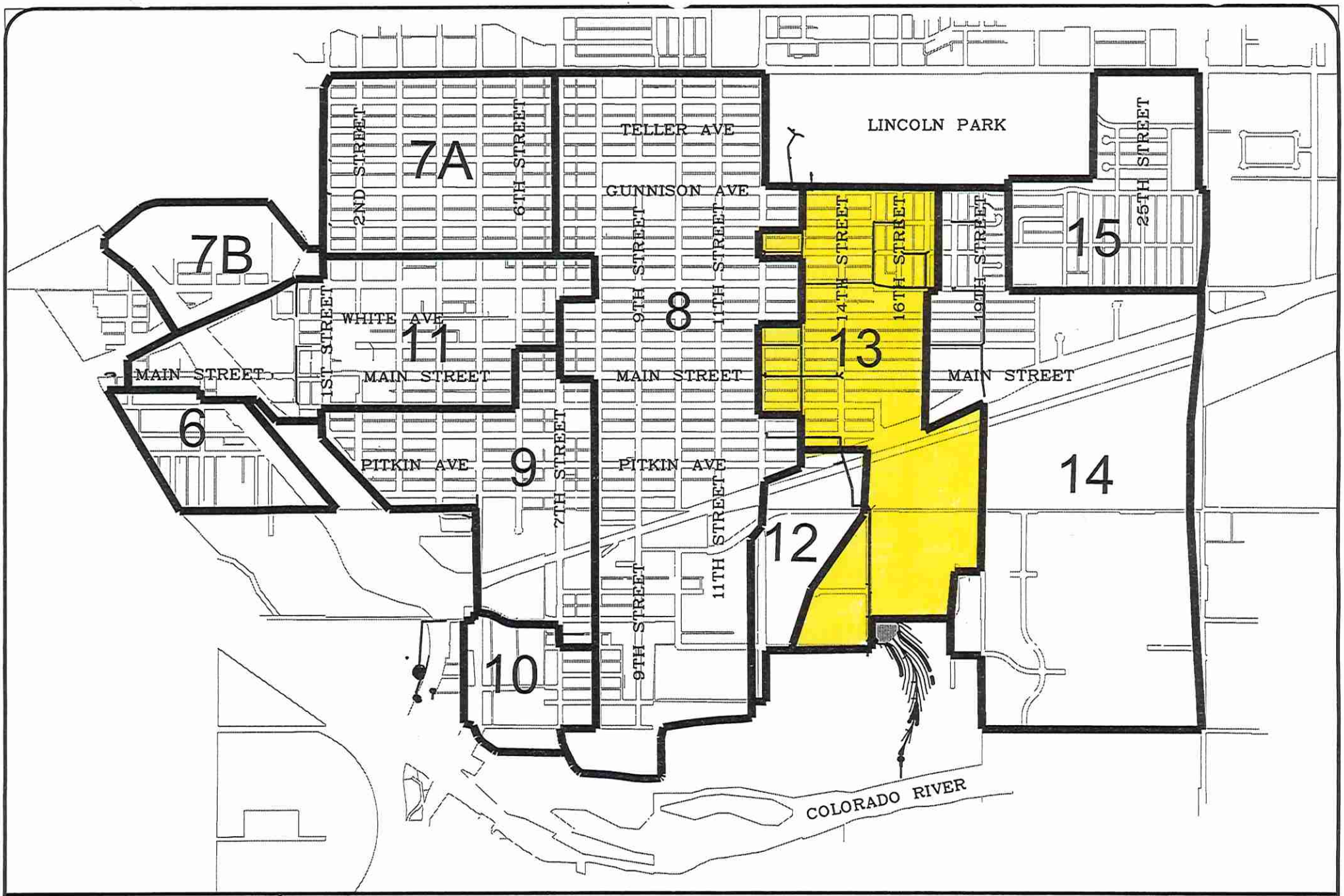
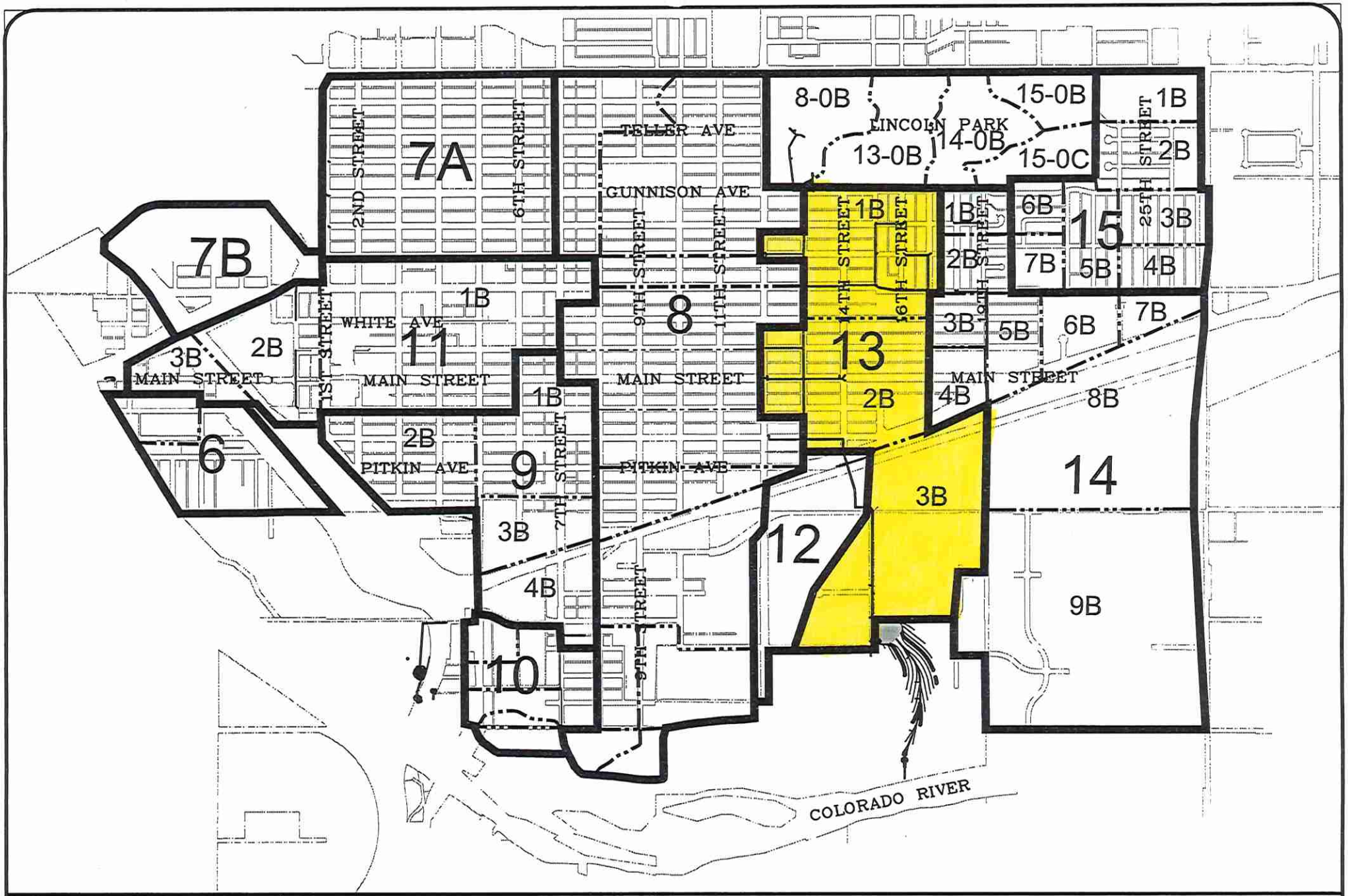
APPENDIX: Basin 13



SEAR-BROWN

CSEP BASIN KEY MAP



SEAR·BROWN

CSEP BASIN KEY MAP

Combined Sewer Elimination Project: Basin 13

The purpose Basin 13 is to separate the storm and sanitary sewer systems and to provide water quality control by use of existing, new or improved water quality basins prior to outfalling to the Colorado River.

Basin 13 Water Quality Pond: This proposed dry pond facility will comprise approximately 1.5 acres and has the capacity of over 4.4 acre-feet. In order to prevent ground water from infiltrating into the Water Quality pond, the pond will be lined with a 30mils thick PVC liner; this liner is covered with 12 inches of clean pond liner soil and then 20 inches of on site backfill, providing a minimum of 32 inches of material on top of the liner. This excess material will be provided to prevent floating of the pond liner in the event that the pond is empty and the static ground water elevation is above the pond bottom elevation. Maximum side-slope angles will be 3H:1V by the outlet structure. All the other sides will have a maximum side-slope of 4H:1V. The pond is designed to capture the more frequent storm events while providing an average of 40 hours of detention time before a low flow storm sewer carries the treated storm water to the Colorado River. The less frequent, more intense, storm events will overtop to the overflow swale. It is assumed that the facility will fill (and subsequently drain) two to three times in a normal year. The overall purpose of the facility is to provide water quality treatment (primarily sediment removal through extended detention times) to stormwater before the water enters the Colorado River.

Basin 13 Overflow Swale: The overflow swale was designed to safely carry the overflow from the Basin 13 Water Quality Pond to the Colorado River. The overflow swale slopes to the levee at 0.4% within 2% cross slope to tie into the existing ground surface of the park. The swale was designed at minimum slopes in the attempt to minimize its appearance and to blend into the park's natural appearance. This area will remain dry except during rain events with a frequency less than every 2 years.

Basin 13 Levee: A levee exists at the south end of the park just before the storm water from the overflow swale enters the Colorado River. At the levee dual 6'x 3' RCBC will be constructed to carry storm water under the levee to the Colorado River. Riprap will be provided downstream of the RCBCs to provide protection on the bank of the river. Flap gates on the downstream side will prevent Colorado River floodwaters from crossing under the levee. Slide gates on the upstream side will allow for isolation of storm water from the river.

100-year Inlet on Ute Avenue: Historically, stormwater for approximately half of Lincoln Park as well as part of Basins 14-2B, 14-3B and 14-4B travel overland through Basin 13 to Basin 8. The majority of Basin 13 travels to basin 8 as well. While analyzing Basin 8, it was decided, by both the City of Grand Junction and Sear Brown, to design for the 100-year storm event for Basin 8. Due to this design decision the added, unaccounted for flows from Basins 13, 14 and Lincoln Park will need to be collected prior to Basin 8.

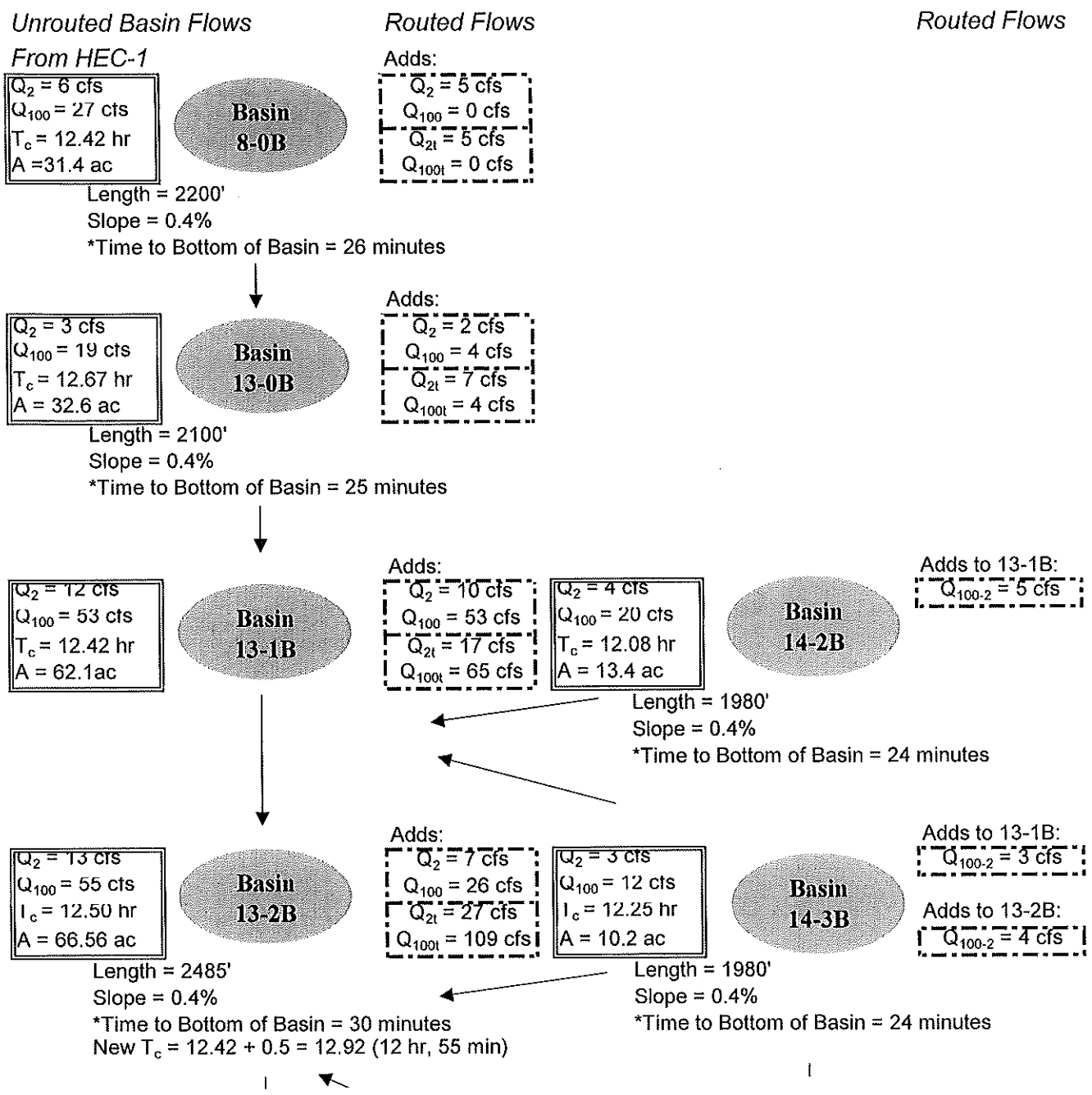
During the 100-year storm event, Basin 14-2B, 14-3B, 14-4B and Lincoln Park will collect the flows equal to the 2-year storm event, the rest will travel via curb and gutter to Basin 13. The 100-year storm (minus the 2-year flows) enters Basin 13 and is either collected in the existing/proposed storm sewer systems or continues southwest, via curb and gutter, through the basin. The majority of the flow will travel southwest to 12th Street. At 12th Street a large portion of the flows will travel south, while small amounts of flow will spill west to Basin 8. This spillover flow is minor and will not affect the Basin 8 sewer system design. The stormwater flowing down 12th Street will be picked up in a 15 foot proposed inlet approximately 35 feet east of 12th Street on Ute Avenue.

The proposed inlet on Ute Avenue will be connected to the Basin 13 proposed storm sewer system. The system will take the stormwater collected in the inlet to the proposed water quality pond in Basin 13.

HEC-1 Output Data and Routing

Hec-1 was used to obtain runoff hydrographs for each of the basins. The runoff hydrographs were used to obtain runoff values.

Grand Junction CSEP - Basin 13 Hydrology Summary



HYDROLOGY

The following assumptions and guidelines were used for the revisions to the HEC-1 model:

- IT card, NMIN parameter – using Table P-9 (SWMM), for 24 hour storm, use 5
- IT card, NQ parameter - using Table P-9 (SWMM), for NMIN = 5, use 300
- LG card, IA parameter– using Table D-1 (SWMM) and Table RO-3 (UDFCD)
  Residential = 0.125 (50% lawn & turf, 50% pavement)
  Apartments = 0.08 (80% pavement, 20% lawn & turf)
  Business, neighborhood area = 0.0725 (85% pavement, 15% lawn & turf)
  Industrial = varies (estimated % pavement, estimated % dirt or "desert landscape")
  Park = 0.20 (100% lawn & turf)
- LG card, DTHETA parameter – using Figure D-4, "normal" curve (SWMM)
- LG card, PSIF parameter – using Figure D-4 (SWMM)
- LG card, XKSAT parameter – using Table D-2 & Figure D-3 (SWMM)
- LG card, RTIMP parameter – using Table RO-3 & RO-4 (UDFCD)
- UD card, TLAG parameter – using equation on Figure E-4 (SWMM).

Basin 11-3B			
HEC-1 Parameter	**MP Value**	**Revised Value**	**Remarks**
IT card- NMIN	2	5	
NQ	750	300	
LG card- IA	0.143	0.108	
DTHETA	0.15	0.20	
PSIF	9.2	No change	
XKSAT	0.062	0.042	
RTIMP	20	38	
UD card- TLAG	0.148	No change	

Basin 13-1B			
HEC-1 Parameter	**MP Value**	**Revised Value**	**Remarks**
IT card- NMIN	2	5	
NQ	750	300	
LG card- IA	0.143	0.125	
DTHETA	0.15	No change	
PSIF	9.2	No change	
XKSAT	0.062	0.058	
RTIMP	20	36	
UD card- TLAG	0.258		

Basin 13-2B			
HEC-1 Parameter	**MP Value**	**Revised Value**	**Remarks**
IT card- NMIN	2	5	
NQ	750	300	
LG card- IA	0.143	0.120	
DTHETA	0.15	No change	
PSIF	9.2	No change	
XKSAT	0.062	0.056	
RTIMP	20	42	
UD card- TLAG	0.278	No change	

Basin 13-3B			
HEC-1 Parameter	**MP Value**	**Revised Value**	**Remarks**
IT card- NMIN	2	5	
NQ	750	300	
LG card- IA	0.095	0.092	
DTHETA	0.15	0.25	
PSIF	9.2	No change	
XKSAT	0.04	No change	
RTIMP	10	50	
UD card- TLAG	0.328	No change	

```
1****************************************
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 *                                      *                                      *
*
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                      *    U.S. ARMY CORPS OF
NGINEERS     *
 *                JUN   1998            *                                      *    HYDROLOGIC ENGINEERING
ENTER    *
 *             VERSION 4.1              *                                      *         609 SECOND STREET
*
 *                                      *                                      *       DAVIS, CALIFORNIA 95616
*
 *  RUN DATE   03JUL03  TIME  09:25:04  *                                      *          (916) 756-1104
*
 *                                      *                                      *
*
 ****************************************
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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

. HEC-1 INPUT

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

   1          ID      HEC-1 Analysis
   2          ID      comb-sewer
   3          ID      area-13
   4          ID      Updated 6/04/03, Sear-Brown, trm
              *DIAGRAM
   5          IT       5  1JAN94       0     300
   6          IO       1
   7          JR    PREC       1    2.81

   8          KK    13-1B
   9          KM
  10          KO       0       0       0       0      22
  11          BA   0.097
  12          PB     0.7
  13          IN       6  1JAN94       0
              * typeII-24hour
  14          PC       0   0.001   0.002  0.0031  0.0041  0.0051  0.0062  0.0073  0.0083  0.0094
  15          PC  0.0105  0.0116  0.0127  0.0138   0.015  0.0161  0.0173  0.0185  0.0196  0.0208
  16          PC   0.022  0.0232  0.0244  0.0257  0.0269  0.0281  0.0294  0.0307  0.0319  0.0332
  17          PC  0.0345  0.0358  0.0371  0.0384  0.0398  0.0411  0.0425  0.0438  0.0452  0.0466
  18          PC   0.048  0.0494  0.0508  0.0523  0.0538  0.0553  0.0568  0.0583  0.0598  0.0614
  19          PC   0.063  0.0646  0.0662  0.0679  0.0696  0.0712   0.073  0.0747  0.0764  0.0782
  20          PC    0.08  0.0818  0.0836  0.0855  0.0874  0.0892  0.0912  0.0931   0.095   0.097
  21          PC   0.099   0.101   0.103  0.1051  0.1072  0.1093  0.1114  0.1135  0.1156  0.1178
  22          PC    0.12  0.1223  0.1246  0.1271  0.1296  0.1323   0.135  0.1379  0.1408  0.1439
  23          PC   0.147  0.1502  0.1534  0.1566  0.1598   0.163  0.1663  0.1697  0.1733  0.1771
  24          PC   0.181  0.1851  0.1895  0.1941  0.1989   0.204  0.2094  0.2152  0.2214   0.228
  25          PC   0.235  0.2427  0.2513  0.2609  0.2715   0.283  0.3068  0.3544  0.4308  0.5679
  26          PC   0.663   0.682  0.6986   0.713  0.7252   0.735  0.7434  0.7514  0.7588  0.7656
  27          PC   0.772   0.778  0.7836   0.789  0.7942   0.799  0.8036   0.808  0.8122  0.8162
  28          PC    0.82  0.8237  0.8273  0.8308  0.8342  0.8376  0.8409  0.8442  0.8474  0.8505
  29          PC  0.8535  0.8565  0.8594  0.8622  0.8649  0.8676  0.8702  0.8728  0.8753  0.8777
  30          PC    0.88  0.8823  0.8846  0.8868   0.889  0.8912  0.8934  0.8955  0.8976  0.8997
  31          PC  0.9018  0.9038  0.9058  0.9078  0.9098  0.9117  0.9136  0.9155  0.9174  0.9192
  32          PC   0.921  0.9228  0.9246  0.9263   0.928  0.9297  0.9314   0.933  0.9346  0.9362
  33          PC  0.9377  0.9393  0.9408  0.9423  0.9438  0.9452  0.9466   0.948  0.9494  0.9507
  34          PC   0.952  0.9533  0.9546  0.9559  0.9572  0.9584  0.9597   0.961  0.9622  0.9635
  35          PC  0.9648   0.966  0.9672  0.9685  0.9697  0.9709  0.9722  0.9734  0.9746  0.9758
  36          PC   0.977  0.9782  0.9794  0.9806  0.9818  0.9829  0.9841  0.9853  0.9864  0.9876
  37          PC  0.9888  0.9899   0.991  0.9922  0.9933  0.9944  0.9956  0.9967  0.9978  0.9989
  38          PC       1
  39          LG   0.125    0.15     9.2   0.058      36
```

```
          40            UD   0.564

          41            KK    13-2B
          42            KO      0       0       0       0      22
          43            BA   0.104
          44            PB     0.7
          45            LG   0.120    0.15     9.2   0.056      42
          46            UD   0.605
1                                                     HEC-1 INPUT                                          PAGE  2

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


          47            KK   13-3B
          48            KO      0       0       0       0      22
          49            BA   0.140
          50            PB     0.7
          51            LG   0.092    0.15     9.2    0.04      50
          52            UD   1.067

          53            KK    13-4B
          54            KO      0       0       0       0      22
          55            BA   0.039
          56            PB     0.7
          57            LG    0.25    0.15     9.2    0.04      01
          58            UD    0.64
          59            ZZ
1
                 SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

    8        13-1
               .
               .
   41          .         13-2
               .           .
               .           .
   47          .           .        13-3B
               .           .          .
               .           .          .
   53          .           .          .          13-4

 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************
***************************************
 *                                       *                                                  *
*
 *   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    03JUL03   TIME   09:25:04  *                                                  *         (916) 756-1104
*
 *                                       *                                                  *
*
 *****************************************
***************************************




                          HEC-1 Analysis
                          comb-sewer
                          area-13
                          Updated 6/04/03, Sear-Brown, trm

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

      IT          HYDROGRAPH TIME DATA
                        NMIN           5  MINUTES IN COMPUTATION INTERVAL
                       IDATE      1JAN94  STARTING DATE
                       ITIME        0000  STARTING TIME
                          NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                      NDDATE      2JAN94  ENDING DATE
                      NDTIME        0055  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

     JP              MULTI-PLAN OPTION
                          NPLAN              1  NUMBER OF PLANS

     JR              MULTI-RATIO OPTION
                         RATIOS OF PRECIPITATION
                        1.00       2.81


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


            **************
            *            *
   8 KK     *      13-1  *      B
            *            *
            **************


   10 KO             OUTPUT CONTROL VARIABLES
                          IPRNT              1  PRINT CONTROL
                          IPLOT              0  PLOT CONTROL
                          QSCAL             0.  HYDROGRAPH PLOT SCALE
                          IPNCH              0  PUNCH COMPUTED HYDROGRAPH
                           IOUT             22  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


   13 IN             TIME DATA FOR INPUT TIME SERIES
                          JXMIN              6  TIME INTERVAL IN MINUTES
                         JXDATE         1JAN94  STARTING DATE
                         JXTIME              0  STARTING TIME

                   SUBBASIN RUNOFF DATA

   11 BA             SUBBASIN CHARACTERISTICS
                          TAREA            .10  SUBBASIN AREA

                     PRECIPITATION DATA

   12 PB                  STORM            .70  BASIN TOTAL PRECIPITATION

   14 PI               INCREMENTAL PRECIPITATION PATTERN
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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                        .00      .00      .00      .00      .00      .00      .00      .00      .01      .01
                        .01      .01      .01      .01      .01      .01      .01      .01      .02      .04
                        .05      .08      .11      .08      .02      .01      .01      .01      .01      .01
                        .01      .01      .01      .01      .01      .01      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                        .00      .00      .00      .00      .00      .00      .00      .00

   39 LG              GREEN AND AMPT LOSS RATE
                          STRTL            .13  STARTING LOSS
                            DTH            .15  MOISTURE DEFICIT
                           PSIF           9.20  WETTING FRONT SUCTION
```

```
                XKSAT        .06  HYDRAULIC CONDUCTIVITY
                RTIMP      36.00  PERCENT IMPERVIOUS AREA

40 UD        SCS DIMENSIONLESS UNITGRAPH
                TLAG        .56  LAG

                                        ***

                                    UNIT HYDROGRAPH
                                36 END-OF-PERIOD ORDINATES
          4.      13.      26.      44.      62.      73.      77.      77.      70.      62.
         51.      39.      31.      25.      20.      16.      13.      10.       8.       7.
          5.       4.       3.       3.       2.       2.       1.       1.       1.       1.
          1.       0.       0.       0.       0.       0.
```

****

HYDROGRAPH AT STATION 13-1

****

DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 0000	1	.00	.00	.00	0.	1 JAN 1230	151	.01	.00	.00	11.
1 JAN 0005	2	.00	.00	.00	0.	1 JAN 1235	152	.00	.00	.00	11.
1 JAN 0010	3	.00	.00	.00	0.	1 JAN 1240	153	.00	.00	.00	10.
1 JAN 0015	4	.00	.00	.00	0.	1 JAN 1245	154	.00	.00	.00	8.
1 JAN 0020	5	.00	.00	.00	0.	1 JAN 1250	155	.00	.00	.00	7.
1 JAN 0025	6	.00	.00	.00	0.	1 JAN 1255	156	.00	.00	.00	6.
1 JAN 0030	7	.00	.00	.00	0.	1 JAN 1300	157	.00	.00	.00	5.
1 JAN 0035	8	.00	.00	.00	0.	1 JAN 1305	158	.00	.00	.00	4.
1 JAN 0040	9	.00	.00	.00	0.	1 JAN 1310	159	.00	.00	.00	4.
1 JAN 0045	10	.00	.00	.00	0.	1 JAN 1315	160	.00	.00	.00	3.
1 JAN 0050	11	.00	.00	.00	0.	1 JAN 1320	161	.00	.00	.00	3.
1 JAN 0055	12	.00	.00	.00	0.	1 JAN 1325	162	.00	.00	.00	2.
1 JAN 0100	13	.00	.00	.00	0.	1 JAN 1330	163	.00	.00	.00	2.
1 JAN 0105	14	.00	.00	.00	0.	1 JAN 1335	164	.00	.00	.00	2.
1 JAN 0110	15	.00	.00	.00	0.	1 JAN 1340	165	.00	.00	.00	2.
1 JAN 0115	16	.00	.00	.00	0.	1 JAN 1345	166	.00	.00	.00	1.
1 JAN 0120	17	.00	.00	.00	0.	1 JAN 1350	167	.00	.00	.00	1.
1 JAN 0125	18	.00	.00	.00	0.	1 JAN 1355	168	.00	.00	.00	1.
1 JAN 0130	19	.00	.00	.00	0.	1 JAN 1400	169	.00	.00	.00	1.
1 JAN 0135	20	.00	.00	.00	0.	1 JAN 1405	170	.00	.00	.00	1.
1 JAN 0140	21	.00	.00	.00	0.	1 JAN 1410	171	.00	.00	.00	1.
1 JAN 0145	22	.00	.00	.00	0.	1 JAN 1415	172	.00	.00	.00	1.
1 JAN 0150	23	.00	.00	.00	0.	1 JAN 1420	173	.00	.00	.00	1.
1 JAN 0155	24	.00	.00	.00	0.	1 JAN 1425	174	.00	.00	.00	1.
1 JAN 0200	25	.00	.00	.00	0.	1 JAN 1430	175	.00	.00	.00	1.
1 JAN 0205	26	.00	.00	.00	0.	1 JAN 1435	176	.00	.00	.00	1.
1 JAN 0210	27	.00	.00	.00	0.	1 JAN 1440	177	.00	.00	.00	1.
1 JAN 0215	28	.00	.00	.00	0.	1 JAN 1445	178	.00	.00	.00	1.
1 JAN 0220	29	.00	.00	.00	0.	1 JAN 1450	179	.00	.00	.00	1.
1 JAN 0225	30	.00	.00	.00	0.	1 JAN 1455	180	.00	.00	.00	1.
1 JAN 0230	31	.00	.00	.00	0.	1 JAN 1500	181	.00	.00	.00	1.
1 JAN 0235	32	.00	.00	.00	0.	1 JAN 1505	182	.00	.00	.00	1.
1 JAN 0240	33	.00	.00	.00	0.	1 JAN 1510	183	.00	.00	.00	1.
1 JAN 0245	34	.00	.00	.00	0.	1 JAN 1515	184	.00	.00	.00	1.
1 JAN 0250	35	.00	.00	.00	0.	1 JAN 1520	185	.00	.00	.00	1.
1 JAN 0255	36	.00	.00	.00	0.	1 JAN 1525	186	.00	.00	.00	1.
1 JAN 0300	37	.00	.00	.00	0.	1 JAN 1530	187	.00	.00	.00	1.
1 JAN 0305	38	.00	.00	.00	0.	1 JAN 1535	188	.00	.00	.00	0.
1 JAN 0310	39	.00	.00	.00	0.	1 JAN 1540	189	.00	.00	.00	0.
1 JAN 0315	40	.00	.00	.00	0.	1 JAN 1545	190	.00	.00	.00	0.
1 JAN 0320	41	.00	.00	.00	0.	1 JAN 1550	191	.00	.00	.00	0.
1 JAN 0325	42	.00	.00	.00	0.	1 JAN 1555	192	.00	.00	.00	0.
1 JAN 0330	43	.00	.00	.00	0.	1 JAN 1600	193	.00	.00	.00	0.
1 JAN 0335	44	.00	.00	.00	0.	1 JAN 1605	194	.00	.00	.00	0.
1 JAN 0340	45	.00	.00	.00	0.	1 JAN 1610	195	.00	.00	.00	0.
1 JAN 0345	46	.00	.00	.00	0.	1 JAN 1615	196	.00	.00	.00	0.
1 JAN 0350	47	.00	.00	.00	0.	1 JAN 1620	197	.00	.00	.00	0.
1 JAN 0355	48	.00	.00	.00	0.	1 JAN 1625	198	.00	.00	.00	0.
1 JAN 0400	49	.00	.00	.00	0.	1 JAN 1630	199	.00	.00	.00	0.
1 JAN 0405	50	.00	.00	.00	0.	1 JAN 1635	200	.00	.00	.00	0.
1 JAN 0410	51	.00	.00	.00	0.	1 JAN 1640	201	.00	.00	.00	0.
1 JAN 0415	52	.00	.00	.00	0.	1 JAN 1645	202	.00	.00	.00	0.
1 JAN 0420	53	.00	.00	.00	0.	1 JAN 1650	203	.00	.00	.00	0.
1 JAN 0425	54	.00	.00	.00	0.	1 JAN 1655	204	.00	.00	.00	0.
1 JAN 0430	55	.00	.00	.00	0.	1 JAN 1700	205	.00	.00	.00	0.
1 JAN 0435	56	.00	.00	.00	0.	1 JAN 1705	206	.00	.00	.00	0.
1 JAN 0440	57	.00	.00	.00	0.	1 JAN 1710	207	.00	.00	.00	0.
1 JAN 0445	58	.00	.00	.00	0.	1 JAN 1715	208	.00	.00	.00	0.
1 JAN 0450	59	.00	.00	.00	0.	1 JAN 1720	209	.00	.00	.00	0.
1 JAN 0455	60	.00	.00	.00	0.	1 JAN 1725	210	.00	.00	.00	0.
1 JAN 0500	61	.00	.00	.00	0.	1 JAN 1730	211	.00	.00	.00	0.
1 JAN 0505	62	.00	.00	.00	0.	1 JAN 1735	212	.00	.00	.00	0.
1 JAN 0510	63	.00	.00	.00	0.	1 JAN 1740	213	.00	.00	.00	0.

1 JAN 0515	64	.00	.00	.00	0.	*	1 JAN 1745	214	.00	.00	.00	0.
1 JAN 0520	65	.00	.00	.00	0.	*	1 JAN 1750	215	.00	.00	.00	0.
1 JAN 0525	66	.00	.00	.00	0.	*	1 JAN 1755	216	.00	.00	.00	0.
1 JAN 0530	67	.00	.00	.00	0.	*	1 JAN 1800	217	.00	.00	.00	0.
1 JAN 0535	68	.00	.00	.00	0.	*	1 JAN 1805	218	.00	.00	.00	0.
1 JAN 0540	69	.00	.00	.00	0.	*	1 JAN 1810	219	.00	.00	.00	0.
1 JAN 0545	70	.00	.00	.00	0.	*	1 JAN 1815	220	.00	.00	.00	0.
1 JAN 0550	71	.00	.00	.00	0.	*	1 JAN 1820	221	.00	.00	.00	0.
1 JAN 0555	72	.00	.00	.00	0.	*	1 JAN 1825	222	.00	.00	.00	0.
1 JAN 0600	73	.00	.00	.00	0.	*	1 JAN 1830	223	.00	.00	.00	0.
1 JAN 0605	74	.00	.00	.00	0.	*	1 JAN 1835	224	.00	.00	.00	0.
1 JAN 0610	75	.00	.00	.00	0.	*	1 JAN 1840	225	.00	.00	.00	0.
1 JAN 0615	76	.00	.00	.00	0.	*	1 JAN 1845	226	.00	.00	.00	0.
1 JAN 0620	77	.00	.00	.00	0.	*	1 JAN 1850	227	.00	.00	.00	0.
1 JAN 0625	78	.00	.00	.00	0.	*	1 JAN 1855	228	.00	.00	.00	0.
1 JAN 0630	79	.00	.00	.00	0.	*	1 JAN 1900	229	.00	.00	.00	0.
1 JAN 0635	80	.00	.00	.00	0.	*	1 JAN 1905	230	.00	.00	.00	0.
1 JAN 0640	81	.00	.00	.00	0.	*	1 JAN 1910	231	.00	.00	.00	0.
1 JAN 0645	82	.00	.00	.00	0.	*	1 JAN 1915	232	.00	.00	.00	0.
1 JAN 0650	83	.00	.00	.00	0.	*	1 JAN 1920	233	.00	.00	.00	0.
1 JAN 0655	84	.00	.00	.00	0.	*	1 JAN 1925	234	.00	.00	.00	0.
1 JAN 0700	85	.00	.00	.00	0.	*	1 JAN 1930	235	.00	.00	.00	0.
1 JAN 0705	86	.00	.00	.00	0.	*	1 JAN 1935	236	.00	.00	.00	0.
1 JAN 0710	87	.00	.00	.00	0.	*	1 JAN 1940	237	.00	.00	.00	0.
1 JAN 0715	88	.00	.00	.00	0.	*	1 JAN 1945	238	.00	.00	.00	0.
1 JAN 0720	89	.00	.00	.00	0.	*	1 JAN 1950	239	.00	.00	.00	0.
1 JAN 0725	90	.00	.00	.00	0.	*	1 JAN 1955	240	.00	.00	.00	0.
1 JAN 0730	91	.00	.00	.00	0.	*	1 JAN 2000	241	.00	.00	.00	0.
1 JAN 0735	92	.00	.00	.00	0.	*	1 JAN 2005	242	.00	.00	.00	0.
1 JAN 0740	93	.00	.00	.00	0.	*	1 JAN 2010	243	.00	.00	.00	0.
1 JAN 0745	94	.00	.00	.00	0.	*	1 JAN 2015	244	.00	.00	.00	0.
1 JAN 0750	95	.00	.00	.00	0.	*	1 JAN 2020	245	.00	.00	.00	0.
1 JAN 0755	96	.00	.00	.00	0.	*	1 JAN 2025	246	.00	.00	.00	0.
1 JAN 0800	97	.00	.00	.00	0.	*	1 JAN 2030	247	.00	.00	.00	0.
1 JAN 0805	98	.00	.00	.00	0.	*	1 JAN 2035	248	.00	.00	.00	0.
1 JAN 0810	99	.00	.00	.00	0.	*	1 JAN 2040	249	.00	.00	.00	0.
1 JAN 0815	100	.00	.00	.00	0.	*	1 JAN 2045	250	.00	.00	.00	0.
1 JAN 0820	101	.00	.00	.00	0.	*	1 JAN 2050	251	.00	.00	.00	0.
1 JAN 0825	102	.00	.00	.00	0.	*	1 JAN 2055	252	.00	.00	.00	0.
1 JAN 0830	103	.00	.00	.00	0.	*	1 JAN 2100	253	.00	.00	.00	0.
1 JAN 0835	104	.00	.00	.00	0.	*	1 JAN 2105	254	.00	.00	.00	0.
1 JAN 0840	105	.00	.00	.00	0.	*	1 JAN 2110	255	.00	.00	.00	0.
1 JAN 0845	106	.00	.00	.00	0.	*	1 JAN 2115	256	.00	.00	.00	0.
1 JAN 0850	107	.00	.00	.00	0.	*	1 JAN 2120	257	.00	.00	.00	0.
1 JAN 0855	108	.00	.00	.00	0.	*	1 JAN 2125	258	.00	.00	.00	0.
1 JAN 0900	109	.00	.00	.00	0.	*	1 JAN 2130	259	.00	.00	.00	0.
1 JAN 0905	110	.00	.00	.00	0.	*	1 JAN 2135	260	.00	.00	.00	0.
1 JAN 0910	111	.00	.00	.00	0.	*	1 JAN 2140	261	.00	.00	.00	0.
1 JAN 0915	112	.00	.00	.00	0.	*	1 JAN 2145	262	.00	.00	.00	0.
1 JAN 0920	113	.00	.00	.00	0.	*	1 JAN 2150	263	.00	.00	.00	0.
1 JAN 0925	114	.00	.00	.00	0.	*	1 JAN 2155	264	.00	.00	.00	0.
1 JAN 0930	115	.00	.00	.00	0.	*	1 JAN 2200	265	.00	.00	.00	0.
1 JAN 0935	116	.00	.00	.00	0.	*	1 JAN 2205	266	.00	.00	.00	0.
1 JAN 0940	117	.00	.00	.00	0.	*	1 JAN 2210	267	.00	.00	.00	0.
1 JAN 0945	118	.00	.00	.00	0.	*	1 JAN 2215	268	.00	.00	.00	0.
1 JAN 0950	119	.00	.00	.00	0.	*	1 JAN 2220	269	.00	.00	.00	0.
1 JAN 0955	120	.00	.00	.00	0.	*	1 JAN 2225	270	.00	.00	.00	0.
1 JAN 1000	121	.00	.00	.00	1.	*	1 JAN 2230	271	.00	.00	.00	0.
1 JAN 1005	122	.00	.00	.00	1.	*	1 JAN 2235	272	.00	.00	.00	0.
1 JAN 1010	123	.00	.00	.00	1.	*	1 JAN 2240	273	.00	.00	.00	0.
1 JAN 1015	124	.00	.00	.00	1.	*	1 JAN 2245	274	.00	.00	.00	0.
1 JAN 1020	125	.00	.00	.00	1.	*	1 JAN 2250	275	.00	.00	.00	0.
1 JAN 1025	126	.00	.00	.00	1.	*	1 JAN 2255	276	.00	.00	.00	0.
1 JAN 1030	127	.00	.00	.00	1.	*	1 JAN 2300	277	.00	.00	.00	0.
1 JAN 1035	128	.00	.00	.00	1.	*	1 JAN 2305	278	.00	.00	.00	0.
1 JAN 1040	129	.00	.00	.00	1.	*	1 JAN 2310	279	.00	.00	.00	0.
1 JAN 1045	130	.00	.00	.00	1.	*	1 JAN 2315	280	.00	.00	.00	0.
1 JAN 1050	131	.00	.00	.00	1.	*	1 JAN 2320	281	.00	.00	.00	0.
1 JAN 1055	132	.00	.00	.00	1.	*	1 JAN 2325	282	.00	.00	.00	0.
1 JAN 1100	133	.00	.00	.00	1.	*	1 JAN 2330	283	.00	.00	.00	0.
1 JAN 1105	134	.00	.00	.00	1.	*	1 JAN 2335	284	.00	.00	.00	0.
1 JAN 1110	135	.00	.00	.00	1.	*	1 JAN 2340	285	.00	.00	.00	0.
1 JAN 1115	136	.01	.00	.00	1.	*	1 JAN 2345	286	.00	.00	.00	0.
1 JAN 1120	137	.01	.00	.00	1.	*	1 JAN 2350	287	.00	.00	.00	0.
1 JAN 1125	138	.01	.00	.00	1.	*	1 JAN 2355	288	.00	.00	.00	0.
1 JAN 1130	139	.01	.00	.00	1.	*	2 JAN 0000	289	.00	.00	.00	0.
1 JAN 1135	140	.01	.01	.00	1.	*	2 JAN 0005	290	.00	.00	.00	0.
1 JAN 1140	141	.02	.02	.01	1.	*	2 JAN 0010	291	.00	.00	.00	0.
1 JAN 1145	142	.04	.02	.01	1.	*	2 JAN 0015	292	.00	.00	.00	0.
1 JAN 1150	143	.06	.03	.03	2.	*	2 JAN 0020	293	.00	.00	.00	0.
1 JAN 1155	144	.08	.02	.05	3.	*	2 JAN 0025	294	.00	.00	.00	0.
1 JAN 1200	145	.06	.02	.04	4.	*	2 JAN 0030	295	.00	.00	.00	0.
1 JAN 1205	146	.01	.01	.00	6.	*	2 JAN 0035	296	.00	.00	.00	0.
1 JAN 1210	147	.01	.01	.00	8.	*	2 JAN 0040	297	.00	.00	.00	0.
1 JAN 1215	148	.01	.01	.00	10.	*	2 JAN 0045	298	.00	.00	.00	0.
1 JAN 1220	149	.01	.01	.00	11.	*	2 JAN 0050	299	.00	.00	.00	0.
1 JAN 1225	150	.01	.00	.00	12.	*	2 JAN 0055	300	.00	.00	.00	0.
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TOTAL RAINFALL = .70, TOTAL LOSS = .40, TOTAL EXCESS = .30

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)				
		(CFS)			
12.	12.42	2.	1.	1.	1.
		(INCHES) .227	.301	.301	.301
		(AC-FT) 1.	2.	2.	2.

CUMULATIVE AREA = .10 SQ MI

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HYDROGRAPH AT STATION 13-1
PLAN 1, RATIO = 1.00

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	0000	1	.00	.00	.00	0.	1	JAN	1230	151	.01	.00	.00	11.
1	JAN	0005	2	.00	.00	.00	0.	1	JAN	1235	152	.00	.00	.00	11.
1	JAN	0010	3	.00	.00	.00	0.	1	JAN	1240	153	.00	.00	.00	10.
1	JAN	0015	4	.00	.00	.00	0.	1	JAN	1245	154	.00	.00	.00	8.
1	JAN	0020	5	.00	.00	.00	0.	1	JAN	1250	155	.00	.00	.00	7.
1	JAN	0025	6	.00	.00	.00	0.	1	JAN	1255	156	.00	.00	.00	6.
1	JAN	0030	7	.00	.00	.00	0.	1	JAN	1300	157	.00	.00	.00	5.
1	JAN	0035	8	.00	.00	.00	0.	1	JAN	1305	158	.00	.00	.00	4.
1	JAN	0040	9	.00	.00	.00	0.	1	JAN	1310	159	.00	.00	.00	4.
1	JAN	0045	10	.00	.00	.00	0.	1	JAN	1315	160	.00	.00	.00	3.
1	JAN	0050	11	.00	.00	.00	0.	1	JAN	1320	161	.00	.00	.00	3.
1	JAN	0055	12	.00	.00	.00	0.	1	JAN	1325	162	.00	.00	.00	2.
1	JAN	0100	13	.00	.00	.00	0.	1	JAN	1330	163	.00	.00	.00	2.
1	JAN	0105	14	.00	.00	.00	0.	1	JAN	1335	164	.00	.00	.00	2.
1	JAN	0110	15	.00	.00	.00	0.	1	JAN	1340	165	.00	.00	.00	2
1	JAN	0115	16	.00	.00	.00	0.	1	JAN	1345	166	.00	.00	.00	
1	JAN	0120	17	.00	.00	.00	0.	1	JAN	1350	167	.00	.00	.00	1.
1	JAN	0125	18	.00	.00	.00	0.	1	JAN	1355	168	.00	.00	.00	1.
1	JAN	0130	19	.00	.00	.00	0.	1	JAN	1400	169	.00	.00	.00	1.
1	JAN	0135	20	.00	.00	.00	0.	1	JAN	1405	170	.00	.00	.00	1.
1	JAN	0140	21	.00	.00	.00	0.	1	JAN	1410	171	.00	.00	.00	1.
1	JAN	0145	22	.00	.00	.00	0.	1	JAN	1415	172	.00	.00	.00	1.
1	JAN	0150	23	.00	.00	.00	0.	1	JAN	1420	173	.00	.00	.00	1.
1	JAN	0155	24	.00	.00	.00	0.	1	JAN	1425	174	.00	.00	.00	1.
1	JAN	0200	25	.00	.00	.00	0.	1	JAN	1430	175	.00	.00	.00	1.
1	JAN	0205	26	.00	.00	.00	0.	1	JAN	1435	176	.00	.00	.00	1.
1	JAN	0210	27	.00	.00	.00	0.	1	JAN	1440	177	.00	.00	.00	1.
1	JAN	0215	28	.00	.00	.00	0.	1	JAN	1445	178	.00	.00	.00	1.
1	JAN	0220	29	.00	.00	.00	0.	1	JAN	1450	179	.00	.00	.00	1.
1	JAN	0225	30	.00	.00	.00	0.	1	JAN	1455	180	.00	.00	.00	1.
1	JAN	0230	31	.00	.00	.00	0.	1	JAN	1500	181	.00	.00	.00	1.
1	JAN	0235	32	.00	.00	.00	0.	1	JAN	1505	182	.00	.00	.00	1.
1	JAN	0240	33	.00	.00	.00	0.	1	JAN	1510	183	.00	.00	.00	1.
1	JAN	0245	34	.00	.00	.00	0.	1	JAN	1515	184	.00	.00	.00	1.
1	JAN	0250	35	.00	.00	.00	0.	1	JAN	1520	185	.00	.00	.00	1.
1	JAN	0255	36	.00	.00	.00	0.	1	JAN	1525	186	.00	.00	.00	1.
1	JAN	0300	37	.00	.00	.00	0.	1	JAN	1530	187	.00	.00	.00	1.
1	JAN	0305	38	.00	.00	.00	0.	1	JAN	1535	188	.00	.00	.00	0.
1	JAN	0310	39	.00	.00	.00	0.	1	JAN	1540	189	.00	.00	.00	0.
1	JAN	0315	40	.00	.00	.00	0.	1	JAN	1545	190	.00	.00	.00	0.
1	JAN	0320	41	.00	.00	.00	0.	1	JAN	1550	191	.00	.00	.00	0.
1	JAN	0325	42	.00	.00	.00	0.	1	JAN	1555	192	.00	.00	.00	0.
1	JAN	0330	43	.00	.00	.00	0.	1	JAN	1600	193	.00	.00	.00	0.
1	JAN	0335	44	.00	.00	.00	0.	1	JAN	1605	194	.00	.00	.00	0.
1	JAN	0340	45	.00	.00	.00	0.	1	JAN	1610	195	.00	.00	.00	0.
1	JAN	0345	46	.00	.00	.00	0.	1	JAN	1615	196	.00	.00	.00	0.
1	JAN	0350	47	.00	.00	.00	0.	1	JAN	1620	197	.00	.00	.00	0.
1	JAN	0355	48	.00	.00	.00	0.	1	JAN	1625	198	.00	.00	.00	0.
1	JAN	0400	49	.00	.00	.00	0.	1	JAN	1630	199	.00	.00	.00	0.
1	JAN	0405	50	.00	.00	.00	0.	1	JAN	1635	200	.00	.00	.00	0.
1	JAN	0410	51	.00	.00	.00	0.	1	JAN	1640	201	.00	.00	.00	0.
1	JAN	0415	52	.00	.00	.00	0.	1	JAN	1645	202	.00	.00	.00	0.
1	JAN	0420	53	.00	.00	.00	0.	1	JAN	1650	203	.00	.00	.00	0
1	JAN	0425	54	.00	.00	.00	0.	1	JAN	1655	204	.00	.00	.00	
1	JAN	0430	55	.00	.00	.00	0.	1	JAN	1700	205	.00	.00	.00	0.
1	JAN	0435	56	.00	.00	.00	0.	1	JAN	1705	206	.00	.00	.00	0.
1	JAN	0440	57	.00	.00	.00	0.	1	JAN	1710	207	.00	.00	.00	0.
1	JAN	0445	58	.00	.00	.00	0.	1	JAN	1715	208	.00	.00	.00	0.
1	JAN	0450	59	.00	.00	.00	0.	1	JAN	1720	209	.00	.00	.00	0.
1	JAN	0455	60	.00	.00	.00	0.	1	JAN	1725	210	.00	.00	.00	0.

1 JAN 0500	61	.00	.00	.00	0.	*	1 JAN 1730	211	.00	.00	.00	0.
1 JAN 0505	62	.00	.00	.00	0.	*	1 JAN 1735	212	.00	.00	.00	0.
1 JAN 0510	63	.00	.00	.00	0.	*	1 JAN 1740	213	.00	.00	.00	0.
1 JAN 0515	64	.00	.00	.00	0.	*	1 JAN 1745	214	.00	.00	.00	0.
1 JAN 0520	65	.00	.00	.00	0.	*	1 JAN 1750	215	.00	.00	.00	0.
1 JAN 0525	66	.00	.00	.00	0.	*	1 JAN 1755	216	.00	.00	.00	0.
1 JAN 0530	67	.00	.00	.00	0.	*	1 JAN 1800	217	.00	.00	.00	0.
1 JAN 0535	68	.00	.00	.00	0.	*	1 JAN 1805	218	.00	.00	.00	0.
1 JAN 0540	69	.00	.00	.00	0.	*	1 JAN 1810	219	.00	.00	.00	0.
1 JAN 0545	70	.00	.00	.00	0.	*	1 JAN 1815	220	.00	.00	.00	0.
1 JAN 0550	71	.00	.00	.00	0.	*	1 JAN 1820	221	.00	.00	.00	0.
1 JAN 0555	72	.00	.00	.00	0.	*	1 JAN 1825	222	.00	.00	.00	0.
1 JAN 0600	73	.00	.00	.00	0.	*	1 JAN 1830	223	.00	.00	.00	0.
1 JAN 0605	74	.00	.00	.00	0.	*	1 JAN 1835	224	.00	.00	.00	0.
1 JAN 0610	75	.00	.00	.00	0.	*	1 JAN 1840	225	.00	.00	.00	0.
1 JAN 0615	76	.00	.00	.00	0.	*	1 JAN 1845	226	.00	.00	.00	0.
1 JAN 0620	77	.00	.00	.00	0.	*	1 JAN 1850	227	.00	.00	.00	0.
1 JAN 0625	78	.00	.00	.00	0.	*	1 JAN 1855	228	.00	.00	.00	0.
1 JAN 0630	79	.00	.00	.00	0.	*	1 JAN 1900	229	.00	.00	.00	0.
1 JAN 0635	80	.00	.00	.00	0.	*	1 JAN 1905	230	.00	.00	.00	0.
1 JAN 0640	81	.00	.00	.00	0.	*	1 JAN 1910	231	.00	.00	.00	0.
1 JAN 0645	82	.00	.00	.00	0.	*	1 JAN 1915	232	.00	.00	.00	0.
1 JAN 0650	83	.00	.00	.00	0.	*	1 JAN 1920	233	.00	.00	.00	0.
1 JAN 0655	84	.00	.00	.00	0.	*	1 JAN 1925	234	.00	.00	.00	0.
1 JAN 0700	85	.00	.00	.00	0.	*	1 JAN 1930	235	.00	.00	.00	0.
1 JAN 0705	86	.00	.00	.00	0.	*	1 JAN 1935	236	.00	.00	.00	0.
1 JAN 0710	87	.00	.00	.00	0.	*	1 JAN 1940	237	.00	.00	.00	0.
1 JAN 0715	88	.00	.00	.00	0.	*	1 JAN 1945	238	.00	.00	.00	0.
1 JAN 0720	89	.00	.00	.00	0.	*	1 JAN 1950	239	.00	.00	.00	0.
1 JAN 0725	90	.00	.00	.00	0.	*	1 JAN 1955	240	.00	.00	.00	0.
1 JAN 0730	91	.00	.00	.00	0.	*	1 JAN 2000	241	.00	.00	.00	0.
1 JAN 0735	92	.00	.00	.00	0.	*	1 JAN 2005	242	.00	.00	.00	0.
1 JAN 0740	93	.00	.00	.00	0.	*	1 JAN 2010	243	.00	.00	.00	0.
1 JAN 0745	94	.00	.00	.00	0.	*	1 JAN 2015	244	.00	.00	.00	0.
1 JAN 0750	95	.00	.00	.00	0.	*	1 JAN 2020	245	.00	.00	.00	0.
1 JAN 0755	96	.00	.00	.00	0.	*	1 JAN 2025	246	.00	.00	.00	0.
1 JAN 0800	97	.00	.00	.00	0.	*	1 JAN 2030	247	.00	.00	.00	0.
1 JAN 0805	98	.00	.00	.00	0.	*	1 JAN 2035	248	.00	.00	.00	0.
1 JAN 0810	99	.00	.00	.00	0.	*	1 JAN 2040	249	.00	.00	.00	0.
1 JAN 0815	100	.00	.00	.00	0.	*	1 JAN 2045	250	.00	.00	.00	0.
1 JAN 0820	101	.00	.00	.00	0.	*	1 JAN 2050	251	.00	.00	.00	0.
1 JAN 0825	102	.00	.00	.00	0.	*	1 JAN 2055	252	.00	.00	.00	0.
1 JAN 0830	103	.00	.00	.00	0.	*	1 JAN 2100	253	.00	.00	.00	0.
1 JAN 0835	104	.00	.00	.00	0.	*	1 JAN 2105	254	.00	.00	.00	0.
1 JAN 0840	105	.00	.00	.00	0.	*	1 JAN 2110	255	.00	.00	.00	0.
1 JAN 0845	106	.00	.00	.00	0.	*	1 JAN 2115	256	.00	.00	.00	0.
1 JAN 0850	107	.00	.00	.00	0.	*	1 JAN 2120	257	.00	.00	.00	0.
1 JAN 0855	108	.00	.00	.00	0.	*	1 JAN 2125	258	.00	.00	.00	0.
1 JAN 0900	109	.00	.00	.00	0.	*	1 JAN 2130	259	.00	.00	.00	0.
1 JAN 0905	110	.00	.00	.00	0.	*	1 JAN 2135	260	.00	.00	.00	0.
1 JAN 0910	111	.00	.00	.00	0.	*	1 JAN 2140	261	.00	.00	.00	0.
1 JAN 0915	112	.00	.00	.00	0.	*	1 JAN 2145	262	.00	.00	.00	0.
1 JAN 0920	113	.00	.00	.00	0.	*	1 JAN 2150	263	.00	.00	.00	0.
1 JAN 0925	114	.00	.00	.00	0.	*	1 JAN 2155	264	.00	.00	.00	0.
1 JAN 0930	115	.00	.00	.00	0.	*	1 JAN 2200	265	.00	.00	.00	0.
1 JAN 0935	116	.00	.00	.00	0.	*	1 JAN 2205	266	.00	.00	.00	0.
1 JAN 0940	117	.00	.00	.00	0.	*	1 JAN 2210	267	.00	.00	.00	0.
1 JAN 0945	118	.00	.00	.00	0.	*	1 JAN 2215	268	.00	.00	.00	0.
1 JAN 0950	119	.00	.00	.00	0.	*	1 JAN 2220	269	.00	.00	.00	0.
1 JAN 0955	120	.00	.00	.00	0.	*	1 JAN 2225	270	.00	.00	.00	0.
1 JAN 1000	121	.00	.00	.00	1.	*	1 JAN 2230	271	.00	.00	.00	0.
1 JAN 1005	122	.00	.00	.00	1.	*	1 JAN 2235	272	.00	.00	.00	0.
1 JAN 1010	123	.00	.00	.00	1.	*	1 JAN 2240	273	.00	.00	.00	0.
1 JAN 1015	124	.00	.00	.00	1.	*	1 JAN 2245	274	.00	.00	.00	0.
1 JAN 1020	125	.00	.00	.00	1.	*	1 JAN 2250	275	.00	.00	.00	0.
1 JAN 1025	126	.00	.00	.00	1.	*	1 JAN 2255	276	.00	.00	.00	0.
1 JAN 1030	127	.00	.00	.00	1.	*	1 JAN 2300	277	.00	.00	.00	0.
1 JAN 1035	128	.00	.00	.00	1.	*	1 JAN 2305	278	.00	.00	.00	0.
1 JAN 1040	129	.00	.00	.00	1.	*	1 JAN 2310	279	.00	.00	.00	0.
1 JAN 1045	130	.00	.00	.00	1.	*	1 JAN 2315	280	.00	.00	.00	0.
1 JAN 1050	131	.00	.00	.00	1.	*	1 JAN 2320	281	.00	.00	.00	0.
1 JAN 1055	132	.00	.00	.00	1.	*	1 JAN 2325	282	.00	.00	.00	0.
1 JAN 1100	133	.00	.00	.00	1.	*	1 JAN 2330	283	.00	.00	.00	0.
1 JAN 1105	134	.00	.00	.00	1.	*	1 JAN 2335	284	.00	.00	.00	0.
1 JAN 1110	135	.00	.00	.00	1.	*	1 JAN 2340	285	.00	.00	.00	0.
1 JAN 1115	136	.01	.00	.00	1.	*	1 JAN 2345	286	.00	.00	.00	0.
1 JAN 1120	137	.01	.00	.00	1.	*	1 JAN 2350	287	.00	.00	.00	0.
1 JAN 1125	138	.01	.00	.00	1.	*	1 JAN 2355	288	.00	.00	.00	0.
1 JAN 1130	139	.01	.00	.00	1.	*	2 JAN 0000	289	.00	.00	.00	0.
1 JAN 1135	140	.01	.01	.00	1.	*	2 JAN 0005	290	.00	.00	.00	0.
1 JAN 1140	141	.02	.02	.01	1.	*	2 JAN 0010	291	.00	.00	.00	0.
1 JAN 1145	142	.04	.02	.01	1.	*	2 JAN 0015	292	.00	.00	.00	0.
1 JAN 1150	143	.06	.03	.03	2.	*	2 JAN 0020	293	.00	.00	.00	0.
1 JAN 1155	144	.08	.02	.05	3.	*	2 JAN 0025	294	.00	.00	.00	0.
1 JAN 1200	145	.06	.02	.04	4.	*	2 JAN 0030	295	.00	.00	.00	0.
1 JAN 1205	146	.01	.01	.00	6.	*	2 JAN 0035	296	.00	.00	.00	0.
1 JAN 1210	147	.01	.01	.00	8.	*	2 JAN 0040	297	.00	.00	.00	0.
1 JAN 1215	148	.01	.01	.00	10.	*	2 JAN 0045	298	.00	.00	.00	0.
1 JAN 1220	149	.01	.01	.00	11.	*	2 JAN 0050	299	.00	.00	.00	0.
1 JAN 1225	150	.01	.00	.00	12.	*	2 JAN 0055	300	.00	.00	.00	0.

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TOTAL RAINFALL = .70, TOTAL LOSS = .40, TOTAL EXCESS = .30

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)				
		(CFS)			
12.	12.42	2.	1.	1.	1.
		(INCHES) .227	.301	.301	.301
		(AC-FT) 1.	2.	2.	2.

CUMULATIVE AREA = .10 SQ MI

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HYDROGRAPH AT STATION 13-1
PLAN 1, RATIO = 2.81

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	0000	1	.00	.00	.00	0.	1	JAN	1230	151	.02	.01	.01	51.
1	JAN	0005	2	.00	.00	.00	0.	1	JAN	1235	152	.01	.01	.00	48.
1	JAN	0010	3	.00	.00	.00	0.	1	JAN	1240	153	.01	.01	.00	42.
1	JAN	0015	4	.00	.00	.00	0.	1	JAN	1245	154	.01	.01	.00	36.
1	JAN	0020	5	.00	.00	.00	0.	1	JAN	1250	155	.01	.01	.00	30.
1	JAN	0025	6	.00	.00	.00	0.	1	JAN	1255	156	.01	.01	.00	25.
1	JAN	0030	7	.00	.00	.00	0.	1	JAN	1300	157	.01	.01	.00	21.
1	JAN	0035	8	.00	.00	.00	0.	1	JAN	1305	158	.01	.01	.00	17.
1	JAN	0040	9	.00	.00	.00	0.	1	JAN	1310	159	.01	.01	.00	15.
1	JAN	0045	10	.00	.00	.00	0.	1	JAN	1315	160	.01	.01	.00	12.
1	JAN	0050	11	.00	.00	.00	0.	1	JAN	1320	161	.01	.01	.00	10.
1	JAN	0055	12	.00	.00	.00	0.	1	JAN	1325	162	.01	.01	.00	9.
1	JAN	0100	13	.00	.00	.00	0.	1	JAN	1330	163	.01	.01	.00	8.
1	JAN	0105	14	.00	.00	.00	0.	1	JAN	1335	164	.01	.00	.00	7.
1	JAN	0110	15	.00	.00	.00	0.	1	JAN	1340	165	.01	.00	.00	6.
1	JAN	0115	16	.00	.00	.00	0.	1	JAN	1345	166	.01	.00	.00	5.
1	JAN	0120	17	.00	.00	.00	0.	1	JAN	1350	167	.01	.00	.00	4.
1	JAN	0125	18	.00	.00	.00	0.	1	JAN	1355	168	.01	.00	.00	4.
1	JAN	0130	19	.00	.00	.00	0.	1	JAN	1400	169	.01	.00	.00	4.
1	JAN	0135	20	.00	.00	.00	0.	1	JAN	1405	170	.01	.00	.00	3.
1	JAN	0140	21	.00	.00	.00	0.	1	JAN	1410	171	.01	.00	.00	3.
1	JAN	0145	22	.00	.00	.00	0.	1	JAN	1415	172	.01	.00	.00	3.
1	JAN	0150	23	.00	.00	.00	0.	1	JAN	1420	173	.01	.00	.00	3.
1	JAN	0155	24	.00	.00	.00	0.	1	JAN	1425	174	.01	.00	.00	2.
1	JAN	0200	25	.00	.00	.00	0.	1	JAN	1430	175	.01	.00	.00	2.
1	JAN	0205	26	.00	.00	.00	0.	1	JAN	1435	176	.01	.00	.00	2.
1	JAN	0210	27	.00	.00	.00	1.	1	JAN	1440	177	.01	.00	.00	2.
1	JAN	0215	28	.00	.00	.00	1.	1	JAN	1445	178	.01	.00	.00	2.
1	JAN	0220	29	.00	.00	.00	1.	1	JAN	1450	179	.01	.00	.00	2.
1	JAN	0225	30	.00	.00	.00	1.	1	JAN	1455	180	.01	.00	.00	2.
1	JAN	0230	31	.00	.00	.00	1.	1	JAN	1500	181	.00	.00	.00	2.
1	JAN	0235	32	.00	.00	.00	1.	1	JAN	1505	182	.00	.00	.00	2.
1	JAN	0240	33	.00	.00	.00	1.	1	JAN	1510	183	.00	.00	.00	2.
1	JAN	0245	34	.00	.00	.00	1.	1	JAN	1515	184	.00	.00	.00	2.
1	JAN	0250	35	.00	.00	.00	1.	1	JAN	1520	185	.00	.00	.00	1.
1	JAN	0255	36	.00	.00	.00	1.	1	JAN	1525	186	.00	.00	.00	1.
1	JAN	0300	37	.00	.00	.00	1.	1	JAN	1530	187	.00	.00	.00	1.
1	JAN	0305	38	.00	.00	.00	1.	1	JAN	1535	188	.00	.00	.00	1.
1	JAN	0310	39	.00	.00	.00	1.	1	JAN	1540	189	.00	.00	.00	1.
1	JAN	0315	40	.00	.00	.00	1.	1	JAN	1545	190	.00	.00	.00	1.
1	JAN	0320	41	.00	.00	.00	1.	1	JAN	1550	191	.00	.00	.00	1.
1	JAN	0325	42	.00	.00	.00	1.	1	JAN	1555	192	.00	.00	.00	1.
1	JAN	0330	43	.00	.00	.00	1.	1	JAN	1600	193	.00	.00	.00	1.
1	JAN	0335	44	.00	.00	.00	1.	1	JAN	1605	194	.00	.00	.00	1.
1	JAN	0340	45	.00	.00	.00	1.	1	JAN	1610	195	.00	.00	.00	1.
1	JAN	0345	46	.00	.00	.00	1.	1	JAN	1615	196	.00	.00	.00	1.
1	JAN	0350	47	.00	.00	.00	1.	1	JAN	1620	197	.00	.00	.00	1.
1	JAN	0355	48	.00	.00	.00	1.	1	JAN	1625	198	.00	.00	.00	1.
1	JAN	0400	49	.00	.00	.00	1.	1	JAN	1630	199	.00	.00	.00	1.
1	JAN	0405	50	.00	.00	.00	1.	1	JAN	1635	200	.00	.00	.00	1.
1	JAN	0410	51	.00	.00	.00	1.	1	JAN	1640	201	.00	.00	.00	1.
1	JAN	0415	52	.00	.00	.00	1.	1	JAN	1645	202	.00	.00	.00	1.
1	JAN	0420	53	.00	.00	.00	1.	1	JAN	1650	203	.00	.00	.00	1.
1	JAN	0425	54	.00	.00	.00	1.	1	JAN	1655	204	.00	.00	.00	1.
1	JAN	0430	55	.00	.00	.00	1.	1	JAN	1700	205	.00	.00	.00	1.
1	JAN	0435	56	.00	.00	.00	1.	1	JAN	1705	206	.00	.00	.00	1.
1	JAN	0440	57	.00	.00	.00	1.	1	JAN	1710	207	.00	.00	.00	1.
1	JAN	0445	58	.00	.00	.00	1.	1	JAN	1715	208	.00	.00	.00	1.
1	JAN	0450	59	.00	.00	.00	1.	1	JAN	1720	209	.00	.00	.00	1.

1 JAN 0455	60	.00	.00	.00	1.	*	1 JAN 1725	210	.00	.00	.00	1.	
1 JAN 0500	61	.00	.00	.00	1.	*	1 JAN 1730	211	.00	.00	.00	1.	
1 JAN 0505	62	.00	.00	.00	1.	*	1 JAN 1735	212	.00	.00	.00	1.	
1 JAN 0510	63	.00	.00	.00	1.	*	1 JAN 1740	213	.00	.00	.00	1.	
1 JAN 0515	64	.00	.00	.00	1.	*	1 JAN 1745	214	.00	.00	.00	1.	
1 JAN 0520	65	.00	.00	.00	1.	*	1 JAN 1750	215	.00	.00	.00	1.	
1 JAN 0525	66	.00	.00	.00	1.	*	1 JAN 1755	216	.00	.00	.00	1.	
1 JAN 0530	67	.00	.00	.00	1.	*	1 JAN 1800	217	.00	.00	.00	1.	
1 JAN 0535	68	.00	.00	.00	1.	*	1 JAN 1805	218	.00	.00	.00	1.	
1 JAN 0540	69	.00	.00	.00	1.	*	1 JAN 1810	219	.00	.00	.00	1.	
1 JAN 0545	70	.00	.00	.00	1.	*	1 JAN 1815	220	.00	.00	.00	1.	
1 JAN 0550	71	.00	.00	.00	1.	*	1 JAN 1820	221	.00	.00	.00	1.	
1 JAN 0555	72	.00	.00	.00	1.	*	1 JAN 1825	222	.00	.00	.00	1.	
1 JAN 0600	73	.00	.00	.00	1.	*	1 JAN 1830	223	.00	.00	.00	1.	
1 JAN 0605	74	.00	.00	.00	1.	*	1 JAN 1835	224	.00	.00	.00	1.	
1 JAN 0610	75	.00	.00	.00	1.	*	1 JAN 1840	225	.00	.00	.00	1.	
1 JAN 0615	76	.00	.00	.00	1.	*	1 JAN 1845	226	.00	.00	.00	1.	
1 JAN 0620	77	.00	.00	.00	1.	*	1 JAN 1850	227	.00	.00	.00	1.	
1 JAN 0625	78	.00	.00	.00	1.	*	1 JAN 1855	228	.00	.00	.00	1.	
1 JAN 0630	79	.00	.00	.00	1.	*	1 JAN 1900	229	.00	.00	.00	1.	
1 JAN 0635	80	.00	.00	.00	1.	*	1 JAN 1905	230	.00	.00	.00	1.	
1 JAN 0640	81	.00	.00	.00	1.	*	1 JAN 1910	231	.00	.00	.00	1.	
1 JAN 0645	82	.00	.00	.00	1.	*	1 JAN 1915	232	.00	.00	.00	1.	
1 JAN 0650	83	.00	.00	.00	1.	*	1 JAN 1920	233	.00	.00	.00	1.	
1 JAN 0655	84	.00	.00	.00	1.	*	1 JAN 1925	234	.00	.00	.00	1.	
1 JAN 0700	85	.00	.00	.00	1.	*	1 JAN 1930	235	.00	.00	.00	1.	
1 JAN 0705	86	.00	.00	.00	1.	*	1 JAN 1935	236	.00	.00	.00	1.	
1 JAN 0710	87	.00	.00	.00	1.	*	1 JAN 1940	237	.00	.00	.00	1.	
1 JAN 0715	88	.00	.00	.00	1.	*	1 JAN 1945	238	.00	.00	.00	1.	
1 JAN 0720	89	.00	.00	.00	1.	*	1 JAN 1950	239	.00	.00	.00	1.	
1 JAN 0725	90	.00	.00	.00	1.	*	1 JAN 1955	240	.00	.00	.00	1.	
1 JAN 0730	91	.00	.00	.00	1.	*	1 JAN 2000	241	.00	.00	.00	1.	
1 JAN 0735	92	.00	.00	.00	1.	*	1 JAN 2005	242	.00	.00	.00	1.	
1 JAN 0740	93	.00	.00	.00	1.	*	1 JAN 2010	243	.00	.00	.00	1.	
1 JAN 0745	94	.00	.00	.00	1.	*	1 JAN 2015	244	.00	.00	.00	1.	
1 JAN 0750	95	.00	.00	.00	1.	*	1 JAN 2020	245	.00	.00	.00	1.	
1 JAN 0755	96	.00	.00	.00	1.	*	1 JAN 2025	246	.00	.00	.00	1.	
1 JAN 0800	97	.00	.00	.00	1.	*	1 JAN 2030	247	.00	.00	.00	1.	
1 JAN 0805	98	.00	.00	.00	1.	*	1 JAN 2035	248	.00	.00	.00	1.	
1 JAN 0810	99	.00	.00	.00	1.	*	1 JAN 2040	249	.00	.00	.00	1.	
1 JAN 0815	100	.00	.00	.00	1.	*	1 JAN 2045	250	.00	.00	.00	1.	
1 JAN 0820	101	.00	.00	.00	1.	*	1 JAN 2050	251	.00	.00	.00	1.	
1 JAN 0825	102	.00	.00	.00	1.	*	1 JAN 2055	252	.00	.00	.00	1.	
1 JAN 0830	103	.00	.00	.00	1.	*	1 JAN 2100	253	.00	.00	.00	1.	
1 JAN 0835	104	.00	.00	.00	1.	*	1 JAN 2105	254	.00	.00	.00	1.	
1 JAN 0840	105	.00	.00	.00	1.	*	1 JAN 2110	255	.00	.00	.00	1.	
1 JAN 0845	106	.00	.00	.00	1.	*	1 JAN 2115	256	.00	.00	.00	1.	
1 JAN 0850	107	.00	.00	.00	1.	*	1 JAN 2120	257	.00	.00	.00	1.	
1 JAN 0855	108	.01	.00	.00	1.	*	1 JAN 2125	258	.00	.00	.00	1.	
1 JAN 0900	109	.01	.00	.00	1.	*	1 JAN 2130	259	.00	.00	.00	1.	
1 JAN 0905	110	.01	.00	.00	1.	*	1 JAN 2135	260	.00	.00	.00	1.	
1 JAN 0910	111	.01	.00	.00	1.	*	1 JAN 2140	261	.00	.00	.00	1.	
1 JAN 0915	112	.01	.00	.00	1.	*	1 JAN 2145	262	.00	.00	.00	1.	
1 JAN 0920	113	.01	.00	.00	1.	*	1 JAN 2150	263	.00	.00	.00	1.	
1 JAN 0925	114	.01	.00	.00	1.	*	1 JAN 2155	264	.00	.00	.00	1.	
1 JAN 0930	115	.01	.00	.00	1.	*	1 JAN 2200	265	.00	.00	.00	1.	
1 JAN 0935	116	.01	.00	.00	1.	*	1 JAN 2205	266	.00	.00	.00	1.	
1 JAN 0940	117	.01	.00	.00	1.	*	1 JAN 2210	267	.00	.00	.00	1.	
1 JAN 0945	118	.01	.00	.00	1.	*	1 JAN 2215	268	.00	.00	.00	1.	
1 JAN 0950	119	.01	.00	.00	1.	*	1 JAN 2220	269	.00	.00	.00	1.	
1 JAN 0955	120	.01	.00	.00	1.	*	1 JAN 2225	270	.00	.00	.00	1.	
1 JAN 1000	121	.01	.00	.00	1.	*	1 JAN 2230	271	.00	.00	.00	1.	
1 JAN 1005	122	.01	.00	.00	1.	*	1 JAN 2235	272	.00	.00	.00	1.	
1 JAN 1010	123	.01	.00	.00	1.	*	1 JAN 2240	273	.00	.00	.00	1.	
1 JAN 1015	124	.01	.00	.00	2.	*	1 JAN 2245	274	.00	.00	.00	1.	
1 JAN 1020	125	.01	.00	.00	2.	*	1 JAN 2250	275	.00	.00	.00	1.	
1 JAN 1025	126	.01	.01	.00	2.	*	1 JAN 2255	276	.00	.00	.00	1.	
1 JAN 1030	127	.01	.01	.00	2.	*	1 JAN 2300	277	.00	.00	.00	1.	
1 JAN 1035	128	.01	.01	.00	2.	*	1 JAN 2305	278	.00	.00	.00	1.	
1 JAN 1040	129	.01	.01	.00	2.	*	1 JAN 2310	279	.00	.00	.00	1.	
1 JAN 1045	130	.01	.01	.00	2.	*	1 JAN 2315	280	.00	.00	.00	1.	
1 JAN 1050	131	.01	.01	.00	2.	*	1 JAN 2320	281	.00	.00	.00	1.	
1 JAN 1055	132	.01	.01	.00	2.	*	1 JAN 2325	282	.00	.00	.00	1.	
1 JAN 1100	133	.01	.01	.00	2.	*	1 JAN 2330	283	.00	.00	.00	1.	
1 JAN 1105	134	.01	.01	.00	2.	*	1 JAN 2335	284	.00	.00	.00	1.	
1 JAN 1110	135	.01	.01	.00	2.	*	1 JAN 2340	285	.00	.00	.00	1.	
1 JAN 1115	136	.02	.01	.01	2.	*	1 JAN 2345	286	.00	.00	.00	1.	
1 JAN 1120	137	.02	.01	.01	3.	*	1 JAN 2350	287	.00	.00	.00	1.	
1 JAN 1125	138	.02	.01	.01	3.	*	1 JAN 2355	288	.00	.00	.00	1.	
1 JAN 1130	139	.02	.01	.01	3.	*	2 JAN 0000	289	.00	.00	.00	1.	
1 JAN 1135	140	.04	.01	.03	3.	*	2 JAN 0005	290	.00	.00	.00	1.	
1 JAN 1140	141	.07	.01	.06	4.	*	2 JAN 0010	291	.00	.00	.00	0.	
1 JAN 1145	142	.11	.01	.09	5.	*	2 JAN 0015	292	.00	.00	.00	0.	
1 JAN 1150	143	.17	.01	.15	8.	*	2 JAN 0020	293	.00	.00	.00	0.	
1 JAN 1155	144	.21	.01	.20	12.	*	2 JAN 0025	294	.00	.00	.00	0.	
1 JAN 1200	145	.16	.01	.14	19.	*	2 JAN 0030	295	.00	.00	.00	0.	
1 JAN 1205	146	.03	.01	.02	28.	*	2 JAN 0035	296	.00	.00	.00	0.	
1 JAN 1210	147	.03	.01	.02	38.	*	2 JAN 0040	297	.00	.00	.00	0.	
1 JAN 1215	148	.03	.01	.01	46.	*	2 JAN 0045	298	.00	.00	.00	0.	
1 JAN 1220	149	.02	.01	.01	51.	*	2 JAN 0050	299	.00	.00	.00	0.	

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        1 JAN 1225  150     .02      .01      .01        53.        *       2 JAN 0055  300      .00      .00      .00          0.
                                                                    *

*****************************************************************************************************************************
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    TOTAL RAINFALL =    1.97, TOTAL LOSS =     .82, TOTAL EXCESS =   1.14

  PEAK FLOW     TIME                             MAXIMUM AVERAGE FLOW
                                       6-HR        24-HR       72-HR      24.92-HR
+    (CFS)       (HR)
                               (CFS)
+       53.     12.42                    10.          3.          3.          3.
                             (INCHES)   .935       1.142       1.143       1.143
                              (AC-FT)     5.          6.          6.          6.

                            CUMULATIVE AREA =     .10 SQ MI


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

             **************
             *            *
   41 KK     *      13-2  *     B
             *            *
             **************

   42 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           1  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE
                        IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                         IOUT          22  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

   43 BA          SUBBASIN CHARACTERISTICS
                        TAREA         .10  SUBBASIN AREA

                  PRECIPITATION DATA

   44 PB                STORM         .70  BASIN TOTAL PRECIPITATION

   14 PI            INCREMENTAL PRECIPITATION PATTERN
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
                        .01       .01       .01       .01       .01       .01       .01       .01       .02       .04
                        .05       .08       .11       .08       .02       .01       .01       .01       .01       .01
                        .01       .01       .01       .01       .01       .01       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00

   45 LG          GREEN AND AMPT LOSS RATE
                        STRTL         .12  STARTING LOSS
                          DTH         .15  MOISTURE DEFICIT
                         PSIF        9.20  WETTING FRONT SUCTION
                        XKSAT         .06  HYDRAULIC CONDUCTIVITY
                        RTIMP       42.00  PERCENT IMPERVIOUS AREA

   46 UD          SCS DIMENSIONLESS UNITGRAPH
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TLAG .61 LAG

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UNIT HYDROGRAPH
38 END-OF-PERIOD ORDINATES

4.	12.	23.	39.	57.	70.	77.	77.	74.	67.
59.	49.	38.	30.	24.	20.	16.	13.	11.	9.
7.	6.	5.	4.	3.	2.	2.	2.	1.	1.
1.	1.	1.	0.	0.	0.	0.	0.		

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HYDROGRAPH AT STATION 13-2

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DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 0000	1	.00	.00	.00	0.	1 JAN 1230	151	.01	.00	.00	13.
1 JAN 0005	2	.00	.00	.00	0.	1 JAN 1235	152	.00	.00	.00	12.
1 JAN 0010	3	.00	.00	.00	0.	1 JAN 1240	153	.00	.00	.00	12.
1 JAN 0015	4	.00	.00	.00	0.	1 JAN 1245	154	.00	.00	.00	10.
1 JAN 0020	5	.00	.00	.00	0.	1 JAN 1250	155	.00	.00	.00	9.
1 JAN 0025	6	.00	.00	.00	0.	1 JAN 1255	156	.00	.00	.00	8.
1 JAN 0030	7	.00	.00	.00	0.	1 JAN 1300	157	.00	.00	.00	6.
1 JAN 0035	8	.00	.00	.00	0.	1 JAN 1305	158	.00	.00	.00	5.
1 JAN 0040	9	.00	.00	.00	0.	1 JAN 1310	159	.00	.00	.00	5.
1 JAN 0045	10	.00	.00	.00	0.	1 JAN 1315	160	.00	.00	.00	4.
1 JAN 0050	11	.00	.00	.00	0.	1 JAN 1320	161	.00	.00	.00	4.
1 JAN 0055	12	.00	.00	.00	0.	1 JAN 1325	162	.00	.00	.00	3.
1 JAN 0100	13	.00	.00	.00	0.	1 JAN 1330	163	.00	.00	.00	3.
1 JAN 0105	14	.00	.00	.00	0.	1 JAN 1335	164	.00	.00	.00	2.
1 JAN 0110	15	.00	.00	.00	0.	1 JAN 1340	165	.00	.00	.00	2.
1 JAN 0115	16	.00	.00	.00	0.	1 JAN 1345	166	.00	.00	.00	2.
1 JAN 0120	17	.00	.00	.00	0.	1 JAN 1350	167	.00	.00	.00	2.
1 JAN 0125	18	.00	.00	.00	0.	1 JAN 1355	168	.00	.00	.00	2.
1 JAN 0130	19	.00	.00	.00	0.	1 JAN 1400	169	.00	.00	.00	2.
1 JAN 0135	20	.00	.00	.00	0.	1 JAN 1405	170	.00	.00	.00	1.
1 JAN 0140	21	.00	.00	.00	0.	1 JAN 1410	171	.00	.00	.00	1.
1 JAN 0145	22	.00	.00	.00	0.	1 JAN 1415	172	.00	.00	.00	1.
1 JAN 0150	23	.00	.00	.00	0.	1 JAN 1420	173	.00	.00	.00	1.
1 JAN 0155	24	.00	.00	.00	0.	1 JAN 1425	174	.00	.00	.00	1.
1 JAN 0200	25	.00	.00	.00	0.	1 JAN 1430	175	.00	.00	.00	1.
1 JAN 0205	26	.00	.00	.00	0.	1 JAN 1435	176	.00	.00	.00	1.
1 JAN 0210	27	.00	.00	.00	0.	1 JAN 1440	177	.00	.00	.00	1.
1 JAN 0215	28	.00	.00	.00	0.	1 JAN 1445	178	.00	.00	.00	1.
1 JAN 0220	29	.00	.00	.00	0.	1 JAN 1450	179	.00	.00	.00	1.
1 JAN 0225	30	.00	.00	.00	0.	1 JAN 1455	180	.00	.00	.00	1.
1 JAN 0230	31	.00	.00	.00	0.	1 JAN 1500	181	.00	.00	.00	1.
1 JAN 0235	32	.00	.00	.00	0.	1 JAN 1505	182	.00	.00	.00	1.
1 JAN 0240	33	.00	.00	.00	0.	1 JAN 1510	183	.00	.00	.00	1.
1 JAN 0245	34	.00	.00	.00	0.	1 JAN 1515	184	.00	.00	.00	1.
1 JAN 0250	35	.00	.00	.00	0.	1 JAN 1520	185	.00	.00	.00	1.
1 JAN 0255	36	.00	.00	.00	0.	1 JAN 1525	186	.00	.00	.00	1.
1 JAN 0300	37	.00	.00	.00	0.	1 JAN 1530	187	.00	.00	.00	1.
1 JAN 0305	38	.00	.00	.00	0.	1 JAN 1535	188	.00	.00	.00	1.
1 JAN 0310	39	.00	.00	.00	0.	1 JAN 1540	189	.00	.00	.00	1.
1 JAN 0315	40	.00	.00	.00	0.	1 JAN 1545	190	.00	.00	.00	1.
1 JAN 0320	41	.00	.00	.00	0.	1 JAN 1550	191	.00	.00	.00	1.
1 JAN 0325	42	.00	.00	.00	0.	1 JAN 1555	192	.00	.00	.00	1.
1 JAN 0330	43	.00	.00	.00	0.	1 JAN 1600	193	.00	.00	.00	1.
1 JAN 0335	44	.00	.00	.00	0.	1 JAN 1605	194	.00	.00	.00	1.
1 JAN 0340	45	.00	.00	.00	0.	1 JAN 1610	195	.00	.00	.00	1.
1 JAN 0345	46	.00	.00	.00	0.	1 JAN 1615	196	.00	.00	.00	1.
1 JAN 0350	47	.00	.00	.00	0.	1 JAN 1620	197	.00	.00	.00	1.
1 JAN 0355	48	.00	.00	.00	0.	1 JAN 1625	198	.00	.00	.00	1.
1 JAN 0400	49	.00	.00	.00	0.	1 JAN 1630	199	.00	.00	.00	0.
1 JAN 0405	50	.00	.00	.00	0.	1 JAN 1635	200	.00	.00	.00	0.
1 JAN 0410	51	.00	.00	.00	0.	1 JAN 1640	201	.00	.00	.00	0.
1 JAN 0415	52	.00	.00	.00	0.	1 JAN 1645	202	.00	.00	.00	0.
1 JAN 0420	53	.00	.00	.00	0.	1 JAN 1650	203	.00	.00	.00	0.
1 JAN 0425	54	.00	.00	.00	0.	1 JAN 1655	204	.00	.00	.00	0.
1 JAN 0430	55	.00	.00	.00	0.	1 JAN 1700	205	.00	.00	.00	0.
1 JAN 0435	56	.00	.00	.00	0.	1 JAN 1705	206	.00	.00	.00	0.
1 JAN 0440	57	.00	.00	.00	0.	1 JAN 1710	207	.00	.00	.00	0.
1 JAN 0445	58	.00	.00	.00	0.	1 JAN 1715	208	.00	.00	.00	0.
1 JAN 0450	59	.00	.00	.00	0.	1 JAN 1720	209	.00	.00	.00	0.
1 JAN 0455	60	.00	.00	.00	0.	1 JAN 1725	210	.00	.00	.00	0.
1 JAN 0500	61	.00	.00	.00	0.	1 JAN 1730	211	.00	.00	.00	0.
1 JAN 0505	62	.00	.00	.00	0.	1 JAN 1735	212	.00	.00	.00	0.
1 JAN 0510	63	.00	.00	.00	0.	1 JAN 1740	213	.00	.00	.00	0.
1 JAN 0515	64	.00	.00	.00	0.	1 JAN 1745	214	.00	.00	.00	0.
1 JAN 0520	65	.00	.00	.00	0.	1 JAN 1750	215	.00	.00	.00	0.
1 JAN 0525	66	.00	.00	.00	0.	1 JAN 1755	216	.00	.00	.00	0.
1 JAN 0530	67	.00	.00	.00	0.	1 JAN 1800	217	.00	.00	.00	0.

1	JAN	0535	68	.00	.00	.00	0.	*	1	JAN	1805	218	.00	.00	.00	0.
1	JAN	0540	69	.00	.00	.00	0.	*	1	JAN	1810	219	.00	.00	.00	0.
1	JAN	0545	70	.00	.00	.00	0.	*	1	JAN	1815	220	.00	.00	.00	0.
1	JAN	0550	71	.00	.00	.00	0.	*	1	JAN	1820	221	.00	.00	.00	0.
1	JAN	0555	72	.00	.00	.00	0.	*	1	JAN	1825	222	.00	.00	.00	0.
1	JAN	0600	73	.00	.00	.00	0.	*	1	JAN	1830	223	.00	.00	.00	0.
1	JAN	0605	74	.00	.00	.00	0.	*	1	JAN	1835	224	.00	.00	.00	
1	JAN	0610	75	.00	.00	.00	0.	*	1	JAN	1840	225	.00	.00	.00	
1	JAN	0615	76	.00	.00	.00	0.	*	1	JAN	1845	226	.00	.00	.00	0.
1	JAN	0620	77	.00	.00	.00	0.	*	1	JAN	1850	227	.00	.00	.00	0.
1	JAN	0625	78	.00	.00	.00	0.	*	1	JAN	1855	228	.00	.00	.00	0.
1	JAN	0630	79	.00	.00	.00	0.	*	1	JAN	1900	229	.00	.00	.00	0.
1	JAN	0635	80	.00	.00	.00	0.	*	1	JAN	1905	230	.00	.00	.00	0.
1	JAN	0640	81	.00	.00	.00	0.	*	1	JAN	1910	231	.00	.00	.00	0.
1	JAN	0645	82	.00	.00	.00	0.	*	1	JAN	1915	232	.00	.00	.00	0.
1	JAN	0650	83	.00	.00	.00	0.	*	1	JAN	1920	233	.00	.00	.00	0.
1	JAN	0655	84	.00	.00	.00	0.	*	1	JAN	1925	234	.00	.00	.00	0.
1	JAN	0700	85	.00	.00	.00	0.	*	1	JAN	1930	235	.00	.00	.00	0.
1	JAN	0705	86	.00	.00	.00	0.	*	1	JAN	1935	236	.00	.00	.00	0.
1	JAN	0710	87	.00	.00	.00	0.	*	1	JAN	1940	237	.00	.00	.00	0.
1	JAN	0715	88	.00	.00	.00	0.	*	1	JAN	1945	238	.00	.00	.00	0.
1	JAN	0720	89	.00	.00	.00	0.	*	1	JAN	1950	239	.00	.00	.00	0.
1	JAN	0725	90	.00	.00	.00	0.	*	1	JAN	1955	240	.00	.00	.00	0.
1	JAN	0730	91	.00	.00	.00	0.	*	1	JAN	2000	241	.00	.00	.00	0.
1	JAN	0735	92	.00	.00	.00	0.	*	1	JAN	2005	242	.00	.00	.00	0.
1	JAN	0740	93	.00	.00	.00	0.	*	1	JAN	2010	243	.00	.00	.00	0.
1	JAN	0745	94	.00	.00	.00	0.	*	1	JAN	2015	244	.00	.00	.00	0.
1	JAN	0750	95	.00	.00	.00	0.	*	1	JAN	2020	245	.00	.00	.00	0.
1	JAN	0755	96	.00	.00	.00	0.	*	1	JAN	2025	246	.00	.00	.00	0.
1	JAN	0800	97	.00	.00	.00	0.	*	1	JAN	2030	247	.00	.00	.00	0.
1	JAN	0805	98	.00	.00	.00	0.	*	1	JAN	2035	248	.00	.00	.00	0.
1	JAN	0810	99	.00	.00	.00	0.	*	1	JAN	2040	249	.00	.00	.00	0.
1	JAN	0815	100	.00	.00	.00	0.	*	1	JAN	2045	250	.00	.00	.00	0.
1	JAN	0820	101	.00	.00	.00	0.	*	1	JAN	2050	251	.00	.00	.00	0.
1	JAN	0825	102	.00	.00	.00	0.	*	1	JAN	2055	252	.00	.00	.00	0.
1	JAN	0830	103	.00	.00	.00	0.	*	1	JAN	2100	253	.00	.00	.00	0.
1	JAN	0835	104	.00	.00	.00	0.	*	1	JAN	2105	254	.00	.00	.00	0.
1	JAN	0840	105	.00	.00	.00	0.	*	1	JAN	2110	255	.00	.00	.00	0.
1	JAN	0845	106	.00	.00	.00	0.	*	1	JAN	2115	256	.00	.00	.00	0.
1	JAN	0850	107	.00	.00	.00	0.	*	1	JAN	2120	257	.00	.00	.00	0.
1	JAN	0855	108	.00	.00	.00	0.	*	1	JAN	2125	258	.00	.00	.00	0.
1	JAN	0900	109	.00	.00	.00	0.	*	1	JAN	2130	259	.00	.00	.00	0.
1	JAN	0905	110	.00	.00	.00	1.	*	1	JAN	2135	260	.00	.00	.00	0.
1	JAN	0910	111	.00	.00	.00	1.	*	1	JAN	2140	261	.00	.00	.00	0.
1	JAN	0915	112	.00	.00	.00	1.	*	1	JAN	2145	262	.00	.00	.00	
1	JAN	0920	113	.00	.00	.00	1.	*	1	JAN	2150	263	.00	.00	.00	
1	JAN	0925	114	.00	.00	.00	1.	*	1	JAN	2155	264	.00	.00	.00	0.
1	JAN	0930	115	.00	.00	.00	1.	*	1	JAN	2200	265	.00	.00	.00	0.
1	JAN	0935	116	.00	.00	.00	1.	*	1	JAN	2205	266	.00	.00	.00	0.
1	JAN	0940	117	.00	.00	.00	1.	*	1	JAN	2210	267	.00	.00	.00	0.
1	JAN	0945	118	.00	.00	.00	1.	*	1	JAN	2215	268	.00	.00	.00	0.
1	JAN	0950	119	.00	.00	.00	1.	*	1	JAN	2220	269	.00	.00	.00	0.
1	JAN	0955	120	.00	.00	.00	1.	*	1	JAN	2225	270	.00	.00	.00	0.
1	JAN	1000	121	.00	.00	.00	1.	*	1	JAN	2230	271	.00	.00	.00	0.
1	JAN	1005	122	.00	.00	.00	1.	*	1	JAN	2235	272	.00	.00	.00	0.
1	JAN	1010	123	.00	.00	.00	1.	*	1	JAN	2240	273	.00	.00	.00	0.
1	JAN	1015	124	.00	.00	.00	1.	*	1	JAN	2245	274	.00	.00	.00	0.
1	JAN	1020	125	.00	.00	.00	1.	*	1	JAN	2250	275	.00	.00	.00	0.
1	JAN	1025	126	.00	.00	.00	1.	*	1	JAN	2255	276	.00	.00	.00	0.
1	JAN	1030	127	.00	.00	.00	1.	*	1	JAN	2300	277	.00	.00	.00	0.
1	JAN	1035	128	.00	.00	.00	1.	*	1	JAN	2305	278	.00	.00	.00	0.
1	JAN	1040	129	.00	.00	.00	1.	*	1	JAN	2310	279	.00	.00	.00	0.
1	JAN	1045	130	.00	.00	.00	1.	*	1	JAN	2315	280	.00	.00	.00	0.
1	JAN	1050	131	.00	.00	.00	1.	*	1	JAN	2320	281	.00	.00	.00	0.
1	JAN	1055	132	.00	.00	.00	1.	*	1	JAN	2325	282	.00	.00	.00	0.
1	JAN	1100	133	.00	.00	.00	1.	*	1	JAN	2330	283	.00	.00	.00	0.
1	JAN	1105	134	.00	.00	.00	1.	*	1	JAN	2335	284	.00	.00	.00	0.
1	JAN	1110	135	.00	.00	.00	1.	*	1	JAN	2340	285	.00	.00	.00	0.
1	JAN	1115	136	.01	.00	.00	1.	*	1	JAN	2345	286	.00	.00	.00	0.
1	JAN	1120	137	.01	.00	.00	1.	*	1	JAN	2350	287	.00	.00	.00	0.
1	JAN	1125	138	.01	.00	.00	1.	*	1	JAN	2355	288	.00	.00	.00	0.
1	JAN	1130	139	.01	.00	.00	1.	*	2	JAN	0000	289	.00	.00	.00	0.
1	JAN	1135	140	.01	.01	.01	1.	*	2	JAN	0005	290	.00	.00	.00	0.
1	JAN	1140	141	.02	.01	.01	2.	*	2	JAN	0010	291	.00	.00	.00	0.
1	JAN	1145	142	.04	.02	.02	2.	*	2	JAN	0015	292	.00	.00	.00	0.
1	JAN	1150	143	.06	.02	.03	2.	*	2	JAN	0020	293	.00	.00	.00	0.
1	JAN	1155	144	.08	.02	.05	3.	*	2	JAN	0025	294	.00	.00	.00	0.
1	JAN	1200	145	.06	.02	.04	4.	*	2	JAN	0030	295	.00	.00	.00	0.
1	JAN	1205	146	.01	.01	.00	6.	*	2	JAN	0035	296	.00	.00	.00	0.
1	JAN	1210	147	.01	.01	.00	8.	*	2	JAN	0040	297	.00	.00	.00	0.
1	JAN	1215	148	.01	.01	.00	10.	*	2	JAN	0045	298	.00	.00	.00	0.
1	JAN	1220	149	.01	.00	.00	12.	*	2	JAN	0050	299	.00	.00	.00	0.
1	JAN	1225	150	.01	.00	.00	13.	*	2	JAN	0055	300	.00	.00	.00	
								*								

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TOTAL RAINFALL = .70, TOTAL LOSS = .36, TOTAL EXCESS = .34

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)					
		(CFS)				
13.	12.50		3.	1.	1.	1.
		(INCHES)	.255	.341	.341	.341
		(AC-FT)	1.	2.	2.	2.

CUMULATIVE AREA = .10 SQ MI

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HYDROGRAPH AT STATION 13-2
PLAN 1, RATIO = 1.00

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DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 0000	1	.00	.00	.00	0.	1 JAN 1230	151	.01	.00	.00	13.
1 JAN 0005	2	.00	.00	.00	0.	1 JAN 1235	152	.00	.00	.00	12.
1 JAN 0010	3	.00	.00	.00	0.	1 JAN 1240	153	.00	.00	.00	12.
1 JAN 0015	4	.00	.00	.00	0.	1 JAN 1245	154	.00	.00	.00	10.
1 JAN 0020	5	.00	.00	.00	0.	1 JAN 1250	155	.00	.00	.00	9.
1 JAN 0025	6	.00	.00	.00	0.	1 JAN 1255	156	.00	.00	.00	8.
1 JAN 0030	7	.00	.00	.00	0.	1 JAN 1300	157	.00	.00	.00	6.
1 JAN 0035	8	.00	.00	.00	0.	1 JAN 1305	158	.00	.00	.00	5.
1 JAN 0040	9	.00	.00	.00	0.	1 JAN 1310	159	.00	.00	.00	5.
1 JAN 0045	10	.00	.00	.00	0.	1 JAN 1315	160	.00	.00	.00	4.
1 JAN 0050	11	.00	.00	.00	0.	1 JAN 1320	161	.00	.00	.00	4.
1 JAN 0055	12	.00	.00	.00	0.	1 JAN 1325	162	.00	.00	.00	3.
1 JAN 0100	13	.00	.00	.00	0.	1 JAN 1330	163	.00	.00	.00	3.
1 JAN 0105	14	.00	.00	.00	0.	1 JAN 1335	164	.00	.00	.00	2.
1 JAN 0110	15	.00	.00	.00	0.	1 JAN 1340	165	.00	.00	.00	2.
1 JAN 0115	16	.00	.00	.00	0.	1 JAN 1345	166	.00	.00	.00	2.
1 JAN 0120	17	.00	.00	.00	0.	1 JAN 1350	167	.00	.00	.00	2.
1 JAN 0125	18	.00	.00	.00	0.	1 JAN 1355	168	.00	.00	.00	2.
1 JAN 0130	19	.00	.00	.00	0.	1 JAN 1400	169	.00	.00	.00	2.
1 JAN 0135	20	.00	.00	.00	0.	1 JAN 1405	170	.00	.00	.00	1.
1 JAN 0140	21	.00	.00	.00	0.	1 JAN 1410	171	.00	.00	.00	1.
1 JAN 0145	22	.00	.00	.00	0.	1 JAN 1415	172	.00	.00	.00	1.
1 JAN 0150	23	.00	.00	.00	0.	1 JAN 1420	173	.00	.00	.00	1.
1 JAN 0155	24	.00	.00	.00	0.	1 JAN 1425	174	.00	.00	.00	1.
1 JAN 0200	25	.00	.00	.00	0.	1 JAN 1430	175	.00	.00	.00	1.
1 JAN 0205	26	.00	.00	.00	0.	1 JAN 1435	176	.00	.00	.00	1.
1 JAN 0210	27	.00	.00	.00	0.	1 JAN 1440	177	.00	.00	.00	1.
1 JAN 0215	28	.00	.00	.00	0.	1 JAN 1445	178	.00	.00	.00	1.
1 JAN 0220	29	.00	.00	.00	0.	1 JAN 1450	179	.00	.00	.00	1.
1 JAN 0225	30	.00	.00	.00	0.	1 JAN 1455	180	.00	.00	.00	1.
1 JAN 0230	31	.00	.00	.00	0.	1 JAN 1500	181	.00	.00	.00	1.
1 JAN 0235	32	.00	.00	.00	0.	1 JAN 1505	182	.00	.00	.00	1.
1 JAN 0240	33	.00	.00	.00	0.	1 JAN 1510	183	.00	.00	.00	1.
1 JAN 0245	34	.00	.00	.00	0.	1 JAN 1515	184	.00	.00	.00	1.
1 JAN 0250	35	.00	.00	.00	0.	1 JAN 1520	185	.00	.00	.00	1.
1 JAN 0255	36	.00	.00	.00	0.	1 JAN 1525	186	.00	.00	.00	1.
1 JAN 0300	37	.00	.00	.00	0.	1 JAN 1530	187	.00	.00	.00	1.
1 JAN 0305	38	.00	.00	.00	0.	1 JAN 1535	188	.00	.00	.00	1.
1 JAN 0310	39	.00	.00	.00	0.	1 JAN 1540	189	.00	.00	.00	1.
1 JAN 0315	40	.00	.00	.00	0.	1 JAN 1545	190	.00	.00	.00	1.
1 JAN 0320	41	.00	.00	.00	0.	1 JAN 1550	191	.00	.00	.00	1.
1 JAN 0325	42	.00	.00	.00	0.	1 JAN 1555	192	.00	.00	.00	1.
1 JAN 0330	43	.00	.00	.00	0.	1 JAN 1600	193	.00	.00	.00	1.
1 JAN 0335	44	.00	.00	.00	0.	1 JAN 1605	194	.00	.00	.00	1.
1 JAN 0340	45	.00	.00	.00	0.	1 JAN 1610	195	.00	.00	.00	1.
1 JAN 0345	46	.00	.00	.00	0.	1 JAN 1615	196	.00	.00	.00	1.
1 JAN 0350	47	.00	.00	.00	0.	1 JAN 1620	197	.00	.00	.00	1.
1 JAN 0355	48	.00	.00	.00	0.	1 JAN 1625	198	.00	.00	.00	1.
1 JAN 0400	49	.00	.00	.00	0.	1 JAN 1630	199	.00	.00	.00	0.
1 JAN 0405	50	.00	.00	.00	0.	1 JAN 1635	200	.00	.00	.00	0.
1 JAN 0410	51	.00	.00	.00	0.	1 JAN 1640	201	.00	.00	.00	0.
1 JAN 0415	52	.00	.00	.00	0.	1 JAN 1645	202	.00	.00	.00	0.
1 JAN 0420	53	.00	.00	.00	0.	1 JAN 1650	203	.00	.00	.00	0.
1 JAN 0425	54	.00	.00	.00	0.	1 JAN 1655	204	.00	.00	.00	0.
1 JAN 0430	55	.00	.00	.00	0.	1 JAN 1700	205	.00	.00	.00	0.
1 JAN 0435	56	.00	.00	.00	0.	1 JAN 1705	206	.00	.00	.00	0.
1 JAN 0440	57	.00	.00	.00	0.	1 JAN 1710	207	.00	.00	.00	0.
1 JAN 0445	58	.00	.00	.00	0.	1 JAN 1715	208	.00	.00	.00	0.
1 JAN 0450	59	.00	.00	.00	0.	1 JAN 1720	209	.00	.00	.00	0.
1 JAN 0455	60	.00	.00	.00	0.	1 JAN 1725	210	.00	.00	.00	0.
1 JAN 0500	61	.00	.00	.00	0.	1 JAN 1730	211	.00	.00	.00	0.
1 JAN 0505	62	.00	.00	.00	0.	1 JAN 1735	212	.00	.00	.00	0.
1 JAN 0510	63	.00	.00	.00	0.	1 JAN 1740	213	.00	.00	.00	0.
1 JAN 0515	64	.00	.00	.00	0.	1 JAN 1745	214	.00	.00	.00	0.
1 JAN 0520	65	.00	.00	.00	0.	1 JAN 1750	215	.00	.00	.00	0.
1 JAN 0525	66	.00	.00	.00	0.	1 JAN 1755	216	.00	.00	.00	0.

1 JAN 0530	67	.00	.00	.00	0.	*	1 JAN 1800	217	.00	.00	.00	0.
1 JAN 0535	68	.00	.00	.00	0.	*	1 JAN 1805	218	.00	.00	.00	0.
1 JAN 0540	69	.00	.00	.00	0.	*	1 JAN 1810	219	.00	.00	.00	0.
1 JAN 0545	70	.00	.00	.00	0.	*	1 JAN 1815	220	.00	.00	.00	0.
1 JAN 0550	71	.00	.00	.00	0.	*	1 JAN 1820	221	.00	.00	.00	0.
1 JAN 0555	72	.00	.00	.00	0.	*	1 JAN 1825	222	.00	.00	.00	0.
1 JAN 0600	73	.00	.00	.00	0.	*	1 JAN 1830	223	.00	.00	.00	0.
1 JAN 0605	74	.00	.00	.00	0.	*	1 JAN 1835	224	.00	.00	.00	0.
1 JAN 0610	75	.00	.00	.00	0.	*	1 JAN 1840	225	.00	.00	.00	0.
1 JAN 0615	76	.00	.00	.00	0.	*	1 JAN 1845	226	.00	.00	.00	0.
1 JAN 0620	77	.00	.00	.00	0.	*	1 JAN 1850	227	.00	.00	.00	0.
1 JAN 0625	78	.00	.00	.00	0.	*	1 JAN 1855	228	.00	.00	.00	0.
1 JAN 0630	79	.00	.00	.00	0.	*	1 JAN 1900	229	.00	.00	.00	0.
1 JAN 0635	80	.00	.00	.00	0.	*	1 JAN 1905	230	.00	.00	.00	0.
1 JAN 0640	81	.00	.00	.00	0.	*	1 JAN 1910	231	.00	.00	.00	0.
1 JAN 0645	82	.00	.00	.00	0.	*	1 JAN 1915	232	.00	.00	.00	0.
1 JAN 0650	83	.00	.00	.00	0.	*	1 JAN 1920	233	.00	.00	.00	0.
1 JAN 0655	84	.00	.00	.00	0.	*	1 JAN 1925	234	.00	.00	.00	0.
1 JAN 0700	85	.00	.00	.00	0.	*	1 JAN 1930	235	.00	.00	.00	0.
1 JAN 0705	86	.00	.00	.00	0.	*	1 JAN 1935	236	.00	.00	.00	0.
1 JAN 0710	87	.00	.00	.00	0.	*	1 JAN 1940	237	.00	.00	.00	0.
1 JAN 0715	88	.00	.00	.00	0.	*	1 JAN 1945	238	.00	.00	.00	0.
1 JAN 0720	89	.00	.00	.00	0.	*	1 JAN 1950	239	.00	.00	.00	0.
1 JAN 0725	90	.00	.00	.00	0.	*	1 JAN 1955	240	.00	.00	.00	0.
1 JAN 0730	91	.00	.00	.00	0.	*	1 JAN 2000	241	.00	.00	.00	0.
1 JAN 0735	92	.00	.00	.00	0.	*	1 JAN 2005	242	.00	.00	.00	0.
1 JAN 0740	93	.00	.00	.00	0.	*	1 JAN 2010	243	.00	.00	.00	0.
1 JAN 0745	94	.00	.00	.00	0.	*	1 JAN 2015	244	.00	.00	.00	0.
1 JAN 0750	95	.00	.00	.00	0.	*	1 JAN 2020	245	.00	.00	.00	0.
1 JAN 0755	96	.00	.00	.00	0.	*	1 JAN 2025	246	.00	.00	.00	0.
1 JAN 0800	97	.00	.00	.00	0.	*	1 JAN 2030	247	.00	.00	.00	0.
1 JAN 0805	98	.00	.00	.00	0.	*	1 JAN 2035	248	.00	.00	.00	0.
1 JAN 0810	99	.00	.00	.00	0.	*	1 JAN 2040	249	.00	.00	.00	0.
1 JAN 0815	100	.00	.00	.00	0.	*	1 JAN 2045	250	.00	.00	.00	0.
1 JAN 0820	101	.00	.00	.00	0.	*	1 JAN 2050	251	.00	.00	.00	0.
1 JAN 0825	102	.00	.00	.00	0.	*	1 JAN 2055	252	.00	.00	.00	0.
1 JAN 0830	103	.00	.00	.00	0.	*	1 JAN 2100	253	.00	.00	.00	0.
1 JAN 0835	104	.00	.00	.00	0.	*	1 JAN 2105	254	.00	.00	.00	0.
1 JAN 0840	105	.00	.00	.00	0.	*	1 JAN 2110	255	.00	.00	.00	0.
1 JAN 0845	106	.00	.00	.00	0.	*	1 JAN 2115	256	.00	.00	.00	0.
1 JAN 0850	107	.00	.00	.00	0.	*	1 JAN 2120	257	.00	.00	.00	0.
1 JAN 0855	108	.00	.00	.00	0.	*	1 JAN 2125	258	.00	.00	.00	0.
1 JAN 0900	109	.00	.00	.00	0.	*	1 JAN 2130	259	.00	.00	.00	0.
1 JAN 0905	110	.00	.00	.00	1.	*	1 JAN 2135	260	.00	.00	.00	0.
1 JAN 0910	111	.00	.00	.00	1.	*	1 JAN 2140	261	.00	.00	.00	0.
1 JAN 0915	112	.00	.00	.00	1.	*	1 JAN 2145	262	.00	.00	.00	0.
1 JAN 0920	113	.00	.00	.00	1.	*	1 JAN 2150	263	.00	.00	.00	0.
1 JAN 0925	114	.00	.00	.00	1.	*	1 JAN 2155	264	.00	.00	.00	0.
1 JAN 0930	115	.00	.00	.00	1.	*	1 JAN 2200	265	.00	.00	.00	0.
1 JAN 0935	116	.00	.00	.00	1.	*	1 JAN 2205	266	.00	.00	.00	0.
1 JAN 0940	117	.00	.00	.00	1.	*	1 JAN 2210	267	.00	.00	.00	0.
1 JAN 0945	118	.00	.00	.00	1.	*	1 JAN 2215	268	.00	.00	.00	0.
1 JAN 0950	119	.00	.00	.00	1.	*	1 JAN 2220	269	.00	.00	.00	0.
1 JAN 0955	120	.00	.00	.00	1.	*	1 JAN 2225	270	.00	.00	.00	0.
1 JAN 1000	121	.00	.00	.00	1.	*	1 JAN 2230	271	.00	.00	.00	0.
1 JAN 1005	122	.00	.00	.00	1.	*	1 JAN 2235	272	.00	.00	.00	0.
1 JAN 1010	123	.00	.00	.00	1.	*	1 JAN 2240	273	.00	.00	.00	0.
1 JAN 1015	124	.00	.00	.00	1.	*	1 JAN 2245	274	.00	.00	.00	0.
1 JAN 1020	125	.00	.00	.00	1.	*	1 JAN 2250	275	.00	.00	.00	0.
1 JAN 1025	126	.00	.00	.00	1.	*	1 JAN 2255	276	.00	.00	.00	0.
1 JAN 1030	127	.00	.00	.00	1.	*	1 JAN 2300	277	.00	.00	.00	0.
1 JAN 1035	128	.00	.00	.00	1.	*	1 JAN 2305	278	.00	.00	.00	0.
1 JAN 1040	129	.00	.00	.00	1.	*	1 JAN 2310	279	.00	.00	.00	0.
1 JAN 1045	130	.00	.00	.00	1.	*	1 JAN 2315	280	.00	.00	.00	0.
1 JAN 1050	131	.00	.00	.00	1.	*	1 JAN 2320	281	.00	.00	.00	0.
1 JAN 1055	132	.00	.00	.00	1.	*	1 JAN 2325	282	.00	.00	.00	0.
1 JAN 1100	133	.00	.00	.00	1.	*	1 JAN 2330	283	.00	.00	.00	0.
1 JAN 1105	134	.00	.00	.00	1.	*	1 JAN 2335	284	.00	.00	.00	0.
1 JAN 1110	135	.00	.00	.00	1.	*	1 JAN 2340	285	.00	.00	.00	0.
1 JAN 1115	136	.01	.00	.00	1.	*	1 JAN 2345	286	.00	.00	.00	0.
1 JAN 1120	137	.01	.00	.00	1.	*	1 JAN 2350	287	.00	.00	.00	0.
1 JAN 1125	138	.01	.00	.00	1.	*	1 JAN 2355	288	.00	.00	.00	0.
1 JAN 1130	139	.01	.00	.00	1.	*	2 JAN 0000	289	.00	.00	.00	0.
1 JAN 1135	140	.01	.01	.01	1.	*	2 JAN 0005	290	.00	.00	.00	0.
1 JAN 1140	141	.02	.01	.01	2.	*	2 JAN 0010	291	.00	.00	.00	0.
1 JAN 1145	142	.04	.02	.02	2.	*	2 JAN 0015	292	.00	.00	.00	0.
1 JAN 1150	143	.06	.02	.03	2.	*	2 JAN 0020	293	.00	.00	.00	0.
1 JAN 1155	144	.08	.02	.05	3.	*	2 JAN 0025	294	.00	.00	.00	0.
1 JAN 1200	145	.06	.02	.04	4.	*	2 JAN 0030	295	.00	.00	.00	0.
1 JAN 1205	146	.01	.01	.00	6.	*	2 JAN 0035	296	.00	.00	.00	0.
1 JAN 1210	147	.01	.01	.00	8.	*	2 JAN 0040	297	.00	.00	.00	0.
1 JAN 1215	148	.01	.01	.00	10.	*	2 JAN 0045	298	.00	.00	.00	0.
1 JAN 1220	149	.01	.00	.00	12.	*	2 JAN 0050	299	.00	.00	.00	0.
1 JAN 1225	150	.01	.00	.00	13.	*	2 JAN 0055	300	.00	.00	.00	0.
						*						

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TOTAL RAINFALL = .70, TOTAL LOSS = .36, TOTAL EXCESS = .34

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW	6-HR	24-HR	72-HR	24.92-HR
		(CFS)	3.	1.	1.	1.
13.	12.50	(INCHES)	.255	.341	.341	.341
		(AC-FT)	1.	2.	2.	2.

CUMULATIVE AREA = .10 SQ MI

****

HYDROGRAPH AT STATION 13-2
PLAN 1, RATIO = 2.81

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	0000	1	.00	.00	.00	0.	1	JAN	1230	151	.02	.01	.01	55.
1	JAN	0005	2	.00	.00	.00	0.	1	JAN	1235	152	.01	.01	.01	52.
1	JAN	0010	3	.00	.00	.00	0.	1	JAN	1240	153	.01	.01	.01	48.
1	JAN	0015	4	.00	.00	.00	0.	1	JAN	1245	154	.01	.01	.01	42.
1	JAN	0020	5	.00	.00	.00	0.	1	JAN	1250	155	.01	.01	.00	36.
1	JAN	0025	6	.00	.00	.00	0.	1	JAN	1255	156	.01	.01	.00	31.
1	JAN	0030	7	.00	.00	.00	0.	1	JAN	1300	157	.01	.01	.00	26.
1	JAN	0035	8	.00	.00	.00	0.	1	JAN	1305	158	.01	.01	.00	22.
1	JAN	0040	9	.00	.00	.00	0.	1	JAN	1310	159	.01	.01	.00	19.
1	JAN	0045	10	.00	.00	.00	0.	1	JAN	1315	160	.01	.01	.00	16.
1	JAN	0050	11	.00	.00	.00	0.	1	JAN	1320	161	.01	.01	.00	14.
1	JAN	0055	12	.00	.00	.00	0.	1	JAN	1325	162	.01	.00	.00	12.
1	JAN	0100	13	.00	.00	.00	0.	1	JAN	1330	163	.01	.00	.00	10.
1	JAN	0105	14	.00	.00	.00	0.	1	JAN	1335	164	.01	.00	.00	9.
1	JAN	0110	15	.00	.00	.00	0.	1	JAN	1340	165	.01	.00	.00	8.
1	JAN	0115	16	.00	.00	.00	1.	1	JAN	1345	166	.01	.00	.00	7.
1	JAN	0120	17	.00	.00	.00	1.	1	JAN	1350	167	.01	.00	.00	6.
1	JAN	0125	18	.00	.00	.00	1.	1	JAN	1355	168	.01	.00	.00	5.
1	JAN	0130	19	.00	.00	.00	1.	1	JAN	1400	169	.01	.00	.00	5.
1	JAN	0135	20	.00	.00	.00	1.	1	JAN	1405	170	.01	.00	.00	4.
1	JAN	0140	21	.00	.00	.00	1.	1	JAN	1410	171	.01	.00	.00	4.
1	JAN	0145	22	.00	.00	.00	1.	1	JAN	1415	172	.01	.00	.00	4.
1	JAN	0150	23	.00	.00	.00	1.	1	JAN	1420	173	.01	.00	.00	3.
1	JAN	0155	24	.00	.00	.00	1.	1	JAN	1425	174	.01	.00	.00	3.
1	JAN	0200	25	.00	.00	.00	1.	1	JAN	1430	175	.01	.00	.00	3.
1	JAN	0205	26	.00	.00	.00	1.	1	JAN	1435	176	.01	.00	.00	3.
1	JAN	0210	27	.00	.00	.00	1.	1	JAN	1440	177	.01	.00	.00	3.
1	JAN	0215	28	.00	.00	.00	1.	1	JAN	1445	178	.01	.00	.00	2.
1	JAN	0220	29	.00	.00	.00	1.	1	JAN	1450	179	.01	.00	.00	2.
1	JAN	0225	30	.00	.00	.00	1.	1	JAN	1455	180	.01	.00	.00	2.
1	JAN	0230	31	.00	.00	.00	1.	1	JAN	1500	181	.00	.00	.00	2.
1	JAN	0235	32	.00	.00	.00	1.	1	JAN	1505	182	.00	.00	.00	2.
1	JAN	0240	33	.00	.00	.00	1.	1	JAN	1510	183	.00	.00	.00	2.
1	JAN	0245	34	.00	.00	.00	1.	1	JAN	1515	184	.00	.00	.00	2.
1	JAN	0250	35	.00	.00	.00	1.	1	JAN	1520	185	.00	.00	.00	2.
1	JAN	0255	36	.00	.00	.00	1.	1	JAN	1525	186	.00	.00	.00	2.
1	JAN	0300	37	.00	.00	.00	1.	1	JAN	1530	187	.00	.00	.00	2.
1	JAN	0305	38	.00	.00	.00	1.	1	JAN	1535	188	.00	.00	.00	2.
1	JAN	0310	39	.00	.00	.00	1.	1	JAN	1540	189	.00	.00	.00	2.
1	JAN	0315	40	.00	.00	.00	1.	1	JAN	1545	190	.00	.00	.00	2.
1	JAN	0320	41	.00	.00	.00	1.	1	JAN	1550	191	.00	.00	.00	2.
1	JAN	0325	42	.00	.00	.00	1.	1	JAN	1555	192	.00	.00	.00	2.
1	JAN	0330	43	.00	.00	.00	1.	1	JAN	1600	193	.00	.00	.00	2.
1	JAN	0335	44	.00	.00	.00	1.	1	JAN	1605	194	.00	.00	.00	2.
1	JAN	0340	45	.00	.00	.00	1.	1	JAN	1610	195	.00	.00	.00	2.
1	JAN	0345	46	.00	.00	.00	1.	1	JAN	1615	196	.00	.00	.00	1.
1	JAN	0350	47	.00	.00	.00	1.	1	JAN	1620	197	.00	.00	.00	1.
1	JAN	0355	48	.00	.00	.00	1.	1	JAN	1625	198	.00	.00	.00	1.
1	JAN	0400	49	.00	.00	.00	1.	1	JAN	1630	199	.00	.00	.00	1.
1	JAN	0405	50	.00	.00	.00	1.	1	JAN	1635	200	.00	.00	.00	1.
1	JAN	0410	51	.00	.00	.00	1.	1	JAN	1640	201	.00	.00	.00	1.
1	JAN	0415	52	.00	.00	.00	1.	1	JAN	1645	202	.00	.00	.00	1.
1	JAN	0420	53	.00	.00	.00	1.	1	JAN	1650	203	.00	.00	.00	1.
1	JAN	0425	54	.00	.00	.00	1.	1	JAN	1655	204	.00	.00	.00	1.
1	JAN	0430	55	.00	.00	.00	1.	1	JAN	1700	205	.00	.00	.00	1.
1	JAN	0435	56	.00	.00	.00	1.	1	JAN	1705	206	.00	.00	.00	1.
1	JAN	0440	57	.00	.00	.00	1.	1	JAN	1710	207	.00	.00	.00	1.
1	JAN	0445	58	.00	.00	.00	1.	1	JAN	1715	208	.00	.00	.00	1.
1	JAN	0450	59	.00	.00	.00	1.	1	JAN	1720	209	.00	.00	.00	1.
1	JAN	0455	60	.00	.00	.00	1.	1	JAN	1725	210	.00	.00	.00	1.
1	JAN	0500	61	.00	.00	.00	1.	1	JAN	1730	211	.00	.00	.00	1.
1	JAN	0505	62	.00	.00	.00	1.	1	JAN	1735	212	.00	.00	.00	1.
1	JAN	0510	63	.00	.00	.00	1.	1	JAN	1740	213	.00	.00	.00	1.
1	JAN	0515	64	.00	.00	.00	1.	1	JAN	1745	214	.00	.00	.00	1.
1	JAN	0520	65	.00	.00	.00	1.	1	JAN	1750	215	.00	.00	.00	1.

1 JAN 0525	66	.00	.00	.00	1.	*	1 JAN 1755	216	.00	.00	.00	1.
1 JAN 0530	67	.00	.00	.00	1.	*	1 JAN 1800	217	.00	.00	.00	1.
1 JAN 0535	68	.00	.00	.00	1.	*	1 JAN 1805	218	.00	.00	.00	1.
1 JAN 0540	69	.00	.00	.00	1.	*	1 JAN 1810	219	.00	.00	.00	1.
1 JAN 0545	70	.00	.00	.00	1.	*	1 JAN 1815	220	.00	.00	.00	1.
1 JAN 0550	71	.00	.00	.00	1.	*	1 JAN 1820	221	.00	.00	.00	1.
1 JAN 0555	72	.00	.00	.00	1.	*	1 JAN 1825	222	.00	.00	.00	
1 JAN 0600	73	.00	.00	.00	1.	*	1 JAN 1830	223	.00	.00	.00	
1 JAN 0605	74	.00	.00	.00	1.	*	1 JAN 1835	224	.00	.00	.00	1.
1 JAN 0610	75	.00	.00	.00	1.	*	1 JAN 1840	225	.00	.00	.00	1.
1 JAN 0615	76	.00	.00	.00	1.	*	1 JAN 1845	226	.00	.00	.00	1.
1 JAN 0620	77	.00	.00	.00	1.	*	1 JAN 1850	227	.00	.00	.00	1.
1 JAN 0625	78	.00	.00	.00	1.	*	1 JAN 1855	228	.00	.00	.00	1.
1 JAN 0630	79	.00	.00	.00	1.	*	1 JAN 1900	229	.00	.00	.00	1.
1 JAN 0635	80	.00	.00	.00	1.	*	1 JAN 1905	230	.00	.00	.00	1.
1 JAN 0640	81	.00	.00	.00	1.	*	1 JAN 1910	231	.00	.00	.00	1.
1 JAN 0645	82	.00	.00	.00	1.	*	1 JAN 1915	232	.00	.00	.00	1.
1 JAN 0650	83	.00	.00	.00	1.	*	1 JAN 1920	233	.00	.00	.00	1.
1 JAN 0655	84	.00	.00	.00	1.	*	1 JAN 1925	234	.00	.00	.00	1.
1 JAN 0700	85	.00	.00	.00	1.	*	1 JAN 1930	235	.00	.00	.00	1.
1 JAN 0705	86	.00	.00	.00	1.	*	1 JAN 1935	236	.00	.00	.00	1.
1 JAN 0710	87	.00	.00	.00	1.	*	1 JAN 1940	237	.00	.00	.00	1.
1 JAN 0715	88	.00	.00	.00	1.	*	1 JAN 1945	238	.00	.00	.00	1.
1 JAN 0720	89	.00	.00	.00	1.	*	1 JAN 1950	239	.00	.00	.00	1.
1 JAN 0725	90	.00	.00	.00	1.	*	1 JAN 1955	240	.00	.00	.00	1.
1 JAN 0730	91	.00	.00	.00	1.	*	1 JAN 2000	241	.00	.00	.00	1.
1 JAN 0735	92	.00	.00	.00	1.	*	1 JAN 2005	242	.00	.00	.00	1.
1 JAN 0740	93	.00	.00	.00	1.	*	1 JAN 2010	243	.00	.00	.00	1.
1 JAN 0745	94	.00	.00	.00	1.	*	1 JAN 2015	244	.00	.00	.00	1.
1 JAN 0750	95	.00	.00	.00	1.	*	1 JAN 2020	245	.00	.00	.00	1.
1 JAN 0755	96	.00	.00	.00	1.	*	1 JAN 2025	246	.00	.00	.00	1.
1 JAN 0800	97	.00	.00	.00	1.	*	1 JAN 2030	247	.00	.00	.00	1.
1 JAN 0805	98	.00	.00	.00	1.	*	1 JAN 2035	248	.00	.00	.00	1.
1 JAN 0810	99	.00	.00	.00	1.	*	1 JAN 2040	249	.00	.00	.00	1.
1 JAN 0815	100	.00	.00	.00	1.	*	1 JAN 2045	250	.00	.00	.00	1.
1 JAN 0820	101	.00	.00	.00	1.	*	1 JAN 2050	251	.00	.00	.00	1.
1 JAN 0825	102	.00	.00	.00	1.	*	1 JAN 2055	252	.00	.00	.00	1.
1 JAN 0830	103	.00	.00	.00	1.	*	1 JAN 2100	253	.00	.00	.00	1.
1 JAN 0835	104	.00	.00	.00	1.	*	1 JAN 2105	254	.00	.00	.00	1.
1 JAN 0840	105	.00	.00	.00	1.	*	1 JAN 2110	255	.00	.00	.00	1.
1 JAN 0845	106	.00	.00	.00	1.	*	1 JAN 2115	256	.00	.00	.00	1.
1 JAN 0850	107	.00	.00	.00	1.	*	1 JAN 2120	257	.00	.00	.00	1.
1 JAN 0855	108	.01	.00	.00	1.	*	1 JAN 2125	258	.00	.00	.00	1.
1 JAN 0900	109	.01	.00	.00	1.	*	1 JAN 2130	259	.00	.00	.00	1.
1 JAN 0905	110	.01	.00	.00	1.	*	1 JAN 2135	260	.00	.00	.00	
1 JAN 0910	111	.01	.00	.00	1.	*	1 JAN 2140	261	.00	.00	.00	
1 JAN 0915	112	.01	.00	.00	1.	*	1 JAN 2145	262	.00	.00	.00	1.
1 JAN 0920	113	.01	.00	.00	2.	*	1 JAN 2150	263	.00	.00	.00	1.
1 JAN 0925	114	.01	.00	.00	2.	*	1 JAN 2155	264	.00	.00	.00	1.
1 JAN 0930	115	.01	.00	.00	2.	*	1 JAN 2200	265	.00	.00	.00	1.
1 JAN 0935	116	.01	.00	.00	2.	*	1 JAN 2205	266	.00	.00	.00	1.
1 JAN 0940	117	.01	.00	.00	2.	*	1 JAN 2210	267	.00	.00	.00	1.
1 JAN 0945	118	.01	.00	.00	2.	*	1 JAN 2215	268	.00	.00	.00	1.
1 JAN 0950	119	.01	.00	.00	2.	*	1 JAN 2220	269	.00	.00	.00	1.
1 JAN 0955	120	.01	.00	.00	2.	*	1 JAN 2225	270	.00	.00	.00	1.
1 JAN 1000	121	.01	.00	.00	2.	*	1 JAN 2230	271	.00	.00	.00	1.
1 JAN 1005	122	.01	.00	.00	2.	*	1 JAN 2235	272	.00	.00	.00	1.
1 JAN 1010	123	.01	.00	.00	2.	*	1 JAN 2240	273	.00	.00	.00	1.
1 JAN 1015	124	.01	.00	.00	2.	*	1 JAN 2245	274	.00	.00	.00	1.
1 JAN 1020	125	.01	.00	.00	2.	*	1 JAN 2250	275	.00	.00	.00	1.
1 JAN 1025	126	.01	.00	.00	2.	*	1 JAN 2255	276	.00	.00	.00	1.
1 JAN 1030	127	.01	.00	.00	2.	*	1 JAN 2300	277	.00	.00	.00	1.
1 JAN 1035	128	.01	.01	.00	2.	*	1 JAN 2305	278	.00	.00	.00	1.
1 JAN 1040	129	.01	.01	.00	2.	*	1 JAN 2310	279	.00	.00	.00	1.
1 JAN 1045	130	.01	.01	.00	2.	*	1 JAN 2315	280	.00	.00	.00	1.
1 JAN 1050	131	.01	.01	.00	2.	*	1 JAN 2320	281	.00	.00	.00	1.
1 JAN 1055	132	.01	.01	.00	2.	*	1 JAN 2325	282	.00	.00	.00	1.
1 JAN 1100	133	.01	.01	.00	3.	*	1 JAN 2330	283	.00	.00	.00	1.
1 JAN 1105	134	.01	.01	.01	3.	*	1 JAN 2335	284	.00	.00	.00	1.
1 JAN 1110	135	.01	.01	.01	3.	*	1 JAN 2340	285	.00	.00	.00	1.
1 JAN 1115	136	.02	.01	.01	3.	*	1 JAN 2345	286	.00	.00	.00	1.
1 JAN 1120	137	.02	.01	.01	3.	*	1 JAN 2350	287	.00	.00	.00	1.
1 JAN 1125	138	.02	.01	.01	3.	*	1 JAN 2355	288	.00	.00	.00	1.
1 JAN 1130	139	.02	.01	.01	4.	*	2 JAN 0000	289	.00	.00	.00	1.
1 JAN 1135	140	.04	.01	.03	4.	*	2 JAN 0005	290	.00	.00	.00	1.
1 JAN 1140	141	.07	.01	.06	5.	*	2 JAN 0010	291	.00	.00	.00	1.
1 JAN 1145	142	.11	.01	.10	6.	*	2 JAN 0015	292	.00	.00	.00	1.
1 JAN 1150	143	.17	.01	.15	8.	*	2 JAN 0020	293	.00	.00	.00	1.
1 JAN 1155	144	.21	.01	.20	13.	*	2 JAN 0025	294	.00	.00	.00	1.
1 JAN 1200	145	.16	.01	.15	19.	*	2 JAN 0030	295	.00	.00	.00	0.
1 JAN 1205	146	.03	.01	.02	27.	*	2 JAN 0035	296	.00	.00	.00	0.
1 JAN 1210	147	.03	.01	.02	36.	*	2 JAN 0040	297	.00	.00	.00	0.
1 JAN 1215	148	.03	.01	.02	45.	*	2 JAN 0045	298	.00	.00	.00	
1 JAN 1220	149	.02	.01	.01	51.	*	2 JAN 0050	299	.00	.00	.00	
1 JAN 1225	150	.02	.01	.01	55.	*	2 JAN 0055	300	.00	.00	.00	0.
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     TOTAL RAINFALL =     1.97, TOTAL LOSS =      .74, TOTAL EXCESS =     1.23

   PEAK FLOW      TIME                              MAXIMUM AVERAGE FLOW
                                          6-HR         24-HR        72-HR       24.92-HR
+    (CFS)        (HR)
                               (CFS)
       55.       12.50                    11.           3.           3.            3.
                             (INCHES)    .982        1.223        1.224         1.224
                              (AC-FT)      5.           7.           7.            7.

                             CUMULATIVE AREA =      .10 SQ MI


 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
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              **************
              *            *
   47 KK      *    13-3B   *
              *            *
              **************

   48 KO          OUTPUT CONTROL VARIABLES
                         IPRNT          1  PRINT CONTROL
                         IPLOT          0  PLOT CONTROL
                         QSCAL         0.  HYDROGRAPH PLOT SCALE
                         IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                          IOUT         22  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

   49 BA          SUBBASIN CHARACTERISTICS
                         TAREA        .14  SUBBASIN AREA

                  PRECIPITATION DATA

   50 PB                 STORM        .70  BASIN TOTAL PRECIPITATION

   14 PI            INCREMENTAL PRECIPITATION PATTERN
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .01      .01
                   .01      .01      .01      .01      .01      .01      .01      .01      .02      .04
                   .05      .08      .11      .08      .02      .01      .01      .01      .01      .01
                   .01      .01      .01      .01      .01      .01      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00

   51 LG            GREEN AND AMPT LOSS RATE
                         STRTL        .09  STARTING LOSS
                           DTH        .15  MOISTURE DEFICIT
                          PSIF       9.20  WETTING FRONT SUCTION
                         XKSAT        .04  HYDRAULIC CONDUCTIVITY
                         RTIMP      50.00  PERCENT IMPERVIOUS AREA

   52 UD            SCS DIMENSIONLESS UNITGRAPH
                          TLAG       1.07  LAG

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                                           UNIT HYDROGRAPH
                                       66 END-OF-PERIOD ORDINATES
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1.	4.	7.	12.	17.	24.	32.	40.	48.	53.
58.	60.	61.	61.	59.	57.	53.	50.	46.	41.
36.	31.	27.	24.	21.	18.	16.	15.	13.	12.
10.	9.	8.	7.	6.	6.	5.	4.	4.	3.
3.	3.	2.	2.	2.	2.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.				

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HYDROGRAPH AT STATION 13-3B

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DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 0000	1	.00	.00	.00	0.	1 JAN 1230	151	.01	.00	.00	10.
1 JAN 0005	2	.00	.00	.00	0.	1 JAN 1235	152	.00	.00	.00	12.
1 JAN 0010	3	.00	.00	.00	0.	1 JAN 1240	153	.00	.00	.00	13.
1 JAN 0015	4	.00	.00	.00	0.	1 JAN 1245	154	.00	.00	.00	13.
1 JAN 0020	5	.00	.00	.00	0.	1 JAN 1250	155	.00	.00	.00	14.
1 JAN 0025	6	.00	.00	.00	0.	1 JAN 1255	156	.00	.00	.00	14.
1 JAN 0030	7	.00	.00	.00	0.	1 JAN 1300	157	.00	.00	.00	14.
1 JAN 0035	8	.00	.00	.00	0.	1 JAN 1305	158	.00	.00	.00	13.
1 JAN 0040	9	.00	.00	.00	0.	1 JAN 1310	159	.00	.00	.00	13.
1 JAN 0045	10	.00	.00	.00	0.	1 JAN 1315	160	.00	.00	.00	12.
1 JAN 0050	11	.00	.00	.00	0.	1 JAN 1320	161	.00	.00	.00	12.
1 JAN 0055	12	.00	.00	.00	0.	1 JAN 1325	162	.00	.00	.00	11.
1 JAN 0100	13	.00	.00	.00	0.	1 JAN 1330	163	.00	.00	.00	10.
1 JAN 0105	14	.00	.00	.00	0.	1 JAN 1335	164	.00	.00	.00	9.
1 JAN 0110	15	.00	.00	.00	0.	1 JAN 1340	165	.00	.00	.00	8.
1 JAN 0115	16	.00	.00	.00	0.	1 JAN 1345	166	.00	.00	.00	7.
1 JAN 0120	17	.00	.00	.00	0.	1 JAN 1350	167	.00	.00	.00	7.
1 JAN 0125	18	.00	.00	.00	0.	1 JAN 1355	168	.00	.00	.00	6.
1 JAN 0130	19	.00	.00	.00	0.	1 JAN 1400	169	.00	.00	.00	6.
1 JAN 0135	20	.00	.00	.00	0.	1 JAN 1405	170	.00	.00	.00	5.
1 JAN 0140	21	.00	.00	.00	0.	1 JAN 1410	171	.00	.00	.00	5.
1 JAN 0145	22	.00	.00	.00	0.	1 JAN 1415	172	.00	.00	.00	4.
1 JAN 0150	23	.00	.00	.00	0.	1 JAN 1420	173	.00	.00	.00	4.
1 JAN 0155	24	.00	.00	.00	0.	1 JAN 1425	174	.00	.00	.00	4.
1 JAN 0200	25	.00	.00	.00	0.	1 JAN 1430	175	.00	.00	.00	4
1 JAN 0205	26	.00	.00	.00	0.	1 JAN 1435	176	.00	.00	.00	
1 JAN 0210	27	.00	.00	.00	0.	1 JAN 1440	177	.00	.00	.00	3.
1 JAN 0215	28	.00	.00	.00	0.	1 JAN 1445	178	.00	.00	.00	3.
1 JAN 0220	29	.00	.00	.00	0.	1 JAN 1450	179	.00	.00	.00	3.
1 JAN 0225	30	.00	.00	.00	0.	1 JAN 1455	180	.00	.00	.00	2.
1 JAN 0230	31	.00	.00	.00	0.	1 JAN 1500	181	.00	.00	.00	2.
1 JAN 0235	32	.00	.00	.00	0.	1 JAN 1505	182	.00	.00	.00	2.
1 JAN 0240	33	.00	.00	.00	0.	1 JAN 1510	183	.00	.00	.00	2.
1 JAN 0245	34	.00	.00	.00	0.	1 JAN 1515	184	.00	.00	.00	2.
1 JAN 0250	35	.00	.00	.00	0.	1 JAN 1520	185	.00	.00	.00	2.
1 JAN 0255	36	.00	.00	.00	0.	1 JAN 1525	186	.00	.00	.00	2.
1 JAN 0300	37	.00	.00	.00	0.	1 JAN 1530	187	.00	.00	.00	2.
1 JAN 0305	38	.00	.00	.00	0.	1 JAN 1535	188	.00	.00	.00	2.
1 JAN 0310	39	.00	.00	.00	0.	1 JAN 1540	189	.00	.00	.00	2.
1 JAN 0315	40	.00	.00	.00	0.	1 JAN 1545	190	.00	.00	.00	1.
1 JAN 0320	41	.00	.00	.00	0.	1 JAN 1550	191	.00	.00	.00	1.
1 JAN 0325	42	.00	.00	.00	0.	1 JAN 1555	192	.00	.00	.00	1.
1 JAN 0330	43	.00	.00	.00	0.	1 JAN 1600	193	.00	.00	.00	1.
1 JAN 0335	44	.00	.00	.00	0.	1 JAN 1605	194	.00	.00	.00	1.
1 JAN 0340	45	.00	.00	.00	0.	1 JAN 1610	195	.00	.00	.00	1.
1 JAN 0345	46	.00	.00	.00	0.	1 JAN 1615	196	.00	.00	.00	1.
1 JAN 0350	47	.00	.00	.00	0.	1 JAN 1620	197	.00	.00	.00	1.
1 JAN 0355	48	.00	.00	.00	0.	1 JAN 1625	198	.00	.00	.00	1.
1 JAN 0400	49	.00	.00	.00	0.	1 JAN 1630	199	.00	.00	.00	1.
1 JAN 0405	50	.00	.00	.00	0.	1 JAN 1635	200	.00	.00	.00	1.
1 JAN 0410	51	.00	.00	.00	0.	1 JAN 1640	201	.00	.00	.00	1.
1 JAN 0415	52	.00	.00	.00	0.	1 JAN 1645	202	.00	.00	.00	1.
1 JAN 0420	53	.00	.00	.00	0.	1 JAN 1650	203	.00	.00	.00	1.
1 JAN 0425	54	.00	.00	.00	0.	1 JAN 1655	204	.00	.00	.00	1.
1 JAN 0430	55	.00	.00	.00	0.	1 JAN 1700	205	.00	.00	.00	1.
1 JAN 0435	56	.00	.00	.00	0.	1 JAN 1705	206	.00	.00	.00	1.
1 JAN 0440	57	.00	.00	.00	0.	1 JAN 1710	207	.00	.00	.00	1.
1 JAN 0445	58	.00	.00	.00	0.	1 JAN 1715	208	.00	.00	.00	1.
1 JAN 0450	59	.00	.00	.00	0.	1 JAN 1720	209	.00	.00	.00	1.
1 JAN 0455	60	.00	.00	.00	0.	1 JAN 1725	210	.00	.00	.00	1.
1 JAN 0500	61	.00	.00	.00	0.	1 JAN 1730	211	.00	.00	.00	1.
1 JAN 0505	62	.00	.00	.00	0.	1 JAN 1735	212	.00	.00	.00	1.
1 JAN 0510	63	.00	.00	.00	0.	1 JAN 1740	213	.00	.00	.00	1
1 JAN 0515	64	.00	.00	.00	0.	1 JAN 1745	214	.00	.00	.00	
1 JAN 0520	65	.00	.00	.00	0.	1 JAN 1750	215	.00	.00	.00	1.
1 JAN 0525	66	.00	.00	.00	0.	1 JAN 1755	216	.00	.00	.00	1.
1 JAN 0530	67	.00	.00	.00	0.	1 JAN 1800	217	.00	.00	.00	1.
1 JAN 0535	68	.00	.00	.00	0.	1 JAN 1805	218	.00	.00	.00	1.
1 JAN 0540	69	.00	.00	.00	0.	1 JAN 1810	219	.00	.00	.00	1.
1 JAN 0545	70	.00	.00	.00	0.	1 JAN 1815	220	.00	.00	.00	1.

1 JAN 0550	71	.00	.00	.00	0.	*	1 JAN 1820	221	.00	.00	.00	1.
1 JAN 0555	72	.00	.00	.00	0.	*	1 JAN 1825	222	.00	.00	.00	1.
1 JAN 0600	73	.00	.00	.00	0.	*	1 JAN 1830	223	.00	.00	.00	1.
1 JAN 0605	74	.00	.00	.00	0.	*	1 JAN 1835	224	.00	.00	.00	1.
1 JAN 0610	75	.00	.00	.00	0.	*	1 JAN 1840	225	.00	.00	.00	1.
1 JAN 0615	76	.00	.00	.00	0.	*	1 JAN 1845	226	.00	.00	.00	1.
1 JAN 0620	77	.00	.00	.00	1.	*	1 JAN 1850	227	.00	.00	.00	1.
1 JAN 0625	78	.00	.00	.00	1.	*	1 JAN 1855	228	.00	.00	.00	1.
1 JAN 0630	79	.00	.00	.00	1.	*	1 JAN 1900	229	.00	.00	.00	1.
1 JAN 0635	80	.00	.00	.00	1.	*	1 JAN 1905	230	.00	.00	.00	1.
1 JAN 0640	81	.00	.00	.00	1.	*	1 JAN 1910	231	.00	.00	.00	1.
1 JAN 0645	82	.00	.00	.00	1.	*	1 JAN 1915	232	.00	.00	.00	1.
1 JAN 0650	83	.00	.00	.00	1.	*	1 JAN 1920	233	.00	.00	.00	1.
1 JAN 0655	84	.00	.00	.00	1.	*	1 JAN 1925	234	.00	.00	.00	1.
1 JAN 0700	85	.00	.00	.00	1.	*	1 JAN 1930	235	.00	.00	.00	1.
1 JAN 0705	86	.00	.00	.00	1.	*	1 JAN 1935	236	.00	.00	.00	1.
1 JAN 0710	87	.00	.00	.00	1.	*	1 JAN 1940	237	.00	.00	.00	1.
1 JAN 0715	88	.00	.00	.00	1.	*	1 JAN 1945	238	.00	.00	.00	1.
1 JAN 0720	89	.00	.00	.00	1.	*	1 JAN 1950	239	.00	.00	.00	1.
1 JAN 0725	90	.00	.00	.00	1.	*	1 JAN 1955	240	.00	.00	.00	1.
1 JAN 0730	91	.00	.00	.00	1.	*	1 JAN 2000	241	.00	.00	.00	1.
1 JAN 0735	92	.00	.00	.00	1.	*	1 JAN 2005	242	.00	.00	.00	1.
1 JAN 0740	93	.00	.00	.00	1.	*	1 JAN 2010	243	.00	.00	.00	1.
1 JAN 0745	94	.00	.00	.00	1.	*	1 JAN 2015	244	.00	.00	.00	1.
1 JAN 0750	95	.00	.00	.00	1.	*	1 JAN 2020	245	.00	.00	.00	0.
1 JAN 0755	96	.00	.00	.00	1.	*	1 JAN 2025	246	.00	.00	.00	0.
1 JAN 0800	97	.00	.00	.00	1.	*	1 JAN 2030	247	.00	.00	.00	0.
1 JAN 0805	98	.00	.00	.00	1.	*	1 JAN 2035	248	.00	.00	.00	0.
1 JAN 0810	99	.00	.00	.00	1.	*	1 JAN 2040	249	.00	.00	.00	0.
1 JAN 0815	100	.00	.00	.00	1.	*	1 JAN 2045	250	.00	.00	.00	0.
1 JAN 0820	101	.00	.00	.00	1.	*	1 JAN 2050	251	.00	.00	.00	0.
1 JAN 0825	102	.00	.00	.00	1.	*	1 JAN 2055	252	.00	.00	.00	0.
1 JAN 0830	103	.00	.00	.00	1.	*	1 JAN 2100	253	.00	.00	.00	0.
1 JAN 0835	104	.00	.00	.00	1.	*	1 JAN 2105	254	.00	.00	.00	0.
1 JAN 0840	105	.00	.00	.00	1.	*	1 JAN 2110	255	.00	.00	.00	0.
1 JAN 0845	106	.00	.00	.00	1.	*	1 JAN 2115	256	.00	.00	.00	0.
1 JAN 0850	107	.00	.00	.00	1.	*	1 JAN 2120	257	.00	.00	.00	0.
1 JAN 0855	108	.00	.00	.00	1.	*	1 JAN 2125	258	.00	.00	.00	0.
1 JAN 0900	109	.00	.00	.00	1.	*	1 JAN 2130	259	.00	.00	.00	0.
1 JAN 0905	110	.00	.00	.00	1.	*	1 JAN 2135	260	.00	.00	.00	0.
1 JAN 0910	111	.00	.00	.00	1.	*	1 JAN 2140	261	.00	.00	.00	0.
1 JAN 0915	112	.00	.00	.00	1.	*	1 JAN 2145	262	.00	.00	.00	0.
1 JAN 0920	113	.00	.00	.00	1.	*	1 JAN 2150	263	.00	.00	.00	0.
1 JAN 0925	114	.00	.00	.00	1.	*	1 JAN 2155	264	.00	.00	.00	0.
1 JAN 0930	115	.00	.00	.00	1.	*	1 JAN 2200	265	.00	.00	.00	0.
1 JAN 0935	116	.00	.00	.00	1.	*	1 JAN 2205	266	.00	.00	.00	0.
1 JAN 0940	117	.00	.00	.00	1.	*	1 JAN 2210	267	.00	.00	.00	0.
1 JAN 0945	118	.00	.00	.00	1.	*	1 JAN 2215	268	.00	.00	.00	0.
1 JAN 0950	119	.00	.00	.00	1.	*	1 JAN 2220	269	.00	.00	.00	0.
1 JAN 0955	120	.00	.00	.00	1.	*	1 JAN 2225	270	.00	.00	.00	0.
1 JAN 1000	121	.00	.00	.00	1.	*	1 JAN 2230	271	.00	.00	.00	0.
1 JAN 1005	122	.00	.00	.00	1.	*	1 JAN 2235	272	.00	.00	.00	0.
1 JAN 1010	123	.00	.00	.00	1.	*	1 JAN 2240	273	.00	.00	.00	0.
1 JAN 1015	124	.00	.00	.00	1.	*	1 JAN 2245	274	.00	.00	.00	0.
1 JAN 1020	125	.00	.00	.00	1.	*	1 JAN 2250	275	.00	.00	.00	0.
1 JAN 1025	126	.00	.00	.00	1.	*	1 JAN 2255	276	.00	.00	.00	0.
1 JAN 1030	127	.00	.00	.00	1.	*	1 JAN 2300	277	.00	.00	.00	0.
1 JAN 1035	128	.00	.00	.00	1.	*	1 JAN 2305	278	.00	.00	.00	0.
1 JAN 1040	129	.00	.00	.00	1.	*	1 JAN 2310	279	.00	.00	.00	0.
1 JAN 1045	130	.00	.00	.00	1.	*	1 JAN 2315	280	.00	.00	.00	0.
1 JAN 1050	131	.00	.00	.00	1.	*	1 JAN 2320	281	.00	.00	.00	0.
1 JAN 1055	132	.00	.00	.00	1.	*	1 JAN 2325	282	.00	.00	.00	0.
1 JAN 1100	133	.00	.00	.00	1.	*	1 JAN 2330	283	.00	.00	.00	0.
1 JAN 1105	134	.00	.00	.00	1.	*	1 JAN 2335	284	.00	.00	.00	0.
1 JAN 1110	135	.00	.00	.00	1.	*	1 JAN 2340	285	.00	.00	.00	0.
1 JAN 1115	136	.01	.00	.00	1.	*	1 JAN 2345	286	.00	.00	.00	0.
1 JAN 1120	137	.01	.00	.00	1.	*	1 JAN 2350	287	.00	.00	.00	0.
1 JAN 1125	138	.01	.00	.00	1.	*	1 JAN 2355	288	.00	.00	.00	0.
1 JAN 1130	139	.01	.00	.00	2.	*	2 JAN 0000	289	.00	.00	.00	0.
1 JAN 1135	140	.01	.01	.01	2.	*	2 JAN 0005	290	.00	.00	.00	0.
1 JAN 1140	141	.02	.01	.01	2.	*	2 JAN 0010	291	.00	.00	.00	0.
1 JAN 1145	142	.04	.02	.02	2.	*	2 JAN 0015	292	.00	.00	.00	0.
1 JAN 1150	143	.06	.01	.04	2.	*	2 JAN 0020	293	.00	.00	.00	0.
1 JAN 1155	144	.08	.01	.06	3.	*	2 JAN 0025	294	.00	.00	.00	0.
1 JAN 1200	145	.06	.01	.04	3.	*	2 JAN 0030	295	.00	.00	.00	0.
1 JAN 1205	146	.01	.01	.01	4.	*	2 JAN 0035	296	.00	.00	.00	0.
1 JAN 1210	147	.01	.00	.00	5.	*	2 JAN 0040	297	.00	.00	.00	0.
1 JAN 1215	148	.01	.00	.00	6.	*	2 JAN 0045	298	.00	.00	.00	0.
1 JAN 1220	149	.01	.00	.00	7.	*	2 JAN 0050	299	.00	.00	.00	0.
1 JAN 1225	150	.01	.00	.00	9.	*	2 JAN 0055	300	.00	.00	.00	0.
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TOTAL RAINFALL = .70, TOTAL LOSS = .29, TOTAL EXCESS = .41

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				

		(CFS)				
+	14.	12.92	5.	2.	1.	1.
		(INCHES)	.306	.408	.408	.408
		(AC-FT)	2.	3.	3.	3.

CUMULATIVE AREA = .14 SQ MI

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HYDROGRAPH AT STATION 13-3B
PLAN 1, RATIO = 1.00

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	0000	1	.00	.00	.00	0.	1	JAN	1230	151	.01	.00	.00	10.
1	JAN	0005	2	.00	.00	.00	0.	1	JAN	1235	152	.00	.00	.00	12.
1	JAN	0010	3	.00	.00	.00	0.	1	JAN	1240	153	.00	.00	.00	13.
1	JAN	0015	4	.00	.00	.00	0.	1	JAN	1245	154	.00	.00	.00	13.
1	JAN	0020	5	.00	.00	.00	0.	1	JAN	1250	155	.00	.00	.00	14.
1	JAN	0025	6	.00	.00	.00	0.	1	JAN	1255	156	.00	.00	.00	14.
1	JAN	0030	7	.00	.00	.00	0.	1	JAN	1300	157	.00	.00	.00	14.
1	JAN	0035	8	.00	.00	.00	0.	1	JAN	1305	158	.00	.00	.00	13.
1	JAN	0040	9	.00	.00	.00	0.	1	JAN	1310	159	.00	.00	.00	13.
1	JAN	0045	10	.00	.00	.00	0.	1	JAN	1315	160	.00	.00	.00	12.
1	JAN	0050	11	.00	.00	.00	0.	1	JAN	1320	161	.00	.00	.00	12.
1	JAN	0055	12	.00	.00	.00	0.	1	JAN	1325	162	.00	.00	.00	11.
1	JAN	0100	13	.00	.00	.00	0.	1	JAN	1330	163	.00	.00	.00	10.
1	JAN	0105	14	.00	.00	.00	0.	1	JAN	1335	164	.00	.00	.00	9.
1	JAN	0110	15	.00	.00	.00	0.	1	JAN	1340	165	.00	.00	.00	8.
1	JAN	0115	16	.00	.00	.00	0.	1	JAN	1345	166	.00	.00	.00	7.
1	JAN	0120	17	.00	.00	.00	0.	1	JAN	1350	167	.00	.00	.00	7.
1	JAN	0125	18	.00	.00	.00	0.	1	JAN	1355	168	.00	.00	.00	6.
1	JAN	0130	19	.00	.00	.00	0.	1	JAN	1400	169	.00	.00	.00	6.
1	JAN	0135	20	.00	.00	.00	0.	1	JAN	1405	170	.00	.00	.00	5.
1	JAN	0140	21	.00	.00	.00	0.	1	JAN	1410	171	.00	.00	.00	5.
1	JAN	0145	22	.00	.00	.00	0.	1	JAN	1415	172	.00	.00	.00	4.
1	JAN	0150	23	.00	.00	.00	0.	1	JAN	1420	173	.00	.00	.00	4.
1	JAN	0155	24	.00	.00	.00	0.	1	JAN	1425	174	.00	.00	.00	4
1	JAN	0200	25	.00	.00	.00	0.	1	JAN	1430	175	.00	.00	.00	(
1	JAN	0205	26	.00	.00	.00	0.	1	JAN	1435	176	.00	.00	.00	3.
1	JAN	0210	27	.00	.00	.00	0.	1	JAN	1440	177	.00	.00	.00	3.
1	JAN	0215	28	.00	.00	.00	0.	1	JAN	1445	178	.00	.00	.00	3.
1	JAN	0220	29	.00	.00	.00	0.	1	JAN	1450	179	.00	.00	.00	3.
1	JAN	0225	30	.00	.00	.00	0.	1	JAN	1455	180	.00	.00	.00	2.
1	JAN	0230	31	.00	.00	.00	0.	1	JAN	1500	181	.00	.00	.00	2.
1	JAN	0235	32	.00	.00	.00	0.	1	JAN	1505	182	.00	.00	.00	2.
1	JAN	0240	33	.00	.00	.00	0.	1	JAN	1510	183	.00	.00	.00	2.
1	JAN	0245	34	.00	.00	.00	0.	1	JAN	1515	184	.00	.00	.00	2.
1	JAN	0250	35	.00	.00	.00	0.	1	JAN	1520	185	.00	.00	.00	2.
1	JAN	0255	36	.00	.00	.00	0.	1	JAN	1525	186	.00	.00	.00	2.
1	JAN	0300	37	.00	.00	.00	0.	1	JAN	1530	187	.00	.00	.00	2.
1	JAN	0305	38	.00	.00	.00	0.	1	JAN	1535	188	.00	.00	.00	2.
1	JAN	0310	39	.00	.00	.00	0.	1	JAN	1540	189	.00	.00	.00	2.
1	JAN	0315	40	.00	.00	.00	0.	1	JAN	1545	190	.00	.00	.00	1.
1	JAN	0320	41	.00	.00	.00	0.	1	JAN	1550	191	.00	.00	.00	1.
1	JAN	0325	42	.00	.00	.00	0.	1	JAN	1555	192	.00	.00	.00	1.
1	JAN	0330	43	.00	.00	.00	0.	1	JAN	1600	193	.00	.00	.00	1.
1	JAN	0335	44	.00	.00	.00	0.	1	JAN	1605	194	.00	.00	.00	1.
1	JAN	0340	45	.00	.00	.00	0.	1	JAN	1610	195	.00	.00	.00	1.
1	JAN	0345	46	.00	.00	.00	0.	1	JAN	1615	196	.00	.00	.00	1.
1	JAN	0350	47	.00	.00	.00	0.	1	JAN	1620	197	.00	.00	.00	1.
1	JAN	0355	48	.00	.00	.00	0.	1	JAN	1625	198	.00	.00	.00	1.
1	JAN	0400	49	.00	.00	.00	0.	1	JAN	1630	199	.00	.00	.00	1.
1	JAN	0405	50	.00	.00	.00	0.	1	JAN	1635	200	.00	.00	.00	1.
1	JAN	0410	51	.00	.00	.00	0.	1	JAN	1640	201	.00	.00	.00	1.
1	JAN	0415	52	.00	.00	.00	0.	1	JAN	1645	202	.00	.00	.00	1.
1	JAN	0420	53	.00	.00	.00	0.	1	JAN	1650	203	.00	.00	.00	1.
1	JAN	0425	54	.00	.00	.00	0.	1	JAN	1655	204	.00	.00	.00	1.
1	JAN	0430	55	.00	.00	.00	0.	1	JAN	1700	205	.00	.00	.00	1.
1	JAN	0435	56	.00	.00	.00	0.	1	JAN	1705	206	.00	.00	.00	1.
1	JAN	0440	57	.00	.00	.00	0.	1	JAN	1710	207	.00	.00	.00	1.
1	JAN	0445	58	.00	.00	.00	0.	1	JAN	1715	208	.00	.00	.00	1.
1	JAN	0450	59	.00	.00	.00	0.	1	JAN	1720	209	.00	.00	.00	1.
1	JAN	0455	60	.00	.00	.00	0.	1	JAN	1725	210	.00	.00	.00	1.
1	JAN	0500	61	.00	.00	.00	0.	1	JAN	1730	211	.00	.00	.00	1.
1	JAN	0505	62	.00	.00	.00	0.	1	JAN	1735	212	.00	.00	.00	1
1	JAN	0510	63	.00	.00	.00	0.	1	JAN	1740	213	.00	.00	.00	(
1	JAN	0515	64	.00	.00	.00	0.	1	JAN	1745	214	.00	.00	.00	1.
1	JAN	0520	65	.00	.00	.00	0.	1	JAN	1750	215	.00	.00	.00	1.
1	JAN	0525	66	.00	.00	.00	0.	1	JAN	1755	216	.00	.00	.00	1.
1	JAN	0530	67	.00	.00	.00	0.	1	JAN	1800	217	.00	.00	.00	1.
1	JAN	0535	68	.00	.00	.00	0.	1	JAN	1805	218	.00	.00	.00	1.
1	JAN	0540	69	.00	.00	.00	0.	1	JAN	1810	219	.00	.00	.00	1.

1 JAN 0545	70	.00	.00	.00	0.	*	1 JAN 1815	220	.00	.00	.00	1.
1 JAN 0550	71	.00	.00	.00	0.	*	1 JAN 1820	221	.00	.00	.00	1.
1 JAN 0555	72	.00	.00	.00	0.	*	1 JAN 1825	222	.00	.00	.00	1.
1 JAN 0600	73	.00	.00	.00	0.	*	1 JAN 1830	223	.00	.00	.00	1.
1 JAN 0605	74	.00	.00	.00	0.	*	1 JAN 1835	224	.00	.00	.00	1.
1 JAN 0610	75	.00	.00	.00	0.	*	1 JAN 1840	225	.00	.00	.00	1.
1 JAN 0615	76	.00	.00	.00	0.	*	1 JAN 1845	226	.00	.00	.00	1.
1 JAN 0620	77	.00	.00	.00	1.	*	1 JAN 1850	227	.00	.00	.00	1.
1 JAN 0625	78	.00	.00	.00	1.	*	1 JAN 1855	228	.00	.00	.00	1.
1 JAN 0630	79	.00	.00	.00	1.	*	1 JAN 1900	229	.00	.00	.00	1.
1 JAN 0635	80	.00	.00	.00	1.	*	1 JAN 1905	230	.00	.00	.00	1.
1 JAN 0640	81	.00	.00	.00	1.	*	1 JAN 1910	231	.00	.00	.00	1.
1 JAN 0645	82	.00	.00	.00	1.	*	1 JAN 1915	232	.00	.00	.00	1.
1 JAN 0650	83	.00	.00	.00	1.	*	1 JAN 1920	233	.00	.00	.00	1.
1 JAN 0655	84	.00	.00	.00	1.	*	1 JAN 1925	234	.00	.00	.00	1.
1 JAN 0700	85	.00	.00	.00	1.	*	1 JAN 1930	235	.00	.00	.00	1.
1 JAN 0705	86	.00	.00	.00	1.	*	1 JAN 1935	236	.00	.00	.00	1.
1 JAN 0710	87	.00	.00	.00	1.	*	1 JAN 1940	237	.00	.00	.00	1.
1 JAN 0715	88	.00	.00	.00	1.	*	1 JAN 1945	238	.00	.00	.00	1.
1 JAN 0720	89	.00	.00	.00	1.	*	1 JAN 1950	239	.00	.00	.00	1.
1 JAN 0725	90	.00	.00	.00	1.	*	1 JAN 1955	240	.00	.00	.00	1.
1 JAN 0730	91	.00	.00	.00	1.	*	1 JAN 2000	241	.00	.00	.00	1.
1 JAN 0735	92	.00	.00	.00	1.	*	1 JAN 2005	242	.00	.00	.00	1.
1 JAN 0740	93	.00	.00	.00	1.	*	1 JAN 2010	243	.00	.00	.00	1.
1 JAN 0745	94	.00	.00	.00	1.	*	1 JAN 2015	244	.00	.00	.00	1.
1 JAN 0750	95	.00	.00	.00	1.	*	1 JAN 2020	245	.00	.00	.00	0.
1 JAN 0755	96	.00	.00	.00	1.	*	1 JAN 2025	246	.00	.00	.00	0.
1 JAN 0800	97	.00	.00	.00	1.	*	1 JAN 2030	247	.00	.00	.00	0.
1 JAN 0805	98	.00	.00	.00	1.	*	1 JAN 2035	248	.00	.00	.00	0.
1 JAN 0810	99	.00	.00	.00	1.	*	1 JAN 2040	249	.00	.00	.00	0.
1 JAN 0815	100	.00	.00	.00	1.	*	1 JAN 2045	250	.00	.00	.00	0.
1 JAN 0820	101	.00	.00	.00	1.	*	1 JAN 2050	251	.00	.00	.00	0.
1 JAN 0825	102	.00	.00	.00	1.	*	1 JAN 2055	252	.00	.00	.00	0.
1 JAN 0830	103	.00	.00	.00	1.	*	1 JAN 2100	253	.00	.00	.00	0.
1 JAN 0835	104	.00	.00	.00	1.	*	1 JAN 2105	254	.00	.00	.00	0.
1 JAN 0840	105	.00	.00	.00	1.	*	1 JAN 2110	255	.00	.00	.00	0.
1 JAN 0845	106	.00	.00	.00	1.	*	1 JAN 2115	256	.00	.00	.00	0.
1 JAN 0850	107	.00	.00	.00	1.	*	1 JAN 2120	257	.00	.00	.00	0.
1 JAN 0855	108	.00	.00	.00	1.	*	1 JAN 2125	258	.00	.00	.00	0.
1 JAN 0900	109	.00	.00	.00	1.	*	1 JAN 2130	259	.00	.00	.00	0.
1 JAN 0905	110	.00	.00	.00	1.	*	1 JAN 2135	260	.00	.00	.00	0.
1 JAN 0910	111	.00	.00	.00	1.	*	1 JAN 2140	261	.00	.00	.00	0.
1 JAN 0915	112	.00	.00	.00	1.	*	1 JAN 2145	262	.00	.00	.00	0.
1 JAN 0920	113	.00	.00	.00	1.	*	1 JAN 2150	263	.00	.00	.00	0.
1 JAN 0925	114	.00	.00	.00	1.	*	1 JAN 2155	264	.00	.00	.00	0.
1 JAN 0930	115	.00	.00	.00	1.	*	1 JAN 2200	265	.00	.00	.00	0.
1 JAN 0935	116	.00	.00	.00	1.	*	1 JAN 2205	266	.00	.00	.00	0.
1 JAN 0940	117	.00	.00	.00	1.	*	1 JAN 2210	267	.00	.00	.00	0.
1 JAN 0945	118	.00	.00	.00	1.	*	1 JAN 2215	268	.00	.00	.00	0.
1 JAN 0950	119	.00	.00	.00	1.	*	1 JAN 2220	269	.00	.00	.00	0.
1 JAN 0955	120	.00	.00	.00	1.	*	1 JAN 2225	270	.00	.00	.00	0.
1 JAN 1000	121	.00	.00	.00	1.	*	1 JAN 2230	271	.00	.00	.00	0.
1 JAN 1005	122	.00	.00	.00	1.	*	1 JAN 2235	272	.00	.00	.00	0.
1 JAN 1010	123	.00	.00	.00	1.	*	1 JAN 2240	273	.00	.00	.00	0.
1 JAN 1015	124	.00	.00	.00	1.	*	1 JAN 2245	274	.00	.00	.00	0.
1 JAN 1020	125	.00	.00	.00	1.	*	1 JAN 2250	275	.00	.00	.00	0.
1 JAN 1025	126	.00	.00	.00	1.	*	1 JAN 2255	276	.00	.00	.00	0.
1 JAN 1030	127	.00	.00	.00	1.	*	1 JAN 2300	277	.00	.00	.00	0.
1 JAN 1035	128	.00	.00	.00	1.	*	1 JAN 2305	278	.00	.00	.00	0.
1 JAN 1040	129	.00	.00	.00	1.	*	1 JAN 2310	279	.00	.00	.00	0.
1 JAN 1045	130	.00	.00	.00	1.	*	1 JAN 2315	280	.00	.00	.00	0.
1 JAN 1050	131	.00	.00	.00	1.	*	1 JAN 2320	281	.00	.00	.00	0.
1 JAN 1055	132	.00	.00	.00	1.	*	1 JAN 2325	282	.00	.00	.00	0.
1 JAN 1100	133	.00	.00	.00	1.	*	1 JAN 2330	283	.00	.00	.00	0.
1 JAN 1105	134	.00	.00	.00	1.	*	1 JAN 2335	284	.00	.00	.00	0.
1 JAN 1110	135	.00	.00	.00	1.	*	1 JAN 2340	285	.00	.00	.00	0.
1 JAN 1115	136	.01	.00	.00	1.	*	1 JAN 2345	286	.00	.00	.00	0.
1 JAN 1120	137	.01	.00	.00	1.	*	1 JAN 2350	287	.00	.00	.00	0.
1 JAN 1125	138	.01	.00	.00	1.	*	1 JAN 2355	288	.00	.00	.00	0.
1 JAN 1130	139	.01	.00	.00	2.	*	2 JAN 0000	289	.00	.00	.00	0.
1 JAN 1135	140	.01	.01	.01	2.	*	2 JAN 0005	290	.00	.00	.00	0.
1 JAN 1140	141	.02	.01	.01	2.	*	2 JAN 0010	291	.00	.00	.00	0.
1 JAN 1145	142	.04	.02	.02	2.	*	2 JAN 0015	292	.00	.00	.00	0.
1 JAN 1150	143	.06	.01	.04	2.	*	2 JAN 0020	293	.00	.00	.00	0.
1 JAN 1155	144	.08	.01	.06	3.	*	2 JAN 0025	294	.00	.00	.00	0.
1 JAN 1200	145	.06	.01	.04	3.	*	2 JAN 0030	295	.00	.00	.00	0.
1 JAN 1205	146	.01	.01	.01	4.	*	2 JAN 0035	296	.00	.00	.00	0.
1 JAN 1210	147	.01	.00	.00	5.	*	2 JAN 0040	297	.00	.00	.00	0.
1 JAN 1215	148	.01	.00	.00	6.	*	2 JAN 0045	298	.00	.00	.00	0.
1 JAN 1220	149	.01	.00	.00	7.	*	2 JAN 0050	299	.00	.00	.00	0.
1 JAN 1225	150	.01	.00	.00	9.	*	2 JAN 0055	300	.00	.00	.00	0.
						*						

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TOTAL RAINFALL = .70, TOTAL LOSS = .29, TOTAL EXCESS = .41

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR

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+   (CFS)       (HR)
                              (CFS)
+     14.      12.92                      5.           2.          1.           1.
                           (INCHES)      .306        .408        .408         .408
                            (AC-FT)        2.          3.          3.           3.

                         CUMULATIVE AREA =      .14 SQ MI
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HYDROGRAPH AT STATION 13-3B
PLAN 1, RATIO = 2.81

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DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 0000	1	.00	.00	.00	0.	*	1 JAN 1230	151	.02	.01	.01	38.
1 JAN 0005	2	.00	.00	.00	0.	*	1 JAN 1235	152	.01	.01	.01	42.
1 JAN 0010	3	.00	.00	.00	0.	*	1 JAN 1240	153	.01	.01	.01	46.
1 JAN 0015	4	.00	.00	.00	0.	*	1 JAN 1245	154	.01	.01	.01	49.
1 JAN 0020	5	.00	.00	.00	0.	*	1 JAN 1250	155	.01	.01	.01	50.
1 JAN 0025	6	.00	.00	.00	0.	*	1 JAN 1255	156	.01	.01	.01	51.
1 JAN 0030	7	.00	.00	.00	0.	*	1 JAN 1300	157	.01	.01	.01	50.
1 JAN 0035	8	.00	.00	.00	0.	*	1 JAN 1305	158	.01	.00	.00	49.
1 JAN 0040	9	.00	.00	.00	0.	*	1 JAN 1310	159	.01	.00	.00	47.
1 JAN 0045	10	.00	.00	.00	0.	*	1 JAN 1315	160	.01	.00	.00	45.
1 JAN 0050	11	.00	.00	.00	0.	*	1 JAN 1320	161	.01	.00	.00	42.
1 JAN 0055	12	.00	.00	.00	0.	*	1 JAN 1325	162	.01	.00	.00	39.
1 JAN 0100	13	.00	.00	.00	0.	*	1 JAN 1330	163	.01	.00	.00	36.
1 JAN 0105	14	.00	.00	.00	0.	*	1 JAN 1335	164	.01	.00	.00	33.
1 JAN 0110	15	.00	.00	.00	0.	*	1 JAN 1340	165	.01	.00	.00	29.
1 JAN 0115	16	.00	.00	.00	0.	*	1 JAN 1345	166	.01	.00	.00	27.
1 JAN 0120	17	.00	.00	.00	1.	*	1 JAN 1350	167	.01	.00	.00	24.
1 JAN 0125	18	.00	.00	.00	1.	*	1 JAN 1355	168	.01	.00	.00	22.
1 JAN 0130	19	.00	.00	.00	1.	*	1 JAN 1400	169	.01	.00	.00	20.
1 JAN 0135	20	.00	.00	.00	1.	*	1 JAN 1405	170	.01	.00	.00	18.
1 JAN 0140	21	.00	.00	.00	1.	*	1 JAN 1410	171	.01	.00	.00	17.
1 JAN 0145	22	.00	.00	.00	1.	*	1 JAN 1415	172	.01	.00	.00	15.
1 JAN 0150	23	.00	.00	.00	1.	*	1 JAN 1420	173	.01	.00	.00	14
1 JAN 0155	24	.00	.00	.00	1.	*	1 JAN 1425	174	.01	.00	.00	1[illegible]
1 JAN 0200	25	.00	.00	.00	1.	*	1 JAN 1430	175	.01	.00	.00	12.
1 JAN 0205	26	.00	.00	.00	1.	*	1 JAN 1435	176	.01	.00	.00	11.
1 JAN 0210	27	.00	.00	.00	1.	*	1 JAN 1440	177	.01	.00	.00	10.
1 JAN 0215	28	.00	.00	.00	1.	*	1 JAN 1445	178	.01	.00	.00	9.
1 JAN 0220	29	.00	.00	.00	1.	*	1 JAN 1450	179	.01	.00	.00	9.
1 JAN 0225	30	.00	.00	.00	1.	*	1 JAN 1455	180	.01	.00	.00	8.
1 JAN 0230	31	.00	.00	.00	1.	*	1 JAN 1500	181	.00	.00	.00	7.
1 JAN 0235	32	.00	.00	.00	1.	*	1 JAN 1505	182	.00	.00	.00	7.
1 JAN 0240	33	.00	.00	.00	1.	*	1 JAN 1510	183	.00	.00	.00	6.
1 JAN 0245	34	.00	.00	.00	1.	*	1 JAN 1515	184	.00	.00	.00	6.
1 JAN 0250	35	.00	.00	.00	1.	*	1 JAN 1520	185	.00	.00	.00	6.
1 JAN 0255	36	.00	.00	.00	1.	*	1 JAN 1525	186	.00	.00	.00	5.
1 JAN 0300	37	.00	.00	.00	1.	*	1 JAN 1530	187	.00	.00	.00	5.
1 JAN 0305	38	.00	.00	.00	1.	*	1 JAN 1535	188	.00	.00	.00	5.
1 JAN 0310	39	.00	.00	.00	1.	*	1 JAN 1540	189	.00	.00	.00	5.
1 JAN 0315	40	.00	.00	.00	1.	*	1 JAN 1545	190	.00	.00	.00	4.
1 JAN 0320	41	.00	.00	.00	1.	*	1 JAN 1550	191	.00	.00	.00	4.
1 JAN 0325	42	.00	.00	.00	1.	*	1 JAN 1555	192	.00	.00	.00	4.
1 JAN 0330	43	.00	.00	.00	1.	*	1 JAN 1600	193	.00	.00	.00	4.
1 JAN 0335	44	.00	.00	.00	1.	*	1 JAN 1605	194	.00	.00	.00	4.
1 JAN 0340	45	.00	.00	.00	1.	*	1 JAN 1610	195	.00	.00	.00	4.
1 JAN 0345	46	.00	.00	.00	1.	*	1 JAN 1615	196	.00	.00	.00	3.
1 JAN 0350	47	.00	.00	.00	1.	*	1 JAN 1620	197	.00	.00	.00	3.
1 JAN 0355	48	.00	.00	.00	1.	*	1 JAN 1625	198	.00	.00	.00	3.
1 JAN 0400	49	.00	.00	.00	1.	*	1 JAN 1630	199	.00	.00	.00	3.
1 JAN 0405	50	.00	.00	.00	1.	*	1 JAN 1635	200	.00	.00	.00	3.
1 JAN 0410	51	.00	.00	.00	1.	*	1 JAN 1640	201	.00	.00	.00	3.
1 JAN 0415	52	.00	.00	.00	1.	*	1 JAN 1645	202	.00	.00	.00	3.
1 JAN 0420	53	.00	.00	.00	1.	*	1 JAN 1650	203	.00	.00	.00	3.
1 JAN 0425	54	.00	.00	.00	1.	*	1 JAN 1655	204	.00	.00	.00	3.
1 JAN 0430	55	.00	.00	.00	1.	*	1 JAN 1700	205	.00	.00	.00	3.
1 JAN 0435	56	.00	.00	.00	1.	*	1 JAN 1705	206	.00	.00	.00	2.
1 JAN 0440	57	.00	.00	.00	1.	*	1 JAN 1710	207	.00	.00	.00	2.
1 JAN 0445	58	.00	.00	.00	1.	*	1 JAN 1715	208	.00	.00	.00	2.
1 JAN 0450	59	.00	.00	.00	1.	*	1 JAN 1720	209	.00	.00	.00	2.
1 JAN 0455	60	.00	.00	.00	1.	*	1 JAN 1725	210	.00	.00	.00	2.
1 JAN 0500	61	.00	.00	.00	1.	*	1 JAN 1730	211	.00	.00	.00	2
1 JAN 0505	62	.00	.00	.00	1.	*	1 JAN 1735	212	.00	.00	.00	[illegible]
1 JAN 0510	63	.00	.00	.00	1.	*	1 JAN 1740	213	.00	.00	.00	2.
1 JAN 0515	64	.00	.00	.00	1.	*	1 JAN 1745	214	.00	.00	.00	2.
1 JAN 0520	65	.00	.00	.00	1.	*	1 JAN 1750	215	.00	.00	.00	2.
1 JAN 0525	66	.00	.00	.00	1.	*	1 JAN 1755	216	.00	.00	.00	2.
1 JAN 0530	67	.00	.00	.00	1.	*	1 JAN 1800	217	.00	.00	.00	2.
1 JAN 0535	68	.00	.00	.00	1.	*	1 JAN 1805	218	.00	.00	.00	2.

1 JAN 0540	69	.00	.00	.00	1.	*	1 JAN 1810	219	.00	.00	.00	2.
1 JAN 0545	70	.00	.00	.00	1.	*	1 JAN 1815	220	.00	.00	.00	2.
1 JAN 0550	71	.00	.00	.00	1.	*	1 JAN 1820	221	.00	.00	.00	2.
1 JAN 0555	72	.00	.00	.00	1.	*	1 JAN 1825	222	.00	.00	.00	2.
1 JAN 0600	73	.00	.00	.00	1.	*	1 JAN 1830	223	.00	.00	.00	2.
1 JAN 0605	74	.00	.00	.00	1.	*	1 JAN 1835	224	.00	.00	.00	2.
1 JAN 0610	75	.00	.00	.00	1.	*	1 JAN 1840	225	.00	.00	.00	2.
1 JAN 0615	76	.00	.00	.00	1.	*	1 JAN 1845	226	.00	.00	.00	2.
1 JAN 0620	77	.00	.00	.00	1.	*	1 JAN 1850	227	.00	.00	.00	2.
1 JAN 0625	78	.00	.00	.00	1.	*	1 JAN 1855	228	.00	.00	.00	2.
1 JAN 0630	79	.00	.00	.00	1.	*	1 JAN 1900	229	.00	.00	.00	2.
1 JAN 0635	80	.00	.00	.00	1.	*	1 JAN 1905	230	.00	.00	.00	2.
1 JAN 0640	81	.00	.00	.00	1.	*	1 JAN 1910	231	.00	.00	.00	2.
1 JAN 0645	82	.00	.00	.00	1.	*	1 JAN 1915	232	.00	.00	.00	2.
1 JAN 0650	83	.00	.00	.00	2.	*	1 JAN 1920	233	.00	.00	.00	2.
1 JAN 0655	84	.00	.00	.00	2.	*	1 JAN 1925	234	.00	.00	.00	2.
1 JAN 0700	85	.00	.00	.00	2.	*	1 JAN 1930	235	.00	.00	.00	2.
1 JAN 0705	86	.00	.00	.00	2.	*	1 JAN 1935	236	.00	.00	.00	2.
1 JAN 0710	87	.00	.00	.00	2.	*	1 JAN 1940	237	.00	.00	.00	2.
1 JAN 0715	88	.00	.00	.00	2.	*	1 JAN 1945	238	.00	.00	.00	2.
1 JAN 0720	89	.00	.00	.00	2.	*	1 JAN 1950	239	.00	.00	.00	2.
1 JAN 0725	90	.00	.00	.00	2.	*	1 JAN 1955	240	.00	.00	.00	1.
1 JAN 0730	91	.00	.00	.00	2.	*	1 JAN 2000	241	.00	.00	.00	1.
1 JAN 0735	92	.00	.00	.00	2.	*	1 JAN 2005	242	.00	.00	.00	1.
1 JAN 0740	93	.00	.00	.00	2.	*	1 JAN 2010	243	.00	.00	.00	1.
1 JAN 0745	94	.00	.00	.00	2.	*	1 JAN 2015	244	.00	.00	.00	1.
1 JAN 0750	95	.00	.00	.00	2.	*	1 JAN 2020	245	.00	.00	.00	1.
1 JAN 0755	96	.00	.00	.00	2.	*	1 JAN 2025	246	.00	.00	.00	1.
1 JAN 0800	97	.00	.00	.00	2.	*	1 JAN 2030	247	.00	.00	.00	1.
1 JAN 0805	98	.00	.00	.00	2.	*	1 JAN 2035	248	.00	.00	.00	1.
1 JAN 0810	99	.00	.00	.00	2.	*	1 JAN 2040	249	.00	.00	.00	1.
1 JAN 0815	100	.00	.00	.00	2.	*	1 JAN 2045	250	.00	.00	.00	1.
1 JAN 0820	101	.00	.00	.00	2.	*	1 JAN 2050	251	.00	.00	.00	1.
1 JAN 0825	102	.00	.00	.00	2.	*	1 JAN 2055	252	.00	.00	.00	1.
1 JAN 0830	103	.00	.00	.00	2.	*	1 JAN 2100	253	.00	.00	.00	1.
1 JAN 0835	104	.00	.00	.00	2.	*	1 JAN 2105	254	.00	.00	.00	1.
1 JAN 0840	105	.00	.00	.00	2.	*	1 JAN 2110	255	.00	.00	.00	1.
1 JAN 0845	106	.00	.00	.00	2.	*	1 JAN 2115	256	.00	.00	.00	1.
1 JAN 0850	107	.00	.00	.00	2.	*	1 JAN 2120	257	.00	.00	.00	1.
1 JAN 0855	108	.01	.00	.00	2.	*	1 JAN 2125	258	.00	.00	.00	1.
1 JAN 0900	109	.01	.00	.00	2.	*	1 JAN 2130	259	.00	.00	.00	1.
1 JAN 0905	110	.01	.00	.00	2.	*	1 JAN 2135	260	.00	.00	.00	1.
1 JAN 0910	111	.01	.00	.00	2.	*	1 JAN 2140	261	.00	.00	.00	1.
1 JAN 0915	112	.01	.00	.00	2.	*	1 JAN 2145	262	.00	.00	.00	1.
1 JAN 0920	113	.01	.00	.00	2.	*	1 JAN 2150	263	.00	.00	.00	1.
1 JAN 0925	114	.01	.00	.00	2.	*	1 JAN 2155	264	.00	.00	.00	1.
1 JAN 0930	115	.01	.00	.00	2.	*	1 JAN 2200	265	.00	.00	.00	1.
1 JAN 0935	116	.01	.00	.00	2.	*	1 JAN 2205	266	.00	.00	.00	1.
1 JAN 0940	117	.01	.00	.00	2.	*	1 JAN 2210	267	.00	.00	.00	1.
1 JAN 0945	118	.01	.00	.00	2.	*	1 JAN 2215	268	.00	.00	.00	1.
1 JAN 0950	119	.01	.00	.00	2.	*	1 JAN 2220	269	.00	.00	.00	1.
1 JAN 0955	120	.01	.00	.00	2.	*	1 JAN 2225	270	.00	.00	.00	1.
1 JAN 1000	121	.01	.00	.00	2.	*	1 JAN 2230	271	.00	.00	.00	1.
1 JAN 1005	122	.01	.00	.00	3.	*	1 JAN 2235	272	.00	.00	.00	1.
1 JAN 1010	123	.01	.00	.00	3.	*	1 JAN 2240	273	.00	.00	.00	1.
1 JAN 1015	124	.01	.00	.00	3.	*	1 JAN 2245	274	.00	.00	.00	1.
1 JAN 1020	125	.01	.00	.00	3.	*	1 JAN 2250	275	.00	.00	.00	1.
1 JAN 1025	126	.01	.00	.00	3.	*	1 JAN 2255	276	.00	.00	.00	1.
1 JAN 1030	127	.01	.00	.00	3.	*	1 JAN 2300	277	.00	.00	.00	1.
1 JAN 1035	128	.01	.00	.00	3.	*	1 JAN 2305	278	.00	.00	.00	1.
1 JAN 1040	129	.01	.00	.00	3.	*	1 JAN 2310	279	.00	.00	.00	1.
1 JAN 1045	130	.01	.00	.00	3.	*	1 JAN 2315	280	.00	.00	.00	1.
1 JAN 1050	131	.01	.01	.01	3.	*	1 JAN 2320	281	.00	.00	.00	1.
1 JAN 1055	132	.01	.01	.01	3.	*	1 JAN 2325	282	.00	.00	.00	1.
1 JAN 1100	133	.01	.01	.01	3.	*	1 JAN 2330	283	.00	.00	.00	1.
1 JAN 1105	134	.01	.01	.01	3.	*	1 JAN 2335	284	.00	.00	.00	1.
1 JAN 1110	135	.01	.01	.01	4.	*	1 JAN 2340	285	.00	.00	.00	1.
1 JAN 1115	136	.02	.01	.01	4.	*	1 JAN 2345	286	.00	.00	.00	1.
1 JAN 1120	137	.02	.01	.01	4.	*	1 JAN 2350	287	.00	.00	.00	1.
1 JAN 1125	138	.02	.01	.01	4.	*	1 JAN 2355	288	.00	.00	.00	1.
1 JAN 1130	139	.02	.01	.01	4.	*	2 JAN 0000	289	.00	.00	.00	1.
1 JAN 1135	140	.04	.01	.03	5.	*	2 JAN 0005	290	.00	.00	.00	1.
1 JAN 1140	141	.07	.01	.06	5.	*	2 JAN 0010	291	.00	.00	.00	1.
1 JAN 1145	142	.11	.01	.10	6.	*	2 JAN 0015	292	.00	.00	.00	1.
1 JAN 1150	143	.17	.01	.16	7.	*	2 JAN 0020	293	.00	.00	.00	1.
1 JAN 1155	144	.21	.01	.20	8.	*	2 JAN 0025	294	.00	.00	.00	1.
1 JAN 1200	145	.16	.01	.15	11.	*	2 JAN 0030	295	.00	.00	.00	1.
1 JAN 1205	146	.03	.01	.03	14.	*	2 JAN 0035	296	.00	.00	.00	1.
1 JAN 1210	147	.03	.01	.02	18.	*	2 JAN 0040	297	.00	.00	.00	1.
1 JAN 1215	148	.03	.01	.02	22.	*	2 JAN 0045	298	.00	.00	.00	1.
1 JAN 1220	149	.02	.01	.02	27.	*	2 JAN 0050	299	.00	.00	.00	1.
1 JAN 1225	150	.02	.01	.01	32.	*	2 JAN 0055	300	.00	.00	.00	1.
						*						

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TOTAL RAINFALL = 1.97, TOTAL LOSS = .60, TOTAL EXCESS = 1.37

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

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                                          6-HR        24-HR        72-HR      24.92-HR
+    (CFS)        (HR)
                               (CFS)
+       51.      12.92                     16.           5.           5.            5.
                            (INCHES)      1.071        1.359        1.360         1.360
                             (AC-FT)         8.          10.          10.           10.

                            CUMULATIVE AREA =       .14 SQ MI


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


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             *            *
   53 KK     *     13-4   *     B
             *            *
             **************

   54 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           1  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE
                        IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                         IOUT          22  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

   55 BA          SUBBASIN CHARACTERISTICS
                        TAREA         .04  SUBBASIN AREA

                  PRECIPITATION DATA

   56 PB                STORM         .70  BASIN TOTAL PRECIPITATION

   14 PI            INCREMENTAL PRECIPITATION PATTERN
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
                        .01       .01       .01       .01       .01       .01       .01       .01       .02       .04
                        .05       .08       .11       .08       .02       .01       .01       .01       .01       .01
                        .01       .01       .01       .01       .01       .01       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                        .00       .00       .00       .00       .00       .00       .00       .00

   57 LG          GREEN AND AMPT LOSS RATE
                        STRTL         .25  STARTING LOSS
                          DTH         .15  MOISTURE DEFICIT
                         PSIF        9.20  WETTING FRONT SUCTION
                        XKSAT         .04  HYDRAULIC CONDUCTIVITY
                        RTIMP        1.00  PERCENT IMPERVIOUS AREA

   58 UD          SCS DIMENSIONLESS UNITGRAPH
                         TLAG         .64  LAG

                                                  ***

                                             UNIT HYDROGRAPH
                                          40 END-OF-PERIOD ORDINATES
                  1.        4.        7.       13.       19.       24.       27.       28.       27.       25.
                 23.       20.       16.       12.       10.        8.        7.        6.        5.        4.
                  3.        3.        2.        2.        1.        1.        1.        1.        1.        1.
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0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

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HYDROGRAPH AT STATION 13-4

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	0000	1	.00	.00	.00	0.	1	JAN	1230	151	.01	.01	.00	1.
1	JAN	0005	2	.00	.00	.00	0.	1	JAN	1235	152	.00	.00	.00	1.
1	JAN	0010	3	.00	.00	.00	0.	1	JAN	1240	153	.00	.00	.00	1.
1	JAN	0015	4	.00	.00	.00	0.	1	JAN	1245	154	.00	.00	.00	1.
1	JAN	0020	5	.00	.00	.00	0.	1	JAN	1250	155	.00	.00	.00	1.
1	JAN	0025	6	.00	.00	.00	0.	1	JAN	1255	156	.00	.00	.00	1.
1	JAN	0030	7	.00	.00	.00	0.	1	JAN	1300	157	.00	.00	.00	1.
1	JAN	0035	8	.00	.00	.00	0.	1	JAN	1305	158	.00	.00	.00	1.
1	JAN	0040	9	.00	.00	.00	0.	1	JAN	1310	159	.00	.00	.00	0.
1	JAN	0045	10	.00	.00	.00	0.	1	JAN	1315	160	.00	.00	.00	0.
1	JAN	0050	11	.00	.00	.00	0.	1	JAN	1320	161	.00	.00	.00	0.
1	JAN	0055	12	.00	.00	.00	0.	1	JAN	1325	162	.00	.00	.00	0.
1	JAN	0100	13	.00	.00	.00	0.	1	JAN	1330	163	.00	.00	.00	0.
1	JAN	0105	14	.00	.00	.00	0.	1	JAN	1335	164	.00	.00	.00	0.
1	JAN	0110	15	.00	.00	.00	0.	1	JAN	1340	165	.00	.00	.00	0.
1	JAN	0115	16	.00	.00	.00	0.	1	JAN	1345	166	.00	.00	.00	0.
1	JAN	0120	17	.00	.00	.00	0.	1	JAN	1350	167	.00	.00	.00	0.
1	JAN	0125	18	.00	.00	.00	0.	1	JAN	1355	168	.00	.00	.00	0.
1	JAN	0130	19	.00	.00	.00	0.	1	JAN	1400	169	.00	.00	.00	0.
1	JAN	0135	20	.00	.00	.00	0.	1	JAN	1405	170	.00	.00	.00	0.
1	JAN	0140	21	.00	.00	.00	0.	1	JAN	1410	171	.00	.00	.00	0.
1	JAN	0145	22	.00	.00	.00	0.	1	JAN	1415	172	.00	.00	.00	0.
1	JAN	0150	23	.00	.00	.00	0.	1	JAN	1420	173	.00	.00	.00	0.
1	JAN	0155	24	.00	.00	.00	0.	1	JAN	1425	174	.00	.00	.00	0.
1	JAN	0200	25	.00	.00	.00	0.	1	JAN	1430	175	.00	.00	.00	0.
1	JAN	0205	26	.00	.00	.00	0.	1	JAN	1435	176	.00	.00	.00	0.
1	JAN	0210	27	.00	.00	.00	0.	1	JAN	1440	177	.00	.00	.00	0.
1	JAN	0215	28	.00	.00	.00	0.	1	JAN	1445	178	.00	.00	.00	0.
1	JAN	0220	29	.00	.00	.00	0.	1	JAN	1450	179	.00	.00	.00	0.
1	JAN	0225	30	.00	.00	.00	0.	1	JAN	1455	180	.00	.00	.00	0.
1	JAN	0230	31	.00	.00	.00	0.	1	JAN	1500	181	.00	.00	.00	0.
1	JAN	0235	32	.00	.00	.00	0.	1	JAN	1505	182	.00	.00	.00	0.
1	JAN	0240	33	.00	.00	.00	0.	1	JAN	1510	183	.00	.00	.00	0.
1	JAN	0245	34	.00	.00	.00	0.	1	JAN	1515	184	.00	.00	.00	0.
1	JAN	0250	35	.00	.00	.00	0.	1	JAN	1520	185	.00	.00	.00	0.
1	JAN	0255	36	.00	.00	.00	0.	1	JAN	1525	186	.00	.00	.00	0.
1	JAN	0300	37	.00	.00	.00	0.	1	JAN	1530	187	.00	.00	.00	0.
1	JAN	0305	38	.00	.00	.00	0.	1	JAN	1535	188	.00	.00	.00	0.
1	JAN	0310	39	.00	.00	.00	0.	1	JAN	1540	189	.00	.00	.00	0.
1	JAN	0315	40	.00	.00	.00	0.	1	JAN	1545	190	.00	.00	.00	0.
1	JAN	0320	41	.00	.00	.00	0.	1	JAN	1550	191	.00	.00	.00	0.
1	JAN	0325	42	.00	.00	.00	0.	1	JAN	1555	192	.00	.00	.00	0.
1	JAN	0330	43	.00	.00	.00	0.	1	JAN	1600	193	.00	.00	.00	0.
1	JAN	0335	44	.00	.00	.00	0.	1	JAN	1605	194	.00	.00	.00	0.
1	JAN	0340	45	.00	.00	.00	0.	1	JAN	1610	195	.00	.00	.00	0.
1	JAN	0345	46	.00	.00	.00	0.	1	JAN	1615	196	.00	.00	.00	0.
1	JAN	0350	47	.00	.00	.00	0.	1	JAN	1620	197	.00	.00	.00	0.
1	JAN	0355	48	.00	.00	.00	0.	1	JAN	1625	198	.00	.00	.00	0.
1	JAN	0400	49	.00	.00	.00	0.	1	JAN	1630	199	.00	.00	.00	0.
1	JAN	0405	50	.00	.00	.00	0.	1	JAN	1635	200	.00	.00	.00	0.
1	JAN	0410	51	.00	.00	.00	0.	1	JAN	1640	201	.00	.00	.00	0.
1	JAN	0415	52	.00	.00	.00	0.	1	JAN	1645	202	.00	.00	.00	0.
1	JAN	0420	53	.00	.00	.00	0.	1	JAN	1650	203	.00	.00	.00	0.
1	JAN	0425	54	.00	.00	.00	0.	1	JAN	1655	204	.00	.00	.00	0.
1	JAN	0430	55	.00	.00	.00	0.	1	JAN	1700	205	.00	.00	.00	0.
1	JAN	0435	56	.00	.00	.00	0.	1	JAN	1705	206	.00	.00	.00	0.
1	JAN	0440	57	.00	.00	.00	0.	1	JAN	1710	207	.00	.00	.00	0.
1	JAN	0445	58	.00	.00	.00	0.	1	JAN	1715	208	.00	.00	.00	0.
1	JAN	0450	59	.00	.00	.00	0.	1	JAN	1720	209	.00	.00	.00	0.
1	JAN	0455	60	.00	.00	.00	0.	1	JAN	1725	210	.00	.00	.00	0.
1	JAN	0500	61	.00	.00	.00	0.	1	JAN	1730	211	.00	.00	.00	0.
1	JAN	0505	62	.00	.00	.00	0.	1	JAN	1735	212	.00	.00	.00	0.
1	JAN	0510	63	.00	.00	.00	0.	1	JAN	1740	213	.00	.00	.00	0.
1	JAN	0515	64	.00	.00	.00	0.	1	JAN	1745	214	.00	.00	.00	0.
1	JAN	0520	65	.00	.00	.00	0.	1	JAN	1750	215	.00	.00	.00	0.
1	JAN	0525	66	.00	.00	.00	0.	1	JAN	1755	216	.00	.00	.00	0.
1	JAN	0530	67	.00	.00	.00	0.	1	JAN	1800	217	.00	.00	.00	0.
1	JAN	0535	68	.00	.00	.00	0.	1	JAN	1805	218	.00	.00	.00	0.
1	JAN	0540	69	.00	.00	.00	0.	1	JAN	1810	219	.00	.00	.00	0.
1	JAN	0545	70	.00	.00	.00	0.	1	JAN	1815	220	.00	.00	.00	0.
1	JAN	0550	71	.00	.00	.00	0.	1	JAN	1820	221	.00	.00	.00	0.
1	JAN	0555	72	.00	.00	.00	0.	1	JAN	1825	222	.00	.00	.00	0.
1	JAN	0600	73	.00	.00	.00	0.	1	JAN	1830	223	.00	.00	.00	0.
1	JAN	0605	74	.00	.00	.00	0.	1	JAN	1835	224	.00	.00	.00	0.
1	JAN	0610	75	.00	.00	.00	0.	1	JAN	1840	225	.00	.00	.00	0.
1	JAN	0615	76	.00	.00	.00	0.	1	JAN	1845	226	.00	.00	.00	0.

1	JAN	0620	77	.00	.00	.00	0.	*	1	JAN	1850	227	.00	.00	.00	0.
1	JAN	0625	78	.00	.00	.00	0.	*	1	JAN	1855	228	.00	.00	.00	0.
1	JAN	0630	79	.00	.00	.00	0.	*	1	JAN	1900	229	.00	.00	.00	0.
1	JAN	0635	80	.00	.00	.00	0.	*	1	JAN	1905	230	.00	.00	.00	0.
1	JAN	0640	81	.00	.00	.00	0.	*	1	JAN	1910	231	.00	.00	.00	0.
1	JAN	0645	82	.00	.00	.00	0.	*	1	JAN	1915	232	.00	.00	.00	0.
1	JAN	0650	83	.00	.00	.00	0.	*	1	JAN	1920	233	.00	.00	.00	0.
1	JAN	0655	84	.00	.00	.00	0.	*	1	JAN	1925	234	.00	.00	.00	0.
1	JAN	0700	85	.00	.00	.00	0.	*	1	JAN	1930	235	.00	.00	.00	0.
1	JAN	0705	86	.00	.00	.00	0.	*	1	JAN	1935	236	.00	.00	.00	0.
1	JAN	0710	87	.00	.00	.00	0.	*	1	JAN	1940	237	.00	.00	.00	0.
1	JAN	0715	88	.00	.00	.00	0.	*	1	JAN	1945	238	.00	.00	.00	0.
1	JAN	0720	89	.00	.00	.00	0.	*	1	JAN	1950	239	.00	.00	.00	0.
1	JAN	0725	90	.00	.00	.00	0.	*	1	JAN	1955	240	.00	.00	.00	0.
1	JAN	0730	91	.00	.00	.00	0.	*	1	JAN	2000	241	.00	.00	.00	0.
1	JAN	0735	92	.00	.00	.00	0.	*	1	JAN	2005	242	.00	.00	.00	0.
1	JAN	0740	93	.00	.00	.00	0.	*	1	JAN	2010	243	.00	.00	.00	0.
1	JAN	0745	94	.00	.00	.00	0.	*	1	JAN	2015	244	.00	.00	.00	0.
1	JAN	0750	95	.00	.00	.00	0.	*	1	JAN	2020	245	.00	.00	.00	0.
1	JAN	0755	96	.00	.00	.00	0.	*	1	JAN	2025	246	.00	.00	.00	0.
1	JAN	0800	97	.00	.00	.00	0.	*	1	JAN	2030	247	.00	.00	.00	0.
1	JAN	0805	98	.00	.00	.00	0.	*	1	JAN	2035	248	.00	.00	.00	0.
1	JAN	0810	99	.00	.00	.00	0.	*	1	JAN	2040	249	.00	.00	.00	0.
1	JAN	0815	100	.00	.00	.00	0.	*	1	JAN	2045	250	.00	.00	.00	0.
1	JAN	0820	101	.00	.00	.00	0.	*	1	JAN	2050	251	.00	.00	.00	0.
1	JAN	0825	102	.00	.00	.00	0.	*	1	JAN	2055	252	.00	.00	.00	0.
1	JAN	0830	103	.00	.00	.00	0.	*	1	JAN	2100	253	.00	.00	.00	0.
1	JAN	0835	104	.00	.00	.00	0.	*	1	JAN	2105	254	.00	.00	.00	0.
1	JAN	0840	105	.00	.00	.00	0.	*	1	JAN	2110	255	.00	.00	.00	0.
1	JAN	0845	106	.00	.00	.00	0.	*	1	JAN	2115	256	.00	.00	.00	0.
1	JAN	0850	107	.00	.00	.00	0.	*	1	JAN	2120	257	.00	.00	.00	0.
1	JAN	0855	108	.00	.00	.00	0.	*	1	JAN	2125	258	.00	.00	.00	0.
1	JAN	0900	109	.00	.00	.00	0.	*	1	JAN	2130	259	.00	.00	.00	0.
1	JAN	0905	110	.00	.00	.00	0.	*	1	JAN	2135	260	.00	.00	.00	0.
1	JAN	0910	111	.00	.00	.00	0.	*	1	JAN	2140	261	.00	.00	.00	0.
1	JAN	0915	112	.00	.00	.00	0.	*	1	JAN	2145	262	.00	.00	.00	0.
1	JAN	0920	113	.00	.00	.00	0.	*	1	JAN	2150	263	.00	.00	.00	0.
1	JAN	0925	114	.00	.00	.00	0.	*	1	JAN	2155	264	.00	.00	.00	0.
1	JAN	0930	115	.00	.00	.00	0.	*	1	JAN	2200	265	.00	.00	.00	0.
1	JAN	0935	116	.00	.00	.00	0.	*	1	JAN	2205	266	.00	.00	.00	0.
1	JAN	0940	117	.00	.00	.00	0.	*	1	JAN	2210	267	.00	.00	.00	0.
1	JAN	0945	118	.00	.00	.00	0.	*	1	JAN	2215	268	.00	.00	.00	0.
1	JAN	0950	119	.00	.00	.00	0.	*	1	JAN	2220	269	.00	.00	.00	0.
1	JAN	0955	120	.00	.00	.00	0.	*	1	JAN	2225	270	.00	.00	.00	0.
1	JAN	1000	121	.00	.00	.00	0.	*	1	JAN	2230	271	.00	.00	.00	0.
1	JAN	1005	122	.00	.00	.00	0.	*	1	JAN	2235	272	.00	.00	.00	0.
1	JAN	1010	123	.00	.00	.00	0.	*	1	JAN	2240	273	.00	.00	.00	0.
1	JAN	1015	124	.00	.00	.00	0.	*	1	JAN	2245	274	.00	.00	.00	0.
1	JAN	1020	125	.00	.00	.00	0.	*	1	JAN	2250	275	.00	.00	.00	0.
1	JAN	1025	126	.00	.00	.00	0.	*	1	JAN	2255	276	.00	.00	.00	0.
1	JAN	1030	127	.00	.00	.00	0.	*	1	JAN	2300	277	.00	.00	.00	0.
1	JAN	1035	128	.00	.00	.00	0.	*	1	JAN	2305	278	.00	.00	.00	0.
1	JAN	1040	129	.00	.00	.00	0.	*	1	JAN	2310	279	.00	.00	.00	0.
1	JAN	1045	130	.00	.00	.00	0.	*	1	JAN	2315	280	.00	.00	.00	0.
1	JAN	1050	131	.00	.00	.00	0.	*	1	JAN	2320	281	.00	.00	.00	0.
1	JAN	1055	132	.00	.00	.00	0.	*	1	JAN	2325	282	.00	.00	.00	0.
1	JAN	1100	133	.00	.00	.00	0.	*	1	JAN	2330	283	.00	.00	.00	0.
1	JAN	1105	134	.00	.00	.00	0.	*	1	JAN	2335	284	.00	.00	.00	0.
1	JAN	1110	135	.00	.00	.00	0.	*	1	JAN	2340	285	.00	.00	.00	0.
1	JAN	1115	136	.01	.01	.00	0.	*	1	JAN	2345	286	.00	.00	.00	0.
1	JAN	1120	137	.01	.01	.00	0.	*	1	JAN	2350	287	.00	.00	.00	0.
1	JAN	1125	138	.01	.01	.00	0.	*	1	JAN	2355	288	.00	.00	.00	0.
1	JAN	1130	139	.01	.01	.00	0.	*	2	JAN	0000	289	.00	.00	.00	0.
1	JAN	1135	140	.01	.01	.00	0.	*	2	JAN	0005	290	.00	.00	.00	0.
1	JAN	1140	141	.02	.02	.00	0.	*	2	JAN	0010	291	.00	.00	.00	0.
1	JAN	1145	142	.04	.04	.00	0.	*	2	JAN	0015	292	.00	.00	.00	0.
1	JAN	1150	143	.06	.06	.00	0.	*	2	JAN	0020	293	.00	.00	.00	0.
1	JAN	1155	144	.08	.05	.03	0.	*	2	JAN	0025	294	.00	.00	.00	0.
1	JAN	1200	145	.06	.03	.02	0.	*	2	JAN	0030	295	.00	.00	.00	0.
1	JAN	1205	146	.01	.01	.00	0.	*	2	JAN	0035	296	.00	.00	.00	0.
1	JAN	1210	147	.01	.01	.00	1.	*	2	JAN	0040	297	.00	.00	.00	0.
1	JAN	1215	148	.01	.01	.00	1.	*	2	JAN	0045	298	.00	.00	.00	0.
1	JAN	1220	149	.01	.01	.00	1.	*	2	JAN	0050	299	.00	.00	.00	0.
1	JAN	1225	150	.01	.01	.00	1.	*	2	JAN	0055	300	.00	.00	.00	0.
								*								

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TOTAL RAINFALL = .70, TOTAL LOSS = .64, TOTAL EXCESS = .06

	PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
				6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
			(CFS)				
+	1.	12.58		0.	0.	0.	0.
			(INCHES)	.054	.056	.056	.056
			(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = .04 SQ MI

****

HYDROGRAPH AT STATION 13-4
PLAN 1, RATIO = 1.00

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	0000	1	.00	.00	.00	0.	1	JAN	1230	151	.01	.01	.00	1.
1	JAN	0005	2	.00	.00	.00	0.	1	JAN	1235	152	.00	.00	.00	1.
1	JAN	0010	3	.00	.00	.00	0.	1	JAN	1240	153	.00	.00	.00	1.
1	JAN	0015	4	.00	.00	.00	0.	1	JAN	1245	154	.00	.00	.00	1.
1	JAN	0020	5	.00	.00	.00	0.	1	JAN	1250	155	.00	.00	.00	1.
1	JAN	0025	6	.00	.00	.00	0.	1	JAN	1255	156	.00	.00	.00	1.
1	JAN	0030	7	.00	.00	.00	0.	1	JAN	1300	157	.00	.00	.00	1.
1	JAN	0035	8	.00	.00	.00	0.	1	JAN	1305	158	.00	.00	.00	1.
1	JAN	0040	9	.00	.00	.00	0.	1	JAN	1310	159	.00	.00	.00	0.
1	JAN	0045	10	.00	.00	.00	0.	1	JAN	1315	160	.00	.00	.00	0.
1	JAN	0050	11	.00	.00	.00	0.	1	JAN	1320	161	.00	.00	.00	0.
1	JAN	0055	12	.00	.00	.00	0.	1	JAN	1325	162	.00	.00	.00	0.
1	JAN	0100	13	.00	.00	.00	0.	1	JAN	1330	163	.00	.00	.00	0.
1	JAN	0105	14	.00	.00	.00	0.	1	JAN	1335	164	.00	.00	.00	0.
1	JAN	0110	15	.00	.00	.00	0.	1	JAN	1340	165	.00	.00	.00	0.
1	JAN	0115	16	.00	.00	.00	0.	1	JAN	1345	166	.00	.00	.00	0.
1	JAN	0120	17	.00	.00	.00	0.	1	JAN	1350	167	.00	.00	.00	0.
1	JAN	0125	18	.00	.00	.00	0.	1	JAN	1355	168	.00	.00	.00	0.
1	JAN	0130	19	.00	.00	.00	0.	1	JAN	1400	169	.00	.00	.00	0.
1	JAN	0135	20	.00	.00	.00	0.	1	JAN	1405	170	.00	.00	.00	0.
1	JAN	0140	21	.00	.00	.00	0.	1	JAN	1410	171	.00	.00	.00	0.
1	JAN	0145	22	.00	.00	.00	0.	1	JAN	1415	172	.00	.00	.00	0.
1	JAN	0150	23	.00	.00	.00	0.	1	JAN	1420	173	.00	.00	.00	0.
1	JAN	0155	24	.00	.00	.00	0.	1	JAN	1425	174	.00	.00	.00	0.
1	JAN	0200	25	.00	.00	.00	0.	1	JAN	1430	175	.00	.00	.00	0.
1	JAN	0205	26	.00	.00	.00	0.	1	JAN	1435	176	.00	.00	.00	0.
1	JAN	0210	27	.00	.00	.00	0.	1	JAN	1440	177	.00	.00	.00	0.
1	JAN	0215	28	.00	.00	.00	0.	1	JAN	1445	178	.00	.00	.00	0.
1	JAN	0220	29	.00	.00	.00	0.	1	JAN	1450	179	.00	.00	.00	0.
1	JAN	0225	30	.00	.00	.00	0.	1	JAN	1455	180	.00	.00	.00	0.
1	JAN	0230	31	.00	.00	.00	0.	1	JAN	1500	181	.00	.00	.00	0.
1	JAN	0235	32	.00	.00	.00	0.	1	JAN	1505	182	.00	.00	.00	0.
1	JAN	0240	33	.00	.00	.00	0.	1	JAN	1510	183	.00	.00	.00	0.
1	JAN	0245	34	.00	.00	.00	0.	1	JAN	1515	184	.00	.00	.00	0.
1	JAN	0250	35	.00	.00	.00	0.	1	JAN	1520	185	.00	.00	.00	0.
1	JAN	0255	36	.00	.00	.00	0.	1	JAN	1525	186	.00	.00	.00	0.
1	JAN	0300	37	.00	.00	.00	0.	1	JAN	1530	187	.00	.00	.00	0.
1	JAN	0305	38	.00	.00	.00	0.	1	JAN	1535	188	.00	.00	.00	0.
1	JAN	0310	39	.00	.00	.00	0.	1	JAN	1540	189	.00	.00	.00	0.
1	JAN	0315	40	.00	.00	.00	0.	1	JAN	1545	190	.00	.00	.00	0.
1	JAN	0320	41	.00	.00	.00	0.	1	JAN	1550	191	.00	.00	.00	0.
1	JAN	0325	42	.00	.00	.00	0.	1	JAN	1555	192	.00	.00	.00	0.
1	JAN	0330	43	.00	.00	.00	0.	1	JAN	1600	193	.00	.00	.00	0.
1	JAN	0335	44	.00	.00	.00	0.	1	JAN	1605	194	.00	.00	.00	0.
1	JAN	0340	45	.00	.00	.00	0.	1	JAN	1610	195	.00	.00	.00	0.
1	JAN	0345	46	.00	.00	.00	0.	1	JAN	1615	196	.00	.00	.00	0.
1	JAN	0350	47	.00	.00	.00	0.	1	JAN	1620	197	.00	.00	.00	0.
1	JAN	0355	48	.00	.00	.00	0.	1	JAN	1625	198	.00	.00	.00	0.
1	JAN	0400	49	.00	.00	.00	0.	1	JAN	1630	199	.00	.00	.00	0.
1	JAN	0405	50	.00	.00	.00	0.	1	JAN	1635	200	.00	.00	.00	0.
1	JAN	0410	51	.00	.00	.00	0.	1	JAN	1640	201	.00	.00	.00	0.
1	JAN	0415	52	.00	.00	.00	0.	1	JAN	1645	202	.00	.00	.00	0.
1	JAN	0420	53	.00	.00	.00	0.	1	JAN	1650	203	.00	.00	.00	0.
1	JAN	0425	54	.00	.00	.00	0.	1	JAN	1655	204	.00	.00	.00	0.
1	JAN	0430	55	.00	.00	.00	0.	1	JAN	1700	205	.00	.00	.00	0.
1	JAN	0435	56	.00	.00	.00	0.	1	JAN	1705	206	.00	.00	.00	0.
1	JAN	0440	57	.00	.00	.00	0.	1	JAN	1710	207	.00	.00	.00	0.
1	JAN	0445	58	.00	.00	.00	0.	1	JAN	1715	208	.00	.00	.00	0.
1	JAN	0450	59	.00	.00	.00	0.	1	JAN	1720	209	.00	.00	.00	0.
1	JAN	0455	60	.00	.00	.00	0.	1	JAN	1725	210	.00	.00	.00	0.
1	JAN	0500	61	.00	.00	.00	0.	1	JAN	1730	211	.00	.00	.00	0.
1	JAN	0505	62	.00	.00	.00	0.	1	JAN	1735	212	.00	.00	.00	0.
1	JAN	0510	63	.00	.00	.00	0.	1	JAN	1740	213	.00	.00	.00	0.
1	JAN	0515	64	.00	.00	.00	0.	1	JAN	1745	214	.00	.00	.00	0.
1	JAN	0520	65	.00	.00	.00	0.	1	JAN	1750	215	.00	.00	.00	0.
1	JAN	0525	66	.00	.00	.00	0.	1	JAN	1755	216	.00	.00	.00	0.
1	JAN	0530	67	.00	.00	.00	0.	1	JAN	1800	217	.00	.00	.00	0.
1	JAN	0535	68	.00	.00	.00	0.	1	JAN	1805	218	.00	.00	.00	0.
1	JAN	0540	69	.00	.00	.00	0.	1	JAN	1810	219	.00	.00	.00	0.
1	JAN	0545	70	.00	.00	.00	0.	1	JAN	1815	220	.00	.00	.00	0.
1	JAN	0550	71	.00	.00	.00	0.	1	JAN	1820	221	.00	.00	.00	0.
1	JAN	0555	72	.00	.00	.00	0.	1	JAN	1825	222	.00	.00	.00	0.
1	JAN	0600	73	.00	.00	.00	0.	1	JAN	1830	223	.00	.00	.00	0.
1	JAN	0605	74	.00	.00	.00	0.	1	JAN	1835	224	.00	.00	.00	0.
1	JAN	0610	75	.00	.00	.00	0.	1	JAN	1840	225	.00	.00	.00	0.

1	JAN	0615	76	.00	.00	.00	0.	*	1	JAN	1845	226	.00	.00	.00	0.
1	JAN	0620	77	.00	.00	.00	0.	*	1	JAN	1850	227	.00	.00	.00	0.
1	JAN	0625	78	.00	.00	.00	0.	*	1	JAN	1855	228	.00	.00	.00	0.
1	JAN	0630	79	.00	.00	.00	0.	*	1	JAN	1900	229	.00	.00	.00	0.
1	JAN	0635	80	.00	.00	.00	0.	*	1	JAN	1905	230	.00	.00	.00	0.
1	JAN	0640	81	.00	.00	.00	0.	*	1	JAN	1910	231	.00	.00	.00	0.
1	JAN	0645	82	.00	.00	.00	0.	*	1	JAN	1915	232	.00	.00	.00	
1	JAN	0650	83	.00	.00	.00	0.	*	1	JAN	1920	233	.00	.00	.00	
1	JAN	0655	84	.00	.00	.00	0.	*	1	JAN	1925	234	.00	.00	.00	0.
1	JAN	0700	85	.00	.00	.00	0.	*	1	JAN	1930	235	.00	.00	.00	0.
1	JAN	0705	86	.00	.00	.00	0.	*	1	JAN	1935	236	.00	.00	.00	0.
1	JAN	0710	87	.00	.00	.00	0.	*	1	JAN	1940	237	.00	.00	.00	0.
1	JAN	0715	88	.00	.00	.00	0.	*	1	JAN	1945	238	.00	.00	.00	0.
1	JAN	0720	89	.00	.00	.00	0.	*	1	JAN	1950	239	.00	.00	.00	0.
1	JAN	0725	90	.00	.00	.00	0.	*	1	JAN	1955	240	.00	.00	.00	0.
1	JAN	0730	91	.00	.00	.00	0.	*	1	JAN	2000	241	.00	.00	.00	0.
1	JAN	0735	92	.00	.00	.00	0.	*	1	JAN	2005	242	.00	.00	.00	0.
1	JAN	0740	93	.00	.00	.00	0.	*	1	JAN	2010	243	.00	.00	.00	0.
1	JAN	0745	94	.00	.00	.00	0.	*	1	JAN	2015	244	.00	.00	.00	0.
1	JAN	0750	95	.00	.00	.00	0.	*	1	JAN	2020	245	.00	.00	.00	0.
1	JAN	0755	96	.00	.00	.00	0.	*	1	JAN	2025	246	.00	.00	.00	0.
1	JAN	0800	97	.00	.00	.00	0.	*	1	JAN	2030	247	.00	.00	.00	0.
1	JAN	0805	98	.00	.00	.00	0.	*	1	JAN	2035	248	.00	.00	.00	0.
1	JAN	0810	99	.00	.00	.00	0.	*	1	JAN	2040	249	.00	.00	.00	0.
1	JAN	0815	100	.00	.00	.00	0.	*	1	JAN	2045	250	.00	.00	.00	0.
1	JAN	0820	101	.00	.00	.00	0.	*	1	JAN	2050	251	.00	.00	.00	0.
1	JAN	0825	102	.00	.00	.00	0.	*	1	JAN	2055	252	.00	.00	.00	0.
1	JAN	0830	103	.00	.00	.00	0.	*	1	JAN	2100	253	.00	.00	.00	0.
1	JAN	0835	104	.00	.00	.00	0.	*	1	JAN	2105	254	.00	.00	.00	0.
1	JAN	0840	105	.00	.00	.00	0.	*	1	JAN	2110	255	.00	.00	.00	0.
1	JAN	0845	106	.00	.00	.00	0.	*	1	JAN	2115	256	.00	.00	.00	0.
1	JAN	0850	107	.00	.00	.00	0.	*	1	JAN	2120	257	.00	.00	.00	0.
1	JAN	0855	108	.00	.00	.00	0.	*	1	JAN	2125	258	.00	.00	.00	0.
1	JAN	0900	109	.00	.00	.00	0.	*	1	JAN	2130	259	.00	.00	.00	0.
1	JAN	0905	110	.00	.00	.00	0.	*	1	JAN	2135	260	.00	.00	.00	0.
1	JAN	0910	111	.00	.00	.00	0.	*	1	JAN	2140	261	.00	.00	.00	0.
1	JAN	0915	112	.00	.00	.00	0.	*	1	JAN	2145	262	.00	.00	.00	0.
1	JAN	0920	113	.00	.00	.00	0.	*	1	JAN	2150	263	.00	.00	.00	0.
1	JAN	0925	114	.00	.00	.00	0.	*	1	JAN	2155	264	.00	.00	.00	0.
1	JAN	0930	115	.00	.00	.00	0.	*	1	JAN	2200	265	.00	.00	.00	0.
1	JAN	0935	116	.00	.00	.00	0.	*	1	JAN	2205	266	.00	.00	.00	0.
1	JAN	0940	117	.00	.00	.00	0.	*	1	JAN	2210	267	.00	.00	.00	0.
1	JAN	0945	118	.00	.00	.00	0.	*	1	JAN	2215	268	.00	.00	.00	0.
1	JAN	0950	119	.00	.00	.00	0.	*	1	JAN	2220	269	.00	.00	.00	0.
1	JAN	0955	120	.00	.00	.00	0.	*	1	JAN	2225	270	.00	.00	.00	
1	JAN	1000	121	.00	.00	.00	0.	*	1	JAN	2230	271	.00	.00	.00	
1	JAN	1005	122	.00	.00	.00	0.	*	1	JAN	2235	272	.00	.00	.00	0.
1	JAN	1010	123	.00	.00	.00	0.	*	1	JAN	2240	273	.00	.00	.00	0.
1	JAN	1015	124	.00	.00	.00	0.	*	1	JAN	2245	274	.00	.00	.00	0.
1	JAN	1020	125	.00	.00	.00	0.	*	1	JAN	2250	275	.00	.00	.00	0.
1	JAN	1025	126	.00	.00	.00	0.	*	1	JAN	2255	276	.00	.00	.00	0.
1	JAN	1030	127	.00	.00	.00	0.	*	1	JAN	2300	277	.00	.00	.00	0.
1	JAN	1035	128	.00	.00	.00	0.	*	1	JAN	2305	278	.00	.00	.00	0.
1	JAN	1040	129	.00	.00	.00	0.	*	1	JAN	2310	279	.00	.00	.00	0.
1	JAN	1045	130	.00	.00	.00	0.	*	1	JAN	2315	280	.00	.00	.00	0.
1	JAN	1050	131	.00	.00	.00	0.	*	1	JAN	2320	281	.00	.00	.00	0.
1	JAN	1055	132	.00	.00	.00	0.	*	1	JAN	2325	282	.00	.00	.00	0.
1	JAN	1100	133	.00	.00	.00	0.	*	1	JAN	2330	283	.00	.00	.00	0.
1	JAN	1105	134	.00	.00	.00	0.	*	1	JAN	2335	284	.00	.00	.00	0.
1	JAN	1110	135	.00	.00	.00	0.	*	1	JAN	2340	285	.00	.00	.00	0.
1	JAN	1115	136	.01	.01	.00	0.	*	1	JAN	2345	286	.00	.00	.00	0.
1	JAN	1120	137	.01	.01	.00	0.	*	1	JAN	2350	287	.00	.00	.00	0.
1	JAN	1125	138	.01	.01	.00	0.	*	1	JAN	2355	288	.00	.00	.00	0.
1	JAN	1130	139	.01	.01	.00	0.	*	2	JAN	0000	289	.00	.00	.00	0.
1	JAN	1135	140	.01	.01	.00	0.	*	2	JAN	0005	290	.00	.00	.00	0.
1	JAN	1140	141	.02	.02	.00	0.	*	2	JAN	0010	291	.00	.00	.00	0.
1	JAN	1145	142	.04	.04	.00	0.	*	2	JAN	0015	292	.00	.00	.00	0.
1	JAN	1150	143	.06	.06	.00	0.	*	2	JAN	0020	293	.00	.00	.00	0.
1	JAN	1155	144	.08	.05	.03	0.	*	2	JAN	0025	294	.00	.00	.00	0.
1	JAN	1200	145	.06	.03	.02	0.	*	2	JAN	0030	295	.00	.00	.00	0.
1	JAN	1205	146	.01	.01	.00	0.	*	2	JAN	0035	296	.00	.00	.00	0.
1	JAN	1210	147	.01	.01	.00	1.	*	2	JAN	0040	297	.00	.00	.00	0.
1	JAN	1215	148	.01	.01	.00	1.	*	2	JAN	0045	298	.00	.00	.00	0.
1	JAN	1220	149	.01	.01	.00	1.	*	2	JAN	0050	299	.00	.00	.00	0.
1	JAN	1225	150	.01	.01	.00	1.	*	2	JAN	0055	300	.00	.00	.00	0.
								*								

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TOTAL RAINFALL = .70, TOTAL LOSS = .64, TOTAL EXCESS = .06

	PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
				6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
			(CFS)				
+	1.	12.58		0.	0.	0.	0.
			(INCHES)	.054	.056	.056	.056
			(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = .04 SQ MI

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HYDROGRAPH AT STATION 13-4
PLAN 1, RATIO = 2.81

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DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 0000	1	.00	.00	.00	0.	1 JAN 1230	151	.02	.01	.00	18.
1 JAN 0005	2	.00	.00	.00	0.	1 JAN 1235	152	.01	.01	.00	18.
1 JAN 0010	3	.00	.00	.00	0.	1 JAN 1240	153	.01	.01	.00	16.
1 JAN 0015	4	.00	.00	.00	0.	1 JAN 1245	154	.01	.01	.00	15.
1 JAN 0020	5	.00	.00	.00	0.	1 JAN 1250	155	.01	.01	.00	13.
1 JAN 0025	6	.00	.00	.00	0.	1 JAN 1255	156	.01	.01	.00	11.
1 JAN 0030	7	.00	.00	.00	0.	1 JAN 1300	157	.01	.01	.00	9.
1 JAN 0035	8	.00	.00	.00	0.	1 JAN 1305	158	.01	.01	.00	7.
1 JAN 0040	9	.00	.00	.00	0.	1 JAN 1310	159	.01	.01	.00	6.
1 JAN 0045	10	.00	.00	.00	0.	1 JAN 1315	160	.01	.01	.00	5.
1 JAN 0050	11	.00	.00	.00	0.	1 JAN 1320	161	.01	.01	.00	4.
1 JAN 0055	12	.00	.00	.00	0.	1 JAN 1325	162	.01	.01	.00	3.
1 JAN 0100	13	.00	.00	.00	0.	1 JAN 1330	163	.01	.01	.00	3.
1 JAN 0105	14	.00	.00	.00	0.	1 JAN 1335	164	.01	.01	.00	2.
1 JAN 0110	15	.00	.00	.00	0.	1 JAN 1340	165	.01	.01	.00	2.
1 JAN 0115	16	.00	.00	.00	0.	1 JAN 1345	166	.01	.01	.00	2.
1 JAN 0120	17	.00	.00	.00	0.	1 JAN 1350	167	.01	.01	.00	1.
1 JAN 0125	18	.00	.00	.00	0.	1 JAN 1355	168	.01	.01	.00	1.
1 JAN 0130	19	.00	.00	.00	0.	1 JAN 1400	169	.01	.01	.00	1.
1 JAN 0135	20	.00	.00	.00	0.	1 JAN 1405	170	.01	.01	.00	1.
1 JAN 0140	21	.00	.00	.00	0.	1 JAN 1410	171	.01	.01	.00	1.
1 JAN 0145	22	.00	.00	.00	0.	1 JAN 1415	172	.01	.01	.00	0.
1 JAN 0150	23	.00	.00	.00	0.	1 JAN 1420	173	.01	.01	.00	0.
1 JAN 0155	24	.00	.00	.00	0.	1 JAN 1425	174	.01	.01	.00	0.
1 JAN 0200	25	.00	.00	.00	0.	1 JAN 1430	175	.01	.01	.00	0.
1 JAN 0205	26	.00	.00	.00	0.	1 JAN 1435	176	.01	.01	.00	0.
1 JAN 0210	27	.00	.00	.00	0.	1 JAN 1440	177	.01	.01	.00	0.
1 JAN 0215	28	.00	.00	.00	0.	1 JAN 1445	178	.01	.01	.00	0.
1 JAN 0220	29	.00	.00	.00	0.	1 JAN 1450	179	.01	.01	.00	0.
1 JAN 0225	30	.00	.00	.00	0.	1 JAN 1455	180	.01	.00	.00	0.
1 JAN 0230	31	.00	.00	.00	0.	1 JAN 1500	181	.00	.00	.00	0.
1 JAN 0235	32	.00	.00	.00	0.	1 JAN 1505	182	.00	.00	.00	0.
1 JAN 0240	33	.00	.00	.00	0.	1 JAN 1510	183	.00	.00	.00	0.
1 JAN 0245	34	.00	.00	.00	0.	1 JAN 1515	184	.00	.00	.00	0.
1 JAN 0250	35	.00	.00	.00	0.	1 JAN 1520	185	.00	.00	.00	0.
1 JAN 0255	36	.00	.00	.00	0.	1 JAN 1525	186	.00	.00	.00	0.
1 JAN 0300	37	.00	.00	.00	0.	1 JAN 1530	187	.00	.00	.00	0.
1 JAN 0305	38	.00	.00	.00	0.	1 JAN 1535	188	.00	.00	.00	0.
1 JAN 0310	39	.00	.00	.00	0.	1 JAN 1540	189	.00	.00	.00	0.
1 JAN 0315	40	.00	.00	.00	0.	1 JAN 1545	190	.00	.00	.00	0.
1 JAN 0320	41	.00	.00	.00	0.	1 JAN 1550	191	.00	.00	.00	0.
1 JAN 0325	42	.00	.00	.00	0.	1 JAN 1555	192	.00	.00	.00	0.
1 JAN 0330	43	.00	.00	.00	0.	1 JAN 1600	193	.00	.00	.00	0.
1 JAN 0335	44	.00	.00	.00	0.	1 JAN 1605	194	.00	.00	.00	0.
1 JAN 0340	45	.00	.00	.00	0.	1 JAN 1610	195	.00	.00	.00	0.
1 JAN 0345	46	.00	.00	.00	0.	1 JAN 1615	196	.00	.00	.00	0.
1 JAN 0350	47	.00	.00	.00	0.	1 JAN 1620	197	.00	.00	.00	0.
1 JAN 0355	48	.00	.00	.00	0.	1 JAN 1625	198	.00	.00	.00	0.
1 JAN 0400	49	.00	.00	.00	0.	1 JAN 1630	199	.00	.00	.00	0.
1 JAN 0405	50	.00	.00	.00	0.	1 JAN 1635	200	.00	.00	.00	0.
1 JAN 0410	51	.00	.00	.00	0.	1 JAN 1640	201	.00	.00	.00	0.
1 JAN 0415	52	.00	.00	.00	0.	1 JAN 1645	202	.00	.00	.00	0.
1 JAN 0420	53	.00	.00	.00	0.	1 JAN 1650	203	.00	.00	.00	0.
1 JAN 0425	54	.00	.00	.00	0.	1 JAN 1655	204	.00	.00	.00	0.
1 JAN 0430	55	.00	.00	.00	0.	1 JAN 1700	205	.00	.00	.00	0.
1 JAN 0435	56	.00	.00	.00	0.	1 JAN 1705	206	.00	.00	.00	0.
1 JAN 0440	57	.00	.00	.00	0.	1 JAN 1710	207	.00	.00	.00	0.
1 JAN 0445	58	.00	.00	.00	0.	1 JAN 1715	208	.00	.00	.00	0.
1 JAN 0450	59	.00	.00	.00	0.	1 JAN 1720	209	.00	.00	.00	0.
1 JAN 0455	60	.00	.00	.00	0.	1 JAN 1725	210	.00	.00	.00	0.
1 JAN 0500	61	.00	.00	.00	0.	1 JAN 1730	211	.00	.00	.00	0.
1 JAN 0505	62	.00	.00	.00	0.	1 JAN 1735	212	.00	.00	.00	0.
1 JAN 0510	63	.00	.00	.00	0.	1 JAN 1740	213	.00	.00	.00	0.
1 JAN 0515	64	.00	.00	.00	0.	1 JAN 1745	214	.00	.00	.00	0.
1 JAN 0520	65	.00	.00	.00	0.	1 JAN 1750	215	.00	.00	.00	0.
1 JAN 0525	66	.00	.00	.00	0.	1 JAN 1755	216	.00	.00	.00	0.
1 JAN 0530	67	.00	.00	.00	0.	1 JAN 1800	217	.00	.00	.00	0.
1 JAN 0535	68	.00	.00	.00	0.	1 JAN 1805	218	.00	.00	.00	0.
1 JAN 0540	69	.00	.00	.00	0.	1 JAN 1810	219	.00	.00	.00	0.
1 JAN 0545	70	.00	.00	.00	0.	1 JAN 1815	220	.00	.00	.00	0.
1 JAN 0550	71	.00	.00	.00	0.	1 JAN 1820	221	.00	.00	.00	0.
1 JAN 0555	72	.00	.00	.00	0.	1 JAN 1825	222	.00	.00	.00	0.
1 JAN 0600	73	.00	.00	.00	0.	1 JAN 1830	223	.00	.00	.00	0.
1 JAN 0605	74	.00	.00	.00	0.	1 JAN 1835	224	.00	.00	.00	0.

1 JAN 0610	75	.00	.00	.00	0.	*	1 JAN 1840	225	.00	.00	.00	0.
1 JAN 0615	76	.00	.00	.00	0.	*	1 JAN 1845	226	.00	.00	.00	0.
1 JAN 0620	77	.00	.00	.00	0.	*	1 JAN 1850	227	.00	.00	.00	0.
1 JAN 0625	78	.00	.00	.00	0.	*	1 JAN 1855	228	.00	.00	.00	0.
1 JAN 0630	79	.00	.00	.00	0.	*	1 JAN 1900	229	.00	.00	.00	0.
1 JAN 0635	80	.00	.00	.00	0.	*	1 JAN 1905	230	.00	.00	.00	0.
1 JAN 0640	81	.00	.00	.00	0.	*	1 JAN 1910	231	.00	.00	.00	0.
1 JAN 0645	82	.00	.00	.00	0.	*	1 JAN 1915	232	.00	.00	.00	0.
1 JAN 0650	83	.00	.00	.00	0.	*	1 JAN 1920	233	.00	.00	.00	0.
1 JAN 0655	84	.00	.00	.00	0.	*	1 JAN 1925	234	.00	.00	.00	0.
1 JAN 0700	85	.00	.00	.00	0.	*	1 JAN 1930	235	.00	.00	.00	0.
1 JAN 0705	86	.00	.00	.00	0.	*	1 JAN 1935	236	.00	.00	.00	0.
1 JAN 0710	87	.00	.00	.00	0.	*	1 JAN 1940	237	.00	.00	.00	0.
1 JAN 0715	88	.00	.00	.00	0.	*	1 JAN 1945	238	.00	.00	.00	0.
1 JAN 0720	89	.00	.00	.00	0.	*	1 JAN 1950	239	.00	.00	.00	0.
1 JAN 0725	90	.00	.00	.00	0.	*	1 JAN 1955	240	.00	.00	.00	0.
1 JAN 0730	91	.00	.00	.00	0.	*	1 JAN 2000	241	.00	.00	.00	0.
1 JAN 0735	92	.00	.00	.00	0.	*	1 JAN 2005	242	.00	.00	.00	0.
1 JAN 0740	93	.00	.00	.00	0.	*	1 JAN 2010	243	.00	.00	.00	0.
1 JAN 0745	94	.00	.00	.00	0.	*	1 JAN 2015	244	.00	.00	.00	0.
1 JAN 0750	95	.00	.00	.00	0.	*	1 JAN 2020	245	.00	.00	.00	0.
1 JAN 0755	96	.00	.00	.00	0.	*	1 JAN 2025	246	.00	.00	.00	0.
1 JAN 0800	97	.00	.00	.00	0.	*	1 JAN 2030	247	.00	.00	.00	0.
1 JAN 0805	98	.00	.00	.00	0.	*	1 JAN 2035	248	.00	.00	.00	0.
1 JAN 0810	99	.00	.00	.00	0.	*	1 JAN 2040	249	.00	.00	.00	0.
1 JAN 0815	100	.00	.00	.00	0.	*	1 JAN 2045	250	.00	.00	.00	0.
1 JAN 0820	101	.00	.00	.00	0.	*	1 JAN 2050	251	.00	.00	.00	0.
1 JAN 0825	102	.00	.00	.00	0.	*	1 JAN 2055	252	.00	.00	.00	0.
1 JAN 0830	103	.00	.00	.00	0.	*	1 JAN 2100	253	.00	.00	.00	0.
1 JAN 0835	104	.00	.00	.00	0.	*	1 JAN 2105	254	.00	.00	.00	0.
1 JAN 0840	105	.00	.00	.00	0.	*	1 JAN 2110	255	.00	.00	.00	0.
1 JAN 0845	106	.00	.00	.00	0.	*	1 JAN 2115	256	.00	.00	.00	0.
1 JAN 0850	107	.00	.00	.00	0.	*	1 JAN 2120	257	.00	.00	.00	0.
1 JAN 0855	108	.01	.01	.00	0.	*	1 JAN 2125	258	.00	.00	.00	0.
1 JAN 0900	109	.01	.01	.00	0.	*	1 JAN 2130	259	.00	.00	.00	0.
1 JAN 0905	110	.01	.01	.00	0.	*	1 JAN 2135	260	.00	.00	.00	0.
1 JAN 0910	111	.01	.01	.00	0.	*	1 JAN 2140	261	.00	.00	.00	0.
1 JAN 0915	112	.01	.01	.00	0.	*	1 JAN 2145	262	.00	.00	.00	0.
1 JAN 0920	113	.01	.01	.00	0.	*	1 JAN 2150	263	.00	.00	.00	0.
1 JAN 0925	114	.01	.01	.00	0.	*	1 JAN 2155	264	.00	.00	.00	0.
1 JAN 0930	115	.01	.01	.00	0.	*	1 JAN 2200	265	.00	.00	.00	0.
1 JAN 0935	116	.01	.01	.00	0.	*	1 JAN 2205	266	.00	.00	.00	0.
1 JAN 0940	117	.01	.01	.00	0.	*	1 JAN 2210	267	.00	.00	.00	0.
1 JAN 0945	118	.01	.01	.00	0.	*	1 JAN 2215	268	.00	.00	.00	0.
1 JAN 0950	119	.01	.01	.00	0.	*	1 JAN 2220	269	.00	.00	.00	0.
1 JAN 0955	120	.01	.01	.00	0.	*	1 JAN 2225	270	.00	.00	.00	0.
1 JAN 1000	121	.01	.01	.00	0.	*	1 JAN 2230	271	.00	.00	.00	0.
1 JAN 1005	122	.01	.01	.00	0.	*	1 JAN 2235	272	.00	.00	.00	0.
1 JAN 1010	123	.01	.01	.00	0.	*	1 JAN 2240	273	.00	.00	.00	0.
1 JAN 1015	124	.01	.01	.00	0.	*	1 JAN 2245	274	.00	.00	.00	0.
1 JAN 1020	125	.01	.01	.00	0.	*	1 JAN 2250	275	.00	.00	.00	0.
1 JAN 1025	126	.01	.01	.00	0.	*	1 JAN 2255	276	.00	.00	.00	0.
1 JAN 1030	127	.01	.01	.00	0.	*	1 JAN 2300	277	.00	.00	.00	0.
1 JAN 1035	128	.01	.01	.00	0.	*	1 JAN 2305	278	.00	.00	.00	0.
1 JAN 1040	129	.01	.01	.00	0.	*	1 JAN 2310	279	.00	.00	.00	0.
1 JAN 1045	130	.01	.01	.00	0.	*	1 JAN 2315	280	.00	.00	.00	0.
1 JAN 1050	131	.01	.01	.00	0.	*	1 JAN 2320	281	.00	.00	.00	0.
1 JAN 1055	132	.01	.01	.00	0.	*	1 JAN 2325	282	.00	.00	.00	0.
1 JAN 1100	133	.01	.01	.00	0.	*	1 JAN 2330	283	.00	.00	.00	0.
1 JAN 1105	134	.01	.01	.00	0.	*	1 JAN 2335	284	.00	.00	.00	0.
1 JAN 1110	135	.01	.01	.00	0.	*	1 JAN 2340	285	.00	.00	.00	0.
1 JAN 1115	136	.02	.01	.00	0.	*	1 JAN 2345	286	.00	.00	.00	0.
1 JAN 1120	137	.02	.02	.00	0.	*	1 JAN 2350	287	.00	.00	.00	0.
1 JAN 1125	138	.02	.02	.00	0.	*	1 JAN 2355	288	.00	.00	.00	0.
1 JAN 1130	139	.02	.02	.00	0.	*	2 JAN 0000	289	.00	.00	.00	0.
1 JAN 1135	140	.04	.02	.02	0.	*	2 JAN 0005	290	.00	.00	.00	0.
1 JAN 1140	141	.07	.02	.05	0.	*	2 JAN 0010	291	.00	.00	.00	0.
1 JAN 1145	142	.11	.02	.09	1.	*	2 JAN 0015	292	.00	.00	.00	0.
1 JAN 1150	143	.17	.02	.15	1.	*	2 JAN 0020	293	.00	.00	.00	0.
1 JAN 1155	144	.21	.02	.20	3.	*	2 JAN 0025	294	.00	.00	.00	0.
1 JAN 1200	145	.16	.01	.14	5.	*	2 JAN 0030	295	.00	.00	.00	0.
1 JAN 1205	146	.03	.01	.02	7.	*	2 JAN 0035	296	.00	.00	.00	0.
1 JAN 1210	147	.03	.01	.01	11.	*	2 JAN 0040	297	.00	.00	.00	0.
1 JAN 1215	148	.03	.01	.01	14.	*	2 JAN 0045	298	.00	.00	.00	0.
1 JAN 1220	149	.02	.01	.01	16.	*	2 JAN 0050	299	.00	.00	.00	0.
1 JAN 1225	150	.02	.01	.01	18.	*	2 JAN 0055	300	.00	.00	.00	0.
						*						

****

TOTAL RAINFALL = 1.97, TOTAL LOSS = 1.24, TOTAL EXCESS = .72

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 18.	12.50		3.	1.	1.	1.
		(INCHES)	.718	.724	.724	.724
		(AC-FT)	1.	2.	2.	2.

CUMULATIVE AREA = .04 SQ MI

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
TIME TO PEAK IN HOURS

					RATIOS APPLIED TO PRECIPITATION	
OPERATION	STATION	AREA	PLAN		RATIO 1	RATIO 2
					1.00	2.81
HYDROGRAPH AT						
+	13-1	.10	1	FLOW	12.	53.
				TIME	12.42	12.42
HYDROGRAPH AT						
+	13-2	.10	1	FLOW	13.	55.
				TIME	12.50	12.50
HYDROGRAPH AT						
+	13-3B	.14	1	FLOW	14.	51.
				TIME	12.92	12.92
HYDROGRAPH AT						
+	13-4	.04	1	FLOW	1.	18.
				TIME	12.58	12.50

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

```
1****************************************
****************************************
 *                                      *                                        *
*
 *   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   20OCT03  TIME  12:02:04  *                                        *           (916) 756-1104
*
 *                                      *                                        *
*
 ****************************************
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```
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

HEC-1 INPUT PAGE 1

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

  1           ID      HEC-1 Analysis
  2           ID      comb-sewer
  3           ID      area-park
  4           ID      Updated 10/20/03, Sear-Brown, JYM
  5           ID      B13-0B, 8-0b, 14-0b, 15-0b added, flows from the park
              *DIAGRAM
  6           IT       5  1JAN94       0     300
  7           IO       1
  8           JR    PREC       1    2.81

  9           KK     8-0B
 10           KM
 11           KO       0       0       0       0      22
 12           BA   0.049
 13           PB     0.7
 14           IN       6  1JAN94       0
              * typeII-24hour
 15           PC       0   0.001   0.002  0.0031  0.0041  0.0051  0.0062  0.0073  0.0083  0.0094
 16           PC  0.0105  0.0116  0.0127  0.0138   0.015  0.0161  0.0173  0.0185  0.0196  0.0208
 17           PC   0.022  0.0232  0.0244  0.0257  0.0269  0.0281  0.0294  0.0307  0.0319  0.0332
 18           PC  0.0345  0.0358  0.0371  0.0384  0.0398  0.0411  0.0425  0.0438  0.0452  0.0466
 19           PC   0.048  0.0494  0.0508  0.0523  0.0538  0.0553  0.0568  0.0583  0.0598  0.0614
 20           PC   0.063  0.0646  0.0662  0.0679  0.0696  0.0712   0.073  0.0747  0.0764  0.0782
 21           PC    0.08  0.0818  0.0836  0.0855  0.0874  0.0892  0.0912  0.0931   0.095   0.097
 22           PC   0.099   0.101   0.103  0.1051  0.1072  0.1093  0.1114  0.1135  0.1156  0.1178
 23           PC    0.12  0.1223  0.1246  0.1271  0.1296  0.1323   0.135  0.1379  0.1408  0.1439
 24           PC   0.147  0.1502  0.1534  0.1566  0.1598   0.163  0.1663  0.1697  0.1733  0.1771
 25           PC   0.181  0.1851  0.1895  0.1941  0.1989   0.204  0.2094  0.2152  0.2214   0.228
 26           PC   0.235  0.2427  0.2513  0.2609  0.2715   0.283  0.3068  0.3544  0.4308  0.5679
 27           PC   0.663   0.682  0.6986   0.713  0.7252   0.735  0.7434  0.7514  0.7588  0.7656
 28           PC   0.772   0.778  0.7836   0.789  0.7942   0.799  0.8036   0.808  0.8122  0.8162
 29           PC    0.82  0.8237  0.8273  0.8308  0.8342  0.8376  0.8409  0.8442  0.8474  0.8505
 30           PC  0.8535  0.8565  0.8594  0.8622  0.8649  0.8676  0.8702  0.8728  0.8753  0.8777
 31           PC    0.88  0.8823  0.8846  0.8868   0.889  0.8912  0.8934  0.8955  0.8976  0.8997
 32           PC  0.9018  0.9038  0.9058  0.9078  0.9098  0.9117  0.9136  0.9155  0.9174  0.9192
 33           PC   0.921  0.9228  0.9246  0.9263   0.928  0.9297  0.9314   0.933  0.9346  0.9362
 34           PC  0.9377  0.9393  0.9408  0.9423  0.9438  0.9452  0.9466   0.948  0.9494  0.9507
 35           PC   0.952  0.9533  0.9546  0.9559  0.9572  0.9584  0.9597   0.961  0.9622  0.9635
 36           PC  0.9648   0.966  0.9672  0.9685  0.9697  0.9709  0.9722  0.9734  0.9746  0.9758
 37           PC   0.977  0.9782  0.9794  0.9806  0.9818  0.9829  0.9841  0.9853  0.9864  0.9876
 38           PC  0.9888  0.9899   0.991  0.9922  0.9933  0.9944  0.9956  0.9967  0.9978  0.9989
 39           PC       1
```

```
          40          LG   0.140    0.15     9.2   0.062      40
          41          UD   0.556

          42          KK    14-0B
          43          KO      0       0        0       0      22
          44          BA   0.023
          45          PB     0.7
          46          LG   0.197    0.15     9.2   0.080      05
          47          UD   0.650
1                                                      HEC-1 INPUT                                        PAGE  2

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


          48          KK    15-0B
          49          KO      0       0        0       0      22
          50          BA   0.032
          51          PB     0.7
          52          LG   0.197    0.15     9.2   0.080      05
          53          UD   0.780

          54          KK    15-0C
          55          KO      0       0        0       0      22
          56          BA   0.036
          57          PB     0.7
          58          LG   0.073    0.15     9.2   0.042      85
          59          UD   0.273

          60          KK    13-0B
          61          KO      0       0        0       0      22
          62          BA   0.051
          63          PB     0.7
          64          LG   0.170    0.15     9.2    0.07      20
          65          UD   0.812
          66          KM
          67          KM
          68          ZZ
1
            SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

    9         8-0
               .
               .
   42          .         14-0
               .           .
               .           .
   48          .           .         15-0
               .           .           .
               .           .           .
   54          .           .           .         15-0
               .           .           .           .
               .           .           .           .
   60          .           .           .           .         13-0

 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************
***************************************
 *                                        *                                                   *
*
 *   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   20OCT03  TIME  12:02:04    *                                                   *           (916) 756-1104
*
 *                                        *                                                   *
*
 ****************************************
***************************************




                           HEC-1 Analysis
                           comb-sewer
                           area-park
                           Updated 10/20/03, Sear-Brown, JYM
                           B13-0B, 8-0b, 14-0b, 15-0b added, flows from the park

    7 IO          OUTPUT CONTROL VARIABLES
                        IPRNT          1  PRINT CONTROL
```

```
                    IPLOT            0  PLOT CONTROL
                    QSCAL           0.  HYDROGRAPH PLOT SCALE

     IT          HYDROGRAPH TIME DATA
                     NMIN            5  MINUTES IN COMPUTATION INTERVAL
                    IDATE       1JAN94  STARTING DATE
                    ITIME         0000  STARTING TIME
                       NQ          300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE       2JAN94  ENDING DATE
                   NDTIME         0055  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

     JP          MULTI-PLAN OPTION
                    NPLAN            1  NUMBER OF PLANS

     JR          MULTI-RATIO OPTION
                   RATIOS OF PRECIPITATION
                  1.00      2.81


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


             **************
             *            *
    9 KK     *     8-0    *     B
             *            *
             **************


   11 KO          OUTPUT CONTROL VARIABLES
                    IPRNT            1  PRINT CONTROL
                    IPLOT            0  PLOT CONTROL
                    QSCAL           0.  HYDROGRAPH PLOT SCALE
                    IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                     IOUT           22  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


   14 IN          TIME DATA FOR INPUT TIME SERIES
                    JXMIN            6  TIME INTERVAL IN MINUTES
                   JXDATE       1JAN94  STARTING DATE
                   JXTIME            0  STARTING TIME

               SUBBASIN RUNOFF DATA

   12 BA          SUBBASIN CHARACTERISTICS
                    TAREA          .05  SUBBASIN AREA

                PRECIPITATION DATA

   13 PB            STORM          .70  BASIN TOTAL PRECIPITATION

   15 PI           INCREMENTAL PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .02       .04
                     .05       .08       .11       .08       .02       .01       .01       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00		

40 LG GREEN AND AMPT LOSS RATE

STRTL	.14	STARTING LOSS
DTH	.15	MOISTURE DEFICIT
PSIF	9.20	WETTING FRONT SUCTION
XKSAT	.06	HYDRAULIC CONDUCTIVITY
RTIMP	40.00	PERCENT IMPERVIOUS AREA

41 UD SCS DIMENSIONLESS UNITGRAPH

TLAG	.56	LAG

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UNIT HYDROGRAPH
35 END-OF-PERIOD ORDINATES

2.	7.	13.	23.	32.	38.	39.	39.	35.	31.
25.	19.	15.	12.	10.	8.	6.	5.	4.	3.
2.	2.	2.	1.	1.	1.	1.	1.	0.	0.
0.	0.	0.	0.	0.					

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HYDROGRAPH AT STATION 8-0

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DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 0000	1	.00	.00	.00	0.	*	1 JAN 1230	151	.01	.00	.00	6.
1 JAN 0005	2	.00	.00	.00	0.	*	1 JAN 1235	152	.00	.00	.00	5.
1 JAN 0010	3	.00	.00	.00	0.	*	1 JAN 1240	153	.00	.00	.00	5.
1 JAN 0015	4	.00	.00	.00	0.	*	1 JAN 1245	154	.00	.00	.00	[illegible]
1 JAN 0020	5	.00	.00	.00	0.	*	1 JAN 1250	155	.00	.00	.00	[illegible]
1 JAN 0025	6	.00	.00	.00	0.	*	1 JAN 1255	156	.00	.00	.00	3.
1 JAN 0030	7	.00	.00	.00	0.	*	1 JAN 1300	157	.00	.00	.00	2.
1 JAN 0035	8	.00	.00	.00	0.	*	1 JAN 1305	158	.00	.00	.00	2.
1 JAN 0040	9	.00	.00	.00	0.	*	1 JAN 1310	159	.00	.00	.00	2.
1 JAN 0045	10	.00	.00	.00	0.	*	1 JAN 1315	160	.00	.00	.00	2.
1 JAN 0050	11	.00	.00	.00	0.	*	1 JAN 1320	161	.00	.00	.00	1.
1 JAN 0055	12	.00	.00	.00	0.	*	1 JAN 1325	162	.00	.00	.00	1.
1 JAN 0100	13	.00	.00	.00	0.	*	1 JAN 1330	163	.00	.00	.00	1.
1 JAN 0105	14	.00	.00	.00	0.	*	1 JAN 1335	164	.00	.00	.00	1.
1 JAN 0110	15	.00	.00	.00	0.	*	1 JAN 1340	165	.00	.00	.00	1.
1 JAN 0115	16	.00	.00	.00	0.	*	1 JAN 1345	166	.00	.00	.00	1.
1 JAN 0120	17	.00	.00	.00	0.	*	1 JAN 1350	167	.00	.00	.00	1.
1 JAN 0125	18	.00	.00	.00	0.	*	1 JAN 1355	168	.00	.00	.00	1.
1 JAN 0130	19	.00	.00	.00	0.	*	1 JAN 1400	169	.00	.00	.00	1.
1 JAN 0135	20	.00	.00	.00	0.	*	1 JAN 1405	170	.00	.00	.00	1.
1 JAN 0140	21	.00	.00	.00	0.	*	1 JAN 1410	171	.00	.00	.00	1.
1 JAN 0145	22	.00	.00	.00	0.	*	1 JAN 1415	172	.00	.00	.00	0.
1 JAN 0150	23	.00	.00	.00	0.	*	1 JAN 1420	173	.00	.00	.00	0.
1 JAN 0155	24	.00	.00	.00	0.	*	1 JAN 1425	174	.00	.00	.00	0.
1 JAN 0200	25	.00	.00	.00	0.	*	1 JAN 1430	175	.00	.00	.00	0.
1 JAN 0205	26	.00	.00	.00	0.	*	1 JAN 1435	176	.00	.00	.00	0.
1 JAN 0210	27	.00	.00	.00	0.	*	1 JAN 1440	177	.00	.00	.00	0.
1 JAN 0215	28	.00	.00	.00	0.	*	1 JAN 1445	178	.00	.00	.00	0.
1 JAN 0220	29	.00	.00	.00	0.	*	1 JAN 1450	179	.00	.00	.00	0.
1 JAN 0225	30	.00	.00	.00	0.	*	1 JAN 1455	180	.00	.00	.00	0.
1 JAN 0230	31	.00	.00	.00	0.	*	1 JAN 1500	181	.00	.00	.00	0.
1 JAN 0235	32	.00	.00	.00	0.	*	1 JAN 1505	182	.00	.00	.00	0.
1 JAN 0240	33	.00	.00	.00	0.	*	1 JAN 1510	183	.00	.00	.00	0.
1 JAN 0245	34	.00	.00	.00	0.	*	1 JAN 1515	184	.00	.00	.00	0.
1 JAN 0250	35	.00	.00	.00	0.	*	1 JAN 1520	185	.00	.00	.00	0.
1 JAN 0255	36	.00	.00	.00	0.	*	1 JAN 1525	186	.00	.00	.00	0.
1 JAN 0300	37	.00	.00	.00	0.	*	1 JAN 1530	187	.00	.00	.00	0.
1 JAN 0305	38	.00	.00	.00	0.	*	1 JAN 1535	188	.00	.00	.00	0.
1 JAN 0310	39	.00	.00	.00	0.	*	1 JAN 1540	189	.00	.00	.00	0.
1 JAN 0315	40	.00	.00	.00	0.	*	1 JAN 1545	190	.00	.00	.00	0.
1 JAN 0320	41	.00	.00	.00	0.	*	1 JAN 1550	191	.00	.00	.00	0.
1 JAN 0325	42	.00	.00	.00	0.	*	1 JAN 1555	192	.00	.00	.00	[illegible]
1 JAN 0330	43	.00	.00	.00	0.	*	1 JAN 1600	193	.00	.00	.00	[illegible]
1 JAN 0335	44	.00	.00	.00	0.	*	1 JAN 1605	194	.00	.00	.00	0.
1 JAN 0340	45	.00	.00	.00	0.	*	1 JAN 1610	195	.00	.00	.00	0.
1 JAN 0345	46	.00	.00	.00	0.	*	1 JAN 1615	196	.00	.00	.00	0.
1 JAN 0350	47	.00	.00	.00	0.	*	1 JAN 1620	197	.00	.00	.00	0.
1 JAN 0355	48	.00	.00	.00	0.	*	1 JAN 1625	198	.00	.00	.00	0.
1 JAN 0400	49	.00	.00	.00	0.	*	1 JAN 1630	199	.00	.00	.00	0.

1 JAN	0405	50	.00	.00	.00	0.	*	1 JAN	1635	200	.00	.00	.00	0.
1 JAN	0410	51	.00	.00	.00	0.	*	1 JAN	1640	201	.00	.00	.00	0.
1 JAN	0415	52	.00	.00	.00	0.	*	1 JAN	1645	202	.00	.00	.00	0.
1 JAN	0420	53	.00	.00	.00	0.	*	1 JAN	1650	203	.00	.00	.00	0.
1 JAN	0425	54	.00	.00	.00	0.	*	1 JAN	1655	204	.00	.00	.00	0.
1 JAN	0430	55	.00	.00	.00	0.	*	1 JAN	1700	205	.00	.00	.00	0.
1 JAN	0435	56	.00	.00	.00	0.	*	1 JAN	1705	206	.00	.00	.00	0.
1 JAN	0440	57	.00	.00	.00	0.	*	1 JAN	1710	207	.00	.00	.00	0.
1 JAN	0445	58	.00	.00	.00	0.	*	1 JAN	1715	208	.00	.00	.00	0.
1 JAN	0450	59	.00	.00	.00	0.	*	1 JAN	1720	209	.00	.00	.00	0.
1 JAN	0455	60	.00	.00	.00	0.	*	1 JAN	1725	210	.00	.00	.00	0.
1 JAN	0500	61	.00	.00	.00	0.	*	1 JAN	1730	211	.00	.00	.00	0.
1 JAN	0505	62	.00	.00	.00	0.	*	1 JAN	1735	212	.00	.00	.00	0.
1 JAN	0510	63	.00	.00	.00	0.	*	1 JAN	1740	213	.00	.00	.00	0.
1 JAN	0515	64	.00	.00	.00	0.	*	1 JAN	1745	214	.00	.00	.00	0.
1 JAN	0520	65	.00	.00	.00	0.	*	1 JAN	1750	215	.00	.00	.00	0.
1 JAN	0525	66	.00	.00	.00	0.	*	1 JAN	1755	216	.00	.00	.00	0.
1 JAN	0530	67	.00	.00	.00	0.	*	1 JAN	1800	217	.00	.00	.00	0.
1 JAN	0535	68	.00	.00	.00	0.	*	1 JAN	1805	218	.00	.00	.00	0.
1 JAN	0540	69	.00	.00	.00	0.	*	1 JAN	1810	219	.00	.00	.00	0.
1 JAN	0545	70	.00	.00	.00	0.	*	1 JAN	1815	220	.00	.00	.00	0.
1 JAN	0550	71	.00	.00	.00	0.	*	1 JAN	1820	221	.00	.00	.00	0.
1 JAN	0555	72	.00	.00	.00	0.	*	1 JAN	1825	222	.00	.00	.00	0.
1 JAN	0600	73	.00	.00	.00	0.	*	1 JAN	1830	223	.00	.00	.00	0.
1 JAN	0605	74	.00	.00	.00	0.	*	1 JAN	1835	224	.00	.00	.00	0.
1 JAN	0610	75	.00	.00	.00	0.	*	1 JAN	1840	225	.00	.00	.00	0.
1 JAN	0615	76	.00	.00	.00	0.	*	1 JAN	1845	226	.00	.00	.00	0.
1 JAN	0620	77	.00	.00	.00	0.	*	1 JAN	1850	227	.00	.00	.00	0.
1 JAN	0625	78	.00	.00	.00	0.	*	1 JAN	1855	228	.00	.00	.00	0.
1 JAN	0630	79	.00	.00	.00	0.	*	1 JAN	1900	229	.00	.00	.00	0.
1 JAN	0635	80	.00	.00	.00	0.	*	1 JAN	1905	230	.00	.00	.00	0.
1 JAN	0640	81	.00	.00	.00	0.	*	1 JAN	1910	231	.00	.00	.00	0.
1 JAN	0645	82	.00	.00	.00	0.	*	1 JAN	1915	232	.00	.00	.00	0.
1 JAN	0650	83	.00	.00	.00	0.	*	1 JAN	1920	233	.00	.00	.00	0.
1 JAN	0655	84	.00	.00	.00	0.	*	1 JAN	1925	234	.00	.00	.00	0.
1 JAN	0700	85	.00	.00	.00	0.	*	1 JAN	1930	235	.00	.00	.00	0.
1 JAN	0705	86	.00	.00	.00	0.	*	1 JAN	1935	236	.00	.00	.00	0.
1 JAN	0710	87	.00	.00	.00	0.	*	1 JAN	1940	237	.00	.00	.00	0.
1 JAN	0715	88	.00	.00	.00	0.	*	1 JAN	1945	238	.00	.00	.00	0.
1 JAN	0720	89	.00	.00	.00	0.	*	1 JAN	1950	239	.00	.00	.00	0.
1 JAN	0725	90	.00	.00	.00	0.	*	1 JAN	1955	240	.00	.00	.00	0.
1 JAN	0730	91	.00	.00	.00	0.	*	1 JAN	2000	241	.00	.00	.00	0.
1 JAN	0735	92	.00	.00	.00	0.	*	1 JAN	2005	242	.00	.00	.00	0.
1 JAN	0740	93	.00	.00	.00	0.	*	1 JAN	2010	243	.00	.00	.00	0.
1 JAN	0745	94	.00	.00	.00	0.	*	1 JAN	2015	244	.00	.00	.00	0.
1 JAN	0750	95	.00	.00	.00	0.	*	1 JAN	2020	245	.00	.00	.00	0.
1 JAN	0755	96	.00	.00	.00	0.	*	1 JAN	2025	246	.00	.00	.00	0.
1 JAN	0800	97	.00	.00	.00	0.	*	1 JAN	2030	247	.00	.00	.00	0.
1 JAN	0805	98	.00	.00	.00	0.	*	1 JAN	2035	248	.00	.00	.00	0.
1 JAN	0810	99	.00	.00	.00	0.	*	1 JAN	2040	249	.00	.00	.00	0.
1 JAN	0815	100	.00	.00	.00	0.	*	1 JAN	2045	250	.00	.00	.00	0.
1 JAN	0820	101	.00	.00	.00	0.	*	1 JAN	2050	251	.00	.00	.00	0.
1 JAN	0825	102	.00	.00	.00	0.	*	1 JAN	2055	252	.00	.00	.00	0.
1 JAN	0830	103	.00	.00	.00	0.	*	1 JAN	2100	253	.00	.00	.00	0.
1 JAN	0835	104	.00	.00	.00	0.	*	1 JAN	2105	254	.00	.00	.00	0.
1 JAN	0840	105	.00	.00	.00	0.	*	1 JAN	2110	255	.00	.00	.00	0.
1 JAN	0845	106	.00	.00	.00	0.	*	1 JAN	2115	256	.00	.00	.00	0.
1 JAN	0850	107	.00	.00	.00	0.	*	1 JAN	2120	257	.00	.00	.00	0.
1 JAN	0855	108	.00	.00	.00	0.	*	1 JAN	2125	258	.00	.00	.00	0.
1 JAN	0900	109	.00	.00	.00	0.	*	1 JAN	2130	259	.00	.00	.00	0.
1 JAN	0905	110	.00	.00	.00	0.	*	1 JAN	2135	260	.00	.00	.00	0.
1 JAN	0910	111	.00	.00	.00	0.	*	1 JAN	2140	261	.00	.00	.00	0.
1 JAN	0915	112	.00	.00	.00	0.	*	1 JAN	2145	262	.00	.00	.00	0.
1 JAN	0920	113	.00	.00	.00	0.	*	1 JAN	2150	263	.00	.00	.00	0.
1 JAN	0925	114	.00	.00	.00	0.	*	1 JAN	2155	264	.00	.00	.00	0.
1 JAN	0930	115	.00	.00	.00	0.	*	1 JAN	2200	265	.00	.00	.00	0.
1 JAN	0935	116	.00	.00	.00	0.	*	1 JAN	2205	266	.00	.00	.00	0.
1 JAN	0940	117	.00	.00	.00	0.	*	1 JAN	2210	267	.00	.00	.00	0.
1 JAN	0945	118	.00	.00	.00	0.	*	1 JAN	2215	268	.00	.00	.00	0.
1 JAN	0950	119	.00	.00	.00	0.	*	1 JAN	2220	269	.00	.00	.00	0.
1 JAN	0955	120	.00	.00	.00	0.	*	1 JAN	2225	270	.00	.00	.00	0.
1 JAN	1000	121	.00	.00	.00	0.	*	1 JAN	2230	271	.00	.00	.00	0.
1 JAN	1005	122	.00	.00	.00	0.	*	1 JAN	2235	272	.00	.00	.00	0.
1 JAN	1010	123	.00	.00	.00	0.	*	1 JAN	2240	273	.00	.00	.00	0.
1 JAN	1015	124	.00	.00	.00	0.	*	1 JAN	2245	274	.00	.00	.00	0.
1 JAN	1020	125	.00	.00	.00	0.	*	1 JAN	2250	275	.00	.00	.00	0.
1 JAN	1025	126	.00	.00	.00	0.	*	1 JAN	2255	276	.00	.00	.00	0.
1 JAN	1030	127	.00	.00	.00	0.	*	1 JAN	2300	277	.00	.00	.00	0.
1 JAN	1035	128	.00	.00	.00	0.	*	1 JAN	2305	278	.00	.00	.00	0.
1 JAN	1040	129	.00	.00	.00	0.	*	1 JAN	2310	279	.00	.00	.00	0.
1 JAN	1045	130	.00	.00	.00	0.	*	1 JAN	2315	280	.00	.00	.00	0.
1 JAN	1050	131	.00	.00	.00	0.	*	1 JAN	2320	281	.00	.00	.00	0.
1 JAN	1055	132	.00	.00	.00	0.	*	1 JAN	2325	282	.00	.00	.00	0.
1 JAN	1100	133	.00	.00	.00	0.	*	1 JAN	2330	283	.00	.00	.00	0.
1 JAN	1105	134	.00	.00	.00	0.	*	1 JAN	2335	284	.00	.00	.00	0.
1 JAN	1110	135	.00	.00	.00	0.	*	1 JAN	2340	285	.00	.00	.00	0.
1 JAN	1115	136	.01	.00	.00	0.	*	1 JAN	2345	286	.00	.00	.00	0.
1 JAN	1120	137	.01	.00	.00	1.	*	1 JAN	2350	287	.00	.00	.00	0.
1 JAN	1125	138	.01	.00	.00	1.	*	1 JAN	2355	288	.00	.00	.00	0.
1 JAN	1130	139	.01	.00	.00	1.	*	2 JAN	0000	289	.00	.00	.00	0.

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1135	140	.01	.01	.01	1.	*	2	JAN	0005	290	.00	.00	.00	0.
1	JAN	1140	141	.02	.01	.01	1.	*	2	JAN	0010	291	.00	.00	.00	0.
1	JAN	1145	142	.04	.02	.02	1.	*	2	JAN	0015	292	.00	.00	.00	0.
1	JAN	1150	143	.06	.03	.03	1.	*	2	JAN	0020	293	.00	.00	.00	0.
1	JAN	1155	144	.08	.02	.05	2.	*	2	JAN	0025	294	.00	.00	.00	0.
1	JAN	1200	145	.06	.02	.03	2.	*	2	JAN	0030	295	.00	.00	.00	0.
1	JAN	1205	146	.01	.01	.00	3.	*	2	JAN	0035	296	.00	.00	.00	0
1	JAN	1210	147	.01	.01	.00	4.	*	2	JAN	0040	297	.00	.00	.00	0
1	JAN	1215	148	.01	.01	.00	5.	*	2	JAN	0045	298	.00	.00	.00	0.
1	JAN	1220	149	.01	.00	.00	6.	*	2	JAN	0050	299	.00	.00	.00	0.
1	JAN	1225	150	.01	.00	.00	6.	*	2	JAN	0055	300	.00	.00	.00	0.
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TOTAL RAINFALL = .70, TOTAL LOSS = .38, TOTAL EXCESS = .32

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				
		(CFS)			
+ 6.	12.42	1.	0.	0.	0.
		(INCHES) .236	.318	.319	.319
		(AC-FT) 1.	1.	1.	1.

CUMULATIVE AREA = .05 SQ MI

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HYDROGRAPH AT STATION 8-0
PLAN 1, RATIO = 1.00

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	0000	1	.00	.00	.00	0.	*	1	JAN	1230	151	.01	.00	.00	6.
1	JAN	0005	2	.00	.00	.00	0.	*	1	JAN	1235	152	.00	.00	.00	5.
1	JAN	0010	3	.00	.00	.00	0.	*	1	JAN	1240	153	.00	.00	.00	5
1	JAN	0015	4	.00	.00	.00	0.	*	1	JAN	1245	154	.00	.00	.00	(
1	JAN	0020	5	.00	.00	.00	0.	*	1	JAN	1250	155	.00	.00	.00	3.
1	JAN	0025	6	.00	.00	.00	0.	*	1	JAN	1255	156	.00	.00	.00	3.
1	JAN	0030	7	.00	.00	.00	0.	*	1	JAN	1300	157	.00	.00	.00	2.
1	JAN	0035	8	.00	.00	.00	0.	*	1	JAN	1305	158	.00	.00	.00	2.
1	JAN	0040	9	.00	.00	.00	0.	*	1	JAN	1310	159	.00	.00	.00	2.
1	JAN	0045	10	.00	.00	.00	0.	*	1	JAN	1315	160	.00	.00	.00	2.
1	JAN	0050	11	.00	.00	.00	0.	*	1	JAN	1320	161	.00	.00	.00	1.
1	JAN	0055	12	.00	.00	.00	0.	*	1	JAN	1325	162	.00	.00	.00	1.
1	JAN	0100	13	.00	.00	.00	0.	*	1	JAN	1330	163	.00	.00	.00	1.
1	JAN	0105	14	.00	.00	.00	0.	*	1	JAN	1335	164	.00	.00	.00	1.
1	JAN	0110	15	.00	.00	.00	0.	*	1	JAN	1340	165	.00	.00	.00	1.
1	JAN	0115	16	.00	.00	.00	0.	*	1	JAN	1345	166	.00	.00	.00	1.
1	JAN	0120	17	.00	.00	.00	0.	*	1	JAN	1350	167	.00	.00	.00	1.
1	JAN	0125	18	.00	.00	.00	0.	*	1	JAN	1355	168	.00	.00	.00	1.
1	JAN	0130	19	.00	.00	.00	0.	*	1	JAN	1400	169	.00	.00	.00	1.
1	JAN	0135	20	.00	.00	.00	0.	*	1	JAN	1405	170	.00	.00	.00	1.
1	JAN	0140	21	.00	.00	.00	0.	*	1	JAN	1410	171	.00	.00	.00	1.
1	JAN	0145	22	.00	.00	.00	0.	*	1	JAN	1415	172	.00	.00	.00	0.
1	JAN	0150	23	.00	.00	.00	0.	*	1	JAN	1420	173	.00	.00	.00	0.
1	JAN	0155	24	.00	.00	.00	0.	*	1	JAN	1425	174	.00	.00	.00	0.
1	JAN	0200	25	.00	.00	.00	0.	*	1	JAN	1430	175	.00	.00	.00	0.
1	JAN	0205	26	.00	.00	.00	0.	*	1	JAN	1435	176	.00	.00	.00	0.
1	JAN	0210	27	.00	.00	.00	0.	*	1	JAN	1440	177	.00	.00	.00	0.
1	JAN	0215	28	.00	.00	.00	0.	*	1	JAN	1445	178	.00	.00	.00	0.
1	JAN	0220	29	.00	.00	.00	0.	*	1	JAN	1450	179	.00	.00	.00	0.
1	JAN	0225	30	.00	.00	.00	0.	*	1	JAN	1455	180	.00	.00	.00	0.
1	JAN	0230	31	.00	.00	.00	0.	*	1	JAN	1500	181	.00	.00	.00	0.
1	JAN	0235	32	.00	.00	.00	0.	*	1	JAN	1505	182	.00	.00	.00	0.
1	JAN	0240	33	.00	.00	.00	0.	*	1	JAN	1510	183	.00	.00	.00	0.
1	JAN	0245	34	.00	.00	.00	0.	*	1	JAN	1515	184	.00	.00	.00	0.
1	JAN	0250	35	.00	.00	.00	0.	*	1	JAN	1520	185	.00	.00	.00	0.
1	JAN	0255	36	.00	.00	.00	0.	*	1	JAN	1525	186	.00	.00	.00	0.
1	JAN	0300	37	.00	.00	.00	0.	*	1	JAN	1530	187	.00	.00	.00	0.
1	JAN	0305	38	.00	.00	.00	0.	*	1	JAN	1535	188	.00	.00	.00	0.
1	JAN	0310	39	.00	.00	.00	0.	*	1	JAN	1540	189	.00	.00	.00	0.
1	JAN	0315	40	.00	.00	.00	0.	*	1	JAN	1545	190	.00	.00	.00	0.
1	JAN	0320	41	.00	.00	.00	0.	*	1	JAN	1550	191	.00	.00	.00	0
1	JAN	0325	42	.00	.00	.00	0.	*	1	JAN	1555	192	.00	.00	.00	(
1	JAN	0330	43	.00	.00	.00	0.	*	1	JAN	1600	193	.00	.00	.00	0.
1	JAN	0335	44	.00	.00	.00	0.	*	1	JAN	1605	194	.00	.00	.00	0.
1	JAN	0340	45	.00	.00	.00	0.	*	1	JAN	1610	195	.00	.00	.00	0.
1	JAN	0345	46	.00	.00	.00	0.	*	1	JAN	1615	196	.00	.00	.00	0.
1	JAN	0350	47	.00	.00	.00	0.	*	1	JAN	1620	197	.00	.00	.00	0.
1	JAN	0355	48	.00	.00	.00	0.	*	1	JAN	1625	198	.00	.00	.00	0.

1 JAN	0400	49	.00	.00	.00	0.	*	1 JAN	1630	199	.00	.00	.00	0.
1 JAN	0405	50	.00	.00	.00	0.	*	1 JAN	1635	200	.00	.00	.00	0.
1 JAN	0410	51	.00	.00	.00	0.	*	1 JAN	1640	201	.00	.00	.00	0.
1 JAN	0415	52	.00	.00	.00	0.	*	1 JAN	1645	202	.00	.00	.00	0.
1 JAN	0420	53	.00	.00	.00	0.	*	1 JAN	1650	203	.00	.00	.00	0.
1 JAN	0425	54	.00	.00	.00	0.	*	1 JAN	1655	204	.00	.00	.00	0.
1 JAN	0430	55	.00	.00	.00	0.	*	1 JAN	1700	205	.00	.00	.00	0.
1 JAN	0435	56	.00	.00	.00	0.	*	1 JAN	1705	206	.00	.00	.00	0.
1 JAN	0440	57	.00	.00	.00	0.	*	1 JAN	1710	207	.00	.00	.00	0.
1 JAN	0445	58	.00	.00	.00	0.	*	1 JAN	1715	208	.00	.00	.00	0.
1 JAN	0450	59	.00	.00	.00	0.	*	1 JAN	1720	209	.00	.00	.00	0.
1 JAN	0455	60	.00	.00	.00	0.	*	1 JAN	1725	210	.00	.00	.00	0.
1 JAN	0500	61	.00	.00	.00	0.	*	1 JAN	1730	211	.00	.00	.00	0.
1 JAN	0505	62	.00	.00	.00	0.	*	1 JAN	1735	212	.00	.00	.00	0.
1 JAN	0510	63	.00	.00	.00	0.	*	1 JAN	1740	213	.00	.00	.00	0.
1 JAN	0515	64	.00	.00	.00	0.	*	1 JAN	1745	214	.00	.00	.00	0.
1 JAN	0520	65	.00	.00	.00	0.	*	1 JAN	1750	215	.00	.00	.00	0.
1 JAN	0525	66	.00	.00	.00	0.	*	1 JAN	1755	216	.00	.00	.00	0.
1 JAN	0530	67	.00	.00	.00	0.	*	1 JAN	1800	217	.00	.00	.00	0.
1 JAN	0535	68	.00	.00	.00	0.	*	1 JAN	1805	218	.00	.00	.00	0.
1 JAN	0540	69	.00	.00	.00	0.	*	1 JAN	1810	219	.00	.00	.00	0.
1 JAN	0545	70	.00	.00	.00	0.	*	1 JAN	1815	220	.00	.00	.00	0.
1 JAN	0550	71	.00	.00	.00	0.	*	1 JAN	1820	221	.00	.00	.00	0.
1 JAN	0555	72	.00	.00	.00	0.	*	1 JAN	1825	222	.00	.00	.00	0.
1 JAN	0600	73	.00	.00	.00	0.	*	1 JAN	1830	223	.00	.00	.00	0.
1 JAN	0605	74	.00	.00	.00	0.	*	1 JAN	1835	224	.00	.00	.00	0.
1 JAN	0610	75	.00	.00	.00	0.	*	1 JAN	1840	225	.00	.00	.00	0.
1 JAN	0615	76	.00	.00	.00	0.	*	1 JAN	1845	226	.00	.00	.00	0.
1 JAN	0620	77	.00	.00	.00	0.	*	1 JAN	1850	227	.00	.00	.00	0.
1 JAN	0625	78	.00	.00	.00	0.	*	1 JAN	1855	228	.00	.00	.00	0.
1 JAN	0630	79	.00	.00	.00	0.	*	1 JAN	1900	229	.00	.00	.00	0.
1 JAN	0635	80	.00	.00	.00	0.	*	1 JAN	1905	230	.00	.00	.00	0.
1 JAN	0640	81	.00	.00	.00	0.	*	1 JAN	1910	231	.00	.00	.00	0.
1 JAN	0645	82	.00	.00	.00	0.	*	1 JAN	1915	232	.00	.00	.00	0.
1 JAN	0650	83	.00	.00	.00	0.	*	1 JAN	1920	233	.00	.00	.00	0.
1 JAN	0655	84	.00	.00	.00	0.	*	1 JAN	1925	234	.00	.00	.00	0.
1 JAN	0700	85	.00	.00	.00	0.	*	1 JAN	1930	235	.00	.00	.00	0.
1 JAN	0705	86	.00	.00	.00	0.	*	1 JAN	1935	236	.00	.00	.00	0.
1 JAN	0710	87	.00	.00	.00	0.	*	1 JAN	1940	237	.00	.00	.00	0.
1 JAN	0715	88	.00	.00	.00	0.	*	1 JAN	1945	238	.00	.00	.00	0.
1 JAN	0720	89	.00	.00	.00	0.	*	1 JAN	1950	239	.00	.00	.00	0.
1 JAN	0725	90	.00	.00	.00	0.	*	1 JAN	1955	240	.00	.00	.00	0.
1 JAN	0730	91	.00	.00	.00	0.	*	1 JAN	2000	241	.00	.00	.00	0.
1 JAN	0735	92	.00	.00	.00	0.	*	1 JAN	2005	242	.00	.00	.00	0.
1 JAN	0740	93	.00	.00	.00	0.	*	1 JAN	2010	243	.00	.00	.00	0.
1 JAN	0745	94	.00	.00	.00	0.	*	1 JAN	2015	244	.00	.00	.00	0.
1 JAN	0750	95	.00	.00	.00	0.	*	1 JAN	2020	245	.00	.00	.00	0.
1 JAN	0755	96	.00	.00	.00	0.	*	1 JAN	2025	246	.00	.00	.00	0.
1 JAN	0800	97	.00	.00	.00	0.	*	1 JAN	2030	247	.00	.00	.00	0.
1 JAN	0805	98	.00	.00	.00	0.	*	1 JAN	2035	248	.00	.00	.00	0.
1 JAN	0810	99	.00	.00	.00	0.	*	1 JAN	2040	249	.00	.00	.00	0.
1 JAN	0815	100	.00	.00	.00	0.	*	1 JAN	2045	250	.00	.00	.00	0.
1 JAN	0820	101	.00	.00	.00	0.	*	1 JAN	2050	251	.00	.00	.00	0.
1 JAN	0825	102	.00	.00	.00	0.	*	1 JAN	2055	252	.00	.00	.00	0.
1 JAN	0830	103	.00	.00	.00	0.	*	1 JAN	2100	253	.00	.00	.00	0.
1 JAN	0835	104	.00	.00	.00	0.	*	1 JAN	2105	254	.00	.00	.00	0.
1 JAN	0840	105	.00	.00	.00	0.	*	1 JAN	2110	255	.00	.00	.00	0.
1 JAN	0845	106	.00	.00	.00	0.	*	1 JAN	2115	256	.00	.00	.00	0.
1 JAN	0850	107	.00	.00	.00	0.	*	1 JAN	2120	257	.00	.00	.00	0.
1 JAN	0855	108	.00	.00	.00	0.	*	1 JAN	2125	258	.00	.00	.00	0.
1 JAN	0900	109	.00	.00	.00	0.	*	1 JAN	2130	259	.00	.00	.00	0.
1 JAN	0905	110	.00	.00	.00	0.	*	1 JAN	2135	260	.00	.00	.00	0.
1 JAN	0910	111	.00	.00	.00	0.	*	1 JAN	2140	261	.00	.00	.00	0.
1 JAN	0915	112	.00	.00	.00	0.	*	1 JAN	2145	262	.00	.00	.00	0.
1 JAN	0920	113	.00	.00	.00	0.	*	1 JAN	2150	263	.00	.00	.00	0.
1 JAN	0925	114	.00	.00	.00	0.	*	1 JAN	2155	264	.00	.00	.00	0.
1 JAN	0930	115	.00	.00	.00	0.	*	1 JAN	2200	265	.00	.00	.00	0.
1 JAN	0935	116	.00	.00	.00	0.	*	1 JAN	2205	266	.00	.00	.00	0.
1 JAN	0940	117	.00	.00	.00	0.	*	1 JAN	2210	267	.00	.00	.00	0.
1 JAN	0945	118	.00	.00	.00	0.	*	1 JAN	2215	268	.00	.00	.00	0.
1 JAN	0950	119	.00	.00	.00	0.	*	1 JAN	2220	269	.00	.00	.00	0.
1 JAN	0955	120	.00	.00	.00	0.	*	1 JAN	2225	270	.00	.00	.00	0.
1 JAN	1000	121	.00	.00	.00	0.	*	1 JAN	2230	271	.00	.00	.00	0.
1 JAN	1005	122	.00	.00	.00	0.	*	1 JAN	2235	272	.00	.00	.00	0.
1 JAN	1010	123	.00	.00	.00	0.	*	1 JAN	2240	273	.00	.00	.00	0.
1 JAN	1015	124	.00	.00	.00	0.	*	1 JAN	2245	274	.00	.00	.00	0.
1 JAN	1020	125	.00	.00	.00	0.	*	1 JAN	2250	275	.00	.00	.00	0.
1 JAN	1025	126	.00	.00	.00	0.	*	1 JAN	2255	276	.00	.00	.00	0.
1 JAN	1030	127	.00	.00	.00	0.	*	1 JAN	2300	277	.00	.00	.00	0.
1 JAN	1035	128	.00	.00	.00	0.	*	1 JAN	2305	278	.00	.00	.00	0.
1 JAN	1040	129	.00	.00	.00	0.	*	1 JAN	2310	279	.00	.00	.00	0.
1 JAN	1045	130	.00	.00	.00	0.	*	1 JAN	2315	280	.00	.00	.00	0.
1 JAN	1050	131	.00	.00	.00	0.	*	1 JAN	2320	281	.00	.00	.00	0.
1 JAN	1055	132	.00	.00	.00	0.	*	1 JAN	2325	282	.00	.00	.00	0.
1 JAN	1100	133	.00	.00	.00	0.	*	1 JAN	2330	283	.00	.00	.00	0.
1 JAN	1105	134	.00	.00	.00	0.	*	1 JAN	2335	284	.00	.00	.00	0.
1 JAN	1110	135	.00	.00	.00	0.	*	1 JAN	2340	285	.00	.00	.00	0.
1 JAN	1115	136	.01	.00	.00	0.	*	1 JAN	2345	286	.00	.00	.00	0.
1 JAN	1120	137	.01	.00	.00	1.	*	1 JAN	2350	287	.00	.00	.00	0.
1 JAN	1125	138	.01	.00	.00	1.	*	1 JAN	2355	288	.00	.00	.00	0.

1	JAN 1130	139	.01	.00	.00	1.	*	2	JAN 0000	289	.00	.00	.00	0.
1	JAN 1135	140	.01	.01	.01	1.	*	2	JAN 0005	290	.00	.00	.00	0.
1	JAN 1140	141	.02	.01	.01	1.	*	2	JAN 0010	291	.00	.00	.00	0.
1	JAN 1145	142	.04	.02	.02	1.	*	2	JAN 0015	292	.00	.00	.00	0.
1	JAN 1150	143	.06	.03	.03	1.	*	2	JAN 0020	293	.00	.00	.00	0.
1	JAN 1155	144	.08	.02	.05	2.	*	2	JAN 0025	294	.00	.00	.00	0.
1	JAN 1200	145	.06	.02	.03	2.	*	2	JAN 0030	295	.00	.00	.00	0.
1	JAN 1205	146	.01	.01	.00	3.	*	2	JAN 0035	296	.00	.00	.00	0.
1	JAN 1210	147	.01	.01	.00	4.	*	2	JAN 0040	297	.00	.00	.00	0.
1	JAN 1215	148	.01	.01	.00	5.	*	2	JAN 0045	298	.00	.00	.00	0.
1	JAN 1220	149	.01	.00	.00	6.	*	2	JAN 0050	299	.00	.00	.00	0.
1	JAN 1225	150	.01	.00	.00	6.	*	2	JAN 0055	300	.00	.00	.00	0.
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TOTAL RAINFALL = .70, TOTAL LOSS = .38, TOTAL EXCESS = .32

	PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
			(CFS)			
+	6.	12.42	1.	0.	0.	0.
			(INCHES) .236	.318	.319	.319
			(AC-FT) 1.	1.	1.	1.

CUMULATIVE AREA = .05 SQ MI

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HYDROGRAPH AT STATION 8-0
PLAN 1, RATIO = 2.81

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
								*								
1	JAN	0000	1	.00	.00	.00	0.	*	1	JAN	1230	151	.02	.01	.01	26.
1	JAN	0005	2	.00	.00	.00	0.	*	1	JAN	1235	152	.01	.01	.01	24
1	JAN	0010	3	.00	.00	.00	0.	*	1	JAN	1240	153	.01	.01	.01	2
1	JAN	0015	4	.00	.00	.00	0.	*	1	JAN	1245	154	.01	.01	.01	18.
1	JAN	0020	5	.00	.00	.00	0.	*	1	JAN	1250	155	.01	.01	.00	15.
1	JAN	0025	6	.00	.00	.00	0.	*	1	JAN	1255	156	.01	.01	.00	12.
1	JAN	0030	7	.00	.00	.00	0.	*	1	JAN	1300	157	.01	.01	.00	10.
1	JAN	0035	8	.00	.00	.00	0.	*	1	JAN	1305	158	.01	.01	.00	9.
1	JAN	0040	9	.00	.00	.00	0.	*	1	JAN	1310	159	.01	.01	.00	7.
1	JAN	0045	10	.00	.00	.00	0.	*	1	JAN	1315	160	.01	.01	.00	6.
1	JAN	0050	11	.00	.00	.00	0.	*	1	JAN	1320	161	.01	.01	.00	5.
1	JAN	0055	12	.00	.00	.00	0.	*	1	JAN	1325	162	.01	.01	.00	5.
1	JAN	0100	13	.00	.00	.00	0.	*	1	JAN	1330	163	.01	.00	.00	4.
1	JAN	0105	14	.00	.00	.00	0.	*	1	JAN	1335	164	.01	.00	.00	3.
1	JAN	0110	15	.00	.00	.00	0.	*	1	JAN	1340	165	.01	.00	.00	3.
1	JAN	0115	16	.00	.00	.00	0.	*	1	JAN	1345	166	.01	.00	.00	3.
1	JAN	0120	17	.00	.00	.00	0.	*	1	JAN	1350	167	.01	.00	.00	2.
1	JAN	0125	18	.00	.00	.00	0.	*	1	JAN	1355	168	.01	.00	.00	2.
1	JAN	0130	19	.00	.00	.00	0.	*	1	JAN	1400	169	.01	.00	.00	2.
1	JAN	0135	20	.00	.00	.00	0.	*	1	JAN	1405	170	.01	.00	.00	2.
1	JAN	0140	21	.00	.00	.00	0.	*	1	JAN	1410	171	.01	.00	.00	2.
1	JAN	0145	22	.00	.00	.00	0.	*	1	JAN	1415	172	.01	.00	.00	1.
1	JAN	0150	23	.00	.00	.00	0.	*	1	JAN	1420	173	.01	.00	.00	1.
1	JAN	0155	24	.00	.00	.00	0.	*	1	JAN	1425	174	.01	.00	.00	1.
1	JAN	0200	25	.00	.00	.00	0.	*	1	JAN	1430	175	.01	.00	.00	1.
1	JAN	0205	26	.00	.00	.00	0.	*	1	JAN	1435	176	.01	.00	.00	1.
1	JAN	0210	27	.00	.00	.00	0.	*	1	JAN	1440	177	.01	.00	.00	1.
1	JAN	0215	28	.00	.00	.00	0.	*	1	JAN	1445	178	.01	.00	.00	1.
1	JAN	0220	29	.00	.00	.00	0.	*	1	JAN	1450	179	.01	.00	.00	1.
1	JAN	0225	30	.00	.00	.00	0.	*	1	JAN	1455	180	.01	.00	.00	1.
1	JAN	0230	31	.00	.00	.00	0.	*	1	JAN	1500	181	.00	.00	.00	1.
1	JAN	0235	32	.00	.00	.00	0.	*	1	JAN	1505	182	.00	.00	.00	1.
1	JAN	0240	33	.00	.00	.00	0.	*	1	JAN	1510	183	.00	.00	.00	1.
1	JAN	0245	34	.00	.00	.00	0.	*	1	JAN	1515	184	.00	.00	.00	1.
1	JAN	0250	35	.00	.00	.00	0.	*	1	JAN	1520	185	.00	.00	.00	1.
1	JAN	0255	36	.00	.00	.00	0.	*	1	JAN	1525	186	.00	.00	.00	1.
1	JAN	0300	37	.00	.00	.00	0.	*	1	JAN	1530	187	.00	.00	.00	1.
1	JAN	0305	38	.00	.00	.00	0.	*	1	JAN	1535	188	.00	.00	.00	1.
1	JAN	0310	39	.00	.00	.00	0.	*	1	JAN	1540	189	.00	.00	.00	1.
1	JAN	0315	40	.00	.00	.00	0.	*	1	JAN	1545	190	.00	.00	.00	1
1	JAN	0320	41	.00	.00	.00	0.	*	1	JAN	1550	191	.00	.00	.00	(
1	JAN	0325	42	.00	.00	.00	0.	*	1	JAN	1555	192	.00	.00	.00	1.
1	JAN	0330	43	.00	.00	.00	0.	*	1	JAN	1600	193	.00	.00	.00	1.
1	JAN	0335	44	.00	.00	.00	0.	*	1	JAN	1605	194	.00	.00	.00	1.
1	JAN	0340	45	.00	.00	.00	0.	*	1	JAN	1610	195	.00	.00	.00	1.
1	JAN	0345	46	.00	.00	.00	0.	*	1	JAN	1615	196	.00	.00	.00	1.
1	JAN	0350	47	.00	.00	.00	0.	*	1	JAN	1620	197	.00	.00	.00	1.

1 JAN	0355	48	.00	.00	.00	0.	*	1 JAN	1625	198	.00	.00	.00	1.
1 JAN	0400	49	.00	.00	.00	0.	*	1 JAN	1630	199	.00	.00	.00	1.
1 JAN	0405	50	.00	.00	.00	0.	*	1 JAN	1635	200	.00	.00	.00	1.
1 JAN	0410	51	.00	.00	.00	0.	*	1 JAN	1640	201	.00	.00	.00	1.
1 JAN	0415	52	.00	.00	.00	0.	*	1 JAN	1645	202	.00	.00	.00	1.
1 JAN	0420	53	.00	.00	.00	0.	*	1 JAN	1650	203	.00	.00	.00	1.
1 JAN	0425	54	.00	.00	.00	0.	*	1 JAN	1655	204	.00	.00	.00	1.
1 JAN	0430	55	.00	.00	.00	0.	*	1 JAN	1700	205	.00	.00	.00	1.
1 JAN	0435	56	.00	.00	.00	0.	*	1 JAN	1705	206	.00	.00	.00	1.
1 JAN	0440	57	.00	.00	.00	0.	*	1 JAN	1710	207	.00	.00	.00	1.
1 JAN	0445	58	.00	.00	.00	0.	*	1 JAN	1715	208	.00	.00	.00	1.
1 JAN	0450	59	.00	.00	.00	0.	*	1 JAN	1720	209	.00	.00	.00	1.
1 JAN	0455	60	.00	.00	.00	0.	*	1 JAN	1725	210	.00	.00	.00	1.
1 JAN	0500	61	.00	.00	.00	0.	*	1 JAN	1730	211	.00	.00	.00	1.
1 JAN	0505	62	.00	.00	.00	0.	*	1 JAN	1735	212	.00	.00	.00	1.
1 JAN	0510	63	.00	.00	.00	0.	*	1 JAN	1740	213	.00	.00	.00	1.
1 JAN	0515	64	.00	.00	.00	0.	*	1 JAN	1745	214	.00	.00	.00	1.
1 JAN	0520	65	.00	.00	.00	0.	*	1 JAN	1750	215	.00	.00	.00	1.
1 JAN	0525	66	.00	.00	.00	0.	*	1 JAN	1755	216	.00	.00	.00	0.
1 JAN	0530	67	.00	.00	.00	0.	*	1 JAN	1800	217	.00	.00	.00	0.
1 JAN	0535	68	.00	.00	.00	0.	*	1 JAN	1805	218	.00	.00	.00	0.
1 JAN	0540	69	.00	.00	.00	0.	*	1 JAN	1810	219	.00	.00	.00	0.
1 JAN	0545	70	.00	.00	.00	0.	*	1 JAN	1815	220	.00	.00	.00	0.
1 JAN	0550	71	.00	.00	.00	0.	*	1 JAN	1820	221	.00	.00	.00	0.
1 JAN	0555	72	.00	.00	.00	0.	*	1 JAN	1825	222	.00	.00	.00	0.
1 JAN	0600	73	.00	.00	.00	0.	*	1 JAN	1830	223	.00	.00	.00	0.
1 JAN	0605	74	.00	.00	.00	0.	*	1 JAN	1835	224	.00	.00	.00	0.
1 JAN	0610	75	.00	.00	.00	0.	*	1 JAN	1840	225	.00	.00	.00	0.
1 JAN	0615	76	.00	.00	.00	0.	*	1 JAN	1845	226	.00	.00	.00	0.
1 JAN	0620	77	.00	.00	.00	0.	*	1 JAN	1850	227	.00	.00	.00	0.
1 JAN	0625	78	.00	.00	.00	0.	*	1 JAN	1855	228	.00	.00	.00	0.
1 JAN	0630	79	.00	.00	.00	0.	*	1 JAN	1900	229	.00	.00	.00	0.
1 JAN	0635	80	.00	.00	.00	0.	*	1 JAN	1905	230	.00	.00	.00	0.
1 JAN	0640	81	.00	.00	.00	0.	*	1 JAN	1910	231	.00	.00	.00	0.
1 JAN	0645	82	.00	.00	.00	0.	*	1 JAN	1915	232	.00	.00	.00	0.
1 JAN	0650	83	.00	.00	.00	0.	*	1 JAN	1920	233	.00	.00	.00	0.
1 JAN	0655	84	.00	.00	.00	0.	*	1 JAN	1925	234	.00	.00	.00	0.
1 JAN	0700	85	.00	.00	.00	0.	*	1 JAN	1930	235	.00	.00	.00	0.
1 JAN	0705	86	.00	.00	.00	0.	*	1 JAN	1935	236	.00	.00	.00	0.
1 JAN	0710	87	.00	.00	.00	0.	*	1 JAN	1940	237	.00	.00	.00	0.
1 JAN	0715	88	.00	.00	.00	0.	*	1 JAN	1945	238	.00	.00	.00	0.
1 JAN	0720	89	.00	.00	.00	0.	*	1 JAN	1950	239	.00	.00	.00	0.
1 JAN	0725	90	.00	.00	.00	0.	*	1 JAN	1955	240	.00	.00	.00	0.
1 JAN	0730	91	.00	.00	.00	0.	*	1 JAN	2000	241	.00	.00	.00	0.
1 JAN	0735	92	.00	.00	.00	0.	*	1 JAN	2005	242	.00	.00	.00	0.
1 JAN	0740	93	.00	.00	.00	0.	*	1 JAN	2010	243	.00	.00	.00	0.
1 JAN	0745	94	.00	.00	.00	0.	*	1 JAN	2015	244	.00	.00	.00	0.
1 JAN	0750	95	.00	.00	.00	1.	*	1 JAN	2020	245	.00	.00	.00	0.
1 JAN	0755	96	.00	.00	.00	1.	*	1 JAN	2025	246	.00	.00	.00	0.
1 JAN	0800	97	.00	.00	.00	1.	*	1 JAN	2030	247	.00	.00	.00	0.
1 JAN	0805	98	.00	.00	.00	1.	*	1 JAN	2035	248	.00	.00	.00	0.
1 JAN	0810	99	.00	.00	.00	1.	*	1 JAN	2040	249	.00	.00	.00	0.
1 JAN	0815	100	.00	.00	.00	1.	*	1 JAN	2045	250	.00	.00	.00	0.
1 JAN	0820	101	.00	.00	.00	1.	*	1 JAN	2050	251	.00	.00	.00	0.
1 JAN	0825	102	.00	.00	.00	1.	*	1 JAN	2055	252	.00	.00	.00	0.
1 JAN	0830	103	.00	.00	.00	1.	*	1 JAN	2100	253	.00	.00	.00	0.
1 JAN	0835	104	.00	.00	.00	1.	*	1 JAN	2105	254	.00	.00	.00	0.
1 JAN	0840	105	.00	.00	.00	1.	*	1 JAN	2110	255	.00	.00	.00	0.
1 JAN	0845	106	.00	.00	.00	1.	*	1 JAN	2115	256	.00	.00	.00	0.
1 JAN	0850	107	.00	.00	.00	1.	*	1 JAN	2120	257	.00	.00	.00	0.
1 JAN	0855	108	.01	.00	.00	1.	*	1 JAN	2125	258	.00	.00	.00	0.
1 JAN	0900	109	.01	.00	.00	1.	*	1 JAN	2130	259	.00	.00	.00	0.
1 JAN	0905	110	.01	.00	.00	1.	*	1 JAN	2135	260	.00	.00	.00	0.
1 JAN	0910	111	.01	.00	.00	1.	*	1 JAN	2140	261	.00	.00	.00	0.
1 JAN	0915	112	.01	.00	.00	1.	*	1 JAN	2145	262	.00	.00	.00	0.
1 JAN	0920	113	.01	.00	.00	1.	*	1 JAN	2150	263	.00	.00	.00	0.
1 JAN	0925	114	.01	.00	.00	1.	*	1 JAN	2155	264	.00	.00	.00	0.
1 JAN	0930	115	.01	.00	.00	1.	*	1 JAN	2200	265	.00	.00	.00	0.
1 JAN	0935	116	.01	.00	.00	1.	*	1 JAN	2205	266	.00	.00	.00	0.
1 JAN	0940	117	.01	.00	.00	1.	*	1 JAN	2210	267	.00	.00	.00	0.
1 JAN	0945	118	.01	.00	.00	1.	*	1 JAN	2215	268	.00	.00	.00	0.
1 JAN	0950	119	.01	.00	.00	1.	*	1 JAN	2220	269	.00	.00	.00	0.
1 JAN	0955	120	.01	.00	.00	1.	*	1 JAN	2225	270	.00	.00	.00	0.
1 JAN	1000	121	.01	.00	.00	1.	*	1 JAN	2230	271	.00	.00	.00	0.
1 JAN	1005	122	.01	.00	.00	1.	*	1 JAN	2235	272	.00	.00	.00	0.
1 JAN	1010	123	.01	.00	.00	1.	*	1 JAN	2240	273	.00	.00	.00	0.
1 JAN	1015	124	.01	.00	.00	1.	*	1 JAN	2245	274	.00	.00	.00	0.
1 JAN	1020	125	.01	.00	.00	1.	*	1 JAN	2250	275	.00	.00	.00	0.
1 JAN	1025	126	.01	.00	.00	1.	*	1 JAN	2255	276	.00	.00	.00	0.
1 JAN	1030	127	.01	.01	.00	1.	*	1 JAN	2300	277	.00	.00	.00	0.
1 JAN	1035	128	.01	.01	.00	1.	*	1 JAN	2305	278	.00	.00	.00	0.
1 JAN	1040	129	.01	.01	.00	1.	*	1 JAN	2310	279	.00	.00	.00	0.
1 JAN	1045	130	.01	.01	.00	1.	*	1 JAN	2315	280	.00	.00	.00	0.
1 JAN	1050	131	.01	.01	.00	1.	*	1 JAN	2320	281	.00	.00	.00	0.
1 JAN	1055	132	.01	.01	.00	1.	*	1 JAN	2325	282	.00	.00	.00	0.
1 JAN	1100	133	.01	.01	.00	1.	*	1 JAN	2330	283	.00	.00	.00	0.
1 JAN	1105	134	.01	.01	.01	1.	*	1 JAN	2335	284	.00	.00	.00	0.
1 JAN	1110	135	.01	.01	.01	1.	*	1 JAN	2340	285	.00	.00	.00	0.
1 JAN	1115	136	.02	.01	.01	1.	*	1 JAN	2345	286	.00	.00	.00	0.
1 JAN	1120	137	.02	.01	.01	1.	*	1 JAN	2350	287	.00	.00	.00	0.

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      1 JAN 1125  138     .02     .01     .01         2.       *       1 JAN 2355  288     .00     .00     .00        0.
      1 JAN 1130  139     .02     .01     .01         2.       *       2 JAN 0000  289     .00     .00     .00        0.
      1 JAN 1135  140     .04     .01     .03         2.       *       2 JAN 0005  290     .00     .00     .00        0.
      1 JAN 1140  141     .07     .01     .06         2.       *       2 JAN 0010  291     .00     .00     .00        0.
      1 JAN 1145  142     .11     .01     .09         3.       *       2 JAN 0015  292     .00     .00     .00        0.
      1 JAN 1150  143     .17     .01     .15         4.       *       2 JAN 0020  293     .00     .00     .00        0.
      1 JAN 1155  144     .21     .01     .20         7.       *       2 JAN 0025  294     .00     .00     .00        (
      1 JAN 1200  145     .16     .01     .14        10.       *       2 JAN 0030  295     .00     .00     .00        (
      1 JAN 1205  146     .03     .01     .02        15.       *       2 JAN 0035  296     .00     .00     .00        0.
      1 JAN 1210  147     .03     .01     .02        20.       *       2 JAN 0040  297     .00     .00     .00        0.
      1 JAN 1215  148     .03     .01     .01        24.       *       2 JAN 0045  298     .00     .00     .00        0.
      1 JAN 1220  149     .02     .01     .01        26.       *       2 JAN 0050  299     .00     .00     .00        0.
      1 JAN 1225  150     .02     .01     .01        27.       *       2 JAN 0055  300     .00     .00     .00        0.
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    TOTAL RAINFALL =    1.97, TOTAL LOSS =     .78, TOTAL EXCESS =    1.19

  PEAK FLOW     TIME                              MAXIMUM AVERAGE FLOW
                                          6-HR         24-HR        72-HR        24.92-HR

+    (CFS)       (HR)
                              (CFS)
+       27.      12.42                      5.            2.           2.             2.
                            (INCHES)       .954         1.183        1.185          1.185
                             (AC-FT)         2.            3.           3.             3.

                            CUMULATIVE AREA =      .05 SQ MI


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


             **************
             *            *
  60 KK      *     13-0   *     B
             *            *
             **************

  61 KO           OUTPUT CONTROL VARIABLES
                        IPRNT            1  PRINT CONTROL
                        IPLOT            0  PLOT CONTROL
                        QSCAL           0.  HYDROGRAPH PLOT SCALE
                        IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                         IOUT           22  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

  62 BA           SUBBASIN CHARACTERISTICS
                        TAREA          .05  SUBBASIN AREA

                  PRECIPITATION DATA

  63 PB                 STORM          .70  BASIN TOTAL PRECIPITATION

  15 PI             INCREMENTAL PRECIPITATION PATTERN
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
                       .01       .01       .01       .01       .01       .01       .01       .01       .02       .04
                       .05       .08       .11       .08       .02       .01       .01       .01       .01       .01
                       .01       .01       .01       .01       .01       .01       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                       .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00		

64 LG GREEN AND AMPT LOSS RATE

STRTL	.17	STARTING LOSS
DTH	.15	MOISTURE DEFICIT
PSIF	9.20	WETTING FRONT SUCTION
XKSAT	.07	HYDRAULIC CONDUCTIVITY
RTIMP	20.00	PERCENT IMPERVIOUS AREA

65 UD SCS DIMENSIONLESS UNITGRAPH

TLAG	.81	LAG

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UNIT HYDROGRAPH
51 END-OF-PERIOD ORDINATES

1.	3.	5.	9.	13.	18.	23.	26.	28.	29.
29.	27.	25.	23.	21.	17.	14.	12.	10.	9.
8.	7.	6.	5.	4.	3.	3.	3.	2.	2.
2.	1.	1.	1.	1.	1.	1.	1.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.									

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HYDROGRAPH AT STATION 13-0

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DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 0000	1	.00	.00	.00	0.	1 JAN 1230	151	.01	.00	.00	3.
1 JAN 0005	2	.00	.00	.00	0.	1 JAN 1235	152	.00	.00	.00	3.
1 JAN 0010	3	.00	.00	.00	0.	1 JAN 1240	153	.00	.00	.00	3.
1 JAN 0015	4	.00	.00	.00	0.	1 JAN 1245	154	.00	.00	.00	3.
1 JAN 0020	5	.00	.00	.00	0.	1 JAN 1250	155	.00	.00	.00	3.
1 JAN 0025	6	.00	.00	.00	0.	1 JAN 1255	156	.00	.00	.00	2.
1 JAN 0030	7	.00	.00	.00	0.	1 JAN 1300	157	.00	.00	.00	2.
1 JAN 0035	8	.00	.00	.00	0.	1 JAN 1305	158	.00	.00	.00	2.
1 JAN 0040	9	.00	.00	.00	0.	1 JAN 1310	159	.00	.00	.00	2.
1 JAN 0045	10	.00	.00	.00	0.	1 JAN 1315	160	.00	.00	.00	2.
1 JAN 0050	11	.00	.00	.00	0.	1 JAN 1320	161	.00	.00	.00	1.
1 JAN 0055	12	.00	.00	.00	0.	1 JAN 1325	162	.00	.00	.00	1.
1 JAN 0100	13	.00	.00	.00	0.	1 JAN 1330	163	.00	.00	.00	1.
1 JAN 0105	14	.00	.00	.00	0.	1 JAN 1335	164	.00	.00	.00	1.
1 JAN 0110	15	.00	.00	.00	0.	1 JAN 1340	165	.00	.00	.00	1.
1 JAN 0115	16	.00	.00	.00	0.	1 JAN 1345	166	.00	.00	.00	1.
1 JAN 0120	17	.00	.00	.00	0.	1 JAN 1350	167	.00	.00	.00	1.
1 JAN 0125	18	.00	.00	.00	0.	1 JAN 1355	168	.00	.00	.00	1.
1 JAN 0130	19	.00	.00	.00	0.	1 JAN 1400	169	.00	.00	.00	1.
1 JAN 0135	20	.00	.00	.00	0.	1 JAN 1405	170	.00	.00	.00	1.
1 JAN 0140	21	.00	.00	.00	0.	1 JAN 1410	171	.00	.00	.00	0.
1 JAN 0145	22	.00	.00	.00	0.	1 JAN 1415	172	.00	.00	.00	0.
1 JAN 0150	23	.00	.00	.00	0.	1 JAN 1420	173	.00	.00	.00	0.
1 JAN 0155	24	.00	.00	.00	0.	1 JAN 1425	174	.00	.00	.00	0.
1 JAN 0200	25	.00	.00	.00	0.	1 JAN 1430	175	.00	.00	.00	0.
1 JAN 0205	26	.00	.00	.00	0.	1 JAN 1435	176	.00	.00	.00	0.
1 JAN 0210	27	.00	.00	.00	0.	1 JAN 1440	177	.00	.00	.00	0.
1 JAN 0215	28	.00	.00	.00	0.	1 JAN 1445	178	.00	.00	.00	0.
1 JAN 0220	29	.00	.00	.00	0.	1 JAN 1450	179	.00	.00	.00	0.
1 JAN 0225	30	.00	.00	.00	0.	1 JAN 1455	180	.00	.00	.00	0.
1 JAN 0230	31	.00	.00	.00	0.	1 JAN 1500	181	.00	.00	.00	0.
1 JAN 0235	32	.00	.00	.00	0.	1 JAN 1505	182	.00	.00	.00	0.
1 JAN 0240	33	.00	.00	.00	0.	1 JAN 1510	183	.00	.00	.00	0.
1 JAN 0245	34	.00	.00	.00	0.	1 JAN 1515	184	.00	.00	.00	0.
1 JAN 0250	35	.00	.00	.00	0.	1 JAN 1520	185	.00	.00	.00	0.
1 JAN 0255	36	.00	.00	.00	0.	1 JAN 1525	186	.00	.00	.00	0.
1 JAN 0300	37	.00	.00	.00	0.	1 JAN 1530	187	.00	.00	.00	0.
1 JAN 0305	38	.00	.00	.00	0.	1 JAN 1535	188	.00	.00	.00	0.
1 JAN 0310	39	.00	.00	.00	0.	1 JAN 1540	189	.00	.00	.00	0.
1 JAN 0315	40	.00	.00	.00	0.	1 JAN 1545	190	.00	.00	.00	0.
1 JAN 0320	41	.00	.00	.00	0.	1 JAN 1550	191	.00	.00	.00	0.
1 JAN 0325	42	.00	.00	.00	0.	1 JAN 1555	192	.00	.00	.00	0.
1 JAN 0330	43	.00	.00	.00	0.	1 JAN 1600	193	.00	.00	.00	0.
1 JAN 0335	44	.00	.00	.00	0.	1 JAN 1605	194	.00	.00	.00	0.
1 JAN 0340	45	.00	.00	.00	0.	1 JAN 1610	195	.00	.00	.00	0.
1 JAN 0345	46	.00	.00	.00	0.	1 JAN 1615	196	.00	.00	.00	0.
1 JAN 0350	47	.00	.00	.00	0.	1 JAN 1620	197	.00	.00	.00	0.
1 JAN 0355	48	.00	.00	.00	0.	1 JAN 1625	198	.00	.00	.00	0.
1 JAN 0400	49	.00	.00	.00	0.	1 JAN 1630	199	.00	.00	.00	0.
1 JAN 0405	50	.00	.00	.00	0.	1 JAN 1635	200	.00	.00	.00	0.

1	JAN	0410	51	.00	.00	.00	0.	*	1	JAN	1640	201	.00	.00	.00	0.
1	JAN	0415	52	.00	.00	.00	0.	*	1	JAN	1645	202	.00	.00	.00	0.
1	JAN	0420	53	.00	.00	.00	0.	*	1	JAN	1650	203	.00	.00	.00	0.
1	JAN	0425	54	.00	.00	.00	0.	*	1	JAN	1655	204	.00	.00	.00	0.
1	JAN	0430	55	.00	.00	.00	0.	*	1	JAN	1700	205	.00	.00	.00	0.
1	JAN	0435	56	.00	.00	.00	0.	*	1	JAN	1705	206	.00	.00	.00	0.
1	JAN	0440	57	.00	.00	.00	0.	*	1	JAN	1710	207	.00	.00	.00	(
1	JAN	0445	58	.00	.00	.00	0.	*	1	JAN	1715	208	.00	.00	.00	(
1	JAN	0450	59	.00	.00	.00	0.	*	1	JAN	1720	209	.00	.00	.00	0.
1	JAN	0455	60	.00	.00	.00	0.	*	1	JAN	1725	210	.00	.00	.00	0.
1	JAN	0500	61	.00	.00	.00	0.	*	1	JAN	1730	211	.00	.00	.00	0.
1	JAN	0505	62	.00	.00	.00	0.	*	1	JAN	1735	212	.00	.00	.00	0.
1	JAN	0510	63	.00	.00	.00	0.	*	1	JAN	1740	213	.00	.00	.00	0.
1	JAN	0515	64	.00	.00	.00	0.	*	1	JAN	1745	214	.00	.00	.00	0.
1	JAN	0520	65	.00	.00	.00	0.	*	1	JAN	1750	215	.00	.00	.00	0.
1	JAN	0525	66	.00	.00	.00	0.	*	1	JAN	1755	216	.00	.00	.00	0.
1	JAN	0530	67	.00	.00	.00	0.	*	1	JAN	1800	217	.00	.00	.00	0.
1	JAN	0535	68	.00	.00	.00	0.	*	1	JAN	1805	218	.00	.00	.00	0.
1	JAN	0540	69	.00	.00	.00	0.	*	1	JAN	1810	219	.00	.00	.00	0.
1	JAN	0545	70	.00	.00	.00	0.	*	1	JAN	1815	220	.00	.00	.00	0.
1	JAN	0550	71	.00	.00	.00	0.	*	1	JAN	1820	221	.00	.00	.00	0.
1	JAN	0555	72	.00	.00	.00	0.	*	1	JAN	1825	222	.00	.00	.00	0.
1	JAN	0600	73	.00	.00	.00	0.	*	1	JAN	1830	223	.00	.00	.00	0.
1	JAN	0605	74	.00	.00	.00	0.	*	1	JAN	1835	224	.00	.00	.00	0.
1	JAN	0610	75	.00	.00	.00	0.	*	1	JAN	1840	225	.00	.00	.00	0.
1	JAN	0615	76	.00	.00	.00	0.	*	1	JAN	1845	226	.00	.00	.00	0.
1	JAN	0620	77	.00	.00	.00	0.	*	1	JAN	1850	227	.00	.00	.00	0.
1	JAN	0625	78	.00	.00	.00	0.	*	1	JAN	1855	228	.00	.00	.00	0.
1	JAN	0630	79	.00	.00	.00	0.	*	1	JAN	1900	229	.00	.00	.00	0.
1	JAN	0635	80	.00	.00	.00	0.	*	1	JAN	1905	230	.00	.00	.00	0.
1	JAN	0640	81	.00	.00	.00	0.	*	1	JAN	1910	231	.00	.00	.00	0.
1	JAN	0645	82	.00	.00	.00	0.	*	1	JAN	1915	232	.00	.00	.00	0.
1	JAN	0650	83	.00	.00	.00	0.	*	1	JAN	1920	233	.00	.00	.00	0.
1	JAN	0655	84	.00	.00	.00	0.	*	1	JAN	1925	234	.00	.00	.00	0.
1	JAN	0700	85	.00	.00	.00	0.	*	1	JAN	1930	235	.00	.00	.00	0.
1	JAN	0705	86	.00	.00	.00	0.	*	1	JAN	1935	236	.00	.00	.00	0.
1	JAN	0710	87	.00	.00	.00	0.	*	1	JAN	1940	237	.00	.00	.00	0.
1	JAN	0715	88	.00	.00	.00	0.	*	1	JAN	1945	238	.00	.00	.00	0.
1	JAN	0720	89	.00	.00	.00	0.	*	1	JAN	1950	239	.00	.00	.00	0.
1	JAN	0725	90	.00	.00	.00	0.	*	1	JAN	1955	240	.00	.00	.00	0.
1	JAN	0730	91	.00	.00	.00	0.	*	1	JAN	2000	241	.00	.00	.00	0.
1	JAN	0735	92	.00	.00	.00	0.	*	1	JAN	2005	242	.00	.00	.00	0.
1	JAN	0740	93	.00	.00	.00	0.	*	1	JAN	2010	243	.00	.00	.00	0.
1	JAN	0745	94	.00	.00	.00	0.	*	1	JAN	2015	244	.00	.00	.00	0.
1	JAN	0750	95	.00	.00	.00	0.	*	1	JAN	2020	245	.00	.00	.00	(
1	JAN	0755	96	.00	.00	.00	0.	*	1	JAN	2025	246	.00	.00	.00	(
1	JAN	0800	97	.00	.00	.00	0.	*	1	JAN	2030	247	.00	.00	.00	0.
1	JAN	0805	98	.00	.00	.00	0.	*	1	JAN	2035	248	.00	.00	.00	0.
1	JAN	0810	99	.00	.00	.00	0.	*	1	JAN	2040	249	.00	.00	.00	0.
1	JAN	0815	100	.00	.00	.00	0.	*	1	JAN	2045	250	.00	.00	.00	0.
1	JAN	0820	101	.00	.00	.00	0.	*	1	JAN	2050	251	.00	.00	.00	0.
1	JAN	0825	102	.00	.00	.00	0.	*	1	JAN	2055	252	.00	.00	.00	0.
1	JAN	0830	103	.00	.00	.00	0.	*	1	JAN	2100	253	.00	.00	.00	0.
1	JAN	0835	104	.00	.00	.00	0.	*	1	JAN	2105	254	.00	.00	.00	0.
1	JAN	0840	105	.00	.00	.00	0.	*	1	JAN	2110	255	.00	.00	.00	0.
1	JAN	0845	106	.00	.00	.00	0.	*	1	JAN	2115	256	.00	.00	.00	0.
1	JAN	0850	107	.00	.00	.00	0.	*	1	JAN	2120	257	.00	.00	.00	0.
1	JAN	0855	108	.00	.00	.00	0.	*	1	JAN	2125	258	.00	.00	.00	0.
1	JAN	0900	109	.00	.00	.00	0.	*	1	JAN	2130	259	.00	.00	.00	0.
1	JAN	0905	110	.00	.00	.00	0.	*	1	JAN	2135	260	.00	.00	.00	0.
1	JAN	0910	111	.00	.00	.00	0.	*	1	JAN	2140	261	.00	.00	.00	0.
1	JAN	0915	112	.00	.00	.00	0.	*	1	JAN	2145	262	.00	.00	.00	0.
1	JAN	0920	113	.00	.00	.00	0.	*	1	JAN	2150	263	.00	.00	.00	0.
1	JAN	0925	114	.00	.00	.00	0.	*	1	JAN	2155	264	.00	.00	.00	0.
1	JAN	0930	115	.00	.00	.00	0.	*	1	JAN	2200	265	.00	.00	.00	0.
1	JAN	0935	116	.00	.00	.00	0.	*	1	JAN	2205	266	.00	.00	.00	0.
1	JAN	0940	117	.00	.00	.00	0.	*	1	JAN	2210	267	.00	.00	.00	0.
1	JAN	0945	118	.00	.00	.00	0.	*	1	JAN	2215	268	.00	.00	.00	0.
1	JAN	0950	119	.00	.00	.00	0.	*	1	JAN	2220	269	.00	.00	.00	0.
1	JAN	0955	120	.00	.00	.00	0.	*	1	JAN	2225	270	.00	.00	.00	0.
1	JAN	1000	121	.00	.00	.00	0.	*	1	JAN	2230	271	.00	.00	.00	0.
1	JAN	1005	122	.00	.00	.00	0.	*	1	JAN	2235	272	.00	.00	.00	0.
1	JAN	1010	123	.00	.00	.00	0.	*	1	JAN	2240	273	.00	.00	.00	0.
1	JAN	1015	124	.00	.00	.00	0.	*	1	JAN	2245	274	.00	.00	.00	0.
1	JAN	1020	125	.00	.00	.00	0.	*	1	JAN	2250	275	.00	.00	.00	0.
1	JAN	1025	126	.00	.00	.00	0.	*	1	JAN	2255	276	.00	.00	.00	0.
1	JAN	1030	127	.00	.00	.00	0.	*	1	JAN	2300	277	.00	.00	.00	0.
1	JAN	1035	128	.00	.00	.00	0.	*	1	JAN	2305	278	.00	.00	.00	0.
1	JAN	1040	129	.00	.00	.00	0.	*	1	JAN	2310	279	.00	.00	.00	0.
1	JAN	1045	130	.00	.00	.00	0.	*	1	JAN	2315	280	.00	.00	.00	0.
1	JAN	1050	131	.00	.00	.00	0.	*	1	JAN	2320	281	.00	.00	.00	0.
1	JAN	1055	132	.00	.00	.00	0.	*	1	JAN	2325	282	.00	.00	.00	0.
1	JAN	1100	133	.00	.00	.00	0.	*	1	JAN	2330	283	.00	.00	.00	(
1	JAN	1105	134	.00	.00	.00	0.	*	1	JAN	2335	284	.00	.00	.00	(
1	JAN	1110	135	.00	.00	.00	0.	*	1	JAN	2340	285	.00	.00	.00	0.
1	JAN	1115	136	.01	.00	.00	0.	*	1	JAN	2345	286	.00	.00	.00	0.
1	JAN	1120	137	.01	.00	.00	0.	*	1	JAN	2350	287	.00	.00	.00	0.
1	JAN	1125	138	.01	.01	.00	0.	*	1	JAN	2355	288	.00	.00	.00	0.
1	JAN	1130	139	.01	.01	.00	0.	*	2	JAN	0000	289	.00	.00	.00	0.
1	JAN	1135	140	.01	.01	.00	0.	*	2	JAN	0005	290	.00	.00	.00	0.

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1140	141	.02	.02	.00	0.	2	JAN	0010	291	.00	.00	.00	0.
1	JAN	1145	142	.04	.03	.01	0.	2	JAN	0015	292	.00	.00	.00	0.
1	JAN	1150	143	.06	.05	.01	0.	2	JAN	0020	293	.00	.00	.00	0.
1	JAN	1155	144	.08	.04	.04	0.	2	JAN	0025	294	.00	.00	.00	0.
1	JAN	1200	145	.06	.03	.02	1.	2	JAN	0030	295	.00	.00	.00	0.
1	JAN	1205	146	.01	.01	.00	1.	2	JAN	0035	296	.00	.00	.00	0.
1	JAN	1210	147	.01	.01	.00	1.	2	JAN	0040	297	.00	.00	.00	0.
1	JAN	1215	148	.01	.01	.00	2.	2	JAN	0045	298	.00	.00	.00	0.
1	JAN	1220	149	.01	.01	.00	2.	2	JAN	0050	299	.00	.00	.00	0.
1	JAN	1225	150	.01	.01	.00	2.	2	JAN	0055	300	.00	.00	.00	0.

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TOTAL RAINFALL = .70, TOTAL LOSS = .53, TOTAL EXCESS = .17

	PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
				6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
			(CFS)				
+	3.	12.67		1.	0.	0.	0.
			(INCHES)	.132	.173	.173	.173
			(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = .05 SQ MI

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HYDROGRAPH AT STATION 13-0
PLAN 1, RATIO = 1.00

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	0000	1	.00	.00	.00	0.	1	JAN	1230	151	.01	.00	.00	3.
1	JAN	0005	2	.00	.00	.00	0.	1	JAN	1235	152	.00	.00	.00	3.
1	JAN	0010	3	.00	.00	.00	0.	1	JAN	1240	153	.00	.00	.00	3.
1	JAN	0015	4	.00	.00	.00	0.	1	JAN	1245	154	.00	.00	.00	3.
1	JAN	0020	5	.00	.00	.00	0.	1	JAN	1250	155	.00	.00	.00	3.
1	JAN	0025	6	.00	.00	.00	0.	1	JAN	1255	156	.00	.00	.00	2.
1	JAN	0030	7	.00	.00	.00	0.	1	JAN	1300	157	.00	.00	.00	2.
1	JAN	0035	8	.00	.00	.00	0.	1	JAN	1305	158	.00	.00	.00	2.
1	JAN	0040	9	.00	.00	.00	0.	1	JAN	1310	159	.00	.00	.00	2.
1	JAN	0045	10	.00	.00	.00	0.	1	JAN	1315	160	.00	.00	.00	2.
1	JAN	0050	11	.00	.00	.00	0.	1	JAN	1320	161	.00	.00	.00	1.
1	JAN	0055	12	.00	.00	.00	0.	1	JAN	1325	162	.00	.00	.00	1.
1	JAN	0100	13	.00	.00	.00	0.	1	JAN	1330	163	.00	.00	.00	1.
1	JAN	0105	14	.00	.00	.00	0.	1	JAN	1335	164	.00	.00	.00	1.
1	JAN	0110	15	.00	.00	.00	0.	1	JAN	1340	165	.00	.00	.00	1.
1	JAN	0115	16	.00	.00	.00	0.	1	JAN	1345	166	.00	.00	.00	1.
1	JAN	0120	17	.00	.00	.00	0.	1	JAN	1350	167	.00	.00	.00	1.
1	JAN	0125	18	.00	.00	.00	0.	1	JAN	1355	168	.00	.00	.00	1.
1	JAN	0130	19	.00	.00	.00	0.	1	JAN	1400	169	.00	.00	.00	1.
1	JAN	0135	20	.00	.00	.00	0.	1	JAN	1405	170	.00	.00	.00	1.
1	JAN	0140	21	.00	.00	.00	0.	1	JAN	1410	171	.00	.00	.00	0.
1	JAN	0145	22	.00	.00	.00	0.	1	JAN	1415	172	.00	.00	.00	0.
1	JAN	0150	23	.00	.00	.00	0.	1	JAN	1420	173	.00	.00	.00	0.
1	JAN	0155	24	.00	.00	.00	0.	1	JAN	1425	174	.00	.00	.00	0.
1	JAN	0200	25	.00	.00	.00	0.	1	JAN	1430	175	.00	.00	.00	0.
1	JAN	0205	26	.00	.00	.00	0.	1	JAN	1435	176	.00	.00	.00	0.
1	JAN	0210	27	.00	.00	.00	0.	1	JAN	1440	177	.00	.00	.00	0.
1	JAN	0215	28	.00	.00	.00	0.	1	JAN	1445	178	.00	.00	.00	0.
1	JAN	0220	29	.00	.00	.00	0.	1	JAN	1450	179	.00	.00	.00	0.
1	JAN	0225	30	.00	.00	.00	0.	1	JAN	1455	180	.00	.00	.00	0.
1	JAN	0230	31	.00	.00	.00	0.	1	JAN	1500	181	.00	.00	.00	0.
1	JAN	0235	32	.00	.00	.00	0.	1	JAN	1505	182	.00	.00	.00	0.
1	JAN	0240	33	.00	.00	.00	0.	1	JAN	1510	183	.00	.00	.00	0.
1	JAN	0245	34	.00	.00	.00	0.	1	JAN	1515	184	.00	.00	.00	0.
1	JAN	0250	35	.00	.00	.00	0.	1	JAN	1520	185	.00	.00	.00	0.
1	JAN	0255	36	.00	.00	.00	0.	1	JAN	1525	186	.00	.00	.00	0.
1	JAN	0300	37	.00	.00	.00	0.	1	JAN	1530	187	.00	.00	.00	0.
1	JAN	0305	38	.00	.00	.00	0.	1	JAN	1535	188	.00	.00	.00	0.
1	JAN	0310	39	.00	.00	.00	0.	1	JAN	1540	189	.00	.00	.00	0.
1	JAN	0315	40	.00	.00	.00	0.	1	JAN	1545	190	.00	.00	.00	0.
1	JAN	0320	41	.00	.00	.00	0.	1	JAN	1550	191	.00	.00	.00	0.
1	JAN	0325	42	.00	.00	.00	0.	1	JAN	1555	192	.00	.00	.00	0.
1	JAN	0330	43	.00	.00	.00	0.	1	JAN	1600	193	.00	.00	.00	0.
1	JAN	0335	44	.00	.00	.00	0.	1	JAN	1605	194	.00	.00	.00	0.
1	JAN	0340	45	.00	.00	.00	0.	1	JAN	1610	195	.00	.00	.00	0.
1	JAN	0345	46	.00	.00	.00	0.	1	JAN	1615	196	.00	.00	.00	0.
1	JAN	0350	47	.00	.00	.00	0.	1	JAN	1620	197	.00	.00	.00	0.
1	JAN	0355	48	.00	.00	.00	0.	1	JAN	1625	198	.00	.00	.00	0.
1	JAN	0400	49	.00	.00	.00	0.	1	JAN	1630	199	.00	.00	.00	0.

1 JAN 0405	50	.00	.00	.00	0.	*	1 JAN 1635	200	.00	.00	.00	0.
1 JAN 0410	51	.00	.00	.00	0.	*	1 JAN 1640	201	.00	.00	.00	0.
1 JAN 0415	52	.00	.00	.00	0.	*	1 JAN 1645	202	.00	.00	.00	0.
1 JAN 0420	53	.00	.00	.00	0.	*	1 JAN 1650	203	.00	.00	.00	0.
1 JAN 0425	54	.00	.00	.00	0.	*	1 JAN 1655	204	.00	.00	.00	0.
1 JAN 0430	55	.00	.00	.00	0.	*	1 JAN 1700	205	.00	.00	.00	0.
1 JAN 0435	56	.00	.00	.00	0.	*	1 JAN 1705	206	.00	.00	.00	0.
1 JAN 0440	57	.00	.00	.00	0.	*	1 JAN 1710	207	.00	.00	.00	0.
1 JAN 0445	58	.00	.00	.00	0.	*	1 JAN 1715	208	.00	.00	.00	0.
1 JAN 0450	59	.00	.00	.00	0.	*	1 JAN 1720	209	.00	.00	.00	0.
1 JAN 0455	60	.00	.00	.00	0.	*	1 JAN 1725	210	.00	.00	.00	0.
1 JAN 0500	61	.00	.00	.00	0.	*	1 JAN 1730	211	.00	.00	.00	0.
1 JAN 0505	62	.00	.00	.00	0.	*	1 JAN 1735	212	.00	.00	.00	0.
1 JAN 0510	63	.00	.00	.00	0.	*	1 JAN 1740	213	.00	.00	.00	0.
1 JAN 0515	64	.00	.00	.00	0.	*	1 JAN 1745	214	.00	.00	.00	0.
1 JAN 0520	65	.00	.00	.00	0.	*	1 JAN 1750	215	.00	.00	.00	0.
1 JAN 0525	66	.00	.00	.00	0.	*	1 JAN 1755	216	.00	.00	.00	0.
1 JAN 0530	67	.00	.00	.00	0.	*	1 JAN 1800	217	.00	.00	.00	0.
1 JAN 0535	68	.00	.00	.00	0.	*	1 JAN 1805	218	.00	.00	.00	0.
1 JAN 0540	69	.00	.00	.00	0.	*	1 JAN 1810	219	.00	.00	.00	0.
1 JAN 0545	70	.00	.00	.00	0.	*	1 JAN 1815	220	.00	.00	.00	0.
1 JAN 0550	71	.00	.00	.00	0.	*	1 JAN 1820	221	.00	.00	.00	0.
1 JAN 0555	72	.00	.00	.00	0.	*	1 JAN 1825	222	.00	.00	.00	0.
1 JAN 0600	73	.00	.00	.00	0.	*	1 JAN 1830	223	.00	.00	.00	0.
1 JAN 0605	74	.00	.00	.00	0.	*	1 JAN 1835	224	.00	.00	.00	0.
1 JAN 0610	75	.00	.00	.00	0.	*	1 JAN 1840	225	.00	.00	.00	0.
1 JAN 0615	76	.00	.00	.00	0.	*	1 JAN 1845	226	.00	.00	.00	0.
1 JAN 0620	77	.00	.00	.00	0.	*	1 JAN 1850	227	.00	.00	.00	0.
1 JAN 0625	78	.00	.00	.00	0.	*	1 JAN 1855	228	.00	.00	.00	0.
1 JAN 0630	79	.00	.00	.00	0.	*	1 JAN 1900	229	.00	.00	.00	0.
1 JAN 0635	80	.00	.00	.00	0.	*	1 JAN 1905	230	.00	.00	.00	0.
1 JAN 0640	81	.00	.00	.00	0.	*	1 JAN 1910	231	.00	.00	.00	0.
1 JAN 0645	82	.00	.00	.00	0.	*	1 JAN 1915	232	.00	.00	.00	0.
1 JAN 0650	83	.00	.00	.00	0.	*	1 JAN 1920	233	.00	.00	.00	0.
1 JAN 0655	84	.00	.00	.00	0.	*	1 JAN 1925	234	.00	.00	.00	0.
1 JAN 0700	85	.00	.00	.00	0.	*	1 JAN 1930	235	.00	.00	.00	0.
1 JAN 0705	86	.00	.00	.00	0.	*	1 JAN 1935	236	.00	.00	.00	0.
1 JAN 0710	87	.00	.00	.00	0.	*	1 JAN 1940	237	.00	.00	.00	0.
1 JAN 0715	88	.00	.00	.00	0.	*	1 JAN 1945	238	.00	.00	.00	0.
1 JAN 0720	89	.00	.00	.00	0.	*	1 JAN 1950	239	.00	.00	.00	0.
1 JAN 0725	90	.00	.00	.00	0.	*	1 JAN 1955	240	.00	.00	.00	0.
1 JAN 0730	91	.00	.00	.00	0.	*	1 JAN 2000	241	.00	.00	.00	0.
1 JAN 0735	92	.00	.00	.00	0.	*	1 JAN 2005	242	.00	.00	.00	0.
1 JAN 0740	93	.00	.00	.00	0.	*	1 JAN 2010	243	.00	.00	.00	0.
1 JAN 0745	94	.00	.00	.00	0.	*	1 JAN 2015	244	.00	.00	.00	0.
1 JAN 0750	95	.00	.00	.00	0.	*	1 JAN 2020	245	.00	.00	.00	0.
1 JAN 0755	96	.00	.00	.00	0.	*	1 JAN 2025	246	.00	.00	.00	0.
1 JAN 0800	97	.00	.00	.00	0.	*	1 JAN 2030	247	.00	.00	.00	0.
1 JAN 0805	98	.00	.00	.00	0.	*	1 JAN 2035	248	.00	.00	.00	0.
1 JAN 0810	99	.00	.00	.00	0.	*	1 JAN 2040	249	.00	.00	.00	0.
1 JAN 0815	100	.00	.00	.00	0.	*	1 JAN 2045	250	.00	.00	.00	0.
1 JAN 0820	101	.00	.00	.00	0.	*	1 JAN 2050	251	.00	.00	.00	0.
1 JAN 0825	102	.00	.00	.00	0.	*	1 JAN 2055	252	.00	.00	.00	0.
1 JAN 0830	103	.00	.00	.00	0.	*	1 JAN 2100	253	.00	.00	.00	0.
1 JAN 0835	104	.00	.00	.00	0.	*	1 JAN 2105	254	.00	.00	.00	0.
1 JAN 0840	105	.00	.00	.00	0.	*	1 JAN 2110	255	.00	.00	.00	0.
1 JAN 0845	106	.00	.00	.00	0.	*	1 JAN 2115	256	.00	.00	.00	0.
1 JAN 0850	107	.00	.00	.00	0.	*	1 JAN 2120	257	.00	.00	.00	0.
1 JAN 0855	108	.00	.00	.00	0.	*	1 JAN 2125	258	.00	.00	.00	0.
1 JAN 0900	109	.00	.00	.00	0.	*	1 JAN 2130	259	.00	.00	.00	0.
1 JAN 0905	110	.00	.00	.00	0.	*	1 JAN 2135	260	.00	.00	.00	0.
1 JAN 0910	111	.00	.00	.00	0.	*	1 JAN 2140	261	.00	.00	.00	0.
1 JAN 0915	112	.00	.00	.00	0.	*	1 JAN 2145	262	.00	.00	.00	0.
1 JAN 0920	113	.00	.00	.00	0.	*	1 JAN 2150	263	.00	.00	.00	0.
1 JAN 0925	114	.00	.00	.00	0.	*	1 JAN 2155	264	.00	.00	.00	0.
1 JAN 0930	115	.00	.00	.00	0.	*	1 JAN 2200	265	.00	.00	.00	0.
1 JAN 0935	116	.00	.00	.00	0.	*	1 JAN 2205	266	.00	.00	.00	0.
1 JAN 0940	117	.00	.00	.00	0.	*	1 JAN 2210	267	.00	.00	.00	0.
1 JAN 0945	118	.00	.00	.00	0.	*	1 JAN 2215	268	.00	.00	.00	0.
1 JAN 0950	119	.00	.00	.00	0.	*	1 JAN 2220	269	.00	.00	.00	0.
1 JAN 0955	120	.00	.00	.00	0.	*	1 JAN 2225	270	.00	.00	.00	0.
1 JAN 1000	121	.00	.00	.00	0.	*	1 JAN 2230	271	.00	.00	.00	0.
1 JAN 1005	122	.00	.00	.00	0.	*	1 JAN 2235	272	.00	.00	.00	0.
1 JAN 1010	123	.00	.00	.00	0.	*	1 JAN 2240	273	.00	.00	.00	0.
1 JAN 1015	124	.00	.00	.00	0.	*	1 JAN 2245	274	.00	.00	.00	0.
1 JAN 1020	125	.00	.00	.00	0.	*	1 JAN 2250	275	.00	.00	.00	0.
1 JAN 1025	126	.00	.00	.00	0.	*	1 JAN 2255	276	.00	.00	.00	0.
1 JAN 1030	127	.00	.00	.00	0.	*	1 JAN 2300	277	.00	.00	.00	0.
1 JAN 1035	128	.00	.00	.00	0.	*	1 JAN 2305	278	.00	.00	.00	0.
1 JAN 1040	129	.00	.00	.00	0.	*	1 JAN 2310	279	.00	.00	.00	0.
1 JAN 1045	130	.00	.00	.00	0.	*	1 JAN 2315	280	.00	.00	.00	0.
1 JAN 1050	131	.00	.00	.00	0.	*	1 JAN 2320	281	.00	.00	.00	0.
1 JAN 1055	132	.00	.00	.00	0.	*	1 JAN 2325	282	.00	.00	.00	0.
1 JAN 1100	133	.00	.00	.00	0.	*	1 JAN 2330	283	.00	.00	.00	0.
1 JAN 1105	134	.00	.00	.00	0.	*	1 JAN 2335	284	.00	.00	.00	0.
1 JAN 1110	135	.00	.00	.00	0.	*	1 JAN 2340	285	.00	.00	.00	0.
1 JAN 1115	136	.01	.00	.00	0.	*	1 JAN 2345	286	.00	.00	.00	0.
1 JAN 1120	137	.01	.00	.00	0.	*	1 JAN 2350	287	.00	.00	.00	0.
1 JAN 1125	138	.01	.01	.00	0.	*	1 JAN 2355	288	.00	.00	.00	0.
1 JAN 1130	139	.01	.01	.00	0.	*	2 JAN 0000	289	.00	.00	.00	0.

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1135	140	.01	.01	.00	0.	2	JAN	0005	290	.00	.00	.00	0.
1	JAN	1140	141	.02	.02	.00	0.	2	JAN	0010	291	.00	.00	.00	0.
1	JAN	1145	142	.04	.03	.01	0.	2	JAN	0015	292	.00	.00	.00	0.
1	JAN	1150	143	.06	.05	.01	0.	2	JAN	0020	293	.00	.00	.00	0.
1	JAN	1155	144	.08	.04	.04	0.	2	JAN	0025	294	.00	.00	.00	0.
1	JAN	1200	145	.06	.03	.02	1.	2	JAN	0030	295	.00	.00	.00	0.
1	JAN	1205	146	.01	.01	.00	1.	2	JAN	0035	296	.00	.00	.00	0.
1	JAN	1210	147	.01	.01	.00	1.	2	JAN	0040	297	.00	.00	.00	0.
1	JAN	1215	148	.01	.01	.00	2.	2	JAN	0045	298	.00	.00	.00	0.
1	JAN	1220	149	.01	.01	.00	2.	2	JAN	0050	299	.00	.00	.00	0.
1	JAN	1225	150	.01	.01	.00	2.	2	JAN	0055	300	.00	.00	.00	0.

****

TOTAL RAINFALL = .70, TOTAL LOSS = .53, TOTAL EXCESS = .17

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)					
		(CFS)				
3.	12.67		1.	0.	0.	0.
		(INCHES)	.132	.173	.173	.173
		(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = .05 SQ MI

****

HYDROGRAPH AT STATION 13-0
PLAN 1, RATIO = 2.81

****

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	0000	1	.00	.00	.00	0.	1	JAN	1230	151	.02	.01	.00	18.
1	JAN	0005	2	.00	.00	.00	0.	1	JAN	1235	152	.01	.01	.00	19.
1	JAN	0010	3	.00	.00	.00	0.	1	JAN	1240	153	.01	.01	.00	19.
1	JAN	0015	4	.00	.00	.00	0.	1	JAN	1245	154	.01	.01	.00	19.
1	JAN	0020	5	.00	.00	.00	0.	1	JAN	1250	155	.01	.01	.00	18.
1	JAN	0025	6	.00	.00	.00	0.	1	JAN	1255	156	.01	.01	.00	17.
1	JAN	0030	7	.00	.00	.00	0.	1	JAN	1300	157	.01	.01	.00	15.
1	JAN	0035	8	.00	.00	.00	0.	1	JAN	1305	158	.01	.01	.00	14.
1	JAN	0040	9	.00	.00	.00	0.	1	JAN	1310	159	.01	.01	.00	12.
1	JAN	0045	10	.00	.00	.00	0.	1	JAN	1315	160	.01	.01	.00	10.
1	JAN	0050	11	.00	.00	.00	0.	1	JAN	1320	161	.01	.01	.00	9.
1	JAN	0055	12	.00	.00	.00	0.	1	JAN	1325	162	.01	.01	.00	8.
1	JAN	0100	13	.00	.00	.00	0.	1	JAN	1330	163	.01	.01	.00	7.
1	JAN	0105	14	.00	.00	.00	0.	1	JAN	1335	164	.01	.01	.00	6.
1	JAN	0110	15	.00	.00	.00	0.	1	JAN	1340	165	.01	.01	.00	5.
1	JAN	0115	16	.00	.00	.00	0.	1	JAN	1345	166	.01	.01	.00	4.
1	JAN	0120	17	.00	.00	.00	0.	1	JAN	1350	167	.01	.01	.00	4.
1	JAN	0125	18	.00	.00	.00	0.	1	JAN	1355	168	.01	.01	.00	3.
1	JAN	0130	19	.00	.00	.00	0.	1	JAN	1400	169	.01	.00	.00	3.
1	JAN	0135	20	.00	.00	.00	0.	1	JAN	1405	170	.01	.00	.00	3.
1	JAN	0140	21	.00	.00	.00	0.	1	JAN	1410	171	.01	.00	.00	2.
1	JAN	0145	22	.00	.00	.00	0.	1	JAN	1415	172	.01	.00	.00	2.
1	JAN	0150	23	.00	.00	.00	0.	1	JAN	1420	173	.01	.00	.00	2.
1	JAN	0155	24	.00	.00	.00	0.	1	JAN	1425	174	.01	.00	.00	2.
1	JAN	0200	25	.00	.00	.00	0.	1	JAN	1430	175	.01	.00	.00	1.
1	JAN	0205	26	.00	.00	.00	0.	1	JAN	1435	176	.01	.00	.00	1.
1	JAN	0210	27	.00	.00	.00	0.	1	JAN	1440	177	.01	.00	.00	1.
1	JAN	0215	28	.00	.00	.00	0.	1	JAN	1445	178	.01	.00	.00	1.
1	JAN	0220	29	.00	.00	.00	0.	1	JAN	1450	179	.01	.00	.00	1.
1	JAN	0225	30	.00	.00	.00	0.	1	JAN	1455	180	.01	.00	.00	1.
1	JAN	0230	31	.00	.00	.00	0.	1	JAN	1500	181	.00	.00	.00	1.
1	JAN	0235	32	.00	.00	.00	0.	1	JAN	1505	182	.00	.00	.00	1.
1	JAN	0240	33	.00	.00	.00	0.	1	JAN	1510	183	.00	.00	.00	1.
1	JAN	0245	34	.00	.00	.00	0.	1	JAN	1515	184	.00	.00	.00	1.
1	JAN	0250	35	.00	.00	.00	0.	1	JAN	1520	185	.00	.00	.00	1.
1	JAN	0255	36	.00	.00	.00	0.	1	JAN	1525	186	.00	.00	.00	1.
1	JAN	0300	37	.00	.00	.00	0.	1	JAN	1530	187	.00	.00	.00	1.
1	JAN	0305	38	.00	.00	.00	0.	1	JAN	1535	188	.00	.00	.00	1.
1	JAN	0310	39	.00	.00	.00	0.	1	JAN	1540	189	.00	.00	.00	1.
1	JAN	0315	40	.00	.00	.00	0.	1	JAN	1545	190	.00	.00	.00	0.
1	JAN	0320	41	.00	.00	.00	0.	1	JAN	1550	191	.00	.00	.00	0.
1	JAN	0325	42	.00	.00	.00	0.	1	JAN	1555	192	.00	.00	.00	0.
1	JAN	0330	43	.00	.00	.00	0.	1	JAN	1600	193	.00	.00	.00	0.
1	JAN	0335	44	.00	.00	.00	0.	1	JAN	1605	194	.00	.00	.00	0.
1	JAN	0340	45	.00	.00	.00	0.	1	JAN	1610	195	.00	.00	.00	0.
1	JAN	0345	46	.00	.00	.00	0.	1	JAN	1615	196	.00	.00	.00	0.
1	JAN	0350	47	.00	.00	.00	0.	1	JAN	1620	197	.00	.00	.00	0.
1	JAN	0355	48	.00	.00	.00	0.	1	JAN	1625	198	.00	.00	.00	0.

1 JAN 0400	49	.00	.00	.00	0.	*
1 JAN 0405	50	.00	.00	.00	0.	*
1 JAN 0410	51	.00	.00	.00	0.	*
1 JAN 0415	52	.00	.00	.00	0.	*
1 JAN 0420	53	.00	.00	.00	0.	*
1 JAN 0425	54	.00	.00	.00	0.	*
1 JAN 0430	55	.00	.00	.00	0.	*
1 JAN 0435	56	.00	.00	.00	0.	*
1 JAN 0440	57	.00	.00	.00	0.	*
1 JAN 0445	58	.00	.00	.00	0.	*
1 JAN 0450	59	.00	.00	.00	0.	*
1 JAN 0455	60	.00	.00	.00	0.	*
1 JAN 0500	61	.00	.00	.00	0.	*
1 JAN 0505	62	.00	.00	.00	0.	*
1 JAN 0510	63	.00	.00	.00	0.	*
1 JAN 0515	64	.00	.00	.00	0.	*
1 JAN 0520	65	.00	.00	.00	0.	*
1 JAN 0525	66	.00	.00	.00	0.	*
1 JAN 0530	67	.00	.00	.00	0.	*
1 JAN 0535	68	.00	.00	.00	0.	*
1 JAN 0540	69	.00	.00	.00	0.	*
1 JAN 0545	70	.00	.00	.00	0.	*
1 JAN 0550	71	.00	.00	.00	0.	*
1 JAN 0555	72	.00	.00	.00	0.	*
1 JAN 0600	73	.00	.00	.00	0.	*
1 JAN 0605	74	.00	.00	.00	0.	*
1 JAN 0610	75	.00	.00	.00	0.	*
1 JAN 0615	76	.00	.00	.00	0.	*
1 JAN 0620	77	.00	.00	.00	0.	*
1 JAN 0625	78	.00	.00	.00	0.	*
1 JAN 0630	79	.00	.00	.00	0.	*
1 JAN 0635	80	.00	.00	.00	0.	*
1 JAN 0640	81	.00	.00	.00	0.	*
1 JAN 0645	82	.00	.00	.00	0.	*
1 JAN 0650	83	.00	.00	.00	0.	*
1 JAN 0655	84	.00	.00	.00	0.	*
1 JAN 0700	85	.00	.00	.00	0.	*
1 JAN 0705	86	.00	.00	.00	0.	*
1 JAN 0710	87	.00	.00	.00	0.	*
1 JAN 0715	88	.00	.00	.00	0.	*
1 JAN 0720	89	.00	.00	.00	0.	*
1 JAN 0725	90	.00	.00	.00	0.	*
1 JAN 0730	91	.00	.00	.00	0.	*
1 JAN 0735	92	.00	.00	.00	0.	*
1 JAN 0740	93	.00	.00	.00	0.	*
1 JAN 0745	94	.00	.00	.00	0.	*
1 JAN 0750	95	.00	.00	.00	0.	*
1 JAN 0755	96	.00	.00	.00	0.	*
1 JAN 0800	97	.00	.00	.00	0.	*
1 JAN 0805	98	.00	.00	.00	0.	*
1 JAN 0810	99	.00	.00	.00	0.	*
1 JAN 0815	100	.00	.00	.00	0.	*
1 JAN 0820	101	.00	.00	.00	0.	*
1 JAN 0825	102	.00	.00	.00	0.	*
1 JAN 0830	103	.00	.00	.00	0.	*
1 JAN 0835	104	.00	.00	.00	0.	*
1 JAN 0840	105	.00	.00	.00	0.	*
1 JAN 0845	106	.00	.00	.00	0.	*
1 JAN 0850	107	.00	.00	.00	0.	*
1 JAN 0855	108	.01	.00	.00	0.	*
1 JAN 0900	109	.01	.00	.00	0.	*
1 JAN 0905	110	.01	.00	.00	0.	*
1 JAN 0910	111	.01	.00	.00	0.	*
1 JAN 0915	112	.01	.00	.00	0.	*
1 JAN 0920	113	.01	.00	.00	0.	*
1 JAN 0925	114	.01	.00	.00	0.	*
1 JAN 0930	115	.01	.00	.00	0.	*
1 JAN 0935	116	.01	.00	.00	0.	*
1 JAN 0940	117	.01	.00	.00	0.	*
1 JAN 0945	118	.01	.00	.00	0.	*
1 JAN 0950	119	.01	.00	.00	0.	*
1 JAN 0955	120	.01	.01	.00	0.	*
1 JAN 1000	121	.01	.01	.00	0.	*
1 JAN 1005	122	.01	.01	.00	0.	*
1 JAN 1010	123	.01	.01	.00	0.	*
1 JAN 1015	124	.01	.01	.00	0.	*
1 JAN 1020	125	.01	.01	.00	0.	*
1 JAN 1025	126	.01	.01	.00	0.	*
1 JAN 1030	127	.01	.01	.00	0.	*
1 JAN 1035	128	.01	.01	.00	0.	*
1 JAN 1040	129	.01	.01	.00	0.	*
1 JAN 1045	130	.01	.01	.00	0.	*
1 JAN 1050	131	.01	.01	.00	1.	*
1 JAN 1055	132	.01	.01	.00	1.	*
1 JAN 1100	133	.01	.01	.00	1.	*
1 JAN 1105	134	.01	.01	.00	1.	*
1 JAN 1110	135	.01	.01	.00	1.	*
1 JAN 1115	136	.02	.01	.00	1.	*
1 JAN 1120	137	.02	.01	.00	1.	*
1 JAN 1125	138	.02	.01	.00	1.	*
1 JAN 1630	199	.00	.00	.00	0.	
1 JAN 1635	200	.00	.00	.00	0.	
1 JAN 1640	201	.00	.00	.00	0.	
1 JAN 1645	202	.00	.00	.00	0.	
1 JAN 1650	203	.00	.00	.00	0.	
1 JAN 1655	204	.00	.00	.00	0.	
1 JAN 1700	205	.00	.00	.00	0.	
1 JAN 1705	206	.00	.00	.00	0.	
1 JAN 1710	207	.00	.00	.00	0.	
1 JAN 1715	208	.00	.00	.00	0.	
1 JAN 1720	209	.00	.00	.00	0.	
1 JAN 1725	210	.00	.00	.00	0.	
1 JAN 1730	211	.00	.00	.00	0.	
1 JAN 1735	212	.00	.00	.00	0.	
1 JAN 1740	213	.00	.00	.00	0.	
1 JAN 1745	214	.00	.00	.00	0.	
1 JAN 1750	215	.00	.00	.00	0.	
1 JAN 1755	216	.00	.00	.00	0.	
1 JAN 1800	217	.00	.00	.00	0.	
1 JAN 1805	218	.00	.00	.00	0.	
1 JAN 1810	219	.00	.00	.00	0.	
1 JAN 1815	220	.00	.00	.00	0.	
1 JAN 1820	221	.00	.00	.00	0.	
1 JAN 1825	222	.00	.00	.00	0.	
1 JAN 1830	223	.00	.00	.00	0.	
1 JAN 1835	224	.00	.00	.00	0.	
1 JAN 1840	225	.00	.00	.00	0.	
1 JAN 1845	226	.00	.00	.00	0.	
1 JAN 1850	227	.00	.00	.00	0.	
1 JAN 1855	228	.00	.00	.00	0.	
1 JAN 1900	229	.00	.00	.00	0.	
1 JAN 1905	230	.00	.00	.00	0.	
1 JAN 1910	231	.00	.00	.00	0.	
1 JAN 1915	232	.00	.00	.00	0.	
1 JAN 1920	233	.00	.00	.00	0.	
1 JAN 1925	234	.00	.00	.00	0.	
1 JAN 1930	235	.00	.00	.00	0.	
1 JAN 1935	236	.00	.00	.00	0.	
1 JAN 1940	237	.00	.00	.00	0.	
1 JAN 1945	238	.00	.00	.00	0.	
1 JAN 1950	239	.00	.00	.00	0.	
1 JAN 1955	240	.00	.00	.00	0.	
1 JAN 2000	241	.00	.00	.00	0.	
1 JAN 2005	242	.00	.00	.00	0.	
1 JAN 2010	243	.00	.00	.00	0.	
1 JAN 2015	244	.00	.00	.00	0.	
1 JAN 2020	245	.00	.00	.00	0.	
1 JAN 2025	246	.00	.00	.00	0.	
1 JAN 2030	247	.00	.00	.00	0.	
1 JAN 2035	248	.00	.00	.00	0.	
1 JAN 2040	249	.00	.00	.00	0.	
1 JAN 2045	250	.00	.00	.00	0.	
1 JAN 2050	251	.00	.00	.00	0.	
1 JAN 2055	252	.00	.00	.00	0.	
1 JAN 2100	253	.00	.00	.00	0.	
1 JAN 2105	254	.00	.00	.00	0.	
1 JAN 2110	255	.00	.00	.00	0.	
1 JAN 2115	256	.00	.00	.00	0.	
1 JAN 2120	257	.00	.00	.00	0.	
1 JAN 2125	258	.00	.00	.00	0.	
1 JAN 2130	259	.00	.00	.00	0.	
1 JAN 2135	260	.00	.00	.00	0.	
1 JAN 2140	261	.00	.00	.00	0.	
1 JAN 2145	262	.00	.00	.00	0.	
1 JAN 2150	263	.00	.00	.00	0.	
1 JAN 2155	264	.00	.00	.00	0.	
1 JAN 2200	265	.00	.00	.00	0.	
1 JAN 2205	266	.00	.00	.00	0.	
1 JAN 2210	267	.00	.00	.00	0.	
1 JAN 2215	268	.00	.00	.00	0.	
1 JAN 2220	269	.00	.00	.00	0.	
1 JAN 2225	270	.00	.00	.00	0.	
1 JAN 2230	271	.00	.00	.00	0.	
1 JAN 2235	272	.00	.00	.00	0.	
1 JAN 2240	273	.00	.00	.00	0.	
1 JAN 2245	274	.00	.00	.00	0.	
1 JAN 2250	275	.00	.00	.00	0.	
1 JAN 2255	276	.00	.00	.00	0.	
1 JAN 2300	277	.00	.00	.00	0.	
1 JAN 2305	278	.00	.00	.00	0.	
1 JAN 2310	279	.00	.00	.00	0.	
1 JAN 2315	280	.00	.00	.00	0.	
1 JAN 2320	281	.00	.00	.00	0.	
1 JAN 2325	282	.00	.00	.00	0.	
1 JAN 2330	283	.00	.00	.00	0.	
1 JAN 2335	284	.00	.00	.00	0.	
1 JAN 2340	285	.00	.00	.00	0.	
1 JAN 2345	286	.00	.00	.00	0.	
1 JAN 2350	287	.00	.00	.00	0.	
1 JAN 2355	288	.00	.00	.00	0.	

1 JAN 1130	139	.02	.02	.00	1.	*	2 JAN 0000	289	.00	.00	.00	0.
1 JAN 1135	140	.04	.02	.02	1.	*	2 JAN 0005	290	.00	.00	.00	0.
1 JAN 1140	141	.07	.02	.05	1.	*	2 JAN 0010	291	.00	.00	.00	0.
1 JAN 1145	142	.11	.02	.09	1.	*	2 JAN 0015	292	.00	.00	.00	0.
1 JAN 1150	143	.17	.02	.15	2.	*	2 JAN 0020	293	.00	.00	.00	0.
1 JAN 1155	144	.21	.02	.19	3.	*	2 JAN 0025	294	.00	.00	.00	0.
1 JAN 1200	145	.16	.02	.14	4.	*	2 JAN 0030	295	.00	.00	.00	0.
1 JAN 1205	146	.03	.02	.01	6.	*	2 JAN 0035	296	.00	.00	.00	0.
1 JAN 1210	147	.03	.02	.01	8.	*	2 JAN 0040	297	.00	.00	.00	0.
1 JAN 1215	148	.03	.02	.01	11.	*	2 JAN 0045	298	.00	.00	.00	0.
1 JAN 1220	149	.02	.02	.01	14.	*	2 JAN 0050	299	.00	.00	.00	0.
1 JAN 1225	150	.02	.02	.00	16.	*	2 JAN 0055	300	.00	.00	.00	0.
						*						

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TOTAL RAINFALL = 1.97, TOTAL LOSS = 1.07, TOTAL EXCESS = .90

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 19.	12.67		4.	1.	1.	1.
		(INCHES)	.784	.898	.899	.899
		(AC-FT)	2.	2.	2.	2.

CUMULATIVE AREA = .05 SQ MI

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
TIME TO PEAK IN HOURS

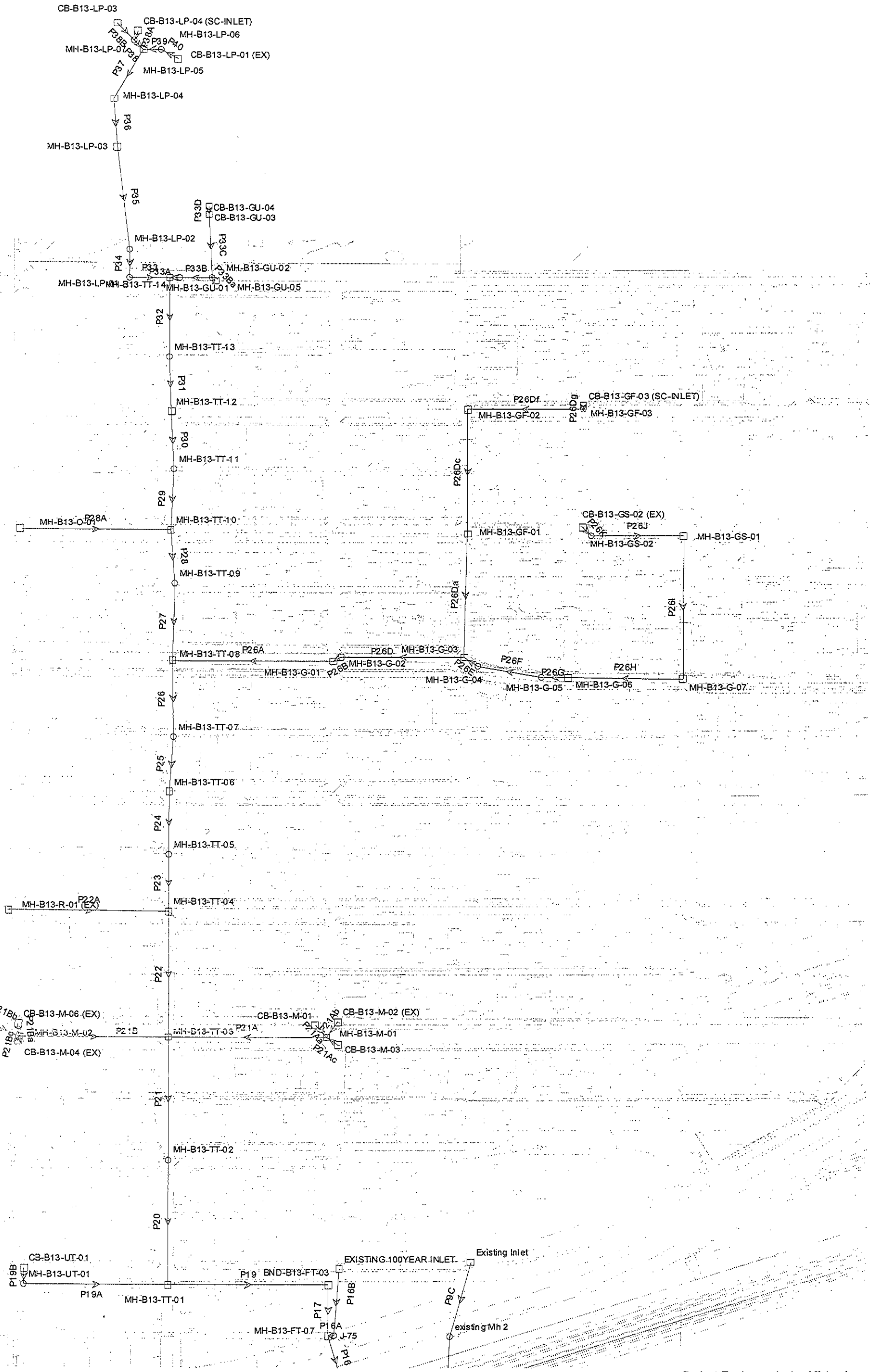
OPERATION	STATION	AREA	PLAN		RATIOS APPLIED TO PRECIPITATION RATIO 1	RATIO 2
					1.00	2.81
HYDROGRAPH AT						
+	8-0	.05	1	FLOW	6.	27.
				TIME	12.42	12.42
HYDROGRAPH AT						
+	13-0	.05	1	FLOW	3.	19.
				TIME	12.67	12.67

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

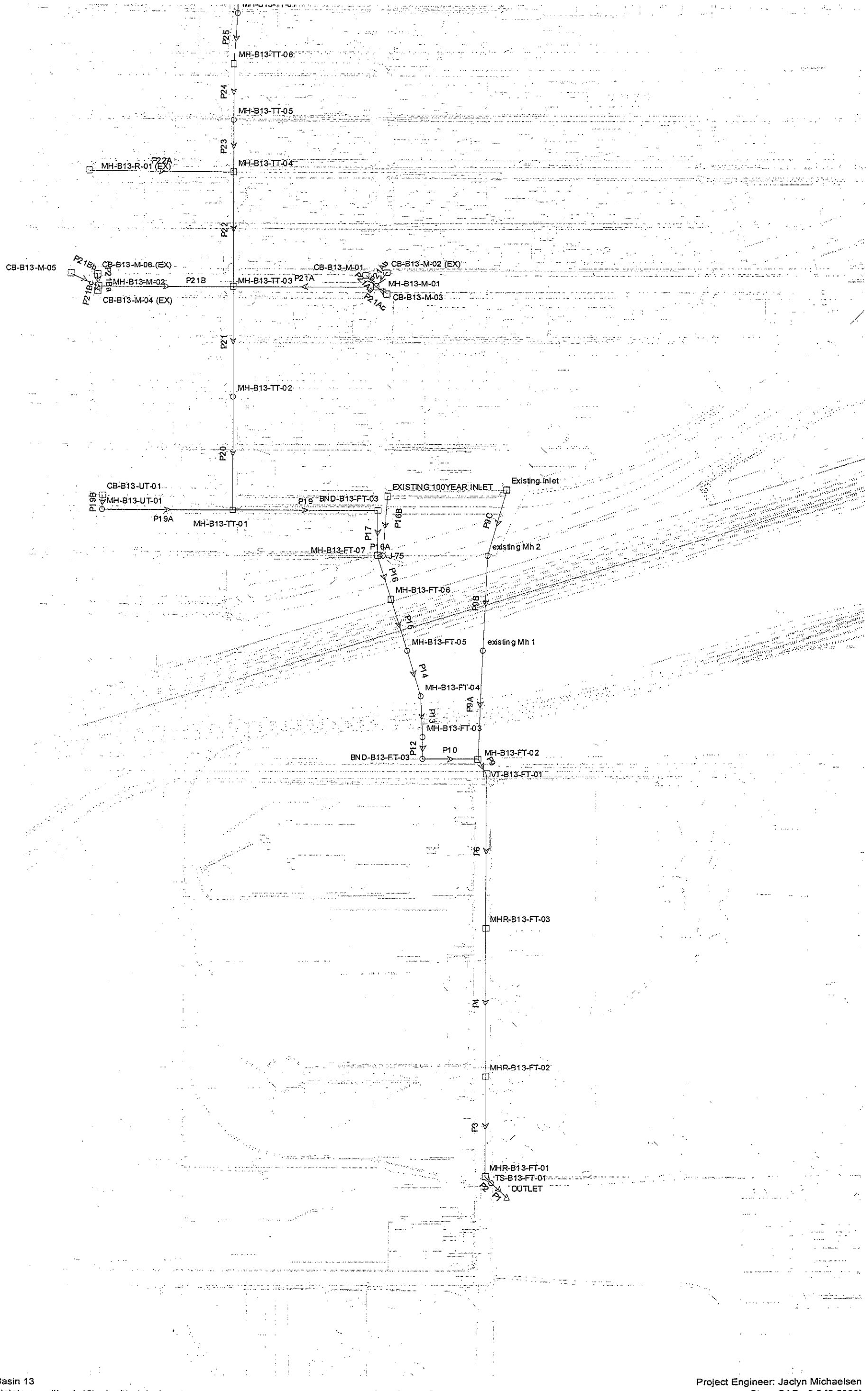
StormCAD Results

StormCAD was used to size the proposed storm sewer systems. The existing system was assumed to adequately handle the design storm and thus was not modeled.

Scenario: Base



Scenario: Base



Calculation Results Summary

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Scenario: Base

>>>> Info: Subsurface Network Rooted by: OUTLET
>>>> Info: Subsurface Analysis iterations: 1
>>>> Info: Convergence was achieved.

CALCULATION SUMMARY FOR SURFACE NETWORKS

Label	Inlet Type	Inlet	Total Intercepted Flow (cfs)	Total Bypassed Flow (cfs)	Capture Efficiency (%)	Gutter Spread (ft)	Gutter Depth (ft)
MHR-B13-FT-03	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MHR-B13-FT-01	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MHR-B13-FT-02	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
Existing Inlet	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-FT-02	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
VT-B13-FT-01	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-FT-06	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
EXISTING 100YEAR INLET	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-FT-07	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
BND-B13-FT-03	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-UT-01	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-M-03	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-M-05	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-M-04 (EX)	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-M-06 (EX)	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-GF-03 (SC-INLET)	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-GU-03	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-GU-04	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-LP-03	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-LP-01 (EX)	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-M-01	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-LP-05	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-TT-01	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-M-01	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-TT-03	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-M-02	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-TT-04	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-R-01 (EX)	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-TT-06	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-TT-08	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-G-01	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-G-02	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-G-03	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-G-06	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-G-07	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-GS-01	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-GF-02	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-GF-01	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-O-01	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-TT-12	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-LP-04	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-LP-03	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-GU-05	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-TT-14	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
MH-B13-TT-10	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-M-02 (EX)	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-LP-04 (SC-INLET)	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00
CB-B13-GS-02 (EX)	Generic Inlet	Generic Default 100%	0.00	0.00	100.0	0.00	0.00

CALCULATION SUMMARY FOR SUBSURFACE NETWORK WITH ROOT: OUTLET

Label	Number of Sections	Section Size	Section Shape	Length (ft)	Total System Flow (cfs)	Average Velocity (ft/s)	Hydraulic Grade Upstream (ft)	Hydraulic Grade Downstream (ft)
P1	1	6 x 4 ft	Box	69.00	132.15	5.51	4,579.53	4,579.40
P2	1	66 inch	Circular	29.00	132.15	5.56	4,579.81	4,579.76
P3	1	66 inch	Circular	324.00	127.05	5.35	4,580.56	4,580.09
P4	1	66 inch	Circular	484.00	121.30	5.11	4,581.41	4,580.78
P6	1	60 inch	Circular	500.00	120.30	6.13	4,582.68	4,581.61
P9	1	60 inch	Circular	57.00	114.00	5.81	4,583.14	4,583.03
P9A	1	30 inch	Circular	356.00	10.20	2.08	4,583.78	4,583.56
P10	1	60 inch	Circular	179.00	106.60	5.43	4,583.86	4,583.56
P9B	1	30 inch	Circular	313.00	10.20	2.08	4,584.01	4,583.81
P12	1	60 inch	Circular	71.00	106.60	5.43	4,584.35	4,584.23
P9C	1	30 inch	Circular	223.00	10.20	2.08	4,584.19	4,584.05
P13	1	60 inch	Circular	135.00	106.60	5.43	4,584.85	4,584.62
P14	1	60 inch	Circular	155.00	106.60	5.43	4,585.38	4,585.12
P15	1	60 inch	Circular	179.00	106.60	5.43	4,585.91	4,585.61
P16	1	60 inch	Circular	150.00	101.60	5.17	4,586.46	4,586.23
P17	1	60 inch	Circular	147.00	101.60	5.17	4,587.02	4,586.79
P16A	1	18 inch	Circular	17.00	3.20	16.11	4,586.76	4,586.79
P19	1	60 inch	Circular	471.00	95.00	4.84	4,587.97	4,587.35
P16B	1	10 inch	Circular	194.00	3.20	6.94	4,590.98	4,586.76
P19A	1	48 inch	Circular	421.00	46.20	3.68	4,588.67	4,588.23
P20	1	36 inch	Circular	366.00	45.37	6.42	4,589.92	4,588.23
P19B	1	48 inch	Circular	47.00	46.20	3.68	4,588.86	4,588.81
P21	1	36 inch	Circular	362.00	45.37	6.42	4,591.92	4,590.24
P22	1	30 inch	Circular	372.00	31.00	6.32	4,594.49	4,592.37
P21B	1	30 inch	Circular	436.00	7.30	1.49	4,592.50	4,592.37
P21A	1	24 inch	Circular	464.00	7.09	2.26	4,592.82	4,592.37
P23	1	30 inch	Circular	166.00	25.46	5.19	4,595.63	4,594.99
P22A	1	15 inch	Circular	466.00	0.70	0.57	4,595.04	4,594.99
P21Bb	1	12 inch	Circular	98.00	0.50	0.64	4,592.56	4,592.54
P21Bc	1	12 inch	Circular	15.00	2.20	2.80	4,592.60	4,592.54
P21Ba	1	18 inch	Circular	39.00	1.10	0.62	4,592.54	4,592.54
P21Ab	1	15 inch	Circular	57.00	4.49	9.76	4,593.83	4,592.90
P21Aa	1	12 inch	Circular	50.00	2.10	2.67	4,593.08	4,592.90
P21Ac	1	15 inch	Circular	41.00	0.50	0.41	4,592.90	4,592.90
P24	1	30 inch	Circular	184.00	25.46	5.19	4,596.55	4,595.84
P25	1	30 inch	Circular	163.00	20.40	4.16	4,597.28	4,596.88
P26	1	24 inch	Circular	225.00	20.40	6.49	4,599.27	4,597.44
P27	1	24 inch	Circular	226.00	10.20	3.25	4,600.19	4,599.73
P26A	1	18 inch	Circular	472.00	5.65	3.20	4,601.10	4,599.73
P28	1	24 inch	Circular	160.00	10.20	3.25	4,600.60	4,600.27
P26B	1	18 inch	Circular	24.00	5.15	2.91	4,601.28	4,601.23
P28A	1	15 inch	Circular	440.00	0.70	0.57	4,600.65	4,600.60
P29	1	18 inch	Circular	181.00	8.40	4.75	4,601.76	4,600.60
P26D	1	18 inch	Circular	362.00	4.70	2.66	4,602.11	4,601.39
P30	1	18 inch	Circular	170.00	8.40	4.75	4,603.05	4,601.97
P26Da	1	15 inch	Circular	364.00	1.80	1.47	4,602.51	4,602.22
P26E	1	15 inch	Circular	48.00	2.30	1.87	4,602.28	4,602.22
P31	1	18 inch	Circular	162.00	7.00	3.96	4,604.06	4,603.34
P26Dc	1	15 inch	Circular	368.00	1.20	3.71	4,604.11	4,602.53
P26F	1	15 inch	Circular	190.00	2.30	1.87	4,602.56	4,602.32
P32	1	18 inch	Circular	234.00	7.00	3.96	4,605.24	4,604.20
P26Df	1	15 inch	Circular	340.00	0.60	2.75	4,606.02	4,604.24
P26G	1	15 inch	Circular	77.00	2.30	1.87	4,602.69	4,602.59
P33A	1	12 inch	Circular	28.00	2.50	3.18	4,605.52	4,605.39
P33	1	18 inch	Circular	117.00	6.00	3.40	4,605.77	4,605.39
P26Dg	1	12 inch	Circular	11.00	0.60	4.32	4,609.17	4,608.87

P26H	1	15 inch	Circular	335.00	1.75	1.43	4,602.99	4,602.74
P33B	1	12 inch	Circular	96.00	2.50	3.18	4,606.00	4,605.52
P34	1	18 inch	Circular	84.00	6.00	8.23	4,606.36	4,605.91
P26I	1	15 inch	Circular	420.00	1.20	3.84	4,604.94	4,603.02
P33Ba	1	12 inch	Circular	13.00	2.00	2.55	4,606.13	4,606.09
P33C	1	8 inch	Circular	186.00	0.50	3.46	4,606.80	4,606.09
P35	1	18 inch	Circular	301.00	6.00	5.04	4,608.18	4,606.60
P26J	1	15 inch	Circular	268.00	0.60	2.38	4,605.90	4,605.08
P33D	1	8 inch	Circular	24.00	0.50	3.45	4,607.07	4,606.87
P36	1	18 inch	Circular	144.00	5.00	5.25	4,609.15	4,608.49
P26K	1	12 inch	Circular	37.00	0.60	5.12	4,607.35	4,606.04
P37	1	15 inch	Circular	169.00	4.50	3.67	4,610.15	4,609.43
P39	1	15 inch	Circular	53.00	2.50	3.50	4,610.43	4,610.35
P38	1	12 inch	Circular	37.00	3.00	3.82	4,610.61	4,610.35
P40	1	12 inch	Circular	56.00	2.50	7.37	4,611.50	4,610.49
P38B	1	12 inch	Circular	71.00	1.50	1.91	4,610.74	4,610.61
P38A	1	12 inch	Circular	29.00	1.50	5.99	4,610.59	4,610.61

Label	Total System Flow (cfs)	Ground Elevation (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)
OUTLET	132.15	4,583.29	4,579.40	4,579.40
TS-B13-FT-01	132.15	4,581.93	4,579.76	4,579.53
MHR-B13-FT-01	132.15	4,582.25	4,580.09	4,579.81
MHR-B13-FT-02	127.05	4,583.39	4,580.78	4,580.56
MHR-B13-FT-03	121.30	4,585.18	4,581.61	4,581.41
VT-B13-FT-01	120.30	4,589.01	4,583.03	4,582.68
MH-B13-FT-02	114.00	4,587.93	4,583.56	4,583.14
existing Mh 1	10.20	4,589.99	4,583.81	4,583.78
BND-B13-FT-03	106.60	4,587.79	4,584.23	4,583.86
existing Mh 2	10.20	4,592.88	4,584.05	4,584.01
MH-B13-FT-03	106.60	4,587.85	4,584.62	4,584.35
Existing Inlet	10.20	4,593.00	4,584.22	4,584.19
MH-B13-FT-04	106.60	4,587.95	4,585.12	4,584.85
MH-B13-FT-05	106.60	4,588.76	4,585.61	4,585.38
MH-B13-FT-06	106.60	4,589.54	4,586.23	4,585.91
MH-B13-FT-07	101.60	4,591.23	4,586.79	4,586.46
BND-B13-FT-03	101.60	4,591.26	4,587.35	4,587.02
J-75	3.20	4,591.21	4,586.76	4,586.76
MH-B13-TT-01	95.00	4,590.28	4,588.23	4,587.97
EXISTING 100YEAR INLET	3.20	4,592.51	4,591.27	4,590.98
MH-B13-UT-01	46.20	4,589.39	4,588.81	4,588.67
MH-B13-TT-02	45.37	4,592.29	4,590.24	4,589.92
CB-B13-UT-01	46.20	4,588.98	4,588.97	4,588.86
MH-B13-TT-03	45.37	4,594.75	4,592.37	4,591.92
MH-B13-TT-04	31.00	4,597.29	4,594.99	4,594.49
MH-B13-M-02	7.30	4,594.10	4,592.54	4,592.50
MH-B13-M-01	7.09	4,596.05	4,592.90	4,592.82
MH-B13-TT-05	25.46	4,598.05	4,595.84	4,595.63
MH-B13-R-01 (EX)	0.70	4,596.24	4,595.05	4,595.04
CB-B13-M-05	0.50	4,593.02	4,592.56	4,592.56
CB-B13-M-04 (EX)	2.20	4,593.02	4,592.66	4,592.60
CB-B13-M-06 (EX)	1.10	4,593.01	4,592.55	4,592.54
CB-B13-M-02 (EX)	4.49	4,595.14	4,594.02	4,593.83
CB-B13-M-01	2.10	4,595.11	4,593.13	4,593.08
CB-B13-M-03	0.50	4,595.10	4,592.91	4,592.90
MH-B13-TT-06	25.46	4,599.18	4,596.88	4,596.55
MH-B13-TT-07	20.40	4,600.00	4,597.44	4,597.28
MH-B13-TT-08	20.40	4,601.88	4,599.73	4,599.27
MH-B13-TT-09	10.20	4,602.67	4,600.27	4,600.19
MH-B13-G-01	5.65	4,603.11	4,601.23	4,601.10
MH-B13-TT-10	10.20	4,603.71	4,600.60	4,600.60

MH-B13-G-02	5.15	4,603.06	4,601.39	4,601.28
MH-B13-O-01	0.70	4,602.67	4,600.66	4,600.65
MH-B13-TT-11	8.40	4,604.54	4,601.97	4,601.76
MH-B13-G-03	4.70	4,604.18	4,602.22	4,602.11
MH-B13-TT-12	8.40	4,605.89	4,603.34	4,603.05
MH-B13-GF-01	1.80	4,607.50	4,602.53	4,602.51
MH-B13-G-04	2.30	4,604.19	4,602.32	4,602.28
MH-B13-TT-13	7.00	4,606.50	4,604.20	4,604.06
MH-B13-GF-02	1.20	4,608.84	4,604.24	4,604.11
MH-B13-G-05	2.30	4,605.05	4,602.59	4,602.56
MH-B13-TT-14	7.00	4,608.22	4,605.39	4,605.24
MH-B13-GF-03	0.60	4,612.14	4,606.11	4,606.02
MH-B13-G-06	2.30	4,605.92	4,602.74	4,602.69
MH-B13-GU-01	2.50	4,608.23	4,605.52	4,605.52
MH-B13-LP-01	6.00	4,608.12	4,605.91	4,605.77
CB-B13-GF-03 (SC-INLET)	0.60	4,611.85	4,609.23	4,609.17
MH-B13-G-07	1.75	4,607.40	4,603.02	4,602.99
MH-B13-GU-02	2.50	4,608.46	4,606.09	4,606.00
MH-B13-LP-02	6.00	4,609.45	4,606.60	4,606.36
MH-B13-GS-01	1.20	4,610.18	4,605.08	4,604.94
MH-B13-GU-05	2.00	4,608.69	4,606.19	4,606.13
CB-B13-GU-03	0.50	4,609.59	4,606.87	4,606.80
MH-B13-LP-03	6.00	4,611.74	4,608.49	4,608.18
MH-B13-GS-02	0.60	4,609.08	4,605.96	4,605.90
CB-B13-GU-04	0.50	4,609.75	4,607.14	4,607.07
MH-B13-LP-04	5.00	4,613.13	4,609.43	4,609.15
CB-B13-GS-02 (EX)	0.60	4,608.58	4,607.41	4,607.35
MH-B13-LP-05	4.50	4,614.19	4,610.35	4,610.15
MH-B13-LP-06	2.50	4,613.05	4,610.49	4,610.43
MH-B13-LP-07	3.00	4,614.23	4,610.61	4,610.61
CB-B13-LP-01 (EX)	2.50	4,612.70	4,611.65	4,611.50
CB-B13-LP-03	1.50	4,612.44	4,610.77	4,610.74
CB-B13-LP-04 (SC-INLET)	1.50	4,613.07	4,610.69	4,610.59

Completed: 08/09/2004 04:19:06 PM

 Sear-Brown Group
37 Brookside Road Waterbury, CT 06708 USA +1-203-755-1666

Scenario: Base

Pipe Report

Label	Upstream Node	Downstream Node	Length (ft)	Constructed Slope (ft/ft)	Section Size	Full Capacity (cfs)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Upstream Ground Elevation (ft)	Downstream Ground Elevation (ft)	Upstream Cover (ft)	Downstream Cover (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Energy Grade Line In (ft)	Energy Grade Line Out (ft)
P1	TS-B13-FT-01	OUTLET	69.00	0.002464	6 x 4 ft	153.76	4,573.37	4,573.20	4,581.93	4,583.29	4.56	6.09	4,579.53	4,579.40	4,580.00	4,579.87
P2	MHR-B13-FT-01	TS-B13-FT-01	29.00	0.002759	66 inch	176.37	4,573.45	4,573.37	4,582.25	4,581.93	3.30	3.06	4,579.81	4,579.76	4,580.29	4,580.24
P3	MHR-B13-FT-02	MHR-B13-FT-01	324.00	0.002500	66 inch	167.90	4,574.26	4,573.45	4,583.39	4,582.25	3.63	3.30	4,580.56	4,580.09	4,581.00	4,580.54
P4	MHR-B13-FT-03	MHR-B13-FT-02	484.00	0.000434	66 inch	69.94	4,574.47	4,574.26	4,585.18	4,583.39	5.21	3.63	4,581.41	4,580.78	4,581.82	4,581.19
P6	VT-B13-FT-01	MHR-B13-FT-03	500.00	0.004500	60 inch	174.70	4,576.72	4,574.47	4,589.01	4,585.18	7.29	5.71	4,582.68	4,581.61	4,583.26	4,582.20
P9	MH-B13-FT-02	VT-B13-FT-01	57.00	0.002456	60 inch	129.07	4,576.86	4,576.72	4,587.93	4,589.01	6.07	7.29	4,583.14	4,583.03	4,583.66	4,583.56
P9A	existing Mh 1	MH-B13-FT-02	356.00	0.001208	30 inch	14.25	4,579.72	4,579.29	4,589.99	4,587.93	7.77	6.14	4,583.78	4,583.56	4,583.85	4,583.63
P9B	existing Mh 2	existing Mh 1	313.00	0.001470	30 inch	15.72	4,580.18	4,579.72	4,592.88	4,589.99	10.20	7.77	4,584.01	4,583.81	4,584.07	4,583.88
P9C	Existing Inlet	existing Mh 2	223.00	0.000583	30 inch	9.90	4,580.31	4,580.18	4,593.00	4,592.88	10.19	10.20	4,584.19	4,584.05	4,584.25	4,584.11
P10	BND-B13-FT-03	MH-B13-FT-02	179.00	0.002458	60 inch	129.12	4,577.30	4,576.86	4,587.79	4,587.93	5.49	6.07	4,583.86	4,583.56	4,584.32	4,584.02
P12	MH-B13-FT-03	BND-B13-FT-03	71.00	0.002535	60 inch	131.13	4,577.48	4,577.30	4,587.85	4,587.79	5.37	5.49	4,584.35	4,584.23	4,584.80	4,584.68
P13	MH-B13-FT-04	MH-B13-FT-03	135.00	0.004519	60 inch	175.06	4,578.09	4,577.48	4,587.95	4,587.85	4.86	5.37	4,584.85	4,584.62	4,585.30	4,585.08
P14	MH-B13-FT-05	MH-B13-FT-04	155.00	0.004452	60 inch	173.76	4,578.78	4,578.09	4,588.76	4,587.95	4.98	4.86	4,585.38	4,585.12	4,585.84	4,585.58
P15	MH-B13-FT-06	MH-B13-FT-05	179.00	0.004525	60 inch	175.19	4,579.59	4,578.78	4,589.54	4,588.76	4.95	4.98	4,585.91	4,585.61	4,586.37	4,586.07
P16	MH-B13-FT-07	MH-B13-FT-06	150.00	0.002533	60 inch	131.08	4,579.97	4,579.59	4,591.23	4,589.54	6.26	4.95	4,586.46	4,586.23	4,586.87	4,586.65
P16A	J-75	MH-B13-FT-07	17.00	0.236471	18 inch	51.08	4,585.75	4,581.73	4,591.21	4,591.23	3.96	8.00	4,586.76	4,586.79	4,586.86	4,586.84
P16B	EXISTING 100YEAR INLE	J-75	194.00	0.022990	10 inch	3.32	4,590.21	4,585.75	4,592.51	4,591.21	1.47	4.63	4,590.98	4,586.76	4,591.55	4,587.29
P17	BND-B13-FT-03	MH-B13-FT-07	147.00	0.002449	60 inch	128.88	4,580.33	4,579.97	4,591.26	4,591.23	5.93	6.26	4,587.02	4,586.79	4,587.43	4,587.21
P19	MH-B13-TT-01	BND-B13-FT-03	471.00	0.003992	60 inch	164.53	4,582.21	4,580.33	4,590.28	4,591.26	3.07	5.93	4,587.97	4,587.35	4,588.34	4,587.71
P19A	MH-B13-UT-01	MH-B13-TT-01	421.00	0.002494	48 inch	71.73	4,583.26	4,582.21	4,589.39	4,590.28	2.13	4.07	4,588.67	4,588.23	4,588.88	4,588.44
P19B	CB-B13-UT-01	MH-B13-UT-01	47.00	0.002553	48 inch	72.58	4,583.38	4,583.26	4,588.98	4,589.39	1.60	2.13	4,588.86	4,588.81	4,589.07	4,589.02
P20	MH-B13-TT-02	MH-B13-TT-01	366.00	0.003792	36 inch	41.07	4,585.60	4,584.21	4,592.29	4,590.28	3.69	3.07	4,589.92	4,588.23	4,590.56	4,588.87
P21	MH-B13-TT-03	MH-B13-TT-02	362.00	0.003785	36 inch	41.03	4,586.97	4,585.60	4,594.75	4,592.29	4.78	3.69	4,591.92	4,590.24	4,592.56	4,590.88
P21A	MH-B13-M-01	MH-B13-TT-03	464.00	0.004009	24 inch	14.32	4,590.33	4,588.47	4,596.05	4,594.75	3.72	4.28	4,592.82	4,592.37	4,592.90	4,592.45
P21A	CB-B13-M-01	MH-B13-M-01	50.00	0.010400	12 inch	3.63	4,591.09	4,590.57	4,595.11	4,596.05	3.02	4.48	4,593.08	4,592.90	4,593.19	4,593.01
P21A	CB-B13-M-02 (EX)	MH-B13-M-01	57.00	0.042105	15 inch	13.25	4,592.97	4,590.57	4,595.14	4,596.05	0.92	4.23	4,593.83	4,592.90	4,594.22	4,593.11
P21A	CB-B13-M-03	MH-B13-M-01	41.00	0.020000	15 inch	9.14	4,591.39	4,590.57	4,595.10	4,596.05	2.46	4.23	4,592.90	4,592.90	4,592.91	4,592.90
P21B	MH-B13-M-02	MH-B13-TT-03	436.00	0.002477	30 inch	20.41	4,588.55	4,587.47	4,594.10	4,594.75	3.05	4.78	4,592.50	4,592.37	4,592.54	4,592.40
P21B	CB-B13-M-06 (EX)	MH-B13-M-02	39.00	0.004103	18 inch	6.73	4,589.71	4,589.55	4,593.01	4,594.10	1.80	3.05	4,592.54	4,592.54	4,592.55	4,592.55
P21B	CB-B13-M-05	MH-B13-M-02	98.00	0.003980	12 inch	2.25	4,590.44	4,590.05	4,593.02	4,594.10	1.58	3.05	4,592.56	4,592.54	4,592.56	4,592.55
P21B	CB-B13-M-04 (EX)	MH-B13-M-02	15.00	0.024000	12 inch	5.52	4,590.41	4,590.05	4,593.02	4,594.10	1.61	3.05	4,592.60	4,592.54	4,592.72	4,592.66
P22	MH-B13-TT-04	MH-B13-TT-03	372.00	0.008336	30 inch	37.45	4,590.57	4,587.47	4,597.29	4,594.75	4.22	4.78	4,594.49	4,592.37	4,595.11	4,592.99
P22A	MH-B13-R-01 (EX)	MH-B13-TT-04	466.00	0.002511	15 inch	3.24	4,591.74	4,590.57	4,596.24	4,597.29	3.25	5.47	4,595.04	4,594.99	4,595.05	4,594.99
P23	MH-B13-TT-05	MH-B13-TT-04	166.00	0.011867	30 inch	44.68	4,592.54	4,590.57	4,598.05	4,597.29	3.01	4.22	4,595.63	4,594.99	4,596.05	4,595.41
P24	MH-B13-TT-06	MH-B13-TT-05	184.00	0.002500	30 inch	20.51	4,593.00	4,592.54	4,599.18	4,598.05	3.68	3.01	4,596.55	4,595.84	4,596.96	4,596.25
P25	MH-B13-TT-07	MH-B13-TT-06	163.00	0.007669	30 inch	35.92	4,594.25	4,593.00	4,600.00	4,599.18	3.25	3.68	4,597.28	4,596.88	4,597.55	4,597.15
P26	MH-B13-TT-08	MH-B13-TT-07	225.00	0.002199	24 inch	10.61	4,595.24	4,594.75	4,601.88	4,600.00	4.64	3.26	4,599.27	4,597.44	4,599.93	4,598.10
P26A	MH-B13-G-01	MH-B13-TT-08	472.00	0.002500	18 inch	5.25	4,596.61	4,595.43	4,603.11	4,601.88	5.00	4.95	4,601.10	4,599.73	4,601.26	4,599.89
P26B	MH-B13-G-02	MH-B13-G-01	24.00	0.002500	18 inch	5.25	4,596.67	4,596.61	4,603.06	4,603.11	4.89	5.00	4,601.28	4,601.23	4,601.42	4,601.36
P26D	MH-B13-G-03	MH-B13-G-02	362.00	0.002514	18 inch	5.27	4,597.58	4,596.67	4,604.18	4,603.06	5.10	4.89	4,602.11	4,601.39	4,602.22	4,601.50
P26D	MH-B13-GF-01	MH-B13-G-03	364.00	0.007999	15 inch	5.78	4,600.74	4,597.83	4,607.50	4,604.18	5.51	5.10	4,602.51	4,602.22	4,602.54	4,602.26
P26D	MH-B13-GF-02	MH-B13-GF-01	368.00	0.007989	15 inch	5.77	4,603.68	4,600.74	4,608.84	4,607.50	3.91	5.51	4,604.11	4,602.53	4,604.27	4,602.55
P26D	MH-B13-GF-03	MH-B13-GF-02	340.00	0.006000	15 inch	5.00	4,605.72	4,603.68	4,612.14	4,608.84	5.17	3.91	4,606.02	4,604.24	4,606.13	4,604.26
P26D	CB-B13-GF-03 (SC-INLET)	MH-B13-GF-03	11.00	0.020094	12 inch	5.05	4,608.85	4,608.63	4,611.85	4,612.14	2.00	2.51	4,609.17	4,608.87	4,609.29	4,609.14
P26E	MH-B13-G-04	MH-B13-G-03	48.00	0.004059	15 inch	4.12	4,598.02	4,597.83	4,604.19	4,604.18	4.92	5.10	4,602.28	4,602.22	4,602.34	4,602.28
P26F	MH-B13-G-05	MH-B13-G-04	190.00	0.004000	15 inch	4.09	4,598.78	4,598.02	4,605.05	4,604.19	5.02	4.92	4,602.56	4,602.32	4,602.61	4,602.37
P26G	MH-B13-G-06	MH-B13-G-05	77.00	0.003896	15 inch	4.03	4,599.08	4,598.78	4,605.92	4,605.05	5.59	5.02	4,602.69	4,602.59	4,602.74	4,602.65
P26H	MH-B13-G-07	MH-B13-G-06	335.00	0.005224	15 inch	4.67	4,600.83	4,599.08	4,607.40	4,605.92	5.32	5.59	4,602.99	4,602.74	4,603.02	4,602.77
P26I	MH-B13-GS-01	MH-B13-G-07	420.00	0.008762	15 inch	6.05	4,604.51	4,600.83	4,610.18	4,607.40	4.42	5.32	4,604.94	4,603.02	4,605.10	4,603.04
P26J	MH-B13-GS-02	MH-B13-GS-01	268.00	0.003993	15 inch	4.08	4,605.58	4,604.51	4,609.08	4,610.18	2.25	4.42	4,605.90	4,605.08	4,605.99	4,605.10
P26K	CB-B13-GS-02 (EX)	MH-B13-GS-02	37.00	0.032432	12 inch	6.42	4,607.03	4,605.83	4,608.58	4,609.08	0.55	2.25	4,607.35	4,606.04	4,607.47	4,606.44

Pipe Report

Label	Upstream Node	Downstream Node	Length (ft)	Constructed Slope (ft/ft)	Section Size	Full Capacity (cfs)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Upstream Ground Elevation (ft)	Downstream Ground Elevation (ft)	Upstream Cover (ft)	Downstream Cover (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Energy Grade Line In (ft)	Energy Grade Line Out (ft)
P27	MH-B13-TT-09	MH-B13-TT-08	226.00	0.003237	24 inch	12.87	4,596.47	4,595.74	4,602.67	4,601.88	4.20	4.14	4,600.19	4,599.73	4,600.36	4,599.90
P28	MH-B13-TT-10	MH-B13-TT-09	160.00	0.003187	24 inch	12.77	4,596.98	4,596.47	4,603.71	4,602.67	4.73	4.20	4,600.60	4,600.27	4,600.76	4,600.44
P28A	MH-B13-O-01	MH-B13-TT-10	440.00	0.003981	15 inch	4.08	4,598.73	4,596.98	4,602.67	4,603.71	2.69	5.48	4,600.65	4,600.60	4,600.66	4,600.60
P29	MH-B13-TT-11	MH-B13-TT-10	181.00	0.010199	18 inch	10.61	4,599.33	4,597.48	4,604.54	4,603.71	3.71	4.72	4,601.76	4,600.60	4,602.11	4,600.95
P30	MH-B13-TT-12	MH-B13-TT-11	170.00	0.004059	18 inch	6.69	4,600.02	4,599.33	4,605.89	4,604.54	4.37	3.71	4,603.05	4,601.97	4,603.41	4,602.32
P31	MH-B13-TT-13	MH-B13-TT-12	162.00	0.002407	18 inch	5.15	4,600.41	4,600.02	4,606.50	4,605.89	4.59	4.37	4,604.06	4,603.34	4,604.30	4,603.58
P32	MH-B13-TT-14	MH-B13-TT-13	234.00	0.002479	18 inch	5.23	4,600.99	4,600.41	4,608.22	4,606.50	5.73	4.59	4,605.24	4,604.20	4,605.48	4,604.45
P33	MH-B13-LP-01	MH-B13-TT-14	117.00	0.022051	18 inch	15.60	4,603.57	4,600.99	4,608.12	4,608.22	3.05	5.73	4,605.77	4,605.39	4,605.95	4,605.57
P33A	MH-B13-GU-01	MH-B13-TT-14	28.00	0.002500	12 inch	1.78	4,601.06	4,600.99	4,608.23	4,608.22	6.17	6.23	4,605.52	4,605.39	4,605.68	4,605.54
P33B	MH-B13-GU-02	MH-B13-GU-01	96.00	0.003958	12 inch	2.24	4,601.44	4,601.06	4,608.46	4,608.23	6.02	6.17	4,606.00	4,605.52	4,606.16	4,605.68
P33B	MH-B13-GU-05	MH-B13-GU-02	13.00	0.052308	12 inch	8.15	4,602.13	4,601.45	4,608.69	4,608.46	5.56	6.01	4,606.13	4,606.09	4,606.23	4,606.19
P33C	CB-B13-GU-03	MH-B13-GU-02	186.00	0.011386	8 inch	1.29	4,606.47	4,604.35	4,609.59	4,608.46	2.45	3.44	4,606.80	4,606.09	4,606.93	4,606.12
P33D	CB-B13-GU-04	CB-B13-GU-03	24.00	0.011326	8 inch	1.29	4,606.74	4,606.47	4,609.75	4,609.59	2.34	2.45	4,607.07	4,606.87	4,607.20	4,606.95
P34	MH-B13-LP-02	MH-B13-LP-01	84.00	0.021905	18 inch	15.55	4,605.41	4,603.57	4,609.45	4,608.12	2.54	3.05	4,606.36	4,605.91	4,606.76	4,606.09
P35	MH-B13-LP-03	MH-B13-LP-02	301.00	0.006013	18 inch	8.15	4,607.22	4,605.41	4,611.74	4,609.45	3.02	2.54	4,608.18	4,606.60	4,608.57	4,606.85
P36	MH-B13-LP-04	MH-B13-LP-03	144.00	0.007431	18 inch	9.05	4,608.29	4,607.22	4,613.13	4,611.74	3.34	3.02	4,609.15	4,608.49	4,609.50	4,608.65
P37	MH-B13-LP-05	MH-B13-LP-04	169.00	0.004024	15 inch	4.10	4,608.97	4,608.29	4,614.19	4,613.13	3.97	3.59	4,610.15	4,609.43	4,610.37	4,609.66
P38	MH-B13-LP-07	MH-B13-LP-05	37.00	0.004054	12 inch	2.27	4,609.37	4,609.22	4,614.23	4,614.19	3.86	3.97	4,610.61	4,610.35	4,610.84	4,610.58
P38A	CB-B13-LP-04 (SC-INLET)	MH-B13-LP-07	29.00	0.024138	12 inch	5.54	4,610.07	4,609.37	4,613.07	4,614.23	2.00	3.86	4,610.59	4,610.61	4,610.80	4,610.67
P38B	CB-B13-LP-03	MH-B13-LP-07	71.00	0.003956	12 inch	2.24	4,609.65	4,609.37	4,612.44	4,614.23	1.79	3.86	4,610.74	4,610.61	4,610.79	4,610.67
P39	MH-B13-LP-06	MH-B13-LP-05	53.00	0.004021	15 inch	4.10	4,609.18	4,608.97	4,613.05	4,614.19	2.62	3.97	4,610.43	4,610.35	4,610.49	4,610.41
P40	CB-B13-LP-01 (EX)	MH-B13-LP-06	56.00	0.029228	12 inch	6.09	4,610.82	4,609.18	4,612.70	4,613.05	0.88	2.87	4,611.50	4,610.49	4,611.80	4,610.64

 Sear-Brown Group
37 Brookside Road Waterbury, CT 06708 USA +1-203-755-1666

Basin 13 Water Quality Pond:

Pond Rating Curve

CSEP Basin 13
Water Quality Pond

Pond Volume Rating Curve

Elevation (ft.)	Area (ft.^{2})	Area (acre)	Storage (acre-ft.)	Cumulative Storage (acre-ft.)	
4573	4766.109	0.109	0	0.00	
4574	17213.387	0.395	0.237	0.24	
4575	27444.142	0.630	0.508	0.75	
4576	36630.872	0.841	0.732	1.48	
4577	44598.921	1.024	0.930	2.41	
4577.63	48228.391	1.107	1.030	3.10	**<= WQCV**
4578	50359.984	1.156	1.088	3.50	
4578.6	52456.372	1.204	0.707	4.21	***<= Spillway Elev***

2-year WSEL = (Elev of Grate) **4577.63** *(Retention)*

Detention Provided = 3.10 **acre-ft.**

$$V = \frac{1}{3}d\left(A + B + \sqrt{AB}\right)$$

where:
V = volume between contour interval
d = elevation$_n$ - elevation$_{n-1}$
A = area of elevation$_{n-1}$ contour
B = area of elevation$_n$ contour

Pond Rating Curve
Submitted Design
2-10-04

Elev (ft)	Area (ft2)	Cumml Avg (acft)	Cumml Conic (acft)
4578.6000	52456.3721	4.2308	4.2068
4578.0000	50359.9837	3.5227	3.4987
4577.0000	44598.9212	2.4328	2.4094
4576.0000	36630.8722	1.5004	1.4785
4575.0000	27444.1419	0.7649	0.7456
4574.0000	17213.3872	0.2523	0.2375
4573.0000	4766.1090	0.0000	0.0000

Basin 13 Water Quality Pond:

Water Quality Volume

SEAR·BROWN

CLIENT: CSEP - Basin 13 Project No: 906003

Project: WQCV Checked By: _____

By: JYM Date: _____ Sheet: 1 Of: ___

17.63

Basin 13 Water Quality Control Volume

UDFCD Procedure

$$\text{Required Storeage} = \left[\frac{WQCV_o}{12}\right](\text{Area}) \times 1.2$$

$$WQCV_o = d_6 \frac{WQCV}{0.43}$$

d_6 ← figure SO-3

Area ⇒

13-1B	= 62.1 ac
13-2B	= 66.56 ac
13-3B	= 89.6 ac
8-0B	= 31.4 ac
13-0B	= 32.6 ac
	282.26 acres

I% ⇒

13-1B	= (36)(62.1) = 2235.6	8-0B	= (40)(31.4)
13-2B	= (42)(66.56) = 2795.52	13-0B	= (20)(32.6)
13-3B	= (50)(89.6) = 4480		

I% = 40.5%

WQCV = Figure SO-2 = 0.17
(40. hr drain time)

d_6 = 0.28 inches (figure SO-3)

$$WQCV_o = 0.28\left(\frac{0.17}{0.43}\right) = 0.11$$

$$\text{Required Storeage} = \left[\frac{0.11}{12}\right](282)(1.2) = 3.10 \text{ ac-ft}$$

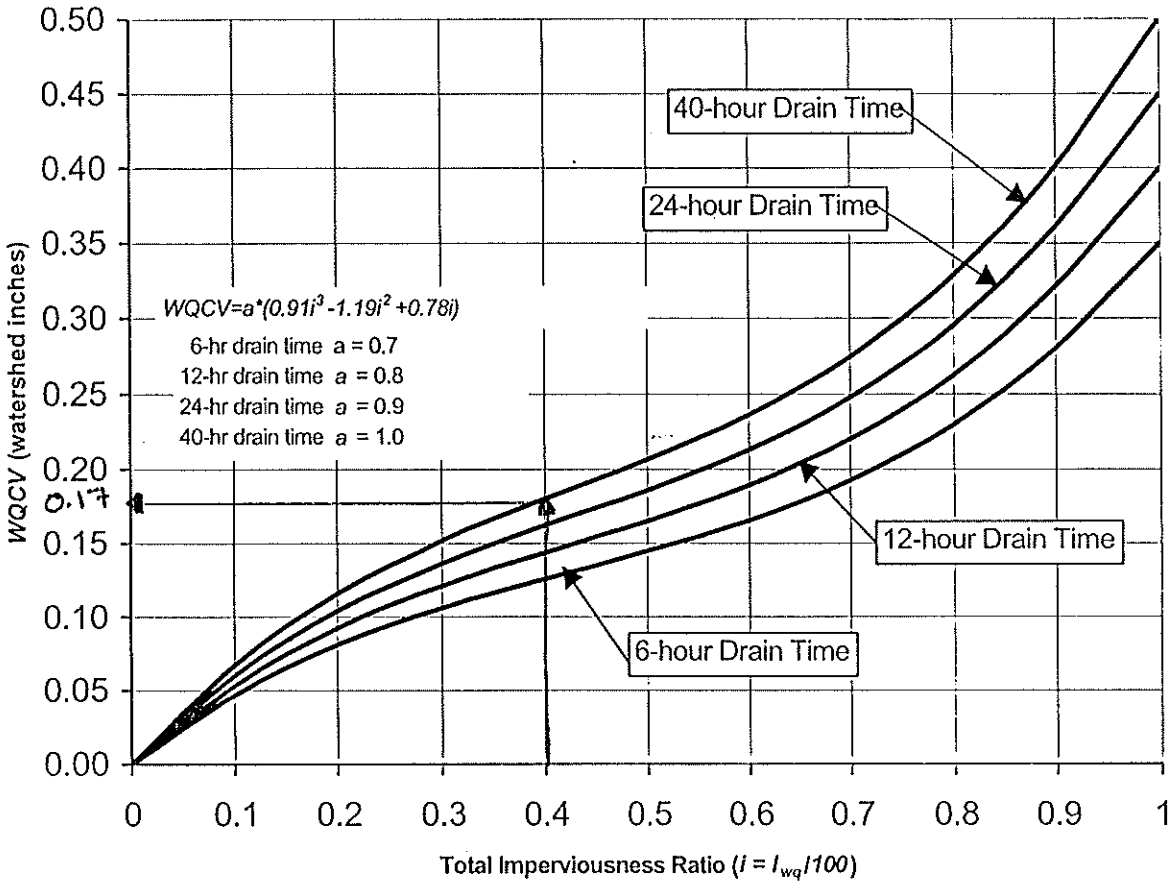


FIGURE SQ-2

Water Quality Capture Volume (WQCV), 80th Percentile Runoff Event

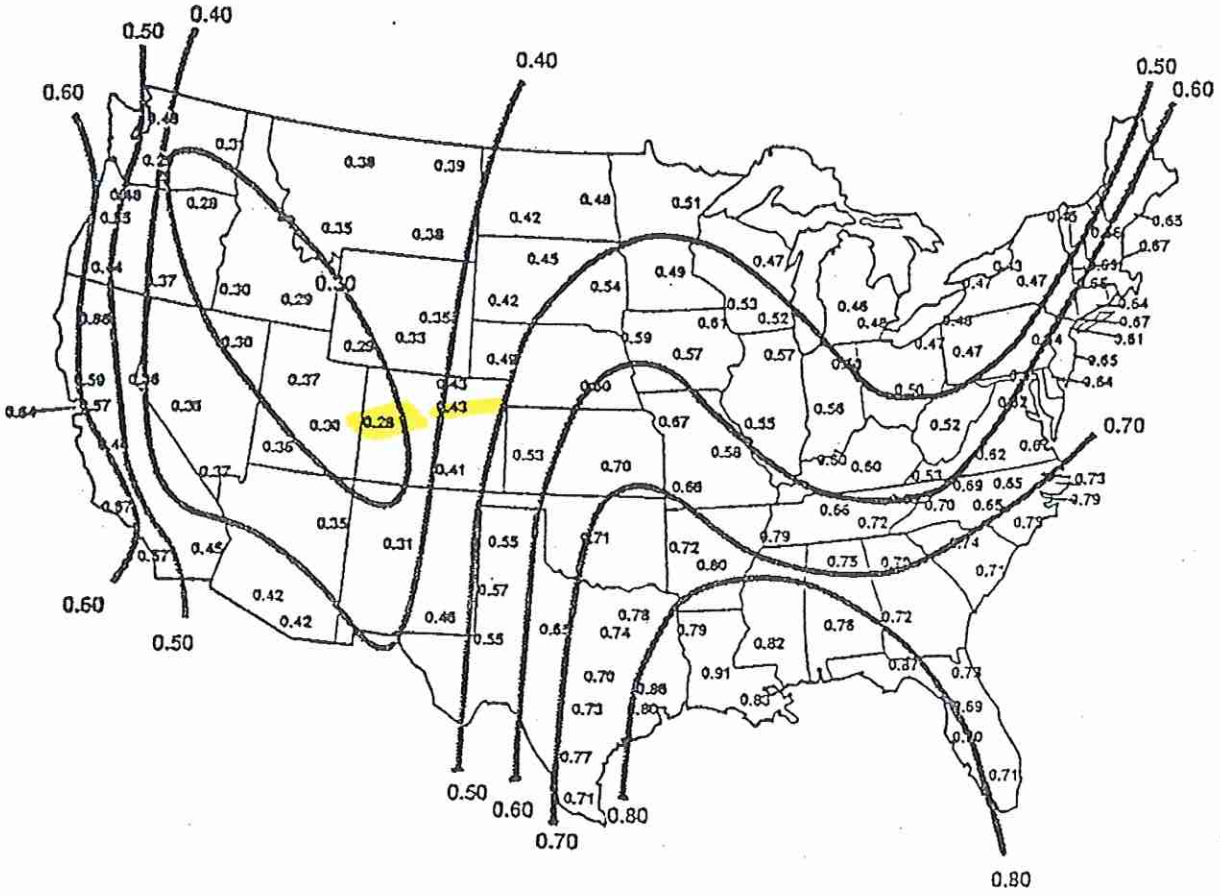


FIGURE SQ-3

Map of the Average Runoff Producing Storms Precipitation Depth in the United States, in inches.

(Ref.: Driscoll et.al., 1989)

100-Year WSEL Calculations

Riser Rating Curve

Q_{100} (cfs)=	154
Riser Elev (ft) =	4577.63
Spillway Elev (ft) =	4578.60

100-year WSEL =	4579.79

100 Year Storm

$Q_{Outlet\ Pipe}$ =	20.54
$Q_{Trash\ Rack}$ =	54.06
$Q_{controlling}$ =	20.5353
$Q_{Spillway}$ =	133.46
$D_{spillway}$ (ft) =	1.19
$D_{Above\ Riser}$ (ft) =	2.16

(24" outlet pipe)

OutletPipe

Discharge (cfs)	EGL (ft)	Head Above Riser (ft)	EGL of Trash Rack (ft)	Head Above Trash Rack (ft)	Controlling Head (ft)	Controlling Structure
1	4572.26	0.00	4577.67	0.04	0.04	Trash Rack
2	4572.46	0.00	4577.72	0.09	0.09	Trash Rack
3	4572.62	0.00	4577.76	0.13	0.13	Trash Rack
4	4572.75	0.00	4577.81	0.18	0.18	Trash Rack
5	4572.88	0.00	4577.85	0.22	0.22	Trash Rack
6	4572.99	0.00	4577.90	0.27	0.27	Trash Rack
7	4573.1	0.00	4577.94	0.31	0.31	Trash Rack
8	4573.2	0.00	4577.99	0.36	0.36	Trash Rack
9	4573.3	0.00	4578.03	0.40	0.40	Trash Rack
10	4573.41	0.00	4578.08	0.45	0.45	Trash Rack
11	4573.55	0.00	4578.12	0.49	0.49	Trash Rack
12	4573.98	0.00	4578.15	0.52	0.52	Trash Rack
13	4574.48	0.00	4578.18	0.55	0.55	Trash Rack
14	4574.99	0.00	4578.20	0.57	0.57	Trash Rack
15	4575.55	0.00	4578.22	0.59	0.59	Trash Rack
16	4576.2	0.00	4578.25	0.62	0.62	Trash Rack
17	4576.92	0.00	4578.27	0.64	0.64	Trash Rack
18	4577.67	0.04	4578.30	0.67	0.67	Trash Rack
19	4578.47	0.84	4578.32	0.69	0.84	Outlet Pipe
20	4579.31	1.68	4578.35	0.72	1.68	Outlet Pipe

Results using StormCad

using orifice calculations (attached sheet)

21	4580.2	2.57	4578.37	0.74	2.57	Outlet Pipe
22	4581.13	3.50	4578.40	0.77	3.50	Outlet Pipe
23	4582.1	4.47	4578.42	0.79	4.47	Outlet Pipe
24	4583.01	5.38	4578.45	0.82	5.38	Outlet Pipe
25	4583.27	5.64	4578.47	0.84	5.64	Outlet Pipe
26	4583.54	5.91	4578.49	0.86	5.91	Outlet Pipe
27	4583.82	6.19	4578.52	0.89	6.19	Outlet Pipe
28	4584.11	6.48	4578.54	0.91	6.48	Outlet Pipe
29	4584.41	6.78	4578.57	0.94	6.78	Outlet Pipe
30	4584.73	7.10	4578.59	0.96	7.10	Outlet Pipe
31	4585.05	7.42	4578.62	0.99	7.42	Outlet Pipe
32	4585.39	7.76	4578.65	1.02	7.76	Outlet Pipe
33	4585.73	8.10	4578.68	1.05	8.10	Outlet Pipe
34	4586.09	8.46	4578.72	1.09	8.46	Outlet Pipe
35	4586.45	8.82	4578.76	1.13	8.82	Outlet Pipe
36	4586.83	9.20	4578.79	1.16	9.20	Outlet Pipe
37	4587.22	9.59	4578.83	1.20	9.59	Outlet Pipe
38	4587.61	9.98	4578.87	1.24	9.98	Outlet Pipe
39	4588.02	10.39	4578.90	1.27	10.39	Outlet Pipe
40	4588.44	10.81	4578.94	1.31	10.81	Outlet Pipe
41	4588.87	11.24	4578.98	1.35	11.24	Outlet Pipe
42	4589.31	11.68	4579.01	1.38	11.68	Outlet Pipe
43			4579.05	1.42		
44			4579.09	1.46		
45			4579.12	1.49		
46			4579.19	1.56		
47			4579.26	1.63		
48			4579.33	1.70		
49			4579.41	1.78		
50			4579.48	1.85		
51			4579.55	1.92		
52			4579.62	1.99		
53			4579.70	2.07		
54			4579.78	2.15		
55			4579.86	2.23		
56			4579.94	2.31		

Area Inlet Design - Trash Rack

Water Quality Pond Trash Rack - 100-year
Project No. 906003

This sheet computes the controlling area inlet flow condition.

Weir - Orifice Control

Weir Equation:

$$Q_{weir} = CLH^{\frac{3}{2}}$$

where: H = *head above weir*

Orifice Equation:

$$Q_{orifice} = C_o A_o \sqrt{2gH}$$

where: $H = h_2 - h_1$

Grate per detail approval:

Weir:			**Orifice:**		
C_{weir} =	3.00		$C_{orifice}$ =	0.6	
L_{crest} =	11.67	ft. (1)	$A_{orifice}$ =	8.51	ft^2
			Clogging Factor =	0.10	

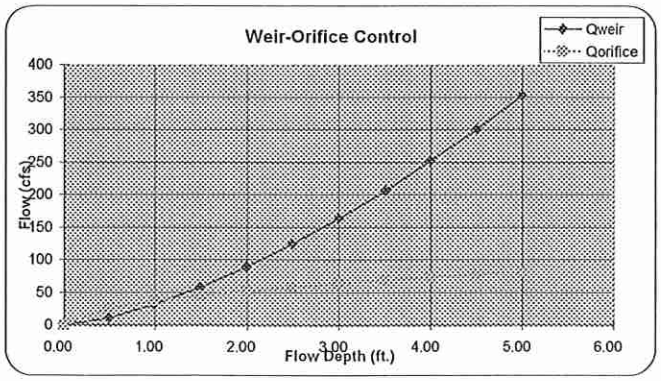
	l		w
Number of Inlets =	1	x	1
Flowline elevation of grate =	4577.63		
100 year Flow (cfs) =	54.06		
100-year Head (feet) =	2.16		
100 year WSEL (54.060740	4579.79		
Head difference:	0.5		

Head (ft.)	Q_{weir}	$Q_{orifice}$	$Q_{control}$	WSEL
0.00	0.00	0.00	0.00	4577.63
0.50	11.14	26.07	11.14	4578.13
1.00	31.50	36.86	31.50	4578.63
1.50	57.87	45.15	45.15	4579.13
2.00	89.10	52.13	52.13	4579.63
2.50	124.51	58.29	58.29	4580.13
3.00	163.68	63.85	63.85	4580.63
3.50	206.26	68.97	68.97	4581.13
4.00	252.00	73.73	73.73	4581.63
4.50	300.70	78.20	78.20	4582.13
5.00	352.18	82.43	82.43	4582.63

Space width =	0.4167 ft.
Bar width =	0.0833 ft.
Number of bars =	8
Number of spaces =	7
Grate length =	4.00 ft.
Effective Grate Length =	2.92 ft.
Grate length =	4.00 ft.
Effective Grate Length =	2.92 ft.

Space width =	0.4167 ft.
Bar width =	0.0833 ft.
Number of bars =	8
Number of spaces =	7
Grate Width =	4.00 ft.
Effective GrateWidth =	2.92 ft.
Grate Width =	4.00 ft.
Effective GrateWidth =	2.92 ft.

Notes:
1) This is the effective weir length which equals the sum of the open space lengths between bars in the predominant flow directions.



Riser Rating Curve

Q_{100} (cfs)=	154
Riser Elev (ft) =	4577.63
Spillway Elev (ft) =	4578.60

Flow to Spillway at Elev 4578.60

$Q_{Outlet\ Pipe}$ =	19.15
$Q_{Spillway}$ =	0.00
$D_{Above\ Riser}$ (ft) =	0.97

2-year WSEL =	4577.63	(Riser Elev)

Discharge (cfs)	EGL (ft)	Head Above Riser (ft)	EGL of Trash Rack (ft)	Head Above Trash Rack (ft)	Controlling Head (ft)	Controlling Structure
1	4572.26	0.00	4577.70	0.07	0.07	Trash Rack
2	4572.46	0.00	4577.77	0.14	0.14	Trash Rack
3	4572.62	0.00	4577.84	0.21	0.21	Trash Rack
4	4572.75	0.00	4577.88	0.25	0.25	Trash Rack
5	4572.88	0.00	4577.91	0.28	0.28	Trash Rack
6	4572.99	0.00	4577.95	0.32	0.32	Trash Rack
7	4573.1	0.00	4577.99	0.36	0.36	Trash Rack
8	4573.2	0.00	4578.03	0.40	0.40	Trash Rack
9	4573.3	0.00	4578.06	0.43	0.43	Trash Rack
10	4573.41	0.00	4578.09	0.46	0.46	Trash Rack
11	4573.55	0.00	4578.12	0.49	0.49	Trash Rack
12	4573.98	0.00	4578.15	0.52	0.52	Trash Rack
13	4574.48	0.00	4578.18	0.55	0.55	Trash Rack
14	4574.99	0.00	4578.21	0.58	0.58	Trash Rack
15	4575.55	0.00	4578.24	0.61	0.61	Trash Rack
16	4576.2	0.00	4578.26	0.63	0.63	Trash Rack
17	4576.92	0.00	4578.29	0.66	0.66	Trash Rack
18	4577.67	0.04	4578.32	0.69	0.69	Trash Rack
19	4578.47	0.84	4578.34	0.71	0.84	Outlet Pipe
20	4579.31	1.68	4578.37	0.74	1.68	Outlet Pipe

21	4580.2	2.57	4578.39	0.76	2.57	Outlet Pipe
22	4581.13	3.50	4578.42	0.79	3.50	Outlet Pipe
23	4582.1	4.47	4578.44	0.81	4.47	Outlet Pipe
24	4583.01	5.38	4578.46	0.83	5.38	Outlet Pipe
25	4583.27	5.64	4578.49	0.85	5.64	Outlet Pipe
26	4583.54	5.91	4578.51	0.88	5.91	Outlet Pipe
27	4583.82	6.19	4578.53	0.90	6.19	Outlet Pipe
28	4584.11	6.48	4578.55	0.92	6.48	Outlet Pipe
29	4584.41	6.78	4578.57	0.94	6.78	Outlet Pipe
30	4584.73	7.10	4578.60	0.97	7.10	Outlet Pipe
31	4585.05	7.42	4578.62	0.99	7.42	Outlet Pipe
32	4585.39	7.76	4578.64	1.01	7.76	Outlet Pipe
33	4585.73	8.10	4578.66	1.03	8.10	Outlet Pipe
34	4586.09	8.46	4578.69	1.06	8.46	Outlet Pipe
35	4586.45	8.82	4578.71	1.08	8.82	Outlet Pipe
36	4586.83	9.20	4578.73	1.10	9.20	Outlet Pipe
37	4587.22	9.59	4578.75	1.12	9.59	Outlet Pipe
38	4587.61	9.98	4578.78	1.15	9.98	Outlet Pipe
39	4588.02	10.39	4578.80	1.17	10.39	Outlet Pipe
40	4588.44	10.81	4578.82	1.19	10.81	Outlet Pipe
41	4588.87	11.24	4578.87	1.24	11.24	Outlet Pipe
42	4589.31	11.68	4578.93	1.30	11.68	Outlet Pipe

Area Inlet Design - Trash Rack

Water Quality Pond Trash Rack - 2-year
Project No. 906003

This sheet computes the controlling area inlet flow condition.

Weir - Orifice Control

Weir Equation:

$$Q_{weir} = CLH^{\frac{3}{2}}$$

where: H = *head above weir*

Orifice Equation:

$$Q_{orifice} = C_o A_o \sqrt{2gH}$$

where: $H = h_2 - h_1$

Grate per detail approval:

Weir:			**Orifice:**		
C_{weir} =	3.00		$C_{orifice}$ =	0.6	
L_{crest} =	11.67	ft. (1)	$A_{orifice}$ =	8.51	ft^2
			Clogging Factor =	0.10	

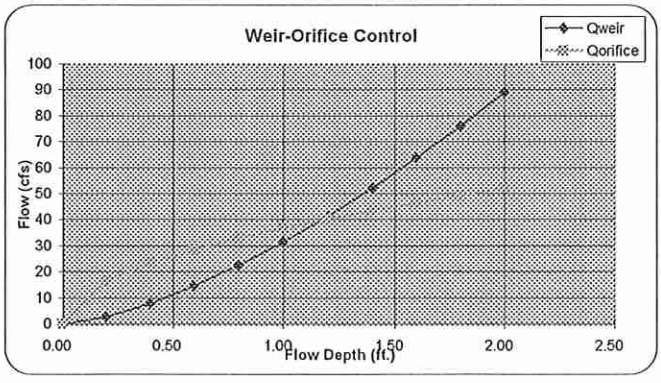
	l		w
Number of Inlets =	1	x	1
Flowline elevation of grate =	**4577.63**		
2 year Design Flow (cfs) =	**30.16**		
2 year WSEL (30.15922112	**4578.60**		
Head difference:	**0.2**		

Head (ft.)	Q_{weir}	$Q_{orifice}$	$Q_{control}$	WSEL
0.00	0.00	0.00	0.00	4577.63
0.20	2.82	16.49	2.82	4577.83
0.40	7.97	23.32	7.97	4578.03
0.60	14.64	28.56	14.64	4578.23
0.80	22.54	32.97	22.54	4578.43
1.00	31.50	36.86	31.50	4578.63
1.20	41.41	40.38	40.38	4578.83
1.40	52.18	43.62	43.62	4579.03
1.60	63.75	46.63	46.63	4579.23
1.80	76.07	49.46	49.46	4579.43
2.00	89.10	52.13	52.13	4579.63

Space width =	0.4167 ft.
Bar width =	0.0833 ft.
Number of bars =	8
Number of spaces =	7
Grate length =	4.00 ft.
Effective Grate Length =	2.92 ft.
Grate length =	4.00 ft.
Effective Grate Length =	2.92 ft.

Space width =	0.4167 ft.
Bar width =	0.0833 ft.
Number of bars =	8
Number of spaces =	7
Grate Width =	4.00 ft.
Effective GrateWidth =	2.92 ft.
Grate Width =	4.00 ft.
Effective GrateWidth =	2.92 ft.

Notes:
1) This is the effective weir length which equals the sum of the open space lengths between bars in the predominant flow directions.



Swale Rating Curve

Q_{100} =	154
$Q_{Trash\ Rack}$ =	20.54
$Q_{Spillway}$ =	133.46
WSEL=	4579.79

$D_{Spillway}$ (ft) =	1.19
$V_{Spillway}$ (ft/s)=	1.90
$A_{Spillway}$ (ft^2)=	70.39
$W_{Spillway}$ (ft)=	118.66

Discharge (cfs)	Depth (ft)	Velocity (ft/s)	Flow Area (ft^2)	Top Width (ft)
10	0.449	0.99	10.1	44.9
12	0.481	1.04	11.6	48.08
14	0.509	1.08	13	50.94
16	0.536	1.12	14.3	53.56
18	0.56	1.15	15.7	56
20	0.582	1.18	16.9	58.22
22	0.603	1.21	18.2	60.34
24	0.624	1.23	19.4	62.35
26	0.643	1.26	20.6	64.26
28	0.661	1.28	21.8	66.07
30	0.678	1.3	23	67.82
32	0.695	1.33	24.1	69.46
34	0.711	1.35	25.2	71.06
36	0.726	1.37	26.3	72.59
38	0.741	1.38	27.4	74.08
40	0.755	1.4	28.5	75.52
42	0.769	1.42	29.6	76.91
44	0.783	1.44	30.6	78.26
46	0.796	1.45	31.7	79.58
48	0.809	1.47	32.7	80.86
50	0.821	1.48	33.7	82.11
52	0.833	1.5	34.7	83.33
54	0.845	1.51	35.7	84.51
56	0.857	1.53	36.7	85.68
58	0.868	1.54	37.7	86.81
60	0.879	1.55	38.7	87.93
62	0.89	1.56	39.6	89.01
64	0.901	1.58	40.6	90.08
66	0.911	1.59	41.5	91.12
68	0.922	1.6	42.5	92.15
70	0.932	1.61	43.4	93.17
72	0.942	1.62	44.3	94.17
74	0.951	1.64	45.2	95.1
76	0.961	1.65	46.1	96.06
78	0.97	1.66	47.1	97.01
80	0.979	1.67	48	97.94
82	0.989	1.68	48.9	98.85
84	0.997	1.69	49.7	99.75
86	1.006	1.7	50.6	100.64

88	1.015	1.71	51.5	101.51
90	1.024	1.72	52.4	102.39
92	1.032	1.73	53.3	103.21
94	1.04	1.74	54.1	104.05
96	1.049	1.75	55	104.87
98	1.057	1.75	55.8	105.68
100	1.065	1.76	56.7	106.48
102	1.073	1.77	57.5	107.28
104	1.081	1.78	58.4	108.06
106	1.088	1.79	59.2	108.83
108	1.096	1.8	60.1	109.59
110	1.103	1.81	60.9	110.34
112	1.111	1.81	61.8	111.14
114	1.119	1.82	62.6	111.87
116	1.126	1.83	63.4	112.6
118	1.133	1.84	64.2	113.32
120	1.14	1.85	65	114.03
122	1.147	1.85	65.8	114.73
124	1.154	1.86	66.6	115.44
126	1.161	1.87	67.4	116.13
128	1.168	1.88	68.2	116.82
130	1.175	1.88	69	117.5
132	1.182	1.89	69.8	118.17
134	1.188	1.9	70.6	118.84
136	1.195	1.9	71.4	119.5
138	1.202	1.91	72.2	120.16
140	1.208	1.92	73	120.81
142	1.215	1.93	73.8	121.45
144	1.221	1.93	74.5	122.09
146	1.227	1.94	75.3	122.73
148	1.234	1.95	76.1	123.35
150	1.24	1.95	76.8	123.98
152	1.246	1.96	77.6	124.59
154	1.252	1.96	78.4	125.21
156	1.258	1.97	79.1	125.81
158	1.264	1.98	79.9	126.41
160	1.27	1.98	80.7	127.01
162	1.276	1.99	81.4	127.61
164	1.282	2	82.2	128.19
166	1.288	2	82.9	128.78
168	1.294	2.01	83.7	129.36
170	1.299	2.01	84.4	129.93
172	1.305	2.02	85.2	130.5
174	1.311	2.03	85.9	131.07
176	1.316	2.03	86.6	131.63
178	1.322	2.04	87.4	132.19
180	1.327	2.04	88.1	132.75
182	1.333	2.05	88.8	133.3
184	1.338	2.05	89.6	133.84
186	1.344	2.06	90.3	134.39
188	1.349	2.07	91	134.93
190	1.355	2.07	91.8	135.46

192	1.36	2.08	92.5	136
194	1.365	2.08	93.2	136.53
196	1.371	2.09	93.9	137.05
198	1.376	2.09	94.6	137.57
200	1.381	2.1	95.3	138.09

Basin 13 Water Quality Pond:

Orifice Plate Sizing Calculations

SEAR·BROWN

CLIENT: CSEP - Basin 13 Project No:

Project: WQCV orifice plate Checked By:

By: JTM Date: Sheet: 1 Of: 1

Outlet ⇨

WQCV = 3.10 acre-ft

D_{WQ} = 4577.63 = grade elevation
- 4572.34 = invert of swale
5.29 ft

* use figure EDB-3 to calculate required area per row (in²)

double check with eqn:

$a = WQCV / K_{40}$

$K_{40} = 0.013 D_{WQ}^2 + 0.22 D_{WQ} - 0.10$

$= 0.013(5.29)^2 + 0.22(5.29) - 0.10$

$= 1.43$

$a = 3.10 / 1.43$

$= 2.17 \text{ in}^2$

* using ☐ holes ⇨

hole area = 2.17 in²/row

# of rows = 14 rows ✓

$a_T = 30 \text{ in}^2$ ✓

4 : ☐ 2" ⇨ 30 in² ✓
3-3/4"

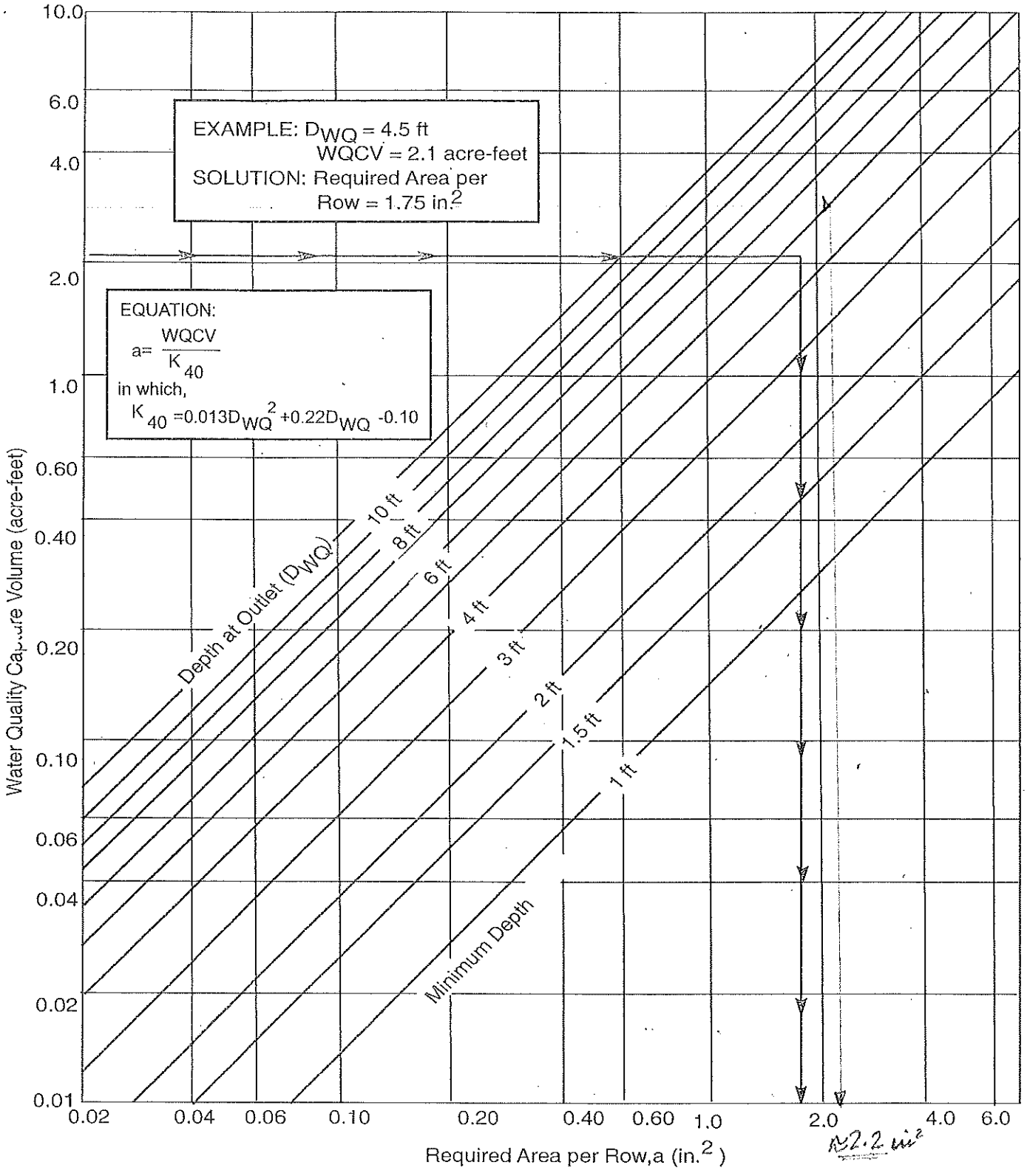


FIGURE EDB-3
Water Quality Outlet Sizing:
Dry Extended Detention Basin With a 40-Hour Drain Time of the Capture Volume

Pond Liner Design

UMTRA GROUND WATER PROJECT

GJO-99-86-TAR
Rev. 1

Final Site Observational Work Plan for the UMTRA Project Site at Grand Junction, Colorado

May 1999

Prepared by the
U.S. Department of Energy
Grand Junction Office

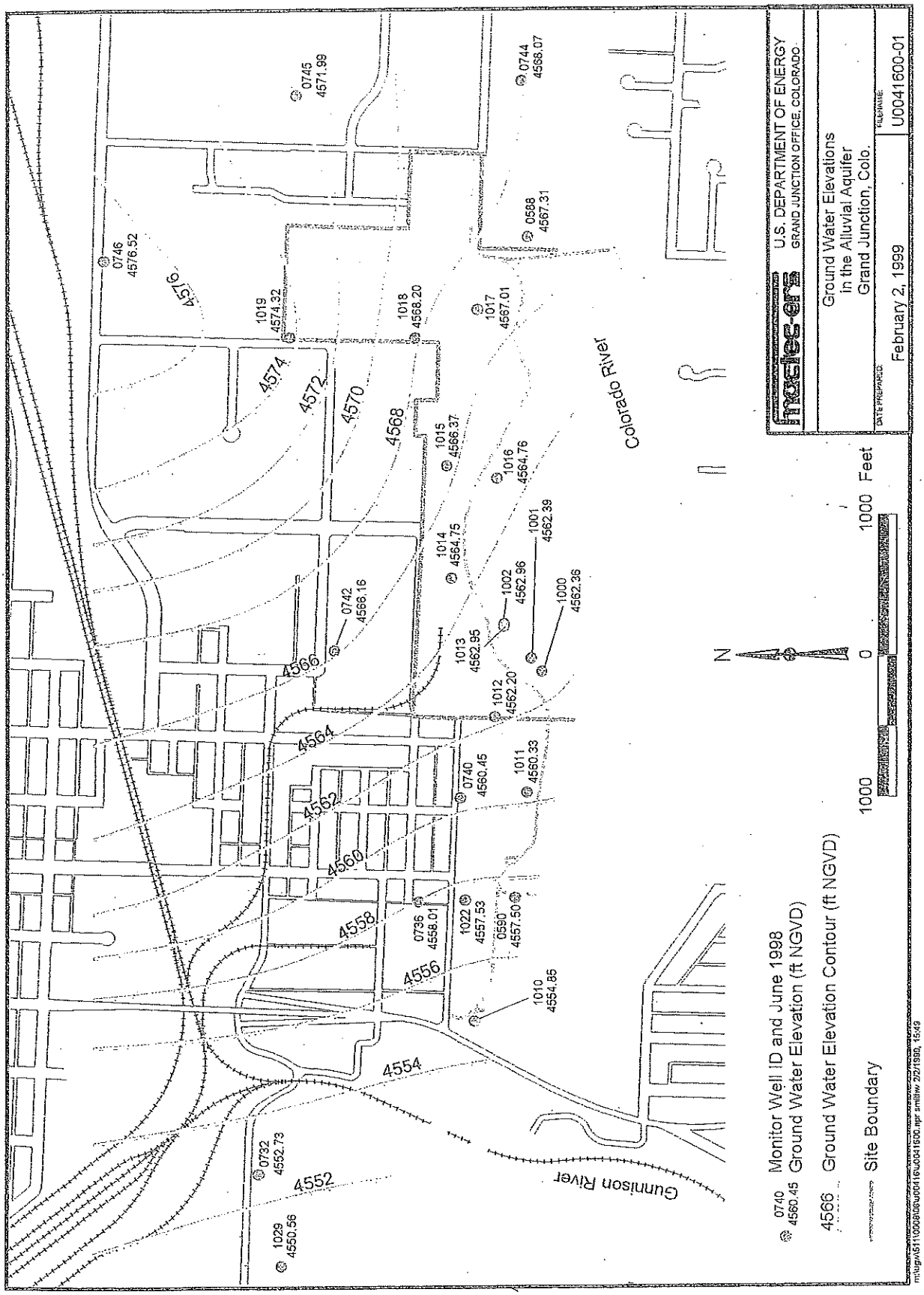


Figure 5–1. Ground Water Elevation in the Alluvial Aquifer

SEAR·BROWN

Project: Grand Junction Basin 13 Project No. 4016-007

By: S. Bleiker Checked:

Date: 11-19-03 Sheet 1 of 2

Determine pond liner requirements to offset uplift in pond @ Detention Pond in Basin 13 (vic. 15th Street & Winters Ave)

Ref. ① UMTRA Ground Water Project GJO-99-81-TAR Rev. 1 Final Site Observational Work Plan for UMTRA Project Site at Grand Junction, Colorado May 1999, page 5-7.

Location 1019 Ground water elev. 4574.32'

② Provided by Drew Feller, from geotech report on DH 38. Ground water elev. 4573.74'

③ Unit wts of stone & sand from White Water Building Materials, Grand Junction, CO.

$$\gamma_{Rock} = \frac{2800\#}{cy} = 103.7 \frac{\#}{ft^3}$$

$$\gamma_{sand} = \frac{2400\#}{cy} = 88.9 \frac{\#}{ft^3}$$

Water elevation used to design pond liner:

Use! 4574.32 ← Ref. ①

Note: Geotech recommended adding 5' to be conservative on pond liner design in Basin 8. [Ryan Dorr]

- Depth of water in base of pond used to design pond liner:

4574.32' (ground water elev. @ loc. 1019 Ref. ①) + 5.00' − 4572.34' (Pond invert elev. @ outlet structure) = 4.98' ⇒ use 5.0'

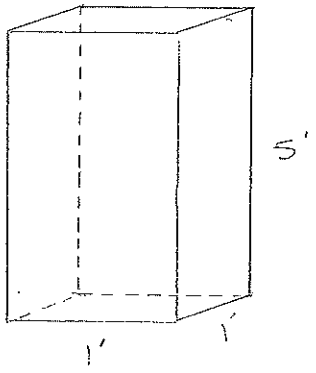
SEAR·BROWN

Project: Grand Junction / Redlands Project No. 906-002

By: S. Baiker Checked:

Date: 11-19-03 Sheet 2 of 2

Unit Volume Water:



$V = 1' \times 1' \times 5' = 5\ ft^3$

$\gamma_{water} = 62.4 \frac{\#}{ft^3}$

$W = V \cdot \gamma = 5\ ft^3 \times 62.4 \frac{\#}{ft^3}$

$W = 312 \frac{\#}{ft^2}$

Use soil w/ $\gamma = 120 \frac{\#}{ft^3}$

$\gamma_{Rock} = 2700 \frac{\#}{cyd} = 103 \frac{\#}{ft^3}$

$\gamma_{Sand} = 2400 \frac{\#}{cyd} = 89 \frac{\#}{ft^3}$

Min. depth Rock = $\frac{312 \frac{\#}{ft^2}}{103 \frac{\#}{ft^3}} = 3.0' \Rightarrow 3.0'$ Rock

Min. depth Sand = $\frac{312 \frac{\#}{ft^2}}{89 \frac{\#}{ft^3}} = 3.5' \Rightarrow 3.5'$ sand

Min depth Soil = $\frac{312 \frac{\#}{ft^2}}{120 \frac{\#}{ft^3}} = 2.6' \Rightarrow 2'-8''$ soil

Basin 13 Water Quality Pond:

Weir Liner Design

UMTRA GROUND WATER PROJECT

GJO-99-86-TAR
Rev. 1

Final Site Observational Work Plan for the UMTRA Project Site at Grand Junction, Colorado

May 1999

Prepared by the
U.S. Department of Energy
Grand Junction Office

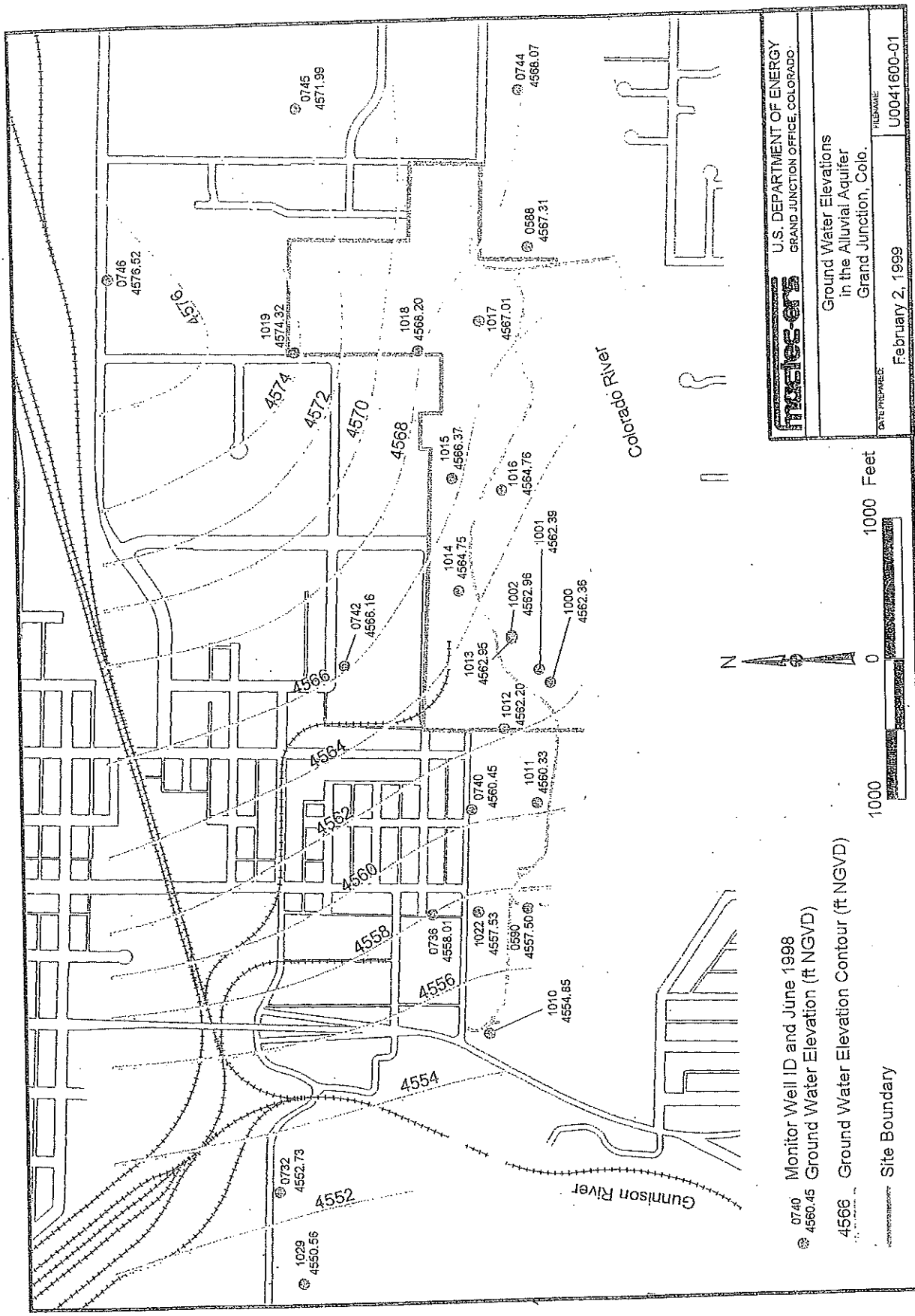
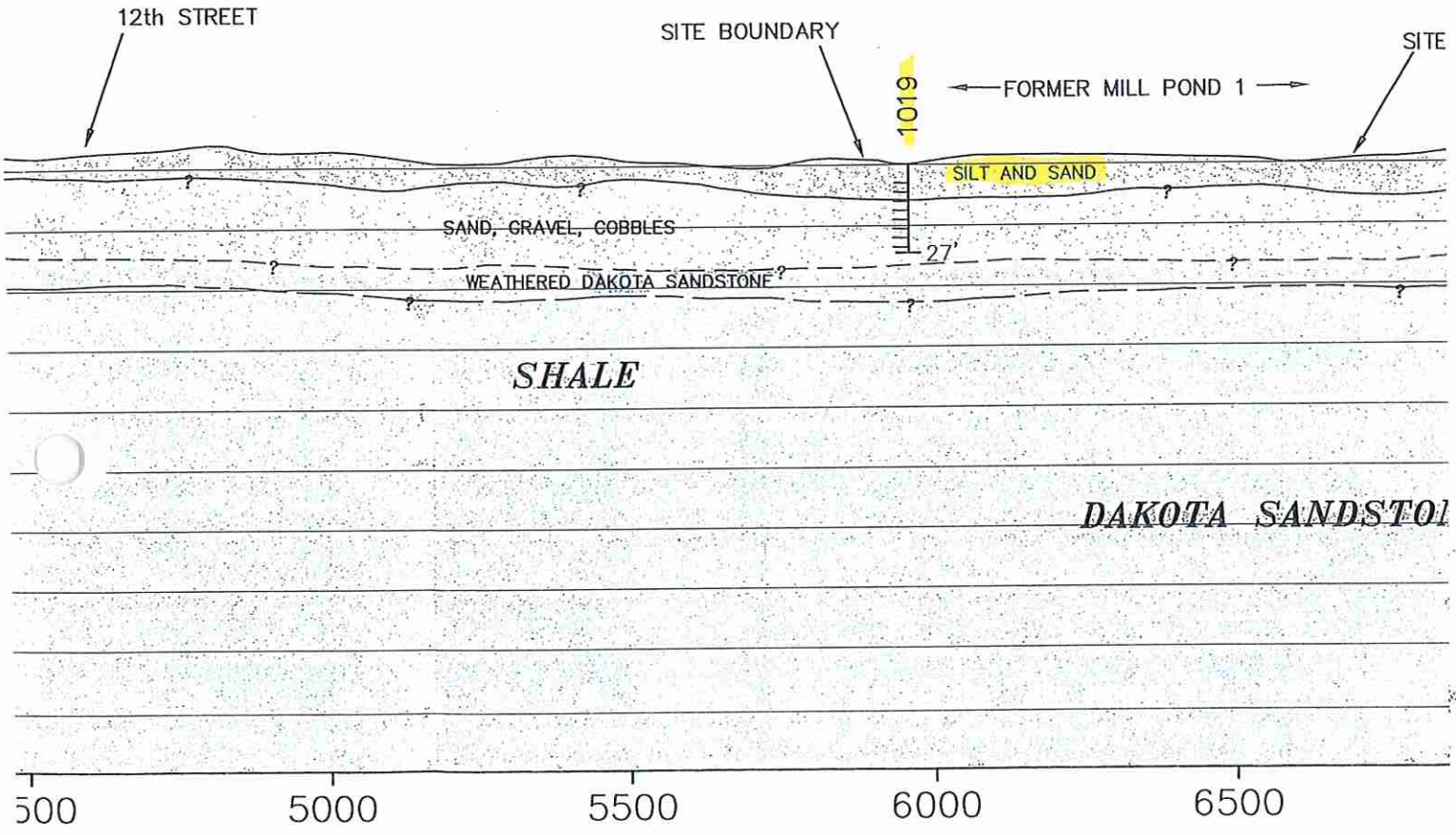


Figure 5–1. Ground Water Elevation in the Alluvial Aquifer

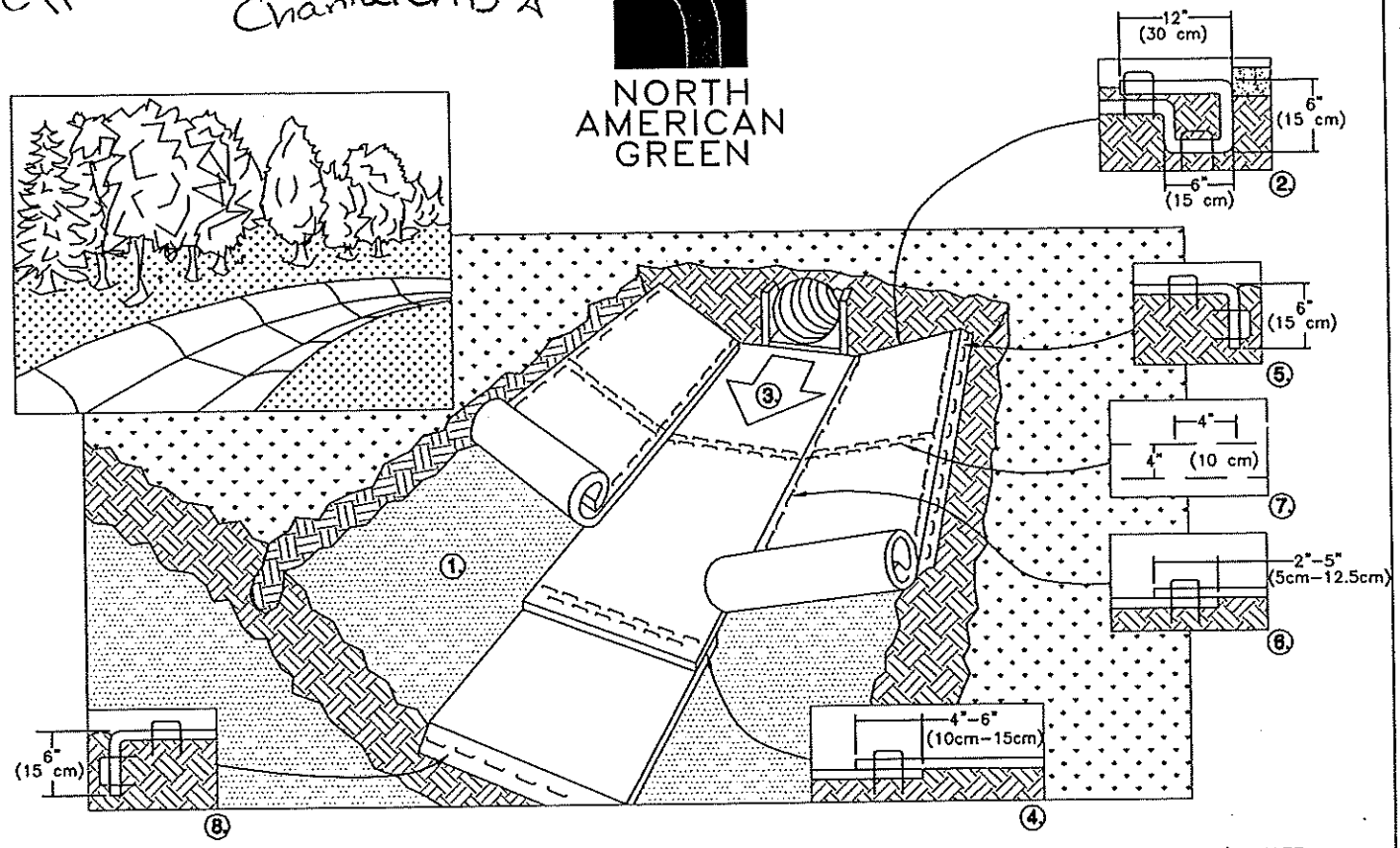

12th STREET
SITE BOUNDARY
SITE
1019
FORMER MILL POND 1
SILT AND SAND
SAND, GRAVEL, COBBLES
27'
WEATHERED DAKOTA SANDSTONE?
SHALE
DAKOTA SANDSTO
500
5000
5500
6000
6500

900
300

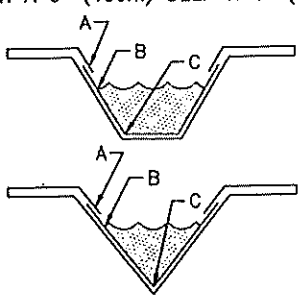
L:\jobs\906002\docs\StephB\ ChannelCAD

CHANNEL INSTALLATION

NORTH AMERICAN GREEN



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"–6" (10cm–15cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"–5" (5cm–12.5cm) (DEPENDING ON BLANKET TYPE) AND STAPLED. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH™ ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m–12m) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



CRITICAL POINTS

A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

14649 HIGHWAY 41 NORTH, EVANSVILLE, INDIANA 47725
USA 1-800-772-2040 CANADA 1-800-448-2040
www.nagreen.com

L:\jobs\706003\docs\steph\B
Staple Pattern

STAPLE PATTERN GUIDE

NORTH AMERICAN GREEN

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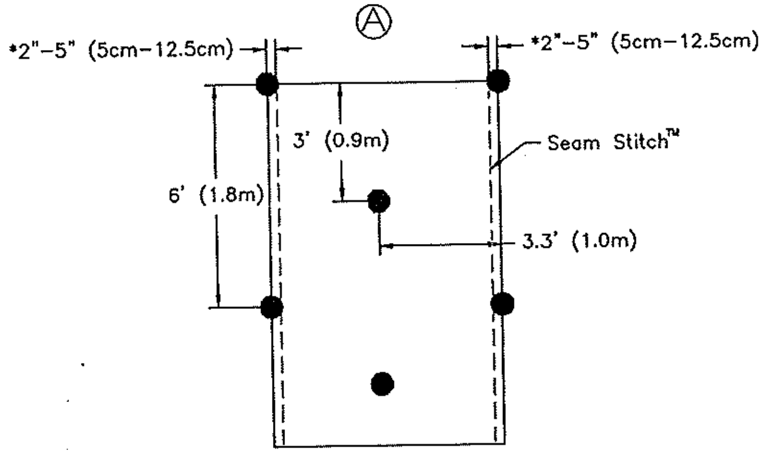
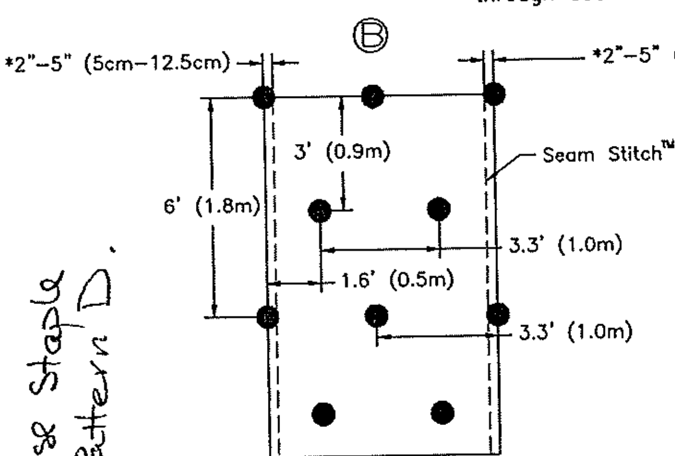
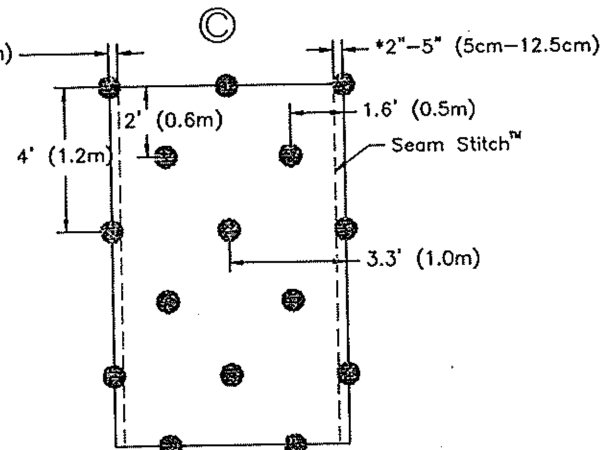
EVANSVILLE, IN 47725
USA 1-800-772-2040
CANADA 1-800-448-2040
www.nagreen.com



0.7 STAPLES PER SQ. YD.
(0.8 STAPLES PER SQ. M)
For blankets with the optional North American Green DOT System™ place staples/stakes through each of the BLUE colored dots.

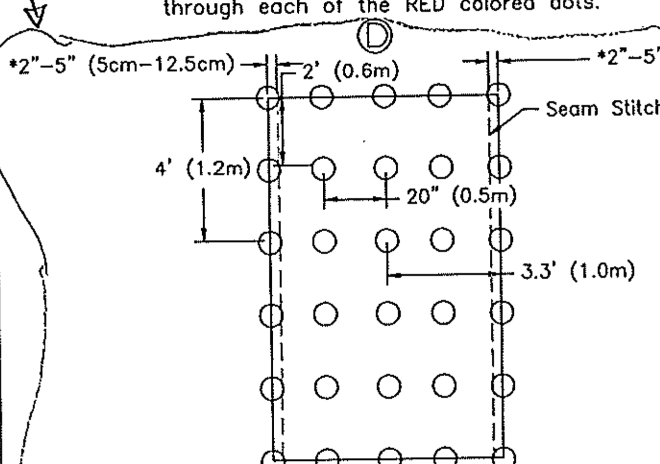


1.15 STAPLES PER SQ. YD.
(1.35 STAPLES PER SQ. M)
For blankets with the optional North American Green DOT System™ place staples/stakes through each of the RED colored dots.

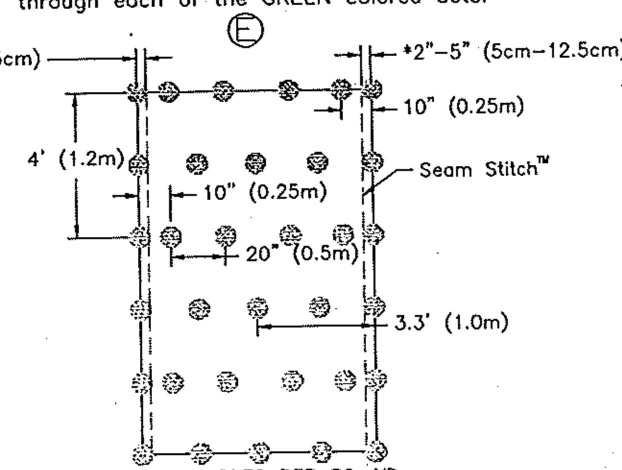


1.7 STAPLES PER SQ. YD.
(2.0 STAPLES PER SQ. M)
For blankets with the optional North American Green DOT System™ place staples/stakes through each of the GREEN colored dots.

Use Staple Pattern D.



3.4 STAPLES PER SQ. YD.
(4.1 STAPLES PER SQ. M)
For blankets with the optional North American Green DOT System™ place staples/stakes through each of the WHITE colored dots.



3.75 STAPLES PER SQ. YD.
(4.5 STAPLES PER SQ. M)
For blankets with the optional North American Green DOT System™ place staples/stakes through each of the YELLOW colored dots.

*Location of Seam Stitch™ will vary depending on North American Green product type:

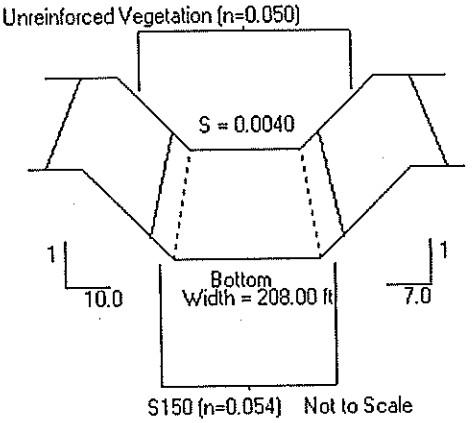
North American Green - ECMDS Version 4.2		12/3/200	01:52 PM	COMPUTED BY: S. Bleiker
PROJECT NAME: Grand Junction / CSEP / Basin 13		PROJECT NO.: 906-003		
FROM STATION/REACH: 19+00	TO STATION/REACH: 4+00	DRAINAGE AREA: Basin 13		DESIGN FREQUENCY: 100-year

HYDRAULIC RESULTS

Discharge (cfs)	Peak Flow Period (hrs)	Velocity (fps)	Area (sq.ft)	Hydraulic Radius(ft)	Normal Depth (ft)
133.5	3.5	1.15	116.27	0.53	0.55

COMPOSITE RESULTS

Low-Flow Channel Depth (ft)	Low Flow Perimeter (ft)	Channel Perimeter (ft)	Effective Manning's 'n'	Shear Ratio
1.20	217.36	217.36	0.054	0.00



LINER RESULTS

Reach	Matting Type / Staple Pattern	Stability Analysis	Vegetation Characteristics: Phase	Class	Type	Density	Permissible Shear Stress (psf)	Calculated Shear Stress (psf)	Safety Factor	Remarks
Low Flow	S150	Unvegetated					1.75	0.14	12.82	STABLE
	Staple D									

Side Slope	Unreinforced	Vegetation		E	Bunch	<50%	2.16	0.00	N/A	STABLE
		Soil	Fine Sand				0.020	0.000	N/A	STABLE

Nilex - Mick 503-766-2000

Note: For S150 cost is $0.51/sy. Use S150 instead of S75. Staple pattern is marked on S150, & not on S75. Erosion mat typically fails because it's not stapled properly.

[S75 costs $ 0.42/sy
C350 " $ 2.93/sy]

****

NORTH AMERICAN GREEN EROSION CONTROL MATERIALS DESIGN SOFTWARE VERSION 4.2
NORTH AMERICAN GREEN CHANNEL PROTECTION - ENGLISH/S.I.
USER SPECIFIED CHANNEL LINING BACK-UP COMPUTATIONS
****

PROJECT NAME: Grand Junction / CSEP / Basin 13 PROJECT NO.: 906-003
COMPUTED BY: S. Bleiker DATE: 12/3/2003
FROM STATION/REACH: 19+00 TO STATION/REACH: 4+00
DRAINAGE AREA: Basin 13 DESIGN FREQUENCY: 100-year

****

INPUT PARAMETERS

****

Channel Discharge : 133.5 cfs (3.78 m^3/s)
Back Flow Period : 3.53 hours
Channel Slope : 0.004 ft/ft (0.004 m/m)
Channel Bottom Width : 208.0 ft (63.40 m)
Left Side Slope : 10:1
Right Side Slope : 7:1

Low-Flow Lining Type : S150 Staple D
Permissible Shear(TpL) : 1.75 psf (83.8 Pa)

Side Slope Lining Type : Unreinforced Vegetation
Permissible Shear(TpZ) : 2.16 psf (103.4 Pa)
Class = E Vegetation
Soil = Fine Sand
Allowable Soil Shear(TaZ) : .02 psf (1.0 Pa)

Low-Flow Channel Depth : 1.2 ft (.37 m)
Low-Flow Channel Perimeter : 217.36 ft (66.25 m)

****

CALCULATIONS

****

Depth Estimate = 0.16 * (133.5 /(0.004^0.5))^0.375 = 2.82 ft (.86 m)
Final Channel Depth (after 203 iterations) = .55 ft (0.17 m)
Flow Area = (208.0 * 0.5)+(0.5 *0.55^2 * (10.0+7.0)) = 116.3 sq.ft (10.8 m^2)
Wet Per. =208.0 +(0.5*(((10.0^2)+1)^.5 +((7.0^2)+1)^.5)) = 217.4 ft (66.3 m)
Hydraulic Radius = (116.3 / 217.4) = 0.5 ft (0.2 m)
Channel Velocity =(1.486/0.054)*(0.5^0.667)*(0.004^.5) = 1.1 fps (0.3 m/s)

Channel Effective Manning's Roughness = 0.054

********** Low-Flow Lining **********
Manning's Roughness = 0.054
Calculated Shear (Td) = 62.4 * 0.55 * 0.004 = 0.14 psf (6.5 Pa)
Safety Factor = (Tp/Td) = (1.75 /0.14) = 12.82

********** Side Slope Lining **********
Side Shear Ratio (K1) [B/d = 208.0/0.55 = 380.4, Chart 13 HEC-15] = 0.00
Manning's Roughness = 0.050
Calculated Shear (Ts) = (K1 * Td) = 0.00 * 0.14 = 0.00 psf (0.0 Pa)
Safety Factor = (Tp/Ts) = (2.16 /0.00) = N/A
Effective Stress on Soil in Bend(Tse)=0.00*(1-0.25)*(0.0156/0.050)^2 = 0.00 psf
= (0.0 Pa)
Safety Factor = (Ta/Tse) = (0.02 /0.00) = N/A
"

Channel Effective Manning's Roughness = 0.041

********** Low-Flow Lining **********
Manning's Roughness = 0.041
Calculated Shear (Td) = 62.4 * 0.46 * 0.004 = 0.12 psf (5.5 Pa)
Safety Factor = (Tp/Td) = (3.00 /0.12) = 25.90

********** Side Slope Lining **********
Side Shear Ratio (K1) [B/d = 208.0/0.46 = 448.1, Chart 13 HEC-15] = 0.00
Manning's Roughness = 0.050
Calculated Shear (Ts) = (K1 * Td) = 0.00 * 0.12 = 0.00 psf (0.0 Pa)
Safety Factor = (Tp/Ts) = (2.16 /0.00) = N/A
Effective Stress on Soil in Bend(Tse)=0.00*(1-0.25)*(0.0156/0.050)^2 = 0.00 psf
= (0.0 Pa)
Safety Factor = (Ta/Tse) = (0.02 /0.00) = N/A
"

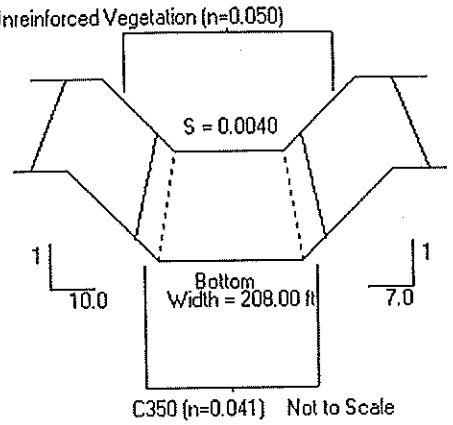
North American Green - ECMDS Version 4.2		12/3/200 12:55 PM	COMPUTED BY: S. Bleiker
PROJECT NAME: Grand Junction / CSEP / Basin 13		PROJECT NO.: 906-003	
FROM STATION/REACH: 19+00	TO STATION/REACH: 4+00	DRAINAGE AREA: Basin 13	DESIGN FREQUENCY: 100-year

HYDRAULIC RESULTS

Discharge (cfs)	Peak Flow Period (hrs)	Velocity (fps)	Area (sq.ft)	Hydraulic Radius(ft)	Normal Depth (ft)
133.5	3.5	1.36	98.37	0.46	0.46

COMPOSITE RESULTS

Low-Flow Channel Depth (ft)	Low Flow Perimeter (ft)	Channel Perimeter (ft)	Effective Manning's 'n'	Shear Ratio
1.20	215.95	215.95	0.041	0.00



LINER RESULTS

Reach	Matting Type / Staple Pattern	Stability Analysis	Vegetation Characteristics: Phase	Class	Type	Density	Permissible Shear Stress (psf)	Calculated Shear Stress (psf)	Safety Factor	Remarks
Low Flow	C350	Unvegetated	1				3.00	0.12	25.90	STABLE
	Staple E									
Side Slope	Unreinforced	Vegetation		E	Bunch	<50%	2.16	0.00	N/A	STABLE
		Soil	Fine Sand				0.020	0.000	N/A	STABLE

don't use

cost $2.93/sy
way overdesigned

****

NORTH AMERICAN GREEN EROSION CONTROL MATERIALS DESIGN SOFTWARE VERSION 4.2
NORTH AMERICAN GREEN CHANNEL PROTECTION - ENGLISH/S.I.
USER SPECIFIED CHANNEL LINING BACK-UP COMPUTATIONS
****

PROJECT NAME: Grand Junction / CSEP / Basin 13 PROJECT NO.: 906-003
COMPUTED BY: S. Bleiker DATE: 12/3/2003
FROM STATION/REACH: 19+00 TO STATION/REACH: 4+00
DRAINAGE AREA: Basin 13 DESIGN FREQUENCY: 100-year

****
INPUT PARAMETERS
****

Channel Discharge : 133.5 cfs (3.78 m^3/s)
Peak Flow Period : 3.53 hours
Channel Slope : 0.004 ft/ft (0.004 m/m)
Channel Bottom Width : 208.0 ft (63.40 m)
Left Side Slope : 10:1
Right Side Slope : 7:1

Low-Flow Lining Type : C350 Staple E
Permissible Shear(TpL) : 3.00 psf (143.6 Pa)
Phase = 1

Side Slope Lining Type : Unreinforced Vegetation
Permissible Shear(TpZ) : 2.16 psf (103.4 Pa)
Class = E Vegetation
Soil = Fine Sand
Allowable Soil Shear(TaZ) : .02 psf (1.0 Pa)

Low-Flow Channel Depth : 1.2 ft (.37 m)
Low-Flow Channel Perimeter : 215.95 ft (65.82 m)

****
CALCULATIONS
****

Initial Depth Estimate = 0.16 * (133.5 /(0.004^0.5))^0.375 = 2.82 ft (.86 m)
Final Channel Depth (after 249 iterations) = .46 ft (0.14 m)
Flow Area = (208.0 * 0.5)+(0.5 *0.46^2 * (10.0+7.0)) = 98.4 sq.ft (9.1 m^2)
Wet Per. =208.0 +(0.5*(((10.0^2)+1)^.5 +((7.0^2)+1)^.5)) = 215.9 ft (65.8 m)
Hydraulic Radius = (98.4 / 215.9) = 0.5 ft (0.1 m)

Channel Velocity =(1.486/0.041)*(0.5^0.667)*(0.004^.5) = 1.4 fps (0.4 m/s)

Basin 13 Water Quality Pond:

Trickle Channel Design

SEAR·BROWN

Project: Grand Junction Basin 13 Project No. 906-003

By: D. Bleiker Checked:

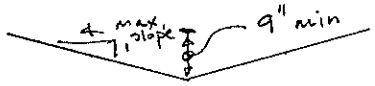
Date: 11/18/03 Sheet 1 of 2

Trickle Channel Design

Ref. Urban Drainage & Flood Control District
Urban Storm Drainage Criteria Manual Vol. 3
September 1999

Trickle Channel Design

- Trickle channel should have a min depth of 9" & side slopes no steeper than 4:1 H:V. (UD&FCD)



- Design Flow

→ Trickle channel Q = 2x Forebay release capacity

→ Forebay Volume = 5% - 10% of WQCV

→ WQCV = 3.02 ac-ft = 131551.2 ft³ ← [Provided by J. Michaelsen]

→ Use release rate = $\frac{0.1 \times (131551.2\ ft^3)}{45\ min \left(\frac{60\ s}{1\ min}\right)}$ ← 10% WQCV

= 4.87 cfs

Notes:

1. Forebay Outlets to be designed for 45 min to drain Forebay volume.
2. Detention pond for Basin 13 does not have a Forebay, therefore the trickle channel design is based on an assumed volume and release rate.
3. Slope on bottom of pond is 0.4 % ← [Provided by J. Michaelsen]

Pond Inlet elev. = 4573.20

Pond Outlet elev. = 4572.34

Distance between = 214'

slope = $\frac{4573.20 - 4572.34}{214'}$

= 0.4 %

SEAR·BROWN

Project: Grand Junction Basin 13 Project No. 906-003

By: S. Bleiker Checked:

Date: 11/18/03 Sheet 2 of 2

Trickle Channel Q

$Q = 2 \times$ Forebay Release Rate

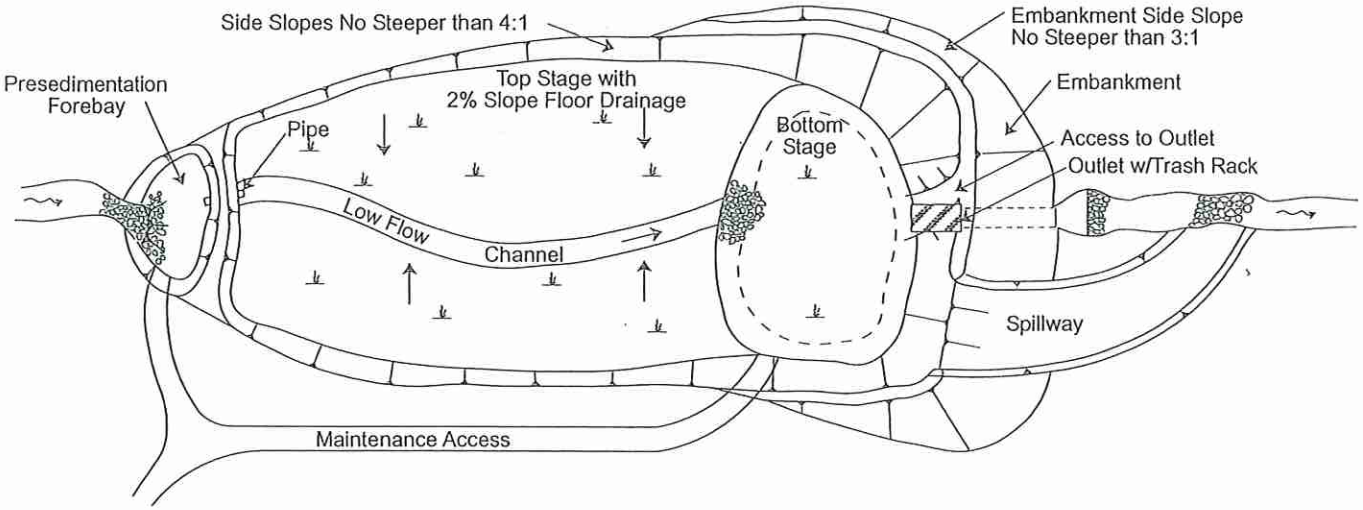
$Q = 2 \times (4.87 - cfs) = 9.74 - cfs$

3.	Trash Rack	Provide a trash rack of sufficient size to prevent clogging of the primary water quality outlet. Size the rack so as not to interfere with the hydraulic capacity of the outlet. Using the total outlet area and the selected perforation diameter (or height), Figures 6, 6a or 7 in the *Water Quality Structure Details* section will help to determine the minimum open area required for the trash rack. If a perforated vertical plate or riser is used as suggested in the *Manual*, use one-half of the total outlet area to calculate the trash rack's size. This accounts for the variable inundation of the outlet orifices. Figures 6 and 6a were developed as suggested standardized outlet designs for smaller sites.
4.	Basin Shape	Shape the pond whenever possible with a gradual expansion from the inlet and a gradual contraction toward the outlet, thereby minimizing short circuiting. The basin length to width ratio between the inlet and the outlet should be between 2:1 to 3:1, with the larger being preferred. It may be necessary to modify the inlet and outlet points through the use of pipes, swales or channels to accomplish this.
5.	Two-Stage Design	A two-stage design with a pool that fills often with frequently occurring runoff minimizes standing water and sediment deposition in the remainder of the basin. The two stages are as follows: A. Top Stage: The top stage should be 2 or more feet deep with its bottom sloped at 2 percent toward the low flow channel. B. Bottom Stage: The active storage basin of the bottom stage should be 1.5 to 3 feet deeper than the top stage and store 5 to 15 percent of the WQCV. Provide a micro-pool below the bottom active storage volume of the lower stage at the outlet point. The pool should be ½ the depth of the upper WQCV depth or 2.5 feet, whichever is the larger.
6.	Low-Flow Channel	Conveys low flows from the forebay to the bottom stage. Erosion protection should be provided where the low-flow channel enters bottom stage. Lining the low flow channel with concrete is recommended. Otherwise line its sides with VL Type riprap and bottom with concrete. Make it at least 9 inches deep, at a minimum provide capacity equal to twice the release capacity at the upstream forebay outlet.
7.	Basin Side Slopes	Basin side slopes should be stable and gentle to facilitate maintenance and access. Side slopes should be no steeper than 4:1, the flatter, the better and safer.
8.	Dam Embankment	The embankment should be designed not to fail during a 100-year and larger storms. Embankment slopes should be no steeper than 3:1, preferably 4:1 or flatter, and planted with turf forming grasses. Poorly compacted native soils should be excavated and replaced. Embankment soils should be compacted to at least 95 percent of their maximum density according to ASTM D 698-70 (Modified Proctor). Spillway structures and overflows should be designed in accordance with local drainage criteria and should consider UDFCD drop-structure design guidelines.
9.	Vegetation	Bottom vegetation provides erosion control and sediment entrapment. Pond bottom, berms, and side sloping areas may be planted with native grasses or with irrigated turf, depending on the local setting.

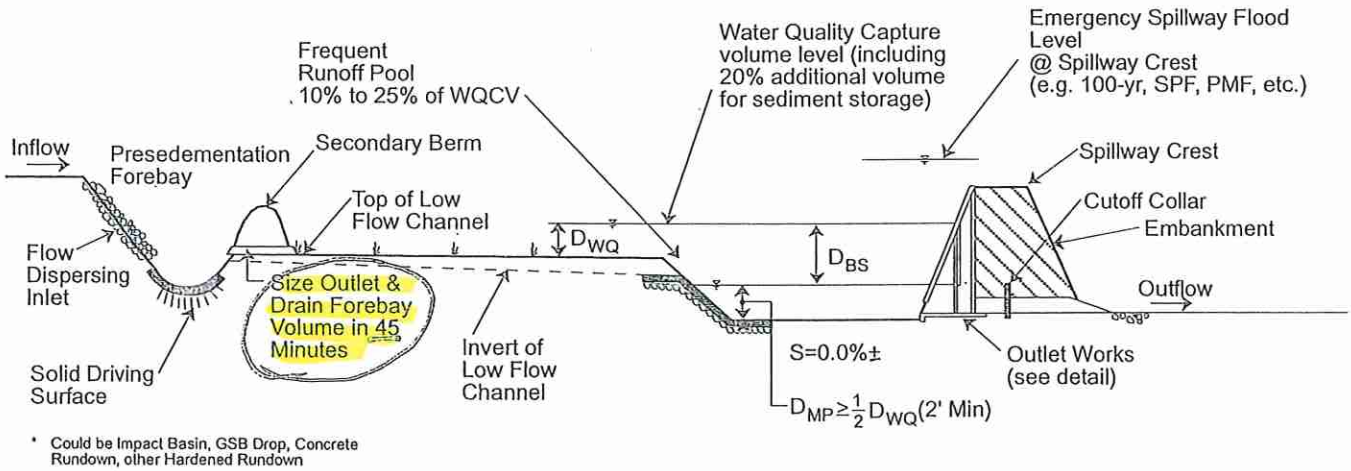
10.	Access	All weather stable access to the bottom, forebay, and outlet works area shall be provided for maintenance vehicles. Maximum grades should be 10 percent, and a solid driving surface of gravel, rock, concrete, or gravel-stabilized turf should be provided.
11.	Inlet	Dissipate flow energy at pond's inflow point(s) to limit erosion and promote particle sedimentation. Inlets should be designed in accordance with UDFCD drop structure criteria or as another type of an energy dissipating structure.
12.	Forebay Design	Provide the opportunity for larger particles to settle out in the inlet in an area that has a solid surface bottom to facilitate mechanical sediment removal. A rock berm should be constructed between the forebay and the main EDB. The forebay volume of the permanent pool should be 5 to 10 percent of the design water quality capture volume. A pipe throughout the berm to convey water the EDB should be offset from the inflow streamline to prevent short circuiting and should be sized to drain the forebay volume in 5 minutes. ? SEE FIGURE EDB-1
13.	Flood Storage	Combining the water quality facility with a flood control facility is recommended. The 10-year, 100-year, or other floods may be detained above the WQCV. See Section 1.5.5 of the *BMP Planning For New Development and Significant Redevelopment* chapter of this volume for further guidance.
14.	Multiple Uses	Whenever desirable and feasible, incorporate the EDB within a larger flood control basin. Also, whenever possible try to provide for other urban uses such as active or passive recreation, and wildlife habitat. If multiple uses are being contemplated, use the multiple-stage detention basin to limit inundation of passive recreational areas to one or two occurrences a year. Generally, the area within the WQCV is not well suited for active recreation facilities such as ballparks, playing fields, and picnic areas. These are best located above the EDB level.

6.6 Design Example

Design forms that provide a means of documenting the design procedure are included in the Design Forms section. A completed form follows as a design example.



PLAN
NOT TO SCALE



SECTION
NOT TO SCALE

FIGURE EDB-1
Plan and Section of an Extended Detention Basin Sedimentation Facility

Trapezoidal Trickle Channel/Basin 13
Worksheet for Trapezoidal Channel

Project Description	
Worksheet	Trapezoidal Trickle Channel - Basin 13
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Discharge

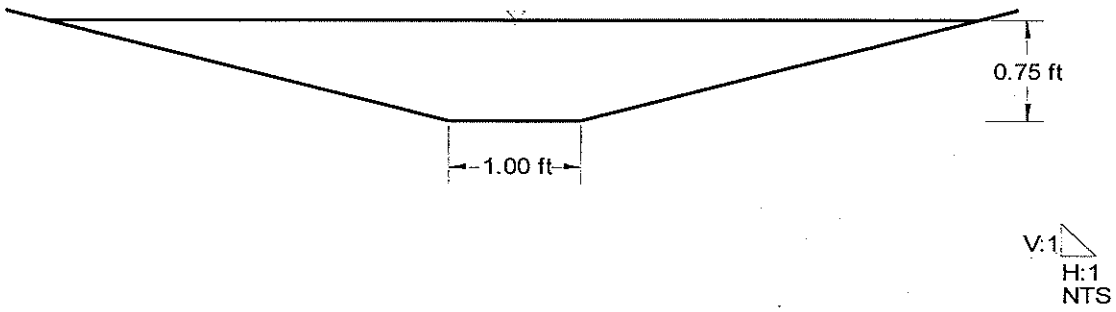
Input Data		
Mannings Coefficient	0.015	
Channel Slope	0.004000	ft/ft
Depth	0.75	ft
Left Side Slope	4.00	H : V
Right Side Slope	4.00	H : V
Bottom Width	1.00	ft

Results		
Discharge	10.50	cfs
Flow Area	3.0	ft²
Wetted Perimeter	7.18	ft
Top Width	7.00	ft
Critical Depth	0.73	ft
Critical Slope	0.004540	ft/ft
Velocity	3.50	ft/s
Velocity Head	0.19	ft
Specific Energy	0.94	ft
Froude Number	0.94	
Flow Type	Subcritical	

Cross Section
Cross Section for Trapezoidal Channel

Project Description	
Worksheet	Trapezoidal Trickle Channel - Basin 13
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Discharge

Section Data		
Mannings Coefficient	0.015	
Channel Slope	0.004000	ft/ft
Depth	0.75	ft
Left Side Slope	4.00	H : V
Right Side Slope	4.00	H : V
Bottom Width	1.00	ft
Discharge	10.50	cfs



Basin 13 Water Quality Pond:

Overflow Swale

Basin 13 Pond Spillway
Worksheet for Trapezoidal Channel

Project Description	
Worksheet	Spillway - Pond 13
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Mannings Coefficient	0.035	
Channel Slope	0.004000	ft/ft
Left Side Slope	50.00	H : V
Right Side Slope	50.00	H : V
Bottom Width	170.00	ft
Discharge	157.00	cfs

Results		
Depth	0.51	ft
Flow Area	99.5	ft²
Wetted Perimeter	220.92	ft
Top Width	220.91	ft
Critical Depth	0.29	ft
Critical Slope	0.027638	ft/ft
Velocity	1.58	ft/s
Velocity Head	0.04	ft
Specific Energy	0.55	ft
Froude Number	0.41	
Flow Type	Subcritical	

Tractive Force $\tau_o = \omega y S$

$(62.4 \frac{lb}{ft^3})(0.51 ft)(0.004 ft/ft) = 0.127 \frac{lb}{ft^2}$

Rip Rap Calculations

CSEP Basin 13

By: JYM 906003

Riprap Rundown for Rectangular Conduit at Pond Inlet

Checked: _____

Updated: 12-Feb-04

Box Width:	W	6	ft
Box Height:	H	4	ft
Discharge:	Q	132.15	cfs
Tailwater*:	y	1.6	ft (unknown)

Soil Type:	Erosion Resistant Soil (Clay)		
Max Velocity:	v	7.7	ft/sec

* Assume that y=0.4*H if tailwater conditions are unknown

1. Required riprap type:

Q/WH^1.5 = 2.75 < 8 --> use design charts

H = 4.00 ft

Yt/H = 0.40

Q/WH^0.5 = 11.01

d50 = 4.63 in --> 6 in

----> Use **Type VL (Class 6) riprap**

2. Expansion Factor:

1/2tanΘ = 4.19

3. Riprap Length:

At = Q/V = 17 ft^2

L = 1/(2tanΘ) * (At/Yt - W) = 20 ft

4. Governing Limits:

L > 3H 12 ft <= 20 ft --> OK

L < 10H = 40 ft => 20 ft --> OK

5. Maximum Depth:

Depth = 2d50 = 2 (6 in / 12) = 1 ft

6. Bedding:

Use 1 ft thick layer of Type II (CDOT Class A) bedding material.

7. Riprap Width (minimum):

Width = 2H = 2 (4 ft) = 8 ft

(Extend riprap to minimum of culvert height or normal channel depth.)

Summary:

Type VL (Class 6) riprap		
Length =	20	ft
Depth =	1	ft
Width =	8	ft

Reference: UDFCD USDCM, Vol. 1, Major Drainage, Page MD-105

L:\JOBS\906003\DATA\BASIN 13\RIPRAP INTO POND 13.XLS

CSEP Basin 13

By: jym 906003

Riprap Rundown for Circular Conduit at Pond Inlet

Checked: _____

Updated: 12-Feb-04

Pipe Diameter:	D	24	in
Discharge:	Q	5	cfs
Tailwater*:	y	0.8	ft (unknown)

Soil Type:	Very Erodible Soil (Sand)		
Max Velocity:	v	5.5	ft/sec

* Assume that y=0.4*D if tailwater conditions are unknown

1. Required riprap type:

$Q/D^{2.5}$ = 0.88 < 6 --> use design charts

D = 2.00 ft

Yt/D = 0.40

Q/D^1.5 = 1.77

d50 = 1.47 in -------> 0 in

----> Use **geotextile or minimum riprap gradation.**

2. Expansion Factor:

1/2tanΘ = 6.68

3. Riprap Length:

At = Q/V = 0.91 ft2

L = 1/2tanΘ * (At/Yt - D) = -6 ft

1. Governing Limits:

L > 3D	6	ft	increase length to 6 ft
L < 10D	20	ft	=> -6 ft --> OK

5. Maximum Depth:

Depth = 2d50 = 2 (0 in / 12) = 0 ft

6. Bedding:

Use 1 ft thick layer of Type II (CDOT Class A) bedding material.

7. Riprap Width:

Width = 3D = 3 (24 in /12) = 6 ft

(Extend riprap to minimum of culvert height or normal channel depth.)

Summary:

geotextile or minimum riprap gradation.		
Length =	6	ft
Depth =	0	ft
Width =	6	ft

The trickle channel is to narrow, no rip rap is needed.

Reference: UDFCD USDCM, Vol. 1, Major Drainage, Page MD-105

L:\JOBS\906003\DATA\BASIN 13\RIPRAP INTO POND 13 - 2.XLS

Proposed Inlets

BASIN 13 PROPOSED INLETS

Inlet Number	Sheet Number	Inlet *	Type of Inlet	Street	Inlet Capacity**	Q	Storm	Capacity OK?
CB-B13-FT-01	34	DBL-Inlet	Curb Inlet	15th Street	22	0.5	100-year	ok
CB-B13-FT-02	34	DBL-Inlet	Curb	15th Street	22	0.6	100-year	ok
CB-B13-FT-03	34	SC-Inlet	Curb	15th Street	22	3.5	100-year	ok
CB-B13-FT-04	34	SC-Inlet	Curb	15th Street	22	2.25	100-year	ok
CB-B13-FT-05	34	SC-Inlet	Curb	15th Street	22	6.3	100-year	ok
CB-B13-FT-09	34	Type D	AREA	--------	17.7	8	100-year	ok
CB-B13-M-01	37.2	SC-Inlet	Curb	Main Street	4	2.1	2-year	ok
CB-B13-M-03	37.2	SC-Inlet	Curb	Main Street	4	0.5	2-year	ok
CB-B13-UT-01	36.1	DBL, TRP	Curb	Ute Avenue	53	46.1	100-year	ok
CB-B13-M-06	37.4	SC-Inlet	Curb	Main Street	22	7.1	100-year	ok
CB-B13-M-05	37.4	SC-Inlet	Curb	Main Street	4	0.5	2-year	ok
CB-B13-GU-01	45	SC-Inlet	Curb	Gunnison Ave	6.4	0.1	2-year	ok
CB-B13-GU-02	45	SC-Inlet	Curb	Gunnison Ave	6.4	0.1	2-year	ok
CB-B13-GU-04	44	SC-Inlet	Curb	Lincoln Park	6.4	0.5	2-year	ok
CB-B13-GU-03	44	SC-Inlet	Curb	Lincoln Park	6.4	0.5	2-year	ok
CB-B13-LP-02	46.1	SC-Inlet	Curb	Lincoln Park	6.4	1	2-year	ok
CB-B13-LP-03	46.2	SC-Inlet	Curb	Lincoln Park	6.4	1.5	2-year	ok
CB-B13-LP-04	46.2	SC-Inlet	Curb	Lincoln Park	6.4	1.5	2-year	ok

*SC-Inlet = Single Storm Drain with Curb Opening (City Detail page D-07)
DBL-Inlet = Double Storm Drain with Curb Opening (City Detail D-08)
TRP-Inlet = Triple Storm Drain with Curb Opening (City Detail D-09)

** Inlet capacity for taken from the City of Grand Junction Standards page G-14, Table "G-1"

Checking BASIN 13 EXISTING 100-year INLETS

Inlet Number	Sheet Number	Inlet *	Type of Inlet	Street	Inlet Capacity**	Q	Storm	Capacity OK?
CB-B13-TT-01	43	SC-Inlet	Curb	13th Street	13	5.6	100-year	ok
13th St & White	39	SC-Inlet	Curb	13th Street	13	3.6	100-year	ok
13th St & Rood	38.1	SC-Inlet	Curb	13th Street	13	4.3	100-year	ok
13th St & Ute	36	SC-Inlet	Curb	Ute Avenue	13	6.72	100-year	ok
15th St & Ute	----	Area	Area	Ute Avenue	20.49	10.2	100-year	ok

*SC-Inlet = Single Storm Drain with Curb Opening (City Detail page D-07)
DBL-Inlet = Double Storm Drain with Curb Opening (City Detail D-08)

** Inlet capacity for taken from the City of Grand Junction Standards page G-14, Table "G-1"

Area Inlet CB-B13-FT-09 - Sump Condition

US 36/McCaslin Interchange Improvements Project
Project No. 906003

This sheet computes the controlling area inlet flow condition.

Weir - Orifice Control

Weir Equation:

$Q_{weir} = CLH^{\frac{3}{2}}$

where: H = *head above weir*

Orifice Equation:

$Q_{orifice} = C_o A_o \sqrt{2gH}$

where: $H = h_2 - h_1$

Grate:CDOT Type D Inlet

	Weir:		Orifice:	
C_{weir} =	3.20		$C_{orifice}$ =	0.65
L_{crest} =	9.57	ft. (1)	$A_{orifice}$ =	5.68 ft^2
			Clogging Factor =	0.30

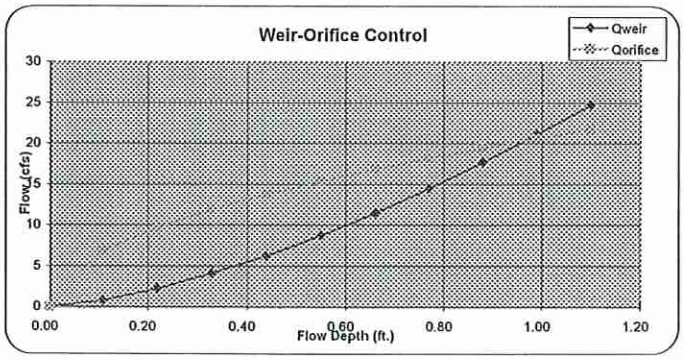
Space width =	0.1667 ft.
Bar width =	0.0313 ft.
Number of bars =	14
Number of spaces =	13
Grate length =	2.60 ft.
Effective Grate Length =	2.17 ft.

Number of Inlets =	**1**
FL Elevation of grate =	**88.25**
Offsite 2-year Design Flow (cfs) =	**8.00**
2 year Design Depth (8) =	**89.13**
Max Flow (cfs) =	**17.70**
Ponding Depth (feet) =	**0.88**
Head Difference (feet) =	**0.11**

Head (ft.)	Q_{weir}	$Q_{orifice}$	$Q_{control}$	WSEL
0.00	0.00	0.00	0.00	88.25
0.11	0.78	6.87	0.78	88.36
0.22	2.21	9.72	2.21	88.47
0.33	4.07	11.90	4.07	88.58
0.44	6.26	13.75	6.26	88.69
0.55	8.75	15.37	8.75	88.80
0.66	11.50	16.83	11.50	88.91
0.77	14.49	18.18	14.49	89.02
0.88	17.70	19.44	17.70	89.13
0.99	21.13	20.62	20.62	89.24
1.10	24.74	21.73	21.73	89.35

Space width =	0.5240 ft.
Bar width =	0.0313 ft.
Number of bars =	7
Number of spaces =	5
Grate Width =	3.36 ft.
Effective GrateWidth =	2.62 ft.

Notes:
1) This is the effective weir length which equals the sum of the open space lengths between bars in the predominant flow directions.



Existing Area Inlet on Ute - Trash Rack

Water Quality Pond Trash Rack
Project No. 906003

This sheet computes the controlling area inlet flow condition.

Weir - Orifice Control

Weir Equation:

$$Q_{weir} = CLH^{\frac{3}{2}}$$

where: H = *head above weir*

Orifice Equation:

$$Q_{orifice} = C_o A_o \sqrt{2gH}$$

where: $H = h_2 - h_1$

Grate per detail approval:

Weir:			**Orifice:**		
C_{weir} =	3.00		$C_{orifice}$ =	0.6	
L_{crest} =	11.67	ft. (1)	$A_{orifice}$ =	8.51	ft^2
			Clogging Factor =	0.10	

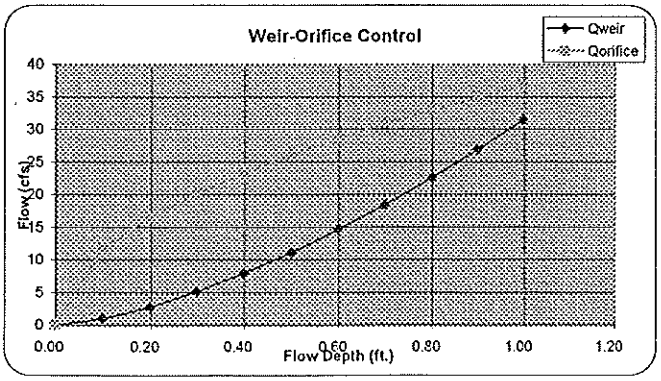
	l		w
Number of inlets =	1	x	1
Flowline elevation of grate =	4592.15		
2 year Design Flow (cfs) =	20.49		
2 year WSEL (20.48797228	4592.90		
Head difference:	0.1		

Head (ft.)	Q_{weir}	$Q_{orifice}$	$Q_{control}$	WSEL
0.00	0.00	0.00	0.00	4592.15
0.10	1.00	11.66	1.00	4592.25
0.20	2.82	16.49	2.82	4592.35
0.30	5.18	20.19	5.18	4592.45
0.40	7.97	23.32	7.97	4592.55
0.50	11.14	26.07	11.14	4592.65
0.60	14.64	28.56	14.64	4592.75
0.70	18.45	30.84	18.45	4592.85
0.80	22.54	32.97	22.54	4592.95
0.90	26.90	34.97	26.90	4593.05
1.00	31.50	36.86	31.50	4593.15

Space width =	0.4167 ft.
Bar width =	0.0833 ft.
Number of bars =	8
Number of spaces =	7
Grate length =	4.00 ft.
Effective Grate Length =	2.92 ft.
Grate length =	4.00 ft.
Effective Grate Length =	2.92 ft.

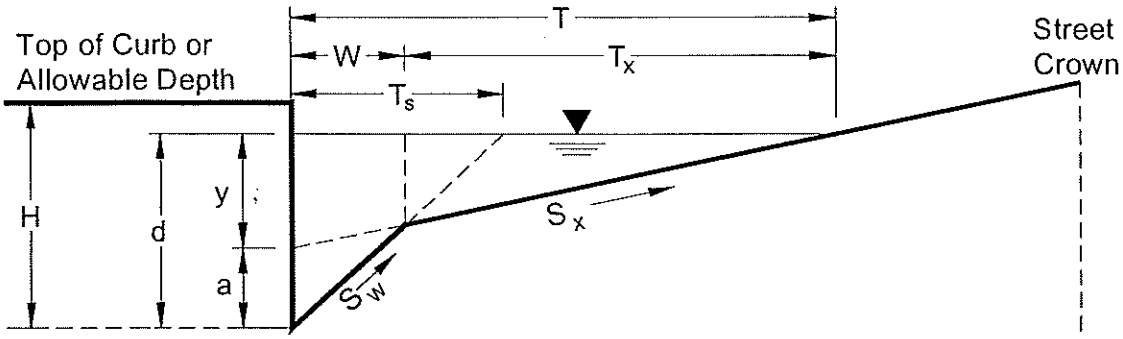
Space width =	0.4167 ft.
Bar width =	0.0833 ft.
Number of bars =	8
Number of spaces =	7
Grate Width =	4.00 ft.
Effective GrateWidth =	2.92 ft.
Grate Width =	4.00 ft.
Effective GrateWidth =	2.92 ft.

Notes:
1) This is the effective weir length which equals the sum of the open space lengths between bars in the predominant flow directions.



GUTTER CONVEYANCE CAPACITY

Project = CSEP Basin 13
Street ID = Inlet on North Side of UTE

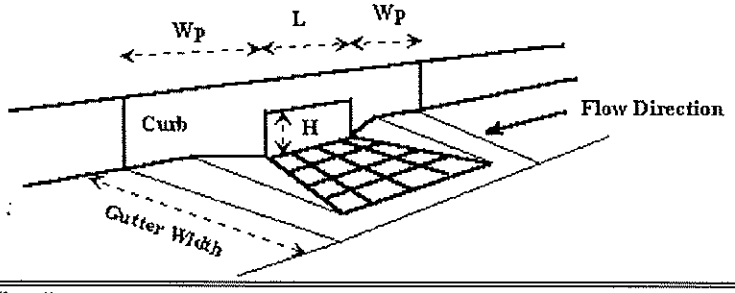


Street Geometry (Input)			
Design Discharge in the Gutter	Q_o =	46.2	cfs
Gutter Width	W =	1.50	ft
Gutter Depression	a =	1.5	inches
Street Transverse Slope	S_x =	0.0200	ft/ft
Street Longitudinal Slope	S_o =	0.0050	ft/ft
Manning's Roughness	n =	0.016	

Gutter Conveyance Capacity			
Gutter Cross Slope	S_w =	0.1033	ft/ft
Water Spread Width	T =	32.72	ft
Water Depth without Gutter Depression	y =	7.9	inches
Water Depth with a Gutter Depression	d =	9.4	inches
Gutter Flow to Design Flow Ratio by FHWA HEC-22 method (Eq. ST-7)	E_o =	0.14	
Spread for Side Flow on the Street	T_x =	31.23	ft
Spread for Gutter Flow along Gutter Slope	T_s =	7.54	ft
Flow Rate Carried by Width T_s	Q_{Ts} =	25.09	cfs
Flow Rate Carried by Width (T_s - W)	Q_{Ts-W} =	13.89	cfs
Gutter Flow	Q_{gutter} =	11.20	cfs
Side Flow	Q_x =	35.26	cfs
Discharge above Depressed Section (Eq. ST-1 or ST-3)	Q_s =	39.96	cfs
Discharge within Depressed Section (Q - Q_s)	Q_w =	6.24	cfs
Flow Rate	Q_T =	46.2	cfs
Equivalent Slope for the Street	S_e =	0.0313	ft/ft
Flow Area	A_s =	10.80	sq ft
Flow Velocity	V_s =	4.28	fps
VsD product	VsD =	40.00	ft^2/s

COMBINATION INLET IN A SUMP

Project = CSEP Basin 13
Inlet ID = Inlet on North Side of UTE



Design Information (input)			
Design Discharge on the Street (from *Street Hy*)	Q_o =	46.2	cfs
Length of a Unit Inlet	L_o =	3.00	ft
Number of Unit Inlets	No =	5	
Water Depth for Design Condition	Y_d =	7.30	inches
Grate Information			
Width of a Unit Grate	W_o =	1.48	ft
Area Opening Ratio for a Grate (see USDCM Table ST-7)	A =	0.80	
Clogging Factor for a Single Grate	C_o (G) =	0.50	
Grate Orifice Coefficient	C_d (G) =	0.67	
Grate Weir Coefficient	C_w (G) =	3.00	
Curb Opening Information			
Height of Curb Opening in Inches	H =	6.00	inches
Angle of Throat (see USDCM Figure ST-5)	Theta =	63.7	degrees
Side Width for Depression Pan	W_p =	3.00	ft
Clogging Factor for a Single Curb Opening	C_o (C) =	0.00	
Curb Opening Orifice Coefficient	C_d (C) =	0.67	
Curb Opening Weir Coefficient	C_w (C) =	3.00	
Grate Inlet Capacity in a Sump (Calculated)			
As a Weir			
Capacity as a Weir without Clogging	Q_{wi} =	25.6	cfs
Clogging Coefficient for Multiple Units	Coef =	1.94	
Clogging Factor for Multiple Units	Clog =	0.19	
Capacity as a Weir with Clogging	Q_{wa} =	21.4	cfs
As an Orifice			
Capacity as an Orifice without Clogging	Q_{oi} =	74.5	cfs
Capacity as an Orifice with Clogging	Q_{oa} =	60.0	cfs
Grate Capacity for Design with Clogging	$Q_{a\text{-}Grate}$ =	21.4	cfs
Curb Opening Inlet Capacity in a Sump			
As a Weir			
Total Length of Curb Opening Inlet	L =	15.00	ft
Capacity as a Weir without Clogging	Q_{wi} =	29.0	cfs
Clogging Coefficient for Multiple Units	Coef =	1.33	
Clogging Factor for Multiple Units	Clog =	0.00	
Capacity as a Weir with Clogging	Q_{wa} =	29.0	cfs
As an Orifice			
Capacity as an Orifice without Clogging	Q_{oi} =	25.0	cfs
Capacity as an Orifice with Clogging	Q_{oa} =	25.0	cfs
Curb Opening Capacity for Design with Clogging	$Q_{a\text{-}Curb}$ =	25.0	cfs
Combination Inlet Capacity with Clogging	Q_a =	46.4	cfs
Capture Percentage for the Combination Inlet	C% =	100.00	%

Note: Unless additional ponding depth or spilling over the curb is acceptable, a capture percentage of less than 100% in a sump may indicate the need for additional inlet units.

ROAD TYPE	COMBINATION INLET CAPACITY (CFS)					
	SINGLE		DOUBLE		TRIPLE	
	2-YR	100-YR	2-YR	100-YR	2-YR	100-YR
Urban Residential (local)	6.4	13	9.5	22	12.7	31
Residential Collector, Commercial and Industrial Streets	3.2	13	4.9	22	6.5	31
Collector Streets (3000 - 8000 ADT)	2.7	13	4.0	22	5.3	31
Principal and Minor Arterials	6.0	13	9.0	22	12.0	31

Inlet capacities shown above are based upon: 1) use of non-curved vane grates (similar to HEC-12 P-1 7/8-4 grates; 2) HEC-12 procedures; 3) clogging factors per Section VI; and 4) City/County standard inlets with 2-inch radius on curb face and type C grates. Capacities shown for 2-year storms are based upon depths allowed by maximum street inundation per Figure "G-3". The 100-year capacities are based upon a ponded depth of 1.0 foot. Note that only combination inlets are allowed in sag or sump conditions.

MAXIMUM INLET CAPACITIES: SUMP OR SAG CONDITION — **TABLE "G-1"**

Levee Design

CURRENT DATE: 03-05-2004 FILE DATE: 03-05-2004
CURRENT TIME: 08:27:24 FILE NAME: LEVEE

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA: INLET ELEV. (ft)	SITE DATA: OUTLET ELEV. (ft)	SITE DATA: CULVERT LENGTH (ft)	CULVERT SHAPE, MATERIAL, INLET: BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	4572.40	4572.30	39.00	2 RCB	6.00	3.00	.013	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: LEVEE DATE: 03-05-2004

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
4572.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4573.07	16.0	16.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4573.44	32.0	32.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4573.76	48.0	48.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4574.05	64.0	64.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4574.32	80.0	80.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4574.57	96.0	96.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4574.80	112.0	112.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4575.02	128.0	128.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4575.23	144.0	144.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4575.40	157.0	157.0	0.0	0.0	0.0	0.0	0.0	0.00	1
4580.44	427.3	427.3	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: LEVEE DATE: 03-05-2004

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
4572.40	0.000	0.00	0.00	0.00
4573.07	0.000	16.00	0.00	0.00
4573.44	0.000	32.00	0.00	0.00
4573.76	0.000	48.00	0.00	0.00
4574.05	0.000	64.00	0.00	0.00
4574.32	0.000	80.00	0.00	0.00
4574.57	0.000	96.00	0.00	0.00
4574.80	0.000	112.00	0.00	0.00
4575.02	0.000	128.00	0.00	0.00
4575.23	0.000	144.00	0.00	0.00
4575.40	0.000	157.00	0.00	0.00

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT TIME: 08:27:24 FILE NAME: LEVEE

PERFORMANCE CURVE FOR CULVERT 1 - 2(6.00 (ft) BY 3.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	4572.40	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
16.00	4573.07	0.66	0.67	2-M2c	0.42	0.38	0.38	0.35	3.49	1.78
32.00	4573.44	1.04	1.04	2-M2c	0.67	0.61	0.61	0.53	4.40	2.31
48.00	4573.76	1.36	1.36	2-M2c	0.88	0.79	0.79	0.67	5.04	2.67
64.00	4574.05	1.64	1.65	2-M2c	1.07	0.96	0.96	0.80	5.55	2.95
80.00	4574.32	1.89	1.92	2-M2c	1.24	1.12	1.12	0.91	5.97	3.19
96.00	4574.57	2.13	2.17	2-M2c	1.41	1.26	1.26	1.01	6.35	3.39
112.00	4574.80	2.36	2.40	2-M2c	1.57	1.40	1.40	1.10	6.68	3.58
128.00	4575.02	2.57	2.62	2-M2c	1.72	1.53	1.53	1.19	6.99	3.74
144.00	4575.23	2.79	2.84	2-M2c	1.87	1.65	1.65	1.27	7.27	3.89
157.00	4575.40	2.96	3.00	2-M2c	1.99	1.75	1.75	1.34	7.48	4.01

El. inlet face invert 4572.40 ft El. outlet invert 4572.30 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	39.00 ft
INLET ELEVATION	4572.40 ft
OUTLET STATION	0.00 ft
OUTLET ELEVATION	4572.30 ft
NUMBER OF BARRELS	2
SLOPE (V/H)	0.0026
CULVERT LENGTH ALONG SLOPE	39.00 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	BOX
BARREL SPAN	6.00 ft
BARREL RISE	3.00 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.013
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE (90-45 DEG.)
INLET DEPRESSION	NONE

3

CURRENT DATE: 03-05-2004 FILE DATE: 03-05-2004
CURRENT TIME: 08:27:24 FILE NAME: LEVEE

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	24.00 ft
SIDE SLOPE H/V (X:1)	4.0
CHANNEL SLOPE V/H (ft/ft)	0.002
MANNING'S n (.01-0.1)	0.020
CHANNEL INVERT ELEVATION	4572.30 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	4572.30 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	4572.30	0.000	0.00	0.00	0.00
16.00	4572.65	0.529	0.35	1.78	0.05
32.00	4572.83	0.557	0.53	2.31	0.08
48.00	4572.97	0.573	0.67	2.67	0.10
64.00	4573.10	0.583	0.80	2.95	0.12
80.00	4573.21	0.590	0.91	3.19	0.14
96.00	4573.31	0.596	1.01	3.39	0.16
112.00	4573.40	0.601	1.10	3.58	0.17
128.00	4573.49	0.605	1.19	3.74	0.19
144.00	4573.57	0.608	1.27	3.89	0.20
157.00	4573.64	0.611	1.34	4.01	0.21

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	12.00 ft
CREST LENGTH	100.00 ft
OVERTOPPING CREST ELEVATION	4580.44 ft