JERRY R. JONES & ASSOCIATES, INC.
ENGINEERS · PLANNERS · SURVEYORS

Agua Fria River

EXHIBIT 4
HEC I COMPUTER MODEL

PRELIMINARY

12.0-00-8-00189

FLOOD CONTROL DISTRICT
RECEIVED
OCT 02 1989

	CH ENG		P & PM
	DEP		HYDRO
	ADMIN		LMGT
	FINANCE		FILE
	C & O		
	ENGR		

REMARKS

Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

Agua Fria River

EXHIBIT 4
HEC I COMPUTER MODEL

PRELIMINARY

```
$ IF F$MODE() .nes. 'INTERACTIVE' THEN EXIT
$ set default [HYDRO.FLICK.POND]
$ define for005 J.DAT;4
$ define for006 sys$output
$ RUN DJA$EXE:hec1
```

```
*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*             FEBRUARY 1981             *
*           REVISED 30 OCT 81           *
*                                       *
*  RUN DATE       8-F    TIME      10:3 *
*                                       *
*****************************************
```

```
*****************************************
*                                       *
*    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.

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

  1           ID   PONDING ANALYSIS FOR AGUA FRIA RIVER FIS, JJA JOB NO. 286-080.02
  2           ID   PONDING @ WEST BANK NORTH OF MCDOWELL RD. CONC. POINT 'J'
  3           IT      30 20JAN89    0830     150
  4           IN      30 20JAN89    0830
  5           IO       0       0       0
  6           OO     0.1     1.0
              *       PONDING LOCATION WEST OF CHANNELIZATION NORTH OF MCDOWELL ROAD
              *       CONCENTRATION POINT 'J'. THIS DRAINAGE AREA IS BOUNDED TO THE
              *       EAST BY THE AGUA FRIA LEVEE STRUCTURE, TO THE SOUTH BY THE
              *       WEST APPROCH RAMP FOR THE NEW MCDOWELL ROAD BRIDGE, TO THE WEST
              *       BY DYSART ROAD AND TO THE NORTH BY THE ROOSEVELT CANAL.
              *       THIS AREA IS APPROXIMATELY 1.60 sq. mi. AND DEVELOPS A
              *       Q100 = 330
              *       THIS RUNOFF IS ROUTED THROUGH 4-48" RCPS JUST SOUTH OF
              *       MCDOWELL ROAD RIVER STA. 5.66

  7           KK       J
  8           KO       0       0       0       0      21       0       0       0
  9           BA     1.6
 10           PB       0
              *       24-HOUR TYPE II STORM
 11           PC       0    0.02    0.04    0.06    0.09    0.11    0.14    0.16    0.19    0.22
 12           PC    0.25    0.28    0.31    0.35    0.38    0.42    0.47    0.52    0.57    0.63
 13           PC    0.71    0.80    0.92    1.10    2.59    2.87    3.01    3.12    3.20    3.27
 14           PC    3.33    3.38    3.43    3.48    3.52    3.55    3.59    3.62    3.65    3.68
 15           PC    3.71    3.74    3.76    3.79    3.81    3.84    3.86    3.88    3.90
              *       SCS RUNOFF & ROUTING PARAMETERS USED THROUGHOUT THIS RUN. Cn = 81
 16           LS       0      81
              *       LAG = ((L**0.8)(S+1)**0.7)/(1900(Y**0.5))
              *       L = 9300 FT, S = 2.36 , Y = .39 %, lag = 2.94 hrs
 17           UD    2.94

 18           KK    JOUT  ROUTED THROUGH 4-48" RCPS AT CONC. PT. 'J' RIVER STA. 5.66
 19           KO       0       0       0       0       0       0     100
 20           RS       1    STOR       0       0
 21           SA       0    0.65   14.52   48.55  114.52
 22           SQ       0       0       0     350     510
 23           SE     978     980     982     984     986
 24           ZZ
```

```
****************************************
*                                      *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*            FEBRUARY 1981             *
*          REVISED 30 OCT 81           *
*                                      *
* RUN DATE       8-F    TIME      10:3 *
*                                      *
****************************************
```

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

```
                    PONDING ANALYSIS FOR AGUA FRIA RIVER FIS, JJA JOB NO. 286-080.02
                    PONDING @ WEST BANK NORTH OF MCDOWELL RD. CONC. POINT 'J'

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

    IT        HYDROGRAPH TIME DATA
                    NMIN         30  MINUTES IN COMPUTATION INTERVAL
                   IDATE     20JAN89  STARTING DATE
                   ITIME        0830  STARTING TIME
                      NQ         150  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     23JAN89  ENDING DATE
                  NDTIME        1100  ENDING TIME

              COMPUTATION INTERVAL    0.50 HOURS
                   TOTAL TIME BASE   74.50 HOURS

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

    JP        MULTI-PLAN OPTION
                  NPLAN           1  NUMBER OF PLANS

    JR        MULTI-RATIO OPTION
                 RATIOS OF RUNOFF
                1.00


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


          **************
          *            *
  7 KK    *         J  *
          *            *
          **************

  8 KO        OUTPUT CONTROL VARIABLES
                   IPRNT          0  PRINT CONTROL
                   IPLOT          0  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE
                   IPNCH          0  PUNCH COMPUTED HYDROGRAPH
```

	ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
	ISAV2	150	LAST ORDINATE PUNCHED OR SAVED
	TIMINT	0.500	TIME INTERVAL IN HOURS

4 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	30	TIME INTERVAL IN MINUTES
JXDATE	20JAN89	STARTING DATE
JXTIME	830	STARTING TIME

SUBBASIN RUNOFF DATA

9 BA SUBBASIN CHARACTERISTICS

TAREA	1.60	SUBBASIN AREA

PRECIPITATION DATA

10 PB

STORM	3.90	BASIN TOTAL PRECIPITATION

11 PI INCREMENTAL PRECIPITATION PATTERN

0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.03	0.03	0.03
0.03	0.03	0.04	0.03	0.04	0.05	0.05	0.05	0.06	0.08
0.09	0.12	0.18	1.49	0.28	0.14	0.11	0.08	0.07	0.06
0.05	0.05	0.05	0.04	0.03	0.04	0.03	0.03	0.03	0.03
0.03	0.02	0.03	0.02	0.03	0.02	0.02	0.02		

16 LS SCS LOSS RATE

STRTL	0.47	INITIAL ABSTRACTION
CRVNBR	81.00	CURVE NUMBER
RTIMP	0.00	PERCENT IMPERVIOUS AREA

17 UD SCS DIMENSIONLESS UNITGRAPH

TLAG	2.94	LAG

***

UNIT HYDROGRAPH

31 END-OF-PERIOD ORDINATES

17.	50.	102.	170.	221.	241.	240.	216.	186.	145.
107.	83.	65.	51.	39.	30.	24.	18.	14.	11.
8.	7.	5.	4.	3.	2.	2.	2.	1.	1.
0.									

****

HYDROGRAPH AT STATION J

****

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
20	JAN	0830	1	0.00	0.00	0.00	0.	*	21	JAN	2200	76	0.00	0.00	0.00	0.
20	JAN	0900	2	0.02	0.02	0.00	0.	*	21	JAN	2230	77	0.00	0.00	0.00	0.
20	JAN	0930	3	0.02	0.02	0.00	0.	*	21	JAN	2300	78	0.00	0.00	0.00	0.
20	JAN	1000	4	0.02	0.02	0.00	0.	*	21	JAN	2330	79	0.00	0.00	0.00	0.
20	JAN	1030	5	0.03	0.03	0.00	0.	*	22	JAN	0000	80	0.00	0.00	0.00	0.
20	JAN	1100	6	0.02	0.02	0.00	0.	*	22	JAN	0030	81	0.00	0.00	0.00	0.
20	JAN	1130	7	0.03	0.03	0.00	0.	*	22	JAN	0100	82	0.00	0.00	0.00	0.
20	JAN	1200	8	0.02	0.02	0.00	0.	*	22	JAN	0130	83	0.00	0.00	0.00	0.
20	JAN	1230	9	0.03	0.03	0.00	0.	*	22	JAN	0200	84	0.00	0.00	0.00	0.
20	JAN	1300	10	0.03	0.03	0.00	0.	*	22	JAN	0230	85	0.00	0.00	0.00	0.
20	JAN	1330	11	0.03	0.03	0.00	0.	*	22	JAN	0300	86	0.00	0.00	0.00	0.
20	JAN	1400	12	0.03	0.03	0.00	0.	*	22	JAN	0330	87	0.00	0.00	0.00	0.
20	JAN	1430	13	0.03	0.03	0.00	0.	*	22	JAN	0400	88	0.00	0.00	0.00	0.
20	JAN	1500	14	0.04	0.04	0.00	0.	*	22	JAN	0430	89	0.00	0.00	0.00	0.

20 JAN 1530	15	0.03	0.03	0.00	0.	*
20 JAN 1600	16	0.04	0.04	0.00	0.	*
20 JAN 1630	17	0.05	0.05	0.00	0.	*
20 JAN 1700	18	0.05	0.05	0.00	0.	*
20 JAN 1730	19	0.05	0.05	0.00	0.	*
20 JAN 1800	20	0.06	0.05	0.01	0.	*
20 JAN 1830	21	0.08	0.07	0.01	1.	*
20 JAN 1900	22	0.09	0.07	0.02	2.	*
20 JAN 1930	23	0.12	0.09	0.03	5.	*
20 JAN 2000	24	0.18	0.12	0.06	9.	*
20 JAN 2030	25	1.49	0.62	0.87	29.	*
20 JAN 2100	26	0.28	0.07	0.21	68.	*
20 JAN 2130	27	0.14	0.03	0.11	128.	*
20 JAN 2200	28	0.11	0.02	0.09	207.	*
20 JAN 2230	29	0.08	0.02	0.06	274.	*
20 JAN 2300	30	0.07	0.01	0.06	315.	*
20 JAN 2330	31	0.06	0.01	0.05	331.	*
21 JAN 0000	32	0.05	0.01	0.04	322.	*
21 JAN 0030	33	0.05	0.01	0.04	300.	*
21 JAN 0100	34	0.05	0.01	0.04	262.	*
21 JAN 0130	35	0.04	0.01	0.03	223.	*
21 JAN 0200	36	0.03	0.01	0.02	193.	*
21 JAN 0230	37	0.04	0.01	0.03	168.	*
21 JAN 0300	38	0.03	0.01	0.02	148.	*
21 JAN 0330	39	0.03	0.01	0.02	130.	*
21 JAN 0400	40	0.03	0.01	0.02	115.	*
21 JAN 0430	41	0.03	0.01	0.02	102.	*
21 JAN 0500	42	0.03	0.01	0.02	92.	*
21 JAN 0530	43	0.02	0.00	0.02	83.	*
21 JAN 0600	44	0.03	0.01	0.02	75.	*
21 JAN 0630	45	0.02	0.00	0.02	69.	*
21 JAN 0700	46	0.03	0.01	0.02	64.	*
21 JAN 0730	47	0.02	0.00	0.02	60.	*
21 JAN 0800	48	0.02	0.00	0.02	56.	*
21 JAN 0830	49	0.02	0.00	0.02	53.	*
21 JAN 0900	50	0.00	0.00	0.00	50.	*
21 JAN 0930	51	0.00	0.00	0.00	46.	*
21 JAN 1000	52	0.00	0.00	0.00	42.	*
21 JAN 1030	53	0.00	0.00	0.00	37.	*
21 JAN 1100	54	0.00	0.00	0.00	32.	*
21 JAN 1130	55	0.00	0.00	0.00	26.	*
21 JAN 1200	56	0.00	0.00	0.00	21.	*
21 JAN 1230	57	0.00	0.00	0.00	16.	*
21 JAN 1300	58	0.00	0.00	0.00	12.	*
21 JAN 1330	59	0.00	0.00	0.00	9.	*
21 JAN 1400	60	0.00	0.00	0.00	7.	*
21 JAN 1430	61	0.00	0.00	0.00	6.	*
21 JAN 1500	62	0.00	0.00	0.00	4.	*
21 JAN 1530	63	0.00	0.00	0.00	3.	*
21 JAN 1600	64	0.00	0.00	0.00	3.	*
21 JAN 1630	65	0.00	0.00	0.00	2.	*
21 JAN 1700	66	0.00	0.00	0.00	2.	*
21 JAN 1730	67	0.00	0.00	0.00	1.	*
21 JAN 1800	68	0.00	0.00	0.00	1.	*
21 JAN 1830	69	0.00	0.00	0.00	1.	*
21 JAN 1900	70	0.00	0.00	0.00	1.	*
21 JAN 1930	71	0.00	0.00	0.00	0.	*
21 JAN 2000	72	0.00	0.00	0.00	0.	*
21 JAN 2030	73	0.00	0.00	0.00	0.	*
21 JAN 2100	74	0.00	0.00	0.00	0.	*
21 JAN 2130	75	0.00	0.00	0.00	0.	*
22 JAN 0500	90	0.00	0.00	0.00	0.	*
22 JAN 0530	91	0.00	0.00	0.00	0.	*
22 JAN 0600	92	0.00	0.00	0.00	0.	*
22 JAN 0630	93	0.00	0.00	0.00	0.	*
22 JAN 0700	94	0.00	0.00	0.00	0.	*
22 JAN 0730	95	0.00	0.00	0.00	0.	*
22 JAN 0800	96	0.00	0.00	0.00	0.	*
22 JAN 0830	97	0.00	0.00	0.00	0.	*
22 JAN 0900	98	0.00	0.00	0.00	0.	*
22 JAN 0930	99	0.00	0.00	0.00	0.	*
22 JAN 1000	100	0.00	0.00	0.00	0.	*
22 JAN 1030	101	0.00	0.00	0.00	0.	*
22 JAN 1100	102	0.00	0.00	0.00	0.	*
22 JAN 1130	103	0.00	0.00	0.00	0.	*
22 JAN 1200	104	0.00	0.00	0.00	0.	*
22 JAN 1230	105	0.00	0.00	0.00	0.	*
22 JAN 1300	106	0.00	0.00	0.00	0.	*
22 JAN 1330	107	0.00	0.00	0.00	0.	*
22 JAN 1400	108	0.00	0.00	0.00	0.	*
22 JAN 1430	109	0.00	0.00	0.00	0.	*
22 JAN 1500	110	0.00	0.00	0.00	0.	*
22 JAN 1530	111	0.00	0.00	0.00	0.	*
22 JAN 1600	112	0.00	0.00	0.00	0.	*
22 JAN 1630	113	0.00	0.00	0.00	0.	*
22 JAN 1700	114	0.00	0.00	0.00	0.	*
22 JAN 1730	115	0.00	0.00	0.00	0.	*
22 JAN 1800	116	0.00	0.00	0.00	0.	*
22 JAN 1830	117	0.00	0.00	0.00	0.	*
22 JAN 1900	118	0.00	0.00	0.00	0.	*
22 JAN 1930	119	0.00	0.00	0.00	0.	*
22 JAN 2000	120	0.00	0.00	0.00	0.	*
22 JAN 2030	121	0.00	0.00	0.00	0.	*
22 JAN 2100	122	0.00	0.00	0.00	0.	*
22 JAN 2130	123	0.00	0.00	0.00	0.	*
22 JAN 2200	124	0.00	0.00	0.00	0.	*
22 JAN 2230	125	0.00	0.00	0.00	0.	*
22 JAN 2300	126	0.00	0.00	0.00	0.	*
22 JAN 2330	127	0.00	0.00	0.00	0.	*
23 JAN 0000	128	0.00	0.00	0.00	0.	*
23 JAN 0030	129	0.00	0.00	0.00	0.	*
23 JAN 0100	130	0.00	0.00	0.00	0.	*
23 JAN 0130	131	0.00	0.00	0.00	0.	*
23 JAN 0200	132	0.00	0.00	0.00	0.	*
23 JAN 0230	133	0.00	0.00	0.00	0.	*
23 JAN 0300	134	0.00	0.00	0.00	0.	*
23 JAN 0330	135	0.00	0.00	0.00	0.	*
23 JAN 0400	136	0.00	0.00	0.00	0.	*
23 JAN 0430	137	0.00	0.00	0.00	0.	*
23 JAN 0500	138	0.00	0.00	0.00	0.	*
23 JAN 0530	139	0.00	0.00	0.00	0.	*
23 JAN 0600	140	0.00	0.00	0.00	0.	*
23 JAN 0630	141	0.00	0.00	0.00	0.	*
23 JAN 0700	142	0.00	0.00	0.00	0.	*
23 JAN 0730	143	0.00	0.00	0.00	0.	*
23 JAN 0800	144	0.00	0.00	0.00	0.	*
23 JAN 0830	145	0.00	0.00	0.00	0.	*
23 JAN 0900	146	0.00	0.00	0.00	0.	*
23 JAN 0930	147	0.00	0.00	0.00	0.	*
23 JAN 1000	148	0.00	0.00	0.00	0.	*
23 JAN 1030	149	0.00	0.00	0.00	0.	*
23 JAN 1100	150	0.00	0.00	0.00	0.	*

****

TOTAL RAINFALL = 3.90, TOTAL LOSS = 1.86, TOTAL EXCESS = 2.04

(CFS)	(HR)		6-HR	24-HR	72-HR	74.50-HR
331.	15.00	(CFS)	239.	88.	29.	28.
		(INCHES)	1.391	2.036	2.038	2.038
		(AC-FT)	119.	174.	174.	174.

CUMULATIVE AREA = 1.60 SQ MI

****

HYDROGRAPH AT STATION J

PLAN 1, RATIO = 1.00

****

DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	21 JAN 0330	39	130.	21 JAN 2230	77	0.	22 JAN 1730	115	0.
20 JAN 0900	2	0.	21 JAN 0400	40	115.	21 JAN 2300	78	0.	22 JAN 1800	116	0.
20 JAN 0930	3	0.	21 JAN 0430	41	102.	21 JAN 2330	79	0.	22 JAN 1830	117	0.
20 JAN 1000	4	0.	21 JAN 0500	42	92.	22 JAN 0000	80	0.	22 JAN 1900	118	0.
20 JAN 1030	5	0.	21 JAN 0530	43	83.	22 JAN 0030	81	0.	22 JAN 1930	119	0.
20 JAN 1100	6	0.	21 JAN 0600	44	75.	22 JAN 0100	82	0.	22 JAN 2000	120	0.
20 JAN 1130	7	0.	21 JAN 0630	45	69.	22 JAN 0130	83	0.	22 JAN 2030	121	0.
20 JAN 1200	8	0.	21 JAN 0700	46	64.	22 JAN 0200	84	0.	22 JAN 2100	122	0.
20 JAN 1230	9	0.	21 JAN 0730	47	60.	22 JAN 0230	85	0.	22 JAN 2130	123	0.
20 JAN 1300	10	0.	21 JAN 0800	48	56.	22 JAN 0300	86	0.	22 JAN 2200	124	0.
20 JAN 1330	11	0.	21 JAN 0830	49	53.	22 JAN 0330	87	0.	22 JAN 2230	125	0.
20 JAN 1400	12	0.	21 JAN 0900	50	50.	22 JAN 0400	88	0.	22 JAN 2300	126	0.
20 JAN 1430	13	0.	21 JAN 0930	51	46.	22 JAN 0430	89	0.	22 JAN 2330	127	0.
20 JAN 1500	14	0.	21 JAN 1000	52	42.	22 JAN 0500	90	0.	23 JAN 0000	128	0.
20 JAN 1530	15	0.	21 JAN 1030	53	37.	22 JAN 0530	91	0.	23 JAN 0030	129	0.
20 JAN 1600	16	0.	21 JAN 1100	54	32.	22 JAN 0600	92	0.	23 JAN 0100	130	0.
20 JAN 1630	17	0.	21 JAN 1130	55	26.	22 JAN 0630	93	0.	23 JAN 0130	131	0.
20 JAN 1700	18	0.	21 JAN 1200	56	21.	22 JAN 0700	94	0.	23 JAN 0200	132	0.
20 JAN 1730	19	0.	21 JAN 1230	57	16.	22 JAN 0730	95	0.	23 JAN 0230	133	0.
20 JAN 1800	20	0.	21 JAN 1300	58	12.	22 JAN 0800	96	0.	23 JAN 0300	134	0.
20 JAN 1830	21	1.	21 JAN 1330	59	9.	22 JAN 0830	97	0.	23 JAN 0330	135	0.
20 JAN 1900	22	2.	21 JAN 1400	60	7.	22 JAN 0900	98	0.	23 JAN 0400	136	0.
20 JAN 1930	23	5.	21 JAN 1430	61	6.	22 JAN 0930	99	0.	23 JAN 0430	137	0.
20 JAN 2000	24	9.	21 JAN 1500	62	4.	22 JAN 1000	100	0.	23 JAN 0500	138	0.
20 JAN 2030	25	29.	21 JAN 1530	63	3.	22 JAN 1030	101	0.	23 JAN 0530	139	0.
20 JAN 2100	26	68.	21 JAN 1600	64	3.	22 JAN 1100	102	0.	23 JAN 0600	140	0.
20 JAN 2130	27	128.	21 JAN 1630	65	2.	22 JAN 1130	103	0.	23 JAN 0630	141	0.
20 JAN 2200	28	207.	21 JAN 1700	66	2.	22 JAN 1200	104	0.	23 JAN 0700	142	0.
20 JAN 2230	29	274.	21 JAN 1730	67	1.	22 JAN 1230	105	0.	23 JAN 0730	143	0.
20 JAN 2300	30	315.	21 JAN 1800	68	1.	22 JAN 1300	106	0.	23 JAN 0800	144	0.
20 JAN 2330	31	331.	21 JAN 1830	69	1.	22 JAN 1330	107	0.	23 JAN 0830	145	0.
21 JAN 0000	32	322.	21 JAN 1900	70	1.	22 JAN 1400	108	0.	23 JAN 0900	146	0.
21 JAN 0030	33	300.	21 JAN 1930	71	0.	22 JAN 1430	109	0.	23 JAN 0930	147	0.
21 JAN 0100	34	262.	21 JAN 2000	72	0.	22 JAN 1500	110	0.	23 JAN 1000	148	0.
21 JAN 0130	35	223.	21 JAN 2030	73	0.	22 JAN 1530	111	0.	23 JAN 1030	149	0.
21 JAN 0200	36	193.	21 JAN 2100	74	0.	22 JAN 1600	112	0.	23 JAN 1100	150	0.
21 JAN 0230	37	168.	21 JAN 2130	75	0.	22 JAN 1630	113	0.			
21 JAN 0300	38	148.	21 JAN 2200	76	0.	22 JAN 1700	114	0.			

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	74.50-HR
331.	15.00	(CFS)	239.	88.	29.	28.
		(INCHES)	1.391	2.036	2.038	2.038
		(AC-FT)	119.	174.	174.	174.

CUMULATIVE AREA = 1.60 SQ MI

*** ***

```
          **************
          *            *
 18 KK    *     JOUT   *      ROUTED THROUGH 4-48" RCPS AT CONC. PT. "J" RIVER STA. 5.66
          *            *
          **************

 19 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          0  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

            HYDROGRAPH ROUTING DATA

 20 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

 21 SA              AREA        0.0       0.6      14.5      48.5     114.5

 22 SQ          DISCHARGE         0.        0.        0.      350.      510.

 23 SE          ELEVATION     978.00    980.00    982.00    984.00    986.00

                                                   ***

                                          COMPUTED STORAGE-ELEVATION DATA

          STORAGE       0.00      0.43     12.59     72.34    230.77
        ELEVATION     978.00    980.00    982.00    984.00    986.00
```

****

HYDROGRAPH AT STATION JOUT
PLAN 1, RATIO = 1.00

****

DA MON HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA MON HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA MON HRMN	ORD	OUTFLOW	STORAGE	STAGE
20 JAN 0830	1	0.	0.0	978.0	21 JAN 0930	51	68.	24.1	982.4	22 JAN 1030	101	0.	12.6	982.0
20 JAN 0900	2	0.	0.0	978.0	21 JAN 1000	52	63.	23.3	982.4	22 JAN 1100	102	0.	12.6	982.0
20 JAN 0930	3	0.	0.0	978.0	21 JAN 1030	53	58.	22.4	982.3	22 JAN 1130	103	0.	12.6	982.0
20 JAN 1000	4	0.	0.0	978.0	21 JAN 1100	54	53.	21.6	982.3	22 JAN 1200	104	0.	12.6	982.0
20 JAN 1030	5	0.	0.0	978.0	21 JAN 1130	55	48.	20.7	982.3	22 JAN 1230	105	0.	12.6	982.0
20 JAN 1100	6	0.	0.0	978.0	21 JAN 1200	56	42.	19.8	982.2	22 JAN 1300	106	0.	12.6	982.0
20 JAN 1130	7	0.	0.0	978.0	21 JAN 1230	57	37.	18.9	982.2	22 JAN 1330	107	0.	12.6	982.0
20 JAN 1200	8	0.	0.0	978.0	21 JAN 1300	58	32.	18.1	982.2	22 JAN 1400	108	0.	12.6	982.0
20 JAN 1230	9	0.	0.0	978.0	21 JAN 1330	59	28.	17.3	982.2	22 JAN 1430	109	0.	12.6	982.0
20 JAN 1300	10	0.	0.0	978.0	21 JAN 1400	60	23.	16.6	982.1	22 JAN 1500	110	0.	12.6	982.0
20 JAN 1330	11	0.	0.0	978.0	21 JAN 1430	61	20.	16.0	982.1	22 JAN 1530	111	0.	12.6	982.0
20 JAN 1400	12	0.	0.0	978.0	21 JAN 1500	62	17.	15.4	982.1	22 JAN 1600	112	0.	12.6	982.0
20 JAN 1430	13	0.	0.0	978.0	21 JAN 1530	63	14.	15.0	982.1	22 JAN 1630	113	0.	12.6	982.0
20 JAN 1500	14	0.	0.0	978.0	21 JAN 1600	64	11.	14.6	982.1	22 JAN 1700	114	0.	12.6	982.0
20 JAN 1530	15	0.	0.0	978.0	21 JAN 1630	65	9.	14.2	982.1	22 JAN 1730	115	0.	12.6	982.0
20 JAN 1600	16	0.	0.0	978.0	21 JAN 1700	66	8.	13.9	982.0	22 JAN 1800	116	0.	12.6	982.0
20 JAN 1630	17	0.	0.0	978.0	21 JAN 1730	67	6.	13.7	982.0	22 JAN 1830	117	0.	12.6	982.0
20 JAN 1700	18	0.	0.0	978.0	21 JAN 1800	68	5.	13.5	982.0	22 JAN 1900	118	0.	12.6	982.0

20 JAN 1800	20	0.	0.0	978.1 * 21 JAN 1900	70	3.	13.2	982.0 * 22 JAN 2000	120	0.	12.6	982.0
20 JAN 1830	21	0.	0.0	978.2 * 21 JAN 1930	71	3.	13.1	982.0 * 22 JAN 2030	121	0.	12.6	982.0
20 JAN 1900	22	0.	0.1	978.5 * 21 JAN 2000	72	2.	13.0	982.0 * 22 JAN 2100	122	0.	12.6	982.0
20 JAN 1930	23	0.	0.3	979.2 * 21 JAN 2030	73	2.	12.9	982.0 * 22 JAN 2130	123	0.	12.6	982.0
20 JAN 2000	24	0.	0.5	980.0 * 21 JAN 2100	74	1.	12.8	982.0 * 22 JAN 2200	124	0.	12.6	982.0
20 JAN 2030	25	0.	1.3	980.1 * 21 JAN 2130	75	1.	12.8	982.0 * 22 JAN 2230	125	0.	12.6	982.0
20 JAN 2100	26	0.	3.3	980.5 * 21 JAN 2200	76	1.	12.8	982.0 * 22 JAN 2300	126	0.	12.6	982.0
20 JAN 2130	27	0.	7.4	981.1 * 21 JAN 2230	77	1.	12.7	982.0 * 22 JAN 2330	127	0.	12.6	982.0
20 JAN 2200	28	9.	14.1	982.1 * 21 JAN 2300	78	1.	12.7	982.0 * 23 JAN 0000	128	0.	12.6	982.0
20 JAN 2230	29	59.	22.7	982.3 * 21 JAN 2330	79	0.	12.7	982.0 * 23 JAN 0030	129	0.	12.6	982.0
20 JAN 2300	30	110.	31.4	982.6 * 22 JAN 0000	80	0.	12.7	982.0 * 23 JAN 0100	130	0.	12.6	982.0
20 JAN 2330	31	156.	39.2	982.9 * 22 JAN 0030	81	0.	12.6	982.0 * 23 JAN 0130	131	0.	12.6	982.0
21 JAN 0000	32	193.	45.5	983.1 * 22 JAN 0100	82	0.	12.6	982.0 * 23 JAN 0200	132	0.	12.6	982.0
21 JAN 0030	33	218.	49.9	983.2 * 22 JAN 0130	83	0.	12.6	982.0 * 23 JAN 0230	133	0.	12.6	982.0
21 JAN 0100	34	232.	52.2	983.3 * 22 JAN 0200	84	0.	12.6	982.0 * 23 JAN 0300	134	0.	12.6	982.0
21 JAN 0130	35	234.	52.6	983.3 * 22 JAN 0230	85	0.	12.6	982.0 * 23 JAN 0330	135	0.	12.6	982.0
21 JAN 0200	36	229.	51.6	983.3 * 22 JAN 0300	86	0.	12.6	982.0 * 23 JAN 0400	136	0.	12.6	982.0
21 JAN 0230	37	218.	49.8	983.2 * 22 JAN 0330	87	0.	12.6	982.0 * 23 JAN 0430	137	0.	12.6	982.0
21 JAN 0300	38	205.	47.6	983.2 * 22 JAN 0400	88	0.	12.6	982.0 * 23 JAN 0500	138	0.	12.6	982.0
21 JAN 0330	39	191.	45.2	983.1 * 22 JAN 0430	89	0.	12.6	982.0 * 23 JAN 0530	139	0.	12.6	982.0
21 JAN 0400	40	176.	42.6	983.0 * 22 JAN 0500	90	0.	12.6	982.0 * 23 JAN 0600	140	0.	12.6	982.0
21 JAN 0430	41	161.	40.1	982.9 * 22 JAN 0530	91	0.	12.6	982.0 * 23 JAN 0630	141	0.	12.6	982.0
21 JAN 0500	42	147.	37.8	982.8 * 22 JAN 0600	92	0.	12.6	982.0 * 23 JAN 0700	142	0.	12.6	982.0
21 JAN 0530	43	134.	35.5	982.8 * 22 JAN 0630	93	0.	12.6	982.0 * 23 JAN 0730	143	0.	12.6	982.0
21 JAN 0600	44	122.	33.5	982.7 * 22 JAN 0700	94	0.	12.6	982.0 * 23 JAN 0800	144	0.	12.6	982.0
21 JAN 0630	45	112.	31.7	982.6 * 22 JAN 0730	95	0.	12.6	982.0 * 23 JAN 0830	145	0.	12.6	982.0
21 JAN 0700	46	102.	30.0	982.6 * 22 JAN 0800	96	0.	12.6	982.0 * 23 JAN 0900	146	0.	12.6	982.0
21 JAN 0730	47	93.	28.5	982.5 * 22 JAN 0830	97	0.	12.6	982.0 * 23 JAN 0930	147	0.	12.6	982.0
21 JAN 0800	48	86.	27.2	982.5 * 22 JAN 0900	98	0.	12.6	982.0 * 23 JAN 1000	148	0.	12.6	982.0
21 JAN 0830	49	79.	26.1	982.5 * 22 JAN 0930	99	0.	12.6	982.0 * 23 JAN 1030	149	0.	12.6	982.0
21 JAN 0900	50	73.	25.1	982.4 * 22 JAN 1000	100	0.	12.6	982.0 * 23 JAN 1100	150	0.	12.6	982.0
				*				*				

****

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
234.	17.00	(CFS)	196.	81.	27.	26.
		(INCHES)	1.138	1.888	1.890	1.890
		(AC-FT)	97.	161.	161.	161.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	74.50-HR
53.	17.00	46.	26.	15.	15.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	74.50-HR
983.34	17.00	983.12	982.46	981.64	981.52

CUMULATIVE AREA = 1.60 SQ MI

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

					RATIOS APPLIED TO FLOWS
OPERATION	STATION	AREA	PLAN		RATIO 1
					1.00
HYDROGRAPH AT	J	1.60	1	FLOW	331.
				TIME	15.00
ROUTED TO	JOUT	1.60	1	FLOW	234.
				TIME	17.00

** PEAK STAGES IN FEET **

1	STAGE	983.34
	TIME	17.00

SUMMARY OF COMPONENT COSTS

PROJECT	LOCATION	CAPACITY	CAPITAL COST	AMORTIZED CAPITAL COST	ANNUAL O+M COST	ANNUAL POWER COST	TOTAL ANNUAL COST

```
                    SYSTEM COST AND PERFORMANCE SUMMARY
              (UNITS SAME AS INPUT - NORMALLY 1000\S OF DOLLARS)

          TOTAL SYSTEM CAPITAL COST * * * * * * * * * * * * * *        0.

          TOTAL SYSTEM AMORTIZED CAPITAL COST * * * * * * * * *        0.

          TOTAL SYSTEM ANNUAL O,M,POWER AND REPLACEMENT COST  *        0.

          TOTAL SYSTEM ANNUAL COST  * * * * * * * * * * * * * *                0.


          AVERAGE ANNUAL DAMAGES -- EXISTING CONDITIONS * * * *        0.

          AVERAGE ANNUAL DAMAGES -- OPTIMIZED SYSTEM  * * * * *        0.

          AVERAGE ANNUAL DAMAGE REDUCTION (BENEFITS)  * * * * *                0.


          AVERAGE ANNUAL SYSTEM NET BENEFITS  * * * * * * * * *                0.


*** NORMAL END OF HEC-1 ***
101
$ delete for0*.dat;*
  FLICK        Job terminated at  8-FEB-1989 10:30:35.64

  Accounting information:
  Buffered I/O count:          72      Peak working set size:   859
  Direct I/O count:           166      Peak page file size:    1477
  Page faults:                937      Mounted volumes:           0
  Charged CPU time:     0 00:00:11.48  Elapsed time:     0 00:00:28.06
```

```
$ IF F$MODE() .nes. 'INTERACTIVE' THEN EXIT
$ set default [HYDRO.FLICK.POND]
$ define for005 MCDFLP.DAT;4
$ define for006 sys$output
$ RUN DJA$EXE:hec1
```

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            FEBRUARY 1981             *
*          REVISED 30 OCT 81           *
*                                      *
* RUN DATE       8-F    TIME      10:3 *
*                                      *
****************************************
```


```
****************************************
*                                      *
*    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.

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

  1           ID   PONDING ANALYSIS FOR AGUA FRIA RIVER FIS, JJA JOB NO. 286-080.02
  2           ID   PONDING @ EAST BANK NORTH OF MCDOWELL RD. CONC. POINT 'MCDEFLP'
              * ***** THIS DECK IS MODIFIED FROM THE ORIGINAL DECK SUBMITTED FOR *****
              * ***** THIS PONDING AREA (22NOV88, 1600h) BY REVISING THE SA, SQ, *****
              * ***** AND SE CARDS TO ACCOUNT FOR THE INSTALLATION OF FLAPGATES  *****
              * ***** ON THE DOWNSTREAM SIDE OF MCDOWELL ROAD TO PREVENT WATER   *****
              * ***** FROM THE MAIN CHANNEL OF THE AGUA FRIA BACKING UP INTO THE *****
              * ***** PONDING AREA AND USING UP ALL THE AVAILABLE VOLUME BELOW   *****
              * ***** ELEVATION 982.64.  FLOW THROUGH THE CULVERTS BEGINS AT     *****
              * ***** ELEVATION 982.84 (0.2 FT HEADLOSS DUE TO FLAPGATES)        *****
  3           IT      30 20JAN89    0830     150
  4           IN      30 20JAN89    0830
  5           IO       0       0       0
  6           OO     0.1     1.0
              *       PONDING LOCATION EAST OF CHANNELIZATION NORTH OF MCDOWELL ROAD
              *       CONCENTRATION POINT 'MCDEAST'. THIS DRAINAGE AREA IS BOUNDED TO THE
              *       WEST BY THE AGUA FRIA LEVEE STRUCTURE, TO THE SOUTH BY THE
              *       EAST APPROCH RAMP FOR THE NEW MCDOWELL ROAD BRIDGE.
              *       THIS AREA IS APPROXIMATELY 5.61 sq. mi. AND DEVELOPS A
              *       Q100 = 267 CFS
              *       THIS RUNOFF IS ROUTED THROUGH 2-60' CMPS WITH FLAPGATES LOCATED ALONG
              *       MCDOWELL ROAD.  THE OUTLET IS AFFECTED BY THE AGUA FRIA WSEL AT
              *       RIVER MILE 5.57.

  7           KK     MCD
  8           KO       0       0       0       0      21       0       0       0
  9           BA    5.61
 10           PB       0
              *       24-HOUR TYPE II STORM
 11           PC       0    0.02    0.04    0.06    0.09    0.11    0.14    0.16    0.19    0.22
 12           PC    0.25    0.28    0.31    0.35    0.38    0.42    0.47    0.52    0.57    0.63
 13           PC    0.71    0.80    0.92    1.10    2.59    2.87    3.01    3.12    3.20    3.27
 14           PC    3.33    3.38    3.43    3.48    3.52    3.55    3.59    3.62    3.65    3.68
 15           PC    3.71    3.74    3.76    3.79    3.81    3.84    3.86    3.88    3.90
              *       SCS RUNOFF & ROUTING PARAMETERS USED THROUGHOUT THIS RUN. Cn = 81
 16           LS       0      81
              *       LAG = ((L**0.8)(S+1)**0.7)/(1900(Y**0.5))
              *       L = 36,600 FT, S = 2.36 , Y = .31 %, lag = 9.88 hrs
 17           UD    9.88

 18           KK  MCDOUT  ROUTED THROUGH 2-60' CMPS AT CONC. PT. 'MCDEAST'
 19           KO       0       0       0       0       0       0     100
 20           RS       1    STOR       0       0
 21           SA       0    0.09    0.49    2.07    9.77   33.56      77      87      93     102
 22           SQ       0       0       0       0       0       0       0     144     308    2816
              *       WEIR FLOW OVER MCDOWELL BEGINS AT ELEVATION 983.6
 23           SE     962     964     968     972     976     980  982.84   983.6     984     985
 24           ZZ
```

```
****************************************
*                                      *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*           FEBRUARY 1981              *
*         REVISED 30 OCT 81            *
*                                      *
* RUN DATE       8-F    TIME      10:3 *
*                                      *
****************************************
```

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

```
                    PONDING ANALYSIS FOR AGUA FRIA RIVER FIS, JJA JOB NO. 286-080.02
                    PONDING @ EAST BANK NORTH OF MCDOWELL RD. CONC. POINT 'MCDEFLP'

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

    IT          HYDROGRAPH TIME DATA
                       NMIN         30  MINUTES IN COMPUTATION INTERVAL
                      IDATE     20JAN89  STARTING DATE
                      ITIME       0830  STARTING TIME
                         NQ        150  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE     23JAN89  ENDING DATE
                     NDTIME       1100  ENDING TIME

                 COMPUTATION INTERVAL    0.50 HOURS
                      TOTAL TIME BASE   74.50 HOURS

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

    JP          MULTI-PLAN OPTION
                      NPLAN          1  NUMBER OF PLANS

    JR          MULTI-RATIO OPTION
                    RATIOS OF RUNOFF
                   1.00


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


          **************
          *            *
  7 KK    *      MCD   *
          *            *
          **************

  8 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          0  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPUNCH         0  PUNCH COMPUTED HYDROGRAPH
```

ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	150	LAST ORDINATE PUNCHED OR SAVED
TIMINT	0.500	TIME INTERVAL IN HOURS

4 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	30	TIME INTERVAL IN MINUTES
JXDATE	20JAN89	STARTING DATE
JXTIME	830	STARTING TIME

SUBBASIN RUNOFF DATA

9 BA SUBBASIN CHARACTERISTICS

TAREA	5.61	SUBBASIN AREA

PRECIPITATION DATA

10 PB

STORM	3.90	BASIN TOTAL PRECIPITATION

11 PI INCREMENTAL PRECIPITATION PATTERN

0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.03	0.03	0.03
0.03	0.03	0.04	0.03	0.04	0.05	0.05	0.05	0.06	0.08
0.09	0.12	0.18	1.49	0.28	0.14	0.11	0.08	0.07	0.06
0.05	0.05	0.05	0.04	0.03	0.04	0.03	0.03	0.03	0.03
0.03	0.02	0.03	0.02	0.03	0.02	0.02	0.02		

16 LS SCS LOSS RATE

STRTL	0.47	INITIAL ABSTRACTION
CRVNBR	81.00	CURVE NUMBER
RTIMP	0.00	PERCENT IMPERVIOUS AREA

17 UD SCS DIMENSIONLESS UNITGRAPH

TLAG	9.88	LAG

***

UNIT HYDROGRAPH

101 END-OF-PERIOD ORDINATES

4.	8.	17.	26.	38.	50.	65.	81.	102.	123.
148.	173.	194.	216.	231.	246.	255.	263.	266.	267.
267.	265.	259.	251.	242.	233.	223.	213.	200.	187.
172.	156.	142.	129.	118.	109.	100.	92.	85.	78.
73.	68.	63.	58.	54.	50.	46.	42.	38.	36.
33.	30.	28.	26.	24.	22.	20.	19.	17.	16.
14.	14.	13.	12.	11.	10.	9.	8.	8.	7.
7.	6.	6.	5.	5.	4.	4.	4.	3.	3.
3.	3.	3.	2.	2.	2.	2.	2.	2.	2.
1.	1.	1.	1.	1.	1.	1.	0.	0.	0.
0.									

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HYDROGRAPH AT STATION MCD

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
20	JAN	0830	1	0.00	0.00	0.00	0.	*	21	JAN	2200	76	0.00	0.00	0.00	100.
20	JAN	0900	2	0.02	0.02	0.00	0.	*	21	JAN	2230	77	0.00	0.00	0.00	92.
20	JAN	0930	3	0.02	0.02	0.00	0.	*	21	JAN	2300	78	0.00	0.00	0.00	85.
20	JAN	1000	4	0.02	0.02	0.00	0.	*	21	JAN	2330	79	0.00	0.00	0.00	78.
20	JAN	1030	5	0.03	0.03	0.00	0.	*	22	JAN	0000	80	0.00	0.00	0.00	72.
20	JAN	1100	6	0.02	0.02	0.00	0.	*	22	JAN	0030	81	0.00	0.00	0.00	66.
20	JAN	1130	7	0.03	0.03	0.00	0.	*	22	JAN	0100	82	0.00	0.00	0.00	61.

20 JAN 1230	9	0.03	0.03	0.00	0.	*
20 JAN 1300	10	0.03	0.03	0.00	0.	*
20 JAN 1330	11	0.03	0.03	0.00	0.	*
20 JAN 1400	12	0.03	0.03	0.00	0.	*
20 JAN 1430	13	0.03	0.03	0.00	0.	*
20 JAN 1500	14	0.04	0.04	0.00	0.	*
20 JAN 1530	15	0.03	0.03	0.00	0.	*
20 JAN 1600	16	0.04	0.04	0.00	0.	*
20 JAN 1630	17	0.05	0.05	0.00	0.	*
20 JAN 1700	18	0.05	0.05	0.00	0.	*
20 JAN 1730	19	0.05	0.05	0.00	0.	*
20 JAN 1800	20	0.06	0.05	0.01	0.	*
20 JAN 1830	21	0.08	0.07	0.01	0.	*
20 JAN 1900	22	0.09	0.07	0.02	0.	*
20 JAN 1930	23	0.12	0.09	0.03	1.	*
20 JAN 2000	24	0.18	0.12	0.06	2.	*
20 JAN 2030	25	1.49	0.62	0.87	6.	*
20 JAN 2100	26	0.28	0.07	0.21	12.	*
20 JAN 2130	27	0.14	0.03	0.11	22.	*
20 JAN 2200	28	0.11	0.02	0.09	35.	*
20 JAN 2230	29	0.08	0.02	0.06	51.	*
20 JAN 2300	30	0.07	0.01	0.06	68.	*
20 JAN 2330	31	0.06	0.01	0.05	90.	*
21 JAN 0000	32	0.05	0.01	0.04	113.	*
21 JAN 0030	33	0.05	0.01	0.04	142.	*
21 JAN 0100	34	0.05	0.01	0.04	174.	*
21 JAN 0130	35	0.04	0.01	0.03	209.	*
21 JAN 0200	36	0.03	0.01	0.02	247.	*
21 JAN 0230	37	0.04	0.01	0.03	282.	*
21 JAN 0300	38	0.03	0.01	0.02	317.	*
21 JAN 0330	39	0.03	0.01	0.02	348.	*
21 JAN 0400	40	0.03	0.01	0.02	376.	*
21 JAN 0430	41	0.03	0.01	0.02	399.	*
21 JAN 0500	42	0.03	0.01	0.02	420.	*
21 JAN 0530	43	0.02	0.00	0.02	435.	*
21 JAN 0600	44	0.03	0.01	0.02	447.	*
21 JAN 0630	45	0.02	0.00	0.02	455.	*
21 JAN 0700	46	0.03	0.01	0.02	462.	*
21 JAN 0730	47	0.02	0.00	0.02	463.	*
21 JAN 0800	48	0.02	0.00	0.02	461.	*
21 JAN 0830	49	0.02	0.00	0.02	457.	*
21 JAN 0900	50	0.00	0.00	0.00	451.	*
21 JAN 0930	51	0.00	0.00	0.00	443.	*
21 JAN 1000	52	0.00	0.00	0.00	433.	*
21 JAN 1030	53	0.00	0.00	0.00	420.	*
21 JAN 1100	54	0.00	0.00	0.00	405.	*
21 JAN 1130	55	0.00	0.00	0.00	388.	*
21 JAN 1200	56	0.00	0.00	0.00	368.	*
21 JAN 1230	57	0.00	0.00	0.00	349.	*
21 JAN 1300	58	0.00	0.00	0.00	330.	*
21 JAN 1330	59	0.00	0.00	0.00	312.	*
21 JAN 1400	60	0.00	0.00	0.00	296.	*
21 JAN 1430	61	0.00	0.00	0.00	280.	*
21 JAN 1500	62	0.00	0.00	0.00	264.	*
21 JAN 1530	63	0.00	0.00	0.00	249.	*
21 JAN 1600	64	0.00	0.00	0.00	234.	*
21 JAN 1630	65	0.00	0.00	0.00	220.	*
21 JAN 1700	66	0.00	0.00	0.00	207.	*
21 JAN 1730	67	0.00	0.00	0.00	195.	*
21 JAN 1800	68	0.00	0.00	0.00	182.	*
21 JAN 1830	69	0.00	0.00	0.00	170.	*
21 JAN 1900	70	0.00	0.00	0.00	158.	*
21 JAN 1930	71	0.00	0.00	0.00	147.	*
21 JAN 2000	72	0.00	0.00	0.00	136.	*
22 JAN 0200	84	0.00	0.00	0.00	52.	
22 JAN 0230	85	0.00	0.00	0.00	48.	
22 JAN 0300	86	0.00	0.00	0.00	44.	
22 JAN 0330	87	0.00	0.00	0.00	41.	
22 JAN 0400	88	0.00	0.00	0.00	38.	
22 JAN 0430	89	0.00	0.00	0.00	35.	
22 JAN 0500	90	0.00	0.00	0.00	32.	
22 JAN 0530	91	0.00	0.00	0.00	30.	
22 JAN 0600	92	0.00	0.00	0.00	27.	
22 JAN 0630	93	0.00	0.00	0.00	25.	
22 JAN 0700	94	0.00	0.00	0.00	23.	
22 JAN 0730	95	0.00	0.00	0.00	22.	
22 JAN 0800	96	0.00	0.00	0.00	20.	
22 JAN 0830	97	0.00	0.00	0.00	18.	
22 JAN 0900	98	0.00	0.00	0.00	17.	
22 JAN 0930	99	0.00	0.00	0.00	16.	
22 JAN 1000	100	0.00	0.00	0.00	14.	
22 JAN 1030	101	0.00	0.00	0.00	13.	
22 JAN 1100	102	0.00	0.00	0.00	12.	
22 JAN 1130	103	0.00	0.00	0.00	11.	
22 JAN 1200	104	0.00	0.00	0.00	10.	
22 JAN 1230	105	0.00	0.00	0.00	10.	
22 JAN 1300	106	0.00	0.00	0.00	9.	
22 JAN 1330	107	0.00	0.00	0.00	8.	
22 JAN 1400	108	0.00	0.00	0.00	8.	
22 JAN 1430	109	0.00	0.00	0.00	7.	
22 JAN 1500	110	0.00	0.00	0.00	7.	
22 JAN 1530	111	0.00	0.00	0.00	6.	
22 JAN 1600	112	0.00	0.00	0.00	6.	
22 JAN 1630	113	0.00	0.00	0.00	5.	
22 JAN 1700	114	0.00	0.00	0.00	5.	
22 JAN 1730	115	0.00	0.00	0.00	4.	
22 JAN 1800	116	0.00	0.00	0.00	4.	
22 JAN 1830	117	0.00	0.00	0.00	4.	
22 JAN 1900	118	0.00	0.00	0.00	3.	
22 JAN 1930	119	0.00	0.00	0.00	3.	
22 JAN 2000	120	0.00	0.00	0.00	3.	
22 JAN 2030	121	0.00	0.00	0.00	2.	
22 JAN 2100	122	0.00	0.00	0.00	2.	
22 JAN 2130	123	0.00	0.00	0.00	2.	
22 JAN 2200	124	0.00	0.00	0.00	1.	
22 JAN 2230	125	0.00	0.00	0.00	1.	
22 JAN 2300	126	0.00	0.00	0.00	1.	
22 JAN 2330	127	0.00	0.00	0.00	1.	
23 JAN 0000	128	0.00	0.00	0.00	1.	
23 JAN 0030	129	0.00	0.00	0.00	1.	
23 JAN 0100	130	0.00	0.00	0.00	1.	
23 JAN 0130	131	0.00	0.00	0.00	1.	
23 JAN 0200	132	0.00	0.00	0.00	0.	
23 JAN 0230	133	0.00	0.00	0.00	0.	
23 JAN 0300	134	0.00	0.00	0.00	0.	
23 JAN 0330	135	0.00	0.00	0.00	0.	
23 JAN 0400	136	0.00	0.00	0.00	0.	
23 JAN 0430	137	0.00	0.00	0.00	0.	
23 JAN 0500	138	0.00	0.00	0.00	0.	
23 JAN 0530	139	0.00	0.00	0.00	0.	
23 JAN 0600	140	0.00	0.00	0.00	0.	
23 JAN 0630	141	0.00	0.00	0.00	0.	
23 JAN 0700	142	0.00	0.00	0.00	0.	
23 JAN 0730	143	0.00	0.00	0.00	0.	
23 JAN 0800	144	0.00	0.00	0.00	0.	
23 JAN 0830	145	0.00	0.00	0.00	0.	
23 JAN 0900	146	0.00	0.00	0.00	0.	
23 JAN 0930	147	0.00	0.00	0.00	0.	

21 JAN 2130	75	0.00	0.00	0.00	108.	*	23 JAN 1100	150	0.00	0.00	0.00	0.

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TOTAL RAINFALL = 3.90, TOTAL LOSS = 1.86, TOTAL EXCESS = 2.04

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
463.	23.00	(CFS)	445.	282.	102.	99.
		(INCHES)	0.737	1.873	2.038	2.038
		(AC-FT)	221.	560.	610.	610.

CUMULATIVE AREA = 5.61 SQ MI

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HYDROGRAPH AT STATION MCD
PLAN 1, RATIO = 1.00

****

DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	21 JAN 0330	39	348.	21 JAN 2230	77	92.	22 JAN 1730	115	4.
20 JAN 0900	2	0.	21 JAN 0400	40	376.	21 JAN 2300	78	85.	22 JAN 1800	116	4.
20 JAN 0930	3	0.	21 JAN 0430	41	399.	21 JAN 2330	79	78.	22 JAN 1830	117	4.
20 JAN 1000	4	0.	21 JAN 0500	42	420.	22 JAN 0000	80	72.	22 JAN 1900	118	3.
20 JAN 1030	5	0.	21 JAN 0530	43	435.	22 JAN 0030	81	66.	22 JAN 1930	119	3.
20 JAN 1100	6	0.	21 JAN 0600	44	447.	22 JAN 0100	82	61.	22 JAN 2000	120	3.
20 JAN 1130	7	0.	21 JAN 0630	45	455.	22 JAN 0130	83	56.	22 JAN 2030	121	2.
20 JAN 1200	8	0.	21 JAN 0700	46	462.	22 JAN 0200	84	52.	22 JAN 2100	122	2.
20 JAN 1230	9	0.	21 JAN 0730	47	463.	22 JAN 0230	85	48.	22 JAN 2130	123	2.
20 JAN 1300	10	0.	21 JAN 0800	48	461.	22 JAN 0300	86	44.	22 JAN 2200	124	1.
20 JAN 1330	11	0.	21 JAN 0830	49	457.	22 JAN 0330	87	41.	22 JAN 2230	125	1.
20 JAN 1400	12	0.	21 JAN 0900	50	451.	22 JAN 0400	88	38.	22 JAN 2300	126	1.
20 JAN 1430	13	0.	21 JAN 0930	51	443.	22 JAN 0430	89	35.	22 JAN 2330	127	1.
20 JAN 1500	14	0.	21 JAN 1000	52	433.	22 JAN 0500	90	32.	23 JAN 0000	128	1.
20 JAN 1530	15	0.	21 JAN 1030	53	420.	22 JAN 0530	91	30.	23 JAN 0030	129	1.
20 JAN 1600	16	0.	21 JAN 1100	54	405.	22 JAN 0600	92	27.	23 JAN 0100	130	1.
20 JAN 1630	17	0.	21 JAN 1130	55	388.	22 JAN 0630	93	25.	23 JAN 0130	131	1.
20 JAN 1700	18	0.	21 JAN 1200	56	368.	22 JAN 0700	94	23.	23 JAN 0200	132	0.
20 JAN 1730	19	0.	21 JAN 1230	57	349.	22 JAN 0730	95	22.	23 JAN 0230	133	0.
20 JAN 1800	20	0.	21 JAN 1300	58	330.	22 JAN 0800	96	20.	23 JAN 0300	134	0.
20 JAN 1830	21	0.	21 JAN 1330	59	312.	22 JAN 0830	97	18.	23 JAN 0330	135	0.
20 JAN 1900	22	0.	21 JAN 1400	60	296.	22 JAN 0900	98	17.	23 JAN 0400	136	0.
20 JAN 1930	23	1.	21 JAN 1430	61	280.	22 JAN 0930	99	16.	23 JAN 0430	137	0.
20 JAN 2000	24	2.	21 JAN 1500	62	264.	22 JAN 1000	100	14.	23 JAN 0500	138	0.
20 JAN 2030	25	6.	21 JAN 1530	63	249.	22 JAN 1030	101	13.	23 JAN 0530	139	0.
20 JAN 2100	26	12.	21 JAN 1600	64	234.	22 JAN 1100	102	12.	23 JAN 0600	140	0.
20 JAN 2130	27	22.	21 JAN 1630	65	220.	22 JAN 1130	103	11.	23 JAN 0630	141	0.
20 JAN 2200	28	35.	21 JAN 1700	66	207.	22 JAN 1200	104	10.	23 JAN 0700	142	0.
20 JAN 2230	29	51.	21 JAN 1730	67	195.	22 JAN 1230	105	10.	23 JAN 0730	143	0.
20 JAN 2300	30	68.	21 JAN 1800	68	182.	22 JAN 1300	106	9.	23 JAN 0800	144	0.
20 JAN 2330	31	90.	21 JAN 1830	69	170.	22 JAN 1330	107	8.	23 JAN 0830	145	0.
21 JAN 0000	32	113.	21 JAN 1900	70	158.	22 JAN 1400	108	8.	23 JAN 0900	146	0.
21 JAN 0030	33	142.	21 JAN 1930	71	147.	22 JAN 1430	109	7.	23 JAN 0930	147	0.
21 JAN 0100	34	174.	21 JAN 2000	72	136.	22 JAN 1500	110	7.	23 JAN 1000	148	0.
21 JAN 0130	35	209.	21 JAN 2030	73	126.	22 JAN 1530	111	6.	23 JAN 1030	149	0.
21 JAN 0200	36	247.	21 JAN 2100	74	117.	22 JAN 1600	112	6.	23 JAN 1100	150	0.
21 JAN 0230	37	282.	21 JAN 2130	75	108.	22 JAN 1630	113	5.			
21 JAN 0300	38	317.	21 JAN 2200	76	100.	22 JAN 1700	114	5.			

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(CFS)	(HR)		6-HR	24-HR	72-HR	74.50-HR
463.	23.00	(CFS)	445.	282.	102.	99.
		(INCHES)	0.737	1.873	2.038	2.038
		(AC-FT)	221.	560.	610.	610.

CUMULATIVE AREA = 5.61 SQ MI

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          *            *
18 KK     *   MCDOUT   *      ROUTED THROUGH 2-60" CMPS AT CONC. PT. "MCDEAST"
          *            *
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19 KO OUTPUT CONTROL VARIABLES

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

HYDROGRAPH ROUTING DATA

20 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

21 SA AREA	0.0	0.1	0.5	2.1	9.8	33.6	77.0	87.0	93.0	102.0
22 SQ DISCHARGE	0.	0.	0.	0.	0.	0.	0.	144.	308.	2816.
23 SE ELEVATION	962.00	964.00	968.00	972.00	976.00	980.00	982.84	983.60	984.00	985.00

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COMPUTED STORAGE-ELEVATION DATA

STORAGE	0.00	0.06	1.11	5.87	27.65	109.57	262.36	324.63	360.63	458.10
ELEVATION	962.00	964.00	968.00	972.00	976.00	980.00	982.84	983.60	984.00	985.00

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HYDROGRAPH AT STATION MCDOUT
PLAN 1, RATIO = 1.00

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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
20	JAN	0830	1	0.	0.0	962.0	21	JAN	0930	51	71.	293.2	983.2	22	JAN	1030	101	40.	279.7	983.1
20	JAN	0900	2	0.	0.0	962.0	21	JAN	1000	52	105.	307.7	983.4	22	JAN	1100	102	38.	278.6	983.0
20	JAN	0930	3	0.	0.0	962.0	21	JAN	1030	53	134.	320.4	983.5	22	JAN	1130	103	35.	277.6	983.0
20	JAN	1000	4	0.	0.0	962.0	21	JAN	1100	54	173.	331.1	983.7	22	JAN	1200	104	33.	276.6	983.0
20	JAN	1030	5	0.	0.0	962.0	21	JAN	1130	55	212.	339.5	983.8	22	JAN	1230	105	31.	275.7	983.0
20	JAN	1100	6	0.	0.0	962.0	21	JAN	1200	56	240.	345.8	983.8	22	JAN	1300	106	29.	274.9	983.0
20	JAN	1130	7	0.	0.0	962.0	21	JAN	1230	57	261.	350.7	983.8	22	JAN	1330	107	27.	274.1	983.0

20	JAN 1200	8	0.	0.0	962.0	*	21 JAN 1300	58	274.	355.1	983.9	*	22 JAN 1400	108	24.	272.6	983.0
20	JAN 1230	9	0.	0.0	962.0	*	21 JAN 1330	59	282.	355.0	983.9	*	22 JAN 1430	109	24.	272.6	983.0
20	JAN 1300	10	0.	0.0	962.0	*	21 JAN 1400	60	286.	355.8	983.9	*	22 JAN 1500	110	22.	272.0	983.0
20	JAN 1330	11	0.	0.0	962.0	*	21 JAN 1430	61	286.	355.9	983.9	*	22 JAN 1530	111	21.	271.3	982.9
20	JAN 1400	12	0.	0.0	962.0	*	21 JAN 1500	62	284.	355.3	983.9	*	22 JAN 1600	112	19.	270.8	982.9
20	JAN 1430	13	0.	0.0	962.0	*	21 JAN 1530	63	279.	354.3	983.9	*	22 JAN 1630	113	18.	270.2	982.9
20	JAN 1500	14	0.	0.0	962.0	*	21 JAN 1600	64	273.	352.9	983.9	*	22 JAN 1700	114	17.	269.7	982.9
20	JAN 1530	15	0.	0.0	962.0	*	21 JAN 1630	65	265.	351.2	983.9	*	22 JAN 1730	115	16.	269.2	982.9
20	JAN 1600	16	0.	0.0	962.0	*	21 JAN 1700	66	256.	349.2	983.9	*	22 JAN 1800	116	15.	268.7	982.9
20	JAN 1630	17	0.	0.0	962.0	*	21 JAN 1730	67	247.	347.2	983.9	*	22 JAN 1830	117	14.	268.3	982.9
20	JAN 1700	18	0.	0.0	962.0	*	21 JAN 1800	68	237.	345.0	983.8	*	22 JAN 1900	118	13.	267.9	982.9
20	JAN 1730	19	0.	0.0	962.0	*	21 JAN 1830	69	226.	342.7	983.8	*	22 JAN 1930	119	12.	267.5	982.9
20	JAN 1800	20	0.	0.0	962.1	*	21 JAN 1900	70	216.	340.3	983.8	*	22 JAN 2000	120	11.	267.2	982.9
20	JAN 1830	21	0.	0.0	962.2	*	21 JAN 1930	71	205.	338.0	983.7	*	22 JAN 2030	121	10.	266.8	982.9
20	JAN 1900	22	0.	0.0	962.6	*	21 JAN 2000	72	194.	335.6	983.7	*	22 JAN 2100	122	10.	266.5	982.9
20	JAN 1930	23	0.	0.0	963.5	*	21 JAN 2030	73	183.	333.2	983.7	*	22 JAN 2130	123	9.	266.2	982.9
20	JAN 2000	24	0.	0.1	964.1	*	21 JAN 2100	74	173.	330.9	983.7	*	22 JAN 2200	124	8.	265.9	982.9
20	JAN 2030	25	0.	0.3	964.7	*	21 JAN 2130	75	162.	328.6	983.6	*	22 JAN 2230	125	8.	265.7	982.9
20	JAN 2100	26	0.	0.6	966.1	*	21 JAN 2200	76	152.	326.4	983.6	*	22 JAN 2300	126	7.	265.4	982.9
20	JAN 2130	27	0.	1.3	968.2	*	21 JAN 2230	77	143.	324.3	983.6	*	22 JAN 2330	127	6.	265.2	982.9
20	JAN 2200	28	0.	2.5	969.2	*	21 JAN 2300	78	138.	322.1	983.6	*	23 JAN 0000	128	6.	264.9	982.9
20	JAN 2230	29	0.	4.3	970.7	*	21 JAN 2330	79	133.	319.9	983.5	*	23 JAN 0030	129	5.	264.7	982.9
20	JAN 2300	30	0.	6.7	972.2	*	22 JAN 0000	80	128.	317.6	983.5	*	23 JAN 0100	130	5.	264.5	982.9
20	JAN 2330	31	0.	10.0	972.8	*	22 JAN 0030	81	122.	315.3	983.5	*	23 JAN 0130	131	5.	264.4	982.9
21	JAN 0000	32	0.	14.2	973.5	*	22 JAN 0100	82	117.	313.0	983.5	*	23 JAN 0200	132	4.	264.2	982.9
21	JAN 0030	33	0.	19.5	974.5	*	22 JAN 0130	83	112.	310.7	983.4	*	23 JAN 0230	133	4.	264.0	982.9
21	JAN 0100	34	0.	26.0	975.7	*	22 JAN 0200	84	107.	308.4	983.4	*	23 JAN 0300	134	4.	263.9	982.9
21	JAN 0130	35	0.	33.9	976.3	*	22 JAN 0230	85	101.	306.2	983.4	*	23 JAN 0330	135	3.	263.8	982.9
21	JAN 0200	36	0.	43.3	976.8	*	22 JAN 0300	86	96.	304.0	983.3	*	23 JAN 0400	136	3.	263.7	982.9
21	JAN 0230	37	0.	54.2	977.3	*	22 JAN 0330	87	91.	301.9	983.3	*	23 JAN 0430	137	3.	263.6	982.9
21	JAN 0300	38	0.	66.6	977.9	*	22 JAN 0400	88	87.	299.9	983.3	*	23 JAN 0500	138	3.	263.5	982.9
21	JAN 0330	39	0.	80.3	978.6	*	22 JAN 0430	89	82.	297.9	983.3	*	23 JAN 0530	139	2.	263.4	982.9
21	JAN 0400	40	0.	95.3	979.3	*	22 JAN 0500	90	78.	296.0	983.3	*	23 JAN 0600	140	2.	263.3	982.9
21	JAN 0430	41	0.	111.3	980.0	*	22 JAN 0530	91	73.	294.1	983.2	*	23 JAN 0630	141	2.	263.2	982.9
21	JAN 0500	42	0.	128.2	980.3	*	22 JAN 0600	92	69.	292.3	983.2	*	23 JAN 0700	142	2.	263.1	982.8
21	JAN 0530	43	0.	145.9	980.7	*	22 JAN 0630	93	65.	290.7	983.2	*	23 JAN 0730	143	2.	263.1	982.8
21	JAN 0600	44	0.	164.1	981.0	*	22 JAN 0700	94	62.	289.0	983.2	*	23 JAN 0800	144	1.	263.0	982.8
21	JAN 0630	45	0.	182.7	981.4	*	22 JAN 0730	95	58.	287.5	983.1	*	23 JAN 0830	145	1.	262.9	982.8
21	JAN 0700	46	0.	201.7	981.7	*	22 JAN 0800	96	55.	286.0	983.1	*	23 JAN 0900	146	1.	262.9	982.8
21	JAN 0730	47	0.	220.8	982.1	*	22 JAN 0830	97	51.	284.6	983.1	*	23 JAN 0930	147	1.	262.8	982.8
21	JAN 0800	48	0.	239.9	982.4	*	22 JAN 0900	98	48.	283.3	983.1	*	23 JAN 1000	148	1.	262.8	982.8
21	JAN 0830	49	0.	258.9	982.8	*	22 JAN 0930	99	45.	282.0	983.1	*	23 JAN 1030	149	1.	262.8	982.8
21	JAN 0900	50	34.	276.9	983.0	*	22 JAN 1000	100	43.	280.8	983.1	*	23 JAN 1100	150	1.	262.7	982.8
						*						*					

****

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
286.	30.00	(CFS)	269.	160.	58.	56.
		(INCHES)	0.446	1.062	1.160	1.160
		(AC-FT)	134.	318.	347.	347.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	74.50-HR
356.	30.00	352.	323.	220.	213.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	74.50-HR
983.95	30.00	983.91	983.56	979.32	978.74

CUMULATIVE AREA = 5.61 SQ MI

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

RATIOS APPLIED TO FLOWS

OPERATION	STATION	AREA	PLAN		RATIO 1
					1.00
HYDROGRAPH AT	MCD	5.61	1	FLOW	463.
				TIME	23.00
ROUTED TO	MCDOUT	5.61	1	FLOW	286.
				TIME	30.00

** PEAK STAGES IN FEET **

1	STAGE	983.95
	TIME	30.00

SUMMARY OF COMPONENT COSTS

PROJECT	LOCATION	CAPACITY	CAPITAL COST	AMORTIZED CAPITAL COST	ANNUAL O+M COST	ANNUAL POWER COST	TOTAL ANNUAL COST

SYSTEM COST AND PERFORMANCE SUMMARY
(UNITS SAME AS INPUT - NORMALLY 1000\S OF DOLLARS)

TOTAL SYSTEM CAPITAL COST * * * * * * * * * * * * * *	0.	
TOTAL SYSTEM AMORTIZED CAPITAL COST * * * * * * * * *	0.	
TOTAL SYSTEM ANNUAL O,M,POWER AND REPLACEMENT COST *	0.	
TOTAL SYSTEM ANNUAL COST * * * * * * * * * * * * * *		0.
AVERAGE ANNUAL DAMAGES -- EXISTING CONDITIONS * * * *	0.	
AVERAGE ANNUAL DAMAGES -- OPTIMIZED SYSTEM * * * * *	0.	
AVERAGE ANNUAL DAMAGE REDUCTION (BENEFITS) * * * * *		0.
AVERAGE ANNUAL SYSTEM NET BENEFITS * * * * * * * * *		0.

```
*** NORMAL END OF HEC-1 ***
101
$ delete for0*.dat;*
 FLICK        Job terminated at  8-FEB-1989 10:31:10.46

 Accounting information:
 Buffered I/O count:          72      Peak working set size:   854
 Direct I/O count:           170      Peak page file size:    1477
 Page faults:                929      Mounted volumes:           0
 Charged CPU time:     0 00:00:12.35  Elapsed time:     0 00:00:29.36
```

```
$ set default [HIDAO.TLICK.FORD]

$ define for005 AGERWIND.DAT;9
$ define for006 sys$output
$ RUN DJA$EXE:hecl
```

```
*****************************************
*                                       *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *
*          FEBRUARY 1981                *
*         REVISED 30 OCT 81             *
*                                       *
*  RUN DATE       8-F    TIME      10:2 *
*                                       *
*****************************************
```

```
*****************************************
*                                       *
*   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.

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

  1           ID   PONDING ANALYSIS FOR AGUA FRIA RIVER FIS, JJA JOB NO. 286-080.02
  2           ID   PONDING @ WEST BANK NORTH OF INDIAN SCHOOL RD. CONC. PT. 'O'
  3           IT      30 20JAN89    0830      60
  4           IN      30 20JAN89    0830
  5           IO       0       0       0
  6           OO     0.1     1.0
              *       PONDING LOCATION WEST OF CHANNELIZATION NORTH OF INDIAN SCHOOL RD.
              *       CONCENTRATION POINT 'O'. THIS DRAINAGE AREA IS BOUNDED TO THE
              *       EAST AND NORTH BY THE AGUA FRIA LEVEE STRUCTURE, TO THE WEST
              *       BY EL MIRAGE AND TO THE SOUTH BY INDIAN SCHOOL RD.
              *       THIS AREA IS APPROXIMATELY 0.217 sq. mi.AND DEVELOPS A Q100 = 140 cfs
              *       THIS RUNOFF IS ROUTED THROUGH 1-42" RCP@ RIVER STA. 8.08

  7           KK       O
  8           KO       0       0       0       0      31       0       0       0
  9           BA   0.217
 10           PB       0
              *       24-HOUR TYPE II STORM
 11           PC       0    0.02    0.04    0.06    0.09    0.11    0.14    0.16    0.19    0.22
 12           PC    0.25    0.28    0.31    0.35    0.38    0.42    0.47    0.52    0.57    0.63
 13           PC    0.71    0.80    0.92    1.10    2.59    2.87    3.01    3.12    3.20    3.27
 14           PC    3.33    3.38    3.43    3.48    3.52    3.55    3.59    3.62    3.65    3.68
 15           PC    3.71    3.74    3.76    3.79    3.81    3.84    3.86    3.88    3.90
              *       SCS RUNOFF & ROUTING PARAMETERS USED THROUGHOUT THIS RUN. Cn = 83
 16           LS       0      83
              *       LAG = ((L**0.8)(S+1)**0.7)/(1900(Y**0.5))
              *       L = 3000 FT, S = 2.05 , Y = .47 %, lag = 0.48
 17           UD    0.48

 18           KK    OOUT  WATERSHED ROUTED THROUGH 1-42" RCP @ CONC. PT. 'O' RIVER STA. 8.08
 19           KO       0       0       0       0       0       0     100
 20           RS       1    STOR       0       0
              * ********** THE TOTAL VOLUME OF THE RAINFALL IS ABOUT 45 ACRE-FEET.  FLOW
              * ********** THROUGH THE PIPE DOES NOT BEGIN UNTIL ELEVATION 1009.4 (AGUA FRIA
              * ********** WSE + 0.2 FT FLAPGATE LOSS)
 21           SA       0     .13     .86    3.18    11.3   21.70   31.75   43.73   66.96
 22           SQ       0       0       0       0       0       0       0   46.50   87.75
 23           SE   999.9    1000    1004    1006  1007.5    1008  1009.4    1010    1012
              * ****************************************     ***********************************
              * ***** AGUA FRIA W.S.E. = 1009.2 *****     ***** INDIAN SCHOOL ROAD AND *****
              * ***** HIGHEST PONDING ELEVATION *****     ***** THE LEVEE ARE HIGHER   *****
              * ***** LOWER THAN AGUA FRIA WSE  *****     *****  THAN THE PONDED WSE   *****
              * ***** NO DISCHARGE THROUGH PIPE *****     ***** NO DISCHARGE OVER ROAD *****
              * *****  DURING PEAK RIVER FLOW   *****     *****  ALL WATER IS STORED   *****
              * ****************************************     ***********************************
 24           ZZ
```

```
*****************************************
*                                       *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *
*          FEBRUARY 1981                *
*         REVISED 30 OCT 81             *
*                                       *
*  RUN DATE      8-F    TIME      10:2  *
*                                       *
*****************************************
```

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

PONDING ANALYSIS FOR AGUA FRIA RIVER FIS, JJA JOB NO. 286-080.03
PONDING @ WEST BANK NORTH OF INDIAN SCHOOL RD. CONC. PT. "O"

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

  IT        HYDROGRAPH TIME DATA
                MTIN          30  MINUTES IN COMPUTATION INTERVAL
                IDATE     20JAN89  STARTING DATE
                ITIME        0830  STARTING TIME
                  NO          60  NUMBER OF HYDROGRAPH ORDINATES
              NDDATE     21JAN89  ENDING DATE
              NDTIME        1400  ENDING TIME

          COMPUTATION INTERVAL    0.50 HOURS
               TOTAL TIME BASE   29.50 HOURS

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

  JP        MULTI-PLAN OPTION
                NPLAN          1  NUMBER OF PLANS

  JR        MULTI-RATIO OPTION
             RATIOS OF RUNOFF
            1.00
```

*** ***

```
        **************
        *            *
7 KK    *        O   *
        *            *
        **************

9 KO        OUTPUT CONTROL VARIABLES
                IPRNT          0  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE
                IPNCH          0  PUNCH COMPUTED HYDROGRAPH
```

```
                ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2         60  LAST ORDINATE PUNCHED OR SAVED
               TIMINT      0.500  TIME INTERVAL IN HOURS


 4 IN        TIME DATA FOR INPUT TIME SERIES
                JXMIN         30  TIME INTERVAL IN MINUTES
               JXDATE    20JAN89  STARTING DATE
               JXTIME        830  STARTING TIME

           SUBBASIN RUNOFF DATA

 9 BA        SUBBASIN CHARACTERISTICS
                TAREA       0.22  SUBBASIN AREA

            PRECIPITATION DATA

10 PB             STORM       3.90  BASIN TOTAL PRECIPITATION

11 PI          INCREMENTAL PRECIPITATION PATTERN
                0.02      0.02      0.02      0.03      0.02      0.03      0.02      0.03      0.03      0.03
                0.03      0.03      0.04      0.03      0.04      0.05      0.05      0.05      0.06      0.08
                0.09      0.12      0.18      1.49      0.28      0.14      0.11      0.08      0.07      0.06
                0.05      0.05      0.05      0.04      0.03      0.04      0.03      0.03      0.03      0.03
                0.03      0.02      0.03      0.02      0.03      0.02      0.02      0.02

16 LS       SCS LOSS RATE
               STRTL       0.41  INITIAL ABSTRACTION
               CRVNBR     83.00  CURVE NUMBER
               RIMP       0.00  PERCENT IMPERVIOUS AREA

17 UD       SCS DIMENSIONLESS UNITGRAPH
                TLAG       0.48  LAG

                                                    ***

WARNING *** TIME INTERVAL IS GREATER THAN LAG/3

                                          UNIT HYDROGRAPH
                                       7 END-OF-PERIOD ORDINATES
          112.      113.       37.       12.        4.        1.        0.

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

                                     HYDROGRAPH AT STATION        0

*****************************************************************************************************************
                                                    |
   DA MON HRMN  ORD   RAIN   LOSS  EXCESS   COMP Q   |   DA MON HRMN  ORD   RAIN   LOSS  EXCESS   COMP Q
                                                    |
   20 JAN 0830    1   0.00   0.00   0.00      0.     |   20 JAN 2330   31   0.06   0.01   0.05     17.
   20 JAN 0900    2   0.02   0.02   0.00      0.     |   21 JAN 0000   32   0.05   0.01   0.04     14.
   20 JAN 0930    3   0.02   0.02   0.00      0.     |   21 JAN 0030   33   0.05   0.01   0.04     12.
   20 JAN 1000    4   0.02   0.02   0.00      0.     |   21 JAN 0100   34   0.05   0.01   0.04     12.
   20 JAN 1030    5   0.03   0.03   0.00      0.     |   21 JAN 0130   35   0.04   0.01   0.03     11.
   20 JAN 1100    6   0.02   0.02   0.00      0.     |   21 JAN 0200   36   0.03   0.00   0.03      9.
   20 JAN 1130    7   0.03   0.03   0.00      0.     |   21 JAN 0230   37   0.04   0.01   0.03      9.
   20 JAN 1200    8   0.02   0.02   0.00      0.     |   21 JAN 0300   38   0.03   0.00   0.03      8.
   20 JAN 1230    9   0.03   0.03   0.00      0.     |   21 JAN 0330   39   0.03   0.00   0.03      7.
   20 JAN 1300   10   0.03   0.03   0.00      0.     |   21 JAN 0400   40   0.03   0.00   0.03      7.
   20 JAN 1330   11   0.03   0.03   0.00      0.     |   21 JAN 0430   41   0.03   0.00   0.03      7.
   20 JAN 1400   12   0.03   0.03   0.00      0.     |   21 JAN 0500   42   0.03   0.00   0.03      7.
   20 JAN 1430   13   0.03   0.03   0.00      0.     |   21 JAN 0530   43   0.02   0.00   0.02      6.
   20 JAN 1500   14   0.04   0.04   0.00      0.     |   21 JAN 0600   44   0.03   0.00   0.03      6.
   20 JAN 1530   15   0.03   0.03   0.00      0.     |   21 JAN 0630   45   0.02   0.00   0.02      6.
```

20 JAN 1630	17	0.05	0.05	0.00	0.	*	21 JAN 0730	47	0.02	0.00	0.02	6.
20 JAN 1700	18	0.05	0.05	0.00	1.	*	21 JAN 0800	48	0.02	0.00	0.02	5.
20 JAN 1730	19	0.05	0.04	0.01	1.	*	21 JAN 0830	49	0.02	0.00	0.02	5.
20 JAN 1800	20	0.06	0.05	0.01	2.	*	21 JAN 0900	50	0.00	0.00	0.00	3.
20 JAN 1830	21	0.08	0.06	0.02	3.	*	21 JAN 0930	51	0.00	0.00	0.00	1.
20 JAN 1900	22	0.09	0.07	0.02	5.	*	21 JAN 1000	52	0.00	0.00	0.00	0.
20 JAN 1930	23	0.12	0.08	0.04	8.	*	21 JAN 1030	53	0.00	0.00	0.00	0.
20 JAN 2000	24	0.18	0.11	0.07	14.	*	21 JAN 1100	54	0.00	0.00	0.00	0.
20 JAN 2030	25	1.49	0.54	0.95	117.	*	21 JAN 1130	55	0.00	0.00	0.00	0.
20 JAN 2100	26	0.28	0.06	0.22	136.	*	21 JAN 1200	56	0.00	0.00	0.00	0.
20 JAN 2130	27	0.14	0.03	0.11	73.	*	21 JAN 1230	57	0.00	0.00	0.00	0.
20 JAN 2200	28	0.11	0.02	0.09	43.	*	21 JAN 1300	58	0.00	0.00	0.00	0.
20 JAN 2230	29	0.08	0.01	0.07	28.	*	21 JAN 1330	59	0.00	0.00	0.00	0.
20 JAN 2300	30	0.07	0.01	0.06	21.	*	21 JAN 1400	60	0.00	0.00	0.00	0.
						*						

****

TOTAL RAINFALL = 3.90, TOTAL LOSS = 1.70, TOTAL EXCESS = 2.20

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	29.50-HR
136.	12.50	(CFS)	41.	13.	10.	10.
		(INCHES)	1.766	2.200	2.200	2.200
		(AC-FT)	30.	35.	35.	35.

CUMULATIVE AREA = 0.22 SQ MI

****

HYDROGRAPH AT STATION 6
PLAN 1, RATIO = 1.00

****

DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	*	20 JAN 1600	16	0.	*	20 JAN 2330	31	17.	*	21 JAN 0700	46	6.
20 JAN 0900	2	0.	*	20 JAN 1630	17	0.	*	21 JAN 0000	32	14.	*	21 JAN 0730	47	6.
20 JAN 0930	3	0.	*	20 JAN 1700	18	1.	*	21 JAN 0030	33	12.	*	21 JAN 0800	48	5.
20 JAN 1000	4	0.	*	20 JAN 1730	19	1.	*	21 JAN 0100	34	12.	*	21 JAN 0830	49	5.
20 JAN 1030	5	0.	*	20 JAN 1800	20	2.	*	21 JAN 0130	35	11.	*	21 JAN 0900	50	3.
20 JAN 1100	6	0.	*	20 JAN 1830	21	3.	*	21 JAN 0200	36	9.	*	21 JAN 0930	51	1.
20 JAN 1130	7	0.	*	20 JAN 1900	22	5.	*	21 JAN 0230	37	9.	*	21 JAN 1000	52	0.
20 JAN 1200	8	0.	*	20 JAN 1930	23	8.	*	21 JAN 0300	38	8.	*	21 JAN 1030	53	0.
20 JAN 1230	9	0.	*	20 JAN 2000	24	14.	*	21 JAN 0330	39	7.	*	21 JAN 1100	54	0.
20 JAN 1300	10	0.	*	20 JAN 2030	25	117.	*	21 JAN 0400	40	7.	*	21 JAN 1130	55	0.
20 JAN 1330	11	0.	*	20 JAN 2100	26	136.	*	21 JAN 0430	41	7.	*	21 JAN 1200	56	0.
20 JAN 1400	12	0.	*	20 JAN 2130	27	73.	*	21 JAN 0500	42	7.	*	21 JAN 1230	57	0.
20 JAN 1430	13	0.	*	20 JAN 2200	28	43.	*	21 JAN 0530	43	6.	*	21 JAN 1300	58	0.
20 JAN 1500	14	0.	*	20 JAN 2230	29	28.	*	21 JAN 0600	44	6.	*	21 JAN 1330	59	0.
20 JAN 1530	15	0.	*	20 JAN 2300	30	21.	*	21 JAN 0630	45	6.	*	21 JAN 1400	60	0.
			*				*				*			

****

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	29.50-HR
136.	12.50	(CFS)	41.	13.	10.	10.
		(INCHES)	1.766	2.200	2.200	2.200
		(AC-FT)	30.	35.	35.	35.

CUMULATIVE AREA = 0.22 SQ MI

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

          ***************
          *             *
18 KK     *    OOUT     *      WATERSHED ROUTED THROUGH 1-42" RCP @ CONC. PT. 'O' RIVER STA. 8.08
          *             *
          ***************

19 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          0  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

            HYDROGRAPH ROUTING DATA

20 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

21 SA              AREA        0.0       0.1       0.9       5.2      11.3      21.7      31.8      43.7      67.0

22 SQ          DISCHARGE        0.        0.        0.        0.        0.        0.        0.       47.       88.

23 SE          ELEVATION      999.90   1000.00   1004.00   1006.00   1007.50   1008.00   1009.40   1010.00   1012.00

                                                                  ***

                                                COMPUTED STORAGE-ELEVATION DATA

          STORAGE       0.00      0.00      1.77      7.20     19.27     27.38     64.57     87.12    196.99
        ELEVATION     999.90   1000.00   1004.00   1006.00   1007.50   1008.00   1009.40   1010.00   1012.00

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

                                                HYDROGRAPH AT STATION     OOUT
                                                   PLAN 1,   RATIO =  1.00

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

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
20	JAN	0830	1	0.	0.0	999.9	20	JAN	1830	21	0.	0.3	1000.5	21	JAN	0430	41	0.	23.2	1007.7
20	JAN	0900	2	0.	0.0	999.9	20	JAN	1900	22	0.	0.4	1000.9	21	JAN	0500	42	0.	23.5	1007.8
20	JAN	0930	3	0.	0.0	999.9	20	JAN	1930	23	0.	0.7	1001.5	21	JAN	0530	43	0.	23.7	1007.8
20	JAN	1000	4	0.	0.0	999.9	20	JAN	2000	24	0.	1.1	1002.5	21	JAN	0600	44	0.	24.0	1007.8
20	JAN	1030	5	0.	0.0	999.9	20	JAN	2030	25	0.	3.8	1004.8	21	JAN	0630	45	0.	24.2	1007.8
20	JAN	1100	6	0.	0.0	999.9	20	JAN	2100	26	0.	9.0	1006.2	21	JAN	0700	46	0.	24.5	1007.8
20	JAN	1130	7	0.	0.0	999.9	20	JAN	2130	27	0.	12.3	1006.8	21	JAN	0730	47	0.	24.7	1007.8
20	JAN	1200	8	0.	0.0	999.9	20	JAN	2200	28	0.	15.7	1007.1	21	JAN	0800	48	0.	25.0	1007.9
20	JAN	1230	9	0.	0.0	999.9	20	JAN	2230	29	0.	17.3	1007.2	21	JAN	0830	49	0.	25.2	1007.9
20	JAN	1300	10	0.	0.0	999.9	20	JAN	2300	30	0.	18.2	1007.4	21	JAN	0900	50	0.	25.3	1007.9
20	JAN	1330	11	0.	0.0	999.9	20	JAN	2330	31	0.	19.0	1007.5	21	JAN	0930	51	0.	25.4	1007.9
20	JAN	1400	12	0.	0.0	999.9	21	JAN	0000	32	0.	19.6	1007.5	21	JAN	1000	52	0.	25.4	1007.9
20	JAN	1430	13	0.	0.0	999.9	21	JAN	0030	33	0.	20.1	1007.6	21	JAN	1030	53	0.	25.5	1007.9
20	JAN	1500	14	0.	0.0	999.9	21	JAN	0100	34	0.	20.6	1007.6	21	JAN	1100	54	0.	25.5	1007.9
20	JAN	1530	15	0.	0.0	999.9	21	JAN	0130	35	0.	21.1	1007.6	21	JAN	1130	55	0.	25.5	1007.9
20	JAN	1600	16	0.	0.0	999.9	21	JAN	0200	36	0.	21.5	1007.6	21	JAN	1200	56	0.	25.5	1007.9
20	JAN	1630	17	0.	0.0	1000.0	21	JAN	0230	37	0.	21.9	1007.7	21	JAN	1230	57	0.	25.5	1007.9
20	JAN	1700	18	0.	0.0	1000.0	21	JAN	0300	38	0.	22.2	1007.7	21	JAN	1300	58	0.	25.5	1007.9
20	JAN	1730	19	0.	0.1	1000.1	21	JAN	0330	39	0.	22.6	1007.7	21	JAN	1330	59	0.	25.5	1007.9
20	JAN	1800	20	0.	0.1	1000.3	21	JAN	0400	40	0.	22.9	1007.7	21	JAN	1400	60	0.	25.5	1007.9

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	29.50-HR
0.	0.50	(CFS)	0.	0.	0.	0.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	0.	0.	0.	0.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	29.50-HR
25.	26.50	25.	16.	13.	12.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	29.50-HR
1007.88	27.00	1007.88	1005.71	1004.63	1004.63

CUMULATIVE AREA = 0.22 SQ MI

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

					RATIOS APPLIED TO FLOWS
OPERATION	STATION	AREA	PLAN		RATIO 1
					1.00
HYDROGRAPH AT	0	0.22	1	FLOW	136.
				TIME	12.50
ROUTED TO	OOUT	0.22	1	FLOW	0.
				TIME	0.50

** PEAK STAGES IN FEET **

1	STAGE	1007.88
	TIME	27.00

SUMMARY OF COMPONENT COSTS

PROJECT	LOCATION	CAPACITY	CAPITAL COST	AMORTIZED CAPITAL COST	ANNUAL O+M COST	ANNUAL POWER COST	TOTAL ANNUAL COST

SYSTEM COST AND PERFORMANCE SUMMARY
(UNITS SAME AS INPUT - NORMALLY 1000\S OF DOLLARS)

TOTAL SYSTEM CAPITAL COST * * * * * * * * * * * * * *	0.	
TOTAL SYSTEM AMORTIZED CAPITAL COST * * * * * * * * *	0.	
TOTAL SYSTEM ANNUAL O.M.POWER AND REPLACEMENT COST *	0.	
TOTAL SYSTEM ANNUAL COST * * * * * * * * * * * * * *		0.
AVERAGE ANNUAL DAMAGES -- EXISTING CONDITIONS * * * *	0.	
AVERAGE ANNUAL DAMAGES -- OPTIMIZED SYSTEM * * * * *	0.	
AVERAGE ANNUAL DAMAGE REDUCTION (BENEFITS) * * * * *		0.
AVERAGE ANNUAL SYSTEM NET BENEFITS * * * * * * * * *		0.

```
*** NORMAL END OF HEC-1 ***
101
$ delete for0*.dat;*
FLICK        job terminated at  8-FEB-1989 10:25:43.73

Accounting information:
Buffered I/O count:          71      Peak working set size:   865
Direct I/O count:           142      Peak page file size:    1477
Page faults:                897      Mounted volumes:           0
Charged CPU time:    0 00:00:09.87   Elapsed time:     0 00:00:21.68
```

```
$ set default [HYDRO.FLICK.POND]
$ define for005 AGFRRIDW.DAT;6
$ define for006 sys$output
$ RUN DJA$EXE:hecl
```

```
*                                        *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)     *
*           FEBRUARY 1981                *
*          REVISED 30 OCT 81             *
*                                        *
*  RUN DATE       8-E    TIME      10:2  *
*                                        *
******************************************
```

```
*                                        *
*    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.

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

*** LIST ***
  1           ID    PONDING @ WB STA 39+13.5 N OF RID CANAL, OUTLET CONTROL, 24-HR STORM
  2           ID    THE WATERSHED IS ROUGHLY BOUNDED BY THE EL MIRAGE ROAD ALIGNMENT TO THE
  3           ID    WEST, THE LEVEE TO THE EAST, INDIAN SCHOOL ROAD TO THE NORTH, AND THE
  4           ID    ROOSEVELT IRRIGATION DISTRICT CANAL TO THE SOUTH
  5           IT      30 20JAN89    0830      60
  6           IW      20 20JAN89    0830
  7           IO       0       0       0
  8           OO     0.1     1.0
              * ********** THE AREA WEST OF THIS WATERSHED WOULD FLOW INTO THE 50' DEEP
              * ********** PIT AND IS NOT INCLUDED IN THIS ANALYSIS.  THE PURPOSE OF THIS
              * ********** ANALYSIS IS TO CALCULATE THE PONDING, IF ANY, ADJACENT TO THE
              * ********** LEVEE.  MOST OF THE STORAGE IS PROVIDED BY PITS LOCATED NEAR THE
              * ********** LEVEE.  THERE IS NO DISCHARGE THROUGH THE LEVEE UNTIL THE WATER
              * ********** WATER SURFACE WEST OF THE LEVEE REACHES AN ELEVATION OF 1006.65
              * ********** (WSE IN RIVER + 0.2 FT FOR FLAPGATE LOSS).  THE TOTAL VOLUME OF
              * ********** RAINFALL IS APPROXIMATELY 9 ACRE-FEET.

  9           KK     RID
 10           KO       0       0       0       0      21       0       0       0
 11           BA   0.042
 12           PR       0
              * ********** 24-HOUR, TYPE II STORM
 13           PC       0    0.02    0.04    0.06    0.09    0.11    0.14    0.16    0.19    0.22
 14           PC    0.25    0.28    0.31    0.35    0.38    0.42    0.47    0.52    0.57    0.63
 15           PC    0.71    0.80    0.92    1.10    2.59    2.87    3.01    3.12    3.20    3.27
 16           PC    3.33    3.38    3.43    3.48    3.52    3.55    3.59    3.62    3.65    3.68
 17           PC    3.71    3.74    3.76    3.79    3.81    3.84    3.86    3.88    3.90
              * ********** SCS RUNOFF & ROUTING PARAMETERS USED THROUGHOUT THIS RUN.
 18           LS       0      88       0
              * ********** LAG = LA**0.8*(S+1)**0.7/(1900*Y**0.5)
              * ********** L=1800 FT, S=1000/88-10=1.364, Y=(1008-998)/1800=0.56%
 19           UD    0.52

 20           KK  RIDOUT    BASIN ROUTED THROUGH THE CULVERT AT RID CANAL (STA 39+14)
 21           KO       0       0       0       0       0       0     100
 22           RS       1    STOR       0       0
              * ********** A PONDING ELEVATION GREATER THAN 1003 WOULD RESULT IN OVERFLOW INTO
              * ********** THE GRAVEL PITS LOCATED ABOUT 1000 FEET WEST OF THE LEVEE.
 23           SA    0.01    0.09    0.23    2.15    8.96
 24           SO       0       0       0       0       0
 25           SE     988     992     996    1000    1003
 26           ZZ
```

```
*                                        *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *
*            FEBRUARY 1981               *
*          REVISED 30 OCT 81             *
*                                        *
*  RUN DATE       8-E    TIME      10:2 *
*                                        *
******************************************
```

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

PONDING @ WB STA 39+13.5 N OF RID CANAL, OUTLET CONTROL, 24-HR STORM
THE WATERSHED IS ROUGHLY BOUNDED BY THE EL MIRAGE ROAD ALIGNMENT TO THE
WEST, THE LEVEE TO THE EAST, INDIAN SCHOOL ROAD TO THE NORTH, AND THE
ROOSEVELT IRRIGATION DISTRICT CANAL TO THE SOUTH

```
 7 IO        OUTPUT CONTROL VARIABLES
                 IPRNT          0  PRINT CONTROL
                 IPLOT          0  PLOT CONTROL
                 QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT        HYDROGRAPH TIME DATA
                 NMIN         30  MINUTES IN COMPUTATION INTERVAL
                 IDATE     20JAN89  STARTING DATE
                 ITIME        0830  STARTING TIME
                   NQ          60  NUMBER OF HYDROGRAPH ORDINATES
                NDDATE     21JAN89  ENDING DATE
                NDTIME        0410  ENDING TIME

             COMPUTATION INTERVAL    0.33 HOURS
                  TOTAL TIME BASE   19.67 HOURS

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

   JP        MULTI-PLAN OPTION
                 NPLAN           1  NUMBER OF PLANS

   JR        MULTI-RATIO OPTION
               RATIOS OF RUNOFF
              1.00
```

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

          ***************
          *             *
 9 KK     *       RID   *
          *             *
          ***************

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

	IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
	ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
	ISAV2	60	LAST ORDINATE PUNCHED OR SAVED
	TIMINT	0.333	TIME INTERVAL IN HOURS

6 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	30	TIME INTERVAL IN MINUTES
JXDATE	20JAN89	STARTING DATE
JXTIME	830	STARTING TIME

SUBBASIN RUNOFF DATA

11 BA SUBBASIN CHARACTERISTICS

TAREA	0.04	SUBBASIN AREA

PRECIPITATION DATA

12 PB

STORM	3.90	BASIN TOTAL PRECIPITATION

13 PI INCREMENTAL PRECIPITATION PATTERN

0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.03	0.03	0.03
0.03	0.03	0.04	0.03	0.04	0.05	0.05	0.05	0.06	0.08
0.09	0.12	0.18	1.49	0.28	0.14	0.11	0.08	0.07	0.06
0.05	0.05	0.05	0.04	0.03	0.04	0.03	0.03	0.03	0.03
0.03	0.02	0.03	0.02	0.03	0.02	0.02	0.02		

18 LS SCS LOSS RATE

STRTL	0.27	INITIAL ABSTRACTION
CRVNBR	88.00	CURVE NUMBER
RTIMP	0.00	PERCENT IMPERVIOUS AREA

19 UD SCS DIMENSIONLESS UNITGRAPH

TLAG	0.52	LAG

***

WARNING *** TIME INTERVAL IS GREATER THAN LAG/2

UNIT HYDROGRAPH
10 END-OF-PERIOD ORDINATES

13. 30. 22. 9. 4. 2. 1. 0. 0. 0.

****

HYDROGRAPH AT STATION RID

****

DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
20 JAN 0830	1	0.00	0.00	0.00	0.	*	20 JAN 1830	31	0.06	0.01	0.05	7.
20 JAN 0850	2	0.02	0.02	0.00	0.	*	20 JAN 1850	32	0.05	0.00	0.05	6.
20 JAN 0910	3	0.02	0.02	0.00	0.	*	20 JAN 1910	33	0.05	0.00	0.05	5.
20 JAN 0930	4	0.02	0.02	0.00	0.	*	20 JAN 1930	34	0.05	0.00	0.05	4.
20 JAN 0950	5	0.03	0.03	0.00	0.	*	20 JAN 1950	35	0.04	0.00	0.04	4.
20 JAN 1010	6	0.02	0.02	0.00	0.	*	20 JAN 2010	36	0.03	0.00	0.03	2.
20 JAN 1030	7	0.03	0.03	0.00	0.	*	20 JAN 2030	37	0.04	0.00	0.04	3.
20 JAN 1050	8	0.02	0.02	0.00	0.	*	20 JAN 2050	38	0.03	0.00	0.03	3.
20 JAN 1110	9	0.03	0.03	0.00	0.	*	20 JAN 2110	39	0.03	0.00	0.03	3.
20 JAN 1130	10	0.03	0.03	0.00	0.	*	20 JAN 2130	40	0.03	0.00	0.03	2.
20 JAN 1150	11	0.03	0.03	0.00	0.	*	20 JAN 2150	41	0.03	0.00	0.03	2.
20 JAN 1210	12	0.03	0.03	0.00	0.	*	20 JAN 2210	42	0.03	0.00	0.03	2.
20 JAN 1230	13	0.03	0.03	0.00	0.	*	20 JAN 2230	43	0.02	0.00	0.02	2.
20 JAN 1250	14	0.04	0.04	0.00	0.	*	20 JAN 2250	44	0.03	0.00	0.03	2.

20 JAN 1330	16	0.04	0.03	0.01	0.	*	20 JAN 2330	46	0.03	0.00	0.03	0.
20 JAN 1350	17	0.05	0.04	0.01	0.	*	20 JAN 2350	47	0.02	0.00	0.02	0.
20 JAN 1410	18	0.05	0.04	0.01	1.	*	21 JAN 0010	48	0.02	0.00	0.02	0.
20 JAN 1430	19	0.05	0.03	0.02	1.	*	21 JAN 0030	49	0.02	0.00	0.02	0.
20 JAN 1450	20	0.06	0.04	0.02	1.	*	21 JAN 0050	50	0.00	0.00	0.00	0.
20 JAN 1510	21	0.08	0.05	0.03	2.	*	21 JAN 0110	51	0.00	0.00	0.00	0.
20 JAN 1530	22	0.09	0.05	0.04	2.	*	21 JAN 0130	52	0.00	0.00	0.00	0.
20 JAN 1550	23	0.12	0.06	0.06	3.	*	21 JAN 0150	53	0.00	0.00	0.00	0.
20 JAN 1610	24	0.18	0.08	0.10	5.	*	21 JAN 0210	54	0.00	0.00	0.00	0.
20 JAN 1630	25	1.49	0.34	1.15	20.	*	21 JAN 0230	55	0.00	0.00	0.00	0.
20 JAN 1650	26	0.28	0.04	0.24	40.	*	21 JAN 0250	56	0.00	0.00	0.00	0.
20 JAN 1710	27	0.14	0.02	0.12	35.	*	21 JAN 0310	57	0.00	0.00	0.00	0.
20 JAN 1730	28	0.11	0.01	0.10	21.	*	21 JAN 0330	58	0.00	0.00	0.00	0.
20 JAN 1750	29	0.08	0.01	0.07	14.	*	21 JAN 0350	59	0.00	0.00	0.00	0.
20 JAN 1810	30	0.07	0.01	0.06	10.	*	21 JAN 0410	60	0.00	0.00	0.00	0.
						*						

****

TOTAL RAINFALL = 3.90, TOTAL LOSS = 1.26, TOTAL EXCESS = 2.64

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	19.67-HR
40.	8.33	(CFS)	10.	4.	4.	4.
		(INCHES)	2.294	2.636	2.636	2.636
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 0.04 SQ MI

****

HYDROGRAPH AT STATION RIP
PLAN 1, RATIO = 1.00

****

DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	*	20 JAN 1330	16	0.	*	20 JAN 1830	31	7.	*	20 JAN 2330	46	3.
20 JAN 0850	2	0.	*	20 JAN 1350	17	0.	*	20 JAN 1850	32	6.	*	20 JAN 2350	47	3.
20 JAN 0910	3	0.	*	20 JAN 1410	18	1.	*	20 JAN 1910	33	5.	*	21 JAN 0010	48	2.
20 JAN 0930	4	0.	*	20 JAN 1430	19	1.	*	20 JAN 1930	34	4.	*	21 JAN 0030	49	2.
20 JAN 0950	5	0.	*	20 JAN 1450	20	1.	*	20 JAN 1950	35	4.	*	21 JAN 0050	50	1.
20 JAN 1010	6	0.	*	20 JAN 1510	21	2.	*	20 JAN 2010	36	3.	*	21 JAN 0110	51	1.
20 JAN 1030	7	0.	*	20 JAN 1530	22	2.	*	20 JAN 2030	37	3.	*	21 JAN 0130	52	0.
20 JAN 1050	8	0.	*	20 JAN 1550	23	3.	*	20 JAN 2050	38	3.	*	21 JAN 0150	53	0.
20 JAN 1110	9	0.	*	20 JAN 1610	24	5.	*	20 JAN 2110	39	3.	*	21 JAN 0210	54	0.
20 JAN 1130	10	0.	*	20 JAN 1630	25	20.	*	20 JAN 2130	40	2.	*	21 JAN 0230	55	0.
20 JAN 1150	11	0.	*	20 JAN 1650	26	40.	*	20 JAN 2150	41	2.	*	21 JAN 0250	56	0.
20 JAN 1210	12	0.	*	20 JAN 1710	27	35.	*	20 JAN 2210	42	2.	*	21 JAN 0310	57	0.
20 JAN 1230	13	0.	*	20 JAN 1730	28	21.	*	20 JAN 2230	43	2.	*	21 JAN 0330	58	0.
20 JAN 1250	14	0.	*	20 JAN 1750	29	14.	*	20 JAN 2250	44	2.	*	21 JAN 0350	59	0.
20 JAN 1310	15	0.	*	20 JAN 1810	30	10.	*	20 JAN 2310	45	2.	*	21 JAN 0410	60	0.
			*				*				*			

****

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	19.67-HR
40.	8.33	(CFS)	10.	4.	4.	4.
		(INCHES)	2.294	2.636	2.636	2.636
		(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = 0.04 SQ MI

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

          ***************
          *             *
 20 KK    *   RIDOUT    *        BASIN ROUTED THROUGH THE CULVERT AT RID CANAL (STA 39+14)
          *             *
          ***************

 21 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          0  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE

            HYDROGRAPH ROUTING DATA

 22 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

 23 SA              AREA        0.0       0.1       0.2       2.2       7.0

 24 SQ          DISCHARGE        0.        0.        0.        0.        0.

 25 SE          ELEVATION     988.00    992.00    996.00   1000.00   1003.00

                                                   ***

                                   COMPUTED STORAGE-ELEVATION DATA

          STORAGE      0.00      0.17      0.79      4.90     20.40
        ELEVATION    988.00    992.00    996.00   1000.00   1003.00
```

****

HYDROGRAPH AT STATION RIDOUT
PLAN 1, RATIO = 1.00

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
20	JAN	0830	1	0.	0.0	988.0	20	JAN	1510	21	0.	0.1	990.8	20	JAN	2150	41	0.	5.4	1000.1
20	JAN	0850	2	0.	0.0	988.0	20	JAN	1530	22	0.	0.2	992.0	20	JAN	2210	42	0.	5.4	1000.1
20	JAN	0910	3	0.	0.0	988.0	20	JAN	1550	23	0.	0.2	992.5	20	JAN	2230	43	0.	5.5	1000.1
20	JAN	0930	4	0.	0.0	988.0	20	JAN	1610	24	0.	0.3	993.1	20	JAN	2250	44	0.	5.6	1000.1
20	JAN	0950	5	0.	0.0	988.0	20	JAN	1630	25	0.	0.7	995.3	20	JAN	2310	45	0.	5.6	1000.1
20	JAN	1010	6	0.	0.0	988.0	20	JAN	1650	26	0.	1.5	996.7	20	JAN	2330	46	0.	5.7	1000.1
20	JAN	1030	7	0.	0.0	988.0	20	JAN	1710	27	0.	2.6	997.7	20	JAN	2350	47	0.	5.7	1000.2
20	JAN	1050	8	0.	0.0	988.0	20	JAN	1730	28	0.	3.3	998.5	21	JAN	0010	48	0.	5.8	1000.2
20	JAN	1110	9	0.	0.0	988.0	20	JAN	1750	29	0.	3.8	998.9	21	JAN	0030	49	0.	5.8	1000.2
20	JAN	1130	10	0.	0.0	988.0	20	JAN	1810	30	0.	4.1	999.3	21	JAN	0050	50	0.	5.9	1000.2
20	JAN	1150	11	0.	0.0	988.0	20	JAN	1830	31	0.	4.4	999.5	21	JAN	0110	51	0.	5.9	1000.2
20	JAN	1210	12	0.	0.0	988.0	20	JAN	1850	32	0.	4.5	999.7	21	JAN	0130	52	0.	5.9	1000.2
20	JAN	1230	13	0.	0.0	988.0	20	JAN	1910	33	0.	4.7	999.8	21	JAN	0150	53	0.	5.9	1000.2
20	JAN	1250	14	0.	0.0	988.0	20	JAN	1930	34	0.	4.8	999.9	21	JAN	0210	54	0.	5.9	1000.2
20	JAN	1310	15	0.	0.0	988.1	20	JAN	1950	35	0.	4.9	1000.0	21	JAN	0230	55	0.	5.9	1000.2
20	JAN	1330	16	0.	0.0	988.2	20	JAN	2010	36	0.	5.0	1000.0	21	JAN	0250	56	0.	5.9	1000.2
20	JAN	1350	17	0.	0.0	988.5	20	JAN	2030	37	0.	5.1	1000.0	21	JAN	0310	57	0.	5.9	1000.2
20	JAN	1410	18	0.	0.0	988.8	20	JAN	2050	38	0.	5.2	1000.1	21	JAN	0330	58	0.	5.9	1000.2
20	JAN	1430	19	0.	0.1	989.3	20	JAN	2110	39	0.	5.2	1000.1	21	JAN	0350	59	0.	5.9	1000.2
20	JAN	1450	20	0.	0.1	990.0	20	JAN	2130	40	0.	5.3	1000.1	21	JAN	0410	60	0.	5.9	1000.2

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	19.67-HR
0.	0.33	(CFS)	0.	0.	0.	0.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	0.	0.	0.	0.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	19.67-HR
6.	18.00	6.	3.	3.	3.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	19.67-HR
1000.19	19.00	1000.17	995.39	995.39	995.39

CUMULATIVE AREA = 0.04 SQ MI

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

					RATIOS APPLIED TO FLOWS
OPERATION	STATION	AREA	PLAN		RATIO 1
					1.00
HYDROGRAPH AT	RID	0.04	1	FLOW	40.
				TIME	8.33
ROUTED TO	RIDOUT	0.04	1	FLOW	0.
				TIME	0.33

** PEAK STAGES IN FEET **

1	STAGE	1000.19
	TIME	19.00

SUMMARY OF COMPONENT COSTS

PROJECT	LOCATION	CAPACITY	CAPITAL COST	AMORTIZED CAPITAL COST	ANNUAL O+M COST	ANNUAL POWER COST	TOTAL ANNUAL COST

SYSTEM COST AND PERFORMANCE SUMMARY
(UNITS SAME AS INPUT - NORMALLY 1000\S OF DOLLARS)

TOTAL SYSTEM CAPITAL COST * * * * * * * * * * * * * *	0.	
TOTAL SYSTEM AMORTIZED CAPITAL COST * * * * * * * * *	0.	
TOTAL SYSTEM ANNUAL O,M,POWER AND REPLACEMENT COST *	0.	
TOTAL SYSTEM ANNUAL COST * * * * * * * * * * * * * *		0.
AVERAGE ANNUAL DAMAGES -- EXISTING CONDITIONS * * * *	0.	
AVERAGE ANNUAL DAMAGES -- OPTIMIZED SYSTEM * * * * *	0.	
AVERAGE ANNUAL DAMAGE REDUCTION (BENEFITS) * * * * *		0.
AVERAGE ANNUAL SYSTEM NET BENEFITS * * * * * * * * *		0.

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

*** NOLIST ***


*** NORMAL END OF HEC-1 ***
$0$
 delete for0*.dat;*
 ELICK        job terminated at  8-FEB-1989 10:24:54.12

 Accounting information:
 Buffered I/O count:          71      Peak working set size:   796
 Direct I/O count:           153      Peak page file size:    1477
 Page faults:                941      Mounted volumes:           0
 Charged CPU time:     0 00:00:09.99  Elapsed time:     0 00:00:31.75
```

```
$ IF F$MODE() .nes. 'INTERACTIVE' THEN EXIT
$ set default [HYDRO.FLICK.POND]
$ define for005 CL.DAT;5
$ define for006 sys$output
$ RUN DJA$EXE:hec1
```

```
****************************************
*                                      *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*           FEBRUARY 1981              *
*         REVISED 30 OCT 81            *
*                                      *
* RUN DATE       8-F    TIME      10:2 *
*                                      *
****************************************
```

```
****************************************
*                                      *
*   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.

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

  1           ID   PONDING ANALYSIS FOR AGUA FRIA RIVER FIS, JJA JOB NO. 286-080.02
  2           ID   PONDING @ EAST BANK AGUA FRIA LEVEE & NORTH OF S.P.R.R. (BUCKEYE RD.)
              *      THIS RUN USED TO CALCULATE LAG FOR ROUTING BASIN 'F' OUTFLOW
  3           IT     30 20JAN89    0830     150
  4           IN     30 20JAN89    0830
  5           IO      0       0       0
  6           UO    0.1     1.0
              *      CONCENTRATION POINT 'C' ; THIS DRAINAGE AREA IS BOUNDED TO THE
              *      TO THE WEST BY THE AGUA FRIA RIVER LEVEE STRUCTURE, TO THE SOUTH
              *      FOR APPROX. 3000' BY THE SO. PACIFIC R.R. AND THEN NORTH EASTERLY BY
              *      A NATURAL HIGH GROUND WATERSHED DIVIDE EXTENDING TO 107th AVE.
              *      & I-10 WHICH IS THE NORTHERN BOUNDARY.
              *      THIS AREA IS APPROXIMATELY 2.13 sq. mi.
              *      THE RUNOFF IS ROUTED TO THE AGUA FRIA RIVER VIA 3-36" RCP'S
              *      @ RIVER STA. 3.78 CONC. PT. 'C'

  7           KK      C
  8           KO      0       0       0       0      22       0       0       0
  9           BA   2.13
 10           PB      0
              *      24-HOUR TYPE II STORM
 11           PC      0    0.02    0.04    0.06    0.09    0.11    0.14    0.16    0.19    0.22
 12           PC   0.25    0.28    0.31    0.35    0.38    0.42    0.47    0.52    0.57    0.63
 13           PC   0.71    0.80    0.92    1.10    2.59    2.87    3.01    3.12    3.20    3.27
 14           PC   3.33    3.38    3.43    3.48    3.52    3.55    3.59    3.62    3.65    3.68
 15           PC   3.71    3.74    3.76    3.79    3.81    3.84    3.86    3.88    3.90
              *      SCS RUNOFF & ROUTING PARAMETERS USED THROUGHOUT THIS RUN. CN = 81
              *      IMPERVIOUSNESS CONSIDERED AS PART OF CURVE #
 16           LS      0      81
              *      LAG = ((L**0.8)(S+1)**0.7)/(1900(Y**0.5))
              *      L = 15000 FT, S = 2.35 , Y = .37  LAG = 4.42 HRS
 17           UD   4.42
              *      CONCENTRATION POINT 'F' ; THIS DRAINAGE AREA IS BOUNDED TO THE
              *      EAST BY A NATURAL HIGH GROUND WATERSHED DIVIDE HALFWAY BETWEEN
              *      THE AGUA FRIA RIVER AND EL MIRAGE RD. TO THE WEST BY THE AGUA
              *      FRIA RIVER LEVEE STRUCTURE TO THE SOUTH BY VAN BUREN ST. AND
              *      TO THE NORTH BY I-10.
              *      THIS AREA IS APPROXIMATELY 0.198 sq. mi.
              *      FLOW IS DETAINED NORTH OF VAN BUREN
              *      EAST OF THE LEVEE STRUCTURE. THE BASIN OUTFLOWS AS
              *      WEIR FLOW OVER VAN BUREN ST. WHICH PROCEEDS DOWNSTREAM TO CONC. PT. 'C'
              *      WHERE IT IS COMBINED WITH THE HYDROGRAPH FOR CONC. PT. 'C'

 18           KK      F
 19           KO      0       0       0       0      22       0       0       0
 20           BA   .198
 21           PB      0
              *      24-HOUR TYPE II STORM
 22           PC      0    0.02    0.04    0.06    0.09    0.11    0.14    0.16    0.19    0.22
 23           PC   0.25    0.28    0.31    0.35    0.38    0.42    0.47    0.52    0.57    0.63
 24           PC   0.71    0.80    0.92    1.10    2.59    2.87    3.01    3.12    3.20    3.27
 25           PC   3.33    3.38    3.43    3.48    3.52    3.55    3.59    3.62    3.65    3.68
 26           PC   3.71    3.74    3.76    3.79    3.81    3.84    3.86    3.88    3.90
              *      SCS RUNOFF & ROUTING PARAMETERS USED THROUGHOUT THIS RUN.  CN = 81
 27           LS      0      81
              *      IMPERVIOUSNESS CONSIDERED AS PART OF CURVE #
              *      LAG = ((L**0.8)(S+1)**0.7)/(1900(Y**0.5))
              *      L = 3500 FT, S = 2.35 , Y = .29, LAG = 1.56 HR
```

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

  28          UD    1.56

  29          KK    FOUT  WATERSHED ROUTED OVER VAN BUREN ST. @ RIVER STA. 4.7
  30          KO       0       0       0       0       0       0     100
  31          RS       1    STOR       0       0
  32          SA       0    2.15   10.49   17.26
  33          SQ       0       0       0     180
  34          SE     970     971  971.65     972

  35          KK      FR SUB BASIN 'F' ROUTED TO PIPE OUTLET @ CONC. PT. 'C'
              *        WATERSHED 'F' OUTFLOW HYDROGRAPH ROUTED USING KINEMATIC WAVE OPTION
  36          KO       0       0       0       0      21       0       0
  37          RK    5150   .0031    .035            TRAP     400       2

  38          KK      FC  HYDROGRAPHS COMBINED
  39          KO       0       0       0       0      21       0     100
  40          BI      FR      21
  41          HC       2
              *       PONDING LOCATION EAST OF CHANNELIZATION NORTH OF SO. PACIFIC R.R.
              *       CONCENTRATION POINT 'C'.
              *       CONCENTRATION POINT 'F' OUTFLOW HYDROGRAPH ROUTED AND COMBINED
              *       WITH CONCENTRATION POINT 'C' OUTFLOW HYDROGRAPH.
              *       THE RUNOFF IS ROUTED TO THE AGUA FRIA RIVER VIA 3-36" RCP'S
              *       @ RIVER STA. 3.78 CONC. PT. 'C' (THIS RUN INCLUDES 'HOLE' STAGE-STORAGE)

  42          KK    COUT  WATERSHED ROUTED THROUGH 3-36" RCP'S AT CONC. PT. 'C' RIVER STA. 3.78
  43          KO       0       0       0       0       0       0     100
  44          RS       1    STOR       0       0
  45          SA       0     .88    4.15   11.82   36.91   70.11   108.9   131.4   159.5
  46          SQ       0       0       0       0       0       0       0     126     192
  47          SE   954.3     956     958     960     962     963   964.2     965     966
  48          ZZ
```

```
****************************************
*                                      *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*            FEBRUARY 1981             *
*          REVISED 30 OCT 81           *
*                                      *
* RUN DATE       8-F    TIME      10:2 *
*                                      *
****************************************
```

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

```
                    PONDING ANALYSIS FOR AGUA FRIA RIVER FIS, JJA JOB NO. 286-080.02
                    PONDING @ EAST BANK AGUA FRIA LEVEE & NORTH OF S.P.R.R. (BUCKEYE RD.)

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

   IT         HYDROGRAPH TIME DATA
                    NMIN         30  MINUTES IN COMPUTATION INTERVAL
                   IDATE     20JAN89  STARTING DATE
                   ITIME       0830  STARTING TIME
                      NQ        150  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     23JAN89  ENDING DATE
                  NDTIME       1100  ENDING TIME

             COMPUTATION INTERVAL    0.50 HOURS
                  TOTAL TIME BASE   74.50 HOURS

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

   JP         MULTI-PLAN OPTION
                   NPLAN          1  NUMBER OF PLANS

   JR         MULTI-RATIO OPTION
                RATIOS OF RUNOFF
               1.00


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


         **************
         *            *
  7 KK   *         C  *
         *            *
         **************

  8 KO        OUTPUT CONTROL VARIABLES
                   IPRNT          0  PRINT CONTROL
                   IPLOT          0  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE
                   IPNCH          0  PUNCH COMPUTED HYDROGRAPH
```

ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	150	LAST ORDINATE PUNCHED OR SAVED
TIMINT	0.500	TIME INTERVAL IN HOURS

4 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	30	TIME INTERVAL IN MINUTES
JXDATE	20JAN89	STARTING DATE
JXTIME	830	STARTING TIME

SUBBASIN RUNOFF DATA

9 BA SUBBASIN CHARACTERISTICS

TAREA	2.13	SUBBASIN AREA

PRECIPITATION DATA

10 PB

STORM	3.90	BASIN TOTAL PRECIPITATION

11 PI INCREMENTAL PRECIPITATION PATTERN

0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.03	0.03	0.03
0.03	0.03	0.04	0.03	0.04	0.05	0.05	0.05	0.06	0.08
0.09	0.12	0.18	1.49	0.28	0.14	0.11	0.08	0.07	0.06
0.05	0.05	0.05	0.04	0.03	0.04	0.03	0.03	0.03	0.03
0.03	0.02	0.03	0.02	0.03	0.02	0.02	0.02		

16 LS SCS LOSS RATE

STRTL	0.47	INITIAL ABSTRACTION
CRVNBR	81.00	CURVE NUMBER
RTIMP	0.00	PERCENT IMPERVIOUS AREA

17 UD SCS DIMENSIONLESS UNITGRAPH

TLAG	4.42	LAG

***

UNIT HYDROGRAPH

46 END-OF-PERIOD ORDINATES

8.	25.	48.	78.	118.	161.	193.	213.	220.	219.
208.	192.	173.	150.	122.	99.	83.	70.	59.	50.
42.	35.	30.	25.	21.	18.	15.	12.	10.	9.
7.	6.	5.	4.	4.	3.	3.	2.	2.	2.
1.	1.	1.	1.	0.	0.				

****

HYDROGRAPH AT STATION C

****

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
20	JAN	0830	1	0.00	0.00	0.00	0.	*	21	JAN	2200	76	0.00	0.00	0.00	2.
20	JAN	0900	2	0.02	0.02	0.00	0.	*	21	JAN	2230	77	0.00	0.00	0.00	1.
20	JAN	0930	3	0.02	0.02	0.00	0.	*	21	JAN	2300	78	0.00	0.00	0.00	1.
20	JAN	1000	4	0.02	0.02	0.00	0.	*	21	JAN	2330	79	0.00	0.00	0.00	1.
20	JAN	1030	5	0.03	0.03	0.00	0.	*	22	JAN	0000	80	0.00	0.00	0.00	1.
20	JAN	1100	6	0.02	0.02	0.00	0.	*	22	JAN	0030	81	0.00	0.00	0.00	1.
20	JAN	1130	7	0.03	0.03	0.00	0.	*	22	JAN	0100	82	0.00	0.00	0.00	0.
20	JAN	1200	8	0.02	0.02	0.00	0.	*	22	JAN	0130	83	0.00	0.00	0.00	0.
20	JAN	1230	9	0.03	0.03	0.00	0.	*	22	JAN	0200	84	0.00	0.00	0.00	0.
20	JAN	1300	10	0.03	0.03	0.00	0.	*	22	JAN	0230	85	0.00	0.00	0.00	0.
20	JAN	1330	11	0.03	0.03	0.00	0.	*	22	JAN	0300	86	0.00	0.00	0.00	0.
20	JAN	1400	12	0.03	0.03	0.00	0.	*	22	JAN	0330	87	0.00	0.00	0.00	0.
20	JAN	1430	13	0.03	0.03	0.00	0.	*	22	JAN	0400	88	0.00	0.00	0.00	0.

20 JAN 1530	15	0.03	0.03	0.00	0.	*	22 JAN 0500	90	0.00	0.00	0.00	0.
20 JAN 1600	16	0.04	0.04	0.00	0.	*	22 JAN 0530	91	0.00	0.00	0.00	0.
20 JAN 1630	17	0.05	0.05	0.00	0.	*	22 JAN 0600	92	0.00	0.00	0.00	0.
20 JAN 1700	18	0.05	0.05	0.00	0.	*	22 JAN 0630	93	0.00	0.00	0.00	0.
20 JAN 1730	19	0.05	0.05	0.00	0.	*	22 JAN 0700	94	0.00	0.00	0.00	0.
20 JAN 1800	20	0.06	0.05	0.01	0.	*	22 JAN 0730	95	0.00	0.00	0.00	0.
20 JAN 1830	21	0.08	0.07	0.01	0.	*	22 JAN 0800	96	0.00	0.00	0.00	0.
20 JAN 1900	22	0.09	0.07	0.02	1.	*	22 JAN 0830	97	0.00	0.00	0.00	0.
20 JAN 1930	23	0.12	0.09	0.03	2.	*	22 JAN 0900	98	0.00	0.00	0.00	0.
20 JAN 2000	24	0.18	0.12	0.06	5.	*	22 JAN 0930	99	0.00	0.00	0.00	0.
20 JAN 2030	25	1.49	0.62	0.87	14.	*	22 JAN 1000	100	0.00	0.00	0.00	0.
20 JAN 2100	26	0.28	0.07	0.21	35.	*	22 JAN 1030	101	0.00	0.00	0.00	0.
20 JAN 2130	27	0.14	0.03	0.11	64.	*	22 JAN 1100	102	0.00	0.00	0.00	0.
20 JAN 2200	28	0.11	0.02	0.09	102.	*	22 JAN 1130	103	0.00	0.00	0.00	0.
20 JAN 2230	29	0.08	0.02	0.06	152.	*	22 JAN 1200	104	0.00	0.00	0.00	0.
20 JAN 2300	30	0.07	0.01	0.06	206.	*	22 JAN 1230	105	0.00	0.00	0.00	0.
20 JAN 2330	31	0.06	0.01	0.05	254.	*	22 JAN 1300	106	0.00	0.00	0.00	0.
21 JAN 0000	32	0.05	0.01	0.04	290.	*	22 JAN 1330	107	0.00	0.00	0.00	0.
21 JAN 0030	33	0.05	0.01	0.04	313.	*	22 JAN 1400	108	0.00	0.00	0.00	0.
21 JAN 0100	34	0.05	0.01	0.04	324.	*	22 JAN 1430	109	0.00	0.00	0.00	0.
21 JAN 0130	35	0.04	0.01	0.03	324.	*	22 JAN 1500	110	0.00	0.00	0.00	0.
21 JAN 0200	36	0.03	0.01	0.02	315.	*	22 JAN 1530	111	0.00	0.00	0.00	0.
21 JAN 0230	37	0.04	0.01	0.03	300.	*	22 JAN 1600	112	0.00	0.00	0.00	0.
21 JAN 0300	38	0.03	0.01	0.02	279.	*	22 JAN 1630	113	0.00	0.00	0.00	0.
21 JAN 0330	39	0.03	0.01	0.02	250.	*	22 JAN 1700	114	0.00	0.00	0.00	0.
21 JAN 0400	40	0.03	0.01	0.02	224.	*	22 JAN 1730	115	0.00	0.00	0.00	0.
21 JAN 0430	41	0.03	0.01	0.02	203.	*	22 JAN 1800	116	0.00	0.00	0.00	0.
21 JAN 0500	42	0.03	0.01	0.02	184.	*	22 JAN 1830	117	0.00	0.00	0.00	0.
21 JAN 0530	43	0.02	0.00	0.02	167.	*	22 JAN 1900	118	0.00	0.00	0.00	0.
21 JAN 0600	44	0.03	0.01	0.02	153.	*	22 JAN 1930	119	0.00	0.00	0.00	0.
21 JAN 0630	45	0.02	0.00	0.02	141.	*	22 JAN 2000	120	0.00	0.00	0.00	0.
21 JAN 0700	46	0.03	0.01	0.02	129.	*	22 JAN 2030	121	0.00	0.00	0.00	0.
21 JAN 0730	47	0.02	0.00	0.02	119.	*	22 JAN 2100	122	0.00	0.00	0.00	0.
21 JAN 0800	48	0.02	0.00	0.02	110.	*	22 JAN 2130	123	0.00	0.00	0.00	0.
21 JAN 0830	49	0.02	0.00	0.02	102.	*	22 JAN 2200	124	0.00	0.00	0.00	0.
21 JAN 0900	50	0.00	0.00	0.00	94.	*	22 JAN 2230	125	0.00	0.00	0.00	0.
21 JAN 0930	51	0.00	0.00	0.00	88.	*	22 JAN 2300	126	0.00	0.00	0.00	0.
21 JAN 1000	52	0.00	0.00	0.00	81.	*	22 JAN 2330	127	0.00	0.00	0.00	0.
21 JAN 1030	53	0.00	0.00	0.00	75.	*	23 JAN 0000	128	0.00	0.00	0.00	0.
21 JAN 1100	54	0.00	0.00	0.00	69.	*	23 JAN 0030	129	0.00	0.00	0.00	0.
21 JAN 1130	55	0.00	0.00	0.00	62.	*	23 JAN 0100	130	0.00	0.00	0.00	0.
21 JAN 1200	56	0.00	0.00	0.00	55.	*	23 JAN 0130	131	0.00	0.00	0.00	0.
21 JAN 1230	57	0.00	0.00	0.00	49.	*	23 JAN 0200	132	0.00	0.00	0.00	0.
21 JAN 1300	58	0.00	0.00	0.00	42.	*	23 JAN 0230	133	0.00	0.00	0.00	0.
21 JAN 1330	59	0.00	0.00	0.00	37.	*	23 JAN 0300	134	0.00	0.00	0.00	0.
21 JAN 1400	60	0.00	0.00	0.00	31.	*	23 JAN 0330	135	0.00	0.00	0.00	0.
21 JAN 1430	61	0.00	0.00	0.00	26.	*	23 JAN 0400	136	0.00	0.00	0.00	0.
21 JAN 1500	62	0.00	0.00	0.00	22.	*	23 JAN 0430	137	0.00	0.00	0.00	0.
21 JAN 1530	63	0.00	0.00	0.00	19.	*	23 JAN 0500	138	0.00	0.00	0.00	0.
21 JAN 1600	64	0.00	0.00	0.00	16.	*	23 JAN 0530	139	0.00	0.00	0.00	0.
21 JAN 1630	65	0.00	0.00	0.00	13.	*	23 JAN 0600	140	0.00	0.00	0.00	0.
21 JAN 1700	66	0.00	0.00	0.00	11.	*	23 JAN 0630	141	0.00	0.00	0.00	0.
21 JAN 1730	67	0.00	0.00	0.00	9.	*	23 JAN 0700	142	0.00	0.00	0.00	0.
21 JAN 1800	68	0.00	0.00	0.00	8.	*	23 JAN 0730	143	0.00	0.00	0.00	0.
21 JAN 1830	69	0.00	0.00	0.00	6.	*	23 JAN 0800	144	0.00	0.00	0.00	0.
21 JAN 1900	70	0.00	0.00	0.00	5.	*	23 JAN 0830	145	0.00	0.00	0.00	0.
21 JAN 1930	71	0.00	0.00	0.00	4.	*	23 JAN 0900	146	0.00	0.00	0.00	0.
21 JAN 2000	72	0.00	0.00	0.00	3.	*	23 JAN 0930	147	0.00	0.00	0.00	0.
21 JAN 2030	73	0.00	0.00	0.00	3.	*	23 JAN 1000	148	0.00	0.00	0.00	0.
21 JAN 2100	74	0.00	0.00	0.00	2.	*	23 JAN 1030	149	0.00	0.00	0.00	0.
21 JAN 2130	75	0.00	0.00	0.00	2.	*	23 JAN 1100	150	0.00	0.00	0.00	0.
						*						

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TOTAL RAINFALL = 7.80, TOTAL LOSS = 1.96, TOTAL EXCESS = 2.04

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
324.	16.50	(CFS)	273.	116.	39.	38.
		(INCHES)	1.190	2.029	2.038	2.038
		(AC-FT)	135.	231.	231.	231.

CUMULATIVE AREA = 2.13 SQ MI

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HYDROGRAPH AT STATION C
PLAN 1, RATIO = 1.00

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DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	21 JAN 0330	39	250.	21 JAN 2230	77	1.	22 JAN 1730	115	0.
20 JAN 0900	2	0.	21 JAN 0400	40	224.	21 JAN 2300	78	1.	22 JAN 1800	116	0.
20 JAN 0930	3	0.	21 JAN 0430	41	203.	21 JAN 2330	79	1.	22 JAN 1830	117	0.
20 JAN 1000	4	0.	21 JAN 0500	42	184.	22 JAN 0000	80	1.	22 JAN 1900	118	0.
20 JAN 1030	5	0.	21 JAN 0530	43	167.	22 JAN 0030	81	1.	22 JAN 1930	119	0.
20 JAN 1100	6	0.	21 JAN 0600	44	153.	22 JAN 0100	82	0.	22 JAN 2000	120	0.
20 JAN 1130	7	0.	21 JAN 0630	45	141.	22 JAN 0130	83	0.	22 JAN 2030	121	0.
20 JAN 1200	8	0.	21 JAN 0700	46	129.	22 JAN 0200	84	0.	22 JAN 2100	122	0.
20 JAN 1230	9	0.	21 JAN 0730	47	119.	22 JAN 0230	85	0.	22 JAN 2130	123	0.
20 JAN 1300	10	0.	21 JAN 0800	48	110.	22 JAN 0300	86	0.	22 JAN 2200	124	0.
20 JAN 1330	11	0.	21 JAN 0830	49	102.	22 JAN 0330	87	0.	22 JAN 2230	125	0.
20 JAN 1400	12	0.	21 JAN 0900	50	94.	22 JAN 0400	88	0.	22 JAN 2300	126	0.
20 JAN 1430	13	0.	21 JAN 0930	51	88.	22 JAN 0430	89	0.	22 JAN 2330	127	0.
20 JAN 1500	14	0.	21 JAN 1000	52	81.	22 JAN 0500	90	0.	23 JAN 0000	128	0.
20 JAN 1530	15	0.	21 JAN 1030	53	75.	22 JAN 0530	91	0.	23 JAN 0030	129	0.
20 JAN 1600	16	0.	21 JAN 1100	54	69.	22 JAN 0600	92	0.	23 JAN 0100	130	0.
20 JAN 1630	17	0.	21 JAN 1130	55	62.	22 JAN 0630	93	0.	23 JAN 0130	131	0.
20 JAN 1700	18	0.	21 JAN 1200	56	55.	22 JAN 0700	94	0.	23 JAN 0200	132	0.
20 JAN 1730	19	0.	21 JAN 1230	57	49.	22 JAN 0730	95	0.	23 JAN 0230	133	0.
20 JAN 1800	20	0.	21 JAN 1300	58	42.	22 JAN 0800	96	0.	23 JAN 0300	134	0.
20 JAN 1830	21	0.	21 JAN 1330	59	37.	22 JAN 0830	97	0.	23 JAN 0330	135	0.
20 JAN 1900	22	1.	21 JAN 1400	60	31.	22 JAN 0900	98	0.	23 JAN 0400	136	0.
20 JAN 1930	23	2.	21 JAN 1430	61	26.	22 JAN 0930	99	0.	23 JAN 0430	137	0.
20 JAN 2000	24	5.	21 JAN 1500	62	22.	22 JAN 1000	100	0.	23 JAN 0500	138	0.
20 JAN 2030	25	14.	21 JAN 1530	63	19.	22 JAN 1030	101	0.	23 JAN 0530	139	0.
20 JAN 2100	26	35.	21 JAN 1600	64	16.	22 JAN 1100	102	0.	23 JAN 0600	140	0.
20 JAN 2130	27	64.	21 JAN 1630	65	13.	22 JAN 1130	103	0.	23 JAN 0630	141	0.
20 JAN 2200	28	102.	21 JAN 1700	66	11.	22 JAN 1200	104	0.	23 JAN 0700	142	0.
20 JAN 2230	29	152.	21 JAN 1730	67	9.	22 JAN 1230	105	0.	23 JAN 0730	143	0.
20 JAN 2300	30	206.	21 JAN 1800	68	8.	22 JAN 1300	106	0.	23 JAN 0800	144	0.
20 JAN 2330	31	254.	21 JAN 1830	69	6.	22 JAN 1330	107	0.	23 JAN 0830	145	0.
21 JAN 0000	32	290.	21 JAN 1900	70	5.	22 JAN 1400	108	0.	23 JAN 0900	146	0.
21 JAN 0030	33	313.	21 JAN 1930	71	4.	22 JAN 1430	109	0.	23 JAN 0930	147	0.
21 JAN 0100	34	324.	21 JAN 2000	72	3.	22 JAN 1500	110	0.	23 JAN 1000	148	0.
21 JAN 0130	35	324.	21 JAN 2030	73	3.	22 JAN 1530	111	0.	23 JAN 1030	149	0.
21 JAN 0200	36	315.	21 JAN 2100	74	2.	22 JAN 1600	112	0.	23 JAN 1100	150	0.
21 JAN 0230	37	300.	21 JAN 2130	75	2.	22 JAN 1630	113	0.			
21 JAN 0300	38	279.	21 JAN 2200	76	2.	22 JAN 1700	114	0.			

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
324.	16.50	(CFS)	273.	116.	39.	38.
		(INCHES)	1.190	2.029	2.038	2.038
		(AC-FT)	135.	231.	231.	231.

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          *            *
18 KK     *        F   *
          *            *
          **************

19 KO          OUTPUT CONTROL VARIABLES
                    IPRNT          0  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE
                    IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                     IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                    ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                    ISAV2        150  LAST ORDINATE PUNCHED OR SAVED
                   TIMINT      0.500  TIME INTERVAL IN HOURS


 4 IN          TIME DATA FOR INPUT TIME SERIES
                    JXMIN         30  TIME INTERVAL IN MINUTES
                   JXDATE    20JAN89  STARTING DATE
                   JXTIME        830  STARTING TIME

            SUBBASIN RUNOFF DATA

20 BA          SUBBASIN CHARACTERISTICS
                    TAREA       0.20  SUBBASIN AREA

               PRECIPITATION DATA

21 PB               STORM       3.90  BASIN TOTAL PRECIPITATION

22 PI            INCREMENTAL PRECIPITATION PATTERN
                  0.02      0.02      0.02      0.03      0.02      0.03      0.02      0.03      0.03      0.03
                  0.03      0.03      0.04      0.03      0.04      0.05      0.05      0.05      0.06      0.08
                  0.09      0.12      0.18      1.49      0.28      0.14      0.11      0.08      0.07      0.06
                  0.05      0.05      0.05      0.04      0.03      0.04      0.03      0.03      0.03      0.03
                  0.03      0.02      0.03      0.02      0.03      0.02      0.02      0.02

27 LS          SCS LOSS RATE
                    STRTL       0.47  INITIAL ABSTRACTION
                   CRVNBR      81.00  CURVE NUMBER
                    RTIMP       0.00  PERCENT IMPERVIOUS AREA

28 UD          SCS DIMENSIONLESS UNITGRAPH
                     TLAG       1.56  LAG

                                                  ***

                                              UNIT HYDROGRAPH
                                          18 END-OF-PERIOD ORDINATES
            9.        30.       50.       52.       42.       27.       17.       11.        7.        4.
            3.         2.        1.        1.        0.        0.        0.        0.
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HYDROGRAPH AT STATION F

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DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*
20	JAN	0830	1	0.00	0.00	0.00	0.	*
20	JAN	0900	2	0.02	0.02	0.00	0.	*
20	JAN	0930	3	0.02	0.02	0.00	0.	*
20	JAN	1000	4	0.02	0.02	0.00	0.	*
20	JAN	1030	5	0.03	0.03	0.00	0.	*
20	JAN	1100	6	0.02	0.02	0.00	0.	*
20	JAN	1130	7	0.03	0.03	0.00	0.	*
20	JAN	1200	8	0.02	0.02	0.00	0.	*
20	JAN	1230	9	0.03	0.03	0.00	0.	*
20	JAN	1300	10	0.03	0.03	0.00	0.	*
20	JAN	1330	11	0.03	0.03	0.00	0.	*
20	JAN	1400	12	0.03	0.03	0.00	0.	*
20	JAN	1430	13	0.03	0.03	0.00	0.	*
20	JAN	1500	14	0.04	0.04	0.00	0.	*
20	JAN	1530	15	0.03	0.03	0.00	0.	*
20	JAN	1600	16	0.04	0.04	0.00	0.	*
20	JAN	1630	17	0.05	0.05	0.00	0.	*
20	JAN	1700	18	0.05	0.05	0.00	0.	*
20	JAN	1730	19	0.05	0.05	0.00	0.	*
20	JAN	1800	20	0.06	0.05	0.01	0.	*
20	JAN	1830	21	0.08	0.07	0.01	1.	*
20	JAN	1900	22	0.09	0.07	0.02	1.	*
20	JAN	1930	23	0.12	0.09	0.03	2.	*
20	JAN	2000	24	0.18	0.12	0.06	3.	*
20	JAN	2030	25	1.49	0.62	0.87	13.	*
20	JAN	2100	26	0.28	0.07	0.21	34.	*
20	JAN	2130	27	0.14	0.03	0.11	56.	*
20	JAN	2200	28	0.11	0.02	0.09	64.	*
20	JAN	2230	29	0.08	0.02	0.06	58.	*
20	JAN	2300	30	0.07	0.01	0.06	46.	*
20	JAN	2330	31	0.06	0.01	0.05	35.	*
21	JAN	0000	32	0.05	0.01	0.04	28.	*
21	JAN	0030	33	0.05	0.01	0.04	22.	*
21	JAN	0100	34	0.05	0.01	0.04	18.	*
21	JAN	0130	35	0.04	0.01	0.03	15.	*
21	JAN	0200	36	0.03	0.01	0.02	13.	*
21	JAN	0230	37	0.04	0.01	0.03	11.	*
21	JAN	0300	38	0.03	0.01	0.02	10.	*
21	JAN	0330	39	0.03	0.01	0.02	9.	*
21	JAN	0400	40	0.03	0.01	0.02	8.	*
21	JAN	0430	41	0.03	0.01	0.02	8.	*
21	JAN	0500	42	0.03	0.01	0.02	7.	*
21	JAN	0530	43	0.02	0.00	0.02	7.	*
21	JAN	0600	44	0.03	0.01	0.02	6.	*
21	JAN	0630	45	0.02	0.00	0.02	6.	*
21	JAN	0700	46	0.03	0.01	0.02	6.	*
21	JAN	0730	47	0.02	0.00	0.02	6.	*
21	JAN	0800	48	0.02	0.00	0.02	5.	*
21	JAN	0830	49	0.02	0.00	0.02	5.	*
21	JAN	0900	50	0.00	0.00	0.00	5.	*
21	JAN	0930	51	0.00	0.00	0.00	4.	*
21	JAN	1000	52	0.00	0.00	0.00	3.	*
21	JAN	1030	53	0.00	0.00	0.00	2.	*
21	JAN	1100	54	0.00	0.00	0.00	1.	*
21	JAN	1130	55	0.00	0.00	0.00	1.	*
21	JAN	1200	56	0.00	0.00	0.00	1.	*
21	JAN	1230	57	0.00	0.00	0.00	0.	*
21	JAN	1300	58	0.00	0.00	0.00	0.	*
21	JAN	1330	59	0.00	0.00	0.00	0.	*
21	JAN	1400	60	0.00	0.00	0.00	0.	*
21	JAN	1430	61	0.00	0.00	0.00	0.	*
21	JAN	1500	62	0.00	0.00	0.00	0.	*
21	JAN	1530	63	0.00	0.00	0.00	0.	*

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
21	JAN	2200	76	0.00	0.00	0.00	0.
21	JAN	2230	77	0.00	0.00	0.00	0.
21	JAN	2300	78	0.00	0.00	0.00	0.
21	JAN	2330	79	0.00	0.00	0.00	0.
22	JAN	0000	80	0.00	0.00	0.00	0.
22	JAN	0030	81	0.00	0.00	0.00	0.
22	JAN	0100	82	0.00	0.00	0.00	0.
22	JAN	0130	83	0.00	0.00	0.00	0.
22	JAN	0200	84	0.00	0.00	0.00	0.
22	JAN	0230	85	0.00	0.00	0.00	0.
22	JAN	0300	86	0.00	0.00	0.00	0.
22	JAN	0330	87	0.00	0.00	0.00	0.
22	JAN	0400	88	0.00	0.00	0.00	0.
22	JAN	0430	89	0.00	0.00	0.00	0.
22	JAN	0500	90	0.00	0.00	0.00	0.
22	JAN	0530	91	0.00	0.00	0.00	0.
22	JAN	0600	92	0.00	0.00	0.00	0.
22	JAN	0630	93	0.00	0.00	0.00	0.
22	JAN	0700	94	0.00	0.00	0.00	0.
22	JAN	0730	95	0.00	0.00	0.00	0.
22	JAN	0800	96	0.00	0.00	0.00	0.
22	JAN	0830	97	0.00	0.00	0.00	0.
22	JAN	0900	98	0.00	0.00	0.00	0.
22	JAN	0930	99	0.00	0.00	0.00	0.
22	JAN	1000	100	0.00	0.00	0.00	0.
22	JAN	1030	101	0.00	0.00	0.00	0.
22	JAN	1100	102	0.00	0.00	0.00	0.
22	JAN	1130	103	0.00	0.00	0.00	0.
22	JAN	1200	104	0.00	0.00	0.00	0.
22	JAN	1230	105	0.00	0.00	0.00	0.
22	JAN	1300	106	0.00	0.00	0.00	0.
22	JAN	1330	107	0.00	0.00	0.00	0.
22	JAN	1400	108	0.00	0.00	0.00	0.
22	JAN	1430	109	0.00	0.00	0.00	0.
22	JAN	1500	110	0.00	0.00	0.00	0.
22	JAN	1530	111	0.00	0.00	0.00	0.
22	JAN	1600	112	0.00	0.00	0.00	0.
22	JAN	1630	113	0.00	0.00	0.00	0.
22	JAN	1700	114	0.00	0.00	0.00	0.
22	JAN	1730	115	0.00	0.00	0.00	0.
22	JAN	1800	116	0.00	0.00	0.00	0.
22	JAN	1830	117	0.00	0.00	0.00	0.
22	JAN	1900	118	0.00	0.00	0.00	0.
22	JAN	1930	119	0.00	0.00	0.00	0.
22	JAN	2000	120	0.00	0.00	0.00	0.
22	JAN	2030	121	0.00	0.00	0.00	0.
22	JAN	2100	122	0.00	0.00	0.00	0.
22	JAN	2130	123	0.00	0.00	0.00	0.
22	JAN	2200	124	0.00	0.00	0.00	0.
22	JAN	2230	125	0.00	0.00	0.00	0.
22	JAN	2300	126	0.00	0.00	0.00	0.
22	JAN	2330	127	0.00	0.00	0.00	0.
23	JAN	0000	128	0.00	0.00	0.00	0.
23	JAN	0030	129	0.00	0.00	0.00	0.
23	JAN	0100	130	0.00	0.00	0.00	0.
23	JAN	0130	131	0.00	0.00	0.00	0.
23	JAN	0200	132	0.00	0.00	0.00	0.
23	JAN	0230	133	0.00	0.00	0.00	0.
23	JAN	0300	134	0.00	0.00	0.00	0.
23	JAN	0330	135	0.00	0.00	0.00	0.
23	JAN	0400	136	0.00	0.00	0.00	0.
23	JAN	0430	137	0.00	0.00	0.00	0.
23	JAN	0500	138	0.00	0.00	0.00	0.

21 JAN 1630	65	0.00	0.00	0.00	0.	*	23 JAN 0600	140	0.00	0.00	0.00	0.
21 JAN 1700	66	0.00	0.00	0.00	0.	*	23 JAN 0630	141	0.00	0.00	0.00	0.
21 JAN 1730	67	0.00	0.00	0.00	0.	*	23 JAN 0700	142	0.00	0.00	0.00	0.
21 JAN 1800	68	0.00	0.00	0.00	0.	*	23 JAN 0730	143	0.00	0.00	0.00	0.
21 JAN 1830	69	0.00	0.00	0.00	0.	*	23 JAN 0800	144	0.00	0.00	0.00	0.
21 JAN 1900	70	0.00	0.00	0.00	0.	*	23 JAN 0830	145	0.00	0.00	0.00	0.
21 JAN 1930	71	0.00	0.00	0.00	0.	*	23 JAN 0900	146	0.00	0.00	0.00	0.
21 JAN 2000	72	0.00	0.00	0.00	0.	*	23 JAN 0930	147	0.00	0.00	0.00	0.
21 JAN 2030	73	0.00	0.00	0.00	0.	*	23 JAN 1000	148	0.00	0.00	0.00	0.
21 JAN 2100	74	0.00	0.00	0.00	0.	*	23 JAN 1030	149	0.00	0.00	0.00	0.
21 JAN 2130	75	0.00	0.00	0.00	0.	*	23 JAN 1100	150	0.00	0.00	0.00	0.
						*						

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TOTAL RAINFALL = 3.90, TOTAL LOSS = 1.86, TOTAL EXCESS = 2.04

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
64.	13.50	(CFS)	33.	11.	4.	3.
		(INCHES)	1.571	2.038	2.038	2.038
		(AC-FT)	17.	22.	22.	22.

CUMULATIVE AREA = 0.20 SQ MI

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HYDROGRAPH AT STATION F

PLAN 1, RATIO = 1.00

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DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	*	21 JAN 0330	39	9.	*	21 JAN 2230	77	0.	*	22 JAN 1730	115	0.
20 JAN 0900	2	0.	*	21 JAN 0400	40	8.	*	21 JAN 2300	78	0.	*	22 JAN 1800	116	0.
20 JAN 0930	3	0.	*	21 JAN 0430	41	8.	*	21 JAN 2330	79	0.	*	22 JAN 1830	117	0.
20 JAN 1000	4	0.	*	21 JAN 0500	42	7.	*	22 JAN 0000	80	0.	*	22 JAN 1900	118	0.
20 JAN 1030	5	0.	*	21 JAN 0530	43	7.	*	22 JAN 0030	81	0.	*	22 JAN 1930	119	0.
20 JAN 1100	6	0.	*	21 JAN 0600	44	6.	*	22 JAN 0100	82	0.	*	22 JAN 2000	120	0.
20 JAN 1130	7	0.	*	21 JAN 0630	45	6.	*	22 JAN 0130	83	0.	*	22 JAN 2030	121	0.
20 JAN 1200	8	0.	*	21 JAN 0700	46	6.	*	22 JAN 0200	84	0.	*	22 JAN 2100	122	0.
20 JAN 1230	9	0.	*	21 JAN 0730	47	6.	*	22 JAN 0230	85	0.	*	22 JAN 2130	123	0.
20 JAN 1300	10	0.	*	21 JAN 0800	48	5.	*	22 JAN 0300	86	0.	*	22 JAN 2200	124	0.
20 JAN 1330	11	0.	*	21 JAN 0830	49	5.	*	22 JAN 0330	87	0.	*	22 JAN 2230	125	0.
20 JAN 1400	12	0.	*	21 JAN 0900	50	5.	*	22 JAN 0400	88	0.	*	22 JAN 2300	126	0.
20 JAN 1430	13	0.	*	21 JAN 0930	51	4.	*	22 JAN 0430	89	0.	*	22 JAN 2330	127	0.
20 JAN 1500	14	0.	*	21 JAN 1000	52	3.	*	22 JAN 0500	90	0.	*	23 JAN 0000	128	0.
20 JAN 1530	15	0.	*	21 JAN 1030	53	2.	*	22 JAN 0530	91	0.	*	23 JAN 0030	129	0.
20 JAN 1600	16	0.	*	21 JAN 1100	54	1.	*	22 JAN 0600	92	0.	*	23 JAN 0100	130	0.
20 JAN 1630	17	0.	*	21 JAN 1130	55	1.	*	22 JAN 0630	93	0.	*	23 JAN 0130	131	0.
20 JAN 1700	18	0.	*	21 JAN 1200	56	1.	*	22 JAN 0700	94	0.	*	23 JAN 0200	132	0.
20 JAN 1730	19	0.	*	21 JAN 1230	57	0.	*	22 JAN 0730	95	0.	*	23 JAN 0230	133	0.
20 JAN 1800	20	0.	*	21 JAN 1300	58	0.	*	22 JAN 0800	96	0.	*	23 JAN 0300	134	0.
20 JAN 1830	21	1.	*	21 JAN 1330	59	0.	*	22 JAN 0830	97	0.	*	23 JAN 0330	135	0.
20 JAN 1900	22	1.	*	21 JAN 1400	60	0.	*	22 JAN 0900	98	0.	*	23 JAN 0400	136	0.
20 JAN 1930	23	2.	*	21 JAN 1430	61	0.	*	22 JAN 0930	99	0.	*	23 JAN 0430	137	0.
20 JAN 2000	24	3.	*	21 JAN 1500	62	0.	*	22 JAN 1000	100	0.	*	23 JAN 0500	138	0.
20 JAN 2030	25	13.	*	21 JAN 1530	63	0.	*	22 JAN 1030	101	0.	*	23 JAN 0530	139	0.
20 JAN 2100	26	34.	*	21 JAN 1600	64	0.	*	22 JAN 1100	102	0.	*	23 JAN 0600	140	0.
20 JAN 2130	27	56.	*	21 JAN 1630	65	0.	*	22 JAN 1130	103	0.	*	23 JAN 0630	141	0.
20 JAN 2200	28	64.	*	21 JAN 1700	66	0.	*	22 JAN 1200	104	0.	*	23 JAN 0700	142	0.
20 JAN 2230	29	58.	*	21 JAN 1730	67	0.	*	22 JAN 1230	105	0.	*	23 JAN 0730	143	0.
20 JAN 2300	30	46.	*	21 JAN 1800	68	0.	*	22 JAN 1300	106	0.	*	23 JAN 0800	144	0.
20 JAN 2330	31	35.	*	21 JAN 1830	69	0.	*	22 JAN 1330	107	0.	*	23 JAN 0830	145	0.

21 JAN 0030	33	22.	*	21 JAN 1930	71	0.	*	22 JAN 1430	109	0.	*	23 JAN 0930	147	0.
21 JAN 0100	34	18.	*	21 JAN 2000	72	0.	*	22 JAN 1500	110	0.	*	23 JAN 1000	148	0.
21 JAN 0130	35	15.	*	21 JAN 2030	73	0.	*	22 JAN 1530	111	0.	*	23 JAN 1030	149	0.
21 JAN 0200	36	13.	*	21 JAN 2100	74	0.	*	22 JAN 1600	112	0.	*	23 JAN 1100	150	0.
21 JAN 0230	37	11.	*	21 JAN 2130	75	0.	*	22 JAN 1630	113	0.	*			
21 JAN 0300	38	10.	*	21 JAN 2200	76	0.	*	22 JAN 1700	114	0.	*			
			*				*				*			

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
64.	13.50	(CFS)	33.	11.	4.	3.
		(INCHES)	1.571	2.038	2.038	2.038
		(AC-FT)	17.	22.	22.	22.

CUMULATIVE AREA = 0.20 SQ MI

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          **************
          *            *
29 KK     *     FOUT   *      WATERSHED ROUTED OVER VAN BUREN ST. @ RIVER STA. 4.7
          *            *
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30 KO OUTPUT CONTROL VARIABLES

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

HYDROGRAPH ROUTING DATA

31 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

32 SA	AREA	0.0	2.2	10.5	17.3
33 SQ	DISCHARGE	0.	0.	0.	180.
34 SE	ELEVATION	970.00	971.00	971.65	972.00

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COMPUTED STORAGE-ELEVATION DATA

STORAGE	0.00	0.72	4.48	9.29
ELEVATION	970.00	971.00	971.65	972.00

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HYDROGRAPH AT STATION FOUT
PLAN 1, RATIO = 1.00

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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
20 JAN 0830	1	0.	0.0	970.0	*	21 JAN 0930	51	4.	4.6	971.7	*	22 JAN 1030	101	0.	4.5	971.7

20 JAN 0930	3	0.	0.0	970.0 *	21 JAN 1030	53	3.	4.6	971.7 *	22 JAN 1130	103	0.	4.5	971.7
20 JAN 1000	4	0.	0.0	970.0 *	21 JAN 1100	54	2.	4.5	971.7 *	22 JAN 1200	104	0.	4.5	971.7
20 JAN 1030	5	0.	0.0	970.0 *	21 JAN 1130	55	1.	4.5	971.7 *	22 JAN 1230	105	0.	4.5	971.7
20 JAN 1100	6	0.	0.0	970.0 *	21 JAN 1200	56	1.	4.5	971.7 *	22 JAN 1300	106	0.	4.5	971.7
20 JAN 1130	7	0.	0.0	970.0 *	21 JAN 1230	57	0.	4.5	971.7 *	22 JAN 1330	107	0.	4.5	971.7
20 JAN 1200	8	0.	0.0	970.0 *	21 JAN 1300	58	0.	4.5	971.7 *	22 JAN 1400	108	0.	4.5	971.7
20 JAN 1230	9	0.	0.0	970.0 *	21 JAN 1330	59	0.	4.5	971.7 *	22 JAN 1430	109	0.	4.5	971.7
20 JAN 1300	10	0.	0.0	970.0 *	21 JAN 1400	60	0.	4.5	971.7 *	22 JAN 1500	110	0.	4.5	971.7
20 JAN 1330	11	0.	0.0	970.0 *	21 JAN 1430	61	0.	4.5	971.7 *	22 JAN 1530	111	0.	4.5	971.7
20 JAN 1400	12	0.	0.0	970.0 *	21 JAN 1500	62	0.	4.5	971.7 *	22 JAN 1600	112	0.	4.5	971.7
20 JAN 1430	13	0.	0.0	970.0 *	21 JAN 1530	63	0.	4.5	971.7 *	22 JAN 1630	113	0.	4.5	971.7
20 JAN 1500	14	0.	0.0	970.0 *	21 JAN 1600	64	0.	4.5	971.7 *	22 JAN 1700	114	0.	4.5	971.7
20 JAN 1530	15	0.	0.0	970.0 *	21 JAN 1630	65	0.	4.5	971.7 *	22 JAN 1730	115	0.	4.5	971.7
20 JAN 1600	16	0.	0.0	970.0 *	21 JAN 1700	66	0.	4.5	971.7 *	22 JAN 1800	116	0.	4.5	971.7
20 JAN 1630	17	0.	0.0	970.0 *	21 JAN 1730	67	0.	4.5	971.7 *	22 JAN 1830	117	0.	4.5	971.7
20 JAN 1700	18	0.	0.0	970.0 *	21 JAN 1800	68	0.	4.5	971.7 *	22 JAN 1900	118	0.	4.5	971.7
20 JAN 1730	19	0.	0.0	970.0 *	21 JAN 1830	69	0.	4.5	971.7 *	22 JAN 1930	119	0.	4.5	971.7
20 JAN 1800	20	0.	0.0	970.0 *	21 JAN 1900	70	0.	4.5	971.7 *	22 JAN 2000	120	0.	4.5	971.7
20 JAN 1830	21	0.	0.0	970.0 *	21 JAN 1930	71	0.	4.5	971.7 *	22 JAN 2030	121	0.	4.5	971.7
20 JAN 1900	22	0.	0.1	970.1 *	21 JAN 2000	72	0.	4.5	971.7 *	22 JAN 2100	122	0.	4.5	971.7
20 JAN 1930	23	0.	0.1	970.2 *	21 JAN 2030	73	0.	4.5	971.7 *	22 JAN 2130	123	0.	4.5	971.7
20 JAN 2000	24	0.	0.2	970.3 *	21 JAN 2100	74	0.	4.5	971.7 *	22 JAN 2200	124	0.	4.5	971.7
20 JAN 2030	25	0.	0.6	970.8 *	21 JAN 2130	75	0.	4.5	971.7 *	22 JAN 2230	125	0.	4.5	971.7
20 JAN 2100	26	0.	1.5	971.1 *	21 JAN 2200	76	0.	4.5	971.7 *	22 JAN 2300	126	0.	4.5	971.7
20 JAN 2130	27	0.	3.4	971.5 *	21 JAN 2230	77	0.	4.5	971.7 *	22 JAN 2330	127	0.	4.5	971.7
20 JAN 2200	28	29.	5.3	971.7 *	21 JAN 2300	78	0.	4.5	971.7 *	23 JAN 0000	128	0.	4.5	971.7
20 JAN 2230	29	57.	6.0	971.8 *	21 JAN 2330	79	0.	4.5	971.7 *	23 JAN 0030	129	0.	4.5	971.7
20 JAN 2300	30	53.	5.9	971.8 *	22 JAN 0000	80	0.	4.5	971.7 *	23 JAN 0100	130	0.	4.5	971.7
20 JAN 2330	31	42.	5.6	971.7 *	22 JAN 0030	81	0.	4.5	971.7 *	23 JAN 0130	131	0.	4.5	971.7
21 JAN 0000	32	33.	5.4	971.7 *	22 JAN 0100	82	0.	4.5	971.7 *	23 JAN 0200	132	0.	4.5	971.7
21 JAN 0030	33	26.	5.2	971.7 *	22 JAN 0130	83	0.	4.5	971.7 *	23 JAN 0230	133	0.	4.5	971.7
21 JAN 0100	34	21.	5.0	971.7 *	22 JAN 0200	84	0.	4.5	971.7 *	23 JAN 0300	134	0.	4.5	971.7
21 JAN 0130	35	17.	4.9	971.7 *	22 JAN 0230	85	0.	4.5	971.7 *	23 JAN 0330	135	0.	4.5	971.7
21 JAN 0200	36	15.	4.9	971.7 *	22 JAN 0300	86	0.	4.5	971.7 *	23 JAN 0400	136	0.	4.5	971.7
21 JAN 0230	37	13.	4.8	971.7 *	22 JAN 0330	87	0.	4.5	971.7 *	23 JAN 0430	137	0.	4.5	971.7
21 JAN 0300	38	11.	4.8	971.7 *	22 JAN 0400	88	0.	4.5	971.7 *	23 JAN 0500	138	0.	4.5	971.7
21 JAN 0330	39	10.	4.7	971.7 *	22 JAN 0430	89	0.	4.5	971.7 *	23 JAN 0530	139	0.	4.5	971.7
21 JAN 0400	40	9.	4.7	971.7 *	22 JAN 0500	90	0.	4.5	971.7 *	23 JAN 0600	140	0.	4.5	971.7
21 JAN 0430	41	8.	4.7	971.7 *	22 JAN 0530	91	0.	4.5	971.7 *	23 JAN 0630	141	0.	4.5	971.7
21 JAN 0500	42	7.	4.7	971.7 *	22 JAN 0600	92	0.	4.5	971.7 *	23 JAN 0700	142	0.	4.5	971.7
21 JAN 0530	43	7.	4.7	971.7 *	22 JAN 0630	93	0.	4.5	971.7 *	23 JAN 0730	143	0.	4.5	971.7
21 JAN 0600	44	7.	4.7	971.7 *	22 JAN 0700	94	0.	4.5	971.7 *	23 JAN 0800	144	0.	4.5	971.7
21 JAN 0630	45	6.	4.7	971.7 *	22 JAN 0730	95	0.	4.5	971.7 *	23 JAN 0830	145	0.	4.5	971.7
21 JAN 0700	46	6.	4.6	971.7 *	22 JAN 0800	96	0.	4.5	971.7 *	23 JAN 0900	146	0.	4.5	971.7
21 JAN 0730	47	6.	4.6	971.7 *	22 JAN 0830	97	0.	4.5	971.7 *	23 JAN 0930	147	0.	4.5	971.7
21 JAN 0800	48	6.	4.6	971.7 *	22 JAN 0900	98	0.	4.5	971.7 *	23 JAN 1000	148	0.	4.5	971.7
21 JAN 0830	49	5.	4.6	971.7 *	22 JAN 0930	99	0.	4.5	971.7 *	23 JAN 1030	149	0.	4.5	971.7
21 JAN 0900	50	5.	4.6	971.7 *	22 JAN 1000	100	0.	4.5	971.7 *	23 JAN 1100	150	0.	4.5	971.7
				*					*					

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
57.	14.00	(CFS)	27.	9.	3.	3.
		(INCHES)	1.254	1.613	1.613	1.613
		(AC-FT)	13.	17.	17.	17.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	74.50-HR
6.	14.00	5.	5.	4.	4.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	74.50-HR
971.76	14.00	971.70	971.67	971.44	971.39

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          **************
          *            *
35 KK     *       FR   *      SUB BASIN 'F' ROUTED TO PIPE OUTLET @ CONC. PT. 'C'
          *            *
          **************

36 KO          OUTPUT CONTROL VARIABLES
                    IPRNT          0  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE
                    IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                     IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                    ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                    ISAV2        150  LAST ORDINATE PUNCHED OR SAVED
                   TIMINT      0.500  TIME INTERVAL IN HOURS


            HYDROGRAPH ROUTING DATA

37 RK          KINEMATIC WAVE STREAM ROUTING
                        L      5150.  CHANNEL LENGTH
                        S     0.0031  SLOPE
                        N      0.035  CHANNEL ROUGHNESS COEFFICIENT
                       CA       0.00  CONTRIBUTING AREA
                    SHAPE       TRAP  CHANNEL SHAPE
                       WD     400.00  BOTTOM WIDTH OR DIAMETER
                        Z       2.00  SIDE SLOPE

                                                        ***


       KINEMATIC STREAM ROUTING USED FOR THIS REACH


        COMPUTED KINEMATIC PARAMETERS
            ALPHA        M      DT (MIN)   DX (FT)
           0.0468    1.653       30.00     2575.00
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HYDROGRAPH AT STATION FR
PLAN 1, RATIO = 1.00

****

DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	*	21 JAN 0330	39	14.	*	21 JAN 2230	77	0.	*	22 JAN 1730	115	0.
20 JAN 0900	2	0.	*	21 JAN 0400	40	13.	*	21 JAN 2300	78	0.	*	22 JAN 1800	116	0.
20 JAN 0930	3	0.	*	21 JAN 0430	41	11.	*	21 JAN 2330	79	0.	*	22 JAN 1830	117	0.
20 JAN 1000	4	0.	*	21 JAN 0500	42	10.	*	22 JAN 0000	80	0.	*	22 JAN 1900	118	0.
20 JAN 1030	5	0.	*	21 JAN 0530	43	9.	*	22 JAN 0030	81	0.	*	22 JAN 1930	119	0.
20 JAN 1100	6	0.	*	21 JAN 0600	44	9.	*	22 JAN 0100	82	0.	*	22 JAN 2000	120	0.
20 JAN 1130	7	0.	*	21 JAN 0630	45	8.	*	22 JAN 0130	83	0.	*	22 JAN 2030	121	0.
20 JAN 1200	8	0.	*	21 JAN 0700	46	8.	*	22 JAN 0200	84	0.	*	22 JAN 2100	122	0.
20 JAN 1230	9	0.	*	21 JAN 0730	47	7.	*	22 JAN 0230	85	0.	*	22 JAN 2130	123	0.
20 JAN 1700	10	0.	*	21 JAN 0800	48	7.	*	22 JAN 0300	86	0.	*	22 JAN 2200	124	0.

20 JAN 1400	12	0.	*	21 JAN 0900	50	6.	*	22 JAN 0400	88	0.	*	22 JAN 2300	126	0.
20 JAN 1430	13	0.	*	21 JAN 0930	51	6.	*	22 JAN 0430	89	0.	*	22 JAN 2330	127	0.
20 JAN 1500	14	0.	*	21 JAN 1000	52	6.	*	22 JAN 0500	90	0.	*	23 JAN 0000	128	0.
20 JAN 1530	15	0.	*	21 JAN 1030	53	5.	*	22 JAN 0530	91	0.	*	23 JAN 0030	129	0.
20 JAN 1600	16	0.	*	21 JAN 1100	54	5.	*	22 JAN 0600	92	0.	*	23 JAN 0100	130	0.
20 JAN 1630	17	0.	*	21 JAN 1130	55	4.	*	22 JAN 0630	93	0.	*	23 JAN 0130	131	0.
20 JAN 1700	18	0.	*	21 JAN 1200	56	4.	*	22 JAN 0700	94	0.	*	23 JAN 0200	132	0.
20 JAN 1730	19	0.	*	21 JAN 1230	57	3.	*	22 JAN 0730	95	0.	*	23 JAN 0230	133	0.
20 JAN 1800	20	0.	*	21 JAN 1300	58	3.	*	22 JAN 0800	96	0.	*	23 JAN 0300	134	0.
20 JAN 1830	21	0.	*	21 JAN 1330	59	3.	*	22 JAN 0830	97	0.	*	23 JAN 0330	135	0.
20 JAN 1900	22	0.	*	21 JAN 1400	60	2.	*	22 JAN 0900	98	0.	*	23 JAN 0400	136	0.
20 JAN 1930	23	0.	*	21 JAN 1430	61	2.	*	22 JAN 0930	99	0.	*	23 JAN 0430	137	0.
20 JAN 2000	24	0.	*	21 JAN 1500	62	2.	*	22 JAN 1000	100	0.	*	23 JAN 0500	138	0.
20 JAN 2030	25	0.	*	21 JAN 1530	63	1.	*	22 JAN 1030	101	0.	*	23 JAN 0530	139	0.
20 JAN 2100	26	0.	*	21 JAN 1600	64	1.	*	22 JAN 1100	102	0.	*	23 JAN 0600	140	0.
20 JAN 2130	27	0.	*	21 JAN 1630	65	1.	*	22 JAN 1130	103	0.	*	23 JAN 0630	141	0.
20 JAN 2200	28	0.	*	21 JAN 1700	66	1.	*	22 JAN 1200	104	0.	*	23 JAN 0700	142	0.
20 JAN 2230	29	1.	*	21 JAN 1730	67	1.	*	22 JAN 1230	105	0.	*	23 JAN 0730	143	0.
20 JAN 2300	30	14.	*	21 JAN 1800	68	1.	*	22 JAN 1300	106	0.	*	23 JAN 0800	144	0.
20 JAN 2330	31	37.	*	21 JAN 1830	69	1.	*	22 JAN 1330	107	0.	*	23 JAN 0830	145	0.
21 JAN 0000	32	42.	*	21 JAN 1900	70	1.	*	22 JAN 1400	108	0.	*	23 JAN 0900	146	0.
21 JAN 0030	33	37.	*	21 JAN 1930	71	1.	*	22 JAN 1430	109	0.	*	23 JAN 0930	147	0.
21 JAN 0100	34	31.	*	21 JAN 2000	72	1.	*	22 JAN 1500	110	0.	*	23 JAN 1000	148	0.
21 JAN 0130	35	26.	*	21 JAN 2030	73	0.	*	22 JAN 1530	111	0.	*	23 JAN 1030	149	0.
21 JAN 0200	36	22.	*	21 JAN 2100	74	0.	*	22 JAN 1600	112	0.	*	23 JAN 1100	150	0.
21 JAN 0230	37	19.	*	21 JAN 2130	75	0.	*	22 JAN 1630	113	0.	*			
21 JAN 0300	38	16.	*	21 JAN 2200	76	0.	*	22 JAN 1700	114	0.	*			
			*				*				*			

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
42.	15.50	(CFS)	23.	9.	3.	3.
		(INCHES)	1.096	1.597	1.621	1.621
		(AC-FT)	12.	17.	17.	17.

CUMULATIVE AREA = 0.20 SQ MI

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          *            *
38 KK     *       FC   *      HYDROGRAPHS COMBINED
          *            *
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39 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	100	LAST ORDINATE PUNCHED OR SAVED
TIMINT	0.500	TIME INTERVAL IN HOURS

40 BI READ STATION FR HYDROGRAPH FROM UNIT 21

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DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	21 JAN 0330	39	14.	21 JAN 2230	77	0.	22 JAN 1730	115	0.
20 JAN 0900	2	0.	21 JAN 0400	40	13.	21 JAN 2300	78	0.	22 JAN 1800	116	0.
20 JAN 0930	3	0.	21 JAN 0430	41	11.	21 JAN 2330	79	0.	22 JAN 1830	117	0.
20 JAN 1000	4	0.	21 JAN 0500	42	10.	22 JAN 0000	80	0.	22 JAN 1900	118	0.
20 JAN 1030	5	0.	21 JAN 0530	43	9.	22 JAN 0030	81	0.	22 JAN 1930	119	0.
20 JAN 1100	6	0.	21 JAN 0600	44	9.	22 JAN 0100	82	0.	22 JAN 2000	120	0.
20 JAN 1130	7	0.	21 JAN 0630	45	8.	22 JAN 0130	83	0.	22 JAN 2030	121	0.
20 JAN 1200	8	0.	21 JAN 0700	46	8.	22 JAN 0200	84	0.	22 JAN 2100	122	0.
20 JAN 1230	9	0.	21 JAN 0730	47	7.	22 JAN 0230	85	0.	22 JAN 2130	123	0.
20 JAN 1300	10	0.	21 JAN 0800	48	7.	22 JAN 0300	86	0.	22 JAN 2200	124	0.
20 JAN 1330	11	0.	21 JAN 0830	49	6.	22 JAN 0330	87	0.	22 JAN 2230	125	0.
20 JAN 1400	12	0.	21 JAN 0900	50	6.	22 JAN 0400	88	0.	22 JAN 2300	126	0.
20 JAN 1430	13	0.	21 JAN 0930	51	6.	22 JAN 0430	89	0.	22 JAN 2330	127	0.
20 JAN 1500	14	0.	21 JAN 1000	52	6.	22 JAN 0500	90	0.	23 JAN 0000	128	0.
20 JAN 1530	15	0.	21 JAN 1030	53	5.	22 JAN 0530	91	0.	23 JAN 0030	129	0.
20 JAN 1600	16	0.	21 JAN 1100	54	5.	22 JAN 0600	92	0.	23 JAN 0100	130	0.
20 JAN 1630	17	0.	21 JAN 1130	55	4.	22 JAN 0630	93	0.	23 JAN 0130	131	0.
20 JAN 1700	18	0.	21 JAN 1200	56	4.	22 JAN 0700	94	0.	23 JAN 0200	132	0.
20 JAN 1730	19	0.	21 JAN 1230	57	3.	22 JAN 0730	95	0.	23 JAN 0230	133	0.
20 JAN 1800	20	0.	21 JAN 1300	58	3.	22 JAN 0800	96	0.	23 JAN 0300	134	0.
20 JAN 1830	21	0.	21 JAN 1330	59	3.	22 JAN 0830	97	0.	23 JAN 0330	135	0.
20 JAN 1900	22	0.	21 JAN 1400	60	2.	22 JAN 0900	98	0.	23 JAN 0400	136	0.
20 JAN 1930	23	0.	21 JAN 1430	61	2.	22 JAN 0930	99	0.	23 JAN 0430	137	0.
20 JAN 2000	24	0.	21 JAN 1500	62	2.	22 JAN 1000	100	0.	23 JAN 0500	138	0.
20 JAN 2030	25	0.	21 JAN 1530	63	1.	22 JAN 1030	101	0.	23 JAN 0530	139	0.
20 JAN 2100	26	0.	21 JAN 1600	64	1.	22 JAN 1100	102	0.	23 JAN 0600	140	0.
20 JAN 2130	27	0.	21 JAN 1630	65	1.	22 JAN 1130	103	0.	23 JAN 0630	141	0.
20 JAN 2200	28	0.	21 JAN 1700	66	1.	22 JAN 1200	104	0.	23 JAN 0700	142	0.
20 JAN 2230	29	1.	21 JAN 1730	67	1.	22 JAN 1230	105	0.	23 JAN 0730	143	0.
20 JAN 2300	30	14.	21 JAN 1800	68	1.	22 JAN 1300	106	0.	23 JAN 0800	144	0.
20 JAN 2330	31	37.	21 JAN 1830	69	1.	22 JAN 1330	107	0.	23 JAN 0830	145	0.
21 JAN 0000	32	42.	21 JAN 1900	70	1.	22 JAN 1400	108	0.	23 JAN 0900	146	0.
21 JAN 0030	33	37.	21 JAN 1930	71	1.	22 JAN 1430	109	0.	23 JAN 0930	147	0.
21 JAN 0100	34	31.	21 JAN 2000	72	1.	22 JAN 1500	110	0.	23 JAN 1000	148	0.
21 JAN 0130	35	26.	21 JAN 2030	73	0.	22 JAN 1530	111	0.	23 JAN 1030	149	0.
21 JAN 0200	36	22.	21 JAN 2100	74	0.	22 JAN 1600	112	0.	23 JAN 1100	150	0.
21 JAN 0230	37	19.	21 JAN 2130	75	0.	22 JAN 1630	113	0.			
21 JAN 0300	38	16.	21 JAN 2200	76	0.	22 JAN 1700	114	0.			

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
42.	15.50	(CFS)	23.	9.	3.	3.
		(INCHES)	1.096	1.597	1.621	1.621
		(AC-FT)	12.	17.	17.	17.

CUMULATIVE AREA = 0.20 SQ MI

41 HC HYDROGRAPH COMBINATION

ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION FC

SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
20	JAN	0830	1	0.	21	JAN	0330	39	265.	21	JAN	2230	77	2.	22	JAN	1730	115	0.
20	JAN	0900	2	0.	21	JAN	0400	40	237.	21	JAN	2300	78	1.	22	JAN	1800	116	0.
20	JAN	0930	3	0.	21	JAN	0430	41	214.	21	JAN	2330	79	1.	22	JAN	1830	117	0.
20	JAN	1000	4	0.	21	JAN	0500	42	194.	22	JAN	0000	80	1.	22	JAN	1900	118	0.
20	JAN	1030	5	0.	21	JAN	0530	43	177.	22	JAN	0030	81	1.	22	JAN	1930	119	0.
20	JAN	1100	6	0.	21	JAN	0600	44	162.	22	JAN	0100	82	1.	22	JAN	2000	120	0.
20	JAN	1130	7	0.	21	JAN	0630	45	149.	22	JAN	0130	83	1.	22	JAN	2030	121	0.
20	JAN	1200	8	0.	21	JAN	0700	46	136.	22	JAN	0200	84	1.	22	JAN	2100	122	0.
20	JAN	1230	9	0.	21	JAN	0730	47	126.	22	JAN	0230	85	0.	22	JAN	2130	123	0.
20	JAN	1300	10	0.	21	JAN	0800	48	116.	22	JAN	0300	86	0.	22	JAN	2200	124	0.
20	JAN	1330	11	0.	21	JAN	0830	49	108.	22	JAN	0330	87	0.	22	JAN	2230	125	0.
20	JAN	1400	12	0.	21	JAN	0900	50	101.	22	JAN	0400	88	0.	22	JAN	2300	126	0.
20	JAN	1430	13	0.	21	JAN	0930	51	94.	22	JAN	0430	89	0.	22	JAN	2330	127	0.
20	JAN	1500	14	0.	21	JAN	1000	52	87.	22	JAN	0500	90	0.	23	JAN	0000	128	0.
20	JAN	1530	15	0.	21	JAN	1030	53	80.	22	JAN	0530	91	0.	23	JAN	0030	129	0.
20	JAN	1600	16	0.	21	JAN	1100	54	73.	22	JAN	0600	92	0.	23	JAN	0100	130	0.
20	JAN	1630	17	0.	21	JAN	1130	55	66.	22	JAN	0630	93	0.	23	JAN	0130	131	0.
20	JAN	1700	18	0.	21	JAN	1200	56	59.	22	JAN	0700	94	0.	23	JAN	0200	132	0.
20	JAN	1730	19	0.	21	JAN	1230	57	52.	22	JAN	0730	95	0.	23	JAN	0230	133	0.
20	JAN	1800	20	0.	21	JAN	1300	58	45.	22	JAN	0800	96	0.	23	JAN	0300	134	0.
20	JAN	1830	21	0.	21	JAN	1330	59	39.	22	JAN	0830	97	0.	23	JAN	0330	135	0.
20	JAN	1900	22	1.	21	JAN	1400	60	33.	22	JAN	0900	98	0.	23	JAN	0400	136	0.
20	JAN	1930	23	2.	21	JAN	1430	61	28.	22	JAN	0930	99	0.	23	JAN	0430	137	0.
20	JAN	2000	24	5.	21	JAN	1500	62	24.	22	JAN	1000	100	0.	23	JAN	0500	138	0.
20	JAN	2030	25	14.	21	JAN	1530	63	20.	22	JAN	1030	101	0.	23	JAN	0530	139	0.
20	JAN	2100	26	35.	21	JAN	1600	64	17.	22	JAN	1100	102	0.	23	JAN	0600	140	0.
20	JAN	2130	27	64.	21	JAN	1630	65	14.	22	JAN	1130	103	0.	23	JAN	0630	141	0.
20	JAN	2200	28	102.	21	JAN	1700	66	12.	22	JAN	1200	104	0.	23	JAN	0700	142	0.
20	JAN	2230	29	153.	21	JAN	1730	67	10.	22	JAN	1230	105	0.	23	JAN	0730	143	0.
20	JAN	2300	30	221.	21	JAN	1800	68	8.	22	JAN	1300	106	0.	23	JAN	0800	144	0.
20	JAN	2330	31	291.	21	JAN	1830	69	7.	22	JAN	1330	107	0.	23	JAN	0830	145	0.
21	JAN	0000	32	332.	21	JAN	1900	70	6.	22	JAN	1400	108	0.	23	JAN	0900	146	0.
21	JAN	0030	33	349.	21	JAN	1930	71	5.	22	JAN	1430	109	0.	23	JAN	0930	147	0.
21	JAN	0100	34	355.	21	JAN	2000	72	4.	22	JAN	1500	110	0.	23	JAN	1000	148	0.
21	JAN	0130	35	350.	21	JAN	2030	73	3.	22	JAN	1530	111	0.	23	JAN	1030	149	0.
21	JAN	0200	36	337.	21	JAN	2100	74	3.	22	JAN	1600	112	0.	23	JAN	1100	150	0.
21	JAN	0230	37	319.	21	JAN	2130	75	2.	22	JAN	1630	113	0.					
21	JAN	0300	38	295.	21	JAN	2200	76	2.	22	JAN	1700	114	0.					

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
355.	16.50	(CFS)	296.	125.	42.	40.
		(INCHES)	1.182	1.992	2.002	2.002
		(AC-FT)	147.	247.	249.	249.

CUMULATIVE AREA = 2.33 SQ MI

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          *            *
42 KK     *     COUT   *      WATERSHED ROUTED THROUGH 3-36" RCP'S AT CONC. PT. "C" RIVER STA. 3.78
          *            *
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IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

44 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

45 SA	AREA	0.0	0.9	4.2	11.8	36.9	70.1	108.9	131.4	159.5
46 SQ	DISCHARGE	0.	0.	0.	0.	0.	0.	0.	126.	192.
47 SE	ELEVATION	954.30	956.00	958.00	960.00	962.00	963.00	964.20	965.00	966.00

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COMPUTED STORAGE-ELEVATION DATA

STORAGE	0.00	0.50	5.13	20.44	66.85	119.48	226.04	322.02	467.24
ELEVATION	954.30	956.00	958.00	960.00	962.00	963.00	964.20	965.00	966.00

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HYDROGRAPH AT STATION COUT

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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
20	JAN	0830	1	0.	0.0	954.3	*	21	JAN	0930	51	0.	217.2	964.1	*	22	JAN	1030	101	3.	228.6	964.2
20	JAN	0900	2	0.	0.0	954.3	*	21	JAN	1000	52	0.	220.9	964.1	*	22	JAN	1100	102	3.	228.4	964.2
20	JAN	0930	3	0.	0.0	954.3	*	21	JAN	1030	53	0.	224.4	964.2	*	22	JAN	1130	103	3.	228.3	964.2
20	JAN	1000	4	0.	0.0	954.3	*	21	JAN	1100	54	2.	227.5	964.2	*	22	JAN	1200	104	3.	228.2	964.2
20	JAN	1030	5	0.	0.0	954.3	*	21	JAN	1130	55	6.	230.3	964.2	*	22	JAN	1230	105	3.	228.1	964.2
20	JAN	1100	6	0.	0.0	954.3	*	21	JAN	1200	56	9.	232.6	964.3	*	22	JAN	1300	106	3.	228.0	964.2
20	JAN	1130	7	0.	0.0	954.3	*	21	JAN	1230	57	11.	234.5	964.3	*	22	JAN	1330	107	2.	227.9	964.2
20	JAN	1200	8	0.	0.0	954.3	*	21	JAN	1300	58	13.	236.0	964.3	*	22	JAN	1400	108	2.	227.8	964.2
20	JAN	1230	9	0.	0.0	954.3	*	21	JAN	1330	59	15.	237.1	964.3	*	22	JAN	1430	109	2.	227.7	964.2
20	JAN	1300	10	0.	0.0	954.3	*	21	JAN	1400	60	16.	238.0	964.3	*	22	JAN	1500	110	2.	227.6	964.2
20	JAN	1330	11	0.	0.0	954.3	*	21	JAN	1430	61	17.	238.6	964.3	*	22	JAN	1530	111	2.	227.5	964.2
20	JAN	1400	12	0.	0.0	954.3	*	21	JAN	1500	62	17.	239.0	964.3	*	22	JAN	1600	112	2.	227.5	964.2
20	JAN	1430	13	0.	0.0	954.3	*	21	JAN	1530	63	17.	239.2	964.3	*	22	JAN	1630	113	2.	227.4	964.2
20	JAN	1500	14	0.	0.0	954.3	*	21	JAN	1600	64	17.	239.2	964.3	*	22	JAN	1700	114	2.	227.3	964.2
20	JAN	1530	15	0.	0.0	954.3	*	21	JAN	1630	65	17.	239.2	964.3	*	22	JAN	1730	115	2.	227.3	964.2
20	JAN	1600	16	0.	0.0	954.3	*	21	JAN	1700	66	17.	239.0	964.3	*	22	JAN	1800	116	2.	227.2	964.2
20	JAN	1630	17	0.	0.0	954.3	*	21	JAN	1730	67	17.	238.8	964.3	*	22	JAN	1830	117	1.	227.1	964.2
20	JAN	1700	18	0.	0.0	954.3	*	21	JAN	1800	68	16.	238.5	964.3	*	22	JAN	1900	118	1.	227.1	964.2
20	JAN	1730	19	0.	0.0	954.3	*	21	JAN	1830	69	16.	238.1	964.3	*	22	JAN	1930	119	1.	227.0	964.2
20	JAN	1800	20	0.	0.0	954.3	*	21	JAN	1900	70	15.	237.7	964.3	*	22	JAN	2000	120	1.	227.0	964.2
20	JAN	1830	21	0.	0.0	954.4	*	21	JAN	1930	71	15.	237.3	964.3	*	22	JAN	2030	121	1.	226.9	964.2
20	JAN	1900	22	0.	0.1	954.5	*	21	JAN	2000	72	14.	236.9	964.3	*	22	JAN	2100	122	1.	226.9	964.2
20	JAN	1930	23	0.	0.1	954.7	*	21	JAN	2030	73	14.	236.5	964.3	*	22	JAN	2130	123	1.	226.8	964.2
20	JAN	2000	24	0.	0.3	955.2	*	21	JAN	2100	74	13.	236.0	964.3	*	22	JAN	2200	124	1.	226.8	964.2
20	JAN	2030	25	0.	0.7	956.1	*	21	JAN	2130	75	13.	235.6	964.3	*	22	JAN	2230	125	1.	226.8	964.2
20	JAN	2100	26	0.	1.7	956.5	*	21	JAN	2200	76	12.	235.2	964.3	*	22	JAN	2300	126	1.	226.7	964.2
20	JAN	2130	27	0.	3.7	957.4	*	21	JAN	2230	77	11.	234.8	964.3	*	22	JAN	2330	127	1.	226.7	964.2
20	JAN	2200	28	0.	7.1	958.3	*	21	JAN	2300	78	11.	234.4	964.3	*	23	JAN	0000	128	1.	226.7	964.2
20	JAN	2230	29	0.	12.4	959.0	*	21	JAN	2330	79	10.	234.0	964.3	*	23	JAN	0030	129	1.	226.6	964.2
20	JAN	2300	30	0.	20.1	960.0	*	22	JAN	0000	80	10.	233.6	964.3	*	23	JAN	0100	130	1.	226.6	964.2
20	JAN	2330	31	0.	30.7	960.4	*	22	JAN	0030	81	9.	233.2	964.3	*	23	JAN	0130	131	1.	226.6	964.2
21	JAN	0000	32	0.	43.6	961.0	*	22	JAN	0100	82	9.	232.9	964.3	*	23	JAN	0200	132	1.	226.5	964.2
21	JAN	0030	33	0.	57.6	961.6	*	22	JAN	0130	83	8.	232.6	964.3	*	23	JAN	0230	133	1.	226.5	964.2

21 JAN 0130	35	0.	86.8	962.4	*	22 JAN 0230	85	8.	231.9	964.2	*	23 JAN 0330	135	1.	226.5	964.2
21 JAN 0200	36	0.	100.9	962.6	*	22 JAN 0300	86	7.	231.6	964.2	*	23 JAN 0400	136	1.	226.4	964.2
21 JAN 0230	37	0.	114.5	962.9	*	22 JAN 0330	87	7.	231.3	964.2	*	23 JAN 0430	137	1.	226.4	964.2
21 JAN 0300	38	0.	127.2	963.1	*	22 JAN 0400	88	7.	231.1	964.2	*	23 JAN 0500	138	0.	226.4	964.2
21 JAN 0330	39	0.	138.7	963.2	*	22 JAN 0430	89	6.	230.8	964.2	*	23 JAN 0530	139	0.	226.4	964.2
21 JAN 0400	40	0.	149.1	963.3	*	22 JAN 0500	90	6.	230.6	964.2	*	23 JAN 0600	140	0.	226.4	964.2
21 JAN 0430	41	0.	158.4	963.4	*	22 JAN 0530	91	6.	230.3	964.2	*	23 JAN 0630	141	0.	226.4	964.2
21 JAN 0500	42	0.	166.8	963.5	*	22 JAN 0600	92	5.	230.1	964.2	*	23 JAN 0700	142	0.	226.3	964.2
21 JAN 0530	43	0.	174.5	963.6	*	22 JAN 0630	93	5.	229.9	964.2	*	23 JAN 0730	143	0.	226.3	964.2
21 JAN 0600	44	0.	181.5	963.7	*	22 JAN 0700	94	5.	229.7	964.2	*	23 JAN 0800	144	0.	226.3	964.2
21 JAN 0630	45	0.	187.9	963.8	*	22 JAN 0730	95	5.	229.5	964.2	*	23 JAN 0830	145	0.	226.3	964.2
21 JAN 0700	46	0.	193.8	963.8	*	22 JAN 0800	96	4.	229.3	964.2	*	23 JAN 0900	146	0.	226.3	964.2
21 JAN 0730	47	0.	199.2	963.9	*	22 JAN 0830	97	4.	229.2	964.2	*	23 JAN 0930	147	0.	226.3	964.2
21 JAN 0800	48	0.	204.2	964.0	*	22 JAN 0900	98	4.	229.0	964.2	*	23 JAN 1000	148	0.	226.3	964.2
21 JAN 0830	49	0.	208.9	964.0	*	22 JAN 0930	99	4.	228.9	964.2	*	23 JAN 1030	149	0.	226.2	964.2
21 JAN 0900	50	0.	213.2	964.1	*	22 JAN 1000	100	4.	228.7	964.2	*	23 JAN 1100	150	0.	226.2	964.2
					*						*					

****

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.50-HR
17.	31.50	(CFS)	16.	10.	4.	4.
		(INCHES)	0.066	0.161	0.180	0.180
		(AC-FT)	8.	20.	22.	22.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	74.50-HR
239.	31.50	239.	234.	179.	173.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	74.50-HR
964.31	31.50	964.30	964.26	962.53	962.26

CUMULATIVE AREA = 2.33 SQ MI

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

RATIOS APPLIED TO FLOWS

OPERATION	STATION	AREA	PLAN		RATIO 1
					1.00
HYDROGRAPH AT	C	2.13	1	FLOW	324.
				TIME	16.50
HYDROGRAPH AT	F	0.20	1	FLOW	64.
				TIME	13.50
ROUTED TO	FOUT	0.20	1	FLOW	57.
				TIME	14.00
			** PEAK STAGES IN FEET **		
			1	STAGE	971.76
				TIME	14.00
ROUTED TO	FR	0.20	1	FLOW	42.
				TIME	15.50
2 COMBINED AT	FC	2.33	1	FLOW	355.
				TIME	16.50
ROUTED TO	COUT	2.33	1	FLOW	17.
				TIME	31.50
			** PEAK STAGES IN FEET **		
			1	STAGE	964.31
				TIME	31.50

SUMMARY OF COMPONENT COSTS

PROJECT	LOCATION	CAPACITY	CAPITAL COST	AMORTIZED CAPITAL COST	ANNUAL O+M COST	ANNUAL POWER COST	TOTAL ANNUAL COST

SYSTEM COST AND PERFORMANCE SUMMARY
(UNITS SAME AS INPUT - NORMALLY 1000\S OF DOLLARS)

TOTAL SYSTEM CAPITAL COST * * * * * * * * * * * * * *	0.	
TOTAL SYSTEM AMORTIZED CAPITAL COST * * * * * * * * *	0.	
TOTAL SYSTEM ANNUAL O,M,POWER AND REPLACEMENT COST *	0.	
TOTAL SYSTEM ANNUAL COST * * * * * * * * * * * * * *		0.
AVERAGE ANNUAL DAMAGES -- EXISTING CONDITIONS * * * *	0.	
AVERAGE ANNUAL DAMAGES -- OPTIMIZED SYSTEM * * * * *	0.	
AVERAGE ANNUAL DAMAGE REDUCTION (BENEFITS) * * * * *		0.
AVERAGE ANNUAL SYSTEM NET BENEFITS * * * * * * * * *		0.

```
*** NORMAL END OF HEC-1 ***
101
$ delete for0*.dat;*
%DELETE-W-FILNOTDEL, error deleting SYS$SYSDEVICE:[HYDRO.FLICK.POND]FOR023.DAT;2
-RMS-E-FLK, file currently locked by another user
FLICK        Job terminated at  8-FEB-1989 10:28:30.27

Accounting information:
Buffered I/O count:          82      Peak working set size:   878
Direct I/O count:           299      Peak page file size:    1605
Page faults:               1087      Mounted volumes:           0
Charged CPU time:     0 00:00:21.09  Elapsed time:     0 00:00:49.17
```

```
$ IF F$MODE() .nes. 'INTERACTIVE' THEN EXIT
set default [HYDRO.FLICK.POND]
$ define for005 BUCKWEST.DAT;4
$ define for006 sys$output
RUN DJA$EXE:hec1
```

```
*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*            FEBRUARY 1981              *
*          REVISED 30 OCT 81            *
*                                       *
* RUN DATE       8-F    TIME      10:2 *
*                                       *
*****************************************
```

```
*****************************************
*                                       *
*    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.

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

*** LIST ***
  1           ID    PONDING ALONG WEST LEVEE NORTH OF BUCKEYE ROAD/SPRR
  2           IT      10 20JAN89    0830     225
  3           IN      30 20JAN89    0830
  4           IO       0       0       0
  5           OO     0.1     1.0

  6           KK      AD  SUB-BASINS A, B, C, &D AT BUCKEYE ROAD
  7           KM    SLA'S WATERSHEDS A, B, C, & D WERE COMBINED INTO ONE FOR THE PURPOSES OF
  8           KM    THIS ANALYSIS BECAUSE UPON INSPECTION OF THE CULVERT RECORDS GENERATED BY
  9           KM    JJA FOR THE OUTLETS THROUGH THE BANK PROTECTION AND THE TOPOGRAPHY ON THE
 10           KM    COE TOPO AND THE CHANNELIZATION TOPO, IT WAS OBVIOUS THAT THE WATER WOULD
 11           KM    FLOW PAST THE CULVERTS, NOT THROUGH THE CULVERTS.  THE 200 C.Y. OF
 12           KM    EXCAVATION NEAR EACH CULVERT WAS CONSIDERED INSIGNIFICANT FOR DETERMINING
 13           KM    THE PEAK FLOW BUT WAS LATER INCLUDED IN THE STORAGE ROUTING.
 14           KO       0       0       0       0      22       0       0       0       0       0
              * ********** WATERSHED AREA OF WATERSHEDS A-D IS 0.4 SQUARE MILES
 15           BA    0.40       0
 16           PB       0
 17           PC       0    0.02    0.04    0.06    0.09    0.11    0.14    0.16    0.19    0.22
 18           PC    0.25    0.28    0.31    0.35    0.38    0.42    0.47    0.52    0.57    0.63
 19           PC    0.71    0.80    0.92    1.10    2.59    2.87    3.01    3.12    3.20    3.27
 20           PC    3.33    3.38    3.43    3.48    3.52    3.55    3.59    3.62    3.65    3.68
 21           PC    3.71    3.74    3.76    3.79    3.81    3.84    3.86    3.88    3.90
              * ********** SCS RUNOFF & ROUTING PARAMETERS USED THROUGHOUT THIS RUN
              * ********** THE PERCENT IMPERVIOUS COVER IS INCLUDED IN THE CURVE NUMBER SO NO
              * ********** PERCENT IMPERVIOUSNESS IS LISTED ON THE LS CARD
 22           LS       0      81       0
              * ********** LAG = L**0.8*(S+1)**0.7/(1900*Y**0.5)=2.448, TLAG = LAG*LAG FACTOR
              * ********** LAG FACTOR = 1-PRCT*(-0.006789+0.000335*CN-0.0000004298*CN**2-
              * ********** 0.00000002185*CN**3)=0.869,   TLAG=2.448*0.869=2.13
              * ********** L=6040 FT, S=1000/81-10=2.346, Y=(981-964)/6040=0.281%, PRCT=22
              * ********** NO LAG FACTOR IS ASSUMED FOR WATERSHED SHORTENING
 23           UD    2.13

 24           KK      TF  SUB-BASINS T&F AT CORNER OF WESTERN AND DYSART
 25           KM    SLA'S SUB-BASINS T & F WERE COMBINED AT THE CORNER OF WESTERN & DYSART.
 26           KM    THE MODEL STORM IS THE 100-YEAR, 24-HOUR STORM AS
 27           KM    DETERMINED FROM THE REGION VIII NOAA ATLAS.  THE RAINFALL DISTRIBUTION IS
 28           KM    THE SCS TYPE II DISTRIBUTION.
 29           KO       0       0       0       0      22       0       0       0
              * ********** WATERSHED AREA OF BASIN F IS 0.51 SQUARE MILES, WATERSHED OF
              * ********** SUB-BASIN T IS 0.03 SQ MI
 30           BA    0.54       0
 31           PB       0
 32           PC    0.00    0.02    0.04    0.06    0.09    0.11    0.14    0.16    0.19    0.22
 33           PC    0.25    0.28    0.31    0.35    0.38    0.42    0.47    0.52    0.57    0.63
 34           PC    0.71    0.80    0.92    1.10    2.59    2.87    3.01    3.12    3.20    3.27
 35           PC    3.33    3.38    3.43    3.48    3.52    3.55    3.59    3.62    3.65    3.68
 36           PC    3.71    3.74    3.76    3.79    3.81    3.84    3.86    3.88    3.90
              * ********** PERCENT IMPERVIOUSNESS INCLUDED IN CN
 37           LS       0      82       0
              * ********** SEE PREVIOUS CALCULATION METHOD. L=7900, S=2.195, Y=0.215%, PRCT=45
              * ********** LAG=3.36, LAG FACTOR=0.74, TLAG=2.49
 38           UD    2.49
```

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

 39           KK      FC  SUB-BASINS F&T ROUTED THROUGH CHANNEL TO OUTLET
 40           KM    SUB-BASINS F&T ROUTED THROUGH CHANNEL TO OUTLET
 41           KO       0       0       0       0      21       0       0
 42           RK    2200  0.0032   0.035            TRAP       0       2

 43           KK     CP1  COMBINE ALL HYDROGRAPHS
 44           KO       0       0       0       0      21       0     100
 45           BI      FC      21
 46           HC       2    0.54
              * ********** THE TOTAL FLOW IS ROUTED THROUGH THE 'BASIN' FORMED BY THE LEVEE.
              * ********** THINGS TO KEEP IN MIND ARE:
              * ********** TOTAL RAINFALL = 196 AC.FT., TOTAL DEPRESSED STORAGE AT CP-2 AND
              * ********** CP-3 = 0.25 AC.FT., LOWEST ELEVATION AT WHICH WATER WILL FLOW THRU
              * ********** CULVERT = 964.2 = 964 + 0.2 (100-YEAR W.S.E. IN AGUA
              * ********** FRIA) + 0.2 (HEAD LOSS THROUGH FLAPGATE), LOWEST ELEVATION AT WHICH
              * ********** WATER WILL OVERTOP THE LEVEE = 967.8

 47           KK    1OUT  *****COMBINED HYDROGRAPHS ROUTED THROUGH OUTLET AT BUCKEYE*****
 48           KM    ****************************************************************************
 49           KM    *******ROUTING OF COMBINED HYDROGRAPH THROUGH OUTLET AT BUCKEYE ROAD********
 50           KM    ****************************************************************************
 51           KO       0       0       0       0       0       0     100
              * ********** STORAGE REDUCTION DUE TO OVERBANK LANDFILL
              * ********** LANDFILL STORAGE REDUCTION CORRECTED 1MAR88
 52           RS       1    STOR    0.25       0
 53           SV    0.25   0.259   0.696  14.856  71.842 106.139 118.850 192.534 251.966 341.773
 54           SQ       0       0       0       0       0       0       0       0      42      63
 55           SE   955.7     956     958     960     962  962.75     963   964.2     965     966
 56           ZZ
```

```
*****************************************
*                                       *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *
*            FEBRUARY 1981              *
*          REVISED 30 OCT 81            *
*                                       *
* RUN DATE       8-F     TIME      10:2 *
*                                       *
*****************************************
```

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

PONDING ALONG WEST LEVEE NORTH OF BUCKEYE ROAD/SPRR

```
4 IO          OUTPUT CONTROL VARIABLES
                   IPRNT          0  PRINT CONTROL
                   IPLOT          0  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

  IT          HYDROGRAPH TIME DATA
                    NMIN         10  MINUTES IN COMPUTATION INTERVAL
                   IDATE     20JAN89  STARTING DATE
                   ITIME        0830  STARTING TIME
                      NQ         225  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     21JAN89  ENDING DATE
                  NDTIME        2150  ENDING TIME

              COMPUTATION INTERVAL    0.17 HOURS
                   TOTAL TIME BASE   37.33 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

  JR          MULTI-PLAN OPTION
                   NPLAN          1  NUMBER OF PLANS

  JR          MULTI-RATIO OPTION
                RATIOS OF RUNOFF
               1.00


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


          **************
          *            *
6 KK      *       AD   *      SUB-BASINS A, B, C, &D AT BUCKEYE ROAD
          *            *
          **************
```

SLA'S WATERSHEDS A, B, C, & D WERE COMBINED INTO ONE FOR THE PURPOSES OF THIS ANALYSIS BECAUSE UPON INSPECTION OF THE CULVERT RECORDS GENERATED BY JJA FOR THE OUTLETS THROUGH THE BANK PROTECTION AND THE TOPOGRAPHY ON THE COE TOPO AND THE CHANNELIZATION TOPO, IT WAS OBVIOUS THAT THE WATER WOULD FLOW PAST THE CULVERTS, NOT THROUGH THE CULVERTS. THE 200 C.Y. OF EXCAVATION NEAR EACH CULVERT WAS CONSIDERED INSIGNIFICANT FOR DETERMINING THE PEAK FLOW BUT WAS LATER INCLUDED IN THE STORAGE ROUTING.

14 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	225	LAST ORDINATE PUNCHED OR SAVED
TIMINT	0.167	TIME INTERVAL IN HOURS

3 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	30	TIME INTERVAL IN MINUTES
JXDATE	20JAN89	STARTING DATE
JXTIME	830	STARTING TIME

SUBBASIN RUNOFF DATA

15 BA SUBBASIN CHARACTERISTICS

TAREA	0.40	SUBBASIN AREA

PRECIPITATION DATA

16 PB

STORM	3.90	BASIN TOTAL PRECIPITATION

17 PI INCREMENTAL PRECIPITATION PATTERN

0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
0.03	0.03	0.03	0.04	0.04	0.04	0.06	0.06	0.06	0.50
0.50	0.50	0.09	0.09	0.09	0.05	0.05	0.05	0.04	0.04
0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01						

22 LS SCS LOSS RATE

STRTL	0.47	INITIAL ABSTRACTION
CRVNBR	81.00	CURVE NUMBER
RTIMP	0.00	PERCENT IMPERVIOUS AREA

23 UD SCS DIMENSIONLESS UNITGRAPH

TLAG	2.13	LAG

***

UNIT HYDROGRAPH

66 END-OF-PERIOD ORDINATES

2.	6.	11.	17.	25.	34.	46.	58.	68.	77.
83.	86.	87.	87.	85.	81.	76.	71.	65.	59.
51.	44.	38.	34.	30.	26.	23.	21.	19.	17.
15.	13.	11.	10.	9.	8.	7.	6.	5.	5.
4.	4.	3.	3.	3.	2.	2.	2.	2.	1.
1.	1.	1.	1.	1.	1.	1.	1.	0.	0.
0.	0.	0.	0.	0.	0.				

****

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
20	JAN	0830	1	0.00	0.00	0.00	0.
20	JAN	0840	2	0.01	0.01	0.00	0.
20	JAN	0850	3	0.01	0.01	0.00	0.
20	JAN	0900	4	0.01	0.01	0.00	0.
20	JAN	0910	5	0.01	0.01	0.00	0.
20	JAN	0920	6	0.01	0.01	0.00	0.
20	JAN	0930	7	0.01	0.01	0.00	0.
20	JAN	0940	8	0.01	0.01	0.00	0.
20	JAN	0950	9	0.01	0.01	0.00	0.
20	JAN	1000	10	0.01	0.01	0.00	0.
20	JAN	1010	11	0.01	0.01	0.00	0.
20	JAN	1020	12	0.01	0.01	0.00	0.
20	JAN	1030	13	0.01	0.01	0.00	0.
20	JAN	1040	14	0.01	0.01	0.00	0.
20	JAN	1050	15	0.01	0.01	0.00	0.
20	JAN	1100	16	0.01	0.01	0.00	0.
20	JAN	1110	17	0.01	0.01	0.00	0.
20	JAN	1120	18	0.01	0.01	0.00	0.
20	JAN	1130	19	0.01	0.01	0.00	0.
20	JAN	1140	20	0.01	0.01	0.00	0.
20	JAN	1150	21	0.01	0.01	0.00	0.
20	JAN	1200	22	0.01	0.01	0.00	0.
20	JAN	1210	23	0.01	0.01	0.00	0.
20	JAN	1220	24	0.01	0.01	0.00	0.
20	JAN	1230	25	0.01	0.01	0.00	0.
20	JAN	1240	26	0.01	0.01	0.00	0.
20	JAN	1250	27	0.01	0.01	0.00	0.
20	JAN	1300	28	0.01	0.01	0.00	0.
20	JAN	1310	29	0.01	0.01	0.00	0.
20	JAN	1320	30	0.01	0.01	0.00	0.
20	JAN	1330	31	0.01	0.01	0.00	0.
20	JAN	1340	32	0.01	0.01	0.00	0.
20	JAN	1350	33	0.01	0.01	0.00	0.
20	JAN	1400	34	0.01	0.01	0.00	0.
20	JAN	1410	35	0.01	0.01	0.00	0.
20	JAN	1420	36	0.01	0.01	0.00	0.
20	JAN	1430	37	0.01	0.01	0.00	0.
20	JAN	1440	38	0.01	0.01	0.00	0.
20	JAN	1450	39	0.01	0.01	0.00	0.
20	JAN	1500	40	0.01	0.01	0.00	0.
20	JAN	1510	41	0.01	0.01	0.00	0.
20	JAN	1520	42	0.01	0.01	0.00	0.
20	JAN	1530	43	0.01	0.01	0.00	0.
20	JAN	1540	44	0.01	0.01	0.00	0.
20	JAN	1550	45	0.01	0.01	0.00	0.
20	JAN	1600	46	0.01	0.01	0.00	0.
20	JAN	1610	47	0.02	0.02	0.00	0.
20	JAN	1620	48	0.02	0.02	0.00	0.
20	JAN	1630	49	0.02	0.02	0.00	0.
20	JAN	1640	50	0.02	0.02	0.00	0.
20	JAN	1650	51	0.02	0.02	0.00	0.
20	JAN	1700	52	0.02	0.02	0.00	0.
20	JAN	1710	53	0.02	0.02	0.00	0.
20	JAN	1720	54	0.02	0.02	0.00	0.
20	JAN	1730	55	0.02	0.02	0.00	0.
20	JAN	1740	56	0.02	0.02	0.00	0.
20	JAN	1750	57	0.02	0.02	0.00	0.
20	JAN	1800	58	0.02	0.02	0.00	0.
20	JAN	1810	59	0.03	0.02	0.00	0.
20	JAN	1820	60	0.03	0.02	0.00	0.

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
21	JAN	0320	114	0.01	0.00	0.01	24.
21	JAN	0330	115	0.01	0.00	0.01	23.
21	JAN	0340	116	0.01	0.00	0.01	22.
21	JAN	0350	117	0.01	0.00	0.01	21.
21	JAN	0400	118	0.01	0.00	0.01	20.
21	JAN	0410	119	0.01	0.00	0.01	19.
21	JAN	0420	120	0.01	0.00	0.01	19.
21	JAN	0430	121	0.01	0.00	0.01	18.
21	JAN	0440	122	0.01	0.00	0.01	17.
21	JAN	0450	123	0.01	0.00	0.01	17.
21	JAN	0500	124	0.01	0.00	0.01	17.
21	JAN	0510	125	0.01	0.00	0.01	16.
21	JAN	0520	126	0.01	0.00	0.01	16.
21	JAN	0530	127	0.01	0.00	0.01	15.
21	JAN	0540	128	0.01	0.00	0.01	15.
21	JAN	0550	129	0.01	0.00	0.01	15.
21	JAN	0600	130	0.01	0.00	0.01	14.
21	JAN	0610	131	0.01	0.00	0.01	14.
21	JAN	0620	132	0.01	0.00	0.01	14.
21	JAN	0630	133	0.01	0.00	0.01	13.
21	JAN	0640	134	0.01	0.00	0.01	13.
21	JAN	0650	135	0.01	0.00	0.01	13.
21	JAN	0700	136	0.01	0.00	0.01	13.
21	JAN	0710	137	0.01	0.00	0.01	12.
21	JAN	0720	138	0.01	0.00	0.01	12.
21	JAN	0730	139	0.01	0.00	0.01	12.
21	JAN	0740	140	0.01	0.00	0.01	12.
21	JAN	0750	141	0.01	0.00	0.01	12.
21	JAN	0800	142	0.01	0.00	0.01	12.
21	JAN	0810	143	0.01	0.00	0.01	11.
21	JAN	0820	144	0.01	0.00	0.01	11.
21	JAN	0830	145	0.01	0.00	0.01	11.
21	JAN	0840	146	0.00	0.00	0.00	11.
21	JAN	0850	147	0.00	0.00	0.00	11.
21	JAN	0900	148	0.00	0.00	0.00	10.
21	JAN	0910	149	0.00	0.00	0.00	10.
21	JAN	0920	150	0.00	0.00	0.00	10.
21	JAN	0930	151	0.00	0.00	0.00	10.
21	JAN	0940	152	0.00	0.00	0.00	9.
21	JAN	0950	153	0.00	0.00	0.00	9.
21	JAN	1000	154	0.00	0.00	0.00	8.
21	JAN	1010	155	0.00	0.00	0.00	8.
21	JAN	1020	156	0.00	0.00	0.00	7.
21	JAN	1030	157	0.00	0.00	0.00	6.
21	JAN	1040	158	0.00	0.00	0.00	6.
21	JAN	1050	159	0.00	0.00	0.00	5.
21	JAN	1100	160	0.00	0.00	0.00	5.
21	JAN	1110	161	0.00	0.00	0.00	4.
21	JAN	1120	162	0.00	0.00	0.00	4.
21	JAN	1130	163	0.00	0.00	0.00	3.
21	JAN	1140	164	0.00	0.00	0.00	3.
21	JAN	1150	165	0.00	0.00	0.00	3.
21	JAN	1200	166	0.00	0.00	0.00	2.
21	JAN	1210	167	0.00	0.00	0.00	2.
21	JAN	1220	168	0.00	0.00	0.00	2.
21	JAN	1230	169	0.00	0.00	0.00	2.
21	JAN	1240	170	0.00	0.00	0.00	1.
21	JAN	1250	171	0.00	0.00	0.00	1.
21	JAN	1300	172	0.00	0.00	0.00	1.
21	JAN	1310	173	0.00	0.00	0.00	1.

20 JAN 1850	63	0.03	0.02	0.01	1.	*	21 JAN 1340	176	0.00	0.00	0.00	1.
20 JAN 1900	64	0.03	0.02	0.01	1.	*	21 JAN 1350	177	0.00	0.00	0.00	1.
20 JAN 1910	65	0.04	0.03	0.01	1.	*	21 JAN 1400	178	0.00	0.00	0.00	1.
20 JAN 1920	66	0.04	0.03	0.01	2.	*	21 JAN 1410	179	0.00	0.00	0.00	0.
20 JAN 1930	67	0.04	0.03	0.01	2.	*	21 JAN 1420	180	0.00	0.00	0.00	0.
20 JAN 1940	68	0.06	0.04	0.02	3.	*	21 JAN 1430	181	0.00	0.00	0.00	0.
20 JAN 1950	69	0.06	0.04	0.02	3.	*	21 JAN 1440	182	0.00	0.00	0.00	0.
20 JAN 2000	70	0.06	0.04	0.02	4.	*	21 JAN 1450	183	0.00	0.00	0.00	0.
20 JAN 2010	71	0.50	0.26	0.23	5.	*	21 JAN 1500	184	0.00	0.00	0.00	0.
20 JAN 2020	72	0.50	0.20	0.30	8.	*	21 JAN 1510	185	0.00	0.00	0.00	0.
20 JAN 2030	73	0.50	0.15	0.34	11.	*	21 JAN 1520	186	0.00	0.00	0.00	0.
20 JAN 2040	74	0.09	0.03	0.07	17.	*	21 JAN 1530	187	0.00	0.00	0.00	0.
20 JAN 2050	75	0.09	0.02	0.07	23.	*	21 JAN 1540	188	0.00	0.00	0.00	0.
20 JAN 2100	76	0.09	0.02	0.07	31.	*	21 JAN 1550	189	0.00	0.00	0.00	0.
20 JAN 2110	77	0.05	0.01	0.04	41.	*	21 JAN 1600	190	0.00	0.00	0.00	0.
20 JAN 2120	78	0.05	0.01	0.04	53.	*	21 JAN 1610	191	0.00	0.00	0.00	0.
20 JAN 2130	79	0.05	0.01	0.04	65.	*	21 JAN 1620	192	0.00	0.00	0.00	0.
20 JAN 2140	80	0.04	0.01	0.03	77.	*	21 JAN 1630	193	0.00	0.00	0.00	0.
20 JAN 2150	81	0.04	0.01	0.03	87.	*	21 JAN 1640	194	0.00	0.00	0.00	0.
20 JAN 2200	82	0.04	0.01	0.03	96.	*	21 JAN 1650	195	0.00	0.00	0.00	0.
20 JAN 2210	83	0.03	0.01	0.02	102.	*	21 JAN 1700	196	0.00	0.00	0.00	0.
20 JAN 2220	84	0.03	0.01	0.02	106.	*	21 JAN 1710	197	0.00	0.00	0.00	0.
20 JAN 2230	85	0.03	0.01	0.02	109.	*	21 JAN 1720	198	0.00	0.00	0.00	0.
20 JAN 2240	86	0.02	0.00	0.02	110.	*	21 JAN 1730	199	0.00	0.00	0.00	0.
20 JAN 2250	87	0.02	0.00	0.02	109.	*	21 JAN 1740	200	0.00	0.00	0.00	0.
20 JAN 2300	88	0.02	0.00	0.02	106.	*	21 JAN 1750	201	0.00	0.00	0.00	0.
20 JAN 2310	89	0.02	0.00	0.02	103.	*	21 JAN 1800	202	0.00	0.00	0.00	0.
20 JAN 2320	90	0.02	0.00	0.02	98.	*	21 JAN 1810	203	0.00	0.00	0.00	0.
20 JAN 2330	91	0.02	0.00	0.02	93.	*	21 JAN 1820	204	0.00	0.00	0.00	0.
20 JAN 2340	92	0.02	0.00	0.01	87.	*	21 JAN 1830	205	0.00	0.00	0.00	0.
20 JAN 2350	93	0.02	0.00	0.01	80.	*	21 JAN 1840	206	0.00	0.00	0.00	0.
21 JAN 0000	94	0.02	0.00	0.01	74.	*	21 JAN 1850	207	0.00	0.00	0.00	0.
21 JAN 0010	95	0.02	0.00	0.01	69.	*	21 JAN 1900	208	0.00	0.00	0.00	0.
21 JAN 0020	96	0.02	0.00	0.01	64.	*	21 JAN 1910	209	0.00	0.00	0.00	0.
21 JAN 0030	97	0.02	0.00	0.01	60.	*	21 JAN 1920	210	0.00	0.00	0.00	0.
21 JAN 0040	98	0.02	0.00	0.01	56.	*	21 JAN 1930	211	0.00	0.00	0.00	0.
21 JAN 0050	99	0.02	0.00	0.01	53.	*	21 JAN 1940	212	0.00	0.00	0.00	0.
21 JAN 0100	100	0.02	0.00	0.01	49.	*	21 JAN 1950	213	0.00	0.00	0.00	0.
21 JAN 0110	101	0.01	0.00	0.01	46.	*	21 JAN 2000	214	0.00	0.00	0.00	0.
21 JAN 0120	102	0.01	0.00	0.01	44.	*	21 JAN 2010	215	0.00	0.00	0.00	0.
21 JAN 0130	103	0.01	0.00	0.01	41.	*	21 JAN 2020	216	0.00	0.00	0.00	0.
21 JAN 0140	104	0.01	0.00	0.01	39.	*	21 JAN 2030	217	0.00	0.00	0.00	0.
21 JAN 0150	105	0.01	0.00	0.01	37.	*	21 JAN 2040	218	0.00	0.00	0.00	0.
21 JAN 0200	106	0.01	0.00	0.01	35.	*	21 JAN 2050	219	0.00	0.00	0.00	0.
21 JAN 0210	107	0.01	0.00	0.01	33.	*	21 JAN 2100	220	0.00	0.00	0.00	0.
21 JAN 0220	108	0.01	0.00	0.01	31.	*	21 JAN 2110	221	0.00	0.00	0.00	0.
21 JAN 0230	109	0.01	0.00	0.01	30.	*	21 JAN 2120	222	0.00	0.00	0.00	0.
21 JAN 0240	110	0.01	0.00	0.01	28.	*	21 JAN 2130	223	0.00	0.00	0.00	0.
21 JAN 0250	111	0.01	0.00	0.01	27.	*	21 JAN 2140	224	0.00	0.00	0.00	0.
21 JAN 0300	112	0.01	0.00	0.01	26.	*	21 JAN 2150	225	0.00	0.00	0.00	0.
21 JAN 0310	113	0.01	0.00	0.01	25.	*						
						*						

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TOTAL RAINFALL = 3.90, TOTAL LOSS = 1.86, TOTAL EXCESS = 2.04

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	37.33-HR
110.	14.17	(CFS)	66.	22.	14.	14.
		(INCHES)	1.527	2.038	2.038	2.038
		(AC-FT)	33.	43.	43.	43.

CUMULATIVE AREA = 0.40 SQ MI

HYDROGRAPH AT STATION AD

PLAN 1, RATIO = 1.00

DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	20 JAN 1800	58	0.	21 JAN 0330	115	23.	21 JAN 1300	172	1.
20 JAN 0840	2	0.	20 JAN 1810	59	0.	21 JAN 0340	116	22.	21 JAN 1310	173	1.
20 JAN 0850	3	0.	20 JAN 1820	60	0.	21 JAN 0350	117	21.	21 JAN 1320	174	1.
20 JAN 0900	4	0.	20 JAN 1830	61	0.	21 JAN 0400	118	20.	21 JAN 1330	175	1.
20 JAN 0910	5	0.	20 JAN 1840	62	1.	21 JAN 0410	119	19.	21 JAN 1340	176	1.
20 JAN 0920	6	0.	20 JAN 1850	63	1.	21 JAN 0420	120	19.	21 JAN 1350	177	1.
20 JAN 0930	7	0.	20 JAN 1900	64	1.	21 JAN 0430	121	18.	21 JAN 1400	178	1.
20 JAN 0940	8	0.	20 JAN 1910	65	1.	21 JAN 0440	122	17.	21 JAN 1410	179	0.
20 JAN 0950	9	0.	20 JAN 1920	66	2.	21 JAN 0450	123	17.	21 JAN 1420	180	0.
20 JAN 1000	10	0.	20 JAN 1930	67	2.	21 JAN 0500	124	17.	21 JAN 1430	181	0.
20 JAN 1010	11	0.	20 JAN 1940	68	3.	21 JAN 0510	125	16.	21 JAN 1440	182	0.
20 JAN 1020	12	0.	20 JAN 1950	69	3.	21 JAN 0520	126	16.	21 JAN 1450	183	0.
20 JAN 1030	13	0.	20 JAN 2000	70	4.	21 JAN 0530	127	15.	21 JAN 1500	184	0.
20 JAN 1040	14	0.	20 JAN 2010	71	5.	21 JAN 0540	128	15.	21 JAN 1510	185	0.
20 JAN 1050	15	0.	20 JAN 2020	72	8.	21 JAN 0550	129	15.	21 JAN 1520	186	0.
20 JAN 1100	16	0.	20 JAN 2030	73	11.	21 JAN 0600	130	14.	21 JAN 1530	187	0.
20 JAN 1110	17	0.	20 JAN 2040	74	17.	21 JAN 0610	131	14.	21 JAN 1540	188	0.
20 JAN 1120	18	0.	20 JAN 2050	75	23.	21 JAN 0620	132	14.	21 JAN 1550	189	0.
20 JAN 1130	19	0.	20 JAN 2100	76	31.	21 JAN 0630	133	13.	21 JAN 1600	190	0.
20 JAN 1140	20	0.	20 JAN 2110	77	41.	21 JAN 0640	134	13.	21 JAN 1610	191	0.
20 JAN 1150	21	0.	20 JAN 2120	78	53.	21 JAN 0650	135	13.	21 JAN 1620	192	0.
20 JAN 1200	22	0.	20 JAN 2130	79	65.	21 JAN 0700	136	13.	21 JAN 1630	193	0.
20 JAN 1210	23	0.	20 JAN 2140	80	77.	21 JAN 0710	137	12.	21 JAN 1640	194	0.
20 JAN 1220	24	0.	20 JAN 2150	81	87.	21 JAN 0720	138	12.	21 JAN 1650	195	0.
20 JAN 1230	25	0.	20 JAN 2200	82	96.	21 JAN 0730	139	12.	21 JAN 1700	196	0.
20 JAN 1240	26	0.	20 JAN 2210	83	102.	21 JAN 0740	140	12.	21 JAN 1710	197	0.
20 JAN 1250	27	0.	20 JAN 2220	84	106.	21 JAN 0750	141	12.	21 JAN 1720	198	0.
20 JAN 1300	28	0.	20 JAN 2230	85	109.	21 JAN 0800	142	12.	21 JAN 1730	199	0.
20 JAN 1310	29	0.	20 JAN 2240	86	110.	21 JAN 0810	143	11.	21 JAN 1740	200	0.
20 JAN 1320	30	0.	20 JAN 2250	87	109.	21 JAN 0820	144	11.	21 JAN 1750	201	0.
20 JAN 1330	31	0.	20 JAN 2300	88	106.	21 JAN 0830	145	11.	21 JAN 1800	202	0.
20 JAN 1340	32	0.	20 JAN 2310	89	103.	21 JAN 0840	146	11.	21 JAN 1810	203	0.
20 JAN 1350	33	0.	20 JAN 2320	90	98.	21 JAN 0850	147	11.	21 JAN 1820	204	0.
20 JAN 1400	34	0.	20 JAN 2330	91	93.	21 JAN 0900	148	10.	21 JAN 1830	205	0.
20 JAN 1410	35	0.	20 JAN 2340	92	87.	21 JAN 0910	149	10.	21 JAN 1840	206	0.
20 JAN 1420	36	0.	20 JAN 2350	93	80.	21 JAN 0920	150	10.	21 JAN 1850	207	0.
20 JAN 1430	37	0.	21 JAN 0000	94	74.	21 JAN 0930	151	10.	21 JAN 1900	208	0.
20 JAN 1440	38	0.	21 JAN 0010	95	69.	21 JAN 0940	152	9.	21 JAN 1910	209	0.
20 JAN 1450	39	0.	21 JAN 0020	96	64.	21 JAN 0950	153	9.	21 JAN 1920	210	0.
20 JAN 1500	40	0.	21 JAN 0030	97	60.	21 JAN 1000	154	8.	21 JAN 1930	211	0.
20 JAN 1510	41	0.	21 JAN 0040	98	56.	21 JAN 1010	155	8.	21 JAN 1940	212	0.
20 JAN 1520	42	0.	21 JAN 0050	99	53.	21 JAN 1020	156	7.	21 JAN 1950	213	0.
20 JAN 1530	43	0.	21 JAN 0100	100	49.	21 JAN 1030	157	6.	21 JAN 2000	214	0.
20 JAN 1540	44	0.	21 JAN 0110	101	46.	21 JAN 1040	158	6.	21 JAN 2010	215	0.
20 JAN 1550	45	0.	21 JAN 0120	102	44.	21 JAN 1050	159	5.	21 JAN 2020	216	0.
20 JAN 1600	46	0.	21 JAN 0130	103	41.	21 JAN 1100	160	5.	21 JAN 2030	217	0.
20 JAN 1610	47	0.	21 JAN 0140	104	39.	21 JAN 1110	161	4.	21 JAN 2040	218	0.
20 JAN 1620	48	0.	21 JAN 0150	105	37.	21 JAN 1120	162	4.	21 JAN 2050	219	0.
20 JAN 1630	49	0.	21 JAN 0200	106	35.	21 JAN 1130	163	3.	21 JAN 2100	220	0.
20 JAN 1640	50	0.	21 JAN 0210	107	33.	21 JAN 1140	164	3.	21 JAN 2110	221	0.
20 JAN 1650	51	0.	21 JAN 0220	108	31.	21 JAN 1150	165	3.	21 JAN 2120	222	0.
20 JAN 1700	52	0.	21 JAN 0230	109	30.	21 JAN 1200	166	2.	21 JAN 2130	223	0.
20 JAN 1710	53	0.	21 JAN 0240	110	28.	21 JAN 1210	167	2.	21 JAN 2140	224	0.
20 JAN 1720	54	0.	21 JAN 0250	111	27.	21 JAN 1220	168	2.	21 JAN 2150	225	0.
20 JAN 1730	55	0.	21 JAN 0300	112	26.	21 JAN 1230	169	2.			
20 JAN 1740	56	0.	21 JAN 0310	113	25.	21 JAN 1240	170	1.			

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PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
  (CFS)       (HR)                  6-HR       24-HR       72-HR     37.33-HR
   110.      14.17       (CFS)      66.         22.         14.         14.
                       (INCHES)    1.527       2.038       2.038       2.038
                        (AC-FT)     33.         43.         43.         43.

                       CUMULATIVE AREA =    0.40 SQ MI


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          *            *
 24 KK    *        TF  *       SUB-BASINS T&F AT CORNER OF WESTERN AND DYSART
          *            *
          **************
                         SLA'S SUB-BASINS T & F WERE COMBINED AT THE CORNER OF WESTERN & DYSART.
                         THE MODEL STORM IS THE 100-YEAR, 24-HOUR STORM AS
                         DETERMINED FROM THE REGION VIII NOAA ATLAS.  THE RAINFALL DISTRIBUTION IS
                         THE SCS TYPE II DISTRIBUTION.

 29 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          0  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        225  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT      0.167  TIME INTERVAL IN HOURS


  3 IN          TIME DATA FOR INPUT TIME SERIES
                       JXMIN         30  TIME INTERVAL IN MINUTES
                      JXDATE    20JAN89  STARTING DATE
                      JXTIME        830  STARTING TIME

             SUBBASIN RUNOFF DATA

 30 BA          SUBBASIN CHARACTERISTICS
                       TAREA       0.54  SUBBASIN AREA

                PRECIPITATION DATA

 31 PB                 STORM       3.90  BASIN TOTAL PRECIPITATION

 32 PI            INCREMENTAL PRECIPITATION PATTERN
                    0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                    0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                    0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                    0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                    0.01      0.01      0.01      0.01      0.01      0.02      0.02      0.02      0.02      0.02
                    0.02      0.02      0.02      0.02      0.02      0.02      0.02      0.03      0.03      0.03
                    0.03      0.03      0.03      0.04      0.04      0.04      0.06      0.06      0.06      0.50
                    0.50      0.50      0.09      0.09      0.09      0.05      0.05      0.05      0.04      0.04
                    0.04      0.03      0.03      0.03      0.02      0.02      0.02      0.02      0.02      0.02
                    0.02      0.02      0.02      0.02      0.02      0.02      0.02      0.02      0.02      0.01
                    0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
                    0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01
```

0.01 0.01 0.01 0.01

37 LS SCS LOSS RATE

STRTL	0.44	INITIAL ABSTRACTION
CRVNBR	82.00	CURVE NUMBER
RTIMP	0.00	PERCENT IMPERVIOUS AREA

38 UD SCS DIMENSIONLESS UNITGRAPH

TLAG	2.49	LAG

***

UNIT HYDROGRAPH

77 END-OF-PERIOD ORDINATES

2.	5.	10.	16.	22.	30.	40.	51.	64.	75.
85.	92.	97.	100.	101.	101.	100.	96.	92.	87.
82.	77.	70.	62.	55.	48.	43.	39.	35.	31.
28.	26.	23.	21.	19.	17.	15.	14.	12.	11.
10.	9.	8.	7.	7.	6.	5.	5.	4.	4.
3.	3.	3.	3.	2.	2.	2.	2.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	0.
0.	0.	0.	0.	0.	0.	0.			

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HYDROGRAPH AT STATION TF

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DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA MON HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
20 JAN 0830	1	0.00	0.00	0.00	0.	*	21 JAN 0320	114	0.01	0.00	0.01	39.
20 JAN 0840	2	0.01	0.01	0.00	0.	*	21 JAN 0330	115	0.01	0.00	0.01	37.
20 JAN 0850	3	0.01	0.01	0.00	0.	*	21 JAN 0340	116	0.01	0.00	0.01	35.
20 JAN 0900	4	0.01	0.01	0.00	0.	*	21 JAN 0350	117	0.01	0.00	0.01	34.
20 JAN 0910	5	0.01	0.01	0.00	0.	*	21 JAN 0400	118	0.01	0.00	0.01	32.
20 JAN 0920	6	0.01	0.01	0.00	0.	*	21 JAN 0410	119	0.01	0.00	0.01	31.
20 JAN 0930	7	0.01	0.01	0.00	0.	*	21 JAN 0420	120	0.01	0.00	0.01	30.
20 JAN 0940	8	0.01	0.01	0.00	0.	*	21 JAN 0430	121	0.01	0.00	0.01	29.
20 JAN 0950	9	0.01	0.01	0.00	0.	*	21 JAN 0440	122	0.01	0.00	0.01	28.
20 JAN 1000	10	0.01	0.01	0.00	0.	*	21 JAN 0450	123	0.01	0.00	0.01	27.
20 JAN 1010	11	0.01	0.01	0.00	0.	*	21 JAN 0500	124	0.01	0.00	0.01	26.
20 JAN 1020	12	0.01	0.01	0.00	0.	*	21 JAN 0510	125	0.01	0.00	0.01	25.
20 JAN 1030	13	0.01	0.01	0.00	0.	*	21 JAN 0520	126	0.01	0.00	0.01	24.
20 JAN 1040	14	0.01	0.01	0.00	0.	*	21 JAN 0530	127	0.01	0.00	0.01	24.
20 JAN 1050	15	0.01	0.01	0.00	0.	*	21 JAN 0540	128	0.01	0.00	0.01	23.
20 JAN 1100	16	0.01	0.01	0.00	0.	*	21 JAN 0550	129	0.01	0.00	0.01	23.
20 JAN 1110	17	0.01	0.01	0.00	0.	*	21 JAN 0600	130	0.01	0.00	0.01	22.
20 JAN 1120	18	0.01	0.01	0.00	0.	*	21 JAN 0610	131	0.01	0.00	0.01	21.
20 JAN 1130	19	0.01	0.01	0.00	0.	*	21 JAN 0620	132	0.01	0.00	0.01	21.
20 JAN 1140	20	0.01	0.01	0.00	0.	*	21 JAN 0630	133	0.01	0.00	0.01	20.
20 JAN 1150	21	0.01	0.01	0.00	0.	*	21 JAN 0640	134	0.01	0.00	0.01	20.
20 JAN 1200	22	0.01	0.01	0.00	0.	*	21 JAN 0650	135	0.01	0.00	0.01	20.
20 JAN 1210	23	0.01	0.01	0.00	0.	*	21 JAN 0700	136	0.01	0.00	0.01	19.
20 JAN 1220	24	0.01	0.01	0.00	0.	*	21 JAN 0710	137	0.01	0.00	0.01	19.
20 JAN 1230	25	0.01	0.01	0.00	0.	*	21 JAN 0720	138	0.01	0.00	0.01	18.
20 JAN 1240	26	0.01	0.01	0.00	0.	*	21 JAN 0730	139	0.01	0.00	0.01	18.
20 JAN 1250	27	0.01	0.01	0.00	0.	*	21 JAN 0740	140	0.01	0.00	0.01	18.
20 JAN 1300	28	0.01	0.01	0.00	0.	*	21 JAN 0750	141	0.01	0.00	0.01	17.
20 JAN 1310	29	0.01	0.01	0.00	0.	*	21 JAN 0800	142	0.01	0.00	0.01	17.
20 JAN 1320	30	0.01	0.01	0.00	0.	*	21 JAN 0810	143	0.01	0.00	0.01	17.
20 JAN 1330	31	0.01	0.01	0.00	0.	*	21 JAN 0820	144	0.01	0.00	0.01	17.
20 JAN 1340	32	0.01	0.01	0.00	0.	*	21 JAN 0830	145	0.01	0.00	0.01	16.
20 JAN 1350	33	0.01	0.01	0.00	0.	*	21 JAN 0840	146	0.00	0.00	0.00	16.

20 JAN 1410	35	0.01	0.01	0.00	0.	*	21 JAN 0900	148	0.00	0.00	0.00	15.
20 JAN 1420	36	0.01	0.01	0.00	0.	*	21 JAN 0910	149	0.00	0.00	0.00	15.
20 JAN 1430	37	0.01	0.01	0.00	0.	*	21 JAN 0920	150	0.00	0.00	0.00	15.
20 JAN 1440	38	0.01	0.01	0.00	0.	*	21 JAN 0930	151	0.00	0.00	0.00	14.
20 JAN 1450	39	0.01	0.01	0.00	0.	*	21 JAN 0940	152	0.00	0.00	0.00	14.
20 JAN 1500	40	0.01	0.01	0.00	0.	*	21 JAN 0950	153	0.00	0.00	0.00	13.
20 JAN 1510	41	0.01	0.01	0.00	0.	*	21 JAN 1000	154	0.00	0.00	0.00	13.
20 JAN 1520	42	0.01	0.01	0.00	0.	*	21 JAN 1010	155	0.00	0.00	0.00	12.
20 JAN 1530	43	0.01	0.01	0.00	0.	*	21 JAN 1020	156	0.00	0.00	0.00	11.
20 JAN 1540	44	0.01	0.01	0.00	0.	*	21 JAN 1030	157	0.00	0.00	0.00	11.
20 JAN 1550	45	0.01	0.01	0.00	0.	*	21 JAN 1040	158	0.00	0.00	0.00	10.
20 JAN 1600	46	0.01	0.01	0.00	0.	*	21 JAN 1050	159	0.00	0.00	0.00	9.
20 JAN 1610	47	0.02	0.02	0.00	0.	*	21 JAN 1100	160	0.00	0.00	0.00	8.
20 JAN 1620	48	0.02	0.02	0.00	0.	*	21 JAN 1110	161	0.00	0.00	0.00	8.
20 JAN 1630	49	0.02	0.02	0.00	0.	*	21 JAN 1120	162	0.00	0.00	0.00	7.
20 JAN 1640	50	0.02	0.02	0.00	0.	*	21 JAN 1130	163	0.00	0.00	0.00	6.
20 JAN 1650	51	0.02	0.02	0.00	0.	*	21 JAN 1140	164	0.00	0.00	0.00	6.
20 JAN 1700	52	0.02	0.02	0.00	0.	*	21 JAN 1150	165	0.00	0.00	0.00	5.
20 JAN 1710	53	0.02	0.02	0.00	0.	*	21 JAN 1200	166	0.00	0.00	0.00	5.
20 JAN 1720	54	0.02	0.02	0.00	0.	*	21 JAN 1210	167	0.00	0.00	0.00	4.
20 JAN 1730	55	0.02	0.01	0.00	0.	*	21 JAN 1220	168	0.00	0.00	0.00	4.
20 JAN 1740	56	0.02	0.02	0.00	0.	*	21 JAN 1230	169	0.00	0.00	0.00	3.
20 JAN 1750	57	0.02	0.02	0.00	0.	*	21 JAN 1240	170	0.00	0.00	0.00	3.
20 JAN 1800	58	0.02	0.02	0.00	0.	*	21 JAN 1250	171	0.00	0.00	0.00	3.
20 JAN 1810	59	0.03	0.02	0.00	0.	*	21 JAN 1300	172	0.00	0.00	0.00	2.
20 JAN 1820	60	0.03	0.02	0.00	1.	*	21 JAN 1310	173	0.00	0.00	0.00	2.
20 JAN 1830	61	0.03	0.02	0.01	1.	*	21 JAN 1320	174	0.00	0.00	0.00	2.
20 JAN 1840	62	0.03	0.02	0.01	1.	*	21 JAN 1330	175	0.00	0.00	0.00	2.
20 JAN 1850	63	0.03	0.02	0.01	1.	*	21 JAN 1340	176	0.00	0.00	0.00	2.
20 JAN 1900	64	0.03	0.02	0.01	1.	*	21 JAN 1350	177	0.00	0.00	0.00	1.
20 JAN 1910	65	0.04	0.03	0.01	2.	*	21 JAN 1400	178	0.00	0.00	0.00	1.
20 JAN 1920	66	0.04	0.03	0.01	2.	*	21 JAN 1410	179	0.00	0.00	0.00	1.
20 JAN 1930	67	0.04	0.03	0.01	3.	*	21 JAN 1420	180	0.00	0.00	0.00	1.
20 JAN 1940	68	0.06	0.04	0.02	3.	*	21 JAN 1430	181	0.00	0.00	0.00	1.
20 JAN 1950	69	0.06	0.04	0.02	4.	*	21 JAN 1440	182	0.00	0.00	0.00	1.
20 JAN 2000	70	0.06	0.04	0.02	5.	*	21 JAN 1450	183	0.00	0.00	0.00	1.
20 JAN 2010	71	0.50	0.25	0.25	6.	*	21 JAN 1500	184	0.00	0.00	0.00	1.
20 JAN 2020	72	0.50	0.19	0.31	9.	*	21 JAN 1510	185	0.00	0.00	0.00	1.
20 JAN 2030	73	0.50	0.14	0.35	13.	*	21 JAN 1520	186	0.00	0.00	0.00	1.
20 JAN 2040	74	0.09	0.02	0.07	18.	*	21 JAN 1530	187	0.00	0.00	0.00	0.
20 JAN 2050	75	0.09	0.02	0.07	24.	*	21 JAN 1540	188	0.00	0.00	0.00	0.
20 JAN 2100	76	0.09	0.02	0.07	32.	*	21 JAN 1550	189	0.00	0.00	0.00	0.
20 JAN 2110	77	0.05	0.01	0.04	41.	*	21 JAN 1600	190	0.00	0.00	0.00	0.
20 JAN 2120	78	0.05	0.01	0.04	52.	*	21 JAN 1610	191	0.00	0.00	0.00	0.
20 JAN 2130	79	0.05	0.01	0.04	64.	*	21 JAN 1620	192	0.00	0.00	0.00	0.
20 JAN 2140	80	0.04	0.01	0.03	78.	*	21 JAN 1630	193	0.00	0.00	0.00	0.
20 JAN 2150	81	0.04	0.01	0.03	91.	*	21 JAN 1640	194	0.00	0.00	0.00	0.
20 JAN 2200	82	0.04	0.01	0.03	103.	*	21 JAN 1650	195	0.00	0.00	0.00	0.
20 JAN 2210	83	0.03	0.01	0.02	113.	*	21 JAN 1700	196	0.00	0.00	0.00	0.
20 JAN 2220	84	0.03	0.01	0.02	122.	*	21 JAN 1710	197	0.00	0.00	0.00	0.
20 JAN 2230	85	0.03	0.01	0.02	129.	*	21 JAN 1720	198	0.00	0.00	0.00	0.
20 JAN 2240	86	0.02	0.00	0.02	133.	*	21 JAN 1730	199	0.00	0.00	0.00	0.
20 JAN 2250	87	0.02	0.00	0.02	136.	*	21 JAN 1740	200	0.00	0.00	0.00	0.
20 JAN 2300	88	0.02	0.00	0.02	137.	*	21 JAN 1750	201	0.00	0.00	0.00	0.
20 JAN 2310	89	0.02	0.00	0.02	137.	*	21 JAN 1800	202	0.00	0.00	0.00	0.
20 JAN 2320	90	0.02	0.00	0.02	135.	*	21 JAN 1810	203	0.00	0.00	0.00	0.
20 JAN 2330	91	0.02	0.00	0.02	132.	*	21 JAN 1820	204	0.00	0.00	0.00	0.
20 JAN 2340	92	0.02	0.00	0.01	128.	*	21 JAN 1830	205	0.00	0.00	0.00	0.
20 JAN 2350	93	0.02	0.00	0.01	123.	*	21 JAN 1840	206	0.00	0.00	0.00	0.
21 JAN 0000	94	0.02	0.00	0.01	117.	*	21 JAN 1850	207	0.00	0.00	0.00	0.
21 JAN 0010	95	0.02	0.00	0.01	111.	*	21 JAN 1900	208	0.00	0.00	0.00	0.
21 JAN 0020	96	0.02	0.00	0.01	104.	*	21 JAN 1910	209	0.00	0.00	0.00	0.
21 JAN 0030	97	0.02	0.00	0.01	97.	*	21 JAN 1920	210	0.00	0.00	0.00	0.
21 JAN 0040	98	0.02	0.00	0.01	91.	*	21 JAN 1930	211	0.00	0.00	0.00	0.
21 JAN 0050	99	0.02	0.00	0.01	85.	*	21 JAN 1940	212	0.00	0.00	0.00	0.

21 JAN 0120	102	0.01	0.00	0.01	71.	*	21 JAN 2010	215	0.00	0.00	0.00	0.
21 JAN 0130	103	0.01	0.00	0.01	67.	*	21 JAN 2020	216	0.00	0.00	0.00	0.
21 JAN 0140	104	0.01	0.00	0.01	64.	*	21 JAN 2030	217	0.00	0.00	0.00	0.
21 JAN 0150	105	0.01	0.00	0.01	60.	*	21 JAN 2040	218	0.00	0.00	0.00	0.
21 JAN 0200	106	0.01	0.00	0.01	57.	*	21 JAN 2050	219	0.00	0.00	0.00	0.
21 JAN 0210	107	0.01	0.00	0.01	54.	*	21 JAN 2100	220	0.00	0.00	0.00	0.
21 JAN 0220	108	0.01	0.00	0.01	52.	*	21 JAN 2110	221	0.00	0.00	0.00	0.
21 JAN 0230	109	0.01	0.00	0.01	49.	*	21 JAN 2120	222	0.00	0.00	0.00	0.
21 JAN 0240	110	0.01	0.00	0.01	47.	*	21 JAN 2130	223	0.00	0.00	0.00	0.
21 JAN 0250	111	0.01	0.00	0.01	44.	*	21 JAN 2140	224	0.00	0.00	0.00	0.
21 JAN 0300	112	0.01	0.00	0.01	42.	*	21 JAN 2150	225	0.00	0.00	0.00	0.
21 JAN 0310	113	0.01	0.00	0.01	40.	*						

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TOTAL RAINFALL = 3.90, TOTAL LOSS = 1.78, TOTAL EXCESS = 2.12

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	37.33-HR
137.	14.50	(CFS)	90.	31.	20.	20.
		(INCHES)	1.541	2.117	2.118	2.118
		(AC-FT)	44.	61.	61.	61.

CUMULATIVE AREA = 0.54 SQ MI

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HYDROGRAPH AT STATION TF

PLAN 1, RATIO = 1.00

****

DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	20 JAN 1800	58	0.	21 JAN 0330	115	37.	21 JAN 1300	172	2.
20 JAN 0840	2	0.	20 JAN 1810	59	0.	21 JAN 0340	116	35.	21 JAN 1310	173	2.
20 JAN 0850	3	0.	20 JAN 1820	60	1.	21 JAN 0350	117	34.	21 JAN 1320	174	2.
20 JAN 0900	4	0.	20 JAN 1830	61	1.	21 JAN 0400	118	32.	21 JAN 1330	175	2.
20 JAN 0910	5	0.	20 JAN 1840	62	1.	21 JAN 0410	119	31.	21 JAN 1340	176	2.
20 JAN 0920	6	0.	20 JAN 1850	63	1.	21 JAN 0420	120	30.	21 JAN 1350	177	1.
20 JAN 0930	7	0.	20 JAN 1900	64	1.	21 JAN 0430	121	29.	21 JAN 1400	178	1.
20 JAN 0940	8	0.	20 JAN 1910	65	2.	21 JAN 0440	122	28.	21 JAN 1410	179	1.
20 JAN 0950	9	0.	20 JAN 1920	66	2.	21 JAN 0450	123	27.	21 JAN 1420	180	1.
20 JAN 1000	10	0.	20 JAN 1930	67	3.	21 JAN 0500	124	26.	21 JAN 1430	181	1.
20 JAN 1010	11	0.	20 JAN 1940	68	3.	21 JAN 0510	125	25.	21 JAN 1440	182	1.
20 JAN 1020	12	0.	20 JAN 1950	69	4.	21 JAN 0520	126	24.	21 JAN 1450	183	1.
20 JAN 1030	13	0.	20 JAN 2000	70	5.	21 JAN 0530	127	24.	21 JAN 1500	184	1.
20 JAN 1040	14	0.	20 JAN 2010	71	6.	21 JAN 0540	128	23.	21 JAN 1510	185	1.
20 JAN 1050	15	0.	20 JAN 2020	72	9.	21 JAN 0550	129	23.	21 JAN 1520	186	1.
20 JAN 1100	16	0.	20 JAN 2030	73	13.	21 JAN 0600	130	22.	21 JAN 1530	187	0.
20 JAN 1110	17	0.	20 JAN 2040	74	18.	21 JAN 0610	131	21.	21 JAN 1540	188	0.
20 JAN 1120	18	0.	20 JAN 2050	75	24.	21 JAN 0620	132	21.	21 JAN 1550	189	0.
20 JAN 1130	19	0.	20 JAN 2100	76	32.	21 JAN 0630	133	20.	21 JAN 1600	190	0.
20 JAN 1140	20	0.	20 JAN 2110	77	41.	21 JAN 0640	134	20.	21 JAN 1610	191	0.
20 JAN 1150	21	0.	20 JAN 2120	78	52.	21 JAN 0650	135	20.	21 JAN 1620	192	0.
20 JAN 1200	22	0.	20 JAN 2130	79	64.	21 JAN 0700	136	19.	21 JAN 1630	193	0.
20 JAN 1210	23	0.	20 JAN 2140	80	78.	21 JAN 0710	137	19.	21 JAN 1640	194	0.
20 JAN 1220	24	0.	20 JAN 2150	81	91.	21 JAN 0720	138	18.	21 JAN 1650	195	0.
20 JAN 1230	25	0.	20 JAN 2200	82	103.	21 JAN 0730	139	18.	21 JAN 1700	196	0.
20 JAN 1240	26	0.	20 JAN 2210	83	113.	21 JAN 0740	140	18.	21 JAN 1710	197	0.
20 JAN 1250	27	0.	20 JAN 2220	84	122.	21 JAN 0750	141	17.	21 JAN 1720	198	0.
20 JAN 1300	28	0.	20 JAN 2230	85	129.	21 JAN 0800	142	17.	21 JAN 1730	199	0.
20 JAN 1310	29	0.	20 JAN 2240	86	133.	21 JAN 0810	143	17.	21 JAN 1740	200	0.

20 JAN 1340	32	0.	*	20 JAN 2310	89	137.	*	21 JAN 0840	146	16.	*	21 JAN 1810	203	0.
20 JAN 1350	33	0.	*	20 JAN 2320	90	135.	*	21 JAN 0850	147	16.	*	21 JAN 1820	204	0.
20 JAN 1400	34	0.	*	20 JAN 2330	91	132.	*	21 JAN 0900	148	15.	*	21 JAN 1830	205	0.
20 JAN 1410	35	0.	*	20 JAN 2340	92	128.	*	21 JAN 0910	149	15.	*	21 JAN 1840	206	0.
20 JAN 1420	36	0.	*	20 JAN 2350	93	123.	*	21 JAN 0920	150	15.	*	21 JAN 1850	207	0.
20 JAN 1430	37	0.	*	21 JAN 0000	94	117.	*	21 JAN 0930	151	14.	*	21 JAN 1900	208	0.
20 JAN 1440	38	0.	*	21 JAN 0010	95	111.	*	21 JAN 0940	152	14.	*	21 JAN 1910	209	0.
20 JAN 1450	39	0.	*	21 JAN 0020	96	104.	*	21 JAN 0950	153	13.	*	21 JAN 1920	210	0.
20 JAN 1500	40	0.	*	21 JAN 0030	97	97.	*	21 JAN 1000	154	13.	*	21 JAN 1930	211	0.
20 JAN 1510	41	0.	*	21 JAN 0040	98	91.	*	21 JAN 1010	155	12.	*	21 JAN 1940	212	0.
20 JAN 1520	42	0.	*	21 JAN 0050	99	85.	*	21 JAN 1020	156	11.	*	21 JAN 1950	213	0.
20 JAN 1530	43	0.	*	21 JAN 0100	100	80.	*	21 JAN 1030	157	11.	*	21 JAN 2000	214	0.
20 JAN 1540	44	0.	*	21 JAN 0110	101	75.	*	21 JAN 1040	158	10.	*	21 JAN 2010	215	0.
20 JAN 1550	45	0.	*	21 JAN 0120	102	71.	*	21 JAN 1050	159	9.	*	21 JAN 2020	216	0.
20 JAN 1600	46	0.	*	21 JAN 0130	103	67.	*	21 JAN 1100	160	8.	*	21 JAN 2030	217	0.
20 JAN 1610	47	0.	*	21 JAN 0140	104	64.	*	21 JAN 1110	161	8.	*	21 JAN 2040	218	0.
20 JAN 1620	48	0.	*	21 JAN 0150	105	60.	*	21 JAN 1120	162	7.	*	21 JAN 2050	219	0.
20 JAN 1630	49	0.	*	21 JAN 0200	106	57.	*	21 JAN 1130	163	6.	*	21 JAN 2100	220	0.
20 JAN 1640	50	0.	*	21 JAN 0210	107	54.	*	21 JAN 1140	164	6.	*	21 JAN 2110	221	0.
20 JAN 1650	51	0.	*	21 JAN 0220	108	52.	*	21 JAN 1150	165	5.	*	21 JAN 2120	222	0.
20 JAN 1700	52	0.	*	21 JAN 0230	109	49.	*	21 JAN 1200	166	5.	*	21 JAN 2130	223	0.
20 JAN 1710	53	0.	*	21 JAN 0240	110	47.	*	21 JAN 1210	167	4.	*	21 JAN 2140	224	0.
20 JAN 1720	54	0.	*	21 JAN 0250	111	44.	*	21 JAN 1220	168	4.	*	21 JAN 2150	225	0.
20 JAN 1730	55	0.	*	21 JAN 0300	112	42.	*	21 JAN 1230	169	3.	*			
20 JAN 1740	56	0.	*	21 JAN 0310	113	40.	*	21 JAN 1240	170	3.	*			
20 JAN 1750	57	0.	*	21 JAN 0320	114	39.	*	21 JAN 1250	171	3.	*			
			*				*				*			

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	37.33-HR
137.	14.50	(CFS)	90.	31.	20.	20.
		(INCHES)	1.541	2.117	2.118	2.118
		(AC-FT)	44.	61.	61.	61.

CUMULATIVE AREA = 0.54 SQ MI

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          **************
          *            *
39 KK     *       FC   *      SUB-BASINS F&T ROUTED THROUGH CHANNEL TO OUTLET
          *            *
          **************
                          SUB-BASINS F&T ROUTED THROUGH CHANNEL TO OUTLET

41 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          0  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2        225  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT      0.167  TIME INTERVAL IN HOURS


            HYDROGRAPH ROUTING DATA

42 RK          KINEMATIC WAVE STREAM ROUTING
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S	0.00032	SLOPE
N	0.035	CHANNEL ROUGHNESS COEFFICIENT
CA	0.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	0.00	BOTTOM WIDTH OR DIAMETER
Z	2.00	SIDE SLOPE

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KINEMATIC STREAM ROUTING USED FOR THIS REACH

COMPUTED KINEMATIC PARAMETERS

ALPHA	M	DT (MIN)	DX (FT)
1.1194	1.333	5.00	1100.00

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HYDROGRAPH AT STATION FC

PLAN 1, RATIO = 1.00

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DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	20 JAN 1800	58	0.	21 JAN 0330	115	38.	21 JAN 1300	172	3.
20 JAN 0840	2	0.	20 JAN 1810	59	0.	21 JAN 0340	116	36.	21 JAN 1310	173	3.
20 JAN 0850	3	0.	20 JAN 1820	60	0.	21 JAN 0350	117	35.	21 JAN 1320	174	2.
20 JAN 0900	4	0.	20 JAN 1830	61	0.	21 JAN 0400	118	33.	21 JAN 1330	175	2.
20 JAN 0910	5	0.	20 JAN 1840	62	0.	21 JAN 0410	119	32.	21 JAN 1340	176	2.
20 JAN 0920	6	0.	20 JAN 1850	63	1.	21 JAN 0420	120	31.	21 JAN 1350	177	2.
20 JAN 0930	7	0.	20 JAN 1900	64	1.	21 JAN 0430	121	30.	21 JAN 1400	178	2.
20 JAN 0940	8	0.	20 JAN 1910	65	1.	21 JAN 0440	122	28.	21 JAN 1410	179	1.
20 JAN 0950	9	0.	20 JAN 1920	66	2.	21 JAN 0450	123	27.	21 JAN 1420	180	1.
20 JAN 1000	10	0.	20 JAN 1930	67	2.	21 JAN 0500	124	27.	21 JAN 1430	181	1.
20 JAN 1010	11	0.	20 JAN 1940	68	3.	21 JAN 0510	125	26.	21 JAN 1440	182	1.
20 JAN 1020	12	0.	20 JAN 1950	69	3.	21 JAN 0520	126	25.	21 JAN 1450	183	1.
20 JAN 1030	13	0.	20 JAN 2000	70	4.	21 JAN 0530	127	24.	21 JAN 1500	184	1.
20 JAN 1040	14	0.	20 JAN 2010	71	5.	21 JAN 0540	128	24.	21 JAN 1510	185	1.
20 JAN 1050	15	0.	20 JAN 2020	72	6.	21 JAN 0550	129	23.	21 JAN 1520	186	1.
20 JAN 1100	16	0.	20 JAN 2030	73	9.	21 JAN 0600	130	22.	21 JAN 1530	187	1.
20 JAN 1110	17	0.	20 JAN 2040	74	13.	21 JAN 0610	131	22.	21 JAN 1540	188	1.
20 JAN 1120	18	0.	20 JAN 2050	75	20.	21 JAN 0620	132	21.	21 JAN 1550	189	1.
20 JAN 1130	19	0.	20 JAN 2100	76	27.	21 JAN 0630	133	21.	21 JAN 1600	190	0.
20 JAN 1140	20	0.	20 JAN 2110	77	36.	21 JAN 0640	134	20.	21 JAN 1610	191	0.
20 JAN 1150	21	0.	20 JAN 2120	78	47.	21 JAN 0650	135	20.	21 JAN 1620	192	0.
20 JAN 1200	22	0.	20 JAN 2130	79	53.	21 JAN 0700	136	19.	21 JAN 1630	193	0.
20 JAN 1210	23	0.	20 JAN 2140	80	66.	21 JAN 0710	137	19.	21 JAN 1640	194	0.
20 JAN 1220	24	0.	20 JAN 2150	81	80.	21 JAN 0720	138	19.	21 JAN 1650	195	0.
20 JAN 1230	25	0.	20 JAN 2200	82	93.	21 JAN 0730	139	18.	21 JAN 1700	196	0.
20 JAN 1240	26	0.	20 JAN 2210	83	105.	21 JAN 0740	140	18.	21 JAN 1710	197	0.
20 JAN 1250	27	0.	20 JAN 2220	84	115.	21 JAN 0750	141	18.	21 JAN 1720	198	0.
20 JAN 1300	28	0.	20 JAN 2230	85	124.	21 JAN 0800	142	17.	21 JAN 1730	199	0.
20 JAN 1310	29	0.	20 JAN 2240	86	130.	21 JAN 0810	143	17.	21 JAN 1740	200	0.
20 JAN 1320	30	0.	20 JAN 2250	87	134.	21 JAN 0820	144	17.	21 JAN 1750	201	0.
20 JAN 1330	31	0.	20 JAN 2300	88	136.	21 JAN 0830	145	16.	21 JAN 1800	202	0.
20 JAN 1340	32	0.	20 JAN 2310	89	137.	21 JAN 0840	146	16.	21 JAN 1810	203	0.
20 JAN 1350	33	0.	20 JAN 2320	90	137.	21 JAN 0850	147	16.	21 JAN 1820	204	0.
20 JAN 1400	34	0.	20 JAN 2330	91	134.	21 JAN 0900	148	15.	21 JAN 1830	205	0.
20 JAN 1410	35	0.	20 JAN 2340	92	131.	21 JAN 0910	149	15.	21 JAN 1840	206	0.
20 JAN 1420	36	0.	20 JAN 2350	93	127.	21 JAN 0920	150	15.	21 JAN 1850	207	0.
20 JAN 1430	37	0.	21 JAN 0000	94	122.	21 JAN 0930	151	14.	21 JAN 1900	208	0.
20 JAN 1440	38	0.	21 JAN 0010	95	116.	21 JAN 0940	152	14.	21 JAN 1910	209	0.

20 JAN 1510	41	0.	*	21 JAN 0040	98	96.	*	21 JAN 1010	155	12.	*	21 JAN 1940	212	0.
20 JAN 1520	42	0.	*	21 JAN 0050	99	90.	*	21 JAN 1020	156	12.	*	21 JAN 1950	213	0.
20 JAN 1530	43	0.	*	21 JAN 0100	100	84.	*	21 JAN 1030	157	11.	*	21 JAN 2000	214	0.
20 JAN 1540	44	0.	*	21 JAN 0110	101	79.	*	21 JAN 1040	158	11.	*	21 JAN 2010	215	0.
20 JAN 1550	45	0.	*	21 JAN 0120	102	75.	*	21 JAN 1050	159	10.	*	21 JAN 2020	216	0.
20 JAN 1600	46	0.	*	21 JAN 0130	103	71.	*	21 JAN 1100	160	9.	*	21 JAN 2030	217	0.
20 JAN 1610	47	0.	*	21 JAN 0140	104	67.	*	21 JAN 1110	161	8.	*	21 JAN 2040	218	0.
20 JAN 1620	48	0.	*	21 JAN 0150	105	63.	*	21 JAN 1120	162	8.	*	21 JAN 2050	219	0.
20 JAN 1630	49	0.	*	21 JAN 0200	106	60.	*	21 JAN 1130	163	7.	*	21 JAN 2100	220	0.
20 JAN 1640	50	0.	*	21 JAN 0210	107	57.	*	21 JAN 1140	164	7.	*	21 JAN 2110	221	0.
20 JAN 1650	51	0.	*	21 JAN 0220	108	54.	*	21 JAN 1150	165	6.	*	21 JAN 2120	222	0.
20 JAN 1700	52	0.	*	21 JAN 0230	109	51.	*	21 JAN 1200	166	5.	*	21 JAN 2130	223	0.
20 JAN 1710	53	0.	*	21 JAN 0240	110	49.	*	21 JAN 1210	167	5.	*	21 JAN 2140	224	0.
20 JAN 1720	54	0.	*	21 JAN 0250	111	47.	*	21 JAN 1220	168	4.	*	21 JAN 2150	225	0.
20 JAN 1730	55	0.	*	21 JAN 0300	112	44.	*	21 JAN 1230	169	4.	*			
20 JAN 1740	56	0.	*	21 JAN 0310	113	42.	*	21 JAN 1240	170	4.	*			
20 JAN 1750	57	0.	*	21 JAN 0320	114	40.	*	21 JAN 1250	171	3.	*			

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	37.33-HR
137.	14.67	(CFS)	90.	31.	20.	20.
		(INCHES)	1.542	2.120	2.120	2.120
		(AC-FT)	44.	61.	61.	61.

CUMULATIVE AREA = 0.54 SQ MI

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          **************
          *            *
 43 KK    *      CP1   *      COMBINE ALL HYDROGRAPHS
          *            *
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44 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	100	LAST ORDINATE PUNCHED OR SAVED
TIMINT	0.167	TIME INTERVAL IN HOURS

45 BI READ STATION FC HYDROGRAPH FROM UNIT 21

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HYDROGRAPH AT STATION CP1

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DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	*	20 JAN 1800	58	0.	*	21 JAN 0330	115	38.	*	21 JAN 1300	172	3.
20 JAN 0840	2	0.	*	20 JAN 1810	59	0.	*	21 JAN 0340	116	36.	*	21 JAN 1310	173	3.
20 JAN 0850	3	0.	*	20 JAN 1820	60	0.	*	21 JAN 0350	117	35.	*	21 JAN 1320	174	2.

20 JAN 0920	6	0.	*	20 JAN 1850	63	1.	*	21 JAN 0420	120	31.	*	21 JAN 1350	177	2.
20 JAN 0930	7	0.	*	20 JAN 1900	64	1.	*	21 JAN 0430	121	30.	*	21 JAN 1400	178	2.
20 JAN 0940	8	0.	*	20 JAN 1910	65	1.	*	21 JAN 0440	122	28.	*	21 JAN 1410	179	1.
20 JAN 0950	9	0.	*	20 JAN 1920	66	2.	*	21 JAN 0450	123	27.	*	21 JAN 1420	180	1.
20 JAN 1000	10	0.	*	20 JAN 1930	67	2.	*	21 JAN 0500	124	27.	*	21 JAN 1430	181	1.
20 JAN 1010	11	0.	*	20 JAN 1940	68	3.	*	21 JAN 0510	125	26.	*	21 JAN 1440	182	1.
20 JAN 1020	12	0.	*	20 JAN 1950	69	3.	*	21 JAN 0520	126	25.	*	21 JAN 1450	183	1.
20 JAN 1030	13	0.	*	20 JAN 2000	70	4.	*	21 JAN 0530	127	24.	*	21 JAN 1500	184	1.
20 JAN 1040	14	0.	*	20 JAN 2010	71	5.	*	21 JAN 0540	128	24.	*	21 JAN 1510	185	1.
20 JAN 1050	15	0.	*	20 JAN 2020	72	6.	*	21 JAN 0550	129	23.	*	21 JAN 1520	186	1.
20 JAN 1100	16	0.	*	20 JAN 2030	73	9.	*	21 JAN 0600	130	22.	*	21 JAN 1530	187	1.
20 JAN 1110	17	0.	*	20 JAN 2040	74	13.	*	21 JAN 0610	131	22.	*	21 JAN 1540	188	1.
20 JAN 1120	18	0.	*	20 JAN 2050	75	20.	*	21 JAN 0620	132	21.	*	21 JAN 1550	189	1.
20 JAN 1130	19	0.	*	20 JAN 2100	76	27.	*	21 JAN 0630	133	21.	*	21 JAN 1600	190	0.
20 JAN 1140	20	0.	*	20 JAN 2110	77	36.	*	21 JAN 0640	134	20.	*	21 JAN 1610	191	0.
20 JAN 1150	21	0.	*	20 JAN 2120	78	47.	*	21 JAN 0650	135	20.	*	21 JAN 1620	192	0.
20 JAN 1200	22	0.	*	20 JAN 2130	79	53.	*	21 JAN 0700	136	19.	*	21 JAN 1630	193	0.
20 JAN 1210	23	0.	*	20 JAN 2140	80	66.	*	21 JAN 0710	137	19.	*	21 JAN 1640	194	0.
20 JAN 1220	24	0.	*	20 JAN 2150	81	80.	*	21 JAN 0720	138	19.	*	21 JAN 1650	195	0.
20 JAN 1230	25	0.	*	20 JAN 2200	82	93.	*	21 JAN 0730	139	18.	*	21 JAN 1700	196	0.
20 JAN 1240	26	0.	*	20 JAN 2210	83	105.	*	21 JAN 0740	140	18.	*	21 JAN 1710	197	0.
20 JAN 1250	27	0.	*	20 JAN 2220	84	115.	*	21 JAN 0750	141	18.	*	21 JAN 1720	198	0.
20 JAN 1300	28	0.	*	20 JAN 2230	85	124.	*	21 JAN 0800	142	17.	*	21 JAN 1730	199	0.
20 JAN 1310	29	0.	*	20 JAN 2240	86	130.	*	21 JAN 0810	143	17.	*	21 JAN 1740	200	0.
20 JAN 1320	30	0.	*	20 JAN 2250	87	134.	*	21 JAN 0820	144	17.	*	21 JAN 1750	201	0.
20 JAN 1330	31	0.	*	20 JAN 2300	88	136.	*	21 JAN 0830	145	16.	*	21 JAN 1800	202	0.
20 JAN 1340	32	0.	*	20 JAN 2310	89	137.	*	21 JAN 0840	146	16.	*	21 JAN 1810	203	0.
20 JAN 1350	33	0.	*	20 JAN 2320	90	137.	*	21 JAN 0850	147	16.	*	21 JAN 1820	204	0.
20 JAN 1400	34	0.	*	20 JAN 2330	91	134.	*	21 JAN 0900	148	15.	*	21 JAN 1830	205	0.
20 JAN 1410	35	0.	*	20 JAN 2340	92	131.	*	21 JAN 0910	149	15.	*	21 JAN 1840	206	0.
20 JAN 1420	36	0.	*	20 JAN 2350	93	127.	*	21 JAN 0920	150	15.	*	21 JAN 1850	207	0.
20 JAN 1430	37	0.	*	21 JAN 0000	94	122.	*	21 JAN 0930	151	14.	*	21 JAN 1900	208	0.
20 JAN 1440	38	0.	*	21 JAN 0010	95	116.	*	21 JAN 0940	152	14.	*	21 JAN 1910	209	0.
20 JAN 1450	39	0.	*	21 JAN 0020	96	109.	*	21 JAN 0950	153	14.	*	21 JAN 1920	210	0.
20 JAN 1500	40	0.	*	21 JAN 0030	97	102.	*	21 JAN 1000	154	13.	*	21 JAN 1930	211	0.
20 JAN 1510	41	0.	*	21 JAN 0040	98	96.	*	21 JAN 1010	155	12.	*	21 JAN 1940	212	0.
20 JAN 1520	42	0.	*	21 JAN 0050	99	90.	*	21 JAN 1020	156	12.	*	21 JAN 1950	213	0.
20 JAN 1530	43	0.	*	21 JAN 0100	100	84.	*	21 JAN 1030	157	11.	*	21 JAN 2000	214	0.
20 JAN 1540	44	0.	*	21 JAN 0110	101	79.	*	21 JAN 1040	158	11.	*	21 JAN 2010	215	0.
20 JAN 1550	45	0.	*	21 JAN 0120	102	75.	*	21 JAN 1050	159	10.	*	21 JAN 2020	216	0.
20 JAN 1600	46	0.	*	21 JAN 0130	103	71.	*	21 JAN 1100	160	9.	*	21 JAN 2030	217	0.
20 JAN 1610	47	0.	*	21 JAN 0140	104	67.	*	21 JAN 1110	161	8.	*	21 JAN 2040	218	0.
20 JAN 1620	48	0.	*	21 JAN 0150	105	63.	*	21 JAN 1120	162	8.	*	21 JAN 2050	219	0.
20 JAN 1630	49	0.	*	21 JAN 0200	106	60.	*	21 JAN 1130	163	7.	*	21 JAN 2100	220	0.
20 JAN 1640	50	0.	*	21 JAN 0210	107	57.	*	21 JAN 1140	164	7.	*	21 JAN 2110	221	0.
20 JAN 1650	51	0.	*	21 JAN 0220	108	54.	*	21 JAN 1150	165	6.	*	21 JAN 2120	222	0.
20 JAN 1700	52	0.	*	21 JAN 0230	109	51.	*	21 JAN 1200	166	5.	*	21 JAN 2130	223	0.
20 JAN 1710	53	0.	*	21 JAN 0240	110	49.	*	21 JAN 1210	167	5.	*	21 JAN 2140	224	0.
20 JAN 1720	54	0.	*	21 JAN 0250	111	47.	*	21 JAN 1220	168	4.	*	21 JAN 2150	225	0.
20 JAN 1730	55	0.	*	21 JAN 0300	112	44.	*	21 JAN 1230	169	4.	*			
20 JAN 1740	56	0.	*	21 JAN 0310	113	42.	*	21 JAN 1240	170	4.	*			
20 JAN 1750	57	0.	*	21 JAN 0320	114	40.	*	21 JAN 1250	171	3.	*			
			*				*				*			

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	37.33-HR
137.	14.67	(CFS)	90.	31.	20.	20.
		(INCHES)	1.542	2.120	2.120	2.120
		(AC-FT)	44.	61.	61.	61.

CUMULATIVE AREA = 0.54 SQ MI

ITEM 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION CP1
SUM OF 2 HYDROGRAPHS

DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	20 JAN 1800	58	0.	21 JAN 0330	115	60.	21 JAN 1300	172	4.
20 JAN 0840	2	0.	20 JAN 1810	59	0.	21 JAN 0340	116	58.	21 JAN 1310	173	4.
20 JAN 0850	3	0.	20 JAN 1820	60	1.	21 JAN 0350	117	55.	21 JAN 1320	174	3.
20 JAN 0900	4	0.	20 JAN 1830	61	1.	21 JAN 0400	118	53.	21 JAN 1330	175	3.
20 JAN 0910	5	0.	20 JAN 1840	62	1.	21 JAN 0410	119	51.	21 JAN 1340	176	3.
20 JAN 0920	6	0.	20 JAN 1850	63	2.	21 JAN 0420	120	49.	21 JAN 1350	177	2.
20 JAN 0930	7	0.	20 JAN 1900	64	2.	21 JAN 0430	121	48.	21 JAN 1400	178	2.
20 JAN 0940	8	0.	20 JAN 1910	65	3.	21 JAN 0440	122	46.	21 JAN 1410	179	2.
20 JAN 0950	9	0.	20 JAN 1920	66	3.	21 JAN 0450	123	44.	21 JAN 1420	180	2.
20 JAN 1000	10	0.	20 JAN 1930	67	4.	21 JAN 0500	124	43.	21 JAN 1430	181	2.
20 JAN 1010	11	0.	20 JAN 1940	68	5.	21 JAN 0510	125	42.	21 JAN 1440	182	1.
20 JAN 1020	12	0.	20 JAN 1950	69	6.	21 JAN 0520	126	41.	21 JAN 1450	183	1.
20 JAN 1030	13	0.	20 JAN 2000	70	8.	21 JAN 0530	127	40.	21 JAN 1500	184	1.
20 JAN 1040	14	0.	20 JAN 2010	71	10.	21 JAN 0540	128	39.	21 JAN 1510	185	1.
20 JAN 1050	15	0.	20 JAN 2020	72	14.	21 JAN 0550	129	38.	21 JAN 1520	186	1.
20 JAN 1100	16	0.	20 JAN 2030	73	20.	21 JAN 0600	130	37.	21 JAN 1530	187	1.
20 JAN 1110	17	0.	20 JAN 2040	74	30.	21 JAN 0610	131	36.	21 JAN 1540	188	1.
20 JAN 1120	18	0.	20 JAN 2050	75	43.	21 JAN 0620	132	35.	21 JAN 1550	189	1.
20 JAN 1130	19	0.	20 JAN 2100	76	59.	21 JAN 0630	133	34.	21 JAN 1600	190	1.
20 JAN 1140	20	0.	20 JAN 2110	77	77.	21 JAN 0640	134	33.	21 JAN 1610	191	1.
20 JAN 1150	21	0.	20 JAN 2120	78	99.	21 JAN 0650	135	33.	21 JAN 1620	192	0.
20 JAN 1200	22	0.	20 JAN 2130	79	118.	21 JAN 0700	136	32.	21 JAN 1630	193	0.
20 JAN 1210	23	0.	20 JAN 2140	80	143.	21 JAN 0710	137	31.	21 JAN 1640	194	0.
20 JAN 1220	24	0.	20 JAN 2150	81	167.	21 JAN 0720	138	31.	21 JAN 1650	195	0.
20 JAN 1230	25	0.	20 JAN 2200	82	189.	21 JAN 0730	139	30.	21 JAN 1700	196	0.
20 JAN 1240	26	0.	20 JAN 2210	83	207.	21 JAN 0740	140	30.	21 JAN 1710	197	0.
20 JAN 1250	27	0.	20 JAN 2220	84	222.	21 JAN 0750	141	29.	21 JAN 1720	198	0.
20 JAN 1300	28	0.	20 JAN 2230	85	232.	21 JAN 0800	142	29.	21 JAN 1730	199	0.
20 JAN 1310	29	0.	20 JAN 2240	86	239.	21 JAN 0810	143	28.	21 JAN 1740	200	0.
20 JAN 1320	30	0.	20 JAN 2250	87	243.	21 JAN 0820	144	28.	21 JAN 1750	201	0.
20 JAN 1330	31	0.	20 JAN 2300	88	243.	21 JAN 0830	145	28.	21 JAN 1800	202	0.
20 JAN 1340	32	0.	20 JAN 2310	89	240.	21 JAN 0840	146	27.	21 JAN 1810	203	0.
20 JAN 1350	33	0.	20 JAN 2320	90	235.	21 JAN 0850	147	27.	21 JAN 1820	204	0.
20 JAN 1400	34	0.	20 JAN 2330	91	227.	21 JAN 0900	148	26.	21 JAN 1830	205	0.
20 JAN 1410	35	0.	20 JAN 2340	92	218.	21 JAN 0910	149	25.	21 JAN 1840	206	0.
20 JAN 1420	36	0.	20 JAN 2350	93	207.	21 JAN 0920	150	25.	21 JAN 1850	207	0.
20 JAN 1430	37	0.	21 JAN 0000	94	196.	21 JAN 0930	151	24.	21 JAN 1900	208	0.
20 JAN 1440	38	0.	21 JAN 0010	95	185.	21 JAN 0940	152	23.	21 JAN 1910	209	0.
20 JAN 1450	39	0.	21 JAN 0020	96	173.	21 JAN 0950	153	22.	21 JAN 1920	210	0.
20 JAN 1500	40	0.	21 JAN 0030	97	162.	21 JAN 1000	154	21.	21 JAN 1930	211	0.
20 JAN 1510	41	0.	21 JAN 0040	98	152.	21 JAN 1010	155	20.	21 JAN 1940	212	0.
20 JAN 1520	42	0.	21 JAN 0050	99	142.	21 JAN 1020	156	19.	21 JAN 1950	213	0.
20 JAN 1530	43	0.	21 JAN 0100	100	134.	21 JAN 1030	157	18.	21 JAN 2000	214	0.
20 JAN 1540	44	0.	21 JAN 0110	101	126.	21 JAN 1040	158	16.	21 JAN 2010	215	0.
20 JAN 1550	45	0.	21 JAN 0120	102	118.	21 JAN 1050	159	15.	21 JAN 2020	216	0.
20 JAN 1600	46	0.	21 JAN 0130	103	112.	21 JAN 1100	160	14.	21 JAN 2030	217	0.
20 JAN 1610	47	0.	21 JAN 0140	104	106.	21 JAN 1110	161	13.	21 JAN 2040	218	0.
20 JAN 1620	48	0.	21 JAN 0150	105	100.	21 JAN 1120	162	12.	21 JAN 2050	219	0.
20 JAN 1630	49	0.	21 JAN 0200	106	95.	21 JAN 1130	163	11.	21 JAN 2100	220	0.
20 JAN 1640	50	0.	21 JAN 0210	107	90.	21 JAN 1140	164	10.	21 JAN 2110	221	0.
20 JAN 1650	51	0.	21 JAN 0220	108	85.	21 JAN 1150	165	9.	21 JAN 2120	222	0.
20 JAN 1700	52	0.	21 JAN 0230	109	81.	21 JAN 1200	166	8.	21 JAN 2130	223	0.

20 JAN 1730	55	0.	*	21 JAN 0300	112	70.	*	21 JAN 1230	169	6.	*						
20 JAN 1740	56	0.	*	21 JAN 0310	113	67.	*	21 JAN 1240	170	5.	*						
20 JAN 1750	57	0.	*	21 JAN 0320	114	64.	*	21 JAN 1250	171	4.	*						
			*				*				*						

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	37.33-HR
243.	14.50	(CFS)	155.	53.	34.	34.
		(INCHES)	1.533	2.085	2.085	2.085
		(AC-FT)	77.	105.	105.	105.

CUMULATIVE AREA = 0.94 SQ MI

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          *            *
47 KK     *     1OUT   *      *****COMBINED HYDROGRAPHS ROUTED THROUGH OUTLET AT BUCKEYE*****
          *            *
          **************
                         ************************************************************************
                         *******ROUTING OF COMBINED HYDROGRAPH THROUGH OUTLET AT BUCKEYE ROAD********
                         ************************************************************************

51 KO          OUTPUT CONTROL VARIABLES
                    IPRNT          0  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

            HYDROGRAPH ROUTING DATA

52 RS          STORAGE ROUTING
                                          NSTPS          1  NUMBER OF SUBREACHES
                     ITYP       STOR  TYPE OF INITIAL CONDITION
                   RSVRIC       0.25  INITIAL CONDITION
                        X       0.00 WORKING R AND D COEFFICIENT

53 SV            STORAGE        0.3      0.3      0.7     14.9     71.8    106.1    118.8    192.5    252.0    341.8

54 SQ          DISCHARGE         0.       0.       0.       0.       0.       0.       0.       0.      42.      63.

55 SE          ELEVATION      955.70   956.00   958.00   960.00   962.00   962.75   963.00   964.20   965.00   966.00

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HYDROGRAPH AT STATION 1OUT

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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
20 JAN 0830	1	0.	0.2	955.7	*	20 JAN 2100	76	0.	2.8	958.3	*	21 JAN 0930	151	0.	100.5	962.6
20 JAN 0840	2	0.	0.2	955.7	*	20 JAN 2110	77	0.	3.7	958.4	*	21 JAN 0940	152	0.	100.9	962.6
20 JAN 0850	3	0.	0.2	955.7	*	20 JAN 2120	78	0.	4.9	958.6	*	21 JAN 0950	153	0.	101.2	962.6

20	JAN	0920	6	0.	0.2	955.7	*	20 JAN 2150	81	0.	10.4	959.4	*	21 JAN 1020	156	0.	102.0	962.7
20	JAN	0930	7	0.	0.2	955.7	*	20 JAN 2200	82	0.	12.8	959.7	*	21 JAN 1030	157	0.	102.3	962.7
20	JAN	0940	8	0.	0.2	955.7	*	20 JAN 2210	83	0.	15.5	960.0	*	21 JAN 1040	158	0.	102.5	962.7
20	JAN	0950	9	0.	0.2	955.7	*	20 JAN 2220	84	0.	18.5	960.1	*	21 JAN 1050	159	0.	102.7	962.7
20	JAN	1000	10	0.	0.2	955.7	*	20 JAN 2230	85	0.	21.6	960.2	*	21 JAN 1100	160	0.	102.9	962.7
20	JAN	1010	11	0.	0.2	955.7	*	20 JAN 2240	86	0.	24.9	960.4	*	21 JAN 1110	161	0.	103.1	962.7
20	JAN	1020	12	0.	0.2	955.7	*	20 JAN 2250	87	0.	28.2	960.5	*	21 JAN 1120	162	0.	103.3	962.7
20	JAN	1030	13	0.	0.2	955.7	*	20 JAN 2300	88	0.	31.5	960.6	*	21 JAN 1130	163	0.	103.4	962.7
20	JAN	1040	14	0.	0.2	955.7	*	20 JAN 2310	89	0.	34.8	960.7	*	21 JAN 1140	164	0.	103.6	962.7
20	JAN	1050	15	0.	0.2	955.7	*	20 JAN 2320	90	0.	38.1	960.8	*	21 JAN 1150	165	0.	103.7	962.7
20	JAN	1100	16	0.	0.2	955.7	*	20 JAN 2330	91	0.	41.3	960.9	*	21 JAN 1200	166	0.	103.8	962.7
20	JAN	1110	17	0.	0.2	955.7	*	20 JAN 2340	92	0.	44.4	961.0	*	21 JAN 1210	167	0.	103.9	962.7
20	JAN	1120	18	0.	0.2	955.7	*	20 JAN 2350	93	0.	47.3	961.1	*	21 JAN 1220	168	0.	104.0	962.7
20	JAN	1130	19	0.	0.2	955.7	*	21 JAN 0000	94	0.	50.1	961.2	*	21 JAN 1230	169	0.	104.1	962.7
20	JAN	1140	20	0.	0.2	955.7	*	21 JAN 0010	95	0.	52.7	961.3	*	21 JAN 1240	170	0.	104.2	962.7
20	JAN	1150	21	0.	0.2	955.7	*	21 JAN 0020	96	0.	55.1	961.4	*	21 JAN 1250	171	0.	104.2	962.7
20	JAN	1200	22	0.	0.2	955.7	*	21 JAN 0030	97	0.	57.5	961.5	*	21 JAN 1300	172	0.	104.3	962.7
20	JAN	1210	23	0.	0.2	955.7	*	21 JAN 0040	98	0.	59.6	961.6	*	21 JAN 1310	173	0.	104.3	962.7
20	JAN	1220	24	0.	0.2	955.7	*	21 JAN 0050	99	0.	61.6	961.6	*	21 JAN 1320	174	0.	104.4	962.7
20	JAN	1230	25	0.	0.2	955.7	*	21 JAN 0100	100	0.	63.5	961.7	*	21 JAN 1330	175	0.	104.4	962.7
20	JAN	1240	26	0.	0.2	955.7	*	21 JAN 0110	101	0.	65.3	961.8	*	21 JAN 1340	176	0.	104.5	962.7
20	JAN	1250	27	0.	0.2	955.7	*	21 JAN 0120	102	0.	67.0	961.8	*	21 JAN 1350	177	0.	104.5	962.7
20	JAN	1300	28	0.	0.2	955.7	*	21 JAN 0130	103	0.	68.6	961.9	*	21 JAN 1400	178	0.	104.5	962.7
20	JAN	1310	29	0.	0.2	955.7	*	21 JAN 0140	104	0.	70.1	961.9	*	21 JAN 1410	179	0.	104.5	962.7
20	JAN	1320	30	0.	0.2	955.7	*	21 JAN 0150	105	0.	71.5	962.0	*	21 JAN 1420	180	0.	104.6	962.7
20	JAN	1330	31	0.	0.2	955.7	*	21 JAN 0200	106	0.	72.9	962.0	*	21 JAN 1430	181	0.	104.6	962.7
20	JAN	1340	32	0.	0.2	955.7	*	21 JAN 0210	107	0.	74.1	962.1	*	21 JAN 1440	182	0.	104.6	962.7
20	JAN	1350	33	0.	0.2	955.7	*	21 JAN 0220	108	0.	75.3	962.1	*	21 JAN 1450	183	0.	104.6	962.7
20	JAN	1400	34	0.	0.2	955.7	*	21 JAN 0230	109	0.	76.5	962.1	*	21 JAN 1500	184	0.	104.7	962.7
20	JAN	1410	35	0.	0.2	955.7	*	21 JAN 0240	110	0.	77.6	962.1	*	21 JAN 1510	185	0.	104.7	962.7
20	JAN	1420	36	0.	0.2	955.7	*	21 JAN 0250	111	0.	78.6	962.1	*	21 JAN 1520	186	0.	104.7	962.7
20	JAN	1430	37	0.	0.2	955.7	*	21 JAN 0300	112	0.	79.6	962.2	*	21 JAN 1530	187	0.	104.7	962.7
20	JAN	1440	38	0.	0.2	955.7	*	21 JAN 0310	113	0.	80.5	962.2	*	21 JAN 1540	188	0.	104.7	962.7
20	JAN	1450	39	0.	0.2	955.7	*	21 JAN 0320	114	0.	81.4	962.2	*	21 JAN 1550	189	0.	104.7	962.7
20	JAN	1500	40	0.	0.2	955.7	*	21 JAN 0330	115	0.	82.3	962.2	*	21 JAN 1600	190	0.	104.7	962.7
20	JAN	1510	41	0.	0.2	955.7	*	21 JAN 0340	116	0.	83.1	962.2	*	21 JAN 1610	191	0.	104.7	962.7
20	JAN	1520	42	0.	0.2	955.7	*	21 JAN 0350	117	0.	83.9	962.3	*	21 JAN 1620	192	0.	104.7	962.7
20	JAN	1530	43	0.	0.2	955.7	*	21 JAN 0400	118	0.	84.6	962.3	*	21 JAN 1630	193	0.	104.7	962.7
20	JAN	1540	44	0.	0.2	955.7	*	21 JAN 0410	119	0.	85.4	962.3	*	21 JAN 1640	194	0.	104.7	962.7
20	JAN	1550	45	0.	0.2	955.7	*	21 JAN 0420	120	0.	86.1	962.3	*	21 JAN 1650	195	0.	104.7	962.7
20	JAN	1600	46	0.	0.2	955.7	*	21 JAN 0430	121	0.	86.7	962.3	*	21 JAN 1700	196	0.	104.8	962.7
20	JAN	1610	47	0.	0.2	955.7	*	21 JAN 0440	122	0.	87.4	962.3	*	21 JAN 1710	197	0.	104.8	962.7
20	JAN	1620	48	0.	0.2	955.7	*	21 JAN 0450	123	0.	88.0	962.4	*	21 JAN 1720	198	0.	104.8	962.7
20	JAN	1630	49	0.	0.2	955.7	*	21 JAN 0500	124	0.	88.6	962.4	*	21 JAN 1730	199	0.	104.8	962.7
20	JAN	1640	50	0.	0.3	955.7	*	21 JAN 0510	125	0.	89.2	962.4	*	21 JAN 1740	200	0.	104.8	962.7
20	JAN	1650	51	0.	0.3	955.7	*	21 JAN 0520	126	0.	89.8	962.4	*	21 JAN 1750	201	0.	104.8	962.7
20	JAN	1700	52	0.	0.3	955.7	*	21 JAN 0530	127	0.	90.3	962.4	*	21 JAN 1800	202	0.	104.8	962.7
20	JAN	1710	53	0.	0.3	955.7	*	21 JAN 0540	128	0.	90.8	962.4	*	21 JAN 1810	203	0.	104.8	962.7
20	JAN	1720	54	0.	0.3	955.7	*	21 JAN 0550	129	0.	91.4	962.4	*	21 JAN 1820	204	0.	104.8	962.7
20	JAN	1730	55	0.	0.3	955.7	*	21 JAN 0600	130	0.	91.9	962.4	*	21 JAN 1830	205	0.	104.8	962.7
20	JAN	1740	56	0.	0.3	955.8	*	21 JAN 0610	131	0.	92.4	962.4	*	21 JAN 1840	206	0.	104.8	962.7
20	JAN	1750	57	0.	0.3	955.8	*	21 JAN 0620	132	0.	92.9	962.5	*	21 JAN 1850	207	0.	104.8	962.7
20	JAN	1800	58	0.	0.3	955.9	*	21 JAN 0630	133	0.	93.3	962.5	*	21 JAN 1900	208	0.	104.8	962.7
20	JAN	1810	59	0.	0.3	956.0	*	21 JAN 0640	134	0.	93.8	962.5	*	21 JAN 1910	209	0.	104.8	962.7
20	JAN	1820	60	0.	0.3	956.0	*	21 JAN 0650	135	0.	94.3	962.5	*	21 JAN 1920	210	0.	104.8	962.7
20	JAN	1830	61	0.	0.3	956.1	*	21 JAN 0700	136	0.	94.7	962.5	*	21 JAN 1930	211	0.	104.8	962.7
20	JAN	1840	62	0.	0.3	956.1	*	21 JAN 0710	137	0.	95.2	962.5	*	21 JAN 1940	212	0.	104.8	962.7
20	JAN	1850	63	0.	0.3	956.2	*	21 JAN 0720	138	0.	95.6	962.5	*	21 JAN 1950	213	0.	104.8	962.7
20	JAN	1900	64	0.	0.3	956.3	*	21 JAN 0730	139	0.	96.0	962.5	*	21 JAN 2000	214	0.	104.8	962.7
20	JAN	1910	65	0.	0.4	956.5	*	21 JAN 0740	140	0.	96.4	962.5	*	21 JAN 2010	215	0.	104.8	962.7
20	JAN	1920	66	0.	0.4	956.7	*	21 JAN 0750	141	0.	96.8	962.5	*	21 JAN 2020	216	0.	104.8	962.7
20	JAN	1930	67	0.	0.5	956.9	*	21 JAN 0800	142	0.	97.2	962.6	*	21 JAN 2030	217	0.	104.8	962.7
20	JAN	1940	68	0.	0.5	957.2	*	21 JAN 0810	143	0.	97.6	962.6	*	21 JAN 2040	218	0.	104.8	962.7
20	JAN	1950	69	0.	0.6	957.6	*	21 JAN 0820	144	0.	98.0	962.6	*	21 JAN 2050	219	0.	104.8	962.7
20	JAN	2000	70	0.	0.7	958.0	*	21 JAN 0830	145	0.	98.4	962.6	*	21 JAN 2100	220	0.	104.8	962.7

20 JAN 2020	72	0.	1.0	958.0 *	21 JAN 0850	147	0.	99.1	962.6 *	21 JAN 2120	222	0.	104.8	962.7
20 JAN 2030	73	0.	1.2	958.1 *	21 JAN 0900	148	0.	99.5	962.6 *	21 JAN 2130	223	0.	104.8	962.7
20 JAN 2040	74	0.	1.6	958.1 *	21 JAN 0910	149	0.	99.9	962.6 *	21 JAN 2140	224	0.	104.8	962.7
20 JAN 2050	75	0.	2.1	958.2 *	21 JAN 0920	150	0.	100.2	962.6 *	21 JAN 2150	225	0.	104.8	962.7
				*					*					

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	37.33-HR
0.	0.17	(CFS)	0.	0.	0.	0.
		(INCHES)	0.000	0.000	0.000	0.000
		(AC-FT)	0.	0.	0.	0.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	37.33-HR
105.	36.83	105.	90.	58.	58.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	37.33-HR
962.72	36.17	962.72	962.32	960.14	960.14

CUMULATIVE AREA = 0.94 SQ MI

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

RATIOS APPLIED TO FLOWS

PERATION	STATION	AREA	PLAN		RATIO 1
					1.00
YDROGRAPH AT	AD	0.40	1	FLOW	110.
				TIME	14.17
YDROGRAPH AT	TF	0.54	1	FLOW	137.
				TIME	14.50
ROUTED TO	FC	0.54	1	FLOW	137.
				TIME	14.67
2 COMBINED AT	CP1	0.94	1	FLOW	243.
				TIME	14.50
ROUTED TO	1OUT	0.94	1	FLOW	0.
				TIME	0.17

** PEAK STAGES IN FEET **

1	STAGE	962.72
	TIME	36.17

SUMMARY OF COMPONENT COSTS

PROJECT	LOCATION	CAPACITY	CAPITAL COST	AMORTIZED CAPITAL COST	ANNUAL O+M COST	ANNUAL POWER COST	TOTAL ANNUAL COST

SYSTEM COST AND PERFORMANCE SUMMARY
(UNITS SAME AS INPUT - NORMALLY 1000\S OF DOLLARS)

TOTAL SYSTEM CAPITAL COST * * * * * * * * * * * * * *	0.	
TOTAL SYSTEM AMORTIZED CAPITAL COST * * * * * * * * *	0.	
TOTAL SYSTEM ANNUAL O,M,POWER AND REPLACEMENT COST *	0.	
TOTAL SYSTEM ANNUAL COST * * * * * * * * * * * * * *		0.
AVERAGE ANNUAL DAMAGES -- EXISTING CONDITIONS * * * *	0.	
AVERAGE ANNUAL DAMAGES -- OPTIMIZED SYSTEM * * * * *	0.	
AVERAGE ANNUAL DAMAGE REDUCTION (BENEFITS) * * * * *		0.
AVERAGE ANNUAL SYSTEM NET BENEFITS * * * * * * * * *		0.

```
*** NORMAL END OF HEC-1 ***
101
$ delete for0*.dat;*
FLICK        Job terminated at  8-FEB-1989 10:27:26.83

Accounting information:
Buffered I/O count:          82      Peak working set size:   876
Direct I/O count:           338      Peak page file size:    1605
Page faults:               1105      Mounted volumes:           0
Charged CPU time:    0 00:00:24.37   Elapsed time:    0 00:00:42.81
```

```
$ set default [HYDRO.FLICK.POND]
$ define for005 T.DAT;5
$ define for006 sys$output
$ RUN DJA$EXE:hec1
```

```
*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*            FEBRUARY 1981              *
*          REVISED 30 OCT 81            *
*                                       *
*  RUN DATE       8-F    TIME      10:2 *
*                                       *
*****************************************
```

```
*****************************************
*                                       *
*    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 KM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. SEE SEPTEMBER 1981 INPUT DESCRIPTION FOR NEW DEFINITIONS.

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

  1           ID   PONDING ANALYSIS FOR AGUA FRIA RIVER FIS, JJA JOB NO. 286-080.02
  2           ID   PONDING @ WEST BANK NORTH OF I-10 CONC. POINT 'I'
  3           IT      10 20JAN89    0830     300
  4           IN      30 20JAN89    0830
  5           IO       0       0       0
  6           QQ     0.1     1.0
              *       PONDING LOCATION WEST OF CHANNELIZATION NORTH OF INTERSTATE 10
              *       CONCENTRATION POINT 'I'. THIS DRAINAGE AREA IS BOUNDED TO THE
              *       EAST BY THE AGUA FRIA LEVEE STRUCTURE, TO THE SOUTH BY I-10
              *       TO THE WEST BY DYSART ROAD AND TO THE NORTH BY THE NEW MCDOWELL RD.
              *       ALIGNMENT.
              *       THIS AREA IS APPROXIMATELY 0.158 sq. mi. AND DEVELOPS A
              *       Q100 = 74 CFS
              *       THIS RUNOFF IS ROUTED THROUGH 2-36" RCPS @ RIVER STA. 5.27

  7           KK       1
  8           KO       0       0       0       0      31       0       0       0
  9           BA   0.158
 10           PB       0
              *       24-HOUR TYPE II STORM
 11           PC       0    0.02    0.04    0.06    0.09    0.11    0.14    0.16    0.19    0.22
 12           PC    0.25    0.28    0.31    0.35    0.38    0.42    0.47    0.52    0.57    0.63
 13           PC    0.71    0.80    0.92    1.10    2.59    2.87    3.01    3.12    3.20    3.27
 14           PC    3.33    3.38    3.43    3.48    3.52    3.55    3.59    3.62    3.65    3.68
 15           PC    3.71    3.74    3.76    3.79    3.81    3.84    3.86    3.88    3.90
              *       SCS RUNOFF & ROUTING PARAMETERS USED THROUGHOUT THIS RUN. Cn = 81
              *       IMPERVIOUSNESS CONSIDERED AS PART OF CURVE
 16           LS       0      81
              *       LAG = ((L**0.8)(S+1)**0.7)/(1900(Y**0.5))
              *       L = 3650 FT, S = 2.35 , Y = .45 %, lag = 1.00 hrs
 17           UD    1.00

 18           KK    IOUT  WATERSHED ROUTED THROUGH 2-36" RCPS AT CONC. PT. 'I' RIVER STA. 5.27
 19           KO       0       0       0       0       0       0     100
 20           RS       1    STOR       0       0
 21           SA       0  .00001   .0001    .001     .32     .63    7.73   22.99   34.94   41.79
 22           SO       0      37      70     110     121     131     146     180     204     216
 23           SE   977.4     978   978.7     980   980.5     981     982     984     986     987
              *    ***************************************************
              *    ***** NOTE: AT ANY PONDING ELEVATION WHERE SA *****
              *    ***** IS ZERO (AT THE PIPE INLET), IT IS      *****
              *    ***** IMPOSSIBLE TO SHOW THE PONDING LIMITS   *****
              *    ***** ON THE FIRM WORK MAPS                   *****
              *    ***************************************************
 24           ZZ
```

```
*****************************************
*                                       *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *
*            FEBRUARY 1981              *
*          REVISED 30 OCT 81            *
*                                       *
*  RUN DATE       8-F    TIME      10:2 *
*                                       *
*****************************************
```

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

PONDING ANALYSIS FOR AGUA FRIA RIVER FIS, JJA JOB NO. 286-080.02
PONDING @ WEST BANK NORTH OF I-10 CONC. POINT 'I'

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

   IT         HYDROGRAPH TIME DATA
                    NMIN         10  MINUTES IN COMPUTATION INTERVAL
                   IDATE     20JAN89  STARTING DATE
                   ITIME        0830  STARTING TIME
                      NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     22JAN89  ENDING DATE
                  NDTIME        1020  ENDING TIME

              COMPUTATION INTERVAL    0.17 HOURS
                   TOTAL TIME BASE   49.83 HOURS

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

   JP         MULTI-PLAN OPTION
                  NPLAN          1  NUMBER OF PLANS

   JR         MULTI-RATIO OPTION
                RATIOS OF RUNOFF
               1.00


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

          **************
          *            *
  7 KK    *         1  *
          *            *
          **************

  8 KO        OUTPUT CONTROL VARIABLES
                   IPRNT          0  PRINT CONTROL
                   IPLOT          0  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE
                   IPUNCH         0  PUNCH COMPUTED HYDROGRAPH
```

```
           ISAV1         1  FIRST ORDINATE PUNCHED OR SAVED
           ISAV2       300  LAST ORDINATE PUNCHED OR SAVED
          TIMINT     0.167  TIME INTERVAL IN HOURS


 4 IN        TIME DATA FOR INPUT TIME SERIES
           JXMIN        30  TIME INTERVAL IN MINUTES
          JXDATE   20JAN89  STARTING DATE
          JXTIME       830  STARTING TIME

         SUBBASIN RUNOFF DATA

 9 BA        SUBBASIN CHARACTERISTICS
           TAREA      0.16  SUBBASIN AREA

             PRECIPITATION DATA

10 PB          STORM      3.90  BASIN TOTAL PRECIPITATION

11 PI          INCREMENTAL PRECIPITATION PATTERN
            0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01
            0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01
            0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01
            0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01
            0.01     0.01     0.01     0.01     0.01     0.02     0.02     0.02     0.02     0.02
            0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.03     0.03     0.03
            0.03     0.03     0.03     0.04     0.04     0.04     0.06     0.06     0.06     0.50
            0.50     0.50     0.09     0.09     0.09     0.05     0.05     0.05     0.04     0.04
            0.04     0.03     0.03     0.03     0.02     0.02     0.02     0.02     0.02     0.02
            0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.02     0.01
            0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01
            0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01
            0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01
            0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01
            0.01     0.01     0.01     0.01

16 LS        SCS LOSS RATE
           STRTL      0.47  INITIAL ABSTRACTION
          CRVNBR     81.00  CURVE NUMBER
           RTIMP      0.00  PERCENT IMPERVIOUS AREA

17 UD        SCS DIMENSIONLESS UNITGRAPH
            TLAG      1.00  LAG

                                                ***

                                            UNIT HYDROGRAPH
                                        32 END-OF-PERIOD ORDINATES
          5.       14.       29.       48.       63.       70.       70.       64.       56.       45.
         33.       26.       20.       16.       12.        9.        7.        6.        4.        3.
          3.        3.        2.        1.        1.        1.        1.        1.        0.        0.
          0.        0.
*********************************************************************************************************

                                          HYDROGRAPH AT STATION        1

*********************************************************************************************************
                                                  *
   DA MON HRMN  ORD    RAIN   LOSS  EXCESS     COMP Q   *   DA MON HRMN  ORD    RAIN   LOSS  EXCESS     COMP Q
                                                  *
   20 JAN 0830    1    0.00   0.00   0.00         0.    *   21 JAN 0930  151    0.00   0.00   0.00          2.
   20 JAN 0840    2    0.01   0.01   0.00         0.    *   21 JAN 0940  152    0.00   0.00   0.00          2.
   20 JAN 0850    3    0.01   0.01   0.00         0.    *   21 JAN 0950  153    0.00   0.00   0.00          1.
   20 JAN 0900    4    0.01   0.01   0.00         0.    *   21 JAN 1000  154    0.00   0.00   0.00          1.
```

20 JAN 0920	6	0.01	0.01	0.00	0.	*	21 JAN 1020	156	0.00	0.00	0.00	1.
20 JAN 0930	7	0.01	0.01	0.00	0.	*	21 JAN 1030	157	0.00	0.00	0.00	1.
20 JAN 0940	8	0.01	0.01	0.00	0.	*	21 JAN 1040	158	0.00	0.00	0.00	0.
20 JAN 0950	9	0.01	0.01	0.00	0.	*	21 JAN 1050	159	0.00	0.00	0.00	0.
20 JAN 1000	10	0.01	0.01	0.00	0.	*	21 JAN 1100	160	0.00	0.00	0.00	0.
20 JAN 1010	11	0.01	0.01	0.00	0.	*	21 JAN 1110	161	0.00	0.00	0.00	0.
20 JAN 1020	12	0.01	0.01	0.00	0.	*	21 JAN 1120	162	0.00	0.00	0.00	0.
20 JAN 1030	13	0.01	0.01	0.00	0.	*	21 JAN 1130	163	0.00	0.00	0.00	0.
20 JAN 1040	14	0.01	0.01	0.00	0.	*	21 JAN 1140	164	0.00	0.00	0.00	0.
20 JAN 1050	15	0.01	0.01	0.00	0.	*	21 JAN 1150	165	0.00	0.00	0.00	0.
20 JAN 1100	16	0.01	0.01	0.00	0.	*	21 JAN 1200	166	0.00	0.00	0.00	0.
20 JAN 1110	17	0.01	0.01	0.00	0.	*	21 JAN 1210	167	0.00	0.00	0.00	0.
20 JAN 1120	18	0.01	0.01	0.00	0.	*	21 JAN 1220	168	0.00	0.00	0.00	0.
20 JAN 1130	19	0.01	0.01	0.00	0.	*	21 JAN 1230	169	0.00	0.00	0.00	0.
20 JAN 1140	20	0.01	0.01	0.00	0.	*	21 JAN 1240	170	0.00	0.00	0.00	0.
20 JAN 1150	21	0.01	0.01	0.00	0.	*	21 JAN 1250	171	0.00	0.00	0.00	0.
20 JAN 1200	22	0.01	0.01	0.00	0.	*	21 JAN 1300	172	0.00	0.00	0.00	0.
20 JAN 1210	23	0.01	0.01	0.00	0.	*	21 JAN 1310	173	0.00	0.00	0.00	0.
20 JAN 1220	24	0.01	0.01	0.00	0.	*	21 JAN 1320	174	0.00	0.00	0.00	0.
20 JAN 1230	25	0.01	0.01	0.00	0.	*	21 JAN 1330	175	0.00	0.00	0.00	0.
20 JAN 1240	26	0.01	0.01	0.00	0.	*	21 JAN 1340	176	0.00	0.00	0.00	0.
20 JAN 1250	27	0.01	0.01	0.00	0.	*	21 JAN 1350	177	0.00	0.00	0.00	0.
20 JAN 1300	28	0.01	0.01	0.00	0.	*	21 JAN 1400	178	0.00	0.00	0.00	0.
20 JAN 1310	29	0.01	0.01	0.00	0.	*	21 JAN 1410	179	0.00	0.00	0.00	0.
20 JAN 1320	30	0.01	0.01	0.00	0.	*	21 JAN 1420	180	0.00	0.00	0.00	0.
20 JAN 1330	31	0.01	0.01	0.00	0.	*	21 JAN 1430	181	0.00	0.00	0.00	0.
20 JAN 1340	32	0.01	0.01	0.00	0.	*	21 JAN 1440	182	0.00	0.00	0.00	0.
20 JAN 1350	33	0.01	0.01	0.00	0.	*	21 JAN 1450	183	0.00	0.00	0.00	0.
20 JAN 1400	34	0.01	0.01	0.00	0.	*	21 JAN 1500	184	0.00	0.00	0.00	0.
20 JAN 1410	35	0.01	0.01	0.00	0.	*	21 JAN 1510	185	0.00	0.00	0.00	0.
20 JAN 1420	36	0.01	0.01	0.00	0.	*	21 JAN 1520	186	0.00	0.00	0.00	0.
20 JAN 1430	37	0.01	0.01	0.00	0.	*	21 JAN 1530	187	0.00	0.00	0.00	0.
20 JAN 1440	38	0.01	0.01	0.00	0.	*	21 JAN 1540	188	0.00	0.00	0.00	0.
20 JAN 1450	39	0.01	0.01	0.00	0.	*	21 JAN 1550	189	0.00	0.00	0.00	0.
20 JAN 1500	40	0.01	0.01	0.00	0.	*	21 JAN 1600	190	0.00	0.00	0.00	0.
20 JAN 1510	41	0.01	0.01	0.00	0.	*	21 JAN 1610	191	0.00	0.00	0.00	0.
20 JAN 1520	42	0.01	0.01	0.00	0.	*	21 JAN 1620	192	0.00	0.00	0.00	0.
20 JAN 1530	43	0.01	0.01	0.00	0.	*	21 JAN 1630	193	0.00	0.00	0.00	0.
20 JAN 1540	44	0.01	0.01	0.00	0.	*	21 JAN 1640	194	0.00	0.00	0.00	0.
20 JAN 1550	45	0.01	0.01	0.00	0.	*	21 JAN 1650	195	0.00	0.00	0.00	0.
20 JAN 1600	46	0.01	0.01	0.00	0.	*	21 JAN 1700	196	0.00	0.00	0.00	0.
20 JAN 1610	47	0.02	0.02	0.00	0.	*	21 JAN 1710	197	0.00	0.00	0.00	0.
20 JAN 1620	48	0.02	0.02	0.00	0.	*	21 JAN 1720	198	0.00	0.00	0.00	0.
20 JAN 1630	49	0.02	0.02	0.00	0.	*	21 JAN 1730	199	0.00	0.00	0.00	0.
20 JAN 1640	50	0.02	0.02	0.00	0.	*	21 JAN 1740	200	0.00	0.00	0.00	0.
20 JAN 1650	51	0.02	0.02	0.00	0.	*	21 JAN 1750	201	0.00	0.00	0.00	0.
20 JAN 1700	52	0.02	0.02	0.00	0.	*	21 JAN 1800	202	0.00	0.00	0.00	0.
20 JAN 1710	53	0.02	0.02	0.00	0.	*	21 JAN 1810	203	0.00	0.00	0.00	0.
20 JAN 1720	54	0.02	0.02	0.00	0.	*	21 JAN 1820	204	0.00	0.00	0.00	0.
20 JAN 1730	55	0.02	0.02	0.00	0.	*	21 JAN 1830	205	0.00	0.00	0.00	0.
20 JAN 1740	56	0.02	0.02	0.00	0.	*	21 JAN 1840	206	0.00	0.00	0.00	0.
20 JAN 1750	57	0.02	0.02	0.00	0.	*	21 JAN 1850	207	0.00	0.00	0.00	0.
20 JAN 1800	58	0.02	0.02	0.00	0.	*	21 JAN 1900	208	0.00	0.00	0.00	0.
20 JAN 1810	59	0.03	0.02	0.00	0.	*	21 JAN 1910	209	0.00	0.00	0.00	0.
20 JAN 1820	60	0.03	0.02	0.00	1.	*	21 JAN 1920	210	0.00	0.00	0.00	0.
20 JAN 1830	61	0.03	0.02	0.00	1.	*	21 JAN 1930	211	0.00	0.00	0.00	0.
20 JAN 1840	62	0.03	0.02	0.01	1.	*	21 JAN 1940	212	0.00	0.00	0.00	0.
20 JAN 1850	63	0.03	0.02	0.01	1.	*	21 JAN 1950	213	0.00	0.00	0.00	0.
20 JAN 1900	64	0.03	0.02	0.01	2.	*	21 JAN 2000	214	0.00	0.00	0.00	0.
20 JAN 1910	65	0.04	0.03	0.01	2.	*	21 JAN 2010	215	0.00	0.00	0.00	0.
20 JAN 1920	66	0.04	0.03	0.01	2.	*	21 JAN 2020	216	0.00	0.00	0.00	0.
20 JAN 1930	67	0.04	0.03	0.01	3.	*	21 JAN 2030	217	0.00	0.00	0.00	0.
20 JAN 1940	68	0.06	0.04	0.02	3.	*	21 JAN 2040	218	0.00	0.00	0.00	0.
20 JAN 1950	69	0.06	0.04	0.02	4.	*	21 JAN 2050	219	0.00	0.00	0.00	0.
20 JAN 2000	70	0.06	0.04	0.02	5.	*	21 JAN 2100	220	0.00	0.00	0.00	0.

20 JAN 2020	72	0.50	0.20	0.30	11.	*	21 JAN 2120	222	0.00	0.00	0.00	0.
20 JAN 2030	73	0.50	0.15	0.34	19.	*	21 JAN 2130	223	0.00	0.00	0.00	0.
20 JAN 2040	74	0.09	0.03	0.07	32.	*	21 JAN 2140	224	0.00	0.00	0.00	0.
20 JAN 2050	75	0.09	0.02	0.07	46.	*	21 JAN 2150	225	0.00	0.00	0.00	0.
20 JAN 2100	76	0.09	0.02	0.07	60.	*	21 JAN 2200	226	0.00	0.00	0.00	0.
20 JAN 2110	77	0.05	0.01	0.04	70.	*	21 JAN 2210	227	0.00	0.00	0.00	0.
20 JAN 2120	78	0.05	0.01	0.04	74.	*	21 JAN 2220	228	0.00	0.00	0.00	0.
20 JAN 2130	79	0.05	0.01	0.04	73.	*	21 JAN 2230	229	0.00	0.00	0.00	0.
20 JAN 2140	80	0.04	0.01	0.03	69.	*	21 JAN 2240	230	0.00	0.00	0.00	0.
20 JAN 2150	81	0.04	0.01	0.03	61.	*	21 JAN 2250	231	0.00	0.00	0.00	0.
20 JAN 2200	82	0.04	0.01	0.03	53.	*	21 JAN 2300	232	0.00	0.00	0.00	0.
20 JAN 2210	83	0.03	0.01	0.02	46.	*	21 JAN 2310	233	0.00	0.00	0.00	0.
20 JAN 2220	84	0.03	0.01	0.02	40.	*	21 JAN 2320	234	0.00	0.00	0.00	0.
20 JAN 2230	85	0.03	0.01	0.02	35.	*	21 JAN 2330	235	0.00	0.00	0.00	0.
20 JAN 2240	86	0.02	0.00	0.02	31.	*	21 JAN 2340	236	0.00	0.00	0.00	0.
20 JAN 2250	87	0.02	0.00	0.02	27.	*	21 JAN 2350	237	0.00	0.00	0.00	0.
20 JAN 2300	88	0.02	0.00	0.02	24.	*	22 JAN 0000	238	0.00	0.00	0.00	0.
20 JAN 2310	89	0.02	0.00	0.02	22.	*	22 JAN 0010	239	0.00	0.00	0.00	0.
20 JAN 2320	90	0.02	0.00	0.02	19.	*	22 JAN 0020	240	0.00	0.00	0.00	0.
20 JAN 2330	91	0.02	0.00	0.02	18.	*	22 JAN 0030	241	0.00	0.00	0.00	0.
20 JAN 2340	92	0.02	0.00	0.01	16.	*	22 JAN 0040	242	0.00	0.00	0.00	0.
20 JAN 2350	93	0.02	0.00	0.01	15.	*	22 JAN 0050	243	0.00	0.00	0.00	0.
21 JAN 0000	94	0.02	0.00	0.01	14.	*	22 JAN 0100	244	0.00	0.00	0.00	0.
21 JAN 0010	95	0.02	0.00	0.01	13.	*	22 JAN 0110	245	0.00	0.00	0.00	0.
21 JAN 0020	96	0.02	0.00	0.01	12.	*	22 JAN 0120	246	0.00	0.00	0.00	0.
21 JAN 0030	97	0.02	0.00	0.01	11.	*	22 JAN 0130	247	0.00	0.00	0.00	0.
21 JAN 0040	98	0.02	0.00	0.01	10.	*	22 JAN 0140	248	0.00	0.00	0.00	0.
21 JAN 0050	99	0.02	0.00	0.01	10.	*	22 JAN 0150	249	0.00	0.00	0.00	0.
21 JAN 0100	100	0.02	0.00	0.01	10.	*	22 JAN 0200	250	0.00	0.00	0.00	0.
21 JAN 0110	101	0.01	0.00	0.01	9.	*	22 JAN 0210	251	0.00	0.00	0.00	0.
21 JAN 0120	102	0.01	0.00	0.01	9.	*	22 JAN 0220	252	0.00	0.00	0.00	0.
21 JAN 0130	103	0.01	0.00	0.01	9.	*	22 JAN 0230	253	0.00	0.00	0.00	0.
21 JAN 0140	104	0.01	0.00	0.01	8.	*	22 JAN 0240	254	0.00	0.00	0.00	0.
21 JAN 0150	105	0.01	0.00	0.01	8.	*	22 JAN 0250	255	0.00	0.00	0.00	0.
21 JAN 0200	106	0.01	0.00	0.01	8.	*	22 JAN 0300	256	0.00	0.00	0.00	0.
21 JAN 0210	107	0.01	0.00	0.01	7.	*	22 JAN 0310	257	0.00	0.00	0.00	0.
21 JAN 0220	108	0.01	0.00	0.01	7.	*	22 JAN 0320	258	0.00	0.00	0.00	0.
21 JAN 0230	109	0.01	0.00	0.01	7.	*	22 JAN 0330	259	0.00	0.00	0.00	0.
21 JAN 0240	110	0.01	0.00	0.01	7.	*	22 JAN 0340	260	0.00	0.00	0.00	0.
21 JAN 0250	111	0.01	0.00	0.01	6.	*	22 JAN 0350	261	0.00	0.00	0.00	0.
21 JAN 0300	112	0.01	0.00	0.01	6.	*	22 JAN 0400	262	0.00	0.00	0.00	0.
21 JAN 0310	113	0.01	0.00	0.01	6.	*	22 JAN 0410	263	0.00	0.00	0.00	0.
21 JAN 0320	114	0.01	0.00	0.01	6.	*	22 JAN 0420	264	0.00	0.00	0.00	0.
21 JAN 0330	115	0.01	0.00	0.01	6.	*	22 JAN 0430	265	0.00	0.00	0.00	0.
21 JAN 0340	116	0.01	0.00	0.01	6.	*	22 JAN 0440	266	0.00	0.00	0.00	0.
21 JAN 0350	117	0.01	0.00	0.01	6.	*	22 JAN 0450	267	0.00	0.00	0.00	0.
21 JAN 0400	118	0.01	0.00	0.01	5.	*	22 JAN 0500	268	0.00	0.00	0.00	0.
21 JAN 0410	119	0.01	0.00	0.01	5.	*	22 JAN 0510	269	0.00	0.00	0.00	0.
21 JAN 0420	120	0.01	0.00	0.01	5.	*	22 JAN 0520	270	0.00	0.00	0.00	0.
21 JAN 0430	121	0.01	0.00	0.01	5.	*	22 JAN 0530	271	0.00	0.00	0.00	0.
21 JAN 0440	122	0.01	0.00	0.01	5.	*	22 JAN 0540	272	0.00	0.00	0.00	0.
21 JAN 0450	123	0.01	0.00	0.01	5.	*	22 JAN 0550	273	0.00	0.00	0.00	0.
21 JAN 0500	124	0.01	0.00	0.01	5.	*	22 JAN 0600	274	0.00	0.00	0.00	0.
21 JAN 0510	125	0.01	0.00	0.01	5.	*	22 JAN 0610	275	0.00	0.00	0.00	0.
21 JAN 0520	126	0.01	0.00	0.01	5.	*	22 JAN 0620	276	0.00	0.00	0.00	0.
21 JAN 0530	127	0.01	0.00	0.01	5.	*	22 JAN 0630	277	0.00	0.00	0.00	0.
21 JAN 0540	128	0.01	0.00	0.01	5.	*	22 JAN 0640	278	0.00	0.00	0.00	0.
21 JAN 0550	129	0.01	0.00	0.01	5.	*	22 JAN 0650	279	0.00	0.00	0.00	0.
21 JAN 0600	130	0.01	0.00	0.01	5.	*	22 JAN 0700	280	0.00	0.00	0.00	0.
21 JAN 0610	131	0.01	0.00	0.01	4.	*	22 JAN 0710	281	0.00	0.00	0.00	0.
21 JAN 0620	132	0.01	0.00	0.01	4.	*	22 JAN 0720	282	0.00	0.00	0.00	0.
21 JAN 0630	133	0.01	0.00	0.01	4.	*	22 JAN 0730	283	0.00	0.00	0.00	0.
21 JAN 0640	134	0.01	0.00	0.01	4.	*	22 JAN 0740	284	0.00	0.00	0.00	0.
21 JAN 0650	135	0.01	0.00	0.01	4.	*	22 JAN 0750	285	0.00	0.00	0.00	0.
21 JAN 0700	136	0.01	0.00	0.01	4.	*	22 JAN 0800	286	0.00	0.00	0.00	0.

21 JAN 0720	138	0.01	0.00	0.01	4.	*	22 JAN 0820	288	0.00	0.00	0.00	0.
21 JAN 0730	139	0.01	0.00	0.01	4.	*	22 JAN 0830	289	0.00	0.00	0.00	0.
21 JAN 0740	140	0.01	0.00	0.01	4.	*	22 JAN 0840	290	0.00	0.00	0.00	0.
21 JAN 0750	141	0.01	0.00	0.01	4.	*	22 JAN 0850	291	0.00	0.00	0.00	0.
21 JAN 0800	142	0.01	0.00	0.01	4.	*	22 JAN 0900	292	0.00	0.00	0.00	0.
21 JAN 0810	143	0.01	0.00	0.01	4.	*	22 JAN 0910	293	0.00	0.00	0.00	0.
21 JAN 0820	144	0.01	0.00	0.01	4.	*	22 JAN 0920	294	0.00	0.00	0.00	0.
21 JAN 0830	145	0.01	0.00	0.01	4.	*	22 JAN 0930	295	0.00	0.00	0.00	0.
21 JAN 0840	146	0.00	0.00	0.00	4.	*	22 JAN 0940	296	0.00	0.00	0.00	0.
21 JAN 0850	147	0.00	0.00	0.00	4.	*	22 JAN 0950	297	0.00	0.00	0.00	0.
21 JAN 0900	148	0.00	0.00	0.00	3.	*	22 JAN 1000	298	0.00	0.00	0.00	0.
21 JAN 0910	149	0.00	0.00	0.00	3.	*	22 JAN 1010	299	0.00	0.00	0.00	0.
21 JAN 0920	150	0.00	0.00	0.00	3.	*	22 JAN 1020	300	0.00	0.00	0.00	0.
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TOTAL RAINFALL = 3.90, TOTAL LOSS = 1.86, TOTAL EXCESS = 2.04

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	49.83-HR
74.	12.83	(CFS)	28.	9.	4.	4.
		(INCHES)	1.630	2.038	2.038	2.038
		(AC-FT)	14.	17.	17.	17.

CUMULATIVE AREA = 0.16 SQ MI

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HYDROGRAPH AT STATION 1
PLAN 1, RATIO = 1.00

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DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW
20 JAN 0830	1	0.	*	20 JAN 2100	76	60.	*	21 JAN 0930	151	2.	*	21 JAN 2200	226	0.
20 JAN 0840	2	0.	*	20 JAN 2110	77	70.	*	21 JAN 0940	152	2.	*	21 JAN 2210	227	0.
20 JAN 0850	3	0.	*	20 JAN 2120	78	74.	*	21 JAN 0950	153	1.	*	21 JAN 2220	228	0.
20 JAN 0900	4	0.	*	20 JAN 2130	79	73.	*	21 JAN 1000	154	1.	*	21 JAN 2230	229	0.
20 JAN 0910	5	0.	*	20 JAN 2140	80	69.	*	21 JAN 1010	155	1.	*	21 JAN 2240	230	0.
20 JAN 0920	6	0.	*	20 JAN 2150	81	61.	*	21 JAN 1020	156	1.	*	21 JAN 2250	231	0.
20 JAN 0930	7	0.	*	20 JAN 2200	82	53.	*	21 JAN 1030	157	1.	*	21 JAN 2300	232	0.
20 JAN 0940	8	0.	*	20 JAN 2210	83	46.	*	21 JAN 1040	158	0.	*	21 JAN 2310	233	0.
20 JAN 0950	9	0.	*	20 JAN 2220	84	40.	*	21 JAN 1050	159	0.	*	21 JAN 2320	234	0.
20 JAN 1000	10	0.	*	20 JAN 2230	85	35.	*	21 JAN 1100	160	0.	*	21 JAN 2330	235	0.
20 JAN 1010	11	0.	*	20 JAN 2240	86	31.	*	21 JAN 1110	161	0.	*	21 JAN 2340	236	0.
20 JAN 1020	12	0.	*	20 JAN 2250	87	27.	*	21 JAN 1120	162	0.	*	21 JAN 2350	237	0.
20 JAN 1030	13	0.	*	20 JAN 2300	88	24.	*	21 JAN 1130	163	0.	*	22 JAN 0000	238	0.
20 JAN 1040	14	0.	*	20 JAN 2310	89	22.	*	21 JAN 1140	164	0.	*	22 JAN 0010	239	0.
20 JAN 1050	15	0.	*	20 JAN 2320	90	19.	*	21 JAN 1150	165	0.	*	22 JAN 0020	240	0.
20 JAN 1100	16	0.	*	20 JAN 2330	91	18.	*	21 JAN 1200	166	0.	*	22 JAN 0030	241	0.
20 JAN 1110	17	0.	*	20 JAN 2340	92	16.	*	21 JAN 1210	167	0.	*	22 JAN 0040	242	0.
20 JAN 1120	18	0.	*	20 JAN 2350	93	15.	*	21 JAN 1220	168	0.	*	22 JAN 0050	243	0.
20 JAN 1130	19	0.	*	21 JAN 0000	94	14.	*	21 JAN 1230	169	0.	*	22 JAN 0100	244	0.
20 JAN 1140	20	0.	*	21 JAN 0010	95	13.	*	21 JAN 1240	170	0.	*	22 JAN 0110	245	0.
20 JAN 1150	21	0.	*	21 JAN 0020	96	12.	*	21 JAN 1250	171	0.	*	22 JAN 0120	246	0.
20 JAN 1200	22	0.	*	21 JAN 0030	97	11.	*	21 JAN 1300	172	0.	*	22 JAN 0130	247	0.
20 JAN 1210	23	0.	*	21 JAN 0040	98	10.	*	21 JAN 1310	173	0.	*	22 JAN 0140	248	0.
20 JAN 1220	24	0.	*	21 JAN 0050	99	10.	*	21 JAN 1320	174	0.	*	22 JAN 0150	249	0.
20 JAN 1230	25	0.	*	21 JAN 0100	100	10.	*	21 JAN 1330	175	0.	*	22 JAN 0200	250	0.
20 JAN 1240	26	0.	*	21 JAN 0110	101	9.	*	21 JAN 1340	176	0.	*	22 JAN 0210	251	0.
20 JAN 1250	27	0.	*	21 JAN 0120	102	9.	*	21 JAN 1350	177	0.	*	22 JAN 0220	252	0.
20 JAN 1300	28	0.	*	21 JAN 0130	103	9.	*	21 JAN 1400	178	0.	*	22 JAN 0230	253	0.
20 JAN 1310	29	0.	*	21 JAN 0140	104	8.	*	21 JAN 1410	179	0.	*	22 JAN 0240	254	0.

20 JAN 1330	31	0.	*	21 JAN 0200	106	8.	*	21 JAN 1430	181	0.	*	22 JAN 0300	256	0.
20 JAN 1340	32	0.	*	21 JAN 0210	107	7.	*	21 JAN 1440	182	0.	*	22 JAN 0310	257	0.
20 JAN 1350	33	0.	*	21 JAN 0220	108	7.	*	21 JAN 1450	183	0.	*	22 JAN 0320	258	0.
20 JAN 1400	34	0.	*	21 JAN 0230	109	7.	*	21 JAN 1500	184	0.	*	22 JAN 0330	259	0.
20 JAN 1410	35	0.	*	21 JAN 0240	110	7.	*	21 JAN 1510	185	0.	*	22 JAN 0340	260	0.
20 JAN 1420	36	0.	*	21 JAN 0250	111	6.	*	21 JAN 1520	186	0.	*	22 JAN 0350	261	0.
20 JAN 1430	37	0.	*	21 JAN 0300	112	6.	*	21 JAN 1530	187	0.	*	22 JAN 0400	262	0.
20 JAN 1440	38	0.	*	21 JAN 0310	113	6.	*	21 JAN 1540	188	0.	*	22 JAN 0410	263	0.
20 JAN 1450	39	0.	*	21 JAN 0320	114	6.	*	21 JAN 1550	189	0.	*	22 JAN 0420	264	0.
20 JAN 1500	40	0.	*	21 JAN 0330	115	6.	*	21 JAN 1600	190	0.	*	22 JAN 0430	265	0.
20 JAN 1510	41	0.	*	21 JAN 0340	116	6.	*	21 JAN 1610	191	0.	*	22 JAN 0440	266	0.
20 JAN 1520	42	0.	*	21 JAN 0350	117	6.	*	21 JAN 1620	192	0.	*	22 JAN 0450	267	0.
20 JAN 1530	43	0.	*	21 JAN 0400	118	5.	*	21 JAN 1630	193	0.	*	22 JAN 0500	268	0.
20 JAN 1540	44	0.	*	21 JAN 0410	119	5.	*	21 JAN 1640	194	0.	*	22 JAN 0510	269	0.
20 JAN 1550	45	0.	*	21 JAN 0420	120	5.	*	21 JAN 1650	195	0.	*	22 JAN 0520	270	0.
20 JAN 1600	46	0.	*	21 JAN 0430	121	5.	*	21 JAN 1700	196	0.	*	22 JAN 0530	271	0.
20 JAN 1610	47	0.	*	21 JAN 0440	122	5.	*	21 JAN 1710	197	0.	*	22 JAN 0540	272	0.
20 JAN 1620	48	0.	*	21 JAN 0450	123	5.	*	21 JAN 1720	198	0.	*	22 JAN 0550	273	0.
20 JAN 1630	49	0.	*	21 JAN 0500	124	5.	*	21 JAN 1730	199	0.	*	22 JAN 0600	274	0.
20 JAN 1640	50	0.	*	21 JAN 0510	125	5.	*	21 JAN 1740	200	0.	*	22 JAN 0610	275	0.
20 JAN 1650	51	0.	*	21 JAN 0520	126	5.	*	21 JAN 1750	201	0.	*	22 JAN 0620	276	0.
20 JAN 1700	52	0.	*	21 JAN 0530	127	5.	*	21 JAN 1800	202	0.	*	22 JAN 0630	277	0.
20 JAN 1710	53	0.	*	21 JAN 0540	128	5.	*	21 JAN 1810	203	0.	*	22 JAN 0640	278	0.
20 JAN 1720	54	0.	*	21 JAN 0550	129	5.	*	21 JAN 1820	204	0.	*	22 JAN 0650	279	0.
20 JAN 1730	55	0.	*	21 JAN 0600	130	5.	*	21 JAN 1830	205	0.	*	22 JAN 0700	280	0.
20 JAN 1740	56	0.	*	21 JAN 0610	131	4.	*	21 JAN 1840	206	0.	*	22 JAN 0710	281	0.
20 JAN 1750	57	0.	*	21 JAN 0620	132	4.	*	21 JAN 1850	207	0.	*	22 JAN 0720	282	0.
20 JAN 1800	58	0.	*	21 JAN 0630	133	4.	*	21 JAN 1900	208	0.	*	22 JAN 0730	283	0.
20 JAN 1810	59	0.	*	21 JAN 0640	134	4.	*	21 JAN 1910	209	0.	*	22 JAN 0740	284	0.
20 JAN 1820	60	1.	*	21 JAN 0650	135	4.	*	21 JAN 1920	210	0.	*	22 JAN 0750	285	0.
20 JAN 1830	61	1.	*	21 JAN 0700	136	4.	*	21 JAN 1930	211	0.	*	22 JAN 0800	286	0.
20 JAN 1840	62	1.	*	21 JAN 0710	137	4.	*	21 JAN 1940	212	0.	*	22 JAN 0810	287	0.
20 JAN 1850	63	1.	*	21 JAN 0720	138	4.	*	21 JAN 1950	213	0.	*	22 JAN 0820	288	0.
20 JAN 1900	64	2.	*	21 JAN 0730	139	4.	*	21 JAN 2000	214	0.	*	22 JAN 0830	289	0.
20 JAN 1910	65	2.	*	21 JAN 0740	140	4.	*	21 JAN 2010	215	0.	*	22 JAN 0840	290	0.
20 JAN 1920	66	2.	*	21 JAN 0750	141	4.	*	21 JAN 2020	216	0.	*	22 JAN 0850	291	0.
20 JAN 1930	67	3.	*	21 JAN 0800	142	4.	*	21 JAN 2030	217	0.	*	22 JAN 0900	292	0.
20 JAN 1940	68	3.	*	21 JAN 0810	143	4.	*	21 JAN 2040	218	0.	*	22 JAN 0910	293	0.
20 JAN 1950	69	4.	*	21 JAN 0820	144	4.	*	21 JAN 2050	219	0.	*	22 JAN 0920	294	0.
20 JAN 2000	70	5.	*	21 JAN 0830	145	4.	*	21 JAN 2100	220	0.	*	22 JAN 0930	295	0.
20 JAN 2010	71	6.	*	21 JAN 0840	146	4.	*	21 JAN 2110	221	0.	*	22 JAN 0940	296	0.
20 JAN 2020	72	11.	*	21 JAN 0850	147	4.	*	21 JAN 2120	222	0.	*	22 JAN 0950	297	0.
20 JAN 2030	73	19.	*	21 JAN 0900	148	3.	*	21 JAN 2130	223	0.	*	22 JAN 1000	298	0.
20 JAN 2040	74	32.	*	21 JAN 0910	149	3.	*	21 JAN 2140	224	0.	*	22 JAN 1010	299	0.
20 JAN 2050	75	46.	*	21 JAN 0920	150	3.	*	21 JAN 2150	225	0.	*	22 JAN 1020	300	0.
			*				*				*			

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	49.83-HR
74.	12.83	(CFS)	38.	9.	4.	4.
		(INCHES)	1.630	2.038	2.038	2.038
		(AC-FT)	14.	17.	17.	17.

CUMULATIVE AREA = 0.16 SQ MI

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* *
15 MN * IOUT * WATERSHED ROUTED THROUGH 2.251 MSEC AT ROWE, NT - LIL RIVER STA. 5.25

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19 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
OSCAL	0.	HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

20 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

21 SA	AREA	0.0	0.0	0.0	0.0	0.3	0.6	7.7	23.0	34.9	41.8
22 SO	DISCHARGE	0.	37.	70.	110.	121.	131.	146.	180.	204.	216.
23 SE	ELEVATION	977.40	978.00	978.70	980.00	980.50	981.00	982.00	984.00	986.00	987.00

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COMPUTED STORAGE-ELEVATION DATA

STORAGE	0.00	0.00	0.00	0.00	0.06	0.29	3.81	33.18	90.69	129.01
ELEVATION	977.40	978.00	978.70	980.00	980.50	981.00	982.00	984.00	986.00	987.00

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 0. TO 121.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

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HYDROGRAPH AT STATION IOUT
PLAN 1, RATIO = 1.00

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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
20	JAN	0830	1	0.	0.0	977.4	21	JAN	0110	101	9.	0.0	977.5	21	JAN	1750	201	0.	0.0	977.4
20	JAN	0840	2	0.	0.0	977.4	21	JAN	0120	102	9.	0.0	977.5	21	JAN	1800	202	0.	0.0	977.4
20	JAN	0850	3	0.	0.0	977.4	21	JAN	0130	103	9.	0.0	977.5	21	JAN	1810	203	0.	0.0	977.4
20	JAN	0900	4	0.	0.0	977.4	21	JAN	0140	104	8.	0.0	977.5	21	JAN	1820	204	0.	0.0	977.4
20	JAN	0910	5	0.	0.0	977.4	21	JAN	0150	105	8.	0.0	977.5	21	JAN	1830	205	0.	0.0	977.4
20	JAN	0920	6	0.	0.0	977.4	21	JAN	0200	106	8.	0.0	977.5	21	JAN	1840	206	0.	0.0	977.4
20	JAN	0930	7	0.	0.0	977.4	21	JAN	0210	107	7.	0.0	977.5	21	JAN	1850	207	0.	0.0	977.4
20	JAN	0940	8	0.	0.0	977.4	21	JAN	0220	108	7.	0.0	977.5	21	JAN	1900	208	0.	0.0	977.4
20	JAN	0950	9	0.	0.0	977.4	21	JAN	0230	109	7.	0.0	977.5	21	JAN	1910	209	0.	0.0	977.4
20	JAN	1000	10	0.	0.0	977.4	21	JAN	0240	110	7.	0.0	977.5	21	JAN	1920	210	0.	0.0	977.4
20	JAN	1010	11	0.	0.0	977.4	21	JAN	0250	111	6.	0.0	977.5	21	JAN	1930	211	0.	0.0	977.4
20	JAN	1020	12	0.	0.0	977.4	21	JAN	0300	112	6.	0.0	977.5	21	JAN	1940	212	0.	0.0	977.4
20	JAN	1030	13	0.	0.0	977.4	21	JAN	0310	113	6.	0.0	977.5	21	JAN	1950	213	0.	0.0	977.4
20	JAN	1040	14	0.	0.0	977.4	21	JAN	0320	114	6.	0.0	977.5	21	JAN	2000	214	0.	0.0	977.4
20	JAN	1050	15	0.	0.0	977.4	21	JAN	0330	115	6.	0.0	977.5	21	JAN	2010	215	0.	0.0	977.4
20	JAN	1100	16	0.	0.0	977.4	21	JAN	0340	116	6.	0.0	977.5	21	JAN	2020	216	0.	0.0	977.4
20	JAN	1110	17	0.	0.0	977.4	21	JAN	0350	117	6.	0.0	977.5	21	JAN	2030	217	0.	0.0	977.4
20	JAN	1120	18	0.	0.0	977.4	21	JAN	0400	118	5.	0.0	977.5	21	JAN	2040	218	0.	0.0	977.4
20	JAN	1130	19	0.	0.0	977.4	21	JAN	0410	119	5.	0.0	977.5	21	JAN	2050	219	0.	0.0	977.4
20	JAN	1140	20	0.	0.0	977.4	21	JAN	0420	120	5.	0.0	977.5	21	JAN	2100	220	0.	0.0	977.4

20 JAN 1200	22	0.	0.0	977.4	* 21 JAN 0440	122	5.	0.0	977.5	* 21 JAN 2120	222	0.	0.0	977.4
20 JAN 1210	23	0.	0.0	977.4	* 21 JAN 0450	123	5.	0.0	977.5	* 21 JAN 2130	223	0.	0.0	977.4
20 JAN 1220	24	0.	0.0	977.4	* 21 JAN 0500	124	5.	0.0	977.5	* 21 JAN 2140	224	0.	0.0	977.4
20 JAN 1230	25	0.	0.0	977.4	* 21 JAN 0510	125	5.	0.0	977.5	* 21 JAN 2150	225	0.	0.0	977.4
20 JAN 1240	26	0.	0.0	977.4	* 21 JAN 0520	126	5.	0.0	977.5	* 21 JAN 2200	226	0.	0.0	977.4
20 JAN 1250	27	0.	0.0	977.4	* 21 JAN 0530	127	5.	0.0	977.5	* 21 JAN 2210	227	0.	0.0	977.4
20 JAN 1300	28	0.	0.0	977.4	* 21 JAN 0540	128	5.	0.0	977.5	* 21 JAN 2220	228	0.	0.0	977.4
20 JAN 1310	29	0.	0.0	977.4	* 21 JAN 0550	129	5.	0.0	977.5	* 21 JAN 2230	229	0.	0.0	977.4
20 JAN 1320	30	0.	0.0	977.4	* 21 JAN 0600	130	5.	0.0	977.5	* 21 JAN 2240	230	0.	0.0	977.4
20 JAN 1330	31	0.	0.0	977.4	* 21 JAN 0610	131	4.	0.0	977.5	* 21 JAN 2250	231	0.	0.0	977.4
20 JAN 1340	32	0.	0.0	977.4	* 21 JAN 0620	132	4.	0.0	977.5	* 21 JAN 2300	232	0.	0.0	977.4
20 JAN 1350	33	0.	0.0	977.4	* 21 JAN 0630	133	4.	0.0	977.5	* 21 JAN 2310	233	0.	0.0	977.4
20 JAN 1400	34	0.	0.0	977.4	* 21 JAN 0640	134	4.	0.0	977.5	* 21 JAN 2320	234	0.	0.0	977.4
20 JAN 1410	35	0.	0.0	977.4	* 21 JAN 0650	135	4.	0.0	977.5	* 21 JAN 2330	235	0.	0.0	977.4
20 JAN 1420	36	0.	0.0	977.4	* 21 JAN 0700	136	4.	0.0	977.5	* 21 JAN 2340	236	0.	0.0	977.4
20 JAN 1430	37	0.	0.0	977.4	* 21 JAN 0710	137	4.	0.0	977.5	* 21 JAN 2350	237	0.	0.0	977.4
20 JAN 1440	38	0.	0.0	977.4	* 21 JAN 0720	138	4.	0.0	977.5	* 22 JAN 0000	238	0.	0.0	977.4
20 JAN 1450	39	0.	0.0	977.4	* 21 JAN 0730	139	4.	0.0	977.5	* 22 JAN 0010	239	0.	0.0	977.4
20 JAN 1500	40	0.	0.0	977.4	* 21 JAN 0740	140	4.	0.0	977.5	* 22 JAN 0020	240	0.	0.0	977.4
20 JAN 1510	41	0.	0.0	977.4	* 21 JAN 0750	141	4.	0.0	977.5	* 22 JAN 0030	241	0.	0.0	977.4
20 JAN 1520	42	0.	0.0	977.4	* 21 JAN 0800	142	4.	0.0	977.5	* 22 JAN 0040	242	0.	0.0	977.4
20 JAN 1530	43	0.	0.0	977.4	* 21 JAN 0810	143	4.	0.0	977.5	* 22 JAN 0050	243	0.	0.0	977.4
20 JAN 1540	44	0.	0.0	977.4	* 21 JAN 0820	144	4.	0.0	977.5	* 22 JAN 0100	244	0.	0.0	977.4
20 JAN 1550	45	0.	0.0	977.4	* 21 JAN 0830	145	4.	0.0	977.5	* 22 JAN 0110	245	0.	0.0	977.4
20 JAN 1600	46	0.	0.0	977.4	* 21 JAN 0840	146	4.	0.0	977.5	* 22 JAN 0120	246	0.	0.0	977.4
20 JAN 1610	47	0.	0.0	977.4	* 21 JAN 0850	147	4.	0.0	977.5	* 22 JAN 0130	247	0.	0.0	977.4
20 JAN 1620	48	0.	0.0	977.4	* 21 JAN 0900	148	3.	0.0	977.5	* 22 JAN 0140	248	0.	0.0	977.4
20 JAN 1630	49	0.	0.0	977.4	* 21 JAN 0910	149	3.	0.0	977.4	* 22 JAN 0150	249	0.	0.0	977.4
20 JAN 1640	50	0.	0.0	977.4	* 21 JAN 0920	150	3.	0.0	977.4	* 22 JAN 0200	250	0.	0.0	977.4
20 JAN 1650	51	0.	0.0	977.4	* 21 JAN 0930	151	2.	0.0	977.4	* 22 JAN 0210	251	0.	0.0	977.4
20 JAN 1700	52	0.	0.0	977.4	* 21 JAN 0940	152	2.	0.0	977.4	* 22 JAN 0220	252	0.	0.0	977.4
20 JAN 1710	53	0.	0.0	977.4	* 21 JAN 0950	153	1.	0.0	977.4	* 22 JAN 0230	253	0.	0.0	977.4
20 JAN 1720	54	0.	0.0	977.4	* 21 JAN 1000	154	1.	0.0	977.4	* 22 JAN 0240	254	0.	0.0	977.4
20 JAN 1730	55	0.	0.0	977.4	* 21 JAN 1010	155	1.	0.0	977.4	* 22 JAN 0250	255	0.	0.0	977.4
20 JAN 1740	56	0.	0.0	977.4	* 21 JAN 1020	156	1.	0.0	977.4	* 22 JAN 0300	256	0.	0.0	977.4
20 JAN 1750	57	0.	0.0	977.4	* 21 JAN 1030	157	1.	0.0	977.4	* 22 JAN 0310	257	0.	0.0	977.4
20 JAN 1800	58	0.	0.0	977.4	* 21 JAN 1040	158	0.	0.0	977.4	* 22 JAN 0320	258	0.	0.0	977.4
20 JAN 1810	59	0.	0.0	977.4	* 21 JAN 1050	159	0.	0.0	977.4	* 22 JAN 0330	259	0.	0.0	977.4
20 JAN 1820	60	1.	0.0	977.4	* 21 JAN 1100	160	0.	0.0	977.4	* 22 JAN 0340	260	0.	0.0	977.4
20 JAN 1830	61	1.	0.0	977.4	* 21 JAN 1110	161	0.	0.0	977.4	* 22 JAN 0350	261	0.	0.0	977.4
20 JAN 1840	62	1.	0.0	977.4	* 21 JAN 1120	162	0.	0.0	977.4	* 22 JAN 0400	262	0.	0.0	977.4
20 JAN 1850	63	1.	0.0	977.4	* 21 JAN 1130	163	0.	0.0	977.4	* 22 JAN 0410	263	0.	0.0	977.4
20 JAN 1900	64	2.	0.0	977.4	* 21 JAN 1140	164	0.	0.0	977.4	* 22 JAN 0420	264	0.	0.0	977.4
20 JAN 1910	65	2.	0.0	977.4	* 21 JAN 1150	165	0.	0.0	977.4	* 22 JAN 0430	265	0.	0.0	977.4
20 JAN 1920	66	2.	0.0	977.4	* 21 JAN 1200	166	0.	0.0	977.4	* 22 JAN 0440	266	0.	0.0	977.4
20 JAN 1930	67	3.	0.0	977.4	* 21 JAN 1210	167	0.	0.0	977.4	* 22 JAN 0450	267	0.	0.0	977.4
20 JAN 1940	68	3.	0.0	977.5	* 21 JAN 1220	168	0.	0.0	977.4	* 22 JAN 0500	268	0.	0.0	977.4
20 JAN 1950	69	4.	0.0	977.5	* 21 JAN 1230	169	0.	0.0	977.4	* 22 JAN 0510	269	0.	0.0	977.4
20 JAN 2000	70	5.	0.0	977.5	* 21 JAN 1240	170	0.	0.0	977.4	* 22 JAN 0520	270	0.	0.0	977.4
20 JAN 2010	71	6.	0.0	977.5	* 21 JAN 1250	171	0.	0.0	977.4	* 22 JAN 0530	271	0.	0.0	977.4
20 JAN 2020	72	11.	0.0	977.6	* 21 JAN 1300	172	0.	0.0	977.4	* 22 JAN 0540	272	0.	0.0	977.4
20 JAN 2030	73	19.	0.0	977.7	* 21 JAN 1310	173	0.	0.0	977.4	* 22 JAN 0550	273	0.	0.0	977.4
20 JAN 2040	74	32.	0.0	977.9	* 21 JAN 1320	174	0.	0.0	977.4	* 22 JAN 0600	274	0.	0.0	977.4
20 JAN 2050	75	46.	0.0	978.2	* 21 JAN 1330	175	0.	0.0	977.4	* 22 JAN 0610	275	0.	0.0	977.4
20 JAN 2100	76	60.	0.0	978.5	* 21 JAN 1340	176	0.	0.0	977.4	* 22 JAN 0620	276	0.	0.0	977.4
20 JAN 2110	77	70.	0.0	978.7	* 21 JAN 1350	177	0.	0.0	977.4	* 22 JAN 0630	277	0.	0.0	977.4
20 JAN 2120	78	74.	0.0	978.8	* 21 JAN 1400	178	0.	0.0	977.4	* 22 JAN 0640	278	0.	0.0	977.4
20 JAN 2130	79	73.	0.0	978.8	* 21 JAN 1410	179	0.	0.0	977.4	* 22 JAN 0650	279	0.	0.0	977.4
20 JAN 2140	80	69.	0.0	978.7	* 21 JAN 1420	180	0.	0.0	977.4	* 22 JAN 0700	280	0.	0.0	977.4
20 JAN 2150	81	61.	0.0	978.5	* 21 JAN 1430	181	0.	0.0	977.4	* 22 JAN 0710	281	0.	0.0	977.4
20 JAN 2200	82	53.	0.0	978.3	* 21 JAN 1440	182	0.	0.0	977.4	* 22 JAN 0720	282	0.	0.0	977.4
20 JAN 2210	83	46.	0.0	978.2	* 21 JAN 1450	183	0.	0.0	977.4	* 22 JAN 0730	283	0.	0.0	977.4
20 JAN 2220	84	40.	0.0	978.1	* 21 JAN 1500	184	0.	0.0	977.4	* 22 JAN 0740	284	0.	0.0	977.4
20 JAN 2230	85	35.	0.0	978.0	* 21 JAN 1510	185	0.	0.0	977.4	* 22 JAN 0750	285	0.	0.0	977.4
20 JAN 2240	86	31.	0.0	977.9	* 21 JAN 1520	186	0.	0.0	977.4	* 22 JAN 0800	286	0.	0.0	977.4

20 JAN 2300	88	24.	0.0	977.8	*	21 JAN 1540	188	0.	0.0	977.4	*	22 JAN 0820	288	0.	0.0	977.4
20 JAN 2310	89	23.	0.0	977.7	*	21 JAN 1550	189	0.	0.0	977.4	*	22 JAN 0830	289	0.	0.0	977.4
20 JAN 2320	90	19.	0.0	977.7	*	21 JAN 1600	190	0.	0.0	977.4	*	22 JAN 0840	290	0.	0.0	977.4
20 JAN 2330	91	18.	0.0	977.7	*	21 JAN 1610	191	0.	0.0	977.4	*	22 JAN 0850	291	0.	0.0	977.4
20 JAN 2340	92	16.	0.0	977.7	*	21 JAN 1620	192	0.	0.0	977.4	*	22 JAN 0900	292	0.	0.0	977.4
20 JAN 2350	93	15.	0.0	977.6	*	21 JAN 1630	193	0.	0.0	977.4	*	22 JAN 0910	293	0.	0.0	977.4
21 JAN 0000	94	14.	0.0	977.6	*	21 JAN 1640	194	0.	0.0	977.4	*	22 JAN 0920	294	0.	0.0	977.4
21 JAN 0010	95	13.	0.0	977.6	*	21 JAN 1650	195	0.	0.0	977.4	*	22 JAN 0930	295	0.	0.0	977.4
21 JAN 0020	96	12.	0.0	977.6	*	21 JAN 1700	196	0.	0.0	977.4	*	22 JAN 0940	296	0.	0.0	977.4
21 JAN 0030	97	11.	0.0	977.6	*	21 JAN 1710	197	0.	0.0	977.4	*	22 JAN 0950	297	0.	0.0	977.4
21 JAN 0040	98	10.	0.0	977.6	*	21 JAN 1720	198	0.	0.0	977.4	*	22 JAN 1000	298	0.	0.0	977.4
21 JAN 0050	99	10.	0.0	977.6	*	21 JAN 1730	199	0.	0.0	977.4	*	22 JAN 1010	299	0.	0.0	977.4
21 JAN 0100	100	10.	0.0	977.6	*	21 JAN 1740	200	0.	0.0	977.4	*	22 JAN 1020	300	0.	0.0	977.4
					*						*					

****

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	49.83-HR
74.	12.83	(CFS)	28.	9.	4.	4.
		(INCHES)	1.630	2.038	2.038	2.038
		(AC-FT)	14.	17.	17.	17.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	49.83-HR
0.	0.17	0.	0.	0.	0.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	49.83-HR
978.82	12.83	977.88	977.55	977.47	977.47

CUMULATIVE AREA = 0.16 SQ MI

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

					RATIOS APPLIED TO FLOWS
OPERATION	STATION	AREA	PLAN		RATIO 1
					1.00
HYDROGRAPH AT	1	0.16	1	FLOW	74.
				TIME	12.83
ROUTED TO	IOUT	0.16	1	FLOW	74.
				TIME	12.83

** PEAK STAGES IN FEET **

1	STAGE	978.82
	TIME	12.83

SUMMARY OF COMPONENT COSTS

PROJECT	LOCATION	CAPACITY	CAPITAL COST	AMORTIZED CAPITAL COST	ANNUAL O+M COST	ANNUAL POWER COST	TOTAL ANNUAL COST

SYSTEM COST AND PERFORMANCE SUMMARY
(UNITS SAME AS INPUT - NORMALLY 1000\S OF DOLLARS)

TOTAL SYSTEM CAPITAL COST * * * * * * * * * * * * * *	0.	
TOTAL SYSTEM AMORTIZED CAPITAL COST * * * * * * * * *	0.	
TOTAL SYSTEM ANNUAL O.M.POWER AND REPLACEMENT COST *	0.	
TOTAL SYSTEM ANNUAL COST * * * * * * * * * * * * * *		0.
AVERAGE ANNUAL DAMAGES -- EXISTING CONDITIONS * * * *	0.	
AVERAGE ANNUAL DAMAGES -- OPTIMIZED SYSTEM * * * * *	0.	
AVERAGE ANNUAL DAMAGE REDUCTION (BENEFITS) * * * * *		0.
AVERAGE ANNUAL SYSTEM NET BENEFITS * * * * * * * * *		0.

```
*** NORMAL END OF HEC-1 ***
101
$ delete for0*.dat;*
CLICK        job terminated at  8-FEB-1989 10:29:46.58

 Accounting information:
 Buffered I/O count:          74      Peak working set size:   866
 Direct I/O count:           215      Peak page file size:    1477
 Page faults:                930      Mounted volumes:           0
 Charged CPU time:     0 00:00:15.18  Elapsed time:     0 00:00:27.53
```

```
$IMODE() .eqs. 'INTERACTIVE' THEN EXIT
$ default DHYDRO.CLICK.FORD]
$ define for005 CL.DAT;5
```