ENGINEERING DIVISION
LIBRARY

FLOOD CONTROL DISTRICT
of
MARICOPA COUNTY

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DRAINAGE STUDY AND CONCEPTUAL DESIGN

VICINITY OF 107th AVENUE, RID CANAL
TO BETHANY HOME ROAD

FCD 84-32

VOLUME II - COMPUTER OUTPUT

DOOLEY-JONES & ASSOCIATES, INC.
ANCHOR CENTRE TWO
2207 E. CAMELBACK RD. PHX. AZ. 85016
(602) 956-9850 SUITE 302

JUNE 17, 1985

A109.303

VAX/VMS SHIAU MMR2 11-JUN-1985 11:13 TXA5: 11-JUN-1985 11:20 DISK$SYSV35:[HYDRO.SHIAU]MMR2.LOG;2 VAX/VMS
VAX/VMS SHIAU MMR2 11-JUN-1985 11:13 TXA5: 11-JUN-1985 11:20 DISK$SYSV35:[HYDRO.SHIAU]MMR2.LOG;2 VAX/VMS

```
 SSSS  H   H  III   AAA   U   U
S      H   H   I   A   A  U   U
S      H   H   I   A   A  U   U
 SSS   HHHHH   I   A   A  U   U
    S  H   H   I   AAAAA  U   U
    S  H   H   I   A   A  U   U
SSSS   H   H  III  A   A  UUUUU
```

```
MM      MM  MM      MM  RRRRRRRR      222222
MM      MM  MM      MM  RRRRRRRR      222222
MMMM  MMMM  MMMM  MMMM  RR      RR  22      22
MMMM  MMMM  MMMM  MMMM  RR      RR  22      22
MM  MM  MM  MM  MM  MM  RR      RR          22
MM  MM  MM  MM  MM  MM  RR      RR          22
MM      MM  MM      MM  RRRRRRRR          22
MM      MM  MM      MM  RRRRRRRR          22
MM      MM  MM      MM  RR  RR          22
MM      MM  MM      MM  RR  RR          22
MM      MM  MM      MM  RR    RR      22            ++++
MM      MM  MM      MM  RR    RR      22            ++++
MM      MM  MM      MM  RR      RR  2222222222      ++++
MM      MM  MM      MM  RR      RR  2222222222      ++++
```

```
LL          000000      GGGGGGGG      ;;;;      222222
LL          000000      GGGGGGGG      ;;;;      222222
LL        00      00  GG              ;;;;    22      22
LL        00      00  GG              ;;;;    22      22
LL        00      00  GG                              22
LL        00      00  GG                              22
LL        00      00  GG              ;;;;          22
LL        00      00  GG              ;;;;          22
LL        00      00  GG  GGGGGG      ;;;;        22
LL        00      00  GG  GGGGGG      ;;;;        22
LL        00      00  GG      GG        ;;      22
LL        00      00  GG      GG        ;;      22
LLLLLLLLLL    000000      GGGGGG        ;;      2222222222
LLLLLLLLLL    000000      GGGGGG        ;;      2222222222
```

```
 SSSS  H   H  III   AAA   U   U
S      H   H   I   A   A  U   U
S      H   H   I   A   A  U   U
 SSS   HHHHH   I   A   A  U   U
    S  H   H   I   AAAAA  U   U
    S  H   H   I   A   A  U   U
SSSS   H   H  III  A   A  UUUUU
```

VAX/VMS SHIAU MMR2 11-JUN-1985 11:13 TXA5: 11-JUN-1985 11:20 DISK$SYSV35:[HYDRO.SHIAU]MMR2.LOG;2 VAX/VMS
VAX/VMS SHIAU MMR2 11-JUN-1985 11:13 TXA5: 11-JUN-1985 11:20 DISK$SYSV35:[HYDRO.SHIAU]MMR2.LOG;2 VAX/VMS
VAX/VMS SHIAU MMR2 11-JUN-1985 11:13 TXA5: 11-JUN-1985 11:20 DISK$SYSV35:[HYDRO.SHIAU]MMR2.LOG;2 VAX/VMS

```
$ DEL FOR%%%.DAT;*
$ SUBMIT == "SUBMIT/NOKEEP/PRINTER=ANNEX/NOTIFY"
$ PRINT == "PRINT/DEVICE=ANNEX"
$ HYDRO == "SET DEF [HYDRO]"
$ SHIAU == "SET DEF [HYDRO.SHIAU]"
$ WRITE SYS$OUTPUT ""

$EXIT
$ RUN HEC1
```

```
*******************************************
*                                         *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)      *
*           FEBRUARY 1981                 *
*         REVISED 30 OCT 81               *
*                                         *
* RUN DATE      11-J    TIME      11:0    *
*                                         *
*******************************************
```


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*****************************************
*                                       *
*   U.S. ARMY CORPS OF ENGINEERS        *
* THE HYDROLOGIC ENGINEERING CENTER     *
*        609 SECOND STREET              *
*      DAVIS, CALIFORNIA 95616          *
* (916) 440-3285 OR (FTS) 448-3285      *
*                                       *
*****************************************
```


```
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. SEE SEPTEMBER 1981 INPUT DESCRIPTION FOR NEW DEFINITIONS.

HEC-1 INPUT


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

    1     ID  MARICOPA COUNTY FLOOD CONTROL DISTRICT
    2     ID  HYDROLOGY(AQUA FRIA RIVER-BETHANY HOME-91TH ST-THOMAS RD)
    3     ID   1 HOUR 100 YEAR DISCHARGE EXISTING CONDITION
    4     ID   TYPE 2 RAINFALL DISTRIBUTION
    5     ID   KINEMATIC WAVE METHOD
    6     ID   VAX-MMR2-DAT
    7     IT      5           120
    8     IO      2       2

    9     KK   SUB2A
   10     KM  SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
   11     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
   12     PB   2.45
   13     PI   0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
   14     PI   0.06    0.05
   15     BA   0.50
   16     LS      0      72       4              72       4
   17     UK   1850   .0033     0.2      25
   18     UK   5600   .0033     0.2      75
   19     RK   2640   0.005   0.025            TRAP

   20     KK   SUB2B
   21     KM  NORTH-WEST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
   22     KM   ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99-TH ST ROAD
   23     PB   2.45
   24     PI   0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
   25     PI   0.06    0.05
   26     BA   0.50
   27     LS      0      72       4              72       4
   28     UK   1850   .0033     0.2      25
   29     UK   5600   .0033     0.2      75
   30     RK   2640   0.005   0.025            TRAP

   31     KK   SUB2
   32     KM       COMBINE RUNOFF FROM SUB2A AND SUB2B AT C.P.(B)
   33     HC      2

   34     KK   SUB2
   35     KM        DIVERT TO SUB5B
   36     DT   DIV25
   37     DI      2     100    1000
   38     DQ      1      50     500

   39     KK   SUB3A
   40     KM   AREA BOUNDED BY BETHANY HOME ROAD- 99TH ST- CAMELBACK ROAD- RID CHANNEL
   41     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
   42     KM   HYDROGRAPH AT C.P. (C)
   43     PB   2.45
   44     PI   0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
   45     PI   0.06    0.05
   46     BA   0.66
   47     LS      0      85      48
   48     UK   4500    .005     0.2     100
   49     RK   5280    .003   0.025            TRAP                    YES
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

  50      KK  SUB3A
  51      KM       DIVERT TO R.I.D. CHANNEL
  52      DT   RID
  53      DI     1    150    151    300   1000
  54      DQ     1    150    150    150    150

  55      KK   SUB4
  56      KM  AREA BOUNDED BY BETHANY HOME ROAD- AGUA FRIA-CAMELBACK ROAD- RID CHANNEL
  57      KM  ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
  58      KM  HYDROGRAPH AT C.P. (D) INTO AGUA FRIA WASH
  59      PB   2.45
  60      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  61      PI   0.06   0.05
  62      BA   1.06
  63      LS      0     72      4
  64      UK   5800   .005    0.2    100
  65      RK   4000   .003  0.025          TRAP                  YES

  66      KK  DIV25
  67      KM       RETRIEVE DIVERSION FROM CONCENTRATION B OF AREA 2
  68      DR  DIV25

  69      KK  SUB5B
  70      KM  NORTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
  71      KM  ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99TH STREET
  72      PB   2.45
  73      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  74      PI   0.06   0.05
  75      BA   0.50
  76      LS      0     72      4             72      4
  77      UK   1850  .0033    0.2     25
  78      UK   5600  .0033    0.2     75
  79      RK   2640  0.005  0.025          TRAP                  YES

  80      KK  SUB5A
  81      KM  SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
  82      KM  ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  83      PB   2.45
  84      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  85      PI   0.06   0.05
  86      BA   0.50
  87      LS      0     72      4             72      4
  88      UK   1850  .0033    0.2     25
  89      UK   5600  .0033    0.2     75
  90      RK   2640  0.005  0.025          TRAP

  91      KK   SUB5
  92      KM      COMBINE RUNOFF FROM SUB5A AND SUB5B AND DIVERT 25 AT C.P.(E)
  93      HC     2
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

  94      KK   SUB5
  95      KM        DIVERT TO THOMAS ROAD
  96      DT  THOMAS
  97      DI       2     100    1000
  98      DQ       1      50     500

  99      KK   SUB6
 100      KM        ROUTED TO SUB6 (AT MID-POINT OF (E) AND (F))
 101      KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
 102      RK    2640   0.005   0.025           TRAP       5     0.5

 103      KK   SUB6A
 104      KM   AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
 105      KM   ASSUME OVERLAND LENGTH 100' AS LOT SIZE
 106      KM         COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
 107      KM         MAIN CHANNEL 5000' RUNING NORTH-SOUTH
 108      KM   CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
 109      KM   MODELED AS 75% OF THE AREA ROUTED THROUGH THE LAKE
 110      BA     .75
 111      LS              80      29
 112      UK     100   .0033     0.2     100
 113      RK    2000    .005    0.16     .10    TRAP
 114      RK    5000    .005    0.16            TRAP

 115      KK   SUB6A
 116      KM        SUB6A LAKE ROUTING
 117      RL       0       0
 118      RS       1    STOR       0
 119      SV       0     5.5    11.0    16.5    17.9    19.3    20.7    23.5
 120      SQ       0       0       0       0      67     190     350     750
 121      SE       0       1       2       3     3.2     3.4     3.6     4.0

 122      KK   SUB6B
 123      KM   AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
 124      KM   ASSUME OVERLAND LENGTH 100' AS LOT SIZE
 125      KM         COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
 126      KM         MAIN CHANNEL 1000' RUNING NORTH-SOUTH
 127      KM   CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
 128      KM   MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE
 129      BA    .125
 130      LS       0      80      29
 131      UK     100   .0033     0.2     100
 132      RK    2000    .005    0.16     .10    TRAP
 133      RK    1000    .005    0.16            TRAP

 134      KK   SUB6
 135      KM        COMBINED SUB6B, ROUTED SUB6A AND ROUTED 5 AT C.P. (F)
 136      HC       3
```

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

  137     KK   SUB6
  138     KM        DIVERT TO SUB8 AT MID-POINT OF (E) AND (F)
  139     DT  DIV681
  140     DI      1    111    146    199    266    350    450    570    711
  141     DQ      0      1      5     17     39     73    121    186    267

  142     KK   SUB6
  143     KM        ROUTED TO SUB6 (CONTRATION POINT F)
  144     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  145     RK   2640  0.005  0.025          TRAP      5    0.5

  146     KK   SUB6C
  147     KM   AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
  148     KM   ASSUME OVERLAND LENGTH 100' AS LOT SIZE
  149     KM         COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
  150     KM         MAIN CHANNEL 1000' RUNING NORTH-SOUTH
  151     KM   CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT (F)
  152     KM   MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE
  153     BA   .125
  154     LS      0     80     29
  155     UK    100  .0033    0.2    100
  156     RK   2000   .005   0.16    .10   TRAP
  157     RK   1000   .005   0.16          TRAP

  158     KK   SUB6
  159     KM        COMBINED SUB6C, ROUTED (SUB6A,SUB6B  AND ROUTED 5) AT C.P. (F)
  160     HC      2

  161     KK   SUB6
  162     KM        DIVERT TO SUB8
  163     DT  DIV682
  164     DI      2    150   1000
  165     DQ      1     75    500

  166     KK   SUB7
  167     KM   AREA BOUNDED BY 107TH ST- CAMELBACK ROAD- INDIAN SCHOOL-AUGU FRIA
  168     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  169     KM   HYDROGRAPH AT C.P. (G) INTO AGUA FRIA WASH
  170     PB   2.45
  171     PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  172     PI   0.06   0.05
  173     BA   0.58
  174     LS      0     71      2
  175     UK   4500   .005    0.2    100
  176     RK   5800   .003  0.025          TRAP                    YES

  177     KK  DIV681
  178     KM        RETRIEVED DIVERSION FROM SUB6
  179     DR  DIV681
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

  180     KK   SUB6
  181     KM        ROUTED TO SUB6 (CONTRATION POINT F)
  182     KM   ASSUME COLLECTOR CHANNEL ALONG SOUTH SIDE EASEMENT INDIAN SCHOOL ROAD
  183     RK    2640   0.005   0.025           TRAP       5     0.5

  184     KK  DIV682
  185     KM        RETRIEVED DIVERSION FROM SUB6
  186     DR  DIV682

  187     KK   SUB68
  188     KM        COMBINE DIVERT FLOW 681 AND 682
  189     HC       2

  190     KK   SUB8
  191     KM   SOUTH-EAST CORNER OF INDIAN SCHOOL RD AND 107 TH ST
  192     KM   ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 107TH ST
  193     KM   HYDROGRAPH AT C.P. (H)
  194     PB    2.45
  195     PI    0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
  196     PI    0.06    0.05
  197     BA    0.36
  198     LS       0      89       2
  199     UK    3000    .005     0.2     100
  200     RK    2640    .003   0.025           TRAP                    YES

  201     KK   SUB9
  202     KM   AREA BOUNDED BY INDIAN SCHOOL RD-107 ST-LEVEE-AGUA FRIA
  203     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT OF LEVEE
  204     KM   HYDROGRAPH AT C.P. (I) INTO AGUA FRIA WASH
  205     PB    2.45
  206     PI    0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
  207     PI    0.06    0.05
  208     BA    0.30
  209     LS       0      89       2
  210     UK    1500    .005     0.2     100
  211     RK    6400    .003   0.025           TRAP                    YES
  212     ZZ
```

```
*****************************************                    ****************************************
*                                       *                    *                                      *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *                    *    U.S. ARMY CORPS OF ENGINEERS      *
*           FEBRUARY 1981               *                    *  THE HYDROLOGIC ENGINEERING CENTER   *
*          REVISED 30 OCT 81            *                    *         609 SECOND STREET            *
*                                       *                    *       DAVIS, CALIFORNIA 95616        *
* RUN DATE     11-J   TIME      11:0    *                    *  (916) 440-3285 OR (FTS) 448-3285    *
*                                       *                    *                                      *
*****************************************                    ****************************************
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                              MARICOPA COUNTY FLOOD CONTROL DISTRICT
                              HYDROLOGY(AQUA FRIA RIVER-BETHANY HOME-91TH ST-THOMAS RD)
                               1 HOUR 100 YEAR DISCHARGE EXISTING CONDITION
                               TYPE 2 RAINFALL DISTRIBUTION
                               KINEMATIC WAVE METHOD
                               VAX-MMR2-DAT

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

     IT         HYDROGRAPH TIME DATA
                       NMIN            5  MINUTES IN COMPUTATION INTERVAL
                      IDATE       1    0  STARTING DATE
                      ITIME         0120  STARTING TIME
                         NQ          101  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE       1    0  ENDING DATE
                     NDTIME         0940  ENDING TIME

                COMPUTATION INTERVAL    0.08 HOURS
                     TOTAL TIME BASE    8.33 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


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

            **************
            *            *
   9 KK     *    SUB2A   *
            *            *
            **************
                              SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-BETHANY HOME ROAD
                               ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD

             SUBBASIN RUNOFF DATA

  15 BA         SUBBASIN CHARACTERISTICS
```

```
                TAREA       0.50  SUBBASIN AREA

            PRECIPITATION DATA

12 PB           STORM       2.45  BASIN TOTAL PRECIPITATION

13 PI         INCREMENTAL PRECIPITATION PATTERN
                0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                0.06      0.05

16 LS       SCS LOSS RATE
                STRTL       0.78  INITIAL ABSTRACTION
               CRVNBR      72.00  CURVE NUMBER
                RTIMP       4.00  PERCENT IMPERVIOUS AREA

            LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
                STRTL       0.78  INITIAL ABSTRACTION
               CRVNBR      72.00  CURVE NUMBER
                RTIMP       4.00  PERCENT IMPERVIOUS AREA

            KINEMATIC WAVE
17 UK         OVERLAND-FLOW ELEMENT NO. 1
                   L      1850.  OVERLAND FLOW LENGTH
                   S     0.0033  SLOPE
                   N      0.200  ROUGHNESS COEFFICIENT
                  PA       25.0  PERCENT OF SUBBASIN
18 UK         OVERLAND-FLOW ELEMENT NO. 2
                   L      5600.  OVERLAND FLOW LENGTH
                   S     0.0033  SLOPE
                   N      0.200  ROUGHNESS COEFFICIENT
                  PA       75.0  PERCENT OF SUBBASIN
19 RK         MAIN CHANNEL
                   L      2640.  CHANNEL LENGTH
                   S     0.0050  SLOPE
                   N      0.025  CHANNEL ROUGHNESS COEFFICIENT
                  CA       0.50  CONTRIBUTING AREA
               SHAPE       TRAP  CHANNEL SHAPE
                  WD       0.00  BOTTOM WIDTH OR DIAMETER
                   Z       1.00  SIDE SLOPE
              RUPSTQ         NO  ROUTE UPSTREAM HYDROGRAPH

                                                    ***

      COMPUTED KINEMATIC PARAMETERS
        ELEMENT     ALPHA         M      DT (MIN)   DX (FT)
              1    0.4280     1.667          5.00     84.09
              2    0.4280     1.667          5.00    133.33
              3    2.1102     1.333          5.00   1320.00

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

                                        HYDROGRAPH AT STATION    SUB2A

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

                                                                  *
    DA MON HRMN  ORD    RAIN    LOSS  EXCESS     COMP Q         *     DA MON HRMN  ORD    RAIN    LOSS  EXCESS     COMP Q
                                                                  *
     1    0120    1    0.00    0.00    0.00         0.           *      1    0535   52    0.00    0.00    0.00        10.
     1    0125    2    0.05    0.05    0.00         0.           *      1    0540   53    0.00    0.00    0.00        10.
     1    0130    3    0.07    0.07    0.00         0.           *      1    0545   54    0.00    0.00    0.00        10.
     1    0135    4    0.07    0.07    0.00         0.           *      1    0550   55    0.00    0.00    0.00        10.
```

1	0140	5	0.10	0.10	0.00	0.	*	1	0555	56	0.00	0.00	0.00	10.
1	0145	6	0.16	0.15	0.01	0.	*	1	0600	57	0.00	0.00	0.00	10.
1	0150	7	1.16	0.97	0.19	0.	*	1	0605	58	0.00	0.00	0.00	10.
1	0155	8	0.39	0.23	0.16	1.	*	1	0610	59	0.00	0.00	0.00	10.
1	0200	9	0.14	0.08	0.06	2.	*	1	0615	60	0.00	0.00	0.00	10.
1	0205	10	0.11	0.06	0.05	4.	*	1	0620	61	0.00	0.00	0.00	10.
1	0210	11	0.09	0.04	0.05	6.	*	1	0625	62	0.00	0.00	0.00	10.
1	0215	12	0.06	0.03	0.03	8.	*	1	0630	63	0.00	0.00	0.00	10.
1	0220	13	0.05	0.02	0.03	9.	*	1	0635	64	0.00	0.00	0.00	10.
1	0225	14	0.00	0.00	0.00	10.	*	1	0640	65	0.00	0.00	0.00	10.
1	0230	15	0.00	0.00	0.00	10.	*	1	0645	66	0.00	0.00	0.00	9.
1	0235	16	0.00	0.00	0.00	10.	*	1	0650	67	0.00	0.00	0.00	9.
1	0240	17	0.00	0.00	0.00	10.	*	1	0655	68	0.00	0.00	0.00	9.
1	0245	18	0.00	0.00	0.00	10.	*	1	0700	69	0.00	0.00	0.00	9.
1	0250	19	0.00	0.00	0.00	10.	*	1	0705	70	0.00	0.00	0.00	9.
1	0255	20	0.00	0.00	0.00	10.	*	1	0710	71	0.00	0.00	0.00	9.
1	0300	21	0.00	0.00	0.00	10.	*	1	0715	72	0.00	0.00	0.00	9.
1	0305	22	0.00	0.00	0.00	10.	*	1	0720	73	0.00	0.00	0.00	9.
1	0310	23	0.00	0.00	0.00	10.	*	1	0725	74	0.00	0.00	0.00	9.
1	0315	24	0.00	0.00	0.00	10.	*	1	0730	75	0.00	0.00	0.00	9.
1	0320	25	0.00	0.00	0.00	10.	*	1	0735	76	0.00	0.00	0.00	9.
1	0325	26	0.00	0.00	0.00	10.	*	1	0740	77	0.00	0.00	0.00	9.
1	0330	27	0.00	0.00	0.00	10.	*	1	0745	78	0.00	0.00	0.00	9.
1	0335	28	0.00	0.00	0.00	10.	*	1	0750	79	0.00	0.00	0.00	9.
1	0340	29	0.00	0.00	0.00	10.	*	1	0755	80	0.00	0.00	0.00	8.
1	0345	30	0.00	0.00	0.00	10.	*	1	0800	81	0.00	0.00	0.00	8.
1	0350	31	0.00	0.00	0.00	10.	*	1	0805	82	0.00	0.00	0.00	8.
1	0355	32	0.00	0.00	0.00	10.	*	1	0810	83	0.00	0.00	0.00	8.
1	0400	33	0.00	0.00	0.00	10.	*	1	0815	84	0.00	0.00	0.00	8.
1	0405	34	0.00	0.00	0.00	10.	*	1	0820	85	0.00	0.00	0.00	8.
1	0410	35	0.00	0.00	0.00	10.	*	1	0825	86	0.00	0.00	0.00	8.
1	0415	36	0.00	0.00	0.00	10.	*	1	0830	87	0.00	0.00	0.00	8.
1	0420	37	0.00	0.00	0.00	10.	*	1	0835	88	0.00	0.00	0.00	8.
1	0425	38	0.00	0.00	0.00	10.	*	1	0840	89	0.00	0.00	0.00	8.
1	0430	39	0.00	0.00	0.00	10.	*	1	0845	90	0.00	0.00	0.00	8.
1	0435	40	0.00	0.00	0.00	10.	*	1	0850	91	0.00	0.00	0.00	8.
1	0440	41	0.00	0.00	0.00	10.	*	1	0855	92	0.00	0.00	0.00	8.
1	0445	42	0.00	0.00	0.00	10.	*	1	0900	93	0.00	0.00	0.00	8.
1	0450	43	0.00	0.00	0.00	10.	*	1	0905	94	0.00	0.00	0.00	8.
1	0455	44	0.00	0.00	0.00	10.	*	1	0910	95	0.00	0.00	0.00	7.
1	0500	45	0.00	0.00	0.00	10.	*	1	0915	96	0.00	0.00	0.00	7.
1	0505	46	0.00	0.00	0.00	10.	*	1	0920	97	0.00	0.00	0.00	7.
1	0510	47	0.00	0.00	0.00	10.	*	1	0925	98	0.00	0.00	0.00	7.
1	0515	48	0.00	0.00	0.00	10.	*	1	0930	99	0.00	0.00	0.00	7.
1	0520	49	0.00	0.00	0.00	10.	*	1	0935	100	0.00	0.00	0.00	7.
1	0525	50	0.00	0.00	0.00	10.	*	1	0940	101	0.00	0.00	0.00	7.
1	0530	51	0.00	0.00	0.00	10.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.87, TOTAL EXCESS = 0.58

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.179	0.218	0.218	0.218
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB2A

(O) OUTFLOW

	0.	2.	4.	6.	8.	10.	0.	0.	0.	0.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLL
10150	7.0										LLLLLLLLLLLLLLLLLLLLLLLLXXXXX		
10155	8.	O										LLLLLLXXXX	
10200	9.		O										LLXX
10205	10.			O									LLX
10210	11.				O								LX
10215	12.					O							X
10220	13.						O						X
10225	14.						O						
10230	15.						O						
10235	16.						O						
10240	17.						O						
10245	18.						O						
10250	19.						O						
10255	20.						O						
10300	21.						O						
10305	22.						O						
10310	23.						O						
10315	24.						O						
10320	25.						O						
10325	26.						O						
10330	27.						O						
10335	28.						O						
10340	29.						O						
10345	30.						O						
10350	31.						O						
10355	32.						O						
10400	33.						O						
10405	34.						O						
10410	35.						O						
10415	36.						O						
10420	37.						O						
10425	38.						O						
10430	39.						O						
10435	40.						O						
10440	41.						O						
10445	42.						O						
10450	43.						O						
10455	44.						O						
10500	45.						O						
10505	46.						O						
10510	47.						O						
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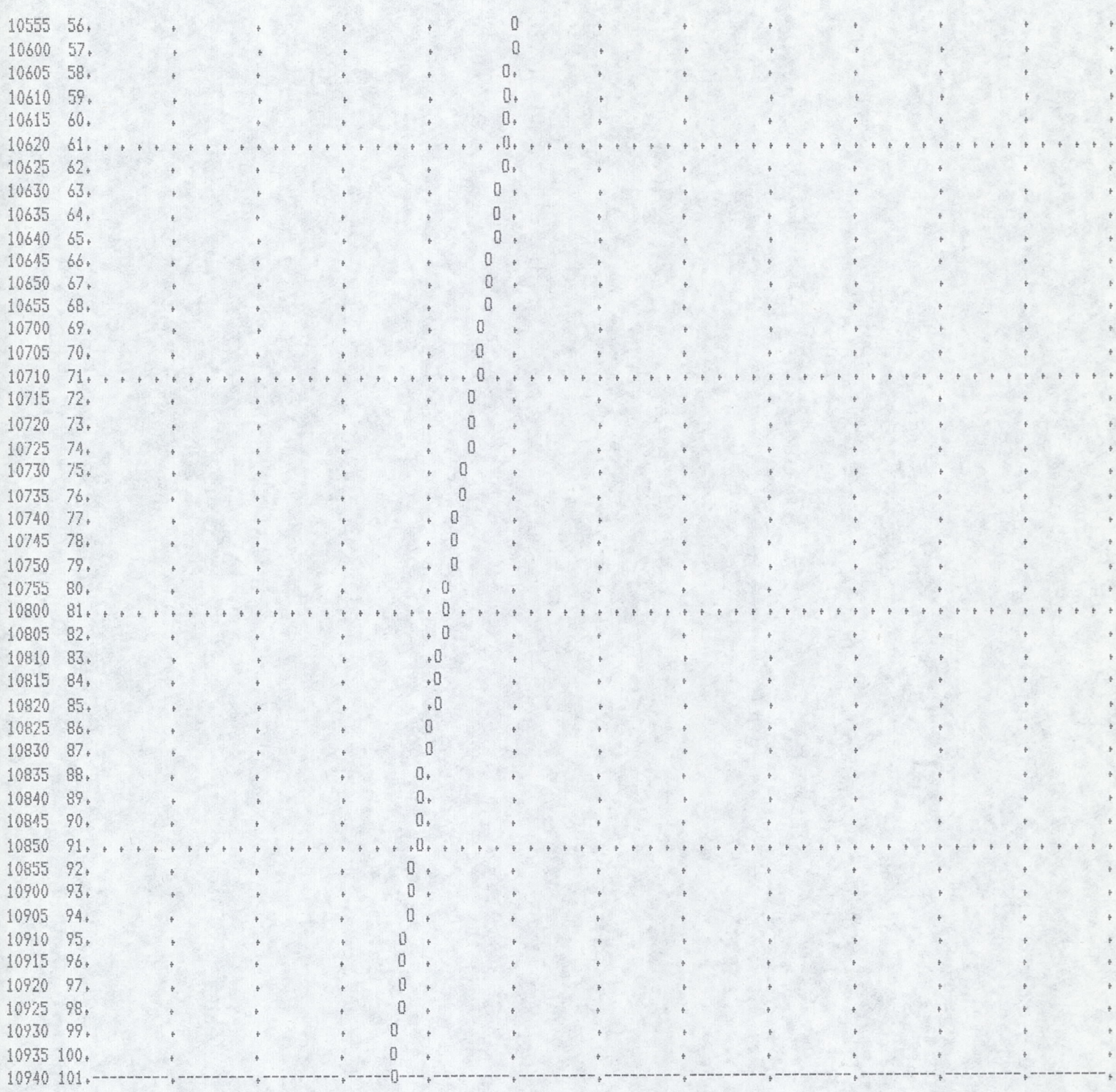
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10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
 20 KK    *    SUB2B   *
          *            *
          **************
                    NORTH-WEST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
                     ASSUME COLLECTOR CHANNEL ALONG EAST SINE EASEMENT 99-TH ST ROAD

             SUBBASIN RUNOFF DATA

 26 BA         SUBBASIN CHARACTERISTICS
                     TAREA        0.50  SUBBASIN AREA

               PRECIPITATION DATA

 23 PB               STORM        2.45  BASIN TOTAL PRECIPITATION

 24 PI           INCREMENTAL PRECIPITATION PATTERN
                    0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                    0.06      0.05

 27 LS         SCS LOSS RATE
                     STRTL        0.78  INITIAL ABSTRACTION
                    CRVNBR       72.00  CURVE NUMBER
                     RTIMP        4.00  PERCENT IMPERVIOUS AREA

                 LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
                     STRTL        0.78  INITIAL ABSTRACTION
                    CRVNBR       72.00  CURVE NUMBER
                     RTIMP        4.00  PERCENT IMPERVIOUS AREA

               KINEMATIC WAVE
 28 UK           OVERLAND-FLOW ELEMENT NO. 1
                         L       1850.  OVERLAND FLOW LENGTH
                         S      0.0033  SLOPE
                         N       0.200  ROUGHNESS COEFFICIENT
                        PA        25.0  PERCENT OF SUBBASIN
 29 UK           OVERLAND-FLOW ELEMENT NO. 2
                         L       5600.  OVERLAND FLOW LENGTH
                         S      0.0033  SLOPE
                         N       0.200  ROUGHNESS COEFFICIENT
                        PA        75.0  PERCENT OF SUBBASIN
 30 RK           MAIN CHANNEL
                         L       2640.  CHANNEL LENGTH
                         S      0.0050  SLOPE
                         N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                        CA        0.50  CONTRIBUTING AREA
                     SHAPE        TRAP  CHANNEL SHAPE
                        WD        0.00  BOTTOM WIDTH OR DIAMETER
                         Z        1.00  SIDE SLOPE
                    RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

                                             ***

        COMPUTED KINEMATIC PARAMETERS
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ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	84.09
2	0.4280	1.667	5.00	133.33
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB2B

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	10.
1		0125	2	0.05	0.05	0.00	0.	*	1		0540	53	0.00	0.00	0.00	10.
1		0130	3	0.07	0.07	0.00	0.	*	1		0545	54	0.00	0.00	0.00	10.
1		0135	4	0.07	0.07	0.00	0.	*	1		0550	55	0.00	0.00	0.00	10.
1		0140	5	0.10	0.10	0.00	0.	*	1		0555	56	0.00	0.00	0.00	10.
1		0145	6	0.16	0.15	0.01	0.	*	1		0600	57	0.00	0.00	0.00	10.
1		0150	7	1.16	0.97	0.19	0.	*	1		0605	58	0.00	0.00	0.00	10.
1		0155	8	0.39	0.23	0.16	1.	*	1		0610	59	0.00	0.00	0.00	10.
1		0200	9	0.14	0.08	0.06	2.	*	1		0615	60	0.00	0.00	0.00	10.
1		0205	10	0.11	0.06	0.05	4.	*	1		0620	61	0.00	0.00	0.00	10.
1		0210	11	0.09	0.04	0.05	6.	*	1		0625	62	0.00	0.00	0.00	10.
1		0215	12	0.06	0.03	0.03	8.	*	1		0630	63	0.00	0.00	0.00	10.
1		0220	13	0.05	0.02	0.03	9.	*	1		0635	64	0.00	0.00	0.00	10.
1		0225	14	0.00	0.00	0.00	10.	*	1		0640	65	0.00	0.00	0.00	10.
1		0230	15	0.00	0.00	0.00	10.	*	1		0645	66	0.00	0.00	0.00	9.
1		0235	16	0.00	0.00	0.00	10.	*	1		0650	67	0.00	0.00	0.00	9.
1		0240	17	0.00	0.00	0.00	10.	*	1		0655	68	0.00	0.00	0.00	9.
1		0245	18	0.00	0.00	0.00	10.	*	1		0700	69	0.00	0.00	0.00	9.
1		0250	19	0.00	0.00	0.00	10.	*	1		0705	70	0.00	0.00	0.00	9.
1		0255	20	0.00	0.00	0.00	10.	*	1		0710	71	0.00	0.00	0.00	9.
1		0300	21	0.00	0.00	0.00	10.	*	1		0715	72	0.00	0.00	0.00	9.
1		0305	22	0.00	0.00	0.00	10.	*	1		0720	73	0.00	0.00	0.00	9.
1		0310	23	0.00	0.00	0.00	10.	*	1		0725	74	0.00	0.00	0.00	9.
1		0315	24	0.00	0.00	0.00	10.	*	1		0730	75	0.00	0.00	0.00	9.
1		0320	25	0.00	0.00	0.00	10.	*	1		0735	76	0.00	0.00	0.00	9.
1		0325	26	0.00	0.00	0.00	10.	*	1		0740	77	0.00	0.00	0.00	9.
1		0330	27	0.00	0.00	0.00	10.	*	1		0745	78	0.00	0.00	0.00	9.
1		0335	28	0.00	0.00	0.00	10.	*	1		0750	79	0.00	0.00	0.00	9.
1		0340	29	0.00	0.00	0.00	10.	*	1		0755	80	0.00	0.00	0.00	8.
1		0345	30	0.00	0.00	0.00	10.	*	1		0800	81	0.00	0.00	0.00	8.
1		0350	31	0.00	0.00	0.00	10.	*	1		0805	82	0.00	0.00	0.00	8.
1		0355	32	0.00	0.00	0.00	10.	*	1		0810	83	0.00	0.00	0.00	8.
1		0400	33	0.00	0.00	0.00	10.	*	1		0815	84	0.00	0.00	0.00	8.
1		0405	34	0.00	0.00	0.00	10.	*	1		0820	85	0.00	0.00	0.00	8.
1		0410	35	0.00	0.00	0.00	10.	*	1		0825	86	0.00	0.00	0.00	8.
1		0415	36	0.00	0.00	0.00	10.	*	1		0830	87	0.00	0.00	0.00	8.
1		0420	37	0.00	0.00	0.00	10.	*	1		0835	88	0.00	0.00	0.00	8.
1		0425	38	0.00	0.00	0.00	10.	*	1		0840	89	0.00	0.00	0.00	8.
1		0430	39	0.00	0.00	0.00	10.	*	1		0845	90	0.00	0.00	0.00	8.
1		0435	40	0.00	0.00	0.00	10.	*	1		0850	91	0.00	0.00	0.00	8.
1		0440	41	0.00	0.00	0.00	10.	*	1		0855	92	0.00	0.00	0.00	8.
1		0445	42	0.00	0.00	0.00	10.	*	1		0900	93	0.00	0.00	0.00	8.
1		0450	43	0.00	0.00	0.00	10.	*	1		0905	94	0.00	0.00	0.00	8.
1		0455	44	0.00	0.00	0.00	10.	*	1		0910	95	0.00	0.00	0.00	7.
1		0500	45	0.00	0.00	0.00	10.	*	1		0915	96	0.00	0.00	0.00	7.
1		0505	46	0.00	0.00	0.00	10.	*	1		0920	97	0.00	0.00	0.00	7.
1		0510	47	0.00	0.00	0.00	10.	*	1		0925	98	0.00	0.00	0.00	7.
1		0515	48	0.00	0.00	0.00	10.	*	1		0930	99	0.00	0.00	0.00	7.

1	0520	49	0.00	0.00	0.00	10.	*	1	0935	100	0.00	0.00	0.00	7.
1	0525	50	0.00	0.00	0.00	10.	*	1	0940	101	0.00	0.00	0.00	7.
1	0530	51	0.00	0.00	0.00	10.	*							
							*							

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.87, TOTAL EXCESS = 0.58

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.179	0.218	0.218	0.218
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB2B

(O) OUTFLOW

	0.	2.	4.	6.	8.	10.	0.	0.	0.	0.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLL
10150	7.0										LLLLLLLLLLLLLLLLLLLLLLLLXXXXX		
10155	8.	O										LLLLLLXXXX	
10200	9.		O										LLXX
10205	10.			O									LLX
10210	11.				O								LX
10215	12.					O							X
10220	13.						O						X
10225	14.						O						
10230	15.						O						
10235	16.						O						
10240	17.						O						
10245	18.						O						
10250	19.						O						
10255	20.						O						
10300	21.						O						
10305	22.						O						
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10315	24.						O						
10320	25.						O						
10325	26.						O						
10330	27.						O						
10335	28.						O						
10340	29.						O						
10345	30.						O						
10350	31.						O						
10355	32.						O						
10400	33.						O						
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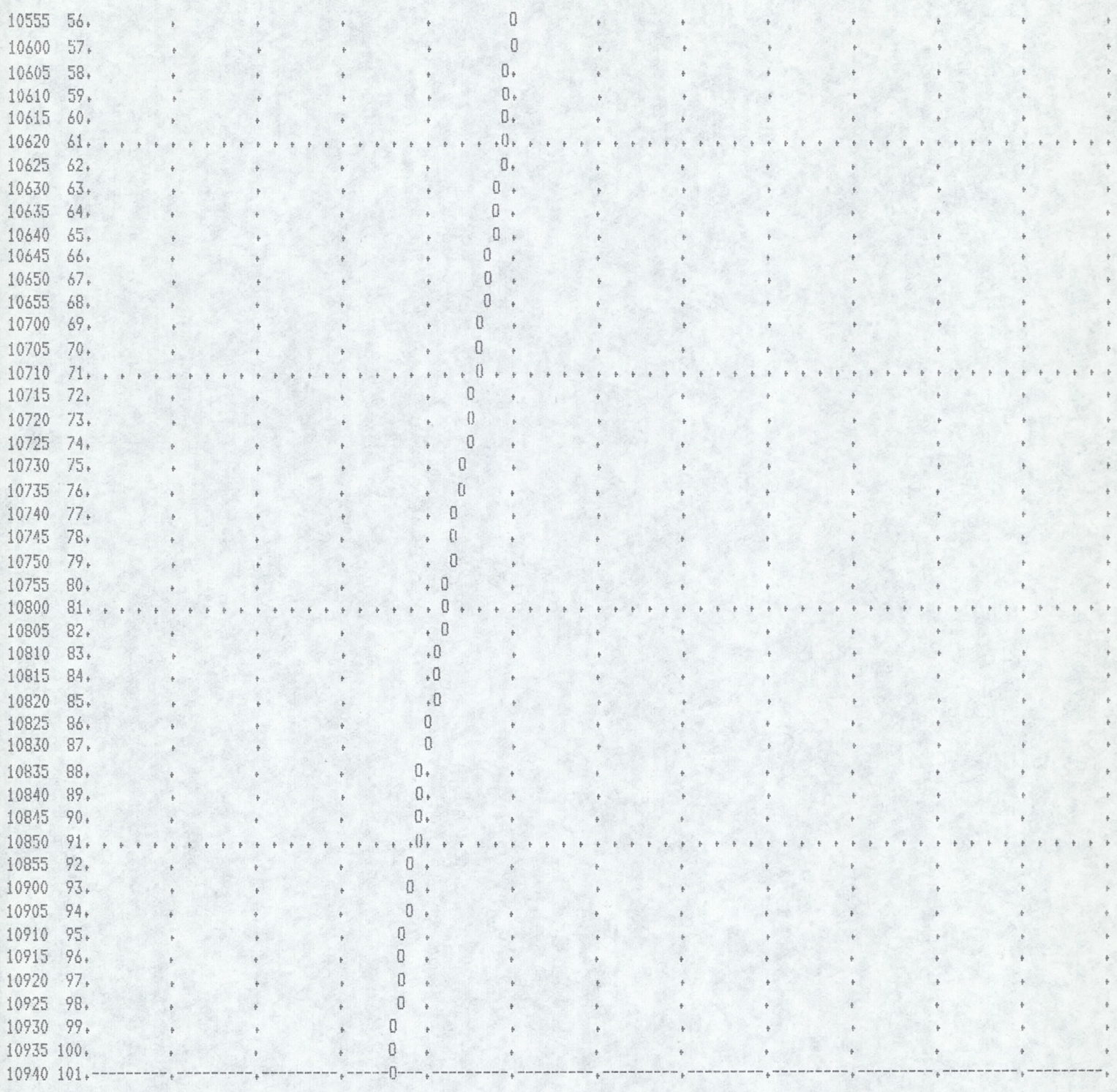
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10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *             *
          *             *
31 KK     *      SUB2   *
          *             *
          *             *
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COMBINE RUNOFF FROM SUB2A AND SUB2B AT C.P.(B)

33 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB2

SUM OF 2 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	20.	1		0540	53	20.	1		0750	79	17.
1		0125	2	0.	1		0335	28	20.	1		0545	54	20.	1		0755	80	17.
1		0130	3	0.	1		0340	29	20.	1		0550	55	20.	1		0800	81	17.
1		0135	4	0.	1		0345	30	20.	1		0555	56	20.	1		0805	82	17.
1		0140	5	0.	1		0350	31	20.	1		0600	57	20.	1		0810	83	16.
1		0145	6	0.	1		0355	32	20.	1		0605	58	20.	1		0815	84	16.
1		0150	7	0.	1		0400	33	20.	1		0610	59	20.	1		0820	85	16.
1		0155	8	2.	1		0405	34	20.	1		0615	60	20.	1		0825	86	16.
1		0200	9	5.	1		0410	35	20.	1		0620	61	20.	1		0830	87	16.
1		0205	10	9.	1		0415	36	20.	1		0625	62	19.	1		0835	88	16.
1		0210	11	13.	1		0420	37	20.	1		0630	63	19.	1		0840	89	16.
1		0215	12	16.	1		0425	38	20.	1		0635	64	19.	1		0845	90	16.
1		0220	13	18.	1		0430	39	20.	1		0640	65	19.	1		0850	91	15.
1		0225	14	19.	1		0435	40	20.	1		0645	66	19.	1		0855	92	15.
1		0230	15	20.	1		0440	41	20.	1		0650	67	19.	1		0900	93	15.
1		0235	16	20.	1		0445	42	20.	1		0655	68	19.	1		0905	94	15.
1		0240	17	20.	1		0450	43	20.	1		0700	69	19.	1		0910	95	15.
1		0245	18	20.	1		0455	44	20.	1		0705	70	18.	1		0915	96	15.
1		0250	19	20.	1		0500	45	20.	1		0710	71	18.	1		0920	97	15.
1		0255	20	20.	1		0505	46	20.	1		0715	72	18.	1		0925	98	15.
1		0300	21	20.	1		0510	47	20.	1		0720	73	18.	1		0930	99	15.
1		0305	22	20.	1		0515	48	20.	1		0725	74	18.	1		0935	100	14.
1		0310	23	20.	1		0520	49	20.	1		0730	75	18.	1		0940	101	14.
1		0315	24	20.	1		0525	50	20.	1		0735	76	18.					
1		0320	25	20.	1		0530	51	20.	1		0740	77	17.					
1		0325	26	20.	1		0535	52	20.	1		0745	78	17.					

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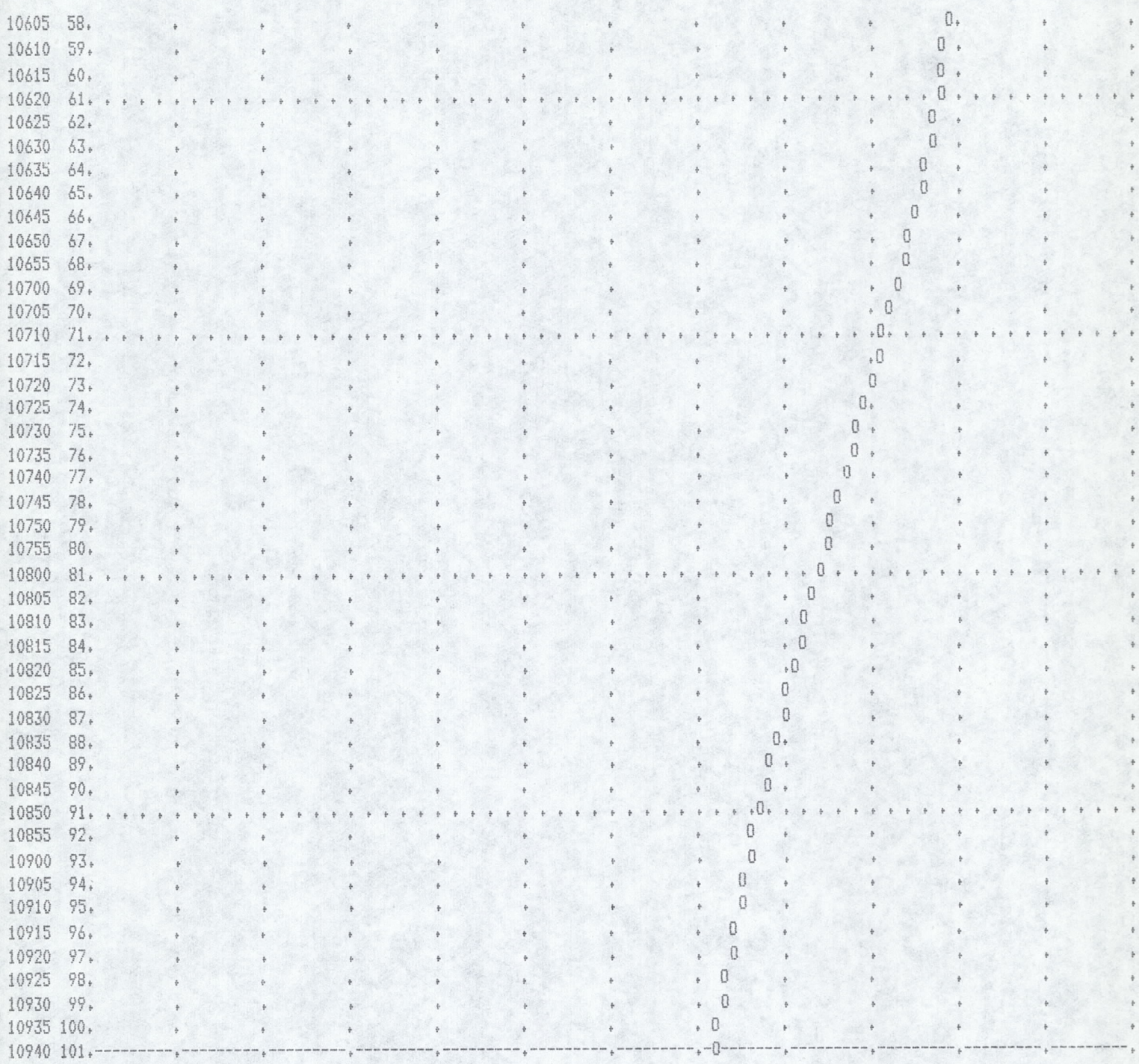
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
20.	1.42	(CFS)	19.	17.	17.	17.
		(INCHES)	0.179	0.218	0.218	0.218
		(AC-FT)	10.	12.	12.	12.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB2

(O) OUTFLOW

DAHRMN	PER	0.	2.	4.	6.	8.	10.	12.	14.	16.	18.	20.	22.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	7.0													
10155	8.		O											
10200	9.				O									
10205	10.						O							
10210	11.								O					
10215	12.									O				
10220	13.										O			
10225	14.											O		
10230	15.											0		
10235	16.											0		
10240	17.											0		
10245	18.											0		
10250	19.											0		
10255	20.											0		
10300	21.											0		
10305	22.											0		
10310	23.											0		
10315	24.											0		
10320	25.											0		
10325	26.											0		
10330	27.											0		
10335	28.											0		
10340	29.											0		
10345	30.											0		
10350	31.											0		
10355	32.											0		
10400	33.											0		
10405	34.											0		
10410	35.											0		
10415	36.											0		
10420	37.											0		
10425	38.											0		
10430	39.											0		
10435	40.											0		
10440	41.											0		
10445	42.											0		
10450	43.											0		
10455	44.											0		
10500	45.											0		
10505	46.											0		
10510	47.											0		
10515	48.											0		
10520	49.											0		
10525	50.											0		
10530	51.											0		
10535	52.											0		
10540	53.											0		
10545	54.											0		
10550	55.											0.		
10555	56.											0.		
10600	57.											0.		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10610 59
10615 60
10620 61
10625 62
10630 63
10635 64
10640 65
10645 66
10650 67
10655 68
10700 69
10705 70
10710 71
10715 72
10720 73
10725 74
10730 75
10735 76
10740 77
10745 78
10750 79
10755 80
10800 81
10805 82
10810 83
10815 84
10820 85
10825 86
10830 87
10835 88
10840 89
10845 90
10850 91
10855 92
10900 93
10905 94
10910 95
10915 96
10920 97
10925 98
10930 99
10935 100
10940 101

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          *            *
 34 KK    *     SUB2   *
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DIVERT TO SUB5B

DT	DIVERSION				
	ISTAD	DIV25	DIVERSION HYDROGRAPH IDENTIFICATION		
DI	INFLOW	2.00	100.00	1000.00	
DQ	DIVERTED FLOW	1.00	50.00	500.00	

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DIVERSION HYDROGRAPH DIV25

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	10.	1		0540	53	10.	1		0750	79	9.
1		0125	2	0.	1		0335	28	10.	1		0545	54	10.	1		0755	80	8.
1		0130	3	0.	1		0340	29	10.	1		0550	55	10.	1		0800	81	8.
1		0135	4	0.	1		0345	30	10.	1		0555	56	10.	1		0805	82	8.
1		0140	5	0.	1		0350	31	10.	1		0600	57	10.	1		0810	83	8.
1		0145	6	0.	1		0355	32	10.	1		0605	58	10.	1		0815	84	8.
1		0150	7	0.	1		0400	33	10.	1		0610	59	10.	1		0820	85	8.
1		0155	8	1.	1		0405	34	10.	1		0615	60	10.	1		0825	86	8.
1		0200	9	2.	1		0410	35	10.	1		0620	61	10.	1		0830	87	8.
1		0205	10	4.	1		0415	36	10.	1		0625	62	10.	1		0835	88	8.
1		0210	11	6.	1		0420	37	10.	1		0630	63	10.	1		0840	89	8.
1		0215	12	8.	1		0425	38	10.	1		0635	64	10.	1		0845	90	8.
1		0220	13	9.	1		0430	39	10.	1		0640	65	10.	1		0850	91	8.
1		0225	14	10.	1		0435	40	10.	1		0645	66	9.	1		0855	92	8.
1		0230	15	10.	1		0440	41	10.	1		0650	67	9.	1		0900	93	8.
1		0235	16	10.	1		0445	42	10.	1		0655	68	9.	1		0905	94	8.
1		0240	17	10.	1		0450	43	10.	1		0700	69	9.	1		0910	95	7.
1		0245	18	10.	1		0455	44	10.	1		0705	70	9.	1		0915	96	7.
1		0250	19	10.	1		0500	45	10.	1		0710	71	9.	1		0920	97	7.
1		0255	20	10.	1		0505	46	10.	1		0715	72	9.	1		0925	98	7.
1		0300	21	10.	1		0510	47	10.	1		0720	73	9.	1		0930	99	7.
1		0305	22	10.	1		0515	48	10.	1		0725	74	9.	1		0935	100	7.
1		0310	23	10.	1		0520	49	10.	1		0730	75	9.	1		0940	101	7.
1		0315	24	10.	1		0525	50	10.	1		0735	76	9.					
1		0320	25	10.	1		0530	51	10.	1		0740	77	9.					
1		0325	26	10.	1		0535	52	10.	1		0745	78	9.					

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.090	0.109	0.109	0.109
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 1.00 SQ MI

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HYDROGRAPH AT STATION SUB2

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	10.	1		0540	53	10.	1		0750	79	9.
1		0125	2	0.	1		0335	28	10.	1		0545	54	10.	1		0755	80	8.
1		0130	3	0.	1		0340	29	10.	1		0550	55	10.	1		0800	81	8.
1		0135	4	0.	1		0345	30	10.	1		0555	56	10.	1		0805	82	8.
1		0140	5	0.	1		0350	31	10.	1		0600	57	10.	1		0810	83	8.
1		0145	6	0.	1		0355	32	10.	1		0605	58	10.	1		0815	84	8.
1		0150	7	0.	1		0400	33	10.	1		0610	59	10.	1		0820	85	8.
1		0155	8	1.	1		0405	34	10.	1		0615	60	10.	1		0825	86	8.
1		0200	9	2.	1		0410	35	10.	1		0620	61	10.	1		0830	87	8.
1		0205	10	4.	1		0415	36	10.	1		0625	62	10.	1		0835	88	8.
1		0210	11	6.	1		0420	37	10.	1		0630	63	10.	1		0840	89	8.
1		0215	12	8.	1		0425	38	10.	1		0635	64	10.	1		0845	90	8.
1		0220	13	9.	1		0430	39	10.	1		0640	65	10.	1		0850	91	8.
1		0225	14	10.	1		0435	40	10.	1		0645	66	9.	1		0855	92	8.
1		0230	15	10.	1		0440	41	10.	1		0650	67	9.	1		0900	93	8.
1		0235	16	10.	1		0445	42	10.	1		0655	68	9.	1		0905	94	8.
1		0240	17	10.	1		0450	43	10.	1		0700	69	9.	1		0910	95	7.
1		0245	18	10.	1		0455	44	10.	1		0705	70	9.	1		0915	96	7.
1		0250	19	10.	1		0500	45	10.	1		0710	71	9.	1		0920	97	7.
1		0255	20	10.	1		0505	46	10.	1		0715	72	9.	1		0925	98	7.
1		0300	21	10.	1		0510	47	10.	1		0720	73	9.	1		0930	99	7.
1		0305	22	10.	1		0515	48	10.	1		0725	74	9.	1		0935	100	7.
1		0310	23	10.	1		0520	49	10.	1		0730	75	9.	1		0940	101	7.
1		0315	24	10.	1		0525	50	10.	1		0735	76	9.					
1		0320	25	10.	1		0530	51	10.	1		0740	77	9.					
1		0325	26	10.	1		0535	52	10.	1		0745	78	9.					

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.090	0.109	0.109	0.109
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 1.00 SQ MI

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39 KK * SUB3A *

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                    AREA BOUNDED BY BETHANY HOME ROAD- 99TH ST- CAMELBACK ROAD- RID CHANNEL
                    ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
                    HYDROGRAPH AT C.P. (C)

          SUBBASIN RUNOFF DATA

 46 BA         SUBBASIN CHARACTERISTICS
                    TAREA        0.66  SUBBASIN AREA

               PRECIPITATION DATA

 43 PB              STORM        2.45  BASIN TOTAL PRECIPITATION

 44 PI           INCREMENTAL PRECIPITATION PATTERN
                  0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
                  0.06     0.05

 47 LS         SCS LOSS RATE
                    STRTL        0.35  INITIAL ABSTRACTION
                   CRVNBR       85.00  CURVE NUMBER
                    RTIMP       48.00  PERCENT IMPERVIOUS AREA

               KINEMATIC WAVE
 48 UK           OVERLAND-FLOW ELEMENT NO. 1
                        L       4500.  OVERLAND FLOW LENGTH
                        S      0.0050  SLOPE
                        N       0.200  ROUGHNESS COEFFICIENT
                       PA       100.0  PERCENT OF SUBBASIN
 49 RK           MAIN CHANNEL
                        L       5280.  CHANNEL LENGTH
                        S      0.0030  SLOPE
                        N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                       CA        0.66  CONTRIBUTING AREA
                    SHAPE        TRAP  CHANNEL SHAPE
                       WD        0.00  BOTTOM WIDTH OR DIAMETER
                        Z        1.00  SIDE SLOPE
                   RUPSTQ         YES  ROUTE UPSTREAM HYDROGRAPH

                                              ***

       COMPUTED KINEMATIC PARAMETERS
           ELEMENT      ALPHA        M        DT (MIN)    DX (FT)
                 1     0.5268    1.667          5.00      250.00
                 3     1.6346    1.333          5.00     2640.00
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HYDROGRAPH AT STATION SUB3A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	96.
1		0125	2	0.05	0.03	0.02	0.	*	1		0540	53	0.00	0.00	0.00	95.
1		0130	3	0.07	0.04	0.03	0.	*	1		0545	54	0.00	0.00	0.00	95.
1		0135	4	0.07	0.04	0.03	0.	*	1		0550	55	0.00	0.00	0.00	94.
1		0140	5	0.10	0.05	0.05	0.	*	1		0555	56	0.00	0.00	0.00	93.
1		0145	6	0.16	0.08	0.08	0.	*	1		0600	57	0.00	0.00	0.00	92.

1	0150	7	1.16	0.33	0.83	0.	*	1	0605	58	0.00	0.00	0.00	91.
1	0155	8	0.39	0.06	0.33	5.	*	1	0610	59	0.00	0.00	0.00	90.
1	0200	9	0.14	0.02	0.12	17.	*	1	0615	60	0.00	0.00	0.00	89.
1	0205	10	0.11	0.01	0.10	32.	*	1	0620	61	0.00	0.00	0.00	88.
1	0210	11	0.09	0.01	0.08	49.	*	1	0625	62	0.00	0.00	0.00	87.
1	0215	12	0.06	0.01	0.05	65.	*	1	0630	63	0.00	0.00	0.00	86.
1	0220	13	0.05	0.01	0.04	77.	*	1	0635	64	0.00	0.00	0.00	85.
1	0225	14	0.00	0.00	0.00	86.	*	1	0640	65	0.00	0.00	0.00	83.
1	0230	15	0.00	0.00	0.00	92.	*	1	0645	66	0.00	0.00	0.00	82.
1	0235	16	0.00	0.00	0.00	95.	*	1	0650	67	0.00	0.00	0.00	81.
1	0240	17	0.00	0.00	0.00	97.	*	1	0655	68	0.00	0.00	0.00	79.
1	0245	18	0.00	0.00	0.00	97.	*	1	0700	69	0.00	0.00	0.00	78.
1	0250	19	0.00	0.00	0.00	98.	*	1	0705	70	0.00	0.00	0.00	76.
1	0255	20	0.00	0.00	0.00	98.	*	1	0710	71	0.00	0.00	0.00	75.
1	0300	21	0.00	0.00	0.00	98.	*	1	0715	72	0.00	0.00	0.00	74.
1	0305	22	0.00	0.00	0.00	98.	*	1	0720	73	0.00	0.00	0.00	72.
1	0310	23	0.00	0.00	0.00	98.	*	1	0725	74	0.00	0.00	0.00	71.
1	0315	24	0.00	0.00	0.00	98.	*	1	0730	75	0.00	0.00	0.00	69.
1	0320	25	0.00	0.00	0.00	98.	*	1	0735	76	0.00	0.00	0.00	68.
1	0325	26	0.00	0.00	0.00	98.	*	1	0740	77	0.00	0.00	0.00	67.
1	0330	27	0.00	0.00	0.00	98.	*	1	0745	78	0.00	0.00	0.00	65.
1	0335	28	0.00	0.00	0.00	98.	*	1	0750	79	0.00	0.00	0.00	64.
1	0340	29	0.00	0.00	0.00	98.	*	1	0755	80	0.00	0.00	0.00	63.
1	0345	30	0.00	0.00	0.00	98.	*	1	0800	81	0.00	0.00	0.00	61.
1	0350	31	0.00	0.00	0.00	98.	*	1	0805	82	0.00	0.00	0.00	60.
1	0355	32	0.00	0.00	0.00	98.	*	1	0810	83	0.00	0.00	0.00	59.
1	0400	33	0.00	0.00	0.00	98.	*	1	0815	84	0.00	0.00	0.00	58.
1	0405	34	0.00	0.00	0.00	98.	*	1	0820	85	0.00	0.00	0.00	57.
1	0410	35	0.00	0.00	0.00	98.	*	1	0825	86	0.00	0.00	0.00	55.
1	0415	36	0.00	0.00	0.00	98.	*	1	0830	87	0.00	0.00	0.00	54.
1	0420	37	0.00	0.00	0.00	98.	*	1	0835	88	0.00	0.00	0.00	53.
1	0425	38	0.00	0.00	0.00	98.	*	1	0840	89	0.00	0.00	0.00	52.
1	0430	39	0.00	0.00	0.00	98.	*	1	0845	90	0.00	0.00	0.00	51.
1	0435	40	0.00	0.00	0.00	98.	*	1	0850	91	0.00	0.00	0.00	50.
1	0440	41	0.00	0.00	0.00	98.	*	1	0855	92	0.00	0.00	0.00	49.
1	0445	42	0.00	0.00	0.00	98.	*	1	0900	93	0.00	0.00	0.00	48.
1	0450	43	0.00	0.00	0.00	98.	*	1	0905	94	0.00	0.00	0.00	47.
1	0455	44	0.00	0.00	0.00	98.	*	1	0910	95	0.00	0.00	0.00	46.
1	0500	45	0.00	0.00	0.00	98.	*	1	0915	96	0.00	0.00	0.00	45.
1	0505	46	0.00	0.00	0.00	97.	*	1	0920	97	0.00	0.00	0.00	44.
1	0510	47	0.00	0.00	0.00	97.	*	1	0925	98	0.00	0.00	0.00	44.
1	0515	48	0.00	0.00	0.00	97.	*	1	0930	99	0.00	0.00	0.00	43.
1	0520	49	0.00	0.00	0.00	97.	*	1	0935	100	0.00	0.00	0.00	42.
1	0525	50	0.00	0.00	0.00	96.	*	1	0940	101	0.00	0.00	0.00	41.
1	0530	51	0.00	0.00	0.00	96.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.68, TOTAL EXCESS = 1.77

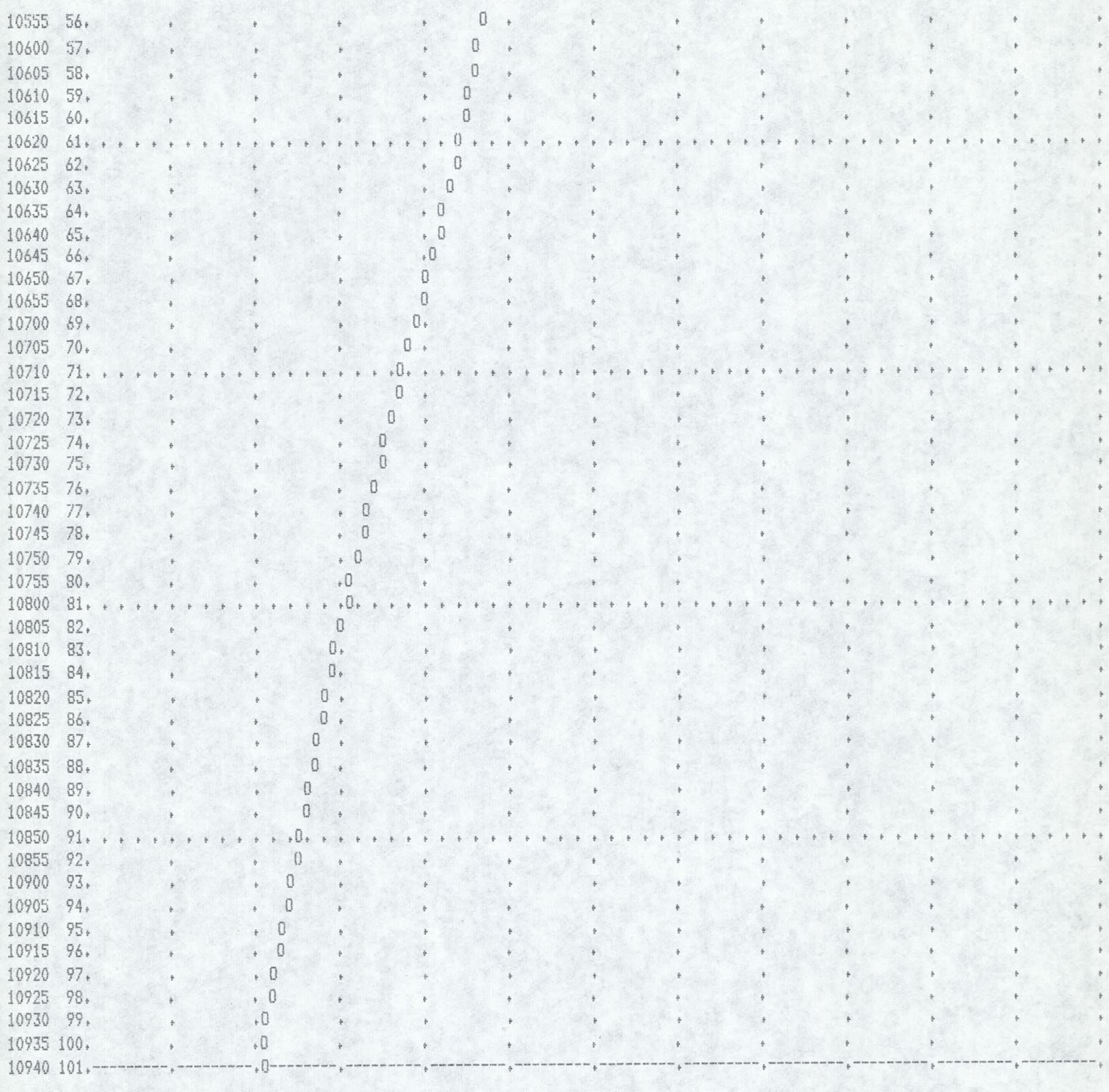
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
98.	2.00	(CFS)	88.	73.	73.	73.
		(INCHES)	0.495	0.570	0.570	0.570
		(AC-FT)	44.	50.	50.	50.

CUMULATIVE AREA = 1.66 SQ MI

STATION SUB3A

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	0.	0.	0.	0.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												X
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLXX
10150	70										LLLLLLLLXXXXXXXXXXXXXXXXXXXXX		
10155	8.	O										LLXXXXXXXX	
10200	9.		O										LXXX
10205	10.			O									LXX
10210	11.				O								XX
10215	12.				O								X
10220	13.					O							X
10225	14.						O						
10230	15.						O						
10235	16.						O						
10240	17.						O						
10245	18.						O						
10250	19.						O						
10255	20.						O						
10300	21.						O						
10305	22.						O						
10310	23.						O						
10315	24.						O						
10320	25.						O						
10325	26.						O						
10330	27.						O						
10335	28.						O						
10340	29.						O						
10345	30.						O						
10350	31.						O						
10355	32.						O						
10400	33.						O						
10405	34.						O						
10410	35.						O						
10415	36.						O						
10420	37.						O						
10425	38.						O						
10430	39.						O						
10435	40.						O						
10440	41.						O						
10445	42.						O						
10450	43.						O						
10455	44.						O						
10500	45.						O						
10505	46.						O						
10510	47.						O						
10515	48.						O						
10520	49.						O						
10525	50.						O						
10530	51.						O						
10535	52.						O						
10540	53.						O						
10545	54.						O						
10550	55.						O						


10555 56.
10600 57.
10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
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10635 64.
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10645 66.
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10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
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10825 86.
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10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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           *            *
50 KK      *    SUB3A   *
           *            *
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DIVERT TO R.I.D. CHANNEL

DT	DIVERSION					
	ISTAD	RID	DIVERSION HYDROGRAPH IDENTIFICATION			
DI	INFLOW	1.00	150.00	151.00	300.00	1000.00
DQ	DIVERTED FLOW	1.00	150.00	150.00	150.00	150.00

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DIVERSION HYDROGRAPH RID

DA MON	HRMN	ORD	FLOW	DA MON	HRMN	ORD	FLOW	DA MON	HRMN	ORD	FLOW	DA MON	HRMN	ORD	FLOW
1	0120	1	0.	1	0330	27	98.	1	0540	53	95.	1	0750	79	64.
1	0125	2	0.	1	0335	28	98.	1	0545	54	95.	1	0755	80	63.
1	0130	3	0.	1	0340	29	98.	1	0550	55	94.	1	0800	81	61.
1	0135	4	0.	1	0345	30	98.	1	0555	56	93.	1	0805	82	60.
1	0140	5	0.	1	0350	31	98.	1	0600	57	92.	1	0810	83	59.
1	0145	6	0.	1	0355	32	98.	1	0605	58	91.	1	0815	84	58.
1	0150	7	0.	1	0400	33	98.	1	0610	59	90.	1	0820	85	57.
1	0155	8	5.	1	0405	34	98.	1	0615	60	89.	1	0825	86	55.
1	0200	9	17.	1	0410	35	98.	1	0620	61	88.	1	0830	87	54.
1	0205	10	32.	1	0415	36	98.	1	0625	62	87.	1	0835	88	53.
1	0210	11	49.	1	0420	37	98.	1	0630	63	86.	1	0840	89	52.
1	0215	12	65.	1	0425	38	98.	1	0635	64	85.	1	0845	90	51.
1	0220	13	77.	1	0430	39	98.	1	0640	65	83.	1	0850	91	50.
1	0225	14	86.	1	0435	40	98.	1	0645	66	82.	1	0855	92	49.
1	0230	15	92.	1	0440	41	98.	1	0650	67	81.	1	0900	93	48.
1	0235	16	95.	1	0445	42	98.	1	0655	68	79.	1	0905	94	47.
1	0240	17	97.	1	0450	43	98.	1	0700	69	78.	1	0910	95	46.
1	0245	18	97.	1	0455	44	98.	1	0705	70	76.	1	0915	96	45.
1	0250	19	98.	1	0500	45	98.	1	0710	71	75.	1	0920	97	44.
1	0255	20	98.	1	0505	46	97.	1	0715	72	74.	1	0925	98	44.
1	0300	21	98.	1	0510	47	97.	1	0720	73	72.	1	0930	99	43.
1	0305	22	98.	1	0515	48	97.	1	0725	74	71.	1	0935	100	42.
1	0310	23	98.	1	0520	49	97.	1	0730	75	69.	1	0940	101	41.
1	0315	24	98.	1	0525	50	96.	1	0735	76	68.				
1	0320	25	98.	1	0530	51	96.	1	0740	77	67.				
1	0325	26	98.	1	0535	52	96.	1	0745	78	65.				

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
98.	2.00	(CFS)	88.	73.	73.	73.
		(INCHES)	0.495	0.570	0.570	0.570
		(AC-FT)	44.	50.	50.	50.

CUMULATIVE AREA = 1.66 SQ MI

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HYDROGRAPH AT STATION SUB3A

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	0.	1		0540	53	0.	1		0750	79	0.
1		0125	2	0.	1		0335	28	0.	1		0545	54	0.	1		0755	80	0.
1		0130	3	0.	1		0340	29	0.	1		0550	55	0.	1		0800	81	0.
1		0135	4	0.	1		0345	30	0.	1		0555	56	0.	1		0805	82	0.
1		0140	5	0.	1		0350	31	0.	1		0600	57	0.	1		0810	83	0.
1		0145	6	0.	1		0355	32	0.	1		0605	58	0.	1		0815	84	0.
1		0150	7	0.	1		0400	33	0.	1		0610	59	0.	1		0820	85	0.
1		0155	8	0.	1		0405	34	0.	1		0615	60	0.	1		0825	86	0.
1		0200	9	0.	1		0410	35	0.	1		0620	61	0.	1		0830	87	0.
1		0205	10	0.	1		0415	36	0.	1		0625	62	0.	1		0835	88	0.
1		0210	11	0.	1		0420	37	0.	1		0630	63	0.	1		0840	89	0.
1		0215	12	0.	1		0425	38	0.	1		0635	64	0.	1		0845	90	0.
1		0220	13	0.	1		0430	39	0.	1		0640	65	0.	1		0850	91	0.
1		0225	14	0.	1		0435	40	0.	1		0645	66	0.	1		0855	92	0.
1		0230	15	0.	1		0440	41	0.	1		0650	67	0.	1		0900	93	0.
1		0235	16	0.	1		0445	42	0.	1		0655	68	0.	1		0905	94	0.
1		0240	17	0.	1		0450	43	0.	1		0700	69	0.	1		0910	95	0.
1		0245	18	0.	1		0455	44	0.	1		0705	70	0.	1		0915	96	0.
1		0250	19	0.	1		0500	45	0.	1		0710	71	0.	1		0920	97	0.
1		0255	20	0.	1		0505	46	0.	1		0715	72	0.	1		0925	98	0.
1		0300	21	0.	1		0510	47	0.	1		0720	73	0.	1		0930	99	0.
1		0305	22	0.	1		0515	48	0.	1		0725	74	0.	1		0935	100	0.
1		0310	23	0.	1		0520	49	0.	1		0730	75	0.	1		0940	101	0.
1		0315	24	0.	1		0525	50	0.	1		0735	76	0.					
1		0320	25	0.	1		0530	51	0.	1		0740	77	0.					
1		0325	26	0.	1		0535	52	0.	1		0745	78	0.					

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
0.	0.08	(CFS)	0.	0.	0.	0.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = 1.66 SQ MI

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          *             *
 55 KK    *     SUB4    *
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AREA BOUNDED BY BETHANY HOME ROAD- AGUA FRIA-CAMELBACK ROAD- RID CHANNEL
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
HYDROGRAPH AT C.P. (D) INTO AGUA FRIA WASH

SUBBASIN RUNOFF DATA

62 BA SUBBASIN CHARACTERISTICS

TAREA	1.06	SUBBASIN AREA

PRECIPITATION DATA

59 PB

STORM	2.45	BASIN TOTAL PRECIPITATION

60 PI INCREMENTAL PRECIPITATION PATTERN

0.05	0.07	0.07	0.10	0.16	1.16	0.39	0.14	0.11	0.09
0.06	0.05								

63 LS SCS LOSS RATE

STRTL	0.78	INITIAL ABSTRACTION
CRVNBR	72.00	CURVE NUMBER
RTIMP	4.00	PERCENT IMPERVIOUS AREA

KINEMATIC WAVE

64 UK OVERLAND-FLOW ELEMENT NO. 1

L	5800.	OVERLAND FLOW LENGTH
S	0.0050	SLOPE
N	0.200	ROUGHNESS COEFFICIENT
PA	100.0	PERCENT OF SUBBASIN

65 RK MAIN CHANNEL

L	4000.	CHANNEL LENGTH
S	0.0030	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	1.06	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	0.00	BOTTOM WIDTH OR DIAMETER
Z	1.00	SIDE SLOPE
RUPSTQ	YES	ROUTE UPSTREAM HYDROGRAPH

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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.5268	1.667	5.00	152.63
3	1.6346	1.333	5.00	2000.00

HYDROGRAPH AT STATION SUB4

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	17.
1		0125	2	0.05	0.05	0.00	0.	1		0540	53	0.00	0.00	0.00	17.
1		0130	3	0.07	0.07	0.00	0.	1		0545	54	0.00	0.00	0.00	17.
1		0135	4	0.07	0.07	0.00	0.	1		0550	55	0.00	0.00	0.00	17.
1		0140	5	0.10	0.10	0.00	0.	1		0555	56	0.00	0.00	0.00	17.
1		0145	6	0.16	0.15	0.01	0.	1		0600	57	0.00	0.00	0.00	17.

1	0150	7	1.16	0.97	0.19	0.	*	1	0605	58	0.00	0.00	0.00	17.
1	0155	8	0.39	0.23	0.16	0.	*	1	0610	59	0.00	0.00	0.00	17.
1	0200	9	0.14	0.08	0.06	1.	*	1	0615	60	0.00	0.00	0.00	17.
1	0205	10	0.11	0.06	0.05	3.	*	1	0620	61	0.00	0.00	0.00	17.
1	0210	11	0.09	0.04	0.05	5.	*	1	0625	62	0.00	0.00	0.00	17.
1	0215	12	0.06	0.03	0.03	8.	*	1	0630	63	0.00	0.00	0.00	17.
1	0220	13	0.05	0.02	0.03	11.	*	1	0635	64	0.00	0.00	0.00	17.
1	0225	14	0.00	0.00	0.00	13.	*	1	0640	65	0.00	0.00	0.00	17.
1	0230	15	0.00	0.00	0.00	15.	*	1	0645	66	0.00	0.00	0.00	17.
1	0235	16	0.00	0.00	0.00	16.	*	1	0650	67	0.00	0.00	0.00	17.
1	0240	17	0.00	0.00	0.00	16.	*	1	0655	68	0.00	0.00	0.00	17.
1	0245	18	0.00	0.00	0.00	16.	*	1	0700	69	0.00	0.00	0.00	17.
1	0250	19	0.00	0.00	0.00	17.	*	1	0705	70	0.00	0.00	0.00	17.
1	0255	20	0.00	0.00	0.00	17.	*	1	0710	71	0.00	0.00	0.00	17.
1	0300	21	0.00	0.00	0.00	17.	*	1	0715	72	0.00	0.00	0.00	17.
1	0305	22	0.00	0.00	0.00	17.	*	1	0720	73	0.00	0.00	0.00	17.
1	0310	23	0.00	0.00	0.00	17.	*	1	0725	74	0.00	0.00	0.00	17.
1	0315	24	0.00	0.00	0.00	17.	*	1	0730	75	0.00	0.00	0.00	17.
1	0320	25	0.00	0.00	0.00	17.	*	1	0735	76	0.00	0.00	0.00	17.
1	0325	26	0.00	0.00	0.00	17.	*	1	0740	77	0.00	0.00	0.00	17.
1	0330	27	0.00	0.00	0.00	17.	*	1	0745	78	0.00	0.00	0.00	17.
1	0335	28	0.00	0.00	0.00	17.	*	1	0750	79	0.00	0.00	0.00	17.
1	0340	29	0.00	0.00	0.00	17.	*	1	0755	80	0.00	0.00	0.00	17.
1	0345	30	0.00	0.00	0.00	17.	*	1	0800	81	0.00	0.00	0.00	17.
1	0350	31	0.00	0.00	0.00	17.	*	1	0805	82	0.00	0.00	0.00	17.
1	0355	32	0.00	0.00	0.00	17.	*	1	0810	83	0.00	0.00	0.00	17.
1	0400	33	0.00	0.00	0.00	17.	*	1	0815	84	0.00	0.00	0.00	17.
1	0405	34	0.00	0.00	0.00	17.	*	1	0820	85	0.00	0.00	0.00	17.
1	0410	35	0.00	0.00	0.00	17.	*	1	0825	86	0.00	0.00	0.00	17.
1	0415	36	0.00	0.00	0.00	17.	*	1	0830	87	0.00	0.00	0.00	17.
1	0420	37	0.00	0.00	0.00	17.	*	1	0835	88	0.00	0.00	0.00	17.
1	0425	38	0.00	0.00	0.00	17.	*	1	0840	89	0.00	0.00	0.00	17.
1	0430	39	0.00	0.00	0.00	17.	*	1	0845	90	0.00	0.00	0.00	17.
1	0435	40	0.00	0.00	0.00	17.	*	1	0850	91	0.00	0.00	0.00	17.
1	0440	41	0.00	0.00	0.00	17.	*	1	0855	92	0.00	0.00	0.00	17.
1	0445	42	0.00	0.00	0.00	17.	*	1	0900	93	0.00	0.00	0.00	17.
1	0450	43	0.00	0.00	0.00	17.	*	1	0905	94	0.00	0.00	0.00	17.
1	0455	44	0.00	0.00	0.00	17.	*	1	0910	95	0.00	0.00	0.00	17.
1	0500	45	0.00	0.00	0.00	17.	*	1	0915	96	0.00	0.00	0.00	17.
1	0505	46	0.00	0.00	0.00	17.	*	1	0920	97	0.00	0.00	0.00	17.
1	0510	47	0.00	0.00	0.00	17.	*	1	0925	98	0.00	0.00	0.00	17.
1	0515	48	0.00	0.00	0.00	17.	*	1	0930	99	0.00	0.00	0.00	17.
1	0520	49	0.00	0.00	0.00	17.	*	1	0935	100	0.00	0.00	0.00	17.
1	0525	50	0.00	0.00	0.00	17.	*	1	0940	101	0.00	0.00	0.00	17.
1	0530	51	0.00	0.00	0.00	17.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.87, TOTAL EXCESS = 0.58

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
17.	2.33	(CFS)	17.	15.	15.	15.
		(INCHES)	0.057	0.071	0.071	0.071
		(AC-FT)	8.	10.	10.	10.

CUMULATIVE AREA = 2.72 SQ MI

STATION SUB4

(O) OUTFLOW

	0.	2.	4.	6.	8.	10.	12.	14.	16.	18.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLL
10150	70										LLLLLLLLLLLLLLLLLLLLLLLLXXXXX		
10155	8.0											LLLLLLXXXX	
10200	9.	O											LLXX
10205	10.		O										LLX
10210	11.			O									LX
10215	12.				O								X
10220	13.					O							X
10225	14.						O						
10230	15.							O					
10235	16.								O				
10240	17.								O				
10245	18.								O				
10250	19.								O				
10255	20.								O				
10300	21.								O				
10305	22.								O				
10310	23.								O				
10315	24.								O				
10320	25.								O				
10325	26.								O				
10330	27.								O				
10335	28.								O				
10340	29.								O				
10345	30.								O				
10350	31.								O				
10355	32.								O				
10400	33.								O				
10405	34.								O				
10410	35.								O				
10415	36.								O				
10420	37.								O				
10425	38.								O				
10430	39.								O				
10435	40.								O				
10440	41.								O				
10445	42.								O				
10450	43.								O				
10455	44.								O				
10500	45.								O				
10505	46.								O				
10510	47.								O				
10515	48.								O				
10520	49.								O				
10525	50.								O				
10530	51.								O				
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10550	55.								O				

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10635  64.                                                    0
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10650  67.                                                    0
10655  68.                                                    0
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10705  70.                                                    0
10710  71.                                                    0
10715  72.                                                    0
10720  73.                                                    0
10725  74.                                                    0
10730  75.                                                    0
10735  76.                                                    0
10740  77.                                                    0
10745  78.                                                    0
10750  79.                                                    0
10755  80.                                                    0
10800  81.                                                    0
10805  82.                                                    0
10810  83.                                                    0
10815  84.                                                    0
10820  85.                                                    0
10825  86.                                                    0
10830  87.                                                    0
10835  88.                                                    0
10840  89.                                                    0
10845  90.                                                    0
10850  91.                                                    0
10855  92.                                                    0
10900  93.                                                    0
10905  94.                                                    0
10910  95.                                                    0
10915  96.                                                    0
10920  97.                                                    0
10925  98.                                                    0
10930  99.                                                    0
10935 100.                                                    0
10940 101.----------+---------+---------+---------+---------+---0-----+---------+---------+---------+
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          ***************
          *             *
66 KK     *     DIV25   *
          *             *
          ***************
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RETRIEVE DIVERSION FROM CONCENTRATION B OF AREA 2

68 DR RETRIEVE DIVERSION HYDROGRAPH

ISTAD DIV25 DIVERSION HYDROGRAPH IDENTIFICATION

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HYDROGRAPH AT STATION DIV25

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	10.	1		0540	53	10.	1		0750	79	9.
1		0125	2	0.	1		0335	28	10.	1		0545	54	10.	1		0755	80	8.
1		0130	3	0.	1		0340	29	10.	1		0550	55	10.	1		0800	81	8.
1		0135	4	0.	1		0345	30	10.	1		0555	56	10.	1		0805	82	8.
1		0140	5	0.	1		0350	31	10.	1		0600	57	10.	1		0810	83	8.
1		0145	6	0.	1		0355	32	10.	1		0605	58	10.	1		0815	84	8.
1		0150	7	0.	1		0400	33	10.	1		0610	59	10.	1		0820	85	8.
1		0155	8	1.	1		0405	34	10.	1		0615	60	10.	1		0825	86	8.
1		0200	9	2.	1		0410	35	10.	1		0620	61	10.	1		0830	87	8.
1		0205	10	4.	1		0415	36	10.	1		0625	62	10.	1		0835	88	8.
1		0210	11	6.	1		0420	37	10.	1		0630	63	10.	1		0840	89	8.
1		0215	12	8.	1		0425	38	10.	1		0635	64	10.	1		0845	90	8.
1		0220	13	9.	1		0430	39	10.	1		0640	65	10.	1		0850	91	8.
1		0225	14	10.	1		0435	40	10.	1		0645	66	9.	1		0855	92	8.
1		0230	15	10.	1		0440	41	10.	1		0650	67	9.	1		0900	93	8.
1		0235	16	10.	1		0445	42	10.	1		0655	68	9.	1		0905	94	8.
1		0240	17	10.	1		0450	43	10.	1		0700	69	9.	1		0910	95	7.
1		0245	18	10.	1		0455	44	10.	1		0705	70	9.	1		0915	96	7.
1		0250	19	10.	1		0500	45	10.	1		0710	71	9.	1		0920	97	7.
1		0255	20	10.	1		0505	46	10.	1		0715	72	9.	1		0925	98	7.
1		0300	21	10.	1		0510	47	10.	1		0720	73	9.	1		0930	99	7.
1		0305	22	10.	1		0515	48	10.	1		0725	74	9.	1		0935	100	7.
1		0310	23	10.	1		0520	49	10.	1		0730	75	9.	1		0940	101	7.
1		0315	24	10.	1		0525	50	10.	1		0735	76	9.					
1		0320	25	10.	1		0530	51	10.	1		0740	77	9.					
1		0325	26	10.	1		0535	52	10.	1		0745	78	9.					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.033	0.040	0.040	0.040
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 0.00 SQ MI

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         **************
         *            *
69 KK    *    SUB5B   *
         *            *
         **************
                NORTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
                 ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99TH STREET

          SUBBASIN RUNOFF DATA

75 BA      SUBBASIN CHARACTERISTICS
              TAREA        0.50  SUBBASIN AREA

           PRECIPITATION DATA

72 PB         STORM        2.45  BASIN TOTAL PRECIPITATION

73 PI        INCREMENTAL PRECIPITATION PATTERN
             0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
             0.06     0.05

76 LS      SCS LOSS RATE
              STRTL        0.78  INITIAL ABSTRACTION
             CRVNBR       72.00  CURVE NUMBER
              RTIMP        4.00  PERCENT IMPERVIOUS AREA

            LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
              STRTL        0.78  INITIAL ABSTRACTION
             CRVNBR       72.00  CURVE NUMBER
              RTIMP        4.00  PERCENT IMPERVIOUS AREA

           KINEMATIC WAVE
77 UK       OVERLAND-FLOW ELEMENT NO. 1
                  L       1850.  OVERLAND FLOW LENGTH
                  S      0.0033  SLOPE
                  N       0.200  ROUGHNESS COEFFICIENT
                 PA        25.0  PERCENT OF SUBBASIN
78 UK       OVERLAND-FLOW ELEMENT NO. 2
                  L       5600.  OVERLAND FLOW LENGTH
                  S      0.0033  SLOPE
                  N       0.200  ROUGHNESS COEFFICIENT
                 PA        75.0  PERCENT OF SUBBASIN
79 RK       MAIN CHANNEL
                  L       2640.  CHANNEL LENGTH
                  S      0.0050  SLOPE
                  N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                 CA        0.50  CONTRIBUTING AREA
              SHAPE        TRAP  CHANNEL SHAPE
                 WD        0.00  BOTTOM WIDTH OR DIAMETER
                  Z        1.00  SIDE SLOPE
             RUPSTQ         YES  ROUTE UPSTREAM HYDROGRAPH
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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	84.09
2	0.4280	1.667	5.00	133.33
3	2.1102	1.333	5.00	1320.00

HYDROGRAPH AT STATION SUB5B

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	20.
1		0125	2	0.05	0.05	0.00	0.	1		0540	53	0.00	0.00	0.00	20.
1		0130	3	0.07	0.07	0.00	0.	1		0545	54	0.00	0.00	0.00	20.
1		0135	4	0.07	0.07	0.00	0.	1		0550	55	0.00	0.00	0.00	20.
1		0140	5	0.10	0.10	0.00	0.	1		0555	56	0.00	0.00	0.00	20.
1		0145	6	0.16	0.15	0.01	0.	1		0600	57	0.00	0.00	0.00	20.
1		0150	7	1.16	0.97	0.19	0.	1		0605	58	0.00	0.00	0.00	20.
1		0155	8	0.39	0.23	0.16	1.	1		0610	59	0.00	0.00	0.00	20.
1		0200	9	0.14	0.08	0.06	3.	1		0615	60	0.00	0.00	0.00	20.
1		0205	10	0.11	0.06	0.05	6.	1		0620	61	0.00	0.00	0.00	20.
1		0210	11	0.09	0.04	0.05	11.	1		0625	62	0.00	0.00	0.00	20.
1		0215	12	0.06	0.03	0.03	15.	1		0630	63	0.00	0.00	0.00	20.
1		0220	13	0.05	0.02	0.03	16.	1		0635	64	0.00	0.00	0.00	20.
1		0225	14	0.00	0.00	0.00	18.	1		0640	65	0.00	0.00	0.00	20.
1		0230	15	0.00	0.00	0.00	19.	1		0645	66	0.00	0.00	0.00	19.
1		0235	16	0.00	0.00	0.00	20.	1		0650	67	0.00	0.00	0.00	19.
1		0240	17	0.00	0.00	0.00	20.	1		0655	68	0.00	0.00	0.00	19.
1		0245	18	0.00	0.00	0.00	20.	1		0700	69	0.00	0.00	0.00	19.
1		0250	19	0.00	0.00	0.00	20.	1		0705	70	0.00	0.00	0.00	19.
1		0255	20	0.00	0.00	0.00	20.	1		0710	71	0.00	0.00	0.00	19.
1		0300	21	0.00	0.00	0.00	20.	1		0715	72	0.00	0.00	0.00	19.
1		0305	22	0.00	0.00	0.00	20.	1		0720	73	0.00	0.00	0.00	18.
1		0310	23	0.00	0.00	0.00	20.	1		0725	74	0.00	0.00	0.00	18.
1		0315	24	0.00	0.00	0.00	20.	1		0730	75	0.00	0.00	0.00	18.
1		0320	25	0.00	0.00	0.00	20.	1		0735	76	0.00	0.00	0.00	18.
1		0325	26	0.00	0.00	0.00	20.	1		0740	77	0.00	0.00	0.00	18.
1		0330	27	0.00	0.00	0.00	20.	1		0745	78	0.00	0.00	0.00	18.
1		0335	28	0.00	0.00	0.00	20.	1		0750	79	0.00	0.00	0.00	17.
1		0340	29	0.00	0.00	0.00	20.	1		0755	80	0.00	0.00	0.00	17.
1		0345	30	0.00	0.00	0.00	20.	1		0800	81	0.00	0.00	0.00	17.
1		0350	31	0.00	0.00	0.00	20.	1		0805	82	0.00	0.00	0.00	17.
1		0355	32	0.00	0.00	0.00	20.	1		0810	83	0.00	0.00	0.00	17.
1		0400	33	0.00	0.00	0.00	20.	1		0815	84	0.00	0.00	0.00	17.
1		0405	34	0.00	0.00	0.00	20.	1		0820	85	0.00	0.00	0.00	17.
1		0410	35	0.00	0.00	0.00	20.	1		0825	86	0.00	0.00	0.00	16.
1		0415	36	0.00	0.00	0.00	20.	1		0830	87	0.00	0.00	0.00	16.
1		0420	37	0.00	0.00	0.00	20.	1		0835	88	0.00	0.00	0.00	16.
1		0425	38	0.00	0.00	0.00	20.	1		0840	89	0.00	0.00	0.00	16.
1		0430	39	0.00	0.00	0.00	20.	1		0845	90	0.00	0.00	0.00	16.
1		0435	40	0.00	0.00	0.00	20.	1		0850	91	0.00	0.00	0.00	16.
1		0440	41	0.00	0.00	0.00	20.	1		0855	92	0.00	0.00	0.00	16.
1		0445	42	0.00	0.00	0.00	20.	1		0900	93	0.00	0.00	0.00	16.
1		0450	43	0.00	0.00	0.00	20.	1		0905	94	0.00	0.00	0.00	15.
1		0455	44	0.00	0.00	0.00	20.	1		0910	95	0.00	0.00	0.00	15.
1		0500	45	0.00	0.00	0.00	20.	1		0915	96	0.00	0.00	0.00	15.
1		0505	46	0.00	0.00	0.00	20.	1		0920	97	0.00	0.00	0.00	15.

1	0510	47	0.00	0.00	0.00	20.	*	1	0925	98	0.00	0.00	0.00	15.
1	0515	48	0.00	0.00	0.00	20.	*	1	0930	99	0.00	0.00	0.00	15.
1	0520	49	0.00	0.00	0.00	20.	*	1	0935	100	0.00	0.00	0.00	15.
1	0525	50	0.00	0.00	0.00	20.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	20.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.87, TOTAL EXCESS = 0.58

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
20.	1.58	(CFS)	20.	17.	17.	17.
		(INCHES)	0.364	0.439	0.439	0.439
		(AC-FT)	10.	12.	12.	12.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB5B

(O) OUTFLOW

(L) PRECIP, (X) EXCESS

		0.	4.	8.	12.	16.	20.	24.	0.	0.	0.	0.	0.	0.
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER													
10120	10													
10125	20													L
10130	30													LL
10135	40													LL
10140	50													LLL
10145	60													LLLL
10150	70											LLLLLLLLLLLLLLLLLLLLLXXXXX		
10155	8.	O											LLLLLLXXXX	
10200	9.		O											LLXX
10205	10.			O										LLX
10210	11.				O									LX
10215	12.					O								X
10220	13.					O								X
10225	14.						O							
10230	15.						O							
10235	16.						O							
10240	17.						O							
10245	18.						O							
10250	19.						O							
10255	20.						O							
10300	21.						O							
10305	22.						O							
10310	23.						O							
10315	24.						O							
10320	25.						O							
10325	26.						O							
10330	27.						O							
10335	28.						O							
10340	29.						O							
10345	30.						O							
10350	31.						O							
10355	32.						O							
10400	33.						O							
10405	34.						O							
10410	35.						O							
10415	36.						O							
10420	37.						O							
10425	38.						O							
10430	39.						O							
10435	40.						O							
10440	41.						O							
10445	42.						O							
10450	43.						O							
10455	44.						O							
10500	45.						O							
10505	46.						O							
10510	47.						O							
10515	48.						O							
10520	49.						O							
10525	50.						O							
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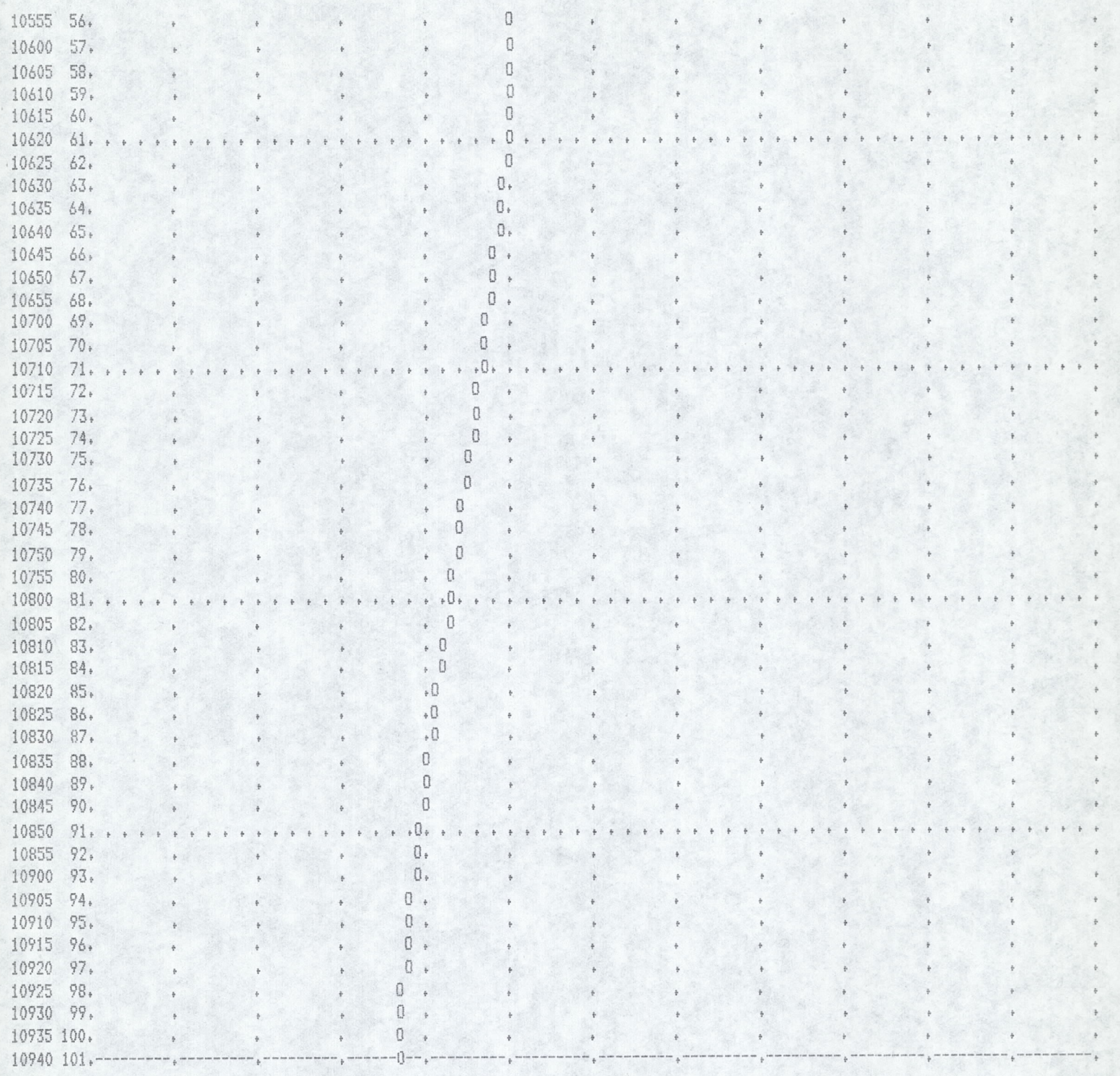
10535	52.						O							
10540	53.						O							
10545	54.						O							
10550	55.						O							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10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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         **************
         *            *
80 KK    *    SUB5A   *
         *            *
         **************
                      SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
                       ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

            SUBBASIN RUNOFF DATA

86 BA         SUBBASIN CHARACTERISTICS
                    TAREA         0.50  SUBBASIN AREA

              PRECIPITATION DATA

83 PB               STORM         2.45  BASIN TOTAL PRECIPITATION

84 PI           INCREMENTAL PRECIPITATION PATTERN
                   0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
                   0.06     0.05

87 LS         SCS LOSS RATE
                    STRTL         0.78  INITIAL ABSTRACTION
                   CRVNBR        72.00  CURVE NUMBER
                    RTIMP         4.00  PERCENT IMPERVIOUS AREA

                LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
                    STRTL         0.78  INITIAL ABSTRACTION
                   CRVNBR        72.00  CURVE NUMBER
                    RTIMP         4.00  PERCENT IMPERVIOUS AREA

              KINEMATIC WAVE
88 UK           OVERLAND-FLOW ELEMENT NO. 1
                        L        1850.  OVERLAND FLOW LENGTH
                        S       0.0033  SLOPE
                        N        0.200  ROUGHNESS COEFFICIENT
                       PA         25.0  PERCENT OF SUBBASIN
89 UK           OVERLAND-FLOW ELEMENT NO. 2
                        L        5600.  OVERLAND FLOW LENGTH
                        S       0.0033  SLOPE
                        N        0.200  ROUGHNESS COEFFICIENT
                       PA         75.0  PERCENT OF SUBBASIN
90 RK           MAIN CHANNEL
                        L        2640.  CHANNEL LENGTH
                        S       0.0050  SLOPE
                        N        0.025  CHANNEL ROUGHNESS COEFFICIENT
                       CA         0.50  CONTRIBUTING AREA
                    SHAPE         TRAP  CHANNEL SHAPE
                       WD         0.00  BOTTOM WIDTH OR DIAMETER
                        Z         1.00  SIDE SLOPE
                   RUPSTQ           NO  ROUTE UPSTREAM HYDROGRAPH

                                                  ***

       COMPUTED KINEMATIC PARAMETERS
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ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	84.09
2	0.4280	1.667	5.00	133.33
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB5A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	10.
1		0125	2	0.05	0.05	0.00	0.	*	1		0540	53	0.00	0.00	0.00	10.
1		0130	3	0.07	0.07	0.00	0.	*	1		0545	54	0.00	0.00	0.00	10.
1		0135	4	0.07	0.07	0.00	0.	*	1		0550	55	0.00	0.00	0.00	10.
1		0140	5	0.10	0.10	0.00	0.	*	1		0555	56	0.00	0.00	0.00	10.
1		0145	6	0.16	0.15	0.01	0.	*	1		0600	57	0.00	0.00	0.00	10.
1		0150	7	1.16	0.97	0.19	0.	*	1		0605	58	0.00	0.00	0.00	10.
1		0155	8	0.39	0.23	0.16	1.	*	1		0610	59	0.00	0.00	0.00	10.
1		0200	9	0.14	0.08	0.06	2.	*	1		0615	60	0.00	0.00	0.00	10.
1		0205	10	0.11	0.06	0.05	4.	*	1		0620	61	0.00	0.00	0.00	10.
1		0210	11	0.09	0.04	0.05	6.	*	1		0625	62	0.00	0.00	0.00	10.
1		0215	12	0.06	0.03	0.03	8.	*	1		0630	63	0.00	0.00	0.00	10.
1		0220	13	0.05	0.02	0.03	9.	*	1		0635	64	0.00	0.00	0.00	10.
1		0225	14	0.00	0.00	0.00	10.	*	1		0640	65	0.00	0.00	0.00	10.
1		0230	15	0.00	0.00	0.00	10.	*	1		0645	66	0.00	0.00	0.00	9.
1		0235	16	0.00	0.00	0.00	10.	*	1		0650	67	0.00	0.00	0.00	9.
1		0240	17	0.00	0.00	0.00	10.	*	1		0655	68	0.00	0.00	0.00	9.
1		0245	18	0.00	0.00	0.00	10.	*	1		0700	69	0.00	0.00	0.00	9.
1		0250	19	0.00	0.00	0.00	10.	*	1		0705	70	0.00	0.00	0.00	9.
1		0255	20	0.00	0.00	0.00	10.	*	1		0710	71	0.00	0.00	0.00	9.
1		0300	21	0.00	0.00	0.00	10.	*	1		0715	72	0.00	0.00	0.00	9.
1		0305	22	0.00	0.00	0.00	10.	*	1		0720	73	0.00	0.00	0.00	9.
1		0310	23	0.00	0.00	0.00	10.	*	1		0725	74	0.00	0.00	0.00	9.
1		0315	24	0.00	0.00	0.00	10.	*	1		0730	75	0.00	0.00	0.00	9.
1		0320	25	0.00	0.00	0.00	10.	*	1		0735	76	0.00	0.00	0.00	9.
1		0325	26	0.00	0.00	0.00	10.	*	1		0740	77	0.00	0.00	0.00	9.
1		0330	27	0.00	0.00	0.00	10.	*	1		0745	78	0.00	0.00	0.00	9.
1		0335	28	0.00	0.00	0.00	10.	*	1		0750	79	0.00	0.00	0.00	9.
1		0340	29	0.00	0.00	0.00	10.	*	1		0755	80	0.00	0.00	0.00	8.
1		0345	30	0.00	0.00	0.00	10.	*	1		0800	81	0.00	0.00	0.00	8.
1		0350	31	0.00	0.00	0.00	10.	*	1		0805	82	0.00	0.00	0.00	8.
1		0355	32	0.00	0.00	0.00	10.	*	1		0810	83	0.00	0.00	0.00	8.
1		0400	33	0.00	0.00	0.00	10.	*	1		0815	84	0.00	0.00	0.00	8.
1		0405	34	0.00	0.00	0.00	10.	*	1		0820	85	0.00	0.00	0.00	8.
1		0410	35	0.00	0.00	0.00	10.	*	1		0825	86	0.00	0.00	0.00	8.
1		0415	36	0.00	0.00	0.00	10.	*	1		0830	87	0.00	0.00	0.00	8.
1		0420	37	0.00	0.00	0.00	10.	*	1		0835	88	0.00	0.00	0.00	8.
1		0425	38	0.00	0.00	0.00	10.	*	1		0840	89	0.00	0.00	0.00	8.
1		0430	39	0.00	0.00	0.00	10.	*	1		0845	90	0.00	0.00	0.00	8.
1		0435	40	0.00	0.00	0.00	10.	*	1		0850	91	0.00	0.00	0.00	8.
1		0440	41	0.00	0.00	0.00	10.	*	1		0855	92	0.00	0.00	0.00	8.
1		0445	42	0.00	0.00	0.00	10.	*	1		0900	93	0.00	0.00	0.00	8.
1		0450	43	0.00	0.00	0.00	10.	*	1		0905	94	0.00	0.00	0.00	8.
1		0455	44	0.00	0.00	0.00	10.	*	1		0910	95	0.00	0.00	0.00	7.
1		0500	45	0.00	0.00	0.00	10.	*	1		0915	96	0.00	0.00	0.00	7.
1		0505	46	0.00	0.00	0.00	10.	*	1		0920	97	0.00	0.00	0.00	7.
1		0510	47	0.00	0.00	0.00	10.	*	1		0925	98	0.00	0.00	0.00	7.
1		0515	48	0.00	0.00	0.00	10.	*	1		0930	99	0.00	0.00	0.00	7.

1	0520	49	0.00	0.00	0.00	10.	*	1	0935	100	0.00	0.00	0.00	7.
1	0525	50	0.00	0.00	0.00	10.	*	1	0940	101	0.00	0.00	0.00	7.
1	0530	51	0.00	0.00	0.00	10.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.87, TOTAL EXCESS = 0.58

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW				
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.179	0.218	0.218	0.218
		(AC-FT)	5.	6.	6.	6.

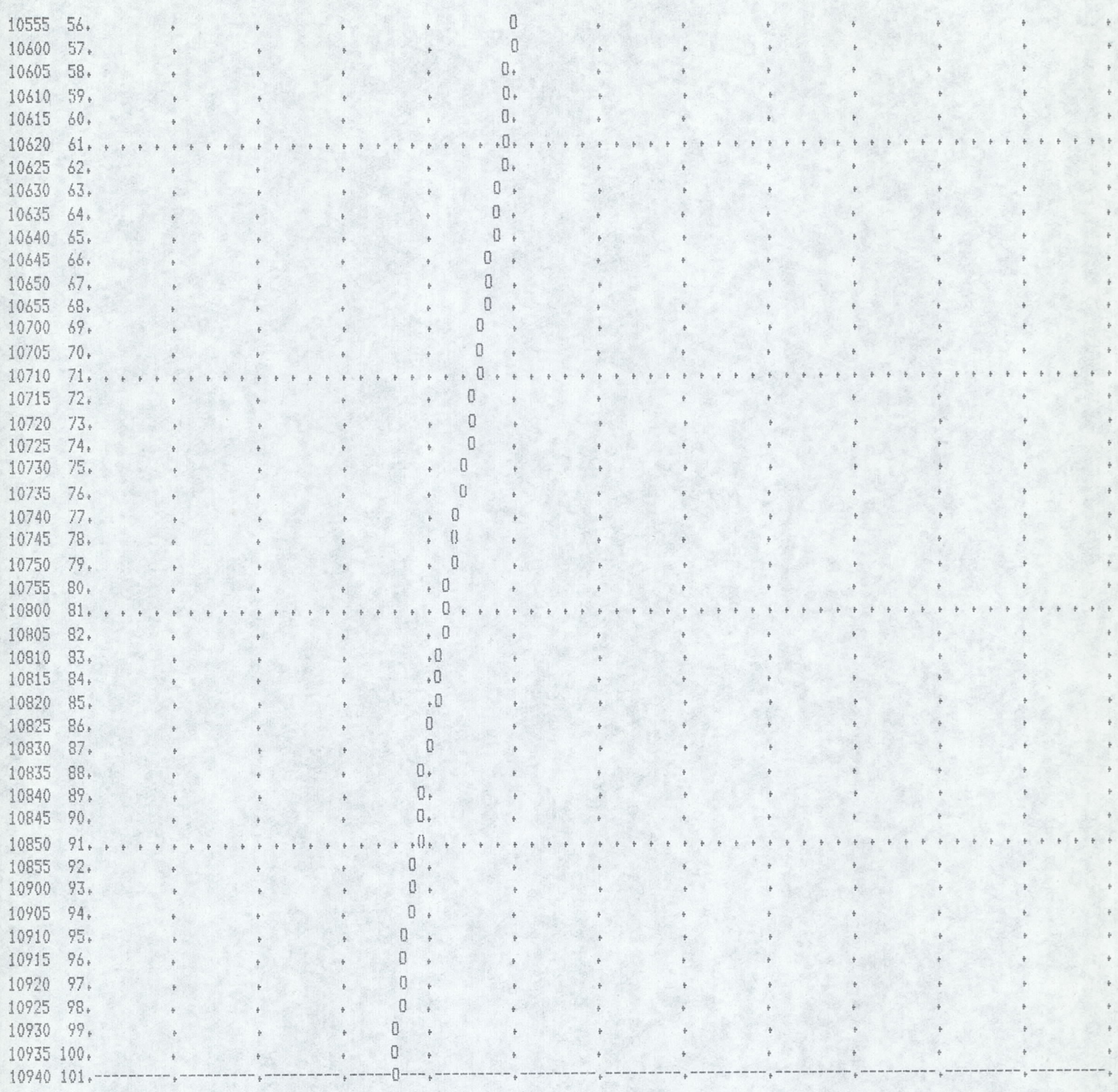
CUMULATIVE AREA = 0.50 SQ MI

STATION SUB5A

(O) OUTFLOW

(L) PRECIP, (X) EXCESS

	0.	2.	4.	6.	8.	10.	0.	0.	0.	0.	0.	0.	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLL
10150	7.0										LLLLLLLLLLLLLLLLLLLLLLLLXXXXX		
10155	8.	O										LLLLLLXXXX	
10200	9.		O										LLXX
10205	10.			O									LLX
10210	11.				O								LX
10215	12.				O								X
10220	13.					O							X
10225	14.					O							
10230	15.					O							
10235	16.					O							
10240	17.					O							
10245	18.					O							
10250	19.					O							
10255	20.					O							
10300	21.					O							
10305	22.					O							
10310	23.					O							
10315	24.					O							
10320	25.					O							
10325	26.					O							
10330	27.					O							
10335	28.					O							
10340	29.					O							
10345	30.					O							
10350	31.					O							
10355	32.					O							
10400	33.					O							
10405	34.					O							
10410	35.					O							
10415	36.					O							
10420	37.					O							
10425	38.					O							
10430	39.					O							
10435	40.					O							
10440	41.					O							
10445	42.					O							
10450	43.					O							
10455	44.					O							
10500	45.					O							
10505	46.					O							
10510	47.					O							
10515	48.					O							
10520	49.					O							
10525	50.					O							
10530	51.					O							
10535	52.					O							
10540	53.					O							
10545	54.					O							
10550	55.					O							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10855 92.
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10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
91 KK     *      SUB5  *
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COMBINE RUNOFF FROM SUB5A AND SUB5B AND DIVERT 25 AT C.P.(E)

93 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB5

SUM OF 2 HYDROGRAPHS

****

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	30.	1		0540	53	30.	1		0750	79	26.
1		0125	2	0.	1		0335	28	30.	1		0545	54	30.	1		0755	80	26.
1		0130	3	0.	1		0340	29	30.	1		0550	55	30.	1		0800	81	26.
1		0135	4	0.	1		0345	30	30.	1		0555	56	30.	1		0805	82	25.
1		0140	5	0.	1		0350	31	30.	1		0600	57	30.	1		0810	83	25.
1		0145	6	0.	1		0355	32	30.	1		0605	58	30.	1		0815	84	25.
1		0150	7	0.	1		0400	33	30.	1		0610	59	30.	1		0820	85	25.
1		0155	8	2.	1		0405	34	30.	1		0615	60	30.	1		0825	86	24.
1		0200	9	5.	1		0410	35	30.	1		0620	61	30.	1		0830	87	24.
1		0205	10	11.	1		0415	36	30.	1		0625	62	30.	1		0835	88	24.
1		0210	11	17.	1		0420	37	30.	1		0630	63	29.	1		0840	89	24.
1		0215	12	22.	1		0425	38	30.	1		0635	64	29.	1		0845	90	24.
1		0220	13	25.	1		0430	39	30.	1		0640	65	29.	1		0850	91	23.
1		0225	14	28.	1		0435	40	30.	1		0645	66	29.	1		0855	92	23.
1		0230	15	29.	1		0440	41	30.	1		0650	67	29.	1		0900	93	23.
1		0235	16	30.	1		0445	42	30.	1		0655	68	28.	1		0905	94	23.
1		0240	17	30.	1		0450	43	30.	1		0700	69	28.	1		0910	95	23.
1		0245	18	30.	1		0455	44	30.	1		0705	70	28.	1		0915	96	23.
1		0250	19	30.	1		0500	45	30.	1		0710	71	28.	1		0920	97	22.
1		0255	20	30.	1		0505	46	30.	1		0715	72	28.	1		0925	98	22.
1		0300	21	30.	1		0510	47	30.	1		0720	73	27.	1		0930	99	22.
1		0305	22	30.	1		0515	48	30.	1		0725	74	27.	1		0935	100	22.
1		0310	23	30.	1		0520	49	30.	1		0730	75	27.	1		0940	101	22.
1		0315	24	30.	1		0525	50	30.	1		0735	76	27.					
1		0320	25	30.	1		0530	51	30.	1		0740	77	26.					
1		0325	26	30.	1		0535	52	30.	1		0745	78	26.					

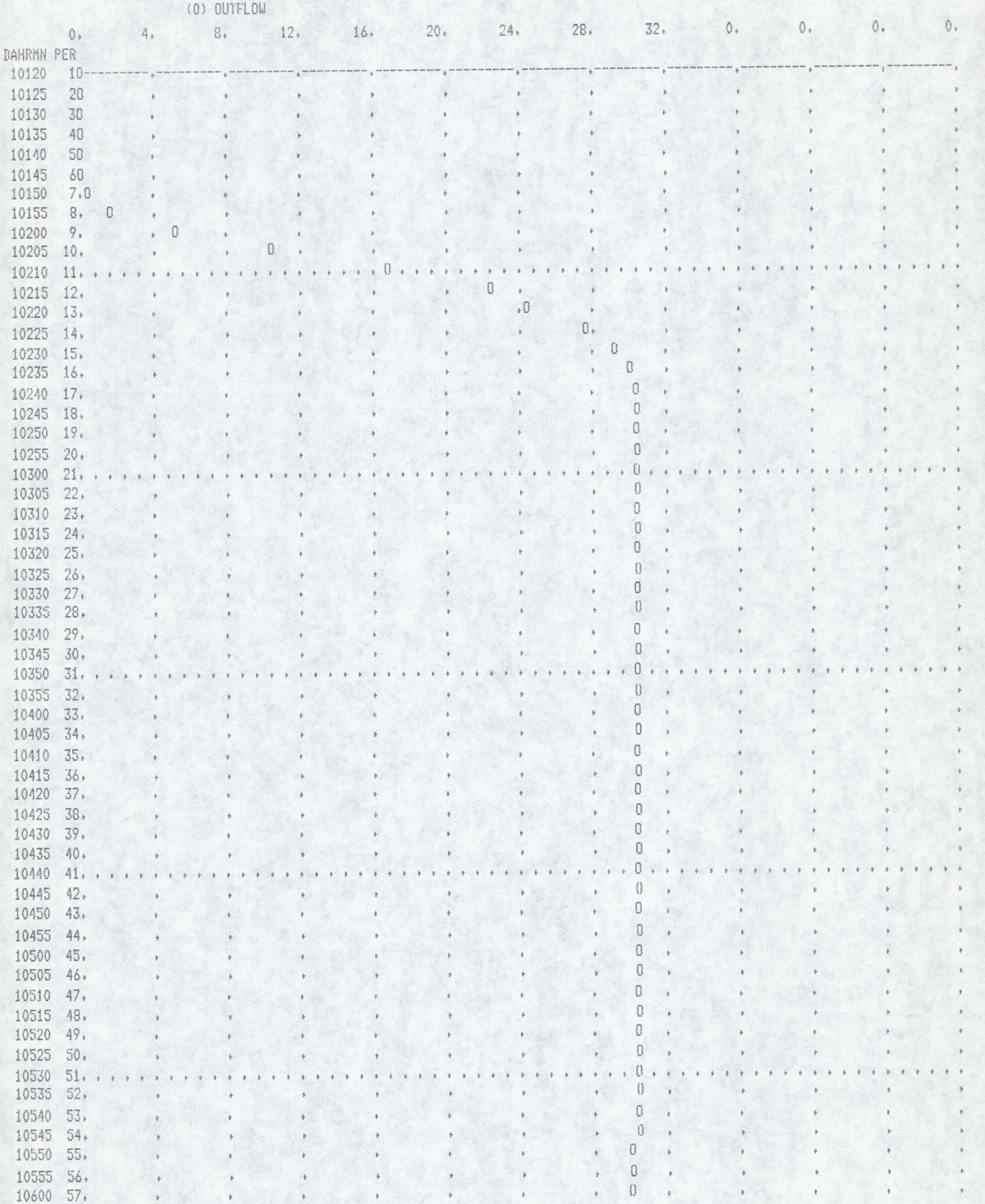
****

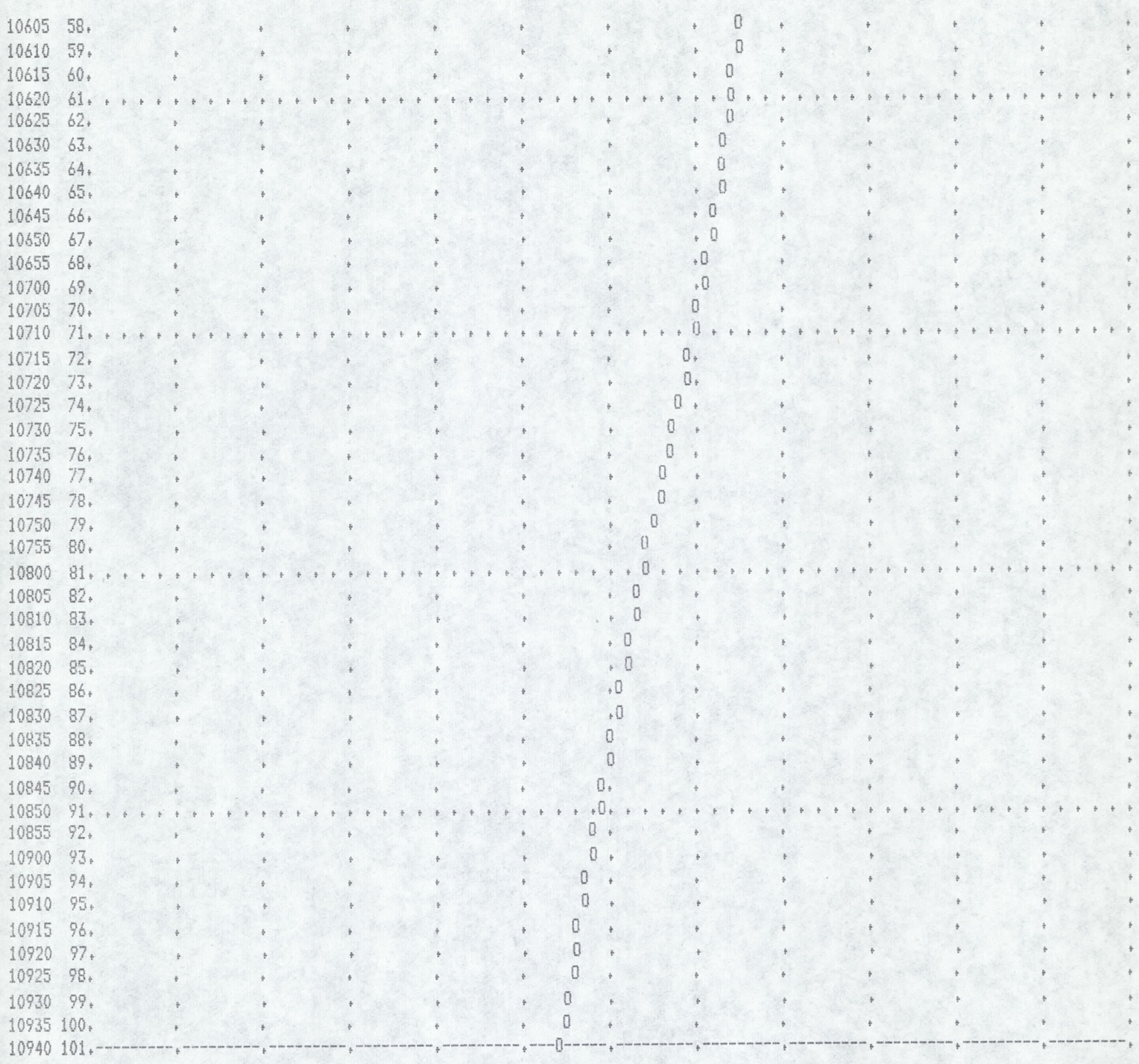
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
30.	1.58	(CFS)	29.	25.	25.	25.
		(INCHES)	0.272	0.328	0.328	0.328
		(AC-FT)	14.	18.	18.	18.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB5

(O) OUTFLOW

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10635 64.
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10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
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10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
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10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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              *            *
   94 KK      *     SUB5   *
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DIVERT TO THOMAS ROAD

DT	DIVERSION				
	ISTAD	THOMAS	DIVERSION HYDROGRAPH IDENTIFICATION		
DI	INFLOW	2.00	100.00	1000.00	
DQ	DIVERTED FLOW	1.00	50.00	500.00	

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DIVERSION HYDROGRAPH THOMAS

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DA MON	HRMN	ORD	FLOW	DA MON	HRMN	ORD	FLOW	DA MON	HRMN	ORD	FLOW	DA MON	HRMN	ORD	FLOW
1	0120	1	0.	1	0330	27	15.	1	0540	53	15.	1	0750	79	13.
1	0125	2	0.	1	0335	28	15.	1	0545	54	15.	1	0755	80	13.
1	0130	3	0.	1	0340	29	15.	1	0550	55	15.	1	0800	81	13.
1	0135	4	0.	1	0345	30	15.	1	0555	56	15.	1	0805	82	13.
1	0140	5	0.	1	0350	31	15.	1	0600	57	15.	1	0810	83	13.
1	0145	6	0.	1	0355	32	15.	1	0605	58	15.	1	0815	84	12.
1	0150	7	0.	1	0400	33	15.	1	0610	59	15.	1	0820	85	12.
1	0155	8	1.	1	0405	34	15.	1	0615	60	15.	1	0825	86	12.
1	0200	9	3.	1	0410	35	15.	1	0620	61	15.	1	0830	87	12.
1	0205	10	5.	1	0415	36	15.	1	0625	62	15.	1	0835	88	12.
1	0210	11	8.	1	0420	37	15.	1	0630	63	15.	1	0840	89	12.
1	0215	12	11.	1	0425	38	15.	1	0635	64	15.	1	0845	90	12.
1	0220	13	12.	1	0430	39	15.	1	0640	65	15.	1	0850	91	12.
1	0225	14	14.	1	0435	40	15.	1	0645	66	14.	1	0855	92	12.
1	0230	15	15.	1	0440	41	15.	1	0650	67	14.	1	0900	93	12.
1	0235	16	15.	1	0445	42	15.	1	0655	68	14.	1	0905	94	11.
1	0240	17	15.	1	0450	43	15.	1	0700	69	14.	1	0910	95	11.
1	0245	18	15.	1	0455	44	15.	1	0705	70	14.	1	0915	96	11.
1	0250	19	15.	1	0500	45	15.	1	0710	71	14.	1	0920	97	11.
1	0255	20	15.	1	0505	46	15.	1	0715	72	14.	1	0925	98	11.
1	0300	21	15.	1	0510	47	15.	1	0720	73	14.	1	0930	99	11.
1	0305	22	15.	1	0515	48	15.	1	0725	74	14.	1	0935	100	11.
1	0310	23	15.	1	0520	49	15.	1	0730	75	13.	1	0940	101	11.
1	0315	24	15.	1	0525	50	15.	1	0735	76	13.				
1	0320	25	15.	1	0530	51	15.	1	0740	77	13.				
1	0325	26	15.	1	0535	52	15.	1	0745	78	13.				

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PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
		MAXIMUM AVERAGE FLOW				
15.	1.50	(CFS)	15.	13.	13.	13.
		(INCHES)	0.136	0.164	0.164	0.164
		(AC-FT)	7.	9.	9.	9.

CUMULATIVE AREA = 1.00 SQ MI

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HYDROGRAPH AT STATION SUB5

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	15.	1		0540	53	15.	1		0750	79	13.
1		0125	2	0.	1		0335	28	15.	1		0545	54	15.	1		0755	80	13.
1		0130	3	0.	1		0340	29	15.	1		0550	55	15.	1		0800	81	13.
1		0135	4	0.	1		0345	30	15.	1		0555	56	15.	1		0805	82	13.
1		0140	5	0.	1		0350	31	15.	1		0600	57	15.	1		0810	83	13.
1		0145	6	0.	1		0355	32	15.	1		0605	58	15.	1		0815	84	12.
1		0150	7	0.	1		0400	33	15.	1		0610	59	15.	1		0820	85	12.
1		0155	8	1.	1		0405	34	15.	1		0615	60	15.	1		0825	86	12.
1		0200	9	3.	1		0410	35	15.	1		0620	61	15.	1		0830	87	12.
1		0205	10	5.	1		0415	36	15.	1		0625	62	15.	1		0835	88	12.
1		0210	11	8.	1		0420	37	15.	1		0630	63	15.	1		0840	89	12.
1		0215	12	11.	1		0425	38	15.	1		0635	64	15.	1		0845	90	12.
1		0220	13	12.	1		0430	39	15.	1		0640	65	15.	1		0850	91	12.
1		0225	14	14.	1		0435	40	15.	1		0645	66	14.	1		0855	92	12.
1		0230	15	15.	1		0440	41	15.	1		0650	67	14.	1		0900	93	12.
1		0235	16	15.	1		0445	42	15.	1		0655	68	14.	1		0905	94	11.
1		0240	17	15.	1		0450	43	15.	1		0700	69	14.	1		0910	95	11.
1		0245	18	15.	1		0455	44	15.	1		0705	70	14.	1		0915	96	11.
1		0250	19	15.	1		0500	45	15.	1		0710	71	14.	1		0920	97	11.
1		0255	20	15.	1		0505	46	15.	1		0715	72	14.	1		0925	98	11.
1		0300	21	15.	1		0510	47	15.	1		0720	73	14.	1		0930	99	11.
1		0305	22	15.	1		0515	48	15.	1		0725	74	14.	1		0935	100	11.
1		0310	23	15.	1		0520	49	15.	1		0730	75	13.	1		0940	101	11.
1		0315	24	15.	1		0525	50	15.	1		0735	76	13.					
1		0320	25	15.	1		0530	51	15.	1		0740	77	13.					
1		0325	26	15.	1		0535	52	15.	1		0745	78	13.					

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PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
		MAXIMUM AVERAGE FLOW				
15.	1.50	(CFS)	15.	13.	13.	13.
		(INCHES)	0.136	0.164	0.164	0.164
		(AC-FT)	7.	9.	9.	9.

CUMULATIVE AREA = 1.00 SQ MI

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          *             *
99 KK     *      SUB6   *
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ROUTED TO SUB6 (AT MID-POINT OF (E) AND (F))
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

HYDROGRAPH ROUTING DATA

102 RK KINEMATIC WAVE STREAM ROUTING

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

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KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.5941	1.423	2.50	1320.00

HYDROGRAPH AT STATION SUB6

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0120	1	0.	1	0330	27	15.	1	0540	53	15.	1	0750	79	13.
1	0125	2	0.	1	0335	28	15.	1	0545	54	15.	1	0755	80	13.
1	0130	3	0.	1	0340	29	15.	1	0550	55	15.	1	0800	81	13.
1	0135	4	0.	1	0345	30	15.	1	0555	56	15.	1	0805	82	13.
1	0140	5	0.	1	0350	31	15.	1	0600	57	15.	1	0810	83	13.
1	0145	6	0.	1	0355	32	15.	1	0605	58	15.	1	0815	84	13.
1	0150	7	0.	1	0400	33	15.	1	0610	59	15.	1	0820	85	13.
1	0155	8	0.	1	0405	34	15.	1	0615	60	15.	1	0825	86	12.
1	0200	9	0.	1	0410	35	15.	1	0620	61	15.	1	0830	87	12.
1	0205	10	0.	1	0415	36	15.	1	0625	62	15.	1	0835	88	12.
1	0210	11	1.	1	0420	37	15.	1	0630	63	15.	1	0840	89	12.
1	0215	12	4.	1	0425	38	15.	1	0635	64	15.	1	0845	90	12.
1	0220	13	7.	1	0430	39	15.	1	0640	65	15.	1	0850	91	12.
1	0225	14	10.	1	0435	40	15.	1	0645	66	15.	1	0855	92	12.
1	0230	15	12.	1	0440	41	15.	1	0650	67	14.	1	0900	93	12.
1	0235	16	14.	1	0445	42	15.	1	0655	68	14.	1	0905	94	12.
1	0240	17	15.	1	0450	43	15.	1	0700	69	14.	1	0910	95	12.
1	0245	18	15.	1	0455	44	15.	1	0705	70	14.	1	0915	96	11.
1	0250	19	15.	1	0500	45	15.	1	0710	71	14.	1	0920	97	11.
1	0255	20	15.	1	0505	46	15.	1	0715	72	14.	1	0925	98	11.
1	0300	21	15.	1	0510	47	15.	1	0720	73	14.	1	0930	99	11.
1	0305	22	15.	1	0515	48	15.	1	0725	74	14.	1	0935	100	11.
1	0310	23	15.	1	0520	49	15.	1	0730	75	14.	1	0940	101	11.
1	0315	24	15.	1	0525	50	15.	1	0735	76	14.				
1	0320	25	15.	1	0530	51	15.	1	0740	77	13.				
1	0325	26	15.	1	0535	52	15.	1	0745	78	13.				

* * *

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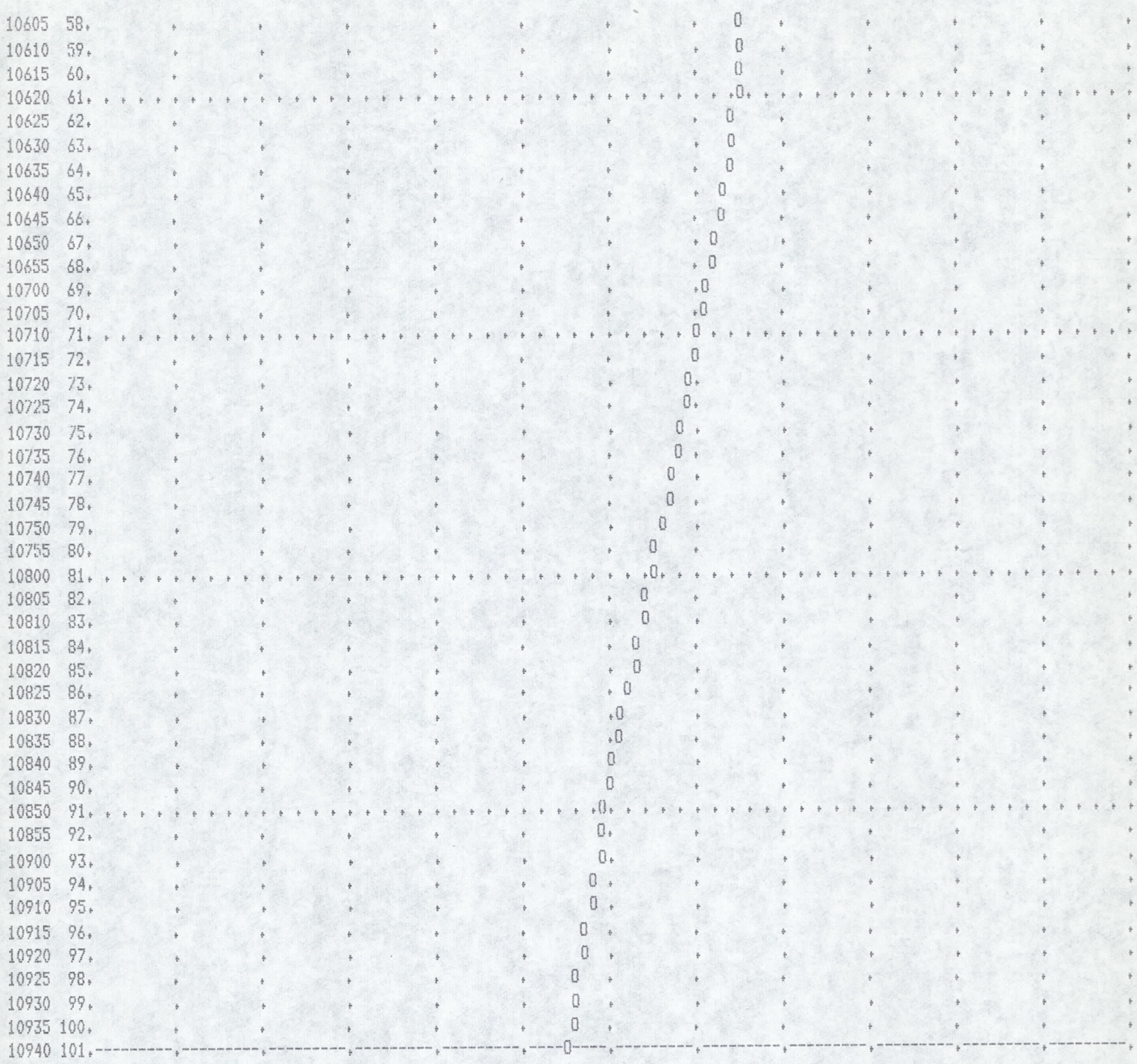
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
15.	1.83	(CFS)	15.	12.	12.	12.
		(INCHES)	0.136	0.160	0.160	0.160
		(AC-FT)	7.	9.	9.	9.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB6

(O) OUTFLOW

DAHRMN	PER	0.	2.	4.	6.	8.	10.	12.	14.	16.	0.	0.	0.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	70													
10155	80													
10200	90													
10205	10.0													
10210	11.		0											
10215	12.			0										
10220	13.					0								
10225	14.						0							
10230	15.							0						
10235	16.								0					
10240	17.									0				
10245	18.									0				
10250	19.									0				
10255	20.									0				
10300	21.									0				
10305	22.									0				
10310	23.									0				
10315	24.									0				
10320	25.									0				
10325	26.									0				
10330	27.									0				
10335	28.									0				
10340	29.									0				
10345	30.									0				
10350	31.									0				
10355	32.									0				
10400	33.									0				
10405	34.									0				
10410	35.									0				
10415	36.									0				
10420	37.									0				
10425	38.									0				
10430	39.									0				
10435	40.									0				
10440	41.									0				
10445	42.									0				
10450	43.									0				
10455	44.									0				
10500	45.									0				
10505	46.									0				
10510	47.									0				
10515	48.									0				
10520	49.									0				
10525	50.									0				
10530	51.									0				
10535	52.									0				
10540	53.									0				
10545	54.									0				
10550	55.									0				
10555	56.									0				
10600	57.									0				


10605 58
10610 59
10615 60
10620 61
10625 62
10630 63
10635 64
10640 65
10645 66
10650 67
10655 68
10700 69
10705 70
10710 71
10715 72
10720 73
10725 74
10730 75
10735 76
10740 77
10745 78
10750 79
10755 80
10800 81
10805 82
10810 83
10815 84
10820 85
10825 86
10830 87
10835 88
10840 89
10845 90
10850 91
10855 92
10900 93
10905 94
10910 95
10915 96
10920 97
10925 98
10930 99
10935 100
10940 101

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              **************
              *            *
 103 KK       *    SUB6A   *
              *            *
              **************
                         AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                         ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                               COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                               MAIN CHANNEL 5000' RUNING NORTH-SOUTH
                         CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
                         MODELED AS 75% OF THE AREA ROUTED THROUGH THE LAKE

                SUBBASIN RUNOFF DATA

 110 BA           SUBBASIN CHARACTERISTICS
                        TAREA        0.75  SUBBASIN AREA

                  PRECIPITATION DATA

  83 PB                 STORM        2.45  BASIN TOTAL PRECIPITATION

  84 PI             INCREMENTAL PRECIPITATION PATTERN
                      0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                      0.06      0.05

 111 LS           SCS LOSS RATE
                        STRTL        0.50  INITIAL ABSTRACTION
                       CRVNBR       80.00  CURVE NUMBER
                        RTIMP       29.00  PERCENT IMPERVIOUS AREA

                  KINEMATIC WAVE
 112 UK             OVERLAND-FLOW ELEMENT NO. 1
                            L        100.  OVERLAND FLOW LENGTH
                            S      0.0033  SLOPE
                            N       0.200  ROUGHNESS COEFFICIENT
                           PA       100.0  PERCENT OF SUBBASIN
 113 RK             COLLECTOR CHANNEL
                            L       2000.  CHANNEL LENGTH
                            S      0.0050  SLOPE
                            N       0.160  CHANNEL ROUGHNESS COEFFICIENT
                           CA        0.10  CONTRIBUTING AREA
                        SHAPE        TRAP  CHANNEL SHAPE
                           WD        0.00  BOTTOM WIDTH OR DIAMETER
                            Z        1.00  SIDE SLOPE
 114 RK             MAIN CHANNEL
                            L       5000.  CHANNEL LENGTH
                            S      0.0050  SLOPE
                            N       0.160  CHANNEL ROUGHNESS COEFFICIENT
                           CA        0.75  CONTRIBUTING AREA
                        SHAPE        TRAP  CHANNEL SHAPE
                           WD        0.00  BOTTOM WIDTH OR DIAMETER
                            Z        1.00  SIDE SLOPE
                       RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH
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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	2500.00

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HYDROGRAPH AT STATION SUB6A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	18.
1		0125	2	0.05	0.04	0.01	0.	1		0540	53	0.00	0.00	0.00	17.
1		0130	3	0.07	0.05	0.02	0.	1		0545	54	0.00	0.00	0.00	16.
1		0135	4	0.07	0.05	0.02	0.	1		0550	55	0.00	0.00	0.00	15.
1		0140	5	0.10	0.07	0.03	0.	1		0555	56	0.00	0.00	0.00	14.
1		0145	6	0.16	0.11	0.05	0.	1		0600	57	0.00	0.00	0.00	13.
1		0150	7	1.16	0.58	0.58	0.	1		0605	58	0.00	0.00	0.00	12.
1		0155	8	0.39	0.12	0.27	5.	1		0610	59	0.00	0.00	0.00	12.
1		0200	9	0.14	0.04	0.10	31.	1		0615	60	0.00	0.00	0.00	11.
1		0205	10	0.11	0.03	0.08	92.	1		0620	61	0.00	0.00	0.00	10.
1		0210	11	0.09	0.02	0.07	178.	1		0625	62	0.00	0.00	0.00	10.
1		0215	12	0.06	0.01	0.05	269.	1		0630	63	0.00	0.00	0.00	9.
1		0220	13	0.05	0.01	0.04	347.	1		0635	64	0.00	0.00	0.00	9.
1		0225	14	0.00	0.00	0.00	402.	1		0640	65	0.00	0.00	0.00	8.
1		0230	15	0.00	0.00	0.00	430.	1		0645	66	0.00	0.00	0.00	8.
1		0235	16	0.00	0.00	0.00	435.	1		0650	67	0.00	0.00	0.00	8.
1		0240	17	0.00	0.00	0.00	422.	1		0655	68	0.00	0.00	0.00	7.
1		0245	18	0.00	0.00	0.00	398.	1		0700	69	0.00	0.00	0.00	7.
1		0250	19	0.00	0.00	0.00	367.	1		0705	70	0.00	0.00	0.00	7.
1		0255	20	0.00	0.00	0.00	334.	1		0710	71	0.00	0.00	0.00	6.
1		0300	21	0.00	0.00	0.00	301.	1		0715	72	0.00	0.00	0.00	6.
1		0305	22	0.00	0.00	0.00	270.	1		0720	73	0.00	0.00	0.00	6.
1		0310	23	0.00	0.00	0.00	241.	1		0725	74	0.00	0.00	0.00	6.
1		0315	24	0.00	0.00	0.00	215.	1		0730	75	0.00	0.00	0.00	5.
1		0320	25	0.00	0.00	0.00	192.	1		0735	76	0.00	0.00	0.00	5.
1		0325	26	0.00	0.00	0.00	171.	1		0740	77	0.00	0.00	0.00	5.
1		0330	27	0.00	0.00	0.00	153.	1		0745	78	0.00	0.00	0.00	5.
1		0335	28	0.00	0.00	0.00	137.	1		0750	79	0.00	0.00	0.00	5.
1		0340	29	0.00	0.00	0.00	123.	1		0755	80	0.00	0.00	0.00	4.
1		0345	30	0.00	0.00	0.00	110.	1		0800	81	0.00	0.00	0.00	4.
1		0350	31	0.00	0.00	0.00	99.	1		0805	82	0.00	0.00	0.00	4.
1		0355	32	0.00	0.00	0.00	90.	1		0810	83	0.00	0.00	0.00	4.
1		0400	33	0.00	0.00	0.00	81.	1		0815	84	0.00	0.00	0.00	4.
1		0405	34	0.00	0.00	0.00	73.	1		0820	85	0.00	0.00	0.00	4.
1		0410	35	0.00	0.00	0.00	67.	1		0825	86	0.00	0.00	0.00	3.
1		0415	36	0.00	0.00	0.00	61.	1		0830	87	0.00	0.00	0.00	3.
1		0420	37	0.00	0.00	0.00	56.	1		0835	88	0.00	0.00	0.00	3.
1		0425	38	0.00	0.00	0.00	51.	1		0840	89	0.00	0.00	0.00	3.
1		0430	39	0.00	0.00	0.00	47.	1		0845	90	0.00	0.00	0.00	3.
1		0435	40	0.00	0.00	0.00	43.	1		0850	91	0.00	0.00	0.00	3.
1		0440	41	0.00	0.00	0.00	39.	1		0855	92	0.00	0.00	0.00	3.
1		0445	42	0.00	0.00	0.00	36.	1		0900	93	0.00	0.00	0.00	3.
1		0450	43	0.00	0.00	0.00	34.	1		0905	94	0.00	0.00	0.00	3.
1		0455	44	0.00	0.00	0.00	31.	1		0910	95	0.00	0.00	0.00	3.
1		0500	45	0.00	0.00	0.00	29.	1		0915	96	0.00	0.00	0.00	2.
1		0505	46	0.00	0.00	0.00	27.	1		0920	97	0.00	0.00	0.00	2.

1	0510	47	0.00	0.00	0.00	25.	*	1	0925	98	0.00	0.00	0.00	2.
1	0515	48	0.00	0.00	0.00	23.	*	1	0930	99	0.00	0.00	0.00	2.
1	0520	49	0.00	0.00	0.00	22.	*	1	0935	100	0.00	0.00	0.00	2.
1	0525	50	0.00	0.00	0.00	20.	*	1	0940	101	0.00	0.00	0.00	2.
1	0530	51	0.00	0.00	0.00	19.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
435.	1.25	(CFS)	95.	69.	69.	69.
		(INCHES)	1.181	1.192	1.192	1.192
		(AC-FT)	47.	48.	48.	48.

CUMULATIVE AREA = 0.75 SQ MI

STATION SUB6A

(O) OUTFLOW

	0.	50.	100.	150.	200.	250.	300.	350.	400.	450.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLLX
10150	70										LLLLLLLLLLLLLLLXXXXXXXXXXXXXX		
10155	8.0											LLLXXXXXXX	
10200	9.	O											LXXX
10205	10.		O										LXX
10210	11.					O							XX
10215	12.						O						X
10220	13.							O					X
10225	14.								O				
10230	15.									O			
10235	16.									O			
10240	17.								O				
10245	18.								O				
10250	19.							O					
10255	20.							O					
10300	21.						O						
10305	22.						O						
10310	23.					O							
10315	24.					O							
10320	25.				O								
10325	26.				O								
10330	27.				O								
10335	28.			O									
10340	29.			O									
10345	30.		O										
10350	31.		O										
10355	32.		O										
10400	33.	O											
10405	34.	O											
10410	35.	O											
10415	36.	O											
10420	37.	O											
10425	38.	O											
10430	39.	O											
10435	40.	O											
10440	41.	O											
10445	42.	O											
10450	43.	O											
10455	44.	O											
10500	45.	O											
10505	46.	O											
10510	47.	O											
10515	48.	O											
10520	49.	O											
10525	50.	O											
10530	51.	O											
10535	52.	O											
10540	53.	O											
10545	54.	O											
10550	55.	O											

10555 56. 0
10600 57. 0
10605 58. 0
10610 59. 0
10615 60. 0
10620 61. 0
10625 62. 0
10630 63. 0
10635 64. 0
10640 65. 0
10645 66. 0
10650 67. 0
10655 68.0
10700 69.0
10705 70.0
10710 71.0
10715 72.0
10720 73.0
10725 74.0
10730 75.0
10735 76.0
10740 77.0
10745 78.0
10750 79.0
10755 80.0
10800 81.0
10805 82.0
10810 83.0
10815 84.0
10820 85.0
10825 86.0
10830 87.0
10835 88.0
10840 89.0
10845 90.0
10850 91.0
10855 92.0
10900 93.0
10905 94.0
10910 95.0
10915 960
10920 970
10925 980
10930 990
10935 1000
10940 1010

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           *             *
115 KK     *    SUB6A    *
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SUB6A LAKE ROUTING

HYDROGRAPH ROUTING DATA

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117 RL       ROUTING LOSSES
                  QLOSS        0.00  INITIAL LOSS
                  CLOSS        0.00  ADDITIONAL FRACTION LOST

118 RS       STORAGE ROUTING
                  NSTPS           1  NUMBER OF SUBREACHES
                   ITYP        STOR  TYPE OF INITIAL CONDITION
                 RSVRIC        0.00  INITIAL CONDITION
                      X        0.00  WORKING R AND D COEFFICIENT
```

119 SV	STORAGE	0.0	5.5	11.0	16.5	17.9	19.3	20.7	23.5
120 SQ	DISCHARGE	0.	0.	0.	0.	67.	190.	350.	750.
121 SE	ELEVATION	0.00	1.00	2.00	3.00	3.20	3.40	3.60	4.00

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HYDROGRAPH AT STATION SUB6A

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DA MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0120	1	0.	0.0	0.0	*	1	0410	35	80.	18.0	3.2	*	1	0700	69	8.	16.7	3.0
1	0125	2	0.	0.0	0.0	*	1	0415	36	72.	18.0	3.2	*	1	0705	70	8.	16.7	3.0
1	0130	3	0.	0.0	0.0	*	1	0420	37	66.	17.9	3.2	*	1	0710	71	7.	16.7	3.0
1	0135	4	0.	0.0	0.0	*	1	0425	38	63.	17.8	3.2	*	1	0715	72	7.	16.6	3.0
1	0140	5	0.	0.0	0.0	*	1	0430	39	59.	17.7	3.2	*	1	0720	73	7.	16.6	3.0
1	0145	6	0.	0.0	0.0	*	1	0435	40	55.	17.6	3.2	*	1	0725	74	6.	16.6	3.0
1	0150	7	0.	0.0	0.0	*	1	0440	41	51.	17.6	3.2	*	1	0730	75	6.	16.6	3.0
1	0155	8	0.	0.0	0.0	*	1	0445	42	47.	17.5	3.1	*	1	0735	76	6.	16.6	3.0
1	0200	9	0.	0.1	0.0	*	1	0450	43	44.	17.4	3.1	*	1	0740	77	6.	16.6	3.0
1	0205	10	0.	0.6	0.1	*	1	0455	44	40.	17.3	3.1	*	1	0745	78	5.	16.6	3.0
1	0210	11	0.	1.5	0.3	*	1	0500	45	38.	17.3	3.1	*	1	0750	79	5.	16.6	3.0
1	0215	12	0.	3.0	0.6	*	1	0505	46	35.	17.2	3.1	*	1	0755	80	5.	16.6	3.0
1	0220	13	0.	5.2	0.9	*	1	0510	47	32.	17.2	3.1	*	1	0800	81	5.	16.6	3.0
1	0225	14	0.	7.7	1.4	*	1	0515	48	30.	17.1	3.1	*	1	0805	82	5.	16.6	3.0
1	0230	15	0.	10.6	1.9	*	1	0520	49	28.	17.1	3.1	*	1	0810	83	4.	16.6	3.0
1	0235	16	0.	13.6	2.5	*	1	0525	50	26.	17.0	3.1	*	1	0815	84	4.	16.6	3.0
1	0240	17	2.	16.5	3.0	*	1	0530	51	24.	17.0	3.1	*	1	0820	85	4.	16.6	3.0
1	0245	18	149.	18.8	3.3	*	1	0535	52	22.	17.0	3.1	*	1	0825	86	4.	16.6	3.0
1	0250	19	272.	20.0	3.5	*	1	0540	53	21.	16.9	3.1	*	1	0830	87	4.	16.6	3.0
1	0255	20	316.	20.4	3.6	*	1	0545	54	20.	16.9	3.1	*	1	0835	88	4.	16.6	3.0

1	0300	21	317.	20.4	3.6	*	1	0550	55	18.	16.9	3.1	*	1	0840	89	3.	16.6	3.0
1	0305	22	299.	20.3	3.5	*	1	0555	56	17.	16.9	3.1	*	1	0845	90	3.	16.6	3.0
1	0310	23	275.	20.0	3.5	*	1	0600	57	16.	16.8	3.0	*	1	0850	91	3.	16.6	3.0
1	0315	24	249.	19.8	3.5	*	1	0605	58	15.	16.8	3.0	*	1	0855	92	3.	16.6	3.0
1	0320	25	223.	19.6	3.4	*	1	0610	59	14.	16.8	3.0	*	1	0900	93	3.	16.6	3.0
1	0325	26	200.	19.4	3.4	*	1	0615	60	13.	16.8	3.0	*	1	0905	94	3.	16.6	3.0
1	0330	27	181.	19.2	3.4	*	1	0620	61	13.	16.8	3.0	*	1	0910	95	3.	16.6	3.0
1	0335	28	164.	19.0	3.4	*	1	0625	62	12.	16.8	3.0	*	1	0915	96	3.	16.6	3.0
1	0340	29	148.	18.8	3.3	*	1	0630	63	11.	16.7	3.0	*	1	0920	97	3.	16.6	3.0
1	0345	30	133.	18.7	3.3	*	1	0635	64	11.	16.7	3.0	*	1	0925	98	3.	16.6	3.0
1	0350	31	120.	18.5	3.3	*	1	0640	65	10.	16.7	3.0	*	1	0930	99	2.	16.6	3.0
1	0355	32	108.	18.4	3.3	*	1	0645	66	10.	16.7	3.0	*	1	0935	100	2.	16.5	3.0
1	0400	33	98.	18.2	3.2	*	1	0650	67	9.	16.7	3.0	*	1	0940	101	2.	16.5	3.0
1	0405	34	88.	18.1	3.2	*	1	0655	68	9.	16.7	3.0	*						
						*							*						

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
317.	1.67	(CFS)	62.	45.	45.	45.
		(INCHES)	0.772	0.778	0.778	0.778
		(AC-FT)	31.	31.	31.	31.

PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)		6-HR	24-HR	72-HR	8.33-HR
20.	1.67		17.	15.	15.	15.

PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE			
(FEET)	(HR)		6-HR	24-HR	72-HR	8.33-HR
3.56	1.67		3.14	2.71	2.71	2.71

CUMULATIVE AREA = 0.75 SQ MI

STATION SUB6A

(I) INFLOW, (O) OUTFLOW

0. 50. 100. 150. 200. 250. 300. 350. 400. 450. 0. 0. 0.

(S) STORAGE

0. 0. 0. 0. 0. 0. 0. 10. 20. 30. 0. 0. 0.

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DAHRMN PER
10120  1I---------.---------.---------.---------.---------.---------S---------.---------.---------.---------.---------.---------.
10125  2I         .         .         .         .         .         S         .         .         .         .         .         .
10130  3I         .         .         .         .         .         S         .         .         .         .         .         .
10135  4I         .         .         .         .         .         S         .         .         .         .         .         .
10140  5I         .         .         .         .         .         S         .         .         .         .         .         .
10145  6I         .         .         .         .         .         S         .         .         .         .         .         .
10150  7I         .         .         .         .         .         S         .         .         .         .         .         .
10155  8OI        .         .         .         .         .         S         .         .         .         .         .         .
10200  90    I    .         .         .         .         .         S         .         .         .         .         .         .
10205  100        .    I    .         .         .         .         .S        .         .         .         .         .         .
10210  110 . . . . . . . . . . . . . . . . . I . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10215  120        .         .         .         .         .    I    .  S      .         .         .         .         .         .
10220  130        .         .         .         .         .         .     S  I.         .         .         .         .         .
10225  140        .         .         .         .         .         .        S .         I         .         .         .         .
10230  150        .         .         .         .         .         .         .S         .    I    .         .         .         .
10235  160        .         .         .         .         .         .         .    S    .         I .         .         .         .
10240  170        .         .         .         .         .         .         .         S  .    I    .         .         .         .
10245  18.        .         .         .    O    .         .         .         .         .SI         .         .         .         .
10250  19.        .         .         .         .         .    O    .         .    1    S         .         .         .         .
10255  20.        .         .         .         .         .         .    O    I    .    S         .         .         .         .
10300  21. . . . . . . . . . . . . . . . . . . . . . . . . . . . . I .O. . . . . . . S . . . . . . . . . . . . . . . . . . . . .
10305  22.        .         .         .         .         .    I    O    .         .    S         .         .         .         .
10310  23.        .         .         .         .         .  I .    O    .         .    S         .         .         .         .
10315  24.        .         .         .         .         .I   .    O    .         .    S         .         .         .         .
10320  25.        .         .         .         .    I    .  O    .         .         .    S         .         .         .         .
10325  26.        .         .         .         .  I    O    .         .         .         .    S.         .         .         .
10330  27.        .         .         .         .I   O    .         .         .         .         .    S.         .         .         .
10335  28.        .         .         .    I    .  O    .         .         .         .         .    S.         .         .         .
10340  29.        .         .         .  I    O    .         .         .         .         .         .    S.         .         .         .
10345  30.        .         .         .I   O    .         .         .         .         .         .         .    S.         .         .         .
10350  31. . . . . . . . . . . . . I . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10355  32.        .         .    I    .O        .         .         .         .         .         .         .         .         .         .
10400  33.        .         .  I    O         .         .         .         .         .         .         .         .         .         .
10405  34.        .         .  I  O   .         .         .         .         .         .         .         .         .         .         .
10410  35.        .         . I  O    .         .         .         .         .         .         .         .         .         .         .
10415  36.        .         .I   O    .         .         .         .         .         .         .         .         .         .         .
10420  37.        .         .I   O    .         .         .         .         .         .         .         .         .         .         .
10425  38.        .         I    O    .         .         .         .         .         .         .         .         .         .         .
10430  39.        .       I .  O      .         .         .         .         .         .         .         .         .         .         .
10435  40.        .       I.   O      .         .         .         .         .         .         .         .         .         .         .
10440  41. . . . . I . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10445  42.        .    I  O.         .         .         .         .         .         .         .         .         .         .         .
10450  43.        .    I  O.         .         .         .         .         .         .         .         .         .         .         .
10455  44.        .    I  O  .       .         .         .         .         .         .         .         .         .         .         .
10500  45.        .    I  O  .       .         .         .         .         .         .         .         .         .         .         .
10505  46.        .   I   O  .       .         .         .         .         .         .         .         .         .         .         .
10510  47.        .   I   O  .       .         .         .         .         .         .         .         .         .         .         .
10515  48.        .   I   O  .       .         .         .         .         .         .         .         .         .         .         .
10520  49.        .  I    O  .       .         .         .         .         .         .         .         .         .         .         .
10525  50.        .  I    O  .       .         .         .         .         .         .         .         .         .         .         .
10530  51.        . IO.  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10535  52.        .  I    .  .       .         .         .         .         .         .         .         .         .         .         .
10540  53.        . IO    .  .       .         .         .         .         .         .         .         .         .         .         .
10545  54.        . IO    .  .       .         .         .         .         .         .         .         .         .         .         .
10550  55.        . IO    .  .       .         .         .         .         .         .         .         .         .         .         .
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10555  56,  I     ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10600  57,  I     ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10605  58, IO     ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10610  59, IO     ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10615  60, IO     ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10620  61, IO,++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++S,++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
10625  62, I      ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10630  63, I      ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10635  64, I      ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10640  65, I      ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10645  66, I      ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10650  67, I      ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10655  68,IO      ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10700  69,IO      ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10705  70,IO      ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10710  71,I,++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++S,++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
10715  72,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10720  73,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10725  74,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10730  75,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10735  76,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10740  77,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10745  78,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10750  79,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10755  80,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10800  81,I,++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++S,++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
10805  82,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10810  83,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10815  84,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10820  85,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10825  86,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10830  87,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10835  88,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10840  89,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10845  90,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10850  91,I,++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++S,++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
10855  92,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10900  93,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10905  94,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10910  95,I       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10915  96IO       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10920  97IO       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10925  98IO       ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10930  99I        ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10935 100I        ,       ,       ,       ,       ,       ,       ,       S ,       ,       ,       ,       ,
10940 101I--------,--------,--------,--------,--------,--------,--------,-----S--,--------,--------,--------,--------,
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          *            *
122 KK    *     SUB6B  *
          *            *
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                    AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                    ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                          COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                          MAIN CHANNEL 1000' RUNING NORTH-SOUTH
                    CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
                    MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE

               SUBBASIN RUNOFF DATA

129 BA           SUBBASIN CHARACTERISTICS
                      TAREA       0.13  SUBBASIN AREA

                 PRECIPITATION DATA

 83 PB                STORM       2.45  BASIN TOTAL PRECIPITATION

 84 PI              INCREMENTAL PRECIPITATION PATTERN
                      0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                      0.06      0.05

130 LS           SCS LOSS RATE
                      STRTL       0.50  INITIAL ABSTRACTION
                     CRVNBR      80.00  CURVE NUMBER
                      RTIMP      29.00  PERCENT IMPERVIOUS AREA

                 KINEMATIC WAVE
131 UK             OVERLAND-FLOW ELEMENT NO. 1
                          L        100.  OVERLAND FLOW LENGTH
                          S     0.0033  SLOPE
                          N      0.200  ROUGHNESS COEFFICIENT
                         PA      100.0  PERCENT OF SUBBASIN
132 RK             COLLECTOR CHANNEL
                          L       2000.  CHANNEL LENGTH
                          S     0.0050  SLOPE
                          N      0.160  CHANNEL ROUGHNESS COEFFICIENT
                         CA       0.10  CONTRIBUTING AREA
                      SHAPE       TRAP  CHANNEL SHAPE
                         WD       0.00  BOTTOM WIDTH OR DIAMETER
                          Z       1.00  SIDE SLOPE
133 RK             MAIN CHANNEL
                          L       1000.  CHANNEL LENGTH
                          S     0.0050  SLOPE
                          N      0.160  CHANNEL ROUGHNESS COEFFICIENT
                         CA       0.13  CONTRIBUTING AREA
                      SHAPE       TRAP  CHANNEL SHAPE
                         WD       0.00  BOTTOM WIDTH OR DIAMETER
                          Z       1.00  SIDE SLOPE
                     RUPSTQ         NO  ROUTE UPSTREAM HYDROGRAPH
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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	500.00

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HYDROGRAPH AT STATION SUB6B

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	1.
1		0125	2	0.05	0.04	0.01	0.	*	1		0540	53	0.00	0.00	0.00	1.
1		0130	3	0.07	0.05	0.02	0.	*	1		0545	54	0.00	0.00	0.00	1.
1		0135	4	0.07	0.05	0.02	0.	*	1		0550	55	0.00	0.00	0.00	1.
1		0140	5	0.10	0.07	0.03	0.	*	1		0555	56	0.00	0.00	0.00	1.
1		0145	6	0.16	0.11	0.05	0.	*	1		0600	57	0.00	0.00	0.00	1.
1		0150	7	1.16	0.58	0.58	0.	*	1		0605	58	0.00	0.00	0.00	1.
1		0155	8	0.39	0.12	0.27	4.	*	1		0610	59	0.00	0.00	0.00	1.
1		0200	9	0.14	0.04	0.10	25.	*	1		0615	60	0.00	0.00	0.00	1.
1		0205	10	0.11	0.03	0.08	69.	*	1		0620	61	0.00	0.00	0.00	1.
1		0210	11	0.09	0.02	0.07	108.	*	1		0625	62	0.00	0.00	0.00	1.
1		0215	12	0.06	0.01	0.05	123.	*	1		0630	63	0.00	0.00	0.00	1.
1		0220	13	0.05	0.01	0.04	117.	*	1		0635	64	0.00	0.00	0.00	1.
1		0225	14	0.00	0.00	0.00	105.	*	1		0640	65	0.00	0.00	0.00	1.
1		0230	15	0.00	0.00	0.00	90.	*	1		0645	66	0.00	0.00	0.00	1.
1		0235	16	0.00	0.00	0.00	76.	*	1		0650	67	0.00	0.00	0.00	1.
1		0240	17	0.00	0.00	0.00	61.	*	1		0655	68	0.00	0.00	0.00	1.
1		0245	18	0.00	0.00	0.00	50.	*	1		0700	69	0.00	0.00	0.00	1.
1		0250	19	0.00	0.00	0.00	42.	*	1		0705	70	0.00	0.00	0.00	1.
1		0255	20	0.00	0.00	0.00	35.	*	1		0710	71	0.00	0.00	0.00	1.
1		0300	21	0.00	0.00	0.00	30.	*	1		0715	72	0.00	0.00	0.00	1.
1		0305	22	0.00	0.00	0.00	25.	*	1		0720	73	0.00	0.00	0.00	1.
1		0310	23	0.00	0.00	0.00	22.	*	1		0725	74	0.00	0.00	0.00	0.
1		0315	24	0.00	0.00	0.00	19.	*	1		0730	75	0.00	0.00	0.00	0.
1		0320	25	0.00	0.00	0.00	16.	*	1		0735	76	0.00	0.00	0.00	0.
1		0325	26	0.00	0.00	0.00	14.	*	1		0740	77	0.00	0.00	0.00	0.
1		0330	27	0.00	0.00	0.00	12.	*	1		0745	78	0.00	0.00	0.00	0.
1		0335	28	0.00	0.00	0.00	11.	*	1		0750	79	0.00	0.00	0.00	0.
1		0340	29	0.00	0.00	0.00	10.	*	1		0755	80	0.00	0.00	0.00	0.
1		0345	30	0.00	0.00	0.00	9.	*	1		0800	81	0.00	0.00	0.00	0.
1		0350	31	0.00	0.00	0.00	8.	*	1		0805	82	0.00	0.00	0.00	0.
1		0355	32	0.00	0.00	0.00	7.	*	1		0810	83	0.00	0.00	0.00	0.
1		0400	33	0.00	0.00	0.00	6.	*	1		0815	84	0.00	0.00	0.00	0.
1		0405	34	0.00	0.00	0.00	6.	*	1		0820	85	0.00	0.00	0.00	0.
1		0410	35	0.00	0.00	0.00	5.	*	1		0825	86	0.00	0.00	0.00	0.
1		0415	36	0.00	0.00	0.00	5.	*	1		0830	87	0.00	0.00	0.00	0.
1		0420	37	0.00	0.00	0.00	4.	*	1		0835	88	0.00	0.00	0.00	0.
1		0425	38	0.00	0.00	0.00	4.	*	1		0840	89	0.00	0.00	0.00	0.
1		0430	39	0.00	0.00	0.00	4.	*	1		0845	90	0.00	0.00	0.00	0.
1		0435	40	0.00	0.00	0.00	3.	*	1		0850	91	0.00	0.00	0.00	0.
1		0440	41	0.00	0.00	0.00	3.	*	1		0855	92	0.00	0.00	0.00	0.
1		0445	42	0.00	0.00	0.00	3.	*	1		0900	93	0.00	0.00	0.00	0.
1		0450	43	0.00	0.00	0.00	3.	*	1		0905	94	0.00	0.00	0.00	0.
1		0455	44	0.00	0.00	0.00	2.	*	1		0910	95	0.00	0.00	0.00	0.
1		0500	45	0.00	0.00	0.00	2.	*	1		0915	96	0.00	0.00	0.00	0.
1		0505	46	0.00	0.00	0.00	2.	*	1		0920	97	0.00	0.00	0.00	0.

1	0510	47	0.00	0.00	0.00	2.	*	1	0925	98	0.00	0.00	0.00	0.
1	0515	48	0.00	0.00	0.00	2.	*	1	0930	99	0.00	0.00	0.00	0.
1	0520	49	0.00	0.00	0.00	2.	*	1	0935	100	0.00	0.00	0.00	0.
1	0525	50	0.00	0.00	0.00	2.	*	1	0940	101	0.00	0.00	0.00	0.
1	0530	51	0.00	0.00	0.00	2.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
123.	0.92	(CFS)	16.	12.	12.	12.
		(INCHES)	1.211	1.217	1.217	1.217
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 0.13 SQ MI

STATION SUB6B

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	120.	140.	0.	0.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLLX
10150	70										LLLLLLLLLLLLLLLXXXXXXXXXXXXXX		
10155	8	O										LLLXXXXXXX	
10200	9		O										LXXX
10205	10				O								LXX
10210	11						O						XX
10215	12							O					X
10220	13							O					X
10225	14						O						
10230	15					O							
10235	16				O								
10240	17				O								
10245	18			O									
10250	19			O									
10255	20		O										
10300	21		O										
10305	22		O										
10310	23		O										
10315	24	O											
10320	25	O											
10325	26	O											
10330	27	O											
10335	28	O											
10340	29	O											
10345	30	O											
10350	31	O											
10355	32	O											
10400	33	O											
10405	34	O											
10410	35	O											
10415	36	O											
10420	37	O											
10425	38	O											
10430	39	O											
10435	40	O											
10440	41	O											
10445	42	O											
10450	43	O											
10455	44	O											
10500	45	O											
10505	46	O											
10510	47	O											
10515	48	O											
10520	49	O											
10525	50	O											
10530	51	O											
10535	52	O											
10540	53	O											
10545	54	O											
10550	55	O											

10555	56.0
10600	57.0
10605	58.0
10610	590
10615	600
10620	610
10625	620
10630	630
10635	640
10640	650
10645	660
10650	670
10655	680
10700	690
10705	700
10710	710
10715	720
10720	730
10725	740
10730	750
10735	760
10740	770
10745	780
10750	790
10755	800
10800	810
10805	820
10810	830
10815	840
10820	850
10825	860
10830	870
10835	880
10840	890
10845	900
10850	910
10855	920
10900	930
10905	940
10910	950
10915	960
10920	970
10925	980
10930	990
10935	1000
10940	1010

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          *             *
134 KK    *      SUB6   *
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COMBINED SUB6B, ROUTED SUB6A AND ROUTED 5 AT C.P. (F)

136 HC HYDROGRAPH COMBINATION

ICOMP 3 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB6

SUM OF 3 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	208.	1		0540	53	37.	1		0750	79	19.
1		0125	2	0.	1		0335	28	190.	1		0545	54	36.	1		0755	80	18.
1		0130	3	0.	1		0340	29	173.	1		0550	55	35.	1		0800	81	18.
1		0135	4	0.	1		0345	30	157.	1		0555	56	33.	1		0805	82	18.
1		0140	5	0.	1		0350	31	143.	1		0600	57	32.	1		0810	83	17.
1		0145	6	0.	1		0355	32	130.	1		0605	58	31.	1		0815	84	17.
1		0150	7	0.	1		0400	33	119.	1		0610	59	30.	1		0820	85	17.
1		0155	8	4.	1		0405	34	109.	1		0615	60	29.	1		0825	86	17.
1		0200	9	25.	1		0410	35	100.	1		0620	61	28.	1		0830	87	16.
1		0205	10	70.	1		0415	36	92.	1		0625	62	28.	1		0835	88	16.
1		0210	11	109.	1		0420	37	86.	1		0630	63	27.	1		0840	89	16.
1		0215	12	127.	1		0425	38	82.	1		0635	64	26.	1		0845	90	16.
1		0220	13	125.	1		0430	39	77.	1		0640	65	26.	1		0850	91	15.
1		0225	14	115.	1		0435	40	73.	1		0645	66	25.	1		0855	92	15.
1		0230	15	103.	1		0440	41	69.	1		0650	67	24.	1		0900	93	15.
1		0235	16	90.	1		0445	42	65.	1		0655	68	24.	1		0905	94	15.
1		0240	17	78.	1		0450	43	62.	1		0700	69	23.	1		0910	95	15.
1		0245	18	215.	1		0455	44	58.	1		0705	70	23.	1		0915	96	14.
1		0250	19	329.	1		0500	45	55.	1		0710	71	22.	1		0920	97	14.
1		0255	20	367.	1		0505	46	52.	1		0715	72	22.	1		0925	98	14.
1		0300	21	362.	1		0510	47	49.	1		0720	73	21.	1		0930	99	14.
1		0305	22	340.	1		0515	48	47.	1		0725	74	21.	1		0935	100	14.
1		0310	23	312.	1		0520	49	45.	1		0730	75	20.	1		0940	101	14.
1		0315	24	282.	1		0525	50	43.	1		0735	76	20.					
1		0320	25	255.	1		0530	51	41.	1		0740	77	20.					
1		0325	26	229.	1		0535	52	39.	1		0745	78	19.					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
367.	1.58	(CFS)	92.	69.	69.	69.
		(INCHES)	0.456	0.478	0.478	0.478
		(AC-FT)	46.	48.	48.	48.

CUMULATIVE AREA = 1.88 SQ MI

STATION SUB6

(O) OUTFLOW

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          0.      40.      80.     120.     160.     200.     240.     280.     320.     360.     400.      0.      0.
DAHRMN PER
 10120  10+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
 10125  20         .        .        .        .        .        .        .        .        .        .        .        .
 10130  30         .        .        .        .        .        .        .        .        .        .        .        .
 10135  40         .        .        .        .        .        .        .        .        .        .        .        .
 10140  50         .        .        .        .        .        .        .        .        .        .        .        .
 10145  60         .        .        .        .        .        .        .        .        .        .        .        .
 10150  70         .        .        .        .        .        .        .        .        .        .        .        .
 10155  8.0        .        .        .        .        .        .        .        .        .        .        .        .
 10200  9.    0    .        .        .        .        .        .        .        .        .        .        .        .
 10205  10.        .    0   .        .        .        .        .        .        .        .        .        .        .
 10210  11. . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10215  12.        .        .    0   .        .        .        .        .        .        .        .        .        .
 10220  13.        .        .   0    .        .        .        .        .        .        .        .        .        .
 10225  14.        .        .  0.    .        .        .        .        .        .        .        .        .        .
 10230  15.        .        . 0      .        .        .        .        .        .        .        .        .        .
 10235  16.        .       0 .       .        .        .        .        .        .        .        .        .        .
 10240  17.        .      0. .       .        .        .        .        .        .        .        .        .        .
 10245  18.        .        .        .        .        .    0   .        .        .        .        .        .        .
 10250  19.        .        .        .        .        .        .        .        .    0   .        .        .        .
 10255  20.        .        .        .        .        .        .        .        .        .0       .        .        .
 10300  21. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .0. . . . . . . . .
 10305  22.        .        .        .        .        .        .        .        .    0   .        .        .        .
 10310  23.        .        .        .        .        .        .        .        .  0     .        .        .        .
 10315  24.        .        .        .        .        .        .        .    .0  .        .        .        .        .
 10320  25.        .        .        .        .        .        .        .  0     .        .        .        .        .
 10325  26.        .        .        .        .        .        .    0   .        .        .        .        .        .
 10330  27.        .        .        .        .        .       .0        .        .        .        .        .        .
 10335  28.        .        .        .        .       0 .       .        .        .        .        .        .        .
 10340  29.        .        .        .        .      . 0       .        .        .        .        .        .        .
 10345  30.        .        .        .       0.      .        .        .        .        .        .        .        .
 10350  31. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10355  32.        .        .        .   0    .        .        .        .        .        .        .        .        .
 10400  33.        .        .        .  0     .        .        .        .        .        .        .        .        .
 10405  34.        .        .       0 .       .        .        .        .        .        .        .        .        .
 10410  35.        .        .      0  .       .        .        .        .        .        .        .        .        .
 10415  36.        .        .     0   .       .        .        .        .        .        .        .        .        .
 10420  37.        .        .    0    .       .        .        .        .        .        .        .        .        .
 10425  38.        .        .   0     .       .        .        .        .        .        .        .        .        .
 10430  39.        .        .  0.     .       .        .        .        .        .        .        .        .        .
 10435  40.        .        . 0       .       .        .        .        .        .        .        .        .        .
 10440  41. . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10445  42.        .      0 .       .        .        .        .        .        .        .        .        .        .
 10450  43.        .     0  .       .        .        .        .        .        .        .        .        .        .
 10455  44.        .     0  .       .        .        .        .        .        .        .        .        .        .
 10500  45.        .    0   .       .        .        .        .        .        .        .        .        .        .
 10505  46.        .   0    .       .        .        .        .        .        .        .        .        .        .
 10510  47.        .  0     .       .        .        .        .        .        .        .        .        .        .
 10515  48.        .  0     .       .        .        .        .        .        .        .        .        .        .
 10520  49.        . 0      .       .        .        .        .        .        .        .        .        .        .
 10525  50.        . 0      .       .        .        .        .        .        .        .        .        .        .
 10530  51. . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10535  52.        0        .       .        .        .        .        .        .        .        .        .        .
 10540  53.       0.        .       .        .        .        .        .        .        .        .        .        .
 10545  54.       0.        .       .        .        .        .        .        .        .        .        .        .
 10550  55.       0.        .       .        .        .        .        .        .        .        .        .        .
 10555  56.      0  .       .       .        .        .        .        .        .        .        .        .        .
 10600  57.      0  .       .       .        .        .        .        .        .        .        .        .        .
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10605  58.       0 .         .         .         .         .         .         .         .         .         .         .         .
10610  59.       0 .         .         .         .         .         .         .         .         .         .         .         .
10615  60.      0  .         .         .         .         .         .         .         .         .         .         .         .
10620  61. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.      0  .         .         .         .         .         .         .         .         .         .         .         .
10630  63.      0  .         .         .         .         .         .         .         .         .         .         .         .
10635  64.      0  .         .         .         .         .         .         .         .         .         .         .         .
10640  65.     0   .         .         .         .         .         .         .         .         .         .         .         .
10645  66.     0   .         .         .         .         .         .         .         .         .         .         .         .
10650  67.     0   .         .         .         .         .         .         .         .         .         .         .         .
10655  68.     0   .         .         .         .         .         .         .         .         .         .         .         .
10700  69.     0   .         .         .         .         .         .         .         .         .         .         .         .
10705  70.     0   .         .         .         .         .         .         .         .         .         .         .         .
10710  71. . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.    0    .         .         .         .         .         .         .         .         .         .         .         .
10720  73.    0    .         .         .         .         .         .         .         .         .         .         .         .
10725  74.    0    .         .         .         .         .         .         .         .         .         .         .         .
10730  75.    0    .         .         .         .         .         .         .         .         .         .         .         .
10735  76.    0    .         .         .         .         .         .         .         .         .         .         .         .
10740  77.    0    .         .         .         .         .         .         .         .         .         .         .         .
10745  78.    0    .         .         .         .         .         .         .         .         .         .         .         .
10750  79.    0    .         .         .         .         .         .         .         .         .         .         .         .
10755  80.    0    .         .         .         .         .         .         .         .         .         .         .         .
10800  81. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.   0     .         .         .         .         .         .         .         .         .         .         .         .
10810  83.   0     .         .         .         .         .         .         .         .         .         .         .         .
10815  84.   0     .         .         .         .         .         .         .         .         .         .         .         .
10820  85.   0     .         .         .         .         .         .         .         .         .         .         .         .
10825  86.   0     .         .         .         .         .         .         .         .         .         .         .         .
10830  87.   0     .         .         .         .         .         .         .         .         .         .         .         .
10835  88.   0     .         .         .         .         .         .         .         .         .         .         .         .
10840  89.   0     .         .         .         .         .         .         .         .         .         .         .         .
10845  90.   0     .         .         .         .         .         .         .         .         .         .         .         .
10850  91. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.   0     .         .         .         .         .         .         .         .         .         .         .         .
10900  93.   0     .         .         .         .         .         .         .         .         .         .         .         .
10905  94.   0     .         .         .         .         .         .         .         .         .         .         .         .
10910  95.   0     .         .         .         .         .         .         .         .         .         .         .         .
10915  96.   0     .         .         .         .         .         .         .         .         .         .         .         .
10920  97.   0     .         .         .         .         .         .         .         .         .         .         .         .
10925  98.   0     .         .         .         .         .         .         .         .         .         .         .         .
10930  99.  0      .         .         .         .         .         .         .         .         .         .         .         .
10935 100.  0      .         .         .         .         .         .         .         .         .         .         .         .
10940 101.--0------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
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          *            *
137 KK    *      SUB6  *
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DIVERT TO SUB8 AT MID-POINT OF (E) AND (F)

DT	DIVERSION									
	ISTAD	DIV681 DIVERSION HYDROGRAPH IDENTIFICATION								
DI	INFLOW	1.00	111.00	146.00	199.00	266.00	350.00	450.00	570.00	711.00
DQ	DIVERTED FLOW	0.00	1.00	5.00	17.00	39.00	73.00	121.00	186.00	267.00

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DIVERSION HYDROGRAPH DIV681

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	20.	1		0540	53	0.	1		0750	79	0.
1		0125	2	0.	1		0335	28	15.	1		0545	54	0.	1		0755	80	0.
1		0130	3	0.	1		0340	29	11.	1		0550	55	0.	1		0800	81	0.
1		0135	4	0.	1		0345	30	8.	1		0555	56	0.	1		0805	82	0.
1		0140	5	0.	1		0350	31	5.	1		0600	57	0.	1		0810	83	0.
1		0145	6	0.	1		0355	32	3.	1		0605	58	0.	1		0815	84	0.
1		0150	7	0.	1		0400	33	2.	1		0610	59	0.	1		0820	85	0.
1		0155	8	0.	1		0405	34	1.	1		0615	60	0.	1		0825	86	0.
1		0200	9	0.	1		0410	35	1.	1		0620	61	0.	1		0830	87	0.
1		0205	10	1.	1		0415	36	1.	1		0625	62	0.	1		0835	88	0.
1		0210	11	1.	1		0420	37	1.	1		0630	63	0.	1		0840	89	0.
1		0215	12	3.	1		0425	38	1.	1		0635	64	0.	1		0845	90	0.
1		0220	13	3.	1		0430	39	1.	1		0640	65	0.	1		0850	91	0.
1		0225	14	1.	1		0435	40	1.	1		0645	66	0.	1		0855	92	0.
1		0230	15	1.	1		0440	41	1.	1		0650	67	0.	1		0900	93	0.
1		0235	16	1.	1		0445	42	1.	1		0655	68	0.	1		0905	94	0.
1		0240	17	1.	1		0450	43	1.	1		0700	69	0.	1		0910	95	0.
1		0245	18	22.	1		0455	44	1.	1		0705	70	0.	1		0915	96	0.
1		0250	19	65.	1		0500	45	0.	1		0710	71	0.	1		0920	97	0.
1		0255	20	81.	1		0505	46	0.	1		0715	72	0.	1		0925	98	0.
1		0300	21	79.	1		0510	47	0.	1		0720	73	0.	1		0930	99	0.
1		0305	22	69.	1		0515	48	0.	1		0725	74	0.	1		0935	100	0.
1		0310	23	57.	1		0520	49	0.	1		0730	75	0.	1		0940	101	0.
1		0315	24	46.	1		0525	50	0.	1		0735	76	0.					
1		0320	25	35.	1		0530	51	0.	1		0740	77	0.					
1		0325	26	27.	1		0535	52	0.	1		0745	78	0.					

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

6-HR 24-HR 72-HR 8.33-HR

PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
81.	1.58	(CFS)	8.	6.	6.	6.
		(INCHES)	0.039	0.040	0.040	0.040
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 1.88 SQ MI

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	188.	1		0540	53	37.	1		0750	79	19.
1		0125	2	0.	1		0335	28	175.	1		0545	54	36.	1		0755	80	18.
1		0130	3	0.	1		0340	29	162.	1		0550	55	34.	1		0800	81	18.
1		0135	4	0.	1		0345	30	150.	1		0555	56	33.	1		0805	82	18.
1		0140	5	0.	1		0350	31	138.	1		0600	57	32.	1		0810	83	17.
1		0145	6	0.	1		0355	32	127.	1		0605	58	31.	1		0815	84	17.
1		0150	7	0.	1		0400	33	117.	1		0610	59	30.	1		0820	85	17.
1		0155	8	4.	1		0405	34	108.	1		0615	60	29.	1		0825	86	16.
1		0200	9	24.	1		0410	35	99.	1		0620	61	28.	1		0830	87	16.
1		0205	10	69.	1		0415	36	91.	1		0625	62	27.	1		0835	88	16.
1		0210	11	108.	1		0420	37	85.	1		0630	63	27.	1		0840	89	16.
1		0215	12	125.	1		0425	38	81.	1		0635	64	26.	1		0845	90	15.
1		0220	13	122.	1		0430	39	77.	1		0640	65	25.	1		0850	91	15.
1		0225	14	114.	1		0435	40	73.	1		0645	66	25.	1		0855	92	15.
1		0230	15	102.	1		0440	41	68.	1		0650	67	24.	1		0900	93	15.
1		0235	16	89.	1		0445	42	65.	1		0655	68	23.	1		0905	94	15.
1		0240	17	77.	1		0450	43	61.	1		0700	69	23.	1		0910	95	14.
1		0245	18	193.	1		0455	44	58.	1		0705	70	22.	1		0915	96	14.
1		0250	19	265.	1		0500	45	54.	1		0710	71	22.	1		0920	97	14.
1		0255	20	286.	1		0505	46	52.	1		0715	72	21.	1		0925	98	14.
1		0300	21	283.	1		0510	47	49.	1		0720	73	21.	1		0930	99	14.
1		0305	22	271.	1		0515	48	47.	1		0725	74	21.	1		0935	100	14.
1		0310	23	254.	1		0520	49	44.	1		0730	75	20.	1		0940	101	13.
1		0315	24	237.	1		0525	50	42.	1		0735	76	20.					
1		0320	25	219.	1		0530	51	40.	1		0740	77	19.					
1		0325	26	202.	1		0535	52	39.	1		0745	78	19.					

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PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
286.	1.58	(CFS)	84.	64.	64.	64.
		(INCHES)	0.416	0.438	0.438	0.438
		(AC-FT)	42.	44.	44.	44.

CUMULATIVE AREA = 1.88 SQ MI

*** ***

142 KK SUB6

* *
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ROUTED TO SUB6 (CONTRATION POINT F)
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

HYDROGRAPH ROUTING DATA

117 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

145 RK KINEMATIC WAVE STREAM ROUTING

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

***

KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.5941	1.423	1.67	1320.00

HYDROGRAPH AT STATION SUB6

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	197.	1		0540	53	39.	1		0750	79	19.
1		0125	2	0.	1		0335	28	183.	1		0545	54	37.	1		0755	80	19.
1		0130	3	0.	1		0340	29	170.	1		0550	55	36.	1		0800	81	18.
1		0135	4	0.	1		0345	30	158.	1		0555	56	35.	1		0805	82	18.
1		0140	5	0.	1		0350	31	146.	1		0600	57	33.	1		0810	83	18.
1		0145	6	0.	1		0355	32	135.	1		0605	58	32.	1		0815	84	18.
1		0150	7	0.	1		0400	33	124.	1		0610	59	31.	1		0820	85	17.
1		0155	8	0.	1		0405	34	115.	1		0615	60	30.	1		0825	86	17.
1		0200	9	1.	1		0410	35	106.	1		0620	61	29.	1		0830	87	17.
1		0205	10	15.	1		0415	36	98.	1		0625	62	29.	1		0835	88	16.
1		0210	11	63.	1		0420	37	90.	1		0630	63	28.	1		0840	89	16.
1		0215	12	107.	1		0425	38	85.	1		0635	64	27.	1		0845	90	16.
1		0220	13	122.	1		0430	39	80.	1		0640	65	26.	1		0850	91	16.
1		0225	14	119.	1		0435	40	76.	1		0645	66	26.	1		0855	92	15.
1		0230	15	110.	1		0440	41	72.	1		0650	67	25.	1		0900	93	15.
1		0235	16	99.	1		0445	42	68.	1		0655	68	24.	1		0905	94	15.
1		0240	17	87.	1		0450	43	64.	1		0700	69	24.	1		0910	95	15.
1		0245	18	117.	1		0455	44	61.	1		0705	70	23.	1		0915	96	15.
1		0250	19	219.	1		0500	45	58.	1		0710	71	23.	1		0920	97	14.
1		0255	20	274.	1		0505	46	55.	1		0715	72	22.	1		0925	98	14.
1		0300	21	284.	1		0510	47	52.	1		0720	73	22.	1		0930	99	14.
1		0305	22	277.	1		0515	48	49.	1		0725	74	21.	1		0935	100	14.

1	0310	23	263.	*	1	0520	49	47.	*	1	0730	75	21.	*	1	0940	101	14.	
1	0315	24	246.	*	1	0525	50	45.	*	1	0735	76	20.	*					
1	0320	25	229.	*	1	0530	51	43.	*	1	0740	77	20.	*					
1	0325	26	212.	*	1	0535	52	41.	*	1	0745	78	20.	*					
				*					*					*					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
284.	1.67	(CFS)	84.	63.	63.	63.
		(INCHES)	0.415	0.436	0.436	0.436
		(AC-FT)	41.	44.	44.	44.

CUMULATIVE AREA = 1.88 SQ MI

STATION SUB6

(O) OUTFLOW

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          0.      40.      80.     120.     160.     200.     240.     280.     320.       0.       0.       0.       0.
DAHRMN PER
 10120  10+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
 10125  20         .        .        .        .        .        .        .        .        .        .        .        .
 10130  30         .        .        .        .        .        .        .        .        .        .        .        .
 10135  40         .        .        .        .        .        .        .        .        .        .        .        .
 10140  50         .        .        .        .        .        .        .        .        .        .        .        .
 10145  60         .        .        .        .        .        .        .        .        .        .        .        .
 10150  70         .        .        .        .        .        .        .        .        .        .        .        .
 10155  80         .        .        .        .        .        .        .        .        .        .        .        .
 10200  90         .        .        .        .        .        .        .        .        .        .        .        .
 10205  10.  O     .        .        .        .        .        .        .        .        .        .        .        .
 10210  11. . . . . . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10215  12.        .        .     O  .        .        .        .        .        .        .        .        .        .
 10220  13.        .        .        O        .        .        .        .        .        .        .        .        .
 10225  14.        .        .        O        .        .        .        .        .        .        .        .        .
 10230  15.        .        .     O  .        .        .        .        .        .        .        .        .        .
 10235  16.        .        .  O     .        .        .        .        .        .        .        .        .        .
 10240  17.        .        . O      .        .        .        .        .        .        .        .        .        .
 10245  18.        .        .        O.       .        .        .        .        .        .        .        .        .
 10250  19.        .        .        .        .        .     O  .        .        .        .        .        .        .
 10255  20.        .        .        .        .        .        .     O  .        .        .        .        .        .
 10300  21. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10305  22.        .        .        .        .        .        .        O.       .        .        .        .        .
 10310  23.        .        .        .        .        .        .     O  .        .        .        .        .        .
 10315  24.        .        .        .        .        .        .  O     .        .        .        .        .        .
 10320  25.        .        .        .        .        .     O  .        .        .        .        .        .        .
 10325  26.        .        .        .        .        .  O     .        .        .        .        .        .        .
 10330  27.        .        .        .        .        O.       .        .        .        .        .        .        .
 10335  28.        .        .        .        .     O  .        .        .        .        .        .        .        .
 10340  29.        .        .        .        .  O     .        .        .        .        .        .        .        .
 10345  30.        .        .        .        O.       .        .        .        .        .        .        .        .
 10350  31. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10355  32.        .        .        .     O  .        .        .        .        .        .        .        .        .
 10400  33.        .        .        .     O  .        .        .        .        .        .        .        .        .
 10405  34.        .        .        O.       .        .        .        .        .        .        .        .        .
 10410  35.        .        .     O  .        .        .        .        .        .        .        .        .        .
 10415  36.        .        .  O     .        .        .        .        .        .        .        .        .        .
 10420  37.        .        .  O     .        .        .        .        .        .        .        .        .        .
 10425  38.        .        .O       .        .        .        .        .        .        .        .        .        .
 10430  39.        .        O        .        .        .        .        .        .        .        .        .        .
 10435  40.        .        O.       .        .        .        .        .        .        .        .        .        .
 10440  41. . . . . . . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10445  42.        .     O  .        .        .        .        .        .        .        .        .        .        .
 10450  43.        .     O  .        .        .        .        .        .        .        .        .        .        .
 10455  44.        .   O    .        .        .        .        .        .        .        .        .        .        .
 10500  45.        .  O     .        .        .        .        .        .        .        .        .        .        .
 10505  46.        .  O     .        .        .        .        .        .        .        .        .        .        .
 10510  47.        . O      .        .        .        .        .        .        .        .        .        .        .
 10515  48.        .O       .        .        .        .        .        .        .        .        .        .        .
 10520  49.        .O       .        .        .        .        .        .        .        .        .        .        .
 10525  50.        O        .        .        .        .        .        .        .        .        .        .        .
 10530  51. . . . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10535  52.        O        .        .        .        .        .        .        .        .        .        .        .
 10540  53.        O        .        .        .        .        .        .        .        .        .        .        .
 10545  54.        O.       .        .        .        .        .        .        .        .        .        .        .
 10550  55.        O.       .        .        .        .        .        .        .        .        .        .        .
 10555  56.        O.       .        .        .        .        .        .        .        .        .        .        .
 10600  57.       O .       .        .        .        .        .        .        .        .        .        .        .
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10605  58.      0 .       .       .       .       .       .       .       .       .       .       .       .
10610  59.      0 .       .       .       .       .       .       .       .       .       .       .       .
10615  60.      0 .       .       .       .       .       .       .       .       .       .       .       .
10620  61. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.      0 .       .       .       .       .       .       .       .       .       .       .       .
10630  63.      0 .       .       .       .       .       .       .       .       .       .       .       .
10635  64.      0 .       .       .       .       .       .       .       .       .       .       .       .
10640  65.      0 .       .       .       .       .       .       .       .       .       .       .       .
10645  66.     0  .       .       .       .       .       .       .       .       .       .       .       .
10650  67.     0  .       .       .       .       .       .       .       .       .       .       .       .
10655  68.     0  .       .       .       .       .       .       .       .       .       .       .       .
10700  69.     0  .       .       .       .       .       .       .       .       .       .       .       .
10705  70.     0  .       .       .       .       .       .       .       .       .       .       .       .
10710  71. . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.     0  .       .       .       .       .       .       .       .       .       .       .       .
10720  73.    0   .       .       .       .       .       .       .       .       .       .       .       .
10725  74.    0   .       .       .       .       .       .       .       .       .       .       .       .
10730  75.    0   .       .       .       .       .       .       .       .       .       .       .       .
10735  76.    0   .       .       .       .       .       .       .       .       .       .       .       .
10740  77.    0   .       .       .       .       .       .       .       .       .       .       .       .
10745  78.    0   .       .       .       .       .       .       .       .       .       .       .       .
10750  79.    0   .       .       .       .       .       .       .       .       .       .       .       .
10755  80.    0   .       .       .       .       .       .       .       .       .       .       .       .
10800  81. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.    0   .       .       .       .       .       .       .       .       .       .       .       .
10810  83.   0    .       .       .       .       .       .       .       .       .       .       .       .
10815  84.   0    .       .       .       .       .       .       .       .       .       .       .       .
10820  85.   0    .       .       .       .       .       .       .       .       .       .       .       .
10825  86.   0    .       .       .       .       .       .       .       .       .       .       .       .
10830  87.   0    .       .       .       .       .       .       .       .       .       .       .       .
10835  88.   0    .       .       .       .       .       .       .       .       .       .       .       .
10840  89.   0    .       .       .       .       .       .       .       .       .       .       .       .
10845  90.   0    .       .       .       .       .       .       .       .       .       .       .       .
10850  91. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.   0    .       .       .       .       .       .       .       .       .       .       .       .
10900  93.   0    .       .       .       .       .       .       .       .       .       .       .       .
10905  94.   0    .       .       .       .       .       .       .       .       .       .       .       .
10910  95.   0    .       .       .       .       .       .       .       .       .       .       .       .
10915  96.   0    .       .       .       .       .       .       .       .       .       .       .       .
10920  97.   0    .       .       .       .       .       .       .       .       .       .       .       .
10925  98.   0    .       .       .       .       .       .       .       .       .       .       .       .
10930  99.   0    .       .       .       .       .       .       .       .       .       .       .       .
10935 100.  0     .       .       .       .       .       .       .       .       .       .       .       .
10940 101.--0-----+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
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            *            *
146 KK      *    SUB6C   *
            *            *
            **************
                          AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                          ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                                 COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                                 MAIN CHANNEL 1000' RUNING NORTH-SOUTH
                          CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT (F)
                          MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE

               SUBBASIN RUNOFF DATA

153 BA           SUBBASIN CHARACTERISTICS
                       TAREA        0.13  SUBBASIN AREA

                 PRECIPITATION DATA

 83 PB                 STORM        2.45  BASIN TOTAL PRECIPITATION

 84 PI             INCREMENTAL PRECIPITATION PATTERN
                    0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                    0.06      0.05

154 LS           SCS LOSS RATE
                       STRTL        0.50  INITIAL ABSTRACTION
                      CRVNBR       80.00  CURVE NUMBER
                       RTIMP       29.00  PERCENT IMPERVIOUS AREA

                 KINEMATIC WAVE
155 UK             OVERLAND-FLOW ELEMENT NO. 1
                           L        100.  OVERLAND FLOW LENGTH
                           S      0.0033  SLOPE
                           N       0.200  ROUGHNESS COEFFICIENT
                          PA       100.0  PERCENT OF SUBBASIN
156 RK             COLLECTOR CHANNEL
                           L       2000.  CHANNEL LENGTH
                           S      0.0050  SLOPE
                           N       0.160  CHANNEL ROUGHNESS COEFFICIENT
                          CA        0.10  CONTRIBUTING AREA
                       SHAPE        TRAP  CHANNEL SHAPE
                          WD        0.00  BOTTOM WIDTH OR DIAMETER
                           Z        1.00  SIDE SLOPE
157 RK             MAIN CHANNEL
                           L       1000.  CHANNEL LENGTH
                           S      0.0050  SLOPE
                           N       0.160  CHANNEL ROUGHNESS COEFFICIENT
                          CA        0.13  CONTRIBUTING AREA
                       SHAPE        TRAP  CHANNEL SHAPE
                          WD        0.00  BOTTOM WIDTH OR DIAMETER
                           Z        1.00  SIDE SLOPE
                      RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	500.00

HYDROGRAPH AT STATION SUB6C

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	1.
1		0125	2	0.05	0.04	0.01	0.	1		0540	53	0.00	0.00	0.00	1.
1		0130	3	0.07	0.05	0.02	0.	1		0545	54	0.00	0.00	0.00	1.
1		0135	4	0.07	0.05	0.02	0.	1		0550	55	0.00	0.00	0.00	1.
1		0140	5	0.10	0.07	0.03	0.	1		0555	56	0.00	0.00	0.00	1.
1		0145	6	0.16	0.11	0.05	0.	1		0600	57	0.00	0.00	0.00	1.
1		0150	7	1.16	0.58	0.58	0.	1		0605	58	0.00	0.00	0.00	1.
1		0155	8	0.39	0.12	0.27	4.	1		0610	59	0.00	0.00	0.00	1.
1		0200	9	0.14	0.04	0.10	25.	1		0615	60	0.00	0.00	0.00	1.
1		0205	10	0.11	0.03	0.08	69.	1		0620	61	0.00	0.00	0.00	1.
1		0210	11	0.09	0.02	0.07	108.	1		0625	62	0.00	0.00	0.00	1.
1		0215	12	0.06	0.01	0.05	123.	1		0630	63	0.00	0.00	0.00	1.
1		0220	13	0.05	0.01	0.04	117.	1		0635	64	0.00	0.00	0.00	1.
1		0225	14	0.00	0.00	0.00	105.	1		0640	65	0.00	0.00	0.00	1.
1		0230	15	0.00	0.00	0.00	90.	1		0645	66	0.00	0.00	0.00	1.
1		0235	16	0.00	0.00	0.00	76.	1		0650	67	0.00	0.00	0.00	1.
1		0240	17	0.00	0.00	0.00	61.	1		0655	68	0.00	0.00	0.00	1.
1		0245	18	0.00	0.00	0.00	50.	1		0700	69	0.00	0.00	0.00	1.
1		0250	19	0.00	0.00	0.00	42.	1		0705	70	0.00	0.00	0.00	1.
1		0255	20	0.00	0.00	0.00	35.	1		0710	71	0.00	0.00	0.00	1.
1		0300	21	0.00	0.00	0.00	30.	1		0715	72	0.00	0.00	0.00	1.
1		0305	22	0.00	0.00	0.00	25.	1		0720	73	0.00	0.00	0.00	1.
1		0310	23	0.00	0.00	0.00	22.	1		0725	74	0.00	0.00	0.00	0.
1		0315	24	0.00	0.00	0.00	19.	1		0730	75	0.00	0.00	0.00	0.
1		0320	25	0.00	0.00	0.00	16.	1		0735	76	0.00	0.00	0.00	0.
1		0325	26	0.00	0.00	0.00	14.	1		0740	77	0.00	0.00	0.00	0.
1		0330	27	0.00	0.00	0.00	12.	1		0745	78	0.00	0.00	0.00	0.
1		0335	28	0.00	0.00	0.00	11.	1		0750	79	0.00	0.00	0.00	0.
1		0340	29	0.00	0.00	0.00	10.	1		0755	80	0.00	0.00	0.00	0.
1		0345	30	0.00	0.00	0.00	9.	1		0800	81	0.00	0.00	0.00	0.
1		0350	31	0.00	0.00	0.00	8.	1		0805	82	0.00	0.00	0.00	0.
1		0355	32	0.00	0.00	0.00	7.	1		0810	83	0.00	0.00	0.00	0.
1		0400	33	0.00	0.00	0.00	6.	1		0815	84	0.00	0.00	0.00	0.
1		0405	34	0.00	0.00	0.00	6.	1		0820	85	0.00	0.00	0.00	0.
1		0410	35	0.00	0.00	0.00	5.	1		0825	86	0.00	0.00	0.00	0.
1		0415	36	0.00	0.00	0.00	5.	1		0830	87	0.00	0.00	0.00	0.
1		0420	37	0.00	0.00	0.00	4.	1		0835	88	0.00	0.00	0.00	0.
1		0425	38	0.00	0.00	0.00	4.	1		0840	89	0.00	0.00	0.00	0.
1		0430	39	0.00	0.00	0.00	4.	1		0845	90	0.00	0.00	0.00	0.
1		0435	40	0.00	0.00	0.00	3.	1		0850	91	0.00	0.00	0.00	0.
1		0440	41	0.00	0.00	0.00	3.	1		0855	92	0.00	0.00	0.00	0.
1		0445	42	0.00	0.00	0.00	3.	1		0900	93	0.00	0.00	0.00	0.
1		0450	43	0.00	0.00	0.00	3.	1		0905	94	0.00	0.00	0.00	0.
1		0455	44	0.00	0.00	0.00	2.	1		0910	95	0.00	0.00	0.00	0.
1		0500	45	0.00	0.00	0.00	2.	1		0915	96	0.00	0.00	0.00	0.
1		0505	46	0.00	0.00	0.00	2.	1		0920	97	0.00	0.00	0.00	0.

1	0510	47	0.00	0.00	0.00	2.	*	1	0925	98	0.00	0.00	0.00	0.
1	0515	48	0.00	0.00	0.00	2.	*	1	0930	99	0.00	0.00	0.00	0.
1	0520	49	0.00	0.00	0.00	2.	*	1	0935	100	0.00	0.00	0.00	0.
1	0525	50	0.00	0.00	0.00	2.	*	1	0940	101	0.00	0.00	0.00	0.
1	0530	51	0.00	0.00	0.00	2.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
123.	0.92	(CFS)	16.	12.	12.	12.
		(INCHES)	1.211	1.217	1.217	1.217
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 0.13 SQ MI

STATION SUB6C

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	120.	140.	0.	0.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLLX
10150	70										LLLLLLLLLLLLLLLXXXXXXXXXXXXXX		
10155	8. O											LLLXXXXXXX	
10200	9.	O											LXXX
10205	10.				O								LXX
10210	11.						O						XX
10215	12.							O					X
10220	13.						O						X
10225	14.					O							
10230	15.					O							
10235	16.				O								
10240	17.			O									
10245	18.			O									
10250	19.		O										
10255	20.		O										
10300	21.	O											
10305	22.	O											
10310	23.	O											
10315	24.	O											
10320	25.	O											
10325	26.	O											
10330	27.	O											
10335	28.	O											
10340	29.	O											
10345	30.	O											
10350	31.	O											
10355	32.	O											
10400	33.	O											
10405	34.	O											
10410	35.	O											
10415	36.	O											
10420	37.	O											
10425	38.	O											
10430	39.	O											
10435	40.	O											
10440	41.	O											
10445	42.	O											
10450	43.	O											
10455	44.	O											
10500	45.	O											
10505	46.	O											
10510	47.	O											
10515	48.	O											
10520	49.	O											
10525	50.	O											
10530	51.	O											
10535	52.	O											
10540	53.	O											
10545	54.	O											
10550	55.	O											

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10555  56.0
10600  57.0
10605  58.0
10610  590
10615  600
10620  610
10625  620
10630  630
10635  640
10640  650
10645  660
10650  670
10655  680
10700  690
10705  700
10710  710
10715  720
10720  730
10725  740
10730  750
10735  760
10740  770
10745  780
10750  790
10755  800
10800  810
10805  820
10810  830
10815  840
10820  850
10825  860
10830  870
10835  880
10840  890
10845  900
10850  910
10855  920
10900  930
10905  940
10910  950
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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          *             *
158 KK    *      SUB6   *
          *             *
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COMBINED SUB6C, ROUTED (SUB6A,SUB6B AND ROUTED 5) AT C.P. (F)

160 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB6

SUM OF 2 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	209.	1		0540	53	40.	1		0750	79	20.
1		0125	2	0.	1		0335	28	194.	1		0545	54	39.	1		0755	80	19.
1		0130	3	0.	1		0340	29	180.	1		0550	55	37.	1		0800	81	19.
1		0135	4	0.	1		0345	30	166.	1		0555	56	36.	1		0805	82	18.
1		0140	5	0.	1		0350	31	154.	1		0600	57	35.	1		0810	83	18.
1		0145	6	0.	1		0355	32	142.	1		0605	58	33.	1		0815	84	18.
1		0150	7	0.	1		0400	33	131.	1		0610	59	32.	1		0820	85	18.
1		0155	8	4.	1		0405	34	121.	1		0615	60	31.	1		0825	86	17.
1		0200	9	25.	1		0410	35	111.	1		0620	61	30.	1		0830	87	17.
1		0205	10	85.	1		0415	36	102.	1		0625	62	29.	1		0835	88	17.
1		0210	11	171.	1		0420	37	95.	1		0630	63	29.	1		0840	89	16.
1		0215	12	230.	1		0425	38	89.	1		0635	64	28.	1		0845	90	16.
1		0220	13	239.	1		0430	39	84.	1		0640	65	27.	1		0850	91	16.
1		0225	14	224.	1		0435	40	80.	1		0645	66	26.	1		0855	92	16.
1		0230	15	201.	1		0440	41	75.	1		0650	67	26.	1		0900	93	15.
1		0235	16	175.	1		0445	42	71.	1		0655	68	25.	1		0905	94	15.
1		0240	17	148.	1		0450	43	67.	1		0700	69	24.	1		0910	95	15.
1		0245	18	168.	1		0455	44	63.	1		0705	70	24.	1		0915	96	15.
1		0250	19	261.	1		0500	45	60.	1		0710	71	23.	1		0920	97	15.
1		0255	20	309.	1		0505	46	57.	1		0715	72	23.	1		0925	98	14.
1		0300	21	314.	1		0510	47	54.	1		0720	73	22.	1		0930	99	14.
1		0305	22	302.	1		0515	48	51.	1		0725	74	22.	1		0935	100	14.
1		0310	23	284.	1		0520	49	49.	1		0730	75	21.	1		0940	101	14.
1		0315	24	265.	1		0525	50	46.	1		0735	76	21.					
1		0320	25	245.	1		0530	51	44.	1		0740	77	20.					
1		0325	26	226.	1		0535	52	42.	1		0745	78	20.					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
314.	1.67	(CFS)	100.	75.	75.	75.
		(INCHES)	0.463	0.485	0.485	0.485
		(AC-FT)	49.	52.	52.	52.

CUMULATIVE AREA = 2.00 SQ MI

STATION SUB6

(O) OUTFLOW

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                0.      40.      80.     120.     160.     200.     240.     280.     320.      0.       0.       0.       0.
DAHRMN PER
 10120  10----------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
 10125  20          +        +        +        +        +        +        +        +        +        +        +        +
 10130  30          +        +        +        +        +        +        +        +        +        +        +        +
 10135  40          +        +        +        +        +        +        +        +        +        +        +        +
 10140  50          +        +        +        +        +        +        +        +        +        +        +        +
 10145  60          +        +        +        +        +        +        +        +        +        +        +        +
 10150  70          +        +        +        +        +        +        +        +        +        +        +        +
 10155  8.0         +        +        +        +        +        +        +        +        +        +        +        +
 10200  9.    0     +        +        +        +        +        +        +        +        +        +        +        +
 10205  10.         +       .0        +        +        +        +        +        +        +        +        +        +
 10210  11.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10215  12.         +        +        +        +        +        +       0.        +        +        +        +        +
 10220  13.         +        +        +        +        +        +        0        +        +        +        +        +
 10225  14.         +        +        +        +        +       0.        +        +        +        +        +        +
 10230  15.         +        +        +        +        +        0        +        +        +        +        +        +
 10235  16.         +        +        +        +       0.        +        +        +        +        +        +        +
 10240  17.         +        +        +       0.        +        +        +        +        +        +        +        +
 10245  18.         +        +        +        +0        +        +        +        +        +        +        +        +
 10250  19.         +        +        +        +        +        +        +        0        +        +        +        +
 10255  20.         +        +        +        +        +        +        +        +        0        +        +        +
 10300  21.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10305  22.         +        +        +        +        +        +        +        +        0        +        +        +
 10310  23.         +        +        +        +        +        +        +       .0        +        +        +        +
 10315  24.         +        +        +        +        +        +        +        0        +        +        +        +
 10320  25.         +        +        +        +        +        +       .0        +        +        +        +        +
 10325  26.         +        +        +        +        +       0.        +        +        +        +        +        +
 10330  27.         +        +        +        +        +.       0        +        +        +        +        +        +
 10335  28.         +        +        +        +       0.        +        +        +        +        +        +        +
 10340  29.         +        +        +        +.       0        +        +        +        +        +        +        +
 10345  30.         +        +        +        +0       +        +        +        +        +        +        +        +
 10350  31.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10355  32.         +        +        +.       0        +        +        +        +        +        +        +        +
 10400  33.         +        +        +.       0        +        +        +        +        +        +        +        +
 10405  34.         +        +        +0       +        +        +        +        +        +        +        +        +
 10410  35.         +        +       0.        +        +        +        +        +        +        +        +        +
 10415  36.         +        +.       0        +        +        +        +        +        +        +        +        +
 10420  37.         +        +.       0        +        +        +        +        +        +        +        +        +
 10425  38.         +        +.       0        +        +        +        +        +        +        +        +        +
 10430  39.         +        +.       0        +        +        +        +        +        +        +        +        +
 10435  40.         +        +0       +        +        +        +        +        +        +        +        +        +
 10440  41.. . . . . . . . .+0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10445  42.         +       0.        +        +        +        +        +        +        +        +        +        +
 10450  43.         +       0.        +        +        +        +        +        +        +        +        +        +
 10455  44.         +       0.        +        +        +        +        +        +        +        +        +        +
 10500  45.         +       0.        +        +        +        +        +        +        +        +        +        +
 10505  46.         +       0.        +        +        +        +        +        +        +        +        +        +
 10510  47.         +       0.        +        +        +        +        +        +        +        +        +        +
 10515  48.         +       0.        +        +        +        +        +        +        +        +        +        +
 10520  49.         +       0.        +        +        +        +        +        +        +        +        +        +
 10525  50.         +       0.        +        +        +        +        +        +        +        +        +        +
 10530  51.. . . . .+0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10535  52.         +0       +        +        +        +        +        +        +        +        +        +        +
 10540  53.         0        +        +        +        +        +        +        +        +        +        +        +
 10545  54.         0        +        +        +        +        +        +        +        +        +        +        +
 10550  55.        0.        +        +        +        +        +        +        +        +        +        +        +
 10555  56.        0.        +        +        +        +        +        +        +        +        +        +        +
 10600  57.        0.        +        +        +        +        +        +        +        +        +        +        +
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10605  58.       0 .         .         .         .         .         .         .         .         .         .         .         .         .
10610  59.       0 .         .         .         .         .         .         .         .         .         .         .         .         .
10615  60.       0 .         .         .         .         .         .         .         .         .         .         .         .         .
10620  61. . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.      0  .         .         .         .         .         .         .         .         .         .         .         .         .
10630  63.      0  .         .         .         .         .         .         .         .         .         .         .         .         .
10635  64.      0  .         .         .         .         .         .         .         .         .         .         .         .         .
10640  65.      0  .         .         .         .         .         .         .         .         .         .         .         .         .
10645  66.      0  .         .         .         .         .         .         .         .         .         .         .         .         .
10650  67.     0   .         .         .         .         .         .         .         .         .         .         .         .         .
10655  68.     0   .         .         .         .         .         .         .         .         .         .         .         .         .
10700  69.     0   .         .         .         .         .         .         .         .         .         .         .         .         .
10705  70.     0   .         .         .         .         .         .         .         .         .         .         .         .         .
10710  71. . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.     0   .         .         .         .         .         .         .         .         .         .         .         .         .
10720  73.     0   .         .         .         .         .         .         .         .         .         .         .         .         .
10725  74.    0    .         .         .         .         .         .         .         .         .         .         .         .         .
10730  75.    0    .         .         .         .         .         .         .         .         .         .         .         .         .
10735  76.    0    .         .         .         .         .         .         .         .         .         .         .         .         .
10740  77.    0    .         .         .         .         .         .         .         .         .         .         .         .         .
10745  78.    0    .         .         .         .         .         .         .         .         .         .         .         .         .
10750  79.    0    .         .         .         .         .         .         .         .         .         .         .         .         .
10755  80.    0    .         .         .         .         .         .         .         .         .         .         .         .         .
10800  81. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.    0    .         .         .         .         .         .         .         .         .         .         .         .         .
10810  83.    0    .         .         .         .         .         .         .         .         .         .         .         .         .
10815  84.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10820  85.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10825  86.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10830  87.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10835  88.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10840  89.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10845  90.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10850  91. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10900  93.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10905  94.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10910  95.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10915  96.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10920  97.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10925  98.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10930  99.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10935 100.   0     .         .         .         .         .         .         .         .         .         .         .         .         .
10940 101.--0------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------
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161 KK    *      SUB6  *
          *            *
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DIVERT TO SUB8

DT DIVERSION

ISTAD DIV682 DIVERSION HYDROGRAPH IDENTIFICATION

DI INFLOW 2.00 150.00 1000.00

DQ DIVERTED FLOW 1.00 75.00 500.00

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DIVERSION HYDROGRAPH DIV682

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	104.	1		0540	53	20.	1		0750	79	10.
1		0125	2	0.	1		0335	28	97.	1		0545	54	19.	1		0755	80	10.
1		0130	3	0.	1		0340	29	90.	1		0550	55	19.	1		0800	81	9.
1		0135	4	0.	1		0345	30	83.	1		0555	56	18.	1		0805	82	9.
1		0140	5	0.	1		0350	31	77.	1		0600	57	17.	1		0810	83	9.
1		0145	6	0.	1		0355	32	71.	1		0605	58	17.	1		0815	84	9.
1		0150	7	0.	1		0400	33	65.	1		0610	59	16.	1		0820	85	9.
1		0155	8	2.	1		0405	34	60.	1		0615	60	16.	1		0825	86	9.
1		0200	9	13.	1		0410	35	56.	1		0620	61	15.	1		0830	87	8.
1		0205	10	42.	1		0415	36	51.	1		0625	62	15.	1		0835	88	8.
1		0210	11	85.	1		0420	37	47.	1		0630	63	14.	1		0840	89	8.
1		0215	12	115.	1		0425	38	44.	1		0635	64	14.	1		0845	90	8.
1		0220	13	120.	1		0430	39	42.	1		0640	65	13.	1		0850	91	8.
1		0225	14	112.	1		0435	40	40.	1		0645	66	13.	1		0855	92	8.
1		0230	15	100.	1		0440	41	38.	1		0650	67	13.	1		0900	93	8.
1		0235	16	87.	1		0445	42	36.	1		0655	68	12.	1		0905	94	8.
1		0240	17	74.	1		0450	43	34.	1		0700	69	12.	1		0910	95	8.
1		0245	18	84.	1		0455	44	32.	1		0705	70	12.	1		0915	96	7.
1		0250	19	131.	1		0500	45	30.	1		0710	71	12.	1		0920	97	7.
1		0255	20	155.	1		0505	46	28.	1		0715	72	11.	1		0925	98	7.
1		0300	21	157.	1		0510	47	27.	1		0720	73	11.	1		0930	99	7.
1		0305	22	151.	1		0515	48	26.	1		0725	74	11.	1		0935	100	7.
1		0310	23	142.	1		0520	49	24.	1		0730	75	11.	1		0940	101	7.
1		0315	24	132.	1		0525	50	23.	1		0735	76	10.					
1		0320	25	123.	1		0530	51	22.	1		0740	77	10.					
1		0325	26	113.	1		0535	52	21.	1		0745	78	10.					

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PEAK FLOW TIME MAXIMUM AVERAGE FLOW

6-HR 24-HR 72-HR 8.33-HR

PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
		MAXIMUM AVERAGE FLOW				
157.	1.67	(CFS)	50.	38.	38.	38.
		(INCHES)	0.231	0.242	0.242	0.242
		(AC-FT)	25.	26.	26.	26.

CUMULATIVE AREA = 2.00 SQ MI

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	104.	1		0540	53	20.	1		0750	79	10.
1		0125	2	0.	1		0335	28	97.	1		0545	54	19.	1		0755	80	10.
1		0130	3	0.	1		0340	29	90.	1		0550	55	19.	1		0800	81	9.
1		0135	4	0.	1		0345	30	83.	1		0555	56	18.	1		0805	82	9.
1		0140	5	0.	1		0350	31	77.	1		0600	57	17.	1		0810	83	9.
1		0145	6	0.	1		0355	32	71.	1		0605	58	17.	1		0815	84	9.
1		0150	7	0.	1		0400	33	65.	1		0610	59	16.	1		0820	85	9.
1		0155	8	2.	1		0405	34	60.	1		0615	60	16.	1		0825	86	9.
1		0200	9	13.	1		0410	35	56.	1		0620	61	15.	1		0830	87	8.
1		0205	10	42.	1		0415	36	51.	1		0625	62	15.	1		0835	88	8.
1		0210	11	85.	1		0420	37	47.	1		0630	63	14.	1		0840	89	8.
1		0215	12	115.	1		0425	38	44.	1		0635	64	14.	1		0845	90	8.
1		0220	13	120.	1		0430	39	42.	1		0640	65	13.	1		0850	91	8.
1		0225	14	112.	1		0435	40	40.	1		0645	66	13.	1		0855	92	8.
1		0230	15	100.	1		0440	41	38.	1		0650	67	13.	1		0900	93	8.
1		0235	16	87.	1		0445	42	36.	1		0655	68	12.	1		0905	94	8.
1		0240	17	74.	1		0450	43	34.	1		0700	69	12.	1		0910	95	8.
1		0245	18	84.	1		0455	44	32.	1		0705	70	12.	1		0915	96	7.
1		0250	19	131.	1		0500	45	30.	1		0710	71	12.	1		0920	97	7.
1		0255	20	155.	1		0505	46	28.	1		0715	72	11.	1		0925	98	7.
1		0300	21	157.	1		0510	47	27.	1		0720	73	11.	1		0930	99	7.
1		0305	22	151.	1		0515	48	26.	1		0725	74	11.	1		0935	100	7.
1		0310	23	142.	1		0520	49	24.	1		0730	75	11.	1		0940	101	7.
1		0315	24	132.	1		0525	50	23.	1		0735	76	10.					
1		0320	25	123.	1		0530	51	22.	1		0740	77	10.					
1		0325	26	113.	1		0535	52	21.	1		0745	78	10.					

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PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
		MAXIMUM AVERAGE FLOW				
157.	1.67	(CFS)	50.	38.	38.	38.
		(INCHES)	0.231	0.242	0.242	0.242
		(AC-FT)	25.	26.	26.	26.

CUMULATIVE AREA = 2.00 SQ MI

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166 KK SUB7

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                   AREA BOUNDED BY 107TH ST- CAMELBACK ROAD- INDIAN SCHOOL-AUGU FRIA
                   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
                   HYDROGRAPH AT C.P. (G) INTO AGUA FRIA WASH

        SUBBASIN RUNOFF DATA

173 BA       SUBBASIN CHARACTERISTICS
                TAREA       0.58 SUBBASIN AREA

             PRECIPITATION DATA

170 PB          STORM       2.45 BASIN TOTAL PRECIPITATION

171 PI         INCREMENTAL PRECIPITATION PATTERN
                 0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
                 0.06     0.05

174 LS       SCS LOSS RATE
                STRTL       0.82 INITIAL ABSTRACTION
               CRVNBR      71.00 CURVE NUMBER
                RTIMP       2.00 PERCENT IMPERVIOUS AREA

             KINEMATIC WAVE
175 UK         OVERLAND-FLOW ELEMENT NO. 1
                    L      4500. OVERLAND FLOW LENGTH
                    S     0.0050 SLOPE
                    N      0.200 ROUGHNESS COEFFICIENT
                   PA      100.0 PERCENT OF SUBBASIN
176 RK         MAIN CHANNEL
                    L      5800. CHANNEL LENGTH
                    S     0.0030 SLOPE
                    N      0.025 CHANNEL ROUGHNESS COEFFICIENT
                   CA       0.58 CONTRIBUTING AREA
                SHAPE       TRAP CHANNEL SHAPE
                   WD       0.00 BOTTOM WIDTH OR DIAMETER
                    Z       1.00 SIDE SLOPE
               RUPSTQ        YES ROUTE UPSTREAM HYDROGRAPH

                                                ***

     COMPUTED KINEMATIC PARAMETERS
        ELEMENT     ALPHA        M      DT (MIN)   DX (FT)
              1    0.5268    1.667       5.00      132.35
              3    1.6346    1.333       5.00     2900.00
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HYDROGRAPH AT STATION SUB7

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	34.
1		0125	2	0.05	0.05	0.00	0.	*	1		0540	53	0.00	0.00	0.00	33.
1		0130	3	0.07	0.07	0.00	0.	*	1		0545	54	0.00	0.00	0.00	32.
1		0135	4	0.07	0.07	0.00	0.	*	1		0550	55	0.00	0.00	0.00	31.
1		0140	5	0.10	0.10	0.00	0.	*	1		0555	56	0.00	0.00	0.00	30.
1		0145	6	0.16	0.16	0.00	0.	*	1		0600	57	0.00	0.00	0.00	29.

1	0150	7	1.16	1.01	0.15	0.	*	1	0605	58	0.00	0.00	0.00	29.
1	0155	8	0.39	0.25	0.14	0.	*	1	0610	59	0.00	0.00	0.00	28.
1	0200	9	0.14	0.08	0.06	0.	*	1	0615	60	0.00	0.00	0.00	27.
1	0205	10	0.11	0.06	0.05	2.	*	1	0620	61	0.00	0.00	0.00	27.
1	0210	11	0.09	0.05	0.04	7.	*	1	0625	62	0.00	0.00	0.00	26.
1	0215	12	0.06	0.03	0.03	27.	*	1	0630	63	0.00	0.00	0.00	26.
1	0220	13	0.05	0.03	0.02	63.	*	1	0635	64	0.00	0.00	0.00	25.
1	0225	14	0.00	0.00	0.00	95.	*	1	0640	65	0.00	0.00	0.00	25.
1	0230	15	0.00	0.00	0.00	111.	*	1	0645	66	0.00	0.00	0.00	24.
1	0235	16	0.00	0.00	0.00	113.	*	1	0650	67	0.00	0.00	0.00	24.
1	0240	17	0.00	0.00	0.00	106.	*	1	0655	68	0.00	0.00	0.00	23.
1	0245	18	0.00	0.00	0.00	97.	*	1	0700	69	0.00	0.00	0.00	23.
1	0250	19	0.00	0.00	0.00	94.	*	1	0705	70	0.00	0.00	0.00	23.
1	0255	20	0.00	0.00	0.00	112.	*	1	0710	71	0.00	0.00	0.00	22.
1	0300	21	0.00	0.00	0.00	138.	*	1	0715	72	0.00	0.00	0.00	22.
1	0305	22	0.00	0.00	0.00	155.	*	1	0720	73	0.00	0.00	0.00	22.
1	0310	23	0.00	0.00	0.00	159.	*	1	0725	74	0.00	0.00	0.00	22.
1	0315	24	0.00	0.00	0.00	156.	*	1	0730	75	0.00	0.00	0.00	21.
1	0320	25	0.00	0.00	0.00	149.	*	1	0735	76	0.00	0.00	0.00	21.
1	0325	26	0.00	0.00	0.00	140.	*	1	0740	77	0.00	0.00	0.00	21.
1	0330	27	0.00	0.00	0.00	132.	*	1	0745	78	0.00	0.00	0.00	21.
1	0335	28	0.00	0.00	0.00	123.	*	1	0750	79	0.00	0.00	0.00	20.
1	0340	29	0.00	0.00	0.00	115.	*	1	0755	80	0.00	0.00	0.00	20.
1	0345	30	0.00	0.00	0.00	108.	*	1	0800	81	0.00	0.00	0.00	20.
1	0350	31	0.00	0.00	0.00	101.	*	1	0805	82	0.00	0.00	0.00	20.
1	0355	32	0.00	0.00	0.00	94.	*	1	0810	83	0.00	0.00	0.00	19.
1	0400	33	0.00	0.00	0.00	88.	*	1	0815	84	0.00	0.00	0.00	19.
1	0405	34	0.00	0.00	0.00	83.	*	1	0820	85	0.00	0.00	0.00	19.
1	0410	35	0.00	0.00	0.00	77.	*	1	0825	86	0.00	0.00	0.00	19.
1	0415	36	0.00	0.00	0.00	72.	*	1	0830	87	0.00	0.00	0.00	19.
1	0420	37	0.00	0.00	0.00	68.	*	1	0835	88	0.00	0.00	0.00	19.
1	0425	38	0.00	0.00	0.00	64.	*	1	0840	89	0.00	0.00	0.00	18.
1	0430	39	0.00	0.00	0.00	60.	*	1	0845	90	0.00	0.00	0.00	18.
1	0435	40	0.00	0.00	0.00	57.	*	1	0850	91	0.00	0.00	0.00	18.
1	0440	41	0.00	0.00	0.00	54.	*	1	0855	92	0.00	0.00	0.00	18.
1	0445	42	0.00	0.00	0.00	52.	*	1	0900	93	0.00	0.00	0.00	18.
1	0450	43	0.00	0.00	0.00	49.	*	1	0905	94	0.00	0.00	0.00	18.
1	0455	44	0.00	0.00	0.00	47.	*	1	0910	95	0.00	0.00	0.00	18.
1	0500	45	0.00	0.00	0.00	45.	*	1	0915	96	0.00	0.00	0.00	18.
1	0505	46	0.00	0.00	0.00	43.	*	1	0920	97	0.00	0.00	0.00	17.
1	0510	47	0.00	0.00	0.00	41.	*	1	0925	98	0.00	0.00	0.00	17.
1	0515	48	0.00	0.00	0.00	40.	*	1	0930	99	0.00	0.00	0.00	17.
1	0520	49	0.00	0.00	0.00	38.	*	1	0935	100	0.00	0.00	0.00	17.
1	0525	50	0.00	0.00	0.00	37.	*	1	0940	101	0.00	0.00	0.00	17.
1	0530	51	0.00	0.00	0.00	36.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.94, TOTAL EXCESS = 0.51

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
159.	1.83	(CFS)	59.	46.	46.	46.
		(INCHES)	0.212	0.228	0.228	0.228
		(AC-FT)	29.	31.	31.	31.

CUMULATIVE AREA = 2.58 SQ MI

STATION SUB7

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	120.	140.	160.	0.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLL
10150	70										LLLLLLLLLLLLLLLLLLLLLLLLXXXX		
10155	80											LLLLLLXXXX	
10200	90												LLLX
10205	10.0												LLX
10210	11.	O											LX
10215	12.		O										X
10220	13.			O									X
10225	14.					O							
10230	15.						O						
10235	16.						O						
10240	17.						O						
10245	18.					O							
10250	19.					O							
10255	20.						O						
10300	21.							O					
10305	22.								O				
10310	23.								O				
10315	24.								O				
10320	25.								O				
10325	26.							O					
10330	27.							O					
10335	28.						O						
10340	29.						O						
10345	30.						O						
10350	31.						O						
10355	32.					O							
10400	33.					O							
10405	34.				O								
10410	35.				O								
10415	36.				O								
10420	37.				O								
10425	38.				O								
10430	39.				O								
10435	40.			O									
10440	41.			O									
10445	42.			O									
10450	43.			O									
10455	44.			O									
10500	45.			O									
10505	46.			O									
10510	47.			O									
10515	48.		O										
10520	49.		O										
10525	50.		O										
10530	51.		O										
10535	52.		O										
10540	53.		O										
10545	54.		O										
10550	55.		O										

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10555  56.        .   0   .       .       .       .       .       .       .       .       .       .       .       .
10600  57.        .   0   .       .       .       .       .       .       .       .       .       .       .       .
10605  58.        .  0    .       .       .       .       .       .       .       .       .       .       .       .
10610  59.        .  0    .       .       .       .       .       .       .       .       .       .       .       .
10615  60.        .  0    .       .       .       .       .       .       .       .       .       .       .       .
10620  61. . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.        .  0    .       .       .       .       .       .       .       .       .       .       .       .
10630  63.        .  0    .       .       .       .       .       .       .       .       .       .       .       .
10635  64.        .  0    .       .       .       .       .       .       .       .       .       .       .       .
10640  65.        . 0     .       .       .       .       .       .       .       .       .       .       .       .
10645  66.        . 0     .       .       .       .       .       .       .       .       .       .       .       .
10650  67.        . 0     .       .       .       .       .       .       .       .       .       .       .       .
10655  68.        . 0     .       .       .       .       .       .       .       .       .       .       .       .
10700  69.        . 0     .       .       .       .       .       .       .       .       .       .       .       .
10705  70.        .0      .       .       .       .       .       .       .       .       .       .       .       .
10710  71. . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.        .0      .       .       .       .       .       .       .       .       .       .       .       .
10720  73.        .0      .       .       .       .       .       .       .       .       .       .       .       .
10725  74.        .0      .       .       .       .       .       .       .       .       .       .       .       .
10730  75.        .0      .       .       .       .       .       .       .       .       .       .       .       .
10735  76.        .0      .       .       .       .       .       .       .       .       .       .       .       .
10740  77.        0       .       .       .       .       .       .       .       .       .       .       .       .
10745  78.        0       .       .       .       .       .       .       .       .       .       .       .       .
10750  79.        0       .       .       .       .       .       .       .       .       .       .       .       .
10755  80.        0       .       .       .       .       .       .       .       .       .       .       .       .
10800  81. . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.        0       .       .       .       .       .       .       .       .       .       .       .       .
10810  83.        0       .       .       .       .       .       .       .       .       .       .       .       .
10815  84.        0       .       .       .       .       .       .       .       .       .       .       .       .
10820  85.        0       .       .       .       .       .       .       .       .       .       .       .       .
10825  86.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10830  87.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10835  88.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10840  89.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10845  90.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10850  91. . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10900  93.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10905  94.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10910  95.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10915  96.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10920  97.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10925  98.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10930  99.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10935 100.       0.       .       .       .       .       .       .       .       .       .       .       .       .
10940 101.------0-.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.
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              *            *
 177 KK       *   DIV681   *
              *            *
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RETRIEVED DIVERSION FROM SUB6

179 DR RETRIEVE DIVERSION HYDROGRAPH

ISTAD DIV681 DIVERSION HYDROGRAPH IDENTIFICATION

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HYDROGRAPH AT STATION DIV681

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	20.	*	1		0540	53	0.	*	1		0750	79	0.
1		0125	2	0.	*	1		0335	28	15.	*	1		0545	54	0.	*	1		0755	80	0.
1		0130	3	0.	*	1		0340	29	11.	*	1		0550	55	0.	*	1		0800	81	0.
1		0135	4	0.	*	1		0345	30	8.	*	1		0555	56	0.	*	1		0805	82	0.
1		0140	5	0.	*	1		0350	31	5.	*	1		0600	57	0.	*	1		0810	83	0.
1		0145	6	0.	*	1		0355	32	3.	*	1		0605	58	0.	*	1		0815	84	0.
1		0150	7	0.	*	1		0400	33	2.	*	1		0610	59	0.	*	1		0820	85	0.
1		0155	8	0.	*	1		0405	34	1.	*	1		0615	60	0.	*	1		0825	86	0.
1		0200	9	0.	*	1		0410	35	1.	*	1		0620	61	0.	*	1		0830	87	0.
1		0205	10	1.	*	1		0415	36	1.	*	1		0625	62	0.	*	1		0835	88	0.
1		0210	11	1.	*	1		0420	37	1.	*	1		0630	63	0.	*	1		0840	89	0.
1		0215	12	3.	*	1		0425	38	1.	*	1		0635	64	0.	*	1		0845	90	0.
1		0220	13	3.	*	1		0430	39	1.	*	1		0640	65	0.	*	1		0850	91	0.
1		0225	14	1.	*	1		0435	40	1.	*	1		0645	66	0.	*	1		0855	92	0.
1		0230	15	1.	*	1		0440	41	1.	*	1		0650	67	0.	*	1		0900	93	0.
1		0235	16	1.	*	1		0445	42	1.	*	1		0655	68	0.	*	1		0905	94	0.
1		0240	17	1.	*	1		0450	43	1.	*	1		0700	69	0.	*	1		0910	95	0.
1		0245	18	22.	*	1		0455	44	1.	*	1		0705	70	0.	*	1		0915	96	0.
1		0250	19	65.	*	1		0500	45	0.	*	1		0710	71	0.	*	1		0920	97	0.
1		0255	20	81.	*	1		0505	46	0.	*	1		0715	72	0.	*	1		0925	98	0.
1		0300	21	79.	*	1		0510	47	0.	*	1		0720	73	0.	*	1		0930	99	0.
1		0305	22	69.	*	1		0515	48	0.	*	1		0725	74	0.	*	1		0935	100	0.
1		0310	23	57.	*	1		0520	49	0.	*	1		0730	75	0.	*	1		0940	101	0.
1		0315	24	46.	*	1		0525	50	0.	*	1		0735	76	0.	*					
1		0320	25	35.	*	1		0530	51	0.	*	1		0740	77	0.	*					
1		0325	26	27.	*	1		0535	52	0.	*	1		0745	78	0.	*					

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
81.	1.58	(CFS)	8.	6.	6.	6.
		(INCHES)	0.029	0.029	0.029	0.029
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 0.00 SQ MI

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          *            *
180 KK    *     SUB6   *
          *            *
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ROUTED TO SUB6 (CONTRATION POINT F)
ASSUME COLLECTOR CHANNEL ALONG SOUTH SIDE EASEMENT INDIAN SCHOOL ROAD

HYDROGRAPH ROUTING DATA

117 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

183 RK KINEMATIC WAVE STREAM ROUTING

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

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KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.5941	1.423	2.50	1320.00

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	28.	*	1		0540	53	0.	*	1		0750	79	0.
1		0125	2	0.	*	1		0335	28	22.	*	1		0545	54	0.	*	1		0755	80	0.
1		0130	3	0.	*	1		0340	29	17.	*	1		0550	55	0.	*	1		0800	81	0.
1		0135	4	0.	*	1		0345	30	13.	*	1		0555	56	0.	*	1		0805	82	0.
1		0140	5	0.	*	1		0350	31	10.	*	1		0600	57	0.	*	1		0810	83	0.
1		0145	6	0.	*	1		0355	32	7.	*	1		0605	58	0.	*	1		0815	84	0.
1		0150	7	0.	*	1		0400	33	5.	*	1		0610	59	0.	*	1		0820	85	0.
1		0155	8	0.	*	1		0405	34	4.	*	1		0615	60	0.	*	1		0825	86	0.
1		0200	9	0.	*	1		0410	35	3.	*	1		0620	61	0.	*	1		0830	87	0.
1		0205	10	0.	*	1		0415	36	2.	*	1		0625	62	0.	*	1		0835	88	0.
1		0210	11	0.	*	1		0420	37	2.	*	1		0630	63	0.	*	1		0840	89	0.

1	0215	12	0.	*	1	0425	38	1.	*	1	0635	64	0.	*	1	0845	90	0.
1	0220	13	0.	*	1	0430	39	1.	*	1	0640	65	0.	*	1	0850	91	0.
1	0225	14	1.	*	1	0435	40	1.	*	1	0645	66	0.	*	1	0855	92	0.
1	0230	15	1.	*	1	0440	41	1.	*	1	0650	67	0.	*	1	0900	93	0.
1	0235	16	1.	*	1	0445	42	1.	*	1	0655	68	0.	*	1	0905	94	0.
1	0240	17	1.	*	1	0450	43	1.	*	1	0700	69	0.	*	1	0910	95	0.
1	0245	18	2.	*	1	0455	44	1.	*	1	0705	70	0.	*	1	0915	96	0.
1	0250	19	16.	*	1	0500	45	1.	*	1	0710	71	0.	*	1	0920	97	0.
1	0255	20	59.	*	1	0505	46	1.	*	1	0715	72	0.	*	1	0925	98	0.
1	0300	21	79.	*	1	0510	47	1.	*	1	0720	73	0.	*	1	0930	99	0.
1	0305	22	76.	*	1	0515	48	1.	*	1	0725	74	0.	*	1	0935	100	0.
1	0310	23	66.	*	1	0520	49	1.	*	1	0730	75	0.	*	1	0940	101	0.
1	0315	24	55.	*	1	0525	50	1.	*	1	0735	76	0.	*				
1	0320	25	45.	*	1	0530	51	0.	*	1	0740	77	0.	*				
1	0325	26	36.	*	1	0535	52	0.	*	1	0745	78	0.	*				
				*					*					*				

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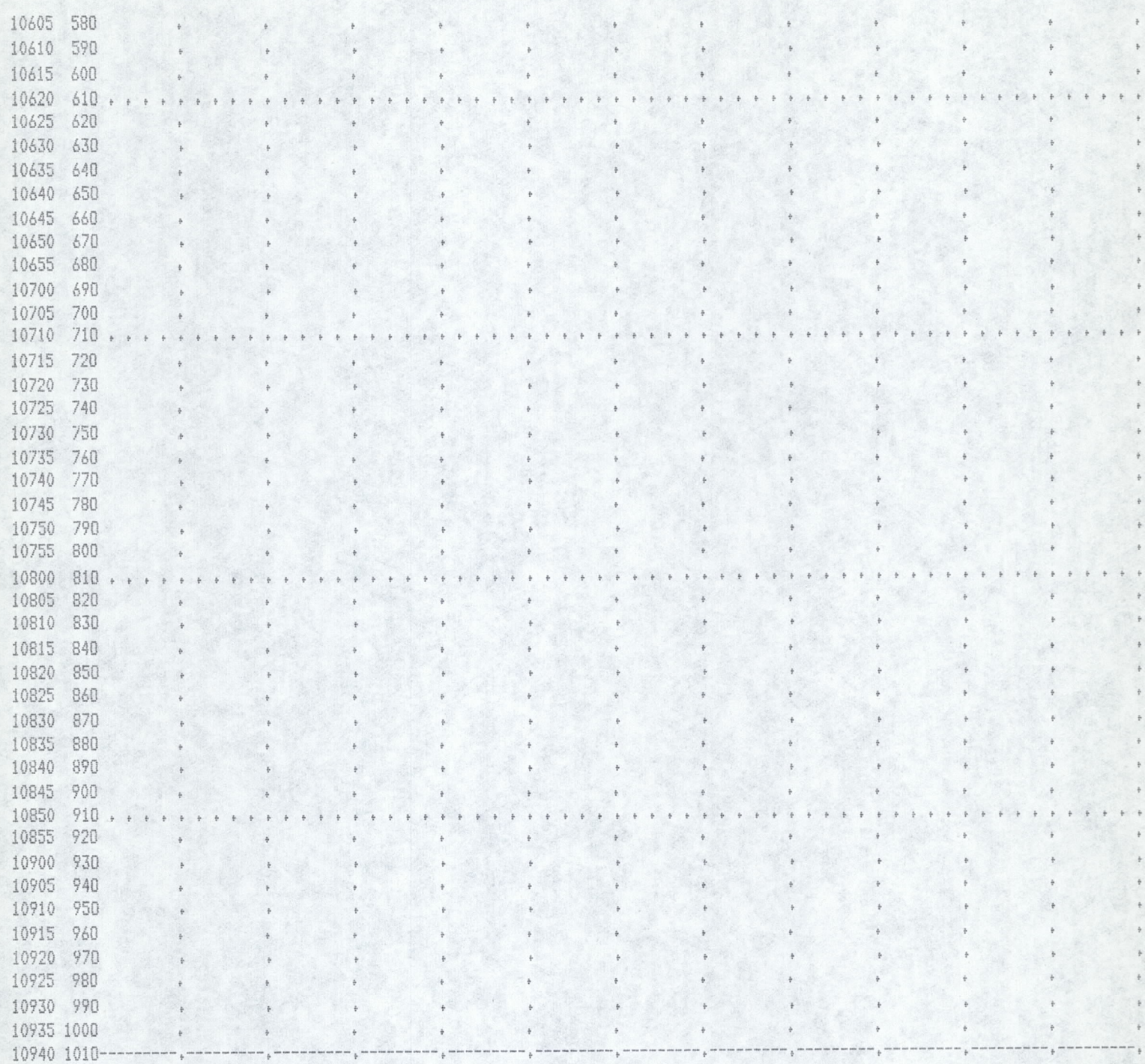
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
79.	1.67	(CFS)	8.	6.	6.	6.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 0.00 SQ MI

STATION SUB6

(O) OUTFLOW

DAHRMN	PER	0.	10.	20.	30.	40.	50.	60.	70.	80.	0.	0.	0.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	70													
10155	80													
10200	90													
10205	100													
10210	110													
10215	120													
10220	130													
10225	14.0													
10230	15.0													
10235	16.0													
10240	17.0													
10245	18. 0													
10250	19.			O										
10255	20.							O.						
10300	21.										O.			
10305	22.									O				
10310	23.								O					
10315	24.							O						
10320	25.						O							
10325	26.					O								
10330	27.				O									
10335	28.			O										
10340	29.		O											
10345	30.	O												
10350	31.													
10355	32.		O											
10400	33.	O												
10405	34.	O												
10410	35. O													
10415	36. O													
10420	37. O													
10425	38.0													
10430	39.0													
10435	40.0													
10440	41.0													
10445	42.0													
10450	43.0													
10455	44.0													
10500	45.0													
10505	46.0													
10510	47.0													
10515	48.0													
10520	49.0													
10525	50.0													
10530	510													
10535	520													
10540	530													
10545	540													
10550	550													
10555	560													
10600	570													


10605 580
10610 590
10615 600
10620 610
10625 620
10630 630
10635 640
10640 650
10645 660
10650 670
10655 680
10700 690
10705 700
10710 710
10715 720
10720 730
10725 740
10730 750
10735 760
10740 770
10745 780
10750 790
10755 800
10800 810
10805 820
10810 830
10815 840
10820 850
10825 860
10830 870
10835 880
10840 890
10845 900
10850 910
10855 920
10900 930
10905 940
10910 950
10915 960
10920 970
10925 980
10930 990
10935 1000
10940 1010

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              *             *
184 KK        *   DIV682    *
              *             *
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RETRIEVED DIVERSION FROM SUB6

186 DR RETRIEVE DIVERSION HYDROGRAPH

ISTAD DIV682 DIVERSION HYDROGRAPH IDENTIFICATION

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HYDROGRAPH AT STATION DIV682

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	104.	*	1		0540	53	20.	*	1		0750	79	10.
1		0125	2	0.	*	1		0335	28	97.	*	1		0545	54	19.	*	1		0755	80	10.
1		0130	3	0.	*	1		0340	29	90.	*	1		0550	55	19.	*	1		0800	81	9.
1		0135	4	0.	*	1		0345	30	83.	*	1		0555	56	18.	*	1		0805	82	9.
1		0140	5	0.	*	1		0350	31	77.	*	1		0600	57	17.	*	1		0810	83	9.
1		0145	6	0.	*	1		0355	32	71.	*	1		0605	58	17.	*	1		0815	84	9.
1		0150	7	0.	*	1		0400	33	65.	*	1		0610	59	16.	*	1		0820	85	9.
1		0155	8	2.	*	1		0405	34	60.	*	1		0615	60	16.	*	1		0825	86	9.
1		0200	9	13.	*	1		0410	35	56.	*	1		0620	61	15.	*	1		0830	87	8.
1		0205	10	42.	*	1		0415	36	51.	*	1		0625	62	15.	*	1		0835	88	8.
1		0210	11	85.	*	1		0420	37	47.	*	1		0630	63	14.	*	1		0840	89	8.
1		0215	12	115.	*	1		0425	38	44.	*	1		0635	64	14.	*	1		0845	90	8.
1		0220	13	120.	*	1		0430	39	42.	*	1		0640	65	13.	*	1		0850	91	8.
1		0225	14	112.	*	1		0435	40	40.	*	1		0645	66	13.	*	1		0855	92	8.
1		0230	15	100.	*	1		0440	41	38.	*	1		0650	67	13.	*	1		0900	93	8.
1		0235	16	87.	*	1		0445	42	36.	*	1		0655	68	12.	*	1		0905	94	8.
1		0240	17	74.	*	1		0450	43	34.	*	1		0700	69	12.	*	1		0910	95	8.
1		0245	18	84.	*	1		0455	44	32.	*	1		0705	70	12.	*	1		0915	96	7.
1		0250	19	131.	*	1		0500	45	30.	*	1		0710	71	12.	*	1		0920	97	7.
1		0255	20	155.	*	1		0505	46	28.	*	1		0715	72	11.	*	1		0925	98	7.
1		0300	21	157.	*	1		0510	47	27.	*	1		0720	73	11.	*	1		0930	99	7.
1		0305	22	151.	*	1		0515	48	26.	*	1		0725	74	11.	*	1		0935	100	7.
1		0310	23	142.	*	1		0520	49	24.	*	1		0730	75	11.	*	1		0940	101	7.
1		0315	24	132.	*	1		0525	50	23.	*	1		0735	76	10.	*					
1		0320	25	123.	*	1		0530	51	22.	*	1		0740	77	10.	*					
1		0325	26	113.	*	1		0535	52	21.	*	1		0745	78	10.	*					

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
157.	1.67	(CFS)	50.	38.	38.	38.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	25.	26.	26.	26.

CUMULATIVE AREA = 0.00 SQ MI

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              *            *
187 KK        *     SUB68  *
              *            *
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COMBINE DIVERT FLOW 681 AND 682

189 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB68

SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	133.	1		0540	53	21.	1		0750	79	10.
1		0125	2	0.	1		0335	28	119.	1		0545	54	20.	1		0755	80	10.
1		0130	3	0.	1		0340	29	107.	1		0550	55	19.	1		0800	81	10.
1		0135	4	0.	1		0345	30	96.	1		0555	56	18.	1		0805	82	9.
1		0140	5	0.	1		0350	31	87.	1		0600	57	18.	1		0810	83	9.
1		0145	6	0.	1		0355	32	78.	1		0605	58	17.	1		0815	84	9.
1		0150	7	0.	1		0400	33	71.	1		0610	59	16.	1		0820	85	9.
1		0155	8	2.	1		0405	34	64.	1		0615	60	16.	1		0825	86	9.
1		0200	9	13.	1		0410	35	59.	1		0620	61	15.	1		0830	87	9.
1		0205	10	42.	1		0415	36	53.	1		0625	62	15.	1		0835	88	8.
1		0210	11	85.	1		0420	37	49.	1		0630	63	15.	1		0840	89	8.
1		0215	12	115.	1		0425	38	46.	1		0635	64	14.	1		0845	90	8.
1		0220	13	120.	1		0430	39	43.	1		0640	65	14.	1		0850	91	8.
1		0225	14	113.	1		0435	40	41.	1		0645	66	13.	1		0855	92	8.
1		0230	15	102.	1		0440	41	39.	1		0650	67	13.	1		0900	93	8.
1		0235	16	89.	1		0445	42	36.	1		0655	68	13.	1		0905	94	8.
1		0240	17	75.	1		0450	43	34.	1		0700	69	12.	1		0910	95	8.
1		0245	18	86.	1		0455	44	32.	1		0705	70	12.	1		0915	96	8.
1		0250	19	146.	1		0500	45	31.	1		0710	71	12.	1		0920	97	7.
1		0255	20	214.	1		0505	46	29.	1		0715	72	12.	1		0925	98	7.
1		0300	21	236.	1		0510	47	27.	1		0720	73	11.	1		0930	99	7.
1		0305	22	227.	1		0515	48	26.	1		0725	74	11.	1		0935	100	7.
1		0310	23	208.	1		0520	49	25.	1		0730	75	11.	1		0940	101	7.
1		0315	24	188.	1		0525	50	24.	1		0735	76	11.					
1		0320	25	167.	1		0530	51	23.	1		0740	77	10.					
1		0325	26	149.	1		0535	52	22.	1		0745	78	10.					

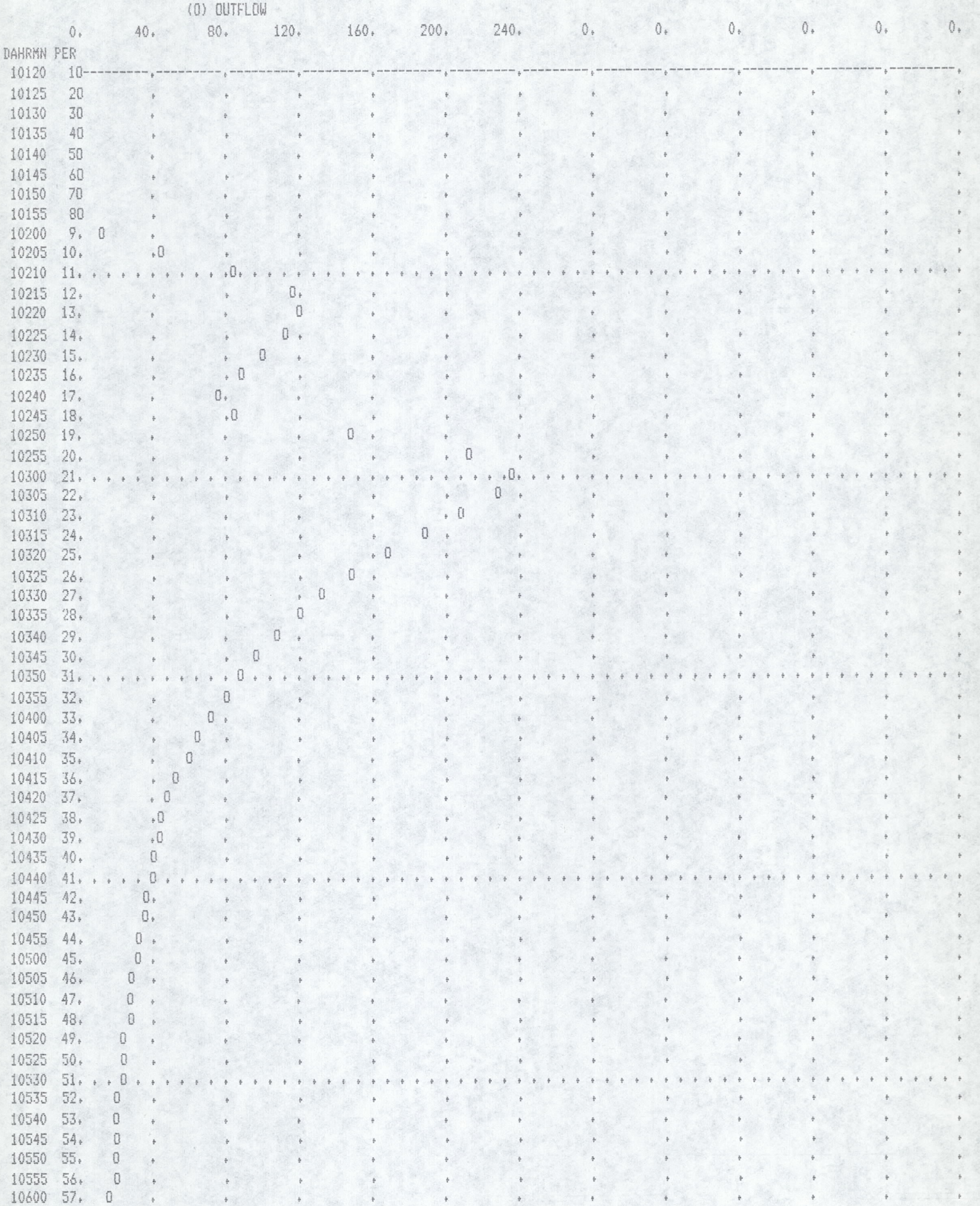
PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	8.33-HR

236.	1.67	(CFS)	58.	43.	43.	43.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	29.	30.	30.	30.

CUMULATIVE AREA = 0.00 SQ MI

STATION SUB68

(O) OUTFLOW



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10605  58.   0
10610  59.   0
10615  60.   0
10620  61.  .0
10625  62.   0
10630  63.   0
10635  64.   0
10640  65.  0
10645  66.  0
10650  67.  0
10655  68.  0
10700  69.  0
10705  70.  0
10710  71. .0
10715  72.  0
10720  73.  0
10725  74.  0
10730  75.  0
10735  76.  0
10740  77.  0
10745  78.  0
10750  79. 0
10755  80. 0
10800  81. 0
10805  82. 0
10810  83. 0
10815  84. 0
10820  85. 0
10825  86. 0
10830  87. 0
10835  88. 0
10840  89. 0
10845  90. 0
10850  91. 0
10855  92. 0
10900  93. 0
10905  94. 0
10910  95. 0
10915  96. 0
10920  97. 0
10925  98. 0
10930  99. 0
10935 100. 0
10940 101.-0-------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

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              *            *
190 KK        *     SUB8   *
              *            *
              **************
                               SOUTH-EAST CORNER OF INDIAN SCHOOL RD AND 107 TH ST
                               ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 107TH ST
                               HYDROGRAPH AT C.P. (H)

                   SUBBASIN RUNOFF DATA

197 BA               SUBBASIN CHARACTERISTICS
                           TAREA       0.36  SUBBASIN AREA

                     PRECIPITATION DATA

194 PB                     STORM       2.45  BASIN TOTAL PRECIPITATION

195 PI                 INCREMENTAL PRECIPITATION PATTERN
                          0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                          0.06      0.05

198 LS               SCS LOSS RATE
                           STRTL       0.25  INITIAL ABSTRACTION
                          CRVNBR      89.00  CURVE NUMBER
                           RTIMP       2.00  PERCENT IMPERVIOUS AREA

                     KINEMATIC WAVE
199 UK                 OVERLAND-FLOW ELEMENT NO. 1
                               L      3000.  OVERLAND FLOW LENGTH
                               S     0.0050  SLOPE
                               N      0.200  ROUGHNESS COEFFICIENT
                              PA      100.0  PERCENT OF SUBBASIN
200 RK                 MAIN CHANNEL
                               L      2640.  CHANNEL LENGTH
                               S     0.0030  SLOPE
                               N      0.025  CHANNEL ROUGHNESS COEFFICIENT
                              CA       0.36  CONTRIBUTING AREA
                           SHAPE       TRAP  CHANNEL SHAPE
                              WD       0.00  BOTTOM WIDTH OR DIAMETER
                               Z       1.00  SIDE SLOPE
                          RUPSTQ        YES  ROUTE UPSTREAM HYDROGRAPH

                                                                ***

              COMPUTED KINEMATIC PARAMETERS
                  ELEMENT     ALPHA        M      DT (MIN)    DX (FT)
                        1    0.5268    1.667        5.00      187.50
                        3    1.6346    1.333        5.00     1320.00

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                                                   HYDROGRAPH AT STATION     SUB8

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	65.
1		0125	2	0.05	0.05	0.00	0.	1		0540	53	0.00	0.00	0.00	63.
1		0130	3	0.07	0.07	0.00	0.	1		0545	54	0.00	0.00	0.00	61.
1		0135	4	0.07	0.07	0.00	0.	1		0550	55	0.00	0.00	0.00	60.
1		0140	5	0.10	0.10	0.00	0.	1		0555	56	0.00	0.00	0.00	58.
1		0145	6	0.16	0.13	0.03	0.	1		0600	57	0.00	0.00	0.00	56.
1		0150	7	1.16	0.46	0.70	0.	1		0605	58	0.00	0.00	0.00	54.
1		0155	8	0.39	0.08	0.31	4.	1		0610	59	0.00	0.00	0.00	53.
1		0200	9	0.14	0.02	0.12	16.	1		0615	60	0.00	0.00	0.00	51.
1		0205	10	0.11	0.02	0.09	42.	1		0620	61	0.00	0.00	0.00	49.
1		0210	11	0.09	0.01	0.08	57.	1		0625	62	0.00	0.00	0.00	48.
1		0215	12	0.06	0.01	0.05	106.	1		0630	63	0.00	0.00	0.00	47.
1		0220	13	0.05	0.01	0.04	148.	1		0635	64	0.00	0.00	0.00	45.
1		0225	14	0.00	0.00	0.00	167.	1		0640	65	0.00	0.00	0.00	44.
1		0230	15	0.00	0.00	0.00	166.	1		0645	66	0.00	0.00	0.00	43.
1		0235	16	0.00	0.00	0.00	157.	1		0650	67	0.00	0.00	0.00	41.
1		0240	17	0.00	0.00	0.00	145.	1		0655	68	0.00	0.00	0.00	40.
1		0245	18	0.00	0.00	0.00	134.	1		0700	69	0.00	0.00	0.00	39.
1		0250	19	0.00	0.00	0.00	137.	1		0705	70	0.00	0.00	0.00	38.
1		0255	20	0.00	0.00	0.00	179.	1		0710	71	0.00	0.00	0.00	37.
1		0300	21	0.00	0.00	0.00	244.	1		0715	72	0.00	0.00	0.00	36.
1		0305	22	0.00	0.00	0.00	278.	1		0720	73	0.00	0.00	0.00	35.
1		0310	23	0.00	0.00	0.00	278.	1		0725	74	0.00	0.00	0.00	34.
1		0315	24	0.00	0.00	0.00	262.	1		0730	75	0.00	0.00	0.00	33.
1		0320	25	0.00	0.00	0.00	243.	1		0735	76	0.00	0.00	0.00	32.
1		0325	26	0.00	0.00	0.00	224.	1		0740	77	0.00	0.00	0.00	31.
1		0330	27	0.00	0.00	0.00	205.	1		0745	78	0.00	0.00	0.00	31.
1		0335	28	0.00	0.00	0.00	189.	1		0750	79	0.00	0.00	0.00	30.
1		0340	29	0.00	0.00	0.00	175.	1		0755	80	0.00	0.00	0.00	29.
1		0345	30	0.00	0.00	0.00	163.	1		0800	81	0.00	0.00	0.00	28.
1		0350	31	0.00	0.00	0.00	152.	1		0805	82	0.00	0.00	0.00	28.
1		0355	32	0.00	0.00	0.00	142.	1		0810	83	0.00	0.00	0.00	27.
1		0400	33	0.00	0.00	0.00	133.	1		0815	84	0.00	0.00	0.00	26.
1		0405	34	0.00	0.00	0.00	126.	1		0820	85	0.00	0.00	0.00	26.
1		0410	35	0.00	0.00	0.00	119.	1		0825	86	0.00	0.00	0.00	25.
1		0415	36	0.00	0.00	0.00	113.	1		0830	87	0.00	0.00	0.00	24.
1		0420	37	0.00	0.00	0.00	107.	1		0835	88	0.00	0.00	0.00	24.
1		0425	38	0.00	0.00	0.00	102.	1		0840	89	0.00	0.00	0.00	23.
1		0430	39	0.00	0.00	0.00	98.	1		0845	90	0.00	0.00	0.00	23.
1		0435	40	0.00	0.00	0.00	95.	1		0850	91	0.00	0.00	0.00	22.
1		0440	41	0.00	0.00	0.00	92.	1		0855	92	0.00	0.00	0.00	22.
1		0445	42	0.00	0.00	0.00	90.	1		0900	93	0.00	0.00	0.00	21.
1		0450	43	0.00	0.00	0.00	87.	1		0905	94	0.00	0.00	0.00	21.
1		0455	44	0.00	0.00	0.00	84.	1		0910	95	0.00	0.00	0.00	21.
1		0500	45	0.00	0.00	0.00	82.	1		0915	96	0.00	0.00	0.00	20.
1		0505	46	0.00	0.00	0.00	79.	1		0920	97	0.00	0.00	0.00	20.
1		0510	47	0.00	0.00	0.00	77.	1		0925	98	0.00	0.00	0.00	19.
1		0515	48	0.00	0.00	0.00	74.	1		0930	99	0.00	0.00	0.00	19.
1		0520	49	0.00	0.00	0.00	72.	1		0935	100	0.00	0.00	0.00	19.
1		0525	50	0.00	0.00	0.00	70.	1		0940	101	0.00	0.00	0.00	18.
1		0530	51	0.00	0.00	0.00	68.								

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.02, TOTAL EXCESS = 1.43

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
278.	1.75	(CFS)	98.	75.	75.	75.
		(INCHES)	2.535	2.701	2.701	2.701
		(AC-FT)	49.	52.	52.	52.

CUMULATIVE AREA = 0.36 SQ MI

STATION SUB8

(O) OUTFLOW

	0.	40.	80.	120.	160.	200.	240.	280.	0.	0.	0. (L) PRECIP	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLX
10150	70										LLLLLLLLLLLLXXXXXXXXXXXXXXXXX		
10155	8.0											LLXXXXXXXX	
10200	9.	O											LXXX
10205	10.		O										LXX
10210	11.			O									XX
10215	12.				O								X
10220	13.					O							X
10225	14.						O						
10230	15.						O						
10235	16.					O							
10240	17.						O						
10245	18.					O							
10250	19.					O							
10255	20.						O						
10300	21.							O					
10305	22.								O				
10310	23.								O				
10315	24.									O			
10320	25.							O					
10325	26.								O				
10330	27.						O						
10335	28.							O					
10340	29.						O						
10345	30.					O							
10350	31.												
10355	32.					O							
10400	33.				O								
10405	34.				O								
10410	35.				O								
10415	36.			O									
10420	37.			O									
10425	38.			O									
10430	39.			O									
10435	40.			O									
10440	41.			O									
10445	42.		O										
10450	43.		O										
10455	44.		O										
10500	45.		O										
10505	46.		O										
10510	47.		O										
10515	48.		O										
10520	49.		O										
10525	50.		O										
10530	51.		O										
10535	52.		O										
10540	53.		O										
10545	54.		O										
10550	55.		O										

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10555  56.          .  0     .        .        .        .        .        .        .        .        .        .        .        .
10600  57.          .  0     .        .        .        .        .        .        .        .        .        .        .        .
10605  58.          .  0     .        .        .        .        .        .        .        .        .        .        .        .
10610  59.          . 0      .        .        .        .        .        .        .        .        .        .        .        .
10615  60.          . 0      .        .        .        .        .        .        .        .        .        .        .        .
10620  61. . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.          . 0      .        .        .        .        .        .        .        .        .        .        .        .
10630  63.          . 0      .        .        .        .        .        .        .        .        .        .        .        .
10635  64.          .0       .        .        .        .        .        .        .        .        .        .        .        .
10640  65.          .0       .        .        .        .        .        .        .        .        .        .        .        .
10645  66.          .0       .        .        .        .        .        .        .        .        .        .        .        .
10650  67.          0        .        .        .        .        .        .        .        .        .        .        .        .
10655  68.          0        .        .        .        .        .        .        .        .        .        .        .        .
10700  69.          0        .        .        .        .        .        .        .        .        .        .        .        .
10705  70.          0        .        .        .        .        .        .        .        .        .        .        .        .
10710  71. . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.         0.        .        .        .        .        .        .        .        .        .        .        .        .
10720  73.         0.        .        .        .        .        .        .        .        .        .        .        .        .
10725  74.         0.        .        .        .        .        .        .        .        .        .        .        .        .
10730  75.        0  .       .        .        .        .        .        .        .        .        .        .        .        .
10735  76.        0  .       .        .        .        .        .        .        .        .        .        .        .        .
10740  77.        0  .       .        .        .        .        .        .        .        .        .        .        .        .
10745  78.        0  .       .        .        .        .        .        .        .        .        .        .        .        .
10750  79.       0   .       .        .        .        .        .        .        .        .        .        .        .        .
10755  80.       0   .       .        .        .        .        .        .        .        .        .        .        .        .
10800  81. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.       0   .       .        .        .        .        .        .        .        .        .        .        .        .
10810  83.       0   .       .        .        .        .        .        .        .        .        .        .        .        .
10815  84.       0   .       .        .        .        .        .        .        .        .        .        .        .        .
10820  85.      0    .       .        .        .        .        .        .        .        .        .        .        .        .
10825  86.      0    .       .        .        .        .        .        .        .        .        .        .        .        .
10830  87.      0    .       .        .        .        .        .        .        .        .        .        .        .        .
10835  88.      0    .       .        .        .        .        .        .        .        .        .        .        .        .
10840  89.      0    .       .        .        .        .        .        .        .        .        .        .        .        .
10845  90.      0    .       .        .        .        .        .        .        .        .        .        .        .        .
10850  91. . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.     0    .       .        .        .        .        .        .        .        .        .        .        .        .
10900  93.     0    .       .        .        .        .        .        .        .        .        .        .        .        .
10905  94.     0    .       .        .        .        .        .        .        .        .        .        .        .        .
10910  95.     0    .       .        .        .        .        .        .        .        .        .        .        .        .
10915  96.     0    .       .        .        .        .        .        .        .        .        .        .        .        .
10920  97.     0    .       .        .        .        .        .        .        .        .        .        .        .        .
10925  98.     0    .       .        .        .        .        .        .        .        .        .        .        .        .
10930  99.     0    .       .        .        .        .        .        .        .        .        .        .        .        .
10935 100.     0    .       .        .        .        .        .        .        .        .        .        .        .        .
10940 101.----0----.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------
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              *            *
201 KK        *     SUB9   *
              *            *
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                            AREA BOUNDED BY INDIAN SCHOOL RD-107 ST-LEVEE-AGUA FRIA
                            ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT OF LEVEE
                            HYDROGRAPH AT C.P. (I) INTO AGUA FRIA WASH

                 SUBBASIN RUNOFF DATA

208 BA             SUBBASIN CHARACTERISTICS
                         TAREA         0.30  SUBBASIN AREA

                   PRECIPITATION DATA

205 PB                   STORM         2.45  BASIN TOTAL PRECIPITATION

206 PI               INCREMENTAL PRECIPITATION PATTERN
                        0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                        0.06      0.05

209 LS             SCS LOSS RATE
                         STRTL         0.25  INITIAL ABSTRACTION
                        CRVNBR        89.00  CURVE NUMBER
                         RTIMP         2.00  PERCENT IMPERVIOUS AREA

                   KINEMATIC WAVE
210 UK               OVERLAND-FLOW ELEMENT NO. 1
                             L        1500.  OVERLAND FLOW LENGTH
                             S       0.0050  SLOPE
                             N        0.200  ROUGHNESS COEFFICIENT
                            PA        100.0  PERCENT OF SUBBASIN
211 RK               MAIN CHANNEL
                             L        6400.  CHANNEL LENGTH
                             S       0.0030  SLOPE
                             N        0.025  CHANNEL ROUGHNESS COEFFICIENT
                            CA         0.30  CONTRIBUTING AREA
                         SHAPE         TRAP  CHANNEL SHAPE
                            WD         0.00  BOTTOM WIDTH OR DIAMETER
                             Z         1.00  SIDE SLOPE
                        RUPSTQ          YES  ROUTE UPSTREAM HYDROGRAPH

                                                         ***

             COMPUTED KINEMATIC PARAMETERS
                ELEMENT      ALPHA         M       DT (MIN)     DX (FT)
                      1     0.5268     1.667        5.00        150.00
                      3     1.6346     1.333        5.00       3200.00

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

                                              HYDROGRAPH AT STATION      SUB9

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	94.
1		0125	2	0.05	0.05	0.00	0.	1		0540	53	0.00	0.00	0.00	91.
1		0130	3	0.07	0.07	0.00	0.	1		0545	54	0.00	0.00	0.00	88.
1		0135	4	0.07	0.07	0.00	0.	1		0550	55	0.00	0.00	0.00	85.
1		0140	5	0.10	0.10	0.00	0.	1		0555	56	0.00	0.00	0.00	82.
1		0145	6	0.16	0.13	0.03	0.	1		0600	57	0.00	0.00	0.00	79.
1		0150	7	1.16	0.46	0.70	0.	1		0605	58	0.00	0.00	0.00	77.
1		0155	8	0.39	0.08	0.31	2.	1		0610	59	0.00	0.00	0.00	74.
1		0200	9	0.14	0.02	0.12	10.	1		0615	60	0.00	0.00	0.00	72.
1		0205	10	0.11	0.02	0.09	22.	1		0620	61	0.00	0.00	0.00	70.
1		0210	11	0.09	0.01	0.08	44.	1		0625	62	0.00	0.00	0.00	67.
1		0215	12	0.06	0.01	0.05	73.	1		0630	63	0.00	0.00	0.00	65.
1		0220	13	0.05	0.01	0.04	115.	1		0635	64	0.00	0.00	0.00	63.
1		0225	14	0.00	0.00	0.00	168.	1		0640	65	0.00	0.00	0.00	61.
1		0230	15	0.00	0.00	0.00	212.	1		0645	66	0.00	0.00	0.00	59.
1		0235	16	0.00	0.00	0.00	236.	1		0650	67	0.00	0.00	0.00	58.
1		0240	17	0.00	0.00	0.00	241.	1		0655	68	0.00	0.00	0.00	56.
1		0245	18	0.00	0.00	0.00	236.	1		0700	69	0.00	0.00	0.00	54.
1		0250	19	0.00	0.00	0.00	228.	1		0705	70	0.00	0.00	0.00	53.
1		0255	20	0.00	0.00	0.00	224.	1		0710	71	0.00	0.00	0.00	51.
1		0300	21	0.00	0.00	0.00	243.	1		0715	72	0.00	0.00	0.00	50.
1		0305	22	0.00	0.00	0.00	288.	1		0720	73	0.00	0.00	0.00	48.
1		0310	23	0.00	0.00	0.00	333.	1		0725	74	0.00	0.00	0.00	47.
1		0315	24	0.00	0.00	0.00	352.	1		0730	75	0.00	0.00	0.00	46.
1		0320	25	0.00	0.00	0.00	348.	1		0735	76	0.00	0.00	0.00	44.
1		0325	26	0.00	0.00	0.00	333.	1		0740	77	0.00	0.00	0.00	43.
1		0330	27	0.00	0.00	0.00	313.	1		0745	78	0.00	0.00	0.00	42.
1		0335	28	0.00	0.00	0.00	293.	1		0750	79	0.00	0.00	0.00	41.
1		0340	29	0.00	0.00	0.00	274.	1		0755	80	0.00	0.00	0.00	40.
1		0345	30	0.00	0.00	0.00	257.	1		0800	81	0.00	0.00	0.00	39.
1		0350	31	0.00	0.00	0.00	241.	1		0805	82	0.00	0.00	0.00	38.
1		0355	32	0.00	0.00	0.00	226.	1		0810	83	0.00	0.00	0.00	37.
1		0400	33	0.00	0.00	0.00	213.	1		0815	84	0.00	0.00	0.00	36.
1		0405	34	0.00	0.00	0.00	201.	1		0820	85	0.00	0.00	0.00	35.
1		0410	35	0.00	0.00	0.00	189.	1		0825	86	0.00	0.00	0.00	34.
1		0415	36	0.00	0.00	0.00	179.	1		0830	87	0.00	0.00	0.00	33.
1		0420	37	0.00	0.00	0.00	170.	1		0835	88	0.00	0.00	0.00	32.
1		0425	38	0.00	0.00	0.00	161.	1		0840	89	0.00	0.00	0.00	31.
1		0430	39	0.00	0.00	0.00	153.	1		0845	90	0.00	0.00	0.00	31.
1		0435	40	0.00	0.00	0.00	146.	1		0850	91	0.00	0.00	0.00	30.
1		0440	41	0.00	0.00	0.00	140.	1		0855	92	0.00	0.00	0.00	29.
1		0445	42	0.00	0.00	0.00	135.	1		0900	93	0.00	0.00	0.00	29.
1		0450	43	0.00	0.00	0.00	130.	1		0905	94	0.00	0.00	0.00	28.
1		0455	44	0.00	0.00	0.00	125.	1		0910	95	0.00	0.00	0.00	27.
1		0500	45	0.00	0.00	0.00	121.	1		0915	96	0.00	0.00	0.00	27.
1		0505	46	0.00	0.00	0.00	116.	1		0920	97	0.00	0.00	0.00	26.
1		0510	47	0.00	0.00	0.00	112.	1		0925	98	0.00	0.00	0.00	26.
1		0515	48	0.00	0.00	0.00	108.	1		0930	99	0.00	0.00	0.00	25.
1		0520	49	0.00	0.00	0.00	105.	1		0935	100	0.00	0.00	0.00	25.
1		0525	50	0.00	0.00	0.00	101.	1		0940	101	0.00	0.00	0.00	24.
1		0530	51	0.00	0.00	0.00	97.								

****

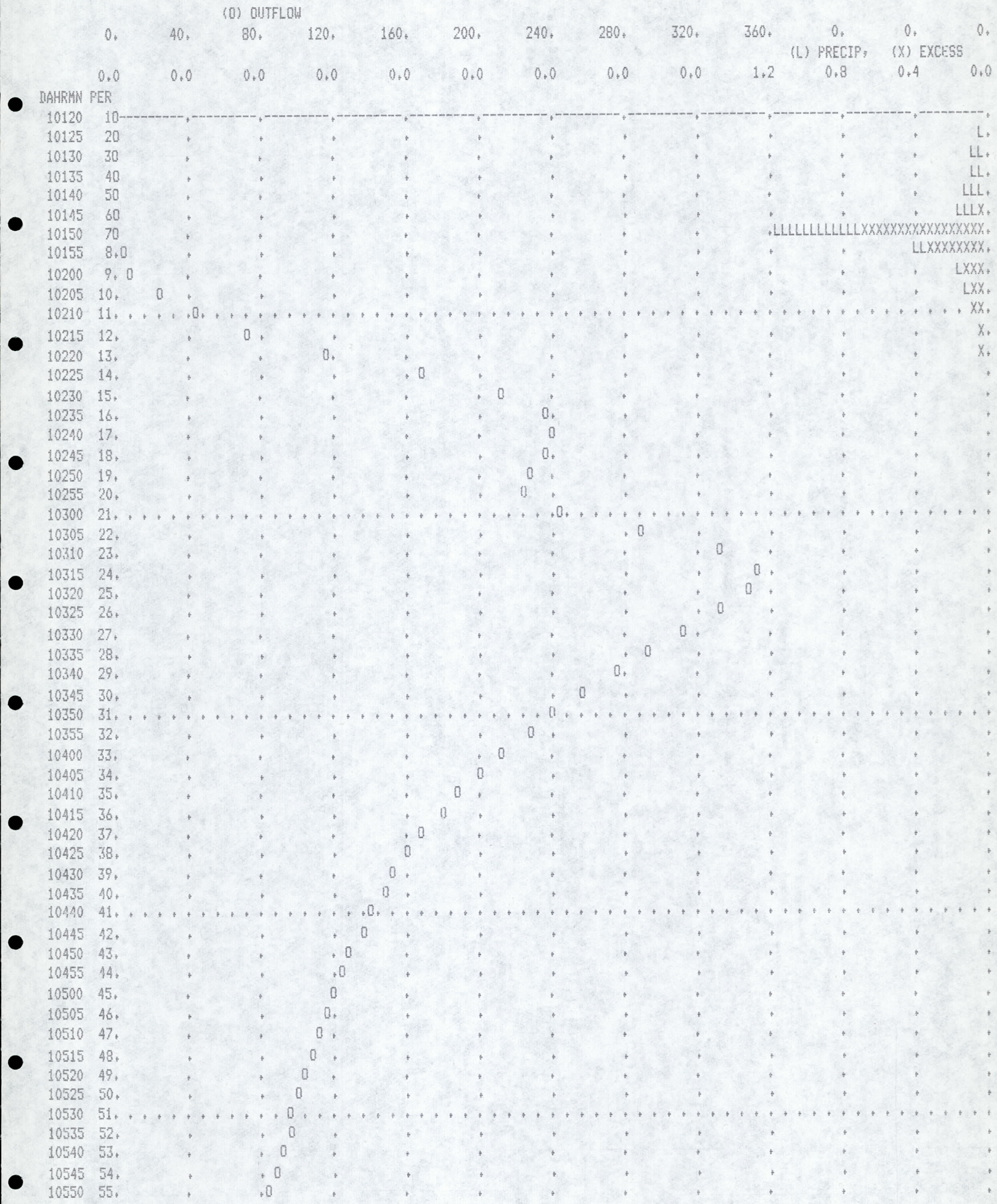
TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.02, TOTAL EXCESS = 1.43

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
352.	1.92	(CFS)	137.	104.	104.	104.
		(INCHES)	1.928	2.043	2.043	2.043
		(AC-FT)	68.	72.	72.	72.

CUMULATIVE AREA = 0.66 SQ MI

STATION SUB9



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10555  56.          .          .0          .          .          .          .          .          .          .          .          .          .          .          .
10600  57.          .          0           .          .          .          .          .          .          .          .          .          .          .          .
10605  58.          .          0.          .          .          .          .          .          .          .          .          .          .          .          .
10610  59.          .          0.          .          .          .          .          .          .          .          .          .          .          .          .
10615  60.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10620  61. . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10630  63.          .          0  .        .          .          .          .          .          .          .          .          .          .          .          .
10635  64.          .          0  .        .          .          .          .          .          .          .          .          .          .          .          .
10640  65.          .          0   .       .          .          .          .          .          .          .          .          .          .          .          .
10645  66.          .          0   .       .          .          .          .          .          .          .          .          .          .          .          .
10650  67.          .          0    .      .          .          .          .          .          .          .          .          .          .          .          .
10655  68.          .          0    .      .          .          .          .          .          .          .          .          .          .          .          .
10700  69.          .          0    .      .          .          .          .          .          .          .          .          .          .          .          .
10705  70.          .          0     .     .          .          .          .          .          .          .          .          .          .          .          .
10710  71. . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.          .          0      .     .          .          .          .          .          .          .          .          .          .          .          .
10720  73.          .          0      .     .          .          .          .          .          .          .          .          .          .          .          .
10725  74.          .          0      .     .          .          .          .          .          .          .          .          .          .          .          .
10730  75.          .          0      .     .          .          .          .          .          .          .          .          .          .          .          .
10735  76.          .          0      .     .          .          .          .          .          .          .          .          .          .          .          .
10740  77.          .          0      .     .          .          .          .          .          .          .          .          .          .          .          .
10745  78.          .          0      .     .          .          .          .          .          .          .          .          .          .          .          .
10750  79.          .          0      .     .          .          .          .          .          .          .          .          .          .          .          .
10755  80.          .          0      .     .          .          .          .          .          .          .          .          .          .          .          .
10800  81. . . . . .          0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.          .          0.          .          .          .          .          .          .          .          .          .          .          .          .
10810  83.          .          0.          .          .          .          .          .          .          .          .          .          .          .          .
10815  84.          .          0.          .          .          .          .          .          .          .          .          .          .          .          .
10820  85.          .          0.          .          .          .          .          .          .          .          .          .          .          .          .
10825  86.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10830  87.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10835  88.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10840  89.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10845  90.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10850  91. . . . . .          0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10900  93.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10905  94.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10910  95.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10915  96.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10920  97.          .          0 .         .          .          .          .          .          .          .          .          .          .          .          .
10925  98.          .       0    .         .          .          .          .          .          .          .          .          .          .          .          .
10930  99.          .       0    .         .          .          .          .          .          .          .          .          .          .          .          .
10935 100.          .       0    .         .          .          .          .          .          .          .          .          .          .          .          .
10940 101.----------.-----0---.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	SUB2A	10.	1.42	10.	8.	8.	0.50		
HYDROGRAPH AT	SUB2B	10.	1.42	10.	8.	8.	0.50		
2 COMBINED AT	SUB2	20.	1.42	19.	17.	17.	1.00		
DIVERSION TO	DIV25	10.	1.42	10.	8.	8.	1.00		
HYDROGRAPH AT	SUB2	10.	1.42	10.	8.	8.	1.00		
HYDROGRAPH AT	SUB3A	98.	2.00	88.	73.	73.	1.66		
DIVERSION TO	RID	98.	0.08	88.	73.	73.	1.66		
HYDROGRAPH AT	SUB3A	0.	0.08	0.	0.	0.	1.66		
HYDROGRAPH AT	SUB4	17.	2.33	17.	15.	15.	2.72		
HYDROGRAPH AT	DIV25	10.	1.42	10.	8.	8.	0.00		
HYDROGRAPH AT	SUB5B	20.	1.58	20.	17.	17.	0.50		
HYDROGRAPH AT	SUB5A	10.	1.42	10.	8.	8.	0.50		
2 COMBINED AT	SUB5	30.	1.58	29.	25.	25.	1.00		
DIVERSION TO	THOMAS	15.	1.50	15.	13.	13.	1.00		
HYDROGRAPH AT	SUB5	15.	1.50	15.	13.	13.	1.00		
ROUTED TO	SUB6	15.	1.83	15.	12.	12.	1.00		
HYDROGRAPH AT	SUB6A	435.	1.25	95.	69.	69.	0.75		
ROUTED TO	SUB6A	317.	1.67	62.	45.	45.	0.75	3.56	1.67
HYDROGRAPH AT	SUB6B	123.	0.92	16.	12.	12.	0.13		
3 COMBINED AT	SUB6	367.	1.58	92.	69.	69.	1.88		
DIVERSION TO	DIV681	81.	1.58	8.	6.	6.	1.88		
HYDROGRAPH AT	SUB6	286.	1.58	84.	64.	64.	1.88		
ROUTED TO	SUB6	284.	1.67	84.	63.	63.	1.88		
HYDROGRAPH AT	SUB6C	123.	0.92	16.	12.	12.	0.13		
2 COMBINED AT	SUB6	314.	1.67	100.	75.	75.	2.00		
DIVERSION TO	DIV682	157.	1.67	50.	38.	38.	2.00		
HYDROGRAPH AT	SUB6	157.	1.67	50.	38.	38.	2.00		

HYDROGRAPH AT	SUB7	159.	1.83	59.	46.	46.	2.58
HYDROGRAPH AT	DIV681	81.	1.58	8.	6.	6.	0.00
ROUTED TO	SUB6	79.	1.67	8.	6.	6.	0.00
HYDROGRAPH AT	DIV682	157.	1.67	50.	38.	38.	0.00
2 COMBINED AT	SUB68	236.	1.67	58.	43.	43.	0.00
HYDROGRAPH AT	SUB8	278.	1.75	98.	75.	75.	0.36
HYDROGRAPH AT	SUB9	352.	1.92	137.	104.	104.	0.66

*** NORMAL END OF HEC-1 ***
101
$ EXIT
SHIAU Job terminated at 11-JUN-1985 11:13:18.82

Accounting information:

Buffered I/O count:	123	Peak working set size:	714
Direct I/O count:	1265	Peak page file size:	791
Page faults:	541	Mounted volumes:	0
Elapsed CPU time:	0 00:01:47.28	Elapsed time:	0 00:03:34.95

VAX/VMS SHIAU MMR3 11-JUN-1985 11:16 TXA5: 11-JUN-1985 12:22 DISK$SYSV35:[HYDRO.SHIAU]MMR3.LOG;2 VAX/VMS
VAX/VMS SHIAU MMR3 11-JUN-1985 11:16 TXA5: 11-JUN-1985 12:22 DISK$SYSV35:[HYDRO.SHIAU]MMR3.LOG;2 VAX/VMS

```
 SSSS  H   H  III   AAA   U   U
S      H   H   I   A   A  U   U
S      H   H   I   A   A  U   U
 SSS   HHHHH   I   A   A  U   U
    S  H   H   I   AAAAA  U   U
    S  H   H   I   A   A  U   U
SSSS   H   H  III  A   A  UUUUU
```

```
MM      MM  MM      MM  RRRRRRRR      333333
MM      MM  MM      MM  RRRRRRRR      333333
MMMM  MMMM  MMMM  MMMM  RR      RR  33      33
MMMM  MMMM  MMMM  MMMM  RR      RR  33      33
MM  MM  MM  MM  MM  MM  RR      RR          33
MM  MM  MM  MM  MM  MM  RR      RR          33
MM      MM  MM      MM  RRRRRRRR          33
MM      MM  MM      MM  RRRRRRRR          33
MM      MM  MM      MM  RR  RR              33
MM      MM  MM      MM  RR  RR              33
MM      MM  MM      MM  RR    RR    33      33      ++++
MM      MM  MM      MM  RR    RR    33      33      ++++
MM      MM  MM      MM  RR      RR    333333        ++++
MM      MM  MM      MM  RR      RR    333333        ++++
```

```
LL          000000      GGGGGGGG      ;;;;      222222
LL          000000      GGGGGGGG      ;;;;      222222
LL        00      00  GG              ;;;;    22      22
LL        00      00  GG              ;;;;    22      22
LL        00      00  GG                              22
LL        00      00  GG                              22
LL        00      00  GG              ;;;;          22
LL        00      00  GG              ;;;;          22
LL        00      00  GG  GGGGGG      ;;;;        22
LL        00      00  GG  GGGGGG      ;;;;        22
LL        00      00  GG      GG        ;;      22
LL        00      00  GG      GG        ;;      22
LLLLLLLLLL    000000      GGGGGG        ;;      2222222222
LLLLLLLLLL    000000      GGGGGG        ;;      2222222222
```

```
 SSSS  H   H  III   AAA   U   U
S      H   H   I   A   A  U   U
S      H   H   I   A   A  U   U
 SSS   HHHHH   I   A   A  U   U
    S  H   H   I   AAAAA  U   U
    S  H   H   I   A   A  U   U
SSSS   H   H  III  A   A  UUUUU
```


VAX/VMS SHIAU MMR3 11-JUN-1985 11:16 TXA5: 11-JUN-1985 12:22 DISK$SYSV35:[HYDRO.SHIAU]MMR3.LOG;2 VAX/VMS
VAX/VMS SHIAU MMR3 11-JUN-1985 11:16 TXA5: 11-JUN-1985 12:22 DISK$SYSV35:[HYDRO.SHIAU]MMR3.LOG;2 VAX/VMS

```
$ DEL FOR%%%.DAT;*
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR023.DAT;1
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR024.DAT;1
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR032.DAT;1
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR038.DAT;1
-RMS-E-FLK, file currently locked by another user
$ SUBMIT == "SUBMIT/NOKEEP/PRINTER=ANNEX/NOTIFY"
$ PRINT == "PRINT/DEVICE=ANNEX"
$ HYDRO == "SET DEF [HYDRO]"
$ SHIAU == "SET DEF [HYDRO.SHIAU]"
$ WRITE SYS$OUTPUT ""

$EXIT
$ RUN HEC1
```

```
*******************************************
*                                         *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)     *
*             FEBRUARY 1981               *
*          REVISED 30 OCT 81              *
*                                         *
*  RUN DATE      11-J    TIME      11:1   *
*                                         *
*******************************************
```


```
*****************************************
*                                       *
*    U.S. ARMY CORPS OF ENGINEERS       *
*  THE HYDROLOGIC ENGINEERING CENTER    *
*         609 SECOND STREET             *
*       DAVIS, CALIFORNIA 95616         *
*  (916) 440-3285 OR (FTS) 448-3285     *
*                                       *
*****************************************
```


```
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. SEE SEPTEMBER 1981 INPUT DESCRIPTION FOR NEW DEFINITIONS.

HEC-1 INPUT PAGE 1

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

    1     ID  MARICOPA COUNTY FLOOD CONTROL DISTRICT
    2     ID  HYDROLOGY(AQUA FRIA RIVER-BETHANY HOME-91TH ST-THOMAS RD)
    3     ID   1 HOUR 100 YEAR DISCHARGE EXISTING CONDITION
    4     ID   W/ IMPROVEMENT AT INTERSECTION OF INDIAN SCHOOL AND 107TH ST
    5     ID   NO SPLIT FLOW TO THE SOUTH OF C.P. (F)
    6     ID   TYPE 2 RAINFALL DISTRIBUTION
    7     ID   KINEMATIC WAVE METHOD
    8     ID   VAX-MMR3.DAT
    9     IT      5          120
   10     IO      2      2

   11     KK   SUB2A
   12     KM  SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
   13     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
   14     PB    2.45
   15     PI    0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
   16     PI    0.06    0.05
   17     BA    0.50
   18     LS       0      72       4              72       4
   19     UK    1850   .0033     0.2      25
   20     UK    5600   .0033     0.2      75
   21     RK    2640   0.005   0.025            TRAP

   22     KK   SUB2B
   23     KM  NORTH-WEST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
   24     KM   ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99-TH ST ROAD
   25     PB    2.45
   26     PI    0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
   27     PI    0.06    0.05
   28     BA    0.50
   29     LS       0      72       4              72       4
   30     UK    1850   .0033     0.2      25
   31     UK    5600   .0033     0.2      75
   32     RK    2640   0.005   0.025            TRAP

   33     KK    SUB2
   34     KM        COMBINE RUNOFF FROM SUB2A AND SUB2B AT C.P.(B)
   35     HC       2

   36     KK    SUB2
   37     KM         DIVERT TO SUB5B
   38     DT   DIV25
   39     DI       2     100    1000
   40     DQ       1      50     500

   41     KK   SUB3A
   42     KM   AREA BOUNDED BY BETHANY HOME ROAD- 99TH ST- CAMELBACK ROAD- RID CHANNEL
   43     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
   44     KM   HYDROGRAPH AT C.P. (C)
   45     PB    2.45
   46     PI    0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
   47     PI    0.06    0.05
   48     BA    0.66
   49     LS       0      85      48
   50     UK    4500   .005     0.2     100
```

HEC-1 INPUT


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

  51      RK   5280   .003  0.025          TRAP                  YES

  52      KK  SUB3A
  53      KM       DIVERT TO R.I.D. CHANNEL
  54      DT    RID
  55      DI      1    150    151    300   1000
  56      DQ      1    150    150    150    150

  57      KK   SUB4
  58      KM  AREA BOUNDED BY BETHANY HOME ROAD- AGUA FRIA-CAMELBACK ROAD- RID CHANNEL
  59      KM  ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
  60      KM  HYDROGRAPH AT C.P. (D) INTO AGUA FRIA WASH
  61      PB   2.45
  62      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  63      PI   0.06   0.05
  64      BA   1.06
  65      LS      0     72      4
  66      UK   5800   .005    0.2    100
  67      RK   4000   .003  0.025          TRAP                  YES

  68      KK  DIV25
  69      KM       RETRIEVE DIVERSION FROM CONCENTRATION B OF AREA 2
  70      DR  DIV25

  71      KK  SUB5B
  72      KM  NORTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
  73      KM  ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99TH STREET
  74      PB   2.45
  75      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  76      PI   0.06   0.05
  77      BA   0.50
  78      LS      0     72      4             72      4
  79      UK   1850   .0033   0.2    25
  80      UK   5600   .0033   0.2    75
  81      RK   2640   0.005  0.025          TRAP                  YES

  82      KK  SUB5A
  83      KM  SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
  84      KM  ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  85      PB   2.45
  86      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  87      PI   0.06   0.05
  88      BA   0.50
  89      LS      0     72      4             72      4
  90      UK   1850   .0033   0.2    25
  91      UK   5600   .0033   0.2    75
  92      RK   2640   0.005  0.025          TRAP

  93      KK   SUB5
  94      KM       COMBINE RUNOFF FROM SUB5A AND SUB5B AND DIVERT 25 AT C.P.(E)
  95      HC      2
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

  96      KK   SUB5
  97      KM        DIVERT TO THOMAS ROAD
  98      DT  THOMAS
  99      DI       2     100    1000
 100      DQ       1      50     500

 101      KK   SUB6
 102      KM        ROUTED TO SUB6 (AT MID-POINT OF (E) AND (F))
 103      KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
 104      RK    2640   0.005   0.025           TRAP       5     0.5

 105      KK   SUB6A
 106      KM   AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
 107      KM   ASSUME OVERLAND LENGTH 100' AS LOT SIZE
 108      KM         COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
 109      KM         MAIN CHANNEL 5000' RUNING NORTH-SOUTH
 110      KM   CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
 111      KM   MODELED AS 75% OF THE AREA ROUTED THROUGH THE LAKE
 112      BA     .75
 113      LS              80      29
 114      UK     100   .0033     0.2     100
 115      RK    2000    .005    0.16     .10    TRAP
 116      RK    5000    .005    0.16            TRAP

 117      KK   SUB6A
 118      KM        SUB6A LAKE ROUTING
 119      RL       0       0
 120      RS       1    STOR       0
 121      SV       0     5.5    11.0    16.5    17.9    19.3    20.7    23.5
 122      SQ       0       0       0       0      67     190     350     750
 123      SE       0       1       2       3     3.2     3.4     3.6     4.0

 124      KK   SUB6B
 125      KM   AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
 126      KM   ASSUME OVERLAND LENGTH 100' AS LOT SIZE
 127      KM         COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
 128      KM         MAIN CHANNEL 1000' RUNING NORTH-SOUTH
 129      KM   CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
 130      KM   MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE
 131      BA    .125
 132      LS       0      80      29
 133      UK     100   .0033     0.2     100
 134      RK    2000    .005    0.16     .10    TRAP
 135      RK    1000    .005    0.16            TRAP

 136      KK   SUB6
 137      KM        COMBINED SUB6B, ROUTED SUB6A AND ROUTED 5 AT C.P. (F)
 138      HC       3
```

HEC-1 INPUT


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

  139     KK   SUB6
  140     KM        DIVERT TO SUB8 AT MID-POINT OF (E) AND (F)
  141     DT  DIV681
  142     DI      1     111     146     199     266     350     450     570     711
  143     DQ      0       1       5      17      39      73     121     186     267

  144     KK   SUB6
  145     KM        ROUTED TO SUB6 (CONTRATION POINT F)
  146     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  147     RK    2640   0.005   0.025           TRAP       5     0.5

  148     KK   SUB6C
  149     KM   AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
  150     KM   ASSUME OVERLAND LENGTH 100' AS LOT SIZE
  151     KM         COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
  152     KM         MAIN CHANNEL 1000' RUNING NORTH-SOUTH
  153     KM   CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT (F)
  154     KM   MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE
  155     BA    .125
  156     LS      0      80      29
  157     UK    100   .0033     0.2     100
  158     RK   2000    .005    0.16     .10    TRAP
  159     RK   1000    .005    0.16            TRAP

  160     KK   SUB6
  161     KM        COMBINED SUB6C, ROUTED (SUB6A,SUB6B  AND ROUTED 5) AT C.P. (F)
  162     HC      2

  163     KK   SUB7
  164     KM   AREA BOUNDED BY 107TH ST- CAMELBACK ROAD- INDIAN SCHOOL-AUGU FRIA
  165     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  166     KM   HYDROGRAPH AT C.P. (G) INTO AGUA FRIA WASH
  167     PB   2.45
  168     PI   0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
  169     PI   0.06    0.05
  170     BA   0.58
  171     LS      0      71       2
  172     UK   4500    .005     0.2     100
  173     RK   5800    .003   0.025           TRAP       5       3     YES

  174     KK  DIV681
  175     KM        RETRIEVED DIVERSION FROM SUB6
  176     DR  DIV681

  177     KK   SUB6
  178     KM        ROUTED TO SUB6 (CONTRATION POINT F)
  179     KM   ASSUME COLLECTOR CHANNEL ALONG SOUTH SIDE EASEMENT INDIAN SCHOOL ROAD
  180     RK    2640   0.005   0.025           TRAP       5     0.5
```

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

  181     KK   SUB8
  182     KM   SOUTH-EAST CORNER OF INDIAN SCHOOL RD AND 107 TH ST
  183     KM   ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 107TH ST
  184     KM   HYDROGRAPH AT C.P. (H)
  185     PB   2.45
  186     PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  187     PI   0.06   0.05
  188     BA   0.36
  189     LS      0     89      2
  190     UK   3000   .005    0.2    100
  191     RK   2640   .003   0.025          TRAP                  YES

  192     KK   SUB9
  193     KM   AREA BOUNDED BY INDIAN SCHOOL RD-107 ST-LEVEE-AGUA FRIA
  194     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT OF LEVEE
  195     KM   HYDROGRAPH AT C.P. (I) INTO AGUA FRIA WASH
  196     PB   2.45
  197     PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  198     PI   0.06   0.05
  199     BA   0.30
  200     LS      0     89      2
  201     UK   1500   .005    0.2    100
  202     RK   6400   .003   0.025          TRAP                  YES
  203     ZZ
```

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*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*            FEBRUARY 1981              *
*          REVISED 30 OCT 81            *
*                                       *
*  RUN DATE      11-J    TIME      11:1 *
*                                       *
*****************************************
```


```
*****************************************
*                                       *
*    U.S. ARMY CORPS OF ENGINEERS       *
*  THE HYDROLOGIC ENGINEERING CENTER    *
*         609 SECOND STREET             *
*       DAVIS, CALIFORNIA 95616         *
*  (916) 440-3285 OR (FTS) 448-3285     *
*                                       *
*****************************************
```


MARICOPA COUNTY FLOOD CONTROL DISTRICT
HYDROLOGY(AQUA FRIA RIVER-BETHANY HOME-91TH ST-THOMAS RD)
1 HOUR 100 YEAR DISCHARGE EXISTING CONDITION
W/ IMPROVEMENT AT INTERSECTION OF INDIAN SCHOOL AND 107TH ST
NO SPLIT FLOW TO THE SOUTH OF C.P. (F)
TYPE 2 RAINFALL DISTRIBUTION
KINEMATIC WAVE METHOD
VAX-MMR3.DAT

10 IO OUTPUT CONTROL VARIABLES

IPRNT	2	PRINT CONTROL
IPLOT	2	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA

NMIN		5	MINUTES IN COMPUTATION INTERVAL
IDATE	1	0	STARTING DATE
ITIME		0120	STARTING TIME
NQ		101	NUMBER OF HYDROGRAPH ORDINATES
NDDATE	1	0	ENDING DATE
NDTIME		0940	ENDING TIME

COMPUTATION INTERVAL 0.08 HOURS
TOTAL TIME BASE 8.33 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

*** ***

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***************
*             *
*     SUB2A   *
*             *
***************
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11 KK

SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD

SUBBASIN RUNOFF DATA

17 BA SUBBASIN CHARACTERISTICS

TAREA 0.50 SUBBASIN AREA

PRECIPITATION DATA

14 PB STORM 2.45 BASIN TOTAL PRECIPITATION

15 PI INCREMENTAL PRECIPITATION PATTERN

0.05 0.07 0.07 0.10 0.16 1.16 0.39 0.14 0.11 0.09
0.06 0.05

18 LS SCS LOSS RATE

STRTL 0.78 INITIAL ABSTRACTION
CRVNBR 72.00 CURVE NUMBER
RTIMP 4.00 PERCENT IMPERVIOUS AREA

LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT

STRTL 0.78 INITIAL ABSTRACTION
CRVNBR 72.00 CURVE NUMBER
RTIMP 4.00 PERCENT IMPERVIOUS AREA

KINEMATIC WAVE

19 UK OVERLAND-FLOW ELEMENT NO. 1

L 1850. OVERLAND FLOW LENGTH
S 0.0033 SLOPE
N 0.200 ROUGHNESS COEFFICIENT
PA 25.0 PERCENT OF SUBBASIN

20 UK OVERLAND-FLOW ELEMENT NO. 2

L 5600. OVERLAND FLOW LENGTH
S 0.0033 SLOPE
N 0.200 ROUGHNESS COEFFICIENT
PA 75.0 PERCENT OF SUBBASIN

21 RK MAIN CHANNEL

L 2640. CHANNEL LENGTH
S 0.0050 SLOPE
N 0.025 CHANNEL ROUGHNESS COEFFICIENT
CA 0.50 CONTRIBUTING AREA
SHAPE TRAP CHANNEL SHAPE
WD 0.00 BOTTOM WIDTH OR DIAMETER
Z 1.00 SIDE SLOPE
RUPSTQ NO ROUTE UPSTREAM HYDROGRAPH

***

COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	84.09
2	0.4280	1.667	5.00	133.33
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB2A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	10.
1		0125	2	0.05	0.05	0.00	0.	*	1		0540	53	0.00	0.00	0.00	10.

1	0130	3	0.07	0.07	0.00	0.	*	1	0545	54	0.00	0.00	0.00	10.
1	0135	4	0.07	0.07	0.00	0.	*	1	0550	55	0.00	0.00	0.00	10.
1	0140	5	0.10	0.10	0.00	0.	*	1	0555	56	0.00	0.00	0.00	10.
1	0145	6	0.16	0.15	0.01	0.	*	1	0600	57	0.00	0.00	0.00	10.
1	0150	7	1.16	0.97	0.19	0.	*	1	0605	58	0.00	0.00	0.00	10.
1	0155	8	0.39	0.23	0.16	1.	*	1	0610	59	0.00	0.00	0.00	10.
1	0200	9	0.14	0.08	0.06	2.	*	1	0615	60	0.00	0.00	0.00	10.
1	0205	10	0.11	0.06	0.05	4.	*	1	0620	61	0.00	0.00	0.00	10.
1	0210	11	0.09	0.04	0.05	6.	*	1	0625	62	0.00	0.00	0.00	10.
1	0215	12	0.06	0.03	0.03	8.	*	1	0630	63	0.00	0.00	0.00	10.
1	0220	13	0.05	0.02	0.03	9.	*	1	0635	64	0.00	0.00	0.00	10.
1	0225	14	0.00	0.00	0.00	10.	*	1	0640	65	0.00	0.00	0.00	10.
1	0230	15	0.00	0.00	0.00	10.	*	1	0645	66	0.00	0.00	0.00	9.
1	0235	16	0.00	0.00	0.00	10.	*	1	0650	67	0.00	0.00	0.00	9.
1	0240	17	0.00	0.00	0.00	10.	*	1	0655	68	0.00	0.00	0.00	9.
1	0245	18	0.00	0.00	0.00	10.	*	1	0700	69	0.00	0.00	0.00	9.
1	0250	19	0.00	0.00	0.00	10.	*	1	0705	70	0.00	0.00	0.00	9.
1	0255	20	0.00	0.00	0.00	10.	*	1	0710	71	0.00	0.00	0.00	9.
1	0300	21	0.00	0.00	0.00	10.	*	1	0715	72	0.00	0.00	0.00	9.
1	0305	22	0.00	0.00	0.00	10.	*	1	0720	73	0.00	0.00	0.00	9.
1	0310	23	0.00	0.00	0.00	10.	*	1	0725	74	0.00	0.00	0.00	9.
1	0315	24	0.00	0.00	0.00	10.	*	1	0730	75	0.00	0.00	0.00	9.
1	0320	25	0.00	0.00	0.00	10.	*	1	0735	76	0.00	0.00	0.00	9.
1	0325	26	0.00	0.00	0.00	10.	*	1	0740	77	0.00	0.00	0.00	9.
1	0330	27	0.00	0.00	0.00	10.	*	1	0745	78	0.00	0.00	0.00	9.
1	0335	28	0.00	0.00	0.00	10.	*	1	0750	79	0.00	0.00	0.00	9.
1	0340	29	0.00	0.00	0.00	10.	*	1	0755	80	0.00	0.00	0.00	8.
1	0345	30	0.00	0.00	0.00	10.	*	1	0800	81	0.00	0.00	0.00	8.
1	0350	31	0.00	0.00	0.00	10.	*	1	0805	82	0.00	0.00	0.00	8.
1	0355	32	0.00	0.00	0.00	10.	*	1	0810	83	0.00	0.00	0.00	8.
1	0400	33	0.00	0.00	0.00	10.	*	1	0815	84	0.00	0.00	0.00	8.
1	0405	34	0.00	0.00	0.00	10.	*	1	0820	85	0.00	0.00	0.00	8.
1	0410	35	0.00	0.00	0.00	10.	*	1	0825	86	0.00	0.00	0.00	8.
1	0415	36	0.00	0.00	0.00	10.	*	1	0830	87	0.00	0.00	0.00	8.
1	0420	37	0.00	0.00	0.00	10.	*	1	0835	88	0.00	0.00	0.00	8.
1	0425	38	0.00	0.00	0.00	10.	*	1	0840	89	0.00	0.00	0.00	8.
1	0430	39	0.00	0.00	0.00	10.	*	1	0845	90	0.00	0.00	0.00	8.
1	0435	40	0.00	0.00	0.00	10.	*	1	0850	91	0.00	0.00	0.00	8.
1	0440	41	0.00	0.00	0.00	10.	*	1	0855	92	0.00	0.00	0.00	8.
1	0445	42	0.00	0.00	0.00	10.	*	1	0900	93	0.00	0.00	0.00	8.
1	0450	43	0.00	0.00	0.00	10.	*	1	0905	94	0.00	0.00	0.00	8.
1	0455	44	0.00	0.00	0.00	10.	*	1	0910	95	0.00	0.00	0.00	7.
1	0500	45	0.00	0.00	0.00	10.	*	1	0915	96	0.00	0.00	0.00	7.
1	0505	46	0.00	0.00	0.00	10.	*	1	0920	97	0.00	0.00	0.00	7.
1	0510	47	0.00	0.00	0.00	10.	*	1	0925	98	0.00	0.00	0.00	7.
1	0515	48	0.00	0.00	0.00	10.	*	1	0930	99	0.00	0.00	0.00	7.
1	0520	49	0.00	0.00	0.00	10.	*	1	0935	100	0.00	0.00	0.00	7.
1	0525	50	0.00	0.00	0.00	10.	*	1	0940	101	0.00	0.00	0.00	7.
1	0530	51	0.00	0.00	0.00	10.	*							
							*							

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.87, TOTAL EXCESS = 0.58

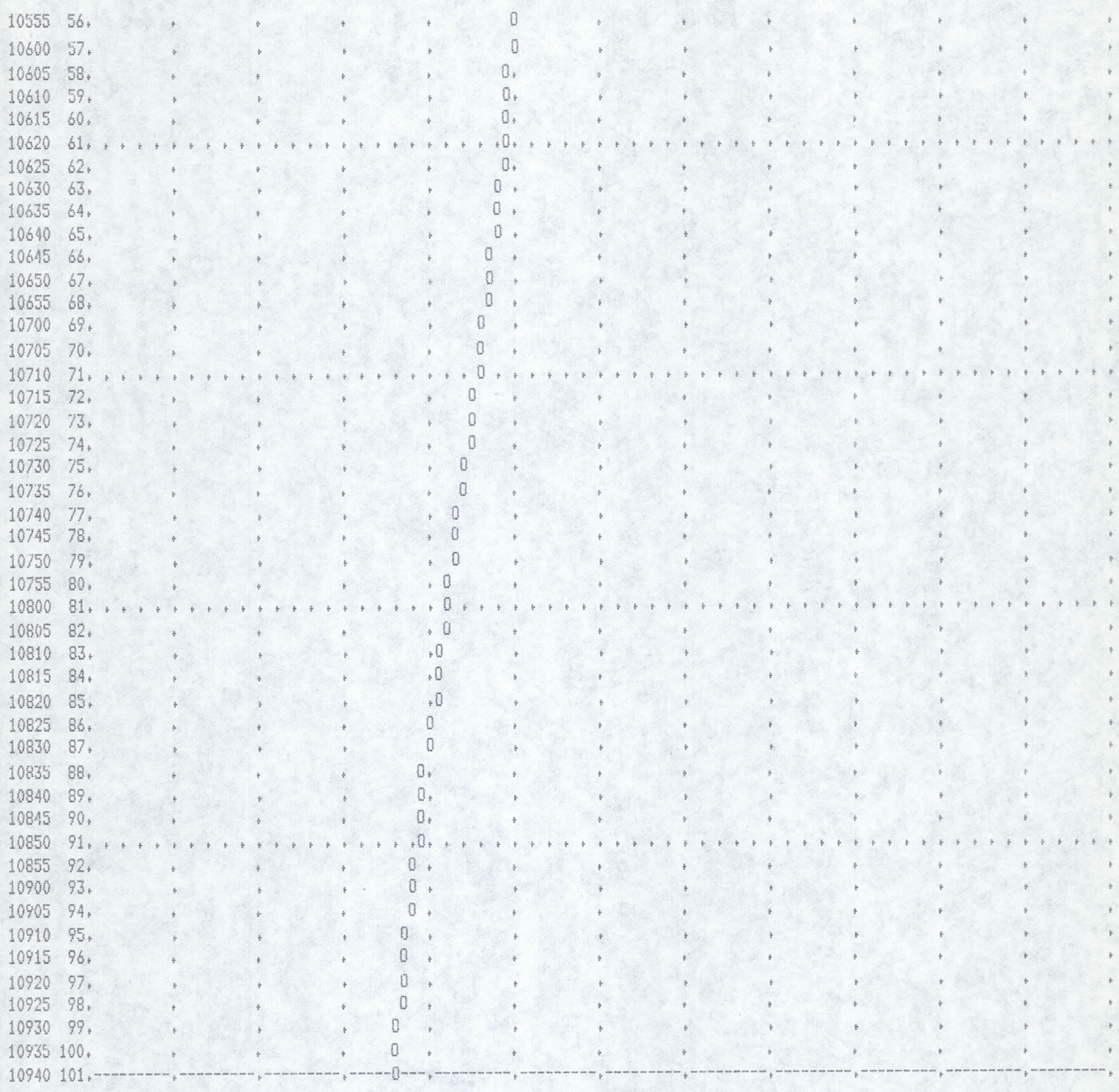
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.179	0.218	0.218	0.218
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB2A

(O) OUTFLOW

	0.	2.	4.	6.	8.	10.	0.	0.	0.	0.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLL
10150	7.0										LLLLLLLLLLLLLLLLLLLLLLLLLXXXXX		
10155	8.	O										LLLLLLXXXX	
10200	9.		O										LLXX
10205	10.			O									LLX
10210	11.					O							LX
10215	12.				O								X
10220	13.					O							X
10225	14.					O							
10230	15.					O							
10235	16.					O							
10240	17.					O							
10245	18.					O							
10250	19.					O							
10255	20.					O							
10300	21.					O							
10305	22.					O							
10310	23.					O							
10315	24.					O							
10320	25.					O							
10325	26.					O							
10330	27.					O							
10335	28.					O							
10340	29.					O							
10345	30.					O							
10350	31.					O							
10355	32.					O							
10400	33.					O							
10405	34.					O							
10410	35.					O							
10415	36.					O							
10420	37.					O							
10425	38.					O							
10430	39.					O							
10435	40.					O							
10440	41.					O							
10445	42.					O							
10450	43.					O							
10455	44.					O							
10500	45.					O							
10505	46.					O							
10510	47.					O							
10515	48.					O							
10520	49.					O							
10525	50.					O							
10530	51.					O							
10535	52.					O							
10540	53.					O							
10545	54.					O							
10550	55.					O							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10700 69
10705 70
10710 71
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10845 90
10850 91
10855 92
10900 93
10905 94
10910 95
10915 96
10920 97
10925 98
10930 99
10935 100
10940 101

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

           **************
           *            *
  22 KK    *    SUB2B   *
           *            *
           **************
                         NORTH-WEST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
                          ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99-TH ST ROAD

              SUBBASIN RUNOFF DATA

  28 BA         SUBBASIN CHARACTERISTICS
                      TAREA        0.50  SUBBASIN AREA

                PRECIPITATION DATA

  25 PB               STORM        2.45  BASIN TOTAL PRECIPITATION

  26 PI           INCREMENTAL PRECIPITATION PATTERN
                     0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                     0.06      0.05

  29 LS         SCS LOSS RATE
                      STRTL        0.78  INITIAL ABSTRACTION
                     CRVNBR       72.00  CURVE NUMBER
                      RTIMP        4.00  PERCENT IMPERVIOUS AREA

                  LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
                      STRTL        0.78  INITIAL ABSTRACTION
                     CRVNBR       72.00  CURVE NUMBER
                      RTIMP        4.00  PERCENT IMPERVIOUS AREA

                KINEMATIC WAVE
  30 UK           OVERLAND-FLOW ELEMENT NO. 1
                          L       1850.  OVERLAND FLOW LENGTH
                          S      0.0033  SLOPE
                          N       0.200  ROUGHNESS COEFFICIENT
                         PA        25.0  PERCENT OF SUBBASIN
  31 UK           OVERLAND-FLOW ELEMENT NO. 2
                          L       5600.  OVERLAND FLOW LENGTH
                          S      0.0033  SLOPE
                          N       0.200  ROUGHNESS COEFFICIENT
                         PA        75.0  PERCENT OF SUBBASIN
  32 RK           MAIN CHANNEL
                          L       2640.  CHANNEL LENGTH
                          S      0.0050  SLOPE
                          N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                         CA        0.50  CONTRIBUTING AREA
                      SHAPE        TRAP  CHANNEL SHAPE
                         WD        0.00  BOTTOM WIDTH OR DIAMETER
                          Z        1.00  SIDE SLOPE
                     RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

                                                     ***

        COMPUTED KINEMATIC PARAMETERS
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ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	84.09
2	0.4280	1.667	5.00	133.33
3	2.1102	1.333	5.00	1320.00

****

HYDROGRAPH AT STATION SUB2B

****

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	10.
1		0125	2	0.05	0.05	0.00	0.	*	1		0540	53	0.00	0.00	0.00	10.
1		0130	3	0.07	0.07	0.00	0.	*	1		0545	54	0.00	0.00	0.00	10.
1		0135	4	0.07	0.07	0.00	0.	*	1		0550	55	0.00	0.00	0.00	10.
1		0140	5	0.10	0.10	0.00	0.	*	1		0555	56	0.00	0.00	0.00	10.
1		0145	6	0.16	0.15	0.01	0.	*	1		0600	57	0.00	0.00	0.00	10.
1		0150	7	1.16	0.97	0.19	0.	*	1		0605	58	0.00	0.00	0.00	10.
1		0155	8	0.39	0.23	0.16	1.	*	1		0610	59	0.00	0.00	0.00	10.
1		0200	9	0.14	0.08	0.06	2.	*	1		0615	60	0.00	0.00	0.00	10.
1		0205	10	0.11	0.06	0.05	4.	*	1		0620	61	0.00	0.00	0.00	10.
1		0210	11	0.09	0.04	0.05	6.	*	1		0625	62	0.00	0.00	0.00	10.
1		0215	12	0.06	0.03	0.03	8.	*	1		0630	63	0.00	0.00	0.00	10.
1		0220	13	0.05	0.02	0.03	9.	*	1		0635	64	0.00	0.00	0.00	10.
1		0225	14	0.00	0.00	0.00	10.	*	1		0640	65	0.00	0.00	0.00	10.
1		0230	15	0.00	0.00	0.00	10.	*	1		0645	66	0.00	0.00	0.00	9.
1		0235	16	0.00	0.00	0.00	10.	*	1		0650	67	0.00	0.00	0.00	9.
1		0240	17	0.00	0.00	0.00	10.	*	1		0655	68	0.00	0.00	0.00	9.
1		0245	18	0.00	0.00	0.00	10.	*	1		0700	69	0.00	0.00	0.00	9.
1		0250	19	0.00	0.00	0.00	10.	*	1		0705	70	0.00	0.00	0.00	9.
1		0255	20	0.00	0.00	0.00	10.	*	1		0710	71	0.00	0.00	0.00	9.
1		0300	21	0.00	0.00	0.00	10.	*	1		0715	72	0.00	0.00	0.00	9.
1		0305	22	0.00	0.00	0.00	10.	*	1		0720	73	0.00	0.00	0.00	9.
1		0310	23	0.00	0.00	0.00	10.	*	1		0725	74	0.00	0.00	0.00	9.
1		0315	24	0.00	0.00	0.00	10.	*	1		0730	75	0.00	0.00	0.00	9.
1		0320	25	0.00	0.00	0.00	10.	*	1		0735	76	0.00	0.00	0.00	9.
1		0325	26	0.00	0.00	0.00	10.	*	1		0740	77	0.00	0.00	0.00	9.
1		0330	27	0.00	0.00	0.00	10.	*	1		0745	78	0.00	0.00	0.00	9.
1		0335	28	0.00	0.00	0.00	10.	*	1		0750	79	0.00	0.00	0.00	9.
1		0340	29	0.00	0.00	0.00	10.	*	1		0755	80	0.00	0.00	0.00	8.
1		0345	30	0.00	0.00	0.00	10.	*	1		0800	81	0.00	0.00	0.00	8.
1		0350	31	0.00	0.00	0.00	10.	*	1		0805	82	0.00	0.00	0.00	8.
1		0355	32	0.00	0.00	0.00	10.	*	1		0810	83	0.00	0.00	0.00	8.
1		0400	33	0.00	0.00	0.00	10.	*	1		0815	84	0.00	0.00	0.00	8.
1		0405	34	0.00	0.00	0.00	10.	*	1		0820	85	0.00	0.00	0.00	8.
1		0410	35	0.00	0.00	0.00	10.	*	1		0825	86	0.00	0.00	0.00	8.
1		0415	36	0.00	0.00	0.00	10.	*	1		0830	87	0.00	0.00	0.00	8.
1		0420	37	0.00	0.00	0.00	10.	*	1		0835	88	0.00	0.00	0.00	8.
1		0425	38	0.00	0.00	0.00	10.	*	1		0840	89	0.00	0.00	0.00	8.
1		0430	39	0.00	0.00	0.00	10.	*	1		0845	90	0.00	0.00	0.00	8.
1		0435	40	0.00	0.00	0.00	10.	*	1		0850	91	0.00	0.00	0.00	8.
1		0440	41	0.00	0.00	0.00	10.	*	1		0855	92	0.00	0.00	0.00	8.
1		0445	42	0.00	0.00	0.00	10.	*	1		0900	93	0.00	0.00	0.00	8.
1		0450	43	0.00	0.00	0.00	10.	*	1		0905	94	0.00	0.00	0.00	8.
1		0455	44	0.00	0.00	0.00	10.	*	1		0910	95	0.00	0.00	0.00	7.
1		0500	45	0.00	0.00	0.00	10.	*	1		0915	96	0.00	0.00	0.00	7.
1		0505	46	0.00	0.00	0.00	10.	*	1		0920	97	0.00	0.00	0.00	7.
1		0510	47	0.00	0.00	0.00	10.	*	1		0925	98	0.00	0.00	0.00	7.
1		0515	48	0.00	0.00	0.00	10.	*	1		0930	99	0.00	0.00	0.00	7.

1	0520	49	0.00	0.00	0.00	10.	*	1	0935	100	0.00	0.00	0.00	7.
1	0525	50	0.00	0.00	0.00	10.	*	1	0940	101	0.00	0.00	0.00	7.
1	0530	51	0.00	0.00	0.00	10.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.87, TOTAL EXCESS = 0.58

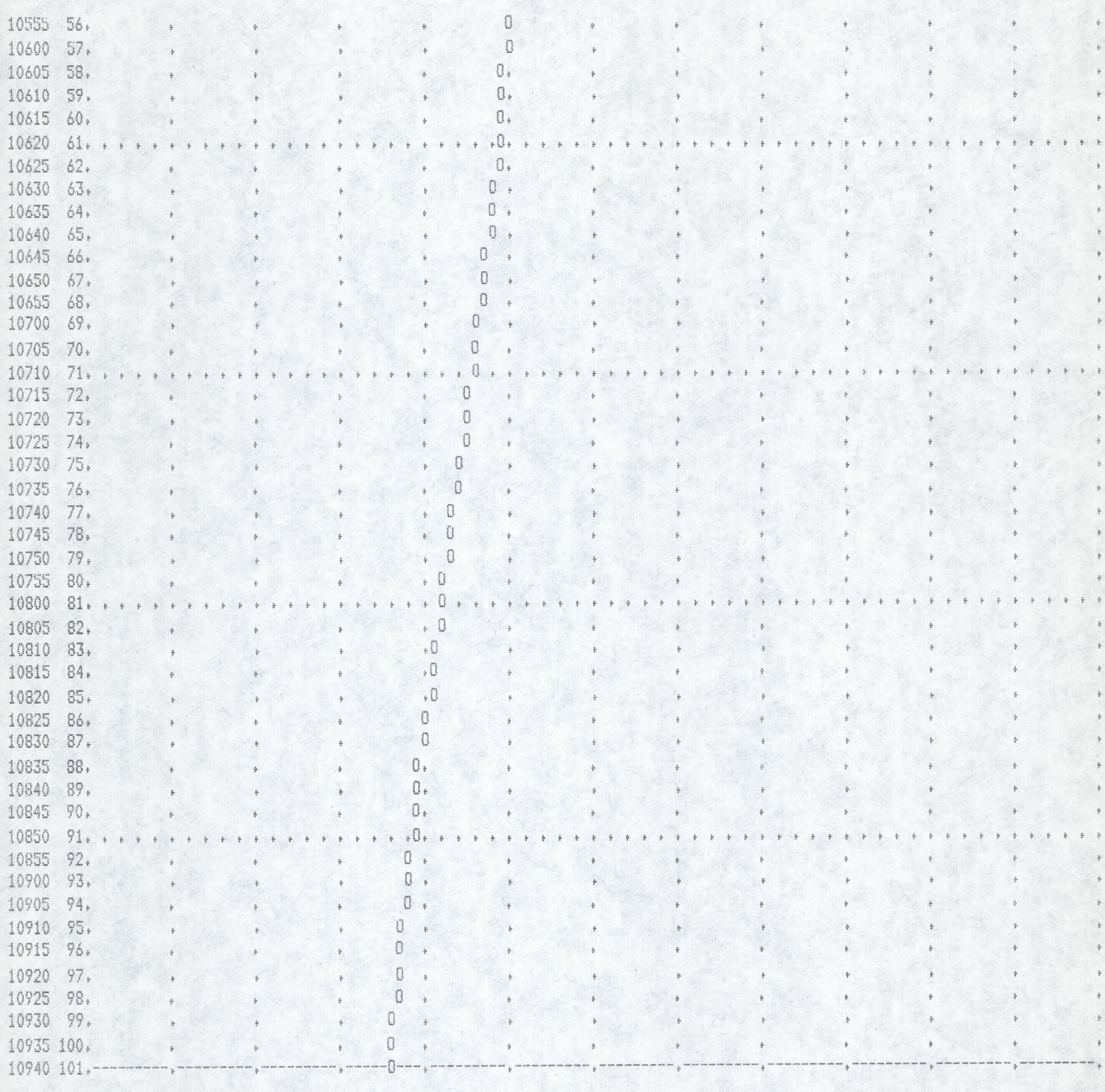
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.179	0.218	0.218	0.218
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB2B

(O) OUTFLOW

	0.	2.	4.	6.	8.	10.	0.	0.	0.	0.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLL
10150	7.0										LLLLLLLLLLLLLLLLLLLLLLLL		XXXXX
10155	8.	O										LLLLLLL	XXXX
10200	9.		O										LLXX
10205	10.			O									LLX
10210	11.				O								LX
10215	12.					O.							X
10220	13.						O						X
10225	14.						O						
10230	15.						O						
10235	16.						O						
10240	17.						O						
10245	18.						O						
10250	19.						O						
10255	20.						O						
10300	21.						O						
10305	22.						O						
10310	23.						O						
10315	24.						O						
10320	25.						O						
10325	26.						O						
10330	27.						O						
10335	28.						O						
10340	29.						O						
10345	30.						O						
10350	31.						O						
10355	32.						O						
10400	33.						O						
10405	34.						O						
10410	35.						O						
10415	36.						O						
10420	37.						O						
10425	38.						O						
10430	39.						O						
10435	40.						O						
10440	41.						O						
10445	42.						O						
10450	43.						O						
10455	44.						O						
10500	45.						O						
10505	46.						O						
10510	47.						O						
10515	48.						O						
10520	49.						O						
10525	50.						O						
10530	51.						O						
10535	52.						O						
10540	53.						O						
10545	54.						O						
10550	55.						O						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10655 68
10700 69
10705 70
10710 71
10715 72
10720 73
10725 74
10730 75
10735 76
10740 77
10745 78
10750 79
10755 80
10800 81
10805 82
10810 83
10815 84
10820 85
10825 86
10830 87
10835 88
10840 89
10845 90
10850 91
10855 92
10900 93
10905 94
10910 95
10915 96
10920 97
10925 98
10930 99
10935 100
10940 101

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          *             *
  33 KK   *      SUB2   *
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COMBINE RUNOFF FROM SUB2A AND SUB2B AT C.P.(B)

35 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB2

SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	20.	1		0540	53	20.	1		0750	79	17.
1		0125	2	0.	1		0335	28	20.	1		0545	54	20.	1		0755	80	17.
1		0130	3	0.	1		0340	29	20.	1		0550	55	20.	1		0800	81	17.
1		0135	4	0.	1		0345	30	20.	1		0555	56	20.	1		0805	82	17.
1		0140	5	0.	1		0350	31	20.	1		0600	57	20.	1		0810	83	16.
1		0145	6	0.	1		0355	32	20.	1		0605	58	20.	1		0815	84	16.
1		0150	7	0.	1		0400	33	20.	1		0610	59	20.	1		0820	85	16.
1		0155	8	2.	1		0405	34	20.	1		0615	60	20.	1		0825	86	16.
1		0200	9	5.	1		0410	35	20.	1		0620	61	20.	1		0830	87	16.
1		0205	10	9.	1		0415	36	20.	1		0625	62	19.	1		0835	88	16.
1		0210	11	13.	1		0420	37	20.	1		0630	63	19.	1		0840	89	16.
1		0215	12	16.	1		0425	38	20.	1		0635	64	19.	1		0845	90	16.
1		0220	13	18.	1		0430	39	20.	1		0640	65	19.	1		0850	91	15.
1		0225	14	19.	1		0435	40	20.	1		0645	66	19.	1		0855	92	15.
1		0230	15	20.	1		0440	41	20.	1		0650	67	19.	1		0900	93	15.
1		0235	16	20.	1		0445	42	20.	1		0655	68	19.	1		0905	94	15.
1		0240	17	20.	1		0450	43	20.	1		0700	69	19.	1		0910	95	15.
1		0245	18	20.	1		0455	44	20.	1		0705	70	18.	1		0915	96	15.
1		0250	19	20.	1		0500	45	20.	1		0710	71	18.	1		0920	97	15.
1		0255	20	20.	1		0505	46	20.	1		0715	72	18.	1		0925	98	15.
1		0300	21	20.	1		0510	47	20.	1		0720	73	18.	1		0930	99	15.
1		0305	22	20.	1		0515	48	20.	1		0725	74	18.	1		0935	100	14.
1		0310	23	20.	1		0520	49	20.	1		0730	75	18.	1		0940	101	14.
1		0315	24	20.	1		0525	50	20.	1		0735	76	18.					
1		0320	25	20.	1		0530	51	20.	1		0740	77	17.					
1		0325	26	20.	1		0535	52	20.	1		0745	78	17.					

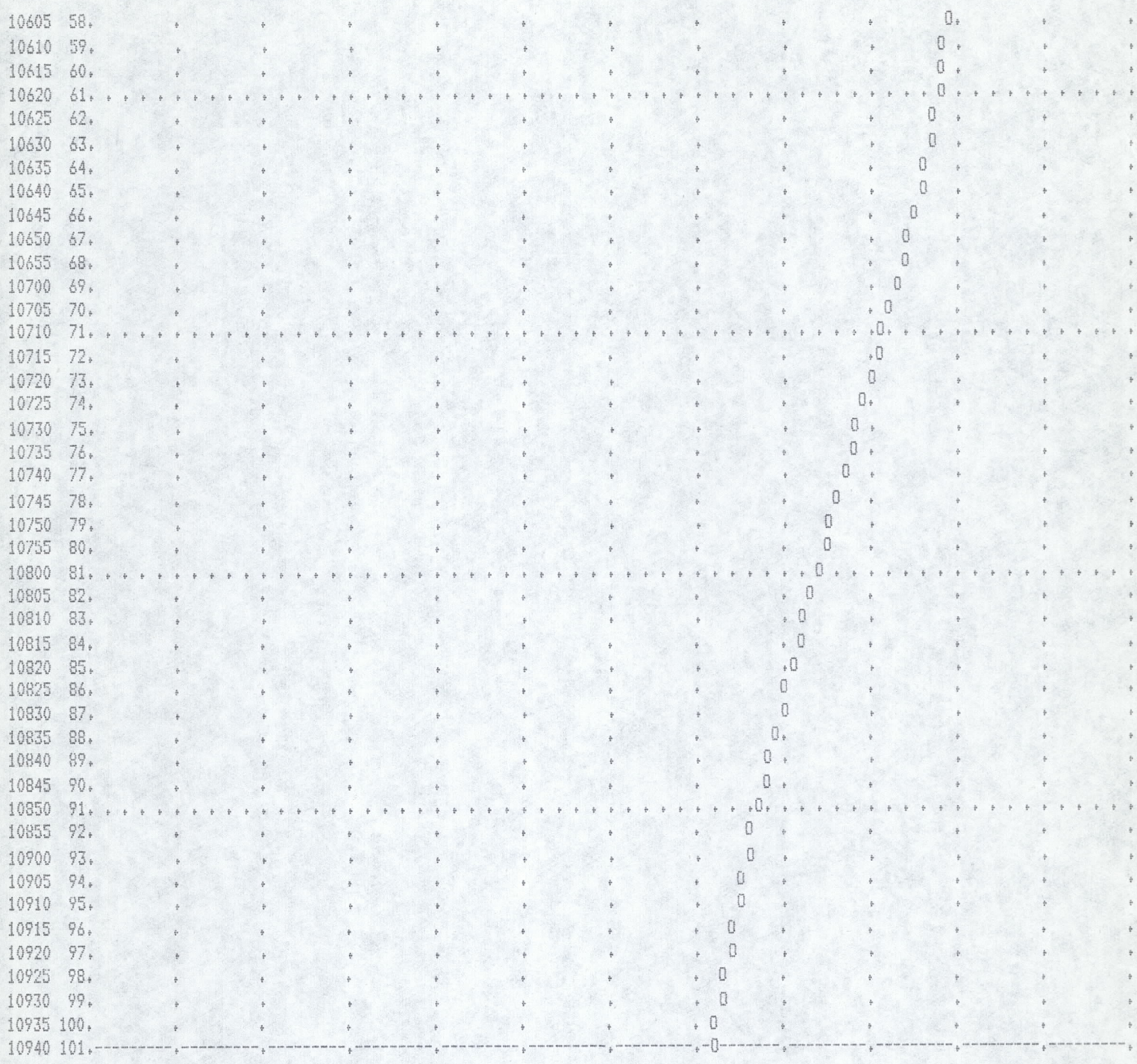
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
20.	1.42	(CFS)	19.	17.	17.	17.
		(INCHES)	0.179	0.218	0.218	0.218
		(AC-FT)	10.	12.	12.	12.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB2

(O) OUTFLOW

DAHRMN	PER	0.	2.	4.	6.	8.	10.	12.	14.	16.	18.	20.	22.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	7.0													
10155	8.		O											
10200	9.			O										
10205	10.					O								
10210	11.							O						
10215	12.									O				
10220	13.										O			
10225	14.											O		
10230	15.											O		
10235	16.											O		
10240	17.											O		
10245	18.											O		
10250	19.											O		
10255	20.											O		
10300	21.											O		
10305	22.											O		
10310	23.											O		
10315	24.											O		
10320	25.											O		
10325	26.											O		
10330	27.											O		
10335	28.											O		
10340	29.											O		
10345	30.											O		
10350	31.											O		
10355	32.											O		
10400	33.											O		
10405	34.											O		
10410	35.											O		
10415	36.											O		
10420	37.											O		
10425	38.											O		
10430	39.											O		
10435	40.											O		
10440	41.											O		
10445	42.											O		
10450	43.											O		
10455	44.											O		
10500	45.											O		
10505	46.											O		
10510	47.											O		
10515	48.											O		
10520	49.											O		
10525	50.											O		
10530	51.											O		
10535	52.											O		
10540	53.											O		
10545	54.											O		
10550	55.											O		
10555	56.											O		
10600	57.											O		


10605 58.
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10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *             *
   36 KK  *      SUB2   *
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DIVERT TO SUB5R

DT	DIVERSION				
	ISTAD	DIV25	DIVERSION HYDROGRAPH IDENTIFICATION		
DI	INFLOW	2.00	100.00	1000.00	
DQ	DIVERTED FLOW	1.00	50.00	500.00	

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DIVERSION HYDROGRAPH DIV25

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	10.	*	1		0540	53	10.	*	1		0750	79	9.
1		0125	2	0.	*	1		0335	28	10.	*	1		0545	54	10.	*	1		0755	80	8.
1		0130	3	0.	*	1		0340	29	10.	*	1		0550	55	10.	*	1		0800	81	8.
1		0135	4	0.	*	1		0345	30	10.	*	1		0555	56	10.	*	1		0805	82	8.
1		0140	5	0.	*	1		0350	31	10.	*	1		0600	57	10.	*	1		0810	83	8.
1		0145	6	0.	*	1		0355	32	10.	*	1		0605	58	10.	*	1		0815	84	8.
1		0150	7	0.	*	1		0400	33	10.	*	1		0610	59	10.	*	1		0820	85	8.
1		0155	8	1.	*	1		0405	34	10.	*	1		0615	60	10.	*	1		0825	86	8.
1		0200	9	2.	*	1		0410	35	10.	*	1		0620	61	10.	*	1		0830	87	8.
1		0205	10	4.	*	1		0415	36	10.	*	1		0625	62	10.	*	1		0835	88	8.
1		0210	11	6.	*	1		0420	37	10.	*	1		0630	63	10.	*	1		0840	89	8.
1		0215	12	8.	*	1		0425	38	10.	*	1		0635	64	10.	*	1		0845	90	8.
1		0220	13	9.	*	1		0430	39	10.	*	1		0640	65	10.	*	1		0850	91	8.
1		0225	14	10.	*	1		0435	40	10.	*	1		0645	66	9.	*	1		0855	92	8.
1		0230	15	10.	*	1		0440	41	10.	*	1		0650	67	9.	*	1		0900	93	8.
1		0235	16	10.	*	1		0445	42	10.	*	1		0655	68	9.	*	1		0905	94	8.
1		0240	17	10.	*	1		0450	43	10.	*	1		0700	69	9.	*	1		0910	95	7.
1		0245	18	10.	*	1		0455	44	10.	*	1		0705	70	9.	*	1		0915	96	7.
1		0250	19	10.	*	1		0500	45	10.	*	1		0710	71	9.	*	1		0920	97	7.
1		0255	20	10.	*	1		0505	46	10.	*	1		0715	72	9.	*	1		0925	98	7.
1		0300	21	10.	*	1		0510	47	10.	*	1		0720	73	9.	*	1		0930	99	7.
1		0305	22	10.	*	1		0515	48	10.	*	1		0725	74	9.	*	1		0935	100	7.
1		0310	23	10.	*	1		0520	49	10.	*	1		0730	75	9.	*	1		0940	101	7.
1		0315	24	10.	*	1		0525	50	10.	*	1		0735	76	9.	*					
1		0320	25	10.	*	1		0530	51	10.	*	1		0740	77	9.	*					
1		0325	26	10.	*	1		0535	52	10.	*	1		0745	78	9.	*					

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PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
		MAXIMUM AVERAGE FLOW				
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.090	0.109	0.109	0.109
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 1.00 SQ MI

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HYDROGRAPH AT STATION SUB2

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	10.	1		0540	53	10.	1		0750	79	9.
1		0125	2	0.	1		0335	28	10.	1		0545	54	10.	1		0755	80	8.
1		0130	3	0.	1		0340	29	10.	1		0550	55	10.	1		0800	81	8.
1		0135	4	0.	1		0345	30	10.	1		0555	56	10.	1		0805	82	8.
1		0140	5	0.	1		0350	31	10.	1		0600	57	10.	1		0810	83	8.
1		0145	6	0.	1		0355	32	10.	1		0605	58	10.	1		0815	84	8.
1		0150	7	0.	1		0400	33	10.	1		0610	59	10.	1		0820	85	8.
1		0155	8	1.	1		0405	34	10.	1		0615	60	10.	1		0825	86	8.
1		0200	9	2.	1		0410	35	10.	1		0620	61	10.	1		0830	87	8.
1		0205	10	4.	1		0415	36	10.	1		0625	62	10.	1		0835	88	8.
1		0210	11	6.	1		0420	37	10.	1		0630	63	10.	1		0840	89	8.
1		0215	12	8.	1		0425	38	10.	1		0635	64	10.	1		0845	90	8.
1		0220	13	9.	1		0430	39	10.	1		0640	65	10.	1		0850	91	8.
1		0225	14	10.	1		0435	40	10.	1		0645	66	9.	1		0855	92	8.
1		0230	15	10.	1		0440	41	10.	1		0650	67	9.	1		0900	93	8.
1		0235	16	10.	1		0445	42	10.	1		0655	68	9.	1		0905	94	8.
1		0240	17	10.	1		0450	43	10.	1		0700	69	9.	1		0910	95	7.
1		0245	18	10.	1		0455	44	10.	1		0705	70	9.	1		0915	96	7.
1		0250	19	10.	1		0500	45	10.	1		0710	71	9.	1		0920	97	7.
1		0255	20	10.	1		0505	46	10.	1		0715	72	9.	1		0925	98	7.
1		0300	21	10.	1		0510	47	10.	1		0720	73	9.	1		0930	99	7.
1		0305	22	10.	1		0515	48	10.	1		0725	74	9.	1		0935	100	7.
1		0310	23	10.	1		0520	49	10.	1		0730	75	9.	1		0940	101	7.
1		0315	24	10.	1		0525	50	10.	1		0735	76	9.					
1		0320	25	10.	1		0530	51	10.	1		0740	77	9.					
1		0325	26	10.	1		0535	52	10.	1		0745	78	9.					

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PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
		MAXIMUM AVERAGE FLOW				
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.090	0.109	0.109	0.109
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 1.00 SQ MI

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41 KK SUB3A

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        *                   *
        **************
                        AREA BOUNDED BY BETHANY HOME ROAD- 99TH ST- CAMELBACK ROAD- RID CHANNEL
                        ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
                        HYDROGRAPH AT C.P. (C)

          SUBBASIN RUNOFF DATA

 48 BA      SUBBASIN CHARACTERISTICS
                 TAREA        0.66  SUBBASIN AREA

            PRECIPITATION DATA

 45 PB           STORM        2.45  BASIN TOTAL PRECIPITATION

 46 PI        INCREMENTAL PRECIPITATION PATTERN
                0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
                0.06     0.05

 49 LS      SCS LOSS RATE
                 STRTL        0.35  INITIAL ABSTRACTION
                CRVNBR       85.00  CURVE NUMBER
                 RTIMP       48.00  PERCENT IMPERVIOUS AREA

            KINEMATIC WAVE
 50 UK        OVERLAND-FLOW ELEMENT NO. 1
                     L       4500.  OVERLAND FLOW LENGTH
                     S      0.0050  SLOPE
                     N       0.200  ROUGHNESS COEFFICIENT
                    PA       100.0  PERCENT OF SUBBASIN
 51 RK        MAIN CHANNEL
                     L       5280.  CHANNEL LENGTH
                     S      0.0030  SLOPE
                     N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                    CA        0.66  CONTRIBUTING AREA
                 SHAPE        TRAP  CHANNEL SHAPE
                    WD        0.00  BOTTOM WIDTH OR DIAMETER
                     Z        1.00  SIDE SLOPE
                RUPSTQ         YES  ROUTE UPSTREAM HYDROGRAPH

                                               ***

      COMPUTED KINEMATIC PARAMETERS
         ELEMENT      ALPHA       M      DT (MIN)    DX (FT)
               1     0.5268    1.667       5.00      250.00
               3     1.6346    1.333       5.00     2640.00

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

                                   HYDROGRAPH AT STATION     SUB3A

****************************************************************************************************
                                              *
  DA MON HRMN  ORD    RAIN   LOSS  EXCESS    COMP Q   *    DA MON HRMN  ORD   RAIN   LOSS  EXCESS    COMP Q
                                              *
   1    0120     1    0.00   0.00   0.00        0.    *     1    0535   52   0.00   0.00   0.00        96.
   1    0125     2    0.05   0.03   0.02        0.    *     1    0540   53   0.00   0.00   0.00        95.
   1    0130     3    0.07   0.04   0.03        0.    *     1    0545   54   0.00   0.00   0.00        95.
   1    0135     4    0.07   0.04   0.03        0.    *     1    0550   55   0.00   0.00   0.00        94.
   1    0140     5    0.10   0.05   0.05        0.    *     1    0555   56   0.00   0.00   0.00        93.
   1    0145     6    0.16   0.08   0.08        0.    *     1    0600   57   0.00   0.00   0.00        92.
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1	0150	7	1.16	0.33	0.83	0.	*	1	0605	58	0.00	0.00	0.00	91.
1	0155	8	0.39	0.06	0.33	5.	*	1	0610	59	0.00	0.00	0.00	90.
1	0200	9	0.14	0.02	0.12	17.	*	1	0615	60	0.00	0.00	0.00	89.
1	0205	10	0.11	0.01	0.10	32.	*	1	0620	61	0.00	0.00	0.00	88.
1	0210	11	0.09	0.01	0.08	49.	*	1	0625	62	0.00	0.00	0.00	87.
1	0215	12	0.06	0.01	0.05	65.	*	1	0630	63	0.00	0.00	0.00	86.
1	0220	13	0.05	0.01	0.04	77.	*	1	0635	64	0.00	0.00	0.00	85.
1	0225	14	0.00	0.00	0.00	86.	*	1	0640	65	0.00	0.00	0.00	83.
1	0230	15	0.00	0.00	0.00	92.	*	1	0645	66	0.00	0.00	0.00	82.
1	0235	16	0.00	0.00	0.00	95.	*	1	0650	67	0.00	0.00	0.00	81.
1	0240	17	0.00	0.00	0.00	97.	*	1	0655	68	0.00	0.00	0.00	79.
1	0245	18	0.00	0.00	0.00	97.	*	1	0700	69	0.00	0.00	0.00	78.
1	0250	19	0.00	0.00	0.00	98.	*	1	0705	70	0.00	0.00	0.00	76.
1	0255	20	0.00	0.00	0.00	98.	*	1	0710	71	0.00	0.00	0.00	75.
1	0300	21	0.00	0.00	0.00	98.	*	1	0715	72	0.00	0.00	0.00	74.
1	0305	22	0.00	0.00	0.00	98.	*	1	0720	73	0.00	0.00	0.00	72.
1	0310	23	0.00	0.00	0.00	98.	*	1	0725	74	0.00	0.00	0.00	71.
1	0315	24	0.00	0.00	0.00	98.	*	1	0730	75	0.00	0.00	0.00	69.
1	0320	25	0.00	0.00	0.00	98.	*	1	0735	76	0.00	0.00	0.00	68.
1	0325	26	0.00	0.00	0.00	98.	*	1	0740	77	0.00	0.00	0.00	67.
1	0330	27	0.00	0.00	0.00	98.	*	1	0745	78	0.00	0.00	0.00	65.
1	0335	28	0.00	0.00	0.00	98.	*	1	0750	79	0.00	0.00	0.00	64.
1	0340	29	0.00	0.00	0.00	98.	*	1	0755	80	0.00	0.00	0.00	63.
1	0345	30	0.00	0.00	0.00	98.	*	1	0800	81	0.00	0.00	0.00	61.
1	0350	31	0.00	0.00	0.00	98.	*	1	0805	82	0.00	0.00	0.00	60.
1	0355	32	0.00	0.00	0.00	98.	*	1	0810	83	0.00	0.00	0.00	59.
1	0400	33	0.00	0.00	0.00	98.	*	1	0815	84	0.00	0.00	0.00	58.
1	0405	34	0.00	0.00	0.00	98.	*	1	0820	85	0.00	0.00	0.00	57.
1	0410	35	0.00	0.00	0.00	98.	*	1	0825	86	0.00	0.00	0.00	55.
1	0415	36	0.00	0.00	0.00	98.	*	1	0830	87	0.00	0.00	0.00	54.
1	0420	37	0.00	0.00	0.00	98.	*	1	0835	88	0.00	0.00	0.00	53.
1	0425	38	0.00	0.00	0.00	98.	*	1	0840	89	0.00	0.00	0.00	52.
1	0430	39	0.00	0.00	0.00	98.	*	1	0845	90	0.00	0.00	0.00	51.
1	0435	40	0.00	0.00	0.00	98.	*	1	0850	91	0.00	0.00	0.00	50.
1	0440	41	0.00	0.00	0.00	98.	*	1	0855	92	0.00	0.00	0.00	49.
1	0445	42	0.00	0.00	0.00	98.	*	1	0900	93	0.00	0.00	0.00	48.
1	0450	43	0.00	0.00	0.00	98.	*	1	0905	94	0.00	0.00	0.00	47.
1	0455	44	0.00	0.00	0.00	98.	*	1	0910	95	0.00	0.00	0.00	46.
1	0500	45	0.00	0.00	0.00	98.	*	1	0915	96	0.00	0.00	0.00	45.
1	0505	46	0.00	0.00	0.00	97.	*	1	0920	97	0.00	0.00	0.00	44.
1	0510	47	0.00	0.00	0.00	97.	*	1	0925	98	0.00	0.00	0.00	44.
1	0515	48	0.00	0.00	0.00	97.	*	1	0930	99	0.00	0.00	0.00	43.
1	0520	49	0.00	0.00	0.00	97.	*	1	0935	100	0.00	0.00	0.00	42.
1	0525	50	0.00	0.00	0.00	96.	*	1	0940	101	0.00	0.00	0.00	41.
1	0530	51	0.00	0.00	0.00	96.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.68, TOTAL EXCESS = 1.77

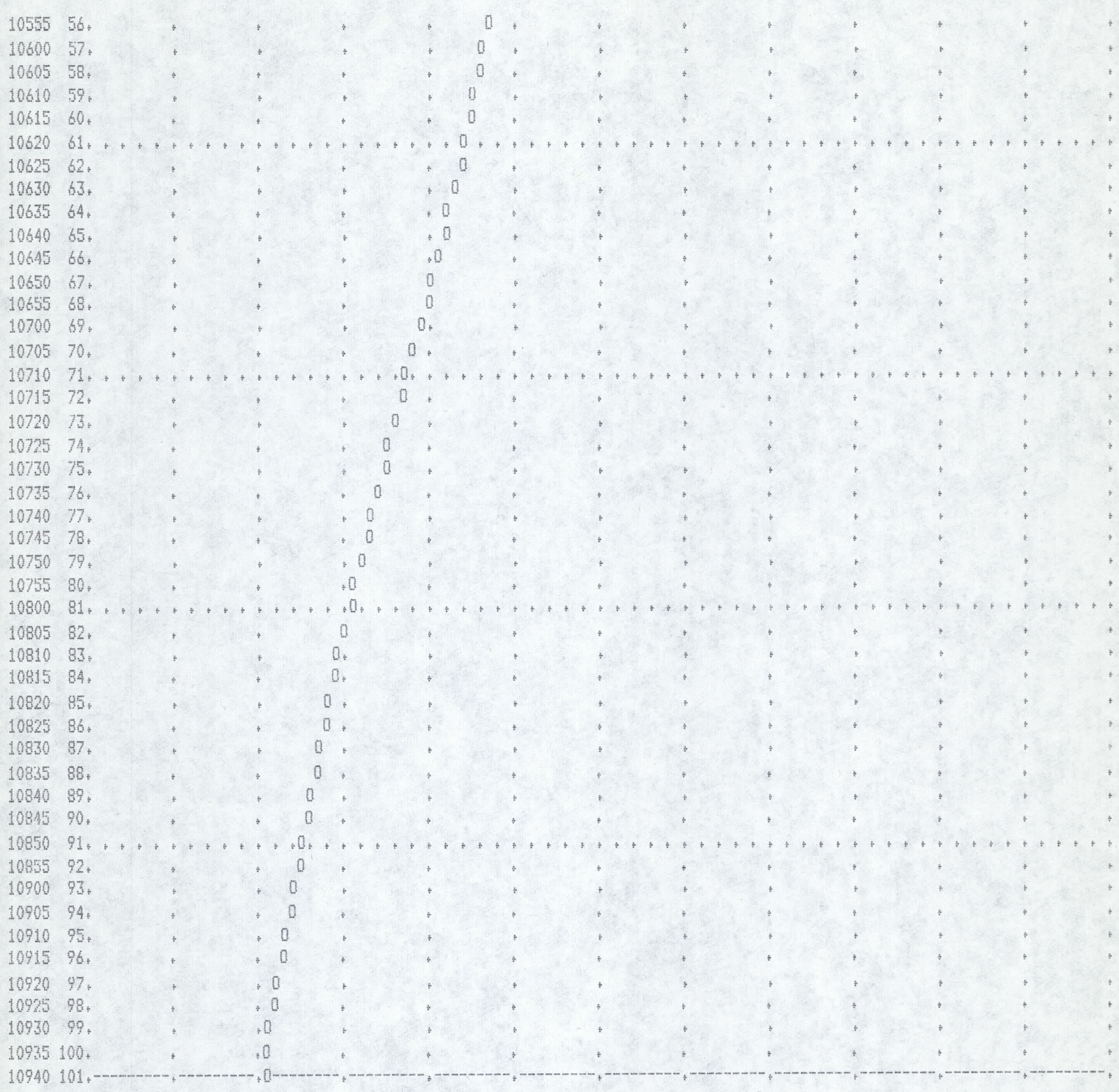
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
98.	2.00	(CFS)	88.	73.	73.	73.
		(INCHES)	0.495	0.570	0.570	0.570
		(AC-FT)	44.	50.	50.	50.

CUMULATIVE AREA = 1.66 SQ MI

STATION SUB3A

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	0.	0.	0.	0.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												X
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLXX
10150	70										LLLLLLLLXXXXXXXXXXXXXXXXXXXX		
10155	8	O										LLXXXXXXXX	
10200	9		O										LXXX
10205	10			O									LXX
10210	11				O								XX
10215	12				O								X
10220	13					O							X
10225	14					O							
10230	15					O							
10235	16					O							
10240	17					O							
10245	18					O							
10250	19					O							
10255	20					O							
10300	21					O							
10305	22					O							
10310	23					O							
10315	24					O							
10320	25					O							
10325	26					O							
10330	27					O							
10335	28					O							
10340	29					O							
10345	30					O							
10350	31					O							
10355	32					O							
10400	33					O							
10405	34					O							
10410	35					O							
10415	36					O							
10420	37					O							
10425	38					O							
10430	39					O							
10435	40					O							
10440	41					O							
10445	42					O							
10450	43					O							
10455	44					O							
10500	45					O							
10505	46					O							
10510	47					O							
10515	48					O							
10520	49					O							
10525	50					O							
10530	51					O							
10535	52					O							
10540	53					O							
10545	54					O							
10550	55					O							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10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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            *             *
  52 KK     *    SUB3A    *
            *             *
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DIVERT TO R.I.D. CHANNEL

DT	DIVERSION					
	ISTAD	RID	DIVERSION HYDROGRAPH IDENTIFICATION			
DI	INFLOW	1.00	150.00	151.00	300.00	1000.00
DQ	DIVERTED FLOW	1.00	150.00	150.00	150.00	150.00

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DIVERSION HYDROGRAPH RID

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	98.	1		0540	53	95.	1		0750	79	64.
1		0125	2	0.	1		0335	28	98.	1		0545	54	95.	1		0755	80	63.
1		0130	3	0.	1		0340	29	98.	1		0550	55	94.	1		0800	81	61.
1		0135	4	0.	1		0345	30	98.	1		0555	56	93.	1		0805	82	60.
1		0140	5	0.	1		0350	31	98.	1		0600	57	92.	1		0810	83	59.
1		0145	6	0.	1		0355	32	98.	1		0605	58	91.	1		0815	84	58.
1		0150	7	0.	1		0400	33	98.	1		0610	59	90.	1		0820	85	57.
1		0155	8	5.	1		0405	34	98.	1		0615	60	89.	1		0825	86	55.
1		0200	9	17.	1		0410	35	98.	1		0620	61	88.	1		0830	87	54.
1		0205	10	32.	1		0415	36	98.	1		0625	62	87.	1		0835	88	53.
1		0210	11	49.	1		0420	37	98.	1		0630	63	86.	1		0840	89	52.
1		0215	12	65.	1		0425	38	98.	1		0635	64	85.	1		0845	90	51.
1		0220	13	77.	1		0430	39	98.	1		0640	65	83.	1		0850	91	50.
1		0225	14	86.	1		0435	40	98.	1		0645	66	82.	1		0855	92	49.
1		0230	15	92.	1		0440	41	98.	1		0650	67	81.	1		0900	93	48.
1		0235	16	95.	1		0445	42	98.	1		0655	68	79.	1		0905	94	47.
1		0240	17	97.	1		0450	43	98.	1		0700	69	78.	1		0910	95	46.
1		0245	18	97.	1		0455	44	98.	1		0705	70	76.	1		0915	96	45.
1		0250	19	98.	1		0500	45	98.	1		0710	71	75.	1		0920	97	44.
1		0255	20	98.	1		0505	46	97.	1		0715	72	74.	1		0925	98	44.
1		0300	21	98.	1		0510	47	97.	1		0720	73	72.	1		0930	99	43.
1		0305	22	98.	1		0515	48	97.	1		0725	74	71.	1		0935	100	42.
1		0310	23	98.	1		0520	49	97.	1		0730	75	69.	1		0940	101	41.
1		0315	24	98.	1		0525	50	96.	1		0735	76	68.					
1		0320	25	98.	1		0530	51	96.	1		0740	77	67.					
1		0325	26	98.	1		0535	52	96.	1		0745	78	65.					

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PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
98.	2.00	(CFS)	88.	73.	73.	73.
		(INCHES)	0.495	0.570	0.570	0.570
		(AC-FT)	44.	50.	50.	50.

CUMULATIVE AREA = 1.66 SQ MI

****

HYDROGRAPH AT STATION SUB3A

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	0.	1		0540	53	0.	1		0750	79	0.
1		0125	2	0.	1		0335	28	0.	1		0545	54	0.	1		0755	80	0.
1		0130	3	0.	1		0340	29	0.	1		0550	55	0.	1		0800	81	0.
1		0135	4	0.	1		0345	30	0.	1		0555	56	0.	1		0805	82	0.
1		0140	5	0.	1		0350	31	0.	1		0600	57	0.	1		0810	83	0.
1		0145	6	0.	1		0355	32	0.	1		0605	58	0.	1		0815	84	0.
1		0150	7	0.	1		0400	33	0.	1		0610	59	0.	1		0820	85	0.
1		0155	8	0.	1		0405	34	0.	1		0615	60	0.	1		0825	86	0.
1		0200	9	0.	1		0410	35	0.	1		0620	61	0.	1		0830	87	0.
1		0205	10	0.	1		0415	36	0.	1		0625	62	0.	1		0835	88	0.
1		0210	11	0.	1		0420	37	0.	1		0630	63	0.	1		0840	89	0.
1		0215	12	0.	1		0425	38	0.	1		0635	64	0.	1		0845	90	0.
1		0220	13	0.	1		0430	39	0.	1		0640	65	0.	1		0850	91	0.
1		0225	14	0.	1		0435	40	0.	1		0645	66	0.	1		0855	92	0.
1		0230	15	0.	1		0440	41	0.	1		0650	67	0.	1		0900	93	0.
1		0235	16	0.	1		0445	42	0.	1		0655	68	0.	1		0905	94	0.
1		0240	17	0.	1		0450	43	0.	1		0700	69	0.	1		0910	95	0.
1		0245	18	0.	1		0455	44	0.	1		0705	70	0.	1		0915	96	0.
1		0250	19	0.	1		0500	45	0.	1		0710	71	0.	1		0920	97	0.
1		0255	20	0.	1		0505	46	0.	1		0715	72	0.	1		0925	98	0.
1		0300	21	0.	1		0510	47	0.	1		0720	73	0.	1		0930	99	0.
1		0305	22	0.	1		0515	48	0.	1		0725	74	0.	1		0935	100	0.
1		0310	23	0.	1		0520	49	0.	1		0730	75	0.	1		0940	101	0.
1		0315	24	0.	1		0525	50	0.	1		0735	76	0.					
1		0320	25	0.	1		0530	51	0.	1		0740	77	0.					
1		0325	26	0.	1		0535	52	0.	1		0745	78	0.					

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
0.	0.08	(CFS)	0.	0.	0.	0.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = 1.66 SQ MI

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* *
57 KK * SUB4 *

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*          *
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AREA BOUNDED BY BETHANY HOME ROAD- AGUA FRIA-CAMELBACK ROAD- RID CHANNEL
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
HYDROGRAPH AT C.P. (D) INTO AGUA FRIA WASH

SUBBASIN RUNOFF DATA

64 BA SUBBASIN CHARACTERISTICS

TAREA	1.06	SUBBASIN AREA

PRECIPITATION DATA

61 PB

STORM	2.45	BASIN TOTAL PRECIPITATION

62 PI INCREMENTAL PRECIPITATION PATTERN

0.05	0.07	0.07	0.10	0.16	1.16	0.39	0.14	0.11	0.09
0.06	0.05								

65 LS SCS LOSS RATE

STRTL	0.78	INITIAL ABSTRACTION
CRVNBR	72.00	CURVE NUMBER
RTIMP	4.00	PERCENT IMPERVIOUS AREA

KINEMATIC WAVE

66 UK OVERLAND-FLOW ELEMENT NO. 1

L	5800.	OVERLAND FLOW LENGTH
S	0.0050	SLOPE
N	0.200	ROUGHNESS COEFFICIENT
PA	100.0	PERCENT OF SUBBASIN

67 RK MAIN CHANNEL

L	4000.	CHANNEL LENGTH
S	0.0030	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	1.06	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	0.00	BOTTOM WIDTH OR DIAMETER
Z	1.00	SIDE SLOPE
RUPSTQ	YES	ROUTE UPSTREAM HYDROGRAPH

***

COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.5268	1.667	5.00	152.63
3	1.6346	1.333	5.00	2000.00

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HYDROGRAPH AT STATION SUB4

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	17.
1		0125	2	0.05	0.05	0.00	0.	1		0540	53	0.00	0.00	0.00	17.
1		0130	3	0.07	0.07	0.00	0.	1		0545	54	0.00	0.00	0.00	17.
1		0135	4	0.07	0.07	0.00	0.	1		0550	55	0.00	0.00	0.00	17.
1		0140	5	0.10	0.10	0.00	0.	1		0555	56	0.00	0.00	0.00	17.
1		0145	6	0.16	0.15	0.01	0.	1		0600	57	0.00	0.00	0.00	17.

1	0150	7	1.16	0.97	0.19	0.	*	1	0605	58	0.00	0.00	0.00	17.
1	0155	8	0.39	0.23	0.16	0.	*	1	0610	59	0.00	0.00	0.00	17.
1	0200	9	0.14	0.08	0.06	1.	*	1	0615	60	0.00	0.00	0.00	17.
1	0205	10	0.11	0.06	0.05	3.	*	1	0620	61	0.00	0.00	0.00	17.
1	0210	11	0.09	0.04	0.05	5.	*	1	0625	62	0.00	0.00	0.00	17.
1	0215	12	0.06	0.03	0.03	8.	*	1	0630	63	0.00	0.00	0.00	17.
1	0220	13	0.05	0.02	0.03	11.	*	1	0635	64	0.00	0.00	0.00	17.
1	0225	14	0.00	0.00	0.00	13.	*	1	0640	65	0.00	0.00	0.00	17.
1	0230	15	0.00	0.00	0.00	15.	*	1	0645	66	0.00	0.00	0.00	17.
1	0235	16	0.00	0.00	0.00	16.	*	1	0650	67	0.00	0.00	0.00	17.
1	0240	17	0.00	0.00	0.00	16.	*	1	0655	68	0.00	0.00	0.00	17.
1	0245	18	0.00	0.00	0.00	16.	*	1	0700	69	0.00	0.00	0.00	17.
1	0250	19	0.00	0.00	0.00	17.	*	1	0705	70	0.00	0.00	0.00	17.
1	0255	20	0.00	0.00	0.00	17.	*	1	0710	71	0.00	0.00	0.00	17.
1	0300	21	0.00	0.00	0.00	17.	*	1	0715	72	0.00	0.00	0.00	17.
1	0305	22	0.00	0.00	0.00	17.	*	1	0720	73	0.00	0.00	0.00	17.
1	0310	23	0.00	0.00	0.00	17.	*	1	0725	74	0.00	0.00	0.00	17.
1	0315	24	0.00	0.00	0.00	17.	*	1	0730	75	0.00	0.00	0.00	17.
1	0320	25	0.00	0.00	0.00	17.	*	1	0735	76	0.00	0.00	0.00	17.
1	0325	26	0.00	0.00	0.00	17.	*	1	0740	77	0.00	0.00	0.00	17.
1	0330	27	0.00	0.00	0.00	17.	*	1	0745	78	0.00	0.00	0.00	17.
1	0335	28	0.00	0.00	0.00	17.	*	1	0750	79	0.00	0.00	0.00	17.
1	0340	29	0.00	0.00	0.00	17.	*	1	0755	80	0.00	0.00	0.00	17.
1	0345	30	0.00	0.00	0.00	17.	*	1	0800	81	0.00	0.00	0.00	17.
1	0350	31	0.00	0.00	0.00	17.	*	1	0805	82	0.00	0.00	0.00	17.
1	0355	32	0.00	0.00	0.00	17.	*	1	0810	83	0.00	0.00	0.00	17.
1	0400	33	0.00	0.00	0.00	17.	*	1	0815	84	0.00	0.00	0.00	17.
1	0405	34	0.00	0.00	0.00	17.	*	1	0820	85	0.00	0.00	0.00	17.
1	0410	35	0.00	0.00	0.00	17.	*	1	0825	86	0.00	0.00	0.00	17.
1	0415	36	0.00	0.00	0.00	17.	*	1	0830	87	0.00	0.00	0.00	17.
1	0420	37	0.00	0.00	0.00	17.	*	1	0835	88	0.00	0.00	0.00	17.
1	0425	38	0.00	0.00	0.00	17.	*	1	0840	89	0.00	0.00	0.00	17.
1	0430	39	0.00	0.00	0.00	17.	*	1	0845	90	0.00	0.00	0.00	17.
1	0435	40	0.00	0.00	0.00	17.	*	1	0850	91	0.00	0.00	0.00	17.
1	0440	41	0.00	0.00	0.00	17.	*	1	0855	92	0.00	0.00	0.00	17.
1	0445	42	0.00	0.00	0.00	17.	*	1	0900	93	0.00	0.00	0.00	17.
1	0450	43	0.00	0.00	0.00	17.	*	1	0905	94	0.00	0.00	0.00	17.
1	0455	44	0.00	0.00	0.00	17.	*	1	0910	95	0.00	0.00	0.00	17.
1	0500	45	0.00	0.00	0.00	17.	*	1	0915	96	0.00	0.00	0.00	17.
1	0505	46	0.00	0.00	0.00	17.	*	1	0920	97	0.00	0.00	0.00	17.
1	0510	47	0.00	0.00	0.00	17.	*	1	0925	98	0.00	0.00	0.00	17.
1	0515	48	0.00	0.00	0.00	17.	*	1	0930	99	0.00	0.00	0.00	17.
1	0520	49	0.00	0.00	0.00	17.	*	1	0935	100	0.00	0.00	0.00	17.
1	0525	50	0.00	0.00	0.00	17.	*	1	0940	101	0.00	0.00	0.00	17.
1	0530	51	0.00	0.00	0.00	17.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.87, TOTAL EXCESS = 0.58

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
17.	2.33	(CFS)	17.	15.	15.	15.
		(INCHES)	0.057	0.071	0.071	0.071
		(AC-FT)	8.	10.	10.	10.

CUMULATIVE AREA = 2.72 SQ MI

STATION SUB4

(O) OUTFLOW

	0.	2.	4.	6.	8.	10.	12.	14.	16.	18.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLL
10150	70										LLLLLLLLLLLLLLLLLLLLLLLLLXXXXX		
10155	8.0											LLLLLLXXXX	
10200	9.	O											LLXX
10205	10.		O										LLX
10210	11.			O									LX
10215	12.				O								X
10220	13.					O							X
10225	14.						O						
10230	15.							O					
10235	16.								O				
10240	17.								O				
10245	18.								O				
10250	19.								O				
10255	20.								O				
10300	21.								O				
10305	22.								O				
10310	23.								O				
10315	24.								O				
10320	25.								O				
10325	26.								O				
10330	27.								O				
10335	28.								O				
10340	29.								O				
10345	30.								O				
10350	31.								O				
10355	32.								O				
10400	33.								O				
10405	34.								O				
10410	35.								O				
10415	36.								O				
10420	37.								O				
10425	38.								O				
10430	39.								O				
10435	40.								O				
10440	41.								O				
10445	42.								O				
10450	43.								O				
10455	44.								O				
10500	45.								O				
10505	46.								O				
10510	47.								O				
10515	48.								O				
10520	49.								O				
10525	50.								O				
10530	51.								O				
10535	52.								O				
10540	53.								O				
10545	54.								O				
10550	55.								O				

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10555  56.                                                  0
10600  57.                                                  0
10605  58.                                                  0
10610  59.                                                  0
10615  60.                                                  0
10620  61.                                                  0
10625  62.                                                  0
10630  63.                                                  0
10635  64.                                                  0
10640  65.                                                  0
10645  66.                                                  0
10650  67.                                                  0
10655  68.                                                  0
10700  69.                                                  0
10705  70.                                                  0
10710  71.                                                  0
10715  72.                                                  0
10720  73.                                                  0
10725  74.                                                  0
10730  75.                                                  0
10735  76.                                                  0
10740  77.                                                  0
10745  78.                                                  0
10750  79.                                                  0
10755  80.                                                  0
10800  81.                                                  0
10805  82.                                                  0
10810  83.                                                  0
10815  84.                                                  0
10820  85.                                                  0
10825  86.                                                  0
10830  87.                                                  0
10835  88.                                                  0
10840  89.                                                  0
10845  90.                                                  0
10850  91.                                                  0
10855  92.                                                  0
10900  93.                                                  0
10905  94.                                                  0
10910  95.                                                  0
10915  96.                                                  0
10920  97.                                                  0
10925  98.                                                  0
10930  99.                                                  0
10935 100.                                                  0
10940 101.----------+---------+---------+---------+---------+---------+---------+---------+---0-----+---------+---------+---------+
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              **************
              *            *
  68 KK       *    DIV25   *
              *            *
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RETRIEVE DIVERSION FROM CONCENTRATION B OF AREA 2

70 DR RETRIEVE DIVERSION HYDROGRAPH

ISTAD DIV25 DIVERSION HYDROGRAPH IDENTIFICATION

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HYDROGRAPH AT STATION DIV25

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	10.	1		0540	53	10.	1		0750	79	9.
1		0125	2	0.	1		0335	28	10.	1		0545	54	10.	1		0755	80	8.
1		0130	3	0.	1		0340	29	10.	1		0550	55	10.	1		0800	81	8.
1		0135	4	0.	1		0345	30	10.	1		0555	56	10.	1		0805	82	8.
1		0140	5	0.	1		0350	31	10.	1		0600	57	10.	1		0810	83	8.
1		0145	6	0.	1		0355	32	10.	1		0605	58	10.	1		0815	84	8.
1		0150	7	0.	1		0400	33	10.	1		0610	59	10.	1		0820	85	8.
1		0155	8	1.	1		0405	34	10.	1		0615	60	10.	1		0825	86	8.
1		0200	9	2.	1		0410	35	10.	1		0620	61	10.	1		0830	87	8.
1		0205	10	4.	1		0415	36	10.	1		0625	62	10.	1		0835	88	8.
1		0210	11	6.	1		0420	37	10.	1		0630	63	10.	1		0840	89	8.
1		0215	12	8.	1		0425	38	10.	1		0635	64	10.	1		0845	90	8.
1		0220	13	9.	1		0430	39	10.	1		0640	65	10.	1		0850	91	8.
1		0225	14	10.	1		0435	40	10.	1		0645	66	9.	1		0855	92	8.
1		0230	15	10.	1		0440	41	10.	1		0650	67	9.	1		0900	93	8.
1		0235	16	10.	1		0445	42	10.	1		0655	68	9.	1		0905	94	8.
1		0240	17	10.	1		0450	43	10.	1		0700	69	9.	1		0910	95	7.
1		0245	18	10.	1		0455	44	10.	1		0705	70	9.	1		0915	96	7.
1		0250	19	10.	1		0500	45	10.	1		0710	71	9.	1		0920	97	7.
1		0255	20	10.	1		0505	46	10.	1		0715	72	9.	1		0925	98	7.
1		0300	21	10.	1		0510	47	10.	1		0720	73	9.	1		0930	99	7.
1		0305	22	10.	1		0515	48	10.	1		0725	74	9.	1		0935	100	7.
1		0310	23	10.	1		0520	49	10.	1		0730	75	9.	1		0940	101	7.
1		0315	24	10.	1		0525	50	10.	1		0735	76	9.					
1		0320	25	10.	1		0530	51	10.	1		0740	77	9.					
1		0325	26	10.	1		0535	52	10.	1		0745	78	9.					

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.033	0.040	0.040	0.040
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 0.00 SQ MI

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          *            *
71 KK     *     SUB5B  *
          *            *
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NORTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99TH STREET

SUBBASIN RUNOFF DATA

77 BA SUBBASIN CHARACTERISTICS

TAREA	0.50	SUBBASIN AREA

PRECIPITATION DATA

74 PB

STORM	2.45	BASIN TOTAL PRECIPITATION

75 PI INCREMENTAL PRECIPITATION PATTERN

0.05	0.07	0.07	0.10	0.16	1.16	0.39	0.14	0.11	0.09
0.06	0.05								

78 LS SCS LOSS RATE

STRTL	0.78	INITIAL ABSTRACTION
CRVNBR	72.00	CURVE NUMBER
RTIMP	4.00	PERCENT IMPERVIOUS AREA

LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT

STRTL	0.78	INITIAL ABSTRACTION
CRVNBR	72.00	CURVE NUMBER
RTIMP	4.00	PERCENT IMPERVIOUS AREA

KINEMATIC WAVE

79 UK OVERLAND-FLOW ELEMENT NO. 1

L	1850.	OVERLAND FLOW LENGTH
S	0.0033	SLOPE
N	0.200	ROUGHNESS COEFFICIENT
PA	25.0	PERCENT OF SUBBASIN

80 UK OVERLAND-FLOW ELEMENT NO. 2

L	5600.	OVERLAND FLOW LENGTH
S	0.0033	SLOPE
N	0.200	ROUGHNESS COEFFICIENT
PA	75.0	PERCENT OF SUBBASIN

81 RK MAIN CHANNEL

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.50	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	0.00	BOTTOM WIDTH OR DIAMETER
Z	1.00	SIDE SLOPE
RUPSTQ	YES	ROUTE UPSTREAM HYDROGRAPH

***

COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	84.09
2	0.4280	1.667	5.00	133.33
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB5B

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	20.
1		0125	2	0.05	0.05	0.00	0.	*	1		0540	53	0.00	0.00	0.00	20.
1		0130	3	0.07	0.07	0.00	0.	*	1		0545	54	0.00	0.00	0.00	20.
1		0135	4	0.07	0.07	0.00	0.	*	1		0550	55	0.00	0.00	0.00	20.
1		0140	5	0.10	0.10	0.00	0.	*	1		0555	56	0.00	0.00	0.00	20.
1		0145	6	0.16	0.15	0.01	0.	*	1		0600	57	0.00	0.00	0.00	20.
1		0150	7	1.16	0.97	0.19	0.	*	1		0605	58	0.00	0.00	0.00	20.
1		0155	8	0.39	0.23	0.16	1.	*	1		0610	59	0.00	0.00	0.00	20.
1		0200	9	0.14	0.08	0.06	3.	*	1		0615	60	0.00	0.00	0.00	20.
1		0205	10	0.11	0.06	0.05	6.	*	1		0620	61	0.00	0.00	0.00	20.
1		0210	11	0.09	0.04	0.05	11.	*	1		0625	62	0.00	0.00	0.00	20.
1		0215	12	0.06	0.03	0.03	15.	*	1		0630	63	0.00	0.00	0.00	20.
1		0220	13	0.05	0.02	0.03	16.	*	1		0635	64	0.00	0.00	0.00	20.
1		0225	14	0.00	0.00	0.00	18.	*	1		0640	65	0.00	0.00	0.00	20.
1		0230	15	0.00	0.00	0.00	19.	*	1		0645	66	0.00	0.00	0.00	19.
1		0235	16	0.00	0.00	0.00	20.	*	1		0650	67	0.00	0.00	0.00	19.
1		0240	17	0.00	0.00	0.00	20.	*	1		0655	68	0.00	0.00	0.00	19.
1		0245	18	0.00	0.00	0.00	20.	*	1		0700	69	0.00	0.00	0.00	19.
1		0250	19	0.00	0.00	0.00	20.	*	1		0705	70	0.00	0.00	0.00	19.
1		0255	20	0.00	0.00	0.00	20.	*	1		0710	71	0.00	0.00	0.00	19.
1		0300	21	0.00	0.00	0.00	20.	*	1		0715	72	0.00	0.00	0.00	19.
1		0305	22	0.00	0.00	0.00	20.	*	1		0720	73	0.00	0.00	0.00	18.
1		0310	23	0.00	0.00	0.00	20.	*	1		0725	74	0.00	0.00	0.00	18.
1		0315	24	0.00	0.00	0.00	20.	*	1		0730	75	0.00	0.00	0.00	18.
1		0320	25	0.00	0.00	0.00	20.	*	1		0735	76	0.00	0.00	0.00	18.
1		0325	26	0.00	0.00	0.00	20.	*	1		0740	77	0.00	0.00	0.00	18.
1		0330	27	0.00	0.00	0.00	20.	*	1		0745	78	0.00	0.00	0.00	18.
1		0335	28	0.00	0.00	0.00	20.	*	1		0750	79	0.00	0.00	0.00	17.
1		0340	29	0.00	0.00	0.00	20.	*	1		0755	80	0.00	0.00	0.00	17.
1		0345	30	0.00	0.00	0.00	20.	*	1		0800	81	0.00	0.00	0.00	17.
1		0350	31	0.00	0.00	0.00	20.	*	1		0805	82	0.00	0.00	0.00	17.
1		0355	32	0.00	0.00	0.00	20.	*	1		0810	83	0.00	0.00	0.00	17.
1		0400	33	0.00	0.00	0.00	20.	*	1		0815	84	0.00	0.00	0.00	17.
1		0405	34	0.00	0.00	0.00	20.	*	1		0820	85	0.00	0.00	0.00	17.
1		0410	35	0.00	0.00	0.00	20.	*	1		0825	86	0.00	0.00	0.00	16.
1		0415	36	0.00	0.00	0.00	20.	*	1		0830	87	0.00	0.00	0.00	16.
1		0420	37	0.00	0.00	0.00	20.	*	1		0835	88	0.00	0.00	0.00	16.
1		0425	38	0.00	0.00	0.00	20.	*	1		0840	89	0.00	0.00	0.00	16.
1		0430	39	0.00	0.00	0.00	20.	*	1		0845	90	0.00	0.00	0.00	16.
1		0435	40	0.00	0.00	0.00	20.	*	1		0850	91	0.00	0.00	0.00	16.
1		0440	41	0.00	0.00	0.00	20.	*	1		0855	92	0.00	0.00	0.00	16.
1		0445	42	0.00	0.00	0.00	20.	*	1		0900	93	0.00	0.00	0.00	16.
1		0450	43	0.00	0.00	0.00	20.	*	1		0905	94	0.00	0.00	0.00	15.
1		0455	44	0.00	0.00	0.00	20.	*	1		0910	95	0.00	0.00	0.00	15.
1		0500	45	0.00	0.00	0.00	20.	*	1		0915	96	0.00	0.00	0.00	15.
1		0505	46	0.00	0.00	0.00	20.	*	1		0920	97	0.00	0.00	0.00	15.

1	0510	47	0.00	0.00	0.00	20.	*	1	0925	98	0.00	0.00	0.00	15.
1	0515	48	0.00	0.00	0.00	20.	*	1	0930	99	0.00	0.00	0.00	15.
1	0520	49	0.00	0.00	0.00	20.	*	1	0935	100	0.00	0.00	0.00	15.
1	0525	50	0.00	0.00	0.00	20.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	20.	*							
							*							

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.87, TOTAL EXCESS = 0.58

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
20.	1.58	(CFS)	20.	17.	17.	17.
		(INCHES)	0.364	0.439	0.439	0.439
		(AC-FT)	10.	12.	12.	12.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB5B

(O) OUTFLOW

	0.	4.	8.	12.	16.	20.	24.	0.	0.	0.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLL
10150	70										LLLLLLLLLLLLLLLLLLLLLLLLXXXXX		
10155	8	O										LLLLLLXXXX	
10200	9		O										LLXX
10205	10			O									LLX
10210	11				O								LX
10215	12					O							X
10220	13					O							X
10225	14						O						
10230	15						O						
10235	16						O						
10240	17						O						
10245	18						O						
10250	19						O						
10255	20						O						
10300	21						O						
10305	22						O						
10310	23						O						
10315	24						O						
10320	25						O						
10325	26						O						
10330	27						O						
10335	28						O						
10340	29						O						
10345	30						O						
10350	31						O						
10355	32						O						
10400	33						O						
10405	34						O						
10410	35						O						
10415	36						O						
10420	37						O						
10425	38						O						
10430	39						O						
10435	40						O						
10440	41						O						
10445	42						O						
10450	43						O						
10455	44						O						
10500	45						O						
10505	46						O						
10510	47						O						
10515	48						O						
10520	49						O						
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10540	53						O						
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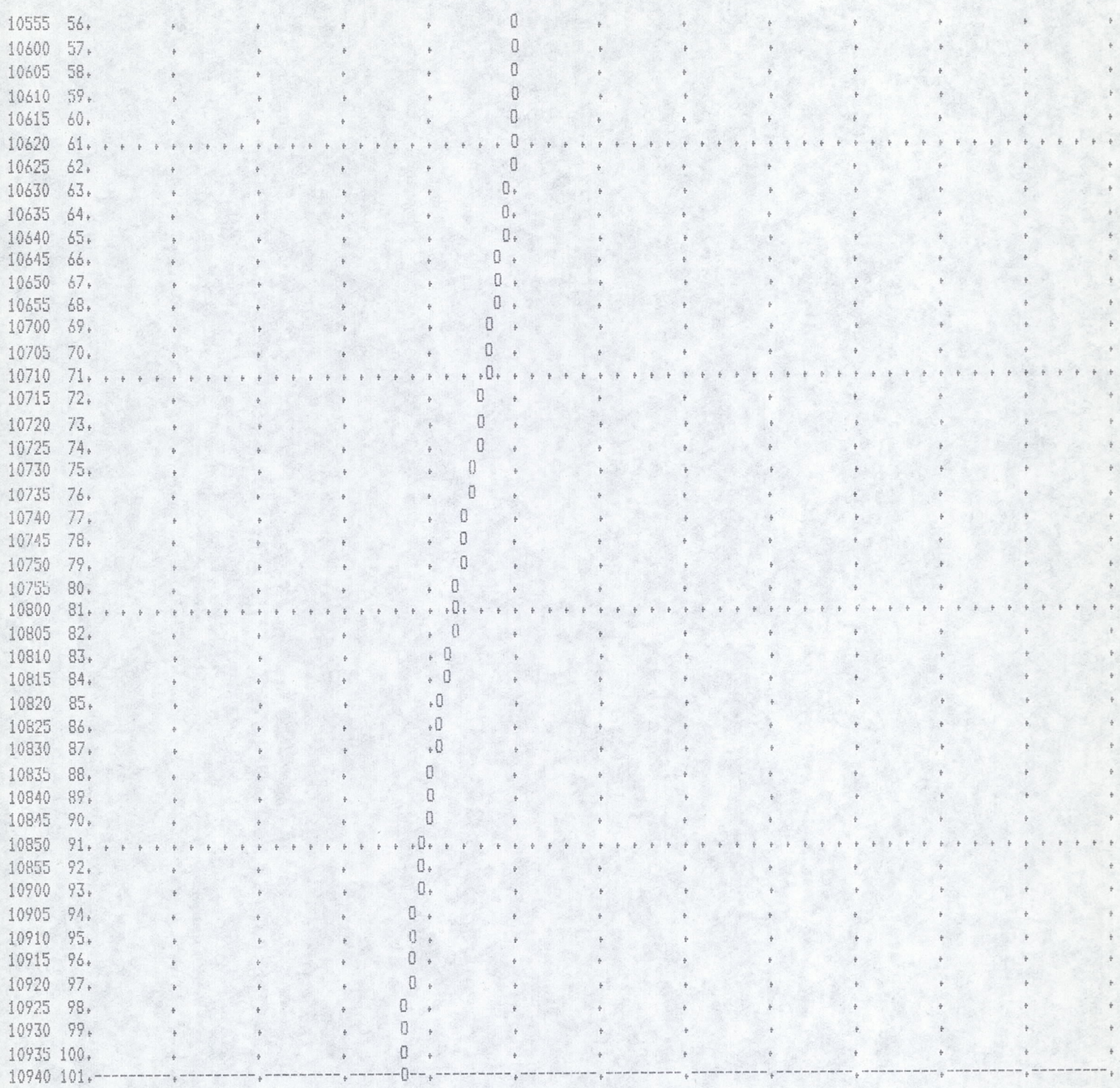
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10920 97.
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10930 99.
10935 100.
10940 101.

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            *            *
 82 KK      *    SUB5A   *
            *            *
            **************
                        SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
                         ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

              SUBBASIN RUNOFF DATA

 88 BA          SUBBASIN CHARACTERISTICS
                      TAREA        0.50  SUBBASIN AREA

                PRECIPITATION DATA

 85 PB                STORM        2.45  BASIN TOTAL PRECIPITATION

 86 PI            INCREMENTAL PRECIPITATION PATTERN
                     0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                     0.06      0.05

 89 LS          SCS LOSS RATE
                      STRTL        0.78  INITIAL ABSTRACTION
                     CRVNBR       72.00  CURVE NUMBER
                      RTIMP        4.00  PERCENT IMPERVIOUS AREA

                  LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
                      STRTL        0.78  INITIAL ABSTRACTION
                     CRVNBR       72.00  CURVE NUMBER
                      RTIMP        4.00  PERCENT IMPERVIOUS AREA

                KINEMATIC WAVE
 90 UK            OVERLAND-FLOW ELEMENT NO. 1
                          L       1850.  OVERLAND FLOW LENGTH
                          S      0.0033  SLOPE
                          N       0.200  ROUGHNESS COEFFICIENT
                         PA        25.0  PERCENT OF SUBBASIN
 91 UK            OVERLAND-FLOW ELEMENT NO. 2
                          L       5600.  OVERLAND FLOW LENGTH
                          S      0.0033  SLOPE
                          N       0.200  ROUGHNESS COEFFICIENT
                         PA        75.0  PERCENT OF SUBBASIN
 92 RK            MAIN CHANNEL
                          L       2640.  CHANNEL LENGTH
                          S      0.0050  SLOPE
                          N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                         CA        0.50  CONTRIBUTING AREA
                      SHAPE        TRAP  CHANNEL SHAPE
                         WD        0.00  BOTTOM WIDTH OR DIAMETER
                          Z        1.00  SIDE SLOPE
                     RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

                                                      ***

          COMPUTED KINEMATIC PARAMETERS
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ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	84.09
2	0.4280	1.667	5.00	133.33
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB5A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	10.
1		0125	2	0.05	0.05	0.00	0.	*	1		0540	53	0.00	0.00	0.00	10.
1		0130	3	0.07	0.07	0.00	0.	*	1		0545	54	0.00	0.00	0.00	10.
1		0135	4	0.07	0.07	0.00	0.	*	1		0550	55	0.00	0.00	0.00	10.
1		0140	5	0.10	0.10	0.00	0.	*	1		0555	56	0.00	0.00	0.00	10.
1		0145	6	0.16	0.15	0.01	0.	*	1		0600	57	0.00	0.00	0.00	10.
1		0150	7	1.16	0.97	0.19	0.	*	1		0605	58	0.00	0.00	0.00	10.
1		0155	8	0.39	0.23	0.16	1.	*	1		0610	59	0.00	0.00	0.00	10.
1		0200	9	0.14	0.08	0.06	2.	*	1		0615	60	0.00	0.00	0.00	10.
1		0205	10	0.11	0.06	0.05	4.	*	1		0620	61	0.00	0.00	0.00	10.
1		0210	11	0.09	0.04	0.05	6.	*	1		0625	62	0.00	0.00	0.00	10.
1		0215	12	0.06	0.03	0.03	8.	*	1		0630	63	0.00	0.00	0.00	10.
1		0220	13	0.05	0.02	0.03	9.	*	1		0635	64	0.00	0.00	0.00	10.
1		0225	14	0.00	0.00	0.00	10.	*	1		0640	65	0.00	0.00	0.00	10.
1		0230	15	0.00	0.00	0.00	10.	*	1		0645	66	0.00	0.00	0.00	9.
1		0235	16	0.00	0.00	0.00	10.	*	1		0650	67	0.00	0.00	0.00	9.
1		0240	17	0.00	0.00	0.00	10.	*	1		0655	68	0.00	0.00	0.00	9.
1		0245	18	0.00	0.00	0.00	10.	*	1		0700	69	0.00	0.00	0.00	9.
1		0250	19	0.00	0.00	0.00	10.	*	1		0705	70	0.00	0.00	0.00	9.
1		0255	20	0.00	0.00	0.00	10.	*	1		0710	71	0.00	0.00	0.00	9.
1		0300	21	0.00	0.00	0.00	10.	*	1		0715	72	0.00	0.00	0.00	9.
1		0305	22	0.00	0.00	0.00	10.	*	1		0720	73	0.00	0.00	0.00	9.
1		0310	23	0.00	0.00	0.00	10.	*	1		0725	74	0.00	0.00	0.00	9.
1		0315	24	0.00	0.00	0.00	10.	*	1		0730	75	0.00	0.00	0.00	9.
1		0320	25	0.00	0.00	0.00	10.	*	1		0735	76	0.00	0.00	0.00	9.
1		0325	26	0.00	0.00	0.00	10.	*	1		0740	77	0.00	0.00	0.00	9.
1		0330	27	0.00	0.00	0.00	10.	*	1		0745	78	0.00	0.00	0.00	9.
1		0335	28	0.00	0.00	0.00	10.	*	1		0750	79	0.00	0.00	0.00	9.
1		0340	29	0.00	0.00	0.00	10.	*	1		0755	80	0.00	0.00	0.00	8.
1		0345	30	0.00	0.00	0.00	10.	*	1		0800	81	0.00	0.00	0.00	8.
1		0350	31	0.00	0.00	0.00	10.	*	1		0805	82	0.00	0.00	0.00	8.
1		0355	32	0.00	0.00	0.00	10.	*	1		0810	83	0.00	0.00	0.00	8.
1		0400	33	0.00	0.00	0.00	10.	*	1		0815	84	0.00	0.00	0.00	8.
1		0405	34	0.00	0.00	0.00	10.	*	1		0820	85	0.00	0.00	0.00	8.
1		0410	35	0.00	0.00	0.00	10.	*	1		0825	86	0.00	0.00	0.00	8.
1		0415	36	0.00	0.00	0.00	10.	*	1		0830	87	0.00	0.00	0.00	8.
1		0420	37	0.00	0.00	0.00	10.	*	1		0835	88	0.00	0.00	0.00	8.
1		0425	38	0.00	0.00	0.00	10.	*	1		0840	89	0.00	0.00	0.00	8.
1		0430	39	0.00	0.00	0.00	10.	*	1		0845	90	0.00	0.00	0.00	8.
1		0435	40	0.00	0.00	0.00	10.	*	1		0850	91	0.00	0.00	0.00	8.
1		0440	41	0.00	0.00	0.00	10.	*	1		0855	92	0.00	0.00	0.00	8.
1		0445	42	0.00	0.00	0.00	10.	*	1		0900	93	0.00	0.00	0.00	8.
1		0450	43	0.00	0.00	0.00	10.	*	1		0905	94	0.00	0.00	0.00	8.
1		0455	44	0.00	0.00	0.00	10.	*	1		0910	95	0.00	0.00	0.00	7.
1		0500	45	0.00	0.00	0.00	10.	*	1		0915	96	0.00	0.00	0.00	7.
1		0505	46	0.00	0.00	0.00	10.	*	1		0920	97	0.00	0.00	0.00	7.
1		0510	47	0.00	0.00	0.00	10.	*	1		0925	98	0.00	0.00	0.00	7.
1		0515	48	0.00	0.00	0.00	10.	*	1		0930	99	0.00	0.00	0.00	7.

1	0520	49	0.00	0.00	0.00	10.	*	1	0935	100	0.00	0.00	0.00	7.
1	0525	50	0.00	0.00	0.00	10.	*	1	0940	101	0.00	0.00	0.00	7.
1	0530	51	0.00	0.00	0.00	10.	*							
							*							

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.87, TOTAL EXCESS = 0.58

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
10.	1.42	(CFS)	10.	8.	8.	8.
		(INCHES)	0.179	0.218	0.218	0.218
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB5A

(O) OUTFLOW

	0.	2.	4.	6.	8.	10.	0.	0.	0.	0.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLL
10150	7.0										LLLLLLLLLLLLLLLLLLLLLLLLXXXXX		
10155	8.	O										LLLLLLXXXX	
10200	9.		O										LLXX
10205	10.			O									LLX
10210	11.				O								LX
10215	12.					O							X
10220	13.						O						X
10225	14.						O						
10230	15.						O						
10235	16.						O						
10240	17.						O						
10245	18.						O						
10250	19.						O						
10255	20.						O						
10300	21.						O						
10305	22.						O						
10310	23.						O						
10315	24.						O						
10320	25.						O						
10325	26.						O						
10330	27.						O						
10335	28.						O						
10340	29.						O						
10345	30.						O						
10350	31.						O						
10355	32.						O						
10400	33.						O						
10405	34.						O						
10410	35.						O						
10415	36.						O						
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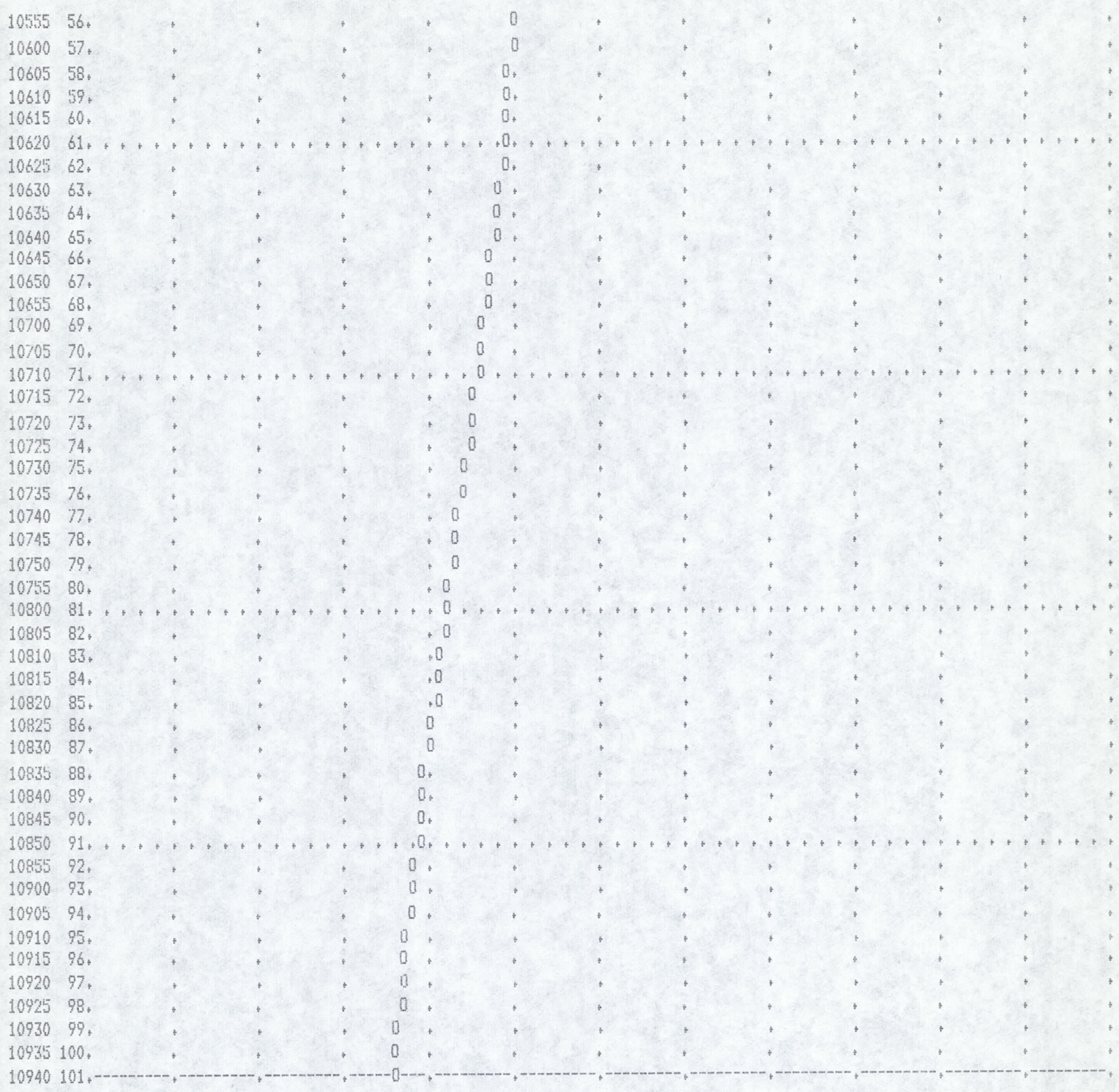
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10940 101.

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          *            *
 93 KK    *      SUB5  *
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COMBINE RUNOFF FROM SUB5A AND SUB5B AND DIVERT 25 AT C.P.(E)

95 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB5

SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	30.	1		0540	53	30.	1		0750	79	26.
1		0125	2	0.	1		0335	28	30.	1		0545	54	30.	1		0755	80	26.
1		0130	3	0.	1		0340	29	30.	1		0550	55	30.	1		0800	81	26.
1		0135	4	0.	1		0345	30	30.	1		0555	56	30.	1		0805	82	25.
1		0140	5	0.	1		0350	31	30.	1		0600	57	30.	1		0810	83	25.
1		0145	6	0.	1		0355	32	30.	1		0605	58	30.	1		0815	84	25.
1		0150	7	0.	1		0400	33	30.	1		0610	59	30.	1		0820	85	25.
1		0155	8	2.	1		0405	34	30.	1		0615	60	30.	1		0825	86	24.
1		0200	9	5.	1		0410	35	30.	1		0620	61	30.	1		0830	87	24.
1		0205	10	11.	1		0415	36	30.	1		0625	62	30.	1		0835	88	24.
1		0210	11	17.	1		0420	37	30.	1		0630	63	29.	1		0840	89	24.
1		0215	12	22.	1		0425	38	30.	1		0635	64	29.	1		0845	90	24.
1		0220	13	25.	1		0430	39	30.	1		0640	65	29.	1		0850	91	23.
1		0225	14	28.	1		0435	40	30.	1		0645	66	29.	1		0855	92	23.
1		0230	15	29.	1		0440	41	30.	1		0650	67	29.	1		0900	93	23.
1		0235	16	30.	1		0445	42	30.	1		0655	68	28.	1		0905	94	23.
1		0240	17	30.	1		0450	43	30.	1		0700	69	28.	1		0910	95	23.
1		0245	18	30.	1		0455	44	30.	1		0705	70	28.	1		0915	96	23.
1		0250	19	30.	1		0500	45	30.	1		0710	71	28.	1		0920	97	22.
1		0255	20	30.	1		0505	46	30.	1		0715	72	28.	1		0925	98	22.
1		0300	21	30.	1		0510	47	30.	1		0720	73	27.	1		0930	99	22.
1		0305	22	30.	1		0515	48	30.	1		0725	74	27.	1		0935	100	22.
1		0310	23	30.	1		0520	49	30.	1		0730	75	27.	1		0940	101	22.
1		0315	24	30.	1		0525	50	30.	1		0735	76	27.					
1		0320	25	30.	1		0530	51	30.	1		0740	77	26.					
1		0325	26	30.	1		0535	52	30.	1		0745	78	26.					

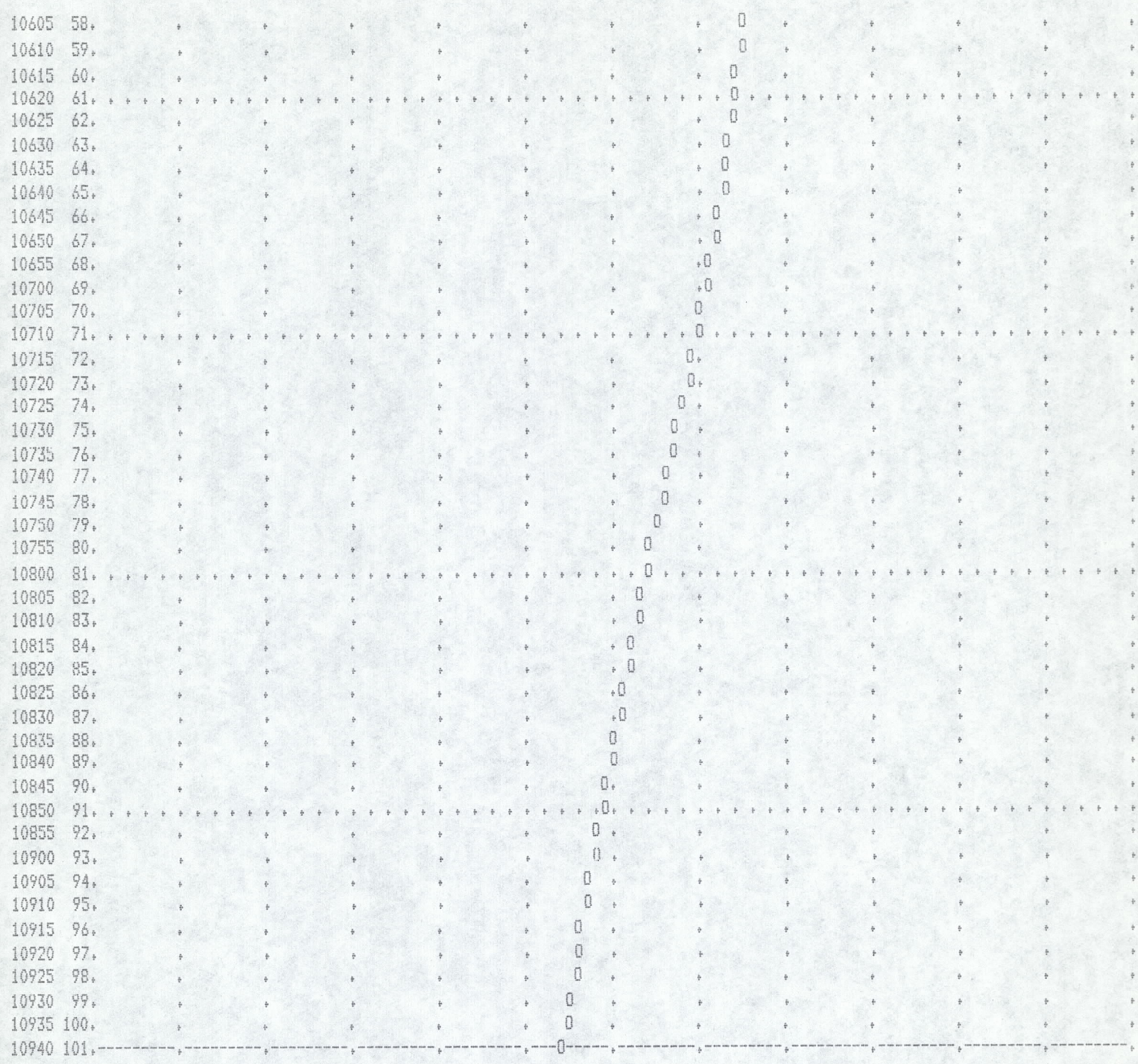
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
30.	1.58	(CFS)	29.	25.	25.	25.
		(INCHES)	0.272	0.328	0.328	0.328
		(AC-FT)	14.	18.	18.	18.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB5

(O) OUTFLOW

DAHRMN	PER	0.	4.	8.	12.	16.	20.	24.	28.	32.	0.	0.	0.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	7.0													
10155	8.	O												
10200	9.		O											
10205	10.				O									
10210	11.						O							
10215	12.							O						
10220	13.							.O						
10225	14.								O.					
10230	15.									O				
10235	16.									O				
10240	17.									O				
10245	18.									O				
10250	19.									O				
10255	20.									O				
10300	21.									O				
10305	22.									O				
10310	23.									O				
10315	24.									O				
10320	25.									O				
10325	26.									O				
10330	27.									O				
10335	28.									O				
10340	29.									O				
10345	30.									O				
10350	31.									O				
10355	32.									O				
10400	33.									O				
10405	34.									O				
10410	35.									O				
10415	36.									O				
10420	37.									O				
10425	38.									O				
10430	39.									O				
10435	40.									O				
10440	41.									O				
10445	42.									O				
10450	43.									O				
10455	44.									O				
10500	45.									O				
10505	46.									O				
10510	47.									O				
10515	48.									O				
10520	49.									O				
10525	50.									O				
10530	51.									O				
10535	52.									O				
10540	53.									O				
10545	54.									O				
10550	55.									O				
10555	56.									O				
10600	57.									O				


10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
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10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
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10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
 96 KK    *     SUB5   *
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DIVERT TO THOMAS ROAD

DT	DIVERSION ISTAD	THOMAS	DIVERSION HYDROGRAPH IDENTIFICATION		
DI	INFLOW	2.00	100.00	1000.00	
DQ	DIVERTED FLOW	1.00	50.00	500.00	

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DIVERSION HYDROGRAPH THOMAS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	15.	1		0540	53	15.	1		0750	79	13.
1		0125	2	0.	1		0335	28	15.	1		0545	54	15.	1		0755	80	13.
1		0130	3	0.	1		0340	29	15.	1		0550	55	15.	1		0800	81	13.
1		0135	4	0.	1		0345	30	15.	1		0555	56	15.	1		0805	82	13.
1		0140	5	0.	1		0350	31	15.	1		0600	57	15.	1		0810	83	13.
1		0145	6	0.	1		0355	32	15.	1		0605	58	15.	1		0815	84	12.
1		0150	7	0.	1		0400	33	15.	1		0610	59	15.	1		0820	85	12.
1		0155	8	1.	1		0405	34	15.	1		0615	60	15.	1		0825	86	12.
1		0200	9	3.	1		0410	35	15.	1		0620	61	15.	1		0830	87	12.
1		0205	10	5.	1		0415	36	15.	1		0625	62	15.	1		0835	88	12.
1		0210	11	8.	1		0420	37	15.	1		0630	63	15.	1		0840	89	12.
1		0215	12	11.	1		0425	38	15.	1		0635	64	15.	1		0845	90	12.
1		0220	13	12.	1		0430	39	15.	1		0640	65	15.	1		0850	91	12.
1		0225	14	14.	1		0435	40	15.	1		0645	66	14.	1		0855	92	12.
1		0230	15	15.	1		0440	41	15.	1		0650	67	14.	1		0900	93	12.
1		0235	16	15.	1		0445	42	15.	1		0655	68	14.	1		0905	94	11.
1		0240	17	15.	1		0450	43	15.	1		0700	69	14.	1		0910	95	11.
1		0245	18	15.	1		0455	44	15.	1		0705	70	14.	1		0915	96	11.
1		0250	19	15.	1		0500	45	15.	1		0710	71	14.	1		0920	97	11.
1		0255	20	15.	1		0505	46	15.	1		0715	72	14.	1		0925	98	11.
1		0300	21	15.	1		0510	47	15.	1		0720	73	14.	1		0930	99	11.
1		0305	22	15.	1		0515	48	15.	1		0725	74	14.	1		0935	100	11.
1		0310	23	15.	1		0520	49	15.	1		0730	75	13.	1		0940	101	11.
1		0315	24	15.	1		0525	50	15.	1		0735	76	13.					
1		0320	25	15.	1		0530	51	15.	1		0740	77	13.					
1		0325	26	15.	1		0535	52	15.	1		0745	78	13.					

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PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
		MAXIMUM AVERAGE FLOW				
15.	1.50	(CFS)	15.	13.	13.	13.
		(INCHES)	0.136	0.164	0.164	0.164
		(AC-FT)	7.	9.	9.	9.

CUMULATIVE AREA = 1.00 SQ MI

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HYDROGRAPH AT STATION SUB5

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	15.	1		0540	53	15.	1		0750	79	13.
1		0125	2	0.	1		0335	28	15.	1		0545	54	15.	1		0755	80	13.
1		0130	3	0.	1		0340	29	15.	1		0550	55	15.	1		0800	81	13.
1		0135	4	0.	1		0345	30	15.	1		0555	56	15.	1		0805	82	13.
1		0140	5	0.	1		0350	31	15.	1		0600	57	15.	1		0810	83	13.
1		0145	6	0.	1		0355	32	15.	1		0605	58	15.	1		0815	84	12.
1		0150	7	0.	1		0400	33	15.	1		0610	59	15.	1		0820	85	12.
1		0155	8	1.	1		0405	34	15.	1		0615	60	15.	1		0825	86	12.
1		0200	9	3.	1		0410	35	15.	1		0620	61	15.	1		0830	87	12.
1		0205	10	5.	1		0415	36	15.	1		0625	62	15.	1		0835	88	12.
1		0210	11	8.	1		0420	37	15.	1		0630	63	15.	1		0840	89	12.
1		0215	12	11.	1		0425	38	15.	1		0635	64	15.	1		0845	90	12.
1		0220	13	12.	1		0430	39	15.	1		0640	65	15.	1		0850	91	12.
1		0225	14	14.	1		0435	40	15.	1		0645	66	14.	1		0855	92	12.
1		0230	15	15.	1		0440	41	15.	1		0650	67	14.	1		0900	93	12.
1		0235	16	15.	1		0445	42	15.	1		0655	68	14.	1		0905	94	11.
1		0240	17	15.	1		0450	43	15.	1		0700	69	14.	1		0910	95	11.
1		0245	18	15.	1		0455	44	15.	1		0705	70	14.	1		0915	96	11.
1		0250	19	15.	1		0500	45	15.	1		0710	71	14.	1		0920	97	11.
1		0255	20	15.	1		0505	46	15.	1		0715	72	14.	1		0925	98	11.
1		0300	21	15.	1		0510	47	15.	1		0720	73	14.	1		0930	99	11.
1		0305	22	15.	1		0515	48	15.	1		0725	74	14.	1		0935	100	11.
1		0310	23	15.	1		0520	49	15.	1		0730	75	13.	1		0940	101	11.
1		0315	24	15.	1		0525	50	15.	1		0735	76	13.					
1		0320	25	15.	1		0530	51	15.	1		0740	77	13.					
1		0325	26	15.	1		0535	52	15.	1		0745	78	13.					

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PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
		MAXIMUM AVERAGE FLOW				
15.	1.50	(CFS)	15.	13.	13.	13.
		(INCHES)	0.136	0.164	0.164	0.164
		(AC-FT)	7.	9.	9.	9.

CUMULATIVE AREA = 1.00 SQ MI

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101 KK SUB6

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ROUTED TO SUB6 (AT MID-POINT OF (E) AND (F))
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

HYDROGRAPH ROUTING DATA

104 RK KINEMATIC WAVE STREAM ROUTING

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

***

KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.5941	1.423	2.50	1320.00

HYDROGRAPH AT STATION SUB6

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	15.	*	1		0540	53	15.	*	1		0750	79	13.
1		0125	2	0.	*	1		0335	28	15.	*	1		0545	54	15.	*	1		0755	80	13.
1		0130	3	0.	*	1		0340	29	15.	*	1		0550	55	15.	*	1		0800	81	13.
1		0135	4	0.	*	1		0345	30	15.	*	1		0555	56	15.	*	1		0805	82	13.
1		0140	5	0.	*	1		0350	31	15.	*	1		0600	57	15.	*	1		0810	83	13.
1		0145	6	0.	*	1		0355	32	15.	*	1		0605	58	15.	*	1		0815	84	13.
1		0150	7	0.	*	1		0400	33	15.	*	1		0610	59	15.	*	1		0820	85	13.
1		0155	8	0.	*	1		0405	34	15.	*	1		0615	60	15.	*	1		0825	86	12.
1		0200	9	0.	*	1		0410	35	15.	*	1		0620	61	15.	*	1		0830	87	12.
1		0205	10	0.	*	1		0415	36	15.	*	1		0625	62	15.	*	1		0835	88	12.
1		0210	11	1.	*	1		0420	37	15.	*	1		0630	63	15.	*	1		0840	89	12.
1		0215	12	4.	*	1		0425	38	15.	*	1		0635	64	15.	*	1		0845	90	12.
1		0220	13	7.	*	1		0430	39	15.	*	1		0640	65	15.	*	1		0850	91	12.
1		0225	14	10.	*	1		0435	40	15.	*	1		0645	66	15.	*	1		0855	92	12.
1		0230	15	12.	*	1		0440	41	15.	*	1		0650	67	14.	*	1		0900	93	12.
1		0235	16	14.	*	1		0445	42	15.	*	1		0655	68	14.	*	1		0905	94	12.
1		0240	17	15.	*	1		0450	43	15.	*	1		0700	69	14.	*	1		0910	95	12.
1		0245	18	15.	*	1		0455	44	15.	*	1		0705	70	14.	*	1		0915	96	11.
1		0250	19	15.	*	1		0500	45	15.	*	1		0710	71	14.	*	1		0920	97	11.
1		0255	20	15.	*	1		0505	46	15.	*	1		0715	72	14.	*	1		0925	98	11.
1		0300	21	15.	*	1		0510	47	15.	*	1		0720	73	14.	*	1		0930	99	11.
1		0305	22	15.	*	1		0515	48	15.	*	1		0725	74	14.	*	1		0935	100	11.
1		0310	23	15.	*	1		0520	49	15.	*	1		0730	75	14.	*	1		0940	101	11.
1		0315	24	15.	*	1		0525	50	15.	*	1		0735	76	14.	*					
1		0320	25	15.	*	1		0530	51	15.	*	1		0740	77	13.	*					
1		0325	26	15.	*	1		0535	52	15.	*	1		0745	78	13.	*					

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
15.	1.83	(CFS)	15.	12.	12.	12.
		(INCHES)	0.136	0.160	0.160	0.160
		(AC-FT)	7.	9.	9.	9.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB6

(O) OUTFLOW

DAHRMN	PER	0.	2.	4.	6.	8.	10.	12.	14.	16.	0.	0.	0.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	70													
10155	80													
10200	90													
10205	10.0													
10210	11.		0.											
10215	12.			0										
10220	13.					0								
10225	14.						0							
10230	15.							0						
10235	16.								0.					
10240	17.									0				
10245	18.									0				
10250	19.									0				
10255	20.									0				
10300	21.									0				
10305	22.									0				
10310	23.									0				
10315	24.									0				
10320	25.									0				
10325	26.									0				
10330	27.									0				
10335	28.									0				
10340	29.									0				
10345	30.									0				
10350	31.									0				
10355	32.									0				
10400	33.									0				
10405	34.									0				
10410	35.									0				
10415	36.									0				
10420	37.									0				
10425	38.									0				
10430	39.									0				
10435	40.									0				
10440	41.									0				
10445	42.									0				
10450	43.									0				
10455	44.									0				
10500	45.									0				
10505	46.									0				
10510	47.									0				
10515	48.									0				
10520	49.									0				
10525	50.									0				
10530	51.									0				
10535	52.									0				
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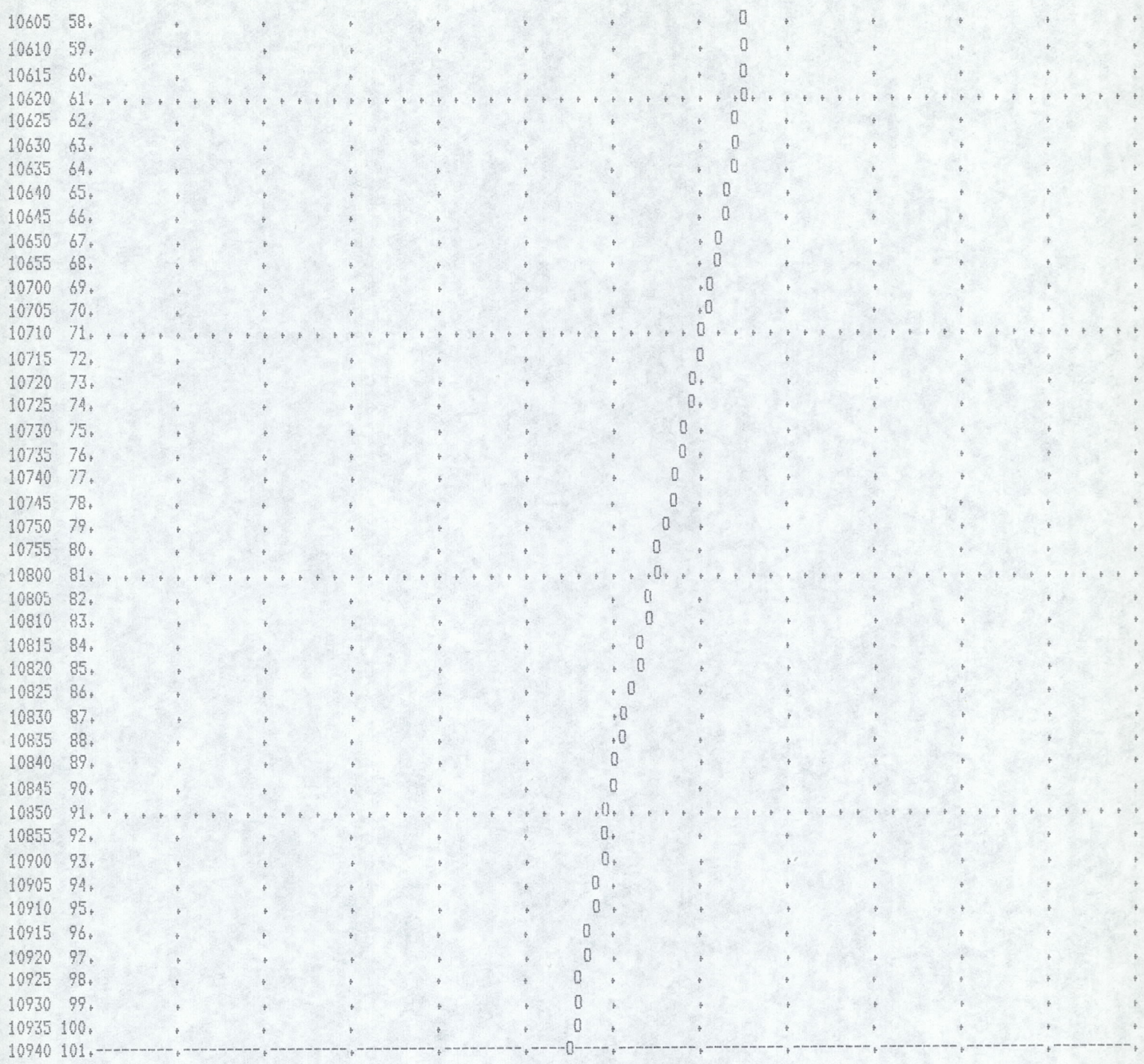
10550	55.									0				
10555	56.									0				
10600	57.									0				


10605 58.
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10805 82.
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10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
105 KK    *    SUB6A   *
          *            *
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                    AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                    ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                          COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                          MAIN CHANNEL 5000' RUNING NORTH-SOUTH
                    CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
                    MODELED AS 75% OF THE AREA ROUTED THROUGH THE LAKE

               SUBBASIN RUNOFF DATA

112 BA           SUBBASIN CHARACTERISTICS
                      TAREA       0.75  SUBBASIN AREA

                 PRECIPITATION DATA

 85 PB                STORM       2.45  BASIN TOTAL PRECIPITATION

 86 PI              INCREMENTAL PRECIPITATION PATTERN
                      0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                      0.06      0.05

113 LS           SCS LOSS RATE
                      STRTL       0.50  INITIAL ABSTRACTION
                     CRVNBR      80.00  CURVE NUMBER
                      RTIMP      29.00  PERCENT IMPERVIOUS AREA

                 KINEMATIC WAVE
114 UK             OVERLAND-FLOW ELEMENT NO. 1
                          L       100.  OVERLAND FLOW LENGTH
                          S     0.0033  SLOPE
                          N      0.200  ROUGHNESS COEFFICIENT
                         PA      100.0  PERCENT OF SUBBASIN
115 RK             COLLECTOR CHANNEL
                          L      2000.  CHANNEL LENGTH
                          S     0.0050  SLOPE
                          N      0.160  CHANNEL ROUGHNESS COEFFICIENT
                         CA       0.10  CONTRIBUTING AREA
                      SHAPE       TRAP  CHANNEL SHAPE
                         WD       0.00  BOTTOM WIDTH OR DIAMETER
                          Z       1.00  SIDE SLOPE
116 RK             MAIN CHANNEL
                          L      5000.  CHANNEL LENGTH
                          S     0.0050  SLOPE
                          N      0.160  CHANNEL ROUGHNESS COEFFICIENT
                         CA       0.75  CONTRIBUTING AREA
                      SHAPE       TRAP  CHANNEL SHAPE
                         WD       0.00  BOTTOM WIDTH OR DIAMETER
                          Z       1.00  SIDE SLOPE
                     RUPSTQ         NO  ROUTE UPSTREAM HYDROGRAPH
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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	2500.00

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HYDROGRAPH AT STATION SUB6A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	18.
1		0125	2	0.05	0.04	0.01	0.	1		0540	53	0.00	0.00	0.00	17.
1		0130	3	0.07	0.05	0.02	0.	1		0545	54	0.00	0.00	0.00	16.
1		0135	4	0.07	0.05	0.02	0.	1		0550	55	0.00	0.00	0.00	15.
1		0140	5	0.10	0.07	0.03	0.	1		0555	56	0.00	0.00	0.00	14.
1		0145	6	0.16	0.11	0.05	0.	1		0600	57	0.00	0.00	0.00	13.
1		0150	7	1.16	0.58	0.58	0.	1		0605	58	0.00	0.00	0.00	12.
1		0155	8	0.39	0.12	0.27	5.	1		0610	59	0.00	0.00	0.00	12.
1		0200	9	0.14	0.04	0.10	31.	1		0615	60	0.00	0.00	0.00	11.
1		0205	10	0.11	0.03	0.08	92.	1		0620	61	0.00	0.00	0.00	10.
1		0210	11	0.09	0.02	0.07	178.	1		0625	62	0.00	0.00	0.00	10.
1		0215	12	0.06	0.01	0.05	269.	1		0630	63	0.00	0.00	0.00	9.
1		0220	13	0.05	0.01	0.04	347.	1		0635	64	0.00	0.00	0.00	9.
1		0225	14	0.00	0.00	0.00	402.	1		0640	65	0.00	0.00	0.00	8.
1		0230	15	0.00	0.00	0.00	430.	1		0645	66	0.00	0.00	0.00	8.
1		0235	16	0.00	0.00	0.00	435.	1		0650	67	0.00	0.00	0.00	8.
1		0240	17	0.00	0.00	0.00	422.	1		0655	68	0.00	0.00	0.00	7.
1		0245	18	0.00	0.00	0.00	398.	1		0700	69	0.00	0.00	0.00	7.
1		0250	19	0.00	0.00	0.00	367.	1		0705	70	0.00	0.00	0.00	7.
1		0255	20	0.00	0.00	0.00	334.	1		0710	71	0.00	0.00	0.00	6.
1		0300	21	0.00	0.00	0.00	301.	1		0715	72	0.00	0.00	0.00	6.
1		0305	22	0.00	0.00	0.00	270.	1		0720	73	0.00	0.00	0.00	6.
1		0310	23	0.00	0.00	0.00	241.	1		0725	74	0.00	0.00	0.00	6.
1		0315	24	0.00	0.00	0.00	215.	1		0730	75	0.00	0.00	0.00	5.
1		0320	25	0.00	0.00	0.00	192.	1		0735	76	0.00	0.00	0.00	5.
1		0325	26	0.00	0.00	0.00	171.	1		0740	77	0.00	0.00	0.00	5.
1		0330	27	0.00	0.00	0.00	153.	1		0745	78	0.00	0.00	0.00	5.
1		0335	28	0.00	0.00	0.00	137.	1		0750	79	0.00	0.00	0.00	5.
1		0340	29	0.00	0.00	0.00	123.	1		0755	80	0.00	0.00	0.00	4.
1		0345	30	0.00	0.00	0.00	110.	1		0800	81	0.00	0.00	0.00	4.
1		0350	31	0.00	0.00	0.00	99.	1		0805	82	0.00	0.00	0.00	4.
1		0355	32	0.00	0.00	0.00	90.	1		0810	83	0.00	0.00	0.00	4.
1		0400	33	0.00	0.00	0.00	81.	1		0815	84	0.00	0.00	0.00	4.
1		0405	34	0.00	0.00	0.00	73.	1		0820	85	0.00	0.00	0.00	4.
1		0410	35	0.00	0.00	0.00	67.	1		0825	86	0.00	0.00	0.00	3.
1		0415	36	0.00	0.00	0.00	61.	1		0830	87	0.00	0.00	0.00	3.
1		0420	37	0.00	0.00	0.00	56.	1		0835	88	0.00	0.00	0.00	3.
1		0425	38	0.00	0.00	0.00	51.	1		0840	89	0.00	0.00	0.00	3.
1		0430	39	0.00	0.00	0.00	47.	1		0845	90	0.00	0.00	0.00	3.
1		0435	40	0.00	0.00	0.00	43.	1		0850	91	0.00	0.00	0.00	3.
1		0440	41	0.00	0.00	0.00	39.	1		0855	92	0.00	0.00	0.00	3.
1		0445	42	0.00	0.00	0.00	36.	1		0900	93	0.00	0.00	0.00	3.
1		0450	43	0.00	0.00	0.00	34.	1		0905	94	0.00	0.00	0.00	3.
1		0455	44	0.00	0.00	0.00	31.	1		0910	95	0.00	0.00	0.00	3.
1		0500	45	0.00	0.00	0.00	29.	1		0915	96	0.00	0.00	0.00	2.
1		0505	46	0.00	0.00	0.00	27.	1		0920	97	0.00	0.00	0.00	2.

1	0510	47	0.00	0.00	0.00	25.	*	1	0925	98	0.00	0.00	0.00	2.
1	0515	48	0.00	0.00	0.00	23.	*	1	0930	99	0.00	0.00	0.00	2.
1	0520	49	0.00	0.00	0.00	22.	*	1	0935	100	0.00	0.00	0.00	2.
1	0525	50	0.00	0.00	0.00	20.	*	1	0940	101	0.00	0.00	0.00	2.
1	0530	51	0.00	0.00	0.00	19.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
435.	1.25	(CFS)	95.	69.	69.	69.
		(INCHES)	1.181	1.192	1.192	1.192
		(AC-FT)	47.	48.	48.	48.

CUMULATIVE AREA = 0.75 SQ MI

STATION SUB6A

(O) OUTFLOW

	0.	50.	100.	150.	200.	250.	300.	350.	400.	450.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLLX
10150	70										LLLLLLLLLLLLLLLXXXXXXXXXXXXXXX		
10155	8.0											LLLXXXXXXX	
10200	9.	O											LXXX
10205	10.		O										LXX
10210	11.					O							XX
10215	12.						O						X
10220	13.							O					X
10225	14.								O				
10230	15.									O			
10235	16.									O			
10240	17.									O			
10245	18.								O				
10250	19.							O					
10255	20.							O					
10300	21.							O					
10305	22.						O						
10310	23.					O							
10315	24.				O								
10320	25.				O								
10325	26.			O									
10330	27.			O									
10335	28.		O										
10340	29.		O										
10345	30.	O											
10350	31.	O											
10355	32.		O										
10400	33.	O											
10405	34.	O											
10410	35.	O											
10415	36.	O											
10420	37.	O											
10425	38.	O											
10430	39.	O											
10435	40.	O											
10440	41.	O											
10445	42.	O											
10450	43.	O											
10455	44.	O											
10500	45.	O											
10505	46.	O											
10510	47.	O											
10515	48.	O											
10520	49.	O											
10525	50.	O											
10530	51.	O											
10535	52.	O											
10540	53.	O											
10545	54.	O											
10550	55.	O											

```
10555  56.  0
10600  57.  0
10605  58. 0
10610  59. 0
10615  60. 0
10620  61. 0
10625  62. 0
10630  63. 0
10635  64. 0
10640  65. 0
10645  66. 0
10650  67. 0
10655  68.0
10700  69.0
10705  70.0
10710  71.0
10715  72.0
10720  73.0
10725  74.0
10730  75.0
10735  76.0
10740  77.0
10745  78.0
10750  79.0
10755  80.0
10800  81.0
10805  82.0
10810  83.0
10815  84.0
10820  85.0
10825  86.0
10830  87.0
10835  88.0
10840  89.0
10845  90.0
10850  91.0
10855  92.0
10900  93.0
10905  94.0
10910  95.0
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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              *            *
117 KK        *    SUB6A   *
              *            *
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SUB6A LAKE ROUTING

HYDROGRAPH ROUTING DATA

119 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

120 RS STORAGE ROUTING

NSTPS	1	NUMBER OF SUBREACHES
ITYP	STOR	TYPE OF INITIAL CONDITION
RSVRIC	0.00	INITIAL CONDITION
X	0.00	WORKING R AND D COEFFICIENT

121 SV	STORAGE	0.0	5.5	11.0	16.5	17.9	19.3	20.7	23.5
122 SQ	DISCHARGE	0.	0.	0.	0.	67.	190.	350.	750.
123 SE	ELEVATION	0.00	1.00	2.00	3.00	3.20	3.40	3.60	4.00

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HYDROGRAPH AT STATION SUB6A

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	*	1		0410	35	80.	18.0	3.2	*	1		0700	69	8.	16.7	3.0
1		0125	2	0.	0.0	0.0	*	1		0415	36	72.	18.0	3.2	*	1		0705	70	8.	16.7	3.0
1		0130	3	0.	0.0	0.0	*	1		0420	37	66.	17.9	3.2	*	1		0710	71	7.	16.7	3.0
1		0135	4	0.	0.0	0.0	*	1		0425	38	63.	17.8	3.2	*	1		0715	72	7.	16.6	3.0
1		0140	5	0.	0.0	0.0	*	1		0430	39	59.	17.7	3.2	*	1		0720	73	7.	16.6	3.0
1		0145	6	0.	0.0	0.0	*	1		0435	40	55.	17.6	3.2	*	1		0725	74	6.	16.6	3.0
1		0150	7	0.	0.0	0.0	*	1		0440	41	51.	17.6	3.2	*	1		0730	75	6.	16.6	3.0
1		0155	8	0.	0.0	0.0	*	1		0445	42	47.	17.5	3.1	*	1		0735	76	6.	16.6	3.0
1		0200	9	0.	0.1	0.0	*	1		0450	43	44.	17.4	3.1	*	1		0740	77	6.	16.6	3.0
1		0205	10	0.	0.6	0.1	*	1		0455	44	40.	17.3	3.1	*	1		0745	78	5.	16.6	3.0
1		0210	11	0.	1.5	0.3	*	1		0500	45	38.	17.3	3.1	*	1		0750	79	5.	16.6	3.0
1		0215	12	0.	3.0	0.6	*	1		0505	46	35.	17.2	3.1	*	1		0755	80	5.	16.6	3.0
1		0220	13	0.	5.2	0.9	*	1		0510	47	32.	17.2	3.1	*	1		0800	81	5.	16.6	3.0
1		0225	14	0.	7.7	1.4	*	1		0515	48	30.	17.1	3.1	*	1		0805	82	5.	16.6	3.0
1		0230	15	0.	10.6	1.9	*	1		0520	49	28.	17.1	3.1	*	1		0810	83	4.	16.6	3.0
1		0235	16	0.	13.6	2.5	*	1		0525	50	26.	17.0	3.1	*	1		0815	84	4.	16.6	3.0
1		0240	17	2.	16.5	3.0	*	1		0530	51	24.	17.0	3.1	*	1		0820	85	4.	16.6	3.0
1		0245	18	149.	18.8	3.3	*	1		0535	52	22.	17.0	3.1	*	1		0825	86	4.	16.6	3.0
1		0250	19	272.	20.0	3.5	*	1		0540	53	21.	16.9	3.1	*	1		0830	87	4.	16.6	3.0
1		0255	20	316.	20.4	3.6	*	1		0545	54	20.	16.9	3.1	*	1		0835	88	4.	16.6	3.0

1	0300	21	317.	20.4	3.6	*	1	0550	55	18.	16.9	3.1	*	1	0840	89	3.	16.6	3.0
1	0305	22	299.	20.3	3.5	*	1	0555	56	17.	16.9	3.1	*	1	0845	90	3.	16.6	3.0
1	0310	23	275.	20.0	3.5	*	1	0600	57	16.	16.8	3.0	*	1	0850	91	3.	16.6	3.0
1	0315	24	249.	19.8	3.5	*	1	0605	58	15.	16.8	3.0	*	1	0855	92	3.	16.6	3.0
1	0320	25	223.	19.6	3.4	*	1	0610	59	14.	16.8	3.0	*	1	0900	93	3.	16.6	3.0
1	0325	26	200.	19.4	3.4	*	1	0615	60	13.	16.8	3.0	*	1	0905	94	3.	16.6	3.0
1	0330	27	181.	19.2	3.4	*	1	0620	61	13.	16.8	3.0	*	1	0910	95	3.	16.6	3.0
1	0335	28	164.	19.0	3.4	*	1	0625	62	12.	16.8	3.0	*	1	0915	96	3.	16.6	3.0
1	0340	29	148.	18.8	3.3	*	1	0630	63	11.	16.7	3.0	*	1	0920	97	3.	16.6	3.0
1	0345	30	133.	18.7	3.3	*	1	0635	64	11.	16.7	3.0	*	1	0925	98	3.	16.6	3.0
1	0350	31	120.	18.5	3.3	*	1	0640	65	10.	16.7	3.0	*	1	0930	99	2.	16.6	3.0
1	0355	32	108.	18.4	3.3	*	1	0645	66	10.	16.7	3.0	*	1	0935	100	2.	16.5	3.0
1	0400	33	98.	18.2	3.2	*	1	0650	67	9.	16.7	3.0	*	1	0940	101	2.	16.5	3.0
1	0405	34	88.	18.1	3.2	*	1	0655	68	9.	16.7	3.0	*						
						*							*						

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
317.	1.67	(CFS)	62.	45.	45.	45.
		(INCHES)	0.772	0.778	0.778	0.778
		(AC-FT)	31.	31.	31.	31.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)	6-HR	24-HR	72-HR	8.33-HR
20.	1.67	17.	15.	15.	15.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)	6-HR	24-HR	72-HR	8.33-HR
3.56	1.67	3.14	2.71	2.71	2.71

CUMULATIVE AREA = 0.75 SQ MI

STATION SUB6A

(I) INFLOW, (O) OUTFLOW

0. 50. 100. 150. 200. 250. 300. 350. 400. 450. 0. 0. 0.

(S) STORAGE

0. 0. 0. 0. 0. 0. 0. 10. 20. 30. 0. 0. 0.

DAHRMN PER

10120 1I---------,---------,---------,---------,---------,---------S---------,---------,---------,---------,---------,---------,
10125 2I , , , , , S , , , , , ,
10130 3I , , , , , S , , , , , ,
10135 4I , , , , , S , , , , , ,
10140 5I , , , , , S , , , , , ,
10145 6I , , , , , S , , , , , ,
10150 7I , , , , , S , , , , , ,
10155 80I , , , , , S , , , , , ,
10200 90 I , , , , , S , , , , , ,
10205 100 , I , , , , ,S , , , , , ,
10210 110 . . . . . I . . . . . .S. . . . . .
10215 120 , , , , , I , S , , , , , ,
10220 130 , , , , , , S I, , , , , ,
10225 140 , , , , , , S , I , , , , ,
10230 150 , , , , , , ,S , I , , , ,
10235 160 , , , , , , , S , I , , , ,
10240 170 , , , , , , , S , I , , , ,
10245 18. , , 0 , , , , SI , , , , ,
10250 19. , , , , , 0 , , I S , , , , ,
10255 20. , , , , , , 0 I , S , , , , ,
10300 21. . . . . I .0. . . . . S . . . . . .
10305 22. , , , , , I 0 , S , , , , ,
10310 23. , , , , I , 0 , , S , , , , ,
10315 24. , , , , I 0 , , S , , , , ,
10320 25. , , , I , 0 , , , S , , , , ,
10325 26. , , , I 0 , , , S, , , , ,
10330 27. , , ,I 0 , , , , S, , , , ,
10335 28. , , I , 0 , , , , S, , , , ,
10340 29. , , I 0 , , , , S, , , , ,
10345 30. , , I 0 , , , , , S, , , , ,
10350 31. . . . . I , 0 . . . . . .S. . . . . .
10355 32. , I , 0 , , , , , S , , , , ,
10400 33. , I 0 , , , , , , S , , , , ,
10405 34. , I 0 , , , , , , S , , , , ,
10410 35. , I 0 , , , , , , S , , , , ,
10415 36. , I 0 , , , , , , S , , , , ,
10420 37. ,I 0 , , , , , , S , , , , ,
10425 38. I 0 , , , , , , S , , , , ,
10430 39. I, 0 , , , , , , S , , , , ,
10435 40. I,0 , , , , , , S , , , , ,
10440 41. . . . I 0 . . . . . .S. . . . . .
10445 42. I 0, , , , , , S , , , , ,
10450 43. I 0, , , , , , S , , , , ,
10455 44. I 0 , , , , , , S , , , , ,
10500 45. I 0 , , , , , , S , , , , ,
10505 46. I 0 , , , , , , S , , , , ,
10510 47. I0 , , , , , , S , , , , ,
10515 48. I0 , , , , , , S , , , , ,
10520 49. I 0 , , , , , , S , , , , ,
10525 50. I0 , , , , , , S , , , , ,
10530 51. , I0. . . . . .S. . . . . .
10535 52. I , , , , , , S , , , , ,
10540 53. I0 , , , , , , S , , , , ,
10545 54. I0 , , , , , , S , , , , ,
10550 55. I0 , , , , , , S , , , , ,

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10555  56.  I      .       .       .       .       .       .       S       .       .       .       .       .
10600  57.  I      .       .       .       .       .       .       S       .       .       .       .       .
10605  58. IO      .       .       .       .       .       .       S       .       .       .       .       .
10610  59. IO      .       .       .       .       .       .       S       .       .       .       .       .
10615  60. IO      .       .       .       .       .       .       S       .       .       .       .       .
10620  61. IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62. I       .       .       .       .       .       .       S       .       .       .       .       .
10630  63. I       .       .       .       .       .       .       S       .       .       .       .       .
10635  64. I       .       .       .       .       .       .       S       .       .       .       .       .
10640  65. I       .       .       .       .       .       .       S       .       .       .       .       .
10645  66. I       .       .       .       .       .       .       S       .       .       .       .       .
10650  67. I       .       .       .       .       .       .       S       .       .       .       .       .
10655  68.IO       .       .       .       .       .       .       S       .       .       .       .       .
10700  69.IO       .       .       .       .       .       .       S       .       .       .       .       .
10705  70.IO       .       .       .       .       .       .       S       .       .       .       .       .
10710  71.I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.I        .       .       .       .       .       .       S       .       .       .       .       .
10720  73.I        .       .       .       .       .       .       S       .       .       .       .       .
10725  74.I        .       .       .       .       .       .       S       .       .       .       .       .
10730  75.I        .       .       .       .       .       .       S       .       .       .       .       .
10735  76.I        .       .       .       .       .       .       S       .       .       .       .       .
10740  77.I        .       .       .       .       .       .       S       .       .       .       .       .
10745  78.I        .       .       .       .       .       .       S       .       .       .       .       .
10750  79.I        .       .       .       .       .       .       S       .       .       .       .       .
10755  80.I        .       .       .       .       .       .       S       .       .       .       .       .
10800  81.I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.I        .       .       .       .       .       .       S       .       .       .       .       .
10810  83.I        .       .       .       .       .       .       S       .       .       .       .       .
10815  84.I        .       .       .       .       .       .       S       .       .       .       .       .
10820  85.I        .       .       .       .       .       .       S       .       .       .       .       .
10825  86.I        .       .       .       .       .       .       S       .       .       .       .       .
10830  87.I        .       .       .       .       .       .       S       .       .       .       .       .
10835  88.I        .       .       .       .       .       .       S       .       .       .       .       .
10840  89.I        .       .       .       .       .       .       S       .       .       .       .       .
10845  90.I        .       .       .       .       .       .       S       .       .       .       .       .
10850  91.I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.I        .       .       .       .       .       .       S       .       .       .       .       .
10900  93.I        .       .       .       .       .       .       S       .       .       .       .       .
10905  94.I        .       .       .       .       .       .       S       .       .       .       .       .
10910  95.I        .       .       .       .       .       .       S       .       .       .       .       .
10915  96IO        .       .       .       .       .       .       S       .       .       .       .       .
10920  97IO        .       .       .       .       .       .       S       .       .       .       .       .
10925  98IO        .       .       .       .       .       .       S       .       .       .       .       .
10930  99I         .       .       .       .       .       .       S       .       .       .       .       .
10935 100I         .       .       .       .       .       .       S       .       .       .       .       .
10940 101I---------.-------.-------.-------.-------.-------.-------S-------.-------.-------.-------.-------.
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          *            *
124 KK    *    SUB6B   *
          *            *
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                  AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                  ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                        COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                        MAIN CHANNEL 1000' RUNING NORTH-SOUTH
                  CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
                  MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE

            SUBBASIN RUNOFF DATA

131 BA        SUBBASIN CHARACTERISTICS
                   TAREA        0.13  SUBBASIN AREA

              PRECIPITATION DATA

 85 PB             STORM        2.45  BASIN TOTAL PRECIPITATION

 86 PI          INCREMENTAL PRECIPITATION PATTERN
                  0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
                  0.06     0.05

132 LS        SCS LOSS RATE
                   STRTL        0.50  INITIAL ABSTRACTION
                  CRVNBR       80.00  CURVE NUMBER
                   RTIMP       29.00  PERCENT IMPERVIOUS AREA

              KINEMATIC WAVE
133 UK          OVERLAND-FLOW ELEMENT NO. 1
                       L        100.  OVERLAND FLOW LENGTH
                       S      0.0033  SLOPE
                       N       0.200  ROUGHNESS COEFFICIENT
                      PA       100.0  PERCENT OF SUBBASIN
134 RK          COLLECTOR CHANNEL
                       L       2000.  CHANNEL LENGTH
                       S      0.0050  SLOPE
                       N       0.160  CHANNEL ROUGHNESS COEFFICIENT
                      CA        0.10  CONTRIBUTING AREA
                   SHAPE        TRAP  CHANNEL SHAPE
                      WD        0.00  BOTTOM WIDTH OR DIAMETER
                       Z        1.00  SIDE SLOPE
135 RK          MAIN CHANNEL
                       L       1000.  CHANNEL LENGTH
                       S      0.0050  SLOPE
                       N       0.160  CHANNEL ROUGHNESS COEFFICIENT
                      CA        0.13  CONTRIBUTING AREA
                   SHAPE        TRAP  CHANNEL SHAPE
                      WD        0.00  BOTTOM WIDTH OR DIAMETER
                       Z        1.00  SIDE SLOPE
                  RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH
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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	500.00

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HYDROGRAPH AT STATION SUB6B

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	1.
1		0125	2	0.05	0.04	0.01	0.	1		0540	53	0.00	0.00	0.00	1.
1		0130	3	0.07	0.05	0.02	0.	1		0545	54	0.00	0.00	0.00	1.
1		0135	4	0.07	0.05	0.02	0.	1		0550	55	0.00	0.00	0.00	1.
1		0140	5	0.10	0.07	0.03	0.	1		0555	56	0.00	0.00	0.00	1.
1		0145	6	0.16	0.11	0.05	0.	1		0600	57	0.00	0.00	0.00	1.
1		0150	7	1.16	0.58	0.58	0.	1		0605	58	0.00	0.00	0.00	1.
1		0155	8	0.39	0.12	0.27	4.	1		0610	59	0.00	0.00	0.00	1.
1		0200	9	0.14	0.04	0.10	25.	1		0615	60	0.00	0.00	0.00	1.
1		0205	10	0.11	0.03	0.08	69.	1		0620	61	0.00	0.00	0.00	1.
1		0210	11	0.09	0.02	0.07	108.	1		0625	62	0.00	0.00	0.00	1.
1		0215	12	0.06	0.01	0.05	123.	1		0630	63	0.00	0.00	0.00	1.
1		0220	13	0.05	0.01	0.04	117.	1		0635	64	0.00	0.00	0.00	1.
1		0225	14	0.00	0.00	0.00	105.	1		0640	65	0.00	0.00	0.00	1.
1		0230	15	0.00	0.00	0.00	90.	1		0645	66	0.00	0.00	0.00	1.
1		0235	16	0.00	0.00	0.00	76.	1		0650	67	0.00	0.00	0.00	1.
1		0240	17	0.00	0.00	0.00	61.	1		0655	68	0.00	0.00	0.00	1.
1		0245	18	0.00	0.00	0.00	50.	1		0700	69	0.00	0.00	0.00	1.
1		0250	19	0.00	0.00	0.00	42.	1		0705	70	0.00	0.00	0.00	1.
1		0255	20	0.00	0.00	0.00	35.	1		0710	71	0.00	0.00	0.00	1.
1		0300	21	0.00	0.00	0.00	30.	1		0715	72	0.00	0.00	0.00	1.
1		0305	22	0.00	0.00	0.00	25.	1		0720	73	0.00	0.00	0.00	1.
1		0310	23	0.00	0.00	0.00	22.	1		0725	74	0.00	0.00	0.00	0.
1		0315	24	0.00	0.00	0.00	19.	1		0730	75	0.00	0.00	0.00	0.
1		0320	25	0.00	0.00	0.00	16.	1		0735	76	0.00	0.00	0.00	0.
1		0325	26	0.00	0.00	0.00	14.	1		0740	77	0.00	0.00	0.00	0.
1		0330	27	0.00	0.00	0.00	12.	1		0745	78	0.00	0.00	0.00	0.
1		0335	28	0.00	0.00	0.00	11.	1		0750	79	0.00	0.00	0.00	0.
1		0340	29	0.00	0.00	0.00	10.	1		0755	80	0.00	0.00	0.00	0.
1		0345	30	0.00	0.00	0.00	9.	1		0800	81	0.00	0.00	0.00	0.
1		0350	31	0.00	0.00	0.00	8.	1		0805	82	0.00	0.00	0.00	0.
1		0355	32	0.00	0.00	0.00	7.	1		0810	83	0.00	0.00	0.00	0.
1		0400	33	0.00	0.00	0.00	6.	1		0815	84	0.00	0.00	0.00	0.
1		0405	34	0.00	0.00	0.00	6.	1		0820	85	0.00	0.00	0.00	0.
1		0410	35	0.00	0.00	0.00	5.	1		0825	86	0.00	0.00	0.00	0.
1		0415	36	0.00	0.00	0.00	5.	1		0830	87	0.00	0.00	0.00	0.
1		0420	37	0.00	0.00	0.00	4.	1		0835	88	0.00	0.00	0.00	0.
1		0425	38	0.00	0.00	0.00	4.	1		0840	89	0.00	0.00	0.00	0.
1		0430	39	0.00	0.00	0.00	4.	1		0845	90	0.00	0.00	0.00	0.
1		0435	40	0.00	0.00	0.00	3.	1		0850	91	0.00	0.00	0.00	0.
1		0440	41	0.00	0.00	0.00	3.	1		0855	92	0.00	0.00	0.00	0.
1		0445	42	0.00	0.00	0.00	3.	1		0900	93	0.00	0.00	0.00	0.
1		0450	43	0.00	0.00	0.00	3.	1		0905	94	0.00	0.00	0.00	0.
1		0455	44	0.00	0.00	0.00	2.	1		0910	95	0.00	0.00	0.00	0.
1		0500	45	0.00	0.00	0.00	2.	1		0915	96	0.00	0.00	0.00	0.
1		0505	46	0.00	0.00	0.00	2.	1		0920	97	0.00	0.00	0.00	0.

1	0510	47	0.00	0.00	0.00	2.	*	1	0925	98	0.00	0.00	0.00	0.
1	0515	48	0.00	0.00	0.00	2.	*	1	0930	99	0.00	0.00	0.00	0.
1	0520	49	0.00	0.00	0.00	2.	*	1	0935	100	0.00	0.00	0.00	0.
1	0525	50	0.00	0.00	0.00	2.	*	1	0940	101	0.00	0.00	0.00	0.
1	0530	51	0.00	0.00	0.00	2.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
123.	0.92	(CFS)	16.	12.	12.	12.
		(INCHES)	1.211	1.217	1.217	1.217
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 0.13 SQ MI

STATION SUB6B

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	120.	140.	0.	0.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLLX
10150	70										LLLLLLLLLLLLLLLXXXXXXXXXXXXXXX		
10155	8	O										LLLXXXXXXX	
10200	9		O										LXXX
10205	10				O								LXX
10210	11						O						XX
10215	12							O					X
10220	13							O					X
10225	14						O						
10230	15					O							
10235	16				O								
10240	17			O									
10245	18			O									
10250	19		O										
10255	20		O										
10300	21		O										
10305	22		O										
10310	23		O										
10315	24	O											
10320	25	O											
10325	26	O											
10330	27	O											
10335	28	O											
10340	29	O											
10345	30	O											
10350	31	O											
10355	32	O											
10400	33	O											
10405	34	O											
10410	35	O											
10415	36	O											
10420	37	O											
10425	38	O											
10430	39	O											
10435	40	O											
10440	41	O											
10445	42	O											
10450	43	O											
10455	44	O											
10500	45	O											
10505	46	O											
10510	47	O											
10515	48	O											
10520	49	O											
10525	50	O											
10530	51	O											
10535	52	O											
10540	53	O											
10545	54	O											
10550	55	O											

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10555  56.0
10600  57.0
10605  58.0
10610  590
10615  600
10620  610
10625  620
10630  630
10635  640
10640  650
10645  660
10650  670
10655  680
10700  690
10705  700
10710  710
10715  720
10720  730
10725  740
10730  750
10735  760
10740  770
10745  780
10750  790
10755  800
10800  810
10805  820
10810  830
10815  840
10820  850
10825  860
10830  870
10835  880
10840  890
10845  900
10850  910
10855  920
10900  930
10905  940
10910  950
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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          *             *
136 KK    *      SUB6   *
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COMBINED SUB6B, ROUTED SUB6A AND ROUTED 5 AT C.P. (F)

138 HC HYDROGRAPH COMBINATION

ICOMP 3 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB6

SUM OF 3 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	208.	1		0540	53	37.	1		0750	79	19.
1		0125	2	0.	1		0335	28	190.	1		0545	54	36.	1		0755	80	18.
1		0130	3	0.	1		0340	29	173.	1		0550	55	35.	1		0800	81	18.
1		0135	4	0.	1		0345	30	157.	1		0555	56	33.	1		0805	82	18.
1		0140	5	0.	1		0350	31	143.	1		0600	57	32.	1		0810	83	17.
1		0145	6	0.	1		0355	32	130.	1		0605	58	31.	1		0815	84	17.
1		0150	7	0.	1		0400	33	119.	1		0610	59	30.	1		0820	85	17.
1		0155	8	4.	1		0405	34	109.	1		0615	60	29.	1		0825	86	17.
1		0200	9	25.	1		0410	35	100.	1		0620	61	28.	1		0830	87	16.
1		0205	10	70.	1		0415	36	92.	1		0625	62	28.	1		0835	88	16.
1		0210	11	109.	1		0420	37	86.	1		0630	63	27.	1		0840	89	16.
1		0215	12	127.	1		0425	38	82.	1		0635	64	26.	1		0845	90	16.
1		0220	13	125.	1		0430	39	77.	1		0640	65	26.	1		0850	91	15.
1		0225	14	115.	1		0435	40	73.	1		0645	66	25.	1		0855	92	15.
1		0230	15	103.	1		0440	41	69.	1		0650	67	24.	1		0900	93	15.
1		0235	16	90.	1		0445	42	65.	1		0655	68	24.	1		0905	94	15.
1		0240	17	78.	1		0450	43	62.	1		0700	69	23.	1		0910	95	15.
1		0245	18	215.	1		0455	44	58.	1		0705	70	23.	1		0915	96	14.
1		0250	19	329.	1		0500	45	55.	1		0710	71	22.	1		0920	97	14.
1		0255	20	367.	1		0505	46	52.	1		0715	72	22.	1		0925	98	14.
1		0300	21	362.	1		0510	47	49.	1		0720	73	21.	1		0930	99	14.
1		0305	22	340.	1		0515	48	47.	1		0725	74	21.	1		0935	100	14.
1		0310	23	312.	1		0520	49	45.	1		0730	75	20.	1		0940	101	14.
1		0315	24	282.	1		0525	50	43.	1		0735	76	20.					
1		0320	25	255.	1		0530	51	41.	1		0740	77	20.					
1		0325	26	229.	1		0535	52	39.	1		0745	78	19.					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
367.	1.58	(CFS)	92.	69.	69.	69.
		(INCHES)	0.456	0.478	0.478	0.478
		(AC-FT)	46.	48.	48.	48.

CUMULATIVE AREA = 1.88 SQ MI

STATION SUB6

(O) OUTFLOW

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                0.      40.      80.     120.     160.     200.     240.     280.     320.     360.     400.       0.       0.
DAHRMN PER
 10120  10+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
 10125  20         .        .        .        .        .        .        .        .        .        .        .        .
 10130  30         .        .        .        .        .        .        .        .        .        .        .        .
 10135  40         .        .        .        .        .        .        .        .        .        .        .        .
 10140  50         .        .        .        .        .        .        .        .        .        .        .        .
 10145  60         .        .        .        .        .        .        .        .        .        .        .        .
 10150  70         .        .        .        .        .        .        .        .        .        .        .        .
 10155  8.0        .        .        .        .        .        .        .        .        .        .        .        .
 10200  9.    0    .        .        .        .        .        .        .        .        .        .        .        .
 10205  10.       .    0   .        .        .        .        .        .        .        .        .        .        .
 10210  11.. . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10215  12.       .        .        .0       .        .        .        .        .        .        .        .        .
 10220  13.       .        .        .0       .        .        .        .        .        .        .        .        .
 10225  14.       .        .        0.       .        .        .        .        .        .        .        .        .
 10230  15.       .        .   0    .        .        .        .        .        .        .        .        .        .
 10235  16.       .        .0       .        .        .        .        .        .        .        .        .        .
 10240  17.       .   0    .        .        .        .        .        .        .        .        .        .        .
 10245  18.       .        .        .        .        .   0    .        .        .        .        .        .        .
 10250  19.       .        .        .        .        .        .        .   0    .        .        .        .        .
 10255  20.       .        .        .        .        .        .        .        .0       .        .        .        .
 10300  21.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10305  22.       .        .        .        .        .        .        .        .   0    .        .        .        .
 10310  23.       .        .        .        .        .        .        .    0   .        .        .        .        .
 10315  24.       .        .        .        .        .        .        .0       .        .        .        .        .
 10320  25.       .        .        .        .        .        .   0    .        .        .        .        .        .
 10325  26.       .        .        .        .        .    0   .        .        .        .        .        .        .
 10330  27.       .        .        .        .        .0       .        .        .        .        .        .        .
 10335  28.       .        .        .        .    0   .        .        .        .        .        .        .        .
 10340  29.       .        .        .        .0       .        .        .        .        .        .        .        .
 10345  30.       .        .        .    0.           .        .        .        .        .        .        .        .
 10350  31.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10355  32.       .        .        .0       .        .        .        .        .        .        .        .        .
 10400  33.       .        .        0        .        .        .        .        .        .        .        .        .
 10405  34.       .        .    0   .        .        .        .        .        .        .        .        .        .
 10410  35.       .        .   0    .        .        .        .        .        .        .        .        .        .
 10415  36.       .        .0       .        .        .        .        .        .        .        .        .        .
 10420  37.       .        .0       .        .        .        .        .        .        .        .        .        .
 10425  38.       .        0        .        .        .        .        .        .        .        .        .        .
 10430  39.       .    0.           .        .        .        .        .        .        .        .        .        .
 10435  40.       .    0    .      .        .        .        .        .        .        .        .        .        .
 10440  41.. . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10445  42.       .   0    .        .        .        .        .        .        .        .        .        .        .
 10450  43.       .  0     .        .        .        .        .        .        .        .        .        .        .
 10455  44.       .  0     .        .        .        .        .        .        .        .        .        .        .
 10500  45.       . 0      .        .        .        .        .        .        .        .        .        .        .
 10505  46.       .0       .        .        .        .        .        .        .        .        .        .        .
 10510  47.       .0       .        .        .        .        .        .        .        .        .        .        .
 10515  48.       .0       .        .        .        .        .        .        .        .        .        .        .
 10520  49.       .0       .        .        .        .        .        .        .        .        .        .        .
 10525  50.       .0       .        .        .        .        .        .        .        .        .        .        .
 10530  51.. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10535  52.       0        .        .        .        .        .        .        .        .        .        .        .
 10540  53.      0.        .        .        .        .        .        .        .        .        .        .        .
 10545  54.      0.        .        .        .        .        .        .        .        .        .        .        .
 10550  55.      0.        .        .        .        .        .        .        .        .        .        .        .
 10555  56.     0  .       .        .        .        .        .        .        .        .        .        .        .
 10600  57.     0  .       .        .        .        .        .        .        .        .        .        .        .
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10605  58.       0 .         .         .         .         .         .         .         .         .         .         .         .
10610  59.       0 .         .         .         .         .         .         .         .         .         .         .         .
10615  60.      0  .         .         .         .         .         .         .         .         .         .         .         .
10620  61. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.      0  .         .         .         .         .         .         .         .         .         .         .         .
10630  63.      0  .         .         .         .         .         .         .         .         .         .         .         .
10635  64.      0  .         .         .         .         .         .         .         .         .         .         .         .
10640  65.     0   .         .         .         .         .         .         .         .         .         .         .         .
10645  66.     0   .         .         .         .         .         .         .         .         .         .         .         .
10650  67.     0   .         .         .         .         .         .         .         .         .         .         .         .
10655  68.     0   .         .         .         .         .         .         .         .         .         .         .         .
10700  69.     0   .         .         .         .         .         .         .         .         .         .         .         .
10705  70.     0   .         .         .         .         .         .         .         .         .         .         .         .
10710  71. . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.    0    .         .         .         .         .         .         .         .         .         .         .         .
10720  73.    0    .         .         .         .         .         .         .         .         .         .         .         .
10725  74.    0    .         .         .         .         .         .         .         .         .         .         .         .
10730  75.    0    .         .         .         .         .         .         .         .         .         .         .         .
10735  76.    0    .         .         .         .         .         .         .         .         .         .         .         .
10740  77.    0    .         .         .         .         .         .         .         .         .         .         .         .
10745  78.    0    .         .         .         .         .         .         .         .         .         .         .         .
10750  79.    0    .         .         .         .         .         .         .         .         .         .         .         .
10755  80.    0    .         .         .         .         .         .         .         .         .         .         .         .
10800  81. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.   0     .         .         .         .         .         .         .         .         .         .         .         .
10810  83.   0     .         .         .         .         .         .         .         .         .         .         .         .
10815  84.   0     .         .         .         .         .         .         .         .         .         .         .         .
10820  85.   0     .         .         .         .         .         .         .         .         .         .         .         .
10825  86.   0     .         .         .         .         .         .         .         .         .         .         .         .
10830  87.   0     .         .         .         .         .         .         .         .         .         .         .         .
10835  88.   0     .         .         .         .         .         .         .         .         .         .         .         .
10840  89.   0     .         .         .         .         .         .         .         .         .         .         .         .
10845  90.   0     .         .         .         .         .         .         .         .         .         .         .         .
10850  91. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.   0     .         .         .         .         .         .         .         .         .         .         .         .
10900  93.   0     .         .         .         .         .         .         .         .         .         .         .         .
10905  94.   0     .         .         .         .         .         .         .         .         .         .         .         .
10910  95.   0     .         .         .         .         .         .         .         .         .         .         .         .
10915  96.   0     .         .         .         .         .         .         .         .         .         .         .         .
10920  97.   0     .         .         .         .         .         .         .         .         .         .         .         .
10925  98.   0     .         .         .         .         .         .         .         .         .         .         .         .
10930  99.  0      .         .         .         .         .         .         .         .         .         .         .         .
10935 100.  0      .         .         .         .         .         .         .         .         .         .         .         .
10940 101.--0------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
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          *            *
139 KK    *      SUB6  *
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DIVERT TO SUB8 AT MID-POINT OF (E) AND (F)

DT	DIVERSION ISTAD	DIV681	DIVERSION HYDROGRAPH IDENTIFICATION						
DI	INFLOW	1.00	111.00	146.00	199.00	266.00	350.00	450.00	570.00	711.00
DQ	DIVERTED FLOW	0.00	1.00	5.00	17.00	39.00	73.00	121.00	186.00	267.00

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DIVERSION HYDROGRAPH DIV681

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	20.	1		0540	53	0.	1		0750	79	0.
1		0125	2	0.	1		0335	28	15.	1		0545	54	0.	1		0755	80	0.
1		0130	3	0.	1		0340	29	11.	1		0550	55	0.	1		0800	81	0.
1		0135	4	0.	1		0345	30	8.	1		0555	56	0.	1		0805	82	0.
1		0140	5	0.	1		0350	31	5.	1		0600	57	0.	1		0810	83	0.
1		0145	6	0.	1		0355	32	3.	1		0605	58	0.	1		0815	84	0.
1		0150	7	0.	1		0400	33	2.	1		0610	59	0.	1		0820	85	0.
1		0155	8	0.	1		0405	34	1.	1		0615	60	0.	1		0825	86	0.
1		0200	9	0.	1		0410	35	1.	1		0620	61	0.	1		0830	87	0.
1		0205	10	1.	1		0415	36	1.	1		0625	62	0.	1		0835	88	0.
1		0210	11	1.	1		0420	37	1.	1		0630	63	0.	1		0840	89	0.
1		0215	12	3.	1		0425	38	1.	1		0635	64	0.	1		0845	90	0.
1		0220	13	3.	1		0430	39	1.	1		0640	65	0.	1		0850	91	0.
1		0225	14	1.	1		0435	40	1.	1		0645	66	0.	1		0855	92	0.
1		0230	15	1.	1		0440	41	1.	1		0650	67	0.	1		0900	93	0.
1		0235	16	1.	1		0445	42	1.	1		0655	68	0.	1		0905	94	0.
1		0240	17	1.	1		0450	43	1.	1		0700	69	0.	1		0910	95	0.
1		0245	18	22.	1		0455	44	1.	1		0705	70	0.	1		0915	96	0.
1		0250	19	65.	1		0500	45	0.	1		0710	71	0.	1		0920	97	0.
1		0255	20	81.	1		0505	46	0.	1		0715	72	0.	1		0925	98	0.
1		0300	21	79.	1		0510	47	0.	1		0720	73	0.	1		0930	99	0.
1		0305	22	69.	1		0515	48	0.	1		0725	74	0.	1		0935	100	0.
1		0310	23	57.	1		0520	49	0.	1		0730	75	0.	1		0940	101	0.
1		0315	24	46.	1		0525	50	0.	1		0735	76	0.					
1		0320	25	35.	1		0530	51	0.	1		0740	77	0.					
1		0325	26	27.	1		0535	52	0.	1		0745	78	0.					

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PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
81.	1.58	(CFS)	8.	6.	6.	6.
		(INCHES)	0.039	0.040	0.040	0.040
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 1.88 SQ MI

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	188.	1		0540	53	37.	1		0750	79	19.
1		0125	2	0.	1		0335	28	175.	1		0545	54	36.	1		0755	80	18.
1		0130	3	0.	1		0340	29	162.	1		0550	55	34.	1		0800	81	18.
1		0135	4	0.	1		0345	30	150.	1		0555	56	33.	1		0805	82	18.
1		0140	5	0.	1		0350	31	138.	1		0600	57	32.	1		0810	83	17.
1		0145	6	0.	1		0355	32	127.	1		0605	58	31.	1		0815	84	17.
1		0150	7	0.	1		0400	33	117.	1		0610	59	30.	1		0820	85	17.
1		0155	8	4.	1		0405	34	108.	1		0615	60	29.	1		0825	86	16.
1		0200	9	24.	1		0410	35	99.	1		0620	61	28.	1		0830	87	16.
1		0205	10	69.	1		0415	36	91.	1		0625	62	27.	1		0835	88	16.
1		0210	11	108.	1		0420	37	85.	1		0630	63	27.	1		0840	89	16.
1		0215	12	125.	1		0425	38	81.	1		0635	64	26.	1		0845	90	15.
1		0220	13	122.	1		0430	39	77.	1		0640	65	25.	1		0850	91	15.
1		0225	14	114.	1		0435	40	73.	1		0645	66	25.	1		0855	92	15.
1		0230	15	102.	1		0440	41	68.	1		0650	67	24.	1		0900	93	15.
1		0235	16	89.	1		0445	42	65.	1		0655	68	23.	1		0905	94	15.
1		0240	17	77.	1		0450	43	61.	1		0700	69	23.	1		0910	95	14.
1		0245	18	193.	1		0455	44	58.	1		0705	70	22.	1		0915	96	14.
1		0250	19	265.	1		0500	45	54.	1		0710	71	22.	1		0920	97	14.
1		0255	20	286.	1		0505	46	52.	1		0715	72	21.	1		0925	98	14.
1		0300	21	283.	1		0510	47	49.	1		0720	73	21.	1		0930	99	14.
1		0305	22	271.	1		0515	48	47.	1		0725	74	21.	1		0935	100	14.
1		0310	23	254.	1		0520	49	44.	1		0730	75	20.	1		0940	101	13.
1		0315	24	237.	1		0525	50	42.	1		0735	76	20.					
1		0320	25	219.	1		0530	51	40.	1		0740	77	19.					
1		0325	26	202.	1		0535	52	39.	1		0745	78	19.					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
286.	1.58	(CFS)	84.	64.	64.	64.
		(INCHES)	0.416	0.438	0.438	0.438
		(AC-FT)	42.	44.	44.	44.

CUMULATIVE AREA = 1.88 SQ MI

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* *
144 KK * SUB6 *

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ROUTED TO SUB6 (CONTRATION POINT F)
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

HYDROGRAPH ROUTING DATA

119 RL   ROUTING LOSSES
    QLOSS   0.00 INITIAL LOSS
    CLOSS   0.00 ADDITIONAL FRACTION LOST

147 RK   KINEMATIC WAVE STREAM ROUTING
    L   2640. CHANNEL LENGTH
    S   0.0050 SLOPE
    N   0.025 CHANNEL ROUGHNESS COEFFICIENT
    CA   0.00 CONTRIBUTING AREA
    SHAPE   TRAP CHANNEL SHAPE
    WD   5.00 BOTTOM WIDTH OR DIAMETER
    Z   0.50 SIDE SLOPE

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KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.5941	1.423	1.67	1320.00

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	197.	*	1		0540	53	39.	*	1		0750	79	19.
1		0125	2	0.	*	1		0335	28	183.	*	1		0545	54	37.	*	1		0755	80	19.
1		0130	3	0.	*	1		0340	29	170.	*	1		0550	55	36.	*	1		0800	81	18.
1		0135	4	0.	*	1		0345	30	158.	*	1		0555	56	35.	*	1		0805	82	18.
1		0140	5	0.	*	1		0350	31	146.	*	1		0600	57	33.	*	1		0810	83	18.
1		0145	6	0.	*	1		0355	32	135.	*	1		0605	58	32.	*	1		0815	84	18.
1		0150	7	0.	*	1		0400	33	124.	*	1		0610	59	31.	*	1		0820	85	17.
1		0155	8	0.	*	1		0405	34	115.	*	1		0615	60	30.	*	1		0825	86	17.
1		0200	9	1.	*	1		0410	35	106.	*	1		0620	61	29.	*	1		0830	87	17.
1		0205	10	15.	*	1		0415	36	98.	*	1		0625	62	29.	*	1		0835	88	16.
1		0210	11	63.	*	1		0420	37	90.	*	1		0630	63	28.	*	1		0840	89	16.
1		0215	12	107.	*	1		0425	38	85.	*	1		0635	64	27.	*	1		0845	90	16.
1		0220	13	122.	*	1		0430	39	80.	*	1		0640	65	26.	*	1		0850	91	16.
1		0225	14	119.	*	1		0435	40	76.	*	1		0645	66	26.	*	1		0855	92	15.
1		0230	15	110.	*	1		0440	41	72.	*	1		0650	67	25.	*	1		0900	93	15.
1		0235	16	99.	*	1		0445	42	68.	*	1		0655	68	24.	*	1		0905	94	15.
1		0240	17	87.	*	1		0450	43	64.	*	1		0700	69	24.	*	1		0910	95	15.
1		0245	18	117.	*	1		0455	44	61.	*	1		0705	70	23.	*	1		0915	96	15.
1		0250	19	219.	*	1		0500	45	58.	*	1		0710	71	23.	*	1		0920	97	14.
1		0255	20	274.	*	1		0505	46	55.	*	1		0715	72	22.	*	1		0925	98	14.
1		0300	21	284.	*	1		0510	47	52.	*	1		0720	73	22.	*	1		0930	99	14.
1		0305	22	277.	*	1		0515	48	49.	*	1		0725	74	21.	*	1		0935	100	14.

1	0310	23	263.	*	1	0520	49	47.	*	1	0730	75	21.	*	1	0940	101	14.		
1	0315	24	246.	*	1	0525	50	45.	*	1	0735	76	20.	*						
1	0320	25	229.	*	1	0530	51	43.	*	1	0740	77	20.	*						
1	0325	26	212.	*	1	0535	52	41.	*	1	0745	78	20.	*						
				*					*					*						

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
284.	1.67	(CFS)	84.	63.	63.	63.
		(INCHES)	0.415	0.436	0.436	0.436
		(AC-FT)	41.	44.	44.	44.

CUMULATIVE AREA = 1.88 SQ MI

STATION SUB6

(O) OUTFLOW

DAHRMN	PER	0.	40.	80.	120.	160.	200.	240.	280.	320.	0.	0.	0.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	70													
10155	80													
10200	90													
10205	10.	O												
10210	11.		O											
10215	12.			O										
10220	13.			O										
10225	14.			O										
10230	15.			O										
10235	16.			O										
10240	17.		O											
10245	18.			O										
10250	19.							O						
10255	20.								O					
10300	21.									O				
10305	22.								O					
10310	23.									O				
10315	24.								O					
10320	25.							O						
10325	26.						O							
10330	27.						O							
10335	28.					O								
10340	29.					O								
10345	30.				O									
10350	31.				O									
10355	32.				O									
10400	33.				O									
10405	34.				O									
10410	35.				O									
10415	36.			O										
10420	37.			O										
10425	38.			O										
10430	39.			O										
10435	40.			O										
10440	41.		O											
10445	42.		O											
10450	43.		O											
10455	44.		O											
10500	45.		O											
10505	46.		O											
10510	47.		O											
10515	48.		O											
10520	49.		O											
10525	50.		O											
10530	51.		O											
10535	52.		O											
10540	53.		O											
10545	54.		O											
10550	55.		O											
10555	56.		O											
10600	57.		O											

```
10605  58.      0 .       .       .       .       .       .       .       .       .       .       .       .
10610  59.      0 .       .       .       .       .       .       .       .       .       .       .       .
10615  60.      0 .       .       .       .       .       .       .       .       .       .       .       .
10620  61. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.      0 .       .       .       .       .       .       .       .       .       .       .       .
10630  63.      0 .       .       .       .       .       .       .       .       .       .       .       .
10635  64.      0 .       .       .       .       .       .       .       .       .       .       .       .
10640  65.      0 .       .       .       .       .       .       .       .       .       .       .       .
10645  66.     0  .       .       .       .       .       .       .       .       .       .       .       .
10650  67.     0  .       .       .       .       .       .       .       .       .       .       .       .
10655  68.     0  .       .       .       .       .       .       .       .       .       .       .       .
10700  69.     0  .       .       .       .       .       .       .       .       .       .       .       .
10705  70.     0  .       .       .       .       .       .       .       .       .       .       .       .
10710  71. . .0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.     0  .       .       .       .       .       .       .       .       .       .       .       .
10720  73.    0   .       .       .       .       .       .       .       .       .       .       .       .
10725  74.    0   .       .       .       .       .       .       .       .       .       .       .       .
10730  75.    0   .       .       .       .       .       .       .       .       .       .       .       .
10735  76.    0   .       .       .       .       .       .       .       .       .       .       .       .
10740  77.    0   .       .       .       .       .       .       .       .       .       .       .       .
10745  78.    0   .       .       .       .       .       .       .       .       .       .       .       .
10750  79.    0   .       .       .       .       .       .       .       .       .       .       .       .
10755  80.    0   .       .       .       .       .       .       .       .       .       .       .       .
10800  81. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.    0   .       .       .       .       .       .       .       .       .       .       .       .
10810  83.   0    .       .       .       .       .       .       .       .       .       .       .       .
10815  84.   0    .       .       .       .       .       .       .       .       .       .       .       .
10820  85.   0    .       .       .       .       .       .       .       .       .       .       .       .
10825  86.   0    .       .       .       .       .       .       .       .       .       .       .       .
10830  87.   0    .       .       .       .       .       .       .       .       .       .       .       .
10835  88.   0    .       .       .       .       .       .       .       .       .       .       .       .
10840  89.   0    .       .       .       .       .       .       .       .       .       .       .       .
10845  90.   0    .       .       .       .       .       .       .       .       .       .       .       .
10850  91. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.   0    .       .       .       .       .       .       .       .       .       .       .       .
10900  93.   0    .       .       .       .       .       .       .       .       .       .       .       .
10905  94.   0    .       .       .       .       .       .       .       .       .       .       .       .
10910  95.   0    .       .       .       .       .       .       .       .       .       .       .       .
10915  96.   0    .       .       .       .       .       .       .       .       .       .       .       .
10920  97.   0    .       .       .       .       .       .       .       .       .       .       .       .
10925  98.   0    .       .       .       .       .       .       .       .       .       .       .       .
10930  99.   0    .       .       .       .       .       .       .       .       .       .       .       .
10935 100.  0     .       .       .       .       .       .       .       .       .       .       .       .
10940 101.--0-----+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
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          **************
          *            *
148 KK    *    SUB6C   *
          *            *
          **************
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AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
ASSUME OVERLAND LENGTH 100' AS LOT SIZE
COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
MAIN CHANNEL 1000' RUNING NORTH-SOUTH
CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT (F)
MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE

SUBBASIN RUNOFF DATA

155 BA SUBBASIN CHARACTERISTICS

TAREA	0.13	SUBBASIN AREA

PRECIPITATION DATA

85 PB STORM	2.45	BASIN TOTAL PRECIPITATION

86 PI INCREMENTAL PRECIPITATION PATTERN

0.05	0.07	0.07	0.10	0.16	1.16	0.39	0.14	0.11	0.09
0.06	0.05								

156 LS SCS LOSS RATE

STRTL	0.50	INITIAL ABSTRACTION
CRVNBR	80.00	CURVE NUMBER
RTIMP	29.00	PERCENT IMPERVIOUS AREA

KINEMATIC WAVE

157 UK OVERLAND-FLOW ELEMENT NO. 1

L	100.	OVERLAND FLOW LENGTH
S	0.0033	SLOPE
N	0.200	ROUGHNESS COEFFICIENT
PA	100.0	PERCENT OF SUBBASIN

158 RK COLLECTOR CHANNEL

L	2000.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.160	CHANNEL ROUGHNESS COEFFICIENT
CA	0.10	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	0.00	BOTTOM WIDTH OR DIAMETER
Z	1.00	SIDE SLOPE

159 RK MAIN CHANNEL

L	1000.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.160	CHANNEL ROUGHNESS COEFFICIENT
CA	0.13	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	0.00	BOTTOM WIDTH OR DIAMETER
Z	1.00	SIDE SLOPE
RUPSTQ	NO	ROUTE UPSTREAM HYDROGRAPH

***

COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	500.00

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HYDROGRAPH AT STATION SUB&C

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	1.
1		0125	2	0.05	0.04	0.01	0.	*	1		0540	53	0.00	0.00	0.00	1.
1		0130	3	0.07	0.05	0.02	0.	*	1		0545	54	0.00	0.00	0.00	1.
1		0135	4	0.07	0.05	0.02	0.	*	1		0550	55	0.00	0.00	0.00	1.
1		0140	5	0.10	0.07	0.03	0.	*	1		0555	56	0.00	0.00	0.00	1.
1		0145	6	0.16	0.11	0.05	0.	*	1		0600	57	0.00	0.00	0.00	1.
1		0150	7	1.16	0.58	0.58	0.	*	1		0605	58	0.00	0.00	0.00	1.
1		0155	8	0.39	0.12	0.27	4.	*	1		0610	59	0.00	0.00	0.00	1.
1		0200	9	0.14	0.04	0.10	25.	*	1		0615	60	0.00	0.00	0.00	1.
1		0205	10	0.11	0.03	0.08	69.	*	1		0620	61	0.00	0.00	0.00	1.
1		0210	11	0.09	0.02	0.07	108.	*	1		0625	62	0.00	0.00	0.00	1.
1		0215	12	0.06	0.01	0.05	123.	*	1		0630	63	0.00	0.00	0.00	1.
1		0220	13	0.05	0.01	0.04	117.	*	1		0635	64	0.00	0.00	0.00	1.
1		0225	14	0.00	0.00	0.00	105.	*	1		0640	65	0.00	0.00	0.00	1.
1		0230	15	0.00	0.00	0.00	90.	*	1		0645	66	0.00	0.00	0.00	1.
1		0235	16	0.00	0.00	0.00	76.	*	1		0650	67	0.00	0.00	0.00	1.
1		0240	17	0.00	0.00	0.00	61.	*	1		0655	68	0.00	0.00	0.00	1.
1		0245	18	0.00	0.00	0.00	50.	*	1		0700	69	0.00	0.00	0.00	1.
1		0250	19	0.00	0.00	0.00	42.	*	1		0705	70	0.00	0.00	0.00	1.
1		0255	20	0.00	0.00	0.00	35.	*	1		0710	71	0.00	0.00	0.00	1.
1		0300	21	0.00	0.00	0.00	30.	*	1		0715	72	0.00	0.00	0.00	1.
1		0305	22	0.00	0.00	0.00	25.	*	1		0720	73	0.00	0.00	0.00	1.
1		0310	23	0.00	0.00	0.00	22.	*	1		0725	74	0.00	0.00	0.00	0.
1		0315	24	0.00	0.00	0.00	19.	*	1		0730	75	0.00	0.00	0.00	0.
1		0320	25	0.00	0.00	0.00	16.	*	1		0735	76	0.00	0.00	0.00	0.
1		0325	26	0.00	0.00	0.00	14.	*	1		0740	77	0.00	0.00	0.00	0.
1		0330	27	0.00	0.00	0.00	12.	*	1		0745	78	0.00	0.00	0.00	0.
1		0335	28	0.00	0.00	0.00	11.	*	1		0750	79	0.00	0.00	0.00	0.
1		0340	29	0.00	0.00	0.00	10.	*	1		0755	80	0.00	0.00	0.00	0.
1		0345	30	0.00	0.00	0.00	9.	*	1		0800	81	0.00	0.00	0.00	0.
1		0350	31	0.00	0.00	0.00	8.	*	1		0805	82	0.00	0.00	0.00	0.
1		0355	32	0.00	0.00	0.00	7.	*	1		0810	83	0.00	0.00	0.00	0.
1		0400	33	0.00	0.00	0.00	6.	*	1		0815	84	0.00	0.00	0.00	0.
1		0405	34	0.00	0.00	0.00	6.	*	1		0820	85	0.00	0.00	0.00	0.
1		0410	35	0.00	0.00	0.00	5.	*	1		0825	86	0.00	0.00	0.00	0.
1		0415	36	0.00	0.00	0.00	5.	*	1		0830	87	0.00	0.00	0.00	0.
1		0420	37	0.00	0.00	0.00	4.	*	1		0835	88	0.00	0.00	0.00	0.
1		0425	38	0.00	0.00	0.00	4.	*	1		0840	89	0.00	0.00	0.00	0.
1		0430	39	0.00	0.00	0.00	4.	*	1		0845	90	0.00	0.00	0.00	0.
1		0435	40	0.00	0.00	0.00	3.	*	1		0850	91	0.00	0.00	0.00	0.
1		0440	41	0.00	0.00	0.00	3.	*	1		0855	92	0.00	0.00	0.00	0.
1		0445	42	0.00	0.00	0.00	3.	*	1		0900	93	0.00	0.00	0.00	0.
1		0450	43	0.00	0.00	0.00	3.	*	1		0905	94	0.00	0.00	0.00	0.
1		0455	44	0.00	0.00	0.00	2.	*	1		0910	95	0.00	0.00	0.00	0.
1		0500	45	0.00	0.00	0.00	2.	*	1		0915	96	0.00	0.00	0.00	0.
1		0505	46	0.00	0.00	0.00	2.	*	1		0920	97	0.00	0.00	0.00	0.

1	0510	47	0.00	0.00	0.00	2.	*	1	0925	98	0.00	0.00	0.00	0.
1	0515	48	0.00	0.00	0.00	2.	*	1	0930	99	0.00	0.00	0.00	0.
1	0520	49	0.00	0.00	0.00	2.	*	1	0935	100	0.00	0.00	0.00	0.
1	0525	50	0.00	0.00	0.00	2.	*	1	0940	101	0.00	0.00	0.00	0.
1	0530	51	0.00	0.00	0.00	2.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
123.	0.92	(CFS)	16.	12.	12.	12.
		(INCHES)	1.211	1.217	1.217	1.217
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 0.13 SQ MI

STATION SUB6C

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	120.	140.	0.	0.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLLX
10150	70										LLLLLLLLLLLLLLLXXXXXXXXXXXXXX		
10155	8.	O										LLLXXXXXXX	
10200	9.		O										LXXX
10205	10.				O								LXX
10210	11.						O						XX
10215	12.							O					X
10220	13.							O					X
10225	14.						O						
10230	15.					O							
10235	16.				O								
10240	17.			O									
10245	18.			O									
10250	19.		O										
10255	20.		O										
10300	21.	O											
10305	22.	O											
10310	23.	O											
10315	24.	O											
10320	25.	O											
10325	26.	O											
10330	27.	O											
10335	28.	O											
10340	29.	O											
10345	30.	O											
10350	31.	O											
10355	32.	O											
10400	33.	O											
10405	34.	O											
10410	35.	O											
10415	36.	O											
10420	37.	O											
10425	38.	O											
10430	39.	O											
10435	40.	O											
10440	41.	O											
10445	42.	O											
10450	43.	O											
10455	44.	O											
10500	45.	O											
10505	46.	O											
10510	47.	O											
10515	48.	O											
10520	49.	O											
10525	50.	O											
10530	51.	O											
10535	52.	O											
10540	53.	O											
10545	54.	O											
10550	55.	O											

```
10555  56.0
10600  57.0
10605  58.0
10610  590
10615  600
10620  610
10625  620
10630  630
10635  640
10640  650
10645  660
10650  670
10655  680
10700  690
10705  700
10710  710
10715  720
10720  730
10725  740
10730  750
10735  760
10740  770
10745  780
10750  790
10755  800
10800  810
10805  820
10810  830
10815  840
10820  850
10825  860
10830  870
10835  880
10840  890
10845  900
10850  910
10855  920
10900  930
10905  940
10910  950
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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          *             *
160 KK    *      SUB6   *
          *             *
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COMBINED SUB6C: ROUTED (SUB6A;SUB6B AND ROUTED 5) AT C.P. (F)

162 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB6

SUM OF 2 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	209.	1		0540	53	40.	1		0750	79	20.
1		0125	2	0.	1		0335	28	194.	1		0545	54	39.	1		0755	80	19.
1		0130	3	0.	1		0340	29	180.	1		0550	55	37.	1		0800	81	19.
1		0135	4	0.	1		0345	30	166.	1		0555	56	36.	1		0805	82	18.
1		0140	5	0.	1		0350	31	154.	1		0600	57	35.	1		0810	83	18.
1		0145	6	0.	1		0355	32	142.	1		0605	58	33.	1		0815	84	18.
1		0150	7	0.	1		0400	33	131.	1		0610	59	32.	1		0820	85	18.
1		0155	8	4.	1		0405	34	121.	1		0615	60	31.	1		0825	86	17.
1		0200	9	25.	1		0410	35	111.	1		0620	61	30.	1		0830	87	17.
1		0205	10	85.	1		0415	36	102.	1		0625	62	29.	1		0835	88	17.
1		0210	11	171.	1		0420	37	95.	1		0630	63	29.	1		0840	89	16.
1		0215	12	230.	1		0425	38	89.	1		0635	64	28.	1		0845	90	16.
1		0220	13	239.	1		0430	39	84.	1		0640	65	27.	1		0850	91	16.
1		0225	14	224.	1		0435	40	80.	1		0645	66	26.	1		0855	92	16.
1		0230	15	201.	1		0440	41	75.	1		0650	67	26.	1		0900	93	15.
1		0235	16	175.	1		0445	42	71.	1		0655	68	25.	1		0905	94	15.
1		0240	17	148.	1		0450	43	67.	1		0700	69	24.	1		0910	95	15.
1		0245	18	168.	1		0455	44	63.	1		0705	70	24.	1		0915	96	15.
1		0250	19	261.	1		0500	45	60.	1		0710	71	23.	1		0920	97	15.
1		0255	20	309.	1		0505	46	57.	1		0715	72	23.	1		0925	98	14.
1		0300	21	314.	1		0510	47	54.	1		0720	73	22.	1		0930	99	14.
1		0305	22	302.	1		0515	48	51.	1		0725	74	22.	1		0935	100	14.
1		0310	23	284.	1		0520	49	49.	1		0730	75	21.	1		0940	101	14.
1		0315	24	265.	1		0525	50	46.	1		0735	76	21.					
1		0320	25	245.	1		0530	51	44.	1		0740	77	20.					
1		0325	26	226.	1		0535	52	42.	1		0745	78	20.					

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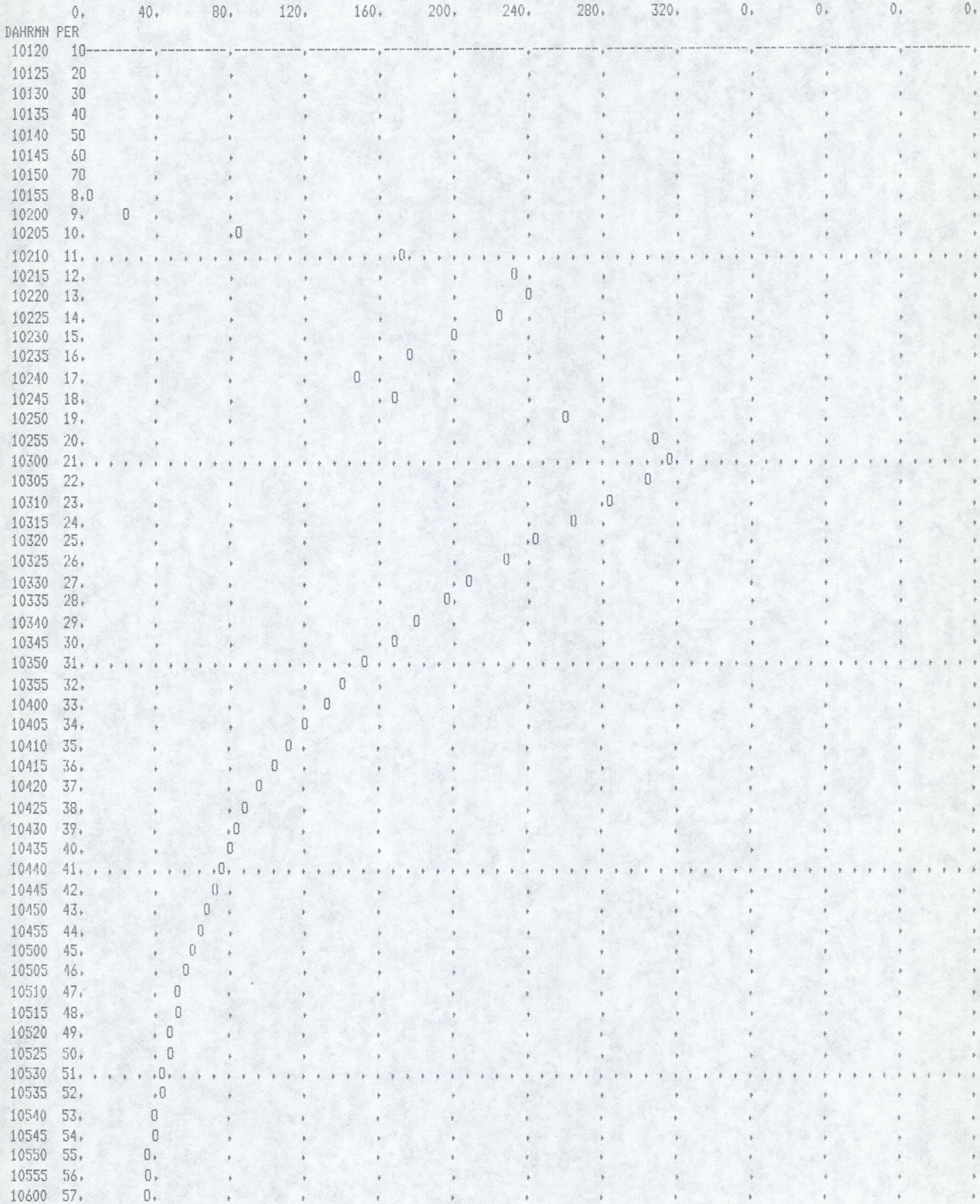
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
314.	1.67	(CFS)	100.	75.	75.	75.
		(INCHES)	0.463	0.485	0.485	0.485
		(AC-FT)	49.	52.	52.	52.

CUMULATIVE AREA = 2.00 SQ MI

STATION SUB6

(O) OUTFLOW



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10605  58.      0 .       .       .       .       .       .       .       .       .       .       .       .
10610  59.      0 .       .       .       .       .       .       .       .       .       .       .       .
10615  60.      0 .       .       .       .       .       .       .       .       .       .       .       .
10620  61. . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.     0  .       .       .       .       .       .       .       .       .       .       .       .
10630  63.     0  .       .       .       .       .       .       .       .       .       .       .       .
10635  64.     0  .       .       .       .       .       .       .       .       .       .       .       .
10640  65.     0  .       .       .       .       .       .       .       .       .       .       .       .
10645  66.     0  .       .       .       .       .       .       .       .       .       .       .       .
10650  67.    0   .       .       .       .       .       .       .       .       .       .       .       .
10655  68.    0   .       .       .       .       .       .       .       .       .       .       .       .
10700  69.    0   .       .       .       .       .       .       .       .       .       .       .       .
10705  70.    0   .       .       .       .       .       .       .       .       .       .       .       .
10710  71. . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.    0   .       .       .       .       .       .       .       .       .       .       .       .
10720  73.    0   .       .       .       .       .       .       .       .       .       .       .       .
10725  74.   0    .       .       .       .       .       .       .       .       .       .       .       .
10730  75.   0    .       .       .       .       .       .       .       .       .       .       .       .
10735  76.   0    .       .       .       .       .       .       .       .       .       .       .       .
10740  77.   0    .       .       .       .       .       .       .       .       .       .       .       .
10745  78.   0    .       .       .       .       .       .       .       .       .       .       .       .
10750  79.   0    .       .       .       .       .       .       .       .       .       .       .       .
10755  80.   0    .       .       .       .       .       .       .       .       .       .       .       .
10800  81. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.   0    .       .       .       .       .       .       .       .       .       .       .       .
10810  83.   0    .       .       .       .       .       .       .       .       .       .       .       .
10815  84.  0     .       .       .       .       .       .       .       .       .       .       .       .
10820  85.  0     .       .       .       .       .       .       .       .       .       .       .       .
10825  86.  0     .       .       .       .       .       .       .       .       .       .       .       .
10830  87.  0     .       .       .       .       .       .       .       .       .       .       .       .
10835  88.  0     .       .       .       .       .       .       .       .       .       .       .       .
10840  89.  0     .       .       .       .       .       .       .       .       .       .       .       .
10845  90.  0     .       .       .       .       .       .       .       .       .       .       .       .
10850  91. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.  0     .       .       .       .       .       .       .       .       .       .       .       .
10900  93.  0     .       .       .       .       .       .       .       .       .       .       .       .
10905  94.  0     .       .       .       .       .       .       .       .       .       .       .       .
10910  95.  0     .       .       .       .       .       .       .       .       .       .       .       .
10915  96.  0     .       .       .       .       .       .       .       .       .       .       .       .
10920  97.  0     .       .       .       .       .       .       .       .       .       .       .       .
10925  98.  0     .       .       .       .       .       .       .       .       .       .       .       .
10930  99.  0     .       .       .       .       .       .       .       .       .       .       .       .
10935 100.  0     .       .       .       .       .       .       .       .       .       .       .       .
10940 101.--0-----.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.
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          *             *
163 KK    *       SUB7  *
          *             *
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                          AREA BOUNDED BY 107TH ST- CAMELBACK ROAD- INDIAN SCHOOL-AUGU FRIA
                          ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
                          HYDROGRAPH AT C.P. (G) INTO AGUA FRIA WASH

             SUBBASIN RUNOFF DATA

170 BA         SUBBASIN CHARACTERISTICS
                     TAREA        0.58  SUBBASIN AREA

               PRECIPITATION DATA

167 PB               STORM        2.45  BASIN TOTAL PRECIPITATION

168 PI           INCREMENTAL PRECIPITATION PATTERN
                    0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                    0.06      0.05

171 LS         SCS LOSS RATE
                     STRTL        0.82  INITIAL ABSTRACTION
                    CRVNBR       71.00  CURVE NUMBER
                     RTIMP        2.00  PERCENT IMPERVIOUS AREA

               KINEMATIC WAVE
172 UK           OVERLAND-FLOW ELEMENT NO. 1
                         L       4500.  OVERLAND FLOW LENGTH
                         S      0.0050  SLOPE
                         N       0.200  ROUGHNESS COEFFICIENT
                        PA       100.0  PERCENT OF SUBBASIN
173 RK           MAIN CHANNEL
                         L       5800.  CHANNEL LENGTH
                         S      0.0030  SLOPE
                         N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                        CA        0.58  CONTRIBUTING AREA
                     SHAPE        TRAP  CHANNEL SHAPE
                        WD        5.00  BOTTOM WIDTH OR DIAMETER
                         Z        3.00  SIDE SLOPE
                    RUPSTQ         YES  ROUTE UPSTREAM HYDROGRAPH

                                                         ***

          COMPUTED KINEMATIC PARAMETERS
             ELEMENT      ALPHA         M       DT (MIN)     DX (FT)
                   1     0.5268     1.667         5.00       132.35
                   3     1.1362     1.375         5.00      2900.00
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HYDROGRAPH AT STATION SUB7

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	59.
1		0125	2	0.05	0.05	0.00	0.	1		0540	53	0.00	0.00	0.00	57.
1		0130	3	0.07	0.07	0.00	0.	1		0545	54	0.00	0.00	0.00	55.
1		0135	4	0.07	0.07	0.00	0.	1		0550	55	0.00	0.00	0.00	53.
1		0140	5	0.10	0.10	0.00	0.	1		0555	56	0.00	0.00	0.00	51.
1		0145	6	0.16	0.16	0.00	0.	1		0600	57	0.00	0.00	0.00	49.
1		0150	7	1.16	1.01	0.15	0.	1		0605	58	0.00	0.00	0.00	48.
1		0155	8	0.39	0.25	0.14	0.	1		0610	59	0.00	0.00	0.00	47.
1		0200	9	0.14	0.08	0.06	0.	1		0615	60	0.00	0.00	0.00	45.
1		0205	10	0.11	0.06	0.05	2.	1		0620	61	0.00	0.00	0.00	44.
1		0210	11	0.09	0.05	0.04	11.	1		0625	62	0.00	0.00	0.00	43.
1		0215	12	0.06	0.03	0.03	48.	1		0630	63	0.00	0.00	0.00	42.
1		0220	13	0.05	0.03	0.02	120.	1		0635	64	0.00	0.00	0.00	41.
1		0225	14	0.00	0.00	0.00	186.	1		0640	65	0.00	0.00	0.00	40.
1		0230	15	0.00	0.00	0.00	216.	1		0645	66	0.00	0.00	0.00	39.
1		0235	16	0.00	0.00	0.00	217.	1		0650	67	0.00	0.00	0.00	38.
1		0240	17	0.00	0.00	0.00	203.	1		0655	68	0.00	0.00	0.00	37.
1		0245	18	0.00	0.00	0.00	182.	1		0700	69	0.00	0.00	0.00	37.
1		0250	19	0.00	0.00	0.00	178.	1		0705	70	0.00	0.00	0.00	36.
1		0255	20	0.00	0.00	0.00	218.	1		0710	71	0.00	0.00	0.00	35.
1		0300	21	0.00	0.00	0.00	272.	1		0715	72	0.00	0.00	0.00	35.
1		0305	22	0.00	0.00	0.00	305.	1		0720	73	0.00	0.00	0.00	34.
1		0310	23	0.00	0.00	0.00	311.	1		0725	74	0.00	0.00	0.00	34.
1		0315	24	0.00	0.00	0.00	302.	1		0730	75	0.00	0.00	0.00	33.
1		0320	25	0.00	0.00	0.00	287.	1		0735	76	0.00	0.00	0.00	32.
1		0325	26	0.00	0.00	0.00	269.	1		0740	77	0.00	0.00	0.00	32.
1		0330	27	0.00	0.00	0.00	251.	1		0745	78	0.00	0.00	0.00	31.
1		0335	28	0.00	0.00	0.00	234.	1		0750	79	0.00	0.00	0.00	31.
1		0340	29	0.00	0.00	0.00	218.	1		0755	80	0.00	0.00	0.00	31.
1		0345	30	0.00	0.00	0.00	204.	1		0800	81	0.00	0.00	0.00	30.
1		0350	31	0.00	0.00	0.00	190.	1		0805	82	0.00	0.00	0.00	30.
1		0355	32	0.00	0.00	0.00	178.	1		0810	83	0.00	0.00	0.00	29.
1		0400	33	0.00	0.00	0.00	166.	1		0815	84	0.00	0.00	0.00	29.
1		0405	34	0.00	0.00	0.00	154.	1		0820	85	0.00	0.00	0.00	29.
1		0410	35	0.00	0.00	0.00	144.	1		0825	86	0.00	0.00	0.00	28.
1		0415	36	0.00	0.00	0.00	134.	1		0830	87	0.00	0.00	0.00	28.
1		0420	37	0.00	0.00	0.00	125.	1		0835	88	0.00	0.00	0.00	28.
1		0425	38	0.00	0.00	0.00	117.	1		0840	89	0.00	0.00	0.00	27.
1		0430	39	0.00	0.00	0.00	109.	1		0845	90	0.00	0.00	0.00	27.
1		0435	40	0.00	0.00	0.00	103.	1		0850	91	0.00	0.00	0.00	27.
1		0440	41	0.00	0.00	0.00	98.	1		0855	92	0.00	0.00	0.00	26.
1		0445	42	0.00	0.00	0.00	93.	1		0900	93	0.00	0.00	0.00	26.
1		0450	43	0.00	0.00	0.00	89.	1		0905	94	0.00	0.00	0.00	26.
1		0455	44	0.00	0.00	0.00	84.	1		0910	95	0.00	0.00	0.00	26.
1		0500	45	0.00	0.00	0.00	80.	1		0915	96	0.00	0.00	0.00	25.
1		0505	46	0.00	0.00	0.00	77.	1		0920	97	0.00	0.00	0.00	25.
1		0510	47	0.00	0.00	0.00	73.	1		0925	98	0.00	0.00	0.00	25.
1		0515	48	0.00	0.00	0.00	70.	1		0930	99	0.00	0.00	0.00	25.
1		0520	49	0.00	0.00	0.00	67.	1		0935	100	0.00	0.00	0.00	25.
1		0525	50	0.00	0.00	0.00	64.	1		0940	101	0.00	0.00	0.00	24.
1		0530	51	0.00	0.00	0.00	62.								

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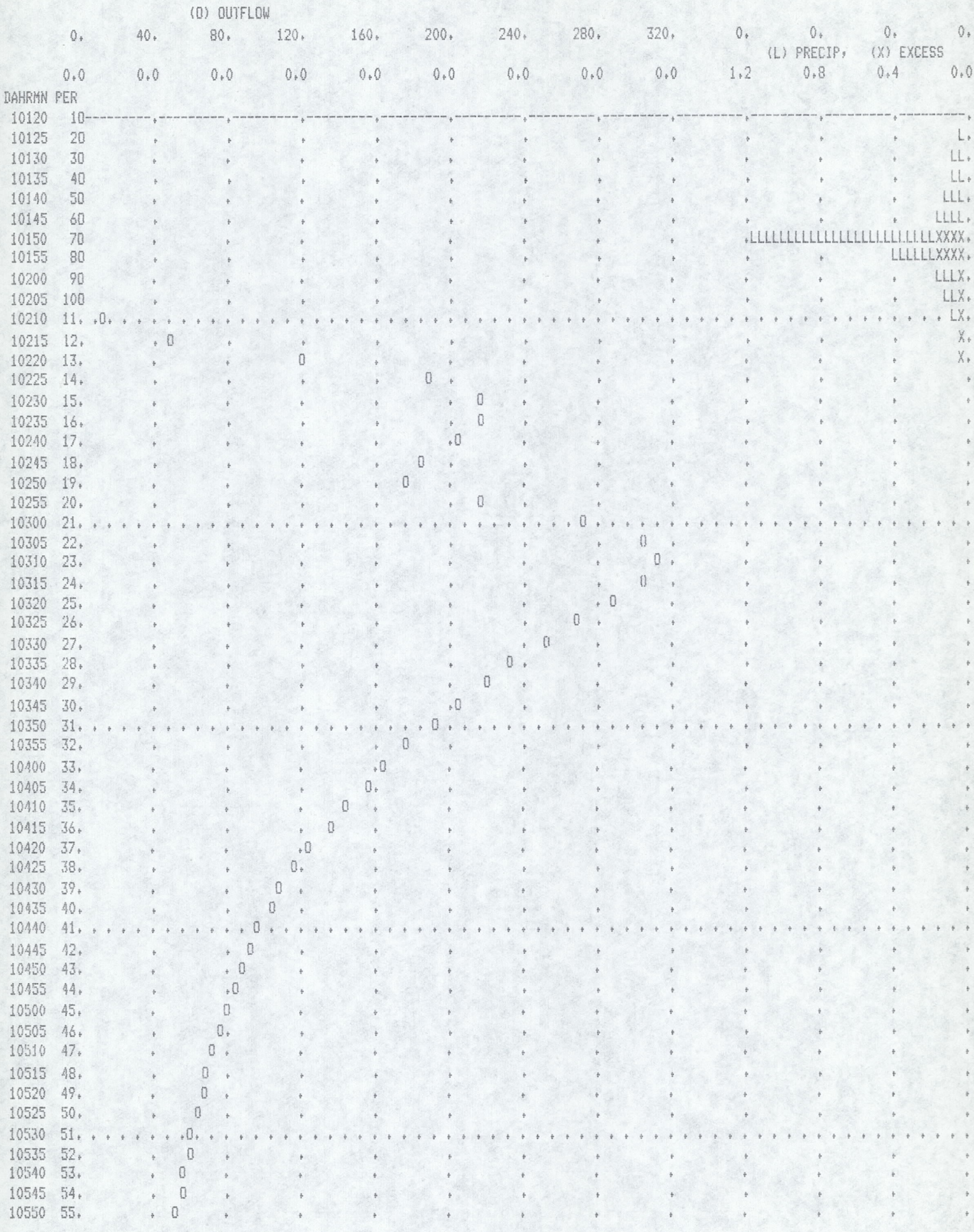
TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.94, TOTAL EXCESS = 0.51

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
311.	1.83	(CFS)	108.	83.	83.	83.
		(INCHES)	0.389	0.413	0.413	0.413
		(AC-FT)	54.	57.	57.	57.

CUMULATIVE AREA = 2.58 SQ MI

STATION SUB7



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10555  56.        . 0     .       .       .       .       .       .       .       .       .       .       .
10600  57.        . 0     .       .       .       .       .       .       .       .       .       .       .
10605  58.        . 0     .       .       .       .       .       .       .       .       .       .       .
10610  59.        . 0     .       .       .       .       .       .       .       .       .       .       .
10615  60.        .0      .       .       .       .       .       .       .       .       .       .       .
10620  61. . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.        .0      .       .       .       .       .       .       .       .       .       .       .
10630  63.        0       .       .       .       .       .       .       .       .       .       .       .
10635  64.        0       .       .       .       .       .       .       .       .       .       .       .
10640  65.        0       .       .       .       .       .       .       .       .       .       .       .
10645  66.        0       .       .       .       .       .       .       .       .       .       .       .
10650  67.        0       .       .       .       .       .       .       .       .       .       .       .
10655  68.       0.       .       .       .       .       .       .       .       .       .       .       .
10700  69.       0.       .       .       .       .       .       .       .       .       .       .       .
10705  70.       0.       .       .       .       .       .       .       .       .       .       .       .
10710  71. . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.       0.       .       .       .       .       .       .       .       .       .       .       .
10720  73.       0.       .       .       .       .       .       .       .       .       .       .       .
10725  74.      0 .       .       .       .       .       .       .       .       .       .       .       .
10730  75.      0 .       .       .       .       .       .       .       .       .       .       .       .
10735  76.      0 .       .       .       .       .       .       .       .       .       .       .       .
10740  77.      0 .       .       .       .       .       .       .       .       .       .       .       .
10745  78.      0 .       .       .       .       .       .       .       .       .       .       .       .
10750  79.      0 .       .       .       .       .       .       .       .       .       .       .       .
10755  80.      0 .       .       .       .       .       .       .       .       .       .       .       .
10800  81. . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.     0  .       .       .       .       .       .       .       .       .       .       .       .
10810  83.     0  .       .       .       .       .       .       .       .       .       .       .       .
10815  84.     0  .       .       .       .       .       .       .       .       .       .       .       .
10820  85.     0  .       .       .       .       .       .       .       .       .       .       .       .
10825  86.     0  .       .       .       .       .       .       .       .       .       .       .       .
10830  87.     0  .       .       .       .       .       .       .       .       .       .       .       .
10835  88.     0  .       .       .       .       .       .       .       .       .       .       .       .
10840  89.     0  .       .       .       .       .       .       .       .       .       .       .       .
10845  90.     0  .       .       .       .       .       .       .       .       .       .       .       .
10850  91. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.     0  .       .       .       .       .       .       .       .       .       .       .       .
10900  93.     0  .       .       .       .       .       .       .       .       .       .       .       .
10905  94.    0   .       .       .       .       .       .       .       .       .       .       .       .
10910  95.    0   .       .       .       .       .       .       .       .       .       .       .       .
10915  96.    0   .       .       .       .       .       .       .       .       .       .       .       .
10920  97.    0   .       .       .       .       .       .       .       .       .       .       .       .
10925  98.    0   .       .       .       .       .       .       .       .       .       .       .       .
10930  99.    0   .       .       .       .       .       .       .       .       .       .       .       .
10935 100.    0   .       .       .       .       .       .       .       .       .       .       .       .
10940 101.-----0---.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.
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174 KK    *    DIV681   *
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RETRIEVED DIVERSION FROM SUB6

176 DR RETRIEVE DIVERSION HYDROGRAPH
ISTAD DIV681 DIVERSION HYDROGRAPH IDENTIFICATION

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HYDROGRAPH AT STATION DIV681

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	20.	1		0540	53	0.	1		0750	79	0.
1		0125	2	0.	1		0335	28	15.	1		0545	54	0.	1		0755	80	0.
1		0130	3	0.	1		0340	29	11.	1		0550	55	0.	1		0800	81	0.
1		0135	4	0.	1		0345	30	8.	1		0555	56	0.	1		0805	82	0.
1		0140	5	0.	1		0350	31	5.	1		0600	57	0.	1		0810	83	0.
1		0145	6	0.	1		0355	32	3.	1		0605	58	0.	1		0815	84	0.
1		0150	7	0.	1		0400	33	2.	1		0610	59	0.	1		0820	85	0.
1		0155	8	0.	1		0405	34	1.	1		0615	60	0.	1		0825	86	0.
1		0200	9	0.	1		0410	35	1.	1		0620	61	0.	1		0830	87	0.
1		0205	10	1.	1		0415	36	1.	1		0625	62	0.	1		0835	88	0.
1		0210	11	1.	1		0420	37	1.	1		0630	63	0.	1		0840	89	0.
1		0215	12	3.	1		0425	38	1.	1		0635	64	0.	1		0845	90	0.
1		0220	13	3.	1		0430	39	1.	1		0640	65	0.	1		0850	91	0.
1		0225	14	1.	1		0435	40	1.	1		0645	66	0.	1		0855	92	0.
1		0230	15	1.	1		0440	41	1.	1		0650	67	0.	1		0900	93	0.
1		0235	16	1.	1		0445	42	1.	1		0655	68	0.	1		0905	94	0.
1		0240	17	1.	1		0450	43	1.	1		0700	69	0.	1		0910	95	0.
1		0245	18	22.	1		0455	44	1.	1		0705	70	0.	1		0915	96	0.
1		0250	19	65.	1		0500	45	0.	1		0710	71	0.	1		0920	97	0.
1		0255	20	81.	1		0505	46	0.	1		0715	72	0.	1		0925	98	0.
1		0300	21	79.	1		0510	47	0.	1		0720	73	0.	1		0930	99	0.
1		0305	22	69.	1		0515	48	0.	1		0725	74	0.	1		0935	100	0.
1		0310	23	57.	1		0520	49	0.	1		0730	75	0.	1		0940	101	0.
1		0315	24	46.	1		0525	50	0.	1		0735	76	0.					
1		0320	25	35.	1		0530	51	0.	1		0740	77	0.					
1		0325	26	27.	1		0535	52	0.	1		0745	78	0.					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
81.	1.58	(CFS)	8.	6.	6.	6.
		(INCHES)	0.029	0.029	0.029	0.029
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 0.00 SQ MI

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          *             *
177 KK    *     SUB6    *
          *             *
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ROUTED TO SUB6 (CONTRATION POINT F)
ASSUME COLLECTOR CHANNEL ALONG SOUTH SIDE EASEMENT INDIAN SCHOOL ROAD

HYDROGRAPH ROUTING DATA

119 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

180 RK KINEMATIC WAVE STREAM ROUTING

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

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KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.5941	1.423	2.50	1320.00

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	28.	*	1		0540	53	0.	*	1		0750	79	0.
1		0125	2	0.	*	1		0335	28	22.	*	1		0545	54	0.	*	1		0755	80	0.
1		0130	3	0.	*	1		0340	29	17.	*	1		0550	55	0.	*	1		0800	81	0.
1		0135	4	0.	*	1		0345	30	13.	*	1		0555	56	0.	*	1		0805	82	0.
1		0140	5	0.	*	1		0350	31	10.	*	1		0600	57	0.	*	1		0810	83	0.
1		0145	6	0.	*	1		0355	32	7.	*	1		0605	58	0.	*	1		0815	84	0.
1		0150	7	0.	*	1		0400	33	5.	*	1		0610	59	0.	*	1		0820	85	0.
1		0155	8	0.	*	1		0405	34	4.	*	1		0615	60	0.	*	1		0825	86	0.
1		0200	9	0.	*	1		0410	35	3.	*	1		0620	61	0.	*	1		0830	87	0.
1		0205	10	0.	*	1		0415	36	2.	*	1		0625	62	0.	*	1		0835	88	0.
1		0210	11	0.	*	1		0420	37	2.	*	1		0630	63	0.	*	1		0840	89	0.

1	0215	12	0.	*	1	0425	38	1.	*	1	0635	64	0.	*	1	0845	90	0.
1	0220	13	0.	*	1	0430	39	1.	*	1	0640	65	0.	*	1	0850	91	0.
1	0225	14	1.	*	1	0435	40	1.	*	1	0645	66	0.	*	1	0855	92	0.
1	0230	15	1.	*	1	0440	41	1.	*	1	0650	67	0.	*	1	0900	93	0.
1	0235	16	1.	*	1	0445	42	1.	*	1	0655	68	0.	*	1	0905	94	0.
1	0240	17	1.	*	1	0450	43	1.	*	1	0700	69	0.	*	1	0910	95	0.
1	0245	18	2.	*	1	0455	44	1.	*	1	0705	70	0.	*	1	0915	96	0.
1	0250	19	16.	*	1	0500	45	1.	*	1	0710	71	0.	*	1	0920	97	0.
1	0255	20	59.	*	1	0505	46	1.	*	1	0715	72	0.	*	1	0925	98	0.
1	0300	21	79.	*	1	0510	47	1.	*	1	0720	73	0.	*	1	0930	99	0.
1	0305	22	76.	*	1	0515	48	1.	*	1	0725	74	0.	*	1	0935	100	0.
1	0310	23	66.	*	1	0520	49	1.	*	1	0730	75	0.	*	1	0940	101	0.
1	0315	24	55.	*	1	0525	50	1.	*	1	0735	76	0.	*				
1	0320	25	45.	*	1	0530	51	0.	*	1	0740	77	0.	*				
1	0325	26	36.	*	1	0535	52	0.	*	1	0745	78	0.	*				
				*					*					*				

****

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
79.	1.67	(CFS)	8.	6.	6.	6.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 0.00 SQ MI

STATION SUB6

(O) OUTFLOW

DAHRMN	PER	0.	10.	20.	30.	40.	50.	60.	70.	80.	0.	0.	0.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	70													
10155	80													
10200	90													
10205	100													
10210	110													
10215	120													
10220	130													
10225	14.0													
10230	15.0													
10235	16.0													
10240	17.0													
10245	18. 0													
10250	19.			O										
10255	20.							O.						
10300	21.									.O.				
10305	22.									O				
10310	23.								O					
10315	24.							O						
10320	25.						O							
10325	26.					O								
10330	27.				O									
10335	28.			O										
10340	29.		O											
10345	30.	O												
10350	31.													
10355	32.		O											
10400	33.	O												
10405	34.	O												
10410	35. O													
10415	36. O													
10420	37. O													
10425	38.0													
10430	39.0													
10435	40.0													
10440	41.0.													
10445	42.0													
10450	43.0													
10455	44.0													
10500	45.0													
10505	46.0													
10510	47.0													
10515	48.0													
10520	49.0													
10525	50.0													
10530	510													
10535	520													
10540	530													
10545	540													
10550	550													
10555	560													
10600	570													

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10605  580
10610  590
10615  600
10620  610
10625  620
10630  630
10635  640
10640  650
10645  660
10650  670
10655  680
10700  690
10705  700
10710  710
10715  720
10720  730
10725  740
10730  750
10735  760
10740  770
10745  780
10750  790
10755  800
10800  810
10805  820
10810  830
10815  840
10820  850
10825  860
10830  870
10835  880
10840  890
10845  900
10850  910
10855  920
10900  930
10905  940
10910  950
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

          **************
          *            *
181 KK    *      SUB8  *
          *            *
          **************
                         SOUTH-EAST CORNER OF INDIAN SCHOOL RD AND 107 TH ST
                         ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 107TH ST
                         HYDROGRAPH AT C.P. (H)

             SUBBASIN RUNOFF DATA

188 BA         SUBBASIN CHARACTERISTICS
                     TAREA        0.36  SUBBASIN AREA

               PRECIPITATION DATA

185 PB               STORM        2.45  BASIN TOTAL PRECIPITATION

186 PI           INCREMENTAL PRECIPITATION PATTERN
                    0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                    0.06      0.05

189 LS         SCS LOSS RATE
                     STRTL        0.25  INITIAL ABSTRACTION
                    CRVNBR       89.00  CURVE NUMBER
                     RTIMP        2.00  PERCENT IMPERVIOUS AREA

               KINEMATIC WAVE
190 UK           OVERLAND-FLOW ELEMENT NO. 1
                         L       3000.  OVERLAND FLOW LENGTH
                         S      0.0050  SLOPE
                         N       0.200  ROUGHNESS COEFFICIENT
                        PA       100.0  PERCENT OF SUBBASIN
191 RK           MAIN CHANNEL
                         L       2640.  CHANNEL LENGTH
                         S      0.0030  SLOPE
                         N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                        CA        0.36  CONTRIBUTING AREA
                     SHAPE        TRAP  CHANNEL SHAPE
                        WD        0.00  BOTTOM WIDTH OR DIAMETER
                         Z        1.00  SIDE SLOPE
                    RUPSTQ         YES  ROUTE UPSTREAM HYDROGRAPH

                                                      ***

          COMPUTED KINEMATIC PARAMETERS
             ELEMENT      ALPHA          M      DT (MIN)    DX (FT)
                   1     0.5268      1.667       5.00       187.50
                   3     1.6346      1.333       5.00      1320.00

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

                                           HYDROGRAPH AT STATION      SUB8

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	43.
1		0125	2	0.05	0.05	0.00	0.	1		0540	53	0.00	0.00	0.00	42.
1		0130	3	0.07	0.07	0.00	0.	1		0545	54	0.00	0.00	0.00	40.
1		0135	4	0.07	0.07	0.00	0.	1		0550	55	0.00	0.00	0.00	39.
1		0140	5	0.10	0.10	0.00	0.	1		0555	56	0.00	0.00	0.00	38.
1		0145	6	0.16	0.13	0.03	0.	1		0600	57	0.00	0.00	0.00	37.
1		0150	7	1.16	0.46	0.70	0.	1		0605	58	0.00	0.00	0.00	36.
1		0155	8	0.39	0.08	0.31	4.	1		0610	59	0.00	0.00	0.00	35.
1		0200	9	0.14	0.02	0.12	15.	1		0615	60	0.00	0.00	0.00	34.
1		0205	10	0.11	0.02	0.09	29.	1		0620	61	0.00	0.00	0.00	33.
1		0210	11	0.09	0.01	0.08	37.	1		0625	62	0.00	0.00	0.00	32.
1		0215	12	0.06	0.01	0.05	43.	1		0630	63	0.00	0.00	0.00	31.
1		0220	13	0.05	0.01	0.04	47.	1		0635	64	0.00	0.00	0.00	31.
1		0225	14	0.00	0.00	0.00	49.	1		0640	65	0.00	0.00	0.00	30.
1		0230	15	0.00	0.00	0.00	51.	1		0645	66	0.00	0.00	0.00	28.
1		0235	16	0.00	0.00	0.00	52.	1		0650	67	0.00	0.00	0.00	27.
1		0240	17	0.00	0.00	0.00	52.	1		0655	68	0.00	0.00	0.00	27.
1		0245	18	0.00	0.00	0.00	52.	1		0700	69	0.00	0.00	0.00	26.
1		0250	19	0.00	0.00	0.00	52.	1		0705	70	0.00	0.00	0.00	25.
1		0255	20	0.00	0.00	0.00	48.	1		0710	71	0.00	0.00	0.00	24.
1		0300	21	0.00	0.00	0.00	78.	1		0715	72	0.00	0.00	0.00	24.
1		0305	22	0.00	0.00	0.00	118.	1		0720	73	0.00	0.00	0.00	23.
1		0310	23	0.00	0.00	0.00	128.	1		0725	74	0.00	0.00	0.00	22.
1		0315	24	0.00	0.00	0.00	122.	1		0730	75	0.00	0.00	0.00	22.
1		0320	25	0.00	0.00	0.00	113.	1		0735	76	0.00	0.00	0.00	21.
1		0325	26	0.00	0.00	0.00	103.	1		0740	77	0.00	0.00	0.00	20.
1		0330	27	0.00	0.00	0.00	93.	1		0745	78	0.00	0.00	0.00	20.
1		0335	28	0.00	0.00	0.00	85.	1		0750	79	0.00	0.00	0.00	19.
1		0340	29	0.00	0.00	0.00	78.	1		0755	80	0.00	0.00	0.00	19.
1		0345	30	0.00	0.00	0.00	73.	1		0800	81	0.00	0.00	0.00	18.
1		0350	31	0.00	0.00	0.00	68.	1		0805	82	0.00	0.00	0.00	18.
1		0355	32	0.00	0.00	0.00	65.	1		0810	83	0.00	0.00	0.00	17.
1		0400	33	0.00	0.00	0.00	62.	1		0815	84	0.00	0.00	0.00	17.
1		0405	34	0.00	0.00	0.00	59.	1		0820	85	0.00	0.00	0.00	16.
1		0410	35	0.00	0.00	0.00	57.	1		0825	86	0.00	0.00	0.00	16.
1		0415	36	0.00	0.00	0.00	55.	1		0830	87	0.00	0.00	0.00	16.
1		0420	37	0.00	0.00	0.00	54.	1		0835	88	0.00	0.00	0.00	15.
1		0425	38	0.00	0.00	0.00	53.	1		0840	89	0.00	0.00	0.00	15.
1		0430	39	0.00	0.00	0.00	52.	1		0845	90	0.00	0.00	0.00	14.
1		0435	40	0.00	0.00	0.00	52.	1		0850	91	0.00	0.00	0.00	14.
1		0440	41	0.00	0.00	0.00	51.	1		0855	92	0.00	0.00	0.00	14.
1		0445	42	0.00	0.00	0.00	51.	1		0900	93	0.00	0.00	0.00	13.
1		0450	43	0.00	0.00	0.00	50.	1		0905	94	0.00	0.00	0.00	13.
1		0455	44	0.00	0.00	0.00	49.	1		0910	95	0.00	0.00	0.00	13.
1		0500	45	0.00	0.00	0.00	49.	1		0915	96	0.00	0.00	0.00	12.
1		0505	46	0.00	0.00	0.00	48.	1		0920	97	0.00	0.00	0.00	12.
1		0510	47	0.00	0.00	0.00	47.	1		0925	98	0.00	0.00	0.00	12.
1		0515	48	0.00	0.00	0.00	46.	1		0930	99	0.00	0.00	0.00	12.
1		0520	49	0.00	0.00	0.00	45.	1		0935	100	0.00	0.00	0.00	11.
1		0525	50	0.00	0.00	0.00	44.	1		0940	101	0.00	0.00	0.00	11.
1		0530	51	0.00	0.00	0.00	44.								

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.02, TOTAL EXCESS = 1.43

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

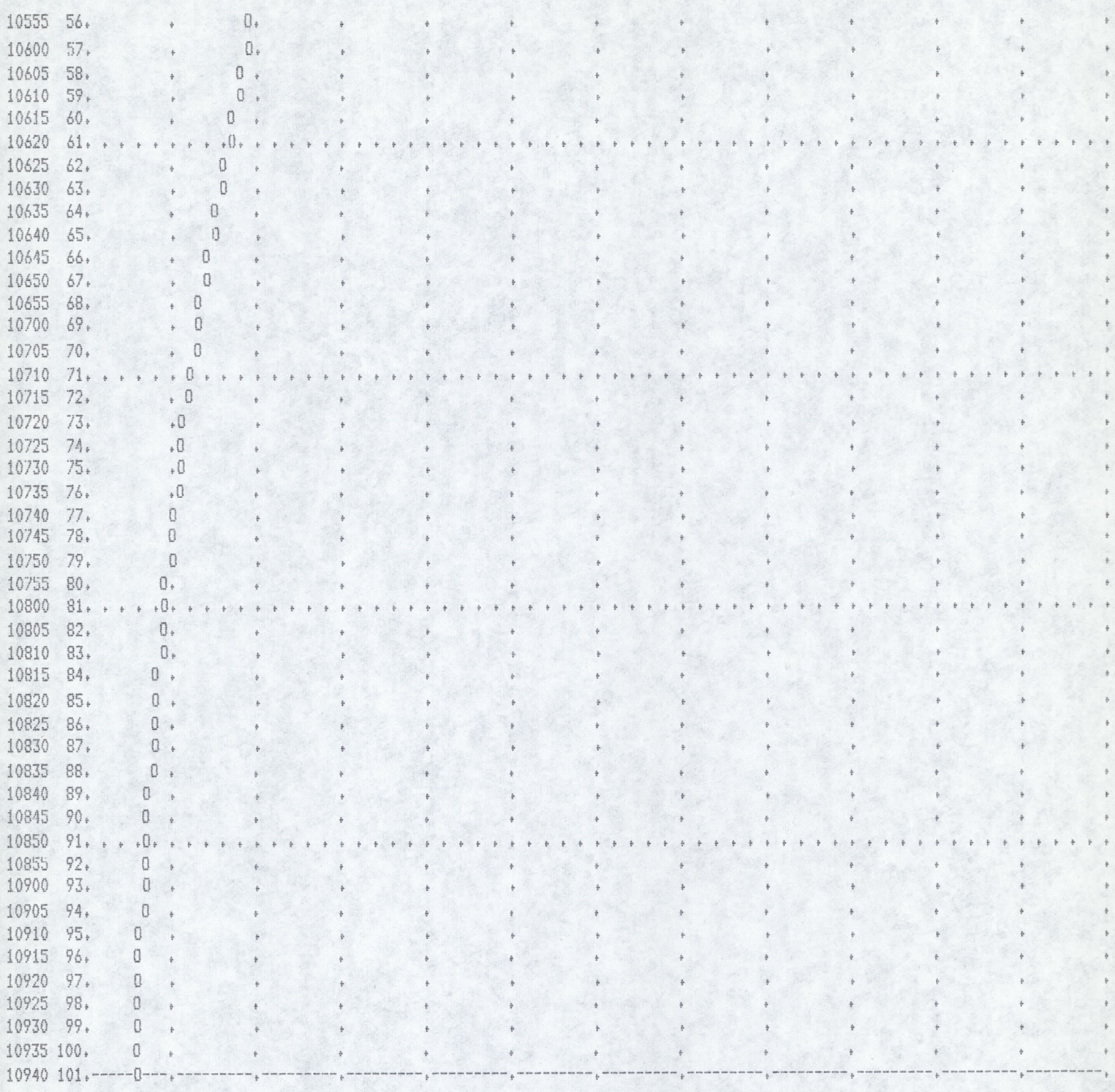
(CFS)	(HR)					
128.	1.83	(CFS)	48.	38.	38.	38.
		(INCHES)	1.245	1.351	1.351	1.351
		(AC-FT)	24.	26.	26.	26.

CUMULATIVE AREA = 0.36 SQ MI

STATION SUB8

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	120.	140.	0.	0.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLX
10150	70										LLLLLLLLLLLLXXXXXXXXXXXXXXXXXX		
10155	8	O										LLXXXXXXXX	
10200	9		O										LXXX
10205	10			O									LXX
10210	11				O								XX
10215	12			O									X
10220	13			O									X
10225	14			O									
10230	15			O									
10235	16			O									
10240	17			O									
10245	18			O									
10250	19			O									
10255	20			O									
10300	21				O								
10305	22						O						
10310	23							O					
10315	24						O						
10320	25							O					
10325	26					O							
10330	27					O							
10335	28				O								
10340	29				O								
10345	30				O								
10350	31					O							
10355	32			O									
10400	33			O									
10405	34			O									
10410	35			O									
10415	36			O									
10420	37			O									
10425	38			O									
10430	39			O									
10435	40			O									
10440	41				O								
10445	42			O									
10450	43			O									
10455	44			O									
10500	45			O									
10505	46			O									
10510	47			O									
10515	48			O									
10520	49			O									
10525	50			O									
10530	51				O								
10535	52			O									
10540	53			O									
10545	54			O									
10550	55			O									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10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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              ***************
              *             *
192 KK        *      SUB9   *
              *             *
              ***************
                          AREA BOUNDED BY INDIAN SCHOOL RD-107 ST-LEVEE-AGUA FRIA
                          ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT OF LEVEE
                          HYDROGRAPH AT C.P. (I) INTO AGUA FRIA WASH

                SUBBASIN RUNOFF DATA

199 BA            SUBBASIN CHARACTERISTICS
                        TAREA        0.30  SUBBASIN AREA

                  PRECIPITATION DATA

196 PB                  STORM        2.45  BASIN TOTAL PRECIPITATION

197 PI              INCREMENTAL PRECIPITATION PATTERN
                       0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                       0.06      0.05

200 LS            SCS LOSS RATE
                        STRTL        0.25  INITIAL ABSTRACTION
                       CRVNBR       89.00  CURVE NUMBER
                        RTIMP        2.00  PERCENT IMPERVIOUS AREA

                  KINEMATIC WAVE
201 UK              OVERLAND-FLOW ELEMENT NO. 1
                            L       1500.  OVERLAND FLOW LENGTH
                            S      0.0050  SLOPE
                            N       0.200  ROUGHNESS COEFFICIENT
                           PA       100.0  PERCENT OF SUBBASIN
202 RK              MAIN CHANNEL
                            L       6400.  CHANNEL LENGTH
                            S      0.0030  SLOPE
                            N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                           CA        0.30  CONTRIBUTING AREA
                        SHAPE        TRAP  CHANNEL SHAPE
                           WD        0.00  BOTTOM WIDTH OR DIAMETER
                            Z        1.00  SIDE SLOPE
                       RUPSTQ         YES  ROUTE UPSTREAM HYDROGRAPH

                                                                  ***

           COMPUTED KINEMATIC PARAMETERS
              ELEMENT     ALPHA        M     DT (MIN)    DX (FT)
                    1    0.5268    1.667       5.00      150.00
                    3    1.6346    1.333       5.00     3200.00

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

                                                    HYDROGRAPH AT STATION     SUB9

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	69.
1		0125	2	0.05	0.05	0.00	0.	1		0540	53	0.00	0.00	0.00	67.
1		0130	3	0.07	0.07	0.00	0.	1		0545	54	0.00	0.00	0.00	65.
1		0135	4	0.07	0.07	0.00	0.	1		0550	55	0.00	0.00	0.00	63.
1		0140	5	0.10	0.10	0.00	0.	1		0555	56	0.00	0.00	0.00	61.
1		0145	6	0.16	0.13	0.03	0.	1		0600	57	0.00	0.00	0.00	59.
1		0150	7	1.16	0.46	0.70	0.	1		0605	58	0.00	0.00	0.00	57.
1		0155	8	0.39	0.08	0.31	2.	1		0610	59	0.00	0.00	0.00	56.
1		0200	9	0.14	0.02	0.12	10.	1		0615	60	0.00	0.00	0.00	54.
1		0205	10	0.11	0.02	0.09	22.	1		0620	61	0.00	0.00	0.00	52.
1		0210	11	0.09	0.01	0.08	41.	1		0625	62	0.00	0.00	0.00	51.
1		0215	12	0.06	0.01	0.05	64.	1		0630	63	0.00	0.00	0.00	49.
1		0220	13	0.05	0.01	0.04	86.	1		0635	64	0.00	0.00	0.00	48.
1		0225	14	0.00	0.00	0.00	105.	1		0640	65	0.00	0.00	0.00	46.
1		0230	15	0.00	0.00	0.00	118.	1		0645	66	0.00	0.00	0.00	45.
1		0235	16	0.00	0.00	0.00	126.	1		0650	67	0.00	0.00	0.00	43.
1		0240	17	0.00	0.00	0.00	131.	1		0655	68	0.00	0.00	0.00	42.
1		0245	18	0.00	0.00	0.00	134.	1		0700	69	0.00	0.00	0.00	40.
1		0250	19	0.00	0.00	0.00	136.	1		0705	70	0.00	0.00	0.00	39.
1		0255	20	0.00	0.00	0.00	136.	1		0710	71	0.00	0.00	0.00	38.
1		0300	21	0.00	0.00	0.00	135.	1		0715	72	0.00	0.00	0.00	37.
1		0305	22	0.00	0.00	0.00	145.	1		0720	73	0.00	0.00	0.00	36.
1		0310	23	0.00	0.00	0.00	168.	1		0725	74	0.00	0.00	0.00	34.
1		0315	24	0.00	0.00	0.00	189.	1		0730	75	0.00	0.00	0.00	33.
1		0320	25	0.00	0.00	0.00	197.	1		0735	76	0.00	0.00	0.00	32.
1		0325	26	0.00	0.00	0.00	196.	1		0740	77	0.00	0.00	0.00	32.
1		0330	27	0.00	0.00	0.00	188.	1		0745	78	0.00	0.00	0.00	31.
1		0335	28	0.00	0.00	0.00	179.	1		0750	79	0.00	0.00	0.00	30.
1		0340	29	0.00	0.00	0.00	168.	1		0755	80	0.00	0.00	0.00	29.
1		0345	30	0.00	0.00	0.00	158.	1		0800	81	0.00	0.00	0.00	28.
1		0350	31	0.00	0.00	0.00	149.	1		0805	82	0.00	0.00	0.00	27.
1		0355	32	0.00	0.00	0.00	140.	1		0810	83	0.00	0.00	0.00	27.
1		0400	33	0.00	0.00	0.00	133.	1		0815	84	0.00	0.00	0.00	26.
1		0405	34	0.00	0.00	0.00	126.	1		0820	85	0.00	0.00	0.00	25.
1		0410	35	0.00	0.00	0.00	120.	1		0825	86	0.00	0.00	0.00	24.
1		0415	36	0.00	0.00	0.00	114.	1		0830	87	0.00	0.00	0.00	24.
1		0420	37	0.00	0.00	0.00	109.	1		0835	88	0.00	0.00	0.00	23.
1		0425	38	0.00	0.00	0.00	105.	1		0840	89	0.00	0.00	0.00	23.
1		0430	39	0.00	0.00	0.00	101.	1		0845	90	0.00	0.00	0.00	22.
1		0435	40	0.00	0.00	0.00	97.	1		0850	91	0.00	0.00	0.00	21.
1		0440	41	0.00	0.00	0.00	94.	1		0855	92	0.00	0.00	0.00	21.
1		0445	42	0.00	0.00	0.00	91.	1		0900	93	0.00	0.00	0.00	20.
1		0450	43	0.00	0.00	0.00	88.	1		0905	94	0.00	0.00	0.00	20.
1		0455	44	0.00	0.00	0.00	86.	1		0910	95	0.00	0.00	0.00	19.
1		0500	45	0.00	0.00	0.00	84.	1		0915	96	0.00	0.00	0.00	19.
1		0505	46	0.00	0.00	0.00	81.	1		0920	97	0.00	0.00	0.00	18.
1		0510	47	0.00	0.00	0.00	79.	1		0925	98	0.00	0.00	0.00	18.
1		0515	48	0.00	0.00	0.00	77.	1		0930	99	0.00	0.00	0.00	17.
1		0520	49	0.00	0.00	0.00	75.	1		0935	100	0.00	0.00	0.00	17.
1		0525	50	0.00	0.00	0.00	73.	1		0940	101	0.00	0.00	0.00	17.
1		0530	51	0.00	0.00	0.00	71.								

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.02, TOTAL EXCESS = 1.43

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
197.	2.00	(CFS)	87.	67.	67.	67.
		(INCHES)	1.229	1.313	1.313	1.313
		(AC-FT)	43.	46.	46.	46.

CUMULATIVE AREA = 0.66 SQ MI

STATION SUB9

(O) OUTFLOW

	0.	40.	80.	120.	160.	200.	0.	0.	0.	0.	0. (L) PRECIP	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LL
10135	40												LL
10140	50												LLL
10145	60												LLLX
10150	70										LLLLLLLLLLLLXXXXXXXXXXXXXXXXX		
10155	8.0											LLXXXXXXXX	
10200	9. 0												LXXX
10205	10.	O											LXX
10210	11.		O										XX
10215	12.		O										X
10220	13.		O										X
10225	14.		O										
10230	15.		O										
10235	16.		O										
10240	17.		O										
10245	18.		O										
10250	19.		O										
10255	20.		O										
10300	21.		O										
10305	22.		O										
10310	23.		O										
10315	24.		O										
10320	25.		O										
10325	26.		O										
10330	27.		O										
10335	28.		O										
10340	29.		O										
10345	30.		O										
10350	31.		O										
10355	32.		O										
10400	33.		O										
10405	34.		O										
10410	35.		O										
10415	36.		O										
10420	37.		O										
10425	38.		O										
10430	39.		O										
10435	40.		O										
10440	41.		O										
10445	42.		O										
10450	43.		O										
10455	44.		O										
10500	45.		O										
10505	46.		O										
10510	47.		O										
10515	48.		O										
10520	49.		O										
10525	50.		O										
10530	51.		O										
10535	52.		O										
10540	53.		O										
10545	54.		O										
10550	55.		O										

```
10555  56.          .   0   .       .       .       .       .       .       .       .       .       .       .       .
10600  57.          .   0   .       .       .       .       .       .       .       .       .       .       .       .
10605  58.          .  0    .       .       .       .       .       .       .       .       .       .       .       .
10610  59.          .  0    .       .       .       .       .       .       .       .       .       .       .       .
10615  60.          . 0     .       .       .       .       .       .       .       .       .       .       .       .
10620  61. . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.          . 0     .       .       .       .       .       .       .       .       .       .       .       .
10630  63.          .0      .       .       .       .       .       .       .       .       .       .       .       .
10635  64.          .0      .       .       .       .       .       .       .       .       .       .       .       .
10640  65.          .0      .       .       .       .       .       .       .       .       .       .       .       .
10645  66.          .0      .       .       .       .       .       .       .       .       .       .       .       .
10650  67.          .0      .       .       .       .       .       .       .       .       .       .       .       .
10655  68.          0       .       .       .       .       .       .       .       .       .       .       .       .
10700  69.          0       .       .       .       .       .       .       .       .       .       .       .       .
10705  70.          0       .       .       .       .       .       .       .       .       .       .       .       .
10710  71. . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.         0.       .       .       .       .       .       .       .       .       .       .       .       .
10720  73.         0.       .       .       .       .       .       .       .       .       .       .       .       .
10725  74.         0.       .       .       .       .       .       .       .       .       .       .       .       .
10730  75.        0 .       .       .       .       .       .       .       .       .       .       .       .       .
10735  76.        0 .       .       .       .       .       .       .       .       .       .       .       .       .
10740  77.        0 .       .       .       .       .       .       .       .       .       .       .       .       .
10745  78.        0 .       .       .       .       .       .       .       .       .       .       .       .       .
10750  79.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10755  80.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10800  81. . .  0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10810  83.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10815  84.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10820  85.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10825  86.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10830  87.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10835  88.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10840  89.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10845  90.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10850  91. .  .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10900  93.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10905  94.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10910  95.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10915  96.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10920  97.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10925  98.   0      .       .       .       .       .       .       .       .       .       .       .       .       .
10930  99.   0      .       .       .       .       .       .       .       .       .       .       .       .       .
10935 100.   0      .       .       .       .       .       .       .       .       .       .       .       .       .
10940 101.---0------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.
```

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	SUB2A	10.	1.42	10.	8.	8.	0.50		
HYDROGRAPH AT	SUB2B	10.	1.42	10.	8.	8.	0.50		
2 COMBINED AT	SUB2	20.	1.42	19.	17.	17.	1.00		
DIVERSION TO	DIV25	10.	1.42	10.	8.	8.	1.00		
HYDROGRAPH AT	SUB2	10.	1.42	10.	8.	8.	1.00		
HYDROGRAPH AT	SUB3A	98.	2.00	88.	73.	73.	1.66		
DIVERSION TO	RID	98.	0.08	88.	73.	73.	1.66		
HYDROGRAPH AT	SUB3A	0.	0.08	0.	0.	0.	1.66		
HYDROGRAPH AT	SUB4	17.	2.33	17.	15.	15.	2.72		
HYDROGRAPH AT	DIV25	10.	1.42	10.	8.	8.	0.00		
HYDROGRAPH AT	SUB5B	20.	1.58	20.	17.	17.	0.50		
HYDROGRAPH AT	SUB5A	10.	1.42	10.	8.	8.	0.50		
2 COMBINED AT	SUB5	30.	1.58	29.	25.	25.	1.00		
DIVERSION TO	THOMAS	15.	1.50	15.	13.	13.	1.00		
HYDROGRAPH AT	SUB5	15.	1.50	15.	13.	13.	1.00		
ROUTED TO	SUB6	15.	1.83	15.	12.	12.	1.00		
HYDROGRAPH AT	SUB6A	435.	1.25	95.	69.	69.	0.75		
ROUTED TO	SUB6A	317.	1.67	62.	45.	45.	0.75	3.56	1.67
HYDROGRAPH AT	SUB6B	123.	0.92	16.	12.	12.	0.13		
3 COMBINED AT	SUB6	367.	1.58	92.	69.	69.	1.88		
DIVERSION TO	DIV681	81.	1.58	8.	6.	6.	1.88		
HYDROGRAPH AT	SUB6	286.	1.58	84.	64.	64.	1.88		
ROUTED TO	SUB6	284.	1.67	84.	63.	63.	1.88		
HYDROGRAPH AT	SUB6C	123.	0.92	16.	12.	12.	0.13		
2 COMBINED AT	SUB6	314.	1.67	100.	75.	75.	2.00		
HYDROGRAPH AT	SUB7	311.	1.83	108.	83.	83.	2.58		
HYDROGRAPH AT	DIV681	81.	1.58	8.	6.	6.	0.00		

ROUTED TO	SUB6	79.	1.67	8.	6.	6.	0.00
HYDROGRAPH AT	SUB8	128.	1.83	48.	38.	38.	0.36
HYDROGRAPH AT	SUB9	197.	2.00	87.	67.	67.	0.66

*** NORMAL END OF HEC-1 ***
101
$ EXIT
SHIAU Job terminated at 11-JUN-1985 11:16:24.04

Accounting information:

Buffered I/O count:	103	Peak working set size:	709
Direct I/O count:	1165	Peak page file size:	791
Page faults:	538	Mounted volumes:	0
Elapsed CPU time:	0 00:01:41.87	Elapsed time:	0 00:05:45.16

VAX/VMS SHIAU MMR4 11-JUN-1985 11:19 TXA5: 11-JUN-1985 13:21 DISK$SYSV35:[HYDRO.SHIAU]MMR4.LOG;2 VAX/VMS
VAX/VMS SHIAU MMR4 11-JUN-1985 11:19 TXA5: 11-JUN-1985 13:21 DISK$SYSV35:[HYDRO.SHIAU]MMR4.LOG;2 VAX/VMS

```
 SSSS  H   H  III   AAA   U   U
S      H   H   I   A   A  U   U
S      H   H   I   A   A  U   U
 SSS   HHHHH   I   A   A  U   U
    S  H   H   I   AAAAA  U   U
    S  H   H   I   A   A  U   U
SSSS   H   H  III  A   A  UUUUU
```

```
MM      MM  MM      MM  RRRRRRRR    44    44
MM      MM  MM      MM  RRRRRRRR    44    44
MMMM  MMMM  MMMM  MMMM  RR      RR  44    44
MMMM  MMMM  MMMM  MMMM  RR      RR  44    44
MM  MM  MM  MM  MM  MM  RR      RR  44    44
MM  MM  MM  MM  MM  MM  RR      RR  44    44
MM      MM  MM      MM  RRRRRRRR    4444444444
MM      MM  MM      MM  RRRRRRRR    4444444444
MM      MM  MM      MM  RR  RR            44
MM      MM  MM      MM  RR  RR            44
MM      MM  MM      MM  RR    RR          44        ++++
MM      MM  MM      MM  RR    RR          44        ++++
MM      MM  MM      MM  RR      RR        44        ++++
MM      MM  MM      MM  RR      RR        44        ++++
```

```
LL            000000      GGGGGGGG      ;;;;      222222
LL            000000      GGGGGGGG      ;;;;      222222
LL          00      00  GG              ;;;;    22      22
LL          00      00  GG              ;;;;    22      22
LL          00      00  GG                              22
LL          00      00  GG                              22
LL          00      00  GG              ;;;;          22
LL          00      00  GG              ;;;;          22
LL          00      00  GG  GGGGGG      ;;;;        22
LL          00      00  GG  GGGGGG      ;;;;        22
LL          00      00  GG      GG        ;;      22
LL          00      00  GG      GG        ;;      22
LLLLLLLLLL    000000      GGGGGG        ;;      2222222222
LLLLLLLLLL    000000      GGGGGG        ;;      2222222222
```

```
 SSSS  H   H  III   AAA   U   U
S      H   H   I   A   A  U   U
S      H   H   I   A   A  U   U
 SSS   HHHHH   I   A   A  U   U
    S  H   H   I   AAAAA  U   U
    S  H   H   I   A   A  U   U
SSSS   H   H  III  A   A  UUUUU
```

VAX/VMS SHIAU MMR4 11-JUN-1985 11:19 TXA5: 11-JUN-1985 13:21 DISK$SYSV35:[HYDRO.SHIAU]MMR4.LOG;2 VAX/VMS
VAX/VMS SHIAU MMR4 11-JUN-1985 11:19 TXA5: 11-JUN-1985 13:21 DISK$SYSV35:[HYDRO.SHIAU]MMR4.LOG;2 VAX/VMS
VAX/VMS SHIAU MMR4 11-JUN-1985 11:19 TXA5: 11-JUN-1985 13:21 DISK$SYSV35:[HYDRO.SHIAU]MMR4.LOG;2 VAX/VMS

```
$ DEL FOR%%%.DAT;*
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR023.DAT;2
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR023.DAT;1
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR024.DAT;2
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR024.DAT;1
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR032.DAT;1
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR038.DAT;2
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR038.DAT;1
-RMS-E-FLK, file currently locked by another user
$ SUBMIT == "SUBMIT/NOKEEP/PRINTER=ANNEX/NOTIFY"
$ PRINT == "PRINT/DEVICE=ANNEX"
$ HYDRO == "SET DEF [HYDRO]"
$ SHIAU == "SET DEF [HYDRO.SHIAU]"
$ WRITE SYS$OUTPUT ""

$EXIT
$ RUN HEC1
```

```
*******************************************
*                                         *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)     *
*             FEBRUARY 1981               *
*           REVISED 30 OCT 81             *
*                                         *
*  RUN DATE      11-J    TIME      11:1 *
*                                         *
*******************************************
```


```
*****************************************
*                                       *
*    U.S. ARMY CORPS OF ENGINEERS       *
*  THE HYDROLOGIC ENGINEERING CENTER    *
*         609 SECOND STREET             *
*       DAVIS, CALIFORNIA 95616         *
*  (916) 440-3285 OR (FTS) 448-3285     *
*                                       *
*****************************************
```


```
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. SEE SEPTEMBER 1981 INPUT DESCRIPTION FOR NEW DEFINITIONS.

HEC-1 INPUT


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

    1     ID  MARICOPA COUNTY FLOOD CONTROL DISTRICT
    2     ID  HYDROLOGY(AQUA FRIA RIVER-BETHANY HOME-91TH ST-THOMAS RD)
    3     ID   1 HOUR 100 YEAR DISCHARGE FUTURE CONDITION
    4     ID   NO IMPROVEMENT AT ANY INTERSECTION
    5     ID   TYPE 2 RAINFALL DISTRIBUTION
    6     ID   KINEMATIC WAVE METHOD
    7     ID   VAX-MMR4.DAT
    8     IT     5           120
    9     IO     2     2

   10     KK   SUB2A
   11     KM  SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
   12     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
   13     PB    2.45
   14     PI    0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
   15     PI    0.06   0.05
   16     BA    0.50
   17     LS      0     89     54           89     54
   18     UK   1850  .0033    0.1     25
   19     UK   5600  .0033    0.1     75
   20     RK   2640  0.005  0.025          TRAP

   21     KK   SUB2B
   22     KM  NORTH-WEST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
   23     KM   ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99-TH ST ROAD
   24     PB    2.45
   25     PI    0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
   26     PI    0.06   0.05
   27     BA    0.50
   28     LS      0     89     54           89     54
   29     UK   1850  .0033    0.1     25
   30     UK   5600  .0033    0.1     75
   31     RK   2640  0.005  0.025          TRAP

   32     KK   SUB2
   33     KM       COMBINE RUNOFF FROM SUB2A AND SUB2B AT C.P.(B)
   34     HC     2

   35     KK   SUB2
   36     KM       DIVERSION FOR THE STORM DRAIN
   37     DT    SD2
   38     DI      1     52   1000
   39     DQ      1     52     52

   40     KK   RET2
   41     KM       RETENTION REQUIREMENT
   42     RL      0      0
   43     RS      1   STOR      0
   44     SV      0   14.3   28.7   43.0   45.9   48.8   51.7   57.3
   45     SQ      0      0      0      0    107    304    558   1200
   46     SE      0      1      2      3    3.2    3.4    3.6    4.0
```

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

  47      KK   SUB2
  48      KM        DIVERT TO SUB5B
  49      DT   DIV25
  50      DI      2    100    1000
  51      DQ      1     50     500

  52      KK   SUB3A
  53      KM   AREA BOUNDED BY BETHANY HOME ROAD- 99TH ST- CAMELBACK ROAD- RID CHANNEL
  54      KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
  55      KM   HYDROGRAPH AT C.P. (C)
  56      PB   2.45
  57      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  58      PI   0.06   0.05
  59      BA   0.66
  60      LS      0     85     48
  61      UK   4500   .005    0.1    100
  62      RK   5280   .003  0.025          TRAP                  YES

  63      KK   SUB3A
  64      KM        DIVERT TO R.I.D. CHANNEL
  65      DT    RID
  66      DI      1    150    151    300   1000
  67      DQ      1    150    150    150    150

  68      KK   SUB4
  69      KM        SUBAREA 3 ROUTED TO SUBAREA 4
  70      RK   4000   .003  0.025          TRAP      5    0.5

  71      KK   SUB4
  72      KM   AREA BOUNDED BY BETHANY HOME ROAD- AGUA FRIA-CAMELBACK ROAD- RID CHANNEL
  73      KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
  74      KM   HYDROGRAPH AT C.P. (D) INTO AGUA FRIA WASH
  75      PB   2.45
  76      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  77      PI   0.06   0.05
  78      BA   1.06
  79      LS      0     88     55
  80      UK   5800   .005    0.1    100
  81      RK   4000   .003  0.025          TRAP

  82      KK   RET4
  83      KM        RETENTION REQUIREMENT FOR SUB AREA 4
  84      RL      0      0
  85      RS      1   STOR      0
  86      SV      0     15     30     45     48     51     54     60
  87      SQ      0      0      0      0    107    304    558   1200
  88      SE      0      1      2      3    3.2    3.4    3.6    4.0

  89      KK   SUB4
  90      KM        COMBINED ROUTED SUB3 AND ROUTED SUB4
  91      HC      2
```

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

  92      KK  DIV25
  93      KM       RETRIEVE DIVERSION FROM CONCENTRATION B OF AREA 2
  94      DR  DIV25

  95      KK   SUB5
  96      KM       DIVERSION FLOW FROM SUB2 ROUTED TO SUB5
  97      RK   5280  0.005  0.025          TRAP      5    0.5

  98      KK  SUB5B
  99      KM  NORTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
 100      KM   ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99TH STREET
 101      PB   2.45
 102      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
 103      PI   0.06   0.05
 104      BA   0.50
 105      LS      0     89     60            89     60
 106      UK   1850  .0033    0.1     25
 107      UK   5600  .0033    0.1     75
 108      RK   2640  0.005  0.025          TRAP

 109      KK  SUB5A
 110      KM  SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
 111      KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
 112      PB   2.45
 113      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
 114      PI   0.06   0.05
 115      BA   0.50
 116      LS      0     89     60            89     60
 117      UK   1850  .0033    0.1     25
 118      UK   5600  .0033    0.1     75
 119      RK   2640  0.005  0.025          TRAP

 120      KK   SUB5
 121      KM       COMBINE RUNOFF FROM SUB5A AND SUB5B
 122      HC      2

 123      KK   RET5
 124      KM       RETENTION REQUIREMENT FOR SUBAREA 5
 125      RS      1   STOR      0
 126      SV      0     15     30     45     48     51     54     60
 127      SQ      0      0      0      0    107    304    558   1200
 128      SE      0      1      2      3    3.2    3.4    3.6    4.0

 129      KK   SUB5
 130      KM       COMBINE ROUTED SUB5A-B AND DIVERTED SUB2
 131      HC      2

 132      KK   SUB5
 133      KM       DIVERT TO THOMAS ROAD
 134      DT  THOMAS
 135      DI      2    100   1000
 136      DQ      1     50    500
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

  137     KK   SUB6
  138     KM        ROUTED TO SUB6 (AT MID-POINT (E) AND (F))
  139     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  140     RK    2640   0.005   0.025          TRAP      5     0.5

  141     KK   SUB6A
  142     KM   AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
  143     KM   ASSUME OVERLAND LENGTH 100' AS LOT SIZE
  144     KM         COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
  145     KM         MAIN CHANNEL 5000' RUNING NORTH-SOUTH
  146     KM   CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
  147     KM   MODELED AS 75% OF THE AREA ROUTED THROUGH THE LAKE
  148     BA     .75
  149     LS             80      29
  150     UK     100   .0033     0.2     100
  151     RK    2000    .005    0.16     .10    TRAP
  152     RK    5000    .005    0.16            TRAP

  153     KK   SUB6A
  154     KM        SUB6A LAKE ROUTING
  155     RL       0       0
  156     RS       1    STOR       0
  157     SV       0     5.5    11.0    16.5    17.9    19.3    20.7    23.5
  158     SQ       0       0       0       0      67     190     350     750
  159     SE       0       1       2       3     3.2     3.4     3.6     4.0

  160     KK   SUB6B
  161     KM   AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
  162     KM   ASSUME OVERLAND LENGTH 100' AS LOT SIZE
  163     KM         COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
  164     KM         MAIN CHANNEL 1000' RUNING NORTH-SOUTH
  165     KM   CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
  166     KM   MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE
  167     BA    .125
  168     LS       0      80      29
  169     UK     100   .0033     0.2     100
  170     RK    2000    .005    0.16     .10    TRAP
  171     RK    1000    .005    0.16            TRAP

  172     KK   SUB6
  173     KM        COMBINED SUB6B, ROUTED SUB6A AND ROUTED 5 AT C.P. (F)
  174     HC       3

  175     KK   SUB6
  176     KM        DIVERT TO SUB8
  177     DT   DIV681
  178     DI       1     111     146     199     266     350     450     570     711
  179     DQ       0       1       5      17      39      73     121     186     267
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

  180     KK   SUB6
  181     KM        ROUTED TO SUB6 (CONTRATION POINT F)
  182     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  183     RK    2640  0.005  0.025          TRAP      5    0.5

  184     KK   SUB6C
  185     KM   AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
  186     KM   ASSUME OVERLAND LENGTH 100' AS LOT SIZE
  187     KM         COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
  188     KM         MAIN CHANNEL 1000' RUNING NORTH-SOUTH
  189     KM   CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
  190     KM   MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE
  191     BA    .125
  192     LS      0     80     29
  193     UK    100   .0033   0.2    100
  194     RK   2000    .005   0.16   .10   TRAP
  195     RK   1000    .005   0.16         TRAP

  196     KK   SUB6
  197     KM        COMBINED SUB6C, ROUTED(SUB6A, SUB6B AND ROUTED 5) AT C.P. (F)
  198     HC      2

  199     KK   SUB6
  200     KM        DIVERT TO SUB8
  201     DT  DIV682
  202     DI      2    150    1000
  203     DQ      1     75     500

  204     KK   SUB7
  205     KM        SUB6 ROUTED TO SUB7
  206     RK   5800   .003  0.025          TRAP      5    0.5

  207     KK   SUB7
  208     KM   AREA BOUNDED BY 107TH ST- CAMELBACK ROAD- INDIAN SCHOOL-AUGU FRIA
  209     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  210     KM   HYDROGRAPH AT C.P. (G) INTO AGUA FRIA WASH
  211     PB    2.45
  212     PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  213     PI   0.06   0.05
  214     BA   0.58
  215     LS      0     89     60
  216     UK   4500   .005    0.1    100
  217     RK   5800   .003  0.025          TRAP

  218     KK   RET7
  219     KM        RETENTION REQUIREMENT FOR SUBAREA 7
  220     RS      1   STOR      0
  221     SV      0      9     18     27     29     31     32     36
  222     SQ      0      0      0      0    107    304    558   1200
  223     SE      0      1      2      3    3.2    3.4    3.6    4.0
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

  224     KK   SUB7
  225     KM        COMBINED ROUTED SUB6 AND ROUTED SUB7
  226     HC      2

  227     KK  DIV681
  228     KM        RETRIEVED DIVERSION FROM SUB6
  229     DR  DIV681

  230     KK   SUB6
  231     KM        ROUTED TO SUB6 (CONTRATION POINT F)
  232     KM   ASSUME COLLECTOR CHANNEL ALONG SOUTH SIDE EASEMENT INDIAN SCHOOL ROAD
  233     RK    2640   0.005   0.025          TRAP      5     0.5

  234     KK  DIV682
  235     KM        RETRIEVED DIVERSION FROM SUB6
  236     DR  DIV682

  237     KK   SUB68
  238     KM        COMBINED RETRIVED DIV681 AND DIV682
  239     HC      2

  240     KK   SUB8
  241     KM   SOUTH-EAST CORNER OF INDIAN SCHOOL RD AND 107 TH ST
  242     KM   ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 107TH ST
  243     KM   HYDROGRAPH AT C.P. (H)
  244     PB    2.45
  245     PI    0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
  246     PI    0.06    0.05
  247     BA    0.36
  248     LS       0      89      60
  249     UK    3000    .005     0.1     100
  250     RK    2640    .003   0.025          TRAP                    YES

  251     KK   SUB9
  252     KM   AREA BOUNDED BY INDIAN SCHOOL RD-107 ST-LEVEE-AGUA FRIA
  253     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT OF LEVEE
  254     KM   HYDROGRAPH AT C.P. (I) INTO AGUA FRIA WASH
  255     PB    2.45
  256     PI    0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
  257     PI    0.06    0.05
  258     BA    0.30
  259     LS       0      89      60
  260     UK    1500    .005     0.1     100
  261     RK    6400    .003   0.025          TRAP                    YES
  262     ZZ
```

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****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*             FEBRUARY 1981            *
*          REVISED 30 OCT 81           *
*                                      *
* RUN DATE      11-J    TIME      11:1 *
*                                      *
****************************************
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```
****************************************
*                                      *
*      U.S. ARMY CORPS OF ENGINEERS    *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*  (916) 440-3285 OR (FTS) 448-3285    *
*                                      *
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                    MARICOPA COUNTY FLOOD CONTROL DISTRICT
                    HYDROLOGY(AQUA FRIA RIVER-BETHANY HOME-91TH ST-THOMAS RD)
                     1 HOUR 100 YEAR DISCHARGE FUTURE CONDITION
                     NO IMPROVEMENT AT ANY INTERSECTION
                     TYPE 2 RAINFALL DISTRIBUTION
                     KINEMATIC WAVE METHOD
                     VAX-MMR4.DAT

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

    IT          HYDROGRAPH TIME DATA
                       NMIN          5  MINUTES IN COMPUTATION INTERVAL
                      IDATE     1    0  STARTING DATE
                      ITIME       0120  STARTING TIME
                         NQ        101  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE     1    0  ENDING DATE
                     NDTIME       0940  ENDING TIME

                 COMPUTATION INTERVAL     0.08 HOURS
                      TOTAL TIME BASE     8.33 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
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
 10 KK      *    SUB2A   *
            *            *
            **************
                    SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
                     ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD

            SUBBASIN RUNOFF DATA
```

16 BA SUBBASIN CHARACTERISTICS

TAREA 0.50 SUBBASIN AREA

PRECIPITATION DATA

13 PB STORM 2.45 BASIN TOTAL PRECIPITATION

14 PI INCREMENTAL PRECIPITATION PATTERN

0.05 0.07 0.07 0.10 0.16 1.16 0.39 0.14 0.11 0.09
0.06 0.05

17 LS SCS LOSS RATE

STRTL 0.25 INITIAL ABSTRACTION
CRVNBR 89.00 CURVE NUMBER
RTIMP 54.00 PERCENT IMPERVIOUS AREA

LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT

STRTL 0.25 INITIAL ABSTRACTION
CRVNBR 89.00 CURVE NUMBER
RTIMP 54.00 PERCENT IMPERVIOUS AREA

KINEMATIC WAVE

18 UK OVERLAND-FLOW ELEMENT NO. 1

L 1850. OVERLAND FLOW LENGTH
S 0.0033 SLOPE
N 0.100 ROUGHNESS COEFFICIENT
PA 25.0 PERCENT OF SUBBASIN

19 UK OVERLAND-FLOW ELEMENT NO. 2

L 5600. OVERLAND FLOW LENGTH
S 0.0033 SLOPE
N 0.100 ROUGHNESS COEFFICIENT
PA 75.0 PERCENT OF SUBBASIN

20 RK MAIN CHANNEL

L 2640. CHANNEL LENGTH
S 0.0050 SLOPE
N 0.025 CHANNEL ROUGHNESS COEFFICIENT
CA 0.50 CONTRIBUTING AREA
SHAPE TRAP CHANNEL SHAPE
WD 0.00 BOTTOM WIDTH OR DIAMETER
Z 1.00 SIDE SLOPE
RUPSTQ NO ROUTE UPSTREAM HYDROGRAPH

***

COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.8559	1.667	5.00	231.25
2	0.8559	1.667	5.00	350.00
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB2A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	65.
1		0125	2	0.05	0.02	0.03	0.	1		0540	53	0.00	0.00	0.00	63.
1		0130	3	0.07	0.03	0.04	0.	1		0545	54	0.00	0.00	0.00	61.

1	0135	4	0.07	0.03	0.04	0.	*	1	0550	55	0.00	0.00	0.00	59.
1	0140	5	0.10	0.05	0.05	0.	*	1	0555	56	0.00	0.00	0.00	57.
1	0145	6	0.16	0.06	0.10	1.	*	1	0600	57	0.00	0.00	0.00	55.
1	0150	7	1.16	0.22	0.94	17.	*	1	0605	58	0.00	0.00	0.00	53.
1	0155	8	0.39	0.04	0.35	67.	*	1	0610	59	0.00	0.00	0.00	51.
1	0200	9	0.14	0.01	0.13	105.	*	1	0615	60	0.00	0.00	0.00	50.
1	0205	10	0.11	0.01	0.10	123.	*	1	0620	61	0.00	0.00	0.00	48.
1	0210	11	0.09	0.01	0.08	136.	*	1	0625	62	0.00	0.00	0.00	46.
1	0215	12	0.06	0.00	0.06	145.	*	1	0630	63	0.00	0.00	0.00	45.
1	0220	13	0.05	0.00	0.05	153.	*	1	0635	64	0.00	0.00	0.00	43.
1	0225	14	0.00	0.00	0.00	157.	*	1	0640	65	0.00	0.00	0.00	42.
1	0230	15	0.00	0.00	0.00	158.	*	1	0645	66	0.00	0.00	0.00	41.
1	0235	16	0.00	0.00	0.00	158.	*	1	0650	67	0.00	0.00	0.00	39.
1	0240	17	0.00	0.00	0.00	157.	*	1	0655	68	0.00	0.00	0.00	38.
1	0245	18	0.00	0.00	0.00	156.	*	1	0700	69	0.00	0.00	0.00	37.
1	0250	19	0.00	0.00	0.00	153.	*	1	0705	70	0.00	0.00	0.00	36.
1	0255	20	0.00	0.00	0.00	149.	*	1	0710	71	0.00	0.00	0.00	35.
1	0300	21	0.00	0.00	0.00	145.	*	1	0715	72	0.00	0.00	0.00	34.
1	0305	22	0.00	0.00	0.00	140.	*	1	0720	73	0.00	0.00	0.00	33.
1	0310	23	0.00	0.00	0.00	135.	*	1	0725	74	0.00	0.00	0.00	32.
1	0315	24	0.00	0.00	0.00	130.	*	1	0730	75	0.00	0.00	0.00	31.
1	0320	25	0.00	0.00	0.00	126.	*	1	0735	76	0.00	0.00	0.00	30.
1	0325	26	0.00	0.00	0.00	122.	*	1	0740	77	0.00	0.00	0.00	29.
1	0330	27	0.00	0.00	0.00	118.	*	1	0745	78	0.00	0.00	0.00	28.
1	0335	28	0.00	0.00	0.00	115.	*	1	0750	79	0.00	0.00	0.00	27.
1	0340	29	0.00	0.00	0.00	112.	*	1	0755	80	0.00	0.00	0.00	26.
1	0345	30	0.00	0.00	0.00	109.	*	1	0800	81	0.00	0.00	0.00	26.
1	0350	31	0.00	0.00	0.00	107.	*	1	0805	82	0.00	0.00	0.00	25.
1	0355	32	0.00	0.00	0.00	104.	*	1	0810	83	0.00	0.00	0.00	24.
1	0400	33	0.00	0.00	0.00	102.	*	1	0815	84	0.00	0.00	0.00	24.
1	0405	34	0.00	0.00	0.00	100.	*	1	0820	85	0.00	0.00	0.00	23.
1	0410	35	0.00	0.00	0.00	98.	*	1	0825	86	0.00	0.00	0.00	22.
1	0415	36	0.00	0.00	0.00	97.	*	1	0830	87	0.00	0.00	0.00	22.
1	0420	37	0.00	0.00	0.00	95.	*	1	0835	88	0.00	0.00	0.00	21.
1	0425	38	0.00	0.00	0.00	93.	*	1	0840	89	0.00	0.00	0.00	21.
1	0430	39	0.00	0.00	0.00	91.	*	1	0845	90	0.00	0.00	0.00	20.
1	0435	40	0.00	0.00	0.00	89.	*	1	0850	91	0.00	0.00	0.00	20.
1	0440	41	0.00	0.00	0.00	88.	*	1	0855	92	0.00	0.00	0.00	19.
1	0445	42	0.00	0.00	0.00	86.	*	1	0900	93	0.00	0.00	0.00	19.
1	0450	43	0.00	0.00	0.00	84.	*	1	0905	94	0.00	0.00	0.00	18.
1	0455	44	0.00	0.00	0.00	82.	*	1	0910	95	0.00	0.00	0.00	18.
1	0500	45	0.00	0.00	0.00	79.	*	1	0915	96	0.00	0.00	0.00	17.
1	0505	46	0.00	0.00	0.00	77.	*	1	0920	97	0.00	0.00	0.00	17.
1	0510	47	0.00	0.00	0.00	75.	*	1	0925	98	0.00	0.00	0.00	16.
1	0515	48	0.00	0.00	0.00	73.	*	1	0930	99	0.00	0.00	0.00	16.
1	0520	49	0.00	0.00	0.00	71.	*	1	0935	100	0.00	0.00	0.00	16.
1	0525	50	0.00	0.00	0.00	69.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	67.	*							
							*							

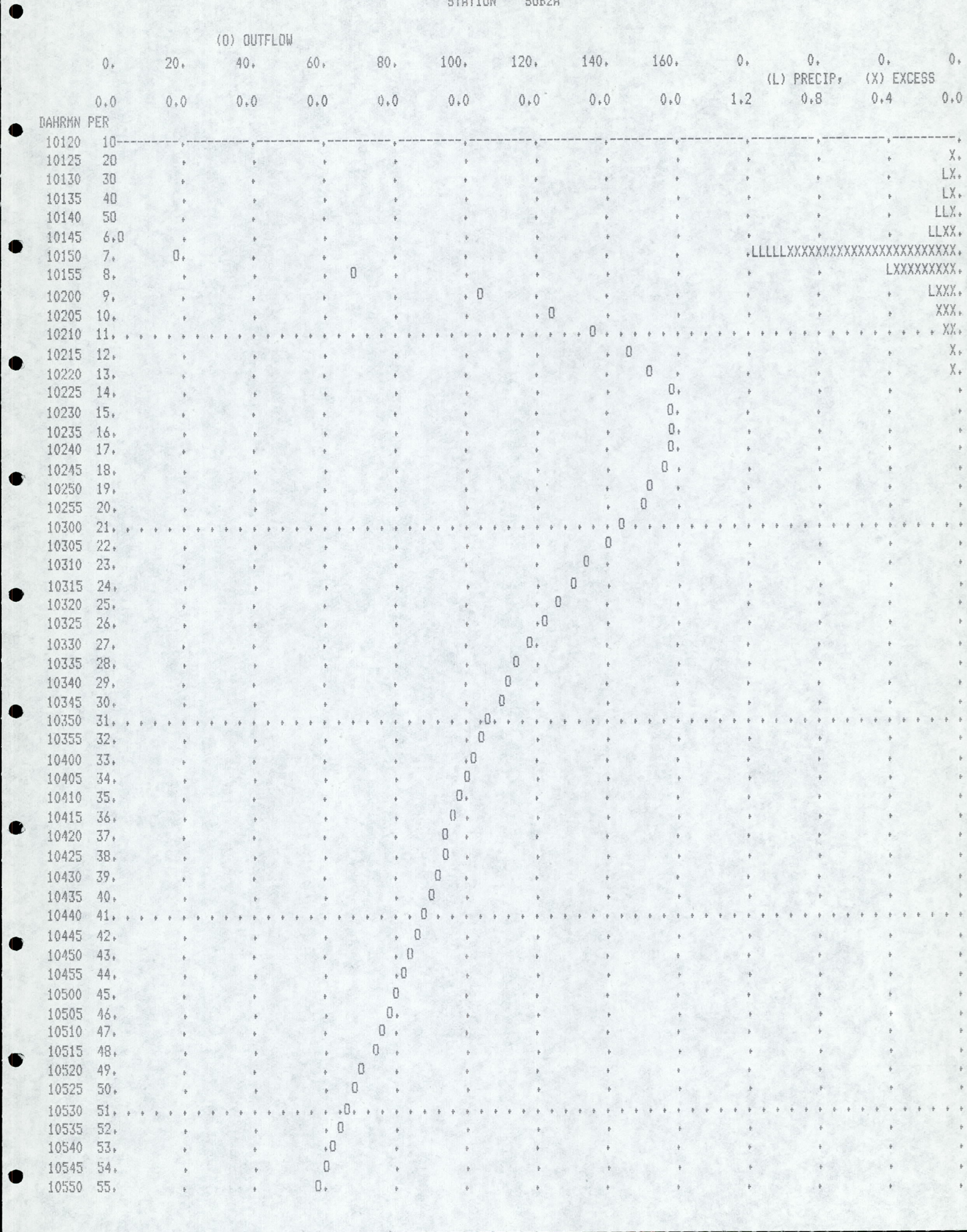
****

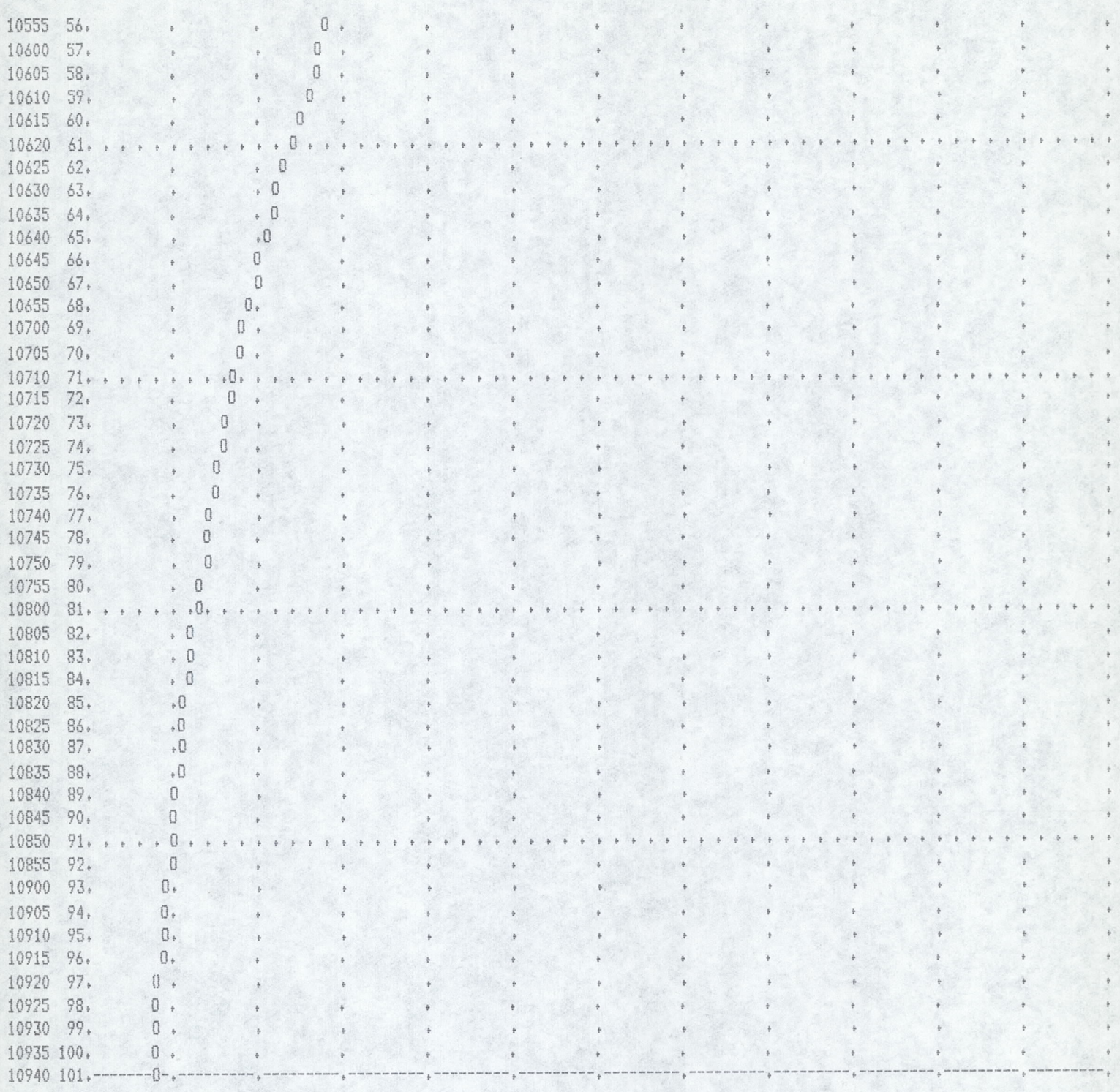
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.48, TOTAL EXCESS = 1.97

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
158.	1.17	(CFS)	85.	66.	66.	66.
		(INCHES)	1.574	1.693	1.693	1.693
		(AC-FT)	42.	45.	45.	45.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB2A

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10650 67.
10655 68.
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10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
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10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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

            **************
            *            *
21 KK       *    SUB2B   *
            *            *
            **************
                      NORTH-WEST HALF OF 91ST-CAMELBACK-99TH-BETHANY HOME ROAD
                       ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99-TH ST ROAD

              SUBBASIN RUNOFF DATA

27 BA           SUBBASIN CHARACTERISTICS
                      TAREA          0.50  SUBBASIN AREA

                PRECIPITATION DATA

24 PB                 STORM          2.45  BASIN TOTAL PRECIPITATION

25 PI             INCREMENTAL PRECIPITATION PATTERN
                     0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                     0.06      0.05

28 LS           SCS LOSS RATE
                      STRTL          0.25  INITIAL ABSTRACTION
                     CRVNBR         89.00  CURVE NUMBER
                      RTIMP         54.00  PERCENT IMPERVIOUS AREA

                  LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
                      STRTL          0.25  INITIAL ABSTRACTION
                     CRVNBR         89.00  CURVE NUMBER
                      RTIMP         54.00  PERCENT IMPERVIOUS AREA

                KINEMATIC WAVE
29 UK             OVERLAND-FLOW ELEMENT NO. 1
                          L         1850.  OVERLAND FLOW LENGTH
                          S        0.0033  SLOPE
                          N         0.100  ROUGHNESS COEFFICIENT
                         PA          25.0  PERCENT OF SUBBASIN
30 UK             OVERLAND-FLOW ELEMENT NO. 2
                          L         5600.  OVERLAND FLOW LENGTH
                          S        0.0033  SLOPE
                          N         0.100  ROUGHNESS COEFFICIENT
                         PA          75.0  PERCENT OF SUBBASIN
31 RK             MAIN CHANNEL
                          L         2640.  CHANNEL LENGTH
                          S        0.0050  SLOPE
                          N         0.025  CHANNEL ROUGHNESS COEFFICIENT
                         CA          0.50  CONTRIBUTING AREA
                      SHAPE          TRAP  CHANNEL SHAPE
                         WD          0.00  BOTTOM WIDTH OR DIAMETER
                          Z          1.00  SIDE SLOPE
                     RUPSTQ            NO  ROUTE UPSTREAM HYDROGRAPH

                                                                  ***

          COMPUTED KINEMATIC PARAMETERS
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ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.8559	1.667	5.00	231.25
2	0.8559	1.667	5.00	350.00
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB2B

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	65.
1		0125	2	0.05	0.02	0.03	0.	*	1		0540	53	0.00	0.00	0.00	63.
1		0130	3	0.07	0.03	0.04	0.	*	1		0545	54	0.00	0.00	0.00	61.
1		0135	4	0.07	0.03	0.04	0.	*	1		0550	55	0.00	0.00	0.00	59.
1		0140	5	0.10	0.05	0.05	0.	*	1		0555	56	0.00	0.00	0.00	57.
1		0145	6	0.16	0.06	0.10	1.	*	1		0600	57	0.00	0.00	0.00	55.
1		0150	7	1.16	0.22	0.94	17.	*	1		0605	58	0.00	0.00	0.00	53.
1		0155	8	0.39	0.04	0.35	67.	*	1		0610	59	0.00	0.00	0.00	51.
1		0200	9	0.14	0.01	0.13	105.	*	1		0615	60	0.00	0.00	0.00	50.
1		0205	10	0.11	0.01	0.10	123.	*	1		0620	61	0.00	0.00	0.00	48.
1		0210	11	0.09	0.01	0.08	136.	*	1		0625	62	0.00	0.00	0.00	46.
1		0215	12	0.06	0.00	0.06	145.	*	1		0630	63	0.00	0.00	0.00	45.
1		0220	13	0.05	0.00	0.05	153.	*	1		0635	64	0.00	0.00	0.00	43.
1		0225	14	0.00	0.00	0.00	157.	*	1		0640	65	0.00	0.00	0.00	42.
1		0230	15	0.00	0.00	0.00	158.	*	1		0645	66	0.00	0.00	0.00	41.
1		0235	16	0.00	0.00	0.00	158.	*	1		0650	67	0.00	0.00	0.00	39.
1		0240	17	0.00	0.00	0.00	157.	*	1		0655	68	0.00	0.00	0.00	38.
1		0245	18	0.00	0.00	0.00	156.	*	1		0700	69	0.00	0.00	0.00	37.
1		0250	19	0.00	0.00	0.00	153.	*	1		0705	70	0.00	0.00	0.00	36.
1		0255	20	0.00	0.00	0.00	149.	*	1		0710	71	0.00	0.00	0.00	35.
1		0300	21	0.00	0.00	0.00	145.	*	1		0715	72	0.00	0.00	0.00	34.
1		0305	22	0.00	0.00	0.00	140.	*	1		0720	73	0.00	0.00	0.00	33.
1		0310	23	0.00	0.00	0.00	135.	*	1		0725	74	0.00	0.00	0.00	32.
1		0315	24	0.00	0.00	0.00	130.	*	1		0730	75	0.00	0.00	0.00	31.
1		0320	25	0.00	0.00	0.00	126.	*	1		0735	76	0.00	0.00	0.00	30.
1		0325	26	0.00	0.00	0.00	122.	*	1		0740	77	0.00	0.00	0.00	29.
1		0330	27	0.00	0.00	0.00	118.	*	1		0745	78	0.00	0.00	0.00	28.
1		0335	28	0.00	0.00	0.00	115.	*	1		0750	79	0.00	0.00	0.00	27.
1		0340	29	0.00	0.00	0.00	112.	*	1		0755	80	0.00	0.00	0.00	26.
1		0345	30	0.00	0.00	0.00	109.	*	1		0800	81	0.00	0.00	0.00	26.
1		0350	31	0.00	0.00	0.00	107.	*	1		0805	82	0.00	0.00	0.00	25.
1		0355	32	0.00	0.00	0.00	104.	*	1		0810	83	0.00	0.00	0.00	24.
1		0400	33	0.00	0.00	0.00	102.	*	1		0815	84	0.00	0.00	0.00	24.
1		0405	34	0.00	0.00	0.00	100.	*	1		0820	85	0.00	0.00	0.00	23.
1		0410	35	0.00	0.00	0.00	98.	*	1		0825	86	0.00	0.00	0.00	22.
1		0415	36	0.00	0.00	0.00	97.	*	1		0830	87	0.00	0.00	0.00	22.
1		0420	37	0.00	0.00	0.00	95.	*	1		0835	88	0.00	0.00	0.00	21.
1		0425	38	0.00	0.00	0.00	93.	*	1		0840	89	0.00	0.00	0.00	21.
1		0430	39	0.00	0.00	0.00	91.	*	1		0845	90	0.00	0.00	0.00	20.
1		0435	40	0.00	0.00	0.00	89.	*	1		0850	91	0.00	0.00	0.00	20.
1		0440	41	0.00	0.00	0.00	88.	*	1		0855	92	0.00	0.00	0.00	19.
1		0445	42	0.00	0.00	0.00	86.	*	1		0900	93	0.00	0.00	0.00	19.
1		0450	43	0.00	0.00	0.00	84.	*	1		0905	94	0.00	0.00	0.00	18.
1		0455	44	0.00	0.00	0.00	82.	*	1		0910	95	0.00	0.00	0.00	18.
1		0500	45	0.00	0.00	0.00	79.	*	1		0915	96	0.00	0.00	0.00	17.
1		0505	46	0.00	0.00	0.00	77.	*	1		0920	97	0.00	0.00	0.00	17.
1		0510	47	0.00	0.00	0.00	75.	*	1		0925	98	0.00	0.00	0.00	16.
1		0515	48	0.00	0.00	0.00	73.	*	1		0930	99	0.00	0.00	0.00	16.

1	0520	49	0.00	0.00	0.00	71.	*	1	0935	100	0.00	0.00	0.00	16.
1	0525	50	0.00	0.00	0.00	69.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	67.	*							
							*							

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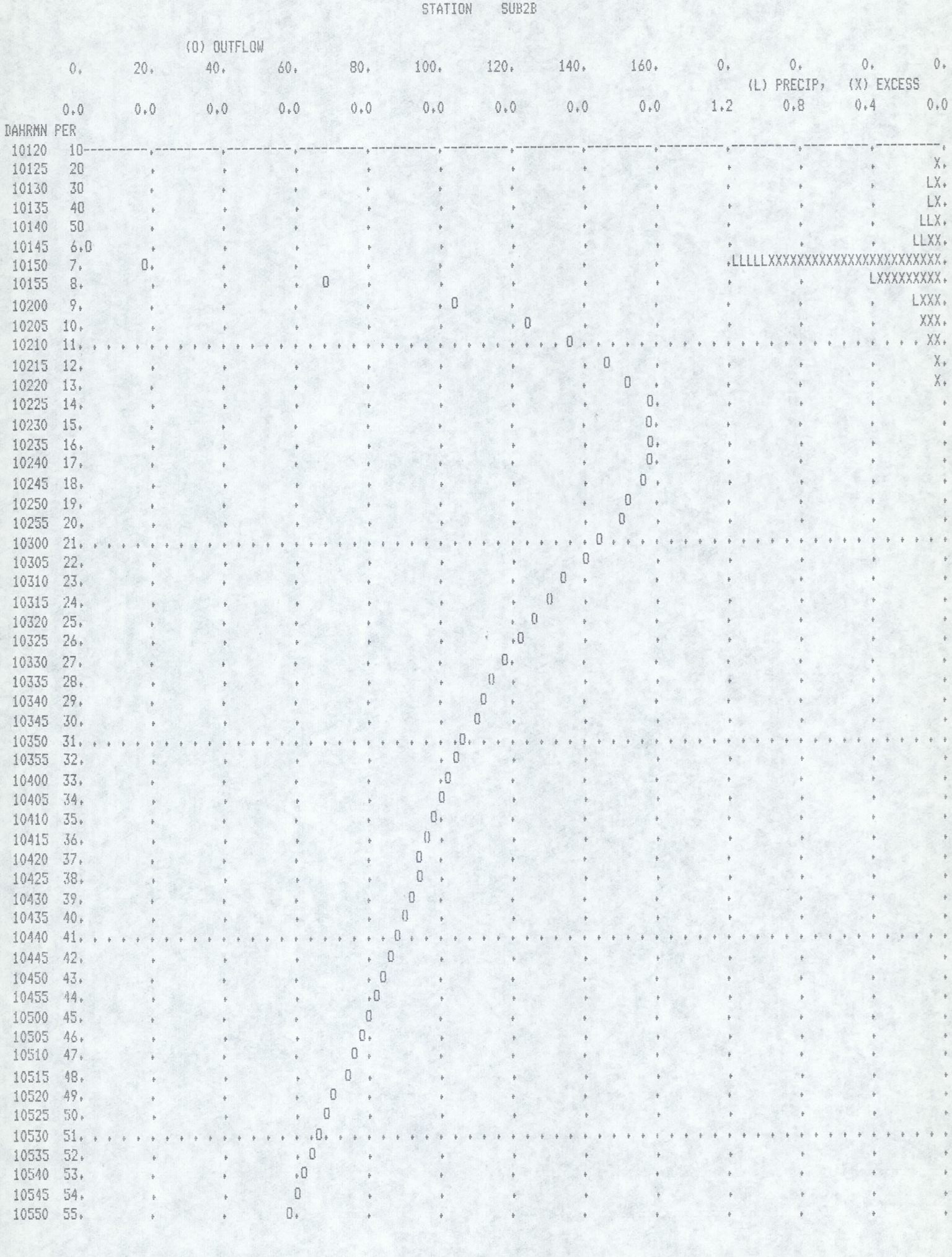
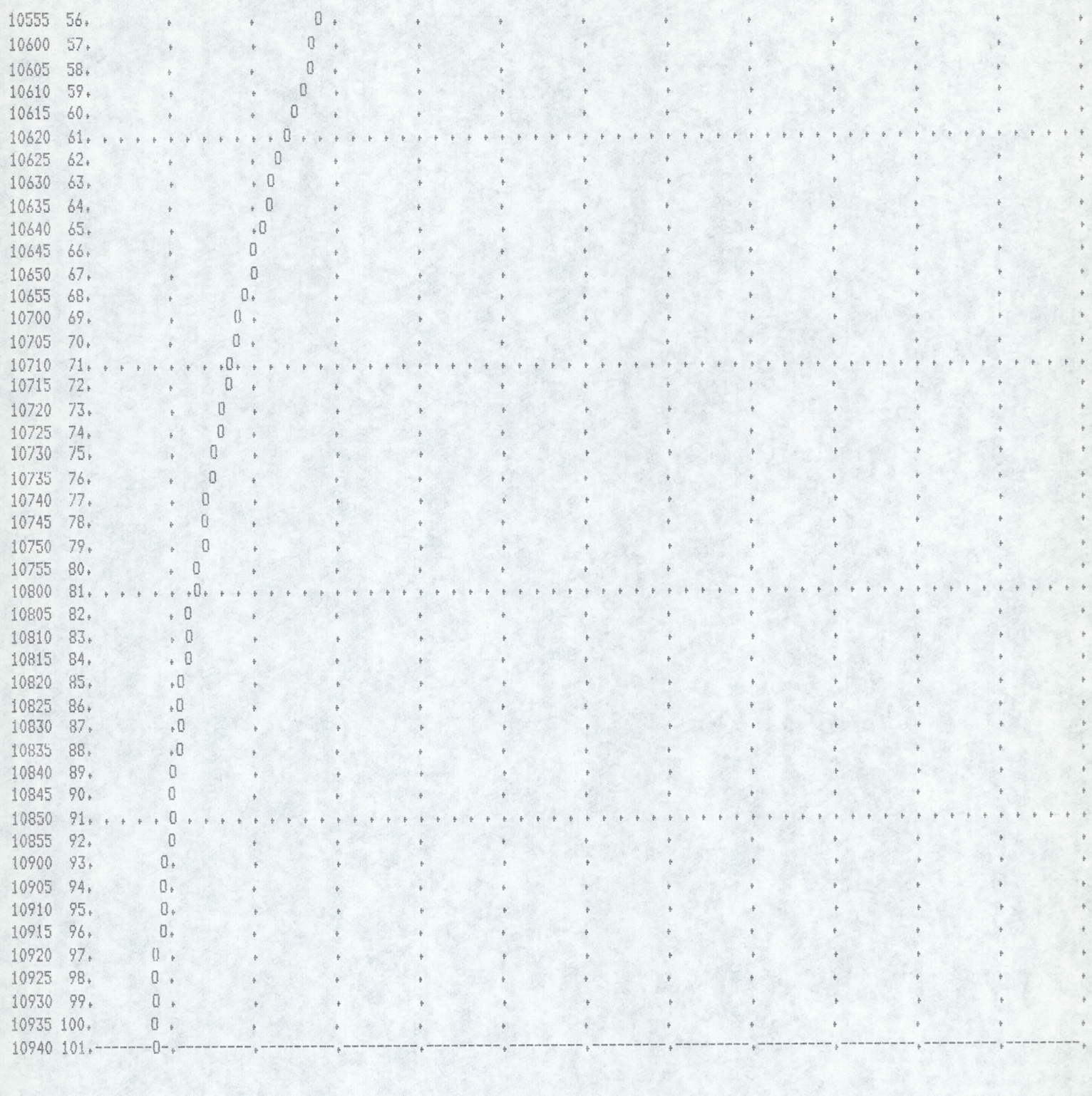
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.48, TOTAL EXCESS = 1.97

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
158.	1.17	(CFS)	85.	66.	66.	66.
		(INCHES)	1.574	1.693	1.693	1.693
		(AC-FT)	42.	45.	45.	45.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB2B

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10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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              *            *
  32 KK       *      SUB2  *
              *            *
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COMBINE RUNOFF FROM SUB2A AND SUB2B AT C.P.(B)

34 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB2

SUM OF 2 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	237.	1		0540	53	125.	1		0750	79	54.
1		0125	2	0.	1		0335	28	230.	1		0545	54	121.	1		0755	80	53.
1		0130	3	0.	1		0340	29	224.	1		0550	55	117.	1		0800	81	51.
1		0135	4	0.	1		0345	30	218.	1		0555	56	113.	1		0805	82	50.
1		0140	5	1.	1		0350	31	213.	1		0600	57	110.	1		0810	83	49.
1		0145	6	3.	1		0355	32	209.	1		0605	58	106.	1		0815	84	47.
1		0150	7	35.	1		0400	33	205.	1		0610	59	103.	1		0820	85	46.
1		0155	8	134.	1		0405	34	201.	1		0615	60	99.	1		0825	86	45.
1		0200	9	209.	1		0410	35	197.	1		0620	61	96.	1		0830	87	43.
1		0205	10	246.	1		0415	36	193.	1		0625	62	93.	1		0835	88	42.
1		0210	11	271.	1		0420	37	190.	1		0630	63	90.	1		0840	89	41.
1		0215	12	291.	1		0425	38	186.	1		0635	64	87.	1		0845	90	40.
1		0220	13	306.	1		0430	39	183.	1		0640	65	84.	1		0850	91	39.
1		0225	14	315.	1		0435	40	179.	1		0645	66	81.	1		0855	92	38.
1		0230	15	317.	1		0440	41	175.	1		0650	67	79.	1		0900	93	37.
1		0235	16	316.	1		0445	42	171.	1		0655	68	76.	1		0905	94	36.
1		0240	17	315.	1		0450	43	167.	1		0700	69	74.	1		0910	95	35.
1		0245	18	311.	1		0455	44	163.	1		0705	70	72.	1		0915	96	34.
1		0250	19	306.	1		0500	45	159.	1		0710	71	69.	1		0920	97	34.
1		0255	20	298.	1		0505	46	155.	1		0715	72	67.	1		0925	98	33.
1		0300	21	289.	1		0510	47	150.	1		0720	73	65.	1		0930	99	32.
1		0305	22	280.	1		0515	48	146.	1		0725	74	63.	1		0935	100	31.
1		0310	23	270.	1		0520	49	142.	1		0730	75	61.	1		0940	101	30.
1		0315	24	261.	1		0525	50	137.	1		0735	76	59.					
1		0320	25	252.	1		0530	51	133.	1		0740	77	58.					
1		0325	26	244.	1		0535	52	129.	1		0745	78	56.					

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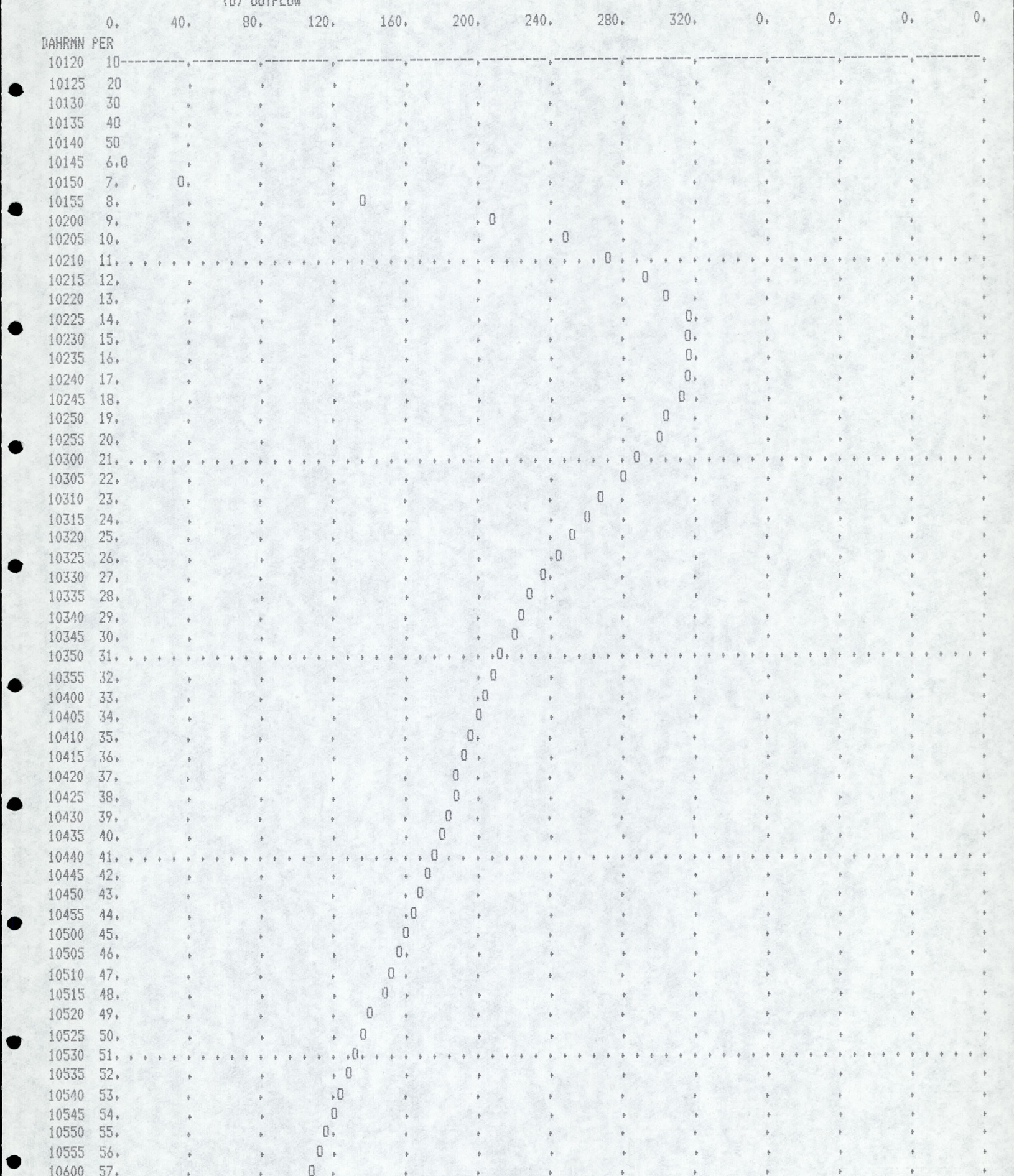
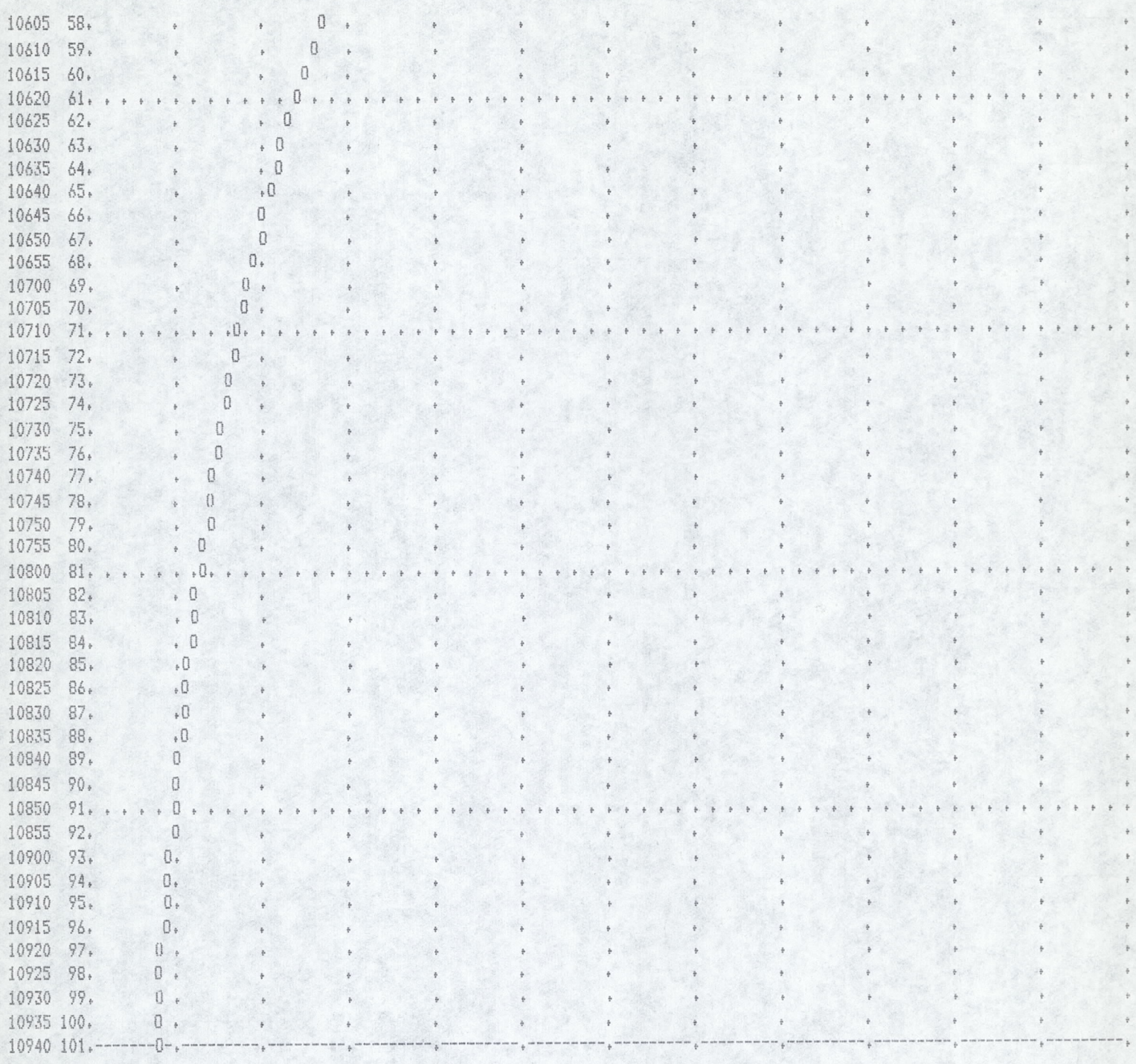
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
317.	1.17	(CFS)	169.	131.	131.	131.
		(INCHES)	1.574	1.693	1.693	1.693
		(AC-FT)	84.	90.	90.	90.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB2

(O) OUTFLOW

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10930 99.
10935 100.
10940 101.

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              *             *
  35 KK       *      SUB2   *
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DIVERSION FOR THE STORM DRAIN

DT	DIVERSION				
	ISTAD	SD2	DIVERSION HYDROGRAPH IDENTIFICATION		
DI	INFLOW	1.00	52.00	1000.00	
DQ	DIVERTED FLOW	1.00	52.00	52.00	

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DIVERSION HYDROGRAPH SD2

DA MON	HRMN	ORD	FLOW	*	DA MON	HRMN	ORD	FLOW	*	DA MON	HRMN	ORD	FLOW	*	DA MON	HRMN	ORD	FLOW
1	0120	1	0.	*	1	0330	27	52.	*	1	0540	53	52.	*	1	0750	79	52.
1	0125	2	0.	*	1	0335	28	52.	*	1	0545	54	52.	*	1	0755	80	52.
1	0130	3	0.	*	1	0340	29	52.	*	1	0550	55	52.	*	1	0800	81	51.
1	0135	4	0.	*	1	0345	30	52.	*	1	0555	56	52.	*	1	0805	82	50.
1	0140	5	1.	*	1	0350	31	52.	*	1	0600	57	52.	*	1	0810	83	49.
1	0145	6	3.	*	1	0355	32	52.	*	1	0605	58	52.	*	1	0815	84	47.
1	0150	7	35.	*	1	0400	33	52.	*	1	0610	59	52.	*	1	0820	85	46.
1	0155	8	52.	*	1	0405	34	52.	*	1	0615	60	52.	*	1	0825	86	45.
1	0200	9	52.	*	1	0410	35	52.	*	1	0620	61	52.	*	1	0830	87	43.
1	0205	10	52.	*	1	0415	36	52.	*	1	0625	62	52.	*	1	0835	88	42.
1	0210	11	52.	*	1	0420	37	52.	*	1	0630	63	52.	*	1	0840	89	41.
1	0215	12	52.	*	1	0425	38	52.	*	1	0635	64	52.	*	1	0845	90	40.
1	0220	13	52.	*	1	0430	39	52.	*	1	0640	65	52.	*	1	0850	91	39.
1	0225	14	52.	*	1	0435	40	52.	*	1	0645	66	52.	*	1	0855	92	38.
1	0230	15	52.	*	1	0440	41	52.	*	1	0650	67	52.	*	1	0900	93	37.
1	0235	16	52.	*	1	0445	42	52.	*	1	0655	68	52.	*	1	0905	94	36.
1	0240	17	52.	*	1	0450	43	52.	*	1	0700	69	52.	*	1	0910	95	35.
1	0245	18	52.	*	1	0455	44	52.	*	1	0705	70	52.	*	1	0915	96	34.
1	0250	19	52.	*	1	0500	45	52.	*	1	0710	71	52.	*	1	0920	97	34.
1	0255	20	52.	*	1	0505	46	52.	*	1	0715	72	52.	*	1	0925	98	33.
1	0300	21	52.	*	1	0510	47	52.	*	1	0720	73	52.	*	1	0930	99	32.
1	0305	22	52.	*	1	0515	48	52.	*	1	0725	74	52.	*	1	0935	100	31.
1	0310	23	52.	*	1	0520	49	52.	*	1	0730	75	52.	*	1	0940	101	30.
1	0315	24	52.	*	1	0525	50	52.	*	1	0735	76	52.	*				
1	0320	25	52.	*	1	0530	51	52.	*	1	0740	77	52.	*				
1	0325	26	52.	*	1	0535	52	52.	*	1	0745	78	52.	*				

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
52.	0.58	(CFS)	52.	47.	47.	47.
		(INCHES)	0.483	0.601	0.601	0.601
		(AC-FT)	26.	32.	32.	32.

CUMULATIVE AREA = 1.00 SQ MI

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HYDROGRAPH AT STATION SUB2

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	185.	1		0540	53	73.	1		0750	79	2.
1		0125	2	0.	1		0335	28	178.	1		0545	54	69.	1		0755	80	1.
1		0130	3	0.	1		0340	29	172.	1		0550	55	65.	1		0800	81	0.
1		0135	4	0.	1		0345	30	166.	1		0555	56	61.	1		0805	82	0.
1		0140	5	0.	1		0350	31	161.	1		0600	57	58.	1		0810	83	0.
1		0145	6	0.	1		0355	32	157.	1		0605	58	54.	1		0815	84	0.
1		0150	7	0.	1		0400	33	153.	1		0610	59	51.	1		0820	85	0.
1		0155	8	82.	1		0405	34	149.	1		0615	60	47.	1		0825	86	0.
1		0200	9	157.	1		0410	35	145.	1		0620	61	44.	1		0830	87	0.
1		0205	10	194.	1		0415	36	141.	1		0625	62	41.	1		0835	88	0.
1		0210	11	219.	1		0420	37	138.	1		0630	63	38.	1		0840	89	0.
1		0215	12	239.	1		0425	38	134.	1		0635	64	35.	1		0845	90	0.
1		0220	13	254.	1		0430	39	131.	1		0640	65	32.	1		0850	91	0.
1		0225	14	263.	1		0435	40	127.	1		0645	66	29.	1		0855	92	0.
1		0230	15	265.	1		0440	41	123.	1		0650	67	27.	1		0900	93	0.
1		0235	16	264.	1		0445	42	119.	1		0655	68	24.	1		0905	94	0.
1		0240	17	263.	1		0450	43	115.	1		0700	69	22.	1		0910	95	0.
1		0245	18	259.	1		0455	44	111.	1		0705	70	20.	1		0915	96	0.
1		0250	19	254.	1		0500	45	107.	1		0710	71	17.	1		0920	97	0.
1		0255	20	246.	1		0505	46	103.	1		0715	72	15.	1		0925	98	0.
1		0300	21	237.	1		0510	47	98.	1		0720	73	13.	1		0930	99	0.
1		0305	22	228.	1		0515	48	94.	1		0725	74	11.	1		0935	100	0.
1		0310	23	218.	1		0520	49	90.	1		0730	75	9.	1		0940	101	0.
1		0315	24	209.	1		0525	50	85.	1		0735	76	7.					
1		0320	25	200.	1		0530	51	81.	1		0740	77	6.					
1		0325	26	192.	1		0535	52	77.	1		0745	78	4.					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
265.	1.17	(CFS)	117.	85.	85.	85.
		(INCHES)	1.092	1.092	1.092	1.092
		(AC-FT)	58.	58.	58.	58.

CUMULATIVE AREA = 1.00 SQ MI

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          *             *
 40 KK    *     RET2    *
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RETENTION REQUIREMENT

HYDROGRAPH ROUTING DATA

42 RL ROUTING LOSSES
QLOSS 0.00 INITIAL LOSS
CLOSS 0.00 ADDITIONAL FRACTION LOST

43 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP STOR TYPE OF INITIAL CONDITION
RSVRIC 0.00 INITIAL CONDITION
X 0.00 WORKING R AND D COEFFICIENT

44 SV	STORAGE	0.0	14.3	28.7	43.0	45.9	48.8	51.7	57.3
45 SQ	DISCHARGE	0.	0.	0.	0.	107.	304.	558.	1200.
46 SE	ELEVATION	0.00	1.00	2.00	3.00	3.20	3.40	3.60	4.00

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HYDROGRAPH AT STATION RET2

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	1		0410	35	0.	38.8	2.7	1		0700	69	33.	43.9	3.1
1		0125	2	0.	0.0	0.0	1		0415	36	0.	39.8	2.8	1		0705	70	30.	43.8	3.1
1		0130	3	0.	0.0	0.0	1		0420	37	0.	40.7	2.8	1		0710	71	27.	43.7	3.1
1		0135	4	0.	0.0	0.0	1		0425	38	0.	41.7	2.9	1		0715	72	25.	43.7	3.0
1		0140	5	0.	0.0	0.0	1		0430	39	0.	42.6	3.0	1		0720	73	22.	43.6	3.0
1		0145	6	0.	0.0	0.0	1		0435	40	16.	43.4	3.0	1		0725	74	20.	43.5	3.0
1		0150	7	0.	0.0	0.0	1		0440	41	40.	44.1	3.1	1		0730	75	18.	43.5	3.0
1		0155	8	0.	0.3	0.0	1		0445	42	59.	44.6	3.1	1		0735	76	16.	43.4	3.0
1		0200	9	0.	1.1	0.1	1		0450	43	72.	44.9	3.1	1		0740	77	14.	43.4	3.0
1		0205	10	0.	2.3	0.2	1		0455	44	81.	45.2	3.2	1		0745	78	12.	43.3	3.0
1		0210	11	0.	3.7	0.3	1		0500	45	87.	45.4	3.2	1		0750	79	10.	43.3	3.0
1		0215	12	0.	5.3	0.4	1		0505	46	91.	45.5	3.2	1		0755	80	8.	43.2	3.0
1		0220	13	0.	7.0	0.5	1		0510	47	93.	45.5	3.2	1		0800	81	6.	43.2	3.0
1		0225	14	0.	8.8	0.6	1		0515	48	94.	45.5	3.2	1		0805	82	5.	43.1	3.0
1		0230	15	0.	10.6	0.7	1		0520	49	94.	45.5	3.2	1		0810	83	4.	43.1	3.0
1		0235	16	0.	12.4	0.9	1		0525	50	92.	45.5	3.2	1		0815	84	3.	43.1	3.0
1		0240	17	0.	14.2	1.0	1		0530	51	90.	45.4	3.2	1		0820	85	2.	43.1	3.0
1		0245	18	0.	16.0	1.1	1		0535	52	88.	45.4	3.2	1		0825	86	2.	43.0	3.0
1		0250	19	0.	17.8	1.2	1		0540	53	85.	45.3	3.2	1		0830	87	1.	43.0	3.0
1		0255	20	0.	19.5	1.4	1		0545	54	82.	45.2	3.2	1		0835	88	1.	43.0	3.0
1		0300	21	0.	21.2	1.5	1		0550	55	78.	45.1	3.1	1		0840	89	1.	43.0	3.0
1		0305	22	0.	22.8	1.6	1		0555	56	75.	45.0	3.1	1		0845	90	1.	43.0	3.0
1		0310	23	0.	24.3	1.7	1		0600	57	71.	44.9	3.1	1		0850	91	0.	43.0	3.0
1		0315	24	0.	25.8	1.8	1		0605	58	68.	44.8	3.1	1		0855	92	0.	43.0	3.0
1		0320	25	0.	27.2	1.9	1		0610	59	64.	44.7	3.1	1		0900	93	0.	43.0	3.0
1		0325	26	0.	28.6	2.0	1		0615	60	61.	44.7	3.1	1		0905	94	0.	43.0	3.0
1		0330	27	0.	29.8	2.1	1		0620	61	57.	44.6	3.1	1		0910	95	0.	43.0	3.0
1		0335	28	0.	31.1	2.2	1		0625	62	54.	44.5	3.1	1		0915	96	0.	43.0	3.0
1		0340	29	0.	32.3	2.3	1		0630	63	51.	44.4	3.1	1		0920	97	0.	43.0	3.0

1	0345	30	0.	33.5	2.3	*	1	0635	64	47.	44.3	3.1	*	1	0925	98	0.	43.0	3.0
1	0350	31	0.	34.6	2.4	*	1	0640	65	44.	44.2	3.1	*	1	0930	99	0.	43.0	3.0
1	0355	32	0.	35.7	2.5	*	1	0645	66	41.	44.1	3.1	*	1	0935	100	0.	43.0	3.0
1	0400	33	0.	36.8	2.6	*	1	0650	67	38.	44.0	3.1	*	1	0940	101	0.	43.0	3.0
1	0405	34	0.	37.8	2.6	*	1	0655	68	35.	44.0	3.1	*						
						*							*						

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
94.	3.92	(CFS)	31.	22.	22.	22.
		(INCHES)	0.286	0.286	0.286	0.286
		(AC-FT)	15.	15.	15.	15.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	8.33-HR
46.	3.92	43.	34.	34.	34.

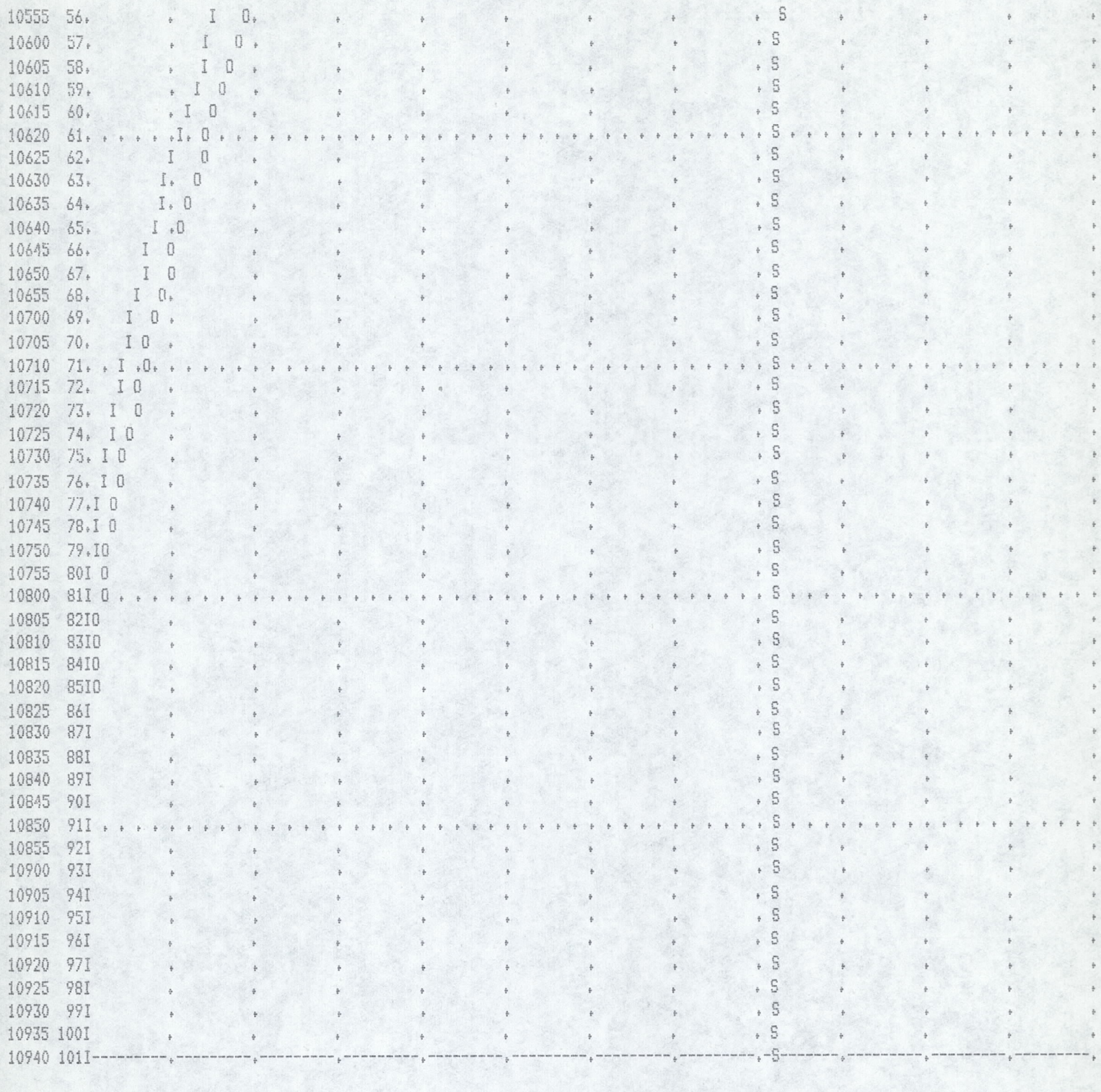
PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	8.33-HR
3.18	3.92	3.01	2.41	2.41	2.41

CUMULATIVE AREA = 1.00 SQ MI

STATION RET2

(I) INFLOW, (O) OUTFLOW

	0.	40.	80.	120.	160.	200.	240.	280.	0.	0.	0.	0.	0.
									(S) STORAGE				
	0.	0.	0.	0.	0.	0.	0.	20.	40.	60.	0.	0.	0.
DAHRMN	PER												
10120	1	I						S					
10125	2	I						S					
10130	3	I						S					
10135	4	I						S					
10140	5	I						S					
10145	6	I						S					
10150	7	I						S					
10155	8	I						S					
10200	9	I						S					
10205	10	I						S					
10210	11	I						S					
10215	12	I						IS					
10220	13	I						IS					
10225	14	I						SI					
10230	15	I						SI					
10235	16	I						S					
10240	17	I						IS					
10245	18	I						IS					
10250	19	I						IS					
10255	20	I						IS					
10300	21	I						S					
10305	22	I						S					
10310	23	I						S					
10315	24	I						S					
10320	25	I						S					
10325	26	I						S					
10330	27	I						S					
10335	28	I						S					
10340	29	I						S					
10345	30	I						S					
10350	31	I						S					
10355	32	I						S					
10400	33	I						S					
10405	34	I						S					
10410	35	I						S					
10415	36	I						S					
10420	37	I						S					
10425	38	I						S					
10430	39	I						S					
10435	40	O	I					S					
10440	41	O	I					S					
10445	42	O	I					S					
10450	43	O	I					S					
10455	44	O	I					S					
10500	45	O	I					S					
10505	46	O	I					S					
10510	47	O	I					S					
10515	48	I						S					
10520	49	IO						S					
10525	50	IO						S					
10530	51	IO						S					
10535	52	IO						S					
10540	53	IO						S					
10545	54	IO						S					
10550	55	IO						S					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10605 58. I O S
10610 59. I O S
10615 60. I O S
10620 61. I O S
10625 62. I O S
10630 63. I O S
10635 64. I O S
10640 65. I O S
10645 66. I O S
10650 67. I O S
10655 68. I O S
10700 69. I O S
10705 70. I O S
10710 71. I O S
10715 72. I O S
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10730 75. I O S
10735 76. I O S
10740 77. I O S
10745 78. I O S
10750 79. I O S
10755 80 I O S
10800 81 I O S
10805 82 I O S
10810 83 I O S
10815 84 I O S
10820 85 I O S
10825 86 I S
10830 87 I S
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10840 89 I S
10845 90 I S
10850 91 I S
10855 92 I S
10900 93 I S
10905 94 I S
10910 95 I S
10915 96 I S
10920 97 I S
10925 98 I S
10930 99 I S
10935 100 I S
10940 101 I S

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          *            *
47 KK     *     SUB2   *
          *            *
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DIVERT TO SUB5B

		ISTAD	DIV25	DIVERSION HYDROGRAPH IDENTIFICATION
DT	DIVERSION			
DI	INFLOW	2.00	100.00	1000.00
DQ	DIVERTED FLOW	1.00	50.00	500.00

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DIVERSION HYDROGRAPH DIV25

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	0.	1		0540	53	42.	1		0750	79	5.
1		0125	2	0.	1		0335	28	0.	1		0545	54	41.	1		0755	80	4.
1		0130	3	0.	1		0340	29	0.	1		0550	55	39.	1		0800	81	3.
1		0135	4	0.	1		0345	30	0.	1		0555	56	37.	1		0805	82	2.
1		0140	5	0.	1		0350	31	0.	1		0600	57	36.	1		0810	83	2.
1		0145	6	0.	1		0355	32	0.	1		0605	58	34.	1		0815	84	1.
1		0150	7	0.	1		0400	33	0.	1		0610	59	32.	1		0820	85	1.
1		0155	8	0.	1		0405	34	0.	1		0615	60	30.	1		0825	86	1.
1		0200	9	0.	1		0410	35	0.	1		0620	61	29.	1		0830	87	1.
1		0205	10	0.	1		0415	36	0.	1		0625	62	27.	1		0835	88	1.
1		0210	11	0.	1		0420	37	0.	1		0630	63	25.	1		0840	89	1.
1		0215	12	0.	1		0425	38	0.	1		0635	64	24.	1		0845	90	1.
1		0220	13	0.	1		0430	39	0.	1		0640	65	22.	1		0850	91	0.
1		0225	14	0.	1		0435	40	8.	1		0645	66	21.	1		0855	92	0.
1		0230	15	0.	1		0440	41	20.	1		0650	67	19.	1		0900	93	0.
1		0235	16	0.	1		0445	42	29.	1		0655	68	18.	1		0905	94	0.
1		0240	17	0.	1		0450	43	36.	1		0700	69	16.	1		0910	95	0.
1		0245	18	0.	1		0455	44	41.	1		0705	70	15.	1		0915	96	0.
1		0250	19	0.	1		0500	45	44.	1		0710	71	14.	1		0920	97	0.
1		0255	20	0.	1		0505	46	46.	1		0715	72	12.	1		0925	98	0.
1		0300	21	0.	1		0510	47	47.	1		0720	73	11.	1		0930	99	0.
1		0305	22	0.	1		0515	48	47.	1		0725	74	10.	1		0935	100	0.
1		0310	23	0.	1		0520	49	47.	1		0730	75	9.	1		0940	101	0.
1		0315	24	0.	1		0525	50	46.	1		0735	76	8.					
1		0320	25	0.	1		0530	51	45.	1		0740	77	7.					
1		0325	26	0.	1		0535	52	44.	1		0745	78	6.					

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PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
47.	3.92	(CFS)	15.	11.	11.	11.
		(INCHES)	0.143	0.143	0.143	0.143
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 1.00 SQ MI

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HYDROGRAPH AT STATION SUB2

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	0.	*	1		0540	53	42.	*	1		0750	79	5.
1		0125	2	0.	*	1		0335	28	0.	*	1		0545	54	41.	*	1		0755	80	4.
1		0130	3	0.	*	1		0340	29	0.	*	1		0550	55	39.	*	1		0800	81	3.
1		0135	4	0.	*	1		0345	30	0.	*	1		0555	56	37.	*	1		0805	82	2.
1		0140	5	0.	*	1		0350	31	0.	*	1		0600	57	36.	*	1		0810	83	2.
1		0145	6	0.	*	1		0355	32	0.	*	1		0605	58	34.	*	1		0815	84	1.
1		0150	7	0.	*	1		0400	33	0.	*	1		0610	59	32.	*	1		0820	85	1.
1		0155	8	0.	*	1		0405	34	0.	*	1		0615	60	30.	*	1		0825	86	1.
1		0200	9	0.	*	1		0410	35	0.	*	1		0620	61	29.	*	1		0830	87	0.
1		0205	10	0.	*	1		0415	36	0.	*	1		0625	62	27.	*	1		0835	88	0.
1		0210	11	0.	*	1		0420	37	0.	*	1		0630	63	25.	*	1		0840	89	0.
1		0215	12	0.	*	1		0425	38	0.	*	1		0635	64	24.	*	1		0845	90	0.
1		0220	13	0.	*	1		0430	39	0.	*	1		0640	65	22.	*	1		0850	91	0.
1		0225	14	0.	*	1		0435	40	8.	*	1		0645	66	21.	*	1		0855	92	0.
1		0230	15	0.	*	1		0440	41	20.	*	1		0650	67	19.	*	1		0900	93	0.
1		0235	16	0.	*	1		0445	42	29.	*	1		0655	68	18.	*	1		0905	94	0.
1		0240	17	0.	*	1		0450	43	36.	*	1		0700	69	16.	*	1		0910	95	0.
1		0245	18	0.	*	1		0455	44	41.	*	1		0705	70	15.	*	1		0915	96	0.
1		0250	19	0.	*	1		0500	45	44.	*	1		0710	71	14.	*	1		0920	97	0.
1		0255	20	0.	*	1		0505	46	46.	*	1		0715	72	12.	*	1		0925	98	0.
1		0300	21	0.	*	1		0510	47	47.	*	1		0720	73	11.	*	1		0930	99	0.
1		0305	22	0.	*	1		0515	48	47.	*	1		0725	74	10.	*	1		0935	100	0.
1		0310	23	0.	*	1		0520	49	47.	*	1		0730	75	9.	*	1		0940	101	0.
1		0315	24	0.	*	1		0525	50	46.	*	1		0735	76	8.	*					
1		0320	25	0.	*	1		0530	51	45.	*	1		0740	77	7.	*					
1		0325	26	0.	*	1		0535	52	44.	*	1		0745	78	6.	*					

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
47.	3.92	(CFS)	15.	11.	11.	11.
		(INCHES)	0.143	0.143	0.143	0.143
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 1.00 SQ MI

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* *
52 KK * SUB3A *

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*           *
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            AREA BOUNDED BY BETHANY HOME ROAD- 99TH ST- CAMELBACK ROAD- RID CHANNEL
            ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
            HYDROGRAPH AT C.P. (C)

      SUBBASIN RUNOFF DATA

59 BA        SUBBASIN CHARACTERISTICS
                 TAREA        0.66  SUBBASIN AREA

             PRECIPITATION DATA

56 PB            STORM        2.45  BASIN TOTAL PRECIPITATION

57 PI          INCREMENTAL PRECIPITATION PATTERN
                0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
                0.06     0.05

60 LS        SCS LOSS RATE
                 STRTL        0.35  INITIAL ABSTRACTION
                CRVNBR       85.00  CURVE NUMBER
                 RTIMP       48.00  PERCENT IMPERVIOUS AREA

             KINEMATIC WAVE
61 UK          OVERLAND-FLOW ELEMENT NO. 1
                     L       4500.  OVERLAND FLOW LENGTH
                     S      0.0050  SLOPE
                     N       0.100  ROUGHNESS COEFFICIENT
                    PA       100.0  PERCENT OF SUBBASIN
62 RK          MAIN CHANNEL
                     L       5280.  CHANNEL LENGTH
                     S      0.0030  SLOPE
                     N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                    CA        0.66  CONTRIBUTING AREA
                 SHAPE        TRAP  CHANNEL SHAPE
                    WD        0.00  BOTTOM WIDTH OR DIAMETER
                     Z        1.00  SIDE SLOPE
                RUPSTQ         YES  ROUTE UPSTREAM HYDROGRAPH

                                                   ***

    COMPUTED KINEMATIC PARAMETERS
       ELEMENT     ALPHA        M       DT (MIN)    DX (FT)
           1     1.0536     1.667       5.00      375.00
           3     1.6346     1.333       5.00     2640.00

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

                                    HYDROGRAPH AT STATION     SUB3A

*******************************************************************************************************
                                           *
  DA MON HRMN  ORD    RAIN    LOSS  EXCESS    COMP Q    *    DA MON HRMN  ORD    RAIN    LOSS  EXCESS    COMP Q
                                           *
   1     0120    1    0.00    0.00    0.00        0.    *     1   0535    52    0.00    0.00    0.00      122.
   1     0125    2    0.05    0.03    0.02        0.    *     1   0540    53    0.00    0.00    0.00      118.
   1     0130    3    0.07    0.04    0.03        0.    *     1   0545    54    0.00    0.00    0.00      114.
   1     0135    4    0.07    0.04    0.03        0.    *     1   0550    55    0.00    0.00    0.00      110.
   1     0140    5    0.10    0.05    0.05        0.    *     1   0555    56    0.00    0.00    0.00      105.
   1     0145    6    0.16    0.08    0.08        0.    *     1   0600    57    0.00    0.00    0.00      101.
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1	0150	7	1.16	0.33	0.83	1.	*	1	0605	58	0.00	0.00	0.00	97.
1	0155	8	0.39	0.06	0.33	13.	*	1	0610	59	0.00	0.00	0.00	93.
1	0200	9	0.14	0.02	0.12	41.	*	1	0615	60	0.00	0.00	0.00	89.
1	0205	10	0.11	0.01	0.10	77.	*	1	0620	61	0.00	0.00	0.00	86.
1	0210	11	0.09	0.01	0.08	110.	*	1	0625	62	0.00	0.00	0.00	82.
1	0215	12	0.06	0.01	0.05	135.	*	1	0630	63	0.00	0.00	0.00	78.
1	0220	13	0.05	0.01	0.04	151.	*	1	0635	64	0.00	0.00	0.00	75.
1	0225	14	0.00	0.00	0.00	163.	*	1	0640	65	0.00	0.00	0.00	72.
1	0230	15	0.00	0.00	0.00	169.	*	1	0645	66	0.00	0.00	0.00	68.
1	0235	16	0.00	0.00	0.00	171.	*	1	0650	67	0.00	0.00	0.00	65.
1	0240	17	0.00	0.00	0.00	172.	*	1	0655	68	0.00	0.00	0.00	62.
1	0245	18	0.00	0.00	0.00	172.	*	1	0700	69	0.00	0.00	0.00	60.
1	0250	19	0.00	0.00	0.00	172.	*	1	0705	70	0.00	0.00	0.00	57.
1	0255	20	0.00	0.00	0.00	172.	*	1	0710	71	0.00	0.00	0.00	54.
1	0300	21	0.00	0.00	0.00	172.	*	1	0715	72	0.00	0.00	0.00	52.
1	0305	22	0.00	0.00	0.00	172.	*	1	0720	73	0.00	0.00	0.00	49.
1	0310	23	0.00	0.00	0.00	172.	*	1	0725	74	0.00	0.00	0.00	47.
1	0315	24	0.00	0.00	0.00	172.	*	1	0730	75	0.00	0.00	0.00	45.
1	0320	25	0.00	0.00	0.00	172.	*	1	0735	76	0.00	0.00	0.00	42.
1	0325	26	0.00	0.00	0.00	171.	*	1	0740	77	0.00	0.00	0.00	40.
1	0330	27	0.00	0.00	0.00	170.	*	1	0745	78	0.00	0.00	0.00	38.
1	0335	28	0.00	0.00	0.00	169.	*	1	0750	79	0.00	0.00	0.00	36.
1	0340	29	0.00	0.00	0.00	168.	*	1	0755	80	0.00	0.00	0.00	35.
1	0345	30	0.00	0.00	0.00	166.	*	1	0800	81	0.00	0.00	0.00	33.
1	0350	31	0.00	0.00	0.00	163.	*	1	0805	82	0.00	0.00	0.00	31.
1	0355	32	0.00	0.00	0.00	160.	*	1	0810	83	0.00	0.00	0.00	30.
1	0400	33	0.00	0.00	0.00	157.	*	1	0815	84	0.00	0.00	0.00	28.
1	0405	34	0.00	0.00	0.00	153.	*	1	0820	85	0.00	0.00	0.00	27.
1	0410	35	0.00	0.00	0.00	148.	*	1	0825	86	0.00	0.00	0.00	25.
1	0415	36	0.00	0.00	0.00	144.	*	1	0830	87	0.00	0.00	0.00	24.
1	0420	37	0.00	0.00	0.00	139.	*	1	0835	88	0.00	0.00	0.00	23.
1	0425	38	0.00	0.00	0.00	134.	*	1	0840	89	0.00	0.00	0.00	22.
1	0430	39	0.00	0.00	0.00	129.	*	1	0845	90	0.00	0.00	0.00	21.
1	0435	40	0.00	0.00	0.00	124.	*	1	0850	91	0.00	0.00	0.00	20.
1	0440	41	0.00	0.00	0.00	124.	*	1	0855	92	0.00	0.00	0.00	20.
1	0445	42	0.00	0.00	0.00	129.	*	1	0900	93	0.00	0.00	0.00	19.
1	0450	43	0.00	0.00	0.00	134.	*	1	0905	94	0.00	0.00	0.00	18.
1	0455	44	0.00	0.00	0.00	137.	*	1	0910	95	0.00	0.00	0.00	18.
1	0500	45	0.00	0.00	0.00	139.	*	1	0915	96	0.00	0.00	0.00	17.
1	0505	46	0.00	0.00	0.00	139.	*	1	0920	97	0.00	0.00	0.00	17.
1	0510	47	0.00	0.00	0.00	138.	*	1	0925	98	0.00	0.00	0.00	17.
1	0515	48	0.00	0.00	0.00	136.	*	1	0930	99	0.00	0.00	0.00	16.
1	0520	49	0.00	0.00	0.00	133.	*	1	0935	100	0.00	0.00	0.00	16.
1	0525	50	0.00	0.00	0.00	130.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	126.	*							
							*							

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.68, TOTAL EXCESS = 1.77

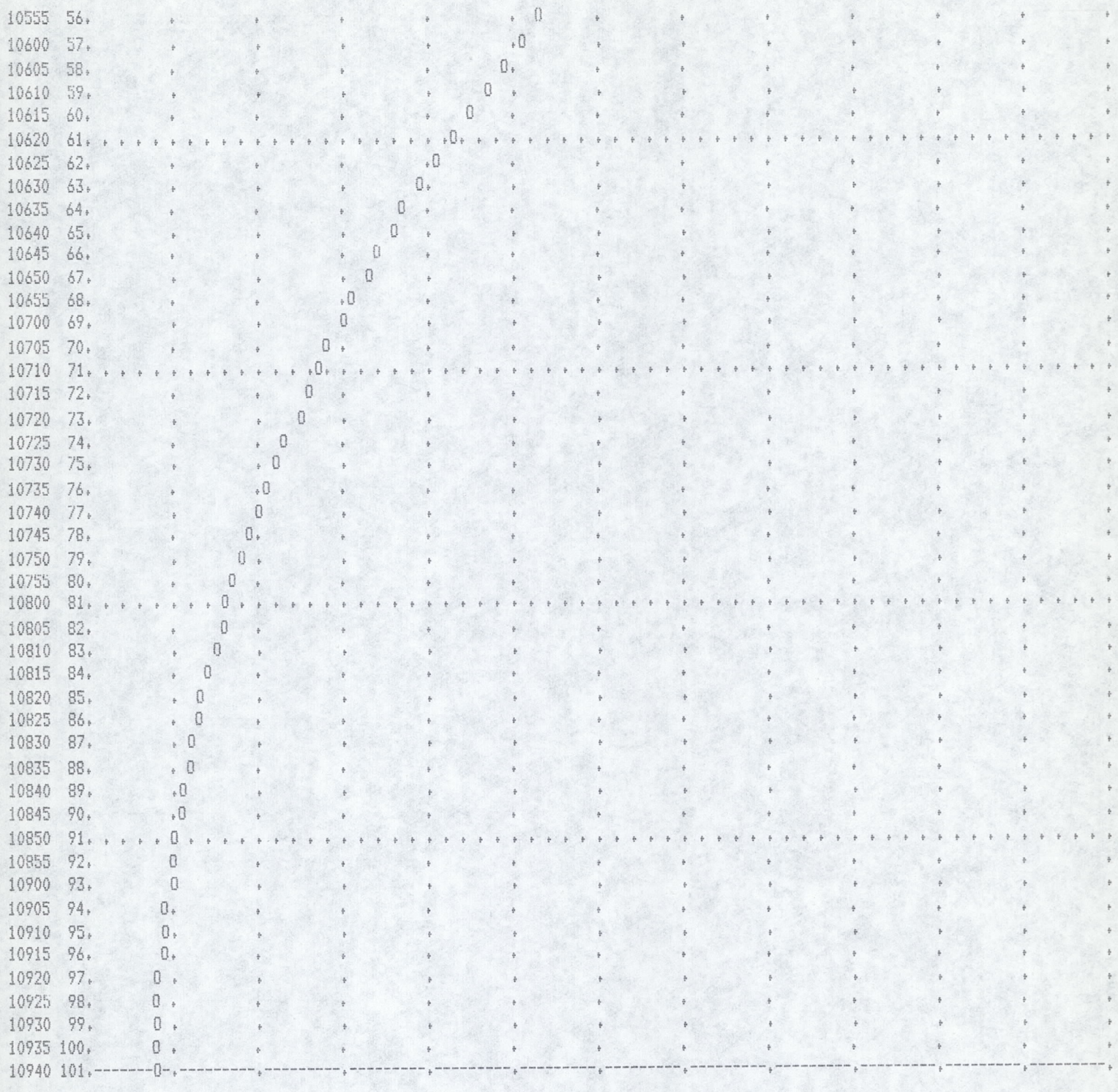
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
172.	1.67	(CFS)	117.	89.	89.	89.
		(INCHES)	0.655	0.691	0.691	0.691
		(AC-FT)	58.	61.	61.	61.

CUMULATIVE AREA = 1.66 SQ MI

STATION SUB3A

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	120.	140.	160.	180.	0. (L) PRECIP	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												X
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLXX
10150	70										LLLLLLLLXXXXXXXXXXXXXXXXXXXXX		
10155	8	O										LLXXXXXXXX	
10200	9		O										LXXX
10205	10				O								LXX
10210	11						O						XX
10215	12							O					X
10220	13								O				X
10225	14								O				
10230	15								O				
10235	16								O				
10240	17								O				
10245	18								O				
10250	19								O				
10255	20								O				
10300	21								O				
10305	22								O				
10310	23								O				
10315	24								O				
10320	25								O				
10325	26								O				
10330	27								O				
10335	28								O				
10340	29								O				
10345	30								O				
10350	31								O				
10355	32								O				
10400	33								O				
10405	34								O				
10410	35								O				
10415	36								O				
10420	37								O				
10425	38							O					
10430	39							O					
10435	40							O					
10440	41							O					
10445	42							O					
10450	43							O					
10455	44							O					
10500	45							O					
10505	46							O					
10510	47							O					
10515	48							O					
10520	49							O					
10525	50							O					
10530	51							O					
10535	52						O						
10540	53						O						
10545	54					O							
10550	55					O							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10850 91
10855 92
10900 93
10905 94
10910 95
10915 96
10920 97
10925 98
10930 99
10935 100
10940 101

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          *            *
 63 KK    *    SUB3A   *
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DIVERT TO R.I.D. CHANNEL

DT	DIVERSION					
	ISTAD	RID	DIVERSION HYDROGRAPH IDENTIFICATION			
DI	INFLOW	1.00	150.00	151.00	300.00	1000.00
DQ	DIVERTED FLOW	1.00	150.00	150.00	150.00	150.00

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DIVERSION HYDROGRAPH RID

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	150.	*	1		0540	53	118.	*	1		0750	79	36.
1		0125	2	0.	*	1		0335	28	150.	*	1		0545	54	114.	*	1		0755	80	35.
1		0130	3	0.	*	1		0340	29	150.	*	1		0550	55	110.	*	1		0800	81	33.
1		0135	4	0.	*	1		0345	30	150.	*	1		0555	56	105.	*	1		0805	82	31.
1		0140	5	0.	*	1		0350	31	150.	*	1		0600	57	101.	*	1		0810	83	30.
1		0145	6	0.	*	1		0355	32	150.	*	1		0605	58	97.	*	1		0815	84	28.
1		0150	7	1.	*	1		0400	33	150.	*	1		0610	59	93.	*	1		0820	85	27.
1		0155	8	13.	*	1		0405	34	150.	*	1		0615	60	89.	*	1		0825	86	25.
1		0200	9	41.	*	1		0410	35	148.	*	1		0620	61	86.	*	1		0830	87	24.
1		0205	10	77.	*	1		0415	36	144.	*	1		0625	62	82.	*	1		0835	88	23.
1		0210	11	110.	*	1		0420	37	139.	*	1		0630	63	78.	*	1		0840	89	22.
1		0215	12	135.	*	1		0425	38	134.	*	1		0635	64	75.	*	1		0845	90	21.
1		0220	13	150.	*	1		0430	39	129.	*	1		0640	65	72.	*	1		0850	91	20.
1		0225	14	150.	*	1		0435	40	124.	*	1		0645	66	68.	*	1		0855	92	20.
1		0230	15	150.	*	1		0440	41	124.	*	1		0650	67	65.	*	1		0900	93	19.
1		0235	16	150.	*	1		0445	42	129.	*	1		0655	68	62.	*	1		0905	94	18.
1		0240	17	150.	*	1		0450	43	134.	*	1		0700	69	60.	*	1		0910	95	18.
1		0245	18	150.	*	1		0455	44	137.	*	1		0705	70	57.	*	1		0915	96	17.
1		0250	19	150.	*	1		0500	45	139.	*	1		0710	71	54.	*	1		0920	97	17.
1		0255	20	150.	*	1		0505	46	139.	*	1		0715	72	52.	*	1		0925	98	17.
1		0300	21	150.	*	1		0510	47	138.	*	1		0720	73	49.	*	1		0930	99	16.
1		0305	22	150.	*	1		0515	48	136.	*	1		0725	74	47.	*	1		0935	100	16.
1		0310	23	150.	*	1		0520	49	133.	*	1		0730	75	45.	*	1		0940	101	15.
1		0315	24	150.	*	1		0525	50	130.	*	1		0735	76	42.	*					
1		0320	25	150.	*	1		0530	51	126.	*	1		0740	77	40.	*					
1		0325	26	150.	*	1		0535	52	122.	*	1		0745	78	38.	*					

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

6-HR 24-HR 72-HR 8.33-HR

(CFS)	(HR)					
150.	1.00	(CFS)	112.	85.	85.	85.
		(INCHES)	0.625	0.662	0.662	0.662
		(AC-FT)	55.	59.	59.	59.

CUMULATIVE AREA = 1.66 SQ MI

HYDROGRAPH AT STATION SUB3A

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	20.	1		0540	53	0.	1		0750	79	0.
1		0125	2	0.	1		0335	28	19.	1		0545	54	0.	1		0755	80	0.
1		0130	3	0.	1		0340	29	18.	1		0550	55	0.	1		0800	81	0.
1		0135	4	0.	1		0345	30	16.	1		0555	56	0.	1		0805	82	0.
1		0140	5	0.	1		0350	31	13.	1		0600	57	0.	1		0810	83	0.
1		0145	6	0.	1		0355	32	10.	1		0605	58	0.	1		0815	84	0.
1		0150	7	0.	1		0400	33	7.	1		0610	59	0.	1		0820	85	0.
1		0155	8	0.	1		0405	34	3.	1		0615	60	0.	1		0825	86	0.
1		0200	9	0.	1		0410	35	0.	1		0620	61	0.	1		0830	87	0.
1		0205	10	0.	1		0415	36	0.	1		0625	62	0.	1		0835	88	0.
1		0210	11	0.	1		0420	37	0.	1		0630	63	0.	1		0840	89	0.
1		0215	12	0.	1		0425	38	0.	1		0635	64	0.	1		0845	90	0.
1		0220	13	1.	1		0430	39	0.	1		0640	65	0.	1		0850	91	0.
1		0225	14	13.	1		0435	40	0.	1		0645	66	0.	1		0855	92	0.
1		0230	15	19.	1		0440	41	0.	1		0650	67	0.	1		0900	93	0.
1		0235	16	21.	1		0445	42	0.	1		0655	68	0.	1		0905	94	0.
1		0240	17	22.	1		0450	43	0.	1		0700	69	0.	1		0910	95	0.
1		0245	18	22.	1		0455	44	0.	1		0705	70	0.	1		0915	96	0.
1		0250	19	22.	1		0500	45	0.	1		0710	71	0.	1		0920	97	0.
1		0255	20	22.	1		0505	46	0.	1		0715	72	0.	1		0925	98	0.
1		0300	21	22.	1		0510	47	0.	1		0720	73	0.	1		0930	99	0.
1		0305	22	22.	1		0515	48	0.	1		0725	74	0.	1		0935	100	0.
1		0310	23	22.	1		0520	49	0.	1		0730	75	0.	1		0940	101	0.
1		0315	24	22.	1		0525	50	0.	1		0735	76	0.					
1		0320	25	22.	1		0530	51	0.	1		0740	77	0.					
1		0325	26	21.	1		0535	52	0.	1		0745	78	0.					

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
22.	1.67	(CFS)	5.	4.	4.	4.
		(INCHES)	0.029	0.029	0.029	0.029
		(AC-FT)	3.	3.	3.	3.

CUMULATIVE AREA = 1.66 SQ MI

68 KK SUB4

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SUBAREA 3 ROUTED TO SUBAREA 4

HYDROGRAPH ROUTING DATA

42 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

70 RK KINEMATIC WAVE STREAM ROUTING

L	4000.	CHANNEL LENGTH
S	0.0030	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

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KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.2348	1.423	5.00	2000.00

HYDROGRAPH AT STATION SUB4

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	22.	1		0540	53	0.	1		0750	79	0.
1		0125	2	0.	1		0335	28	21.	1		0545	54	0.	1		0755	80	0.
1		0130	3	0.	1		0340	29	20.	1		0550	55	0.	1		0800	81	0.
1		0135	4	0.	1		0345	30	19.	1		0555	56	0.	1		0805	82	0.
1		0140	5	0.	1		0350	31	18.	1		0600	57	0.	1		0810	83	0.
1		0145	6	0.	1		0355	32	16.	1		0605	58	0.	1		0815	84	0.
1		0150	7	0.	1		0400	33	14.	1		0610	59	0.	1		0820	85	0.
1		0155	8	0.	1		0405	34	12.	1		0615	60	0.	1		0825	86	0.
1		0200	9	0.	1		0410	35	9.	1		0620	61	0.	1		0830	87	0.
1		0205	10	0.	1		0415	36	7.	1		0625	62	0.	1		0835	88	0.
1		0210	11	0.	1		0420	37	5.	1		0630	63	0.	1		0840	89	0.
1		0215	12	0.	1		0425	38	4.	1		0635	64	0.	1		0845	90	0.
1		0220	13	0.	1		0430	39	3.	1		0640	65	0.	1		0850	91	0.
1		0225	14	0.	1		0435	40	2.	1		0645	66	0.	1		0855	92	0.
1		0230	15	1.	1		0440	41	2.	1		0650	67	0.	1		0900	93	0.
1		0235	16	3.	1		0445	42	1.	1		0655	68	0.	1		0905	94	0.
1		0240	17	9.	1		0450	43	1.	1		0700	69	0.	1		0910	95	0.
1		0245	18	14.	1		0455	44	1.	1		0705	70	0.	1		0915	96	0.
1		0250	19	18.	1		0500	45	1.	1		0710	71	0.	1		0920	97	0.
1		0255	20	20.	1		0505	46	1.	1		0715	72	0.	1		0925	98	0.
1		0300	21	21.	1		0510	47	1.	1		0720	73	0.	1		0930	99	0.
1		0305	22	22.	1		0515	48	0.	1		0725	74	0.	1		0935	100	0.
1		0310	23	22.	1		0520	49	0.	1		0730	75	0.	1		0940	101	0.

1	0315	24	22.	*	1	0525	50	0.	*	1	0735	76	0.	*
1	0320	25	22.	*	1	0530	51	0.	*	1	0740	77	0.	*
1	0325	26	22.	*	1	0535	52	0.	*	1	0745	78	0.	*
				*					*					*

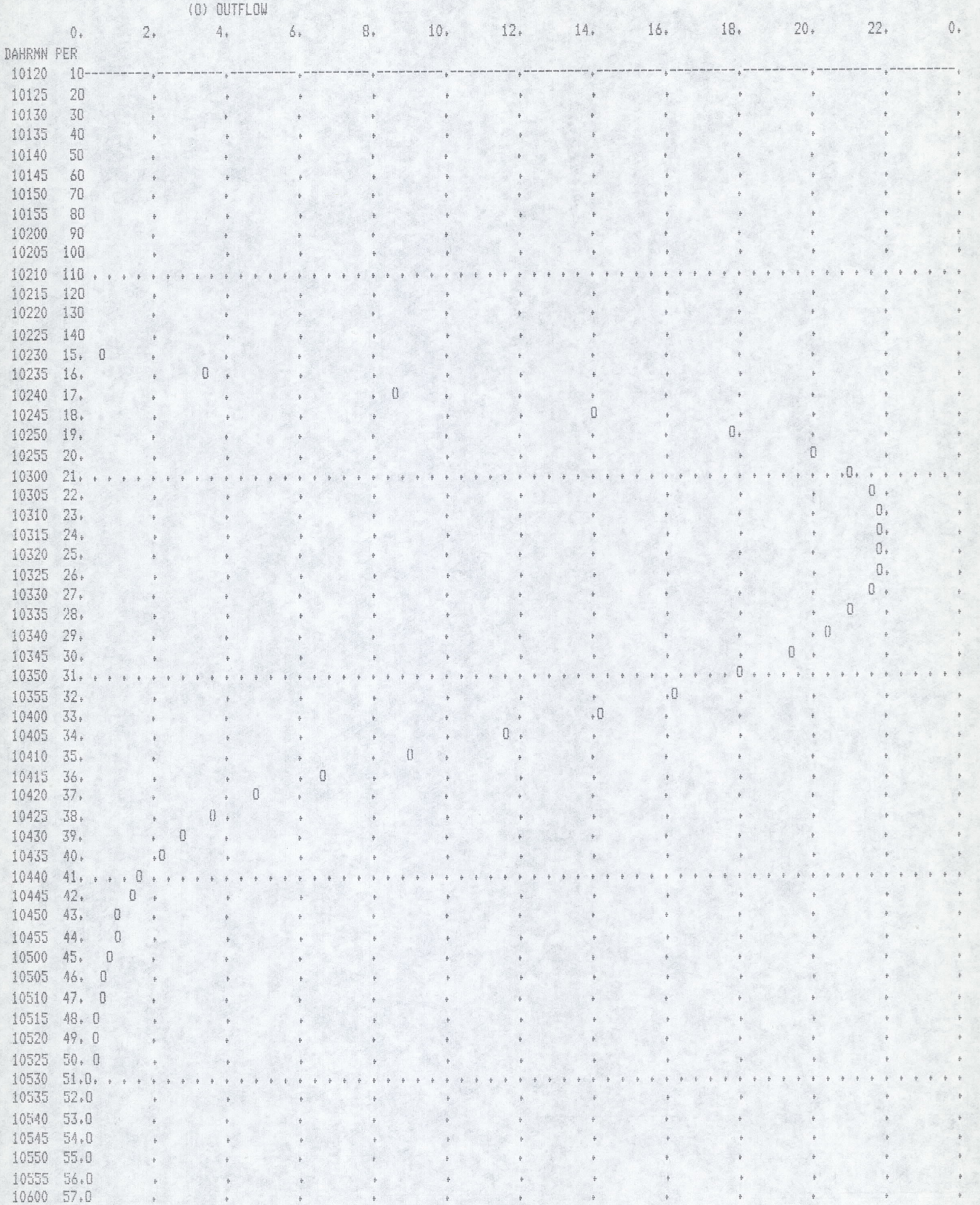
****

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
22.	1.92	(CFS)	5.	4.	4.	4.
		(INCHES)	0.029	0.029	0.029	0.029
		(AC-FT)	3.	3.	3.	3.

CUMULATIVE AREA = 1.66 SQ MI

STATION SUB4

(O) OUTFLOW



```
10605  58.0
10610  59.0
10615  60.0
10620  610
10625  620
10630  630
10635  640
10640  650
10645  660
10650  670
10655  680
10700  690
10705  700
10710  710
10715  720
10720  730
10725  740
10730  750
10735  760
10740  770
10745  780
10750  790
10755  800
10800  810
10805  820
10810  830
10815  840
10820  850
10825  860
10830  870
10835  880
10840  890
10845  900
10850  910
10855  920
10900  930
10905  940
10910  950
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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           **************
           *            *
71 KK      *     SUB4   *
           *            *
           **************
                 AREA BOUNDED BY BETHANY HOME ROAD- AGUA FRIA-CAMELBACK ROAD- RID CHANNEL
                 ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
                 HYDROGRAPH AT C.P. (D) INTO AGUA FRIA WASH

           SUBBASIN RUNOFF DATA

78 BA       SUBBASIN CHARACTERISTICS
               TAREA        1.06  SUBBASIN AREA

            PRECIPITATION DATA

75 PB          STORM        2.45  BASIN TOTAL PRECIPITATION

76 PI        INCREMENTAL PRECIPITATION PATTERN
              0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
              0.06     0.05

79 LS       SCS LOSS RATE
               STRTL        0.27  INITIAL ABSTRACTION
              CRVNBR       88.00  CURVE NUMBER
               RTIMP       55.00  PERCENT IMPERVIOUS AREA

            KINEMATIC WAVE
80 UK        OVERLAND-FLOW ELEMENT NO. 1
                   L       5800.  OVERLAND FLOW LENGTH
                   S      0.0050  SLOPE
                   N       0.100  ROUGHNESS COEFFICIENT
                  PA       100.0  PERCENT OF SUBBASIN
81 RK        MAIN CHANNEL
                   L       4000.  CHANNEL LENGTH
                   S      0.0030  SLOPE
                   N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                  CA        1.06  CONTRIBUTING AREA
               SHAPE        TRAP  CHANNEL SHAPE
                  WD        0.00  BOTTOM WIDTH OR DIAMETER
                   Z        1.00  SIDE SLOPE
              RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

                                                    ***

       COMPUTED KINEMATIC PARAMETERS
           ELEMENT     ALPHA        M      DT (MIN)   DX (FT)
                 1    1.0536    1.667        5.00      414.29
                 3    1.6346    1.333        5.00     2000.00
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HYDROGRAPH AT STATION SUB4

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	148.
1		0125	2	0.05	0.02	0.03	0.	1		0540	53	0.00	0.00	0.00	143.
1		0130	3	0.07	0.03	0.04	0.	1		0545	54	0.00	0.00	0.00	138.
1		0135	4	0.07	0.03	0.04	0.	1		0550	55	0.00	0.00	0.00	133.
1		0140	5	0.10	0.04	0.06	0.	1		0555	56	0.00	0.00	0.00	128.
1		0145	6	0.16	0.06	0.10	1.	1		0600	57	0.00	0.00	0.00	123.
1		0150	7	1.16	0.23	0.93	2.	1		0605	58	0.00	0.00	0.00	119.
1		0155	8	0.39	0.04	0.35	33.	1		0610	59	0.00	0.00	0.00	115.
1		0200	9	0.14	0.01	0.13	103.	1		0615	60	0.00	0.00	0.00	111.
1		0205	10	0.11	0.01	0.10	172.	1		0620	61	0.00	0.00	0.00	107.
1		0210	11	0.09	0.01	0.08	201.	1		0625	62	0.00	0.00	0.00	103.
1		0215	12	0.06	0.00	0.06	228.	1		0630	63	0.00	0.00	0.00	99.
1		0220	13	0.05	0.00	0.05	243.	1		0635	64	0.00	0.00	0.00	96.
1		0225	14	0.00	0.00	0.00	254.	1		0640	65	0.00	0.00	0.00	93.
1		0230	15	0.00	0.00	0.00	260.	1		0645	66	0.00	0.00	0.00	90.
1		0235	16	0.00	0.00	0.00	260.	1		0650	67	0.00	0.00	0.00	87.
1		0240	17	0.00	0.00	0.00	260.	1		0655	68	0.00	0.00	0.00	84.
1		0245	18	0.00	0.00	0.00	260.	1		0700	69	0.00	0.00	0.00	81.
1		0250	19	0.00	0.00	0.00	260.	1		0705	70	0.00	0.00	0.00	78.
1		0255	20	0.00	0.00	0.00	260.	1		0710	71	0.00	0.00	0.00	76.
1		0300	21	0.00	0.00	0.00	260.	1		0715	72	0.00	0.00	0.00	73.
1		0305	22	0.00	0.00	0.00	260.	1		0720	73	0.00	0.00	0.00	71.
1		0310	23	0.00	0.00	0.00	260.	1		0725	74	0.00	0.00	0.00	69.
1		0315	24	0.00	0.00	0.00	260.	1		0730	75	0.00	0.00	0.00	67.
1		0320	25	0.00	0.00	0.00	260.	1		0735	76	0.00	0.00	0.00	65.
1		0325	26	0.00	0.00	0.00	260.	1		0740	77	0.00	0.00	0.00	63.
1		0330	27	0.00	0.00	0.00	260.	1		0745	78	0.00	0.00	0.00	61.
1		0335	28	0.00	0.00	0.00	259.	1		0750	79	0.00	0.00	0.00	59.
1		0340	29	0.00	0.00	0.00	259.	1		0755	80	0.00	0.00	0.00	57.
1		0345	30	0.00	0.00	0.00	259.	1		0800	81	0.00	0.00	0.00	56.
1		0350	31	0.00	0.00	0.00	258.	1		0805	82	0.00	0.00	0.00	54.
1		0355	32	0.00	0.00	0.00	256.	1		0810	83	0.00	0.00	0.00	52.
1		0400	33	0.00	0.00	0.00	255.	1		0815	84	0.00	0.00	0.00	51.
1		0405	34	0.00	0.00	0.00	252.	1		0820	85	0.00	0.00	0.00	49.
1		0410	35	0.00	0.00	0.00	250.	1		0825	86	0.00	0.00	0.00	48.
1		0415	36	0.00	0.00	0.00	246.	1		0830	87	0.00	0.00	0.00	47.
1		0420	37	0.00	0.00	0.00	242.	1		0835	88	0.00	0.00	0.00	46.
1		0425	38	0.00	0.00	0.00	238.	1		0840	89	0.00	0.00	0.00	44.
1		0430	39	0.00	0.00	0.00	232.	1		0845	90	0.00	0.00	0.00	43.
1		0435	40	0.00	0.00	0.00	227.	1		0850	91	0.00	0.00	0.00	42.
1		0440	41	0.00	0.00	0.00	221.	1		0855	92	0.00	0.00	0.00	41.
1		0445	42	0.00	0.00	0.00	215.	1		0900	93	0.00	0.00	0.00	40.
1		0450	43	0.00	0.00	0.00	209.	1		0905	94	0.00	0.00	0.00	39.
1		0455	44	0.00	0.00	0.00	202.	1		0910	95	0.00	0.00	0.00	38.
1		0500	45	0.00	0.00	0.00	196.	1		0915	96	0.00	0.00	0.00	37.
1		0505	46	0.00	0.00	0.00	189.	1		0920	97	0.00	0.00	0.00	36.
1		0510	47	0.00	0.00	0.00	183.	1		0925	98	0.00	0.00	0.00	35.
1		0515	48	0.00	0.00	0.00	177.	1		0930	99	0.00	0.00	0.00	34.
1		0520	49	0.00	0.00	0.00	170.	1		0935	100	0.00	0.00	0.00	33.
1		0525	50	0.00	0.00	0.00	164.	1		0940	101	0.00	0.00	0.00	33.
1		0530	51	0.00	0.00	0.00	158.								

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.50, TOTAL EXCESS = 1.95

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
260.	1.17	(CFS)	175.	135.	135.	135.
		(INCHES)	1.537	1.650	1.650	1.650
		(AC-FT)	87.	93.	93.	93.

CUMULATIVE AREA = 1.06 SQ MI

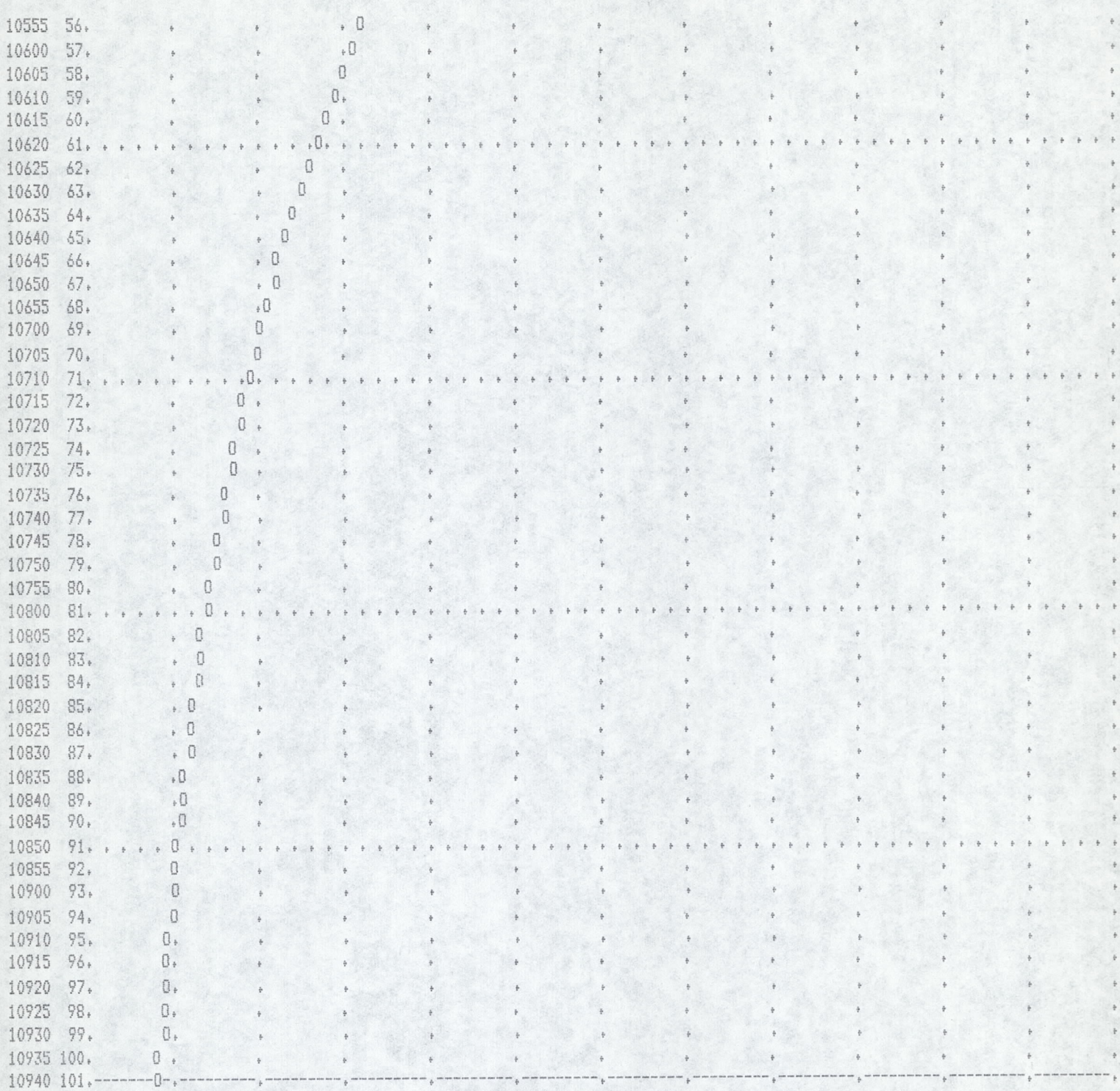
STATION SUB4

(O) OUTFLOW

0.	40.	80.	120.	160.	200.	240.	280.	0.	0.	0. (L) PRECIP,	0. (X) EXCESS	0.
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0

DAHRMN PER

```
10120  10---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
10125  20         +         +         +         +         +         +         +         +         +         +         +        X+
10130  30         +         +         +         +         +         +         +         +         +         +         +       LX+
10135  40         +         +         +         +         +         +         +         +         +         +         +       LX+
10140  50         +         +         +         +         +         +         +         +         +         +         +      LLX+
10145  60         +         +         +         +         +         +         +         +         +         +         +     LLXX+
10150  7.0        +         +         +         +         +         +         +         +         +LLLLLLXXXXXXXXXXXXXXXXXXXXXX+
10155  8.         0         +         +         +         +         +         +         +         +         +         +LXXXXXXXXX+
10200  9.         +         +         0         +         +         +         +         +         +         +         +     LXXX+
10205  10.        +         +         +         +         0         +         +         +         +         +         +      XXX+
10210  11.+++++++++++++++++++++++++++++++++++++++++++++++0+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++XX+
10215  12.        +         +         +         +         +         0         +         +         +         +         +        X+
10220  13.        +         +         +         +         +         +0        +         +         +         +         +        X+
10225  14.        +         +         +         +         +         +         0         +         +         +         +         +
10230  15.        +         +         +         +         +         +         0         +         +         +         +         +
10235  16.        +         +         +         +         +         +         0         +         +         +         +         +
10240  17.        +         +         +         +         +         +         0         +         +         +         +         +
10245  18.        +         +         +         +         +         +         0         +         +         +         +         +
10250  19.        +         +         +         +         +         +         0         +         +         +         +         +
10255  20.        +         +         +         +         +         +         0         +         +         +         +         +
10300  21.+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++0+++++++++++++++++++++++++++++++++++++++++++++++++++++
10305  22.        +         +         +         +         +         +         0         +         +         +         +         +
10310  23.        +         +         +         +         +         +         0         +         +         +         +         +
10315  24.        +         +         +         +         +         +         0         +         +         +         +         +
10320  25.        +         +         +         +         +         +         0         +         +         +         +         +
10325  26.        +         +         +         +         +         +         0         +         +         +         +         +
10330  27.        +         +         +         +         +         +         0         +         +         +         +         +
10335  28.        +         +         +         +         +         +         0         +         +         +         +         +
10340  29.        +         +         +         +         +         +         0         +         +         +         +         +
10345  30.        +         +         +         +         +         +         0         +         +         +         +         +
10350  31.+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++0+++++++++++++++++++++++++++++++++++++++++++++++++++
10355  32.        +         +         +         +         +         +         0         +         +         +         +         +
10400  33.        +         +         +         +         +         +         0         +         +         +         +         +
10405  34.        +         +         +         +         +         +          0        +         +         +         +         +
10410  35.        +         +         +         +         +         +          0        +         +         +         +         +
10415  36.        +         +         +         +         +         +          0        +         +         +         +         +
10420  37.        +         +         +         +         +         +         0         +         +         +         +         +
10425  38.        +         +         +         +         +         +        0          +         +         +         +         +
10430  39.        +         +         +         +         +         +       0           +         +         +         +         +
10435  40.        +         +         +         +         +         +       0           +         +         +         +         +
10440  41.+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++0+++++++++++++++++++++++++++++++++++++++++++++++
10445  42.        +         +         +         +         +         +  0        +         +         +         +         +         +
10450  43.        +         +         +         +         +         + 0         +         +         +         +         +         +
10455  44.        +         +         +         +         +         +0          +         +         +         +         +         +
10500  45.        +         +         +         +         +        0+           +         +         +         +         +         +
10505  46.        +         +         +         +         +     0   +           +         +         +         +         +         +
10510  47.        +         +         +         +         +    0    +           +         +         +         +         +         +
10515  48.        +         +         +         +         +  0      +           +         +         +         +         +         +
10520  49.        +         +         +         +         + 0       +           +         +         +         +         +         +
10525  50.        +         +         +         +         +0        +           +         +         +         +         +         +
10530  51.+++++++++++++++++++++++++++++++++++++++++++++++0+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
10535  52.        +         +         +         +  0      +           +         +         +         +         +         +         +
10540  53.        +         +         +         + 0       +           +         +         +         +         +         +         +
10545  54.        +         +         +         0         +           +         +         +         +         +         +         +
10550  55.        +         +         +        0          +           +         +         +         +         +         +         +
```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10845 90
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10855 92
10900 93
10905 94
10910 95
10915 96
10920 97
10925 98
10930 99
10935 100
10940 101

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          **************
          *            *
82 KK     *      RET4  *
          *            *
          **************
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RETENTION REQUIREMENT FOR SUB AREA 4

HYDROGRAPH ROUTING DATA

```
84 RL          ROUTING LOSSES
                    QLOSS        0.00  INITIAL LOSS
                    CLOSS        0.00  ADDITIONAL FRACTION LOST

85 RS          STORAGE ROUTING
                    NSTPS           1  NUMBER OF SUBREACHES
                     ITYP        STOR  TYPE OF INITIAL CONDITION
                   RSVRIC        0.00  INITIAL CONDITION
                        X        0.00  WORKING R AND D COEFFICIENT
```

86 SV	STORAGE	0.0	15.0	30.0	45.0	48.0	51.0	54.0	60.0
87 SQ	DISCHARGE	0.	0.	0.	0.	107.	304.	558.	1200.
88 SE	ELEVATION	0.00	1.00	2.00	3.00	3.20	3.40	3.60	4.00

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HYDROGRAPH AT STATION RET4

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	*	1		0410	35	1.	45.0	3.0	*	1		0700	69	92.	47.6	3.2
1		0125	2	0.	0.0	0.0	*	1		0415	36	55.	46.5	3.1	*	1		0705	70	89.	47.5	3.2
1		0130	3	0.	0.0	0.0	*	1		0420	37	96.	47.7	3.2	*	1		0710	71	87.	47.4	3.2
1		0135	4	0.	0.0	0.0	*	1		0425	38	142.	48.5	3.2	*	1		0715	72	84.	47.4	3.2
1		0140	5	0.	0.0	0.0	*	1		0430	39	176.	49.1	3.3	*	1		0720	73	81.	47.3	3.2
1		0145	6	0.	0.0	0.0	*	1		0435	40	196.	49.4	3.3	*	1		0725	74	79.	47.2	3.1
1		0150	7	0.	0.0	0.0	*	1		0440	41	206.	49.5	3.3	*	1		0730	75	76.	47.1	3.1
1		0155	8	0.	0.1	0.0	*	1		0445	42	211.	49.6	3.3	*	1		0735	76	74.	47.1	3.1
1		0200	9	0.	0.6	0.0	*	1		0450	43	211.	49.6	3.3	*	1		0740	77	72.	47.0	3.1
1		0205	10	0.	1.6	0.1	*	1		0455	44	209.	49.6	3.3	*	1		0745	78	70.	47.0	3.1
1		0210	11	0.	2.8	0.2	*	1		0500	45	205.	49.5	3.3	*	1		0750	79	67.	46.9	3.1
1		0215	12	0.	4.3	0.3	*	1		0505	46	201.	49.4	3.3	*	1		0755	80	65.	46.8	3.1
1		0220	13	0.	5.9	0.4	*	1		0510	47	195.	49.3	3.3	*	1		0800	81	63.	46.8	3.1
1		0225	14	0.	7.7	0.5	*	1		0515	48	190.	49.3	3.3	*	1		0805	82	62.	46.7	3.1
1		0230	15	0.	9.4	0.6	*	1		0520	49	184.	49.2	3.3	*	1		0810	83	60.	46.7	3.1
1		0235	16	0.	11.2	0.7	*	1		0525	50	178.	49.1	3.3	*	1		0815	84	58.	46.6	3.1
1		0240	17	0.	13.0	0.9	*	1		0530	51	172.	49.0	3.3	*	1		0820	85	56.	46.6	3.1
1		0245	18	0.	14.8	1.0	*	1		0535	52	165.	48.9	3.3	*	1		0825	86	55.	46.5	3.1
1		0250	19	0.	16.6	1.1	*	1		0540	53	158.	48.8	3.3	*	1		0830	87	53.	46.5	3.1
1		0255	20	0.	18.4	1.2	*	1		0545	54	151.	48.7	3.2	*	1		0835	88	52.	46.4	3.1

1	0300	21	0.	20.2	1.3	*	1	0550	55	145.	48.6	3.2	*	1	0840	89	50.	46.4	3.1
1	0305	22	0.	21.9	1.5	*	1	0555	56	140.	48.5	3.2	*	1	0845	90	49.	46.4	3.1
1	0310	23	0.	23.7	1.6	*	1	0600	57	134.	48.4	3.2	*	1	0850	91	47.	46.3	3.1
1	0315	24	0.	25.5	1.7	*	1	0605	58	129.	48.3	3.2	*	1	0855	92	46.	46.3	3.1
1	0320	25	0.	27.3	1.8	*	1	0610	59	125.	48.3	3.2	*	1	0900	93	45.	46.3	3.1
1	0325	26	0.	29.1	1.9	*	1	0615	60	120.	48.2	3.2	*	1	0905	94	44.	46.2	3.1
1	0330	27	0.	30.9	2.1	*	1	0620	61	116.	48.1	3.2	*	1	0910	95	42.	46.2	3.1
1	0335	28	0.	32.7	2.2	*	1	0625	62	112.	48.1	3.2	*	1	0915	96	41.	46.2	3.1
1	0340	29	0.	34.5	2.3	*	1	0630	63	108.	48.0	3.2	*	1	0920	97	40.	46.1	3.1
1	0345	30	0.	36.2	2.4	*	1	0635	64	105.	48.0	3.2	*	1	0925	98	39.	46.1	3.1
1	0350	31	0.	38.0	2.5	*	1	0640	65	103.	47.9	3.2	*	1	0930	99	38.	46.1	3.1
1	0355	32	0.	39.8	2.7	*	1	0645	66	100.	47.8	3.2	*	1	0935	100	37.	46.0	3.1
1	0400	33	0.	41.6	2.8	*	1	0650	67	98.	47.7	3.2	*	1	0940	101	36.	46.0	3.1
1	0405	34	0.	43.3	2.9	*	1	0655	68	95.	47.7	3.2	*						
						*							*						

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
211.	3.50	(CFS)	95.	69.	69.	69.
		(INCHES)	0.836	0.836	0.836	0.836
		(AC-FT)	47.	47.	47.	47.

PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)		6-HR	24-HR	72-HR	8.33-HR
50.	3.50		47.	37.	37.	37.

PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE			
(FEET)	(HR)		6-HR	24-HR	72-HR	8.33-HR
3.31	3.50		3.13	2.48	2.48	2.48

CUMULATIVE AREA = 1.06 SQ MI

STATION RET4

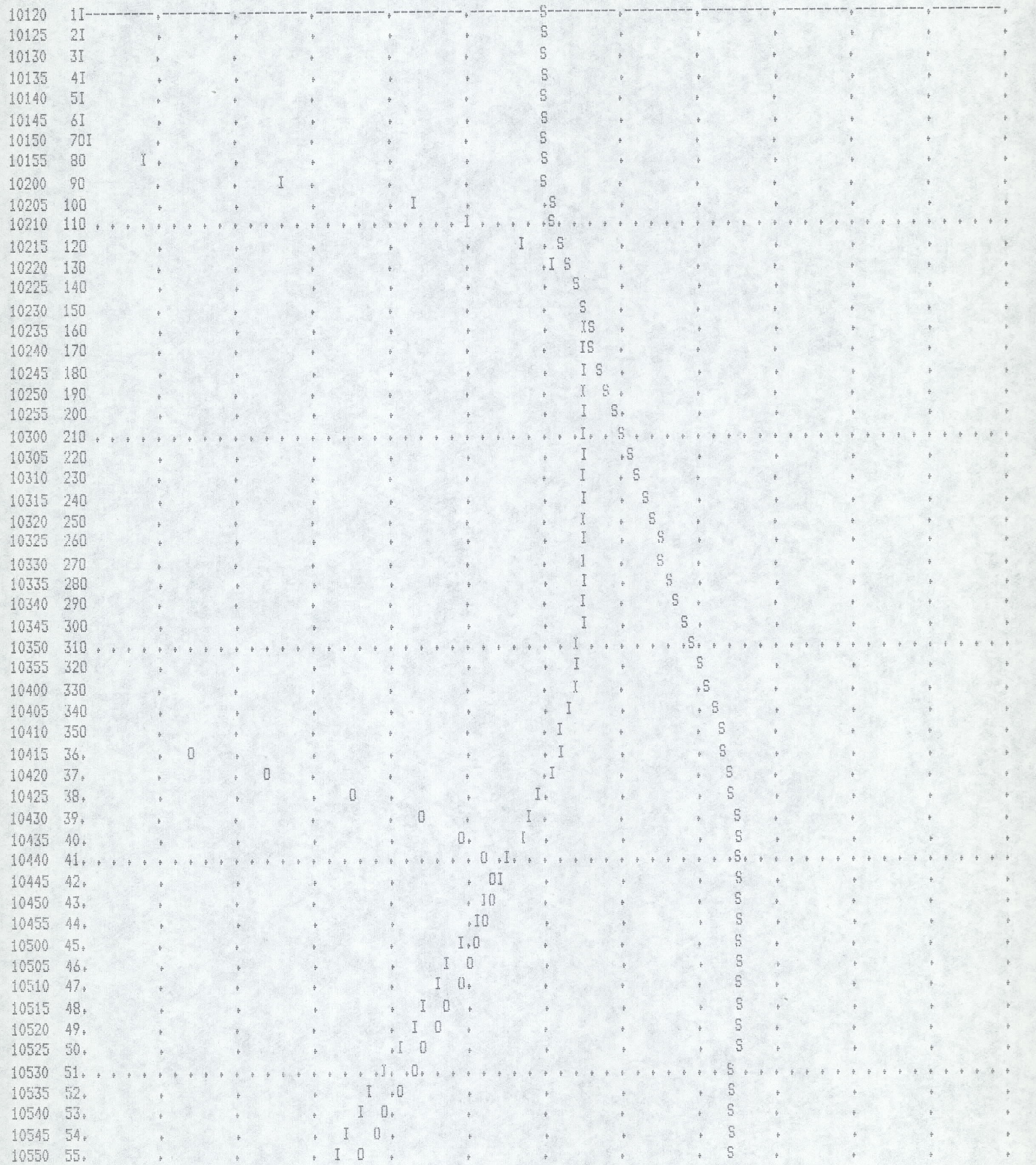
(I) INFLOW, (O) OUTFLOW

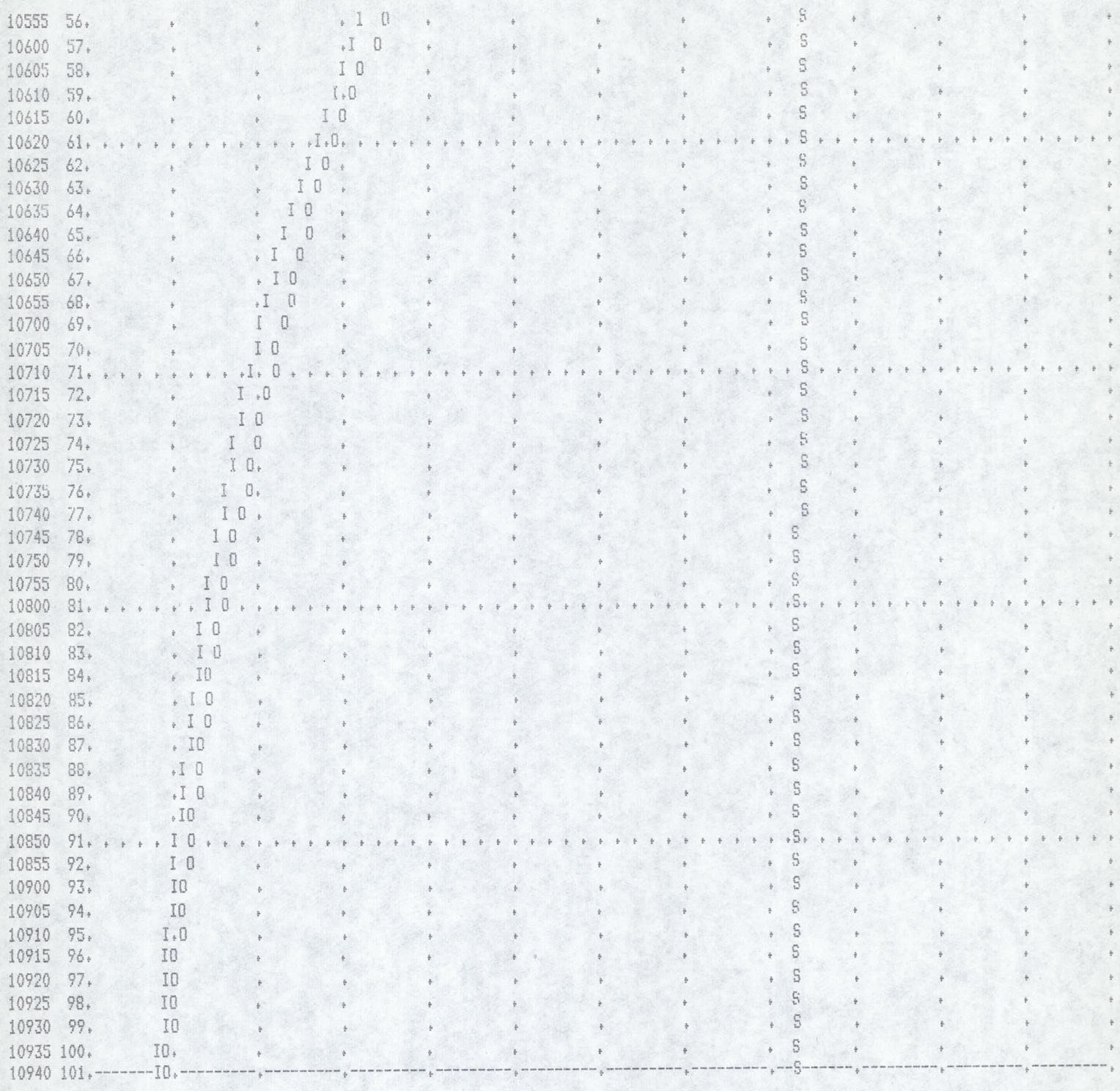
0. 40. 80. 120. 160. 200. 240. 280. 0. 0. 0. 0. 0.

(S) STORAGE

0. 0. 0. 0. 0. 0. 0. 20. 40. 60. 0. 0. 0.

DAHRMN PER




10555 56. I O S
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10605 58. I O S
10610 59. I O S
10615 60. I O S
10620 61. I O S
10625 62. I O S
10630 63. I O S
10635 64. I O S
10640 65. I O S
10645 66. I O S
10650 67. I O S
10655 68. I O S
10700 69. I O S
10705 70. I O S
10710 71. I O S
10715 72. I O S
10720 73. I O S
10725 74. I O S
10730 75. I O S
10735 76. I O S
10740 77. I O S
10745 78. I O S
10750 79. I O S
10755 80. I O S
10800 81. I O S
10805 82. I O S
10810 83. I O S
10815 84. I O S
10820 85. I O S
10825 86. I O S
10830 87. I O S
10835 88. I O S
10840 89. I O S
10845 90. I O S
10850 91. I O S
10855 92. I O S
10900 93. I O S
10905 94. I O S
10910 95. I O S
10915 96. I O S
10920 97. I O S
10925 98. I O S
10930 99. I O S
10935 100. I O S
10940 101. I O S

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              *            *
  89 KK       *      SUB4  *
              *            *
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COMBINED ROUTED SUB3 AND ROUTED SUB4

91 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB4

SUM OF 2 HYDROGRAPHS

****

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	22.	*	1		0540	53	158.	*	1		0750	79	67.
1		0125	2	0.	*	1		0335	28	21.	*	1		0545	54	151.	*	1		0755	80	65.
1		0130	3	0.	*	1		0340	29	20.	*	1		0550	55	145.	*	1		0800	81	63.
1		0135	4	0.	*	1		0345	30	19.	*	1		0555	56	140.	*	1		0805	82	62.
1		0140	5	0.	*	1		0350	31	18.	*	1		0600	57	135.	*	1		0810	83	60.
1		0145	6	0.	*	1		0355	32	16.	*	1		0605	58	130.	*	1		0815	84	58.
1		0150	7	0.	*	1		0400	33	14.	*	1		0610	59	125.	*	1		0820	85	56.
1		0155	8	0.	*	1		0405	34	12.	*	1		0615	60	120.	*	1		0825	86	55.
1		0200	9	0.	*	1		0410	35	10.	*	1		0620	61	116.	*	1		0830	87	53.
1		0205	10	0.	*	1		0415	36	61.	*	1		0625	62	112.	*	1		0835	88	52.
1		0210	11	0.	*	1		0420	37	101.	*	1		0630	63	108.	*	1		0840	89	50.
1		0215	12	0.	*	1		0425	38	145.	*	1		0635	64	105.	*	1		0845	90	49.
1		0220	13	0.	*	1		0430	39	179.	*	1		0640	65	103.	*	1		0850	91	47.
1		0225	14	0.	*	1		0435	40	198.	*	1		0645	66	100.	*	1		0855	92	46.
1		0230	15	1.	*	1		0440	41	208.	*	1		0650	67	98.	*	1		0900	93	45.
1		0235	16	3.	*	1		0445	42	212.	*	1		0655	68	95.	*	1		0905	94	44.
1		0240	17	9.	*	1		0450	43	212.	*	1		0700	69	92.	*	1		0910	95	42.
1		0245	18	14.	*	1		0455	44	210.	*	1		0705	70	89.	*	1		0915	96	41.
1		0250	19	18.	*	1		0500	45	206.	*	1		0710	71	87.	*	1		0920	97	40.
1		0255	20	20.	*	1		0505	46	201.	*	1		0715	72	84.	*	1		0925	98	39.
1		0300	21	21.	*	1		0510	47	196.	*	1		0720	73	81.	*	1		0930	99	38.
1		0305	22	22.	*	1		0515	48	190.	*	1		0725	74	79.	*	1		0935	100	37.
1		0310	23	22.	*	1		0520	49	184.	*	1		0730	75	76.	*	1		0940	101	36.
1		0315	24	22.	*	1		0525	50	178.	*	1		0735	76	74.	*					
1		0320	25	22.	*	1		0530	51	172.	*	1		0740	77	72.	*					
1		0325	26	22.	*	1		0535	52	165.	*	1		0745	78	70.	*					

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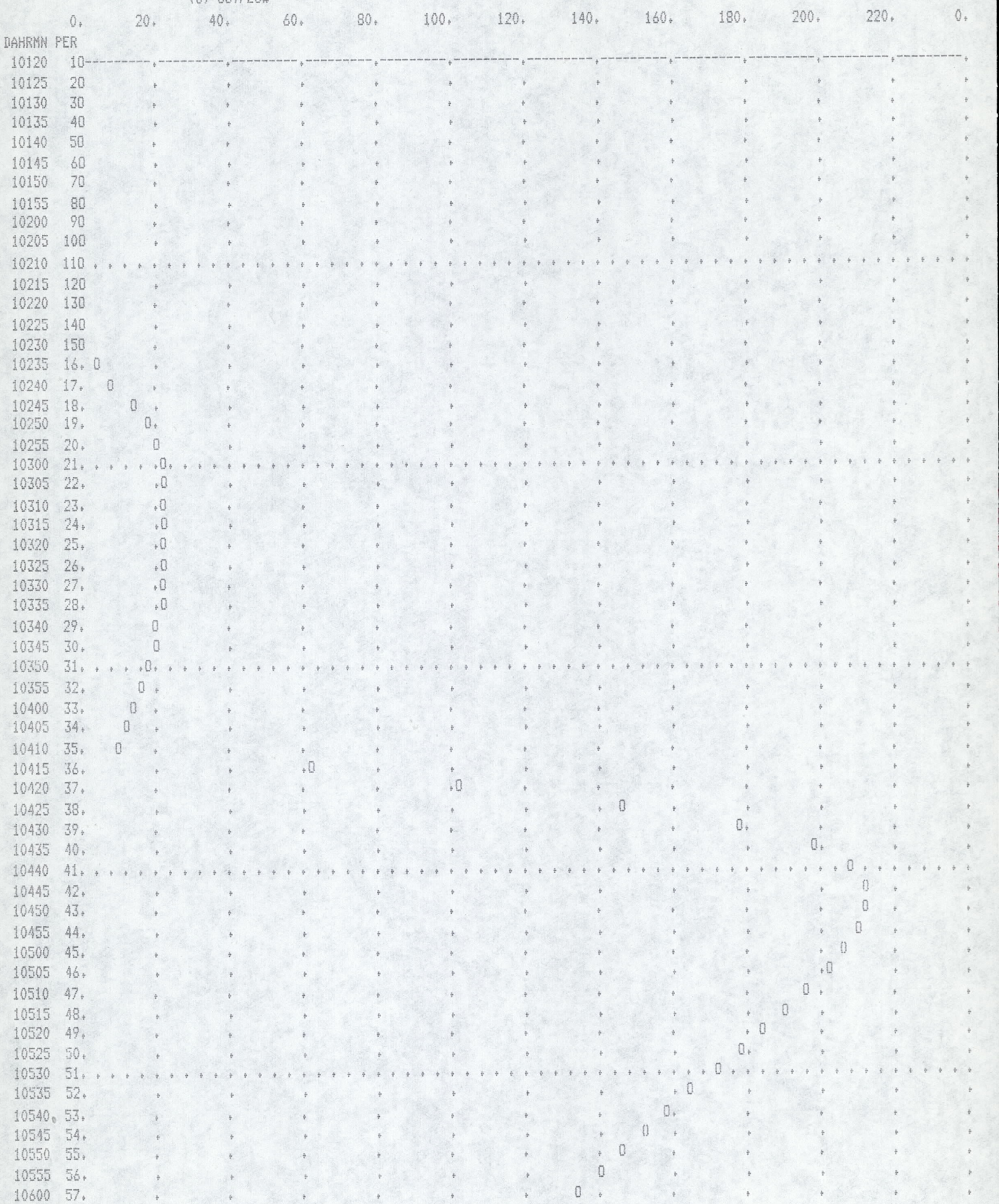
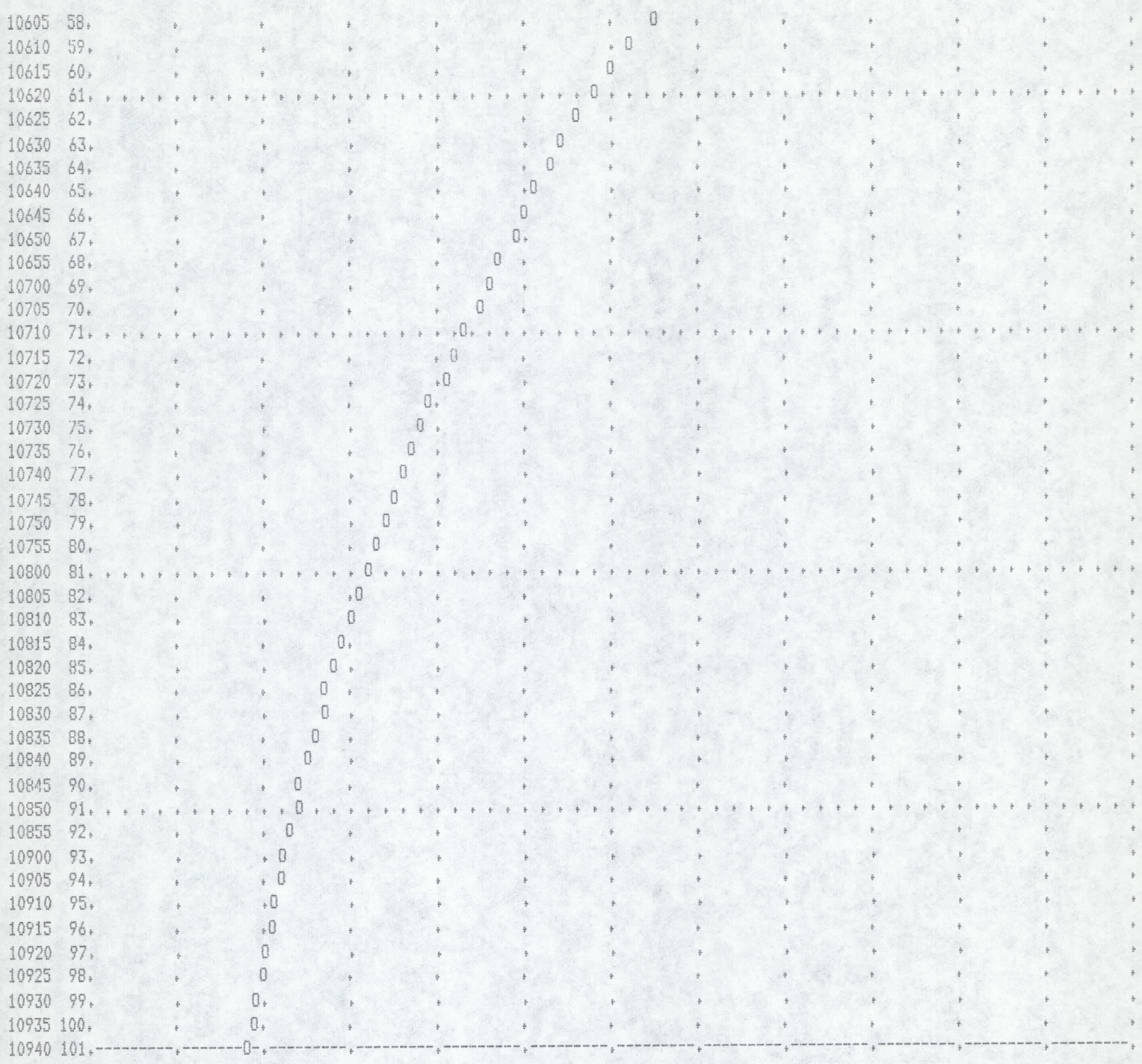
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
212.	3.50	(CFS)	97.	72.	72.	72.
		(INCHES)	0.332	0.344	0.344	0.344
		(AC-FT)	48.	50.	50.	50.

CUMULATIVE AREA = 2.72 SQ MI

STATION SUB4

(O) OUTFLOW




10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
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10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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              *            *
   92 KK      *    DIV25   *
              *            *
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RETRIEVE DIVERSION FROM CONCENTRATION B OF AREA 2

94 DR RETRIEVE DIVERSION HYDROGRAPH

ISTAD DIV25 DIVERSION HYDROGRAPH IDENTIFICATION

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HYDROGRAPH AT STATION DIV25

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	0.	1		0540	53	42.	1		0750	79	5.
1		0125	2	0.	1		0335	28	0.	1		0545	54	41.	1		0755	80	4.
1		0130	3	0.	1		0340	29	0.	1		0550	55	39.	1		0800	81	3.
1		0135	4	0.	1		0345	30	0.	1		0555	56	37.	1		0805	82	2.
1		0140	5	0.	1		0350	31	0.	1		0600	57	36.	1		0810	83	2.
1		0145	6	0.	1		0355	32	0.	1		0605	58	34.	1		0815	84	1.
1		0150	7	0.	1		0400	33	0.	1		0610	59	32.	1		0820	85	1.
1		0155	8	0.	1		0405	34	0.	1		0615	60	30.	1		0825	86	1.
1		0200	9	0.	1		0410	35	0.	1		0620	61	29.	1		0830	87	1.
1		0205	10	0.	1		0415	36	0.	1		0625	62	27.	1		0835	88	1.
1		0210	11	0.	1		0420	37	0.	1		0630	63	25.	1		0840	89	1.
1		0215	12	0.	1		0425	38	0.	1		0635	64	24.	1		0845	90	1.
1		0220	13	0.	1		0430	39	0.	1		0640	65	22.	1		0850	91	0.
1		0225	14	0.	1		0435	40	8.	1		0645	66	21.	1		0855	92	0.
1		0230	15	0.	1		0440	41	20.	1		0650	67	19.	1		0900	93	0.
1		0235	16	0.	1		0445	42	29.	1		0655	68	18.	1		0905	94	0.
1		0240	17	0.	1		0450	43	36.	1		0700	69	16.	1		0910	95	0.
1		0245	18	0.	1		0455	44	41.	1		0705	70	15.	1		0915	96	0.
1		0250	19	0.	1		0500	45	44.	1		0710	71	14.	1		0920	97	0.
1		0255	20	0.	1		0505	46	46.	1		0715	72	12.	1		0925	98	0.
1		0300	21	0.	1		0510	47	47.	1		0720	73	11.	1		0930	99	0.
1		0305	22	0.	1		0515	48	47.	1		0725	74	10.	1		0935	100	0.
1		0310	23	0.	1		0520	49	47.	1		0730	75	9.	1		0940	101	0.
1		0315	24	0.	1		0525	50	46.	1		0735	76	8.					
1		0320	25	0.	1		0530	51	45.	1		0740	77	7.					
1		0325	26	0.	1		0535	52	44.	1		0745	78	6.					

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
47.	3.92	(CFS)	15.	11.	11.	11.
		(INCHES)	0.053	0.053	0.053	0.053
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 0.00 SQ MI

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          *            *
 95 KK    *      SUB5  *
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DIVERSION FLOW FROM SUB2 ROUTED TO SUB5

HYDROGRAPH ROUTING DATA

84 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

97 RK KINEMATIC WAVE STREAM ROUTING

L	5280.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

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KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.5941	1.423	5.00	2640.00

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HYDROGRAPH AT STATION SUB5

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	0.	*	1		0540	53	45.	*	1		0750	79	9.
1		0125	2	0.	*	1		0335	28	0.	*	1		0545	54	44.	*	1		0755	80	8.
1		0130	3	0.	*	1		0340	29	0.	*	1		0550	55	42.	*	1		0800	81	7.
1		0135	4	0.	*	1		0345	30	0.	*	1		0555	56	41.	*	1		0805	82	6.
1		0140	5	0.	*	1		0350	31	0.	*	1		0600	57	39.	*	1		0810	83	5.
1		0145	6	0.	*	1		0355	32	0.	*	1		0605	58	37.	*	1		0815	84	4.
1		0150	7	0.	*	1		0400	33	0.	*	1		0610	59	36.	*	1		0820	85	4.
1		0155	8	0.	*	1		0405	34	0.	*	1		0615	60	34.	*	1		0825	86	3.
1		0200	9	0.	*	1		0410	35	0.	*	1		0620	61	32.	*	1		0830	87	3.
1		0205	10	0.	*	1		0415	36	0.	*	1		0625	62	31.	*	1		0835	88	2.
1		0210	11	0.	*	1		0420	37	0.	*	1		0630	63	29.	*	1		0840	89	2.
1		0215	12	0.	*	1		0425	38	0.	*	1		0635	64	28.	*	1		0845	90	2.

1	0220	13	0.	*	1	0430	39	0.	*	1	0640	65	26.	*	1	0850	91	2.
1	0225	14	0.	*	1	0435	40	0.	*	1	0645	66	24.	*	1	0855	92	2.
1	0230	15	0.	*	1	0440	41	0.	*	1	0650	67	23.	*	1	0900	93	1.
1	0235	16	0.	*	1	0445	42	2.	*	1	0655	68	21.	*	1	0905	94	1.
1	0240	17	0.	*	1	0450	43	8.	*	1	0700	69	20.	*	1	0910	95	1.
1	0245	18	0.	*	1	0455	44	18.	*	1	0705	70	19.	*	1	0915	96	1.
1	0250	19	0.	*	1	0500	45	28.	*	1	0710	71	17.	*	1	0920	97	1.
1	0255	20	0.	*	1	0505	46	36.	*	1	0715	72	16.	*	1	0925	98	1.
1	0300	21	0.	*	1	0510	47	42.	*	1	0720	73	15.	*	1	0930	99	1.
1	0305	22	0.	*	1	0515	48	45.	*	1	0725	74	14.	*	1	0935	100	1.
1	0310	23	0.	*	1	0520	49	46.	*	1	0730	75	13.	*	1	0940	101	1.
1	0315	24	0.	*	1	0525	50	47.	*	1	0735	76	11.	*				
1	0320	25	0.	*	1	0530	51	46.	*	1	0740	77	10.	*				
1	0325	26	0.	*	1	0535	52	46.	*	1	0745	78	9.	*				
				*					*					*				

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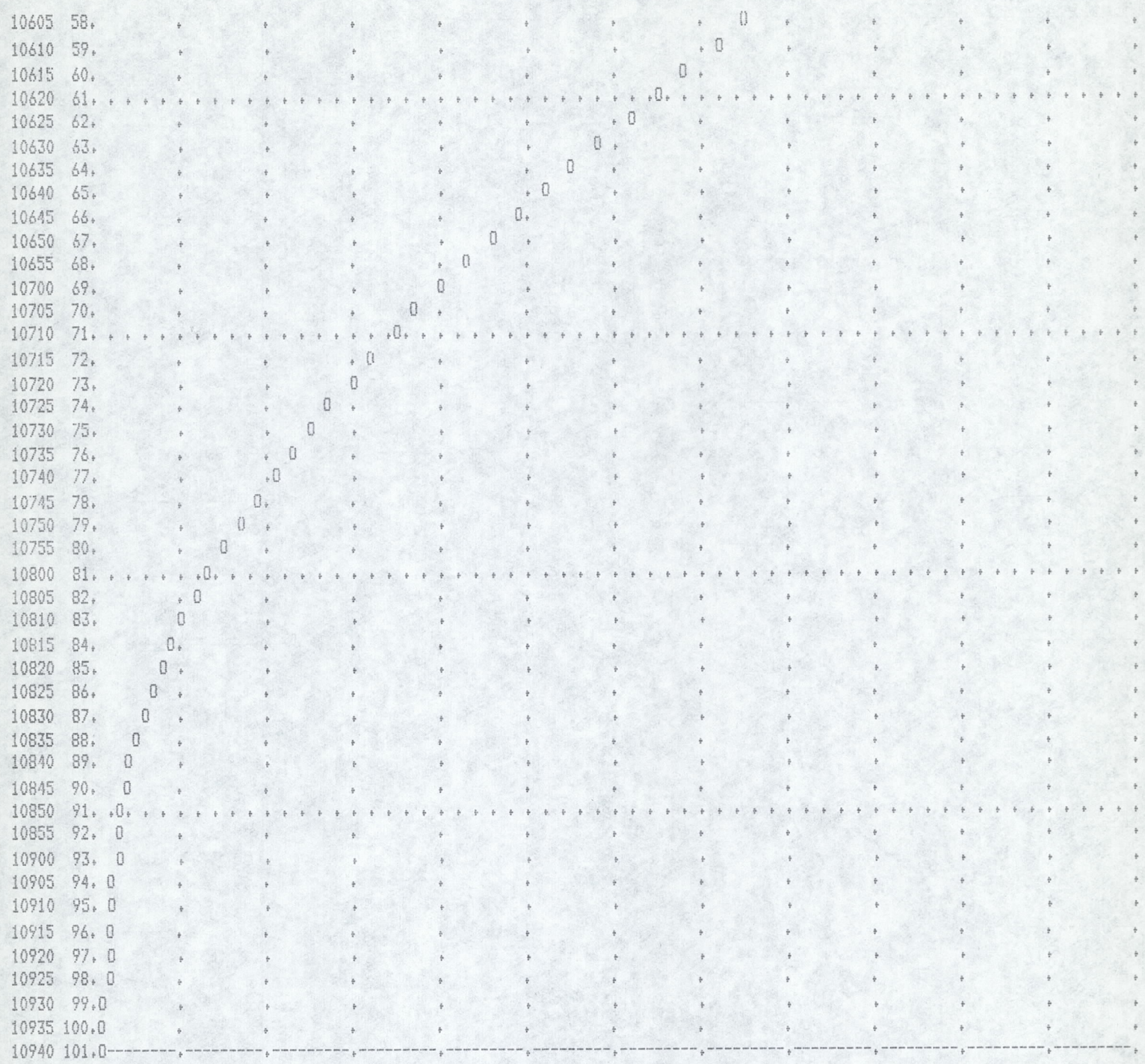
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
47.	4.08	(CFS)	15.	11.	11.	11.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 0.00 SQ MI

STATION SUB5

(O) OUTFLOW

DAHRMN	PER	0.	5.	10.	15.	20.	25.	30.	35.	40.	45.	50.	0.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	70													
10155	80													
10200	90													
10205	100													
10210	110													
10215	120													
10220	130													
10225	140													
10230	150													
10235	160													
10240	170													
10245	180													
10250	190													
10255	200													
10300	210													
10305	220													
10310	230													
10315	240													
10320	250													
10325	260													
10330	270													
10335	280													
10340	290													
10345	300													
10350	310													
10355	320													
10400	330													
10405	340													
10410	350													
10415	360													
10420	370													
10425	380													
10430	390													
10435	400													
10440	410													
10445	42.	O												
10450	43.		O											
10455	44.				O									
10500	45.							O						
10505	46.								O					
10510	47.									O				
10515	48.										O			
10520	49.										O			
10525	50.										O			
10530	51.										O			
10535	52.										O			
10540	53.										O			
10545	54.										O			
10550	55.									O				
10555	56.									O				
10600	57.									O				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10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
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10800 81.
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10830 87.
10835 88.
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10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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

           **************
           *            *
  98 KK    *   SUB5B    *
           *            *
           **************
                          NORTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
                           ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99TH STREET

              SUBBASIN RUNOFF DATA

 104 BA         SUBBASIN CHARACTERISTICS
                      TAREA        0.50  SUBBASIN AREA

                PRECIPITATION DATA

 101 PB               STORM        2.45  BASIN TOTAL PRECIPITATION

 102 PI           INCREMENTAL PRECIPITATION PATTERN
                     0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                     0.06      0.05

 105 LS         SCS LOSS RATE
                      STRTL        0.25  INITIAL ABSTRACTION
                     CRVNBR       89.00  CURVE NUMBER
                      RTIMP       60.00  PERCENT IMPERVIOUS AREA

                  LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
                      STRTL        0.25  INITIAL ABSTRACTION
                     CRVNBR       89.00  CURVE NUMBER
                      RTIMP       60.00  PERCENT IMPERVIOUS AREA

                KINEMATIC WAVE
 106 UK           OVERLAND-FLOW ELEMENT NO. 1
                          L       1850.  OVERLAND FLOW LENGTH
                          S      0.0033  SLOPE
                          N       0.100  ROUGHNESS COEFFICIENT
                         PA        25.0  PERCENT OF SUBBASIN
 107 UK           OVERLAND-FLOW ELEMENT NO. 2
                          L       5600.  OVERLAND FLOW LENGTH
                          S      0.0033  SLOPE
                          N       0.100  ROUGHNESS COEFFICIENT
                         PA        75.0  PERCENT OF SUBBASIN
 108 RK           MAIN CHANNEL
                          L       2640.  CHANNEL LENGTH
                          S      0.0050  SLOPE
                          N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                         CA        0.50  CONTRIBUTING AREA
                      SHAPE        TRAP  CHANNEL SHAPE
                         WD        0.00  BOTTOM WIDTH OR DIAMETER
                          Z        1.00  SIDE SLOPE
                     RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

                                                      ***

        COMPUTED KINEMATIC PARAMETERS
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ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.8559	1.667	5.00	231.25
2	0.8559	1.667	5.00	373.33
3	2.1102	1.333	5.00	1320.00

****

HYDROGRAPH AT STATION SUB5B

****

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	65.
1		0125	2	0.05	0.02	0.03	0.	*	1		0540	53	0.00	0.00	0.00	63.
1		0130	3	0.07	0.03	0.04	0.	*	1		0545	54	0.00	0.00	0.00	61.
1		0135	4	0.07	0.03	0.04	0.	*	1		0550	55	0.00	0.00	0.00	59.
1		0140	5	0.10	0.04	0.06	1.	*	1		0555	56	0.00	0.00	0.00	57.
1		0145	6	0.16	0.05	0.11	2.	*	1		0600	57	0.00	0.00	0.00	55.
1		0150	7	1.16	0.19	0.97	19.	*	1		0605	58	0.00	0.00	0.00	54.
1		0155	8	0.39	0.03	0.36	72.	*	1		0610	59	0.00	0.00	0.00	52.
1		0200	9	0.14	0.01	0.13	111.	*	1		0615	60	0.00	0.00	0.00	50.
1		0205	10	0.11	0.01	0.10	130.	*	1		0620	61	0.00	0.00	0.00	48.
1		0210	11	0.09	0.01	0.08	143.	*	1		0625	62	0.00	0.00	0.00	47.
1		0215	12	0.06	0.00	0.06	154.	*	1		0630	63	0.00	0.00	0.00	45.
1		0220	13	0.05	0.00	0.05	161.	*	1		0635	64	0.00	0.00	0.00	44.
1		0225	14	0.00	0.00	0.00	166.	*	1		0640	65	0.00	0.00	0.00	42.
1		0230	15	0.00	0.00	0.00	167.	*	1		0645	66	0.00	0.00	0.00	41.
1		0235	16	0.00	0.00	0.00	166.	*	1		0650	67	0.00	0.00	0.00	40.
1		0240	17	0.00	0.00	0.00	165.	*	1		0655	68	0.00	0.00	0.00	38.
1		0245	18	0.00	0.00	0.00	163.	*	1		0700	69	0.00	0.00	0.00	37.
1		0250	19	0.00	0.00	0.00	160.	*	1		0705	70	0.00	0.00	0.00	36.
1		0255	20	0.00	0.00	0.00	156.	*	1		0710	71	0.00	0.00	0.00	35.
1		0300	21	0.00	0.00	0.00	151.	*	1		0715	72	0.00	0.00	0.00	34.
1		0305	22	0.00	0.00	0.00	146.	*	1		0720	73	0.00	0.00	0.00	33.
1		0310	23	0.00	0.00	0.00	141.	*	1		0725	74	0.00	0.00	0.00	32.
1		0315	24	0.00	0.00	0.00	136.	*	1		0730	75	0.00	0.00	0.00	31.
1		0320	25	0.00	0.00	0.00	131.	*	1		0735	76	0.00	0.00	0.00	30.
1		0325	26	0.00	0.00	0.00	127.	*	1		0740	77	0.00	0.00	0.00	29.
1		0330	27	0.00	0.00	0.00	123.	*	1		0745	78	0.00	0.00	0.00	28.
1		0335	28	0.00	0.00	0.00	120.	*	1		0750	79	0.00	0.00	0.00	27.
1		0340	29	0.00	0.00	0.00	116.	*	1		0755	80	0.00	0.00	0.00	27.
1		0345	30	0.00	0.00	0.00	114.	*	1		0800	81	0.00	0.00	0.00	26.
1		0350	31	0.00	0.00	0.00	111.	*	1		0805	82	0.00	0.00	0.00	25.
1		0355	32	0.00	0.00	0.00	109.	*	1		0810	83	0.00	0.00	0.00	24.
1		0400	33	0.00	0.00	0.00	106.	*	1		0815	84	0.00	0.00	0.00	24.
1		0405	34	0.00	0.00	0.00	104.	*	1		0820	85	0.00	0.00	0.00	23.
1		0410	35	0.00	0.00	0.00	102.	*	1		0825	86	0.00	0.00	0.00	23.
1		0415	36	0.00	0.00	0.00	100.	*	1		0830	87	0.00	0.00	0.00	22.
1		0420	37	0.00	0.00	0.00	98.	*	1		0835	88	0.00	0.00	0.00	21.
1		0425	38	0.00	0.00	0.00	96.	*	1		0840	89	0.00	0.00	0.00	21.
1		0430	39	0.00	0.00	0.00	94.	*	1		0845	90	0.00	0.00	0.00	20.
1		0435	40	0.00	0.00	0.00	92.	*	1		0850	91	0.00	0.00	0.00	20.
1		0440	41	0.00	0.00	0.00	90.	*	1		0855	92	0.00	0.00	0.00	19.
1		0445	42	0.00	0.00	0.00	88.	*	1		0900	93	0.00	0.00	0.00	19.
1		0450	43	0.00	0.00	0.00	86.	*	1		0905	94	0.00	0.00	0.00	18.
1		0455	44	0.00	0.00	0.00	83.	*	1		0910	95	0.00	0.00	0.00	18.
1		0500	45	0.00	0.00	0.00	81.	*	1		0915	96	0.00	0.00	0.00	17.
1		0505	46	0.00	0.00	0.00	79.	*	1		0920	97	0.00	0.00	0.00	17.
1		0510	47	0.00	0.00	0.00	77.	*	1		0925	98	0.00	0.00	0.00	17.
1		0515	48	0.00	0.00	0.00	74.	*	1		0930	99	0.00	0.00	0.00	16.

1	0520	49	0.00	0.00	0.00	72.	*	1	0935	100	0.00	0.00	0.00	16.
1	0525	50	0.00	0.00	0.00	70.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	68.	*							
							*							

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.42, TOTAL EXCESS = 2.03

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
167.	1.17	(CFS)	88.	68.	68.	68.
		(INCHES)	1.630	1.751	1.751	1.751
		(AC-FT)	43.	47.	47.	47.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB5B

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	120.	140.	160.	180.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												X
10130	30												LX
10135	40												LX
10140	50												LXX
10145	6.0												LXXX
10150	7.	O									LLLLLXXXXXXXXXXXXXXXXXXXXXXXX		
10155	8.				O							LXXXXXXXXX	
10200	9.					O							LXXX
10205	10.						O						XXX
10210	11.							O					XX
10215	12.								O				X
10220	13.								O				X
10225	14.								O				
10230	15.								O				
10235	16.								O				
10240	17.								O				
10245	18.								O				
10250	19.								O				
10255	20.								O				
10300	21.							O					
10305	22.							O					
10310	23.							O					
10315	24.							O					
10320	25.						O						
10325	26.						O						
10330	27.						O						
10335	28.						O						
10340	29.						O						
10345	30.						O						
10350	31.						O						
10355	32.					O							
10400	33.					O							
10405	34.					O							
10410	35.					O							
10415	36.					O							
10420	37.					O							
10425	38.					O							
10430	39.					O							
10435	40.					O							
10440	41.				O								
10445	42.				O								
10450	43.				O								
10455	44.				O								
10500	45.				O								
10505	46.				O								
10510	47.				O								
10515	48.				O								
10520	49.				O								
10525	50.				O								
10530	51.			O									
10535	52.			O									
10540	53.			O									
10545	54.			O									
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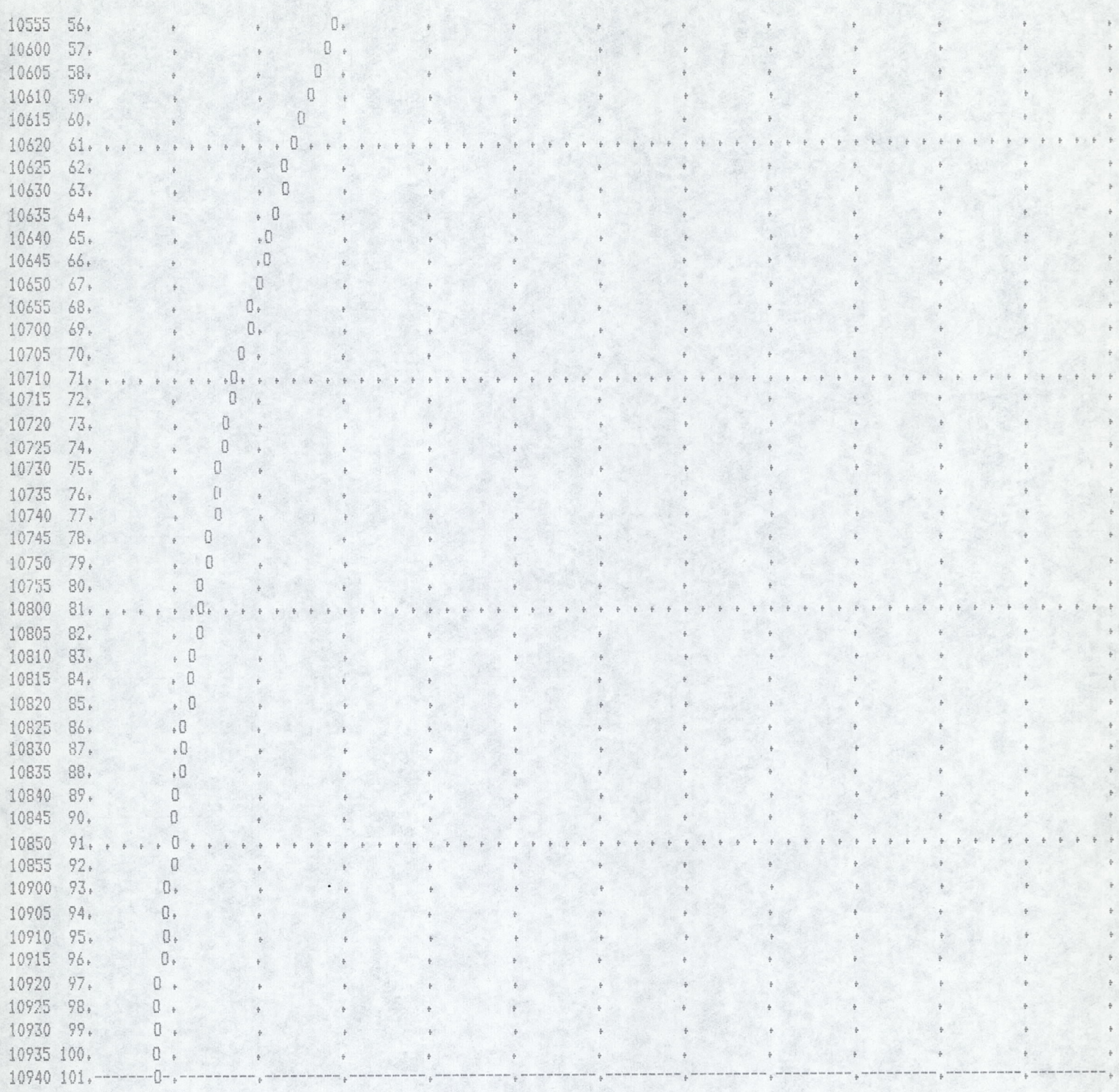
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10720 73.
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10750 79.
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10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
109 KK    *    SUB5A   *
          *            *
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SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

SUBBASIN RUNOFF DATA

115 BA SUBBASIN CHARACTERISTICS

TAREA	0.50	SUBBASIN AREA

PRECIPITATION DATA

112 PB STORM	2.45	BASIN TOTAL PRECIPITATION

113 PI INCREMENTAL PRECIPITATION PATTERN

0.05	0.07	0.07	0.10	0.16	1.16	0.39	0.14	0.11	0.09
0.06	0.05								

116 LS SCS LOSS RATE

STRTL	0.25	INITIAL ABSTRACTION
CRVNBR	89.00	CURVE NUMBER
RTIMP	60.00	PERCENT IMPERVIOUS AREA

LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT

STRTL	0.25	INITIAL ABSTRACTION
CRVNBR	89.00	CURVE NUMBER
RTIMP	60.00	PERCENT IMPERVIOUS AREA

KINEMATIC WAVE

117 UK OVERLAND-FLOW ELEMENT NO. 1

L	1850.	OVERLAND FLOW LENGTH
S	0.0033	SLOPE
N	0.100	ROUGHNESS COEFFICIENT
PA	25.0	PERCENT OF SUBBASIN

118 UK OVERLAND-FLOW ELEMENT NO. 2

L	5600.	OVERLAND FLOW LENGTH
S	0.0033	SLOPE
N	0.100	ROUGHNESS COEFFICIENT
PA	75.0	PERCENT OF SUBBASIN

119 RK MAIN CHANNEL

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.50	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	0.00	BOTTOM WIDTH OR DIAMETER
Z	1.00	SIDE SLOPE
RUPSTQ	NO	ROUTE UPSTREAM HYDROGRAPH

***

COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.8559	1.667	5.00	231.25
2	0.8559	1.667	5.00	373.33
3	2.1102	1.333	5.00	1320.00

****

HYDROGRAPH AT STATION SUB5A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	65.
1		0125	2	0.05	0.02	0.03	0.	*	1		0540	53	0.00	0.00	0.00	63.
1		0130	3	0.07	0.03	0.04	0.	*	1		0545	54	0.00	0.00	0.00	61.
1		0135	4	0.07	0.03	0.04	0.	*	1		0550	55	0.00	0.00	0.00	59.
1		0140	5	0.10	0.04	0.06	1.	*	1		0555	56	0.00	0.00	0.00	57.
1		0145	6	0.16	0.05	0.11	2.	*	1		0600	57	0.00	0.00	0.00	55.
1		0150	7	1.16	0.19	0.97	19.	*	1		0605	58	0.00	0.00	0.00	54.
1		0155	8	0.39	0.03	0.36	72.	*	1		0610	59	0.00	0.00	0.00	52.
1		0200	9	0.14	0.01	0.13	111.	*	1		0615	60	0.00	0.00	0.00	50.
1		0205	10	0.11	0.01	0.10	130.	*	1		0620	61	0.00	0.00	0.00	48.
1		0210	11	0.09	0.01	0.08	143.	*	1		0625	62	0.00	0.00	0.00	47.
1		0215	12	0.06	0.00	0.06	154.	*	1		0630	63	0.00	0.00	0.00	45.
1		0220	13	0.05	0.00	0.05	161.	*	1		0635	64	0.00	0.00	0.00	44.
1		0225	14	0.00	0.00	0.00	166.	*	1		0640	65	0.00	0.00	0.00	42.
1		0230	15	0.00	0.00	0.00	167.	*	1		0645	66	0.00	0.00	0.00	41.
1		0235	16	0.00	0.00	0.00	166.	*	1		0650	67	0.00	0.00	0.00	40.
1		0240	17	0.00	0.00	0.00	165.	*	1		0655	68	0.00	0.00	0.00	38.
1		0245	18	0.00	0.00	0.00	163.	*	1		0700	69	0.00	0.00	0.00	37.
1		0250	19	0.00	0.00	0.00	160.	*	1		0705	70	0.00	0.00	0.00	36.
1		0255	20	0.00	0.00	0.00	156.	*	1		0710	71	0.00	0.00	0.00	35.
1		0300	21	0.00	0.00	0.00	151.	*	1		0715	72	0.00	0.00	0.00	34.
1		0305	22	0.00	0.00	0.00	146.	*	1		0720	73	0.00	0.00	0.00	33.
1		0310	23	0.00	0.00	0.00	141.	*	1		0725	74	0.00	0.00	0.00	32.
1		0315	24	0.00	0.00	0.00	136.	*	1		0730	75	0.00	0.00	0.00	31.
1		0320	25	0.00	0.00	0.00	131.	*	1		0735	76	0.00	0.00	0.00	30.
1		0325	26	0.00	0.00	0.00	127.	*	1		0740	77	0.00	0.00	0.00	29.
1		0330	27	0.00	0.00	0.00	123.	*	1		0745	78	0.00	0.00	0.00	28.
1		0335	28	0.00	0.00	0.00	120.	*	1		0750	79	0.00	0.00	0.00	27.
1		0340	29	0.00	0.00	0.00	116.	*	1		0755	80	0.00	0.00	0.00	27.
1		0345	30	0.00	0.00	0.00	114.	*	1		0800	81	0.00	0.00	0.00	26.
1		0350	31	0.00	0.00	0.00	111.	*	1		0805	82	0.00	0.00	0.00	25.
1		0355	32	0.00	0.00	0.00	109.	*	1		0810	83	0.00	0.00	0.00	24.
1		0400	33	0.00	0.00	0.00	106.	*	1		0815	84	0.00	0.00	0.00	24.
1		0405	34	0.00	0.00	0.00	104.	*	1		0820	85	0.00	0.00	0.00	23.
1		0410	35	0.00	0.00	0.00	102.	*	1		0825	86	0.00	0.00	0.00	23.
1		0415	36	0.00	0.00	0.00	100.	*	1		0830	87	0.00	0.00	0.00	22.
1		0420	37	0.00	0.00	0.00	98.	*	1		0835	88	0.00	0.00	0.00	21.
1		0425	38	0.00	0.00	0.00	96.	*	1		0840	89	0.00	0.00	0.00	21.
1		0430	39	0.00	0.00	0.00	94.	*	1		0845	90	0.00	0.00	0.00	20.
1		0435	40	0.00	0.00	0.00	92.	*	1		0850	91	0.00	0.00	0.00	20.
1		0440	41	0.00	0.00	0.00	90.	*	1		0855	92	0.00	0.00	0.00	19.
1		0445	42	0.00	0.00	0.00	88.	*	1		0900	93	0.00	0.00	0.00	19.
1		0450	43	0.00	0.00	0.00	86.	*	1		0905	94	0.00	0.00	0.00	18.
1		0455	44	0.00	0.00	0.00	83.	*	1		0910	95	0.00	0.00	0.00	18.
1		0500	45	0.00	0.00	0.00	81.	*	1		0915	96	0.00	0.00	0.00	17.
1		0505	46	0.00	0.00	0.00	79.	*	1		0920	97	0.00	0.00	0.00	17.
1		0510	47	0.00	0.00	0.00	77.	*	1		0925	98	0.00	0.00	0.00	17.
1		0515	48	0.00	0.00	0.00	74.	*	1		0930	99	0.00	0.00	0.00	16.

1	0520	49	0.00	0.00	0.00	72.	*	1	0935	100	0.00	0.00	0.00	16.
1	0525	50	0.00	0.00	0.00	70.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	68.	*							
							*							

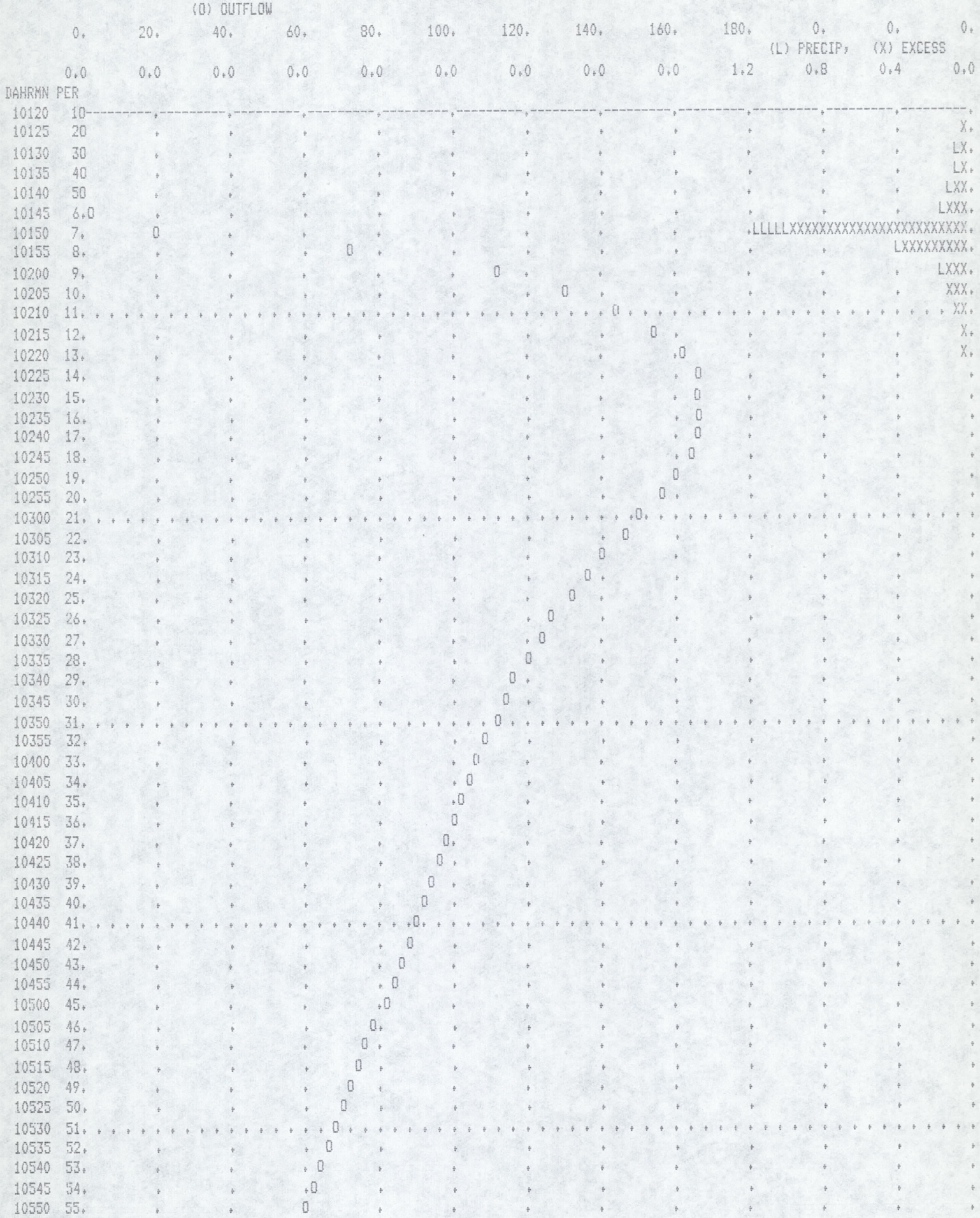
****

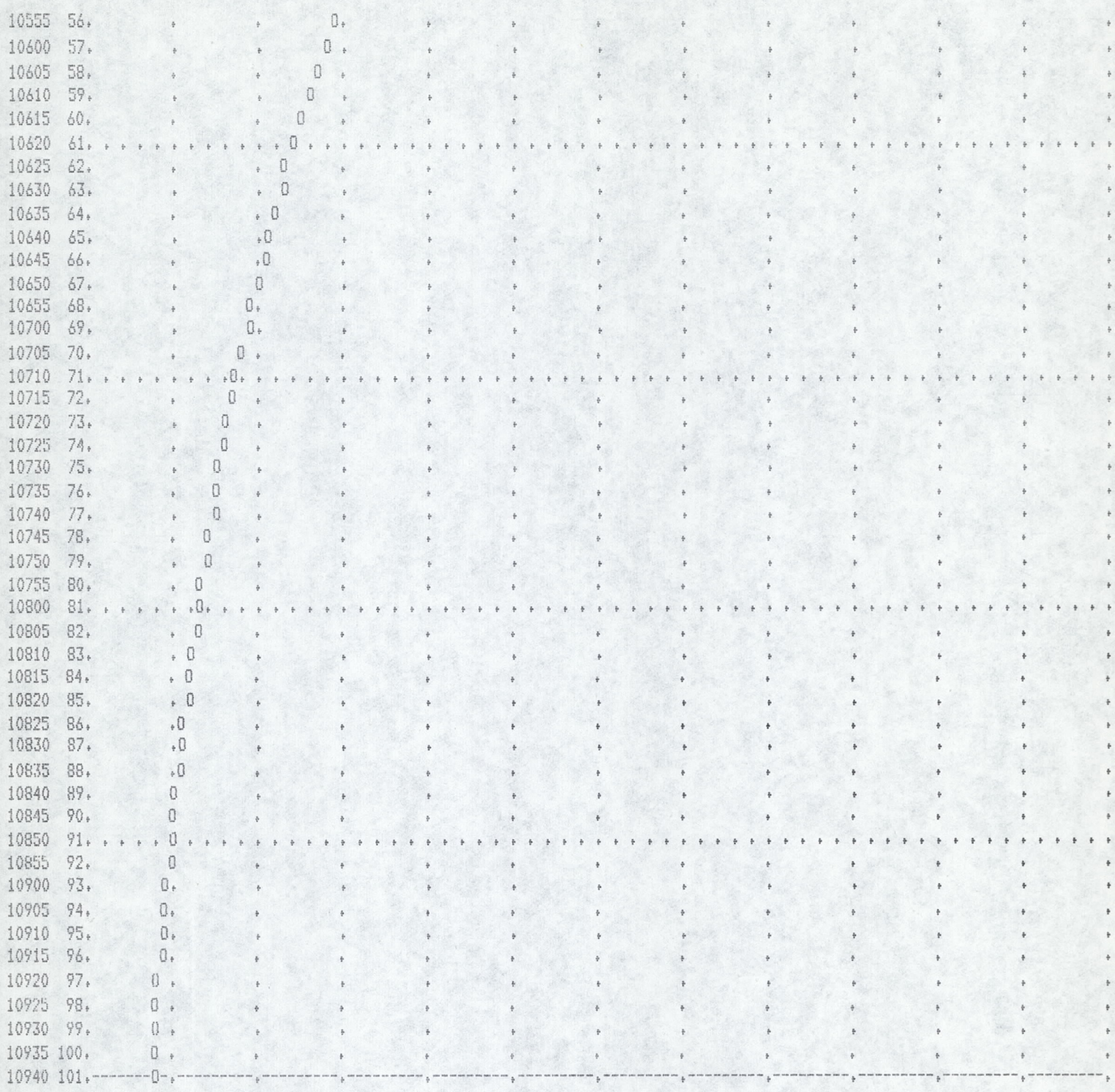
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.42, TOTAL EXCESS = 2.03

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
167.	1.17	(CFS)	88.	68.	68.	68.
		(INCHES)	1.630	1.751	1.751	1.751
		(AC-FT)	43.	47.	47.	47.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB5A

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10725 74
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10735 76
10740 77
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10750 79
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10840 89
10845 90
10850 91
10855 92
10900 93
10905 94
10910 95
10915 96
10920 97
10925 98
10930 99
10935 100
10940 101

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          *            *
 120 KK   *      SUB5  *
          *            *
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COMBINE RUNOFF FROM SUB5A AND SUB5B

122 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB5

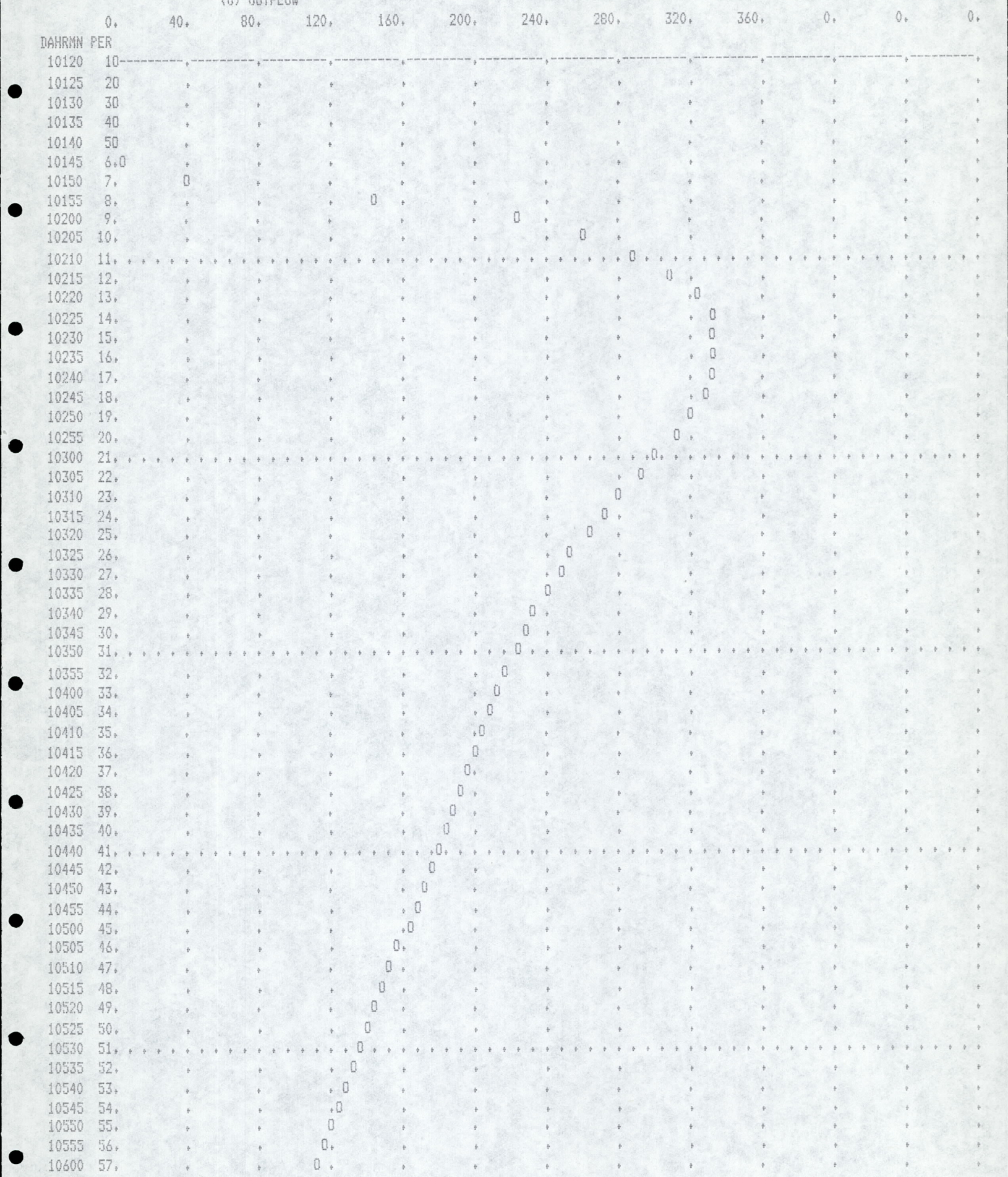
SUM OF 2 HYDROGRAPHS

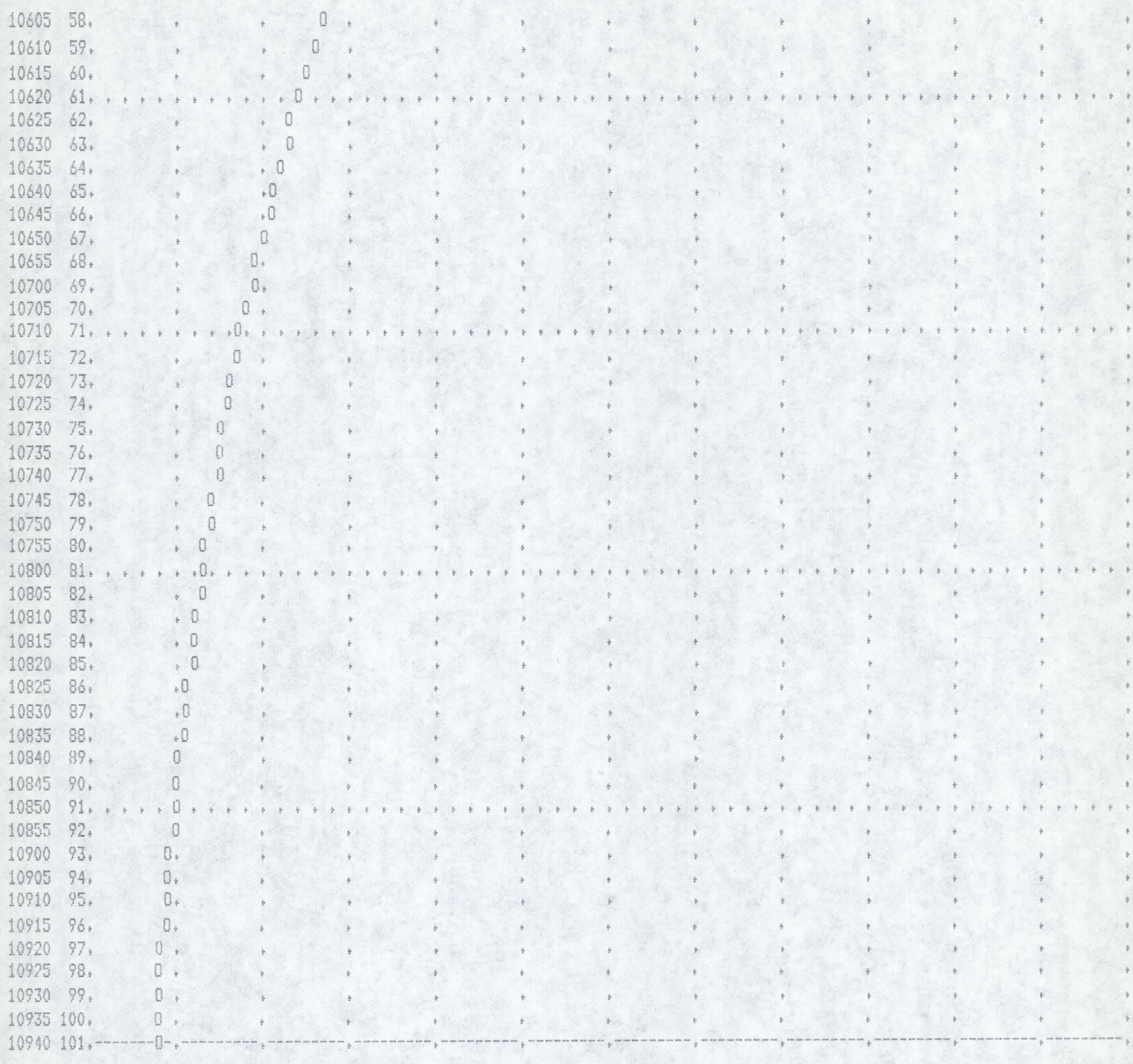
DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	246.	1		0540	53	127.	1		0750	79	55.
1		0125	2	0.	1		0335	28	239.	1		0545	54	122.	1		0755	80	53.
1		0130	3	0.	1		0340	29	233.	1		0550	55	118.	1		0800	81	52.
1		0135	4	0.	1		0345	30	227.	1		0555	56	115.	1		0805	82	50.
1		0140	5	1.	1		0350	31	222.	1		0600	57	111.	1		0810	83	49.
1		0145	6	4.	1		0355	32	217.	1		0605	58	107.	1		0815	84	48.
1		0150	7	39.	1		0400	33	213.	1		0610	59	104.	1		0820	85	46.
1		0155	8	145.	1		0405	34	209.	1		0615	60	100.	1		0825	86	45.
1		0200	9	223.	1		0410	35	205.	1		0620	61	97.	1		0830	87	44.
1		0205	10	261.	1		0415	36	201.	1		0625	62	94.	1		0835	88	43.
1		0210	11	287.	1		0420	37	197.	1		0630	63	91.	1		0840	89	42.
1		0215	12	307.	1		0425	38	193.	1		0635	64	88.	1		0845	90	40.
1		0220	13	323.	1		0430	39	189.	1		0640	65	85.	1		0850	91	39.
1		0225	14	331.	1		0435	40	184.	1		0645	66	82.	1		0855	92	38.
1		0230	15	333.	1		0440	41	180.	1		0650	67	79.	1		0900	93	37.
1		0235	16	333.	1		0445	42	176.	1		0655	68	77.	1		0905	94	37.
1		0240	17	331.	1		0450	43	171.	1		0700	69	75.	1		0910	95	36.
1		0245	18	327.	1		0455	44	167.	1		0705	70	72.	1		0915	96	35.
1		0250	19	320.	1		0500	45	162.	1		0710	71	70.	1		0920	97	34.
1		0255	20	312.	1		0505	46	158.	1		0715	72	68.	1		0925	98	33.
1		0300	21	302.	1		0510	47	153.	1		0720	73	66.	1		0930	99	32.
1		0305	22	291.	1		0515	48	149.	1		0725	74	64.	1		0935	100	31.
1		0310	23	281.	1		0520	49	144.	1		0730	75	62.	1		0940	101	31.
1		0315	24	271.	1		0525	50	140.	1		0735	76	60.					
1		0320	25	262.	1		0530	51	135.	1		0740	77	58.					
1		0325	26	254.	1		0535	52	131.	1		0745	78	57.					

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
333.	1.17	(CFS)	175.	136.	136.	136.
		(INCHES)	1.630	1.751	1.751	1.751
		(AC-FT)	87.	93.	93.	93.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB5

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10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
123 KK    *     RET5   *
          *            *
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RETENTION REQUIREMENT FOR SUBAREA 5

HYDROGRAPH ROUTING DATA

```
 84 RL          ROUTING LOSSES
                     QLOSS        0.00  INITIAL LOSS
                     CLOSS        0.00  ADDITIONAL FRACTION LOST

125 RS          STORAGE ROUTING
                     NSTPS           1  NUMBER OF SUBREACHES
                      ITYP        STOR  TYPE OF INITIAL CONDITION
                     RSVRIC       0.00  INITIAL CONDITION
                          X       0.00 WORKING R AND D COEFFICIENT

126 SV           STORAGE        0.0      15.0      30.0      45.0      48.0      51.0      54.0      60.0

127 SQ          DISCHARGE       0.        0.        0.        0.      107.      304.      558.     1200.

128 SE          ELEVATION      0.00      1.00      2.00      3.00      3.20      3.40      3.60      4.00

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HYDROGRAPH AT STATION RET5

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	1		0410	35	156.	48.7	3.2	1		0700	69	85.	47.4	3.2
1		0125	2	0.	0.0	0.0	1		0415	36	173.	49.0	3.3	1		0705	70	83.	47.3	3.2
1		0130	3	0.	0.0	0.0	1		0420	37	183.	49.2	3.3	1		0710	71	80.	47.2	3.1
1		0135	4	0.	0.0	0.0	1		0425	38	187.	49.2	3.3	1		0715	72	78.	47.2	3.1
1		0140	5	0.	0.0	0.0	1		0430	39	188.	49.2	3.3	1		0720	73	75.	47.1	3.1
1		0145	6	0.	0.0	0.0	1		0435	40	188.	49.2	3.3	1		0725	74	73.	47.0	3.1
1		0150	7	0.	0.2	0.0	1		0440	41	186.	49.2	3.3	1		0730	75	71.	47.0	3.1
1		0155	8	0.	0.8	0.1	1		0445	42	183.	49.2	3.3	1		0735	76	69.	46.9	3.1
1		0200	9	0.	2.1	0.1	1		0450	43	179.	49.1	3.3	1		0740	77	67.	46.9	3.1
1		0205	10	0.	3.7	0.2	1		0455	44	176.	49.0	3.3	1		0745	78	65.	46.8	3.1
1		0210	11	0.	5.6	0.4	1		0500	45	171.	49.0	3.3	1		0750	79	63.	46.8	3.1
1		0215	12	0.	7.7	0.5	1		0505	46	167.	48.9	3.3	1		0755	80	61.	46.7	3.1
1		0220	13	0.	9.8	0.7	1		0510	47	163.	48.9	3.3	1		0800	81	59.	46.7	3.1
1		0225	14	0.	12.1	0.8	1		0515	48	158.	48.8	3.3	1		0805	82	57.	46.6	3.1
1		0230	15	0.	14.4	1.0	1		0520	49	154.	48.7	3.2	1		0810	83	56.	46.6	3.1
1		0235	16	0.	16.7	1.1	1		0525	50	149.	48.6	3.2	1		0815	84	54.	46.5	3.1
1		0240	17	0.	19.0	1.3	1		0530	51	145.	48.6	3.2	1		0820	85	52.	46.5	3.1
1		0245	18	0.	21.2	1.4	1		0535	52	141.	48.5	3.2	1		0825	86	51.	46.4	3.1
1		0250	19	0.	23.4	1.6	1		0540	53	136.	48.4	3.2	1		0830	87	50.	46.4	3.1
1		0255	20	0.	25.6	1.7	1		0545	54	132.	48.4	3.2	1		0835	88	48.	46.4	3.1

1	0300	21	0.	27.7	1.8	*	1	0550	55	128.	48.3	3.2	*	1	0840	89	47.	46.3	3.1
1	0305	22	0.	29.8	2.0	*	1	0555	56	124.	48.3	3.2	*	1	0845	90	46.	46.3	3.1
1	0310	23	0.	31.8	2.1	*	1	0600	57	119.	48.2	3.2	*	1	0850	91	44.	46.2	3.1
1	0315	24	0.	33.7	2.2	*	1	0605	58	116.	48.1	3.2	*	1	0855	92	43.	46.2	3.1
1	0320	25	0.	35.5	2.4	*	1	0610	59	112.	48.1	3.2	*	1	0900	93	42.	46.2	3.1
1	0325	26	0.	37.3	2.5	*	1	0615	60	108.	48.0	3.2	*	1	0905	94	41.	46.1	3.1
1	0330	27	0.	39.0	2.6	*	1	0620	61	106.	48.0	3.2	*	1	0910	95	40.	46.1	3.1
1	0335	28	0.	40.7	2.7	*	1	0625	62	103.	47.9	3.2	*	1	0915	96	39.	46.1	3.1
1	0340	29	0.	42.3	2.8	*	1	0630	63	101.	47.8	3.2	*	1	0920	97	38.	46.1	3.1
1	0345	30	0.	43.9	2.9	*	1	0635	64	98.	47.8	3.2	*	1	0925	98	37.	46.0	3.1
1	0350	31	13.	45.4	3.0	*	1	0640	65	96.	47.7	3.2	*	1	0930	99	36.	46.0	3.1
1	0355	32	58.	46.6	3.1	*	1	0645	66	93.	47.6	3.2	*	1	0935	100	35.	46.0	3.1
1	0400	33	93.	47.6	3.2	*	1	0650	67	90.	47.5	3.2	*	1	0940	101	34.	46.0	3.1
1	0405	34	126.	48.3	3.2	*	1	0655	68	88.	47.5	3.2	*						
						*							*						

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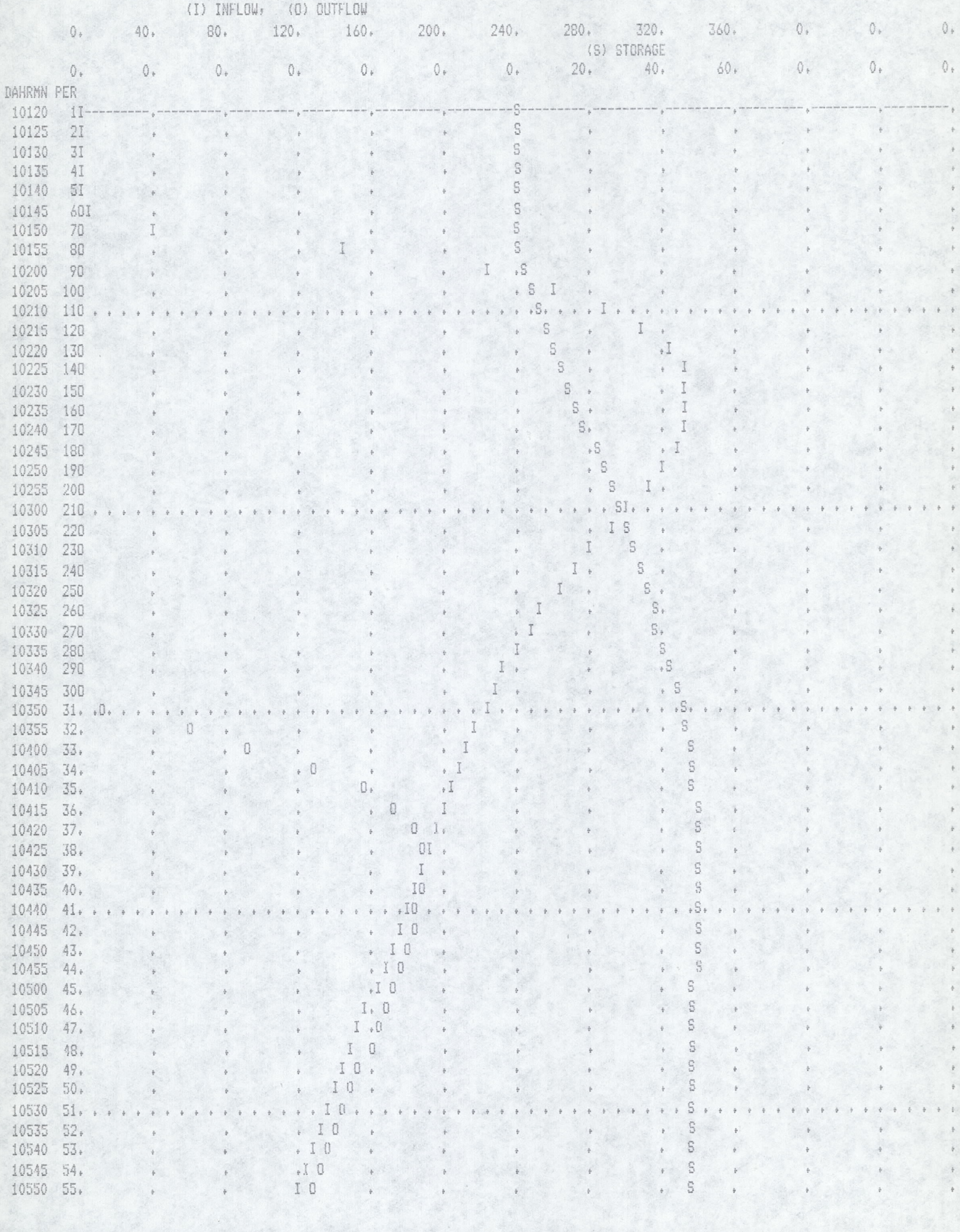
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
188.	3.17	(CFS)	96.	69.	69.	69.
		(INCHES)	0.889	0.889	0.889	0.889
		(AC-FT)	47.	47.	47.	47.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)	6-HR	24-HR	72-HR	8.33-HR
49.	3.17	47.	39.	39.	39.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)	6-HR	24-HR	72-HR	8.33-HR
3.28	3.17	3.16	2.58	2.58	2.58

CUMULATIVE AREA = 1.00 SQ MI

STATION RET5



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10605  58.        I O.                                   S
10610  59.       I O                                     S
10615  60.      I O                                      S
10620  61.-----------I O-----------------------------------S-----------------------
10625  62.        I  O                                    S
10630  63.        I O                                     S
10635  64.       I  O                                     S
10640  65.       I  O                                     S
10645  66.       I O                                      S
10650  67.       I  O                                     S
10655  68.      I. O                                      S
10700  69.      I.O                                       S
10705  70.     I .O                                       S
10710  71.-------I. O-----------------------------------S-----------------------
10715  72.      I O.                                      S
10720  73.     I  O.                                      S
10725  74.     I O                                        S
10730  75.     I  O                                       S
10735  76.     I O                                        S
10740  77.     I O                                        S
10745  78.    I O                                         S
10750  79.    I O                                         S
10755  80.   I O                                          S
10800  81.---I.O.-----------------------------------------S-----------------------
10805  82.   IO                                           S
10810  83.  I O                                           S
10815  84.  I O                                           S
10820  85.  IO                                            S
10825  86.  I O                                           S
10830  87.  IO                                            S
10835  88.  IO                                            S
10840  89.  I O                                           S
10845  90.  IO                                            S
10850  91.--IO.-----------------------------------------S-----------------------
10855  92.  IO                                            S
10900  93.  I.O                                          S
10905  94.  IO                                           S
10910  95.  IO                                           S
10915  96.  IO                                           S
10920  97. IO.                                           S
10925  98. IO.                                           S
10930  99. IO.                                           S
10935 100. IO.                                           S
10940 101.-IO.-----------------------------------------S-----------------------
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           *            *
129 KK     *      SUB5  *
           *            *
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                               COMBINE ROUTED SUB5A-B AND DIVERTED SUB2

131 HC          HYDROGRAPH COMBINATION
                     ICOMP             2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                        ***
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HYDROGRAPH AT STATION SUB5

SUM OF 2 HYDROGRAPHS

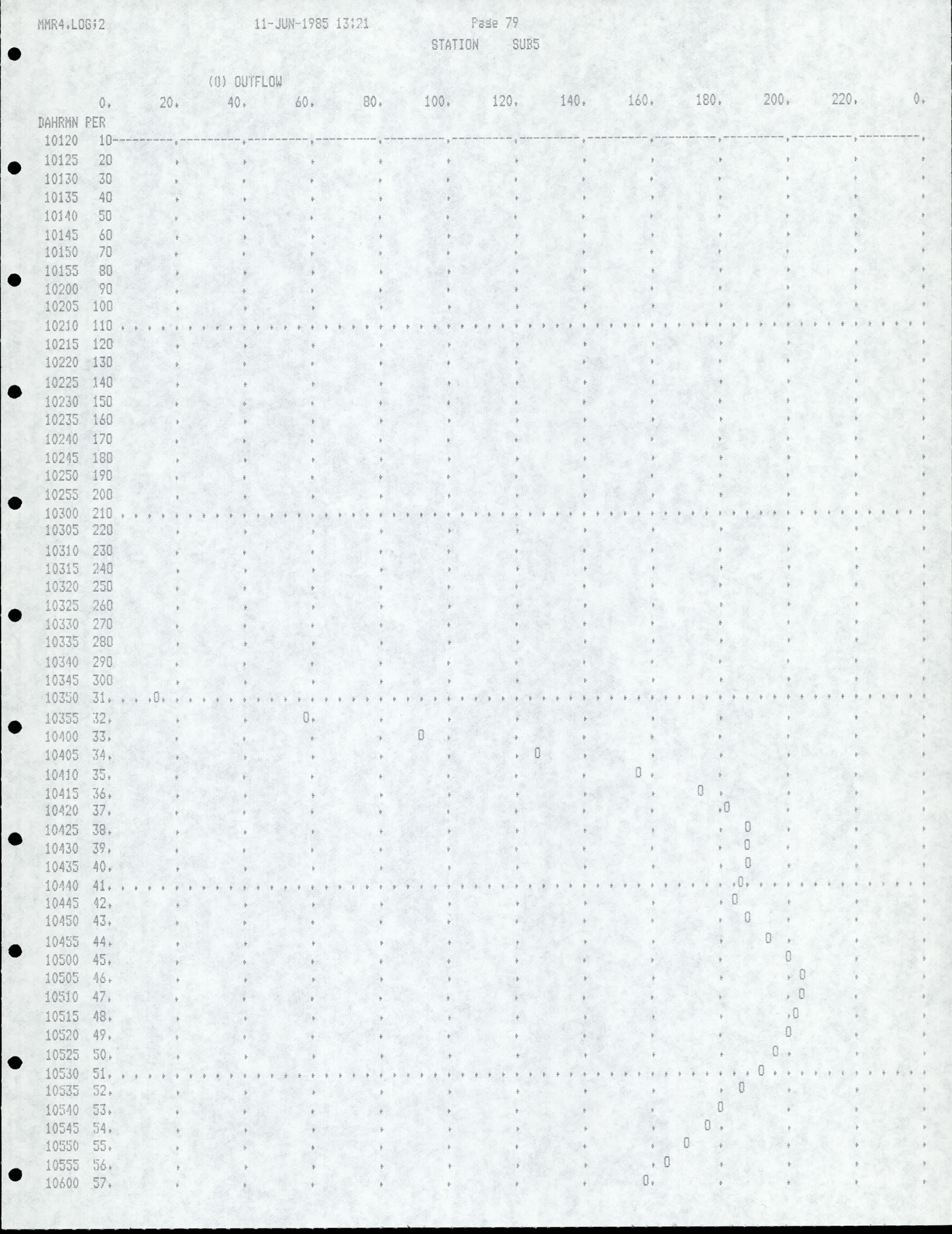
DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	0.	1		0540	53	181.	1		0750	79	71.
1		0125	2	0.	1		0335	28	0.	1		0545	54	175.	1		0755	80	68.
1		0130	3	0.	1		0340	29	0.	1		0550	55	170.	1		0800	81	66.
1		0135	4	0.	1		0345	30	0.	1		0555	56	164.	1		0805	82	63.
1		0140	5	0.	1		0350	31	13.	1		0600	57	159.	1		0810	83	61.
1		0145	6	0.	1		0355	32	58.	1		0605	58	153.	1		0815	84	58.
1		0150	7	0.	1		0400	33	93.	1		0610	59	148.	1		0820	85	56.
1		0155	8	0.	1		0405	34	126.	1		0615	60	142.	1		0825	86	54.
1		0200	9	0.	1		0410	35	156.	1		0620	61	138.	1		0830	87	52.
1		0205	10	0.	1		0415	36	173.	1		0625	62	134.	1		0835	88	51.
1		0210	11	0.	1		0420	37	183.	1		0630	63	130.	1		0840	89	49.
1		0215	12	0.	1		0425	38	187.	1		0635	64	126.	1		0845	90	48.
1		0220	13	0.	1		0430	39	188.	1		0640	65	122.	1		0850	91	46.
1		0225	14	0.	1		0435	40	188.	1		0645	66	117.	1		0855	92	45.
1		0230	15	0.	1		0440	41	186.	1		0650	67	113.	1		0900	93	43.
1		0235	16	0.	1		0445	42	185.	1		0655	68	109.	1		0905	94	42.
1		0240	17	0.	1		0450	43	187.	1		0700	69	105.	1		0910	95	41.
1		0245	18	0.	1		0455	44	193.	1		0705	70	101.	1		0915	96	40.
1		0250	19	0.	1		0500	45	200.	1		0710	71	97.	1		0920	97	39.
1		0255	20	0.	1		0505	46	204.	1		0715	72	94.	1		0925	98	38.
1		0300	21	0.	1		0510	47	204.	1		0720	73	90.	1		0930	99	37.
1		0305	22	0.	1		0515	48	203.	1		0725	74	87.	1		0935	100	36.
1		0310	23	0.	1		0520	49	200.	1		0730	75	83.	1		0940	101	35.
1		0315	24	0.	1		0525	50	196.	1		0735	76	80.					
1		0320	25	0.	1		0530	51	191.	1		0740	77	77.					
1		0325	26	0.	1		0535	52	186.	1		0745	78	74.					

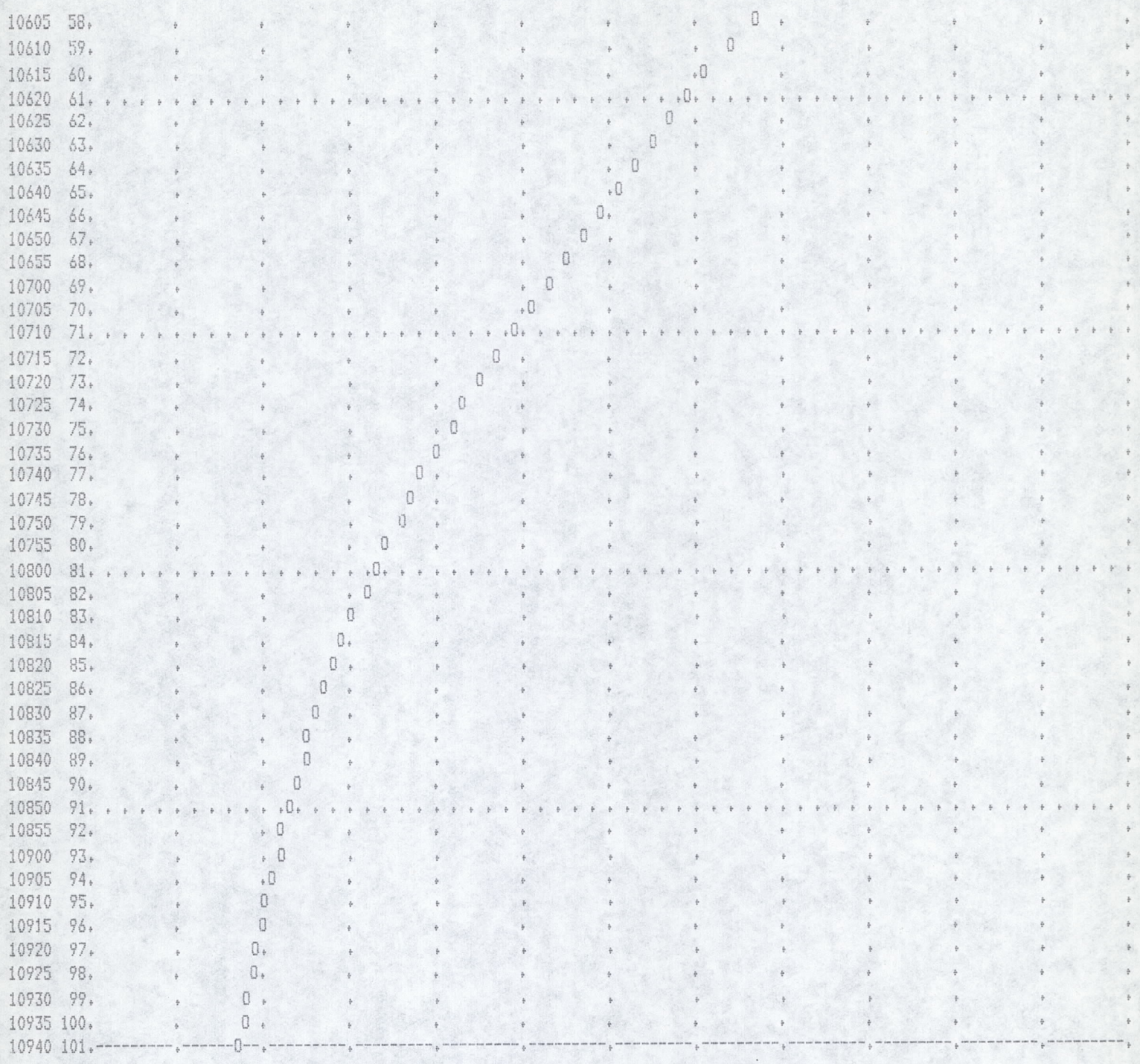
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
204.	3.83	(CFS)	111.	80.	80.	80.
		(INCHES)	1.032	1.032	1.032	1.032
		(AC-FT)	55.	55.	55.	55.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB5

(O) OUTFLOW

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10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
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10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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

              ***************
              *             *
 132 KK       *      SUB5   *
              *             *
              ***************
                                      DIVERT TO THOMAS ROAD

     DT          DIVERSION
                       ISTAD        THOMAS  DIVERSION HYDROGRAPH IDENTIFICATION

     DI                INFLOW        2.00     100.00    1000.00

     DQ        DIVERTED FLOW         1.00      50.00     500.00

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DIVERSION HYDROGRAPH THOMAS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	0.	1		0540	53	90.	1		0750	79	36.
1		0125	2	0.	1		0335	28	0.	1		0545	54	88.	1		0755	80	34.
1		0130	3	0.	1		0340	29	0.	1		0550	55	85.	1		0800	81	33.
1		0135	4	0.	1		0345	30	0.	1		0555	56	82.	1		0805	82	32.
1		0140	5	0.	1		0350	31	7.	1		0600	57	79.	1		0810	83	30.
1		0145	6	0.	1		0355	32	29.	1		0605	58	77.	1		0815	84	29.
1		0150	7	0.	1		0400	33	46.	1		0610	59	74.	1		0820	85	28.
1		0155	8	0.	1		0405	34	63.	1		0615	60	71.	1		0825	86	27.
1		0200	9	0.	1		0410	35	78.	1		0620	61	69.	1		0830	87	26.
1		0205	10	0.	1		0415	36	87.	1		0625	62	67.	1		0835	88	25.
1		0210	11	0.	1		0420	37	91.	1		0630	63	65.	1		0840	89	25.
1		0215	12	0.	1		0425	38	94.	1		0635	64	63.	1		0845	90	24.
1		0220	13	0.	1		0430	39	94.	1		0640	65	61.	1		0850	91	23.
1		0225	14	0.	1		0435	40	94.	1		0645	66	59.	1		0855	92	22.
1		0230	15	0.	1		0440	41	93.	1		0650	67	57.	1		0900	93	22.
1		0235	16	0.	1		0445	42	92.	1		0655	68	55.	1		0905	94	21.
1		0240	17	0.	1		0450	43	94.	1		0700	69	53.	1		0910	95	20.
1		0245	18	0.	1		0455	44	97.	1		0705	70	51.	1		0915	96	20.
1		0250	19	0.	1		0500	45	100.	1		0710	71	49.	1		0920	97	19.
1		0255	20	0.	1		0505	46	102.	1		0715	72	47.	1		0925	98	19.
1		0300	21	0.	1		0510	47	102.	1		0720	73	45.	1		0930	99	18.
1		0305	22	0.	1		0515	48	101.	1		0725	74	43.	1		0935	100	18.
1		0310	23	0.	1		0520	49	100.	1		0730	75	42.	1		0940	101	17.
1		0315	24	0.	1		0525	50	98.	1		0735	76	40.					
1		0320	25	0.	1		0530	51	96.	1		0740	77	38.					
1		0325	26	0.	1		0535	52	93.	1		0745	78	37.					

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

6-HR 24-HR 72-HR 8.33-HR

(CFS)	(HR)				
102.	3.83	(CFS)	55.	40.	40.	40.
		(INCHES)	0.516	0.516	0.516	0.516
		(AC-FT)	28.	28.	28.	28.

CUMULATIVE AREA = 1.00 SQ MI

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HYDROGRAPH AT STATION SUB5

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DA MON	HRMN	ORD	FLOW	DA MON	HRMN	ORD	FLOW	DA MON	HRMN	ORD	FLOW	DA MON	HRMN	ORD	FLOW
1	0120	1	0.	1	0330	27	0.	1	0540	53	90.	1	0750	79	36.
1	0125	2	0.	1	0335	28	0.	1	0545	54	88.	1	0755	80	34.
1	0130	3	0.	1	0340	29	0.	1	0550	55	85.	1	0800	81	33.
1	0135	4	0.	1	0345	30	0.	1	0555	56	82.	1	0805	82	32.
1	0140	5	0.	1	0350	31	7.	1	0600	57	79.	1	0810	83	30.
1	0145	6	0.	1	0355	32	29.	1	0605	58	77.	1	0815	84	29.
1	0150	7	0.	1	0400	33	46.	1	0610	59	74.	1	0820	85	28.
1	0155	8	0.	1	0405	34	63.	1	0615	60	71.	1	0825	86	27.
1	0200	9	0.	1	0410	35	78.	1	0620	61	69.	1	0830	87	26.
1	0205	10	0.	1	0415	36	87.	1	0625	62	67.	1	0835	88	25.
1	0210	11	0.	1	0420	37	91.	1	0630	63	65.	1	0840	89	25.
1	0215	12	0.	1	0425	38	94.	1	0635	64	63.	1	0845	90	24.
1	0220	13	0.	1	0430	39	94.	1	0640	65	61.	1	0850	91	23.
1	0225	14	0.	1	0435	40	94.	1	0645	66	59.	1	0855	92	22.
1	0230	15	0.	1	0440	41	93.	1	0650	67	57.	1	0900	93	22.
1	0235	16	0.	1	0445	42	92.	1	0655	68	55.	1	0905	94	21.
1	0240	17	0.	1	0450	43	94.	1	0700	69	53.	1	0910	95	20.
1	0245	18	0.	1	0455	44	97.	1	0705	70	51.	1	0915	96	20.
1	0250	19	0.	1	0500	45	100.	1	0710	71	49.	1	0920	97	19.
1	0255	20	0.	1	0505	46	102.	1	0715	72	47.	1	0925	98	19.
1	0300	21	0.	1	0510	47	102.	1	0720	73	45.	1	0930	99	18.
1	0305	22	0.	1	0515	48	101.	1	0725	74	43.	1	0935	100	18.
1	0310	23	0.	1	0520	49	100.	1	0730	75	42.	1	0940	101	17.
1	0315	24	0.	1	0525	50	98.	1	0735	76	40.				
1	0320	25	0.	1	0530	51	96.	1	0740	77	38.				
1	0325	26	0.	1	0535	52	93.	1	0745	78	37.				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
102.	3.83	(CFS)	55.	40.	40.	40.
		(INCHES)	0.516	0.516	0.516	0.516
		(AC-FT)	28.	28.	28.	28.

CUMULATIVE AREA = 1.00 SQ MI

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          *            *
137 KK    *     SUB6   *
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ROUTED TO SUB6 (AT MID-POINT (E) AND (F))
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

HYDROGRAPH ROUTING DATA

84 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

140 RK KINEMATIC WAVE STREAM ROUTING

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

***

KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.5941	1.423	1.67	1320.00

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	0.	*	1		0540	53	93.	*	1		0750	79	37.
1		0125	2	0.	*	1		0335	28	0.	*	1		0545	54	90.	*	1		0755	80	36.
1		0130	3	0.	*	1		0340	29	0.	*	1		0550	55	87.	*	1		0800	81	34.
1		0135	4	0.	*	1		0345	30	0.	*	1		0555	56	84.	*	1		0805	82	33.
1		0140	5	0.	*	1		0350	31	0.	*	1		0600	57	82.	*	1		0810	83	32.
1		0145	6	0.	*	1		0355	32	2.	*	1		0605	58	79.	*	1		0815	84	31.
1		0150	7	0.	*	1		0400	33	16.	*	1		0610	59	76.	*	1		0820	85	30.
1		0155	8	0.	*	1		0405	34	40.	*	1		0615	60	74.	*	1		0825	86	29.
1		0200	9	0.	*	1		0410	35	61.	*	1		0620	61	71.	*	1		0830	87	27.
1		0205	10	0.	*	1		0415	36	77.	*	1		0625	62	69.	*	1		0835	88	27.
1		0210	11	0.	*	1		0420	37	86.	*	1		0630	63	67.	*	1		0840	89	26.
1		0215	12	0.	*	1		0425	38	91.	*	1		0635	64	65.	*	1		0845	90	25.
1		0220	13	0.	*	1		0430	39	93.	*	1		0640	65	63.	*	1		0850	91	24.
1		0225	14	0.	*	1		0435	40	94.	*	1		0645	66	61.	*	1		0855	92	23.
1		0230	15	0.	*	1		0440	41	94.	*	1		0650	67	59.	*	1		0900	93	23.
1		0235	16	0.	*	1		0445	42	93.	*	1		0655	68	57.	*	1		0905	94	22.
1		0240	17	0.	*	1		0450	43	93.	*	1		0700	69	55.	*	1		0910	95	21.
1		0245	18	0.	*	1		0455	44	94.	*	1		0705	70	53.	*	1		0915	96	21.
1		0250	19	0.	*	1		0500	45	97.	*	1		0710	71	51.	*	1		0920	97	20.
1		0255	20	0.	*	1		0505	46	100.	*	1		0715	72	49.	*	1		0925	98	20.
1		0300	21	0.	*	1		0510	47	102.	*	1		0720	73	47.	*	1		0930	99	19.
1		0305	22	0.	*	1		0515	48	102.	*	1		0725	74	45.	*	1		0935	100	19.

1	0310	23	0.	*	1	0520	49	101.	*	1	0730	75	44.	*	1	0940	101	18.
1	0315	24	0.	*	1	0525	50	100.	*	1	0735	76	42.	*				
1	0320	25	0.	*	1	0530	51	97.	*	1	0740	77	40.	*				
1	0325	26	0.	*	1	0535	52	95.	*	1	0745	78	39.	*				
				*					*					*				

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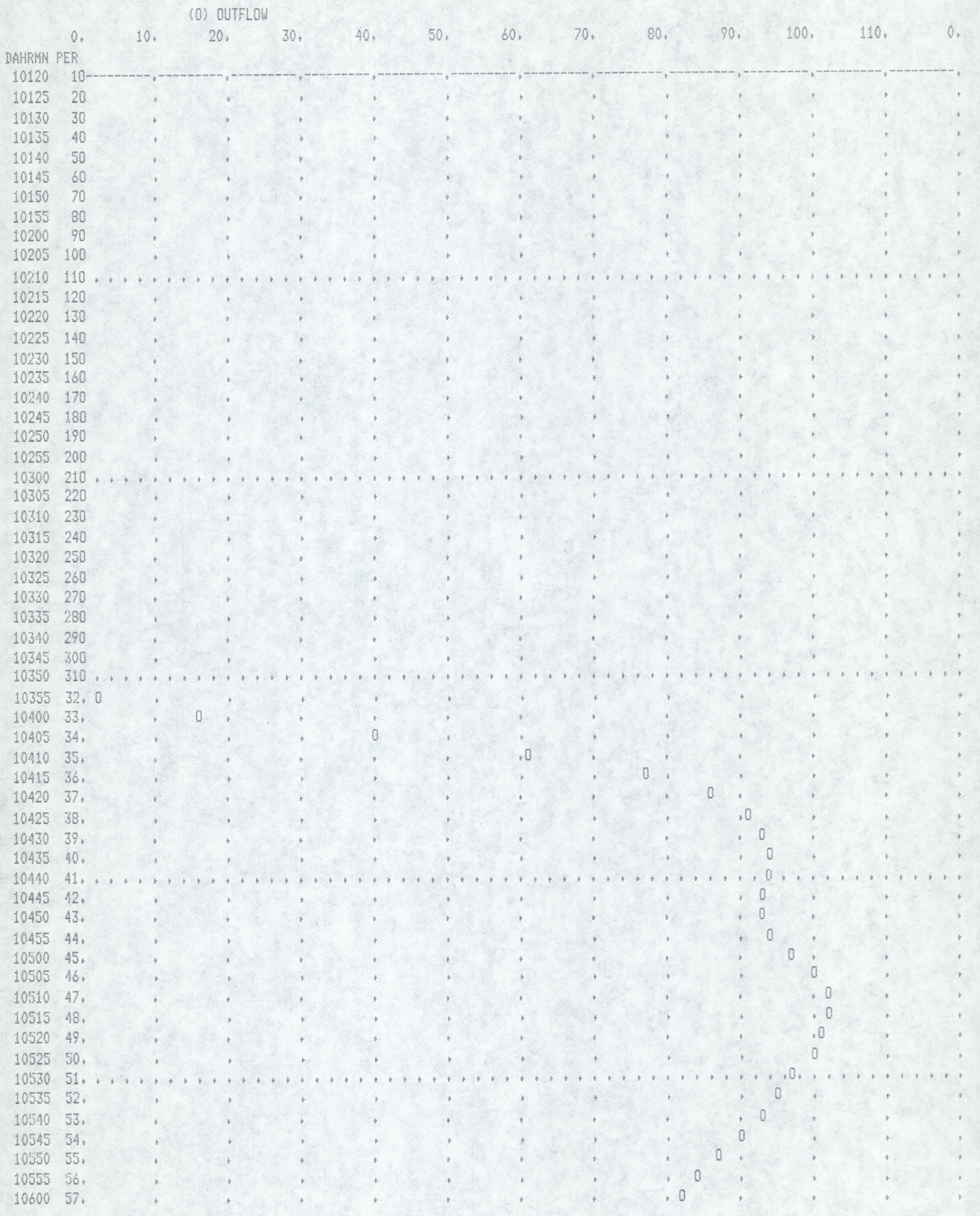
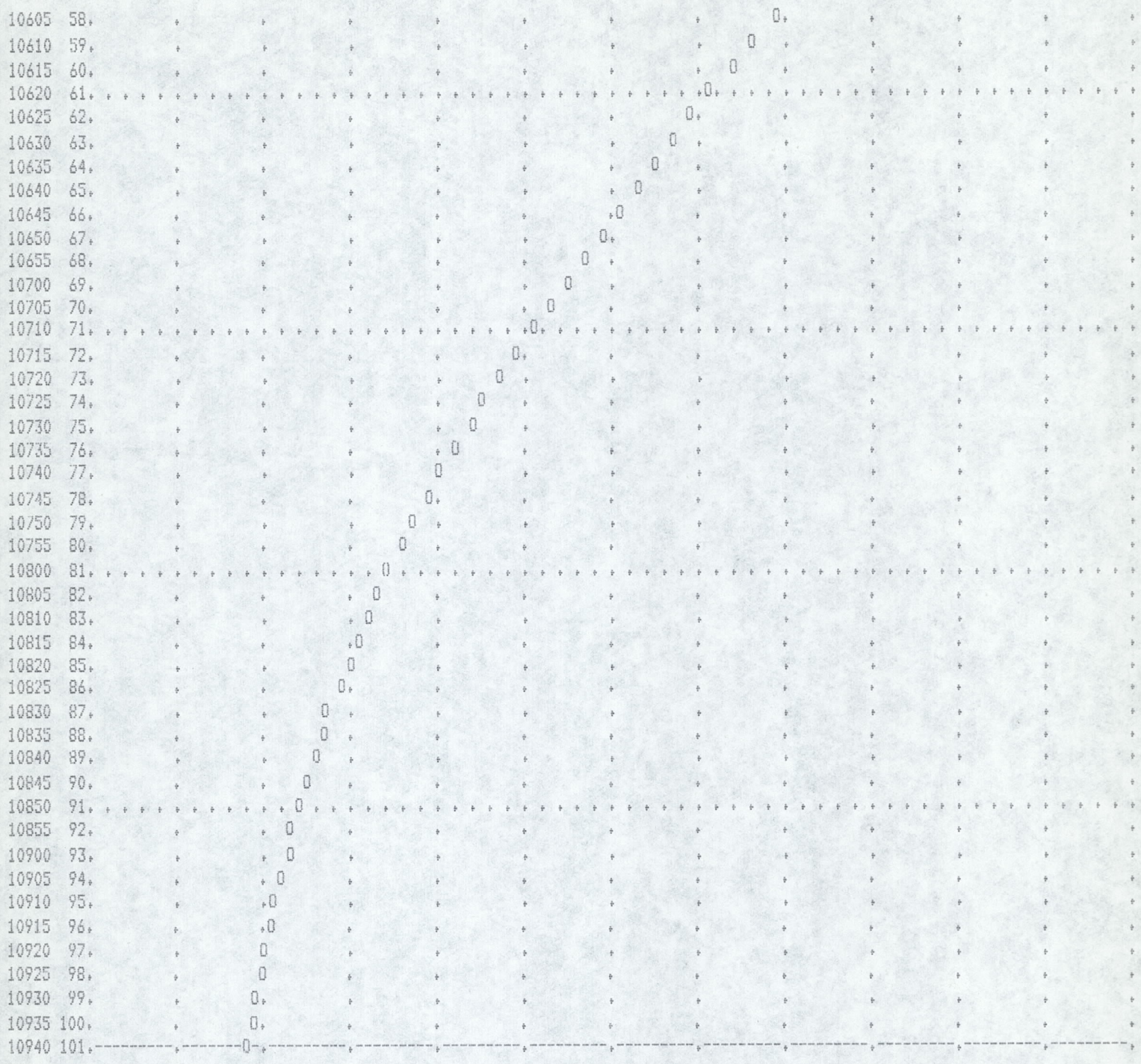
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
102.	3.92	(CFS)	55.	40.	40.	40.
		(INCHES)	0.511	0.511	0.511	0.511
		(AC-FT)	27.	27.	27.	27.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB6




10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
141 KK    *     SUB6A  *
          *            *
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                    AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                    ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                          COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                          MAIN CHANNEL 5000' RUNING NORTH-SOUTH
                    CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
                    MODELED AS 75% OF THE AREA ROUTED THROUGH THE LAKE

               SUBBASIN RUNOFF DATA

148 BA           SUBBASIN CHARACTERISTICS
                       TAREA       0.75  SUBBASIN AREA

                 PRECIPITATION DATA

112 PB                 STORM       2.45  BASIN TOTAL PRECIPITATION

113 PI             INCREMENTAL PRECIPITATION PATTERN
                     0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
                     0.06     0.05

149 LS           SCS LOSS RATE
                      STRTL       0.50  INITIAL ABSTRACTION
                     CRVNBR      80.00  CURVE NUMBER
                      RTIMP      29.00  PERCENT IMPERVIOUS AREA

                 KINEMATIC WAVE
150 UK             OVERLAND-FLOW ELEMENT NO. 1
                          L        100.  OVERLAND FLOW LENGTH
                          S     0.0033  SLOPE
                          N      0.200  ROUGHNESS COEFFICIENT
                         PA      100.0  PERCENT OF SUBBASIN
151 RK             COLLECTOR CHANNEL
                          L       2000.  CHANNEL LENGTH
                          S     0.0050  SLOPE
                          N      0.160  CHANNEL ROUGHNESS COEFFICIENT
                         CA       0.10  CONTRIBUTING AREA
                      SHAPE       TRAP  CHANNEL SHAPE
                         WD       0.00  BOTTOM WIDTH OR DIAMETER
                          Z       1.00  SIDE SLOPE
152 RK             MAIN CHANNEL
                          L       5000.  CHANNEL LENGTH
                          S     0.0050  SLOPE
                          N      0.160  CHANNEL ROUGHNESS COEFFICIENT
                         CA       0.75  CONTRIBUTING AREA
                      SHAPE       TRAP  CHANNEL SHAPE
                         WD       0.00  BOTTOM WIDTH OR DIAMETER
                          Z       1.00  SIDE SLOPE
                     RUPSTQ         NO  ROUTE UPSTREAM HYDROGRAPH
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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	2500.00

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HYDROGRAPH AT STATION SUB6A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	18.
1		0125	2	0.05	0.04	0.01	0.	1		0540	53	0.00	0.00	0.00	17.
1		0130	3	0.07	0.05	0.02	0.	1		0545	54	0.00	0.00	0.00	16.
1		0135	4	0.07	0.05	0.02	0.	1		0550	55	0.00	0.00	0.00	15.
1		0140	5	0.10	0.07	0.03	0.	1		0555	56	0.00	0.00	0.00	14.
1		0145	6	0.16	0.11	0.05	0.	1		0600	57	0.00	0.00	0.00	13.
1		0150	7	1.16	0.58	0.58	0.	1		0605	58	0.00	0.00	0.00	12.
1		0155	8	0.39	0.12	0.27	5.	1		0610	59	0.00	0.00	0.00	12.
1		0200	9	0.14	0.04	0.10	31.	1		0615	60	0.00	0.00	0.00	11.
1		0205	10	0.11	0.03	0.08	92.	1		0620	61	0.00	0.00	0.00	10.
1		0210	11	0.09	0.02	0.07	178.	1		0625	62	0.00	0.00	0.00	10.
1		0215	12	0.06	0.01	0.05	269.	1		0630	63	0.00	0.00	0.00	9.
1		0220	13	0.05	0.01	0.04	347.	1		0635	64	0.00	0.00	0.00	9.
1		0225	14	0.00	0.00	0.00	402.	1		0640	65	0.00	0.00	0.00	8.
1		0230	15	0.00	0.00	0.00	430.	1		0645	66	0.00	0.00	0.00	8.
1		0235	16	0.00	0.00	0.00	435.	1		0650	67	0.00	0.00	0.00	8.
1		0240	17	0.00	0.00	0.00	422.	1		0655	68	0.00	0.00	0.00	7.
1		0245	18	0.00	0.00	0.00	398.	1		0700	69	0.00	0.00	0.00	7.
1		0250	19	0.00	0.00	0.00	367.	1		0705	70	0.00	0.00	0.00	7.
1		0255	20	0.00	0.00	0.00	334.	1		0710	71	0.00	0.00	0.00	6.
1		0300	21	0.00	0.00	0.00	301.	1		0715	72	0.00	0.00	0.00	6.
1		0305	22	0.00	0.00	0.00	270.	1		0720	73	0.00	0.00	0.00	6.
1		0310	23	0.00	0.00	0.00	241.	1		0725	74	0.00	0.00	0.00	6.
1		0315	24	0.00	0.00	0.00	215.	1		0730	75	0.00	0.00	0.00	5.
1		0320	25	0.00	0.00	0.00	192.	1		0735	76	0.00	0.00	0.00	5.
1		0325	26	0.00	0.00	0.00	171.	1		0740	77	0.00	0.00	0.00	5.
1		0330	27	0.00	0.00	0.00	153.	1		0745	78	0.00	0.00	0.00	5.
1		0335	28	0.00	0.00	0.00	137.	1		0750	79	0.00	0.00	0.00	5.
1		0340	29	0.00	0.00	0.00	123.	1		0755	80	0.00	0.00	0.00	4.
1		0345	30	0.00	0.00	0.00	110.	1		0800	81	0.00	0.00	0.00	4.
1		0350	31	0.00	0.00	0.00	99.	1		0805	82	0.00	0.00	0.00	4.
1		0355	32	0.00	0.00	0.00	90.	1		0810	83	0.00	0.00	0.00	4.
1		0400	33	0.00	0.00	0.00	81.	1		0815	84	0.00	0.00	0.00	4.
1		0405	34	0.00	0.00	0.00	73.	1		0820	85	0.00	0.00	0.00	4.
1		0410	35	0.00	0.00	0.00	67.	1		0825	86	0.00	0.00	0.00	3.
1		0415	36	0.00	0.00	0.00	61.	1		0830	87	0.00	0.00	0.00	3.
1		0420	37	0.00	0.00	0.00	56.	1		0835	88	0.00	0.00	0.00	3.
1		0425	38	0.00	0.00	0.00	51.	1		0840	89	0.00	0.00	0.00	3.
1		0430	39	0.00	0.00	0.00	47.	1		0845	90	0.00	0.00	0.00	3.
1		0435	40	0.00	0.00	0.00	43.	1		0850	91	0.00	0.00	0.00	3.
1		0440	41	0.00	0.00	0.00	39.	1		0855	92	0.00	0.00	0.00	3.
1		0445	42	0.00	0.00	0.00	36.	1		0900	93	0.00	0.00	0.00	3.
1		0450	43	0.00	0.00	0.00	34.	1		0905	94	0.00	0.00	0.00	3.
1		0455	44	0.00	0.00	0.00	31.	1		0910	95	0.00	0.00	0.00	3.
1		0500	45	0.00	0.00	0.00	29.	1		0915	96	0.00	0.00	0.00	2.
1		0505	46	0.00	0.00	0.00	27.	1		0920	97	0.00	0.00	0.00	2.

1	0510	47	0.00	0.00	0.00	25.	*	1	0925	98	0.00	0.00	0.00	2.
1	0515	48	0.00	0.00	0.00	23.	*	1	0930	99	0.00	0.00	0.00	2.
1	0520	49	0.00	0.00	0.00	22.	*	1	0935	100	0.00	0.00	0.00	2.
1	0525	50	0.00	0.00	0.00	20.	*	1	0940	101	0.00	0.00	0.00	2.
1	0530	51	0.00	0.00	0.00	19.	*							
							*							

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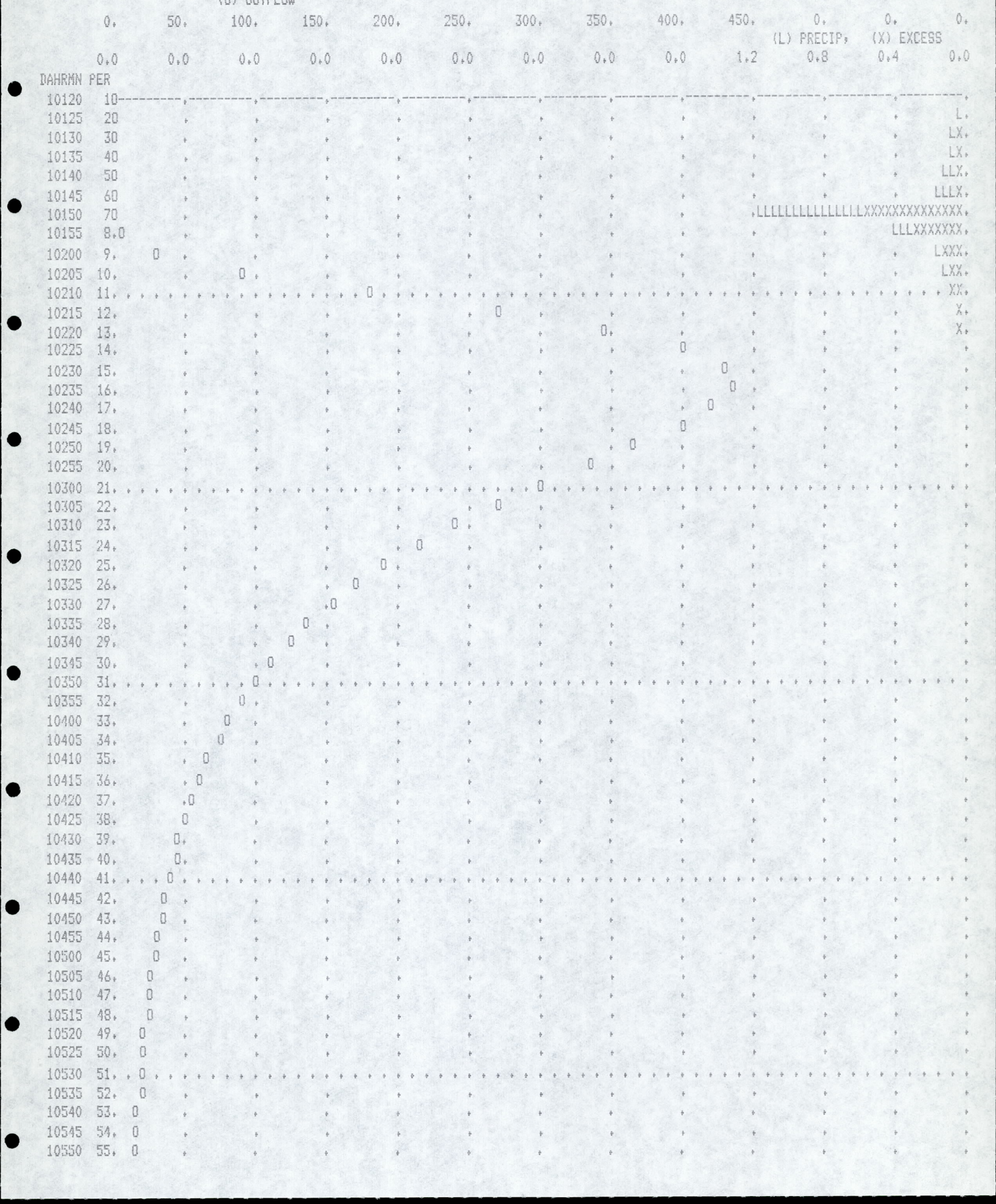
TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
435.	1.25	(CFS)	95.	69.	69.	69.
		(INCHES)	1.181	1.192	1.192	1.192
		(AC-FT)	47.	48.	48.	48.

CUMULATIVE AREA = 0.75 SQ MI

STATION SUB6A



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10555  56.  0
10600  57.  0
10605  58. 0
10610  59. 0
10615  60. 0
10620  61. 0
10625  62. 0
10630  63. 0
10635  64. 0
10640  65. 0
10645  66. 0
10650  67. 0
10655  68.0
10700  69.0
10705  70.0
10710  71.0
10715  72.0
10720  73.0
10725  74.0
10730  75.0
10735  76.0
10740  77.0
10745  78.0
10750  79.0
10755  80.0
10800  81.0
10805  82.0
10810  83.0
10815  84.0
10820  85.0
10825  86.0
10830  87.0
10835  88.0
10840  89.0
10845  90.0
10850  91.0
10855  92.0
10900  93.0
10905  94.0
10910  95.0
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
153 KK      *    SUB6A   *
            *            *
            **************
                            SUB6A LAKE ROUTING

             HYDROGRAPH ROUTING DATA

155 RL           ROUTING LOSSES
                       QLOSS         0.00  INITIAL LOSS
                       CLOSS         0.00  ADDITIONAL FRACTION LOST

156 RS           STORAGE ROUTING
                       NSTPS            1  NUMBER OF SUBREACHES
                        ITYP         STOR  TYPE OF INITIAL CONDITION
                      RSVRIC         0.00  INITIAL CONDITION
                           X         0.00 WORKING R AND D COEFFICIENT

157 SV             STORAGE       0.0      5.5     11.0     16.5     17.9     19.3     20.7     23.5

158 SQ           DISCHARGE        0.       0.       0.       0.      67.     190.     350.     750.

159 SE           ELEVATION      0.00     1.00     2.00     3.00     3.20     3.40     3.60     4.00

                                                   ***

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                                          HYDROGRAPH AT STATION     SUB6A

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	*	1		0410	35	80.	18.0	3.2	*	1		0700	69	8.	16.7	3.0
1		0125	2	0.	0.0	0.0	*	1		0415	36	72.	18.0	3.2	*	1		0705	70	8.	16.7	3.0
1		0130	3	0.	0.0	0.0	*	1		0420	37	66.	17.9	3.2	*	1		0710	71	7.	16.7	3.0
1		0135	4	0.	0.0	0.0	*	1		0425	38	63.	17.8	3.2	*	1		0715	72	7.	16.6	3.0
1		0140	5	0.	0.0	0.0	*	1		0430	39	59.	17.7	3.2	*	1		0720	73	7.	16.6	3.0
1		0145	6	0.	0.0	0.0	*	1		0435	40	55.	17.6	3.2	*	1		0725	74	6.	16.6	3.0
1		0150	7	0.	0.0	0.0	*	1		0440	41	51.	17.6	3.2	*	1		0730	75	6.	16.6	3.0
1		0155	8	0.	0.0	0.0	*	1		0445	42	47.	17.5	3.1	*	1		0735	76	6.	16.6	3.0
1		0200	9	0.	0.1	0.0	*	1		0450	43	44.	17.4	3.1	*	1		0740	77	6.	16.6	3.0
1		0205	10	0.	0.6	0.1	*	1		0455	44	40.	17.3	3.1	*	1		0745	78	5.	16.6	3.0
1		0210	11	0.	1.5	0.3	*	1		0500	45	38.	17.3	3.1	*	1		0750	79	5.	16.6	3.0
1		0215	12	0.	3.0	0.6	*	1		0505	46	35.	17.2	3.1	*	1		0755	80	5.	16.6	3.0
1		0220	13	0.	5.2	0.9	*	1		0510	47	32.	17.2	3.1	*	1		0800	81	5.	16.6	3.0
1		0225	14	0.	7.7	1.4	*	1		0515	48	30.	17.1	3.1	*	1		0805	82	5.	16.6	3.0
1		0230	15	0.	10.6	1.9	*	1		0520	49	28.	17.1	3.1	*	1		0810	83	4.	16.6	3.0
1		0235	16	0.	13.6	2.5	*	1		0525	50	26.	17.0	3.1	*	1		0815	84	4.	16.6	3.0
1		0240	17	2.	16.5	3.0	*	1		0530	51	24.	17.0	3.1	*	1		0820	85	4.	16.6	3.0
1		0245	18	149.	18.8	3.3	*	1		0535	52	22.	17.0	3.1	*	1		0825	86	4.	16.6	3.0
1		0250	19	272.	20.0	3.5	*	1		0540	53	21.	16.9	3.1	*	1		0830	87	4.	16.6	3.0
1		0255	20	316.	20.4	3.6	*	1		0545	54	20.	16.9	3.1	*	1		0835	88	4.	16.6	3.0

1	0300	21	317.	20.4	3.6	*	1	0550	55	18.	16.9	3.1	*	1	0840	89	3.	16.6	3.0
1	0305	22	299.	20.3	3.5	*	1	0555	56	17.	16.9	3.1	*	1	0845	90	3.	16.6	3.0
1	0310	23	275.	20.0	3.5	*	1	0600	57	16.	16.8	3.0	*	1	0850	91	3.	16.6	3.0
1	0315	24	249.	19.8	3.5	*	1	0605	58	15.	16.8	3.0	*	1	0855	92	3.	16.6	3.0
1	0320	25	223.	19.6	3.4	*	1	0610	59	14.	16.8	3.0	*	1	0900	93	3.	16.6	3.0
1	0325	26	200.	19.4	3.4	*	1	0615	60	13.	16.8	3.0	*	1	0905	94	3.	16.6	3.0
1	0330	27	181.	19.2	3.4	*	1	0620	61	13.	16.8	3.0	*	1	0910	95	3.	16.6	3.0
1	0335	28	164.	19.0	3.4	*	1	0625	62	12.	16.8	3.0	*	1	0915	96	3.	16.6	3.0
1	0340	29	148.	18.8	3.3	*	1	0630	63	11.	16.7	3.0	*	1	0920	97	3.	16.6	3.0
1	0345	30	133.	18.7	3.3	*	1	0635	64	11.	16.7	3.0	*	1	0925	98	3.	16.6	3.0
1	0350	31	120.	18.5	3.3	*	1	0640	65	10.	16.7	3.0	*	1	0930	99	2.	16.6	3.0
1	0355	32	108.	18.4	3.3	*	1	0645	66	10.	16.7	3.0	*	1	0935	100	2.	16.5	3.0
1	0400	33	98.	18.2	3.2	*	1	0650	67	9.	16.7	3.0	*	1	0940	101	2.	16.5	3.0
1	0405	34	88.	18.1	3.2	*	1	0655	68	9.	16.7	3.0	*						
						*							*						

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
317.	1.67	(CFS)	62.	45.	45.	45.
		(INCHES)	0.772	0.778	0.778	0.778
		(AC-FT)	31.	31.	31.	31.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)	6-HR	24-HR	72-HR	8.33-HR
20.	1.67	17.	15.	15.	15.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)	6-HR	24-HR	72-HR	8.33-HR
3.56	1.67	3.14	2.71	2.71	2.71

CUMULATIVE AREA = 0.75 SQ MI

STATION   SUB6A

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                              (I) INFLOW,  (O) OUTFLOW
          0.       50.       100.      150.      200.      250.      300.      350.      400.      450.        0.        0.        0.
                                                                                    (S) STORAGE
          0.        0.        0.        0.        0.        0.        0.       10.       20.       30.        0.        0.        0.
DAHRMN PER
 10120   1I---------.---------.---------.---------.---------.---------S---------.---------.---------.---------.---------.---------.
 10125   2I         .         .         .         .         .         S         .         .         .         .         .         .
 10130   3I         .         .         .         .         .         S         .         .         .         .         .         .
 10135   4I         .         .         .         .         .         S         .         .         .         .         .         .
 10140   5I         .         .         .         .         .         S         .         .         .         .         .         .
 10145   6I         .         .         .         .         .         S         .         .         .         .         .         .
 10150   7I         .         .         .         .         .         S         .         .         .         .         .         .
 10155   8OI        .         .         .         .         .         S         .         .         .         .         .         .
 10200   9O     I   .         .         .         .         .         S         .         .         .         .         .         .
 10205  10O         .       I .         .         .         .         .S        .         .         .         .         .         .
 10210  11O . . . . . . . . . . . . . . . . . . I . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10215  12O         .         .         .         .         .   I     .  S      .         .         .         .         .         .
 10220  13O         .         .         .         .         .         .    S   I.         .         .         .         .         .
 10225  14O         .         .         .         .         .         .       S .         I         .         .         .         .
 10230  15O         .         .         .         .         .         .         .S        .     I   .         .         .         .
 10235  16O         .         .         .         .         .         .         .   S     .      I  .         .         .         .
 10240  17O         .         .         .         .         .         .         .      S  .   I     .         .         .         .
 10245  18.         .         .         O         .         .         .         .        SI         .         .         .         .
 10250  19.         .         .         .         .         .   O     .         .  I      S         .         .         .         .
 10255  20.         .         .         .         .         .         .  O   I  .         S         .         .         .         .
 10300  21. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . I .O. . . . . . . . . . S . . . . . . . . . . . . . . . . .
 10305  22.         .         .         .         .         .   I     O         .         S         .         .         .         .
 10310  23.         .         .         .         .       I .    O    .         .         S         .         .         .         .
 10315  24.         .         .         .         .  I      O         .         .         S         .         .         .         .
 10320  25.         .         .         .       I .    O    .         .         .         S         .         .         .         .
 10325  26.         .         .         .   I     O         .         .         .        S.         .         .         .         .
 10330  27.         .         .         .I    O   .         .         .         .        S.         .         .         .         .
 10335  28.         .         .      I  .  O      .         .         .         .        S.         .         .         .         .
 10340  29.         .         .    I    O         .         .         .         .        S.         .         .         .         .
 10345  30.         .         .  I    O .         .         .         .         .        S.         .         .         .         .
 10350  31. . . . . . . . . . I . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . .
 10355  32.         .       I .  O      .         .         .         .         .       S .         .         .         .         .
 10400  33.         .     I   O         .         .         .         .         .       S .         .         .         .         .
 10405  34.         .    I  O .         .         .         .         .         .       S .         .         .         .         .
 10410  35.         .  I  O   .         .         .         .         .         .       S .         .         .         .         .
 10415  36.         . I O     .         .         .         .         .         .       S .         .         .         .         .
 10420  37.         .I O      .         .         .         .         .         .       S .         .         .         .         .
 10425  38.         I  O      .         .         .         .         .         .       S .         .         .         .         .
 10430  39.        I. O       .         .         .         .         .         .       S .         .         .         .         .
 10435  40.        I.O        .         .         .         .         .         .       S .         .         .         .         .
 10440  41. . . . I O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . .
 10445  42.      I O.         .         .         .         .         .         .      S  .         .         .         .         .
 10450  43.      I O.         .         .         .         .         .         .      S  .         .         .         .         .
 10455  44.     I O .         .         .         .         .         .         .      S  .         .         .         .         .
 10500  45.     I O .         .         .         .         .         .         .      S  .         .         .         .         .
 10505  46.    I O  .         .         .         .         .         .         .      S  .         .         .         .         .
 10510  47.   IO    .         .         .         .         .         .         .      S  .         .         .         .         .
 10515  48.   IO    .         .         .         .         .         .         .      S  .         .         .         .         .
 10520  49.   I O   .         .         .         .         .         .         .      S  .         .         .         .         .
 10525  50.   IO    .         .         .         .         .         .         .      S  .         .         .         .         .
 10530  51. . IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . .
 10535  52.   I     .         .         .         .         .         .         .      S  .         .         .         .         .
 10540  53.  IO     .         .         .         .         .         .         .      S  .         .         .         .         .
 10545  54.  IO     .         .         .         .         .         .         .      S  .         .         .         .         .
 10550  55.  IO     .         .         .         .         .         .         .      S  .         .         .         .         .
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10555  56.  I      .       .       .       .       .       .       .       S       .       .       .       .       .
10600  57.  I      .       .       .       .       .       .       .       S       .       .       .       .       .
10605  58. IO      .       .       .       .       .       .       .       S       .       .       .       .       .
10610  59. IO      .       .       .       .       .       .       .       S       .       .       .       .       .
10615  60. IO      .       .       .       .       .       .       .       S       .       .       .       .       .
10620  61. IO.......................................................................S.......................................
10625  62. I       .       .       .       .       .       .       .       S       .       .       .       .       .
10630  63. I       .       .       .       .       .       .       .       S       .       .       .       .       .
10635  64. I       .       .       .       .       .       .       .       S       .       .       .       .       .
10640  65. I       .       .       .       .       .       .       .       S       .       .       .       .       .
10645  66. I       .       .       .       .       .       .       .       S       .       .       .       .       .
10650  67. I       .       .       .       .       .       .       .       S       .       .       .       .       .
10655  68.IO       .       .       .       .       .       .       .       S       .       .       .       .       .
10700  69.IO       .       .       .       .       .       .       .       S       .       .       .       .       .
10705  70.IO       .       .       .       .       .       .       .       S       .       .       .       .       .
10710  71.I.......................................................................S.......................................
10715  72.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10720  73.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10725  74.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10730  75.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10735  76.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10740  77.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10745  78.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10750  79.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10755  80.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10800  81.I.......................................................................S.......................................
10805  82.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10810  83.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10815  84.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10820  85.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10825  86.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10830  87.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10835  88.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10840  89.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10845  90.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10850  91.I.......................................................................S.......................................
10855  92.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10900  93.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10905  94.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10910  95.I        .       .       .       .       .       .       .       S       .       .       .       .       .
10915  96IO        .       .       .       .       .       .       .       S       .       .       .       .       .
10920  97IO        .       .       .       .       .       .       .       S       .       .       .       .       .
10925  98IO        .       .       .       .       .       .       .       S       .       .       .       .       .
10930  99I         .       .       .       .       .       .       .       S       .       .       .       .       .
10935 100I         .       .       .       .       .       .       .       S       .       .       .       .       .
10940 101I---------.---------.---------.---------.---------.---------.---------.-----S---.---------.---------.---------.---------.
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            *            *
160 KK      *    SUB6B   *
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                           AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                           ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                                  COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                                  MAIN CHANNEL 1000' RUNING NORTH-SOUTH
                           CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
                           MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE

               SUBBASIN RUNOFF DATA

167 BA           SUBBASIN CHARACTERISTICS
                       TAREA        0.13  SUBBASIN AREA

                 PRECIPITATION DATA

112 PB                 STORM        2.45  BASIN TOTAL PRECIPITATION

113 PI             INCREMENTAL PRECIPITATION PATTERN
                      0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                      0.06      0.05

168 LS           SCS LOSS RATE
                       STRTL        0.50  INITIAL ABSTRACTION
                      CRVNBR       80.00  CURVE NUMBER
                       RTIMP       29.00  PERCENT IMPERVIOUS AREA

                 KINEMATIC WAVE
169 UK             OVERLAND-FLOW ELEMENT NO. 1
                           L        100.  OVERLAND FLOW LENGTH
                           S      0.0033  SLOPE
                           N       0.200  ROUGHNESS COEFFICIENT
                          PA       100.0  PERCENT OF SUBBASIN
170 RK             COLLECTOR CHANNEL
                           L       2000.  CHANNEL LENGTH
                           S      0.0050  SLOPE
                           N       0.160  CHANNEL ROUGHNESS COEFFICIENT
                          CA        0.10  CONTRIBUTING AREA
                       SHAPE        TRAP  CHANNEL SHAPE
                          WD        0.00  BOTTOM WIDTH OR DIAMETER
                           Z        1.00  SIDE SLOPE
171 RK             MAIN CHANNEL
                           L       1000.  CHANNEL LENGTH
                           S      0.0050  SLOPE
                           N       0.160  CHANNEL ROUGHNESS COEFFICIENT
                          CA        0.13  CONTRIBUTING AREA
                       SHAPE        TRAP  CHANNEL SHAPE
                          WD        0.00  BOTTOM WIDTH OR DIAMETER
                           Z        1.00  SIDE SLOPE
                      RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

                                                                 ***
```

COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	500.00

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HYDROGRAPH AT STATION SUB6B

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	1.
1		0125	2	0.05	0.04	0.01	0.	1		0540	53	0.00	0.00	0.00	1.
1		0130	3	0.07	0.05	0.02	0.	1		0545	54	0.00	0.00	0.00	1.
1		0135	4	0.07	0.05	0.02	0.	1		0550	55	0.00	0.00	0.00	1.
1		0140	5	0.10	0.07	0.03	0.	1		0555	56	0.00	0.00	0.00	1.
1		0145	6	0.16	0.11	0.05	0.	1		0600	57	0.00	0.00	0.00	1.
1		0150	7	1.16	0.58	0.58	0.	1		0605	58	0.00	0.00	0.00	1.
1		0155	8	0.39	0.12	0.27	4.	1		0610	59	0.00	0.00	0.00	1.
1		0200	9	0.14	0.04	0.10	25.	1		0615	60	0.00	0.00	0.00	1.
1		0205	10	0.11	0.03	0.08	69.	1		0620	61	0.00	0.00	0.00	1.
1		0210	11	0.09	0.02	0.07	108.	1		0625	62	0.00	0.00	0.00	1.
1		0215	12	0.06	0.01	0.05	123.	1		0630	63	0.00	0.00	0.00	1.
1		0220	13	0.05	0.01	0.04	117.	1		0635	64	0.00	0.00	0.00	1.
1		0225	14	0.00	0.00	0.00	105.	1		0640	65	0.00	0.00	0.00	1.
1		0230	15	0.00	0.00	0.00	90.	1		0645	66	0.00	0.00	0.00	1.
1		0235	16	0.00	0.00	0.00	76.	1		0650	67	0.00	0.00	0.00	1.
1		0240	17	0.00	0.00	0.00	61.	1		0655	68	0.00	0.00	0.00	1.
1		0245	18	0.00	0.00	0.00	50.	1		0700	69	0.00	0.00	0.00	1.
1		0250	19	0.00	0.00	0.00	42.	1		0705	70	0.00	0.00	0.00	1.
1		0255	20	0.00	0.00	0.00	35.	1		0710	71	0.00	0.00	0.00	1.
1		0300	21	0.00	0.00	0.00	30.	1		0715	72	0.00	0.00	0.00	1.
1		0305	22	0.00	0.00	0.00	25.	1		0720	73	0.00	0.00	0.00	1.
1		0310	23	0.00	0.00	0.00	22.	1		0725	74	0.00	0.00	0.00	0.
1		0315	24	0.00	0.00	0.00	19.	1		0730	75	0.00	0.00	0.00	0.
1		0320	25	0.00	0.00	0.00	16.	1		0735	76	0.00	0.00	0.00	0.
1		0325	26	0.00	0.00	0.00	14.	1		0740	77	0.00	0.00	0.00	0.
1		0330	27	0.00	0.00	0.00	12.	1		0745	78	0.00	0.00	0.00	0.
1		0335	28	0.00	0.00	0.00	11.	1		0750	79	0.00	0.00	0.00	0.
1		0340	29	0.00	0.00	0.00	10.	1		0755	80	0.00	0.00	0.00	0.
1		0345	30	0.00	0.00	0.00	9.	1		0800	81	0.00	0.00	0.00	0.
1		0350	31	0.00	0.00	0.00	8.	1		0805	82	0.00	0.00	0.00	0.
1		0355	32	0.00	0.00	0.00	7.	1		0810	83	0.00	0.00	0.00	0.
1		0400	33	0.00	0.00	0.00	6.	1		0815	84	0.00	0.00	0.00	0.
1		0405	34	0.00	0.00	0.00	6.	1		0820	85	0.00	0.00	0.00	0.
1		0410	35	0.00	0.00	0.00	5.	1		0825	86	0.00	0.00	0.00	0.
1		0415	36	0.00	0.00	0.00	5.	1		0830	87	0.00	0.00	0.00	0.
1		0420	37	0.00	0.00	0.00	4.	1		0835	88	0.00	0.00	0.00	0.
1		0425	38	0.00	0.00	0.00	4.	1		0840	89	0.00	0.00	0.00	0.
1		0430	39	0.00	0.00	0.00	4.	1		0845	90	0.00	0.00	0.00	0.
1		0435	40	0.00	0.00	0.00	3.	1		0850	91	0.00	0.00	0.00	0.
1		0440	41	0.00	0.00	0.00	3.	1		0855	92	0.00	0.00	0.00	0.
1		0445	42	0.00	0.00	0.00	3.	1		0900	93	0.00	0.00	0.00	0.
1		0450	43	0.00	0.00	0.00	3.	1		0905	94	0.00	0.00	0.00	0.
1		0455	44	0.00	0.00	0.00	2.	1		0910	95	0.00	0.00	0.00	0.
1		0500	45	0.00	0.00	0.00	2.	1		0915	96	0.00	0.00	0.00	0.
1		0505	46	0.00	0.00	0.00	2.	1		0920	97	0.00	0.00	0.00	0.

1	0510	47	0.00	0.00	0.00	2.	*	1	0925	98	0.00	0.00	0.00	0.
1	0515	48	0.00	0.00	0.00	2.	*	1	0930	99	0.00	0.00	0.00	0.
1	0520	49	0.00	0.00	0.00	2.	*	1	0935	100	0.00	0.00	0.00	0.
1	0525	50	0.00	0.00	0.00	2.	*	1	0940	101	0.00	0.00	0.00	0.
1	0530	51	0.00	0.00	0.00	2.	*							
							*							

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
123.	0.92	(CFS)	16.	12.	12.	12.
		(INCHES)	1.211	1.217	1.217	1.217
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 0.13 SQ MI

STATION SUB6B

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	120.	140.	0.	0.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLLX
10150	70										LLLLLLLLLLLLLLLXXXXXXXXXXXXXX		
10155	8.	O										LLLXXXXXXX	
10200	9.		O										LXXX
10205	10.				O								LXX
10210	11.						O						XX
10215	12.							O					X
10220	13.							O					X
10225	14.						O						
10230	15.					O							
10235	16.				O								
10240	17.			O									
10245	18.			O									
10250	19.		O										
10255	20.		O										
10300	21.	O											
10305	22.		O										
10310	23.	O											
10315	24.	O											
10320	25.	O											
10325	26.	O											
10330	27.	O											
10335	28.	O											
10340	29.	O											
10345	30.	O											
10350	31.	O											
10355	32.	O											
10400	33.	O											
10405	34.	O											
10410	35.	O											
10415	36.	O											
10420	37.	O											
10425	38.	O											
10430	39.	O											
10435	40.	O											
10440	41.	O											
10445	42.	O											
10450	43.	O											
10455	44.	O											
10500	45.	O											
10505	46.	O											
10510	47.	O											
10515	48.	O											
10520	49.	O											
10525	50.	O											
10530	51.	O											
10535	52.	O											
10540	53.	O											
10545	54.	O											
10550	55.	O											

```
10555  56.0
10600  57.0
10605  58.0
10610  590
10615  600
10620  610
10625  620
10630  630
10635  640
10640  650
10645  660
10650  670
10655  680
10700  690
10705  700
10710  710
10715  720
10720  730
10725  740
10730  750
10735  760
10740  770
10745  780
10750  790
10755  800
10800  810
10805  820
10810  830
10815  840
10820  850
10825  860
10830  870
10835  880
10840  890
10845  900
10850  910
10855  920
10900  930
10905  940
10910  950
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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             *            *
172 KK       *     SUB6   *
             *            *
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COMBINED SUB6B, ROUTED SUB6A AND ROUTED 5 AT C.P. (F)

174 HC HYDROGRAPH COMBINATION

ICOMP 3 NUMBER OF HYDROGRAPHS TO COMBINE

***

HYDROGRAPH AT STATION SUB6

SUM OF 3 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	193.	1		0540	53	115.	1		0750	79	43.
1		0125	2	0.	1		0335	28	175.	1		0545	54	111.	1		0755	80	41.
1		0130	3	0.	1		0340	29	158.	1		0550	55	107.	1		0800	81	40.
1		0135	4	0.	1		0345	30	142.	1		0555	56	103.	1		0805	82	38.
1		0140	5	0.	1		0350	31	128.	1		0600	57	99.	1		0810	83	37.
1		0145	6	0.	1		0355	32	117.	1		0605	58	95.	1		0815	84	35.
1		0150	7	0.	1		0400	33	120.	1		0610	59	91.	1		0820	85	34.
1		0155	8	4.	1		0405	34	133.	1		0615	60	88.	1		0825	86	33.
1		0200	9	25.	1		0410	35	146.	1		0620	61	85.	1		0830	87	32.
1		0205	10	69.	1		0415	36	154.	1		0625	62	82.	1		0835	88	30.
1		0210	11	108.	1		0420	37	157.	1		0630	63	79.	1		0840	89	29.
1		0215	12	123.	1		0425	38	158.	1		0635	64	76.	1		0845	90	28.
1		0220	13	117.	1		0430	39	156.	1		0640	65	74.	1		0850	91	28.
1		0225	14	105.	1		0435	40	152.	1		0645	66	71.	1		0855	92	27.
1		0230	15	90.	1		0440	41	147.	1		0650	67	68.	1		0900	93	26.
1		0235	16	76.	1		0445	42	143.	1		0655	68	66.	1		0905	94	25.
1		0240	17	63.	1		0450	43	139.	1		0700	69	63.	1		0910	95	24.
1		0245	18	200.	1		0455	44	137.	1		0705	70	61.	1		0915	96	24.
1		0250	19	314.	1		0500	45	137.	1		0710	71	59.	1		0920	97	23.
1		0255	20	352.	1		0505	46	137.	1		0715	72	56.	1		0925	98	22.
1		0300	21	347.	1		0510	47	136.	1		0720	73	54.	1		0930	99	22.
1		0305	22	325.	1		0515	48	134.	1		0725	74	52.	1		0935	100	21.
1		0310	23	296.	1		0520	49	131.	1		0730	75	50.	1		0940	101	21.
1		0315	24	267.	1		0525	50	127.	1		0735	76	48.					
1		0320	25	239.	1		0530	51	123.	1		0740	77	46.					
1		0325	26	214.	1		0535	52	119.	1		0745	78	45.					

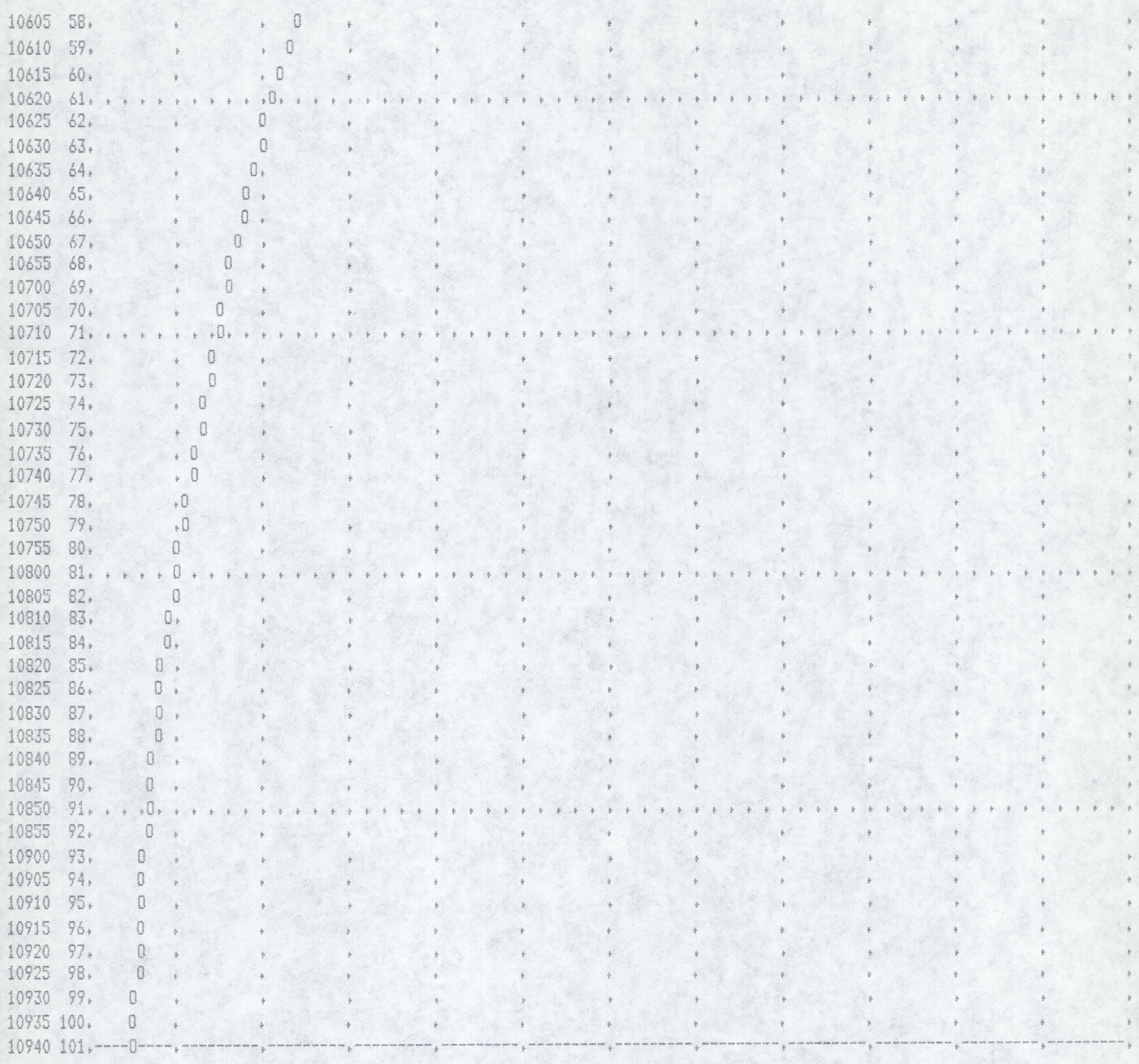
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
352.	1.58	(CFS)	126.	97.	97.	97.
		(INCHES)	0.624	0.665	0.665	0.665
		(AC-FT)	62.	66.	66.	66.

CUMULATIVE AREA = 1.88 SQ MI

STATION SUB6

(O) OUTFLOW

```
                0.      40.      80.     120.     160.     200.     240.     280.     320.     360.       0.       0.       0.
DAHRMN PER
 10120  10----------,--------,--------,--------,--------,--------,--------,--------,--------,--------,--------,--------,
 10125  20          ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10130  30          ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10135  40          ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10140  50          ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10145  60          ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10150  70          ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10155  8.0         ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10200  9.     0    ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10205  10.         ,     0  ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10210  11. . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10215  12.         ,        ,        ,0       ,        ,        ,        ,        ,        ,        ,        ,        ,
 10220  13.         ,        ,        0.       ,        ,        ,        ,        ,        ,        ,        ,        ,
 10225  14.         ,        ,     0  ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10230  15.         ,        ,  0     ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10235  16.         ,     0. ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10240  17.         ,  0     ,        ,        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10245  18.         ,        ,        ,        ,        0        ,        ,        ,        ,        ,        ,        ,
 10250  19.         ,        ,        ,        ,        ,        ,        ,        0.       ,        ,        ,        ,
 10255  20.         ,        ,        ,        ,        ,        ,        ,        ,     0  ,        ,        ,        ,
 10300  21. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10305  22.         ,        ,        ,        ,        ,        ,        ,        ,0       ,        ,        ,        ,
 10310  23.         ,        ,        ,        ,        ,        ,        ,     0  ,        ,        ,        ,        ,
 10315  24.         ,        ,        ,        ,        ,        ,     0  ,        ,        ,        ,        ,        ,
 10320  25.         ,        ,        ,        ,        ,     0  ,        ,        ,        ,        ,        ,        ,
 10325  26.         ,        ,        ,        ,        ,  0     ,        ,        ,        ,        ,        ,        ,
 10330  27.         ,        ,        ,        ,     0  ,        ,        ,        ,        ,        ,        ,        ,
 10335  28.         ,        ,        ,        ,  0     ,        ,        ,        ,        ,        ,        ,        ,
 10340  29.         ,        ,        ,     0. ,        ,        ,        ,        ,        ,        ,        ,        ,
 10345  30.         ,        ,        ,  0     ,        ,        ,        ,        ,        ,        ,        ,        ,
 10350  31. . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10355  32.         ,        ,        0.       ,        ,        ,        ,        ,        ,        ,        ,        ,
 10400  33.         ,        ,        0        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10405  34.         ,        ,        ,  0     ,        ,        ,        ,        ,        ,        ,        ,        ,
 10410  35.         ,        ,        ,     0  ,        ,        ,        ,        ,        ,        ,        ,        ,
 10415  36.         ,        ,        ,        0.       ,        ,        ,        ,        ,        ,        ,        ,
 10420  37.         ,        ,        ,        0.       ,        ,        ,        ,        ,        ,        ,        ,
 10425  38.         ,        ,        ,        0.       ,        ,        ,        ,        ,        ,        ,        ,
 10430  39.         ,        ,        ,        0.       ,        ,        ,        ,        ,        ,        ,        ,
 10435  40.         ,        ,        ,       0 ,        ,        ,        ,        ,        ,        ,        ,        ,
 10440  41. . . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10445  42.         ,        ,        ,    0   ,        ,        ,        ,        ,        ,        ,        ,        ,
 10450  43.         ,        ,        ,   0    ,        ,        ,        ,        ,        ,        ,        ,        ,
 10455  44.         ,        ,        ,  0     ,        ,        ,        ,        ,        ,        ,        ,        ,
 10500  45.         ,        ,        ,  0     ,        ,        ,        ,        ,        ,        ,        ,        ,
 10505  46.         ,        ,        ,  0     ,        ,        ,        ,        ,        ,        ,        ,        ,
 10510  47.         ,        ,        ,  0     ,        ,        ,        ,        ,        ,        ,        ,        ,
 10515  48.         ,        ,        , 0      ,        ,        ,        ,        ,        ,        ,        ,        ,
 10520  49.         ,        ,        , 0      ,        ,        ,        ,        ,        ,        ,        ,        ,
 10525  50.         ,        ,        ,0       ,        ,        ,        ,        ,        ,        ,        ,        ,
 10530  51. . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10535  52.         ,        ,        0        ,        ,        ,        ,        ,        ,        ,        ,        ,
 10540  53.         ,        ,        0.       ,        ,        ,        ,        ,        ,        ,        ,        ,
 10545  54.         ,        ,       0 ,       ,        ,        ,        ,        ,        ,        ,        ,        ,
 10550  55.         ,        ,      0  ,       ,        ,        ,        ,        ,        ,        ,        ,        ,
 10555  56.         ,        ,     0   ,       ,        ,        ,        ,        ,        ,        ,        ,        ,
 10600  57.         ,        ,    0    ,       ,        ,        ,        ,        ,        ,        ,        ,        ,
```


10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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              *            *
 175 KK       *     SUB6   *
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DIVERT TO SUB8

DT DIVERSION

ISTAD DIV681 DIVERSION HYDROGRAPH IDENTIFICATION

DI	INFLOW	1.00	111.00	146.00	199.00	266.00	350.00	450.00	570.00	711.00
DQ	DIVERTED FLOW	0.00	1.00	5.00	17.00	39.00	73.00	121.00	186.00	267.00

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DIVERSION HYDROGRAPH DIV681

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	16.	*	1		0540	53	1.	*	1		0750	79	0.
1		0125	2	0.	*	1		0335	28	12.	*	1		0545	54	1.	*	1		0755	80	0.
1		0130	3	0.	*	1		0340	29	8.	*	1		0550	55	1.	*	1		0800	81	0.
1		0135	4	0.	*	1		0345	30	5.	*	1		0555	56	1.	*	1		0805	82	0.
1		0140	5	0.	*	1		0350	31	3.	*	1		0600	57	1.	*	1		0810	83	0.
1		0145	6	0.	*	1		0355	32	2.	*	1		0605	58	1.	*	1		0815	84	0.
1		0150	7	0.	*	1		0400	33	2.	*	1		0610	59	1.	*	1		0820	85	0.
1		0155	8	0.	*	1		0405	34	4.	*	1		0615	60	1.	*	1		0825	86	0.
1		0200	9	0.	*	1		0410	35	5.	*	1		0620	61	1.	*	1		0830	87	0.
1		0205	10	1.	*	1		0415	36	7.	*	1		0625	62	1.	*	1		0835	88	0.
1		0210	11	1.	*	1		0420	37	7.	*	1		0630	63	1.	*	1		0840	89	0.
1		0215	12	2.	*	1		0425	38	8.	*	1		0635	64	1.	*	1		0845	90	0.
1		0220	13	2.	*	1		0430	39	7.	*	1		0640	65	1.	*	1		0850	91	0.
1		0225	14	1.	*	1		0435	40	6.	*	1		0645	66	1.	*	1		0855	92	0.
1		0230	15	1.	*	1		0440	41	5.	*	1		0650	67	1.	*	1		0900	93	0.
1		0235	16	1.	*	1		0445	42	5.	*	1		0655	68	1.	*	1		0905	94	0.
1		0240	17	1.	*	1		0450	43	4.	*	1		0700	69	1.	*	1		0910	95	0.
1		0245	18	17.	*	1		0455	44	4.	*	1		0705	70	1.	*	1		0915	96	0.
1		0250	19	59.	*	1		0500	45	4.	*	1		0710	71	1.	*	1		0920	97	0.
1		0255	20	74.	*	1		0505	46	4.	*	1		0715	72	1.	*	1		0925	98	0.
1		0300	21	72.	*	1		0510	47	4.	*	1		0720	73	0.	*	1		0930	99	0.
1		0305	22	63.	*	1		0515	48	4.	*	1		0725	74	0.	*	1		0935	100	0.
1		0310	23	51.	*	1		0520	49	3.	*	1		0730	75	0.	*	1		0940	101	0.
1		0315	24	40.	*	1		0525	50	3.	*	1		0735	76	0.	*					
1		0320	25	30.	*	1		0530	51	2.	*	1		0740	77	0.	*					
1		0325	26	22.	*	1		0535	52	2.	*	1		0745	78	0.	*					

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

6-HR 24-HR 72-HR 8.33-HR

PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
74.	1.58	(CFS)	8.	6.	6.	6.
		(INCHES)	0.041	0.041	0.041	0.041
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 1.88 SQ MI

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	177.	1		0540	53	114.	1		0750	79	42.
1		0125	2	0.	1		0335	28	163.	1		0545	54	110.	1		0755	80	41.
1		0130	3	0.	1		0340	29	150.	1		0550	55	106.	1		0800	81	39.
1		0135	4	0.	1		0345	30	138.	1		0555	56	102.	1		0805	82	38.
1		0140	5	0.	1		0350	31	125.	1		0600	57	98.	1		0810	83	36.
1		0145	6	0.	1		0355	32	115.	1		0605	58	94.	1		0815	84	35.
1		0150	7	0.	1		0400	33	118.	1		0610	59	91.	1		0820	85	34.
1		0155	8	4.	1		0405	34	130.	1		0615	60	87.	1		0825	86	32.
1		0200	9	24.	1		0410	35	141.	1		0620	61	84.	1		0830	87	31.
1		0205	10	69.	1		0415	36	147.	1		0625	62	81.	1		0835	88	30.
1		0210	11	107.	1		0420	37	149.	1		0630	63	78.	1		0840	89	29.
1		0215	12	121.	1		0425	38	150.	1		0635	64	76.	1		0845	90	28.
1		0220	13	116.	1		0430	39	148.	1		0640	65	73.	1		0850	91	27.
1		0225	14	104.	1		0435	40	146.	1		0645	66	70.	1		0855	92	26.
1		0230	15	90.	1		0440	41	142.	1		0650	67	68.	1		0900	93	26.
1		0235	16	75.	1		0445	42	138.	1		0655	68	65.	1		0905	94	25.
1		0240	17	63.	1		0450	43	135.	1		0700	69	63.	1		0910	95	24.
1		0245	18	183.	1		0455	44	133.	1		0705	70	61.	1		0915	96	23.
1		0250	19	256.	1		0500	45	133.	1		0710	71	58.	1		0920	97	23.
1		0255	20	278.	1		0505	46	133.	1		0715	72	56.	1		0925	98	22.
1		0300	21	275.	1		0510	47	132.	1		0720	73	54.	1		0930	99	22.
1		0305	22	262.	1		0515	48	130.	1		0725	74	52.	1		0935	100	21.
1		0310	23	245.	1		0520	49	127.	1		0730	75	50.	1		0940	101	20.
1		0315	24	228.	1		0525	50	124.	1		0735	76	48.					
1		0320	25	209.	1		0530	51	121.	1		0740	77	46.					
1		0325	26	192.	1		0535	52	117.	1		0745	78	44.					

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PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
278.	1.58	(CFS)	118.	91.	91.	91.
		(INCHES)	0.584	0.624	0.624	0.624
		(AC-FT)	58.	62.	62.	62.

CUMULATIVE AREA = 1.88 SQ MI

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* *
180 KK * SUB6 *

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ROUTED TO SUB6 (CONTRATION POINT F)
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

HYDROGRAPH ROUTING DATA

155 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

183 RK KINEMATIC WAVE STREAM ROUTING

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

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KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.5941	1.423	1.67	1320.00

HYDROGRAPH AT STATION SUB6

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	186.	1		0540	53	116.	1		0750	79	44.
1		0125	2	0.	1		0335	28	172.	1		0545	54	113.	1		0755	80	43.
1		0130	3	0.	1		0340	29	159.	1		0550	55	109.	1		0800	81	41.
1		0135	4	0.	1		0345	30	146.	1		0555	56	105.	1		0805	82	40.
1		0140	5	0.	1		0350	31	134.	1		0600	57	101.	1		0810	83	38.
1		0145	6	0.	1		0355	32	123.	1		0605	58	97.	1		0815	84	37.
1		0150	7	0.	1		0400	33	117.	1		0610	59	94.	1		0820	85	35.
1		0155	8	0.	1		0405	34	122.	1		0615	60	90.	1		0825	86	34.
1		0200	9	1.	1		0410	35	133.	1		0620	61	87.	1		0830	87	33.
1		0205	10	15.	1		0415	36	143.	1		0625	62	84.	1		0835	88	32.
1		0210	11	62.	1		0420	37	148.	1		0630	63	81.	1		0840	89	31.
1		0215	12	105.	1		0425	38	150.	1		0635	64	78.	1		0845	90	29.
1		0220	13	117.	1		0430	39	149.	1		0640	65	75.	1		0850	91	29.
1		0225	14	112.	1		0435	40	147.	1		0645	66	73.	1		0855	92	28.
1		0230	15	100.	1		0440	41	144.	1		0650	67	70.	1		0900	93	27.
1		0235	16	87.	1		0445	42	141.	1		0655	68	68.	1		0905	94	26.
1		0240	17	74.	1		0450	43	137.	1		0700	69	65.	1		0910	95	25.
1		0245	18	102.	1		0455	44	135.	1		0705	70	63.	1		0915	96	24.
1		0250	19	208.	1		0500	45	133.	1		0710	71	60.	1		0920	97	24.
1		0255	20	265.	1		0505	46	133.	1		0715	72	58.	1		0925	98	23.
1		0300	21	276.	1		0510	47	133.	1		0720	73	56.	1		0930	99	22.
1		0305	22	269.	1		0515	48	131.	1		0725	74	54.	1		0935	100	22.

1	0310	23	254.	*	1	0520	49	129.	*	1	0730	75	52.	*	1	0940	101	21.	
1	0315	24	237.	*	1	0525	50	126.	*	1	0735	76	50.	*					
1	0320	25	220.	*	1	0530	51	123.	*	1	0740	77	48.	*					
1	0325	26	202.	*	1	0535	52	120.	*	1	0745	78	46.	*					
				*					*					*					

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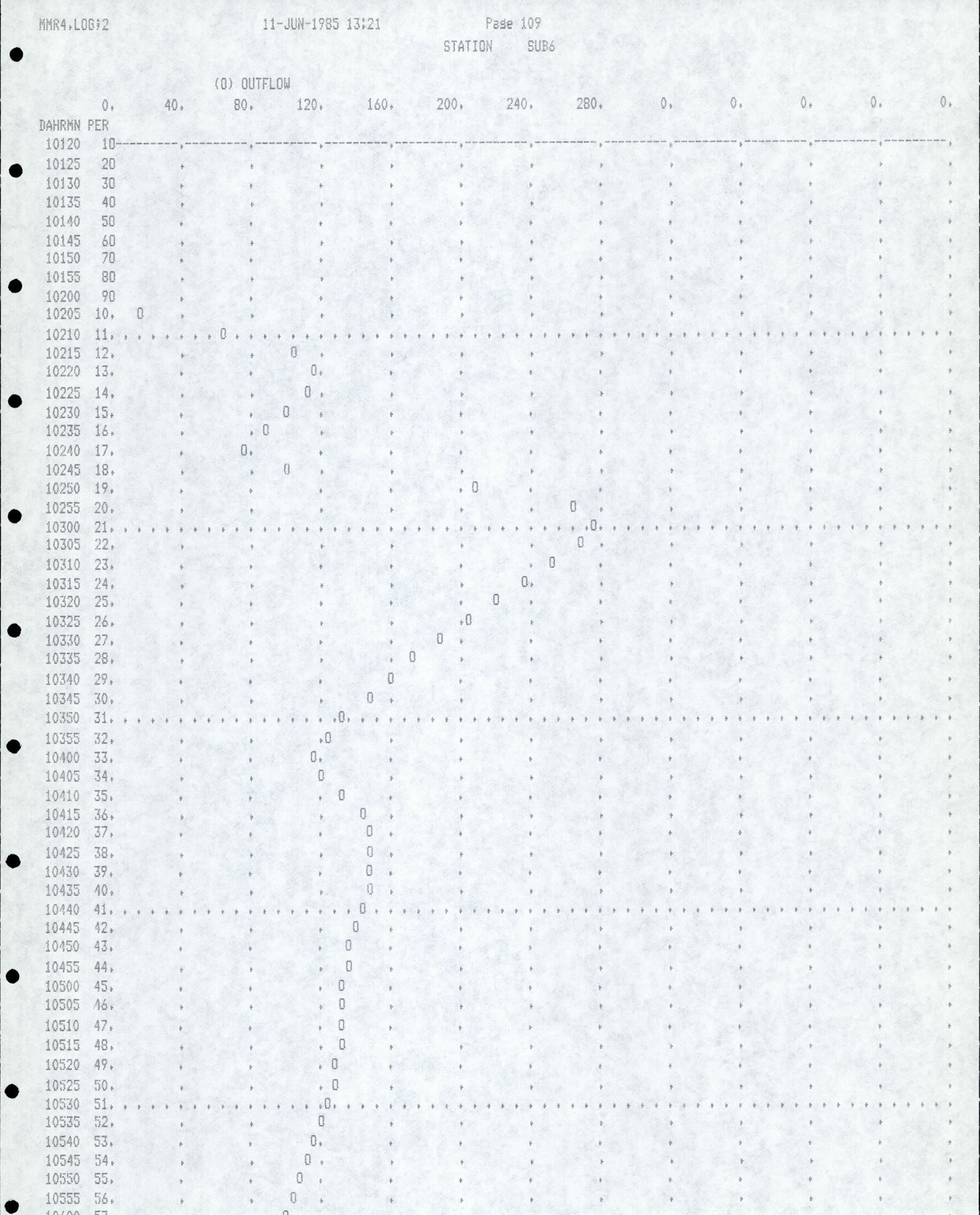
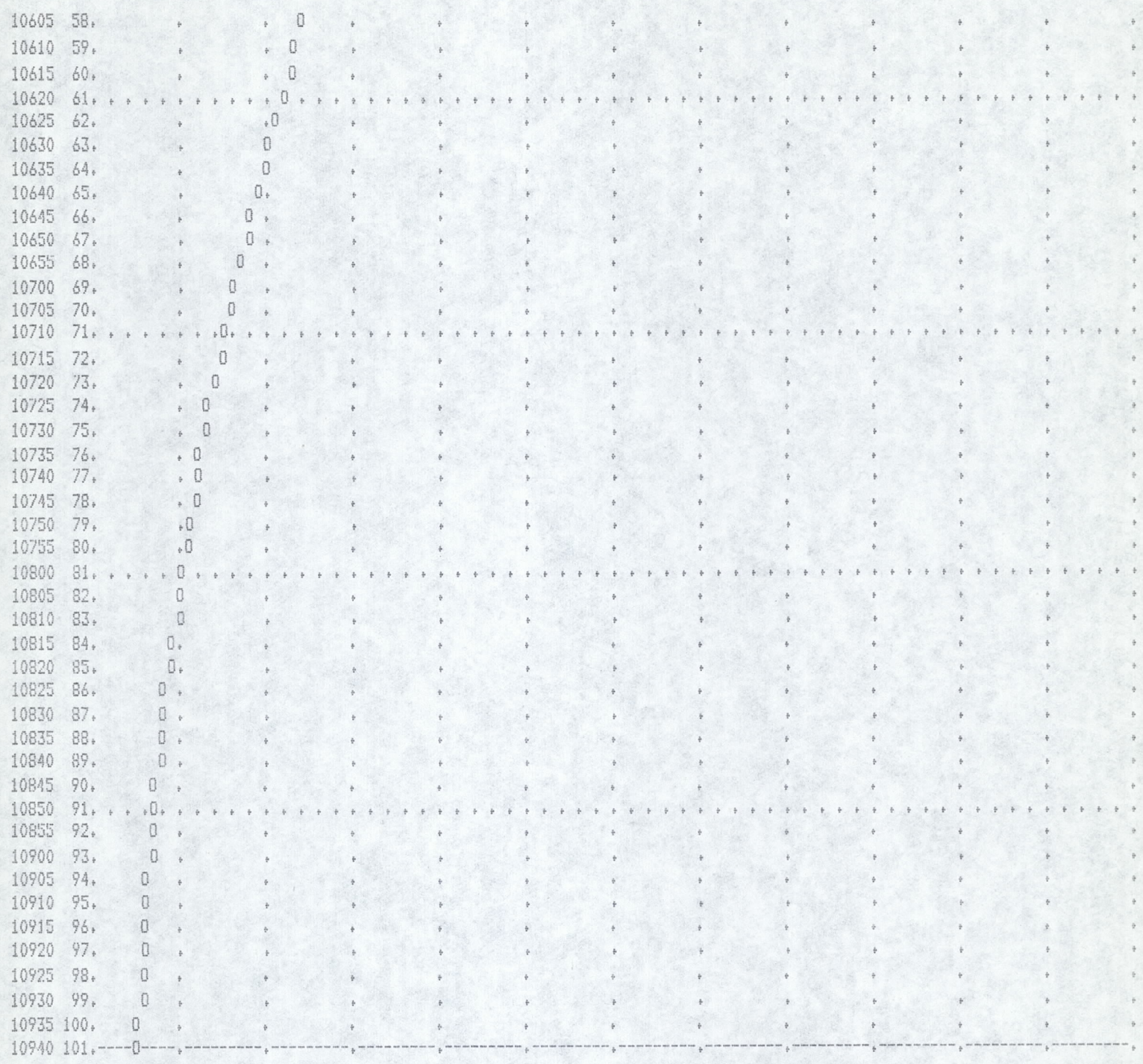
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
276.	1.67	(CFS)	117.	90.	90.	90.
		(INCHES)	0.582	0.620	0.620	0.620
		(AC-FT)	58.	62.	62.	62.

CUMULATIVE AREA = 1.88 SQ MI

STATION SUB6




10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
184 KK    *    SUB6C   *
          *            *
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                    AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                    ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                          COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                          MAIN CHANNEL 1000' RUNING NORTH-SOUTH
                    CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
                    MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE

               SUBBASIN RUNOFF DATA

191 BA           SUBBASIN CHARACTERISTICS
                      TAREA       0.13  SUBBASIN AREA

                 PRECIPITATION DATA

112 PB                STORM       2.45  BASIN TOTAL PRECIPITATION

113 PI             INCREMENTAL PRECIPITATION PATTERN
                     0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
                     0.06     0.05

192 LS           SCS LOSS RATE
                      STRTL       0.50  INITIAL ABSTRACTION
                     CRVNBR      80.00  CURVE NUMBER
                      RTIMP      29.00  PERCENT IMPERVIOUS AREA

                 KINEMATIC WAVE
193 UK             OVERLAND-FLOW ELEMENT NO. 1
                          L        100.  OVERLAND FLOW LENGTH
                          S     0.0033  SLOPE
                          N      0.200  ROUGHNESS COEFFICIENT
                         PA      100.0  PERCENT OF SUBBASIN
194 RK             COLLECTOR CHANNEL
                          L       2000.  CHANNEL LENGTH
                          S     0.0050  SLOPE
                          N      0.160  CHANNEL ROUGHNESS COEFFICIENT
                         CA       0.10  CONTRIBUTING AREA
                      SHAPE       TRAP  CHANNEL SHAPE
                         WD       0.00  BOTTOM WIDTH OR DIAMETER
                          Z       1.00  SIDE SLOPE
195 RK             MAIN CHANNEL
                          L       1000.  CHANNEL LENGTH
                          S     0.0050  SLOPE
                          N      0.160  CHANNEL ROUGHNESS COEFFICIENT
                         CA       0.13  CONTRIBUTING AREA
                      SHAPE       TRAP  CHANNEL SHAPE
                         WD       0.00  BOTTOM WIDTH OR DIAMETER
                          Z       1.00  SIDE SLOPE
                     RUPSTQ         NO  ROUTE UPSTREAM HYDROGRAPH
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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	500.00

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HYDROGRAPH AT STATION SUB6C

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	1.
1		0125	2	0.05	0.04	0.01	0.	1		0540	53	0.00	0.00	0.00	1.
1		0130	3	0.07	0.05	0.02	0.	1		0545	54	0.00	0.00	0.00	1.
1		0135	4	0.07	0.05	0.02	0.	1		0550	55	0.00	0.00	0.00	1.
1		0140	5	0.10	0.07	0.03	0.	1		0555	56	0.00	0.00	0.00	1.
1		0145	6	0.16	0.11	0.05	0.	1		0600	57	0.00	0.00	0.00	1.
1		0150	7	1.16	0.58	0.58	0.	1		0605	58	0.00	0.00	0.00	1.
1		0155	8	0.39	0.12	0.27	4.	1		0610	59	0.00	0.00	0.00	1.
1		0200	9	0.14	0.04	0.10	25.	1		0615	60	0.00	0.00	0.00	1.
1		0205	10	0.11	0.03	0.08	69.	1		0620	61	0.00	0.00	0.00	1.
1		0210	11	0.09	0.02	0.07	108.	1		0625	62	0.00	0.00	0.00	1.
1		0215	12	0.06	0.01	0.05	123.	1		0630	63	0.00	0.00	0.00	1.
1		0220	13	0.05	0.01	0.04	117.	1		0635	64	0.00	0.00	0.00	1.
1		0225	14	0.00	0.00	0.00	105.	1		0640	65	0.00	0.00	0.00	1.
1		0230	15	0.00	0.00	0.00	90.	1		0645	66	0.00	0.00	0.00	1.
1		0235	16	0.00	0.00	0.00	76.	1		0650	67	0.00	0.00	0.00	1.
1		0240	17	0.00	0.00	0.00	61.	1		0655	68	0.00	0.00	0.00	1.
1		0245	18	0.00	0.00	0.00	50.	1		0700	69	0.00	0.00	0.00	1.
1		0250	19	0.00	0.00	0.00	42.	1		0705	70	0.00	0.00	0.00	1.
1		0255	20	0.00	0.00	0.00	35.	1		0710	71	0.00	0.00	0.00	1.
1		0300	21	0.00	0.00	0.00	30.	1		0715	72	0.00	0.00	0.00	1.
1		0305	22	0.00	0.00	0.00	25.	1		0720	73	0.00	0.00	0.00	1.
1		0310	23	0.00	0.00	0.00	22.	1		0725	74	0.00	0.00	0.00	0.
1		0315	24	0.00	0.00	0.00	19.	1		0730	75	0.00	0.00	0.00	0.
1		0320	25	0.00	0.00	0.00	16.	1		0735	76	0.00	0.00	0.00	0.
1		0325	26	0.00	0.00	0.00	14.	1		0740	77	0.00	0.00	0.00	0.
1		0330	27	0.00	0.00	0.00	12.	1		0745	78	0.00	0.00	0.00	0.
1		0335	28	0.00	0.00	0.00	11.	1		0750	79	0.00	0.00	0.00	0.
1		0340	29	0.00	0.00	0.00	10.	1		0755	80	0.00	0.00	0.00	0.
1		0345	30	0.00	0.00	0.00	9.	1		0800	81	0.00	0.00	0.00	0.
1		0350	31	0.00	0.00	0.00	8.	1		0805	82	0.00	0.00	0.00	0.
1		0355	32	0.00	0.00	0.00	7.	1		0810	83	0.00	0.00	0.00	0.
1		0400	33	0.00	0.00	0.00	6.	1		0815	84	0.00	0.00	0.00	0.
1		0405	34	0.00	0.00	0.00	6.	1		0820	85	0.00	0.00	0.00	0.
1		0410	35	0.00	0.00	0.00	5.	1		0825	86	0.00	0.00	0.00	0.
1		0415	36	0.00	0.00	0.00	5.	1		0830	87	0.00	0.00	0.00	0.
1		0420	37	0.00	0.00	0.00	4.	1		0835	88	0.00	0.00	0.00	0.
1		0425	38	0.00	0.00	0.00	4.	1		0840	89	0.00	0.00	0.00	0.
1		0430	39	0.00	0.00	0.00	4.	1		0845	90	0.00	0.00	0.00	0.
1		0435	40	0.00	0.00	0.00	3.	1		0850	91	0.00	0.00	0.00	0.
1		0440	41	0.00	0.00	0.00	3.	1		0855	92	0.00	0.00	0.00	0.
1		0445	42	0.00	0.00	0.00	3.	1		0900	93	0.00	0.00	0.00	0.
1		0450	43	0.00	0.00	0.00	3.	1		0905	94	0.00	0.00	0.00	0.
1		0455	44	0.00	0.00	0.00	2.	1		0910	95	0.00	0.00	0.00	0.
1		0500	45	0.00	0.00	0.00	2.	1		0915	96	0.00	0.00	0.00	0.
1		0505	46	0.00	0.00	0.00	2.	1		0920	97	0.00	0.00	0.00	0.

1	0510	47	0.00	0.00	0.00	2.	*	1	0925	98	0.00	0.00	0.00	0.
1	0515	48	0.00	0.00	0.00	2.	*	1	0930	99	0.00	0.00	0.00	0.
1	0520	49	0.00	0.00	0.00	2.	*	1	0935	100	0.00	0.00	0.00	0.
1	0525	50	0.00	0.00	0.00	2.	*	1	0940	101	0.00	0.00	0.00	0.
1	0530	51	0.00	0.00	0.00	2.	*							
							*							

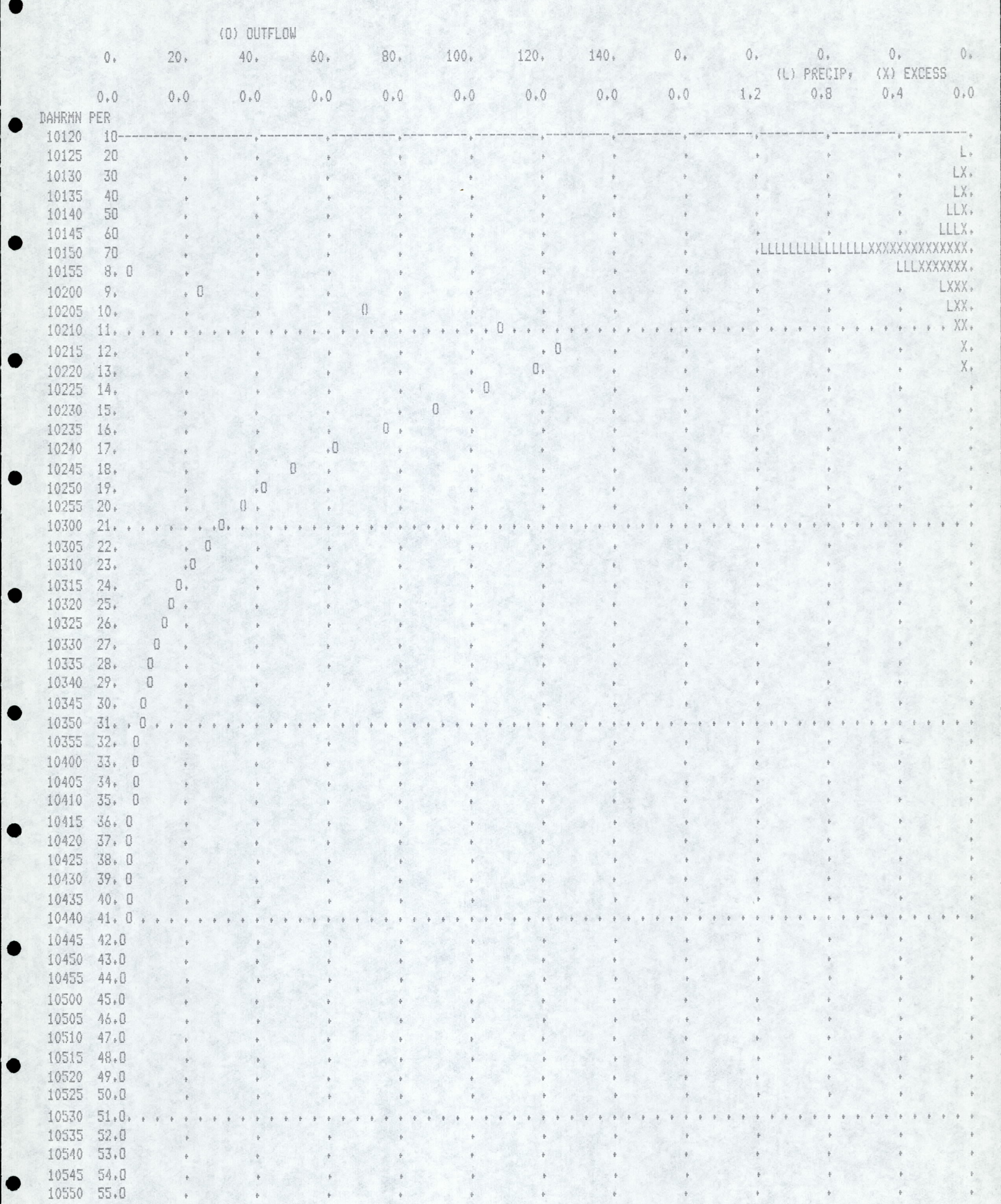
****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
123.	0.92	(CFS)	16.	12.	12.	12.
		(INCHES)	1.211	1.217	1.217	1.217
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 0.13 SQ MI

STATION SUB6C



```
10555  56.0
10600  57.0
10605  58.0
10610  590
10615  600
10620  610
10625  620
10630  630
10635  640
10640  650
10645  660
10650  670
10655  680
10700  690
10705  700
10710  710
10715  720
10720  730
10725  740
10730  750
10735  760
10740  770
10745  780
10750  790
10755  800
10800  810
10805  820
10810  830
10815  840
10820  850
10825  860
10830  870
10835  880
10840  890
10845  900
10850  910
10855  920
10900  930
10905  940
10910  950
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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              **************
              *            *
196 KK        *     SUB6   *
              *            *
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COMBINED SUB6C, ROUTED(SUB6A, SUB6B AND ROUTED 5) AT C.P. (F)

198 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

***

HYDROGRAPH AT STATION SUB6

SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	199.	1		0540	53	118.	1		0750	79	45.
1		0125	2	0.	1		0335	28	183.	1		0545	54	114.	1		0755	80	43.
1		0130	3	0.	1		0340	29	169.	1		0550	55	110.	1		0800	81	41.
1		0135	4	0.	1		0345	30	155.	1		0555	56	106.	1		0805	82	40.
1		0140	5	0.	1		0350	31	142.	1		0600	57	102.	1		0810	83	38.
1		0145	6	0.	1		0355	32	130.	1		0605	58	98.	1		0815	84	37.
1		0150	7	0.	1		0400	33	123.	1		0610	59	95.	1		0820	85	36.
1		0155	8	4.	1		0405	34	128.	1		0615	60	91.	1		0825	86	34.
1		0200	9	25.	1		0410	35	138.	1		0620	61	88.	1		0830	87	33.
1		0205	10	85.	1		0415	36	147.	1		0625	62	84.	1		0835	88	32.
1		0210	11	170.	1		0420	37	152.	1		0630	63	81.	1		0840	89	31.
1		0215	12	228.	1		0425	38	153.	1		0635	64	79.	1		0845	90	30.
1		0220	13	235.	1		0430	39	153.	1		0640	65	76.	1		0850	91	29.
1		0225	14	217.	1		0435	40	151.	1		0645	66	73.	1		0855	92	28.
1		0230	15	191.	1		0440	41	147.	1		0650	67	71.	1		0900	93	27.
1		0235	16	163.	1		0445	42	144.	1		0655	68	68.	1		0905	94	26.
1		0240	17	135.	1		0450	43	140.	1		0700	69	66.	1		0910	95	25.
1		0245	18	152.	1		0455	44	137.	1		0705	70	63.	1		0915	96	25.
1		0250	19	250.	1		0500	45	136.	1		0710	71	61.	1		0920	97	24.
1		0255	20	300.	1		0505	46	135.	1		0715	72	59.	1		0925	98	23.
1		0300	21	306.	1		0510	47	135.	1		0720	73	57.	1		0930	99	23.
1		0305	22	294.	1		0515	48	133.	1		0725	74	54.	1		0935	100	22.
1		0310	23	276.	1		0520	49	131.	1		0730	75	52.	1		0940	101	21.
1		0315	24	256.	1		0525	50	128.	1		0735	76	50.					
1		0320	25	236.	1		0530	51	125.	1		0740	77	48.					
1		0325	26	216.	1		0535	52	121.	1		0745	78	47.					

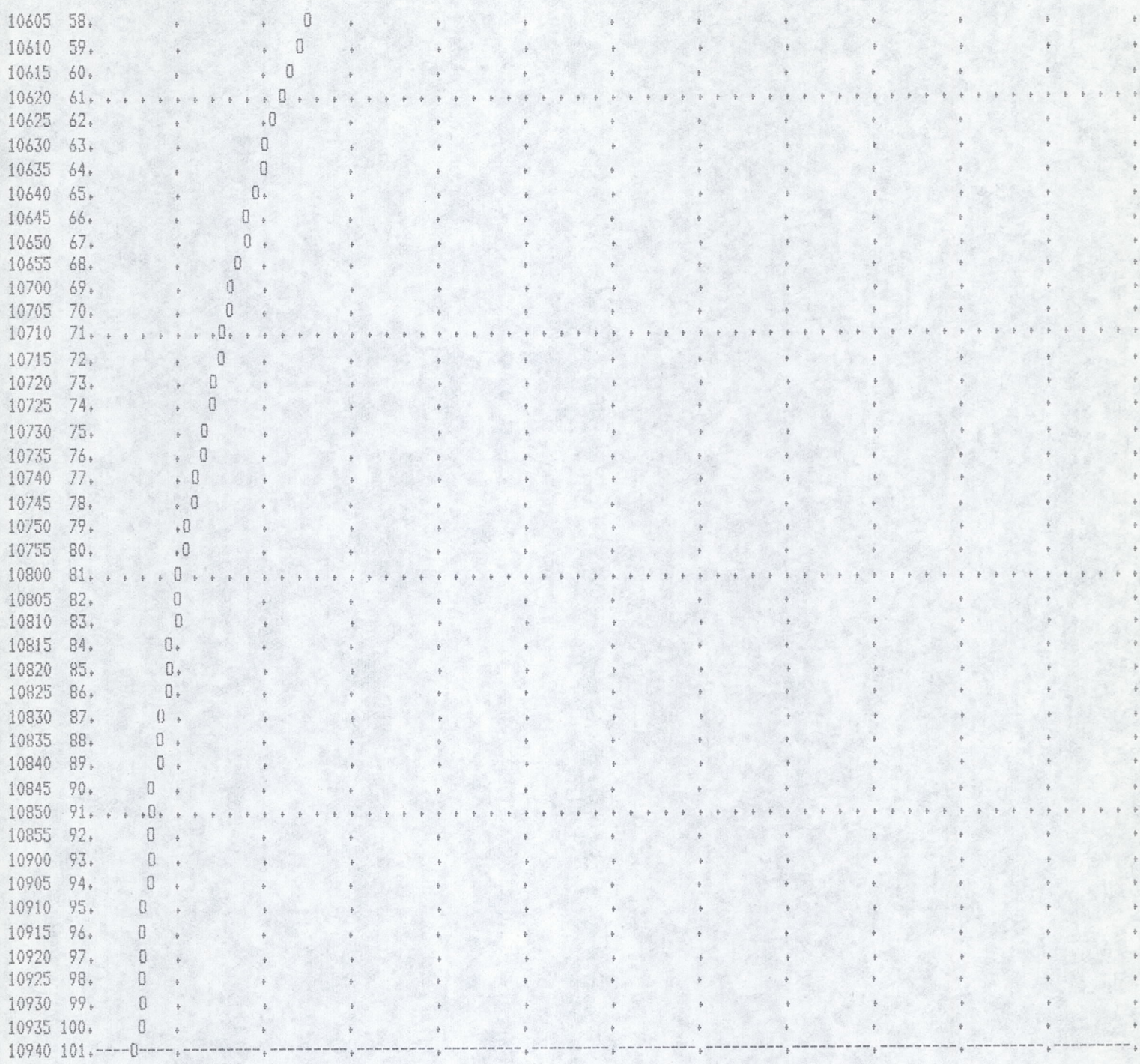
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
306.	1.67	(CFS)	133.	102.	102.	102.
		(INCHES)	0.618	0.658	0.658	0.658
		(AC-FT)	66.	70.	70.	70.

CUMULATIVE AREA = 2.00 SQ MI

STATION SUB6

(O) OUTFLOW

DAHRMN	PER	0.	40.	80.	120.	160.	200.	240.	280.	320.	0.	0.	0.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	70													
10155	8.0													
10200	9.	O												
10205	10.			O										
10210	11.					O								
10215	12.							O						
10220	13.							O						
10225	14.						O							
10230	15.						O							
10235	16.					O								
10240	17.				O									
10245	18.				O									
10250	19.							O						
10255	20.								O					
10300	21.								O					
10305	22.								O					
10310	23.							O						
10315	24.							O						
10320	25.							O						
10325	26.						O							
10330	27.						O							
10335	28.					O								
10340	29.					O								
10345	30.				O									
10350	31.				O									
10355	32.				O									
10400	33.				O									
10405	34.				O									
10410	35.				O									
10415	36.				O									
10420	37.				O									
10425	38.				O									
10430	39.				O									
10435	40.				O									
10440	41.				O									
10445	42.				O									
10450	43.				O									
10455	44.				O									
10500	45.				O									
10505	46.				O									
10510	47.				O									
10515	48.				O									
10520	49.				O									
10525	50.				O									
10530	51.				O									
10535	52.			O										
10540	53.			O										
10545	54.			O										
10550	55.			O										
10555	56.			O										
10600	57.			O										


10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
 199 KK   *      SUB6  *
          *            *
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DIVERT TO SUB8

DT	DIVERSION			
	ISTAD	DIV682	DIVERSION HYDROGRAPH IDENTIFICATION	
DI	INFLOW	2.00	150.00	1000.00
DQ	DIVERTED FLOW	1.00	75.00	500.00

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DIVERSION HYDROGRAPH DIV682

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	99.	*	1		0540	53	59.	*	1		0750	79	22.
1		0125	2	0.	*	1		0335	28	92.	*	1		0545	54	57.	*	1		0755	80	22.
1		0130	3	0.	*	1		0340	29	84.	*	1		0550	55	55.	*	1		0800	81	21.
1		0135	4	0.	*	1		0345	30	77.	*	1		0555	56	53.	*	1		0805	82	20.
1		0140	5	0.	*	1		0350	31	71.	*	1		0600	57	51.	*	1		0810	83	19.
1		0145	6	0.	*	1		0355	32	65.	*	1		0605	58	49.	*	1		0815	84	18.
1		0150	7	0.	*	1		0400	33	62.	*	1		0610	59	47.	*	1		0820	85	18.
1		0155	8	2.	*	1		0405	34	64.	*	1		0615	60	46.	*	1		0825	86	17.
1		0200	9	13.	*	1		0410	35	69.	*	1		0620	61	44.	*	1		0830	87	17.
1		0205	10	42.	*	1		0415	36	74.	*	1		0625	62	42.	*	1		0835	88	16.
1		0210	11	85.	*	1		0420	37	76.	*	1		0630	63	41.	*	1		0840	89	15.
1		0215	12	114.	*	1		0425	38	77.	*	1		0635	64	39.	*	1		0845	90	15.
1		0220	13	117.	*	1		0430	39	76.	*	1		0640	65	38.	*	1		0850	91	14.
1		0225	14	108.	*	1		0435	40	75.	*	1		0645	66	37.	*	1		0855	92	14.
1		0230	15	95.	*	1		0440	41	74.	*	1		0650	67	35.	*	1		0900	93	14.
1		0235	16	82.	*	1		0445	42	72.	*	1		0655	68	34.	*	1		0905	94	13.
1		0240	17	68.	*	1		0450	43	70.	*	1		0700	69	33.	*	1		0910	95	13.
1		0245	18	76.	*	1		0455	44	68.	*	1		0705	70	32.	*	1		0915	96	12.
1		0250	19	125.	*	1		0500	45	68.	*	1		0710	71	31.	*	1		0920	97	12.
1		0255	20	150.	*	1		0505	46	68.	*	1		0715	72	29.	*	1		0925	98	12.
1		0300	21	153.	*	1		0510	47	67.	*	1		0720	73	28.	*	1		0930	99	11.
1		0305	22	147.	*	1		0515	48	67.	*	1		0725	74	27.	*	1		0935	100	11.
1		0310	23	138.	*	1		0520	49	65.	*	1		0730	75	26.	*	1		0940	101	11.
1		0315	24	128.	*	1		0525	50	64.	*	1		0735	76	25.	*					
1		0320	25	118.	*	1		0530	51	62.	*	1		0740	77	24.	*					
1		0325	26	108.	*	1		0535	52	61.	*	1		0745	78	23.	*					

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
153.	1.67	(CFS)	67.	51.	51.	51.
		(INCHES)	0.309	0.329	0.329	0.329
		(AC-FT)	33.	35.	35.	35.

CUMULATIVE AREA = 2.00 SQ MI

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	99.	1		0540	53	59.	1		0750	79	22.
1		0125	2	0.	1		0335	28	92.	1		0545	54	57.	1		0755	80	22.
1		0130	3	0.	1		0340	29	84.	1		0550	55	55.	1		0800	81	21.
1		0135	4	0.	1		0345	30	77.	1		0555	56	53.	1		0805	82	20.
1		0140	5	0.	1		0350	31	71.	1		0600	57	51.	1		0810	83	19.
1		0145	6	0.	1		0355	32	65.	1		0605	58	49.	1		0815	84	18.
1		0150	7	0.	1		0400	33	62.	1		0610	59	47.	1		0820	85	18.
1		0155	8	2.	1		0405	34	64.	1		0615	60	46.	1		0825	86	17.
1		0200	9	13.	1		0410	35	69.	1		0620	61	44.	1		0830	87	17.
1		0205	10	42.	1		0415	36	74.	1		0625	62	42.	1		0835	88	16.
1		0210	11	85.	1		0420	37	76.	1		0630	63	41.	1		0840	89	15.
1		0215	12	114.	1		0425	38	77.	1		0635	64	39.	1		0845	90	15.
1		0220	13	117.	1		0430	39	76.	1		0640	65	38.	1		0850	91	14.
1		0225	14	108.	1		0435	40	75.	1		0645	66	37.	1		0855	92	14.
1		0230	15	95.	1		0440	41	74.	1		0650	67	35.	1		0900	93	14.
1		0235	16	82.	1		0445	42	72.	1		0655	68	34.	1		0905	94	13.
1		0240	17	68.	1		0450	43	70.	1		0700	69	33.	1		0910	95	13.
1		0245	18	76.	1		0455	44	68.	1		0705	70	32.	1		0915	96	12.
1		0250	19	125.	1		0500	45	68.	1		0710	71	31.	1		0920	97	12.
1		0255	20	150.	1		0505	46	68.	1		0715	72	29.	1		0925	98	12.
1		0300	21	153.	1		0510	47	67.	1		0720	73	28.	1		0930	99	11.
1		0305	22	147.	1		0515	48	67.	1		0725	74	27.	1		0935	100	11.
1		0310	23	138.	1		0520	49	65.	1		0730	75	26.	1		0940	101	11.
1		0315	24	128.	1		0525	50	64.	1		0735	76	25.					
1		0320	25	118.	1		0530	51	62.	1		0740	77	24.					
1		0325	26	108.	1		0535	52	61.	1		0745	78	23.					

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PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
153.	1.67	(CFS)	67.	51.	51.	51.
		(INCHES)	0.309	0.329	0.329	0.329
		(AC-FT)	33.	35.	35.	35.

CUMULATIVE AREA = 2.00 SQ MI

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* *
204 KK * SUB7 *

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SUB6 ROUTED TO SUB7

HYDROGRAPH ROUTING DATA

155 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

206 RK KINEMATIC WAVE STREAM ROUTING

L	5800.	CHANNEL LENGTH
S	0.0030	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

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KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.2348	1.423	2.50	2900.00

HYDROGRAPH AT STATION SUB7

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	120.	*	1		0540	53	63.	*	1		0750	79	26.
1		0125	2	0.	*	1		0335	28	111.	*	1		0545	54	62.	*	1		0755	80	25.
1		0130	3	0.	*	1		0340	29	103.	*	1		0550	55	60.	*	1		0800	81	24.
1		0135	4	0.	*	1		0345	30	96.	*	1		0555	56	59.	*	1		0805	82	23.
1		0140	5	0.	*	1		0350	31	89.	*	1		0600	57	57.	*	1		0810	83	23.
1		0145	6	0.	*	1		0355	32	82.	*	1		0605	58	55.	*	1		0815	84	22.
1		0150	7	0.	*	1		0400	33	76.	*	1		0610	59	53.	*	1		0820	85	21.
1		0155	8	0.	*	1		0405	34	71.	*	1		0615	60	51.	*	1		0825	86	20.
1		0200	9	0.	*	1		0410	35	68.	*	1		0620	61	49.	*	1		0830	87	20.
1		0205	10	0.	*	1		0415	36	68.	*	1		0625	62	48.	*	1		0835	88	19.
1		0210	11	3.	*	1		0420	37	69.	*	1		0630	63	46.	*	1		0840	89	18.
1		0215	12	16.	*	1		0425	38	71.	*	1		0635	64	44.	*	1		0845	90	18.
1		0220	13	42.	*	1		0430	39	73.	*	1		0640	65	43.	*	1		0850	91	17.
1		0225	14	69.	*	1		0435	40	75.	*	1		0645	66	41.	*	1		0855	92	16.
1		0230	15	87.	*	1		0440	41	75.	*	1		0650	67	40.	*	1		0900	93	16.
1		0235	16	93.	*	1		0445	42	75.	*	1		0655	68	39.	*	1		0905	94	15.
1		0240	17	90.	*	1		0450	43	74.	*	1		0700	69	37.	*	1		0910	95	15.
1		0245	18	84.	*	1		0455	44	73.	*	1		0705	70	36.	*	1		0915	96	14.
1		0250	19	83.	*	1		0500	45	71.	*	1		0710	71	35.	*	1		0920	97	14.
1		0255	20	95.	*	1		0505	46	70.	*	1		0715	72	34.	*	1		0925	98	14.
1		0300	21	115.	*	1		0510	47	69.	*	1		0720	73	33.	*	1		0930	99	13.
1		0305	22	132.	*	1		0515	48	68.	*	1		0725	74	31.	*	1		0935	100	13.
1		0310	23	140.	*	1		0520	49	68.	*	1		0730	75	30.	*	1		0940	101	12.

1	0315	24	140.	*	1	0525	50	67.	*	1	0735	76	29.	*
1	0320	25	135.	*	1	0530	51	66.	*	1	0740	77	28.	*
1	0325	26	128.	*	1	0535	52	65.	*	1	0745	78	27.	*
				*					*					*

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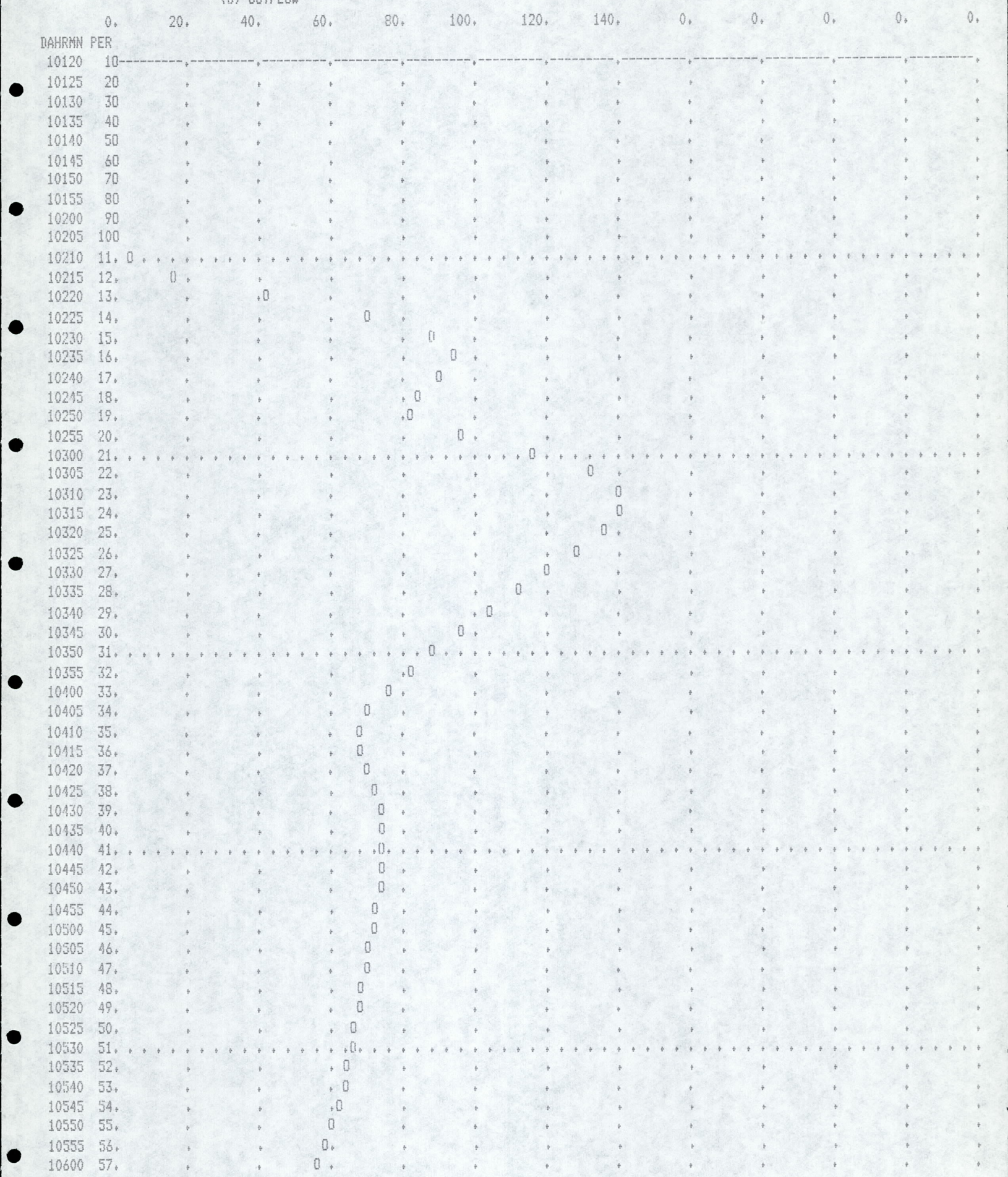
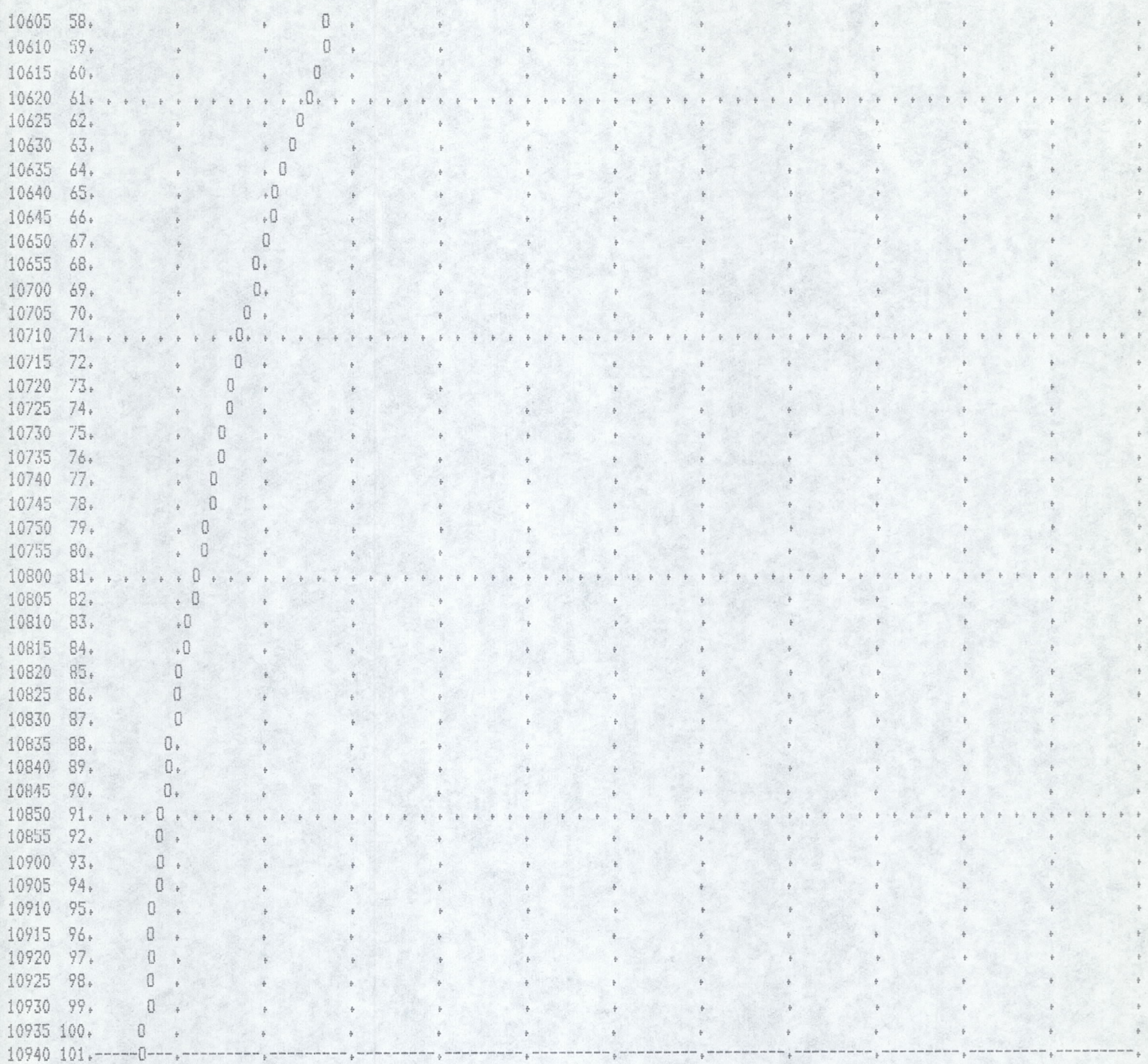
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
140.	1.92	(CFS)	66.	50.	50.	50.
		(INCHES)	0.305	0.323	0.323	0.323
		(AC-FT)	32.	34.	34.	34.

CUMULATIVE AREA = 2.00 SQ MI

STATION SUB7

(O) OUTFLOW




10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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

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              *            *
 207 KK       *      SUB7  *
              *            *
              **************
                              AREA BOUNDED BY 107TH ST- CAMELBACK ROAD- INDIAN SCHOOL-AUGU FRIA
                              ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
                              HYDROGRAPH AT C.P. (G) INTO AGUA FRIA WASH

                SUBBASIN RUNOFF DATA

 214 BA           SUBBASIN CHARACTERISTICS
                        TAREA        0.58  SUBBASIN AREA

                  PRECIPITATION DATA

 211 PB                 STORM        2.45  BASIN TOTAL PRECIPITATION

 212 PI             INCREMENTAL PRECIPITATION PATTERN
                       0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                       0.06      0.05

 215 LS           SCS LOSS RATE
                        STRTL        0.25  INITIAL ABSTRACTION
                       CRVNBR       89.00  CURVE NUMBER
                        RTIMP       60.00  PERCENT IMPERVIOUS AREA

                  KINEMATIC WAVE
 216 UK             OVERLAND-FLOW ELEMENT NO. 1
                            L       4500.  OVERLAND FLOW LENGTH
                            S      0.0050  SLOPE
                            N       0.100  ROUGHNESS COEFFICIENT
                           PA       100.0  PERCENT OF SUBBASIN
 217 RK             MAIN CHANNEL
                            L       5800.  CHANNEL LENGTH
                            S      0.0030  SLOPE
                            N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                           CA        0.58  CONTRIBUTING AREA
                        SHAPE        TRAP  CHANNEL SHAPE
                           WD        0.00  BOTTOM WIDTH OR DIAMETER
                            Z        1.00  SIDE SLOPE
                       RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

                                                                   ***

           COMPUTED KINEMATIC PARAMETERS
              ELEMENT      ALPHA         M       DT (MIN)    DX (FT)
                    1     1.0536     1.667        5.00       375.00
                    3     1.6346     1.333        5.00      2900.00

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

                                                       HYDROGRAPH AT STATION      SUB7

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	71.
1		0125	2	0.05	0.02	0.03	0.	1		0540	53	0.00	0.00	0.00	68.
1		0130	3	0.07	0.03	0.04	0.	1		0545	54	0.00	0.00	0.00	65.
1		0135	4	0.07	0.03	0.04	0.	1		0550	55	0.00	0.00	0.00	62.
1		0140	5	0.10	0.04	0.06	0.	1		0555	56	0.00	0.00	0.00	59.
1		0145	6	0.16	0.05	0.11	0.	1		0600	57	0.00	0.00	0.00	57.
1		0150	7	1.16	0.19	0.97	1.	1		0605	58	0.00	0.00	0.00	55.
1		0155	8	0.39	0.03	0.36	15.	1		0610	59	0.00	0.00	0.00	53.
1		0200	9	0.14	0.01	0.13	45.	1		0615	60	0.00	0.00	0.00	50.
1		0205	10	0.11	0.01	0.10	83.	1		0620	61	0.00	0.00	0.00	48.
1		0210	11	0.09	0.01	0.08	119.	1		0625	62	0.00	0.00	0.00	47.
1		0215	12	0.06	0.00	0.06	146.	1		0630	63	0.00	0.00	0.00	45.
1		0220	13	0.05	0.00	0.05	166.	1		0635	64	0.00	0.00	0.00	43.
1		0225	14	0.00	0.00	0.00	179.	1		0640	65	0.00	0.00	0.00	42.
1		0230	15	0.00	0.00	0.00	186.	1		0645	66	0.00	0.00	0.00	40.
1		0235	16	0.00	0.00	0.00	189.	1		0650	67	0.00	0.00	0.00	39.
1		0240	17	0.00	0.00	0.00	190.	1		0655	68	0.00	0.00	0.00	37.
1		0245	18	0.00	0.00	0.00	191.	1		0700	69	0.00	0.00	0.00	36.
1		0250	19	0.00	0.00	0.00	191.	1		0705	70	0.00	0.00	0.00	35.
1		0255	20	0.00	0.00	0.00	191.	1		0710	71	0.00	0.00	0.00	33.
1		0300	21	0.00	0.00	0.00	191.	1		0715	72	0.00	0.00	0.00	32.
1		0305	22	0.00	0.00	0.00	191.	1		0720	73	0.00	0.00	0.00	31.
1		0310	23	0.00	0.00	0.00	191.	1		0725	74	0.00	0.00	0.00	30.
1		0315	24	0.00	0.00	0.00	190.	1		0730	75	0.00	0.00	0.00	29.
1		0320	25	0.00	0.00	0.00	190.	1		0735	76	0.00	0.00	0.00	28.
1		0325	26	0.00	0.00	0.00	189.	1		0740	77	0.00	0.00	0.00	27.
1		0330	27	0.00	0.00	0.00	187.	1		0745	78	0.00	0.00	0.00	26.
1		0335	28	0.00	0.00	0.00	185.	1		0750	79	0.00	0.00	0.00	26.
1		0340	29	0.00	0.00	0.00	182.	1		0755	80	0.00	0.00	0.00	25.
1		0345	30	0.00	0.00	0.00	179.	1		0800	81	0.00	0.00	0.00	24.
1		0350	31	0.00	0.00	0.00	175.	1		0805	82	0.00	0.00	0.00	23.
1		0355	32	0.00	0.00	0.00	170.	1		0810	83	0.00	0.00	0.00	23.
1		0400	33	0.00	0.00	0.00	164.	1		0815	84	0.00	0.00	0.00	22.
1		0405	34	0.00	0.00	0.00	159.	1		0820	85	0.00	0.00	0.00	21.
1		0410	35	0.00	0.00	0.00	153.	1		0825	86	0.00	0.00	0.00	21.
1		0415	36	0.00	0.00	0.00	147.	1		0830	87	0.00	0.00	0.00	20.
1		0420	37	0.00	0.00	0.00	141.	1		0835	88	0.00	0.00	0.00	20.
1		0425	38	0.00	0.00	0.00	135.	1		0840	89	0.00	0.00	0.00	19.
1		0430	39	0.00	0.00	0.00	129.	1		0845	90	0.00	0.00	0.00	18.
1		0435	40	0.00	0.00	0.00	123.	1		0850	91	0.00	0.00	0.00	18.
1		0440	41	0.00	0.00	0.00	118.	1		0855	92	0.00	0.00	0.00	18.
1		0445	42	0.00	0.00	0.00	112.	1		0900	93	0.00	0.00	0.00	17.
1		0450	43	0.00	0.00	0.00	107.	1		0905	94	0.00	0.00	0.00	17.
1		0455	44	0.00	0.00	0.00	102.	1		0910	95	0.00	0.00	0.00	16.
1		0500	45	0.00	0.00	0.00	97.	1		0915	96	0.00	0.00	0.00	16.
1		0505	46	0.00	0.00	0.00	93.	1		0920	97	0.00	0.00	0.00	15.
1		0510	47	0.00	0.00	0.00	89.	1		0925	98	0.00	0.00	0.00	15.
1		0515	48	0.00	0.00	0.00	85.	1		0930	99	0.00	0.00	0.00	15.
1		0520	49	0.00	0.00	0.00	81.	1		0935	100	0.00	0.00	0.00	14.
1		0525	50	0.00	0.00	0.00	77.	1		0940	101	0.00	0.00	0.00	14.
1		0530	51	0.00	0.00	0.00	74.								

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.42, TOTAL EXCESS = 2.03

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
191.	1.67	(CFS)	104.	79.	79.	79.
		(INCHES)	1.673	1.762	1.762	1.762
		(AC-FT)	52.	55.	55.	55.

CUMULATIVE AREA = 0.58 SQ MI

STATION SUB7

(O) OUTFLOW

	0.	40.	80.	120.	160.	200.	0.	0.	0.	0.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												X
10130	30												LX
10135	40												LX
10140	50												LXX
10145	60												LXXX
10150	70										LLLLLXXXXXXXXXXXXXXXXXXXXXXXX		
10155	8	O										LXXXXXXXXX	
10200	9		O										LXXX
10205	10			O									XXX
10210	11				O								XX
10215	12					O							X
10220	13					O							X
10225	14						O						
10230	15						O						
10235	16						O						
10240	17						O						
10245	18						O						
10250	19						O						
10255	20						O						
10300	21						O						
10305	22						O						
10310	23						O						
10315	24						O						
10320	25						O						
10325	26						O						
10330	27						O						
10335	28						O						
10340	29						O						
10345	30						O						
10350	31						O						
10355	32					O							
10400	33					O							
10405	34					O							
10410	35				O								
10415	36				O								
10420	37				O								
10425	38				O								
10430	39				O								
10435	40				O								
10440	41				O								
10445	42			O									
10450	43			O									
10455	44			O									
10500	45		O										
10505	46		O										
10510	47		O										
10515	48		O										
10520	49		O										
10525	50		O										
10530	51		O										
10535	52		O										
10540	53		O										
10545	54		O										
10550	55		O										

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10555  56.          .   0   .       .       .       .       .       .       .       .       .       .       .       .
10600  57.          .  0    .       .       .       .       .       .       .       .       .       .       .       .
10605  58.          .  0    .       .       .       .       .       .       .       .       .       .       .       .
10610  59.          . 0     .       .       .       .       .       .       .       .       .       .       .       .
10615  60.          . 0     .       .       .       .       .       .       .       .       .       .       .       .
10620  61. . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.          .0      .       .       .       .       .       .       .       .       .       .       .       .
10630  63.          .0      .       .       .       .       .       .       .       .       .       .       .       .
10635  64.          .0      .       .       .       .       .       .       .       .       .       .       .       .
10640  65.          0       .       .       .       .       .       .       .       .       .       .       .       .
10645  66.          0       .       .       .       .       .       .       .       .       .       .       .       .
10650  67.          0       .       .       .       .       .       .       .       .       .       .       .       .
10655  68.         0.       .       .       .       .       .       .       .       .       .       .       .       .
10700  69.         0.       .       .       .       .       .       .       .       .       .       .       .       .
10705  70.         0.       .       .       .       .       .       .       .       .       .       .       .       .
10710  71. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.        0 .       .       .       .       .       .       .       .       .       .       .       .       .
10720  73.        0 .       .       .       .       .       .       .       .       .       .       .       .       .
10725  74.        0 .       .       .       .       .       .       .       .       .       .       .       .       .
10730  75.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10735  76.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10740  77.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10745  78.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10750  79.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10755  80.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10800  81. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10810  83.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10815  84.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10820  85.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10825  86.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10830  87.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10835  88.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10840  89.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10845  90.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10850  91. . 0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10900  93.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10905  94.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10910  95.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10915  96.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10920  97.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10925  98.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10930  99.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10935 100.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10940 101.--0-------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.
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              *            *
218 KK        *    RET7    *
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RETENTION REQUIREMENT FOR SUBAREA 7

HYDROGRAPH ROUTING DATA

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155 RL        ROUTING LOSSES
                    QLOSS          0.00  INITIAL LOSS
                    CLOSS          0.00  ADDITIONAL FRACTION LOST

220 RS        STORAGE ROUTING
                    NSTPS             1  NUMBER OF SUBREACHES
                     ITYP          STOR  TYPE OF INITIAL CONDITION
                   RSVRIC          0.00  INITIAL CONDITION
                        X          0.00  WORKING R AND D COEFFICIENT
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221 SV	STORAGE	0.0	9.0	18.0	27.0	29.0	31.0	32.0	36.0
222 SQ	DISCHARGE	0.	0.	0.	0.	107.	304.	558.	1200.
223 SE	ELEVATION	0.00	1.00	2.00	3.00	3.20	3.40	3.60	4.00

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HYDROGRAPH AT STATION RET7

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	*	1		0410	35	126.	29.2	3.2	*	1		0700	69	40.	27.7	3.1
1		0125	2	0.	0.0	0.0	*	1		0415	36	138.	29.3	3.2	*	1		0705	70	38.	27.7	3.1
1		0130	3	0.	0.0	0.0	*	1		0420	37	141.	29.3	3.2	*	1		0710	71	37.	27.7	3.1
1		0135	4	0.	0.0	0.0	*	1		0425	38	139.	29.3	3.2	*	1		0715	72	36.	27.7	3.1
1		0140	5	0.	0.0	0.0	*	1		0430	39	136.	29.3	3.2	*	1		0720	73	35.	27.6	3.1
1		0145	6	0.	0.0	0.0	*	1		0435	40	131.	29.2	3.2	*	1		0725	74	33.	27.6	3.1
1		0150	7	0.	0.0	0.0	*	1		0440	41	126.	29.2	3.2	*	1		0730	75	32.	27.6	3.1
1		0155	8	0.	0.1	0.0	*	1		0445	42	120.	29.1	3.2	*	1		0735	76	31.	27.6	3.1
1		0200	9	0.	0.3	0.0	*	1		0450	43	115.	29.1	3.2	*	1		0740	77	30.	27.6	3.1
1		0205	10	0.	0.7	0.1	*	1		0455	44	110.	29.0	3.2	*	1		0745	78	29.	27.5	3.1
1		0210	11	0.	1.4	0.2	*	1		0500	45	106.	29.0	3.2	*	1		0750	79	28.	27.5	3.1
1		0215	12	0.	2.3	0.3	*	1		0505	46	102.	28.9	3.2	*	1		0755	80	27.	27.5	3.1
1		0220	13	0.	3.4	0.4	*	1		0510	47	99.	28.8	3.2	*	1		0800	81	26.	27.5	3.0
1		0225	14	0.	4.6	0.5	*	1		0515	48	95.	28.8	3.2	*	1		0805	82	26.	27.5	3.0
1		0230	15	0.	5.8	0.6	*	1		0520	49	91.	28.7	3.2	*	1		0810	83	25.	27.5	3.0
1		0235	16	0.	7.1	0.8	*	1		0525	50	87.	28.6	3.2	*	1		0815	84	24.	27.4	3.0
1		0240	17	0.	8.4	0.9	*	1		0530	51	84.	28.6	3.2	*	1		0820	85	23.	27.4	3.0
1		0245	18	0.	9.7	1.1	*	1		0535	52	80.	28.5	3.1	*	1		0825	86	23.	27.4	3.0
1		0250	19	0.	11.1	1.2	*	1		0540	53	77.	28.4	3.1	*	1		0830	87	22.	27.4	3.0
1		0255	20	0.	12.4	1.4	*	1		0545	54	74.	28.4	3.1	*	1		0835	88	21.	27.4	3.0

1	0300	21	0.	13.7	1.5	*	1	0550	55	70.	28.3	3.1	*	1	0840	89	21.	27.4	3.0
1	0305	22	0.	15.0	1.7	*	1	0555	56	67.	28.3	3.1	*	1	0845	90	20.	27.4	3.0
1	0310	23	0.	16.3	1.8	*	1	0600	57	65.	28.2	3.1	*	1	0850	91	20.	27.4	3.0
1	0315	24	0.	17.6	2.0	*	1	0605	58	62.	28.2	3.1	*	1	0855	92	19.	27.4	3.0
1	0320	25	0.	18.9	2.1	*	1	0610	59	59.	28.1	3.1	*	1	0900	93	18.	27.3	3.0
1	0325	26	0.	20.2	2.2	*	1	0615	60	57.	28.1	3.1	*	1	0905	94	18.	27.3	3.0
1	0330	27	0.	21.5	2.4	*	1	0620	61	55.	28.0	3.1	*	1	0910	95	17.	27.3	3.0
1	0335	28	0.	22.8	2.5	*	1	0625	62	52.	28.0	3.1	*	1	0915	96	17.	27.3	3.0
1	0340	29	0.	24.1	2.7	*	1	0630	63	50.	27.9	3.1	*	1	0920	97	17.	27.3	3.0
1	0345	30	0.	25.3	2.8	*	1	0635	64	48.	27.9	3.1	*	1	0925	98	16.	27.3	3.0
1	0350	31	0.	26.5	2.9	*	1	0640	65	46.	27.9	3.1	*	1	0930	99	16.	27.3	3.0
1	0355	32	33.	27.6	3.1	*	1	0645	66	45.	27.8	3.1	*	1	0935	100	15.	27.3	3.0
1	0400	33	75.	28.4	3.1	*	1	0650	67	43.	27.8	3.1	*	1	0940	101	15.	27.3	3.0
1	0405	34	102.	28.9	3.2	*	1	0655	68	41.	27.8	3.1	*						
						*							*						

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
141.	3.00	(CFS)	55.	40.	40.	40.
		(INCHES)	0.880	0.880	0.880	0.880
		(AC-FT)	27.	27.	27.	27.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)	6-HR	24-HR	72-HR	8.33-HR
29.	3.00	28.	22.	22.	22.

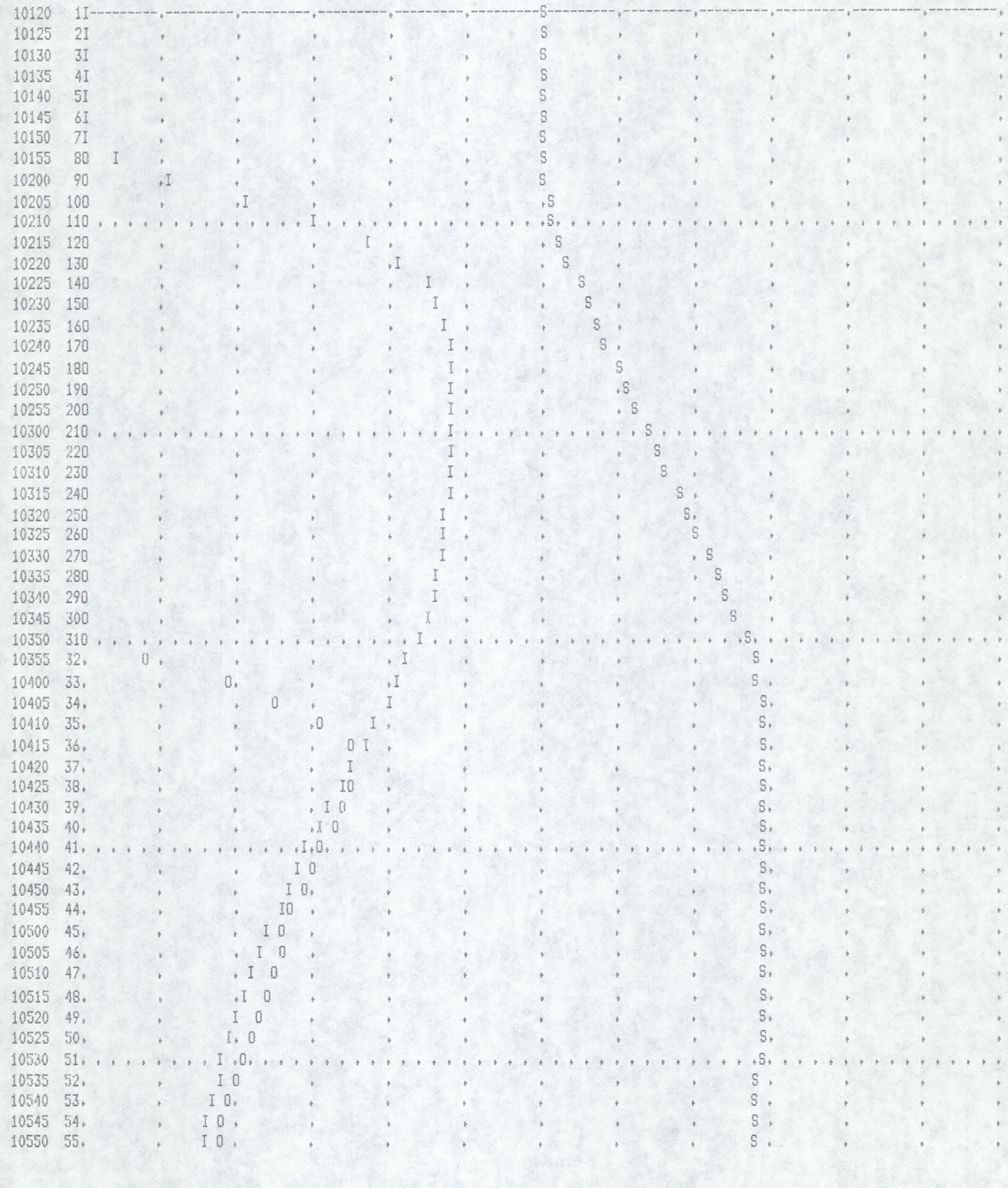
PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)	6-HR	24-HR	72-HR	8.33-HR
3.23	3.00	3.09	2.48	2.48	2.48

CUMULATIVE AREA = 0.58 SQ MI

STATION RET7

(I) INFLOW, (O) OUTFLOW

(S) STORAGE



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10555  56.          I O                                                S
10600  57.          I O                                                S
10605  58.          IO                                                 S
10610  59.          I O                                                S
10615  60.          IO                                                 S
10620  61.          I O                                                S
10625  62.          IO                                                 S
10630  63.          I O                                                S
10635  64.          IO                                                 S
10640  65.          I O                                                S
10645  66.          IO                                                 S
10650  67.          IO                                                 S
10655  68.          IO                                                 S
10700  69.          IO                                                 S
10705  70.          IO                                                 S
10710  71.          IO                                                 S
10715  72.          IO                                                 S
10720  73.          IO                                                 S
10725  74.          I                                                  S
10730  75.          IO                                                 S
10735  76.          IO                                                 S
10740  77.          IO                                                 S
10745  78.          I                                                  S
10750  79.          IO                                                 S
10755  80.          IO                                                 S
10800  81.          IO                                                 S
10805  82.          I                                                  S
10810  83.          I                                                  S
10815  84.          IO                                                 S
10820  85.          IO                                                 S
10825  86.          IO                                                 S
10830  87.          I                                                  S
10835  88.          I                                                  S
10840  89.          I                                                  S
10845  90.          I                                                  S
10850  91.          IO                                                 S
10855  92.          IO                                                 S
10900  93.          IO                                                 S
10905  94.          I                                                  S
10910  95.          I                                                  S
10915  96.          I                                                  S
10920  97.          I                                                  S
10925  98.          I                                                  S
10930  99.          I                                                  S
10935 100.          I                                                  S
10940 101.          IO                                                 S
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          *            *
224 KK    *      SUB7  *
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COMBINED ROUTED SUB6 AND ROUTED SUB7

226 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB7

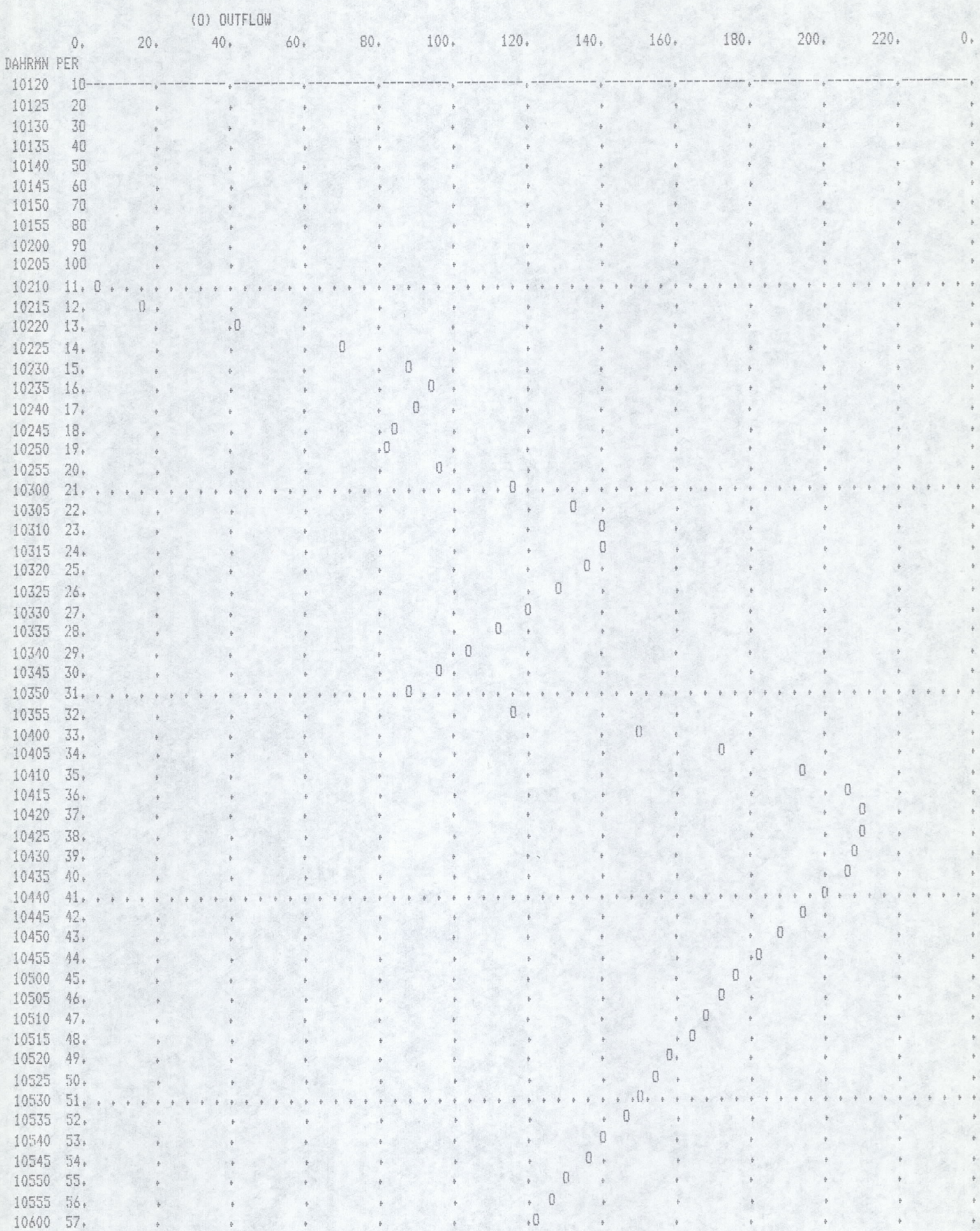
SUM OF 2 HYDROGRAPHS

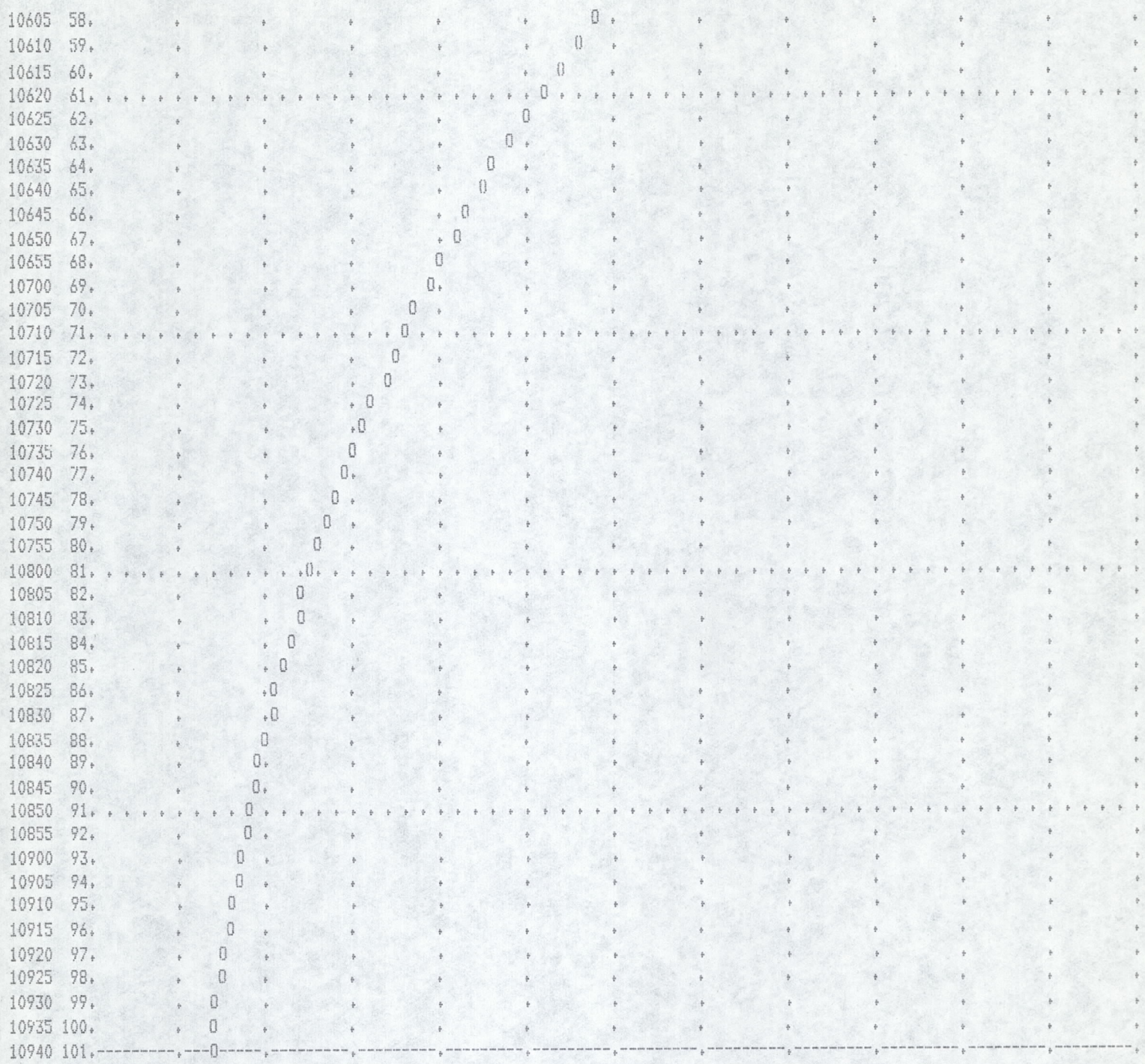
DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	120.	1		0540	53	140.	1		0750	79	54.
1		0125	2	0.	1		0335	28	111.	1		0545	54	135.	1		0755	80	52.
1		0130	3	0.	1		0340	29	103.	1		0550	55	131.	1		0800	81	51.
1		0135	4	0.	1		0345	30	96.	1		0555	56	126.	1		0805	82	49.
1		0140	5	0.	1		0350	31	89.	1		0600	57	121.	1		0810	83	47.
1		0145	6	0.	1		0355	32	115.	1		0605	58	117.	1		0815	84	46.
1		0150	7	0.	1		0400	33	151.	1		0610	59	112.	1		0820	85	44.
1		0155	8	0.	1		0405	34	173.	1		0615	60	108.	1		0825	86	43.
1		0200	9	0.	1		0410	35	194.	1		0620	61	104.	1		0830	87	41.
1		0205	10	0.	1		0415	36	206.	1		0625	62	100.	1		0835	88	40.
1		0210	11	3.	1		0420	37	210.	1		0630	63	96.	1		0840	89	39.
1		0215	12	16.	1		0425	38	211.	1		0635	64	93.	1		0845	90	38.
1		0220	13	42.	1		0430	39	209.	1		0640	65	89.	1		0850	91	36.
1		0225	14	69.	1		0435	40	205.	1		0645	66	86.	1		0855	92	35.
1		0230	15	87.	1		0440	41	201.	1		0650	67	83.	1		0900	93	34.
1		0235	16	93.	1		0445	42	195.	1		0655	68	80.	1		0905	94	33.
1		0240	17	90.	1		0450	43	189.	1		0700	69	77.	1		0910	95	32.
1		0245	18	84.	1		0455	44	182.	1		0705	70	75.	1		0915	96	31.
1		0250	19	83.	1		0500	45	177.	1		0710	71	72.	1		0920	97	31.
1		0255	20	95.	1		0505	46	172.	1		0715	72	69.	1		0925	98	30.
1		0300	21	115.	1		0510	47	168.	1		0720	73	67.	1		0930	99	29.
1		0305	22	132.	1		0515	48	163.	1		0725	74	65.	1		0935	100	28.
1		0310	23	140.	1		0520	49	159.	1		0730	75	62.	1		0940	101	27.
1		0315	24	140.	1		0525	50	154.	1		0735	76	60.					
1		0320	25	135.	1		0530	51	150.	1		0740	77	58.					
1		0325	26	128.	1		0535	52	145.	1		0745	78	56.					

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
211.	3.08	(CFS)	116.	90.	90.	90.
		(INCHES)	0.419	0.449	0.449	0.449
		(AC-FT)	58.	62.	62.	62.

CUMULATIVE AREA = 2.58 SQ MI

STATION SUB7




10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *             *
227 KK    *    DIV681   *
          *             *
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RETRIEVED DIVERSION FROM SUB6

229 DR RETRIEVE DIVERSION HYDROGRAPH
ISTAD DIV681 DIVERSION HYDROGRAPH IDENTIFICATION

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HYDROGRAPH AT STATION DIV681

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	16.	1		0540	53	1.	1		0750	79	0.
1		0125	2	0.	1		0335	28	12.	1		0545	54	1.	1		0755	80	0.
1		0130	3	0.	1		0340	29	8.	1		0550	55	1.	1		0800	81	0.
1		0135	4	0.	1		0345	30	5.	1		0555	56	1.	1		0805	82	0.
1		0140	5	0.	1		0350	31	3.	1		0600	57	1.	1		0810	83	0.
1		0145	6	0.	1		0355	32	2.	1		0605	58	1.	1		0815	84	0.
1		0150	7	0.	1		0400	33	2.	1		0610	59	1.	1		0820	85	0.
1		0155	8	0.	1		0405	34	4.	1		0615	60	1.	1		0825	86	0.
1		0200	9	0.	1		0410	35	5.	1		0620	61	1.	1		0830	87	0.
1		0205	10	1.	1		0415	36	7.	1		0625	62	1.	1		0835	88	0.
1		0210	11	1.	1		0420	37	7.	1		0630	63	1.	1		0840	89	0.
1		0215	12	2.	1		0425	38	8.	1		0635	64	1.	1		0845	90	0.
1		0220	13	2.	1		0430	39	7.	1		0640	65	1.	1		0850	91	0.
1		0225	14	1.	1		0435	40	6.	1		0645	66	1.	1		0855	92	0.
1		0230	15	1.	1		0440	41	5.	1		0650	67	1.	1		0900	93	0.
1		0235	16	1.	1		0445	42	5.	1		0655	68	1.	1		0905	94	0.
1		0240	17	1.	1		0450	43	4.	1		0700	69	1.	1		0910	95	0.
1		0245	18	17.	1		0455	44	4.	1		0705	70	1.	1		0915	96	0.
1		0250	19	59.	1		0500	45	4.	1		0710	71	1.	1		0920	97	0.
1		0255	20	74.	1		0505	46	4.	1		0715	72	1.	1		0925	98	0.
1		0300	21	72.	1		0510	47	4.	1		0720	73	0.	1		0930	99	0.
1		0305	22	63.	1		0515	48	4.	1		0725	74	0.	1		0935	100	0.
1		0310	23	51.	1		0520	49	3.	1		0730	75	0.	1		0940	101	0.
1		0315	24	40.	1		0525	50	3.	1		0735	76	0.					
1		0320	25	30.	1		0530	51	2.	1		0740	77	0.					
1		0325	26	22.	1		0535	52	2.	1		0745	78	0.					

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
74.	1.58	(CFS)	8.	6.	6.	6.
		(INCHES)	0.029	0.030	0.030	0.030
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 0.00 SQ MI

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          *            *
230 KK    *     SUB6   *
          *            *
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ROUTED TO SUB6 (CONTRATION POINT F)
ASSUME COLLECTOR CHANNEL ALONG SOUTH SIDE EASEMENT INDIAN SCHOOL ROAD

HYDROGRAPH ROUTING DATA

155 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

233 RK KINEMATIC WAVE STREAM ROUTING

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	5.00	BOTTOM WIDTH OR DIAMETER
Z	0.50	SIDE SLOPE

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KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.5941	1.423	2.50	1320.00

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	24.	*	1		0540	53	3.	*	1		0750	79	0.
1		0125	2	0.	*	1		0335	28	18.	*	1		0545	54	2.	*	1		0755	80	0.
1		0130	3	0.	*	1		0340	29	14.	*	1		0550	55	2.	*	1		0800	81	0.
1		0135	4	0.	*	1		0345	30	10.	*	1		0555	56	2.	*	1		0805	82	0.
1		0140	5	0.	*	1		0350	31	7.	*	1		0600	57	1.	*	1		0810	83	0.
1		0145	6	0.	*	1		0355	32	5.	*	1		0605	58	1.	*	1		0815	84	0.
1		0150	7	0.	*	1		0400	33	4.	*	1		0610	59	1.	*	1		0820	85	0.
1		0155	8	0.	*	1		0405	34	3.	*	1		0615	60	1.	*	1		0825	86	0.
1		0200	9	0.	*	1		0410	35	3.	*	1		0620	61	1.	*	1		0830	87	0.
1		0205	10	0.	*	1		0415	36	4.	*	1		0625	62	1.	*	1		0835	88	0.
1		0210	11	0.	*	1		0420	37	5.	*	1		0630	63	1.	*	1		0840	89	0.

1	0215	12	0.	*	1	0425	38	6.	*	1	0635	64	1.	*	1	0845	90	0.
1	0220	13	0.	*	1	0430	39	7.	*	1	0640	65	1.	*	1	0850	91	0.
1	0225	14	1.	*	1	0435	40	7.	*	1	0645	66	1.	*	1	0855	92	0.
1	0230	15	1.	*	1	0440	41	7.	*	1	0650	67	1.	*	1	0900	93	0.
1	0235	16	1.	*	1	0445	42	6.	*	1	0655	68	1.	*	1	0905	94	0.
1	0240	17	1.	*	1	0450	43	5.	*	1	0700	69	1.	*	1	0910	95	0.
1	0245	18	1.	*	1	0455	44	5.	*	1	0705	70	1.	*	1	0915	96	0.
1	0250	19	12.	*	1	0500	45	5.	*	1	0710	71	1.	*	1	0920	97	0.
1	0255	20	51.	*	1	0505	46	4.	*	1	0715	72	1.	*	1	0925	98	0.
1	0300	21	71.	*	1	0510	47	4.	*	1	0720	73	1.	*	1	0930	99	0.
1	0305	22	69.	*	1	0515	48	4.	*	1	0725	74	1.	*	1	0935	100	0.
1	0310	23	60.	*	1	0520	49	4.	*	1	0730	75	1.	*	1	0940	101	0.
1	0315	24	50.	*	1	0525	50	4.	*	1	0735	76	1.	*				
1	0320	25	39.	*	1	0530	51	3.	*	1	0740	77	1.	*				
1	0325	26	31.	*	1	0535	52	3.	*	1	0745	78	0.	*				
				*					*					*				

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
71.	1.67	(CFS)	8.	6.	6.	6.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 0.00 SQ MI

STATION SUB6

(O) OUTFLOW

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                0.       10.       20.       30.       40.       50.       60.       70.       80.        0.        0.        0.        0.
DAHRMN PER
 10120  10+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
 10125  20          .         .         .         .         .         .         .         .         .         .         .         .
 10130  30          .         .         .         .         .         .         .         .         .         .         .         .
 10135  40          .         .         .         .         .         .         .         .         .         .         .         .
 10140  50          .         .         .         .         .         .         .         .         .         .         .         .
 10145  60          .         .         .         .         .         .         .         .         .         .         .         .
 10150  70          .         .         .         .         .         .         .         .         .         .         .         .
 10155  80          .         .         .         .         .         .         .         .         .         .         .         .
 10200  90          .         .         .         .         .         .         .         .         .         .         .         .
 10205 100          .         .         .         .         .         .         .         .         .         .         .         .
 10210 110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10215 120          .         .         .         .         .         .         .         .         .         .         .         .
 10220 130          .         .         .         .         .         .         .         .         .         .         .         .
 10225 14.0         .         .         .         .         .         .         .         .         .         .         .         .
 10230 15.0         .         .         .         .         .         .         .         .         .         .         .         .
 10235 16.0         .         .         .         .         .         .         .         .         .         .         .         .
 10240 17.0         .         .         .         .         .         .         .         .         .         .         .         .
 10245 18.0         .         .         .         .         .         .         .         .         .         .         .         .
 10250 19.          . 0       .         .         .         .         .         .         .         .         .         .         .
 10255 20.          .         .         .         .         .0        .         .         .         .         .         .         .
 10300 21. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10305 22.          .         .         .         .         .         .         .0        .         .         .         .         .
 10310 23.          .         .         .         .         .         .0        .         .         .         .         .         .
 10315 24.          .         .         .         .         .0        .         .         .         .         .         .         .
 10320 25.          .         .         .         .0        .         .         .         .         .         .         .         .
 10325 26.          .         .         .0        .         .         .         .         .         .         .         .         .
 10330 27.          .         .  0      .         .         .         .         .         .         .         .         .         .
 10335 28.          .      0  .         .         .         .         .         .         .         .         .         .         .
 10340 29.          .   0     .         .         .         .         .         .         .         .         .         .         .
 10345 30.          0         .         .         .         .         .         .         .         .         .         .         .
 10350 31. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10355 32.     0    .         .         .         .         .         .         .         .         .         .         .         .
 10400 33.   0      .         .         .         .         .         .         .         .         .         .         .         .
 10405 34.  0       .         .         .         .         .         .         .         .         .         .         .         .
 10410 35.  0       .         .         .         .         .         .         .         .         .         .         .         .
 10415 36.   0      .         .         .         .         .         .         .         .         .         .         .         .
 10420 37.    0     .         .         .         .         .         .         .         .         .         .         .         .
 10425 38.     0    .         .         .         .         .         .         .         .         .         .         .         .
 10430 39.      0   .         .         .         .         .         .         .         .         .         .         .         .
 10435 40.      0   .         .         .         .         .         .         .         .         .         .         .         .
 10440 41. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10445 42.     0    .         .         .         .         .         .         .         .         .         .         .         .
 10450 43.    0     .         .         .         .         .         .         .         .         .         .         .         .
 10455 44.    0     .         .         .         .         .         .         .         .         .         .         .         .
 10500 45.    0     .         .         .         .         .         .         .         .         .         .         .         .
 10505 46.   0      .         .         .         .         .         .         .         .         .         .         .         .
 10510 47.   0      .         .         .         .         .         .         .         .         .         .         .         .
 10515 48.   0      .         .         .         .         .         .         .         .         .         .         .         .
 10520 49.   0      .         .         .         .         .         .         .         .         .         .         .         .
 10525 50.   0      .         .         .         .         .         .         .         .         .         .         .         .
 10530 51. .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10535 52.  0       .         .         .         .         .         .         .         .         .         .         .         .
 10540 53.  0       .         .         .         .         .         .         .         .         .         .         .         .
 10545 54. 0        .         .         .         .         .         .         .         .         .         .         .         .
 10550 55. 0        .         .         .         .         .         .         .         .         .         .         .         .
 10555 56. 0        .         .         .         .         .         .         .         .         .         .         .         .
 10600 57.0         .         .         .         .         .         .         .         .         .         .         .         .
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10605  58.0
10610  59.0
10615  60.0
10620  61.0
10625  62.0
10630  63.0
10635  64.0
10640  65.0
10645  66.0
10650  67.0
10655  68.0
10700  69.0
10705  70.0
10710  71.0
10715  72.0
10720  73.0
10725  74.0
10730  75.0
10735  76.0
10740  77.0
10745  780
10750  790
10755  800
10800  810
10805  820
10810  830
10815  840
10820  850
10825  860
10830  870
10835  880
10840  890
10845  900
10850  910
10855  920
10900  930
10905  940
10910  950
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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          *             *
234 KK    *    DIV682   *
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RETRIEVED DIVERSION FROM SUB6

236 DR RETRIEVE DIVERSION HYDROGRAPH

ISTAD DIV682 DIVERSION HYDROGRAPH IDENTIFICATION

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HYDROGRAPH AT STATION DIV682

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	99.	1		0540	53	59.	1		0750	79	22.
1		0125	2	0.	1		0335	28	92.	1		0545	54	57.	1		0755	80	22.
1		0130	3	0.	1		0340	29	84.	1		0550	55	55.	1		0800	81	21.
1		0135	4	0.	1		0345	30	77.	1		0555	56	53.	1		0805	82	20.
1		0140	5	0.	1		0350	31	71.	1		0600	57	51.	1		0810	83	19.
1		0145	6	0.	1		0355	32	65.	1		0605	58	49.	1		0815	84	18.
1		0150	7	0.	1		0400	33	62.	1		0610	59	47.	1		0820	85	18.
1		0155	8	2.	1		0405	34	64.	1		0615	60	46.	1		0825	86	17.
1		0200	9	13.	1		0410	35	69.	1		0620	61	44.	1		0830	87	17.
1		0205	10	42.	1		0415	36	74.	1		0625	62	42.	1		0835	88	16.
1		0210	11	85.	1		0420	37	76.	1		0630	63	41.	1		0840	89	15.
1		0215	12	114.	1		0425	38	77.	1		0635	64	39.	1		0845	90	15.
1		0220	13	117.	1		0430	39	76.	1		0640	65	38.	1		0850	91	14.
1		0225	14	108.	1		0435	40	75.	1		0645	66	37.	1		0855	92	14.
1		0230	15	95.	1		0440	41	74.	1		0650	67	35.	1		0900	93	14.
1		0235	16	82.	1		0445	42	72.	1		0655	68	34.	1		0905	94	13.
1		0240	17	68.	1		0450	43	70.	1		0700	69	33.	1		0910	95	13.
1		0245	18	76.	1		0455	44	68.	1		0705	70	32.	1		0915	96	12.
1		0250	19	125.	1		0500	45	68.	1		0710	71	31.	1		0920	97	12.
1		0255	20	150.	1		0505	46	68.	1		0715	72	29.	1		0925	98	12.
1		0300	21	153.	1		0510	47	67.	1		0720	73	28.	1		0930	99	11.
1		0305	22	147.	1		0515	48	67.	1		0725	74	27.	1		0935	100	11.
1		0310	23	138.	1		0520	49	65.	1		0730	75	26.	1		0940	101	11.
1		0315	24	128.	1		0525	50	64.	1		0735	76	25.					
1		0320	25	118.	1		0530	51	62.	1		0740	77	24.					
1		0325	26	108.	1		0535	52	61.	1		0745	78	23.					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
153.	1.67	(CFS)	67.	51.	51.	51.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	33.	35.	35.	35.

CUMULATIVE AREA = 0.00 SQ MI

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 237 KK       *     SUB68  *
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COMBINED RETRIVED DIV681 AND DIV682

239 HC HYDROGRAPH COMBINATION
ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB68
SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	123.	*	1		0540	53	61.	*	1		0750	79	23.
1		0125	2	0.	*	1		0335	28	110.	*	1		0545	54	59.	*	1		0755	80	22.
1		0130	3	0.	*	1		0340	29	98.	*	1		0550	55	57.	*	1		0800	81	21.
1		0135	4	0.	*	1		0345	30	88.	*	1		0555	56	55.	*	1		0805	82	20.
1		0140	5	0.	*	1		0350	31	78.	*	1		0600	57	52.	*	1		0810	83	20.
1		0145	6	0.	*	1		0355	32	70.	*	1		0605	58	50.	*	1		0815	84	19.
1		0150	7	0.	*	1		0400	33	66.	*	1		0610	59	48.	*	1		0820	85	18.
1		0155	8	2.	*	1		0405	34	67.	*	1		0615	60	47.	*	1		0825	86	18.
1		0200	9	13.	*	1		0410	35	72.	*	1		0620	61	45.	*	1		0830	87	17.
1		0205	10	42.	*	1		0415	36	77.	*	1		0625	62	43.	*	1		0835	88	16.
1		0210	11	85.	*	1		0420	37	81.	*	1		0630	63	42.	*	1		0840	89	16.
1		0215	12	114.	*	1		0425	38	83.	*	1		0635	64	40.	*	1		0845	90	15.
1		0220	13	118.	*	1		0430	39	83.	*	1		0640	65	39.	*	1		0850	91	15.
1		0225	14	109.	*	1		0435	40	82.	*	1		0645	66	37.	*	1		0855	92	14.
1		0230	15	96.	*	1		0440	41	80.	*	1		0650	67	36.	*	1		0900	93	14.
1		0235	16	82.	*	1		0445	42	78.	*	1		0655	68	35.	*	1		0905	94	13.
1		0240	17	69.	*	1		0450	43	75.	*	1		0700	69	34.	*	1		0910	95	13.
1		0245	18	78.	*	1		0455	44	73.	*	1		0705	70	32.	*	1		0915	96	13.
1		0250	19	136.	*	1		0500	45	72.	*	1		0710	71	31.	*	1		0920	97	12.
1		0255	20	201.	*	1		0505	46	72.	*	1		0715	72	30.	*	1		0925	98	12.
1		0300	21	224.	*	1		0510	47	71.	*	1		0720	73	29.	*	1		0930	99	12.
1		0305	22	216.	*	1		0515	48	71.	*	1		0725	74	28.	*	1		0935	100	11.
1		0310	23	198.	*	1		0520	49	69.	*	1		0730	75	27.	*	1		0940	101	11.
1		0315	24	178.	*	1		0525	50	68.	*	1		0735	76	26.	*					
1		0320	25	157.	*	1		0530	51	66.	*	1		0740	77	25.	*					
1		0325	26	139.	*	1		0535	52	64.	*	1		0745	78	24.	*					

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW		
(CFS)	(HR)	6-HR	24-HR	72-HR	8.33-HR

224.	1.67	(CFS)	75.	57.	57.	57.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	37.	39.	39.	39.

CUMULATIVE AREA = 0.00 SQ MI

STATION SUB6B

(O) OUTFLOW

DAHRMN	PER	0.	40.	80.	120.	160.	200.	240.	0.	0.	0.	0.	0.	0.
10120	10													
10125	20													
10130	30													
10135	40													
10140	50													
10145	60													
10150	70													
10155	80													
10200	9.	O												
10205	10.		O											
10210	11.			O										
10215	12.				O									
10220	13.				O									
10225	14.				O									
10230	15.			O										
10235	16.			O										
10240	17.		O											
10245	18.		O											
10250	19.				O									
10255	20.						O							
10300	21.							O						
10305	22.							O						
10310	23.						O							
10315	24.					O								
10320	25.					O								
10325	26.				O									
10330	27.				O									
10335	28.			O										
10340	29.			O										
10345	30.			O										
10350	31.			O										
10355	32.		O											
10400	33.		O											
10405	34.		O											
10410	35.		O											
10415	36.		O											
10420	37.		O											
10425	38.		O											
10430	39.		O											
10435	40.		O											
10440	41.		O											
10445	42.		O											
10450	43.		O											
10455	44.		O											
10500	45.		O											
10505	46.		O											
10510	47.		O											
10515	48.		O											
10520	49.		O											
10525	50.		O											
10530	51.		O											
10535	52.		O											
10540	53.		O											
10545	54.		O											
10550	55.		O											
10555	56.		O											
10600	57.		O											

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10605  58.          . 0      .        .        .        .        .        .        .        .        .        .        .        .
10610  59.          . 0      .        .        .        .        .        .        .        .        .        .        .        .
10615  60.          . 0      .        .        .        .        .        .        .        .        .        .        .        .
10620  61. . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.          .0       .        .        .        .        .        .        .        .        .        .        .        .
10630  63.          0        .        .        .        .        .        .        .        .        .        .        .        .
10635  64.          0        .        .        .        .        .        .        .        .        .        .        .        .
10640  65.          0        .        .        .        .        .        .        .        .        .        .        .        .
10645  66.         0.        .        .        .        .        .        .        .        .        .        .        .        .
10650  67.         0.        .        .        .        .        .        .        .        .        .        .        .        .
10655  68.         0.        .        .        .        .        .        .        .        .        .        .        .        .
10700  69.        0 .        .        .        .        .        .        .        .        .        .        .        .        .
10705  70.        0 .        .        .        .        .        .        .        .        .        .        .        .        .
10710  71. . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.       0  .        .        .        .        .        .        .        .        .        .        .        .        .
10720  73.       0  .        .        .        .        .        .        .        .        .        .        .        .        .
10725  74.       0  .        .        .        .        .        .        .        .        .        .        .        .        .
10730  75.       0  .        .        .        .        .        .        .        .        .        .        .        .        .
10735  76.      0   .        .        .        .        .        .        .        .        .        .        .        .        .
10740  77.      0   .        .        .        .        .        .        .        .        .        .        .        .        .
10745  78.      0   .        .        .        .        .        .        .        .        .        .        .        .        .
10750  79.      0   .        .        .        .        .        .        .        .        .        .        .        .        .
10755  80.      0   .        .        .        .        .        .        .        .        .        .        .        .        .
10800  81. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.     0    .        .        .        .        .        .        .        .        .        .        .        .        .
10810  83.     0    .        .        .        .        .        .        .        .        .        .        .        .        .
10815  84.     0    .        .        .        .        .        .        .        .        .        .        .        .        .
10820  85.     0    .        .        .        .        .        .        .        .        .        .        .        .        .
10825  86.    0     .        .        .        .        .        .        .        .        .        .        .        .        .
10830  87.    0     .        .        .        .        .        .        .        .        .        .        .        .        .
10835  88.    0     .        .        .        .        .        .        .        .        .        .        .        .        .
10840  89.    0     .        .        .        .        .        .        .        .        .        .        .        .        .
10845  90.    0     .        .        .        .        .        .        .        .        .        .        .        .        .
10850  91. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92.    0     .        .        .        .        .        .        .        .        .        .        .        .        .
10900  93.   0      .        .        .        .        .        .        .        .        .        .        .        .        .
10905  94.   0      .        .        .        .        .        .        .        .        .        .        .        .        .
10910  95.   0      .        .        .        .        .        .        .        .        .        .        .        .        .
10915  96.   0      .        .        .        .        .        .        .        .        .        .        .        .        .
10920  97.   0      .        .        .        .        .        .        .        .        .        .        .        .        .
10925  98.   0      .        .        .        .        .        .        .        .        .        .        .        .        .
10930  99.   0      .        .        .        .        .        .        .        .        .        .        .        .        .
10935 100.   0      .        .        .        .        .        .        .        .        .        .        .        .        .
10940 101.--0------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.
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              *            *
240 KK        *     SUB8   *
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                           SOUTH-EAST CORNER OF INDIAN SCHOOL RD AND 107 TH ST
                           ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 107TH ST
                           HYDROGRAPH AT C.P. (H)

                SUBBASIN RUNOFF DATA

247 BA            SUBBASIN CHARACTERISTICS
                        TAREA        0.36  SUBBASIN AREA

                  PRECIPITATION DATA

244 PB                  STORM        2.45  BASIN TOTAL PRECIPITATION

245 PI              INCREMENTAL PRECIPITATION PATTERN
                       0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
                       0.06     0.05

248 LS            SCS LOSS RATE
                        STRTL        0.25  INITIAL ABSTRACTION
                       CRVNBR       89.00  CURVE NUMBER
                        RTIMP       60.00  PERCENT IMPERVIOUS AREA

                  KINEMATIC WAVE
249 UK              OVERLAND-FLOW ELEMENT NO. 1
                            L       3000.  OVERLAND FLOW LENGTH
                            S      0.0050  SLOPE
                            N       0.100  ROUGHNESS COEFFICIENT
                           PA       100.0  PERCENT OF SUBBASIN
250 RK              MAIN CHANNEL
                            L       2640.  CHANNEL LENGTH
                            S      0.0030  SLOPE
                            N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                           CA        0.36  CONTRIBUTING AREA
                        SHAPE        TRAP  CHANNEL SHAPE
                           WD        0.00  BOTTOM WIDTH OR DIAMETER
                            Z        1.00  SIDE SLOPE
                       RUPSTQ         YES  ROUTE UPSTREAM HYDROGRAPH

                                                       ***

            COMPUTED KINEMATIC PARAMETERS
               ELEMENT     ALPHA        M     DT (MIN)   DX (FT)
                    1     1.0536    1.667       5.00      333.33
                    3     1.6346    1.333       5.00     1320.00

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                                           HYDROGRAPH AT STATION     SUB8

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	95.
1		0125	2	0.05	0.02	0.03	0.	1		0540	53	0.00	0.00	0.00	92.
1		0130	3	0.07	0.03	0.04	0.	1		0545	54	0.00	0.00	0.00	88.
1		0135	4	0.07	0.03	0.04	0.	1		0550	55	0.00	0.00	0.00	85.
1		0140	5	0.10	0.04	0.06	0.	1		0555	56	0.00	0.00	0.00	82.
1		0145	6	0.16	0.05	0.11	1.	1		0600	57	0.00	0.00	0.00	78.
1		0150	7	1.16	0.19	0.97	2.	1		0605	58	0.00	0.00	0.00	75.
1		0155	8	0.39	0.03	0.36	37.	1		0610	59	0.00	0.00	0.00	72.
1		0200	9	0.14	0.01	0.13	103.	1		0615	60	0.00	0.00	0.00	69.
1		0205	10	0.11	0.01	0.10	135.	1		0620	61	0.00	0.00	0.00	67.
1		0210	11	0.09	0.01	0.08	174.	1		0625	62	0.00	0.00	0.00	64.
1		0215	12	0.06	0.00	0.06	229.	1		0630	63	0.00	0.00	0.00	62.
1		0220	13	0.05	0.00	0.05	275.	1		0635	64	0.00	0.00	0.00	59.
1		0225	14	0.00	0.00	0.00	296.	1		0640	65	0.00	0.00	0.00	57.
1		0230	15	0.00	0.00	0.00	294.	1		0645	66	0.00	0.00	0.00	55.
1		0235	16	0.00	0.00	0.00	284.	1		0650	67	0.00	0.00	0.00	53.
1		0240	17	0.00	0.00	0.00	271.	1		0655	68	0.00	0.00	0.00	51.
1		0245	18	0.00	0.00	0.00	259.	1		0700	69	0.00	0.00	0.00	50.
1		0250	19	0.00	0.00	0.00	261.	1		0705	70	0.00	0.00	0.00	48.
1		0255	20	0.00	0.00	0.00	300.	1		0710	71	0.00	0.00	0.00	46.
1		0300	21	0.00	0.00	0.00	358.	1		0715	72	0.00	0.00	0.00	44.
1		0305	22	0.00	0.00	0.00	385.	1		0720	73	0.00	0.00	0.00	43.
1		0310	23	0.00	0.00	0.00	379.	1		0725	74	0.00	0.00	0.00	41.
1		0315	24	0.00	0.00	0.00	357.	1		0730	75	0.00	0.00	0.00	40.
1		0320	25	0.00	0.00	0.00	329.	1		0735	76	0.00	0.00	0.00	38.
1		0325	26	0.00	0.00	0.00	302.	1		0740	77	0.00	0.00	0.00	37.
1		0330	27	0.00	0.00	0.00	275.	1		0745	78	0.00	0.00	0.00	36.
1		0335	28	0.00	0.00	0.00	251.	1		0750	79	0.00	0.00	0.00	34.
1		0340	29	0.00	0.00	0.00	229.	1		0755	80	0.00	0.00	0.00	33.
1		0345	30	0.00	0.00	0.00	209.	1		0800	81	0.00	0.00	0.00	32.
1		0350	31	0.00	0.00	0.00	192.	1		0805	82	0.00	0.00	0.00	31.
1		0355	32	0.00	0.00	0.00	175.	1		0810	83	0.00	0.00	0.00	30.
1		0400	33	0.00	0.00	0.00	161.	1		0815	84	0.00	0.00	0.00	29.
1		0405	34	0.00	0.00	0.00	149.	1		0820	85	0.00	0.00	0.00	28.
1		0410	35	0.00	0.00	0.00	142.	1		0825	86	0.00	0.00	0.00	27.
1		0415	36	0.00	0.00	0.00	140.	1		0830	87	0.00	0.00	0.00	25.
1		0420	37	0.00	0.00	0.00	141.	1		0835	88	0.00	0.00	0.00	24.
1		0425	38	0.00	0.00	0.00	141.	1		0840	89	0.00	0.00	0.00	23.
1		0430	39	0.00	0.00	0.00	140.	1		0845	90	0.00	0.00	0.00	23.
1		0435	40	0.00	0.00	0.00	138.	1		0850	91	0.00	0.00	0.00	22.
1		0440	41	0.00	0.00	0.00	134.	1		0855	92	0.00	0.00	0.00	21.
1		0445	42	0.00	0.00	0.00	130.	1		0900	93	0.00	0.00	0.00	21.
1		0450	43	0.00	0.00	0.00	125.	1		0905	94	0.00	0.00	0.00	20.
1		0455	44	0.00	0.00	0.00	120.	1		0910	95	0.00	0.00	0.00	20.
1		0500	45	0.00	0.00	0.00	115.	1		0915	96	0.00	0.00	0.00	19.
1		0505	46	0.00	0.00	0.00	111.	1		0920	97	0.00	0.00	0.00	18.
1		0510	47	0.00	0.00	0.00	109.	1		0925	98	0.00	0.00	0.00	18.
1		0515	48	0.00	0.00	0.00	106.	1		0930	99	0.00	0.00	0.00	17.
1		0520	49	0.00	0.00	0.00	104.	1		0935	100	0.00	0.00	0.00	17.
1		0525	50	0.00	0.00	0.00	101.	1		0940	101	0.00	0.00	0.00	17.
1		0530	51	0.00	0.00	0.00	98.								

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.42, TOTAL EXCESS = 2.03

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
385.	1.75	(CFS)	145.	109.	109.	109.
		(INCHES)	3.739	3.923	3.923	3.923
		(AC-FT)	72.	75.	75.	75.

CUMULATIVE AREA = 0.36 SQ MI

STATION SUB8

(O) OUTFLOW

	0.	50.	100.	150.	200.	250.	300.	350.	400.	0.	0. (L) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												X
10130	30												LX
10135	40												LX
10140	50												LXX
10145	60												LXXX
10150	70										LLLLLXXXXXXXXXXXXXXXXXXXXXXXX		
10155	8.	O										LXXXXXXXXX	
10200	9.		O										LXXX
10205	10.			O									XXX
10210	11.				O								XX
10215	12.					O							X
10220	13.						O						X
10225	14.						O						
10230	15.						O						
10235	16.						O						
10240	17.						O						
10245	18.						O						
10250	19.						O						
10255	20.						O						
10300	21.							O					
10305	22.							O					
10310	23.							O					
10315	24.							O					
10320	25.							O					
10325	26.							O					
10330	27.						O						
10335	28.					O							
10340	29.					O							
10345	30.				O								
10350	31.				O								
10355	32.				O								
10400	33.			O									
10405	34.			O									
10410	35.			O									
10415	36.			O									
10420	37.			O									
10425	38.			O									
10430	39.			O									
10435	40.			O									
10440	41.			O									
10445	42.		O										
10450	43.		O										
10455	44.		O										
10500	45.		O										
10505	46.		O										
10510	47.		O										
10515	48.		O										
10520	49.		O										
10525	50.		O										
10530	51.		O										
10535	52.	O											
10540	53.	O											
10545	54.	O											
10550	55.	O											

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10555  56.          .    0   .         .         .         .         .         .         .         .         .         .         .         .
10600  57.          .    0   .         .         .         .         .         .         .         .         .         .         .         .
10605  58.          .   0    .         .         .         .         .         .         .         .         .         .         .         .
10610  59.          .  0     .         .         .         .         .         .         .         .         .         .         .         .
10615  60.          .  0     .         .         .         .         .         .         .         .         .         .         .         .
10620  61.  .  .  .  .0.  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
10625  62.          . 0      .         .         .         .         .         .         .         .         .         .         .         .
10630  63.          .0       .         .         .         .         .         .         .         .         .         .         .         .
10635  64.          .0       .         .         .         .         .         .         .         .         .         .         .         .
10640  65.          .0       .         .         .         .         .         .         .         .         .         .         .         .
10645  66.          .0       .         .         .         .         .         .         .         .         .         .         .         .
10650  67.          .0       .         .         .         .         .         .         .         .         .         .         .         .
10655  68.          0        .         .         .         .         .         .         .         .         .         .         .         .
10700  69.          0        .         .         .         .         .         .         .         .         .         .         .         .
10705  70.          0        .         .         .         .         .         .         .         .         .         .         .         .
10710  71.  .  .  .  .0.  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
10715  72.          0.       .         .         .         .         .         .         .         .         .         .         .         .
10720  73.          0.       .         .         .         .         .         .         .         .         .         .         .         .
10725  74.         0 .       .         .         .         .         .         .         .         .         .         .         .         .
10730  75.         0 .       .         .         .         .         .         .         .         .         .         .         .         .
10735  76.         0 .       .         .         .         .         .         .         .         .         .         .         .         .
10740  77.        0  .       .         .         .         .         .         .         .         .         .         .         .         .
10745  78.        0  .       .         .         .         .         .         .         .         .         .         .         .         .
10750  79.        0  .       .         .         .         .         .         .         .         .         .         .         .         .
10755  80.        0  .       .         .         .         .         .         .         .         .         .         .         .         .
10800  81.  .  0  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
10805  82.        0  .       .         .         .         .         .         .         .         .         .         .         .         .
10810  83.        0  .       .         .         .         .         .         .         .         .         .         .         .         .
10815  84.        0  .       .         .         .         .         .         .         .         .         .         .         .         .
10820  85.        0  .       .         .         .         .         .         .         .         .         .         .         .         .
10825  86.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10830  87.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10835  88.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10840  89.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10845  90.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10850  91.  .  0  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
10855  92.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10900  93.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10905  94.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10910  95.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10915  96.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10920  97.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10925  98.       0   .       .         .         .         .         .         .         .         .         .         .         .         .
10930  99.      0    .       .         .         .         .         .         .         .         .         .         .         .         .
10935 100.      0    .       .         .         .         .         .         .         .         .         .         .         .         .
10940 101.--0-------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
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              *            *
 251 KK       *    SUB9    *
              *            *
              **************
                        AREA BOUNDED BY INDIAN SCHOOL RD-107 ST-LEVEE-AGUA FRIA
                        ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT OF LEVEE
                        HYDROGRAPH AT C.P. (1) INTO AGUA FRIA WASH

                SUBBASIN RUNOFF DATA

 258 BA          SUBBASIN CHARACTERISTICS
                      TAREA         0.30  SUBBASIN AREA

                 PRECIPITATION DATA

 255 PB               STORM         2.45  BASIN TOTAL PRECIPITATION

 256 PI            INCREMENTAL PRECIPITATION PATTERN
                     0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                     0.06      0.05

 259 LS          SCS LOSS RATE
                      STRTL         0.25  INITIAL ABSTRACTION
                     CRVNBR        89.00  CURVE NUMBER
                      RTIMP        60.00  PERCENT IMPERVIOUS AREA

                 KINEMATIC WAVE
 260 UK            OVERLAND-FLOW ELEMENT NO. 1
                          L        1500.  OVERLAND FLOW LENGTH
                          S       0.0050  SLOPE
                          N        0.100  ROUGHNESS COEFFICIENT
                         PA        100.0  PERCENT OF SUBBASIN
 261 RK            MAIN CHANNEL
                          L        6400.  CHANNEL LENGTH
                          S       0.0030  SLOPE
                          N        0.025  CHANNEL ROUGHNESS COEFFICIENT
                         CA         0.30  CONTRIBUTING AREA
                      SHAPE         TRAP  CHANNEL SHAPE
                         WD         0.00  BOTTOM WIDTH OR DIAMETER
                          Z         1.00  SIDE SLOPE
                     RUPSTQ          YES  ROUTE UPSTREAM HYDROGRAPH

                                                          ***

           COMPUTED KINEMATIC PARAMETERS
              ELEMENT      ALPHA        M      DT (MIN)    DX (FT)
                    1     1.0536    1.667       5.00      250.00
                    3     1.6346    1.333       5.00     3200.00

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                                             HYDROGRAPH AT STATION     SUB9

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	114.
1		0125	2	0.05	0.02	0.03	0.	1		0540	53	0.00	0.00	0.00	110.
1		0130	3	0.07	0.03	0.04	0.	1		0545	54	0.00	0.00	0.00	107.
1		0135	4	0.07	0.03	0.04	0.	1		0550	55	0.00	0.00	0.00	103.
1		0140	5	0.10	0.04	0.06	0.	1		0555	56	0.00	0.00	0.00	99.
1		0145	6	0.16	0.05	0.11	1.	1		0600	57	0.00	0.00	0.00	96.
1		0150	7	1.16	0.19	0.97	2.	1		0605	58	0.00	0.00	0.00	92.
1		0155	8	0.39	0.03	0.36	24.	1		0610	59	0.00	0.00	0.00	89.
1		0200	9	0.14	0.01	0.13	81.	1		0615	60	0.00	0.00	0.00	85.
1		0205	10	0.11	0.01	0.10	182.	1		0620	61	0.00	0.00	0.00	82.
1		0210	11	0.09	0.01	0.08	293.	1		0625	62	0.00	0.00	0.00	79.
1		0215	12	0.06	0.00	0.06	389.	1		0630	63	0.00	0.00	0.00	76.
1		0220	13	0.05	0.00	0.05	474.	1		0635	64	0.00	0.00	0.00	73.
1		0225	14	0.00	0.00	0.00	543.	1		0640	65	0.00	0.00	0.00	70.
1		0230	15	0.00	0.00	0.00	573.	1		0645	66	0.00	0.00	0.00	68.
1		0235	16	0.00	0.00	0.00	563.	1		0650	67	0.00	0.00	0.00	65.
1		0240	17	0.00	0.00	0.00	532.	1		0655	68	0.00	0.00	0.00	63.
1		0245	18	0.00	0.00	0.00	495.	1		0700	69	0.00	0.00	0.00	61.
1		0250	19	0.00	0.00	0.00	458.	1		0705	70	0.00	0.00	0.00	59.
1		0255	20	0.00	0.00	0.00	433.	1		0710	71	0.00	0.00	0.00	57.
1		0300	21	0.00	0.00	0.00	437.	1		0715	72	0.00	0.00	0.00	55.
1		0305	22	0.00	0.00	0.00	467.	1		0720	73	0.00	0.00	0.00	53.
1		0310	23	0.00	0.00	0.00	487.	1		0725	74	0.00	0.00	0.00	51.
1		0315	24	0.00	0.00	0.00	480.	1		0730	75	0.00	0.00	0.00	49.
1		0320	25	0.00	0.00	0.00	454.	1		0735	76	0.00	0.00	0.00	48.
1		0325	26	0.00	0.00	0.00	422.	1		0740	77	0.00	0.00	0.00	46.
1		0330	27	0.00	0.00	0.00	388.	1		0745	78	0.00	0.00	0.00	44.
1		0335	28	0.00	0.00	0.00	355.	1		0750	79	0.00	0.00	0.00	43.
1		0340	29	0.00	0.00	0.00	325.	1		0755	80	0.00	0.00	0.00	41.
1		0345	30	0.00	0.00	0.00	298.	1		0800	81	0.00	0.00	0.00	40.
1		0350	31	0.00	0.00	0.00	273.	1		0805	82	0.00	0.00	0.00	39.
1		0355	32	0.00	0.00	0.00	251.	1		0810	83	0.00	0.00	0.00	37.
1		0400	33	0.00	0.00	0.00	231.	1		0815	84	0.00	0.00	0.00	36.
1		0405	34	0.00	0.00	0.00	213.	1		0820	85	0.00	0.00	0.00	35.
1		0410	35	0.00	0.00	0.00	197.	1		0825	86	0.00	0.00	0.00	34.
1		0415	36	0.00	0.00	0.00	184.	1		0830	87	0.00	0.00	0.00	32.
1		0420	37	0.00	0.00	0.00	176.	1		0835	88	0.00	0.00	0.00	31.
1		0425	38	0.00	0.00	0.00	171.	1		0840	89	0.00	0.00	0.00	30.
1		0430	39	0.00	0.00	0.00	168.	1		0845	90	0.00	0.00	0.00	29.
1		0435	40	0.00	0.00	0.00	165.	1		0850	91	0.00	0.00	0.00	28.
1		0440	41	0.00	0.00	0.00	162.	1		0855	92	0.00	0.00	0.00	27.
1		0445	42	0.00	0.00	0.00	158.	1		0900	93	0.00	0.00	0.00	26.
1		0450	43	0.00	0.00	0.00	154.	1		0905	94	0.00	0.00	0.00	25.
1		0455	44	0.00	0.00	0.00	148.	1		0910	95	0.00	0.00	0.00	25.
1		0500	45	0.00	0.00	0.00	143.	1		0915	96	0.00	0.00	0.00	24.
1		0505	46	0.00	0.00	0.00	137.	1		0920	97	0.00	0.00	0.00	23.
1		0510	47	0.00	0.00	0.00	132.	1		0925	98	0.00	0.00	0.00	22.
1		0515	48	0.00	0.00	0.00	128.	1		0930	99	0.00	0.00	0.00	22.
1		0520	49	0.00	0.00	0.00	124.	1		0935	100	0.00	0.00	0.00	21.
1		0525	50	0.00	0.00	0.00	120.	1		0940	101	0.00	0.00	0.00	21.
1		0530	51	0.00	0.00	0.00	117.								

****

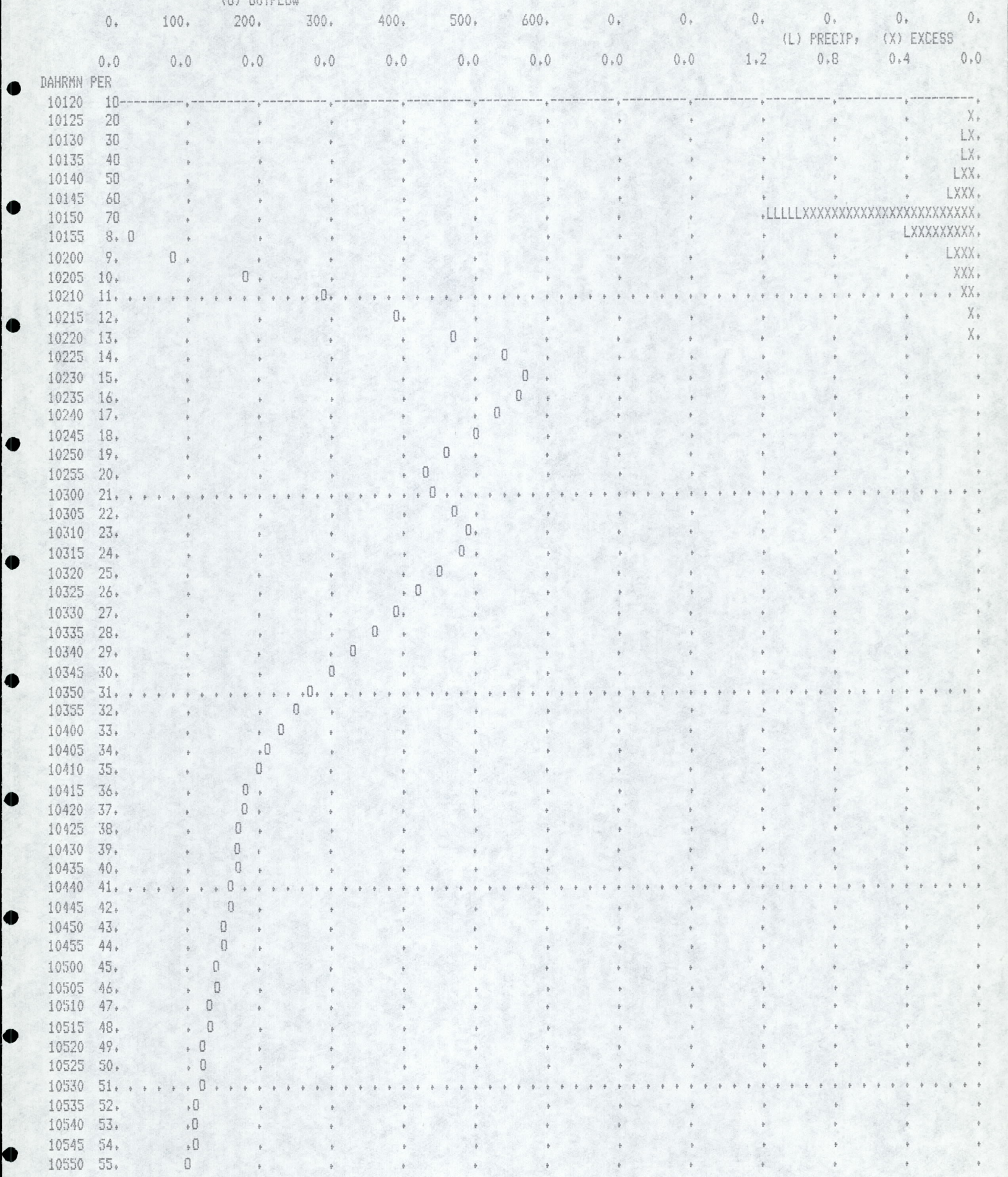
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.42, TOTAL EXCESS = 2.03

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
573.	1.17	(CFS)	205.	154.	154.	154.
		(INCHES)	2.886	3.009	3.009	3.009
		(AC-FT)	102.	106.	106.	106.

CUMULATIVE AREA = 0.66 SQ MI

STATION SUB9



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10600  57.        0
10605  58.       0.
10610  59.       0.
10615  60.       0.
10620  61. . . .0
10625  62.      0
10630  63.      0
10635  64.     0
10640  65.     0
10645  66.     0
10650  67.     0
10655  68.    0
10700  69.    0
10705  70.    0
10710  71. . .0
10715  72.   0
10720  73.   0
10725  74.   0
10730  75.   0
10735  76.   0
10740  77.   0
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10750  79.  0
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10820  85. 0
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10835  88. 0
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10845  90. 0
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10905  94. 0
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10915  96.0
10920  97.0
10925  98.0
10930  99.0
10935 100.0
10940 101.-0-------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	SUB2A	158.	1.17	85.	66.	66.	0.50		
HYDROGRAPH AT	SUB2B	158.	1.17	85.	66.	66.	0.50		
2 COMBINED AT	SUB2	317.	1.17	169.	131.	131.	1.00		
DIVERSION TO	SD2	52.	1.17	52.	47.	47.	1.00		
HYDROGRAPH AT	SUB2	265.	1.17	117.	85.	85.	1.00		
ROUTED TO	RET2	94.	3.92	31.	22.	22.	1.00	3.18	3.92
DIVERSION TO	DIV25	47.	3.92	15.	11.	11.	1.00		
HYDROGRAPH AT	SUB2	47.	3.92	15.	11.	11.	1.00		
HYDROGRAPH AT	SUB3A	172.	1.67	117.	89.	89.	1.66		
DIVERSION TO	RID	150.	1.67	112.	85.	85.	1.66		
HYDROGRAPH AT	SUB3A	22.	1.67	5.	4.	4.	1.66		
ROUTED TO	SUB4	22.	1.92	5.	4.	4.	1.66		
HYDROGRAPH AT	SUB4	260.	1.17	175.	135.	135.	1.06		
ROUTED TO	RET4	211.	3.50	95.	69.	69.	1.06	3.31	3.50
2 COMBINED AT	SUB4	212.	3.50	97.	72.	72.	2.72		
HYDROGRAPH AT	DIV25	47.	3.92	15.	11.	11.	0.00		
ROUTED TO	SUB5	47.	4.08	15.	11.	11.	0.00		
HYDROGRAPH AT	SUB5B	167.	1.17	88.	68.	68.	0.50		
HYDROGRAPH AT	SUB5A	167.	1.17	88.	68.	68.	0.50		
2 COMBINED AT	SUB5	333.	1.17	175.	136.	136.	1.00		
ROUTED TO	RET5	188.	3.17	96.	69.	69.	1.00	3.28	3.17
2 COMBINED AT	SUB5	204.	3.83	111.	80.	80.	1.00		
DIVERSION TO	THOMAS	102.	3.83	55.	40.	40.	1.00		
HYDROGRAPH AT	SUB5	102.	3.83	55.	40.	40.	1.00		
ROUTED TO	SUB6	102.	3.92	55.	40.	40.	1.00		
HYDROGRAPH AT	SUB6A	435.	1.25	95.	69.	69.	0.75		
ROUTED TO	SUB6A	317.	1.67	62.	45.	45.	0.75		

								3.56	1.67
HYDROGRAPH AT	SUB6B	123.	0.92	16.	12.	12.	0.13		
3 COMBINED AT	SUB6	352.	1.58	126.	97.	97.	1.88		
DIVERSION TO	DIV681	74.	1.58	8.	6.	6.	1.88		
HYDROGRAPH AT	SUB6	278.	1.58	118.	91.	91.	1.88		
ROUTED TO	SUB6	276.	1.67	117.	90.	90.	1.88		
HYDROGRAPH AT	SUB6C	123.	0.92	16.	12.	12.	0.13		
2 COMBINED AT	SUB6	306.	1.67	133.	102.	102.	2.00		
DIVERSION TO	DIV682	153.	1.67	67.	51.	51.	2.00		
HYDROGRAPH AT	SUB6	153.	1.67	67.	51.	51.	2.00		
ROUTED TO	SUB7	140.	1.92	66.	50.	50.	2.00		
HYDROGRAPH AT	SUB7	191.	1.67	104.	79.	79.	0.58		
ROUTED TO	RET7	141.	3.00	55.	40.	40.	0.58	3.23	3.00
2 COMBINED AT	SUB7	211.	3.08	116.	90.	90.	2.58		
HYDROGRAPH AT	DIV681	74.	1.58	8.	6.	6.	0.00		
ROUTED TO	SUB6	71.	1.67	8.	6.	6.	0.00		
HYDROGRAPH AT	DIV682	153.	1.67	67.	51.	51.	0.00		
2 COMBINED AT	SUB68	224.	1.67	75.	57.	57.	0.00		
HYDROGRAPH AT	SUB8	385.	1.75	145.	109.	109.	0.36		
HYDROGRAPH AT	SUB9	573.	1.17	205.	154.	154.	0.66		

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

101

$ EXIT

SHIAU Job terminated at 11-JUN-1985 11:18:59.89

Accounting information:

Buffered I/O count:	130	Peak working set size:	710
Direct I/O count:	1741	Peak page file size:	791
Page faults:	552	Mounted volumes:	0
Elapsed CPU time:	0 00:02:16.72	Elapsed time:	0 00:07:15.41

```
 SSSS  H   H  III    AAA   U   U
S      H   H   I    A   A  U   U
S      H   H   I    A   A  U   U
 SSS   HHHHH   I    A   A  U   U
    S  H   H   I    AAAAA  U   U
    S  H   H   I    A   A  U   U
SSSS   H   H  III   A   A  UUUUU
```

```
MM      MM  MM      MM  RRRRRRRR    5555555555
MM      MM  MM      MM  RRRRRRRR    5555555555
MMMM  MMMM  MMMM  MMMM  RR      RR  55
MMMM  MMMM  MMMM  MMMM  RR      RR  55
MM  MM  MM  MM  MM  MM  RR      RR  555555
MM  MM  MM  MM  MM  MM  RR      RR  555555
MM      MM  MM      MM  RRRRRRRR          55
MM      MM  MM      MM  RRRRRRRR          55
MM      MM  MM      MM  RR  RR              55
MM      MM  MM      MM  RR  RR              55
MM      MM  MM      MM  RR    RR    55      55      ++++
MM      MM  MM      MM  RR    RR    55      55      ++++
MM      MM  MM      MM  RR      RR    555555        ++++
MM      MM  MM      MM  RR      RR    555555        ++++
```

```
LL            000000      GGGGGGGG      ;;;;      222222
LL            000000      GGGGGGGG      ;;;;      222222
LL          00      00  GG              ;;;;    22      22
LL          00      00  GG              ;;;;    22      22
LL          00      00  GG                              22
LL          00      00  GG                              22
LL          00      00  GG              ;;;;          22
LL          00      00  GG              ;;;;          22
LL          00      00  GG  GGGGGG      ;;;;        22
LL          00      00  GG  GGGGGG      ;;;;        22
LL          00      00  GG      GG        ;;      22
LL          00      00  GG      GG        ;;      22
LLLLLLLLLL    000000      GGGGGG        ;;      2222222222
LLLLLLLLLL    000000      GGGGGG        ;;      2222222222
```

```
 SSSS  H   H  III    AAA   U   U
S      H   H   I    A   A  U   U
S      H   H   I    A   A  U   U
 SSS   HHHHH   I    A   A  U   U
    S  H   H   I    AAAAA  U   U
    S  H   H   I    A   A  U   U
SSSS   H   H  III   A   A  UUUUU
```

```
$ DEL FOR%%%.DAT;*
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR023.DAT;3
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR023.DAT;2
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR024.DAT;3
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR024.DAT;2
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR032.DAT;2
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR038.DAT;3
-RMS-E-FLK, file currently locked by another user
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.SHIAU]FOR038.DAT;2
-RMS-E-FLK, file currently locked by another user
$ SUBMIT == "SUBMIT/NOKEEP/PRINTER=ANNEX/NOTIFY"
$ PRINT == "PRINT/DEVICE=ANNEX"
$ HYDRO == "SET DEF [HYDRO]"
$ SHIAU == "SET DEF [HYDRO.SHIAU]"
$ WRITE SYS$OUTPUT ""

$EXIT
$ RUN HEC1
```

```
*******************************************
*                                         *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)      *
*            FEBRUARY 1981                *
*          REVISED 30 OCT 81              *
*                                         *
*  RUN DATE      11-J    TIME      11:1   *
*                                         *
*******************************************
```


```
*****************************************
*                                       *
*    U.S. ARMY CORPS OF ENGINEERS       *
*  THE HYDROLOGIC ENGINEERING CENTER    *
*         609 SECOND STREET             *
*       DAVIS, CALIFORNIA 95616         *
*  (916) 440-3285 OR (FTS) 448-3285     *
*                                       *
*****************************************
```


```
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. SEE SEPTEMBER 1981 INPUT DESCRIPTION FOR NEW DEFINITIONS.

HEC-1 INPUT


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

    1     ID  MARICOPA COUNTY FLOOD CONTROL DISTRICT
    2     ID  HYDROLOGY(AQUA FRIA RIVER-BETHANY HOME-91TH ST-THOMAS RD)
    3     ID   1 HOUR 100 YEAR DISCHARGE FUTURE CONDITION
    4     ID   IMPROVEMENT AT INTERSECTION THAT NO SPLIT FLOW TOWARD SOUTH
    5     ID   TYPE 2 RAINFALL DISTRIBUTION
    6     ID   KINEMATIC WAVE METHOD
    7     ID   VAX-MMR5.DAT
    8     IT       5          120
    9     IO       2        2

   10     KK   SUB2A
   11     KM  SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
   12     KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
   13     PB    2.45
   14     PI    0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
   15     PI    0.06    0.05
   16     BA    0.50
   17     LS       0      89      54              89      54
   18     UK    1850   .0033     0.1      25
   19     UK    5600   .0033     0.1      75
   20     RK    2640   0.005   0.025            TRAP

   21     KK   SUB2B
   22     KM  NORTH-WEST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
   23     KM   ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99-TH ST ROAD
   24     PB    2.45
   25     PI    0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
   26     PI    0.06    0.05
   27     BA    0.50
   28     LS       0      89      54              89      54
   29     UK    1850   .0033     0.1      25
   30     UK    5600   .0033     0.1      75
   31     RK    2640   0.005   0.025            TRAP

   32     KK    SUB2
   33     KM        COMBINE RUNOFF FROM SUB2A AND SUB2B AT C.P.(B)
   34     HC       2

   35     KK    SUB2
   36     KM         DIVERSION FOR THE STORM DRAIN
   37     DT     SD2
   38     DI       1      52    1000
   39     DQ       1      52      52

   40     KK    RET2
   41     KM         RETENTION REQUIREMENT
   42     RL       0       0
   43     RS       1    STOR       0
   44     SV       0    14.3    28.7    43.0    45.9    48.8    51.7    57.3
   45     SQ       0       0       0       0     107     304     558    1200
   46     SE       0       1       2       3     3.2     3.4     3.6     4.0
```

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

  47      KK  SUB3A
  48      KM  AREA BOUNDED BY BETHANY HOME ROAD- 99TH ST- CAMELBACK ROAD- RID CHANNEL
  49      KM  ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
  50      KM  PROPOSED CHANNEL : V SHAPE, SIDE SLOPE = 3:1
  51      KM  HYDROGRAPH AT C.P. (C)
  52      PB   2.45
  53      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  54      PI   0.06   0.05
  55      BA   0.66
  56      LS      0     85     48
  57      UK   4500   .005    0.1    100
  58      RK   5280   .003  0.025          TRAP      0      3    YES

  59      KK  SUB3A
  60      KM       DIVERT TO R.I.D. CHANNEL
  61      DT    RID
  62      DI      1    150    151    300   1000
  63      DQ      1    150    150    150    150

  64      KK  SUB4
  65      KM       SUBAREA 3 ROUTED TO SUBAREA 4
  66      KM       PROPOSED CHANNEL : V SHAPE, SIDE SLOPE= 3:1
  67      RK   4000   .003  0.025          TRAP      0      3

  68      KK  SUB4
  69      KM  AREA BOUNDED BY BETHANY HOME ROAD- AGUA FRIA-CAMELBACK ROAD- RID CHANNEL
  70      KM  ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
  71      KM  HYDROGRAPH AT C.P. (D) INTO AGUA FRIA WASH
  72      PB   2.45
  73      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  74      PI   0.06   0.05
  75      BA   1.06
  76      LS      0     88     55
  77      UK   5800   .005    0.1    100
  78      RK   4000   .003  0.025          TRAP

  79      KK  RET4
  80      KM       RETENTION REQUIREMENT FOR SUB AREA 4
  81      RL      0      0
  82      RS      1   STOR      0
  83      SV      0     15     30     45     48     51     54     60
  84      SQ      0      0      0      0    107    304    558   1200
  85      SE      0      1      2      3    3.2    3.4    3.6    4.0

  86      KK  SUB4
  87      KM       COMBINED ROUTED SUB3 AND ROUTED SUB4
  88      HC      2

  89      KK  SUB5B
  90      KM  NORTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
  91      KM  ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99TH STREET
  92      PB   2.45
  93      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  94      PI   0.06   0.05
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

  95      BA   0.50
  96      LS      0     89     60            89     60
  97      UK   1850   .0033   0.1     25
  98      UK   5600   .0033   0.1     75
  99      RK   2640   0.005  0.025          TRAP

 100      KK   SUB5A
 101      KM  SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
 102      KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
 103      PB   2.45
 104      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
 105      PI   0.06   0.05
 106      BA   0.50
 107      LS      0     89     60            89     60
 108      UK   1850   .0033   0.1     25
 109      UK   5600   .0033   0.1     75
 110      RK   2640   0.005  0.025          TRAP

 111      KK   SUB5
 112      KM       COMBINE RUNOFF FROM SUB5A AND SUB5B
 113      HC     2

 114      KK   RET5
 115      KM        RETENTION REQUIREMENT FOR SUBAREA 5
 116      RS     1   STOR      0
 117      SV     0     15     30     45     48     51     54     60
 118      SQ     0      0      0      0    107    304    558   1200
 119      SE     0      1      2      3    3.2    3.4    3.6    4.0

 120      KK   SUB6
 121      KM        ROUTED TO SUB6
 122      KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
 123      KM        PROPOSED CHANNEL : BW = 8', SIDE SLOPE = 3:1
 124      RK   2640  0.005  0.025          TRAP      8      3

 125      KK   SUB6A
 126      KM   AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
 127      KM   ASSUME OVERLAND LENGTH 100' AS LOT SIZE
 128      KM         COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
 129      KM         MAIN CHANNEL 5000' RUNING NORTH-SOUTH
 130      KM   CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
 131      KM   MODELED AS 75% OF THE AREA ROUTED THROUGH THE LAKE
 132      BA    .75
 133      LS           80     29
 134      UK    100  .0033    0.2    100
 135      RK   2000   .005   0.16   .10   TRAP
 136      RK   5000   .005   0.16         TRAP

 137      KK   SUB6A
 138      KM        SUB6A LAKE ROUTING
 139      RL     0      0
 140      RS     1   STOR      0
 141      SV     0    5.5   11.0   16.5   17.9   19.3   20.7   23.5
 142      SQ     0      0      0      0     67    190    350    750
 143      SE     0      1      2      3    3.2    3.4    3.6    4.0
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

  144     KK  SUB6B
  145     KM  AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
  146     KM  ASSUME OVERLAND LENGTH 100' AS LOT SIZE
  147     KM        COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
  148     KM        MAIN CHANNEL 1000' RUNING NORTH-SOUTH
  149     KM  CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
  150     KM  MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE
  151     BA   .125
  152     LS     0      80      29
  153     UK   100   .0033     0.2     100
  154     RK  2000    .005    0.16     .10    TRAP
  155     RK  1000    .005    0.16            TRAP

  156     KK   SUB6
  157     KM       COMBINED SUB6B, ROUTED SUB6A AND ROUTED 5 AT C.P. (F)
  158     HC     3

  159     KK   SUB6
  160     KM       ROUTED TO SUB6 (CONTRATION POINT F)
  161     KM  ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  162     KM       PROPOSED CHANNEL : BW = 8', SIDE SLOPE = 3:1
  163     RK  2640   0.005   0.025           TRAP      8       3

  164     KK  SUB6C
  165     KM  AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
  166     KM  ASSUME OVERLAND LENGTH 100' AS LOT SIZE
  167     KM        COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
  168     KM        MAIN CHANNEL 1000' RUNING NORTH-SOUTH
  169     KM  CONCENTRATION POINT AT (F)
  170     KM  MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE
  171     BA   .125
  172     LS     0      80      29
  173     UK   100   .0033     0.2     100
  174     RK  2000    .005    0.16     .10    TRAP
  175     RK  1000    .005    0.16            TRAP

  176     KK   SUB6
  177     KM       COMBINED ROUTED SUB6 AND SUB6C
  178     HC     2

  179     KK   SUB7
  180     KM       ROUTED TO SUB7 AT C.P. (G)
  181     KM       ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  182     RK  5800   .0033    .025           TRAP      8       3

  183     KK   SUB7
  184     KM  AREA BOUNDED BY 107TH ST- CAMELBACK ROAD- INDIAN SCHOOL-AUGU FRIA
  185     KM  ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
  186     KM  PROPOSED CHANNEL : BW = 8', SIDE SLOPE = 3:1
  187     KM  HYDROGRAPH AT C.P. (G) INTO AGUA FRIA WASH
  188     PB   2.45
  189     PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
  190     PI   0.06   0.05
  191     BA   0.58
```

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

 192      LS      0     89     60
 193      UK   4500   .005    0.1    100
 194      RK   5800   .003  0.025          TRAP

 195      KK   RET7
 196      KM        RETENTION REQUIREMENT FOR SUBAREA 7
 197      RS      1   STOR      0
 198      SV      0      9     18     27     29     31     32     36
 199      SQ      0      0      0      0    107    304    558   1200
 200      SE      0      1      2      3    3.2    3.4    3.6    4.0

 201      KK   SUB7
 202      KM        COMBINED ROUTED SUB6 AND ROUTED SUB7
 203      HC      2

 204      KK   SUB8
 205      KM   SOUTH-EAST CORNER OF INDIAN SCHOOL RD AND 107 TH ST
 206      KM   ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 107TH ST
 207      KM   HYDROGRAPH AT C.P. (H)
 208      PB   2.45
 209      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
 210      PI   0.06   0.05
 211      BA   0.36
 212      LS      0     89     60
 213      UK   3000   .005    0.1    100
 214      RK   2640   .003  0.025          TRAP

 215      KK   DET8
 216      KM       DETENTION REQUIREMENT FOR SUBAREA 8 TO REGULATE OUTFLOW PEAK TO 150 CFS
 217      RL      0      0
 218      RS      1   STOR      0
 219      SV      0      1      4      6     13     51     54     60
 220      SQ      0     65    130    150    210    304    558   1200
 221      SE      0      1      2    2.3    3.2    3.4    3.6    4.0

 222      KK   SUB9
 223      KM   AREA BOUNDED BY INDIAN SCHOOL RD-107 ST-LEVEE-AGUA FRIA
 224      KM   ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT OF LEVEE
 225      KM   HYDROGRAPH AT C.P. (I) INTO AGUA FRIA WASH
 226      PB   2.45
 227      PI   0.05   0.07   0.07   0.10   0.16   1.16   0.39   0.14   0.11   0.09
 228      PI   0.06   0.05
 229      BA   0.30
 230      LS      0     89     60
 231      UK   1500   .005    0.1    100
 232      RK   6400   .003  0.025          TRAP                  YES
 233      ZZ
```

```
*****************************************                         ****************************************
*                                       *                         *                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                         *   U.S. ARMY CORPS OF ENGINEERS       *
*            FEBRUARY 1981              *                         * THE HYDROLOGIC ENGINEERING CENTER    *
*          REVISED 30 OCT 81            *                         *         609 SECOND STREET            *
*                                       *                         *     DAVIS, CALIFORNIA 95616          *
* RUN DATE      11-J    TIME      11:1  *                         * (916) 440-3285 OR (FTS) 448-3285     *
*                                       *                         *                                      *
*****************************************                         ****************************************
```

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                          MARICOPA COUNTY FLOOD CONTROL DISTRICT
                          HYDROLOGY(AQUA FRIA RIVER-BETHANY HOME-91TH ST-THOMAS RD)
                           1 HOUR 100 YEAR DISCHARGE FUTURE CONDITION
                           IMPROVEMENT AT INTERSECTION THAT NO SPLIT FLOW TOWARD SOUTH
                           TYPE 2 RAINFALL DISTRIBUTION
                           KINEMATIC WAVE METHOD
                           VAX-MMR5.DAT

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

     IT          HYDROGRAPH TIME DATA
                        NMIN           5  MINUTES IN COMPUTATION INTERVAL
                       IDATE      1    0  STARTING DATE
                       ITIME        0120  STARTING TIME
                          NQ         101  NUMBER OF HYDROGRAPH ORDINATES
                      NDDATE      1    0  ENDING DATE
                      NDTIME        0940  ENDING TIME

                COMPUTATION INTERVAL    0.08 HOURS
                     TOTAL TIME BASE    8.33 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


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

            **************
            *            *
  10 KK     *    SUB2A   *
            *            *
            **************
                          SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
                           ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD

           SUBBASIN RUNOFF DATA
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16 BA SUBBASIN CHARACTERISTICS

TAREA	0.50	SUBBASIN AREA

PRECIPITATION DATA

13 PB

STORM	2.45	BASIN TOTAL PRECIPITATION

14 PI INCREMENTAL PRECIPITATION PATTERN

0.05	0.07	0.07	0.10	0.16	1.16	0.39	0.14	0.11	0.09
0.06	0.05								

17 LS SCS LOSS RATE

STRTL	0.25	INITIAL ABSTRACTION
CRVNBR	89.00	CURVE NUMBER
RTIMP	54.00	PERCENT IMPERVIOUS AREA

LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT

STRTL	0.25	INITIAL ABSTRACTION
CRVNBR	89.00	CURVE NUMBER
RTIMP	54.00	PERCENT IMPERVIOUS AREA

KINEMATIC WAVE

18 UK OVERLAND-FLOW ELEMENT NO. 1

L	1850.	OVERLAND FLOW LENGTH
S	0.0033	SLOPE
N	0.100	ROUGHNESS COEFFICIENT
PA	25.0	PERCENT OF SUBBASIN

19 UK OVERLAND-FLOW ELEMENT NO. 2

L	5600.	OVERLAND FLOW LENGTH
S	0.0033	SLOPE
N	0.100	ROUGHNESS COEFFICIENT
PA	75.0	PERCENT OF SUBBASIN

20 RK MAIN CHANNEL

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.50	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	0.00	BOTTOM WIDTH OR DIAMETER
Z	1.00	SIDE SLOPE
RUPSTQ	NO	ROUTE UPSTREAM HYDROGRAPH

***

COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.8559	1.667	5.00	231.25
2	0.8559	1.667	5.00	350.00
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB2A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	65.
1		0125	2	0.05	0.02	0.03	0.	*	1		0540	53	0.00	0.00	0.00	63.
1		0130	3	0.07	0.03	0.04	0.	*	1		0545	54	0.00	0.00	0.00	61.

1	0135	4	0.07	0.03	0.04	0.	*	1	0550	55	0.00	0.00	0.00	59.
1	0140	5	0.10	0.05	0.05	0.	*	1	0555	56	0.00	0.00	0.00	57.
1	0145	6	0.16	0.06	0.10	1.	*	1	0600	57	0.00	0.00	0.00	55.
1	0150	7	1.16	0.22	0.94	17.	*	1	0605	58	0.00	0.00	0.00	53.
1	0155	8	0.39	0.04	0.35	67.	*	1	0610	59	0.00	0.00	0.00	51.
1	0200	9	0.14	0.01	0.13	105.	*	1	0615	60	0.00	0.00	0.00	50.
1	0205	10	0.11	0.01	0.10	123.	*	1	0620	61	0.00	0.00	0.00	48.
1	0210	11	0.09	0.01	0.08	136.	*	1	0625	62	0.00	0.00	0.00	46.
1	0215	12	0.06	0.00	0.06	145.	*	1	0630	63	0.00	0.00	0.00	45.
1	0220	13	0.05	0.00	0.05	153.	*	1	0635	64	0.00	0.00	0.00	43.
1	0225	14	0.00	0.00	0.00	157.	*	1	0640	65	0.00	0.00	0.00	42.
1	0230	15	0.00	0.00	0.00	158.	*	1	0645	66	0.00	0.00	0.00	41.
1	0235	16	0.00	0.00	0.00	158.	*	1	0650	67	0.00	0.00	0.00	39.
1	0240	17	0.00	0.00	0.00	157.	*	1	0655	68	0.00	0.00	0.00	38.
1	0245	18	0.00	0.00	0.00	156.	*	1	0700	69	0.00	0.00	0.00	37.
1	0250	19	0.00	0.00	0.00	153.	*	1	0705	70	0.00	0.00	0.00	36.
1	0255	20	0.00	0.00	0.00	149.	*	1	0710	71	0.00	0.00	0.00	35.
1	0300	21	0.00	0.00	0.00	145.	*	1	0715	72	0.00	0.00	0.00	34.
1	0305	22	0.00	0.00	0.00	140.	*	1	0720	73	0.00	0.00	0.00	33.
1	0310	23	0.00	0.00	0.00	135.	*	1	0725	74	0.00	0.00	0.00	32.
1	0315	24	0.00	0.00	0.00	130.	*	1	0730	75	0.00	0.00	0.00	31.
1	0320	25	0.00	0.00	0.00	126.	*	1	0735	76	0.00	0.00	0.00	30.
1	0325	26	0.00	0.00	0.00	122.	*	1	0740	77	0.00	0.00	0.00	29.
1	0330	27	0.00	0.00	0.00	118.	*	1	0745	78	0.00	0.00	0.00	28.
1	0335	28	0.00	0.00	0.00	115.	*	1	0750	79	0.00	0.00	0.00	27.
1	0340	29	0.00	0.00	0.00	112.	*	1	0755	80	0.00	0.00	0.00	26.
1	0345	30	0.00	0.00	0.00	109.	*	1	0800	81	0.00	0.00	0.00	26.
1	0350	31	0.00	0.00	0.00	107.	*	1	0805	82	0.00	0.00	0.00	25.
1	0355	32	0.00	0.00	0.00	104.	*	1	0810	83	0.00	0.00	0.00	24.
1	0400	33	0.00	0.00	0.00	102.	*	1	0815	84	0.00	0.00	0.00	24.
1	0405	34	0.00	0.00	0.00	100.	*	1	0820	85	0.00	0.00	0.00	23.
1	0410	35	0.00	0.00	0.00	98.	*	1	0825	86	0.00	0.00	0.00	22.
1	0415	36	0.00	0.00	0.00	97.	*	1	0830	87	0.00	0.00	0.00	22.
1	0420	37	0.00	0.00	0.00	95.	*	1	0835	88	0.00	0.00	0.00	21.
1	0425	38	0.00	0.00	0.00	93.	*	1	0840	89	0.00	0.00	0.00	21.
1	0430	39	0.00	0.00	0.00	91.	*	1	0845	90	0.00	0.00	0.00	20.
1	0435	40	0.00	0.00	0.00	89.	*	1	0850	91	0.00	0.00	0.00	20.
1	0440	41	0.00	0.00	0.00	88.	*	1	0855	92	0.00	0.00	0.00	19.
1	0445	42	0.00	0.00	0.00	86.	*	1	0900	93	0.00	0.00	0.00	19.
1	0450	43	0.00	0.00	0.00	84.	*	1	0905	94	0.00	0.00	0.00	18.
1	0455	44	0.00	0.00	0.00	82.	*	1	0910	95	0.00	0.00	0.00	18.
1	0500	45	0.00	0.00	0.00	79.	*	1	0915	96	0.00	0.00	0.00	17.
1	0505	46	0.00	0.00	0.00	77.	*	1	0920	97	0.00	0.00	0.00	17.
1	0510	47	0.00	0.00	0.00	75.	*	1	0925	98	0.00	0.00	0.00	16.
1	0515	48	0.00	0.00	0.00	73.	*	1	0930	99	0.00	0.00	0.00	16.
1	0520	49	0.00	0.00	0.00	71.	*	1	0935	100	0.00	0.00	0.00	16.
1	0525	50	0.00	0.00	0.00	69.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	67.	*							
							*							

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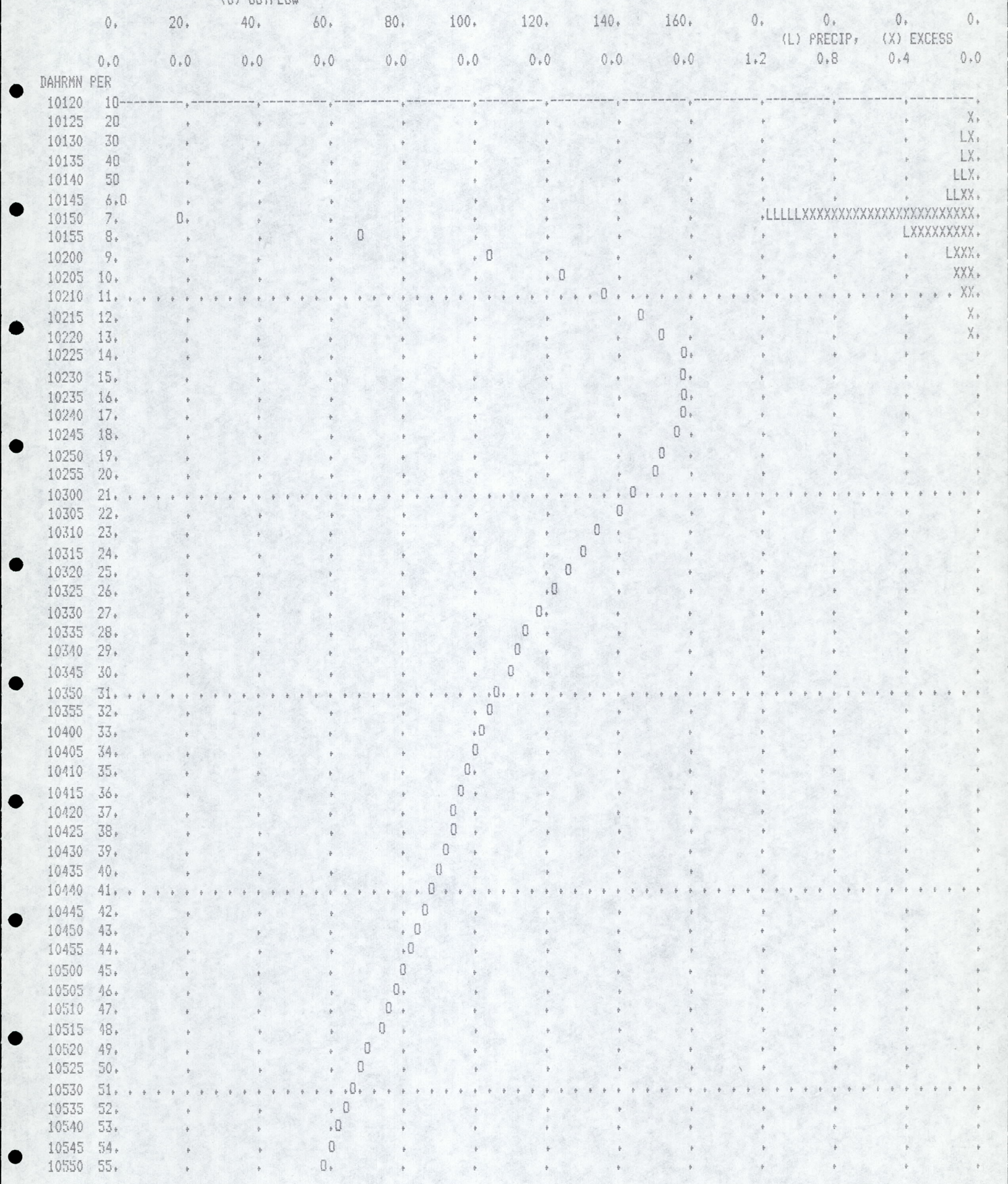
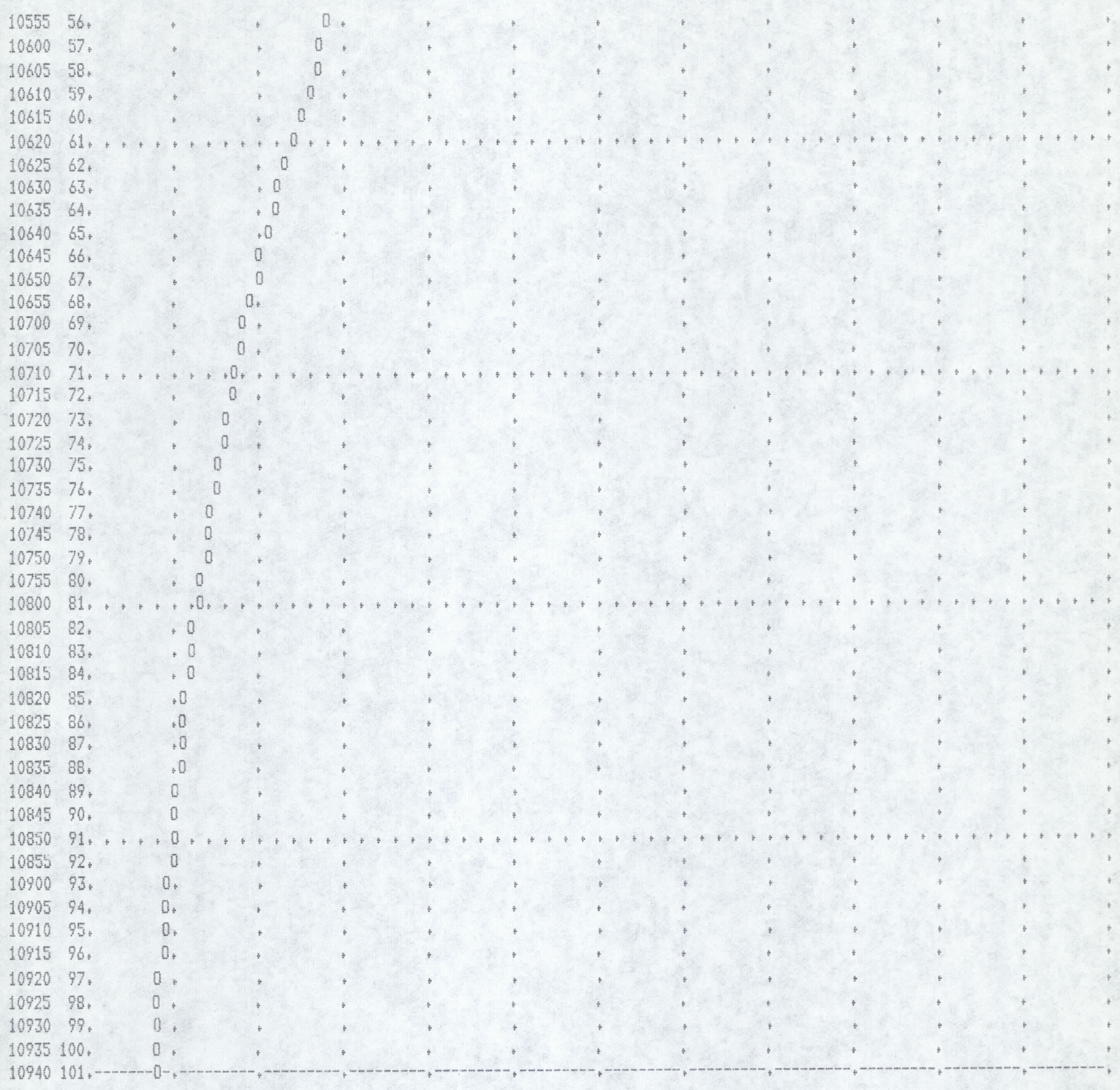
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.48, TOTAL EXCESS = 1.97

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
158.	1.17	(CFS)	85.	66.	66.	66.
		(INCHES)	1.574	1.693	1.693	1.693
		(AC-FT)	42.	45.	45.	45.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB2A

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10940 101.

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        *            *
21 KK   *    SUB2B   *
        *            *
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               NORTH-WEST HALF OF 91ST-CAMELBACK-99TH-SETHANY HOME ROAD
                ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99-TH ST ROAD

          SUBBASIN RUNOFF DATA

27 BA       SUBBASIN CHARACTERISTICS
               TAREA        0.50  SUBBASIN AREA

            PRECIPITATION DATA

24 PB          STORM        2.45  BASIN TOTAL PRECIPITATION

25 PI        INCREMENTAL PRECIPITATION PATTERN
              0.05    0.07    0.07    0.10    0.16    1.16    0.39    0.14    0.11    0.09
              0.06    0.05

28 LS       SCS LOSS RATE
              STRTL        0.25  INITIAL ABSTRACTION
             CRVNBR       89.00  CURVE NUMBER
              RTIMP       54.00  PERCENT IMPERVIOUS AREA

             LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
              STRTL        0.25  INITIAL ABSTRACTION
             CRVNBR       89.00  CURVE NUMBER
              RTIMP       54.00  PERCENT IMPERVIOUS AREA

            KINEMATIC WAVE
29 UK        OVERLAND-FLOW ELEMENT NO. 1
                  L       1850.  OVERLAND FLOW LENGTH
                  S      0.0033  SLOPE
                  N       0.100  ROUGHNESS COEFFICIENT
                 PA        25.0  PERCENT OF SUBBASIN
30 UK        OVERLAND-FLOW ELEMENT NO. 2
                  L       5600.  OVERLAND FLOW LENGTH
                  S      0.0033  SLOPE
                  N       0.100  ROUGHNESS COEFFICIENT
                 PA        75.0  PERCENT OF SUBBASIN
31 RK        MAIN CHANNEL
                  L       2640.  CHANNEL LENGTH
                  S      0.0050  SLOPE
                  N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                 CA        0.50  CONTRIBUTING AREA
              SHAPE        TRAP  CHANNEL SHAPE
                 WD        0.00  BOTTOM WIDTH OR DIAMETER
                  Z        1.00  SIDE SLOPE
             RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

                                        ***

      COMPUTED KINEMATIC PARAMETERS
```

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.8559	1.667	5.00	231.25
2	0.8559	1.667	5.00	350.00
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB2B

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	65.
1		0125	2	0.05	0.02	0.03	0.	1		0540	53	0.00	0.00	0.00	63.
1		0130	3	0.07	0.03	0.04	0.	1		0545	54	0.00	0.00	0.00	61.
1		0135	4	0.07	0.03	0.04	0.	1		0550	55	0.00	0.00	0.00	59.
1		0140	5	0.10	0.05	0.05	0.	1		0555	56	0.00	0.00	0.00	57.
1		0145	6	0.16	0.06	0.10	1.	1		0600	57	0.00	0.00	0.00	55.
1		0150	7	1.16	0.22	0.94	17.	1		0605	58	0.00	0.00	0.00	53.
1		0155	8	0.39	0.04	0.35	67.	1		0610	59	0.00	0.00	0.00	51.
1		0200	9	0.14	0.01	0.13	105.	1		0615	60	0.00	0.00	0.00	50.
1		0205	10	0.11	0.01	0.10	123.	1		0620	61	0.00	0.00	0.00	48.
1		0210	11	0.09	0.01	0.08	136.	1		0625	62	0.00	0.00	0.00	46.
1		0215	12	0.06	0.00	0.06	145.	1		0630	63	0.00	0.00	0.00	45.
1		0220	13	0.05	0.00	0.05	153.	1		0635	64	0.00	0.00	0.00	43.
1		0225	14	0.00	0.00	0.00	157.	1		0640	65	0.00	0.00	0.00	42.
1		0230	15	0.00	0.00	0.00	158.	1		0645	66	0.00	0.00	0.00	41.
1		0235	16	0.00	0.00	0.00	158.	1		0650	67	0.00	0.00	0.00	39.
1		0240	17	0.00	0.00	0.00	157.	1		0655	68	0.00	0.00	0.00	38.
1		0245	18	0.00	0.00	0.00	156.	1		0700	69	0.00	0.00	0.00	37.
1		0250	19	0.00	0.00	0.00	153.	1		0705	70	0.00	0.00	0.00	36.
1		0255	20	0.00	0.00	0.00	149.	1		0710	71	0.00	0.00	0.00	35.
1		0300	21	0.00	0.00	0.00	145.	1		0715	72	0.00	0.00	0.00	34.
1		0305	22	0.00	0.00	0.00	140.	1		0720	73	0.00	0.00	0.00	33.
1		0310	23	0.00	0.00	0.00	135.	1		0725	74	0.00	0.00	0.00	32.
1		0315	24	0.00	0.00	0.00	130.	1		0730	75	0.00	0.00	0.00	31.
1		0320	25	0.00	0.00	0.00	126.	1		0735	76	0.00	0.00	0.00	30.
1		0325	26	0.00	0.00	0.00	122.	1		0740	77	0.00	0.00	0.00	29.
1		0330	27	0.00	0.00	0.00	118.	1		0745	78	0.00	0.00	0.00	28.
1		0335	28	0.00	0.00	0.00	115.	1		0750	79	0.00	0.00	0.00	27.
1		0340	29	0.00	0.00	0.00	112.	1		0755	80	0.00	0.00	0.00	26.
1		0345	30	0.00	0.00	0.00	109.	1		0800	81	0.00	0.00	0.00	26.
1		0350	31	0.00	0.00	0.00	107.	1		0805	82	0.00	0.00	0.00	25.
1		0355	32	0.00	0.00	0.00	104.	1		0810	83	0.00	0.00	0.00	24.
1		0400	33	0.00	0.00	0.00	102.	1		0815	84	0.00	0.00	0.00	24.
1		0405	34	0.00	0.00	0.00	100.	1		0820	85	0.00	0.00	0.00	23.
1		0410	35	0.00	0.00	0.00	98.	1		0825	86	0.00	0.00	0.00	22.
1		0415	36	0.00	0.00	0.00	97.	1		0830	87	0.00	0.00	0.00	22.
1		0420	37	0.00	0.00	0.00	95.	1		0835	88	0.00	0.00	0.00	21.
1		0425	38	0.00	0.00	0.00	93.	1		0840	89	0.00	0.00	0.00	21.
1		0430	39	0.00	0.00	0.00	91.	1		0845	90	0.00	0.00	0.00	20.
1		0435	40	0.00	0.00	0.00	89.	1		0850	91	0.00	0.00	0.00	20.
1		0440	41	0.00	0.00	0.00	88.	1		0855	92	0.00	0.00	0.00	19.
1		0445	42	0.00	0.00	0.00	86.	1		0900	93	0.00	0.00	0.00	19.
1		0450	43	0.00	0.00	0.00	84.	1		0905	94	0.00	0.00	0.00	18.
1		0455	44	0.00	0.00	0.00	82.	1		0910	95	0.00	0.00	0.00	18.
1		0500	45	0.00	0.00	0.00	79.	1		0915	96	0.00	0.00	0.00	17.
1		0505	46	0.00	0.00	0.00	77.	1		0920	97	0.00	0.00	0.00	17.
1		0510	47	0.00	0.00	0.00	75.	1		0925	98	0.00	0.00	0.00	16.
1		0515	48	0.00	0.00	0.00	73.	1		0930	99	0.00	0.00	0.00	16.

1	0520	49	0.00	0.00	0.00	71.	*	1	0935	100	0.00	0.00	0.00	16.
1	0525	50	0.00	0.00	0.00	69.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	67.	*							
							*							

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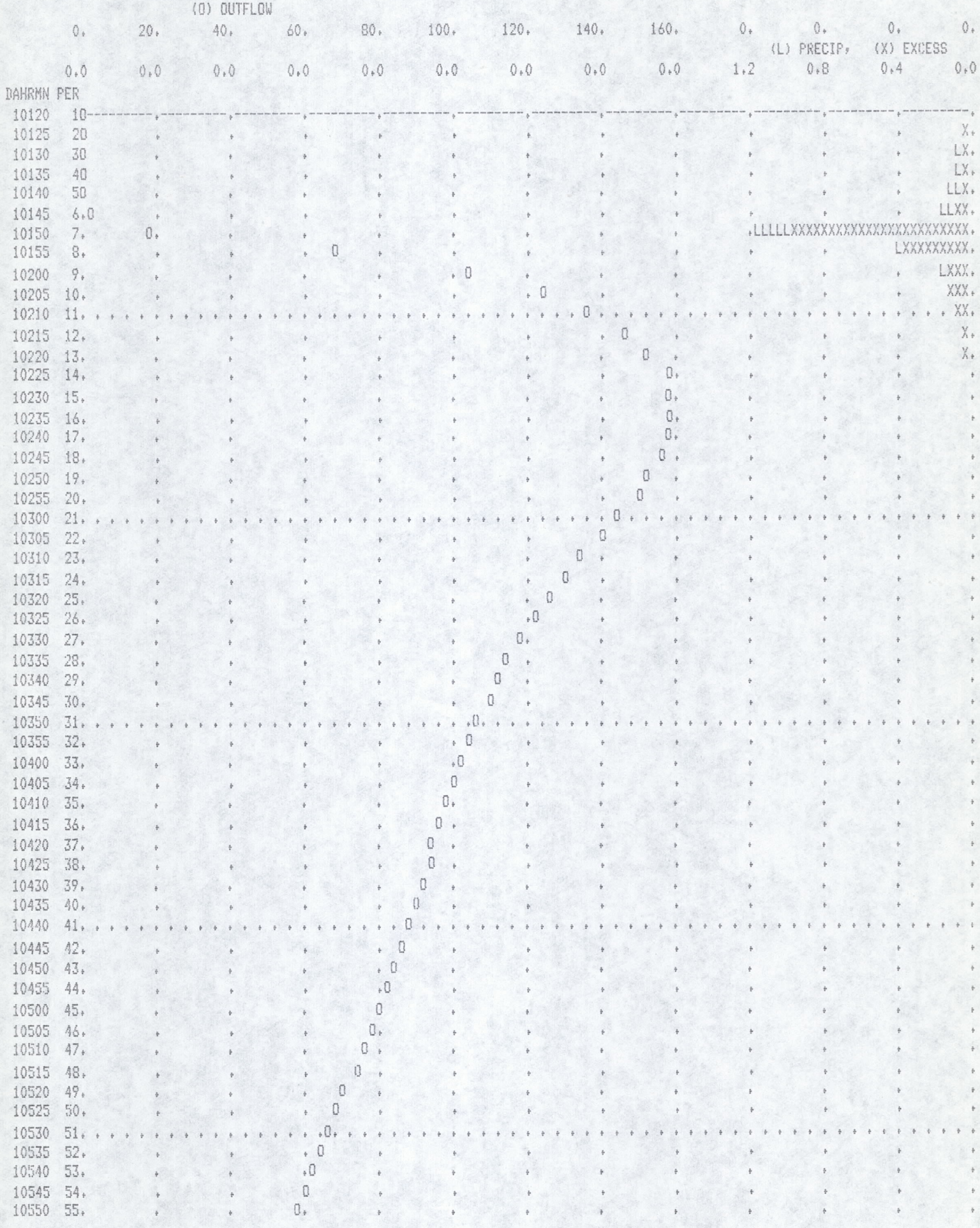
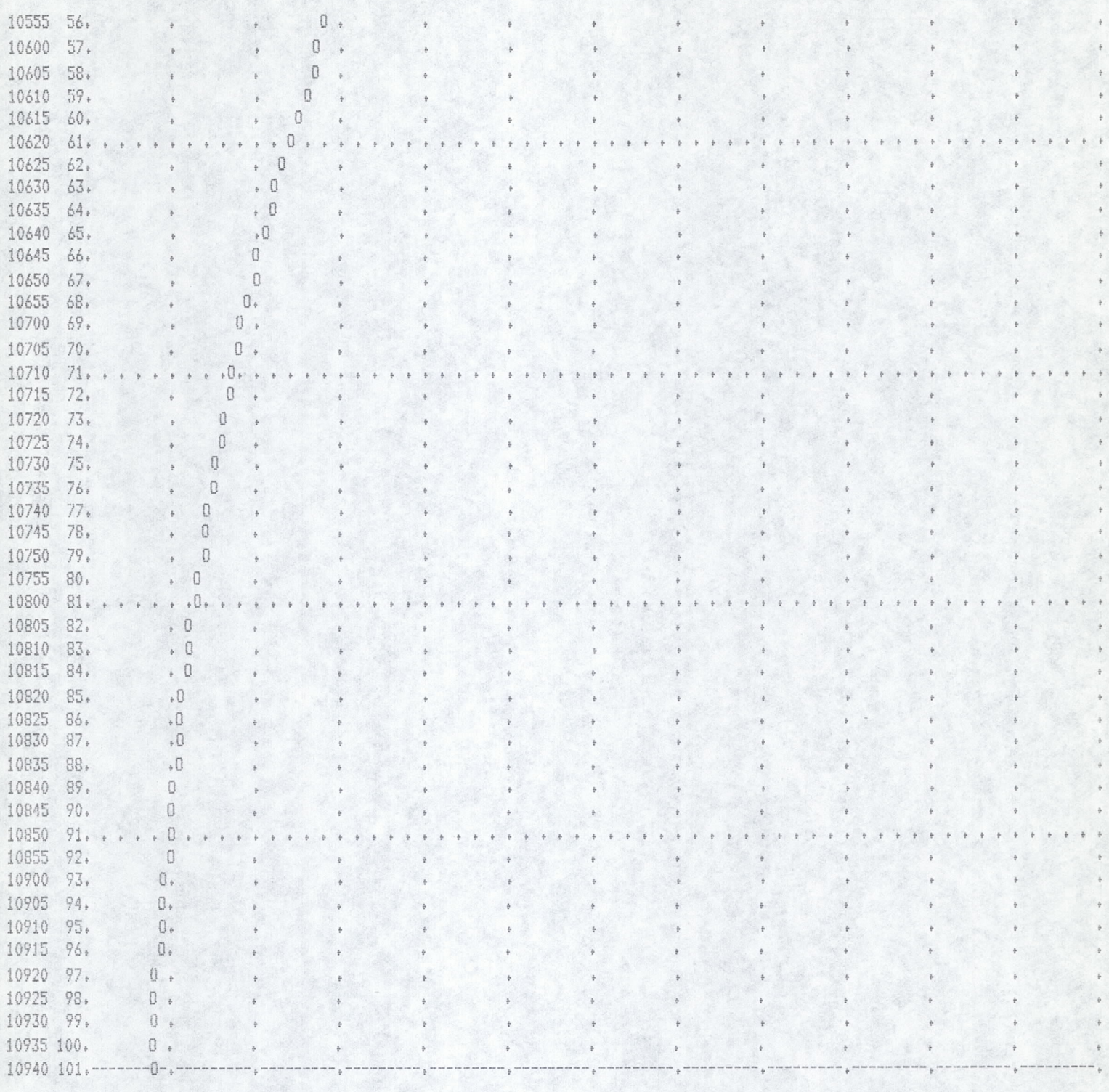
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.48, TOTAL EXCESS = 1.97

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
158.	1.17	(CFS)	85.	66.	66.	66.
		(INCHES)	1.574	1.693	1.693	1.693
		(AC-FT)	42.	45.	45.	45.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB2B

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32 KK     *      SUB2   *
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COMBINE RUNOFF FROM SUB2A AND SUB2B AT C.P.(B)

34 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB2

SUM OF 2 HYDROGRAPHS

****

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	237.	1		0540	53	125.	1		0750	79	54.
1		0125	2	0.	1		0335	28	230.	1		0545	54	121.	1		0755	80	53.
1		0130	3	0.	1		0340	29	224.	1		0550	55	117.	1		0800	81	51.
1		0135	4	0.	1		0345	30	218.	1		0555	56	113.	1		0805	82	50.
1		0140	5	1.	1		0350	31	213.	1		0600	57	110.	1		0810	83	49.
1		0145	6	3.	1		0355	32	209.	1		0605	58	106.	1		0815	84	47.
1		0150	7	35.	1		0400	33	205.	1		0610	59	103.	1		0820	85	46.
1		0155	8	134.	1		0405	34	201.	1		0615	60	99.	1		0825	86	45.
1		0200	9	209.	1		0410	35	197.	1		0620	61	96.	1		0830	87	43.
1		0205	10	246.	1		0415	36	193.	1		0625	62	93.	1		0835	88	42.
1		0210	11	271.	1		0420	37	190.	1		0630	63	90.	1		0840	89	41.
1		0215	12	291.	1		0425	38	186.	1		0635	64	87.	1		0845	90	40.
1		0220	13	306.	1		0430	39	183.	1		0640	65	84.	1		0850	91	39.
1		0225	14	315.	1		0435	40	179.	1		0645	66	81.	1		0855	92	38.
1		0230	15	317.	1		0440	41	175.	1		0650	67	79.	1		0900	93	37.
1		0235	16	316.	1		0445	42	171.	1		0655	68	76.	1		0905	94	36.
1		0240	17	315.	1		0450	43	167.	1		0700	69	74.	1		0910	95	35.
1		0245	18	311.	1		0455	44	163.	1		0705	70	72.	1		0915	96	34.
1		0250	19	306.	1		0500	45	159.	1		0710	71	69.	1		0920	97	34.
1		0255	20	298.	1		0505	46	155.	1		0715	72	67.	1		0925	98	33.
1		0300	21	289.	1		0510	47	150.	1		0720	73	65.	1		0930	99	32.
1		0305	22	280.	1		0515	48	146.	1		0725	74	63.	1		0935	100	31.
1		0310	23	270.	1		0520	49	142.	1		0730	75	61.	1		0940	101	30.
1		0315	24	261.	1		0525	50	137.	1		0735	76	59.					
1		0320	25	252.	1		0530	51	133.	1		0740	77	58.					
1		0325	26	244.	1		0535	52	129.	1		0745	78	56.					

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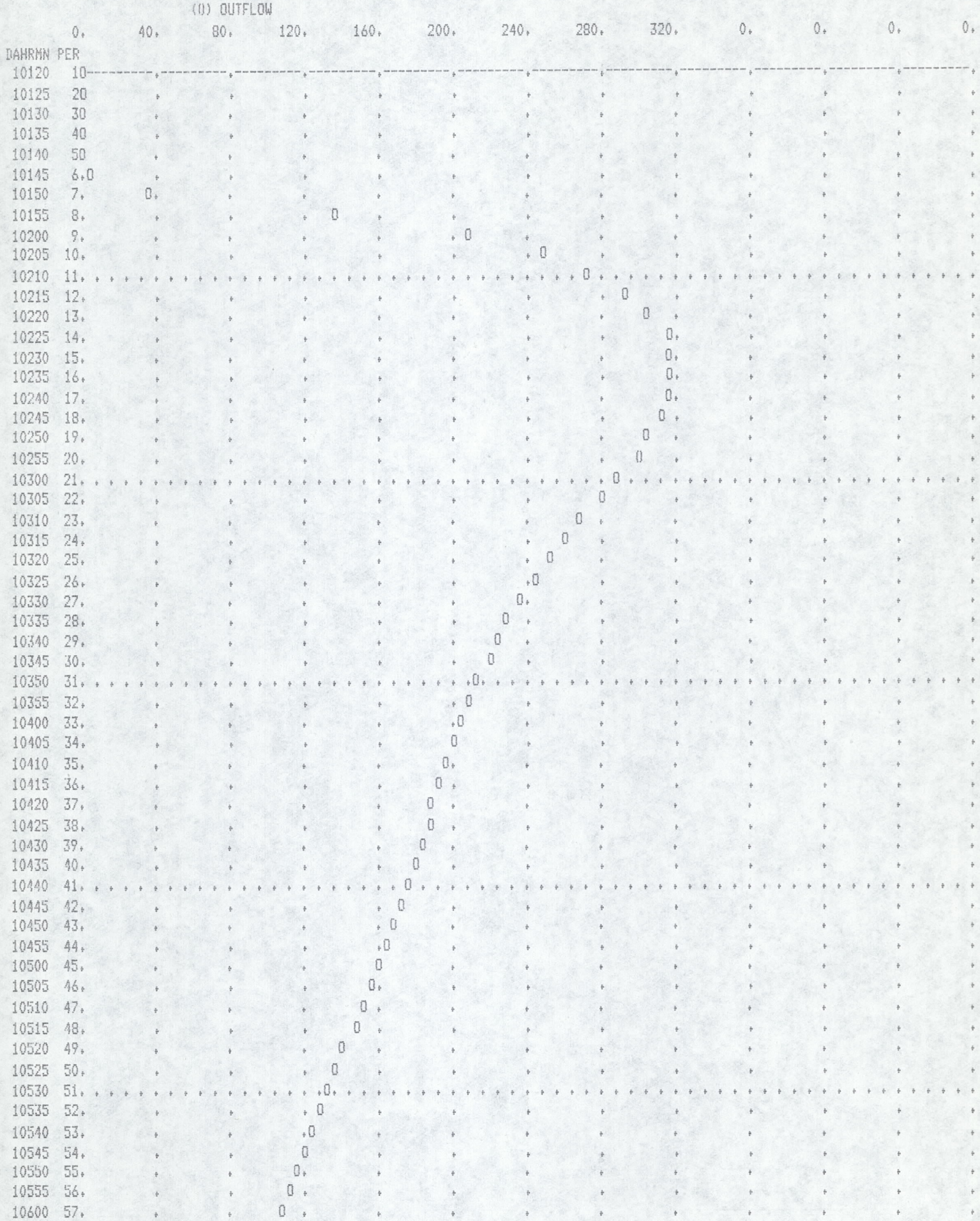
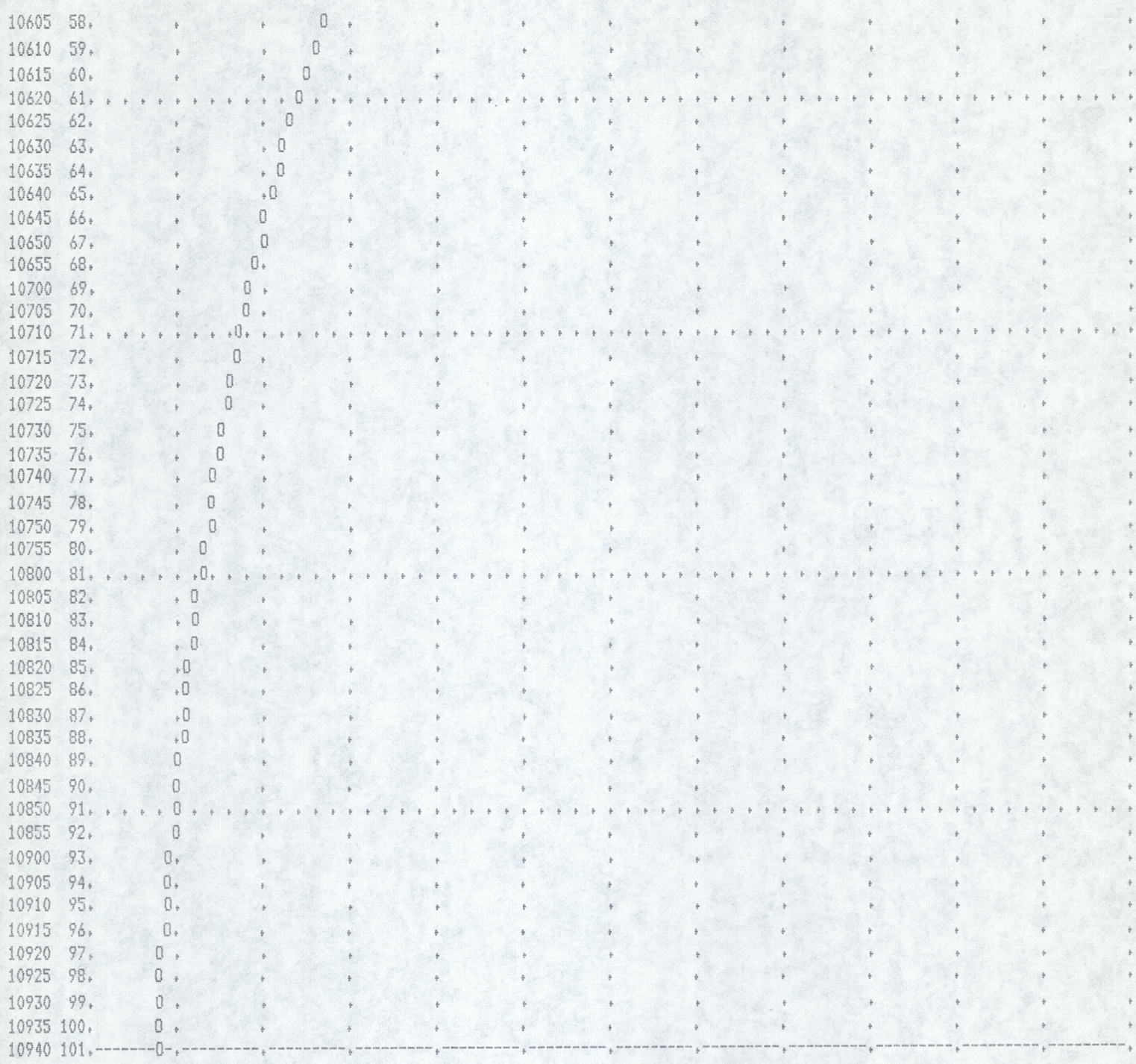
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
317.	1.17	(CFS)	169.	131.	131.	131.
		(INCHES)	1.574	1.693	1.693	1.693
		(AC-FT)	84.	90.	90.	90.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB2

(O) OUTFLOW




10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
 35 KK    *     SUB2   *
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DIVERSION FOR THE STORM DRAIN

DT	DIVERSION				
	ISTAD	SD2	DIVERSION HYDROGRAPH IDENTIFICATION		
DI	INFLOW	1.00	52.00	1000.00	
DQ	DIVERTED FLOW	1.00	52.00	52.00	

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DIVERSION HYDROGRAPH SD2

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	52.	1		0540	53	52.	1		0750	79	52.
1		0125	2	0.	1		0335	28	52.	1		0545	54	52.	1		0755	80	52.
1		0130	3	0.	1		0340	29	52.	1		0550	55	52.	1		0800	81	51.
1		0135	4	0.	1		0345	30	52.	1		0555	56	52.	1		0805	82	50.
1		0140	5	1.	1		0350	31	52.	1		0600	57	52.	1		0810	83	49.
1		0145	6	3.	1		0355	32	52.	1		0605	58	52.	1		0815	84	47.
1		0150	7	35.	1		0400	33	52.	1		0610	59	52.	1		0820	85	46.
1		0155	8	52.	1		0405	34	52.	1		0615	60	52.	1		0825	86	45.
1		0200	9	52.	1		0410	35	52.	1		0620	61	52.	1		0830	87	43.
1		0205	10	52.	1		0415	36	52.	1		0625	62	52.	1		0835	88	42.
1		0210	11	52.	1		0420	37	52.	1		0630	63	52.	1		0840	89	41.
1		0215	12	52.	1		0425	38	52.	1		0635	64	52.	1		0845	90	40.
1		0220	13	52.	1		0430	39	52.	1		0640	65	52.	1		0850	91	39.
1		0225	14	52.	1		0435	40	52.	1		0645	66	52.	1		0855	92	38.
1		0230	15	52.	1		0440	41	52.	1		0650	67	52.	1		0900	93	37.
1		0235	16	52.	1		0445	42	52.	1		0655	68	52.	1		0905	94	36.
1		0240	17	52.	1		0450	43	52.	1		0700	69	52.	1		0910	95	35.
1		0245	18	52.	1		0455	44	52.	1		0705	70	52.	1		0915	96	34.
1		0250	19	52.	1		0500	45	52.	1		0710	71	52.	1		0920	97	34.
1		0255	20	52.	1		0505	46	52.	1		0715	72	52.	1		0925	98	33.
1		0300	21	52.	1		0510	47	52.	1		0720	73	52.	1		0930	99	32.
1		0305	22	52.	1		0515	48	52.	1		0725	74	52.	1		0935	100	31.
1		0310	23	52.	1		0520	49	52.	1		0730	75	52.	1		0940	101	30.
1		0315	24	52.	1		0525	50	52.	1		0735	76	52.					
1		0320	25	52.	1		0530	51	52.	1		0740	77	52.					
1		0325	26	52.	1		0535	52	52.	1		0745	78	52.					

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PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
			MAXIMUM AVERAGE FLOW			
52.	0.58	(CFS)	52.	47.	47.	47.
		(INCHES)	0.483	0.601	0.601	0.601
		(AC-FT)	26.	32.	32.	32.

CUMULATIVE AREA = 1.00 SQ MI

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HYDROGRAPH AT STATION SUB2

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	185.	1		0540	53	73.	1		0750	79	2.
1		0125	2	0.	1		0335	28	178.	1		0545	54	69.	1		0755	80	1.
1		0130	3	0.	1		0340	29	172.	1		0550	55	65.	1		0800	81	0.
1		0135	4	0.	1		0345	30	166.	1		0555	56	61.	1		0805	82	0.
1		0140	5	0.	1		0350	31	161.	1		0600	57	58.	1		0810	83	0.
1		0145	6	0.	1		0355	32	157.	1		0605	58	54.	1		0815	84	0.
1		0150	7	0.	1		0400	33	153.	1		0610	59	51.	1		0820	85	0.
1		0155	8	82.	1		0405	34	149.	1		0615	60	47.	1		0825	86	0.
1		0200	9	157.	1		0410	35	145.	1		0620	61	44.	1		0830	87	0.
1		0205	10	194.	1		0415	36	141.	1		0625	62	41.	1		0835	88	0.
1		0210	11	219.	1		0420	37	138.	1		0630	63	38.	1		0840	89	0.
1		0215	12	239.	1		0425	38	134.	1		0635	64	35.	1		0845	90	0.
1		0220	13	254.	1		0430	39	131.	1		0640	65	32.	1		0850	91	0.
1		0225	14	263.	1		0435	40	127.	1		0645	66	29.	1		0855	92	0.
1		0230	15	265.	1		0440	41	123.	1		0650	67	27.	1		0900	93	0.
1		0235	16	264.	1		0445	42	119.	1		0655	68	24.	1		0905	94	0.
1		0240	17	263.	1		0450	43	115.	1		0700	69	22.	1		0910	95	0.
1		0245	18	259.	1		0455	44	111.	1		0705	70	20.	1		0915	96	0.
1		0250	19	254.	1		0500	45	107.	1		0710	71	17.	1		0920	97	0.
1		0255	20	246.	1		0505	46	103.	1		0715	72	15.	1		0925	98	0.
1		0300	21	237.	1		0510	47	98.	1		0720	73	13.	1		0930	99	0.
1		0305	22	228.	1		0515	48	94.	1		0725	74	11.	1		0935	100	0.
1		0310	23	218.	1		0520	49	90.	1		0730	75	9.	1		0940	101	0.
1		0315	24	209.	1		0525	50	85.	1		0735	76	7.					
1		0320	25	200.	1		0530	51	81.	1		0740	77	6.					
1		0325	26	192.	1		0535	52	77.	1		0745	78	4.					

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PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
			MAXIMUM AVERAGE FLOW			
265.	1.17	(CFS)	117.	85.	85.	85.
		(INCHES)	1.092	1.092	1.092	1.092
		(AC-FT)	58.	58.	58.	58.

CUMULATIVE AREA = 1.00 SQ MI

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40 KK RET2

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RETENTION REQUIREMENT

HYDROGRAPH ROUTING DATA

42 RL ROUTING LOSSES
QLOSS 0.00 INITIAL LOSS
CLOSS 0.00 ADDITIONAL FRACTION LOST

43 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP STOR TYPE OF INITIAL CONDITION
RSVRIC 0.00 INITIAL CONDITION
X 0.00 WORKING R AND D COEFFICIENT

44 SV	STORAGE	0.0	14.3	28.7	43.0	45.9	48.8	51.7	57.3
45 SQ	DISCHARGE	0.	0.	0.	0.	107.	304.	558.	1200.
46 SE	ELEVATION	0.00	1.00	2.00	3.00	3.20	3.40	3.60	4.00

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HYDROGRAPH AT STATION RET2

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	1		0410	35	0.	38.8	2.7	1		0700	69	33.	43.9	3.1
1		0125	2	0.	0.0	0.0	1		0415	36	0.	39.8	2.8	1		0705	70	30.	43.8	3.1
1		0130	3	0.	0.0	0.0	1		0420	37	0.	40.7	2.8	1		0710	71	27.	43.7	3.1
1		0135	4	0.	0.0	0.0	1		0425	38	0.	41.7	2.9	1		0715	72	25.	43.7	3.0
1		0140	5	0.	0.0	0.0	1		0430	39	0.	42.6	3.0	1		0720	73	22.	43.6	3.0
1		0145	6	0.	0.0	0.0	1		0435	40	16.	43.4	3.0	1		0725	74	20.	43.5	3.0
1		0150	7	0.	0.0	0.0	1		0440	41	40.	44.1	3.1	1		0730	75	18.	43.5	3.0
1		0155	8	0.	0.3	0.0	1		0445	42	59.	44.6	3.1	1		0735	76	16.	43.4	3.0
1		0200	9	0.	1.1	0.1	1		0450	43	72.	44.9	3.1	1		0740	77	14.	43.4	3.0
1		0205	10	0.	2.3	0.2	1		0455	44	81.	45.2	3.2	1		0745	78	12.	43.3	3.0
1		0210	11	0.	3.7	0.3	1		0500	45	87.	45.4	3.2	1		0750	79	10.	43.3	3.0
1		0215	12	0.	5.3	0.4	1		0505	46	91.	45.5	3.2	1		0755	80	8.	43.2	3.0
1		0220	13	0.	7.0	0.5	1		0510	47	93.	45.5	3.2	1		0800	81	6.	43.2	3.0
1		0225	14	0.	8.8	0.6	1		0515	48	94.	45.5	3.2	1		0805	82	5.	43.1	3.0
1		0230	15	0.	10.6	0.7	1		0520	49	94.	45.5	3.2	1		0810	83	4.	43.1	3.0
1		0235	16	0.	12.4	0.9	1		0525	50	92.	45.5	3.2	1		0815	84	3.	43.1	3.0
1		0240	17	0.	14.2	1.0	1		0530	51	90.	45.4	3.2	1		0820	85	2.	43.1	3.0
1		0245	18	0.	16.0	1.1	1		0535	52	88.	45.4	3.2	1		0825	86	2.	43.0	3.0
1		0250	19	0.	17.8	1.2	1		0540	53	85.	45.3	3.2	1		0830	87	1.	43.0	3.0
1		0255	20	0.	19.5	1.4	1		0545	54	82.	45.2	3.2	1		0835	88	1.	43.0	3.0
1		0300	21	0.	21.2	1.5	1		0550	55	78.	45.1	3.1	1		0840	89	1.	43.0	3.0
1		0305	22	0.	22.8	1.6	1		0555	56	75.	45.0	3.1	1		0845	90	1.	43.0	3.0
1		0310	23	0.	24.3	1.7	1		0600	57	71.	44.9	3.1	1		0850	91	0.	43.0	3.0
1		0315	24	0.	25.8	1.8	1		0605	58	68.	44.8	3.1	1		0855	92	0.	43.0	3.0
1		0320	25	0.	27.2	1.9	1		0610	59	64.	44.7	3.1	1		0900	93	0.	43.0	3.0
1		0325	26	0.	28.6	2.0	1		0615	60	61.	44.7	3.1	1		0905	94	0.	43.0	3.0
1		0330	27	0.	29.8	2.1	1		0620	61	57.	44.6	3.1	1		0910	95	0.	43.0	3.0
1		0335	28	0.	31.1	2.2	1		0625	62	54.	44.5	3.1	1		0915	96	0.	43.0	3.0
1		0340	29	0.	32.3	2.3	1		0630	63	51.	44.4	3.1	1		0920	97	0.	43.0	3.0

1	0345	30	0.	33.5	2.3	*	1	0635	64	47.	44.3	3.1	*	1	0925	98	0.	43.0	3.0
1	0350	31	0.	34.6	2.4	*	1	0640	65	44.	44.2	3.1	*	1	0930	99	0.	43.0	3.0
1	0355	32	0.	35.7	2.5	*	1	0645	66	41.	44.1	3.1	*	1	0935	100	0.	43.0	3.0
1	0400	33	0.	36.8	2.6	*	1	0650	67	38.	44.0	3.1	*	1	0940	101	0.	43.0	3.0
1	0405	34	0.	37.8	2.6	*	1	0655	68	35.	44.0	3.1	*						
						*							*						

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
94.	3.92	(CFS)	31.	22.	22.	22.
		(INCHES)	0.286	0.286	0.286	0.286
		(AC-FT)	15.	15.	15.	15.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	8.33-HR
46.	3.92	43.	34.	34.	34.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	8.33-HR
3.18	3.92	3.01	2.41	2.41	2.41

CUMULATIVE AREA = 1.00 SQ MI

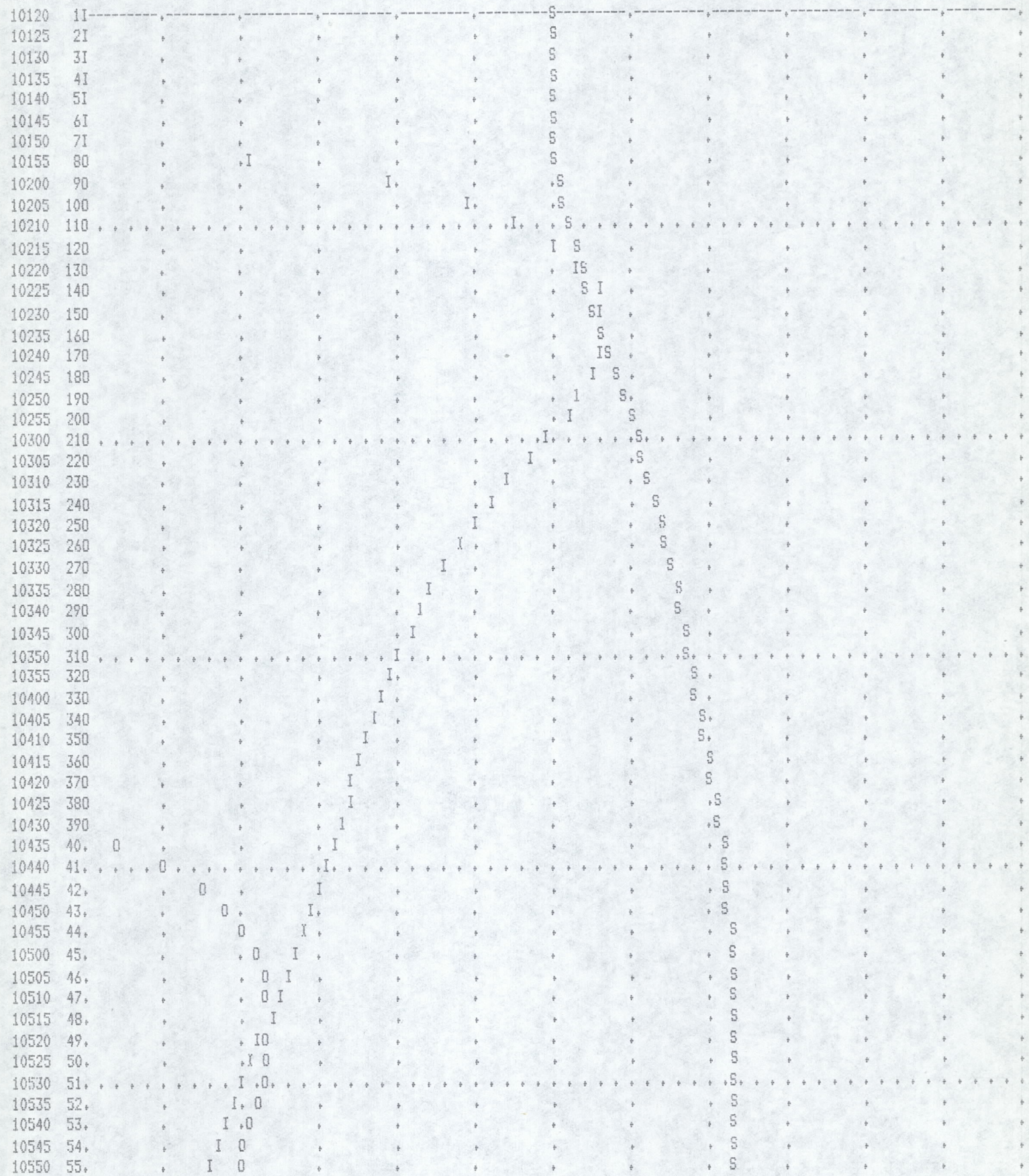
STATION RET2

(I) INFLOW, (O) OUTFLOW

0. 40. 80. 120. 160. 200. 240. 280. 0. 0. 0. 0. 0.

(S) STORAGE

0. 0. 0. 0. 0. 0. 0. 20. 40. 60. 0. 0. 0.



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10555  56.          I  O.                                                S
10600  57.          I  O                                                 S
10605  58.          I  O                                                 S
10610  59.          I  O                                                 S
10615  60.          I  O                                                 S
10620  61.     .    I. O                                                 S
10625  62.          I  O                                                 S
10630  63.         I. O                                                  S
10635  64.         I. O                                                  S
10640  65.        I .O                                                   S
10645  66.       I  O                                                    S
10650  67.       I  O                                                    S
10655  68.      I  O.                                                    S
10700  69.     I  O .                                                    S
10705  70.     I O  .                                                    S
10710  71.    . I .O.                                                    S
10715  72.     I O  .                                                    S
10720  73.    I  O  .                                                    S
10725  74.    I O   .                                                    S
10730  75.   I O    .                                                    S
10735  76.   I O    .                                                    S
10740  77.  I O     .                                                    S
10745  78.  I O     .                                                    S
10750  79.  IO      .                                                    S
10755  80I  O       .                                                    S
10800  81I  O       .                                                    S
10805  82IO         .                                                    S
10810  83IO         .                                                    S
10815  84IO         .                                                    S
10820  85IO         .                                                    S
10825  86I          .                                                    S
10830  87I          .                                                    S
10835  88I          .                                                    S
10840  89I          .                                                    S
10845  90I          .                                                    S
10850  91I          .                                                    S
10855  92I          .                                                    S
10900  93I          .                                                    S
10905  94I          .                                                    S
10910  95I          .                                                    S
10915  96I          .                                                    S
10920  97I          .                                                    S
10925  98I          .                                                    S
10930  99I          .                                                    S
10935 100I          .                                                    S
10940 101I---------.--------.--------.--------.--------.--------.--------.-S------.--------.--------.--------.
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

              ***************
              *             *
  47 KK       *     SUB3A   *
              *             *
              ***************
                         AREA BOUNDED BY BETHANY HOME ROAD- 99TH ST- CAMELBACK ROAD- RID CHANNEL
                         ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
                         PROPOSED CHANNEL : V SHAPE, SIDE SLOPE = 3:1
                         HYDROGRAPH AT C.P. (C)

                SUBBASIN RUNOFF DATA

  55 BA           SUBBASIN CHARACTERISTICS
                        TAREA          0.66  SUBBASIN AREA

                  PRECIPITATION DATA

  52 PB                 STORM          2.45  BASIN TOTAL PRECIPITATION

  53 PI             INCREMENTAL PRECIPITATION PATTERN
                      0.05       0.07       0.07       0.10       0.16       1.16       0.39       0.14       0.11       0.09
                      0.06       0.05

  56 LS           SCS LOSS RATE
                        STRTL          0.35  INITIAL ABSTRACTION
                       CRVNBR         85.00  CURVE NUMBER
                        RTIMP         48.00  PERCENT IMPERVIOUS AREA

                  KINEMATIC WAVE
  57 UK             OVERLAND-FLOW ELEMENT NO. 1
                            L         4500.  OVERLAND FLOW LENGTH
                            S        0.0050  SLOPE
                            N         0.100  ROUGHNESS COEFFICIENT
                           PA         100.0  PERCENT OF SUBBASIN
  58 RK             MAIN CHANNEL
                            L         5280.  CHANNEL LENGTH
                            S        0.0030  SLOPE
                            N         0.025  CHANNEL ROUGHNESS COEFFICIENT
                           CA          0.66  CONTRIBUTING AREA
                        SHAPE          TRAP  CHANNEL SHAPE
                           WD          0.00  BOTTOM WIDTH OR DIAMETER
                            Z          3.00  SIDE SLOPE
                       RUPSTQ           YES  ROUTE UPSTREAM HYDROGRAPH

                                                         ***

            COMPUTED KINEMATIC PARAMETERS
                ELEMENT      ALPHA        M       DT (MIN)    DX (FT)
                      1     1.0536     1.667         5.00      375.00
                      3     1.3787     1.333         5.00     2640.00

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

                                                HYDROGRAPH AT STATION     SUB3A
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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	168.
1		0125	2	0.05	0.03	0.02	0.	1		0540	53	0.00	0.00	0.00	163.
1		0130	3	0.07	0.04	0.03	0.	1		0545	54	0.00	0.00	0.00	158.
1		0135	4	0.07	0.04	0.03	0.	1		0550	55	0.00	0.00	0.00	152.
1		0140	5	0.10	0.05	0.05	0.	1		0555	56	0.00	0.00	0.00	147.
1		0145	6	0.16	0.08	0.08	0.	1		0600	57	0.00	0.00	0.00	141.
1		0150	7	1.16	0.33	0.83	1.	1		0605	58	0.00	0.00	0.00	135.
1		0155	8	0.39	0.06	0.33	11.	1		0610	59	0.00	0.00	0.00	130.
1		0200	9	0.14	0.02	0.12	35.	1		0615	60	0.00	0.00	0.00	124.
1		0205	10	0.11	0.01	0.10	66.	1		0620	61	0.00	0.00	0.00	119.
1		0210	11	0.09	0.01	0.08	98.	1		0625	62	0.00	0.00	0.00	113.
1		0215	12	0.06	0.01	0.05	124.	1		0630	63	0.00	0.00	0.00	108.
1		0220	13	0.05	0.01	0.04	144.	1		0635	64	0.00	0.00	0.00	103.
1		0225	14	0.00	0.00	0.00	157.	1		0640	65	0.00	0.00	0.00	98.
1		0230	15	0.00	0.00	0.00	165.	1		0645	66	0.00	0.00	0.00	93.
1		0235	16	0.00	0.00	0.00	169.	1		0650	67	0.00	0.00	0.00	89.
1		0240	17	0.00	0.00	0.00	171.	1		0655	68	0.00	0.00	0.00	84.
1		0245	18	0.00	0.00	0.00	171.	1		0700	69	0.00	0.00	0.00	80.
1		0250	19	0.00	0.00	0.00	172.	1		0705	70	0.00	0.00	0.00	76.
1		0255	20	0.00	0.00	0.00	172.	1		0710	71	0.00	0.00	0.00	72.
1		0300	21	0.00	0.00	0.00	172.	1		0715	72	0.00	0.00	0.00	68.
1		0305	22	0.00	0.00	0.00	172.	1		0720	73	0.00	0.00	0.00	64.
1		0310	23	0.00	0.00	0.00	172.	1		0725	74	0.00	0.00	0.00	61.
1		0315	24	0.00	0.00	0.00	172.	1		0730	75	0.00	0.00	0.00	57.
1		0320	25	0.00	0.00	0.00	172.	1		0735	76	0.00	0.00	0.00	54.
1		0325	26	0.00	0.00	0.00	171.	1		0740	77	0.00	0.00	0.00	51.
1		0330	27	0.00	0.00	0.00	171.	1		0745	78	0.00	0.00	0.00	48.
1		0335	28	0.00	0.00	0.00	170.	1		0750	79	0.00	0.00	0.00	45.
1		0340	29	0.00	0.00	0.00	168.	1		0755	80	0.00	0.00	0.00	42.
1		0345	30	0.00	0.00	0.00	166.	1		0800	81	0.00	0.00	0.00	40.
1		0350	31	0.00	0.00	0.00	164.	1		0805	82	0.00	0.00	0.00	37.
1		0355	32	0.00	0.00	0.00	161.	1		0810	83	0.00	0.00	0.00	35.
1		0400	33	0.00	0.00	0.00	158.	1		0815	84	0.00	0.00	0.00	32.
1		0405	34	0.00	0.00	0.00	154.	1		0820	85	0.00	0.00	0.00	30.
1		0410	35	0.00	0.00	0.00	150.	1		0825	86	0.00	0.00	0.00	29.
1		0415	36	0.00	0.00	0.00	145.	1		0830	87	0.00	0.00	0.00	27.
1		0420	37	0.00	0.00	0.00	140.	1		0835	88	0.00	0.00	0.00	26.
1		0425	38	0.00	0.00	0.00	136.	1		0840	89	0.00	0.00	0.00	24.
1		0430	39	0.00	0.00	0.00	131.	1		0845	90	0.00	0.00	0.00	23.
1		0435	40	0.00	0.00	0.00	126.	1		0850	91	0.00	0.00	0.00	22.
1		0440	41	0.00	0.00	0.00	128.	1		0855	92	0.00	0.00	0.00	21.
1		0445	42	0.00	0.00	0.00	138.	1		0900	93	0.00	0.00	0.00	20.
1		0450	43	0.00	0.00	0.00	151.	1		0905	94	0.00	0.00	0.00	20.
1		0455	44	0.00	0.00	0.00	163.	1		0910	95	0.00	0.00	0.00	19.
1		0500	45	0.00	0.00	0.00	173.	1		0915	96	0.00	0.00	0.00	18.
1		0505	46	0.00	0.00	0.00	178.	1		0920	97	0.00	0.00	0.00	18.
1		0510	47	0.00	0.00	0.00	181.	1		0925	98	0.00	0.00	0.00	17.
1		0515	48	0.00	0.00	0.00	181.	1		0930	99	0.00	0.00	0.00	17.
1		0520	49	0.00	0.00	0.00	180.	1		0935	100	0.00	0.00	0.00	16.
1		0525	50	0.00	0.00	0.00	177.	1		0940	101	0.00	0.00	0.00	16.
1		0530	51	0.00	0.00	0.00	173.								

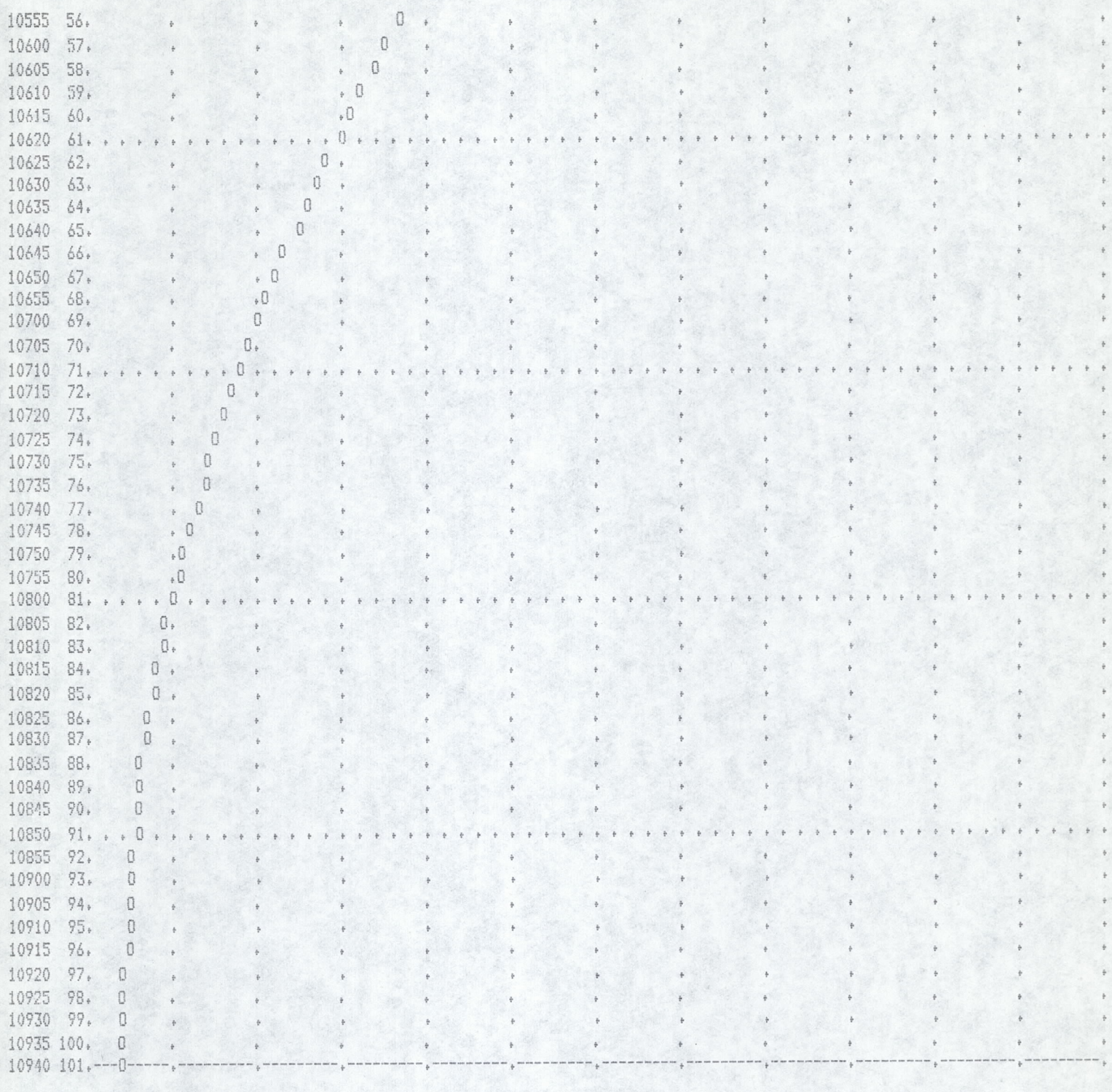
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.68, TOTAL EXCESS = 1.77

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
181.	3.92	(CFS)	132.	100.	100.	100.
		(INCHES)	0.738	0.777	0.777	0.777
		(AC-FT)	65.	69.	69.	69.

CUMULATIVE AREA = 1.66 SQ MI

STATION SUB3A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10600 57.
10605 58.
10610 59.
10615 60.
10620 61.
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10630 63.
10635 64.
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10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *             *
59 KK     *    SUB3A    *
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DIVERT TO R.I.D. CHANNEL

DT	DIVERSION ISTAD	RID	DIVERSION HYDROGRAPH IDENTIFICATION			
DI	INFLOW	1.00	150.00	151.00	300.00	1000.00
DQ	DIVERTED FLOW	1.00	150.00	150.00	150.00	150.00

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DIVERSION HYDROGRAPH RID

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	150.	1		0540	53	150.	1		0750	79	45.
1		0125	2	0.	1		0335	28	150.	1		0545	54	150.	1		0755	80	42.
1		0130	3	0.	1		0340	29	150.	1		0550	55	150.	1		0800	81	40.
1		0135	4	0.	1		0345	30	150.	1		0555	56	147.	1		0805	82	37.
1		0140	5	0.	1		0350	31	150.	1		0600	57	141.	1		0810	83	35.
1		0145	6	0.	1		0355	32	150.	1		0605	58	135.	1		0815	84	32.
1		0150	7	1.	1		0400	33	150.	1		0610	59	130.	1		0820	85	30.
1		0155	8	11.	1		0405	34	150.	1		0615	60	124.	1		0825	86	29.
1		0200	9	35.	1		0410	35	150.	1		0620	61	119.	1		0830	87	27.
1		0205	10	66.	1		0415	36	145.	1		0625	62	113.	1		0835	88	26.
1		0210	11	98.	1		0420	37	140.	1		0630	63	108.	1		0840	89	24.
1		0215	12	124.	1		0425	38	136.	1		0635	64	103.	1		0845	90	23.
1		0220	13	144.	1		0430	39	131.	1		0640	65	98.	1		0850	91	22.
1		0225	14	150.	1		0435	40	126.	1		0645	66	93.	1		0855	92	21.
1		0230	15	150.	1		0440	41	128.	1		0650	67	89.	1		0900	93	20.
1		0235	16	150.	1		0445	42	138.	1		0655	68	84.	1		0905	94	20.
1		0240	17	150.	1		0450	43	150.	1		0700	69	80.	1		0910	95	19.
1		0245	18	150.	1		0455	44	150.	1		0705	70	76.	1		0915	96	18.
1		0250	19	150.	1		0500	45	150.	1		0710	71	72.	1		0920	97	18.
1		0255	20	150.	1		0505	46	150.	1		0715	72	68.	1		0925	98	17.
1		0300	21	150.	1		0510	47	150.	1		0720	73	64.	1		0930	99	17.
1		0305	22	150.	1		0515	48	150.	1		0725	74	61.	1		0935	100	16.
1		0310	23	150.	1		0520	49	150.	1		0730	75	57.	1		0940	101	16.
1		0315	24	150.	1		0525	50	150.	1		0735	76	54.					
1		0320	25	150.	1		0530	51	150.	1		0740	77	51.					
1		0325	26	150.	1		0535	52	150.	1		0745	78	48.					

****

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
150.	1.08	(CFS)	123.	94.	94.	94.
		(INCHES)	0.690	0.729	0.729	0.729
		(AC-FT)	61.	65.	65.	65.

CUMULATIVE AREA = 1.66 SQ MI

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HYDROGRAPH AT STATION SUB3A

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0120	1	0.		1	0330	27	21.		1	0540	53	13.		1	0750	79	0.	
1	0125	2	0.		1	0335	28	20.		1	0545	54	8.		1	0755	80	0.	
1	0130	3	0.		1	0340	29	18.		1	0550	55	2.		1	0800	81	0.	
1	0135	4	0.		1	0345	30	16.		1	0555	56	0.		1	0805	82	0.	
1	0140	5	0.		1	0350	31	14.		1	0600	57	0.		1	0810	83	0.	
1	0145	6	0.		1	0355	32	11.		1	0605	58	0.		1	0815	84	0.	
1	0150	7	0.		1	0400	33	8.		1	0610	59	0.		1	0820	85	0.	
1	0155	8	0.		1	0405	34	4.		1	0615	60	0.		1	0825	86	0.	
1	0200	9	0.		1	0410	35	0.		1	0620	61	0.		1	0830	87	0.	
1	0205	10	0.		1	0415	36	0.		1	0625	62	0.		1	0835	88	0.	
1	0210	11	0.		1	0420	37	0.		1	0630	63	0.		1	0840	89	0.	
1	0215	12	0.		1	0425	38	0.		1	0635	64	0.		1	0845	90	0.	
1	0220	13	0.		1	0430	39	0.		1	0640	65	0.		1	0850	91	0.	
1	0225	14	7.		1	0435	40	0.		1	0645	66	0.		1	0855	92	0.	
1	0230	15	15.		1	0440	41	0.		1	0650	67	0.		1	0900	93	0.	
1	0235	16	19.		1	0445	42	0.		1	0655	68	0.		1	0905	94	0.	
1	0240	17	21.		1	0450	43	1.		1	0700	69	0.		1	0910	95	0.	
1	0245	18	21.		1	0455	44	13.		1	0705	70	0.		1	0915	96	0.	
1	0250	19	22.		1	0500	45	23.		1	0710	71	0.		1	0920	97	0.	
1	0255	20	22.		1	0505	46	28.		1	0715	72	0.		1	0925	98	0.	
1	0300	21	22.		1	0510	47	31.		1	0720	73	0.		1	0930	99	0.	
1	0305	22	22.		1	0515	48	31.		1	0725	74	0.		1	0935	100	0.	
1	0310	23	22.		1	0520	49	30.		1	0730	75	0.		1	0940	101	0.	
1	0315	24	22.		1	0525	50	27.		1	0735	76	0.						
1	0320	25	22.		1	0530	51	23.		1	0740	77	0.						
1	0325	26	21.		1	0535	52	18.		1	0745	78	0.						

****

PEAK FLOW (CFS)	TIME (HR)		6-HR	24-HR	72-HR	8.33-HR
31.	3.92	(CFS)	9.	6.	6.	6.
		(INCHES)	0.048	0.048	0.048	0.048
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 1.66 SQ MI

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64 KK SUB4

* *
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SUBAREA 3 ROUTED TO SUBAREA 4
PROPOSED CHANNEL : V SHAPE, SIDE SLOPE= 3:1

HYDROGRAPH ROUTING DATA

42 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

67 RK KINEMATIC WAVE STREAM ROUTING

L	4000.	CHANNEL LENGTH
S	0.0030	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	0.00	BOTTOM WIDTH OR DIAMETER
Z	3.00	SIDE SLOPE

***

KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.3787	1.333	5.00	2000.00

HYDROGRAPH AT STATION SUB4

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	22.	*	1		0540	53	23.	*	1		0750	79	0.
1		0125	2	0.	*	1		0335	28	21.	*	1		0545	54	20.	*	1		0755	80	0.
1		0130	3	0.	*	1		0340	29	21.	*	1		0550	55	16.	*	1		0800	81	0.
1		0135	4	0.	*	1		0345	30	20.	*	1		0555	56	12.	*	1		0805	82	0.
1		0140	5	0.	*	1		0350	31	19.	*	1		0600	57	9.	*	1		0810	83	0.
1		0145	6	0.	*	1		0355	32	17.	*	1		0605	58	6.	*	1		0815	84	0.
1		0150	7	0.	*	1		0400	33	15.	*	1		0610	59	5.	*	1		0820	85	0.
1		0155	8	0.	*	1		0405	34	13.	*	1		0615	60	3.	*	1		0825	86	0.
1		0200	9	0.	*	1		0410	35	10.	*	1		0620	61	3.	*	1		0830	87	0.
1		0205	10	0.	*	1		0415	36	8.	*	1		0625	62	2.	*	1		0835	88	0.
1		0210	11	0.	*	1		0420	37	6.	*	1		0630	63	2.	*	1		0840	89	0.
1		0215	12	0.	*	1		0425	38	4.	*	1		0635	64	1.	*	1		0845	90	0.
1		0220	13	0.	*	1		0430	39	3.	*	1		0640	65	1.	*	1		0850	91	0.
1		0225	14	0.	*	1		0435	40	2.	*	1		0645	66	1.	*	1		0855	92	0.
1		0230	15	0.	*	1		0440	41	2.	*	1		0650	67	1.	*	1		0900	93	0.
1		0235	16	2.	*	1		0445	42	1.	*	1		0655	68	1.	*	1		0905	94	0.
1		0240	17	6.	*	1		0450	43	1.	*	1		0700	69	0.	*	1		0910	95	0.
1		0245	18	10.	*	1		0455	44	1.	*	1		0705	70	0.	*	1		0915	96	0.
1		0250	19	14.	*	1		0500	45	2.	*	1		0710	71	0.	*	1		0920	97	0.
1		0255	20	18.	*	1		0505	46	6.	*	1		0715	72	0.	*	1		0925	98	0.
1		0300	21	20.	*	1		0510	47	12.	*	1		0720	73	0.	*	1		0930	99	0.
1		0305	22	21.	*	1		0515	48	19.	*	1		0725	74	0.	*	1		0935	100	0.

1	0310	23	21.	*	1	0520	49	25.	*	1	0730	75	0.	*	1	0940	101	0.		
1	0315	24	22.	*	1	0525	50	27.	*	1	0735	76	0.	*						
1	0320	25	22.	*	1	0530	51	28.	*	1	0740	77	0.	*						
1	0325	26	22.	*	1	0535	52	26.	*	1	0745	78	0.	*						
				*					*					*						

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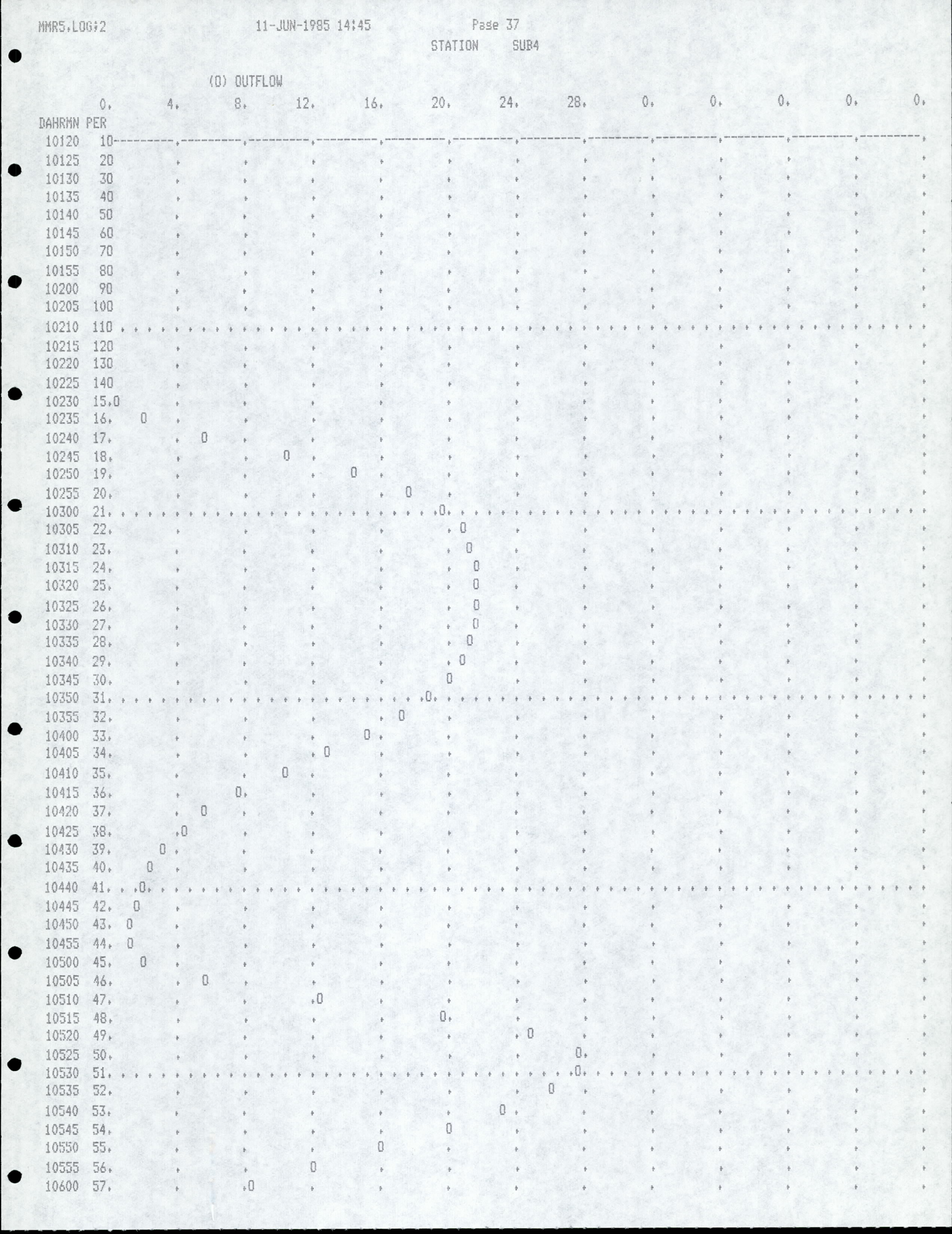
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
28.	4.17	(CFS)	9.	6.	6.	6.
		(INCHES)	0.048	0.048	0.048	0.048
		(AC-FT)	4.	4.	4.	4.

CUMULATIVE AREA = 1.66 SQ MI

STATION SUB4

(O) OUTFLOW



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10605  58.        .   0   .       .       .       .       .       .       .       .       .       .       .       .
10610  59.        .0      .       .       .       .       .       .       .       .       .       .       .       .
10615  60.      0 .       .       .       .       .       .       .       .       .       .       .       .       .
10620  61. . . 0 .       .       .       .       .       .       .       .       .       .       .       .       .
10625  62.    0  .       .       .       .       .       .       .       .       .       .       .       .       .
10630  63.   0   .       .       .       .       .       .       .       .       .       .       .       .       .
10635  64.  0    .       .       .       .       .       .       .       .       .       .       .       .       .
10640  65. 0     .       .       .       .       .       .       .       .       .       .       .       .       .
10645  66. 0     .       .       .       .       .       .       .       .       .       .       .       .       .
10650  67. 0     .       .       .       .       .       .       .       .       .       .       .       .       .
10655  68.0      .       .       .       .       .       .       .       .       .       .       .       .       .
10700  69.0      .       .       .       .       .       .       .       .       .       .       .       .       .
10705  70.0      .       .       .       .       .       .       .       .       .       .       .       .       .
10710  71.0. . . .       .       .       .       .       .       .       .       .       .       .       .       .
10715  72.0      .       .       .       .       .       .       .       .       .       .       .       .       .
10720  73.0      .       .       .       .       .       .       .       .       .       .       .       .       .
10725  74.0      .       .       .       .       .       .       .       .       .       .       .       .       .
10730  750       .       .       .       .       .       .       .       .       .       .       .       .       .
10735  760       .       .       .       .       .       .       .       .       .       .       .       .       .
10740  770       .       .       .       .       .       .       .       .       .       .       .       .       .
10745  780       .       .       .       .       .       .       .       .       .       .       .       .       .
10750  790       .       .       .       .       .       .       .       .       .       .       .       .       .
10755  800       .       .       .       .       .       .       .       .       .       .       .       .       .
10800  810 . . . .       .       .       .       .       .       .       .       .       .       .       .       .
10805  820       .       .       .       .       .       .       .       .       .       .       .       .       .
10810  830       .       .       .       .       .       .       .       .       .       .       .       .       .
10815  840       .       .       .       .       .       .       .       .       .       .       .       .       .
10820  850       .       .       .       .       .       .       .       .       .       .       .       .       .
10825  860       .       .       .       .       .       .       .       .       .       .       .       .       .
10830  870       .       .       .       .       .       .       .       .       .       .       .       .       .
10835  880       .       .       .       .       .       .       .       .       .       .       .       .       .
10840  890       .       .       .       .       .       .       .       .       .       .       .       .       .
10845  900       .       .       .       .       .       .       .       .       .       .       .       .       .
10850  910 . . . .       .       .       .       .       .       .       .       .       .       .       .       .
10855  920       .       .       .       .       .       .       .       .       .       .       .       .       .
10900  930       .       .       .       .       .       .       .       .       .       .       .       .       .
10905  940       .       .       .       .       .       .       .       .       .       .       .       .       .
10910  950       .       .       .       .       .       .       .       .       .       .       .       .       .
10915  960       .       .       .       .       .       .       .       .       .       .       .       .       .
10920  970       .       .       .       .       .       .       .       .       .       .       .       .       .
10925  980       .       .       .       .       .       .       .       .       .       .       .       .       .
10930  990       .       .       .       .       .       .       .       .       .       .       .       .       .
10935 1000       .       .       .       .       .       .       .       .       .       .       .       .       .
10940 1010-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.
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          *            *
68 KK     *      SUB4  *
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                        AREA BOUNDED BY BETHANY HOME ROAD- AGUA FRIA-CAMELBACK ROAD- RID CHANNEL
                        ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT CAMELBACK ROAD
                        HYDROGRAPH AT C.P. (D) INTO AGUA FRIA WASH

            SUBBASIN RUNOFF DATA

75 BA         SUBBASIN CHARACTERISTICS
                    TAREA        1.06  SUBBASIN AREA

              PRECIPITATION DATA

72 PB               STORM        2.45  BASIN TOTAL PRECIPITATION

73 PI           INCREMENTAL PRECIPITATION PATTERN
                   0.05     0.07     0.07     0.10     0.16     1.16     0.39     0.14     0.11     0.09
                   0.06     0.05

76 LS         SCS LOSS RATE
                    STRTL        0.27  INITIAL ABSTRACTION
                   CRVNBR       88.00  CURVE NUMBER
                    RTIMP       55.00  PERCENT IMPERVIOUS AREA

              KINEMATIC WAVE
77 UK           OVERLAND-FLOW ELEMENT NO. 1
                        L       5800.  OVERLAND FLOW LENGTH
                        S      0.0050  SLOPE
                        N       0.100  ROUGHNESS COEFFICIENT
                       PA       100.0  PERCENT OF SUBBASIN
78 RK           MAIN CHANNEL
                        L       4000.  CHANNEL LENGTH
                        S      0.0030  SLOPE
                        N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                       CA        1.06  CONTRIBUTING AREA
                    SHAPE        TRAP  CHANNEL SHAPE
                       WD        0.00  BOTTOM WIDTH OR DIAMETER
                        Z        1.00  SIDE SLOPE
                   RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

                                                  ***

        COMPUTED KINEMATIC PARAMETERS
           ELEMENT      ALPHA         M      DT (MIN)    DX (FT)
                 1     1.0536     1.667        5.00       414.29
                 3     1.6346     1.333        5.00      2000.00
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HYDROGRAPH AT STATION   SUB4

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	148.
1		0125	2	0.05	0.02	0.03	0.	1		0540	53	0.00	0.00	0.00	143.
1		0130	3	0.07	0.03	0.04	0.	1		0545	54	0.00	0.00	0.00	138.
1		0135	4	0.07	0.03	0.04	0.	1		0550	55	0.00	0.00	0.00	133.
1		0140	5	0.10	0.04	0.06	0.	1		0555	56	0.00	0.00	0.00	128.
1		0145	6	0.16	0.06	0.10	1.	1		0600	57	0.00	0.00	0.00	123.
1		0150	7	1.16	0.23	0.93	2.	1		0605	58	0.00	0.00	0.00	119.
1		0155	8	0.39	0.04	0.35	33.	1		0610	59	0.00	0.00	0.00	115.
1		0200	9	0.14	0.01	0.13	103.	1		0615	60	0.00	0.00	0.00	111.
1		0205	10	0.11	0.01	0.10	172.	1		0620	61	0.00	0.00	0.00	107.
1		0210	11	0.09	0.01	0.08	201.	1		0625	62	0.00	0.00	0.00	103.
1		0215	12	0.06	0.00	0.06	228.	1		0630	63	0.00	0.00	0.00	99.
1		0220	13	0.05	0.00	0.05	243.	1		0635	64	0.00	0.00	0.00	96.
1		0225	14	0.00	0.00	0.00	254.	1		0640	65	0.00	0.00	0.00	93.
1		0230	15	0.00	0.00	0.00	260.	1		0645	66	0.00	0.00	0.00	90.
1		0235	16	0.00	0.00	0.00	260.	1		0650	67	0.00	0.00	0.00	87.
1		0240	17	0.00	0.00	0.00	260.	1		0655	68	0.00	0.00	0.00	84.
1		0245	18	0.00	0.00	0.00	260.	1		0700	69	0.00	0.00	0.00	81.
1		0250	19	0.00	0.00	0.00	260.	1		0705	70	0.00	0.00	0.00	78.
1		0255	20	0.00	0.00	0.00	260.	1		0710	71	0.00	0.00	0.00	76.
1		0300	21	0.00	0.00	0.00	260.	1		0715	72	0.00	0.00	0.00	73.
1		0305	22	0.00	0.00	0.00	260.	1		0720	73	0.00	0.00	0.00	71.
1		0310	23	0.00	0.00	0.00	260.	1		0725	74	0.00	0.00	0.00	69.
1		0315	24	0.00	0.00	0.00	260.	1		0730	75	0.00	0.00	0.00	67.
1		0320	25	0.00	0.00	0.00	260.	1		0735	76	0.00	0.00	0.00	65.
1		0325	26	0.00	0.00	0.00	260.	1		0740	77	0.00	0.00	0.00	63.
1		0330	27	0.00	0.00	0.00	260.	1		0745	78	0.00	0.00	0.00	61.
1		0335	28	0.00	0.00	0.00	259.	1		0750	79	0.00	0.00	0.00	59.
1		0340	29	0.00	0.00	0.00	259.	1		0755	80	0.00	0.00	0.00	57.
1		0345	30	0.00	0.00	0.00	259.	1		0800	81	0.00	0.00	0.00	56.
1		0350	31	0.00	0.00	0.00	258.	1		0805	82	0.00	0.00	0.00	54.
1		0355	32	0.00	0.00	0.00	256.	1		0810	83	0.00	0.00	0.00	52.
1		0400	33	0.00	0.00	0.00	255.	1		0815	84	0.00	0.00	0.00	51.
1		0405	34	0.00	0.00	0.00	252.	1		0820	85	0.00	0.00	0.00	49.
1		0410	35	0.00	0.00	0.00	250.	1		0825	86	0.00	0.00	0.00	48.
1		0415	36	0.00	0.00	0.00	246.	1		0830	87	0.00	0.00	0.00	47.
1		0420	37	0.00	0.00	0.00	242.	1		0835	88	0.00	0.00	0.00	46.
1		0425	38	0.00	0.00	0.00	238.	1		0840	89	0.00	0.00	0.00	44.
1		0430	39	0.00	0.00	0.00	232.	1		0845	90	0.00	0.00	0.00	43.
1		0435	40	0.00	0.00	0.00	227.	1		0850	91	0.00	0.00	0.00	42.
1		0440	41	0.00	0.00	0.00	221.	1		0855	92	0.00	0.00	0.00	41.
1		0445	42	0.00	0.00	0.00	215.	1		0900	93	0.00	0.00	0.00	40.
1		0450	43	0.00	0.00	0.00	209.	1		0905	94	0.00	0.00	0.00	39.
1		0455	44	0.00	0.00	0.00	202.	1		0910	95	0.00	0.00	0.00	38.
1		0500	45	0.00	0.00	0.00	196.	1		0915	96	0.00	0.00	0.00	37.
1		0505	46	0.00	0.00	0.00	189.	1		0920	97	0.00	0.00	0.00	36.
1		0510	47	0.00	0.00	0.00	183.	1		0925	98	0.00	0.00	0.00	35.
1		0515	48	0.00	0.00	0.00	177.	1		0930	99	0.00	0.00	0.00	34.
1		0520	49	0.00	0.00	0.00	170.	1		0935	100	0.00	0.00	0.00	33.
1		0525	50	0.00	0.00	0.00	164.	1		0940	101	0.00	0.00	0.00	33.
1		0530	51	0.00	0.00	0.00	158.								

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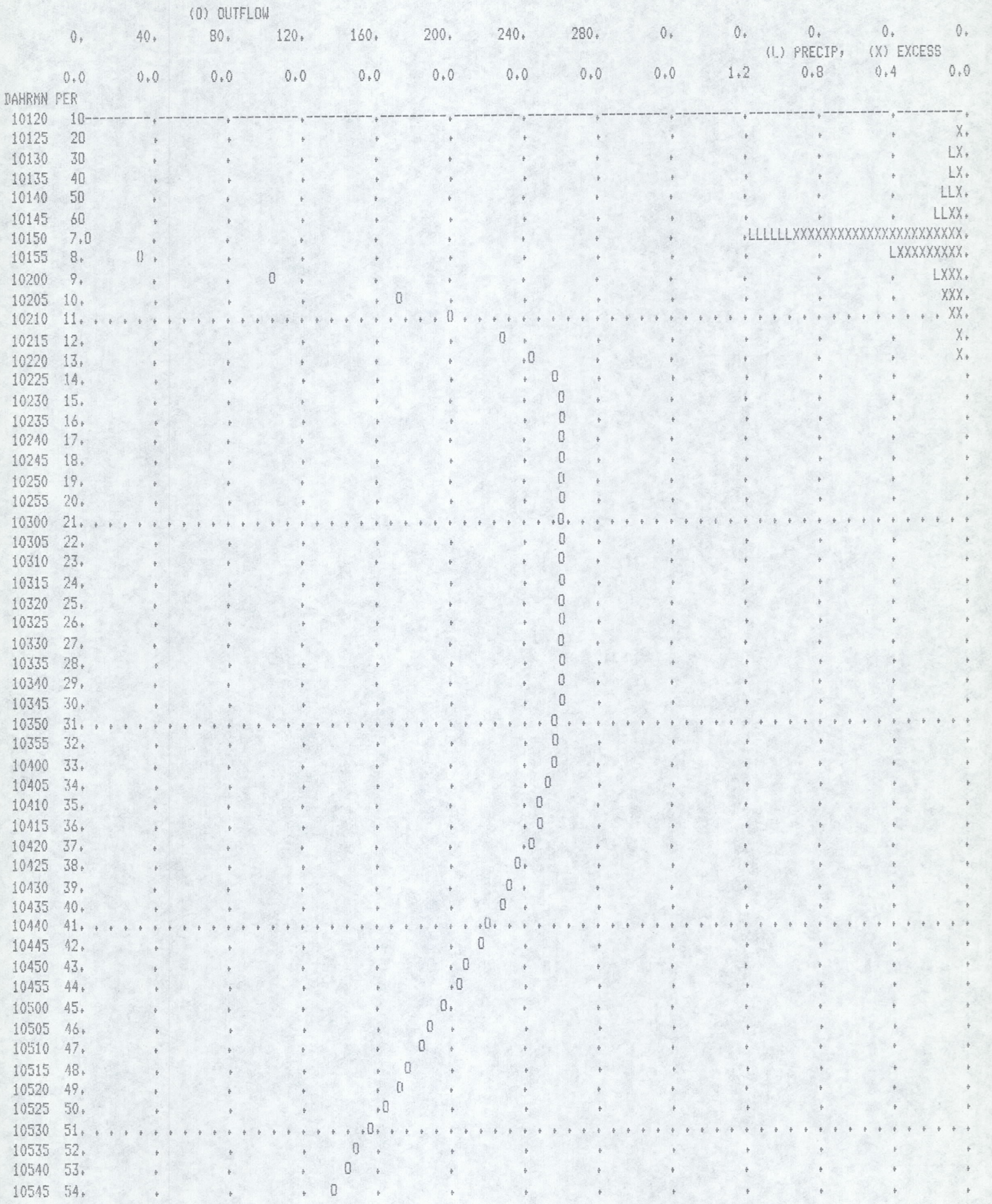
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.50, TOTAL EXCESS = 1.95

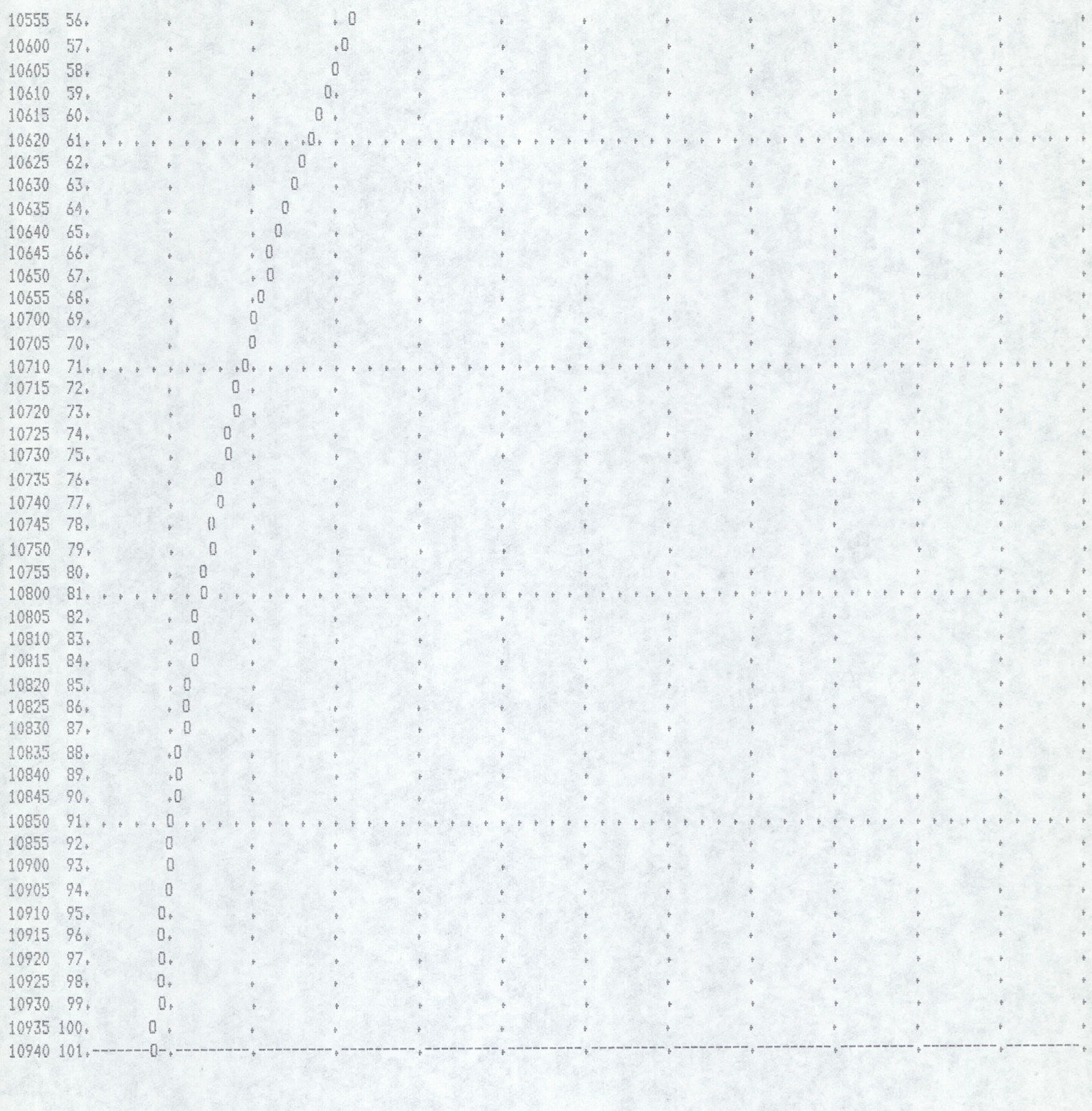
PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
260.	1.17	(CFS)	175.	135.	135.	135.
		(INCHES)	1.537	1.650	1.650	1.650
		(AC-FT)	87.	93.	93.	93.

CUMULATIVE AREA = 1.06 SQ MI

STATION SUB4

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10605 58.
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10640 65.
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10650 67.
10655 68.
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10710 71.
10715 72.
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10725 74.
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10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *             *
79 KK     *      RET4   *
          *             *
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RETENTION REQUIREMENT FOR SUB AREA 4

HYDROGRAPH ROUTING DATA

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81 RL          ROUTING LOSSES
                    QLOSS        0.00  INITIAL LOSS
                    CLOSS        0.00  ADDITIONAL FRACTION LOST

82 RS          STORAGE ROUTING
                    NSTPS           1  NUMBER OF SUBREACHES
                     ITYP        STOR  TYPE OF INITIAL CONDITION
                   RSVRIC        0.00  INITIAL CONDITION
                        X        0.00 WORKING R AND D COEFFICIENT

83 SV           STORAGE        0.0      15.0      30.0      45.0      48.0      51.0      54.0      60.0

84 SQ           DISCHARGE      0.        0.        0.        0.      107.      304.      558.     1200.

85 SE           ELEVATION      0.00      1.00      2.00      3.00      3.20      3.40      3.60      4.00

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HYDROGRAPH AT STATION RET4

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	1		0410	35	1.	45.0	3.0	1		0700	69	92.	47.6	3.2
1		0125	2	0.	0.0	0.0	1		0415	36	55.	46.5	3.1	1		0705	70	89.	47.5	3.2
1		0130	3	0.	0.0	0.0	1		0420	37	96.	47.7	3.2	1		0710	71	87.	47.4	3.2
1		0135	4	0.	0.0	0.0	1		0425	38	142.	48.5	3.2	1		0715	72	84.	47.4	3.2
1		0140	5	0.	0.0	0.0	1		0430	39	176.	49.1	3.3	1		0720	73	81.	47.3	3.2
1		0145	6	0.	0.0	0.0	1		0435	40	196.	49.4	3.3	1		0725	74	79.	47.2	3.1
1		0150	7	0.	0.0	0.0	1		0440	41	206.	49.5	3.3	1		0730	75	76.	47.1	3.1
1		0155	8	0.	0.1	0.0	1		0445	42	211.	49.6	3.3	1		0735	76	74.	47.1	3.1
1		0200	9	0.	0.6	0.0	1		0450	43	211.	49.6	3.3	1		0740	77	72.	47.0	3.1
1		0205	10	0.	1.6	0.1	1		0455	44	209.	49.6	3.3	1		0745	78	70.	47.0	3.1
1		0210	11	0.	2.8	0.2	1		0500	45	205.	49.5	3.3	1		0750	79	67.	46.9	3.1
1		0215	12	0.	4.3	0.3	1		0505	46	201.	49.4	3.3	1		0755	80	65.	46.8	3.1
1		0220	13	0.	5.9	0.4	1		0510	47	195.	49.3	3.3	1		0800	81	63.	46.8	3.1
1		0225	14	0.	7.7	0.5	1		0515	48	190.	49.3	3.3	1		0805	82	62.	46.7	3.1
1		0230	15	0.	9.4	0.6	1		0520	49	184.	49.2	3.3	1		0810	83	60.	46.7	3.1
1		0235	16	0.	11.2	0.7	1		0525	50	178.	49.1	3.3	1		0815	84	58.	46.6	3.1
1		0240	17	0.	13.0	0.9	1		0530	51	172.	49.0	3.3	1		0820	85	56.	46.6	3.1
1		0245	18	0.	14.8	1.0	1		0535	52	165.	48.9	3.3	1		0825	86	55.	46.5	3.1
1		0250	19	0.	16.6	1.1	1		0540	53	158.	48.8	3.3	1		0830	87	53.	46.5	3.1
1		0255	20	0.	18.4	1.2	1		0545	54	151.	48.7	3.2	1		0835	88	52.	46.4	3.1

1	0300	21	0.	20.2	1.3	*	1	0550	55	145.	48.6	3.2	*	1	0840	89	50.	46.4	3.1
1	0305	22	0.	21.9	1.5	*	1	0555	56	140.	48.5	3.2	*	1	0845	90	49.	46.4	3.1
1	0310	23	0.	23.7	1.6	*	1	0600	57	134.	48.4	3.2	*	1	0850	91	47.	46.3	3.1
1	0315	24	0.	25.5	1.7	*	1	0605	58	129.	48.3	3.2	*	1	0855	92	46.	46.3	3.1
1	0320	25	0.	27.3	1.8	*	1	0610	59	125.	48.3	3.2	*	1	0900	93	45.	46.3	3.1
1	0325	26	0.	29.1	1.9	*	1	0615	60	120.	48.2	3.2	*	1	0905	94	44.	46.2	3.1
1	0330	27	0.	30.9	2.1	*	1	0620	61	116.	48.1	3.2	*	1	0910	95	42.	46.2	3.1
1	0335	28	0.	32.7	2.2	*	1	0625	62	112.	48.1	3.2	*	1	0915	96	41.	46.2	3.1
1	0340	29	0.	34.5	2.3	*	1	0630	63	108.	48.0	3.2	*	1	0920	97	40.	46.1	3.1
1	0345	30	0.	36.2	2.4	*	1	0635	64	105.	48.0	3.2	*	1	0925	98	39.	46.1	3.1
1	0350	31	0.	38.0	2.5	*	1	0640	65	103.	47.9	3.2	*	1	0930	99	38.	46.1	3.1
1	0355	32	0.	39.8	2.7	*	1	0645	66	100.	47.8	3.2	*	1	0935	100	37.	46.0	3.1
1	0400	33	0.	41.6	2.8	*	1	0650	67	98.	47.7	3.2	*	1	0940	101	36.	46.0	3.1
1	0405	34	0.	43.3	2.9	*	1	0655	68	95.	47.7	3.2	*						
						*							*						

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
211.	3.50	(CFS)	95.	69.	69.	69.
		(INCHES)	0.836	0.836	0.836	0.836
		(AC-FT)	47.	47.	47.	47.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)	6-HR	24-HR	72-HR	8.33-HR
50.	3.50	47.	37.	37.	37.

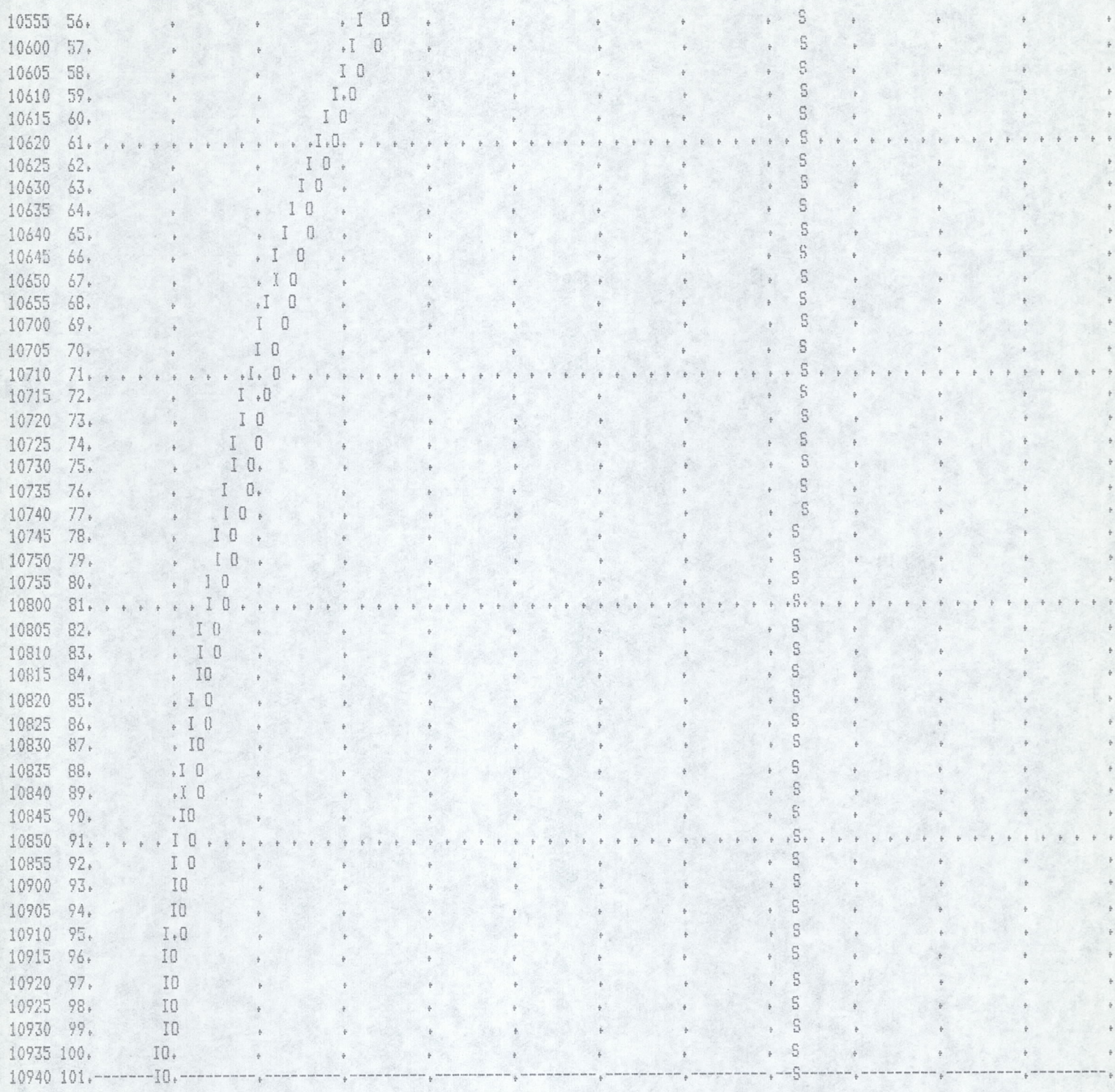
PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)	6-HR	24-HR	72-HR	8.33-HR
3.31	3.50	3.13	2.48	2.48	2.48

CUMULATIVE AREA = 1.06 SQ MI

STATION RET4

(I) INFLOW, (O) OUTFLOW

	0.	40.	80.	120.	160.	200.	240.	280.	0.	0.	0.	0.	0.
								(S) STORAGE					
	0.	0.	0.	0.	0.	0.	0.	20.	40.	60.	0.	0.	0.
DAHRMN	PER												
10120	1	I						S					
10125	2	I						S					
10130	3	I						S					
10135	4	I						S					
10140	5	I						S					
10145	6	I						S					
10150	7	I						S					
10155	8	I						S					
10200	9			I				S					
10205	10					I		S					
10210	11						I	S					
10215	12						I	S					
10220	13							I S					
10225	14							S					
10230	15							S					
10235	16							IS					
10240	17							IS					
10245	18							I S					
10250	19							I S					
10255	20							I S					
10300	21							I S					
10305	22							I S					
10310	23							I S					
10315	24							I S					
10320	25							I S					
10325	26							I S					
10330	27							I S					
10335	28							I S					
10340	29							I S					
10345	30							I S					
10350	31							I S					
10355	32							I S					
10400	33							I S					
10405	34							I S					
10410	35							I S					
10415	36		O					I S					
10420	37			O				I S					
10425	38				O			I S					
10430	39					O		I S					
10435	40						O	I S					
10440	41							O I S					
10445	42							OI S					
10450	43							IO S					
10455	44							IO S					
10500	45						I	O S					
10505	46						I	O S					
10510	47						I	O S					
10515	48						I	O S					
10520	49						I	O S					
10525	50						I	O S					
10530	51						I	O S					
10535	52					I		O S					
10540	53					I		O S					
10545	54					I		O S					
10550	55					I		O S					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10600 57. I O S
10605 58. I O S
10610 59. I O S
10615 60. I O S
10620 61. I O S
10625 62. I O S
10630 63. I O S
10635 64. I O S
10640 65. I O S
10645 66. I O S
10650 67. I O S
10655 68. I O S
10700 69. I O S
10705 70. I O S
10710 71. I O S
10715 72. I O S
10720 73. I O S
10725 74. I O S
10730 75. I O S
10735 76. I O S
10740 77. I O S
10745 78. I O S
10750 79. I O S
10755 80. I O S
10800 81. I O S
10805 82. I O S
10810 83. I O S
10815 84. I O S
10820 85. I O S
10825 86. I O S
10830 87. I O S
10835 88. I O S
10840 89. I O S
10845 90. I O S
10850 91. I O S
10855 92. I O S
10900 93. I O S
10905 94. I O S
10910 95. I O S
10915 96. I O S
10920 97. I O S
10925 98. I O S
10930 99. I O S
10935 100. I O S
10940 101. I O S

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          *            *
 86 KK    *      SUB4  *
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COMBINED ROUTED SUB3 AND ROUTED SUB4

88 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB4

SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	22.	1		0540	53	181.	1		0750	79	68.
1		0125	2	0.	1		0335	28	21.	1		0545	54	171.	1		0755	80	65.
1		0130	3	0.	1		0340	29	21.	1		0550	55	161.	1		0800	81	64.
1		0135	4	0.	1		0345	30	20.	1		0555	56	152.	1		0805	82	62.
1		0140	5	0.	1		0350	31	19.	1		0600	57	143.	1		0810	83	60.
1		0145	6	0.	1		0355	32	17.	1		0605	58	136.	1		0815	84	58.
1		0150	7	0.	1		0400	33	15.	1		0610	59	129.	1		0820	85	56.
1		0155	8	0.	1		0405	34	13.	1		0615	60	124.	1		0825	86	55.
1		0200	9	0.	1		0410	35	11.	1		0620	61	118.	1		0830	87	53.
1		0205	10	0.	1		0415	36	63.	1		0625	62	114.	1		0835	88	52.
1		0210	11	0.	1		0420	37	102.	1		0630	63	109.	1		0840	89	50.
1		0215	12	0.	1		0425	38	146.	1		0635	64	107.	1		0845	90	49.
1		0220	13	0.	1		0430	39	179.	1		0640	65	104.	1		0850	91	47.
1		0225	14	0.	1		0435	40	198.	1		0645	66	101.	1		0855	92	46.
1		0230	15	0.	1		0440	41	208.	1		0650	67	98.	1		0900	93	45.
1		0235	16	2.	1		0445	42	212.	1		0655	68	95.	1		0905	94	44.
1		0240	17	6.	1		0450	43	212.	1		0700	69	93.	1		0910	95	42.
1		0245	18	10.	1		0455	44	210.	1		0705	70	90.	1		0915	96	41.
1		0250	19	14.	1		0500	45	207.	1		0710	71	87.	1		0920	97	40.
1		0255	20	18.	1		0505	46	206.	1		0715	72	84.	1		0925	98	39.
1		0300	21	20.	1		0510	47	208.	1		0720	73	82.	1		0930	99	38.
1		0305	22	21.	1		0515	48	209.	1		0725	74	79.	1		0935	100	37.
1		0310	23	21.	1		0520	49	208.	1		0730	75	77.	1		0940	101	36.
1		0315	24	22.	1		0525	50	205.	1		0735	76	74.					
1		0320	25	22.	1		0530	51	199.	1		0740	77	72.					
1		0325	26	22.	1		0535	52	191.	1		0745	78	70.					

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
212.	3.50	(CFS)	101.	75.	75.	75.
		(INCHES)	0.344	0.355	0.355	0.355
		(AC-FT)	50.	52.	52.	52.

CUMULATIVE AREA = 2.72 SQ MI

STATION   SUB4

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                         (0) OUTFLOW
         0.       20.       40.       60.       80.      100.      120.      140.      160.      180.      200.      220.        0.
DAHRMN PER
 10120   10---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
 10125   20         .         .         .         .         .         .         .         .         .         .         .         .
 10130   30         .         .         .         .         .         .         .         .         .         .         .         .
 10135   40         .         .         .         .         .         .         .         .         .         .         .         .
 10140   50         .         .         .         .         .         .         .         .         .         .         .         .
 10145   60         .         .         .         .         .         .         .         .         .         .         .         .
 10150   70         .         .         .         .         .         .         .         .         .         .         .         .
 10155   80         .         .         .         .         .         .         .         .         .         .         .         .
 10200   90         .         .         .         .         .         .         .         .         .         .         .         .
 10205  100         .         .         .         .         .         .         .         .         .         .         .         .
 10210  110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10215  120         .         .         .         .         .         .         .         .         .         .         .         .
 10220  130         .         .         .         .         .         .         .         .         .         .         .         .
 10225  140         .         .         .         .         .         .         .         .         .         .         .         .
 10230  150         .         .         .         .         .         .         .         .         .         .         .         .
 10235  16.0        .         .         .         .         .         .         .         .         .         .         .         .
 10240  17.  0      .         .         .         .         .         .         .         .         .         .         .         .
 10245  18.    0    .         .         .         .         .         .         .         .         .         .         .         .
 10250  19.      0  .         .         .         .         .         .         .         .         .         .         .         .
 10255  20.        0.         .         .         .         .         .         .         .         .         .         .         .
 10300  21. . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10305  22.         0         .         .         .         .         .         .         .         .         .         .         .
 10310  23.         .0        .         .         .         .         .         .         .         .         .         .         .
 10315  24.         .0        .         .         .         .         .         .         .         .         .         .         .
 10320  25.         .0        .         .         .         .         .         .         .         .         .         .         .
 10325  26.         .0        .         .         .         .         .         .         .         .         .         .         .
 10330  27.         .0        .         .         .         .         .         .         .         .         .         .         .
 10335  28.         .0        .         .         .         .         .         .         .         .         .         .         .
 10340  29.         0         .         .         .         .         .         .         .         .         .         .         .
 10345  30.         0         .         .         .         .         .         .         .         .         .         .         .
 10350  31. . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10355  32.        0.         .         .         .         .         .         .         .         .         .         .         .
 10400  33.       0 .         .         .         .         .         .         .         .         .         .         .         .
 10405  34.     0   .         .         .         .         .         .         .         .         .         .         .         .
 10410  35.     0   .         .         .         .         .         .         .         .         .         .         .         .
 10415  36.         .         .         .0        .         .         .         .         .         .         .         .         .
 10420  37.         .         .         .         .         .0        .         .         .         .         .         .         .
 10425  38.         .         .         .         .         .         .         .  0      .         .         .         .         .
 10430  39.         .         .         .         .         .         .         .         .         0         .         .         .
 10435  40.         .         .         .         .         .         .         .         .         .        0.         .         .
 10440  41. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 0 . . . . . . . .
 10445  42.         .         .         .         .         .         .         .         .         .         .     0   .         .
 10450  43.         .         .         .         .         .         .         .         .         .         .     0   .         .
 10455  44.         .         .         .         .         .         .         .         .         .         .    0    .         .
 10500  45.         .         .         .         .         .         .         .         .         .         .   0     .         .
 10505  46.         .         .         .         .         .         .         .         .         .         .  0      .         .
 10510  47.         .         .         .         .         .         .         .         .         .         .   0     .         .
 10515  48.         .         .         .         .         .         .         .         .         .         .    0    .         .
 10520  49.         .         .         .         .         .         .         .         .         .         .   0     .         .
 10525  50.         .         .         .         .         .         .         .         .         .         .  0      .         .
 10530  51. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 0 . . . . . . . . . .
 10535  52.         .         .         .         .         .         .         .         .         .    0    .         .         .
 10540  53.         .         .         .         .         .         .         .         .         0         .         .         .
 10545  54.         .         .         .         .         .         .         .         .     0   .         .         .         .
 10550  55.         .         .         .         .         .         .         .         .0        .         .         .         .
 10555  56.         .         .         .         .         .         .         .     0   .         .         .         .         .
 10600  57.         .         .         .         .         .         .         . 0       .         .         .         .         .
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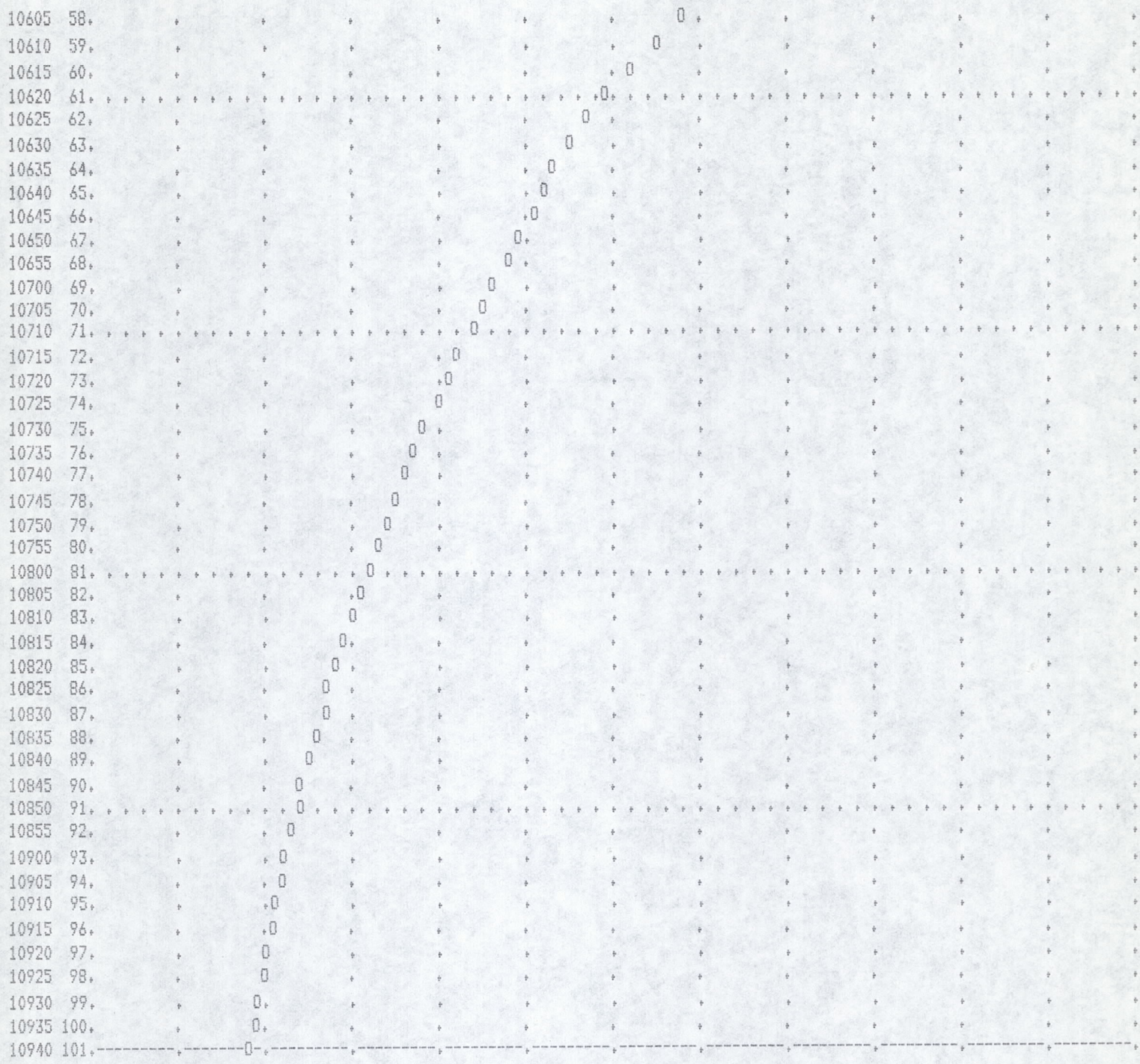
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10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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              *             *
  89 KK       *    SUB5B    *
              *             *
              ***************
                          NORTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
                           ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 99TH STREET

                 SUBBASIN RUNOFF DATA

  95 BA            SUBBASIN CHARACTERISTICS
                         TAREA        0.50  SUBBASIN AREA

                   PRECIPITATION DATA

  92 PB                  STORM        2.45  BASIN TOTAL PRECIPITATION

  93 PI              INCREMENTAL PRECIPITATION PATTERN
                        0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                        0.06      0.05

  96 LS            SCS LOSS RATE
                        STRTL         0.25  INITIAL ABSTRACTION
                       CRVNBR        89.00  CURVE NUMBER
                        RTIMP        60.00  PERCENT IMPERVIOUS AREA

                     LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
                        STRTL         0.25  INITIAL ABSTRACTION
                       CRVNBR        89.00  CURVE NUMBER
                        RTIMP        60.00  PERCENT IMPERVIOUS AREA

                   KINEMATIC WAVE
  97 UK              OVERLAND-FLOW ELEMENT NO. 1
                            L        1850.  OVERLAND FLOW LENGTH
                            S       0.0033  SLOPE
                            N        0.100  ROUGHNESS COEFFICIENT
                           PA         25.0  PERCENT OF SUBBASIN
  98 UK              OVERLAND-FLOW ELEMENT NO. 2
                            L        5600.  OVERLAND FLOW LENGTH
                            S       0.0033  SLOPE
                            N        0.100  ROUGHNESS COEFFICIENT
                           PA         75.0  PERCENT OF SUBBASIN
  99 RK              MAIN CHANNEL
                            L        2640.  CHANNEL LENGTH
                            S       0.0050  SLOPE
                            N        0.025  CHANNEL ROUGHNESS COEFFICIENT
                           CA         0.50  CONTRIBUTING AREA
                        SHAPE         TRAP  CHANNEL SHAPE
                           WD         0.00  BOTTOM WIDTH OR DIAMETER
                            Z         1.00  SIDE SLOPE
                       RUPSTQ           NO  ROUTE UPSTREAM HYDROGRAPH

                                                              ***

           COMPUTED KINEMATIC PARAMETERS
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ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.8559	1.667	5.00	231.25
2	0.8559	1.667	5.00	373.33
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB5B

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	65.
1		0125	2	0.05	0.02	0.03	0.	*	1		0540	53	0.00	0.00	0.00	63.
1		0130	3	0.07	0.03	0.04	0.	*	1		0545	54	0.00	0.00	0.00	61.
1		0135	4	0.07	0.03	0.04	0.	*	1		0550	55	0.00	0.00	0.00	59.
1		0140	5	0.10	0.04	0.06	1.	*	1		0555	56	0.00	0.00	0.00	57.
1		0145	6	0.16	0.05	0.11	2.	*	1		0600	57	0.00	0.00	0.00	55.
1		0150	7	1.16	0.19	0.97	19.	*	1		0605	58	0.00	0.00	0.00	54.
1		0155	8	0.39	0.03	0.36	72.	*	1		0610	59	0.00	0.00	0.00	52.
1		0200	9	0.14	0.01	0.13	111.	*	1		0615	60	0.00	0.00	0.00	50.
1		0205	10	0.11	0.01	0.10	130.	*	1		0620	61	0.00	0.00	0.00	48.
1		0210	11	0.09	0.01	0.08	143.	*	1		0625	62	0.00	0.00	0.00	47.
1		0215	12	0.06	0.00	0.06	154.	*	1		0630	63	0.00	0.00	0.00	45.
1		0220	13	0.05	0.00	0.05	161.	*	1		0635	64	0.00	0.00	0.00	44.
1		0225	14	0.00	0.00	0.00	166.	*	1		0640	65	0.00	0.00	0.00	42.
1		0230	15	0.00	0.00	0.00	167.	*	1		0645	66	0.00	0.00	0.00	41.
1		0235	16	0.00	0.00	0.00	166.	*	1		0650	67	0.00	0.00	0.00	40.
1		0240	17	0.00	0.00	0.00	165.	*	1		0655	68	0.00	0.00	0.00	38.
1		0245	18	0.00	0.00	0.00	163.	*	1		0700	69	0.00	0.00	0.00	37.
1		0250	19	0.00	0.00	0.00	160.	*	1		0705	70	0.00	0.00	0.00	36.
1		0255	20	0.00	0.00	0.00	156.	*	1		0710	71	0.00	0.00	0.00	35.
1		0300	21	0.00	0.00	0.00	151.	*	1		0715	72	0.00	0.00	0.00	34.
1		0305	22	0.00	0.00	0.00	146.	*	1		0720	73	0.00	0.00	0.00	33.
1		0310	23	0.00	0.00	0.00	141.	*	1		0725	74	0.00	0.00	0.00	32.
1		0315	24	0.00	0.00	0.00	136.	*	1		0730	75	0.00	0.00	0.00	31.
1		0320	25	0.00	0.00	0.00	131.	*	1		0735	76	0.00	0.00	0.00	30.
1		0325	26	0.00	0.00	0.00	127.	*	1		0740	77	0.00	0.00	0.00	29.
1		0330	27	0.00	0.00	0.00	123.	*	1		0745	78	0.00	0.00	0.00	28.
1		0335	28	0.00	0.00	0.00	120.	*	1		0750	79	0.00	0.00	0.00	27.
1		0340	29	0.00	0.00	0.00	116.	*	1		0755	80	0.00	0.00	0.00	27.
1		0345	30	0.00	0.00	0.00	114.	*	1		0800	81	0.00	0.00	0.00	26.
1		0350	31	0.00	0.00	0.00	111.	*	1		0805	82	0.00	0.00	0.00	25.
1		0355	32	0.00	0.00	0.00	109.	*	1		0810	83	0.00	0.00	0.00	24.
1		0400	33	0.00	0.00	0.00	106.	*	1		0815	84	0.00	0.00	0.00	24.
1		0405	34	0.00	0.00	0.00	104.	*	1		0820	85	0.00	0.00	0.00	23.
1		0410	35	0.00	0.00	0.00	102.	*	1		0825	86	0.00	0.00	0.00	23.
1		0415	36	0.00	0.00	0.00	100.	*	1		0830	87	0.00	0.00	0.00	22.
1		0420	37	0.00	0.00	0.00	98.	*	1		0835	88	0.00	0.00	0.00	21.
1		0425	38	0.00	0.00	0.00	96.	*	1		0840	89	0.00	0.00	0.00	21.
1		0430	39	0.00	0.00	0.00	94.	*	1		0845	90	0.00	0.00	0.00	20.
1		0435	40	0.00	0.00	0.00	92.	*	1		0850	91	0.00	0.00	0.00	20.
1		0440	41	0.00	0.00	0.00	90.	*	1		0855	92	0.00	0.00	0.00	19.
1		0445	42	0.00	0.00	0.00	88.	*	1		0900	93	0.00	0.00	0.00	19.
1		0450	43	0.00	0.00	0.00	86.	*	1		0905	94	0.00	0.00	0.00	18.
1		0455	44	0.00	0.00	0.00	83.	*	1		0910	95	0.00	0.00	0.00	18.
1		0500	45	0.00	0.00	0.00	81.	*	1		0915	96	0.00	0.00	0.00	17.
1		0505	46	0.00	0.00	0.00	79.	*	1		0920	97	0.00	0.00	0.00	17.
1		0510	47	0.00	0.00	0.00	77.	*	1		0925	98	0.00	0.00	0.00	17.
1		0515	48	0.00	0.00	0.00	74.	*	1		0930	99	0.00	0.00	0.00	16.

1	0520	49	0.00	0.00	0.00	72.	*	1	0935	100	0.00	0.00	0.00	16.
1	0525	50	0.00	0.00	0.00	70.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	68.	*							
							*							

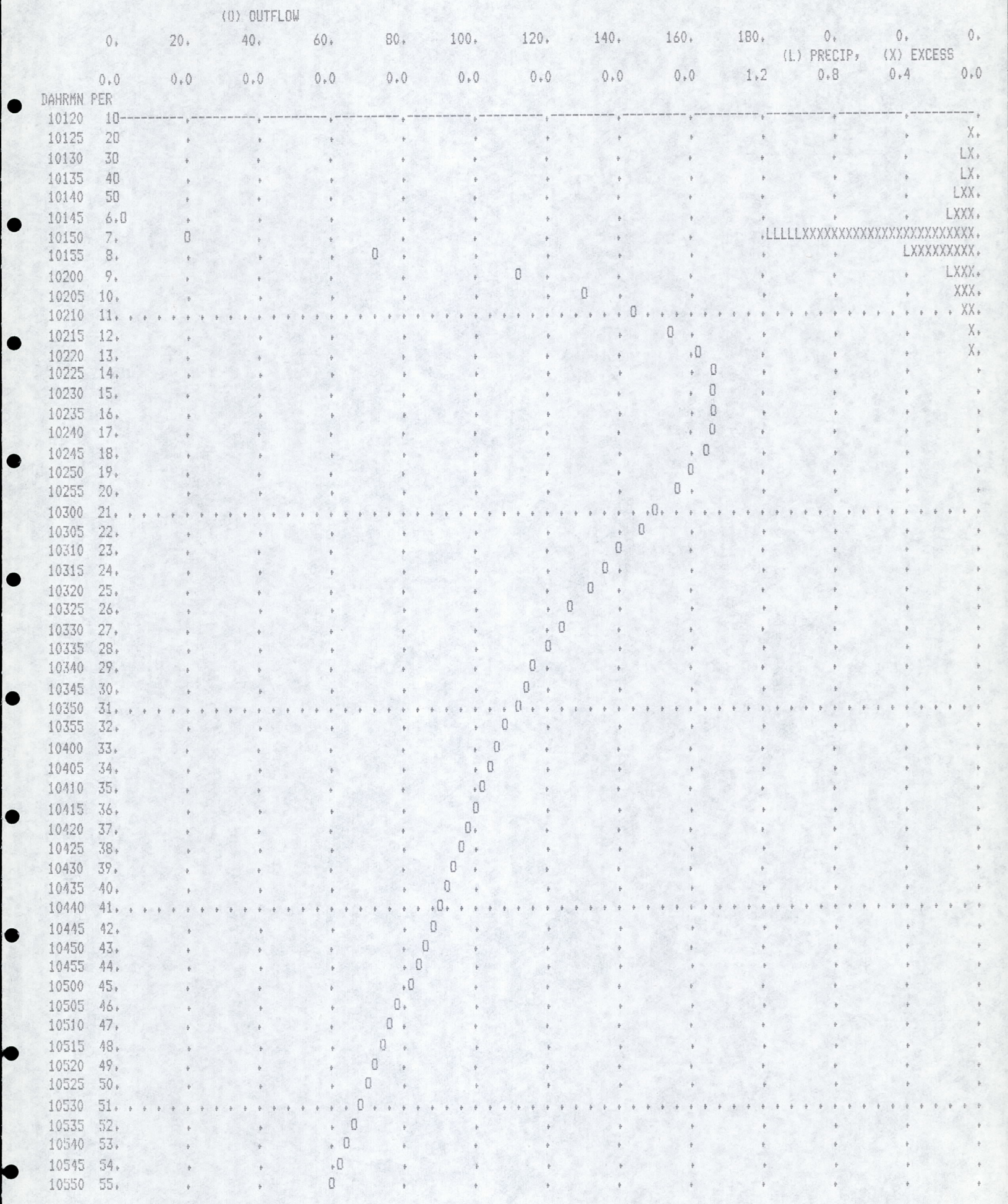
****

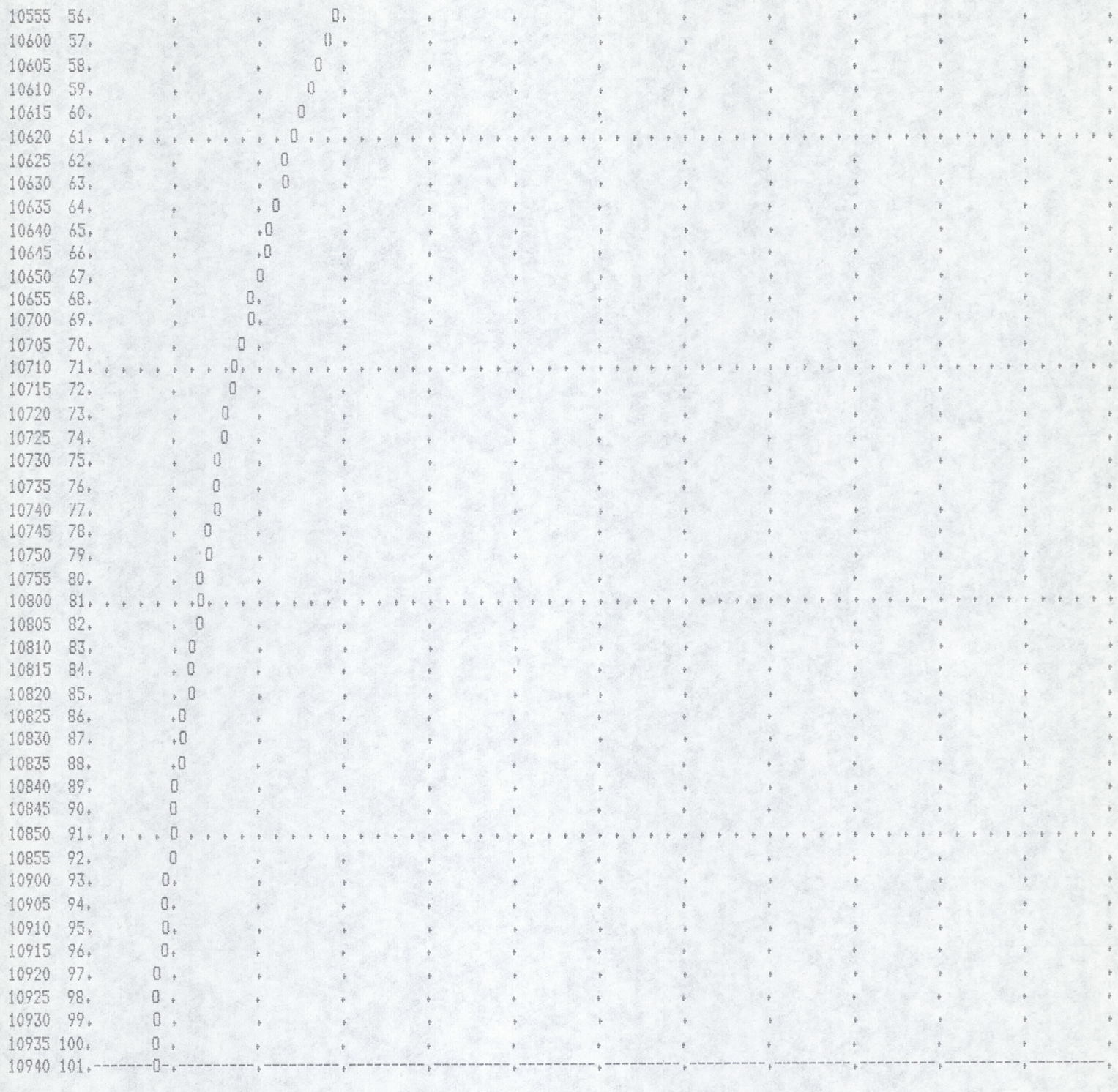
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.42, TOTAL EXCESS = 2.03

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
167.	1.17	(CFS)	88.	68.	68.	68.
		(INCHES)	1.630	1.751	1.751	1.751
		(AC-FT)	43.	47.	47.	47.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB5B

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10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
100 KK    *    SUB5A   *
          *            *
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                    SOUTH-EAST HALF OF 91ST-CAMELBACK-99TH-INDIAN SCHOOL ROAD
                     ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

               SUBBASIN RUNOFF DATA

106 BA           SUBBASIN CHARACTERISTICS
                      TAREA        0.50  SUBBASIN AREA

                 PRECIPITATION DATA

103 PB                STORM        2.45  BASIN TOTAL PRECIPITATION

104 PI             INCREMENTAL PRECIPITATION PATTERN
                     0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                     0.06      0.05

107 LS           SCS LOSS RATE
                      STRTL        0.25  INITIAL ABSTRACTION
                     CRVNBR       89.00  CURVE NUMBER
                      RTIMP       60.00  PERCENT IMPERVIOUS AREA

                   LOSS RATE VARIABLES FOR SECOND OVERLAND FLOW ELEMENT
                      STRTL        0.25  INITIAL ABSTRACTION
                     CRVNBR       89.00  CURVE NUMBER
                      RTIMP       60.00  PERCENT IMPERVIOUS AREA

                 KINEMATIC WAVE
108 UK             OVERLAND-FLOW ELEMENT NO. 1
                         L        1850.  OVERLAND FLOW LENGTH
                         S      0.0033  SLOPE
                         N       0.100  ROUGHNESS COEFFICIENT
                        PA        25.0  PERCENT OF SUBBASIN
109 UK             OVERLAND-FLOW ELEMENT NO. 2
                         L        5600.  OVERLAND FLOW LENGTH
                         S      0.0033  SLOPE
                         N       0.100  ROUGHNESS COEFFICIENT
                        PA        75.0  PERCENT OF SUBBASIN
110 RK             MAIN CHANNEL
                         L        2640.  CHANNEL LENGTH
                         S      0.0050  SLOPE
                         N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                        CA        0.50  CONTRIBUTING AREA
                     SHAPE        TRAP  CHANNEL SHAPE
                        WD        0.00  BOTTOM WIDTH OR DIAMETER
                         Z        1.00  SIDE SLOPE
                    RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

                                                                                                                    ***

          COMPUTED KINEMATIC PARAMETERS
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ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.8559	1.667	5.00	231.25
2	0.8559	1.667	5.00	373.33
3	2.1102	1.333	5.00	1320.00

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HYDROGRAPH AT STATION SUB5A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	65.
1		0125	2	0.05	0.02	0.03	0.	*	1		0540	53	0.00	0.00	0.00	63.
1		0130	3	0.07	0.03	0.04	0.	*	1		0545	54	0.00	0.00	0.00	61.
1		0135	4	0.07	0.03	0.04	0.	*	1		0550	55	0.00	0.00	0.00	59.
1		0140	5	0.10	0.04	0.06	1.	*	1		0555	56	0.00	0.00	0.00	57.
1		0145	6	0.16	0.05	0.11	2.	*	1		0600	57	0.00	0.00	0.00	55.
1		0150	7	1.16	0.19	0.97	19.	*	1		0605	58	0.00	0.00	0.00	54.
1		0155	8	0.39	0.03	0.36	72.	*	1		0610	59	0.00	0.00	0.00	52.
1		0200	9	0.14	0.01	0.13	111.	*	1		0615	60	0.00	0.00	0.00	50.
1		0205	10	0.11	0.01	0.10	130.	*	1		0620	61	0.00	0.00	0.00	48.
1		0210	11	0.09	0.01	0.08	143.	*	1		0625	62	0.00	0.00	0.00	47.
1		0215	12	0.06	0.00	0.06	154.	*	1		0630	63	0.00	0.00	0.00	45.
1		0220	13	0.05	0.00	0.05	161.	*	1		0635	64	0.00	0.00	0.00	44.
1		0225	14	0.00	0.00	0.00	166.	*	1		0640	65	0.00	0.00	0.00	42.
1		0230	15	0.00	0.00	0.00	167.	*	1		0645	66	0.00	0.00	0.00	41.
1		0235	16	0.00	0.00	0.00	166.	*	1		0650	67	0.00	0.00	0.00	40.
1		0240	17	0.00	0.00	0.00	165.	*	1		0655	68	0.00	0.00	0.00	38.
1		0245	18	0.00	0.00	0.00	163.	*	1		0700	69	0.00	0.00	0.00	37.
1		0250	19	0.00	0.00	0.00	160.	*	1		0705	70	0.00	0.00	0.00	36.
1		0255	20	0.00	0.00	0.00	156.	*	1		0710	71	0.00	0.00	0.00	35.
1		0300	21	0.00	0.00	0.00	151.	*	1		0715	72	0.00	0.00	0.00	34.
1		0305	22	0.00	0.00	0.00	146.	*	1		0720	73	0.00	0.00	0.00	33.
1		0310	23	0.00	0.00	0.00	141.	*	1		0725	74	0.00	0.00	0.00	32.
1		0315	24	0.00	0.00	0.00	136.	*	1		0730	75	0.00	0.00	0.00	31.
1		0320	25	0.00	0.00	0.00	131.	*	1		0735	76	0.00	0.00	0.00	30.
1		0325	26	0.00	0.00	0.00	127.	*	1		0740	77	0.00	0.00	0.00	29.
1		0330	27	0.00	0.00	0.00	123.	*	1		0745	78	0.00	0.00	0.00	28.
1		0335	28	0.00	0.00	0.00	120.	*	1		0750	79	0.00	0.00	0.00	27.
1		0340	29	0.00	0.00	0.00	116.	*	1		0755	80	0.00	0.00	0.00	27.
1		0345	30	0.00	0.00	0.00	114.	*	1		0800	81	0.00	0.00	0.00	26.
1		0350	31	0.00	0.00	0.00	111.	*	1		0805	82	0.00	0.00	0.00	25.
1		0355	32	0.00	0.00	0.00	109.	*	1		0810	83	0.00	0.00	0.00	24.
1		0400	33	0.00	0.00	0.00	106.	*	1		0815	84	0.00	0.00	0.00	24.
1		0405	34	0.00	0.00	0.00	104.	*	1		0820	85	0.00	0.00	0.00	23.
1		0410	35	0.00	0.00	0.00	102.	*	1		0825	86	0.00	0.00	0.00	23.
1		0415	36	0.00	0.00	0.00	100.	*	1		0830	87	0.00	0.00	0.00	22.
1		0420	37	0.00	0.00	0.00	98.	*	1		0835	88	0.00	0.00	0.00	21.
1		0425	38	0.00	0.00	0.00	96.	*	1		0840	89	0.00	0.00	0.00	21.
1		0430	39	0.00	0.00	0.00	94.	*	1		0845	90	0.00	0.00	0.00	20.
1		0435	40	0.00	0.00	0.00	92.	*	1		0850	91	0.00	0.00	0.00	20.
1		0440	41	0.00	0.00	0.00	90.	*	1		0855	92	0.00	0.00	0.00	19.
1		0445	42	0.00	0.00	0.00	88.	*	1		0900	93	0.00	0.00	0.00	19.
1		0450	43	0.00	0.00	0.00	86.	*	1		0905	94	0.00	0.00	0.00	18.
1		0455	44	0.00	0.00	0.00	83.	*	1		0910	95	0.00	0.00	0.00	18.
1		0500	45	0.00	0.00	0.00	81.	*	1		0915	96	0.00	0.00	0.00	17.
1		0505	46	0.00	0.00	0.00	79.	*	1		0920	97	0.00	0.00	0.00	17.
1		0510	47	0.00	0.00	0.00	77.	*	1		0925	98	0.00	0.00	0.00	17.
1		0515	48	0.00	0.00	0.00	74.	*	1		0930	99	0.00	0.00	0.00	16.

1	0520	49	0.00	0.00	0.00	72.	*	1	0935	100	0.00	0.00	0.00	16.
1	0525	50	0.00	0.00	0.00	70.	*	1	0940	101	0.00	0.00	0.00	15.
1	0530	51	0.00	0.00	0.00	68.	*							
							*							

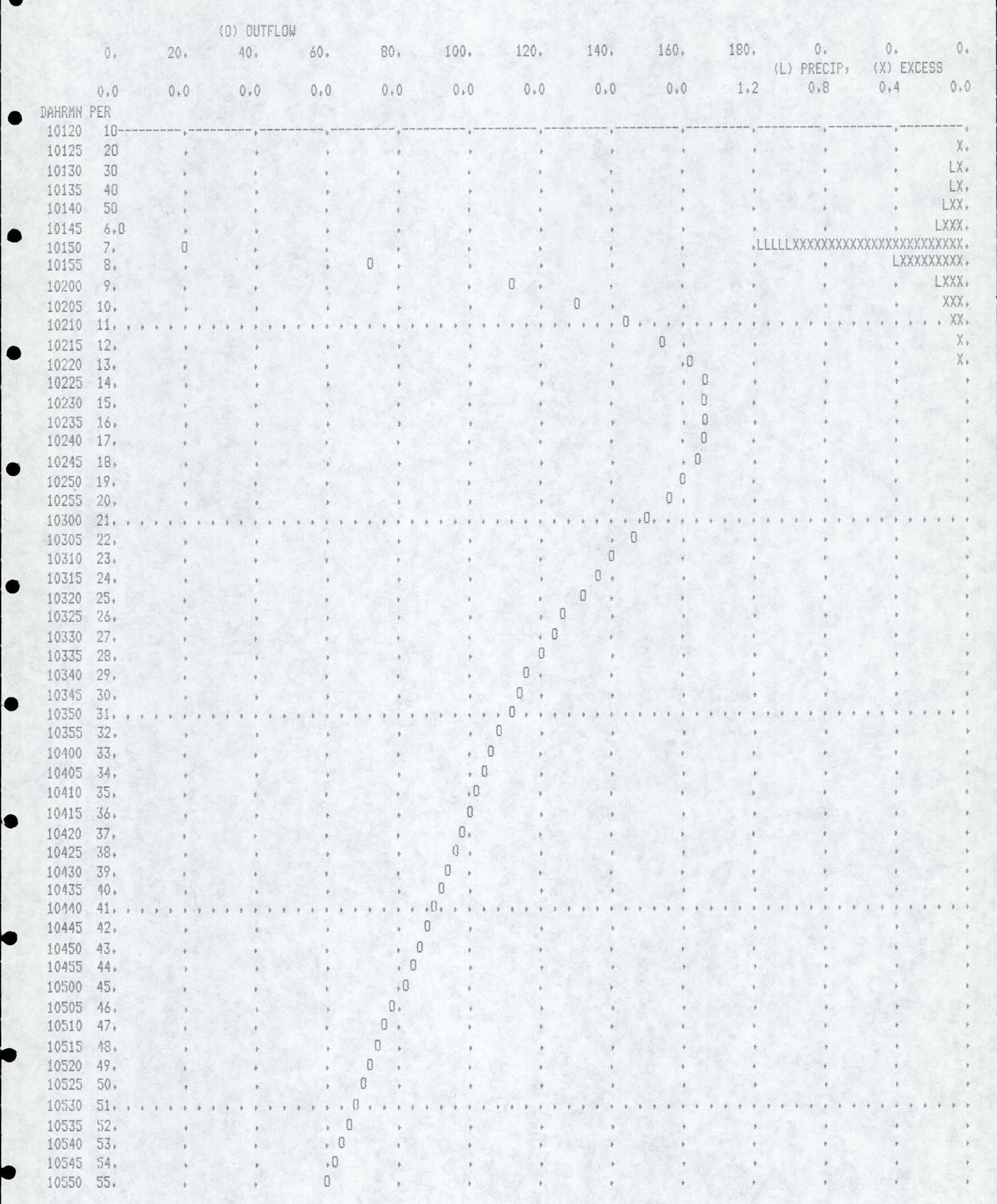
****

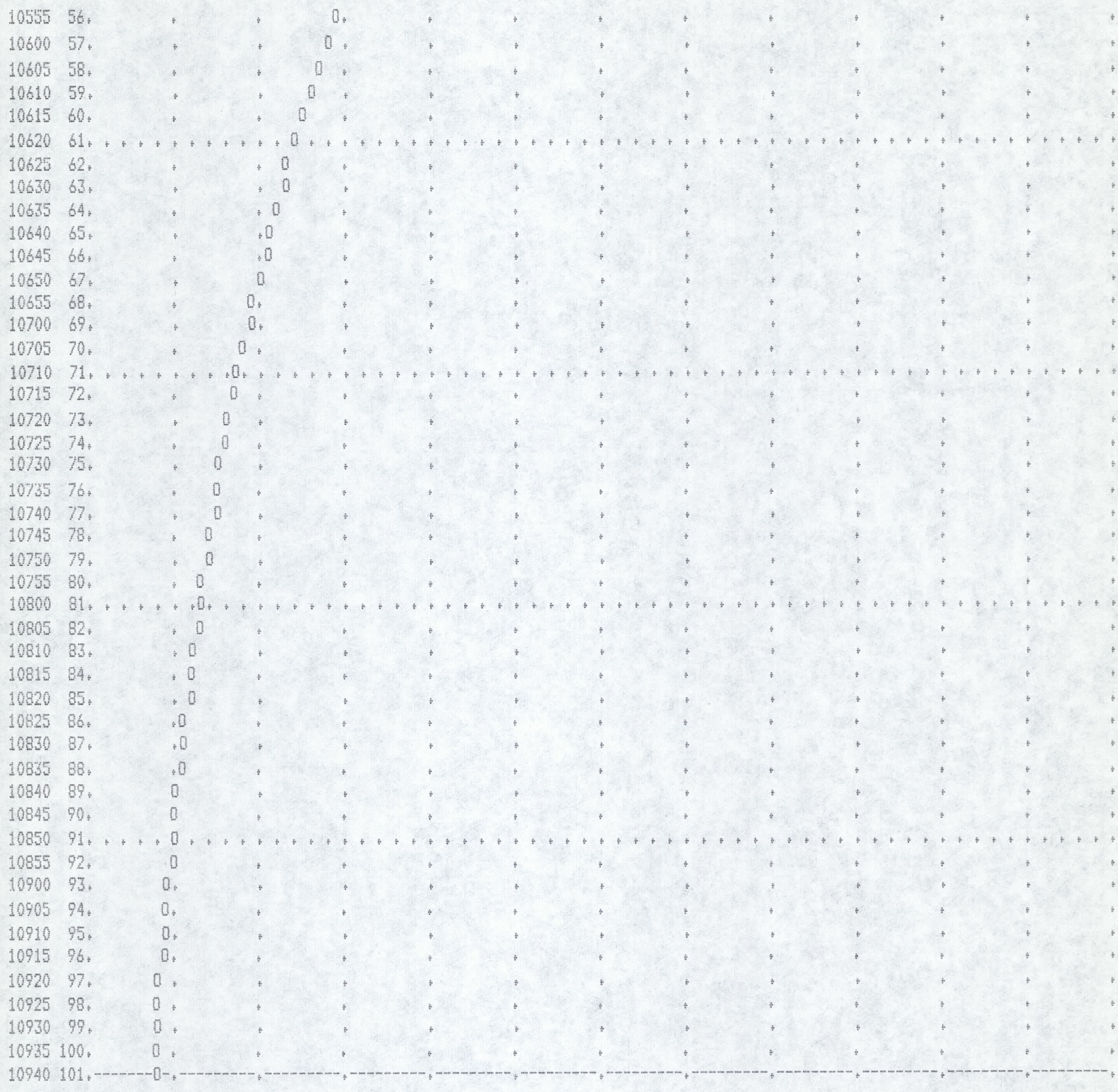
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.42, TOTAL EXCESS = 2.03

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
167.	1.17	(CFS)	88.	68.	68.	68.
		(INCHES)	1.630	1.751	1.751	1.751
		(AC-FT)	43.	47.	47.	47.

CUMULATIVE AREA = 0.50 SQ MI

STATION SUB5A

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10915 96.
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10925 98.
10930 99.
10935 100.
10940 101.

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          *            *
111 KK    *      SUB5  *
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COMBINE RUNOFF FROM SUB5A AND SUB5B

113 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB5

SUM OF 2 HYDROGRAPHS

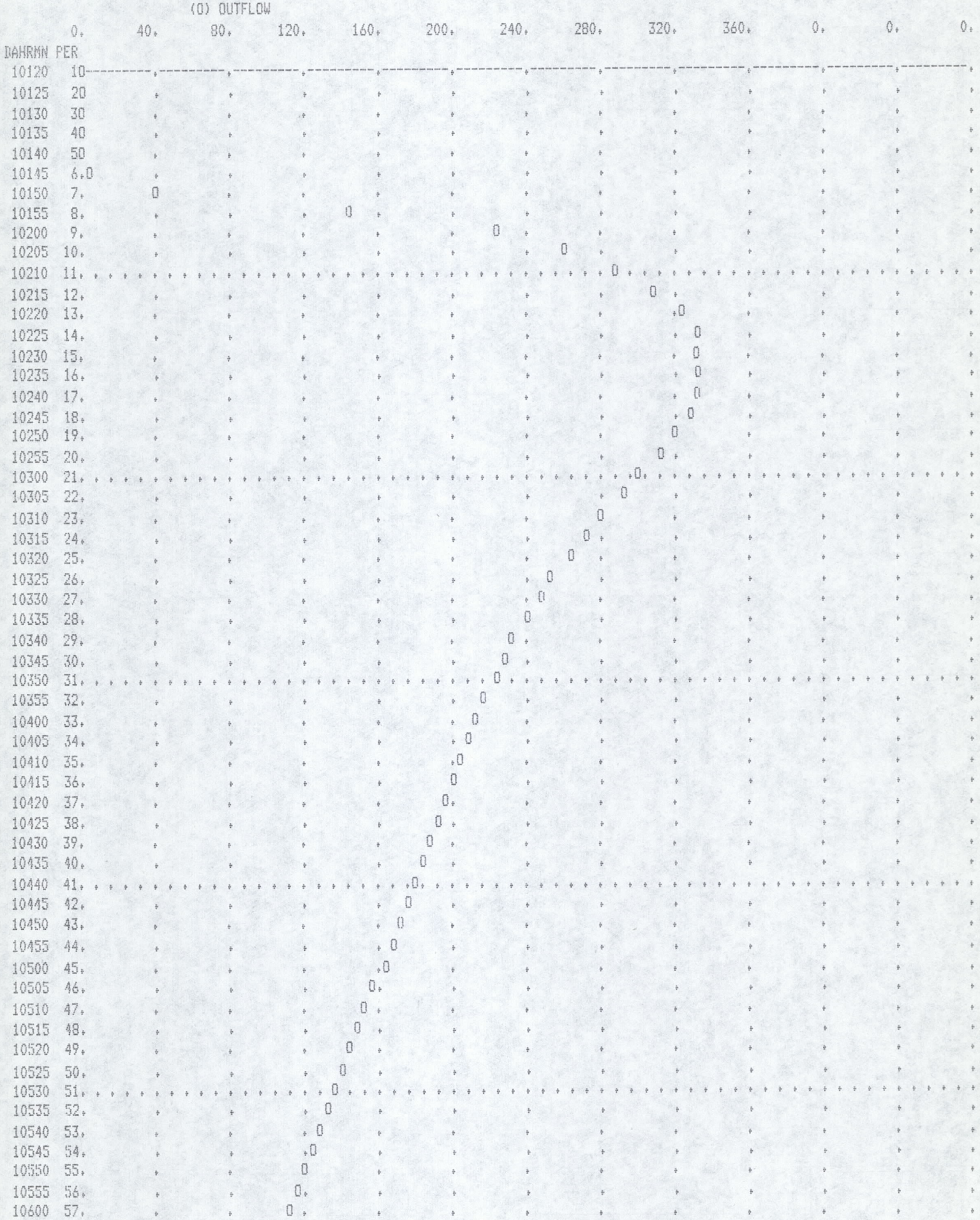
DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	246.	1		0540	53	127.	1		0750	79	55.
1		0125	2	0.	1		0335	28	239.	1		0545	54	122.	1		0755	80	53.
1		0130	3	0.	1		0340	29	233.	1		0550	55	118.	1		0800	81	52.
1		0135	4	0.	1		0345	30	227.	1		0555	56	115.	1		0805	82	50.
1		0140	5	1.	1		0350	31	222.	1		0600	57	111.	1		0810	83	49.
1		0145	6	4.	1		0355	32	217.	1		0605	58	107.	1		0815	84	48.
1		0150	7	39.	1		0400	33	213.	1		0610	59	104.	1		0820	85	46.
1		0155	8	145.	1		0405	34	209.	1		0615	60	100.	1		0825	86	45.
1		0200	9	223.	1		0410	35	205.	1		0620	61	97.	1		0830	87	44.
1		0205	10	261.	1		0415	36	201.	1		0625	62	94.	1		0835	88	43.
1		0210	11	287.	1		0420	37	197.	1		0630	63	91.	1		0840	89	42.
1		0215	12	307.	1		0425	38	193.	1		0635	64	88.	1		0845	90	40.
1		0220	13	323.	1		0430	39	189.	1		0640	65	85.	1		0850	91	39.
1		0225	14	331.	1		0435	40	184.	1		0645	66	82.	1		0855	92	38.
1		0230	15	333.	1		0440	41	180.	1		0650	67	79.	1		0900	93	37.
1		0235	16	333.	1		0445	42	176.	1		0655	68	77.	1		0905	94	37.
1		0240	17	331.	1		0450	43	171.	1		0700	69	75.	1		0910	95	36.
1		0245	18	327.	1		0455	44	167.	1		0705	70	72.	1		0915	96	35.
1		0250	19	320.	1		0500	45	162.	1		0710	71	70.	1		0920	97	34.
1		0255	20	312.	1		0505	46	158.	1		0715	72	68.	1		0925	98	33.
1		0300	21	302.	1		0510	47	153.	1		0720	73	66.	1		0930	99	32.
1		0305	22	291.	1		0515	48	149.	1		0725	74	64.	1		0935	100	31.
1		0310	23	281.	1		0520	49	144.	1		0730	75	62.	1		0940	101	31.
1		0315	24	271.	1		0525	50	140.	1		0735	76	60.					
1		0320	25	262.	1		0530	51	135.	1		0740	77	58.					
1		0325	26	254.	1		0535	52	131.	1		0745	78	57.					

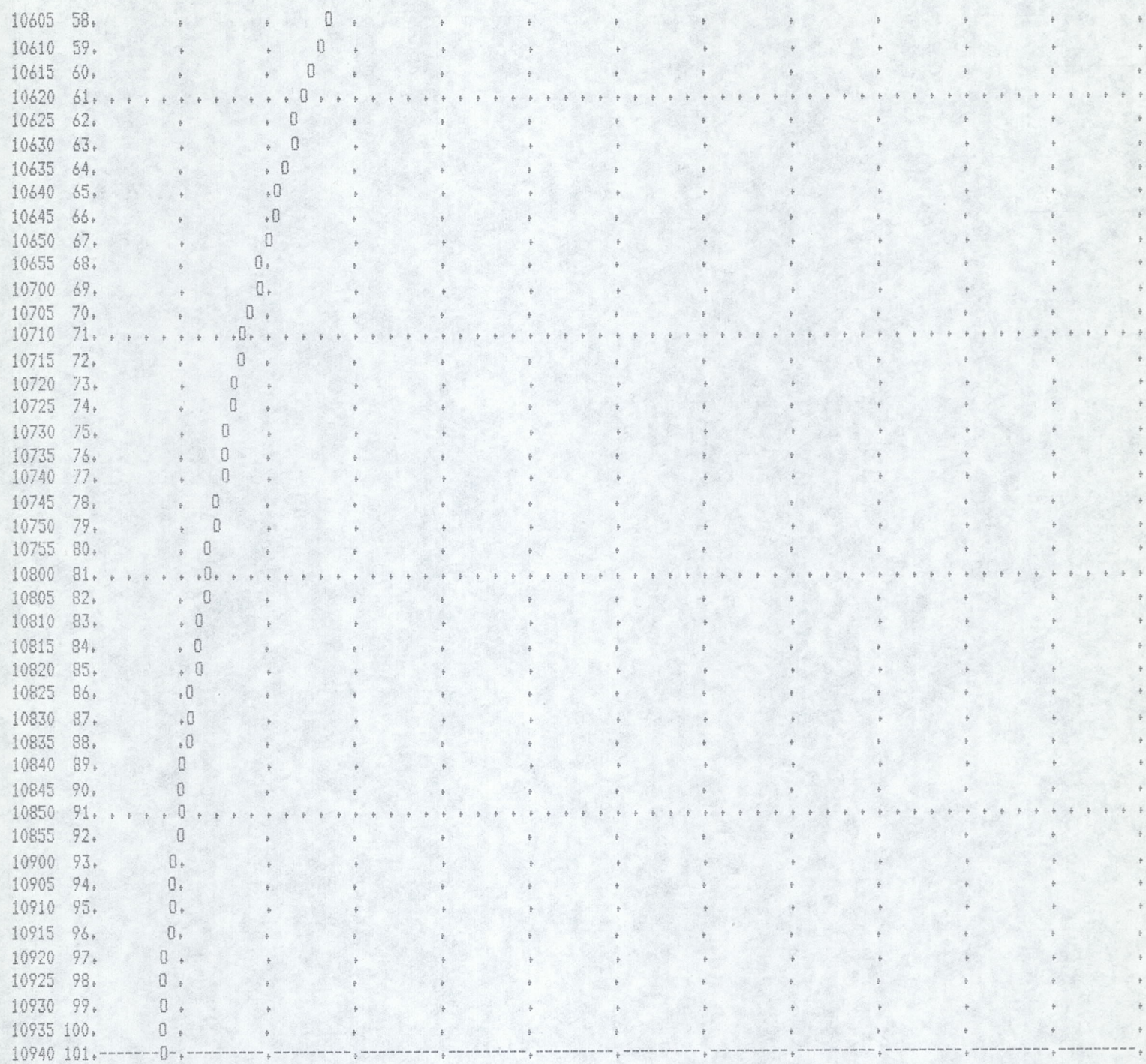
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
333.	1.17	(CFS)	175.	136.	136.	136.
		(INCHES)	1.630	1.751	1.751	1.751
		(AC-FT)	87.	93.	93.	93.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB5

(O) OUTFLOW

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114 KK        *     RET5   *
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RETENTION REQUIREMENT FOR SUBAREA 5

HYDROGRAPH ROUTING DATA

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 81 RL          ROUTING LOSSES
                     QLOSS        0.00  INITIAL LOSS
                     CLOSS        0.00  ADDITIONAL FRACTION LOST

116 RS          STORAGE ROUTING
                     NSTPS           1  NUMBER OF SUBREACHES
                      ITYP        STOR  TYPE OF INITIAL CONDITION
                    RSVRIC        0.00  INITIAL CONDITION
                         X        0.00 WORKING R AND D COEFFICIENT
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117 SV	STORAGE	0.0	15.0	30.0	45.0	48.0	51.0	54.0	60.0
118 SQ	DISCHARGE	0.	0.	0.	0.	107.	304.	558.	1200.
119 SE	ELEVATION	0.00	1.00	2.00	3.00	3.20	3.40	3.60	4.00

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HYDROGRAPH AT STATION RET5

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	1		0410	35	156.	48.7	3.2	1		0700	69	85.	47.4	3.2
1		0125	2	0.	0.0	0.0	1		0415	36	173.	49.0	3.3	1		0705	70	83.	47.3	3.2
1		0130	3	0.	0.0	0.0	1		0420	37	183.	49.2	3.3	1		0710	71	80.	47.2	3.1
1		0135	4	0.	0.0	0.0	1		0425	38	187.	49.2	3.3	1		0715	72	78.	47.2	3.1
1		0140	5	0.	0.0	0.0	1		0430	39	188.	49.2	3.3	1		0720	73	75.	47.1	3.1
1		0145	6	0.	0.0	0.0	1		0435	40	188.	49.2	3.3	1		0725	74	73.	47.0	3.1
1		0150	7	0.	0.2	0.0	1		0440	41	186.	49.2	3.3	1		0730	75	71.	47.0	3.1
1		0155	8	0.	0.8	0.1	1		0445	42	183.	49.2	3.3	1		0735	76	69.	46.9	3.1
1		0200	9	0.	2.1	0.1	1		0450	43	179.	49.1	3.3	1		0740	77	67.	46.9	3.1
1		0205	10	0.	3.7	0.2	1		0455	44	176.	49.0	3.3	1		0745	78	65.	46.8	3.1
1		0210	11	0.	5.6	0.4	1		0500	45	171.	49.0	3.3	1		0750	79	63.	46.8	3.1
1		0215	12	0.	7.7	0.5	1		0505	46	167.	48.9	3.3	1		0755	80	61.	46.7	3.1
1		0220	13	0.	9.8	0.7	1		0510	47	163.	48.9	3.3	1		0800	81	59.	46.7	3.1
1		0225	14	0.	12.1	0.8	1		0515	48	158.	48.8	3.3	1		0805	82	57.	46.6	3.1
1		0230	15	0.	14.4	1.0	1		0520	49	154.	48.7	3.2	1		0810	83	56.	46.6	3.1
1		0235	16	0.	16.7	1.1	1		0525	50	149.	48.6	3.2	1		0815	84	54.	46.5	3.1
1		0240	17	0.	19.0	1.3	1		0530	51	145.	48.6	3.2	1		0820	85	52.	46.5	3.1
1		0245	18	0.	21.2	1.4	1		0535	52	141.	48.5	3.2	1		0825	86	51.	46.4	3.1
1		0250	19	0.	23.4	1.6	1		0540	53	136.	48.4	3.2	1		0830	87	50.	46.4	3.1
1		0255	20	0.	25.6	1.7	1		0545	54	132.	48.4	3.2	1		0835	88	48.	46.4	3.1

1	0300	21	0.	27.7	1.8	*	1	0550	55	128.	48.3	3.2	*	1	0840	89	47.	46.3	3.1
1	0305	22	0.	29.8	2.0	*	1	0555	56	124.	48.3	3.2	*	1	0845	90	46.	46.3	3.1
1	0310	23	0.	31.8	2.1	*	1	0600	57	119.	48.2	3.2	*	1	0850	91	44.	46.2	3.1
1	0315	24	0.	33.7	2.2	*	1	0605	58	116.	48.1	3.2	*	1	0855	92	43.	46.2	3.1
1	0320	25	0.	35.5	2.4	*	1	0610	59	112.	48.1	3.2	*	1	0900	93	42.	46.2	3.1
1	0325	26	0.	37.3	2.5	*	1	0615	60	108.	48.0	3.2	*	1	0905	94	41.	46.1	3.1
1	0330	27	0.	39.0	2.6	*	1	0620	61	106.	48.0	3.2	*	1	0910	95	40.	46.1	3.1
1	0335	28	0.	40.7	2.7	*	1	0625	62	103.	47.9	3.2	*	1	0915	96	39.	46.1	3.1
1	0340	29	0.	42.3	2.8	*	1	0630	63	101.	47.8	3.2	*	1	0920	97	38.	46.1	3.1
1	0345	30	0.	43.9	2.9	*	1	0635	64	98.	47.8	3.2	*	1	0925	98	37.	46.0	3.1
1	0350	31	13.	45.4	3.0	*	1	0640	65	96.	47.7	3.2	*	1	0930	99	36.	46.0	3.1
1	0355	32	58.	46.6	3.1	*	1	0645	66	93.	47.6	3.2	*	1	0935	100	35.	46.0	3.1
1	0400	33	93.	47.6	3.2	*	1	0650	67	90.	47.5	3.2	*	1	0940	101	34.	46.0	3.1
1	0405	34	126.	48.3	3.2	*	1	0655	68	88.	47.5	3.2	*						
						*							*						

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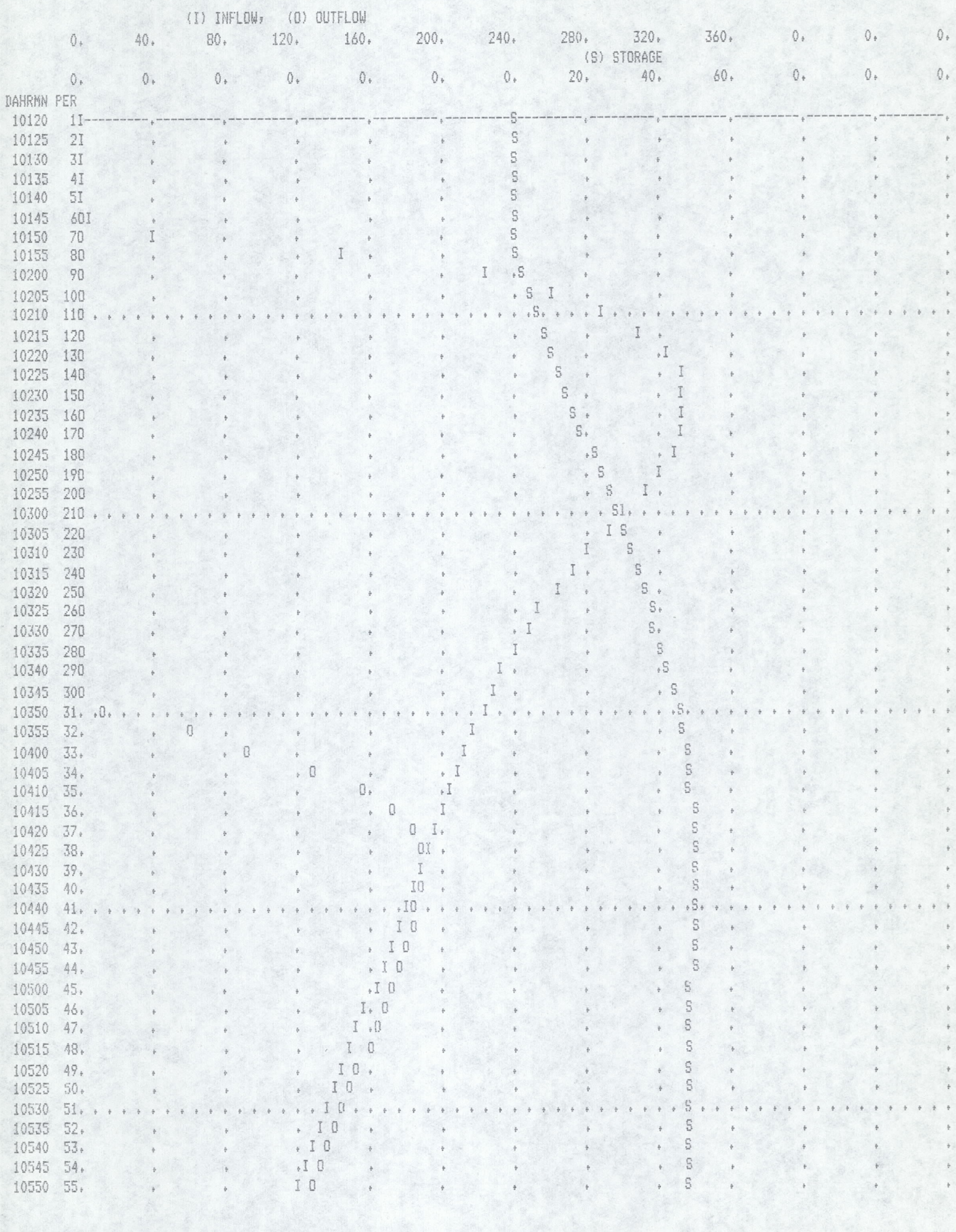
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
188.	3.17	(CFS)	96.	69.	69.	69.
		(INCHES)	0.889	0.889	0.889	0.889
		(AC-FT)	47.	47.	47.	47.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)	6-HR	24-HR	72-HR	8.33-HR
49.	3.17	47.	39.	39.	39.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)	6-HR	24-HR	72-HR	8.33-HR
3.28	3.17	3.16	2.58	2.58	2.58

CUMULATIVE AREA = 1.00 SQ MI

STATION RET5



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10555  56.          I.O                                  S
10600  57.         I O                                   S
10605  58.        I O.                                   S
10610  59.       I O                                     S
10615  60.      I O                                      S
10620  61. . . . . I O . . . . . S . . . . . .
10625  62.       I  O                                    S
10630  63.       I O                                     S
10635  64.      I  O                                     S
10640  65.      I  O                                     S
10645  66.      I O                                      S
10650  67.      I  O                                     S
10655  68.     I. O                                      S
10700  69.     I.O                                       S
10705  70.    I .O                                       S
10710  71. . . . I. O . . . . . S . . . . . .
10715  72.     I O.                                      S
10720  73.     I  O.                                     S
10725  74.     I O                                       S
10730  75.     I  O                                      S
10735  76.     I O                                       S
10740  77.     I O                                       S
10745  78.     I O                                       S
10750  79.     I O                                       S
10755  80.    I O                                        S
10800  81. . . . I.O. . . . . S . . . . . .
10805  82.     IO                                        S
10810  83.    I O                                        S
10815  84.    I O                                        S
10820  85.    IO                                         S
10825  86.    I O                                        S
10830  87.    IO                                         S
10835  88.    IO                                         S
10840  89.    I O                                        S
10845  90.    IO                                         S
10850  91. . . . IO. . . . . S . . . . . .
10855  92.     IO                                        S
10900  93.    I.O                                        S
10905  94.    IO                                         S
10910  95.    IO                                         S
10915  96.    IO                                         S
10920  97.   IO.                                         S
10925  98.   IO.                                         S
10930  99.   IO.                                         S
10935 100.   IO.                                         S
10940 101.---IO.-------.-------.-------.-------.-------.--S------.-------.-------.-------.
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          *             *
120 KK    *      SUB6   *
          *             *
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ROUTED TO SUB6
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
PROPOSED CHANNEL ; BW = 8', SIDE SLOPE = 3:1

HYDROGRAPH ROUTING DATA

81 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

124 RK KINEMATIC WAVE STREAM ROUTING

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	8.00	BOTTOM WIDTH OR DIAMETER
Z	3.00	SIDE SLOPE

***

KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.2752	1.402	1.67	1320.00

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	0.	*	1		0540	53	140.	*	1		0750	79	65.
1		0125	2	0.	*	1		0335	28	0.	*	1		0545	54	136.	*	1		0755	80	63.
1		0130	3	0.	*	1		0340	29	0.	*	1		0550	55	132.	*	1		0800	81	61.
1		0135	4	0.	*	1		0345	30	0.	*	1		0555	56	128.	*	1		0805	82	60.
1		0140	5	0.	*	1		0350	31	0.	*	1		0600	57	123.	*	1		0810	83	58.
1		0145	6	0.	*	1		0355	32	4.	*	1		0605	58	120.	*	1		0815	84	56.
1		0150	7	0.	*	1		0400	33	32.	*	1		0610	59	116.	*	1		0820	85	55.
1		0155	8	0.	*	1		0405	34	79.	*	1		0615	60	112.	*	1		0825	86	53.
1		0200	9	0.	*	1		0410	35	122.	*	1		0620	61	109.	*	1		0830	87	52.
1		0205	10	0.	*	1		0415	36	154.	*	1		0625	62	106.	*	1		0835	88	50.
1		0210	11	0.	*	1		0420	37	172.	*	1		0630	63	103.	*	1		0840	89	49.
1		0215	12	0.	*	1		0425	38	182.	*	1		0635	64	101.	*	1		0845	90	47.

1	0220	13	0.	*	1	0430	39	187.	*	1	0640	65	98.	*	1	0850	91	46.
1	0225	14	0.	*	1	0435	40	188.	*	1	0645	66	96.	*	1	0855	92	45.
1	0230	15	0.	*	1	0440	41	187.	*	1	0650	67	93.	*	1	0900	93	44.
1	0235	16	0.	*	1	0445	42	185.	*	1	0655	68	91.	*	1	0905	94	43.
1	0240	17	0.	*	1	0450	43	182.	*	1	0700	69	88.	*	1	0910	95	41.
1	0245	18	0.	*	1	0455	44	179.	*	1	0705	70	85.	*	1	0915	96	40.
1	0250	19	0.	*	1	0500	45	175.	*	1	0710	71	83.	*	1	0920	97	39.
1	0255	20	0.	*	1	0505	46	171.	*	1	0715	72	80.	*	1	0925	98	38.
1	0300	21	0.	*	1	0510	47	167.	*	1	0720	73	78.	*	1	0930	99	37.
1	0305	22	0.	*	1	0515	48	162.	*	1	0725	74	76.	*	1	0935	100	36.
1	0310	23	0.	*	1	0520	49	158.	*	1	0730	75	73.	*	1	0940	101	36.
1	0315	24	0.	*	1	0525	50	154.	*	1	0735	76	71.	*				
1	0320	25	0.	*	1	0530	51	149.	*	1	0740	77	69.	*				
1	0325	26	0.	*	1	0535	52	145.	*	1	0745	78	67.	*				
				*					*					*				

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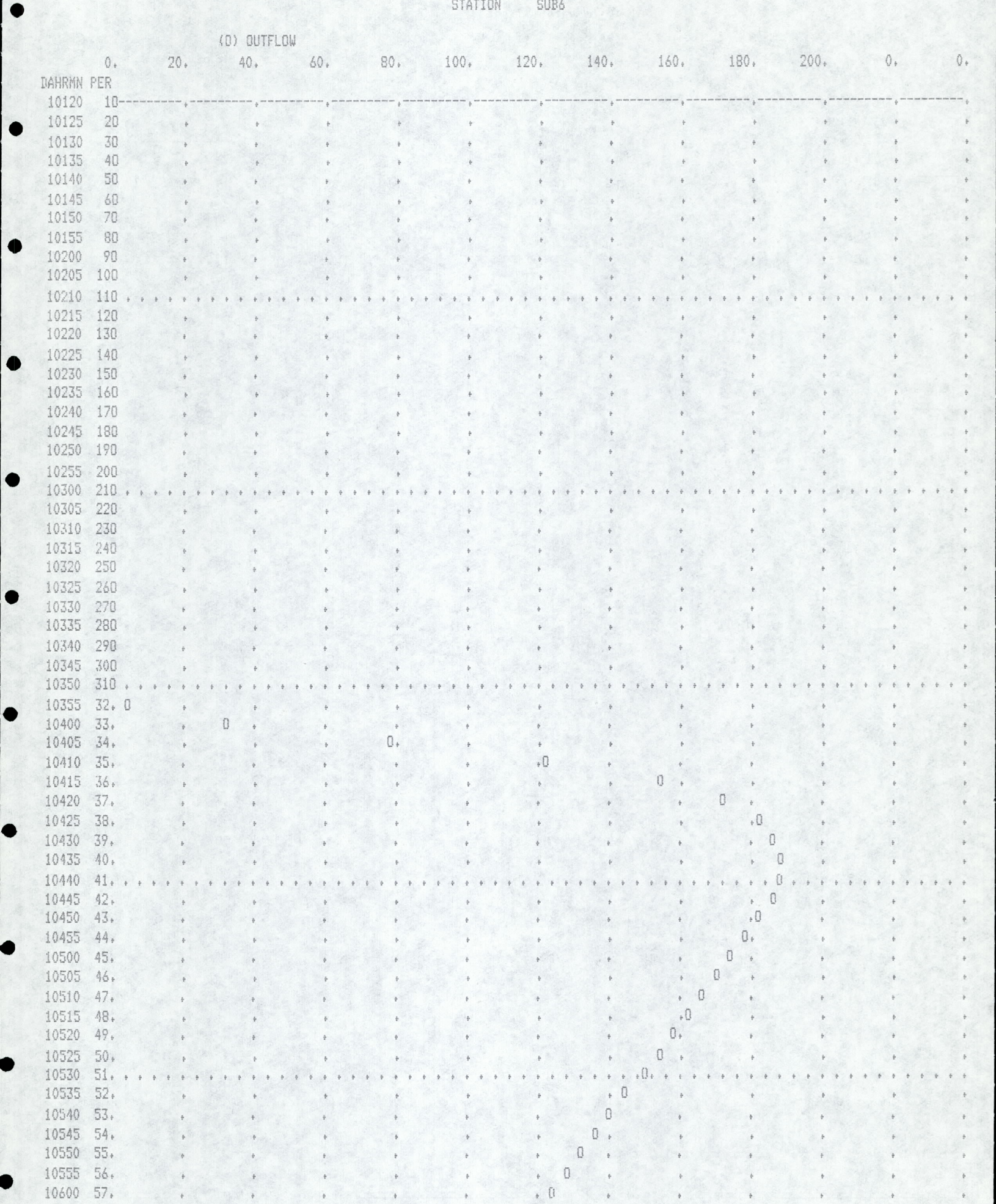
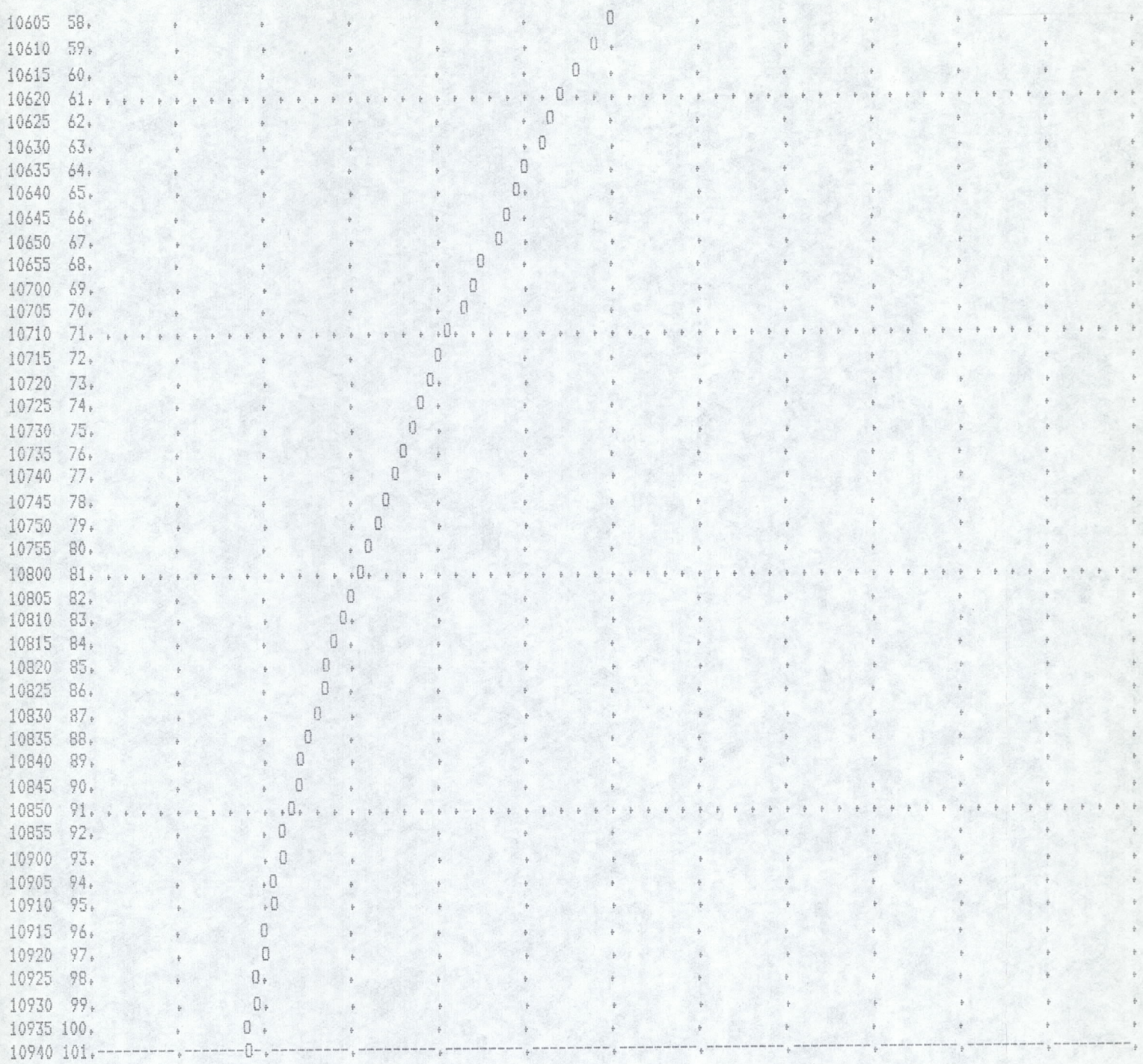
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
188.	3.25	(CFS)	95.	68.	68.	68.
		(INCHES)	0.879	0.879	0.879	0.879
		(AC-FT)	47.	47.	47.	47.

CUMULATIVE AREA = 1.00 SQ MI

STATION SUB6

(O) OUTFLOW




10605 58
10610 59
10615 60
10620 61
10625 62
10630 63
10635 64
10640 65
10645 66
10650 67
10655 68
10700 69
10705 70
10710 71
10715 72
10720 73
10725 74
10730 75
10735 76
10740 77
10745 78
10750 79
10755 80
10800 81
10805 82
10810 83
10815 84
10820 85
10825 86
10830 87
10835 88
10840 89
10845 90
10850 91
10855 92
10900 93
10905 94
10910 95
10915 96
10920 97
10925 98
10930 99
10935 100
10940 101

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

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          *            *
125 KK    *     SUB6A  *
          *            *
          **************
                        AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                        ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                               COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                               MAIN CHANNEL 5000' RUNING NORTH-SOUTH
                        CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
                        MODELED AS 75% OF THE AREA ROUTED THROUGH THE LAKE

             SUBBASIN RUNOFF DATA

132 BA         SUBBASIN CHARACTERISTICS
                     TAREA        0.75  SUBBASIN AREA

               PRECIPITATION DATA

103 PB               STORM        2.45  BASIN TOTAL PRECIPITATION

104 PI           INCREMENTAL PRECIPITATION PATTERN
                    0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                    0.06      0.05

133 LS         SCS LOSS RATE
                     STRTL        0.50  INITIAL ABSTRACTION
                    CRVNBR       80.00  CURVE NUMBER
                     RTIMP       29.00  PERCENT IMPERVIOUS AREA

               KINEMATIC WAVE
134 UK           OVERLAND-FLOW ELEMENT NO. 1
                         L        100.  OVERLAND FLOW LENGTH
                         S      0.0033  SLOPE
                         N       0.200  ROUGHNESS COEFFICIENT
                        PA       100.0  PERCENT OF SUBBASIN
135 RK           COLLECTOR CHANNEL
                         L       2000.  CHANNEL LENGTH
                         S      0.0050  SLOPE
                         N       0.160  CHANNEL ROUGHNESS COEFFICIENT
                        CA        0.10  CONTRIBUTING AREA
                     SHAPE        TRAP  CHANNEL SHAPE
                        WD        0.00  BOTTOM WIDTH OR DIAMETER
                         Z        1.00  SIDE SLOPE
136 RK           MAIN CHANNEL
                         L       5000.  CHANNEL LENGTH
                         S      0.0050  SLOPE
                         N       0.160  CHANNEL ROUGHNESS COEFFICIENT
                        CA        0.75  CONTRIBUTING AREA
                     SHAPE        TRAP  CHANNEL SHAPE
                        WD        0.00  BOTTOM WIDTH OR DIAMETER
                         Z        1.00  SIDE SLOPE
                    RUPSTQ          NO  ROUTE UPSTREAM HYDROGRAPH

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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	2500.00

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HYDROGRAPH AT STATION SUB6A

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	18.
1		0125	2	0.05	0.04	0.01	0.	1		0540	53	0.00	0.00	0.00	17.
1		0130	3	0.07	0.05	0.02	0.	1		0545	54	0.00	0.00	0.00	16.
1		0135	4	0.07	0.05	0.02	0.	1		0550	55	0.00	0.00	0.00	15.
1		0140	5	0.10	0.07	0.03	0.	1		0555	56	0.00	0.00	0.00	14.
1		0145	6	0.16	0.11	0.05	0.	1		0600	57	0.00	0.00	0.00	13.
1		0150	7	1.16	0.58	0.58	0.	1		0605	58	0.00	0.00	0.00	12.
1		0155	8	0.39	0.12	0.27	5.	1		0610	59	0.00	0.00	0.00	12.
1		0200	9	0.14	0.04	0.10	31.	1		0615	60	0.00	0.00	0.00	11.
1		0205	10	0.11	0.03	0.08	92.	1		0620	61	0.00	0.00	0.00	10.
1		0210	11	0.09	0.02	0.07	178.	1		0625	62	0.00	0.00	0.00	10.
1		0215	12	0.06	0.01	0.05	269.	1		0630	63	0.00	0.00	0.00	9.
1		0220	13	0.05	0.01	0.04	347.	1		0635	64	0.00	0.00	0.00	9.
1		0225	14	0.00	0.00	0.00	402.	1		0640	65	0.00	0.00	0.00	8.
1		0230	15	0.00	0.00	0.00	430.	1		0645	66	0.00	0.00	0.00	8.
1		0235	16	0.00	0.00	0.00	435.	1		0650	67	0.00	0.00	0.00	8.
1		0240	17	0.00	0.00	0.00	422.	1		0655	68	0.00	0.00	0.00	7.
1		0245	18	0.00	0.00	0.00	398.	1		0700	69	0.00	0.00	0.00	7.
1		0250	19	0.00	0.00	0.00	367.	1		0705	70	0.00	0.00	0.00	7.
1		0255	20	0.00	0.00	0.00	334.	1		0710	71	0.00	0.00	0.00	6.
1		0300	21	0.00	0.00	0.00	301.	1		0715	72	0.00	0.00	0.00	6.
1		0305	22	0.00	0.00	0.00	270.	1		0720	73	0.00	0.00	0.00	6.
1		0310	23	0.00	0.00	0.00	241.	1		0725	74	0.00	0.00	0.00	6.
1		0315	24	0.00	0.00	0.00	215.	1		0730	75	0.00	0.00	0.00	5.
1		0320	25	0.00	0.00	0.00	192.	1		0735	76	0.00	0.00	0.00	5.
1		0325	26	0.00	0.00	0.00	171.	1		0740	77	0.00	0.00	0.00	5.
1		0330	27	0.00	0.00	0.00	153.	1		0745	78	0.00	0.00	0.00	5.
1		0335	28	0.00	0.00	0.00	137.	1		0750	79	0.00	0.00	0.00	5.
1		0340	29	0.00	0.00	0.00	123.	1		0755	80	0.00	0.00	0.00	4.
1		0345	30	0.00	0.00	0.00	110.	1		0800	81	0.00	0.00	0.00	4.
1		0350	31	0.00	0.00	0.00	99.	1		0805	82	0.00	0.00	0.00	4.
1		0355	32	0.00	0.00	0.00	90.	1		0810	83	0.00	0.00	0.00	4.
1		0400	33	0.00	0.00	0.00	81.	1		0815	84	0.00	0.00	0.00	4.
1		0405	34	0.00	0.00	0.00	73.	1		0820	85	0.00	0.00	0.00	4.
1		0410	35	0.00	0.00	0.00	67.	1		0825	86	0.00	0.00	0.00	3.
1		0415	36	0.00	0.00	0.00	61.	1		0830	87	0.00	0.00	0.00	3.
1		0420	37	0.00	0.00	0.00	56.	1		0835	88	0.00	0.00	0.00	3.
1		0425	38	0.00	0.00	0.00	51.	1		0840	89	0.00	0.00	0.00	3.
1		0430	39	0.00	0.00	0.00	47.	1		0845	90	0.00	0.00	0.00	3.
1		0435	40	0.00	0.00	0.00	43.	1		0850	91	0.00	0.00	0.00	3.
1		0440	41	0.00	0.00	0.00	39.	1		0855	92	0.00	0.00	0.00	3.
1		0445	42	0.00	0.00	0.00	36.	1		0900	93	0.00	0.00	0.00	3.
1		0450	43	0.00	0.00	0.00	34.	1		0905	94	0.00	0.00	0.00	3.
1		0455	44	0.00	0.00	0.00	31.	1		0910	95	0.00	0.00	0.00	3.
1		0500	45	0.00	0.00	0.00	29.	1		0915	96	0.00	0.00	0.00	2.
1		0505	46	0.00	0.00	0.00	27.	1		0920	97	0.00	0.00	0.00	2.

1	0510	47	0.00	0.00	0.00	25.	*	1	0925	98	0.00	0.00	0.00	2.
1	0515	48	0.00	0.00	0.00	23.	*	1	0930	99	0.00	0.00	0.00	2.
1	0520	49	0.00	0.00	0.00	22.	*	1	0935	100	0.00	0.00	0.00	2.
1	0525	50	0.00	0.00	0.00	20.	*	1	0940	101	0.00	0.00	0.00	2.
1	0530	51	0.00	0.00	0.00	19.	*							
							*							

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
435.	1.25	(CFS)	95.	69.	69.	69.
		(INCHES)	1.181	1.192	1.192	1.192
		(AC-FT)	47.	48.	48.	48.

CUMULATIVE AREA = 0.75 SQ MI

STATION SUB6A

(O) OUTFLOW

	0.	50.	100.	150.	200.	250.	300.	350.	400.	450.	0. (L) PRECIP,	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLLX
10150	70										LLLLLLLLLLLLLLLXXXXXXXXXXXXXXX		
10155	8.0											LLLXXXXXXX	
10200	9.	O											LXXX
10205	10.		O										LXX
10210	11.					O							XX
10215	12.						O						X
10220	13.							O					X
10225	14.								O				
10230	15.									O			
10235	16.									O			
10240	17.								O				
10245	18.								O				
10250	19.							O					
10255	20.							O					
10300	21.						O						
10305	22.						O						
10310	23.					O							
10315	24.				O								
10320	25.				O								
10325	26.			O									
10330	27.			O									
10335	28.		O										
10340	29.		O										
10345	30.		O										
10350	31.		O										
10355	32.		O										
10400	33.	O											
10405	34.	O											
10410	35.	O											
10415	36.	O											
10420	37.	O											
10425	38.	O											
10430	39.	O											
10435	40.	O											
10440	41.	O											
10445	42.	O											
10450	43.	O											
10455	44.	O											
10500	45.	O											
10505	46.	O											
10510	47.	O											
10515	48.	O											
10520	49.	O											
10525	50.	O											
10530	51.	O											
10535	52.	O											
10540	53.	O											
10545	54.	O											
10550	55.	O											

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10555  56.  0
10600  57.  0
10605  58. 0
10610  59. 0
10615  60. 0
10620  61. 0
10625  62. 0
10630  63. 0
10635  64. 0
10640  65. 0
10645  66. 0
10650  67. 0
10655  68.0
10700  69.0
10705  70.0
10710  71.0
10715  72.0
10720  73.0
10725  74.0
10730  75.0
10735  76.0
10740  77.0
10745  78.0
10750  79.0
10755  80.0
10800  81.0
10805  82.0
10810  83.0
10815  84.0
10820  85.0
10825  86.0
10830  87.0
10835  88.0
10840  89.0
10845  90.0
10850  91.0
10855  92.0
10900  93.0
10905  94.0
10910  95.0
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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          *            *
137 KK    *    SUB6A   *
          *            *
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SUB6A LAKE ROUTING

HYDROGRAPH ROUTING DATA

139 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

140 RS STORAGE ROUTING

NSTPS	1	NUMBER OF SUBREACHES
ITYP	STOR	TYPE OF INITIAL CONDITION
RSVRIC	0.00	INITIAL CONDITION
X	0.00	WORKING R AND D COEFFICIENT

141 SV	STORAGE	0.0	5.5	11.0	16.5	17.9	19.3	20.7	23.5
142 SQ	DISCHARGE	0.	0.	0.	0.	67.	190.	350.	750.
143 SE	ELEVATION	0.00	1.00	2.00	3.00	3.20	3.40	3.60	4.00

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HYDROGRAPH AT STATION SUB6A

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	*	1		0410	35	80.	18.0	3.2	*	1		0700	69	8.	16.7	3.0
1		0125	2	0.	0.0	0.0	*	1		0415	36	72.	18.0	3.2	*	1		0705	70	8.	16.7	3.0
1		0130	3	0.	0.0	0.0	*	1		0420	37	66.	17.9	3.2	*	1		0710	71	7.	16.7	3.0
1		0135	4	0.	0.0	0.0	*	1		0425	38	63.	17.8	3.2	*	1		0715	72	7.	16.6	3.0
1		0140	5	0.	0.0	0.0	*	1		0430	39	59.	17.7	3.2	*	1		0720	73	7.	16.6	3.0
1		0145	6	0.	0.0	0.0	*	1		0435	40	55.	17.6	3.2	*	1		0725	74	6.	16.6	3.0
1		0150	7	0.	0.0	0.0	*	1		0440	41	51.	17.6	3.2	*	1		0730	75	6.	16.6	3.0
1		0155	8	0.	0.0	0.0	*	1		0445	42	47.	17.5	3.1	*	1		0735	76	6.	16.6	3.0
1		0200	9	0.	0.1	0.0	*	1		0450	43	44.	17.4	3.1	*	1		0740	77	6.	16.6	3.0
1		0205	10	0.	0.6	0.1	*	1		0455	44	40.	17.3	3.1	*	1		0745	78	5.	16.6	3.0
1		0210	11	0.	1.5	0.3	*	1		0500	45	38.	17.3	3.1	*	1		0750	79	5.	16.6	3.0
1		0215	12	0.	3.0	0.6	*	1		0505	46	35.	17.2	3.1	*	1		0755	80	5.	16.6	3.0
1		0220	13	0.	5.2	0.9	*	1		0510	47	32.	17.2	3.1	*	1		0800	81	5.	16.6	3.0
1		0225	14	0.	7.7	1.4	*	1		0515	48	30.	17.1	3.1	*	1		0805	82	5.	16.6	3.0
1		0230	15	0.	10.6	1.9	*	1		0520	49	28.	17.1	3.1	*	1		0810	83	4.	16.6	3.0
1		0235	16	0.	13.6	2.5	*	1		0525	50	26.	17.0	3.1	*	1		0815	84	4.	16.6	3.0
1		0240	17	2.	16.5	3.0	*	1		0530	51	24.	17.0	3.1	*	1		0820	85	4.	16.6	3.0
1		0245	18	149.	18.8	3.3	*	1		0535	52	22.	17.0	3.1	*	1		0825	86	4.	16.6	3.0
1		0250	19	272.	20.0	3.5	*	1		0540	53	21.	16.9	3.1	*	1		0830	87	4.	16.6	3.0
1		0255	20	316.	20.4	3.6	*	1		0545	54	20.	16.9	3.1	*	1		0835	88	4.	16.6	3.0

1	0300	21	317.	20.4	3.6	*	1	0550	55	18.	16.9	3.1	*	1	0840	89	3.	16.6	3.0
1	0305	22	299.	20.3	3.5	*	1	0555	56	17.	16.9	3.1	*	1	0845	90	3.	16.6	3.0
1	0310	23	275.	20.0	3.5	*	1	0600	57	16.	16.8	3.0	*	1	0850	91	3.	16.6	3.0
1	0315	24	249.	19.8	3.5	*	1	0605	58	15.	16.8	3.0	*	1	0855	92	3.	16.6	3.0
1	0320	25	223.	19.6	3.4	*	1	0610	59	14.	16.8	3.0	*	1	0900	93	3.	16.6	3.0
1	0325	26	200.	19.4	3.4	*	1	0615	60	13.	16.8	3.0	*	1	0905	94	3.	16.6	3.0
1	0330	27	181.	19.2	3.4	*	1	0620	61	13.	16.8	3.0	*	1	0910	95	3.	16.6	3.0
1	0335	28	164.	19.0	3.4	*	1	0625	62	12.	16.8	3.0	*	1	0915	96	3.	16.6	3.0
1	0340	29	148.	18.8	3.3	*	1	0630	63	11.	16.7	3.0	*	1	0920	97	3.	16.6	3.0
1	0345	30	133.	18.7	3.3	*	1	0635	64	11.	16.7	3.0	*	1	0925	98	3.	16.6	3.0
1	0350	31	120.	18.5	3.3	*	1	0640	65	10.	16.7	3.0	*	1	0930	99	2.	16.6	3.0
1	0355	32	108.	18.4	3.3	*	1	0645	66	10.	16.7	3.0	*	1	0935	100	2.	16.5	3.0
1	0400	33	98.	18.2	3.2	*	1	0650	67	9.	16.7	3.0	*	1	0940	101	2.	16.5	3.0
1	0405	34	88.	18.1	3.2	*	1	0655	68	9.	16.7	3.0	*						
						*							*						

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
317.	1.67	(CFS)	62.	45.	45.	45.
		(INCHES)	0.772	0.778	0.778	0.778
		(AC-FT)	31.	31.	31.	31.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)	6-HR	24-HR	72-HR	8.33-HR
20.	1.67	17.	15.	15.	15.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)	6-HR	24-HR	72-HR	8.33-HR
3.56	1.67	3.14	2.71	2.71	2.71

CUMULATIVE AREA = 0.75 SQ MI

STATION SUB6A

(I) INFLOW, (O) OUTFLOW

	0.	50.	100.	150.	200.	250.	300.	350.	400.	450.	0.	0.	0.
								(S) STORAGE					
	0.	0.	0.	0.	0.	0.	0.	10.	20.	30.	0.	0.	0.
DAHRMN	PER												
10120	1	I						S					
10125	2	I						S					
10130	3	I						S					
10135	4	I						S					
10140	5	I						S					
10145	6	I						S					
10150	7	I						S					
10155	8	OI						S					
10200	9	O	I					S					
10205	10	O		I				S					
10210	11	O					I	S					
10215	12	O					I	S					
10220	13	O						S	I				
10225	14	O						S	I				
10230	15	O						S	I				
10235	16	O						S	I				
10240	17	O						S	I				
10245	18	O			O			SI					
10250	19	O					O	S					
10255	20	O					O	I	S				
10300	21	O					I	O	S				
10305	22	O					I	O	S				
10310	23	O				I	O	S					
10315	24	O				I	O	S					
10320	25	O			I	O		S					
10325	26	O			I	O		S					
10330	27	O			I	O		S					
10335	28	O		I	O			S					
10340	29	O		I	O			S					
10345	30	O		I	O			S					
10350	31	O		I	O			S					
10355	32	O	I	O				S					
10400	33	O	I	O				S					
10405	34	O	I	O				S					
10410	35	O	I	O				S					
10415	36	O	I	O				S					
10420	37	O	I	O				S					
10425	38	O	I	O				S					
10430	39	O	I	O				S					
10435	40	O	I	O				S					
10440	41	O	I	O				S					
10445	42	O	I	O				S					
10450	43	O	I	O				S					
10455	44	O	I	O				S					
10500	45	O	I	O				S					
10505	46	O	I	O				S					
10510	47	O	I	O				S					
10515	48	O	I	O				S					
10520	49	O	I	O				S					
10525	50	O	I	O				S					
10530	51	O	I	O				S					
10535	52	O	I					S					
10540	53	O	I	O				S					
10545	54	O	I	O				S					
10550	55	O	I	O				S					

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10555  56.  I     .         .         .         .         .         .         .      S  .         .         .         .         .
10600  57.  I     .         .         .         .         .         .         .      S  .         .         .         .         .
10605  58.  IO    .         .         .         .         .         .         .      S  .         .         .         .         .
10610  59.  IO    .         .         .         .         .         .         .      S  .         .         .         .         .
10615  60.  IO    .         .         .         .         .         .         .      S  .         .         .         .         .
10620  61.  IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
10625  62.  I     .         .         .         .         .         .         .      S  .         .         .         .         .
10630  63.  I     .         .         .         .         .         .         .      S  .         .         .         .         .
10635  64.  I     .         .         .         .         .         .         .      S  .         .         .         .         .
10640  65.  I     .         .         .         .         .         .         .      S  .         .         .         .         .
10645  66.  I     .         .         .         .         .         .         .      S  .         .         .         .         .
10650  67.  I     .         .         .         .         .         .         .      S  .         .         .         .         .
10655  68.IO      .         .         .         .         .         .         .      S  .         .         .         .         .
10700  69.IO      .         .         .         .         .         .         .      S  .         .         .         .         .
10705  70.IO      .         .         .         .         .         .         .      S  .         .         .         .         .
10710  71.I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
10715  72.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10720  73.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10725  74.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10730  75.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10735  76.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10740  77.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10745  78.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10750  79.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10755  80.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10800  81.I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
10805  82.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10810  83.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10815  84.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10820  85.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10825  86.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10830  87.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10835  88.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10840  89.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10845  90.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10850  91.I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
10855  92.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10900  93.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10905  94.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10910  95.I       .         .         .         .         .         .         .      S  .         .         .         .         .
10915  96IO       .         .         .         .         .         .         .      S  .         .         .         .         .
10920  97IO       .         .         .         .         .         .         .      S  .         .         .         .         .
10925  98IO       .         .         .         .         .         .         .      S  .         .         .         .         .
10930  99I        .         .         .         .         .         .         .      S  .         .         .         .         .
10935 100I        .         .         .         .         .         .         .      S  .         .         .         .         .
10940 101I---------.---------.---------.---------.---------.---------.---------.------S--.---------.---------.---------.---------.
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          *             *
144 KK    *     SUB6B   *
          *             *
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                    AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                    ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                           COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                           MAIN CHANNEL 1000' RUNING NORTH-SOUTH
                    CONCENTRATION POINT ON INDIAN SCHOOL ROAD AT MID-POINT OF (E) AND (F)
                    MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE

               SUBBASIN RUNOFF DATA

151 BA           SUBBASIN CHARACTERISTICS
                      TAREA       0.13  SUBBASIN AREA

                 PRECIPITATION DATA

103 PB                STORM       2.45  BASIN TOTAL PRECIPITATION

104 PI             INCREMENTAL PRECIPITATION PATTERN
                     0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                     0.06      0.05

152 LS           SCS LOSS RATE
                      STRTL       0.50  INITIAL ABSTRACTION
                     CRVNBR      80.00  CURVE NUMBER
                      RTIMP      29.00  PERCENT IMPERVIOUS AREA

                 KINEMATIC WAVE
153 UK             OVERLAND-FLOW ELEMENT NO. 1
                          L        100.  OVERLAND FLOW LENGTH
                          S     0.0033  SLOPE
                          N      0.200  ROUGHNESS COEFFICIENT
                         PA      100.0  PERCENT OF SUBBASIN
154 RK             COLLECTOR CHANNEL
                          L       2000.  CHANNEL LENGTH
                          S     0.0050  SLOPE
                          N      0.160  CHANNEL ROUGHNESS COEFFICIENT
                         CA       0.10  CONTRIBUTING AREA
                      SHAPE       TRAP  CHANNEL SHAPE
                         WD       0.00  BOTTOM WIDTH OR DIAMETER
                          Z       1.00  SIDE SLOPE
155 RK             MAIN CHANNEL
                          L       1000.  CHANNEL LENGTH
                          S     0.0050  SLOPE
                          N      0.160  CHANNEL ROUGHNESS COEFFICIENT
                         CA       0.13  CONTRIBUTING AREA
                      SHAPE       TRAP  CHANNEL SHAPE
                         WD       0.00  BOTTOM WIDTH OR DIAMETER
                          Z       1.00  SIDE SLOPE
                     RUPSTQ         NO  ROUTE UPSTREAM HYDROGRAPH
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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	500.00

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HYDROGRAPH AT STATION SUB6B

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	*	1		0535	52	0.00	0.00	0.00	1.
1		0125	2	0.05	0.04	0.01	0.	*	1		0540	53	0.00	0.00	0.00	1.
1		0130	3	0.07	0.05	0.02	0.	*	1		0545	54	0.00	0.00	0.00	1.
1		0135	4	0.07	0.05	0.02	0.	*	1		0550	55	0.00	0.00	0.00	1.
1		0140	5	0.10	0.07	0.03	0.	*	1		0555	56	0.00	0.00	0.00	1.
1		0145	6	0.16	0.11	0.05	0.	*	1		0600	57	0.00	0.00	0.00	1.
1		0150	7	1.16	0.58	0.58	0.	*	1		0605	58	0.00	0.00	0.00	1.
1		0155	8	0.39	0.12	0.27	4.	*	1		0610	59	0.00	0.00	0.00	1.
1		0200	9	0.14	0.04	0.10	25.	*	1		0615	60	0.00	0.00	0.00	1.
1		0205	10	0.11	0.03	0.08	69.	*	1		0620	61	0.00	0.00	0.00	1.
1		0210	11	0.09	0.02	0.07	108.	*	1		0625	62	0.00	0.00	0.00	1.
1		0215	12	0.06	0.01	0.05	123.	*	1		0630	63	0.00	0.00	0.00	1.
1		0220	13	0.05	0.01	0.04	117.	*	1		0635	64	0.00	0.00	0.00	1.
1		0225	14	0.00	0.00	0.00	105.	*	1		0640	65	0.00	0.00	0.00	1.
1		0230	15	0.00	0.00	0.00	90.	*	1		0645	66	0.00	0.00	0.00	1.
1		0235	16	0.00	0.00	0.00	76.	*	1		0650	67	0.00	0.00	0.00	1.
1		0240	17	0.00	0.00	0.00	61.	*	1		0655	68	0.00	0.00	0.00	1.
1		0245	18	0.00	0.00	0.00	50.	*	1		0700	69	0.00	0.00	0.00	1.
1		0250	19	0.00	0.00	0.00	42.	*	1		0705	70	0.00	0.00	0.00	1.
1		0255	20	0.00	0.00	0.00	35.	*	1		0710	71	0.00	0.00	0.00	1.
1		0300	21	0.00	0.00	0.00	30.	*	1		0715	72	0.00	0.00	0.00	1.
1		0305	22	0.00	0.00	0.00	25.	*	1		0720	73	0.00	0.00	0.00	1.
1		0310	23	0.00	0.00	0.00	22.	*	1		0725	74	0.00	0.00	0.00	0.
1		0315	24	0.00	0.00	0.00	19.	*	1		0730	75	0.00	0.00	0.00	0.
1		0320	25	0.00	0.00	0.00	16.	*	1		0735	76	0.00	0.00	0.00	0.
1		0325	26	0.00	0.00	0.00	14.	*	1		0740	77	0.00	0.00	0.00	0.
1		0330	27	0.00	0.00	0.00	12.	*	1		0745	78	0.00	0.00	0.00	0.
1		0335	28	0.00	0.00	0.00	11.	*	1		0750	79	0.00	0.00	0.00	0.
1		0340	29	0.00	0.00	0.00	10.	*	1		0755	80	0.00	0.00	0.00	0.
1		0345	30	0.00	0.00	0.00	9.	*	1		0800	81	0.00	0.00	0.00	0.
1		0350	31	0.00	0.00	0.00	8.	*	1		0805	82	0.00	0.00	0.00	0.
1		0355	32	0.00	0.00	0.00	7.	*	1		0810	83	0.00	0.00	0.00	0.
1		0400	33	0.00	0.00	0.00	6.	*	1		0815	84	0.00	0.00	0.00	0.
1		0405	34	0.00	0.00	0.00	6.	*	1		0820	85	0.00	0.00	0.00	0.
1		0410	35	0.00	0.00	0.00	5.	*	1		0825	86	0.00	0.00	0.00	0.
1		0415	36	0.00	0.00	0.00	5.	*	1		0830	87	0.00	0.00	0.00	0.
1		0420	37	0.00	0.00	0.00	4.	*	1		0835	88	0.00	0.00	0.00	0.
1		0425	38	0.00	0.00	0.00	4.	*	1		0840	89	0.00	0.00	0.00	0.
1		0430	39	0.00	0.00	0.00	4.	*	1		0845	90	0.00	0.00	0.00	0.
1		0435	40	0.00	0.00	0.00	3.	*	1		0850	91	0.00	0.00	0.00	0.
1		0440	41	0.00	0.00	0.00	3.	*	1		0855	92	0.00	0.00	0.00	0.
1		0445	42	0.00	0.00	0.00	3.	*	1		0900	93	0.00	0.00	0.00	0.
1		0450	43	0.00	0.00	0.00	3.	*	1		0905	94	0.00	0.00	0.00	0.
1		0455	44	0.00	0.00	0.00	2.	*	1		0910	95	0.00	0.00	0.00	0.
1		0500	45	0.00	0.00	0.00	2.	*	1		0915	96	0.00	0.00	0.00	0.
1		0505	46	0.00	0.00	0.00	2.	*	1		0920	97	0.00	0.00	0.00	0.

1	0510	47	0.00	0.00	0.00	2.	*	1	0925	98	0.00	0.00	0.00	0.
1	0515	48	0.00	0.00	0.00	2.	*	1	0930	99	0.00	0.00	0.00	0.
1	0520	49	0.00	0.00	0.00	2.	*	1	0935	100	0.00	0.00	0.00	0.
1	0525	50	0.00	0.00	0.00	2.	*	1	0940	101	0.00	0.00	0.00	0.
1	0530	51	0.00	0.00	0.00	2.	*							
							*							

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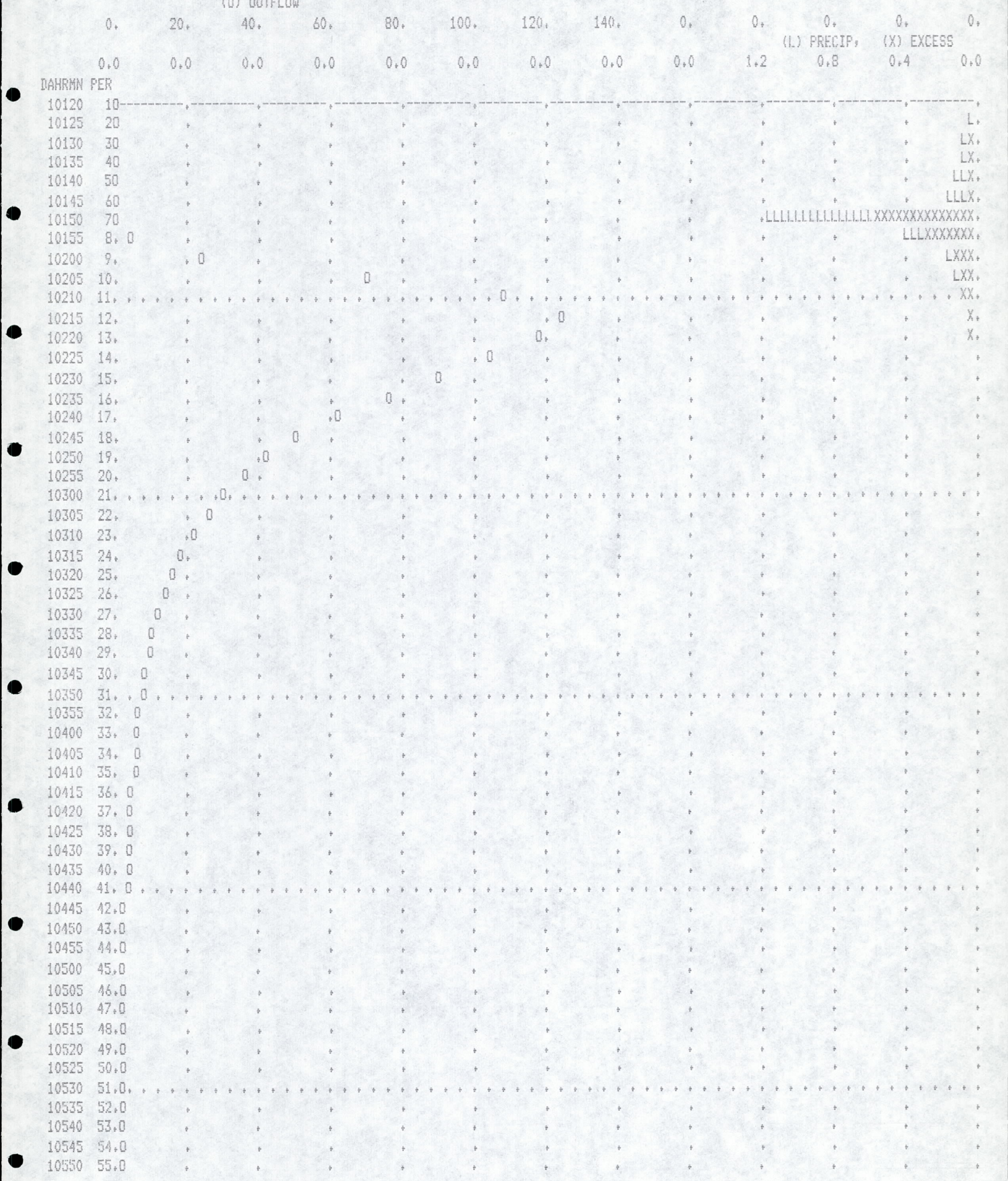
TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
123.	0.92	(CFS)	16.	12.	12.	12.
		(INCHES)	1.211	1.217	1.217	1.217
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 0.13 SQ MI

STATION SUB6B



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10555  56.0
10600  57.0
10605  58.0
10610  590
10615  600
10620  610
10625  620
10630  630
10635  640
10640  650
10645  660
10650  670
10655  680
10700  690
10705  700
10710  710
10715  720
10720  730
10725  740
10730  750
10735  760
10740  770
10745  780
10750  790
10755  800
10800  810
10805  820
10810  830
10815  840
10820  850
10825  860
10830  870
10835  880
10840  890
10845  900
10850  910
10855  920
10900  930
10905  940
10910  950
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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          *             *
          *             *
156 KK    *     SUB6    *
          *             *
          *             *
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COMBINED SUB6B, ROUTED SUB6A AND ROUTED 5 AT C.P. (F)

158 HC HYDROGRAPH COMBINATION

ICOMP 3 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB6

SUM OF 3 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	193.	1		0540	53	163.	1		0750	79	71.
1		0125	2	0.	1		0335	28	175.	1		0545	54	157.	1		0755	80	69.
1		0130	3	0.	1		0340	29	158.	1		0550	55	151.	1		0800	81	66.
1		0135	4	0.	1		0345	30	142.	1		0555	56	146.	1		0805	82	64.
1		0140	5	0.	1		0350	31	128.	1		0600	57	141.	1		0810	83	63.
1		0145	6	0.	1		0355	32	119.	1		0605	58	136.	1		0815	84	61.
1		0150	7	0.	1		0400	33	136.	1		0610	59	131.	1		0820	85	59.
1		0155	8	4.	1		0405	34	173.	1		0615	60	126.	1		0825	86	57.
1		0200	9	25.	1		0410	35	207.	1		0620	61	122.	1		0830	87	56.
1		0205	10	69.	1		0415	36	231.	1		0625	62	119.	1		0835	88	54.
1		0210	11	108.	1		0420	37	243.	1		0630	63	116.	1		0840	89	53.
1		0215	12	123.	1		0425	38	249.	1		0635	64	112.	1		0845	90	51.
1		0220	13	117.	1		0430	39	249.	1		0640	65	109.	1		0850	91	50.
1		0225	14	105.	1		0435	40	246.	1		0645	66	106.	1		0855	92	48.
1		0230	15	90.	1		0440	41	241.	1		0650	67	103.	1		0900	93	47.
1		0235	16	76.	1		0445	42	235.	1		0655	68	100.	1		0905	94	46.
1		0240	17	63.	1		0450	43	229.	1		0700	69	97.	1		0910	95	45.
1		0245	18	200.	1		0455	44	222.	1		0705	70	94.	1		0915	96	43.
1		0250	19	314.	1		0500	45	215.	1		0710	71	91.	1		0920	97	42.
1		0255	20	352.	1		0505	46	208.	1		0715	72	88.	1		0925	98	41.
1		0300	21	347.	1		0510	47	201.	1		0720	73	85.	1		0930	99	40.
1		0305	22	325.	1		0515	48	194.	1		0725	74	83.	1		0935	100	39.
1		0310	23	296.	1		0520	49	187.	1		0730	75	80.	1		0940	101	38.
1		0315	24	267.	1		0525	50	181.	1		0735	76	78.					
1		0320	25	239.	1		0530	51	175.	1		0740	77	75.					
1		0325	26	214.	1		0535	52	169.	1		0745	78	73.					

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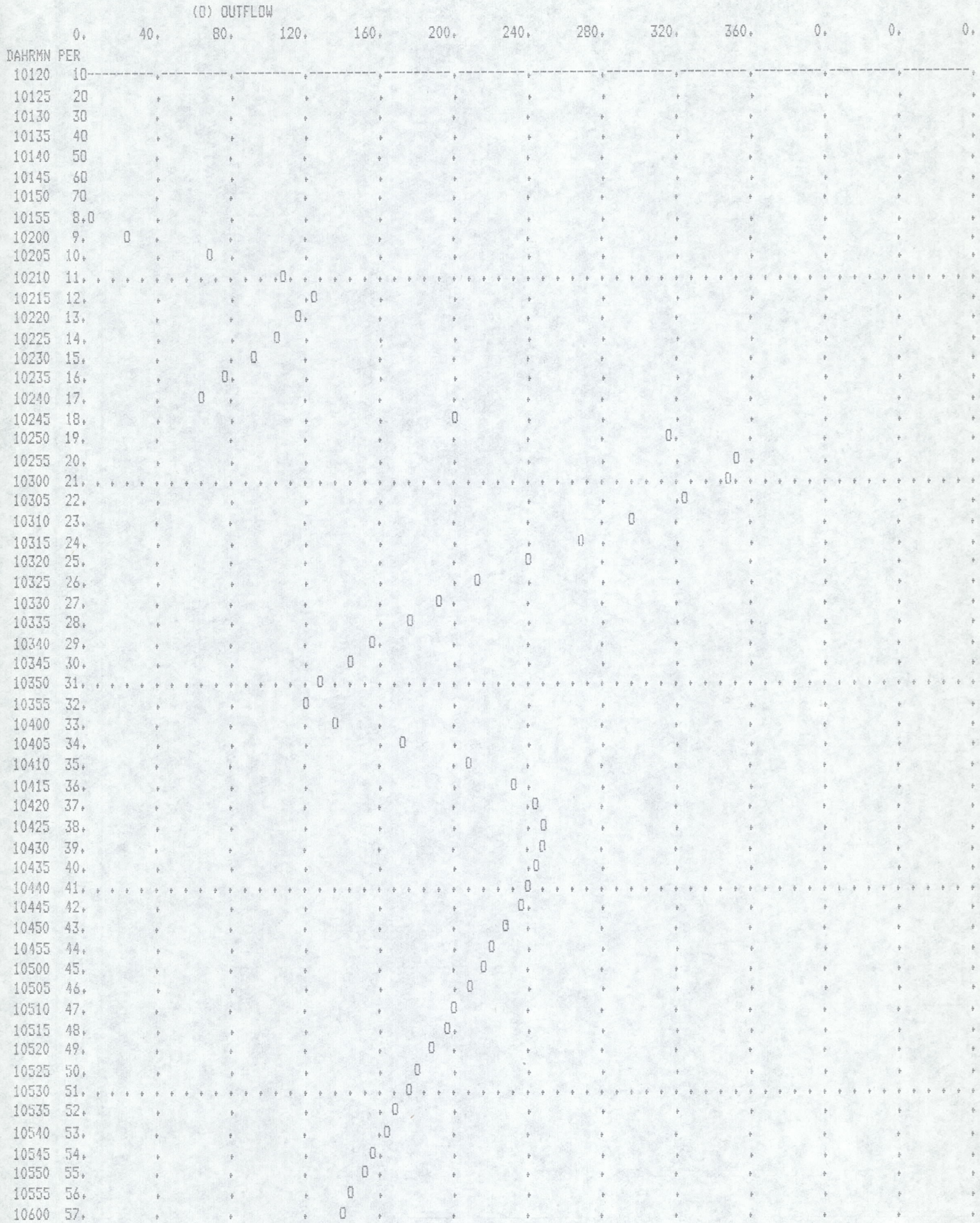
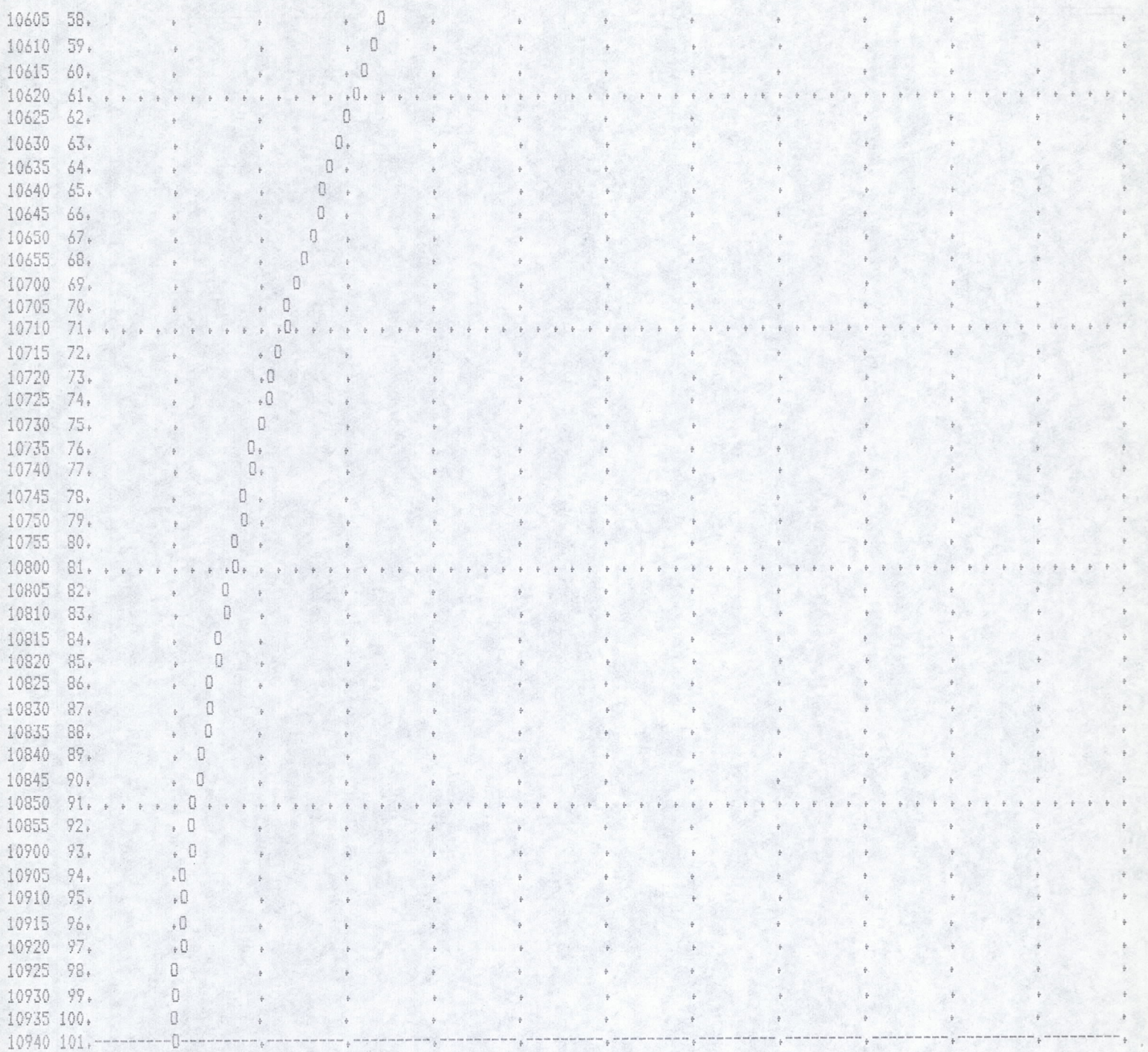
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	8.33-HR
(CFS)	(HR)					
352.	1.58	(CFS)	160.	125.	125.	125.
		(INCHES)	0.792	0.861	0.861	0.861
		(AC-FT)	79.	86.	86.	86.

CUMULATIVE AREA = 1.88 SQ MI

STATION SUB6




10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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          *             *
159 KK    *      SUB6   *
          *             *
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ROUTED TO SUB6 (CONTRATION POINT F)
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
PROPOSED CHANNEL : BW = 8', SIDE SLOPE = 3:1

HYDROGRAPH ROUTING DATA

139 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

163 RK KINEMATIC WAVE STREAM ROUTING

L	2640.	CHANNEL LENGTH
S	0.0050	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	8.00	BOTTOM WIDTH OR DIAMETER
Z	3.00	SIDE SLOPE

***

KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.2752	1.402	1.67	1320.00

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HYDROGRAPH AT STATION SUB6

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	210.	*	1		0540	53	168.	*	1		0750	79	73.
1		0125	2	0.	*	1		0335	28	190.	*	1		0545	54	162.	*	1		0755	80	71.
1		0130	3	0.	*	1		0340	29	173.	*	1		0550	55	156.	*	1		0800	81	69.
1		0135	4	0.	*	1		0345	30	156.	*	1		0555	56	151.	*	1		0805	82	67.
1		0140	5	0.	*	1		0350	31	141.	*	1		0600	57	146.	*	1		0810	83	65.
1		0145	6	0.	*	1		0355	32	129.	*	1		0605	58	140.	*	1		0815	84	63.
1		0150	7	0.	*	1		0400	33	126.	*	1		0610	59	136.	*	1		0820	85	61.
1		0155	8	0.	*	1		0405	34	143.	*	1		0615	60	131.	*	1		0825	86	59.
1		0200	9	1.	*	1		0410	35	176.	*	1		0620	61	126.	*	1		0830	87	58.
1		0205	10	10.	*	1		0415	36	209.	*	1		0625	62	122.	*	1		0835	88	56.
1		0210	11	47.	*	1		0420	37	232.	*	1		0630	63	119.	*	1		0840	89	55.
1		0215	12	93.	*	1		0425	38	243.	*	1		0635	64	116.	*	1		0845	90	53.

1	0220	13	115.	*	1	0430	39	248.	*	1	0640	65	113.	*	1	0850	91	52.
1	0225	14	114.	*	1	0435	40	248.	*	1	0645	66	109.	*	1	0855	92	50.
1	0230	15	104.	*	1	0440	41	244.	*	1	0650	67	106.	*	1	0900	93	49.
1	0235	16	91.	*	1	0445	42	239.	*	1	0655	68	103.	*	1	0905	94	48.
1	0240	17	78.	*	1	0450	43	233.	*	1	0700	69	100.	*	1	0910	95	46.
1	0245	18	97.	*	1	0455	44	227.	*	1	0705	70	97.	*	1	0915	96	45.
1	0250	19	213.	*	1	0500	45	220.	*	1	0710	71	94.	*	1	0920	97	44.
1	0255	20	318.	*	1	0505	46	213.	*	1	0715	72	91.	*	1	0925	98	43.
1	0300	21	347.	*	1	0510	47	206.	*	1	0720	73	88.	*	1	0930	99	42.
1	0305	22	338.	*	1	0515	48	200.	*	1	0725	74	86.	*	1	0935	100	41.
1	0310	23	315.	*	1	0520	49	193.	*	1	0730	75	83.	*	1	0940	101	40.
1	0315	24	288.	*	1	0525	50	186.	*	1	0735	76	81.	*				
1	0320	25	260.	*	1	0530	51	180.	*	1	0740	77	78.	*				
1	0325	26	234.	*	1	0535	52	174.	*	1	0745	78	76.	*				
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
347.	1.67	(CFS)	159.	124.	124.	124.
		(INCHES)	0.790	0.855	0.855	0.855
		(AC-FT)	79.	85.	85.	85.

CUMULATIVE AREA = 1.88 SQ MI

STATION SUB6

(O) OUTFLOW

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                0.      40.      80.     120.     160.     200.     240.     280.     320.     360.       0.       0.       0.
DAHRMN PER
 10120  10+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
 10125  20 .        .        .        .        .        .        .        .        .        .        .        .
 10130  30 .        .        .        .        .        .        .        .        .        .        .        .
 10135  40 .        .        .        .        .        .        .        .        .        .        .        .
 10140  50 .        .        .        .        .        .        .        .        .        .        .        .
 10145  60 .        .        .        .        .        .        .        .        .        .        .        .
 10150  70 .        .        .        .        .        .        .        .        .        .        .        .
 10155  80 .        .        .        .        .        .        .        .        .        .        .        .
 10200  90 .        .        .        .        .        .        .        .        .        .        .        .
 10205  10. O      .        .        .        .        .        .        .        .        .        .        .
 10210  11. . . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10215  12. .        . O      .        .        .        .        .        .        .        .        .        .
 10220  13. .        .        O.       .        .        .        .        .        .        .        .        .
 10225  14. .        .        O.       .        .        .        .        .        .        .        .        .
 10230  15. .        .     O  .        .        .        .        .        .        .        .        .        .
 10235  16. .        .  O     .        .        .        .        .        .        .        .        .        .
 10240  17. .        O        .        .        .        .        .        .        .        .        .        .
 10245  18. .        .  O     .        .        .        .        .        .        .        .        .        .
 10250  19. .        .        .        .        .     O  .        .        .        .        .        .        .
 10255  20. .        .        .        .        .        .        .        .     O  .        .        .        .
 10300  21. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . O . . . . . .
 10305  22. .        .        .        .        .        .        .        .        O        .        .        .
 10310  23. .        .        .        .        .        .        .        .     O  .        .        .        .
 10315  24. .        .        .        .        .        .        .     O  .        .        .        .        .
 10320  25. .        .        .        .        .        .        O        .        .        .        .        .
 10325  26. .        .        .        .        .        O        .        .        .        .        .        .
 10330  27. .        .        .        .        .     O  .        .        .        .        .        .        .
 10335  28. .        .        .        .        O        .        .        .        .        .        .        .
 10340  29. .        .        .        .     O  .        .        .        .        .        .        .        .
 10345  30. .        .        .        O.       .        .        .        .        .        .        .        .
 10350  31. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10355  32. .        .        .     O  .        .        .        .        .        .        .        .        .
 10400  33. .        .        .     O  .        .        .        .        .        .        .        .        .
 10405  34. .        .        .        O        .        .        .        .        .        .        .        .
 10410  35. .        .        .        .     O  .        .        .        .        .        .        .        .
 10415  36. .        .        .        .        .     O  .        .        .        .        .        .        .
 10420  37. .        .        .        .        .        O        .        .        .        .        .        .
 10425  38. .        .        .        .        .        .     O  .        .        .        .        .        .
 10430  39. .        .        .        .        .        .     O  .        .        .        .        .        .
 10435  40. .        .        .        .        .        .     O  .        .        .        .        .        .
 10440  41. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10445  42. .        .        .        .        .        .        O        .        .        .        .        .
 10450  43. .        .        .        .        .        .        O        .        .        .        .        .
 10455  44. .        .        .        .        .        .     O  .        .        .        .        .        .
 10500  45. .        .        .        .        .        .  O     .        .        .        .        .        .
 10505  46. .        .        .        .        .        .  O     .        .        .        .        .        .
 10510  47. .        .        .        .        .        .  O     .        .        .        .        .        .
 10515  48. .        .        .        .        .        O        .        .        .        .        .        .
 10520  49. .        .        .        .        .        O        .        .        .        .        .        .
 10525  50. .        .        .        .        .        O        .        .        .        .        .        .
 10530  51. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10535  52. .        .        .        .        .     O  .        .        .        .        .        .        .
 10540  53. .        .        .        .        .     O  .        .        .        .        .        .        .
 10545  54. .        .        .        .        .     O  .        .        .        .        .        .        .
 10550  55. .        .        .        .        O        .        .        .        .        .        .        .
 10555  56. .        .        .        .        O        .        .        .        .        .        .        .
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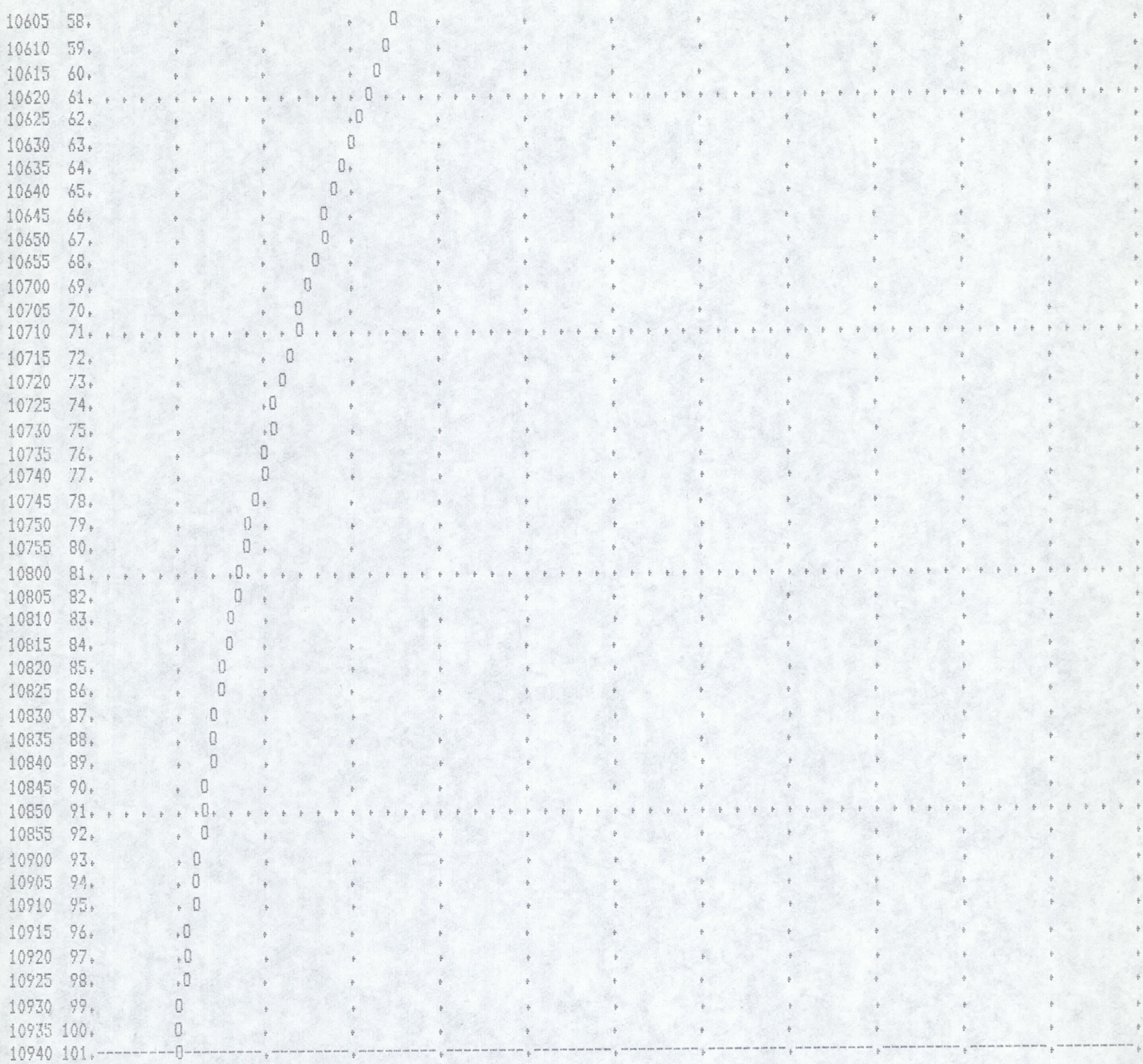
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10610 59.
10615 60.
10620 61.
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10645 66.
10650 67.
10655 68.
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10705 70.
10710 71.
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10735 76.
10740 77.
10745 78.
10750 79.
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10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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              *            *
 164 KK       *    SUB6C   *
              *            *
              **************
                              AREA BOUNDED BY CAMELBACK-99TH-INDIAN SCHOOL-107TH
                              ASSUME OVERLAND LENGTH 100' AS LOT SIZE
                                     COLLECTOR CHANNEL 2000' RUNNING EAST-WEST
                                     MAIN CHANNEL 1000' RUNING NORTH-SOUTH
                              CONCENTRATION POINT AT (F)
                              MODELED AS 12.5% OF THE AREA NOT EFFECT BY THE LAKE

                SUBBASIN RUNOFF DATA

 171 BA           SUBBASIN CHARACTERISTICS
                        TAREA         0.13  SUBBASIN AREA

                  PRECIPITATION DATA

 103 PB                 STORM         2.45  BASIN TOTAL PRECIPITATION

 104 PI             INCREMENTAL PRECIPITATION PATTERN
                     0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                     0.06      0.05

 172 LS           SCS LOSS RATE
                        STRTL         0.50  INITIAL ABSTRACTION
                       CRVNBR        80.00  CURVE NUMBER
                        RTIMP        29.00  PERCENT IMPERVIOUS AREA

                  KINEMATIC WAVE
 173 UK             OVERLAND-FLOW ELEMENT NO. 1
                            L         100.  OVERLAND FLOW LENGTH
                            S       0.0033  SLOPE
                            N        0.200  ROUGHNESS COEFFICIENT
                           PA        100.0  PERCENT OF SUBBASIN
 174 RK             COLLECTOR CHANNEL
                            L        2000.  CHANNEL LENGTH
                            S       0.0050  SLOPE
                            N        0.160  CHANNEL ROUGHNESS COEFFICIENT
                           CA         0.10  CONTRIBUTING AREA
                        SHAPE         TRAP  CHANNEL SHAPE
                           WD         0.00  BOTTOM WIDTH OR DIAMETER
                            Z         1.00  SIDE SLOPE
 175 RK             MAIN CHANNEL
                            L        1000.  CHANNEL LENGTH
                            S       0.0050  SLOPE
                            N        0.160  CHANNEL ROUGHNESS COEFFICIENT
                           CA         0.13  CONTRIBUTING AREA
                        SHAPE         TRAP  CHANNEL SHAPE
                           WD         0.00  BOTTOM WIDTH OR DIAMETER
                            Z         1.00  SIDE SLOPE
                       RUPSTQ           NO  ROUTE UPSTREAM HYDROGRAPH

                                                         ***
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COMPUTED KINEMATIC PARAMETERS

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)
1	0.4280	1.667	5.00	50.00
3	0.3297	1.333	5.00	1000.00
4	0.3297	1.333	5.00	500.00

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HYDROGRAPH AT STATION SUB6C

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	1.
1		0125	2	0.05	0.04	0.01	0.	1		0540	53	0.00	0.00	0.00	1.
1		0130	3	0.07	0.05	0.02	0.	1		0545	54	0.00	0.00	0.00	1.
1		0135	4	0.07	0.05	0.02	0.	1		0550	55	0.00	0.00	0.00	1.
1		0140	5	0.10	0.07	0.03	0.	1		0555	56	0.00	0.00	0.00	1.
1		0145	6	0.16	0.11	0.05	0.	1		0600	57	0.00	0.00	0.00	1.
1		0150	7	1.16	0.58	0.58	0.	1		0605	58	0.00	0.00	0.00	1.
1		0155	8	0.39	0.12	0.27	4.	1		0610	59	0.00	0.00	0.00	1.
1		0200	9	0.14	0.04	0.10	25.	1		0615	60	0.00	0.00	0.00	1.
1		0205	10	0.11	0.03	0.08	69.	1		0620	61	0.00	0.00	0.00	1.
1		0210	11	0.09	0.02	0.07	108.	1		0625	62	0.00	0.00	0.00	1.
1		0215	12	0.06	0.01	0.05	123.	1		0630	63	0.00	0.00	0.00	1.
1		0220	13	0.05	0.01	0.04	117.	1		0635	64	0.00	0.00	0.00	1.
1		0225	14	0.00	0.00	0.00	105.	1		0640	65	0.00	0.00	0.00	1.
1		0230	15	0.00	0.00	0.00	90.	1		0645	66	0.00	0.00	0.00	1.
1		0235	16	0.00	0.00	0.00	76.	1		0650	67	0.00	0.00	0.00	1.
1		0240	17	0.00	0.00	0.00	61.	1		0655	68	0.00	0.00	0.00	1.
1		0245	18	0.00	0.00	0.00	50.	1		0700	69	0.00	0.00	0.00	1.
1		0250	19	0.00	0.00	0.00	42.	1		0705	70	0.00	0.00	0.00	1.
1		0255	20	0.00	0.00	0.00	35.	1		0710	71	0.00	0.00	0.00	1.
1		0300	21	0.00	0.00	0.00	30.	1		0715	72	0.00	0.00	0.00	1.
1		0305	22	0.00	0.00	0.00	25.	1		0720	73	0.00	0.00	0.00	1.
1		0310	23	0.00	0.00	0.00	22.	1		0725	74	0.00	0.00	0.00	0.
1		0315	24	0.00	0.00	0.00	19.	1		0730	75	0.00	0.00	0.00	0.
1		0320	25	0.00	0.00	0.00	16.	1		0735	76	0.00	0.00	0.00	0.
1		0325	26	0.00	0.00	0.00	14.	1		0740	77	0.00	0.00	0.00	0.
1		0330	27	0.00	0.00	0.00	12.	1		0745	78	0.00	0.00	0.00	0.
1		0335	28	0.00	0.00	0.00	11.	1		0750	79	0.00	0.00	0.00	0.
1		0340	29	0.00	0.00	0.00	10.	1		0755	80	0.00	0.00	0.00	0.
1		0345	30	0.00	0.00	0.00	9.	1		0800	81	0.00	0.00	0.00	0.
1		0350	31	0.00	0.00	0.00	8.	1		0805	82	0.00	0.00	0.00	0.
1		0355	32	0.00	0.00	0.00	7.	1		0810	83	0.00	0.00	0.00	0.
1		0400	33	0.00	0.00	0.00	6.	1		0815	84	0.00	0.00	0.00	0.
1		0405	34	0.00	0.00	0.00	6.	1		0820	85	0.00	0.00	0.00	0.
1		0410	35	0.00	0.00	0.00	5.	1		0825	86	0.00	0.00	0.00	0.
1		0415	36	0.00	0.00	0.00	5.	1		0830	87	0.00	0.00	0.00	0.
1		0420	37	0.00	0.00	0.00	4.	1		0835	88	0.00	0.00	0.00	0.
1		0425	38	0.00	0.00	0.00	4.	1		0840	89	0.00	0.00	0.00	0.
1		0430	39	0.00	0.00	0.00	4.	1		0845	90	0.00	0.00	0.00	0.
1		0435	40	0.00	0.00	0.00	3.	1		0850	91	0.00	0.00	0.00	0.
1		0440	41	0.00	0.00	0.00	3.	1		0855	92	0.00	0.00	0.00	0.
1		0445	42	0.00	0.00	0.00	3.	1		0900	93	0.00	0.00	0.00	0.
1		0450	43	0.00	0.00	0.00	3.	1		0905	94	0.00	0.00	0.00	0.
1		0455	44	0.00	0.00	0.00	2.	1		0910	95	0.00	0.00	0.00	0.
1		0500	45	0.00	0.00	0.00	2.	1		0915	96	0.00	0.00	0.00	0.
1		0505	46	0.00	0.00	0.00	2.	1		0920	97	0.00	0.00	0.00	0.

1	0510	47	0.00	0.00	0.00	2.	*	1	0925	98	0.00	0.00	0.00	0.
1	0515	48	0.00	0.00	0.00	2.	*	1	0930	99	0.00	0.00	0.00	0.
1	0520	49	0.00	0.00	0.00	2.	*	1	0935	100	0.00	0.00	0.00	0.
1	0525	50	0.00	0.00	0.00	2.	*	1	0940	101	0.00	0.00	0.00	0.
1	0530	51	0.00	0.00	0.00	2.	*							
							*							

****

TOTAL RAINFALL = 2.45, TOTAL LOSS = 1.13, TOTAL EXCESS = 1.32

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
123.	0.92	(CFS)	16.	12.	12.	12.
		(INCHES)	1.211	1.217	1.217	1.217
		(AC-FT)	8.	8.	8.	8.

CUMULATIVE AREA = 0.13 SQ MI

STATION SUB6C

(O) OUTFLOW

	0.	20.	40.	60.	80.	100.	120.	140.	0.	0.	0. (I) PRECIP.	0. (X) EXCESS	0.
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER												
10120	10												
10125	20												L
10130	30												LX
10135	40												LX
10140	50												LLX
10145	60												LLLX
10150	70										LLLLLLLLLLLLLLLXXXXXXXXXXXXXXX		
10155	8	O										LLLXXXXXXX	
10200	9		O										LXXX
10205	10				O								LXX
10210	11						O						XX
10215	12							O					X
10220	13						O						X
10225	14					O							
10230	15					O							
10235	16				O								
10240	17			O									
10245	18			O									
10250	19		O										
10255	20		O										
10300	21		O										
10305	22		O										
10310	23		O										
10315	24	O											
10320	25	O											
10325	26	O											
10330	27	O											
10335	28	O											
10340	29	O											
10345	30	O											
10350	31	O											
10355	32	O											
10400	33	O											
10405	34	O											
10410	35	O											
10415	36	O											
10420	37	O											
10425	38	O											
10430	39	O											
10435	40	O											
10440	41	O											
10445	42	O											
10450	43	O											
10455	44	O											
10500	45	O											
10505	46	O											
10510	47	O											
10515	48	O											
10520	49	O											
10525	50	O											
10530	51	O											
10535	52	O											
10540	53	O											
10545	54	O											
10550	55	O											

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10555  56.0
10600  57.0
10605  58.0
10610  590
10615  600
10620  610
10625  620
10630  630
10635  640
10640  650
10645  660
10650  670
10655  680
10700  690
10705  700
10710  710
10715  720
10720  730
10725  740
10730  750
10735  760
10740  770
10745  780
10750  790
10755  800
10800  810
10805  820
10810  830
10815  840
10820  850
10825  860
10830  870
10835  880
10840  890
10845  900
10850  910
10855  920
10900  930
10905  940
10910  950
10915  960
10920  970
10925  980
10930  990
10935 1000
10940 1010
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          *            *
176 KK    *     SUB6   *
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COMBINED ROUTED SUB6 AND SUB6C

178 HC HYDROGRAPH COMBINATION
ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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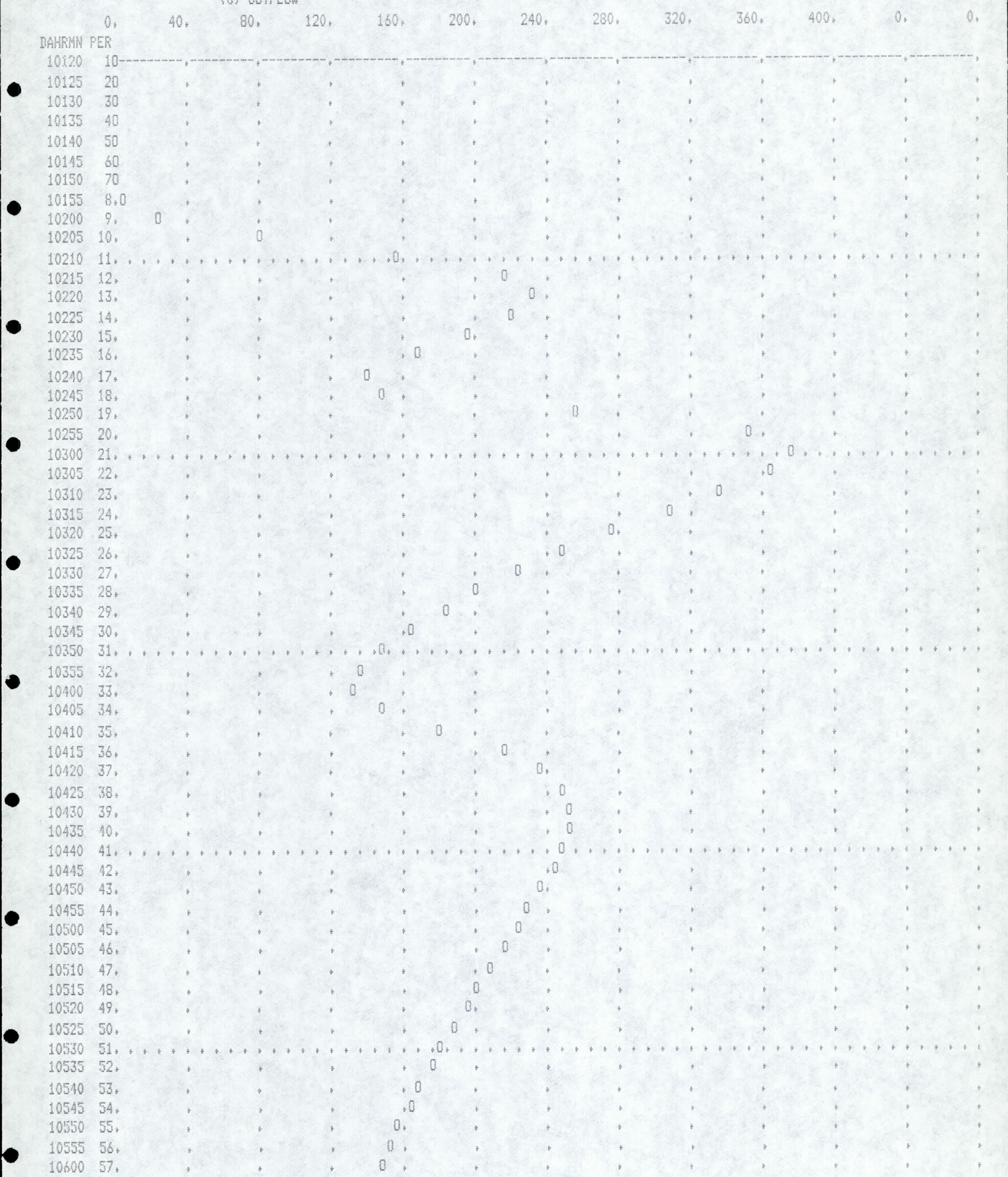
HYDROGRAPH AT STATION SUB6
SUM OF 2 HYDROGRAPHS

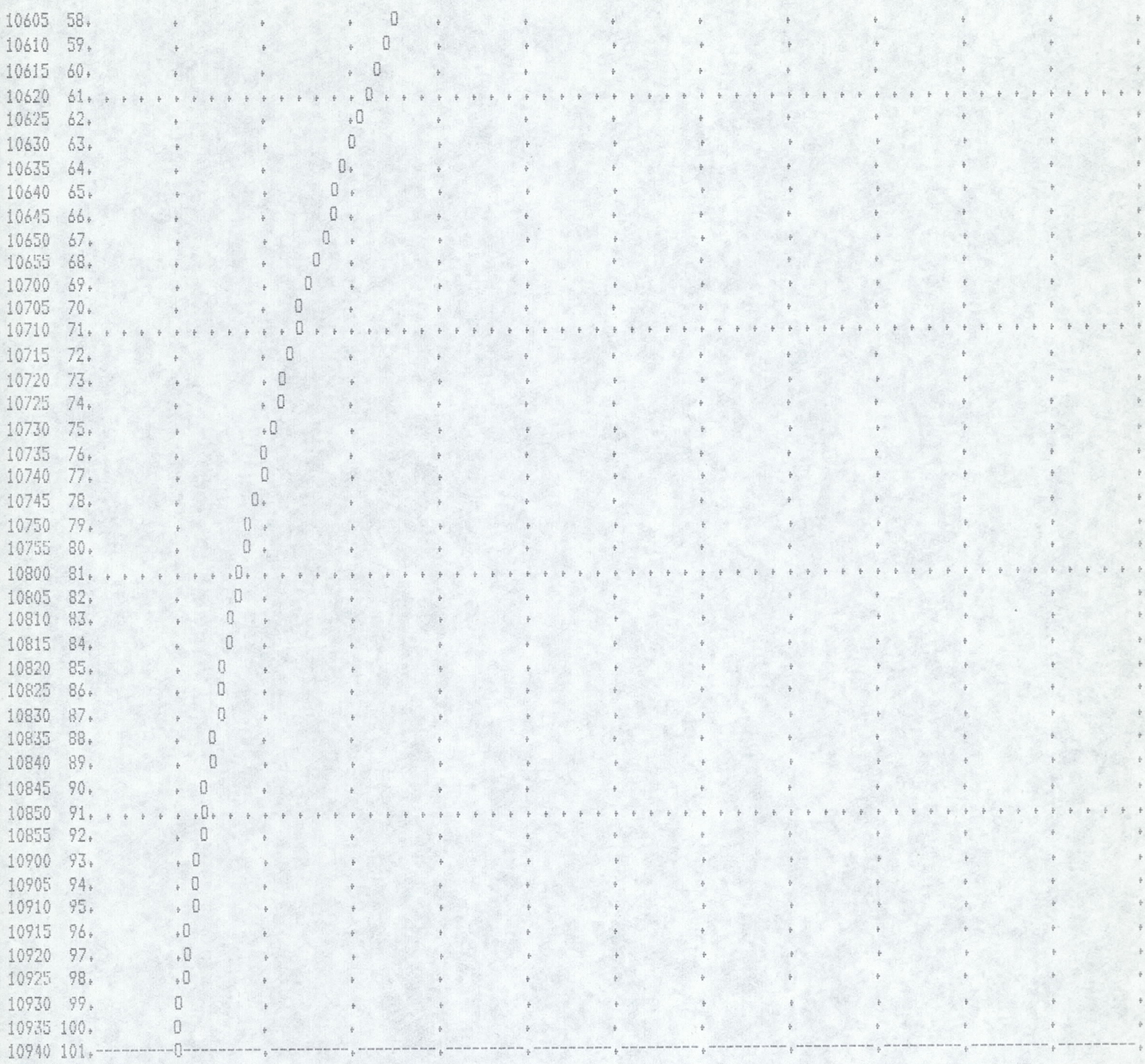
DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	*	1		0330	27	223.	*	1		0540	53	169.	*	1		0750	79	74.
1		0125	2	0.	*	1		0335	28	201.	*	1		0545	54	163.	*	1		0755	80	72.
1		0130	3	0.	*	1		0340	29	183.	*	1		0550	55	158.	*	1		0800	81	69.
1		0135	4	0.	*	1		0345	30	165.	*	1		0555	56	152.	*	1		0805	82	67.
1		0140	5	0.	*	1		0350	31	149.	*	1		0600	57	147.	*	1		0810	83	65.
1		0145	6	0.	*	1		0355	32	136.	*	1		0605	58	142.	*	1		0815	84	63.
1		0150	7	0.	*	1		0400	33	132.	*	1		0610	59	137.	*	1		0820	85	62.
1		0155	8	4.	*	1		0405	34	149.	*	1		0615	60	132.	*	1		0825	86	60.
1		0200	9	25.	*	1		0410	35	182.	*	1		0620	61	127.	*	1		0830	87	58.
1		0205	10	79.	*	1		0415	36	214.	*	1		0625	62	123.	*	1		0835	88	56.
1		0210	11	155.	*	1		0420	37	236.	*	1		0630	63	120.	*	1		0840	89	55.
1		0215	12	216.	*	1		0425	38	247.	*	1		0635	64	116.	*	1		0845	90	53.
1		0220	13	232.	*	1		0430	39	252.	*	1		0640	65	113.	*	1		0850	91	52.
1		0225	14	219.	*	1		0435	40	251.	*	1		0645	66	110.	*	1		0855	92	50.
1		0230	15	195.	*	1		0440	41	247.	*	1		0650	67	107.	*	1		0900	93	49.
1		0235	16	167.	*	1		0445	42	242.	*	1		0655	68	104.	*	1		0905	94	48.
1		0240	17	140.	*	1		0450	43	236.	*	1		0700	69	101.	*	1		0910	95	47.
1		0245	18	148.	*	1		0455	44	229.	*	1		0705	70	98.	*	1		0915	96	45.
1		0250	19	255.	*	1		0500	45	222.	*	1		0710	71	95.	*	1		0920	97	44.
1		0255	20	353.	*	1		0505	46	215.	*	1		0715	72	92.	*	1		0925	98	43.
1		0300	21	377.	*	1		0510	47	208.	*	1		0720	73	89.	*	1		0930	99	42.
1		0305	22	364.	*	1		0515	48	202.	*	1		0725	74	86.	*	1		0935	100	41.
1		0310	23	337.	*	1		0520	49	195.	*	1		0730	75	84.	*	1		0940	101	40.
1		0315	24	306.	*	1		0525	50	188.	*	1		0735	76	81.	*					
1		0320	25	276.	*	1		0530	51	182.	*	1		0740	77	78.	*					
1		0325	26	248.	*	1		0535	52	175.	*	1		0745	78	76.	*					

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
377.	1.67	(CFS)	174.	136.	136.	136.
		(INCHES)	0.809	0.878	0.878	0.878
		(AC-FT)	86.	94.	94.	94.

CUMULATIVE AREA = 2.00 SQ MI

STATION SUB6

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10855 92
10900 93
10905 94
10910 95
10915 96
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10925 98
10930 99
10935 100
10940 101

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          *            *
179 KK    *     SUB7   *
          *            *
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ROUTED TO SUB7 AT C.P. (G)
ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD

HYDROGRAPH ROUTING DATA

139 RL ROUTING LOSSES

QLOSS	0.00	INITIAL LOSS
CLOSS	0.00	ADDITIONAL FRACTION LOST

182 RK KINEMATIC WAVE STREAM ROUTING

L	5800.	CHANNEL LENGTH
S	0.0033	SLOPE
N	0.025	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	8.00	BOTTOM WIDTH OR DIAMETER
Z	3.00	SIDE SLOPE

***

KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.0360	1.402	2.50	2900.00

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HYDROGRAPH AT STATION SUB7

****

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	278.	1		0540	53	185.	1		0750	79	82.
1		0125	2	0.	1		0335	28	254.	1		0545	54	179.	1		0755	80	79.
1		0130	3	0.	1		0340	29	231.	1		0550	55	173.	1		0800	81	77.
1		0135	4	0.	1		0345	30	211.	1		0555	56	167.	1		0805	82	75.
1		0140	5	0.	1		0350	31	192.	1		0600	57	161.	1		0810	83	73.
1		0145	6	0.	1		0355	32	176.	1		0605	58	156.	1		0815	84	71.
1		0150	7	0.	1		0400	33	161.	1		0610	59	150.	1		0820	85	68.
1		0155	8	0.	1		0405	34	151.	1		0615	60	145.	1		0825	86	67.
1		0200	9	0.	1		0410	35	149.	1		0620	61	140.	1		0830	87	65.
1		0205	10	1.	1		0415	36	159.	1		0625	62	136.	1		0835	88	63.
1		0210	11	7.	1		0420	37	178.	1		0630	63	131.	1		0840	89	61.
1		0215	12	31.	1		0425	38	200.	1		0635	64	127.	1		0845	90	59.
1		0220	13	80.	1		0430	39	220.	1		0640	65	123.	1		0850	91	58.

1	0225	14	135.	*	1	0435	40	234.	*	1	0645	66	120.	*	1	0855	92	56.
1	0230	15	173.	*	1	0440	41	242.	*	1	0650	67	116.	*	1	0900	93	55.
1	0235	16	186.	*	1	0445	42	245.	*	1	0655	68	113.	*	1	0905	94	53.
1	0240	17	183.	*	1	0450	43	244.	*	1	0700	69	110.	*	1	0910	95	52.
1	0245	18	170.	*	1	0455	44	241.	*	1	0705	70	107.	*	1	0915	96	50.
1	0250	19	166.	*	1	0500	45	236.	*	1	0710	71	104.	*	1	0920	97	49.
1	0255	20	196.	*	1	0505	46	231.	*	1	0715	72	101.	*	1	0925	98	48.
1	0300	21	255.	*	1	0510	47	224.	*	1	0720	73	98.	*	1	0930	99	47.
1	0305	22	310.	*	1	0515	48	218.	*	1	0725	74	95.	*	1	0935	100	45.
1	0310	23	338.	*	1	0520	49	211.	*	1	0730	75	92.	*	1	0940	101	44.
1	0315	24	339.	*	1	0525	50	204.	*	1	0735	76	90.	*				
1	0320	25	325.	*	1	0530	51	198.	*	1	0740	77	87.	*				
1	0325	26	303.	*	1	0535	52	191.	*	1	0745	78	84.	*				
				*					*					*				

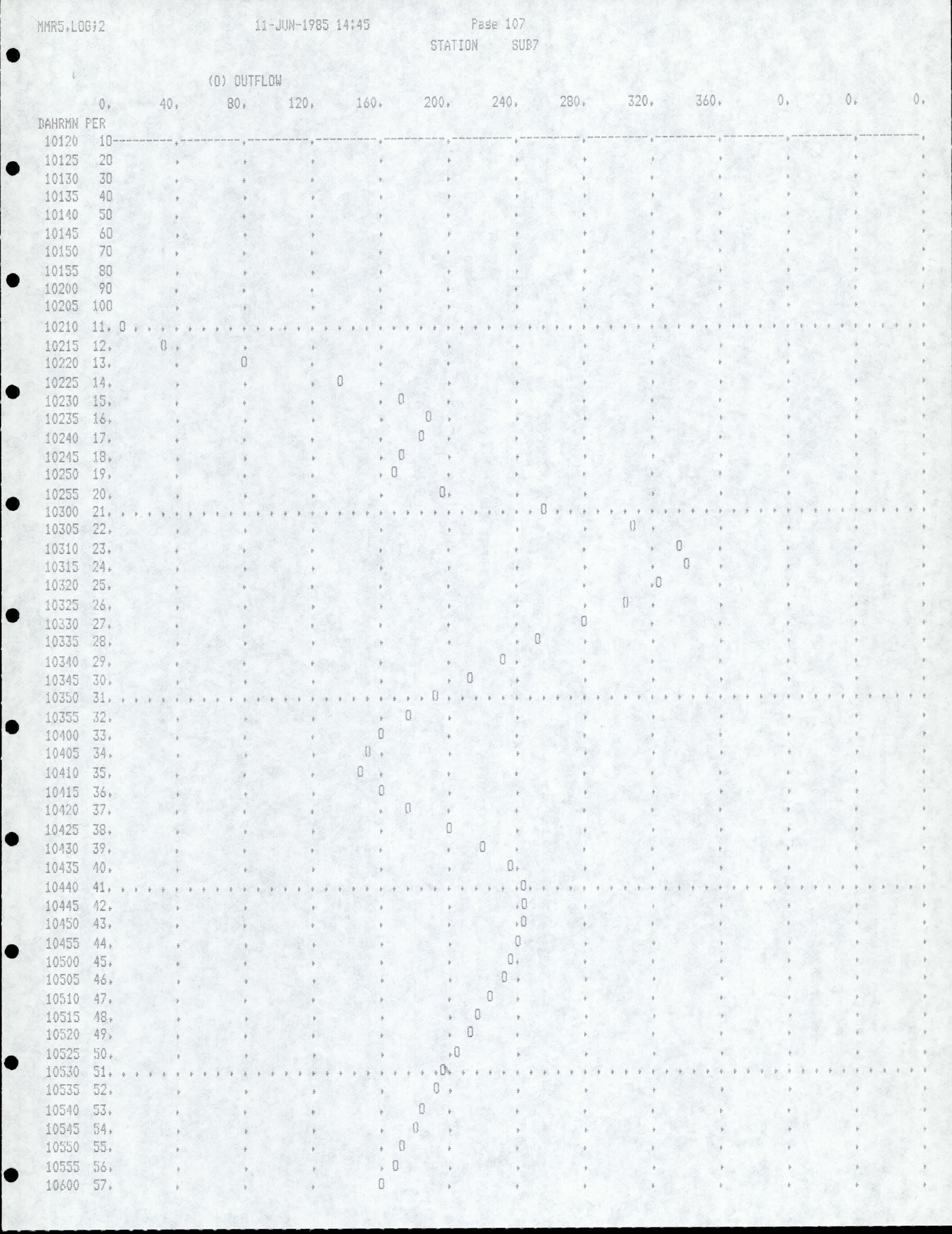
****

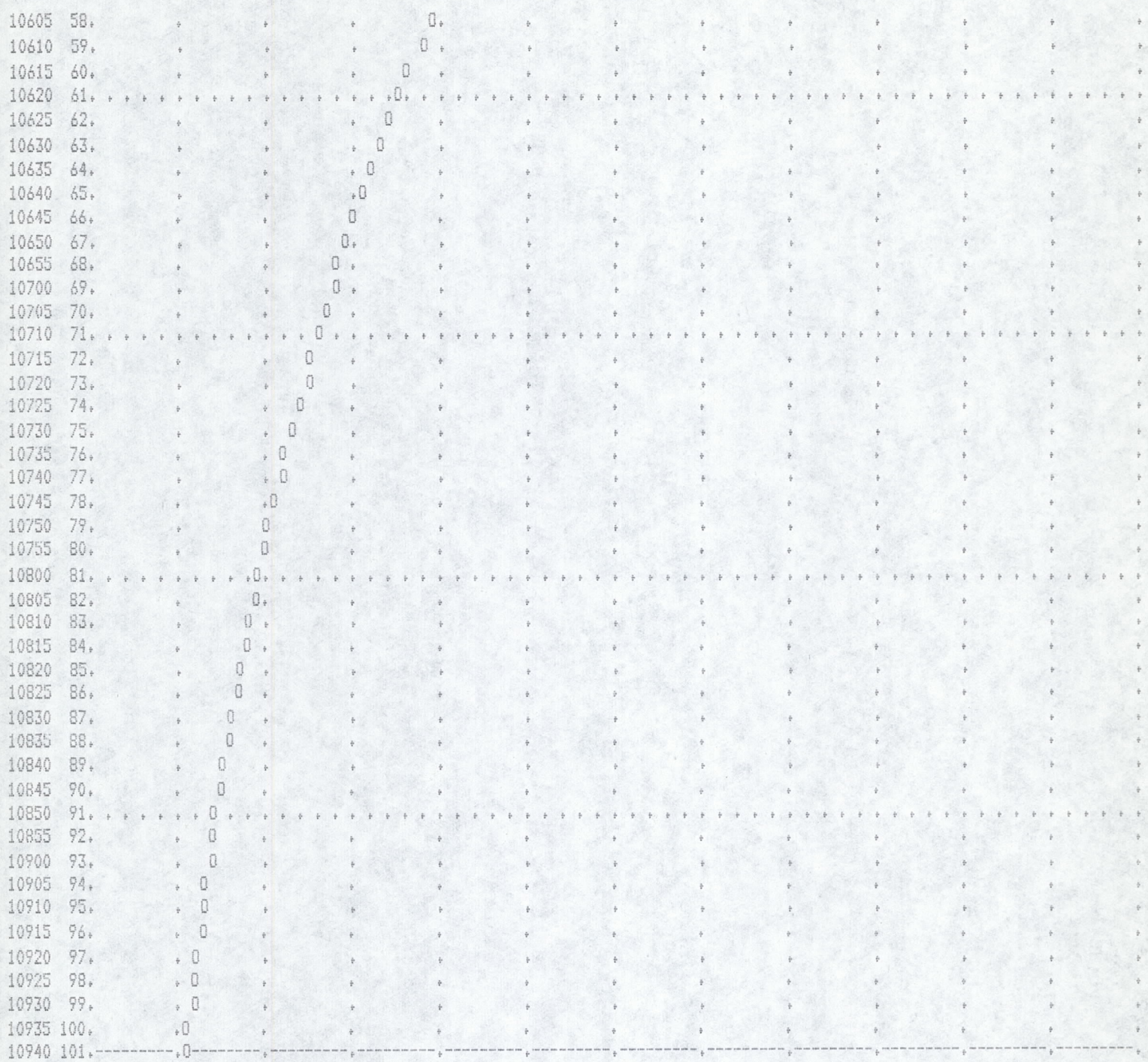
PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
339.	1.92	(CFS)	172.	133.	133.	133.
		(INCHES)	0.799	0.862	0.862	0.862
		(AC-FT)	85.	92.	92.	92.

CUMULATIVE AREA = 2.00 SQ MI

STATION SUB7

(O) OUTFLOW




10605 58.
10610 59.
10615 60.
10620 61.
10625 62.
10630 63.
10635 64.
10640 65.
10645 66.
10650 67.
10655 68.
10700 69.
10705 70.
10710 71.
10715 72.
10720 73.
10725 74.
10730 75.
10735 76.
10740 77.
10745 78.
10750 79.
10755 80.
10800 81.
10805 82.
10810 83.
10815 84.
10820 85.
10825 86.
10830 87.
10835 88.
10840 89.
10845 90.
10850 91.
10855 92.
10900 93.
10905 94.
10910 95.
10915 96.
10920 97.
10925 98.
10930 99.
10935 100.
10940 101.

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              ***************
              *             *
183 KK        *      SUB7   *
              *             *
              ***************
                              AREA BOUNDED BY 107TH ST- CAMELBACK ROAD- INDIAN SCHOOL-AUGU FRIA
                              ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT INDIAN SCHOOL ROAD
                              PROPOSED CHANNEL : BW = 8', SIDE SLOPE = 3:1
                              HYDROGRAPH AT C.P. (G) INTO AGUA FRIA WASH

                 SUBBASIN RUNOFF DATA

191 BA             SUBBASIN CHARACTERISTICS
                         TAREA       0.58  SUBBASIN AREA

                   PRECIPITATION DATA

188 PB                   STORM       2.45  BASIN TOTAL PRECIPITATION

189 PI               INCREMENTAL PRECIPITATION PATTERN
                        0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                        0.06      0.05

192 LS             SCS LOSS RATE
                         STRTL       0.25  INITIAL ABSTRACTION
                        CRVNBR      89.00  CURVE NUMBER
                         RTIMP      60.00  PERCENT IMPERVIOUS AREA

                   KINEMATIC WAVE
193 UK               OVERLAND-FLOW ELEMENT NO. 1
                             L      4500.  OVERLAND FLOW LENGTH
                             S     0.0050  SLOPE
                             N      0.100  ROUGHNESS COEFFICIENT
                            PA      100.0  PERCENT OF SUBBASIN
194 RK               MAIN CHANNEL
                             L      5800.  CHANNEL LENGTH
                             S     0.0030  SLOPE
                             N      0.025  CHANNEL ROUGHNESS COEFFICIENT
                            CA       0.58  CONTRIBUTING AREA
                         SHAPE       TRAP  CHANNEL SHAPE
                            WD       0.00  BOTTOM WIDTH OR DIAMETER
                             Z       1.00  SIDE SLOPE
                        RUPSTQ         NO  ROUTE UPSTREAM HYDROGRAPH

                                                                     ***

            COMPUTED KINEMATIC PARAMETERS
                ELEMENT      ALPHA        M      DT (MIN)    DX (FT)
                      1     1.0536    1.667        5.00      375.00
                      3     1.6346    1.333        5.00     2900.00
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HYDROGRAPH AT STATION SUB7

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	71.
1		0125	2	0.05	0.02	0.03	0.	1		0540	53	0.00	0.00	0.00	68.
1		0130	3	0.07	0.03	0.04	0.	1		0545	54	0.00	0.00	0.00	65.
1		0135	4	0.07	0.03	0.04	0.	1		0550	55	0.00	0.00	0.00	62.
1		0140	5	0.10	0.04	0.06	0.	1		0555	56	0.00	0.00	0.00	59.
1		0145	6	0.16	0.05	0.11	0.	1		0600	57	0.00	0.00	0.00	57.
1		0150	7	1.16	0.19	0.97	1.	1		0605	58	0.00	0.00	0.00	55.
1		0155	8	0.39	0.03	0.36	15.	1		0610	59	0.00	0.00	0.00	53.
1		0200	9	0.14	0.01	0.13	45.	1		0615	60	0.00	0.00	0.00	50.
1		0205	10	0.11	0.01	0.10	83.	1		0620	61	0.00	0.00	0.00	48.
1		0210	11	0.09	0.01	0.08	119.	1		0625	62	0.00	0.00	0.00	47.
1		0215	12	0.06	0.00	0.06	146.	1		0630	63	0.00	0.00	0.00	45.
1		0220	13	0.05	0.00	0.05	166.	1		0635	64	0.00	0.00	0.00	43.
1		0225	14	0.00	0.00	0.00	179.	1		0640	65	0.00	0.00	0.00	42.
1		0230	15	0.00	0.00	0.00	186.	1		0645	66	0.00	0.00	0.00	40.
1		0235	16	0.00	0.00	0.00	189.	1		0650	67	0.00	0.00	0.00	39.
1		0240	17	0.00	0.00	0.00	190.	1		0655	68	0.00	0.00	0.00	37.
1		0245	18	0.00	0.00	0.00	191.	1		0700	69	0.00	0.00	0.00	36.
1		0250	19	0.00	0.00	0.00	191.	1		0705	70	0.00	0.00	0.00	35.
1		0255	20	0.00	0.00	0.00	191.	1		0710	71	0.00	0.00	0.00	33.
1		0300	21	0.00	0.00	0.00	191.	1		0715	72	0.00	0.00	0.00	32.
1		0305	22	0.00	0.00	0.00	191.	1		0720	73	0.00	0.00	0.00	31.
1		0310	23	0.00	0.00	0.00	191.	1		0725	74	0.00	0.00	0.00	30.
1		0315	24	0.00	0.00	0.00	190.	1		0730	75	0.00	0.00	0.00	29.
1		0320	25	0.00	0.00	0.00	190.	1		0735	76	0.00	0.00	0.00	28.
1		0325	26	0.00	0.00	0.00	189.	1		0740	77	0.00	0.00	0.00	27.
1		0330	27	0.00	0.00	0.00	187.	1		0745	78	0.00	0.00	0.00	26.
1		0335	28	0.00	0.00	0.00	185.	1		0750	79	0.00	0.00	0.00	26.
1		0340	29	0.00	0.00	0.00	182.	1		0755	80	0.00	0.00	0.00	25.
1		0345	30	0.00	0.00	0.00	179.	1		0800	81	0.00	0.00	0.00	24.
1		0350	31	0.00	0.00	0.00	175.	1		0805	82	0.00	0.00	0.00	23.
1		0355	32	0.00	0.00	0.00	170.	1		0810	83	0.00	0.00	0.00	23.
1		0400	33	0.00	0.00	0.00	164.	1		0815	84	0.00	0.00	0.00	22.
1		0405	34	0.00	0.00	0.00	159.	1		0820	85	0.00	0.00	0.00	21.
1		0410	35	0.00	0.00	0.00	153.	1		0825	86	0.00	0.00	0.00	21.
1		0415	36	0.00	0.00	0.00	147.	1		0830	87	0.00	0.00	0.00	20.
1		0420	37	0.00	0.00	0.00	141.	1		0835	88	0.00	0.00	0.00	20.
1		0425	38	0.00	0.00	0.00	135.	1		0840	89	0.00	0.00	0.00	19.
1		0430	39	0.00	0.00	0.00	129.	1		0845	90	0.00	0.00	0.00	18.
1		0435	40	0.00	0.00	0.00	123.	1		0850	91	0.00	0.00	0.00	18.
1		0440	41	0.00	0.00	0.00	118.	1		0855	92	0.00	0.00	0.00	18.
1		0445	42	0.00	0.00	0.00	112.	1		0900	93	0.00	0.00	0.00	17.
1		0450	43	0.00	0.00	0.00	107.	1		0905	94	0.00	0.00	0.00	17.
1		0455	44	0.00	0.00	0.00	102.	1		0910	95	0.00	0.00	0.00	16.
1		0500	45	0.00	0.00	0.00	97.	1		0915	96	0.00	0.00	0.00	16.
1		0505	46	0.00	0.00	0.00	93.	1		0920	97	0.00	0.00	0.00	15.
1		0510	47	0.00	0.00	0.00	89.	1		0925	98	0.00	0.00	0.00	15.
1		0515	48	0.00	0.00	0.00	85.	1		0930	99	0.00	0.00	0.00	15.
1		0520	49	0.00	0.00	0.00	81.	1		0935	100	0.00	0.00	0.00	14.
1		0525	50	0.00	0.00	0.00	77.	1		0940	101	0.00	0.00	0.00	14.
1		0530	51	0.00	0.00	0.00	74.								

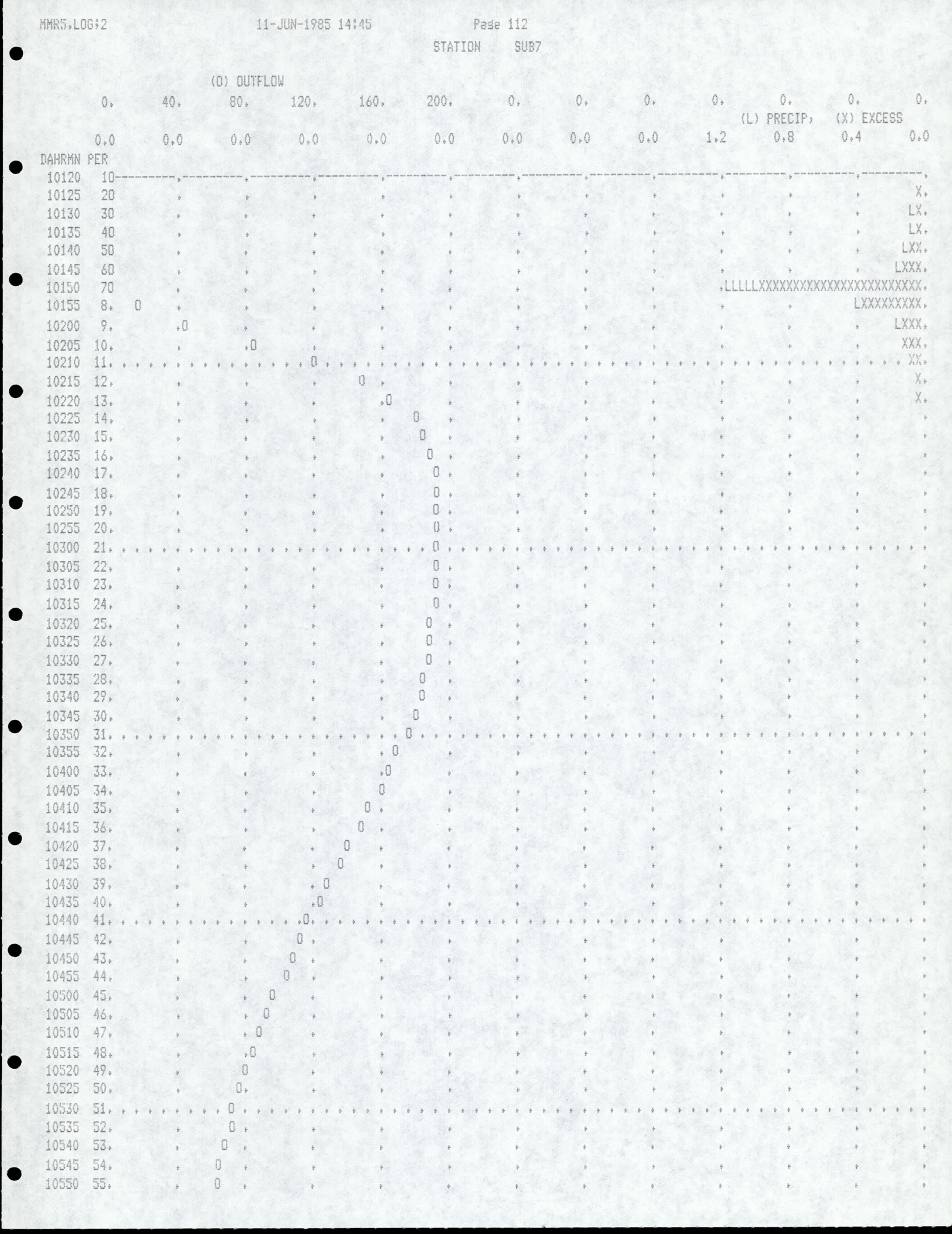
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.42, TOTAL EXCESS = 2.03

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
191.	1.67	(CFS)	104.	79.	79.	79.
		(INCHES)	1.673	1.762	1.762	1.762
		(AC-FT)	52.	55.	55.	55.

CUMULATIVE AREA = 0.58 SQ MI

STATION SUB7



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10555  56.          .   0   .       .       .       .       .       .       .       .       .       .       .       .
10600  57.          .  0    .       .       .       .       .       .       .       .       .       .       .       .
10605  58.          .  0    .       .       .       .       .       .       .       .       .       .       .       .
10610  59.          . 0     .       .       .       .       .       .       .       .       .       .       .       .
10615  60.          . 0     .       .       .       .       .       .       .       .       .       .       .       .
10620  61.  .  .  . 0 .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
10625  62.          . 0     .       .       .       .       .       .       .       .       .       .       .       .
10630  63.          .0      .       .       .       .       .       .       .       .       .       .       .       .
10635  64.          .0      .       .       .       .       .       .       .       .       .       .       .       .
10640  65.          0       .       .       .       .       .       .       .       .       .       .       .       .
10645  66.          0       .       .       .       .       .       .       .       .       .       .       .       .
10650  67.          0       .       .       .       .       .       .       .       .       .       .       .       .
10655  68.         0.       .       .       .       .       .       .       .       .       .       .       .       .
10700  69.         0.       .       .       .       .       .       .       .       .       .       .       .       .
10705  70.         0.       .       .       .       .       .       .       .       .       .       .       .       .
10710  71.  .  .  0 .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
10715  72.        0 .       .       .       .       .       .       .       .       .       .       .       .       .
10720  73.        0 .       .       .       .       .       .       .       .       .       .       .       .       .
10725  74.        0 .       .       .       .       .       .       .       .       .       .       .       .       .
10730  75.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10735  76.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10740  77.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10745  78.       0  .       .       .       .       .       .       .       .       .       .       .       .       .
10750  79.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10755  80.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10800  81.  .  . 0 .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
10805  82.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10810  83.      0   .       .       .       .       .       .       .       .       .       .       .       .       .
10815  84.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10820  85.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10825  86.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10830  87.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10835  88.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10840  89.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10845  90.     0    .       .       .       .       .       .       .       .       .       .       .       .       .
10850  91.  .  0 .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
10855  92.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10900  93.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10905  94.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10910  95.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10915  96.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10920  97.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10925  98.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10930  99.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10935 100.    0     .       .       .       .       .       .       .       .       .       .       .       .       .
10940 101.--0-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.
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          *             *
195 KK    *     RET7    *
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RETENTION REQUIREMENT FOR SUBAREA 7

HYDROGRAPH ROUTING DATA

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139 RL          ROUTING LOSSES
                     QLOSS       0.00  INITIAL LOSS
                     CLOSS       0.00  ADDITIONAL FRACTION LOST

197 RS          STORAGE ROUTING
                     NSTPS          1  NUMBER OF SUBREACHES
                      ITYP       STOR  TYPE OF INITIAL CONDITION
                    RSVRIC       0.00  INITIAL CONDITION
                         X       0.00 WORKING R AND D COEFFICIENT

198 SV           STORAGE        0.0       9.0      18.0      27.0      29.0      31.0      32.0      36.0

199 SQ           DISCHARGE      0.        0.       0.        0.        107.      304.      558.      1200.

200 SE           ELEVATION      0.00      1.00     2.00      3.00      3.20      3.40      3.60      4.00

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HYDROGRAPH AT STATION RET7

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	1		0410	35	126.	29.2	3.2	1		0700	69	40.	27.7	3.1
1		0125	2	0.	0.0	0.0	1		0415	36	138.	29.3	3.2	1		0705	70	38.	27.7	3.1
1		0130	3	0.	0.0	0.0	1		0420	37	141.	29.3	3.2	1		0710	71	37.	27.7	3.1
1		0135	4	0.	0.0	0.0	1		0425	38	139.	29.3	3.2	1		0715	72	36.	27.7	3.1
1		0140	5	0.	0.0	0.0	1		0430	39	136.	29.3	3.2	1		0720	73	35.	27.6	3.1
1		0145	6	0.	0.0	0.0	1		0435	40	131.	29.2	3.2	1		0725	74	33.	27.6	3.1
1		0150	7	0.	0.0	0.0	1		0440	41	126.	29.2	3.2	1		0730	75	32.	27.6	3.1
1		0155	8	0.	0.1	0.0	1		0445	42	120.	29.1	3.2	1		0735	76	31.	27.6	3.1
1		0200	9	0.	0.3	0.0	1		0450	43	115.	29.1	3.2	1		0740	77	30.	27.6	3.1
1		0205	10	0.	0.7	0.1	1		0455	44	110.	29.0	3.2	1		0745	78	29.	27.5	3.1
1		0210	11	0.	1.4	0.2	1		0500	45	106.	29.0	3.2	1		0750	79	28.	27.5	3.1
1		0215	12	0.	2.3	0.3	1		0505	46	102.	28.9	3.2	1		0755	80	27.	27.5	3.1
1		0220	13	0.	3.4	0.4	1		0510	47	99.	28.8	3.2	1		0800	81	26.	27.5	3.0
1		0225	14	0.	4.6	0.5	1		0515	48	95.	28.8	3.2	1		0805	82	26.	27.5	3.0
1		0230	15	0.	5.8	0.6	1		0520	49	91.	28.7	3.2	1		0810	83	25.	27.5	3.0
1		0235	16	0.	7.1	0.8	1		0525	50	87.	28.6	3.2	1		0815	84	24.	27.4	3.0
1		0240	17	0.	8.4	0.9	1		0530	51	84.	28.6	3.2	1		0820	85	23.	27.4	3.0
1		0245	18	0.	9.7	1.1	1		0535	52	80.	28.5	3.1	1		0825	86	23.	27.4	3.0
1		0250	19	0.	11.1	1.2	1		0540	53	77.	28.4	3.1	1		0830	87	22.	27.4	3.0
1		0255	20	0.	12.4	1.4	1		0545	54	74.	28.4	3.1	1		0835	88	21.	27.4	3.0

1	0300	21	0.	13.7	1.5	*	1	0550	55	70.	28.3	3.1	*	1	0840	89	21.	27.4	3.0
1	0305	22	0.	15.0	1.7	*	1	0555	56	67.	28.3	3.1	*	1	0845	90	20.	27.4	3.0
1	0310	23	0.	16.3	1.8	*	1	0600	57	65.	28.2	3.1	*	1	0850	91	20.	27.4	3.0
1	0315	24	0.	17.6	2.0	*	1	0605	58	62.	28.2	3.1	*	1	0855	92	19.	27.4	3.0
1	0320	25	0.	18.9	2.1	*	1	0610	59	59.	28.1	3.1	*	1	0900	93	18.	27.3	3.0
1	0325	26	0.	20.2	2.2	*	1	0615	60	57.	28.1	3.1	*	1	0905	94	18.	27.3	3.0
1	0330	27	0.	21.5	2.4	*	1	0620	61	55.	28.0	3.1	*	1	0910	95	17.	27.3	3.0
1	0335	28	0.	22.8	2.5	*	1	0625	62	52.	28.0	3.1	*	1	0915	96	17.	27.3	3.0
1	0340	29	0.	24.1	2.7	*	1	0630	63	50.	27.9	3.1	*	1	0920	97	17.	27.3	3.0
1	0345	30	0.	25.3	2.8	*	1	0635	64	48.	27.9	3.1	*	1	0925	98	16.	27.3	3.0
1	0350	31	0.	26.5	2.9	*	1	0640	65	46.	27.9	3.1	*	1	0930	99	16.	27.3	3.0
1	0355	32	33.	27.6	3.1	*	1	0645	66	45.	27.8	3.1	*	1	0935	100	15.	27.3	3.0
1	0400	33	75.	28.4	3.1	*	1	0650	67	43.	27.8	3.1	*	1	0940	101	15.	27.3	3.0
1	0405	34	102.	28.9	3.2	*	1	0655	68	41.	27.8	3.1	*						
						*							*						

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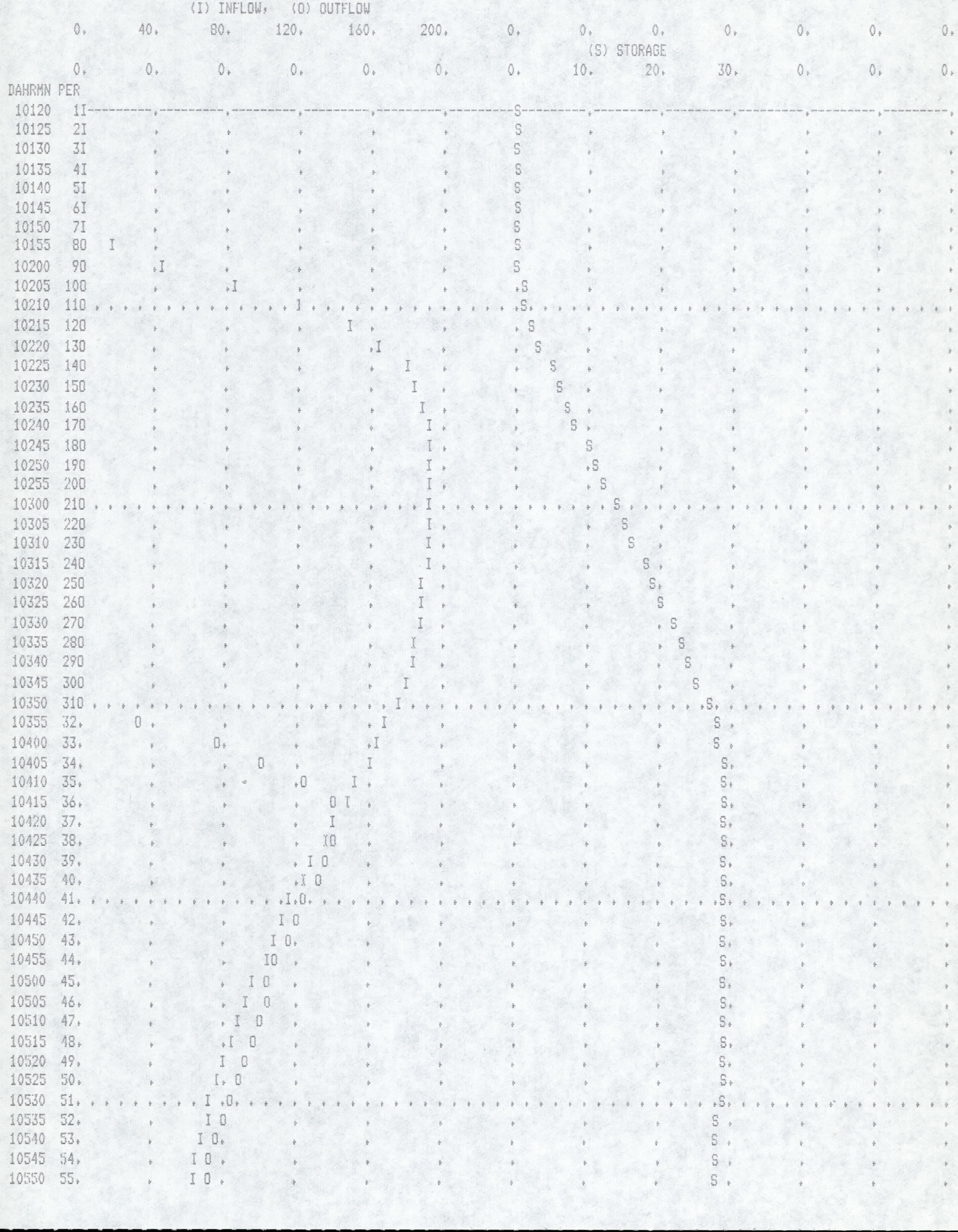
PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
141.	3.00	(CFS)	55.	40.	40.	40.
		(INCHES)	0.880	0.880	0.880	0.880
		(AC-FT)	27.	27.	27.	27.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	8.33-HR
29.	3.00	28.	22.	22.	22.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	8.33-HR
3.23	3.00	3.09	2.48	2.48	2.48

CUMULATIVE AREA = 0.58 SQ MI

STATION RET7



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10555 56.           +    I O  +         +         +         +         +         +         +       S +         +         +         +
10600 57.           +   I O   +         +         +         +         +         +         +       S +         +         +         +
10605 58.           +  IO     +         +         +         +         +         +         +       S +         +         +         +
10610 59.           +  I O    +         +         +         +         +         +         +       S +         +         +         +
10615 60.           + IO      +         +         +         +         +         +         +       S +         +         +         +
10620 61. + + + + + + I O + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + S + + + + + + + + + + + + + + + +
10625 62.           + IO      +         +         +         +         +         +         +       S +         +         +         +
10630 63.           +I O      +         +         +         +         +         +         +       S +         +         +         +
10635 64.           +IO       +         +         +         +         +         +         +       S +         +         +         +
10640 65.           I O       +         +         +         +         +         +         +       S +         +         +         +
10645 66.           IO        +         +         +         +         +         +         +       S +         +         +         +
10650 67.           IO        +         +         +         +         +         +         +       S +         +         +         +
10655 68.          IO         +         +         +         +         +         +         +       S +         +         +         +
10700 69.          IO         +         +         +         +         +         +         +       S +         +         +         +
10705 70.          IO         +         +         +         +         +         +         +       S +         +         +         +
10710 71. + + + + IO+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + S + + + + + + + + + + + + + + + +
10715 72.         IO+         +         +         +         +         +         +         +       S +         +         +         +
10720 73.         IO+         +         +         +         +         +         +         +       S +         +         +         +
10725 74.         I +         +         +         +         +         +         +         +       S +         +         +         +
10730 75.       IO  +         +         +         +         +         +         +         +       S +         +         +         +
10735 76.       IO  +         +         +         +         +         +         +         +       S +         +         +         +
10740 77.       IO  +         +         +         +         +         +         +         +       S +         +         +         +
10745 78.       I   +         +         +         +         +         +         +         +       S +         +         +         +
10750 79.      IO   +         +         +         +         +         +         +         +       S +         +         +         +
10755 80.      IO   +         +         +         +         +         +         +         +       S +         +         +         +
10800 81. + + +IO + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +S+ + + + + + + + + + + + + + + + +
10805 82.      I    +         +         +         +         +         +         +         +      S  +         +         +         +
10810 83.      I    +         +         +         +         +         +         +         +      S  +         +         +         +
10815 84.     IO    +         +         +         +         +         +         +         +      S  +         +         +         +
10820 85.     IO    +         +         +         +         +         +         +         +      S  +         +         +         +
10825 86.     IO    +         +         +         +         +         +         +         +      S  +         +         +         +
10830 87.     I     +         +         +         +         +         +         +         +      S  +         +         +         +
10835 88.     I     +         +         +         +         +         +         +         +      S  +         +         +         +
10840 89.     I     +         +         +         +         +         +         +         +      S  +         +         +         +
10845 90.     I     +         +         +         +         +         +         +         +      S  +         +         +         +
10850 91. +  IO + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +S+ + + + + + + + + + + + + + + + +
10855 92.    IO     +         +         +         +         +         +         +         +      S  +         +         +         +
10900 93.    IO     +         +         +         +         +         +         +         +      S  +         +         +         +
10905 94.    I      +         +         +         +         +         +         +         +      S  +         +         +         +
10910 95.    I      +         +         +         +         +         +         +         +      S  +         +         +         +
10915 96.    I      +         +         +         +         +         +         +         +      S  +         +         +         +
10920 97.    I      +         +         +         +         +         +         +         +      S  +         +         +         +
10925 98.    I      +         +         +         +         +         +         +         +      S  +         +         +         +
10930 99.    I      +         +         +         +         +         +         +         +      S  +         +         +         +
10935 100.   I      +         +         +         +         +         +         +         +      S  +         +         +         +
10940 101.--IO------,---------,---------,---------,---------,---------,---------,---------,------S--,---------,---------,---------,
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          ***************
          *             *
201 KK    *      SUB7   *
          *             *
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COMBINED ROUTED SUB6 AND ROUTED SUB7

203 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION SUB7

SUM OF 2 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0120	1	0.	1		0330	27	278.	1		0540	53	262.	1		0750	79	110.
1		0125	2	0.	1		0335	28	254.	1		0545	54	252.	1		0755	80	107.
1		0130	3	0.	1		0340	29	231.	1		0550	55	243.	1		0800	81	103.
1		0135	4	0.	1		0345	30	211.	1		0555	56	234.	1		0805	82	100.
1		0140	5	0.	1		0350	31	192.	1		0600	57	226.	1		0810	83	97.
1		0145	6	0.	1		0355	32	209.	1		0605	58	218.	1		0815	84	95.
1		0150	7	0.	1		0400	33	236.	1		0610	59	210.	1		0820	85	92.
1		0155	8	0.	1		0405	34	252.	1		0615	60	202.	1		0825	86	89.
1		0200	9	0.	1		0410	35	275.	1		0620	61	195.	1		0830	87	87.
1		0205	10	1.	1		0415	36	297.	1		0625	62	188.	1		0835	88	84.
1		0210	11	7.	1		0420	37	319.	1		0630	63	182.	1		0840	89	82.
1		0215	12	31.	1		0425	38	340.	1		0635	64	175.	1		0845	90	79.
1		0220	13	80.	1		0430	39	356.	1		0640	65	170.	1		0850	91	77.
1		0225	14	135.	1		0435	40	365.	1		0645	66	164.	1		0855	92	75.
1		0230	15	173.	1		0440	41	368.	1		0650	67	159.	1		0900	93	73.
1		0235	16	186.	1		0445	42	365.	1		0655	68	155.	1		0905	94	71.
1		0240	17	183.	1		0450	43	359.	1		0700	69	150.	1		0910	95	69.
1		0245	18	170.	1		0455	44	351.	1		0705	70	145.	1		0915	96	67.
1		0250	19	166.	1		0500	45	342.	1		0710	71	141.	1		0920	97	66.
1		0255	20	196.	1		0505	46	333.	1		0715	72	137.	1		0925	98	64.
1		0300	21	255.	1		0510	47	323.	1		0720	73	133.	1		0930	99	62.
1		0305	22	310.	1		0515	48	313.	1		0725	74	128.	1		0935	100	61.
1		0310	23	338.	1		0520	49	302.	1		0730	75	125.	1		0940	101	59.
1		0315	24	339.	1		0525	50	292.	1		0735	76	121.					
1		0320	25	325.	1		0530	51	282.	1		0740	77	117.					
1		0325	26	303.	1		0535	52	271.	1		0745	78	113.					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	8.33-HR
368.	3.33	(CFS)	223.	173.	173.	173.
		(INCHES)	0.803	0.866	0.866	0.866
		(AC-FT)	110.	119.	119.	119.

CUMULATIVE AREA = 2.58 SQ MI

STATION SUB7

(O) OUTFLOW

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                0.      40.      80.     120.     160.     200.     240.     280.     320.     360.     400.      0.       0.
DAHRMN PER
 10120  10----------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
 10125  20          +        +        +        +        +        +        +        +        +        +        +        +
 10130  30          +        +        +        +        +        +        +        +        +        +        +        +
 10135  40          +        +        +        +        +        +        +        +        +        +        +        +
 10140  50          +        +        +        +        +        +        +        +        +        +        +        +
 10145  60          +        +        +        +        +        +        +        +        +        +        +        +
 10150  70          +        +        +        +        +        +        +        +        +        +        +        +
 10155  80          +        +        +        +        +        +        +        +        +        +        +        +
 10200  90          +        +        +        +        +        +        +        +        +        +        +        +
 10205 100          +        +        +        +        +        +        +        +        +        +        +        +
 10210  11. O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10215  12.    O   +        +        +        +        +        +        +        +        +        +        +        +
 10220  13.        +   O    +        +        +        +        +        +        +        +        +        +        +
 10225  14.        +        +    O   +        +        +        +        +        +        +        +        +        +
 10230  15.        +        +        +    O   +        +        +        +        +        +        +        +        +
 10235  16.        +        +        +        +    O   +        +        +        +        +        +        +        +
 10240  17.        +        +        +        +    O   +        +        +        +        +        +        +        +
 10245  18.        +        +        +        +   O    +        +        +        +        +        +        +        +
 10250  19.        +        +        +        +  O     +        +        +        +        +        +        +        +
 10255  20.        +        +        +        +      O +        +        +        +        +        +        +        +
 10300  21. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10305  22.        +        +        +        +        +        +        +        +    O   +        +        +        +
 10310  23.        +        +        +        +        +        +        +        +        O        +        +        +
 10315  24.        +        +        +        +        +        +        +        +         O       +        +        +
 10320  25.        +        +        +        +        +        +        +        +        O       +        +        +
 10325  26.        +        +        +        +        +        +        +        +    O   +        +        +        +
 10330  27.        +        +        +        +        +        +        +        +  O     +        +        +        +
 10335  28.        +        +        +        +        +        +        +      O +        +        +        +        +
 10340  29.        +        +        +        +        +        +        +    O   +        +        +        +        +
 10345  30.        +        +        +        +        +        +      O +        +        +        +        +        +
 10350  31. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10355  32.        +        +        +        +        +      O +        +        +        +        +        +        +
 10400  33.        +        +        +        +        +        +        +        +        +        +        +        +
 10405  34.        +        +        +        +        +        +      O +        +        +        +        +        +
 10410  35.        +        +        +        +        +        +        +        +        +        +        +        +
 10415  36.        +        +        +        +        +        +        +      O +        +        +        +        +
 10420  37.        +        +        +        +        +        +        +        +    O   +        +        +        +
 10425  38.        +        +        +        +        +        +        +        +        O        +        +        +
 10430  39.        +        +        +        +        +        +        +        +        +        +        +        +
 10435  40.        +        +        +        +        +        +        +        +        +        +        +        +
 10440  41. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10445  42.        +        +        +        +        +        +        +        +        +        +        +        +
 10450  43.        +        +        +        +        +        +        +        +        +        +        +        +
 10455  44.        +        +        +        +        +        +        +        +        +        +        +        +
 10500  45.        +        +        +        +        +        +        +        +        +        +        +        +
 10505  46.        +        +        +        +        +        +        +        +        +        +        +        +
 10510  47.        +        +        +        +        +        +        +        +        +        +        +        +
 10515  48.        +        +        +        +        +        +        +        +        +        +        +        +
 10520  49.        +        +        +        +        +        +        +        +        +        +        +        +
 10525  50.        +        +        +        +        +        +        +        +        +        +        +        +
 10530  51. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10535  52.        +        +        +        +        +        +        +        +        +        +        +        +
 10540  53.        +        +        +        +        +        +        +        +        +        +        +        +
 10545  54.        +        +        +        +        +        +        +        +        +        +        +        +
 10550  55.        +        +        +        +        +        +        +        +        +        +        +        +
 10555  56.        +        +        +        +        +        +        +        +        +        +        +        +
 10600  57.        +        +        +        +        +        +        +        +        +        +        +        +
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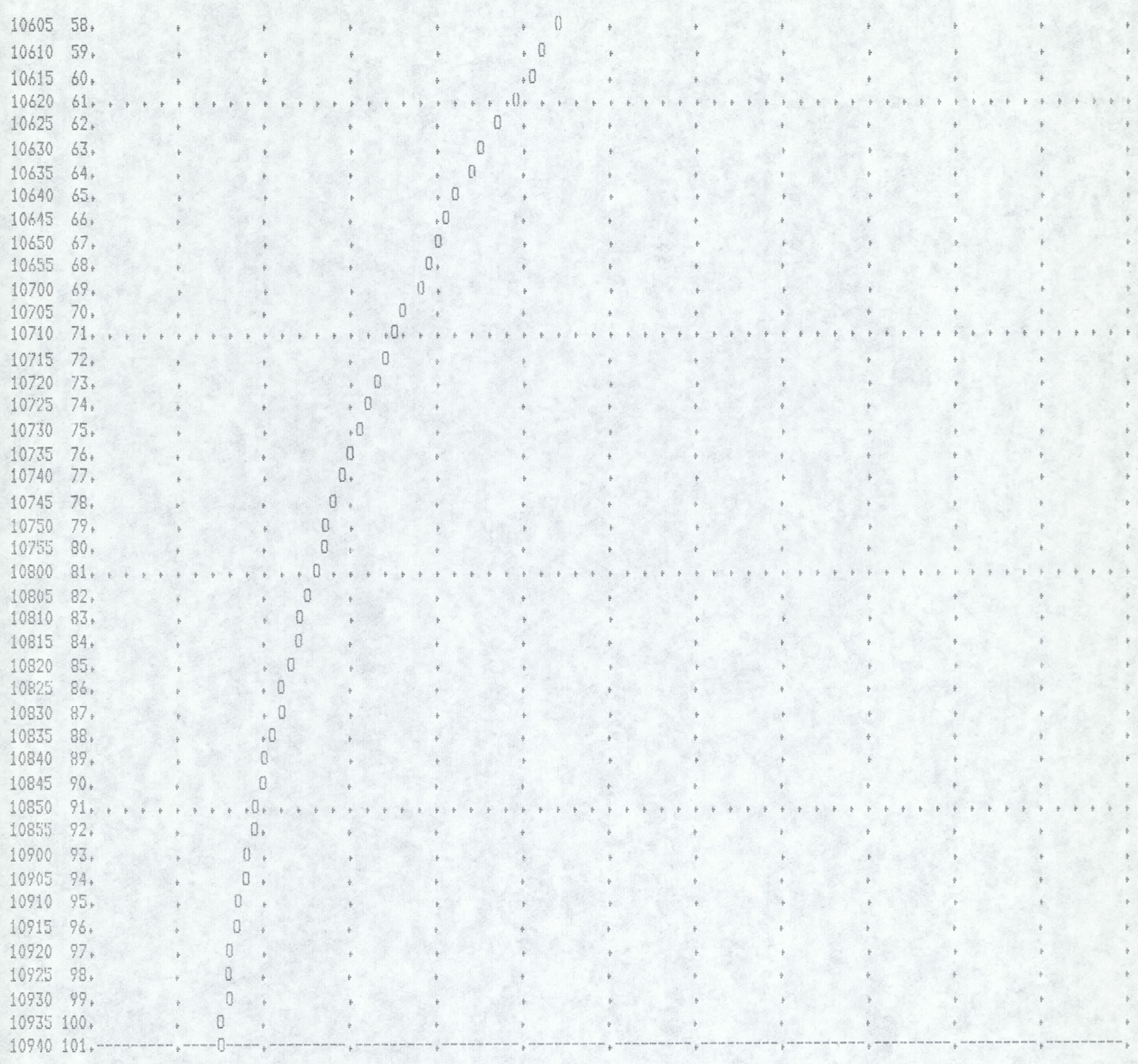
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10825 86
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10835 88
10840 89
10845 90
10850 91
10855 92
10900 93
10905 94
10910 95
10915 96
10920 97
10925 98
10930 99
10935 100
10940 101

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              *            *
 204 KK       *      SUB8  *
              *            *
              **************
                          SOUTH-EAST CORNER OF INDIAN SCHOOL RD AND 107 TH ST
                          ASSUME COLLECTOR CHANNEL ALONG EAST SIDE EASEMENT 107TH ST
                          HYDROGRAPH AT C.P. (H)

            SUBBASIN RUNOFF DATA

 211 BA       SUBBASIN CHARACTERISTICS
                    TAREA        0.36  SUBBASIN AREA

              PRECIPITATION DATA

 208 PB             STORM        2.45  BASIN TOTAL PRECIPITATION

 209 PI         INCREMENTAL PRECIPITATION PATTERN
                   0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                   0.06      0.05

 212 LS       SCS LOSS RATE
                   STRTL         0.25  INITIAL ABSTRACTION
                  CRVNBR        89.00  CURVE NUMBER
                   RTIMP        60.00  PERCENT IMPERVIOUS AREA

              KINEMATIC WAVE
 213 UK         OVERLAND-FLOW ELEMENT NO. 1
                       L        3000.  OVERLAND FLOW LENGTH
                       S       0.0050  SLOPE
                       N        0.100  ROUGHNESS COEFFICIENT
                      PA        100.0  PERCENT OF SUBBASIN
 214 RK         MAIN CHANNEL
                       L        2640.  CHANNEL LENGTH
                       S       0.0030  SLOPE
                       N        0.025  CHANNEL ROUGHNESS COEFFICIENT
                      CA         0.36  CONTRIBUTING AREA
                   SHAPE         TRAP  CHANNEL SHAPE
                      WD         0.00  BOTTOM WIDTH OR DIAMETER
                       Z         1.00  SIDE SLOPE
                  RUPSTQ           NO  ROUTE UPSTREAM HYDROGRAPH

                                                  ***

         COMPUTED KINEMATIC PARAMETERS
            ELEMENT     ALPHA        M      DT (MIN)    DX (FT)
                  1    1.0536    1.667        5.00      333.33
                  3    1.6346    1.333        5.00     1320.00
*****************************************************************************************************************************

                                            HYDROGRAPH AT STATION      SUB8

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.	1		0535	52	0.00	0.00	0.00	28.
1		0125	2	0.05	0.02	0.03	0.	1		0540	53	0.00	0.00	0.00	26.
1		0130	3	0.07	0.03	0.04	0.	1		0545	54	0.00	0.00	0.00	25.
1		0135	4	0.07	0.03	0.04	0.	1		0550	55	0.00	0.00	0.00	24.
1		0140	5	0.10	0.04	0.06	0.	1		0555	56	0.00	0.00	0.00	23.
1		0145	6	0.16	0.05	0.11	1.	1		0600	57	0.00	0.00	0.00	22.
1		0150	7	1.16	0.19	0.97	2.	1		0605	58	0.00	0.00	0.00	21.
1		0155	8	0.39	0.03	0.36	37.	1		0610	59	0.00	0.00	0.00	20.
1		0200	9	0.14	0.01	0.13	106.	1		0615	60	0.00	0.00	0.00	19.
1		0205	10	0.11	0.01	0.10	134.	1		0620	61	0.00	0.00	0.00	18.
1		0210	11	0.09	0.01	0.08	150.	1		0625	62	0.00	0.00	0.00	18.
1		0215	12	0.06	0.00	0.06	163.	1		0630	63	0.00	0.00	0.00	17.
1		0220	13	0.05	0.00	0.05	173.	1		0635	64	0.00	0.00	0.00	16.
1		0225	14	0.00	0.00	0.00	180.	1		0640	65	0.00	0.00	0.00	16.
1		0230	15	0.00	0.00	0.00	183.	1		0645	66	0.00	0.00	0.00	15.
1		0235	16	0.00	0.00	0.00	183.	1		0650	67	0.00	0.00	0.00	15.
1		0240	17	0.00	0.00	0.00	183.	1		0655	68	0.00	0.00	0.00	14.
1		0245	18	0.00	0.00	0.00	183.	1		0700	69	0.00	0.00	0.00	13.
1		0250	19	0.00	0.00	0.00	182.	1		0705	70	0.00	0.00	0.00	13.
1		0255	20	0.00	0.00	0.00	179.	1		0710	71	0.00	0.00	0.00	13.
1		0300	21	0.00	0.00	0.00	176.	1		0715	72	0.00	0.00	0.00	12.
1		0305	22	0.00	0.00	0.00	171.	1		0720	73	0.00	0.00	0.00	12.
1		0310	23	0.00	0.00	0.00	164.	1		0725	74	0.00	0.00	0.00	11.
1		0315	24	0.00	0.00	0.00	157.	1		0730	75	0.00	0.00	0.00	11.
1		0320	25	0.00	0.00	0.00	149.	1		0735	76	0.00	0.00	0.00	11.
1		0325	26	0.00	0.00	0.00	140.	1		0740	77	0.00	0.00	0.00	10.
1		0330	27	0.00	0.00	0.00	132.	1		0745	78	0.00	0.00	0.00	10.
1		0335	28	0.00	0.00	0.00	123.	1		0750	79	0.00	0.00	0.00	10.
1		0340	29	0.00	0.00	0.00	115.	1		0755	80	0.00	0.00	0.00	9.
1		0345	30	0.00	0.00	0.00	107.	1		0800	81	0.00	0.00	0.00	9.
1		0350	31	0.00	0.00	0.00	100.	1		0805	82	0.00	0.00	0.00	9.
1		0355	32	0.00	0.00	0.00	94.	1		0810	83	0.00	0.00	0.00	8.
1		0400	33	0.00	0.00	0.00	87.	1		0815	84	0.00	0.00	0.00	8.
1		0405	34	0.00	0.00	0.00	82.	1		0820	85	0.00	0.00	0.00	8.
1		0410	35	0.00	0.00	0.00	76.	1		0825	86	0.00	0.00	0.00	8.
1		0415	36	0.00	0.00	0.00	71.	1		0830	87	0.00	0.00	0.00	7.
1		0420	37	0.00	0.00	0.00	67.	1		0835	88	0.00	0.00	0.00	7.
1		0425	38	0.00	0.00	0.00	63.	1		0840	89	0.00	0.00	0.00	7.
1		0430	39	0.00	0.00	0.00	59.	1		0845	90	0.00	0.00	0.00	7.
1		0435	40	0.00	0.00	0.00	55.	1		0850	91	0.00	0.00	0.00	7.
1		0440	41	0.00	0.00	0.00	52.	1		0855	92	0.00	0.00	0.00	6.
1		0445	42	0.00	0.00	0.00	49.	1		0900	93	0.00	0.00	0.00	6.
1		0450	43	0.00	0.00	0.00	46.	1		0905	94	0.00	0.00	0.00	6.
1		0455	44	0.00	0.00	0.00	44.	1		0910	95	0.00	0.00	0.00	6.
1		0500	45	0.00	0.00	0.00	41.	1		0915	96	0.00	0.00	0.00	6.
1		0505	46	0.00	0.00	0.00	39.	1		0920	97	0.00	0.00	0.00	6.
1		0510	47	0.00	0.00	0.00	37.	1		0925	98	0.00	0.00	0.00	6.
1		0515	48	0.00	0.00	0.00	35.	1		0930	99	0.00	0.00	0.00	5.
1		0520	49	0.00	0.00	0.00	33.	1		0935	100	0.00	0.00	0.00	5.
1		0525	50	0.00	0.00	0.00	31.	1		0940	101	0.00	0.00	0.00	5.
1		0530	51	0.00	0.00	0.00	30.								

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TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.42, TOTAL EXCESS = 2.03

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
183.	1.17	(CFS)	71.	53.	53.	53.
		(INCHES)	1.836	1.892	1.892	1.892
		(AC-FT)	35.	36.	36.	36.

CUMULATIVE AREA = 0.36 SQ MI

STATION SUB8

(O) OUTFLOW

		0.	40.	80.	120.	160.	200.	0.	0.	0.	0.	0.	0.	0.
												(L) PRECIP.	(X) EXCESS	
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.4	0.0
DAHRMN	PER													
10120	10													
10125	20													X
10130	30													LX
10135	40													LX
10140	50													LXX
10145	60													LXXX
10150	7.0											LLLLLXXXXXXXXXXXXXXXXXXXXXXXXX		
10155	8.		O										LXXXXXXXXX	
10200	9.				O									LXXX
10205	10.					O								XXX
10210	11.						O							XX
10215	12.					O								X
10220	13.					O								X
10225	14.					O								
10230	15.					O								
10235	16.					O								
10240	17.					O								
10245	18.					O								
10250	19.					O								
10255	20.					O								
10300	21.						O							
10305	22.					O								
10310	23.					O								
10315	24.				O									
10320	25.				O									
10325	26.				O									
10330	27.				O									
10335	28.				O									
10340	29.			O										
10345	30.			O										
10350	31.			O										
10355	32.		O											
10400	33.		O											
10405	34.		O											
10410	35.		O											
10415	36.		O											
10420	37.		O											
10425	38.		O											
10430	39.		O											
10435	40.		O											
10440	41.		O											
10445	42.	O												
10450	43.	O												
10455	44.	O												
10500	45.	O												
10505	46.	O												
10510	47.	O												
10515	48.	O												
10520	49.	O												
10525	50.	O												
10530	51.	O												
10535	52.	O												
10540	53.	O												
10545	54.	O												
10550	55.	O												

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10555  56.     0
10600  57.    0
10605  58.    0
10610  59.    0
10615  60.    0
10620  61.  .  .0.
10625  62.   0
10630  63.   0
10635  64.   0
10640  65.   0
10645  66.   0
10650  67.   0
10655  68.  0
10700  69.  0
10705  70.  0
10710  71.  .0.
10715  72.  0
10720  73.  0
10725  74.  0
10730  75.  0
10735  76.  0
10740  77.  0
10745  78. 0
10750  79. 0
10755  80. 0
10800  81. 0
10805  82. 0
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10820  85. 0
10825  86. 0
10830  87. 0
10835  88. 0
10840  89. 0
10845  90. 0
10850  91. 0
10855  92. 0
10900  93. 0
10905  94. 0
10910  95.0
10915  96.0
10920  97.0
10925  98.0
10930  99.0
10935 100.0
10940 101.0--------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+---------
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          **************
          *            *
215 KK    *      DET8  *
          *            *
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DETENTION REQUIREMENT FOR SUBAREA 8 TO REGULATE OUTFLOW PEAK TO 150 CFS

HYDROGRAPH ROUTING DATA

217 RL ROUTING LOSSES
QLOSS 0.00 INITIAL LOSS
CLOSS 0.00 ADDITIONAL FRACTION LOST

218 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP STOR TYPE OF INITIAL CONDITION
RSVRIC 0.00 INITIAL CONDITION
X 0.00 WORKING R AND D COEFFICIENT

219 SV	STORAGE	0.0	1.0	4.0	6.0	13.0	51.0	54.0	60.0
220 SQ	DISCHARGE	0.	65.	130.	150.	210.	304.	558.	1200.
221 SE	ELEVATION	0.00	1.00	2.00	2.30	3.20	3.40	3.60	4.00

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HYDROGRAPH AT STATION DET8

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0120	1	0.	0.0	0.0	1		0410	35	124.	3.7	1.9	1		0700	69	15.	0.2	0.2
1		0125	2	0.	0.0	0.0	1		0415	36	117.	3.4	1.8	1		0705	70	14.	0.2	0.2
1		0130	3	0.	0.0	0.0	1		0420	37	110.	3.1	1.7	1		0710	71	14.	0.2	0.2
1		0135	4	0.	0.0	0.0	1		0425	38	104.	2.8	1.6	1		0715	72	13.	0.2	0.2
1		0140	5	0.	0.0	0.0	1		0430	39	98.	2.5	1.5	1		0720	73	13.	0.2	0.2
1		0145	6	0.	0.0	0.0	1		0435	40	92.	2.3	1.4	1		0725	74	12.	0.2	0.2
1		0150	7	1.	0.0	0.0	1		0440	41	87.	2.0	1.3	1		0730	75	12.	0.2	0.2
1		0155	8	8.	0.1	0.1	1		0445	42	82.	1.8	1.3	1		0735	76	11.	0.2	0.2
1		0200	9	31.	0.5	0.5	1		0450	43	77.	1.6	1.2	1		0740	77	11.	0.2	0.2
1		0205	10	64.	1.0	1.0	1		0455	44	73.	1.3	1.1	1		0745	78	11.	0.2	0.2
1		0210	11	75.	1.5	1.2	1		0500	45	68.	1.2	1.1	1		0750	79	10.	0.2	0.2
1		0215	12	87.	2.0	1.3	1		0505	46	63.	1.0	1.0	1		0755	80	10.	0.2	0.2
1		0220	13	98.	2.5	1.5	1		0510	47	54.	0.8	0.8	1		0800	81	10.	0.1	0.1
1		0225	14	109.	3.0	1.7	1		0515	48	47.	0.7	0.7	1		0805	82	9.	0.1	0.1
1		0230	15	119.	3.5	1.8	1		0520	49	43.	0.7	0.7	1		0810	83	9.	0.1	0.1
1		0235	16	128.	3.9	2.0	1		0525	50	39.	0.6	0.6	1		0815	84	9.	0.1	0.1
1		0240	17	133.	4.3	2.0	1		0530	51	36.	0.6	0.6	1		0820	85	9.	0.1	0.1
1		0245	18	136.	4.6	2.1	1		0535	52	33.	0.5	0.5	1		0825	86	8.	0.1	0.1
1		0250	19	139.	4.9	2.1	1		0540	53	31.	0.5	0.5	1		0830	87	8.	0.1	0.1
1		0255	20	142.	5.2	2.2	1		0545	54	29.	0.4	0.4	1		0835	88	8.	0.1	0.1

1	0300	21	144.	5.4	2.2	*	1	0550	55	27.	0.4	0.4	*	1	0840	89	8.	0.1	0.1
1	0305	22	146.	5.6	2.2	*	1	0555	56	26.	0.4	0.4	*	1	0845	90	7.	0.1	0.1
1	0310	23	148.	5.8	2.3	*	1	0600	57	25.	0.4	0.4	*	1	0850	91	7.	0.1	0.1
1	0315	24	148.	5.8	2.3	*	1	0605	58	23.	0.4	0.4	*	1	0855	92	7.	0.1	0.1
1	0320	25	149.	5.9	2.3	*	1	0610	59	22.	0.3	0.3	*	1	0900	93	7.	0.1	0.1
1	0325	26	148.	5.8	2.3	*	1	0615	60	21.	0.3	0.3	*	1	0905	94	7.	0.1	0.1
1	0330	27	148.	5.8	2.3	*	1	0620	61	20.	0.3	0.3	*	1	0910	95	6.	0.1	0.1
1	0335	28	146.	5.6	2.2	*	1	0625	62	20.	0.3	0.3	*	1	0915	96	6.	0.1	0.1
1	0340	29	144.	5.4	2.2	*	1	0630	63	19.	0.3	0.3	*	1	0920	97	6.	0.1	0.1
1	0345	30	142.	5.2	2.2	*	1	0635	64	18.	0.3	0.3	*	1	0925	98	6.	0.1	0.1
1	0350	31	140.	5.0	2.1	*	1	0640	65	17.	0.3	0.3	*	1	0930	99	6.	0.1	0.1
1	0355	32	137.	4.7	2.1	*	1	0645	66	17.	0.3	0.3	*	1	0935	100	6.	0.1	0.1
1	0400	33	134.	4.4	2.1	*	1	0650	67	16.	0.2	0.2	*	1	0940	101	5.	0.1	0.1
1	0405	34	130.	4.0	2.0	*	1	0655	68	15.	0.2	0.2	*						
						*							*						

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	8.33-HR
149.	2.00	(CFS)	71.	53.	53.	53.
		(INCHES)	1.830	1.888	1.888	1.888
		(AC-FT)	35.	36.	36.	36.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	8.33-HR
6.	2.00	2.	2.	2.	2.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	8.33-HR
2.28	2.00	1.09	0.81	0.81	0.81

CUMULATIVE AREA = 0.36 SQ MI

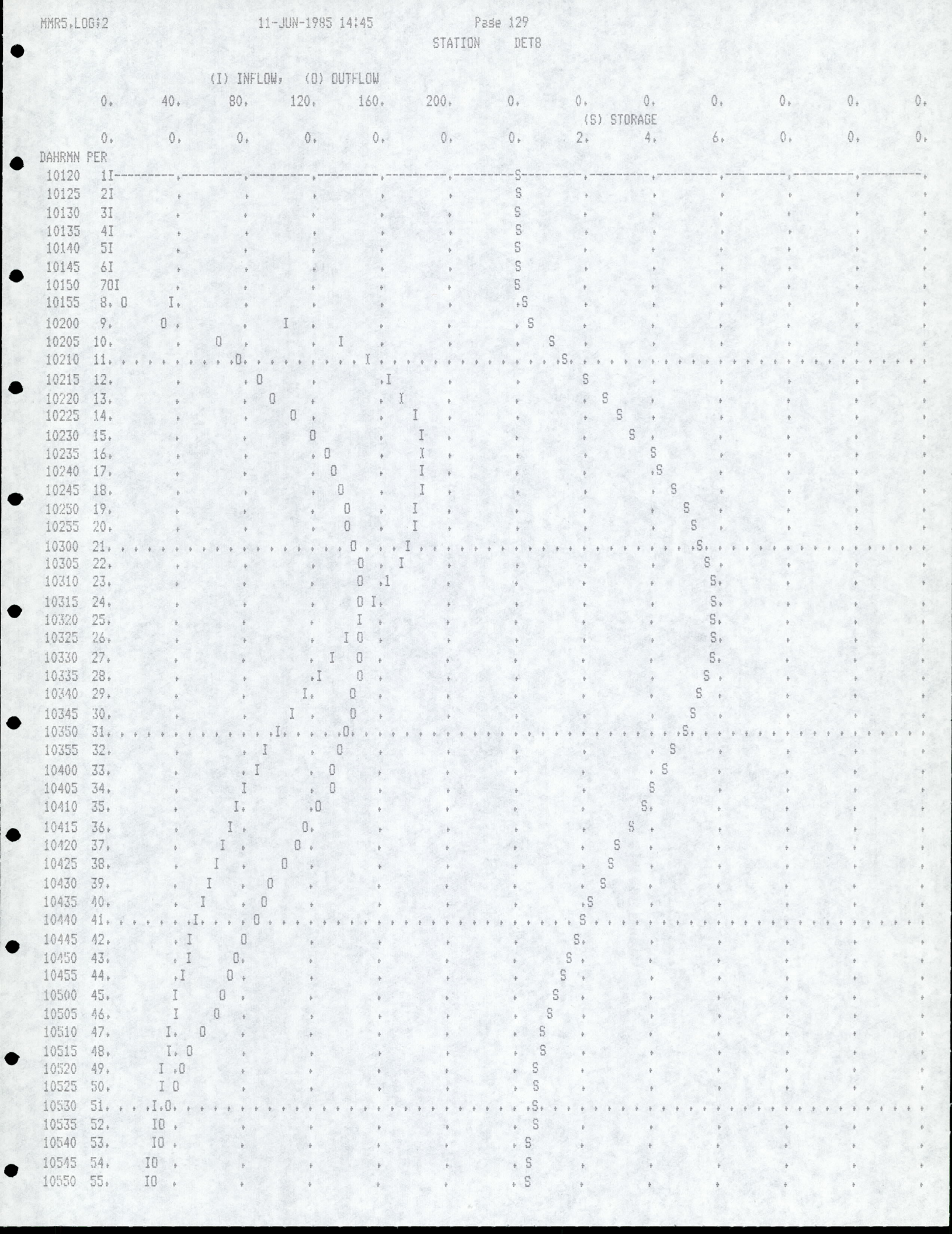
STATION DET8

(I) INFLOW, (O) OUTFLOW

0. 40. 80. 120. 160. 200. 0. 0. 0. 0. 0. 0. 0.

(S) STORAGE

0. 0. 0. 0. 0. 0. 0. 2. 4. 6. 0. 0. 0.



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10555  56,     I   ,       ,       ,       ,       ,       , S     ,       ,       ,       ,       ,       ,
10600  57,    IO   ,       ,       ,       ,       ,       , S     ,       ,       ,       ,       ,       ,
10605  58,    IO   ,       ,       ,       ,       ,       , S     ,       ,       ,       ,       ,       ,
10610  59,    IO   ,       ,       ,       ,       ,       , S     ,       ,       ,       ,       ,       ,
10615  60,    I    ,       ,       ,       ,       ,       , S     ,       ,       ,       ,       ,       ,
10620  61,    ,I   ,       ,       ,       ,       ,       , S     ,       ,       ,       ,       ,       ,
10625  62,   IO    ,       ,       ,       ,       ,       , S     ,       ,       ,       ,       ,       ,
10630  63,   IO    ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10635  64,   I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10640  65,   I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10645  66,   I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10650  67,   I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10655  68,  IO     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10700  69,  IO     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
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10710  71,  ,I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10715  72,   I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10720  73,   I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10725  74,   I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10730  75,   I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10735  76,   I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10740  77,   I     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10745  78,  IO     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10750  79,  IO     ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
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10800  81,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10805  82,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10810  83,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10815  84,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10820  85,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10825  86,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10830  87,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10835  88,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10840  89,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10845  90,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10850  91,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10855  92,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10900  93,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10905  94,  I      ,       ,       ,       ,       ,       ,S      ,       ,       ,       ,       ,       ,
10910  95,IO       ,       ,       ,       ,       ,       S       ,       ,       ,       ,       ,       ,
10915  96,IO       ,       ,       ,       ,       ,       S       ,       ,       ,       ,       ,       ,
10920  97,IO       ,       ,       ,       ,       ,       S       ,       ,       ,       ,       ,       ,
10925  98,I        ,       ,       ,       ,       ,       S       ,       ,       ,       ,       ,       ,
10930  99,I        ,       ,       ,       ,       ,       S       ,       ,       ,       ,       ,       ,
10935 100,I        ,       ,       ,       ,       ,       S       ,       ,       ,       ,       ,       ,
10940 101,I--------,--------,--------,--------,--------,--------S--------,--------,--------,--------,--------,--------,
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              *             *
222 KK        *      SUB9   *
              *             *
              ***************
                            AREA BOUNDED BY INDIAN SCHOOL RD-107 ST-LEVEE-AGUA FRIA
                            ASSUME COLLECTOR CHANNEL ALONG NORTH SIDE EASEMENT OF LEVEE
                            HYDROGRAPH AT C.P. (I) INTO AGUA FRIA WASH

                 SUBBASIN RUNOFF DATA

229 BA             SUBBASIN CHARACTERISTICS
                          TAREA        0.30  SUBBASIN AREA

                   PRECIPITATION DATA

226 PB                    STORM        2.45  BASIN TOTAL PRECIPITATION

227 PI               INCREMENTAL PRECIPITATION PATTERN
                         0.05      0.07      0.07      0.10      0.16      1.16      0.39      0.14      0.11      0.09
                         0.06      0.05

230 LS             SCS LOSS RATE
                          STRTL        0.25  INITIAL ABSTRACTION
                         CRVNBR       89.00  CURVE NUMBER
                          RTIMP       60.00  PERCENT IMPERVIOUS AREA

                   KINEMATIC WAVE
231 UK               OVERLAND-FLOW ELEMENT NO. 1
                              L       1500.  OVERLAND FLOW LENGTH
                              S      0.0050  SLOPE
                              N       0.100  ROUGHNESS COEFFICIENT
                             PA       100.0  PERCENT OF SUBBASIN
232 RK               MAIN CHANNEL
                              L       6400.  CHANNEL LENGTH
                              S      0.0030  SLOPE
                              N       0.025  CHANNEL ROUGHNESS COEFFICIENT
                             CA        0.30  CONTRIBUTING AREA
                          SHAPE        TRAP  CHANNEL SHAPE
                             WD        0.00  BOTTOM WIDTH OR DIAMETER
                              Z        1.00  SIDE SLOPE
                         RUPSTQ         YES  ROUTE UPSTREAM HYDROGRAPH

                                                        ***

            COMPUTED KINEMATIC PARAMETERS
                ELEMENT     ALPHA         M      DT (MIN)    DX (FT)
                      1    1.0536     1.667        5.00       250.00
                      3    1.6346     1.333        5.00      3200.00

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

                                                  HYDROGRAPH AT STATION      SUB9

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0120	1	0.00	0.00	0.00	0.
1		0125	2	0.05	0.02	0.03	0.
1		0130	3	0.07	0.03	0.04	0.
1		0135	4	0.07	0.03	0.04	0.
1		0140	5	0.10	0.04	0.06	0.
1		0145	6	0.16	0.05	0.11	1.
1		0150	7	1.16	0.19	0.97	2.
1		0155	8	0.39	0.03	0.36	23.
1		0200	9	0.14	0.01	0.13	73.
1		0205	10	0.11	0.01	0.10	144.
1		0210	11	0.09	0.01	0.08	226.
1		0215	12	0.06	0.00	0.06	295.
1		0220	13	0.05	0.00	0.05	343.
1		0225	14	0.00	0.00	0.00	374.
1		0230	15	0.00	0.00	0.00	387.
1		0235	16	0.00	0.00	0.00	384.
1		0240	17	0.00	0.00	0.00	371.
1		0245	18	0.00	0.00	0.00	353.
1		0250	19	0.00	0.00	0.00	332.
1		0255	20	0.00	0.00	0.00	312.
1		0300	21	0.00	0.00	0.00	294.
1		0305	22	0.00	0.00	0.00	279.
1		0310	23	0.00	0.00	0.00	265.
1		0315	24	0.00	0.00	0.00	253.
1		0320	25	0.00	0.00	0.00	242.
1		0325	26	0.00	0.00	0.00	233.
1		0330	27	0.00	0.00	0.00	224.
1		0335	28	0.00	0.00	0.00	216.
1		0340	29	0.00	0.00	0.00	209.
1		0345	30	0.00	0.00	0.00	202.
1		0350	31	0.00	0.00	0.00	195.
1		0355	32	0.00	0.00	0.00	188.
1		0400	33	0.00	0.00	0.00	182.
1		0405	34	0.00	0.00	0.00	176.
1		0410	35	0.00	0.00	0.00	170.
1		0415	36	0.00	0.00	0.00	162.
1		0420	37	0.00	0.00	0.00	154.
1		0425	38	0.00	0.00	0.00	146.
1		0430	39	0.00	0.00	0.00	138.
1		0435	40	0.00	0.00	0.00	130.
1		0440	41	0.00	0.00	0.00	123.
1		0445	42	0.00	0.00	0.00	116.
1		0450	43	0.00	0.00	0.00	109.
1		0455	44	0.00	0.00	0.00	103.
1		0500	45	0.00	0.00	0.00	97.
1		0505	46	0.00	0.00	0.00	92.
1		0510	47	0.00	0.00	0.00	87.
1		0515	48	0.00	0.00	0.00	80.
1		0520	49	0.00	0.00	0.00	73.
1		0525	50	0.00	0.00	0.00	67.
1		0530	51	0.00	0.00	0.00	61.
1		0535	52	0.00	0.00	0.00	56.
1		0540	53	0.00	0.00	0.00	52.
1		0545	54	0.00	0.00	0.00	48.
1		0550	55	0.00	0.00	0.00	45.
1		0555	56	0.00	0.00	0.00	42.
1		0600	57	0.00	0.00	0.00	40.
1		0605	58	0.00	0.00	0.00	38.
1		0610	59	0.00	0.00	0.00	36.
1		0615	60	0.00	0.00	0.00	34.
1		0620	61	0.00	0.00	0.00	32.
1		0625	62	0.00	0.00	0.00	31.
1		0630	63	0.00	0.00	0.00	30.
1		0635	64	0.00	0.00	0.00	28.
1		0640	65	0.00	0.00	0.00	27.
1		0645	66	0.00	0.00	0.00	26.
1		0650	67	0.00	0.00	0.00	25.
1		0655	68	0.00	0.00	0.00	24.
1		0700	69	0.00	0.00	0.00	23.
1		0705	70	0.00	0.00	0.00	22.
1		0710	71	0.00	0.00	0.00	21.
1		0715	72	0.00	0.00	0.00	21.
1		0720	73	0.00	0.00	0.00	20.
1		0725	74	0.00	0.00	0.00	19.
1		0730	75	0.00	0.00	0.00	18.
1		0735	76	0.00	0.00	0.00	18.
1		0740	77	0.00	0.00	0.00	17.
1		0745	78	0.00	0.00	0.00	17.
1		0750	79	0.00	0.00	0.00	16.
1		0755	80	0.00	0.00	0.00	16.
1		0800	81	0.00	0.00	0.00	15.
1		0805	82	0.00	0.00	0.00	15.
1		0810	83	0.00	0.00	0.00	14.
1		0815	84	0.00	0.00	0.00	14.
1		0820	85	0.00	0.00	0.00	13.
1		0825	86	0.00	0.00	0.00	13.
1		0830	87	0.00	0.00	0.00	12.
1		0835	88	0.00	0.00	0.00	12.
1		0840	89	0.00	0.00	0.00	12.
1		0845	90	0.00	0.00	0.00	11.
1		0850	91	0.00	0.00	0.00	11.
1		0855	92	0.00	0.00	0.00	11.
1		0900	93	0.00	0.00	0.00	10.
1		0905	94	0.00	0.00	0.00	10.
1		0910	95	0.00	0.00	0.00	10.
1		0915	96	0.00	0.00	0.00	10.
1		0920	97	0.00	0.00	0.00	9.
1		0925	98	0.00	0.00	0.00	9.
1		0930	99	0.00	0.00	0.00	9.
1		0935	100	0.00	0.00	0.00	9.
1		0940	101	0.00	0.00	0.00	8.

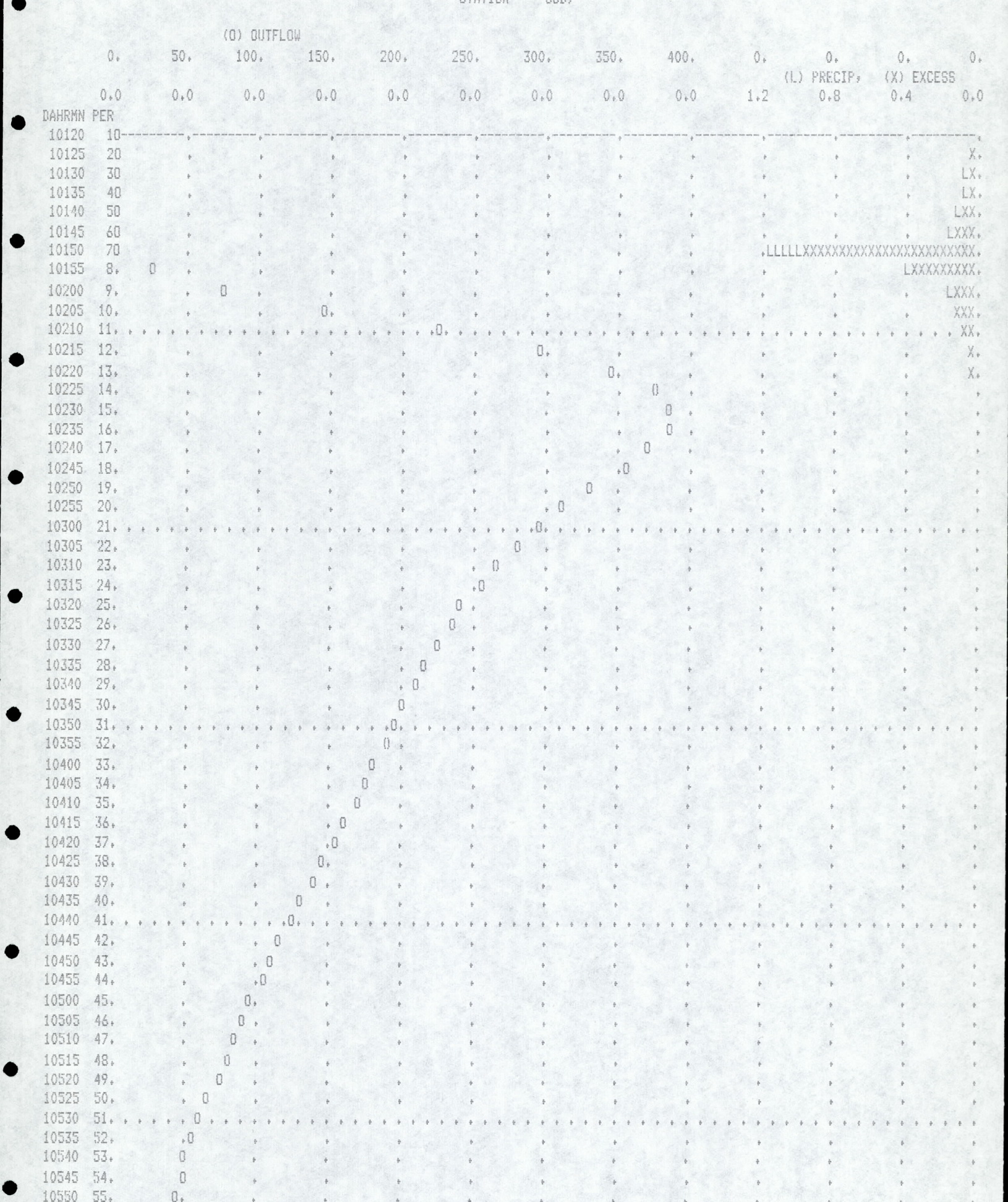
TOTAL RAINFALL = 2.45, TOTAL LOSS = 0.42, TOTAL EXCESS = 2.03

PEAK FLOW	TIME	MAXIMUN AVERAGE FLOW			
		6-HR	24-HR	72-HR	8.33-HR

(CFS)	(HR)					
387.	1.17	(CFS)	132.	98.	98.	98.
		(INCHES)	1.860	1.910	1.910	1.910
		(AC-FT)	65.	67.	67.	67.

CUMULATIVE AREA = 0.66 SQ MI

STATION SUB9



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10555  56.      0 .       .       .       .       .       .       .       .       .       .       .       .
10600  57.      0 .       .       .       .       .       .       .       .       .       .       .       .
10605  58.      0 .       .       .       .       .       .       .       .       .       .       .       .
10610  59.     0  .       .       .       .       .       .       .       .       .       .       .       .
10615  60.     0  .       .       .       .       .       .       .       .       .       .       .       .
10620  61. . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10625  62.     0  .       .       .       .       .       .       .       .       .       .       .       .
10630  63.     0  .       .       .       .       .       .       .       .       .       .       .       .
10635  64.     0  .       .       .       .       .       .       .       .       .       .       .       .
10640  65.    0   .       .       .       .       .       .       .       .       .       .       .       .
10645  66.    0   .       .       .       .       .       .       .       .       .       .       .       .
10650  67.    0   .       .       .       .       .       .       .       .       .       .       .       .
10655  68.    0   .       .       .       .       .       .       .       .       .       .       .       .
10700  69.    0   .       .       .       .       .       .       .       .       .       .       .       .
10705  70.   0    .       .       .       .       .       .       .       .       .       .       .       .
10710  71. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10715  72.   0    .       .       .       .       .       .       .       .       .       .       .       .
10720  73.   0    .       .       .       .       .       .       .       .       .       .       .       .
10725  74.   0    .       .       .       .       .       .       .       .       .       .       .       .
10730  75.   0    .       .       .       .       .       .       .       .       .       .       .       .
10735  76.   0    .       .       .       .       .       .       .       .       .       .       .       .
10740  77.  0     .       .       .       .       .       .       .       .       .       .       .       .
10745  78.  0     .       .       .       .       .       .       .       .       .       .       .       .
10750  79.  0     .       .       .       .       .       .       .       .       .       .       .       .
10755  80.  0     .       .       .       .       .       .       .       .       .       .       .       .
10800  81. .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10805  82.  0     .       .       .       .       .       .       .       .       .       .       .       .
10810  83.  0     .       .       .       .       .       .       .       .       .       .       .       .
10815  84.  0     .       .       .       .       .       .       .       .       .       .       .       .
10820  85.  0     .       .       .       .       .       .       .       .       .       .       .       .
10825  86.  0     .       .       .       .       .       .       .       .       .       .       .       .
10830  87. 0      .       .       .       .       .       .       .       .       .       .       .       .
10835  88. 0      .       .       .       .       .       .       .       .       .       .       .       .
10840  89. 0      .       .       .       .       .       .       .       .       .       .       .       .
10845  90. 0      .       .       .       .       .       .       .       .       .       .       .       .
10850  91. 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10855  92. 0      .       .       .       .       .       .       .       .       .       .       .       .
10900  93. 0      .       .       .       .       .       .       .       .       .       .       .       .
10905  94. 0      .       .       .       .       .       .       .       .       .       .       .       .
10910  95. 0      .       .       .       .       .       .       .       .       .       .       .       .
10915  96. 0      .       .       .       .       .       .       .       .       .       .       .       .
10920  97. 0      .       .       .       .       .       .       .       .       .       .       .       .
10925  98. 0      .       .       .       .       .       .       .       .       .       .       .       .
10930  99. 0      .       .       .       .       .       .       .       .       .       .       .       .
10935 100. 0      .       .       .       .       .       .       .       .       .       .       .       .
10940 101.-0------.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.-------.
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	SUB2A	158.	1.17	85.	66.	66.	0.50		
HYDROGRAPH AT	SUB2B	158.	1.17	85.	66.	66.	0.50		
2 COMBINED AT	SUB2	317.	1.17	169.	131.	131.	1.00		
DIVERSION TO	SD2	52.	1.17	52.	47.	47.	1.00		
HYDROGRAPH AT	SUB2	265.	1.17	117.	85.	85.	1.00		
ROUTED TO	RET2	94.	3.92	31.	22.	22.	1.00	3.18	3.92
HYDROGRAPH AT	SUB3A	181.	3.92	132.	100.	100.	1.66		
DIVERSION TO	RID	150.	3.92	123.	94.	94.	1.66		
HYDROGRAPH AT	SUB3A	31.	3.92	9.	6.	6.	1.66		
ROUTED TO	SUB4	28.	4.17	9.	6.	6.	1.66		
HYDROGRAPH AT	SUB4	260.	1.17	175.	135.	135.	1.06		
ROUTED TO	RET4	211.	3.50	95.	69.	69.	1.06	3.31	3.50
2 COMBINED AT	SUB4	212.	3.50	101.	75.	75.	2.72		
HYDROGRAPH AT	SUB5B	167.	1.17	88.	68.	68.	0.50		
HYDROGRAPH AT	SUB5A	167.	1.17	88.	68.	68.	0.50		
2 COMBINED AT	SUB5	333.	1.17	175.	136.	136.	1.00		
ROUTED TO	RET5	188.	3.17	96.	69.	69.	1.00	3.28	3.17
ROUTED TO	SUB6	188.	3.25	95.	68.	68.	1.00		
HYDROGRAPH AT	SUB6A	435.	1.25	95.	69.	69.	0.75		
ROUTED TO	SUB6A	317.	1.67	62.	45.	45.	0.75	3.56	1.67
HYDROGRAPH AT	SUB6B	123.	0.92	16.	12.	12.	0.13		
3 COMBINED AT	SUB6	352.	1.58	160.	125.	125.	1.88		
ROUTED TO	SUB6	347.	1.67	159.	124.	124.	1.88		
HYDROGRAPH AT	SUB6C	123.	0.92	16.	12.	12.	0.13		
2 COMBINED AT	SUB6	377.	1.67	174.	136.	136.	2.00		
ROUTED TO	SUB7	339.	1.92	172.	133.	133.	2.00		
HYDROGRAPH AT	SUB7	191.	1.67	104.	79.	79.	0.58		

ROUTED TO	RET7	141.	3.00	55.	40.	40.	0.58	3.23	3.00
2 COMBINED AT	SUB7	368.	3.33	223.	173.	173.	2.58		
HYDROGRAPH AT	SUB8	183.	1.17	71.	53.	53.	0.36		
ROUTED TO	DET8	149.	2.00	71.	53.	53.	0.36	2.28	2.00
HYDROGRAPH AT	SUB9	387.	1.17	132.	98.	98.	0.66		

*** NORMAL END OF HEC-1 ***
101
$ EXIT
SHIAU Job terminated at 11-JUN-1985 11:19:13.02

Accounting information:

Buffered I/O count:	121	Peak working set size:	685
Direct I/O count:	1420	Peak page file size:	791
Page faults:	505	Mounted volumes:	0
Elapsed CPU time:	0 00:01:58.87	Elapsed time:	0 00:05:52.73