

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -
INPUT FILE = C:\BND\AHY-1\B056BE-1.TXT

AHYMO.SUM
- VERSION: 1997.02c

RUN DATE (MON/DAY/YR) =12/16/2015
USER NO.= AHYMO-C-9803c01UNMLIB-AH

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION

*S BOCA NEGRA DAM										
*S LOMR MODEL - NEW RAINFALL DATA										
*S INCLUDES BASINS DOWNSTREAM OF THE DAM										
*S 500 YR 24 HR STORM EVENT										
*S DATE: December 2015										

START										
LOCATION BERNALILLO COUNTY										
*S 500 YEAR 24HR STORM										
RAINFALL TYPE= 2										
*S APPLY A 5% SEDIMENT BULKING FACTOR ABOVE THE ESCARPMENT AND 9% BELOW										
*S THE ESCARPMENT TO COMPUTED HYDROGRAPHS - NO SEDIMENT BULKING FACTOR										
*S WHEN USING RECALL HYD COMMAND										
SEDIMENT BULK										
*S*** Basin Contributing to INFLOW POINT 3 (IP3) *****										
*S QUAIL RANCH BASINS										
*S										
*S*** SUB-BASIN 10 *****										
COMPUTE NM HYD 10.00 - 1 .35800 235.27 14.857 .77814 1.750 1.027 PER IMP= .00										
*S*** SUB-BASIN 11 *****										
COMPUTE NM HYD 11.00 - 2 .39000 234.58 16.185 .77814 1.800 .940 PER IMP= .00										
*S										
*S ADD IP3.10 TO IP3.11 TO GET IP3.11.9										
ADD HYD 11.90 1& 2 9 .74800 467.75 31.042 .77814 1.800 .977										
*S										
*S ROUTE 11.9 THRU IP3.12 IN NATURAL ARROYO TO 12.6										
ROUTE MCUNGE 12.60 9 6 .74800 442.19 30.362 .76109 2.400 .924 CCODE = .1										
*S*** SUB-BASIN 12 *****										
COMPUTE NM HYD 12.00 - 1 .30900 216.11 12.781 .77553 1.750 1.093 PER IMP= .00										
*S										
ADD HYD 12.90 1& 6 9 1.05700 484.80 43.143 .76531 2.350 .717										
*S*** SUB-BASIN 14 *****										
COMPUTE NM HYD 14.00 - 2 .51300 311.64 21.219 .77554 1.800 .949 PER IMP= .00										
*S										
ADD HYD 14.80 2& 9 8 1.57000 588.78 64.362 .76865 2.350 .586										
*S										
*S ROUTE 14.8 THRU 15 IN NATURAL ARROYO TO 15.6										
ROUTE MCUNGE 15.60 8 6 1.57000 548.30 63.557 .75905 2.950 .546 CCODE = .1										
*S*** SUB-BASIN 15 *****										
COMPUTE NM HYD 15.00 - 1 .30100 175.35 12.450 .77554 1.800 .910 PER IMP= .00										
*S										
ADD HYD 15.90 1& 6 9 1.87100 565.03 76.007 .76170 2.900 .472										
*S*** SUB-BASIN 16 *****										
COMPUTE NM HYD 16.00 - 1 .53300 332.35 22.046 .77554 1.800 .974 PER IMP= .00										
*S										
*S ROUTE 16 THRU 17 IN NATURAL ARROYO TO 17.7										
ROUTE MCUNGE 17.60 1 6 .53300 322.93 21.858 .76891 2.150 .947 CCODE = .1										
*S*** SUB-BASIN 17 *****										

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 2 NOTATION
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COMPUTE NM HYD	17.00	-	2	.26800	149.68	11.085	.77554	1.800	.873 PER IMP=	.00
*S										
*S ADD 17.6 TO 17 TO GET 17.7										
ADD HYD	17.70	6& 2	7	.80100	423.25	32.943	.77113	2.100	.826	
*S ADD 17.7 TO 15.9 TO GET 17.4										
ADD HYD	17.40	7& 9	4	2.67200	895.97	108.950	.76453	2.300	.524	
*S										
*S ROUTE 17.4 THRU 20 IN NATURAL ARROYO TO 28.6										
ROUTE MCUNGE	20.30	4	3	2.67200	881.55	108.811	.76355	2.500	.516 CCODE =	.1
*S*** SUB-BASIN 21 ****										
COMPUTE NM HYD	21.00	-	1	.14500	120.46	5.997	.77554	1.650	1.298 PER IMP=	.00
*S										
*S ROUTE 21 THRU 22 IN NATURAL ARROYO TO 22.8										
ROUTE MCUNGE	22.50	1	5	.14500	108.78	5.798	.74971	3.050	1.172 CCODE =	.1
*S*** SUB-BASIN 22 ****										
COMPUTE NM HYD	22.00	-	2	.73900	344.12	30.566	.77553	1.950	.728 PER IMP=	.00
*S										
*S ADD 21 AND 22 TO GET 22.8										
ADD HYD	22.80	5& 2	8	.88400	344.12	36.364	.77130	1.950	.608	
*S										
*S*** SUB-BASIN 24 ****										
COMPUTE NM HYD	24.00	-	2	.11700	61.69	4.839	.77554	1.800	.824 PER IMP=	.00
*S										
*S ADD 24 AND 22.8 TO GET 24.7										
ADD HYD	24.70	2& 8	7	1.00100	401.95	41.203	.77179	1.900	.627	
*S										
*S ROUTE 24.7 THRU 23 IN NATURAL ARROYO TO 23.8										
ROUTE MCUNGE	23.60	7	6	1.00100	401.56	41.209	.77191	2.050	.627 CCODE =	.2
*S*** SUB-BASIN 23 ****										
COMPUTE NM HYD	23.00	-	2	.24500	143.13	10.134	.77554	1.800	.913 PER IMP=	.00
*S										
*S ADD 23 AND 23.6 TO GET 23.8										
ADD HYD	23.80	2& 6	8	1.24600	515.25	51.343	.77262	1.950	.646	
*S										
*S*** SUB-BASIN 28 ****										
COMPUTE NM HYD	28.00	-	2	.15800	90.41	6.623	.78595	1.800	.894 PER IMP=	.00
*S										
*S ADD 28 AND 23.8 TO GET 28.9										
ADD HYD	28.90	2& 8	9	1.40400	592.86	57.966	.77412	1.950	.660	
*S										
*S ADD 17.4 TO 28.9 TO GET 28.6										
ADD HYD	28.60	3& 9	6	4.07600	1185.95	166.777	.76719	2.450	.455	
*S										
*S ROUTE 28.6 THRU 20 IN NATURAL ARROYO TO 20.8										
ROUTE MCUNGE	20.70	6	7	4.07600	1171.15	166.653	.76662	2.550	.449 CCODE =	.1
*S*** SUB-BASIN 20 ****										
COMPUTE NM HYD	20.00	-	1	.42600	307.96	17.857	.78595	1.750	1.130 PER IMP=	.00
*S										
ADD HYD	20.80	1& 7	8	4.50200	1207.12	184.510	.76845	2.550	.419	
*S*** SUB-BASIN 25 ****										
COMPUTE NM HYD	25.00	-	1	.46300	242.89	19.086	.77294	1.850	.820 PER IMP=	.00
*S										
*S*** SUB-BASIN 26 ****										

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COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 3 NOTATION
COMPUTE NM HYD	26.00	-	2	.34800	237.82	14.346	.77294	1.750	1.068 PER IMP=	.00

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*S
*S ADD 25 TO 26 TO GET 25.6
ADD HYD          25.60  1& 2   6          .81100      469.13      33.432      .77294      1.800      .904
*S*** SUB-BASIN 27 ****
COMPUTE NM HYD   27.00   -     1          .37600      250.40      15.500      .77294      1.750      1.041 PER IMP=   .00
*S
*S ADD 27 TO 25.6 TO GET 25.75
ADD HYD          25.75  1& 6   7          1.18700      715.51      48.932      .77294      1.800      .942
*S
*S ROUTE 25.75 THRU UPPER 30 IN NATURAL ARROYO TO 30.91
ROUTE MCUNGE     30.51   7    51         1.18700      713.26      48.830      .77132      2.400      .939 CCODE =     .2
*S ROUTE 30.91 THRU LOWER 30 IN NATURAL ARROYO TO 30.9
ROUTE MCUNGE     30.50   51    5         1.18700      707.14      48.641      .76833      2.600      .931 CCODE =     .1
*S*** SUB-BASIN 30 ****
COMPUTE NM HYD   30.00   -     1          .58800      296.44      24.647      .78595      1.900      .788 PER IMP=   .00
*S
*S ADD 30 TO 30.5 TO GET 30.9
ADD HYD          30.90  1& 5   9          1.77500      800.73      73.288      .77417      2.600      .705
*S
*S ***** TOTAL FLOW OUT OF BOCA NEGRA PART OF QUAIL RANCH
*S ADD 30.9 TO 20.8 TO GET 20.75
*S
ADD HYD          20.75  9& 8   7          6.27700      2000.95     257.798      .77007      2.600      .498
*S
*S ROUTE 20.75 THRU 32 IN NATURAL ARROYO TO 32.6
ROUTE MCUNGE     32.60   7     6         6.27700      1997.01     257.757      .76995      2.750      .497 CCODE =     .2
*S ADD BASIN 32*****
COMPUTE NM HYD   32.00   -     1          .25000      197.46      10.306      .77294      1.650      1.234 PER IMP=   .00
*S
*S ADD 32 TO 20.75 TO GET 32.9
ADD HYD          32.90  1& 6   9          6.52700      2011.22     268.063      .77006      2.750      .481
*S
*S ROUTE 32.9 THRU UPPER 39 IN NATURAL ARROYO TO 39.7
ROUTE MCUNGE     39.50   9     5         6.52700      1963.28     267.851      .76945      2.850      .470 CCODE =     .1
*S*** SUB-BASIN 33 ****
COMPUTE NM HYD   33.00   -     1          .73100      312.92      30.134      .77294      2.000      .669 PER IMP=   .00
*S
*S*** SUB-BASIN 35 ****
COMPUTE NM HYD   35.00   -     2          .61600      262.09      25.394      .77294      2.000      .665 PER IMP=   .00
*S
*S ADD 33 TO 35 TO GET 35.8
*S
ADD HYD          35.80  1& 2   8          1.34700      575.02      55.528      .77294      2.000      .667
*S
*S ROUTE 35.8 THRU UPPER 39 IN NATURAL ARROYO TO 36.6
ROUTE MCUNGE     36.70   8     7         1.34700      572.99      55.439      .77170      2.150      .665 CCODE =     .1
*S*** SUB-BASIN 36 ****
COMPUTE NM HYD   36.00   -     1          .40700      273.73      17.773      .81878      1.750      1.051 PER IMP=   2.00
*S
*S ADD 35.8 TO 36 TO GET 36.6
*S

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COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 4 NOTATION
ADD HYD	36.60	1& 7	6	1.75400	725.32	73.212	.78262	2.050	.646	
*S										
*S ROUTE 36.6 THRU MID 39 IN NATURAL ARROYO TO 39.7										
ROUTE MCUNGE	39.40	6	4	1.75400	720.67	73.107	.78151	2.300	.642	CCODE = .1

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*S ADD 32.9 TO 39.4 TO GET 39.7
*S
ADD HYD          39.70  5& 4   7      8.28100    2357.76    340.959    .77201    2.850    .445
*S
*S ROUTE 39.7 THRU LOWER 39 IN NATURAL ARROYO TO 39.8
ROUTE MCUNGE     39.60    7    6      8.28100    2347.30    340.958    .77200    2.900    .443 CCODE =    .2
*S*** SUB-BASIN 39 *****
COMPUTE NM HYD    39.00    -    2      .34100     160.83     14.474    .79586    1.950    .737 PER IMP=    1.00
*S
*S ADD 39.6 TO 39 TO GET 39.8
*S
ADD HYD          39.80  2& 6   8      8.62200    2381.49    355.432    .77295    2.900    .432
*S
*S*** SUB-BASIN 40A *****
COMPUTE NM HYD    40A    -    1      .10700     86.94      4.740    .83067    1.650    1.270 PER IMP=    .00
*S
*S ADD 40A TO 39.8 TO GET 40A.9
*S
ADD HYD          40A.9  1& 8   9      8.72900    2387.19    360.173    .77366    2.900    .427
*S
*S ROUTE 40A.9 THRU 40 IN NATURAL ARROYO TO 40.5
ROUTE MCUNGE     40.60    9    6      8.72900    2349.20    360.081    .77346    3.000    .421 CCODE =    .2
*S*** SUB-BASIN 40 *****
COMPUTE NM HYD    40.00    -    1      .35600     383.05     15.772    .83067    1.600    1.681 PER IMP=    .00
*S
*S ADD 40 TO 40A.9 TO GET 40.5
*S
ADD HYD          40.50  1& 6   5      9.08500    2361.18    375.853    .77570    3.000    .406
*S
*S ROUTE 40.5 THRU UPPER 41A IN NATURAL ARROYO TO 41A.9
ROUTE MCUNGE     41A.61    5   61    9.08500    2343.52    375.669    .77532    3.200    .403 CCODE =    .1
*S ROUTE 40.5 THRU LOWER 41A IN NATURAL ARROYO TO 41A.9
ROUTE MCUNGE     41A.6    61    6      9.08500    2325.88    375.688    .77536    3.200    .400 CCODE =    .2
*S*** SUB-BASIN 41A *****
COMPUTE NM HYD    41A    -    1      .45300     423.25     22.563    .93388    1.700    1.460 PER IMP=    .00
*S
*S ADD 41A TO 40.5 TO GET 41A.9
*S
ADD HYD          41A.9  1& 6   9      9.53800    2344.63    398.250    .78289    3.200    .384
*S
*S*** SUB-BASIN 37 *****
COMPUTE NM HYD    37.00    -    1      .59000     303.57     29.698    .94378    2.000    .804 PER IMP=    7.00
*S
*S ROUTE 37 THRU 34 IN NATURAL ARROYO TO 34.6
ROUTE MCUNGE     34.50    1    5      .59000     302.00     29.671    .94294    2.300    .800 CCODE =    .2
*S*** SUB-BASIN 34 *****
COMPUTE NM HYD    34.00    -    2      .12900     70.86      6.493    .94378    1.850    .858 PER IMP=    7.00
*S

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COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 5 NOTATION
*S ADD 34 TO 34.5 TO GET 34.6										
*S										
ADD HYD	34.60	5& 2	6	.71900	344.00	36.164	.94309	2.300	.748	
*S										
*S ROUTE 34.6 THRU 38 IN NATURAL ARROYO TO 34.3										
ROUTE MCUNGE	38.50	6	5	.71900	341.68	36.086	.94104	2.550	.743 CCODE =	.1
*S*** SUB-BASIN 38A *****										

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 6
COMPUTE NM HYD	38A	-	1	.07500	61.94	3.092	.77294	1.650	1.290 PER IMP=	.00
*S										
*S ROUTE 38A THRU 38 IN NATURAL ARROYO TO 34.3										
ROUTE MCUNGE	38.20	1	2	.07500	60.56	3.070	.76747	2.150	1.262 CCODE =	.1
*S ADD 38.2 TO 38.5 TO GET 34.3										
*S										
ADD HYD	34.30	2& 5	3	.79400	365.25	39.156	.92465	2.500	.719	
*S										
*S*** SUB-BASIN 38 ****										
COMPUTE NM HYD	38.00	-	1	.13100	112.92	5.473	.78335	1.650	1.347 PER IMP=	.00
*S										
*S ADD 38 TO 34.3 TO GET 38.4										
*S										
ADD HYD	38.40	1& 3	4	.92500	374.96	44.629	.90463	2.500	.633	
*S										
*S ROUTE 38.4 THRU 42 IN NATURAL ARROYO TO 42.3										
ROUTE MCUNGE	42.60	4	6	.92500	372.75	44.589	.90383	2.850	.630 CCODE =	.1
*S*** SUB-BASIN 42 ****										
COMPUTE NM HYD	42.00	-	1	.57600	521.89	25.355	.82537	1.650	1.416 PER IMP=	.00
*S										
*S ADD 42 TO 38.9 TO GET 42.3										
*S										
ADD HYD	42.30	1& 6	3	1.50100	524.68	69.944	.87372	1.700	.546	
*S										
*S*** SUB-BASIN 42A ****										
COMPUTE NM HYD	42A	-	1	.31700	407.45	13.954	.82537	1.550	2.008 PER IMP=	.00
*S										
*S ADD 42 TO 38.9 TO GET 42A.4										
*S										
ADD HYD	42A.4	1& 3	4	1.81800	883.01	83.899	.86529	1.600	.759	
*S										
*S ROUTE 42A.4 THRU UPPER 41B IN NATURAL ARROYO TO 41B.52										
ROUTE MCUNGE	41B.51	4	51	1.81800	866.44	83.649	.86271	1.850	.745 CCODE =	.1
*S ROUTE 41B.52 THRU MID 41B IN NATURAL ARROYO TO 41B.5										
ROUTE MCUNGE	41B.52	51	52	1.81800	866.44	83.649	.86271	1.850	.745 CCODE =	.0
*S ROUTE 41B.5 THRU LOWER 41B IN NATURAL ARROYO TO 41B.3										
ROUTE MCUNGE	41B.5	52	5	1.81800	849.73	83.467	.86084	1.950	.730 CCODE =	.1
*S*** SUB-BASIN 41B ****										
COMPUTE NM HYD	41B	-	1	.13700	150.68	6.824	.93388	1.600	1.719 PER IMP=	.00
*S										
*S ADD 41B TO 42A.4 TO GET 41B.3										
*S										
ADD HYD	41B.3	1& 5	3	1.95500	907.91	90.291	.86596	1.950	.726	
*S										
*S*** SUB-BASIN 43A ****										

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COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 6
COMPUTE NM HYD	43A	-	2	.18600	176.43	8.446	.85144	1.650	1.482 PER IMP=	.00
*S										
*S ADD 43A TO 41B.3 TO GET 43A.6										
*S										
ADD HYD	43A.6	2& 3	6	2.14100	987.14	98.737	.86470	1.950	.720	
*S										
*S ADD 43A.6 TO 41A.9 TO GET 41A.7										
*S										
ADD HYD	41A.7	6& 9	7	11.67900	2765.54	496.987	.79789	3.200	.370	
*S										

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COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 7 NOTATION
*S ROUTE 41A.7 THRU 43 IN NATURAL ARROYO TO 43.3										
ROUTE MCUNGE	43.50	7	5	11.67900	2756.11	496.862	.79768	3.350	.369	CCODE = .2
*S*** SUB-BASIN 43 ****										
COMPUTE NM HYD	43.00	-	1	.17000	132.49	7.720	.85144	1.700	1.218	PER IMP= .00
*S ADD 43 TO 41A.7 TO GET 43.3										
ADD HYD	43.30	1& 5	3	11.84900	2762.32	504.582	.79846	3.350	.364	
*S*** SUB-BASIN 44 ****										
COMPUTE NM HYD	44.00	-	5	.40900	284.77	18.004	.82537	1.750	1.088	PER IMP= .00
*S ADD 44 TO 61.6 TO GET 44.8										
ADD HYD	44.80	5& 3	8	12.25800	2777.94	522.586	.79935	3.350	.354	
*S*** SUB-BASIN 61 ****										
COMPUTE NM HYD	61.00	-	3	.04846	48.28	2.201	.85144	1.600	1.557	PER IMP= .00
*S ADD 61 TO 44 TO GET 61.4										
ADD HYD	61.40	8& 3	4	12.30646	2779.21	524.786	.79956	3.350	.353	
*S ROUTE 61.4 THRU 60 IN NATURAL ARROYO TO 60.3										
ROUTE MCUNGE	60.30	4	3	12.30646	2774.88	524.790	.79956	3.400	.352	CCODE = .2
*S*** SUB-BASIN 60 ****										
COMPUTE NM HYD	60.00	-	1	.11036	113.04	4.549	.77294	1.600	1.601	PER IMP= .00
*S ADD 60 TO 44.8 TO GET 60.20										
ADD HYD	60.60	1& 3	6	12.41682	2776.80	529.339	.79933	3.400	.349	
*S ROUTE THRU 4-60" PIPES IN SCENIC BLVD - IP3 *****										
*S ROUTE RESERVOIR COMMAND WAS USED TO ROUTE THRU MULTIPLE PIPES IN SCENIC										
ROUTE RESERVOIR	60.19	6	19	12.41682	2767.30	529.339	.79933	3.350	.348	AC-FT= 3.181
*S*** Basin Contributing to INFLOW POINT 2 (IP2) *****										
*S*** SUB-BASIN 46C										
COMPUTE NM HYD	46C	-	1	.00250	3.71	.110	.82537	1.500	2.316	PER IMP= .00
*S ROUTE 46C THRU 62 IN NATURAL ARROYO TO 62.3										
ROUTE MCUNGE	62.30	1	3	.00250	3.33	.107	.80252	2.450	2.083	CCODE = .1
*S*** SUB-BASIN 62										
COMPUTE NM HYD	62.00	-	2	.06722	63.30	3.052	.85144	1.600	1.471	PER IMP= .00
*S ADD 61.4 TO 62 TO GET 62.5										
ADD HYD	62.10	2& 3	1	.06972	63.30	3.159	.84967	1.600	1.419	
*S										
*S APPLY NO SEDIMENT BULKING FACTOR										
SEDIMENT BULK										PK BF = 1.00
*S THE TRAILS SUBDIVISION										
*S OUTFLOW RESTRICTED TO 62 CFS AT UNIVERSE AND AVENIDA DE JAMITO										
*S RECALL HYD FROM THE TRAILS SUBDIVISION										
*S										
RECALL HYD	BYPASS.ROUTE	-	99	1.05360	60.72	76.374	1.35915	2.800	.090	
*S ROUTE 99 IN 36" PIPE IN UNIVERSE TO GET 47.19										
ROUTE MCUNGE	47.70	99	7	1.05360	60.72	76.379	1.35925	2.900	.090	CCODE = .2
*S APPLY SEDIMENT BULKING FACTOR										
SEDIMENT BULK										PK BF = 1.05
*S*** SUB-BASIN 47B STATE LAND PROPERTY ***										
COMPUTE NM HYD	47B	-	5	.03050	41.80	1.343	.82537	1.500	2.141	PER IMP= .00

AHYMO.SUM

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*S*** SUB-BASIN 46B APS HIGH SCHOOL PROPERTY ***
COMPUTE NM HYD          APS      -      3      .11300      248.41      13.350      2.21518      1.600      3.435 PER IMP= 53.00
*S*** ADD 47B TO 46B TO GET 46B.6
ADD HYD          46B.6      5& 3      6      .14350      287.63      14.693      1.91978      1.550      3.132
*S*** ROUTE -46B.6 THRU APS POND TO DISCHARGE 4.5 CFS TO UNIVERSE SD
ROUTE RESERVOIR          46B.4      6      4      .14350      173.01      14.341      1.87386      1.850      1.884 AC-FT= 8.201
*S ADD 46B.6 TO 46B.4 TO GET 46B.8
*S
ADD HYD          46B.8      7& 4      8      1.19710      230.57      89.257      1.39803      1.850      .301
*S ROUTE 46B.8 IN 36" PIPE IN UNIVERSE TO GET 46.18
ROUTE MCUNGE          46.18      8      18      1.19710      127.37      89.187      1.39692      2.150      .166 CCODE = .2
*S ADD 46.18 TO 62.1 TO GET 46.9
ADD HYD          46.90      18& 1      9      1.26682      140.33      92.346      1.36680      2.150      .173
*S ROUTE 46.9 IN 72" IN SCENIC
ROUTE MCUNGE          IP2      9      2      1.26682      139.89      92.331      1.36657      2.100      .173 CCODE = .2
*S*****
*S ADD IP2 TO IP3 TO GET 60.20
ADD HYD          60.20      2&19      20      13.68364      2837.80      621.669      .85184      3.350      .324
*S ADD OFFSITE VISTA VIEJA (VV) SUB-BASIN - INFLOW POINT IP4
*S*** SUB-BASIN 86 - BASIN E IN VV DRAINAGE REPORT
*S*** INCLUDES 10 AC DEVELOPED VV
COMPUTE NM HYD          86.10      -      1      .24800      248.02      12.235      .92502      1.650      1.563 PER IMP= 4.00
*S ROUTE THRU 48" SD - IP4
ROUTE MCUNGE          IP4      1      10      .24800      234.57      12.094      .91440      1.800      1.478 CCODE = .2
*S INFLOW POINT IP5
*S ONSITE BASINS VV1 UNITS 2 AND PART OF UNIT 3
COMPUTE NM HYD          VV1.23      -      1      .08940      220.73      11.142      2.33689      1.550      3.858 PER IMP= 60.00
*S ROUTE THRU 48" SD - IP5
ROUTE MCUNGE          IP5      1      11      .08940      198.38      10.992      2.30533      1.650      3.467 CCODE = .2
*S ADD OFFSITE VISTA VIEJA (VV2) SUB-BASIN - INFLOW POINT IP6
*S*** SUB-BASIN 83 & 83A - BASIN E IN D DRAINAGE REPORT
*S INCLUDES PARTS OF UNIT 4 & 1
*S*** SUB-BASIN 83
COMPUTE NM HYD          83.00      -      1      .53800      330.36      24.340      .84830      1.850      .959 PER IMP= 1.00
*S*** SUB-BASIN 83A
COMPUTE NM HYD          83A      -      2      .13700      154.52      6.198      .84830      1.600      1.762 PER IMP= 1.00
*S ADD 83 TO 83A TO GET 83A.3
*S

```

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 8 NOTATION
ADD HYD	83A.3	1& 2	3	.67500	413.16	30.539	.84829	1.750	.956	
*S										
*S***	ONSITE SUB-BASIN VV2 - PARTS OF UNITS 4 & 1									
COMPUTE NM HYD	VV2.41	-	2	.03730	71.99	4.649	2.33689	1.650	3.016	PER IMP= 60.00
*S	ADD VV.41 TO 83A.3 TO GET 83A.4									
*S										
ADD HYD	83A.4	3& 2	4	.71230	477.44	35.187	.92624	1.750	1.047	
*S										
*S	ROUTE THRU 60" TO IP6									
ROUTE MCUNGE	IP6	4	12	.71230	472.69	35.143	.92506	1.850	1.037	CCODE = .2
*S	ADD IP5 TO IP5 AND IP6 TO GET 86.2									
*S										
ADD HYD	86.20	12&11	2	.80170	642.19	46.134	1.07898	1.700	1.252	
*S										
*S	ADD IP4 TO 86.2 TO GET 86.45									
*S										
ADD HYD	86.45	2&10	45	1.04970	864.60	58.229	1.04009	1.700	1.287	

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*S
*S ADD 62.20 (IP3) TO 86.45 (IP4, 5 & 6) TO GET 86.70
*S
ADD HYD          86.70 45&20    7      14.73334      2879.16      679.898      .86525      3.350      .305
*S
*S
*S TOTAL OUTFLOW FROM BOCA NEGRA DETENTION FACILITY
ROUTE RESERVOIR      51.60    7    14      14.73334      2817.01      679.601      .86488      3.450      .299 AC-FT=    94.207
*S DIVIDE SURFACE FLOW FROM PIPE FLOW
DIVIDE HYD          PIPE.80    14    80      5.70208      372.00      263.018      .86488      1.650      .102
                      SURF.90 and 90      9.03126      2445.01      416.582      .86488      3.450      .423
*S APPLY SEDIMENT BULKING FACTOR
SEDIMENT BULK
                                           PK BF =    1.05
*S
*S ADD BASINS DRAINING INTO THE TEMPORARY PONDS ALONG UNSER BLVD
*S
COMPUTE NM HYD          3.00    -    3      .09570      74.30      4.296      .84169      1.650      1.213 PER IMP=    3.00
*S ROUTE SUB-BASIN 3 THRU UNSER TEMP POND A
ROUTE RESERVOIR      4.90    3    1      .09570      85.78      4.296      .84169      1.850      1.401 AC-FT=    1.779
COMPUTE NM HYD          4.00    -    4      .02820      35.31      1.231      .81878      1.550      1.956 PER IMP=    2.00
*S ADD ROUTED FLOW FROM TEMP POND A TO SUB-BASIN 4
*S ADD SUB-BASINS 3 AND 4
ADD HYD          4.20    1& 4    2      .12390      95.50      5.527      .83647      1.850      1.204
*S ROUTE THRU UNSER TEMP POND B
ROUTE RESERVOIR      5.90    2    1      .12390      81.45      5.370      .81265      1.850      1.027 AC-FT=    .918
*S ROUTE THRU 24"IN ALMENDRA PL
ROUTE MCUNGE          5.92    1    2      .12390      81.45      5.370      .81265      1.850      1.027 CCODE =    .0
COMPUTE NM HYD          5.00    -    5      .09400      71.62      4.105      .81878      1.650      1.191 PER IMP=    2.00
*S
*S ADD ROUTED FLOW FROM TEMP POND B TO SUB-BASIN 5
ADD HYD          5.10    2& 5    1      .21790      135.65      9.475      .81529      1.850      .973
*S ROUTE THRU UNSER TEMP POND C
ROUTE RESERVOIR      5.93    1    3      .21790      186.96      9.473      .81515      1.850      1.341 AC-FT=    1.211
*S APPLY NO SEDIMENT BULKING FACTOR
SEDIMENT BULK
                                           PK BF =    1.00
*S RECALL HYD FROM SAD 228 POND 4

COMMAND          HYDROGRAPH          FROM TO      AREA      PEAK      RUNOFF      RUNOFF      TIME TO      CFS      PAGE =
IDENTIFICATION    ID    ID      (SQ MI)  DISCHARGE VOLUME      (INCHES)  (HOURS)  PER ACRE  NOTATION
                NO.  NO.

*S
RECALL HYD          POND4A    -    14      .02050      18.04      1.546      1.41378      1.750      1.375
*S
*S ADD SAD 228 POND 4 OUTFLOW TO TEMP POND C OUTFLOW
ADD HYD          200.30  3&14    4      .23840      204.69      11.019      .86662      1.850      1.342
*S RECALL HYD FROM SAD 228 POND 5
*S
RECALL HYD          POND5    -    12      .14890      36.97      12.287      1.54726      2.350      .388
*S
*S ADD SAD 228 POND 4 & 5 OUTFLOW TO TEMP POND C OUTFLOW
ADD HYD          201.10  4&12    1      .38730      237.87      23.306      1.12830      1.850      .960
*S ROUTE 201.1 IN 54" SD IN UNSER BLVD TO GET 201.7
ROUTE MCUNGE          102.70  1    7      .38730      186.39      23.304      1.12818      1.900      .752 CCODE =    .2
*S APPLY SEDIMENT BULKING FACTOR
SEDIMENT BULK
                                           PK BF =    1.05
*S
*S COMPUTE UNSER BLVD RUNOFF SOUTH OF KIMMICK TO BOCA NEGRA DAM
COMPUTE NM HYD          6.00    -    6      .01166      28.02      1.756      2.82347      1.600      3.755 PER IMP=    85.00
*S ADD TOTAL FLOWS FROM UNSER BLVD

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COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 10 NOTATION
ADD HYD	6.20 7& 6	2		.39896	200.92	25.059	1.17772	1.900	.787	
*S ADD PIPE.80 TO 6.2 TO GET PIPE.1										
ADD HYD	PIPE.1 80& 2	1		6.10104	572.92	288.077	.88533	1.900	.147	
*S ROUTE PIPE.1 IN 60" SD TO GET PIPE.2										
ROUTE MCUNGE	PIPE.2 1	8		6.10104	572.92	288.077	.88533	1.900	.147	CCODE = .0
*S ROUTE PIPE.2 IN 54" SD TO GET PIPE.3										
ROUTE MCUNGE	PIPE.3 8	1		6.10104	572.92	288.077	.88533	1.900	.147	CCODE = .0
*S ROUTE PIPE.3 IN 60" SD TO GET PIPE.4										
ROUTE MCUNGE	PIPE.4 1	8		6.10104	548.90	287.895	.88477	1.900	.141	CCODE = .2
*S APPLY SEDIMENT BULKING FACTOR										
SEDIMENT BULK										
*S*** SUB-BASIN 71 DOWNSTREAM OF THE DAM ***										
COMPUTE NM HYD	71.00 -	5		.07675	86.96	3.733	.91203	1.600	1.770	PER IMP= .00
*S ADD SURFACE FLOW FROM DAM TO BASIN 71 TO GET 71.5										
*S ADD BASIN 71 to PIPE.2 TO GET 70.9										
ADD HYD	71.60 5&90	6		9.10801	2446.63	420.316	.86527	3.450	.420	
*S ADD 71.6 to PIPE.2 TO GET 70.9										
ADD HYD	70.90 6& 8	9		15.20905	2867.33	708.212	.87310	3.450	.295	
*S APPLY NO SEDIMENT BULKING FACTOR										
SEDIMENT BULK										
*S RECALL HYD FROM THE VOLCANO HEIGHTS MODEL (BOCA NEGRA ARROYO SOUTH BRANCH)										
RECALL HYD	102.00 -	2		1.64000	378.54	33.646	.38467	2.250	.361	
*S ROUTE THE BOCA NEGRA ARROYO SOUTH BRANCH FLOWS THRU 72" IN EMERALD DR										
ROUTE MCUNGE	70.50 2	5		1.64000	377.51	33.649	.38470	2.300	.360	CCODE = .2
*S APPLY SEDIMENT BULKING FACTOR										
SEDIMENT BULK										
*S										
*S*** SUB-BASIN 70 EAST OF SAD 227 ***										
COMPUTE NM HYD	70.00 -	4		.06914	113.09	3.363	.91203	1.500	2.556	PER IMP= .00
*S										
*S ADD BASIN 70 to ROUTED BOCA NEGRA ARROYO SOUTH BRANCH										
*S										
*S*** SUB-BASIN 72 DOWNSTREAM OF CONFLUENCE WITH SOUTH BRANCH ***										
COMPUTE NM HYD	72.00 -	2		.16708	223.18	8.127	.91203	1.550	2.087	PER IMP= .00
*S ADD OUTFLOW FROM POND 6 TO BASIN 72										
ADD HYD	72.10 19& 2	1		.23248	242.08	13.529	1.09116	1.550	1.627	
*S ADD ALL FLOWS AT TESUQUE DR										
*S ADD 72.1 TO 72.6 TO GET 72.3										
ADD HYD	72.30 1& 6	3		17.15067	2936.86	758.679	.82943	2.900	.268	
*S ROUTE 72.3 IN 73.1 TO GET 73.1.5										
ROUTE MCUNGE	73.1.5 3	5		17.15067	2928.49	758.391	.82911	2.950	.267	CCODE = .1
*S*** SUB-BASIN 73.1										
COMPUTE NM HYD	73.10 -	4		.12879	292.49	13.786	2.00710	1.550	3.549	PER IMP= 40.00

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*S ADD 72.3 TO 73.1 TO GET 73.1.2										
ADD HYD	73.1.2	4& 5	2	17.27946	2935.77	772.178	.83789	2.950	.265	
*S ROUTE 73.1.2 THRU 73.2 TO GET 73.2.5										
ROUTE MCUNGE	73.2.5	2	5	17.27946	2934.61	772.011	.83771	2.950	.265	CCODE = .1
*S										
*S*** SUB-BASIN 73.2										
COMPUTE NM HYD	73.20	-	4	.05105	137.23	5.465	2.00710	1.500	4.200	PER IMP= 40.00
*S ADD 73.2 TO 73.2.5 TO GET 73.2.1										
*S TOTAL FLOWS UPSTREAM END OF SAN ILDEFONSO DR										
ADD HYD	73.2.1	4& 5	1	17.33051	2936.50	777.475	.84116	2.950	.265	
FINISH										

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BOCA NEGRA ARROYO 500 yr.txt
*S*****
*S BOCA NEGRA DAM
*S LOMR MODEL - NEW RAINFALL DATA
*S INCLUDES BASINS DOWNSTREAM OF THE DAM
*S 500 YR 24 HR STORM EVENT
*S DATE: December 2015
*
*S*****
START          TIME=0.0  PUNCH CODE=0  PRINT CODE=0
LOCATION        BERNALILLO COUNTY
*S 500 YEAR 24HR STORM
RAINFALL      TYPE=2  RAIN QUARTER=1.32  RAIN ONE=2.20
              RAIN SIX=2.77  RAIN DAY=3.17  DT=0.05
*
*
*****
*S APPLY A 5% SEDIMENT BULKING FACTOR ABOVE THE ESCARPMENT AND 9% BELOW
*S THE ESCARPMENT TO COMPUTED HYDROGRAPHS - NO SEDIMENT BULKING FACTOR
*S WHEN USING RECALL HYD COMMAND
SEDIMENT BULK  CODE=1  BULKING FACTOR = 1.05
*****
*S*** Basin Contributing to INFLOW POINT 3 (IP3) *****
*****
*S QUAIL RANCH BASINS
*****
*S*
*****
*S*** SUB-BASIN 10 ****
*
COMPUTE LT TP      LCODE=1
                  NK=3  ISLOPE=-1
                  LENGTH=400 FT  SLOPE=0.036 K=0.7
                  LENGTH=1600 FT SLOPE=0.027 K=2.0
                  LENGTH=7708 FT SLOPE=0.025 K=3.0
                  Kn=.033  CR=0.52
COMPUTE NM HYD     ID=1  HYD NO=10  DA= 0.358 SQ MI
                  PER A=99 PER B=0  PER C=1  PER D=0
                  TP=0.0  MASSRAIN=-1
PRINT HYD          ID=1  CODE=1
*
*****
*S*** SUB-BASIN 11 ****
*
COMPUTE LT TP      LCODE=1
                  NK=3  ISLOPE=-1
                  LENGTH=400 FT  SLOPE=0.019 K=0.7
                  LENGTH=1600 FT SLOPE=0.024 K=2.0
                  LENGTH=7880 FT SLOPE=0.024 K=3.0
                  Kn=.033  CR=.64
COMPUTE NM HYD     ID=2  HYD NO=11  DA= 0.390 SQ MI
                  PER A=99 PER B=0  PER C=1  PER D=0
                  TP=0.0  MASSRAIN=-1
PRINT HYD          ID=2  CODE=1
*S
*****
*S ADD IP3.10 TO IP3.11 TO GET IP3.11.9
ADD HYD            ID=9  HYD NO=11.9 ID I=1 ID II=2
PRINT HYD          ID=9  CODE=1
*S
*****
*S ROUTE 11.9 THRU IP3.12 IN NATURAL ARROYO TO 12.6
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                    MIN ELEV=5896.45  MAX ELEV=5900.10
                    CH SLOPE=0.007  FP SLOPE=0.007
                    N=0.035  DIST=780
                    DIST  ELEV  DIST  ELEV
                     0      5898.04 132 5898.03
                     250    5896.63 406 5896.45
                     477    5898.02 593 5899.88
                     740    5900.10 780 5899.98

ROUTE MCUNGE       ID=6  HYD NO=12.6  INFLOW ID=9
                  DT=0.0  L=4765 FT  NS=0  SLOPE=0.007
                  MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD          ID=6  CODE=1
*
*****
*S*** SUB-BASIN 12 ****
*
COMPUTE LT TP      LCODE=1
                  NK=3  ISLOPE=-1
                  LENGTH=400 FT  SLOPE=0.047 K=0.7
                  LENGTH=1600 FT SLOPE=0.026 K=2.0
                  LENGTH=6490 FT SLOPE=0.018 K=3.0
                  Kn=.033  CR=0.50
COMPUTE NM HYD     ID=1  HYD NO=12  DA= 0.309 SQ MI
                  PER A=99 PER B=1  PER C=0  PER D=0
                  TP=0.0  MASSRAIN=-1
PRINT HYD          ID=1  CODE=1
*S
*****
* ADD IP3.12 TO 12.6 TO GET 12.9
ADD HYD            ID=9  HYD NO=12.9 ID I=1 ID II=6
PRINT HYD          ID=9  CODE=1
*
*****
*S*** SUB-BASIN 14 ****

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*
COMPUTE LT TP      LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                   NK=3 ISLOPE=-1
                   LENGTH=400 FT SLOPE=0.0199 K=0.7
                   LENGTH=1600 FT SLOPE=0.033 K=2.0
                   LENGTH=8632 FT SLOPE=0.023 K=3.0
                   Kn=.033 CR=0.50
COMPUTE NM HYD     ID=2 HYD NO=14 DA= 0.513 SQ MI
                   PER A=99 PER B=1 PER C=0 PER D=0
                   TP=0.0 MASSRAIN=-1
PRINT HYD          ID=2 CODE=1
*S
*****
* ADD IP3.14 TO 12.9 TO GET 14.8
ADD HYD            ID=8 HYD NO=14.8 ID I=2 ID II=9
PRINT HYD          ID=8 CODE=1
*S
*****
*S ROUTE 14.8 THRU 15 IN NATURAL ARROYO TO 15.6
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
                   MIN ELEV=5844.46 MAX ELEV=5850.0
                   CH SLOPE=0.007 FP SLOPE=0.007
                   N=0.035 DIST=600.0
                   DIST ELEV DIST ELEV
                   0 5854.38 145 5852.0
                   235 5845.95 300 5844.46
                   399 5846.0 489 5850.0
                   600 5856.87

ROUTE MCUNGE       ID=6 HYD NO=15.6 INFLOW ID=8
                   DT=0.0 L=5450 FT NS=0 SLOPE=0.007
                   MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD          ID=6 CODE=1
*
*****
*S*** SUB-BASIN 15 ****
*
COMPUTE LT TP      LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                   NK=3 ISLOPE=-1
                   LENGTH=400 FT SLOPE=0.005 K=0.7
                   LENGTH=1600 FT SLOPE=0.006 K=2.0
                   LENGTH=2978 FT SLOPE=0.011 K=3.0
                   Kn=.033 CR=0.58
COMPUTE NM HYD     ID=1 HYD NO=15 DA= 0.301 SQ MI
                   PER A=99 PER B=1 PER C=0 PER D=0
                   TP=0.0 MASSRAIN=-1
PRINT HYD          ID=1 CODE=1
*S
*****
* ADD 15 TO 15.6 TO GET 15.9
ADD HYD            ID=9 HYD NO=15.9 ID I=1 ID II=6
PRINT HYD          ID=9 CODE=1
*
*****
*S*** SUB-BASIN 16 ****
*
COMPUTE LT TP      LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                   NK=3 ISLOPE=-1
                   LENGTH=400 FT SLOPE=0.014 K=0.7
                   LENGTH=1600 FT SLOPE=0.022 K=2.0
                   LENGTH=8058 FT SLOPE=0.025 K=3.0
                   Kn=.033 CR=0.52
COMPUTE NM HYD     ID=1 HYD NO=16 DA= 0.533 SQ MI
                   PER A=99 PER B=1 PER C=0 PER D=0
                   TP=0.0 MASSRAIN=-1
PRINT HYD          ID=1 CODE=1
*S
*****
*S ROUTE 16 THRU 17 IN NATURAL ARROYO TO 17.7
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
                   MIN ELEV=5849.92 MAX ELEV=5857.33
                   CH SLOPE=0.009 FP SLOPE=0.009
                   N=0.035 DIST=800.0
                   DIST ELEV DIST ELEV
                   0 5854.05 148 5856.03
                   199 5857.22 274 5854.0
                   400 5849.92 484 5852.0
                   575 5856.0 800 5857.33

ROUTE MCUNGE       ID=6 HYD NO=17.6 INFLOW ID=1
                   DT=0.0 L=3385 FT NS=0 SLOPE=0.009
                   MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD          ID=6 CODE=1
*
*****
*S*** SUB-BASIN 17 ****
*
COMPUTE LT TP      LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                   NK=3 ISLOPE=-1
                   LENGTH=400 FT SLOPE=0.012 K=0.7
                   LENGTH=1600 FT SLOPE=0.008 K=2.0
                   LENGTH=5130 FT SLOPE=0.008 K=3.0
                   Kn=.033 CR=0.59
COMPUTE NM HYD     ID=2 HYD NO=17 DA= 0.268 SQ MI
                   PER A=99 PER B=1 PER C=0 PER D=0
                   TP=0.0 MASSRAIN=-1
PRINT HYD          ID=2 CODE=1
*S
*****
*S ADD 17.6 TO 17 TO GET 17.7
ADD HYD            ID=7 HYD NO=17.7 ID I=6 ID II=2
PRINT HYD          ID=7 CODE=1
*
*****

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```

*S ADD 17.7 TO 15.9 TO GET 17.4
ADD HYD          ID=4    HYD NO=17.4 ID I=7 ID II=9
PRINT HYD        ID=4    CODE=5
*S
*****
*S ROUTE 17.4 THRU 20 IN NATURAL ARROYO TO 28.6
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=5812.0 MAX ELEV=5825.39
                     CH SLOPE=0.0116 FP SLOPE=0.0116
                     N=0.035 DIST=800.0
                     DIST ELEV DIST ELEV
                     0 5829.74 160 5824.0
                     289 5816.16 374 5812.0
                     499 5813.98 662 5819.96
                     800 5825.39

ROUTE MCUNGE      ID=3    HYD NO=20.3 INFLOW ID=4
DT=0.0 L=2323 FT NS=0 SLOPE=0.0116
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

PRINT HYD        ID=3    CODE=1
*

*****
*S*** SUB-BASIN 21 ****
*
COMPUTE LT TP      LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.018 K=0.7
LENGTH=1600 FT SLOPE=0.033 K=2.0
LENGTH=3667 FT SLOPE=0.027 K=3.0
Kn=.033 CR=0.50
COMPUTE NM HYD     ID=1    HYD NO=21 DA= 0.145 SQ MI
PER A=99 PER B=1 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
PRINT HYD          ID=1    CODE=1
*S
*****
*S ROUTE 21 THRU 22 IN NATURAL ARROYO TO 22.8
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=5875.66 MAX ELEV=5883.82
                     CH SLOPE=0.007 FP SLOPE=0.007
                     N=0.035 DIST=1200.0
                     DIST ELEV DIST ELEV
                     0 5881.59 264 5875.89
                     459 5876.12 598 5875.66
                     879 5878.0 1045 5882.96
                     1200 5883.82

ROUTE MCUNGE      ID=5    HYD NO=22.5 INFLOW ID=1
DT=0.0 L=7312 FT NS=0 SLOPE=0.007
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

PRINT HYD        ID=5    CODE=1
*

*****
*S*** SUB-BASIN 22 ****
*
COMPUTE LT TP      LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.015 K=0.7
LENGTH=1600 FT SLOPE=0.018 K=2.0
LENGTH=12166 FT SLOPE=0.017 K=3.0
Kn=.033 CR=.5
COMPUTE NM HYD     ID=2    HYD NO=22 DA= 0.739 SQ MI
PER A=99 PER B=1 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
PRINT HYD          ID=2    CODE=1
*S
*****
*S ADD 21 AND 22 TO GET 22.8
ADD HYD          ID=8    HYD NO=22.8 ID I=5 ID II=2
PRINT HYD        ID=8    CODE=5
*S
*****
*S*** SUB-BASIN 24 ****
*
COMPUTE LT TP      LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.005 K=0.7
LENGTH=1600 FT SLOPE=0.007 K=2.0
LENGTH=1338 FT SLOPE=0.008 K=3.0

COMPUTE NM HYD     ID=2    HYD NO=24 DA= 0.117 SQ MI
PER A=99 PER B=1 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
PRINT HYD          ID=2    CODE=1
*S
*****
*S ADD 24 AND 22.8 TO GET 24.7
ADD HYD          ID=7    HYD NO=24.7 ID I=2 ID II=8
PRINT HYD        ID=7    CODE=5
*S
*****
*S ROUTE 24.7 THRU 23 IN NATURAL ARROYO TO 23.8
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
                     MIN ELEV=5824.56 MAX ELEV=5840.33
                     CH SLOPE=0.014 FP SLOPE=0.014
                     N=0.035 DIST=1000.0
                     DIST ELEV DIST ELEV
                     0 5839.67 207 5837.99
                     372 5829.93 498 5824.56
                     605 5827.79 729 5836.11
                     1000 5840.33

ROUTE MCUNGE      ID=6    HYD NO=23.6 INFLOW ID=7

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BOCA NEGRA ARROYO 500 yr.txt
DT=0.0 L=2675 FT NS=0 SLOPE=0.014
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
ID=6 CODE=1
PRINT HYD
*
*****
*S*** SUB-BASIN 23 ****
*
COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.004 K=0.7
LENGTH=1600 FT SLOPE=0.006 K=2.0
LENGTH=3613 FT SLOPE=0.015 K=3.0
Kn=.033 CR=.5
COMPUTE NM HYD ID=2 HYD NO=23 DA= 0.245 SQ MI
PER A=99 PER B=1 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
PRINT HYD ID=2 CODE=1
*S
*****
*S ADD 23 AND 23.6 TO GET 23.8
ADD HYD ID=8 HYD NO=23.8 ID I=2 ID II=6
PRINT HYD ID=8 CODE=5
*S
*****
*S*** SUB-BASIN 28 ****
*
COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.019 K=0.7
LENGTH=1600 FT SLOPE=0.006 K=2.0
LENGTH=5288 FT SLOPE=0.012 K=3.0
Kn=.033 CR=.5
COMPUTE NM HYD ID=2 HYD NO=28 DA= 0.158 SQ MI
PER A=95 PER B=5 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
PRINT HYD ID=2 CODE=1
*S
*****
*S ADD 28 AND 23.8 TO GET 28.9
ADD HYD ID=9 HYD NO=28.9 ID I=2 ID II=8
PRINT HYD ID=9 CODE=5
*S
*****
*S ADD 17.4 TO 28.9 TO GET 28.6
ADD HYD ID=6 HYD NO=28.6 ID I=3 ID II=9
PRINT HYD ID=6 CODE=5
*S
*****
*S ROUTE 28.6 THRU 20 IN NATURAL ARROYO TO 20.8
*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5771.07 MAX ELEV=5810.76
CH SLOPE=0.015 FP SLOPE=0.015
N=0.035 DIST=850.0
DIST ELEV DIST ELEV
0 5810.76 126 5801.93
250 5796.16 382 5779.97
429 5771.07 483 5775.96
604 5784.0 850 5792.39

ROUTE MCUNGE ID=7 HYD NO=20.7 INFLOW ID=6
DT=0.0 L=2290 FT NS=0 SLOPE=0.015
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
ID=7 CODE=5
PRINT HYD
*
*****
*S*** SUB-BASIN 20 ****
*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.015 K=0.7
LENGTH=1600 FT SLOPE=0.015 K=2.0
LENGTH=5447 FT SLOPE=0.018 K=3.0
Kn=.033 CR=0.50
COMPUTE NM HYD ID=1 HYD NO=20 DA= 0.426 SQ MI
PER A=95 PER B=5 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
PRINT HYD ID=1 CODE=1
*S
*****
* ADD 20 TO 28.6 TO GET 20.8
ADD HYD ID=8 HYD NO=20.8 ID I=1 ID II=7
PRINT HYD ID=8 CODE=1
*
*****
*****
*S*** SUB-BASIN 25 ****
*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.021 K=0.7
LENGTH=1600 FT SLOPE=0.04 K=2.0
LENGTH=10314 FT SLOPE=0.018 K=3.0
Kn=.033 CR=.5
COMPUTE NM HYD ID=1 HYD NO=25 DA= 0.463 SQ MI
PER A=100 PER B=0 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1

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BOCA NEGRA ARROYO 500 yr.txt

PRINT HYD          ID=1  CODE=1
*S
*****
*S*** SUB-BASIN 26 ****
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.04 K=0.7
                   LENGTH=1600 FT  SLOPE=0.034 K=2.0
                   LENGTH=6569 FT  SLOPE=0.020 K=3.0
                   Kn=.033  CR=0.60
COMPUTE NM HYD     ID=2  HYD NO=26  DA= 0.348 SQ MI
                   PER A=100 PER B=0  PER C=0  PER D=0
                   TP=0.0  MASSRAIN=-1
                   ID=2  CODE=1
PRINT HYD
*S
*****
*S ADD 25 TO 26 TO GET 25.6
ADD HYD            ID=6  HYD NO=25.6 ID I=1 ID II=2
PRINT HYD          ID=6  CODE=1
*
*****
*S*** SUB-BASIN 27 ****
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.035 K=0.7
                   LENGTH=1600 FT  SLOPE=0.029 K=2.0
                   LENGTH=7044 FT  SLOPE=0.021 K=3.0
                   Kn=.033  CR=0.55
COMPUTE NM HYD     ID=1  HYD NO=27  DA= 0.376 SQ MI
                   PER A=100 PER B=0  PER C=0  PER D=0
                   TP=0.0  MASSRAIN=-1
                   ID=1  CODE=1
PRINT HYD
*S
*****
*S ADD 27 TO 25.6 TO GET 25.75
ADD HYD            ID=7  HYD NO=25.75 ID I=1 ID II=6
PRINT HYD          ID=7  CODE=1
*S
*****
*S ROUTE 25.75 THRU UPPER 30 IN NATURAL ARROYO TO 30.91
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                     MIN ELEV=5835.82  MAX ELEV=5841.47
                     CH SLOPE=0.005  FP SLOPE=0.005
                     N=0.035  DIST=900.0
                     DIST  ELEV  DIST  ELEV
                        0  5837.78  185 5842.09
                        277  5840.10  449  5835.82
                        630  5838.02  900  5841.47

ROUTE MCUNGE        ID=51  HYD NO=30.51  INFLOW ID=7
                     DT=0.0  L=8763 FT  NS=0  SLOPE=0.005
                     MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD            ID=51  CODE=5
*
*****
*S ROUTE 30.91 THRU LOWER 30 IN NATURAL ARROYO TO 30.9
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                     MIN ELEV=5792.02  MAX ELEV=5809.13
                     CH SLOPE=0.023  FP SLOPE=0.023
                     N=0.035  DIST=700.0
                     DIST  ELEV  DIST  ELEV
                        0  5812.39  101 5806.02
                        218  5800.05  304  5795.17
                        348  5792.02  376  5793.83
                        457  5799.95  570  5807.93
                        700  5809.13

ROUTE MCUNGE        ID=5  HYD NO=30.5  INFLOW ID=51
                     DT=0.0  L=2903 FT  NS=0  SLOPE=0.023
                     MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD            ID=5  CODE=5
*
*****
*S*** SUB-BASIN 30 ****
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.006 K=0.7
                   LENGTH=1600 FT  SLOPE=0.006 K=2.0
                   LENGTH=9286 FT  SLOPE=0.0111 K=3.0
                   Kn=.033  CR=0.50
COMPUTE NM HYD     ID=1  HYD NO=30  DA= 0.588 SQ MI
                   PER A=95 PER B=5  PER C=0  PER D=0
                   TP=0.0  MASSRAIN=-1
                   ID=1  CODE=1
PRINT HYD
*S
*****
*S ADD 30 TO 30.5 TO GET 30.9
ADD HYD            ID=9  HYD NO=30.9 ID I=1 ID II=5
PRINT HYD          ID=9  CODE=1
*S
*****
*S ***** TOTAL FLOW OUT OF BOCA NEGRA PART OF QUAIL RANCH
*S ADD 30.9 TO 20.8 TO GET 20.75
*S
ADD HYD            ID=7  HYD NO=20.75 ID I=9 ID II=8
PRINT HYD          ID=7  CODE=1
*
*S
*****

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*S ROUTE 20.75 THRU 32 IN NATURAL ARROYO TO 32.6
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                      MIN ELEV=5748.37  MAX ELEV=5771.51
                      CH SLOPE=0.009    FP SLOPE=0.009
                      N=0.035          DIST=700.0
                      DIST  ELEV    DIST  ELEV
                      0    5764.7    119  5758.15
                      227    5752.45  351    5748.37
                      476    5758.03  594    5764.93
                      700    5771.51

ROUTE MCUNGE          ID=6  HYD NO=32.6  INFLOW ID=7
DT=0.0  L=3180 FT  NS=0  SLOPE=0.009
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD             ID=6  CODE=5
*
*****
*S ADD BASIN 32*****
*
COMPUTE LT TP          LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.012  K=0.7
LENGTH=1600 FT  SLOPE=0.011  K=2.0
LENGTH=959 FT  SLOPE=0.010  K=3.0

COMPUTE NM HYD         ID=1  HYD NO=32  DA= 0.250 SQ MI
PER A=100 PER B=0  PER C=0  PER D=0
TP=0.0  MASSRAIN=-1
PRINT HYD              ID=1  CODE=1
*S
*****

*S ADD 32 TO 20.75 TO GET 32.9
ADD HYD                ID=9  HYD NO=32.9  ID I=1  ID II=6
PRINT HYD              ID=9  CODE=1
*S
*****
*
*S ROUTE 32.9 THRU UPPER 39 IN NATURAL ARROYO TO 39.7
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                      MIN ELEV=5681.92  MAX ELEV=5694.67
                      CH SLOPE=0.016    FP SLOPE=0.016
                      N=0.035          DIST=490.0
                      DIST  ELEV    DIST  ELEV
                      0    5694.40  76    5691.91
                      153    5688.85  244    5683.15
                      294    5681.92  339    5685.05
                      403    5690.03  490    5694.67

ROUTE MCUNGE          ID=5  HYD NO=39.5  INFLOW ID=9
DT=0.0  L=1800 FT  NS=0  SLOPE=0.016
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD             ID=5  CODE=1
*
*****
*****
*S*** SUB-BASIN 33 ***
*
COMPUTE LT TP          LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.01  K=0.7
LENGTH=1600 FT  SLOPE=0.009  K=2.0
LENGTH=10392 FT  SLOPE=0.009  K=3.0
Kn=.033  CR=0.61
COMPUTE NM HYD         ID=1  HYD NO=33  DA= 0.731 SQ MI
PER A=100 PER B=0  PER C=0  PER D=0
TP=0.0  MASSRAIN=-1
PRINT HYD              ID=1  CODE=1
*S
*****
*S*** SUB-BASIN 35 ***
*
COMPUTE LT TP          LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.004  K=0.7
LENGTH=1600 FT  SLOPE=0.006  K=2.0
LENGTH=11265 FT  SLOPE=0.008  K=3.0
Kn=.033  CR=0.50
COMPUTE NM HYD         ID=2  HYD NO=35  DA= 0.616 SQ MI
PER A=100 PER B=0  PER C=0  PER D=0
TP=0.0  MASSRAIN=-1
PRINT HYD              ID=2  CODE=1
*S
*****
*S ADD 33 TO 35 TO GET 35.8
*S
ADD HYD                ID=8  HYD NO=35.8  ID I=1  ID II=2
PRINT HYD              ID=8  CODE=1
*
*****
*S ROUTE 35.8 THRU UPPER 39 IN NATURAL ARROYO TO 36.6
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                      MIN ELEV=5766.06  MAX ELEV=5778.83
                      CH SLOPE=0.013    FP SLOPE=0.013
                      N=0.035          DIST=700.0
                      DIST  ELEV    DIST  ELEV
                      0    5774.95  177  5770.03
                      320    5766.17  361    5766.06
                      408    5769.73  494    5778.01

```


555 5778.83 700 5775.56 BOCA NEGRA ARROYO 500 yr.txt

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ROUTE MCUNGE      ID=7  HYD NO=36.7  INFLOW ID=8
DT=0.0  L=2020 FT  NS=0  SLOPE=0.013
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD      ID=7  CODE=5
*
*****
*S*** SUB-BASIN 36 ****
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.012  K=0.7
LENGTH=1600 FT  SLOPE=0.008  K=2.0
LENGTH=5646 FT  SLOPE=0.015  K=3.0
Kn=.033  CR=0.50
COMPUTE NM HYD      ID=1  HYD NO=36  DA= 0.407 SQ MI
PER A=98 PER B=0  PER C=0  PER D=2
TP=0.0  MASSRAIN=-1
PRINT HYD      ID=1  CODE=1
*S
*****
*S  ADD 35.8 TO 36 TO GET 36.6
*S
ADD HYD      ID=6  HYD NO=36.6 ID I=1 ID II=7
PRINT HYD      ID=6  CODE=1
*
*S
*****
*S ROUTE 36.6 THRU MID 39 IN NATURAL ARROYO TO 39.7
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
MIN ELEV=5714.17  MAX ELEV=5716.23
CH SLOPE=0.015  FP SLOPE=0.015
N=0.035  DIST=600.0
DIST  ELEV  DIST  ELEV
0  5716.58  50  5715.99
98  5715.76  137  5715.92
301  5714.17  417  5715.74
536  5715.06  600  5716.23

ROUTE MCUNGE      ID=4  HYD NO=39.4  INFLOW ID=6
DT=0.0  L=1884 FT  NS=0  SLOPE=0.015
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD      ID=4  CODE=1
*
*****
*S  ADD 32.9 TO 39.4 TO GET 39.7
*S
ADD HYD      ID=7  HYD NO=39.7 ID I=5 ID II=4
PRINT HYD      ID=7  CODE=1
*
*S
*****
*S ROUTE 39.7 THRU LOWER 39 IN NATURAL ARROYO TO 39.8
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
MIN ELEV=5687.82  MAX ELEV=5701.09
CH SLOPE=0.0156  FP SLOPE=0.0156
N=0.035  DIST=500.0
DIST  ELEV  DIST  ELEV
0  5696.81  76  5694.05
174  5692.95  250  5687.82
339  5693.72  432  5699.97
500  5701.09

ROUTE MCUNGE      ID=6  HYD NO=39.6  INFLOW ID=7
DT=0.0  L=2583 FT  NS=0  SLOPE=0.0156
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD      ID=6  CODE=1
*
*****
*S*** SUB-BASIN 39 ****
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.015  K=0.7
LENGTH=1600 FT  SLOPE=0.015  K=2.0
LENGTH=5883 FT  SLOPE=0.002  K=3.0
Kn=.033  CR=0.50
COMPUTE NM HYD      ID=2  HYD NO=39  DA= 0.341 SQ MI
PER A=99 PER B=0  PER C=0  PER D=1
TP=0.0  MASSRAIN=-1
PRINT HYD      ID=2  CODE=1
*S
*****
*S  ADD 39.6 TO 39 TO GET 39.8
*S
ADD HYD      ID=8  HYD NO=39.8 ID I=2 ID II=6
PRINT HYD      ID=8  CODE=1
*
*S
*****
*S*** SUB-BASIN 40A ****
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.033  K=0.7
LENGTH=1600 FT  SLOPE=0.013  K=2.0
LENGTH=2012 FT  SLOPE=0.016  K=3.0
```

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COMPUTE NM HYD      Kn=.033  CR=0.50
                    ID=1   HYD NO=40A  DA= 0.107 SQ MI
                    PER A=88 PER B=2  PER C=10 PER D=0
                    TP=0.0  MASSRAIN=-1
PRINT HYD           ID=1   CODE=1
*S
*****
*S ADD 40A TO 39.8 TO GET 40A.9
*S
ADD HYD             ID=9   HYD NO=40A.9 ID I=1 ID II=8
PRINT HYD           ID=9   CODE=1
*
*S
*****
*S ROUTE 40A.9 THRU 40 IN NATURAL ARROYO TO 40.5
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                     MIN ELEV=5636.01  MAX ELEV=5641.34
                     CH SLOPE=0.0097  FP SLOPE=0.0097
                     N=0.035  DIST=600.0
                     DIST  ELEV  DIST  ELEV
                        0  5643.37  111 5641.34
                        223 5638.84 301 5636.01
                        448 5641.12 600 5639.78

ROUTE MCUNGE        ID=6   HYD NO=40.6 INFLOW ID=9
                    DT=0.0  L=2390 FT  NS=0  SLOPE=0.0097
                    MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD           ID=6   CODE=1
*
*****
*S*** SUB-BASIN 40 ****
*
COMPUTE LT TP       LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                    NK=3  ISLOPE=-1
                    LENGTH=400 FT  SLOPE=0.052 K=0.7
                    LENGTH=1600 FT SLOPE=0.020 K=2.0
                    LENGTH=2836 FT SLOPE=0.026 K=3.0
                    Kn=.033  CR=0.50
COMPUTE NM HYD      ID=1   HYD NO=40  DA= 0.356 SQ MI
                    PER A=88 PER B=2  PER C=10 PER D=0
                    TP=0.0  MASSRAIN=-1
PRINT HYD           ID=1   CODE=1
*S
*****
*S ADD 40 TO 40A.9 TO GET 40.5
*S
ADD HYD             ID=5   HYD NO=40.5 ID I=1 ID II=6
PRINT HYD           ID=5   CODE=1
*
*S
*****
*S ROUTE 40.5 THRU UPPER 41A IN NATURAL ARROYO TO 41A.9
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                     MIN ELEV=5518.27  MAX ELEV=5549.49
                     CH SLOPE=0.032  FP SLOPE=0.032
                     N=0.035  DIST=400.0
                     DIST  ELEV  DIST  ELEV
                        0  5546.63  70 5541.99
                        134 5529.86 200 5518.27
                        228 5519.99 260 5530.34
                        322 5545.97 400 5549.49

ROUTE MCUNGE        ID=61  HYD NO=41A.61 INFLOW ID=5
                    DT=0.0  L=4947 FT  NS=0  SLOPE=0.032
                    MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD           ID=61  CODE=1
*
*****
*S ROUTE 40.5 THRU LOWER 41A IN NATURAL ARROYO TO 41A.9
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                     MIN ELEV=5457.93  MAX ELEV=5504.28
                     CH SLOPE=0.017  FP SLOPE=0.017
                     N=0.035  DIST=400.0
                     DIST  ELEV  DIST  ELEV
                        0  5485.62  37 5499.76
                        75 5504.28 121 5489.83
                        155 5469.83 201 5457.93
                        233 5470.10 265 5490.19
                        288 5499.91 336 5502.91
                        400 5504.19

ROUTE MCUNGE        ID=6   HYD NO=41A.6 INFLOW ID=61
                    DT=0.0  L=1702 FT  NS=0  SLOPE=0.017
                    MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD           ID=6   CODE=1
*
*****
*S*** SUB-BASIN 41A ****
*
COMPUTE LT TP       LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                    NK=3  ISLOPE=-1
                    LENGTH=400 FT  SLOPE=0.022 K=0.7
                    LENGTH=1600 FT SLOPE=0.014 K=2.0
                    LENGTH=6215 FT SLOPE=0.036 K=3.0
                    Kn=.033  CR=0.50
COMPUTE NM HYD      ID=1   HYD NO=41A  DA= 0.453 SQ MI
                    PER A=70 PER B=0  PER C=30 PER D=0
                    TP=0.0  MASSRAIN=-1
PRINT HYD           ID=1   CODE=1

```

```

*S
*****
*S ADD 41A TO 40.5 TO GET 41A.9
*S
ADD HYD          ID=9  HYD NO=41A.9 ID I=1 ID II=6
PRINT HYD        ID=9  CODE=1
*
*S
*****
*S*** SUB-BASIN 37 ****
*
COMPUTE LT TP    LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                  NK=3 ISLOPE=-1
                  LENGTH=400 FT SLOPE=0.012 K=0.7
                  LENGTH=1600 FT SLOPE=0.010 K=2.0
                  LENGTH=10600 FT SLOPE=0.008 K=3.0
                  Kn=.033 CR=0.55
COMPUTE NM HYD   ID=1  HYD NO=37  DA= 0.590 SQ MI
                  PER A=91 PER B=0 PER C=2 PER D=7
                  TP=0.0 MASSRAIN=-1
PRINT HYD        ID=1  CODE=1
*S
*****
*S ROUTE 37 THRU 34 IN NATURAL ARROYO TO 34.6
*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=5769.66 MAX ELEV=5778.71
                    CH SLOPE=0.005 FP SLOPE=0.005
                    N=0.035 DIST=500.0
                    DIST ELEV DIST ELEV
                     0 5778.71 99 5771.79
                     180 5769.8 249 5769.66
                     340 5769.9 500 5775.36

ROUTE MCUNGE     ID=5  HYD NO=34.5 INFLOW ID=1
                  DT=0.0 L=4007 FT NS=0 SLOPE=0.005
                  MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD        ID=5  CODE=1
*
*****
*S*** SUB-BASIN 34 ****
*
COMPUTE LT TP    LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                  NK=3 ISLOPE=-1
                  LENGTH=400 FT SLOPE=0.010 K=0.7
                  LENGTH=1600 FT SLOPE=0.003 K=2.0
                  LENGTH=1557 FT SLOPE=0.007 K=3.0

COMPUTE NM HYD   ID=2  HYD NO=34  DA= 0.129 SQ MI
                  PER A=91 PER B=0 PER C=2 PER D=7
                  TP=0.0 MASSRAIN=-1
PRINT HYD        ID=2  CODE=1
*S
*****
*S ADD 34 TO 34.5 TO GET 34.6
*S
ADD HYD          ID=6  HYD NO=34.6 ID I=5 ID II=2
PRINT HYD        ID=6  CODE=1
*
*S
*****
*S ROUTE 34.6 THRU 38 IN NATURAL ARROYO TO 34.3
*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=5749.96 MAX ELEV=5753.54
                    CH SLOPE=0.014 FP SLOPE=0.014
                    N=0.035 DIST=500.0
                    DIST ELEV DIST ELEV
                     0 5750.07 77 5749.96
                     177 5753.54 211 5751.74
                     251 5750.83 287 5752.19
                     394 5753.47 500 5751.61

ROUTE MCUNGE     ID=5  HYD NO=38.5 INFLOW ID=6
                  DT=0.0 L=2678 FT NS=0 SLOPE=0.014
                  MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD        ID=5  CODE=1
*
*****
*S*** SUB-BASIN 38A ****
*
COMPUTE LT TP    LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                  NK=2 ISLOPE=-1
                  LENGTH=400 FT SLOPE=0.010 K=0.7
                  LENGTH=1373 FT SLOPE=0.008 K=2.0
COMPUTE NM HYD   ID=1  HYD NO=38A DA= 0.075 SQ MI
                  PER A=100 PER B=0 PER C=0 PER D=0
                  TP=0.0 MASSRAIN=-1
PRINT HYD        ID=1  CODE=1
*S
*****
*S ROUTE 38A THRU 38 IN NATURAL ARROYO TO 34.3
*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
                    MIN ELEV=5742.94 MAX ELEV=5751.34
                    CH SLOPE=0.014 FP SLOPE=0.014
                    N=0.035 DIST=650.0
                    DIST ELEV DIST ELEV
                     0 5751.34 136 5745.99
                     243 5743.74 326 5742.94
                     440 5745.94 517 5747.36
                     650 5743.89

```

```

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ROUTE MCUNGE      ID=2  HYD NO=38.2  INFLOW ID=1
DT=0.0  L=3283 FT  NS=0  SLOPE=0.014
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD      ID=2  CODE=1
*
*****

*S  ADD 38.2 TO 38.5 TO GET 34.3
*S
ADD HYD      ID=3  HYD NO=34.3  ID I=2  ID II=5
PRINT HYD    ID=3  CODE=1
*
*S
*****
*S*** SUB-BASIN 38 *****
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.012  K=0.7
LENGTH=1600 FT  SLOPE=0.022  K=2.0
LENGTH=960 FT  SLOPE=0.012  K=3.0

COMPUTE NM HYD    ID=1  HYD NO=38  DA= 0.131 SQ MI
PER A=96 PER B=4  PER C=0  PER D=0
TP=0.0  MASSRAIN=-1
ID=1  CODE=1
PRINT HYD
*S
*****
*S  ADD 38 TO 34.3 TO GET 38.4
*S
ADD HYD      ID=4  HYD NO=38.4  ID I=1  ID II=3
PRINT HYD    ID=4  CODE=1
*
*S
*****

*S ROUTE 38.4 THRU 42 IN NATURAL ARROYO TO 42.3
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
MIN ELEV=5692.77  MAX ELEV=5703.76
CH SLOPE=0.03  FP SLOPE=0.03
N=0.035  DIST=500.0
DIST  ELEV  DIST  ELEV
0  5703.76  112  5700.06
214  5695.01  251  5692.77
288  5695.93  348  5700.22
410  5701.04  500  5702.54

ROUTE MCUNGE      ID=6  HYD NO=42.6  INFLOW ID=4
DT=0.0  L=4626 FT  NS=0  SLOPE=0.030
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD      ID=6  CODE=1
*
*****

*S*** SUB-BASIN 42 *****
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.020  K=0.7
LENGTH=1600 FT  SLOPE=0.025  K=2.0
LENGTH=4881 FT  SLOPE=0.030  K=3.0
Kn=.033  CR=.5

COMPUTE NM HYD    ID=1  HYD NO=42  DA= 0.576 SQ MI
PER A=90 PER B=0  PER C=10  PER D=0
TP=0.0  MASSRAIN=-1
ID=1  CODE=1
PRINT HYD
*S
*****
*S  ADD 42 TO 38.9 TO GET 42.3
*S
ADD HYD      ID=3  HYD NO=42.3  ID I=1  ID II=6
PRINT HYD    ID=3  CODE=1
*
*S
*****
*S*** SUB-BASIN 42A *****
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.055  K=0.7
LENGTH=1600 FT  SLOPE=0.040  K=2.0
LENGTH=2240 FT  SLOPE=0.033  K=3.0
Kn=.033  CR=.5

COMPUTE NM HYD    ID=1  HYD NO=42A  DA= 0.317 SQ MI
PER A=90 PER B=0  PER C=10  PER D=0
TP=0.0  MASSRAIN=-1
ID=1  CODE=1
PRINT HYD
*S
*****
*S  ADD 42 TO 38.9 TO GET 42A.4
*S
ADD HYD      ID=4  HYD NO=42A.4  ID I=1  ID II=3
PRINT HYD    ID=4  CODE=1
*
*S
*****
*S ROUTE 42A.4 THRU UPPER 41B IN NATURAL ARROYO TO 41B.52
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
MIN ELEV=5556.25  MAX ELEV=5561.32
CH SLOPE=0.0195  FP SLOPE=0.0195

```

N=0.035	DIST=400.0
DIST ELEV	DIST ELEV
0 5561.13	62 5558.07
199 5556.25	288 5558.06
400 5561.32	

```

ROUTE MCUNGE      ID=51  HYD NO=41B.51  INFLOW ID=4
DT=0.0  L=2296 FT  NS=0  SLOPE=0.0195
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD         ID=51  CODE=1

```

```

*
*****
*S ROUTE 41B.52 THRU MID 41B IN NATURAL ARROYO TO 41B.5
*

```

```

COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
MIN ELEV=5482.02  MAX ELEV=5532.32
CH SLOPE=0.18  FP SLOPE=0.18
N=0.035  DIST=400.0
DIST ELEV  DIST ELEV
0 5530.30  53 5531.12
112 5527.73 199 5482.02
294 5527.84 400 5532.32

```

```

ROUTE MCUNGE      ID=52  HYD NO=41B.52  INFLOW ID=51
DT=0.0  L=370 FT  NS=0  SLOPE=0.18
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD         ID=52  CODE=1

```

```

*
*****
*S ROUTE 41B.5 THRU LOWER 41B IN NATURAL ARROYO TO 41B.3
*

```

```

COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
MIN ELEV=5451.32  MAX ELEV=5462.04
CH SLOPE=0.016  FP SLOPE=0.016
N=0.035  DIST=300.0
DIST ELEV  DIST ELEV
0 5462.04  103 5452.05
150 5451.32 219 5452.73
300 5457.13

```

```

ROUTE MCUNGE      ID=5  HYD NO=41B.5  INFLOW ID=52
DT=0.0  L=1760 FT  NS=0  SLOPE=0.016
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
PRINT HYD         ID=5  CODE=1

```

```

*
*****
*S*** SUB-BASIN 41B ****
*

```

```

COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.020 K=0.7
LENGTH=1600 FT  SLOPE=0.020 K=2.0
LENGTH=2167 FT  SLOPE=0.044 K=3.0
Kn=.033  CR=.5
COMPUTE NM HYD     ID=1  HYD NO=41B  DA= 0.137 SQ MI
PER A=70 PER B=0  PER C=30 PER D=0
TP=0.0  MASSRAIN=-1
PRINT HYD          ID=1  CODE=1

```

```

*
*****
*S
*S ADD 41B TO 42A.4 TO GET 41B.3
*S
ADD HYD             ID=3  HYD NO=41B.3 ID I=1 ID II=5
PRINT HYD           ID=3  CODE=1
*

```

```

*
*****
*S*** SUB-BASIN 43A ****
*

```

```

COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT  SLOPE=0.038 K=0.7
LENGTH=1600 FT  SLOPE=0.034 K=2.0
LENGTH=4762 FT  SLOPE=0.037 K=3.0
Kn=.033  CR=.5
COMPUTE NM HYD     ID=2  HYD NO=43A  DA= 0.186 SQ MI
PER A=80 PER B=10 PER C=10 PER D=0
TP=0.0  MASSRAIN=-1
PRINT HYD          ID=2  CODE=1

```

```

*
*****
*S
*S ADD 43A TO 41B.3 TO GET 43A.6
*S
ADD HYD             ID=6  HYD NO=43A.6 ID I=2 ID II=3
PRINT HYD           ID=6  CODE=1
*

```

```

*
*****
*S
*S ADD 43A.6 TO 41A.9 TO GET 41A.7
*S
ADD HYD             ID=7  HYD NO=41A.7 ID I=6 ID II=9
PRINT HYD           ID=7  CODE=1
*

```

```

*
*****
*S ROUTE 41A.7 THRU 43 IN NATURAL ARROYO TO 43.3
*

```

```

COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
MIN ELEV=5412.0  MAX ELEV=5437.18
CH SLOPE=0.009  FP SLOPE=0.009

```

N=0.035		DIST=600.0	
DIST	ELEV	DIST	ELEV
0	5437.18	131	5420.64
248	5414.98	300	5412.0
362	5413.9	488	5419.34
600	5424.41		

```
ROUTE MCUNGE      ID=5  HYD NO=43.5  INFLOW ID=7
DT=0.0            L=4200 FT  NS=0    SLOPE=0.009
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD         ID=5  CODE=1
```

```
*****
```

```
*S*** SUB-BASIN 43 ****
```

```
COMPUTE LT TP      LCODE=1  USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3  ISLOPE=-1
LENGTH=400 FT      SLOPE=0.0204 K=0.7
LENGTH=1600 FT     SLOPE=0.009 K=2.0
LENGTH=3052 FT     SLOPE=0.017 K=3.0
Kn=.033  CR=.5
COMPUTE NM HYD      ID=1  HYD NO=43  DA= 0.170 SQ MI
PER A=80 PER B=10 PER C=10 PER D=0
TP=0.0  MASSRAIN=-1
PRINT HYD           ID=1  CODE=1
```

```
*S
*****
```

```
*S ADD 43 TO 41A.7 TO GET 43.3
```

```
*S
ADD HYD             ID=3  HYD NO=43.3 ID I=1 ID II=5
PRINT HYD           ID=3  CODE=1
```

```
*S
*****
```

```
*S
*****
```

```
*S*** SUB-BASIN 44 ****
```

```
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
NK=3  ISLOPE=-1
LENGTH=400 FT      SLOPE=0.049 K=0.7
LENGTH=1600 FT     SLOPE=0.040 K=2.0
LENGTH=8103 FT     SLOPE=0.025 K=3.0
Kn=.033  CR=0.51
COMPUTE NM HYD      ID=5  HYD NO=44  DA= 0.409 SQ MI
PER A=90 PER B=0 PER C=10 PER D=0
TP=0.0  MASSRAIN=-1
PRINT HYD           ID=5  CODE=1
```

```
*S
*****
```

```
*S ADD 44 TO 61.6 TO GET 44.8
```

```
*S
ADD HYD             ID=8  HYD NO=44.8 ID I=5 ID II=3
PRINT HYD           ID=8  CODE=1
```

```
*S
*****
```

```
*S*** SUB-BASIN 61 ****
```

```
COMPUTE LT TP      LCODE=1  USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3  ISLOPE=-1
LENGTH=400 FT      SLOPE=0.04 K=0.7
LENGTH=1600 FT     SLOPE=0.008 K=2.0
LENGTH=308 FT      SLOPE=0.044 K=3.0
Kn=.033  CR=0.51
COMPUTE NM HYD      ID=3  HYD NO=61  DA= 0.04846 SQ MI
PER A=80 PER B=10 PER C=10 PER D=0
TP=0.0  MASSRAIN=-1
PRINT HYD           ID=3  CODE=1
```

```
*S
*****
```

```
*S ADD 61 TO 44 TO GET 61.4
```

```
*S
ADD HYD             ID=4  HYD NO=61.4 ID I=8 ID II=3
PRINT HYD           ID=4  CODE=1
```

```
*S
*****
```

```
*S
*****
```

```
*S ROUTE 61.4 THRU 60 IN NATURAL ARROYO TO 60.3
```

```
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
MIN ELEV=5354 MAX ELEV=5360
CH SLOPE=0.013 FP SLOPE=0.0194
N=0.035 DIST=369.0
DIST ELEV DIST ELEV
0 5360 45 5359
89 5356 105 5355
133 5354 150 5354
177 5354 210 5355
295 5357 349 5359
369 5360
```

```
ROUTE MCUNGE      ID=3  HYD NO=60.3  INFLOW ID=4
DT=0.0            L=1205 FT  NS=0    SLOPE=0.0194
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
PRINT HYD         ID=3  CODE=1
```

```
*
```

```

*****
*S*** SUB-BASIN 60 *****
*
COMPUTE LT TP      LCODE=1  USDI BUREAU OF RECLAMATION LAG TIME EQUATION
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.065 K=0.7
                   LENGTH=1600 FT  SLOPE=0.026 K=2.0
                   LENGTH=1310 FT  SLOPE=0.016 K=3.0

COMPUTE NM HYD      ID=1  HYD NO=60  DA= 0.11036 SQ MI
                   PER A=100 PER B=0  PER C=0  PER D=0
                   TP=0.0  MASSRAIN=-1
                   ID=1  CODE=1

PRINT HYD
*
*S
*****
*
*S ADD 60 TO 44.8 TO GET 60.20
*S
ADD HYD              ID=6  HYD NO=60.6 ID I=1 ID II=3
PRINT HYD            ID=6  CODE=1
*
*S
*****
*
*S ROUTE THRU 4-60" PIPES IN SCENIC BLVD - IP3 *****
*S ROUTE RESERVOIR COMMAND WAS USED TO ROUTE THRU MULTIPLE PIPES IN SCENIC
*

ROUTE RESERVOIR      ID=19 HYD=60.19 INFLOW ID=6 CODE=5
                   OUTFLOW(CFS)  STORAGE(AC FT)  ELEV (FT)
                   0.0           0.000          5339.8
                   0.23          0.001          5340
                   32            0.200          5341
                   111           0.452          5342
                   229           0.775          5343
                   374           1.185          5344
                   535           1.682          5345
                   700           2.435          5346
                   1190          3.181          5346.7
                   2777          3.18101        5346.7001

PRINT HYD            ID=19  CODE=5
*
*****
*S*** Basin Contributing to INFLOW POINT 2 (IP2) *****
*
*****
*S*** SUB-BASIN 46C *****
*
COMPUTE LT TP      LCODE=1  USDI BUREAU OF RECLAMATION LAG TIME EQUATION
                   NK=1  ISLOPE=-1
                   LENGTH=330 FT  SLOPE=0.023 K=1.0

COMPUTE NM HYD      ID=1  HYD NO=46C  DA= 0.0025 SQ MI
                   PER A=90 PER B=00  PER C=10 PER D=0
                   TP=0.0  MASSRAIN=-1

PRINT HYD            ID=1  CODE=1

*****
*
*S ROUTE 46C THRU 62 IN NATURAL ARROYO TO 62.3
*
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                   MIN ELEV=5372.6  MAX ELEV=5375
                   CH SLOPE=0.0141  FP SLOPE=0.015
                   N=0.035  DIST=172.0
                   DIST  ELEV  DIST  ELEV
                   0 5375 73 5374
                   91 5373 109 5372.6
                   142 5373 157 5374
                   172 5375

ROUTE MCUNGE          ID=3  HYD NO=62.3 INFLOW ID=1
                   DT=0.0  L=2596 FT  NS=0  SLOPE=0.015
                   MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

PRINT HYD            ID=3  CODE=1
*
*****
*S*** SUB-BASIN 62 *****
*
COMPUTE LT TP      LCODE=1  USDI BUREAU OF RECLAMATION LAG TIME EQUATION
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.02 K=0.7
                   LENGTH=1600 FT  SLOPE=0.015 K=2.0
                   LENGTH=708 FT  SLOPE=0.009 K=3.0

COMPUTE NM HYD      ID=2  HYD NO=62  DA= 0.06722 SQ MI
                   PER A=80 PER B=10  PER C=10 PER D=0
                   TP=0.0  MASSRAIN=-1
                   ID=2  CODE=1

PRINT HYD
*
*****
*
*S ADD 61.4 TO 62 TO GET 62.5
*
ADD HYD              ID=1  HYD NO=62.1 ID I=2 ID II=3
PRINT HYD            ID=1  CODE=1
*
*S
*****

```

*S APPLY NO SEDIMENT BULKING FACTOR
 SEDIMENT BULK CODE=1 BULKING FACTOR = 1.00
 *

*

*S THE TRAILS SUBDIVISION
 *S OUTFLOW RESTRICTED TO 62 CFS AT UNIVERSE AND AVENIDA DE JAMITO
 *

*S RECALL HYD FROM THE TRAILS SUBDIVISION

*S
 RECALL HYD ID=99 HYD=BYPASS.ROUTE.K
 DT= .100000 HRS DA= 1.0536 SQ MI
 PEAK= 60.718CFS RO= 1.3592 INCHES NO PTS=600
 FLOW RATES

.0000	.0000	.0000	.0000	.0000
.0000	.0000	.0000	.0000	.0000
.0000	2.066	35.012	45.415	47.520
51.159	54.044	56.146	57.431	58.230
58.915	59.490	59.932	60.231	60.418
60.547	60.637	60.693	60.718	60.716
60.695	60.659	60.612	60.557	60.494
60.426	60.354	60.278	60.199	60.117
60.032	59.946	59.857	59.767	59.675
59.582	59.488	59.392	59.296	59.199
59.101	59.003	58.903	58.804	58.703
58.602	58.500	58.398	58.295	58.191
58.086	57.981	57.876	57.770	57.662
57.552	57.441	57.326	57.208	56.909
56.388	55.855	55.180	54.215	53.381
52.834	52.221	51.798	51.322	50.935
50.532	50.146	49.791	49.468	49.159
48.832	48.521	48.232	47.893	47.580
47.327	47.047	46.743	46.462	46.200
45.916	45.646	45.394	45.118	44.858
44.614	44.347	44.074	43.796	43.493
43.212	42.904	42.592	42.303	42.020
41.748	41.452	41.172	40.883	40.609
40.358	40.112	39.876	39.614	39.369
39.139	38.891	38.655	38.440	38.201
37.979	37.772	37.574	37.381	37.165
36.958	36.772	36.562	36.393	36.234
36.011	35.797	35.628	35.437	35.232
35.029	34.808	34.598	34.407	34.221
34.041	33.865	33.664	33.472	33.302
33.105	32.945	32.796	32.610	32.427
32.233	32.049	31.911	31.745	31.575
31.420	31.240	31.071	30.917	30.770
30.625	30.482	30.342	30.177	30.018
29.879	29.739	29.607	29.446	29.296
29.159	29.028	28.900	28.772	28.620
28.474	28.371	28.240	28.075	27.952
27.825	27.572	27.308	27.056	26.807
26.519	26.213	25.894	25.536	25.192
24.857	24.538	24.194	23.793	23.410
23.035	22.691	22.381	22.089	21.803
21.511	21.200	20.854	20.510	20.241
19.934	19.509	19.115	18.697	18.355
18.045	17.687	17.366	17.074	16.789
16.536	16.289	16.042	15.671	15.037
14.483	14.020	13.573	13.089	12.637
12.135	11.689	11.292	10.870	10.437
10.086	9.818	9.524	9.278	9.083
8.871	7.958	6.399	5.329	4.840
4.555	4.321	4.134	3.981	3.841
3.728	3.634	3.545	3.463	3.394
3.324	3.260	3.204	3.146	3.093
3.045	2.997	2.951	2.910	2.868
2.828	2.792	2.754	2.719	2.685
2.652	2.619	2.588	2.557	2.527
2.498	2.469	2.441	2.414	2.386
2.359	2.333	2.307	2.282	2.257
2.232	2.208	2.184	2.160	2.136
2.113	2.090	2.068	2.045	2.024
2.002	1.979	1.958	1.936	1.916
1.896	1.876	1.856	1.836	1.816
1.797	1.778	1.759	1.741	1.722
1.704	1.686	1.668	1.651	1.633
1.616	1.599	1.582	1.565	1.549
1.532	1.516	1.500	1.484	1.469
1.453	1.438	1.423	1.408	1.393
1.379	1.364	1.350	1.336	1.321
1.307	1.293	1.280	1.266	1.253
1.240	1.227	1.214	1.202	1.189
1.177	1.164	1.152	1.140	1.129
1.117	1.105	1.094	1.083	1.071
1.060	1.049	1.039	1.028	1.017
1.007	.996	.986	.976	.966
.956	.946	.936	.927	.917
.908	.899	.890	.880	.871
.863	.854	.845	.836	.828
.819	.811	.803	.795	.787
.779	.771	.763	.755	.748
.740	.732	.725	.718	.711
.703	.696	.689	.682	.675
.669	.662	.655	.649	.642
.636	.629	.623	.617	.611
.604	.598	.592	.586	.581
.575	.569	.563	.558	.552
.547	.541	.536	.531	.525
.520	.515	.510	.505	.500
.495	.490	.485	.480	.476
.471	.466	.462	.457	.453
.448	.444	.439	.435	.431
.426	.422	.418	.414	.410

BOCA NEGRA ARROYO 500 yr.txt

.406	.402	.398	.394	.390
.386	.383	.379	.375	.371
.368	.364	.361	.357	.354
.350	.347	.343	.340	.337
.333	.330	.327	.324	.321
.317	.314	.311	.308	.305
.302	.299	.296	.294	.291
.288	.285	.282	.280	.277
.274	.272	.269	.266	.264
.261	.259	.256	.254	.251
.249	.246	.244	.242	.239
.237	.235	.232	.230	.228
.226	.224	.221	.219	.217
.214	.212	.210	.208	.206
.204	.202	.200	.198	.196
.194	.193	.191	.189	.187
.185	.184	.182	.180	.178
.177	.175	.173	.172	.170
.168	.167	.164	.163	.161
.159	.158	.156	.155	.154
.152	.151	.149	.148	.146
.145	.144	.142	.141	.140
.138	.137	.136	.134	.133
.132	.131	.129	.128	.127
.126	.124	.123	.122	.121
.120	.119	.118	.116	.115
.113	.112	.111	.110	.109
.108	.107	.106	.105	.104
.103	.102	.101	.100	.099
.098	.097	.096	.096	.095

*
S ROUTE 99 IN 36" PIPE IN UNIVERSE TO GET 47.19
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.019
DIAM=3.0 FT N=0.013ROUTE MCUNGE ID=7 HYD NO=47.7 INFLOW ID=99
DT=0.0 HR LENGTH=1532 FT
NS=0 SLOPE=0.019 CODE=5

PRINT HYD ID=7 CODE=5

*S APPLY SEDIMENT BULKING FACTOR
SEDIMENT BULK CODE=1 BULKING FACTOR = 1.05

*S*** SUB-BASIN 47B STATE LAND PROPERTY ***

*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=2 ISLOPE=-1
LENGTH=400 FT SLOPE=0.026 K=0.7
LENGTH=936 FT SLOPE=0.012 K=1.0COMPUTE NM HYD ID=5 HYD NO=47B DA=0.0305 SQ MI
PER A=90 PER B=0 PER C=10 PER D=0
TP=0.0 MASSRAIN=-1
PRINT HYD ID=5 CODE=1

*S*** SUB-BASIN 46B APS HIGH SCHOOL PROPERTY ***

*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.02 K=0.7
LENGTH=1600 FT SLOPE=0.02 K=2.0
LENGTH=745 FT SLOPE=0.02 K=3.0COMPUTE NM HYD ID=3 HYD NO=APS DA=0.113 SQ MI
PER A=0 PER B=22 PER C=25 PER D=53
TP=0.0 MASSRAIN=-1
PRINT HYD ID=3 CODE=1

*S*** ADD 47B TO 46B TO GET 46B.6

*
ADD HYD ID=6 HYD NO=46B.6 ID I=5 ID II=3
PRINT HYD ID=6 CODE=1

*S*** ROUTE -46B.6 THRU APS POND TO DISCHARGE 4.5 CFS TO UNIVERSE SD

*
ROUTE RESERVOIR ID=4 HYD=46B.4 INFLOW ID=6 CODE=5
OUTFLOW(CFS) STORAGE(AC FT) ELEV (FT)
0.01 0.0004 5375
0.03 0.1097 5376
4.45 0.4827 5377
4.46 1.0921 5378
4.47 1.9496 5379
4.48 3.2565 5380
4.49 4.9487 5381
4.50 8.2 5382
288 8.201 5382.001

PRINT HYD ID=4 CODE=5

*

```

*****
*S ADD 46B.6 TO 46B.4 TO GET 46B.8
*S
ADD HYD          ID=8  HYD NO=46B.8 ID I=7 ID II=4
PRINT HYD        ID=8  CODE=1
*
*****
*S ROUTE 46B.8 IN 36" PIPE IN UNIVERSE TO GET 46.18
*
COMPUTE RATING CURVE  CID=1  VS NO=1 NO SEGS=-1 SLP=0.008
                      DIAM=3.0 FT  N=0.013

ROUTE MCUNGE  ID=18  HYD NO=46.18  INFLOW ID=8
               DT=0.0 HR  LENGTH=1902 FT
               NS=0  SLOPE=0.008  CODE=5

PRINT HYD      ID=18  CODE=5
*
*****
*S ADD 46.18 TO 62.1 TO GET 46.9
*
ADD HYD          ID=9  HYD NO=46.9 ID I=18 ID II=1
PRINT HYD        ID=9  CODE=1
*
*****
*S ROUTE 46.9 IN 72" IN SCENIC
*
COMPUTE RATING CURVE  CID=1  VS NO=1 NO SEGS=-1 SLP=0.0085
                      DIAM=6.0 FT  N=0.013

ROUTE MCUNGE  ID=2  HYD NO=IP2  INFLOW ID=9
               DT=0.0 HR  LENGTH=868 FT
               NS=0  SLOPE=0.0085  CODE=5

PRINT HYD      ID=2  CODE=5
*
*****
*S ADD IP2 TO IP3 TO GET 60.20
*
ADD HYD          ID=20  HYD NO=60.20 ID I=2 ID II=19
PRINT HYD        ID=20  CODE=1
*
*****
*S ADD OFFSITE VISTA VIEJA (VV) SUB-BASIN - INFLOW POINT IP4
*
*S*** SUB-BASIN 86 - BASIN E IN VV DRAINAGE REPORT
*S*** INCLUDES 10 AC DEVELOPED VV
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.065 K=0.7
                   LENGTH=1600 FT  SLOPE=0.038 K=2.0
                   LENGTH=4852 FT  SLOPE=0.028 K=3.0
                   Kn=.033  CR=0.51

COMPUTE NM HYD     ID=1  HYD NO=86.1  DA=0.248 SQ MI
                   PER A=84 PER B=1  PER C=11  PER D=4
                   TP=0.0  MASSRAIN=-1

PRINT HYD          ID=1  CODE=5
*
*****
*S ROUTE THRU 48" SD - IP4
*
COMPUTE RATING CURVE  CID=1  VS NO=1 NO SEGS=-1 SLP=0.02
                      DIAM=4.0 FT  N=0.013

ROUTE MCUNGE  ID=10  HYD NO=IP4  INFLOW ID=1
               DT=0.0 HR  LENGTH=2620 FT
               NS=0  SLOPE=0.02  CODE=5

PRINT HYD      ID=10  CODE=5
*
*****
*S INFLOW POINT IP5
*S ONSITE BASINS VV1 UNITS 2 AND PART OF UNIT 3
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.02 K=0.7
                   LENGTH=1600 FT  SLOPE=0.02 K=2.0
                   LENGTH=150 FT  SLOPE=0.02 K=3.0

COMPUTE NM HYD     ID=1  HYD NO=VV1.23  DA=0.0894 SQ MI
                   PER A=0  PER B=20  PER C=20  PER D=60
                   TP=0.0  MASSRAIN=-1

PRINT HYD          ID=1  CODE=5
*
*****
*S ROUTE THRU 48" SD - IP5
*
COMPUTE RATING CURVE  CID=1  VS NO=1 NO SEGS=-1 SLP=0.015
                      DIAM=4.0 FT  N=0.013

ROUTE MCUNGE  ID=11  HYD NO=IP5  INFLOW ID=1
               DT=0.0 HR  LENGTH=2060 FT
               NS=0  SLOPE=0.015  CODE=5

```

```

PRINT HYD      ID=11  CODE=5
*
*****
*S ADD OFFSITE VISTA VIEJA (VV2) SUB-BASIN - INFLOW POINT IP6
*S*** SUB-BASIN 83 & 83A - BASIN E IN D DRAINAGE REPORT
*S INCLUDES PARTS OF UNIT 4 & 1
*****
*S*** SUB-BASIN 83
*
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.058 K=0.7
                   LENGTH=1600 FT SLOPE=0.061 K=2.0
                   LENGTH=9817 FT SLOPE=0.0326 K=3.0
                   Kn=.033 CR=0.61
COMPUTE NM HYD      ID=1  HYD NO=83  DA=0.538 SQ MI
                   PER A=89 PER B=0  PER C=10 PER D=1
                   TP=0.0  MASSRAIN=-1
PRINT HYD          ID=1  CODE=5
*
*****
*S*** SUB-BASIN 83A
*
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.031 K=0.7
                   LENGTH=1600 FT SLOPE=0.043 K=2.0
                   LENGTH=2172 FT SLOPE=0.0355 K=3.0
                   Kn=.033 CR=.5
COMPUTE NM HYD      ID=2  HYD NO=83A DA=0.137 SQ MI
                   PER A=89 PER B=0  PER C=10 PER D=1
                   TP=0.0  MASSRAIN=-1
PRINT HYD          ID=2  CODE=5
*
*****
*S ADD 83 TO 83A TO GET 83A.3
*S
ADD HYD            ID=3  HYD NO=83A.3 ID I=1 ID II=2
PRINT HYD          ID=3  CODE=1
*
*S
*****
*S*** ONSITE SUB-BASIN VV2 - PARTS OF UNITS 4 & 1
*
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.006 K=0.7
                   LENGTH=1600 FT SLOPE=0.011 K=2.0
                   LENGTH=130 FT  SLOPE=0.013 K=3.0
COMPUTE NM HYD      ID=2  HYD NO=VV2.41 DA=0.0373 SQ MI
                   PER A=0  PER B=20  PER C=20 PER D=60
                   TP=0.0  MASSRAIN=-1
PRINT HYD          ID=2  CODE=5
*
*****
*S ADD VV.41 TO 83A.3 TO GET 83A.4
*S
ADD HYD            ID=4  HYD NO=83A.4 ID I=3 ID II=2
PRINT HYD          ID=4  CODE=1
*
*S
*****
*S ROUTE THRU 60" TO IP6
*
*
COMPUTE RATING CURVE  CID=1  VS NO=1 NO SEGS=-1 SLP=0.028
                   DIAM=5.0 FT  N=0.013
ROUTE MCUNGE      ID=12  HYD NO=IP6  INFLOW ID=4
                   DT=0.0 HR  LENGTH=2865 FT
                   NS=0  SLOPE=0.028  CODE=5
PRINT HYD          ID=12  CODE=5
*
*****
*S ADD IP5 TO IP5 AND IP6 TO GET 86.2
*S
ADD HYD            ID=2  HYD NO=86.2 ID I=12 ID II=11
PRINT HYD          ID=2  CODE=1
*
*S
*****
*S ADD IP4 TO 86.2 TO GET 86.45
*S
ADD HYD            ID=45  HYD NO=86.45 ID I=2 ID II=10
PRINT HYD          ID=45  CODE=1
*
*S
*****
*S ADD 62.20 (IP3) TO 86.45 (IP4, 5 & 6) TO GET 86.70
*S
ADD HYD            ID=7  HYD NO=86.70 ID I=45 ID II=20
PRINT HYD          ID=7  CODE=1
*
*S
*****
*
*S

```

BOCA NEGRA ARROYO 500 yr.txt

 ** DETENTION BASIN ** AMAFCA BOCA NEGRA DAM
 ** ROUTE 46B.4 THROUGH DAM TO GET 51.6 OUTFLOW TO DOWN CANYON PIPE

*S TOTAL OUTFLOW FROM BOCA NEGRA DETENTION FACILITY
 ROUTE RESERVOIR ID=14 HYD=51.6 INFLOW ID=7 CODE=2
 OUTFLOW(CFS) STORAGE(AC FT) ELEV (FT)
 0 0.0 5323
 18 0.86 5324
 31 1.78 5325
 40 2.99 5326
 62 4.51 5327
 106 6.46 5328
 226 8.97 5329
 430 12.16 5330
 479 16.37 5331
 513 21.62 5332
 545 27.74 5333
 574 34.67 5334
 602 42.83 5335
 629 52.31 5336
 655 62.75 5337
 679 74.19 5338
 684 76.49 5338.2
 1438 86.29 5339
 3699 99.27 5340
 6830 113.10 5341
 10683 127.90 5342
 15192 143.55 5343
 20320 160.17 5344
 26006 178.15 5345
 32315 197.56 5346
 39208 218.35 5347
 46624 240.56 5348

PRINT HYD ID=14 CODE=0

*

*S DIVIDE SURFACE FLOW FROM PIPE FLOW
 *

DIVIDE HYD ID=14 Q=372 ID=80 HYD=PIPE.80
 ID=90 HYD=SURF.90

PRINT HYD ID=80 CODE=1
 PRINT HYD ID=90 CODE=1

*

*S APPLY SEDIMENT BULKING FACTOR
 SEDIMENT BULK CODE=1 BULKING FACTOR = 1.05

*

*S ADD BASINS DRAINING INTO THE TEMPORARY PONDS ALONG UNSER BLVD
 *

*S
 * COMPUTE HYD FOR SUB-BASIN 3

COMPUTE LT TP LCODE=1 NK=3 ISLOPE=0
 LENGTH=400 SLOPE=0.013 K=.7
 LENGTH=1600 SLOPE=0.013 K=1
 LENGTH=1250 SLOPE=0.013 K=2

COMPUTE NM HYD ID=3 HYD N0=3 DA=0.0957 SQ MI
 PER A=97 PER B=0 PER C=0 PER D=3
 TP=0.0 MASS RAIN=-1

PRINT HYD ID=3 CODE=5

*

*S ROUTE SUB-BASIN 3 THRU UNSER TEMP POND A
 *

ROUTE RESERVOIR ID=1 HYD=4.9 INFLOW ID=3 CODE=2
 OUTFLOW(CFS) STORAGE(AC FT) ELEV (FT)
 0.0 0.0 5337
 4.4 0.114 5338
 6.7 0.493 5339
 7.6 1.086 5340
 8.5 1.779 5341
 90 1.77901 5341.001

PRINT HYD ID=1 CODE=5

*

*

*S COMPUTE HYD FOR SUB-BASIN 4

COMPUTE LT TP LCODE=1 NK=2 ISLOPE=0
 LENGTH=400 SLOPE=0.017 K=.7
 LENGTH=1053 SLOPE=0.017 K=1

COMPUTE NM HYD ID=4 HYD N0=4 DA=0.0282 SQ MI
 PER A=98 PER B=0 PER C=0 PER D=2
 TP=0.0 MASS RAIN=-1

```

PRINT HYD          ID=4    CODE=5
*****
*
*S ADD ROUTED FLOW FROM TEMP POND A TO SUB-BASIN 4
*
*S ADD SUB-BASINS 3 AND 4
*
ADD HYD            ID=2    HYD NO=4.2 ID I=1 ID II=4
PRINT HYD          ID=2    CODE=1
*****
*
*S ROUTE THRU UNSER TEMP POND B
*
ROUTE RESERVOIR    ID=1 HYD=5.9 INFLOW ID=2 CODE=2
                   OUTFLOW(CFS) STORAGE(AC FT) ELEV (FT)
                   0.0         0.0         5333
                   0.01        0.16         5334
                   2.6         0.50         5335
                   5.1         0.71         5335.5
                   8.0         0.918        5336
                   85          0.91801       5336.001

PRINT HYD          ID=1    CODE=5
*****
*
*S ROUTE THRU 24"IN ALMENDRA PL
*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.011
                     DIAM=2.0 FT N=0.013

ROUTE MCUNGE       ID=2    HYD NO=5.92 INFLOW ID=1
                     DT=0.0 HR LENGTH=48.6 FT
                     NS=0    SLOPE=0.011 CODE=5

PRINT HYD          ID=2    CODE=5
*****
*
*      COMPUTE HYD FOR SUB-BASIN 5
*****
*
COMPUTE LT TP       LCODE=1 NK=3 ISLOPE=0
                     LENGTH=400 SLOPE=0.017 K=.7
                     LENGTH=1600 SLOPE=0.017 K=1
                     LENGTH=2000 SLOPE=0.017 K=2

COMPUTE NM HYD      ID=5    HYD NO=5 DA=0.0940 SQ MI
                     PER A=98 PER B=0 PER C=0 PER D=2
                     TP=0.0 MASS RAIN=-1

PRINT HYD          ID=5    CODE=5
*****
*
*S ADD ROUTED FLOW FROM TEMP POND B TO SUB-BASIN 5
*
ADD HYD            ID=1    HYD NO=5.1 ID I=2 ID II=5
PRINT HYD          ID=1    CODE=1
*****
*
*S ROUTE THRU UNSER TEMP POND C
*
ROUTE RESERVOIR    ID=3 HYD=5.93 INFLOW ID=1 CODE=2
                   OUTFLOW(CFS) STORAGE(AC FT) ELEV (FT)
                   0.0         0.0         5329
                   1.3         0.173        5330
                   5.7         0.509        5331
                   12          0.946        5332
                   19.7        1.211        5333
                   200         1.21101       5333.001

PRINT HYD          ID=3    CODE=5
*****
*
*S APPLY NO SEDIMENT BULKING FACTOR
SEDIMENT BULK      CODE=1 BULKING FACTOR = 1.00
*****
*
*S RECALL HYD FROM SAD 228 POND 4
*
*S
RECALL HYD          ID=14 HYD=POND4A
                     DT=.050000 HRS DA=.0205 SQ MI
                     PEAK=.18.038CFS RO= 1.4138 INCHES NO PTS=503
                     FLOW RATES
                     .000 .000 .000 .000 .000
                     .000 .000 .000 .000 .000
                     .000 .000 .000 .000 .001
                     .020 .091 .228 .402 .568
                     .709 .826 .908 .922 .917
                     1.110 1.922 4.102 7.064 10.145
                     11.550 13.447 15.337 16.809 17.708
                     18.038 18.026 17.734 17.205 16.542
                     15.798 15.014 14.211 13.388 12.542
                     11.685 10.840 10.027 7.066 3.940

```

BOCA NEGRA ARROYO 500 yr.txt				
2.143	1.856	1.674	1.516	1.375
1.250	1.138	1.040	.952	.874
.804	.740	.684	.634	.589
.550	.515	.485	.458	.433
.410	.389	.370	.352	.336
.323	.312	.302	.293	.285
.278	.272	.267	.262	.257
.253	.250	.247	.244	.241
.240	.239	.238	.236	.234
.232	.229	.228	.227	.227
.228	.229	.230	.231	.231
.231	.232	.233	.234	.236
.238	.239	.240	.241	.243
.244	.245	.246	.248	.250
.251	.253	.251	.239	.219
.198	.181	.170	.162	.157
.153	.151	.148	.147	.145
.144	.143	.143	.141	.140
.139	.138	.137	.136	.135
.135	.134	.133	.133	.132
.132	.131	.131	.131	.130
.130	.129	.128	.128	.127
.126	.126	.126	.126	.125
.125	.124	.123	.124	.123
.122	.122	.122	.122	.121
.121	.120	.120	.120	.120
.119	.118	.118	.117	.117
.117	.117	.117	.117	.116
.115	.115	.115	.115	.114
.114	.113	.113	.113	.113
.113	.112	.111	.111	.110
.110	.110	.110	.109	.109
.109	.109	.109	.108	.107
.107	.107	.106	.106	.106
.106	.106	.106	.106	.105
.104	.104	.104	.104	.103
.103	.103	.102	.102	.101
.101	.101	.101	.101	.101
.101	.101	.101	.100	.099
.099	.099	.099	.098	.098
.098	.098	.098	.097	.097
.096	.096	.096	.096	.096
.096	.095	.095	.095	.095
.095	.094	.093	.093	.093
.093	.093	.093	.093	.093
.092	.092	.092	.092	.091
.091	.091	.090	.090	.090
.090	.090	.090	.090	.090
.089	.089	.089	.088	.088
.088	.088	.088	.087	.087
.088	.087	.087	.086	.086
.085	.085	.086	.087	.087
.086	.086	.085	.084	.083
.083	.083	.084	.084	.084
.084	.084	.083	.083	.083
.083	.082	.082	.082	.082
.081	.081	.081	.081	.081
.081	.081	.080	.080	.081
.081	.081	.080	.080	.079
.079	.078	.079	.079	.079
.079	.079	.078	.078	.078
.078	.078	.078	.077	.077
.077	.077	.077	.076	.076
.076	.077	.077	.076	.075
.075	.075	.075	.074	.075
.075	.076	.076	.076	.075
.075	.074	.073	.072	.072
.073	.073	.073	.074	.074
.074	.073	.072	.072	.072
.073	.072	.072	.072	.072
.072	.071	.071	.072	.072
.071	.071	.071	.071	.071
.071	.070	.070	.069	.069
.069	.070	.070	.070	.070
.069	.069	.069	.069	.069
.069	.068	.068	.068	.068
.068	.068	.068	.068	.068
.067	.067	.067	.067	.067
.067	.067	.067	.066	.066
.067	.066	.066	.065	.066
.066	.066	.065	.065	.066
.066	.066	.065	.065	.064
.064	.064	.064	.064	.065
.065	.066	.065	.065	.064
.064	.064	.064	.064	.064
.064	.063	.062	.062	.062
.062	.062	.061	.054	.043
.032	.022	.016	.012	.009
.008	.007	.006	.005	.004
.004	.003	.003	.002	.002
.002	.001	.001		

*S

*S ADD SAD 228 POND 4 OUTFLOW TO TEMP POND C OUTFLOW

ADD HYD ID=4 HYD NO=200.3 ID I=3 ID II=14
 PRINT HYD ID=4 CODE=1

*

*S RECALL HYD FROM SAD 228 POND 5

*

*S

RECALL HYD

BOCA NEGRA ARROYO 500 yr.txt

ID=12 HYD=POND5
DT=.050000 HRS DA=.1489 SQ MI
PEAK= 36.968CFS RO= 1.5473 INCHES NO PTS=600

FLOW RATES				
.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.001	.004	.016	.042	.087
.155	.246	.358	.485	.621
.767	.948	1.234	1.765	2.740
4.748	9.594	15.707	21.217	25.243
28.978	31.229	33.174	34.808	35.892
36.174	36.404	36.589	36.734	36.842
36.915	36.956	36.968	36.957	36.926
36.881	36.825	36.760	36.687	36.608
36.524	36.436	36.344	36.248	36.149
36.048	35.944	35.837	35.519	35.090
34.659	34.228	33.796	33.364	32.934
32.504	32.077	31.651	31.229	30.808
30.391	29.977	29.567	29.160	28.736
28.129	27.535	26.951	26.379	25.818
25.269	24.730	24.203	23.686	23.180
22.685	22.201	21.726	21.263	20.809
20.366	19.932	19.508	18.867	18.173
17.507	16.868	16.255	15.668	15.105
14.565	14.047	13.551	13.076	12.620
12.183	11.766	11.365	10.982	10.615
10.263	9.927	9.605	9.296	9.001
8.718	8.448	8.189	7.941	7.700
7.466	7.236	7.010	6.789	6.573
6.363	6.159	5.961	5.771	5.587
5.411	5.241	5.078	4.921	4.770
4.625	4.486	4.352	4.223	4.099
3.990	3.934	3.879	3.825	3.772
3.719	3.668	3.617	3.567	3.519
3.471	3.424	3.378	3.332	3.288
3.244	3.201	3.159	3.118	3.077
3.037	2.998	2.960	2.922	2.885
2.849	2.813	2.778	2.744	2.710
2.677	2.644	2.613	2.581	2.551
2.520	2.491	2.462	2.433	2.405
2.378	2.350	2.324	2.298	2.272
2.247	2.223	2.199	2.175	2.152
2.129	2.106	2.084	2.062	2.041
2.020	1.999	1.979	1.959	1.940
1.921	1.902	1.883	1.865	1.847
1.829	1.812	1.795	1.779	1.762
1.746	1.730	1.715	1.700	1.684
1.670	1.655	1.641	1.627	1.613
1.600	1.586	1.573	1.560	1.548
1.535	1.523	1.511	1.499	1.487
1.476	1.464	1.453	1.442	1.431
1.421	1.410	1.400	1.390	1.380
1.371	1.361	1.352	1.342	1.333
1.324	1.315	1.307	1.298	1.290
1.281	1.273	1.265	1.257	1.249
1.241	1.233	1.226	1.219	1.211
1.204	1.197	1.190	1.183	1.177
1.170	1.163	1.157	1.150	1.144
1.138	1.132	1.126	1.120	1.114
1.108	1.103	1.097	1.091	1.086
1.080	1.075	1.070	1.065	1.060
1.055	1.050	1.045	1.040	1.035
1.030	1.026	1.021	1.016	1.012
1.007	1.003	.999	.994	.990
.986	.982	.978	.974	.970
.966	.962	.959	.955	.951
.947	.943	.940	.936	.932
.929	.926	.922	.919	.916
.912	.909	.906	.903	.899
.896	.893	.890	.887	.884
.881	.878	.875	.872	.869
.866	.864	.861	.858	.856
.853	.850	.848	.845	.842
.840	.837	.835	.832	.830
.827	.825	.823	.820	.818
.816	.813	.811	.809	.806
.804	.802	.800	.797	.795
.793	.791	.789	.787	.784
.782	.780	.778	.776	.775
.773	.771	.769	.767	.765
.763	.761	.759	.757	.755
.753	.752	.750	.748	.746
.744	.743	.741	.739	.737
.736	.734	.732	.730	.729
.727	.726	.724	.722	.721
.719	.718	.716	.714	.713
.711	.710	.708	.706	.705
.704	.702	.701	.699	.698
.696	.695	.693	.692	.690
.689	.687	.686	.685	.683
.682	.681	.679	.678	.676
.675	.674	.672	.671	.670
.668	.667	.666	.664	.663
.662	.660	.659	.658	.657
.655	.654	.653	.652	.651
.649	.648	.647	.645	.644
.643	.642	.641	.640	.639
.638	.637	.636	.634	.633
.632	.631	.630	.629	.627
.626	.625	.624	.622	.620
.617	.612	.606	.599	.591
.582	.573	.563	.554	.544
.534	.525	.515	.506	.496
.487	.478	.469	.460	.451
.442	.433	.425	.417	.408

BOCA NEGRA ARROYO 500 yr.txt

.400	.392	.384	.377	.369
.362	.355	.347	.340	.333
.327	.320	.314	.307	.301
.295	.289	.283	.277	.271
.266	.260	.255	.250	.245
.240	.235	.230	.225	.221
.216	.211	.207	.203	.199
.195	.191	.187	.183	.179
.175	.172	.168	.165	.161
.158	.155	.151	.148	.145
.142	.139	.136	.134	.131
.128	.125	.123	.120	.118
.115	.113	.111	.108	.106
.104	.102	.100	.098	.096
.094	.092	.090	.088	.086
.084	.083	.081	.079	.078
.076	.074	.073	.071	.070
.068	.067	.066	.064	.063

*S

*S ADD SAD 228 POND 4 & 5 OUTFLOW TO TEMP POND C OUTFLOW

ADD HYD ID=1 HYD NO=201.1 ID I=4 ID II=12
 PRINT HYD ID=1 CODE=1

*

*S ROUTE 201.1 IN 54" SD IN UNSER BLVD TO GET 201.7

*

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.0112
 DIAM=4.5 FT N=0.013

ROUTE MCUNGE ID=7 HYD NO=102.7 INFLOW ID=1
 DT=0.0 HR LENGTH=730 FT
 NS=0 SLOPE=0.0112 CODE=5

PRINT HYD ID=7 CODE=5

*

*S APPLY SEDIMENT BULKING FACTOR
 SEDIMENT BULK CODE=1 BULKING FACTOR = 1.05

*

*S

*S COMPUTE UNSER BLVD RUNOFF SOUTH OF KIMMICK TO BOCA NEGRA DAM

*

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.005 K=0.7
 LENGTH=770 FT SLOPE=0.005 K=2.0

COMPUTE NM HYD ID=6 HYD NO=6 DA=0.01166 SQ MI
 PER A=0 PER B=0 PER C=15 PER D=85
 TP=0.0 MASSRAIN=-1
 ID=6 CODE=1

*

*S ADD TOTAL FLOWS FROM UNSER BLVD

ADD HYD ID=2 HYD NO=6.2 ID I=7 ID II=6
 PRINT HYD ID=2 CODE=1

*

*S ADD PIPE.80 TO 6.2 TO GET PIPE.1

*

ADD HYD ID=1 HYD NO=PIPE.1 ID I=80 ID II=2
 PRINT HYD ID=1 CODE=1

*

*S ROUTE PIPE.1 IN 60" SD TO GET PIPE.2

*

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.015
 DIAM=5.0 FT N=0.013

ROUTE MCUNGE ID=8 HYD NO=PIPE.2 INFLOW ID=1
 DT=0.0 HR LENGTH=640 FT
 NS=0 SLOPE=0.015 CODE=5

PRINT HYD ID=8 CODE=5

*

*S ROUTE PIPE.2 IN 54" SD TO GET PIPE.3

*

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.0881
 DIAM=4.5 FT N=0.013

ROUTE MCUNGE ID=1 HYD NO=PIPE.3 INFLOW ID=8
 DT=0.0 HR LENGTH=1147 FT
 NS=0 SLOPE=0.0881 CODE=5

PRINT HYD ID=1 CODE=5

*

*S ROUTE PIPE.3 IN 60" SD TO GET PIPE.4


```

*
* COMPUTE RATING CURVE      CID=1  VS NO=1  NO SEGS=-1  SLP=0.02
                             DIAM=5.0 FT      N=0.013
*
ROUTE MCUNGE      ID=8  HYD NO=PIPE.4  INFLOW ID=1
                   DT=0.0 HR      LENGTH=949 FT
                   NS=0  SLOPE=0.02  CODE=5
*
PRINT HYD      ID=8  CODE=5
*
*****
*****
*
*S APPLY SEDIMENT BULKING FACTOR
SEDIMENT BULK      CODE=1  BULKING FACTOR = 1.09
*
*****
*****
*
*S*** SUB-BASIN 71 DOWNSTREAM OF THE DAM ***
*
COMPUTE LT TP      LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.02 K=0.7
                   LENGTH=1600 FT  SLOPE=0.02 K=2.0
                   LENGTH=800 FT  SLOPE=0.02 K=3.0
*
COMPUTE NM HYD      ID=5  HYD NO=71  DA=0.07675 SQ MI
                   PER A=80 PER B=0  PER C=20 PER D=0
                   TP=0.0  MASSRAIN=-1
*
PRINT HYD      ID=5  CODE=5
*
*****
*
*S ADD SURFACE FLOW FROM DAM TO BASIN 71 TO GET 71.5
*
*S ADD BASIN 71 to PIPE.2 TO GET 70.9
*
ADD HYD      ID=6  HYD NO=71.6 ID I=5 ID II=90
PRINT HYD    ID=6  CODE=1
*
*****
*
*S ADD 71.6 to PIPE.2 TO GET 70.9
*
ADD HYD      ID=9  HYD NO=70.9 ID I=6 ID II=8
PRINT HYD    ID=9  CODE=1
*
*****
*****
*
*S APPLY NO SEDIMENT BULKING FACTOR
SEDIMENT BULK      CODE=1  BULKING FACTOR = 1.00
*
*****
*
*
*
*S RECALL HYD FROM THE VOLCANO HEIGHTS MODEL (BOCA NEGRA ARROYO SOUTH BRANCH)
*S
RECALL HYD      ID= 2 HYD=      102.00 DT= .050000 HRS DA= 1.6400 SQ MI
PEAK= 378.544CFS  RO= .3847 INCHES  NO PTS=340
FLOW RATES
.000 .000 .000 .000 .000
.000 .000 .000 .000 .000
.000 .000 .000 .000 .000
.000 .000 .000 .000 .000
.000 .000 .000 .000 .000
.000 .000 1.009 9.899 32.824
63.396 90.963 109.803 118.751 119.115
113.134 103.107 91.039 81.968 97.947
149.940 227.995 295.915 342.675 368.910
378.544 375.650 363.734 345.685 323.866
300.290 276.692 253.626 231.248 209.969
190.200 172.161 155.820 141.030 127.642
115.523 104.556 94.638 85.701 77.771
70.968 65.162 59.974 55.161 50.785
46.796 43.156 39.835 36.850 34.361
32.647 31.381 30.209 29.084 28.002
26.961 25.961 24.998 24.073 23.182
22.326 21.502 20.709 19.947 19.213
18.507 17.828 17.174 16.545 15.940
15.357 14.797 14.257 13.737 13.237
12.756 12.292 11.846 11.417 11.003
10.605 10.222 9.852 9.497 9.155
8.825 8.507 8.201 7.907 7.623
7.350 7.087 6.833 6.589 6.353
6.127 5.908 5.698 5.495 5.299
5.111 4.930 4.755 4.586 4.424
4.267 4.116 3.971 3.831 3.696
3.565 3.440 3.319 3.202 3.090
2.981 2.877 2.776 2.679 2.585
2.494 2.407 2.323 2.242 2.164
2.088 2.016 1.946 1.878 1.813
1.750 1.689 1.631 1.574 1.520
1.467 1.416 1.367 1.320 1.274
1.231 1.188 1.147 1.108 1.070
1.033 .997 .963 .930 .898
.867 .838 .809 .781 .754
.729 .704 .680 .657 .634

```

BOCA NEGRA ARROYO 500 yr.txt

.613	.592	.571	.552	.533
.515	.498	.481	.464	.449
.433	.419	.404	.391	.378
.365	.352	.340	.329	.318
.305	.293	.283	.274	.265
.256	.247	.239	.231	.223
.216	.209	.202	.195	.188
.182	.176	.170	.164	.159
.154	.148	.144	.139	.134
.130	.125	.121	.117	.113
.109	.106	.102	.099	.096
.092	.089	.086	.084	.081
.078	.075	.073	.070	.066
.062	.060	.058	.057	.055
.053	.051	.050	.048	.046
.045	.043	.042	.041	.039
.038	.037	.036	.034	.033
.032	.031	.030	.029	.028
.027	.026	.026	.025	.024
.023	.022	.022	.021	.020
.020	.019	.018	.018	.017
.017	.016	.016	.015	.015
.014	.014	.013	.013	.012
.012	.012	.011	.011	.010
.010	.010	.009	.009	.009
.009	.008	.008	.008	.008
.007	.007	.007	.007	.006
.006	.006	.006	.006	.005
.005	.005	.005	.005	.005
.004	.004	.004	.004	.004
.002	.001	.001	.001	.001

*

*S ROUTE THE BOCA NEGRA ARROYO SOUTH BRANCH FLOWS THRU 72" IN EMERALD DR

*

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.021
DIAM=6.0 FT N=0.013

ROUTE MCUNGE ID=5 HYD NO=70.5 INFLOW ID=2
DT=0.0 HR LENGTH=1347 FT
NS=0 SLOPE=0.021 CODE=5

PRINT HYD ID=5 CODE=1

*S APPLY SEDIMENT BULKING FACTOR
SEDIMENT BULK CODE=1 BULKING FACTOR = 1.09

*S

*S*** SUB-BASIN 70 EAST OF SAD 227 ***

*

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.072 K=0.7
LENGTH=1580 FT SLOPE=0.072 K=2.0

COMPUTE NM HYD ID=4 HYD NO=70 DA=0.06914 SQ MI
PER A=80 PER B=0 PER C=20 PER D=0
TP=0.0 MASSRAIN=-1

PRINT HYD ID=4 CODE=5

*S

*S ADD BASIN 70 to ROUTED BOCA NEGRA ARROYO SOUTH BRANCH

*

ADD HYD ID=6 HYD NO=70.6 ID I=4 ID II=5

PRINT HYD ID=6 CODE=1

*

*S ADD ALL FLOWS AT THE CONFLUENCE WITH BOCA NEGRA ARROYO

*

ADD HYD ID=7 HYD NO=71.7 ID I=6 ID II=9

PRINT HYD ID=7 CODE=1

*S ROUTE 71.7 IN 72 TO GET 72.6

*

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5164.49 MAX ELEV=5167.54
CH SLOPE=0.008 FP SLOPE=0.008
N=0.035 DIST=137
DIST ELEV DIST ELEV
0 5167.54 20 5165.67
41 5166.80 77 5165.39
81 5164.71 92 5164.49
99 5165.64 137 5166.10

ROUTE MCUNGE ID=6 HYD NO=72.6 INFLOW ID=7
DT=0.0 L=1805 FT NS=0 SLOPE=0.008
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

PRINT HYD ID=6 CODE=1

*

 *S APPLY NO SEDIMENT BULKING FACTOR
 SEDIMENT BULK CODE=1 BULKING FACTOR = 1.00

*

*

*S RECALL HYD FROM SAD 228 POND 6

*

RECALL HYD ID=19 HYD=POND6
 DT=.050000 HRS DA=.0654 SQ MI
 PEAK= 50.659CFS RO= 1.5488 INCHES NO PTS=539
 FLOW RATES

.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.002	.012	.049	.137	.296
.533	.841	1.202	1.585	1.956
2.303	2.701	3.408	4.947	8.041
12.321	18.906	24.765	30.903	36.022
39.406	41.514	43.269	44.579	48.727
50.659	48.563	44.986	44.498	43.781
42.862	41.773	40.543	39.204	37.551
34.501	31.620	28.909	25.345	22.281
19.653	16.660	14.038	12.007	10.418
9.161	8.152	7.158	6.362	5.742
5.246	4.836	4.491	4.193	3.932
3.699	3.490	3.300	3.127	2.967
2.820	2.684	2.558	2.442	2.334
2.234	2.141	2.054	1.974	1.899
1.830	1.766	1.706	1.650	1.598
1.550	1.505	1.464	1.426	1.390
1.358	1.328	1.300	1.274	1.250
1.228	1.207	1.189	1.172	1.158
1.144	1.131	1.120	1.109	1.099
1.091	1.084	1.079	1.074	1.070
1.066	1.063	1.060	1.057	1.055
1.053	1.051	1.050	1.048	1.043
1.029	1.007	.975	.937	.895
.853	.813	.777	.745	.718
.696	.677	.662	.649	.639
.630	.622	.614	.608	.601
.595	.589	.584	.579	.574
.569	.565	.561	.557	.553
.548	.544	.540	.536	.533
.529	.526	.522	.519	.517
.514	.512	.510	.508	.506
.504	.502	.500	.498	.496
.495	.493	.491	.489	.488
.486	.485	.483	.481	.479
.478	.476	.474	.473	.472
.471	.470	.468	.467	.465
.464	.462	.461	.459	.458
.456	.455	.454	.453	.451
.450	.448	.446	.445	.444
.442	.441	.440	.439	.438
.437	.436	.434	.433	.431
.430	.429	.428	.427	.426
.425	.424	.423	.422	.420
.419	.418	.417	.416	.414
.413	.412	.410	.409	.408
.407	.406	.405	.405	.404
.403	.402	.401	.400	.399
.398	.397	.396	.395	.394
.393	.392	.391	.390	.388
.387	.386	.385	.384	.384
.383	.383	.382	.381	.380
.379	.377	.376	.375	.374
.374	.373	.372	.372	.371
.370	.369	.368	.367	.366
.365	.364	.363	.362	.362
.361	.361	.360	.359	.358
.357	.356	.355	.354	.353
.352	.352	.351	.351	.350
.349	.348	.347	.346	.346
.346	.345	.345	.345	.344
.343	.341	.339	.338	.337
.337	.337	.336	.336	.336
.335	.334	.333	.332	.332
.331	.330	.329	.328	.327
.327	.326	.326	.325	.325
.324	.324	.323	.323	.322
.322	.321	.320	.319	.318
.317	.317	.316	.316	.316
.315	.314	.314	.313	.313
.312	.311	.310	.310	.309
.308	.308	.307	.307	.306
.306	.305	.304	.303	.302
.301	.301	.301	.301	.301
.301	.301	.301	.300	.299
.297	.296	.295	.294	.294
.294	.294	.293	.293	.292
.292	.291	.291	.290	.289
.289	.288	.288	.287	.287
.287	.286	.286	.286	.285
.285	.284	.284	.283	.282
.281	.281	.280	.280	.279
.279	.279	.279	.278	.278
.277	.277	.276	.275	.275
.274	.274	.273	.273	.273
.273	.272	.272	.271	.271
.270	.270	.269	.269	.268
.268	.267	.267	.266	.266
.265	.264	.264	.264	.263
.263	.263	.263	.263	.262

BOCA NEGRA ARROYO 500 yr.txt

.262	.261	.260	.259	.258
.258	.258	.258	.259	.259
.259	.259	.258	.257	.257
.256	.256	.255	.254	.253
.252	.251	.250	.249	.245
.238	.226	.209	.188	.165
.143	.122	.104	.088	.075
.064	.055	.048	.042	.038
.034	.030	.028	.025	.023
.021	.019	.018	.016	.015
.014	.013	.011	.011	.010
.009	.008	.008	.007	.006
.006	.005	.005	.005	.004
.004	.003	.003	.003	.003
.002	.002	.002	.002	.002
.002	.001	.001	.001	

*

*S APPLY SEDIMENT BULKING FACTOR
SEDIMENT BULK CODE=1 BULKING FACTOR = 1.09

*

*S
*S*** SUB-BASIN 72 DOWNSTREAM OF CONFLUENCE WITH SOUTH BRANCH ***

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=355 FT SLOPE=0.02 K=0.7
LENGTH=1645 FT SLOPE=0.02 K=2.0
LENGTH=260 FT SLOPE=0.02 K=3.0

COMPUTE NM HYD ID=2 HYD NO=72 DA=0.16708 SQ MI
PER A=80 PER B=0 PER C=20 PER D=0
TP=0.0 MASSRAIN=-1
PRINT HYD ID=2 CODE=5

*S ADD OUTFLOW FROM POND 6 TO BASIN 72

ADD HYD ID=1 HYD NO=72.1 ID I=19 ID II=2
PRINT HYD ID=1 CODE=1

*S ADD ALL FLOWS AT TESUQUE DR
*S ADD 72.1 TO 72.6 TO GET 72.3

ADD HYD ID=3 HYD NO=72.3 ID I=1 ID II=6
PRINT HYD ID=3 CODE=1

*S ROUTE 72.3 IN 73.1 TO GET 73.1.5

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5149.46 MAX ELEV=5162.40
CH SLOPE=0.006 FP SLOPE=0.006
N=0.035 DIST=149
DIST ELEV DIST ELEV
0 5162.40 17 5157.28
25 5156.08 35 5151.92
75 5149.46 112 5150.98
132 5156.42 149 5157.55

ROUTE MCUNGE ID=5 HYD NO=73.1.5 INFLOW ID=3
DT=0.0 L=1380 FT NS=0 SLOPE=0.006
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

PRINT HYD ID=5 CODE=1

*S*** SUB-BASIN 73.1

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=355 FT SLOPE=0.02 K=0.7
LENGTH=1645 FT SLOPE=0.02 K=2.0
LENGTH=260 FT SLOPE=0.02 K=3.0

COMPUTE NM HYD ID=4 HYD NO=73.1 DA=0.12879 SQ MI
PER A=10 PER B=20 PER C=30 PER D=40
TP=0.0 MASSRAIN=-1
PRINT HYD ID=4 CODE=5

*S ADD 72.3 TO 73.1 TO GET 73.1.2

ADD HYD ID=2 HYD NO=73.1.2 ID I=4 ID II=5
PRINT HYD ID=2 CODE=1

*S ROUTE 73.1.2 THRU 73.2 TO GET 73.2.5

```

BOCA NEGRA ARROYO 500 yr.txt
COMPUTE RATING CURVE  CID=1  VS NO=1  NO SEGS=1
                      MIN ELEV=5149.46  MAX ELEV=5162.40
                      CH SLOPE=0.004    FP SLOPE=0.004
                      N=0.035          DIST=149
                      DIST  ELEV  DIST  ELEV
                        0  5144.26  23  5143.43
                        39  5138.80  68  5137.16
                       110  5138.29  132  5144.34
                       149  5144.48

ROUTE MCUNGE          ID=5  HYD NO=73.2.5  INFLOW ID=2
DT=0.0  L=1060 FT  NS=0  SLOPE=0.004
MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0

PRINT HYD              ID=5  CODE=5
*
*****
*S
*S*** SUB-BASIN 73.2
*
COMPUTE LT TP          LCODE=1  UPLAND/LAG TIME TRANSITION METHOD
                      NK=2  ISLOPE=-1
                      LENGTH=400 FT  SLOPE=0.02 K=0.7
                      LENGTH=865 FT  SLOPE=0.02 K=2.0

COMPUTE NM HYD         ID=4  HYD NO=73.2  DA=0.05105 SQ MI
                      PER A=10 PER B=20 PER C=30 PER D=40
                      TP=0.0  MASSRAIN=-1
PRINT HYD              ID=4  CODE=5
*
*****
*S ADD 73.2 TO 73.2.5 TO GET 73.2.1
*S TOTAL FLOWS UPSTREAM END OF SAN ILDEFONSO DR
*
ADD HYD                ID=1  HYD NO=73.2.1  ID I=4  ID II=5
PRINT HYD              ID=1  CODE=1
*
*****
FINISH
*****

```

OUT.WPD

AHYMO PROGRAM (AHYMO_97) - - Version: 1997.02c
 RUN DATE (MON/DAY/YR) = 12/16/2015
 START TIME (HR:MIN:SEC) = 11:19:32 USER NO.= AHYMO-C-9803c01UNMLIB-AH
 INPUT FILE = C:\BND\AHY-1\B056BE-1.TXT

*S*****
 *S BOCA NEGRA DAM
 *S LOMR MODEL - NEW RAINFALL DATA
 *S INCLUDES BASINS DOWNSTREAM OF THE DAM
 *S 500 YR 24 HR STORM EVENT
 *S DATE: December 2015
 *

*S*****
 START TIME=0.0 PUNCH CODE=0 PRINT CODE=0
 LOCATION BERNALILLO COUNTY
 Bernalillo County soil infiltration values (LAND FACTORS) used for computations.
 Land Treatment Initial Abstr.(in) Unif. Infilt.(in/hour)
 A 0.65 1.67
 B 0.50 1.25
 C 0.35 0.83
 D 0.10 0.04

*S 500 YEAR 24HR STORM
 RAINFALL TYPE=2 RAIN QUARTER=1.32 RAIN ONE=2.20
 RAIN SIX=2.77 RAIN DAY=3.17 DT=0.05

COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
 DT = .050000 HOURS END TIME = 24.000000 HOURS

.0000	.0061	.0124	.0189	.0256	.0325	.0396
.0471	.0548	.0628	.0712	.0799	.0891	.0987
.1088	.1195	.1308	.1429	.1558	.1696	.1846
.1939	.2042	.2339	.3040	.4247	.6113	.8799
1.2473	1.5370	1.6679	1.7772	1.8730	1.9586	2.0361
2.1068	2.1717	2.2315	2.2866	2.3375	2.3846	2.3964
2.4074	2.4177	2.4275	2.4368	2.4457	2.4541	2.4623
2.4701	2.4776	2.4849	2.4920	2.4989	2.5055	2.5120
2.5183	2.5244	2.5304	2.5363	2.5420	2.5476	2.5531
2.5584	2.5637	2.5688	2.5739	2.5789	2.5838	2.5886
2.5933	2.5980	2.6025	2.6070	2.6115	2.6159	2.6202
2.6244	2.6286	2.6328	2.6369	2.6409	2.6449	2.6488
2.6527	2.6566	2.6604	2.6641	2.6678	2.6715	2.6751
2.6787	2.6823	2.6858	2.6893	2.6928	2.6962	2.6996
2.7029	2.7063	2.7095	2.7128	2.7160	2.7193	2.7224
2.7256	2.7287	2.7318	2.7349	2.7379	2.7410	2.7440
2.7469	2.7499	2.7528	2.7558	2.7586	2.7615	2.7644
2.7672	2.7700	2.7717	2.7735	2.7752	2.7769	2.7786
2.7803	2.7820	2.7837	2.7854	2.7871	2.7887	2.7904
2.7921	2.7937	2.7954	2.7970	2.7987	2.8003	2.8019
2.8035	2.8052	2.8068	2.8084	2.8100	2.8116	2.8131
2.8147	2.8163	2.8179	2.8194	2.8210	2.8226	2.8241
2.8257	2.8272	2.8287	2.8303	2.8318	2.8333	2.8348
2.8363	2.8378	2.8393	2.8408	2.8423	2.8438	2.8453
2.8468	2.8482	2.8497	2.8512	2.8526	2.8541	2.8555
2.8570	2.8584	2.8599	2.8613	2.8627	2.8642	2.8656
2.8670	2.8684	2.8698	2.8712	2.8726	2.8740	2.8754
2.8768	2.8782	2.8795	2.8809	2.8823	2.8836	2.8850
2.8864	2.8877	2.8891	2.8904	2.8918	2.8931	2.8944
2.8958	2.8971	2.8984	2.8997	2.9011	2.9024	2.9037
2.9050	2.9063	2.9076	2.9089	2.9102	2.9115	2.9128
2.9140	2.9153	2.9166	2.9179	2.9191	2.9204	2.9217
2.9229	2.9242	2.9254	2.9267	2.9279	2.9292	2.9304
2.9316	2.9329	2.9341	2.9353	2.9365	2.9378	2.9390
2.9402	2.9414	2.9426	2.9438	2.9450	2.9462	2.9474
2.9486	2.9498	2.9510	2.9522	2.9533	2.9545	2.9557
2.9569	2.9580	2.9592	2.9604	2.9615	2.9627	2.9638
2.9650	2.9661	2.9673	2.9684	2.9696	2.9707	2.9719
2.9730	2.9741	2.9753	2.9764	2.9775	2.9786	2.9797
2.9809	2.9820	2.9831	2.9842	2.9853	2.9864	2.9875
2.9886	2.9897	2.9908	2.9919	2.9930	2.9940	2.9951
2.9962	2.9973	2.9984	2.9994	3.0005	3.0016	3.0026
3.0037	3.0048	3.0058	3.0069	3.0079	3.0090	3.0100
3.0111	3.0121	3.0132	3.0142	3.0153	3.0163	3.0173
3.0184	3.0194	3.0204	3.0215	3.0225	3.0235	3.0245
3.0255	3.0266	3.0276	3.0286	3.0296	3.0306	3.0316
3.0326	3.0336	3.0346	3.0356	3.0366	3.0376	3.0386
3.0396	3.0406	3.0415	3.0425	3.0435	3.0445	3.0455
3.0464	3.0474	3.0484	3.0493	3.0503	3.0513	3.0522
3.0532	3.0542	3.0551	3.0561	3.0570	3.0580	3.0589
3.0599	3.0608	3.0618	3.0627	3.0637	3.0646	3.0655
3.0665	3.0674	3.0683	3.0693	3.0702	3.0711	3.0721
3.0730	3.0739	3.0748	3.0757	3.0767	3.0776	3.0785
3.0794	3.0803	3.0812	3.0821	3.0830	3.0839	3.0848
3.0857	3.0866	3.0875	3.0884	3.0893	3.0902	3.0911
3.0920	3.0929	3.0938	3.0947	3.0955	3.0964	3.0973
3.0982	3.0991	3.0999	3.1008	3.1017	3.1026	3.1034
3.1043	3.1052	3.1060	3.1069	3.1077	3.1086	3.1095
3.1103	3.1112	3.1120	3.1129	3.1137	3.1146	3.1154
3.1163	3.1171	3.1180	3.1188	3.1197	3.1205	3.1213
3.1222	3.1230	3.1238	3.1247	3.1255	3.1263	3.1272
3.1280	3.1288	3.1296	3.1305	3.1313	3.1321	3.1329
3.1337	3.1346	3.1354	3.1362	3.1370	3.1378	3.1386
3.1394	3.1402	3.1410	3.1419	3.1427	3.1435	3.1443
3.1451	3.1459	3.1467	3.1474	3.1482	3.1490	3.1498
3.1506	3.1514	3.1522	3.1530	3.1538	3.1546	3.1553
3.1561	3.1569	3.1577	3.1585	3.1592	3.1600	3.1608
3.1616	3.1623	3.1631	3.1639	3.1646	3.1654	3.1662
3.1669	3.1677	3.1685	3.1692	3.1700		

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 *S*****
 *S APPLY A 5% SEDIMENT BULKING FACTOR ABOVE THE ESCARPMENT AND 9% BELOW
 *S THE ESCARPMENT TO COMPUTED HYDROGRAPHS - NO SEDIMENT BULKING FACTOR
 *S WHEN USING RECALL HYD COMMAND
 SEDIMENT BULK CODE=1 BULKING FACTOR = 1.05

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***** OUT.WPD *****
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*S*** Basin Contributing to INFLOW POINT 3 (IP3) *****
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*S QUAIL RANCH BASINS *****
*****
*S* *****
*****
*S*** SUB-BASIN 10 *****
*
COMPUTE LT TP      LCODE=1
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.036 K=0.7
                   LENGTH=1600 FT SLOPE=0.027 K=2.0
                   LENGTH=7708 FT SLOPE=0.025 K=3.0
                   Kn=.033  CR=0.52

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
SHEET FLOW PORTION      LENGTH (FT)      SLOPE (FT/FT)      COMPOSITE K
400.0                   .036000          .7000
SHALLOW FLOW PORTION  1600.0          .027000          2.0000
CHANNEL FLOW PORTION   7708.0          .025000          3.0000
TOTAL BASIN            9708.0          .025783          2.5055

LAG EQUATION FACTORS:  Kn= .0330      TOTAL BASIN LENGTH (FT)= 9708.0
TOTAL BASIN SLOPE (FT/FT)= .025783  CENTROUD LENGTH (FT)= 5048.2

TIME OF CONCENTRATION (HRS)= .5818    TIME TO PEAK (HRS)= .3879    LAG TIME (HRS)= .4364

COMPUTE NM HYD      ID=1  HYD NO=10  DA= 0.358 SQ MI
                   PER A=99 PER B=0  PER C=1  PER D=0
                   TP=0.0  MASSRAIN=-1
TIME TO PEAK (hrs)= .3879

K = .365153HR      TP = .387886HR      K/TP RATIO = .941391      SHAPE CONSTANT, N = 3.755934
UNIT PEAK = 312.47 CFS  UNIT VOLUME = 1.000      B = 338.56      P60 = 2.2000
AREA = .358000 SQ MI  IA = .64700 INCHES      INF = 1.66160 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD          ID=1  CODE=1

OUTFLOW HYDROGRAPH REACH  10.00

RUNOFF VOLUME = .77814 INCHES      = 14.8571 ACRE-FEET
PEAK DISCHARGE RATE = 235.27 CFS AT 1.750 HOURS  BASIN AREA = .3580 SQ. MI.

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*S*** SUB-BASIN 11 *****
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COMPUTE LT TP      LCODE=1
                   NK=3  ISLOPE=-1
                   LENGTH=400 FT  SLOPE=0.019 K=0.7
                   LENGTH=1600 FT SLOPE=0.024 K=2.0
                   LENGTH=7880 FT SLOPE=0.024 K=3.0
                   Kn=.033  CR=.64

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
SHEET FLOW PORTION      LENGTH (FT)      SLOPE (FT/FT)      COMPOSITE K
400.0                   .019000          .7000
SHALLOW FLOW PORTION  1600.0          .024000          2.0000
CHANNEL FLOW PORTION   7880.0          .024000          3.0000
TOTAL BASIN            9880.0          .023798          2.4385

LAG EQUATION FACTORS:  Kn= .0330      TOTAL BASIN LENGTH (FT)= 9880.0
TOTAL BASIN SLOPE (FT/FT)= .023798  CENTROUD LENGTH (FT)= 6323.2

TIME OF CONCENTRATION (HRS)= .6402    TIME TO PEAK (HRS)= .4268    LAG TIME (HRS)= .4802

COMPUTE NM HYD      ID=2  HYD NO=11  DA= 0.390 SQ MI
                   PER A=99 PER B=0  PER C=1  PER D=0
                   TP=0.0  MASSRAIN=-1
TIME TO PEAK (hrs)= .4268

K = .401808HR      TP = .426823HR      K/TP RATIO = .941391      SHAPE CONSTANT, N = 3.755934
UNIT PEAK = 309.35 CFS  UNIT VOLUME = 1.000      B = 338.56      P60 = 2.2000
AREA = .390000 SQ MI  IA = .64700 INCHES      INF = 1.66160 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD          ID=2  CODE=1

OUTFLOW HYDROGRAPH REACH  11.00

RUNOFF VOLUME = .77814 INCHES      = 16.1851 ACRE-FEET
PEAK DISCHARGE RATE = 234.58 CFS AT 1.800 HOURS  BASIN AREA = .3900 SQ. MI.

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***** OUT.WPD *****

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*S ADD IP3.10 TO IP3.11 TO GET IP3.11.9
ADD HYD ID=9 HYD NO=11.9 ID I=1 ID II=2
PRINT HYD ID=9 CODE=1

OUTFLOW HYDROGRAPH REACH 11.90

RUNOFF VOLUME = .77814 INCHES = 31.0422 ACRE-FEET
PEAK DISCHARGE RATE = 467.75 CFS AT 1.800 HOURS BASIN AREA = .7480 SQ. MI.

*S

*S ROUTE 11.9 THRU IP3.12 IN NATURAL ARROYO TO 12.6

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5896.45 MAX ELEV=5900.10
CH SLOPE=0.007 FP SLOPE=0.007
N=0.035 DIST=780
DIST ELEV DIST ELEV
0 5898.04 132 5898.03
250 5896.63 406 5896.45
477 5898.02 593 5899.88
740 5900.10 780 5899.98

RATING CURVE VALLEY SECTION 1.0
WATER FLOW FLOW TOP
SURFACE AREA RATE WIDTH
ELEV SQ FT CFS FT
5896.45 .00 .00 .00
5896.64 16.76 12.92 165.71
5896.83 50.94 75.09 190.56
5897.03 89.89 178.32 215.42
5897.22 133.62 320.96 240.27
5897.41 182.11 503.57 265.12
5897.60 235.37 727.47 289.98
5897.79 293.40 994.31 314.83
5897.99 356.20 1305.90 339.69
5898.18 441.85 1471.31 486.81
5898.37 536.41 2000.08 498.77
5898.56 633.27 2596.18 510.74
5898.75 732.43 3257.76 522.71
5898.94 833.89 3983.49 534.68
5899.14 937.64 4772.36 546.65
5899.33 1043.68 5623.67 558.62
5899.52 1152.03 6536.90 570.59
5899.71 1262.67 7511.71 582.55
5899.90 1375.79 8410.98 609.30
5900.10 1507.24 8333.93 776.09

ROUTE MCUNGE ID=6 HYD NO=12.6 INFLOW ID=9
DT=0.0 L=4765 FT NS=0 SLOPE=0.007
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 252 TABLE PTS= 19
DT= .050000 QMED= 233.88 CKMED= 3.2625
WIDTH MED= 225.10 NREACH= 16 DX= 297.81

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	2.535	.0	1.65	.27	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.19	16.8	12.9	1.717	165.7	1.62	.77	.977	.023	.977	.000	.023	2.0	.996	.000	.004
.38	50.9	75.1	.898	190.6	2.30	1.47	1.392	.082	.934	.192	-.125	38.5	.947	.074	-.021
.58	89.9	178.3	.667	215.4	3.00	1.98	1.812	.132	.910	.321	-.231	122.0	.920	.262	-.181
.77	133.6	321.0	.551	240.3	3.54	2.40	2.142	.181	.891	.398	-.289	245.3	.899	.361	-.259
.96	182.1	503.6	.479	265.1	4.01	2.77	2.422	.227	.875	.452	-.327	408.1	.882	.425	-.307
1.15	235.4	727.5	.428	290.0	4.42	3.09	2.671	.272	.862	.493	-.355	611.4	.867	.472	-.339
1.34	293.4	994.3	.391	314.8	4.80	3.39	2.898	.316	.850	.525	-.375	856.9	.855	.509	-.364
1.54	356.2	1305.9	.361	339.7	3.71	3.67	2.245	.496	.735	.465	-.200	1146.1	.844	.539	-.382
1.73	441.8	1471.3	.397	486.8	3.64	3.33	2.200	.398	.779	.444	-.223	1385.3	.484	.339	-.177
1.92	536.4	2000.1	.355	498.8	5.88	3.73	3.556	.327	.866	.590	-.457	1727.8	.871	.573	-.444
2.11	633.3	2596.2	.323	510.7	6.42	4.10	3.882	.380	.856	.620	-.476	2290.6	.861	.606	-.466
2.30	732.4	3257.8	.298	522.7	6.92	4.45	4.183	.432	.846	.644	-.490	2919.8	.851	.632	-.483
2.49	833.9	3983.5	.277	534.7	7.39	4.78	4.464	.484	.837	.664	-.501	3613.7	.841	.654	-.496
2.69	937.6	4772.4	.260	546.6	7.82	5.09	4.728	.535	.829	.681	-.510	4371.2	.833	.672	-.505
2.88	1043.7	5623.7	.246	558.6	8.23	5.39	4.977	.586	.821	.695	-.517	5191.5	.825	.688	-.513
3.07	1152.0	6536.9	.233	570.6	8.63	5.67	5.213	.637	.814	.708	-.522	6074.0	.817	.702	-.519
3.26	1262.7	7511.7	.222	582.6	8.42	5.95	5.092	.734	.785	.707	-.492	7018.1	.810	.714	-.524
3.45	1375.8	8411.0	.217	609.3	7.83	6.11	4.733	.846	.743	.696	-.439	7957.4	.752	.695	-.447

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 6 OCCURRED 3 TIMES. AVERAGE NUMBER ITERATIONS = 1.1366

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	2.535	.0	1.65	.27	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.19	16.8	12.9	1.717	165.7	1.62	.77	.977	.023	.977	.000	.023	2.0	.996	.000	.004
.38	50.9	75.1	.898	190.6	1.83	1.47	1.104	.104	.906	.094	.000	38.5	.944	.056	.000
.58	89.9	178.3	.667	215.4	1.99	1.98	1.200	.200	.833	.167	.000	122.0	.869	.131	.000
.77	133.6	321.0	.551	240.3	2.15	2.40	1.298	.298	.770	.230	.000	245.3	.800	.200	.000
.96	182.1	503.6	.479	265.1	2.31	2.77	1.395	.395	.717	.283	.000	408.1	.742	.258	.000
1.15	235.4	727.5	.428	290.0	2.46	3.09	1.489	.489	.672	.328	.000	611.4	.693	.307	.000
1.34	293.4	994.3	.391	314.8	2.61	3.39	1.580	.580	.633	.367	.000	856.9	.651	.349	.000
1.54	356.2	1305.9	.361	339.7	2.76	3.67	1.668	.668	.599	.401	.000	1146.1	.615	.385	.000
1.73	441.8	1471.3	.397	486.8	2.58	3.33	1.561	.561	.641	.359	.000	1385.3	.484	.339	.177
1.92	536.4	2000.1	.355	498.8	2.79	3.73	1.689	.689	.592	.408	.000	1727.8	.615	.385	.000
2.11	633.3	2596.2	.323	510.7	3.00	4.10	1.813	.813	.552	.448	.000	2290.6	.571	.429	.000
2.30	732.4	3257.8	.298	522.7	3.20	4.45	1.934	.934	.517	.483	.000	2919.8	.534	.466	.000
2.49	833.9	3983.5	.277	534.7	3.40	4.78	2.052	1.052	.487	.513	.000	3613.7	.502	.498	.000
2.69	937.6	4772.4	.260	546.6	3.59	5.09	2.168	1.168	.461	.539	.000	4371.2	.474	.526	.000
2.88	1043.7	5623.7	.246	558.6	3.77	5.39	2.280	1.280	.439	.561	.000	5191.5	.450	.550	.000
3.07	1152.0	6536.9	.233	570.6	3.95	5.67	2.390	1.390	.418	.582	.000	6074.0	.428	.572	.000
3.26	1262.7	7511.7	.222	582.6	4.13	5.95	2.497	1.497	.400	.600	.000	7018.1	.409	.591	.000
3.45	1375.8	8411.0	.217	609.3	4.24	6.11	2.562	1.562	.390	.610	.000	7957.4	.395	.605	.000

OUT.WPD
 MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 9 TIMES. AVERAGE NUMBER ITERATIONS = 1.1102
 Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
 PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 12.60

RUNOFF VOLUME = .76109 INCHES = 30.3621 ACRE-FEET
 PEAK DISCHARGE RATE = 442.19 CFS AT 2.400 HOURS BASIN AREA = .7480 SQ. MI.

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*S*** SUB-BASIN 12 ****

COMPUTE LT TP LCODE=1
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.047 K=0.7
 LENGTH=1600 FT SLOPE=0.026 K=2.0
 LENGTH=6490 FT SLOPE=0.018 K=3.0
 Kn=.033 CR=0.50

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.047000	.7000
SHALLOW FLOW PORTION	1600.0	.026000	2.0000
CHANNEL FLOW PORTION	6490.0	.018000	3.0000
TOTAL BASIN	8490.0	.020874	2.4772

LAG EQUATION FACTORS: Kn=.0330 TOTAL BASIN LENGTH (FT)= 8490.0
 TOTAL BASIN SLOPE (FT/FT)= .020874 CENTROUD LENGTH (FT)= 4245.0

TIME OF CONCENTRATION (HRS)= .5404 TIME TO PEAK (HRS)= .3603 LAG TIME (HRS)= .4053

COMPUTE NM HYD ID=1 HYD NO=12 DA= 0.309 SQ MI
 PER A=99 PER B=1 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .3603

K = .340773HR TP = .360270HR K/TP RATIO = .945884 SHAPE CONSTANT, N = 3.737385
 UNIT PEAK = 289.27 CFS UNIT VOLUME = 1.000 B = 337.26 P60 = 2.2000
 AREA = .309000 SQ MI IA = .64850 INCHES INF = 1.66580 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 12.00

RUNOFF VOLUME = .77553 INCHES = 12.7807 ACRE-FEET
 PEAK DISCHARGE RATE = 216.11 CFS AT 1.750 HOURS BASIN AREA = .3090 SQ. MI.

*S

* ADD IP3.12 TO 12.6 TO GET 12.9
 ADD HYD ID=9 HYD NO=12.9 ID I=1 ID II=6
 PRINT HYD ID=9 CODE=1

OUTFLOW HYDROGRAPH REACH 12.90

RUNOFF VOLUME = .76531 INCHES = 43.1428 ACRE-FEET
 PEAK DISCHARGE RATE = 484.80 CFS AT 2.350 HOURS BASIN AREA = 1.0570 SQ. MI.

*

*S*** SUB-BASIN 14 ****

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.0199 K=0.7
 LENGTH=1600 FT SLOPE=0.033 K=2.0
 LENGTH=8632 FT SLOPE=0.023 K=3.0
 Kn=.033 CR=0.50

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.019900	.7000
SHALLOW FLOW PORTION	1600.0	.033000	2.0000
CHANNEL FLOW PORTION	8632.0	.023000	3.0000
TOTAL BASIN	10632.0	.024388	2.4822

LAG EQUATION FACTORS: Kn=.0330 TOTAL BASIN LENGTH (FT)= 10632.0
 TOTAL BASIN SLOPE (FT/FT)= .024388 CENTROUD LENGTH (FT)= 5316.0

TIME OF CONCENTRATION (HRS)= .6309 TIME TO PEAK (HRS)= .4206 LAG TIME (HRS)= .4732

COMPUTE NM HYD ID=2 HYD NO=14 DA= 0.513 SQ MI

OUT.WPD
PER A=99 PER B=1 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .4206
K = .396367HR TP = .420599HR K/TP RATIO = .942386 SHAPE CONSTANT, N = 3.751806
UNIT PEAK = 412.58 CFS UNIT VOLUME = 1.000 B = 338.27 P60 = 2.2000
AREA = .513000 SQ MI IA = .64850 INCHES INF = 1.66580 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 14.00

RUNOFF VOLUME = .77554 INCHES = 21.2185 ACRE-FEET
PEAK DISCHARGE RATE = 311.64 CFS AT 1.800 HOURS BASIN AREA = .5130 SQ. MI.

*S

* ADD IP3.14 TO 12.9 TO GET 14.8
ADD HYD ID=8 HYD NO=14.8 ID I=2 ID II=9
PRINT HYD ID=8 CODE=1

OUTFLOW HYDROGRAPH REACH 14.80

RUNOFF VOLUME = .76865 INCHES = 64.3613 ACRE-FEET
PEAK DISCHARGE RATE = 588.78 CFS AT 2.350 HOURS BASIN AREA = 1.5700 SQ. MI.

*S

*S ROUTE 14.8 THRU 15 IN NATURAL ARROYO TO 15.6
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5844.46 MAX ELEV=5850.0
CH SLOPE=0.007 FP SLOPE=0.007
N=0.035 DIST=600.0
DIST ELEV DIST ELEV
0 5854.38 145 5852.0
235 5845.95 300 5844.46
399 5846.0 489 5850.0
600 5856.87

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5844.46	.00	.00	.00
5844.75	4.58	4.51	31.45
5845.04	18.34	28.63	62.91
5845.33	41.26	84.42	94.36
5845.63	73.35	181.82	125.81
5845.92	114.61	329.66	157.27
5846.21	163.16	558.29	172.55
5846.50	215.05	849.13	183.45
5846.79	270.12	1194.70	194.34
5847.08	328.36	1595.05	205.24
5847.38	389.77	2050.65	216.13
5847.67	454.36	2562.29	227.03
5847.96	522.13	3130.91	237.92
5848.25	593.08	3757.61	248.82
5848.54	667.20	4443.57	259.72
5848.83	744.49	5190.02	270.61
5849.12	824.96	5998.23	281.51
5849.42	908.61	6869.52	292.40
5849.71	995.44	7805.21	303.30
5850.00	1085.44	8806.66	314.19

ROUTE MCUNGE ID=6 HYD NO=15.6 INFLOW ID=8
DT=0.0 L=5450 FT NS=0 SLOPE=0.007
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 278 TABLE PTS= 20
DT= .050000 QMED= 294.39 CKMED= 3.5831
WIDTH MED= 149.77 NREACH= 16 DX= 340.63

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	2.108	.0	1.89	.45	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.29	4.6	4.5	1.539	31.5	1.83	.98	.967	.033	.967	.000	.033	.7	.995	.000	.005
.58	18.3	28.6	.970	62.9	2.17	1.56	1.148	.088	.921	.105	.027	13.4	.950	.039	.011
.87	41.3	84.4	.740	94.4	2.79	2.05	1.473	.135	.897	.233	.130	52.7	.902	.163	.065
1.17	73.4	181.8	.611	125.8	3.35	2.48	1.769	.181	.877	.322	.199	128.7	.882	.274	.157
1.46	114.6	329.7	.526	157.3	4.07	2.88	2.150	.216	.872	.406	.277	250.9	.865	.354	.219
1.75	163.2	558.3	.442	172.6	5.17	3.42	2.733	.262	.869	.499	.368	437.9	.875	.466	.341
2.04	215.1	849.1	.383	183.4	5.96	3.95	3.152	.326	.855	.553	.408	697.8	.862	.530	.392
2.33	270.1	1194.7	.342	194.3	6.59	4.42	3.485	.391	.840	.590	.429	1016.3	.846	.572	.418
2.62	328.4	1595.0	.312	205.2	7.16	4.86	3.785	.455	.826	.618	.445	1389.4	.832	.604	.437
2.92	389.8	2050.7	.288	216.1	7.68	5.26	4.060	.518	.814	.641	.456	1817.6	.820	.630	.450
3.21	454.4	2562.3	.268	227.0	8.17	5.64	4.316	.579	.803	.661	.464	2301.3	.808	.651	.459
3.50	522.1	3130.9	.252	237.9	8.62	6.00	4.557	.640	.793	.677	.471	2841.5	.798	.669	.467
3.79	593.1	3757.6	.239	248.8	9.05	6.34	4.785	.700	.784	.692	.476	3439.2	.788	.684	.473
4.08	667.2	4443.6	.227	259.7	9.46	6.66	5.002	.758	.776	.704	.480	4095.6	.779	.698	.477
4.37	744.5	5190.0	.217	270.6	9.86	6.97	5.210	.816	.768	.715	.483	4811.8	.771	.710	.481
4.66	825.0	5998.2	.208	281.5	10.24	7.27	5.410	.873	.760	.725	.486	5589.1	.764	.720	.484
4.96	908.6	6869.5	.200	292.4	10.60	7.56	5.603	.929	.753	.734	.488	6428.9	.756	.730	.486
5.25	995.4	7805.2	.193	303.3	10.96	7.84	5.791	.985	.747	.743	.489	7332.4	.750	.739	.488
5.54	1085.4	8806.7	.187	314.2	11.15	8.11	5.894	1.054	.735	.748	.483	8300.9	.743	.747	.490
MAXIMUM NO. ITERATIONS FOR SOLUTION (KMAX) = 6 OCCURRED 2 TIMES. AVERAGE NUMBER ITERATIONS = 1.2229															
DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M

OUT.WPD

.00	.0	.0	2.108	.0	1.89	.45	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.29	4.6	4.5	1.539	31.5	1.83	.98	.967	.033	.967	.000	.033	.7	.995	.000	.005
.58	18.3	28.6	.970	62.9	2.07	1.56	1.092	.092	.915	.085	.000	13.4	.948	.031	.021
.87	41.3	84.4	.740	94.4	2.21	2.05	1.170	.170	.855	.145	.000	52.7	.884	.116	.000
1.17	73.4	181.8	.611	125.8	2.38	2.48	1.255	.255	.797	.203	.000	128.7	.824	.176	.000
1.46	114.6	329.7	.526	157.3	2.55	2.88	1.345	.345	.743	.257	.000	250.9	.768	.232	.000
1.75	163.2	558.3	.442	172.6	2.81	3.42	1.483	.483	.674	.326	.000	437.9	.706	.294	.000
2.04	215.1	849.1	.383	183.4	3.08	3.95	1.630	.630	.614	.386	.000	697.8	.642	.358	.000
2.33	270.1	1194.7	.342	194.3	3.35	4.42	1.770	.770	.565	.435	.000	1016.3	.588	.412	.000
2.62	328.4	1595.0	.312	205.2	3.60	4.86	1.904	.904	.525	.475	.000	1389.4	.544	.456	.000
2.92	389.8	2050.7	.288	216.1	3.85	5.26	2.034	1.034	.492	.508	.000	1817.6	.508	.492	.000
3.21	454.4	2562.3	.268	227.0	4.09	5.64	2.159	1.159	.463	.537	.000	2301.3	.477	.523	.000
3.50	522.1	3130.9	.252	237.9	4.31	6.00	2.279	1.279	.439	.561	.000	2841.5	.450	.550	.000
3.79	593.1	3757.6	.239	248.8	4.54	6.34	2.397	1.397	.417	.583	.000	3439.2	.428	.572	.000
4.08	667.2	4443.6	.227	259.7	4.75	6.66	2.510	1.510	.398	.602	.000	4095.6	.407	.593	.000
4.37	744.5	5190.0	.217	270.6	4.96	6.97	2.621	1.621	.381	.619	.000	4811.8	.390	.610	.000
4.66	825.0	5998.2	.208	281.5	5.17	7.27	2.730	1.730	.366	.634	.000	5589.1	.374	.626	.000
4.96	908.6	6869.5	.200	292.4	5.37	7.56	2.836	1.836	.353	.647	.000	6428.9	.359	.641	.000
5.25	995.4	7805.2	.193	303.3	5.56	7.84	2.940	1.940	.340	.660	.000	7332.4	.346	.654	.000
5.54	1085.4	8806.7	.187	314.2	5.76	8.11	3.042	2.042	.329	.671	.000	8300.9	.334	.666	.000

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 12 TIMES. AVERAGE NUMBER ITERATIONS = 1.1862
 Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
 PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 15.60

RUNOFF VOLUME = .75905 INCHES = 63.5570 ACRE-Feet
 PEAK DISCHARGE RATE = 548.30 CFS AT 2.950 HOURS BASIN AREA = 1.5700 SQ. MI.

*

*S*** SUB-BASIN 15 ****

*

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.005 K=0.7
 LENGTH=1600 FT SLOPE=0.006 K=2.0
 LENGTH=2978 FT SLOPE=0.011 K=3.0
 Kn=.033 CR=0.58

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.005000	.7000
SHALLOW FLOW PORTION	1600.0	.006000	2.0000
CHANNEL FLOW PORTION	2978.0	.011000	3.0000
TOTAL BASIN	4978.0	.008911	1.8919

LAG EQUATION FACTORS: Kn=.0330 TOTAL BASIN LENGTH (FT)= 4978.0
 TOTAL BASIN SLOPE (FT/FT)= .008911 CENTROID LENGTH (FT)= 2887.2

TIME OF CONCENTRATION (HRS)= .6525 TIME TO PEAK (HRS)= .4350 LAG TIME (HRS)= .4894

COMPUTE NM HYD ID=1 HYD NO=15 DA= 0.301 SQ MI
 PER A=99 PER B=1 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .4350

K = .414937HR TP = .435001HR K/TP RATIO = .953878 SHAPE CONSTANT, N = 3.704938
 UNIT PEAK = 231.80 CFS UNIT VOLUME = 1.000 B = 334.99 P60 = 2.2000
 AREA = .301000 SQ MI IA = .64850 INCHES INF = 1.66580 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 15.00

RUNOFF VOLUME = .77554 INCHES = 12.4499 ACRE-Feet
 PEAK DISCHARGE RATE = 175.35 CFS AT 1.800 HOURS BASIN AREA = .3010 SQ. MI.

*S

* ADD 15 TO 15.6 TO GET 15.9

ADD HYD ID=9 HYD NO=15.9 ID I=1 ID II=6

PRINT HYD ID=9 CODE=1

OUTFLOW HYDROGRAPH REACH 15.90

RUNOFF VOLUME = .76170 INCHES = 76.0070 ACRE-Feet
 PEAK DISCHARGE RATE = 565.03 CFS AT 2.900 HOURS BASIN AREA = 1.8710 SQ. MI.

*

*S*** SUB-BASIN 16 ****

*

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.014 K=0.7
 LENGTH=1600 FT SLOPE=0.022 K=2.0
 LENGTH=8058 FT SLOPE=0.025 K=3.0
 Kn=.033 CR=0.52

OUT.WPD

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.014000	.7000
SHALLOW FLOW PORTION	1600.0	.022000	2.0000
CHANNEL FLOW PORTION	8058.0	.025000	3.0000
TOTAL BASIN	10058.0	.024085	2.3817

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 10058.0
 TOTAL BASIN SLOPE (FT/FT)= .024085 CENTROID LENGTH (FT)= 5230.2

TIME OF CONCENTRATION (HRS)= .6125 TIME TO PEAK (HRS)= .4084 LAG TIME (HRS)= .4594

COMPUTE NM HYD ID=1 HYD NO=16 DA= 0.533 SQ MI
 PER A=99 PER B=1 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .4084

K = .384826HR TP = .408353HR K/TP RATIO = .942386 SHAPE CONSTANT, N = 3.751806
 UNIT PEAK = 441.52 CFS UNIT VOLUME = 1.000 B = 338.27 P60 = 2.2000
 AREA = .533000 SQ MI IA = .64850 INCHES INF = 1.66580 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 16.00

RUNOFF VOLUME = .77554 INCHES = 22.0457 ACRE-FEET
 PEAK DISCHARGE RATE = 332.35 CFS AT 1.800 HOURS BASIN AREA = .5330 SQ. MI.

*S

*S ROUTE 16 THRU 17 IN NATURAL ARROYO TO 17.7

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
 MIN ELEV=5849.92 MAX ELEV=5857.33
 CH SLOPE=0.009 FP SLOPE=0.009
 N=0.035 DIST=800.0
 DIST ELEV DIST ELEV
 0 5854.05 148 5856.03
 199 5857.22 274 5854.0
 400 5849.92 484 5852.0
 575 5856.0 800 5857.33

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5849.92	.00	.00	.00
5850.31	5.42	7.35	27.80
5850.70	21.69	46.64	55.61
5851.09	48.81	137.51	83.41
5851.48	86.78	296.16	111.21
5851.87	135.59	536.97	139.02
5852.26	194.65	885.02	162.22
5852.65	262.02	1339.54	183.14
5853.04	337.55	1900.98	204.07
5853.43	421.24	2576.56	224.99
5853.82	513.10	3373.44	245.92
5854.21	613.93	4198.94	277.32
5854.60	731.32	5062.27	324.44
5854.99	867.08	6142.46	371.56
5855.38	1021.24	7451.03	418.69
5855.77	1193.77	9001.84	465.81
5856.16	1386.34	10565.12	532.45
5856.55	1611.98	12217.50	624.25
5856.94	1873.42	14324.03	716.04
5857.33	2170.27	16999.43	800.00

ROUTE MCUNGE ID=6 HYD NO=17.6 INFLOW ID=1
 DT=0.0 L=3385 FT NS=0 SLOPE=0.009
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 250 TABLE PTS= 20
 DT= .050000 QMED= 166.17 CKMED= 4.1787
 WIDTH MED= 88.43 NREACH= 9 DX= 376.11

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME (HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.951	.0	2.09	.62	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.39	5.4	7.3	.694	27.8	2.01	1.35	.961	.039	.961	.000	.039	1.2	.994	.000	.006
.78	21.7	46.6	.437	55.6	2.99	2.15	1.431	.083	.934	.204	-.139	21.9	.939	.085	-.025
1.17	48.8	137.5	.334	83.4	3.84	2.82	1.837	.127	.914	.325	-.240	85.8	.918	.258	-.176
1.56	86.8	296.2	.276	111.2	4.61	3.41	2.206	.171	.899	.408	-.307	209.7	.902	.363	-.266
1.95	135.6	537.0	.237	139.0	5.42	3.96	2.593	.211	.889	.474	-.363	408.7	.889	.436	-.326
2.34	194.6	885.0	.207	162.2	6.35	4.55	3.039	.254	.882	.534	-.416	702.1	.885	.508	-.393
2.73	262.0	1339.5	.184	183.1	7.12	5.11	3.408	.303	.871	.576	-.447	1103.0	.876	.556	-.432
3.12	337.5	1901.0	.167	204.1	7.78	5.63	3.723	.354	.861	.606	-.467	1610.9	.864	.591	-.455
3.51	421.2	2576.6	.154	225.0	8.40	6.12	4.018	.403	.851	.631	-.482	2229.2	.855	.618	-.473
3.90	513.1	3373.4	.143	245.9	8.51	6.57	4.075	.476	.829	.640	-.468	2965.2	.846	.641	-.488
4.29	613.9	4198.9	.137	277.3	7.85	6.84	3.755	.570	.786	.624	-.410	3778.5	.804	.629	-.433
4.68	731.3	5062.3	.136	324.4	7.68	6.92	3.674	.600	.772	.621	-.393	4623.8	.759	.610	-.369
5.07	867.1	6142.5	.133	371.6	8.24	7.08	3.943	.593	.786	.639	-.425	5593.7	.779	.630	-.408
5.46	1021.2	7451.0	.129	418.7	8.75	7.30	4.190	.601	.793	.655	-.447	6786.3	.788	.646	-.435
5.85	1193.8	9001.8	.125	465.8	8.62	7.54	4.124	.663	.771	.654	-.425	8214.5	.793	.661	-.455
6.24	1386.3	10565.1	.123	532.4	7.77	7.62	3.719	.754	.724	.635	-.359	9774.0	.740	.640	-.380
6.63	1612.0	12217.5	.124	624.2	7.72	7.58	3.694	.749	.725	.633	-.357	11382.0	.699	.622	-.321
7.02	1873.4	14324.0	.123	716.0	8.55	7.65	4.090	.692	.761	.654	-.415	13257.9	.739	.641	-.381

OUT.WPD
 7.41 2170.3 16999.4 .120 800.0 8.83 7.83 4.226 .711 .761 .663 -.424 15643.7 .775 .667 -.442
 MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 5 OCCURRED 4 TIMES. AVERAGE NUMBER ITERATIONS = 1.1313
 DEPTH AREA Q TRAVEL WIDTH CK VEL C D C1 C2 C3 Q-M C1-M C2-M C3-M
 (FT) (SQ FT) (CFS) TIME(HR) (FT) (FPS) (FPS) (CFS) (CFS)
 .00 .0 .0 .951 .0 2.09 .62 1.000 .000 1.000 .000 .000 .0 1.000 .000 .000
 .39 5.4 7.3 .694 27.8 2.01 1.35 .961 .039 .961 .000 .039 1.2 .994 .000 .006
 .78 21.7 46.6 .437 55.6 2.31 2.15 1.107 .107 .903 .097 .000 21.9 .935 .065 .000
 1.17 48.8 137.5 .334 83.4 2.50 2.82 1.195 .195 .837 .163 .000 85.8 .868 .132 .000
 1.56 86.8 296.2 .276 111.2 2.70 3.41 1.292 .292 .774 .226 .000 209.7 .803 .197 .000
 1.95 135.6 537.0 .237 139.0 2.91 3.96 1.392 .392 .718 .282 .000 408.7 .744 .256 .000
 2.34 194.6 885.0 .207 162.2 3.16 4.55 1.511 .511 .662 .338 .000 702.1 .688 .312 .000
 2.73 262.0 1339.5 .184 183.1 3.41 5.11 1.633 .633 .612 .388 .000 1103.0 .635 .365 .000
 3.12 337.5 1901.0 .167 204.1 3.66 5.63 1.752 .752 .571 .429 .000 1610.9 .590 .410 .000
 3.51 421.2 2576.6 .154 225.0 3.90 6.12 1.867 .867 .536 .464 .000 2229.2 .552 .448 .000
 3.90 513.1 3373.4 .143 245.9 4.14 6.57 1.980 .980 .505 .495 .000 2965.2 .519 .481 .000
 4.29 613.9 4198.9 .137 277.3 4.28 6.84 2.046 1.046 .489 .511 .000 3778.5 .497 .503 .000
 4.68 731.3 5062.3 .136 324.4 4.32 6.92 2.067 1.067 .484 .516 .000 4623.8 .486 .514 .000
 5.07 867.1 6142.5 .133 371.6 4.41 7.08 2.108 1.108 .474 .526 .000 5593.7 .479 .521 .000
 5.46 1021.2 7451.0 .129 418.7 4.52 7.30 2.163 1.163 .462 .538 .000 6786.3 .468 .532 .000
 5.85 1193.8 9001.8 .125 465.8 4.65 7.54 2.227 1.227 .449 .551 .000 8214.5 .455 .545 .000
 6.24 1386.3 10565.1 .123 532.4 4.70 7.62 2.248 1.248 .445 .555 .000 9774.0 .447 .553 .000
 6.63 1612.0 12217.5 .124 624.2 4.67 7.58 2.237 1.237 .447 .553 .000 11382.0 .446 .554 .000
 7.02 1873.4 14324.0 .123 716.0 4.71 7.65 2.255 1.255 .444 .556 .000 13257.9 .445 .555 .000
 7.41 2170.3 16999.4 .120 800.0 4.81 7.83 2.304 1.304 .434 .566 .000 15643.7 .439 .561 .000
 MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 5 TIMES. AVERAGE NUMBER ITERATIONS = 1.1010
 Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
 PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 17.60

RUNOFF VOLUME = .76891 INCHES = 21.8575 ACRE-FEET
 PEAK DISCHARGE RATE = 322.93 CFS AT 2.150 HOURS BASIN AREA = .5330 SQ. MI.

*

 *S** SUB-BASIN 17 **
 *
 COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.012 K=0.7
 LENGTH=1600 FT SLOPE=0.008 K=2.0
 LENGTH=5130 FT SLOPE=0.008 K=3.0
 Kn=.033 CR=0.59

Tc And Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.012000	.7000
SHALLOW FLOW PORTION	1600.0	.008000	2.0000
CHANNEL FLOW PORTION	5130.0	.008000	3.0000
TOTAL BASIN	7130.0	.008224	2.3625

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 7130.0
 TOTAL BASIN SLOPE (FT/FT)= .008224 CENTROID LENGTH (FT)= 4206.7

TIME OF CONCENTRATION (HRS)= .6627 TIME TO PEAK (HRS)= .4418 LAG TIME (HRS)= .4970

COMPUTE NM HYD ID=2 HYD NO=17 DA= 0.268 SQ MI
 PER A=99 PER B=1 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .4418
 K = .436006HR TP = .441813HR K/TP RATIO = .986856 SHAPE CONSTANT, N = 3.577985
 UNIT PEAK = 197.74 CFS UNIT VOLUME = 1.000 B = 325.98 P60 = 2.2000
 AREA = .268000 SQ MI IA = .64850 INCHES INF = 1.66580 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 17.00

RUNOFF VOLUME = .77554 INCHES = 11.0849 ACRE-FEET
 PEAK DISCHARGE RATE = 149.68 CFS AT 1.800 HOURS BASIN AREA = .2680 SQ. MI.

*S

 *S ADD 17.6 TO 17 TO GET 17.7
 ADD HYD ID=7 HYD NO=17.7 ID I=6 ID II=2
 PRINT HYD ID=7 CODE=1
 OUTFLOW HYDROGRAPH REACH 17.70
 RUNOFF VOLUME = .77113 INCHES = 32.9424 ACRE-FEET
 PEAK DISCHARGE RATE = 423.25 CFS AT 2.100 HOURS BASIN AREA = .8010 SQ. MI.
 *

 *S ADD 17.7 TO 15.9 TO GET 17.4
 ADD HYD ID=4 HYD NO=17.4 ID I=7 ID II=9
 PRINT HYD ID=4 CODE=5

OUT.WPD
OUTFLOW HYDROGRAPH REACH 17.40

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.000	617.0	6.000	22.8	9.000	1.8	12.000	.1
.250	.0	3.250	439.4	6.250	18.5	9.250	1.4	12.250	.1
.500	.0	3.500	296.1	6.500	15.0	9.500	1.2	12.500	.1
.750	.0	3.750	200.6	6.750	12.2	9.750	.9	12.750	.1
1.000	.0	4.000	137.1	7.000	9.9	10.000	.8	13.000	.0
1.250	.0	4.250	97.5	7.250	8.0	10.250	.6	13.250	.0
1.500	96.0	4.500	77.2	7.500	6.5	10.500	.5	13.500	.0
1.750	316.0	4.750	63.0	7.750	5.2	10.750	.4	13.750	.0
2.000	533.6	5.000	51.4	8.000	4.2	11.000	.3	14.000	.0
2.250	891.1	5.250	41.8	8.250	3.4	11.250	.3	14.250	.0
2.500	702.6	5.500	34.2	8.500	2.7	11.500	.2	14.500	.0
2.750	559.0	5.750	28.0	8.750	2.2	11.750	.2		

RUNOFF VOLUME = .76453 INCHES = 108.9493 ACRE-Feet
PEAK DISCHARGE RATE = 895.97 CFS AT 2.300 HOURS BASIN AREA = 2.6720 SQ. MI.

*S

*S ROUTE 17.4 THRU 20 IN NATURAL ARROYO TO 28.6
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5812.0 MAX ELEV=5825.39
CH SLOPE=0.0116 FP SLOPE=0.0116
N=0.035 DIST=800.0
DIST ELEV DIST ELEV
0 5829.74 160 5824.0
289 5816.16 374 5812.0
499 5813.98 662 5819.96
800 5825.39

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5812.00	.00	.00	.00
5812.70	20.74	47.30	58.88
5813.41	82.97	300.34	117.76
5814.11	186.36	899.32	171.84
5814.82	319.27	1958.20	205.44
5815.52	475.86	3442.24	239.04
5816.23	656.11	5389.29	272.37
5816.93	858.87	7859.91	303.17
5817.64	1083.33	10850.46	333.97
5818.34	1329.50	14391.48	364.77
5819.05	1597.36	18513.44	395.57
5819.75	1886.92	23246.49	426.37
5820.46	2197.96	28653.54	456.25
5821.16	2529.82	34738.90	485.75
5821.86	2882.47	41514.38	515.25
5822.57	3255.91	49006.30	544.75
5823.27	3650.13	57240.66	574.25
5823.98	4065.13	66243.14	603.75
5824.68	4503.58	75496.88	641.05
5825.39	4968.48	85617.45	678.59

ROUTE MCUNGE ID=3 HYD NO=20.3 INFLOW ID=4
DT=0.0 L=2323 FT NS=0 SLOPE=0.0116
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 294
DT= .050000
WIDTH MED= 131.09
TABLE PTS= 20
QMED= 447.99
NREACH= 5
CKMED= 5.7933
DX= 464.60

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.388	.0	2.58	1.05	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.70	20.7	47.3	.283	58.9	3.18	2.28	1.232	.047	.959	.122	-.081	7.4	.994	.019	-.013
1.41	83.0	300.3	.178	117.8	5.09	3.62	1.974	.093	.939	.348	-.287	141.0	.942	.231	-.174
2.11	186.4	899.3	.134	171.8	6.86	4.83	2.657	.142	.925	.473	-.399	558.9	.927	.408	-.335
2.82	319.3	1958.2	.105	205.4	8.83	6.13	3.420	.200	.913	.567	-.480	1384.8	.919	.529	-.449
3.52	475.9	3442.2	.089	239.0	10.21	7.23	3.957	.262	.900	.617	-.516	2656.9	.904	.592	-.496
4.23	656.1	5389.3	.079	272.4	11.52	8.21	4.464	.319	.890	.654	-.544	4372.0	.893	.635	-.527
4.93	858.9	7859.9	.071	303.2	12.80	9.15	4.961	.376	.881	.684	-.566	6579.4	.885	.670	-.555
5.64	1083.3	10850.5	.064	334.0	13.90	10.02	5.384	.434	.873	.707	-.579	9309.6	.876	.695	-.571
6.34	1329.5	14391.5	.060	364.8	14.92	10.82	5.782	.491	.865	.725	-.590	12574.8	.868	.716	-.583
7.05	1597.4	18513.4	.056	395.6	15.90	11.59	6.160	.546	.858	.740	-.599	16405.5	.861	.733	-.593
7.75	1886.9	23246.5	.052	426.4	16.88	12.32	6.541	.599	.853	.754	-.607	20832.2	.854	.747	-.601
8.46	2198.0	28653.5	.049	456.3	17.88	13.04	6.929	.652	.848	.767	-.615	25900.5	.850	.761	-.611
9.16	2529.8	34738.9	.047	485.8	18.80	13.73	7.283	.706	.843	.778	-.620	31645.6	.845	.772	-.617
9.86	2882.5	41514.4	.045	515.3	19.66	14.40	7.617	.760	.838	.787	-.625	38075.2	.840	.782	-.622
10.57	3255.9	49006.3	.043	544.8	20.50	15.05	7.941	.814	.833	.795	-.628	45208.0	.835	.791	-.626
11.27	3650.1	57240.7	.041	574.3	21.31	15.68	8.256	.868	.829	.802	-.631	53070.3	.830	.799	-.629
11.98	4065.1	66243.1	.040	603.8	21.51	16.30	8.333	.947	.816	.805	-.621	61687.8	.826	.806	-.632
12.68	4503.6	75496.9	.038	641.0	21.45	16.76	8.312	1.019	.803	.806	-.609	70823.6	.803	.803	-.607
13.39	4968.5	85617.5	.037	678.6	21.60	17.23	8.367	1.084	.793	.809	-.601	80508.6	.801	.809	-.610

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 8 TIMES. AVERAGE NUMBER ITERATIONS = 1.3002

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.388	.0	2.58	1.05	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.70	20.7	47.3	.283	58.9	2.72	2.28	1.055	.055	.948	.052	.000	7.4	.982	.018	.000
1.41	83.0	300.3	.178	117.8	2.99	3.62	1.158	.158	.863	.137	.000	141.0	.906	.094	.000
2.11	186.4	899.3	.134	171.8	3.33	4.83	1.291	.291	.774	.226	.000	558.9	.815	.185	.000
2.82	319.3	1958.2	.105	205.4	3.79	6.13	1.467	.647	.682	.318	.000	1384.8	.724	.276	.000
3.52	475.9	3442.2	.089	239.0	4.22	7.23	1.634	.634	.612	.388	.000	2656.9	.644	.356	.000
4.23	656.1	5389.3	.079	272.4	4.63	8.21	1.793	.793	.558	.442	.000	4372.0	.583	.417	.000
4.93	858.9	7859.9	.071	303.2	5.04	9.15	1.954	.954	.512	.488	.000	6579.4	.533	.467	.000
5.64	1083.3	10850.5	.064	334.0	5.44	10.02	2.108	1.108	.474	.526	.000	9309.6	.492	.508	.000
6.34	1329.5	14391.5	.060	364.8	5.82	10.82	2.257	1.257	.443	.557	.000	12574.8	.458	.542	.000
7.05	1597.4	18513.4	.056	395.6	6.20	11.59	2.401	1.401	.416	.584	.000	16405.5	.429	.571	.000
7.75	1886.9	23246.5	.052	426.4	6.56	12.32	2.542	1.542	.393	.607	.000	20832.2	.404	.596	.000
8.46	2198.0	28653.5	.049	456.3	6.92	13.04	2.683	1.683	.373	.627	.000	25900.5	.383	.617	.000

OUT.WPD

9.16	2529.8	34738.9	.047	485.8	7.28	13.73	2.822	1.822	.354	.646	.000	31645.6	.363	.637	.000
9.86	2882.5	41514.4	.045	515.3	7.64	14.40	2.958	1.958	.338	.662	.000	38075.2	.346	.654	.000
10.57	3255.9	49006.3	.043	544.8	7.98	15.05	3.092	2.092	.323	.677	.000	45208.0	.330	.670	.000
11.27	3650.1	57240.7	.041	574.3	8.32	15.68	3.223	2.223	.310	.690	.000	53070.3	.317	.683	.000
11.98	4065.1	66243.1	.040	603.8	8.65	16.30	3.353	2.353	.298	.702	.000	61687.8	.304	.696	.000
12.68	4503.6	75496.9	.038	641.0	8.91	16.76	3.452	2.452	.290	.710	.000	70823.6	.294	.706	.000
13.39	4968.5	85617.5	.037	678.6	9.17	17.23	3.553	2.553	.281	.719	.000	80508.6	.285	.715	.000

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 80 TIMES. AVERAGE NUMBER ITERATIONS = 1.2321
 Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
 PRINT HYD ID=3 CODE=1

OUTFLOW HYDROGRAPH REACH 20.30

RUNOFF VOLUME = .76355 INCHES = 108.8106 ACRE-FEET
 PEAK DISCHARGE RATE = 881.55 CFS AT 2.500 HOURS BASIN AREA = 2.6720 SQ. MI.

*

 *S*** SUB-BASIN 21 *****

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.018 K=0.7
 LENGTH=1600 FT SLOPE=0.033 K=2.0
 LENGTH=3667 FT SLOPE=0.027 K=3.0
 Kn=.033 CR=0.50

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.018000	.7000
SHALLOW FLOW PORTION	1600.0	.033000	2.0000
CHANNEL FLOW PORTION	3667.0	.027000	3.0000
TOTAL BASIN	5667.0	.028059	2.1011

LAG EQUATION FACTORS: Kn=.0330 TOTAL BASIN LENGTH (FT)= 5667.0
 TOTAL BASIN SLOPE (FT/FT)= .028059 CENTROID LENGTH (FT)= 2833.5

TIME OF CONCENTRATION (HRS)= .3928 TIME TO PEAK (HRS)= .2619 LAG TIME (HRS)= .2946

COMPUTE NM HYD ID=1 HYD NO=21 DA= 0.145 SQ MI
 PER A=99 PER B=1 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .2619

K = .290639HR TP = .261891HR K/TP RATIO = 1.109772 SHAPE CONSTANT, N = 3.186335
 UNIT PEAK = 164.26 CFS UNIT VOLUME = 1.000 B = 296.68 P60 = 2.2000
 AREA = .145000 SQ MI IA = .64850 INCHES INF = 1.66580 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 21.00

RUNOFF VOLUME = .77554 INCHES = 5.9974 ACRE-FEET
 PEAK DISCHARGE RATE = 120.46 CFS AT 1.650 HOURS BASIN AREA = .1450 SQ. MI.

*S

*S ROUTE 21 THRU 22 IN NATURAL ARROYO TO 22.8

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
 MIN ELEV=5875.66 MAX ELEV=5883.82
 CH SLOPE=0.007 FP SLOPE=0.007
 N=0.035 DIST=1200.0
 DIST ELEV DIST ELEV
 0 5881.59 264 5875.89
 459 5876.12 598 5875.66
 879 5878.0 1045 5882.96
 1200 5883.82

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5875.66	.00	.00	.00
5876.09	56.82	58.94	360.04
5876.52	241.31	552.48	466.36
5876.95	457.07	1456.60	537.86
5877.38	703.54	2750.33	609.37
5877.81	980.74	4443.25	680.87
5878.24	1286.21	6654.26	731.74
5878.67	1607.99	9363.99	766.02
5879.10	1944.50	12483.15	800.30
5879.53	2295.75	16009.20	834.59
5879.96	2661.73	19942.36	868.87
5880.39	3042.43	24284.69	903.15
5880.82	3437.87	29039.64	937.44
5881.25	3848.04	34211.59	971.72
5881.68	4272.77	39908.34	1002.02
5882.11	4706.42	46441.32	1016.40
5882.54	5146.24	53395.18	1030.78
5882.96	5592.25	60736.71	1045.88
5883.39	6058.29	66177.15	1123.34

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5883.82 6557.61 OUT.WPD 1200.00
72264.00
ROUTE MCUNGE ID=5 HYD NO=22.5 INFLOW ID=1
DT=0.0 L=7312 FT NS=0 SLOPE=0.007
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 178 TABLE PTS= 20
DT= .050000 QMED= 60.23 CKMED= 2.6751
WIDTH MED= 360.31 NREACH= 30 DX= 243.73

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	3.029	.0	1.35	.30	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.43	56.8	58.9	1.958	360.0	1.38	1.04	1.016	.070	.933	.041	.026	9.3	.989	.006	.004
.86	241.3	552.5	.887	466.4	3.60	2.29	2.660	.193	.900	.481	.381	248.2	.920	.370	.291
1.29	457.1	1456.6	.637	537.9	4.80	3.19	3.542	.331	.864	.590	.454	958.0	.877	.541	.418
1.72	703.5	2750.3	.520	609.4	5.73	3.91	4.232	.462	.838	.649	.487	2060.3	.848	.621	.468
2.15	980.7	4443.2	.448	680.9	6.66	4.53	4.922	.574	.823	.692	.515	3555.3	.824	.669	.493
2.58	1286.2	6654.3	.393	731.7	7.83	5.17	5.781	.681	.817	.732	.549	5504.3	.821	.714	.535
3.01	1608.0	9364.0	.349	766.0	8.87	5.82	6.551	.808	.807	.761	.567	7964.1	.814	.749	.563
3.44	1944.5	12483.2	.316	800.3	9.68	6.42	7.145	.945	.792	.780	.572	10880.6	.799	.771	.569
3.87	2295.8	16009.2	.291	834.6	10.41	6.97	7.689	1.080	.779	.795	.574	14204.7	.785	.788	.573
4.30	2661.7	19942.4	.271	868.9	11.09	7.49	8.192	1.213	.767	.808	.575	17935.5	.772	.802	.574
4.73	3042.4	24284.7	.254	903.2	11.73	7.98	8.663	1.344	.756	.818	.574	22074.2	.761	.813	.574
5.16	3437.9	29039.6	.240	937.4	12.33	8.45	9.106	1.473	.746	.827	.573	26623.6	.750	.823	.573
5.59	3848.0	34211.6	.228	971.7	13.01	8.89	9.610	1.586	.740	.836	.576	31587.6	.740	.831	.572
6.02	4272.8	39908.3	.217	1002.0	14.17	9.34	10.466	1.647	.749	.847	.596	37020.4	.739	.841	.580
6.45	4706.4	46441.3	.206	1016.4	15.45	9.87	11.408	1.734	.755	.859	.613	43127.9	.759	.855	.614
6.88	5146.2	53395.2	.196	1030.8	16.15	10.38	11.924	1.880	.746	.865	.611	49872.6	.751	.862	.612
7.30	5592.2	60736.7	.187	1045.9	17.50	10.86	12.602	2.371	.661	.857	.518	57021.9	.741	.868	.609
7.73	6058.3	66177.1	.186	1123.3	11.94	10.92	8.821	2.891	.545	.843	.388	63442.7	.532	.841	.372
8.16	6557.6	72264.0	.184	1200.0	11.96	11.02	8.833	2.951	.538	.844	.382	69203.7	.555	.845	.399

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 31 TIMES. AVERAGE NUMBER ITERATIONS = 1.0609

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	3.029	.0	1.35	.30	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.43	56.8	58.9	1.958	360.0	1.38	1.04	1.016	.070	.933	.041	.026	9.3	.989	.006	.004
.86	241.3	552.5	.887	466.4	3.60	2.29	2.660	.193	.900	.481	.381	248.2	.920	.370	.291
1.29	457.1	1456.6	.637	537.9	4.80	3.19	3.542	.331	.864	.590	.454	958.0	.877	.541	.418
1.72	703.5	2750.3	.520	609.4	5.73	3.91	4.232	.462	.838	.649	.487	2060.3	.848	.621	.468
2.15	980.7	4443.2	.448	680.9	6.66	4.53	4.922	.574	.823	.692	.515	3555.3	.824	.669	.493
2.58	1286.2	6654.3	.393	731.7	7.83	5.17	5.781	.681	.817	.732	.549	5504.3	.821	.714	.535
3.01	1608.0	9364.0	.349	766.0	8.87	5.82	6.551	.808	.807	.761	.567	7964.1	.814	.749	.563
3.44	1944.5	12483.2	.316	800.3	9.68	6.42	7.145	.945	.792	.780	.572	10880.6	.799	.771	.569
3.87	2295.8	16009.2	.291	834.6	10.41	6.97	7.689	1.080	.779	.795	.574	14204.7	.785	.788	.573
4.30	2661.7	19942.4	.271	868.9	11.09	7.49	8.192	1.213	.767	.808	.575	17935.5	.772	.802	.574
4.73	3042.4	24284.7	.254	903.2	11.73	7.98	8.663	1.344	.756	.818	.574	22074.2	.761	.813	.574
5.16	3437.9	29039.6	.240	937.4	12.33	8.45	9.106	1.473	.746	.827	.573	26623.6	.750	.823	.573
5.59	3848.0	34211.6	.228	971.7	13.01	8.89	9.610	1.586	.740	.836	.576	31587.6	.740	.831	.572
6.02	4272.8	39908.3	.217	1002.0	14.17	9.34	10.466	1.647	.749	.847	.596	37020.4	.739	.841	.580
6.45	4706.4	46441.3	.206	1016.4	15.45	9.87	11.408	1.734	.755	.859	.613	43127.9	.759	.855	.614
6.88	5146.2	53395.2	.196	1030.8	16.15	10.38	11.924	1.880	.746	.865	.611	49872.6	.751	.862	.612
7.30	5592.2	60736.7	.187	1045.9	17.50	10.86	12.602	2.371	.661	.857	.518	57021.9	.741	.868	.609
7.73	6058.3	66177.1	.186	1123.3	11.94	10.92	8.821	2.891	.545	.843	.388	63442.7	.532	.841	.372
8.16	6557.6	72264.0	.184	1200.0	11.96	11.02	8.833	2.951	.538	.844	.382	69203.7	.555	.845	.399

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 99 TIMES. AVERAGE NUMBER ITERATIONS = 1.0557

Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
PRINT HYD ID=5 CODE=1

OUTFLOW HYDROGRAPH REACH 22.50

RUNOFF VOLUME = .74971 INCHES = 5.7977 ACRE-Feet
PEAK DISCHARGE RATE = 108.78 CFS AT 3.050 HOURS BASIN AREA = .1450 SQ. MI.

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*S*** SUB-BASIN 22 ***

COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.015 K=0.7
LENGTH=1600 FT SLOPE=0.018 K=2.0
LENGTH=12166 FT SLOPE=0.017 K=3.0
Kn=.033 CR=.5

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 14166.0
TOTAL BASIN SLOPE (FT/FT)= .017056 CENTROID LENGTH (FT)= 7083.0

TIME OF CONCENTRATION (HRS)= .8308 TIME TO PEAK (HRS)= .5538 LAG TIME (HRS)= .6231

COMPUTE NM HYD ID=2 HYD NO=22 DA= 0.739 SQ MI
PER A=99 PER B=1 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .5538

K = .521930HR TP = .553839HR K/TP RATIO = .942386 SHAPE CONSTANT, N = 3.751806
UNIT PEAK = .451.36 CFS UNIT VOLUME = 1.000 B = 338.27 P60 = 2.2000
AREA = .739000 SQ MI IA = .64850 INCHES INF = 1.66580 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 22.00

RUNOFF VOLUME = .77553 INCHES = 30.5662 ACRE-Feet
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PEAK DISCHARGE RATE = 344.12 CFS AT 1.950 HOURS OUT.WPD BASIN AREA = .7390 SQ. MI.

*S

*S ADD 21 AND 22 TO GET 22.8
ADD HYD ID=8 HYD NO=22.8 ID I=5 ID II=2
PRINT HYD ID=8 CODE=5

OUTFLOW HYDROGRAPH REACH 22.80

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.500	74.5	7.000	3.5	10.500	.3	14.000	.0
.250	.0	3.750	44.5	7.250	2.9	10.750	.3	14.250	.0
.500	.0	4.000	31.9	7.500	2.5	11.000	.2	14.500	.0
.750	.0	4.250	26.1	7.750	2.1	11.250	.2	14.750	.0
1.000	.0	4.500	21.4	8.000	1.8	11.500	.2	15.000	.0
1.250	.0	4.750	17.6	8.250	1.5	11.750	.1	15.250	.0
1.500	62.9	5.000	14.6	8.500	1.3	12.000	.1	15.500	.0
1.750	289.2	5.250	12.1	8.750	1.1	12.250	.1	15.750	.0
2.000	337.7	5.500	10.0	9.000	.9	12.500	.1	16.000	.0
2.250	247.0	5.750	8.4	9.250	.8	12.750	.1	16.250	.0
2.500	154.1	6.000	7.0	9.500	.7	13.000	.1		
2.750	95.4	6.250	5.8	9.750	.6	13.250	.1		
3.000	156.0	6.500	4.9	10.000	.5	13.500	.0		
3.250	123.8	6.750	4.1	10.250	.4	13.750	.0		

RUNOFF VOLUME = .77130 INCHES = 36.3639 ACRE-Feet
PEAK DISCHARGE RATE = 344.12 CFS AT 1.950 HOURS BASIN AREA = .8840 SQ. MI.

*S

*S*** SUB-BASIN 24 ****

COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.005 K=0.7
LENGTH=1600 FT SLOPE=0.007 K=2.0
LENGTH=1338 FT SLOPE=0.008 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.005000	.7000
SHALLOW FLOW PORTION	1600.0	.007000	2.0000
CHANNEL FLOW PORTION	1338.0	.008000	3.0000
TOTAL BASIN	3338.0	.007161	1.7431

TIME OF CONCENTRATION (HRS)= .6286 TIME TO PEAK (HRS)= .4191 LAG TIME (HRS)= .4714

COMPUTE NM HYD ID=2 HYD NO=24 DA= 0.117 SQ MI
PER A=99 PER B=1 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .4191

K = .476792HR TP = .419064HR K/TP RATIO = 1.137753 SHAPE CONSTANT, N = 3.111748
UNIT PEAK = 81.192 CFS UNIT VOLUME = .9998 B = 290.81 P60 = 2.2000
AREA = .117000 SQ MI IA = .64850 INCHES INF = 1.66580 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 24.00

RUNOFF VOLUME = .77554 INCHES = 4.8393 ACRE-Feet
PEAK DISCHARGE RATE = 61.69 CFS AT 1.800 HOURS BASIN AREA = .1170 SQ. MI.

*S

*S ADD 24 AND 22.8 TO GET 24.7
ADD HYD ID=7 HYD NO=24.7 ID I=2 ID II=8
PRINT HYD ID=7 CODE=5

OUTFLOW HYDROGRAPH REACH 24.70

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.500	78.8	7.000	3.8	10.500	.4	14.000	.0
.250	.0	3.750	48.2	7.250	3.2	10.750	.3	14.250	.0
.500	.0	4.000	35.0	7.500	2.7	11.000	.3	14.500	.0
.750	.0	4.250	28.6	7.750	2.3	11.250	.2	14.750	.0
1.000	.0	4.500	23.6	8.000	1.9	11.500	.2	15.000	.0
1.250	.0	4.750	19.4	8.250	1.6	11.750	.2	15.250	.0
1.500	86.8	5.000	16.1	8.500	1.4	12.000	.1	15.500	.0
1.750	350.1	5.250	13.4	8.750	1.2	12.250	.1	15.750	.0
2.000	388.8	5.500	11.1	9.000	1.0	12.500	.1	16.000	.0
2.250	278.2	5.750	9.3	9.250	.8	12.750	.1	16.250	.0
2.500	172.5	6.000	7.7	9.500	.7	13.000	.1		
2.750	106.4	6.250	6.5	9.750	.6	13.250	.1		
3.000	162.5	6.500	5.4	10.000	.5	13.500	.0		
3.250	128.9	6.750	4.6	10.250	.4	13.750	.0		

RUNOFF VOLUME = .77179 INCHES = 41.2032 ACRE-Feet
PEAK DISCHARGE RATE = 401.95 CFS AT 1.900 HOURS BASIN AREA = 1.0010 SQ. MI.
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OUT.WPD

*S

*S ROUTE 24.7 THRU 23 IN NATURAL ARROYO TO 23.8
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5824.56 MAX ELEV=5840.33
CH SLOPE=0.014 FP SLOPE=0.014
N=0.035 DIST=1000.0
DIST ELEV DIST ELEV
0 5839.67 207 5837.99
372 5829.93 498 5824.56
605 5827.79 729 5836.11
1000 5840.33

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5824.56	.00	.00	.00
5825.39	19.50	54.47	46.97
5826.22	77.98	345.87	93.95
5827.05	175.47	1019.75	140.92
5827.88	311.86	2208.19	186.25
5828.71	479.69	4073.36	218.10
5829.54	673.94	6555.05	249.95
5830.37	894.35	9727.32	280.48
5831.20	1139.35	13626.96	309.84
5832.03	1408.73	18271.95	339.21
5832.86	1702.49	23704.22	368.57
5833.69	2020.62	29965.41	397.93
5834.52	2363.12	37096.56	427.30
5835.35	2730.00	45138.11	456.66
5836.18	3121.38	53874.45	489.54
5837.01	3556.92	61250.50	559.84
5837.84	4050.80	70307.03	630.14
5838.67	4626.88	76752.67	770.43
5839.50	5330.98	85980.91	926.03
5840.33	6137.26	103302.80	1000.00

ROUTE MCUNGE ID=6 HYD NO=23.6 INFLOW ID=7
DT=0.0 L=2675 FT NS=0 SLOPE=0.014
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 330 TABLE PTS= 20
DT= .050000 QMED= 200.97 CKMED= 4.9822
WIDTH MED= 70.59 NREACH= 6 DX= 445.83

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.364	.0	2.48	1.28	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.83	19.5	54.5	.266	47.0	3.90	2.79	1.573	.048	.964	.237	-.200	8.6	.994	.037	-.032
1.66	78.0	345.9	.168	93.9	6.17	4.44	2.491	.096	.947	.442	-.389	162.4	.949	.339	-.289
2.49	175.5	1019.8	.128	140.9	7.96	5.81	3.212	.146	.933	.541	-.474	636.4	.935	.485	-.420
3.32	311.9	2208.2	.105	186.3	9.86	7.08	3.981	.193	.926	.613	-.539	1560.6	.925	.573	-.499
4.15	479.7	4073.4	.088	218.1	12.04	8.49	4.862	.248	.919	.673	-.591	3081.4	.923	.649	-.572
4.98	673.9	6555.1	.076	249.9	13.64	9.73	5.509	.308	.910	.707	-.616	5254.8	.912	.689	-.601
5.81	894.3	9727.3	.068	280.5	15.21	10.88	6.140	.365	.903	.734	-.636	8080.1	.905	.720	-.625
6.64	1139.4	13627.0	.062	309.8	16.63	11.96	6.715	.424	.896	.754	-.650	11614.8	.899	.744	-.643
7.47	1408.7	18271.9	.057	339.2	17.91	12.97	7.232	.482	.889	.770	-.660	15886.3	.892	.762	-.654
8.30	1702.5	23704.2	.053	368.6	19.13	13.92	7.722	.539	.884	.784	-.668	20923.9	.886	.777	-.663
9.13	2020.6	29965.4	.050	397.9	20.29	14.83	8.191	.595	.878	.796	-.674	26769.5	.880	.790	-.670
9.96	2363.1	37096.6	.047	427.3	21.40	15.70	8.641	.650	.874	.806	-.679	33464.4	.875	.801	-.676
10.79	2730.0	45138.1	.045	456.7	22.17	16.53	8.952	.714	.866	.812	-.679	41049.4	.871	.810	-.681
11.62	3121.4	53874.4	.043	489.5	20.01	17.26	8.079	.881	.823	.799	-.622	49442.3	.860	.814	-.673
12.45	3556.9	61250.5	.043	559.8	17.68	17.22	7.140	.991	.783	.781	-.564	57528.9	.766	.774	-.540
13.28	4050.8	70307.0	.043	630.1	14.95	17.36	6.034	1.196	.709	.757	-.466	65733.9	.793	.786	-.580
14.11	4626.9	76752.7	.045	770.4	12.30	16.59	4.964	1.298	.643	.725	-.367	73500.0	.564	.713	-.277
14.94	5331.0	85980.9	.046	926.0	17.09	16.13	6.901	.870	.802	.772	-.574	81323.3	.684	.732	-.416
15.77	6137.3	103302.8	.044	1000.0	21.54	16.83	8.697	.768	.853	.809	-.662	94508.3	.861	.809	-.670

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 10 TIMES. AVERAGE NUMBER ITERATIONS = 1.2280

Equations solved using the Ponce correction to C2
PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 23.60

RUNOFF VOLUME = .77191 INCHES = 41.2092 ACRE-Feet
PEAK DISCHARGE RATE = 401.56 CFS AT 2.050 HOURS BASIN AREA = 1.0010 SQ. MI.

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*S*** SUB-BASIN 23 ***

COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.004 K=0.7
LENGTH=1600 FT SLOPE=0.006 K=2.0
LENGTH=3613 FT SLOPE=0.015 K=3.0
Kn=.033 CR=.5

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.004000	.7000
SHALLOW FLOW PORTION	1600.0	.006000	2.0000
CHANNEL FLOW PORTION	3613.0	.015000	3.0000
TOTAL BASIN	5613.0	.011651	1.7811

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 5613.0
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TOTAL BASIN SLOPE (FT/FT)= .011651 CENTROID LENGTH (FT)= 2806.5
 TIME OF CONCENTRATION (HRS)= .6213 TIME TO PEAK (HRS)= .4142 LAG TIME (HRS)= .4660
 COMPUTE NM HYD ID=2 HYD NO=23 DA= 0.245 SQ MI
 PER A=99 PER B=1 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .4142
 K = .418270HR TP = .414194HR K/TP RATIO = 1.009840 SHAPE CONSTANT, N = 3.495618
 UNIT PEAK = 189.29 CFS UNIT VOLUME = 1.000 B = 320.01 P60 = 2.2000
 AREA = .245000 SQ MI IA = .64850 INCHES INF = 1.66580 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000
 BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.
 PRINT HYD ID=2 CODE=1
 OUTFLOW HYDROGRAPH REACH 23.00
 RUNOFF VOLUME = .77554 INCHES = 10.1336 ACRE-FEET
 PEAK DISCHARGE RATE = 143.13 CFS AT 1.800 HOURS BASIN AREA = .2450 SQ. MI.

*S

*S ADD 23 AND 23.6 TO GET 23.8
 ADD HYD ID=8 HYD NO=23.8 ID I=2 ID II=6
 PRINT HYD ID=8 CODE=5

OUTFLOW HYDROGRAPH REACH 23.80

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.500	119.4	7.000	5.2	10.500	.5	14.000	.0
.250	.0	3.750	75.7	7.250	4.4	10.750	.4	14.250	.0
.500	.0	4.000	50.6	7.500	3.7	11.000	.3	14.500	.0
.750	.0	4.250	39.0	7.750	3.1	11.250	.3	14.750	.0
1.000	.0	4.500	32.2	8.000	2.6	11.500	.2	15.000	.0
1.250	.0	4.750	26.7	8.250	2.2	11.750	.2	15.250	.0
1.500	49.0	5.000	22.1	8.500	1.8	12.000	.2	15.500	.0
1.750	355.1	5.250	18.4	8.750	1.6	12.250	.2	15.750	.0
2.000	512.8	5.500	15.3	9.000	1.3	12.500	.1	16.000	.0
2.250	402.4	5.750	12.7	9.250	1.1	12.750	.1	16.250	.0
2.500	260.6	6.000	10.6	9.500	.9	13.000	.1	16.500	.0
2.750	163.9	6.250	8.9	9.750	.8	13.250	.1	16.750	.0
3.000	110.0	6.500	7.4	10.000	.7	13.500	.1	17.000	.0
3.250	175.6	6.750	6.2	10.250	.6	13.750	.1	17.250	.0

RUNOFF VOLUME = .77262 INCHES = 51.3428 ACRE-FEET
 PEAK DISCHARGE RATE = 515.25 CFS AT 1.950 HOURS BASIN AREA = 1.2460 SQ. MI.

*S

*S*** SUB-BASIN 28 ****

COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.019 K=0.7
 LENGTH=1600 FT SLOPE=0.006 K=2.0
 LENGTH=5288 FT SLOPE=0.012 K=3.0
 Kn=.033 CR=.5

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.019000	.7000
SHALLOW FLOW PORTION	1600.0	.006000	2.0000
CHANNEL FLOW PORTION	5288.0	.012000	3.0000
TOTAL BASIN	7288.0	.011067	2.2666

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 7288.0
 TOTAL BASIN SLOPE (FT/FT)= .011067 CENTROID LENGTH (FT)= 3644.0

TIME OF CONCENTRATION (HRS)= .6031 TIME TO PEAK (HRS)= .4021 LAG TIME (HRS)= .4523

COMPUTE NM HYD ID=2 HYD NO=28 DA= 0.158 SQ MI
 PER A=95 PER B=5 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .4021
 K = .438533HR TP = .402079HR K/TP RATIO = 1.090663 SHAPE CONSTANT, N = 3.240023
 UNIT PEAK = 118.22 CFS UNIT VOLUME = .9999 B = 300.84 P60 = 2.2000
 AREA = .158000 SQ MI IA = .64250 INCHES INF = 1.64900 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000
 BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1
 OUTFLOW HYDROGRAPH REACH 28.00
 RUNOFF VOLUME = .78595 INCHES = 6.6229 ACRE-FEET
 PEAK DISCHARGE RATE = 90.41 CFS AT 1.800 HOURS BASIN AREA = .1580 SQ. MI.
 Page 14

OUT.WPD

*S

 *S ADD 28 AND 23.8 TO GET 28.9
 ADD HYD ID=9 HYD NO=28.9 ID I=2 ID II=8
 PRINT HYD ID=9 CODE=5

OUTFLOW HYDROGRAPH REACH 28.90

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.500	125.1	7.000	5.6	10.500	.5	14.000	.0
.250	.0	3.750	80.4	7.250	4.7	10.750	.4	14.250	.0
.500	.0	4.000	54.4	7.500	3.9	11.000	.4	14.500	.0
.750	.0	4.250	42.2	7.750	3.3	11.250	.3	14.750	.0
1.000	.0	4.500	34.9	8.000	2.8	11.500	.3	15.000	.0
1.250	.0	4.750	28.9	8.250	2.3	11.750	.2	15.250	.0
1.500	84.6	5.000	23.9	8.500	2.0	12.000	.2	15.500	.0
1.750	445.3	5.250	19.9	8.750	1.7	12.250	.2	15.750	.0
2.000	583.8	5.500	16.5	9.000	1.4	12.500	.1	16.000	.0
2.250	443.3	5.750	13.7	9.250	1.2	12.750	.1	16.250	.0
2.500	283.8	6.000	11.5	9.500	1.0	13.000	.1	16.500	.0
2.750	177.0	6.250	9.6	9.750	.8	13.250	.1	16.750	.0
3.000	118.3	6.500	8.0	10.000	.7	13.500	.1	17.000	.0
3.250	182.5	6.750	6.7	10.250	.6	13.750	.1	17.250	.0

RUNOFF VOLUME = .77412 INCHES = 57.9657 ACRE-Feet
 PEAK DISCHARGE RATE = 592.86 CFS AT 1.950 HOURS BASIN AREA = 1.4040 SQ. MI.

*S

 *S ADD 17.4 TO 28.9 TO GET 28.6
 ADD HYD ID=6 HYD NO=28.6 ID I=3 ID II=9
 PRINT HYD ID=6 CODE=5

OUTFLOW HYDROGRAPH REACH 28.60

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.500	539.1	7.000	17.7	10.500	1.1	14.000	.1
.250	.0	3.750	361.8	7.250	14.5	10.750	.9	14.250	.0
.500	.0	4.000	246.9	7.500	11.9	11.000	.8	14.500	.0
.750	.0	4.250	174.9	7.750	9.8	11.250	.6	14.750	.0
1.000	.0	4.500	130.5	8.000	8.0	11.500	.5	15.000	.0
1.250	.0	4.750	105.1	8.250	6.5	11.750	.4	15.250	.0
1.500	84.6	5.000	86.2	8.500	5.3	12.000	.4	15.500	.0
1.750	565.5	5.250	70.7	8.750	4.4	12.250	.3	15.750	.0
2.000	918.0	5.500	57.9	9.000	3.6	12.500	.2	16.000	.0
2.250	1004.5	5.750	47.6	9.250	3.0	12.750	.2	16.250	.0
2.500	1165.3	6.000	39.2	9.500	2.4	13.000	.1	16.500	.0
2.750	824.2	6.250	32.2	9.750	2.0	13.250	.1	16.750	.0
3.000	713.7	6.500	26.4	10.000	1.6	13.500	.1	17.000	.0
3.250	767.3	6.750	21.6	10.250	1.4	13.750	.1	17.250	.0

RUNOFF VOLUME = .76719 INCHES = 166.7762 ACRE-Feet
 PEAK DISCHARGE RATE = 1185.95 CFS AT 2.450 HOURS BASIN AREA = 4.0760 SQ. MI.

*S

*S ROUTE 28.6 THRU 20 IN NATURAL ARROYO TO 20.8

*

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
 MIN ELEV=5771.07 MAX ELEV=5810.76
 CH SLOPE=0.015 FP SLOPE=0.015
 N=0.035 DIST=850.0
 DIST ELEV DIST ELEV
 0 5810.76 126 5801.93
 250 5796.16 382 5779.97
 429 5771.07 483 5775.96
 604 5784.0 850 5792.39

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5771.07	.00	.00	.00
5773.16	35.61	189.55	34.10
5775.25	142.45	1203.58	68.19
5777.34	324.31	3495.74	107.81
5779.43	593.86	7680.56	150.27
5781.51	955.54	14165.13	197.18
5783.60	1418.04	23630.47	245.64
5785.69	2002.20	35354.90	318.26
5787.78	2748.75	51802.03	396.53
5789.87	3658.81	74014.84	474.81
5791.96	4732.38	102673.60	553.09
5794.05	5929.20	144379.90	582.77
5796.14	7164.33	194134.90	599.80
5798.23	8463.46	244360.60	644.38
5800.31	9856.36	301208.00	689.27
5802.40	11342.23	366119.80	730.74
5804.49	12899.79	441774.30	760.55
5806.58	14519.62	524447.70	790.36
5808.67	16201.71	614238.90	820.17
5810.76	17946.07	711255.30	849.98

ROUTE MCUNGE ID=7 HYD NO=20.7 INFLOW ID=6

DT=0.0 L=2290 FT NS=0 SLOPE=0.015
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

OUT.WPD

INFLOW END= 346
DT= .050000
WIDTH MED= 47.66
TABLE PTS= 20
QMED= 592.98
CKMED= 9.4914
NREACH= 3
DX= 763.33

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	CK (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.164	.0	4.24	2.45	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
2.09	35.6	189.6	.120	34.1	7.42	5.32	1.750	.065	.954	.290	-.243	29.9	.967	.043	-.011
4.18	142.4	1203.6	.075	68.2	11.58	8.45	2.731	.133	.931	.482	-.414	565.0	.936	.389	-.325
6.27	324.3	3495.7	.059	107.8	14.32	10.78	3.378	.198	.914	.563	-.476	2186.3	.913	.509	-.423
8.36	593.9	7680.6	.049	150.3	17.03	12.93	4.015	.262	.901	.621	-.522	5387.4	.903	.589	-.492
10.44	955.5	14165.1	.043	197.2	19.36	14.82	4.566	.324	.890	.660	-.550	10695.2	.890	.636	-.526
12.53	1418.0	23630.5	.038	245.6	20.81	16.66	4.907	.404	.872	.683	-.555	18636.6	.883	.676	-.559
14.62	2002.2	35354.9	.036	318.3	21.16	17.66	4.990	.458	.858	.690	-.548	29229.3	.851	.674	-.524
16.71	2748.8	51802.0	.034	396.5	23.32	18.85	5.499	.489	.860	.714	-.574	43248.5	.855	.700	-.555
18.80	3658.8	74014.8	.031	474.8	25.65	20.23	6.048	.531	.860	.736	-.596	62515.3	.858	.724	-.582
20.89	4732.4	102673.6	.029	553.1	30.11	21.70	7.099	.539	.875	.768	-.644	87896.7	.857	.745	-.602
22.98	5929.2	144379.9	.026	582.8	37.54	24.35	8.852	.576	.889	.808	-.698	122840.3	.891	.796	-.687
25.07	7164.3	194134.9	.023	599.8	40.22	27.10	9.484	.703	.874	.821	-.696	168549.8	.889	.820	-.709
27.16	8463.5	244360.6	.022	644.4	39.80	28.87	9.386	.832	.852	.822	-.673	218736.3	.854	.817	-.671
29.24	9856.4	301208.0	.021	689.3	42.27	30.56	9.968	.903	.848	.832	-.679	272266.8	.848	.826	-.674
31.33	11342.2	366119.8	.020	730.7	45.96	32.28	10.838	.952	.851	.844	-.695	333112.5	.847	.837	-.684
33.42	12899.8	441774.3	.019	760.6	49.86	34.25	11.757	1.017	.852	.855	-.707	403311.8	.855	.851	-.706
35.51	14519.6	524447.7	.018	790.4	52.26	36.12	12.323	1.109	.846	.861	-.708	482485.0	.849	.858	-.707
37.60	16201.7	614238.9	.017	820.2	54.54	37.91	12.862	1.199	.841	.867	-.708	568724.4	.843	.864	-.708
39.69	17946.1	711255.3	.016	850.0	56.02	39.63	13.210	1.305	.832	.871	-.703	662133.6	.838	.870	-.708
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 9 TIMES. AVERAGE NUMBER ITERATIONS = 1.3153															
DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	CK (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.164	.0	4.24	2.45	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
2.09	35.6	189.6	.120	34.1	4.68	5.32	1.104	.104	.906	.094	.000	29.9	.966	.034	.000
4.18	142.4	1203.6	.075	68.2	5.44	8.45	1.283	.283	.779	.221	.000	565.0	.840	.160	.000
6.27	324.3	3495.7	.059	107.8	6.18	10.78	1.458	.458	.686	.314	.000	2186.3	.728	.272	.000
8.36	593.9	7680.6	.049	150.3	6.96	12.93	1.641	.641	.609	.391	.000	5387.4	.644	.356	.000
10.44	955.5	14165.1	.043	197.2	7.70	14.82	1.815	.815	.551	.449	.000	10695.2	.577	.423	.000
12.53	1418.0	23630.5	.038	245.6	8.45	16.66	1.994	.994	.502	.498	.000	18636.6	.524	.476	.000
14.62	2002.2	35354.9	.036	318.3	8.88	17.66	2.093	1.093	.478	.522	.000	29229.3	.489	.511	.000
16.71	2748.8	51802.0	.034	396.5	9.39	18.85	2.215	1.215	.452	.548	.000	43248.5	.464	.536	.000
18.80	3658.8	74014.8	.031	474.8	10.01	20.23	2.360	1.360	.424	.576	.000	62515.3	.437	.563	.000
20.89	4732.4	102673.6	.029	553.1	10.68	21.70	2.518	1.518	.397	.603	.000	87896.7	.409	.591	.000
22.98	5929.2	144379.9	.026	582.8	11.93	24.35	2.813	1.813	.355	.645	.000	122840.3	.375	.625	.000
25.07	7164.3	194134.9	.023	599.8	13.27	27.10	3.130	2.130	.320	.680	.000	168549.8	.336	.664	.000
27.16	8463.5	244360.6	.022	644.4	14.16	28.87	3.339	2.339	.299	.701	.000	218736.3	.309	.691	.000
29.24	9856.4	301208.0	.021	689.3	15.02	30.56	3.541	2.541	.282	.718	.000	272266.8	.290	.710	.000
31.33	11342.2	366119.8	.020	730.7	15.91	32.28	3.751	2.751	.267	.733	.000	333112.5	.274	.726	.000
33.42	12899.8	441774.3	.019	760.6	16.94	34.25	3.995	2.995	.250	.750	.000	403311.8	.258	.742	.000
35.51	14519.6	524447.7	.018	790.4	17.94	36.12	4.230	3.230	.236	.764	.000	482485.0	.243	.757	.000
37.60	16201.7	614238.9	.017	820.2	18.91	37.91	4.459	3.459	.224	.776	.000	568724.4	.230	.770	.000
39.69	17946.1	711255.3	.016	850.0	19.85	39.63	4.681	3.681	.214	.786	.000	662133.6	.219	.781	.000
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 45 TIMES. AVERAGE NUMBER ITERATIONS = 1.2443															

Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
PRINT HYD ID=7 CODE=5

OUTFLOW HYDROGRAPH REACH 20.70

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.500	650.0	7.000	19.9	10.500	1.3	14.000	.1
.250	.0	3.750	446.0	7.250	16.3	10.750	1.0	14.250	.0
.500	.0	4.000	301.2	7.500	13.4	11.000	.9	14.500	.0
.750	.0	4.250	209.7	7.750	11.0	11.250	.7	14.750	.0
1.000	.0	4.500	151.6	8.000	9.0	11.500	.6	15.000	.0
1.250	.0	4.750	117.6	8.250	7.3	11.750	.5	15.250	.0
1.500	3.1	5.000	96.1	8.500	6.0	12.000	.4	15.500	.0
1.750	194.6	5.250	78.9	8.750	4.9	12.250	.3	15.750	.0
2.000	834.5	5.500	64.8	9.000	4.0	12.500	.3	16.000	.0
2.250	984.6	5.750	53.1	9.250	3.3	12.750	.2	16.250	.0
2.500	1131.1	6.000	43.8	9.500	2.7	13.000	.2	16.500	.0
2.750	1000.2	6.250	36.1	9.750	2.2	13.250	.1	16.750	.0
3.000	700.2	6.500	29.6	10.000	1.8	13.500	.1	17.000	.0
3.250	798.7	6.750	24.3	10.250	1.5	13.750	.1	17.250	.0

RUNOFF VOLUME = .76662 INCHES = 166.6516 ACRE-Feet
PEAK DISCHARGE RATE = 1171.15 CFS AT 2.550 HOURS BASIN AREA = 4.0760 SQ. MI.

*S*** SUB-BASIN 20 ****

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.015 K=0.7
LENGTH=1600 FT SLOPE=0.015 K=2.0
LENGTH=5447 FT SLOPE=0.018 K=3.0
Kn=.033 CR=0.50

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.015000	.7000
SHALLOW FLOW PORTION	1600.0	.015000	2.0000
CHANNEL FLOW PORTION	5447.0	.018000	3.0000
TOTAL BASIN	7447.0	.017194	2.2964

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 7447.0
TOTAL BASIN SLOPE (FT/FT)= .017194 CENTROUD LENGTH (FT)= 3723.5

TIME OF CONCENTRATION (HRS)= .5304 TIME TO PEAK (HRS)= .3536 LAG TIME (HRS)= .3978

OUT.WPD

```

COMPUTE NM HYD      ID=1  HYD NO=20  DA= 0.426 SQ MI
                    PER A=95 PER B=5  PER C=0  PER D=0
                    TP=0.0  MASSRAIN=-1
                    TIME TO PEAK (hrs)= .3536

K = .331816HR      TP = .353595HR      K/TP RATIO = .938405      SHAPE CONSTANT, N = 3.768383
UNIT PEAK = 408.92 CFS      UNIT VOLUME = 1.000      B = 339.42      P60 = 2.2000
AREA = .426000 SQ MI      IA = .64250 INCHES      INF = 1.64900 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

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BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

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PRINT HYD      ID=1  CODE=1

OUTFLOW HYDROGRAPH REACH 20.00

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RUNOFF VOLUME = .78595 INCHES      = 17.8568 ACRE-FEET
PEAK DISCHARGE RATE = 307.96 CFS AT 1.750 HOURS      BASIN AREA = .4260 SQ. MI.

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*S
*****
* ADD 20 TO 28.6 TO GET 20.8
ADD HYD      ID=8  HYD NO=20.8 ID I=1 ID II=7
PRINT HYD    ID=8  CODE=1

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OUTFLOW HYDROGRAPH REACH 20.80

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RUNOFF VOLUME = .76845 INCHES      = 184.5085 ACRE-FEET
PEAK DISCHARGE RATE = 1207.12 CFS AT 2.550 HOURS      BASIN AREA = 4.5020 SQ. MI.

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*****
*S*** SUB-BASIN 25 ****
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COMPUTE LT TP      LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                    NK=3 ISLOPE=-1
                    LENGTH=400 FT SLOPE=0.021 K=0.7
                    LENGTH=1600 FT SLOPE=0.04 K=2.0
                    LENGTH=10314 FT SLOPE=0.018 K=3.0
                    Kn=.033 CR=.5

```

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

```

LAG EQUATION FACTORS:      Kn= .0330      TOTAL BASIN LENGTH (FT)= 12314.0
TOTAL BASIN SLOPE (FT/FT)= .020956      CENTROUD LENGTH (FT)= 6157.0

```

TIME OF CONCENTRATION (HRS)= .7321 TIME TO PEAK (HRS)= .4881 LAG TIME (HRS)= .5491

```

COMPUTE NM HYD      ID=1  HYD NO=25  DA= 0.463 SQ MI
                    PER A=100 PER B=0  PER C=0  PER D=0
                    TP=0.0  MASSRAIN=-1
                    TIME TO PEAK (hrs)= .4881

K = .460423HR      TP = .488056HR      K/TP RATIO = .943381      SHAPE CONSTANT, N = 3.747694
UNIT PEAK = 320.63 CFS      UNIT VOLUME = 1.000      B = 337.98      P60 = 2.2000
AREA = .463000 SQ MI      IA = .65000 INCHES      INF = 1.67000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

```

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

```

PRINT HYD      ID=1  CODE=1

OUTFLOW HYDROGRAPH REACH 25.00

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RUNOFF VOLUME = .77294 INCHES      = 19.0863 ACRE-FEET
PEAK DISCHARGE RATE = 242.89 CFS AT 1.850 HOURS      BASIN AREA = .4630 SQ. MI.

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*S
*****
*S*** SUB-BASIN 26 ****
*

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COMPUTE LT TP      LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                    NK=3 ISLOPE=-1
                    LENGTH=400 FT SLOPE=0.04 K=0.7
                    LENGTH=1600 FT SLOPE=0.034 K=2.0
                    LENGTH=6569 FT SLOPE=0.020 K=3.0
                    Kn=.033 CR=0.60

```

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.040000	.7000
SHALLOW FLOW PORTION	1600.0	.034000	2.0000
CHANNEL FLOW PORTION	6569.0	.020000	3.0000
TOTAL BASIN	8569.0	.023548	2.4622

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LAG EQUATION FACTORS:      Kn= .0330      TOTAL BASIN LENGTH (FT)= 8569.0
TOTAL BASIN SLOPE (FT/FT)= .023548      CENTROUD LENGTH (FT)= 5141.4

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OUT.WPD

TIME OF CONCENTRATION (HRS)= .5543 TIME TO PEAK (HRS)= .3696 LAG TIME (HRS)= .4157

COMPUTE NM HYD ID=2 HYD NO=26 DA= 0.348 SQ MI
 PER A=100 PER B=0 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .3696

K = .348630HR TP = .369553HR K/TP RATIO = .943381 SHAPE CONSTANT, N = 3.747694
 UNIT PEAK = 318.27 CFS UNIT VOLUME = 1.000 B = 337.98 P60 = 2.2000
 AREA = .348000 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 26.00

RUNOFF VOLUME = .77294 INCHES = 14.3456 ACRE-FEET
 PEAK DISCHARGE RATE = 237.82 CFS AT 1.750 HOURS BASIN AREA = .3480 SQ. MI.

*S

 *S ADD 25 TO 26 TO GET 25.6
 ADD HYD ID=6 HYD NO=25.6 ID I=1 ID II=2
 PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 25.60

RUNOFF VOLUME = .77294 INCHES = 33.4319 ACRE-FEET
 PEAK DISCHARGE RATE = 469.13 CFS AT 1.800 HOURS BASIN AREA = .8110 SQ. MI.

*

 *S*** SUB-BASIN 27 ****
 *

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.035 K=0.7
 LENGTH=1600 FT SLOPE=0.029 K=2.0
 LENGTH=7044 FT SLOPE=0.021 K=3.0
 Kn=.033 CR=0.55

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.035000	.7000
SHALLOW FLOW PORTION	1600.0	.029000	2.0000
CHANNEL FLOW PORTION	7044.0	.021000	3.0000
TOTAL BASIN	9044.0	.023034	2.4876

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 9044.0
 TOTAL BASIN SLOPE (FT/FT)= .023034 CENTROUD LENGTH (FT)= 4974.2

TIME OF CONCENTRATION (HRS)= .5698 TIME TO PEAK (HRS)= .3798 LAG TIME (HRS)= .4273

COMPUTE NM HYD ID=1 HYD NO=27 DA= 0.376 SQ MI
 PER A=100 PER B=0 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .3798

K = .358337HR TP = .379843HR K/TP RATIO = .943381 SHAPE CONSTANT, N = 3.747691
 UNIT PEAK = 334.56 CFS UNIT VOLUME = 1.000 B = 337.98 P60 = 2.2000
 AREA = .376000 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 27.00

RUNOFF VOLUME = .77294 INCHES = 15.4999 ACRE-FEET
 PEAK DISCHARGE RATE = 250.40 CFS AT 1.750 HOURS BASIN AREA = .3760 SQ. MI.

*S

 *S ADD 27 TO 25.6 TO GET 25.75
 ADD HYD ID=7 HYD NO=25.75 ID I=1 ID II=6
 PRINT HYD ID=7 CODE=1

OUTFLOW HYDROGRAPH REACH 25.75

RUNOFF VOLUME = .77294 INCHES = 48.9317 ACRE-FEET
 PEAK DISCHARGE RATE = 715.51 CFS AT 1.800 HOURS BASIN AREA = 1.1870 SQ. MI.

*S

 *S ROUTE 25.75 THRU UPPER 30 IN NATURAL ARROYO TO 30.91
 *

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1 OUT.WPD

MIN ELEV=5835.82 MAX ELEV=5841.47
CH SLOPE=0.005 FP SLOPE=0.005
N=0.035 DIST=900.0
DIST ELEV DIST ELEV
0 5837.78 185 5842.09
277 5840.10 449 5835.82
630 5838.02 900 5841.47

RATING CURVE VALLEY SECTION 1.0
WATER FLOW FLOW TOP
SURFACE AREA RATE WIDTH
ELEV SQ FT CFS FT
5835.82 .00 .00 .00
5836.12 5.41 4.56 36.41
5836.41 21.66 28.96 72.82
5836.71 48.72 85.39 109.24
5837.01 86.62 183.89 145.65
5837.31 135.35 333.42 182.06
5837.60 194.90 542.17 218.47
5837.90 265.59 808.46 260.10
5838.20 350.19 1143.74 308.56
5838.50 449.08 1572.21 356.55
5838.79 562.23 2101.92 404.53
5839.09 689.66 2741.74 452.51
5839.39 831.36 3500.24 500.50
5839.69 987.32 4385.73 548.48
5839.98 1157.55 5406.27 596.46
5840.28 1342.15 6563.07 645.54
5840.58 1541.51 7867.57 695.32
5840.88 1755.68 9332.17 745.11
5841.17 1984.65 10964.47 794.89
5841.47 2228.42 12771.91 844.67

ROUTE MCUNGE ID=51 HYD NO=30.51 INFLOW ID=7
DT=0.0 L=8763 FT NS=0 SLOPE=0.005
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 285 TABLE PTS= 20
DT= .050000 QMED= 357.76 CKMED= 3.5054
WIDTH MED= 186.31 NREACH= 24 DX= 365.13

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	CK (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	3.958	.0	2.03	.39	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.30	5.4	4.6	2.889	36.4	1.96	.84	.965	.035	.965	.000	.035	.7	.994	.000	.006
.59	21.7	29.0	1.820	72.8	1.86	1.34	.917	.117	.885	.017	.098	13.6	.935	.006	.058
.89	48.7	85.4	1.389	109.2	2.39	1.75	1.177	.179	.848	.151	.001	53.3	.857	.079	.064
1.19	86.6	183.9	1.147	145.6	2.87	2.12	1.414	.241	.818	.247	-.065	130.2	.826	.197	-.023
1.49	135.3	333.4	.988	182.1	3.31	2.46	1.634	.303	.794	.319	-.113	253.8	.801	.282	-.082
1.78	194.9	542.2	.875	218.5	3.67	2.78	1.810	.370	.767	.371	-.138	432.5	.779	.347	-.126
2.08	265.6	808.5	.800	260.1	3.90	3.04	1.921	.437	.740	.404	-.144	670.0	.747	.385	-.132
2.38	350.2	1143.7	.745	308.6	4.16	3.27	2.052	.488	.724	.435	-.159	970.4	.724	.416	-.139
2.68	449.1	1572.2	.695	356.5	4.52	3.50	2.229	.534	.716	.469	-.185	1351.5	.718	.452	-.169
2.97	562.2	2101.9	.651	404.5	4.86	3.74	2.398	.585	.706	.498	-.204	1830.0	.709	.483	-.192
3.27	689.7	2741.7	.612	452.5	5.20	3.98	2.563	.638	.696	.524	-.220	2414.2	.699	.511	-.210
3.57	831.4	3500.2	.578	500.5	5.53	4.21	2.724	.693	.686	.547	-.233	3112.8	.689	.535	-.225
3.87	987.3	4385.7	.548	548.5	5.85	4.44	2.882	.749	.676	.568	-.245	3934.3	.680	.558	-.237
4.16	1157.6	5406.3	.521	596.5	6.14	4.67	3.028	.808	.666	.586	-.252	4886.9	.670	.578	-.248
4.46	1342.2	6563.1	.498	645.5	6.41	4.89	3.162	.868	.655	.602	-.257	5975.2	.658	.594	-.252
4.76	1541.5	7867.6	.477	695.3	6.70	5.10	3.303	.925	.646	.617	-.263	7205.5	.649	.610	-.258
5.06	1755.7	9332.2	.458	745.1	6.99	5.32	3.447	.981	.638	.632	-.270	8589.6	.641	.624	-.265
5.35	1984.6	10964.5	.441	794.9	7.28	5.52	3.588	1.038	.631	.645	-.276	10137.6	.634	.638	-.272
5.65	2228.4	12771.9	.425	844.7	7.58	5.73	3.638	1.122	.610	.653	-.263	11857.1	.626	.651	-.277

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 6 OCCURRED 4 TIMES. AVERAGE NUMBER ITERATIONS = 1.1697
Equations solved using the Ponce correction to C2
PRINT HYD ID=51 CODE=5

OUTFLOW HYDROGRAPH REACH 30.51

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.250	203.0	6.500	9.1	9.750	.6	13.000	.0
.250	.0	3.500	137.3	6.750	7.4	10.000	.5	13.250	.0
.500	.0	3.750	94.8	7.000	6.0	10.250	.4	13.500	.0
.750	.0	4.000	71.8	7.250	4.9	10.500	.4	13.750	.0
1.000	.0	4.250	56.9	7.500	4.0	10.750	.3	14.000	.0
1.250	.0	4.500	47.0	7.750	3.2	11.000	.2	14.250	.0
1.500	.0	4.750	39.3	8.000	2.6	11.250	.2	14.500	.0
1.750	.0	5.000	32.8	8.250	2.1	11.500	.2	14.750	.0
2.000	.0	5.250	26.9	8.500	1.7	11.750	.1	15.000	.0
2.250	.0	5.500	21.5	8.750	1.4	12.000	.1	15.250	.0
2.500	664.2	5.750	17.3	9.000	1.2	12.250	.1	15.500	.0
2.750	475.1	6.000	13.9	9.250	.9	12.500	.1	15.750	.0
3.000	308.5	6.250	11.3	9.500	.8	12.750	.1		

RUNOFF VOLUME = .77132 INCHES = 48.8294 ACRE-Feet
PEAK DISCHARGE RATE = 713.26 CFS AT 2.400 HOURS BASIN AREA = 1.1870 SQ. MI.

*S ROUTE 30.91 THRU LOWER 30 IN NATURAL ARROYO TO 30.9

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5792.02 MAX ELEV=5809.13
CH SLOPE=0.023 FP SLOPE=0.023
N=0.035 DIST=700.0
DIST ELEV DIST ELEV
0 5812.39 101 5806.02
218 5800.05 304 5795.17
348 5792.02 376 5793.83
457 5799.95 570 5807.93
700 5809.13

OUT.WPD

RATING CURVE VALLEY SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5792.02	.00	.00	.00
5792.92	11.93	45.06	26.51
5793.82	47.73	286.13	53.01
5794.72	106.51	846.14	77.53
5795.62	187.71	1792.63	103.67
5796.52	293.56	3224.39	131.46
5797.42	424.43	5245.53	159.24
5798.32	580.32	7937.13	187.02
5799.22	761.22	11375.61	214.81
5800.12	967.16	15621.08	242.90
5801.02	1199.55	20675.46	273.29
5801.92	1459.31	26718.63	303.69
5802.82	1746.43	33823.13	334.08
5803.73	2060.92	42059.20	364.48
5804.63	2402.78	51494.96	394.88
5805.53	2772.00	62196.71	425.27
5806.43	3168.29	74381.91	454.15
5807.33	3589.36	88114.90	481.17
5808.23	4038.92	99808.05	536.16
5809.13	4572.03	108176.50	648.00

ROUTE MCUNGE ID=5 HYD NO=30.5 INFLOW ID=51
DT=0.0 L=2903 FT NS=0 SLOPE=0.023
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 319 TABLE PTS= 20
DT= .050000 QMED= 356.63 CKMED= 9.5279
WIDTH MED= 56.10 NREACH= 4 DX= 725.75

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.293	.0	4.03	1.74	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.90	11.9	45.1	.214	26.5	5.27	3.78	1.306	.019	.983	.140	-.123	7.1	.997	.022	-.019
1.80	47.7	286.1	.135	53.0	8.37	5.99	2.077	.039	.975	.358	-.333	134.3	.977	.245	-.222
2.70	106.5	846.1	.102	77.5	10.83	7.94	2.687	.060	.968	.466	-.434	528.4	.970	.410	-.380
3.60	187.7	1792.6	.084	103.7	12.75	9.55	3.163	.081	.962	.529	-.491	1277.7	.963	.491	-.454
4.50	293.6	3224.4	.073	131.5	14.60	10.98	3.621	.101	.957	.576	-.534	2461.7	.958	.549	-.507
5.40	424.4	5245.5	.065	159.2	16.45	12.36	4.081	.120	.954	.615	-.569	4183.3	.955	.594	-.549
6.30	580.3	7937.1	.059	187.0	18.22	13.68	4.519	.140	.951	.647	-.597	6535.3	.951	.630	-.581
7.20	761.2	11375.6	.054	214.8	19.89	14.94	4.932	.160	.948	.672	-.619	9596.4	.949	.659	-.607
8.10	967.2	15621.1	.050	242.9	21.30	16.15	5.283	.181	.944	.691	-.635	13435.1	.946	.681	-.627
9.00	1199.5	20675.5	.047	273.3	22.56	17.24	5.596	.201	.941	.706	-.647	18083.4	.941	.696	-.637
9.90	1459.3	26718.6	.044	303.7	24.06	18.31	5.966	.219	.939	.722	-.661	23627.7	.939	.713	-.653
10.80	1746.4	33823.1	.042	334.1	25.51	19.37	6.328	.238	.937	.736	-.673	30197.3	.938	.728	-.666
11.71	2060.9	42059.2	.040	364.5	26.94	20.41	6.681	.257	.935	.748	-.683	37863.6	.936	.742	-.677
12.61	2402.8	51495.0	.038	394.9	28.33	21.43	7.027	.276	.934	.759	-.693	46695.8	.934	.753	-.687
13.51	2772.0	62196.7	.036	425.3	29.88	22.44	7.411	.293	.933	.770	-.703	56761.0	.932	.764	-.696
14.41	3168.3	74381.9	.034	454.1	31.69	23.48	7.860	.310	.932	.782	-.714	68197.8	.932	.776	-.708
15.31	3589.4	88114.9	.033	481.2	29.61	24.55	7.343	.371	.915	.770	-.685	81150.9	.932	.787	-.720
16.21	4038.9	99808.1	.033	536.2	20.93	24.71	5.190	.533	.841	.703	-.544	93914.3	.888	.742	-.630
17.11	4572.0	108176.5	.034	648.0	14.71	23.66	3.647	.680	.745	.625	-.369	103960.2	.758	.640	-.397

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 5 OCCURRED 5 TIMES. AVERAGE NUMBER ITERATIONS = 1.2235

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.293	.0	4.03	1.74	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.90	11.9	45.1	.214	26.5	4.13	3.78	1.025	.025	.976	.024	.000	7.1	.992	.008	.000
1.80	47.7	286.1	.135	53.0	4.33	5.99	1.075	.075	.931	.069	.000	134.3	.954	.046	.000
2.70	106.5	846.1	.102	77.5	4.60	7.94	1.142	.142	.876	.124	.000	528.4	.902	.098	.000
3.60	187.7	1792.6	.084	103.7	4.89	9.55	1.212	.212	.825	.175	.000	1277.7	.849	.151	.000
4.50	293.6	3224.4	.073	131.5	5.18	10.98	1.284	.284	.779	.221	.000	2461.7	.801	.199	.000
5.40	424.4	5245.5	.065	159.2	5.48	12.36	1.360	.360	.735	.265	.000	4183.3	.756	.244	.000
6.30	580.3	7937.1	.059	187.0	5.80	13.68	1.438	.438	.695	.305	.000	6535.3	.714	.286	.000
7.20	761.2	11375.6	.054	214.8	6.12	14.94	1.518	.518	.659	.341	.000	9596.4	.676	.324	.000
8.10	967.2	15621.1	.050	242.9	6.44	16.15	1.598	.598	.626	.374	.000	13435.1	.641	.359	.000
9.00	1199.5	20675.5	.047	273.3	6.74	17.24	1.672	.672	.598	.402	.000	18083.4	.611	.389	.000
9.90	1459.3	26718.6	.044	303.7	7.05	18.31	1.748	.748	.572	.428	.000	23627.7	.584	.416	.000
10.80	1746.4	33823.1	.042	334.1	7.36	19.37	1.824	.824	.548	.452	.000	30197.3	.560	.440	.000
11.71	2060.9	42059.2	.040	364.5	7.67	20.41	1.902	.902	.526	.474	.000	37863.6	.536	.464	.000
12.61	2402.8	51495.0	.038	394.9	7.98	21.43	1.979	.979	.505	.495	.000	46695.8	.515	.485	.000
13.51	2772.0	62196.7	.036	425.3	8.29	22.44	2.057	1.057	.486	.514	.000	56761.0	.495	.505	.000
14.41	3168.3	74381.9	.034	454.1	8.62	23.48	2.138	1.138	.468	.532	.000	68197.8	.477	.523	.000
15.31	3589.4	88114.9	.033	481.2	8.97	24.55	2.224	1.224	.450	.550	.000	81150.9	.458	.542	.000
16.21	4038.9	99808.1	.033	536.2	9.02	24.71	2.237	1.237	.447	.553	.000	93914.3	.448	.552	.000
17.11	4572.0	108176.5	.034	648.0	8.68	23.66	2.152	1.152	.465	.535	.000	103960.2	.456	.544	.000

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 4 TIMES. AVERAGE NUMBER ITERATIONS = 1.1542

Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3

PRINT HYD ID=5 CODE=5

OUTFLOW HYDROGRAPH REACH 30.50

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.250	278.3	6.500	10.8	9.750	.7	13.000	.0
.250	.0	3.500	183.2	6.750	8.7	10.000	.6	13.250	.0
.500	.0	3.750	125.7	7.000	7.1	10.250	.5	13.500	.0
.750	.0	4.000	88.0	7.250	5.7	10.500	.4	13.750	.0
1.000	.0	4.250	68.0	7.500	4.7	10.750	.3	14.000	.0
1.250	.0	4.500	54.4	7.750	3.8	11.000	.3	14.250	.0
1.500	.0	4.750	45.2	8.000	3.1	11.250	.2	14.500	.0
1.750	.0	5.000	37.8	8.250	2.5	11.500	.2	14.750	.0
2.000	.0	5.250	31.5	8.500	2.0	11.750	.2	15.000	.0
2.250	.0	5.500	25.6	8.750	1.7	12.000	.1	15.250	.0
2.500	90.5	5.750	20.5	9.000	1.4	12.250	.1	15.500	.0
2.750	628.8	6.000	16.5	9.250	1.1	12.500	.1	15.750	.0
3.000	423.4	6.250	13.3	9.500	.9	12.750	.1	16.000	.0

RUNOFF VOLUME = .76833 INCHES = 48.6404 ACRE-Feet
PEAK DISCHARGE RATE = 707.14 CFS AT 2.600 HOURS BASIN AREA = 1.1870 SQ. MI.

★

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.006000	.7000
SHALLOW FLOW PORTION	1600.0	.006000	2.0000
CHANNEL FLOW PORTION	9286.0	.011100	3.0000
TOTAL BASIN	11286.0	.010196	2.3738

TIME OF CONCENTRATION (HRS)= .7796 TIME TO PEAK (HRS)= .5197 LAG TIME (HRS)= .5847

K = .487703HR TP = .519715HR K/TP RATIO = .938405 SHAPE CONSTANT, N = 3.768383
UNIT PEAK = 384.02 CFS UNIT VOLUME = 1.000 B = 339.42 P60 = 2.2000
AREA = .588000 SQ MI IA = .64250 INCHES INF = 1.64900 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

OUTFLOW HYDROGRAPH REACH 30.00

*S

OUTFLOW HYDROGRAPH REACH 30.90

*S

OUTFLOW HYDROGRAPH REACH 20.75

* 9

RATING CURVE VALLEY SECTION		1.0	
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5748.37	.00	.00	.00
5749.59	32.13	92.89	52.77
5750.81	128.52	589.82	105.54
5752.02	249.99	1151.99	158.31
5753.24	510.50	3811.30	292.02
5754.46	780.16	6872.56	240.86
		Page 21	

5755.68 1097.12 10979.83 279.69
 5756.89 1461.36 16234.66 318.52
 5758.11 1872.91 22721.89 357.70
 5759.33 2334.69 30417.02 400.68
 5760.55 2848.77 39599.05 443.62
 5761.77 3415.15 50371.62 486.57
 5762.98 4033.84 62836.27 529.52
 5764.20 4704.83 77091.55 572.47
 5765.42 5423.30 94486.51 601.87
 5766.64 6168.19 114613.90 621.49
 5767.85 6936.98 136539.10 641.11
 5769.07 7729.65 160267.00 660.73
 5770.29 8546.22 185806.20 680.35
 5771.51 9386.67 213168.90 699.97

ROUTE MCUNGE ID=6 HYD NO=32.6 INFLOW ID=7
 DT=0.0 L=3180 FT NS=0 SLOPE=0.009
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 349 TABLE PTS= 20
 DT= .050000 QMED= 1000.47 CKMED= 7.1533
 WIDTH MED= 124.39 NREACH= 5 DX= 636.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.419	.0	3.53	1.33	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
1.22	32.1	92.9	.306	52.8	4.03	2.89	1.141	.076	.931	.098	-.029	14.6	.989	.015	-.005
2.44	128.5	589.8	.192	105.5	6.38	4.59	1.807	.153	.897	.324	-.221	276.9	.904	.212	-.115
3.65	289.2	1739.0	.147	158.3	8.33	6.01	2.358	.230	.872	.443	-.314	1085.3	.873	.376	-.249
4.87	510.5	3811.3	.118	202.0	10.47	7.47	2.963	.315	.853	.532	-.385	2683.3	.859	.492	-.352
6.09	780.2	6872.6	.100	240.9	12.25	8.81	3.468	.407	.833	.590	-.423	5246.9	.840	.562	-.402
7.31	1097.1	10979.8	.088	279.7	13.77	10.01	3.897	.498	.815	.629	-.445	8828.6	.821	.609	-.430
8.52	1461.4	16234.7	.080	318.5	15.16	11.11	4.291	.587	.800	.660	-.460	13506.5	.805	.644	-.450
9.74	1872.9	22721.9	.073	357.7	16.32	12.13	4.618	.680	.784	.682	-.466	19374.5	.791	.672	-.463
10.96	2334.7	30417.0	.068	400.7	17.31	13.03	4.899	.766	.770	.700	-.470	26465.5	.773	.690	-.462
12.18	2848.8	39599.0	.064	443.6	18.48	13.90	5.231	.844	.761	.717	-.479	34898.4	.764	.708	-.472
13.40	3415.2	50371.6	.060	486.6	19.62	14.75	5.553	.922	.753	.732	-.486	44870.4	.756	.725	-.481
14.61	4033.8	62836.3	.057	529.5	20.73	15.58	5.867	1.000	.746	.746	-.492	56483.9	.748	.739	-.487
15.83	4704.8	77091.5	.054	572.5	22.63	16.39	6.404	1.040	.754	.763	-.517	69838.9	.741	.752	-.493
17.05	5423.3	94486.5	.051	601.9	25.56	17.42	7.233	1.073	.769	.785	-.554	85630.2	.765	.776	-.541
18.27	6168.2	114613.9	.048	621.5	27.80	18.58	7.868	1.159	.769	.801	-.569	104372.1	.774	.795	-.569
19.48	6937.0	136539.1	.045	641.1	29.25	19.68	8.279	1.272	.759	.810	-.569	125402.7	.763	.806	-.569
20.70	7729.7	160267.0	.043	660.7	30.63	20.73	8.669	1.384	.750	.819	-.569	148232.8	.754	.815	-.569
21.92	8546.2	185806.2	.041	680.3	31.94	21.74	9.039	1.494	.741	.827	-.568	172869.2	.745	.823	-.568
23.14	9386.7	213168.9	.039	700.0	32.86	22.71	9.301	1.619	.728	.832	-.561	199322.6	.736	.830	-.566

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 19 TIMES. AVERAGE NUMBER ITERATIONS = 1.3312
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=6 CODE=5

OUTFLOW HYDROGRAPH REACH 32.60

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.750	734.3	7.500	23.9	11.250	1.3	15.000	.1
.250	.0	4.000	511.5	7.750	19.6	11.500	1.0	15.250	.0
.500	.0	4.250	366.3	8.000	16.1	11.750	.9	15.500	.0
.750	.0	4.500	272.2	8.250	13.2	12.000	.7	15.750	.0
1.000	.0	4.750	208.8	8.500	10.8	12.250	.6	16.000	.0
1.250	.0	5.000	169.1	8.750	8.9	12.500	.5	16.250	.0
1.500	.0	5.250	140.1	9.000	7.3	12.750	.4	16.500	.0
1.750	426.9	5.500	116.1	9.250	6.0	13.000	.3	16.750	.0
2.000	1095.1	5.750	95.4	9.500	4.9	13.250	.3	17.000	.0
2.250	1290.9	6.000	78.2	9.750	4.0	13.500	.2	17.250	.0
2.500	1228.8	6.250	64.3	10.000	3.3	13.750	.2	17.500	.0
2.750	1997.0	6.500	52.9	10.250	2.7	14.000	.1		
3.000	1401.8	6.750	43.4	10.500	2.3	14.250	.1		
3.250	1108.7	7.000	35.6	10.750	1.9	14.500	.1		
3.500	1031.3	7.250	29.2	11.000	1.5	14.750	.1		

RUNOFF VOLUME = .76995 INCHES = 257.7556 ACRE-Feet
 PEAK DISCHARGE RATE = 1997.01 CFS AT 2.750 HOURS BASIN AREA = 6.2770 SQ. MI.

*

 *S ADD BASIN 32*****
 *

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.012 K=0.7
 LENGTH=1600 FT SLOPE=0.011 K=2.0
 LENGTH=959 FT SLOPE=0.010 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.012000	.7000
SHALLOW FLOW PORTION	1600.0	.011000	2.0000
CHANNEL FLOW PORTION	959.0	.010000	3.0000
TOTAL BASIN	2959.0	.010811	1.7741

TIME OF CONCENTRATION (HRS)= .4456 TIME TO PEAK (HRS)= .2971 LAG TIME (HRS)= .3342

COMPUTE NM HYD ID=1 HYD NO=32 DA= 0.250 SQ MI
 PER A=100 PER B=0 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .2971

K = .298850HR TP = .297051HR K/TP RATIO = 1.006055 SHAPE CONSTANT, N = 3.508860
 UNIT PEAK = 270.13 CFS UNIT VOLUME = 1.000 B = 320.98 P60 = 2.2000
 AREA = .250000 SQ MI IA = .650000 INCHES INF = 1.670000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION METHOD - DT = .050000

OUT.WPD
BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.
PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 32.00

RUNOFF VOLUME = .77294 INCHES = 10.3058 ACRE-Feet
PEAK DISCHARGE RATE = 197.46 CFS AT 1.650 HOURS BASIN AREA = .2500 SQ. MI.

*S

*S ADD 32 TO 20.75 TO GET 32.9
ADD HYD ID=9 HYD NO=32.9 ID I=1 ID II=6
PRINT HYD ID=9 CODE=1

OUTFLOW HYDROGRAPH REACH 32.90

RUNOFF VOLUME = .77006 INCHES = 268.0613 ACRE-Feet
PEAK DISCHARGE RATE = 2011.22 CFS AT 2.750 HOURS BASIN AREA = 6.5270 SQ. MI.

*S

*S ROUTE 32.9 THRU UPPER 39 IN NATURAL ARROYO TO 39.7

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5681.92 MAX ELEV=5694.67
CH SLOPE=0.016 FP SLOPE=0.016
N=0.035 DIST=490.0
DIST ELEV DIST ELEV
0 5694.40 76 5691.91
153 5688.85 244 5683.15
294 5681.92 339 5685.05
403 5690.03 490 5694.67

RATING CURVE VALLEY SECTION 1.0
WATER FLOW FLOW
SURFACE AREA RATE TOP
ELEV SQ FT CFS WIDTH
5681.92 .00 .00 .00
5682.59 12.38 32.09 36.92
5683.26 49.38 207.92 71.08
5683.93 103.90 607.11 91.43
5684.60 172.07 1230.77 111.79
5685.27 253.86 2108.34 131.80
5685.95 348.77 3267.32 151.14
5686.62 456.65 4724.90 170.47
5687.29 577.50 6504.56 189.80
5687.96 711.32 8629.27 209.13
5688.63 858.12 11121.39 228.47
5689.30 1018.81 13870.59 251.93
5689.97 1196.39 17001.34 277.44
5690.64 1392.18 20479.51 306.55
5691.31 1607.73 24488.67 336.01
5691.98 1843.05 29054.48 365.86
5692.65 2099.60 34081.44 398.92
5693.33 2378.33 39783.99 431.98
5694.00 2679.23 46195.91 465.04
5694.67 3001.23 53908.09 489.95

ROUTE MCUNGE ID=5 HYD NO=39.5 INFLOW ID=9
DT=0.0 L=1800 FT NS=0 SLOPE=0.016
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 354 TABLE PTS= 20
DT= .050000 QMED= 1005.61 CKMED= 9.1486
WIDTH MED= 104.44 NREACH= 3 DX= 600.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.267	.0	3.33	1.15	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.67	12.4	32.1	.193	36.9	3.67	2.59	1.100	.025	.977	.059	-.036	5.1	.996	.009	-.006
1.34	49.4	207.9	.119	71.1	6.08	4.21	1.825	.050	.965	.304	-.269	97.6	.968	.186	-.153
2.01	103.9	607.1	.086	91.4	8.40	5.84	2.519	.082	.954	.445	-.399	383.5	.959	.385	-.344
2.68	172.1	1230.8	.070	111.8	10.04	7.15	3.013	.114	.945	.515	-.460	894.9	.948	.479	-.426
3.35	253.9	2108.3	.060	131.8	11.54	8.31	3.462	.144	.937	.566	-.503	1644.8	.940	.540	-.479
4.03	348.8	3267.3	.053	151.1	12.93	9.37	3.878	.174	.931	.604	-.535	2662.3	.933	.585	-.518
4.70	456.7	4724.9	.048	170.5	14.17	10.35	4.252	.204	.925	.633	-.559	3969.9	.927	.618	-.545
5.37	577.5	6504.6	.044	189.8	15.35	11.26	4.605	.233	.920	.657	-.578	5587.8	.922	.645	-.567
6.04	711.3	8629.3	.041	209.1	16.47	12.13	4.941	.261	.916	.678	-.593	7539.2	.917	.667	-.584
6.71	858.1	11121.4	.039	228.5	17.15	12.96	5.146	.296	.908	.690	-.598	9846.8	.913	.686	-.599
7.38	1018.8	13870.6	.037	251.9	17.42	13.61	5.225	.329	.900	.695	-.594	12469.6	.901	.689	-.590
8.05	1196.4	17001.3	.035	277.4	17.79	14.21	5.337	.359	.893	.701	-.594	15408.9	.896	.698	-.594
8.72	1392.2	20479.5	.034	306.6	18.21	14.71	5.463	.382	.888	.708	-.596	18713.8	.888	.701	-.589
9.39	1607.7	24488.7	.033	336.0	19.03	15.23	5.709	.399	.888	.719	-.606	22454.9	.888	.713	-.600
10.06	1843.1	29054.5	.032	365.9	19.57	15.76	5.871	.423	.884	.726	-.610	26740.1	.887	.723	-.610
10.73	2099.6	34081.4	.031	398.9	20.05	16.23	6.015	.444	.881	.732	-.613	31536.5	.880	.726	-.606
11.41	2378.3	39784.0	.030	432.0	20.91	16.73	6.272	.459	.881	.741	-.623	36898.3	.881	.736	-.617
12.08	2679.2	46195.9	.029	465.0	22.58	17.24	6.773	.458	.889	.757	-.646	42952.7	.881	.745	-.626
12.75	3001.2	53908.1	.028	489.9	24.08	17.96	7.225	.476	.891	.770	-.661	50002.1	.895	.769	-.665
MAXIMUM NO. ITERATIONS FOR SOLUTION (KMAX) = 4 OCCURRED 11 TIMES. AVERAGE NUMBER ITERATIONS = 1.3578															
DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.267	.0	3.33	1.15	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.67	12.4	32.1	.193	36.9	3.42	2.59	1.026	.026	.974	.026	.000	5.1	.992	.008	.000
1.34	49.4	207.9	.119	71.1	3.61	4.21	1.084	.084	.922	.078	.000	97.6	.949	.051	.000
2.01	103.9	607.1	.086	91.4	3.92	5.84	1.176	.176	.850	.150	.000	383.5	.885	.115	.000
2.68	172.1	1230.8	.070	111.8	4.24	7.15	1.271	.271	.787	.213	.000	894.9	.817	.183	.000
3.35	253.9	2108.3	.060	131.8	4.55	8.31	1.366	.366	.732	.268	.000	1644.8	.758	.242	.000

OUT.WPD

4.03	348.8	3267.3	.053	151.1	4.87	9.37	1.462	.462	.684	.316	.000	2662.3	.706	.294	.000
4.70	456.7	4724.9	.048	170.5	5.19	10.35	1.556	.556	.642	.358	.000	3969.9	.662	.338	.000
5.37	577.5	6504.6	.044	189.8	5.50	11.26	1.649	.649	.606	.394	.000	5587.8	.623	.377	.000
6.04	711.3	8629.3	.041	209.1	5.80	12.13	1.741	.741	.574	.426	.000	7539.2	.590	.410	.000
6.71	858.1	11121.4	.039	228.5	6.10	12.96	1.831	.831	.546	.454	.000	9846.8	.560	.440	.000
7.38	1018.8	13870.6	.037	251.9	6.35	13.61	1.904	.904	.525	.475	.000	12469.6	.535	.465	.000
8.05	1196.4	17001.3	.035	277.4	6.57	14.21	1.971	.971	.507	.493	.000	15408.9	.516	.484	.000
8.72	1392.2	20479.5	.034	306.6	6.76	14.71	2.029	1.029	.493	.507	.000	18713.8	.500	.500	.000
9.39	1607.7	24488.7	.033	336.0	6.97	15.23	2.090	1.090	.479	.521	.000	22454.9	.485	.515	.000
10.06	1843.1	29054.5	.032	365.9	7.18	15.76	2.153	1.153	.465	.535	.000	26740.1	.471	.529	.000
10.73	2099.6	34081.4	.031	398.9	7.36	16.23	2.209	1.209	.453	.547	.000	31536.5	.458	.542	.000
11.41	2378.3	39784.0	.030	432.0	7.56	16.73	2.269	1.269	.441	.559	.000	36898.3	.447	.553	.000
12.08	2679.2	46195.9	.029	465.0	7.77	17.24	2.331	1.331	.429	.571	.000	42952.7	.435	.565	.000
12.75	3001.2	53908.1	.028	489.9	8.07	17.96	2.421	1.421	.413	.587	.000	50002.1	.421	.579	.000

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 81 TIMES. AVERAGE NUMBER ITERATIONS = 1.3002
 Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
 PRINT HYD ID=5 CODE=1

OUTFLOW HYDROGRAPH REACH 39.50

RUNOFF VOLUME = .76945 INCHES = 267.8496 ACRE-FEET
 PEAK DISCHARGE RATE = 1963.28 CFS AT 2.850 HOURS BASIN AREA = 6.5270 SQ. MI.

*

*S*** SUB-BASIN 33 ****

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.01 K=0.7
 LENGTH=1600 FT SLOPE=0.009 K=2.0
 LENGTH=10392 FT SLOPE=0.009 K=3.0
 Kn=.033 CR=0.61

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

LAG EQUATION FACTORS: Kn=.0330 TOTAL BASIN LENGTH (FT)= 12392.0
 TOTAL BASIN SLOPE (FT/FT)= .009032 CENTROID LENGTH (FT)= 7559.1

TIME OF CONCENTRATION (HRS)= .9019 TIME TO PEAK (HRS)= .6013 LAG TIME (HRS)= .6765

COMPUTE NM HYD ID=1 HYD NO=33 DA= 0.731 SQ MI
 PER A=100 PER B=0 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .6013

K = .567250HR TP = .601295HR K/TP RATIO = .943381 SHAPE CONSTANT, N = 3.747692
 UNIT PEAK = 410.89 CFS UNIT VOLUME = 1.000 B = 337.98 P60 = 2.2000
 AREA = .731000 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 33.00

RUNOFF VOLUME = .77294 INCHES = 30.1341 ACRE-FEET
 PEAK DISCHARGE RATE = 312.92 CFS AT 2.000 HOURS BASIN AREA = .7310 SQ. MI.

*S

 *S*** SUB-BASIN 35 ****

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.004 K=0.7
 LENGTH=1600 FT SLOPE=0.006 K=2.0
 LENGTH=11265 FT SLOPE=0.008 K=3.0
 Kn=.033 CR=0.50

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

LAG EQUATION FACTORS: Kn=.0330 TOTAL BASIN LENGTH (FT)= 13265.0
 TOTAL BASIN SLOPE (FT/FT)= .007638 CENTROID LENGTH (FT)= 6632.5

TIME OF CONCENTRATION (HRS)= .9083 TIME TO PEAK (HRS)= .6055 LAG TIME (HRS)= .6812

COMPUTE NM HYD ID=2 HYD NO=35 DA= 0.616 SQ MI
 PER A=100 PER B=0 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .6055

K = .571219HR TP = .605502HR K/TP RATIO = .943381 SHAPE CONSTANT, N = 3.747694
 UNIT PEAK = 343.84 CFS UNIT VOLUME = 1.000 B = 337.98 P60 = 2.2000
 AREA = .616000 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

OUT.WPD
OUTFLOW HYDROGRAPH REACH 35.00

RUNOFF VOLUME = .77294 INCHES = 25.3934 ACRE-Feet
PEAK DISCHARGE RATE = 262.09 CFS AT 2.000 HOURS BASIN AREA = .6160 SQ. MI.

*S

*S ADD 33 TO 35 TO GET 35.8

*S
ADD HYD ID=8 HYD NO=35.8 ID I=1 ID II=2
PRINT HYD ID=8 CODE=1

OUTFLOW HYDROGRAPH REACH 35.80

RUNOFF VOLUME = .77294 INCHES = 55.5274 ACRE-Feet
PEAK DISCHARGE RATE = 575.02 CFS AT 2.000 HOURS BASIN AREA = 1.3470 SQ. MI.

*
*S

*S ROUTE 35.8 THRU UPPER 39 IN NATURAL ARROYO TO 36.6

*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5766.06 MAX ELEV=5778.83
CH SLOPE=0.013 FP SLOPE=0.013
N=0.035 DIST=700.0
DIST ELEV DIST ELEV
0 5774.95 177 5770.03
320 5766.17 361 5766.06
408 5769.73 494 5778.01
555 5778.83 700 5775.56

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5766.06	.00	.00	.00
5766.73	34.04	101.44	70.43
5767.40	92.61	414.95	103.92
5768.08	173.68	982.34	137.42
5768.75	277.26	1852.05	170.91
5769.42	403.35	3070.01	204.41
5770.09	551.78	4689.72	236.97
5770.76	721.45	6752.28	268.11
5771.44	912.06	9274.84	299.26
5772.11	1123.59	12291.48	330.41
5772.78	1356.04	15835.27	361.56
5773.45	1609.43	19938.37	392.70
5774.12	1883.74	24632.06	423.85
5774.79	2178.98	29946.89	455.00
5775.47	2490.36	36738.55	467.58
5776.14	2814.27	43063.19	500.20
5776.81	3162.69	49894.73	536.97
5777.48	3535.82	57491.10	573.74
5778.15	3934.31	65250.65	619.72
5778.83	4377.48	71915.94	699.48

ROUTE MCUNGE ID=7 HYD NO=36.7 INFLOW ID=8
DT=0.0 L=2020 FT NS=0 SLOPE=0.013
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 353
DT= .050000
WIDTH MED= 90.31
TABLE PTS= 20
QMED= 287.51
NREACH= 4
CKMED= 5.3527
DX= 505.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME (HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.251	.0	2.81	1.48	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.67	34.0	101.4	.188	70.4	5.03	2.98	1.793	.044	.969	.295	-.264	16.0	.983	.132	-.116
1.34	92.6	414.9	.125	103.9	6.36	4.48	2.267	.096	.943	.405	-.348	230.8	.948	.324	-.273
2.02	173.7	982.3	.099	137.4	7.82	5.66	2.787	.139	.929	.491	-.420	669.5	.932	.444	-.377
2.69	277.3	1852.0	.084	170.9	9.12	6.68	3.250	.181	.918	.549	-.467	1386.2	.921	.517	-.438
3.36	403.3	3070.0	.074	204.4	10.35	7.61	3.688	.221	.910	.593	-.503	2428.2	.912	.569	-.480
4.03	551.8	4689.7	.066	237.0	11.58	8.50	4.127	.260	.903	.629	-.532	3844.9	.905	.610	-.515
4.70	721.5	6752.3	.060	268.1	12.75	9.36	4.543	.301	.897	.658	-.555	5684.2	.899	.643	-.543
5.38	912.1	9274.8	.055	299.3	13.79	10.17	4.916	.342	.891	.680	-.571	7975.5	.893	.669	-.561
6.05	1123.6	12291.5	.051	330.4	14.79	10.94	5.272	.383	.885	.699	-.584	10743.8	.887	.690	-.576
6.72	1356.0	15835.3	.048	361.6	15.75	11.68	5.615	.423	.880	.716	-.596	14022.7	.881	.707	-.589
7.39	1609.4	19938.4	.045	392.7	16.68	12.39	5.946	.464	.875	.730	-.605	17844.8	.876	.723	-.599
8.06	1883.7	24632.1	.043	423.9	17.58	13.08	6.268	.503	.870	.743	-.613	22241.9	.872	.736	-.608
8.73	2179.0	29946.9	.041	455.0	19.68	13.74	7.016	.509	.881	.765	-.646	27244.8	.868	.748	-.616
9.41	2490.4	36738.5	.038	467.6	21.04	14.75	7.499	.569	.875	.779	-.654	33277.4	.892	.785	-.678
10.08	2814.3	43063.2	.037	500.2	19.60	15.30	6.986	.669	.845	.769	-.614	39860.3	.849	.767	-.616
10.75	3162.7	49894.7	.036	537.0	20.00	15.78	7.130	.708	.840	.774	-.614	46439.5	.840	.770	-.609
11.42	3535.8	57491.1	.035	573.7	19.98	16.26	7.120	.764	.828	.775	-.603	53650.9	.839	.777	-.616
12.09	3934.3	65250.7	.034	619.7	17.43	16.59	6.212	.920	.774	.754	-.528	61335.8	.814	.770	-.584
12.77	4377.5	71915.9	.034	699.5	14.42	16.43	5.139	1.086	.699	.723	-.422	68563.9	.715	.730	-.445
MAXIMUM NO. ITERATIONS FOR SOLUTION (KMAX) = 4 OCCURRED 7 TIMES. AVERAGE NUMBER ITERATIONS = 1.2622															
DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME (HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.251	.0	2.81	1.48	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.67	34.0	101.4	.188	70.4	3.01	2.98	1.073	.073	.932	.068	.000	16.0	.977	.023	.000
1.34	92.6	414.9	.125	103.9	3.32	4.48	1.183	.183	.845	.155	.000	230.8	.887	.113	.000
2.02	173.7	982.3	.099	137.4	3.64	5.66	1.299	.299	.770	.230	.000	669.5	.805	.195	.000
2.69	277.3	1852.0	.084	170.9	3.97	6.68	1.416	.416	.706	.294	.000	1386.2	.736	.264	.000
3.36	403.3	3070.0	.074	204.4	4.30	7.61	1.532	.532	.653	.347	.000	2428.2	.678	.322	.000
4.03	551.8	4689.7	.066	237.0	4.63	8.50	1.651	.651	.606	.394	.000	3844.9	.628	.372	.000
4.70	721.5	6752.3	.060	268.1	4.97	9.36	1.772	.772	.564	.436	.000	5684.2	.584	.416	.000
5.38	912.1	9274.8	.055	299.3	5.30	10.17	1.890	.890	.529	.471	.000	7975.5	.546	.454	.000

OUT.WPD

6.05	1123.6	12291.5	.051	330.4	5.63	10.94	2.007	1.007	.498	.502	.000	10743.8	.513	.487	.000
6.72	1356.0	15835.3	.048	361.6	5.95	11.68	2.121	1.121	.471	.529	.000	14022.7	.484	.516	.000
7.39	1609.4	19938.4	.045	392.7	6.27	12.39	2.234	1.234	.448	.552	.000	17844.8	.459	.541	.000
8.06	1883.7	24632.1	.043	423.9	6.58	13.08	2.345	1.345	.426	.574	.000	22241.9	.436	.564	.000
8.73	2179.0	29946.9	.041	455.0	6.89	13.74	2.455	1.455	.407	.593	.000	27244.8	.416	.584	.000
9.41	2490.4	36738.5	.038	467.6	7.36	14.75	2.625	1.625	.381	.619	.000	33277.4	.394	.606	.000
10.08	2814.3	43063.2	.037	500.2	7.63	15.30	2.719	1.719	.368	.632	.000	39860.3	.374	.626	.000
10.75	3162.7	49894.7	.036	537.0	7.86	15.78	2.801	1.801	.357	.643	.000	46439.5	.362	.638	.000
11.42	3535.8	57491.1	.035	573.7	8.10	16.26	2.885	1.885	.347	.653	.000	53650.9	.352	.648	.000
12.09	3934.3	65250.7	.034	619.7	8.26	16.59	2.943	1.943	.340	.660	.000	61335.8	.343	.657	.000
12.77	4377.5	71915.9	.034	699.5	8.18	16.43	2.915	1.915	.343	.657	.000	68563.9	.342	.658	.000

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 38 TIMES. AVERAGE NUMBER ITERATIONS = 1.1723
 Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
 PRINT HYD ID=7 CODE=5

OUTFLOW HYDROGRAPH REACH 36.70

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.750	52.6	7.500	5.9	11.250	.7	15.000	.1
.250	.0	4.000	45.2	7.750	5.1	11.500	.6	15.250	.1
.500	.0	4.250	39.1	8.000	4.4	11.750	.5	15.500	.1
.750	.0	4.500	33.8	8.250	3.8	12.000	.4	15.750	.0
1.000	.0	4.750	29.2	8.500	3.3	12.250	.4	16.000	.0
1.250	.0	5.000	25.2	8.750	2.8	12.500	.3	16.250	.0
1.500	.0	5.250	21.8	9.000	2.4	12.750	.3	16.500	.0
1.750	184.5	5.500	18.8	9.250	2.1	13.000	.2	16.750	.0
2.000	523.0	5.750	16.3	9.500	1.8	13.250	.2	17.000	.0
2.250	552.1	6.000	14.1	9.750	1.6	13.500	.2	17.250	.0
2.500	410.5	6.250	12.2	10.000	1.4	13.750	.2	17.500	.0
2.750	269.2	6.500	10.5	10.250	1.2	14.000	.1	17.750	.0
3.000	175.2	6.750	9.1	10.500	1.0	14.250	.1	18.000	.0
3.250	113.8	7.000	7.8	10.750	.9	14.500	.1	18.250	.0
3.500	73.4	7.250	6.8	11.000	.8	14.750	.1		

RUNOFF VOLUME = .77170 INCHES = 55.4387 ACRE-FEET
 PEAK DISCHARGE RATE = 572.99 CFS AT 2.150 HOURS BASIN AREA = 1.3470 SQ. MI.

*

 *S** SUB-BASIN 36 ***
 *

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.012 K=0.7
 LENGTH=1600 FT SLOPE=0.008 K=2.0
 LENGTH=5646 FT SLOPE=0.015 K=3.0
 Kn=.033 CR=0.50

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.012000	.7000
SHALLOW FLOW PORTION	1600.0	.008000	2.0000
CHANNEL FLOW PORTION	5646.0	.015000	3.0000
TOTAL BASIN	7646.0	.013378	2.2388

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 7646.0
 TOTAL BASIN SLOPE (FT/FT)= .013378 CENTROID LENGTH (FT)= 3823.0

TIME OF CONCENTRATION (HRS)= .5867 TIME TO PEAK (HRS)= .3912 LAG TIME (HRS)= .4401

COMPUTE NM HYD ID=1 HYD NO=36 DA= 0.407 SQ MI
 PER A=98 PER B=0 PER C=0 PER D=2
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .3912

K = .217948HR TP = .391163HR K/TP RATIO = .557178 SHAPE CONSTANT, N = 6.908645
 UNIT PEAK = 10.757 CFS UNIT VOLUME = .9989 B = 516.91 P60 = 2.2000
 AREA = .008140 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .369016HR TP = .391163HR K/TP RATIO = .943381 SHAPE CONSTANT, N = 3.747694
 UNIT PEAK = 344.63 CFS UNIT VOLUME = 1.000 B = 337.98 P60 = 2.2000
 AREA = .398860 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 36.00

RUNOFF VOLUME = .81878 INCHES = 17.7728 ACRE-FEET
 PEAK DISCHARGE RATE = 273.73 CFS AT 1.750 HOURS BASIN AREA = .4070 SQ. MI.

*S

 *S ADD 35.8 TO 36 TO GET 36.6
 *S
 ADD HYD ID=6 HYD NO=36.6 ID I=1 ID II=7
 PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 36.60

RUNOFF VOLUME = .78262 INCHES = 73.2114 ACRE-FEET
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PEAK DISCHARGE RATE = 725.32 CFS AT 2.050 HOURS OUT.WPD
BASIN AREA = 1.7540 SQ. MI.

*
*S

*S ROUTE 36.6 THRU MID 39 IN NATURAL ARROYO TO 39.7

*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5714.17 MAX ELEV=5716.23
CH SLOPE=0.015 FP SLOPE=0.015
N=0.035 DIST=600.0
DIST ELEV DIST ELEV
0 5716.58 50 5715.99
98 5715.76 137 5715.92
301 5714.17 417 5715.74
536 5715.06 600 5716.23

RATING CURVE VALLEY SECTION 1.0
WATER FLOW
SURFACE AREA
ELEV SQ FT RATE
CFS TOP
WIDTH
FT
5714.17 .00 .00 .00
5714.28 .98 .73 18.17
5714.39 3.94 4.66 36.33
5714.50 8.86 13.73 54.50
5714.60 15.75 29.56 72.66
5714.71 24.61 53.60 90.83
5714.82 35.44 87.15 109.00
5714.93 48.24 131.47 127.16
5715.04 63.01 187.70 145.33
5715.15 80.59 242.45 183.12
5715.25 102.77 315.84 226.18
5715.36 129.62 414.03 269.24
5715.47 161.14 539.03 312.30
5715.58 197.33 693.19 355.36
5715.69 238.18 878.89 398.42
5715.80 283.62 1093.88 443.96
5715.90 335.27 1319.69 509.02
5716.01 392.49 1649.74 540.02
5716.12 451.84 2048.13 555.14
5716.23 512.84 2484.47 570.25

ROUTE MCUNGE ID=4 HYD NO=39.4 INFLOW ID=6
DT=0.0 L=1884 FT NS=0 SLOPE=0.015
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 529 TABLE PTS= 20
DT= .050000 QMED= 362.66 CKMED= 3.6565
WIDTH MED= 246.71 NREACH= 6 DX= 314.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.963	.0	1.74	.34	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.11	1.0	.7	.703	18.2	1.74	.74	.995	.005	.995	.000	.005	.1	.999	.000	.001
.22	3.9	4.7	.443	36.3	1.72	1.18	.984	.016	.984	.000	.016	2.2	.991	.000	.009
.33	8.9	13.7	.338	54.5	2.11	1.55	1.210	.025	.977	.105	-.082	8.6	.979	.032	-.011
.43	15.8	29.6	.279	72.7	2.53	1.88	1.453	.034	.973	.196	-.168	20.9	.974	.145	-.119
.54	24.6	53.6	.240	90.8	2.93	2.18	1.679	.043	.969	.265	-.234	40.8	.970	.227	-.197
.65	35.4	87.2	.213	109.0	3.30	2.46	1.892	.051	.965	.320	-.285	69.5	.966	.291	-.257
.76	48.2	131.5	.192	127.2	3.65	2.73	2.093	.060	.962	.366	-.328	108.4	.963	.341	-.304
.87	63.0	187.7	.176	145.3	3.57	2.98	2.047	.077	.951	.360	-.311	158.6	.960	.384	-.343
.98	80.6	242.4	.174	183.1	3.23	3.01	1.851	.087	.941	.319	-.260	214.3	.936	.297	-.234
1.08	102.8	315.8	.170	226.2	3.50	3.07	2.004	.085	.945	.353	-.298	278.2	.941	.328	-.269
1.19	129.6	414.0	.164	269.2	3.82	3.19	2.191	.085	.948	.390	-.338	363.7	.946	.370	-.316
1.30	161.1	539.0	.156	312.3	4.12	3.35	2.364	.089	.949	.421	-.369	475.0	.948	.404	-.352
1.41	197.3	693.2	.149	355.4	4.41	3.51	2.529	.094	.948	.448	-.396	614.4	.948	.433	-.381
1.52	238.2	878.9	.142	398.4	4.65	3.69	2.663	.101	.946	.469	-.415	784.1	.947	.459	-.407
1.63	283.6	1093.9	.136	444.0	4.60	3.86	2.638	.114	.939	.467	-.406	984.4	.944	.474	-.418
1.73	335.3	1319.7	.133	509.0	4.99	3.94	2.861	.110	.944	.496	-.441	1205.1	.932	.448	-.380
1.84	392.5	1649.7	.125	540.0	6.20	4.20	3.555	.105	.955	.571	-.526	1481.4	.953	.549	-.502
1.95	451.8	2048.1	.115	555.1	6.94	4.53	3.979	.113	.956	.607	-.563	1844.9	.957	.596	-.553
2.06	512.8	2484.5	.108	570.3	7.30	4.84	4.187	.127	.952	.624	-.576	2262.4	.954	.617	-.571
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 5 OCCURRED 1 TIMES. AVERAGE NUMBER ITERATIONS = 1.2588															
DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.963	.0	1.74	.34	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.11	1.0	.7	.703	18.2	1.74	.74	.995	.005	.995	.000	.005	.1	.999	.000	.001
.22	3.9	4.7	.443	36.3	1.72	1.18	.984	.016	.984	.000	.016	2.2	.991	.000	.009
.33	8.9	13.7	.338	54.5	1.80	1.55	1.030	.030	.971	.029	.000	8.6	.978	.022	.000
.43	15.8	29.6	.279	72.7	1.83	1.88	1.047	.047	.955	.045	.000	20.9	.963	.037	.000
.54	24.6	53.6	.240	90.8	1.86	2.18	1.067	.067	.937	.063	.000	40.8	.946	.054	.000
.65	35.4	87.2	.213	109.0	1.90	2.46	1.089	.089	.918	.082	.000	69.5	.927	.073	.000
.76	48.2	131.5	.192	127.2	1.94	2.73	1.113	.113	.898	.102	.000	108.4	.908	.092	.000
.87	63.0	187.7	.176	145.3	1.99	2.98	1.138	.138	.879	.121	.000	158.6	.888	.112	.000
.98	80.6	242.4	.174	183.1	1.99	3.01	1.141	.141	.876	.124	.000	214.3	.878	.122	.000
1.08	102.8	315.8	.170	226.2	2.00	3.07	1.148	.148	.871	.129	.000	278.2	.874	.126	.000
1.19	129.6	414.0	.164	269.2	2.03	3.19	1.161	.161	.861	.139	.000	363.7	.866	.134	.000
1.30	161.1	539.0	.156	312.3	2.06	3.35	1.178	.178	.849	.151	.000	475.0	.855	.145	.000
1.41	197.3	693.2	.149	355.4	2.09	3.51	1.198	.198	.835	.165	.000	614.4	.841	.159	.000
1.52	238.2	878.9	.142	398.4	2.13	3.69	1.220	.220	.820	.180	.000	784.1	.827	.173	.000
1.63	283.6	1093.9	.136	444.0	2.17	3.86	1.242	.242	.805	.195	.000	984.4	.812	.188	.000
1.73	335.3	1319.7	.133	509.0	2.18	3.94	1.252	.252	.799	.201	.000	1205.1	.802	.198	.000
1.84	392.5	1649.7	.125	540.0	2.25	4.20	1.289	.289	.776	.224	.000	1481.4	.787	.213	.000
1.95	451.8	2048.1	.115	555.1	2.33	4.53	1.336	.336	.748	.252	.000	1844.9	.762	.238	.000
2.06	512.8	2484.5	.108	570.3	2.41	4.84	1.383	.383	.723	.277	.000	2262.4	.735	.265	.000
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 51 TIMES. AVERAGE NUMBER ITERATIONS = 1.1985															
Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3															
PRINT HYD ID=4 CODE=1															

OUTFLOW HYDROGRAPH REACH 39.40

RUNOFF VOLUME = .78151 INCHES = 73.1067 ACRE-Feet
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PEAK DISCHARGE RATE = 720.67 CFS AT 2.300 HOURS OUT.WPD
BASIN AREA = 1.7540 SQ. MI.

*

*S ADD 32.9 TO 39.4 TO GET 39.7

*S

ADD HYD ID=7 HYD NO=39.7 ID I=5 ID II=4
PRINT HYD ID=7 CODE=1

OUTFLOW HYDROGRAPH REACH 39.70

RUNOFF VOLUME = .77201 INCHES = 340.9565 ACRE-FEET
PEAK DISCHARGE RATE = 2357.76 CFS AT 2.850 HOURS BASIN AREA = 8.2810 SQ. MI.

*
*S

*S ROUTE 39.7 THRU LOWER 39 IN NATURAL ARROYO TO 39.8

*

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5687.82 MAX ELEV=5701.09
CH SLOPE=0.0156 FP SLOPE=0.0156
N=0.035 DIST=500.0
DIST ELEV DIST ELEV
0 5696.81 76 5694.05
174 5692.95 250 5687.82
339 5693.72 432 5699.97
500 5701.09

RATING CURVE VALLEY SECTION 1.0
WATER FLOW FLOW TOP
SURFACE AREA RATE WIDTH
ELEV SQ FT CFS FT
5687.82 .00 .00 .00
5688.52 7.29 19.13 20.88
5689.22 29.15 121.49 41.75
5689.91 65.59 358.20 62.63
5690.61 116.61 771.43 83.50
5691.31 182.20 1398.69 104.38
5692.01 262.37 2274.43 125.25
5692.71 357.12 3430.81 146.13
5693.41 474.15 4452.44 200.86
5694.10 639.70 6019.98 270.20
5694.80 838.70 8821.59 299.82
5695.50 1058.39 12208.82 329.43
5696.20 1298.75 16213.98 359.05
5696.90 1559.69 20953.34 386.27
5697.60 1833.03 26943.03 396.66
5698.29 2113.62 33577.68 407.05
5698.99 2401.47 40847.31 417.44
5699.69 2696.57 48745.13 427.83
5700.39 3002.93 55782.66 457.39
5701.09 3337.10 62694.86 499.79

ROUTE MCUNGE ID=6 HYD NO=39.6 INFLOW ID=7
DT=0.0 L=2583 FT NS=0 SLOPE=0.0156
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 535 TABLE PTS= 20
DT= .050000 QMED= 1178.88 CKMED= 9.5629
WIDTH MED= 97.06 NREACH= 3 DX= 861.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.374	.0	4.78	1.21	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.70	7.3	19.1	.273	20.9	4.71	2.63	.986	.014	.986	.000	.014	3.0	.998	.000	.002
1.40	29.2	121.5	.172	41.8	5.80	4.17	1.212	.037	.967	.111	-.078	57.0	.979	.041	-.020
2.09	65.6	358.2	.131	62.6	7.44	5.46	1.555	.057	.956	.234	-.191	223.6	.958	.164	-.122
2.79	116.6	771.4	.108	83.5	8.94	6.62	1.868	.077	.948	.321	-.269	546.3	.950	.273	-.223
3.49	182.2	1398.7	.093	104.4	10.33	7.68	2.159	.097	.941	.386	-.326	1064.6	.942	.351	-.293
4.19	262.4	2274.4	.083	125.3	11.63	8.67	2.432	.116	.934	.436	-.371	1814.4	.936	.409	-.345
4.89	357.1	3430.8	.075	146.1	10.88	9.61	2.274	.161	.906	.418	-.324	2828.9	.931	.456	-.386
5.59	474.2	4452.4	.076	200.9	9.20	9.39	1.924	.179	.884	.356	-.240	3923.6	.863	.322	-.185
6.28	639.7	6020.0	.076	270.2	11.41	9.41	2.385	.145	.918	.434	-.351	5207.4	.890	.366	-.256
6.98	838.7	8821.6	.068	299.8	14.80	10.52	3.095	.148	.930	.529	-.459	7369.5	.933	.509	-.442
7.68	1058.4	12208.8	.062	329.4	16.09	11.54	3.363	.172	.924	.559	-.483	10463.7	.927	.544	-.470
8.38	1298.8	16214.0	.057	359.0	17.44	12.48	3.645	.193	.920	.587	-.507	14159.4	.921	.571	-.492
9.08	1559.7	20953.3	.053	386.3	19.78	13.43	4.136	.204	.924	.625	-.549	18528.5	.919	.601	-.520
9.78	1833.0	26943.0	.049	396.7	22.81	14.70	4.769	.222	.926	.666	-.592	23876.5	.928	.654	-.583
10.47	2113.6	33577.7	.045	407.0	24.48	15.89	5.117	.251	.921	.686	-.607	30191.5	.923	.676	-.600
11.17	2401.5	40847.3	.042	417.4	26.03	17.01	5.443	.280	.917	.702	-.619	37146.1	.919	.694	-.613
11.87	2696.6	48745.1	.040	427.8	25.20	18.08	5.268	.337	.898	.697	-.595	44731.8	.915	.710	-.624
12.57	3002.9	55782.7	.039	457.4	21.92	18.58	4.582	.414	.862	.666	-.528	52228.7	.874	.674	-.549
13.27	3337.1	62694.9	.038	499.8	20.17	18.79	4.216	.463	.837	.648	-.485	59212.1	.845	.653	-.499

MAXIMUM NO. ITERATIONS FOR SOLUTION (KMAX) = 4 OCCURRED 7 TIMES. AVERAGE NUMBER ITERATIONS = 1.3178
Equations solved using the Ponce correction to C2
PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 39.60

RUNOFF VOLUME = .77200 INCHES = 340.9557 ACRE-FEET
PEAK DISCHARGE RATE = 2347.30 CFS AT 2.900 HOURS BASIN AREA = 8.2810 SQ. MI.

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*S*** SUB-BASIN 39 ****

OUT.WPD

*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.015 K=0.7
LENGTH=1600 FT SLOPE=0.015 K=2.0
LENGTH=5883 FT SLOPE=0.002 K=3.0
Kn=.033 CR=0.50

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.015000	.7000
SHALLOW FLOW PORTION	1600.0	.015000	2.0000
CHANNEL FLOW PORTION	5883.0	.002000	3.0000
TOTAL BASIN	7883.0	.005298	1.9674

LAG EQUATION FACTORS: Kn=.0330 TOTAL BASIN LENGTH (FT)= 7883.0
TOTAL BASIN SLOPE (FT/FT)= .005298 CENTROID LENGTH (FT)= 3941.5

TIME OF CONCENTRATION (HRS)= .8376 TIME TO PEAK (HRS)= .5584 LAG TIME (HRS)= .6282

COMPUTE NM HYD ID=2 HYD NO=39 DA= 0.341 SQ MI
PER A=99 PER B=0 PER C=0 PER D=1
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .5584

K = .311122HR TP = .558389HR K/TP RATIO = .557178 SHAPE CONSTANT, N = 6.908645
UNIT PEAK = 3.1567 CFS UNIT VOLUME = .9959 B = 516.91 P60 = 2.2000
AREA = .003410 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .526774HR TP = .558389HR K/TP RATIO = .943381 SHAPE CONSTANT, N = 3.747694
UNIT PEAK = 204.34 CFS UNIT VOLUME = .9999 B = 337.98 P60 = 2.2000
AREA = .337590 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 39.00

RUNOFF VOLUME = .79586 INCHES = 14.4739 ACRE-FEET
PEAK DISCHARGE RATE = 160.83 CFS AT 1.950 HOURS BASIN AREA = .3410 SQ. MI.

*S

*S ADD 39.6 TO 39 TO GET 39.8
*S
ADD HYD ID=8 HYD NO=39.8 ID I=2 ID II=6
PRINT HYD ID=8 CODE=1

OUTFLOW HYDROGRAPH REACH 39.80

RUNOFF VOLUME = .77295 INCHES = 355.4298 ACRE-FEET
PEAK DISCHARGE RATE = 2381.49 CFS AT 2.900 HOURS BASIN AREA = 8.6220 SQ. MI.

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*S

*S*** SUB-BASIN 40A ****
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COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.033 K=0.7
LENGTH=1600 FT SLOPE=0.013 K=2.0
LENGTH=2012 FT SLOPE=0.016 K=3.0
Kn=.033 CR=0.50

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.033000	.7000
SHALLOW FLOW PORTION	1600.0	.013000	2.0000
CHANNEL FLOW PORTION	2012.0	.016000	3.0000
TOTAL BASIN	4012.0	.016499	2.0198

LAG EQUATION FACTORS: Kn=.0330 TOTAL BASIN LENGTH (FT)= 4012.0
TOTAL BASIN SLOPE (FT/FT)= .016499 CENTROID LENGTH (FT)= 2006.0

TIME OF CONCENTRATION (HRS)= .4288 TIME TO PEAK (HRS)= .2858 LAG TIME (HRS)= .3216

COMPUTE NM HYD ID=1 HYD NO=40A DA= 0.107 SQ MI
PER A=88 PER B=2 PER C=10 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .2858

K = .317829HR TP = .285837HR K/TP RATIO = 1.111923 SHAPE CONSTANT, N = 3.180435
UNIT PEAK = 110.89 CFS UNIT VOLUME = .9999 B = 296.22 P60 = 2.2000
AREA = .107000 SQ MI IA = .61700 INCHES INF = 1.57760 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

OUT.WPD

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA 40A

RUNOFF VOLUME = .83067 INCHES = 4.7403 ACRE-Feet
PEAK DISCHARGE RATE = 86.94 CFS AT 1.650 HOURS BASIN AREA = .1070 SQ. MI.

*S

*S ADD 40A TO 39.8 TO GET 40A.9
*S
ADD HYD ID=9 HYD NO=40A.9 ID I=1 ID II=8
PRINT HYD ID=9 CODE=1

HYDROGRAPH FROM AREA 40A.9

RUNOFF VOLUME = .77366 INCHES = 360.1704 ACRE-Feet
PEAK DISCHARGE RATE = 2387.19 CFS AT 2.900 HOURS BASIN AREA = 8.7290 SQ. MI.

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*S ROUTE 40A.9 THRU 40 IN NATURAL ARROYO TO 40.5
*

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5636.01 MAX ELEV=5641.34
CH SLOPE=0.0097 FP SLOPE=0.0097
N=0.035 DIST=600.0
DIST ELEV DIST ELEV
0 5643.37 111 5641.34
223 5638.84 301 5636.01
448 5641.12 600 5639.78

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5636.01	.00	.00	.00
5636.29	2.22	2.51	15.81
5636.57	8.88	15.91	31.63
5636.85	19.98	46.92	47.44
5637.13	35.52	101.05	63.26
5637.41	55.50	183.22	79.07
5637.69	79.92	297.93	94.89
5637.98	108.78	449.41	110.70
5638.26	142.08	641.64	126.51
5638.54	179.82	878.41	142.33
5638.82	222.00	1163.37	158.14
5639.10	269.20	1480.25	178.41
5639.38	322.19	1856.47	199.06
5639.66	380.98	2298.41	219.72
5639.94	447.03	2691.56	258.59
5640.22	527.00	3130.66	311.08
5640.50	621.71	3716.46	363.58
5640.78	731.16	4451.06	416.07
5641.06	855.34	5340.96	468.57
5641.34	990.70	6629.10	489.24

ROUTE MCUNGE ID=6 HYD NO=40.6 INFLOW ID=9
DT=0.0 L=2390 FT NS=0 SLOPE=0.0097
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 538
DT= .050000
WIDTH MED= 160.08
TABLE PTS= 20
QMED= 1193.60
NREACH= 4
CKMED= 6.7143
DX= 597.50

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.806	.0	3.32	.52	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.28	2.2	2.5	.588	15.8	3.29	1.13	.992	.008	.992	.000	.008	.4	.999	.000	.001
.56	8.9	15.9	.370	31.6	3.23	1.79	.973	.027	.973	.000	.027	7.5	.985	.000	.015
.84	20.0	46.9	.283	47.4	3.20	2.35	.964	.053	.947	.008	.044	29.3	.962	.004	.034
1.12	35.5	101.1	.233	63.3	3.84	2.84	1.158	.072	.936	.103	-.039	71.6	.939	.051	.010
1.40	55.5	183.2	.201	79.1	4.44	3.30	1.338	.090	.926	.176	-.102	139.5	.929	.137	-.065
1.68	79.9	297.9	.178	94.9	5.00	3.73	1.507	.108	.917	.235	-.152	237.7	.920	.204	-.124
1.97	108.8	449.4	.161	110.7	5.54	4.13	1.668	.127	.909	.284	-.194	370.6	.912	.258	-.170
2.25	142.1	641.6	.147	126.5	6.04	4.52	1.821	.145	.902	.326	-.228	542.2	.905	.304	-.209
2.53	179.8	878.4	.136	142.3	6.53	4.88	1.968	.163	.896	.361	-.257	756.5	.898	.343	-.241
2.81	222.0	1163.4	.127	158.1	6.81	5.24	2.050	.187	.885	.382	-.267	1017.2	.892	.376	-.268
3.09	269.2	1480.2	.121	178.4	6.92	5.50	2.085	.207	.874	.392	-.267	1318.4	.875	.379	-.253
3.37	322.2	1856.5	.115	199.1	7.32	5.76	2.206	.220	.872	.416	-.288	1664.7	.872	.403	-.275
3.65	381.0	2298.4	.110	219.7	6.84	6.03	2.060	.264	.841	.398	-.240	2073.4	.870	.427	-.297
3.93	447.0	2691.6	.110	258.6	5.75	6.02	1.733	.312	.795	.343	-.138	2492.5	.799	.348	-.147
4.21	527.0	3130.7	.112	311.1	5.87	5.94	1.768	.296	.807	.347	-.154	2908.3	.783	.327	-.110
4.49	621.7	3716.5	.111	363.6	6.47	5.98	1.948	.273	.831	.379	-.210	3419.5	.820	.364	-.183
4.77	731.2	4451.1	.109	416.1	6.95	6.09	2.095	.265	.842	.405	-.247	4078.4	.836	.392	-.228
5.05	855.3	5341.0	.106	468.6	8.20	6.24	2.469	.240	.871	.461	-.331	4889.5	.844	.416	-.260
5.33	990.7	6629.1	.099	489.2	9.74	6.69	2.936	.240	.885	.521	-.406	5972.3	.891	.513	-.404

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 12 TIMES. AVERAGE NUMBER ITERATIONS = 1.3191
Equations solved using the Ponce correction to C2
PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 40.60

RUNOFF VOLUME = .77346 INCHES = 360.0792 ACRE-Feet
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PEAK DISCHARGE RATE = 2349.20 CFS AT 3.000 HOURS OUT.WPD
BASIN AREA = 8.7290 SQ. MI.

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*S*** SUB-BASIN 40 ****

*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.052 K=0.7
LENGTH=1600 FT SLOPE=0.020 K=2.0
LENGTH=2836 FT SLOPE=0.026 K=3.0
Kn=.033 CR=0.50

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.052000	.7000
SHALLOW FLOW PORTION	1600.0	.020000	2.0000
CHANNEL FLOW PORTION	2836.0	.026000	3.0000
TOTAL BASIN	4836.0	.026165	2.1316

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 4836.0
TOTAL BASIN SLOPE (FT/FT)= .026165 CENTROUD LENGTH (FT)= 2418.0

TIME OF CONCENTRATION (HRS)= .3611 TIME TO PEAK (HRS)= .2407 LAG TIME (HRS)= .2708

COMPUTE NM HYD ID=1 HYD NO=40 DA= 0.356 SQ MI
PER A=88 PER B=2 PER C=10 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .2407

K = .221818HR TP = .240717HR K/TP RATIO = .921488 SHAPE CONSTANT, N = 3.840839
UNIT PEAK = 509.36 CFS UNIT VOLUME = 1.000 B = 344.41 P60 = 2.2000
AREA = .356000 SQ MI IA = .61700 INCHES INF = 1.57760 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 40.00

RUNOFF VOLUME = .83067 INCHES = 15.7716 ACRE-Feet
PEAK DISCHARGE RATE = 383.05 CFS AT 1.600 HOURS BASIN AREA = .3560 SQ. MI.

*S

*S ADD 40 TO 40A.9 TO GET 40.5

*S
ADD HYD ID=5 HYD NO=40.5 ID I=1 ID II=6
PRINT HYD ID=5 CODE=1

OUTFLOW HYDROGRAPH REACH 40.50

RUNOFF VOLUME = .77570 INCHES = 375.8508 ACRE-Feet
PEAK DISCHARGE RATE = 2361.18 CFS AT 3.000 HOURS BASIN AREA = 9.0850 SQ. MI.

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*S

*S ROUTE 40.5 THRU UPPER 41A IN NATURAL ARROYO TO 41A.9

*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5518.27 MAX ELEV=5549.49
CH SLOPE=0.032 FP SLOPE=0.032
N=0.035 DIST=400.0
DIST ELEV DIST ELEV
0 5546.63 70 5541.99
134 5529.86 200 5518.27
228 5519.99 260 5530.34
322 5545.97 400 5549.49

RATING CURVE VALLEY SECTION 1.0			TOP
WATER	FLOW	FLOW	WIDTH
SURFACE	AREA	RATE	FT
ELEV	SQ FT	CFS	
5518.27	.00	.00	.00
5519.91	29.66	196.88	36.10
5521.56	102.47	1220.99	51.56
5523.20	199.04	3124.50	65.99
5524.84	319.32	6011.90	80.43
5526.49	463.34	10004.45	94.87
5528.13	631.07	15222.14	109.30
5529.77	822.52	21781.31	123.74
5531.41	1037.69	29757.30	138.47
5533.06	1277.67	39263.71	153.65
5534.70	1542.61	50471.71	168.84
5536.34	1832.50	63491.66	184.02
5537.99	2147.34	78430.69	199.21
5539.63	2487.13	95392.95	214.40
5541.27	2851.88	114480.00	229.58
5542.92	3245.78	132907.50	253.85
5544.56	3688.59	152355.30	285.16

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5546.20 4183.34 OUT.WPD 320.69
5547.85 4749.38 173934.70 363.55
5549.49 5376.63 197925.00 399.96
228588.40
ROUTE MCUNGE ID=61 HYD NO=41A.61 INFLOW ID=5
DT=0.0 L=4947 FT NS=0 SLOPE=0.032
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 542 TABLE PTS= 20
DT= .050000 QMED= 1180.59 CKMED= 14.0657
WIDTH MED= 50.95 NREACH= 4 DX= 1236.75

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.299	.0	6.87	2.56	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
1.64	29.7	196.9	.207	36.1	9.60	6.64	1.397	.014	.988	.171	-.159	31.0	.998	.027	-.025
3.29	102.5	1221.0	.115	51.6	17.58	11.92	2.559	.034	.981	.443	-.424	602.5	.984	.350	-.334
4.93	199.0	3124.5	.088	66.0	22.23	15.70	3.236	.054	.975	.534	-.509	2070.4	.977	.487	-.464
6.57	319.3	6011.9	.073	80.4	26.13	18.83	3.803	.072	.970	.590	-.560	4464.2	.972	.560	-.532
8.22	463.3	10004.5	.064	94.9	29.62	21.59	4.311	.090	.967	.630	-.596	7901.1	.968	.608	-.576
9.86	631.1	15222.1	.057	109.3	32.85	24.12	4.781	.107	.964	.660	-.624	12502.4	.965	.644	-.609
11.50	822.5	21781.3	.052	123.7	35.81	26.48	5.212	.124	.961	.684	-.645	18386.8	.962	.672	-.634
13.14	1037.7	29757.3	.048	138.5	38.48	28.68	5.600	.141	.958	.703	-.661	25651.2	.959	.693	-.652
14.79	1277.7	39263.7	.045	153.7	41.06	30.73	5.977	.157	.956	.720	-.676	34388.4	.956	.711	-.667
16.43	1542.6	50471.7	.042	168.8	43.70	32.72	6.361	.173	.954	.735	-.689	44740.3	.955	.727	-.681
18.07	1832.5	63491.7	.040	184.0	46.27	34.65	6.734	.188	.952	.748	-.700	56849.0	.953	.741	-.694
19.72	2147.3	78430.7	.038	199.2	48.76	36.52	7.097	.204	.951	.759	-.710	70823.5	.951	.753	-.704
21.36	2487.1	95392.9	.036	214.4	51.20	38.35	7.451	.220	.949	.769	-.719	86769.2	.950	.764	-.714
23.00	2851.9	114480.0	.034	229.6	50.02	40.14	7.280	.252	.941	.766	-.707	104789.0	.948	.774	-.722
24.65	3245.8	132907.5	.034	253.9	45.54	40.95	6.628	.291	.927	.747	-.674	123589.8	.931	.751	-.681
26.29	3688.6	152355.3	.033	285.2	43.88	41.30	6.386	.308	.920	.740	-.660	142533.5	.921	.740	-.661
27.93	4183.3	173934.7	.033	320.7	43.32	41.58	6.306	.316	.917	.738	-.655	163042.6	.917	.737	-.655
29.58	4749.4	197925.0	.033	363.5	45.68	41.67	6.649	.301	.924	.748	-.673	185816.9	.914	.734	-.649
31.22	5376.6	228588.4	.032	400.0	47.80	42.52	6.957	.302	.927	.758	-.685	213090.9	.931	.762	-.693
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 14 TIMES. AVERAGE NUMBER ITERATIONS = 1.3913															
DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.299	.0	6.87	2.56	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
1.64	29.7	196.9	.207	36.1	7.01	6.64	1.020	.020	.981	.019	.000	31.0	.994	.006	.000
3.29	102.5	1221.0	.115	51.6	7.42	11.92	1.081	.081	.925	.075	.000	602.5	.954	.046	.000
4.93	199.0	3124.5	.088	66.0	7.91	15.70	1.151	.151	.869	.131	.000	2070.4	.896	.104	.000
6.57	319.3	6011.9	.073	80.4	8.41	18.83	1.224	.224	.817	.183	.000	4464.2	.841	.159	.000
8.22	463.3	10004.5	.064	94.9	8.92	21.59	1.299	.299	.770	.230	.000	7901.1	.792	.208	.000
9.86	631.1	15222.1	.057	109.3	9.43	24.12	1.373	.373	.728	.272	.000	12502.4	.748	.252	.000
11.50	822.5	21781.3	.052	123.7	9.94	26.48	1.447	.447	.691	.309	.000	18386.8	.709	.291	.000
13.14	1037.7	29757.3	.048	138.5	10.44	28.68	1.520	.520	.658	.342	.000	25651.2	.674	.326	.000
14.79	1277.7	39263.7	.045	153.7	10.93	30.73	1.591	.591	.629	.371	.000	34388.4	.643	.357	.000
16.43	1542.6	50471.7	.042	168.8	11.42	32.72	1.662	.662	.602	.398	.000	44740.3	.615	.385	.000
18.07	1832.5	63491.7	.040	184.0	11.90	34.65	1.732	.732	.577	.423	.000	56849.0	.589	.411	.000
19.72	2147.3	78430.7	.038	199.2	12.39	36.52	1.803	.803	.555	.445	.000	70823.5	.565	.435	.000
21.36	2487.1	95392.9	.036	214.4	12.87	38.35	1.873	.873	.534	.466	.000	86769.2	.544	.456	.000
23.00	2851.9	114480.0	.034	229.6	13.35	40.14	1.944	.944	.515	.485	.000	104789.0	.524	.476	.000
24.65	3245.8	132907.5	.034	253.9	13.57	40.95	1.975	.975	.506	.494	.000	123589.8	.510	.490	.000
26.29	3688.6	152355.3	.033	285.2	13.66	41.30	1.988	.988	.503	.497	.000	142533.5	.505	.495	.000
27.93	4183.3	173934.7	.033	320.7	13.73	41.58	1.998	.998	.500	.500	.000	163042.6	.502	.498	.000
29.58	4749.4	197925.0	.033	363.5	13.75	41.67	2.001	1.001	.500	.500	.000	185816.9	.500	.500	.000
31.22	5376.6	228588.4	.032	400.0	13.97	42.52	2.034	1.034	.492	.508	.000	213090.9	.496	.504	.000
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 78 TIMES. AVERAGE NUMBER ITERATIONS = 1.2861															
Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3															
PRINT HYD ID=61 CODE=1															

HYDROGRAPH FROM AREA 41A.61

RUNOFF VOLUME = .77532 INCHES = 375.6671 ACRE-FEET
PEAK DISCHARGE RATE = 2343.52 CFS AT 3.200 HOURS BASIN AREA = 9.0850 SQ. MI.

*

*S ROUTE 40.5 THRU LOWER 41A IN NATURAL ARROYO TO 41A.9

*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5457.93 MAX ELEV=5504.28
CH SLOPE=0.017 FP SLOPE=0.017
N=0.035 DIST=400.0
DIST ELEV DIST ELEV
0 5485.62 37 5499.76
75 5504.28 121 5489.83
155 5469.83 201 5457.93
233 5470.10 265 5490.19
288 5499.91 336 5502.91
400 5504.19

RATING CURVE VALLEY SECTION 1.0				TOP
WATER	FLOW	FLOW		WIDTH
SURFACE	AREA	RATE		FT
ELEV	SQ FT	CFS		
5457.93	.00	.00		.00
5460.37	19.33	118.38		15.84
5462.81	77.30	751.67		31.69
5465.25	173.93	2216.17		47.53
5467.69	309.21	4772.79		63.38
5470.13	483.05	8694.58		78.55
5472.57	684.46	14462.26		86.58
5475.01	905.47	21604.93		94.61
5477.45	1146.08	30157.85		102.65
5479.89	1406.28	40167.77		110.68
5482.32	1686.07	51687.35		118.71
5484.76	1985.47	64772.37		126.75
5487.20	2307.73	78117.62		138.92
5489.64	2664.21	92780.25		153.34
5492.08	3061.00	108294.30		172.56
5494.52	3506.25	126514.40		192.48

5496.96 4000.10 147812.70 212.40
 5499.40 4542.54 172341.40 232.32
 5501.84 5171.52 186034.50 290.61
 5504.28 5994.23 194576.60 400.00
 OUT.WPD
 ROUTE MCUNGE ID=6 HYD NO=41A.6 INFLOW ID=61
 DT=0.0 L=1702 FT NS=0 SLOPE=0.017
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
 INFLOW END= 546 TABLE PTS= 20
 DT= .050000 QMED= 1171.76 CKMED= 15.1560
 WIDTH MED= 36.23 NREACH= 2 DX= 851.00
 DEPTH AREA Q TRAVEL WIDTH ck VEL C D C1 C2 C3 Q-M C1-M C2-M C3-M
 (FT) (SQ FT) (CFS) TIME(HR) (FT) (FPS) (FPS)
 .00 .0 .0 .106 .0 4.73 2.82 1.000 .000 1.000 .000 .000 .0 1.000 .000 .000
 2.44 19.3 118.4 .077 15.8 8.54 6.13 1.807 .060 .958 .302 -.260 18.6 .970 .057 -.028
 4.88 77.3 751.7 .049 31.7 13.52 9.72 2.861 .121 .939 .498 -.437 352.8 .942 .401 -.343
 7.32 173.9 2216.2 .037 47.5 17.36 12.74 3.671 .186 .924 .588 -.512 1383.1 .926 .538 -.464
 9.76 309.2 4772.8 .031 63.4 20.96 15.44 4.433 .248 .913 .648 -.561 3379.7 .914 .615 -.529
 12.20 483.0 8694.6 .026 78.5 25.22 18.00 5.335 .303 .909 .699 -.607 6605.6 .906 .670 -.576
 14.64 684.5 14462.3 .022 86.6 30.66 21.13 6.485 .377 .904 .746 -.650 11436.3 .909 .729 -.639
 17.08 905.5 21604.9 .020 94.6 34.07 23.86 7.207 .463 .893 .769 -.662 17898.3 .898 .758 -.655
 19.52 1146.1 30157.9 .018 102.6 37.12 26.31 7.852 .547 .884 .787 -.671 25749.9 .887 .778 -.666
 21.96 1406.3 40167.8 .017 110.7 39.92 28.56 8.443 .628 .875 .801 -.677 35033.4 .879 .794 -.673
 24.39 1686.1 51687.3 .015 118.7 42.52 30.66 8.994 .708 .868 .813 -.681 45799.1 .871 .807 -.678
 26.83 1985.5 64772.4 .014 126.7 42.96 32.62 9.088 .822 .849 .817 -.666 58101.6 .864 .818 -.682
 29.27 2307.7 78117.6 .014 138.9 41.40 33.85 8.758 .939 .824 .813 -.637 71343.9 .830 .811 -.641
 31.71 2664.2 92780.3 .014 153.3 40.46 34.82 8.558 1.034 .805 .811 -.616 85348.8 .816 .813 -.628
 34.15 3061.0 108294.3 .013 172.6 40.09 35.38 8.479 1.082 .795 .811 -.606 100443.3 .788 .807 -.595
 36.59 3506.3 126514.4 .013 192.5 42.09 36.08 8.903 1.079 .803 .818 -.621 117293.3 .797 .814 -.611
 39.03 4000.1 147812.7 .013 212.4 44.23 36.95 9.356 1.087 .810 .825 -.635 137033.9 .806 .821 -.627
 41.47 4542.5 172341.4 .012 232.3 34.09 37.94 7.210 1.504 .690 .794 -.484 159930.0 .811 .828 -.640
 43.91 5171.5 186034.5 .013 290.6 15.63 35.97 3.306 2.831 .207 .720 .073 179102.8 .426 .741 -.168
 46.35 5994.2 194576.6 .015 400.0 9.87 32.46 2.088 3.407 -.049 .692 .357 190096.5 .085 .707 .208
 MAXIMUM NO. ITERATIONS FOR SOLUTION (KMAX) = 4 OCCURRED 6 TIMES. AVERAGE NUMBER ITERATIONS = 1.4111
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=6 CODE=1

HYDROGRAPH FROM AREA 41A.6

RUNOFF VOLUME = .77536 INCHES = 375.6855 ACRE-Feet
 PEAK DISCHARGE RATE = 2325.88 CFS AT 3.200 HOURS BASIN AREA = 9.0850 SQ. MI.

*

*S** SUB-BASIN 41A **

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.022 K=0.7
 LENGTH=1600 FT SLOPE=0.014 K=2.0
 LENGTH=6215 FT SLOPE=0.036 K=3.0
 Kn=.033 CR=0.50

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.022000	.7000
SHALLOW FLOW PORTION	1600.0	.014000	2.0000
CHANNEL FLOW PORTION	6215.0	.036000	3.0000
TOTAL BASIN	8215.0	.031033	2.1657

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 8215.0
 TOTAL BASIN SLOPE (FT/FT)= .031033 CENTROID LENGTH (FT)= 4107.5

TIME OF CONCENTRATION (HRS)= .4932 TIME TO PEAK (HRS)= .3288 LAG TIME (HRS)= .3699

COMPUTE NM HYD ID=1 HYD NO=41A DA= 0.453 SQ MI
 PER A=70 PER B=0 PER C=30 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .3288

K = .290549HR TP = .328797HR K/TP RATIO = .883674 SHAPE CONSTANT, N = 4.015548
 UNIT PEAK = 490.76 CFS UNIT VOLUME = 1.000 B = 356.21 P60 = 2.2000
 AREA = .453000 SQ MI IA = .56000 INCHES INF = 1.41800 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA 41A

RUNOFF VOLUME = .93388 INCHES = 22.5624 ACRE-Feet
 PEAK DISCHARGE RATE = 423.25 CFS AT 1.700 HOURS BASIN AREA = .4530 SQ. MI.

*S

*S ADD 41A TO 40.5 TO GET 41A.9

*S
 ADD HYD ID=9 HYD NO=41A.9 ID I=1 ID II=6
 PRINT HYD ID=9 CODE=1

HYDROGRAPH FROM AREA 41A.9

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                                OUT.WPD
RUNOFF VOLUME = .78289 INCHES = 398.2478 ACRE-FEET
PEAK DISCHARGE RATE = 2344.63 CFS AT 3.200 HOURS BASIN AREA = 9.5380 SQ. MI.

*
*S
*****
*S*** SUB-BASIN 37 *****
*
COMPUTE LT TP          LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
                        NK=3 ISLOPE=-1
                        LENGTH=400 FT SLOPE=0.012 K=0.7
                        LENGTH=1600 FT SLOPE=0.010 K=2.0
                        LENGTH=10600 FT SLOPE=0.008 K=3.0
                        Kn=.033 CR=0.55

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

LAG EQUATION FACTORS:   Kn= .0330      TOTAL BASIN LENGTH (FT)= 12600.0
TOTAL BASIN SLOPE (FT/FT)= .008381    CENTROUD LENGTH (FT)= 6930.0

TIME OF CONCENTRATION (HRS)= .8922    TIME TO PEAK (HRS)= .5948    LAG TIME (HRS)= .6692

COMPUTE NM HYD          ID=1  HYD NO=37  DA= 0.590 SQ MI
                        PER A=91 PER B=0  PER C=2  PER D=7
                        TP=0.0  MASSRAIN=-1
TIME TO PEAK (hrs)= .5948

K = .331418HR  TP = .594816HR  K/TP RATIO = .557178  SHAPE CONSTANT, N = 6.908645
UNIT PEAK = 35.891 CFS  UNIT VOLUME = .9996  B = 516.91  P60 = 2.2000
AREA = .041300 SQ MI  IA = .10000 INCHES  INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .558592HR  TP = .594816HR  K/TP RATIO = .939101  SHAPE CONSTANT, N = 3.765475
UNIT PEAK = 312.92 CFS  UNIT VOLUME = 1.000  B = 339.22  P60 = 2.2000
AREA = .548700 SQ MI  IA = .64355 INCHES  INF = 1.65194 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD          ID=1  CODE=1

                                OUTFLOW HYDROGRAPH REACH 37.00

RUNOFF VOLUME = .94378 INCHES = 29.6974 ACRE-FEET
PEAK DISCHARGE RATE = 303.57 CFS AT 2.000 HOURS BASIN AREA = .5900 SQ. MI.

*S
*****
*S ROUTE 37 THRU 34 IN NATURAL ARROYO TO 34.6
*
COMPUTE RATING CURVE  CID=1 VS NO=1 NO SEGS=1
                        MIN ELEV=5769.66 MAX ELEV=5778.71
                        CH SLOPE=0.005 FP SLOPE=0.005
                        N=0.035 DIST=500.0
DIST  ELEV  DIST  ELEV
0  5778.71  99  5771.79
180  5769.8  249  5769.66
340  5769.9  500  5775.36

RATING CURVE VALLEY SECTION 1.0
WATER FLOW FLOW TOP
SURFACE AREA RATE WIDTH
ELEV SQ FT CFS FT
5769.66 .00 .00 .00
5770.14 63.57 95.13 180.62
5770.61 157.49 385.43 213.94
5771.09 267.27 845.03 247.27
5771.56 392.93 1476.32 280.60
5772.04 533.62 2314.01 307.31
5772.52 684.86 3357.71 328.07
5772.99 845.99 4583.53 348.84
5773.47 1017.01 5993.91 369.60
5773.94 1197.91 7592.27 390.36
5774.42 1388.69 9382.70 411.12
5774.90 1589.35 11369.66 431.88
5775.37 1799.90 13565.59 452.26
5775.85 2016.83 16235.71 459.07
5776.33 2237.01 19107.10 465.88
5776.80 2460.42 22176.29 472.69
5777.28 2687.08 25440.44 479.50
5777.75 2916.98 28897.18 486.32
5778.23 3150.13 32544.57 493.13
5778.71 3386.51 36381.00 499.94

ROUTE MCUNGE          ID=5  HYD NO=34.5 INFLOW ID=1
DT=0.0 L=4007 FT NS=0 SLOPE=0.005
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 586      TABLE PTS= 20
DT= .050000          QMED= 151.79 CKMED= 3.0910
WIDTH MED= 187.12    NREACH= 14    DX= 286.21

DEPTH  AREA  Q  TRAVEL  WIDTH  ck  VEL  C  D  C1  C2  C3  Q-M  C1-M  C2-M  C3-M
(FT)  (SQ FT) (CFS) TIME(HR) (FT) (FPS) (FPS)
.00 .0 .0 1.033 .0 1.59 .66 1.000 .000 1.000 .000 .000 .0 1.000 .000 .000
.48 63.6 95.1 .744 180.6 2.63 1.50 1.654 .140 .900 .284 -.184 15.0 .944 .104 -.049
.95 157.5 385.4 .455 213.9 3.73 2.45 2.348 .337 .817 .457 -.274 218.8 .843 .374 -.216

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OUT.WPD

1.43	267.3	845.0	.352	247.3	4.66	3.16	2.934	.512	.770	.550	-.320	595.8	.787	.507	-.294
1.90	392.9	1476.3	.296	280.6	5.50	3.76	3.461	.668	.740	.610	-.350	1142.2	.746	.580	-.326
2.38	533.6	2314.0	.257	307.3	6.44	4.34	4.049	.817	.721	.659	-.380	1876.0	.729	.637	-.366
2.86	684.9	3357.7	.227	328.1	7.28	4.90	4.579	.982	.701	.695	-.396	2816.8	.712	.679	-.391
3.33	846.0	4583.5	.205	348.8	7.95	5.42	5.000	1.155	.677	.720	-.398	3952.2	.687	.708	-.395
3.81	1017.0	5993.9	.189	369.6	8.56	5.89	5.384	1.324	.657	.741	-.397	5270.8	.665	.731	-.396
4.28	1197.9	7592.3	.176	390.4	9.13	6.34	5.740	1.489	.638	.757	-.395	6775.5	.646	.749	-.395
4.76	1388.7	9382.7	.165	411.1	9.66	6.76	6.074	1.651	.622	.771	-.392	8470.1	.628	.764	-.392
5.24	1589.4	11369.7	.156	431.9	10.18	7.15	6.401	1.807	.607	.783	-.390	10359.0	.613	.777	-.389
5.71	1799.9	13565.6	.148	452.3	11.25	7.54	7.077	1.863	.625	.799	-.424	12450.4	.601	.788	-.389
6.19	2016.8	16235.7	.138	459.1	12.68	8.05	7.977	1.948	.643	.817	-.460	14877.7	.650	.811	-.461
6.67	2237.0	19107.1	.130	465.9	13.40	8.54	8.426	2.139	.630	.827	-.457	17649.2	.636	.822	-.459
7.14	2460.4	22176.3	.123	472.7	14.08	9.01	8.853	2.329	.618	.836	-.453	20620.1	.624	.832	-.455
7.62	2687.1	25440.4	.118	479.5	14.73	9.47	9.261	2.518	.606	.843	-.449	23787.3	.612	.840	-.451
8.09	2917.0	28897.2	.112	486.3	15.35	9.91	9.652	2.706	.595	.850	-.445	27148.3	.600	.847	-.447
8.57	3150.1	32544.6	.108	493.1	15.94	10.33	10.027	2.893	.584	.856	-.441	30700.8	.589	.853	-.443
9.05	3386.5	36381.0	.104	499.9	16.44	10.74	10.339	3.093	.571	.861	-.433	34443.1	.579	.859	-.438

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 12 TIMES. AVERAGE NUMBER ITERATIONS = 1.2036
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=5 CODE=1

OUTFLOW HYDROGRAPH REACH 34.50

RUNOFF VOLUME = .94294 INCHES = 29.6709 ACRE-FEET
 PEAK DISCHARGE RATE = 302.00 CFS AT 2.300 HOURS BASIN AREA = .5900 SQ. MI.

*

*S*** SUB-BASIN 34 ***

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.010 K=0.7
 LENGTH=1600 FT SLOPE=0.003 K=2.0
 LENGTH=1557 FT SLOPE=0.007 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.010000	.7000
SHALLOW FLOW PORTION	1600.0	.003000	2.0000
CHANNEL FLOW PORTION	1557.0	.007000	3.0000
TOTAL BASIN	3557.0	.005538	1.8021

TIME OF CONCENTRATION (HRS)= .7368 TIME TO PEAK (HRS)= .4912 LAG TIME (HRS)= .5526

COMPUTE NM HYD ID=2 HYD NO=34 DA= 0.129 SQ MI
 PER A=91 PER B=0 PER C=2 PER D=7
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .4912

K = .269282HR TP = .491175HR K/TP RATIO = .548239 SHAPE CONSTANT, N = 7.052719
 UNIT PEAK = 9.6288 CFS UNIT VOLUME = .9987 B = 523.75 P60 = 2.2000
 AREA = .009030 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .550303HR TP = .491175HR K/TP RATIO = 1.120381 SHAPE CONSTANT, N = 3.157504
 UNIT PEAK = 71.913 CFS UNIT VOLUME = .9998 B = 294.42 P60 = 2.2000
 AREA = .119970 SQ MI IA = .64355 INCHES INF = 1.65194 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 34.00

RUNOFF VOLUME = .94378 INCHES = 6.4932 ACRE-FEET
 PEAK DISCHARGE RATE = 70.86 CFS AT 1.850 HOURS BASIN AREA = .1290 SQ. MI.

*S

*S ADD 34 TO 34.5 TO GET 34.6

*S
 ADD HYD ID=6 HYD NO=34.6 ID I=5 ID II=2
 PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 34.60

RUNOFF VOLUME = .94309 INCHES = 36.1640 ACRE-FEET
 PEAK DISCHARGE RATE = 344.00 CFS AT 2.300 HOURS BASIN AREA = .7190 SQ. MI.

*
 *S

*S ROUTE 34.6 THRU 38 IN NATURAL ARROYO TO 34.3

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
 MIN ELEV=5749.96 MAX ELEV=5753.54
 CH SLOPE=0.014 FP SLOPE=0.014
 N=0.035 DIST=500.0
 DIST ELEV DIST ELEV

0 5750.07 77 5749.96 OUT.WPD
177 5753.54 211 5751.74
251 5750.83 287 5752.19
394 5753.47 500 5751.61

RATING CURVE VALLEY SECTION 1.0
WATER FLOW FLOW TOP
SURFACE AREA RATE WIDTH
ELEV SQ FT CFS FT
5749.96 .00 .00
5750.15 10.78 13.97 82.26
5750.34 26.78 61.08 87.53
5750.53 43.77 133.25 92.79
5750.71 61.76 227.94 98.06
5750.90 80.92 334.46 108.41
5751.09 103.10 450.78 126.95
5751.28 128.77 596.27 145.49
5751.47 157.94 773.56 164.02
5751.66 190.67 976.37 185.20
5751.84 228.19 1204.28 211.86
5752.03 270.44 1485.64 236.42
5752.22 317.34 1807.41 262.78
5752.41 370.20 2148.13 298.10
5752.60 429.71 2555.94 333.42
5752.79 495.88 3034.37 368.73
5752.98 568.71 3587.34 404.05
5753.16 648.19 4218.91 439.36
5753.35 734.33 4933.21 474.68
5753.54 826.77 5806.42 500.00

ROUTE MCUNGE ID=5 HYD NO=38.5 INFLOW ID=6
DT=0.0 L=2678 FT NS=0 SLOPE=0.014
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 600 TABLE PTS= 20
DT= .050000 QMED= 172.00 CKMED= 5.2649
WIDTH MED= 94.95 NREACH= 6 DX= 446.33

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.822	.0	2.48	.51	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.19	10.8	14.0	.574	82.3	2.45	1.30	.989	.011	.989	.000	.011	2.2	.998	.000	.002
.38	26.8	61.1	.326	87.5	3.67	2.28	1.480	.030	.976	.203	-.179	34.1	.980	.097	-.077
.57	43.8	133.2	.244	92.8	4.80	3.04	1.936	.048	.968	.330	-.298	94.3	.971	.273	-.245
.75	61.8	227.9	.202	98.1	5.51	3.69	2.221	.068	.959	.392	-.351	178.0	.964	.371	-.335
.94	80.9	334.5	.180	108.4	5.50	4.13	2.216	.090	.946	.395	-.341	279.2	.952	.391	-.343
1.13	103.1	450.8	.170	126.9	5.48	4.37	2.210	.104	.937	.396	-.334	390.8	.937	.377	-.314
1.32	128.8	596.3	.161	145.5	5.89	4.63	2.377	.111	.936	.427	-.363	521.5	.936	.410	-.346
1.51	157.9	773.6	.152	164.0	6.17	4.90	2.488	.122	.932	.446	-.378	682.7	.935	.439	-.373
1.70	190.7	976.4	.145	185.2	6.19	5.12	2.496	.136	.925	.449	-.374	872.8	.928	.446	-.374
1.88	228.2	1204.3	.141	211.9	6.38	5.28	2.571	.143	.923	.462	-.385	1088.1	.920	.444	-.363
2.07	270.4	1485.6	.135	236.4	6.78	5.49	2.734	.148	.924	.485	-.409	1342.3	.925	.477	-.402
2.26	317.3	1807.4	.131	262.8	6.72	5.70	2.709	.164	.915	.484	-.399	1643.8	.921	.488	-.409
2.45	370.2	2148.1	.128	298.1	6.66	5.80	2.688	.173	.910	.482	-.392	1975.3	.907	.470	-.377
2.64	429.7	2555.9	.125	333.4	7.05	5.95	2.845	.174	.913	.502	-.416	2349.1	.912	.492	-.403
2.83	495.9	3034.4	.122	368.7	7.42	6.12	2.994	.177	.915	.521	-.435	2791.8	.914	.511	-.425
3.02	568.7	3587.3	.118	404.0	7.78	6.31	3.138	.183	.915	.537	-.453	3307.1	.915	.528	-.443
3.20	648.2	4218.9	.114	439.4	8.13	6.51	3.279	.189	.915	.552	-.468	3899.0	.915	.544	-.459
3.39	734.3	4933.2	.111	474.7	8.85	6.72	3.567	.188	.921	.579	-.500	4571.6	.915	.559	-.474
3.58	826.8	5806.4	.106	500.0	9.53	7.02	3.843	.195	.923	.603	-.526	5363.7	.926	.601	-.528

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 6 TIMES. AVERAGE NUMBER ITERATIONS = 1.1675
DEPTH (FT) AREA (SQ FT) Q (CFS) TRAVEL TIME(HR) WIDTH (FT) ck (FPS) VEL (FPS) C D C1 C2 C3 Q-M (CFS) C1-M C2-M C3-M
.00 .0 .0 .822 .0 2.48 .51 1.000 .000 1.000 .000 .000 .0 1.000 .000 .000
.19 10.8 14.0 .574 82.3 2.45 1.30 .989 .011 .989 .000 .011 2.2 .998 .000 .002
.38 26.8 61.1 .326 87.5 2.59 2.28 1.043 .043 .959 .041 .000 34.1 .975 .025 .000
.57 43.8 133.2 .244 92.8 2.69 3.04 1.085 .085 .921 .079 .000 94.3 .940 .060 .000
.75 61.8 227.9 .202 98.1 2.81 3.69 1.132 .132 .883 .117 .000 178.0 .902 .098 .000
.94 80.9 334.5 .180 108.4 2.90 4.13 1.170 .170 .855 .145 .000 279.2 .868 .132 .000
1.13 103.1 450.8 .170 126.9 2.96 4.37 1.192 .192 .839 .161 .000 390.8 .846 .154 .000
1.32 128.8 596.3 .161 145.5 3.02 4.63 1.217 .217 .821 .179 .000 521.5 .830 .170 .000
1.51 157.9 773.6 .152 164.0 3.09 4.90 1.245 .245 .803 .197 .000 682.7 .812 .188 .000
1.70 190.7 976.4 .145 185.2 3.14 5.12 1.268 .268 .788 .212 .000 872.8 .796 .204 .000
1.88 228.2 1204.3 .141 211.9 3.19 5.28 1.285 .285 .778 .222 .000 1088.1 .783 .217 .000
2.07 270.4 1485.6 .135 236.4 3.25 5.49 1.310 .310 .764 .236 .000 1342.3 .771 .229 .000
2.26 317.3 1807.4 .131 262.8 3.31 5.70 1.333 .333 .750 .250 .000 1643.8 .757 .243 .000
2.45 370.2 2148.1 .128 298.1 3.34 5.80 1.346 .346 .743 .257 .000 1975.3 .747 .253 .000
2.64 429.7 2555.9 .125 333.4 3.38 5.95 1.363 .363 .734 .266 .000 2349.1 .738 .262 .000
2.83 495.9 3034.4 .122 368.7 3.43 6.12 1.384 .384 .723 .277 .000 2791.8 .728 .272 .000
3.02 568.7 3587.3 .118 404.0 3.49 6.31 1.407 .407 .711 .289 .000 3307.1 .716 .284 .000
3.20 648.2 4218.9 .114 439.4 3.55 6.51 1.433 .433 .698 .302 .000 3899.0 .704 .296 .000
3.39 734.3 4933.2 .111 474.7 3.62 6.72 1.460 .460 .685 .315 .000 4571.6 .691 .309 .000
3.58 826.8 5806.4 .106 500.0 3.72 7.02 1.500 .500 .667 .333 .000 5363.7 .676 .324 .000
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 26 TIMES. AVERAGE NUMBER ITERATIONS = 1.1217
Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
PRINT HYD ID=5 CODE=1

OUTFLOW HYDROGRAPH REACH 38.50

RUNOFF VOLUME = .94104 INCHES = 36.0856 ACRE-Feet
PEAK DISCHARGE RATE = 341.68 CFS AT 2.550 HOURS BASIN AREA = .7190 SQ. MI.

*

*S*** SUB-BASIN 38A ***

*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=2 ISLOPE=-1
LENGTH=400 FT SLOPE=0.010 K=0.7
LENGTH=1373 FT SLOPE=0.008 K=2.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

OUT.WPD

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.010000	.7000
SHALLOW FLOW PORTION	1373.0	.008000	2.0000
CHANNEL FLOW PORTION	.0	.000000	.0000
TOTAL BASIN	1773.0	.008451	1.4404

TIME OF CONCENTRATION (HRS)= .3719 TIME TO PEAK (HRS)= .2480 LAG TIME (HRS)= .2789

COMPUTE NM HYD ID=1 HYD NO=38A DA= 0.075 SQ MI
PER A=100 PER B=0 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .2480

K = .292969HR TP = .247955HR K/TP RATIO = 1.181541 SHAPE CONSTANT, N = 3.003796
UNIT PEAK = 85.337 CFS UNIT VOLUME = .9997 B = 282.13 P60 = 2.2000
AREA = .075000 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA 38A

RUNOFF VOLUME = .77294 INCHES = 3.0917 ACRE-FEET
PEAK DISCHARGE RATE = 61.94 CFS AT 1.650 HOURS BASIN AREA = .0750 SQ. MI.

*S

*S ROUTE 38A THRU 38 IN NATURAL ARROYO TO 34.3
*

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5742.94 MAX ELEV=5751.34
CH SLOPE=0.014 FP SLOPE=0.014
N=0.035 DIST=650.0
DIST ELEV DIST ELEV
0 5751.34 136 5745.99
243 5743.74 326 5742.94
440 5745.94 517 5747.36
650 5743.89

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5742.94	.00	.00	.00
5743.38	13.84	25.40	62.62
5743.82	55.15	164.47	120.55
5744.27	119.48	469.33	172.75
5744.71	207.91	983.48	227.50
5745.15	320.54	1752.53	282.24
5745.59	457.36	2815.96	336.99
5746.03	618.42	4207.28	392.30
5746.48	803.29	5986.73	444.43
5746.92	1011.20	8159.82	496.57
5747.36	1242.15	10756.41	548.70
5747.80	1487.14	14323.43	560.03
5748.24	1737.10	18312.47	571.26
5748.68	1992.02	22710.20	582.50
5749.13	2251.90	27507.32	593.73
5749.57	2516.75	32696.66	604.96
5750.01	2786.56	38272.65	616.20
5750.45	3061.34	44230.98	627.43
5750.89	3341.08	50568.35	638.67
5751.34	3625.79	57282.28	649.90

ROUTE MCUNGE ID=2 HYD NO=38.2 INFLOW ID=1
DT=0.0 L=3283 FT NS=0 SLOPE=0.014
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 168
DT= .050000
WIDTH MED= 64.94
TABLE PTS= 20
QMED= 30.97
NREACH= 11
CKMED= 3.3662
DX= 298.45

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.688	.0	1.66	.82	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.44	13.8	25.4	.497	62.6	2.60	1.84	1.567	.037	.971	.232	-.203	4.0	.995	.037	-.032
.88	55.1	164.5	.306	120.6	4.21	2.98	2.538	.078	.957	.447	-.404	77.2	.961	.350	-.311
1.33	119.5	469.3	.232	172.8	5.37	3.93	3.240	.121	.944	.541	-.486	297.3	.947	.489	-.436
1.77	207.9	983.5	.193	227.5	6.39	4.73	3.856	.162	.936	.601	-.537	704.3	.937	.568	-.505
2.21	320.5	1752.5	.167	282.2	7.36	5.47	4.438	.202	.928	.645	-.574	1343.8	.930	.622	-.552
2.65	457.4	2816.0	.148	337.0	8.26	6.16	4.979	.242	.922	.679	-.601	2258.1	.924	.661	-.585
3.09	618.4	4207.3	.134	392.3	9.15	6.80	5.517	.281	.917	.706	-.623	3483.8	.918	.691	-.608
3.54	803.3	5986.7	.122	444.4	10.07	7.45	6.076	.320	.913	.730	-.643	5066.8	.915	.718	-.633
3.98	1011.2	8159.8	.113	496.6	10.88	8.07	6.561	.362	.909	.748	-.656	7041.8	.910	.738	-.648
4.42	1242.2	10756.4	.105	548.7	12.59	8.66	7.591	.373	.917	.777	-.694	9425.4	.906	.755	-.661
4.86	1487.1	14323.4	.095	560.0	15.28	9.63	9.217	.401	.925	.812	-.736	12490.4	.927	.803	-.730
5.30	1737.1	18312.5	.087	571.3	16.63	10.54	10.027	.461	.920	.826	-.746	16270.8	.922	.819	-.741
5.74	1992.0	22710.2	.080	582.5	17.87	11.40	10.780	.522	.915	.837	-.753	20466.2	.917	.832	-.749
6.19	2251.9	27507.3	.075	593.7	19.04	12.22	11.485	.582	.911	.847	-.758	25065.2	.913	.842	-.755
6.63	2516.8	32696.7	.070	605.0	20.14	12.99	12.149	.642	.907	.855	-.762	30059.9	.909	.851	-.760
7.07	2786.6	38272.6	.066	616.2	21.19	13.73	12.779	.702	.903	.862	-.765	35443.8	.905	.859	-.763
7.51	3061.3	44231.0	.063	627.4	22.18	14.45	13.378	.761	.900	.868	-.767	41212.0	.901	.865	-.766
7.95	3341.1	50568.3	.060	638.7	23.13	15.14	13.950	.819	.896	.873	-.769	47360.7	.898	.871	-.768
8.40	3625.8	57282.3	.058	649.9	23.89	15.80	14.411	.883	.892	.877	-.769	53887.2	.894	.876	-.770

MAXIMUM NO. ITERATIONS FOR SOLUTION (KMAX) = 4 OCCURRED 13 TIMES. AVERAGE NUMBER ITERATIONS = 1.0719

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.688	.0	1.66	.82	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000

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                                OUT.WPD
.44  13.8  25.4  .497  62.6  1.75  1.84  1.055  .955  .947  .053  .000  4.0  .982  .018  .000
.88  55.1  164.5  .306  120.6  1.94  2.98  1.169  .169  .856  .144  .000  77.2  .901  .099  .000
1.33 119.5  469.3  .232  172.8  2.16  3.93  1.301  .301  .768  .232  .000  297.3  .809  .191  .000
1.77 207.9  983.5  .193  227.5  2.38  4.73  1.435  .435  .697  .303  .000  704.3  .730  .270  .000
2.21 320.5  1752.5  .167  282.2  2.60  5.47  1.571  .571  .637  .363  .000  1343.8  .664  .336  .000
2.65 457.4  2816.0  .148  337.0  2.83  6.16  1.707  .707  .586  .414  .000  2258.1  .609  .391  .000
3.09 618.4  4207.3  .134  392.3  3.05  6.80  1.841  .841  .543  .457  .000  3483.8  .563  .437  .000
3.54 803.3  5986.7  .122  444.4  3.29  7.45  1.981  .981  .505  .495  .000  5066.8  .523  .477  .000
3.98 1011.2  8159.8  .113  496.6  3.51  8.07  2.119  1.119  .472  .528  .000  7041.8  .487  .513  .000
4.42 1242.2  10756.4  .105  548.7  3.74  8.66  2.255  1.255  .443  .557  .000  9425.4  .457  .543  .000
4.86 1487.1  14323.4  .095  560.0  4.12  9.63  2.485  1.485  .402  .598  .000  12490.4  .422  .578  .000
5.30 1737.1  18312.5  .087  571.3  4.49  10.54  2.708  1.708  .369  .631  .000  16270.8  .385  .615  .000
5.74 1992.0  22710.2  .080  582.5  4.85  11.40  2.924  1.924  .342  .658  .000  20466.2  .355  .645  .000
6.19 2251.9  27507.3  .075  593.7  5.20  12.22  3.134  2.134  .319  .681  .000  25065.2  .330  .670  .000
6.63 2516.8  32696.7  .070  605.0  5.53  12.99  3.337  2.337  .300  .700  .000  30059.9  .309  .691  .000
7.07 2786.6  38272.6  .066  616.2  5.86  13.73  3.536  2.536  .283  .717  .000  35443.8  .291  .709  .000
7.51 3061.3  44231.0  .063  627.4  6.18  14.45  3.729  2.729  .268  .732  .000  41212.0  .275  .725  .000
7.95 3341.1  50568.3  .060  638.7  6.50  15.14  3.917  2.917  .255  .745  .000  47360.7  .262  .738  .000
8.40 3625.8  57282.3  .058  649.9  6.80  15.80  4.102  3.102  .244  .756  .000  53887.2  .249  .751  .000
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 13 TIMES. AVERAGE NUMBER ITERATIONS = 1.0497
Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
PRINT HYD ID=2 CODE=1

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OUTFLOW HYDROGRAPH REACH 38.20

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RUNOFF VOLUME = .76747 INCHES = 3.0699 ACRE-FEET
PEAK DISCHARGE RATE = 60.56 CFS AT 2.150 HOURS BASIN AREA = .0750 SQ. MI.

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*S ADD 38.2 TO 38.5 TO GET 34.3
*S
ADD HYD ID=3 HYD NO=34.3 ID I=2 ID II=5
PRINT HYD ID=3 CODE=1
                                OUTFLOW HYDROGRAPH REACH 34.30

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RUNOFF VOLUME = .92465 INCHES = 39.1554 ACRE-FEET
PEAK DISCHARGE RATE = 365.25 CFS AT 2.500 HOURS BASIN AREA = .7940 SQ. MI.

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*S** SUB-BASIN 38 ***
*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.012 K=0.7
LENGTH=1600 FT SLOPE=0.022 K=2.0
LENGTH=960 FT SLOPE=0.012 K=3.0

```

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.012000	.7000
SHALLOW FLOW PORTION	1600.0	.022000	2.0000
CHANNEL FLOW PORTION	960.0	.012000	3.0000
TOTAL BASIN	2960.0	.017405	1.6581

TIME OF CONCENTRATION (HRS)= .3759 TIME TO PEAK (HRS)= .2506 LAG TIME (HRS)= .2819

```

COMPUTE NM HYD ID=1 HYD NO=38 DA= 0.131 SQ MI
PER A=96 PER B=4 PER C=0 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .2506
K = .280370HR TP = .250578HR K/TP RATIO = 1.118894 SHAPE CONSTANT, N = 3.161508
UNIT PEAK = 154.09 CFS UNIT VOLUME = 1.000 B = 294.74 P60 = 2.2000
AREA = .131000 SQ MI IA = .64400 INCHES INF = 1.65320 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

```

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

```

PRINT HYD ID=1 CODE=1
                                OUTFLOW HYDROGRAPH REACH 38.00

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RUNOFF VOLUME = .78335 INCHES = 5.4729 ACRE-FEET
PEAK DISCHARGE RATE = 112.92 CFS AT 1.650 HOURS BASIN AREA = .1310 SQ. MI.

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*S ADD 38 TO 34.3 TO GET 38.4
*S
ADD HYD ID=4 HYD NO=38.4 ID I=1 ID II=3
PRINT HYD ID=4 CODE=1
                                OUTFLOW HYDROGRAPH REACH 38.40

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RUNOFF VOLUME = .90463 INCHES = 44.6283 ACRE-FEET
PEAK DISCHARGE RATE = 374.96 CFS AT 2.500 HOURS BASIN AREA = .9250 SQ. MI.

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OUT.WPD

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*S ROUTE 38.4 THRU 42 IN NATURAL ARROYO TO 42.3

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COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5692.77 MAX ELEV=5703.76
CH SLOPE=0.03 FP SLOPE=0.03
N=0.035 DIST=500.0
DIST ELEV DIST ELEV
0 5703.76 112 5700.06
214 5695.01 251 5692.77
288 5695.93 348 5700.22
410 5701.04 500 5702.54

RATING CURVE VALLEY SECTION 1.0
WATER FLOW FLOW TOP
SURFACE AREA RATE WIDTH
ELEV SQ FT CFS FT
5692.77 .00 .00
5693.35 4.73 15.17 16.33
5693.93 18.90 96.35 32.67
5694.51 42.53 284.07 49.00
5695.08 75.61 610.21 65.61
5695.66 118.92 1100.15 84.07
5696.24 173.01 1792.22 103.24
5696.82 238.47 2722.26 123.02
5697.40 315.37 3927.34 142.80
5697.98 403.71 5436.44 162.57
5698.56 503.50 7277.25 182.35
5699.13 614.74 9476.35 202.13
5699.71 737.42 12059.36 221.91
5700.29 871.97 14789.60 248.45
5700.87 1033.45 16951.72 309.72
5701.45 1229.08 20301.36 364.60
5702.03 1455.16 24604.75 416.84
5702.61 1711.32 29971.46 465.09
5703.19 1985.49 37460.37 482.60
5703.76 2269.80 45728.79 500.00

ROUTE MCUNGE ID=6 HYD NO=42.6 INFLOW ID=4
DT=0.0 L=4626 FT NS=0 SLOPE=0.030
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 600 TABLE PTS= 20 7.9453
DT= .050000 QMED= 187.48 CKMED=
WIDTH MED= 40.60 NREACH= 7 DX= 660.86

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.548	.0	3.67	1.48	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.58	4.7	15.2	.400	16.3	4.48	3.21	1.220	.010	.991	.103	-.094	2.4	.999	.016	-.015
1.16	18.9	96.3	.252	32.7	7.09	5.10	1.931	.021	.986	.323	-.308	45.2	.987	.209	-.196
1.74	42.5	284.1	.192	49.0	9.08	6.68	2.473	.032	.982	.429	-.411	177.3	.982	.369	-.351
2.31	75.6	610.2	.159	65.6	10.77	8.07	2.934	.044	.978	.497	-.475	432.5	.979	.460	-.439
2.89	118.9	1100.1	.139	84.1	12.17	9.25	3.315	.054	.975	.542	-.517	838.9	.976	.514	-.490
3.47	173.0	1792.2	.124	103.2	13.59	10.36	3.702	.064	.973	.580	-.553	1428.3	.973	.558	-.532
4.05	238.5	2722.3	.113	123.0	15.01	11.42	4.088	.074	.971	.613	-.584	2237.5	.971	.594	-.566
4.63	315.4	3927.3	.103	142.8	16.44	12.45	4.477	.084	.970	.640	-.610	3303.2	.970	.625	-.595
5.21	403.7	5436.4	.095	162.6	17.82	13.47	4.854	.095	.968	.664	-.632	4658.7	.969	.651	-.620
5.79	503.5	7277.3	.089	182.4	19.16	14.45	5.218	.105	.967	.684	-.650	6332.1	.967	.673	-.640
6.36	614.7	9476.3	.083	202.1	20.46	15.42	5.572	.116	.965	.701	-.666	8350.7	.966	.692	-.658
6.94	737.4	12059.4	.079	221.9	20.80	16.35	5.665	.132	.961	.706	-.667	10740.4	.965	.708	-.673
7.52	872.0	14789.6	.076	248.4	17.21	16.96	4.686	.175	.940	.659	-.599	13401.5	.957	.697	-.654
8.10	1033.5	16951.7	.078	309.7	15.36	16.40	4.182	.180	.933	.627	-.560	15855.6	.911	.587	-.499
8.68	1229.1	20301.4	.078	364.6	18.12	16.52	4.937	.155	.949	.672	-.621	18601.2	.944	.657	-.601
9.26	1455.2	24604.8	.076	416.8	20.02	16.91	5.452	.149	.955	.697	-.652	22419.1	.952	.684	-.636
9.84	1711.3	29971.5	.073	465.1	23.67	17.51	6.448	.137	.964	.736	-.700	27244.2	.957	.709	-.666
10.42	1985.5	37460.4	.068	482.6	28.23	18.87	7.690	.139	.969	.773	-.742	33638.8	.969	.767	-.736
10.99	2269.8	45728.8	.064	500.0	29.60	20.15	8.062	.156	.966	.783	-.749	41519.4	.968	.779	-.747

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 11 TIMES. AVERAGE NUMBER ITERATIONS = 1.2442
DEPTH AREA Q TRAVEL WIDTH ck VEL C D C1 C2 C3 Q-M C1-M C2-M C3-M
(FT) (SQ FT) (CFS) TIME(HR) (FT) (FPS) (FPS)
.00 .0 .0 .548 .0 3.67 1.48 1.000 .000 1.000 .000 .000 .0 1.000 .000 .000
.58 4.7 15.2 .400 16.3 3.72 3.21 1.013 .013 .988 .012 .000 2.4 .996 .004 .000
1.16 18.9 96.3 .252 32.7 3.81 5.10 1.039 .039 .962 .038 .000 45.2 .976 .024 .000
1.74 42.5 284.1 .192 49.0 3.94 6.68 1.074 .074 .931 .069 .000 177.3 .947 .053 .000
2.31 75.6 610.2 .159 65.6 4.09 8.07 1.115 .115 .897 .103 .000 432.5 .913 .087 .000
2.89 118.9 1100.1 .139 84.1 4.24 9.25 1.156 .156 .865 .135 .000 838.9 .881 .119 .000
3.47 173.0 1792.2 .124 103.2 4.40 10.36 1.199 .199 .834 .166 .000 1428.3 .849 .151 .000
4.05 238.5 2722.3 .113 123.0 4.57 11.42 1.244 .244 .804 .196 .000 2237.5 .818 .182 .000
4.63 315.4 3927.3 .103 142.8 4.74 12.45 1.292 .292 .774 .226 .000 3303.2 .788 .212 .000
5.21 403.7 5436.4 .095 162.6 4.93 13.47 1.342 .342 .745 .255 .000 4658.7 .759 .241 .000
5.79 503.5 7277.3 .089 182.4 5.12 14.45 1.393 .393 .718 .282 .000 6332.1 .731 .269 .000
6.36 614.7 9476.3 .083 202.1 5.31 15.42 1.446 .446 .692 .308 .000 8350.7 .704 .296 .000
6.94 737.4 12059.4 .079 221.9 5.50 16.35 1.498 .498 .667 .333 .000 10740.4 .679 .321 .000
7.52 872.0 14789.6 .076 248.4 5.63 16.96 1.533 .533 .652 .348 .000 13401.5 .659 .341 .000
8.10 1033.5 16951.7 .078 309.7 5.51 16.40 1.501 .501 .666 .334 .000 15855.6 .660 .340 .000
8.68 1229.1 20301.4 .078 364.6 5.53 16.52 1.507 .507 .663 .337 .000 18601.2 .665 .335 .000
9.26 1455.2 24604.8 .076 416.8 5.62 16.91 1.530 .530 .654 .346 .000 22419.1 .658 .342 .000
9.84 1711.3 29971.5 .073 465.1 5.75 17.51 1.566 .566 .639 .361 .000 27244.2 .648 .354 .000
10.42 1985.5 37460.4 .068 482.6 6.05 18.87 1.647 .647 .607 .393 .000 33638.8 .622 .378 .000
10.99 2269.8 45728.8 .064 500.0 6.34 20.15 1.727 .727 .579 .421 .000 41519.4 .592 .408 .000
MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 35 TIMES. AVERAGE NUMBER ITERATIONS = 1.1544
Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 42.60

RUNOFF VOLUME = .90383 INCHES = 44.5886 ACRE-Feet
PEAK DISCHARGE RATE = 372.75 CFS AT 2.850 HOURS BASIN AREA = .9250 SQ. MI.
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OUT.WPD

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*S*** SUB-BASIN 42 ****

*

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.020 K=0.7
LENGTH=1600 FT SLOPE=0.025 K=2.0
LENGTH=4881 FT SLOPE=0.030 K=3.0
Kn=.033 CR=.5

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.020000	.7000
SHALLOW FLOW PORTION	1600.0	.025000	2.0000
CHANNEL FLOW PORTION	4881.0	.030000	3.0000
TOTAL BASIN	6881.0	.028256	2.2135

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 6881.0
TOTAL BASIN SLOPE (FT/FT)= .028256 CENTROUD LENGTH (FT)= 3440.5

TIME OF CONCENTRATION (HRS)= .4378 TIME TO PEAK (HRS)= .2919 LAG TIME (HRS)= .3283

COMPUTE NM HYD ID=1 HYD NO=42 DA= 0.576 SQ MI
PER A=90 PER B=0 PER C=10 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .2919

K = .269530HR TP = .291863HR K/TP RATIO = .923479 SHAPE CONSTANT, N = 3.832134
UNIT PEAK = 678.53 CFS UNIT VOLUME = 1.000 B = 343.82 P60 = 2.2000
AREA = .576000 SQ MI IA = .62000 INCHES INF = 1.58600 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 42.00

RUNOFF VOLUME = .82537 INCHES = 25.3553 ACRE-FEET
PEAK DISCHARGE RATE = 521.89 CFS AT 1.650 HOURS BASIN AREA = .5760 SQ. MI.

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*S ADD 42 TO 38.9 TO GET 42.3

*S

ADD HYD ID=3 HYD NO=42.3 ID I=1 ID II=6
PRINT HYD ID=3 CODE=1

OUTFLOW HYDROGRAPH REACH 42.30

RUNOFF VOLUME = .87372 INCHES = 69.9439 ACRE-FEET
PEAK DISCHARGE RATE = 524.68 CFS AT 1.700 HOURS BASIN AREA = 1.5010 SQ. MI.

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*S*** SUB-BASIN 42A ****

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COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.055 K=0.7
LENGTH=1600 FT SLOPE=0.040 K=2.0
LENGTH=2240 FT SLOPE=0.033 K=3.0
Kn=.033 CR=.5

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.055000	.7000
SHALLOW FLOW PORTION	1600.0	.040000	2.0000
CHANNEL FLOW PORTION	2240.0	.033000	3.0000
TOTAL BASIN	4240.0	.037717	2.0700

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 4240.0
TOTAL BASIN SLOPE (FT/FT)= .037717 CENTROUD LENGTH (FT)= 2120.0

TIME OF CONCENTRATION (HRS)= .2877 TIME TO PEAK (HRS)= .1918 LAG TIME (HRS)= .2158

COMPUTE NM HYD ID=1 HYD NO=42A DA= 0.317 SQ MI
PER A=90 PER B=0 PER C=10 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .1918

K = .177116HR TP = .191793HR K/TP RATIO = .923479 SHAPE CONSTANT, N = 3.832134
UNIT PEAK = 568.27 CFS UNIT VOLUME = 1.000 B = 343.82 P60 = 2.2000
AREA = .317000 SQ MI IA = .62000 INCHES INF = 1.58600 INCHES PER HOUR

OUT.WPD
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000
BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.
PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA 42A

RUNOFF VOLUME = .82537 INCHES = 13.9542 ACRE-Feet
PEAK DISCHARGE RATE = 407.45 CFS AT 1.550 HOURS BASIN AREA = .3170 SQ. MI.

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*S ADD 42 TO 38.9 TO GET 42A.4
*S
ADD HYD ID=4 HYD NO=42A.4 ID I=1 ID II=3
PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA 42A.4

RUNOFF VOLUME = .86529 INCHES = 83.8981 ACRE-Feet
PEAK DISCHARGE RATE = 883.01 CFS AT 1.600 HOURS BASIN AREA = 1.8180 SQ. MI.

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*S ROUTE 42A.4 THRU UPPER 41B IN NATURAL ARROYO TO 41B.52
*

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5556.25 MAX ELEV=5561.32
CH SLOPE=0.0195 FP SLOPE=0.0195
N=0.035 DIST=400.0
DIST ELEV DIST ELEV
0 5561.13 62 5558.07
199 5556.25 288 5558.06
400 5561.32

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5556.25	.00	.00	.00
5556.52	4.42	6.84	33.18
5556.78	17.69	43.44	66.36
5557.05	39.81	128.09	99.54
5557.32	70.76	275.85	132.72
5557.58	110.57	500.15	165.90
5557.85	159.22	813.30	199.07
5558.12	216.63	1238.07	228.87
5558.38	279.59	1817.78	243.43
5558.65	346.43	2499.58	257.99
5558.92	417.15	3284.18	272.55
5559.18	491.76	4172.95	287.12
5559.45	570.25	5167.68	301.68
5559.72	652.61	6270.46	316.24
5559.98	738.86	7483.55	330.80
5560.25	829.00	8809.37	345.36
5560.52	923.01	10250.39	359.92
5560.78	1020.91	11809.18	374.49
5561.05	1122.69	13488.33	389.05
5561.32	1228.00	15378.95	399.85

ROUTE MCUNGE ID=51 HYD NO=41B.51 INFLOW ID=4
DT=0.0 L=2296 FT NS=0 SLOPE=0.0195
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 600 TABLE PTS= 20
DT=.050000 QMED= 441.51 CKMED= 5.6349
WIDTH MED= 157.22 NREACH= 5 DX= 459.20

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.565	.0	2.55	.71	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.27	4.4	6.8	.412	33.2	2.53	1.55	.991	.009	.991	.000	.009	1.1	.999	.000	.001
.53	17.7	43.4	.260	66.4	3.42	2.46	1.339	.021	.982	.153	-.135	20.4	.983	.032	-.015
.80	39.8	128.1	.198	99.5	4.38	3.22	1.718	.033	.976	.273	-.249	79.9	.977	.204	-.181
1.07	70.8	275.8	.164	132.7	5.27	3.90	2.064	.044	.972	.357	-.328	195.3	.973	.310	-.283
1.33	110.6	500.1	.141	165.9	6.08	4.52	2.385	.055	.968	.419	-.387	380.7	.969	.385	-.354
1.60	159.2	813.3	.125	199.1	6.94	5.11	2.722	.066	.965	.472	-.437	648.8	.965	.441	-.406
1.87	216.6	1238.1	.112	228.9	8.19	5.72	3.209	.074	.966	.533	-.499	1016.8	.964	.498	-.462
2.13	279.6	1817.8	.098	243.4	9.74	6.50	3.817	.086	.965	.592	-.557	1517.2	.967	.573	-.540
2.40	346.4	2499.6	.088	258.0	10.67	7.22	4.184	.101	.962	.622	-.583	2148.4	.963	.607	-.570
2.67	417.2	3284.2	.081	272.6	11.53	7.87	4.518	.117	.959	.645	-.604	2881.9	.960	.633	-.593
2.93	491.8	4172.9	.075	287.1	12.31	8.49	4.827	.132	.956	.664	-.620	3718.8	.957	.655	-.612
3.20	570.2	5167.7	.070	301.7	13.05	9.06	5.115	.147	.953	.681	-.634	4660.7	.954	.672	-.627
3.47	652.6	6270.5	.066	316.2	13.74	9.61	5.387	.161	.951	.695	-.645	5709.6	.952	.688	-.639
3.73	738.9	7483.6	.063	330.8	14.40	10.13	5.645	.175	.949	.707	-.655	6867.6	.950	.701	-.650
4.00	829.0	8809.4	.060	345.4	15.03	10.63	5.892	.190	.946	.718	-.664	8137.1	.947	.712	-.659
4.27	923.0	10250.4	.057	359.9	15.64	11.11	6.130	.203	.945	.727	-.672	9520.5	.945	.722	-.668
4.53	1020.9	11809.2	.055	374.5	16.22	11.57	6.359	.217	.943	.736	-.679	11020.5	.943	.732	-.675
4.80	1122.7	13488.3	.053	389.0	17.19	12.01	6.736	.225	.943	.749	-.692	12639.4	.942	.740	-.682
5.07	1228.0	15378.9	.051	399.8	18.14	12.52	7.110	.237	.943	.760	-.704	14422.8	.945	.758	-.693
MAXIMUM NO. ITERATIONS FOR SOLUTION (KMAX) = 6 OCCURRED 1 TIMES. AVERAGE NUMBER ITERATIONS = 1.2403															
DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.565	.0	2.55	.71	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.27	4.4	6.8	.412	33.2	2.53	1.55	.991	.009	.991	.000	.009	1.1	.999	.000	.001
.53	17.7	43.4	.260	66.4	2.62	2.46	1.028	.028	.973	.027	.000	20.4	.983	.017	.000
.80	39.8	128.1	.198	99.5	2.69	3.22	1.053	.053	.949	.051	.000	79.9	.961	.039	.000

OUT.WPD

1.07	70.8	275.8	.164	132.7	2.77	3.90	1.084	.084	.923	.077	.000	195.3	.936	.064	.000
1.33	110.6	500.1	.141	165.9	2.85	4.52	1.118	.118	.894	.106	.000	380.7	.908	.092	.000
1.60	159.2	813.3	.125	199.1	2.95	5.11	1.155	.155	.866	.134	.000	648.8	.880	.120	.000
1.87	216.6	1238.1	.112	228.9	3.06	5.72	1.198	.198	.835	.165	.000	1016.8	.850	.150	.000
2.13	279.6	1817.8	.098	243.4	3.21	6.50	1.260	.260	.794	.206	.000	1517.2	.814	.186	.000
2.40	346.4	2499.6	.088	258.0	3.37	7.22	1.321	.321	.757	.243	.000	2148.4	.775	.225	.000
2.67	417.2	3284.2	.081	272.6	3.52	7.87	1.382	.382	.724	.276	.000	2881.9	.740	.260	.000
2.93	491.8	4172.9	.075	287.1	3.68	8.49	1.441	.441	.694	.306	.000	3718.8	.708	.292	.000
3.20	570.2	5167.7	.070	301.7	3.83	9.06	1.500	.500	.667	.333	.000	4660.7	.680	.320	.000
3.47	652.6	6270.5	.066	316.2	3.97	9.61	1.557	.557	.642	.358	.000	5709.6	.654	.346	.000
3.73	738.9	7483.6	.063	330.8	4.12	10.13	1.614	.614	.620	.380	.000	6867.6	.631	.369	.000
4.00	829.0	8809.4	.060	345.4	4.26	10.63	1.669	.669	.599	.401	.000	8137.1	.609	.391	.000
4.27	923.0	10250.4	.057	359.9	4.40	11.11	1.723	.723	.580	.420	.000	9520.5	.589	.411	.000
4.53	1020.9	11809.2	.055	374.5	4.53	11.57	1.777	.777	.563	.437	.000	11020.5	.571	.429	.000
4.80	1122.7	13488.3	.053	389.0	4.67	12.01	1.830	.830	.547	.453	.000	12639.4	.554	.446	.000
5.07	1228.0	15378.9	.051	399.8	4.82	12.52	1.891	.891	.529	.471	.000	14422.8	.538	.462	.000

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 54 TIMES. AVERAGE NUMBER ITERATIONS = 1.1812
 Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
 PRINT HYD ID=51 CODE=1

HYDROGRAPH FROM AREA 41B.51

RUNOFF VOLUME = .86271 INCHES = 83.6483 ACRE-Feet
 PEAK DISCHARGE RATE = 866.44 CFS AT 1.850 HOURS BASIN AREA = 1.8180 SQ. MI.

*

 *S ROUTE 41B.52 THRU MID 41B IN NATURAL ARROYO TO 41B.5
 *

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
 MIN ELEV=5482.02 MAX ELEV=5532.32
 CH SLOPE=0.18 FP SLOPE=0.18
 N=0.035 DIST=400.0
 DIST ELEV DIST ELEV
 0 5530.30 53 5531.12
 112 5527.73 199 5482.02
 294 5527.84 400 5532.32

RATING CURVE VALLEY SECTION 1.0				TOP
WATER	FLOW	FLOW		WIDTH
SURFACE	AREA	RATE		FT
ELEV	SQ FT	CFS		
5482.02	.00	.00		.00
5484.67	13.94	280.70		10.53
5487.31	55.74	1782.35		21.06
5489.96	125.43	5254.98		31.58
5492.61	222.98	11317.26		42.11
5495.26	348.41	20519.57		52.64
5497.90	501.70	33367.11		63.17
5500.55	682.88	50331.93		73.70
5503.20	891.92	71860.30		84.22
5505.85	1128.84	98377.54		94.75
5508.49	1393.62	130291.50		105.28
5511.14	1686.29	167995.10		115.81
5513.79	2006.82	211868.50		126.34
5516.44	2355.23	262280.10		136.86
5519.08	2731.50	319588.60		147.39
5521.73	3135.66	384143.30		157.92
5524.38	3567.68	456285.50		168.45
5527.03	4027.57	536348.80		178.98
5529.67	4580.97	530426.50		259.24
5532.32	5484.07	546080.90		400.00

ROUTE MCUNGE ID=52 HYD NO=41B.52 INFLOW ID=51
 DT=0.0 L=370 FT NS=0 SLOPE=0.18
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
 ZERO VALUE HYDROGRAPH OR SHORT ROUTE - ROUTING BYPASSED
 PRINT HYD ID=52 CODE=1

HYDROGRAPH FROM AREA 41B.52

RUNOFF VOLUME = .86271 INCHES = 83.6483 ACRE-Feet
 PEAK DISCHARGE RATE = 866.44 CFS AT 1.850 HOURS BASIN AREA = 1.8180 SQ. MI.

*

 *S ROUTE 41B.5 THRU LOWER 41B IN NATURAL ARROYO TO 41B.3
 *

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
 MIN ELEV=5451.32 MAX ELEV=5462.04
 CH SLOPE=0.016 FP SLOPE=0.016
 N=0.035 DIST=300.0
 DIST ELEV DIST ELEV
 0 5462.04 103 5452.05
 150 5451.32 219 5452.73
 300 5457.13

RATING CURVE VALLEY SECTION 1.0				TOP
WATER	FLOW	FLOW		WIDTH
SURFACE	AREA	RATE		FT
ELEV	SQ FT	CFS		
5451.32	.00	.00		.00
5451.88	18.05	41.71		63.96
5452.45	67.90	270.34		106.35
5453.01	136.15	749.36		131.15
5453.58	214.75	1481.67		147.36
5454.14	302.50	2446.09		163.57

5454.71 399.40 OUT.WPD 179.78
 5455.27 505.45 5100.70 195.99
 5455.84 620.65 6810.93 212.20
 5456.40 745.01 8791.24 228.41
 5456.96 878.51 11053.14 244.62
 5457.53 1019.70 13836.65 253.49
 5458.09 1164.42 17002.18 259.31
 5458.66 1312.43 20448.90 265.13
 5459.22 1463.73 24173.38 270.95
 5459.79 1618.31 28173.12 276.77
 5460.35 1776.17 32446.41 282.59
 5460.92 1937.32 36992.16 288.41
 5461.48 2101.76 41809.76 294.23
 5462.04 2269.47 46903.77 300.00
 ROUTE MCUNGE ID=5 HYD NO=41B.5 INFLOW ID=52
 DT=0.0 L=1760 FT NS=0 SLOPE=0.016
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 600 TABLE PTS= 20
 DT= .050000 QMED= 433.22 CKMED= 7.0193
 WIDTH MED= 114.78 NREACH= 3 DX= 586.67

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.300	.0	3.26	.94	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.56	18.1	41.7	.212	64.0	3.34	2.31	1.024	.021	.980	.022	-.002	6.6	.997	.003	.000
1.13	67.9	270.3	.123	106.4	5.96	3.98	1.829	.045	.968	.304	-.273	129.3	.972	.190	-.162
1.69	136.1	749.4	.089	131.1	8.25	5.50	2.530	.074	.959	.445	-.404	482.6	.963	.384	-.346
2.26	214.7	1481.7	.071	147.4	10.25	6.90	3.145	.104	.951	.529	-.480	1089.7	.955	.493	-.448
2.82	302.5	2446.1	.060	163.6	11.78	8.09	3.613	.135	.943	.579	-.522	1939.5	.946	.555	-.501
3.39	399.4	3649.3	.054	179.8	13.11	9.14	4.022	.165	.936	.614	-.551	3024.0	.939	.597	-.536
3.95	505.5	5100.7	.048	196.0	14.31	10.09	4.391	.194	.931	.642	-.573	4351.6	.933	.628	-.561
4.52	620.7	6810.9	.045	212.2	15.43	10.97	4.733	.222	.926	.664	-.590	5932.6	.928	.653	-.580
5.08	745.0	8791.2	.041	228.4	16.47	11.80	5.053	.249	.921	.683	-.604	7777.8	.923	.673	-.596
5.64	878.5	11053.1	.039	244.6	18.20	12.58	5.584	.265	.923	.708	-.631	9898.8	.918	.690	-.609
6.21	1019.7	13836.6	.036	253.5	20.77	13.57	6.373	.280	.927	.739	-.666	12415.5	.927	.728	-.655
6.77	1164.4	17002.2	.033	259.3	22.60	14.60	6.935	.309	.925	.757	-.682	15388.5	.927	.750	-.677
7.34	1312.4	20448.9	.031	265.1	23.97	15.58	7.355	.343	.921	.770	-.691	18695.7	.923	.764	-.687
7.90	1463.7	24173.4	.030	270.9	25.27	16.51	7.752	.376	.918	.781	-.698	22282.2	.919	.776	-.695
8.47	1618.3	28173.1	.028	276.8	26.49	17.41	8.128	.409	.914	.790	-.704	26145.0	.916	.786	-.701
9.03	1776.2	32446.4	.027	282.6	27.66	18.27	8.485	.442	.911	.799	-.709	30282.2	.912	.794	-.707
9.60	1937.3	36992.2	.026	288.4	28.77	19.09	8.827	.475	.908	.806	-.714	34692.3	.909	.802	-.711
10.16	2101.8	41809.8	.025	294.2	29.85	19.89	9.158	.507	.905	.812	-.717	39374.5	.906	.809	-.715
10.72	2269.5	46903.8	.024	300.0	30.69	20.67	9.415	.543	.901	.817	-.718	44330.6	.903	.816	-.719

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 5 OCCURRED 3 TIMES. AVERAGE NUMBER ITERATIONS = 1.2378
 DEPTH AREA Q TRAVEL WIDTH ck VEL C D C1 C2 C3 Q-M C1-M C2-M C3-M
 (FT) (SQ FT) (CFS) TIME(HR) (FT) (FPS) (FPS)
 .00 .0 .0 .300 .0 3.26 .94 1.000 .000 1.000 .000 .000 .0 1.000 .000 .000
 .56 18.1 41.7 .212 64.0 3.33 2.31 1.021 .021 .980 .020 .000 6.6 .993 .007 .000
 1.13 67.9 270.3 .123 106.4 3.51 3.98 1.077 .077 .928 .072 .000 129.3 .955 .045 .000
 1.69 136.1 749.4 .089 131.1 3.78 5.50 1.161 .161 .861 .139 .000 482.6 .894 .106 .000
 2.26 214.7 1481.7 .071 147.4 4.11 6.90 1.261 .261 .793 .207 .000 1089.7 .826 .174 .000
 2.82 302.5 2446.1 .060 163.6 4.43 8.09 1.360 .360 .736 .264 .000 1939.5 .763 .237 .000
 3.39 399.4 3649.3 .054 179.8 4.74 9.14 1.456 .456 .687 .313 .000 3024.0 .710 .290 .000
 3.95 505.5 5100.7 .048 196.0 5.05 10.09 1.549 .549 .646 .354 .000 4351.6 .665 .335 .000
 4.52 620.7 6810.9 .045 212.2 5.34 10.97 1.640 .640 .610 .390 .000 5932.6 .627 .373 .000
 5.08 745.0 8791.2 .041 228.4 5.63 11.80 1.728 .728 .579 .421 .000 7777.8 .594 .406 .000
 5.64 878.5 11053.1 .039 244.6 5.91 12.58 1.814 .814 .551 .449 .000 9898.8 .564 .436 .000
 6.21 1019.7 13836.6 .036 253.5 6.28 13.57 1.926 .926 .519 .481 .000 12415.5 .534 .466 .000
 6.77 1164.4 17002.2 .033 259.3 6.67 14.60 2.047 1.047 .489 .511 .000 15388.5 .503 .497 .000
 7.34 1312.4 20448.9 .031 265.1 7.06 15.58 2.165 1.165 .462 .538 .000 18695.7 .475 .525 .000
 7.90 1463.7 24173.4 .030 270.9 7.43 16.51 2.279 1.279 .439 .561 .000 22282.2 .450 .550 .000
 8.47 1618.3 28173.1 .028 276.8 7.79 17.41 2.391 1.391 .418 .582 .000 26145.0 .428 .572 .000
 9.03 1776.2 32446.4 .027 282.6 8.15 18.27 2.501 1.501 .400 .600 .000 30282.2 .409 .591 .000
 9.60 1937.3 36992.2 .026 288.4 8.50 19.09 2.608 1.608 .383 .617 .000 34692.3 .391 .609 .000
 10.16 2101.8 41809.8 .025 294.2 8.84 19.89 2.712 1.712 .369 .631 .000 39374.5 .376 .624 .000
 10.72 2269.5 46903.8 .024 300.0 9.18 20.67 2.815 1.815 .355 .645 .000 44330.6 .362 .638 .000
 MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 42 TIMES. AVERAGE NUMBER ITERATIONS = 1.1933
 Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3
 PRINT HYD ID=5 CODE=1

HYDROGRAPH FROM AREA 41B.5

RUNOFF VOLUME = .86084 INCHES = 83.4667 ACRE-Feet
 PEAK DISCHARGE RATE = 849.73 CFS AT 1.950 HOURS BASIN AREA = 1.8180 SQ. MI.

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*S*** SUB-BASIN 41B ****

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.020 K=0.7
 LENGTH=1600 FT SLOPE=0.020 K=2.0
 LENGTH=2167 FT SLOPE=0.044 K=3.0
 Kn=.033 CR=.5

Tc And Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.020000	.7000
SHALLOW FLOW PORTION	1600.0	.020000	2.0000
CHANNEL FLOW PORTION	2167.0	.044000	3.0000
TOTAL BASIN	4167.0	.032481	1.7595

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 4167.0
 TOTAL BASIN SLOPE (FT/FT)= .032481 CENTROUD LENGTH (FT)= 2083.5

TIME OF CONCENTRATION (HRS)= .3571 TIME TO PEAK (HRS)= .2380 LAG TIME (HRS)= .2678

OUT.WPD

COMPUTE NM HYD ID=1 HYD NO=41B DA= 0.137 SQ MI

PER A=70 PER B=0 PER C=30 PER D=0

TP=0.0 MASSRAIN=-1

TIME TO PEAK (hrs)= .2380

K = .243574HR TP = .238041HR K/TP RATIO = 1.023243 SHAPE CONSTANT, N = 3.449726

UNIT PEAK = 182.24 CFS UNIT VOLUME = 1.000 B = 316.64 P60 = 2.2000

AREA = .137000 SQ MI IA = .56000 INCHES INF = 1.41800 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA 41B

RUNOFF VOLUME = .93388 INCHES = 6.8235 ACRE-Feet

PEAK DISCHARGE RATE = 150.68 CFS AT 1.600 HOURS BASIN AREA = .1370 SQ. MI.

*
*S

*S ADD 41B TO 42A.4 TO GET 41B.3
*S
ADD HYD ID=3 HYD NO=41B.3 ID I=1 ID II=5
PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA 41B.3

RUNOFF VOLUME = .86596 INCHES = 90.2903 ACRE-Feet

PEAK DISCHARGE RATE = 907.91 CFS AT 1.950 HOURS BASIN AREA = 1.9550 SQ. MI.

*
*S

*S*** SUB-BASIN 43A ****
*

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD

NK=3 ISLOPE=-1

LENGTH=400 FT SLOPE=0.038 K=0.7

LENGTH=1600 FT SLOPE=0.034 K=2.0

LENGTH=4762 FT SLOPE=0.037 K=3.0

Kn=.033 CR=.5

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.038000	.7000
SHALLOW FLOW PORTION	1600.0	.034000	2.0000
CHANNEL FLOW PORTION	4762.0	.037000	3.0000
TOTAL BASIN	6762.0	.036349	2.2849

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 6762.0

TOTAL BASIN SLOPE (FT/FT)= .036349 CENTROUD LENGTH (FT)= 3381.0

TIME OF CONCENTRATION (HRS)= .3939 TIME TO PEAK (HRS)= .2626 LAG TIME (HRS)= .2954

COMPUTE NM HYD ID=2 HYD NO=43A DA= 0.186 SQ MI

PER A=80 PER B=10 PER C=10 PER D=0

TP=0.0 MASSRAIN=-1

TIME TO PEAK (hrs)= .2626

K = .269750HR TP = .262593HR K/TP RATIO = 1.027254 SHAPE CONSTANT, N = 3.436280

UNIT PEAK = 223.58 CFS UNIT VOLUME = 1.000 B = 315.65 P60 = 2.2000

AREA = .186000 SQ MI IA = .60500 INCHES INF = 1.54400 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

HYDROGRAPH FROM AREA 43A

RUNOFF VOLUME = .85144 INCHES = 8.4462 ACRE-Feet

PEAK DISCHARGE RATE = 176.43 CFS AT 1.650 HOURS BASIN AREA = .1860 SQ. MI.

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*S

*S ADD 43A TO 41B.3 TO GET 43A.6
*S
ADD HYD ID=6 HYD NO=43A.6 ID I=2 ID II=3
PRINT HYD ID=6 CODE=1

HYDROGRAPH FROM AREA 43A.6

RUNOFF VOLUME = .86470 INCHES = 98.7365 ACRE-Feet

PEAK DISCHARGE RATE = 987.14 CFS AT 1.950 HOURS BASIN AREA = 2.1410 SQ. MI.

OUT.WPD
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*S

*S ADD 43A.6 TO 41A.9 TO GET 41A.7
*S
ADD HYD ID=7 HYD NO=41A.7 ID I=6 ID II=9
PRINT HYD ID=7 CODE=1

HYDROGRAPH FROM AREA 41A.7

RUNOFF VOLUME = .79789 INCHES = 496.9843 ACRE-Feet
PEAK DISCHARGE RATE = 2765.54 CFS AT 3.200 HOURS BASIN AREA = 11.6790 SQ. MI.

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*S ROUTE 41A.7 THRU 43 IN NATURAL ARROYO TO 43.3
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COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5412.0 MAX ELEV=5437.18
CH SLOPE=0.009 FP SLOPE=0.009
N=0.035 DIST=600.0
DIST ELEV DIST ELEV
0 5437.18 131 5420.64
248 5414.98 300 5412.0
362 5413.9 488 5419.34
600 5424.41

RATING CURVE VALLEY SECTION 1.0
WATER FLOW FLOW TOP
SURFACE AREA RATE WIDTH
ELEV SQ FT CFS FT
5412.00 .00 .00
5413.33 43.98 134.55 66.37
5414.65 173.24 863.91 125.63
5415.98 376.98 2459.75 182.66
5417.30 657.53 5171.28 240.74
5418.63 1015.05 9232.20 298.83
5419.95 1449.34 14866.76 356.26
5421.28 1956.43 22508.80 404.82
5422.60 2519.24 32224.46 444.58
5423.93 3134.75 43809.27 484.35
5425.25 3795.14 58548.43 505.53
5426.58 4472.01 75913.80 516.02
5427.90 5162.80 95153.55 526.52
5429.23 5867.49 116221.90 537.01
5430.55 6586.09 139083.70 547.51
5431.88 7318.60 163712.00 558.01
5433.20 8065.02 190086.00 568.50
5434.53 8825.35 218189.80 579.00
5435.85 9599.59 248011.70 589.49
5437.18 10387.74 279542.90 599.99

ROUTE MCUNGE ID=5 HYD NO=43.5 INFLOW ID=7
DT=0.0 L=4200 FT NS=0 SLOPE=0.009
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 600 TABLE PTS= 20
DT= .050000 QMED= 1382.77 CKMED= 7.8326
WIDTH MED= 144.17 NREACH= 6 DX= 700.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.529	.0	3.89	1.35	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
1.33	44.0	134.5	.381	66.4	4.32	3.06	1.112	.074	.932	.085	-.017	21.2	.989	.013	-.003
2.65	173.2	863.9	.234	125.6	7.03	4.99	1.807	.155	.895	.325	-.220	407.5	.906	.218	-.123
3.98	377.0	2459.8	.179	182.7	8.91	6.52	2.292	.240	.864	.434	-.298	1557.6	.870	.374	-.244
5.30	657.5	5171.3	.148	240.7	10.63	7.86	2.734	.321	.842	.507	-.349	3698.3	.846	.468	-.315
6.63	1015.0	9232.2	.128	298.8	12.26	9.10	3.152	.400	.824	.561	-.385	7073.2	.828	.532	-.360
7.95	1449.3	14866.8	.114	356.3	14.04	10.26	3.610	.472	.814	.606	-.421	11910.3	.813	.581	-.394
9.28	1956.4	22508.8	.101	404.8	16.18	11.51	4.160	.546	.809	.649	-.458	18530.5	.811	.630	-.441
10.60	2519.2	32224.5	.091	444.6	18.10	12.79	4.656	.635	.798	.682	-.480	27199.9	.804	.668	-.472
11.93	3134.7	43809.3	.083	484.4	20.41	13.98	5.248	.704	.798	.712	-.510	37850.7	.789	.693	-.483
13.25	3795.1	58548.4	.076	505.5	23.93	15.43	6.153	.768	.806	.748	-.553	50974.3	.806	.734	-.540
14.58	4472.0	75913.8	.069	516.0	26.79	16.98	6.889	.872	.801	.772	-.573	67013.7	.807	.762	-.569
15.90	5162.8	95153.5	.063	526.5	28.91	18.43	7.433	.992	.789	.788	-.577	85325.9	.795	.780	-.575
17.23	5867.5	116221.9	.059	537.0	30.88	19.81	7.942	1.112	.779	.801	-.580	105488.0	.784	.795	-.578
18.55	6586.1	139083.7	.055	547.5	32.74	21.12	8.420	1.231	.769	.812	-.581	127459.8	.773	.807	-.580
19.88	7318.6	163712.0	.052	558.0	34.50	22.37	8.872	1.350	.759	.822	-.581	151210.7	.764	.817	-.581
21.20	8065.0	190086.0	.049	568.5	36.17	23.57	9.301	1.467	.751	.830	-.581	176716.8	.755	.826	-.581
22.53	8825.4	218189.8	.047	579.0	37.76	24.72	9.710	1.584	.742	.837	-.580	203960.1	.746	.834	-.580
23.85	9599.6	248011.7	.045	589.5	39.28	25.84	10.101	1.700	.734	.844	-.578	232926.8	.738	.841	-.579
25.1810387.7	279542.9	.043	600.0	40.49	26.91	26.91	10.412	1.826	.724	.849	-.573	263606.8	.730	.847	-.577

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 16 TIMES. AVERAGE NUMBER ITERATIONS = 1.4084
Equations solved using the Ponce correction to C2
PRINT HYD ID=5 CODE=1

OUTFLOW HYDROGRAPH REACH 43.50

RUNOFF VOLUME = .79768 INCHES = 496.8588 ACRE-Feet
PEAK DISCHARGE RATE = 2756.11 CFS AT 3.350 HOURS BASIN AREA = 11.6790 SQ. MI.

*

*S*** SUB-BASIN 43 ***

*
COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.0204 K=0.7

OUT.WPD

LENGTH=1600 FT SLOPE=0.009 K=2.0
 LENGTH=3052 FT SLOPE=0.017 K=3.0
 Kn=.033 CR=.5

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.020400	.7000
SHALLOW FLOW PORTION	1600.0	.009000	2.0000
CHANNEL FLOW PORTION	3052.0	.017000	3.0000
TOTAL BASIN	5052.0	.014736	2.0566

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 5052.0
 TOTAL BASIN SLOPE (FT/FT)= .014736 CENTROUD LENGTH (FT)= 2526.0

TIME OF CONCENTRATION (HRS)= .4868 TIME TO PEAK (HRS)= .3246 LAG TIME (HRS)= .3651

COMPUTE NM HYD ID=1 HYD NO=43 DA= 0.170 SQ MI
 PER A=80 PER B=10 PER C=10 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .3246

K = .338074HR TP = .324560HR K/TP RATIO = 1.041638 SHAPE CONSTANT, N = 3.389136
 UNIT PEAK = 163.50 CFS UNIT VOLUME = 1.000 B = 312.15 P60 = 2.2000
 AREA = .170000 SQ MI IA = .60500 INCHES INF = 1.54400 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 43.00

RUNOFF VOLUME = .85144 INCHES = 7.7197 ACRE-FEET
 PEAK DISCHARGE RATE = 132.49 CFS AT 1.700 HOURS BASIN AREA = .1700 SQ. MI.

*
 *S

 *S ADD 43 TO 41A.7 TO GET 43.3
 *S
 ADD HYD ID=3 HYD NO=43.3 ID I=1 ID II=5
 PRINT HYD ID=3 CODE=1

OUTFLOW HYDROGRAPH REACH 43.30

RUNOFF VOLUME = .79846 INCHES = 504.5785 ACRE-FEET
 PEAK DISCHARGE RATE = 2762.32 CFS AT 3.350 HOURS BASIN AREA = 11.8490 SQ. MI.

*
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 *S

 *S*** SUB-BASIN 44 ****
 *

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.049 K=0.7
 LENGTH=1600 FT SLOPE=0.040 K=2.0
 LENGTH=8103 FT SLOPE=0.025 K=3.0
 Kn=.033 CR=0.51

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.049000	.7000
SHALLOW FLOW PORTION	1600.0	.040000	2.0000
CHANNEL FLOW PORTION	8103.0	.025000	3.0000
TOTAL BASIN	10103.0	.028326	2.5367

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 10103.0
 TOTAL BASIN SLOPE (FT/FT)= .028326 CENTROUD LENGTH (FT)= 5152.5

TIME OF CONCENTRATION (HRS)= .5875 TIME TO PEAK (HRS)= .3917 LAG TIME (HRS)= .4407

COMPUTE NM HYD ID=5 HYD NO=44 DA= 0.409 SQ MI
 PER A=90 PER B=0 PER C=10 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .3917

K = .361725HR TP = .391698HR K/TP RATIO = .923479 SHAPE CONSTANT, N = 3.832134
 UNIT PEAK = 359.01 CFS UNIT VOLUME = 1.000 B = 343.82 P60 = 2.2000
 AREA = .409000 SQ MI IA = .62000 INCHES INF = 1.58600 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=5 CODE=1

OUTFLOW HYDROGRAPH REACH 44.00

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                                OUT.WPD
RUNOFF VOLUME = .82537 INCHES = 18.0040 ACRE-FEET
PEAK DISCHARGE RATE = 284.77 CFS AT 1.750 HOURS BASIN AREA = .4090 SQ. MI.

*S
*****
*S ADD 44 TO 61.6 TO GET 44.8
*
ADD HYD ID=8 HYD NO=44.8 ID I=5 ID II=3
PRINT HYD ID=8 CODE=1

                                OUTFLOW HYDROGRAPH REACH 44.80

RUNOFF VOLUME = .79935 INCHES = 522.5825 ACRE-FEET
PEAK DISCHARGE RATE = 2777.94 CFS AT 3.350 HOURS BASIN AREA = 12.2580 SQ. MI.

*
*S
*****
*S*** SUB-BASIN 61 ****
*
COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.04 K=0.7
LENGTH=1600 FT SLOPE=0.008 K=2.0
LENGTH=308 FT SLOPE=0.044 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
SHEET FLOW PORTION 400.0 .040000 .7000
SHALLOW FLOW PORTION 1600.0 .008000 2.0000
CHANNEL FLOW PORTION 308.0 .044000 3.0000
TOTAL BASIN 2308.0 .018350 1.3862

TIME OF CONCENTRATION (HRS)= .3414 TIME TO PEAK (HRS)= .2276 LAG TIME (HRS)= .2561
COMPUTE NM HYD ID=3 HYD NO=61 DA= 0.04846 SQ MI
PER A=80 PER B=10 PER C=10 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .2276
K = .259083HR TP = .227608HR K/TP RATIO = 1.138283 SHAPE CONSTANT, N = 3.110384
UNIT PEAK = 61.893 CFS UNIT VOLUME = .9997 B = 290.70 P60 = 2.2000
AREA = .048460 SQ MI IA = .60500 INCHES INF = 1.54400 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.
PRINT HYD ID=3 CODE=1

                                OUTFLOW HYDROGRAPH REACH 61.00

RUNOFF VOLUME = .85144 INCHES = 2.2006 ACRE-FEET
PEAK DISCHARGE RATE = 48.28 CFS AT 1.600 HOURS BASIN AREA = .0485 SQ. MI.

*
*****
*S ADD 61 TO 44 TO GET 61.4
*
ADD HYD ID=4 HYD NO=61.4 ID I=8 ID II=3
PRINT HYD ID=4 CODE=1

                                OUTFLOW HYDROGRAPH REACH 61.40

RUNOFF VOLUME = .79956 INCHES = 524.7831 ACRE-FEET
PEAK DISCHARGE RATE = 2779.21 CFS AT 3.350 HOURS BASIN AREA = 12.3065 SQ. MI.

*
*****
*S ROUTE 61.4 THRU 60 IN NATURAL ARROYO TO 60.3
*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5354 MAX ELEV=5360
CH SLOPE=0.013 FP SLOPE=0.0194
N=0.035 DIST=369.0
DIST ELEV DIST ELEV
0 5360 45 5359
89 5356 105 5355
133 5354 150 5354
177 5354 210 5355
295 5357 349 5359
369 5360

                                RATING CURVE VALLEY SECTION 1.0
                                WATER FLOW FLOW TOP
                                Page 47

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SURFACE ELEV	AREA SQ FT	OUT.WPD RATE CFS	WIDTH FT
5354.00	.00	.00	.00
5354.32	16.94	41.63	63.27
5354.63	39.98	145.77	82.54
5354.95	69.10	315.50	101.81
5355.26	104.22	559.56	120.42
5355.58	145.18	883.98	138.91
5355.90	191.98	1295.74	157.39
5356.21	244.60	1803.57	175.59
5356.53	302.92	2413.10	193.65
5356.84	366.95	3130.03	211.71
5357.16	436.49	3986.33	227.30
5357.48	510.37	4982.63	240.46
5357.79	588.42	6095.60	253.63
5358.11	670.62	7328.43	266.79
5358.42	756.99	8684.42	279.95
5358.74	847.51	10166.92	293.12
5359.05	942.22	11747.49	307.55
5359.37	1042.63	13320.75	328.09
5359.69	1149.52	15052.23	348.62
5360.00	1262.90	16952.94	369.00

ROUTE MCUNGE ID=3 HYD NO=60.3 INFLOW ID=4
 DT=0.0 L=1205 FT NS=0 SLOPE=0.0194
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 600 TABLE PTS= 20
 DT=.050000 QMED= 1389.60 CKMED= 9.6524
 WIDTH MED= 160.75 NREACH= 2 DX= 602.50

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.181	.0	3.35	1.25	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.32	16.9	41.6	.136	63.3	4.58	1.26	1.369	.012	.990	.160	-.150	6.6	.995	.025	-.020
.63	40.0	145.8	.092	82.5	5.31	3.65	1.586	.028	.978	.235	-.213	86.2	.981	.154	-.135
.95	69.1	315.5	.073	101.8	6.46	4.57	1.931	.041	.972	.327	-.300	223.2	.974	.278	-.252
1.26	104.2	559.6	.062	120.4	7.50	5.37	2.240	.053	.968	.393	-.360	430.0	.969	.359	-.328
1.58	145.2	884.0	.055	138.9	8.41	6.09	2.512	.065	.964	.441	-.405	714.1	.965	.415	-.380
1.90	192.0	1295.7	.050	157.4	9.26	6.75	2.767	.076	.960	.480	-.440	1082.0	.961	.459	-.420
2.21	244.6	1803.6	.045	175.6	10.09	7.37	3.013	.087	.958	.512	-.470	1541.5	.959	.495	-.454
2.53	302.9	2413.1	.042	193.6	10.85	7.97	3.243	.098	.955	.539	-.494	2099.9	.956	.525	-.481
2.84	366.9	3130.0	.039	211.7	11.75	8.53	3.511	.108	.953	.567	-.520	2763.0	.953	.550	-.503
3.16	436.5	3986.3	.037	227.3	12.90	9.13	3.853	.116	.953	.598	-.551	3548.7	.953	.583	-.537
3.48	510.4	4982.6	.034	240.5	13.89	9.76	4.151	.128	.952	.621	-.573	4474.4	.953	.612	-.564
3.79	588.4	6095.6	.032	253.6	14.65	10.36	4.377	.140	.949	.637	-.587	5529.1	.950	.629	-.579
4.11	670.6	7328.4	.031	266.8	15.37	10.93	4.591	.153	.947	.652	-.599	6702.0	.948	.644	-.592
4.42	757.0	8684.4	.029	280.0	16.06	11.47	4.797	.165	.945	.665	-.609	7996.4	.945	.658	-.604
4.74	847.5	10166.9	.028	293.1	16.56	12.00	4.947	.179	.942	.674	-.615	9415.6	.943	.670	-.613
5.05	942.2	11747.5	.027	307.6	16.28	12.47	4.865	.201	.934	.670	-.604	10947.7	.939	.675	-.615
5.37	1042.6	13320.8	.026	328.1	15.95	12.78	4.764	.218	.927	.666	-.593	12526.7	.927	.661	-.588
5.69	1149.5	15052.2	.026	348.6	16.49	13.09	4.928	.224	.927	.675	-.602	14178.5	.927	.670	-.597
6.00	1262.9	16952.9	.025	369.0	16.62	13.42	4.964	.237	.924	.677	-.601	15994.1	.927	.679	-.606

MAXIMUM NO. ITERATIONS FOR SOLUTION (KMAX) = 4 OCCURRED 9 TIMES. AVERAGE NUMBER ITERATIONS = 1.4730
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=3 CODE=1

OUTFLOW HYDROGRAPH REACH 60.30

RUNOFF VOLUME = .79956 INCHES = 524.7866 ACRE-Feet
 PEAK DISCHARGE RATE = 2774.88 CFS AT 3.400 HOURS BASIN AREA = 12.3065 SQ. MI.

*

 *S** SUB-BASIN 60 ****
 *
 COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.065 K=0.7
 LENGTH=1600 FT SLOPE=0.026 K=2.0
 LENGTH=1310 FT SLOPE=0.016 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.065000	.7000
SHALLOW FLOW PORTION	1600.0	.026000	2.0000
CHANNEL FLOW PORTION	1310.0	.016000	3.0000
TOTAL BASIN	3310.0	.026755	1.8992

TIME OF CONCENTRATION (HRS)= .2960 TIME TO PEAK (HRS)= .1973 LAG TIME (HRS)= .2220

COMPUTE NM HYD ID=1 HYD NO=60 DA= 0.11036 SQ MI
 PER A=100 PER B=0 PER C=0 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .1973
 K = .226136HR TP = .197312HR K/TP RATIO = 1.146083 SHAPE CONSTANT, N = 3.090422
 UNIT PEAK = 161.71 CFS UNIT VOLUME = .9998 B = 289.11 P60 = 2.2000
 AREA = .110360 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 60.00

RUNOFF VOLUME = .77294 INCHES = 4.5494 ACRE-Feet
 Page 48

PEAK DISCHARGE RATE = 113.04 CFS AT 1.600 HOURS OUT.WPD
BASIN AREA = .1104 SQ. MI.

*
*S

*S ADD 60 TO 44.8 TO GET 60.20

*S
ADD HYD ID=6 HYD NO=60.6 ID I=1 ID II=3
PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 60.60

RUNOFF VOLUME = .79933 INCHES = 529.3359 ACRE-Feet
PEAK DISCHARGE RATE = 2776.80 CFS AT 3.400 HOURS BASIN AREA = 12.4168 SQ. MI.

*
*S

*S ROUTE THRU 4-60" PIPES IN SCENIC BLVD - IP3 *****
*S ROUTE RESERVOIR COMMAND WAS USED TO ROUTE THRU MULTIPLE PIPES IN SCENIC
*

ROUTE RESERVOIR	ID=19 HYD=60.19 OUTFLOW(CFS)	INFLOW ID=6 CODE=5 STORAGE(AC FT) ELEV (FT)
	0.0	0.000 5339.8
	0.23	0.001 5340
	32	0.200 5341
	111	0.452 5342
	229	0.775 5343
	374	1.185 5344
	535	1.682 5345
	700	2.435 5346
	1190	3.181 5346.7
	2777	3.18101 5346.7001

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5339.80	.000	.00
.25	.00	5339.80	.000	.00
.50	.00	5339.80	.000	.00
.75	.00	5339.80	.000	.00
1.00	.00	5339.80	.000	.00
1.25	.00	5339.80	.000	.00
1.50	172.16	5341.95	.440	107.33
1.75	838.60	5345.64	2.167	641.21
2.00	1649.05	5346.70	3.181	1627.27
2.25	1676.05	5346.70	3.181	1697.84
2.50	1950.26	5346.70	3.181	1928.48
2.75	2550.38	5346.70	3.181	2572.16
3.00	2368.65	5346.70	3.181	2346.87
3.25	2477.38	5346.70	3.181	2499.16
3.50	2523.53	5346.70	3.181	2501.76
3.75	1862.40	5346.70	3.181	1884.18
4.00	1530.01	5346.70	3.181	1508.23
4.25	1277.00	5346.70	3.181	1298.78
4.50	932.36	5346.36	2.823	954.66
4.75	692.03	5346.01	2.445	706.80
5.00	528.20	5345.16	1.799	560.58
5.25	413.71	5344.34	1.354	428.87
5.50	331.74	5343.78	1.094	341.76
5.75	272.28	5343.35	.918	279.46
6.00	228.90	5343.04	.790	234.28
6.25	194.06	5342.74	.691	198.36
6.50	164.50	5342.48	.609	168.20
6.75	138.91	5342.26	.537	142.08
7.00	117.49	5342.08	.477	120.15
7.25	99.65	5341.89	.424	102.24
7.50	84.38	5341.69	.374	86.62
7.75	71.24	5341.52	.331	73.16
8.00	60.06	5341.38	.295	61.69
8.25	50.56	5341.25	.264	51.95
8.50	42.45	5341.15	.237	43.63
8.75	35.68	5341.06	.215	36.66
9.00	30.01	5340.98	.195	31.25
9.25	25.29	5340.83	.167	26.66
9.50	21.34	5340.70	.140	22.50
9.75	18.02	5340.59	.119	18.99
10.00	15.26	5340.50	.100	16.07
10.25	12.95	5340.42	.085	13.63
10.50	11.03	5340.36	.072	11.59
10.75	9.43	5340.30	.062	9.90
11.00	8.09	5340.26	.053	8.48
11.25	6.97	5340.22	.045	7.30
11.50	6.04	5340.19	.039	6.31
11.75	5.25	5340.17	.034	5.48
12.00	4.59	5340.14	.030	4.78
12.25	4.03	5340.13	.026	4.20
12.50	3.56	5340.11	.023	3.70
12.75	3.17	5340.10	.020	3.29
13.00	2.84	5340.08	.018	2.94
13.25	2.55	5340.08	.016	2.63
13.50	2.30	5340.07	.014	2.38
13.75	2.10	5340.06	.013	2.16

OUT.WPD

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	1.91	5340.05	.012	1.97
14.25	1.76	5340.05	.011	1.81
14.50	1.63	5340.05	.010	1.67
14.75	1.51	5340.04	.009	1.55
15.00	1.42	5340.04	.009	1.45
15.25	1.34	5340.04	.008	1.37
15.50	1.27	5340.03	.008	1.29
15.75	1.21	5340.03	.007	1.23
16.00	1.16	5340.03	.007	1.18
16.25	1.11	5340.03	.007	1.13
16.50	1.07	5340.03	.006	1.09
16.75	1.03	5340.03	.006	1.05
17.00	1.01	5340.02	.006	1.02
17.25	.98	5340.02	.006	.99
17.50	.96	5340.02	.006	.96
17.75	.94	5340.02	.005	.94
18.00	.92	5340.02	.005	.93
18.25	.90	5340.02	.005	.91
18.50	.88	5340.02	.005	.89
18.75	.87	5340.02	.005	.87
19.00	.85	5340.02	.005	.86
19.25	.83	5340.02	.005	.83
19.50	.82	5340.02	.005	.82
19.75	.81	5340.02	.005	.81
20.00	.80	5340.02	.005	.80
20.25	.79	5340.02	.005	.80
20.50	.79	5340.02	.004	.79
20.75	.78	5340.02	.004	.78
21.00	.77	5340.02	.004	.77
21.25	.76	5340.02	.004	.77
21.50	.76	5340.02	.004	.76
21.75	.75	5340.02	.004	.75
22.00	.74	5340.02	.004	.75
22.25	.74	5340.02	.004	.74
22.50	.73	5340.02	.004	.73
22.75	.72	5340.02	.004	.73
23.00	.72	5340.02	.004	.72
23.25	.71	5340.02	.004	.71
23.50	.71	5340.02	.004	.71
23.75	.70	5340.01	.004	.70
24.00	.69	5340.01	.004	.70
24.25	.69	5340.01	.004	.69
24.50	.68	5340.01	.004	.68
24.75	.68	5340.01	.004	.68
25.00	.67	5340.01	.004	.67
25.25	.66	5340.01	.004	.67
25.50	.65	5340.01	.004	.65
25.75	.59	5340.01	.003	.61
26.00	.52	5340.01	.003	.54
26.25	.48	5340.01	.003	.49
26.50	.42	5340.01	.002	.45
26.75	.29	5340.00	.002	.33
27.00	.17	5339.97	.001	.19
27.25	.10	5339.90	.000	.11
27.50	.07	5339.86	.000	.07
27.75	.05	5339.85	.000	.05

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
28.00	.04	5339.84	.000	.04
28.25	.03	5339.83	.000	.03
28.50	.02	5339.82	.000	.02
28.75	.02	5339.82	.000	.02
29.00	.01	5339.81	.000	.01
29.25	.01	5339.81	.000	.01
29.50	.01	5339.81	.000	.01
29.75	.01	5339.81	.000	.01

PEAK DISCHARGE = 2767.303 CFS - PEAK OCCURS AT HOUR 3.35
 MAXIMUM WATER SURFACE ELEVATION = 5346.700
 MAXIMUM STORAGE = 3.1810 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=19 CODE=5

OUTFLOW HYDROGRAPH REACH 60.19

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	234.3	12.000	4.8	18.000	.9	24.000	.7
.250	.0	6.250	198.4	12.250	4.2	18.250	.9	24.250	.7
.500	.0	6.500	168.2	12.500	3.7	18.500	.9	24.500	.7
.750	.0	6.750	142.1	12.750	3.3	18.750	.9	24.750	.7
1.000	.0	7.000	120.2	13.000	2.9	19.000	.9	25.000	.7
1.250	.0	7.250	102.2	13.250	2.6	19.250	.8	25.250	.7
1.500	107.3	7.500	86.6	13.500	2.4	19.500	.8	25.500	.7
1.750	641.2	7.750	73.2	13.750	2.2	19.750	.8	25.750	.6
2.000	1627.3	8.000	61.7	14.000	2.0	20.000	.8	26.000	.5
2.250	1697.8	8.250	52.0	14.250	1.8	20.250	.8	26.250	.5
2.500	1928.5	8.500	43.6	14.500	1.7	20.500	.8	26.500	.4
2.750	2572.2	8.750	36.7	14.750	1.5	20.750	.8	26.750	.3
3.000	2346.9	9.000	31.2	15.000	1.4	21.000	.8	27.000	.2
3.250	2499.2	9.250	26.7	15.250	1.4	21.250	.8	27.250	.1
3.500	2501.8	9.500	22.5	15.500	1.3	21.500	.8	27.500	.1
3.750	1884.2	9.750	19.0	15.750	1.2	21.750	.8	27.750	.1
4.000	1508.2	10.000	16.1	16.000	1.2	22.000	.7	28.000	.0
4.250	1298.8	10.250	13.6	16.250	1.1	22.250	.7	28.250	.0
4.500	954.7	10.500	11.6	16.500	1.1	22.500	.7	28.500	.0
4.750	706.8	10.750	9.9	16.750	1.0	22.750	.7	28.750	.0
5.000	560.6	11.000	8.5	17.000	1.0	23.000	.7	29.000	.0
5.250	428.9	11.250	7.3	17.250	1.0	23.250	.7	29.250	.0
5.500	341.8	11.500	6.3	17.500	1.0	23.500	.7	29.500	.0
5.750	279.5	11.750	5.5	17.750	.9	23.750	.7	29.750	.0

OUT.WPD
RUNOFF VOLUME = .79933 INCHES = 529.3355 ACRE-FEET
PEAK DISCHARGE RATE = 2767.30 CFS AT 3.350 HOURS BASIN AREA = 12.4168 SQ. MI.

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*S*** Basin Contributing to INFLOW POINT 2 (IP2) *****
*

*S*** SUB-BASIN 46C
*
COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
NK=1 ISLOPE=-1
LENGTH=330 FT SLOPE=0.023 K=1.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	330.0	.023000	1.0000
SHALLOW FLOW PORTION	.0	.000000	.0000
CHANNEL FLOW PORTION	.0	.000000	.0000
TOTAL BASIN	330.0	.023000	1.0000

TIME OF CONCENTRATION (HRS)= .0604 TIME TO PEAK (HRS)= .0403 LAG TIME (HRS)= .0453

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
REVISED VALUES: TIME OF CONCENTRATION (HRS)= .2000 TIME TO PEAK (HRS)= .1333 LAG TIME (HRS)= .1500

COMPUTE NM HYD ID=1 HYD NO=46C DA= 0.0025 SQ MI
PER A=90 PER B=00 PER C=10 PER D=0
TP=0.0 MASSRAIN=-1

TIME TO PEAK (hrs)= .1333

K = .154250HR TP = .133333HR K/TP RATIO = 1.156881 SHAPE CONSTANT, N = 3.063343
UNIT PEAK = 5.3803 CFS UNIT VOLUME = .9969 B = 286.95 P60 = 2.2000
AREA = .002500 SQ MI IA = .62000 INCHES INF = 1.58600 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA 46C

RUNOFF VOLUME = .82537 INCHES = .1100 ACRE-FEET
PEAK DISCHARGE RATE = 3.71 CFS AT 1.500 HOURS BASIN AREA = .0025 SQ. MI.

*S ROUTE 46C THRU 62 IN NATURAL ARROYO TO 62.3

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5372.6 MAX ELEV=5375
CH SLOPE=0.0141 FP SLOPE=0.015
N=0.035 DIST=172.0
DIST ELEV DIST ELEV
0 5375 73 5374
91 5373 109 5372.6
142 5373 157 5374
172 5375

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5372.60	.00	.00	.00
5372.73	1.02	.84	16.13
5372.85	4.08	5.34	32.26
5372.98	9.18	15.76	48.38
5373.11	15.79	35.93	54.50
5373.23	22.94	63.78	58.67
5373.36	30.63	98.59	62.84
5373.49	38.84	140.32	67.02
5373.61	47.58	189.03	71.19
5373.74	56.84	244.81	75.36
5373.86	66.64	307.80	79.54
5373.99	76.96	378.17	83.71
5374.12	88.19	438.17	94.36
5374.24	100.83	508.50	105.48
5374.37	114.87	591.08	116.61
5374.50	130.32	686.45	127.74
5374.62	147.18	795.21	138.87
5374.75	165.45	918.01	150.00
5374.88	185.12	1055.49	161.13
5375.00	206.20	1209.53	172.00

ROUTE MCUNGE ID=3 HYD NO=62.3 INFLOW ID=1
DT=0.0 L=2596 FT NS=0 SLOPE=0.015
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 78 TABLE PTS= 20
DT= .050000 QMED= 1.85 CKMED= 1.4716
WIDTH MED= 19.75 NREACH= 20 DX= 129.80

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	1.197	.0	.72	.38	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.13	1.0	.8	.874	16.1	1.15	.83	1.596	.023	.982	.236	-.219	.1	.997	.037	-.034
.25	4.1	5.3	.550	32.3	1.82	1.31	2.527	.047	.974	.440	-.414	2.5	.975	.337	-.312
.38	9.2	15.8	.420	48.4	2.47	1.72	3.425	.068	.970	.555	-.525	9.8	.968	.482	-.450
.51	15.8	35.9	.317	54.5	3.51	2.28	4.861	.097	.968	.664	-.632	25.0	.970	.628	-.598
.63	22.9	63.8	.259	58.7	4.24	2.78	5.878	.132	.962	.715	-.677	49.1	.965	.693	-.658
.76	30.6	98.6	.224	62.8	4.83	3.22	6.695	.167	.958	.746	-.703	80.4	.960	.731	-.690
.89	38.8	140.3	.200	67.0	5.34	3.61	7.412	.201	.953	.768	-.721	118.7	.955	.757	-.712
1.01	47.6	189.0	.181	71.2	5.81	3.97	8.057	.235	.949	.785	-.734	164.0	.951	.776	-.727
1.14	56.8	244.8	.167	75.4	6.24	4.31	8.650	.267	.946	.798	-.744	216.2	.947	.792	-.739
1.26	66.6	307.8	.156	79.5	6.64	4.62	9.201	.300	.943	.810	-.752	275.6	.944	.804	-.748
1.39	77.0	378.2	.147	83.7	6.22	4.91	8.631	.373	.925	.800	-.726	342.3	.941	.814	-.756
1.52	88.2	438.2	.145	94.4	5.47	4.97	7.579	.436	.903	.778	-.681	407.8	.900	.773	-.673
1.64	100.8	508.5	.143	105.5	5.73	5.04	7.950	.432	.908	.787	-.695	472.9	.904	.781	-.686
1.77	114.9	591.1	.140	116.6	6.04	5.15	8.369	.431	.912	.796	-.708	549.3	.910	.791	-.701
1.90	130.3	686.4	.137	127.7	6.32	5.27	8.764	.437	.914	.804	-.718	638.2	.913	.800	-.713
2.02	147.2	795.2	.133	138.9	6.59	5.40	9.145	.446	.916	.811	-.727	740.2	.915	.807	-.722
2.15	165.4	918.0	.130	150.0	6.86	5.55	9.517	.458	.917	.818	-.734	855.9	.916	.814	-.730
2.28	185.1	1055.5	.126	161.1	7.15	5.70	9.920	.470	.917	.824	-.742	986.0	.916	.821	-.737
2.40	206.2	1209.5	.123	172.0	7.24	5.87	10.040	.499	.914	.827	-.740	1131.7	.918	.828	-.746

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 52 TIMES. AVERAGE NUMBER ITERATIONS = 1.0309
 EQUATIONS SOLVED WITH TWO PASSES: FIRST USING THE PONCE CORRECTION TO C1, SECOND USING THE FREAD CORRECTION TO C1, C2 AND C3
 PRINT HYD ID=3 CODE=1

OUTFLOW HYDROGRAPH REACH 62.30

RUNOFF VOLUME = .80252 INCHES = .1070 ACRE-Feet
 PEAK DISCHARGE RATE = 3.33 CFS AT 2.450 HOURS BASIN AREA = .0025 SQ. MI.

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 *S*** SUB-BASIN 62
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 COMPUTE LT TP LCODE=1 USDI BUREAU OF RECLAMATION LAG TIME EQUATION
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.02 K=0.7
 LENGTH=1600 FT SLOPE=0.015 K=2.0
 LENGTH=708 FT SLOPE=0.009 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.020000	.7000
SHALLOW FLOW PORTION	1600.0	.015000	2.0000
CHANNEL FLOW PORTION	708.0	.009000	3.0000
TOTAL BASIN	2708.0	.014170	1.7419

TIME OF CONCENTRATION (HRS)= .3628 TIME TO PEAK (HRS)= .2419 LAG TIME (HRS)= .2721

COMPUTE NM HYD ID=2 HYD NO=62 DA= 0.06722 SQ MI
 PER A=80 PER B=10 PER C=10 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .2419

K = .274275HR TP = .241856HR K/TP RATIO = 1.134040 SHAPE CONSTANT, N = 3.121385
 UNIT PEAK = 81.038 CFS UNIT VOLUME = .9998 B = 291.57 P60 = 2.2000
 AREA = .067220 SQ MI IA = .60500 INCHES INF = 1.54400 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 62.00

RUNOFF VOLUME = .85144 INCHES = 3.0524 ACRE-Feet
 PEAK DISCHARGE RATE = 63.30 CFS AT 1.600 HOURS BASIN AREA = .0672 SQ. MI.

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*S ADD 61.4 TO 62 TO GET 62.5

OUT.WPD

*
ADD HYD ID=1 HYD NO=62.1 ID I=2 ID II=3
PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 62.10

RUNOFF VOLUME = .84967 INCHES = 3.1594 ACRE-Feet
PEAK DISCHARGE RATE = 63.30 CFS AT 1.600 HOURS BASIN AREA = .0697 SQ. MI.

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*S

*S APPLY NO SEDIMENT BULKING FACTOR
SEDIMENT BULK CODE=1 BULKING FACTOR = 1.00

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*S THE TRAILS SUBDIVISION
*S OUTFLOW RESTRICTED TO 62 CFS AT UNIVERSE AND AVENIDA DE JAMITO

*S RECALL HYD FROM THE TRAILS SUBDIVISION

*S
RECALL HYD ID=99 HYD=BYPASS.ROUTE.K
DT= .100000 HRS DA= 1.0536 SQ MI
PEAK= 60.718CFS RO= 1.3592 INCHES NO PTS=600

FLOW RATES				
.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.000	2.066	35.012	45.415	47.520
51.159	54.044	56.146	57.431	58.230
58.915	59.490	59.932	60.231	60.418
60.547	60.637	60.693	60.718	60.716
60.695	60.659	60.612	60.557	60.494
60.426	60.354	60.278	60.199	60.117
60.032	59.946	59.857	59.767	59.675
59.582	59.488	59.392	59.296	59.199
59.101	59.003	58.903	58.804	58.703
58.602	58.500	58.398	58.295	58.191
58.086	57.981	57.876	57.770	57.662
57.552	57.441	57.326	57.208	56.909
56.388	55.855	55.180	54.215	53.381
52.834	52.221	51.798	51.322	50.935
50.532	50.146	49.791	49.468	49.159
48.832	48.521	48.232	47.893	47.580
47.327	47.047	46.743	46.462	46.200
45.916	45.646	45.394	45.118	44.858
44.614	44.347	44.074	43.796	43.493
43.212	42.904	42.592	42.303	42.020
41.748	41.452	41.172	40.883	40.609
40.358	40.112	39.876	39.614	39.369
39.139	38.891	38.655	38.440	38.201
37.979	37.772	37.574	37.381	37.165
36.958	36.772	36.562	36.393	36.234
36.011	35.797	35.628	35.437	35.232
35.029	34.808	34.598	34.407	34.221
34.041	33.865	33.664	33.472	33.302
33.105	32.945	32.796	32.610	32.427
32.233	32.049	31.911	31.745	31.575
31.420	31.240	31.071	30.917	30.770
30.625	30.482	30.342	30.177	30.018
29.879	29.739	29.607	29.446	29.296
29.159	29.028	28.900	28.772	28.620
28.474	28.371	28.240	28.075	27.952
27.825	27.572	27.308	27.056	26.807
26.519	26.213	25.894	25.536	25.192
24.857	24.538	24.194	23.793	23.410
23.035	22.691	22.381	22.089	21.803
21.511	21.200	20.854	20.510	20.241
19.934	19.509	19.115	18.697	18.355
18.045	17.687	17.366	17.074	16.789
16.536	16.289	16.042	15.671	15.037
14.483	14.020	13.573	13.089	12.637
12.135	11.689	11.292	10.870	10.437
10.086	9.818	9.524	9.278	9.083
8.871	7.958	6.399	5.329	4.840
4.555	4.321	4.134	3.981	3.841
3.728	3.634	3.545	3.463	3.394
3.324	3.260	3.204	3.146	3.093
3.045	2.997	2.951	2.910	2.868
2.828	2.792	2.754	2.719	2.685
2.652	2.619	2.588	2.557	2.527
2.498	2.469	2.441	2.414	2.386
2.359	2.333	2.307	2.282	2.257
2.232	2.208	2.184	2.160	2.136
2.113	2.090	2.068	2.045	2.024
2.002	1.979	1.958	1.936	1.916
1.896	1.876	1.856	1.836	1.816
1.797	1.778	1.759	1.741	1.722
1.704	1.686	1.668	1.651	1.633
1.616	1.599	1.582	1.565	1.549
1.532	1.516	1.500	1.484	1.469
1.453	1.438	1.423	1.408	1.393
1.379	1.364	1.350	1.336	1.321
1.307	1.293	1.280	1.266	1.253
1.240	1.227	1.214	1.202	1.189
1.177	1.164	1.152	1.140	1.129
1.117	1.105	1.094	1.083	1.071
1.060	1.049	1.039	1.028	1.017
1.007	.996	.986	.976	.966

			OUT.WPD	
.956	.946	.936	.927	.917
.908	.899	.890	.880	.871
.863	.854	.845	.836	.828
.819	.811	.803	.795	.787
.779	.771	.763	.755	.748
.740	.732	.725	.718	.711
.703	.696	.689	.682	.675
.669	.662	.655	.649	.642
.636	.629	.623	.617	.611
.604	.598	.592	.586	.581
.575	.569	.563	.558	.552
.547	.541	.536	.531	.525
.520	.515	.510	.505	.500
.495	.490	.485	.480	.476
.471	.466	.462	.457	.453
.448	.444	.439	.435	.431
.426	.422	.418	.414	.410
.406	.402	.398	.394	.390
.386	.383	.379	.375	.371
.368	.364	.361	.357	.354
.350	.347	.343	.340	.337
.333	.330	.327	.324	.321
.317	.314	.311	.308	.305
.302	.299	.296	.294	.291
.288	.285	.282	.280	.277
.274	.272	.269	.266	.264
.261	.259	.256	.254	.251
.249	.246	.244	.242	.239
.237	.235	.232	.230	.228
.226	.224	.221	.219	.217
.214	.212	.210	.208	.206
.204	.202	.200	.198	.196
.194	.193	.191	.189	.187
.185	.184	.182	.180	.178
.177	.175	.173	.172	.170
.168	.167	.164	.163	.161
.159	.158	.156	.155	.154
.152	.151	.149	.148	.146
.145	.144	.142	.141	.140
.138	.137	.136	.134	.133
.132	.131	.129	.128	.127
.126	.124	.123	.122	.121
.120	.119	.118	.116	.115
.113	.112	.111	.110	.109
.108	.107	.106	.105	.104
.103	.102	.101	.100	.099
.098	.097	.096	.096	.095

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*S ROUTE 99 IN 36" PIPE IN UNIVERSE TO GET 47.19

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COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.019
DIAM=3.0 FT N=0.013

RATING CURVE PIPE SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.16	.14	.48	1.33
.31	.39	2.09	1.83
.47	.71	4.87	2.18
.63	1.07	8.75	2.44
.78	1.46	13.67	2.63
.94	1.89	19.50	2.78
1.09	2.33	26.13	2.89
1.25	2.79	33.40	2.96
1.41	3.26	41.18	2.99
1.56	3.72	49.28	3.00
1.72	4.19	57.53	3.00
1.88	4.65	65.74	3.00
2.03	5.10	73.68	3.00
2.19	5.53	81.11	3.00
2.35	5.93	87.77	3.00
2.50	6.30	93.31	3.00
2.66	6.62	97.27	3.00
2.81	6.89	98.90	3.00
3.00	7.07	98.90	3.00

ROUTE MCUNGE ID=7 HYD NO=47.7 INFLOW ID=99
DT=0.0 HR LENGTH=1532 FT
NS=0 SLOPE=0.019 CODE=5

INFLOW END= 600 TABLE PTS= 19
DT= .100000 QMED= 30.36 CKMED= 15.9074
WIDTH MED= 2.93 NREACH= 1 DX= 1532.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.169	.0	4.26	1.62	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.16	.1	.5	.124	1.3	5.65	3.43	1.327	.002	.998	.141	-.139	.1	1.000	.022	-.022
.31	.4	2.1	.079	1.8	7.79	5.36	1.831	.005	.996	.295	-.291	1.2	.997	.207	-.204
.47	.7	4.9	.062	2.2	9.87	6.89	2.319	.008	.995	.399	-.394	3.4	.996	.351	-.346
.63	1.1	8.8	.052	2.4	11.62	8.20	2.730	.011	.994	.465	-.460	6.7	.995	.435	-.430
.78	1.5	13.7	.046	2.6	13.10	9.33	3.079	.014	.993	.511	-.505	11.1	.994	.490	-.484
.94	1.9	19.5	.041	2.8	14.37	10.33	3.377	.017	.992	.545	-.537	16.5	.993	.530	-.523
1.09	2.3	26.1	.038	2.9	15.43	11.20	3.627	.020	.991	.570	-.561	22.7	.992	.559	-.551
1.25	2.8	33.4	.036	3.0	16.31	11.97	3.832	.024	.990	.588	-.578	29.7	.991	.580	-.571
1.41	3.3	41.2	.034	3.0	16.99	12.65	3.993	.028	.989	.602	-.591	37.2	.990	.596	-.586
1.56	3.7	49.3	.032	3.0	17.47	13.23	4.105	.032	.987	.611	-.598	45.2	.988	.607	-.596
1.72	4.2	57.5	.031	3.0	17.58	13.73	4.131	.037	.985	.613	-.599	53.4	.987	.613	-.600
1.88	4.7	65.7	.030	3.0	17.25	14.14	4.054	.044	.983	.608	-.591	61.6	.984	.612	-.596
2.03	5.1	73.7	.029	3.0	16.43	14.45	3.862	.051	.979	.593	-.572	69.7	.981	.602	-.583
2.19	5.5	81.1	.029	3.0	15.06	14.68	3.540	.062	.973	.565	-.539	77.4	.977	.582	-.558

OUT.WPD
 2.35 5.9 87.8 .029 3.0 13.03 14.81 3.062 .077 .963 .517 -.480 84.4 .969 .546 -.515
 2.50 6.3 93.3 .029 3.0 10.15 14.82 2.385 .105 .940 .427 -.367 90.5 .955 .482 -.437
 2.66 6.6 97.3 .029 3.0 5.94 14.69 1.397 .187 .855 .226 -.081 95.3 .917 .358 -.275
 2.81 6.9 98.9 .030 3.0 3.39 14.36 .796 .334 .686 .061 .253 98.1 .697 .065 .238
 MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 1 TIMES. AVERAGE NUMBER ITERATIONS = 1.4482
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=7 CODE=5

OUTFLOW HYDROGRAPH REACH 47.70

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	12.000	39.2	24.000	9.0	36.000	1.0	48.000	.3
.500	.0	12.500	38.0	24.500	4.7	36.500	1.0	48.500	.3
1.000	.0	13.000	37.0	25.000	3.8	37.000	.9	49.000	.3
1.500	51.9	13.500	36.1	25.500	3.4	37.500	.9	49.500	.3
2.000	58.6	14.000	35.1	26.000	3.1	38.000	.8	50.000	.3
2.500	60.5	14.500	34.1	26.500	2.8	38.500	.8	50.500	.2
3.000	60.7	15.000	33.2	27.000	2.7	39.000	.7	51.000	.2
3.500	60.4	15.500	32.3	27.500	2.5	39.500	.7	51.500	.2
4.000	60.1	16.000	31.5	28.000	2.4	40.000	.7	52.000	.2
4.500	59.6	16.500	30.7	28.500	2.2	40.500	.6	52.500	.2
5.000	59.1	17.000	29.9	29.000	2.1	41.000	.6	53.000	.2
5.500	58.6	17.500	29.2	29.500	2.0	41.500	.6	53.500	.2
6.000	58.1	18.000	28.5	30.000	1.9	42.000	.6	54.000	.2
6.500	57.6	18.500	27.9	30.500	1.8	42.500	.5	54.500	.2
7.000	56.5	19.000	26.6	31.000	1.7	43.000	.5	55.000	.2
7.500	52.9	19.500	25.0	31.500	1.6	43.500	.5	55.500	.1
8.000	50.7	20.000	23.1	32.000	1.5	44.000	.5	56.000	.1
8.500	48.9	20.500	21.6	32.500	1.5	44.500	.4	56.500	.1
9.000	47.4	21.000	20.0	33.000	1.4	45.000	.4	57.000	.1
9.500	46.0	21.500	18.1	33.500	1.3	45.500	.4	57.500	.1
10.000	44.7	22.000	16.6	34.000	1.2	46.000	.4	58.000	.1
10.500	43.3	22.500	14.6	34.500	1.2	46.500	.4	58.500	.1
11.000	41.8	23.000	12.3	35.000	1.1	47.000	.3	59.000	.1
11.500	40.4	23.500	10.2	35.500	1.1	47.500	.3	59.500	.1

RUNOFF VOLUME = 1.35925 INCHES = 76.3787 ACRE-Feet
 PEAK DISCHARGE RATE = 60.72 CFS AT 2.900 HOURS BASIN AREA = 1.0536 SQ. MI.

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*S APPLY SEDIMENT BULKING FACTOR
 SEDIMENT BULK CODE=1 BULKING FACTOR = 1.05

*

*S*** SUB-BASIN 47B STATE LAND PROPERTY ***

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=2 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.026 K=0.7
 LENGTH=936 FT SLOPE=0.012 K=1.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

NOTE: Upland factor input values have been adjusted to meet Upland/Lag Time requirements.

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.026000	.7000
SHALLOW FLOW PORTION	936.0	.012000	2.0000
CHANNEL FLOW PORTION	.0	.000000	.0000
TOTAL BASIN	1336.0	.016192	1.3433

TIME OF CONCENTRATION (HRS)= .2171 TIME TO PEAK (HRS)= .1447 LAG TIME (HRS)= .1628

COMPUTE NM HYD ID=5 HYD NO=47B DA=0.0305 SQ MI
 PER A=90 PER B=0 PER C=10 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .1447

K = .167450HR TP = .144742HR K/TP RATIO = 1.156881 SHAPE CONSTANT, N = 3.063343
 UNIT PEAK = 60.465 CFS UNIT VOLUME = .9993 B = 286.95 P60 = 2.2000
 AREA = .030500 SQ MI IA = .62000 INCHES INF = 1.58600 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=5 CODE=1

HYDROGRAPH FROM AREA 47B

RUNOFF VOLUME = .82537 INCHES = 1.3426 ACRE-Feet
 PEAK DISCHARGE RATE = 41.80 CFS AT 1.500 HOURS BASIN AREA = .0305 SQ. MI.

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*S*** SUB-BASIN 46B APS HIGH SCHOOL PROPERTY ***

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.02 K=0.7
 LENGTH=1600 FT SLOPE=0.02 K=2.0
 LENGTH=745 FT SLOPE=0.02 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.020000	.7000
SHALLOW FLOW PORTION	1600.0	.020000	2.0000
CHANNEL FLOW PORTION	745.0	.020000	3.0000
TOTAL BASIN	2745.0	.020000	1.6947

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COMPUTE NM HYD      ID=3  HYD NO=APS  DA=0.113 SQ MI
PER A=0 PER B=22 PER C=25 PER D=53
TP=0.0  MASSRAIN=-1
TIME TO PEAK (hrs)= .2121

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K = .187771HR      TP = .212101HR      K/TP RATIO = .885292      SHAPE CONSTANT, N = 4.007682
UNIT PEAK = 89.063      CFS      UNIT VOLUME = 1.000      B = 355.68      P60 = 2.2000
AREA = .053110 SQ MI      IA = .42021 INCHES      INF = 1.02660 INCHES      PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION      NUMBER METHOD - DT = .050000

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HYDROGRAPH FROM AREA APS

HYDROGRAPH FROM AREA 46B.6

ROUTE	RESERVOIR	ID=4	HYD=468.4	INFLOW	ID=6	CODE=5
		OUTFLOW(CFS)		STORAGE(AC	FT)	ELEV (FT)
		0.01		0.0004		5375
		0.03		0.1097		5376
		4.45		0.4827		5377
		4.46		1.0921		5378
		4.47		1.9496		5379
		4.48		3.2565		5380
		4.49		4.9487		5381
		4.50		8.2		5382
		288		8.201		5382.001

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OUT.WPD

6.25	1.79	5381.86	7.758	4.50
6.50	1.49	5381.85	7.698	4.50
6.75	1.41	5381.83	7.634	4.50
7.00	1.37	5381.81	7.570	4.50
7.25	1.34	5381.79	7.505	4.50
7.50	1.30	5381.77	7.439	4.50
7.75	1.28	5381.75	7.373	4.50
8.00	1.25	5381.73	7.306	4.50
8.25	1.23	5381.70	7.239	4.50
8.50	1.22	5381.68	7.171	4.50
8.75	1.19	5381.66	7.103	4.50
9.00	1.18	5381.64	7.035	4.50
9.25	1.16	5381.62	6.966	4.50
9.50	1.14	5381.60	6.897	4.50
9.75	1.12	5381.58	6.828	4.50
10.00	1.11	5381.56	6.758	4.50
10.25	1.09	5381.53	6.687	4.50
10.50	1.08	5381.51	6.617	4.50
10.75	1.06	5381.49	6.546	4.49
11.00	1.04	5381.47	6.475	4.49
11.25	1.03	5381.45	6.404	4.49
11.50	1.02	5381.43	6.332	4.49
11.75	1.01	5381.40	6.260	4.49
12.00	1.00	5381.38	6.188	4.49
12.25	.98	5381.36	6.115	4.49
12.50	.97	5381.34	6.043	4.49
12.75	.96	5381.31	5.970	4.49
13.00	.94	5381.29	5.897	4.49
13.25	.94	5381.27	5.823	4.49
13.50	.93	5381.25	5.750	4.49
13.75	.91	5381.22	5.676	4.49

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	.90	5381.20	5.602	4.49
14.25	.89	5381.18	5.527	4.49
14.50	.88	5381.16	5.453	4.49
14.75	.87	5381.13	5.378	4.49
15.00	.86	5381.11	5.303	4.49
15.25	.85	5381.09	5.228	4.49
15.50	.84	5381.06	5.153	4.49
15.75	.84	5381.04	5.078	4.49
16.00	.83	5381.02	5.002	4.49
16.25	.82	5380.99	4.926	4.49
16.50	.81	5380.94	4.850	4.49
16.75	.80	5380.90	4.774	4.49
17.00	.79	5380.85	4.698	4.49
17.25	.79	5380.81	4.621	4.49
17.50	.78	5380.76	4.545	4.49
17.75	.77	5380.72	4.468	4.49
18.00	.76	5380.67	4.391	4.49
18.25	.76	5380.63	4.314	4.49
18.50	.75	5380.58	4.237	4.49
18.75	.74	5380.53	4.160	4.49
19.00	.73	5380.49	4.082	4.48
19.25	.73	5380.44	4.005	4.48
19.50	.73	5380.40	3.927	4.48
19.75	.72	5380.35	3.849	4.48
20.00	.71	5380.30	3.772	4.48
20.25	.70	5380.26	3.694	4.48
20.50	.70	5380.21	3.615	4.48
20.75	.69	5380.17	3.537	4.48
21.00	.69	5380.12	3.459	4.48
21.25	.68	5380.07	3.380	4.48
21.50	.67	5380.03	3.302	4.48
21.75	.66	5379.97	3.223	4.48
22.00	.66	5379.91	3.144	4.48
22.25	.66	5379.85	3.065	4.48
22.50	.66	5379.79	2.986	4.48
22.75	.64	5379.73	2.907	4.48
23.00	.65	5379.67	2.828	4.48
23.25	.63	5379.61	2.749	4.48
23.50	.63	5379.55	2.669	4.48
23.75	.62	5379.49	2.590	4.47
24.00	.62	5379.43	2.510	4.47
24.25	.28	5379.37	2.428	4.47
24.50	.08	5379.30	2.339	4.47
24.75	.04	5379.23	2.248	4.47
25.00	.02	5379.16	2.156	4.47
25.25	.01	5379.09	2.064	4.47
25.50	.00	5379.02	1.971	4.47
25.75	.00	5378.92	1.879	4.47
26.00	.00	5378.81	1.787	4.47
26.25	.00	5378.70	1.695	4.47
26.50	.00	5378.59	1.602	4.47
26.75	.00	5378.49	1.510	4.46
27.00	.00	5378.38	1.418	4.46
27.25	.00	5378.27	1.326	4.46
27.50	.00	5378.16	1.233	4.46
27.75	.00	5378.06	1.141	4.46

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
28.00	.00	5377.93	1.049	4.46
28.25	.00	5377.78	.957	4.46
28.50	.00	5377.63	.865	4.46
28.75	.00	5377.48	.773	4.45
29.00	.00	5377.33	.681	4.45
29.25	.00	5377.17	.589	4.45
29.50	.00	5377.02	.497	4.45
29.75	.00	5376.81	.412	3.62

PEAK DISCHARGE = 173.012 CFS - PEAK OCCURS AT HOUR 1.85
 MAXIMUM WATER SURFACE ELEVATION = 5382.000
 MAXIMUM STORAGE = 8.2006 AC-FT INCREMENTAL TIME= .050000HRS
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OUT.WPD

PRINT HYD

ID=4 CODE=5

HYDROGRAPH FROM AREA 46B.4

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	4.5	12.000	4.5	18.000	4.5	24.000	4.5
.250	.0	6.250	4.5	12.250	4.5	18.250	4.5	24.250	4.5
.500	.0	6.500	4.5	12.500	4.5	18.500	4.5	24.500	4.5
.750	.0	6.750	4.5	12.750	4.5	18.750	4.5	24.750	4.5
1.000	.0	7.000	4.5	13.000	4.5	19.000	4.5	25.000	4.5
1.250	1.3	7.250	4.5	13.250	4.5	19.250	4.5	25.250	4.5
1.500	4.5	7.500	4.5	13.500	4.5	19.500	4.5	25.500	4.5
1.750	4.5	7.750	4.5	13.750	4.5	19.750	4.5	25.750	4.5
2.000	45.2	8.000	4.5	14.000	4.5	20.000	4.5	26.000	4.5
2.250	81.3	8.250	4.5	14.250	4.5	20.250	4.5	26.250	4.5
2.500	4.5	8.500	4.5	14.500	4.5	20.500	4.5	26.500	4.5
2.750	21.7	8.750	4.5	14.750	4.5	20.750	4.5	26.750	4.5
3.000	4.5	9.000	4.5	15.000	4.5	21.000	4.5	27.000	4.5
3.250	6.7	9.250	4.5	15.250	4.5	21.250	4.5	27.250	4.5
3.500	4.5	9.500	4.5	15.500	4.5	21.500	4.5	27.500	4.5
3.750	4.5	9.750	4.5	15.750	4.5	21.750	4.5	27.750	4.5
4.000	4.5	10.000	4.5	16.000	4.5	22.000	4.5	28.000	4.5
4.250	4.5	10.250	4.5	16.250	4.5	22.250	4.5	28.250	4.5
4.500	4.5	10.500	4.5	16.500	4.5	22.500	4.5	28.500	4.5
4.750	4.5	10.750	4.5	16.750	4.5	22.750	4.5	28.750	4.5
5.000	4.5	11.000	4.5	17.000	4.5	23.000	4.5	29.000	4.5
5.250	4.5	11.250	4.5	17.250	4.5	23.250	4.5	29.250	4.5
5.500	4.5	11.500	4.5	17.500	4.5	23.500	4.5	29.500	4.5
5.750	4.5	11.750	4.5	17.750	4.5	23.750	4.5	29.750	3.6

RUNOFF VOLUME = 1.87386 INCHES = 14.3412 ACRE-FEET
PEAK DISCHARGE RATE = 173.01 CFS AT 1.850 HOURS BASIN AREA = .1435 SQ. MI.

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*
*S ADD 46B.6 TO 46B.4 TO GET 46B.8
*S
ADD HYD ID=8 HYD NO=46B.8 ID I=7 ID II=4
PRINT HYD ID=8 CODE=1

HYDROGRAPH FROM AREA 46B.8

RUNOFF VOLUME = 1.39803 INCHES = 89.2569 ACRE-FEET
PEAK DISCHARGE RATE = 230.57 CFS AT 1.850 HOURS BASIN AREA = 1.1971 SQ. MI.

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*
*S ROUTE 46B.8 IN 36" PIPE IN UNIVERSE TO GET 46.18
*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.008
DIAM=3.0 FT N=0.013

RATING CURVE PIPE SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.16	.14	.31	1.33
.31	.39	1.36	1.83
.47	.71	3.16	2.18
.63	1.07	5.68	2.44
.78	1.46	8.87	2.63
.94	1.89	12.65	2.78
1.09	2.33	16.95	2.89
1.25	2.79	21.67	2.96
1.41	3.26	26.72	2.99
1.56	3.72	31.98	3.00
1.72	4.19	37.33	3.00
1.88	4.65	42.66	3.00
2.03	5.10	47.81	3.00
2.19	5.53	52.63	3.00
2.35	5.93	56.95	3.00
2.50	6.30	60.55	3.00
2.66	6.62	63.12	3.00
2.81	6.89	64.17	3.00
3.00	7.07	64.17	3.00

ROUTE MCUNGE ID=18 HYD NO=46.18 INFLOW ID=8
DT=0.0 HR LENGTH=1902 FT
NS=0 SLOPE=0.008 CODE=5

INFLOW END= 600 TABLE PTS= 19
DT= .050000 QMED= 115.29 CKMED= 3.9922
WIDTH MED= 3.00 NREACH= 3 DX= 634.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.322	.0	3.52	1.05	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.16	.1	.3	.237	1.3	3.66	2.23	1.040	.013	.988	.026	-.014	.0	.998	.004	-.002
.31	.4	1.4	.152	1.8	5.06	3.48	1.436	.029	.977	.189	-.165	.7	.980	.096	-.076
.47	.7	3.2	.118	2.2	6.40	4.47	1.818	.045	.969	.301	-.270	2.2	.972	.249	-.221
.63	1.1	5.7	.099	2.4	7.54	5.32	2.140	.061	.962	.375	-.337	4.3	.965	.341	-.306
.78	1.5	8.9	.087	2.6	8.50	6.05	2.414	.078	.955	.427	-.383	7.2	.958	.404	-.362
.94	1.9	12.7	.079	2.8	9.32	6.70	2.647	.096	.949	.466	-.414	10.7	.952	.448	-.400
1.09	2.3	17.0	.073	2.9	10.01	7.27	2.843	.116	.942	.495	-.436	14.8	.945	.482	-.427

OUT.WPD

1.25	2.8	21.7	.068	3.0	10.58	7.77	3.004	.137	.934	.517	-.451	19.3	.938	.507	-.445
1.41	3.3	26.7	.064	3.0	11.03	8.21	3.130	.160	.926	.534	-.459	24.2	.930	.527	-.457
1.56	3.7	32.0	.062	3.0	11.33	8.59	3.218	.185	.916	.546	-.462	29.3	.921	.541	-.462
1.72	4.2	37.3	.059	3.0	11.41	8.91	3.239	.215	.903	.551	-.454	34.6	.910	.550	-.460
1.88	4.7	42.7	.058	3.0	11.19	9.17	3.178	.250	.887	.548	-.435	40.0	.896	.551	-.447
2.03	5.1	47.8	.056	3.0	10.66	9.38	3.028	.295	.864	.537	-.401	45.2	.877	.544	-.421
2.19	5.5	52.6	.055	3.0	9.77	9.53	2.775	.354	.829	.516	-.344	50.2	.849	.529	-.377
2.35	5.9	57.0	.055	3.0	8.46	9.61	2.401	.443	.770	.480	-.249	54.8	.805	.501	-.305
2.50	6.3	60.5	.055	3.0	6.58	9.61	1.869	.604	.652	.424	-.076	58.8	.726	.456	-.182
2.66	6.6	63.1	.055	3.0	3.86	9.53	1.095	1.076	.322	.369	.309	61.8	.550	.394	.056
2.81	6.9	64.2	.057	3.0	2.20	9.32	.624	1.919	-.083	.435	.648	63.7	.117	.403	.481

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 1 TIMES. AVERAGE NUMBER ITERATIONS = 1.8114
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=18 CODE=5

OUTFLOW HYDROGRAPH REACH 46.18

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	62.7	12.000	43.8	18.000	33.1	24.000	13.5
.250	.0	6.250	62.5	12.250	43.2	18.250	32.8	24.250	11.6
.500	.0	6.500	62.2	12.500	42.6	18.500	32.4	24.500	9.3
.750	.0	6.750	61.9	12.750	42.1	18.750	31.9	24.750	8.7
1.000	.0	7.000	61.4	13.000	41.6	19.000	31.2	25.000	8.3
1.250	22.1	7.250	60.0	13.250	41.1	19.250	30.5	25.250	8.1
1.500	51.3	7.500	57.8	13.500	40.7	19.500	29.6	25.500	7.9
1.750	59.7	7.750	56.4	13.750	40.2	19.750	28.8	25.750	7.7
2.000	109.4	8.000	55.3	14.000	39.7	20.000	27.8	26.000	7.6
2.250	125.0	8.250	54.4	14.250	39.1	20.250	26.9	26.250	7.4
2.500	100.7	8.500	53.6	14.500	38.7	20.500	26.2	26.500	7.3
2.750	83.9	8.750	52.8	14.750	38.2	20.750	25.4	26.750	7.2
3.000	74.4	9.000	52.0	15.000	37.7	21.000	24.6	27.000	7.2
3.250	69.6	9.250	51.3	15.250	37.3	21.250	23.7	27.250	7.1
3.500	66.7	9.500	50.6	15.500	36.9	21.500	22.8	27.500	7.0
3.750	65.3	9.750	50.0	15.750	36.4	21.750	21.9	27.750	6.9
4.000	64.8	10.000	49.3	16.000	36.0	22.000	21.2	28.000	6.9
4.250	64.6	10.250	48.6	16.250	35.6	22.250	20.6	28.250	6.8
4.500	64.3	10.500	47.9	16.500	35.2	22.500	19.4	28.500	6.7
4.750	64.1	10.750	47.2	16.750	34.9	22.750	18.2	28.750	6.7
5.000	63.8	11.000	46.4	17.000	34.5	23.000	17.0	29.000	6.6
5.250	63.5	11.250	45.7	17.250	34.1	23.250	15.9	29.250	6.5
5.500	63.3	11.500	45.0	17.500	33.7	23.500	14.9	29.500	6.5
5.750	63.0	11.750	44.4	17.750	33.4	23.750	14.1	29.750	5.8

RUNOFF VOLUME = 1.39692 INCHES = 89.1862 ACRE-Feet
 PEAK DISCHARGE RATE = 127.37 CFS AT 2.150 HOURS BASIN AREA = 1.1971 SQ. MI.

*

 *
 *S ADD 46.18 TO 62.1 TO GET 46.9
 *
 ADD HYD ID=9 HYD NO=46.9 ID I=18 ID II=1
 PRINT HYD ID=9 CODE=1

OUTFLOW HYDROGRAPH REACH 46.90

RUNOFF VOLUME = 1.36680 INCHES = 92.3456 ACRE-Feet
 PEAK DISCHARGE RATE = 140.33 CFS AT 2.150 HOURS BASIN AREA = 1.2668 SQ. MI.

*
 *

 *
 *S ROUTE 46.9 IN 72" IN SCENIC
 *
 COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.0085
 DIAM=6.0 FT N=0.013

RATING CURVE PIPE SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.31	.56	2.05	2.67
.63	1.56	8.89	3.67
.94	2.82	20.67	4.36
1.25	4.27	37.17	4.87
1.56	5.86	58.04	5.27
1.88	7.55	82.82	5.56
2.19	9.33	110.95	5.78
2.50	11.16	141.86	5.92
2.81	13.02	174.87	5.99
3.13	14.90	209.29	6.00
3.44	16.76	244.34	6.00
3.75	18.60	279.18	6.00
4.06	20.39	312.91	6.00
4.38	22.10	344.49	6.00
4.69	23.71	372.76	6.00
5.00	25.19	396.27	6.00
5.32	26.49	413.10	6.00
5.63	27.55	420.02	6.00
6.00	28.27	420.02	6.00

ROUTE MCUNGE ID=2 HYD NO=IP2 INFLOW ID=9
 DT=0.0 HR LENGTH=868 FT
 NS=0 SLOPE=0.0085 CODE=5

INFLOW END= 600
 DT= .050000

TABLE PTS= 19
 QMED= 70.17 CKMED= 14.6111
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WIDTH MED= 5.41 NREACH= 1 DX= 868.00 OUT.WPD

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.090	.0	4.82	1.72	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.31	.6	2.0	.066	2.7	6.00	3.64	1.243	.017	.985	.115	-.100	.3	.998	.018	-.016
.63	1.6	8.9	.042	3.7	8.28	5.69	1.716	.040	.971	.274	-.245	4.9	.975	.185	-.160
.94	2.8	20.7	.033	4.4	10.48	7.32	2.173	.061	.962	.382	-.344	14.3	.966	.332	-.298
1.25	4.3	37.2	.028	4.9	12.33	8.70	2.558	.084	.954	.451	-.405	28.5	.958	.419	-.377
1.56	5.9	58.0	.024	5.3	13.91	9.91	2.885	.107	.946	.499	-.445	47.2	.950	.477	-.427
1.88	7.6	82.8	.022	5.6	15.26	10.96	3.164	.132	.938	.534	-.473	70.1	.942	.519	-.461
2.19	9.3	111.0	.020	5.8	16.39	11.89	3.398	.159	.930	.561	-.491	96.6	.934	.549	-.484
2.50	11.2	141.9	.019	5.9	17.31	12.71	3.590	.188	.921	.581	-.503	126.1	.926	.573	-.499
2.81	13.0	174.9	.018	6.0	18.04	13.43	3.741	.219	.912	.597	-.508	158.1	.917	.590	-.507
3.13	14.9	209.3	.017	6.0	18.55	14.05	3.846	.255	.900	.608	-.508	191.9	.906	.604	-.510
3.44	16.8	244.3	.017	6.0	18.66	14.58	3.871	.296	.886	.613	-.498	226.7	.894	.612	-.505
3.75	18.6	279.2	.016	6.0	18.32	15.01	3.798	.344	.866	.611	-.477	261.6	.877	.613	-.490
4.06	20.4	312.9	.016	6.0	17.45	15.35	3.618	.405	.839	.602	-.441	296.0	.854	.608	-.462
4.38	22.1	344.5	.015	6.0	15.99	15.59	3.317	.487	.797	.584	-.381	328.7	.821	.595	-.416
4.69	23.7	372.8	.015	6.0	13.84	15.72	2.869	.609	.728	.553	-.282	358.6	.769	.571	-.340
5.00	25.2	396.3	.015	6.0	10.77	15.73	2.234	.831	.591	.508	-.099	384.6	.677	.534	-.211
5.32	26.5	413.1	.015	6.0	6.31	15.60	1.309	1.479	.219	.472	.309	404.8	.474	.484	.041
5.63	27.5	420.0	.016	6.0	3.60	15.25	.746	2.638	-.203	.544	.660	416.6	.005	.508	.487

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 8 TIMES. AVERAGE NUMBER ITERATIONS = 1.8314
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=2 CODE=5

HYDROGRAPH FROM AREA IP2

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	62.8	12.000	43.8	18.000	33.1	24.000	13.6
.250	.0	6.250	62.5	12.250	43.2	18.250	32.8	24.250	12.1
.500	.0	6.500	62.3	12.500	42.7	18.500	32.4	24.500	9.5
.750	.0	6.750	62.0	12.750	42.1	18.750	31.9	24.750	8.8
1.000	.0	7.000	61.5	13.000	41.6	19.000	31.3	25.000	8.4
1.250	10.5	7.250	60.1	13.250	41.1	19.250	30.5	25.250	8.1
1.500	90.7	7.500	58.0	13.500	40.7	19.500	29.7	25.500	7.9
1.750	113.8	7.750	56.5	13.750	40.2	19.750	28.8	25.750	7.7
2.000	132.4	8.000	55.4	14.000	39.7	20.000	27.9	26.000	7.6
2.250	133.1	8.250	54.5	14.250	39.2	20.250	27.0	26.250	7.5
2.500	111.6	8.500	53.6	14.500	38.7	20.500	26.3	26.500	7.4
2.750	89.4	8.750	52.9	14.750	38.2	20.750	25.5	26.750	7.3
3.000	78.4	9.000	52.1	15.000	37.8	21.000	24.7	27.000	7.2
3.250	72.1	9.250	51.4	15.250	37.3	21.250	23.8	27.250	7.1
3.500	68.6	9.500	50.7	15.500	36.9	21.500	22.8	27.500	7.0
3.750	66.7	9.750	50.0	15.750	36.5	21.750	22.0	27.750	6.9
4.000	65.8	10.000	49.3	16.000	36.1	22.000	21.3	28.000	6.9
4.250	65.2	10.250	48.7	16.250	35.6	22.250	20.7	28.250	6.8
4.500	64.8	10.500	48.0	16.500	35.2	22.500	19.6	28.500	6.7
4.750	64.5	10.750	47.2	16.750	34.9	22.750	18.3	28.750	6.7
5.000	64.1	11.000	46.5	17.000	34.5	23.000	17.1	29.000	6.6
5.250	63.8	11.250	45.8	17.250	34.2	23.250	16.0	29.250	6.5
5.500	63.4	11.500	45.1	17.500	33.8	23.500	15.0	29.500	6.5
5.750	63.1	11.750	44.5	17.750	33.4	23.750	14.2	29.750	6.0

RUNOFF VOLUME = 1.36657 INCHES = 92.3299 ACRE-Feet
 PEAK DISCHARGE RATE = 139.89 CFS AT 2.100 HOURS BASIN AREA = 1.2668 SQ. MI.

*

 *
 *S*****
 *S ADD IP2 TO IP3 TO GET 60.20
 *
 ADD HYD ID=20 HYD NO=60.20 ID I=2 ID II=19
 PRINT HYD ID=20 CODE=1

OUTFLOW HYDROGRAPH REACH 60.20

RUNOFF VOLUME = .85184 INCHES = 621.6656 ACRE-Feet
 PEAK DISCHARGE RATE = 2837.80 CFS AT 3.350 HOURS BASIN AREA = 13.6836 SQ. MI.

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 *
 *S ADD OFFSITE VISTA VIEJA (VV) SUB-BASIN - INFLOW POINT IP4
 *
 *S*** SUB-BASIN 86 - BASIN E IN VV DRAINAGE REPORT
 *S*** INCLUDES 10 AC DEVELOPED VV
 *

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.065 K=0.7
 LENGTH=1600 FT SLOPE=0.038 K=2.0
 LENGTH=4852 FT SLOPE=0.028 K=3.0
 Kn=.033 CR=0.51

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.065000	.7000
SHALLOW FLOW PORTION	1600.0	.038000	2.0000
CHANNEL FLOW PORTION	4852.0	.028000	3.0000
TOTAL BASIN	6852.0	.032495	2.3741

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 6852.0
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OUT.WPD

1.46	4.1	57.7	.052	3.9	19.18	13.92	2.636	.030	.984	.454	-.438	50.2	.985	.441	-.426
1.67	5.0	73.8	.049	3.9	20.27	14.88	2.785	.035	.982	.476	-.458	65.6	.983	.467	-.450
1.88	5.8	91.0	.046	4.0	21.12	15.72	2.902	.041	.979	.493	-.472	82.3	.980	.486	-.467
2.08	6.6	108.9	.044	4.0	21.71	16.45	2.983	.048	.976	.504	-.480	99.8	.978	.500	-.478
2.29	7.5	127.1	.043	4.0	21.85	17.06	3.002	.056	.973	.507	-.480	117.9	.975	.507	-.482
2.50	8.3	145.2	.041	4.0	21.44	17.57	2.946	.065	.968	.501	-.469	136.1	.970	.506	-.476
2.71	9.1	162.8	.041	4.0	20.43	17.97	2.807	.076	.961	.485	-.446	154.0	.965	.495	-.460
2.92	9.8	179.2	.040	4.0	18.72	18.25	2.573	.091	.950	.454	-.404	171.0	.956	.472	-.429
3.13	10.5	193.9	.040	4.0	16.20	18.40	2.226	.114	.932	.401	-.333	186.6	.943	.433	-.375
3.34	11.2	206.2	.040	4.0	12.61	18.42	1.733	.156	.892	.308	-.200	200.1	.917	.364	-.282
3.54	11.8	214.9	.040	4.0	7.39	18.26	1.015	.278	.758	.128	.115	210.6	.855	.241	-.095
3.75	12.2	218.5	.041	4.0	4.21	17.85	.579	.495	.522	.036	.442	216.7	.537	.035	.428

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 11 OCCURRED 1 TIMES. AVERAGE NUMBER ITERATIONS = 1.1604
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=10 CODE=5

HYDROGRAPH FROM AREA IP4

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.250	1.0	10.500	.2	15.750	.1	21.000	.1
.250	.0	5.500	.9	10.750	.2	16.000	.1	21.250	.1
.500	.0	5.750	.7	11.000	.2	16.250	.1	21.500	.1
.750	.0	6.000	.6	11.250	.2	16.500	.1	21.750	.1
1.000	.4	6.250	.6	11.500	.2	16.750	.1	22.000	.1
1.250	1.1	6.500	.4	11.750	.2	17.000	.1	22.250	.1
1.500	109.8	6.750	.3	12.000	.2	17.250	.1	22.500	.1
1.750	231.5	7.000	.3	12.250	.2	17.500	.1	22.750	.1
2.000	103.8	7.250	.3	12.500	.2	17.750	.1	23.000	.1
2.250	45.8	7.500	.3	12.750	.2	18.000	.1	23.250	.1
2.500	23.3	7.750	.2	13.000	.2	18.250	.1	23.500	.1
2.750	16.6	8.000	.2	13.250	.2	18.500	.1	23.750	.1
3.000	12.1	8.250	.2	13.500	.2	18.750	.1	24.000	.1
3.250	8.9	8.500	.2	13.750	.2	19.000	.1	24.250	.1
3.500	6.6	8.750	.2	14.000	.2	19.250	.1	24.500	.0
3.750	4.9	9.000	.2	14.250	.1	19.500	.1	24.750	.0
4.000	3.7	9.250	.2	14.500	.1	19.750	.1	25.000	.0
4.250	2.8	9.500	.2	14.750	.1	20.000	.1	25.250	.0
4.500	2.1	9.750	.2	15.000	.1	20.250	.1	25.500	.0
4.750	1.6	10.000	.2	15.250	.1	20.500	.1	25.750	.0
5.000	1.3	10.250	.2	15.500	.1	20.750	.1		

RUNOFF VOLUME = .91440 INCHES = 12.0944 ACRE-Feet
 PEAK DISCHARGE RATE = 234.57 CFS AT 1.800 HOURS BASIN AREA = .2480 SQ. MI.

 *S INFLOW POINT IP5
 *S ONSITE BASINS VV1 UNITS 2 AND PART OF UNIT 3
 *

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.02 K=0.7
 LENGTH=1600 FT SLOPE=0.02 K=2.0
 LENGTH=150 FT SLOPE=0.02 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.020000	.7000
SHALLOW FLOW PORTION	1600.0	.020000	2.0000
CHANNEL FLOW PORTION	150.0	.020000	3.0000
TOTAL BASIN	2150.0	.020000	1.5126

TIME OF CONCENTRATION (HRS)= .2792 TIME TO PEAK (HRS)= .1861 LAG TIME (HRS)= .2094

COMPUTE NM HYD ID=1 HYD NO=VV1.23 DA=0.0894 SQ MI
 PER A=0 PER B=20 PER C=20 PER D=60
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .1861

K = .101685HR TP = .186130HR K/TP RATIO = .546310 SHAPE CONSTANT, N = 7.084594
 UNIT PEAK = 151.37 CFS UNIT VOLUME = 1.000 B = 525.25 P60 = 2.2000
 AREA = .053640 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .167906HR TP = .186130HR K/TP RATIO = .902092 SHAPE CONSTANT, N = 3.928146
 UNIT PEAK = 67.311 CFS UNIT VOLUME = 1.000 B = 350.35 P60 = 2.2000
 AREA = .035760 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=5

HYDROGRAPH FROM AREA VV1.23

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.250	2.0	10.500	1.0	15.750	.7	21.000	.6
.250	.0	5.500	2.0	10.750	.9	16.000	.7	21.250	.6
.500	.0	5.750	2.0	11.000	.9	16.250	.7	21.500	.6
.750	.5	6.000	2.0	11.250	.9	16.500	.7	21.750	.6
1.000	5.9	6.250	1.5	11.500	.9	16.750	.7	22.000	.6
1.250	12.9	6.500	1.3	11.750	.9	17.000	.7	22.250	.6
1.500	201.7	6.750	1.3	12.000	.9	17.250	.7	22.500	.6
1.750	122.4	7.000	1.2	12.250	.9	17.500	.7	22.750	.6
2.000	64.3	7.250	1.2	12.500	.9	17.750	.7	23.000	.6
2.250	26.5	7.500	1.2	12.750	.9	18.000	.7	23.250	.6
2.500	13.3	7.750	1.1	13.000	.8	18.250	.7	23.500	.6

OUT.WPD									
2.750	8.2	8.000	1.1	13.250	.8	18.500	.7	23.750	.6
3.000	5.4	8.250	1.1	13.500	.8	18.750	.7	24.000	.6
3.250	3.9	8.500	1.1	13.750	.8	19.000	.7	24.250	.2
3.500	3.1	8.750	1.1	14.000	.8	19.250	.7	24.500	.1
3.750	2.6	9.000	1.1	14.250	.8	19.500	.6	24.750	.0
4.000	2.3	9.250	1.0	14.500	.8	19.750	.6	25.000	.0
4.250	2.1	9.500	1.0	14.750	.8	20.000	.6	25.250	.0
4.500	2.0	9.750	1.0	15.000	.8	20.250	.6	25.500	.0
4.750	2.0	10.000	1.0	15.250	.8	20.500	.6		
5.000	2.0	10.250	1.0	15.500	.8	20.750	.6		

RUNOFF VOLUME = 2.33689 INCHES = 11.1422 ACRE-Feet
 PEAK DISCHARGE RATE = 220.73 CFS AT 1.550 HOURS BASIN AREA = .0894 SQ. MI.

*S ROUTE THRU 48" SD - IP5

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.015
 DIAM=4.0 FT N=0.013

RATING CURVE PIPE SECTION 1.0				
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT	
.00	.00	.00	.00	
.21	.25	.92	1.78	
.42	.69	4.01	2.44	
.63	1.25	9.31	2.91	
.83	1.90	16.75	3.25	
1.04	2.60	26.15	3.51	
1.25	3.36	37.31	3.71	
1.46	4.15	49.99	3.85	
1.67	4.96	63.92	3.94	
1.88	5.79	78.79	3.99	
2.08	6.62	94.30	4.00	
2.29	7.45	110.09	4.00	
2.50	8.27	125.79	4.00	
2.71	9.06	140.99	4.00	
2.92	9.82	155.22	4.00	
3.13	10.54	167.95	4.00	
3.34	11.20	178.55	4.00	
3.54	11.77	186.13	4.00	
3.75	12.24	189.24	4.00	
4.00	12.57	189.25	4.00	

ROUTE MCUNGE ID=11 HYD NO=IP5 INFLOW ID=1
 DT=0.0 HR LENGTH=2060 FT
 NS=0 SLOPE=0.015 CODE=5

INFLOW END= 515 TABLE PTS= 19
 DT= .050000 QMED= 110.37 CKMED= 19.2209
 WIDTH MED= 4.00 NREACH= 2 DX= 1030.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	CK (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.211	.0	5.72	1.74	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.21	.2	.9	.155	1.8	6.08	3.69	1.062	.006	.995	.033	-.027	.1	.999	.005	-.004
.42	.7	4.0	.099	2.4	8.39	5.76	1.466	.013	.990	.193	-.183	2.2	.991	.101	-.093
.63	1.3	9.3	.077	2.9	10.62	7.42	1.856	.020	.986	.304	-.291	6.4	.988	.253	-.240
.83	1.9	16.7	.065	3.2	12.50	8.82	2.185	.027	.983	.377	-.361	12.8	.985	.344	-.328
1.04	2.6	26.2	.057	3.5	14.11	10.04	2.465	.034	.980	.428	-.409	21.3	.982	.405	-.387
1.25	3.4	37.3	.051	3.7	15.47	11.11	2.703	.042	.978	.466	-.443	31.6	.979	.449	-.428
1.46	4.1	50.0	.047	3.9	16.61	12.06	2.903	.051	.974	.494	-.469	43.5	.976	.482	-.458
1.67	5.0	63.9	.044	3.9	17.55	12.89	3.067	.060	.971	.515	-.486	56.8	.973	.506	-.479
1.88	5.8	78.8	.042	4.0	18.29	13.61	3.196	.070	.967	.531	-.498	71.2	.969	.525	-.494
2.08	6.6	94.3	.040	4.0	18.80	14.24	3.286	.081	.963	.542	-.505	86.5	.965	.538	-.503
2.29	7.5	110.1	.039	4.0	18.92	14.78	3.307	.094	.957	.546	-.503	102.1	.960	.545	-.506
2.50	8.3	125.8	.038	4.0	18.57	15.22	3.245	.110	.950	.541	-.490	117.9	.954	.545	-.499
2.71	9.1	141.0	.037	4.0	17.69	15.56	3.091	.129	.939	.526	-.465	133.4	.945	.535	-.480
2.92	9.8	155.2	.036	4.0	16.21	15.80	2.834	.155	.922	.499	-.421	148.1	.932	.515	-.447
3.13	10.5	168.0	.036	4.0	14.03	15.94	2.451	.194	.894	.451	-.345	161.6	.911	.479	-.390
3.34	11.2	178.5	.036	4.0	10.92	15.95	1.909	.265	.833	.370	-.203	173.3	.872	.419	-.291
3.54	11.8	186.1	.036	4.0	6.40	15.81	1.118	.471	.636	.227	.136	182.4	.777	.314	-.091
3.75	12.2	189.2	.037	4.0	3.65	15.46	.637	.840	.322	.193	.486	187.7	.341	.189	.471

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 6 OCCURRED 2 TIMES. AVERAGE NUMBER ITERATIONS = 1.1613
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=11 CODE=5

HYDROGRAPH FROM AREA IP5

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.250	1.9	10.500	1.0	15.750	.8	21.000	.6
.250	.0	5.500	2.0	10.750	1.0	16.000	.7	21.250	.6
.500	.0	5.750	2.0	11.000	.9	16.250	.7	21.500	.6
.750	.0	6.000	2.0	11.250	.9	16.500	.7	21.750	.6
1.000	4.9	6.250	1.8	11.500	.9	16.750	.7	22.000	.6
1.250	7.8	6.500	1.3	11.750	.9	17.000	.7	22.250	.6
1.500	165.2	6.750	1.3	12.000	.9	17.250	.7	22.500	.6
1.750	126.3	7.000	1.2	12.250	.9	17.500	.7	22.750	.6
2.000	69.4	7.250	1.2	12.500	.9	17.750	.7	23.000	.6
2.250	31.4	7.500	1.2	12.750	.9	18.000	.7	23.250	.6
2.500	14.7	7.750	1.1	13.000	.8	18.250	.7	23.500	.6
2.750	9.0	8.000	1.1	13.250	.8	18.500	.7	23.750	.6
3.000	6.0	8.250	1.1	13.500	.8	18.750	.7	24.000	.6
3.250	4.3	8.500	1.1	13.750	.8	19.000	.7	24.250	.4
3.500	3.3	8.750	1.1	14.000	.8	19.250	.7	24.500	.1
3.750	2.8	9.000	1.1	14.250	.8	19.500	.7	24.750	.0
4.000	2.4	9.250	1.0	14.500	.8	19.750	.6	25.000	.0
4.250	2.2	9.500	1.0	14.750	.8	20.000	.6	25.250	.0
4.500	2.1	9.750	1.0	15.000	.8	20.250	.6	25.500	.0
4.750	2.0	10.000	1.0	15.250	.8	20.500	.6	25.750	.0

5.000 2.0 10.250 1.0 15.500 OUT.WPD .8 20.750 .6

RUNOFF VOLUME = 2.30533 INCHES = 10.9918 ACRE-FEET
 PEAK DISCHARGE RATE = 198.38 CFS AT 1.650 HOURS BASIN AREA = .0894 SQ. MI.

*

 *S ADD OFFSITE VISTA VIEJA (VV2) SUB-BASIN - INFLOW POINT IP6
 *S*** SUB-BASIN 83 & 83A - BASIN E IN D DRAINAGE REPORT
 *S INCLUDES PARTS OF UNIT 4 & 1

 *S*** SUB-BASIN 83
 *
 *
 COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.058 K=0.7
 LENGTH=1600 FT SLOPE=0.061 K=2.0
 LENGTH=9817 FT SLOPE=0.0326 K=3.0
 Kn=.033 CR=0.61

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.058000	.7000
SHALLOW FLOW PORTION	1600.0	.061000	2.0000
CHANNEL FLOW PORTION	9817.0	.032600	3.0000
TOTAL BASIN	11817.0	.037305	2.5776

LAG EQUATION FACTORS: Kn=.0330 TOTAL BASIN LENGTH (FT)= 11817.0
 TOTAL BASIN SLOPE (FT/FT)= .037305 CENTROID LENGTH (FT)= 7208.4

TIME OF CONCENTRATION (HRS)= .6879 TIME TO PEAK (HRS)= .4586 LAG TIME (HRS)= .5159

COMPUTE NM HYD ID=1 HYD NO=83 DA=0.538 SQ MI
 PER A=89 PER B=0 PER C=10 PER D=1
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .4586

K = .255513HR TP = .458584HR K/TP RATIO = .557178 SHAPE CONSTANT, N = 6.908645
 UNIT PEAK = 6.0643 CFS UNIT VOLUME = .9979 B = 516.91 P60 = 2.2000
 AREA = .005380 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .423400HR TP = .458584HR K/TP RATIO = .923278 SHAPE CONSTANT, N = 3.833020
 UNIT PEAK = 399.40 CFS UNIT VOLUME = 1.000 B = 343.88 P60 = 2.2000
 AREA = .532620 SQ MI IA = .61970 INCHES INF = 1.58515 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=1 CODE=5

OUTFLOW HYDROGRAPH REACH 83.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.500	4.4	11.000	.2	16.500	.1	22.000	.1
.250	.0	5.750	3.6	11.250	.1	16.750	.1	22.250	.1
.500	.0	6.000	3.0	11.500	.1	17.000	.1	22.500	.1
.750	.0	6.250	2.5	11.750	.1	17.250	.1	22.750	.1
1.000	.1	6.500	2.1	12.000	.1	17.500	.1	23.000	.1
1.250	.4	6.750	1.7	12.250	.1	17.750	.1	23.250	.1
1.500	84.2	7.000	1.4	12.500	.1	18.000	.1	23.500	.1
1.750	313.4	7.250	1.2	12.750	.1	18.250	.1	23.750	.1
2.000	286.8	7.500	1.0	13.000	.1	18.500	.1	24.000	.1
2.250	168.9	7.750	.8	13.250	.1	18.750	.1	24.250	.1
2.500	93.5	8.000	.7	13.500	.1	19.000	.1	24.500	.0
2.750	51.9	8.250	.6	13.750	.1	19.250	.1	24.750	.0
3.000	31.5	8.500	.5	14.000	.1	19.500	.1	25.000	.0
3.250	25.4	8.750	.4	14.250	.1	19.750	.1	25.250	.0
3.500	20.8	9.000	.4	14.500	.1	20.000	.1	25.500	.0
3.750	17.1	9.250	.3	14.750	.1	20.250	.1	25.750	.0
4.000	14.0	9.500	.3	15.000	.1	20.500	.1	26.000	.0
4.250	11.5	9.750	.3	15.250	.1	20.750	.1	26.250	.0
4.500	9.5	10.000	.2	15.500	.1	21.000	.1	26.500	.0
4.750	7.8	10.250	.2	15.750	.1	21.250	.1		
5.000	6.4	10.500	.2	16.000	.1	21.500	.1		
5.250	5.3	10.750	.2	16.250	.1	21.750	.1		

RUNOFF VOLUME = .84830 INCHES = 24.3403 ACRE-FEET
 PEAK DISCHARGE RATE = 330.36 CFS AT 1.850 HOURS BASIN AREA = .5380 SQ. MI.

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 *S*** SUB-BASIN 83A
 *
 *
 COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.031 K=0.7
 LENGTH=1600 FT SLOPE=0.043 K=2.0
 LENGTH=2172 FT SLOPE=0.0355 K=3.0
 Kn=.033 CR=.5

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
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OUT.WPD

SHEET FLOW PORTION	400.0	.031000	.7000
SHALLOW FLOW PORTION	1600.0	.043000	2.0000
CHANNEL FLOW PORTION	2172.0	.035500	3.0000
TOTAL BASIN	4172.0	.037945	1.9566

LAG EQUATION FACTORS: Kn= .0330 TOTAL BASIN LENGTH (FT)= 4172.0
TOTAL BASIN SLOPE (FT/FT)= .037945 CENTROID LENGTH (FT)= 2086.0

TIME OF CONCENTRATION (HRS)= .2993 TIME TO PEAK (HRS)= .1995 LAG TIME (HRS)= .2245

COMPUTE NM HYD ID=2 HYD NO=83A DA=0.137 SQ MI
PER A=89 PER B=0 PER C=10 PER D=1
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .1995

K = .109464HR TP = .199522HR K/TP RATIO = .548629 SHAPE CONSTANT, N = 7.046295
UNIT PEAK = 3.5942 CFS UNIT VOLUME = .9960 B = 523.44 P60 = 2.2000
AREA = .001370 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .216881HR TP = .199522HR K/TP RATIO = 1.087003 SHAPE CONSTANT, N = 3.250574
UNIT PEAK = 205.06 CFS UNIT VOLUME = 1.000 B = 301.65 P60 = 2.2000
AREA = .135630 SQ MI IA = .61970 INCHES INF = 1.58515 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=5

HYDROGRAPH FROM AREA 83A

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.2	10.000	.0	15.000	.0	20.000	.0
.250	.0	5.250	.2	10.250	.0	15.250	.0	20.250	.0
.500	.0	5.500	.1	10.500	.0	15.500	.0	20.500	.0
.750	.0	5.750	.1	10.750	.0	15.750	.0	20.750	.0
1.000	.1	6.000	.1	11.000	.0	16.000	.0	21.000	.0
1.250	.3	6.250	.1	11.250	.0	16.250	.0	21.250	.0
1.500	132.1	6.500	.1	11.500	.0	16.500	.0	21.500	.0
1.750	99.8	6.750	.0	11.750	.0	16.750	.0	21.750	.0
2.000	33.0	7.000	.0	12.000	.0	17.000	.0	22.000	.0
2.250	14.4	7.250	.0	12.250	.0	17.250	.0	22.250	.0
2.500	9.6	7.500	.0	12.500	.0	17.500	.0	22.500	.0
2.750	6.5	7.750	.0	12.750	.0	17.750	.0	22.750	.0
3.000	4.4	8.000	.0	13.000	.0	18.000	.0	23.000	.0
3.250	3.0	8.250	.0	13.250	.0	18.250	.0	23.250	.0
3.500	2.1	8.500	.0	13.500	.0	18.500	.0	23.500	.0
3.750	1.4	8.750	.0	13.750	.0	18.750	.0	23.750	.0
4.000	1.0	9.000	.0	14.000	.0	19.000	.0	24.000	.0
4.250	.7	9.250	.0	14.250	.0	19.250	.0	24.250	.0
4.500	.5	9.500	.0	14.500	.0	19.500	.0	24.500	.0
4.750	.3	9.750	.0	14.750	.0	19.750	.0		

RUNOFF VOLUME = .84830 INCHES = 6.1982 ACRE-FEET
PEAK DISCHARGE RATE = 154.52 CFS AT 1.600 HOURS BASIN AREA = .1370 SQ. MI.

*

*S ADD 83 TO 83A TO GET 83A.3

*S
ADD HYD ID=3 HYD NO=83A.3 ID I=1 ID II=2
PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA 83A.3

RUNOFF VOLUME = .84829 INCHES = 30.5384 ACRE-FEET
PEAK DISCHARGE RATE = 413.16 CFS AT 1.750 HOURS BASIN AREA = .6750 SQ. MI.

*
*S

*S*** ONSITE SUB-BASIN VV2 - PARTS OF UNITS 4 & 1

*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.006 K=0.7
LENGTH=1600 FT SLOPE=0.011 K=2.0
LENGTH=130 FT SLOPE=0.013 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.006000	.7000
SHALLOW FLOW PORTION	1600.0	.011000	2.0000
CHANNEL FLOW PORTION	130.0	.013000	3.0000
TOTAL BASIN	2130.0	.010183	1.3720

TIME OF CONCENTRATION (HRS)= .4274 TIME TO PEAK (HRS)= .2849 LAG TIME (HRS)= .3205

COMPUTE NM HYD ID=2 HYD NO=VV2.41 DA=0.0373 SQ MI
PER A=0 PER B=20 PER C=20 PER D=60
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .2849

OUT.WPD
 K = .155273HR TP = .284905HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 41.340 CFS UNIT VOLUME = .9998 B = 526.28 P60 = 2.2000
 AREA = .022380 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .260720HR TP = .284905HR K/TP RATIO = .915112 SHAPE CONSTANT, N = 3.869028
 UNIT PEAK = 18.137 CFS UNIT VOLUME = .9994 B = 346.34 P60 = 2.2000
 AREA = .014920 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=5

HYDROGRAPH FROM AREA VV2.41

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.250	.9	10.500	.4	15.750	.3	21.000	.3
.250	.0	5.500	.9	10.750	.4	16.000	.3	21.250	.3
.500	.0	5.750	.9	11.000	.4	16.250	.3	21.500	.3
.750	.0	6.000	.9	11.250	.4	16.500	.3	21.750	.3
1.000	1.6	6.250	.8	11.500	.4	16.750	.3	22.000	.2
1.250	3.1	6.500	.6	11.750	.4	17.000	.3	22.250	.2
1.500	43.2	6.750	.5	12.000	.4	17.250	.3	22.500	.2
1.750	64.3	7.000	.5	12.250	.4	17.500	.3	22.750	.2
2.000	34.9	7.250	.5	12.500	.4	17.750	.3	23.000	.2
2.250	18.5	7.500	.5	12.750	.4	18.000	.3	23.250	.2
2.500	8.7	7.750	.5	13.000	.4	18.250	.3	23.500	.2
2.750	5.6	8.000	.5	13.250	.4	18.500	.3	23.750	.2
3.000	3.9	8.250	.5	13.500	.3	18.750	.3	24.000	.2
3.250	2.8	8.500	.5	13.750	.3	19.000	.3	24.250	.2
3.500	2.1	8.750	.4	14.000	.3	19.250	.3	24.500	.1
3.750	1.7	9.000	.4	14.250	.3	19.500	.3	24.750	.0
4.000	1.4	9.250	.4	14.500	.3	19.750	.3	25.000	.0
4.250	1.2	9.500	.4	14.750	.3	20.000	.3	25.250	.0
4.500	1.0	9.750	.4	15.000	.3	20.250	.3	25.500	.0
4.750	1.0	10.000	.4	15.250	.3	20.500	.3	25.750	.0
5.000	.9	10.250	.4	15.500	.3	20.750	.3	26.000	.0

RUNOFF VOLUME = 2.33689 INCHES = 4.6488 ACRE-FEET
 PEAK DISCHARGE RATE = 71.99 CFS AT 1.650 HOURS BASIN AREA = .0373 SQ. MI.

*

 *S ADD VV.41 TO 83A.3 TO GET 83A.4
 *S
 ADD HYD ID=4 HYD NO=83A.4 ID I=3 ID II=2
 PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA 83A.4

RUNOFF VOLUME = .92624 INCHES = 35.1872 ACRE-FEET
 PEAK DISCHARGE RATE = 477.44 CFS AT 1.750 HOURS BASIN AREA = .7123 SQ. MI.

*
 *S

 *S ROUTE THRU 60" TO IP6
 *
 *
 COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.028
 DIAM=5.0 FT N=0.013

RATING CURVE PIPE SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.26	.39	2.29	2.22
.52	1.09	9.92	3.06
.78	1.96	23.07	3.63
1.04	2.97	41.49	4.06
1.30	4.07	64.79	4.39
1.56	5.25	92.43	4.64
1.82	6.48	123.84	4.81
2.08	7.75	158.33	4.93
2.35	9.04	195.19	4.99
2.61	10.35	233.60	5.00
2.87	11.64	272.72	5.00
3.13	12.92	311.61	5.00
3.39	14.16	349.25	5.00
3.65	15.35	384.50	5.00
3.91	16.47	416.05	5.00
4.17	17.49	442.30	5.00
4.43	18.39	461.08	5.00
4.69	19.13	468.80	5.00
5.00	19.63	468.80	5.00

ROUTE MCUNGE ID=12 HYD NO=IP6 INFLOW ID=4
 DT=0.0 HR LENGTH=2865 FT
 NS=0 SLOPE=0.028 CODE=5

INFLOW END= 531 TABLE PTS= 19
 DT= .050000 QMED= 238.72 CKMED= 30.1746
 WIDTH MED= 5.00 NREACH= 2 DX= 1432.50

DEPTH AREA Q TRAVEL WIDTH ck VEL C D C1 C2 C3 Q-M C1-M C2-M C3-M
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(FT)	(SQ FT)	(CFS)	TIME(HR)	(FT)	(FPS)	(FPS)	OUT.WPD				(CFS)				
.00	.0	.0	.185	.0	7.96	2.76	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.26	.4	2.3	.136	2.2	9.64	5.86	1.211	.003	.998	.097	-.094	.4	1.000	.015	-.015
.52	1.1	9.9	.087	3.1	13.30	9.14	1.671	.006	.995	.253	-.248	5.5	.996	.163	-.160
.78	2.0	23.1	.068	3.6	16.84	11.76	2.116	.009	.994	.360	-.354	15.9	.995	.310	-.305
1.04	3.0	41.5	.057	4.1	19.82	13.99	2.491	.013	.993	.429	-.422	31.8	.993	.397	-.391
1.30	4.1	64.8	.050	4.4	22.36	15.92	2.810	.016	.991	.477	-.469	52.7	.992	.455	-.447
1.56	5.2	92.4	.045	4.6	24.52	17.62	3.081	.020	.990	.512	-.503	78.2	.991	.497	-.487
1.82	6.5	123.8	.042	4.8	26.34	19.12	3.309	.024	.989	.539	-.527	107.8	.989	.527	-.516
2.08	7.7	158.3	.039	4.9	27.83	20.43	3.497	.029	.987	.558	-.545	140.8	.988	.550	-.538
2.35	9.0	195.2	.037	5.0	29.00	21.58	3.643	.034	.986	.572	-.558	176.5	.987	.567	-.553
2.61	10.3	233.6	.035	5.0	29.81	22.58	3.745	.039	.984	.582	-.566	214.2	.985	.579	-.563
2.87	11.6	272.7	.034	5.0	30.00	23.43	3.769	.045	.981	.585	-.566	253.0	.983	.585	-.567
3.13	12.9	311.6	.033	5.0	29.44	24.12	3.699	.053	.978	.579	-.557	292.0	.980	.583	-.563
3.39	14.2	349.2	.032	5.0	28.05	24.67	3.524	.062	.973	.564	-.537	330.3	.976	.573	-.549
3.65	15.3	384.5	.032	5.0	25.71	25.05	3.230	.075	.965	.535	-.501	366.8	.970	.552	-.522
3.91	16.5	416.1	.031	5.0	22.24	25.27	2.795	.093	.952	.486	-.438	400.3	.960	.515	-.475
4.17	17.5	442.3	.031	5.0	17.32	25.29	2.176	.127	.923	.395	-.317	429.2	.942	.450	-.392
4.43	18.4	461.1	.032	5.0	10.14	25.97	1.274	.227	.819	.200	-.019	451.8	.895	.326	-.221
4.69	19.1	468.8	.032	5.0	5.78	24.51	.726	.404	.620	.061	.318	465.0	.633	.064	.303

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 7 OCCURRED 1 TIMES. AVERAGE NUMBER ITERATIONS = 1.2662
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=12 CODE=5

HYDROGRAPH FROM AREA IP6

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.500	5.7	11.000	.6	16.500	.4	22.000	.3
.250	.0	5.750	4.8	11.250	.6	16.750	.4	22.250	.3
.500	.0	6.000	4.1	11.500	.5	17.000	.4	22.500	.3
.750	.0	6.250	3.6	11.750	.5	17.250	.4	22.750	.3
1.000	.9	6.500	2.9	12.000	.5	17.500	.4	23.000	.3
1.250	3.0	6.750	2.4	12.250	.5	17.750	.4	23.250	.3
1.500	204.3	7.000	2.1	12.500	.5	18.000	.4	23.500	.3
1.750	462.5	7.250	1.8	12.750	.5	18.250	.4	23.750	.3
2.000	378.4	7.500	1.6	13.000	.5	18.500	.4	24.000	.3
2.250	214.8	7.750	1.4	13.250	.5	18.750	.4	24.250	.3
2.500	119.9	8.000	1.3	13.500	.5	19.000	.4	24.500	.1
2.750	69.0	8.250	1.1	13.750	.4	19.250	.4	24.750	.1
3.000	41.9	8.500	1.0	14.000	.4	19.500	.4	25.000	.0
3.250	32.5	8.750	.9	14.250	.4	19.750	.4	25.250	.0
3.500	26.0	9.000	.9	14.500	.4	20.000	.3	25.500	.0
3.750	21.0	9.250	.8	14.750	.4	20.250	.3	25.750	.0
4.000	17.1	9.500	.8	15.000	.4	20.500	.3	26.000	.0
4.250	14.0	9.750	.7	15.250	.4	20.750	.3	26.250	.0
4.500	11.5	10.000	.7	15.500	.4	21.000	.3	26.500	.0
4.750	9.5	10.250	.6	15.750	.4	21.250	.3		
5.000	8.0	10.500	.6	16.000	.4	21.500	.3		
5.250	6.7	10.750	.6	16.250	.4	21.750	.3		

RUNOFF VOLUME = .92506 INCHES = 35.1423 ACRE-Feet
 PEAK DISCHARGE RATE = 472.69 CFS AT 1.850 HOURS BASIN AREA = .7123 SQ. MI.

*S ADD IP5 TO IP5 AND IP6 TO GET 86.2

*S

ADD HYD ID=2 HYD NO=86.2 ID I=12 ID II=11
 PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 86.20

RUNOFF VOLUME = 1.07898 INCHES = 46.1340 ACRE-Feet
 PEAK DISCHARGE RATE = 642.19 CFS AT 1.700 HOURS BASIN AREA = .8017 SQ. MI.

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*S

*S ADD IP4 TO 86.2 TO GET 86.45

*S

ADD HYD ID=45 HYD NO=86.45 ID I=2 ID II=10
 PRINT HYD ID=45 CODE=1

OUTFLOW HYDROGRAPH REACH 86.45

RUNOFF VOLUME = 1.04009 INCHES = 58.2283 ACRE-Feet
 PEAK DISCHARGE RATE = 864.60 CFS AT 1.700 HOURS BASIN AREA = 1.0497 SQ. MI.

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*S ADD 62.20 (IP3) TO 86.45 (IP4, 5 & 6) TO GET 86.70

*S

ADD HYD ID=7 HYD NO=86.70 ID I=45 ID II=20
 PRINT HYD ID=7 CODE=1

OUTFLOW HYDROGRAPH REACH 86.70

RUNOFF VOLUME = .86525 INCHES = 679.8940 ACRE-Feet
 PEAK DISCHARGE RATE = 2879.16 CFS AT 3.350 HOURS BASIN AREA = 14.7333 SQ. MI.

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*S

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*S

** DETENTION BASIN ** AMAFCA BOCA NEGRA DAM
** ROUTE 46B.4 THROUGH DAM TO GET 51.6 OUTFLOW TO DOWN CANYON PIPE

*S TOTAL OUTFLOW FROM BOCA NEGRA DETENTION FACILITY
ROUTE RESERVOIR ID=14 HYD=51.6 INFLOW ID=7 CODE=2
OUTFLOW(CFS) STORAGE(AC FT) ELEV (FT)
0 0.0 5323
18 0.86 5324
31 1.78 5325
40 2.99 5326
62 4.51 5327
106 6.46 5328
226 8.97 5329
430 12.16 5330
479 16.37 5331
513 21.62 5332
545 27.74 5333
574 34.67 5334
602 42.83 5335
629 52.31 5336
655 62.75 5337
679 74.19 5338
684 76.49 5338.2
1438 86.29 5339
3699 99.27 5340
6830 113.10 5341
10683 127.90 5342
15192 143.55 5343
20320 160.17 5344
26006 178.15 5345
32315 197.56 5346
39208 218.35 5347
46624 240.56 5348

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5323.00	.000	.00
.10	.00	5323.00	.000	.00
.20	.00	5323.00	.000	.00
.30	.01	5323.00	.000	.00
.40	.01	5323.00	.000	.00
.50	.01	5323.00	.000	.00
.60	.01	5323.00	.000	.00
.70	.01	5323.00	.000	.01
.80	.05	5323.00	.000	.01
.90	2.22	5323.01	.007	.15
1.00	6.21	5323.05	.039	.81
1.10	9.18	5323.11	.092	1.92
1.20	11.12	5323.18	.155	3.24
1.30	50.79	5323.39	.336	7.03
1.40	171.99	5324.20	1.047	20.65
1.50	677.41	5326.69	4.037	55.16
1.60	1220.29	5329.53	10.657	333.90
1.70	1492.37	5331.38	18.379	492.01
1.80	1937.66	5332.99	27.692	544.75
1.90	2088.62	5334.68	40.252	593.15
2.00	2311.22	5336.11	53.485	631.93
2.10	2497.10	5337.49	68.367	666.78
2.20	2245.39	5338.64	81.832	1095.00
2.30	1941.73	5339.11	87.741	1690.67
2.40	1881.04	5339.18	88.686	1855.29
2.50	2198.02	5339.26	89.648	2023.02
2.60	2477.44	5339.39	91.342	2317.99
2.70	2659.48	5339.49	92.616	2539.85
2.80	2699.60	5339.55	93.427	2681.21
2.90	2606.03	5339.55	93.370	2671.27
3.00	2485.23	5339.51	92.857	2581.89
3.10	2397.13	5339.46	92.266	2478.94
3.20	2460.09	5339.45	92.104	2450.71
3.30	2716.40	5339.51	92.886	2586.88
3.40	2864.30	5339.60	94.053	2790.20
3.50	2606.25	5339.59	93.887	2761.33
3.60	2294.86	5339.47	92.433	2508.04
3.70	2056.20	5339.36	90.950	2249.76
3.80	1832.48	5339.25	89.574	2010.02
3.90	1686.09	5339.17	88.475	1818.68
4.00	1597.19	5339.11	87.730	1688.86
4.10	1525.44	5339.07	87.235	1602.58
4.20	1412.41	5339.03	86.704	1510.20
4.30	1267.63	5338.97	85.928	1410.18
4.40	1164.86	5338.88	84.797	1323.15
4.50	1035.22	5338.76	83.389	1214.77
4.60	921.48	5338.64	81.899	1100.16
4.70	826.52	5338.53	80.478	990.81
4.80	759.87	5338.42	79.219	893.94
4.90	698.59	5338.34	78.195	815.19
5.00	635.89	5338.26	77.267	743.81
5.10	572.57	5338.19	76.386	683.77
5.20	523.65	5338.09	75.268	681.34
5.30	482.33	5337.97	73.804	678.19
5.40	446.27	5337.81	72.049	674.51
5.50	413.66	5337.64	70.041	670.30

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
5.60	385.66	5337.44	67.822	665.64
5.70	361.22	5337.23	65.426	660.61
5.80	339.73	5337.01	62.883	655.28
5.90	320.83	5336.76	60.223	648.71
6.00	303.91	5336.49	57.471	641.85
6.10	288.29	5336.22	54.642	634.81
6.20	273.79	5335.94	51.748	627.40
6.30	260.02	5335.63	48.803	619.01
6.40	247.12	5335.31	45.817	610.51
6.50	235.10	5335.00	42.799	601.89
6.60	223.81	5334.62	39.764	591.48
6.70	213.13	5334.25	36.724	581.05
6.80	203.22	5333.86	33.686	569.88
6.90	194.00	5333.42	30.670	557.26
7.00	185.28	5332.99	27.683	544.70
7.10	176.95	5332.51	24.742	529.32
7.20	169.43	5332.04	21.861	514.26
7.30	161.95	5331.51	19.054	496.38
7.40	154.57	5330.99	16.333	478.57
7.50	147.58	5330.38	13.751	448.52
7.60	141.26	5329.77	11.431	383.38
7.70	135.31	5329.28	9.849	282.23
7.80	129.74	5328.96	8.880	221.70
7.90	124.59	5328.71	8.232	190.71
8.00	119.70	5328.52	7.762	168.23
8.10	115.21	5328.38	7.413	151.57
8.20	110.89	5328.27	7.149	138.92
8.30	106.89	5328.19	6.942	129.06
8.40	103.13	5328.13	6.777	121.15
8.50	99.61	5328.07	6.641	114.65
8.60	96.29	5328.03	6.526	109.15
8.70	93.20	5327.98	6.425	105.21
8.80	90.31	5327.93	6.323	102.91
8.90	87.58	5327.88	6.217	100.53
9.00	85.43	5327.82	6.111	98.12
9.10	83.34	5327.77	6.007	95.78
9.20	81.16	5327.72	5.905	93.47
9.30	79.02	5327.66	5.804	91.19
9.40	77.02	5327.61	5.704	88.94
9.50	75.14	5327.56	5.607	86.75
9.60	73.37	5327.51	5.512	84.62
9.70	71.69	5327.47	5.421	82.56
9.80	70.13	5327.42	5.333	80.57
9.90	68.65	5327.38	5.248	78.66
10.00	67.26	5327.34	5.167	76.84
10.10	65.97	5327.30	5.090	75.09
10.20	64.73	5327.26	5.017	73.43
10.30	63.53	5327.22	4.946	71.84
10.40	62.41	5327.19	4.879	70.33
10.50	61.32	5327.16	4.815	68.89
10.60	60.31	5327.13	4.754	67.51
10.70	59.33	5327.10	4.696	66.20
10.80	58.37	5327.07	4.641	64.94
10.90	57.50	5327.04	4.588	63.75
11.00	56.66	5327.01	4.537	62.61
11.10	55.87	5326.99	4.489	61.69
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	55.11	5326.95	4.440	60.99
11.30	54.38	5326.92	4.392	60.29
11.40	53.69	5326.89	4.343	59.58
11.50	53.02	5326.86	4.294	58.88
11.60	52.42	5326.83	4.246	58.18
11.70	51.83	5326.80	4.199	57.50
11.80	51.27	5326.76	4.153	56.83
11.90	50.72	5326.73	4.107	56.17
12.00	50.20	5326.71	4.063	55.52
12.10	49.72	5326.68	4.019	54.90
12.20	49.23	5326.65	3.977	54.28
12.30	48.76	5326.62	3.936	53.69
12.40	48.33	5326.60	3.896	53.11
12.50	47.91	5326.57	3.857	52.54
12.60	47.50	5326.55	3.819	52.00
12.70	47.12	5326.52	3.782	51.47
12.80	46.76	5326.50	3.747	50.96
12.90	46.41	5326.48	3.713	50.46
13.00	46.06	5326.45	3.680	49.99
13.10	45.72	5326.43	3.648	49.53
13.20	45.40	5326.41	3.617	49.08
13.30	45.09	5326.39	3.587	48.64
13.40	44.80	5326.37	3.558	48.23
13.50	44.53	5326.36	3.531	47.83
13.60	44.21	5326.34	3.504	47.44
13.70	43.90	5326.32	3.477	47.05
13.80	43.64	5326.30	3.452	46.68
13.90	43.38	5326.29	3.427	46.32
14.00	43.08	5326.27	3.403	45.98
14.10	42.80	5326.26	3.379	45.63
14.20	42.51	5326.24	3.356	45.30
14.30	42.24	5326.23	3.333	44.97
14.40	41.98	5326.21	3.311	44.64
14.50	41.73	5326.20	3.289	44.33
14.60	41.50	5326.18	3.268	44.02
14.70	41.27	5326.17	3.247	43.73
14.80	41.02	5326.16	3.227	43.43
14.90	40.78	5326.14	3.208	43.15
15.00	40.57	5326.13	3.188	42.87
15.10	40.34	5326.12	3.169	42.60
15.20	40.13	5326.11	3.151	42.33
15.30	39.95	5326.09	3.133	42.07
15.40	39.73	5326.08	3.116	41.82

OUT.WPD

15.50	39.50	5326.07	3.099	41.57
15.60	39.29	5326.06	3.082	41.33
15.70	39.07	5326.05	3.065	41.08
15.80	38.90	5326.04	3.048	40.85
15.90	38.71	5326.03	3.033	40.62
16.00	38.52	5326.02	3.017	40.39
16.10	38.34	5326.01	3.002	40.17
16.20	38.13	5326.00	2.987	39.97
16.30	37.93	5325.98	2.971	39.86
16.40	37.76	5325.97	2.955	39.74
16.50	37.59	5325.96	2.938	39.62
16.60	37.43	5325.94	2.921	39.49
16.70	37.27	5325.93	2.904	39.36

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
16.80	37.09	5325.91	2.887	39.23
16.90	36.93	5325.90	2.869	39.10
17.00	36.74	5325.88	2.851	38.96
17.10	36.59	5325.87	2.832	38.83
17.20	36.43	5325.85	2.814	38.69
17.30	36.28	5325.84	2.795	38.55
17.40	36.12	5325.82	2.776	38.41
17.50	35.95	5325.81	2.757	38.27
17.60	35.80	5325.79	2.738	38.13
17.70	35.65	5325.78	2.719	37.98
17.80	35.52	5325.76	2.699	37.84
17.90	35.37	5325.74	2.680	37.70
18.00	35.21	5325.73	2.661	37.55
18.10	35.05	5325.71	2.642	37.41
18.20	34.94	5325.70	2.622	37.26
18.30	34.80	5325.68	2.603	37.12
18.40	34.63	5325.66	2.584	36.98
18.50	34.47	5325.65	2.564	36.83
18.60	34.34	5325.63	2.545	36.69
18.70	34.09	5325.62	2.525	36.54
18.80	33.79	5325.60	2.504	36.39
18.90	33.54	5325.58	2.482	36.22
19.00	33.27	5325.56	2.460	36.06
19.10	32.97	5325.54	2.436	35.88
19.20	32.65	5325.52	2.411	35.70
19.30	32.32	5325.50	2.386	35.51
19.40	31.97	5325.48	2.359	35.31
19.50	31.61	5325.46	2.331	35.10
19.60	31.27	5325.43	2.301	34.88
19.70	30.93	5325.41	2.271	34.65
19.80	30.59	5325.38	2.240	34.42
19.90	30.18	5325.35	2.207	34.18
20.00	29.79	5325.33	2.174	33.93
20.10	29.42	5325.30	2.139	33.67
20.20	29.06	5325.27	2.104	33.41
20.30	28.74	5325.24	2.067	33.14
20.40	28.44	5325.21	2.031	32.87
20.50	28.15	5325.18	1.994	32.59
20.60	27.85	5325.15	1.957	32.32
20.70	27.53	5325.12	1.920	32.04
20.80	27.19	5325.08	1.883	31.76
20.90	26.84	5325.05	1.845	31.48
21.00	26.56	5325.02	1.806	31.20
21.10	26.24	5324.99	1.768	30.83
21.20	25.83	5324.95	1.731	30.30
21.30	25.40	5324.91	1.694	29.79
21.40	25.02	5324.87	1.658	29.28
21.50	24.64	5324.83	1.624	28.79
21.60	24.33	5324.79	1.590	28.31
21.70	23.98	5324.76	1.557	27.86
21.80	23.64	5324.72	1.526	27.41
21.90	23.35	5324.69	1.495	26.98
22.00	23.06	5324.66	1.466	26.56
22.10	22.79	5324.63	1.437	26.16
22.20	22.54	5324.60	1.410	25.77
22.30	22.27	5324.57	1.384	25.40

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
22.40	21.92	5324.54	1.358	25.04
22.50	21.34	5324.51	1.332	24.66
22.60	20.73	5324.48	1.303	24.26
22.70	20.28	5324.45	1.274	23.85
22.80	19.80	5324.42	1.244	23.43
22.90	19.33	5324.38	1.214	23.00
23.00	18.86	5324.35	1.183	22.57
23.10	18.40	5324.32	1.153	22.14
23.20	17.92	5324.28	1.122	21.70
23.30	17.52	5324.25	1.091	21.26
23.40	17.10	5324.22	1.060	20.82
23.50	16.67	5324.18	1.029	20.39
23.60	16.30	5324.15	.998	19.96
23.70	16.01	5324.12	.969	19.54
23.80	15.73	5324.09	.940	19.13
23.90	15.45	5324.06	.912	18.74
24.00	15.25	5324.03	.886	18.37
24.10	14.99	5324.00	.861	18.01
24.20	14.25	5323.97	.835	17.48
24.30	12.62	5323.94	.805	16.84
24.40	11.15	5323.89	.767	16.05
24.50	10.39	5323.84	.726	15.20
24.60	9.95	5323.80	.688	14.39
24.70	9.65	5323.76	.653	13.67
24.80	9.42	5323.72	.622	13.01
24.90	9.25	5323.69	.594	12.43
25.00	9.09	5323.66	.569	11.91
25.10	8.95	5323.64	.547	11.45
25.20	8.84	5323.61	.528	11.04

OUT.WPD

25.30	8.74	5323.59	.511	10.69
25.40	8.64	5323.58	.495	10.37
25.50	8.56	5323.56	.482	10.09
25.60	8.48	5323.55	.470	9.84
25.70	8.39	5323.53	.459	9.62
25.80	8.30	5323.52	.450	9.41
25.90	8.21	5323.51	.441	9.23
26.00	8.13	5323.50	.433	9.06
26.10	8.05	5323.49	.426	8.91
26.20	7.98	5323.49	.419	8.77
26.30	7.92	5323.48	.413	8.64
26.40	7.86	5323.47	.407	8.52
26.50	7.80	5323.47	.402	8.41
26.60	7.72	5323.46	.397	8.31
26.70	7.64	5323.46	.392	8.21
26.80	7.54	5323.45	.387	8.11
26.90	7.45	5323.44	.383	8.01
27.00	7.36	5323.44	.378	7.91
27.10	7.28	5323.43	.374	7.82
27.20	7.22	5323.43	.369	7.73
27.30	7.17	5323.42	.365	7.64
27.40	7.12	5323.42	.361	7.56
27.50	7.08	5323.42	.358	7.49
27.60	7.04	5323.41	.355	7.42
27.70	7.00	5323.41	.352	7.36
27.80	6.97	5323.41	.349	7.30
27.90	6.93	5323.40	.346	7.24

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
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28.00	6.90	5323.40	.344	7.19
28.10	6.87	5323.40	.341	7.14
28.20	6.84	5323.39	.339	7.10
28.30	6.81	5323.39	.337	7.05
28.40	6.78	5323.39	.335	7.01
28.50	6.75	5323.39	.333	6.97
28.60	6.72	5323.39	.331	6.94
28.70	6.70	5323.38	.330	6.90
28.80	6.67	5323.38	.328	6.86
28.90	6.64	5323.38	.326	6.83
29.00	6.62	5323.38	.325	6.80
29.10	6.59	5323.38	.323	6.77
29.20	6.57	5323.37	.322	6.74
29.30	6.54	5323.37	.321	6.71
29.40	6.52	5323.37	.319	6.68
29.50	6.49	5323.37	.318	6.65
29.60	6.46	5323.37	.317	6.63
29.70	6.23	5323.37	.315	6.58
29.80	5.78	5323.36	.310	6.49
29.90	5.41	5323.35	.303	6.35

PEAK DISCHARGE = 2817.006 CFS - PEAK OCCURS AT HOUR 3.45
 MAXIMUM WATER SURFACE ELEVATION = 5339.610
 MAXIMUM STORAGE = 94.2066 AC-FT INCREMENTAL TIME = .050000HRS

PRINT HYD ID=14 CODE=0

OUTFLOW HYDROGRAPH REACH 51.60

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	641.9	12.000	55.5	18.000	37.6	24.000	18.4
.050	.0	6.050	638.4	12.050	55.2	18.050	37.5	24.050	18.2
.100	.0	6.100	634.8	12.100	54.9	18.100	37.4	24.100	18.0
.150	.0	6.150	631.2	12.150	54.6	18.150	37.3	24.150	17.8
.200	.0	6.200	627.4	12.200	54.3	18.200	37.3	24.200	17.5
.250	.0	6.250	623.2	12.250	54.0	18.250	37.2	24.250	17.2
.300	.0	6.300	619.0	12.300	53.7	18.300	37.1	24.300	16.8
.350	.0	6.350	614.8	12.350	53.4	18.350	37.1	24.350	16.5
.400	.0	6.400	610.5	12.400	53.1	18.400	37.0	24.400	16.0
.450	.0	6.450	606.2	12.450	52.8	18.450	36.9	24.450	15.6
.500	.0	6.500	601.9	12.500	52.5	18.500	36.8	24.500	15.2
.550	.0	6.550	596.7	12.550	52.3	18.550	36.8	24.550	14.8
.600	.0	6.600	591.5	12.600	52.0	18.600	36.7	24.600	14.4
.650	.0	6.650	586.3	12.650	51.7	18.650	36.6	24.650	14.0
.700	.0	6.700	581.0	12.700	51.5	18.700	36.5	24.700	13.7
.750	.0	6.750	575.8	12.750	51.2	18.750	36.5	24.750	13.3
.800	.0	6.800	569.9	12.800	51.0	18.800	36.4	24.800	13.0
.850	.0	6.850	563.6	12.850	50.7	18.850	36.3	24.850	12.7
.900	.1	6.900	557.3	12.900	50.5	18.900	36.2	24.900	12.4
.950	.4	6.950	551.0	12.950	50.2	18.950	36.1	24.950	12.2
1.000	.8	7.000	544.7	13.000	50.0	19.000	36.1	25.000	11.9
1.050	1.3	7.050	537.0	13.050	49.8	19.050	36.0	25.050	11.7
1.100	1.9	7.100	529.3	13.100	49.5	19.100	35.9	25.100	11.5
1.150	2.6	7.150	521.8	13.150	49.3	19.150	35.8	25.150	11.2
1.200	3.2	7.200	514.3	13.200	49.1	19.200	35.7	25.200	11.0
1.250	4.4	7.250	505.4	13.250	48.9	19.250	35.6	25.250	10.9
1.300	7.0	7.300	496.4	13.300	48.6	19.300	35.5	25.300	10.7
1.350	12.1	7.350	487.5	13.350	48.4	19.350	35.4	25.350	10.5
1.400	20.6	7.400	478.6	13.400	48.2	19.400	35.3	25.400	10.4
1.450	33.1	7.450	463.3	13.450	48.0	19.450	35.2	25.450	10.2
1.500	55.2	7.500	448.5	13.500	47.8	19.500	35.1	25.500	10.1
1.550	135.4	7.550	434.3	13.550	47.6	19.550	35.0	25.550	10.0
1.600	333.9	7.600	383.4	13.600	47.4	19.600	34.9	25.600	9.8
1.650	456.1	7.650	326.5	13.650	47.2	19.650	34.8	25.650	9.7
1.700	492.0	7.700	282.2	13.700	47.1	19.700	34.7	25.700	9.6
1.750	518.3	7.750	247.6	13.750	46.9	19.750	34.5	25.750	9.5
1.800	544.7	7.800	221.7	13.800	46.7	19.800	34.4	25.800	9.4
1.850	570.6	7.850	204.9	13.850	46.5	19.850	34.3	25.850	9.3
1.900	593.2	7.900	190.7	13.900	46.3	19.900	34.2	25.900	9.2
1.950	613.0	7.950	178.6	13.950	46.1	19.950	34.1	25.950	9.1
2.000	631.9	8.000	168.2	14.000	46.0	20.000	33.9	26.000	9.1
2.050	650.1	8.050	159.3	14.050	45.8	20.050	33.8	26.050	9.0
2.100	666.8	8.100	151.6	14.100	45.6	20.100	33.7	26.100	8.9
2.150	682.5	8.150	144.8	14.150	45.5	20.150	33.5	26.150	8.8
2.200	1095.0	8.200	138.9	14.200	45.3	20.200	33.4	26.200	8.8

OUT.WPD									
2.250	1393.8	8.250	133.7	14.250	45.1	20.250	33.3	26.250	8.7
2.300	1690.7	8.300	129.1	14.300	45.0	20.300	33.1	26.300	8.6
2.350	1813.5	8.350	124.9	14.350	44.8	20.350	33.0	26.350	8.6
2.400	1855.3	8.400	121.2	14.400	44.6	20.400	32.9	26.400	8.5
2.450	1912.3	8.450	117.8	14.450	44.5	20.450	32.7	26.450	8.5
2.500	2023.0	8.500	114.6	14.500	44.3	20.500	32.6	26.500	8.4
2.550	2173.3	8.550	111.8	14.550	44.2	20.550	32.5	26.550	8.4
2.600	2318.0	8.600	109.2	14.600	44.0	20.600	32.3	26.600	8.3
2.650	2436.1	8.650	106.7	14.650	43.9	20.650	32.2	26.650	8.3
2.700	2539.8	8.700	105.2	14.700	43.7	20.700	32.0	26.700	8.2
2.750	2628.7	8.750	104.1	14.750	43.6	20.750	31.9	26.750	8.2
2.800	2681.2	8.800	102.9	14.800	43.4	20.800	31.8	26.800	8.1
2.850	2691.3	8.850	101.7	14.850	43.3	20.850	31.6	26.850	8.1
2.900	2671.3	8.900	100.5	14.900	43.1	20.900	31.5	26.900	8.0
2.950	2632.2	8.950	99.3	14.950	43.0	20.950	31.3	26.950	8.0
3.000	2581.9	9.000	98.1	15.000	42.9	21.000	31.2	27.000	7.9
3.050	2527.7	9.050	96.9	15.050	42.7	21.050	31.1	27.050	7.9
3.100	2478.9	9.100	95.8	15.100	42.6	21.100	30.8	27.100	7.8
3.150	2448.4	9.150	94.6	15.150	42.5	21.150	30.6	27.150	7.8
3.200	2450.7	9.200	93.5	15.200	42.3	21.200	30.3	27.200	7.7
3.250	2497.2	9.250	92.3	15.250	42.2	21.250	30.0	27.250	7.7
3.300	2586.9	9.300	91.2	15.300	42.1	21.300	29.8	27.300	7.6
3.350	2698.5	9.350	90.1	15.350	41.9	21.350	29.5	27.350	7.6
3.400	2790.2	9.400	88.9	15.400	41.8	21.400	29.3	27.400	7.6
3.450	2817.0	9.450	87.8	15.450	41.7	21.450	29.0	27.450	7.5
3.500	2761.3	9.500	86.7	15.500	41.6	21.500	28.8	27.500	7.5
3.550	2645.1	9.550	85.7	15.550	41.4	21.550	28.5	27.550	7.5
3.600	2508.0	9.600	84.6	15.600	41.3	21.600	28.3	27.600	7.4
3.650	2375.4	9.650	83.6	15.650	41.2	21.650	28.1	27.650	7.4
3.700	2249.8	9.700	82.6	15.700	41.1	21.700	27.9	27.700	7.4
3.750	2127.0	9.750	81.6	15.750	41.0	21.750	27.6	27.750	7.3
3.800	2010.0	9.800	80.6	15.800	40.8	21.800	27.4	27.800	7.3
3.850	1906.3	9.850	79.6	15.850	40.7	21.850	27.2	27.850	7.3
3.900	1818.7	9.900	78.7	15.900	40.6	21.900	27.0	27.900	7.2
3.950	1746.4	9.950	77.7	15.950	40.5	21.950	26.8	27.950	7.2
4.000	1688.9	10.000	76.8	16.000	40.4	22.000	26.6	28.000	7.2
4.050	1643.1	10.050	76.0	16.050	40.3	22.050	26.4	28.050	7.2
4.100	1602.6	10.100	75.1	16.100	40.2	22.100	26.2	28.100	7.1
4.150	1560.1	10.150	74.3	16.150	40.1	22.150	26.0	28.150	7.1
4.200	1510.2	10.200	73.4	16.200	40.0	22.200	25.8	28.200	7.1
4.250	1450.7	10.250	72.6	16.250	39.9	22.250	25.6	28.250	7.1
4.300	1410.2	10.300	71.8	16.300	39.9	22.300	25.4	28.300	7.1
4.350	1367.9	10.350	71.1	16.350	39.8	22.350	25.2	28.350	7.0
4.400	1323.2	10.400	70.3	16.400	39.7	22.400	25.0	28.400	7.0
4.450	1270.6	10.450	69.6	16.450	39.7	22.450	24.9	28.450	7.0
4.500	1214.8	10.500	68.9	16.500	39.6	22.500	24.7	28.500	7.0
4.550	1157.4	10.550	68.2	16.550	39.6	22.550	24.5	28.550	7.0
4.600	1100.2	10.600	67.5	16.600	39.5	22.600	24.3	28.600	6.9
4.650	1044.3	10.650	66.8	16.650	39.4	22.650	24.1	28.650	6.9
4.700	990.8	10.700	66.2	16.700	39.4	22.700	23.8	28.700	6.9
4.750	940.0	10.750	65.6	16.750	39.3	22.750	23.6	28.750	6.9
4.800	893.9	10.800	64.9	16.800	39.2	22.800	23.4	28.800	6.9
4.850	853.2	10.850	64.3	16.850	39.2	22.850	23.2	28.850	6.8
4.900	815.2	10.900	63.7	16.900	39.1	22.900	23.0	28.900	6.8
4.950	778.8	10.950	63.2	16.950	39.0	22.950	22.8	28.950	6.8
5.000	743.8	11.000	62.6	17.000	39.0	23.000	22.6	29.000	6.8
5.050	710.1	11.050	62.1	17.050	38.9	23.050	22.4	29.050	6.8
5.100	683.8	11.100	61.7	17.100	38.8	23.100	22.1	29.100	6.8
5.150	682.7	11.150	61.3	17.150	38.8	23.150	21.9	29.150	6.8
5.200	681.3	11.200	61.0	17.200	38.7	23.200	21.7	29.200	6.7
5.250	679.8	11.250	60.6	17.250	38.6	23.250	21.5	29.250	6.7
5.300	678.2	11.300	60.3	17.300	38.5	23.300	21.3	29.300	6.7
5.350	676.4	11.350	59.9	17.350	38.5	23.350	21.0	29.350	6.7
5.400	674.5	11.400	59.6	17.400	38.4	23.400	20.8	29.400	6.7
5.450	672.5	11.450	59.2	17.450	38.3	23.450	20.6	29.450	6.7
5.500	670.3	11.500	58.9	17.500	38.3	23.500	20.4	29.500	6.7
5.550	668.0	11.550	58.5	17.550	38.2	23.550	20.2	29.550	6.6
5.600	665.6	11.600	58.2	17.600	38.1	23.600	20.0	29.600	6.6
5.650	663.2	11.650	57.8	17.650	38.1	23.650	19.7	29.650	6.6
5.700	660.6	11.700	57.5	17.700	38.0	23.700	19.5	29.700	6.6
5.750	658.0	11.750	57.2	17.750	37.9	23.750	19.3	29.750	6.5
5.800	655.3	11.800	56.8	17.800	37.8	23.800	19.1	29.800	6.5
5.850	652.1	11.850	56.5	17.850	37.8	23.850	18.9	29.850	6.4
5.900	648.7	11.900	56.2	17.900	37.7	23.900	18.7	29.900	6.3
5.950	645.3	11.950	55.8	17.950	37.6	23.950	18.6	29.950	6.3

RUNOFF VOLUME = .86488 INCHES = 679.5966 ACRE-FEET
PEAK DISCHARGE RATE = 2817.01 CFS AT 3.450 HOURS BASIN AREA = 14.7333 SQ. MI.

*

*

*S DIVIDE SURFACE FLOW FROM PIPE FLOW

*

DIVIDE HYD ID=14 Q=372 ID=80 HYD=PIPE.80
ID=90 HYD=SURF.90

PRINT HYD ID=80 CODE=1

HYDROGRAPH FROM AREA PIPE.80

RUNOFF VOLUME = .86488 INCHES = 263.0167 ACRE-FEET
PEAK DISCHARGE RATE = 372.00 CFS AT 1.650 HOURS BASIN AREA = 5.7021 SQ. MI.

PRINT HYD ID=90 CODE=1

HYDROGRAPH FROM AREA SURF.90

RUNOFF VOLUME = .86488 INCHES = 416.5799 ACRE-FEET
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PEAK DISCHARGE RATE = 2445.01 CFS AT 3.450 HOURS OUT.WPD
BASIN AREA = 9.0313 SQ. MI.

*S APPLY SEDIMENT BULKING FACTOR
SEDIMENT BULK CODE=1 BULKING FACTOR = 1.05

*S
*S ADD BASINS DRAINING INTO THE TEMPORARY PONDS ALONG UNSER BLVD

*S
* COMPUTE HYD FOR SUB-BASIN 3

COMPUTE LT TP LCODE=1 NK=3 ISLOPE=0
LENGTH=400 SLOPE=0.013 K=.7
LENGTH=1600 SLOPE=0.013 K=1
LENGTH=1250 SLOPE=0.013 K=2

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

NOTE: Upland factor input values have been adjusted to meet Upland/Lag Time requirements.

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.013000	.7000
SHALLOW FLOW PORTION	1600.0	.013000	2.0000
CHANNEL FLOW PORTION	1250.0	.013000	3.0000
TOTAL BASIN	3250.0	.013000	1.8176

TIME OF CONCENTRATION (HRS)= .4356 TIME TO PEAK (HRS)= .2904 LAG TIME (HRS)= .3267

COMPUTE NM HYD ID=3 HYD N0=3 DA=0.0957 SQ MI
PER A=97 PER B=0 PER C=0 PER D=3
TP=0.0 MASS RAIN=-1

TIME TO PEAK (hrs)= .2904

K = .158748HR TP = .290419HR K/TP RATIO = .546617 SHAPE CONSTANT, N = 7.079496
UNIT PEAK = 5.1901 CFS UNIT VOLUME = .9980 B = 525.01 P60 = 2.2000
AREA = .092829 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .337114HR TP = .290419HR K/TP RATIO = 1.160784 SHAPE CONSTANT, N = 3.053709
UNIT PEAK = 91.471 CFS UNIT VOLUME = .9998 B = 286.17 P60 = 2.2000
AREA = .092829 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=3 CODE=5

OUTFLOW HYDROGRAPH REACH 3.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.250	.6	10.500	.1	15.750	.0	21.000	.0
.250	.0	5.500	.5	10.750	.1	16.000	.0	21.250	.0
.500	.0	5.750	.4	11.000	.1	16.250	.0	21.500	.0
.750	.0	6.000	.3	11.250	.0	16.500	.0	21.750	.0
1.000	.2	6.250	.3	11.500	.0	16.750	.0	22.000	.0
1.250	.4	6.500	.2	11.750	.0	17.000	.0	22.250	.0
1.500	45.5	6.750	.2	12.000	.0	17.250	.0	22.500	.0
1.750	69.6	7.000	.1	12.250	.0	17.500	.0	22.750	.0
2.000	37.1	7.250	.1	12.500	.0	17.750	.0	23.000	.0
2.250	18.0	7.500	.1	12.750	.0	18.000	.0	23.250	.0
2.500	8.6	7.750	.1	13.000	.0	18.250	.0	23.500	.0
2.750	6.0	8.000	.1	13.250	.0	18.500	.0	23.750	.0
3.000	4.7	8.250	.1	13.500	.0	18.750	.0	24.000	.0
3.250	3.6	8.500	.1	13.750	.0	19.000	.0	24.250	.0
3.500	2.8	8.750	.1	14.000	.0	19.250	.0	24.500	.0
3.750	2.2	9.000	.1	14.250	.0	19.500	.0	24.750	.0
4.000	1.7	9.250	.1	14.500	.0	19.750	.0	25.000	.0
4.250	1.4	9.500	.1	14.750	.0	20.000	.0	25.250	.0
4.500	1.1	9.750	.1	15.000	.0	20.250	.0		
4.750	.9	10.000	.1	15.250	.0	20.500	.0		
5.000	.7	10.250	.1	15.500	.0	20.750	.0		

RUNOFF VOLUME = .84169 INCHES = 4.2960 ACRE-FEET
PEAK DISCHARGE RATE = 74.30 CFS AT 1.650 HOURS BASIN AREA = .0957 SQ. MI.

*S ROUTE SUB-BASIN 3 THRU UNSER TEMP POND A

ROUTE RESERVOIR ID=1 HYD=4.9 INFLOW ID=3 CODE=2
OUTFLOW(CFS) STORAGE(AC FT) ELEV (FT)
0.0 0.0 5337
4.4 0.114 5338
6.7 0.493 5339

7.6	1.086	OUT.WPD
8.5	1.779	5340
90	1.77901	5341
		5341.001

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5337.00	.000	.00
.10	.00	5337.00	.000	.00
.20	.00	5337.00	.000	.00
.30	.00	5337.00	.000	.00
.40	.00	5337.00	.000	.00
.50	.00	5337.00	.000	.00
.60	.00	5337.00	.000	.00
.70	.00	5337.00	.000	.00
.80	.02	5337.00	.000	.00
.90	.09	5337.00	.000	.02
1.00	.19	5337.01	.001	.05
1.10	.28	5337.02	.003	.10
1.20	.33	5337.04	.004	.16
1.30	.56	5337.05	.006	.23
1.40	12.16	5337.35	.040	1.54
1.50	45.50	5338.34	.242	5.18
1.60	70.09	5339.31	.679	6.98
1.70	73.71	5340.20	1.222	7.78
1.80	63.42	5340.92	1.726	8.43
1.90	49.23	5341.00	1.779	19.76
2.00	37.07	5341.00	1.777	8.50
2.10	27.86	5340.98	1.762	8.48
2.20	20.87	5341.00	1.779	9.79
2.30	15.48	5340.99	1.771	8.49
2.40	11.47	5341.00	1.779	8.56
2.50	8.63	5340.99	1.773	8.49
2.60	7.18	5340.98	1.768	8.49
2.70	6.38	5340.96	1.754	8.47
2.80	5.74	5340.93	1.734	8.44
2.90	5.18	5340.90	1.709	8.41
3.00	4.67	5340.86	1.681	8.37
3.10	4.22	5340.81	1.648	8.33
3.20	3.81	5340.76	1.613	8.28
3.30	3.45	5340.71	1.575	8.23
3.40	3.12	5340.65	1.534	8.18
3.50	2.83	5340.58	1.491	8.13
3.60	2.56	5340.52	1.446	8.07
3.70	2.32	5340.45	1.400	8.01
3.80	2.11	5340.38	1.352	7.95
3.90	1.91	5340.31	1.304	7.88
4.00	1.73	5340.24	1.254	7.82
4.10	1.57	5340.17	1.203	7.75
4.20	1.43	5340.09	1.152	7.69
4.30	1.30	5340.02	1.100	7.62
4.40	1.19	5339.94	1.047	7.54
4.50	1.08	5339.85	.995	7.46
4.60	.99	5339.76	.942	7.38
4.70	.91	5339.67	.889	7.30
4.80	.83	5339.58	.836	7.22
4.90	.76	5339.49	.784	7.14
5.00	.70	5339.40	.731	7.06
5.10	.64	5339.31	.678	6.98
5.20	.59	5339.22	.626	6.90
5.30	.55	5339.14	.574	6.82
5.40	.50	5339.05	.522	6.74
5.50	.47	5338.94	.471	6.57
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
5.60	.43	5338.81	.422	6.27
5.70	.40	5338.69	.375	5.98
5.80	.37	5338.57	.330	5.71
5.90	.35	5338.46	.286	5.45
6.00	.33	5338.35	.245	5.20
6.10	.31	5338.24	.206	4.96
6.20	.28	5338.14	.168	4.73
6.30	.25	5338.05	.132	4.51
6.40	.23	5337.87	.099	3.82
6.50	.21	5337.64	.073	2.84
6.60	.19	5337.48	.055	2.12
6.70	.18	5337.36	.041	1.59
6.80	.17	5337.27	.031	1.20
6.90	.16	5337.21	.024	.92
7.00	.15	5337.16	.018	.71
7.10	.14	5337.13	.014	.55
7.20	.13	5337.10	.011	.44
7.30	.13	5337.08	.009	.35
7.40	.12	5337.07	.008	.29
7.50	.11	5337.06	.006	.24
7.60	.11	5337.05	.005	.21
7.70	.10	5337.04	.005	.18
7.80	.10	5337.04	.004	.16
7.90	.10	5337.03	.004	.14
8.00	.09	5337.03	.003	.13
8.10	.09	5337.03	.003	.12
8.20	.08	5337.02	.003	.11
8.30	.08	5337.02	.003	.10
8.40	.08	5337.02	.002	.10
8.50	.08	5337.02	.002	.09
8.60	.08	5337.02	.002	.09
8.70	.07	5337.02	.002	.08
8.80	.07	5337.02	.002	.08
8.90	.07	5337.02	.002	.08
9.00	.07	5337.02	.002	.08
9.10	.07	5337.02	.002	.07

OUT.WPD

9.20	.07	5337.02	.002	.07
9.30	.06	5337.02	.002	.07
9.40	.06	5337.02	.002	.07
9.50	.06	5337.01	.002	.07
9.60	.05	5337.01	.002	.06
9.70	.05	5337.01	.002	.06
9.80	.05	5337.01	.002	.06
9.90	.05	5337.01	.001	.06
10.00	.05	5337.01	.001	.06
10.10	.05	5337.01	.001	.06
10.20	.05	5337.01	.001	.05
10.30	.05	5337.01	.001	.05
10.40	.05	5337.01	.001	.05
10.50	.05	5337.01	.001	.05
10.60	.05	5337.01	.001	.05
10.70	.05	5337.01	.001	.05
10.80	.05	5337.01	.001	.05
10.90	.05	5337.01	.001	.05
11.00	.05	5337.01	.001	.05
11.10	.05	5337.01	.001	.05

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	.05	5337.01	.001	.05
11.30	.05	5337.01	.001	.05
11.40	.05	5337.01	.001	.05
11.50	.05	5337.01	.001	.05
11.60	.05	5337.01	.001	.05
11.70	.05	5337.01	.001	.05
11.80	.05	5337.01	.001	.05
11.90	.05	5337.01	.001	.05
12.00	.05	5337.01	.001	.05
12.10	.05	5337.01	.001	.05
12.20	.05	5337.01	.001	.05
12.30	.05	5337.01	.001	.05
12.40	.05	5337.01	.001	.05
12.50	.05	5337.01	.001	.05
12.60	.05	5337.01	.001	.05
12.70	.05	5337.01	.001	.05
12.80	.05	5337.01	.001	.05
12.90	.05	5337.01	.001	.05
13.00	.05	5337.01	.001	.05
13.10	.05	5337.01	.001	.05
13.20	.05	5337.01	.001	.05
13.30	.04	5337.01	.001	.05
13.40	.04	5337.01	.001	.05
13.50	.04	5337.01	.001	.05
13.60	.04	5337.01	.001	.05
13.70	.04	5337.01	.001	.04
13.80	.04	5337.01	.001	.04
13.90	.04	5337.01	.001	.04
14.00	.04	5337.01	.001	.04
14.10	.04	5337.01	.001	.04
14.20	.04	5337.01	.001	.04
14.30	.04	5337.01	.001	.04
14.40	.04	5337.01	.001	.04
14.50	.04	5337.01	.001	.04
14.60	.04	5337.01	.001	.04
14.70	.04	5337.01	.001	.04
14.80	.04	5337.01	.001	.04
14.90	.04	5337.01	.001	.04
15.00	.04	5337.01	.001	.04
15.10	.04	5337.01	.001	.04
15.20	.04	5337.01	.001	.04
15.30	.04	5337.01	.001	.04
15.40	.04	5337.01	.001	.04
15.50	.04	5337.01	.001	.04
15.60	.04	5337.01	.001	.04
15.70	.04	5337.01	.001	.04
15.80	.04	5337.01	.001	.04
15.90	.04	5337.01	.001	.04
16.00	.04	5337.01	.001	.04
16.10	.04	5337.01	.001	.04
16.20	.04	5337.01	.001	.04
16.30	.04	5337.01	.001	.04
16.40	.04	5337.01	.001	.04
16.50	.04	5337.01	.001	.04
16.60	.04	5337.01	.001	.04
16.70	.04	5337.01	.001	.04

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
16.80	.04	5337.01	.001	.04
16.90	.04	5337.01	.001	.04
17.00	.04	5337.01	.001	.04
17.10	.04	5337.01	.001	.04
17.20	.04	5337.01	.001	.04
17.30	.04	5337.01	.001	.04
17.40	.04	5337.01	.001	.04
17.50	.04	5337.01	.001	.04
17.60	.04	5337.01	.001	.04
17.70	.04	5337.01	.001	.04
17.80	.04	5337.01	.001	.04
17.90	.04	5337.01	.001	.04
18.00	.04	5337.01	.001	.04
18.10	.04	5337.01	.001	.04
18.20	.04	5337.01	.001	.04
18.30	.04	5337.01	.001	.04
18.40	.04	5337.01	.001	.04
18.50	.04	5337.01	.001	.04
18.60	.04	5337.01	.001	.04
18.70	.04	5337.01	.001	.04
18.80	.04	5337.01	.001	.04
18.90	.04	5337.01	.001	.04

OUT.WPD

19.00	.04	5337.01	.001	.04
19.10	.04	5337.01	.001	.04
19.20	.04	5337.01	.001	.04
19.30	.04	5337.01	.001	.04
19.40	.04	5337.01	.001	.04
19.50	.04	5337.01	.001	.04
19.60	.03	5337.01	.001	.04
19.70	.03	5337.01	.001	.03
19.80	.03	5337.01	.001	.03
19.90	.03	5337.01	.001	.03
20.00	.03	5337.01	.001	.03
20.10	.03	5337.01	.001	.03
20.20	.03	5337.01	.001	.03
20.30	.03	5337.01	.001	.03
20.40	.03	5337.01	.001	.03
20.50	.03	5337.01	.001	.03
20.60	.03	5337.01	.001	.03
20.70	.03	5337.01	.001	.03
20.80	.03	5337.01	.001	.03
20.90	.03	5337.01	.001	.03
21.00	.03	5337.01	.001	.03
21.10	.03	5337.01	.001	.03
21.20	.03	5337.01	.001	.03
21.30	.03	5337.01	.001	.03
21.40	.03	5337.01	.001	.03
21.50	.03	5337.01	.001	.03
21.60	.03	5337.01	.001	.03
21.70	.03	5337.01	.001	.03
21.80	.03	5337.01	.001	.03
21.90	.03	5337.01	.001	.03
22.00	.03	5337.01	.001	.03
22.10	.03	5337.01	.001	.03
22.20	.03	5337.01	.001	.03
22.30	.03	5337.01	.001	.03

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
22.40	.03	5337.01	.001	.03
22.50	.03	5337.01	.001	.03
22.60	.03	5337.01	.001	.03
22.70	.03	5337.01	.001	.03
22.80	.03	5337.01	.001	.03
22.90	.03	5337.01	.001	.03
23.00	.03	5337.01	.001	.03
23.10	.03	5337.01	.001	.03
23.20	.03	5337.01	.001	.03
23.30	.03	5337.01	.001	.03
23.40	.03	5337.01	.001	.03
23.50	.03	5337.01	.001	.03
23.60	.03	5337.01	.001	.03
23.70	.03	5337.01	.001	.03
23.80	.03	5337.01	.001	.03
23.90	.03	5337.01	.001	.03
24.00	.03	5337.01	.001	.03
24.10	.03	5337.01	.001	.03
24.20	.03	5337.01	.001	.03
24.30	.02	5337.01	.001	.03
24.40	.01	5337.01	.001	.02
24.50	.01	5337.00	.000	.02
24.60	.00	5337.00	.000	.02
24.70	.00	5337.00	.000	.01
24.80	.00	5337.00	.000	.01
24.90	.00	5337.00	.000	.01
25.00	.00	5337.00	.000	.01
25.10	.00	5337.00	.000	.01
25.20	.00	5337.00	.000	.00

PEAK DISCHARGE = 85.780 CFS - PEAK OCCURS AT HOUR 1.85
 MAXIMUM WATER SURFACE ELEVATION = 5341.001
 MAXIMUM STORAGE = 1.7790 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=1 CODE=5

OUTFLOW HYDROGRAPH REACH 4.90

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.250	6.9	10.500	.1	15.750	.0	21.000	.0
.250	.0	5.500	6.6	10.750	.1	16.000	.0	21.250	.0
.500	.0	5.750	5.8	11.000	.1	16.250	.0	21.500	.0
.750	.0	6.000	5.2	11.250	.1	16.500	.0	21.750	.0
1.000	.1	6.250	4.6	11.500	.1	16.750	.0	22.000	.0
1.250	.2	6.500	2.8	11.750	.0	17.000	.0	22.250	.0
1.500	5.2	6.750	1.4	12.000	.0	17.250	.0	22.500	.0
1.750	8.1	7.000	.7	12.250	.0	17.500	.0	22.750	.0
2.000	8.5	7.250	.4	12.500	.0	17.750	.0	23.000	.0
2.250	29.1	7.500	.2	12.750	.0	18.000	.0	23.250	.0
2.500	8.5	7.750	.2	13.000	.0	18.250	.0	23.500	.0
2.750	8.5	8.000	.1	13.250	.0	18.500	.0	23.750	.0
3.000	8.4	8.250	.1	13.500	.0	18.750	.0	24.000	.0
3.250	8.3	8.500	.1	13.750	.0	19.000	.0	24.250	.0
3.500	8.1	8.750	.1	14.000	.0	19.250	.0	24.500	.0
3.750	8.0	9.000	.1	14.250	.0	19.500	.0	24.750	.0
4.000	7.8	9.250	.1	14.500	.0	19.750	.0	25.000	.0
4.250	7.7	9.500	.1	14.750	.0	20.000	.0	25.250	.0
4.500	7.5	9.750	.1	15.000	.0	20.250	.0	25.500	.0
4.750	7.3	10.000	.1	15.250	.0	20.500	.0		
5.000	7.1	10.250	.1	15.500	.0	20.750	.0		

RUNOFF VOLUME = .84169 INCHES = 4.2959 ACRE-FEET
 PEAK DISCHARGE RATE = 85.78 CFS AT 1.850 HOURS BASIN AREA = .0957 SQ. MI.

OUT.WPD

 *
 * COMPUTE HYD FOR SUB-BASIN 4

COMPUTE LT TP LCODE=1 NK=2 ISLOPE=0
 LENGTH=400 SLOPE=0.017 K=.7
 LENGTH=1053 SLOPE=0.017 K=1

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
 NOTE: Upland factor input values have been adjusted to meet Upland/Lag Time requirements.

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.017000	.7000
SHALLOW FLOW PORTION	1053.0	.017000	2.0000
CHANNEL FLOW PORTION	.0	.000000	.0000
TOTAL BASIN	1453.0	.017000	1.3234

TIME OF CONCENTRATION (HRS)= .2339 TIME TO PEAK (HRS)= .1559 LAG TIME (HRS)= .1754

COMPUTE NM HYD ID=4 HYD NO=4 DA=0.0282 SQ MI
 PER A=98 PER B=0 PER C=0 PER D=2
 TP=0.0 MASS RAIN=-1

TIME TO PEAK (hrs)= .1559

K = .084987HR TP = .155939HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 1.9034 CFS UNIT VOLUME = .9945 B = 526.28 P60 = 2.2000
 AREA = .000564 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .186203HR TP = .155939HR K/TP RATIO = 1.194076 SHAPE CONSTANT, N = 2.974696
 UNIT PEAK = 49.578 CFS UNIT VOLUME = .9991 B = 279.75 P60 = 2.2000
 AREA = .027636 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=4 CODE=5

OUTFLOW HYDROGRAPH REACH 4.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.0	10.000	.0	15.000	.0	20.000	.0
.250	.0	5.250	.0	10.250	.0	15.250	.0	20.250	.0
.500	.0	5.500	.0	10.500	.0	15.500	.0	20.500	.0
.750	.0	5.750	.0	10.750	.0	15.750	.0	20.750	.0
1.000	.1	6.000	.0	11.000	.0	16.000	.0	21.000	.0
1.250	.2	6.250	.0	11.250	.0	16.250	.0	21.250	.0
1.500	34.4	6.500	.0	11.500	.0	16.500	.0	21.500	.0
1.750	16.2	6.750	.0	11.750	.0	16.750	.0	21.750	.0
2.000	4.8	7.000	.0	12.000	.0	17.000	.0	22.000	.0
2.250	2.6	7.250	.0	12.250	.0	17.250	.0	22.250	.0
2.500	1.6	7.500	.0	12.500	.0	17.500	.0	22.500	.0
2.750	1.0	7.750	.0	12.750	.0	17.750	.0	22.750	.0
3.000	.7	8.000	.0	13.000	.0	18.000	.0	23.000	.0
3.250	.4	8.250	.0	13.250	.0	18.250	.0	23.250	.0
3.500	.3	8.500	.0	13.500	.0	18.500	.0	23.500	.0
3.750	.2	8.750	.0	13.750	.0	18.750	.0	23.750	.0
4.000	.1	9.000	.0	14.000	.0	19.000	.0	24.000	.0
4.250	.1	9.250	.0	14.250	.0	19.250	.0	24.250	.0
4.500	.1	9.500	.0	14.500	.0	19.500	.0		
4.750	.0	9.750	.0	14.750	.0	19.750	.0		

RUNOFF VOLUME = .81878 INCHES = 1.2314 ACRE-FEET
 PEAK DISCHARGE RATE = 35.31 CFS AT 1.550 HOURS BASIN AREA = .0282 SQ. MI.

*
 *S ADD ROUTED FLOW FROM TEMP POND A TO SUB-BASIN 4
 *
 *S ADD SUB-BASINS 3 AND 4
 *

ADD HYD ID=2 HYD NO=4.2 ID I=1 ID II=4
 PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 4.20

RUNOFF VOLUME = .83647 INCHES = 5.5273 ACRE-FEET
 PEAK DISCHARGE RATE = 95.50 CFS AT 1.850 HOURS BASIN AREA = .1239 SQ. MI.

 *

*S ROUTE THRU UNSER TEMP POND B

ROUTE RESERVOIR ID=1 HYD=5.9 INFLOW ID=2 CODE=2
 OUTFLOW(CFS) STORAGE(AC FT) ELEV (FT)

	0.0	0.0	5333
	0.01	0.16	5334
	2.6	0.50	5335
	5.1	0.71	5335.5
	8.0	0.918	5336
	85	0.91801	5336.001

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5333.00	.000	.00
.10	.00	5333.00	.000	.00
.20	.00	5333.00	.000	.00
.30	.00	5333.00	.000	.00
.40	.00	5333.00	.000	.00
.50	.00	5333.00	.000	.00
.60	.00	5333.00	.000	.00
.70	.00	5333.00	.000	.00
.80	.03	5333.00	.000	.00
.90	.07	5333.00	.000	.00
1.00	.12	5333.01	.001	.00
1.10	.18	5333.02	.003	.00
1.20	.26	5333.03	.004	.00
1.30	.60	5333.05	.008	.00
1.40	15.51	5333.37	.059	.00
1.50	39.54	5334.41	.298	1.06
1.60	38.65	5335.27	.612	3.93
1.70	28.57	5335.82	.844	6.97
1.80	21.00	5336.00	.918	35.05
1.90	27.29	5336.00	.918	41.35
2.00	13.25	5336.00	.918	27.31
2.10	12.07	5336.00	.918	26.13
2.20	12.64	5336.00	.918	26.70
2.30	10.83	5336.00	.918	24.89
2.40	10.50	5336.00	.918	17.37
2.50	10.11	5336.00	.918	16.40
2.60	9.83	5336.00	.917	7.99
2.70	9.59	5336.00	.918	8.03
2.80	9.38	5336.00	.918	8.00
2.90	9.20	5336.00	.918	8.00
3.00	9.03	5336.00	.918	8.00
3.10	8.89	5336.00	.918	8.00
3.20	8.75	5336.00	.918	8.00
3.30	8.63	5336.00	.918	8.00
3.40	8.51	5336.00	.918	8.00
3.50	8.41	5336.00	.918	8.00
3.60	8.31	5336.00	.918	8.00
3.70	8.21	5336.00	.918	8.00
3.80	8.12	5336.00	.918	8.00
3.90	8.03	5336.00	.918	8.00
4.00	7.94	5336.00	.918	8.00
4.10	7.86	5336.00	.917	7.99
4.20	7.78	5335.99	.916	7.97
4.30	7.70	5335.99	.914	7.94
4.40	7.61	5335.98	.912	7.91
4.50	7.52	5335.98	.909	7.88
4.60	7.44	5335.97	.906	7.83
4.70	7.35	5335.96	.903	7.78
4.80	7.27	5335.95	.899	7.73
4.90	7.18	5335.94	.895	7.68
5.00	7.10	5335.93	.891	7.62
5.10	7.02	5335.92	.886	7.56
5.20	6.93	5335.91	.882	7.49
5.30	6.85	5335.90	.877	7.43
5.40	6.77	5335.89	.872	7.36
5.50	6.59	5335.88	.867	7.29
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
5.60	6.29	5335.86	.860	7.20
5.70	6.00	5335.84	.852	7.08
5.80	5.73	5335.82	.843	6.95
5.90	5.47	5335.79	.832	6.80
6.00	5.22	5335.77	.821	6.64
6.10	4.98	5335.74	.809	6.47
6.20	4.75	5335.71	.796	6.30
6.30	4.53	5335.68	.783	6.12
6.40	3.84	5335.64	.769	5.92
6.50	2.85	5335.59	.748	5.64
6.60	2.13	5335.53	.724	5.29
6.70	1.60	5335.47	.697	4.94
6.80	1.21	5335.40	.669	4.61
6.90	.93	5335.34	.641	4.28
7.00	.72	5335.27	.614	3.95
7.10	.57	5335.21	.588	3.64
7.20	.45	5335.15	.563	3.35
7.30	.37	5335.09	.540	3.07
7.40	.30	5335.04	.518	2.82
7.50	.26	5334.99	.498	2.59
7.60	.22	5334.94	.479	2.44
7.70	.19	5334.89	.461	2.31
7.80	.17	5334.84	.444	2.18
7.90	.15	5334.79	.428	2.05
8.00	.14	5334.74	.413	1.94
8.10	.13	5334.70	.399	1.83
8.20	.12	5334.66	.385	1.72
8.30	.11	5334.62	.372	1.63
8.40	.11	5334.59	.360	1.53
8.50	.10	5334.55	.348	1.45
8.60	.10	5334.52	.338	1.36
8.70	.09	5334.49	.328	1.29
8.80	.09	5334.46	.318	1.21
8.90	.09	5334.44	.309	1.15
9.00	.09	5334.41	.301	1.08
9.10	.08	5334.39	.293	1.02
9.20	.08	5334.37	.285	.96
9.30	.08	5334.35	.278	.91
9.40	.08	5334.33	.271	.86
9.50	.08	5334.31	.265	.81

OUT.WPD

9.60	.07	5334.29	.259	.77
9.70	.07	5334.28	.254	.72
9.80	.07	5334.26	.248	.68
9.90	.07	5334.25	.243	.65
10.00	.07	5334.23	.239	.61
10.10	.07	5334.22	.234	.58
10.20	.07	5334.21	.230	.55
10.30	.06	5334.20	.227	.52
10.40	.06	5334.19	.223	.49
10.50	.06	5334.17	.219	.46
10.60	.06	5334.17	.216	.44
10.70	.06	5334.16	.213	.42
10.80	.06	5334.15	.210	.39
10.90	.06	5334.14	.208	.37
11.00	.06	5334.13	.205	.35
11.10	.06	5334.13	.203	.34

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	.06	5334.12	.201	.32
11.30	.06	5334.11	.199	.30
11.40	.06	5334.11	.197	.29
11.50	.06	5334.10	.195	.28
11.60	.06	5334.10	.193	.26
11.70	.06	5334.09	.191	.25
11.80	.06	5334.09	.190	.24
11.90	.06	5334.08	.189	.23
12.00	.06	5334.08	.187	.22
12.10	.06	5334.08	.186	.21
12.20	.06	5334.07	.185	.20
12.30	.06	5334.07	.184	.19
12.40	.06	5334.07	.182	.18
12.50	.06	5334.06	.181	.17
12.60	.06	5334.06	.181	.17
12.70	.06	5334.06	.180	.16
12.80	.06	5334.06	.179	.15
12.90	.06	5334.05	.178	.15
13.00	.06	5334.05	.177	.14
13.10	.05	5334.05	.177	.14
13.20	.05	5334.05	.176	.13
13.30	.05	5334.04	.175	.13
13.40	.05	5334.04	.175	.12
13.50	.05	5334.04	.174	.12
13.60	.05	5334.04	.174	.11
13.70	.05	5334.04	.173	.11
13.80	.05	5334.04	.173	.11
13.90	.05	5334.04	.172	.10
14.00	.05	5334.04	.172	.10
14.10	.05	5334.03	.172	.10
14.20	.05	5334.03	.171	.09
14.30	.05	5334.03	.171	.09
14.40	.05	5334.03	.170	.09
14.50	.05	5334.03	.170	.09
14.60	.05	5334.03	.170	.09
14.70	.05	5334.03	.170	.08
14.80	.05	5334.03	.169	.08
14.90	.05	5334.03	.169	.08
15.00	.05	5334.03	.169	.08
15.10	.05	5334.03	.169	.08
15.20	.05	5334.02	.168	.07
15.30	.05	5334.02	.168	.07
15.40	.05	5334.02	.168	.07
15.50	.05	5334.02	.168	.07
15.60	.05	5334.02	.168	.07
15.70	.05	5334.02	.168	.07
15.80	.05	5334.02	.167	.07
15.90	.05	5334.02	.167	.07
16.00	.05	5334.02	.167	.06
16.10	.05	5334.02	.167	.06
16.20	.05	5334.02	.167	.06
16.30	.05	5334.02	.167	.06
16.40	.05	5334.02	.167	.06
16.50	.05	5334.02	.167	.06
16.60	.05	5334.02	.166	.06
16.70	.05	5334.02	.166	.06

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
16.80	.05	5334.02	.166	.06
16.90	.05	5334.02	.166	.06
17.00	.05	5334.02	.166	.06
17.10	.05	5334.02	.166	.06
17.20	.05	5334.02	.166	.05
17.30	.05	5334.02	.166	.05
17.40	.05	5334.02	.166	.05
17.50	.05	5334.02	.166	.05
17.60	.05	5334.02	.166	.05
17.70	.04	5334.02	.166	.05
17.80	.04	5334.02	.166	.05
17.90	.04	5334.02	.165	.05
18.00	.04	5334.02	.165	.05
18.10	.04	5334.02	.165	.05
18.20	.04	5334.02	.165	.05
18.30	.04	5334.02	.165	.05
18.40	.04	5334.02	.165	.05
18.50	.04	5334.02	.165	.05
18.60	.04	5334.02	.165	.05
18.70	.04	5334.01	.165	.05
18.80	.04	5334.01	.165	.05
18.90	.04	5334.01	.165	.05
19.00	.04	5334.01	.165	.05
19.10	.04	5334.01	.165	.05
19.20	.04	5334.01	.165	.05
19.30	.04	5334.01	.165	.05

OUT.WPD

19.40	.04	5334.01	.165	.05
19.50	.04	5334.01	.165	.05
19.60	.04	5334.01	.165	.05
19.70	.04	5334.01	.165	.05
19.80	.04	5334.01	.165	.05
19.90	.04	5334.01	.165	.05
20.00	.04	5334.01	.165	.04
20.10	.04	5334.01	.165	.04
20.20	.04	5334.01	.165	.04
20.30	.04	5334.01	.164	.04
20.40	.04	5334.01	.164	.04
20.50	.04	5334.01	.164	.04
20.60	.04	5334.01	.164	.04
20.70	.04	5334.01	.164	.04
20.80	.04	5334.01	.164	.04
20.90	.04	5334.01	.164	.04
21.00	.04	5334.01	.164	.04
21.10	.04	5334.01	.164	.04
21.20	.04	5334.01	.164	.04
21.30	.04	5334.01	.164	.04
21.40	.04	5334.01	.164	.04
21.50	.04	5334.01	.164	.04
21.60	.04	5334.01	.164	.04
21.70	.04	5334.01	.164	.04
21.80	.04	5334.01	.164	.04
21.90	.04	5334.01	.164	.04
22.00	.04	5334.01	.164	.04
22.10	.04	5334.01	.164	.04
22.20	.04	5334.01	.164	.04
22.30	.04	5334.01	.164	.04

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
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22.40	.04	5334.01	.164	.04
22.50	.04	5334.01	.164	.04
22.60	.04	5334.01	.164	.04
22.70	.04	5334.01	.164	.04
22.80	.04	5334.01	.164	.04
22.90	.04	5334.01	.164	.04
23.00	.04	5334.01	.164	.04
23.10	.04	5334.01	.164	.04
23.20	.04	5334.01	.164	.04
23.30	.04	5334.01	.164	.04
23.40	.04	5334.01	.164	.04
23.50	.04	5334.01	.164	.04
23.60	.04	5334.01	.164	.04
23.70	.04	5334.01	.164	.04
23.80	.04	5334.01	.164	.04
23.90	.04	5334.01	.164	.04
24.00	.04	5334.01	.164	.04
24.10	.03	5334.01	.164	.04
24.20	.03	5334.01	.164	.04
24.30	.03	5334.01	.164	.04
24.40	.02	5334.01	.163	.04
24.50	.02	5334.01	.163	.04
24.60	.02	5334.01	.163	.03
24.70	.01	5334.01	.163	.03
24.80	.01	5334.01	.163	.03
24.90	.01	5334.01	.163	.03
25.00	.01	5334.01	.162	.03
25.10	.01	5334.01	.162	.03
25.20	.00	5334.01	.162	.03
25.30	.00	5334.01	.162	.02
25.40	.00	5334.01	.162	.02
25.50	.00	5334.00	.162	.02
25.60	.00	5334.00	.161	.02
25.70	.00	5334.00	.161	.02
25.80	.00	5334.00	.161	.02
25.90	.00	5334.00	.161	.02
26.00	.00	5334.00	.161	.02
26.10	.00	5334.00	.161	.02
26.20	.00	5334.00	.161	.01
26.30	.00	5334.00	.160	.01
26.40	.00	5334.00	.160	.01
26.50	.00	5334.00	.160	.01
26.60	.00	5334.00	.160	.01
26.70	.00	5334.00	.160	.01
26.80	.00	5334.00	.160	.01
26.90	.00	5334.00	.160	.01
27.00	.00	5334.00	.160	.01
27.10	.00	5334.00	.160	.01
27.20	.00	5334.00	.160	.01
27.30	.00	5334.00	.160	.01
27.40	.00	5334.00	.159	.01
27.50	.00	5334.00	.159	.01
27.60	.00	5334.00	.159	.01
27.70	.00	5334.00	.159	.01
27.80	.00	5333.99	.159	.01
27.90	.00	5333.99	.159	.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
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28.00	.00	5333.99	.159	.01
28.10	.00	5333.99	.159	.01
28.20	.00	5333.99	.159	.01
28.30	.00	5333.99	.159	.01
28.40	.00	5333.99	.159	.01
28.50	.00	5333.99	.159	.01
28.60	.00	5333.99	.158	.01
28.70	.00	5333.99	.158	.01
28.80	.00	5333.99	.158	.01
28.90	.00	5333.99	.158	.01
29.00	.00	5333.99	.158	.01
29.10	.00	5333.99	.158	.01

OUT.WPD

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
29.20	.00	5333.99	.158	.01					
29.30	.00	5333.99	.158	.01					
29.40	.00	5333.99	.158	.01					
29.50	.00	5333.99	.158	.01					
29.60	.00	5333.99	.158	.01					
29.70	.00	5333.98	.158	.01					
29.80	.00	5333.98	.158	.01					
29.90	.00	5333.98	.157	.01					

PEAK DISCHARGE = 81.451 CFS - PEAK OCCURS AT HOUR 1.85
 MAXIMUM WATER SURFACE ELEVATION = 5336.001
 MAXIMUM STORAGE = .9180 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=1 CODE=5

OUTFLOW HYDROGRAPH REACH 5.90

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	6.6	12.000	.2	18.000	.1	24.000	.0
.250	.0	6.250	6.2	12.250	.2	18.250	.1	24.250	.0
.500	.0	6.500	5.6	12.500	.2	18.500	.0	24.500	.0
.750	.0	6.750	4.8	12.750	.2	18.750	.0	24.750	.0
1.000	.0	7.000	4.0	13.000	.1	19.000	.0	25.000	.0
1.250	.0	7.250	3.2	13.250	.1	19.250	.0	25.250	.0
1.500	1.1	7.500	2.6	13.500	.1	19.500	.0	25.500	.0
1.750	10.3	7.750	2.2	13.750	.1	19.750	.0	25.750	.0
2.000	27.3	8.000	1.9	14.000	.1	20.000	.0	26.000	.0
2.250	17.6	8.250	1.7	14.250	.1	20.250	.0	26.250	.0
2.500	16.4	8.500	1.4	14.500	.1	20.500	.0	26.500	.0
2.750	11.0	8.750	1.2	14.750	.1	20.750	.0	26.750	.0
3.000	8.0	9.000	1.1	15.000	.1	21.000	.0	27.000	.0
3.250	9.3	9.250	.9	15.250	.1	21.250	.0	27.250	.0
3.500	8.0	9.500	.8	15.500	.1	21.500	.0	27.500	.0
3.750	8.4	9.750	.7	15.750	.1	21.750	.0	27.750	.0
4.000	8.0	10.000	.6	16.000	.1	22.000	.0	28.000	.0
4.250	8.0	10.250	.5	16.250	.1	22.250	.0	28.250	.0
4.500	7.9	10.500	.5	16.500	.1	22.500	.0	28.500	.0
4.750	7.8	10.750	.4	16.750	.1	22.750	.0	28.750	.0
5.000	7.6	11.000	.4	17.000	.1	23.000	.0	29.000	.0
5.250	7.5	11.250	.3	17.250	.1	23.250	.0	29.250	.0
5.500	7.3	11.500	.3	17.500	.1	23.500	.0	29.500	.0
5.750	7.0	11.750	.2	17.750	.1	23.750	.0	29.750	.0

RUNOFF VOLUME = .81265 INCHES = 5.3700 ACRE-Feet
 PEAK DISCHARGE RATE = 81.45 CFS AT 1.850 HOURS BASIN AREA = .1239 SQ. MI.

*S ROUTE THRU 24"IN ALMENDRA PL

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.011
 DIAM=2.0 FT N=0.013

RATING CURVE PIPE SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.10	.06	.12	.89
.21	.17	.54	1.22
.31	.31	1.26	1.45
.42	.47	2.26	1.62
.52	.65	3.53	1.76
.63	.84	5.03	1.85
.73	1.04	6.74	1.93
.83	1.24	8.62	1.97
.94	1.45	10.63	2.00
1.04	1.66	12.72	2.00
1.15	1.86	14.85	2.00
1.25	2.07	16.96	2.00
1.35	2.27	19.01	2.00
1.46	2.46	20.93	2.00
1.56	2.63	22.65	2.00
1.67	2.80	24.08	2.00
1.77	2.94	25.10	2.00
1.88	3.06	25.52	2.00
2.00	3.14	25.52	2.00

ROUTE MCUNGE ID=2 HYD NO=5.92 INFLOW ID=1
 DT=0.0 HR LENGTH=48.6 FT
 NS=0 SLOPE=0.011 CODE=5

ZERO VALUE HYDROGRAPH OR SHORT ROUTE - ROUTING BYPASSED
 PRINT HYD ID=2 CODE=5

OUTFLOW HYDROGRAPH REACH 5.92

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	6.6	12.000	.2	18.000	.1	24.000	.0
.250	.0	6.250	6.2	12.250	.2	18.250	.1	24.250	.0
.500	.0	6.500	5.6	12.500	.2	18.500	.0	24.500	.0
.750	.0	6.750	4.8	12.750	.2	18.750	.0	24.750	.0
1.000	.0	7.000	4.0	13.000	.1	19.000	.0	25.000	.0
1.250	.0	7.250	3.2	13.250	.1	19.250	.0	25.250	.0
1.500	1.1	7.500	2.6	13.500	.1	19.500	.0	25.500	.0
1.750	10.3	7.750	2.2	13.750	.1	19.750	.0	25.750	.0
2.000	27.3	8.000	1.9	14.000	.1	20.000	.0	26.000	.0
2.250	17.6	8.250	1.7	14.250	.1	20.250	.0	26.250	.0
2.500	16.4	8.500	1.4	14.500	.1	20.500	.0	26.500	.0
2.750	11.0	8.750	1.2	14.750	.1	20.750	.0	26.750	.0
3.000	8.0	9.000	1.1	15.000	.1	21.000	.0	27.000	.0

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                                OUT.WPD
3.250      9.3      9.250      .9      15.250      .1      21.250      .0      27.250      .0
3.500      8.0      9.500      .8      15.500      .1      21.500      .0      27.500      .0
3.750      8.4      9.750      .7      15.750      .1      21.750      .0      27.750      .0
4.000      8.0      10.000     .6      16.000      .1      22.000      .0      28.000      .0
4.250      8.0      10.250     .5      16.250      .1      22.250      .0      28.250      .0
4.500      7.9      10.500     .5      16.500      .1      22.500      .0      28.500      .0
4.750      7.8      10.750     .4      16.750      .1      22.750      .0      28.750      .0
5.000      7.6      11.000     .4      17.000      .1      23.000      .0      29.000      .0
5.250      7.5      11.250     .3      17.250      .1      23.250      .0      29.250      .0
5.500      7.3      11.500     .3      17.500      .1      23.500      .0      29.500      .0
5.750      7.0      11.750     .2      17.750      .1      23.750      .0      29.750      .0

RUNOFF VOLUME = .81265 INCHES = 5.3700 ACRE-Feet
PEAK DISCHARGE RATE = 81.45 CFS AT 1.850 HOURS BASIN AREA = .1239 SQ. MI.

*
*****
*
*      COMPUTE HYD FOR SUB-BASIN 5
*****
*
COMPUTE LT TP      LCODE=1      NK=3      ISLOPE=0
                  LENGTH=400      SLOPE=0.017      K=.7
                  LENGTH=1600     SLOPE=0.017      K=1
                  LENGTH=2000     SLOPE=0.017      K=2

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS
NOTE: Upland factor input values have been adjusted to meet Upland/Lag Time requirements.
                  LENGTH (FT)      SLOPE (FT/FT)      COMPOSITE K
SHEET FLOW PORTION      400.0      .017000      .7000
SHALLOW FLOW PORTION   1600.0      .017000      2.0000
CHANNEL FLOW PORTION     2000.0      .017000      3.0000
TOTAL BASIN              4000.0      .017000      1.9626

TIME OF CONCENTRATION (HRS)= .4342      TIME TO PEAK (HRS)= .2895      LAG TIME (HRS)= .3257

COMPUTE NM HYD      ID=5      HYD NO=5      DA=0.0940 SQ MI
                  PER A=98      PER B=0      PER C=0      PER D=2
                  TP=0.0      MASS RAIN=-1

TIME TO PEAK (hrs)= .2895

K = .158206HR      TP = .289472HR      K/TP RATIO = .546534      SHAPE CONSTANT, N = 7.080893
UNIT PEAK = 3.4101 CFS      UNIT VOLUME = .9968      B = 525.07      P60 = 2.2000
AREA = .001880 SQ MI      IA = .10000 INCHES      INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .336508HR      TP = .289472HR      K/TP RATIO = 1.162488      SHAPE CONSTANT, N = 3.049525
UNIT PEAK = 90.963 CFS      UNIT VOLUME = .9998      B = 285.83      P60 = 2.2000
AREA = .092120 SQ MI      IA = .65000 INCHES      INF = 1.67000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD      ID=5      CODE=5

                                OUTFLOW HYDROGRAPH REACH      5.00

TIME      FLOW      TIME      FLOW      TIME      FLOW      TIME      FLOW      TIME      FLOW
HRS      CFS      HRS      CFS      HRS      CFS      HRS      CFS      HRS      CFS
.000      .0      5.250      .5      10.500      .0      15.750      .0      21.000      .0
.250      .0      5.500      .4      10.750      .0      16.000      .0      21.250      .0
.500      .0      5.750      .3      11.000      .0      16.250      .0      21.500      .0
.750      .0      6.000      .3      11.250      .0      16.500      .0      21.750      .0
1.000      .1      6.250      .2      11.500      .0      16.750      .0      22.000      .0
1.250      .3      6.500      .2      11.750      .0      17.000      .0      22.250      .0
1.500      44.1      6.750      .1      12.000      .0      17.250      .0      22.500      .0
1.750      67.1      7.000      .1      12.250      .0      17.500      .0      22.750      .0
2.000      35.6      7.250      .1      12.500      .0      17.750      .0      23.000      .0
2.250      17.1      7.500      .1      12.750      .0      18.000      .0      23.250      .0
2.500      8.2      7.750      .1      13.000      .0      18.250      .0      23.500      .0
2.750      5.8      8.000      .1      13.250      .0      18.500      .0      23.750      .0
3.000      4.5      8.250      .1      13.500      .0      18.750      .0      24.000      .0
3.250      3.5      8.500      .1      13.750      .0      19.000      .0      24.250      .0
3.500      2.7      8.750      .1      14.000      .0      19.250      .0      24.500      .0
3.750      2.1      9.000      .0      14.250      .0      19.500      .0      24.750      .0
4.000      1.7      9.250      .0      14.500      .0      19.750      .0      25.000      .0
4.250      1.3      9.500      .0      14.750      .0      20.000      .0
4.500      1.0      9.750      .0      15.000      .0      20.250      .0
4.750      .8      10.000     .0      15.250      .0      20.500      .0
5.000      .7      10.250     .0      15.500      .0      20.750      .0

RUNOFF VOLUME = .81878 INCHES = 4.1048 ACRE-Feet
PEAK DISCHARGE RATE = 71.62 CFS AT 1.650 HOURS BASIN AREA = .0940 SQ. MI.

*
*****
*S
*S ADD ROUTED FLOW FROM TEMP POND B TO SUB-BASIN 5

ADD HYD      ID=1      HYD NO=5.1 ID I=2 ID II=5
PRINT HYD      ID=1      CODE=1

                                OUTFLOW HYDROGRAPH REACH      5.10

RUNOFF VOLUME = .81529 INCHES = 9.4747 ACRE-Feet

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PEAK DISCHARGE RATE = 135.65 CFS AT 1.850 HOURS OUT.WPD
BASIN AREA = .2179 SQ. MI.

*

*S ROUTE THRU UNSER TEMP POND C

ROUTE RESERVOIR ID=3 HYD=5.93 INFLOW ID=1 CODE=2
OUTFLOW(CFS) STORAGE(AC FT) ELEV (FT)
0.0 0.0 5329
1.3 0.173 5330
5.7 0.509 5331
12 0.946 5332
19.7 1.211 5333
200 1.21101 5333.001

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5329.00	.000	.00
.10	.00	5329.00	.000	.00
.20	.00	5329.00	.000	.00
.30	.00	5329.00	.000	.00
.40	.00	5329.00	.000	.00
.50	.00	5329.00	.000	.00
.60	.00	5329.00	.000	.00
.70	.00	5329.00	.000	.00
.80	.01	5329.00	.000	.00
.90	.06	5329.00	.000	.00
1.00	.13	5329.01	.001	.01
1.10	.19	5329.01	.002	.02
1.20	.22	5329.02	.004	.03
1.30	.37	5329.03	.006	.04
1.40	11.65	5329.24	.041	.31
1.50	45.15	5330.26	.261	2.45
1.60	71.58	5331.46	.709	8.58
1.70	77.98	5333.00	1.211	26.67
1.80	96.13	5333.00	1.211	44.82
1.90	88.69	5333.00	1.211	37.39
2.00	62.87	5332.94	1.195	19.24
2.10	52.75	5332.98	1.205	19.54
2.20	46.59	5332.97	1.204	19.50
2.30	39.64	5332.97	1.204	19.49
2.40	28.30	5332.94	1.195	19.25
2.50	24.63	5333.00	1.211	21.66
2.60	14.86	5332.92	1.190	19.10
2.70	14.15	5332.84	1.168	18.46
2.80	13.51	5332.75	1.145	17.80
2.90	12.98	5332.66	1.121	17.09
3.00	12.50	5332.57	1.098	16.40
3.10	12.07	5332.48	1.074	15.72
3.20	11.68	5332.40	1.052	15.08
3.30	11.33	5332.32	1.030	14.45
3.40	11.01	5332.24	1.011	13.88
3.50	10.73	5332.17	.992	13.33
3.60	10.47	5332.11	.974	12.82
3.70	10.24	5332.04	.958	12.34
3.80	10.02	5331.99	.943	11.95
3.90	9.83	5331.96	.927	11.73
4.00	9.66	5331.92	.912	11.51
4.10	9.50	5331.89	.897	11.29
4.20	9.34	5331.85	.882	11.08
4.30	9.19	5331.82	.868	10.88
4.40	9.05	5331.79	.854	10.68
4.50	8.91	5331.76	.841	10.49
4.60	8.77	5331.73	.828	10.30
4.70	8.64	5331.70	.816	10.12
4.80	8.52	5331.67	.804	9.95
4.90	8.39	5331.65	.792	9.78
5.00	8.27	5331.62	.781	9.62
5.10	8.16	5331.60	.770	9.46
5.20	8.04	5331.57	.759	9.31
5.30	7.93	5331.55	.749	9.16
5.40	7.82	5331.53	.739	9.02
5.50	7.72	5331.50	.729	8.88

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
5.60	7.59	5331.48	.720	8.74
5.70	7.44	5331.46	.710	8.60
5.80	7.28	5331.44	.701	8.46
5.90	7.11	5331.42	.691	8.32
6.00	6.93	5331.39	.681	8.17
6.10	6.74	5331.37	.670	8.02
6.20	6.54	5331.34	.659	7.87
6.30	6.34	5331.32	.648	7.71
6.40	6.12	5331.29	.637	7.54
6.50	5.82	5331.26	.625	7.37
6.60	5.46	5331.23	.611	7.17
6.70	5.10	5331.20	.596	6.96
6.80	4.75	5331.16	.580	6.73
6.90	4.41	5331.13	.564	6.49
7.00	4.08	5331.08	.546	6.24
7.10	3.76	5331.04	.528	5.98
7.20	3.46	5331.00	.510	5.71
7.30	3.18	5330.95	.491	5.46
7.40	2.91	5330.89	.472	5.21
7.50	2.68	5330.83	.453	4.97
7.60	2.53	5330.78	.434	4.72
7.70	2.39	5330.73	.417	4.49

OUT.WPD

7.80	2.25	5330.67	.400	4.27
7.90	2.13	5330.63	.383	4.05
8.00	2.01	5330.58	.368	3.85
8.10	1.89	5330.54	.353	3.66
8.20	1.79	5330.49	.339	3.47
8.30	1.69	5330.45	.325	3.29
8.40	1.59	5330.41	.312	3.12
8.50	1.50	5330.38	.300	2.96
8.60	1.42	5330.34	.288	2.81
8.70	1.34	5330.31	.277	2.66
8.80	1.26	5330.28	.266	2.52
8.90	1.19	5330.25	.256	2.39
9.00	1.13	5330.22	.246	2.26
9.10	1.07	5330.19	.237	2.14
9.20	1.01	5330.17	.229	2.03
9.30	.95	5330.14	.220	1.92
9.40	.90	5330.12	.213	1.82
9.50	.85	5330.10	.205	1.72
9.60	.80	5330.08	.198	1.63
9.70	.76	5330.06	.192	1.54
9.80	.72	5330.04	.185	1.46
9.90	.68	5330.02	.179	1.38
10.00	.65	5330.00	.174	1.31
10.10	.61	5329.97	.168	1.26
10.20	.58	5329.94	.163	1.22
10.30	.55	5329.91	.158	1.18
10.40	.52	5329.88	.152	1.15
10.50	.50	5329.85	.147	1.11
10.60	.47	5329.82	.142	1.07
10.70	.45	5329.79	.137	1.03
10.80	.43	5329.77	.133	1.00
10.90	.41	5329.74	.128	.96
11.00	.39	5329.71	.124	.93
11.10	.37	5329.69	.119	.90

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
11.20	.35	5329.66	.115	.86
11.30	.34	5329.64	.111	.83
11.40	.32	5329.62	.107	.80
11.50	.31	5329.59	.103	.77
11.60	.29	5329.57	.099	.74
11.70	.28	5329.55	.095	.72
11.80	.27	5329.53	.092	.69
11.90	.26	5329.51	.088	.66
12.00	.25	5329.49	.085	.64
12.10	.24	5329.47	.082	.62
12.20	.23	5329.46	.079	.59
12.30	.22	5329.44	.076	.57
12.40	.21	5329.42	.073	.55
12.50	.20	5329.41	.070	.53
12.60	.20	5329.39	.068	.51
12.70	.19	5329.38	.065	.49
12.80	.18	5329.36	.063	.47
12.90	.18	5329.35	.060	.45
13.00	.17	5329.34	.058	.44
13.10	.17	5329.32	.056	.42
13.20	.16	5329.31	.054	.41
13.30	.16	5329.30	.052	.39
13.40	.15	5329.29	.050	.38
13.50	.15	5329.28	.048	.36
13.60	.14	5329.27	.047	.35
13.70	.14	5329.26	.045	.34
13.80	.14	5329.25	.043	.33
13.90	.13	5329.24	.042	.31
14.00	.13	5329.23	.040	.30
14.10	.13	5329.22	.039	.29
14.20	.12	5329.22	.038	.28
14.30	.12	5329.21	.036	.27
14.40	.12	5329.20	.035	.26
14.50	.12	5329.20	.034	.25
14.60	.11	5329.19	.033	.25
14.70	.11	5329.18	.032	.24
14.80	.11	5329.18	.031	.23
14.90	.11	5329.17	.030	.22
15.00	.10	5329.17	.029	.22
15.10	.10	5329.16	.028	.21
15.20	.10	5329.16	.027	.20
15.30	.10	5329.15	.026	.20
15.40	.10	5329.15	.025	.19
15.50	.10	5329.14	.025	.18
15.60	.10	5329.14	.024	.18
15.70	.09	5329.13	.023	.17
15.80	.09	5329.13	.023	.17
15.90	.09	5329.13	.022	.16
16.00	.09	5329.12	.021	.16
16.10	.09	5329.12	.021	.16
16.20	.09	5329.12	.020	.15
16.30	.09	5329.11	.020	.15
16.40	.09	5329.11	.019	.14
16.50	.09	5329.11	.019	.14
16.60	.08	5329.11	.018	.14
16.70	.08	5329.10	.018	.13

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
16.80	.08	5329.10	.017	.13
16.90	.08	5329.10	.017	.13
17.00	.08	5329.10	.017	.13
17.10	.08	5329.09	.016	.12
17.20	.08	5329.09	.016	.12
17.30	.08	5329.09	.016	.12
17.40	.08	5329.09	.015	.12
17.50	.08	5329.09	.015	.11

OUT.WPD

17.60	.08	5329.09	.015	.11
17.70	.08	5329.08	.015	.11
17.80	.08	5329.08	.014	.11
17.90	.08	5329.08	.014	.11
18.00	.08	5329.08	.014	.10
18.10	.07	5329.08	.014	.10
18.20	.07	5329.08	.013	.10
18.30	.07	5329.08	.013	.10
18.40	.07	5329.07	.013	.10
18.50	.07	5329.07	.013	.10
18.60	.07	5329.07	.013	.09
18.70	.07	5329.07	.012	.09
18.80	.07	5329.07	.012	.09
18.90	.07	5329.07	.012	.09
19.00	.07	5329.07	.012	.09
19.10	.07	5329.07	.012	.09
19.20	.07	5329.07	.012	.09
19.30	.07	5329.07	.011	.09
19.40	.07	5329.07	.011	.08
19.50	.07	5329.06	.011	.08
19.60	.07	5329.06	.011	.08
19.70	.07	5329.06	.011	.08
19.80	.07	5329.06	.011	.08
19.90	.07	5329.06	.011	.08
20.00	.07	5329.06	.011	.08
20.10	.07	5329.06	.011	.08
20.20	.07	5329.06	.010	.08
20.30	.07	5329.06	.010	.08
20.40	.07	5329.06	.010	.08
20.50	.07	5329.06	.010	.08
20.60	.07	5329.06	.010	.08
20.70	.07	5329.06	.010	.07
20.80	.06	5329.06	.010	.07
20.90	.06	5329.06	.010	.07
21.00	.06	5329.06	.010	.07
21.10	.06	5329.06	.010	.07
21.20	.06	5329.06	.010	.07
21.30	.06	5329.06	.010	.07
21.40	.06	5329.05	.009	.07
21.50	.06	5329.05	.009	.07
21.60	.06	5329.05	.009	.07
21.70	.06	5329.05	.009	.07
21.80	.06	5329.05	.009	.07
21.90	.06	5329.05	.009	.07
22.00	.06	5329.05	.009	.07
22.10	.06	5329.05	.009	.07
22.20	.06	5329.05	.009	.07
22.30	.06	5329.05	.009	.07
TIME	INFLOW	ELEV	VOLUME	OUTFLOW
(HRS)	(CFS)	(FEET)	(AC-FT)	(CFS)
22.40	.06	5329.05	.009	.07
22.50	.06	5329.05	.009	.07
22.60	.06	5329.05	.009	.07
22.70	.06	5329.05	.009	.07
22.80	.06	5329.05	.009	.07
22.90	.06	5329.05	.009	.07
23.00	.06	5329.05	.009	.06
23.10	.06	5329.05	.009	.06
23.20	.06	5329.05	.009	.06
23.30	.06	5329.05	.009	.06
23.40	.06	5329.05	.008	.06
23.50	.06	5329.05	.008	.06
23.60	.06	5329.05	.008	.06
23.70	.06	5329.05	.008	.06
23.80	.06	5329.05	.008	.06
23.90	.06	5329.05	.008	.06
24.00	.06	5329.05	.008	.06
24.10	.06	5329.05	.008	.06
24.20	.05	5329.05	.008	.06
24.30	.05	5329.05	.008	.06
24.40	.04	5329.05	.008	.06
24.50	.04	5329.05	.008	.06
24.60	.04	5329.04	.008	.06
24.70	.04	5329.04	.007	.06
24.80	.03	5329.04	.007	.05
24.90	.03	5329.04	.007	.05
25.00	.03	5329.04	.007	.05
25.10	.03	5329.04	.007	.05
25.20	.03	5329.04	.007	.05
25.30	.02	5329.04	.006	.05
25.40	.02	5329.04	.006	.05
25.50	.02	5329.03	.006	.05
25.60	.02	5329.03	.006	.04
25.70	.02	5329.03	.006	.04
25.80	.02	5329.03	.005	.04
25.90	.02	5329.03	.005	.04
26.00	.02	5329.03	.005	.04
26.10	.02	5329.03	.005	.04
26.20	.01	5329.03	.005	.04
26.30	.01	5329.03	.005	.03
26.40	.01	5329.03	.004	.03
26.50	.01	5329.02	.004	.03
26.60	.01	5329.02	.004	.03
26.70	.01	5329.02	.004	.03
26.80	.01	5329.02	.004	.03
26.90	.01	5329.02	.004	.03
27.00	.01	5329.02	.003	.03
27.10	.01	5329.02	.003	.03
27.20	.01	5329.02	.003	.02
27.30	.01	5329.02	.003	.02
27.40	.01	5329.02	.003	.02
27.50	.01	5329.02	.003	.02
27.60	.01	5329.02	.003	.02
27.70	.01	5329.02	.003	.02

OUT.WPD

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
27.80	.01	5329.02	.003	.02
27.90	.01	5329.01	.003	.02
28.00	.01	5329.01	.002	.02
28.10	.01	5329.01	.002	.02
28.20	.01	5329.01	.002	.02
28.30	.01	5329.01	.002	.02
28.40	.01	5329.01	.002	.02
28.50	.01	5329.01	.002	.02
28.60	.01	5329.01	.002	.02
28.70	.01	5329.01	.002	.02
28.80	.01	5329.01	.002	.02
28.90	.01	5329.01	.002	.01
29.00	.01	5329.01	.002	.01
29.10	.01	5329.01	.002	.01
29.20	.01	5329.01	.002	.01
29.30	.01	5329.01	.002	.01
29.40	.01	5329.01	.002	.01
29.50	.01	5329.01	.002	.01
29.60	.01	5329.01	.002	.01
29.70	.01	5329.01	.002	.01
29.80	.01	5329.01	.002	.01
29.90	.01	5329.01	.002	.01

PEAK DISCHARGE = 186.957 CFS - PEAK OCCURS AT HOUR 1.85
 MAXIMUM WATER SURFACE ELEVATION = 5333.001
 MAXIMUM STORAGE = 1.2110 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=3 CODE=5

OUTFLOW HYDROGRAPH REACH 5.93

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	8.2	12.000	.6	18.000	.1	24.000	.1
.250	.0	6.250	7.8	12.250	.6	18.250	.1	24.250	.1
.500	.0	6.500	7.4	12.500	.5	18.500	.1	24.500	.1
.750	.0	6.750	6.8	12.750	.5	18.750	.1	24.750	.1
1.000	.0	7.000	6.2	13.000	.4	19.000	.1	25.000	.1
1.250	.0	7.250	5.6	13.250	.4	19.250	.1	25.250	.0
1.500	2.4	7.500	5.0	13.500	.4	19.500	.1	25.500	.0
1.750	128.7	7.750	4.4	13.750	.3	19.750	.1	25.750	.0
2.000	19.2	8.000	3.9	14.000	.3	20.000	.1	26.000	.0
2.250	58.4	8.250	3.4	14.250	.3	20.250	.1	26.250	.0
2.500	21.7	8.500	3.0	14.500	.3	20.500	.1	26.500	.0
2.750	18.1	8.750	2.6	14.750	.2	20.750	.1	26.750	.0
3.000	16.4	9.000	2.3	15.000	.2	21.000	.1	27.000	.0
3.250	14.8	9.250	2.0	15.250	.2	21.250	.1	27.250	.0
3.500	13.3	9.500	1.7	15.500	.2	21.500	.1	27.500	.0
3.750	12.1	9.750	1.5	15.750	.2	21.750	.1	27.750	.0
4.000	11.5	10.000	1.3	16.000	.2	22.000	.1	28.000	.0
4.250	11.0	10.250	1.2	16.250	.2	22.250	.1	28.250	.0
4.500	10.5	10.500	1.1	16.500	.1	22.500	.1	28.500	.0
4.750	10.0	10.750	1.0	16.750	.1	22.750	.1	28.750	.0
5.000	9.6	11.000	.9	17.000	.1	23.000	.1	29.000	.0
5.250	9.2	11.250	.8	17.250	.1	23.250	.1	29.250	.0
5.500	8.9	11.500	.8	17.500	.1	23.500	.1	29.500	.0
5.750	8.5	11.750	.7	17.750	.1	23.750	.1	29.750	.0

RUNOFF VOLUME = .81515 INCHES = 9.4730 ACRE-Feet
 PEAK DISCHARGE RATE = 186.96 CFS AT 1.850 HOURS BASIN AREA = .2179 SQ. MI.

*

 *S APPLY NO SEDIMENT BULKING FACTOR
 SEDIMENT BULK CODE=1 BULKING FACTOR = 1.00

 *

 *S RECALL HYD FROM SAD 228 POND 4
 *
 *S
 RECALL HYD ID=14 HYD=POND4A
 DT= .050000 HRS DA= .0205 SQ MI
 PEAK= 18.038CFS RO= 1.4138 INCHES NO PTS=503
 FLOW RATES

.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.000	.000	.000	.000	.001
.020	.091	.228	.402	.568
.709	.826	.908	.922	.917
1.110	1.922	4.102	7.064	10.145
11.550	13.447	15.337	16.809	17.708
18.038	18.026	17.734	17.205	16.542
15.798	15.014	14.211	13.388	12.542
11.685	10.840	10.027	7.066	3.940
2.143	1.856	1.674	1.516	1.375
1.250	1.138	1.040	.952	.874
.804	.740	.684	.634	.589
.550	.515	.485	.458	.433
.410	.389	.370	.352	.336
.323	.312	.302	.293	.285
.278	.272	.267	.262	.257
.253	.250	.247	.244	.241
.240	.239	.238	.236	.234
.232	.229	.228	.227	.227
.228	.229	.230	.231	.231
.231	.232	.233	.234	.236
.238	.239	.240	.241	.243

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			OUT.WPD	
.244	.245	.246	.248	.250
.251	.253	.251	.239	.219
.198	.181	.170	.162	.157
.153	.151	.148	.147	.145
.144	.143	.143	.141	.140
.139	.138	.137	.136	.135
.135	.134	.133	.133	.132
.132	.131	.131	.131	.130
.130	.129	.128	.128	.127
.126	.126	.126	.126	.125
.125	.124	.123	.124	.123
.122	.122	.122	.122	.121
.121	.120	.120	.120	.120
.119	.118	.118	.117	.117
.117	.117	.117	.117	.116
.115	.115	.115	.115	.114
.114	.113	.113	.113	.113
.113	.112	.111	.111	.110
.110	.110	.110	.109	.109
.109	.109	.109	.108	.107
.107	.107	.106	.106	.106
.106	.106	.106	.106	.105
.104	.104	.104	.104	.103
.103	.103	.102	.102	.101
.101	.101	.101	.101	.101
.101	.101	.101	.100	.099
.099	.099	.099	.098	.098
.098	.098	.098	.097	.097
.096	.096	.096	.096	.096
.096	.095	.095	.095	.095
.095	.094	.093	.093	.093
.093	.093	.093	.093	.093
.092	.092	.092	.092	.091
.091	.091	.090	.090	.090
.090	.090	.090	.090	.090
.089	.089	.089	.088	.088
.088	.088	.088	.087	.087
.088	.087	.087	.086	.086
.085	.085	.086	.087	.087
.086	.086	.085	.084	.083
.083	.083	.084	.084	.084
.084	.084	.083	.083	.083
.083	.082	.082	.082	.082
.081	.081	.081	.081	.081
.081	.081	.080	.080	.081
.081	.081	.080	.080	.079
.079	.078	.079	.079	.079
.079	.079	.078	.078	.078
.078	.078	.078	.077	.077
.077	.077	.077	.076	.076
.076	.077	.077	.076	.075
.075	.075	.075	.074	.075
.075	.076	.076	.076	.075
.075	.074	.073	.072	.072
.073	.073	.073	.074	.074
.074	.073	.072	.072	.072
.073	.072	.072	.072	.072
.072	.071	.071	.072	.072
.071	.071	.071	.071	.071
.071	.070	.070	.069	.069
.069	.070	.070	.070	.070
.069	.069	.069	.069	.069
.069	.068	.068	.068	.068
.068	.068	.068	.068	.068
.067	.067	.067	.067	.067
.067	.067	.067	.066	.066
.067	.066	.066	.065	.066
.066	.066	.065	.065	.066
.066	.066	.065	.065	.064
.064	.064	.064	.064	.065
.065	.066	.065	.065	.064
.064	.064	.064	.064	.064
.064	.063	.062	.062	.062
.062	.062	.061	.054	.043
.032	.022	.016	.012	.009
.008	.007	.006	.005	.004
.004	.003	.003	.002	.002
.002	.001	.001		

*S

*S ADD SAD 228 POND 4 OUTFLOW TO TEMP POND C OUTFLOW

ADD HYD ID=4 HYD NO=200.3 ID I=3 ID II=14

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 200.30

RUNOFF VOLUME = .86662 INCHES = 11.0188 ACRE-Feet
 PEAK DISCHARGE RATE = 204.69 CFS AT 1.850 HOURS BASIN AREA = .2384 SQ. MI.

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*S RECALL HYD FROM SAD 228 POND 5

*S

RECALL HYD ID=12 HYD=POND5
 DT= .050000 HRS DA= .1489 SQ MI
 PEAK= 36.968CFS RO= 1.5473 INCHES NO PTS=600
 FLOW RATES

			OUT.WPD	
.0000	.0000	.0000	.0000	.0000
.0000	.0000	.0000	.0000	.0000
.0000	.0000	.0000	.0000	.0000
.0001	.0004	.0016	.0042	.0087
.155	.246	.358	.485	.621
.767	.948	1.234	1.765	2.740
4.748	9.594	15.707	21.217	25.243
28.978	31.229	33.174	34.808	35.892
36.174	36.404	36.589	36.734	36.842
36.915	36.956	36.968	36.957	36.926
36.881	36.825	36.760	36.687	36.608
36.524	36.436	36.344	36.248	36.149
36.048	35.944	35.837	35.519	35.090
34.659	34.228	33.796	33.364	32.934
32.504	32.077	31.651	31.229	30.808
30.391	29.977	29.567	29.160	28.736
28.129	27.535	26.951	26.379	25.818
25.269	24.730	24.203	23.686	23.180
22.685	22.201	21.726	21.263	20.809
20.366	19.932	19.508	18.867	18.173
17.507	16.868	16.255	15.668	15.105
14.565	14.047	13.551	13.076	12.620
12.183	11.766	11.365	10.982	10.615
10.263	9.927	9.605	9.296	9.001
8.718	8.448	8.189	7.941	7.700
7.466	7.236	7.010	6.789	6.573
6.363	6.159	5.961	5.771	5.587
5.411	5.241	5.078	4.921	4.770
4.625	4.486	4.352	4.223	4.099
3.990	3.934	3.879	3.825	3.772
3.719	3.668	3.617	3.567	3.519
3.471	3.424	3.378	3.332	3.288
3.244	3.201	3.159	3.118	3.077
3.037	2.998	2.960	2.922	2.885
2.849	2.813	2.778	2.744	2.710
2.677	2.644	2.613	2.581	2.551
2.520	2.491	2.462	2.433	2.405
2.378	2.350	2.324	2.298	2.272
2.247	2.223	2.199	2.175	2.152
2.129	2.106	2.084	2.062	2.041
2.020	1.999	1.979	1.959	1.940
1.921	1.902	1.883	1.865	1.847
1.829	1.812	1.795	1.779	1.762
1.746	1.730	1.715	1.700	1.684
1.670	1.655	1.641	1.627	1.613
1.600	1.586	1.573	1.560	1.548
1.535	1.523	1.511	1.499	1.487
1.476	1.464	1.453	1.442	1.431
1.421	1.410	1.400	1.390	1.380
1.371	1.361	1.352	1.342	1.333
1.324	1.315	1.307	1.298	1.290
1.281	1.273	1.265	1.257	1.249
1.241	1.233	1.226	1.219	1.211
1.204	1.197	1.190	1.183	1.177
1.170	1.163	1.157	1.150	1.144
1.138	1.132	1.126	1.120	1.114
1.108	1.103	1.097	1.091	1.086
1.080	1.075	1.070	1.065	1.060
1.055	1.050	1.045	1.040	1.035
1.030	1.026	1.021	1.016	1.012
1.007	1.003	.999	.994	.990
.986	.982	.978	.974	.970
.966	.962	.959	.955	.951
.947	.943	.940	.936	.932
.929	.926	.922	.919	.916
.912	.909	.906	.903	.899
.896	.893	.890	.887	.884
.881	.878	.875	.872	.869
.866	.864	.861	.858	.856
.853	.850	.848	.845	.842
.840	.837	.835	.832	.830
.827	.825	.823	.820	.818
.816	.813	.811	.809	.806
.804	.802	.800	.797	.795
.793	.791	.789	.787	.784
.782	.780	.778	.776	.775
.773	.771	.769	.767	.765
.763	.761	.759	.757	.755
.753	.752	.750	.748	.746
.744	.743	.741	.739	.737
.736	.734	.732	.730	.729
.727	.726	.724	.722	.721
.719	.718	.716	.714	.713
.711	.710	.708	.706	.705
.704	.702	.701	.699	.698
.696	.695	.693	.692	.690
.689	.687	.686	.685	.683
.682	.681	.679	.678	.676
.675	.674	.672	.671	.670
.668	.667	.666	.664	.663
.662	.660	.659	.658	.657
.655	.654	.653	.652	.651
.649	.648	.647	.645	.644
.643	.642	.641	.640	.639
.638	.637	.636	.634	.633
.632	.631	.630	.629	.627
.626	.625	.624	.622	.620
.617	.612	.606	.599	.591
.582	.573	.563	.554	.544
.534	.525	.515	.506	.496
.487	.478	.469	.460	.451
.442	.433	.425	.417	.408
.400	.392	.384	.377	.369
.362	.355	.347	.340	.333
.327	.320	.314	.307	.301
.295	.289	.283	.277	.271

			OUT.WPD	
.266	.260	.255	.250	.245
.240	.235	.230	.225	.221
.216	.211	.207	.203	.199
.195	.191	.187	.183	.179
.175	.172	.168	.165	.161
.158	.155	.151	.148	.145
.142	.139	.136	.134	.131
.128	.125	.123	.120	.118
.115	.113	.111	.108	.106
.104	.102	.100	.098	.096
.094	.092	.090	.088	.086
.084	.083	.081	.079	.078
.076	.074	.073	.071	.070
.068	.067	.066	.064	.063

*S

*S ADD SAD 228 POND 4 & 5 OUTFLOW TO TEMP POND C OUTFLOW

ADD HYD ID=1 HYD NO=201.1 ID I=4 ID II=12
PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 201.10

RUNOFF VOLUME = 1.12830 INCHES = 23.3060 ACRE-FEET
PEAK DISCHARGE RATE = 237.87 CFS AT 1.850 HOURS BASIN AREA = .3873 SQ. MI.

*

*S ROUTE 201.1 IN 54" SD IN UNSER BLVD TO GET 201.7

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.0112
DIAM=4.5 FT N=0.013

RATING CURVE PIPE SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.23	.32	1.09	2.00
.47	.88	4.74	2.75
.70	1.59	11.02	3.27
.94	2.40	19.81	3.66
1.17	3.30	30.94	3.95
1.41	4.25	44.14	4.17
1.64	5.25	59.14	4.33
1.88	6.28	75.61	4.44
2.11	7.32	93.21	4.49
2.35	8.38	111.55	4.50
2.58	9.43	130.23	4.50
2.81	10.46	148.80	4.50
3.05	11.47	166.78	4.50
3.28	12.43	183.61	4.50
3.52	13.34	198.68	4.50
3.75	14.17	211.21	4.50
3.99	14.90	220.18	4.50
4.22	15.50	223.87	4.50
4.50	15.90	223.87	4.50

ROUTE MCUNGE ID=7 HYD NO=102.7 INFLOW ID=1
DT=0.0 HR LENGTH=730 FT
NS=0 SLOPE=0.0112 CODE=5

INFLOW END= 600 TABLE PTS= 19
DT= .050000 QMED= 118.93 CKMED= 17.7896
WIDTH MED= 4.50 NREACH= 1 DX= 730.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.080	.0	4.06	1.63	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.23	.3	1.1	.059	2.0	5.68	3.45	1.401	.012	.990	.171	-.161	.2	.998	.027	-.025
.47	.9	4.7	.038	2.7	7.84	5.39	1.933	.027	.982	.324	-.306	2.6	.984	.238	-.222
.70	1.6	11.0	.029	3.3	9.93	6.94	2.448	.042	.976	.427	-.403	7.6	.978	.380	-.358
.94	2.4	19.8	.025	3.7	11.69	8.25	2.882	.057	.971	.492	-.463	15.2	.973	.462	-.436
1.17	3.3	30.9	.022	4.0	13.18	9.39	3.251	.073	.966	.537	-.504	25.2	.969	.517	-.486
1.41	4.2	44.1	.020	4.2	14.46	10.39	3.565	.090	.962	.570	-.532	37.3	.964	.556	-.519
1.64	5.2	59.1	.018	4.3	15.53	11.27	3.829	.108	.956	.595	-.551	51.5	.959	.584	-.543
1.88	6.3	75.6	.017	4.4	16.41	12.05	4.045	.127	.951	.613	-.564	67.2	.954	.605	-.559
2.11	7.3	93.2	.016	4.5	17.09	12.73	4.215	.148	.945	.627	-.572	84.3	.948	.621	-.569
2.35	8.4	111.6	.015	4.5	17.57	13.31	4.333	.173	.937	.637	-.574	102.3	.941	.633	-.574
2.58	9.4	130.2	.015	4.5	17.69	13.81	4.361	.200	.928	.640	-.568	120.8	.933	.640	-.573
2.81	10.5	148.8	.014	4.5	17.36	14.22	4.279	.233	.915	.637	-.553	139.5	.922	.640	-.562
3.05	11.5	166.8	.014	4.5	16.53	14.54	4.077	.274	.898	.626	-.524	157.8	.908	.633	-.541
3.28	12.4	183.6	.014	4.5	15.15	14.77	3.737	.329	.870	.605	-.475	175.2	.886	.618	-.504
3.52	13.3	198.7	.014	4.5	13.11	14.90	3.233	.412	.823	.569	-.392	191.2	.851	.591	-.442
3.75	14.2	211.2	.014	4.5	10.21	14.91	2.517	.562	.724	.510	-.234	205.0	.787	.545	-.332
3.99	14.9	220.2	.014	4.5	5.98	14.78	1.474	1.001	.424	.425	.151	215.7	.635	.472	-.107
4.22	15.5	223.9	.014	4.5	3.41	14.45	.840	1.785	.015	.448	.536	222.1	.037	.443	.520

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 2 TIMES. AVERAGE NUMBER ITERATIONS = 1.3669
Equations solved using the Ponce correction to C2
PRINT HYD ID=7 CODE=5

PARTIAL HYDROGRAPH 102.70

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	17.3	12.000	2.2	18.000	1.0	24.000	.8
.250	.0	6.250	15.6	12.250	2.1	18.250	1.0	24.250	.7
.500	.0	6.500	14.0	12.500	2.0	18.500	1.0	24.500	.7
.750	.0	6.750	12.5	12.750	1.9	18.750	1.0	24.750	.6

OUT.WPD									
1.000	.7	7.000	11.1	13.000	1.8	19.000	.9	25.000	.5
1.250	1.7	7.250	9.8	13.250	1.7	19.250	.9	25.250	.5
1.500	16.9	7.500	8.9	13.500	1.6	19.500	.9	25.500	.5
1.750	140.6	7.750	8.1	13.750	1.6	19.750	.9	25.750	.4
2.000	175.1	8.000	7.3	14.000	1.5	20.000	.9	26.000	.4
2.250	56.5	8.250	6.6	14.250	1.5	20.250	.9	26.250	.3
2.500	67.9	8.500	6.0	14.500	1.4	20.500	.9	26.500	.3
2.750	55.7	8.750	5.4	14.750	1.4	20.750	.9	26.750	.3
3.000	53.4	9.000	4.9	15.000	1.3	21.000	.8	27.000	.2
3.250	50.2	9.250	4.5	15.250	1.3	21.250	.8	27.250	.2
3.500	46.4	9.500	4.1	15.500	1.2	21.500	.8	27.500	.2
3.750	43.0	9.750	3.8	15.750	1.2	21.750	.8	27.750	.2
4.000	40.2	10.000	3.5	16.000	1.2	22.000	.8	28.000	.2
4.250	36.7	10.250	3.3	16.250	1.1	22.250	.8	28.250	.1
4.500	33.6	10.500	3.1	16.500	1.1	22.500	.8	28.500	.1
4.750	30.8	10.750	2.9	16.750	1.1	22.750	.8	28.750	.1
5.000	27.6	11.000	2.7	17.000	1.1	23.000	.8	29.000	.1
5.250	24.2	11.250	2.6	17.250	1.1	23.250	.8	29.250	.1
5.500	21.5	11.500	2.4	17.500	1.0	23.500	.8	29.500	.1
5.750	19.2	11.750	2.3	17.750	1.0	23.750	.8	29.750	.1

RUNOFF VOLUME = 1.12818 INCHES = 23.3035 ACRE-FEET
 PEAK DISCHARGE RATE = 186.39 CFS AT 1.900 HOURS BASIN AREA = .3873 SQ. MI.

*

 *S APPLY SEDIMENT BULKING FACTOR
 SEDIMENT BULK CODE=1 BULKING FACTOR = 1.05

*

 *S
 *S COMPUTE UNSER BLVD RUNOFF SOUTH OF KIMMICK TO BOCA NEGRA DAM

*
 COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.005 K=0.7
 LENGTH=770 FT SLOPE=0.005 K=2.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

NOTE: Upland factor input values have been adjusted to meet Upland/Lag Time requirements.

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.005000	.7000
SHALLOW FLOW PORTION	770.0	.005000	2.0000
CHANNEL FLOW PORTION	.0	.000000	.0000
TOTAL BASIN	1170.0	.005000	1.2233

TIME OF CONCENTRATION (HRS)= .3757 TIME TO PEAK (HRS)= .2505 LAG TIME (HRS)= .2818

COMPUTE NM HYD ID=6 HYD NO=6 DA=0.01166 SQ MI
 PER A=0 PER B=0 PER C=15 PER D=85
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .2505

K = .136512HR TP = .250481HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 20.824 CFS UNIT VOLUME = .9997 B = 526.28 P60 = 2.2000
 AREA = .009911 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .205927HR TP = .250481HR K/TP RATIO = .822124 SHAPE CONSTANT, N = 4.344039
 UNIT PEAK = 2.6359 CFS UNIT VOLUME = .9949 B = 377.49 P60 = 2.2000
 AREA = .001749 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.05000 AT PEAK FLOW.

PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 6.00

RUNOFF VOLUME = 2.82347 INCHES = 1.7558 ACRE-FEET
 PEAK DISCHARGE RATE = 28.02 CFS AT 1.600 HOURS BASIN AREA = .0117 SQ. MI.

*

 *
 *S ADD TOTAL FLOWS FROM UNSER BLVD

ADD HYD ID=2 HYD NO=6.2 ID I=7 ID II=6
 PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 6.20

RUNOFF VOLUME = 1.17772 INCHES = 25.0592 ACRE-FEET
 PEAK DISCHARGE RATE = 200.92 CFS AT 1.900 HOURS BASIN AREA = .3990 SQ. MI.

*

 *
 *S ADD PIPE.80 TO 6.2 TO GET PIPE.1

OUT.WPD

*
ADD HYD ID=1 HYD NO=PIPE.1 ID I=80 ID II=2
PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA PIPE.1

RUNOFF VOLUME = .88533 INCHES = 288.0757 ACRE-Feet
PEAK DISCHARGE RATE = 572.92 CFS AT 1.900 HOURS BASIN AREA = 6.1010 SQ. MI.

*

*S ROUTE PIPE.1 IN 60" SD TO GET PIPE.2

*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.015
DIAM=5.0 FT N=0.013

RATING CURVE PIPE SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.26	.39	1.67	2.22
.52	1.09	7.26	3.06
.78	1.96	16.89	3.63
1.04	2.97	30.37	4.06
1.30	4.07	47.42	4.39
1.56	5.25	67.65	4.64
1.82	6.48	90.64	4.81
2.08	7.75	115.89	4.93
2.35	9.04	142.86	4.99
2.61	10.35	170.98	5.00
2.87	11.64	199.61	5.00
3.13	12.92	228.07	5.00
3.39	14.16	255.62	5.00
3.65	15.35	281.43	5.00
3.91	16.47	304.52	5.00
4.17	17.49	323.73	5.00
4.43	18.39	337.48	5.00
4.69	19.13	343.12	5.00
5.00	19.63	343.12	5.00

ROUTE MCUNGE ID=8 HYD NO=PIPE.2 INFLOW ID=1
DT=0.0 HR LENGTH=640 FT
NS=0 SLOPE=0.015 CODE=5

ZERO VALUE HYDROGRAPH OR SHORT ROUTE - ROUTING BYPASSED
PRINT HYD ID=8 CODE=5

HYDROGRAPH FROM AREA PIPE.2

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	389.6	12.000	57.9	18.000	38.7	24.000	19.2
.250	.0	6.250	387.9	12.250	56.2	18.250	38.3	24.250	18.0
.500	.0	6.500	386.3	12.500	54.7	18.500	37.9	24.500	15.9
.750	.0	6.750	384.8	12.750	53.2	18.750	37.5	24.750	13.9
1.000	2.3	7.000	383.3	13.000	51.9	19.000	37.1	25.000	12.5
1.250	7.6	7.250	382.0	13.250	50.7	19.250	36.6	25.250	11.4
1.500	92.0	7.500	381.1	13.500	49.6	19.500	36.1	25.500	10.5
1.750	534.4	7.750	255.9	13.750	48.6	19.750	35.6	25.750	9.9
2.000	558.9	8.000	175.7	14.000	47.6	20.000	34.9	26.000	9.4
2.250	434.7	8.250	140.5	14.250	46.7	20.250	34.3	26.250	9.0
2.500	442.8	8.500	120.8	14.500	45.9	20.500	33.6	26.500	8.7
2.750	429.5	8.750	109.7	14.750	45.1	20.750	32.9	26.750	8.4
3.000	426.6	9.000	103.3	15.000	44.3	21.000	32.2	27.000	8.2
3.250	423.0	9.250	97.0	15.250	43.6	21.250	31.0	27.250	7.9
3.500	419.1	9.500	91.1	15.500	43.0	21.500	29.7	27.500	7.7
3.750	415.6	9.750	85.5	15.750	42.3	21.750	28.6	27.750	7.5
4.000	412.6	10.000	80.5	16.000	41.7	22.000	27.5	28.000	7.4
4.250	409.1	10.250	76.1	16.250	41.2	22.250	26.5	28.250	7.2
4.500	406.0	10.500	72.1	16.500	40.9	22.500	25.6	28.500	7.1
4.750	403.2	10.750	68.6	16.750	40.5	22.750	24.5	28.750	7.0
5.000	400.0	11.000	65.5	17.000	40.2	23.000	23.5	29.000	6.9
5.250	396.6	11.250	63.4	17.250	39.8	23.250	22.4	29.250	6.8
5.500	393.8	11.500	61.5	17.500	39.4	23.500	21.3	29.500	6.7
5.750	391.6	11.750	59.6	17.750	39.1	23.750	20.2	29.750	6.6

RUNOFF VOLUME = .88533 INCHES = 288.0757 ACRE-Feet
PEAK DISCHARGE RATE = 572.92 CFS AT 1.900 HOURS BASIN AREA = 6.1010 SQ. MI.

*

*S ROUTE PIPE.2 IN 54" SD TO GET PIPE.3

*
COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.0881
DIAM=4.5 FT N=0.013

RATING CURVE PIPE SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.23	.32	3.06	2.00
.47	.88	13.29	2.75
.70	1.59	30.90	3.27
.94	2.40	55.57	3.66
1.17	3.30	86.77	3.95

1.41 4.25 OUT.WPD 4.17
 1.64 5.25 123.80 4.33
 1.88 6.28 165.86 4.44
 2.11 7.32 212.06 4.49
 2.35 8.38 261.42 4.50
 2.58 9.43 312.87 4.50
 2.81 10.46 365.26 4.50
 3.05 11.47 417.34 4.50
 3.28 12.43 467.76 4.50
 3.52 13.34 514.97 4.50
 3.75 14.17 557.23 4.50
 3.99 14.90 592.38 4.50
 4.22 15.50 617.54 4.50
 4.50 15.90 627.88 4.50
 4.50 627.88 4.50

ROUTE MCUNGE ID=1 HYD NO=PIPE.3 INFLOW ID=8
 DT=0.0 HR LENGTH=1147 FT
 NS=0 SLOPE=0.0881 CODE=5

ZERO VALUE HYDROGRAPH OR SHORT ROUTE - ROUTING BYPASSED
 PRINT HYD ID=1 CODE=5

HYDROGRAPH FROM AREA PIPE.3

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	389.6	12.000	57.9	18.000	38.7	24.000	19.2
.250	.0	6.250	387.9	12.250	56.2	18.250	38.3	24.250	18.0
.500	.0	6.500	386.3	12.500	54.7	18.500	37.9	24.500	15.9
.750	.0	6.750	384.8	12.750	53.2	18.750	37.5	24.750	13.9
1.000	2.3	7.000	383.3	13.000	51.9	19.000	37.1	25.000	12.5
1.250	7.6	7.250	382.0	13.250	50.7	19.250	36.6	25.250	11.4
1.500	92.0	7.500	381.1	13.500	49.6	19.500	36.1	25.500	10.5
1.750	534.4	7.750	255.9	13.750	48.6	19.750	35.6	25.750	9.9
2.000	558.9	8.000	175.7	14.000	47.6	20.000	34.9	26.000	9.4
2.250	434.7	8.250	140.5	14.250	46.7	20.250	34.3	26.250	9.0
2.500	442.8	8.500	120.8	14.500	45.9	20.500	33.6	26.500	8.7
2.750	429.5	8.750	109.7	14.750	45.1	20.750	32.9	26.750	8.4
3.000	426.6	9.000	103.3	15.000	44.3	21.000	32.2	27.000	8.2
3.250	423.0	9.250	97.0	15.250	43.6	21.250	31.0	27.250	7.9
3.500	419.1	9.500	91.1	15.500	43.0	21.500	29.7	27.500	7.7
3.750	415.6	9.750	85.5	15.750	42.3	21.750	28.6	27.750	7.5
4.000	412.6	10.000	80.5	16.000	41.7	22.000	27.5	28.000	7.4
4.250	409.1	10.250	76.1	16.250	41.2	22.250	26.5	28.250	7.2
4.500	406.0	10.500	72.1	16.500	40.9	22.500	25.6	28.500	7.1
4.750	403.2	10.750	68.6	16.750	40.5	22.750	24.5	28.750	7.0
5.000	400.0	11.000	65.5	17.000	40.2	23.000	23.5	29.000	6.9
5.250	396.6	11.250	63.4	17.250	39.8	23.250	22.4	29.250	6.8
5.500	393.8	11.500	61.5	17.500	39.4	23.500	21.3	29.500	6.7
5.750	391.6	11.750	59.6	17.750	39.1	23.750	20.2	29.750	6.6

RUNOFF VOLUME = .88533 INCHES = 288.9757 ACRE-Feet
 PEAK DISCHARGE RATE = 572.92 CFS AT 1.900 HOURS BASIN AREA = 6.1010 SQ. MI.

*

 *
 *S ROUTE PIPE.3 IN 60" SD TO GET PIPE.4
 *

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.02
 DIAM=5.0 FT N=0.013

RATING CURVE PIPE SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.26	.39	1.93	2.22
.52	1.09	8.39	3.06
.78	1.96	19.50	3.63
1.04	2.97	35.07	4.06
1.30	4.07	54.75	4.39
1.56	5.25	78.12	4.64
1.82	6.48	104.66	4.81
2.08	7.75	133.82	4.93
2.35	9.04	164.96	4.99
2.61	10.35	197.43	5.00
2.87	11.64	230.49	5.00
3.13	12.92	263.36	5.00
3.39	14.16	295.17	5.00
3.65	15.35	324.96	5.00
3.91	16.47	351.63	5.00
4.17	17.49	373.81	5.00
4.43	18.39	389.68	5.00
4.69	19.13	396.21	5.00
5.00	19.63	396.21	5.00

ROUTE MCUNGE ID=8 HYD NO=PIPE.4 INFLOW ID=1
 DT=0.0 HR LENGTH=949 FT
 NS=0 SLOPE=0.02 CODE=5

INFLOW END= 600 TABLE PTS= 19
 DT= .050000 QMED= 286.46 CKMED= 25.6359
 WIDTH MED= 5.00 NREACH= 1 DX= 949.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.072	.0	5.27	2.33	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.26	.4	1.9	.053	2.2	8.15	4.95	1.545	.006	.996	.216	-.211	.3	.998	.033	-.030
.52	1.1	8.4	.034	3.1	11.24	7.72	2.132	.013	.992	.364	-.356	4.6	.993	.280	-.273
.78	2.0	19.5	.027	3.6	14.23	9.94	2.699	.020	.989	.462	-.452	13.5	.990	.417	-.407
1.04	3.0	35.1	.022	4.1	16.75	11.82	3.178	.027	.987	.524	-.511	26.9	.988	.496	-.484
1.30	4.1	54.8	.020	4.4	18.90	13.46	3.585	.035	.985	.567	-.552	44.5	.986	.548	-.534
1.56	5.2	78.1	.018	4.6	20.73	14.89	3.931	.043	.983	.598	-.581	66.1	.984	.584	-.568

OUT.WPD

1.82	6.5	104.7	.016	4.8	22.26	16.16	4.222	.051	.980	.621	-.601	91.1	.982	.611	-.592
2.08	7.7	133.8	.015	4.9	23.52	17.27	4.461	.061	.978	.638	-.616	119.0	.979	.630	-.610
2.35	9.0	165.0	.014	5.0	24.51	18.24	4.648	.071	.975	.650	-.625	149.2	.977	.645	-.622
2.61	10.3	197.4	.014	5.0	25.19	19.08	4.778	.083	.972	.659	-.631	181.0	.974	.656	-.629
2.87	11.6	230.5	.013	5.0	25.35	19.80	4.809	.096	.968	.661	-.629	213.8	.970	.661	-.631
3.13	12.9	263.4	.013	5.0	24.88	20.39	4.719	.112	.962	.657	-.619	246.8	.965	.660	-.625
3.39	14.2	295.2	.013	5.0	23.70	20.85	4.496	.131	.953	.645	-.598	279.2	.958	.652	-.610
3.65	15.3	325.0	.012	5.0	21.73	21.17	4.121	.158	.940	.621	-.561	310.0	.948	.635	-.583
3.91	16.5	351.6	.012	5.0	18.80	21.35	3.565	.197	.917	.580	-.497	338.3	.931	.604	-.536
4.17	17.5	373.8	.012	5.0	14.64	21.37	2.776	.269	.867	.506	-.372	362.8	.899	.551	-.450
4.43	18.4	389.7	.012	5.0	8.57	21.18	1.626	.479	.691	.356	-.047	381.8	.819	.451	-.269
4.69	19.1	396.2	.013	5.0	4.89	20.71	.927	.855	.385	.281	.334	393.0	.404	.280	.316

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 4 TIMES. AVERAGE NUMBER ITERATIONS = 1.9398
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=8 CODE=5

HYDROGRAPH FROM AREA PIPE.4

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	389.9	12.000	58.0	18.000	38.7	24.000	19.3
.250	.0	6.250	388.1	12.250	56.3	18.250	38.3	24.250	18.1
.500	.0	6.500	386.4	12.500	54.8	18.500	37.9	24.500	16.0
.750	.0	6.750	384.9	12.750	53.3	18.750	37.6	24.750	14.1
1.000	1.8	7.000	383.5	13.000	52.0	19.000	37.1	25.000	12.6
1.250	6.6	7.250	382.1	13.250	50.8	19.250	36.7	25.250	11.4
1.500	82.2	7.500	381.2	13.500	49.7	19.500	36.2	25.500	10.6
1.750	471.9	7.750	264.9	13.750	48.6	19.750	35.6	25.750	10.0
2.000	529.9	8.000	177.7	14.000	47.7	20.000	35.0	26.000	9.5
2.250	478.9	8.250	141.6	14.250	46.8	20.250	34.3	26.250	9.1
2.500	436.7	8.500	121.5	14.500	45.9	20.500	33.6	26.500	8.7
2.750	430.7	8.750	110.0	14.750	45.1	20.750	32.9	26.750	8.5
3.000	427.3	9.000	103.6	15.000	44.4	21.000	32.2	27.000	8.2
3.250	423.9	9.250	97.3	15.250	43.7	21.250	31.1	27.250	7.9
3.500	419.9	9.500	91.3	15.500	43.0	21.500	29.8	27.500	7.7
3.750	416.3	9.750	85.8	15.750	42.3	21.750	28.6	27.750	7.5
4.000	413.3	10.000	80.7	16.000	41.7	22.000	27.6	28.000	7.4
4.250	409.8	10.250	76.3	16.250	41.2	22.250	26.6	28.250	7.2
4.500	406.6	10.500	72.3	16.500	40.9	22.500	25.6	28.500	7.1
4.750	403.7	10.750	68.8	16.750	40.5	22.750	24.6	28.750	7.0
5.000	400.8	11.000	65.7	17.000	40.2	23.000	23.5	29.000	6.9
5.250	397.3	11.250	63.5	17.250	39.8	23.250	22.4	29.250	6.8
5.500	394.4	11.500	61.6	17.500	39.5	23.500	21.3	29.500	6.8
5.750	392.0	11.750	59.7	17.750	39.1	23.750	20.3	29.750	6.7

RUNOFF VOLUME = .88477 INCHES = 287.8935 ACRE-Feet
 PEAK DISCHARGE RATE = 548.90 CFS AT 1.900 HOURS BASIN AREA = 6.1010 SQ. MI.

*

*S APPLY SEDIMENT BULKING FACTOR
 SEDIMENT BULK CODE=1 BULKING FACTOR = 1.09
 *

*S*** SUB-BASIN 71 DOWNSTREAM OF THE DAM ***

*
 COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.02 K=0.7
 LENGTH=1600 FT SLOPE=0.02 K=2.0
 LENGTH=800 FT SLOPE=0.02 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.020000	.7000
SHALLOW FLOW PORTION	1600.0	.020000	2.0000
CHANNEL FLOW PORTION	800.0	.020000	3.0000
TOTAL BASIN	2800.0	.020000	1.7093

TIME OF CONCENTRATION (HRS)= .3218 TIME TO PEAK (HRS)= .2145 LAG TIME (HRS)= .2413

COMPUTE NM HYD ID=5 HYD NO=71 DA=0.07675 SQ MI
 PER A=80 PER B=0 PER C=20 PER D=0
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .2145

K = .237532HR TP = .214502HR K/TP RATIO = 1.107367 SHAPE CONSTANT, N = 3.192961
 UNIT PEAK = 106.34 CFS UNIT VOLUME = 1.000 B = 297.19 P60 = 2.2000
 AREA = .076750 SQ MI IA = .59000 INCHES INF = 1.50200 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.09000 AT PEAK FLOW.

PRINT HYD ID=5 CODE=5

OUTFLOW HYDROGRAPH REACH 71.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	70.1	3.000	3.1	4.500	.4	6.000	.0
.250	.0	1.750	62.8	3.250	2.1	4.750	.3	6.250	.0
.500	.0	2.000	23.0	3.500	1.5	5.000	.2	6.500	.0
.750	.0	2.250	9.2	3.750	1.1	5.250	.1	6.750	.0
1.000	.0	2.500	6.2	4.000	.7	5.500	.1	7.000	.0
1.250	.0	2.750	4.3	4.250	.5	5.750	.1	7.250	.0

OUT.WPD

RUNOFF VOLUME = .91203 INCHES = 3.7332 ACRE-Feet
 PEAK DISCHARGE RATE = 86.96 CFS AT 1.600 HOURS BASIN AREA = .0768 SQ. MI.

*

*S ADD SURFACE FLOW FROM DAM TO BASIN 71 TO GET 71.5

*S ADD BASIN 71 to PIPE.2 TO GET 70.9

ADD HYD ID=6 HYD NO=71.6 ID I=5 ID II=90
 PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 71.60

RUNOFF VOLUME = .86527 INCHES = 420.3133 ACRE-Feet
 PEAK DISCHARGE RATE = 2446.63 CFS AT 3.450 HOURS BASIN AREA = 9.1080 SQ. MI.

*

*S ADD 71.6 to PIPE.2 TO GET 70.9

ADD HYD ID=9 HYD NO=70.9 ID I=6 ID II=8
 PRINT HYD ID=9 CODE=1

OUTFLOW HYDROGRAPH REACH 70.90

RUNOFF VOLUME = .87310 INCHES = 708.2072 ACRE-Feet
 PEAK DISCHARGE RATE = 2867.33 CFS AT 3.450 HOURS BASIN AREA = 15.2091 SQ. MI.

*

*S APPLY NO SEDIMENT BULKING FACTOR
 SEDIMENT BULK CODE=1 BULKING FACTOR = 1.00

*

*S RECALL HYD FROM THE VOLCANO HEIGHTS MODEL (BOCA NEGRA ARROYO SOUTH BRANCH)

*S RECALL HYD ID= 2 HYD= 102.00 DT= .050000 HRS DA= 1.6400 SQ MI
 PEAK= 378.544CFS RO= .3847 INCHES NO PTS=340

FLOW RATES				
.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.000	.000	.000	.000	.000
.000	.000	1.009	9.899	32.824
63.396	90.963	109.803	118.751	119.115
113.134	103.107	91.039	81.968	97.947
149.940	227.995	295.915	342.675	368.910
378.544	375.650	363.734	345.685	323.866
300.290	276.692	253.626	231.248	209.969
190.200	172.161	155.820	141.030	127.642
115.523	104.556	94.638	85.701	77.771
70.968	65.162	59.974	55.161	50.785
46.796	43.156	39.835	36.850	34.361
32.647	31.381	30.209	29.084	28.002
26.961	25.961	24.998	24.073	23.182
22.326	21.502	20.709	19.947	19.213
18.507	17.828	17.174	16.545	15.940
15.357	14.797	14.257	13.737	13.237
12.756	12.292	11.846	11.417	11.003
10.605	10.222	9.852	9.497	9.155
8.825	8.507	8.201	7.907	7.623
7.350	7.087	6.833	6.589	6.353
6.127	5.908	5.698	5.495	5.299
5.111	4.930	4.755	4.586	4.424
4.267	4.116	3.971	3.831	3.696
3.565	3.440	3.319	3.202	3.090
2.981	2.877	2.776	2.679	2.585
2.494	2.407	2.323	2.242	2.164
2.088	2.016	1.946	1.878	1.813
1.750	1.689	1.631	1.574	1.520
1.467	1.416	1.367	1.320	1.274
1.231	1.188	1.147	1.108	1.070
1.033	.997	.963	.930	.898
.867	.838	.809	.781	.754
.729	.704	.680	.657	.634
.613	.592	.571	.552	.533
.515	.498	.481	.464	.449
.433	.419	.404	.391	.378
.365	.352	.340	.329	.318
.305	.293	.283	.274	.265
.256	.247	.239	.231	.223
.216	.209	.202	.195	.188
.182	.176	.170	.164	.159

			OUT.WPD	
.154	.148	.144	.139	.134
.130	.125	.121	.117	.113
.109	.106	.102	.099	.096
.092	.089	.086	.084	.081
.078	.075	.073	.070	.066
.062	.060	.058	.057	.055
.053	.051	.050	.048	.046
.045	.043	.042	.041	.039
.038	.037	.036	.034	.033
.032	.031	.030	.029	.028
.027	.026	.026	.025	.024
.023	.022	.022	.021	.020
.020	.019	.018	.018	.017
.017	.016	.016	.015	.015
.014	.014	.013	.013	.012
.012	.012	.011	.011	.010
.010	.010	.009	.009	.009
.009	.008	.008	.008	.008
.007	.007	.007	.007	.006
.006	.006	.006	.006	.005
.005	.005	.005	.005	.005
.004	.004	.004	.004	.004
.002	.001	.001	.001	.001

*
 *S ROUTE THE BOCA NEGRA ARROYO SOUTH BRANCH FLOWS THRU 72" IN EMERALD DR
 *
 *

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=-1 SLP=0.021
 DIAM=6.0 FT N=0.013

RATING CURVE PIPE SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.31	.56	3.22	2.67
.63	1.56	13.98	3.67
.94	2.82	32.49	4.36
1.25	4.27	58.43	4.87
1.56	5.86	91.23	5.27
1.88	7.55	130.17	5.56
2.19	9.33	174.40	5.78
2.50	11.16	222.98	5.92
2.81	13.02	274.87	5.99
3.13	14.90	328.97	6.00
3.44	16.76	384.05	6.00
3.75	18.60	438.82	6.00
4.06	20.39	491.83	6.00
4.38	22.10	541.47	6.00
4.69	23.71	585.90	6.00
5.00	25.19	622.87	6.00
5.32	26.49	649.32	6.00
5.63	27.55	660.18	6.00
6.00	28.27	660.18	6.00

ROUTE MCUNGE ID=5 HYD NO=70.5 INFLOW ID=2
 DT=0.0 HR LENGTH=1347 FT
 NS=0 SLOPE=0.021 CODE=5

INFLOW END= 340 TABLE PTS= 19
 DT= .050000 QMED= 189.27 CKMED= 26.5472
 WIDTH MED= 5.82 NREACH= 1 DX= 1347.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.089	.0	7.48	2.70	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.31	.6	3.2	.065	2.7	9.42	5.73	1.259	.005	.996	.117	-.113	.5	.999	.018	-.018
.63	1.6	14.0	.042	3.7	13.01	8.94	1.738	.010	.992	.272	-.265	7.7	.993	.184	-.177
.94	2.8	32.5	.033	4.4	16.47	11.51	2.201	.016	.990	.378	-.368	22.4	.991	.329	-.320
1.25	4.3	58.4	.027	4.9	19.39	13.68	2.591	.022	.988	.446	-.434	44.7	.989	.415	-.404
1.56	5.9	91.2	.024	5.3	21.87	15.57	2.923	.028	.986	.494	-.480	74.2	.987	.472	-.459
1.88	7.6	130.2	.022	5.6	23.98	17.23	3.205	.034	.984	.528	-.512	110.1	.985	.513	-.497
2.19	9.3	174.4	.020	5.8	25.76	18.69	3.442	.041	.982	.554	-.535	151.8	.983	.543	-.525
2.50	11.2	223.0	.019	5.9	27.21	19.98	3.637	.049	.979	.573	-.552	198.3	.980	.565	-.545
2.81	13.0	274.9	.018	6.0	28.36	21.11	3.789	.057	.976	.587	-.564	248.6	.978	.582	-.559
3.13	14.9	329.0	.017	6.0	29.15	22.08	3.895	.066	.973	.597	-.570	301.6	.975	.593	-.568
3.44	16.8	384.1	.016	6.0	29.34	22.91	3.920	.077	.969	.600	-.569	356.3	.971	.600	-.571
3.75	18.6	438.8	.016	6.0	28.79	23.59	3.847	.090	.964	.595	-.559	411.3	.967	.599	-.565
4.06	20.4	491.8	.016	6.0	27.43	24.12	3.665	.106	.956	.581	-.536	465.2	.960	.590	-.550
4.38	22.1	541.5	.015	6.0	25.14	24.50	3.359	.127	.943	.554	-.498	516.6	.951	.570	-.521
4.69	23.7	585.9	.015	6.0	21.75	24.71	2.906	.159	.922	.508	-.430	563.7	.935	.535	-.470
5.00	25.2	622.9	.015	6.0	16.93	24.73	2.263	.217	.875	.425	-.301	604.5	.905	.476	-.381
5.32	26.5	649.3	.015	6.0	9.92	24.51	1.325	.386	.715	.262	.022	636.2	.831	.365	-.196
5.63	27.5	660.2	.016	6.0	5.65	23.97	.755	.688	.437	.182	.382	654.8	.454	.180	.366

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 2 TIMES. AVERAGE NUMBER ITERATIONS = 1.2618
 Equations solved using the Ponce correction to C2
 PRINT HYD ID=5 CODE=1

OUTFLOW HYDROGRAPH REACH 70.50

RUNOFF VOLUME = .38470 INCHES = 33.6484 ACRE-FEET
 PEAK DISCHARGE RATE = 377.51 CFS AT 2.300 HOURS BASIN AREA = 1.6400 SQ. MI.

*S APPLY SEDIMENT BULKING FACTOR

SEDIMENT BULK CODE=1 BULKING FACTOR = 1.09 OUT.WPD

*S
*S*** SUB-BASIN 70 EAST OF SAD 227 ***

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=400 FT SLOPE=0.072 K=0.7
LENGTH=1580 FT SLOPE=0.072 K=2.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

NOTE: Upland factor input values have been adjusted to meet Upland/Lag Time requirements.

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.072000	.7000
SHALLOW FLOW PORTION	1580.0	.072000	2.0000
CHANNEL FLOW PORTION	.0	.000000	.0000
TOTAL BASIN	1980.0	.072000	1.4544

TIME OF CONCENTRATION (HRS)= .1409 TIME TO PEAK (HRS)= .0940 LAG TIME (HRS)= .1057

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.

REVISED VALUES: TIME OF CONCENTRATION (HRS)= .2000 TIME TO PEAK (HRS)= .1333 LAG TIME (HRS)= .1500

COMPUTE NM HYD ID=4 HYD NO=70 DA=0.06914 SQ MI
PER A=80 PER B=0 PER C=20 PER D=0
TP=0.0 MASSRAIN=-1

TIME TO PEAK (hrs)= .1333

K = .148526HR TP = .133333HR K/TP RATIO = 1.113946 SHAPE CONSTANT, N = 3.174909
UNIT PEAK = 153.38 CFS UNIT VOLUME = .9998 B = 295.79 P60 = 2.2000
AREA = .069140 SQ MI IA = .59000 INCHES INF = 1.50200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.09000 AT PEAK FLOW.

PRINT HYD ID=4 CODE=5

OUTFLOW HYDROGRAPH REACH 70.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.250	.0	2.500	3.5	3.750	.2	5.000	.0
.250	.0	1.500	113.1	2.750	2.0	4.000	.1	5.250	.0
.500	.0	1.750	38.8	3.000	1.1	4.250	.1		
.750	.0	2.000	11.0	3.250	.6	4.500	.0		
1.000	.0	2.250	6.1	3.500	.4	4.750	.0		

RUNOFF VOLUME = .91203 INCHES = 3.3631 ACRE-Feet
PEAK DISCHARGE RATE = 113.09 CFS AT 1.500 HOURS BASIN AREA = .0691 SQ. MI.

*

*S
*S ADD BASIN 70 to ROUTED BOCA NEGRA ARROYO SOUTH BRANCH

ADD HYD ID=6 HYD NO=70.6 ID I=4 ID II=5
PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 70.60

RUNOFF VOLUME = .40603 INCHES = 37.0114 ACRE-Feet
PEAK DISCHARGE RATE = 383.37 CFS AT 2.250 HOURS BASIN AREA = 1.7091 SQ. MI.

*

*S ADD ALL FLOWS AT THE CONFLUENCE WITH BOCA NEGRA ARROYO

ADD HYD ID=7 HYD NO=71.7 ID I=6 ID II=9
PRINT HYD ID=7 CODE=1

OUTFLOW HYDROGRAPH REACH 71.70

RUNOFF VOLUME = .82591 INCHES = 745.2181 ACRE-Feet
PEAK DISCHARGE RATE = 2922.08 CFS AT 2.800 HOURS BASIN AREA = 16.9182 SQ. MI.

*

*S ROUTE 71.7 IN 72 TO GET 72.6

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5164.49 MAX ELEV=5167.54
CH SLOPE=0.008 FP SLOPE=0.008
N=0.035 DIST=137
DIST ELEV DIST ELEV
0 5167.54 20 5165.67
41 5166.80 77 5165.39
81 5164.71 92 5164.49

99 5165.64 137 5166.10 OUT.WPD

RATING CURVE VALLEY SECTION 1.0		
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS
5164.49	.00	.00
5164.65	.72	.51
5164.81	2.67	3.43
5164.97	5.00	8.92
5165.13	7.64	16.71
5165.29	10.59	26.83
5165.45	13.89	38.08
5165.61	17.91	50.82
5165.78	23.61	57.27
5165.94	32.79	76.31
5166.10	45.52	109.36
5166.26	60.77	166.06
5166.42	77.44	235.02
5166.58	95.52	316.48
5166.74	115.02	410.94
5166.90	135.71	529.15
5167.06	156.75	667.01
5167.22	178.07	817.89
5167.38	199.67	981.41
5167.54	221.55	1157.42

TOP WIDTH FT
.00
9.02
13.55
15.48
17.40
19.32
22.50
27.58
46.10
68.18
90.26
99.35
108.15
116.96
125.76
130.15
131.87
133.59
135.31
137.00

ROUTE MCUNGE ID=6 HYD NO=72.6 INFLOW ID=7
DT=0.0 L=1805 FT NS=0 SLOPE=0.008
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 600 TABLE PTS= 20
DT= .050000 QMED= 1461.04 CKMED= 8.0463
WIDTH MED= 139.92 NREACH= 3 DX= 601.67

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	1.029	.0	3.34	.27	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.16	.7	.5	.710	9.0	3.33	.71	.996	.004	.996	.000	.004	.1	.999	.000	.001
.32	2.7	3.4	.391	13.6	3.29	1.28	.984	.016	.984	.000	.016	1.6	.992	.000	.008
.48	5.0	8.9	.281	15.5	3.22	1.78	.963	.037	.963	.000	.037	5.9	.974	.000	.026
.64	7.6	16.7	.229	17.4	3.22	2.19	.963	.062	.939	.012	.049	12.6	.952	.006	.043
.80	10.6	26.8	.198	19.3	3.48	2.53	1.042	.083	.922	.059	.019	21.5	.932	.046	.022
.96	13.9	38.1	.183	22.5	3.34	2.74	.999	.105	.900	.049	.051	32.3	.908	.046	.046
1.12	17.9	50.8	.177	27.6	2.90	2.84	.868	.132	.868	.000	.132	44.3	.887	.029	.084
1.29	23.6	57.3	.207	46.1	3.06	2.43	.916	.084	.916	.000	.084	53.7	.889	.000	.111
1.45	32.8	76.3	.215	68.2	3.09	2.33	.925	.075	.925	.000	.075	66.3	.920	.000	.080
1.61	45.5	109.4	.209	90.3	3.07	2.40	.918	.082	.918	.000	.082	92.1	.922	.000	.078
1.77	60.8	166.1	.183	99.3	3.94	2.73	1.180	.088	.922	.118	-.040	136.6	.927	.088	-.015
1.93	77.4	235.0	.165	108.2	4.34	3.03	1.297	.104	.913	.167	-.080	199.4	.917	.143	-.060
2.09	95.5	316.5	.151	117.0	4.69	3.31	1.402	.120	.905	.207	-.112	274.6	.908	.187	-.095
2.25	115.0	410.9	.140	125.8	5.24	3.57	1.567	.130	.904	.258	-.162	362.6	.901	.224	-.124
2.41	135.7	529.2	.129	130.2	6.11	3.90	1.828	.138	.907	.326	-.233	468.6	.907	.299	-.206
2.57	156.8	667.0	.118	131.9	6.82	4.26	2.040	.154	.904	.374	-.277	596.5	.907	.356	-.263
2.73	178.1	817.9	.109	133.6	7.33	4.59	2.193	.174	.897	.406	-.303	741.0	.900	.390	-.290
2.89	199.7	981.4	.102	135.3	7.81	4.92	2.338	.193	.891	.434	-.324	898.2	.894	.420	-.314
3.05	221.5	1157.4	.096	137.0	8.24	5.22	2.465	.213	.884	.456	-.340	1068.0	.888	.446	-.334

MAXIMUM NO. ITERATIONS FOR SOLUTION (KMAX) = 5 OCCURRED 6 TIMES. AVERAGE NUMBER ITERATIONS = 1.5310
Equations solved using the Ponce correction to C2

PRINT HYD ID=6 CODE=1

OUTFLOW HYDROGRAPH REACH 72.60

RUNOFF VOLUME = .82583 INCHES = 745.1456 ACRE-Feet
PEAK DISCHARGE RATE = 2919.16 CFS AT 2.900 HOURS BASIN AREA = 16.9182 SQ. MI.

*

*S APPLY NO SEDIMENT BULKING FACTOR
SEDIMENT BULK CODE=1 BULKING FACTOR = 1.00

*

*S RECALL HYD FROM SAD 228 POND 6

RECALL HYD ID=19 HYD=POND6
DT= .050000 HRS DA= .0654 SQ MI
PEAK= 50.659CFS RO= 1.5488 INCHES NO PTS=539
FLOW RATES
 .000 .000 .000 .000 .000
 .000 .000 .000 .000 .000
 .000 .000 .000 .000 .000
 .002 .012 .049 .137 .296
 .533 .841 1.202 1.585 1.956
 2.303 2.701 3.408 4.947 8.041
 12.321 18.906 24.765 30.903 36.022
 39.406 41.514 43.269 44.579 48.727
 50.659 48.563 44.986 44.498 43.781
 42.862 41.773 40.543 39.204 37.551
 34.501 31.620 28.909 25.345 22.281
 19.653 16.660 14.038 12.007 10.418
 9.161 8.152 7.158 6.362 5.742
 5.246 4.836 4.491 4.193 3.932
 3.699 3.490 3.300 3.127 2.967
 2.820 2.684 2.558 2.442 2.334
 2.234 2.141 2.054 1.974 1.899
 1.830 1.766 1.706 1.650 1.598
 1.550 1.505 1.464 1.426 1.390

OUT.WPD				
1.358	1.328	1.300	1.274	1.250
1.228	1.207	1.189	1.172	1.158
1.144	1.131	1.120	1.109	1.099
1.091	1.084	1.079	1.074	1.070
1.066	1.063	1.060	1.057	1.055
1.053	1.051	1.050	1.048	1.043
1.029	1.007	.975	.937	.895
.853	.813	.777	.745	.718
.696	.677	.662	.649	.639
.630	.622	.614	.608	.601
.595	.589	.584	.579	.574
.569	.565	.561	.557	.553
.548	.544	.540	.536	.533
.529	.526	.522	.519	.517
.514	.512	.510	.508	.506
.504	.502	.500	.498	.496
.495	.493	.491	.489	.488
.486	.485	.483	.481	.479
.478	.476	.474	.473	.472
.471	.470	.468	.467	.465
.464	.462	.461	.459	.458
.456	.455	.454	.453	.451
.450	.448	.446	.445	.444
.442	.441	.440	.439	.438
.437	.436	.434	.433	.431
.430	.429	.428	.427	.426
.425	.424	.423	.422	.420
.419	.418	.417	.416	.414
.413	.412	.410	.409	.408
.407	.406	.405	.405	.404
.403	.402	.401	.400	.399
.398	.397	.396	.395	.394
.393	.392	.391	.390	.388
.387	.386	.385	.384	.384
.383	.383	.382	.381	.380
.379	.377	.376	.375	.374
.374	.373	.372	.372	.371
.370	.369	.368	.367	.366
.365	.364	.363	.362	.362
.361	.361	.360	.359	.358
.357	.356	.355	.354	.353
.352	.352	.351	.351	.350
.349	.348	.347	.346	.346
.346	.345	.345	.345	.344
.343	.341	.339	.338	.337
.337	.337	.336	.336	.336
.335	.334	.333	.332	.332
.331	.330	.329	.328	.327
.327	.326	.326	.325	.325
.324	.324	.323	.323	.322
.322	.321	.320	.319	.318
.317	.317	.316	.316	.316
.315	.314	.314	.313	.313
.312	.311	.310	.310	.309
.308	.308	.307	.307	.306
.306	.305	.304	.303	.302
.301	.301	.301	.301	.301
.301	.301	.301	.300	.299
.297	.296	.295	.294	.294
.294	.294	.293	.293	.292
.292	.291	.291	.290	.289
.289	.288	.288	.287	.287
.287	.286	.286	.286	.285
.285	.284	.284	.283	.282
.281	.281	.280	.280	.279
.279	.279	.279	.278	.278
.277	.277	.276	.275	.275
.274	.274	.273	.273	.273
.273	.272	.272	.271	.271
.270	.270	.269	.269	.268
.268	.267	.267	.266	.266
.265	.264	.264	.264	.263
.263	.263	.263	.263	.262
.262	.261	.260	.259	.258
.258	.258	.258	.259	.259
.259	.259	.258	.257	.257
.256	.256	.255	.254	.253
.252	.251	.250	.249	.245
.238	.226	.209	.188	.165
.143	.122	.104	.088	.075
.064	.055	.048	.042	.038
.034	.030	.028	.025	.023
.021	.019	.018	.016	.015
.014	.013	.011	.011	.010
.009	.008	.008	.007	.006
.006	.005	.005	.005	.004
.004	.003	.003	.003	.003
.002	.002	.002	.002	.002
.002	.001	.001	.001	

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*****
*
*****
*S APPLY SEDIMENT BULKING FACTOR
SEDIMENT BULK CODE=1 BULKING FACTOR = 1.09
*
*****
*S
*S*** SUB-BASIN 72 DOWNSTREAM OF CONFLUENCE WITH SOUTH BRANCH ***
*
COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
NK=3 ISLOPE=-1
LENGTH=355 FT SLOPE=0.02 K=0.7
LENGTH=1645 FT SLOPE=0.02 K=2.0

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LENGTH=260 FT SLOPE=0.02 K=3.0

OUT.WPD

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	355.0	.020000	.7000
SHALLOW FLOW PORTION	1645.0	.020000	2.0000
CHANNEL FLOW PORTION	260.0	.020000	3.0000
TOTAL BASIN	2260.0	.020000	1.5957

TIME OF CONCENTRATION (HRS)= .2782 TIME TO PEAK (HRS)= .1855 LAG TIME (HRS)= .2086

COMPUTE NM HYD ID=2 HYD NO=72 DA=0.16708 SQ MI
PER A=80 PER B=0 PER C=20 PER D=0
TP=0.0 MASSRAIN=-1
TIME TO PEAK (hrs)= .1855

K = .190890HR TP = .185460HR K/TP RATIO = 1.029283 SHAPE CONSTANT, N = 3.429530
UNIT PEAK = 283.92 CFS UNIT VOLUME = 1.000 B = 315.15 P60 = 2.2000
AREA = .167080 SQ MI IA = .59000 INCHES INF = 1.50200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.09000 AT PEAK FLOW.

PRINT HYD ID=2 CODE=5

OUTFLOW HYDROGRAPH REACH 72.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	198.4	3.000	4.8	4.500	.3	6.000	.0
.250	.0	1.750	127.4	3.250	3.1	4.750	.2	6.250	.0
.500	.0	2.000	36.1	3.500	2.0	5.000	.1	6.500	.0
.750	.0	2.250	17.8	3.750	1.3	5.250	.1		
1.000	.0	2.500	11.4	4.000	.8	5.500	.1		
1.250	.0	2.750	7.4	4.250	.5	5.750	.0		

RUNOFF VOLUME = .91203 INCHES = 8.1270 ACRE-Feet
PEAK DISCHARGE RATE = 223.18 CFS AT 1.550 HOURS BASIN AREA = .1671 SQ. MI.

*

*

*S ADD OUTFLOW FROM POND 6 TO BASIN 72

ADD HYD ID=1 HYD NO=72.1 ID I=19 ID II=2
PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 72.10

RUNOFF VOLUME = 1.09116 INCHES = 13.5292 ACRE-Feet
PEAK DISCHARGE RATE = 242.08 CFS AT 1.550 HOURS BASIN AREA = .2325 SQ. MI.

*

*

*S ADD ALL FLOWS AT TESUQUE DR
*S ADD 72.1 TO 72.6 TO GET 72.3

ADD HYD ID=3 HYD NO=72.3 ID I=1 ID II=6
PRINT HYD ID=3 CODE=1

OUTFLOW HYDROGRAPH REACH 72.30

RUNOFF VOLUME = .82943 INCHES = 758.6740 ACRE-Feet
PEAK DISCHARGE RATE = 2936.86 CFS AT 2.900 HOURS BASIN AREA = 17.1507 SQ. MI.

*

*

*S ROUTE 72.3 IN 73.1 TO GET 73.1.5

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
MIN ELEV=5149.46 MAX ELEV=5162.40
CH SLOPE=0.006 FP SLOPE=0.006
N=0.035 DIST=149
DIST ELEV DIST ELEV
0 5162.40 17 5157.28
25 5156.08 35 5151.92
75 5149.46 112 5150.98
132 5156.42 149 5157.55

RATING CURVE VALLEY SECTION 1.0			TOP WIDTH
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	FT
5149.46	.00	.00	.00
5150.14	9.42	15.09	27.66
5150.82	37.68	95.84	55.31
5151.50	81.94	292.89	72.15
5152.18	135.23	618.82	82.06
5152.87	192.54	1077.35	86.21

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5153.55 252.67 OUT.WPD 90.35
 5154.23 315.62 2303.15 94.49
 5154.91 381.39 3064.67 98.63
 5155.59 449.98 3923.72 102.77
 5156.27 521.48 4857.76 107.73
 5156.95 598.87 5670.68 120.83
 5157.63 685.95 6666.85 133.18
 5158.31 777.43 8119.27 135.44
 5159.00 870.46 9691.45 137.70
 5159.68 965.02 11381.12 139.96
 5160.36 1061.13 13186.48 142.22
 5161.04 1158.77 15106.07 144.48
 5161.72 1257.96 17138.70 146.74
 5162.40 1358.68 19283.99 149.00
 ROUTE MCUNGE ID=5 HYD NO=73.1.5 INFLOW ID=3
 DT=0.0 L=1380 FT NS=0 SLOPE=0.006
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 600 TABLE PTS= 20 9.3580
 DT= .050000 QMED= 1468.43 CKMED= 690.00
 WIDTH MED= 89.08 NREACH= 2 DX=

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.328	.0	3.83	.74	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.68	9.4	15.1	.239	27.7	3.70	1.60	.964	.036	.964	.000	.036	2.4	.994	.000	.006
1.36	37.7	95.8	.151	55.3	3.66	2.54	.955	.114	.889	.033	.077	45.0	.937	.012	.051
2.04	81.9	292.9	.107	72.2	5.34	3.57	1.392	.184	.857	.224	-.081	181.8	.869	.142	-.011
2.72	135.2	618.8	.084	82.1	7.03	4.58	1.833	.259	.832	.353	-.186	443.1	.842	.296	-.138
3.41	192.5	1077.3	.069	86.2	8.73	5.60	2.277	.346	.809	.448	-.257	835.5	.823	.410	-.233
4.09	252.7	1640.0	.059	90.3	9.98	6.49	2.604	.439	.783	.505	-.288	1347.2	.795	.478	-.273
4.77	315.6	2303.1	.053	94.5	11.09	7.30	2.892	.531	.760	.548	-.308	1960.8	.770	.528	-.298
5.45	381.4	3064.7	.048	98.6	12.08	8.04	3.150	.621	.740	.581	-.320	2673.6	.749	.565	-.314
6.13	450.0	3923.7	.044	102.8	12.84	8.72	3.349	.718	.716	.605	-.322	3484.3	.729	.595	-.324
6.81	521.5	4857.8	.041	107.7	12.03	9.32	3.137	.906	.641	.603	-.244	4381.7	.701	.613	-.314
7.49	598.9	5670.7	.040	120.8	10.98	9.47	2.864	1.033	.578	.592	-.170	5259.2	.555	.582	-.137
8.17	686.0	6666.8	.039	133.2	13.36	9.72	3.485	.905	.664	.629	-.293	6162.2	.594	.602	-.196
8.85	777.4	8119.3	.037	135.4	16.40	10.44	4.279	.883	.713	.675	-.389	7379.4	.720	.665	-.386
9.54	870.5	9691.4	.034	137.7	17.40	11.13	4.538	.977	.700	.693	-.393	8892.2	.706	.685	-.391
10.22	965.0	11381.1	.033	140.0	18.34	11.79	4.784	1.071	.688	.708	-.396	10523.6	.693	.701	-.394
10.90	1061.1	13186.5	.031	142.2	19.23	12.43	5.017	1.164	.676	.722	-.397	12271.4	.681	.715	-.396
11.58	1158.8	15106.1	.029	144.5	20.09	13.04	5.240	1.257	.665	.733	-.398	14134.2	.670	.728	-.397
12.26	1258.0	17138.7	.028	146.7	20.90	13.62	5.453	1.349	.654	.744	-.398	16110.6	.659	.739	-.398
12.94	1358.7	19284.0	.027	149.0	21.58	14.19	5.629	1.449	.641	.752	-.394	18199.8	.649	.748	-.397

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 10 TIMES. AVERAGE NUMBER ITERATIONS = 1.5084
 DEPTH (FT) AREA (SQ FT) Q (CFS) TRAVEL TIME(HR) WIDTH (FT) ck (FPS) VEL (FPS) C D C1 C2 C3 Q-M (CFS) C1-M C2-M C3-M
 .00 .0 .0 .328 .0 3.83 .74 1.000 .000 1.000 .000 .000 .0 1.000 .000 .000
 .68 9.4 15.1 .239 27.7 3.70 1.60 .964 .036 .964 .000 .036 2.4 .994 .000 .006
 1.36 37.7 95.8 .151 55.3 3.66 2.54 .955 .114 .889 .033 .077 45.0 .937 .012 .051
 2.04 81.9 292.9 .107 72.2 4.64 3.57 1.211 .211 .826 .174 .000 181.8 .865 .135 .000
 2.72 135.2 618.8 .084 82.1 5.18 4.58 1.352 .352 .740 .260 .000 443.1 .780 .220 .000
 3.41 192.5 1077.3 .069 86.2 5.82 5.60 1.519 .519 .659 .341 .000 835.5 .696 .304 .000
 4.09 252.7 1640.0 .059 90.3 6.44 6.49 1.681 .681 .595 .405 .000 1347.2 .625 .375 .000
 4.77 315.6 2303.1 .053 94.5 7.04 7.30 1.836 .836 .545 .455 .000 1960.8 .568 .432 .000
 5.45 381.4 3064.7 .048 98.6 7.61 8.04 1.986 .986 .504 .496 .000 2673.6 .523 .477 .000
 6.13 450.0 3923.7 .044 102.8 8.16 8.72 2.130 .130 .470 .530 .000 3484.3 .486 .514 .000
 6.81 521.5 4857.8 .041 107.7 8.66 9.32 2.258 1.258 .443 .557 .000 4381.7 .456 .544 .000
 7.49 598.9 5670.7 .040 120.8 8.78 9.47 2.291 1.291 .437 .563 .000 5259.2 .440 .560 .000
 8.17 686.0 6666.8 .039 133.2 8.99 9.72 2.345 1.345 .426 .574 .000 6162.2 .431 .569 .000
 8.85 777.4 8119.3 .037 135.4 9.61 10.44 2.507 1.507 .399 .601 .000 7379.4 .412 .588 .000
 9.54 870.5 9691.4 .034 137.7 10.21 11.13 2.664 1.664 .375 .625 .000 8892.2 .387 .613 .000
 10.22 965.0 11381.1 .033 140.0 10.80 11.79 2.818 1.818 .355 .645 .000 10523.6 .365 .635 .000
 10.90 1061.1 13186.5 .031 142.2 11.38 12.43 2.968 1.968 .337 .663 .000 12271.4 .346 .654 .000
 11.58 1158.8 15106.1 .029 144.5 11.94 13.04 3.115 2.115 .321 .679 .000 14134.2 .329 .671 .000
 12.26 1258.0 17138.7 .028 146.7 12.49 13.62 3.259 2.259 .307 .693 .000 16110.6 .314 .686 .000
 12.94 1358.7 19284.0 .027 149.0 13.03 14.19 3.399 2.399 .294 .706 .000 18199.8 .300 .700 .000
 MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 4 OCCURRED 1 TIMES. AVERAGE NUMBER ITERATIONS = 1.4874
 Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3

PRINT HYD ID=5 CODE=1

HYDROGRAPH FROM AREA 73.1.5

RUNOFF VOLUME = .82911 INCHES = 758.3862 ACRE-Feet
 PEAK DISCHARGE CFS = 2928.49 CFS AT 2.950 HOURS BASIN AREA = 17.1507 SQ. MI.

*S** SUB-BASIN 73.1

COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=3 ISLOPE=-1
 LENGTH=355 FT SLOPE=0.02 K=0.7
 LENGTH=1645 FT SLOPE=0.02 K=2.0
 LENGTH=260 FT SLOPE=0.02 K=3.0

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	355.0	.020000	.7000
SHALLOW FLOW PORTION	1645.0	.020000	2.0000
CHANNEL FLOW PORTION	260.0	.020000	3.0000
TOTAL BASIN	2260.0	.020000	1.5957

TIME OF CONCENTRATION (HRS)= .2782 TIME TO PEAK (HRS)= .1855 LAG TIME (HRS)= .2086

COMPUTE NM HYD ID=4 HYD NO=73.1 DA=0.12879 SQ MI

OUT.WPD
 PER A=10 PER B=20 PER C=30 PER D=40
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .1855
 K = .101674HR TP = .185460HR K/TP RATIO = .548229 SHAPE CONSTANT, N = 7.052896
 UNIT PEAK = 145.49 CFS UNIT VOLUME = 1.000 B = 523.75 P60 = 2.2000
 AREA = .051516 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .168806HR TP = .185460HR K/TP RATIO = .910203 SHAPE CONSTANT, N = 3.891065
 UNIT PEAK = 144.93 CFS UNIT VOLUME = 1.000 B = 347.84 P60 = 2.2000
 AREA = .077274 SQ MI IA = .45000 INCHES INF = 1.11000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.09000 AT PEAK FLOW.

PRINT HYD ID=4 CODE=5

OUTFLOW HYDROGRAPH REACH 73.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.250	2.0	10.500	1.0	15.750	.7	21.000	.6
.250	.0	5.500	2.0	10.750	.9	16.000	.7	21.250	.6
.500	.0	5.750	2.0	11.000	.9	16.250	.7	21.500	.6
.750	.5	6.000	2.0	11.250	.9	16.500	.7	21.750	.6
1.000	5.9	6.250	1.5	11.500	.9	16.750	.7	22.000	.6
1.250	13.0	6.500	1.3	11.750	.9	17.000	.7	22.250	.6
1.500	266.6	6.750	1.2	12.000	.9	17.250	.7	22.500	.6
1.750	163.9	7.000	1.2	12.250	.9	17.500	.7	22.750	.6
2.000	76.6	7.250	1.2	12.500	.9	17.750	.7	23.000	.6
2.250	32.2	7.500	1.2	12.750	.9	18.000	.7	23.250	.6
2.500	16.7	7.750	1.1	13.000	.8	18.250	.7	23.500	.6
2.750	10.3	8.000	1.1	13.250	.8	18.500	.7	23.750	.6
3.000	6.7	8.250	1.1	13.500	.8	18.750	.7	24.000	.6
3.250	4.7	8.500	1.1	13.750	.8	19.000	.7	24.250	.2
3.500	3.6	8.750	1.1	14.000	.8	19.250	.7	24.500	.1
3.750	2.9	9.000	1.0	14.250	.8	19.500	.6	24.750	.0
4.000	2.5	9.250	1.0	14.500	.8	19.750	.6	25.000	.0
4.250	2.3	9.500	1.0	14.750	.8	20.000	.6	25.250	.0
4.500	2.1	9.750	1.0	15.000	.8	20.250	.6	25.500	.0
4.750	2.0	10.000	1.0	15.250	.8	20.500	.6		
5.000	2.0	10.250	1.0	15.500	.8	20.750	.6		

RUNOFF VOLUME = 2.00710 INCHES = 13.7863 ACRE-FEET
 PEAK DISCHARGE RATE = 292.49 CFS AT 1.550 HOURS BASIN AREA = .1288 SQ. MI.

*

 *
 *S ADD 72.3 TO 73.1 TO GET 73.1.2

*
 ADD HYD ID=2 HYD NO=73.1.2 ID I=4 ID II=5
 PRINT HYD ID=2 CODE=1

HYDROGRAPH FROM AREA 73.1.2

RUNOFF VOLUME = .83789 INCHES = 772.1728 ACRE-FEET
 PEAK DISCHARGE RATE = 2935.77 CFS AT 2.950 HOURS BASIN AREA = 17.2795 SQ. MI.

*

 *
 *S ROUTE 73.1.2 THRU 73.2 TO GET 73.2.5
 *

COMPUTE RATING CURVE CID=1 VS NO=1 NO SEGS=1
 MIN ELEV=5149.46 MAX ELEV=5162.40
 CH SLOPE=0.004 FP SLOPE=0.004
 N=0.035 DIST=149
 DIST ELEV DIST ELEV
 0 5144.26 23 5143.43
 39 5138.80 68 5137.16
 110 5138.29 132 5144.34
 149 5144.48

RATING CURVE VALLEY SECTION 1.0			
WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
5149.46	.00	.00	149.00
5150.14	1454.98	17726.59	149.00
5150.82	1556.47	19835.01	149.00
5151.50	1657.96	22037.14	149.00
5152.18	1759.46	24331.04	149.00
5152.87	1860.95	26714.91	149.00
5153.55	1962.44	29187.08	149.00
5154.23	2063.93	31745.99	149.00
5154.91	2165.42	34390.21	149.00
5155.59	2266.91	37118.38	149.00
5156.27	2368.41	39929.21	149.00
5156.95	2469.90	42821.54	149.00
5157.63	2571.39	45794.19	149.00
5158.31	2672.88	48846.13	149.00
5159.00	2774.37	51976.31	149.00
5159.68	2875.86	55183.79	149.00
5160.36	2977.36	58467.63	149.00
5161.04	3078.85	61826.96	149.00

5161.72 3180.34 OUT.WPD
5162.40 3281.83 65260.96 149.00
ROUTE MCUNGE ID=5 HYD NO=73.2.5 INFLOW ID=2 68768.80 149.00
DT=0.0 L=1060 FT NS=0 SLOPE=0.004
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

INFLOW END= 600 TABLE PTS= 20
DT= .050000 QMED= 1467.88 CKMED= 12.1834
WIDTH MED= 149.00 NREACH= 1 DX= 1060.00

DEPTH (FT)	AREA (SQ FT)	Q (CFS)	TRAVEL TIME(HR)	WIDTH (FT)	ck (FPS)	VEL (FPS)	C	D	C1	C2	C3	Q-M (CFS)	C1-M	C2-M	C3-M
.00	.0	.0	.025	149.0	5.89	11.16	1.000	.000	1.000	.000	.000	.0	1.000	.000	.000
.68	1455.0	17726.6	.024	149.0	275.19	12.18	46.731	.102	.996	.958	-.954	1973.8	.998	.908	-.905
1.36	1556.5	19835.0	.023	149.0	21.24	12.74	3.607	1.478	.514	.671	-.185	18769.0	.520	.664	-.184
2.04	1658.0	22037.1	.022	149.0	22.15	13.29	3.762	1.575	.503	.684	-.187	20924.5	.508	.678	-.186
2.72	1759.5	24331.0	.021	149.0	23.05	13.83	3.914	1.671	.492	.696	-.189	23172.7	.498	.690	-.188
3.41	1860.9	26714.9	.021	149.0	23.93	14.36	4.063	1.767	.482	.707	-.190	25511.8	.487	.702	-.189
4.09	1962.4	29187.1	.020	149.0	24.79	14.87	4.209	1.864	.473	.717	-.190	27940.1	.478	.712	-.190
4.77	2063.9	31746.0	.019	149.0	25.64	15.38	4.353	1.960	.464	.727	-.190	30455.8	.468	.722	-.190
5.45	2165.4	34390.2	.019	149.0	26.47	15.88	4.495	2.057	.455	.735	-.190	33057.5	.460	.731	-.191
6.13	2266.9	37118.4	.018	149.0	27.29	16.37	4.634	2.153	.447	.743	-.190	35743.9	.451	.739	-.190
6.81	2368.4	39929.2	.017	149.0	28.10	16.86	4.771	2.249	.439	.751	-.190	38513.5	.443	.747	-.190
7.49	2469.9	42821.5	.017	149.0	28.90	17.34	4.907	2.346	.432	.758	-.189	41365.3	.435	.754	-.189
8.17	2571.4	45794.2	.017	149.0	29.68	17.81	5.040	2.442	.424	.764	-.188	44297.9	.428	.761	-.189
8.85	2672.9	48846.1	.016	149.0	30.46	18.27	5.172	2.538	.417	.770	-.188	47310.3	.421	.767	-.188
9.54	2774.4	51976.3	.016	149.0	31.22	18.73	5.302	2.635	.410	.776	-.187	50401.5	.414	.773	-.187
10.22	2875.9	55183.8	.015	149.0	31.98	19.19	5.431	2.731	.404	.782	-.185	53570.4	.407	.779	-.186
10.90	2977.4	58467.6	.015	149.0	32.73	19.64	5.558	2.828	.397	.787	-.184	56816.2	.401	.784	-.185
11.58	3078.8	61827.0	.015	149.0	33.47	20.08	5.683	2.924	.391	.792	-.183	60137.9	.394	.789	-.184
12.26	3180.3	65261.0	.014	149.0	34.20	20.52	5.808	3.020	.385	.797	-.182	63534.7	.388	.794	-.182
12.94	3281.8	68768.8	.014	149.0	34.91	20.95	5.927	3.118	.379	.801	-.180	67005.7	.382	.799	-.181

MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 6 OCCURRED 6 TIMES. AVERAGE NUMBER ITERATIONS = 1.6875
 DEPTH AREA Q TRAVEL WIDTH ck VEL C D C1 C2 C3 Q-M C1-M C2-M C3-M
 (FT) (SQ FT) (CFS) TIME(HR) (FT) (FPS) (FPS)
 .00 .0 .0 .025 149.0 5.89 11.16 1.000 .000 1.000 .000 .000 .0 1.000 .000 .000
 .68 1455.0 17726.6 .024 149.0 16.13 12.18 2.739 1.739 .365 .635 .000 1973.8 .723 .277 .000
 1.36 1556.5 19835.0 .023 149.0 16.86 12.74 2.863 1.863 .349 .651 .000 18769.0 .357 .643 .000
 2.04 1658.0 22037.1 .022 149.0 17.58 13.29 2.985 1.985 .335 .665 .000 20924.5 .342 .658 .000
 2.72 1759.5 24331.0 .021 149.0 18.29 13.83 3.106 2.106 .322 .678 .000 23172.7 .328 .672 .000
 3.41 1860.9 26714.9 .021 149.0 19.00 14.36 3.226 2.226 .310 .690 .000 25511.8 .316 .684 .000
 4.09 1962.4 29187.1 .020 149.0 19.70 14.87 3.345 2.345 .299 .701 .000 27940.1 .304 .696 .000
 4.77 2063.9 31746.0 .019 149.0 20.40 15.38 3.464 2.464 .289 .711 .000 30455.8 .294 .706 .000
 5.45 2165.4 34390.2 .019 149.0 21.09 15.88 3.581 2.581 .279 .721 .000 33057.5 .284 .716 .000
 6.13 2266.9 37118.4 .018 149.0 21.78 16.37 3.698 2.698 .270 .730 .000 35743.9 .275 .725 .000
 6.81 2368.4 39929.2 .017 149.0 22.46 16.86 3.814 2.814 .262 .738 .000 38513.5 .266 .734 .000
 7.49 2469.9 42821.5 .017 149.0 23.14 17.34 3.929 2.929 .254 .746 .000 41365.3 .258 .742 .000
 8.17 2571.4 45794.2 .017 149.0 23.81 17.81 4.044 3.044 .247 .753 .000 44297.9 .251 .749 .000
 8.85 2672.9 48846.1 .016 149.0 24.48 18.27 4.158 3.158 .241 .759 .000 47310.3 .244 .756 .000
 9.54 2774.4 51976.3 .016 149.0 25.15 18.73 4.271 3.271 .234 .766 .000 50401.5 .237 .763 .000
 10.22 2875.9 55183.8 .015 149.0 25.81 19.19 4.384 3.384 .228 .772 .000 53570.4 .231 .769 .000
 10.90 2977.4 58467.6 .015 149.0 26.47 19.64 4.496 3.496 .222 .778 .000 56816.2 .225 .775 .000
 11.58 3078.8 61827.0 .015 149.0 27.13 20.08 4.607 3.607 .217 .783 .000 60137.9 .220 .780 .000
 12.26 3180.3 65261.0 .014 149.0 27.78 20.52 4.718 3.718 .212 .788 .000 63534.7 .214 .786 .000
 12.94 3281.8 68768.8 .014 149.0 28.43 20.95 4.828 3.828 .207 .793 .000 67005.7 .210 .790 .000
 MAXIMUM NO. ITERATIONS FOR SOLUTION (KKMAX) = 3 OCCURRED 52 TIMES. AVERAGE NUMBER ITERATIONS = 1.4527
 Equations solved with two passes: first using the Ponce correction to C1, second using the Fread correction to C1, C2 and C3

PRINT HYD ID=5 CODE=5

HYDROGRAPH FROM AREA 73.2.5

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	684.4	12.000	61.6	18.000	40.2	24.000	21.3
.250	.0	6.250	664.0	12.250	59.8	18.250	39.8	24.250	20.0
.500	.0	6.500	641.5	12.500	58.1	18.500	39.4	24.500	18.7
.750	.0	6.750	616.5	12.750	56.5	18.750	39.0	24.750	16.7
1.000	5.2	7.000	587.5	13.000	55.0	19.000	38.6	25.000	14.6
1.250	10.0	7.250	553.2	13.250	53.7	19.250	38.2	25.250	12.9
1.500	227.9	7.500	511.6	13.500	52.4	19.500	37.7	25.500	11.7
1.750	836.5	7.750	445.5	13.750	51.2	19.750	37.2	25.750	10.8
2.000	1073.9	8.000	261.2	14.000	50.1	20.000	36.6	26.000	10.1
2.250	1186.6	8.250	183.2	14.250	49.1	20.250	36.0	26.250	9.6
2.500	2321.6	8.500	146.9	14.500	48.2	20.500	35.4	26.500	9.2
2.750	2691.5	8.750	126.8	14.750	47.3	20.750	34.7	26.750	8.8
3.000	2924.1	9.000	114.1	15.000	46.5	21.000	34.0	27.000	8.5
3.250	2654.0	9.250	107.5	15.250	45.7	21.250	33.2	27.250	8.2
3.500	2821.6	9.500	101.1	15.500	44.9	21.500	32.2	27.500	8.0
3.750	2595.5	9.750	94.9	15.750	44.3	21.750	30.9	27.750	7.8
4.000	1999.7	10.000	89.1	16.000	43.6	22.000	29.7	28.000	7.6
4.250	1679.3	10.250	83.8	16.250	43.0	22.250	28.6	28.250	7.4
4.500	1438.8	10.500	79.2	16.500	42.4	22.500	27.6	28.500	7.3
4.750	1175.3	10.750	75.0	16.750	42.0	22.750	26.6	28.750	7.1
5.000	925.1	11.000	71.3	17.000	41.7	23.000	25.6	29.000	7.0
5.250	750.0	11.250	68.0	17.250	41.3	23.250	24.6	29.250	6.9
5.500	715.7	11.500	65.5	17.500	40.9	23.500	23.5	29.500	6.9
5.750	701.1	11.750	63.5	17.750	40.5	23.750	22.4	29.750	6.8

RUNOFF VOLUME = .83771 INCHES = 772.0062 ACRE-Feet
 PEAK DISCHARGE RATE = 2934.61 CFS AT 2.950 HOURS BASIN AREA = 17.2795 SQ. MI.

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 *S
 *S*** SUB-BASIN 73.2
 *
 COMPUTE LT TP LCODE=1 UPLAND/LAG TIME TRANSITION METHOD
 NK=2 ISLOPE=-1
 LENGTH=400 FT SLOPE=0.02 K=0.7
 LENGTH=865 FT SLOPE=0.02 K=2.0

OUT.WPD

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	400.0	.020000	.7000
SHALLOW FLOW PORTION	865.0	.020000	2.0000
CHANNEL FLOW PORTION	.0	.000000	.0000
TOTAL BASIN	1265.0	.020000	1.2600

TIME OF CONCENTRATION (HRS)= .1972 TIME TO PEAK (HRS)= .1315 LAG TIME (HRS)= .1479

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.

REVISED VALUES: TIME OF CONCENTRATION (HRS)= .2000 TIME TO PEAK (HRS)= .1333 LAG TIME (HRS)= .1500

COMPUTE NM HYD ID=4 HYD NO=73.2 DA=0.05105 SQ MI
 PER A=10 PER B=20 PER C=30 PER D=40
 TP=0.0 MASSRAIN=-1
 TIME TO PEAK (hrs)= .1333

K = .072666HR TP = .133333HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 80.599 CFS UNIT VOLUME = .9990 B = 526.28 P60 = 2.2000
 AREA = .020420 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .126147HR TP = .133333HR K/TP RATIO = .946108 SHAPE CONSTANT, N = 3.736470
 UNIT PEAK = 77.463 CFS UNIT VOLUME = 1.001 B = 337.20 P60 = 2.2000
 AREA = .030630 SQ MI IA = .45000 INCHES INF = 1.11000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

BULKING FACTOR APPLIED TO HYDROGRAPH. FACTOR = 1.09000 AT PEAK FLOW.

PRINT HYD ID=4 CODE=5

OUTFLOW HYDROGRAPH REACH 73.20

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.250	.8	10.500	.4	15.750	.3	21.000	.2
.250	.0	5.500	.8	10.750	.4	16.000	.3	21.250	.2
.500	.0	5.750	.8	11.000	.4	16.250	.3	21.500	.2
.750	.6	6.000	.8	11.250	.4	16.500	.3	21.750	.2
1.000	2.8	6.250	.5	11.500	.4	16.750	.3	22.000	.2
1.250	9.3	6.500	.5	11.750	.4	17.000	.3	22.250	.2
1.500	137.2	6.750	.5	12.000	.3	17.250	.3	22.500	.2
1.750	52.3	7.000	.5	12.250	.3	17.500	.3	22.750	.2
2.000	25.5	7.250	.5	12.500	.3	17.750	.3	23.000	.2
2.250	8.6	7.500	.5	12.750	.3	18.000	.3	23.250	.2
2.500	4.4	7.750	.4	13.000	.3	18.250	.3	23.500	.2
2.750	2.6	8.000	.4	13.250	.3	18.500	.3	23.750	.2
3.000	1.8	8.250	.4	13.500	.3	18.750	.3	24.000	.2
3.250	1.3	8.500	.4	13.750	.3	19.000	.3	24.250	.0
3.500	1.1	8.750	.4	14.000	.3	19.250	.3	24.500	.0
3.750	.9	9.000	.4	14.250	.3	19.500	.3	24.750	.0
4.000	.9	9.250	.4	14.500	.3	19.750	.3	25.000	.0
4.250	.8	9.500	.4	14.750	.3	20.000	.2		
4.500	.8	9.750	.4	15.000	.3	20.250	.2		
4.750	.8	10.000	.4	15.250	.3	20.500	.2		
5.000	.8	10.250	.4	15.500	.3	20.750	.2		

RUNOFF VOLUME = 2.00710 INCHES = 5.4646 ACRE-FEET
 PEAK DISCHARGE RATE = 137.23 CFS AT 1.500 HOURS BASIN AREA = .0511 SQ. MI.

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*S ADD 73.2 TO 73.2.5 TO GET 73.2.1
 *S TOTAL FLOWS UPSTREAM END OF SAN ILDEFONSO DR

*
 ADD HYD ID=1 HYD NO=73.2.1 ID I=4 ID II=5
 PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA 73.2.1

RUNOFF VOLUME = .84116 INCHES = 777.4700 ACRE-FEET
 PEAK DISCHARGE RATE = 2936.50 CFS AT 2.950 HOURS BASIN AREA = 17.3305 SQ. MI.

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FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 11:19:34