.51	. Q	V	.	.	.
12.650	35.2212	76.64	. Q	V	.	.	.
12.667	35.3269	76.76	. Q	V	.	.	.
12.683	35.4328	76.89	. Q	V	.	.	.
12.700	35.5389	77.02	. Q	V	.	.	.
12.717	35.6452	77.15	. Q	V	.	.	.
12.733	35.7516	77.27	. Q	V	.	.	.
12.750	35.8582	77.40	. Q	.V	.	.	.
12.767	35.9650	77.53	. Q	.V	.	.	.
12.783	36.0720	77.65	. Q	.V	.	.	.
12.800	36.1791	77.78	. Q	.V	.	.	.
12.817	36.2864	77.91	. Q	.V	.	.	.
12.833	36.3941	78.15	. Q	.V	.	.	.
12.850	36.5021	78.43	. Q	.V	.	.	.
12.867	36.6105	78.71	. Q	.V	.	.	.
12.883	36.7193	79.00	. Q	.V	.	.	.
12.900	36.8285	79.28	. Q	.V	.	.	.
12.917	36.9381	79.56	. Q	.V	.	.	.
12.933	37.0481	79.84	. Q	.V	.	.	.
12.950	37.1585	80.12	. Q	.V	.	.	.
12.967	37.2692	80.40	. Q	.V	.	.	.
12.983	37.3803	80.69	. Q	.V	.	.	.
13.000	37.4919	80.97	. Q	.V	.	.	.
13.017	37.6038	81.25	. Q	.V	.	.	.
13.033	37.7161	81.53	. Q	.V	.	.	.
13.050	37.8288	81.79	. Q	.V	.	.	.
13.067	37.9417	81.96	. Q	.V	.	.	.
13.083	38.0548	82.12	. Q	.V	.	.	.
13.100	38.1681	82.28	. Q	.V	.	.	.
13.117	38.2816	82.43	. Q	.V	.	.	.
13.133	38.3954	82.59	. Q	.V	.	.	.
13.150	38.5094	82.75	. Q	.V	.	.	.
13.167	38.6236	82.90	. Q	.V	.	.	.
13.183	38.7380	83.06	. Q	.V	.	.	.
13.200	38.8526	83.22	. Q	.V	.	.	.
13.217	38.9674	83.38	. Q	.V	.	.	.
13.233	39.0825	83.53	. Q	. V	.	.	.
13.250	39.1978	83.69	. Q	. V	.	.	.
13.267	39.3133	83.85	. Q	. V	.	.	.
13.283	39.4291	84.09	. Q	. V	.	.	.
13.300	39.5454	84.44	. Q	. V	.	.	.
13.317	39.6622	84.79	. Q	. V	.	.	.

13.333	39.7795	85.15	. Q	. V	.	.	.	
13.350	39.8973	85.50	. Q	. V	.	.	.	
13.367	40.0155	85.86	. Q	. V	.	.	.	
13.383	40.1343	86.21	. Q	. V	.	.	.	
13.400	40.2535	86.57	. Q	. V	.	.	.	
13.417	40.3732	86.92	. Q	. V	.	.	.	
13.433	40.4934	87.27	. Q	. V	.	.	.	
13.450	40.6141	87.63	. Q	. V	.	.	.	
13.467	40.7353	87.98	. Q	. V	.	.	.	
13.483	40.8570	88.34	. Q	. V	.	.	.	
13.500	40.9792	88.69	. Q	. V	.	.	.	
13.517	41.1017	88.93	. Q	. V	.	.	.	
13.533	41.2244	89.13	. Q	. V	.	.	.	
13.550	41.3475	89.33	. Q	. V	.	.	.	
13.567	41.4708	89.53	. Q	. V	.	.	.	
13.583	41.5944	89.73	. Q	. V	.	.	.	
13.600	41.7183	89.93	. Q	. V	.	.	.	
13.617	41.8424	90.14	. Q	. V	.	.	.	
13.633	41.9669	90.34	. Q	. V	.	.	.	
13.650	42.0916	90.54	. Q	. V	.	.	.	
13.667	42.2165	90.74	. Q	. V	.	.	.	
13.683	42.3418	90.94	. Q	. V	.	.	.	
13.700	42.4673	91.14	. Q	. V	.	.	.	
13.717	42.5932	91.34	. Q	. V	.	.	.	
13.733	42.7193	91.59	. Q	. V	.	.	.	
13.750	42.8461	92.03	. Q	. V	.	.	.	
13.767	42.9735	92.50	. Q	. V	.	.	.	
13.783	43.1015	92.96	. Q	. V	.	.	.	
13.800	43.2302	93.43	. Q	. V	.	.	.	
13.817	43.3596	93.89	. Q	. V	.	.	.	
13.833	43.4895	94.35	. Q	. V	.	.	.	
13.850	43.6201	94.82	. Q	. V	.	.	.	
13.867	43.7514	95.28	. Q	. V	.	.	.	
13.883	43.8832	95.74	. Q	. V	.	.	.	
13.900	44.0158	96.21	. Q	. V	.	.	.	
13.917	44.1489	96.67	. Q	. V	.	.	.	
13.933	44.2827	97.14	. Q	. V	.	.	.	
13.950	44.4171	97.60	. Q	. V	.	.	.	
13.967	44.5521	97.97	. Q	. V	.	.	.	
13.983	44.6874	98.22	. Q	. V	.	.	.	
14.000	44.8230	98.48	. Q	. V	.	.	.	
14.017	44.9590	98.73	. Q	. V	.	.	.	
14.033	45.0954	98.98	. Q	. V	.	.	.	
14.050	45.2320	99.24	. Q	. V	.	.	.	
14.067	45.3691	99.49	. Q	. V	.	.	.	
14.083	45.5065	99.74	. Q	. V	.	.	.	
14.100	45.6442	99.99	. Q	. V	.	.	.	
14.117	45.7823	100.25	. Q	. V	.	.	.	
14.133	45.9207	100.50	. Q	. V	.	.	.	
14.150	46.0595	100.75	. Q	. V	.	.	.	
14.167	46.1986	101.01	. Q	. V	.	.	.	
14.183	46.3381	101.27	. Q	. V	.	.	.	
14.200	46.4783	101.75	. Q	. V	.	.	.	
14.217	46.6192	102.32	. Q	. V	.	.	.	
14.233	46.7609	102.88	. Q	. V	.	.	.	
14.250	46.9034	103.44	. Q	. V	.	.	.	
14.267	47.0467	104.01	. Q	. V	.	.	.	
14.283	47.1907	104.57	. Q	. V	.	.	.	

14.300	47.3355	105.14	. Q	. V	.	.	.	
14.317	47.4811	105.70	. Q	. V	.	.	.	
14.333	47.6275	106.26	. Q	. V	.	.	.	
14.350	47.7746	106.83	. Q	. V	.	.	.	
14.367	47.9225	107.39	. Q	. V	.	.	.	
14.383	48.0712	107.95	. Q	. V	.	.	.	
14.400	48.2207	108.52	. Q	. V	.	.	.	
14.417	48.3709	109.05	. Q	. V	.	.	.	
14.433	48.5217	109.45	. Q	. V	.	.	.	
14.450	48.6730	109.84	. Q	. V	.	.	.	
14.467	48.8248	110.23	. Q	. V	.	.	.	
14.483	48.9771	110.62	. Q	. V	.	.	.	
14.500	49.1301	111.01	. Q	. V	.	.	.	
14.517	49.2835	111.40	. Q	. V	.	.	.	
14.533	49.4375	111.79	. Q	. V	.	.	.	
14.550	49.5920	112.18	. Q	. V	.	.	.	
14.567	49.7471	112.57	. Q	. V	.	.	.	
14.583	49.9026	112.96	. Q	. V	.	.	.	
14.600	50.0588	113.35	. Q	. V	.	.	.	
14.617	50.2154	113.74	. Q	. V	.	.	.	
14.633	50.3726	114.13	. Q	. V	.	.	.	
14.650	50.5308	114.79	. Q	. V	.	.	.	
14.667	50.6902	115.77	. Q	. V	.	.	.	
14.683	50.8510	116.76	. Q	. V	.	.	.	
14.700	51.0132	117.74	. Q	. V	.	.	.	
14.717	51.1767	118.72	. Q	. V	.	.	.	
14.733	51.3416	119.70	. Q	. V	.	.	.	
14.750	51.5078	120.68	. Q	. V	.	.	.	
14.767	51.6754	121.66	. Q	. V	.	.	.	
14.783	51.8444	122.64	. Q	. V	.	.	.	
14.800	52.0146	123.63	. Q	. V	.	.	.	
14.817	52.1863	124.61	. Q	. V	.	.	.	
14.833	52.3593	125.59	. Q	. V	.	.	.	
14.850	52.5336	126.57	. Q	. V	.	.	.	
14.867	52.7093	127.54	. Q	. V	.	.	.	
14.883	52.8859	128.26	. Q	. V	.	.	.	
14.900	53.0635	128.89	. Q	. V	.	.	.	
14.917	53.2419	129.53	. Q	. V	.	.	.	
14.933	53.4212	130.16	. Q	. V	.	.	.	
14.950	53.6013	130.80	. Q	. V	.	.	.	
14.967	53.7824	131.43	. Q	. V	.	.	.	
14.983	53.9643	132.07	. Q	. V	.	.	.	
15.000	54.1471	132.70	. Q	. V	.	.	.	
15.017	54.3307	133.34	. Q	. V	.	.	.	
15.033	54.5153	133.97	. Q	. V	.	.	.	
15.050	54.7007	134.61	. Q	. V	.	.	.	
15.067	54.8870	135.25	. Q	. V	.	.	.	
15.083	55.0741	135.88	. Q	. V	.	.	.	
15.100	55.2626	136.80	. Q	. V	.	.	.	
15.117	55.4536	138.72	. Q	. V	.	.	.	
15.133	55.6475	140.74	. Q	. V	.	.	.	
15.150	55.8441	142.76	. Q	. V	.	.	.	
15.167	56.0435	144.77	. Q	. V	.	.	.	
15.183	56.2457	146.79	. Q	. V	.	.	.	
15.200	56.4507	148.80	. Q	. V	.	.	.	
15.217	56.6584	150.82	. Q	. V	.	.	.	
15.233	56.8690	152.84	. Q	. V	.	.	.	
15.250	57.0823	154.85	. Q	. V	.	.	.	

15.267	57.2983	156.87	. Q . V . . .
15.283	57.5172	158.88	. Q . V . . .
15.300	57.7388	160.90	. Q . V . . .
15.317	57.9632	162.91	. Q . V . . .
15.333	58.1895	164.30	. Q . V . . .
15.350	58.4168	165.01	. Q . V . . .
15.367	58.6450	165.71	. Q . V . . .
15.383	58.8743	166.42	. Q . V . . .
15.400	59.1045	167.12	. Q . V . . .
15.417	59.3356	167.83	. Q . V . . .
15.433	59.5678	168.53	. Q . V . . .
15.450	59.8009	169.24	. Q . V . . .
15.467	60.0350	169.94	. Q . V . . .
15.483	60.2700	170.65	. Q . V . . .
15.500	60.5060	171.36	. Q . V . . .
15.517	60.7430	172.06	. Q . V . . .
15.533	60.9810	172.77	. Q . V . . .
15.550	61.2203	173.70	. Q . V . . .
15.567	61.4653	177.87	. Q . V . . .
15.583	61.7175	183.09	. Q . V . . .
15.600	61.9768	188.30	. Q . V. . .
15.617	62.2434	193.52	. Q . V. . .
15.633	62.5171	198.73	. Q . V. . .
15.650	62.7980	203.94	. Q . V. . .
15.667	63.0861	209.16	. Q . V. . .
15.683	63.3814	214.37	. Q . V. . .
15.700	63.6839	219.58	. Q . V. . .
15.717	63.9935	224.80	. Q . V. . .
15.733	64.3103	230.01	. Q . V. . .
15.750	64.6343	235.22	. Q . V. . .
15.767	64.9655	240.44	. Q . V. . .
15.783	65.3052	246.64	. Q . V . . .
15.800	65.6580	256.11	. Q . V . . .
15.817	66.0241	265.84	. Q . V . . .
15.833	66.4037	275.57	. Q. V . . .
15.850	66.7967	285.30	. Q. V . . .
15.867	67.2031	295.03	. Q. V . . .
15.883	67.6229	304.76	. Q V . . .
15.900	68.0560	314.49	. Q V . . .
15.917	68.5026	324.23	. Q .V . . .
15.933	68.9626	333.96	. .Q .V . . .
15.950	69.4360	343.69	. .Q .V . . .
15.967	69.9229	353.42	. .Q .V . . .
15.983	70.4231	363.15	. . Q .V . . .
16.000	70.9367	372.88	. . Q .V . . .
16.017	71.4978	407.40	. . Q .V . . .
16.033	72.1407	466.70	. . Q . V . . .
16.050	72.8652	526.00	. . Q . V . . .
16.067	73.6714	585.30	. . Q. V . . .
16.083	74.5592	644.60	. . .QV . . .
16.100	75.5288	703.90	. . . Q . . .
16.117	76.5800	763.20	. . . V Q . . .
16.133	77.7129	822.49	. . . V Q . . .
16.150	78.9275	881.79	. . . V Q. . .
16.167	80.2238	941.09	. . . V .Q . .
16.183	81.6018	1000.39	. . . V . Q . .
16.200	83.0614	1059.69	. . . V . Q . .
16.217	84.6027	1118.99	. . . V . Q . .

16.233	86.2388	1187.78	. . . V . Q.
16.250	87.7898	1126.09	. . . V . Q .
16.267	89.2398	1052.65	. . . V . Q .
16.283	90.5885	979.21	. . . V . Q .
16.300	91.8362	905.77	. . . V Q .
16.317	92.9826	832.32	. . . Q . .
16.333	94.0279	758.88	. . . Q V . .
16.350	94.9720	685.44	. . . Q V. .
16.367	95.8150	612.00	. . Q V. .
16.383	96.5568	538.55	. . Q . V. .
16.400	97.1975	465.11	. . Q . V. .
16.417	97.7370	391.67	. . Q . V .
16.433	98.1753	318.23	. Q . V .
16.450	98.5125	244.79	. Q . . V .
16.467	98.7710	187.69	. Q . . V .
16.483	99.0208	181.33	. Q . . V .
16.500	99.2667	178.58	. Q . . V .
16.517	99.5089	175.84	. Q . . V .
16.533	99.7474	173.09	. Q . . V .
16.550	99.9820	170.35	. Q . . V .
16.567	100.2129	167.60	. Q . . V .
16.583	100.4399	164.86	. Q . . V .
16.600	100.6632	162.12	. Q . . V .
16.617	100.8828	159.37	. Q . . .V .
16.633	101.0985	156.63	. Q . . .V .
16.650	101.3105	153.88	. Q . . .V .
16.667	101.5186	151.14	. Q . . .V .
16.683	101.7230	148.40	. Q . . .V .
16.700	101.9242	146.07	. Q . . .V .
16.717	102.1227	144.12	. Q . . .V .
16.733	102.3186	142.18	. Q . . .V .
16.750	102.5117	140.23	. Q . . .V .
16.767	102.7022	138.29	. Q . . .V .
16.783	102.8900	136.34	. Q . . .V .
16.800	103.0751	134.40	. Q . . .V .
16.817	103.2576	132.45	. Q . . .V .
16.833	103.4373	130.50	. Q . . .V .
16.850	103.6144	128.56	. Q . . .V .
16.867	103.7888	126.61	. Q . . .V .
16.883	103.9605	124.67	. Q . . .V .
16.900	104.1296	122.72	. Q . . . V .
16.917	104.2960	120.83	. Q . . . V .
16.933	104.4606	119.49	. Q . . . V .
16.950	104.6235	118.31	. Q . . . V .
16.967	104.7849	117.12	. Q . . . V .
16.983	104.9445	115.94	. Q . . . V .
17.000	105.1026	114.76	. Q . . . V .
17.017	105.2591	113.57	. Q . . . V .
17.033	105.4139	112.39	. Q . . . V .
17.050	105.5670	111.21	. Q . . . V .
17.067	105.7186	110.03	. Q . . . V .
17.083	105.8685	108.84	. Q . . . V .
17.100	106.0168	107.66	. Q . . . V .
17.117	106.1635	106.48	. Q . . . V .
17.133	106.3085	105.29	. Q . . . V .
17.150	106.4521	104.22	. Q . . . V .
17.167	106.5946	103.49	. Q . . . V .
17.183	106.7362	102.77	. Q . . . V .

17.200	106.8767	102.05	.	Q	.	.	.	V	.
17.217	107.0163	101.33	.	Q	.	.	.	V	.
17.233	107.1549	100.61	.	Q	.	.	.	V	.
17.250	107.2925	99.89	.	Q	.	.	.	V	.
17.267	107.4291	99.18	.	Q	.	.	.	V	.
17.283	107.5647	98.46	.	Q	.	.	.	V	.
17.300	107.6993	97.74	.	Q	.	.	.	V	.
17.317	107.8330	97.02	.	Q	.	.	.	V	.
17.333	107.9656	96.30	.	Q	.	.	.	V	.
17.350	108.0973	95.58	.	Q	.	.	.	V	.
17.367	108.2280	94.87	.	Q	.	.	.	V	.
17.383	108.3577	94.21	.	Q	.	.	.	V	.
17.400	108.4866	93.60	.	Q	.	.	.	V	.
17.417	108.6147	93.00	.	Q	.	.	.	V	.
17.433	108.7420	92.39	.	Q	.	.	.	V	.
17.450	108.8684	91.78	.	Q	.	.	.	V	.
17.467	108.9940	91.18	.	Q	.	.	.	V	.
17.483	109.1188	90.57	.	Q	.	.	.	V	.
17.500	109.2427	89.97	.	Q	.	.	.	V	.
17.517	109.3658	89.36	.	Q	.	.	.	V	.
17.533	109.4880	88.75	.	Q	.	.	.	V	.
17.550	109.6094	88.15	.	Q	.	.	.	V	.
17.567	109.7300	87.54	.	Q	.	.	.	V	.
17.583	109.8498	86.94	.	Q	.	.	.	V	.
17.600	109.9687	86.34	.	Q	.	.	.	V	.
17.617	110.0869	85.84	.	Q	.	.	.	V	.
17.633	110.2045	85.37	.	Q	.	.	.	V	.
17.650	110.3215	84.90	.	Q	.	.	.	V	.
17.667	110.4377	84.42	.	Q	.	.	.	V	.
17.683	110.5534	83.95	.	Q	.	.	.	V	.
17.700	110.6684	83.48	.	Q	.	.	.	V	.
17.717	110.7827	83.00	.	Q	.	.	.	V	.
17.733	110.8964	82.53	.	Q	.	.	.	V	.
17.750	111.0094	82.06	.	Q	.	.	.	V	.
17.767	111.1218	81.59	.	Q	.	.	.	V	.
17.783	111.2335	81.11	.	Q	.	.	.	V	.
17.800	111.3446	80.64	.	Q	.	.	.	V	.
17.817	111.4550	80.17	.	Q	.	.	.	V	.
17.833	111.5648	79.72	.	Q	.	.	.	V	.
17.850	111.6741	79.33	.	Q	.	.	.	V	.
17.867	111.7828	78.95	.	Q	.	.	.	V	.
17.883	111.8910	78.57	.	Q	.	.	.	V	.
17.900	111.9987	78.19	.	Q	.	.	.	V	.
17.917	112.1059	77.80	.	Q	.	.	.	V	.
17.933	112.2126	77.42	.	Q	.	.	.	V	.
17.950	112.3187	77.04	.	Q	.	.	.	V	.
17.967	112.4243	76.66	.	Q	.	.	.	V	.
17.983	112.5293	76.28	.	Q	.	.	.	V	.
18.000	112.6339	75.89	.	Q	.	.	.	V	.
18.017	112.7379	75.51	.	Q	.	.	.	V	.
18.033	112.8414	75.13	.	Q	.	.	.	V	.
18.050	112.9443	74.74	.	Q	.	.	.	V	.
18.067	113.0458	73.69	.	Q	.	.	.	V	.
18.083	113.1451	72.09	.	Q	.	.	.	V	.
18.100	113.2422	70.50	.	Q	.	.	.	V	.
18.117	113.3371	68.90	.	Q	.	.	.	V	.
18.133	113.4298	67.31	.	Q	.	.	.	V	.
18.150	113.5203	65.71	.	Q	.	.	.	V	.

18.167	113.6086	64.12	.	Q	.	.	.	V	.
18.183	113.6947	62.52	.	Q	.	.	.	V	.
18.200	113.7787	60.93	.	Q	.	.	.	V	.
18.217	113.8604	59.33	.	Q	.	.	.	V	.
18.233	113.9399	57.74	.	Q	.	.	.	V	.
18.250	114.0173	56.14	.	Q	.	.	.	V	.
18.267	114.0924	54.55	.	Q	.	.	.	V	.
18.283	114.1655	53.06	.	Q	.	.	.	V	.
18.300	114.2379	52.57	.	Q	.	.	.	V	.
18.317	114.3099	52.32	.	Q	.	.	.	V	.
18.333	114.3817	52.08	.	Q	.	.	.	V	.
18.350	114.4531	51.83	.	Q	.	.	.	V	.
18.367	114.5241	51.58	.	Q	.	.	.	V	.
18.383	114.5948	51.34	.	Q	.	.	.	V	.
18.400	114.6652	51.09	.	Q	.	.	.	V	.
18.417	114.7352	50.85	.	Q	.	.	.	V	.
18.433	114.8049	50.60	.	Q	.	.	.	V	.
18.450	114.8743	50.35	.	Q	.	.	.	V	.
18.467	114.9433	50.11	.	Q	.	.	.	V	.
18.483	115.0120	49.86	.	Q	.	.	.	V	.
18.500	115.0803	49.61	.	Q	.	.	.	V	.
18.517	115.1483	49.38	.	Q	.	.	.	V	.
18.533	115.2161	49.17	.	Q	.	.	.	V	.
18.550	115.2835	48.96	.	Q	.	.	.	V	.
18.567	115.3506	48.75	.	Q	.	.	.	V	.
18.583	115.4175	48.54	.	Q	.	.	.	V	.
18.600	115.4841	48.33	.	Q	.	.	.	V	.
18.617	115.5503	48.12	.	Q	.	.	.	V	.
18.633	115.6163	47.91	.	Q	.	.	.	V	.
18.650	115.6820	47.70	.	Q	.	.	.	V	.
18.667	115.7475	47.49	.	Q	.	.	.	V	.
18.683	115.8126	47.28	.	Q	.	.	.	V	.
18.700	115.8774	47.07	.	Q	.	.	.	V	.
18.717	115.9420	46.86	.	Q	.	.	.	V	.
18.733	116.0062	46.65	.	Q	.	.	.	V	.
18.750	116.0702	46.46	.	Q	.	.	.	V	.
18.767	116.1340	46.28	.	Q	.	.	.	V	.
18.783	116.1974	46.10	.	Q	.	.	.	V	.
18.800	116.2607	45.92	.	Q	.	.	.	V	.
18.817	116.3237	45.74	.	Q	.	.	.	V	.
18.833	116.3864	45.55	.	Q	.	.	.	V	.
18.850	116.4489	45.37	.	Q	.	.	.	V	.
18.867	116.5112	45.19	.	Q	.	.	.	V	.
18.883	116.5732	45.01	.	Q	.	.	.	V	.
18.900	116.6349	44.83	.	Q	.	.	.	V	.
18.917	116.6964	44.65	.	Q	.	.	.	V	.
18.933	116.7577	44.47	.	Q	.	.	.	V	.
18.950	116.8187	44.29	.	Q	.	.	.	V	.
18.967	116.8794	44.11	.	Q	.	.	.	V	.
18.983	116.9400	43.95	.	Q	.	.	.	V	.
19.000	117.0003	43.79	.	Q	.	.	.	V	.
19.017	117.0604	43.63	.	Q	.	.	.	V	.
19.033	117.1203	43.47	.	Q	.	.	.	V	.
19.050	117.1799	43.31	.	Q	.	.	.	V	.
19.067	117.2394	43.16	.	Q	.	.	.	V	.
19.083	117.2986	43.00	.	Q	.	.	.	V	.
19.100	117.3576	42.84	.	Q	.	.	.	V	.
19.117	117.4164	42.68	.	Q	.	.	.	V	.

19.133	117.4750	42.52	.Q	.	.	.	V	.
19.150	117.5333	42.37	.Q	.	.	.	V	.
19.167	117.5915	42.21	.Q	.	.	.	V	.
19.183	117.6494	42.05	.Q	.	.	.	V	.
19.200	117.7071	41.90	.Q	.	.	.	V	.
19.217	117.7646	41.76	.Q	.	.	.	V	.
19.233	117.8219	41.62	.Q	.	.	.	V	.
19.250	117.8791	41.48	.Q	.	.	.	V	.
19.267	117.9360	41.34	.Q	.	.	.	V	.
19.283	117.9928	41.20	.Q	.	.	.	V	.
19.300	118.0493	41.06	.Q	.	.	.	V	.
19.317	118.1057	40.92	.Q	.	.	.	V	.
19.333	118.1618	40.78	.Q	.	.	.	V	.
19.350	118.2178	40.64	.Q	.	.	.	V	.
19.367	118.2736	40.50	.Q	.	.	.	V	.
19.383	118.3292	40.36	.Q	.	.	.	V	.
19.400	118.3846	40.22	.Q	.	.	.	V	.
19.417	118.4398	40.08	.Q	.	.	.	V	.
19.433	118.4948	39.95	.Q	.	.	.	V	.
19.450	118.5497	39.83	.Q	.	.	.	V	.
19.467	118.6044	39.70	.Q	.	.	.	V	.
19.483	118.6589	39.58	.Q	.	.	.	V	.
19.500	118.7132	39.45	.Q	.	.	.	V	.
19.517	118.7674	39.33	.Q	.	.	.	V	.
19.533	118.8214	39.21	.Q	.	.	.	V	.
19.550	118.8753	39.08	.Q	.	.	.	V	.
19.567	118.9289	38.96	.Q	.	.	.	V	.
19.583	118.9824	38.83	.Q	.	.	.	V	.
19.600	119.0357	38.71	.Q	.	.	.	V	.
19.617	119.0889	38.58	.Q	.	.	.	V	.
19.633	119.1418	38.46	.Q	.	.	.	V	.
19.650	119.1946	38.34	.Q	.	.	.	V	.
19.667	119.2473	38.22	.Q	.	.	.	V	.
19.683	119.2998	38.11	.Q	.	.	.	V	.
19.700	119.3521	38.00	.Q	.	.	.	V	.
19.717	119.4043	37.89	.Q	.	.	.	V	.
19.733	119.4563	37.78	.Q	.	.	.	V	.
19.750	119.5082	37.66	.Q	.	.	.	V	.
19.767	119.5599	37.55	.Q	.	.	.	V	.
19.783	119.6115	37.44	.Q	.	.	.	V	.
19.800	119.6629	37.33	.Q	.	.	.	V	.
19.817	119.7142	37.22	.Q	.	.	.	V	.
19.833	119.7653	37.11	.Q	.	.	.	V	.
19.850	119.8163	36.99	.Q	.	.	.	V	.
19.867	119.8671	36.88	.Q	.	.	.	V	.
19.883	119.9177	36.77	.Q	.	.	.	V	.
19.900	119.9682	36.67	.Q	.	.	.	V	.
19.917	120.0186	36.57	.Q	.	.	.	V	.
19.933	120.0688	36.47	.Q	.	.	.	V	.
19.950	120.1189	36.37	.Q	.	.	.	V	.
19.967	120.1689	36.27	.Q	.	.	.	V	.
19.983	120.2187	36.17	.Q	.	.	.	V	.
20.000	120.2684	36.07	.Q	.	.	.	V	.
20.017	120.3179	35.97	.Q	.	.	.	V	.
20.033	120.3673	35.87	.Q	.	.	.	V	.
20.050	120.4166	35.77	.Q	.	.	.	V	.
20.067	120.4657	35.66	.Q	.	.	.	V	.
20.083	120.5147	35.56	.Q	.	.	.	V	.

20.100	120.5636	35.46	.Q	.	.	.	V	.
20.117	120.6123	35.37	.Q	.	.	.	V	.
20.133	120.6609	35.28	.Q	.	.	.	V	.
20.150	120.7093	35.18	.Q	.	.	.	V	.
20.167	120.7577	35.09	.Q	.	.	.	V	.
20.183	120.8059	35.00	.Q	.	.	.	V	.
20.200	120.8540	34.91	.Q	.	.	.	V	.
20.217	120.9019	34.82	.Q	.	.	.	V	.
20.233	120.9497	34.73	.Q	.	.	.	V	.
20.250	120.9974	34.63	.Q	.	.	.	V	.
20.267	121.0450	34.54	.Q	.	.	.	V	.
20.283	121.0925	34.45	.Q	.	.	.	V	.
20.300	121.1398	34.36	.Q	.	.	.	V	.
20.317	121.1870	34.27	.Q	.	.	.	V	.
20.333	121.2341	34.18	.Q	.	.	.	V	.
20.350	121.2810	34.09	.Q	.	.	.	V	.
20.367	121.3279	34.01	.Q	.	.	.	V	.
20.383	121.3746	33.92	.Q	.	.	.	V	.
20.400	121.4212	33.84	.Q	.	.	.	V	.
20.417	121.4677	33.76	.Q	.	.	.	V	.
20.433	121.5141	33.67	.Q	.	.	.	V	.
20.450	121.5604	33.59	.Q	.	.	.	V	.
20.467	121.6065	33.50	.Q	.	.	.	V	.
20.483	121.6525	33.42	.Q	.	.	.	V	.
20.500	121.6985	33.34	.Q	.	.	.	V	.
20.517	121.7443	33.25	.Q	.	.	.	V	.
20.533	121.7899	33.17	.Q	.	.	.	V	.
20.550	121.8355	33.09	.Q	.	.	.	V	.
20.567	121.8810	33.00	.Q	.	.	.	V	.
20.583	121.9263	32.93	.Q	.	.	.	V	.
20.600	121.9716	32.85	.Q	.	.	.	V	.
20.617	122.0167	32.77	.Q	.	.	.	V	.
20.633	122.0618	32.70	.Q	.	.	.	V	.
20.650	122.1067	32.62	.Q	.	.	.	V	.
20.667	122.1515	32.54	.Q	.	.	.	V	.
20.683	122.1962	32.47	.Q	.	.	.	V	.
20.700	122.2408	32.39	.Q	.	.	.	V	.
20.717	122.2853	32.31	.Q	.	.	.	V	.
20.733	122.3298	32.24	.Q	.	.	.	V	.
20.750	122.3740	32.16	.Q	.	.	.	V	.
20.767	122.4182	32.08	.Q	.	.	.	V	.
20.783	122.4623	32.00	.Q	.	.	.	V	.
20.800	122.5063	31.93	.Q	.	.	.	V	.
20.817	122.5502	31.86	.Q	.	.	.	V	.
20.833	122.5940	31.79	.Q	.	.	.	V	.
20.850	122.6377	31.72	.Q	.	.	.	V	.
20.867	122.6813	31.65	.Q	.	.	.	V	.
20.883	122.7247	31.58	.Q	.	.	.	V	.
20.900	122.7681	31.51	.Q	.	.	.	V	.
20.917	122.8114	31.43	.Q	.	.	.	V	.
20.933	122.8546	31.36	.Q	.	.	.	V	.
20.950	122.8977	31.29	.Q	.	.	.	V	.
20.967	122.9407	31.22	.Q	.	.	.	V	.
20.983	122.9837	31.15	.Q	.	.	.	V	.
21.000	123.0265	31.08	.Q	.	.	.	V	.
21.017	123.0692	31.01	.Q	.	.	.	V	.
21.033	123.1118	30.94	.Q	.	.	.	V	.
21.050	123.1543	30.88	.Q	.	.	.	V	.

21.067	123.1968	30.81	.Q	.	.	.	V	.
21.083	123.2391	30.75	.Q	.	.	.	V	.
21.100	123.2814	30.68	.Q	.	.	.	V	.
21.117	123.3235	30.61	.Q	.	.	.	V	.
21.133	123.3656	30.55	.Q	.	.	.	V	.
21.150	123.4076	30.48	.Q	.	.	.	V	.
21.167	123.4495	30.42	.Q	.	.	.	V	.
21.183	123.4913	30.35	.Q	.	.	.	V	.
21.200	123.5330	30.29	.Q	.	.	.	V	.
21.217	123.5746	30.22	.Q	.	.	.	V	.
21.233	123.6162	30.16	.Q	.	.	.	V	.
21.250	123.6576	30.09	.Q	.	.	.	V	.
21.267	123.6990	30.03	.Q	.	.	.	V	.
21.283	123.7403	29.97	.Q	.	.	.	V	.
21.300	123.7815	29.91	.Q	.	.	.	V	.
21.317	123.8226	29.85	.Q	.	.	.	V	.
21.333	123.8636	29.79	.Q	.	.	.	V	.
21.350	123.9046	29.73	.Q	.	.	.	V	.
21.367	123.9454	29.66	Q	.	.	.	V	.
21.383	123.9862	29.60	Q	.	.	.	V	.
21.400	124.0269	29.54	Q	.	.	.	V	.
21.417	124.0675	29.48	Q	.	.	.	V	.
21.433	124.1080	29.42	Q	.	.	.	V	.
21.450	124.1485	29.36	Q	.	.	.	V	.
21.467	124.1889	29.30	Q	.	.	.	V	.
21.483	124.2291	29.24	Q	.	.	.	V	.
21.500	124.2693	29.18	Q	.	.	.	V	.
21.517	124.3094	29.13	Q	.	.	.	V	.
21.533	124.3495	29.07	Q	.	.	.	V	.
21.550	124.3894	29.01	Q	.	.	.	V	.
21.567	124.4293	28.96	Q	.	.	.	V	.
21.583	124.4691	28.90	Q	.	.	.	V	.
21.600	124.5089	28.84	Q	.	.	.	V	.
21.617	124.5485	28.79	Q	.	.	.	V	.
21.633	124.5881	28.73	Q	.	.	.	V	.
21.650	124.6276	28.67	Q	.	.	.	V	.
21.667	124.6670	28.61	Q	.	.	.	V	.
21.683	124.7063	28.56	Q	.	.	.	V	.
21.700	124.7456	28.50	Q	.	.	.	V	.
21.717	124.7848	28.45	Q	.	.	.	V	.
21.733	124.8239	28.39	Q	.	.	.	V	.
21.750	124.8629	28.34	Q	.	.	.	V	.
21.767	124.9019	28.29	Q	.	.	.	V	.
21.783	124.9408	28.24	Q	.	.	.	V	.
21.800	124.9796	28.18	Q	.	.	.	V	.
21.817	125.0183	28.13	Q	.	.	.	V	.
21.833	125.0570	28.08	Q	.	.	.	V	.
21.850	125.0956	28.02	Q	.	.	.	V	.
21.867	125.1341	27.97	Q	.	.	.	V	.
21.883	125.1726	27.92	Q	.	.	.	V	.
21.900	125.2110	27.86	Q	.	.	.	V	.
21.917	125.2493	27.81	Q	.	.	.	V	.
21.933	125.2875	27.76	Q	.	.	.	V	.
21.950	125.3257	27.71	Q	.	.	.	V	.
21.967	125.3638	27.66	Q	.	.	.	V	.
21.983	125.4018	27.61	Q	.	.	.	V	.
22.000	125.4398	27.56	Q	.	.	.	V	.
22.017	125.4777	27.51	Q	.	.	.	V	.

22.033	125.5155	27.46	Q	.	.	.	V	.
22.050	125.5533	27.41	Q	.	.	.	V	.
22.067	125.5910	27.36	Q	.	.	.	V	.
22.083	125.6286	27.31	Q	.	.	.	V	.
22.100	125.6661	27.26	Q	.	.	.	V	.
22.117	125.7036	27.21	Q	.	.	.	V	.
22.133	125.7410	27.16	Q	.	.	.	V	.
22.150	125.7784	27.11	Q	.	.	.	V	.
22.167	125.8156	27.06	Q	.	.	.	V	.
22.183	125.8529	27.02	Q	.	.	.	V	.
22.200	125.8900	26.97	Q	.	.	.	V	.
22.217	125.9271	26.92	Q	.	.	.	V	.
22.233	125.9641	26.88	Q	.	.	.	V	.
22.250	126.0011	26.83	Q	.	.	.	V	.
22.267	126.0380	26.78	Q	.	.	.	V	.
22.283	126.0748	26.74	Q	.	.	.	V	.
22.300	126.1116	26.69	Q	.	.	.	V	.
22.317	126.1483	26.64	Q	.	.	.	V	.
22.333	126.1849	26.60	Q	.	.	.	V	.
22.350	126.2215	26.55	Q	.	.	.	V	.
22.367	126.2580	26.50	Q	.	.	.	V	.
22.383	126.2944	26.46	Q	.	.	.	V	.
22.400	126.3308	26.41	Q	.	.	.	V	.
22.417	126.3671	26.37	Q	.	.	.	V	.
22.433	126.4034	26.33	Q	.	.	.	V	.
22.450	126.4396	26.28	Q	.	.	.	V	.
22.467	126.4757	26.24	Q	.	.	.	V	.
22.483	126.5118	26.19	Q	.	.	.	V	.
22.500	126.5478	26.15	Q	.	.	.	V	.
22.517	126.5838	26.11	Q	.	.	.	V	.
22.533	126.6197	26.06	Q	.	.	.	V	.
22.550	126.6555	26.02	Q	.	.	.	V	.
22.567	126.6913	25.97	Q	.	.	.	V	.
22.583	126.7270	25.93	Q	.	.	.	V	.
22.600	126.7627	25.88	Q	.	.	.	V	.
22.617	126.7983	25.84	Q	.	.	.	V	.
22.633	126.8338	25.80	Q	.	.	.	V	.
22.650	126.8693	25.76	Q	.	.	.	V	.
22.667	126.9047	25.72	Q	.	.	.	V	.
22.683	126.9401	25.68	Q	.	.	.	V	.
22.700	126.9754	25.63	Q	.	.	.	V	.
22.717	127.0106	25.59	Q	.	.	.	V	.
22.733	127.0458	25.55	Q	.	.	.	V	.
22.750	127.0809	25.51	Q	.	.	.	V	.
22.767	127.1160	25.47	Q	.	.	.	V	.
22.783	127.1510	25.43	Q	.	.	.	V	.
22.800	127.1860	25.38	Q	.	.	.	V	.
22.817	127.2209	25.34	Q	.	.	.	V	.
22.833	127.2558	25.30	Q	.	.	.	V	.
22.850	127.2906	25.26	Q	.	.	.	V	.
22.867	127.3253	25.22	Q	.	.	.	V	.
22.883	127.3600	25.18	Q	.	.	.	V	.
22.900	127.3946	25.14	Q	.	.	.	V	.
22.917	127.4292	25.10	Q	.	.	.	V	.
22.933	127.4637	25.07	Q	.	.	.	V	.
22.950	127.4982	25.03	Q	.	.	.	V	.
22.967	127.5326	24.99	Q	.	.	.	V	.
22.983	127.5670	24.95	Q	.	.	.	V	.

23.000	127.6013	24.91	Q	.	.	.	V.
23.017	127.6355	24.87	Q	.	.	.	V.
23.033	127.6697	24.83	Q	.	.	.	V.
23.050	127.7039	24.79	Q	.	.	.	V.
23.067	127.7380	24.75	Q	.	.	.	V.
23.083	127.7720	24.71	Q	.	.	.	V.
23.100	127.8060	24.68	Q	.	.	.	V.
23.117	127.8400	24.64	Q	.	.	.	V.
23.133	127.8738	24.60	Q	.	.	.	V.
23.150	127.9077	24.57	Q	.	.	.	V.
23.167	127.9415	24.53	Q	.	.	.	V.
23.183	127.9752	24.49	Q	.	.	.	V.
23.200	128.0089	24.45	Q	.	.	.	V.
23.217	128.0425	24.42	Q	.	.	.	V.
23.233	128.0761	24.38	Q	.	.	.	V.
23.250	128.1096	24.34	Q	.	.	.	V.
23.267	128.1431	24.31	Q	.	.	.	V.
23.283	128.1765	24.27	Q	.	.	.	V.
23.300	128.2099	24.23	Q	.	.	.	V.
23.317	128.2432	24.20	Q	.	.	.	V.
23.333	128.2765	24.16	Q	.	.	.	V.
23.350	128.3097	24.13	Q	.	.	.	V.
23.367	128.3429	24.09	Q	.	.	.	V.
23.383	128.3761	24.05	Q	.	.	.	V.
23.400	128.4091	24.02	Q	.	.	.	V.
23.417	128.4422	23.98	Q	.	.	.	V.
23.433	128.4752	23.95	Q	.	.	.	V.
23.450	128.5081	23.91	Q	.	.	.	V.
23.467	128.5410	23.88	Q	.	.	.	V.
23.483	128.5738	23.84	Q	.	.	.	V.
23.500	128.6066	23.81	Q	.	.	.	V.
23.517	128.6394	23.77	Q	.	.	.	V.
23.533	128.6721	23.74	Q	.	.	.	V.
23.550	128.7047	23.70	Q	.	.	.	V.
23.567	128.7373	23.67	Q	.	.	.	V.
23.583	128.7699	23.64	Q	.	.	.	V.
23.600	128.8024	23.60	Q	.	.	.	V.
23.617	128.8349	23.57	Q	.	.	.	V.
23.633	128.8673	23.54	Q	.	.	.	V.
23.650	128.8997	23.50	Q	.	.	.	V.
23.667	128.9320	23.47	Q	.	.	.	V.
23.683	128.9643	23.44	Q	.	.	.	V.
23.700	128.9965	23.40	Q	.	.	.	V.
23.717	129.0287	23.37	Q	.	.	.	V.
23.733	129.0609	23.34	Q	.	.	.	V.
23.750	129.0930	23.30	Q	.	.	.	V.
23.767	129.1250	23.27	Q	.	.	.	V.
23.783	129.1571	23.24	Q	.	.	.	V.
23.800	129.1890	23.21	Q	.	.	.	V.
23.817	129.2209	23.18	Q	.	.	.	V.
23.833	129.2528	23.14	Q	.	.	.	V.
23.850	129.2847	23.11	Q	.	.	.	V.
23.867	129.3164	23.08	Q	.	.	.	V.
23.883	129.3482	23.05	Q	.	.	.	V.
23.900	129.3799	23.02	Q	.	.	.	V.
23.917	129.4116	22.98	Q	.	.	.	V.
23.933	129.4432	22.95	Q	.	.	.	V.
23.950	129.4747	22.92	Q	.	.	.	V.

23.967	129.5063	22.89	Q	.	.	.	V.
23.983	129.5378	22.86	Q	.	.	.	V.
24.000	129.5692	22.83	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%	1441.0
10%	665.0
20%	210.0
30%	135.0
40%	105.0
50%	90.0
60%	70.0
70%	55.0
80%	35.0
90%	15.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 SUBAREA B                                                     *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                    *
* 100-YR EV ROKAMOTO JUNE 2018                                           *
 ************************************************************************

  FILE NAME: 3B00EVS.DAT
  TIME/DATE OF STUDY: 08:53 06/19/2018

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


************************************************************************
  FLOW PROCESS FROM NODE    210.00 TO NODE    222.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

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

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  214.70
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.126
    LOW LOSS FRACTION = 0.319
    TIME OF CONCENTRATION(MIN.) = 17.60
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  25
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.40
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.87
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.15
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.94
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.71
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.49

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    53.00
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    27.33

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 107.6 215.2 322.8 430.4
15.000	21.3357	53.52	. Q . V . . .
15.017	21.4102	54.11	. Q . V . . .
15.033	21.4856	54.70	. Q . V . . .
15.050	21.5617	55.29	. Q . V . . .
15.067	21.6387	55.88	. Q . V . . .
15.083	21.7165	56.47	. Q . V . . .
15.100	21.7951	57.06	. Q . V . . .
15.117	21.8745	57.65	. Q . V . . .
15.133	21.9547	58.22	. Q . V . . .
15.150	22.0356	58.74	. Q . V . . .
15.167	22.1172	59.27	. Q . V . . .
15.183	22.1996	59.79	. Q . V . . .
15.200	22.2827	60.31	. Q . V . . .
15.217	22.3665	60.83	. Q . V . . .
15.233	22.4510	61.36	. Q . V . . .
15.250	22.5362	61.88	. Q . V . . .
15.267	22.6222	62.40	. Q . V . . .
15.283	22.7088	62.92	. Q . V . . .
15.300	22.7962	63.44	. Q . V . . .
15.317	22.8843	63.97	. Q . V . . .
15.333	22.9731	64.49	. Q . V . . .
15.350	23.0627	65.01	. Q . V . . .
15.367	23.1530	65.53	. Q . V . . .
15.383	23.2439	66.05	. Q . V . . .
15.400	23.3356	66.58	. Q . V . . .
15.417	23.4281	67.11	. Q . V . . .
15.433	23.5216	67.92	. Q . V . . .
15.450	23.6165	68.87	. Q . V . . .
15.467	23.7127	69.83	. Q . V . . .
15.483	23.8102	70.78	. Q . V . . .
15.500	23.9090	71.73	. Q . V . . .
15.517	24.0091	72.68	. Q . V . . .
15.533	24.1105	73.63	. Q . V . . .
15.550	24.2132	74.59	. Q . V . . .
15.567	24.3173	75.54	. Q . V . . .
15.583	24.4226	76.49	. Q . V . . .
15.600	24.5293	77.44	. Q . V . . .
15.617	24.6373	78.40	. Q . V . . .
15.633	24.7466	79.35	. Q . V . . .
15.650	24.8572	80.30	. Q . V . . .
15.667	24.9691	81.25	. Q . V . . .
15.683	25.0824	82.20	. Q . V . . .
15.700	25.1969	83.16	. Q . V. . . .
15.717	25.3132	84.43	. Q . V. . . .
15.733	25.4330	87.02	. Q . V. . . .

15.750	25.5567	89.75	. Q . V. . . .
15.767	25.6840	92.48	. Q . V. . . .
15.783	25.8152	95.21	. Q . V. . . .
15.800	25.9501	97.94	. Q. V. . . .
15.817	26.0888	100.67	. Q. V. . . .
15.833	26.2312	103.40	. Q. V. . . .
15.850	26.3774	106.13	. Q. V. . . .
15.867	26.5273	108.86	. Q V . . .
15.883	26.6810	111.59	. Q V . . .
15.900	26.8385	114.33	. Q V . . .
15.917	26.9997	117.06	. Q V . . .
15.933	27.1647	119.79	. .Q V . . .
15.950	27.3335	122.52	. .Q V . . .
15.967	27.5060	125.25	. .Q V . . .
15.983	27.6823	127.98	. .Q V . . .
16.000	27.8623	130.71	. . Q .V . . .
16.017	28.0559	140.55	. . Q .V . . .
16.033	28.2729	157.50	. . Q .V . . .
16.050	28.5132	174.45	. . Q .V . . .
16.067	28.7768	191.41	. . Q .V . . .
16.083	29.0638	208.36	. . Q.V . . .
16.100	29.3742	225.31	. . Q V . . .
16.117	29.7079	242.26	. . . Q . . .
16.133	30.0649	259.21	. . . V Q . . .
16.150	30.4453	276.16	. . . V Q . . .
16.167	30.8490	293.11	. . . V Q . . .
16.183	31.2761	310.07	. . . V Q . . .
16.200	31.7266	327.02	. . . V Q . . .
16.217	32.2003	343.97	. . . V .Q . . .
16.233	32.6975	360.92	. . . V . Q . . .
16.250	33.2180	377.87	. . . V . Q . . .
16.267	33.7618	394.82	. . . V . Q . . .
16.283	34.3290	411.78	. . . V . Q . . .
16.300	34.9219	430.42	. . . V . Q . . .
16.317	35.4896	412.17	. . . V . Q . . .
16.333	36.0294	391.89	. . . V . Q . . .
16.350	36.5413	371.62	. . . V . Q . . .
16.367	37.0252	351.34	. . . V . Q . . .
16.383	37.4812	331.06	. . . V Q . . .
16.400	37.9093	310.78	. . . Q . . .
16.417	38.3094	290.51	. . . Q V . . .
16.433	38.6816	270.23	. . . Q V. . . .
16.450	39.0259	249.95	. . . Q V. . . .
16.467	39.3423	229.67	. . .Q V. . . .
16.483	39.6307	209.40	. . Q. V. . . .
16.500	39.8912	189.12	. . Q . V . . .
16.517	40.1238	168.84	. . Q . V . . .
16.533	40.3284	148.56	. . Q . V . . .
16.550	40.5051	128.29	. .Q . V . . .
16.567	40.6539	108.01	. .Q . V . . .
16.583	40.7747	87.73	. Q . V . . .
16.600	40.8760	73.54	. Q . V . . .
16.617	40.9751	71.90	. Q . V . . .
16.633	41.0724	70.65	. Q . V . . .
16.650	41.1679	69.39	. Q . .V . . .
16.667	41.2618	68.13	. Q . .V . . .
16.683	41.3539	66.87	. Q . .V . . .
16.700	41.4443	65.61	. Q . .V . . .

16.717	41.5329	64.36	.	Q	.	.	.V	.
16.733	41.6198	63.10	.	Q	.	.	.V	.
16.750	41.7050	61.84	.	Q	.	.	.V	.
16.767	41.7885	60.58	.	Q	.	.	.V	.
16.783	41.8702	59.33	.	Q	.	.	.V	.
16.800	41.9502	58.07	.	Q	.	.	.V	.
16.817	42.0284	56.81	.	Q	.	.	.V	.
16.833	42.1049	55.55	.	Q	.	.	.V	.
16.850	42.1797	54.30	.	Q	.	.	.V	.
16.867	42.2528	53.04	.	Q	.	.	.V	.
16.883	42.3241	51.80	.	Q	.	.	.V	.
16.900	42.3944	51.03	.	Q	.	.	.V	.
16.917	42.4640	50.51	.	Q	.	.	. V	.
16.933	42.5328	49.98	.	Q	.	.	. V	.
16.950	42.6009	49.45	.	Q	.	.	. V	.
16.967	42.6683	48.92	.	Q	.	.	. V	.
16.983	42.7350	48.40	.	Q	.	.	. V	.
17.000	42.8009	47.87	.	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%	1021.0
10%	820.0
20%	260.0
30%	165.0
40%	140.0
50%	115.0
60%	95.0
70%	70.0
80%	45.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

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

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                          Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 SUBAREA C                                                    *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                   *
* 100-YR EV DECEMBER 2018 CCHIU                                         *
 ************************************************************************

  FILE NAME: 3C00EVS.DAT
  TIME/DATE OF STUDY: 13:17 12/11/2018


******************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE    380.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     870.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.337 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) =  0.151
         LOW LOSS FRACTION = 0.324
         *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 = 0.961
          30-MINUTE FACTOR = 0.961
           1-HOUR FACTOR = 0.961
           3-HOUR FACTOR = 0.994
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998
```



```
         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  24.728


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  10.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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

------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER         MEAN VALUES          ORDINATES(CFS)
------------------------------------------------------------------------------
        1               1.476               155.407
        2               7.237               606.538
        3              20.380              1383.814
        4              37.724              1826.146
        5              58.666              2204.908
        6              75.713              1794.847
        7              86.339              1118.772
        8              92.358               633.736
        9              95.920               375.088
       10              97.811               199.134
       11              98.462                68.504
       12              98.926                48.816
       13              99.374                47.220
       14              99.750                39.534
       15              99.937                19.767
       16             100.000                 6.589


------------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      89.8618
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     235.1963
------------------------------------------------------------------------------
```

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
10.000	41.8284	72.18	.Q V . . . .
10.083	42.3297	72.79	.Q V . . . .
10.167	42.8352	73.40	.Q V . . . .
10.250	43.3451	74.03	.Q V . . . .
10.333	43.8593	74.67	.Q V . . . .
10.417	44.3781	75.33	. Q V . . . .
10.500	44.9015	76.00	. Q V . . . .
10.583	45.4296	76.69	. Q V . . . .
10.667	45.9626	77.39	. Q V . . . .
10.750	46.5006	78.11	. Q V . . . .
10.833	47.0436	78.84	. Q V . . . .
10.917	47.5918	79.61	. Q V . . . .
11.000	48.1454	80.38	. Q V . . . .
11.083	48.7044	81.18	. Q V . . . .
11.167	49.2691	81.99	. Q V . . . .
11.250	49.8395	82.83	. Q V . . . .
11.333	50.4159	83.68	. Q V . . . .
11.417	50.9983	84.57	. Q V . . . .
11.500	51.5870	85.47	. Q V . . . .
11.583	52.1821	86.41	. Q V . . . .
11.667	52.7838	87.36	. Q V . . . .
11.750	53.3923	88.36	. Q V. . . .
11.833	54.0078	89.37	. Q V. . . .
11.917	54.6306	90.42	. Q V. . . .
12.000	55.2607	91.50	. Q V. . . .
12.083	55.9019	93.10	. Q V. . . .
12.167	56.5638	96.11	. Q V. . . .
12.250	57.2633	101.58	. Q V. . . .
12.333	58.0102	108.44	. Q V. . . .
12.417	58.8129	116.55	. Q V . . .
12.500	59.6631	123.44	. Q V . . .
12.583	60.5469	128.34	. Q V . . .
12.667	61.4544	131.77	. Q V . . .
12.750	62.3807	134.49	. Q V . . .
12.833	63.3221	136.70	. Q V . . .
12.917	64.2766	138.59	. Q V . . .
13.000	65.2440	140.46	. Q .V . . .
13.083	66.2249	142.42	. Q .V . . .
13.167	67.2193	144.40	. Q .V . . .
13.250	68.2277	146.41	. Q .V . . .
13.333	69.2500	148.44	. Q .V . . .
13.417	70.2870	150.56	. Q .V . . .
13.500	71.3389	152.75	. Q . V . . .
13.583	72.4068	155.06	. Q . V . . .
13.667	73.4911	157.44	. Q . V . . .
13.750	74.5929	159.97	. Q . V . . .
13.833	75.7127	162.59	. Q . V . . .

13.917	76.8517	165.38	. Q . V . . .
14.000	78.0106	168.27	. Q . V . . .
14.083	79.1916	171.49	. Q . V . . .
14.167	80.3979	175.15	. Q . V . . .
14.250	81.6350	179.63	. Q . V . . .
14.333	82.9062	184.58	. Q . V . . .
14.417	84.2155	190.11	. Q . V . . .
14.500	85.5620	195.52	. Q . V . . .
14.583	86.9448	200.78	. Q . V . . .
14.667	88.3631	205.93	. Q . V . . .
14.750	89.8185	211.33	. Q . V . . .
14.833	91.3124	216.91	. Q . V . . .
14.917	92.8480	222.96	. Q . V . . .
15.000	94.4279	229.41	. Q . V . . .
15.083	96.0573	236.59	. Q . V . . .
15.167	97.7406	244.41	. Q . V . . .
15.250	99.4865	253.50	. Q . V . . .
15.333	101.3058	264.17	. Q . V . . .
15.417	103.2069	276.03	. Q . V . . .
15.500	105.1800	286.49	. Q . V . . .
15.583	107.2024	293.66	. Q . V . . .
15.667	109.2711	300.38	. Q . V . . .
15.750	111.4075	310.21	. Q . V . . .
15.833	113.7011	333.03	. Q . V. . .
15.917	116.3170	379.83	. Q V. . .
16.000	119.4638	456.92	. Q V . . .
16.083	123.6954	614.43	. Q .V . . .
16.167	129.6850	869.69	. VQ . . .
16.250	137.8719	1188.73	. V .Q . .
16.333	147.2103	1355.95	. V . Q .
16.417	156.9532	1414.66	. V . Q .
16.500	165.1722	1193.40	. V .Q . .
16.583	171.2596	883.89	. Q V. . .
16.667	175.7089	646.03	. Q . V. . .
16.750	179.1496	499.60	. Q . V . .
16.833	181.8812	396.62	. Q . V . .
16.917	184.0968	321.71	. Q . .V . .
17.000	186.0840	288.54	. Q . .V . .
17.083	187.9246	267.25	. Q . .V . .
17.167	189.6253	246.94	. Q . . V .
17.250	191.1737	224.83	. Q . . V .
17.333	192.5994	207.02	. Q . . V .
17.417	193.9311	193.36	. Q . . V .
17.500	195.1957	183.62	. Q . . . V .
17.583	196.4044	175.50	. Q . . . V .
17.667	197.5653	168.57	. Q . . . V .
17.750	198.6845	162.50	. Q . . . V .
17.833	199.7668	157.15	. Q . . . V .
17.917	200.8162	152.38	. Q . . . . V .
18.000	201.8356	148.02	. Q . . . . V .
18.083	202.8242	143.54	. Q . . . . V .
18.167	203.7745	137.98	. Q . . . . V .
18.250	204.6721	130.33	. Q . . . . V .
18.333	205.5094	121.58	. Q . . . . V .
18.417	206.2802	111.92	. Q . . . . V .
18.500	206.9948	103.75	. Q . . . . V .
18.583	207.6687	97.86	. Q . . . . V .
18.667	208.3135	93.63	. Q . . . . V .

18.750	208.9357	90.34	. Q	.	.	.	V	.
18.833	209.5399	87.73	. Q	.	.	.	V	.
18.917	210.1297	85.63	. Q	.	.	.	V	.
19.000	210.7061	83.70	. Q	.	.	.	V	.
19.083	211.2700	81.87	. Q	.	.	.	V	.
19.167	211.8219	80.15	. Q	.	.	.	V	.
19.250	212.3630	78.56	. Q	.	.	.	V	.
19.333	212.8940	77.09	. Q	.	.	.	V	.
19.417	213.4154	75.71	. Q	.	.	.	V	.
19.500	213.9278	74.39	.Q	.	.	.	V	.
19.583	214.4314	73.13	.Q	.	.	.	V	.
19.667	214.9268	71.93	.Q	.	.	.	V	.
19.750	215.4142	70.77	.Q	.	.	.	V	.
19.833	215.8939	69.66	.Q	.	.	.	V	.
19.917	216.3663	68.59	.Q	.	.	.	V	.
20.000	216.8316	67.57	.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%	1205.0
10%	305.0
20%	95.0
30%	50.0
40%	40.0
50%	30.0
60%	30.0
70%	20.0
80%	20.0
90%	10.0

END OF FLOODSCx ROUTING ANALYSIS

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 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 *************************
* RMV PA-3 SUBAREA D                                                   *
* UNIT HYDROGRAPH - SINGLE AREA MODEL                                  *
* 100-YR EV SEPTEMBER 2018 CCHIU                                       *
 ************************************************************************

  FILE NAME: 3D00EVS.DAT
  TIME/DATE OF STUDY: 15:21 09/25/2018

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


************************************************************************
  FLOW PROCESS FROM NODE    430.00 TO NODE    428.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  439.50
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.144
    LOW LOSS FRACTION = 0.327
    TIME OF CONCENTRATION(MIN.) = 25.91
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  25
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.40
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.87
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.15
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.94
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.71
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.49

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =   106.90
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    57.55

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	172.7	345.4	518.1	690.9
10.000	18.9985	32.40	.Q	V .	.	.	.
10.017	19.0432	32.48	.Q	V .	.	.	.
10.033	19.0881	32.56	.Q	V .	.	.	.
10.050	19.1330	32.63	.Q	V .	.	.	.
10.067	19.1781	32.71	.Q	V .	.	.	.
10.083	19.2232	32.78	.Q	V .	.	.	.
10.100	19.2685	32.86	.Q	V .	.	.	.
10.117	19.3138	32.94	.Q	V .	.	.	.
10.133	19.3593	33.01	.Q	V .	.	.	.
10.150	19.4049	33.09	.Q	V .	.	.	.
10.167	19.4506	33.16	.Q	V .	.	.	.
10.183	19.4963	33.24	.Q	V .	.	.	.
10.200	19.5422	33.32	.Q	V .	.	.	.
10.217	19.5882	33.39	.Q	V .	.	.	.
10.233	19.6343	33.47	.Q	V .	.	.	.
10.250	19.6805	33.54	.Q	V .	.	.	.
10.267	19.7268	33.62	.Q	V .	.	.	.
10.283	19.7732	33.69	.Q	V .	.	.	.
10.300	19.8198	33.77	.Q	V .	.	.	.
10.317	19.8664	33.85	.Q	V .	.	.	.
10.333	19.9131	33.92	.Q	V .	.	.	.
10.350	19.9599	34.00	.Q	V .	.	.	.
10.367	20.0069	34.07	.Q	V .	.	.	.
10.383	20.0539	34.15	.Q	V .	.	.	.
10.400	20.1010	34.21	.Q	V .	.	.	.
10.417	20.1482	34.26	.Q	V .	.	.	.
10.433	20.1955	34.30	.Q	V .	.	.	.
10.450	20.2428	34.34	.Q	V .	.	.	.
10.467	20.2901	34.39	.Q	V .	.	.	.
10.483	20.3376	34.43	.Q	V .	.	.	.
10.500	20.3850	34.47	.Q	V .	.	.	.
10.517	20.4326	34.51	.Q	V .	.	.	.
10.533	20.4802	34.56	. Q	V .	.	.	.
10.550	20.5278	34.60	. Q	V .	.	.	.
10.567	20.5755	34.64	. Q	V .	.	.	.
10.583	20.6233	34.68	. Q	V .	.	.	.
10.600	20.6712	34.73	. Q	V .	.	.	.
10.617	20.7190	34.77	. Q	V .	.	.	.
10.633	20.7670	34.81	. Q	V .	.	.	.
10.650	20.8150	34.85	. Q	V .	.	.	.
10.667	20.8631	34.90	. Q	V .	.	.	.
10.683	20.9112	34.94	. Q	V .	.	.	.
10.700	20.9594	34.98	. Q	V .	.	.	.
10.717	21.0076	35.03	. Q	V .	.	.	.
10.733	21.0559	35.07	. Q	V .	.	.	.

10.750	21.1043	35.11	. Q	V .	.	.	.
10.767	21.1527	35.15	. Q	V .	.	.	.
10.783	21.2012	35.20	. Q	V .	.	.	.
10.800	21.2497	35.24	. Q	V .	.	.	.
10.817	21.2983	35.28	. Q	V .	.	.	.
10.833	21.3470	35.35	. Q	V .	.	.	.
10.850	21.3958	35.44	. Q	V .	.	.	.
10.867	21.4448	35.54	. Q	V .	.	.	.
10.883	21.4939	35.64	. Q	V .	.	.	.
10.900	21.5431	35.74	. Q	V .	.	.	.
10.917	21.5925	35.83	. Q	V .	.	.	.
10.933	21.6419	35.93	. Q	V .	.	.	.
10.950	21.6916	36.03	. Q	V .	.	.	.
10.967	21.7413	36.12	. Q	V .	.	.	.
10.983	21.7912	36.22	. Q	V .	.	.	.
11.000	21.8412	36.32	. Q	V .	.	.	.
11.017	21.8914	36.41	. Q	V .	.	.	.
11.033	21.9417	36.51	. Q	V .	.	.	.
11.050	21.9921	36.61	. Q	V .	.	.	.
11.067	22.0427	36.71	. Q	V .	.	.	.
11.083	22.0934	36.80	. Q	V .	.	.	.
11.100	22.1442	36.90	. Q	V .	.	.	.
11.117	22.1952	37.00	. Q	V .	.	.	.
11.133	22.2463	37.09	. Q	V .	.	.	.
11.150	22.2975	37.19	. Q	V .	.	.	.
11.167	22.3488	37.29	. Q	V .	.	.	.
11.183	22.4003	37.39	. Q	V .	.	.	.
11.200	22.4520	37.48	. Q	V .	.	.	.
11.217	22.5037	37.58	. Q	V .	.	.	.
11.233	22.5556	37.68	. Q	V .	.	.	.
11.250	22.6077	37.77	. Q	V .	.	.	.
11.267	22.6598	37.85	. Q	V .	.	.	.
11.283	22.7120	37.91	. Q	V .	.	.	.
11.300	22.7643	37.96	. Q	V .	.	.	.
11.317	22.8167	38.02	. Q	V .	.	.	.
11.333	22.8691	38.07	. Q	V .	.	.	.
11.350	22.9216	38.13	. Q	V .	.	.	.
11.367	22.9742	38.18	. Q	V .	.	.	.
11.383	23.0269	38.24	. Q	V .	.	.	.
11.400	23.0796	38.30	. Q	V .	.	.	.
11.417	23.1325	38.35	. Q	V .	.	.	.
11.433	23.1854	38.41	. Q	V .	.	.	.
11.450	23.2383	38.46	. Q	V .	.	.	.
11.467	23.2914	38.52	. Q	V .	.	.	.
11.483	23.3445	38.57	. Q	V .	.	.	.
11.500	23.3977	38.63	. Q	V .	.	.	.
11.517	23.4510	38.69	. Q	V .	.	.	.
11.533	23.5044	38.74	. Q	V .	.	.	.
11.550	23.5578	38.80	. Q	V .	.	.	.
11.567	23.6113	38.85	. Q	V .	.	.	.
11.583	23.6649	38.91	. Q	V .	.	.	.
11.600	23.7186	38.96	. Q	V .	.	.	.
11.617	23.7723	39.02	. Q	V .	.	.	.
11.633	23.8262	39.07	. Q	V .	.	.	.
11.650	23.8801	39.13	. Q	V .	.	.	.
11.667	23.9340	39.19	. Q	V .	.	.	.
11.683	23.9881	39.24	. Q	V .	.	.	.
11.700	24.0423	39.34	. Q	V .	.	.	.

11.717	24.0967	39.47	.	Q	V.	.	.	.
11.733	24.1512	39.60	.	Q	V.	.	.	.
11.750	24.2059	39.73	.	Q	V.	.	.	.
11.767	24.2608	39.86	.	Q	V.	.	.	.
11.783	24.3159	39.99	.	Q	V.	.	.	.
11.800	24.3712	40.12	.	Q	V.	.	.	.
11.817	24.4266	40.25	.	Q	V.	.	.	.
11.833	24.4822	40.38	.	Q	V.	.	.	.
11.850	24.5380	40.51	.	Q	V.	.	.	.
11.867	24.5940	40.64	.	Q	V.	.	.	.
11.883	24.6502	40.77	.	Q	V.	.	.	.
11.900	24.7065	40.90	.	Q	V.	.	.	.
11.917	24.7630	41.03	.	Q	V.	.	.	.
11.933	24.8197	41.16	.	Q	V.	.	.	.
11.950	24.8766	41.29	.	Q	V.	.	.	.
11.967	24.9336	41.42	.	Q	V.	.	.	.
11.983	24.9909	41.55	.	Q	V.	.	.	.
12.000	25.0483	41.68	.	Q	V.	.	.	.
12.017	25.1059	41.81	.	Q	V.	.	.	.
12.033	25.1636	41.94	.	Q	V.	.	.	.
12.050	25.2216	42.07	.	Q	V.	.	.	.
12.067	25.2797	42.20	.	Q	V.	.	.	.
12.083	25.3380	42.33	.	Q	V.	.	.	.
12.100	25.3965	42.46	.	Q	V.	.	.	.
12.117	25.4552	42.60	.	Q	V.	.	.	.
12.133	25.5144	43.02	.	Q	V.	.	.	.
12.150	25.5745	43.59	.	Q	V.	.	.	.
12.167	25.6353	44.16	.	Q	V.	.	.	.
12.183	25.6969	44.73	.	Q	V.	.	.	.
12.200	25.7593	45.30	.	Q	V.	.	.	.
12.217	25.8225	45.86	.	Q	V.	.	.	.
12.233	25.8864	46.43	.	Q	V.	.	.	.
12.250	25.9512	47.00	.	Q	V.	.	.	.
12.267	26.0167	47.57	.	Q	V.	.	.	.
12.283	26.0830	48.14	.	Q	V.	.	.	.
12.300	26.1501	48.71	.	Q	V.	.	.	.
12.317	26.2180	49.28	.	Q	V.	.	.	.
12.333	26.2866	49.85	.	Q	V.	.	.	.
12.350	26.3561	50.41	.	Q	V.	.	.	.
12.367	26.4263	50.98	.	Q	V.	.	.	.
12.383	26.4973	51.55	.	Q	V.	.	.	.
12.400	26.5691	52.12	.	Q	V.	.	.	.
12.417	26.6416	52.69	.	Q	V.	.	.	.
12.433	26.7150	53.26	.	Q	V.	.	.	.
12.450	26.7891	53.83	.	Q	V	.	.	.
12.467	26.8641	54.39	.	Q	V	.	.	.
12.483	26.9398	54.96	.	Q	V	.	.	.
12.500	27.0163	55.53	.	Q	V	.	.	.
12.517	27.0935	56.10	.	Q	V	.	.	.
12.533	27.1716	56.67	.	Q	V	.	.	.
12.550	27.2504	57.23	.	Q	V	.	.	.
12.567	27.3297	57.56	.	Q	V	.	.	.
12.583	27.4093	57.82	.	Q	V	.	.	.
12.600	27.4893	58.07	.	Q	V	.	.	.
12.617	27.5697	58.33	.	Q	V	.	.	.
12.633	27.6504	58.58	.	Q	V	.	.	.
12.650	27.7314	58.84	.	Q	V	.	.	.
12.667	27.8128	59.09	.	Q	V	.	.	.

12.683	27.8945	59.35	.	Q	V	.	.	.
12.700	27.9766	59.60	.	Q	V	.	.	.
12.717	28.0591	59.85	.	Q	V	.	.	.
12.733	28.1419	60.11	.	Q	V	.	.	.
12.750	28.2250	60.36	.	Q	V	.	.	.
12.767	28.3085	60.62	.	Q	V	.	.	.
12.783	28.3924	60.87	.	Q	V	.	.	.
12.800	28.4766	61.13	.	Q	V	.	.	.
12.817	28.5611	61.38	.	Q	V	.	.	.
12.833	28.6460	61.64	.	Q	V	.	.	.
12.850	28.7313	61.89	.	Q	V	.	.	.
12.867	28.8169	62.15	.	Q	V	.	.	.
12.883	28.9028	62.40	.	Q	V	.	.	.
12.900	28.9891	62.66	.	Q	V	.	.	.
12.917	29.0758	62.91	.	Q	V	.	.	.
12.933	29.1628	63.17	.	Q	V	.	.	.
12.950	29.2501	63.42	.	Q	V	.	.	.
12.967	29.3379	63.68	.	Q	V	.	.	.
12.983	29.4259	63.92	.	Q	.V	.	.	.
13.000	29.5141	64.07	.	Q	.V	.	.	.
13.017	29.6026	64.19	.	Q	.V	.	.	.
13.033	29.6911	64.31	.	Q	.V	.	.	.
13.050	29.7799	64.42	.	Q	.V	.	.	.
13.067	29.8688	64.54	.	Q	.V	.	.	.
13.083	29.9578	64.66	.	Q	.V	.	.	.
13.100	30.0471	64.78	.	Q	.V	.	.	.
13.117	30.1365	64.90	.	Q	.V	.	.	.
13.133	30.2260	65.02	.	Q	.V	.	.	.
13.150	30.3157	65.14	.	Q	.V	.	.	.
13.167	30.4056	65.26	.	Q	.V	.	.	.
13.183	30.4957	65.38	.	Q	.V	.	.	.
13.200	30.5859	65.50	.	Q	.V	.	.	.
13.217	30.6763	65.62	.	Q	.V	.	.	.
13.233	30.7668	65.74	.	Q	.V	.	.	.
13.250	30.8575	65.85	.	Q	.V	.	.	.
13.267	30.9484	65.97	.	Q	.V	.	.	.
13.283	31.0394	66.09	.	Q	.V	.	.	.
13.300	31.1306	66.21	.	Q	.V	.	.	.
13.317	31.2220	66.33	.	Q	.V	.	.	.
13.333	31.3135	66.45	.	Q	.V	.	.	.
13.350	31.4052	66.57	.	Q	.V	.	.	.
13.367	31.4971	66.69	.	Q	.V	.	.	.
13.383	31.5891	66.81	.	Q	.V	.	.	.
13.400	31.6813	66.93	.	Q	.V	.	.	.
13.417	31.7737	67.07	.	Q	.V	.	.	.
13.433	31.8664	67.34	.	Q	.V	.	.	.
13.450	31.9596	67.64	.	Q	.V	.	.	.
13.467	32.0532	67.94	.	Q	.V	.	.	.
13.483	32.1472	68.24	.	Q	. V	.	.	.
13.500	32.2416	68.54	.	Q	. V	.	.	.
13.517	32.3364	68.84	.	Q	. V	.	.	.
13.533	32.4316	69.14	.	Q	. V	.	.	.
13.550	32.5273	69.44	.	Q	. V	.	.	.
13.567	32.6233	69.74	.	Q	. V	.	.	.
13.583	32.7198	70.04	.	Q	. V	.	.	.
13.600	32.8167	70.34	.	Q	. V	.	.	.
13.617	32.9140	70.64	.	Q	. V	.	.	.
13.633	33.0117	70.93	.	Q	. V	.	.	.

13.650	33.1098	71.23	.	Q	.	V	.	.	.	
13.667	33.2083	71.53	.	Q	.	V	.	.	.	
13.683	33.3073	71.83	.	Q	.	V	.	.	.	
13.700	33.4066	72.13	.	Q	.	V	.	.	.	
13.717	33.5064	72.43	.	Q	.	V	.	.	.	
13.733	33.6066	72.73	.	Q	.	V	.	.	.	
13.750	33.7072	73.03	.	Q	.	V	.	.	.	
13.767	33.8082	73.33	.	Q	.	V	.	.	.	
13.783	33.9096	73.63	.	Q	.	V	.	.	.	
13.800	34.0114	73.93	.	Q	.	V	.	.	.	
13.817	34.1137	74.23	.	Q	.	V	.	.	.	
13.833	34.2163	74.53	.	Q	.	V	.	.	.	
13.850	34.3194	74.81	.	Q	.	V	.	.	.	
13.867	34.4227	75.02	.	Q	.	V	.	.	.	
13.883	34.5263	75.21	.	Q	.	V	.	.	.	
13.900	34.6302	75.41	.	Q	.	V	.	.	.	
13.917	34.7343	75.60	.	Q	.	V	.	.	.	
13.933	34.8387	75.79	.	Q	.	V	.	.	.	
13.950	34.9434	75.99	.	Q	.	V	.	.	.	
13.967	35.0483	76.18	.	Q	.	V	.	.	.	
13.983	35.1535	76.37	.	Q	.	V	.	.	.	
14.000	35.2590	76.57	.	Q	.	V	.	.	.	
14.017	35.3647	76.76	.	Q	.	V	.	.	.	
14.033	35.4707	76.96	.	Q	.	V	.	.	.	
14.050	35.5770	77.15	.	Q	.	V	.	.	.	
14.067	35.6835	77.34	.	Q	.	V	.	.	.	
14.083	35.7903	77.54	.	Q	.	V	.	.	.	
14.100	35.8974	77.73	.	Q	.	V	.	.	.	
14.117	36.0047	77.92	.	Q	.	V	.	.	.	
14.133	36.1123	78.12	.	Q	.	V	.	.	.	
14.150	36.2202	78.31	.	Q	.	V	.	.	.	
14.167	36.3283	78.51	.	Q	.	V	.	.	.	
14.183	36.4367	78.70	.	Q	.	V	.	.	.	
14.200	36.5454	78.89	.	Q	.	V	.	.	.	
14.217	36.6543	79.09	.	Q	.	V	.	.	.	
14.233	36.7635	79.28	.	Q	.	V	.	.	.	
14.250	36.8730	79.47	.	Q	.	V	.	.	.	
14.267	36.9827	79.67	.	Q	.	V	.	.	.	
14.283	37.0928	79.92	.	Q	.	V	.	.	.	
14.300	37.2036	80.40	.	Q	.	V	.	.	.	
14.317	37.3150	80.90	.	Q	.	V	.	.	.	
14.333	37.4271	81.40	.	Q	.	V	.	.	.	
14.350	37.5399	81.89	.	Q	.	V	.	.	.	
14.367	37.6534	82.39	.	Q	.	V	.	.	.	
14.383	37.7676	82.89	.	Q	.	V	.	.	.	
14.400	37.8824	83.38	.	Q	.	V	.	.	.	
14.417	37.9980	83.88	.	Q	.	V	.	.	.	
14.433	38.1142	84.38	.	Q	.	V	.	.	.	
14.450	38.2311	84.87	.	Q	.	V	.	.	.	
14.467	38.3487	85.37	.	Q	.	V	.	.	.	
14.483	38.4670	85.87	.	Q	.	V	.	.	.	
14.500	38.5859	86.36	.	Q	.	V	.	.	.	
14.517	38.7056	86.86	.	Q	.	V	.	.	.	
14.533	38.8259	87.36	.	Q	.	V	.	.	.	
14.550	38.9469	87.86	.	Q	.	V	.	.	.	
14.567	39.0686	88.35	.	Q	.	V	.	.	.	
14.583	39.1910	88.85	.	Q	.	V	.	.	.	
14.600	39.3140	89.35	.	Q	.	V	.	.	.	

14.617	39.4378	89.84	.	Q	.	V	.	.	.	
14.633	39.5622	90.34	.	Q	.	V	.	.	.	
14.650	39.6874	90.84	.	Q	.	V	.	.	.	
14.667	39.8132	91.33	.	Q	.	V	.	.	.	
14.683	39.9396	91.83	.	Q	.	V	.	.	.	
14.700	40.0668	92.33	.	Q	.	V	.	.	.	
14.717	40.1946	92.80	.	Q	.	V	.	.	.	
14.733	40.3230	93.20	.	Q	.	V	.	.	.	
14.750	40.4519	93.60	.	Q	.	V	.	.	.	
14.767	40.5814	94.00	.	Q	.	V	.	.	.	
14.783	40.7114	94.40	.	Q	.	V	.	.	.	
14.800	40.8420	94.80	.	Q	.	V	.	.	.	
14.817	40.9731	95.20	.	Q	.	V	.	.	.	
14.833	41.1048	95.59	.	Q	.	V	.	.	.	
14.850	41.2370	95.99	.	Q	.	V	.	.	.	
14.867	41.3698	96.39	.	Q	.	V	.	.	.	
14.883	41.5031	96.79	.	Q	.	V	.	.	.	
14.900	41.6370	97.19	.	Q	.	V	.	.	.	
14.917	41.7714	97.59	.	Q	.	V	.	.	.	
14.933	41.9064	97.99	.	Q	.	V	.	.	.	
14.950	42.0419	98.39	.	Q	.	V	.	.	.	
14.967	42.1780	98.79	.	Q	.	V	.	.	.	
14.983	42.3146	99.19	.	Q	.	V	.	.	.	
15.000	42.4518	99.58	.	Q	.	V	.	.	.	
15.017	42.5895	99.98	.	Q	.	V	.	.	.	
15.033	42.7278	100.38	.	Q	.	V	.	.	.	
15.050	42.8666	100.78	.	Q	.	V	.	.	.	
15.067	43.0059	101.18	.	Q	.	V	.	.	.	
15.083	43.1459	101.58	.	Q	.	V	.	.	.	
15.100	43.2863	101.98	.	Q	.	V	.	.	.	
15.117	43.4273	102.38	.	Q	.	V	.	.	.	
15.133	43.5689	102.78	.	Q	.	V	.	.	.	
15.150	43.7115	103.54	.	Q	.	V	.	.	.	
15.167	43.8561	105.01	.	Q	.	V	.	.	.	
15.183	44.0028	106.49	.	Q	.	V	.	.	.	
15.200	44.1516	107.98	.	Q	.	V	.	.	.	
15.217	44.3023	109.46	.	Q	.	V	.	.	.	
15.233	44.4552	110.95	.	Q	.	V	.	.	.	
15.250	44.6100	112.44	.	Q	.	V	.	.	.	
15.267	44.7670	113.92	.	Q	.	V	.	.	.	
15.283	44.9259	115.41	.	Q	.	V	.	.	.	
15.300	45.0869	116.89	.	Q	.	V	.	.	.	
15.317	45.2500	118.38	.	Q	.	V	.	.	.	
15.333	45.4151	119.86	.	Q	.	V	.	.	.	
15.350	45.5822	121.35	.	Q	.	V	.	.	.	
15.367	45.7514	122.84	.	Q	.	V	.	.	.	
15.383	45.9227	124.32	.	Q	.	V	.	.	.	
15.400	46.0960	125.81	.	Q	.	V	.	.	.	
15.417	46.2713	127.29	.	Q	.	V	.	.	.	
15.433	46.4487	128.78	.	Q	.	V	.	.	.	
15.450	46.6281	130.26	.	Q	.	V	.	.	.	
15.467	46.8096	131.75	.	Q	.	V	.	.	.	
15.483	46.9931	133.23	.	Q	.	V	.	.	.	
15.500	47.1786	134.72	.	Q	.	V	.	.	.	
15.517	47.3663	136.21	.	Q	.	V	.	.	.	
15.533	47.5559	137.69	.	Q	.	V	.	.	.	
15.550	47.7476	139.18	.	Q	.	V	.	.	.	
15.567	47.9414	140.66	.	Q	.	V	.	.	.	

15.583	48.1373	142.28	. Q . V . . .
15.600	48.3358	144.08	. Q . V . . .
15.617	48.5367	145.88	. Q . V . . .
15.633	48.7402	147.69	. Q . V . . .
15.650	48.9461	149.49	. Q . V . . .
15.667	49.1545	151.29	. Q . V . . .
15.683	49.3653	153.09	. Q . V . . .
15.700	49.5787	154.89	. Q . V . . .
15.717	49.7945	156.70	. Q. V . . .
15.733	50.0128	158.50	. Q. V . . .
15.750	50.2336	160.30	. Q. V . . .
15.767	50.4569	162.10	. Q. V . . .
15.783	50.6827	163.91	. Q. V . . .
15.800	50.9109	165.71	. Q. V. . .
15.817	51.1417	167.51	. Q. V. . .
15.833	51.3749	169.31	. Q. V. . .
15.850	51.6106	171.12	. Q. V. . .
15.867	51.8488	172.92	. Q V. . .
15.883	52.0894	174.72	. Q V. . .
15.900	52.3326	176.52	. Q V. . .
15.917	52.5782	178.33	. Q V. . .
15.933	52.8263	180.13	. Q V. . .
15.950	53.0769	181.93	. Q V. . .
15.967	53.3300	183.73	. Q V. . .
15.983	53.5855	185.54	. Q V . . .
16.000	53.8436	187.34	. Q V . . .
16.017	54.1162	197.94	. .Q V . . .
16.033	54.4156	217.34	. . Q V . . .
16.050	54.7417	236.74	. . Q V . . .
16.067	55.0945	256.14	. . Q V . . .
16.083	55.4740	275.54	. . Q V . . .
16.100	55.8802	294.93	. . Q V . . .
16.117	56.3132	314.33	. . Q .V . . .
16.133	56.7729	333.73	. . Q.V . . .
16.150	57.2593	353.13	. . QV . . .
16.167	57.7724	372.53	. . .Q . . .
16.183	58.3123	391.93	. . .VQ . . .
16.200	58.8788	411.33	. . . VQ . . .
16.217	59.4721	430.73	. . . V Q . . .
16.233	60.0921	450.13	. . . V Q . . .
16.250	60.7389	469.52	. . . V Q . . .
16.267	61.4123	488.92	. . . V Q . . .
16.283	62.1125	508.32	. . . V Q. . .
16.300	62.8394	527.72	. . . V Q . .
16.317	63.5930	547.12	. . . V .Q . .
16.333	64.3733	566.52	. . . V . Q . .
16.350	65.1804	585.92	. . . V . Q . .
16.367	66.0141	605.32	. . . V . Q . .
16.383	66.8746	624.72	. . . V . Q . .
16.400	67.7618	644.11	. . . V . Q . .
16.417	68.6758	663.51	. . . V . Q . .
16.433	69.6274	690.87	. . . V . Q .
16.450	70.5610	677.82	. . . V . Q. .
16.467	71.4642	655.70	. . . V . Q . .
16.483	72.3369	633.59	. . . V . Q . .
16.500	73.1791	611.48	. . . V . Q . .
16.517	73.9909	589.36	. . . V . Q . .
16.533	74.7723	567.25	. . . V . Q . .

16.550	75.5231	545.14	. . . V .Q .
16.567	76.2436	523.02	. . . V Q .
16.583	76.9335	500.91	. . . VQ. .
16.600	77.5930	478.79	. . . Q V. .
16.617	78.2220	456.68	. . . Q V. .
16.633	78.8206	434.57	. . . Q V. .
16.650	79.3887	412.45	. . . Q V. .
16.667	79.9264	390.34	. . . Q V. .
16.683	80.4336	368.23	. . .Q V .
16.700	80.9103	346.11	. . . Q V .
16.717	81.3566	324.00	. . . Q . V .
16.733	81.7724	301.88	. . . Q . V .
16.750	82.1578	279.77	. . . Q . V .
16.767	82.5127	257.66	. . . Q . V .
16.783	82.8371	235.54	. . . Q . V .
16.800	83.1311	213.43	. . . Q . .V .
16.817	83.3946	191.32	. . .Q . .V .
16.833	83.6277	169.20	. . Q. . .V .
16.850	83.8303	147.09	. . Q . . .V .
16.867	84.0029	125.31	. . Q . . .V .
16.883	84.1641	117.03	. . Q . . .V .
16.900	84.3236	115.76	. . Q . . .V .
16.917	84.4813	114.49	. . Q . . .V .
16.933	84.6372	113.22	. . Q . . .V .
16.950	84.7914	111.95	. . Q . . .V .
16.967	84.9439	110.68	. . Q . . .V .
16.983	85.0946	109.41	. . Q . . .V .
17.000	85.2435	108.14	. . Q . . .V .
17.017	85.3907	106.87	. . Q . . .V .
17.033	85.5362	105.60	. . Q . . . V .
17.050	85.6799	104.33	. . Q . . . V .
17.067	85.8218	103.05	. . Q . . . V .
17.083	85.9620	101.78	. . Q . . . V .
17.100	86.1005	100.51	. . Q . . . V .
17.117	86.2372	99.24	. . Q . . . V .
17.133	86.3721	97.97	. . Q . . . V .
17.150	86.5053	96.70	. . Q . . . V .
17.167	86.6367	95.43	. . Q . . . V .
17.183	86.7664	94.16	. . Q . . . V .
17.200	86.8944	92.89	. . Q . . . V .
17.217	87.0206	91.62	. . Q . . . V .
17.233	87.1450	90.35	. . Q . . . V .
17.250	87.2677	89.07	. . Q . . . V .
17.267	87.3887	87.80	. . Q . . . V .
17.283	87.5079	86.53	. . Q . . . V .
17.300	87.6253	85.29	. Q . . . V .
17.317	87.7418	84.54	. Q . . . V .
17.333	87.8575	83.99	. Q . . . V .
17.350	87.9724	83.44	. Q . . . V .
17.367	88.0866	82.88	. Q . . . V .
17.383	88.2000	82.33	. Q . . . V .
17.400	88.3126	81.77	. Q . . . V .
17.417	88.4245	81.22	. Q . . . V .
17.433	88.5356	80.67	. Q . . . V .
17.450	88.6460	80.11	. Q . . . V .
17.467	88.7555	79.56	. Q . . . V .
17.483	88.8644	79.01	. Q . . . V .
17.500	88.9724	78.45	. Q . . . V .

17.517	89.0797	77.90	.	Q	.	.	.	V	.
17.533	89.1863	77.34	.	Q	.	.	.	V	.
17.550	89.2920	76.79	.	Q	.	.	.	V	.
17.567	89.3970	76.24	.	Q	.	.	.	V	.
17.583	89.5013	75.68	.	Q	.	.	.	V	.
17.600	89.6048	75.13	.	Q	.	.	.	V	.
17.617	89.7075	74.58	.	Q	.	.	.	V	.
17.633	89.8095	74.02	.	Q	.	.	.	V	.
17.650	89.9107	73.47	.	Q	.	.	.	V	.
17.667	90.0111	72.91	.	Q	.	.	.	V	.
17.683	90.1108	72.36	.	Q	.	.	.	V	.
17.700	90.2097	71.81	.	Q	.	.	.	V	.
17.717	90.3078	71.25	.	Q	.	.	.	V	.
17.733	90.4052	70.71	.	Q	.	.	.	V	.
17.750	90.5021	70.31	.	Q	.	.	.	V	.
17.767	90.5984	69.95	.	Q	.	.	.	V	.
17.783	90.6943	69.59	.	Q	.	.	.	V	.
17.800	90.7896	69.23	.	Q	.	.	.	V	.
17.817	90.8845	68.87	.	Q	.	.	.	V	.
17.833	90.9788	68.50	.	Q	.	.	.	V	.
17.850	91.0727	68.14	.	Q	.	.	.	V	.
17.867	91.1661	67.78	.	Q	.	.	.	V	.
17.883	91.2589	67.42	.	Q	.	.	.	V	.
17.900	91.3513	67.06	.	Q	.	.	.	V	.
17.917	91.4432	66.70	.	Q	.	.	.	V	.
17.933	91.5345	66.34	.	Q	.	.	.	V	.
17.950	91.6254	65.97	.	Q	.	.	.	V	.
17.967	91.7158	65.61	.	Q	.	.	.	V	.
17.983	91.8057	65.25	.	Q	.	.	.	V	.
18.000	91.8951	64.89	.	Q	.	.	.	V	.
18.017	91.9839	64.53	.	Q	.	.	.	V	.
18.033	92.0723	64.17	.	Q	.	.	.	V	.
18.050	92.1602	63.81	.	Q	.	.	.	V	.
18.067	92.2476	63.44	.	Q	.	.	.	V	.
18.083	92.3345	63.08	.	Q	.	.	.	V	.
18.100	92.4209	62.72	.	Q	.	.	.	V	.
18.117	92.5068	62.36	.	Q	.	.	.	V	.
18.133	92.5922	62.00	.	Q	.	.	.	V	.
18.150	92.6771	61.64	.	Q	.	.	.	V	.
18.167	92.7614	61.23	.	Q	.	.	.	V	.
18.183	92.8448	60.51	.	Q	.	.	.	V	.
18.200	92.9270	59.72	.	Q	.	.	.	V	.
18.217	93.0082	58.94	.	Q	.	.	.	V	.
18.233	93.0883	58.15	.	Q	.	.	.	V	.
18.250	93.1673	57.36	.	Q	.	.	.	V	.
18.267	93.2452	56.57	.	Q	.	.	.	V	.
18.283	93.3221	55.79	.	Q	.	.	.	V	.
18.300	93.3978	55.00	.	Q	.	.	.	V	.
18.317	93.4725	54.21	.	Q	.	.	.	V	.
18.333	93.5461	53.42	.	Q	.	.	.	V	.
18.350	93.6186	52.64	.	Q	.	.	.	V	.
18.367	93.6900	51.85	.	Q	.	.	.	V	.
18.383	93.7603	51.06	.	Q	.	.	.	V	.
18.400	93.8296	50.27	.	Q	.	.	.	V	.
18.417	93.8978	49.49	.	Q	.	.	.	V	.
18.433	93.9648	48.70	.	Q	.	.	.	V	.
18.450	94.0308	47.91	.	Q	.	.	.	V	.
18.467	94.0957	47.12	.	Q	.	.	.	V	.

18.483	94.1596	46.34	.	Q	.	.	.	V	.
18.500	94.2223	45.55	.	Q	.	.	.	V	.
18.517	94.2840	44.76	.	Q	.	.	.	V	.
18.533	94.3445	43.98	.	Q	.	.	.	V	.
18.550	94.4040	43.19	.	Q	.	.	.	V	.
18.567	94.4624	42.40	.	Q	.	.	.	V	.
18.583	94.5197	41.61	.	Q	.	.	.	V	.
18.600	94.5761	40.92	.	Q	.	.	.	V	.
18.617	94.6321	40.68	.	Q	.	.	.	V	.
18.633	94.6879	40.51	.	Q	.	.	.	V	.
18.650	94.7435	40.35	.	Q	.	.	.	V	.
18.667	94.7989	40.18	.	Q	.	.	.	V	.
18.683	94.8540	40.01	.	Q	.	.	.	V	.
18.700	94.9089	39.84	.	Q	.	.	.	V	.
18.717	94.9635	39.68	.	Q	.	.	.	V	.
18.733	95.0179	39.51	.	Q	.	.	.	V	.
18.750	95.0721	39.34	.	Q	.	.	.	V	.
18.767	95.1261	39.17	.	Q	.	.	.	V	.
18.783	95.1798	39.00	.	Q	.	.	.	V	.
18.800	95.2333	38.84	.	Q	.	.	.	V	.
18.817	95.2865	38.67	.	Q	.	.	.	V	.
18.833	95.3396	38.50	.	Q	.	.	.	V	.
18.850	95.3924	38.33	.	Q	.	.	.	V	.
18.867	95.4449	38.16	.	Q	.	.	.	V	.
18.883	95.4973	38.00	.	Q	.	.	.	V	.
18.900	95.5494	37.83	.	Q	.	.	.	V	.
18.917	95.6013	37.66	.	Q	.	.	.	V	.
18.933	95.6529	37.49	.	Q	.	.	.	V	.
18.950	95.7043	37.33	.	Q	.	.	.	V	.
18.967	95.7555	37.16	.	Q	.	.	.	V	.
18.983	95.8064	36.99	.	Q	.	.	.	V	.
19.000	95.8572	36.82	.	Q	.	.	.	V	.
19.017	95.9077	36.65	.	Q	.	.	.	V	.
19.033	95.9579	36.49	.	Q	.	.	.	V	.
19.050	96.0080	36.36	.	Q	.	.	.	V	.
19.067	96.0579	36.23	.	Q	.	.	.	V	.
19.083	96.1077	36.11	.	Q	.	.	.	V	.
19.100	96.1572	35.98	.	Q	.	.	.	V	.
19.117	96.2066	35.85	.	Q	.	.	.	V	.
19.133	96.2558	35.72	.	Q	.	.	.	V	.
19.150	96.3048	35.59	.	Q	.	.	.	V	.
19.167	96.3537	35.46	.	Q	.	.	.	V	.
19.183	96.4023	35.34	.	Q	.	.	.	V	.
19.200	96.4508	35.21	.	Q	.	.	.	V	.
19.217	96.4992	35.08	.	Q	.	.	.	V	.
19.233	96.5473	34.95	.	Q	.	.	.	V	.
19.250	96.5953	34.82	.	Q	.	.	.	V	.
19.267	96.6430	34.69	.	Q	.	.	.	V	.
19.283	96.6907	34.56	.	Q	.	.	.	V	.
19.300	96.7381	34.44	.	Q	.	.	.	V	.
19.317	96.7853	34.31	.	Q	.	.	.	V	.
19.333	96.8324	34.18	.	Q	.	.	.	V	.
19.350	96.8793	34.05	.	Q	.	.	.	V	.
19.367	96.9260	33.92	.	Q	.	.	.	V	.
19.383	96.9726	33.79	.	Q	.	.	.	V	.
19.400	97.0190	33.67	.	Q	.	.	.	V	.
19.417	97.0652	33.54	.	Q	.	.	.	V	.
19.433	97.1112	33.41	.	Q	.	.	.	V	.

19.450	97.1570	33.28	.Q	.	.	.	V	.
19.467	97.2027	33.16	.Q	.	.	.	V	.
19.483	97.2482	33.06	.Q	.	.	.	V	.
19.500	97.2936	32.95	.Q	.	.	.	V	.
19.517	97.3389	32.85	.Q	.	.	.	V	.
19.533	97.3840	32.75	.Q	.	.	.	V	.
19.550	97.4289	32.65	.Q	.	.	.	V	.
19.567	97.4738	32.55	.Q	.	.	.	V	.
19.583	97.5185	32.44	.Q	.	.	.	V	.
19.600	97.5630	32.34	.Q	.	.	.	V	.
19.617	97.6074	32.24	.Q	.	.	.	V	.
19.633	97.6517	32.14	.Q	.	.	.	V	.
19.650	97.6958	32.03	.Q	.	.	.	V	.
19.667	97.7398	31.93	.Q	.	.	.	V	.
19.683	97.7836	31.83	.Q	.	.	.	V	.
19.700	97.8273	31.73	.Q	.	.	.	V	.
19.717	97.8709	31.63	.Q	.	.	.	V	.
19.733	97.9143	31.52	.Q	.	.	.	V	.
19.750	97.9576	31.42	.Q	.	.	.	V	.
19.767	98.0007	31.32	.Q	.	.	.	V	.
19.783	98.0437	31.22	.Q	.	.	.	V	.
19.800	98.0866	31.12	.Q	.	.	.	V	.
19.817	98.1293	31.01	.Q	.	.	.	V	.
19.833	98.1719	30.91	.Q	.	.	.	V	.
19.850	98.2143	30.81	.Q	.	.	.	V	.
19.867	98.2566	30.71	.Q	.	.	.	V	.
19.883	98.2988	30.61	.Q	.	.	.	V	.
19.900	98.3408	30.51	.Q	.	.	.	V	.
19.917	98.3827	30.43	.Q	.	.	.	V	.
19.933	98.4245	30.34	.Q	.	.	.	V	.
19.950	98.4662	30.26	.Q	.	.	.	V	.
19.967	98.5078	30.18	.Q	.	.	.	V	.
19.983	98.5492	30.09	.Q	.	.	.	V	.
20.000	98.5905	30.01	.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%	1201.0
10%	1201.0
20%	395.0
30%	235.0
40%	200.0
50%	170.0
60%	130.0
70%	100.0
80%	65.0
90%	35.0

END OF FLOODSCx ROUTING ANALYSIS

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                         Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-4 SUBAREA E                                                    *
* UNIT HYDROGRAPH  - SINGLE AREA MODEL                                  *
* 100-YR EV MARCH 2019 CCHIU                                            *
 ************************************************************************

  FILE NAME: 4E00EVS.DAT
  TIME/DATE OF STUDY: 14:26 03/13/2019

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


************************************************************************
  FLOW PROCESS FROM NODE    810.00 TO NODE    817.00 IS CODE = 1.2
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  171.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.174
    LOW LOSS FRACTION = 0.374
    TIME OF CONCENTRATION(MIN.) =  9.39
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  25
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.40
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.87
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.15
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.94
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.71
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.49

------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =    39.14
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    24.84

------------------------------------------------------------------------
```

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

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	122.6	245.1	367.7	490.2
10.000	7.0368	12.06	Q	V	.	.	.
10.017	7.0534	12.08	Q	V	.	.	.
10.033	7.0701	12.09	Q	V	.	.	.
10.050	7.0867	12.11	Q	V	.	.	.
10.067	7.1034	12.12	Q	V	.	.	.
10.083	7.1202	12.15	Q	V	.	.	.
10.100	7.1370	12.18	Q	V	.	.	.
10.117	7.1538	12.21	Q	V	.	.	.
10.133	7.1706	12.24	Q	V	.	.	.
10.150	7.1875	12.27	.Q	V	.	.	.
10.167	7.2045	12.30	.Q	V	.	.	.
10.183	7.2214	12.33	.Q	V	.	.	.
10.200	7.2385	12.35	.Q	V	.	.	.
10.217	7.2555	12.38	.Q	V	.	.	.
10.233	7.2726	12.40	.Q	V	.	.	.
10.250	7.2897	12.41	.Q	V	.	.	.
10.267	7.3068	12.43	.Q	V	.	.	.
10.283	7.3240	12.44	.Q	V	.	.	.
10.300	7.3411	12.46	.Q	V	.	.	.
10.317	7.3583	12.48	.Q	V	.	.	.
10.333	7.3755	12.49	.Q	V	.	.	.
10.350	7.3927	12.51	.Q	V	.	.	.
10.367	7.4100	12.52	.Q	V	.	.	.
10.383	7.4273	12.54	.Q	V	.	.	.
10.400	7.4446	12.58	.Q	V	.	.	.
10.417	7.4619	12.61	.Q	V	.	.	.
10.433	7.4794	12.64	.Q	V	.	.	.
10.450	7.4968	12.67	.Q	V	.	.	.
10.467	7.5143	12.70	.Q	V	.	.	.
10.483	7.5318	12.73	.Q	V	.	.	.
10.500	7.5494	12.76	.Q	V	.	.	.
10.517	7.5670	12.80	.Q	V	.	.	.
10.533	7.5847	12.82	.Q	V	.	.	.
10.550	7.6024	12.84	.Q	V	.	.	.
10.567	7.6201	12.86	.Q	V	.	.	.
10.583	7.6378	12.87	.Q	V	.	.	.
10.600	7.6556	12.89	.Q	V	.	.	.
10.617	7.6734	12.91	.Q	V	.	.	.
10.633	7.6912	12.92	.Q	V	.	.	.
10.650	7.7090	12.94	.Q	V	.	.	.
10.667	7.7268	12.96	.Q	V	.	.	.
10.683	7.7447	12.97	.Q	V	.	.	.
10.700	7.7626	13.00	.Q	V	.	.	.
10.717	7.7806	13.04	.Q	V	.	.	.
10.733	7.7986	13.07	.Q	V	.	.	.

10.750	7.8166	13.11	.Q	V	.	.	.
10.767	7.8348	13.14	.Q	V	.	.	.
10.783	7.8529	13.18	.Q	V	.	.	.
10.800	7.8711	13.21	.Q	V	.	.	.
10.817	7.8893	13.25	.Q	V	.	.	.
10.833	7.9076	13.28	.Q	V	.	.	.
10.850	7.9260	13.31	.Q	V	.	.	.
10.867	7.9443	13.33	.Q	V	.	.	.
10.883	7.9627	13.34	.Q	V	.	.	.
10.900	7.9811	13.36	.Q	V	.	.	.
10.917	7.9995	13.38	.Q	V	.	.	.
10.933	8.0180	13.40	.Q	V	.	.	.
10.950	8.0365	13.42	.Q	V	.	.	.
10.967	8.0550	13.44	.Q	V	.	.	.
10.983	8.0735	13.45	.Q	V	.	.	.
11.000	8.0921	13.47	.Q	V	.	.	.
11.017	8.1107	13.51	.Q	V	.	.	.
11.033	8.1293	13.55	.Q	V	.	.	.
11.050	8.1481	13.59	.Q	V	.	.	.
11.067	8.1668	13.62	.Q	V	.	.	.
11.083	8.1856	13.66	.Q	V	.	.	.
11.100	8.2045	13.70	.Q	V	.	.	.
11.117	8.2234	13.74	.Q	V	.	.	.
11.133	8.2424	13.78	.Q	V	.	.	.
11.150	8.2614	13.81	.Q	V	.	.	.
11.167	8.2805	13.84	.Q	V	.	.	.
11.183	8.2996	13.86	.Q	V	.	.	.
11.200	8.3187	13.88	.Q	V	.	.	.
11.217	8.3379	13.90	.Q	V	.	.	.
11.233	8.3570	13.92	.Q	V	.	.	.
11.250	8.3762	13.94	.Q	V	.	.	.
11.267	8.3955	13.96	.Q	V	.	.	.
11.283	8.4147	13.98	.Q	V	.	.	.
11.300	8.4340	14.00	.Q	V	.	.	.
11.317	8.4533	14.03	.Q	V	.	.	.
11.333	8.4727	14.07	.Q	V	.	.	.
11.350	8.4922	14.11	.Q	V	.	.	.
11.367	8.5117	14.15	.Q	V	.	.	.
11.383	8.5312	14.20	.Q	V	.	.	.
11.400	8.5508	14.24	.Q	V	.	.	.
11.417	8.5705	14.28	.Q	V	.	.	.
11.433	8.5902	14.32	.Q	V	.	.	.
11.450	8.6100	14.37	.Q	V	.	.	.
11.467	8.6299	14.41	.Q	V	.	.	.
11.483	8.6497	14.43	.Q	V	.	.	.
11.500	8.6697	14.46	.Q	V	.	.	.
11.517	8.6896	14.48	.Q	V	.	.	.
11.533	8.7096	14.50	.Q	V	.	.	.
11.550	8.7296	14.52	.Q	V	.	.	.
11.567	8.7496	14.55	.Q	V	.	.	.
11.583	8.7697	14.57	.Q	V	.	.	.
11.600	8.7898	14.59	.Q	V	.	.	.
11.617	8.8099	14.61	.Q	V	.	.	.
11.633	8.8301	14.65	.Q	V	.	.	.
11.650	8.8503	14.69	.Q	V	.	.	.
11.667	8.8706	14.74	.Q	V	.	.	.
11.683	8.8910	14.79	.Q	V	.	.	.
11.700	8.9114	14.83	.Q	V	.	.	.

11.717	8.9319	14.88	.Q	V.	.	.	.
11.733	8.9525	14.93	.Q	V.	.	.	.
11.750	8.9731	14.98	.Q	V.	.	.	.
11.767	8.9938	15.02	.Q	V.	.	.	.
11.783	9.0146	15.07	.Q	V.	.	.	.
11.800	9.0354	15.10	.Q	V.	.	.	.
11.817	9.0562	15.12	.Q	V.	.	.	.
11.833	9.0770	15.15	.Q	V.	.	.	.
11.850	9.0979	15.17	.Q	V.	.	.	.
11.867	9.1189	15.20	.Q	V.	.	.	.
11.883	9.1398	15.22	.Q	V.	.	.	.
11.900	9.1608	15.25	.Q	V.	.	.	.
11.917	9.1819	15.27	.Q	V.	.	.	.
11.933	9.2029	15.30	.Q	V.	.	.	.
11.950	9.2242	15.46	.Q	V.	.	.	.
11.967	9.2459	15.70	.Q	V.	.	.	.
11.983	9.2678	15.94	.Q	V.	.	.	.
12.000	9.2901	16.17	.Q	V.	.	.	.
12.017	9.3127	16.41	.Q	V.	.	.	.
12.033	9.3356	16.65	.Q	V.	.	.	.
12.050	9.3589	16.89	.Q	V.	.	.	.
12.067	9.3825	17.13	.Q	V.	.	.	.
12.083	9.4064	17.37	.Q	V.	.	.	.
12.100	9.4307	17.65	.Q	V.	.	.	.
12.117	9.4556	18.04	.Q	V.	.	.	.
12.133	9.4810	18.43	.Q	V.	.	.	.
12.150	9.5069	18.82	.Q	V.	.	.	.
12.167	9.5333	19.21	.Q	V.	.	.	.
12.183	9.5603	19.60	.Q	V.	.	.	.
12.200	9.5879	20.00	.Q	V.	.	.	.
12.217	9.6160	20.39	.Q	V.	.	.	.
12.233	9.6446	20.78	.Q	V.	.	.	.
12.250	9.6737	21.15	.Q	V.	.	.	.
12.267	9.7030	21.28	.Q	V.	.	.	.
12.283	9.7324	21.35	.Q	V.	.	.	.
12.300	9.7619	21.41	.Q	V.	.	.	.
12.317	9.7915	21.48	.Q	V	.	.	.
12.333	9.8212	21.54	.Q	V	.	.	.
12.350	9.8510	21.61	.Q	V	.	.	.
12.367	9.8808	21.67	.Q	V	.	.	.
12.383	9.9108	21.74	.Q	V	.	.	.
12.400	9.9408	21.80	.Q	V	.	.	.
12.417	9.9709	21.85	.Q	V	.	.	.
12.433	10.0010	21.89	.Q	V	.	.	.
12.450	10.0312	21.92	.Q	V	.	.	.
12.467	10.0615	21.96	.Q	V	.	.	.
12.483	10.0918	21.99	.Q	V	.	.	.
12.500	10.1221	22.03	.Q	V	.	.	.
12.517	10.1525	22.06	.Q	V	.	.	.
12.533	10.1829	22.10	.Q	V	.	.	.
12.550	10.2134	22.13	.Q	V	.	.	.
12.567	10.2440	22.17	.Q	V	.	.	.
12.583	10.2746	22.24	.Q	V	.	.	.
12.600	10.3053	22.32	.Q	V	.	.	.
12.617	10.3362	22.39	.Q	V	.	.	.
12.633	10.3671	22.47	.Q	V	.	.	.
12.650	10.3982	22.54	.Q	V	.	.	.
12.667	10.4293	22.61	.Q	V	.	.	.

12.683	10.4606	22.69	.Q	V	.	.	.
12.700	10.4919	22.76	.Q	V	.	.	.
12.717	10.5234	22.84	.Q	V	.	.	.
12.733	10.5549	22.89	.Q	V	.	.	.
12.750	10.5865	22.93	.Q	V	.	.	.
12.767	10.6181	22.97	.Q	V	.	.	.
12.783	10.6498	23.01	.Q	V	.	.	.
12.800	10.6815	23.05	.Q	V	.	.	.
12.817	10.7133	23.08	.Q	V	.	.	.
12.833	10.7452	23.12	.Q	V	.	.	.
12.850	10.7771	23.16	.Q	.V	.	.	.
12.867	10.8091	23.20	.Q	.V	.	.	.
12.883	10.8411	23.26	.Q	.V	.	.	.
12.900	10.8732	23.34	.Q	.V	.	.	.
12.917	10.9055	23.43	.Q	.V	.	.	.
12.933	10.9379	23.51	.Q	.V	.	.	.
12.950	10.9704	23.60	.Q	.V	.	.	.
12.967	11.0030	23.68	.Q	.V	.	.	.
12.983	11.0358	23.77	.Q	.V	.	.	.
13.000	11.0686	23.86	.Q	.V	.	.	.
13.017	11.1016	23.94	.Q	.V	.	.	.
13.033	11.1347	24.02	.Q	.V	.	.	.
13.050	11.1679	24.08	.Q	.V	.	.	.
13.067	11.2011	24.12	.Q	.V	.	.	.
13.083	11.2344	24.17	.Q	.V	.	.	.
13.100	11.2677	24.21	.Q	.V	.	.	.
13.117	11.3012	24.26	.Q	.V	.	.	.
13.133	11.3346	24.31	.Q	.V	.	.	.
13.150	11.3682	24.35	.Q	.V	.	.	.
13.167	11.4018	24.40	.Q	.V	.	.	.
13.183	11.4355	24.45	.Q	.V	.	.	.
13.200	11.4692	24.52	. Q	.V	.	.	.
13.217	11.5031	24.62	. Q	.V	.	.	.
13.233	11.5372	24.72	. Q	.V	.	.	.
13.250	11.5714	24.82	. Q	.V	.	.	.
13.267	11.6057	24.92	. Q	.V	.	.	.
13.283	11.6402	25.02	. Q	.V	.	.	.
13.300	11.6748	25.12	. Q	.V	.	.	.
13.317	11.7095	25.22	. Q	.V	.	.	.
13.333	11.7444	25.32	. Q	. V	.	.	.
13.350	11.7794	25.41	. Q	. V	.	.	.
13.367	11.8145	25.47	. Q	. V	.	.	.
13.383	11.8496	25.52	. Q	. V	.	.	.
13.400	11.8849	25.58	. Q	. V	.	.	.
13.417	11.9202	25.63	. Q	. V	.	.	.
13.433	11.9555	25.69	. Q	. V	.	.	.
13.450	11.9910	25.74	. Q	. V	.	.	.
13.467	12.0265	25.80	. Q	. V	.	.	.
13.483	12.0621	25.85	. Q	. V	.	.	.
13.500	12.0978	25.91	. Q	. V	.	.	.
13.517	12.1336	26.01	. Q	. V	.	.	.
13.533	12.1696	26.13	. Q	. V	.	.	.
13.550	12.2058	26.25	. Q	. V	.	.	.
13.567	12.2421	26.36	. Q	. V	.	.	.
13.583	12.2786	26.48	. Q	. V	.	.	.
13.600	12.3152	26.60	. Q	. V	.	.	.
13.617	12.3520	26.72	. Q	. V	.	.	.
13.633	12.3890	26.84	. Q	. V	.	.	.

13.650	12.4261	26.96	. Q	. V	.	.	.	
13.667	12.4634	27.06	. Q	. V	.	.	.	
13.683	12.5008	27.13	. Q	. V	.	.	.	
13.700	12.5382	27.19	. Q	. V	.	.	.	
13.717	12.5758	27.26	. Q	. V	.	.	.	
13.733	12.6134	27.32	. Q	. V	.	.	.	
13.750	12.6511	27.39	. Q	. V	.	.	.	
13.767	12.6889	27.45	. Q	. V	.	.	.	
13.783	12.7269	27.52	. Q	. V	.	.	.	
13.800	12.7649	27.59	. Q	. V	.	.	.	
13.817	12.8029	27.66	. Q	. V	.	.	.	
13.833	12.8412	27.79	. Q	. V	.	.	.	
13.850	12.8797	27.94	. Q	. V	.	.	.	
13.867	12.9184	28.08	. Q	. V	.	.	.	
13.883	12.9573	28.23	. Q	. V	.	.	.	
13.900	12.9964	28.38	. Q	. V	.	.	.	
13.917	13.0357	28.52	. Q	. V	.	.	.	
13.933	13.0751	28.67	. Q	. V	.	.	.	
13.950	13.1148	28.81	. Q	. V	.	.	.	
13.967	13.1547	28.96	. Q	. V	.	.	.	
13.983	13.1947	29.06	. Q	. V	.	.	.	
14.000	13.2349	29.14	. Q	. V	.	.	.	
14.017	13.2751	29.21	. Q	. V	.	.	.	
14.033	13.3154	29.28	. Q	. V	.	.	.	
14.050	13.3559	29.36	. Q	. V	.	.	.	
14.067	13.3964	29.43	. Q	. V	.	.	.	
14.083	13.4371	29.51	. Q	. V	.	.	.	
14.100	13.4778	29.58	. Q	. V	.	.	.	
14.117	13.5187	29.65	. Q	. V	.	.	.	
14.133	13.5596	29.75	. Q	. V	.	.	.	
14.150	13.6008	29.89	. Q	. V	.	.	.	
14.167	13.6422	30.04	. Q	. V	.	.	.	
14.183	13.6838	30.19	. Q	. V	.	.	.	
14.200	13.7255	30.34	. Q	. V	.	.	.	
14.217	13.7675	30.48	. Q	. V	.	.	.	
14.233	13.8097	30.63	. Q	. V	.	.	.	
14.250	13.8521	30.78	. Q	. V	.	.	.	
14.267	13.8947	30.93	. Q	. V	.	.	.	
14.283	13.9375	31.07	. Q	. V	.	.	.	
14.300	13.9805	31.19	. Q	. V	.	.	.	
14.317	14.0236	31.29	. Q	. V	.	.	.	
14.333	14.0668	31.40	. Q	. V	.	.	.	
14.350	14.1102	31.50	. Q	. V	.	.	.	
14.367	14.1538	31.61	. Q	. V	.	.	.	
14.383	14.1974	31.71	. Q	. V	.	.	.	
14.400	14.2413	31.81	. Q	. V	.	.	.	
14.417	14.2852	31.92	. Q	. V	.	.	.	
14.433	14.3293	32.02	. Q	. V	.	.	.	
14.450	14.3736	32.18	. Q	. V	.	.	.	
14.467	14.4183	32.42	. Q	. V	.	.	.	
14.483	14.4633	32.66	. Q	. V	.	.	.	
14.500	14.5086	32.90	. Q	. V	.	.	.	
14.517	14.5542	33.14	. Q	. V	.	.	.	
14.533	14.6002	33.38	. Q	. V	.	.	.	
14.550	14.6465	33.62	. Q	. V	.	.	.	
14.567	14.6931	33.85	. Q	. V	.	.	.	
14.583	14.7401	34.09	. Q	. V	.	.	.	
14.600	14.7874	34.32	. Q	. V	.	.	.	

14.617	14.8349	34.47	. Q	.	V .	.	.	
14.633	14.8825	34.61	. Q	.	V .	.	.	
14.650	14.9304	34.75	. Q	.	V .	.	.	
14.667	14.9785	34.89	. Q	.	V .	.	.	
14.683	15.0267	35.03	. Q	.	V .	.	.	
14.700	15.0752	35.17	. Q	.	V .	.	.	
14.717	15.1238	35.31	. Q	.	V .	.	.	
14.733	15.1726	35.45	. Q	.	V .	.	.	
14.750	15.2216	35.59	. Q	.	V .	.	.	
14.767	15.2710	35.85	. Q	.	V .	.	.	
14.783	15.3209	36.18	. Q	.	V .	.	.	
14.800	15.3712	36.51	. Q	.	V .	.	.	
14.817	15.4219	36.85	. Q	.	V .	.	.	
14.833	15.4731	37.18	. Q	.	V .	.	.	
14.850	15.5248	37.51	. Q	.	V .	.	.	
14.867	15.5769	37.85	. Q	.	V .	.	.	
14.883	15.6295	38.18	. Q	.	V .	.	.	
14.900	15.6826	38.51	. Q	.	V .	.	.	
14.917	15.7360	38.81	. Q	.	V .	.	.	
14.933	15.7898	39.02	. Q	.	V .	.	.	
14.950	15.8438	39.22	. Q	.	V .	.	.	
14.967	15.8981	39.42	. Q	.	V .	.	.	
14.983	15.9527	39.62	. Q	.	V .	.	.	
15.000	16.0075	39.82	. Q	.	V .	.	.	
15.017	16.0626	40.03	. Q	.	V .	.	.	
15.033	16.1181	40.23	. Q	.	V .	.	.	
15.050	16.1737	40.43	. Q	.	V .	.	.	
15.067	16.2297	40.65	. Q	.	V .	.	.	
15.083	16.2864	41.12	. Q	.	V .	.	.	
15.100	16.3438	41.67	. Q	.	V .	.	.	
15.117	16.4019	42.22	. Q	.	V .	.	.	
15.133	16.4608	42.76	. Q	.	V .	.	.	
15.150	16.5205	43.31	. Q	.	V .	.	.	
15.167	16.5809	43.86	. Q	.	V .	.	.	
15.183	16.6420	44.40	. Q	.	V .	.	.	
15.200	16.7040	44.95	. Q	.	V .	.	.	
15.217	16.7666	45.50	. Q	.	V .	.	.	
15.233	16.8300	46.03	. Q	.	V .	.	.	
15.250	16.8942	46.56	. Q	.	V .	.	.	
15.267	16.9590	47.08	. Q	.	V .	.	.	
15.283	17.0246	47.61	. Q	.	V .	.	.	
15.300	17.0909	48.13	. Q	.	V .	.	.	
15.317	17.1579	48.66	. Q	.	V .	.	.	
15.333	17.2257	49.18	. Q	.	V .	.	.	
15.350	17.2941	49.71	. Q	.	V .	.	.	
15.367	17.3633	50.23	. Q	.	V .	.	.	
15.383	17.4331	50.68	. Q	.	V .	.	.	
15.400	17.5031	50.79	. Q	.	V .	.	.	
15.417	17.5731	50.84	. Q	.	V .	.	.	
15.433	17.6432	50.90	. Q	.	V .	.	.	
15.450	17.7134	50.95	. Q	.	V .	.	.	
15.467	17.7837	51.01	. Q	.	V .	.	.	
15.483	17.8540	51.06	. Q	.	V .	.	.	
15.500	17.9244	51.12	. Q	.	V .	.	.	
15.517	17.9949	51.17	. Q	.	V .	.	.	
15.533	18.0655	51.24	. Q	.	V .	.	.	
15.550	18.1370	51.96	. Q	.	V .	.	.	
15.567	18.2101	53.02	. Q	.	V .	.	.	

15.583	18.2846	54.09	. Q . V . . .
15.600	18.3605	55.15	. Q . V . . .
15.617	18.4380	56.22	. Q . V . . .
15.633	18.5169	57.28	. Q . V . . .
15.650	18.5972	58.35	. Q . V. . .
15.667	18.6791	59.41	. Q . V. . .
15.683	18.7624	60.48	. Q . V. . .
15.700	18.8488	62.71	. Q . V. . .
15.717	18.9418	67.54	. Q . V. . .
15.733	19.0416	72.46	. Q . V. . .
15.750	19.1482	77.39	. Q . V. . .
15.767	19.2616	82.31	. Q . V. . .
15.783	19.3817	87.23	. Q . V. . .
15.800	19.5087	92.15	. Q . V. . .
15.817	19.6424	97.07	. Q . V . . .
15.833	19.7829	102.00	. Q . V . . .
15.850	19.9301	106.93	. Q . V . . .
15.867	20.0843	111.92	. Q. V . . .
15.883	20.2454	116.93	. Q. V . . .
15.900	20.4133	121.94	. Q. V . . .
15.917	20.5882	126.95	. Q .V . . .
15.933	20.7699	131.96	. Q .V . . .
15.950	20.9586	136.97	. .Q .V . . .
15.967	21.1542	141.98	. .Q .V . . .
15.983	21.3567	146.99	. .Q .V . . .
16.000	21.5660	152.00	. . Q . V . . .
16.017	21.8035	172.38	. . Q . V . . .
16.033	22.0902	208.13	. . Q . V . . .
16.050	22.4261	243.88	. . Q. V . . .
16.067	22.8113	279.64	. . . QV . . .
16.083	23.2457	315.39	. . . V Q . . .
16.100	23.7293	351.14	. . . V Q . . .
16.117	24.2622	386.89	. . . V .Q . .
16.133	24.8444	422.64	. . . V . Q . .
16.150	25.4758	458.39	. . . V . Q .
16.167	26.1510	490.21	. . . V . Q
16.183	26.7590	441.39	. . . V . Q .
16.200	27.3064	397.42	. . . V . Q . .
16.217	27.7932	353.44	. . . Q . . .
16.233	28.2194	309.46	. . . Q V . . .
16.250	28.5851	265.49	. . .Q V. . .
16.267	28.8902	221.51	. . Q . V. . .
16.283	29.1348	177.53	. . Q . V. . .
16.300	29.3187	133.56	. . Q . V. . .
16.317	29.4435	90.58	. Q . . V . .
16.333	29.5472	75.31	. Q . . V . .
16.350	29.6472	72.58	. Q . . V . .
16.367	29.7434	69.86	. Q . . V . .
16.383	29.8359	67.14	. Q . . V . .
16.400	29.9246	64.41	. Q . . V . .
16.417	30.0096	61.69	. Q . . V . .
16.433	30.0908	58.97	. Q . . V . .
16.450	30.1683	56.24	. Q . . V . .
16.467	30.2420	53.52	. Q . . V . .
16.483	30.3128	51.41	. Q . . V . .
16.500	30.3823	50.44	. Q . . .V . .
16.517	30.4505	49.50	. Q . . .V . .
16.533	30.5174	48.56	. Q . . .V . .

16.550	30.5830	47.62	. Q . . .V . .
16.567	30.6472	46.68	. Q . . .V . .
16.583	30.7102	45.74	. Q . . .V . .
16.600	30.7719	44.79	. Q . . .V . .
16.617	30.8323	43.85	. Q . . .V . .
16.633	30.8915	42.94	. Q . . .V . .
16.650	30.9497	42.28	. Q . . .V . .
16.667	31.0071	41.67	. Q . . .V . .
16.683	31.0637	41.06	. Q . . .V . .
16.700	31.1194	40.44	. Q . . .V . .
16.717	31.1743	39.83	. Q . . .V . .
16.733	31.2283	39.22	. Q . . .V . .
16.750	31.2815	38.61	. Q . . .V . .
16.767	31.3338	38.00	. Q . . . V . .
16.783	31.3853	37.39	. Q . . . V . .
16.800	31.4361	36.88	. Q . . . V . .
16.817	31.4863	36.46	. Q . . . V . .
16.833	31.5359	36.03	. Q . . . V . .
16.850	31.5850	35.61	. Q . . . V . .
16.867	31.6335	35.19	. Q . . . V . .
16.883	31.6814	34.77	. Q . . . V . .
16.900	31.7287	34.35	. Q . . . V . .
16.917	31.7754	33.93	. Q . . . V . .
16.933	31.8216	33.51	. Q . . . V . .
16.950	31.8672	33.11	. Q . . . V . .
16.967	31.9123	32.79	. Q . . . V . .
16.983	31.9571	32.48	. Q . . . V . .
17.000	32.0014	32.16	. 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%	1021.0
10%	360.0
20%	145.0
30%	90.0
40%	75.0
50%	60.0
60%	50.0
70%	40.0
80%	25.0
90%	15.0

END OF FLOODSCx ROUTING ANALYSIS

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

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

 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-4 SUBAREA F                                                      *
* UNIT HYDROGRAPH  - SINGLE AREA MODEL                                    *
* 100-YR EV ROKAMOTO AUGUST 2018                                          *
 **************************************************************************

  FILE NAME: 4F00EVS.DAT
  TIME/DATE OF STUDY: 07:50 08/15/2018

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


****************************************************************************
  FLOW PROCESS FROM NODE    920.00 TO NODE    905.00 IS CODE = 1.2
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
============================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =  553.80
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.254
    LOW LOSS FRACTION = 0.434
    TIME OF CONCENTRATION(MIN.) = 16.64
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  25
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.40
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.87
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.15
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.94
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.71
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.49

----------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =   115.25
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    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =    91.96

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

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	271.1	542.1	813.2	1084.3
10.000	20.5032	34.94	.Q	V .	.	.	.
10.017	20.5514	35.02	.Q	V .	.	.	.
10.033	20.5998	35.10	.Q	V .	.	.	.
10.050	20.6483	35.18	.Q	V .	.	.	.
10.067	20.6968	35.26	.Q	V .	.	.	.
10.083	20.7455	35.34	.Q	V .	.	.	.
10.100	20.7943	35.42	.Q	V .	.	.	.
10.117	20.8432	35.50	.Q	V .	.	.	.
10.133	20.8922	35.58	.Q	V .	.	.	.
10.150	20.9413	35.66	.Q	V .	.	.	.
10.167	20.9906	35.74	.Q	V .	.	.	.
10.183	21.0399	35.82	.Q	V .	.	.	.
10.200	21.0893	35.87	.Q	V .	.	.	.
10.217	21.1388	35.91	.Q	V .	.	.	.
10.233	21.1883	35.96	.Q	V .	.	.	.
10.250	21.2379	36.00	.Q	V .	.	.	.
10.267	21.2875	36.04	.Q	V .	.	.	.
10.283	21.3372	36.09	.Q	V .	.	.	.
10.300	21.3870	36.13	.Q	V .	.	.	.
10.317	21.4368	36.17	.Q	V .	.	.	.
10.333	21.4867	36.22	.Q	V .	.	.	.
10.350	21.5367	36.26	.Q	V .	.	.	.
10.367	21.5867	36.30	.Q	V .	.	.	.
10.383	21.6367	36.35	.Q	V .	.	.	.
10.400	21.6868	36.39	.Q	V .	.	.	.
10.417	21.7370	36.43	.Q	V .	.	.	.
10.433	21.7873	36.47	.Q	V .	.	.	.
10.450	21.8376	36.52	.Q	V .	.	.	.
10.467	21.8880	36.58	.Q	V .	.	.	.
10.483	21.9385	36.67	.Q	V .	.	.	.
10.500	21.9891	36.76	.Q	V .	.	.	.
10.517	22.0399	36.86	.Q	V .	.	.	.
10.533	22.0908	36.95	.Q	V .	.	.	.
10.550	22.1418	37.04	.Q	V .	.	.	.
10.567	22.1929	37.14	.Q	V .	.	.	.
10.583	22.2442	37.23	.Q	V .	.	.	.
10.600	22.2956	37.32	.Q	V .	.	.	.
10.617	22.3472	37.42	.Q	V .	.	.	.
10.633	22.3988	37.51	.Q	V .	.	.	.
10.650	22.4506	37.60	.Q	V .	.	.	.
10.667	22.5026	37.70	.Q	V .	.	.	.
10.683	22.5546	37.79	.Q	V .	.	.	.
10.700	22.6068	37.89	.Q	V .	.	.	.
10.717	22.6591	37.98	.Q	V .	.	.	.
10.733	22.7116	38.07	.Q	V .	.	.	.

10.750	22.7641	38.14	.Q	V .	.	.	.
10.767	22.8167	38.19	.Q	V .	.	.	.
10.783	22.8694	38.24	.Q	V .	.	.	.
10.800	22.9221	38.29	.Q	V .	.	.	.
10.817	22.9749	38.34	.Q	V .	.	.	.
10.833	23.0278	38.39	.Q	V .	.	.	.
10.850	23.0807	38.44	.Q	V .	.	.	.
10.867	23.1338	38.49	.Q	V .	.	.	.
10.883	23.1869	38.54	.Q	V .	.	.	.
10.900	23.2400	38.60	.Q	V .	.	.	.
10.917	23.2933	38.65	.Q	V .	.	.	.
10.933	23.3466	38.70	.Q	V .	.	.	.
10.950	23.3999	38.75	.Q	V .	.	.	.
10.967	23.4534	38.80	.Q	V .	.	.	.
10.983	23.5069	38.85	.Q	V .	.	.	.
11.000	23.5605	38.90	.Q	V .	.	.	.
11.017	23.6141	38.96	.Q	V .	.	.	.
11.033	23.6679	39.06	.Q	V .	.	.	.
11.050	23.7219	39.17	.Q	V .	.	.	.
11.067	23.7760	39.28	.Q	V .	.	.	.
11.083	23.8303	39.40	.Q	V .	.	.	.
11.100	23.8847	39.51	.Q	V .	.	.	.
11.117	23.9393	39.62	.Q	V .	.	.	.
11.133	23.9940	39.73	.Q	V .	.	.	.
11.150	24.0488	39.84	.Q	V .	.	.	.
11.167	24.1039	39.95	.Q	V .	.	.	.
11.183	24.1591	40.06	.Q	V .	.	.	.
11.200	24.2144	40.17	.Q	V .	.	.	.
11.217	24.2699	40.28	.Q	V .	.	.	.
11.233	24.3255	40.39	.Q	V .	.	.	.
11.250	24.3813	40.50	.Q	V .	.	.	.
11.267	24.4372	40.61	.Q	V .	.	.	.
11.283	24.4933	40.73	.Q	V .	.	.	.
11.300	24.5496	40.82	.Q	V .	.	.	.
11.317	24.6059	40.88	.Q	V .	.	.	.
11.333	24.6623	40.94	.Q	V .	.	.	.
11.350	24.7187	41.00	.Q	V .	.	.	.
11.367	24.7753	41.06	.Q	V .	.	.	.
11.383	24.8319	41.12	.Q	V .	.	.	.
11.400	24.8886	41.18	.Q	V .	.	.	.
11.417	24.9455	41.24	.Q	V .	.	.	.
11.433	25.0023	41.30	.Q	V .	.	.	.
11.450	25.0593	41.36	.Q	V .	.	.	.
11.467	25.1164	41.42	.Q	V .	.	.	.
11.483	25.1735	41.49	.Q	V .	.	.	.
11.500	25.2307	41.55	.Q	V .	.	.	.
11.517	25.2881	41.61	.Q	V .	.	.	.
11.533	25.3454	41.67	.Q	V .	.	.	.
11.550	25.4029	41.73	.Q	V .	.	.	.
11.567	25.4605	41.79	.Q	V .	.	.	.
11.583	25.5182	41.90	.Q	V .	.	.	.
11.600	25.5761	42.04	.Q	V .	.	.	.
11.617	25.6342	42.17	.Q	V .	.	.	.
11.633	25.6925	42.31	.Q	V .	.	.	.
11.650	25.7509	42.44	.Q	V .	.	.	.
11.667	25.8096	42.57	.Q	V .	.	.	.
11.683	25.8684	42.71	.Q	V .	.	.	.
11.700	25.9274	42.84	.Q	V .	.	.	.

11.717	25.9866	42.97	.Q	V.	.	.	.
11.733	26.0460	43.11	.Q	V.	.	.	.
11.750	26.1055	43.24	.Q	V.	.	.	.
11.767	26.1653	43.38	.Q	V.	.	.	.
11.783	26.2252	43.51	.Q	V.	.	.	.
11.800	26.2853	43.64	.Q	V.	.	.	.
11.817	26.3456	43.78	.Q	V.	.	.	.
11.833	26.4061	43.91	.Q	V.	.	.	.
11.850	26.4668	44.04	.Q	V.	.	.	.
11.867	26.5275	44.11	.Q	V.	.	.	.
11.883	26.5884	44.19	.Q	V.	.	.	.
11.900	26.6494	44.26	.Q	V.	.	.	.
11.917	26.7104	44.34	.Q	V.	.	.	.
11.933	26.7716	44.41	.Q	V.	.	.	.
11.950	26.8329	44.49	.Q	V.	.	.	.
11.967	26.8943	44.56	.Q	V.	.	.	.
11.983	26.9558	44.63	.Q	V.	.	.	.
12.000	27.0173	44.71	.Q	V.	.	.	.
12.017	27.0790	44.78	.Q	V.	.	.	.
12.033	27.1408	44.86	.Q	V.	.	.	.
12.050	27.2027	44.93	.Q	V.	.	.	.
12.067	27.2647	45.01	.Q	V.	.	.	.
12.083	27.3268	45.08	.Q	V.	.	.	.
12.100	27.3890	45.15	.Q	V.	.	.	.
12.117	27.4513	45.23	.Q	V.	.	.	.
12.133	27.5143	45.76	.Q	V.	.	.	.
12.150	27.5788	46.84	.Q	V.	.	.	.
12.167	27.6448	47.92	.Q	V.	.	.	.
12.183	27.7123	48.99	.Q	V.	.	.	.
12.200	27.7813	50.07	.Q	V.	.	.	.
12.217	27.8517	51.15	.Q	V.	.	.	.
12.233	27.9237	52.22	.Q	V.	.	.	.
12.250	27.9971	53.30	.Q	V.	.	.	.
12.267	28.0720	54.38	. Q	V.	.	.	.
12.283	28.1484	55.46	. Q	V.	.	.	.
12.300	28.2262	56.53	. Q	V.	.	.	.
12.317	28.3056	57.61	. Q	V.	.	.	.
12.333	28.3864	58.69	. Q	V.	.	.	.
12.350	28.4687	59.76	. Q	V.	.	.	.
12.367	28.5525	60.84	. Q	V.	.	.	.
12.383	28.6378	61.92	. Q	V.	.	.	.
12.400	28.7245	62.94	. Q	V.	.	.	.
12.417	28.8117	63.27	. Q	V.	.	.	.
12.433	28.8990	63.37	. Q	V	.	.	.
12.450	28.9864	63.47	. Q	V	.	.	.
12.467	29.0740	63.57	. Q	V	.	.	.
12.483	29.1616	63.67	. Q	V	.	.	.
12.500	29.2495	63.77	. Q	V	.	.	.
12.517	29.3375	63.87	. Q	V	.	.	.
12.533	29.4256	63.97	. Q	V	.	.	.
12.550	29.5138	64.07	. Q	V	.	.	.
12.567	29.6022	64.17	. Q	V	.	.	.
12.583	29.6907	64.27	. Q	V	.	.	.
12.600	29.7794	64.37	. Q	V	.	.	.
12.617	29.8682	64.47	. Q	V	.	.	.
12.633	29.9571	64.57	. Q	V	.	.	.
12.650	30.0462	64.67	. Q	V	.	.	.
12.667	30.1354	64.76	. Q	V	.	.	.

12.683	30.2248	64.89	. Q	V	.	.	.
12.700	30.3145	65.11	. Q	V	.	.	.
12.717	30.4045	65.34	. Q	V	.	.	.
12.733	30.4948	65.56	. Q	V	.	.	.
12.750	30.5854	65.79	. Q	V	.	.	.
12.767	30.6763	66.01	. Q	V	.	.	.
12.783	30.7675	66.23	. Q	V	.	.	.
12.800	30.8591	66.46	. Q	V	.	.	.
12.817	30.9509	66.68	. Q	V	.	.	.
12.833	31.0431	66.91	. Q	V	.	.	.
12.850	31.1356	67.13	. Q	V	.	.	.
12.867	31.2283	67.36	. Q	V	.	.	.
12.883	31.3214	67.58	. Q	V	.	.	.
12.900	31.4148	67.81	. Q	V	.	.	.
12.917	31.5085	68.03	. Q	V	.	.	.
12.933	31.6025	68.26	. Q	V	.	.	.
12.950	31.6969	68.48	. Q	.V	.	.	.
12.967	31.7914	68.65	. Q	.V	.	.	.
12.983	31.8862	68.78	. Q	.V	.	.	.
13.000	31.9811	68.91	. Q	.V	.	.	.
13.017	32.0762	69.04	. Q	.V	.	.	.
13.033	32.1715	69.16	. Q	.V	.	.	.
13.050	32.2669	69.29	. Q	.V	.	.	.
13.067	32.3625	69.42	. Q	.V	.	.	.
13.083	32.4583	69.55	. Q	.V	.	.	.
13.100	32.5543	69.67	. Q	.V	.	.	.
13.117	32.6504	69.80	. Q	.V	.	.	.
13.133	32.7467	69.93	. Q	.V	.	.	.
13.150	32.8432	70.06	. Q	.V	.	.	.
13.167	32.9399	70.18	. Q	.V	.	.	.
13.183	33.0368	70.31	. Q	.V	.	.	.
13.200	33.1338	70.44	. Q	.V	.	.	.
13.217	33.2310	70.57	. Q	.V	.	.	.
13.233	33.3284	70.71	. Q	.V	.	.	.
13.250	33.4261	70.97	. Q	.V	.	.	.
13.267	33.5243	71.27	. Q	.V	.	.	.
13.283	33.6229	71.56	. Q	.V	.	.	.
13.300	33.7218	71.85	. Q	.V	.	.	.
13.317	33.8212	72.15	. Q	.V	.	.	.
13.333	33.9210	72.44	. Q	.V	.	.	.
13.350	34.0212	72.74	. Q	.V	.	.	.
13.367	34.1218	73.03	. Q	.V	.	.	.
13.383	34.2228	73.33	. Q	.V	.	.	.
13.400	34.3242	73.62	. Q	.V	.	.	.
13.417	34.4260	73.91	. Q	.V	.	.	.
13.433	34.5282	74.21	. Q	.V	.	.	.
13.450	34.6308	74.50	. Q	. V	.	.	.
13.467	34.7339	74.80	. Q	. V	.	.	.
13.483	34.8373	75.09	. Q	. V	.	.	.
13.500	34.9411	75.38	. Q	. V	.	.	.
13.517	35.0453	75.64	. Q	. V	.	.	.
13.533	35.1498	75.82	. Q	. V	.	.	.
13.550	35.2544	75.99	. Q	. V	.	.	.
13.567	35.3593	76.16	. Q	. V	.	.	.
13.583	35.4645	76.33	. Q	. V	.	.	.
13.600	35.5698	76.50	. Q	. V	.	.	.
13.617	35.6755	76.68	. Q	. V	.	.	.
13.633	35.7813	76.85	. Q	. V	.	.	.

13.650	35.8874	77.02	. Q	. V	.	.	.	
13.667	35.9937	77.19	. Q	. V	.	.	.	
13.683	36.1003	77.36	. Q	. V	.	.	.	
13.700	36.2071	77.53	. Q	. V	.	.	.	
13.717	36.3141	77.70	. Q	. V	.	.	.	
13.733	36.4214	77.87	. Q	. V	.	.	.	
13.750	36.5289	78.05	. Q	. V	.	.	.	
13.767	36.6366	78.22	. Q	. V	.	.	.	
13.783	36.7446	78.39	. Q	. V	.	.	.	
13.800	36.8530	78.71	. Q	. V	.	.	.	
13.817	36.9620	79.12	. Q	. V	.	.	.	
13.833	37.0715	79.52	. Q	. V	.	.	.	
13.850	37.1816	79.93	. Q	. V	.	.	.	
13.867	37.2923	80.34	. Q	. V	.	.	.	
13.883	37.4035	80.75	. Q	. V	.	.	.	
13.900	37.5153	81.16	. Q	. V	.	.	.	
13.917	37.6276	81.57	. Q	. V	.	.	.	
13.933	37.7405	81.97	. Q	. V	.	.	.	
13.950	37.8540	82.38	. Q	. V	.	.	.	
13.967	37.9681	82.79	. Q	. V	.	.	.	
13.983	38.0827	83.20	. Q	. V	.	.	.	
14.000	38.1978	83.61	. Q	. V	.	.	.	
14.017	38.3135	84.02	. Q	. V	.	.	.	
14.033	38.4298	84.43	. Q	. V	.	.	.	
14.050	38.5467	84.83	. Q	. V	.	.	.	
14.067	38.6641	85.22	. Q	. V	.	.	.	
14.083	38.7817	85.44	. Q	. V	.	.	.	
14.100	38.8997	85.63	. Q	. V	.	.	.	
14.117	39.0179	85.82	. Q	. V	.	.	.	
14.133	39.1364	86.01	. Q	. V	.	.	.	
14.150	39.2551	86.20	. Q	. V	.	.	.	
14.167	39.3741	86.39	. Q	. V	.	.	.	
14.183	39.4934	86.59	. Q	. V	.	.	.	
14.200	39.6129	86.78	. Q	. V	.	.	.	
14.217	39.7327	86.97	. Q	. V	.	.	.	
14.233	39.8528	87.16	. Q	. V	.	.	.	
14.250	39.9731	87.35	. Q	. V	.	.	.	
14.267	40.0937	87.54	. Q	. V	.	.	.	
14.283	40.2145	87.73	. Q	. V	.	.	.	
14.300	40.3356	87.93	. Q	. V	.	.	.	
14.317	40.4570	88.12	. Q	. V	.	.	.	
14.333	40.5786	88.31	. Q	. V	.	.	.	
14.350	40.7007	88.65	. Q	. V	.	.	.	
14.367	40.8237	89.25	. Q	. V	.	.	.	
14.383	40.9474	89.86	. Q	. V	.	.	.	
14.400	41.0720	90.47	. Q	. V	.	.	.	
14.417	41.1975	91.08	. Q	. V	.	.	.	
14.433	41.3238	91.69	. Q	. V	.	.	.	
14.450	41.4509	92.30	. Q	. V	.	.	.	
14.467	41.5789	92.91	. Q	. V	.	.	.	
14.483	41.7077	93.52	. Q	. V	.	.	.	
14.500	41.8373	94.12	. Q	. V	.	.	.	
14.517	41.9678	94.73	. Q	. V	.	.	.	
14.533	42.0991	95.34	. Q	. V	.	.	.	
14.550	42.2313	95.95	. Q	. V	.	.	.	
14.567	42.3643	96.56	. Q	. V	.	.	.	
14.583	42.4981	97.17	. Q	. V	.	.	.	
14.600	42.6328	97.78	. Q	. V	.	.	.	

14.617	42.7683	98.39	. Q	. V	.	.	.	
14.633	42.9045	98.85	. Q	. V	.	.	.	
14.650	43.0412	99.26	. Q	. V	.	.	.	
14.667	43.1785	99.66	. Q	. V	.	.	.	
14.683	43.3163	100.06	. Q	. V	.	.	.	
14.700	43.4547	100.46	. Q	. V	.	.	.	
14.717	43.5936	100.87	. Q	. V	.	.	.	
14.733	43.7331	101.27	. Q	. V	.	.	.	
14.750	43.8732	101.67	. Q	. V	.	.	.	
14.767	44.0138	102.07	. Q	. V	.	.	.	
14.783	44.1549	102.47	. Q	. V	.	.	.	
14.800	44.2966	102.88	. Q	. V	.	.	.	
14.817	44.4389	103.28	. Q	. V	.	.	.	
14.833	44.5817	103.68	. Q	. V	.	.	.	
14.850	44.7251	104.08	. Q	. V	.	.	.	
14.867	44.8690	104.49	. Q	. V	.	.	.	
14.883	45.0134	104.89	. Q	. V	.	.	.	
14.900	45.1586	105.40	. Q	. V	.	.	.	
14.917	45.3053	106.45	. Q	. V	.	.	.	
14.933	45.4534	107.58	. Q	. V	.	.	.	
14.950	45.6032	108.70	. Q	. V	.	.	.	
14.967	45.7544	109.82	. Q	. V	.	.	.	
14.983	45.9072	110.94	. Q	. V	.	.	.	
15.000	46.0616	112.06	. Q	. V	.	.	.	
15.017	46.2175	113.18	. Q	. V	.	.	.	
15.033	46.3749	114.30	. Q	. V	.	.	.	
15.050	46.5339	115.42	. Q	. V	.	.	.	
15.067	46.6944	116.54	. Q	. V	.	.	.	
15.083	46.8565	117.66	. Q	. V	.	.	.	
15.100	47.0201	118.78	. Q	. V	.	.	.	
15.117	47.1852	119.90	. Q	. V	.	.	.	
15.133	47.3519	121.02	. Q	. V	.	.	.	
15.150	47.5201	122.14	. Q	. V	.	.	.	
15.167	47.6899	123.26	. Q	. V	.	.	.	
15.183	47.8611	124.26	. Q	. V	.	.	.	
15.200	48.0334	125.09	. Q	. V	.	.	.	
15.217	48.2068	125.92	. Q	. V	.	.	.	
15.233	48.3814	126.75	. Q	. V	.	.	.	
15.250	48.5571	127.58	. Q	. V	.	.	.	
15.267	48.7340	128.41	. Q	. V	.	.	.	
15.283	48.9120	129.24	. Q	. V	.	.	.	
15.300	49.0911	130.07	. Q	. V	.	.	.	
15.317	49.2714	130.90	. Q	. V	.	.	.	
15.333	49.4529	131.73	. Q	. V	.	.	.	
15.350	49.6355	132.56	. Q	. V	.	.	.	
15.367	49.8192	133.39	. Q	. V	.	.	.	
15.383	50.0041	134.22	. Q	. V	.	.	.	
15.400	50.1901	135.05	. Q	. V	.	.	.	
15.417	50.3773	135.88	. Q	. V	.	.	.	
15.433	50.5656	136.71	. Q	. V	.	.	.	
15.450	50.7551	137.57	. Q	. V	.	.	.	
15.467	50.9464	138.94	. Q	. V	.	.	.	
15.483	51.1399	140.49	. Q	. V	.	.	.	
15.500	51.3356	142.04	. Q	. V	.	.	.	
15.517	51.5334	143.60	. Q	. V	.	.	.	
15.533	51.7333	145.15	. Q	. V	.	.	.	
15.550	51.9354	146.71	. Q	. V	.	.	.	
15.567	52.1396	148.26	. Q	. V	.	.	.	

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 15.583     52.3460    149.82  .    Q    .       V .         .         .
 15.600     52.5545    151.37  .    Q    .       V .         .         .
 15.617     52.7651    152.93  .    Q    .       V .         .         .
 15.633     52.9779    154.48  .    Q    .       V .         .         .
 15.650     53.1928    156.04  .    Q    .       V .         .         .
 15.667     53.4099    157.59  .    Q    .       V .         .         .
 15.683     53.6291    159.15  .    Q    .       V .         .         .
 15.700     53.8505    160.70  .    Q    .       V .         .         .
 15.717     54.0740    162.26  .    Q    .       V .         .         .
 15.733     54.3013    165.08  .     Q   .       V .         .         .
 15.750     54.5389    172.44  .     Q   .       V .         .         .
 15.767     54.7871    180.20  .     Q   .        V.         .         .
 15.783     55.0460    187.96  .     Q   .        V.         .         .
 15.800     55.3156    195.73  .      Q  .        V.         .         .
 15.817     55.5959    203.49  .      Q  .        V.         .         .
 15.833     55.8868    211.25  .      Q  .        V.         .         .
 15.850     56.1885    219.01  .       Q .        V.         .         .
 15.867     56.5009    226.77  .       Q .        V.         .         .
 15.883     56.8239    234.53  .       Q .        V.         .         .
 15.900     57.1577    242.30  .       Q .        V.         .         .
 15.917     57.5021    250.06  .        Q.        V.         .         .
 15.933     57.8572    257.82  .        Q.         V         .         .
 15.950     58.2230    265.58  .        Q.         V         .         .
 15.967     58.5995    273.34  .         Q         V         .         .
 15.983     58.9867    281.10  .         Q         V         .         .
 16.000     59.3846    288.87  .         Q         V         .         .
 16.017     59.8206    316.53  .         .Q        V         .         .
 16.033     60.3221    364.10  .         .  Q      V         .         .
 16.050     60.8891    411.67  .         .    Q    .V        .         .
 16.067     61.5217    459.24  .         .     Q   .V        .         .
 16.083     62.2198    506.81  .         .       Q .V        .         .
 16.100     62.9834    554.38  .         .         QV        .         .
 16.117     63.8125    601.95  .         .         . Q       .         .
 16.133     64.7072    649.51  .         .         . VQ      .         .
 16.150     65.6673    697.08  .         .         . V  Q    .         .
 16.167     66.6930    744.65  .         .         .  V   Q  .         .
 16.183     67.7842    792.22  .         .         .  V     Q.         .
 16.200     68.9410    839.79  .         .         .  V      Q         .
 16.217     70.1632    887.36  .         .         .   V     . Q       .
 16.233     71.4510    934.93  .         .         .   V     .   Q     .
 16.250     72.8043    982.50  .         .         .    V    .    Q    .
 16.267     74.2231   1030.07  .         .         .    V    .     Q   .
 16.283     75.7167   1084.30  .         .         .     V   .       Q
 16.300     77.1432   1035.64  .         .         .     V   .      Q .
 16.317     78.4917    979.05  .         .         .      V  .    Q    .
 16.333     79.7623    922.46  .         .         .      V  .   Q     .
 16.350     80.9550    865.88  .         .         .       V .Q       .
 16.367     82.0697    809.29  .         .         .       VQ.        .
 16.383     83.1065    752.71  .         .         .      QV .        .
 16.400     84.0653    696.12  .         .         .    Q  V.         .
 16.417     84.9462    639.53  .         .         .  Q    V.         .
 16.433     85.7492    582.95  .         .         .Q      V.         .
 16.450     86.4742    526.36  .         .        Q.        V         .
 16.467     87.1213    469.77  .         .     Q  .         V         .
 16.483     87.6904    413.19  .         .   Q    .         V         .
 16.500     88.1816    356.60  .         .  Q     .         V         .
 16.517     88.5948    300.01  .         .Q       .         V         .
 16.533     88.9301    243.43  .       Q .        .         V         .
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 16.550     89.1875    186.84  .     Q   .         .         V         .
 16.567     89.3865    144.47  .    Q    .         .         .V        .
 16.583     89.5801    140.56  .    Q    .         .         .V        .
 16.600     89.7713    138.81  .    Q    .         .         .V        .
 16.617     89.9601    137.05  .    Q    .         .         .V        .
 16.633     90.1464    135.29  .   Q     .         .         .V        .
 16.650     90.3304    133.54  .   Q     .         .         .V        .
 16.667     90.5119    131.78  .   Q     .         .         .V        .
 16.683     90.6910    130.03  .   Q     .         .         .V        .
 16.700     90.8677    128.27  .   Q     .         .         .V        .
 16.717     91.0419    126.51  .   Q     .         .         .V        .
 16.733     91.2138    124.76  .   Q     .         .         .V        .
 16.750     91.3832    123.00  .   Q     .         .         .V        .
 16.767     91.5502    121.25  .   Q     .         .         .V        .
 16.783     91.7148    119.49  .   Q     .         .         .V        .
 16.800     91.8770    117.74  .   Q     .         .         .V        .
 16.817     92.0367    115.98  .   Q     .         .         .V        .
 16.833     92.1941    114.23  .   Q     .         .         .V        .
 16.850     92.3494    112.77  .   Q     .         .         . V       .
 16.867     92.5030    111.54  .   Q     .         .         . V       .
 16.883     92.6550    110.31  .   Q     .         .         . V       .
 16.900     92.8052    109.08  .   Q     .         .         . V       .
 16.917     92.9537    107.84  .  Q      .         .         . V       .
 16.933     93.1006    106.61  .  Q      .         .         . V       .
 16.950     93.2457    105.38  .  Q      .         .         . V       .
 16.967     93.3892    104.15  .  Q      .         .         . V       .
 16.983     93.5310    102.91  .  Q      .         .         . V       .
 17.000     93.6710    101.68  .  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%	1021.0
10%	590.0
20%	210.0
30%	145.0
40%	125.0
50%	105.0
60%	80.0
70%	60.0
80%	40.0
90%	25.0

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END OF FLOODSCx ROUTING ANALYSIS