```
PLAN  3 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                    COMPUTED MUSKINGUM-CUNGE PARAMETERS
                          COMPUTATION TIME STEP
     ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                    PEAK                CELERITY
                                     (MIN)      (FT)     (CFS)    (MIN)       (IN)      (FPS)

       MAIN        .72      1.51       2.77    444.50    165.45    721.98      7.54      5.36

                         INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

       MAIN        .72      1.51       5.00              163.83    720.00      7.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2497E+02 EXCESS= .0000E+00 OUTFLOW= .2493E+02 BASIN STORAGE= .6281E-01 PERCENT ERROR=   -.1

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

                     HYDROGRAPH AT STATION    CHANN
                       FOR PLAN 3, RATIO = 1.00

  PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                   6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                          (CFS)
+     164.     12.00                 39.         13.         13.         13.
                        (INCHES)   5.838      7.540       7.540       7.540
                         (AC-FT)     19.         25.         25.         25.

                       CUMULATIVE AREA =     .06 SQ MI

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

PLAN  4 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                    COMPUTED MUSKINGUM-CUNGE PARAMETERS
                          COMPUTATION TIME STEP
     ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                    PEAK                CELERITY
                                     (MIN)      (FT)     (CFS)    (MIN)       (IN)      (FPS)

       MAIN        .72      1.51       2.66    444.50    187.09    720.03      8.81      5.58

                         INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

       MAIN        .72      1.51       5.00              187.00    720.00      8.81

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .2918E+02 EXCESS= .0000E+00 OUTFLOW= .2913E+02 BASIN STORAGE= .7137E-01 PERCENT ERROR=   -.1

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

                     HYDROGRAPH AT STATION    CHANN
                       FOR PLAN 4, RATIO = 1.00

  PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                   6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                          (CFS)
+     187.     12.00                 46.         15.         15.         15.
                        (INCHES)   6.847      8.813       8.813       8.813
                         (AC-FT)     23.         29.         29.         29.

                       CUMULATIVE AREA =     .06 SQ MI

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

PLAN  5 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                    COMPUTED MUSKINGUM-CUNGE PARAMETERS
```

```
                                COMPUTATION TIME STEP
ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                              PEAK                CELERITY
                                (MIN)      (FT)     (CFS)     (MIN)       (IN)      (FPS)

  MAIN        .72      1.51       2.55    444.50    212.35    720.53      9.89      5.82

                           INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

  MAIN        .72      1.51       5.00              211.30    720.00      9.89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3275E+02 EXCESS= .0000E+00 OUTFLOW= .3271E+02 BASIN STORAGE= .7104E-01 PERCENT ERROR=   -.1

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

                HYDROGRAPH AT STATION    CHANN
                  FOR PLAN 5, RATIO = 1.00

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                        6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                                (CFS)
+     211.     12.00                    50.         16.         16.          16.
                             (INCHES)  7.489       9.890       9.890        9.890
                              (AC-FT)    25.         33.         33.          33.

                              CUMULATIVE AREA =     .06 SQ MI


  + *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
 201 KK     *     COMB6  *
            *            *
            **************

 202 HC          HYDROGRAPH COMBINATION
                       ICOMP          2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                          ***


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


            **************
            *            *
 203 KK     *        P2  *
            *            *
            **************


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

 204 KP        PLAN  1 FOR STATION       P2
                                RUNOFF COMPUTATION 2-YRS STORM IN BASIN

               SUBBASIN RUNOFF DATA

 205 BA          SUBBASIN CHARACTERISTICS
                       TAREA         .34  SUBBASIN AREA

                 PRECIPITATION DATA

 210 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                 ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                 5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                   .18     .50    2.40    2.55    2.75    3.30    4.10    4.75     .00     .00     .00     .00

                                                STORM AREA =     .34
```

```
206 LS          SCS LOSS RATE
                      STRTL         .49  INITIAL ABSTRACTION
                     CRVNBR       80.45  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

207 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .46  LAG

                                                  ***

                                                UNIT HYDROGRAPH
                                          30 END-OF-PERIOD ORDINATES
              25.       75.      154.      251.      312.      328.      313.      275.      225.      164.
             123.       93.       73.       56.       42.       32.       24.       18.       14.       11.
               8.        6.        5.        4.        3.        2.        2.        1.        1.        0.

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

211 KP        PLAN  2 FOR STATION       P2
                                RUNOFF COMPUTATION 10-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

205 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .34  SUBBASIN AREA

                PRECIPITATION DATA

213 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .27     .75    3.35    3.95    4.40    5.40    6.60    7.80     .00     .00     .00     .00

                                                STORM AREA =     .34

 )6 LS          SCS LOSS RATE
                      STRTL         .49  INITIAL ABSTRACTION
                     CRVNBR       80.45  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

207 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .46  LAG

                                                  ***

                                                UNIT HYDROGRAPH
                                          30 END-OF-PERIOD ORDINATES
              25.       75.      154.      251.      312.      328.      313.      275.      225.      164.
             123.       93.       73.       56.       42.       32.       24.       18.       14.       11.
               8.        6.        5.        4.        3.        2.        2.        1.        1.        0.

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

214 KP        PLAN  3 FOR STATION       P2
                                RUNOFF COMPUTATION 25-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

205 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .34  SUBBASIN AREA

                PRECIPITATION DATA

216 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .32     .90    3.62    4.65    5.25    6.50    7.70    9.20     .00     .00     .00     .00

                                                STORM AREA =     .34

206 LS          SCS LOSS RATE
                      STRTL         .49  INITIAL ABSTRACTION
                     CRVNBR       80.45  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

207 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .46  LAG

                                                  ***
```

```
                                        UNIT HYDROGRAPH
                                   30 END-OF-PERIOD ORDINATES
      25.      75.     154.     251.     312.     328.     313.     275.     225.     164.
     123.      93.      73.      56.      42.      32.      24.      18.      14.      11.
       8.       6.       5.       4.       3.       2.       2.       1.       1.       0.

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

 217 KP       PLAN  4 FOR STATION       P2
                          RUNOFF COMPUTATION 50-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

 205 BA         SUBBASIN CHARACTERISTICS
                      TAREA         .34  SUBBASIN AREA

                PRECIPITATION DATA

 219 PH                              DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .34     .97    4.00    5.30    5.90    7.50    8.70   10.50     .00     .00     .00     .00

                                          STORM AREA =     .34

 206 LS         SCS LOSS RATE
                      STRTL         .49  INITIAL ABSTRACTION
                     CRVNBR       80.45  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

 207 UD         SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .46  LAG

                                                 ***

                                        UNIT HYDROGRAPH
                                   30 END-OF-PERIOD ORDINATES
      25.      75.     154.     251.     312.     328.     313.     275.     225.     164.
     123.      93.      73.      56.      42.      32.      24.      18.      14.      11.
       8.       6.       5.       4.       3.       2.       2.       1.       1.       0.

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

 220 KP       PLAN  5 FOR STATION       P2
                          RUNOFF COMPUTATION 100-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

 205 BA         SUBBASIN CHARACTERISTICS
                      TAREA         .34  SUBBASIN AREA

                PRECIPITATION DATA

 222 PH                              DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .39    1.10    4.50    5.65    6.80    8.00    9.80   11.60     .00     .00     .00     .00

                                          STORM AREA =     .34

 206 LS         SCS LOSS RATE
                      STRTL         .49  INITIAL ABSTRACTION
                     CRVNBR       80.45  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

 207 UD         SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .46  LAG

                                                 ***

                                        UNIT HYDROGRAPH
                                   30 END-OF-PERIOD ORDINATES
      25.      75.     154.     251.     312.     328.     313.     275.     225.     164.
     123.      93.      73.      56.      42.      32.      24.      18.      14.      11.
       8.       6.       5.       4.       3.       2.       2.       1.       1.       0.
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*** ***

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            **************
            *            *
 223 KK     *     COMB7  *
            *            *
            **************

 224 HC          HYDROGRAPH COMBINATION
                       ICOMP           2  NUMBER OF HYDROGRAPHS TO COMBINE
                                                                  ***
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*** ***

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            **************
            *            *
 225 KK     *     CHANN  *
            *            *
            **************

 226 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           3  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         289  LAST ORDINATE PUNCHED OR SAVED
                      TIMINT        .083  TIME INTERVAL IN HOURS


            HYDROGRAPH ROUTING DATA

 227 RD          MUSKINGUM-CUNGE CHANNEL ROUTING
                           L        524.  CHANNEL LENGTH
                           S       .0050  SLOPE
                           N        .035  CHANNEL ROUGHNESS COEFFICIENT
                          CA         .00  CONTRIBUTING AREA
                       SHAPE        TRAP  CHANNEL SHAPE
                          WD       12.00  BOTTOM WIDTH OR DIAMETER
                           Z         .75  SIDE SLOPE
                                                          ***
                                 COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                        COMPUTATION TIME STEP
                    ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                                  PEAK                CELERITY
                                                   (MIN)      (FT)     (CFS)     (MIN)       (IN)      (FPS)

                       MAIN      .72      1.51       1.17    524.00    451.29    753.46      2.82      7.48

                                          INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                       MAIN      .72      1.51       5.00              450.75    755.00      2.82

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .6555E+02 EXCESS= .0000E+00 OUTFLOW= .6552E+02 BASIN STORAGE= .7294E-01 PERCENT ERROR=   -.1


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

                          HYDROGRAPH AT STATION    CHANN
                            FOR PLAN 1, RATIO = 1.00

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                            (CFS)
      451.     12.58                108.         33.         33.         33.
                         (INCHES)   2.305       2.818       2.818       2.818
                          (AC-FT)     54.         66.         66.         66.

                          CUMULATIVE AREA =     .44 SQ MI
```

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

PLAN 2 INPUT DATA FOR STATION CHANN ARE SAME AS FOR PLAN 1
COMPUTED MUSKINGUM-CUNGE PARAMETERS
COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.72	1.51	.98	524.00	760.81	750.26	5.60	8.92
INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL								
MAIN	.72	1.51	5.00		760.28	750.00	5.60	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1303E+03 EXCESS= .0000E+00 OUTFLOW= .1302E+03 BASIN STORAGE= .1153E+00 PERCENT ERROR= .0

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

HYDROGRAPH AT STATION CHANN
FOR PLAN 2, RATIO = 1.00

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)					
		(CFS)				
+ 760.	12.50		205.	66.	66.	66.
		(INCHES)	4.380	5.601	5.601	5.601
		(AC-FT)	102.	130.	130.	130.

CUMULATIVE AREA = .44 SQ MI

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

PLAN 3 INPUT DATA FOR STATION CHANN ARE SAME AS FOR PLAN 1
COMPUTED MUSKINGUM-CUNGE PARAMETERS
COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.72	1.51	.94	524.00	871.75	749.76	6.92	9.33
INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL								
MAIN	.72	1.51	5.00		871.63	750.00	6.92	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1610E+03 EXCESS= .0000E+00 OUTFLOW= .1609E+03 BASIN STORAGE= .1353E+00 PERCENT ERROR= .0

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

HYDROGRAPH AT STATION CHANN
FOR PLAN 3, RATIO = 1.00

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)					
		(CFS)				
+ 872.	12.50		255.	81.	81.	81.
		(INCHES)	5.436	6.921	6.921	6.921
		(AC-FT)	126.	161.	161.	161.

CUMULATIVE AREA = .44 SQ MI

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

PLAN 4 INPUT DATA FOR STATION CHANN ARE SAME AS FOR PLAN 1
COMPUTED MUSKINGUM-CUNGE PARAMETERS
COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.72	1.51	.90	524.00	987.69	749.49	8.16	9.73

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN	.72	1.51	5.00		987.69	750.00	8.16	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1898E+03 EXCESS= .0000E+00 OUTFLOW= .1897E+03 BASIN STORAGE= .1540E+00 PERCENT ERROR= .0

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

HYDROGRAPH AT STATION CHANN
FOR PLAN 4, RATIO = 1.00

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)					
		(CFS)				
+ 988.	12.50		301.	96.	96.	96.
		(INCHES)	6.413	8.160	8.160	8.160
		(AC-FT)	149.	190.	190.	190.

CUMULATIVE AREA = .44 SQ MI

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

PLAN 5 INPUT DATA FOR STATION CHANN ARE SAME AS FOR PLAN 1
COMPUTED MUSKINGUM-CUNGE PARAMETERS
COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.72	1.51	.86	524.00	1126.55	749.90	9.22	10.17

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN	.72	1.51	5.00		1126.36	750.00	9.23	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2146E+03 EXCESS= .0000E+00 OUTFLOW= .2145E+03 BASIN STORAGE= .1538E+00 PERCENT ERROR= .0

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

HYDROGRAPH AT STATION CHANN
FOR PLAN 5, RATIO = 1.00

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)					
		(CFS)				
+ 1126.	12.50		334.	108.	108.	108.
		(INCHES)	7.123	9.226	9.226	9.226
		(AC-FT)	166.	215.	215.	215.

CUMULATIVE AREA = .44 SQ MI

*** ***

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          **************
          *            *
228 KK    *     COMB8  *
          *            *
          **************

229 HC          HYDROGRAPH COMBINATION
                      ICOMP           2  NUMBER OF HYDROGRAPHS TO COMBINE
                                                                  ***


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


          **************
          *            *
230 KK    *     CHANN  *
          *            *
          **************

231 KO          OUTPUT CONTROL VARIABLES
                 IPRNT           3  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         289  LAST ORDINATE PUNCHED OR SAVED
                TIMINT        .083  TIME INTERVAL IN HOURS


          HYDROGRAPH ROUTING DATA

232 RD          MUSKINGUM-CUNGE CHANNEL ROUTING
                           L        667.  CHANNEL LENGTH
                           S       .0050  SLOPE
                           N        .035  CHANNEL ROUGHNESS COEFFICIENT
                          CA         .00  CONTRIBUTING AREA
                       SHAPE        TRAP  CHANNEL SHAPE
                          WD       12.00  BOTTOM WIDTH OR DIAMETER
                           Z         .75  SIDE SLOPE
                                                  ***
                          COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                COMPUTATION TIME STEP
```

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.72	1.51	1.11	667.00	1078.33	760.01	2.96	10.02
			INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL					
MAIN	.72	1.51	5.00		1078.33	760.00	2.96	

```
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1675E+03 EXCESS= .0000E+00 OUTFLOW= .1674E+03 BASIN STORAGE= .1722E+00 PERCENT ERROR=   -.1


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

                       HYDROGRAPH AT STATION    CHANN
                         FOR PLAN 1, RATIO = 1.00
```

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)	(CFS)				
+ 1078.	12.67		275.	84.	84.	84.
		(INCHES)	2.410	2.959	2.959	2.959
		(AC-FT)	136.	167.	167.	167.

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                       CUMULATIVE AREA =    1.06 SQ MI
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***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***

              PLAN  2 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                                COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                       COMPUTATION TIME STEP
                   ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                                 PEAK                CELERITY
                                                   (MIN)      (FT)     (CFS)    (MIN)       (IN)      (FPS)

                     MAIN        .72      1.51        .93    667.00   1797.17    756.02      5.77     11.90

                                       INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                     MAIN        .72      1.51       5.00             1794.36    755.00      5.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3269E+03 EXCESS= .0000E+00 OUTFLOW= .3268E+03 BASIN STORAGE= .2699E+00 PERCENT ERROR=     .0

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

                         HYDROGRAPH AT STATION    CHANN
                           FOR PLAN 2, RATIO = 1.00

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                          (CFS)
+    1794.     12.58                515.        165.        165.         165.
                        (INCHES)    4.510       5.776       5.776        5.776
                         (AC-FT)     255.        327.        327.         327.

                        CUMULATIVE AREA =    1.06 SQ MI

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

              PLAN  3 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                                COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                       COMPUTATION TIME STEP
                   ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                                 PEAK                CELERITY
                                                   (MIN)      (FT)     (CFS)    (MIN)       (IN)      (FPS)

                     MAIN        .72      1.51        .89    667.00   2061.04    755.92      7.10     12.46

                                       INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                     MAIN        .72      1.51       5.00             2060.41    755.00      7.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4018E+03 EXCESS= .0000E+00 OUTFLOW= .4017E+03 BASIN STORAGE= .3161E+00 PERCENT ERROR=     .0

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

                         HYDROGRAPH AT STATION    CHANN
                           FOR PLAN 3, RATIO = 1.00

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                          (CFS)
+    2060.     12.58                636.        203.        203.         203.
                        (INCHES)    5.570       7.099       7.099        7.099
                         (AC-FT)     315.        402.        402.         402.

                        CUMULATIVE AREA =    1.06 SQ MI

***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***     ***
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PLAN  4 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                    COMPUTED MUSKINGUM-CUNGE PARAMETERS
                           COMPUTATION TIME STEP
     ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                    PEAK                CELERITY
                                     (MIN)      (FT)     (CFS)     (MIN)       (IN)      (FPS)

       MAIN        .72      1.51        .86    667.00   2330.93    755.33      8.34     12.98


                         INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL


       MAIN        .72      1.51       5.00             2330.02    755.00      8.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4723E+03 EXCESS= .0000E+00 OUTFLOW= .4721E+03 BASIN STORAGE= .3592E+00 PERCENT ERROR=    .0


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

                HYDROGRAPH AT STATION    CHANN
                  FOR PLAN 4, RATIO = 1.00

  PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                   6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                          (CFS)
+    2330.     12.58                748.        238.        238.         238.
                       (INCHES)    6.551       8.344       8.344        8.344
                        (AC-FT)     371.        472.        472.         472.

                       CUMULATIVE AREA =    1.06 SQ MI


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

PLAN  5 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                    COMPUTED MUSKINGUM-CUNGE PARAMETERS
                           COMPUTATION TIME STEP
     ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                    PEAK                CELERITY
                                     (MIN)      (FT)     (CFS)     (MIN)       (IN)      (FPS)

       MAIN        .72      1.51        .82    667.00   2647.76    754.85      9.42     13.55


                         INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL


       MAIN        .72      1.51       5.00             2647.74    755.00      9.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5330E+03 EXCESS= .0000E+00 OUTFLOW= .5328E+03 BASIN STORAGE= .3584E+00 PERCENT ERROR=    .0


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

                HYDROGRAPH AT STATION    CHANN
                  FOR PLAN 5, RATIO = 1.00

  PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                   6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                          (CFS)
+    2648.     12.58                827.        269.        269.         269.
                       (INCHES)    7.250       9.416       9.416        9.416
                        (AC-FT)     410.        533.        533.         533.

                       CUMULATIVE AREA =    1.06 SQ MI


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


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            *             *
233 KK      *        E7   *
            *             *
            **************


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

234 KP        PLAN  1 FOR STATION       E7
                                RUNOFF COMPUTATION 2-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

235 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .15  SUBBASIN AREA

                PRECIPITATION DATA

240 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .18     .50    2.40    2.55    2.75    3.30    4.10    4.75     .00     .00     .00     .00

                                                STORM AREA =     .15

236 LS          SCS LOSS RATE
                      STRTL         .30  INITIAL ABSTRACTION
                     CRVNBR       86.78  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

237 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .47  LAG

                                                     ***

                                                UNIT HYDROGRAPH
                                           30 END-OF-PERIOD ORDINATES
              10.       31.       63.      104.      131.      139.      135.      120.      100.       74.
              55.       42.       33.       26.       19.       15.       11.        9.        7.        5.
               4.        3.        2.        2.        1.        1.        1.        1.        0.        0.


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

241 KP        PLAN  2 FOR STATION       E7
                                RUNOFF COMPUTATION 10-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

235 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .15  SUBBASIN AREA

                PRECIPITATION DATA

243 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .27     .75    3.35    3.95    4.40    5.40    6.60    7.80     .00     .00     .00     .00

                                                STORM AREA =     .15

236 LS          SCS LOSS RATE
                      STRTL         .30  INITIAL ABSTRACTION
                     CRVNBR       86.78  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

237 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .47  LAG

                                                     ***

                                                UNIT HYDROGRAPH
                                           30 END-OF-PERIOD ORDINATES
              10.       31.       63.      104.      131.      139.      135.      120.      100.       74.
              55.       42.       33.       26.       19.       15.       11.        9.        7.        5.
               4.        3.        2.        2.        1.        1.        1.        1.        0.        0.


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

244 KP        PLAN  3 FOR STATION       E7
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                                RUNOFF COMPUTATION 25-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

235 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .15  SUBBASIN AREA

                PRECIPITATION DATA

246 PH                                 DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .32     .90    3.62    4.65    5.25    6.50    7.70    9.20     .00     .00     .00     .00

                                                STORM AREA =     .15

236 LS          SCS LOSS RATE
                      STRTL         .30  INITIAL ABSTRACTION
                     CRVNBR       86.78  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

237 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .47  LAG

                                                        ***

                                                   UNIT HYDROGRAPH
                                             30 END-OF-PERIOD ORDINATES
                10.       31.       63.      104.      131.      139.      135.      120.      100.       74.
                55.       42.       33.       26.       19.       15.       11.        9.        7.        5.
                 4.        3.        2.        2.        1.        1.        1.        1.        0.        0.


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

247 KP        PLAN  4 FOR STATION       E7
                                RUNOFF COMPUTATION 50-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

235 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .15  SUBBASIN AREA

                PRECIPITATION DATA

249 PH                                 DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .34     .97    4.00    5.30    5.90    7.50    8.70   10.50     .00     .00     .00     .00

                                                STORM AREA =     .15

236 LS          SCS LOSS RATE
                      STRTL         .30  INITIAL ABSTRACTION
                     CRVNBR       86.78  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

237 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .47  LAG

                                                        ***

                                                   UNIT HYDROGRAPH
                                             30 END-OF-PERIOD ORDINATES
                10.       31.       63.      104.      131.      139.      135.      120.      100.       74.
                55.       42.       33.       26.       19.       15.       11.        9.        7.        5.
                 4.        3.        2.        2.        1.        1.        1.        1.        0.        0.


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

250 KP        PLAN  5 FOR STATION       E7
                                RUNOFF COMPUTATION 100-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

  5 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .15  SUBBASIN AREA

                PRECIPITATION DATA
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252 PH                          DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                      ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                      5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                        .39    1.10    4.50    5.65    6.80    8.00    9.80   11.60     .00     .00     .00     .00

                                                STORM AREA =     .15

236 LS                SCS LOSS RATE
                            STRTL         .30  INITIAL ABSTRACTION
                           CRVNBR       86.78  CURVE NUMBER
                            RTIMP         .00  PERCENT IMPERVIOUS AREA

237 UD                SCS DIMENSIONLESS UNITGRAPH
                             TLAG         .47  LAG

                                                   ***

                                                UNIT HYDROGRAPH
                                            30 END-OF-PERIOD ORDINATES
                      10.       31.       63.      104.      131.      139.      135.      120.      100.       74.
                      55.       42.       33.       26.       19.       15.       11.        9.        7.        5.
                       4.        3.        2.        2.        1.        1.        1.        1.        0.        0.

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


                    **************
                    *            *
253 KK              *     CHANN  *
                    *            *
                    **************

254 KO                  OUTPUT CONTROL VARIABLES
                              IPRNT           3  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         289  LAST ORDINATE PUNCHED OR SAVED
                             TIMINT        .083  TIME INTERVAL IN HOURS


                        HYDROGRAPH ROUTING DATA

255 RD                  MUSKINGUM-CUNGE CHANNEL ROUTING
                                   L       1492.  CHANNEL LENGTH
                                   S       .0050  SLOPE
                                   N        .035  CHANNEL ROUGHNESS COEFFICIENT
                                  CA         .00  CONTRIBUTING AREA
                               SHAPE        TRAP  CHANNEL SHAPE
                                  WD       12.00  BOTTOM WIDTH OR DIAMETER
                                   Z         .75  SIDE SLOPE

                                                   ***
                                COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                      COMPUTATION TIME STEP
                      ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO      VOLUME    MAXIMUM
                                                                                     PEAK                CELERITY
                                                     (MIN)      (FT)     (CFS)     (MIN)       (IN)      (FPS)

                        MAIN      .72      1.51       4.57    746.00    174.32    759.36       3.27      5.44

                                      INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                        MAIN      .72      1.51       5.00              173.89    760.00       3.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2592E+02 EXCESS= .0000E+00 OUTFLOW= .2585E+02 BASIN STORAGE= .1063E+00 PERCENT ERROR=   -.2


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

                   HYDROGRAPH AT STATION    CHANN
                     FOR PLAN 1, RATIO = 1.00
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  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                            (CFS)
+     174.     12.67                 42.         13.         13.          13.
                         (INCHES)  2.633       3.277       3.277        3.277
                          (AC-FT)    21.         26.         26.          26.

                         CUMULATIVE AREA =     .15 SQ MI


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

                PLAN  2 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                                COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                      COMPUTATION TIME STEP
                    ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                                  PEAK                CELERITY
                                                   (MIN)      (FT)     (CFS)     (MIN)       (IN)      (FPS)

                      MAIN        .72      1.51       3.91    746.00    276.68    755.51       6.16       6.35

                                      INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                      MAIN        .72      1.51       5.00              276.09    755.00       6.17

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .4876E+02 EXCESS= .0000E+00 OUTFLOW= .4865E+02 BASIN STORAGE= .1645E+00 PERCENT ERROR=   -.1


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

                        HYDROGRAPH AT STATION    CHANN
                          FOR PLAN 2, RATIO = 1.00

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                            (CFS)
+     276.     12.58                 76.         25.         25.          25.
                         (INCHES)  4.761       6.166       6.166        6.166
                          (AC-FT)    38.         49.         49.          49.

                         CUMULATIVE AREA =     .15 SQ MI


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

                PLAN  3 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                                COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                      COMPUTATION TIME STEP
                    ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                                  PEAK                CELERITY
                                                   (MIN)      (FT)     (CFS)     (MIN)       (IN)      (FPS)

                      MAIN        .72      1.51       3.75    746.00    314.45    754.40       7.51       6.63

                                      INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                      MAIN        .72      1.51       5.00              314.35    755.00       7.52

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .5944E+02 EXCESS= .0000E+00 OUTFLOW= .5931E+02 BASIN STORAGE= .1922E+00 PERCENT ERROR=   -.1


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

                        HYDROGRAPH AT STATION    CHANN
                          FOR PLAN 3, RATIO = 1.00

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
```

```
                          (CFS)
+     314.     12.58                  93.         30.         30.         30.
                       (INCHES)     5.841       7.516       7.516       7.516
                        (AC-FT)       46.         59.         59.         59.

                       CUMULATIVE AREA =     .15 SQ MI


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

                PLAN  4 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                                COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                      COMPUTATION TIME STEP
                    ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                                  PEAK                CELERITY
                                                   (MIN)      (FT)     (CFS)     (MIN)       (IN)      (FPS)

                      MAIN        .72      1.51       3.61    746.00    352.87    754.97      8.77      6.88

                                          INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                      MAIN        .72      1.51       5.00              352.85    755.00      8.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6940E+02 EXCESS= .0000E+00 OUTFLOW= .6926E+02 BASIN STORAGE= .2181E+00 PERCENT ERROR=   -.1


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

                        HYDROGRAPH AT STATION    CHANN
                          FOR PLAN 4, RATIO = 1.00

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
   (CFS)       (HR)
                          (CFS)
+     353.     12.58                 109.         35.         35.         35.
                       (INCHES)     6.830       8.775       8.775       8.775
                        (AC-FT)       54.         69.         69.         69.

                       CUMULATIVE AREA =     .15 SQ MI


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

                PLAN  5 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                                COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                      COMPUTATION TIME STEP
                    ELEMENT    ALPHA       M         DT        DX       PEAK    TIME TO     VOLUME    MAXIMUM
                                                                                  PEAK                CELERITY
                                                   (MIN)      (FT)     (CFS)     (MIN)       (IN)      (FPS)
                      MAIN        .72      1.51       3.47    746.00    399.24    755.42      9.85      7.18

                                          INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                      MAIN        .72      1.51       5.00              398.92    755.00      9.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7796E+02 EXCESS= .0000E+00 OUTFLOW= .7781E+02 BASIN STORAGE= .2173E+00 PERCENT ERROR=   -.1


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

                        HYDROGRAPH AT STATION    CHANN
                          FOR PLAN 5, RATIO = 1.00

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
   (CFS)       (HR)
                          (CFS)
+     399.     12.58                 119.         39.         39.         39.
                       (INCHES)     7.496       9.859       9.859       9.859
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                    (AC-FT)       59.         78.         78.          78.

                    CUMULATIVE AREA =     .15 SQ MI


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


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          *            *
 256 KK   *        P3  *
          *            *
          **************


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

 257 KP        PLAN  1 FOR STATION       P3
                                RUNOFF COMPUTATION 2-YRS STORM IN BASIN

               SUBBASIN RUNOFF DATA

 258 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .06  SUBBASIN AREA

                 PRECIPITATION DATA

 263 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                 ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                 5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                   .18     .50    2.40    2.55    2.75    3.30    4.10    4.75     .00     .00     .00     .00

                                                STORM AREA =     .06

 259 LS          SCS LOSS RATE
                      STRTL         .35  INITIAL ABSTRACTION
                     CRVNBR       85.02  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

 260 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .18  LAG

                                                     ***

                                                UNIT HYDROGRAPH
                                           13 END-OF-PERIOD ORDINATES
                37.      116.      129.       90.       45.       25.       14.        7.        4.        2.
                 1.        1.        0.


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

 264 KP        PLAN  2 FOR STATION       P3
                                RUNOFF COMPUTATION 10-YRS STORM IN BASIN

               SUBBASIN RUNOFF DATA

 258 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .06  SUBBASIN AREA

                 PRECIPITATION DATA

 266 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                 ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                 5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                   .27     .75    3.35    3.95    4.40    5.40    6.60    7.80     .00     .00     .00     .00

                                                STORM AREA =     .06

 259 LS          SCS LOSS RATE
                      STRTL         .35  INITIAL ABSTRACTION
                     CRVNBR       85.02  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

 260 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .18  LAG

                                                     ***
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                                        UNIT HYDROGRAPH
                                   13 END-OF-PERIOD ORDINATES
          37.      116.      129.       90.       45.       25.       14.        7.        4.        2.
           1.        1.        0.

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

267 KP      PLAN  3 FOR STATION       P3
                        RUNOFF COMPUTATION 25-YRS STORM IN BASIN

            SUBBASIN RUNOFF DATA

258 BA        SUBBASIN CHARACTERISTICS
                TAREA         .06  SUBBASIN AREA

              PRECIPITATION DATA

269 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
              ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
              5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                .32     .90    3.62    4.65    5.25    6.50    7.70    9.20     .00     .00     .00     .00

                                          STORM AREA =     .06

259 LS        SCS LOSS RATE
                STRTL         .35  INITIAL ABSTRACTION
               CRVNBR       85.02  CURVE NUMBER
                RTIMP         .00  PERCENT IMPERVIOUS AREA

260 UD        SCS DIMENSIONLESS UNITGRAPH
                 TLAG         .18  LAG

                                              ***

                                        UNIT HYDROGRAPH
                                   13 END-OF-PERIOD ORDINATES
          37.      116.      129.       90.       45.       25.       14.        7.        4.        2.
           1.        1.        0.

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

270 KP      PLAN  4 FOR STATION       P3
                        RUNOFF COMPUTATION 50-YRS STORM IN BASIN

            SUBBASIN RUNOFF DATA

258 BA        SUBBASIN CHARACTERISTICS
                TAREA         .06  SUBBASIN AREA

              PRECIPITATION DATA

272 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
              ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
              5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                .34     .97    4.00    5.30    5.90    7.50    8.70   10.50     .00     .00     .00     .00

                                          STORM AREA =     .06

259 LS        SCS LOSS RATE
                STRTL         .35  INITIAL ABSTRACTION
               CRVNBR       85.02  CURVE NUMBER
                RTIMP         .00  PERCENT IMPERVIOUS AREA

260 UD        SCS DIMENSIONLESS UNITGRAPH
                 TLAG         .18  LAG

                                              ***

                                        UNIT HYDROGRAPH
                                   13 END-OF-PERIOD ORDINATES
          37.      116.      129.       90.       45.       25.       14.        7.        4.        2.
           1.        1.        0.

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

273 KP      PLAN  5 FOR STATION       P3
                        RUNOFF COMPUTATION 100-YRS STORM IN BASIN
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              SUBBASIN RUNOFF DATA

258 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .06  SUBBASIN AREA

                PRECIPITATION DATA

275 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .39    1.10    4.50    5.65    6.80    8.00    9.80   11.60     .00     .00     .00     .00

                                                STORM AREA =     .06

259 LS          SCS LOSS RATE
                      STRTL         .35  INITIAL ABSTRACTION
                     CRVNBR       85.02  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

260 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .18  LAG

                                                      ***

                                                UNIT HYDROGRAPH
                                            13 END-OF-PERIOD ORDINATES
              37.      116.      129.       90.       45.       25.       14.        7.        4.        2.
               1.        1.        0.


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


            **************
            *            *
276 KK      *     COMB9  *
            *            *
            **************

277 HC          HYDROGRAPH COMBINATION
                      ICOMP           2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                      ***


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


            **************
            *            *
278 KK      *    COMB10  *
            *            *
            **************

279 HC          HYDROGRAPH COMBINATION
                      ICOMP           2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                      ***
1

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


                                                                  RATIOS APPLIED TO FLOWS
 OPERATION       STATION     AREA    PLAN            RATIO 1
                                                        1.00

 HYDROGRAPH AT
+                    E3       .03     1   FLOW          45.
                                          TIME        11.92
                                        2   FLOW          71.
                                          TIME        11.92
                                        3   FLOW          77.
                                          TIME        12.00
                                        4   FLOW          87.
                                          TIME        11.92
                                        5   FLOW          98.
```

```
                                        TIME        11.92

 ROUTED TO
+                CHANN       .03     1  FLOW          46.
                                        TIME        12.08
                                     2  FLOW          71.
                                        TIME        12.08
                                     3  FLOW          78.
                                        TIME        12.08
                                     4  FLOW          88.
                                        TIME        12.08
                                     5  FLOW          99.
                                        TIME        12.08

 HYDROGRAPH AT
+                  E4       .02     1  FLOW          30.
                                        TIME        12.33
                                     2  FLOW          50.
                                        TIME        12.00
                                     3  FLOW          58.
                                        TIME        12.00
                                     4  FLOW          66.
                                        TIME        12.00
                                     5  FLOW          76.
                                        TIME        12.00

 ROUTED TO
+                CHANN       .02     1  FLOW          28.
                                        TIME        12.50
                                     2  FLOW          50.
                                        TIME        12.08
                                     3  FLOW          57.
                                        TIME        12.08
                                     4  FLOW          67.
                                        TIME        12.08
                                     5  FLOW          77.
                                        TIME        12.08

    COMBINED AT
+                COMB1       .05     1  FLOW          71.
                                        TIME        12.08
                                     2  FLOW         121.
                                        TIME        12.08
                                     3  FLOW         135.
                                        TIME        12.08
                                     4  FLOW         154.
                                        TIME        12.08
                                     5  FLOW         176.
                                        TIME        12.08

 HYDROGRAPH AT
+                  E2       .01     1  FLOW          15.
                                        TIME        11.92
                                     2  FLOW          23.
                                        TIME        11.92
                                     3  FLOW          25.
                                        TIME        12.00
                                     4  FLOW          28.
                                        TIME        11.92
                                     5  FLOW          31.
                                        TIME        11.92

  2 COMBINED AT
+                COMB2       .06     1  FLOW          83.
                                        TIME        12.08
                                     2  FLOW         141.
                                        TIME        12.08
                                     3  FLOW         158.
                                        TIME        12.08
                                     4  FLOW         180.
                                        TIME        12.08
                                     5  FLOW         205.
                                        TIME        12.08

 ROUTED TO
+                CHANN       .06     1  FLOW          82.
                                        TIME        12.17
                                     2  FLOW         135.
                                        TIME        12.17
                                     3  FLOW         154.
                                        TIME        12.17
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                                        4   FLOW        173.
                                            TIME       12.17
                                        5   FLOW        197.
                                            TIME       12.17

 HYDROGRAPH AT
+                    P1       .11       1   FLOW        134.
                                            TIME       12.50
                                        2   FLOW        213.
                                            TIME       12.42
                                        3   FLOW        244.
                                            TIME       12.42
                                        4   FLOW        273.
                                            TIME       12.42
                                        5   FLOW        311.
                                            TIME       12.42

  2 COMBINED AT
+                  COMB3       .17       1   FLOW        211.
                                            TIME       12.50
                                        2   FLOW        337.
                                            TIME       12.17
                                        3   FLOW        387.
                                            TIME       12.25
                                        4   FLOW        436.
                                            TIME       12.17
                                        5   FLOW        494.
                                            TIME       12.17

 ROUTED TO
+                  CHANN       .17       1   FLOW        208.
                                            TIME       12.67
                                        2   FLOW        338.
                                            TIME       12.33
                                        3   FLOW        388.
                                            TIME       12.33
                                        4   FLOW        436.
                                            TIME       12.33
                                        5   FLOW        495.
                                            TIME       12.33

 HYDROGRAPH AT
+                    E1       .01       1   FLOW         10.
                                            TIME       12.42
                                        2   FLOW         17.
                                            TIME       12.08
                                        3   FLOW         19.
                                            TIME       12.08
                                        4   FLOW         22.
                                            TIME       12.08
                                        5   FLOW         25.
                                            TIME       12.08

  2 COMBINED AT
+                  COMB4       .18       1   FLOW        214.
                                            TIME       12.67
                                        2   FLOW        354.
                                            TIME       12.33
                                        3   FLOW        407.
                                            TIME       12.33
                                        4   FLOW        457.
                                            TIME       12.33
                                        5   FLOW        519.
                                            TIME       12.33

 HYDROGRAPH AT
+                    E        .45       1   FLOW        456.
                                            TIME       12.75
                                        2   FLOW        752.
                                            TIME       12.67
                                        3   FLOW        862.
                                            TIME       12.67
                                        4   FLOW        974.
                                            TIME       12.67
                                        5   FLOW       1103.
                                            TIME       12.67

    COMBINED AT
+                  COMB5       .63       1   FLOW        668.
                                            TIME       12.67
                                        2   FLOW       1089.
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                                        TIME        12.67
                                   3    FLOW        1238.
                                        TIME        12.58
                                   4    FLOW        1396.
                                        TIME        12.58
                                   5    FLOW        1583.
                                        TIME        12.58

 ROUTED TO
+                  CHANN       .63     1    FLOW         666.
                                        TIME        12.75
                                   2    FLOW        1079.
                                        TIME        12.75
                                   3    FLOW        1232.
                                        TIME        12.67
                                   4    FLOW        1388.
                                        TIME        12.67
                                   5    FLOW        1577.
                                        TIME        12.67

 HYDROGRAPH AT
+                     E5       .03     1    FLOW          51.
                                        TIME        11.92
                                   2    FLOW          82.
                                        TIME        11.92
                                   3    FLOW          90.
                                        TIME        12.00
                                   4    FLOW         101.
                                        TIME        11.92
                                   5    FLOW         114.
                                        TIME        12.00

 ROUTED TO
+                  CHANN       .03     1    FLOW          51.
                                        TIME        12.17
                                   2    FLOW          82.
                                        TIME        12.17
                                   3    FLOW          91.
                                        TIME        12.17
                                   4    FLOW         102.
                                        TIME        12.17
                                   5    FLOW         115.
                                        TIME        12.17

 HYDROGRAPH AT
+                     E6       .06     1    FLOW          93.
                                        TIME        12.00
                                   2    FLOW         150.
                                        TIME        12.00
                                   3    FLOW         167.
                                        TIME        12.00
                                   4    FLOW         189.
                                        TIME        12.00
                                   5    FLOW         214.
                                        TIME        12.00

 ROUTED TO
+                  CHANN       .06     1    FLOW          92.
                                        TIME        12.00
                                   2    FLOW         149.
                                        TIME        12.00
                                   3    FLOW         164.
                                        TIME        12.00
                                   4    FLOW         187.
                                        TIME        12.00
                                   5    FLOW         211.
                                        TIME        12.00

  2 COMBINED AT
+                  COMB6       .09     1    FLOW         132.
                                        TIME        12.08
                                   2    FLOW         219.
                                        TIME        12.08
                                   3    FLOW         247.
                                        TIME        12.08
                                   4    FLOW         279.
                                        TIME        12.08
                                   5    FLOW         318.
                                        TIME        12.08

 HYDROGRAPH AT
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+                    P2        .34     1   FLOW        338.
                                           TIME       12.58
                                       2   FLOW        582.
                                           TIME       12.58
                                       3   FLOW        672.
                                           TIME       12.58
                                       4   FLOW        763.
                                           TIME       12.58
                                       5   FLOW        872.
                                           TIME       12.58

  2 COMBINED AT
+                  COMB7        .44     1   FLOW        451.
                                           TIME       12.50
                                       2   FLOW        763.
                                           TIME       12.50
                                       3   FLOW        873.
                                           TIME       12.50
                                       4   FLOW        989.
                                           TIME       12.50
                                       5   FLOW       1128.
                                           TIME       12.50

 ROUTED TO
+                  CHANN        .44     1   FLOW        451.
                                           TIME       12.58
                                       2   FLOW        760.
                                           TIME       12.50
                                       3   FLOW        872.
                                           TIME       12.50
                                       4   FLOW        988.
                                           TIME       12.50
                                       5   FLOW       1126.
                                           TIME       12.50

  2 COMBINED AT
                   COMB8       1.06     1   FLOW       1080.
                                           TIME       12.67
                                       2   FLOW       1800.
                                           TIME       12.58
                                       3   FLOW       2064.
                                           TIME       12.58
                                       4   FLOW       2334.
                                           TIME       12.58
                                       5   FLOW       2652.
                                           TIME       12.58

 ROUTED TO
+                  CHANN       1.06     1   FLOW       1078.
                                           TIME       12.67
                                       2   FLOW       1794.
                                           TIME       12.58
                                       3   FLOW       2060.
                                           TIME       12.58
                                       4   FLOW       2330.
                                           TIME       12.58
                                       5   FLOW       2648.
                                           TIME       12.58

 HYDROGRAPH AT
+                    E7        .15     1   FLOW        175.
                                           TIME       12.58
                                       2   FLOW        278.
                                           TIME       12.58
                                       3   FLOW        315.
                                           TIME       12.58
                                       4   FLOW        353.
                                           TIME       12.58
                                       5   FLOW        400.
                                           TIME       12.58

 ROUTED TO
+                  CHANN        .15     1   FLOW        174.
                                           TIME       12.67
                                       2   FLOW        276.
                                           TIME       12.58
                                       3   FLOW        314.
                                           TIME       12.58
                                       4   FLOW        353.
                                           TIME       12.58
                                       5   FLOW        399.
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                                        TIME        12.58

 HYDROGRAPH AT
+                    P3       .06     1  FLOW         81.
                                         TIME        12.42
                                      2  FLOW        132.
                                         TIME        12.08
                                      3  FLOW        151.
                                         TIME        12.08
                                      4  FLOW        170.
                                         TIME        12.08
                                      5  FLOW        193.
                                         TIME        12.08

  2 COMBINED AT
+                  COMB9       .21     1  FLOW        242.
                                         TIME        12.50
                                      2  FLOW        386.
                                         TIME        12.50
                                      3  FLOW        436.
                                         TIME        12.50
                                      4  FLOW        490.
                                         TIME        12.50
                                      5  FLOW        556.
                                         TIME        12.50

  2 COMBINED AT
+                 COMB10      1.27     1  FLOW       1304.
                                         TIME        12.58
                                      2  FLOW       2172.
                                         TIME        12.58
                                      3  FLOW       2486.
                                         TIME        12.58
                                      4  FLOW       2808.
                                         TIME        12.58
                                      5  FLOW       3188.
                                         TIME        12.58

                                        SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                            (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                          INTERPOLATED TO
                                                                      COMPUTATION INTERVAL
          ISTAQ    ELEMENT      DT       PEAK    TIME TO     VOLUME      DT       PEAK    TIME TO     VOLUME
                                                    PEAK                                     PEAK

                               (MIN)     (CFS)     (MIN)      (IN)     (MIN)     (CFS)     (MIN)       (IN)

         FOR PLAN = 1  RATIO=  .00
            CHANN  MANE         5.00     46.09    725.00      3.40      5.00     46.09    725.00        3.40

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .5102E+01 EXCESS= .0000E+00 OUTFLOW= .5080E+01 BASIN STORAGE= .3786E-01 PERCENT ERROR=   -.3

         FOR PLAN = 2  RATIO=  .00
            CHANN  MANE         5.00     70.71    725.00      6.33      5.00     70.71    725.00        6.33

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .9485E+01 EXCESS= .0000E+00 OUTFLOW= .9456E+01 BASIN STORAGE= .5838E-01 PERCENT ERROR=   -.3

         FOR PLAN = 3  RATIO=  .00
            CHANN  MANE         5.00     78.28    725.00      7.69      5.00     78.28    725.00        7.69

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .1153E+02 EXCESS= .0000E+00 OUTFLOW= .1150E+02 BASIN STORAGE= .6820E-01 PERCENT ERROR=   -.3

         FOR PLAN = 4  RATIO=  .00
            CHANN  MANE         5.00     87.70    725.00      8.97      5.00     87.70    725.00        8.97

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .1344E+02 EXCESS= .0000E+00 OUTFLOW= .1340E+02 BASIN STORAGE= .7740E-01 PERCENT ERROR=   -.3

         FOR PLAN = 5  RATIO=  .00
            CHANN  MANE         5.00     99.20    725.00     10.05      5.00     99.20    725.00       10.05

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .1506E+02 EXCESS= .0000E+00 OUTFLOW= .1502E+02 BASIN STORAGE= .7708E-01 PERCENT ERROR=   -.2
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FOR PLAN = 1  RATIO=  .00
   CHANN  MANE         5.00     28.43    750.00      2.57      5.00     28.43    750.00        2.57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3307E+01 EXCESS= .0000E+00 OUTFLOW= .3286E+01 BASIN STORAGE= .3962E-01 PERCENT ERROR=   -.6

FOR PLAN = 2  RATIO=  .00
   CHANN  MANE         5.00     50.23    725.00      5.28      5.00     50.23    725.00        5.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6801E+01 EXCESS= .0000E+00 OUTFLOW= .6768E+01 BASIN STORAGE= .6335E-01 PERCENT ERROR=   -.4

FOR PLAN = 3  RATIO=  .00
   CHANN  MANE         5.00     57.07    725.00      6.59      5.00     57.07    725.00        6.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8478E+01 EXCESS= .0000E+00 OUTFLOW= .8437E+01 BASIN STORAGE= .7457E-01 PERCENT ERROR=   -.4

FOR PLAN = 4  RATIO=  .00
   CHANN  MANE         5.00     66.50    725.00      7.81      5.00     66.50    725.00        7.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1006E+02 EXCESS= .0000E+00 OUTFLOW= .1001E+02 BASIN STORAGE= .8505E-01 PERCENT ERROR=   -.4

FOR PLAN = 5  RATIO=  .00
   CHANN  MANE         5.00     76.79    725.00      8.87      5.00     76.79    725.00        8.87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1141E+02 EXCESS= .0000E+00 OUTFLOW= .1136E+02 BASIN STORAGE= .8498E-01 PERCENT ERROR=   -.3

FOR PLAN = 1  RATIO=  .00
   CHANN  MANE         4.65     82.05    730.09      3.06      5.00     81.89    730.00        3.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1000E+02 EXCESS= .0000E+00 OUTFLOW= .9974E+01 BASIN STORAGE= .4534E-01 PERCENT ERROR=   -.2

FOR PLAN = 2  RATIO=  .00
   CHANN  MANE         3.90    138.02    728.40      5.90      5.00    135.25    730.00        5.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1925E+02 EXCESS= .0000E+00 OUTFLOW= .1921E+02 BASIN STORAGE= .7068E-01 PERCENT ERROR=   -.1

FOR PLAN = 3  RATIO=  .00
   CHANN  MANE         3.74    154.87    729.76      7.24      5.00    154.49    730.00        7.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2361E+02 EXCESS= .0000E+00 OUTFLOW= .2356E+02 BASIN STORAGE= .8280E-01 PERCENT ERROR=   -.1

FOR PLAN = 4  RATIO=  .00
   CHANN  MANE         3.59    176.77    728.28      8.50      5.00    173.41    730.00        8.50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2771E+02 EXCESS= .0000E+00 OUTFLOW= .2765E+02 BASIN STORAGE= .9403E-01 PERCENT ERROR=   -.1

FOR PLAN = 5  RATIO=  .00
   CHANN  MANE         3.43    201.27    727.60      9.57      5.00    196.87    730.00        9.57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3119E+02 EXCESS= .0000E+00 OUTFLOW= .3113E+02 BASIN STORAGE= .9380E-01 PERCENT ERROR=   -.1

FOR PLAN = 1  RATIO=  .00
   CHANN  MANE         5.00    208.10    760.00      3.06      5.00    208.10    760.00        3.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2780E+02 EXCESS= .0000E+00 OUTFLOW= .2764E+02 BASIN STORAGE= .2983E+00 PERCENT ERROR=   -.5

FOR PLAN = 2  RATIO=  .00
   CHANN  MANE         5.00    337.63    740.00      5.91      5.00    337.63    740.00        5.91
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CONTINUITY SUMMARY (AC-FT) - INFLOW= .5351E+02 EXCESS= .0000E+00 OUTFLOW= .5326E+02 BASIN STORAGE= .4646E+00 PERCENT ERROR=   -.4

          FOR PLAN = 3  RATIO=  .00
             CHANN  MANE         5.00    388.07    740.00      7.24      5.00    388.07    740.00        7.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6563E+02 EXCESS= .0000E+00 OUTFLOW= .6533E+02 BASIN STORAGE= .5439E+00 PERCENT ERROR=   -.4

          FOR PLAN = 4  RATIO=  .00
             CHANN  MANE         5.00    436.09    740.00      8.49      5.00    436.09    740.00        8.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7697E+02 EXCESS= .0000E+00 OUTFLOW= .7661E+02 BASIN STORAGE= .6180E+00 PERCENT ERROR=   -.3

          FOR PLAN = 5  RATIO=  .00
             CHANN  MANE         5.00    495.37    740.00      9.57      5.00    495.37    740.00        9.57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8665E+02 EXCESS= .0000E+00 OUTFLOW= .8629E+02 BASIN STORAGE= .6164E+00 PERCENT ERROR=   -.3

          FOR PLAN = 1  RATIO=  .00
             CHANN  MANE         5.00    665.93    765.00      3.06      5.00    665.93    765.00        3.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1023E+03 EXCESS= .0000E+00 OUTFLOW= .1020E+03 BASIN STORAGE= .5371E+00 PERCENT ERROR=   -.2

          FOR PLAN = 2  RATIO=  .00
             CHANN  MANE         4.84   1081.73    760.45      5.90      5.00   1079.45    765.00        5.90

 ᐧNTINUITY SUMMARY (AC-FT) - INFLOW= .1972E+03 EXCESS= .0000E+00 OUTFLOW= .1966E+03 BASIN STORAGE= .8381E+00 PERCENT ERROR=   -.2

          FOR PLAN = 3  RATIO=  .00
             CHANN  MANE         4.64   1235.08    760.88      7.22      5.00   1232.26    760.00        7.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2416E+03 EXCESS= .0000E+00 OUTFLOW= .2409E+03 BASIN STORAGE= .9808E+00 PERCENT ERROR=   -.1

          FOR PLAN = 4  RATIO=  .00
             CHANN  MANE         4.46   1390.43    761.90      8.47      5.00   1387.93    760.00        8.48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2834E+03 EXCESS= .0000E+00 OUTFLOW= .2826E+03 BASIN STORAGE= .1113E+01 PERCENT ERROR=   -.1

          FOR PLAN = 5  RATIO=  .00
             CHANN  MANE         4.27   1578.09    760.34      9.55      5.00   1576.91    760.00        9.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3193E+03 EXCESS= .0000E+00 OUTFLOW= .3185E+03 BASIN STORAGE= .1111E+01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             CHANN  MANE         5.00     51.43    730.00      3.28      5.00     51.43    730.00        3.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5818E+01 EXCESS= .0000E+00 OUTFLOW= .5776E+01 BASIN STORAGE= .7739E-01 PERCENT ERROR=   -.6

          FOR PLAN = 2  RATIO=  .00
             CHANN  MANE         5.00     81.69    730.00      6.18      5.00     81.69    730.00        6.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1095E+02 EXCESS= .0000E+00 OUTFLOW= .1088E+02 BASIN STORAGE= .1197E+00 PERCENT ERROR=   -.5

          FOR PLAN = 3  RATIO=  .00
             CHANN  MANE         5.00     91.00    730.00      7.53      5.00     91.00    730.00        7.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1335E+02 EXCESS= .0000E+00 OUTFLOW= .1327E+02 BASIN STORAGE= .1400E+00 PERCENT ERROR=   -.5
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```
FOR PLAN = 4  RATIO=  .00
   CHANN  MANE          5.00    101.62    730.00      8.80      5.00    101.62    730.00        8.80

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1559E+02 EXCESS= .0000E+00 OUTFLOW= .1549E+02 BASIN STORAGE= .1589E+00 PERCENT ERROR=   -.4

FOR PLAN = 5  RATIO=  .00
   CHANN  MANE          5.00    114.82    730.00      9.88      5.00    114.82    730.00        9.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1749E+02 EXCESS= .0000E+00 OUTFLOW= .1740E+02 BASIN STORAGE= .1584E+00 PERCENT ERROR=   -.4

FOR PLAN = 1  RATIO=  .00
   CHANN  MANE          3.37     93.16    720.95      3.28      5.00     91.79    720.00        3.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1086E+02 EXCESS= .0000E+00 OUTFLOW= .1083E+02 BASIN STORAGE= .3463E-01 PERCENT ERROR=   -.1

FOR PLAN = 2  RATIO=  .00
   CHANN  MANE          2.87    150.11    720.52      6.18      5.00    149.38    720.00        6.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2048E+02 EXCESS= .0000E+00 OUTFLOW= .2045E+02 BASIN STORAGE= .5373E-01 PERCENT ERROR=   -.1

FOR PLAN = 3  RATIO=  .00
   CHANN  MANE          2.77    165.45    721.98      7.54      5.00    163.83    720.00        7.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2497E+02 EXCESS= .0000E+00 OUTFLOW= .2493E+02 BASIN STORAGE= .6281E-01 PERCENT ERROR=   -.1

FOR PLAN = 4  RATIO=  .00
   CHANN  MANE          2.66    187.09    720.03      8.81      5.00    187.00    720.00        8.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2918E+02 EXCESS= .0000E+00 OUTFLOW= .2913E+02 BASIN STORAGE= .7137E-01 PERCENT ERROR=   -.1

FOR PLAN = 5  RATIO=  .00
   CHANN  MANE          2.55    212.35    720.53      9.89      5.00    211.30    720.00        9.89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3275E+02 EXCESS= .0000E+00 OUTFLOW= .3271E+02 BASIN STORAGE= .7104E-01 PERCENT ERROR=   -.1

FOR PLAN = 1  RATIO=  .00
   CHANN  MANE          1.17    451.29    753.46      2.82      5.00    450.75    755.00        2.82

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6555E+02 EXCESS= .0000E+00 OUTFLOW= .6552E+02 BASIN STORAGE= .7294E-01 PERCENT ERROR=   -.1

FOR PLAN = 2  RATIO=  .00
   CHANN  MANE           .98    760.81    750.26      5.60      5.00    760.28    750.00        5.60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1303E+03 EXCESS= .0000E+00 OUTFLOW= .1302E+03 BASIN STORAGE= .1153E+00 PERCENT ERROR=    .0

FOR PLAN = 3  RATIO=  .00
   CHANN  MANE           .94    871.75    749.76      6.92      5.00    871.63    750.00        6.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1610E+03 EXCESS= .0000E+00 OUTFLOW= .1609E+03 BASIN STORAGE= .1353E+00 PERCENT ERROR=    .0

FOR PLAN = 4  RATIO=  .00
   CHANN  MANE           .90    987.69    749.49      8.16      5.00    987.69    750.00        8.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1898E+03 EXCESS= .0000E+00 OUTFLOW= .1897E+03 BASIN STORAGE= .1540E+00 PERCENT ERROR=    .0

FOR PLAN = 5  RATIO=  .00
   CHANN  MANE           .86   1126.55    749.90      9.22      5.00   1126.36    750.00        9.23
```

```
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2146E+03 EXCESS= .0000E+00 OUTFLOW= .2145E+03 BASIN STORAGE= .1538E+00 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             CHANN  MANE          1.11   1078.33    760.01      2.96      5.00   1078.33    760.00        2.96

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1675E+03 EXCESS= .0000E+00 OUTFLOW= .1674E+03 BASIN STORAGE= .1722E+00 PERCENT ERROR=   -.1

          FOR PLAN = 2  RATIO=  .00
             CHANN  MANE           .93   1797.17    756.02      5.77      5.00   1794.36    755.00        5.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3269E+03 EXCESS= .0000E+00 OUTFLOW= .3268E+03 BASIN STORAGE= .2699E+00 PERCENT ERROR=    .0

          FOR PLAN = 3  RATIO=  .00
             CHANN  MANE           .89   2061.04    755.92      7.10      5.00   2060.41    755.00        7.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4018E+03 EXCESS= .0000E+00 OUTFLOW= .4017E+03 BASIN STORAGE= .3161E+00 PERCENT ERROR=    .0

          FOR PLAN = 4  RATIO=  .00
             CHANN  MANE           .86   2330.93    755.33      8.34      5.00   2330.02    755.00        8.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4723E+03 EXCESS= .0000E+00 OUTFLOW= .4721E+03 BASIN STORAGE= .3592E+00 PERCENT ERROR=    .0

          FOR PLAN = 5  RATIO=  .00
             CHANN  MANE           .82   2647.76    754.85      9.42      5.00   2647.74    755.00        9.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5330E+03 EXCESS= .0000E+00 OUTFLOW= .5328E+03 BASIN STORAGE= .3584E+00 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             CHANN  MANE          4.57    174.32    759.36      3.27      5.00    173.89    760.00        3.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2592E+02 EXCESS= .0000E+00 OUTFLOW= .2585E+02 BASIN STORAGE= .1063E+00 PERCENT ERROR=   -.2

          FOR PLAN = 2  RATIO=  .00
             CHANN  MANE          3.91    276.68    755.51      6.16      5.00    276.09    755.00        6.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4876E+02 EXCESS= .0000E+00 OUTFLOW= .4865E+02 BASIN STORAGE= .1645E+00 PERCENT ERROR=   -.1

          FOR PLAN = 3  RATIO=  .00
             CHANN  MANE          3.75    314.45    754.40      7.51      5.00    314.35    755.00        7.52

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5944E+02 EXCESS= .0000E+00 OUTFLOW= .5931E+02 BASIN STORAGE= .1922E+00 PERCENT ERROR=   -.1

          FOR PLAN = 4  RATIO=  .00
             CHANN  MANE          3.61    352.87    754.97      8.77      5.00    352.85    755.00        8.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6940E+02 EXCESS= .0000E+00 OUTFLOW= .6926E+02 BASIN STORAGE= .2181E+00 PERCENT ERROR=   -.1

          FOR PLAN = 5  RATIO=  .00
             CHANN  MANE          3.47    399.24    755.42      9.85      5.00    398.92    755.00        9.86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7796E+02 EXCESS= .0000E+00 OUTFLOW= .7781E+02 BASIN STORAGE= .2173E+00 PERCENT ERROR=   -.1


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

APPENDIX C

HEC-1 RESULTS FOR PROPOSED CONDITION

```
*                                        *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *
*              JUN   1998                *
*            VERSION 4.1                 *
*  RGMHEC2000                HEC-1.COM   *
*  RUN DATE   30AUG07  TIME  13:35:01    *
*                                        *
******************************************
```

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

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

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

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

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

  1           ID        HYDROLOGIC ANALYSIS
  2           ID        PROJECT: LA SABANA
  3           ID        TRIANGULAR DISTRIBUTION
  4           ID        FREQUENCY OF OCCURRENCE: 2, 10, 25, 50 AND 100 YEARS
  5           ID        CA ENGINEERING, AUGUST 2007
  6           ID         PROPOSED CONDITION
  7           IT       5                    289
  8           IO       4
  9           JP       5

 10           KK      E3
 11           KP       1
 12           BA   0.028
 13           LS       0   87.89
 14           UD    0.10
 15           IN      15
 16           KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
 17           PH                    0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
 18           KP       2
 19           KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
 20           PH                    0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
 21           KP       3
 22           KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
 23           PH                    0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
 24           KP       4
 25           KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
 26           PH                    0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
 27           KP       5
 28           KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
 29           PH                    0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

 30           KK   CHANN
 31           KO       3                         21
 32           RD    1630   0.005   0.035        TRAP      12     0.3

 33           KK      E4
 34           KP       1
 35           BA   0.024
 36           LS       0      79
 37           UD    0.11
 38           IN      15
 39           KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
 40           PH                    0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
 41           KP       2
 42           KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
 43           PH                    0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
 44           KP       3
 45           KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
 46           PH                    0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
 47           KP       4
 48           KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
 49           PH                    0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
 50           KP       5
 51           KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
 52           PH                    0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60
```



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

 53           KK   CHANN
 54           KO       3                         21
 55           RD    2021   0.005   0.035        TRAP      12     0.3

 56           KK   COMB1
 57           HC       2

 58           KK      E2
 59           KP       1
 60           BA   0.009
 61           LS       0   87.82
 62           UD    0.10
 63           IN      15
 64           KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
 65           PH                    0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
 66           KP       2
 67           KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
```

```
68          PH                      0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
69          KP       3
70          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
71          PH                      0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
72          KP       4
73          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
74          PH                      0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
75          KP       5
76          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
77          PH                      0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

78          KK   COMB2
79          HC       2

80          KK   CHANN
81          KO       3                          21
82          RD     593   0.006   0.013          TRAP      12       2

83          KK      P1
84          KP       1
85          BA   0.140
86          LS       0   85.76
87          UD    0.50
88          IN      15
89          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
90          PH                      0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
91          KP       2
92          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
93          PH                      0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
94          KP       3
95          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
96          PH                      0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
97          KP       4
98          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
99          PH                      0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
100         KP       5
101         KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
```



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

102         PH                      0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

103         KK   COMB3
104         HC       2

105         KK   CHANN
106         KO       3                          21
107         RD     948   0.005   0.013          TRAP      12       2

108         KK      E5
109         KP       1
110         BA   0.033
111         LS       0   86.77
112         UD    0.10
113         IN      15
114         KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
115         PH                      0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
116         KP       2
117         KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
118         PH                      0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
119         KP       3
120         KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
121         PH                      0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
122         KP       4
123         KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
124         PH                      0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
125         KP       5
126         KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
127         PH                      0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

128         KK   COMB4
129         HC       2

130         KK   CHANN
131         KO       3                          21
132         RD    2920   0.005   0.013          TRAP      12       2

133         KK      P2E
134         KP       1
135         BA   0.077
```

```
 136          LS       0      93
 137          UD    0.29
 138          IN      15
 139          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
 140          PH                   0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
 141          KP       2
 142          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
 143          PH                   0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
 144          KP       3
 145          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
 146          PH                   0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
 147          KP       4
 148          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
 149          PH                   0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
 150          KP       5
1                                   HEC-1 INPUT                                                    PAGE  4

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

 151          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
 152          PH                   0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

 153          KK    PIPE
 154          KO       3                            21
 155          RD    1099   0.005   0.013            CIRC       5

 156          KK      E6
 157          KP       1
 158          BA   0.062
 159          LS       0   86.57
 160          UD    0.11
 161          IN      15
 162          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
 163          PH                   0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
 164          KP       2
 165          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
 166          PH                   0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
 167          KP       3
 168          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
 169          PH                   0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
 170          KP       4
 171          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
 172          PH                   0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
 173          KP       5
 174          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
 175          PH                   0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

 176          KK    COMB5
 177          HC       3

 178          KK    CHANN
 179          KO       3                            21
 180          RD    1102   0.005   0.013            TRAP      12       2

 181          KK      E7
 182          KP       1
 183          BA   0.148
 184          LS       0   86.78
 185          UD    0.47
 186          IN      15
 187          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
 188          PH                   0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
 189          KP       2
 190          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
 191          PH                   0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
 192          KP       3
 193          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
 194          PH                   0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
 195          KP       4
 196          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
 197          PH                   0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
 198          KP       5
 199          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
 200          PH                   0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60
1                                   HEC-1 INPUT                                                    PAGE  5

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

 201          KK    COMB6
 202          HC       2
```

```
203          KK   CHANN
204          KO       3                                21
205          RD    1089   0.005   0.013            TRAP      12       2

206          KK       E
207          KP       1
208          BA   0.448
209          LS       0   84.67
210          UD    0.60
211          IN      15
212          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
213          PH                    0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
214          KP       2
215          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
216          PH                    0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
217          KP       3
218          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
219          PH                    0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
220          KP       4
221          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
222          PH                    0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
223          KP       5
224          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
225          PH                    0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

226          KK      E1
227          KP       1
228          BA   0.008
229          LS       0   82.92
230          UD    0.17
231          IN      15
232          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
233          PH                    0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
234          KP       2
235          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
236          PH                    0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
237          KP       3
238          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
239          PH                    0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
240          KP       4
241          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
242          PH                    0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
243          KP       5
244          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
245          PH                    0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60
```



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

246          KK   COMB8
247          HC       2

248          KK     P2A
249          KP       1
250          BA   0.026
251          LS       0      93
252          UD    0.22
253          IN      15
254          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
255          PH                    0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
256          KP       2
257          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
258          PH                    0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
259          KP       3
260          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
261          PH                    0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
262          KP       4
263          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
264          PH                    0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
265          KP       5
266          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
267          PH                    0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

268          KK    PIPE
269          KO       3                                21
270          RD     337   0.005   0.013            CIRC      3.5

271          KK     P2B
272          KP       1
```

```
273          BA   0.028
274          LS       0      93
275          UD    0.18
276          IN      15
277          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
278          PH                   0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
279          KP       2
280          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
281          PH                   0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
282          KP       3
283          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
284          PH                   0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
285          KP       4
286          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
287          PH                   0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
288          KP       5
289          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
290          PH                   0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60
1                                       HEC-1 INPUT                                                PAGE  7

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

291          KK    COMB
292          HC       2

293          KK     P2D
294          KP       1
295          BA   0.029
296          LS       0      93
297          UD    0.24
298          IN      15
299          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
300          PH                   0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
301          KP       2
302          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
303          PH                   0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
304          KP       3
305          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
306          PH                   0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
307          KP       4
308          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
309          PH                   0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
310          KP       5
311          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
312          PH                   0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

313          KK    PIPE
314          KO       3                           21
315          RD     426   0.005   0.013           CIRC     3.5

316          KK     P2C
317          KP       1
318          BA   0.023
319          LS       0      93
320          UD    0.26
321          IN      15
322          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
323          PH                   0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
324          KP       2
325          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
326          PH                   0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
327          KP       3
328          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
329          PH                   0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
330          KP       4
331          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
332          PH                   0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
333          KP       5
334          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
335          PH                   0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60
1                                       HEC-1 INPUT                                                PAGE  8

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

336          KK    COMB
337          HC       2

338          KK    PIPE
339          KO       3                           21
```

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340          RD     524   0.005   0.013            CIRC       4

341          KK    COMB
342          HC       2

343          KK    PIPE
344          KO       3                              21
345          RD     524   0.005   0.013            CIRC       5

346          KK     P2F
347          KP       1
348          BA   0.044
349          LS       0      93
350          UD    0.19
351          IN      15
352          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
353          PH                    0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
354          KP       2
355          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
356          PH                    0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
357          KP       3
358          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
359          PH                    0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
360          KP       4
361          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
362          PH                    0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
363          KP       5
364          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
365          PH                    0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

366          KK    COMB
367          HC       2

368          KK    PIPE
369          KO       3                              21
370          RD    1807   0.005   0.013            CIRC       5

371          KK     P2G
372          KP       1
373          BA   0.065
374          LS       0      93
375          UD    0.23
376          IN      15
377          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
378          PH                    0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
379          KP       2
380          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
381          PH                    0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
382          KP       3
```



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

383          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
384          PH                    0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
385          KP       4
386          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
387          PH                    0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
388          KP       5
389          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
390          PH                    0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

391          KK     P3B
392          KP       1
393          BA   0.049
394          LS       0      93
395          UD    0.09
396          IN      15
397          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
398          PH                    0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
399          KP       2
400          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
401          PH                    0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
402          KP       3
403          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
404          PH                    0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
405          KP       4
406          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
407          PH                    0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
408          KP       5
409          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
```

```
410          PH                    0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60

411          KK     P3A
412          KP       1
413          BA   0.021
414          LS       0      93
415          UD   0.08
416          IN      15
417          KM           RUNOFF COMPUTATION 2-YRS STORM IN BASIN
418          PH                    0.18    0.50    2.40    2.55    2.75    3.30    4.10    4.75
419          KP       2
420          KM           RUNOFF COMPUTATION 10-YRS STORM IN BASIN
421          PH                    0.27    0.75    3.35    3.95    4.40    5.40    6.60    7.80
422          KP       3
423          KM           RUNOFF COMPUTATION 25-YRS STORM IN BASIN
424          PH                    0.32    0.90    3.62    4.65    5.25    6.50    7.70    9.20
425          KP       4
426          KM           RUNOFF COMPUTATION 50-YRS STORM IN BASIN
427          PH                    0.34    0.97    4.00    5.30    5.90    7.50    8.70   10.50
428          KP       5
429          KM           RUNOFF COMPUTATION 100-YRS STORM IN BASIN
430          PH                    0.39    1.10    4.50    5.65    6.80    8.00    9.80   11.60
```



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

       431          KK    COMB
       432          HC       2

       433          KK    COMB
       434          HC       5
       435          ZZ
```

```
1****************************************
 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *              JUN   1998              *
 *            VERSION 4.1               *
 *  RGMHEC2000                HEC-1.COM *
 *  RUN DATE   30AUG07  TIME  13:35:01  *
 *                                      *
 ****************************************
```

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

```
                    HYDROLOGIC ANALYSIS
                    PROJECT: LA SABANA
                    TRIANGULAR DISTRIBUTION
                    FREQUENCY OF OCCURRENCE: 2, 10, 25, 50 AND 100 YEARS
                    CA ENGINEERING, AUGUST 2007
                     PROPOSED CONDITION

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

IT            HYDROGRAPH TIME DATA
                NMIN           5  MINUTES IN COMPUTATION INTERVAL
               IDATE      1    0  STARTING DATE
               ITIME        0000  STARTING TIME
                  NQ         289  NUMBER OF HYDROGRAPH ORDINATES
              NDDATE      2    0  ENDING DATE
              NDTIME        0000  ENDING TIME
              ICENT          19  CENTURY MARK

          COMPUTATION INTERVAL     .08 HOURS
               TOTAL TIME BASE   24.00 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          5  NUMBER OF PLANS

    JR          MULTI-RATIO OPTION
                    RATIOS OF RUNOFF
                   1.00


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


            **************
            *            *
  10 KK     *        E3  *
            *            *
            **************


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

  11 KP         PLAN  1 FOR STATION       E3
                                RUNOFF COMPUTATION 2-YRS STORM IN BASIN

                SUBBASIN RUNOFF DATA

  12 BA           SUBBASIN CHARACTERISTICS
                        TAREA          .03  SUBBASIN AREA

                  PRECIPITATION DATA

  17 PH                                 DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                  ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                  5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                    .18     .50    2.40    2.55    2.75    3.30    4.10    4.75     .00     .00     .00     .00

                                                STORM AREA =      .03

   3 LS           SCS LOSS RATE
                        STRTL          .28  INITIAL ABSTRACTION
                       CRVNBR        87.89  CURVE NUMBER
                        RTIMP          .00  PERCENT IMPERVIOUS AREA

  14 UD           SCS DIMENSIONLESS UNITGRAPH
                         TLAG          .10  LAG

                                                     ***

                                                UNIT HYDROGRAPH
                                           8 END-OF-PERIOD ORDINATES
                61.       91.       40.       15.        6.        2.        1.        0.


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

  18 KP         PLAN  2 FOR STATION       E3
                                RUNOFF COMPUTATION 10-YRS STORM IN BASIN

                SUBBASIN RUNOFF DATA

  12 BA           SUBBASIN CHARACTERISTICS
                        TAREA          .03  SUBBASIN AREA

                  PRECIPITATION DATA

  20 PH                                 DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                  ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                  5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                    .27     .75    3.35    3.95    4.40    5.40    6.60    7.80     .00     .00     .00     .00

                                                STORM AREA =      .03

  13 LS           SCS LOSS RATE
                        STRTL          .28  INITIAL ABSTRACTION
                       CRVNBR        87.89  CURVE NUMBER
                        RTIMP          .00  PERCENT IMPERVIOUS AREA

   4 UD           SCS DIMENSIONLESS UNITGRAPH
                         TLAG          .10  LAG

                                                     ***
```

```
                                        UNIT HYDROGRAPH
                                    8 END-OF-PERIOD ORDINATES
          61.      91.      40.      15.       6.       2.       1.       0.

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

 21 KP      PLAN  3 FOR STATION      E3
                        RUNOFF COMPUTATION 25-YRS STORM IN BASIN

            SUBBASIN RUNOFF DATA

 12 BA        SUBBASIN CHARACTERISTICS
                TAREA          .03  SUBBASIN AREA

              PRECIPITATION DATA

 23 PH                          DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
              ..... HYDRO-35 .....  ............... TP-40 ...............  ........... TP-49 ...........
              5-MIN  15-MIN  60-MIN   2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                .32     .90    3.62   4.65    5.25    6.50    7.70    9.20     .00     .00     .00     .00

                                        STORM AREA =      .03

 13 LS        SCS LOSS RATE
                STRTL          .28  INITIAL ABSTRACTION
               CRVNBR        87.89  CURVE NUMBER
                RTIMP          .00  PERCENT IMPERVIOUS AREA

 14 UD        SCS DIMENSIONLESS UNITGRAPH
                TLAG          .10  LAG

                                            ***

                                        UNIT HYDROGRAPH
                                    8 END-OF-PERIOD ORDINATES
          61.      91.      40.      15.       6.       2.       1.       0.

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

 24 KP      PLAN  4 FOR STATION      E3
                        RUNOFF COMPUTATION 50-YRS STORM IN BASIN

            SUBBASIN RUNOFF DATA

 12 BA        SUBBASIN CHARACTERISTICS
                TAREA          .03  SUBBASIN AREA

              PRECIPITATION DATA

 26 PH                          DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
              ..... HYDRO-35 .....  ............... TP-40 ...............  ........... TP-49 ...........
              5-MIN  15-MIN  60-MIN   2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                .34     .97    4.00   5.30    5.90    7.50    8.70   10.50     .00     .00     .00     .00

                                        STORM AREA =      .03

 13 LS        SCS LOSS RATE
                STRTL          .28  INITIAL ABSTRACTION
               CRVNBR        87.89  CURVE NUMBER
                RTIMP          .00  PERCENT IMPERVIOUS AREA

 14 UD        SCS DIMENSIONLESS UNITGRAPH
                TLAG          .10  LAG

                                            ***

                                        UNIT HYDROGRAPH
                                    8 END-OF-PERIOD ORDINATES
          61.      91.      40.      15.       6.       2.       1.       0.

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

 27 KP      PLAN  5 FOR STATION      E3
                        RUNOFF COMPUTATION 100-YRS STORM IN BASIN

            SUBBASIN RUNOFF DATA

 12 BA        SUBBASIN CHARACTERISTICS
```

FOR PLAN 1, RATIO = 1.00

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)					
		(CFS)				
+ 46.	12.08		8.	3.	3.	3.
		(INCHES)	2.708	3.400	3.400	3.400
		(AC-FT)	4.	5.	5.	5.

CUMULATIVE AREA = .03 SQ MI

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

PLAN 2 INPUT DATA FOR STATION CHANN ARE SAME AS FOR PLAN 1

COMPUTED MUSKINGUM-CUNGE PARAMETERS

ELEMENT	ALPHA	M	COMPUTATION TIME STEP DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.71	1.52	5.00	815.00	70.52	725.00	6.33	4.09

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN	.71	1.52	5.00	70.52	725.00	6.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9485E+01 EXCESS= .0000E+00 OUTFLOW= .9456E+01 BASIN STORAGE= .5866E-01 PERCENT ERROR= -.3

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

HYDROGRAPH AT STATION CHANN
FOR PLAN 2, RATIO = 1.00

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)					
		(CFS)				
+ 71.	12.08		15.	5.	5.	5.
		(INCHES)	4.845	6.329	6.329	6.329
		(AC-FT)	7.	9.	9.	9.

CUMULATIVE AREA = .03 SQ MI

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

PLAN 3 INPUT DATA FOR STATION CHANN ARE SAME AS FOR PLAN 1

COMPUTED MUSKINGUM-CUNGE PARAMETERS

ELEMENT	ALPHA	M	COMPUTATION TIME STEP DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.71	1.52	5.00	815.00	78.15	725.00	7.69	4.20

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN	.71	1.52	5.00	78.15	725.00	7.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1153E+02 EXCESS= .0000E+00 OUTFLOW= .1149E+02 BASIN STORAGE= .6846E-01 PERCENT ERROR= -.3

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

HYDROGRAPH AT STATION CHANN
FOR PLAN 3, RATIO = 1.00

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

```
                                        6-HR        24-HR        72-HR      24.00-HR
+   (CFS)        (HR)
                              (CFS)
+      78.      12.08                   18.          6.           6.           6.
                           (INCHES)   5.936       7.693        7.693        7.693
                            (AC-FT)     9.          11.          11.          11.

                           CUMULATIVE AREA =     .03 SQ MI


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

                PLAN  4 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                                COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                      COMPUTATION TIME STEP
                     ELEMENT    ALPHA        M          DT          DX        PEAK    TIME TO      VOLUME    MAXIMUM
                                                                                        PEAK                   CELERITY
                                                      (MIN)       (FT)      (CFS)     (MIN)       (IN)      (FPS)

                       MAIN       .71      1.52        5.00      815.00      87.51    725.00       8.97      4.38


                                      INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                       MAIN       .71      1.52        5.00                  87.51    725.00       8.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1344E+02 EXCESS= .0000E+00 OUTFLOW= .1340E+02 BASIN STORAGE= .7762E-01 PERCENT ERROR=    -.3


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

                           HYDROGRAPH AT STATION    CHANN
                             FOR PLAN 4, RATIO = 1.00

 PEAK FLOW      TIME                           MAXIMUM AVERAGE FLOW
                                        6-HR        24-HR        72-HR      24.00-HR
+   (CFS)        (HR)
                              (CFS)
+      88.      12.08                   21.          7.           7.           7.
                           (INCHES)   6.944       8.965        8.965        8.965
                            (AC-FT)    10.          13.          13.          13.

                           CUMULATIVE AREA =     .03 SQ MI


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

                PLAN  5 INPUT DATA FOR STATION    CHANN ARE SAME AS FOR PLAN  1
                                COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                      COMPUTATION TIME STEP
                     ELEMENT    ALPHA        M          DT          DX        PEAK    TIME TO      VOLUME    MAXIMUM
                                                                                        PEAK                   CELERITY
                                                      (MIN)       (FT)      (CFS)     (MIN)       (IN)      (FPS)

                       MAIN       .71      1.52        5.00      815.00      98.97    725.00      10.05      4.56

                                      INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                       MAIN       .71      1.52        5.00                  98.97    725.00      10.05

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1506E+02 EXCESS= .0000E+00 OUTFLOW= .1502E+02 BASIN STORAGE= .7730E-01 PERCENT ERROR=    -.2


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

                           HYDROGRAPH AT STATION    CHANN
                             FOR PLAN 5, RATIO = 1.00

 PEAK FLOW      TIME                           MAXIMUM AVERAGE FLOW
                                        6-HR        24-HR        72-HR      24.00-HR
+   (CFS)        (HR)
                              (CFS)
```

```
+      99.     12.08                    23.          8.          8.          8.
                          (INCHES)    7.576      10.050      10.050      10.050
                           (AC-FT)     11.         15.         15.         15.

                          CUMULATIVE AREA =      .03 SQ MI


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


              **************
              *            *
   33 KK      *        E4  *
              *            *
              **************


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

   34 KP          PLAN  1 FOR STATION       E4
                                  RUNOFF COMPUTATION 2-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

   35 BA            SUBBASIN CHARACTERISTICS
                          TAREA          .02  SUBBASIN AREA

                    PRECIPITATION DATA

   40 PH                                 DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                  ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                  5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                    .18     .50    2.40    2.55    2.75    3.30    4.10    4.75     .00     .00     .00     .00

                                                STORM AREA =      .02

   36 LS            SCS LOSS RATE
                          STRTL          .53  INITIAL ABSTRACTION
                         CRVNBR        79.00  CURVE NUMBER
                          RTIMP          .00  PERCENT IMPERVIOUS AREA

   37 UD            SCS DIMENSIONLESS UNITGRAPH
                           TLAG          .11  LAG

                                                     ***

                                                UNIT HYDROGRAPH
                                            9 END-OF-PERIOD ORDINATES
                 43.       76.       39.       16.        7.        3.        1.        0.        0.


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

   41 KP          PLAN  2 FOR STATION       E4
                                  RUNOFF COMPUTATION 10-YRS STORM IN BASIN

              SUBBASIN RUNOFF DATA

   35 BA            SUBBASIN CHARACTERISTICS
                          TAREA          .02  SUBBASIN AREA

                    PRECIPITATION DATA

   43 PH                                 DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                  ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                  5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                    .27     .75    3.35    3.95    4.40    5.40    6.60    7.80     .00     .00     .00     .00

                                                STORM AREA =      .02

   36 LS            SCS LOSS RATE
                          STRTL          .53  INITIAL ABSTRACTION
                         CRVNBR        79.00  CURVE NUMBER
                          RTIMP          .00  PERCENT IMPERVIOUS AREA

   37 UD            SCS DIMENSIONLESS UNITGRAPH
                           TLAG          .11  LAG

                                                     ***
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```
                                        UNIT HYDROGRAPH
                                   9 END-OF-PERIOD ORDINATES
          43.      76.      39.      16.       7.       3.       1.       0.       0.

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

 44 KP    PLAN  3 FOR STATION      E4
                          RUNOFF COMPUTATION 25-YRS STORM IN BASIN

          SUBBASIN RUNOFF DATA

 35 BA      SUBBASIN CHARACTERISTICS
                TAREA         .02  SUBBASIN AREA

            PRECIPITATION DATA

 46 PH                          DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
            ..... HYDRO-35 .....  ............... TP-40 ...............  ........... TP-49 ...........
            5-MIN  15-MIN  60-MIN   2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
              .32     .90    3.62   4.65    5.25    6.50    7.70    9.20     .00     .00     .00     .00

                                          STORM AREA =      .02

 36 LS      SCS LOSS RATE
                STRTL         .53  INITIAL ABSTRACTION
               CRVNBR       79.00  CURVE NUMBER
                RTIMP         .00  PERCENT IMPERVIOUS AREA

 37 UD      SCS DIMENSIONLESS UNITGRAPH
                TLAG         .11  LAG

                                              ***

                                        UNIT HYDROGRAPH
                                   9 END-OF-PERIOD ORDINATES
          43.      76.      39.      16.       7.       3.       1.       0.       0.

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

 47 KP    PLAN  4 FOR STATION      E4
                          RUNOFF COMPUTATION 50-YRS STORM IN BASIN

          SUBBASIN RUNOFF DATA

 35 BA      SUBBASIN CHARACTERISTICS
                TAREA         .02  SUBBASIN AREA

            PRECIPITATION DATA

 49 PH                          DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
            ..... HYDRO-35 .....  ............... TP-40 ...............  ........... TP-49 ...........
            5-MIN  15-MIN  60-MIN   2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
              .34     .97    4.00   5.30    5.90    7.50    8.70   10.50     .00     .00     .00     .00

                                          STORM AREA =      .02

 36 LS      SCS LOSS RATE
                STRTL         .53  INITIAL ABSTRACTION
               CRVNBR       79.00  CURVE NUMBER
                RTIMP         .00  PERCENT IMPERVIOUS AREA

 37 UD      SCS DIMENSIONLESS UNITGRAPH
                TLAG         .11  LAG

                                              ***

                                        UNIT HYDROGRAPH
                                   9 END-OF-PERIOD ORDINATES
          43.      76.      39.      16.       7.       3.       1.       0.       0.

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

 50 KP    PLAN  5 FOR STATION      E4
                          RUNOFF COMPUTATION 100-YRS STORM IN BASIN

          SUBBASIN RUNOFF DATA
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35 BA          SUBBASIN CHARACTERISTICS
                    TAREA          .02  SUBBASIN AREA

               PRECIPITATION DATA

52 PH                                 DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
               ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
               5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                 .39    1.10    4.50    5.65    6.80    8.00    9.80   11.60     .00     .00     .00     .00

                                                STORM AREA =      .02

36 LS          SCS LOSS RATE
                    STRTL          .53  INITIAL ABSTRACTION
                   CRVNBR        79.00  CURVE NUMBER
                    RTIMP          .00  PERCENT IMPERVIOUS AREA

37 UD          SCS DIMENSIONLESS UNITGRAPH
                     TLAG          .11  LAG

                                                 ***

                                              UNIT HYDROGRAPH
                                          9 END-OF-PERIOD ORDINATES
                43.       76.       39.       16.        7.        3.        1.        0.        0.

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

               **************
               *            *
53 KK          *     CHANN  *
               *            *
               **************

54 KO            OUTPUT CONTROL VARIABLES
                      IPRNT           3  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         289  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .083  TIME INTERVAL IN HOURS

                HYDROGRAPH ROUTING DATA

55 RD            MUSKINGUM-CUNGE CHANNEL ROUTING
                          L       2021.  CHANNEL LENGTH
                          S       .0050  SLOPE
                          N        .035  CHANNEL ROUGHNESS COEFFICIENT
                         CA         .00  CONTRIBUTING AREA
                      SHAPE        TRAP  CHANNEL SHAPE
                         WD       12.00  BOTTOM WIDTH OR DIAMETER
                          Z         .30  SIDE SLOPE

                                                 ***
                                 COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                        COMPUTATION TIME STEP
                ELEMENT    ALPHA       M        DT        DX      PEAK    TIME TO     VOLUME    MAXIMUM
                                                                          PEAK                  CELERITY
                                                (MIN)      (FT)    (CFS)    (MIN)      (IN)      (FPS)

                  MAIN       .71     1.52      5.00    505.25    28.49   750.00      2.57      3.04

                                       INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                  MAIN       .71     1.52      5.00              28.49   750.00      2.57

NTINUITY SUMMARY (AC-FT) - INFLOW= .3307E+01 EXCESS= .0000E+00 OUTFLOW= .3286E+01 BASIN STORAGE= .3998E-01 PERCENT ERROR=    -.6

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