Appendix D

Detention Backup Information

Rating curve information was obtained from continuous simulation hydrologic modeling for the August 19, 2009 report titled Hydromodification Management Study for Meadowood Vesting Tentative Map

Drainage Basin 2000 Detention Basin (DB2)

		Crest of Riser Notch	Top of Riser	10-year flow
Volume (acre-feet)	0	0.21	0.36	0.53
Flow (cfs)	0	3.65	5.95	36.41
Assumed Elevation (feet)	100	101.95	103	104.01

Drainage Basin 3000 Detention Basin (DB3)

		Crest of Riser Notch	Top of Riser	10-year flow
Volume (acre-feet)	0	2.05	2.62	3.29
Flow (cfs)	0	4.18	10.06	33.13
Assumed Elevation (feet)	100	102.4	103	103.69

Drainage Basin 4000 Detention Basin (DB4)

		Crest of Riser Notch	Top of Riser	10-year flow
Volume (acre-feet)	0	0.72	0.94	1.05
Flow (cfs)	0	0.67	2.76	5.51
Assumed Elevation (feet)	100	102.4	103	103.32

Drainage Basin 7000A Detention Basin (DB7A)

		Crest of Riser Notch	Top of Riser	10-year flow
Volume (acre-feet)	0	9.24	11.95	14.77
Flow (cfs)	0	13.08	31.51	96.4
Assumed Elevation (feet)	100	103.17	104	104.87

Drainage Basin 7000B Detention Basin (DB7B)

		Crest of Riser Notch	Top of Riser	10-year flow
Volume (acre-feet)	0	2.54	3.30	3.69
Flow (cfs)	0	2.64	11.50	21.90
Assumed Elevation (feet)	100	103.17	104	104.41

Drainage Basin 8000A Detention Basin (DB8A)

		Crest of Riser Notch	Top of Riser	10-year flow
Volume (acre-feet)	0	0.65	0.86	1.11
Flow (cfs)	0	1.54	3.90	13.18
Assumed Elevation (feet)	100	102.37	103	103.72

Drainage Basin 8000B Detention Basin (DB8B)

		Crest of Riser Notch	Top of Riser	10-year flow
Volume (acre-feet)	0	1.27	1.63	1.97
Flow (cfs)	0	1.05	3.2	9.4
Assumed Elevation (feet)	100	102.34	103	103.54

Meadowood 3/25/2009

J-15956

Weighted Runoff Calculations

Basin 2000A

Node	Area (AC)	RC	AreaxRC
200-2001	0.20	0.30	0.06
2001-2004	10.90	0.30	3.27
2002-2003	0.20	0.30	0.06
2003-2004	6.90	0.30	2.07
2004-2009	4.30	0.29	1.25
2005-2006	0.30	0.30	0.09
2006-2007	2.30	0.30	0.69
2007-2008	13.40	0.30	4.02
2008-2011	6.20	0.28	1.74
2013-2014	0.20	0.90	0.18
2014-2012	2.70	0.61	1.65
2016-2017	0.20	0.61	0.12
2017-2018	0.60	0.61	0.37
2020-2021	0.30	0.90	0.27
2021-2019	0.20	0.90	0.18
2023-2024	0.30	0.61	0.18
2024-2022.5	1.80	0.63	1.13
	51.00		17.33

Weighted Runoff Coefficient 0.34

Meadowood

J-15956

Weighted Runoff Calculations

Basin 2000B

3/25/2009

Node	Area (AC)	RC	AreaxRC
2030-2031	0.20	0.30	0.06
2031-2032	2.60	0.30	0.78
2032-2033	5.70	0.30	1.71
	8.50		2.55

Weighted Runoff Coefficient 0.30

Meadowood 3/25/2009

J-15956

Weighted Runoff Calculations

Basin 3000

Node	Area (AC)	RC	AreaxRC
3000-3001	0.20	0.30	0.06
3001-3002	10.60	0.30	3.18
3002-3006	2.60	0.28	0.73
3008-3009	0.20	0.30	0.06
3009-3010	6.70	0.30	2.01
3010-3011	4.60	0.30	1.38
3013-3014	0.20	0.61	0.12
3014-3012	2.10	0.62	1.30
3016-3017	0.30	0.61	0.18
3017-3018	2.20	0.61	1.34
3020-3021	0.20	0.30	0.06
3021-3022	1.30	0.30	0.39
3024-3025	0.40	0.61	0.24
3025-3026	2.70	0.61	1.65
3003-3004	0.20	0.30	0.06
3004-3005	8.60	0.30	2.58
3005-3028	9.70	0.30	2.91
3032-3035	0.30	0.61	0.18
3035-3033	2.00	0.61	1.22
3037-3038	0.20	0.62	0.12
3038-3036	0.80	0.62	0.50
3040-3041	0.30	0.61	0.18
3041-3042	2.30	0.61	1.40
1008-1009	0.20	0.90	0.18
1009-1010	1.20	0.90	1.08
2026-2027	0.20	0.90	0.18
2027-2028	0.60	0.90	0.54
3043.5-3043.7	0.70	0.61	0.43
	61.60		24.27

Weighted Runoff Coefficient 0.39

Meadowood
J-15956
Weighted Runoff Calculations

7/29/2009

Basin 4000

Node 4002.1

Node	Area (AC)	RC	AreaxRC
4000-4001	0.20	0.30	0.06
4001-4002	3.00	0.30	0.90
Weighted Runoff Coefficient			0.30

Node 4003.0

Node	Area (AC)	RC	AreaxRC
4004-4005	0.30	0.62	0.19
4005-4003	6.60	0.62	4.09
Weighted Runoff Coefficient			0.62

Meadowood
J-15956
Weighted Runoff Calculations

7/29/2009

Basin 7000A

Node	Area (AC)	RC	AreaxRC
5000	0.5	0.9	0.45
5000.1	0.4	0.3	0.12
5000.2	2.4	0.3	0.72
5000.3	3	0.3	0.90
5001	1	0.9	0.90
5001.1	0.4	0.3	0.12
5001.2	0.7	0.3	0.21
5002	1	0.9	0.90
5002.1	0.6	0.3	0.18
5002.2	1.3	0.3	0.39
5002.3	2.2	0.3	0.66
5004	0.2	0.9	0.18
5005	1.8	0.63	1.13
5008	0.2	0.3	0.06
5009	0.4	0.78	0.31
5012	0.2	0.3	0.06
5013	5.8	0.3	1.74
5017	0.6	0.9	0.54
5021	0.2	0.3	0.06
5022	14	0.3	4.20
5026	0.2	0.63	0.13
5027	1.8	0.63	1.13
5030	0.2	0.3	0.06
5031	3.8	0.3	1.14
5034	0.3	0.63	0.19
5035	5.1	0.63	3.21
5039	0.2	0.62	0.12
5040	2.7	0.62	1.67
5043	0.2	0.3	0.06
5044	2.7	0.32	0.86
5047	0.3	0.63	0.19
5048	3.5	0.63	2.21
5052	0.2	0.63	0.13
5053	4.2	0.63	2.65
5057	0.2	0.61	0.12
5058	2.3	0.64	1.47
5061	0.2	0.63	0.13
5062	3.1	0.63	1.95
5065	0.2	0.63	0.13
5066	3.1	0.63	1.95
5068	5.7	0.3	1.71
5070	0.2	0.64	0.13
5071	1.6	0.64	1.02
5075	0.2	0.27	0.05
5076	0.8	0.31	0.25
5079	0.2	0.25	0.05
5080	2	0.28	0.56
5084	0.3	0.77	0.23
5085	1.3	0.77	1.00
5088	0.6	0.77	0.46
5089	2	0.77	1.54
6000	0.2	0.28	0.06
6001	0.4	0.3	0.12
6004	0.2	0.29	0.06
6005	0.2	0.3	0.06
6012	0.2	0.63	0.13
6013	1.9	0.63	1.20
6008	0.2	0.61	0.12
6009	0.7	0.62	0.43
6014	0.3	0.35	0.11
6014.2	2	0.29	0.58
6017	0.2	0.61	0.12
6018	2.1	0.29	0.61
6021	0.3	0.3	0.09
6022	0.6	0.78	0.47
6024	0.2	0.77	0.15
6025	1.7	0.68	1.16
6032	0.2	0.3	0.06
6033	0.5	0.77	0.39
6036	0.2	0.77	0.15
6037	1.1	0.77	0.85
6038	0.2	0.67	0.13
6039	1.1	0.77	0.85

6040	0.2	0.25	0.05
6041	0.7	0.67	0.47
6042	0.3	0.67	0.20
6043	0.7	0.67	0.47
6047	0.2	0.67	0.13
6048	1.6	0.77	1.23
6049	0.6	0.67	0.40
6052	0.6	0.77	0.46
6056	0.5	0.77	0.39
6059	0.3	0.77	0.23
6060	1.7	0.77	1.31
6061	0.2	0.77	0.15
6062	1.2	0.77	0.92
6063	0.5	0.67	0.34
6087	0.2	0.77	0.15
6088	1.2	0.77	0.92
6066	1	0.77	0.77
6082	0.5	0.77	0.39
6068	0.2	0.25	0.05
6069	0.6	0.29	0.17
6070	1.5	0.77	1.16
6077	0.5	0.67	0.34
6078	2.3	0.77	1.77
7000	0.7	0.45	0.32
700.1	1.4	0.45	0.63
7001	0.2	0.3	0.06
7001.1	0.7	0.3	0.21
7001.2	1.9	0.3	0.57
7004	0.2	0.3	0.06
7005	3.1	0.3	0.93
7006	1.3	0.63	0.82
7007	0.2	0.3	0.06
7008	2.3	0.3	0.69
7017	0.2	0.3	0.06
7018	0.9	0.3	0.27
7020	0.2	0.63	0.13
7021	0.8	0.63	0.50
7024	0.3	0.3	0.09
7025	3.4	0.3	1.02
7040	0.3	0.63	0.19
7041	1.9	0.63	1.20
7028	0.2	0.63	0.13
7029	2.7	0.63	1.70
7042	1.4	0.3	0.42
7032	0.3	0.63	0.19
7033	1.8	0.63	1.13
7036	0.2	0.63	0.13
7037	3.8	0.63	2.39
7045	0.4	0.61	0.24
7046	3.5	0.62	2.17
7049	0.2	0.61	0.12
7050	0.9	0.39	0.35
7053	0.2	0.65	0.13
7054	0.6	0.65	0.39
7058	0.2	0.63	0.13
7059	0.9	0.9	0.81
7061	0.2	0.61	0.12
7062	0.6	0.61	0.37
7066	0.2	0.51	0.10
7067	1	0.69	0.69
5102	0.3	0.9	0.27
5103	1.7	0.9	1.53
7070	0.2	0.8	0.16
7071	3.8	0.8	3.04
7079	6.1	0.45	2.75
7074.1	0.3	0.35	0.11
7074.2	13.3	0.32	4.26
7075.1	0.2	0.35	0.07
7075.2	11	0.35	3.85
	194.50		96.24

Weighted Runoff Coefficient 0.49

Meadowood 8/13/2009

J-15956

Weighted Runoff Calculations

Basin 7000B

Weighted Runoff Coefficient Tributary to DB 7B

Node	Area (AC)	RC	AreaxRC
7079-7080	0.20	0.90	0.18
7080-7081	5.60	0.67	3.75
7093-7094	0.20	0.35	0.07
7094-7095	3.90	0.34	1.33
7095-7099	23.80	0.34	8.09
7104-7106	0.20	0.45	0.09
7106-7099	10.90	0.45	4.91
	44.80		18.42

Weighted Runoff Coefficient 0.41

Weighted Runoff Coefficient Downstream of DB 7B

7082-7081	0.50	0.25	0.13

Weighted Runoff Coefficient 0.25

Meadowood 8/13/2009

J-15956

Weighted Runoff Calculations

Basin 8000A

Node	Area (AC)	RC	AreaxRC
8100-8101	0.3	0.35	0.11
8101-8102	13	0.33	4.29
8114-8115	0.2	0.9	0.18
8115-8116	2.4	0.9	2.16
8118-8119	0.2	0.9	0.18
8119-8120	1.2	0.9	1.08
8123-8124	0.2	0.78	0.16
8124-8125	1	0.77	0.77
8128-8129	0.20	0.90	0.18
8129-8130	0.80	0.77	0.62
8132-8133	0.20	0.77	0.15
8133-8134	1.10	0.77	0.85
8136-8137	0.30	0.77	0.23
8137-8138	0.60	0.77	0.46
8145-8146	0.20	0.77	0.15
8146-8147	2.30	0.77	1.77
8148.2-8148.4	0.20	0.25	0.05
8148.4-8148.6	0.20	0.25	0.05
	24.60		13.44

Weighted Runoff Coefficient 0.55

Node 8152

Node	Area (AC)	RC	AreaxRC
8150-8151	0.3	0.9	0.27
8146-8147	1.9	0.67	1.27
	2.2		1.543

Weighted Runoff Coefficient 0.701

Meadowood 3/25/2009

J-15956

Weighted Runoff Calculations

Basin 8000B

Node	Area (AC)	RC	AreaxRC
8200-8201	0.3	0.35	0.11
8201-8202	0.6	0.34	0.20
8202-8203	11.8	0.33	3.89
8216-8217	0.2	0.77	0.15
8217-8218	0.5	0.77	0.39
8218-8223	0.9	0.46	0.41
8220-8221	0.2	0.77	0.15
8221-8222	0.6	0.77	0.46
8226-8227	0.20	0.77	0.15
8227-8228	1.20	0.77	0.92
8235-8236	0.20	0.77	0.15
8236-8237	4.60	0.77	3.54
8230-8231	0.20	0.87	0.17
8231-8232	1.10	0.77	0.85
9010-9011	0.20	0.90	0.18
9011-8204	0.60	0.90	0.54
8244-8245	0.20	0.87	0.17
8245-8246	2.50	0.77	1.93
	26.10		14.39

Weighted Runoff Coefficient 0.55

Appendix E

100-Year Detention Analyses

Drainage Basin 2000

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   12JAN09  TIME  16:10:10  *
*                                      *
****************************************
```

```
*************************************
*                                   *
*    U.S. ARMY CORPS OF ENGINEERS   *
*    HYDROLOGIC ENGINEERING CENTER  *
*          609 SECOND STREET        *
*       DAVIS, CALIFORNIA 95616     *
*           (916) 756-1104          *
*                                   *
*************************************
```

```
X     X  XXXXXXX   XXXXX           X
X     X  X        X     X         XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX          XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

*** FREE ***
              *DIAGRAM
  1           ID   MEADOWOOD J-15956  01/12/09 FILE: MW2000D.HC1
  2           ID   DETENTION FOR 100-YEAR STORM EVENT (BASED ON RATIONAL METHOD)
  3           ID   R/0=.34, PRECIP=3.6IN, TC 12.23MIN
  4           IT       2 01JAN90    1200     200
  5           IO       0       2

  6           KK   2000A
  7           KM   DRIANAGE BASIN 2000A
  8           KO       0       0       0       0      21
  9           BA  0.0797
 10           IN      12 01JAN90    1154
 11           QI       0     3.7     3.8       4     4.1     4.3     4.5     4.7     4.9     5.2
 12           QI     5.4     5.9     6.2     6.9     7.3     8.4     9.1    11.1    12.6    18.5
 13           QI    25.2   94.41    14.9     9.9     7.8     6.5     5.7     5.1     4.6     4.2
 14           QI     3.9       0       0       0       0       0       0       0       0       0
 15           QI       0       0

 16           KK  DETAIN
 17           KM   100-YEAR DETENTION
 18           KO       0       0       0       0      21
 19           RS       1    STOR      -1
 20           SV       0    0.21    0.36    0.53    0.85
 21           SQ       0    3.65    5.95   36.41    70.6
 22           SE     100  101.95     103  104.01     105

 23           KK MW2000B
 24           KM   RUN DATE   1/12/2009
 25           KM   RATIONAL METHOD HYDROGRAPH PROGRAM
 26           KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
 27           KM   6HR RAINFALL IS  3.6  INCHES
 28           KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.3
 29           KM   RATIONAL METHOD TIME OF CONCENTRATION IS  11  MIN.
 30           KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
 31           KM   IT 2 01JAN90 1200 200
 32           KO       0       0       0       0      21
 33           BA  0.0133
 34           IN      11 01JAN90    1153
 35           QI       0     0.5     0.6     0.6     0.6     0.6     0.6     0.7     0.7     0.7
 36           QI     0.8     0.8     0.8     0.9       1     1.1     1.1     1.3     1.4     1.7
 37           QI       2     2.9     3.8   14.78     2.3     1.5     1.2       1     0.9     0.8
 38           QI     0.7     0.7     0.6     0.6       0       0       0       0       0       0
 39           QI       0       0       0       0       0

 40           KK COMBINE
 41           KO       0       0       0       0      21
 42           HC       2
 43           ZZ
```

```
                SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    6       2000A
                V
                V
   16      DETAIN
                .
                .
   23           .     MW2000B
                .           .
                .           .
   40     COMBINE............
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************                                    ****************************************
*                                      *                                    *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                    *    U.S. ARMY CORPS OF ENGINEERS
*              JUN   1998              *                                    *    HYDROLOGIC ENGINEERING CENTER
*           VERSION 4.1                *                                    *          609 SECOND STREET
*                                      *                                    *       DAVIS, CALIFORNIA 95616
*  RUN DATE   12JAN09  TIME  16:10:10  *                                    *           (916) 756-1104
*                                      *                                    *
****************************************                                    ****************************************
```

```
                    MEADOWOOD J-15956  01/12/09 FILE: MW2000D.HC1
                    DETENTION FOR 100-YEAR STORM EVENT (BASED ON RATIONAL METHOD)
                    R/0=.34, PRECIP=3.6IN, TC 12.23MIN

  5 IO        OUTPUT CONTROL VARIABLES
                  IPRNT          0  PRINT CONTROL
                  IPLOT          2  PLOT CONTROL
                  QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT        HYDROGRAPH TIME DATA
                   NMIN          2  MINUTES IN COMPUTATION INTERVAL
                  IDATE     1JAN90  STARTING DATE
                  ITIME       1200  STARTING TIME
                     NQ        200  NUMBER OF HYDROGRAPH ORDINATES
                 NDDATE     1JAN90  ENDING DATE
                 NDTIME       1838  ENDING TIME
                  ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .03 HOURS
                   TOTAL TIME BASE    6.63 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT


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


          **************
          *            *
  6 KK    *     2000A  *
          *            *
          **************
                    DRIANAGE BASIN 2000A

  8 KO        OUTPUT CONTROL VARIABLES
                  IPRNT          0  PRINT CONTROL
                  IPLOT          2  PLOT CONTROL
                  QSCAL         0.  HYDROGRAPH PLOT SCALE
```

```
                IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                 IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2        200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT      .033  TIME INTERVAL IN HOURS


 10 IN        TIME DATA FOR INPUT TIME SERIES
                 JXMIN         12  TIME INTERVAL IN MINUTES
                JXDATE     1JAN90  STARTING DATE
                JXTIME       1154  STARTING TIME

            SUBBASIN RUNOFF DATA

  9 BA        SUBBASIN CHARACTERISTICS
                 TAREA        .08  SUBBASIN AREA

                                          ***
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****

HYDROGRAPH AT STATION 2000A

****

DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW
1 JAN 1200	1	2.	1 JAN 1340	51	5.	1 JAN 1520	101	11.	1 JAN 1700	151	6.
1 JAN 1202	2	2.	1 JAN 1342	52	5.	1 JAN 1522	102	12.	1 JAN 1702	152	6.
1 JAN 1204	3	3.	1 JAN 1344	53	5.	1 JAN 1524	103	12.	1 JAN 1704	153	6.
1 JAN 1206	4	4.	1 JAN 1346	54	5.	1 JAN 1526	104	12.	1 JAN 1706	154	6.
1 JAN 1208	5	4.	1 JAN 1348	55	5.	1 JAN 1528	105	12.	1 JAN 1708	155	6.
1 JAN 1210	6	4.	1 JAN 1350	56	5.	1 JAN 1530	106	13.	1 JAN 1710	156	6.
1 JAN 1212	7	4.	1 JAN 1352	57	5.	1 JAN 1532	107	14.	1 JAN 1712	157	5.
1 JAN 1214	8	4.	1 JAN 1354	58	5.	1 JAN 1534	108	15.	1 JAN 1714	158	5.
1 JAN 1216	9	4.	1 JAN 1356.	59	5.	1 JAN 1536	109	16.	1 JAN 1716	159	5.
1 JAN 1218	10	4.	1 JAN 1358	60	6.	1 JAN 1538	110	17.	1 JAN 1718	160	5.
1 JAN 1220	11	4.	1 JAN 1400	61	6.	1 JAN 1540	111	18.	1 JAN 1720	161	5.
1 JAN 1222	12	4.	1 JAN 1402	62	6.	1 JAN 1542	112	19.	1 JAN 1722	162	5.
1 JAN 1224	13	4.	1 JAN 1404	63	6.	1 JAN 1544	113	20.	1 JAN 1724	163	5.
1 JAN 1226	14	4.	1 JAN 1406	64	6.	1 JAN 1546	114	21.	1 JAN 1726	164	5.
1 JAN 1228	15	4.	1 JAN 1408	65	6.	1 JAN 1548	115	22.	1 JAN 1728	165	5.
1 JAN 1230	16	4.	1 JAN 1410	66	6.	1 JAN 1550	116	23.	1 JAN 1730	166	5.
1 JAN 1232	17	4.	1 JAN 1412	67	6.	1 JAN 1552	117	24.	1 JAN 1732	167	5.
1 JAN 1234	18	4.	1 JAN 1414	68	6.	1 JAN 1554	118	25.	1 JAN 1734	168	4.
1 JAN 1236	19	4.	1 JAN 1416	69	6.	1 JAN 1556	119	37.	1 JAN 1736	169	4.
1 JAN 1238	20	4.	1 JAN 1418	70	6.	1 JAN 1558	120	48.	1 JAN 1738	170	4.
1 JAN 1240	21	4.	1 JAN 1420	71	6.	1 JAN 1600	121	60.	1 JAN 1740	171	4.
1 JAN 1242	22	4.	1 JAN 1422	72	6.	1 JAN 1602	122	71.	1 JAN 1742	172	4.
1 JAN 1244	23	4.	1 JAN 1424	73	7.	1 JAN 1604	123	83.	1 JAN 1744	173	4.
1 JAN 1246	24	4.	1 JAN 1426	74	7.	1 JAN 1606	124	94.	1 JAN 1746	174	4.
1 JAN 1248	25	4.	1 JAN 1428	75	7.	1 JAN 1608	125	81.	1 JAN 1748	175	4.
1 JAN 1250	26	4.	1 JAN 1430	76	7.	1 JAN 1610	126	68.	1 JAN 1750	176	4.
1 JAN 1252	27	4.	1 JAN 1432	77	7.	1 JAN 1612	127	55.	1 JAN 1752	177	4.
1 JAN 1254	28	4.	1 JAN 1434	78	7.	1 JAN 1614	128	41.	1 JAN 1754	178	4.
1 JAN 1256	29	4.	1 JAN 1436	79	7.	1 JAN 1616	129	28.	1 JAN 1756	179	3.
1 JAN 1258	30	4.	1 JAN 1438	80	7.	1 JAN 1618	130	15.	1 JAN 1758	180	3.
1 JAN 1300	31	4.	1 JAN 1440	81	7.	1 JAN 1620	131	14.	1 JAN 1800	181	2.
1 JAN 1302	32	4.	1 JAN 1442	82	7.	1 JAN 1622	132	13.	1 JAN 1802	182	1.
1 JAN 1304	33	4.	1 JAN 1444	83	7.	1 JAN 1624	133	12.	1 JAN 1804	183	1.

1 JAN 1306	34	5.	*	1 JAN 1446	84	8.	*	1 JAN 1626	134	12.	*	1 JAN 1806	184	0.
1 JAN 1308	35	5.	*	1 JAN 1448	85	8.	*	1 JAN 1628	135	11.	*	1 JAN 1808	185	0.
1 JAN 1310	36	5.	*	1 JAN 1450	86	8.	*	1 JAN 1630	136	10.	*	1 JAN 1810	186	0.
1 JAN 1312	37	5.	*	1 JAN 1452	87	8.	*	1 JAN 1632	137	10.	*	1 JAN 1812	187	0.
1 JAN 1314	38	5.	*	1 JAN 1454	88	8.	*	1 JAN 1634	138	9.	*	1 JAN 1814	188	0.
1 JAN 1316	39	5.	*	1 JAN 1456	89	9.	*	1 JAN 1636	139	9.	*	1 JAN 1816	189	0.
1 JAN 1318	40	5.	*	1 JAN 1458	90	9.	*	1 JAN 1638	140	9.	*	1 JAN 1818	190	0.
1 JAN 1320	41	5.	*	1 JAN 1500	91	9.	*	1 JAN 1640	141	8.	*	1 JAN 1820	191	0.
1 JAN 1322	42	5.	*	1 JAN 1502	92	9.	*	1 JAN 1642	142	8.	*	1 JAN 1822	192	0.
1 JAN 1324	43	5.	*	1 JAN 1504	93	9.	*	1 JAN 1644	143	8.	*	1 JAN 1824	193	0.
1 JAN 1326	44	5.	*	1 JAN 1506	94	9.	*	1 JAN 1646	144	7.	*	1 JAN 1826	194	0.
1 JAN 1328	45	5.	*	1 JAN 1508	95	9.	*	1 JAN 1648	145	7.	*	1 JAN 1828	195	0.
1 JAN 1330	46	5.	*	1 JAN 1510	96	10.	*	1 JAN 1650	146	7.	*	1 JAN 1830	196	0.
1 JAN 1332	47	5.	*	1 JAN 1512	97	10.	*	1 JAN 1652	147	7.	*	1 JAN 1832	197	0.
1 JAN 1334	48	5.	*	1 JAN 1514	98	10.	*	1 JAN 1654	148	7.	*	1 JAN 1834	198	0.
1 JAN 1336	49	5.	*	1 JAN 1516	99	11.	*	1 JAN 1656	149	6.	*	1 JAN 1836	199	0.
1 JAN 1338	50	5.	*	1 JAN 1518	100	11.	*	1 JAN 1658	150	6.	*	1 JAN 1838	200	0.
			*				*				*			

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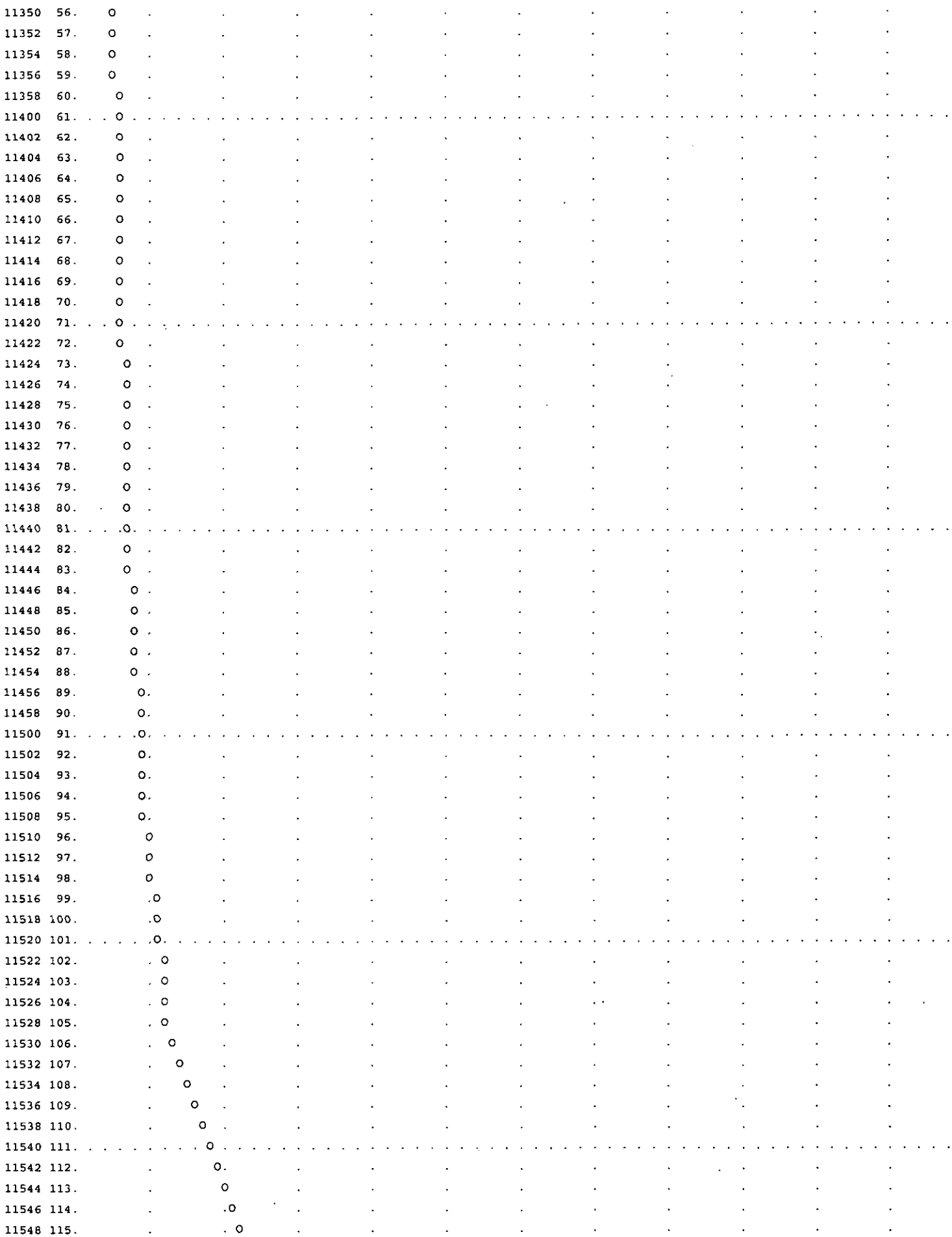
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	6.63-HR
94.	4.10	(CFS)	10.	9.	9.	9.
		(INCHES)	1.213	1.215	1.215	1.215
		(AC-FT)	5.	5.	5.	5.

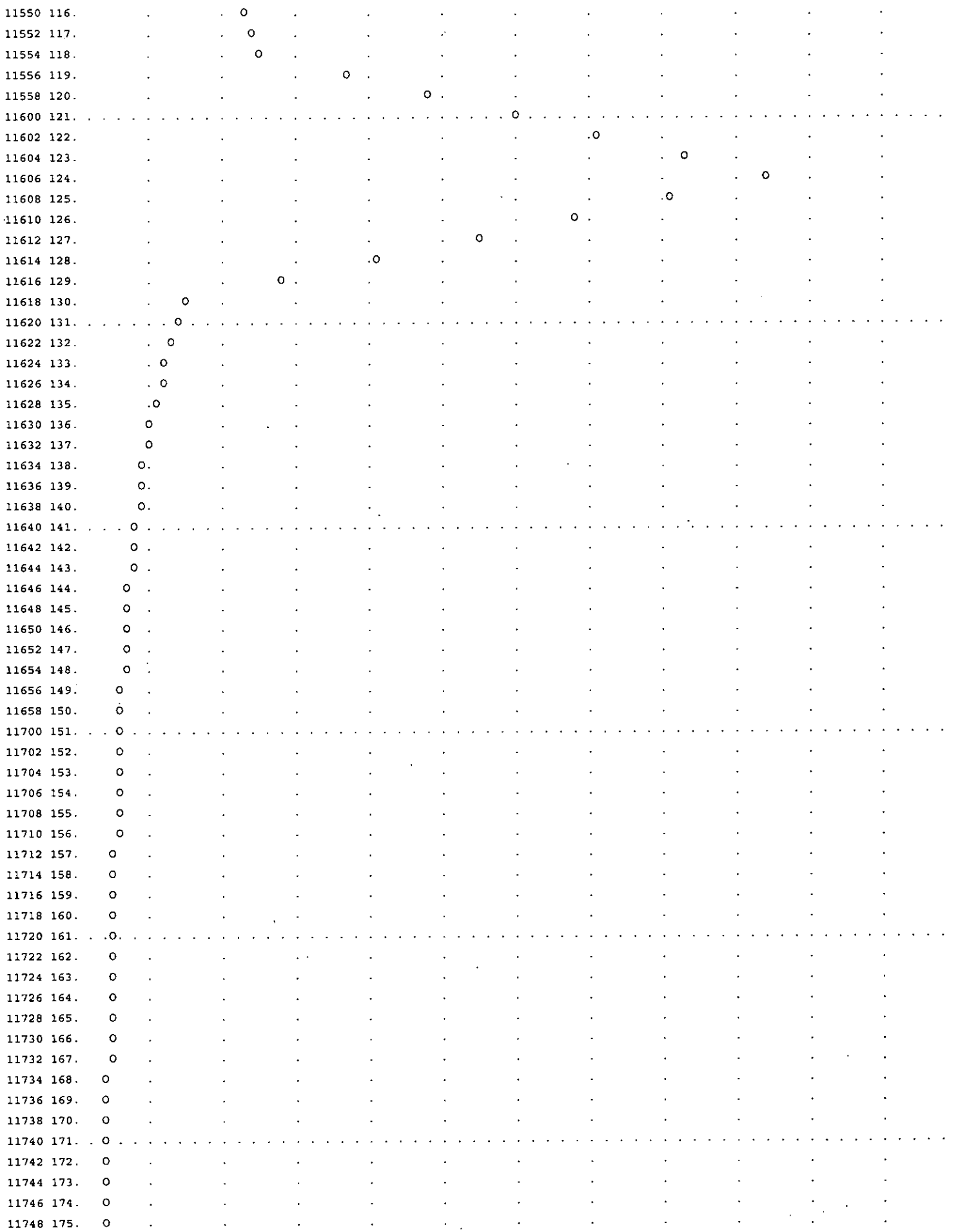
CUMULATIVE AREA = .08 SQ MI

STATION 2000A

(O) OUTFLOW

DAHRMN	PER	0.	10.	20.	30.	40.	50.	60.	70.	80.	90.	100.	0.	0
11200	1.	O												
11202	2.	O												
11204	3.	O												
11206	4.	O												
11208	5.	O												
11210	6.	O												
11212	7.	O												
11214	8.	O												
11216	9.	O												
11218	10.	O												
11220	11.	O												
11222	12.	O												
11224	13.	O												
11226	14.	O												
11228	15.	O												
11230	16.	O												
11232	17.	O												
11234	18.	O												
11236	19.	O												
11238	20.	O												
11240	21.	O												
11242	22.	O												
11244	23.	O												
11246	24.	O												
11248	25.	O												
11250	26.	O												
11252	27.	O												
11254	28.	O												
11256	29.	O												
11258	30.	O												
11300	31.	O												
11302	32.	O												
11304	33.	O												
11306	34.	O												
11308	35.	O												
11310	36.	O												
11312	37.	O												
11314	38.	O												
11316	39.	O												
11318	40.	O												
11320	41.	O												
11322	42.	O												
11324	43.	O												
11326	44.	O												
11328	45.	O												
11330	46.	O												
11332	47.	O												
11334	48.	O												
11336	49.	O												
11338	50.	O												
11340	51.	O												
11342	52.	O												
11344	53.	O												
11346	54.	O												
11348	55.	O												

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11552 117.
11554 118.
11556 119.
11558 120.
11600 121.
11602 122.
11604 123.
11606 124.
11608 125.
11610 126.
11612 127.
11614 128.
11616 129.
11618 130.
11620 131.
11622 132.
11624 133.
11626 134.
11628 135.
11630 136.
11632 137.
11634 138.
11636 139.
11638 140.
11640 141.
11642 142.
11644 143.
11646 144.
11648 145.
11650 146.
11652 147.
11654 148.
11656 149.
11658 150.
11700 151.
11702 152.
11704 153.
11706 154.
11708 155.
11710 156.
11712 157.
11714 158.
11716 159.
11718 160.
11720 161.
11722 162.
11724 163.
11726 164.
11728 165.
11730 166.
11732 167.
11734 168.
11736 169.
11738 170.
11740 171.
11742 172.
11744 173.
11746 174.
11748 175.

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11750 176.   O
11752 177.   O
11754 178.   O
11756 179.  O
11758 180.  O
11800 181. O
11802 182.O
11804 183.O
11806 184O
11808 185O
11810 186O
11812 187O
11814 188O
11816 189O
11818 190O
11820 191O
11822 192O
11824 193O
11826 194O
11828 195O
11830 196O
11832 197O
11834 198O
11836 199O
11838 200O
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          **************
          *            *
 16 KK    *    DETAIN  *
          *            *
          **************
                        100-YEAR DETENTION

 18 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           0  PRINT CONTROL
                      IPLOT           2  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2         200  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .033  TIME INTERVAL IN HOURS

             HYDROGRAPH ROUTING DATA

 19 RS          STORAGE ROUTING
                      NSTPS           1  NUMBER OF SUBREACHES
                       ITYP        STOR  TYPE OF INITIAL CONDITION
                     RSVRIC       -1.00  INITIAL CONDITION
                          X         .00 WORKING R AND D COEFFICIENT

 20 SV            STORAGE          .0        .2        .4        .5        .9

 21 SQ          DISCHARGE          0.        4.        6.       36.       71.

 22 SE          ELEVATION      100.00    101.95    103.00    104.01    105.00

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WARNING --- ROUTED OUTFLOW (     71.) IS GREATER THAN MAXIMUM OUTFLOW (     71.) IN STORAGE-OUTFLOW TABLE
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HYDROGRAPH AT STATION DETAIN

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	JAN	1200	1	2.	.1	101.0	1	JAN	1414	68	5.	.3	102.5	1	JAN	1628	135	16.	.4	103.3
1	JAN	1202	2	2.	.1	101.0	1	JAN	1416	69	5.	.3	102.6	1	JAN	1630	136	14.	.4	103.3
1	JAN	1204	3	2.	.1	101.0	1	JAN	1418	70	5.	.3	102.6	1	JAN	1632	137	12.	.4	103.2
1	JAN	1206	4	2.	.1	101.1	1	JAN	1420	71	5.	.3	102.6	1	JAN	1634	138	11.	.4	103.2
1	JAN	1208	5	2.	.1	101.1	1	JAN	1422	72	5.	.3	102.6	1	JAN	1636	139	10.	.4	103.1
1	JAN	1210	6	2.	.1	101.1	1	JAN	1424	73	5.	.3	102.7	1	JAN	1638	140	10.	.4	103.1
1	JAN	1212	7	2.	.1	101.2	1	JAN	1426	74	5.	.3	102.7	1	JAN	1640	141	9.	.4	103.1
1	JAN	1214	8	2.	.1	101.2	1	JAN	1428	75	5.	.3	102.7	1	JAN	1642	142	9.	.4	103.1
1	JAN	1216	9	2.	.1	101.3	1	JAN	1430	76	5.	.3	102.7	1	JAN	1644	143	8.	.4	103.1

1 JAN	1218	10	2.	.1	101.3	*	1 JAN	1432	77	5.	.3	102.8	*	1 JAN	1646	144	8.	.4	103.1
1 JAN	1220	11	2.	.1	101.3	*	1 JAN	1434	78	6.	.3	102.8	*	1 JAN	1648	145	8.	.4	103.1
1 JAN	1222	12	3.	.1	101.4	*	1 JAN	1436	79	6.	.3	102.8	*	1 JAN	1650	146	7.	.4	103.0
1 JAN	1224	13	3.	.2	101.4	*	1 JAN	1438	80	6.	.3	102.9	*	1 JAN	1652	147	7.	.4	103.0
1 JAN	1226	14	3.	.2	101.4	*	1 JAN	1440	81	6.	.3	102.9	*	1 JAN	1654	148	7.	.4	103.0
1 JAN	1228	15	3.	.2	101.5	*	1 JAN	1442	82	6.	.3	102.9	*	1 JAN	1656	149	7.	.4	103.0
1 JAN	1230	16	3.	.2	101.5	*	1 JAN	1444	83	6.	.4	103.0	*	1 JAN	1658	150	7.	.4	103.0
1 JAN	1232	17	3.	.2	101.5	*	1 JAN	1446	84	6.	.4	103.0	*	1 JAN	1700	151	6.	.4	103.0
1 JAN	1234	18	3.	.2	101.6	*	1 JAN	1448	85	6.	.4	103.0	*	1 JAN	1702	152	6.	.4	103.0
1 JAN	1236	19	3.	.2	101.6	*	1 JAN	1450	86	7.	.4	103.0	*	1 JAN	1704	153	6.	.4	103.0
1 JAN	1238	20	3.	.2	101.6	*	1 JAN	1452	87	7.	.4	103.0	*	1 JAN	1706	154	6.	.4	103.0
1 JAN	1240	21	3.	.2	101.6	*	1 JAN	1454	88	8.	.4	103.1	*	1 JAN	1708	155	6.	.4	103.0
1 JAN	1242	22	3.	.2	101.7	*	1 JAN	1456	89	8.	.4	103.1	*	1 JAN	1710	156	6.	.4	103.0
1 JAN	1244	23	3.	.2	101.7	*	1 JAN	1458	90	8.	.4	103.1	*	1 JAN	1712	157	6.	.4	103.0
1 JAN	1246	24	3.	.2	101.7	*	1 JAN	1500	91	8.	.4	103.1	*	1 JAN	1714	158	6.	.4	103.0
1 JAN	1248	25	3.	.2	101.7	*	1 JAN	1502	92	9.	.4	103.1	*	1 JAN	1716	159	6.	.4	103.0
1 JAN	1250	26	3.	.2	101.8	*	1 JAN	1504	93	9.	.4	103.1	*	1 JAN	1718	160	6.	.4	102.9
1 JAN	1252	27	3.	.2	101.8	*	1 JAN	1506	94	9.	.4	103.1	*	1 JAN	1720	161	6.	.3	102.9
1 JAN	1254	28	3.	.2	101.8	*	1 JAN	1508	95	9.	.4	103.1	*	1 JAN	1722	162	6.	.3	102.9
1 JAN	1256	29	3.	.2	101.8	*	1 JAN	1510	96	9.	.4	103.1	*	1 JAN	1724	163	6.	.3	102.9
1 JAN	1258	30	3.	.2	101.9	*	1 JAN	1512	97	10.	.4	103.1	*	1 JAN	1726	164	6.	.3	102.9
1 JAN	1300	31	4.	.2	101.9	*	1 JAN	1514	98	10.	.4	103.1	*	1 JAN	1728	165	6.	.3	102.9
1 JAN	1302	32	4.	.2	101.9	*	1 JAN	1516	99	10.	.4	103.1	*	1 JAN	1730	166	6.	.3	102.8
1 JAN	1304	33	4.	.2	101.9	*	1 JAN	1518	100	10.	.4	103.1	*	1 JAN	1732	167	6.	.3	102.8
1 JAN	1306	34	4.	.2	101.9	*	1 JAN	1520	101	11.	.4	103.2	*	1 JAN	1734	168	6.	.3	102.8
1 JAN	1308	35	4.	.2	102.0	*	1 JAN	1522	102	11.	.4	103.2	*	1 JAN	1736	169	5.	.3	102.8
1 JAN	1310	36	4.	.2	102.0	*	1 JAN	1524	103	11.	.4	103.2	*	1 JAN	1738	170	5.	.3	102.8
1 JAN	1312	37	4.	.2	102.0	*	1 JAN	1526	104	12.	.4	103.2	*	1 JAN	1740	171	5.	.3	102.7
1 JAN	1314	38	4.	.2	102.0	*	1 JAN	1528	105	12.	.4	103.2	*	1 JAN	1742	172	5.	.3	102.7
1 JAN	1316	39	4.	.2	102.0	*	1 JAN	1530	106	12.	.4	103.2	*	1 JAN	1744	173	5.	.3	102.7
1 JAN	1318	40	4.	.2	102.0	*	1 JAN	1532	107	12.	.4	103.2	*	1 JAN	1746	174	5.	.3	102.7
1 JAN	1320	41	4.	.2	102.1	*	1 JAN	1534	108	13.	.4	103.2	*	1 JAN	1748	175	5.	.3	102.7
1 JAN	1322	42	4.	.2	102.1	*	1 JAN	1536	109	14.	.4	103.3	*	1 JAN	1750	176	5.	.3	102.6
1 JAN	1324	43	4.	.2	102.1	*	1 JAN	1538	110	15.	.4	103.3	*	1 JAN	1752	177	5.	.3	102.6
1 JAN	1326	44	4.	.2	102.1	*	1 JAN	1540	111	16.	.4	103.3	*	1 JAN	1754	178	5.	.3	102.6
1 JAN	1328	45	4.	.2	102.1	*	1 JAN	1542	112	17.	.4	103.4	*	1 JAN	1756	179	5.	.3	102.6
1 JAN	1330	46	4.	.2	102.1	*	1 JAN	1544	113	18.	.4	103.4	*	1 JAN	1758	180	5.	.3	102.5
1 JAN	1332	47	4.	.2	102.2	*	1 JAN	1546	114	19.	.4	103.4	*	1 JAN	1800	181	5.	.3	102.5
1 JAN	1334	48	4.	.2	102.2	*	1 JAN	1548	115	20.	.4	103.5	*	1 JAN	1802	182	5.	.3	102.4
1 JAN	1336	49	4.	.2	102.2	*	1 JAN	1550	116	21.	.4	103.5	*	1 JAN	1804	183	5.	.3	102.3
1 JAN	1338	50	4.	.2	102.2	*	1 JAN	1552	117	22.	.4	103.5	*	1 JAN	1806	184	4.	.3	102.3
1 JAN	1340	51	4.	.2	102.2	*	1 JAN	1554	118	23.	.5	103.6	*	1 JAN	1808	185	4.	.2	102.2
1 JAN	1342	52	4.	.3	102.2	*	1 JAN	1556	119	26.	.5	103.7	*	1 JAN	1810	186	4.	.2	102.1
1 JAN	1344	53	4.	.3	102.3	*	1 JAN	1558	120	33.	.5	103.9	*	1 JAN	1812	187	4.	.2	102.0
1 JAN	1346	54	4.	.3	102.3	*	1 JAN	1600	121	39.	.6	104.1	*	1 JAN	1814	188	4.	.2	102.0
1 JAN	1348	55	4.	.3	102.3	*	1 JAN	1602	122	46.	.6	104.3	*	1 JAN	1816	189	3.	.2	101.9
1 JAN	1350	56	4.	.3	102.3	*	1 JAN	1604	123	54.	.7	104.5	*	1 JAN	1818	190	3.	.2	101.8
1 JAN	1352	57	4.	.3	102.3	*	1 JAN	1606	124	63.	.8	104.8	*	1 JAN	1820	191	3.	.2	101.7
1 JAN	1354	58	5.	.3	102.3	*	1 JAN	1608	125	69.	.8	105.0	*	1 JAN	1822	192	3.	.2	101.6
1 JAN	1356	59	5.	.3	102.4	*	1 JAN	1610	126	71.	.9	105.0	*	1 JAN	1824	193	3.	.2	101.5
1 JAN	1358	60	5.	.3	102.4	*	1 JAN	1612	127	68.	.8	104.9	*	1 JAN	1826	194	3.	.2	101.5
1 JAN	1400	61	5.	.3	102.4	*	1 JAN	1614	128	63.	.8	104.8	*	1 JAN	1828	195	3.	.2	101.4
1 JAN	1402	62	5.	.3	102.4	*	1 JAN	1616	129	56.	.7	104.6	*	1 JAN	1830	196	2.	.1	101.3
1 JAN	1404	63	5.	.3	102.4	*	1 JAN	1618	130	47.	.6	104.3	*	1 JAN	1832	197	2.	.1	101.3
1 JAN	1406	64	5.	.3	102.5	*	1 JAN	1620	131	39.	.6	104.1	*	1 JAN	1834	198	2.	.1	101.2
1 JAN	1408	65	5.	.3	102.5	*	1 JAN	1622	132	30.	.5	103.8	*	1 JAN	1836	199	2.	.1	101.2
1 JAN	1410	66	5.	.3	102.5	*	1 JAN	1624	133	23.	.5	103.6	*	1 JAN	1838	200	2.	.1	101.1
1 JAN	1412	67	5.	.3	102.5	*	1 JAN	1626	134	19.	.4	103.4	*						
						*							*						

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	6.63-HR
71.	4.17	(CFS)	10.	9.	9.	9.
		(INCHES)	1.184	1.212	1.212	1.212
		(AC-FT)	5.	5.	5.	5.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)	6-HR	24-HR	72-HR	6.63-HR
1.	4.17	0.	0.	0.	0.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)	6-HR	24-HR	72-HR	6.63-HR
105.00	4.17	102.75	102.60	102.60	102.60

CUMULATIVE AREA = .08 SQ MI

STATION DETAIN

(I) INFLOW, (O) OUTFLOW

(S) STORAGE

DAHRMN	PER		0.	20.	40.	60.	80.	100.	0.	0.	0.	0.	0.	0.	0
			.0	.0	.0	.0	.0	.0	.0	.2	.4	.6	.8	1.0	.
11200	1.	I								S					
11202	2.	I								S					
11204	3.	OI								S					
11206	4.	OI								S					
11208	5.	OI								S					
11210	6.	OI								S					
11212	7.	OI								S					
11214	8.	OI								S					
11216	9.	OI								S					
11218	10.	OI								S					
11220	11.	OI								S					
11222	12.	OI								S					
11224	13.	OI								S					
11226	14.	OI								S					
11228	15.	OI								S					
11230	16.	OI								S					
11232	17.	OI								S					
11234	18.	OI								S					
11236	19.	OI								S					
11238	20.	I								S					
11240	21.	I								S					
11242	22.	I								S					
11244	23.	I								S					
11246	24.	I								S					
11248	25.	I								S					
11250	26.	I								S					
11252	27.	I								S					
11254	28.	I								S					
11256	29.	I								S					
11258	30.	I								S					
11300	31.	I								S					
11302	32.	I								S					
11304	33.	I								S					
11306	34.	I								S					
11308	35.	I								S					
11310	36.	I								S					
11312	37.	I								S					
11314	38.	I								S					
11316	39.	I								S					
11318	40.	I								S					
11320	41.	I								S					
11322	42.	I								S					
11324	43.	I									S				
11326	44.	I									S				
11328	45.	I									S				
11330	46.	I									S				
11332	47.	I									S				
11334	48.	OI									S				
11336	49.	OI									S				
11338	50.	OI									S				
11340	51.	OI									S				
11342	52.	OI										S			
11344	53.	OI										S			

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11346  54. OI      .         .         .         .         .         .         .  S      .         .         .         .
11348  55. OI      .         .         .         .         .         .         .  S      .         .         .         .
11350  56. OI      .         .         .         .         .         .         .  S      .         .         .         .
11352  57. OI      .         .         .         .         .         .         .  S      .         .         .         .
11354  58. OI      .         .         .         .         .         .         .  S      .         .         .         .
11356  59. OI      .         .         .         .         .         .         .  S      .         .         .         .
11358  60. OI      .         .         .         .         .         .         .   S     .         .         .         .
11400  61. OI.     .         .         .         .         .         .         .   S     .         .         .         .
11402  62. OI      .         .         .         .         .         .         .   S     .         .         .         .
11404  63. OI      .         .         .         .         .         .         .   S     .         .         .         .
11406  64. OI      .         .         .         .         .         .         .   S     .         .         .         .
11408  65. OI      .         .         .         .         .         .         .   S     .         .         .         .
11410  66. OI      .         .         .         .         .         .         .   S     .         .         .         .
11412  67. OI      .         .         .         .         .         .         .    S    .         .         .         .
11414  68. OI      .         .         .         .         .         .         .    S    .         .         .         .
11416  69.  I      .         .         .         .         .         .         .    S    .         .         .         .
11418  70.  I      .         .         .         .         .         .         .    S    .         .         .         .
11420  71. .I.     .         .         .         .         .         .         .    S.   .         .         .         .
11422  72.  I      .         .         .         .         .         .         .    S    .         .         .         .
11424  73.  I      .         .         .         .         .         .         .     S   .         .         .         .
11426  74.  I      .         .         .         .         .         .         .     S   .         .         .         .
11428  75.  I      .         .         .         .         .         .         .     S   .         .         .         .
11430  76.  I      .         .         .         .         .         .         .     S   .         .         .         .
11432  77.  I      .         .         .         .         .         .         .     S   .         .         .         .
11434  78.  OI     .         .         .         .         .         .         .      S  .         .         .         .
11436  79.  OI     .         .         .         .         .         .         .      S  .         .         .         .
11438  80.  OI     .         .         .         .         .         .         .      S  .         .         .         .
11440  81. .OI     .         .         .         .         .         .         .     .S. .         .         .         .
11442  82.  OI     .         .         .         .         .         .         .      S  .         .         .         .
11444  83.  OI     .         .         .         .         .         .         .       S .         .         .         .
11446  84.  OI     .         .         .         .         .         .         .       S .         .         .         .
11448  85.  OI     .         .         .         .         .         .         .       S .         .         .         .
11450  86.  OI     .         .         .         .         .         .         .       S .         .         .         .
11452  87.   I     .         .         .         .         .         .         .       S .         .         .         .
11454  88.   I     .         .         .         .         .         .         .        S.         .         .         .
11456  89.   I     .         .         .         .         .         .         .        S.         .         .         .
11458  90.   I     .         .         .         .         .         .         .        S.         .         .         .
11500  91.  .I     .         .         .         .         .         .         .        S.         .         .         .
11502  92.   I     .         .         .         .         .         .         .        S.         .         .         .
11504  93.   I     .         .         .         .         .         .         .        S.         .         .         .
11506  94.   OI    .         .         .         .         .         .         .        S.         .         .         .
11508  95.    I    .         .         .         .         .         .         .        S.         .         .         .
11510  96.    I    .         .         .         .         .         .         .        S.         .         .         .
11512  97.    I    .         .         .         .         .         .         .        S.         .         .         .
11514  98.    I    .         .         .         .         .         .         .        S.         .         .         .
11516  99.    I    .         .         .         .         .         .         .        S.         .         .         .
11518 100.    OI   .         .         .         .         .         .         .        S.         .         .         .
11520 101.   .OI   .         .         .         .         .         .         .        S.         .         .         .
11522 102.     I   .         .         .         .         .         .         .        S.         .         .         .
11524 103.     I   .         .         .         .         .         .         .        S.         .         .         .
11526 104.     I   .         .         .         .         .         .         .         S         .         .         .
11528 105.     I   .         .         .         .         .         .         .         S         .         .         .
11530 106.     I   .         .         .         .         .         .         .         S         .         .         .
11532 107.    OI   .         .         .         .         .         .         .         S         .         .         .
11534 108.     I   .         .         .         .         .         .         .         S         .         .         .
11536 109.    OI   .         .         .         .         .         .         .         S         .         .         .
11538 110.    OI   .         .         .         .         .         .         .         S         .         .         .
11540 111.   . . OI.         .         .         .         .         .         .         .S.       .         .         .
11542 112.     OI.           .         .         .         .         .         .         .S        .         .         .
11544 113.      OI           .         .         .         .         .         .         .S        .         .         .
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11546 114.         OI         .         .         .         .         .         .         . S       .         .         .
11548 115.          OI        .         .         .         .         .         .         . S       .         .         .
11550 116.          OI        .         .         .         .         .         .         . S       .         .         .
11552 117.          .OI       .         .         .         .         .         .         . S       .         .         .
11554 118.          .O I      .         .         .         .         .         .         .  S      .         .         .
11556 119.          .  O    I .         .         .         .         .         .         .   S     .         .         .
11558 120.          .     O   .   I     .         .         .         .         .         .    S    .         .         .
11600 121. . . . . . . . . . .O. . . . .I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . .
11602 122.          .         .  O      .     I   .         .         .         .         .         .S        .         .
11604 123.          .         .      O  .         .I        .         .         .         .         .    S    .         .
11606 124.          .         .         .O        .      I  .         .         .         .         .        S.         .
11608 125.          .         .         .    O    .I        .         .         .         .         .         . S       .
11610 126.          .         .         .   IO    .         .         .         .         .         .         .  S      .
11612 127.          .         .      I -.   O     .         .         .         .         .         .         .S        .
11614 128.          .        ..I        . O       .         .         .         .         .         .        S.         .
11616 129.          .   I     .       O .         .         .         .         .         .     S   .         .
11618 130.       I  .         .   O     .         .         .         .         .         .         .S        .         .
11620 131. . . .I. . . . . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . .
11622 132.       I  .    O    .         .         .         .         .         .         .    S    .         .         .
11624 133.      I   . O       .         .         .         .         .         .         .  S      .         .         .
11626 134.      I  O.         .         .         .         .         .         .         . S       .         .         .
11628 135.     I  O .         .         .         .         .         .         .         .S        .         .         .
11630 136.     I O  .         .         .         .         .         .         .         S         .         .         .
11632 137.     IO   .         .         .         .         .         .         .         S         .         .         .
11634 138.     I    .         .         .         .         .         .         .        S.         .         .         .
11636 139.   IO     .         .         .         .         .         .         .        S.         .         .         .
11638 140.   IO     .         .         .         .         .         .         .        S.         .         .         .
11640 141. . IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . .
11642 142.   I      .         .         .         .         .         .         .        S.         .         .         .
11644 143.   I      .         .         .         .         .         .         .        S.         .         .         .
11646 144.   I      .         .         .         .         .         .         .        S.         .         .         .
11648 145.   I      .         .         .         .         .         .         .       S .         .         .         .
11650 146.  IO      .         .         .         .         .         .         .       S .         .         .         .
11652 147.  IO      .         .         .         .         .         .         .       S .         .         .         .
11654 148.  I       .         .         .         .         .         .         .       S .         .         .         .
11656 149.  I       .         .         .         .         .         .         .       S .         .         .         .
11658 150.  I       .         .         .         .         .         .         .       S .         .         .         .
11700 151. .I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . .
11702 152.  I       .         .         .         .         .         .         .       S .         .         .         .
11704 153.  I       .         .         .         .         .         .         .       S .         .         .         .
11706 154.  I       .         .         .         .         .         .         .       S .         .         .         .
11708 155.  I       .         .         .         .         .         .         .       S .         .         .         .
11710 156.  I       .         .         .         .         .         .         .       S .         .         .         .
11712 157.  I       .         .         .         .         .         .         .       S .         .         .         .
11714 158.  I       .         .         .         .         .         .         .       S .         .         .         .
11716 159.  I       .         .         .         .         .         .         .       S .         .         .         .
11718 160.  I       .         .         .         .         .         .         .       S .         .         .         .
11720 161. .I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . .
11722 162. IO       .         .         .         .         .         .         .      S  .         .         .         .
11724 163. IO       .         .         .         .         .         .         .      S  .         .         .         .
11726 164. IO       .         .         .         .         .         .         .      S  .         .         .         .
11728 165. IO       .         .         .         .         .         .         .      S  .         .         .         .
11730 166. IO       .         .         .         .         .         .         .      S  .         .         .         .
11732 167. IO       .         .         .         .         .         .         .      S  .         .         .         .
11734 168. IO       .         .         .         .         .         .         .      S  .         .         .         .
11736 169. IO       .         .         .         .         .         .         .     S   .         .         .         .
11738 170. IO       .         .         .         .         .         .         .     S   .         .         .         .
11740 171. IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . .
11742 172. IO       .         .         .         .         .         .         .     S   .         .         .         .
11744 173. IO       .         .         .         .         .         .         .     S   .         .         .         .
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11746 174. IO      .         .         .         .         .         .         .         S         .         .         .         .
11748 175. IO      .         .         .         .         .         .         .         S         .         .         .         .
11750 176. IO      .         .         .         .         .         .         .         S         .         .         .         .
11752 177. IO      .         .         .         .         .         .         .         S         .         .         .         .
11754 178. IO      .         .         .         .         .         .         .         S         .         .         .         .
11756 179. I       .         .         .         .         .         .         .         S         .         .         .         .
11758 180.IO       .         .         .         .         .         .         .         S         .         .         .         .
11800 181.IO       .         .         .         .         .         .         .         S         .         .         .         .
11802 182.IO       .         .         .         .         .         .         .         S         .         .         .         .
11804 183I O       .         .         .         .         .         .         .         S         .         .         .         .
11806 184I O       .         .         .         .         .         .         .         S         .         .         .         .
11808 185I O       .         .         .         .         .         .         .         S         .         .         .         .
11810 186I O       .         .         .         .         .         .         .         S         .         .         .         .
11812 187I O       .         .         .         .         .         .         .         S         .         .         .         .
11814 188I O       .         .         .         .         .         .         .         S         .         .         .         .
11816 189I O       .         .         .         .         .         .         .         S         .         .         .         .
11818 190I O       .         .         .         .         .         .         .         S         .         .         .         .
11820 191I O       .         .         .         .         .         .         .         S         .         .         .         .
11822 192I O       .         .         .         .         .         .         .         S         .         .         .         .
11824 193IO        .         .         .         .         .         .         .         S         .         .         .         .
11826 194IO        .         .         .         .         .         .         .         S         .         .         .         .
11828 195IO        .         .         .         .         .         .         .         S         .         .         .         .
11830 196IO        .         .         .         .         .         .         .         S         .         .         .         .
11832 197IO        .         .         .         .         .         .         .         S         .         .         .         .
11834 198IO        .         .         .         .         .         .         .         S         .         .         .         .
11836 199IO        .         .         .         .         .         .         .         S         .         .         .         .
11838 200IO--------.---------.---------.---------.---------.---------.---------S---------.---------.---------.---------.---------
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          *            *
 23 KK    *   MW2000B  *
          *            *
          **************
                         RUN DATE   1/12/2009
                         RATIONAL METHOD HYDROGRAPH PROGRAM
                         COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
                         6HR RAINFALL IS  3.6  INCHES
                         RATIONAL METHOD RUNOFF COEFFICIENT IS  0.3
                         RATIONAL METHOD TIME OF CONCENTRATION IS  11  MIN.
                         FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
                         IT 2 01JAN90 1200 200

 32 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           0  PRINT CONTROL
                      IPLOT           2  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2         200  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .033  TIME INTERVAL IN HOURS


 34 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN          11  TIME INTERVAL IN MINUTES
                     JXDATE      1JAN90  STARTING DATE
                     JXTIME        1153  STARTING TIME

            SUBBASIN RUNOFF DATA

 33 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .01  SUBBASIN AREA

                                                          ***

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                                          HYDROGRAPH AT STATION  MW2000B

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DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW
1 JAN 1200	1	0.	*	1 JAN 1340	51	1.	*	1 JAN 1520	101	2.	*	1 JAN 1700	151	1.
1 JAN 1202	2	0.	*	1 JAN 1342	52	1.	*	1 JAN 1522	102	2.	*	1 JAN 1702	152	1.
1 JAN 1204	3	1.	*	1 JAN 1344	53	1.	*	1 JAN 1524	103	2.	*	1 JAN 1704	153	1.
1 JAN 1206	4	1.	*	1 JAN 1346	54	1.	*	1 JAN 1526	104	2.	*	1 JAN 1706	154	1.
1 JAN 1208	5	1.	*	1 JAN 1348	55	1.	*	1 JAN 1528	105	2.	*	1 JAN 1708	155	1.
1 JAN 1210	6	1.	*	1 JAN 1350	56	1.	*	1 JAN 1530	106	2.	*	1 JAN 1710	156	1.
1 JAN 1212	7	1.	*	1 JAN 1352	57	1.	*	1 JAN 1532	107	2.	*	1 JAN 1712	157	1.
1 JAN 1214	8	1.	*	1 JAN 1354	58	1.	*	1 JAN 1534	108	2.	*	1 JAN 1714	158	1.

1 JAN 1216	9	1.	*	1 JAN 1356	59	1.	*	1 JAN 1536	109	2.	*	1 JAN 1716	159	1.
1 JAN 1218	10	1.	*	1 JAN 1358	60	1.	*	1 JAN 1538	110	2.	*	1 JAN 1718	160	1.
1 JAN 1220	11	1.	*	1 JAN 1400	61	1.	*	1 JAN 1540	111	3.	*	1 JAN 1720	161	1.
1 JAN 1222	12	1.	*	1 JAN 1402	62	1.	*	1 JAN 1542	112	3.	*	1 JAN 1722	162	1.
1 JAN 1224	13	1.	*	1 JAN 1404	63	1.	*	1 JAN 1544	113	3.	*	1 JAN 1724	163	1.
1 JAN 1226	14	1.	*	1 JAN 1406	64	1.	*	1 JAN 1546	114	3.	*	1 JAN 1726	164	1.
1 JAN 1228	15	1.	*	1 JAN 1408	65	1.	*	1 JAN 1548	115	3.	*	1 JAN 1728	165	1.
1 JAN 1230	16	1.	*	1 JAN 1410	66	1.	*	1 JAN 1550	116	3.	*	1 JAN 1730	166	1.
1 JAN 1232	17	1.	*	1 JAN 1412	67	1.	*	1 JAN 1552	117	4.	*	1 JAN 1732	167	1.
1 JAN 1234	18	1.	*	1 JAN 1414	68	1.	*	1 JAN 1554	118	4.	*	1 JAN 1734	168	1.
1 JAN 1236	19	1.	*	1 JAN 1416	69	1.	*	1 JAN 1556	119	5.	*	1 JAN 1736	169	1.
1 JAN 1238	20	1.	*	1 JAN 1418	70	1.	*	1 JAN 1558	120	7.	*	1 JAN 1738	170	1.
1 JAN 1240	21	1.	*	1 JAN 1420	71	1.	*	1 JAN 1600	121	9.	*	1 JAN 1740	171	1.
1 JAN 1242	22	1.	*	1 JAN 1422	72	1.	*	1 JAN 1602	122	11.	*	1 JAN 1742	172	1.
1 JAN 1244	23	1.	*	1 JAN 1424	73	1.	*	1 JAN 1604	123	13.	*	1 JAN 1744	173	1.
1 JAN 1246	24	1.	*	1 JAN 1426	74	1.	*	1 JAN 1606	124	15.	*	1 JAN 1746	174	1.
1 JAN 1248	25	1.	*	1 JAN 1428	75	1.	*	1 JAN 1608	125	13.	*	1 JAN 1748	175	1.
1 JAN 1250	26	1.	*	1 JAN 1430	76	1.	*	1 JAN 1610	126	10.	*	1 JAN 1750	176	1.
1 JAN 1252	27	1.	*	1 JAN 1432	77	1.	*	1 JAN 1612	127	8.	*	1 JAN 1752	177	1.
1 JAN 1254	28	1.	*	1 JAN 1434	78	1.	*	1 JAN 1614	128	6.	*	1 JAN 1754	178	1.
1 JAN 1256	29	1.	*	1 JAN 1436	79	1.	*	1 JAN 1616	129	3.	*	1 JAN 1756	179	1.
1 JAN 1258	30	1.	*	1 JAN 1438	80	1.	*	1 JAN 1618	130	2.	*	1 JAN 1758	180	0.
1 JAN 1300	31	1.	*	1 JAN 1440	81	1.	*	1 JAN 1620	131	2.	*	1 JAN 1800	181	0.
1 JAN 1302	32	1.	*	1 JAN 1442	82	1.	*	1 JAN 1622	132	2.	*	1 JAN 1802	182	0.
1 JAN 1304	33	1.	*	1 JAN 1444	83	1.	*	1 JAN 1624	133	2.	*	1 JAN 1804	183	0.
1 JAN 1306	34	1.	*	1 JAN 1446	84	1.	*	1 JAN 1626	134	2.	*	1 JAN 1806	184	0.
1 JAN 1308	35	1.	*	1 JAN 1448	85	1.	*	1 JAN 1628	135	2.	*	1 JAN 1808	185	0.
1 JAN 1310	36	1.	*	1 JAN 1450	86	1.	*	1 JAN 1630	136	1.	*	1 JAN 1810	186	0.
1 JAN 1312	37	1.	*	1 JAN 1452	87	1.	*	1 JAN 1632	137	1.	*	1 JAN 1812	187	0.
1 JAN 1314	38	1.	*	1 JAN 1454	88	1.	*	1 JAN 1634	138	1.	*	1 JAN 1814	188	0.
1 JAN 1316	39	1.	*	1 JAN 1456	89	1.	*	1 JAN 1636	139	1.	*	1 JAN 1816	189	0.
1 JAN 1318	40	1.	*	1 JAN 1458	90	1.	*	1 JAN 1638	140	1.	*	1 JAN 1818	190	0.
1 JAN 1320	41	1.	*	1 JAN 1500	91	1.	*	1 JAN 1640	141	1.	*	1 JAN 1820	191	0.
1 JAN 1322	42	1.	*	1 JAN 1502	92	1.	*	1 JAN 1642	142	1.	*	1 JAN 1822	192	0.
1 JAN 1324	43	1.	*	1 JAN 1504	93	1.	*	1 JAN 1644	143	1.	*	1 JAN 1824	193	0.
1 JAN 1326	44	1.	*	1 JAN 1506	94	1.	*	1 JAN 1646	144	1.	*	1 JAN 1826	194	0.
1 JAN 1328	45	1.	*	1 JAN 1508	95	1.	*	1 JAN 1648	145	1.	*	1 JAN 1828	195	0.
1 JAN 1330	46	1.	*	1 JAN 1510	96	1.	*	1 JAN 1650	146	1.	*	1 JAN 1830	196	0.
1 JAN 1332	47	1.	*	1 JAN 1512	97	1.	*	1 JAN 1652	147	1.	*	1 JAN 1832	197	0.
1 JAN 1334	48	1.	*	1 JAN 1514	98	1.	*	1 JAN 1654	148	1.	*	1 JAN 1834	198	0.
1 JAN 1336	49	1.	*	1 JAN 1516	99	2.	*	1 JAN 1656	149	1.	*	1 JAN 1836	199	0.
1 JAN 1338	50	1.	*	1 JAN 1518	100	2.	*	1 JAN 1658	150	1.	*	1 JAN 1838	200	0.
			*				*				*			

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	6.63-HR
15.	4.10	(CFS)	2.	1.	1.	1.
		(INCHES)	1.071	1.074	1.074	1.074
		(AC-FT)	1.	1.	1.	1.

CUMULATIVE AREA = .01 SQ MI

STATION MW2000B

(O) OUTFLOW

DAHRMN	PER	0.	2.	4.	6.	8.	10.	12.	14.	16.	0.	0.	0.	0
11200	1.	O												
11202	2.	O												
11204	3.	O												
11206	4.	O												
11208	5.	O												
11210	6.	O												
11212	7.	O												
11214	8.	O												
11216	9.	O												
11218	10.	O												
11220	11.	O												
11222	12.	O												
11224	13.	O												
11226	14.	O												
11228	15.	O												
11230	16.	O												
11232	17.	O												
11234	18.	O												
11236	19.	O												
11238	20.	O												
11240	21.	O												
11242	22.	O												
11244	23.	O												
11246	24.	O												
11248	25.	O												
11250	26.	O												
11252	27.	O												
11254	28.	O												
11256	29.	O												
11258	30.	O												
11300	31.	O												
11302	32.	O												
11304	33.	O												
11306	34.	O												
11308	35.	O												
11310	36.	O												
11312	37.	O												
11314	38.	O												
11316	39.	O												
11318	40.	O												
11320	41.	O												
11322	42.	O												
11324	43.	O												
11326	44.	O												
11328	45.	O												
11330	46.	O												
11332	47.	O												
11334	48.	O												
11336	49.	O												
11338	50.	O												
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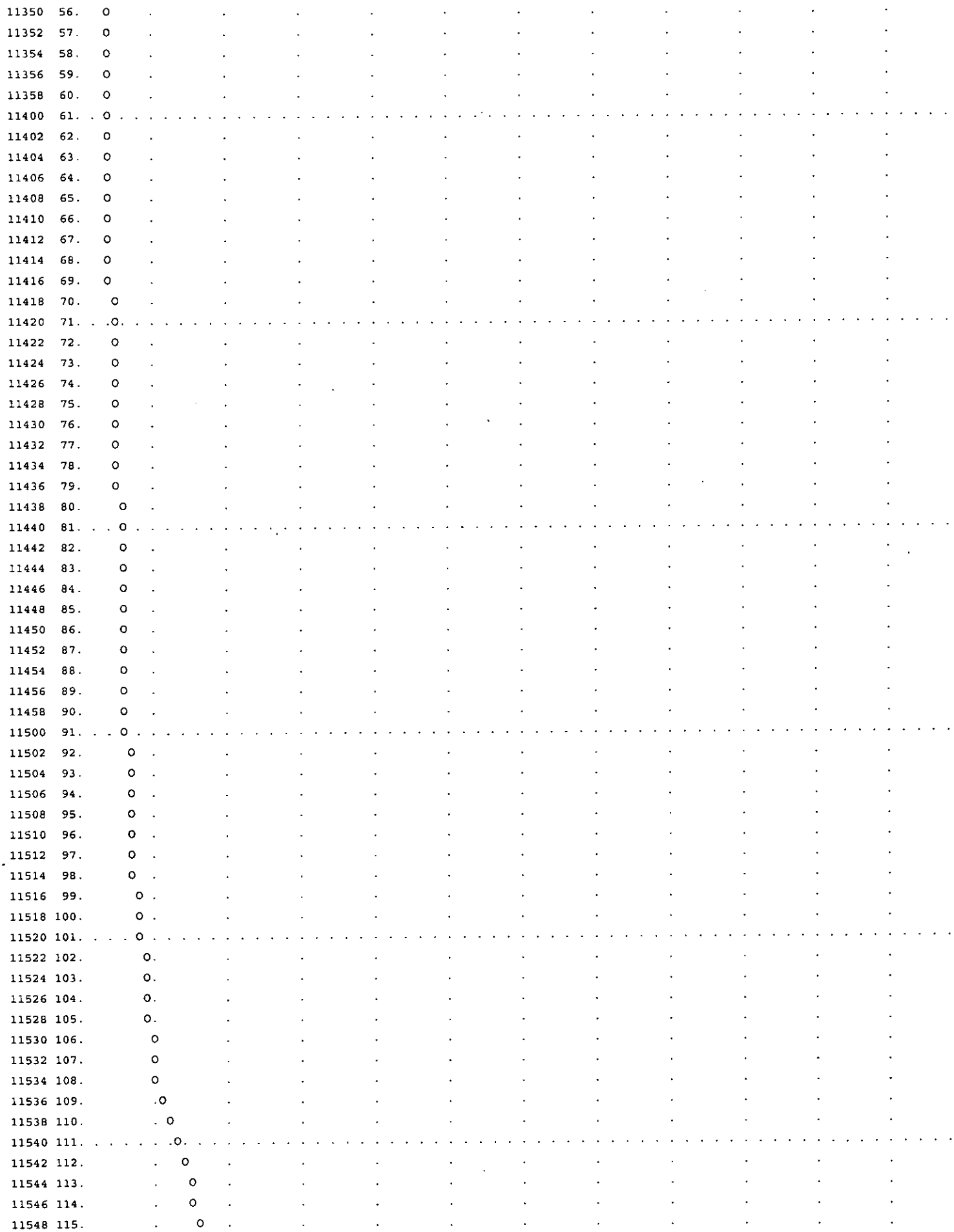
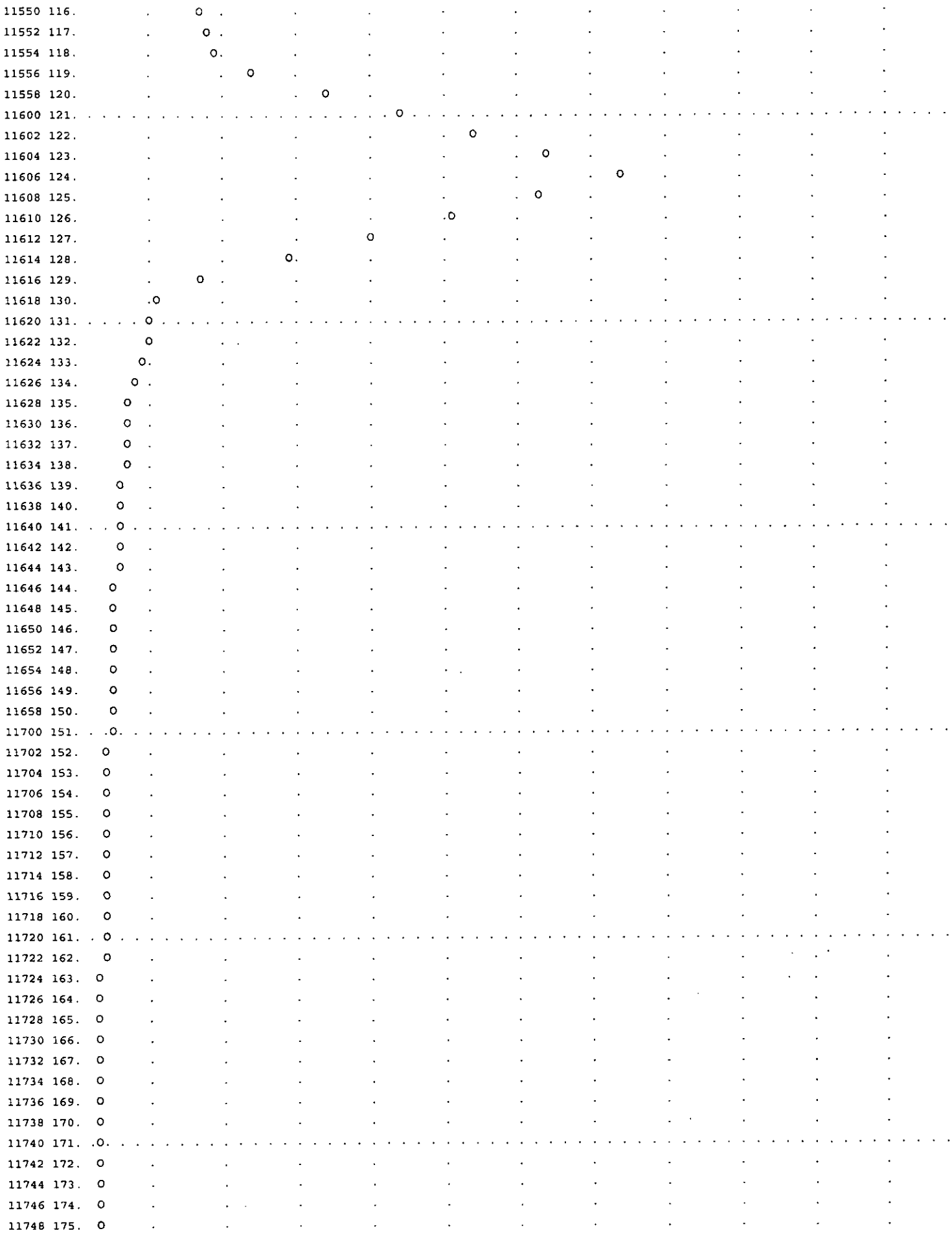
11344	53.	O												
11346	54.	O												
11348	55.	O												





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11752 177.  O      .         .         .         .         .         .         .         .         .         .         .
11754 178.  O      .         .         .         .         .         .         .         .         .         .         .
11756 179.  O      .         .         .         .         .         .         .         .         .         .         .
11758 180. O       .         .         .         .         .         .         .         .         .         .         .
11800 181. O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11802 182.O        .         .         .         .         .         .         .         .         .         .         .
11804 183.O        .         .         .         .         .         .         .         .         .         .         .
11806 1840         .         .         .         .         .         .         .         .         .         .         .
11808 1850         .         .         .         .         .         .         .         .         .         .         .
11810 1860         .         .         .         .         .         .         .         .         .         .         .
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11814 1880         .         .         .         .         .         .         .         .         .         .         .
11816 1890         .         .         .         .         .         .         .         .         .         .         .
11818 1900         .         .         .         .         .         .         .         .         .         .         .
11820 1910 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11822 1920         .         .         .         .         .         .         .         .         .         .         .
11824 1930         .         .         .         .         .         .         .         .         .         .         .
11826 1940         .         .         .         .         .         .         .         .         .         .         .
11828 1950         .         .         .         .         .         .         .         .         .         .         .
11830 1960         .         .         .         .         .         .         .         .         .         .         .
11832 1970         .         .         .         .         .         .         .         .         .         .         .
11834 1980         .         .         .         .         .         .         .         .         .         .         .
11836 1990         .         .         .         .         .         .         .         .         .         .         .
11838 2000---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------
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              *            *
40 KK         *   COMBINE  *
              *            *
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41 KO *OUTPUT CONTROL VARIABLES*

IPRNT	0	PRINT CONTROL
IPLOT	2	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

42 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION COMBINE
SUM OF 2 HYDROGRAPHS

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DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW
1 JAN 1200	1	2.	*	1 JAN 1340	51	5.	*	1 JAN 1520	101	12.	*	1 JAN 1700	151	7.
1 JAN 1202	2	2.	*	1 JAN 1342	52	5.	*	1 JAN 1522	102	13.	*	1 JAN 1702	152	7.
1 JAN 1204	3	2.	*	1 JAN 1344	53	5.	*	1 JAN 1524	103	13.	*	1 JAN 1704	153	7.
1 JAN 1206	4	2.	*	1 JAN 1346	54	5.	*	1 JAN 1526	104	13.	*	1 JAN 1706	154	7.
1 JAN 1208	5	3.	*	1 JAN 1348	55	5.	*	1 JAN 1528	105	14.	*	1 JAN 1708	155	7.
1 JAN 1210	6	3.	*	1 JAN 1350	56	5.	*	1 JAN 1530	106	14.	*	1 JAN 1710	156	7.
1 JAN 1212	7	3.	*	1 JAN 1352	57	5.	*	1 JAN 1532	107	14.	*	1 JAN 1712	157	7.
1 JAN 1214	8	3.	*	1 JAN 1354	58	5.	*	1 JAN 1534	108	15.	*	1 JAN 1714	158	7.
1 JAN 1216	9	3.	*	1 JAN 1356	59	5.	*	1 JAN 1536	109	16.	*	1 JAN 1716	159	7.
1 JAN 1218	10	3.	*	1 JAN 1358	60	5.	*	1 JAN 1538	110	17.	*	1 JAN 1718	160	7.
1 JAN 1220	11	3.	*	1 JAN 1400	61	5.	*	1 JAN 1540	111	18.	*	1 JAN 1720	161	7.
1 JAN 1222	12	3.	*	1 JAN 1402	62	5.	*	1 JAN 1542	112	19.	*	1 JAN 1722	162	6.
1 JAN 1224	13	3.	*	1 JAN 1404	63	6.	*	1 JAN 1544	113	20.	*	1 JAN 1724	163	6.
1 JAN 1226	14	3.	*	1 JAN 1406	64	6.	*	1 JAN 1546	114	22.	*	1 JAN 1726	164	6.
1 JAN 1228	15	3.	*	1 JAN 1408	65	6.	*	1 JAN 1548	115	23.	*	1 JAN 1728	165	6.
1 JAN 1230	16	3.	*	1 JAN 1410	66	6.	*	1 JAN 1550	116	24.	*	1 JAN 1730	166	6.
1 JAN 1232	17	3.	*	1 JAN 1412	67	6.	*	1 JAN 1552	117	25.	*	1 JAN 1732	167	6.
1 JAN 1234	18	4.	*	1 JAN 1414	68	6.	*	1 JAN 1554	118	27.	*	1 JAN 1734	168	6.
1 JAN 1236	19	4.	*	1 JAN 1416	69	6.	*	1 JAN 1556	119	31.	*	1 JAN 1736	169	6.
1 JAN 1238	20	4.	*	1 JAN 1418	70	6.	*	1 JAN 1558	120	39.	*	1 JAN 1738	170	6.
1 JAN 1240	21	4.	*	1 JAN 1420	71	6.	*	1 JAN 1600	121	48.	*	1 JAN 1740	171	6.
1 JAN 1242	22	4.	*	1 JAN 1422	72	6.	*	1 JAN 1602	122	57.	*	1 JAN 1742	172	6.

1 JAN 1244	23	4.	*	1 JAN 1424	73	6.	*	1 JAN 1604	123	67.	*	1 JAN 1744	173	6.
1 JAN 1246	24	4.	*	1 JAN 1426	74	6.	*	1 JAN 1606	124	78.	*	1 JAN 1746	174	6.
1 JAN 1248	25	4.	*	1 JAN 1428	75	6.	*	1 JAN 1608	125	82.	*	1 JAN 1748	175	6.
1 JAN 1250	26	4.	*	1 JAN 1430	76	6.	*	1 JAN 1610	126	81.	*	1 JAN 1750	176	6.
1 JAN 1252	27	4.	*	1 JAN 1432	77	7.	*	1 JAN 1612	127	76.	*	1 JAN 1752	177	6.
1 JAN 1254	28	4.	*	1 JAN 1434	78	7.	*	1 JAN 1614	128	69.	*	1 JAN 1754	178	6.
1 JAN 1256	29	4.	*	1 JAN 1436	79	7.	*	1 JAN 1616	129	59.	*	1 JAN 1756	179	6.
1 JAN 1258	30	4.	*	1 JAN 1438	80	7.	*	1 JAN 1618	130	49.	*	1 JAN 1758	180	5.
1 JAN 1300	31	4.	*	1 JAN 1440	81	7.	*	1 JAN 1620	131	41.	*	1 JAN 1800	181	5.
1 JAN 1302	32	4.	*	1 JAN 1442	82	7.	*	1 JAN 1622	132	32.	*	1 JAN 1802	182	5.
1 JAN 1304	33	4.	*	1 JAN 1444	83	7.	*	1 JAN 1624	133	25.	*	1 JAN 1804	183	5.
1 JAN 1306	34	4.	*	1 JAN 1446	84	7.	*	1 JAN 1626	134	20.	*	1 JAN 1806	184	4.
1 JAN 1308	35	4.	*	1 JAN 1448	85	7.	*	1 JAN 1628	135	17.	*	1 JAN 1808	185	4.
1 JAN 1310	36	4.	*	1 JAN 1450	86	8.	*	1 JAN 1630	136	15.	*	1 JAN 1810	186	4.
1 JAN 1312	37	4.	*	1 JAN 1452	87	9.	*	1 JAN 1632	137	13.	*	1 JAN 1812	187	4.
1 JAN 1314	38	4.	*	1 JAN 1454	88	9.	*	1 JAN 1634	138	12.	*	1 JAN 1814	188	4.
1 JAN 1316	39	5.	*	1 JAN 1456	89	9.	*	1 JAN 1636	139	11.	*	1 JAN 1816	189	3.
1 JAN 1318	40	5.	*	1 JAN 1458	90	10.	*	1 JAN 1638	140	11.	*	1 JAN 1818	190	3.
1 JAN 1320	41	5.	*	1 JAN 1500	91	10.	*	1 JAN 1640	141	10.	*	1 JAN 1820	191	3.
1 JAN 1322	42	5.	*	1 JAN 1502	92	10.	*	1 JAN 1642	142	10.	*	1 JAN 1822	192	3.
1 JAN 1324	43	5.	*	1 JAN 1504	93	10.	*	1 JAN 1644	143	9.	*	1 JAN 1824	193	3.
1 JAN 1326	44	5.	*	1 JAN 1506	94	10.	*	1 JAN 1646	144	9.	*	1 JAN 1826	194	3.
1 JAN 1328	45	5.	*	1 JAN 1508	95	10.	*	1 JAN 1648	145	9.	*	1 JAN 1828	195	3.
1 JAN 1330	46	5.	*	1 JAN 1510	96	11.	*	1 JAN 1650	146	8.	*	1 JAN 1830	196	2.
1 JAN 1332	47	5.	*	1 JAN 1512	97	11.	*	1 JAN 1652	147	8.	*	1 JAN 1832	197	2.
1 JAN 1334	48	5.	*	1 JAN 1514	98	11.	*	1 JAN 1654	148	8.	*	1 JAN 1834	198	2.
1 JAN 1336	49	5.	*	1 JAN 1516	99	12.	*	1 JAN 1656	149	8.	*	1 JAN 1836	199	2.
1 JAN 1338	50	5.	*	1 JAN 1518	100	12.	*	1 JAN 1658	150	7.	*	1 JAN 1838	200	2.
			*				*				*			

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	6.63-HR
82.	4.13	(CFS)	12.	11.	11.	11.
		(INCHES)	1.164	1.192	1.192	1.192
		(AC-FT)	6.	6.	6.	6.

CUMULATIVE AREA = .09 SQ MI

STATION COMBINE

(O) OUTFLOW

DAHRMN	PER	0.	10.	20.	30.	40.	50.	60.	70.	80.	90.	0.	0.	0
11200	1.	O												
11202	2.	O												
11204	3.	O												
11206	4.	O												
11208	5.	O												
11210	6.	O												
11212	7.	O												
11214	8.	O												
11216	9.	O												
11218	10.	O												
11220	11.	O												
11222	12.	O												
11224	13.	O												
11226	14.	O												
11228	15.	O												
11230	16.	O												
11232	17.	O												
11234	18.	O												
11236	19.	O												
11238	20.	O												
11240	21.	O												
11242	22.	O												
11244	23.	O												
11246	24.	O												
11248	25.	O												
11250	26.	O												
11252	27.	O												
11254	28.	O												
11256	29.	O												
11258	30.	O												
11300	31.	O												
11302	32.	O												
11304	33.	O												
11306	34.	O												
11308	35.	O												
11310	36.	O												
11312	37.	O												
11314	38.	O												
11316	39.	O												
11318	40.	O												
11320	41.	O												
11322	42.	O												
11324	43.	O												
11326	44.	O												
11328	45.	O												
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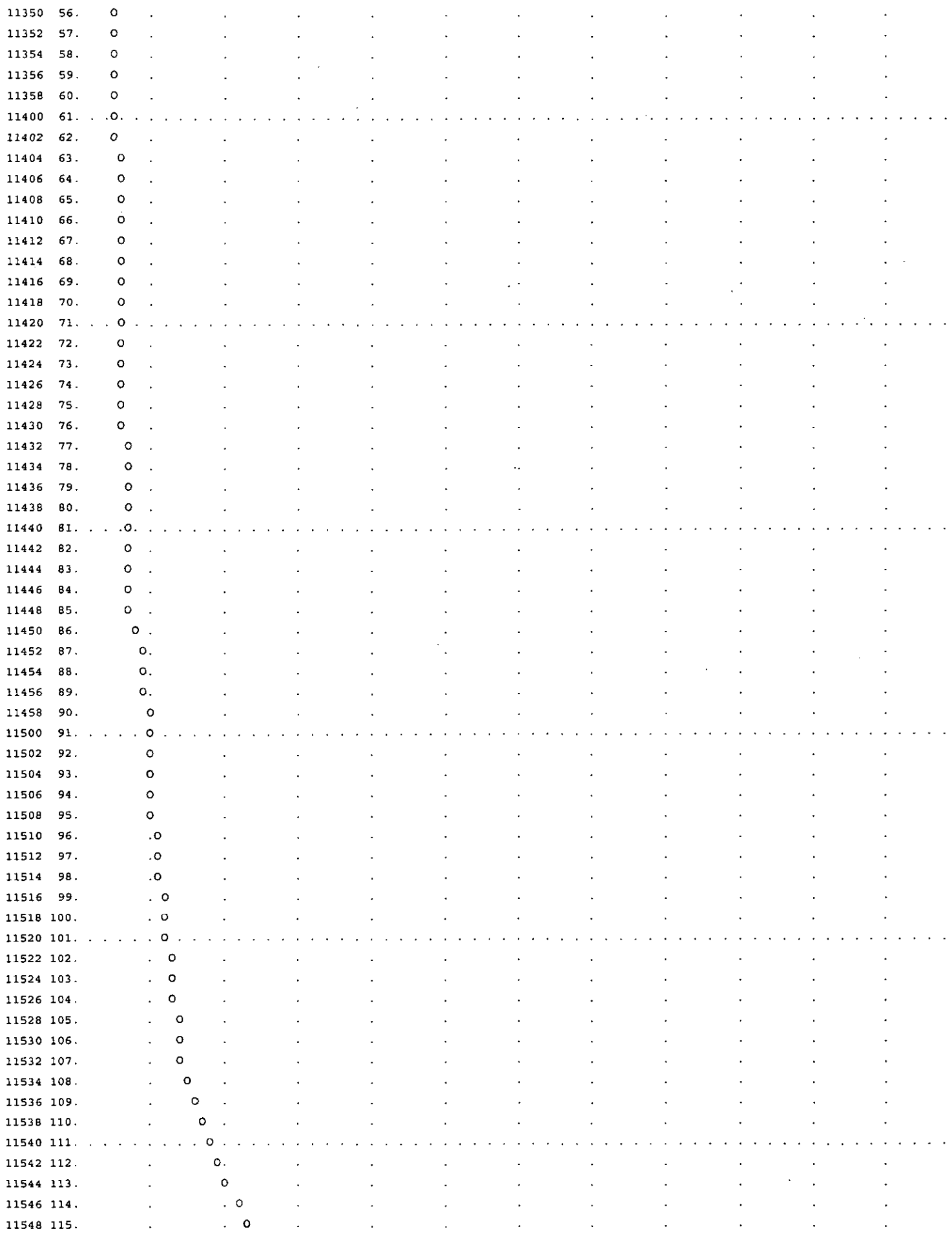

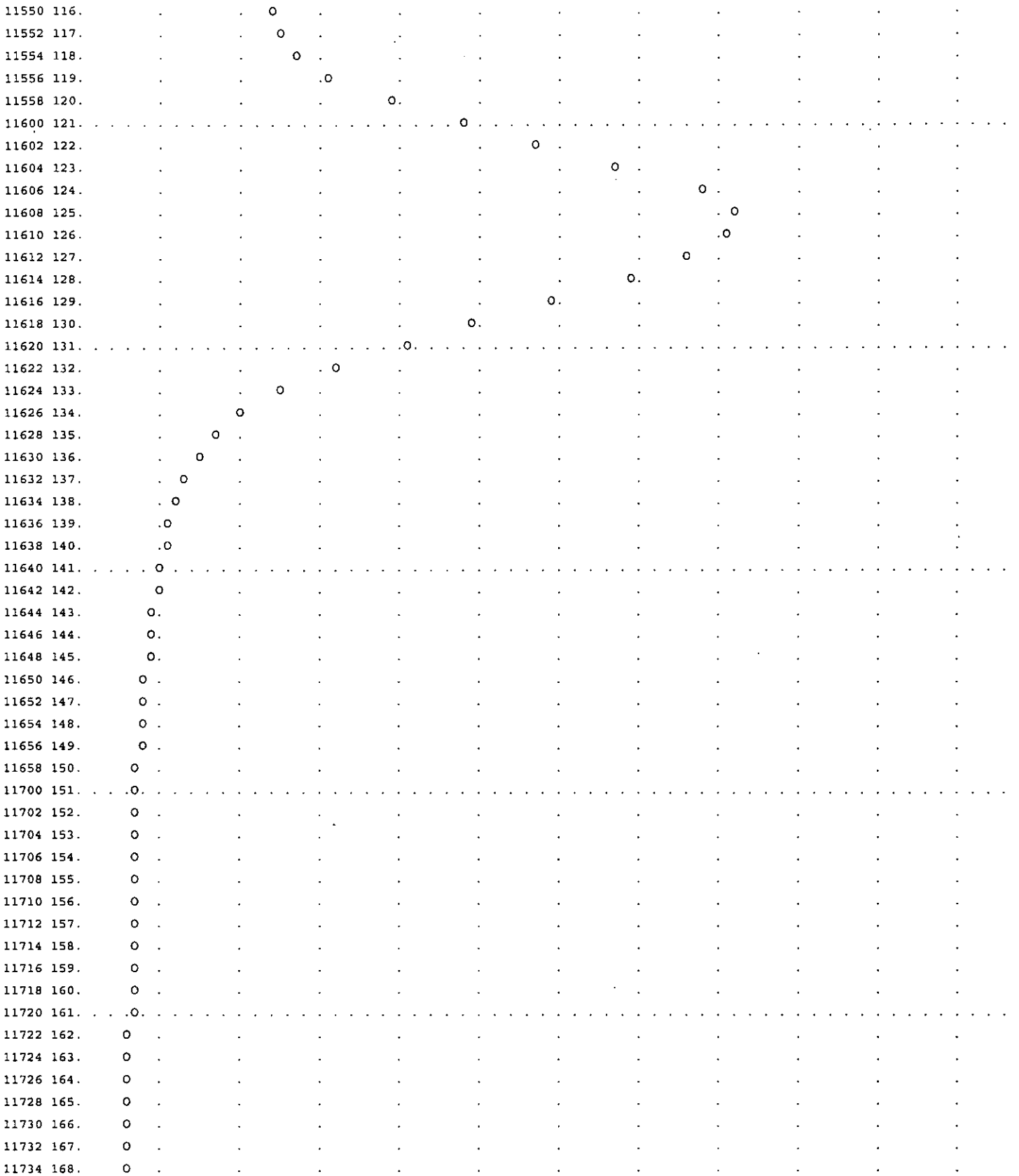
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11612 127.
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11650 146.
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11708 155.
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11714 158.
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11726 164.
11728 165.
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11732 167.
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11736 169.
11738 170.
11740 171.
11742 172.
11744 173.
11746 174.
11748 175.

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11752 177.     O   .         .         .         .         .         .         .         .         .         .         .
11754 178.     O   .         .         .         .         .         .         .         .         .         .         .
11756 179.     O   .         .         .         .         .         .         .         .         .         .         .
11758 180.    O    .         .         .         .         .         .         .         .         .         .         .
11800 181. . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11802 182.    O    .         .         .         .         .         .         .         .         .         .         .
11804 183.    O    .         .         .         .         .         .         .         .         .         .         .
11806 184.   O     .         .         .         .         .         .         .         .         .         .         .
11808 185.   O     .         .         .         .         .         .         .         .         .         .         .
11810 186.   O     .         .         .         .         .         .         .         .         .         .         .
11812 187.   O     .         .         .         .         .         .         .         .         .         .         .
11814 188.   O     .         .         .         .         .         .         .         .         .         .         .
11816 189.  O      .         .         .         .         .         .         .         .         .         .         .
11818 190.  O      .         .         .         .         .         .         .         .         .         .         .
11820 191. .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11822 192.  O      .         .         .         .         .         .         .         .         .         .         .
11824 193.  O      .         .         .         .         .         .         .         .         .         .         .
11826 194.  O      .         .         .         .         .         .         .         .         .         .         .
11828 195.  O      .         .         .         .         .         .         .         .         .         .         .
11830 196. O       .         .         .         .         .         .         .         .         .         .         .
11832 197. O       .         .         .         .         .         .         .         .         .         .         .
11834 198. O       .         .         .         .         .         .         .         .         .         .         .
11836 199. O       .         .         .         .         .         .         .         .         .         .         .
11838 200.-O-------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------
```

RUNOFF SUMMARY

FLOW IN CUBIC FEET PER SECOND

TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	2000A	94.	4.10	10.	9.	9.	.08		
ROUTED TO	DETAIN	71.	4.17	10.	9.	9.	.08	105.00	4.17
HYDROGRAPH AT	MW2000B	15.	4.10	2.	1.	1.	.01		
2 COMBINED AT	COMBINE	82.	4.13	12.	11.	11.	.09		

*** NORMAL END OF HEC-1 ***

Drainage Basin 3000

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   29JUL09  TIME  14:12:36  *
*                                      *
****************************************
```

```
*************************************
*                                   *
*    U.S. ARMY CORPS OF ENGINEERS   *
*    HYDROLOGIC ENGINEERING CENTER  *
*          609 SECOND STREET        *
*       DAVIS, CALIFORNIA 95616     *
*          (916) 756-1104           *
*                                   *
*************************************
```

```
X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

*** FREE ***
              *DIAGRAM
  1           ID   MEADOWOOD J-15956  07/16/09 FILE: MW3000D.HC1
  2           ID   DETENTION FOR 100-YEAR STORM EVENT (BASED ON RATIONAL METHOD)
  3           ID   R/0=.39, PRECIP=3.6IN, TC 12.35MIN
  4           IT       1 01JAN90    1200     700
  5           IO       0       2

  6           KK    3000
  7           KM   DRIANAGE BASIN 3000
  8           KM   RUN DATE   7/16/2009
  9           KM   RATIONAL METHOD HYDROGRAPH PROGRAM
 10           KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
 11           KM   6HR RAINFALL IS  3.6  INCHES
 12           KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.39
 13           KM   RATIONAL METHOD TIME OF CONCENTRATION IS  14  MIN.
 14           KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
 15           KM   IT 2 01JAN90 1200 200
 16           BA  0.0963
 17           IN      14 01JAN90    1155
 18           QI       0     5.2     5.4     5.6     5.9     6.1     6.6     6.8     7.4     7.8
 19           QI     8.6     9.1    10.5    11.4    13.9    15.8    23.2    18.8  131.19    18.6
 20           QI    12.5     9.8     8.2     7.1     6.3     5.8     5.3       0       0       0
 21           QI       0       0       0       0       0       0       0       0

 22           KK  DETAIN
 23           KM   100-YEAR DETENTION
 24           KO       0       0       0       0      21
 25           RS       1    STOR      -1
 26           SV       0    2.05    2.62    3.29   3.933
 27           SQ       0    4.18   10.06   33.13    79.1
 28           SE     100   102.4     103  103.69     104
 29           ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    6        3000
                V
                V
   22       DETAIN
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************                                    ****************************************
*                                      *                                    *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                    *   U.S. ARMY CORPS OF ENGINEERS
*              JUN   1998              *                                    *   HYDROLOGIC ENGINEERING CENTER
*           VERSION 4.1                *                                    *         609 SECOND STREET
*                                      *                                    *      DAVIS, CALIFORNIA 95616
*  RUN DATE   29JUL09  TIME  14:12:36  *                                    *          (916) 756-1104
*                                      *                                    *
****************************************                                    ****************************************
```

```
                    MEADOWOOD J-15956  07/16/09 FILE: MW3000D.HC1
                    DETENTION FOR 100-YEAR STORM EVENT (BASED ON RATIONAL METHOD)
                    R/0=.39, PRECIP=3.6IN, TC 12.35MIN

  5 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          0  PRINT CONTROL
                    IPLOT          2  PLOT CONTROL
                    QSCAL         .0.  HYDROGRAPH PLOT SCALE

    IT        HYDROGRAPH TIME DATA
                     NMIN          1  MINUTES IN COMPUTATION INTERVAL
                    IDATE     1JAN90  STARTING DATE
                    ITIME       1200  STARTING TIME
                       NQ        700  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE     1JAN90  ENDING DATE
                   NDTIME       2339  ENDING TIME
                    ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .02 HOURS
                   TOTAL TIME BASE   11.65 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT
```

*** **

```
          **************
          *            *
  6 KK    *      3000  *
          *            *
          **************
                    DRIANAGE BASIN 3000
                    RUN DATE   7/16/2009
                    RATIONAL METHOD HYDROGRAPH PROGRAM
                    COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
                    6HR RAINFALL IS  3.6  INCHES
                    RATIONAL METHOD RUNOFF COEFFICIENT IS  0.39
```

RATIONAL METHOD TIME OF CONCENTRATION IS 14 MIN.
FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
IT 2 01JAN90 1200 200

17 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	14	TIME INTERVAL IN MINUTES
JXDATE	1JAN90	STARTING DATE
JXTIME	1155	STARTING TIME

SUBBASIN RUNOFF DATA

16 BA SUBBASIN CHARACTERISTICS

TAREA	.10	SUBBASIN AREA

***

HYDROGRAPH AT STATION 3000

DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW
1 JAN 1200	1	2.	1 JAN 1455	176	11.	1 JAN 1750	351	6.	1 JAN 2045	526	0.
1 JAN 1201	2	2.	1 JAN 1456	177	11.	1 JAN 1751	352	6.	1 JAN 2046	527	0.
1 JAN 1202	3	3.	1 JAN 1457	178	11.	1 JAN 1752	353	6.	1 JAN 2047	528	0.
1 JAN 1203	4	3.	1 JAN 1458	179	12.	1 JAN 1753	354	6.	1 JAN 2048	529	0.
1 JAN 1204	5	3.	1 JAN 1459	180	12.	1 JAN 1754	355	5.	1 JAN 2049	530	0.
1 JAN 1205	6	4.	1 JAN 1500	181	12.	1 JAN 1755	356	5.	1 JAN 2050	531	0.
1 JAN 1206	7	4.	1 JAN 1501	182	12.	1 JAN 1756	357	5.	1 JAN 2051	532	0.
1 JAN 1207	8	4.	1 JAN 1502	183	12.	1 JAN 1757	358	5.	1 JAN 2052	533	0.
1 JAN 1208	9	5.	1 JAN 1503	184	12.	1 JAN 1758	359	5.	1 JAN 2053	534	0.
1 JAN 1209	10	5.	1 JAN 1504	185	13.	1 JAN 1759	360	5.	1 JAN 2054	535	0.
1 JAN 1210	11	5.	1 JAN 1505	186	13.	1 JAN 1800	361	5.	1 JAN 2055	536	0.
1 JAN 1211	12	5.	1 JAN 1506	187	13.	1 JAN 1801	362	5.	1 JAN 2056	537	0.
1 JAN 1212	13	5.	1 JAN 1507	188	13.	1 JAN 1802	363	4.	1 JAN 2057	538	0.
1 JAN 1213	14	5.	1 JAN 1508	189	13.	1 JAN 1803	364	4.	1 JAN 2058	539	0.
1 JAN 1214	15	5.	1 JAN 1509	190	14.	1 JAN 1804	365	3.	1 JAN 2059	540	0.
1 JAN 1215	16	5.	1 JAN 1510	191	14.	1 JAN 1805	366	3.	1 JAN 2100	541	0.
1 JAN 1216	17	5.	1 JAN 1511	192	14.	1 JAN 1806	367	3.	1 JAN 2101	542	0.
1 JAN 1217	18	5.	1 JAN 1512	193	14.	1 JAN 1807	368	2.	1 JAN 2102	543	0.
1 JAN 1218	19	5.	1 JAN 1513	194	14.	1 JAN 1808	369	2.	1 JAN 2103	544	0.
1 JAN 1219	20	5.	1 JAN 1514	195	14.	1 JAN 1809	370	2.	1 JAN 2104	545	0.
1 JAN 1220	21	5.	1 JAN 1515	196	14.	1 JAN 1810	371	1.	1 JAN 2105	546	0.
1 JAN 1221	22	5.	1 JAN 1516	197	15.	1 JAN 1811	372	1.	1 JAN 2106	547	0.
1 JAN 1222	23	5.	1 JAN 1517	198	15.	1 JAN 1812	373	0.	1 JAN 2107	548	0.
1 JAN 1223	24	5.	1 JAN 1518	199	15.	1 JAN 1813	374	0.	1 JAN 2108	549	0.
1 JAN 1224	25	5.	1 JAN 1519	200	15.	1 JAN 1814	375	0.	1 JAN 2109	550	0.
1 JAN 1225	26	5.	1 JAN 1520	201	15.	1 JAN 1815	376	0.	1 JAN 2110	551	0.
1 JAN 1226	27	5.	1 JAN 1521	202	15.	1 JAN 1816	377	0.	1 JAN 2111	552	0.
1 JAN 1227	28	5.	1 JAN 1522	203	15.	1 JAN 1817	378	0.	1 JAN 2112	553	0.
1 JAN 1228	29	5.	1 JAN 1523	204	16.	1 JAN 1818	379	0.	1 JAN 2113	554	0.
1 JAN 1229	30	5.	1 JAN 1524	205	16.	1 JAN 1819	380	0.	1 JAN 2114	555	0.
1 JAN 1230	31	6.	1 JAN 1525	206	16.	1 JAN 1820	381	0.	1 JAN 2115	556	0.
1 JAN 1231	32	6.	1 JAN 1526	207	16.	1 JAN 1821	382	0.	1 JAN 2116	557	0.
1 JAN 1232	33	6.	1 JAN 1527	208	17.	1 JAN 1822	383	0.	1 JAN 2117	558	0.
1 JAN 1233	34	6.	1 JAN 1528	209	17.	1 JAN 1823	384	0.	1 JAN 2118	559	0.
1 JAN 1234	35	6.	1 JAN 1529	210	18.	1 JAN 1824	385	0.	1 JAN 2119	560	0.
1 JAN 1235	36	6.	1 JAN 1530	211	18.	1 JAN 1825	386	0.	1 JAN 2120	561	0.

1 JAN 1236	37	6.	*	1 JAN 1531	212	19.	*	1 JAN 1826	387	0.	*	1 JAN 2121	562	0.
1 JAN 1237	38	6.	*	1 JAN 1532	213	20.	*	1 JAN 1827	388	0.	*	1 JAN 2122	563	0.
1 JAN 1238	39	6.	*	1 JAN 1533	214	20.	*	1 JAN 1828	389	0.	*	1 JAN 2123	564	0.
1 JAN 1239	40	6.	*	1 JAN 1534	215	21.	*	1 JAN 1829	390	0.	*	1 JAN 2124	565	0.
1 JAN 1240	41	6.	*	1 JAN 1535	216	21.	*	1 JAN 1830	391	0.	*	1 JAN 2125	566	0.
1 JAN 1241	42	6.	*	1 JAN 1536	217	22.	*	1 JAN 1831	392	0.	*	1 JAN 2126	567	0.
1 JAN 1242	43	6.	*	1 JAN 1537	218	22.	*	1 JAN 1832	393	0.	*	1 JAN 2127	568	0.
1 JAN 1243	44	6.	*	1 JAN 1538	219	23.	*	1 JAN 1833	394	0.	*	1 JAN 2128	569	0.
1 JAN 1244	45	6.	*	1 JAN 1539	220	23.	*	1 JAN 1834	395	0.	*	1 JAN 2129	570	0.
1 JAN 1245	46	6.	*	1 JAN 1540	221	23.	*	1 JAN 1835	396	0.	*	1 JAN 2130	571	0.
1 JAN 1246	47	6.	*	1 JAN 1541	222	23.	*	1 JAN 1836	397	0.	*	1 JAN 2131	572	0.
1 JAN 1247	48	6.	*	1 JAN 1542	223	22.	*	1 JAN 1837	398	0.	*	1 JAN 2132	573	0.
1 JAN 1248	49	6.	*	1 JAN 1543	224	22.	*	1 JAN 1838	399	0.	*	1 JAN 2133	574	0.
1 JAN 1249	50	6.	*	1 JAN 1544	225	22.	*	1 JAN 1839	400	0.	*	1 JAN 2134	575	0.
1 JAN 1250	51	6.	*	1 JAN 1545	226	21.	*	1 JAN 1840	401	0.	*	1 JAN 2135	576	0.
1 JAN 1251	52	6.	*	1 JAN 1546	227	21.	*	1 JAN 1841	402	0.	*	1 JAN 2136	577	0.
1 JAN 1252	53	6.	*	1 JAN 1547	228	21.	*	1 JAN 1842	403	0.	*	1 JAN 2137	578	0.
1 JAN 1253	54	6.	*	1 JAN 1548	229	20.	*	1 JAN 1843	404	0.	*	1 JAN 2138	579	0.
1 JAN 1254	55	6.	*	1 JAN 1549	230	20.	*	1 JAN 1844	405	0.	*	1 JAN 2139	580	0.
1 JAN 1255	56	6.	*	1 JAN 1550	231	20.	*	1 JAN 1845	406	0.	*	1 JAN 2140	581	0.
1 JAN 1256	57	6.	*	1 JAN 1551	232	19.	*	1 JAN 1846	407	0.	*	1 JAN 2141	582	0.
1 JAN 1257	58	6.	*	1 JAN 1552	233	19.	*	1 JAN 1847	408	0.	*	1 JAN 2142	583	0.
1 JAN 1258	59	6.	*	1 JAN 1553	234	19.	*	1 JAN 1848	409	0.	*	1 JAN 2143	584	0.
1 JAN 1259	60	6.	*	1 JAN 1554	235	27.	*	1 JAN 1849	410	0.	*	1 JAN 2144	585	0.
1 JAN 1300	61	6.	*	1 JAN 1555	236	35.	*	1 JAN 1850	411	0.	*	1 JAN 2145	586	0.
1 JAN 1301	62	6.	*	1 JAN 1556	237	43.	*	1 JAN 1851	412	0.	*	1 JAN 2146	587	0.
1 JAN 1302	63	6.	*	1 JAN 1557	238	51.	*	1 JAN 1852	413	0.	*	1 JAN 2147	588	0.
1 JAN 1303	64	6.	*	1 JAN 1558	239	59.	*	1 JAN 1853	414	0.	*	1 JAN 2148	589	0.
1 JAN 1304	65	6.	*	1 JAN 1559	240	67.	*	1 JAN 1854	415	0.	*	1 JAN 2149	590	0.
1 JAN 1305	66	6.	*	1 JAN 1600	241	75.	*	1 JAN 1855	416	0.	*	1 JAN 2150	591	0.
1 JAN 1306	67	6.	*	1 JAN 1601	242	83.	*	1 JAN 1856	417	0.	*	1 JAN 2151	592	0.
1 JAN 1307	68	6.	*	1 JAN 1602	243	91.	*	1 JAN 1857	418	0.	*	1 JAN 2152	593	0.
1 JAN 1308	69	6.	*	1 JAN 1603	244	99.	*	1 JAN 1858	419	0.	*	1 JAN 2153	594	0.
1 JAN 1309	70	6.	*	1 JAN 1604	245	107.	*	1 JAN 1859	420	0.	*	1 JAN 2154	595	0.
1 JAN 1310	71	6.	*	1 JAN 1605	246	115.	*	1 JAN 1900	421	0.	*	1 JAN 2155	596	0.
1 JAN 1311	72	6.	*	1 JAN 1606	247	123.	*	1 JAN 1901	422	0.	*	1 JAN 2156	597	0.
1 JAN 1312	73	6.	*	1 JAN 1607	248	131.	*	1 JAN 1902	423	0.	*	1 JAN 2157	598	0.
1 JAN 1313	74	6.	*	1 JAN 1608	249	123.	*	1 JAN 1903	424	0.	*	1 JAN 2158	599	0.
1 JAN 1314	75	6.	*	1 JAN 1609	250	115.	*	1 JAN 1904	425	0.	*	1 JAN 2159	600	0.
1 JAN 1315	76	6.	*	1 JAN 1610	251	107.	*	1 JAN 1905	426	0.	*	1 JAN 2200	601	0.
1 JAN 1316	77	6.	*	1 JAN 1611	252	99.	*	1 JAN 1906	427	0.	*	1 JAN 2201	602	0.
1 JAN 1317	78	7.	*	1 JAN 1612	253	91.	*	1 JAN 1907	428	0.	*	1 JAN 2202	603	0.
1 JAN 1318	79	7.	*	1 JAN 1613	254	83.	*	1 JAN 1908	429	0.	*	1 JAN 2203	604	0.
1 JAN 1319	80	7.	*	1 JAN 1614	255	75.	*	1 JAN 1909	430	0.	*	1 JAN 2204	605	0.
1 JAN 1320	81	7.	*	1 JAN 1615	256	67.	*	1 JAN 1910	431	0.	*	1 JAN 2205	606	0.
1 JAN 1321	82	7.	*	1 JAN 1616	257	59.	*	1 JAN 1911	432	0.	*	1 JAN 2206	607	0.
1 JAN 1322	83	7.	*	1 JAN 1617	258	51.	*	1 JAN 1912	433	0.	*	1 JAN 2207	608	0.
1 JAN 1323	84	7.	*	1 JAN 1618	259	43.	*	1 JAN 1913	434	0.	*	1 JAN 2208	609	0.
1 JAN 1324	85	7.	*	1 JAN 1619	260	35.	*	1 JAN 1914	435	0.	*	1 JAN 2209	610	0.
1 JAN 1325	86	7.	*	1 JAN 1620	261	27.	*	1 JAN 1915	436	0.	*	1 JAN 2210	611	0.
1 JAN 1326	87	7.	*	1 JAN 1621	262	19.	*	1 JAN 1916	437	0.	*	1 JAN 2211	612	0.
1 JAN 1327	88	7.	*	1 JAN 1622	263	18.	*	1 JAN 1917	438	0.	*	1 JAN 2212	613	0.
1 JAN 1328	89	7.	*	1 JAN 1623	264	18.	*	1 JAN 1918	439	0.	*	1 JAN 2213	614	0.
1 JAN 1329	90	7.	*	1 JAN 1624	265	17.	*	1 JAN 1919	440	0.	*	1 JAN 2214	615	0.
1 JAN 1330	91	7.	*	1 JAN 1625	266	17.	*	1 JAN 1920	441	0.	*	1 JAN 2215	616	0.
1 JAN 1331	92	7.	*	1 JAN 1626	267	16.	*	1 JAN 1921	442	0.	*	1 JAN 2216	617	0.
1 JAN 1332	93	7.	*	1 JAN 1627	268	16.	*	1 JAN 1922	443	0.	*	1 JAN 2217	618	0.
1 JAN 1333	94	7.	*	1 JAN 1628	269	16.	*	1 JAN 1923	444	0.	*	1 JAN 2218	619	0.
1 JAN 1334	95	7.	*	1 JAN 1629	270	15.	*	1 JAN 1924	445	0.	*	1 JAN 2219	620	0.
1 JAN 1335	96	7.	*	1 JAN 1630	271	15.	*	1 JAN 1925	446	0.	*	1 JAN 2220	621	0.

1 JAN 1336	97	7.	*	1 JAN 1631	272	14.	*	1 JAN 1926	447	0.	*	1 JAN 2221	622	0.
1 JAN 1337	98	7.	*	1 JAN 1632	273	14.	*	1 JAN 1927	448	0.	*	1 JAN 2222	623	0.
1 JAN 1338	99	7.	*	1 JAN 1633	274	13.	*	1 JAN 1928	449	0.	*	1 JAN 2223	624	0.
1 JAN 1339	100	7.	*	1 JAN 1634	275	13.	*	1 JAN 1929	450	0.	*	1 JAN 2224	625	0.
1 JAN 1340	101	7.	*	1 JAN 1635	276	13.	*	1 JAN 1930	451	0.	*	1 JAN 2225	626	0.
1 JAN 1341	102	7.	*	1 JAN 1636	277	12.	*	1 JAN 1931	452	0.	*	1 JAN 2226	627	0.
1 JAN 1342	103	7.	*	1 JAN 1637	278	12.	*	1 JAN 1932	453	0.	*	1 JAN 2227	628	0.
1 JAN 1343	104	7.	*	1 JAN 1638	279	12.	*	1 JAN 1933	454	0.	*	1 JAN 2228	629	0.
1 JAN 1344	105	7.	*	1 JAN 1639	280	12.	*	1 JAN 1934	455	0.	*	1 JAN 2229	630	0.
1 JAN 1345	106	7.	*	1 JAN 1640	281	12.	*	1 JAN 1935	456	0.	*	1 JAN 2230	631	0.
1 JAN 1346	107	7.	*	1 JAN 1641	282	11.	*	1 JAN 1936	457	0.	*	1 JAN 2231	632	0.
1 JAN 1347	108	7.	*	1 JAN 1642	283	11.	*	1 JAN 1937	458	0.	*	1 JAN 2232	633	0.
1 JAN 1348	109	7.	*	1 JAN 1643	284	11.	*	1 JAN 1938	459	0.	*	1 JAN 2233	634	0.
1 JAN 1349	110	7.	*	1 JAN 1644	285	11.	*	1 JAN 1939	460	0.	*	1 JAN 2234	635	0.
1 JAN 1350	111	7.	*	1 JAN 1645	286	11.	*	1 JAN 1940	461	0.	*	1 JAN 2235	636	0.
1 JAN 1351	112	8.	*	1 JAN 1646	287	10.	*	1 JAN 1941	462	0.	*	1 JAN 2236	637	0.
1 JAN 1352	113	8.	*	1 JAN 1647	288	10.	*	1 JAN 1942	463	0.	*	1 JAN 2237	638	0.
1 JAN 1353	114	8.	*	1 JAN 1648	289	10.	*	1 JAN 1943	464	0.	*	1 JAN 2238	639	0.
1 JAN 1354	115	8.	*	1 JAN 1649	290	10.	*	1 JAN 1944	465	0.	*	1 JAN 2239	640	0.
1 JAN 1355	116	8.	*	1 JAN 1650	291	10.	*	1 JAN 1945	466	0.	*	1 JAN 2240	641	0.
1 JAN 1356	117	8.	*	1 JAN 1651	292	10.	*	1 JAN 1946	467	0.	*	1 JAN 2241	642	0.
1 JAN 1357	118	8.	*	1 JAN 1652	293	9.	*	1 JAN 1947	468	0.	*	1 JAN 2242	643	0.
1 JAN 1358	119	8.	*	1 JAN 1653	294	9.	*	1 JAN 1948	469	0.	*	1 JAN 2243	644	0.
1 JAN 1359	120	8.	*	1 JAN 1654	295	9.	*	1 JAN 1949	470	0.	*	1 JAN 2244	645	0.
1 JAN 1400	121	8.	*	1 JAN 1655	296	9.	*	1 JAN 1950	471	0.	*	1 JAN 2245	646	0.
1 JAN 1401	122	8.	*	1 JAN 1656	297	9.	*	1 JAN 1951	472	0.	*	1 JAN 2246	647	0.
1 JAN 1402	123	8.	*	1 JAN 1657	298	9.	*	1 JAN 1952	473	0.	*	1 JAN 2247	648	0.
1 JAN 1403	124	8.	*	1 JAN 1658	299	9.	*	1 JAN 1953	474	0.	*	1 JAN 2248	649	0.
1 JAN 1404	125	8.	*	1 JAN 1659	300	9.	*	1 JAN 1954	475	0.	*	1 JAN 2249	650	0.
1 JAN 1405	126	8.	*	1 JAN 1700	301	9.	*	1 JAN 1955	476	0.	*	1 JAN 2250	651	0.
1 JAN 1406	127	8.	*	1 JAN 1701	302	8.	*	1 JAN 1956	477	0.	*	1 JAN 2251	652	0.
1 JAN 1407	128	8.	*	1 JAN 1702	303	8.	*	1 JAN 1957	478	0.	*	1 JAN 2252	653	0.
1 JAN 1408	129	8.	*	1 JAN 1703	304	8.	*	1 JAN 1958	479	0.	*	1 JAN 2253	654	0.
1 JAN 1409	130	8.	*	1 JAN 1704	305	8.	*	1 JAN 1959	480	0.	*	1 JAN 2254	655	0.
1 JAN 1410	131	8.	*	1 JAN 1705	306	8.	*	1 JAN 2000	481	0.	*	1 JAN 2255	656	0.
1 JAN 1411	132	8.	*	1 JAN 1706	307	8.	*	1 JAN 2001	482	0.	*	1 JAN 2256	657	0.
1 JAN 1412	133	8.	*	1 JAN 1707	308	8.	*	1 JAN 2002	483	0.	*	1 JAN 2257	658	0.
1 JAN 1413	134	8.	*	1 JAN 1708	309	8.	*	1 JAN 2003	484	0.	*	1 JAN 2258	659	0.
1 JAN 1414	135	9.	*	1 JAN 1709	310	8.	*	1 JAN 2004	485	0.	*	1 JAN 2259	660	0.
1 JAN 1415	136	9.	*	1 JAN 1710	311	8.	*	1 JAN 2005	486	0.	*	1 JAN 2300	661	0.
1 JAN 1416	137	9.	*	1 JAN 1711	312	8.	*	1 JAN 2006	487	0.	*	1 JAN 2301	662	0.
1 JAN 1417	138	9.	*	1 JAN 1712	313	7.	*	1 JAN 2007	488	0.	*	1 JAN 2302	663	0.
1 JAN 1418	139	9.	*	1 JAN 1713	314	7.	*	1 JAN 2008	489	0.	*	1 JAN 2303	664	0.
1 JAN 1419	140	9.	*	1 JAN 1714	315	7.	*	1 JAN 2009	490	0.	*	1 JAN 2304	665	0.
1 JAN 1420	141	9.	*	1 JAN 1715	316	7.	*	1 JAN 2010	491	0.	*	1 JAN 2305	666	0.
1 JAN 1421	142	9.	*	1 JAN 1716	317	7.	*	1 JAN 2011	492	0.	*	1 JAN 2306	667	0.
1 JAN 1422	143	9.	*	1 JAN 1717	318	7.	*	1 JAN 2012	493	0.	*	1 JAN 2307	668	0.
1 JAN 1423	144	9.	*	1 JAN 1718	319	7.	*	1 JAN 2013	494	0.	*	1 JAN 2308	669	0.
1 JAN 1424	145	9.	*	1 JAN 1719	320	7.	*	1 JAN 2014	495	0.	*	1 JAN 2309	670	0.
1 JAN 1425	146	9.	*	1 JAN 1720	321	7.	*	1 JAN 2015	496	0.	*	1 JAN 2310	671	0.
1 JAN 1426	147	9.	*	1 JAN 1721	322	7.	*	1 JAN 2016	497	0.	*	1 JAN 2311	672	0.
1 JAN 1427	148	9.	*	1 JAN 1722	323	7.	*	1 JAN 2017	498	0.	*	1 JAN 2312	673	0.
1 JAN 1428	149	9.	*	1 JAN 1723	324	7.	*	1 JAN 2018	499	0.	*	1 JAN 2313	674	0.
1 JAN 1429	150	9.	*	1 JAN 1724	325	7.	*	1 JAN 2019	500	0.	*	1 JAN 2314	675	0.
1 JAN 1430	151	9.	*	1 JAN 1725	326	7.	*	1 JAN 2020	501	0.	*	1 JAN 2315	676	0.
1 JAN 1431	152	9.	*	1 JAN 1726	327	7.	*	1 JAN 2021	502	0.	*	1 JAN 2316	677	0.
1 JAN 1432	153	9.	*	1 JAN 1727	328	7.	*	1 JAN 2022	503	0.	*	1 JAN 2317	678	0.
1 JAN 1433	154	10.	*	1 JAN 1728	329	6.	*	1 JAN 2023	504	0.	*	1 JAN 2318	679	0.
1 JAN 1434	155	10.	*	1 JAN 1729	330	6.	*	1 JAN 2024	505	0.	*	1 JAN 2319	680	0.
1 JAN 1435	156	10.	*	1 JAN 1730	331	6.	*	1 JAN 2025	506	0.	*	1 JAN 2320	681	0.

1 JAN 1436	157	10.	*	1 JAN 1731	332	6.	*	1 JAN 2026	507	0.	*	1 JAN 2321	682	0.
1 JAN 1437	158	10.	*	1 JAN 1732	333	6.	*	1 JAN 2027	508	0.	*	1 JAN 2322	683	0.
1 JAN 1438	159	10.	*	1 JAN 1733	334	6.	*	1 JAN 2028	509	0.	*	1 JAN 2323	684	0.
1 JAN 1439	160	10.	*	1 JAN 1734	335	6.	*	1 JAN 2029	510	0.	*	1 JAN 2324	685	0.
1 JAN 1440	161	10.	*	1 JAN 1735	336	6.	*	1 JAN 2030	511	0.	*	1 JAN 2325	686	0.
1 JAN 1441	162	10.	*	1 JAN 1736	337	6.	*	1 JAN 2031	512	0.	*	1 JAN 2326	687	0.
1 JAN 1442	163	10.	*	1 JAN 1737	338	6.	*	1 JAN 2032	513	0.	*	1 JAN 2327	688	0.
1 JAN 1443	164	11.	*	1 JAN 1738	339	6.	*	1 JAN 2033	514	0.	*	1 JAN 2328	689	0.
1 JAN 1444	165	11.	*	1 JAN 1739	340	6.	*	1 JAN 2034	515	0.	*	1 JAN 2329	690	0.
1 JAN 1445	166	11.	*	1 JAN 1740	341	6.	*	1 JAN 2035	516	0.	*	1 JAN 2330	691	0.
1 JAN 1446	167	11.	*	1 JAN 1741	342	6.	*	1 JAN 2036	517	0.	*	1 JAN 2331	692	0.
1 JAN 1447	168	11.	*	1 JAN 1742	343	6.	*	1 JAN 2037	518	0.	*	1 JAN 2332	693	0.
1 JAN 1448	169	11.	*	1 JAN 1743	344	6.	*	1 JAN 2038	519	0.	*	1 JAN 2333	694	0.
1 JAN 1449	170	11.	*	1 JAN 1744	345	6.	*	1 JAN 2039	520	0.	*	1 JAN 2334	695	0.
1 JAN 1450	171	11.	*	1 JAN 1745	346	6.	*	1 JAN 2040	521	0.	*	1 JAN 2335	696	0.
1 JAN 1451	172	11.	*	1 JAN 1746	347	6.	*	1 JAN 2041	522	0.	*	1 JAN 2336	697	0.
1 JAN 1452	173	11.	*	1 JAN 1747	348	6.	*	1 JAN 2042	523	0.	*	1 JAN 2337	698	0.
1 JAN 1453	174	11.	*	1 JAN 1748	349	6.	*	1 JAN 2043	524	0.	*	1 JAN 2338	699	0.
1 JAN 1454	175	11.	*	1 JAN 1749	350	6.	*	1 JAN 2044	525	0.	*	1 JAN 2339	700	0.
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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	11.65-HR
131.	4.12	(CFS)	14.	7.	7.	7.
		(INCHES)	1.392	1.399	1.399	1.399
		(AC-FT)	7.	7.	7.	7.

CUMULATIVE AREA = .10 SQ MI

STATION 3000

(O) OUTFLOW

DAHRMN	PER	0.	20.	40.	60.	80.	100.	120.	140.	0.	0.	0.	0.	0
11200	1.	O												
11201	2.	O												
11202	3.	O												
11203	4.	O												
11204	5.	O												
11205	6.	O												
11206	7.	O												
11207	8.	O												
11208	9.	O												
11209	10.	O												
11210	11.	O												
11211	12.	O												
11212	13.	O												
11213	14.	O												
11214	15.	O												
11215	16.	O												
11216	17.	O												
11217	18.	O												
11218	19.	O												
11219	20.	O												
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11223	24.	O												
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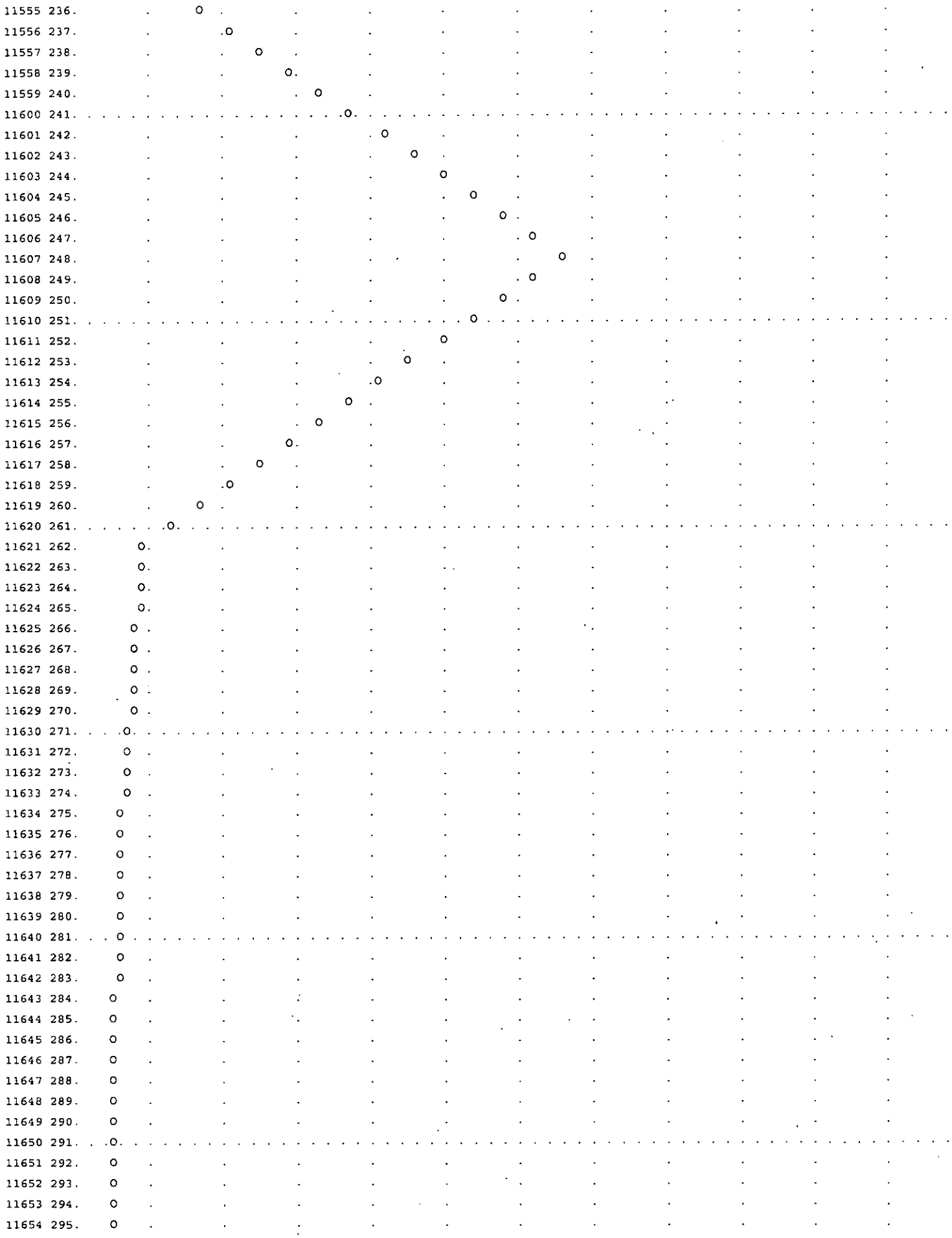

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          *            *
 22 KK    *    DETAIN  *
          *            *
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                        100-YEAR DETENTION

 24 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           0  PRINT CONTROL
                      IPLOT           2  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2         700  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .017  TIME INTERVAL IN HOURS


             HYDROGRAPH ROUTING DATA

 25 RS          STORAGE ROUTING
                      NSTPS           1  NUMBER OF SUBREACHES
                       ITYP        STOR  TYPE OF INITIAL CONDITION
                     RSVRIC       -1.00  INITIAL CONDITION
                          X         .00 WORKING R AND D COEFFICIENT

 26 SV            STORAGE          .0       2.0       2.6       3.3       3.9

 27 SQ          DISCHARGE          0.        4.       10.       33.       79.

 28 SE          ELEVATION      100.00    102.40    103.00    103.69    104.00

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                                                HYDROGRAPH AT STATION   DETAIN

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                                          *                                          *
DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE
                                          *                                          *
 1 JAN 1200  1       2.       .9   101.1 *  1 JAN 1554 235      14.      2.7   103.1 *  1 JAN 1948 469       4.      1.8   102.1
 1 JAN 1201  2       2.       .9   101.1 *  1 JAN 1555 236      15.      2.8   103.1 *  1 JAN 1949 470       4.      1.8   102.1
 1 JAN 1202  3       2.       .9   101.1 *  1 JAN 1556 237      16.      2.8   103.2 *  1 JAN 1950 471       4.      1.7   102.0
 1 JAN 1203  4       2.       .9   101.1 *  1 JAN 1557 238      17.      2.8   103.2 *  1 JAN 1951 472       4.      1.7   102.0
 1 JAN 1204  5       2.       .9   101.1 *  1 JAN 1558 239      19.      2.9   103.3 *  1 JAN 1952 473       4.      1.7   102.0
 1 JAN 1205  6       2.       .9   101.1 *  1 JAN 1559 240      21.      2.9   103.3 *  1 JAN 1953 474       4.      1.7   102.0
 1 JAN 1206  7       2.       .9   101.1 *  1 JAN 1600 241      23.      3.0   103.4 *  1 JAN 1954 475       4.      1.7   102.0
 1 JAN 1207  8       2.       .9   101.1 *  1 JAN 1601 242      26.      3.1   103.5 *  1 JAN 1955 476       4.      1.7   102.0
 1 JAN 1208  9       2.       .9   101.1 *  1 JAN 1602 243      29.      3.2   103.6 *  1 JAN 1956 477       4.      1.7   102.0
 1 JAN 1209 10       2.       .9   101.1 *  1 JAN 1603 244      32.      3.3   103.7 *  1 JAN 1957 478       3.      1.7   102.0
 1 JAN 1210 11       2.       .9   101.1 *  1 JAN 1604 245      37.      3.3   103.7 *  1 JAN 1958 479       3.      1.7   102.0
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1 JAN 1211	12	2.	.9	101.1	*	1 JAN 1605	246	44.	3.4	103.8	*	1 JAN 1959	480	3.	1.7	102.0
1 JAN 1212	13	2.	.9	101.1	*	1 JAN 1606	247	51.	3.5	103.8	*	1 JAN 2000	481	3.	1.7	102.0
1 JAN 1213	14	2.	.9	101.1	*	1 JAN 1607	248	58.	3.6	103.9	*	1 JAN 2001	482	3.	1.7	102.0
1 JAN 1214	15	2.	1.0	101.1	*	1 JAN 1608	249	65.	3.7	103.9	*	1 JAN 2002	483	3.	1.7	102.0
1 JAN 1215	16	2.	1.0	101.1	*	1 JAN 1609	250	70.	3.8	103.9	*	1 JAN 2003	484	3.	1.7	102.0
1 JAN 1216	17	2.	1.0	101.1	*	1 JAN 1610	251	74.	3.9	104.0	*	1 JAN 2004	485	3.	1.7	102.0
1 JAN 1217	18	2.	1.0	101.1	*	1 JAN 1611	252	77.	3.9	104.0	*	1 JAN 2005	486	3.	1.7	102.0
1 JAN 1218	19	2.	1.0	101.1	*	1 JAN 1612	253	78.	3.9	104.0	*	1 JAN 2006	487	3.	1.7	102.0
1 JAN 1219	20	2.	1.0	101.1	*	1 JAN 1613	254	79.	3.9	104.0	*	1 JAN 2007	488	3.	1.7	101.9
1 JAN 1220	21	2.	1.0	101.1	*	1 JAN 1614	255	79.	3.9	104.0	*	1 JAN 2008	489	3.	1.7	101.9
1 JAN 1221	22	2.	1.0	101.2	*	1 JAN 1615	256	78.	3.9	104.0	*	1 JAN 2009	490	3.	1.7	101.9
1 JAN 1222	23	2.	1.0	101.2	*	1 JAN 1616	257	77.	3.9	104.0	*	1 JAN 2010	491	3.	1.7	101.9
1 JAN 1223	24	2.	1.0	101.2	*	1 JAN 1617	258	75.	3.9	104.0	*	1 JAN 2011	492	3.	1.6	101.9
1 JAN 1224	25	2.	1.0	101.2	*	1 JAN 1618	259	72.	3.8	104.0	*	1 JAN 2012	493	3.	1.6	101.9
1 JAN 1225	26	2.	1.0	101.2	*	1 JAN 1619	260	69.	3.8	103.9	*	1 JAN 2013	494	3.	1.6	101.9
1 JAN 1226	27	2.	1.0	101.2	*	1 JAN 1620	261	65.	3.7	103.9	*	1 JAN 2014	495	3.	1.6	101.9
1 JAN 1227	28	2.	1.0	101.2	*	1 JAN 1621	262	61.	3.7	103.9	*	1 JAN 2015	496	3.	1.6	101.9
1 JAN 1228	29	2.	1.0	101.2	*	1 JAN 1622	263	57.	3.6	103.9	*	1 JAN 2016	497	3.	1.6	101.9
1 JAN 1229	30	2.	1.0	101.2	*	1 JAN 1623	264	54.	3.6	103.8	*	1 JAN 2017	498	3.	1.6	101.9
1 JAN 1230	31	2.	1.0	101.2	*	1 JAN 1624	265	50.	3.5	103.8	*	1 JAN 2018	499	3.	1.6	101.9
1 JAN 1231	32	2.	1.0	101.2	*	1 JAN 1625	266	47.	3.5	103.8	*	1 JAN 2019	500	3.	1.6	101.9
1 JAN 1232	33	2.	1.0	101.2	*	1 JAN 1626	267	44.	3.4	103.8	*	1 JAN 2020	501	3.	1.6	101.9
1 JAN 1233	34	2.	1.0	101.2	*	1 JAN 1627	268	42.	3.4	103.7	*	1 JAN 2021	502	3.	1.6	101.9
1 JAN 1234	35	2.	1.0	101.2	*	1 JAN 1628	269	39.	3.4	103.7	*	1 JAN 2022	503	3.	1.6	101.9
1 JAN 1235	36	2.	1.1	101.2	*	1 JAN 1629	270	37.	3.3	103.7	*	1 JAN 2023	504	3.	1.6	101.9
1 JAN 1236	37	2.	1.1	101.2	*	1 JAN 1630	271	35.	3.3	103.7	*	1 JAN 2024	505	3.	1.6	101.9
1 JAN 1237	38	2.	1.1	101.2	*	1 JAN 1631	272	33.	3.3	103.7	*	1 JAN 2025	506	3.	1.6	101.9
1 JAN 1238	39	2.	1.1	101.2	*	1 JAN 1632	273	32.	3.3	103.7	*	1 JAN 2026	507	3.	1.6	101.8
1 JAN 1239	40	2.	1.1	101.3	*	1 JAN 1633	274	31.	3.2	103.6	*	1 JAN 2027	508	3.	1.6	101.8
1 JAN 1240	41	2.	1.1	101.3	*	1 JAN 1634	275	30.	3.2	103.6	*	1 JAN 2028	509	3.	1.6	101.8
1 JAN 1241	42	2.	1.1	101.3	*	1 JAN 1635	276	30.	3.2	103.6	*	1 JAN 2029	510	3.	1.6	101.8
1 JAN 1242	43	2.	1.1	101.3	*	1 JAN 1636	277	29.	3.2	103.6	*	1 JAN 2030	511	3.	1.6	101.8
1 JAN 1243	44	2.	1.1	101.3	*	1 JAN 1637	278	28.	3.1	103.5	*	1 JAN 2031	512	3.	1.6	101.8
1 JAN 1244	45	2.	1.1	101.3	*	1 JAN 1638	279	27.	3.1	103.5	*	1 JAN 2032	513	3.	1.6	101.8
1 JAN 1245	46	2.	1.1	101.3	*	1 JAN 1639	280	27.	3.1	103.5	*	1 JAN 2033	514	3.	1.5	101.8
1 JAN 1246	47	2.	1.1	101.3	*	1 JAN 1640	281	26.	3.1	103.5	*	1 JAN 2034	515	3.	1.5	101.8
1 JAN 1247	48	2.	1.1	101.3	*	1 JAN 1641	282	25.	3.1	103.5	*	1 JAN 2035	516	3.	1.5	101.8
1 JAN 1248	49	2.	1.1	101.3	*	1 JAN 1642	283	25.	3.0	103.4	*	1 JAN 2036	517	3.	1.5	101.8
1 JAN 1249	50	2.	1.1	101.3	*	1 JAN 1643	284	24.	3.0	103.4	*	1 JAN 2037	518	3.	1.5	101.8
1 JAN 1250	51	2.	1.1	101.3	*	1 JAN 1644	285	23.	3.0	103.4	*	1 JAN 2038	519	3.	1.5	101.8
1 JAN 1251	52	2.	1.1	101.3	*	1 JAN 1645	286	23.	3.0	103.4	*	1 JAN 2039	520	3.	1.5	101.8
1 JAN 1252	53	2.	1.1	101.3	*	1 JAN 1646	287	22.	3.0	103.4	*	1 JAN 2040	521	3.	1.5	101.8
1 JAN 1253	54	2.	1.1	101.3	*	1 JAN 1647	288	22.	3.0	103.3	*	1 JAN 2041	522	3.	1.5	101.8
1 JAN 1254	55	2.	1.1	101.3	*	1 JAN 1648	289	21.	2.9	103.3	*	1 JAN 2042	523	3.	1.5	101.8
1 JAN 1255	56	2.	1.1	101.3	*	1 JAN 1649	290	21.	2.9	103.3	*	1 JAN 2043	524	3.	1.5	101.8
1 JAN 1256	57	2.	1.2	101.4	*	1 JAN 1650	291	20.	2.9	103.3	*	1 JAN 2044	525	3.	1.5	101.8
1 JAN 1257	58	2.	1.2	101.4	*	1 JAN 1651	292	20.	2.9	103.3	*	1 JAN 2045	526	3.	1.5	101.8
1 JAN 1258	59	2.	1.2	101.4	*	1 JAN 1652	293	19.	2.9	103.3	*	1 JAN 2046	527	3.	1.5	101.7
1 JAN 1259	60	2.	1.2	101.4	*	1 JAN 1653	294	19.	2.9	103.3	*	1 JAN 2047	528	3.	1.5	101.7
1 JAN 1300	61	2.	1.2	101.4	*	1 JAN 1654	295	18.	2.9	103.2	*	1 JAN 2048	529	3.	1.5	101.7
1 JAN 1301	62	2.	1.2	101.4	*	1 JAN 1655	296	18.	2.8	103.2	*	1 JAN 2049	530	3.	1.5	101.7
1 JAN 1302	63	2.	1.2	101.4	*	1 JAN 1656	297	17.	2.8	103.2	*	1 JAN 2050	531	3.	1.5	101.7
1 JAN 1303	64	2.	1.2	101.4	*	1 JAN 1657	298	17.	2.8	103.2	*	1 JAN 2051	532	3.	1.5	101.7
1 JAN 1304	65	2.	1.2	101.4	*	1 JAN 1658	299	17.	2.8	103.2	*	1 JAN 2052	533	3.	1.5	101.7
1 JAN 1305	66	2.	1.2	101.4	*	1 JAN 1659	300	16.	2.8	103.2	*	1 JAN 2053	534	3.	1.5	101.7
1 JAN 1306	67	2.	1.2	101.4	*	1 JAN 1700	301	16.	2.8	103.2	*	1 JAN 2054	535	3.	1.5	101.7
1 JAN 1307	68	2.	1.2	101.4	*	1 JAN 1701	302	16.	2.8	103.2	*	1 JAN 2055	536	3.	1.5	101.7
1 JAN 1308	69	2.	1.2	101.4	*	1 JAN 1702	303	15.	2.8	103.2	*	1 JAN 2056	537	3.	1.5	101.7
1 JAN 1309	70	2.	1.2	101.4	*	1 JAN 1703	304	15.	2.8	103.1	*	1 JAN 2057	538	3.	1.4	101.7
1 JAN 1310	71	2.	1.2	101.4	*	1 JAN 1704	305	15.	2.8	103.1	*	1 JAN 2058	539	3.	1.4	101.7

1 JAN 1311	72	3.	1.2	101.4	*	1 JAN 1705	306	14.	2.7	103.1	*	1 JAN 2059	540	3.	1.4	101.7
1 JAN 1312	73	3.	1.2	101.4	*	1 JAN 1706	307	14.	2.7	103.1	*	1 JAN 2100	541	3.	1.4	101.7
1 JAN 1313	74	3.	1.2	101.5	*	1 JAN 1707	308	14.	2.7	103.1	*	1 JAN 2101	542	3.	1.4	101.7
1 JAN 1314	75	3.	1.2	101.5	*	1 JAN 1708	309	13.	2.7	103.1	*	1 JAN 2102	543	3.	1.4	101.7
1 JAN 1315	76	3.	1.3	101.5	*	1 JAN 1709	310	13.	2.7	103.1	*	1 JAN 2103	544	3.	1.4	101.7
1 JAN 1316	77	3.	1.3	101.5	*	1 JAN 1710	311	13.	2.7	103.1	*	1 JAN 2104	545	3.	1.4	101.7
1 JAN 1317	78	3.	1.3	101.5	*	1 JAN 1711	312	13.	2.7	103.1	*	1 JAN 2105	546	3.	1.4	101.7
1 JAN 1318	79	3.	1.3	101.5	*	1 JAN 1712	313	12.	2.7	103.1	*	1 JAN 2106	547	3.	1.4	101.7
1 JAN 1319	80	3.	1.3	101.5	*	1 JAN 1713	314	12.	2.7	103.1	*	1 JAN 2107	548	3.	1.4	101.6
1 JAN 1320	81	3.	1.3	101.5	*	1 JAN 1714	315	12.	2.7	103.1	*	1 JAN 2108	549	3.	1.4	101.6
1 JAN 1321	82	3.	1.3	101.5	*	1 JAN 1715	316	12.	2.7	103.1	*	1 JAN 2109	550	3.	1.4	101.6
1 JAN 1322	83	3.	1.3	101.5	*	1 JAN 1716	317	12.	2.7	103.0	*	1 JAN 2110	551	3.	1.4	101.6
1 JAN 1323	84	3.	1.3	101.5	*	1 JAN 1717	318	11.	2.7	103.0	*	1 JAN 2111	552	3.	1.4	101.6
1 JAN 1324	85	3.	1.3	101.5	*	1 JAN 1718	319	11.	2.7	103.0	*	1 JAN 2112	553	3.	1.4	101.6
1 JAN 1325	86	3.	1.3	101.5	*	1 JAN 1719	320	11.	2.6	103.0	*	1 JAN 2113	554	3.	1.4	101.6
1 JAN 1326	87	3.	1.3	101.5	*	1 JAN 1720	321	11.	2.6	103.0	*	1 JAN 2114	555	3.	1.4	101.6
1 JAN 1327	88	3.	1.3	101.5	*	1 JAN 1721	322	11.	2.6	103.0	*	1 JAN 2115	556	3.	1.4	101.6
1 JAN 1328	89	3.	1.3	101.5	*	1 JAN 1722	323	10.	2.6	103.0	*	1 JAN 2116	557	3.	1.4	101.6
1 JAN 1329	90	3.	1.3	101.6	*	1 JAN 1723	324	10.	2.6	103.0	*	1 JAN 2117	558	3.	1.4	101.6
1 JAN 1330	91	3.	1.3	101.6	*	1 JAN 1724	325	10.	2.6	103.0	*	1 JAN 2118	559	3.	1.4	101.6
1 JAN 1331	92	3.	1.3	101.6	*	1 JAN 1725	326	10.	2.6	103.0	*	1 JAN 2119	560	3.	1.4	101.6
1 JAN 1332	93	3.	1.3	101.6	*	1 JAN 1726	327	10.	2.6	103.0	*	1 JAN 2120	561	3.	1.4	101.6
1 JAN 1333	94	3.	1.4	101.6	*	1 JAN 1727	328	10.	2.6	103.0	*	1 JAN 2121	562	3.	1.4	101.6
1 JAN 1334	95	3.	1.4	101.6	*	1 JAN 1728	329	10.	2.6	103.0	*	1 JAN 2122	563	3.	1.3	101.6
1 JAN 1335	96	3.	1.4	101.6	*	1 JAN 1729	330	10.	2.6	103.0	*	1 JAN 2123	564	3.	1.3	101.6
1 JAN 1336	97	3.	1.4	101.6	*	1 JAN 1730	331	10.	2.6	103.0	*	1 JAN 2124	565	3.	1.3	101.6
1 JAN 1337	98	3.	1.4	101.6	*	1 JAN 1731	332	10.	2.6	103.0	*	1 JAN 2125	566	3.	1.3	101.6
1 JAN 1338	99	3.	1.4	101.6	*	1 JAN 1732	333	10.	2.6	103.0	*	1 JAN 2126	567	3.	1.3	101.6
1 JAN 1339	100	3.	1.4	101.6	*	1 JAN 1733	334	10.	2.6	103.0	*	1 JAN 2127	568	3.	1.3	101.6
1 JAN 1340	101	3.	1.4	101.6	*	1 JAN 1734	335	10.	2.6	103.0	*	1 JAN 2128	569	3.	1.3	101.6
1 JAN 1341	102	3.	1.4	101.6	*	1 JAN 1735	336	10.	2.6	102.9	*	1 JAN 2129	570	3.	1.3	101.5
1 JAN 1342	103	3.	1.4	101.6	*	1 JAN 1736	337	9.	2.6	102.9	*	1 JAN 2130	571	3.	1.3	101.5
1 JAN 1343	104	3.	1.4	101.6	*	1 JAN 1737	338	9.	2.6	102.9	*	1 JAN 2131	572	3.	1.3	101.5
1 JAN 1344	105	3.	1.4	101.7	*	1 JAN 1738	339	9.	2.6	102.9	*	1 JAN 2132	573	3.	1.3	101.5
1 JAN 1345	106	3.	1.4	101.7	*	1 JAN 1739	340	9.	2.6	102.9	*	1 JAN 2133	574	3.	1.3	101.5
1 JAN 1346	107	3.	1.4	101.7	*	1 JAN 1740	341	9.	2.5	102.9	*	1 JAN 2134	575	3.	1.3	101.5
1 JAN 1347	108	3.	1.4	101.7	*	1 JAN 1741	342	9.	2.5	102.9	*	1 JAN 2135	576	3.	1.3	101.5
1 JAN 1348	109	3.	1.4	101.7	*	1 JAN 1742	343	9.	2.5	102.9	*	1 JAN 2136	577	3.	1.3	101.5
1 JAN 1349	110	3.	1.4	101.7	*	1 JAN 1743	344	9.	2.5	102.9	*	1 JAN 2137	578	3.	1.3	101.5
1 JAN 1350	111	3.	1.5	101.7	*	1 JAN 1744	345	9.	2.5	102.9	*	1 JAN 2138	579	3.	1.3	101.5
1 JAN 1351	112	3.	1.5	101.7	*	1 JAN 1745	346	9.	2.5	102.9	*	1 JAN 2139	580	3.	1.3	101.5
1 JAN 1352	113	3.	1.5	101.7	*	1 JAN 1746	347	9.	2.5	102.9	*	1 JAN 2140	581	3.	1.3	101.5
1 JAN 1353	114	3.	1.5	101.7	*	1 JAN 1747	348	9.	2.5	102.9	*	1 JAN 2141	582	3.	1.3	101.5
1 JAN 1354	115	3.	1.5	101.7	*	1 JAN 1748	349	9.	2.5	102.9	*	1 JAN 2142	583	3.	1.3	101.5
1 JAN 1355	116	3.	1.5	101.7	*	1 JAN 1749	350	9.	2.5	102.9	*	1 JAN 2143	584	3.	1.3	101.5
1 JAN 1356	117	3.	1.5	101.7	*	1 JAN 1750	351	9.	2.5	102.9	*	1 JAN 2144	585	3.	1.3	101.5
1 JAN 1357	118	3.	1.5	101.8	*	1 JAN 1751	352	9.	2.5	102.9	*	1 JAN 2145	586	3.	1.3	101.5
1 JAN 1358	119	3.	1.5	101.8	*	1 JAN 1752	353	9.	2.5	102.9	*	1 JAN 2146	587	3.	1.3	101.5
1 JAN 1359	120	3.	1.5	101.8	*	1 JAN 1753	354	9.	2.5	102.9	*	1 JAN 2147	588	3.	1.3	101.5
1 JAN 1400	121	3.	1.5	101.8	*	1 JAN 1754	355	9.	2.5	102.9	*	1 JAN 2148	589	3.	1.3	101.5
1 JAN 1401	122	3.	1.5	101.8	*	1 JAN 1755	356	9.	2.5	102.9	*	1 JAN 2149	590	3.	1.3	101.5
1 JAN 1402	123	3.	1.5	101.8	*	1 JAN 1756	357	9.	2.5	102.8	*	1 JAN 2150	591	3.	1.2	101.5
1 JAN 1403	124	3.	1.5	101.8	*	1 JAN 1757	358	9.	2.5	102.8	*	1 JAN 2151	592	3.	1.2	101.5
1 JAN 1404	125	3.	1.5	101.8	*	1 JAN 1758	359	8.	2.5	102.8	*	1 JAN 2152	593	3.	1.2	101.5
1 JAN 1405	126	3.	1.5	101.8	*	1 JAN 1759	360	8.	2.5	102.8	*	1 JAN 2153	594	3.	1.2	101.4
1 JAN 1406	127	3.	1.6	101.8	*	1 JAN 1800	361	8.	2.5	102.8	*	1 JAN 2154	595	3.	1.2	101.4
1 JAN 1407	128	3.	1.6	101.8	*	1 JAN 1801	362	8.	2.5	102.8	*	1 JAN 2155	596	3.	1.2	101.4
1 JAN 1408	129	3.	1.6	101.8	*	1 JAN 1802	363	8.	2.4	102.8	*	1 JAN 2156	597	2.	1.2	101.4
1 JAN 1409	130	3.	1.6	101.8	*	1 JAN 1803	364	8.	2.4	102.8	*	1 JAN 2157	598	2.	1.2	101.4
1 JAN 1410	131	3.	1.6	101.9	*	1 JAN 1804	365	8.	2.4	102.8	*	1 JAN 2158	599	2.	1.2	101.4

1 JAN 1411 132	3.	1.6	101.9 *	1 JAN 1805 366	8.	2.4	102.8 *	1 JAN 2159 600	2.	1.2	101.4
1 JAN 1412 133	3.	1.6	101.9 *	1 JAN 1806 367	8.	2.4	102.8 *	1 JAN 2200 601	2.	1.2	101.4
1 JAN 1413 134	3.	1.6	101.9 *	1 JAN 1807 368	8.	2.4	102.8 *	1 JAN 2201 602	2.	1.2	101.4
1 JAN 1414 135	3.	1.6	101.9 *	1 JAN 1808 369	8.	2.4	102.8 *	1 JAN 2202 603	2.	1.2	101.4
1 JAN 1415 136	3.	1.6	101.9 *	1 JAN 1809 370	8.	2.4	102.8 *	1 JAN 2203 604	2.	1.2	101.4
1 JAN 1416 137	3.	1.6	101.9 *	1 JAN 1810 371	8.	2.4	102.8 *	1 JAN 2204 605	2.	1.2	101.4
1 JAN 1417 138	3.	1.6	101.9 *	1 JAN 1811 372	8.	2.4	102.7 *	1 JAN 2205 606	2.	1.2	101.4
1 JAN 1418 139	3.	1.6	101.9 *	1 JAN 1812 373	7.	2.4	102.7 *	1 JAN 2206 607	2.	1.2	101.4
1 JAN 1419 140	3.	1.6	101.9 *	1 JAN 1813 374	7.	2.4	102.7 *	1 JAN 2207 608	2.	1.2	101.4
1 JAN 1420 141	3.	1.7	101.9 *	1 JAN 1814 375	7.	2.3	102.7 *	1 JAN 2208 609	2.	1.2	101.4
1 JAN 1421 142	3.	1.7	101.9 *	1 JAN 1815 376	7.	2.3	102.7 *	1 JAN 2209 610	2.	1.2	101.4
1 JAN 1422 143	3.	1.7	102.0 *	1 JAN 1816 377	7.	2.3	102.7 *	1 JAN 2210 611	2.	1.2	101.4
1 JAN 1423 144	3.	1.7	102.0 *	1 JAN 1817 378	7.	2.3	102.7 *	1 JAN 2211 612	2.	1.2	101.4
1 JAN 1424 145	3.	1.7	102.0 *	1 JAN 1818 379	7.	2.3	102.7 *	1 JAN 2212 613	2.	1.2	101.4
1 JAN 1425 146	3.	1.7	102.0 *	1 JAN 1819 380	7.	2.3	102.7 *	1 JAN 2213 614	2.	1.2	101.4
1 JAN 1426 147	3.	1.7	102.0 *	1 JAN 1820 381	7.	2.3	102.7 *	1 JAN 2214 615	2.	1.2	101.4
1 JAN 1427 148	3.	1.7	102.0 *	1 JAN 1821 382	7.	2.3	102.6 *	1 JAN 2215 616	2.	1.2	101.4
1 JAN 1428 149	3.	1.7	102.0 *	1 JAN 1822 383	6.	2.3	102.6 *	1 JAN 2216 617	2.	1.2	101.4
1 JAN 1429 150	4.	1.7	102.0 *	1 JAN 1823 384	6.	2.3	102.6 *	1 JAN 2217 618	2.	1.2	101.4
1 JAN 1430 151	4.	1.7	102.0 *	1 JAN 1824 385	6.	2.3	102.6 *	1 JAN 2218 619	2.	1.2	101.3
1 JAN 1431 152	4.	1.7	102.0 *	1 JAN 1825 386	6.	2.2	102.6 *	1 JAN 2219 620	2.	1.1	101.3
1 JAN 1432 153	4.	1.7	102.0 *	1 JAN 1826 387	6.	2.2	102.6 *	1 JAN 2220 621	2.	1.1	101.3
1 JAN 1433 154	4.	1.8	102.1 *	1 JAN 1827 388	6.	2.2	102.6 *	1 JAN 2221 622	2.	1.1	101.3
1 JAN 1434 155	4.	1.8	102.1 *	1 JAN 1828 389	6.	2.2	102.6 *	1 JAN 2222 623	2.	1.1	101.3
1 JAN 1435 156	4.	1.8	102.1 *	1 JAN 1829 390	6.	2.2	102.6 *	1 JAN 2223 624	2.	1.1	101.3
1 JAN 1436 157	4.	1.8	102.1 *	1 JAN 1830 391	6.	2.2	102.6 *	1 JAN 2224 625	2.	1.1	101.3
1 JAN 1437 158	4.	1.8	102.1 *	1 JAN 1831 392	6.	2.2	102.6 *	1 JAN 2225 626	2.	1.1	101.3
1 JAN 1438 159	4.	1.8	102.1 *	1 JAN 1832 393	6.	2.2	102.5 *	1 JAN 2226 627	2.	1.1	101.3
1 JAN 1439 160	4.	1.8	102.1 *	1 JAN 1833 394	6.	2.2	102.5 *	1 JAN 2227 628	2.	1.1	101.3
1 JAN 1440 161	4.	1.8	102.1 *	1 JAN 1834 395	5.	2.2	102.5 *	1 JAN 2228 629	2.	1.1	101.3
1 JAN 1441 162	4.	1.8	102.1 *	1 JAN 1835 396	5.	2.2	102.5 *	1 JAN 2229 630	2.	1.1	101.3
1 JAN 1442 163	4.	1.8	102.1 *	1 JAN 1836 397	5.	2.2	102.5 *	1 JAN 2230 631	2.	1.1	101.3
1 JAN 1443 164	4.	1.8	102.2 *	1 JAN 1837 398	5.	2.2	102.5 *	1 JAN 2231 632	2.	1.1	101.3
1 JAN 1444 165	4.	1.9	102.2 *	1 JAN 1838 399	5.	2.1	102.5 *	1 JAN 2232 633	2.	1.1	101.3
1 JAN 1445 166	4.	1.9	102.2 *	1 JAN 1839 400	5.	2.1	102.5 *	1 JAN 2233 634	2.	1.1	101.3
1 JAN 1446 167	4.	1.9	102.2 *	1 JAN 1840 401	5.	2.1	102.5 *	1 JAN 2234 635	2.	1.1	101.3
1 JAN 1447 168	4.	1.9	102.2 *	1 JAN 1841 402	5.	2.1	102.5 *	1 JAN 2235 636	2.	1.1	101.3
1 JAN 1448 169	4.	1.9	102.2 *	1 JAN 1842 403	5.	2.1	102.5 *	1 JAN 2236 637	2.	1.1	101.3
1 JAN 1449 170	4.	1.9	102.2 *	1 JAN 1843 404	5.	2.1	102.5 *	1 JAN 2237 638	2.	1.1	101.3
1 JAN 1450 171	4.	1.9	102.2 *	1 JAN 1844 405	5.	2.1	102.5 *	1 JAN 2238 639	2.	1.1	101.3
1 JAN 1451 172	4.	1.9	102.2 *	1 JAN 1845 406	5.	2.1	102.5 *	1 JAN 2239 640	2.	1.1	101.3
1 JAN 1452 173	4.	1.9	102.3 *	1 JAN 1846 407	5.	2.1	102.4 *	1 JAN 2240 641	2.	1.1	101.3
1 JAN 1453 174	4.	1.9	102.3 *	1 JAN 1847 408	5.	2.1	102.4 *	1 JAN 2241 642	2.	1.1	101.3
1 JAN 1454 175	4.	1.9	102.3 *	1 JAN 1848 409	4.	2.1	102.4 *	1 JAN 2242 643	2.	1.1	101.3
1 JAN 1455 176	4.	2.0	102.3 *	1 JAN 1849 410	4.	2.1	102.4 *	1 JAN 2243 644	2.	1.1	101.3
1 JAN 1456 177	4.	2.0	102.3 *	1 JAN 1850 411	4.	2.1	102.4 *	1 JAN 2244 645	2.	1.1	101.3
1 JAN 1457 178	4.	2.0	102.3 *	1 JAN 1851 412	4.	2.1	102.4 *	1 JAN 2245 646	2.	1.1	101.3
1 JAN 1458 179	4.	2.0	102.3 *	1 JAN 1852 413	4.	2.1	102.4 *	1 JAN 2246 647	2.	1.1	101.2
1 JAN 1459 180	4.	2.0	102.3 *	1 JAN 1853 414	4.	2.0	102.4 *	1 JAN 2247 648	2.	1.1	101.2
1 JAN 1500 181	4.	2.0	102.4 *	1 JAN 1854 415	4.	2.0	102.4 *	1 JAN 2248 649	2.	1.1	101.2
1 JAN 1501 182	4.	2.0	102.4 *	1 JAN 1855 416	4.	2.0	102.4 *	1 JAN 2249 650	2.	1.1	101.2
1 JAN 1502 183	4.	2.0	102.4 *	1 JAN 1856 417	4.	2.0	102.4 *	1 JAN 2250 651	2.	1.1	101.2
1 JAN 1503 184	4.	2.0	102.4 *	1 JAN 1857 418	4.	2.0	102.4 *	1 JAN 2251 652	2.	1.1	101.2
1 JAN 1504 185	4.	2.1	102.4 *	1 JAN 1858 419	4.	2.0	102.4 *	1 JAN 2252 653	2.	1.0	101.2
1 JAN 1505 186	4.	2.1	102.4 *	1 JAN 1859 420	4.	2.0	102.4 *	1 JAN 2253 654	2.	1.0	101.2
1 JAN 1506 187	4.	2.1	102.4 *	1 JAN 1900 421	4.	2.0	102.4 *	1 JAN 2254 655	2.	1.0	101.2
1 JAN 1507 188	5.	2.1	102.4 *	1 JAN 1901 422	4.	2.0	102.3 *	1 JAN 2255 656	2.	1.0	101.2
1 JAN 1508 189	5.	2.1	102.5 *	1 JAN 1902 423	4.	2.0	102.3 *	1 JAN 2256 657	2.	1.0	101.2
1 JAN 1509 190	5.	2.1	102.5 *	1 JAN 1903 424	4.	2.0	102.3 *	1 JAN 2257 658	2.	1.0	101.2
1 JAN 1510 191	5.	2.1	102.5 *	1 JAN 1904 425	4.	2.0	102.3 *	1 JAN 2258 659	2.	1.0	101.2

1 JAN 1511 192	5.	2.1	102.5 *	1 JAN 1905 426	4.	2.0	102.3 *	1 JAN 2259 660	2.	1.0	101.2
1 JAN 1512 193	5.	2.1	102.5 *	1 JAN 1906 427	4.	2.0	102.3 *	1 JAN 2300 661	2.	1.0	101.2
1 JAN 1513 194	5.	2.2	102.5 *	1 JAN 1907 428	4.	2.0	102.3 *	1 JAN 2301 662	2.	1.0	101.2
1 JAN 1514 195	5.	2.2	102.5 *	1 JAN 1908 429	4.	2.0	102.3 *	1 JAN 2302 663	2.	1.0	101.2
1 JAN 1515 196	6.	2.2	102.5 *	1 JAN 1909 430	4.	2.0	102.3 *	1 JAN 2303 664	2.	1.0	101.2
1 JAN 1516 197	6.	2.2	102.6 *	1 JAN 1910 431	4.	2.0	102.3 *	1 JAN 2304 665	2.	1.0	101.2
1 JAN 1517 198	6.	2.2	102.6 *	1 JAN 1911 432	4.	1.9	102.3 *	1 JAN 2305 666	2.	1.0	101.2
1 JAN 1518 199	6.	2.2	102.6 *	1 JAN 1912 433	4.	1.9	102.3 *	1 JAN 2306 667	2.	1.0	101.2
1 JAN 1519 200	6.	2.2	102.6 *	1 JAN 1913 434	4.	1.9	102.3 *	1 JAN 2307 668	2.	1.0	101.2
1 JAN 1520 201	6.	2.2	102.6 *	1 JAN 1914 435	4.	1.9	102.3 *	1 JAN 2308 669	2.	1.0	101.2
1 JAN 1521 202	6.	2.3	102.6 *	1 JAN 1915 436	4.	1.9	102.3 *	1 JAN 2309 670	2.	1.0	101.2
1 JAN 1522 203	6.	2.3	102.6 *	1 JAN 1916 437	4.	1.9	102.2 *	1 JAN 2310 671	2.	1.0	101.2
1 JAN 1523 204	7.	2.3	102.6 *	1 JAN 1917 438	4.	1.9	102.2 *	1 JAN 2311 672	2.	1.0	101.2
1 JAN 1524 205	7.	2.3	102.7 *	1 JAN 1918 439	4.	1.9	102.2 *	1 JAN 2312 673	2.	1.0	101.2
1 JAN 1525 206	7.	2.3	102.7 *	1 JAN 1919 440	4.	1.9	102.2 *	1 JAN 2313 674	2.	1.0	101.2
1 JAN 1526 207	7.	2.3	102.7 *	1 JAN 1920 441	4.	1.9	102.2 *	1 JAN 2314 675	2.	1.0	101.2
1 JAN 1527 208	7.	2.3	102.7 *	1 JAN 1921 442	4.	1.9	102.2 *	1 JAN 2315 676	2.	1.0	101.1
1 JAN 1528 209	7.	2.3	102.7 *	1 JAN 1922 443	4.	1.9	102.2 *	1 JAN 2316 677	2.	1.0	101.1
1 JAN 1529 210	7.	2.4	102.7 *	1 JAN 1923 444	4.	1.9	102.2 *	1 JAN 2317 678	2.	1.0	101.1
1 JAN 1530 211	8.	2.4	102.7 *	1 JAN 1924 445	4.	1.9	102.2 *	1 JAN 2318 679	2.	1.0	101.1
1 JAN 1531 212	8.	2.4	102.8 *	1 JAN 1925 446	4.	1.9	102.2 *	1 JAN 2319 680	2.	1.0	101.1
1 JAN 1532 213	8.	2.4	102.8 *	1 JAN 1926 447	4.	1.9	102.2 *	1 JAN 2320 681	2.	1.0	101.1
1 JAN 1533 214	8.	2.4	102.8 *	1 JAN 1927 448	4.	1.9	102.2 *	1 JAN 2321 682	2.	1.0	101.1
1 JAN 1534 215	8.	2.4	102.8 *	1 JAN 1928 449	4.	1.9	102.2 *	1 JAN 2322 683	2.	1.0	101.1
1 JAN 1535 216	8.	2.5	102.8 *	1 JAN 1929 450	4.	1.9	102.2 *	1 JAN 2323 684	2.	1.0	101.1
1 JAN 1536 217	9.	2.5	102.8 *	1 JAN 1930 451	4.	1.8	102.2 *	1 JAN 2324 685	2.	1.0	101.1
1 JAN 1537 218	9.	2.5	102.9 *	1 JAN 1931 452	4.	1.8	102.2 *	1 JAN 2325 686	2.	1.0	101.1
1 JAN 1538 219	9.	2.5	102.9 *	1 JAN 1932 453	4.	1.8	102.2 *	1 JAN 2326 687	2.	1.0	101.1
1 JAN 1539 220	9.	2.5	102.9 *	1 JAN 1933 454	4.	1.8	102.1 *	1 JAN 2327 688	2.	.9	101.1
1 JAN 1540 221	9.	2.6	102.9 *	1 JAN 1934 455	4.	1.8	102.1 *	1 JAN 2328 689	2.	.9	101.1
1 JAN 1541 222	10.	2.6	102.9 *	1 JAN 1935 456	4.	1.8	102.1 *	1 JAN 2329 690	2.	.9	101.1
1 JAN 1542 223	10.	2.6	103.0 *	1 JAN 1936 457	4.	1.8	102.1 *	1 JAN 2330 691	2.	.9	101.1
1 JAN 1543 224	10.	2.6	103.0 *	1 JAN 1937 458	4.	1.8	102.1 *	1 JAN 2331 692	2.	.9	101.1
1 JAN 1544 225	10.	2.6	103.0 *	1 JAN 1938 459	4.	1.8	102.1 *	1 JAN 2332 693	2.	.9	101.1
1 JAN 1545 226	11.	2.6	103.0 *	1 JAN 1939 460	4.	1.8	102.1 *	1 JAN 2333 694	2.	.9	101.1
1 JAN 1546 227	11.	2.6	103.0 *	1 JAN 1940 461	4.	1.8	102.1 *	1 JAN 2334 695	2.	.9	101.1
1 JAN 1547 228	12.	2.7	103.0 *	1 JAN 1941 462	4.	1.8	102.1 *	1 JAN 2335 696	2.	.9	101.1
1 JAN 1548 229	12.	2.7	103.1 *	1 JAN 1942 463	4.	1.8	102.1 *	1 JAN 2336 697	2.	.9	101.1
1 JAN 1549 230	12.	2.7	103.1 *	1 JAN 1943 464	4.	1.8	102.1 *	1 JAN 2337 698	2.	.9	101.1
1 JAN 1550 231	13.	2.7	103.1 *	1 JAN 1944 465	4.	1.8	102.1 *	1 JAN 2338 699	2.	.9	101.1
1 JAN 1551 232	13.	2.7	103.1 *	1 JAN 1945 466	4.	1.8	102.1 *	1 JAN 2339 700	2.	.9	101.1
1 JAN 1552 233	13.	2.7	103.1 *	1 JAN 1946 467	4.	1.8	102.1 *				
1 JAN 1553 234	14.	2.7	103.1 *	1 JAN 1947 468	4.	1.8	102.1 *				
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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	11.65-HR
79.	4.22	(CFS)	12.	7.	7.	7.
		(INCHES)	1.169	1.397	1.397	1.397
		(AC-FT)	6.	7.	7.	7.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)	6-HR	24-HR	72-HR	11.65-HR
4.	4.22	2.	2.	2.	2.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)	6-HR	24-HR	72-HR	11.65-HR
104.00	4.22	102.70	102.09	102.09	102.09

CUMULATIVE AREA = .10 SQ MI

STATION DETAIN

(I) INFLOW, (O) OUTFLOW

		0.	20.	40.	60.	80.	100.	120.	140.	0.	0.	0.	0.	0
									(S) STORAGE					
		0.	0.	0.	0.	0.	0.	0.	1.	2.	3.	4.	0.	0
DAHRMN	PER													
11200	1.I								S					
11201	2.I								S					
11202	3.I								S					
11203	4.I								S					
11204	5.OI								S					
11205	6.OI								S					
11206	7.OI								S					
11207	8.OI								S					
11208	9.OI								S					
11209	10.O I								S					
11210	11.O.I								S					
11211	12.O I								S					
11212	13.O I								S					
11213	14.O I								S					
11214	15.O I								S					
11215	16.O I								S					
11216	17.O I								S					
11217	18.O I								S					
11218	19.O I								S					
11219	20.O I								S					
11220	21.O.I								S					
11221	22.O I								S					
11222	23.O I								S					
11223	24.O I								S					
11224	25.O I								S					
11225	26.O I								S					
11226	27.O I								S					
11227	28.O I								S					
11228	29.O I								S					
11229	30.O I								S					
11230	31.O.I								S					
11231	32.O I								S					
11232	33.O I								S					
11233	34.O I								S					
11234	35.O I								S					
11235	36.O I								.S					
11236	37.O I								.S					
11237	38.O I								.S					
11238	39.O I								.S					
11239	40.O I								.S					
11240	41.O.I								.S					
11241	42.O I								.S					
11242	43.O I								.S					
11243	44.O I								.S					
11244	45.O I								.S					
11245	46.O I								.S					
11246	47.O I								.S					
11247	48.O I								.S					
11248	49.O I								.S					
11249	50.O I								.S					
11250	51.O.I								.S					
11251	52.O I								.S					
11252	53.O I								.S					

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11253  54.0 I                                  S
11254  55.0 I                                  S
11255  56.0 I                                  S
11256  57.0 I                                   S
11257  58.0 I                                   S
11258  59.0 I                                   S
11259  60.0 I                                   S
11300  61.0 I                                   S
11301  62.0 I                                   S
11302  63.0 I                                   S
11303  64.0 I                                   S
11304  65.0 I                                   S
11305  66.0 I                                   S
11306  67.0 I                                   S
11307  68.0 I                                   S
11308  69.0 I                                   S
11309  70.0 I                                   S
11310  71.0 I                                   S
11311  72.0 I                                   S
11312  73.0 I                                   S
11313  74.0 I                                   S
11314  75.0 I                                   S
11315  76.0 I                                    S
11316  77.0 I                                    S
11317  78.0 I                                    S
11318  79.0 I                                    S
11319  80.0 I                                    S
11320  81.0 I                                    S
11321  82.0 I                                    S
11322  83.0 I                                    S
11323  84.0 I                                    S
11324  85.0 I                                    S
11325  86.0 I                                    S
11326  87.0 I                                    S
11327  88.0 I                                    S
11328  89.0 I                                    S
11329  90.0 I                                    S
11330  91.0 I                                    S
11331  92.0 I                                    S
11332  93.0 I                                    S
11333  94.0 I                                     S
11334  95.0 I                                     S
11335  96.0 I                                     S
11336  97.0 I                                     S
11337  98.0 I                                     S
11338  99.0  I                                    S
11339 100.0  I                                    S
11340 101.0  I                                    S
11341 102.0  I                                    S
11342 103.0  I                                    S
11343 104.0  I                                    S
11344 105.0  I                                    S
11345 106.0  I                                    S
11346 107.0  I                                    S
11347 108.0  I                                    S
11348 109.0  I                                    S
11349 110.0  I                                    S
11350 111.0  I                                     S
11351 112.0  I                                      S
11352 113.0  I                                      S
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11353 114.O  I                                                  S
11354 115. O I                                                  S
11355 116. O I                                                  S
11356 117. O I                                                  S
11357 118. O I                                                  S
11358 119. O I                                                  S
11359 120. O I                                                  S
11400 121. O I                                                  S
11401 122. O I                                                  S
11402 123. O I                                                  S
11403 124. O I                                                  S
11404 125. O I                                                  S
11405 126. O I                                                  S
11406 127. O I                                                   S
11407 128. O I                                                   S
11408 129. O I                                                   S
11409 130. O I                                                   S
11410 131. O I                                                   S
11411 132. O I                                                   S
11412 133. O I                                                   S
11413 134. O I                                                   S
11414 135. O I                                                   S
11415 136. O I                                                   S
11416 137. O I                                                   S
11417 138. O I                                                   S
11418 139. O I                                                   S
11419 140. O I                                                   S
11420 141. O I                                                   S
11421 142. O I                                                    S
11422 143. O I                                                    S
11423 144. O I                                                    S
11424 145. O I                                                    S
11425 146. O I                                                    S
11426 147. O I                                                    S
11427 148. O  I                                                   S
11428 149. O  I                                                   S
11429 150. O  I                                                   S
11430 151. O .I                                                   S
11431 152. O  I                                                   S
11432 153. O  I                                                   S
11433 154. O  I                                                    S
11434 155. O  I                                                    S
11435 156. O  I                                                    S
11436 157. O  I                                                    S
11437 158. O  I                                                    S
11438 159. O  I                                                    S
11439 160. O  I                                                    S
11440 161. O .I                                                    S
11441 162. O  I                                                    S
11442 163. O  I                                                    S
11443 164. O  I                                                    S
11444 165. O  I                                                     S
11445 166. O  I                                                     S
11446 167. O  I                                                     S
11447 168. O  I                                                     S
11448 169. O  I                                                     S
11449 170. O  I                                                     S
11450 171. O .I                                                     S
11451 172. O   I                                                    S
11452 173. O   I                                                    S
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11453 174.  O   I   .         .         .         .         .         .         .        S.         .         .         .
11454 175.  O   I   .         .         .         .         .         .         .        S.         .         .         .
11455 176.  O   I   .         .         .         .         .         .         .         S         .         .         .
11456 177.  O   I   .         .         .         .         .         .         .         S         .         .         .
11457 178.  O   I   .         .         .         .         .         .         .         S         .         .         .
11458 179.  O   I   .         .         .         .         .         .         .         S         .         .         .
11459 180.  O   I   .         .         .         .         .         .         .         S         .         .         .
11500 181.  O . I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . .
11501 182.  O   I   .         .         .         .         .         .         .         S         .         .         .
11502 183.  O   I   .         .         .         .         .         .         .         S         .         .         .
11503 184.  O   I   .         .         .         .         .         .         .         S         .         .         .
11504 185.  O   I   .         .         .         .         .         .         .         .S        .         .         .
11505 186.  O   I   .         .         .         .         .         .         .         .S        .         .         .
11506 187.  O    I  .         .         .         .         .         .         .         .S        .         .         .
11507 188.  O    I  .         .         .         .         .         .         .         .S        .         .         .
11508 189.  O    I  .         .         .         .         .         .         .         .S        .         .         .
11509 190.  O    I  .         .         .         .         .         .         .         .S        .         .         .
11510 191.  O . .I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . .
11511 192.   O   I  .         .         .         .         .         .         .         .S        .         .         .
11512 193.   O   I  .         .         .         .         .         .         .         .S        .         .         .
11513 194.   O   I  .         .         .         .         .         .         .         . S       .         .         .
11514 195.   O   I  .         .         .         .         .         .         .         . S       .         .         .
11515 196.   O   I  .         .         .         .         .         .         .         . S       .         .         .
11516 197.   O   I  .         .         .         .         .         .         .         . S       .         .         .
11517 198.   O   I  .         .         .         .         .         .         .         . S       .         .         .
11518 199.   O   I  .         .         .         .         .         .         .         . S       .         .         .
11519 200.   O   I  .         .         .         .         .         .         .         . S       .         .         .
11520 201.  .O. . I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . .
11521 202.   O    I .         .         .         .         .         .         .         .  S      .         .         .
11522 203.   O    I .         .         .         .         .         .         .         .  S      .         .         .
11523 204.   O    I .         .         .         .         .         .         .         .  S      .         .         .
11524 205.   O    I .         .         .         .         .         .         .         .  S      .         .         .
11525 206.   O    I .         .         .         .         .         .         .         .  S      .         .         .
11526 207.   O    I .         .         .         .         .         .         .         .  S      .         .         .
11527 208.    O   I .         .         .         .         .         .         .         .  S      .         .         .
11528 209.    O    I.         .         .         .         .         .         .         .  S      .         .         .
11529 210.    O    I.         .         .         .         .         .         .         .   S     .         .         .
11530 211.  . O . .I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . .
11531 212.    O    I.         .         .         .         .         .         .         .   S     .         .         .
11532 213.    O     I         .         .         .         .         .         .         .   S     .         .         .
11533 214.    O     I         .         .         .         .         .         .         .   S     .         .         .
11534 215.    O     I         .         .         .         .         .         .         .   S     .         .         .
11535 216.    O     .I        .         .         .         .         .         .         .    S    .         .         .
11536 217.    O     .I        .         .         .         .         .         .         .    S    .         .         .
11537 218.    O     .I        .         .         .         .         .         .         .    S    .         .         .
11538 219.    O     .I        .         .         .         .         .         .         .    S    .         .         .
11539 220.     O    . I       .         .         .         .         .         .         .    S    .         .         .
11540 221.  . .O. . .I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . .
11541 222.     O    .I        .         .         .         .         .         .         .     S   .         .         .
11542 223.     O    .I        .         .         .         .         .         .         .     S   .         .         .
11543 224.     O    .I        .         .         .         .         .         .         .     S   .         .         .
11544 225.     O    .I        .         .         .         .         .         .         .     S   .         .         .
11545 226.     O    .I        .         .         .         .         .         .         .     S   .         .         .
11546 227.      O   .I        .         .         .         .         .         .         .     S   .         .         .
11547 228.      O   I         .         .         .         .         .         .         .      S  .         .         .
11548 229.      O   I         .         .         .         .         .         .         .      S  .         .         .
11549 230.      O   I         .         .         .         .         .         .         .      S  .         .         .
11550 231.  . . O . I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . .
11551 232.       O  I         .         .         .         .         .         .         .      S  .         .         .
11552 233.       O  I         .         .         .         .         .         .         .      S  .         .         .
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11553 234.     O I.         .         .         .         .         .         .         .         S .         .         .
11554 235.     O . I       .         .         .         .         .         .         .         S .         .         .
11555 236.     O .     I   .         .         .         .         .         .         .         S .         .         .
11556 237.      O .         .I        .         .         .         .         .         .         S .         .         .
11557 238.       O.         .    I    .         .         .         .         .         .         S .         .         .
11558 239.        O         .        I.         .         .         .         .         .         S.         .         .
11559 240.        .O        .         . I       .         .         .         .         .         S.         .         .
11600 241. . . . . O . . . . . .I. . . . . S . . . . . .
11601 242.        . O       .         .         . I       .         .         .         .         .S         .         .
11602 243.        .  O      .         .         .    I    .         .         .         .         . S        .         .
11603 244.        .    O    .         .         .         I         .         .         .         .  S       .         .
11604 245.        .       O.         .         .         .    I    .         .         .         .  S       .         .
11605 246.        .         . O       .         .         .       I .         .         .         .   S      .         .
11606 247.        .         .    O    .         .         .         . I       .         .         .    S     .         .
11607 248.        .         .       O.         .         .         .    I    .         .         .     S    .         .
11608 249.        .         .         . O       .         .         . I       .         .         .      S   .         .
11609 250.        .         .         .   O     .         .       I .         .         .         .       S  .         .
11610 251. . . . . .O. . . . . I . . . . . .S. . . . . .
11611 252.        .         .         .      O .         I         .         .         .         .        S.         .
11612 253.        .         .         .       O.    I    .         .         .         .         .        S.         .
11613 254.        .         .         .        OI        .         .         .         .         .        S.         .
11614 255.        .         .         ..     I  O        .         .         .         .         .        S.         .
11615 256.        .         .         . I     O.         .         .         .         .         .        S.         .
11616 257.        .         .       I.       O .         .         .         .         .         .        S.         .
11617 258.        .         .    I    .     O .         .         .         .         .         .        S.         .
11618 259.        .         .I        .    O  .         .         .         .         .         .       S .         .
11619 260.        .      I  .         .    O  .         .         .         .         .         .       S .         .
11620 261. . . . . .I. . . . . .O. . . . . .S. . . . . .
11621 262.       I.         .         .O        .         .         .         .         .         .      S  .         .
11622 263.       I.         .        O.         .         .         .         .         .         .     S   .         .
11623 264.       I.         .      O  .         .         .         .         .         .         .     S   .         .
11624 265.       I.         .    O    .         .         .         .         .         .         .    S    .         .
11625 266.      I .         .   O     .         .         .         .         .         .         .    S    .         .
11626 267.      I .         . O       .         .         .         .         .         .         .   S     .         .
11627 268.      I .         .O        .         .         .         .         .         .         .   S     .         .
11628 269.      I .         O         .         .         .         .         .         .         .   S     .         .
11629 270.      I .       O .         .         .         .         .         .         .         .  S      .         .
11630 271. . . .I. . . . .O. . . . . .S. . . . . .
11631 272.     I  .      O  .         .         .         .         .         .         .         .  S      .         .
11632 273.     I  .     O   .         .         .         .         .         .         .         . S       .         .
11633 274.     I  .     O   .         .         .         .         .         .         .         .S        .         .
11634 275.    I   .    O    .         .         .         .         .         .         .         .S        .         .
11635 276.    I   .    O    .         .         .         .         .         .         .         .S        .         .
11636 277.    I   .   O     .         .         .         .         .         .         .         .S        .         .
11637 278.    I   .   O     .         .         .         .         .         .         .         .S        .         .
11638 279.    I   .   O     .         .         .         .         .         .         .         .S        .         .
11639 280.    I   . O       .         .         .         .         .         .         .         .S        .         .
11640 281. . . I . . .O. . . . . .S. . . . . .
11641 282.    I   . O       .         .         .         .         .         .         .         .S        .         .
11642 283.    I   . O       .         .         .         .         .         .         .         S         .         .
11643 284.   I    . O       .         .         .         .         .         .         .         S         .         .
11644 285.   I    . O       .         .         .         .         .         .         .         S         .         .
11645 286.   I    .O        .         .         .         .         .         .         .         S         .         .
11646 287.   I    .O        .         .         .         .         .         .         .         S         .         .
11647 288.   I    .O        .         .         .         .         .         .         .         S         .         .
11648 289.   I    .O        .         .         .         .         .         .         .        S.         .         .
11649 290.   I    O         .         .         .         .         .         .         .        S.         .         .
11650 291. . .I. . O . . . . . .S. . . . . .
11651 292.   I    O         .         .         .         .         .         .         .        S.         .         .
11652 293.   I    O         .         .         .         .         .         .         .        S.         .         .
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11653 294.    I    O.     .     .     .     .     .     .     .     S.    .     .
11654 295.    I    O.     .     .     .     .     .     .     .     S.    .     .
11655 296.    I    O.     .     .     .     .     .     .     .    S .    .     .
11656 297.    I    O.     .     .     .     .     .     .     .    S .    .     .
11657 298.   I     O.     .     .     .     .     .     .     .    S .    .     .
11658 299.   I    O .     .     .     .     .     .     .     .    S .    .     .
11659 300.   I    O .     .     .     .     .     .     .     .    S .    .     .
11700 301. . I . O . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . .
11701 302.   I    O .     .     .     .     .     .     .     .    S .    .     .
11702 303.   I    O .     .     .     .     .     .     .     .    S .    .     .
11703 304.   I   O  .     .     .     .     .     .     .     .    S .    .     .
11704 305.   I   O  .     .     .     .     .     .     .     .    S .    .     .
11705 306.   I   O  .     .     .     .     .     .     .     .   S  .    .     .
11706 307.   I   O  .     .     .     .     .     .     .     .   S  .    .     .
11707 308.   I   O  .     .     .     .     .     .     .     .   S  .    .     .
11708 309.   I   O  .     .     .     .     .     .     .     .   S  .    .     .
11709 310.   I   O  .     .     .     .     .     .     .     .   S  .    .     .
11710 311. . I O . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . .
11711 312.   I O    .     .     .     .     .     .     .     .   S  .    .     .
11712 313.   I O    .     .     .     .     .     .     .     .   S  .    .     .
11713 314.   I O    .     .     .     .     .     .     .     .   S  .    .     .
11714 315.   I O    .     .     .     .     .     .     .     .   S  .    .     .
11715 316.   I O    .     .     .     .     .     .     .     .   S  .    .     .
11716 317.   I O    .     .     .     .     .     .     .     .   S  .    .     .
11717 318.   I O    .     .     .     .     .     .     .     .   S  .    .     .
11718 319.   I O    .     .     .     .     .     .     .     .   S  .    .     .
11719 320.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11720 321. .I.O. . . . . . . . . . . . . . . . . . . . . . . . . .S . . . . . . . . . . . . . .
11721 322.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11722 323.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11723 324.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11724 325.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11725 326.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11726 327.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11727 328.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11728 329.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11729 330.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11730 331. .I.O. . . . . . . . . . . . . . . . . . . . . . . . . .S . . . . . . . . . . . . . .
11731 332.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11732 333.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11733 334.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11734 335.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11735 336.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11736 337.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11737 338.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11738 339.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11739 340.  I O     .     .     .     .     .     .     .     .  S   .    .     .
11740 341. .I.O. . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . .
11741 342.  I O     .     .     .     .     .     .     .     . S    .    .     .
11742 343.  I O     .     .     .     .     .     .     .     . S    .    .     .
11743 344.  I O     .     .     .     .     .     .     .     . S    .    .     .
11744 345.  I O     .     .     .     .     .     .     .     . S    .    .     .
11745 346.  I O     .     .     .     .     .     .     .     . S    .    .     .
11746 347.  I O     .     .     .     .     .     .     .     . S    .    .     .
11747 348.  IO      .     .     .     .     .     .     .     . S    .    .     .
11748 349.  IO      .     .     .     .     .     .     .     . S    .    .     .
11749 350.  IO      .     .     .     .     .     .     .     . S    .    .     .
11750 351. .IO . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . .
11751 352.  IO      .     .     .     .     .     .     .     . S    .    .     .
11752 353.  IO      .     .     .     .     .     .     .     . S    .    .     .
```

```
11753 354.  IO                                                  S
11754 355.  IO                                                  S
11755 356.  IO                                                  S
11756 357.  IO                                                  S
11757 358.  IO                                                  S
11758 359.  IO                                                  S
11759 360.  IO                                                  S
11800 361. I O                                                  S
11801 362. I O                                                  S
11802 363. I O                                                  S
11803 364. I O                                                  S
11804 365. I O                                                  S
11805 366. I O                                                  S
11806 367.I  O                                                  S
11807 368.I  O                                                  S
11808 369.I  O                                                  S
11809 370.I  O                                                  S
11810 371.I. O                                                  S
11811 372I   O                                                  S
11812 373I   O                                                  S
11813 374I   O                                                  S
11814 375I   O                                                  S
11815 376I   O                                                  S
11816 377I   O                                                  S
11817 378I  O                                                   S
11818 379I  O                                                   S
11819 380I  O                                                   S
11820 381I .O                                                   S
11821 382I  O                                                   S
11822 383I  O                                                   S
11823 384I  O                                                   S
11824 385I  O                                                   S
11825 386I  O                                                   S
11826 387I  O                                                   S
11827 388I  O                                                   S
11828 389I  O                                                   S
11829 390I  O                                                   S
11830 391I .O                                                   S
11831 392I  O                                                   S
11832 393I  O                                                   S
11833 394I  O                                                   S
11834 395I  O                                                   S
11835 396I  O                                                   S
11836 397I  O                                                   S
11837 398I  O                                                   S
11838 399I  O                                                   S
11839 400I  O                                                   S
11840 401I .O                                                   S
11841 402I O                                                    S
11842 403I O                                                    S
11843 404I O                                                    S
11844 405I O                                                    S
11845 406I O                                                    S
11846 407I O                                                    S
11847 408I O                                                    S
11848 409I O                                                    S
11849 410I O                                                    S
11850 411I O                                                    S
11851 412I O                                                    S
11852 413I O                                                    S
```

```
11853 414I O                                                    S
11854 415I O                                                    S
11855 416I O                                                    S
11856 417I O                                                    S
11857 418I O                                                    S
11858 419I O                                                    S
11859 420I O                                                    S
11900 421I O                                                    S
11901 422I O                                                    S
11902 423I O                                                    S
11903 424I O                                                    S
11904 425I O                                                    S
11905 426I O                                                    S
11906 427I O                                                    S
11907 428I O                                                    S
11908 429I O                                                    S
11909 430I O                                                    S
11910 431I O                                                    S
11911 432I O                                                    S.
11912 433I O                                                    S.
11913 434I O                                                    S.
11914 435I O                                                    S.
11915 436I O                                                    S.
11916 437I O                                                    S.
11917 438I O                                                    S.
11918 439I O                                                    S.
11919 440I O                                                    S.
11920 441I O                                                    S.
11921 442I O                                                    S.
11922 443I O                                                    S.
11923 444I O                                                    S.
11924 445I O                                                    S.
11925 446I O                                                    S.
11926 447I O                                                    S.
11927 448I O                                                    S.
11928 449I O                                                    S.
11929 450I O                                                    S.
11930 451I O                                                    S
11931 452I O                                                    S
11932 453I O                                                    S
11933 454I O                                                    S
11934 455I O                                                    S
11935 456I O                                                    S
11936 457I O                                                    S
11937 458I O                                                    S
11938 459I O                                                    S
11939 460I O                                                    S
11940 461I O                                                    S
11941 462I O                                                    S
11942 463I O                                                    S
11943 464I O                                                    S
11944 465I O                                                    S
11945 466I O                                                    S
11946 467I O                                                    S
11947 468I O                                                    S
11948 469I O                                                    S
11949 470I O                                                    S
11950 471I O                                                    S.
11951 472I O                                                    S
11952 473I O                                                    S
```

11953 474I O . . . . . S . . . .
11954 475I O . . . . . S . . . .
11955 476I O . . . . . S . . . .
11956 477I O . . . . . S . . . .
11957 478I O . . . . . S . . . .
11958 479I O . . . . . S . . . .
11959 480I O . . . . . S . . . .
12000 481I O . . . . . S . . . .
12001 482I O . . . . . S . . . .
12002 483I O . . . . . S . . . .
12003 484I O . . . . . S . . . .
12004 485I O . . . . . S . . . .
12005 486I O . . . . . S . . . .
12006 487I O . . . . . S . . . .
12007 488I O . . . . . S . . . .
12008 489I O . . . . . S . . . .
12009 490I O . . . . . S . . . .
12010 491I O . . . . . S . . . .
12011 492I O . . . . . S . . . .
12012 493I O . . . . . S . . . .
12013 494I O . . . . . S . . . .
12014 495I O . . . . . S . . . .
12015 496I O . . . . . S . . . .
12016 497I O . . . . . S . . . .
12017 498I O . . . . . S . . . .
12018 499I O . . . . . S . . . .
12019 500I O . . . . . S . . . .
12020 501I O . . . . . S . . . .
12021 502I O . . . . . S . . . .
12022 503I O . . . . . S . . . .
12023 504I O . . . . . S . . . .
12024 505I O . . . . . S . . . .
12025 506I O . . . . . S . . . .
12026 507I O . . . . . S . . . .
12027 508I O . . . . . S . . . .
12028 509I O . . . . . S . . . .
12029 510I O . . . . . S . . . .
12030 511I O . . . . . S . . . .
12031 512I O . . . . . S . . . .
12032 513I O . . . . . S . . . .
12033 514I O . . . . . S . . . .
12034 515I O . . . . . S . . . .
12035 516I O . . . . . S . . . .
12036 517I O . . . . . S . . . .
12037 518I O . . . . . S . . . .
12038 519I O . . . . . S . . . .
12039 520I O . . . . . S . . . .
12040 521I O . . . . . S . . . .
12041 522I O . . . . . S . . . .
12042 523I O . . . . . S . . . .
12043 524I O . . . . . S . . . .
12044 525I O . . . . . S . . . .
12045 526I O . . . . . S . . . .
12046 527I O . . . . . S . . . .
12047 528I O . . . . . S . . . .
12048 529I O . . . . . S . . . .
12049 530I O . . . . . S . . . .
12050 531I O . . . . . S . . . .
12051 532I O . . . . . S . . . .
12052 533IO . . . . . S . . . .

12053 534IO . . . . . S . . . .
12054 535IO . . . . . S . . . .
12055 536IO . . . . . S . . . .
12056 537IO . . . . . S . . . .
12057 538IO . . . . . S . . . .
12058 539IO . . . . . S . . . .
12059 540IO . . . . . S . . . .
12100 541IO . . . . . S . . . .
12101 542IO . . . . . S . . . .
12102 543IO . . . . . S . . . .
12103 544IO . . . . . S . . . .
12104 545IO . . . . . S . . . .
12105 546IO . . . . . S . . . .
12106 547IO . . . . . S . . . .
12107 548IO . . . . . S . . . .
12108 549IO . . . . . S . . . .
12109 550IO . . . . . S . . . .
12110 551IO . . . . . S . . . .
12111 552IO . . . . . S . . . .
12112 553IO . . . . . S . . . .
12113 554IO . . . . . S . . . .
12114 555IO . . . . . S . . . .
12115 556IO . . . . . S . . . .
12116 557IO . . . . . S . . . .
12117 558IO . . . . . S . . . .
12118 559IO . . . . . S . . . .
12119 560IO . . . . . S . . . .
12120 561IO . . . . . S . . . .
12121 562IO . . . . . S . . . .
12122 563IO . . . . . S . . . .
12123 564IO . . . . . S . . . .
12124 565IO . . . . . S . . . .
12125 566IO . . . . . S . . . .
12126 567IO . . . . . S . . . .
12127 568IO . . . . . S . . . .
12128 569IO . . . . . S . . . .
12129 570IO . . . . . S . . . .
12130 571IO . . . . . S . . . .
12131 572IO . . . . . S . . . .
12132 573IO . . . . . S . . . .
12133 574IO . . . . . S . . . .
12134 575IO . . . . . S . . . .
12135 576IO . . . . . S . . . .
12136 577IO . . . . . S . . . .
12137 578IO . . . . . S . . . .
12138 579IO . . . . . S . . . .
12139 580IO . . . . . S . . . .
12140 581IO . . . . . S . . . .
12141 582IO . . . . . S . . . .
12142 583IO . . . . . S . . . .
12143 584IO . . . . . S . . . .
12144 585IO . . . . . S . . . .
12145 586IO . . . . . S . . . .
12146 587IO . . . . . S . . . .
12147 588IO . . . . . S . . . .
12148 589IO . . . . . S . . . .
12149 590IO . . . . . S . . . .
12150 591IO . . . . . S . . . .
12151 592IO . . . . . S . . . .
12152 593IO . . . . . S . . . .

12153 594IO . . . . . S . . . .
12154 595IO . . . . . S . . . .
12155 596IO . . . . . S . . . .
12156 597IO . . . . . S . . . .
12157 598IO . . . . . S . . . .
12158 599IO . . . . . S . . . .
12159 600IO . . . . . S . . . .
12200 601IO . . . . . S . . . .
12201 602IO . . . . . S . . . .
12202 603IO . . . . . S . . . .
12203 604IO . . . . . S . . . .
12204 605IO . . . . . S . . . .
12205 606IO . . . . . S . . . .
12206 607IO . . . . . S . . . .
12207 608IO . . . . . S . . . .
12208 609IO . . . . . S . . . .
12209 610IO . . . . . S . . . .
12210 611IO . . . . . S . . . .
12211 612IO . . . . . S . . . .
12212 613IO . . . . . S . . . .
12213 614IO . . . . . S . . . .
12214 615IO . . . . . S . . . .
12215 616IO . . . . . S . . . .
12216 617IO . . . . . S . . . .
12217 618IO . . . . . S . . . .
12218 619IO . . . . . S . . . .
12219 620IO . . . . . S . . . .
12220 621IO . . . . . S . . . .
12221 622IO . . . . . S . . . .
12222 623IO . . . . . S . . . .
12223 624IO . . . . . S . . . .
12224 625IO . . . . . S . . . .
12225 626IO . . . . . S . . . .
12226 627IO . . . . . S . . . .
12227 628IO . . . . . S . . . .
12228 629IO . . . . . S . . . .
12229 630IO . . . . . S . . . .
12230 631IO . . . . . S . . . .
12231 632IO . . . . . S . . . .
12232 633IO . . . . . S . . . .
12233 634IO . . . . . S . . . .
12234 635IO . . . . . S . . . .
12235 636IO . . . . . S . . . .
12236 637IO . . . . . S . . . .
12237 638IO . . . . . S . . . .
12238 639IO . . . . . S . . . .
12239 640IO . . . . . S . . . .
12240 641IO . . . . . S . . . .
12241 642IO . . . . . S . . . .
12242 643IO . . . . . S . . . .
12243 644IO . . . . . S . . . .
12244 645IO . . . . . S . . . .
12245 646IO . . . . . S . . . .
12246 647IO . . . . . S . . . .
12247 648IO . . . . . S . . . .
12248 649IO . . . . . S . . . .
12249 650IO . . . . . S . . . .
12250 651IO . . . . . S . . . .
12251 652IO . . . . . S . . . .
12252 653IO . . . . . S . . . .

```
12253 654IO                                                  S
12254 655IO                                                  S
12255 656IO                                                  S
12256 657IO                                                  S
12257 658IO                                                  S
12258 659IO                                                  S
12259 660IO                                                  S
12300 661IO                                                  S
12301 662IO                                                  S
12302 663IO                                                  S
12303 664IO                                                  S
12304 665IO                                                  S
12305 666IO                                                  S
12306 667IO                                                  S
12307 668IO                                                  S
12308 669IO                                                  S
12309 670IO                                                  S
12310 671IO                                                  S
12311 672IO                                                  S
12312 673IO                                                  S
12313 674IO                                                  S
12314 675IO                                                  S
12315 676IO                                                  S
12316 677IO                                                  S
12317 678IO                                                  S
12318 679IO                                                  S
12319 680IO                                                  S
12320 681IO                                                  S
12321 682IO                                                  S
12322 683IO                                                  S
12323 684IO                                                  S
12324 685IO                                                  S
12325 686IO                                                  S
12326 687IO                                                  S
12327 688IO                                                  S.
12328 689IO                                                  S.
12329 690IO                                                  S.
12330 691IO                                                  S.
12331 692IO                                                  S.
12332 693IO                                                  S.
12333 694IO                                                  S.
12334 695IO                                                  S.
12335 696IO                                                  S.
12336 697IO                                                  S.
12337 698IO                                                  S.
12338 699IO                                                  S.
12339 700IO                                                  S.
```

RUNOFF SUMMARY

FLOW IN CUBIC FEET PER SECOND

TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	3000	131.	4.12	14.	7.	7.	.10		
ROUTED TO	DETAIN	79.	4.22	12.	7.	7.	.10	104.00	4.22

*** NORMAL END OF HEC-1 ***

Drainage Basin 4000

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   29JUL09  TIME  14:50:13  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

```
X     X  XXXXXXX   XXXXX           X
X     X  X        X     X         XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX          XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE..
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

*** FREE ***
              *DIAGRAM
  1           ID   MEADOWOOD J-15956 01/13/09 FILE: MW4000D.HC1
  2           ID   DETENTION FOR 100-YEAR STORM EVENT (BASED ON RATIONAL METHOD)
  3           ID   R/0=.50, PRECIP=3.6IN, TC 6.66MIN
  4           IT       1 01JAN90    1200     600
  5           IO       3       1

  6           KK    4003
  7           KM   RUN DATE   7/16/2009
  8           KM   RATIONAL METHOD HYDROGRAPH PROGRAM
  9           KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
 10           KM   6HR RAINFALL IS  3.6  INCHES
 11           KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.62
 12           KM   RATIONAL METHOD TIME OF CONCENTRATION IS  6  MIN.
 13           KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
 14           KM   IT 2 01JAN90 1200 200
 15           KO       0       0       0       0      21
 16           BA  0.0108
 17           IN       6 01JAN90    1157
 18           QI       0     0.9     0.9     0.9       1       1       1       1       1     1.1
 19           QI     1.1     1.1     1.1     1.2     1.2     1.2     1.2     1.3     1.3     1.4
 20           QI     1.4     1.4     1.5     1.5     1.6     1.7     1.7     1.8     1.9       2
 21           QI     2.1     2.3     2.4     2.7     2.8     3.2     3.5     4.3     4.9     7.1
 22           QI    10.2   35.92     5.7     3.8       3     2.5     2.2       2     1.8     1.6
 23           QI     1.5     1.4     1.3     1.3     1.2     1.1     1.1       1       1       1
 24           QI     0.9       0       0       0       0       0       0       0       0       0
 25           QI       0       0

 26           KK  4002.1
 27           KM   RUN DATE   7/16/2009
 28           KM   RATIONAL METHOD HYDROGRAPH PROGRAM
 29           KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
 30           KM   6HR RAINFALL IS  3.6  INCHES
 31           KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.3
 32           KM   RATIONAL METHOD TIME OF CONCENTRATION IS  13  MIN.
 33           KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
 34           KM   IT 2 01JAN90 1200 200
 35           BA   0.005
 36           IN      13 01JAN90    1147
 37           QI       0       0     0.2     0.2     0.2     0.2     0.2     0.3     0.3     0.3
 38           QI     0.3     0.3     0.4     0.4     0.4     0.5     0.6     0.7       1     0.9
 39           QI     5.4     0.8     0.5     0.4     0.3     0.3     0.3     0.2     0.2       0
 40           QI       0       0       0       0       0       0       0       0       0       0

 41           KK Combine
 42           KM   Combine the two drainage areas entering the detention basin
 43           HC       2

 44           KK  DETAIN
 45           KM   100-YEAR DETENTION
 46           KO       0       0       0       0      21
 47           RS       1    STOR      -1
 48           SV       0    0.72    0.94    1.05   1.246
 49           SQ       0    0.67    2.76    5.51    15.5
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  50          SE     100   102.4     103  103.32     104

  51          KK    4006
  52          KM   Undetained Area Trib to Node 4006
  53          KM   RUN DATE   7/16/2009
  54          KM   RATIONAL METHOD HYDROGRAPH PROGRAM
  55          KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
  56          KM   6HR RAINFALL IS  3.6  INCHES
  57          KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.284
  58          KM   RATIONAL METHOD TIME OF CONCENTRATION IS  16  MIN.
  59          KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
  60          KM   IT 2 01JAN90 1200 200
  61          BA  0.0017
  62          IN      16 01JAN90    1152
  63          QI       0     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1
  64          QI     0.1     0.1     0.2     0.2     0.3     0.4    1.38     0.2     0.1     0.1
  65          QI     0.1     0.1     0.1     0.1       0       0       0       0       0       0
  66          QI       0       0       0       0       0

  67          KK Combine
  68          KM   Combine detained outflow from DB4 and area trib to Node 4006
  69          KO       0       0       0       0      21
  70          HC       2
  71          ZZ
```

```
                SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    6        4003
                .
                .
   26           .       4002.1
                .            .
                .            .
   41     Combine............
                V
                V
   44      DETAIN
                .
                .
   51           .         4006
                .            .
                .            .
   67     Combine............

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
```

```
****************************************                    ****************************************
*                                      *                    *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *    U.S. ARMY CORPS OF ENGINEERS
*              JUN   1998              *                    *    HYDROLOGIC ENGINEERING CENTER
*           VERSION 4.1                *                    *          609 SECOND STREET
*                                      *                    *       DAVIS, CALIFORNIA 95616
*  RUN DATE   29JUL09  TIME  14:50:13  *                    *           (916) 756-1104
*                                      *                    *
****************************************                    ****************************************
```

```
                    MEADOWOOD J-15956 01/13/09 FILE: MW4000D.HC1
                    DETENTION FOR 100-YEAR STORM EVENT (BASED ON RATIONAL METHOD)
                    R/0=.50, PRECIP=3.6IN, TC 6.66MIN

  5 IO        OUTPUT CONTROL VARIABLES
                  IPRNT          3  PRINT CONTROL
                  IPLOT          1  PLOT CONTROL
                  QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT        HYDROGRAPH TIME DATA
                   NMIN          1  MINUTES IN COMPUTATION INTERVAL
                  IDATE     1JAN90  STARTING DATE
                  ITIME       1200  STARTING TIME
                     NQ        600  NUMBER OF HYDROGRAPH ORDINATES
                 NDDATE     1JAN90  ENDING DATE
                 NDTIME       2159  ENDING TIME
                  ICENT         19  CENTURY MARK

            COMPUTATION INTERVAL     .02 HOURS
                 TOTAL TIME BASE    9.98 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT


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


          **************
          *            *
  6 KK    *      4003  *
          *            *
          **************
                    RUN DATE   7/16/2009
                    RATIONAL METHOD HYDROGRAPH PROGRAM
                    COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
                    6HR RAINFALL IS  3.6  INCHES
                    RATIONAL METHOD RUNOFF COEFFICIENT IS  0.62
                    RATIONAL METHOD TIME OF CONCENTRATION IS  6  MIN.
```

```
                    FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
                    IT 2 01JAN90 1200 200

 15 KO        OUTPUT CONTROL VARIABLES
                  IPRNT          3  PRINT CONTROL
                  IPLOT          1  PLOT CONTROL
                  QSCAL         0.  HYDROGRAPH PLOT SCALE
                  IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                   IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                  ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                  ISAV2        600  LAST ORDINATE PUNCHED OR SAVED
                 TIMINT       .017  TIME INTERVAL IN HOURS


 17 IN        TIME DATA FOR INPUT TIME SERIES
                  JXMIN          6  TIME INTERVAL IN MINUTES
                 JXDATE     1JAN90  STARTING DATE
                 JXTIME       1157  STARTING TIME

            SUBBASIN RUNOFF DATA

 16 BA        SUBBASIN CHARACTERISTICS
                  TAREA        .01  SUBBASIN AREA

                                                        ***

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

                     HYDROGRAPH AT STATION     4003

PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
  (CFS)       (HR)                 6-HR       24-HR       72-HR      9.98-HR
    36.       4.05        (CFS)      3.          2.          2.          2.
                        (INCHES)  2.210       2.211       2.211       2.211
                         (AC-FT)     1.          1.          1.          1.

                      CUMULATIVE AREA =     .01 SQ MI


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

          **************
          *            *
 26 KK    *    4002.1  *
          *            *
          **************
                    RUN DATE   7/16/2009
                    RATIONAL METHOD HYDROGRAPH PROGRAM
                    COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
                    6HR RAINFALL IS  3.6  INCHES
                    RATIONAL METHOD RUNOFF COEFFICIENT IS  0.3
                    RATIONAL METHOD TIME OF CONCENTRATION IS  13  MIN.
                    FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
                    IT 2 01JAN90 1200 200

 36 IN        TIME DATA FOR INPUT TIME SERIES
                  JXMIN         13  TIME INTERVAL IN MINUTES
```

```
                JXDATE      1JAN90  STARTING DATE
                JXTIME        1147  STARTING TIME

          SUBBASIN RUNOFF DATA

 35 BA        SUBBASIN CHARACTERISTICS
                TAREA          .00  SUBBASIN AREA

                                                    ***

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

                  HYDROGRAPH AT STATION   4002.1

PEAK FLOW    TIME                        MAXIMUM AVERAGE FLOW
  (CFS)      (HR)                 6-HR      24-HR      72-HR     9.98-HR
    5.       4.12       (CFS)       1.         0.         0.         0.
                      (INCHES)    1.061      1.061      1.061      1.061
                       (AC-FT)       0.         0.         0.         0.

                     CUMULATIVE AREA =     .00 SQ MI

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

          **************
          *            *
 41 KK    *   Combine  *
          *            *
          **************
                  Combine the two drainage areas entering the detention basin

 43 HC        HYDROGRAPH COMBINATION
                ICOMP           2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                    ***

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

                  HYDROGRAPH AT STATION  Combine

PEAK FLOW    TIME                        MAXIMUM AVERAGE FLOW
  (CFS)      (HR)                 6-HR      24-HR      72-HR     9.98-HR
   40.       4.05       (CFS)       3.         2.         2.         2.
                      (INCHES)    1.846      1.847      1.847      1.847
                       (AC-FT)       2.         2.         2.         2.

                     CUMULATIVE AREA =     .02 SQ MI

*** *** *** *** *** *** *** *** *** *** *** ***,*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** **

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

```
44 KK      *    DETAIN  *
           *            *
           **************
                          100-YEAR DETENTION

46 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          3  PRINT CONTROL
                     IPLOT          1  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2        600  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .017  TIME INTERVAL IN HOURS


             HYDROGRAPH ROUTING DATA

47 RS          STORAGE ROUTING
                    NSTPS          1  NUMBER OF SUBREACHES
                     ITYP       STOR  TYPE OF INITIAL CONDITION
                    RSVRIC      -1.00  INITIAL CONDITION
                         X        .00 WORKING R AND D COEFFICIENT

48 SV            STORAGE         .0        .7        .9       1.0       1.2

49 SQ          DISCHARGE         0.        1.        3.        6.       16.

50 SE          ELEVATION     100.00    102.40    103.00    103.32    104.00

                                                              ***

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

                        HYDROGRAPH AT STATION   DETAIN

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
   (CFS)       (HR)                  6-HR       24-HR       72-HR      9.98-HR
     15.       4.13        (CFS)       3.          2.          2.          2.
                         (INCHES)    1.504       1.718       1.718       1.718
                          (AC-FT)       1.          1.          1.          1.

PEAK STORAGE   TIME                         MAXIMUM AVERAGE STORAGE
  (AC-FT)      (HR)                  6-HR       24-HR       72-HR      9.98-HR
      1.       4.13                    1.          1.          1.          1.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
   (FEET)      (HR)                  6-HR       24-HR       72-HR      9.98-HR
   104.00      4.13                102.74      102.43      102.43      102.43

                         CUMULATIVE AREA =     .02 SQ MI


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


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

```
51 KK      *      4006  *
           *            *
           **************
                          Undetained Area Trib to Node 4006
                          RUN DATE   7/16/2009
                          RATIONAL METHOD HYDROGRAPH PROGRAM
                          COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
                          6HR RAINFALL IS  3.6  INCHES
                          RATIONAL METHOD RUNOFF COEFFICIENT IS  0.284
                          RATIONAL METHOD TIME OF CONCENTRATION IS  16  MIN.
                          FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
                          IT 2 01JAN90 1200 200

62 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN          16  TIME INTERVAL IN MINUTES
                    JXDATE      1JAN90  STARTING DATE
                    JXTIME        1152  STARTING TIME

             SUBBASIN RUNOFF DATA

61 BA          SUBBASIN CHARACTERISTICS
                     TAREA         .00  SUBBASIN AREA

                                                          ***

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

                       HYDROGRAPH AT STATION     4006

PEAK FLOW     TIME                            MAXIMUM AVERAGE FLOW
  (CFS)       (HR)                   6-HR       24-HR       72-HR      9.98-HR
     1.       4.13        (CFS)        0.          0.          0.          0.
                        (INCHES)    1.051       1.062       1.062       1.062
                         (AC-FT)        0.          0.          0.          0.

                       CUMULATIVE AREA =     .00 SQ MI


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


           **************
           *            *
67 KK      *   Combine  *
           *            *
           **************
                          Combine detained outflow from DB4 and area trib to Node 4006

69 KO          OUTPUT CONTROL VARIABLES
                     IPRNT           3  PRINT CONTROL
                     IPLOT           1  PLOT CONTROL
                     QSCAL          0.  HYDROGRAPH PLOT SCALE
                     IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                      IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2         600  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT        .017  TIME INTERVAL IN HOURS
```

70 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

***

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

HYDROGRAPH AT STATION Combine

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	9.98-HR
17.	4.13	(CFS)	3.	2.	2.	2.
		(INCHES)	1.443	1.654	1.654	1.654
		(AC-FT)	1.	2.	2.	2.

CUMULATIVE AREA = .02 SQ MI

RUNOFF SUMMARY

FLOW IN CUBIC FEET PER SECOND

TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	4003	36.	4.05	3.	2.	2.	.01		
HYDROGRAPH AT	4002.1	5.	4.12	1.	0.	0.	.00		
2 COMBINED AT	Combine	40.	4.05	3.	2.	2.	.02		
ROUTED TO	DETAIN	15.	4.13	3.	2.	2.	.02	104.00	4.13
HYDROGRAPH AT	4006	1.	4.13	0.	0.	0.	.00		
2 COMBINED AT	Combine	17.	4.13	3.	2.	2.	.02		

*** NORMAL END OF HEC-1 ***

Drainage Basin 7000A and 7000B

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   13AUG09  TIME  16:26:33  *
*                                      *
****************************************
```

```
****************************************
*
*    U.S. ARMY CORPS OF ENGINEERS
*    HYDROLOGIC ENGINEERING CENTER
*          609 SECOND STREET
*       DAVIS, CALIFORNIA 95616
*           (916) 756-1104
*
****************************************
```

```
X     X  XXXXXXX   XXXXX           X
X     X  X      X     X         XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX          XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

*** FREE ***
              *DIAGRAM
  1           ID   MEADOWOOD J-15956 01/19/09 FILE: MW7A7B.HC1
  2           ID   DETENTION FOR 100-YEAR STORM EVENT (BASED ON RATIONAL METHOD)
  3           ID   FOR COMINED DRAINAGE BASINS 7000A AND 7000B
  4           IT       1 01JAN90    1200     900
  5           IO       3       1

  6           KK   7000A
  7           KM   DRAINAGE BASIN 7000A
  8           KM   RUN DATE   8/8/2009
  9           KM   RATIONAL METHOD HYDROGRAPH PROGRAM
 10           KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
 11           KM   6HR RAINFALL IS  3.6  INCHES
 12           KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.49
 13           KM   RATIONAL METHOD TIME OF CONCENTRATION IS  10  MIN.
 14           KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
 15           KM   IT 2 01JAN90 1200 200
 16           KO       0       0       0       0      21
 17           BA  0.3039
 18           IN      10 01JAN90    1155
 19           QI       0    20.5    20.9    21.7    22.2    23.1    23.7    24.8    25.4    26.8
 20           QI    27.5    29.3    30.2    32.4    33.7    36.6    38.3    42.5    45.1    51.6
 21           QI      56    68.4      78   114.5   233.6  505.77    91.8    61.4    48.1    40.3
 22           QI      35    31.3    28.4    26.1    24.2    22.6    21.3       0       0       0
 23           QI       0       0       0       0       0       0       0       0

 24           KK    DB7A
 25           KM   100-YEAR DETENTION
 26           KO       0       0       0       0      21
 27           RS       1    STOR    6.75
 28           SV       0   9.329   11.95   14.77    18.8
 29           SQ       0   13.08   31.51    96.4     255
 30           SE     100 103.167   104.0  104.87     106

 31           KK   7000B
 32           KM   DRIANAGE BASIN 7000B
 33           KM   RUN DATE   8/8/2009
 34           KM   RATIONAL METHOD HYDROGRAPH PROGRAM
 35           KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
 36           KM   6HR RAINFALL IS  3.6  INCHES
 37           KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.41
 38           KM   RATIONAL METHOD TIME OF CONCENTRATION IS  12  MIN.
 39           KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
 40           KM   IT 2 01JAN90 1200 200
 41           KO       0       0       0       0      21
 42           BA    0.07
 43           IN      12 01JAN90    1154
 44           QI       0       4     4.1     4.2     4.4     4.6     4.7       5     5.2     5.6
 45           QI     5.8     6.3     6.6     7.3     7.7     8.8     9.6    11.7    13.4    19.6
 46           QI    29.3   97.43    15.7    10.5     8.2     6.9       6     5.4     4.9     4.5
 47           QI     4.1       0       0       0       0       0       0       0       0       0
 48           QI       0       0
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  49          KK    DB7B
  50          KM   DETAIN 7000B
  51          KO       0     0       0       0      21
  52          RS       1    STOR     1.3
  53          SV       0   2.544   3.302    3.69     4.2
  54          SQ       0   2.642   11.50   21.90    45.6
  55          SE     100 103.167   104.0  104.41     106

  56          KK7000B_DS
  57          KM   DRAIANGE BASIN DOWNSTREAM OF DB7B (NOT DETAINED)
  58          KM   RUN DATE   8/8/2009
  59          KM   RATIONAL METHOD HYDROGRAPH PROGRAM
  60          KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
  61          KM   6HR RAINFALL IS  3.6  INCHES
  62          KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.6
  63          KM   RATIONAL METHOD TIME OF CONCENTRATION IS  6  MIN.
  64          KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
  65          KM   IT 2 01JAN90 1200 200
  66          BA  0.0008
  67          IN       6 01JAN90    1157
  68          QI       0     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1
  69          QI     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1
  70          QI     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1
  71          QI     0.1     0.2     0.2     0.2     0.2     0.2     0.2     0.3     0.3     0.5
  72          QI     0.8    2.44     0.4     0.3     0.2     0.2     0.2     0.1     0.1     0.1
  73          QI     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1     0.1
  74          QI     0.1       0       0       0       0       0       0       0       0       0
  75          QI       0       0

  76          KK COMBINE
  77          KO       0       0       0       0      21
  78          HC       3
  79          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    6       7000A
                V
                V
   24        DB7A
                .
                .
   31           .        7000B
                .            V
                .            V
   49           .         DB7B
                .            .
                .            .
   56           .            .     7000B_DS
                .            .            .
                .            .            .
   76     COMBINE.......................
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   13AUG09  TIME  16:26:33  *
*                                      *
****************************************
```

```
*************************************
*                                   *
*    U.S. ARMY CORPS OF ENGINEERS   *
*    HYDROLOGIC ENGINEERING CENTER  *
*          609 SECOND STREET        *
*       DAVIS, CALIFORNIA 95616     *
*           (916) 756-1104          *
*                                   *
*************************************
```

```
                    MEADOWOOD J-15956 01/19/09 FILE: MW7A7B.HC1
                    DETENTION FOR 100-YEAR STORM EVENT (BASED ON RATIONAL METHOD)
                    FOR COMINED DRAINAGE BASINS 7000A AND 7000B

  5 IO        OUTPUT CONTROL VARIABLES
                  IPRNT          3  PRINT CONTROL
                  IPLOT          1  PLOT CONTROL
                  QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT        HYDROGRAPH TIME DATA
                   NMIN          1  MINUTES IN COMPUTATION INTERVAL
                  IDATE     1JAN90  STARTING DATE
                  ITIME       1200  STARTING TIME
                     NQ        900  NUMBER OF HYDROGRAPH ORDINATES
                 NDDATE     2JAN90  ENDING DATE
                 NDTIME       0259  ENDING TIME
                  ICENT         19  CENTURY MARK

            COMPUTATION INTERVAL     .02 HOURS
                 TOTAL TIME BASE   14.98 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT
```

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

```
          **************
          *            *
  6 KK    *     7000A  *
          *            *
          **************
                    DRAINAGE BASIN 7000A
                    RUN DATE   8/8/2009
                    RATIONAL METHOD HYDROGRAPH PROGRAM
                    COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
                    6HR RAINFALL IS  3.6  INCHES
                    RATIONAL METHOD RUNOFF COEFFICIENT IS  0.49
```

```
                    RATIONAL METHOD TIME OF CONCENTRATION IS  10  MIN.
                    FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
                    IT 2 01JAN90 1200 200

 16 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           3  PRINT CONTROL
                      IPLOT           1  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2         900  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .017  TIME INTERVAL IN HOURS


 18 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN          10  TIME INTERVAL IN MINUTES
                     JXDATE      1JAN90  STARTING DATE
                     JXTIME        1155  STARTING TIME

              SUBBASIN RUNOFF DATA

 17 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .30  SUBBASIN AREA

                                                          ***

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

                       HYDROGRAPH AT STATION    7000A

PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
  (CFS)       (HR)                  6-HR       24-HR       72-HR     14.98-HR
   506.       4.08        (CFS)      57.         23.         23.          23.
                         (INCHES)  1.749       1.751       1.751        1.751
                          (AC-FT)   28.         28.         28.          28.

                         CUMULATIVE AREA =      .30 SQ MI

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

            **************
            *            *
 24 KK      *      DB7A  *
            *            *
            **************
                       100-YEAR DETENTION

 26 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           3  PRINT CONTROL
                      IPLOT           1  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2         900  LAST ORDINATE PUNCHED OR SAVED
```

```
                    TIMINT        .017  TIME INTERVAL IN HOURS


            HYDROGRAPH ROUTING DATA

 27 RS          STORAGE ROUTING
                      NSTPS           1  NUMBER OF SUBREACHES
                       ITYP        STOR  TYPE OF INITIAL CONDITION
                     RSVRIC        6.75  INITIAL CONDITION
                          X         .00 WORKING R AND D COEFFICIENT

 28 SV            STORAGE          .0       9.3      11.9      14.8      18.8

 29 SQ          DISCHARGE          0.       13.       32.       96.      255.

 30 SE          ELEVATION      100.00    103.17    104.00    104.87    106.00

                                                                 ***

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

                      HYDROGRAPH AT STATION     DB7A

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
   (CFS)       (HR)                  6-HR       24-HR       72-HR     14.98-HR
    254.       4.18        (CFS)      49.         25.         25.         25.
                         (INCHES)   1.513       1.926       1.926       1.926
                          (AC-FT)     25.         31.         31.         31.

PEAK STORAGE   TIME                          MAXIMUM AVERAGE STORAGE
  (AC-FT)      (HR)                  6-HR       24-HR       72-HR     14.98-HR
     19.       4.18                   12.         9.          9.          9.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
   (FEET)      (HR)                  6-HR       24-HR       72-HR     14.98-HR
   106.00      4.18                103.95      102.89      102.89      102.89

                       CUMULATIVE AREA =     .30 SQ MI


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


          **************
          *            *
 31 KK    *     7000B  *
          *            *
          **************
                       DRIANAGE BASIN 7000B
                       RUN DATE   8/8/2009
                       RATIONAL METHOD HYDROGRAPH PROGRAM
                       COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
                       6HR RAINFALL IS  3.6  INCHES
                       RATIONAL METHOD RUNOFF COEFFICIENT IS  0.41
                       RATIONAL METHOD TIME OF CONCENTRATION IS  12  MIN.
                       FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
                       IT 2 01JAN90 1200 200
```

```
41 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          3  PRINT CONTROL
                     IPLOT          1  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2        900  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .017  TIME INTERVAL IN HOURS


43 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN         12  TIME INTERVAL IN MINUTES
                    JXDATE     1JAN90  STARTING DATE
                    JXTIME       1154  STARTING TIME

            SUBBASIN RUNOFF DATA

42 BA          SUBBASIN CHARACTERISTICS
                     TAREA        .07  SUBBASIN AREA

                                                        ***

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

                     HYDROGRAPH AT STATION    7000B

PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
  (CFS)       (HR)                 6-HR       24-HR       72-HR     14.98-HR
    97.       4.10        (CFS)     11.          4.          4.          4.
                         (INCHES)  1.463       1.466       1.466       1.466
                          (AC-FT)    5.          5.          5.          5.

                         CUMULATIVE AREA =      .07 SQ MI


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


           **************
           *            *
49 KK      *      DB7B  *
           *            *
           **************
                      DETAIN 7000B

51 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          3  PRINT CONTROL
                     IPLOT          1  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2        900  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .017  TIME INTERVAL IN HOURS


            HYDROGRAPH ROUTING DATA
```

```
 52 RS          STORAGE ROUTING
                     NSTPS          1  NUMBER OF SUBREACHES
                      ITYP       STOR  TYPE OF INITIAL CONDITION
                    RSVRIC       1.30  INITIAL CONDITION
                         X        .00 WORKING R AND D COEFFICIENT

 53 SV            STORAGE         .0       2.5       3.3       3.7       4.2

 54 SQ          DISCHARGE         0.        3.       12.       22.       46.

 55 SE          ELEVATION      100.00    103.17    104.00    104.41    106.00

                                                                 ***

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

                       HYDROGRAPH AT STATION     DB7B

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
   (CFS)       (HR)                  6-HR       24-HR       72-HR     14.98-HR
     46.       4.23        (CFS)       8.          4.          4.          4.
                         (INCHES)    1.118       1.467       1.467       1.467
                          (AC-FT)      4.          5.          5.          5.

PEAK STORAGE   TIME                          MAXIMUM AVERAGE STORAGE
  (AC-FT)      (HR)                  6-HR       24-HR       72-HR     14.98-HR
      4.       4.23                    3.          2.          2.          2.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
   (FEET)      (HR)                  6-HR       24-HR       72-HR     14.98-HR
   106.00      4.23                103.52      102.67      102.67      102.67

                         CUMULATIVE AREA =      .07 SQ MI


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


            **************
            *            *
 56 KK      *  7000B_DS  *
            *            *
            **************
                         DRAIANGE BASIN DOWNSTREAM OF DB7B (NOT DETAINED)
                         RUN DATE   8/8/2009
                         RATIONAL METHOD HYDROGRAPH PROGRAM
                         COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
                         6HR RAINFALL IS  3.6  INCHES
                         RATIONAL METHOD RUNOFF COEFFICIENT IS  0.6
                         RATIONAL METHOD TIME OF CONCENTRATION IS  6  MIN.
                         FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
                         IT 2 01JAN90 1200 200

 67 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN           6  TIME INTERVAL IN MINUTES
                    JXDATE      1JAN90  STARTING DATE
                    JXTIME        1157  STARTING TIME
```

SUBBASIN RUNOFF DATA

66 BA SUBBASIN CHARACTERISTICS

TAREA .00 SUBBASIN AREA

***

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

HYDROGRAPH AT STATION 7000B_DS

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	14.98-HR
2.	4.05	(CFS)	0.	0.	0.	0.
		(INCHES)	2.172	2.175	2.175	2.175
		(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = .00 SQ MI

*** **

****
* *
76 KK * COMBINE *
* *
****

77 KO OUTPUT CONTROL VARIABLES

IPRNT	3	PRINT CONTROL
IPLOT	1	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	900	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.017	TIME INTERVAL IN HOURS

78 HC HYDROGRAPH COMBINATION

ICOMP 3 *NUMBER OF HYDROGRAPHS TO COMBINE*

***

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

HYDROGRAPH AT STATION COMBINE

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	14.98-HR
299.	4.20	(CFS)	58.	30.	30.	30.
		(INCHES)	1.439	1.841	1.841	1.841
		(AC-FT)	29.	37.	37.	37.

CUMULATIVE AREA = .37 SQ MI

RUNOFF SUMMARY

FLOW IN CUBIC FEET PER SECOND

TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	7000A	506.	4.08	57.	23.	23.	.30		
ROUTED TO	DB7A	254.	4.18	49.	25.	25.	.30	106.00	4.18
HYDROGRAPH AT	7000B	97.	4.10	11.	4.	4.	.07		
ROUTED TO	DB7B	46.	4.23	8.	4.	4.	.07	106.00	4.23
HYDROGRAPH AT	7000B_DS	2.	4.05	0.	0.	0.	.00		
3 COMBINED AT	COMBINE	299.	4.20	58.	30.	30.	.37		

*** NORMAL END OF HEC-1 ***

Drainage Basin 8000

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   29JUL09  TIME  09:30:52  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*   U.S. ARMY CORPS OF ENGINEERS       *
*   HYDROLOGIC ENGINEERING CENTER      *
*         609 SECOND STREET            *
*      DAVIS, CALIFORNIA 95616         *
*          (916) 756-1104              *
*                                      *
****************************************
```

```
X     X  XXXXXXX   XXXXX           X
X     X  X        X     X         XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX          XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS.DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

*** FREE ***
              *DIAGRAM
  1           ID   Meadowood J-15956
  2           ID   100-YEAR, 6-HOUR DETENTION ANALYSIS
  3           ID   7/28/09 FILENAME: MW8000.HC1
  4           IT       1 01JAN90    1200    2000
  5           IO       3       1

  6           KK8149.hc1
  7           KM   RUN DATE   7/28/2009
  8           KM   FLOW INFORMATION AT NODE 8149 THAT ENTERS DET BASIN
  9           KM   RATIONAL METHOD HYDROGRAPH PROGRAM
 10           KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
 11           KM   6HR RAINFALL IS  3.6  INCHES
 12           KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.55
 13           KM   RATIONAL METHOD TIME OF CONCENTRATION IS  10  MIN.
 14           KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
 15           KM   IT 2 01JAN90 1200 200
 16           BA  0.0384
 17           IN      10 01JAN90    1155
 18           QI       0       3       3     3.1     3.2     3.3     3.4     3.6     3.7     3.9
 19           QI       4     4.2     4.4     4.7     4.9     5.3     5.5     6.1     6.5     7.5
 20           QI     8.1     9.9    11.3    16.5    16.8   90.04    13.3     8.9     6.9     5.8
 21           QI     5.1     4.5     4.1     3.8     3.5     3.3     3.1       0       0       0
 22           QI       0       0       0       0       0       0       0       0

 23           KK    DetA
 24           KO       0       0       0       0      21
 25           RS       1    STOR      -1
 26           SV       0     .65     .86    1.11    1.78
 27           SQ       0    1.54    3.90   13.18      45
 28           SE       0  102.37     103  103.72     104

 29           KK8152.hc1
 30           KM   RUN DATE   7/28/2009
 31           KM   FLOW INFORMATION AT NODE 8152 THAT IS NOT DETAINED
 32           KM   RATIONAL METHOD HYDROGRAPH PROGRAM
 33           KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
 34           KM   6HR RAINFALL IS  3.6  INCHES
 35           KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.701
 36           KM   RATIONAL METHOD TIME OF CONCENTRATION IS  6  MIN.
 37           KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
 38           KM   IT 2 01JAN90 1200 200
 39           BA  0.0034
 40           IN       6 01JAN90    1157
 41           QI       0     0.3     0.3     0.3     0.3     0.4     0.4     0.4     0.4     0.4
 42           QI     0.4     0.4     0.4     0.4     0.4     0.4     0.4     0.5     0.5     0.5
 43           QI     0.5     0.5     0.5     0.6     0.6     0.6     0.6     0.7     0.7     0.7
 44           QI     0.8     0.8     0.9       1       1     1.2     1.3     1.5     1.8     2.6
 45           QI     2.9   13.73     2.1     1.4     1.1     0.9     0.8     0.7     0.6     0.6
 46           QI     0.5     0.5     0.5     0.5     0.4     0.4     0.4     0.4     0.4     0.4
 47           QI     0.3       0       0       0       0       0       0       0       0       0
 48           QI       0       0
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 49           KK Combine
 50           KO       0       0       0       0      21
 51           HC       2

 52           KK8200.hc1
 53           KM   RUN DATE   3/18/2009
 54           KM   FLOW INFORMATION FROM BASIN 8200 THAT ENTERS DET BASIN
 55           KM   RATIONAL METHOD HYDROGRAPH PROGRAM
 56           KM   COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
 57           KM   6HR RAINFALL IS  3.6  INCHES
 58           KM   RATIONAL METHOD RUNOFF COEFFICIENT IS  0.551
 59           KM   RATIONAL METHOD TIME OF CONCENTRATION IS  11  MIN.
 60           KM   FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
 61           KM   IT 2 01JAN90 1200 200
 62           BA  0.0408
 63           IN      11 01JAN90    1153
 64           QI       0     3.1     3.1     3.3     3.4     3.5     3.6     3.8     3.9     4.2
 65           QI     4.3     4.6     4.8     5.2     5.4       6     6.4     7.3     7.9     9.7
 66           QI    11.1    16.2    24.6    80.3      13     8.7     6.8     5.7       5     4.4
 67           QI       4     3.7     3.4     3.2       0       0       0       0       0       0
 68           QI       0       0       0       0       0

 69           KK    DetB
 70           KO       0       0       0       0      21
 71           RS       1    STOR      -1
 72           SV       0    1.27    1.63    1.97    2.81
 73           SQ       0    1.05     3.2    9.40   38.18
 74           SE       0  102.34     103  103.54     104

 75           KK Combine
 76           KO       0       0       0       0      21
 77           HC       2
 78           ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    6    8149.hc1
                V
                V
   23         DetA
                .
                .
   29           .     8152.hc1
                .            .
                .            .
   49     Combine............
                .
                .
   52           .     8200.hc1
                .            V
                .            V
   69           .         DetB
                .            .
                .            .
   75     Combine............
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   29JUL09  TIME  09:30:52  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

Meadowood J-15956
100-YEAR, 6-HOUR DETENTION ANALYSIS
7/28/09 FILENAME: MW8000.HC1

```
  5 IO          OUTPUT CONTROL VARIABLES
                      IPRNT          3  PRINT CONTROL
                      IPLOT          1  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT          HYDROGRAPH TIME DATA
                       NMIN          1  MINUTES IN COMPUTATION INTERVAL
                      IDATE     1JAN90  STARTING DATE
                      ITIME       1200  STARTING TIME
                         NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE     2JAN90  ENDING DATE
                     NDTIME       2119  ENDING TIME
                      ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL     .02 HOURS
                      TOTAL TIME BASE   33.32 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT
```

*** **

```
          **************
          *            *
  6 KK    *  8149.hc1  *
          *            *
          **************
```

RUN DATE 7/28/2009
FLOW INFORMATION AT NODE 8149 THAT ENTERS DET BASIN
RATIONAL METHOD HYDROGRAPH PROGRAM
COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
6HR RAINFALL IS 3.6 INCHES
RATIONAL METHOD RUNOFF COEFFICIENT IS 0.55

```
                    RATIONAL METHOD TIME OF CONCENTRATION IS  10  MIN.
                    FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
                    IT 2 01JAN90 1200 200

 17 IN        TIME DATA FOR INPUT TIME SERIES
                   JXMIN          10  TIME INTERVAL IN MINUTES
                  JXDATE      1JAN90  STARTING DATE
                  JXTIME        1155  STARTING TIME

            SUBBASIN RUNOFF DATA

 16 BA        SUBBASIN CHARACTERISTICS
                   TAREA         .04  SUBBASIN AREA

                                                        ***

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

                     HYDROGRAPH AT STATION 8149.hc1

PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
  (CFS)       (HR)                 6-HR       24-HR       72-HR     33.32-HR
    90.       4.08       (CFS)       8.          2.          1.          1.
                       (INCHES)    2.001       2.003       2.003       2.003
                        (AC-FT)       4.          4.          4.          4.

                      CUMULATIVE AREA =     .04 SQ MI


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


            **************
            *            *
 23 KK      *      DetA  *
            *            *
            **************

 24 KO        OUTPUT CONTROL VARIABLES
                   IPRNT           3  PRINT CONTROL
                   IPLOT           1  PLOT CONTROL
                   QSCAL          0.  HYDROGRAPH PLOT SCALE
                   IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                    IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                   ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                   ISAV2        2000  LAST ORDINATE PUNCHED OR SAVED
                  TIMINT        .017  TIME INTERVAL IN HOURS


            HYDROGRAPH ROUTING DATA

 25 RS        STORAGE ROUTING
                   NSTPS           1  NUMBER OF SUBREACHES
                    ITYP        STOR  TYPE OF INITIAL CONDITION
                  RSVRIC       -1.00  INITIAL CONDITION
                       X         .00 WORKING R AND D COEFFICIENT

 26 SV          STORAGE          .0        .6        .9       1.1       1.8
```

```
 27 SQ          DISCHARGE          0.        2.        4.       13.       45.

 28 SE          ELEVATION        .00    102.37    103.00    103.72    104.00

                                                                  ***

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

                      HYDROGRAPH AT STATION     DetA

PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
  (CFS)       (HR)                  6-HR       24-HR       72-HR     33.32-HR
    45.       4.18        (CFS)       8.          2.          2.          2.
                        (INCHES)    1.926       2.301       2.311       2.311
                         (AC-FT)      4.          5.          5.          5.

PEAK STORAGE  TIME                          MAXIMUM AVERAGE STORAGE
  (AC-FT)     (HR)                  6-HR       24-HR       72-HR     33.32-HR
     2.       4.18                    1.          0.          0.          0.

PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
  (FEET)      (HR)                  6-HR       24-HR       72-HR     33.32-HR
  104.00      4.18                103.11       50.90       37.16       37.16

                       CUMULATIVE AREA =     .04 SQ MI


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


          **************
          *            *
 29 KK    *  8152.hc1  *
          *            *
          **************
                        RUN DATE   7/28/2009
                        FLOW INFORMATION AT NODE 8152 THAT IS NOT DETAINED
                        RATIONAL METHOD HYDROGRAPH PROGRAM
                        COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
                        6HR RAINFALL IS  3.6  INCHES
                        RATIONAL METHOD RUNOFF COEFFICIENT IS  0.701
                        RATIONAL METHOD TIME OF CONCENTRATION IS  6  MIN.
                        FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
                        IT 2 01JAN90 1200 200

 40 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN           6  TIME INTERVAL IN MINUTES
                     JXDATE      1JAN90  STARTING DATE
                     JXTIME        1157  STARTING TIME

             SUBBASIN RUNOFF DATA

 39 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .00  SUBBASIN AREA

                                                                  ***
```

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

                    HYDROGRAPH AT STATION 8152.hc1

PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
  (CFS)       (HR)                  6-HR       24-HR       72-HR     33.32-HR
    14.       4.05        (CFS)       1.          0.          0.          0.
                        (INCHES)    2.546       2.547       2.547       2.547
                         (AC-FT)       0.          0.          0.          0.

                         CUMULATIVE AREA =     .00 SQ MI


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


          **************
          *            *
 49 KK    *   Combine  *
          *            *
          **************

 50 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          3  PRINT CONTROL
                      IPLOT          1  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                       IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2       2000  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .017  TIME INTERVAL IN HOURS


 51 HC          HYDROGRAPH COMBINATION
                      ICOMP          2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                          ***

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

                    HYDROGRAPH AT STATION  Combine

PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
  (CFS)       (HR)                  6-HR       24-HR       72-HR     33.32-HR
    46.       4.18        (CFS)       9.          3.          2.          2.
                        (INCHES)    1.969       2.321       2.330       2.330
                         (AC-FT)       4.          5.          5.          5.

                         CUMULATIVE AREA =     .04 SQ MI


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


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

```
52 KK      *  8200.hc1  *
           *            *
           **************
                          RUN DATE   3/18/2009
                          FLOW INFORMATION FROM BASIN 8200 THAT ENTERS DET BASIN
                          RATIONAL METHOD HYDROGRAPH PROGRAM
                          COPYRIGHT 1992, 2001, RICK ENGINEERING COMPANY
                          6HR RAINFALL IS  3.6  INCHES
                          RATIONAL METHOD RUNOFF COEFFICIENT IS  0.551
                          RATIONAL METHOD TIME OF CONCENTRATION IS  11  MIN.
                          FOR THIS DATA TO RUN PROPERLY THIS IT CARD MUST BE ADDED TO YOUR HEC-1
                          IT 2 01JAN90 1200 200

63 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN          11  TIME INTERVAL IN MINUTES
                    JXDATE      1JAN90  STARTING DATE
                    JXTIME        1153  STARTING TIME

             SUBBASIN RUNOFF DATA

62 BA          SUBBASIN CHARACTERISTICS
                     TAREA         .04  SUBBASIN AREA

                                                          ***

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

                       HYDROGRAPH AT STATION 8200.hc1

PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
  (CFS)       (HR)                  6-HR       24-HR       72-HR     33.32-HR
    80.       4.10        (CFS)       9.          2.          2.          2.
                        (INCHES)    1.966       1.970       1.970       1.970
                         (AC-FT)     . 4.          4.          4.          4.

                       CUMULATIVE AREA =      .04 SQ MI


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


           **************
           *            *
69 KK      *      DetB  *
           *            *
           **************

70 KO          OUTPUT CONTROL VARIABLES
                     IPRNT           3  PRINT CONTROL
                     IPLOT           1  PLOT CONTROL
                     QSCAL          0.  HYDROGRAPH PLOT SCALE
                     IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                      IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2        2000  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT        .017  TIME INTERVAL IN HOURS
```

HYDROGRAPH ROUTING DATA

```
 71 RS          STORAGE ROUTING
                     NSTPS          1  NUMBER OF SUBREACHES
                      ITYP       STOR  TYPE OF INITIAL CONDITION
                    RSVRIC      -1.00  INITIAL CONDITION
                         X        .00 WORKING R AND D COEFFICIENT

 72 SV            STORAGE         .0       1.3       1.6       2.0       2.8

 73 SQ          DISCHARGE         0.        1.        3.        9.       38.

 74 SE          ELEVATION        .00    102.34    103.00    103.54    104.00

                                                              ***

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

                        HYDROGRAPH AT STATION     DetB

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
   (CFS)       (HR)                 6-HR       24-HR       72-HR     33.32-HR
     38.       4.22        (CFS)      8.          3.          2.          2.
                         (INCHES)   1.862       2.422       2.517       2.517
                          (AC-FT)      4.          5.          5.          5.

PEAK STORAGE   TIME                          MAXIMUM AVERAGE STORAGE
  (AC-FT)      (HR)                 6-HR       24-HR       72-HR     33.32-HR
      3.       4.22                   2.          1.          1.          1.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
   (FEET)      (HR)                 6-HR       24-HR       72-HR     33.32-HR
   104.00      4.22               103.23       77.45       63.19       63.19

                         CUMULATIVE AREA =     .04 SQ MI


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


          **************
          *            *
 75 KK    *   Combine  *
          *            *
          **************


 76 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          3  PRINT CONTROL
                     IPLOT          1  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       2000  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .017  TIME INTERVAL IN HOURS


 77 HC          HYDROGRAPH COMBINATION
```

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

***

*** *** ***. *** ***

HYDROGRAPH AT STATION Combine

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	33.32-HR
84.	4.20	(CFS)	17.	5.	4.	4.
		(INCHES)	1.915	2.371	2.422	2.422
		(AC-FT)	8.	10.	11.	11.

CUMULATIVE AREA = .08 SQ MI

RUNOFF SUMMARY

FLOW IN CUBIC FEET PER SECOND

TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	8149.hc1	90.	4.08	8.	2.	1.	.04		
ROUTED TO	DetA	45.	4.18	8.	2.	2.	.04	104.00	4.18
HYDROGRAPH AT	8152.hc1	14.	4.05	1.	0.	0.	.00		
2 COMBINED AT	Combine	46.	4.18	9.	3.	2.	.04		
HYDROGRAPH AT	8200.hc1	80.	4.10	9.	2.	2.	.04		
ROUTED TO	DetB	38.	4.22	8.	3.	2.	.04	104.00	4.22
2 COMBINED AT	Combine	84.	4.20	17.	5.	4.	.08		

*** NORMAL END OF HEC-1 ***

Appendix F

WSPGW Analysis for SR-76 Crossing

```
T1 JN - 15956-A                                                                    0
T2 Meadowood --- WSPGW Analysis for Existing Condition
T3 05/29/2009
SO        .000 256.430  1                          258.210
R     471.600 258.820  1       .014                                   .000
JX    471.700 258.821  4  3    .014    6.080          258.821          90.0
.000
TS    475.700 258.840  5       .014                                   .000
WX    475.700 258.840  6
R     587.200 259.380  6       .013                                   .000     .000 0
WE    587.200 259.380  7       .500
TS    591.200 259.400  8       .014                                   .000
JX    591.300 259.401 10  9    .014    5.400          259.400          90.0
.000
R    1125.300 262.158 10       .014                                   .000
JX   1129.300 262.159 14 13    .014    5.400          262.160            .0       -
90.000
R    1129.400 262.160 14       .014                                   .000
WX   1129.400 262.160 15
R    1250.800 262.740 15       .013                                   .000     .000 0
JX   1260.600 262.741 16       .013                    263.070
90.000
R    1286.800 262.920 16       .013                                   .000     .000 0
TS   1286.810 262.921 17       .030
R    1670.670 264.960 17       .030                                   .000     .000 0
SH   2156.800 268.960 18                            268.200
CD   1  1   0     .000   3.300    2.000 1.500 1.500   .00
CD   2  1   0     .000   3.300    2.000 1.500 1.500   .00
CD   3  1   0     .000   3.300     .100  .000  .000   .00
CD   4  1   0     .000   3.300    2.000 1.500 1.500   .00
CD   5  1   0     .000   3.300   11.800  .000  .000   .00
CD   6  4   2     .000   3.000     .000  .000  .000   .00
CD   7  1   0     .000   3.300   11.800  .000  .000   .00
CD   8  1   0     .000   2.500    2.000 1.500 1.500   .00
CD   9  1   0     .000   2.500     .100  .000  .000   .00
CD  10  1   0     .000   2.500    2.000 1.500 1.500   .00
CD  11  1   0     .000   1.640    2.000 3.000 3.000   .00
CD  12  1   0     .000   2.500    9.800  .000  .000   .00
CD  13  1   0     .000   1.640    2.000  .000  .000   .00
CD  14  1   0     .000   2.500    9.800  .000  .000   .00
CD  15  4   2     .000   2.500     .000  .000  .000   .00
CD  16  1   0     .000   3.300    2.000 1.500 1.500   .00
CD  17  1   0     .000   3.300    2.000 3.000 3.000   .00
CD  18  1   0     .000   3.300    2.000 3.000 3.000   .00
Q            45.310   .0
```

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:12

JN - 15956-A

Meadowood --- WSPGW Analysis for Existing Condition

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
.000	256.430	1.779	258.209	62.19	7.49	.87	259.08	.00	1.98	7.34	3.300	2.000	1.50	0 .0
343.115	.0051					.0051	1.74	1.78	1.24	1.78	.014	.00	1.50	TRAP
343.115	258.169	1.779	259.947	62.19	7.49	.87	260.82	.00	1.98	7.34	3.300	2.000	1.50	0 .0
85.133	.0051					.0049	.42	1.78	1.24	1.78	.014	.00	1.50	TRAP
428.248	258.600	1.809	260.409	62.19	7.29	.83	261.24	.00	1.98	7.43	3.300	2.000	1.50	0 .0
31.211	.0051					.0044	.14	1.81	1.20	1.78	.014	.00	1.50	TRAP
459.460	258.758	1.864	260.623	62.19	6.96	.75	261.37	.00	1.98	7.59	3.300	2.000	1.50	0 .0
9.830	.0051					.0039	.04	1.86	1.13	1.78	.014	.00	1.50	TRAP
469.290	258.808	1.921	260.729	62.19	6.63	.68	261.41	.00	1.98	7.76	3.300	2.000	1.50	0 .0
2.310	.0051					.0034	.01	1.92	1.06	1.78	.014	.00	1.50	TRAP
471.600	258.820	1.980	260.800	62.19	6.32	.62	261.42	.00	1.98	7.94	3.300	2.000	1.50	0 .0
JUNCT STR	.0101					.0022	.00	1.98	1.00		.014	.00	1.50	TRAP
471.700	258.821	2.404	261.225	56.11	4.16	.27	261.49	.00	1.88	9.21	3.300	2.000	1.50	0 .0
TRANS STR	.0047					.0006	.00	2.40	.61		.014	.00	1.50	TRAP
475.700	258.840	2.662	261.502	56.11	1.79	.05	261.55	.00	.89	11.80	3.300	11.800	.00	0 .0
WALL EXIT														
475.700	258.840	2.662	261.502	56.11	4.23	.28	261.78	.00	1.71	1.90	3.000	.000	.00	2 .0
38.203	.0048					.0016	.06	2.66	.28	1.68	.013	.00	.00	PIPE

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:12

JN - 15956-A

Meadowood --- WSPGW Analysis for Existing Condition

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
513.903	259.025	2.512	261.537	56.11	4.44	.31	261.84	.00	1.71	2.21	3.000	.000	.00	2 .0
8.593	.0048					.0017	.01	2.51	.33	1.68	.013	.00	.00	PIPE
522.496	259.067	2.480	261.547	56.11	4.49	.31	261.86	.00	1.71	2.27	3.000	.000	.00	2 .0
HYDRAULIC JUMP														
522.496	259.067	1.683	260.749	56.11	6.88	.73	261.48	.00	1.71	2.98	3.000	.000	.00	2 .0
56.532	.0048					.0048	.27	1.68	.73	1.68	.013	.00	.00	PIPE
579.028	259.340	1.683	261.023	56.11	6.88	.73	261.76	.00	1.71	2.98	3.000	.000	.00	2 .0
8.172	.0048					.0047	.04	1.68	.73	1.68	.013	.00	.00	PIPE
587.200	259.380	1.713	261.093	56.11	6.72	.70	261.80	.00	1.71	2.97	3.000	.000	.00	2 .0
587.200	259.380	2.214	261.594	56.11	5.02	.39	261.98	.00	1.71	2.64	3.000	.000	.00	2 .0
WALL ENTRANCE														
587.200	259.380	3.397	262.777	56.11	1.40	.03	262.81	.00	.89	11.80	3.300	11.800	.00	0 .0
TRANS STR	.0050					.0002	.00	3.40	.13		.014	.00	.00	TRAP
591.200	259.400	3.349	262.749	56.11	2.39	.09	262.84	.00	1.88	12.05	2.500	2.000	1.50	0 .0
JUNCT STR	.0101					.0002	.00	3.35	.30		.014	.00	1.50	TRAP
591.300	259.401	3.383	262.784	50.71	2.12	.07	262.85	.00	1.79	12.15	2.500	2.000	1.50	0 .0
17.322	.0052					.0002	.00	3.38	.27	1.61	.014	.00	1.50	TRAP
608.622	259.490	3.290	262.780	50.71	2.22	.08	262.86	.00	1.79	11.87	2.500	2.000	1.50	0 .0
16.826	.0052					.0002	.00	3.29	.28	1.61	.014	.00	1.50	TRAP

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:12

JN - 15956-A

Meadowood --- WSPGW Analysis for Existing Condition

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
625.448	259.577	3.199	262.777	50.71	2.33	.08	262.86	.00	1.79	11.60	2.500	2.000	1.50	0 .0
16.332	.0052					.0003	.00	3.20	.30	1.61	.014	.00	1.50	TRAP
641.780	259.662	3.111	262.773	50.71	2.44	.09	262.87	.00	1.79	11.33	2.500	2.000	1.50	0 .0
15.842	.0052					.0003	.00	3.11	.32	1.61	.014	.00	1.50	TRAP
657.622	259.743	3.025	262.768	50.71	2.56	.10	262.87	.00	1.79	11.07	2.500	2.000	1.50	0 .0
15.352	.0052					.0004	.01	3.02	.34	1.61	.014	.00	1.50	TRAP
672.974	259.823	2.941	262.764	50.71	2.69	.11	262.88	.00	1.79	10.82	2.500	2.000	1.50	0 .0
14.863	.0052					.0004	.01	2.94	.36	1.61	.014	.00	1.50	TRAP
687.836	259.899	2.859	262.758	50.71	2.82	.12	262.88	.00	1.79	10.58	2.500	2.000	1.50	0 .0
14.371	.0052					.0005	.01	2.86	.38	1.61	.014	.00	1.50	TRAP
702.207	259.974	2.779	262.753	50.71	2.96	.14	262.89	.00	1.79	10.34	2.500	2.000	1.50	0 .0
13.875	.0052					.0005	.01	2.78	.40	1.61	.014	.00	1.50	TRAP
716.083	260.045	2.701	262.746	50.71	3.10	.15	262.90	.00	1.79	10.10	2.500	2.000	1.50	0 .0
13.374	.0052					.0006	.01	2.70	.43	1.61	.014	.00	1.50	TRAP
729.457	260.114	2.625	262.739	50.71	3.25	.16	262.90	.00	1.79	9.87	2.500	2.000	1.50	0 .0
12.864	.0052					.0007	.01	2.62	.46	1.61	.014	.00	1.50	TRAP
742.320	260.181	2.550	262.731	50.71	3.41	.18	262.91	.00	1.79	9.65	2.500	2.000	1.50	0 .0
12.341	.0052					.0008	.01	2.55	.48	1.61	.014	.00	1.50	TRAP

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WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:12

JN - 15956-A

Meadowood --- WSPGW Analysis for Existing Condition

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
754.661	260.244	2.478	262.722	50.71	3.58	.20	262.92	.00	1.79	9.43	2.500	2.000	1.50	0 .0
11.801	.0052					.0009	.01	2.48	.51	1.61	.014	.00	1.50	TRAP
766.463	260.305	2.407	262.713	50.71	3.75	.22	262.93	.00	1.79	9.22	2.500	2.000	1.50	0 .0
11.240	.0052					.0010	.01	2.41	.55	1.61	.014	.00	1.50	TRAP
777.702	260.363	2.338	262.702	50.71	3.94	.24	262.94	.00	1.79	9.02	2.500	2.000	1.50	0 .0
10.648	.0052					.0011	.01	2.34	.58	1.61	.014	.00	1.50	TRAP
788.350	260.418	2.271	262.689	50.71	4.13	.26	262.95	.00	1.79	8.81	2.500	2.000	1.50	0 .0
10.017	.0052					.0013	.01	2.27	.62	1.61	.014	.00	1.50	TRAP
798.367	260.470	2.206	262.676	50.71	4.33	.29	262.97	.00	1.79	8.62	2.500	2.000	1.50	0 .0
9.331	.0052					.0014	.01	2.21	.65	1.61	.014	.00	1.50	TRAP
807.698	260.518	2.142	262.660	50.71	4.54	.32	262.98	.00	1.79	8.42	2.500	2.000	1.50	0 .0
8.572	.0052					.0016	.01	2.14	.70	1.61	.014	.00	1.50	TRAP
816.271	260.563	2.079	262.642	50.71	4.76	.35	262.99	.00	1.79	8.24	2.500	2.000	1.50	0 .0
7.710	.0052					.0018	.01	2.08	.74	1.61	.014	.00	1.50	TRAP
823.981	260.602	2.018	262.621	50.71	5.00	.39	263.01	.00	1.79	8.06	2.500	2.000	1.50	0 .0
4.235	.0052					.0020	.01	2.02	.78	1.61	.014	.00	1.50	TRAP
828.215	260.624	1.983	262.608	50.71	5.14	.41	263.02	.00	1.79	7.95	2.500	2.000	1.50	0 .0

HYDRAULIC JUMP

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:12

JN - 15956-A

Meadowood --- WSPGW Analysis for Existing Condition

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
828.215	260.624	1.607	262.231	50.71	7.16	.80	263.03	.00	1.79	6.82	2.500	2.000	1.50	0 .0
180.776	.0052					.0052	.93	1.61	1.24	1.61	.014	.00	1.50	TRAP
1008.992	261.557	1.607	263.164	50.71	7.16	.80	263.96	.00	1.79	6.82	2.500	2.000	1.50	0 .0
75.732	.0052					.0050	.38	1.61	1.24	1.61	.014	.00	1.50	TRAP
1084.724	261.948	1.632	263.580	50.71	6.99	.76	264.34	.00	1.79	6.90	2.500	2.000	1.50	0 .0
29.422	.0052					.0045	.13	1.63	1.20	1.61	.014	.00	1.50	TRAP
1114.146	262.100	1.683	263.783	50.71	6.66	.69	264.47	.00	1.79	7.05	2.500	2.000	1.50	0 .0
9.046	.0052					.0040	.04	1.68	1.13	1.61	.014	.00	1.50	TRAP
1123.192	262.147	1.735	263.882	50.71	6.35	.63	264.51	.00	1.79	7.20	2.500	2.000	1.50	0 .0
2.108	.0052					.0035	.01	1.73	1.06	1.61	.014	.00	1.50	TRAP
1125.300	262.158	1.789	263.947	50.71	6.05	.57	264.52	4.28	1.79	7.37	2.500	2.000	1.50	0 .0
JUNCT STR	.0003					.0017	.01	6.07	1.00		.014	.00	1.50	TRAP
1129.300	262.159	2.379	264.538	45.31	1.94	.06	264.60	.00	.87	9.80	2.500	9.800	.00	0 .0
.100	.0101					.0002	.00	2.38	.22	.64	.014	.00	.00	TRAP
1129.400	262.160	2.378	264.538	45.31	1.94	.06	264.60	.00	.87	9.80	2.500	9.800	.00	0 .0
WALL EXIT														
1129.400	262.160	2.379	264.539	45.31	4.70	.34	264.88	.00	1.62	1.08	2.500	.000	.00	2 .0
62.672	.0048					.0027	.17	2.38	.28	1.69	.013	.00	.00	PIPE

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:12

JN - 15956-A

Meadowood --- WSPGW Analysis for Existing Condition

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1192.072	262.459	2.213	264.673	45.31	4.93	.38	265.05	.00	1.62	1.59	2.500	.000	.00	2 .0
44.484	.0048					.0028	.13	2.21	.36	1.69	.013	.00	.00	PIPE
1236.556	262.672	2.089	264.761	45.31	5.17	.41	265.18	.00	1.62	1.85	2.500	.000	.00	2 .0
14.244	.0048					.0030	.04	2.09	.42	1.69	.013	.00	.00	PIPE
1250.800	262.740	2.049	264.789	45.31	5.26	.43	265.22	.26	1.62	1.92	2.500	.000	.00	2 .0
JUNCT STR	.0001					.0017	.02	2.31	.44		.013	.00	.00	PIPE
---------- WARNING - Junction Analysis - Change in Channel Type ----------														
1260.600	262.741	2.667	265.408	45.31	2.83	.12	265.53	.00	1.69	10.00	3.300	2.000	1.50	0 .0
9.813	.0068					.0004	.00	2.67	.39	1.37	.013	.00	1.50	TRAP
1270.413	262.808	2.591	265.399	45.31	2.97	.14	265.54	.00	1.69	9.77	3.300	2.000	1.50	0 .0
9.416	.0068					.0005	.00	2.59	.42	1.37	.013	.00	1.50	TRAP
1279.829	262.872	2.518	265.390	45.31	3.12	.15	265.54	.00	1.69	9.55	3.300	2.000	1.50	0 .0
6.971	.0068					.0005	.00	2.52	.44	1.37	.013	.00	1.50	TRAP
1286.800	262.920	2.463	265.383	45.31	3.23	.16	265.55	.00	1.69	9.39	3.300	2.000	1.50	0 .0
TRANS STR	.0976					.0019	.00	2.46	.47		.030	.00	1.50	TRAP
1286.810	262.921	2.586	265.507	45.31	1.80	.05	265.56	.00	1.40	17.51	3.300	2.000	3.00	0 .0
14.298	.0053					.0009	.01	2.59	.26	1.76	.030	.00	3.00	TRAP

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:12

JN - 15956-A

Meadowood --- WSPGW Analysis for Existing Condition

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1301.108	262.997	2.518	265.515	45.31	1.88	.06	265.57	.00	1.40	17.11	3.300	2.000	3.00	0 .0
14.219	.0053					.0010	.01	2.52	.28	1.76	.030	.00	3.00	TRAP
1315.327	263.072	2.452	265.524	45.31	1.98	.06	265.58	.00	1.40	16.71	3.300	2.000	3.00	0 .0
14.191	.0053					.0012	.02	2.45	.30	1.76	.030	.00	3.00	TRAP
1329.518	263.148	2.387	265.535	45.31	2.07	.07	265.60	.00	1.40	16.32	3.300	2.000	3.00	0 .0
14.225	.0053					.0013	.02	2.39	.32	1.76	.030	.00	3.00	TRAP
1343.742	263.223	2.324	265.547	45.31	2.17	.07	265.62	.00	1.40	15.94	3.300	2.000	3.00	0 .0
14.337	.0053					.0015	.02	2.32	.33	1.76	.030	.00	3.00	TRAP
1358.080	263.300	2.262	265.562	45.31	2.28	.08	265.64	.00	1.40	15.57	3.300	2.000	3.00	0 .0
14.553	.0053					.0017	.03	2.26	.36	1.76	.030	.00	3.00	TRAP
1372.633	263.377	2.202	265.579	45.31	2.39	.09	265.67	.00	1.40	15.21	3.300	2.000	3.00	0 .0
14.909	.0053					.0020	.03	2.20	.38	1.76	.030	.00	3.00	TRAP
1387.542	263.456	2.144	265.600	45.31	2.51	.10	265.70	.00	1.40	14.86	3.300	2.000	3.00	0 .0
15.464	.0053					.0022	.03	2.14	.40	1.76	.030	.00	3.00	TRAP
1403.005	263.538	2.086	265.625	45.31	2.63	.11	265.73	.00	1.40	14.52	3.300	2.000	3.00	0 .0
16.317	.0053					.0025	.04	2.09	.43	1.76	.030	.00	3.00	TRAP
1419.323	263.625	2.030	265.655	45.31	2.76	.12	265.77	.00	1.40	14.18	3.300	2.000	3.00	0 .0
17.652	.0053					.0029	.05	2.03	.45	1.76	.030	.00	3.00	TRAP

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:12

JN - 15956-A

Meadowood --- WSPGW Analysis for Existing Condition

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1436.975	263.719	1.976	265.695	45.31	2.89	.13	265.82	.00	1.40	13.86	3.300	2.000	3.00	0 .0
19.848	.0053					.0033	.07	1.98	.48	1.76	.030	.00	3.00	TRAP
1456.823	263.824	1.923	265.747	45.31	3.03	.14	265.89	.00	1.40	13.54	3.300	2.000	3.00	0 .0
23.827	.0053					.0037	.09	1.92	.51	1.76	.030	.00	3.00	TRAP
1480.650	263.951	1.871	265.821	45.31	3.18	.16	265.98	.00	1.40	13.22	3.300	2.000	3.00	0 .0
32.606	.0053					.0042	.14	1.87	.54	1.76	.030	.00	3.00	TRAP
1513.257	264.124	1.820	265.944	45.31	3.34	.17	266.12	.00	1.40	12.92	3.300	2.000	3.00	0 .0
64.918	.0053					.0048	.31	1.82	.57	1.76	.030	.00	3.00	TRAP
1578.175	264.469	1.771	266.239	45.31	3.50	.19	266.43	.00	1.40	12.62	3.300	2.000	3.00	0 .0
77.199	.0053					.0052	.40	1.77	.61	1.76	.030	.00	3.00	TRAP
1655.374	264.879	1.757	266.636	45.31	3.55	.20	266.83	.00	1.40	12.54	3.300	2.000	3.00	0 .0
15.296	.0053					.0053	.08	1.76	.62	1.76	.030	.00	3.00	TRAP
1670.670	264.960	1.757	266.717	45.31	3.55	.20	266.91	.00	1.40	12.54	3.300	2.000	3.00	0 .0
486.130	.0053					.0026	4.41	1.76	.62	1.76	.030	.00	3.00	TRAP
2156.800	268.960	1.757	270.717	45.31	3.55	.20	270.91	.00	1.40	12.54	3.300	2.000	3.00	0 .0

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T1 JN - 15956-A                                                                    0
T2 Meadowood --- WSPGW Analysis for Alt.1 Grading
T3 05/29/2009
SO        .000 256.430  1                            258.220
R     471.600 258.820  1      .014                                        .000
JX    471.700 258.821  4  3   .014    6.080           258.821             90.0
.000
TS    475.700 258.840  5      .014                                        .000
WX    475.700 258.840  6
R     587.200 259.380  6      .013                                        .000    .000 0
WE    587.200 259.380  7      .500
TS    591.200 259.400  8      .014                                        .000
JX    591.300 259.401 10  9   .014    5.400           259.400             90.0
.000
R    1125.300 262.158 10      .014                                        .000
JX   1129.300 262.159 14 13   .014    5.400           262.160               .0      -
90.000
R    1129.400 262.160 14      .014                                        .000
WX   1129.400 262.160 15
R    1250.800 262.740 15      .013                                        .000    .000 0
JX   1254.800 263.070 17 16   .013    6.420           263.070            -90.0
90.000
R    1968.800 266.640 17      .013                                        .000    .000 0
JX   1972.800 266.970 18      .013                                                  -
90.000
R    2028.800 267.250 18      .013                                        .000    .000 0
JX   2032.800 267.580 19      .013
90.000
R    2156.800 268.200 19      .013                                        .000    .000 0
SH   2156.800 268.200 19                                 268.200
CD   1  1   0     .000   3.300    2.000 1.500 1.500    .00
CD   2  1   0     .000   3.300    2.000 1.500 1.500    .00
CD   3  1   0     .000   3.300     .100  .000  .000    .00
CD   4  1   0     .000   3.300    2.000 1.500 1.500    .00
CD   5  1   0     .000   3.300   11.800  .000  .000    .00
CD   6  4   2     .000   3.000     .000  .000  .000    .00
CD   7  1   0     .000   3.300   11.800  .000  .000    .00
CD   8  1   0     .000   2.500    2.000 1.500 1.500    .00
CD   9  1   0     .000   2.500     .100  .000  .000    .00
CD  10  1   0     .000   2.500    2.000 1.500 1.500    .00
CD  11  1   0     .000   1.640    2.000 3.000 3.000    .00
CD  12  1   0     .000   2.500    9.800  .000  .000    .00
CD  13  1   0     .000   1.640    2.000  .000  .000    .00
CD  14  1   0     .000   2.500    9.800  .000  .000    .00
CD  15  4   2     .000   2.500     .000  .000  .000    .00
CD  16  4   1     .000   1.500     .000  .000  .000    .00
CD  17  4   1     .000   3.500     .000  .000  .000    .00
CD  18  4   1     .000   3.500     .000  .000  .000    .00
CD  19  4   1     .000   3.500     .000  .000  .000    .00
Q            39.530    .0
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Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:27

JN - 15956-A

Meadowood --- WSPGW Analysis for Alt.1 Grading

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	%L / %R	No Wth Prs/Pip / Type Ch
.000	256.430	1.787	258.217	62.83	7.51	.88	259.09	.00	1.99	7.36	3.300	2.000	1.50	0 .0
343.353	.0051					.0051	1.74	1.79	1.24	1.79	.014	.00	1.50	TRAP
343.353	258.170	1.787	259.957	62.83	7.51	.88	260.83	.00	1.99	7.36	3.300	2.000	1.50	0 .0
85.315	.0051					.0049	.42	1.79	1.24	1.79	.014	.00	1.50	TRAP
428.668	258.602	1.818	260.421	62.83	7.31	.83	261.25	.00	1.99	7.46	3.300	2.000	1.50	0 .0
30.868	.0051					.0044	.14	1.82	1.20	1.79	.014	.00	1.50	TRAP
459.535	258.759	1.874	260.633	62.83	6.97	.75	261.39	.00	1.99	7.62	3.300	2.000	1.50	0 .0
9.776	.0051					.0039	.04	1.87	1.13	1.79	.014	.00	1.50	TRAP
469.312	258.808	1.931	260.740	62.83	6.64	.69	261.43	.00	1.99	7.79	3.300	2.000	1.50	0 .0
2.288	.0051					.0034	.01	1.93	1.06	1.79	.014	.00	1.50	TRAP
471.600	258.820	1.991	260.811	62.83	6.33	.62	261.43	.00	1.99	7.97	3.300	2.000	1.50	0 .0
JUNCT STR	.0101					.0022	.00	1.99	1.00		.014	.00	1.50	TRAP
471.700	258.821	2.414	261.235	56.75	4.18	.27	261.51	.00	1.89	9.24	3.300	2.000	1.50	0 .0
TRANS STR	.0047					.0006	.00	2.41	.61		.014	.00	1.50	TRAP
475.700	258.840	2.675	261.515	56.75	1.80	.05	261.56	.00	.90	11.80	3.300	11.800	.00	0 .0
WALL EXIT														
475.700	258.840	2.675	261.515	56.75	4.26	.28	261.80	.00	1.72	1.86	3.000	.000	.00	2 .0
39.003	.0048					.0017	.07	2.68	.28	1.69	.013	.00	.00	PIPE

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:27

JN - 15956-A

Meadowood --- WSPGW Analysis for Alt.1 Grading

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
514.703	259.029	2.523	261.552	56.75	4.47	.31	261.86	.00	1.72	2.19	3.000	.000	.00	2 .0
8.578	.0048					.0018	.02	2.52	.33	1.69	.013	.00	.00	PIPE
523.281	259.070	2.491	261.561	56.75	4.52	.32	261.88	.00	1.72	2.25	3.000	.000	.00	2 .0
HYDRAULIC JUMP														
523.281	259.070	1.694	260.765	56.75	6.89	.74	261.50	.00	1.72	2.97	3.000	.000	.00	2 .0
56.066	.0048					.0048	.27	1.69	.73	1.69	.013	.00	.00	PIPE
579.347	259.342	1.694	261.036	56.75	6.89	.74	261.77	.00	1.72	2.97	3.000	.000	.00	2 .0
7.853	.0048					.0047	.04	1.69	.73	1.69	.013	.00	.00	PIPE
587.200	259.380	1.723	261.103	56.75	6.75	.71	261.81	.00	1.72	2.97	3.000	.000	.00	2 .0
587.200	259.380	2.230	261.610	56.75	5.04	.39	262.00	.00	1.72	2.62	3.000	.000	.00	2 .0
WALL ENTRANCE														
587.200	259.380	3.428	262.808	56.75	1.40	.03	262.84	.00	.90	11.80	3.300	11.800	.00	0 .0
TRANS STR	.0050					.0002	.00	3.43	.13		.014	.00	.00	TRAP
591.200	259.400	3.381	262.781	56.75	2.37	.09	262.87	.00	1.89	12.14	2.500	2.000	1.50	0 .0
JUNCT STR	.0101					.0002	.00	3.38	.30		.014	.00	1.50	TRAP
591.300	259.401	3.414	262.815	51.35	2.11	.07	262.88	.00	1.80	12.24	2.500	2.000	1.50	0 .0
17.469	.0052					.0002	.00	3.41	.26	1.62	.014	.00	1.50	TRAP
608.769	259.491	3.320	262.811	51.35	2.22	.08	262.89	.00	1.80	11.96	2.500	2.000	1.50	0 .0
16.970	.0052					.0002	.00	3.32	.28	1.62	.014	.00	1.50	TRAP

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:27

JN - 15956-A

Meadowood --- WSPGW Analysis for Alt.1 Grading

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
625.739	259.579	3.229	262.808	51.35	2.32	.08	262.89	.00	1.80	11.69	2.500	2.000	1.50	0 .0
16.474	.0052					.0003	.00	3.23	.30	1.62	.014	.00	1.50	TRAP
642.213	259.664	3.140	262.804	51.35	2.44	.09	262.90	.00	1.80	11.42	2.500	2.000	1.50	0 .0
15.980	.0052					.0003	.00	3.14	.32	1.62	.014	.00	1.50	TRAP
658.193	259.746	3.053	262.799	51.35	2.56	.10	262.90	.00	1.80	11.16	2.500	2.000	1.50	0 .0
15.488	.0052					.0003	.01	3.05	.34	1.62	.014	.00	1.50	TRAP
673.681	259.826	2.968	262.795	51.35	2.68	.11	262.91	.00	1.80	10.90	2.500	2.000	1.50	0 .0
14.996	.0052					.0004	.01	2.97	.36	1.62	.014	.00	1.50	TRAP
688.677	259.904	2.886	262.789	51.35	2.81	.12	262.91	.00	1.80	10.66	2.500	2.000	1.50	0 .0
14.502	.0052					.0004	.01	2.89	.38	1.62	.014	.00	1.50	TRAP
703.179	259.979	2.805	262.784	51.35	2.95	.14	262.92	.00	1.80	10.41	2.500	2.000	1.50	0 .0
14.004	.0052					.0005	.01	2.80	.40	1.62	.014	.00	1.50	TRAP
717.184	260.051	2.726	262.777	51.35	3.09	.15	262.93	.00	1.80	10.18	2.500	2.000	1.50	0 .0
13.501	.0052					.0006	.01	2.73	.43	1.62	.014	.00	1.50	TRAP
730.685	260.121	2.649	262.770	51.35	3.24	.16	262.93	.00	1.80	9.95	2.500	2.000	1.50	0 .0
12.989	.0052					.0007	.01	2.65	.45	1.62	.014	.00	1.50	TRAP
743.674	260.188	2.575	262.762	51.35	3.40	.18	262.94	.00	1.80	9.72	2.500	2.000	1.50	0 .0
12.465	.0052					.0007	.01	2.57	.48	1.62	.014	.00	1.50	TRAP

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:27

JN - 15956-A

Meadowood --- WSPGW Analysis for Alt.1 Grading

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
756.139	260.252	2.502	262.754	51.35	3.57	.20	262.95	.00	1.80	9.50	2.500	2.000	1.50	0 .0
11.925	.0052					.0008	.01	2.50	.51	1.62	.014	.00	1.50	TRAP
768.064	260.314	2.430	262.744	51.35	3.74	.22	262.96	.00	1.80	9.29	2.500	2.000	1.50	0 .0
11.363	.0052					.0010	.01	2.43	.54	1.62	.014	.00	1.50	TRAP
779.427	260.372	2.361	262.733	51.35	3.93	.24	262.97	.00	1.80	9.08	2.500	2.000	1.50	0 .0
10.772	.0052					.0011	.01	2.36	.58	1.62	.014	.00	1.50	TRAP
790.200	260.428	2.293	262.721	51.35	4.12	.26	262.98	.00	1.80	8.88	2.500	2.000	1.50	0 .0
10.143	.0052					.0012	.01	2.29	.61	1.62	.014	.00	1.50	TRAP
800.342	260.480	2.227	262.707	51.35	4.32	.29	263.00	.00	1.80	8.68	2.500	2.000	1.50	0 .0
9.461	.0052					.0014	.01	2.23	.65	1.62	.014	.00	1.50	TRAP
809.803	260.529	2.162	262.691	51.35	4.53	.32	263.01	.00	1.80	8.49	2.500	2.000	1.50	0 .0
8.708	.0052					.0016	.01	2.16	.69	1.62	.014	.00	1.50	TRAP
818.511	260.574	2.100	262.674	51.35	4.75	.35	263.02	.00	1.80	8.30	2.500	2.000	1.50	0 .0
7.855	.0052					.0018	.01	2.10	.73	1.62	.014	.00	1.50	TRAP
826.365	260.615	2.038	262.653	51.35	4.98	.39	263.04	.00	1.80	8.11	2.500	2.000	1.50	0 .0
5.043	.0052					.0020	.01	2.04	.78	1.62	.014	.00	1.50	TRAP
831.408	260.641	1.991	262.632	51.35	5.17	.42	263.05	.00	1.80	7.97	2.500	2.000	1.50	0 .0

HYDRAULIC JUMP

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:27

JN - 15956-A

Meadowood --- WSPGW Analysis for Alt.1 Grading

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
831.408	260.641	1.616	262.257	51.35	7.18	.80	263.06	.00	1.80	6.85	2.500	2.000	1.50	0 .0
176.682	.0052					.0052	.91	1.62	1.24	1.62	.014	.00	1.50	TRAP
1008.090	261.553	1.616	263.169	51.35	7.18	.80	263.97	.00	1.80	6.85	2.500	2.000	1.50	0 .0
76.427	.0052					.0050	.38	1.62	1.24	1.62	.014	.00	1.50	TRAP
1084.516	261.947	1.642	263.589	51.35	7.01	.76	264.35	.00	1.80	6.93	2.500	2.000	1.50	0 .0
29.523	.0052					.0045	.13	1.64	1.20	1.62	.014	.00	1.50	TRAP
1114.039	262.100	1.693	263.793	51.35	6.68	.69	264.49	.00	1.80	7.08	2.500	2.000	1.50	0 .0
9.116	.0052					.0040	.04	1.69	1.13	1.62	.014	.00	1.50	TRAP
1123.156	262.147	1.745	263.892	51.35	6.37	.63	264.52	.00	1.80	7.24	2.500	2.000	1.50	0 .0
2.145	.0052					.0035	.01	1.75	1.06	1.62	.014	.00	1.50	TRAP
1125.300	262.158	1.800	263.958	51.35	6.07	.57	264.53	4.32	1.80	7.40	2.500	2.000	1.50	0 .0
JUNCT STR	.0003					.0017	.01	6.12	1.00		.014	.00	1.50	TRAP
1129.300	262.159	2.395	264.554	45.95	1.96	.06	264.61	.00	.88	9.80	2.500	9.800	.00	0 .0
.100	.0101					.0002	.00	2.39	.22	.64	.014	.00	.00	TRAP
1129.400	262.160	2.394	264.554	45.95	1.96	.06	264.61	.00	.88	9.80	2.500	9.800	.00	0 .0
WALL EXIT														
1129.400	262.160	2.394	264.554	45.95	4.75	.35	264.90	.00	1.63	1.01	2.500	.000	.00	2 .0
67.367	.0048					.0028	.19	2.39	.27	1.71	.013	.00	.00	PIPE

Program Package Serial Number: 1462

WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:27

JN - 15956-A

Meadowood --- WSPGW Analysis for Alt.1 Grading

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1196.767	262.482	2.223	264.705	45.95	4.98	.39	265.09	.00	1.63	1.57	2.500	.000	.00	2 .0
46.671	.0048					.0029	.14	2.22	.36	1.71	.013	.00	.00	PIPE
1243.438	262.705	2.097	264.802	45.95	5.22	.42	265.23	.00	1.63	1.84	2.500	.000	.00	2 .0
7.363	.0048					.0030	.02	2.10	.42	1.71	.013	.00	.00	PIPE
1250.800	262.740	2.077	264.817	45.95	5.27	.43	265.25	2.50	1.63	1.87	2.500	.000	.00	2 .0
JUNCT STR	.0825							2.50	.43		.013	.00	.00	PIPE
1254.800	263.070	1.864	264.934	39.53	7.59	.89	265.83	.00	1.95	3.49	3.500	.000	.00	1 .0
653.108	.0050					.0050	3.27	1.86	1.10	1.86	.013	.00	.00	PIPE
1907.908	266.336	1.864	268.199	39.53	7.59	.89	269.09	.00	1.95	3.49	3.500	.000	.00	1 .0
48.078	.0050					.0049	.24	1.86	1.10	1.86	.013	.00	.00	PIPE
1955.986	266.576	1.879	268.455	39.53	7.51	.88	269.33	.00	1.95	3.49	3.500	.000	.00	1 .0
12.814	.0050					.0046	.06	1.88	1.08	1.86	.013	.00	.00	PIPE
1968.800	266.640	1.954	268.594	39.53	7.16	.80	269.39	3.50	1.95	3.48	3.500	.000	.00	1 .0
JUNCT STR	.0825							3.50	1.00		.013	.00	.00	PIPE
1972.800	266.970	1.864	268.834	39.53	7.59	.89	269.73	.00	1.95	3.49	3.500	.000	.00	1 .0
43.185	.0050					.0049	.21	1.86	1.10	1.86	.013	.00	.00	PIPE
2015.985	267.186	1.879	269.065	39.53	7.51	.88	269.94	.00	1.95	3.49	3.500	.000	.00	1 .0
12.815	.0050					.0046	.06	1.88	1.08	1.86	.013	.00	.00	PIPE

Program Package Serial Number: 1462

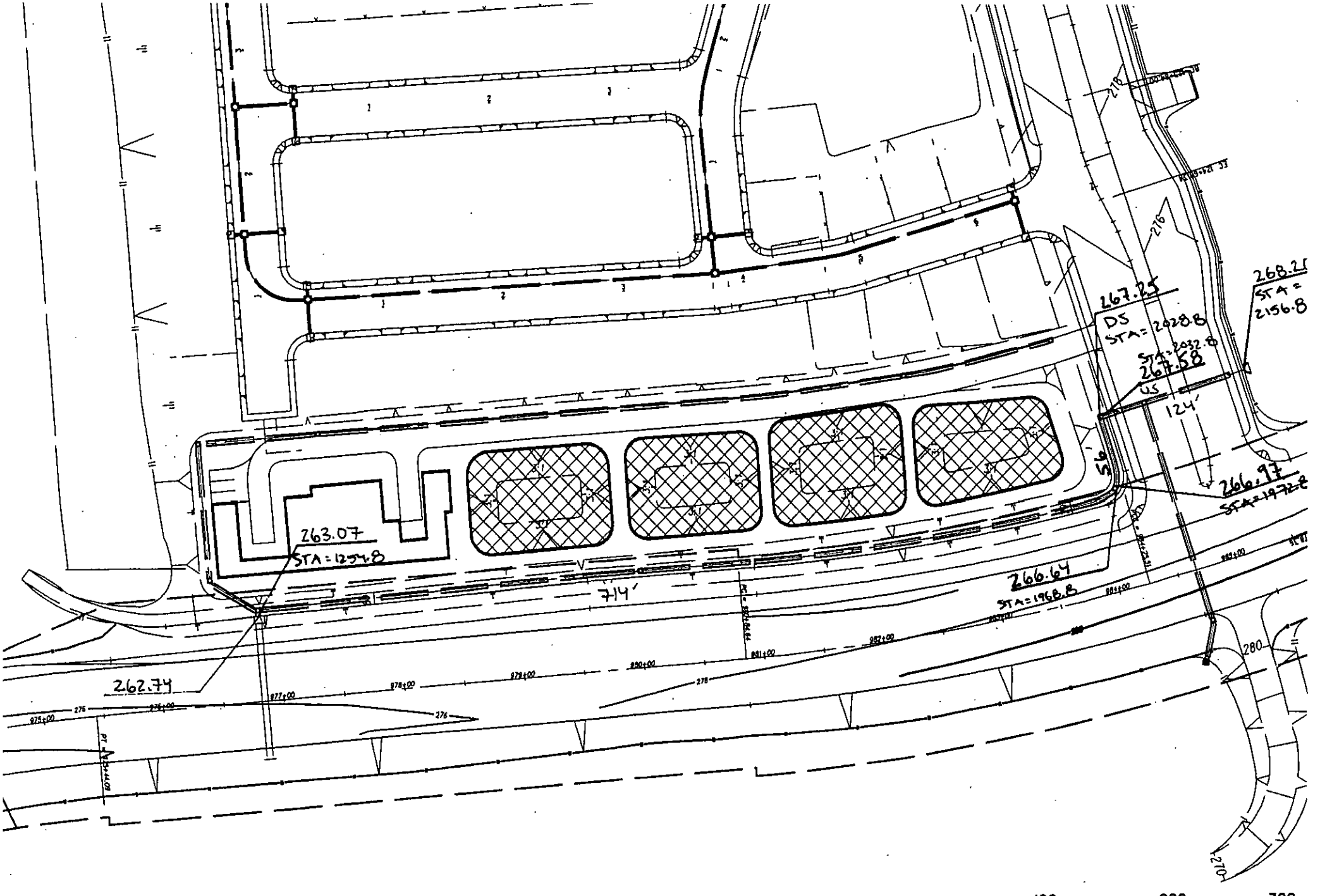
WATER SURFACE PROFILE LISTING Date: 6- 8-2009 Time: 3:44:27

JN - 15956-A

Meadowood --- WSPGW Analysis for Alt.1 Grading

05/29/2009

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
2028.800	267.250	1.954	269.204	39.53	7.16	.80	270.00	3.50	1.95	3.48	3.500	.000	.00	1 .0
JUNCT STR	.0825							3.50	1.00		.013	.00	.00	PIPE
2032.800	267.580	1.864	269.444	39.53	7.59	.89	270.34	.00	1.95	3.49	3.500	.000	.00	1 .0
62.706	.0050					.0050	.31	1.86	1.10	1.86	.013	.00	.00	PIPE
2095.506	267.894	1.864	269.757	39.53	7.59	.89	270.65	.00	1.95	3.49	3.500	.000	.00	1 .0
48.486	.0050					.0049	.24	1.86	1.10	1.86	.013	.00	.00	PIPE
2143.992	268.136	1.879	270.015	39.53	7.51	.88	270.89	.00	1.95	3.49	3.500	.000	.00	1 .0
12.808	.0050					.0046	.06	1.88	1.08	1.86	.013	.00	.00	PIPE
2156.800	268.200	1.954	270.154	39.53	7.16	.80	270.95	.00	1.95	3.48	3.500	.000	.00	1 .0



ALT. 1

100 50 0 100 200 300

GRAPHIC SCALE 1" = 100'

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No
11	SD	76	R28.0-30.1	58

REGISTERED CIVIL ENGINEER 2/14/08

PLANS APPROVAL DATE

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HADI SAMII No. 46173 Exp. 12/31/08 CIVIL STATE OF CALIFORNIA

GRANITE CONSTRUCTION COMPANY
38000 MONROE STREET
INDIO, CALIFORNIA 92203

URS CORPORATION
1615 MURRAY CANYON RD, SUITE 1000
SAN DIEGO, CALIFORNIA 92108

(6) (a) RIPRAP ENERGY DISSIPATOR (SEE DRAINAGE DETAIL ON SHEET DD-1)
(b) CUTOFF WALL (SEE DRAINAGE DETAIL SHEET DD-4)
(c) CONCRETE TRAPEZOIDAL DITCH (SEE DRAINAGE DETAIL SHEET DD-3)

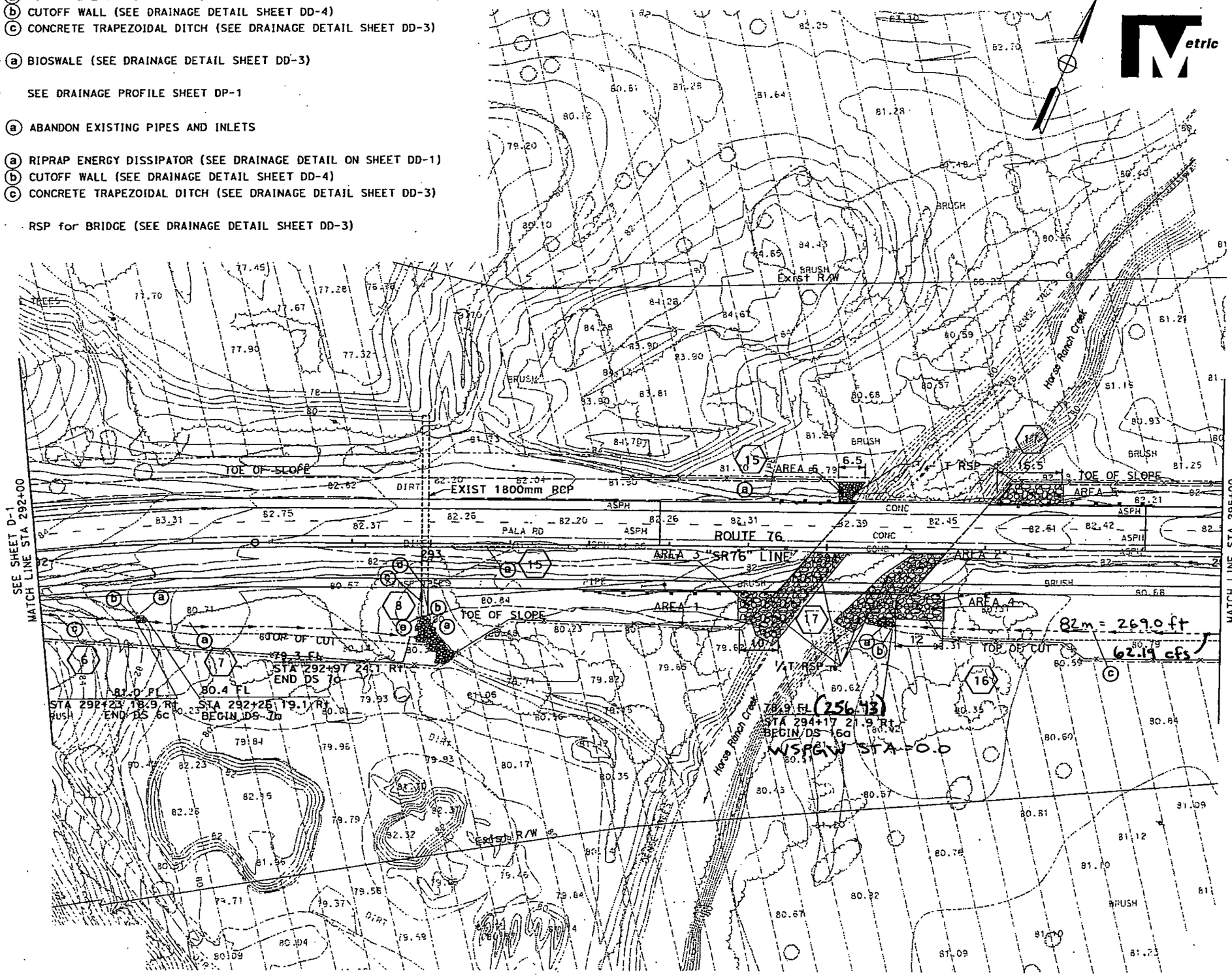
(7) (a) BIOSWALE (SEE DRAINAGE DETAIL SHEET DD-3)

(8) SEE DRAINAGE PROFILE SHEET DP-1

(15) (a) ABANDON EXISTING PIPES AND INLETS

(16) (a) RIPRAP ENERGY DISSIPATOR (SEE DRAINAGE DETAIL ON SHEET DD-1)
(b) CUTOFF WALL (SEE DRAINAGE DETAIL SHEET DD-4)
(c) CONCRETE TRAPEZOIDAL DITCH (SEE DRAINAGE DETAIL SHEET DD-3)

(17) RSP for BRIDGE (SEE DRAINAGE DETAIL SHEET DD-3)



SCALE 1:1000

* Metric *

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

DRAINAGE PLAN

SCALE 1:500

D-2

DATE	REVISION No.	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

DESIGN OVERSIGHT

USERNAME => jeremy_kohn
DGN FILE => ...\08 Drainage\io002.dgn

CU 00000

EA 231501

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	76	R28.0-30.1	59	

REGISTERED CIVIL ENGINEER 2/14/08

PLANS APPROVAL DATE

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GRANITE CONSTRUCTION COMPANY
38000 MONROE STREET
INDIO, CALIFORNIA 92203

URS CORPORATION
1615 MURRAY CANYON RD, SUITE 1000
SAN DIEGO, CALIFORNIA 92108

Metric

(16) (c) CONCRETE TRAPEZOIDAL DITCH (SEE DRAINAGE DETAILS SHEET DD-3)

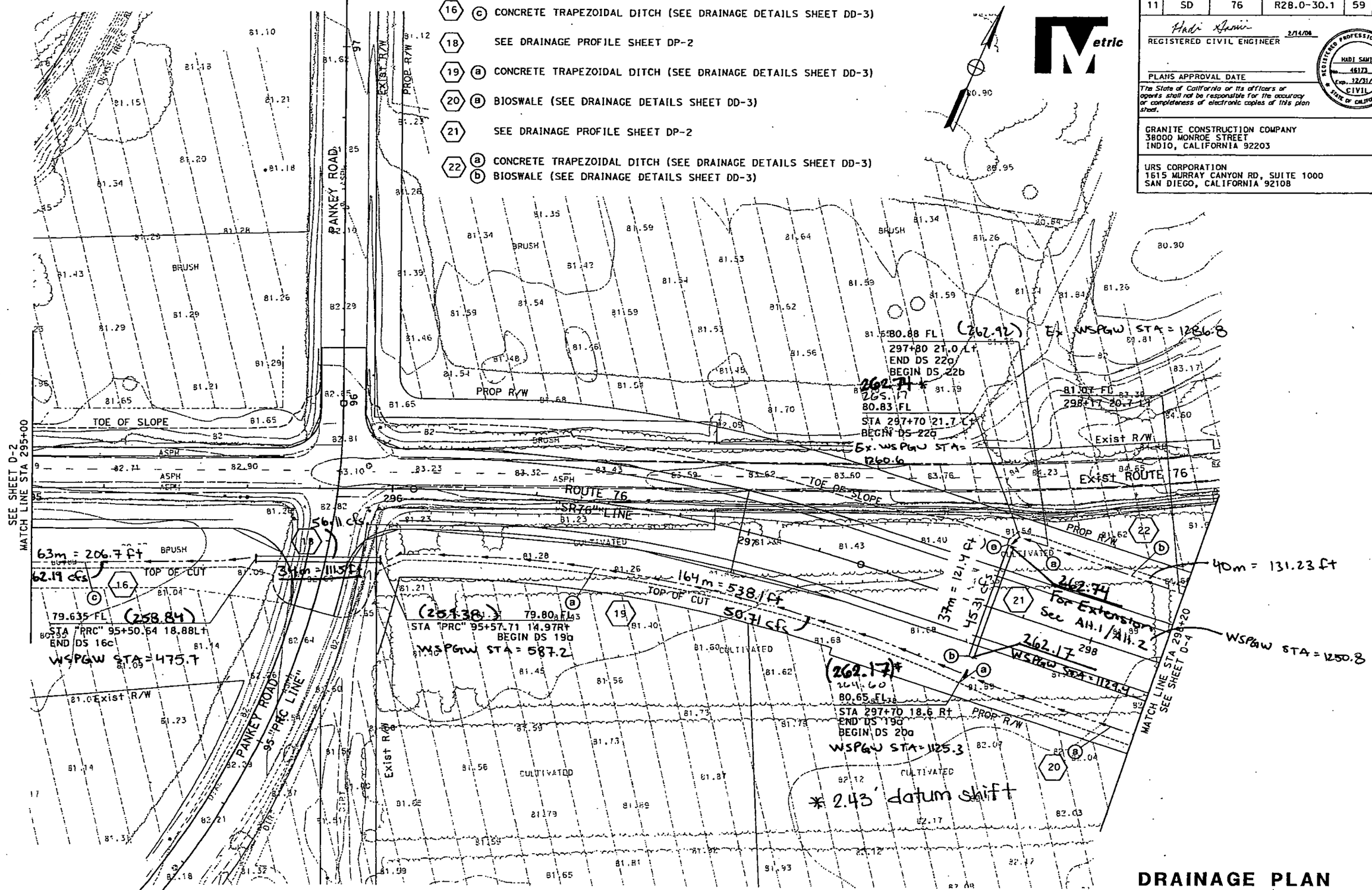
(18) SEE DRAINAGE PROFILE SHEET DP-2

(19) (a) CONCRETE TRAPEZOIDAL DITCH (SEE DRAINAGE DETAILS SHEET DD-3)

(20) (B) BIOSWALE (SEE DRAINAGE DETAILS SHEET DD-3)

(21) SEE DRAINAGE PROFILE SHEET DP-2

(22) (a) CONCRETE TRAPEZOIDAL DITCH (SEE DRAINAGE DETAILS SHEET DD-3)
(b) BIOSWALE (SEE DRAINAGE DETAILS SHEET DD-3)



THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

DRAINAGE PLAN

SCALE 1:500

D-3

REVISION No.	DATE REVISED

DATE

CALCULATED/DESIGNED BY

CHECKED BY

DESIGN OVERSIGHT

USERNAME => jeremy_kohn
DGN FILE => ...\08 Drainage\1a003.dgn

CU 00000

EA 231501

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TO SH
11	SD	76	R28.0-30.1	60	1

Hadi Samii 2/14/08
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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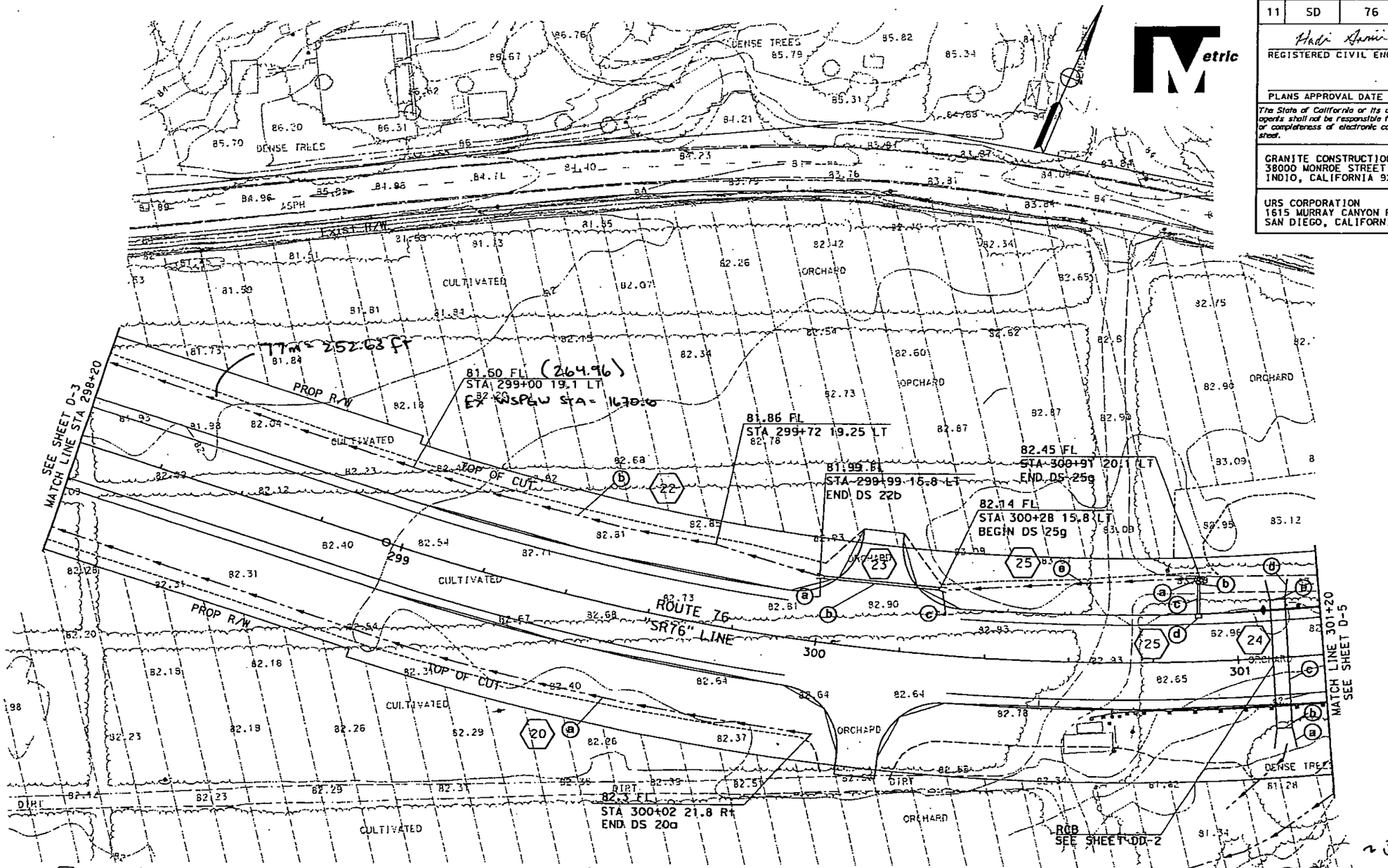
GRANITE CONSTRUCTION COMPANY
38000 MONROE STREET
INDIO, CALIFORNIA 92203

URS CORPORATION
1615 MURRAY CANYON RD, SUITE 1000
SAN DIEGO, CALIFORNIA 92108

DESIGN OVERSIGHT	CALCULATED/ DESIGNED BY	DATE	REVISION No.
	CHECKED BY		DATE REVISED



~304+25 : 0% superelevation

(20) (a) BIOSWALE (SEE DRAINAGE DETAIL SHEET DD-3)

(22) (b) BIOSWALE (SEE DRAINAGE DETAIL SHEET DD-3)

(23) SEE DRAINAGE PROFILE SHEET DP-2

(24) (a) STA 301+10 HEADWALL (SEE DRAINAGE DETAIL SHEET DD-2)
(b) STA 301+10 CABLE RAILING (SEE DRAINAGE DETAIL SHEET DD-2)
(c) STA 301+10 REINF. CONC. BOX (SEE DRAINAGE DETAIL SHEET DD-2)
(d) STA 301+10 HEADWALL (SEE DRAINAGE DETAIL SHEET DD-2)
(e) STA 301+10 CABLE RAILING (SEE DRAINAGE DETAIL SHEET DD-2)

(25) (a)-(d) SEE DRAINAGE PROFILE SHEET DP-3
(e) BIOSWALE (SEE DRAINAGE DETAIL SHEET DD-3)

DRAINAGE PLAN

SCALE 1:500

D-4

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.

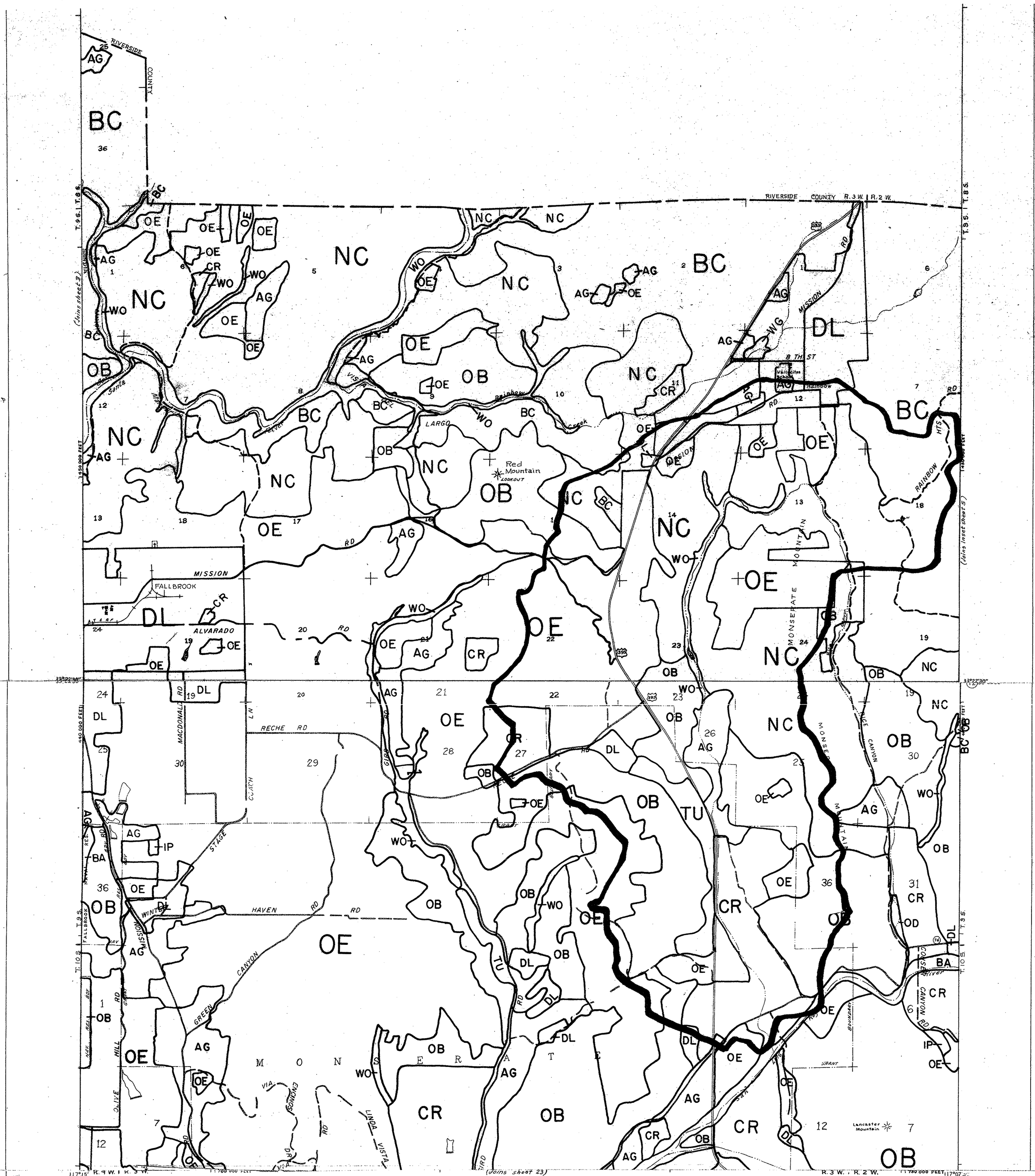
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

USERNAME => jeremy_kahn
DGN FILE => ...\08 Drainage\lo004.dgn

CU 00000 | EA 231501

Appendix G

Support Material for NRCS Hydrologic Method Parameters for Horse Ranch Creek Watershed



San Diego County Soils Interpretation Study

GROUND COVER - Vegetative & Man Made

SEE CAUTION NOTES

AG Annual Grass	DL Developed Lands	OB Open Brush	TU Turf
BA Barren	IP Irrigated Pasture	OD Orchard, Deciduous	VY Vineyard
BC Broadleaf Chaparral	ME Meadow	OE Orchard, Evergreen	WG Woodland Grass
CR Cropland	NC Narrowleaf Chaparral	PG Perennial Grass	WO Woodland

CAUTION NOTES:

1. User is urged to refer to corresponding SUPPLEMENTAL DATA SHEET for assumptions, criteria, map sources, additional legend items, and necessary explanation of ratings shown on map.

2. This map does not eliminate the need for detailed on-site investigation of the soil and site to determine precise soil conditions prior to undertaking any construction, grading, planting, or other soils related activity.

Base Map Source: U. S. Geological Survey with California State Coordinate System, Zone 6 Indicated

Prepared by: U. S. Department of Agriculture, Soil Conservation Service

Published by: San Diego County Planning Department for the Comprehensive Planning Organization — 1969

North

SCALE 1:24000

0 2000 4000 6000 feet

0 ¼ mile ½ mile 1 mile

Represents 40 acres

FEDERAL ASSISTANCE — The preparation of this map was financed in part through a comprehensive planning grant from the Department of Housing and Urban Development.

SHEET NAME	SHEET NUMBER
Bonsall	12

Meadowood VTM - Horse Ranch Creek Watershed

J-15956

J-15956
Meadowood VTM -
Horse Ranch Creek
Watershed

WORKSHEET 4-3 Horse Ranch Creek (name of project) **Peak Discharge Computation**

*****For use with NRCS Hydrologic Method Computations*****

Items in boxes are required input parameters for the SDUH Peak Discharge Program.

Computed by: Nobu M. Date: 6/26/09

Project Identification (Drainage Area Name): Basin 2

Geographic location of center of drainage area: Long: ____ " Lat: ____ "

Drainage Area: 11.97 – square miles

Storm Frequency (Section 2.3): 100 – year

6-Hour Storm Duration Precipitation (Appendix B): 3.6 – inches

24-Hour Storm Duration Precipitation (Appendix B): 6.1 – inches

Precipitation Zone Number (PZN): (Section 4.1.2.4 and Appendix C) PZN = 1.0 1.8 2.0 ____ 3.0 ____ 4.0

PZN Ajustment Factor for 5-year to 35-year storm frequency (interpolate): (Section 4.1.2.4 and Table 4-6) 1.5 ____ 2.5 ____ 2.0 ____ 1.5

PZN Ajustment Factor for 35-year to 150-year storm frequency (interpolate): (Section 4.1.2.4 and Table 4-6) 2.0 2.8 3.0 ____ 3.0 ____ 2.0

PZN Adjusted Runoff Curve Number (interpolate between nearest whole number PZN conditions): (Sections 4.1.2.4 and 4.2.4, Tables 4-6 and 4-10) $CN_{1.0 \text{ or } 2.0}$ 81 CN_X 89 $CN_{2.0 \text{ or } 3.0}$ 91

Watershed Length (L) (Section 4.3.1): 7.35 – miles

Length to Centroid (L_c) (Section 4.3.1): 3.22 – miles

Slope (s) (Section 4.3.1): 230 – feet/mile Basin $\bar{n}$ Factor (Section 4.3.5): 0.050

$\Delta(EL) = 1664' + 26' = 1690'$

Corps lag (T_L) = 24 $\bar{n}$ $((L \times L_c)/s^{0.5})^m$ (Section 4.3.1.1)
OR
Corps lag (T_L) = 0.8 T_c (Section 4.3.1.2) Lag Time: 1.421 – hours

Time to Peak = 0.862 x Corps lag (Section 4.1.5.5): Time to Peak : 1.225 – hours

$0.2 T_p = 0.2(1.225 \text{ hrs})$
$= 14.7$ minutes → Use D = 5 minutes

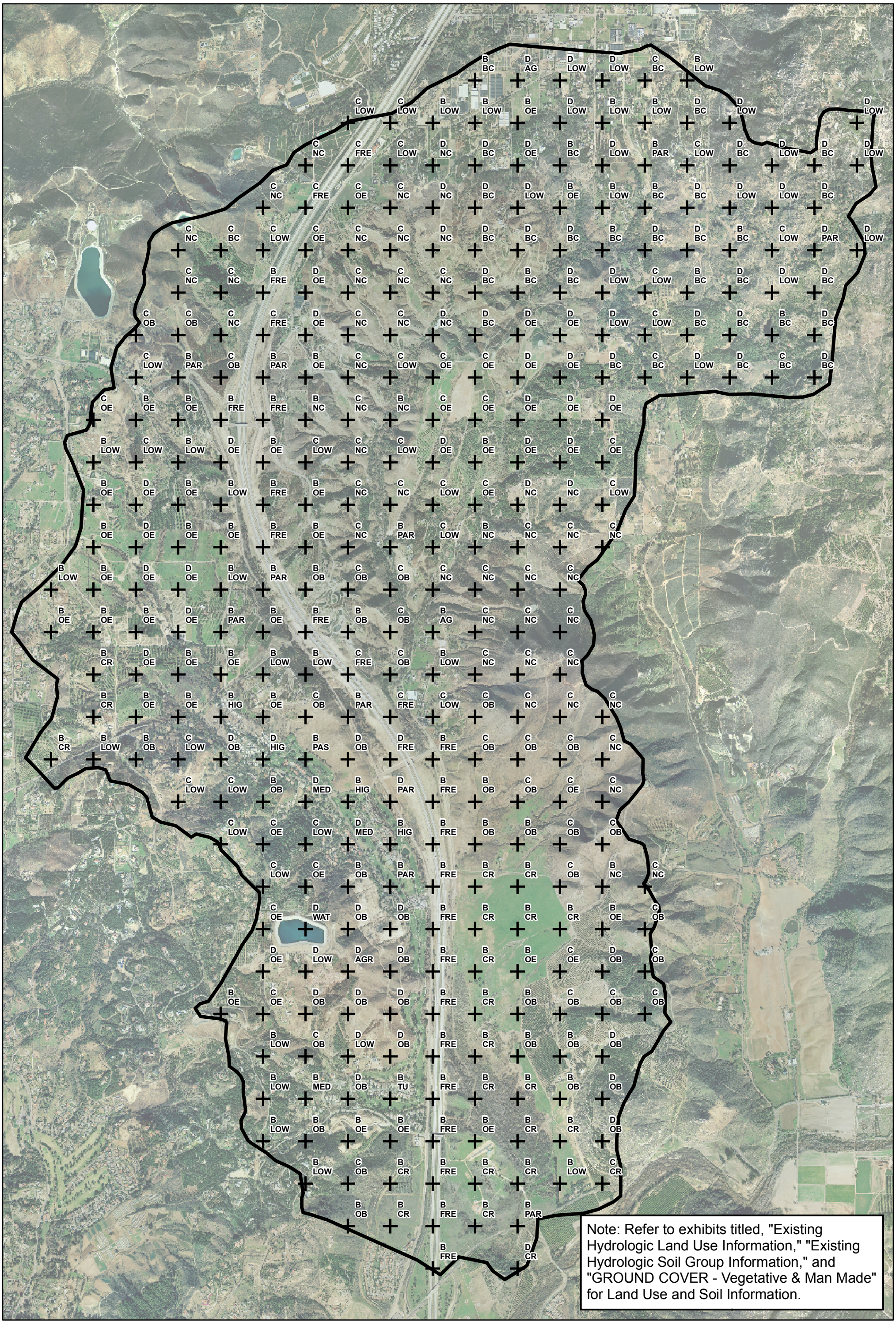
NRCS $T_1 = T_p - D/2$
$= 1.225 - \frac{(5/60)}{2}$
$= 1.183$ hrs

J-15956
June 26, 2009

Horse Ranch Creek - Composite Curve Number Calculations

GROUND COVER / LAND USE	HYDROLOGIC CONDITION	SOIL GROUP	CN_2 from Hydrology Manual Table 4-2	Number of Ticks	FRACTION OF TICKS	PARTIAL CN_2 CN_2 X FRACTION OF TICKS
AG - Annual Grass (Dryland Pasture)	Good	B	61	1	0.003	0.21
AG - Annual Grass (Dryland Pasture)	Good	D	80	1	0.003	0.27
BC - Broadleaf Chaparral	Fair	B	63	8	0.027	1.70
BC - Broadleaf Chaparral	Fair	C	75	3	0.010	0.76
BC - Broadleaf Chaparral	Fair	D	81	24	0.081	6.55
CR - Fallow Bare Soil	N/A	B	86	11	0.037	3.19
FRE - Freeway	N/A	B	98	14	0.047	4.62
FRE - Freeway	N/A	C	98	5	0.017	1.65
FRE - Freeway	N/A	D	98	1	0.003	0.33
HIG - High Residential (65% impervious)	N/A	B	85	3	0.010	0.86
HIG - High Residential (65% impervious)	N/A	D	92	1	0.003	0.31
LOW - Low Residential (Assume 20% Impervious)	N/A	B	68	15	0.051	3.43
LOW - Low Residential (Assume 20% Impervious)	N/A	C	79	23	0.077	6.12
LOW - Low Residential (Assume 20% Impervious)	N/A	D	84	18	0.061	5.09
MED - Medium Residential (Assume 50% Impervious)	N/A	D	89	2	0.007	0.60
NC - Narrowleaf Chaparral	Fair	B	72	4	0.013	0.97
NC - Narrowleaf Chaparral	Fair	C	81	39	0.131	10.64
NC - Narrowleaf Chaparral	Fair	D	86	6	0.020	1.74
OB - Open Brush	Fair	B	66	10	0.034	2.22
OB - Open Brush	Fair	C	77	22	0.074	5.70
OB - Open Brush	Fair	D	83	11	0.037	3.07
OE - Orchards Evergreen	Poor	B	73	27	0.091	6.64
OE - Orchards Evergreen	Poor	C	82	15	0.051	4.14
OE - Orchards Evergreen	Poor	D	86	21	0.071	6.08
PAR - Parking	N/A	B	98	8	0.027	2.64
PAR - Parking	N/A	D	98	2	0.007	0.66
PAS - Passive Parks - Open Space	Good	B	69	1	0.003	0.23
WAT - Water	N/A	D	99	1	0.003	0.33
			Total:	**297**	**1.00**	**80.74**

Composte CN_2 = 81



Meadowood VTM - Horse Ranch Creek Watershed

Hydrologic Land Use and Soils Information for Curve Number Calculation

J:\15956\GIS\gis_layers\Hydro_Analysis\HorseRanchCreek\15956_HRC_TICS_Basin2.mxd

Exhibit Date: June 30, 2009

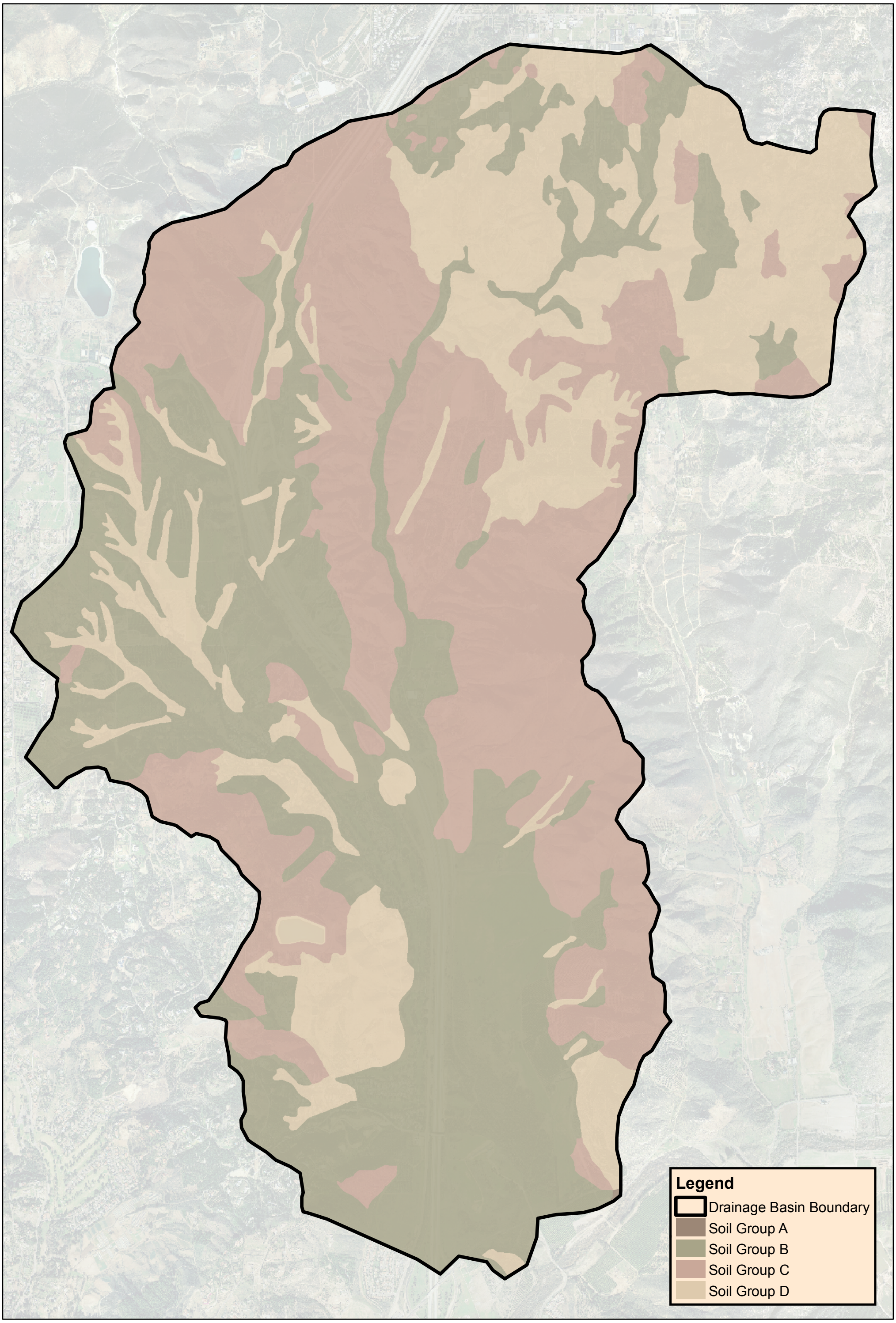
REC JN: 15956

NORTH

0 1,000 2,000 4,000 Feet

Data Sources:
Landiscor Aerial Photo: January 2008

RICK ENGINEERING COMPANY



Meadowood VTM - Horse Ranch Creek Watershed

Hydrologic Soil Group Information

J:\15956\GIS\gis_layers\Hydro_Analysis\HorseRanchCreek\15956_HRC_Soils.mxd

Exhibit Date: June 30, 2009

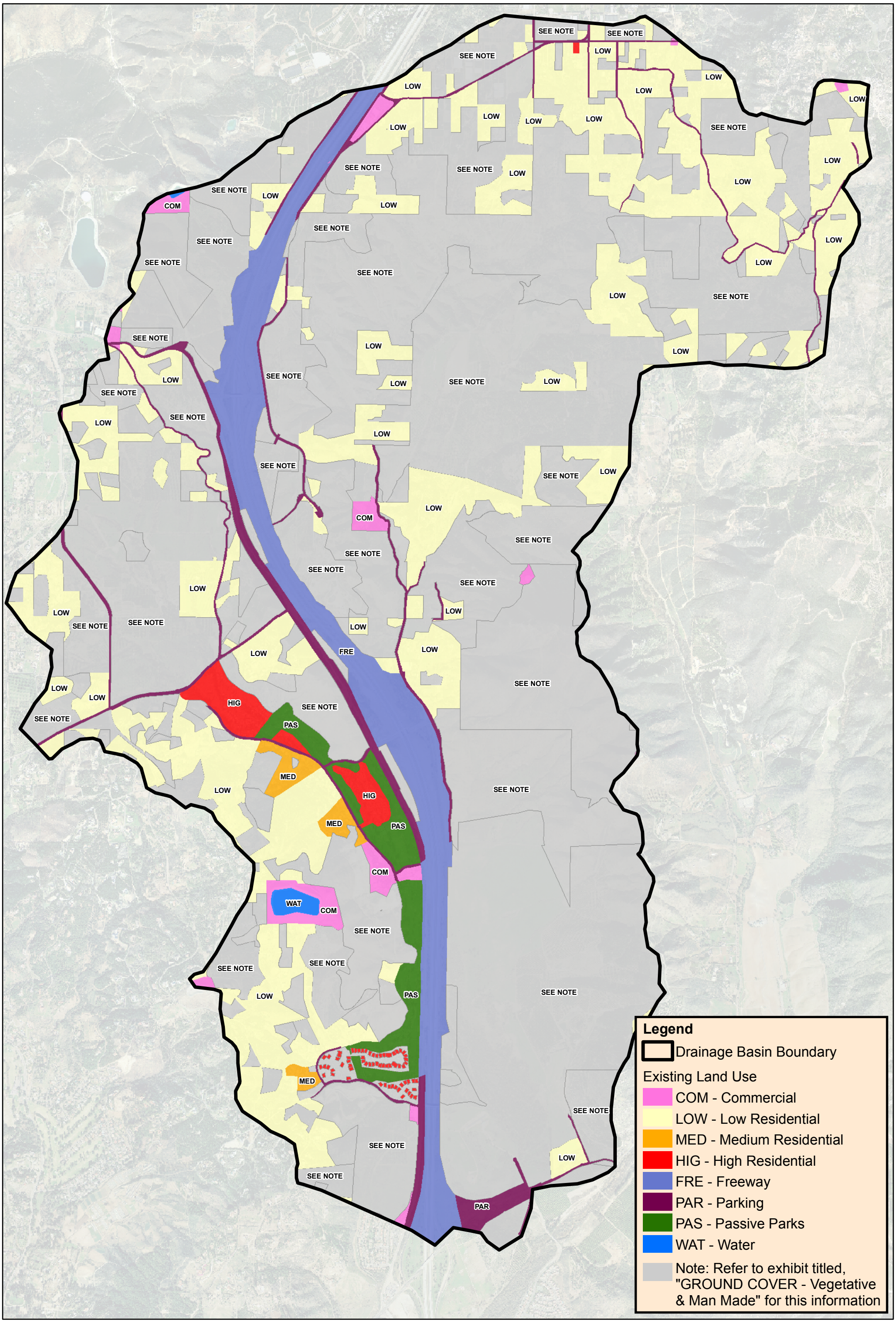
REC JN: 15956

NORTH

0 1,000 2,000 4,000 Feet

Data Sources:
SSURGO Soils Information: 2007
Landiscor Aerial Photo: January 2008

RICK ENGINEERING COMPANY



Meadowood VTM - Horse Ranch Creek Watershed

Existing Hydrologic Land Use Information

J:\15956\GIS\gis_layers\Hydro_Analysis\HorseRanchCreek\15956_HRC_ExistLU.mxd

Exhibit Date: June 30, 2009

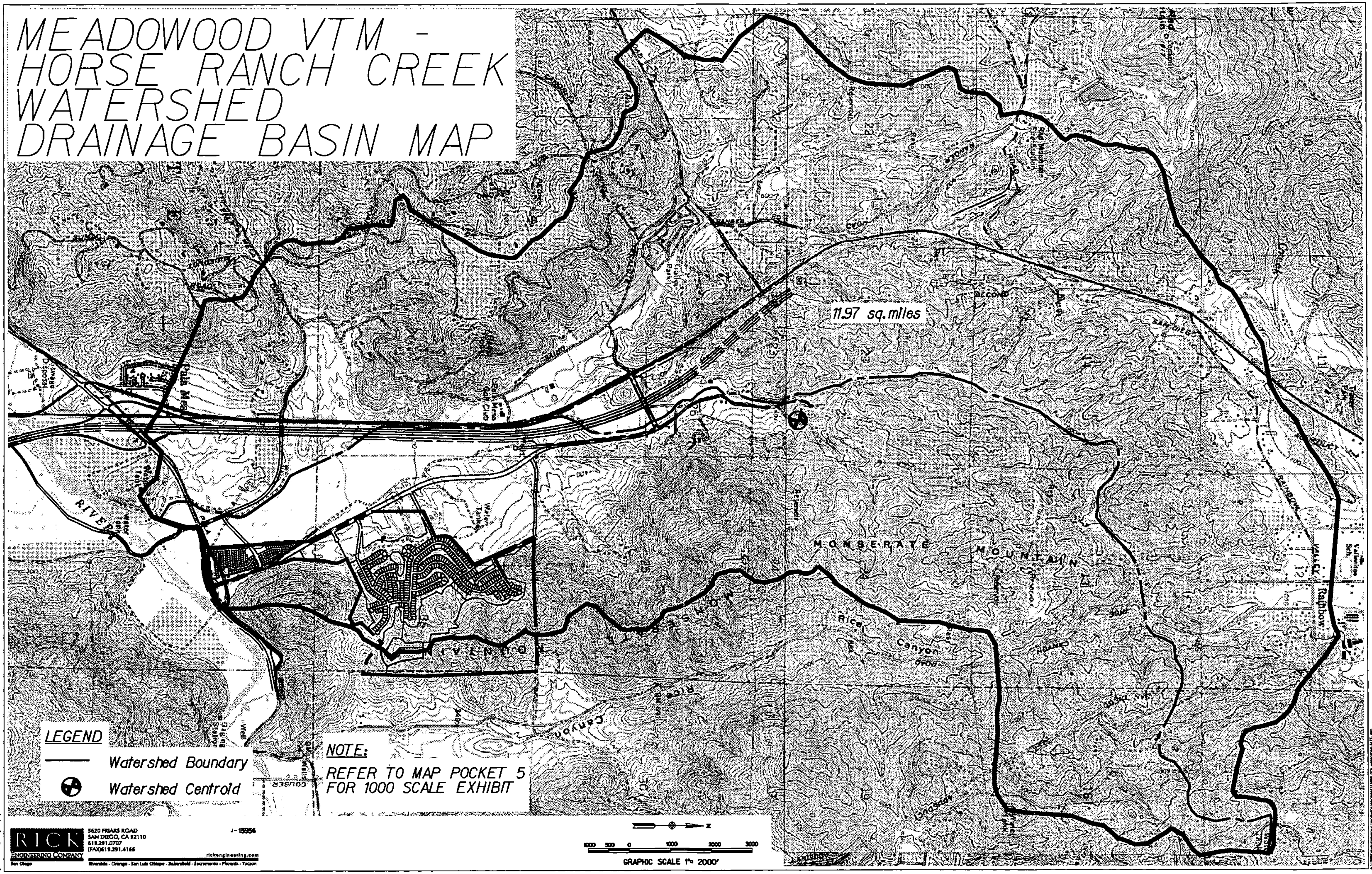
REC JN: 15956

NORTH

0 1,000 2,000 4,000 Feet

Data Sources:
SanGIS Existing Land Use: 2008
Landiscor Aerial Photo: January 2008

RICK ENGINEERING COMPANY


MEADOWOOD VTM -
HORSE RANCH CREEK
WATERSHED
DRAINAGE BASIN MAP
11.97 sq.miles
MONSERATE MOUNTAIN
RIVER
Rice Canyon
LEGEND
Watershed Boundary
Watershed Centroid
NOTE:
REFER TO MAP POCKET 5
FOR 1000 SCALE EXHIBIT
GRAPHIC SCALE 1" = 2000'
1000 500 0 1000 2000 3000
RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165
J-15956
rickengineering.com
Riverside - Orange - San Luis Obispo - Bakersfield - Sacramento - Phoenix - Tucson

Appendix H

Horse Ranch Creek HEC-1 Computer Output

```
*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998           *
*           VERSION 4.1             *
*                                   *
*  RUN DATE   26JUN09  TIME  09:55:07  *
*                                   *
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```

J-15956
Meadowood VTM-
Horse Ranch Creek
Watershed

```
*************************************
*                                   *
*   U.S. ARMY CORPS OF ENGINEERS    *
*   HYDROLOGIC ENGINEERING CENTER   *
*         609 SECOND STREET         *
*      DAVIS, CALIFORNIA 95616      *
*         (916) 756-1104            *
*                                   *
*************************************
```

```
X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

Q_{100} = 8951 cfs

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

              *DIAGRAM
*** FREE ***
    1         ID   J-15956; MEADOWOOD VTM - HORSE RANCH CREEK WATERSHED
    2         ID   BASIN 2: 100-YEAR STORM EVENT (SCENARIO D: N-BAR = 0.050)
    3         ID   FN: HRC2e00D.HC1  JUNE 25, 2009
    4         IT       5 01JAN90    1200     300
    5         IO       1       2

    6         KK  HRC_B2
    7         KM   NESTED STORM PER COUNTY OF SAN DIEGO HYDROLOGY MANUAL
    8         KM   COPYRIGHT 2003 RICK ENGINEERING COMPANY
    9         KM   FOR THIS DATA TO BE USED PROPERLYIN HEC-1,
   10         KM   THE 1DATE1 VARIABLE MUST BE 01JAN90 AND THE 1TIME1
   11         KM   VARIABLE MUST BE 1200 ON THE IT CARD.
   12         KM   THE FOLLOWING IT CARD IS SUGGESTED TO BE USED IN
   13         KM   YOUR DATA SET:
   14         KM   IT 5 01JAN90 1200 300
   15         KM   6HR RAINFALL IS  3.6  INCHES
   16         KM   24HR RAINFALL IS  6.1  INCHES
   17         KM   DAR30 =  .886998
   18         KM   DAR60 =  .937741
   19         KM   DAR180 =  .966454
   20         KM   DAR360 =  .976651
   21         KM   DAR1440 =  .98303
   22         KM   BASIN AREA IS  11.97  SQUARE MILES
   23         IN       5 01JAN90    1200     300
   24         PI  .00801  .00805  .00806   .0081  .00812  .00815  .00817  .00821  .00823  .00826
   25         PI  .00828  .00832  .00834  .00838   .0084  .00844  .00846   .0085  .00852  .00856
   26         PI  .00858  .00862  .00864  .00868   .0087  .00875  .00877  .00881  .00884  .00888
   27         PI   .0089  .00895  .00897  .00902  .00904  .00909  .00911  .00916  .00919  .00924
   28         PI  .00926  .00931  .00934  .00939  .00942  .00947   .0095  .00955  .00958  .00963
   29         PI  .00966  .00972  .00975   .0098  .00983  .00989  .00992  .00998  .01002  .01008
   30         PI  .01011  .01017  .01021  .01027   .0103  .01037  .01041  .01047  .01051  .01058
   31         PI  .01062  .01069  .01073   .0108  .01084  .01092  .01095  .01103  .01107  .01116
   32         PI   .0112  .01128  .01132  .01141  .01145  .01154  .01159  .01168  .01172  .01182
   33         PI  .01187  .01196  .01201  .01212  .01217  .01227  .01232  .01243  .01249   .0126
   34         PI  .01265  .01277  .01283  .01295  .01301  .01313   .0132  .01333  .01339  .01353
   35         PI   .0136  .01374  .01381  .01395  .01403  .01418  .01426  .01442   .0145  .01466
   36         PI  .01475  .01492  .01501  .01519  .01528  .01547  .01557  .01577  .01587   .0160
   37         PI  .01619  .01642  .01653  .01676  .01688  .01713  .01726  .01752  .01766   .0179
   38         PI  .01808  .01838  .01853  .01847  .01862  .01893  .01909  .01942  .01959   .0199
   39         PI  .02014  .02053  .02073  .02116  .02138  .02185  .02209   .0226  .02287  .02344
   40         PI  .02374  .02437   .0247  .02541  .02578  .02658  .02701  .03047   .0309  .03185
   41         PI  .03236  .03347  .03407   .0354  .03613  .03775  .03865  .04068  .04182  .04444
   42         PI  .04595  .04949  .05159  .07013  .07238  .07841  .08254  .08301  .09455   .1388
   43         PI   .1956   .7011  .11134  .08783   .0751  .05397  .04763  .04307  .03962  .03691
   44         PI  .03471  .03289  .03136  .02745  .02617  .02505  .02405  .02315  .02234   .0216
   45         PI  .02094  .02033  .01977  .01925  .01877  .01869  .01823   .0178  .01739  .01701
   46         PI  .01665   .0163  .01598  .01567  .01538   .0151  .01483  .01458  .01434   .0141
   47         PI  .01388  .01367  .01346  .01326  .01307  .01289  .01271  .01254  .01238   .0122
   48         PI  .01206  .01192  .01177  .01163   .0115  .01136  .01124  .01111  .01099  .01088
   49         PI  .01076  .01065  .01054  .01044  .01034  .01024  .01014  .01005  .00995   .0098
   50         PI  .00978  .00969  .00961  .00952  .00944  .00936  .00929  .00921  .00914   .0090
   51         PI  .00899  .00893  .00886  .00879  .00873  .00866   .0086  .00854  .00848  .00842
   52         PI  .00836   .0083  .00824  .00819  .00814  .00808  .00803       0       0       0
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  53          PI        0        0        0        0        0        0        0        0        0        0
  54          PI        0        0
  55          KO        2        2        0        0       21
  56          BA    11.97
  57          LS        0       89
  58          UD    1.183
  59          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT LINE NO.			
	(V) ROUTING	(--->) DIVERSION OR PUMP FLOW	
	(.) CONNECTOR	(<---) RETURN OF DIVERTED OR PUMPED FLOW	
6	HRC_B2		

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************                                    ****************************************
*                                      *                                    *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                    *   U.S. ARMY CORPS OF ENGINEERS
*              JUN   1998              *                                    *   HYDROLOGIC ENGINEERING CENTER
*           VERSION 4.1                *                                    *        609 SECOND STREET
*                                      *                                    *      DAVIS, CALIFORNIA 95616
*  RUN DATE   26JUN09  TIME  09:55:07  *                                    *          (916) 756-1104
*                                      *                                    *
****************************************                                    ****************************************
```

J-15956; MEADOWOOD VTM - HORSE RANCH CREEK WATERSHED
BASIN 2: 100-YEAR STORM EVENT (SCENARIO D: N-BAR = 0.050)
FN: HRC2e00D.HC1 JUNE 25, 2009

```
  5 IO          OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          2  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT          HYDROGRAPH TIME DATA
                       NMIN          5  MINUTES IN COMPUTATION INTERVAL
                      IDATE     1JAN90  STARTING DATE
                      ITIME       1200  STARTING TIME
                         NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE     2JAN90  ENDING DATE
                     NDTIME       1255  ENDING TIME
                      ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL     .08 HOURS
                      TOTAL TIME BASE   24.92 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT


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


          **************
          *            *
  6 KK    *    HRC_B2  *
          *            *
          **************
```

NESTED STORM PER COUNTY OF SAN DIEGO HYDROLOGY MANUAL
COPYRIGHT 2003 RICK ENGINEERING COMPANY
FOR THIS DATA TO BE USED PROPERLYIN HEC-1,
THE 1DATE1 VARIABLE MUST BE 01JAN90 AND THE 1TIME1
VARIABLE MUST BE 1200 ON THE IT CARD.
THE FOLLOWING IT CARD IS SUGGESTED TO BE USED IN

```
                    YOUR DATA SET:
                    IT 5 01JAN90 1200 300
                    6HR RAINFALL IS  3.6  INCHES
                    24HR RAINFALL IS  6.1  INCHES
                    DAR30 =  .886998
                    DAR60 =  .937741
                    DAR180 =  .966454
                    DAR360 =  .976651
                    DAR1440 =  .98303
                    BASIN AREA IS  11.97  SQUARE MILES

23 IN          TIME DATA FOR INPUT TIME SERIES
                    JXMIN           5  TIME INTERVAL IN MINUTES
                   JXDATE      1JAN90  STARTING DATE
                   JXTIME        1200  STARTING TIME

55 KO          OUTPUT CONTROL VARIABLES
                    IPRNT           2  PRINT CONTROL
                    IPLOT           2  PLOT CONTROL
                    QSCAL          0.  HYDROGRAPH PLOT SCALE
                    IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                     IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                    ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                    ISAV2         300  LAST ORDINATE PUNCHED OR SAVED
                   TIMINT        .083  TIME INTERVAL IN HOURS


          SUBBASIN RUNOFF DATA

56 BA          SUBBASIN CHARACTERISTICS
                    TAREA       11.97  SUBBASIN AREA

               PRECIPITATION DATA

24 PB               STORM        5.99  BASIN TOTAL PRECIPITATION

24 PI            INCREMENTAL PRECIPITATION PATTERN
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                    .01       .01       .02       .02       .02       .02       .02       .02       .02       .02
                    .02       .02       .02       .02       .02       .02       .02       .02       .02       .02
                    .02       .02       .02       .02       .02       .02       .02       .02       .02       .02
                    .02       .02       .02       .02       .02       .02       .02       .02       .02       .02
                    .02       .02       .02       .03       .03       .03       .03       .03       .03       .03
                    .03       .03       .03       .04       .04       .04       .04       .04       .04       .04
                    .05       .05       .05       .07       .07       .08       .08       .08       .09       .14
                    .20       .70       .11       .09       .08       .05       .05       .04       .04       .04
                    .03       .03       .03       .03       .03       .03       .02       .02       .02       .02
                    .02       .02       .02       .02       .02       .02       .02       .02       .02       .02
                    .02       .02       .02       .02       .02       .02       .01       .01       .01       .01
```

.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01			

57 LS SCS LOSS RATE

STRTL	.25	INITIAL ABSTRACTION
CRVNBR	89.00	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

58 UD SCS DIMENSIONLESS UNITGRAPH

TLAG	1.18	LAG

***

UNIT HYDROGRAPH

73 END-OF-PERIOD ORDINATES

96.	261.	490.	779.	1125.	1526.	2040.	2617.	3210.	3724.
4124.	4438.	4631.	4699.	4712.	4680.	4514.	4309.	4084.	3831.
3546.	3225.	2842.	2488.	2168.	1943.	1736.	1546.	1385.	1251.
1134.	1016.	913.	817.	720.	647.	583.	519.	467.	419.
371.	333.	298.	263.	238.	214.	190.	172.	154.	137.
124.	111.	98.	89.	79.	70.	63.	57.	51.	47.
43.	40.	36.	32.	28.	24.	21.	18.	14.	11.
8.	5.	2.							

****

HYDROGRAPH AT STATION HRC_B2

****

DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 1200	1	.00	.00	.00	0.	*	2 JAN 0030	151	.02	.00	.02	1138.
1 JAN 1205	2	.01	.01	.00	0.	*	2 JAN 0035	152	.02	.00	.02	1155.
1 JAN 1210	3	.01	.01	.00	0.	*	2 JAN 0040	153	.02	.00	.02	1172.
1 JAN 1215	4	.01	.01	.00	0.	*	2 JAN 0045	154	.02	.00	.02	1189.
1 JAN 1220	5	.01	.01	.00	0.	*	2 JAN 0050	155	.02	.00	.02	1207.
1 JAN 1225	6	.01	.01	.00	0.	*	2 JAN 0055	156	.02	.00	.02	1225.
1 JAN 1230	7	.01	.01	.00	0.	*	2 JAN 0100	157	.02	.00	.02	1243.
1 JAN 1235	8	.01	.01	.00	0.	*	2 JAN 0105	158	.02	.00	.02	1262.
1 JAN 1240	9	.01	.01	.00	0.	*	2 JAN 0110	159	.02	.00	.02	1282.
1 JAN 1245	10	.01	.01	.00	0.	*	2 JAN 0115	160	.02	.00	.02	1301.
1 JAN 1250	11	.01	.01	.00	0.	*	2 JAN 0120	161	.02	.00	.02	1322.
1 JAN 1255	12	.01	.01	.00	0.	*	2 JAN 0125	162	.02	.00	.02	1343.
1 JAN 1300	13	.01	.01	.00	0.	*	2 JAN 0130	163	.02	.00	.02	1365.
1 JAN 1305	14	.01	.01	.00	0.	*	2 JAN 0135	164	.02	.00	.02	1387.
1 JAN 1310	15	.01	.01	.00	0.	*	2 JAN 0140	165	.03	.00	.02	1411.
1 JAN 1315	16	.01	.01	.00	0.	*	2 JAN 0145	166	.03	.00	.02	1435.
1 JAN 1320	17	.01	.01	.00	0.	*	2 JAN 0150	167	.03	.00	.02	1461.
1 JAN 1325	18	.01	.01	.00	0.	*	2 JAN 0155	168	.03	.00	.02	1487.
1 JAN 1330	19	.01	.01	.00	0.	*	2 JAN 0200	169	.03	.00	.03	1515.
1 JAN 1335	20	.01	.01	.00	0.	*	2 JAN 0205	170	.03	.00	.03	1544.
1 JAN 1340	21	.01	.01	.00	0.	*	2 JAN 0210	171	.03	.00	.03	1575.
1 JAN 1345	22	.01	.01	.00	0.	*	2 JAN 0215	172	.03	.00	.03	1608.
1 JAN 1350	23	.01	.01	.00	0.	*	2 JAN 0220	173	.03	.00	.03	1643.
1 JAN 1355	24	.01	.01	.00	0.	*	2 JAN 0225	174	.03	.00	.03	1681.

1 JAN 1400	25	.01	.01	.00	0.	*	2 JAN 0230	175	.04	.00	.03	1721.
1 JAN 1405	26	.01	.01	.00	0.	*	2 JAN 0235	176	.04	.00	.03	1765.
1 JAN 1410	27	.01	.01	.00	0.	*	2 JAN 0240	177	.04	.00	.03	1812.
1 JAN 1415	28	.01	.01	.00	0.	*	2 JAN 0245	178	.04	.00	.03	1862.
1 JAN 1420	29	.01	.01	.00	0.	*	2 JAN 0250	179	.04	.01	.04	1915.
1 JAN 1425	30	.01	.01	.00	0.	*	2 JAN 0255	180	.04	.01	.04	1972.
1 JAN 1430	31	.01	.01	.00	0.	*	2 JAN 0300	181	.04	.01	.04	2032.
1 JAN 1435	32	.01	.01	.00	0.	*	2 JAN 0305	182	.05	.01	.04	2095.
1 JAN 1440	33	.01	.01	.00	0.	*	2 JAN 0310	183	.05	.01	.04	2162.
1 JAN 1445	34	.01	.01	.00	0.	*	2 JAN 0315	184	.05	.01	.05	2233.
1 JAN 1450	35	.01	.01	.00	0.	*	2 JAN 0320	185	.07	.01	.06	2310.
1 JAN 1455	36	.01	.01	.00	1.	*	2 JAN 0325	186	.07	.01	.07	2394.
1 JAN 1500	37	.01	.01	.00	1.	*	2 JAN 0330	187	.08	.01	.07	2488.
1 JAN 1505	38	.01	.01	.00	2.	*	2 JAN 0335	188	.08	.01	.07	2592.
1 JAN 1510	39	.01	.01	.00	3.	*	2 JAN 0340	189	.08	.01	.08	2708.
1 JAN 1515	40	.01	.01	.00	5.	*	2 JAN 0345	190	.09	.01	.09	2839.
1 JAN 1520	41	.01	.01	.00	7.	*	2 JAN 0350	191	.14	.01	.13	2991.
1 JAN 1525	42	.01	.01	.00	10.	*	2 JAN 0355	192	.20	.01	.18	3173.
1 JAN 1530	43	.01	.01	.00	13.	*	2 JAN 0400	193	.70	.04	.66	3438.
1 JAN 1535	44	.01	.01	.00	16.	*	2 JAN 0405	194	.11	.01	.11	3770.
1 JAN 1540	45	.01	.01	.00	20.	*	2 JAN 0410	195	.09	.00	.08	4163.
1 JAN 1545	46	.01	.01	.00	25.	*	2 JAN 0415	196	.08	.00	.07	4613.
1 JAN 1550	47	.01	.01	.00	31.	*	2 JAN 0420	197	.05	.00	.05	5111.
1 JAN 1555	48	.01	.01	.00	36.	*	2 JAN 0425	198	.05	.00	.05	5656.
1 JAN 1600	49	.01	.01	.00	43.	*	2 JAN 0430	199	.04	.00	.04	6265.
1 JAN 1605	50	.01	.01	.00	49.	*	2 JAN 0435	200	.04	.00	.04	6896.
1 JAN 1610	51	.01	.01	.00	57.	*	2 JAN 0440	201	.04	.00	.04	7504.
1 JAN 1615	52	.01	.01	.00	64.	*	2 JAN 0445	202	.03	.00	.03	8025.
1 JAN 1620	53	.01	.01	.00	72.	*	2 JAN 0450	203	.03	.00	.03	8431.
1 JAN 1625	54	.01	.01	.00	80.	*	2 JAN 0455	204	.03	.00	.03	8730.
1 JAN 1630	55	.01	.01	.00	89.	*	2 JAN 0500	205	.03	.00	.03	8902.
1 JAN 1635	56	.01	.01	.00	98.	*	2 JAN 0505	206	.03	.00	.03	8951.
1 JAN 1640	57	.01	.01	.00	106.	*	2 JAN 0510	207	.03	.00	.02	8916.
1 JAN 1645	58	.01	.01	.00	115.	*	2 JAN 0515	208	.02	.00	.02	8803.
1 JAN 1650	59	.01	.01	.00	124.	*	2 JAN 0520	209	.02	.00	.02	8576.
1 JAN 1655	60	.01	.01	.00	134.	*	2 JAN 0525	210	.02	.00	.02	8295.
1 JAN 1700	61	.01	.01	.00	143.	*	2 JAN 0530	211	.02	.00	.02	7976.
1 JAN 1705	62	.01	.01	.00	152.	*	2 JAN 0535	212	.02	.00	.02	7617.
1 JAN 1710	63	.01	.01	.00	162.	*	2 JAN 0540	213	.02	.00	.02	7222.
1 JAN 1715	64	.01	.01	.00	171.	*	2 JAN 0545	214	.02	.00	.02	6793.
1 JAN 1720	65	.01	.01	.00	181.	*	2 JAN 0550	215	.02	.00	.02	6329.
1 JAN 1725	66	.01	.01	.00	191.	*	2 JAN 0555	216	.02	.00	.02	5886.
1 JAN 1730	67	.01	.01	.00	200.	*	2 JAN 0600	217	.02	.00	.02	5477.
1 JAN 1735	68	.01	.01	.00	210.	*	2 JAN 0605	218	.02	.00	.02	5133.
1 JAN 1740	69	.01	.01	.00	219.	*	2 JAN 0610	219	.02	.00	.02	4812.
1 JAN 1745	70	.01	.01	.00	229.	*	2 JAN 0615	220	.02	.00	.02	4516.
1 JAN 1750	71	.01	.01	.00	239.	*	2 JAN 0620	221	.02	.00	.02	4251.
1 JAN 1755	72	.01	.01	.00	248.	*	2 JAN 0625	222	.02	.00	.02	4011.
1 JAN 1800	73	.01	.01	.00	258.	*	2 JAN 0630	223	.02	.00	.02	3792.
1 JAN 1805	74	.01	.01	.00	268.	*	2 JAN 0635	224	.02	.00	.02	3583.
1 JAN 1810	75	.01	.01	.00	277.	*	2 JAN 0640	225	.02	.00	.02	3391.
1 JAN 1815	76	.01	.01	.00	287.	*	2 JAN 0645	226	.02	.00	.01	3212.
1 JAN 1820	77	.01	.01	.01	297.	*	2 JAN 0650	227	.02	.00	.01	3042.
1 JAN 1825	78	.01	.01	.01	306.	*	2 JAN 0655	228	.01	.00	.01	2893.
1 JAN 1830	79	.01	.01.	.01	316.	*	2 JAN 0700	229	.01	.00	.01	2757.
1 JAN 1835	80	.01	.01	.01	325.	*	2 JAN 0705	230	.01	.00	.01	2628.
1 JAN 1840	81	.01	.01	.01	335.	*	2 JAN 0710	231	.01	.00	.01	2512.
1 JAN 1845	82	.01	.01	.01	345.	*	2 JAN 0715	232	.01	.00	.01	2404.
1 JAN 1850	83	.01	.01	.01	354.	*	2 JAN 0720	233	.01	.00	.01	2302.
1 JAN 1855	84	.01	.01	.01	364.	*	2 JAN 0725	234	.01	.00	.01	2210.

1 JAN 1900	85	.01	.01	.01	373.	*	2 JAN 0730	235	.01	.00	.01	2124.
1 JAN 1905	86	.01	.01	.01	383.	*	2 JAN 0735	236	.01	.00	.01	2043.
1 JAN 1910	87	.01	.01	.01	392.	*	2 JAN 0740	237	.01	.00	.01	1971.
1 JAN 1915	88	.01	.01	.01	402.	*	2 JAN 0745	238	.01	.00	.01	1903.
1 JAN 1920	89	.01	.01	.01	412.	*	2 JAN 0750	239	.01	.00	.01	1839.
1 JAN 1925	90	.01	.01	.01	421.	*	2 JAN 0755	240	.01	.00	.01	1781.
1 JAN 1930	91	.01	.01	.01	431.	*	2 JAN 0800	241	.01	.00	.01	1726.
1 JAN 1935	92	.01	.01	.01	440.	*	2 JAN 0805	242	.01	.00	.01	1674.
1 JAN 1940	93	.01	.01	.01	450.	*	2 JAN 0810	243	.01	.00	.01	1627.
1 JAN 1945	94	.01	.01	.01	459.	*	2 JAN 0815	244	.01	.00	.01	1582.
1 JAN 1950	95	.01	.01	.01	469.	*	2 JAN 0820	245	.01	.00	.01	1540.
1 JAN 1955	96	.01	.01	.01	479.	*	2 JAN 0825	246	.01	.00	.01	1501.
1 JAN 2000	97	.01	.01	.01	488.	*	2 JAN 0830	247	.01	.00	.01	1463.
1 JAN 2005	98	.01	.01	.01	498.	*	2 JAN 0835	248	.01	.00	.01	1428.
1 JAN 2010	99	.01	.01	.01	508.	*	2 JAN 0840	249	.01	.00	.01	1396.
1 JAN 2015	100	.01	.00	.01	517.	*	2 JAN 0845	250	.01	.00	.01	1366.
1 JAN 2020	101	.01	.00	.01	527.	*	2 JAN 0850	251	.01	.00	.01	1337.
1 JAN 2025	102	.01	.00	.01	537.	*	2 JAN 0855	252	.01	.00	.01	1310.
1 JAN 2030	103	.01	.00	.01	547.	*	2 JAN 0900	253	.01	.00	.01	1285.
1 JAN 2035	104	.01	.00	.01	556.	*	2 JAN 0905	254	.01	.00	.01	1260.
1 JAN 2040	105	.01	.00	.01	566.	*	2 JAN 0910	255	.01	.00	.01	1236.
1 JAN 2045	106	.01	.00	.01	576.	*	2 JAN 0915	256	.01	.00	.01	1214.
1 JAN 2050	107	.01	.00	.01	586.	*	2 JAN 0920	257	.01	.00	.01	1192.
1 JAN 2055	108	.01	.00	.01	596.	*	2 JAN 0925	258	.01	.00	.01	1170.
1 JAN 2100	109	.01	.00	.01	606.	*	2 JAN 0930	259	.01	.00	.01	1150.
1 JAN 2105	110	.01	.00	.01	616.	*	2 JAN 0935	260	.01	.00	.01	1131.
1 JAN 2110	111	.01	.00	.01	626.	*	2 JAN 0940	261	.01	.00	.01	1112.
1 JAN 2115	112	.01	.00	.01	637.	*	2 JAN 0945	262	.01	.00	.01	1094.
1 JAN 2120	113	.01	.00	.01	647.	*	2 JAN 0950	263	.01	.00	.01	1076.
1 JAN 2125	114	.01	.00	.01	657.	*	2 JAN 0955	264	.01	.00	.01	1060.
1 JAN 2130	115	.01	.00	.01	668.	*	2 JAN 1000	265	.01	.00	.01	1044.
1 JAN 2135	116	.01	.00	.01	678.	*	2 JAN 1005	266	.01	.00	.01	1029.
1 JAN 2140	117	.01	.00	.01	689.	*	2 JAN 1010	267	.01	.00	.01	1017.
1 JAN 2145	118	.01	.00	.01	700.	*	2 JAN 1015	268	.01	.00	.01	1004.
1 JAN 2150	119	.01	.00	.01	710.	*	2 JAN 1020	269	.01	.00	.01	993.
1 JAN 2155	120	.01	.00	.01	721.	*	2 JAN 1025	270	.01	.00	.01	981.
1 JAN 2200	121	.01	.00	.01	732.	*	2 JAN 1030	271	.01	.00	.01	971.
1 JAN 2205	122	.01	.00	.01	743.	*	2 JAN 1035	272	.01	.00	.01	960.
1 JAN 2210	123	.01	.00	.01	754.	*	2 JAN 1040	273	.01	.00	.01	950.
1 JAN 2215	124	.02	.00	.01	766.	*	2 JAN 1045	274	.01	.00	.01	940.
1 JAN 2220	125	.02	.00	.01	777.	*	2 JAN 1050	275	.01	.00	.01	930.
1 JAN 2225	126	.02	.00	.01	789.	*	2 JAN 1055	276	.01	.00	.01	921.
1 JAN 2230	127	.02	.00	.01	800.	*	2 JAN 1100	277	.01	.00	.01	912.
1 JAN 2235	128	.02	.00	.01	812.	*	2 JAN 1105	278	.01	.00	.01	903.
1 JAN 2240	129	.02	.00	.01	824.	*	2 JAN 1110	279	.01	.00	.01	895.
1 JAN 2245	130	.02	.00	.01	836.	*	2 JAN 1115	280	.01	.00	.01	886.
1 JAN 2250	131	.02	.00	.01	848.	*	2 JAN 1120	281	.01	.00	.01	878.
1 JAN 2255	132	.02	.00	.01	861.	*	2 JAN 1125	282	.01	.00	.01	870.
1 JAN 2300	133	.02	.00	.01	873.	*	2 JAN 1130	283	.01	.00	.01	863.
1 JAN 2305	134	.02	.00	.01	886.	*	2 JAN 1135	284	.01	.00	.01	855.
1 JAN 2310	135	.02	.00	.01	899.	*	2 JAN 1140	285	.01	.00	.01	848.
1 JAN 2315	136	.02	.00	.01	912.	*	2 JAN 1145	286	.01	.00	.01	841.
1 JAN 2320	137	.02	.00	.01	926.	*	2 JAN 1150	287	.01	.00	.01	834.
1 JAN 2325	138	.02	.00	.01	939.	*	2 JAN 1155	288	.01	.00	.01	827.
1 JAN 2330	139	.02	.00	.01	953.	*	2 JAN 1200	289	.00	.00	.00	820.
1 JAN 2335	140	.02	.00	.01	967.	*	2 JAN 1205	290	.00	.00	.00	811.
1 JAN 2340	141	.02	.00	.01	981.	*	2 JAN 1210	291	.00	.00	.00	801.
1 JAN 2345	142	.02	.00	.01	996.	*	2 JAN 1215	292	.00	.00	.00	789.
1 JAN 2350	143	.02	.00	.01	1010.	*	2 JAN 1220	293	.00	.00	.00	774.
1 JAN 2355	144	.02	.00	.01	1025.	*	2 JAN 1225	294	.00	.00	.00	756.

2 JAN 0000	145	.02	.00	.01	1041.	*	2 JAN 1230	295	.00	.00	.00	735.
2 JAN 0005	146	.02	.00	.01	1056.	*	2 JAN 1235	296	.00	.00	.00	709.
2 JAN 0010	147	.02	.00	.01	1072.	*	2 JAN 1240	297	.00	.00	.00	679.
2 JAN 0015	148	.02	.00	.02	1088.	*	2 JAN 1245	298	.00	.00	.00	645.
2 JAN 0020	149	.02	.00	.02	1104.	*	2 JAN 1250	299	.00	.00	.00	609.
2 JAN 0025	150	.02	.00	.02	1121.	*	2 JAN 1255	300	.00	.00	.00	570.
						*						

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TOTAL RAINFALL = 5.99, TOTAL LOSS = 1.26, TOTAL EXCESS = 4.72

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.92-HR
8951.	17.08	(CFS)	4062.	1501.	1445.	1445.
		(INCHES)	3.155	4.663	4.663	4.663
		(AC-FT)	2014.	2977.	2977.	2977.

CUMULATIVE AREA = 11.97 SQ MI

STATION HRC_B2

(O) OUTFLOW

		0.	1000.	2000.	3000.	4000.	5000.	6000.	7000.	8000.	9000.	0.	0.	0
												(L) PRECIP,	(X) EXCESS	
		.0	.0	.0	.0	.0	.0	.0	.0	.8	.6	.4	.2	.
DAHRMN	PER													
11200	10													
11205	20													
11210	30													
11215	40													
11220	50													
11225	60													
11230	70													
11235	80													
11240	90													
11245	100													
11250	110													
11255	120													
11300	130													
11305	140													
11310	150													
11315	160													
11320	170													
11325	180													
11330	190													
11335	200													
11340	210													
11345	220													
11350	230													
11355	240													
11400	250													
11405	260													
11410	270													
11415	280													
11420	290													
11425	300													
11430	310													
11435	320													
11440	330													
11445	340													
11450	350													
11455	360													
11500	370													
11505	380													
11510	390													
11515	400													
11520	410													
11525	420													
11530	430													
11535	440													
11540	450													
11545	460													
11550	470													
11555	480													
11600	490													
11605	500													
11610	51.0													
11615	52.0													
11620	53.0													

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11625  54.O
11630  55.O
11635  56.O
11640  57.O
11645  58.O
11650  59.O
11655  60.O                                                                L
11700  61.O                                                                L
11705  62. O                                                               L
11710  63. O                                                               L
11715  64. O                                                               L
11720  65. O                                                               L
11725  66. O                                                               L
11730  67. O                                                               L
11735  68. O                                                               L
11740  69. O                                                               L
11745  70. O                                                               L
11750  71. O                                                               L
11755  72. O                                                               L
11800  73.  O                                                              L
11805  74.  O                                                              L
11810  75.  O                                                              L
11815  76.  O                                                              L
11820  77.  O                                                              L
11825  78.  O                                                              L
11830  79.  O                                                              L
11835  80.  O                                                              L
11840  81.  O                                                              L
11845  82.  O                                                              L
11850  83.   O                                                             L
11855  84.   O                                                             L
11900  85.   O                                                             L
11905  86.   O                                                             L
11910  87.   O                                                             L
11915  88.   O                                                             L
11920  89.   O                                                             L
11925  90.   O                                                             L
11930  91.  O                                                              L
11935  92.   O                                                             L
11940  93.   O                                                             L
11945  94.    O                                                            L
11950  95.    O                                                            L
11955  96.    O                                                            L
12000  97.    O                                                            L
12005  98.    O                                                            L
12010  99.    O                                                            L
12015 100.    O                                                            L
12020 101.  O                                                              L
12025 102.    O                                                            L
12030 103.    O                                                            L
12035 104.     O                                                           L
12040 105.     O                                                           L
12045 106.     O                                                           L
12050 107.     O                                                           L
12055 108.     O                                                           L
12100 109.     O                                                           L
12105 110.     O                                                           L
12110 111.  O                                                              L
12115 112.     O                                                           L
12120 113.     O                                                           L
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12125 114.     O .         .         .         .         .         .         .         .         .         .         .         .         L
12130 115.     O .         .         .         .         .         .         .         .         .         .         .         .         L
12135 116.     O .         .         .         .         .         .         .         .         .         .         .         .         L
12140 117.     O .         .         .         .         .         .         .         .         .         .         .         .         L
12145 118.     O .         .         .         .         .         .         .         .         .         .         .         .         L
12150 119.     O .         .         .         .         .         .         .         .         .         .         .         .         L
12155 120.     O .         .         .         .         .         .         .         .         .         .         .         .         X
12200 121. . . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . X
12205 122.     O .         .         .         .         .         .         .         .         .         .         .         .         X
12210 123.      O .        .         .         .         .         .         .         .         .         .         .         .         X
12215 124.      O .        .         .         .         .         .         .         .         .         .         .         .         X
12220 125.      O .        .         .         .         .         .         .         .         .         .         .         .         X
12225 126.      O .        .         .         .         .         .         .         .         .         .         .         .         X
12230 127.      O .        .         .         .         .         .         .         .         .         .         .         .         X
12235 128.      O .        .         .         .         .         .         .         .         .         .         .         .         X
12240 129.      O .        .         .         .         .         .         .         .         .         .         .         .         X
12245 130.      O .        .         .         .         .         .         .         .         .         .         .         .         X
12250 131. . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . X
12255 132.       O.         .         .         .         .         .         .         .         .         .         .         .         X
12300 133.       O.         .         .         .         .         .         .         .         .         .         .         .         X
12305 134.       O.         .         .         .         .         .         .         .         .         .         .         .         X
12310 135.       O.         .         .         .         .         .         .         .         .         .         .         .         X
12315 136.       O.         .         .         .         .         .         .         .         .         .         .         .         X
12320 137.       O.         .         .         .         .         .         .         .         .         .         .         .         X
12325 138.       O.         .         .         .         .         .         .         .         .         .         .         .         X
12330 139.        O         .         .         .         .         .         .         .         .         .         .         .         X
12335 140.        O         .         .         .         .         .         .         .         .         .         .         .         X
12340 141. . . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . X
12345 142.        O         .         .         .         .         .         .         .         .         .         .         .         X
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12355 144.        O         .         .         .         .         .         .         .         .         .         .         .         X
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20005 146.        .O        .         .         .         .         .         .         .         .         .         .         .         X
20010 147.        .O        .         .         .         .         .         .         .         .         .         .         .         X
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20030 151. . . . . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . X
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20120 161. . . . . . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . X
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20205 170.        .    O    .         .         .         .         .         .         .         .         .         .         .         LX
20210 171. . . . . . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . LX
20215 172.        .     O   .         .         .         .         .         .         .         .         .         .         .         LX
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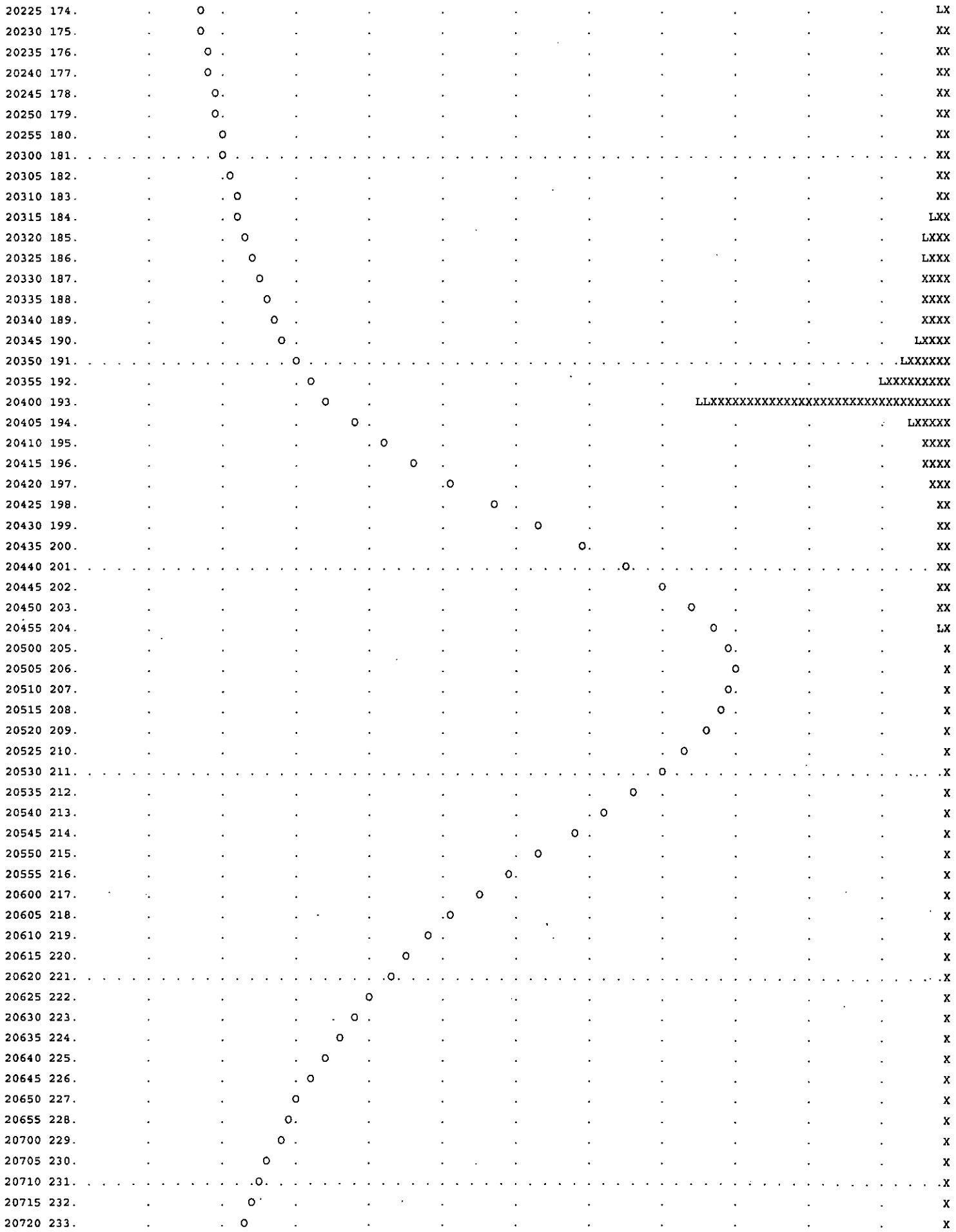
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20720 233.

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20800 241. . . . . . . . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . X
20805 242.          .      O  .         .         .         .         .         .         .         .         .         .         X
20810 243.          .     O   .         .         .         .         .         .         .         .         .         .         X
20815 244.          .     O   .         .         .         .         .         .         .         .         .         .         X
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20845 250.          .   O     .         .         .         .         .         .         .         .         .         .         X
20850 251. . . . . . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . X
20855 252.          . O       .         .         .         .         .         .         .         .         .         .         X
20900 253.          . O       .         .         .         .         .         .         .         .         .         .         X
20905 254.          . O       .         .         .         .         .         .         .         .         .         .         X
20910 255.          . O       .         .         .         .         .         .         .         .         .         .         X
20915 256.          . O       .         .         .         .         .         .         .         .         .         .         L
20920 257.          . O       .         .         .         .         .         .         .         .         .         .         L
20925 258.          . O       .         .         .         .         .         .         .         .         .         .         L
20930 259.          . O       .         .         .         .         .         .         .         .         .         .         L
20935 260.          .O        .         .         .         .         .         .         .         .         .         .
20940 261. . . . . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
20945 262.          .O        .         .         .         .         .         .         .         .         .         .
20950 263.          .O        .         .         .         .         .         .         .         .         .         .
20955 264.          .O        .         .         .         .         .         .         .         .         .         .
21000 265.          O         .         .         .         .         .         .         .         .         .         .
21005 266.          O         .         .         .         .         .         .         .         .         .         .
21010 267.          O         .         .         .         .         .         .         .         .         .         .
21015 268.          O         .         .         .         .         .         .         .         .         .         .
21020 269.          O         .         .         .         .         .         .         .         .         .         .
21025 270.          O         .         .         .         .         .         .         .         .         .         .
21030 271. . . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21035 272.          O         .         .         .         .         .         .         .         .         .         .
21040 273.         O.         .         .         .         .         .         .         .         .         .         .
21045 274.         O.         .         .         .         .         .         .         .         .         .         .
21050 275.         O.         .         .         .         .         .         .         .         .         .         .
21055 276.         O.         .         .         .         .         .         .         .         .         .         .
21100 277.         O.         .         .         .         .         .         .         .         .         .         .
21105 278.         O.         .         .         .         .         .         .         .         .         .         .
21110 279.         O.         .         .         .         .         .         .         .         .         .         .
21115 280.         O.         .         .         .         .         .         .         .         .         .         .
21120 281. . . . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21125 282.         O.         .         .         .         .         .         .         .         .         .         .
21130 283.         O.         .         .         .         .         .         .         .         .         .         .
21135 284.         O.         .         .         .         .         .         .         .         .         .         .
21140 285.        O .         .         .         .         .         .         .         .         .         .         .
21145 286.        O .         .         .         .         .         .         .         .         .         .         .
21150 287.        O .         .         .         .         .         .         .         .         .         .         .
21155 288.        O .         .         .         .         .         .         .         .         .         .         .
21200 289.        O .         .         .         .         .         .         .         .         .         .         .
21205 290.        O .         .         .         .         .         .         .         .         .         .         .
21210 291. . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21215 292.        O .         .         .         .         .         .         .         .         .         .         .
21220 293.        O .         .         .         .         .         .         .         .         .         .         .
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```
21225 294.       O .         .         .         .         .         .         .         .         .         .         .
21230 295.      O  .         .         .         .         .         .         .         .         .         .         .
21235 296.      O  .         .         .         .         .         .         .         .         .         .         .
21240 297.      O  .         .         .         .         .         .         .         .         .         .         .
21245 298.     O   .         .         .         .         .         .         .         .         .         .         .
21250 299.     O   .         .         .         .         .         .         .         .         .         .         .
21255 300.-----O---.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------
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RUNOFF SUMMARY

FLOW IN CUBIC FEET PER SECOND

TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	HRC_B2	8951.	17.08	4062.	1501.	1445.	11.97		

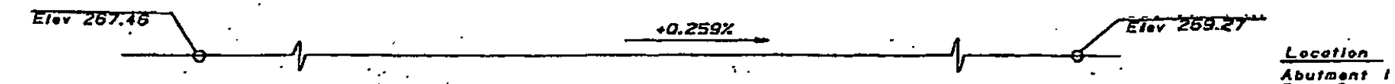
*** NORMAL END OF HEC-1 ***

HRC_B2 51200 1JAN90 0 1 1 300 11.970

.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
.002	.021	.076	.198	.424	.798	1.372	2.209	3.379	4.953
6.991	9.536	12.622	16.266	20.473	25.237	30.548	36.380	42.703	49.485
56.689	64.276	72.203	80.419	88.880	97.546	106.388	115.379	124.498	133.724
143.042	152.438	161.898	171.410	180.966	190.553	200.166	209.797	219.442	229.094
238.751	248.408	258.062	267.712	277.356	286.992	296.620	306.239	315.850	325.451
335.044	344.629	354.206	363.777	373.341	382.901	392.459	402.015	411.573	421.133
430.697	440.268	449.847	459.437	469.040	478.658	488.294	497.950	507.627	517.330
527.061	536.821	546.614	556.442	566.307	576.215	586.166	596.165	606.216	616.320
626.483	636.708	646.998	657.359	667.794	678.306	688.900	699.581	710.353	721.222
732.190	743.262	754.443	765.740	777.156	788.697	800.368	812.176	824.125	836.222
848.468	860.871	873.440	886.182	899.106	912.221	925.534	939.056	952.801	966.785
981.018	995.510	1010.277	1025.330	1040.651	1056.232	1072.069	1088.153	1104.475	1121.033
1137.801	1154.771	1171.950	1189.363	1207.056	1225.064	1243.450	1262.272	1281.576	1301.412
1321.858	1342.967	1364.795	1387.396	1410.836	1435.179	1460.522	1486.924	1514.669	1543.958
1575.020	1608.068	1643.330	1681.014	1721.497	1765.035	1811.830	1861.868	1915.132	1971.660
2031.521	2094.782	2161.816	2233.032	2310.065	2394.375	2487.738	2591.910	2708.355	2839.273
2990.934	3172.773	3437.569	3769.677	4163.280	4612.550	5111.429	5655.622	6264.682	6896.060
7504.110	8025.077	8430.984	8729.771	8901.635	8950.928	8915.605	8802.711	8575.973	8295.336
7975.834	7617.003	7221.953	6792.773	6328.511	5886.282	5477.389	5132.545	4811.985	4515.916
4250.507	4011.463	3792.221	3583.391	3391.125	3211.517	3041.717	2892.953	2756.611	2627.694
2511.944	2403.864	2301.523	2209.899	2123.929	2042.682	1970.835	1903.154	1839.023	1781.208
1726.285	1674.245	1627.077	1582.170	1539.630	1500.573	1463.366	1428.242	1396.132	1365.522
1336.658	1310.091	1284.596	1260.070	1236.422	1213.577	1191.515	1170.252	1150.047	1130.610
1111.860	1093.770	1076.323	1059.572	1043.646	1029.400	1016.626	1004.423	992.723	981.467
970.596	960.077	949.892	940.021	930.443	921.143	912.109	903.319	894.762	886.433
878.326	870.430	862.737	855.235	847.912	840.755	833.770	826.943	819.520	810.974
800.812	788.577	773.837	756.175	734.730	709.033	678.989	645.231	608.660	569.951

Appendix I

Horse Ranch Creek Hydraulic Backup Information



PROFILE GRADE

No Scale

Location	Design Loading (Service Load)	Specified Tip Elev.	Probable Tip Elev.
Abutment 1	45 ton	218.0	212.0
Bent 2	70 ton	194.0	188.0
Bent 3	70 ton	192.0	186.0
Abutment 4	45 ton	197.0	191.0

Precised Prestressed option used

QUANTITIES

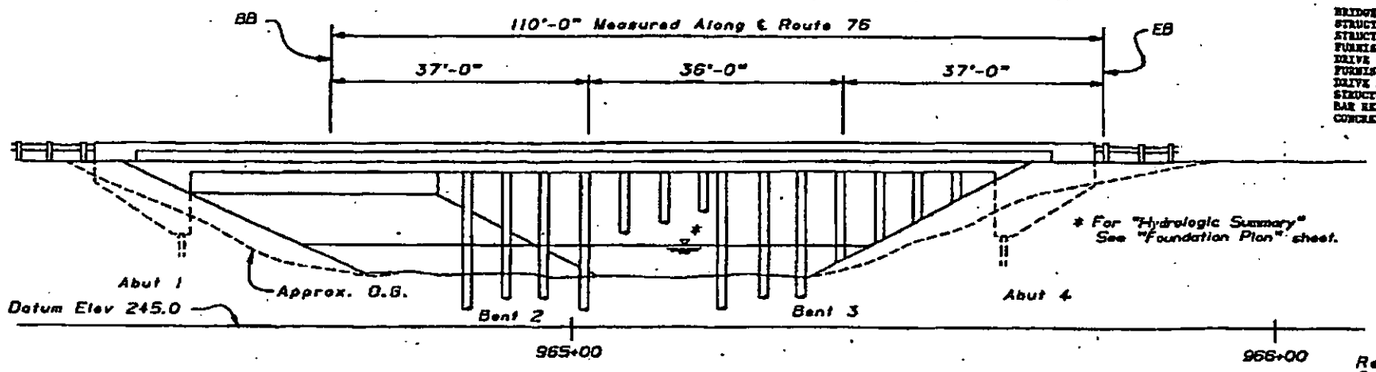
	LIMIT	SUM	
BRIDGE REMOVAL		242	CY
STRUCTURE EXCAVATION (BRIDGE)		116	CY
STRUCTURE BACKFILL (BRIDGE)		1,030	LF
FURNISH PILING (CLASS 70)		16	EA
DRIVE PILE (CLASS 70)		684	LF
FURNISH PILING (CLASS 45)		16	EA
DRIVE PILE (CLASS 45)		404	CY
STRUCTURAL CONCRETE, BRIDGE		67,600	LB
BAR REINFORCING STEEL (BRIDGE)		280	LF
CONCRETE BARRIER (TYPE 25)			

Robert Gee
REGISTERED ENGINEER - CIVIL

REGISTERED PROFESSIONAL ENGINEER
Norbert Gee
No. 47308
Exp. 12-31-95
CIVIL
STATE OF CALIFORNIA

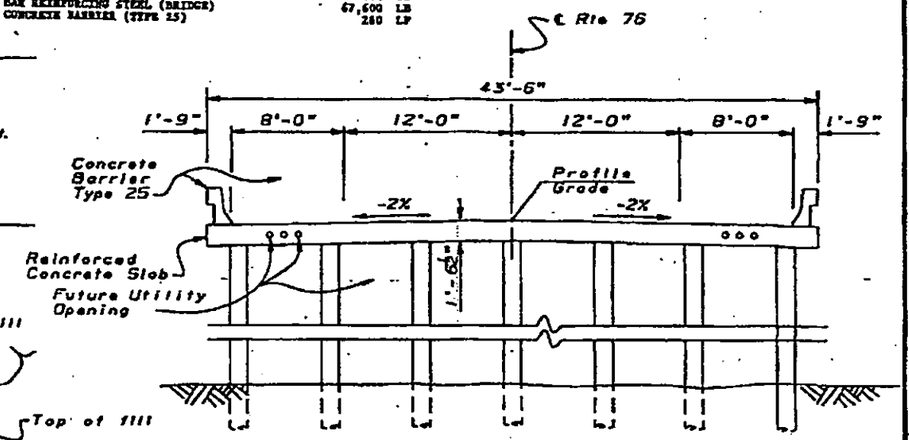
7-10-95
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



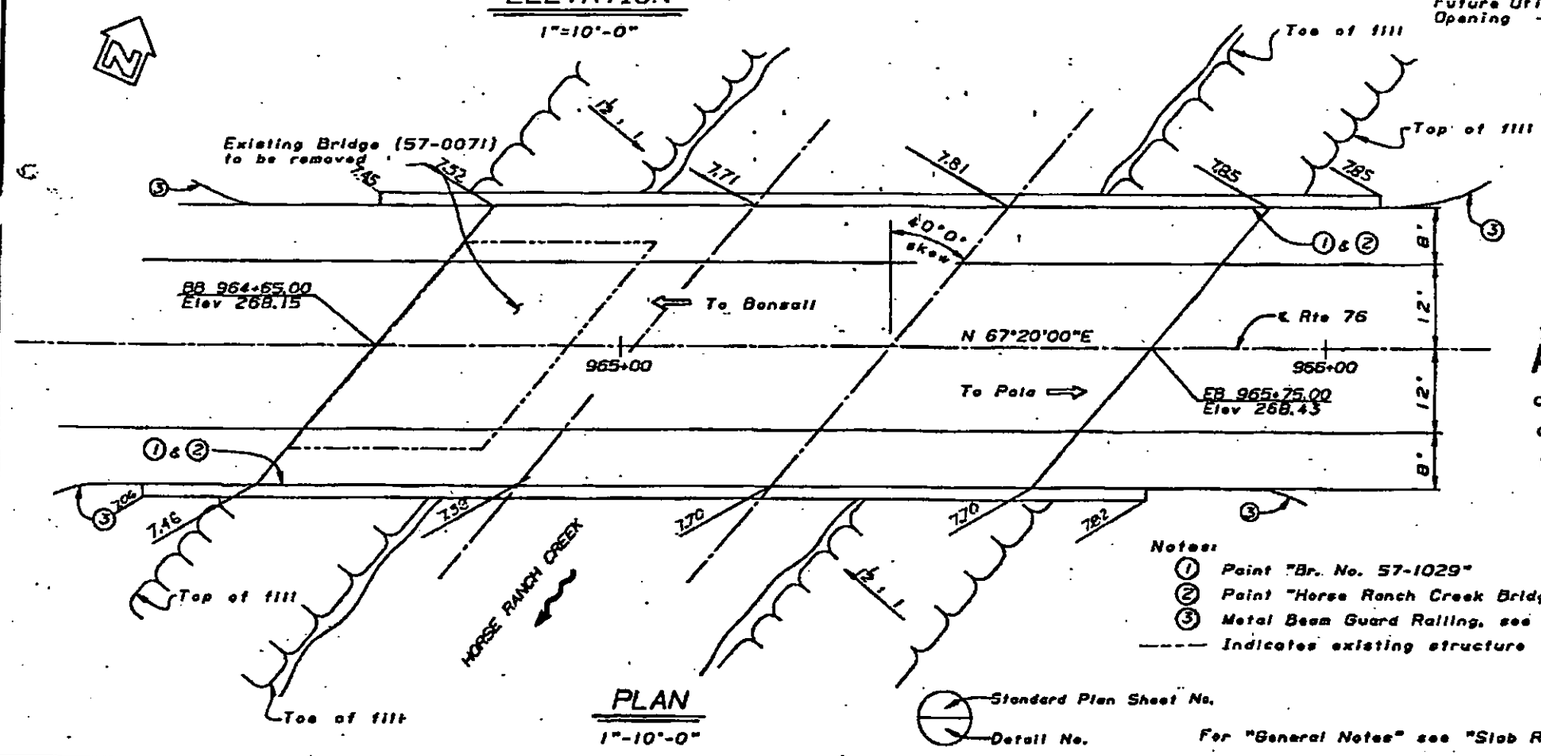
ELEVATION

1"=10'-0"



TYPICAL SECTION

1"=5'-0"



PLAN

1"=10'-0"

NO AS BUILT CHANGES
AS BUILT
CORRECTIONS BY Mohamed Fouad
CONTRACT NO. 11-055301
DATE 6-17-96

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	DECK CONTOURS
3	FOUNDATION PLAN
4	ABUTMENT DETAILS
5	BENT DETAILS & TYPICAL SECTION
6	TOP & BOTTOM SLAB REINFORCEMENT
7	SLAB BRIDGE PILE DETAILS
8	SLAB REINFORCEMENT DETAILS
9	LOG OF TEST BORINGS 1 OF 2
10	LOG OF TEST BORINGS 2 OF 2

STANDARD PLANS DATED JULY 1992

A10A	ABBREVIATIONS
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE
B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B2-5	PILE DETAILS CLASS 45 AND CLASS 70
B11-53	CONCRETE BARRIER TYPE 25

Notes:

1. Paint "Br. No. 57-1029"
2. Paint "Horse Ranch Creek Bridge"
3. Metal Beam Guard Railing, see "Road Plans"

----- Indicates existing structure

Standard Plan Sheet No.
Detail No.

For "General Notes" see "Slab Reinforcement Details" sheet.

DESIGN	Ed Warren	CHECKED N. Gee	LOAD FACTOR DESIGN	LIVE LOADING HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	Bruce Janke 10-93	CHECKED N. Gee	LAYOUT	Ed Warren	CHECKED N. Gee
QUANTITIES	M.K. Brady	CHECKED Ed Warren	SPECIFICATIONS		PLANS AND SPECS COMPARED

ENGINEER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 7

CU 11
EA 055301

BRIDGE NO. 57-1029
POST MILE 17.75

HORSE RANCH CREEK BRIDGE
GENERAL PLAN

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRIOR REVISION DATES
EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 1 OF 10

REGISTERED ENGINEER - CIVIL

7-10-95
PLANS APPROVAL DATE

Herbert Gee No. 47305 Exp. 12-31-95 CIVIL STATE OF CALIFORNIA REGISTERED PROFESSIONAL ENGINEER

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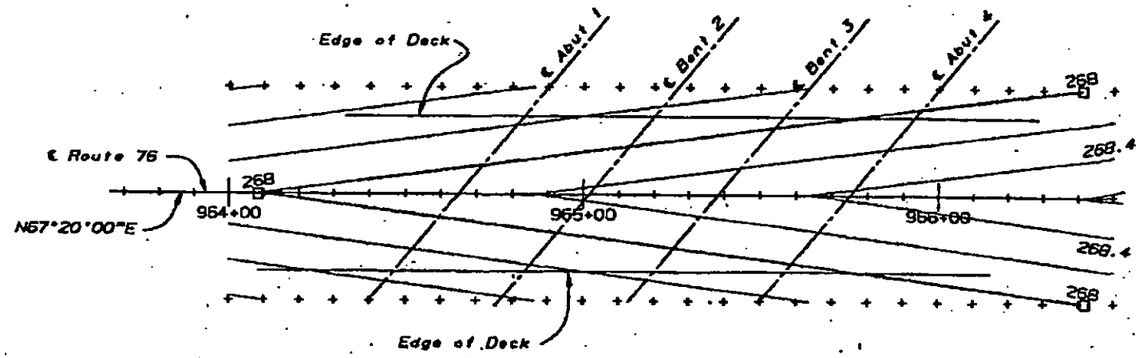
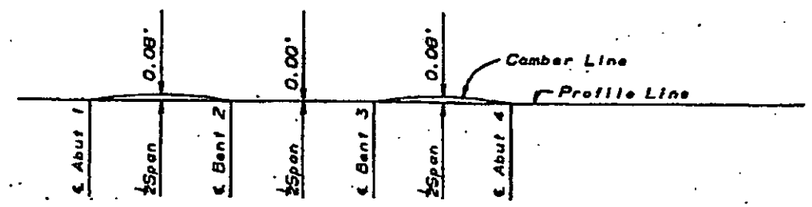


Notes:
□ - Indicates even foot contours
+ - 10' intervals
Contours do not include camber

PLAN

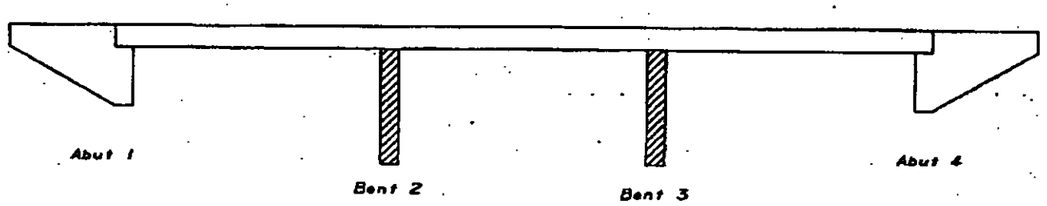
1" = 20'



Notes. Does not include allowance for falsework settlement

CAMBER DIAGRAM

NO SCALE

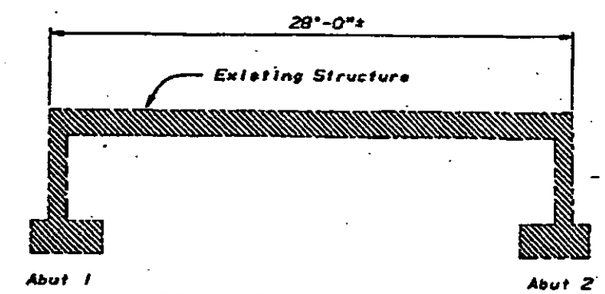


CONCRETE TYPE LIMITS

NO SCALE

Structural Concrete Bridge.

Pile Extension see "Slab Bridge Pile Details" sheet.



LIMITS OF BRIDGE REMOVAL

NO SCALE

Remove existing superstructure, abutments & wingwalls.

NO AS BUILT CHANGES
AS BUILT
CORRECTIONS BY Mohamed Fouad
CONTRACT NO. 11-055301
DATE 6-17-98

DESIGN	BY ED WARREN	CHECKED N. GEE	
DETAILS	BY ED WARREN	CHECKED N. GEE	
QUANTITIES	BY M.K. BRADY	CHECKED ED WARREN	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 7

CU 11
EA 055301

BRIDGE NO. 57-1029
POST MILE 17.75

HORSE RANCH CREEK BRIDGE
DECK CONTOURS

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 2 OF 10

DS 000 2589 (D400) 4/98

CBcPD6 - www.bentle.com

REGISTERED ENGINEER - CIVIL

7-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Norbert Gee — No. 47305 — Exp. 12-31-95 — CIVIL — STATE OF CALIFORNIA

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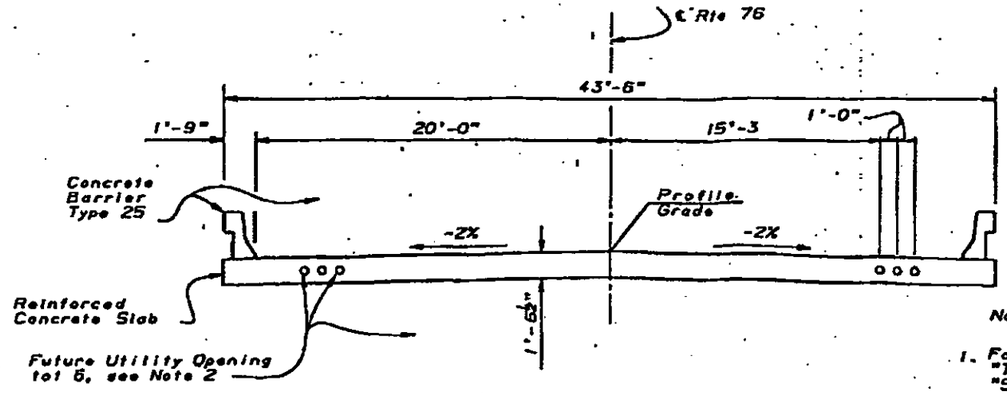
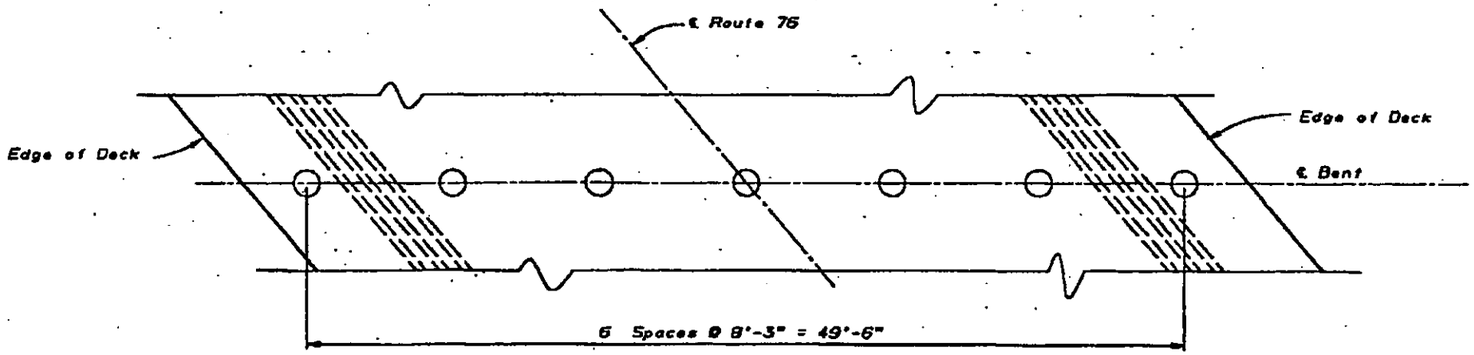


TYPICAL SECTION

½" = 1'-0"

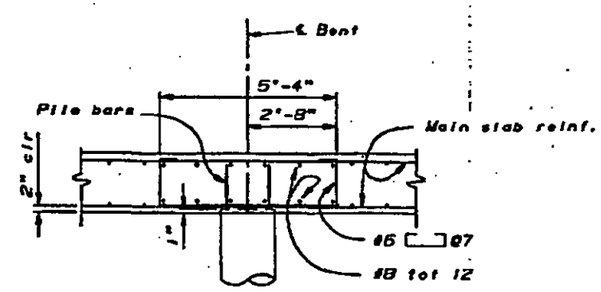
Notes :

1. For details not shown see "Top & Bottom Slab Reinforcement" and "Slab Reinforcement Details" sheets.
2. 5"Ø opening for future utilities. Openings are to be sealed at ends.



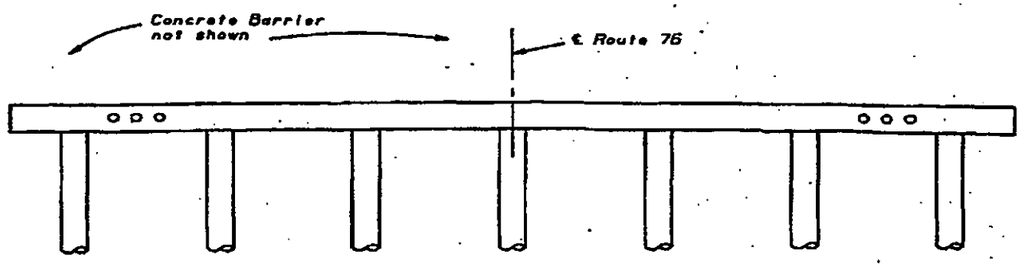
PLAN

½" = 1'-0"



BENT SECTION

½" = 1'-0"



ELEVATION

½" = 1'-0"

Note: For details not shown see "Slab Bridge Pile Details" and "Slab Reinforcement Details" sheets.

AS BUILT

CORRECTIONS BY Mohamed Foundjc

CONTRACT NO. 11-055304

DATE 6-17-97

DESIGN	BY ED WARREN	CHECKED N. GEE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF STRUCTURES STRUCTURE DESIGN 7	BRIDGE NO. 57-1029 / POST MILE 17.75
DETAILS	BY ED WARREN	CHECKED N. GEE			HORSE RANCH CREEK BRIDGE
QUANTITIES	BY M.K. Brady	CHECKED ED WARREN			BENT DETAILS & TYPICAL SECTION

CU 11
EA 055301

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

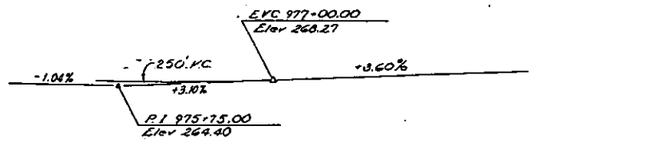
SHEET 5 OF 10

CADPDF - www.helio.com

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15	R45.9/R48.1	158	206

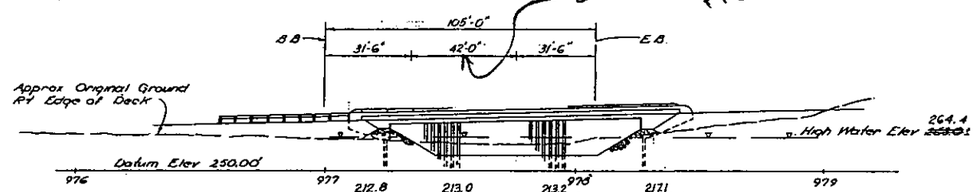
C.C. Callahan 9/81
CHIEF, OFFICE OF STRUCTURE DESIGN — REGISTERED CIVIL ENGINEER

February 5, 1979



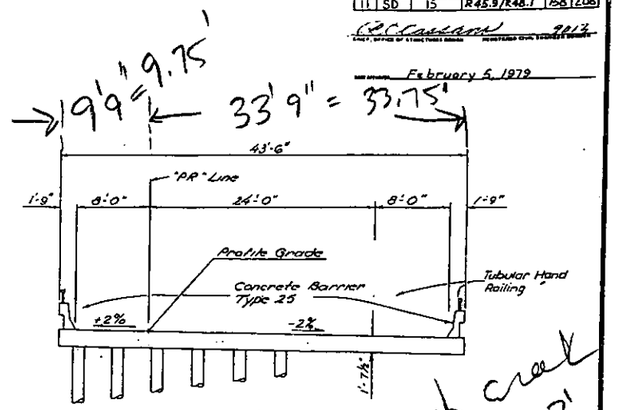
PROFILE GRADE
NO SCALE

DISTANCE BETWEEN PIER 1 & 2



ELEVATION
1" = 20'

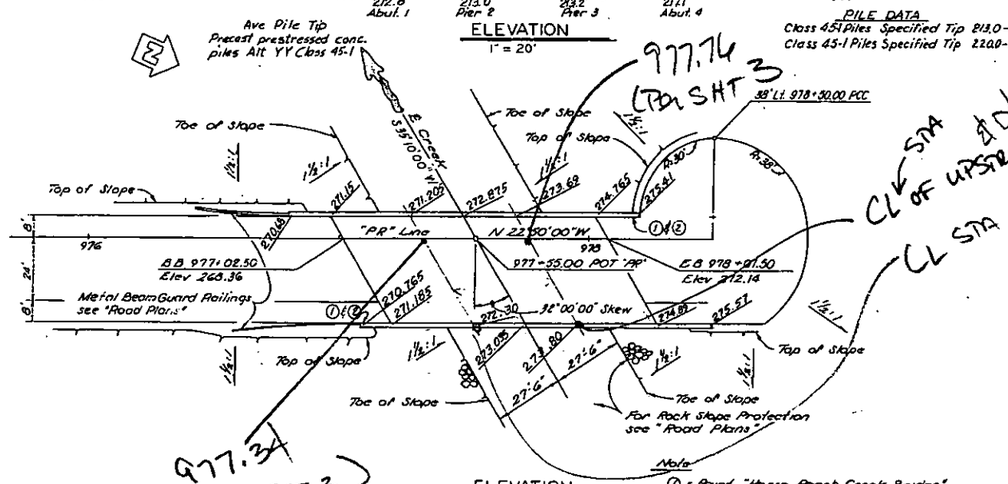
PILE DATA
Class 45-1 Piles Specified Tip 213.0 - Abut 1, Pier 2 & Pier 3
Class 45-1 Piles Specified Tip 212.0 - Abut 5



TYPICAL SECTION
3/16" = 1'-0"

Ave Pile Tip
Precast prestressed conc. piles Alt YY Class 45-1

977.74 (PER SHT 3)



977.34 (PER SHT 3)

ELEVATION
1" = 20'

Note
① - Paint "Horse Ranch Creek Bridge."
② - Paint "57C-323" & Year Constructed.

Standard Plan Sheet No.
Detail No.

FOR GENERAL NOTES SEE "Deck Contour" sheet

LIVE LOADING HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOADING

CL STA of upstream PIER #2 = 16.2' + CL STA of creek
CL STA of u/s PIER #1 = CL STA of creek - 16.2'
CL STA of u/s PIER #1 → CL STA of D/S

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	DECK CONTOURS
3	FOUNDATION PLAN
4	ABUTMENT & PIER DETAILS
5	PIER PILE DETAILS - CLASS 45-1
6	SLAB SECTION & REINFORCEMENT DETAILS
7	SLAB REINFORCEMENT DETAILS
8	LOG OF TEST BORINGS

STANDARD PLANS DATED MARCH, 1977

A62-B8	EXCAVATION AND BACKFILL - LIMITS OF PAYMENT (BRIDGE)
BD-1	BRIDGE DETAILS
B11-51	TUBULAR HAND RAILING.
B11-53	CONCRETE BARRIER TYPE 25.

APPROXIMATE QUANTITIES

FURNISH PILING (CLASS 45-1)	1,705 LF
DRIVE PILE (CLASS 45)	32 EA
TUBULAR HANDRAILING	275 LF
CONCRETE BARRIER (TYPE 25)	275 LF

FINAL PAY QUANTITIES

STRUCTURE EXCAVATION (BRIDGE)	101 CY
STRUCTURE BACKFILL (BRIDGE)	64 CY
STRUCTURAL CONCRETE, BRIDGE	348 CY
BAR REINFORCING STEEL (BRIDGE)	61,000 LB

AS BUILT
CORRECTIONS AS NOTED BY John T. Day RE 12781
CONTRACT NO. 11-095094
DATE 6-15-81

BRIDGE DEPARTMENT
DESIGN SECTION 8
Section Engineer: Frank Roth P.E. 8/79
Project Engineer: O. M. Hilsman 9/79

DESIGN	Gary Lee Hy 2-79	Checked	Thelen 8/79
DETAILS	Vern Groth 2-79	Checked	Thelen 8/79
LAYOUT	Gary Lee Hy 2-79	Checked	Chang 8/79
QUANTITIES	Gary Lee Hy 4-79	Checked	O. M. Hilsman 9-79
SPECIFICATIONS	Frank Roth 4-79	Checked	PEJ 4/79
Approval Recommended by	Sigurd Hjornevik	Bridge Engineer	8/79

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

HORSE RANCH CREEK BRIDGE

GENERAL PLAN

POST MILE	DRAWING NO.	SHEET	OF
CO. RD.		1	8

WO 095091
CU 11203

Designed plans bearing earlier revision date → 7/79

REVISION DATES — APPLICATION BY PHASE (MILT)

AS BUILT PLANS
Contract No. 11-095094
Date Completed
Document No.

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.
7-19-82 Donald Blackford SUPERVISOR OF MICROFILM SERVICES

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$0.7'' = \frac{40}{1.7}$ $1'' = 57.1$

PIERS = DIA = 1'3" (OCTAGONAL) ≥ 1.25'
DECK WIDTH = 43' 6"
DECK THICKNESS = 1' 7½"
= 1.625

* HAD TO ASSUME ~~BED~~ PIER SPACING. THIS INFO WAS NOT ON PLAN SET