2 COMBINED AT	DP506	105	6.50	42	18	6.	3.77
ROUTED TO	RT506	103.	6.50	42.	18	6.	3.77
HYDROGRAPH AT	SC507	5.	6.00	1.	1.	0.	0.10
2 COMBINED AT	DP507	105.	6.50	43.	18.	6.	3.87
ROUTED TO	RT507	101.	6.75	43.	18.	6.	3.87
HYDROGRAPH AT	SC509	6.	6.00	2.	1.	0.	0.15
2 COMBINED AT	DP509	105.	6.75	45.	19	6.	4.02
ROUTED TO	RT509	105.	6.75	44.	19.	6.	4.02
HYDROGRAPH AT	SC511	5.	6.00	1.	0.	0.	0.09
2 COMBINED AT	DP511	107.	6.75	45.	20.	7.	4.11
ROUTED TO	RT511	106.	6.75	45.	20.	7.	4.11
HYDROGRAPH AT	SC601	4.	5.75	1.	0.	0.	0.06
ROUTED TO	RT601	4.	6.00	1.	0.	0.	0.06
HYDROGRAPH AT	SC603	13.	6.00	3.	1.	0.	0.25
2 COMBINED AT	DP603	17.	6.00	4	2.	1.	0.31
2 COMBINED AT	DP604	112	6.75	49.	21.	7.	4.43
ROUTED TO	RT604	110	6.75	49.	21.	7	4.43
HYDROGRAPH AT	SC607	5.	6.00	1.	0.	0.	0.08
HYDROGRAPH AT	SC609	8.	6.00	2.	1.	0.	0.14
3 COMBINED AT	DP609	115.	6.75	52.	23.	8.	4.65
ROUTED TO	RES610	127	6.75	49.	22.	8.	4.65

6823.17 6.75

HYDROGRAPH AT	SC605A	3	6.00	1	0.	0.	0.05
ROUTED TO	RT605	3.	6.00	1	0.	0.	0.05
HYDROGRAPH AT	SC605B	12	6.00	2.	1.	0.	0.08
ROUTED TO	RES605	11	6.00	2.	1	0.	0.08

6819.40 6.00

	3 COMBINED AT	DP610	132	6 75	51	23	8.	4. 78
	ROUTED TO	RT610	120.	7 00	50	23	8.	4. 78
	HYDROGRAPH AT	SC611	10.	5 75	2	1.	0	0. 11
	2 COMBINED AT	DP611	122.	7. 00	51	24.	8.	4 89
	ROUTED TO	RES612	114	7. 25	51.	24.	8	4. 89
6762. 76	7. 25							
	ROUTED TO	RT612	111.	7. 25	51.	24.	8	4. 89
	HYDROGRAPH AT	SC613	19.	6. 00	4.	1.	0.	0. 12
	ROUTED TO	RES613	6.	6 50	5.	5.	5.	0. 12
6795. 04	6. 50							
	ROUTED TO	RT618	6.	6. 50	5.	5.	5.	0. 12
	HYDROGRAPH AT	SC617A	2.	5. 75	0.	0.	0.	0. 01
	ROUTED TO	RES617	2.	6. 00	0.	0.	0.	0. 01
6740. 28	6. 00							
	HYDROGRAPH AT	SC618	1.	5. 75	0.	0.	0.	0. 01
	ROUTED TO	RES618	0.	6. 50	0.	0.	0.	0. 01
6768. 15	6. 50							
	3 COMBINED AT	DP618	7.	6. 25	6.	5.	5.	0. 15
	HYDROGRAPH AT	SC615B	9.	5. 75	1.	0.	0.	0. 03
	ROUTED TO	RES614	4.	6 00	1.	0.	0.	0. 03
6724. 48	6. 00							
	HYDROGRAPH AT	SC615A	10.	5. 75	1	1.	0.	0 06
	ROUTED TO	RES615	6.	6. 00	1.	1.	0.	0. 06
6726. 20	6. 00							
	HYDROGRAPH AT	SC617C	1.	5. 75	0.	0.	0.	0. 05
	5 COMBINED AT	DP613	119.	7. 25	58.	30.	13.	5. 17
	ROUTED TO	RT614	118.	7. 25	58	30.	13.	5. 17
	HYDROGRAPH AT	SC617B	1.	6. 00	0	0.	0.	0. 02
	2 COMBINED AT	DP617	118.	7. 25	59	30	13.	5 19

ROUTED TO	RT617	118.	7 50	59.	30.	13.	5 19
HYDROGRAPH AT	SC701	46	6.00	8.	2.	1.	0 07
HYDROGRAPH AT	SC703	40	5 75	5.	2	1.	0 13
3 COMBINED AT	DP703	124.	7. 50	69.	34	15.	5 39
ROUTED TO	RT703	123.	7. 50	68.	34.	15.	5. 39
HYDROGRAPH AT	SC705	5.	6.00	1.	1.	0	0. 09
2 COMBINED AT	DP705	124.	7. 50	69.	34.	15.	5. 48

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	INTERPOLATED TO COMPUTATION INTERVAL DT	PEAK	TIME TO PEAK	VOLUME
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
RT205	MANE	2.10	4.96	363.33	0.19	15.00	4.66	360.00	0.20

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1006E+01 EXCESS=0.0000E+00 OUTFLOW=0.1006E+01 BASIN STORAGE= 0.6242E-09 PERCENT ERROR= 0.0

RT213	MANE	1.41	14.37	363.56	0.19	15.00	13.07	360.00	0.19

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3404E+01 EXCESS=0.0000E+00 OUTFLOW=0.3404E+01 BASIN STORAGE= 0.2477E-08 PERCENT ERROR= 0.0

RT215	MANE	2.57	17.91	366.38	0.16	15.00	17.37	375.00	0.16

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5130E+01 EXCESS=0.0000E+00 OUTFLOW=0.5127E+01 BASIN STORAGE= 0.1756E-07 PERCENT ERROR= 0.0

RT201	MANE	2.92	1.41	379.61	0.10	15.00	1.38	375.00	0.10

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6596E+00 EXCESS=0.0000E+00 OUTFLOW=0.6594E+00 BASIN STORAGE= 0.6243E-09 PERCENT ERROR= 0.0

RT203	MANE	3.81	2.07	383.26	0.09	15.00	2.07	390.00	0.09

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1093E+01 EXCESS=0.0000E+00 OUTFLOW=0.1092E+01 BASIN STORAGE= 0.7516E-08 PERCENT ERROR= 0.0

RT220	MANE	1.02	20.59	376.60	0.13	15.00	20.20	375.00	0.13

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.7068E+01 EXCESS=0.0000E+00 OUTFLOW=0.7068E+01 BASIN STORAGE= 0.1934E-07 PERCENT ERROR= 0.0

RT303	MANE	1.20	12.53	362.29	0.19	15.00	11.88	360.00	0.20

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2589E+01 EXCESS=0.0000E+00 OUTFLOW=0.2589E+01 BASIN STORAGE= 0.1605E-09 PERCENT ERROR= 0.0

RT305	MANE	2.33	15.03	364.45	0.20	15.00	13.15	360.00	0.20

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3251E+01 EXCESS=0.0000E+00 OUTFLOW=0.3250E+01 BASIN STORAGE= 0.5245E-08 PERCENT ERROR= 0.0

RT311	MANE	3.61	27.83	367.32	0.19	15.00	26.57	375.00	0.19

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 6766E+01 EXCESS=0.0000E+00 OUTFLOW=0 6761E+01 BASIN STORAGE=
0 5757E-07 PERCENT ERROR= 0 1

RT316 MANE 3.76 54.50 382.98 0.16 15.00 50 93 390.00
0.16

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1614E+02 EXCESS=0.0000E+00 OUTFLOW=0 1613E+02 BASIN STORAGE=
0.4072E-06 PERCENT ERROR= 0 1

RT401 MANE 0.89 56.05 377.60 0.16 15.00 55.46 390.00
0.16

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 1768E+02 EXCESS=0.0000E+00 OUTFLOW=0.1768E+02 BASIN STORAGE=
0.1767E-06 PERCENT ERROR= 0.0

RT405 MANE 2.57 59.86 393.07 0.16 15.00 59.69 390.00
0.16

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1945E+02 EXCESS=0.0000E+00 OUTFLOW=0.1945E+02 BASIN STORAGE=
0.8777E-06 PERCENT ERROR= 0.0

RT101 MANE 3.92 1.45 381.61 0.12 15.00 1.44 375.00
0.12

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5779E+00 EXCESS=0.0000E+00 OUTFLOW=0.5776E+00 BASIN STORAGE=
0.2828E-08 PERCENT ERROR= 0.1

RT103 MANE 1.37 7.79 377.94 0.15 15.00 7.74 390.00
0.15

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2669E+01 EXCESS=0.0000E+00 OUTFLOW=0.2669E+01 BASIN STORAGE=
0.3956E-08 PERCENT ERROR= 0.0

RT105A MANE 1 54 10.40 378.83 0.16 15.00 10.07 390.00
0.16

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3466E+01 EXCESS=0.0000E+00 OUTFLOW=0.3466E+01 BASIN STORAGE=
0.9233E-08 PERCENT ERROR= 0.0

RT105B MANE 1.42 16.96 377.16 0 18 15.00 16.63 375.00
0.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5053E+01 EXCESS=0.0000E+00 OUTFLOW=0.5053E+01 BASIN STORAGE=
0.1347E-07 PERCENT ERROR= 0.0

RT107 MANE 2.68 17.95 381.17 0.18 15.00 16.90 390.00
0.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5487E+01 EXCESS=0 0000E+00 OUTFLOW=0.5484E+01 BASIN STORAGE=
0.6814E-07 PERCENT ERROR= 0.0

RT109 MANE 6.28 24 13 386.63 0.19 15.00 23.87 390.00
0.19

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.7372E+01 EXCESS=0 0000E+00 OUTFLOW=0 7368E+01 BASIN STORAGE=
0 7212E-06 PERCENT ERROR= 0.0

RT407 MANE 1 82 94 73 393 09 0.17 15.00 93 04 390.00
0.17

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3076E+02 EXCESS=0.0000E+00 OUTFLOW=0.3075E+02 BASIN STORAGE=
0.1245E-05 PERCENT ERROR= 0.0

RT506 MANE 1.48 105.03 392.72 0.18 15.00 102.92 390.00
0.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3528E+02 EXCESS=0.0000E+00 OUTFLOW=0.3527E+02 BASIN STORAGE=
0.1598E-05 PERCENT ERROR= 0.0

RT507 MANE 2.15 105.03 394.18 0.18 15.00 101.43 405.00
0.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3631E+02 EXCESS=0.0000E+00 OUTFLOW=0.3630E+02 BASIN STORAGE=
0.3887E-05 PERCENT ERROR= 0.0

RT509 MANE 3.48 104.93 411.26 0.18 15.00 104.77 405.00
0.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3788E+02 EXCESS=0.0000E+00 OUTFLOW=0.3786E+02 BASIN STORAGE=
0.9906E-05 PERCENT ERROR= 0.1

RT511 MANE 0.66 106.57 406.42 0.18 15.00 105.71 405.00
0.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3875E+02 EXCESS=0.0000E+00 OUTFLOW=0.3875E+02 BASIN STORAGE=
0.2221E-05 PERCENT ERROR= 0.0

RT601 MANE 2.73 3.90 350.74 0.22 15.00 3.87 360.00
0.22

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.7321E+00 EXCESS=0.0000E+00 OUTFLOW=0.7318E+00 BASIN STORAGE=
0.1225E-08 PERCENT ERROR= 0.0

RT604 MANE 1.57 112.02 408.35 0.18 15.00 110.02 405.00
0.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4212E+02 EXCESS=0.0000E+00 OUTFLOW=0.4211E+02 BASIN STORAGE=
0.5879E-05 PERCENT ERROR= 0.0

RT605 MANE 1.39 2.60 362.21 0.19 15.00 2.51 360.00
0.20

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5238E+00 EXCESS=0.0000E+00 OUTFLOW=0.5237E+00 BASIN STORAGE=
0.1585E-09 PERCENT ERROR= 0.0

RT610 MANE 3.32 131.45 411.92 0.18 15.00 120.42 420.00
0.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4683E+02 EXCESS=0.0000E+00 OUTFLOW=0.4681E+02 BASIN STORAGE=
0.2208E-04 PERCENT ERROR= 0.0

RT612 MANE 2.38 113.30 439.32 0.18 15.00 110.63 435.00
0.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4804E+02 EXCESS=0.0000E+00 OUTFLOW=0.4804E+02 BASIN STORAGE=
0.2220E-04 PERCENT ERROR= 0.0

RT618 MANE 0.68 6.10 391.61 4.23 15.00 6.09 390.00
4.23

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2785E+02 EXCESS=0.0000E+00 OUTFLOW=0.2784E+02 BASIN STORAGE=
0.9394E-02 PERCENT ERROR= 0.0

RT614	MANE	0.74	119.31	437.07	0.28	15.00	117.67	435.00
0.28								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.7843E+02 EXCESS=0.0000E+00 OUTFLOW=0.7842E+02 BASIN STORAGE=
0.7193E-02 PERCENT ERROR= 0.0

RT617	MANE	2.51	117.85	442.44	0.28	15.00	117.52	450.00
0.28								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.7869E+02 EXCESS=0.0000E+00 OUTFLOW=0.7863E+02 BASIN STORAGE=
0.5955E-01 PERCENT ERROR= 0.0

RT703	MANE	2.21	124.00	455.25	0.30	15.00	122.82	450.00
0.30								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8651E+02 EXCESS=0.0000E+00 OUTFLOW=0.8641E+02 BASIN STORAGE=
0.7969E-01 PERCENT ERROR= 0.0

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

5 year future-Alternate 2
HEC1 S/N: 1343001909 HMVersion: 6.33 Data File: C:\WINNT\TEMP\~vbh361C.TMP

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**********************************************
**********************************
*                                    *
*
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
U.S. ARMY CORPS OF ENGINEERS      *
*                MAY   1991             *
HYDROLOGIC ENGINEERING CENTER     *
*             VERSION 4.0.1E            *
609 SECOND STREET           *
*                                    *
DAVIS, CALIFORNIA 95616         *
*  RUN DATE  06/19/2001  TIME  16:14:47 *
(916) 756-1104              *
*                                    *
*
**********************************************
**********************************
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X     X  XXXXXXX   XXXXX            X
X     X  X        X     X          XX
X     X  X        X                 X
XXXXXXX  XXXX     X        XXXXX    X
X     X  X        X                 X
X     X  X        X     X           X
X     X  XXXXXXX   XXXXX           XXX
```

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::::::::::::::::::::::::::::::::::::::::::::
::::::::::::::::::::::::::::::::::::::::::::::
:::                                        :::
:::  Full Microcomputer Implementation     :::
:::                  by                    :::
:::        Haestad Methods, Inc.           :::
:::                                        :::
::::::::::::::::::::::::::::::::::::::::::::::
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```

37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.

THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION

NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS WRITE STAGE FREQUENCY,

DSS: READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE GREEN AND AMPT INFILTRATION

KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

HEC-1 INPUT

```
ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
    1   ID  Type IIA storm
    2   IT      15       0       0     288
    3   IO       5

    4   KK  SC205
    5   KM  Smith Creek 205 Runoff
    6   KO                                      22
    7   BA  0.0970
    8   PB     2.6
    9   IN      15
   10   PC  0.0005  0.0015  0.0030  0.0045  0.0060  0.0080  0.0100  0.0120  0.0143
0.0165
   11   PC  0.0188  0.0210  0.0233  0.0255  0.0278  0.0320  0.0390  0.0460  0.0530
0.0600
   12   PC  0.0750  0.1000  0.4000  0.7000  0.7250  0.7500  0.7650  0.7800  0.7900
0.8000
   13   PC  0.8100  0.8200  0.8250  0.8300  0.8350  0.8400  0.8450  0.8500  0.8550
0.8600
   14   PC  0.8638  0.8675  0.8713  0.8750  0.8788  0.8825  0.8863  0.8900  0.8938
0.8975
   15   PC  0.9013  0.9050  0.9083  0.9115  0.9148  0.9180  0.9210  0.9240  0.9270
0.9300
   16   PC  0.9325  0.9350  0.9375  0.9400  0.9425  0.9450  0.9475  0.9500  0.9525
0.9550
   17   PC  0.9575  0.9600  0.9625  0.9650  0.9675  0.9700  0.9725  0.9750  0.9775
0.9800
   18   PC  0.9813  0.9825  0.9838  0.9850  0.9863  0.9875  0.9888  0.9900  0.9913
0.9925
   19   PC  0.9938  0.9950  0.9963  0.9975  0.9988  1.0000
   20   LS      0      68
   21   UD  0.257

   22   KK  RT205
   23   KM  Smith Creek Route 205 to 213
   24   KO                                      22
   25   RK    1530  0.0431   0.055            TRAP              2

   26   KK  SC207
   27   KM  Smith Creek 207 Runoff
   28   KO                                      22
   29   BA   0.12
   30   PB    2.6
   31   LS      0      68
   32   UD  0.367

   33   KK  SC213
   34   KM  Smith Creek 213 Runoff
   35   KO                                      22
   36   BA  0.1243
   37   PB    2.6
   38   LS      0      67
   39   UD  0.361

   40   KK  DP213
   41   KM  Combine RT205 SC207 and SC213
   42   KO                                      22
   43   HC      3

   44   KK  RT213
   45   KM  Smith Creek Route 213 to 215
   46   KO                                      22
   47   RK    1360  0.0493   0.055            TRAP              2
```

HEC-1 INPUT

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

  48          KK  SC209
  49          KM  Smith Creek 209 Runoff
  50          KO                                          22
  51          BA  0.1351
  52          PB     2.6
  53          LS       0       63
  54          UD   0.336

  55          KK  SC211
  56          KM  Smith Creek 211 Runoff
  57          KO                                          22
  58          BA  0.0799
  59          PB     2.6
  60          LS       0       62
  61          UD   0.418

  62          KK  SC215
  63          KM  Smith Creek 215 Runoff
  64          KO                                          22
  65          BA  0.0589
  66          PB     2.6
  67          LS       0       68
  68          UD   0.227

  69          KK  DP215
  70          KM  Combine RT213 SC209 SC211 and SC215
  71          KO                                          22
  72          HC       4

  73          KK  RT215
  74          KM  Smith Creek Route 215 to 219
  75          KO                                          22
  76          RK    2110  0.0446  0.0745            TRAP                2

  77          KK  SC219
  78          KM  Smith Creek 219 Runoff
  79          KO                                          22
  80          BA  0.1298
  81          PB     2.6
  82          LS       0       62
  83          UD   0.362

  84          KK  DP219
  85          KM  Combine RT215 and SC219
  86          KO                                          22
  87          HC       2

  88          KK  SC201
  89          KM  Smith Creek 201 Runoff
  90          KO                                          22
  91          BA  0.1216
  92          PB     2.6
  93          LS       0       63
  94          UD   0.340
```

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

        95         KK  RT201
        96         KM  Tributary Route 201 to 203
        97         KO                                           22
        98         RK     1650  0.0509   0 055               TRAP                  2

        99         KK  SC203
       100         KM  Smith Creek 203 Runoff
       101         KO                                           22
       102         BA  0.1113
       103         PB     2.6
       104         LS       0       61
       105         UD   0.223

       106         KK  DP203
       107         KM  Combine RT201 and SC203
       108         KO                                           22
       109         HC       2

       110         KK  RT203
       111         KM  Tributary Route 203 to 217
       112         KO                                           22
       113         RK     2010  0.0557  0.0698               TRAP                  2

       114         KK  SC217
       115         KM  Smith Creek 217 Runoff
       116         KO                                           22
       117         BA  0.0547
       118         PB     2.6
       119         LS       0       62
       120         UD   0.211

       121         KK  DP217
       122         KM  Combine RT203 and SC217
       123         KO                                           22
       124         HC       2

       125         KK  DP220
       126         KM  Combine DP217 and DP219
       127         KO                                           22
       128         HC       2

       129         KK  RT220
       130         KM  Smith Creek Route 220 to 316
       131         KO                                           22
       132         RK      646   0 0313   0.0829             TRAP          1       2

       133         KK  SC301
       134         KM  Smith Creek 301 Runoff
       135         KO                                           22
       136         BA  0.1196
       137         PB     2.6
       138         LS       0       68
       139         UD   0.279
```

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

  140          KK  SC303
  141          KM  Smith Creek 303 Runoff
  142          KO                                          22
  143          BA  0.1300
  144          PB     2.6
  145          LS       0       68
  146          UD   0.314

  147          KK  DP303
  148          KM  Combine SC301 and SC303
  149          KO                                          22
  150          HC       2

  151          KK  RT303
  152          KM  Tributary Route 303 to 305
  153          KO                                          22
  154          RK     940  0.0372   0.055            TRAP              2

  155          KK  SC305
  156          KM  Smith Creek 305 Runoff
  157          KO                                          22
  158          BA  0.0629
  159          PB     2.6
  160          LS       0       68
  161          UD   0.261

  162          KK  DP305
  163          KM  Combine RT303 and SC305
  164          KO                                          22
  165          HC       2

  166          KK  RT305
  167          KM  Tributary Route 305 to 311
  168          KO                                          22
  169          RK    2150  0.0414   0.055            TRAP              2

  170          KK  SC307
  171          KM  Smith Creek 307 Runoff
  172          KO                                          22
  173          BA  0.1081
  174          PB     2.6
  175          LS       0       68
  176          UD   0.472

  177          KK  SC309
  178          KM  Smith Creek 309 Runoff
  179          KO                                          22
  180          BA  0.1240
  181          PB     2.6
  182          LS       0       68
  183          UD   0.366
```

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

  184          KK  SC311
  185          KM  Smith Creek 311 Runoff
  186          KO                                                  22
  187          BA  0.1064
  188          PB     2.6
  189          LS       0       68
  190          UD   0.234

  191          KK  DP311
  192          KM  Combine RT305 SC307 SC309 and SC311
  193          KO                                                  22
  194          HC       4

  195          KK  RT311
  196          KM  Tributary Route 311 to 315
  197          KO                                                  22
  198          RK    2860  0.0448  0.0888             TRAP                  2

  199          KK  SC313
  200          KM  Smith Creek 313 Runoff
  201          KO                                                  22
  202          BA  0.1520
  203          PB     2.6
  204          LS       0       67
  205          UD   0.352

  206          KK  SC315
  207          KM  Smith Creek 315 Runoff
  208          KO                                                  22
  209          BA  0.0886
  210          PB     2.6
  211          LS       0       68
  212          UD   0.297

  213          KK  DP315
  214          KM  Combine RT311 SC313 and SC315
  215          KO                                                  22
  216          HC       3

  217          KK  DP316
  218          KM  Combine RT220 and DP315
  219          KO                                                  22
  220          HC       2

  221          KK  RT316
  222          KM  Smith Creek Route 316 to 401
  223          KO                                                  22
  224          RK    2575  0.0361   0.120             TRAP        1         2
```

HEC-1 INPUT

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

225         KK  SC401
226         KM  Smith Creek 401 Runoff
227         KO                                          22
228         BA  0.1524
229         PB     2.6
230         LS       0       68
231         UD   0.377

232         KK  DP401
233         KM  Combine RT316 and SC401
234         KO                                          22
235         HC       2

236         KK  RT401
237         KM  Smith Creek Route 401 to 405
238         KO                                          22
239         RK     660  0.0548   0.120            TRAP        1        2

240         KK  SC403
241         KM  Smith Creek 403 Runoff
242         KO                                          22
243         BA  0.1007
244         PB     2.6
245         LS       0       68
246         UD   0.332

247         KK  SC405
248         KM  Smith Creek 405 Runoff
249         KO                                          22
250         BA  0.0677
251         PB     2.6
252         LS       0       68
253         UD   0.263

254         KK  DP405
255         KM  Combine RT401 SC403 and SC405
256         KO                                          22
257         HC       3

258         KK  RT405
259         KM  Smith Creek Route 405 to 407
260         KO                                          22
261         RK    1500  0.0210   0.120            TRAP        1        2

262         KK  SC101
263         KM  Smith Creek 101 Runoff
264         KO                                          22
265         BA  0.0920
266         PB     2.6
267         LS       0       64
268         UD   0.353
```

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

            269         KK   RT101
            270         KM   Tributary Route 101 to 103
            271         KO                                            22
            272         RK     2050  0.0424   0.055                 TRAP                2

            273         KK   SC103
            274         KM   Smith Creek 103 Runoff
            275         KO                                            22
            276         BA   0.1670
            277         PB      2.6
            278         LS        0       65
            279         UD    0.348

            280         KK   SC105A
            281         KM   Smith Creek 105A Runoff
            282         KO                                            22
            283         BA   0.0693
            284         PB      2.6
            285         LS        0       70
            286         UD    0.345

            287         KK   DP103
            288         KM   Combine RT101 SC105A and SC103
            289         KO                                            22
            290         HC        3

            291         KK   RES106
            292         KM   Exisitng Detention Pond 106
            293         KO                                            22
            294         RS        1     STOR      -1
            295         SA     0.43     0.54     0.65     0.80     0.94     1.00
            296         SE     7320     7322     7324     7326     7328     7330
            297         SQ        0       50       80      100      190      250
            298         SE     7320     7322     7324     7326     7328     7330

            299         KK   RT103
            300         KM   Tributary Route RES103 to 105
            301         KO                                            22
            302         RK     1150  0.0478   0.055                 TRAP                2

            303         KK   SC105B
            304         KM   Smith Creek 105B Runoff
            305         KO                                            22
            306         BA   0.0686
            307         PB      2.6
            308         LS        0       69
            309         UD    0.345

            310         KK   DP105
            311         KM   Combine RT103 and SC105B
            312         KO                                            22
            313         HC        2
```

```
ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
 LINE
  314          KK  RT105A
  315          KM  Tributary Route 105 to 107A
  316          KO                                          22
  317          RK    1000  0 0395  0.0727            TRAP              2

  318          KK  SC107A
  319          KM  Smith Creek 107A Runoff
  320          KO                                          22
  321          BA  0.1367
  322          PB     2.6
  323          LS       0       69
  324          UD   0.273

  325          KK  RES108
  326          KM  EXISTING DETENTION POND 108
  327          KO                                          22
  328          RS       1     STOR       -1
  329          SV     0.0     0.20     0.68     1.35     2.32
  330          SE    7340     7342     7344     7346     7348
  331          SQ       0       20       48      220      822
  332          SE    7340     7342     7344     7346     7348

  333          KK  DP107A
  334          KM  Combine RT105A and RES108
  335          KO                                          22
  336          HC       2

  337          KK  RT105B
  338          KM  TRIBUTARY ROUTE 107A TO 107B
  339          KO                                          22
  340          RK    1000  0.0395  0.0727            TRAP              2

  341          KK  SC107B
  342          KM  SMITH CREEK 107B RUNOFF
  343          KO                                          22
  344          BA  0.0408
  345          PB     2.6
  346          LS       0       68
  347          UD   0.273

  348          KK  DP107B
  349          KM  COMBINE RT105B AND SC107B
  350          KO                                          22
  351          HC       2

  352          KK  RT107
  353          KM  Tributary Route 107B to 109
  354          KO                                          22
  355          RK    1420  0.0359   0.120            TRAP              2
```

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

  356          KK  SC109
  357          KM  Smith Creek 109 Runoff
  358          KO                                          22
  359          BA  0.1637
  360          PB     2.6
  361          LS        0       69
  362          UD   0 350

  363          KK  DP109
  364          KM  Combine RT107 and SC109
  365          KO                                          22
  366          HC        2

  367          KK  RT109
  368          KM  Tributary Route 109 to 111
  369          KO                                          22
  370          RK    3840  0.0453   0.120           TRAP                2

  371          KK  SC111
  372          KM  Smith Creek 111 Runoff
  373          KO                                          22
  374          BA  0.1894
  375          PB     2.6
  376          LS        0       69
  377          UD   0.382

  378          KK  DP111
  379          KM  Combine RT109 and SC111
  380          KO                                          22
  381          HC        2

  382          KK  SC407
  383          KM  Smith Creek 407 Runoff
  384          KO                                          22
  385          BA  0.1685
  386          PB     2.6
  387          LS        0       68
  388          UD   0.423

  389          KK  DP407
  390          KM  Combine DP111 RT405 and SC407
  391          KO                                          22
  392          HC        3

  393          KK  RT407
  394          KM  SMITH CREEK ROUTE 407 TO 506
  395          KO                                          22
  396          RK    1105  0.0210   0.120           TRAP        1       2
```

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

  397          KK  SC501
  398          KM  Smith Creek 501 Runoff
  399          KO                                          22
  400          BA  0.1219
  401          PB     2.6
  402          LS       0       68
  403          UD   0.312

  404          KK  SC503
  405          KM  Smith Creek 503 Runoff
  406          KO                                          22
  407          BA  0.1193
  408          PB     2.6
  409          LS       0       68
  410          UD   0.334

  411          KK  SC505
  412          KM  Smith Creek 505 Runoff
  413          KO                                          22
  414          BA  0 1923
  415          PB     2.6
  416          LS       0       68
  417          UD   0.379

  418          KK  DP505
  419          KM  Combine SC501 SC503 and SC505
  420          KO                                          22
  421          HC       3

  422          KK  DP506
  423          KM  Combine RT407 and DP505
  424          KO                                          22
  425          HC       2

  426          KK  RT506
  427          KM  Smith Creek Route 506 to 507
  428          KO                                          22
  429          RK     750  0.0067  0.0978            TRAP       2       1

  430          KK  SC507
  431          KM  Smith Creek 507 Runoff
  432          KO                                          22
  433          BA  0.0958
  434          PB     2.6
  435          LS       0       68
  436          UD   0.229

  437          KK  DP507
  438          KM  Combine RT506 and SC507
  439          KO                                          22
  440          HC       2
```

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

      441         KK  RT507
      442         KM  Smith Creek Route 507 to 509
      443         KO                                          22
      444         RK    2010  0.0268  0 0978                TRAP      2       1

      445         KK  SC509
      446         KM  Smith Creek 509 Runoff
      447         KO                                          22
      448         BA  0.1514
      449         PB     2.6
      450         LS       0       68
      451         UD   0.405

      452         KK  DP509
      453         KM  Combine RT507 and SC509
      454         KO                                          22
      455         HC       2

      456         KK  RT509
      457         KM  Smith Creek Route 509 to 511
      458         KO                                          22
      459         RK    2650  0.0160  0.0978                TRAP      2       1

      460         KK  SC511
      461         KM  Smith Creek 511 Runoff
      462         KO                                          22
      463         BA  0.0907
      464         PB     2.6
      465         LS       0       68
      466         UD   0.305

      467         KK  DP511
      468         KM  Combine RT509 and SC511
      469         KO                                          22
      470         HC       2

      471         KK  RT511
      472         KM  Smith Creek Route 511 to 603
      473         KO                                          22
      474         RK     670  0.0373  0.0978                TRAP      2       1

      475         KK  SC601
      476         KM  Smith Creek 601 Runoff
      477         KO                                          22
      478         BA  0.0633
      479         PB     2.6
      480         LS       0       69
      481         UD   0.210
```

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

        482         KK  RT601
        483         KM  Tributary Route 601 to 603
        484         KO                                        22
        485         RK    1170   0.0359   0.090             TRAP                 2

        486         KK  SC603
        487         KM  Smith Creek 603 Runoff
        488         KO                                        22
        489         BA  0.2514
        490         PB     2.6
        491         LS     0       68
        492         UD   0.289

        493         KK  DP603
        494         KM  Combine RT601 and SC603
        495         KO                                        22
        496         HC     2

        497         KK  DP604
        498         KM  Combine RT511 and DP603
        499         KO                                        22
        500         HC     2

        501         KK  RT604
        502         KM  Smith Creek Route 604 to 609
        503         KO                                        22
        504         RK    1380   0.0236   0.0928            TRAP         2       1

        505         KK  SC607
        506         KM  Smith Creek 607 Runoff
        507         KO                                        22
        508         BA  0.0840
        509         PB     2.6
        510         LS     0       69
        511         UD   0.270

        512         KK  SC609
        513         KM  Smith Creek 609 Runoff
        514         KO                                        22
        515         BA  0.1389
        516         PB     2.6
        517         LS     0       69
        518         UD   0.326

        519         KK  DP609
        520         KM  Combine RT604 SC607 and SC609
        521         KO                                        22
        522         HC     3
```

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

            523           KK  RES610
            524           KM  Smith Creek Reservoir Route 610
            525           KO                                            22
            526           RS       1     STOR       -1
            527           SA     2.2      2.7      3.3      3.8      4.4      5.1      5.8
            528           SE    6822     6823     6824     6825     6826     6827     6828
            529           SQ       0       11      701     2361     4843    10331    16010

            530           KK  SC605A
            531           KM  Smith Creek 605A Runoff
            532           KO                                            22
            533           BA  0.0505
            534           PB     2.6
            535           LS       0       68
            536           UD   0.252

            537           KK  RT605
            538           KM  SMITH CREEK ROUTE 605 TO DP610
            539           KO                                            22
            540           RK    2000     0.03    0.013              TRAP        2        2

            541           KK  SC605B
            542           KM  SMITH CREEK 605B RUNOFF
            543           KO                                            22
            544           BA  0.0778
            545           PB     2.6
            546           LS       0       75
            547           UD   0.252

            548           KK  RES605
            549           KM  SMITH CREEK RESEVOIR ROUTE 605
            550           KO                                            22
            551           RS       1     STOR       -1
            552           SV       0    0.099    0.218     0.36    0.526    0.718    0.937    1.185    1.463
1.773
            553           SV   2.117    2.496    2.912
            554           SE    6818     6819     6820     6821     6822     6823     6824     6825     6826
6827
            555           SE    6828     6829     6830
            556           SQ       0     5.18    19.37    40.40    65.78    92.88   119.23   143.30   162.05
176.76
            557           SQ  190.33   202.99   214.91
            558           SE    6818     6819     6820     6821     6822     6823     6824     6825     6826
6827
            559           SE    6828     6829     6830

            560           KK  DP610
            561           KM  COMBINE RES 610 RES 605 AND RT605
            562           KO                                            22
            563           HC       3

            564           KK  RT610
            565           KM  Smith Creek Route 610 to 611
            566           KO                                            22
            567           RK    3200   0.0226    0.090              TRAP        2        1
```

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

      568      KK  SC611
      569      KM  Smith Creek 611 Runoff
      570      KO                                         22
      571      BA  0.1095
      572      PB     2.6
      573      LS       0       69
      574      UD  0 149

      575      KK  DP611
      576      KM  Combine RT610 and SC611
      577      KO                                         22
      578      HC       2

      579      KK  RES612
      580      KM  Smith Creek Reservoir Route 612
      581      KO                                         22
      582      RS       1     STOR      -1
      583      SA    1.82     2.77    3.72     4.5     5.28     5.78
      584      SE    6762     6763    6764    6765     6766   6766.5
      585      SQ       0      150     510    1160     2120     2680

      586      KK  RT612
      587      KM  Smith Creek Route 612 to 617
      588      KO                                         22
      589      RK    2250   0.0240  0 0866              TRAP        2        1

      590      KK  SC613
      591      KM  Smith Creek 613 Runoff
      592      KO                                         22
      593      BA  0.1233
      594      PB     2.6
      595      LS       0       75
      596      UD  0.270

      597      KK  RES613
      598      KM  EXISTING POND 613
      599      KO                                         22
      600      RS       1     STOR      -1
      601      SA    0.12     0.96    1.09    1.21     1 34     1.47
      602      SE    6794     6796    6798    6800     6802     6804
      603      SQ    4.67     7 44    9 43   22.99    29.35    34.42
      604      SE    6794     6796    6798    6800     6802     6804

      605      KK  RT618
      606      KM  SMITH CREEK ROUTE RES613 TO DP  618
      607      KO                                         22
      608      RK    1100    0.030   0.013              TRAP        2        2

      609      KK  SC617A
      610      KM
      611      KO                                         22
      612      BA  0.0149
      613      PB     2.6
      614      LS       0       73
```

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

  615          UD   0 162

  616          KK  RES617
  617          KM  SMITH CREEK RESEVOIR ROUTE 617
  618          KO                                                    22
  619          RS       1     STOR       -1
  620          SV       0      0.5      1.0      1.5
  621          SE    6740     6745     6748     6750
  622          SQ       0       30       40       63
  623          SE    6740     6745     6748     6750

  624          KK  SC618
  625          KM  SMITH CREEK 618 RUNOFF
  626          KO                                                    22
  627          BA   0.007
  628          PB     2.6
  629          LS       0       73
  630          UD    0.15

  631          KK  RES618
  632          KM  SMITH CREEK RESEVOIR 618
  633          KO                                                    22
  634          RS       1     STOR       -1
  635          SV       0      0.5      1.0
  636          SE    6768     6770     6772
  637          SQ       0        3        6
  638          SE    6768     6770     6772

  639          KK  DP618
  640          KM  COMBINE RES 613 RES 618 AND RT618
  641          KO                                                    22
  642          HC       3

  643          KK  SC615B
  644          KM  Smith Creek 615B Runoff
  645          KO                                                    22
  646          BA  0.0313
  647          PB     2.6
  648          LS       0       78
  649          UD   0.160

  650          KK  RES614
  651          KM  EXISTING POND 614
  652          KO                                                    22
  653          RS       1     STOR       -1
  654          SV       0    0.067     0.32     0.67     1.16      1.5
  655          SE    6722     6724     6726     6728     6730     6732
  656          SQ       0        4        6       10     13.3       20
  657          SE    6722     6724     6726     6728     6730     6732
```

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

658          KK  SC615A
659          KM  SMITH CREEK 615A
660          KO                                          22
661          BA  0.0567
662          PB     2.6
663          LS       0       74
664          UD    0.18

665          KK  RES615
666          KM  SMITH CREEK RESEVOIR ROUTE 615
667          KO                                          22
668          RS       1     STOR       -1
669          SV       0        1        2      2.5
670          SE    6726     6728     6730     6732
671          SQ       0        5       10     16.7
672          SE    6724     6726     6728     6729

673          KK  SC617C
674          KM  SMITH CREEK 617C Runoff
675          KO                                          22
676          BA   .0482
677          PB     2.6
678          LS       0       65
679          UD     .17

680          KK  DP613
681          KM  COMBINE DP 618 RES 615 RES 614 SC 617C AND RT 612
682          KO                                          22
683          HC       5

684          KK  RT614
685          KM  SMITH CREEK ROUTE 613 TO 617
686          KO                                          22
687          RK    1200   0.022   0.030            TRAP       2       4

688          KK  SC617B
689          KM  Smith Creek 617B Runoff
690          KO                                          22
691          BA  0.0215
692          PB     2.6
693          LS       0       69
694          UD   0.228

695          KK  DP617
696          KM  Combine RT614 AND SC617B
697          KO                                          22
698          HC       2

699          KK  RT617
700          KM  Smith Creek Route 617 to 703
701          KO                                          22
702          RK    1470  0.0061   0.085            TRAP       2       1
```

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

       703         KK  SC701
       704         KM  Smith Creek 701 Runoff
       705         KO                                            22
       706         BA  0.0722
       707         PB     2.6
       708         LS      0        92
       709         UD   0.360

       710         KK  SC703
       711         KM  Smith Creek 703 Runoff
       712         KO                                            22
       713         BA  0.1305
       714         PB     2.6
       715         LS      0        77
       716         UD   0.092

       717         KK  DP703
       718         KM  Combine RT617 SC701 and SC703
       719         KO                                            22
       720         HC      3

       721         KK  RT703
       722         KM  Smith Creek Route 703 to 705
       723         KO                                            22
       724         RK    2780  0.0338  0.0786                  TRAP        3       1

       725         KK  SC705
       726         KM  Smith Creek 705 Runoff
       727         KO                                            22
       728         BA  0.0869
       729         PB     2.6
       730         LS      0        69
       731         UD   0.329

       732         KK  DP705
       733         KM  Combine RT703 and SC705
       734         KO                                            22
       735         HC      2
       736         ZZ
```

HEC1 S/N: 1343001909 HMVersion: 6.33 Data File: C:\WINNT\TEMP\~vbh361C.TMP

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

MAXIMUM STAGE	TIME OF OPERATION MAX STAGE	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
	HYDROGRAPH AT	SC205	16.	6.00	3.	1.	0.	0.10
	ROUTED TO	RT205	15	6.00	3.	1.	0.	0.10
	HYDROGRAPH AT	SC207	17.	6.00	4.	1.	0.	0.12
	HYDROGRAPH AT	SC213	16.	6.00	4.	1.	0.	0.12
	3 COMBINED AT	DP213	49.	6.00	11.	4.	1.	0.34
	ROUTED TO	RT213	46.	6.00	11.	4.	1.	0.34
	HYDROGRAPH AT	SC209	10.	6.00	3.	1.	0.	0.14
	HYDROGRAPH AT	SC211	4.	6.25	1.	1.	0.	0.08
	HYDROGRAPH AT	SC215	9.	6.00	2.	1.	0.	0.06
	4 COMBINED AT	DP215	69.	6.00	16.	6	2.	0.62
	ROUTED TO	RT215	61.	6.00	16.	6.	2.	0.62
	HYDROGRAPH AT	SC219	8.	6.00	2.	1.	0.	0.13
	2 COMBINED AT	DP219	69.	6.00	19.	7.	2.	0.75
	HYDROGRAPH AT	SC201	9.	6.00	2.	1.	0.	0.12
	ROUTED TO	RT201	8.	6.00	2	1.	0.	0.12
	HYDROGRAPH AT	SC203	6.	6.00	2.	1.	0.	0.11
	2 COMBINED AT	DP203	14	6.00	4	2.	1.	0.23
	ROUTED TO	RT203	12.	6.25	4.	2.	1.	0.23
	HYDROGRAPH AT	SC217	4.	6.00	1.	0.	0.	0.05
	2 COMBINED AT	DP217	16.	6.00	5.	2.	1.	0.29
	2 COMBINED AT	DP220	84	6.00	23.	9.	3.	1.03
	ROUTED TO	RT220	81	6.25	23.	9.	3.	1.03
	HYDROGRAPH AT	SC301	20	6.00	4.	1.	0.	0.12

HYDROGRAPH AT	SC303	21.	6.00	4.	2.	1.	0.13
2 COMBINED AT	DP303	40.	6.00	8.	3.	1.	0.25
ROUTED TO	RT303	39	6.00	8.	3	1.	0.25
HYDROGRAPH AT	SC305	10.	6.00	2.	1.	0.	0.06
2 COMBINED AT	DP305	49.	6.00	10.	4.	1.	0.31
ROUTED TO	RT305	45.	6.00	10.	4.	1.	0.31
HYDROGRAPH AT	SC307	13.	6.25	3.	1.	0.	0.11
HYDROGRAPH AT	SC309	18.	6.00	4.	1.	0.	0.12
HYDROGRAPH AT	SC311	17.	6.00	3.	1.	0.	0.11
4 COMBINED AT	DP311	93.	6.00	21.	8.	3.	0.65
ROUTED TO	RT311	80.	6.25	21.	8.	3.	0.65
HYDROGRAPH AT	SC313	20.	6.00	4.	2.	1.	0.15
HYDROGRAPH AT	SC315	14.	6.00	3.	1.	0.	0.09
3 COMBINED AT	DP315	112.	6.00	28.	10.	3.	0.89
2 COMBINED AT	DP316	192	6.00	51.	19.	6.	1.92
ROUTED TO	RT316	188.	6.25	51.	19.	6.	1.92
HYDROGRAPH AT	SC401	22.	6.00	5	2.	1	0.15
2 COMBINED AT	DP401	206.	6.25	56.	21.	7.	2.08
ROUTED TO	RT401	203.	6.25	56.	21.	7.	2.08
HYDROGRAPH AT	SC403	16.	6.00	3.	1.	0.	0.10
HYDROGRAPH AT	SC405	11	6.00	2.	1	0.	0.07
3 COMBINED AT	DP405	220.	6.25	61.	23.	8.	2.25
ROUTED TO	RT405	211.	6.25	61.	23	8.	2.25
HYDROGRAPH AT	SC101	8	6.00	2.	1.	0.	0.09
ROUTED TO	RT101	7	6.25	2.	1.	0.	0.09
HYDROGRAPH AT	SC103	17.	6.00	4.	2.	1.	0.17
HYDROGRAPH AT							

		SC105A	13.	6.00	3	1.	0.	0.07
	3 COMBINED AT	DP103	36.	6.00	9.	3.	1.	0.33
	ROUTED TO	RES106	29.	6.25	8.	3.	1.	0.33
7321.16	6.25							
	ROUTED TO	RT103	28.	6.25	8.	3.	1.	0.33
	HYDROGRAPH AT	SC105B	12.	6.00	2	1.	0.	0.07
	2 COMBINED AT	DP105	36.	6.25	11.	4.	1.	0.40
	ROUTED TO	RT105A	35.	6.25	11.	4.	1.	0.40
	HYDROGRAPH AT	SC107A	25.	6.00	5.	2.	1.	0.14
	ROUTED TO	RES108	22.	6.00	5.	2.	1.	0.14
7342.11	6.00							
	2 COMBINED AT	DP107A	56.	6.25	16.	6.	2.	0.53
	ROUTED TO	RT105B	55.	6.25	16.	6.	2.	0.53
	HYDROGRAPH AT	SC107B	7.	6.00	1.	0.	0.	0.04
	2 COMBINED AT	DP107B	59.	6.25	17.	6.	2.	0.57
	ROUTED TO	RT107	57.	6.25	17.	6.	2.	0.57
	HYDROGRAPH AT	SC109	28.	6.00	6.	2.	1.	0.16
	2 COMBINED AT	DP109	77.	6.25	23.	8.	3.	0.74
	ROUTED TO	RT109	73.	6.25	22.	8.	3.	0.74
	HYDROGRAPH AT	SC111	30.	6.00	7.	2.	1.	0.19
	2 COMBINED AT	DP111	98.	6.25	29.	11.	4.	0.93
	HYDROGRAPH AT	SC407	22.	6.00	5.	2.	1.	0.17
	3 COMBINED AT	DP407	329.	6.25	95.	36.	12.	3.34
	ROUTED TO	RT407	312.	6.25	95.	36.	12.	3.34
	HYDROGRAPH AT	SC501	20.	6.00	4.	1.	0.	0.12
	HYDROGRAPH AT	SC503	19.	6.00	4.	1.	0.	0.12
	HYDROGRAPH AT	SC505	27.	6.00	6	2.	1.	0.19
	3 COMBINED AT	DP505	65.	6.00	14.	5.	2.	0.43

2 COMBINED AT	DP506	361.	6.25	108.	41.	14.	3.77
ROUTED TO	RT506	348	6.25	109.	41.	14.	3.77
HYDROGRAPH AT	SC507	15	6.00	3.	1.	0	0.10
2 COMBINED AT	DP507	356.	6.25	111.	42.	14.	3.87
ROUTED TO	RT507	343.	6.50	112.	42.	14.	3.87
HYDROGRAPH AT	SC509	20.	6.00	5	2.	1.	0.15
2 COMBINED AT	DP509	355.	6.50	116.	44.	15.	4.02
ROUTED TO	RT509	354	6.50	116.	44.	15.	4.02
HYDROGRAPH AT	SC511	15.	6.00	3.	1.	0.	0.09
2 COMBINED AT	DP511	360	6.50	119.	45.	15.	4.11
ROUTED TO	RT511	357.	6.50	119.	45.	15.	4.11
HYDROGRAPH AT	SC601	12.	5.75	2.	1.	0.	0.06
ROUTED TO	RT601	11.	6.00	2.	1.	0.	0.06
HYDROGRAPH AT	SC603	41.	6.00	8.	3.	1.	0.25
2 COMBINED AT	DP603	52.	6.00	10.	4.	1.	0.31
2 COMBINED AT	DP604	377.	6.50	128.	49.	16.	4.43
ROUTED TO	RT604	372.	6.50	128.	49.	16	4.43
HYDROGRAPH AT	SC607	16.	6.00	3.	1.	0.	0.08
HYDROGRAPH AT	SC609	25.	6.00	5.	2.	1.	0.14
3 COMBINED AT	DP609	388.	6.50	136.	52.	17	4.65
ROUTED TO	RES610	374.	6.75	132.	51.	17.	4.65
6823.53	6.75						
HYDROGRAPH AT	SC605A	8.	6.00	2.	1.	0.	0.05
ROUTED TO	RT605	8.	6.00	2.	1.	0.	0.05
HYDROGRAPH AT	SC605B	25	6.00	4	1	0.	0.08
ROUTED TO	RES605	25.	6.00	4.	1.	0.	0.08
6820.29	6.00						

	3 COMBINED AT	DP610	387	6 25	137.	53.	18	4 78
	ROUTED TO	RT610	381.	6 50	137	53	18.	4 78
	HYDROGRAPH AT	SC611	29	5. 75	4.	1	0.	0. 11
	2 COMBINED AT	DP611	387	6. 50	140.	55.	18.	4 89
	ROUTED TO	RES612	388.	6. 75	139.	55	18.	4. 89
6763. 66	6. 75							
	ROUTED TO	RT612	380.	6. 75	139.	55.	18.	4. 89
	HYDROGRAPH AT	SC613	40.	6. 00	7.	2.	1.	0. 12
	ROUTED TO	RES613	8.	6. 75	7.	5.	5.	0. 12
6796. 59	6. 75							
	ROUTED TO	RT618	8.	6. 75	7.	5.	5.	0. 12
	HYDROGRAPH AT	SC617A	6.	5. 75	1.	0.	0.	0. 01
	ROUTED TO	RES617	4.	6. 00	1.	0.	0.	0. 01
6740. 65	6. 00							
	HYDROGRAPH AT	SC618	3.	5. 75	0	0	0.	0. 01
	ROUTED TO	RES618	0.	6 50	0.	0.	0.	0. 01
6768. 33	6. 50							
	3 COMBINED AT	DP618	11.	6. 00	8.	6	5.	0. 15
	HYDROGRAPH AT	SC615B	18.	5. 75	2.	1.	0.	0. 03
	ROUTED TO	RES614	6.	6. 25	2.	1.	0.	0. 03
6726. 20	6. 25							
	HYDROGRAPH AT	SC615A	21.	5 75	3.	1.	0.	0. 06
	ROUTED TO	RES615	7.	6. 25	3.	1	0	0. 06
6726. 92	6. 25							
	HYDROGRAPH AT	SC617C	7.	5. 75	1.	0.	0.	0. 05
	5 COMBINED AT	DP613	403	6. 75	152.	62.	24.	5. 17
	ROUTED TO	RT614	399.	6 75	152.	62	24.	5 17
	HYDROGRAPH AT	SC617B	4	6 00	1.	0.	0.	0. 02
	2 COMBINED AT	DP617	400.	6. 75	153.	63.	24.	5. 19

ROUTED TO	RT617	391.	7.00	153.	63	24.	5.19
HYDROGRAPH AT	SC701	68.	6.00	12.	3.	1.	0.07
HYDROGRAPH AT	SC703	79.	5.75	9.	3.	1.	0.13
3 COMBINED AT	DP703	406.	7.00	169.	69	26.	5.39
ROUTED TO	RT703	405.	7.00	169.	69.	26.	5.39
HYDROGRAPH AT	SC705	15.	6.00	3.	1.	0.	0.09
2 COMBINED AT	DP705	409.	7.00	172.	70.	27.	5.48

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	INTERPOLATED TO COMPUTATION INTERVAL DT	PEAK	TIME TO PEAK	VOLUME
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
RT205	MANE	1.58	15.94	363.22	0.43	15.00	15.28	360.00	0.44

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2237E+01 EXCESS=0.0000E+00 OUTFLOW=0.2239E+01 BASIN STORAGE= 0.5963E-09 PERCENT ERROR= -0.1

RT213	MANE	1.10	48.48	362.39	0.42	15.00	45.64	360.00	0.42

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.7664E+01 EXCESS=0.0000E+00 OUTFLOW=0.7665E+01 BASIN STORAGE= 0.2831E-08 PERCENT ERROR= 0.0

RT215	MANE	1.98	68.73	363.84	0.37	15.00	61.09	360.00	0.37

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1213E+02 EXCESS=0.0000E+00 OUTFLOW=0.1213E+02 BASIN STORAGE= 0.2367E-07 PERCENT ERROR= 0.0

RT201	MANE	1.85	8.79	363.18	0.28	15.00	7.81	360.00	0.28

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1805E+01 EXCESS=0.0000E+00 OUTFLOW=0.1805E+01 BASIN STORAGE= 0.9118E-09 PERCENT ERROR= 0.0

RT203	MANE	2.37	13.79	364.89	0.25	15.00	12.24	375.00	0.25

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3155E+01 EXCESS=0.0000E+00 OUTFLOW=0.3154E+01 BASIN STORAGE= 0.9072E-08 PERCENT ERROR= 0.0

RT220	MANE	0.71	84.07	362.04	0.32	15.00	80.73	375.00	0.32

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1782E+02 EXCESS=0.0000E+00 OUTFLOW=0.1782E+02 BASIN STORAGE= 0.1939E-07 PERCENT ERROR= 0.0

RT303	MANE	0.98	40.07	361.84	0.43	15.00	38.91	360.00	0.43

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5755E+01 EXCESS=0.0000E+00 OUTFLOW=0.5755E+01 BASIN STORAGE= 0.1739E-09 PERCENT ERROR= 0.0

RT305	MANE	1.68	48.55	362.76	0.43	15.00	45.05	360.00	0.44

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.7228E+01 EXCESS=0.0000E+00 OUTFLOW=0.7229E+01 BASIN STORAGE= 0.4596E-08 PERCENT ERROR= 0.0

RT311	MANE	2.65	91.22	364.83	0.43	15.00	80.39	375.00	0.43

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1508E+02 EXCESS=0.0000E+00 OUTFLOW=0.1508E+02 BASIN STORAGE=
0.5653E-07 PERCENT ERROR= 0.0

RT316	MANE	2.76	191.52	365.76	0.37	15.00	187.66	375.00
0.37								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3820E+02 EXCESS=0.0000E+00 OUTFLOW=0.3817E+02 BASIN STORAGE=
0.4957E-06 PERCENT ERROR= 0.1

RT401	MANE	0.59	205.39	376.05	0.38	15.00	202.79	375.00
0.38								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4160E+02 EXCESS=0.0000E+00 OUTFLOW=0.4161E+02 BASIN STORAGE=
0.1758E-06 PERCENT ERROR= 0.0

RT405	MANE	1.94	218.80	379.15	0.38	15.00	210.63	375.00
0.38								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4556E+02 EXCESS=0.0000E+00 OUTFLOW=0.4555E+02 BASIN STORAGE=
0.7613E-06 PERCENT ERROR= 0.0

RT101	MANE	2.50	7.74	365.60	0.31	15.00	6.83	375.00
0.31								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1504E+01 EXCESS=0.0000E+00 OUTFLOW=0.1503E+01 BASIN STORAGE=
0.2943E-08 PERCENT ERROR= 0.1

RT103	MANE	1.12	28.94	377.29	0.36	15.00	27.87	375.00
0.36								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6355E+01 EXCESS=0.0000E+00 OUTFLOW=0.6355E+01 BASIN STORAGE=
0.4218E-08 PERCENT ERROR= 0.0

RT105A	MANE	1.11	36.21	377.59	0.38	15.00	35.45	375.00
0.38								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8078E+01 EXCESS=0.0000E+00 OUTFLOW=0.8078E+01 BASIN STORAGE=
0.9359E-08 PERCENT ERROR= 0.0

RT105B	MANE	1.02	55.49	376.90	0.40	15.00	54.73	375.00
0.41								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1150E+02 EXCESS=0.0000E+00 OUTFLOW=0.1151E+02 BASIN STORAGE=
0.1587E-07 PERCENT ERROR= 0.0

RT107	MANE	2.13	58.20	378.60	0.41	15.00	56.63	375.00
0.41								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1247E+02 EXCESS=0.0000E+00 OUTFLOW=0.1247E+02 BASIN STORAGE=
0.7761E-07 PERCENT ERROR= 0.0

RT109	MANE	4.78	76.36	383.20	0.42	15.00	72.58	375.00
0.42								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1657E+02 EXCESS=0.0000E+00 OUTFLOW=0.1655E+02 BASIN STORAGE=
0.7140E-06 PERCENT ERROR= 0.1

RT407	MANE	1.40	326.34	378.56	0.40	15.00	312.28	375.00
0.40								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 7076E+02 EXCESS=0.0000E+00 OUTFLOW=0.7077E+02 BASIN STORAGE=
0.1291E-05 PERCENT ERROR= 0.0

RT506	MANE	1.00	360 48	377.09	0.40	15 00	347.60	375.00
0.40								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 8093E+02 EXCESS=0.0000E+00 OUTFLOW=0.8093E+02 BASIN STORAGE=
0.1725E-05 PERCENT ERROR= 0.0

RT507	MANE	1.64	354.11	379.68	0.40	15.00	342.93	390 00
0.40								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8331E+02 EXCESS=0.0000E+00 OUTFLOW=0.8332E+02 BASIN STORAGE=
0.3608E-05 PERCENT ERROR= 0 0

RT509	MANE	2.61	354.25	392 13	0.41	15.00	353.72	390.00
0.41								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8698E+02 EXCESS=0.0000E+00 OUTFLOW=0.8693E+02 BASIN STORAGE=
0.8666E-05 PERCENT ERROR= 0.1

RT511	MANE	0.55	359.26	391.12	0.41	15.00	357.12	390.00
0.41								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8903E+02 EXCESS=0.0000E+00 OUTFLOW=0.8903E+02 BASIN STORAGE=
0.2215E-05 PERCENT ERROR= 0.0

RT601	MANE	1.99	11.99	350.46	0.47	15.00	11.32	360.00
0.47								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1578E+01 EXCESS=0.0000E+00 OUTFLOW=0.1577E+01 BASIN STORAGE=
0.1410E-08 PERCENT ERROR= 0.0

RT604	MANE	1.07	376.18	392.61	0 41	15.00	371.91	390.00
0.41								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.9651E+02 EXCESS=0.0000E+00 OUTFLOW=0.9651E+02 BASIN STORAGE=
0.5976E-05 PERCENT ERROR= 0.0

RT605	MANE	1.02	8.24	361.40	0.43	15.00	8.11	360.00
0.43								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1164E+01 EXCESS=0.0000E+00 OUTFLOW=0.1165E+01 BASIN STORAGE=
0.1430E-09 PERCENT ERROR= 0.0

RT610	MANE	2 54	386.22	381.99	0.42	15.00	381.45	390.00
0.42								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1064E+03 EXCESS=0 0000E+00 OUTFLOW=0.1063E+03 BASIN STORAGE=
0.2263E-04 PERCENT ERROR= 0.0

RT612	MANE	1 69	386 91	408.84	0.42	15.00	380.44	405.00
0.42								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 1091E+03 EXCESS=0.0000E+00 OUTFLOW=0.1091E+03 BASIN STORAGE=
0.2129E-04 PERCENT ERROR= 0.0

RT618	MANE	0.68	8.02	406.59	4.36	15.00	8.02	405.00
4 36								

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 2870E+02 EXCESS=0.0000E+00 OUTFLOW=0.2869E+02 BASIN STORAGE=
0.9394E-02 PERCENT ERROR= 0.0

RT614 MANE 0.55 403.01 406.39 0.52 15.00 398.60 405.00
0.52

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1429E+03 EXCESS=0.0000E+00 OUTFLOW=0.1429E+03 BASIN STORAGE=
0.7844E-02 PERCENT ERROR= 0.0

RT617 MANE 1.83 398.33 410.11 0.52 15.00 391.25 420.00
0.52

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1435E+03 EXCESS=0.0000E+00 OUTFLOW=0.1434E+03 BASIN STORAGE=
0.5245E-01 PERCENT ERROR= 0.0

RT703 MANE 1.74 405.59 421.37 0.54 15.00 405.31 420.00
0.54

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1560E+03 EXCESS=0.0000E+00 OUTFLOW=0.1559E+03 BASIN STORAGE=
0.7698E-01 PERCENT ERROR= 0.0

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

10 year future-Alternate 2
HEC1 S/N: 1343001909 HMVersion: 6.33 Data File: C:\WINNT\TEMP\~vbh135E.TMP

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*                                       *
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
U.S. ARMY CORPS OF ENGINEERS      *
*                MAY   1991             *
HYDROLOGIC ENGINEERING CENTER     *
*            VERSION 4.0.1E             *
609 SECOND STREET           *
*                                       *
DAVIS, CALIFORNIA 95616         *
*  RUN DATE  06/19/2001  TIME  16:14:12 *
(916) 756-1104              *
*                                       *
*                                       *
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X     X  XXXXXXX   XXXXX           X
X     X  X        X     X         XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX           XXX
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:::                                     :::
:::  Full Microcomputer Implementation  :::
:::                 by                  :::
:::        Haestad Methods, Inc.        :::
:::                                     :::
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37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.

THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION

NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,

DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION

KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

HEC-1 INPUT

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

          1          ID  Type IIA storm
          2          IT      15        0        0      288
          3          IO       5

          4          KK  SC205
          5          KM  Smith Creek 205 Runoff
          6          KO                                      22
          7          BA  0.0970
          8          PB       3
          9          IN      15
         10          PC  0.0005  0.0015  0.0030  0.0045  0.0060  0.0080  0.0100  0.0120  0.0143
0.0165
         11          PC  0.0188  0.0210  0.0233  0.0255  0.0278  0.0320  0.0390  0.0460  0.0530
0.0600
         12          PC  0.0750  0.1000  0.4000  0.7000  0.7250  0.7500  0.7650  0.7800  0.7900
0.8000
         13          PC  0.8100  0.8200  0.8250  0.8300  0.8350  0.8400  0.8450  0.8500  0.8550
0.8600
         14          PC  0.8638  0.8675  0.8713  0.8750  0.8788  0.8825  0.8863  0.8900  0.8938
0.8975
         15          PC  0.9013  0.9050  0.9083  0.9115  0.9148  0.9180  0.9210  0.9240  0.9270
0.9300
         16          PC  0.9325  0.9350  0.9375  0.9400  0.9425  0.9450  0.9475  0.9500  0.9525
0.9550
         17          PC  0.9575  0.9600  0.9625  0.9650  0.9675  0.9700  0.9725  0.9750  0.9775
0.9800
         18          PC  0.9813  0.9825  0.9838  0.9850  0.9863  0.9875  0.9888  0.9900  0.9913
0.9925
         19          PC  0.9938  0.9950  0.9963  0.9975  0.9988  1.0000
         20          LS       0      68
         21          UD   0.257

         22          KK  RT205
         23          KM  Smith Creek Route 205 to 213
         24          KO                                      22
         25          RK    1530  0.0431   0.055            TRAP              2

         26          KK  SC207
         27          KM  Smith Creek 207 Runoff
         28          KO                                      22
         29          BA    0.12
         30          PB       3
         31          LS       0      68
         32          UD   0.367

         33          KK  SC213
         34          KM  Smith Creek 213 Runoff
         35          KO                                      22
         36          BA  0.1243
         37          PB       3
         38          LS       0      67
         39          UD   0.361

         40          KK  DP213
         41          KM  Combine RT205 SC207 and SC213
         42          KO                                      22
         43          HC       3

         44          KK  RT213
         45          KM  Smith Creek Route 213 to 215
         46          KO                                      22
         47          RK    1360  0.0493   0.055            TRAP              2
```

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

48          KK  SC209
49          KM  Smith Creek 209 Runoff
50          KO                                          22
51          BA  0.1351
52          PB       3
53          LS       0       63
54          UD   0 336

55          KK  SC211
56          KM  Smith Creek 211 Runoff
57          KO                                          22
58          BA  0.0799
59          PB       3
60          LS       0       62
61          UD   0.418

62          KK  SC215
63          KM  Smith Creek 215 Runoff
64          KO                                          22
65          BA  0.0589
66          PB       3
67          LS       0       68
68          UD   0.227

69          KK  DP215
70          KM  Combine RT213 SC209 SC211 and SC215
71          KO                                          22
72          HC       4

73          KK  RT215
74          KM  Smith Creek Route 215 to 219
75          KO                                          22
76          RK    2110  0.0446  0.0745            TRAP              2

77          KK  SC219
78          KM  Smith Creek 219 Runoff
79          KO                                          22
80          BA  0.1298
81          PB       3
82          LS       0       62
83          UD   0.362

84          KK  DP219
85          KM  Combine RT215 and SC219
86          KO                                          22
87          HC       2

88          KK  SC201
89          KM  Smith Creek 201 Runoff
90          KO                                          22
91          BA  0.1216
92          PB       3
93          LS       0       63
94          UD   0.340
```

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

             95        KK  RT201
             96        KM  Tributary Route 201 to 203
             97        KO                                        22
             98        RK    1650   0.0509    0.055             TRAP                2

             99        KK  SC203
            100        KM  Smith Creek 203 Runoff
            101        KO                                        22
            102        BA  0.1113
            103        PB       3
            104        LS       0        61
            105        UD   0.223

            106        KK  DP203
            107        KM  Combine RT201 and SC203
            108        KO                                        22
            109        HC       2

            110        KK  RT203
            111        KM  Tributary Route 203 to 217
            112        KO                                        22
            113        RK    2010   0.0557   0.0698             TRAP                2

            114        KK  SC217
            115        KM  Smith Creek 217 Runoff
            116        KO                                        22
            117        BA  0.0547
            118        PB       3
            119        LS       0        62
            120        UD   0.211

            121        KK  DP217
            122        KM  Combine RT203 and SC217
            123        KO                                        22
            124        HC       2

            125        KK  DP220
            126        KM  Combine DP217 and DP219
            127        KO                                        22
            128        HC       2

            129        KK  RT220
            130        KM  Smith Creek Route 220 to 316
            131        KO                                        22
            132        RK     646   0.0313   0.0829             TRAP       1        2

            133        KK  SC301
            134        KM  Smith Creek 301 Runoff
            135        KO                                        22
            136        BA  0.1196
            137        PB       3
            138        LS       0        68
            139        UD   0.279
```

HEC-1 INPUT

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

  140          KK  SC303
  141          KM  Smith Creek 303 Runoff
  142          KO                                          22
  143          BA  0.1300
  144          PB       3
  145          LS       0       68
  146          UD   0.314

  147          KK  DP303
  148          KM  Combine SC301 and SC303
  149          KO                                          22
  150          HC       2

  151          KK  RT303
  152          KM  Tributary Route 303 to 305
  153          KO                                          22
  154          RK     940  0.0372   0.055            TRAP              2

  155          KK  SC305
  156          KM  Smith Creek 305 Runoff
  157          KO                                          22
  158          BA  0.0629
  159          PB       3
  160          LS       0       68
  161          UD   0.261

  162          KK  DP305
  163          KM  Combine RT303 and SC305
  164          KO                                          22
  165          HC       2

  166          KK  RT305
  167          KM  Tributary Route 305 to 311
  168          KO                                          22
  169          RK    2150  0.0414   0.055            TRAP              2

  170          KK  SC307
  171          KM  Smith Creek 307 Runoff
  172          KO                                          22
  173          BA  0.1081
  174          PB       3
  175          LS       0       68
  176          UD   0.472

  177          KK  SC309
  178          KM  Smith Creek 309 Runoff
  179          KO                                          22
  180          BA  0.1240
  181          PB       3
  182          LS       0       68
  183          UD   0.366
```

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

  184          KK  SC311
  185          KM  Smith Creek 311 Runoff
  186          KO                                          22
  187          BA  0.1064
  188          PB       3
  189          LS       0       68
  190          UD   0.234

  191          KK  DP311
  192          KM  Combine RT305 SC307 SC309 and SC311
  193          KO                                          22
  194          HC       4

  195          KK  RT311
  196          KM  Tributary Route 311 to 315
  197          KO                                          22
  198          RK    2860  0.0448  0.0888            TRAP                2

  199          KK  SC313
  200          KM  Smith Creek 313 Runoff
  201          KO                                          22
  202          BA  0.1520
  203          PB       3
  204          LS       0       67
  205          UD   0.352

  206          KK  SC315
  207          KM  Smith Creek 315 Runoff
  208          KO                                          22
  209          BA  0.0886
  210          PB       3
  211          LS       0       68
  212          UD   0.297

  213          KK  DP315
  214          KM  Combine RT311 SC313 and SC315
  215          KO                                          22
  216          HC       3

  217          KK  DP316
  218          KM  Combine RT220 and DP315
  219          KO                                          22
  220          HC       2

  221          KK  RT316
  222          KM  Smith Creek Route 316 to 401
  223          KO                                          22
  224          RK    2575  0.0361   0.120            TRAP        1       2
```

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

225          KK  SC401
226          KM  Smith Creek 401 Runoff
227          KO                                          22
228          BA  0.1524
229          PB       3
230          LS       0       68
231          UD   0.377

232          KK  DP401
233          KM  Combine RT316 and SC401
234          KO                                          22
235          HC       2

236          KK  RT401
237          KM  Smith Creek Route 401 to 405
238          KO                                          22
239          RK     660   0.0548    0.120            TRAP        1        2

240          KK  SC403
241          KM  Smith Creek 403 Runoff
242          KO                                          22
243          BA  0.1007
244          PB       3
245          LS       0       68
246          UD   0.332

247          KK  SC405
248          KM  Smith Creek 405 Runoff
249          KO                                          22
250          BA  0.0677
251          PB       3
252          LS       0       68
253          UD   0.263

254          KK  DP405
255          KM  Combine RT401 SC403 and SC405
256          KO                                          22
257          HC       3

258          KK  RT405
259          KM  Smith Creek Route 405 to 407
260          KO                                          22
261          RK    1500   0.0210    0.120            TRAP        1        2

262          KK  SC101
263          KM  Smith Creek 101 Runoff
264          KO                                          22
265          BA  0.0920
266          PB       3
267          LS       0       64
268          UD   0.353
```

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

         269         KK   RT101
         270         KM   Tributary Route 101 to 103
         271         KO                                          22
         272         RK    2050   0.0424    0.055               TRAP              2

         273         KK   SC103
         274         KM   Smith Creek 103 Runoff
         275         KO                                          22
         276         BA   0.1670
         277         PB        3
         278         LS        0        65
         279         UD    0.348

         280         KK   SC105A
         281         KM   Smith Creek 105A Runoff
         282         KO                                          22
         283         BA   0.0693
         284         PB        3
         285         LS        0        70
         286         UD    0.345

         287         KK   DP103
         288         KM   Combine RT101 SC105A and SC103
         289         KO                                          22
         290         HC        3

         291         KK   RES106
         292         KM   Exisitng Detention Pond 106
         293         KO                                          22
         294         RS        1      STOR       -1
         295         SA     0.43      0.54     0.65     0.80     0.94     1.00
         296         SE     7320      7322     7324     7326     7328     7330
         297         SQ        0        50       80      100      190      250
         298         SE     7320      7322     7324     7326     7328     7330

         299         KK   RT103
         300         KM   Tributary Route RES103 to 105
         301         KO                                          22
         302         RK     1150  0.0478    0.055               TRAP              2

         303         KK   SC105B
         304         KM   Smith Creek 105B Runoff
         305         KO                                          22
         306         BA   0.0686
         307         PB        3
         308         LS        0        69
         309         UD    0.345

         310         KK   DP105
         311         KM   Combine RT103 and SC105B
         312         KO                                          22
         313         HC        2
```

HEC-1 INPUT

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

  314          KK  RT105A
  315          KM  Tributary Route 105 to 107A
  316          KO                                                  22
  317          RK    1000  0.0395  0.0727                  TRAP                2

  318          KK  SC107A
  319          KM  Smith Creek 107A Runoff
  320          KO                                                  22
  321          BA  0.1367
  322          PB       3
  323          LS       0       69
  324          UD   0.273

  325          KK  RES108
  326          KM  EXISTING DETENTION POND 108
  327          KO                                                  22
  328          RS       1     STOR       -1
  329          SV     0.0     0.20     0.68     1.35     2.32
  330          SE    7340     7342     7344     7346     7348
  331          SQ       0       20       48      220      822
  332          SE    7340     7342     7344     7346     7348

  333          KK  DP107A
  334          KM  Combine RT105A and RES108
  335          KO                                                  22
  336          HC       2

  337          KK  RT105B
  338          KM  TRIBUTARY ROUTE 107A TO 107B
  339          KO                                                  22
  340          RK    1000  0.0395  0.0727                  TRAP                2

  341          KK  SC107B
  342          KM  SMITH CREEK 107B RUNOFF
  343          KO                                                  22
  344          BA  0.0408
  345          PB       3
  346          LS       0       68
  347          UD   0.273

  348          KK  DP107B
  349          KM  COMBINE RT105B AND SC107B
  350          KO                                                  22
  351          HC       2

  352          KK  RT107
  353          KM  Tributary Route 107B to 109
  354          KO                                                  22
  355          RK    1420  0.0359   0.120                  TRAP                2
```

HEC-1 INPUT

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

     356   KK  SC109
     357   KM  Smith Creek 109 Runoff
     358   KO                                          22
     359   BA  0.1637
     360   PB       3
     361   LS       0       69
     362   UD   0.350

     363   KK  DP109
     364   KM  Combine RT107 and SC109
     365   KO                                          22
     366   HC       2

     367   KK  RT109
     368   KM  Tributary Route 109 to 111
     369   KO                                          22
     370   RK    3840  0.0453   0.120          TRAP                2

     371   KK  SC111
     372   KM  Smith Creek 111 Runoff
     373   KO                                          22
     374   BA  0.1894
     375   PB       3
     376   LS       0       69
     377   UD   0.382

     378   KK  DP111
     379   KM  Combine RT109 and SC111
     380   KO                                          22
     381   HC       2

     382   KK  SC407
     383   KM  Smith Creek 407 Runoff
     384   KO                                          22
     385   BA  0.1685
     386   PB       3
     387   LS       0       68
     388   UD   0.423

     389   KK  DP407
     390   KM  Combine DP111 RT405 and SC407
     391   KO                                          22
     392   HC       3

     393   KK  RT407
     394   KM  SMITH CREEK ROUTE 407 TO 506
     395   KO                                          22
     396   RK    1105  0.0210   0.120          TRAP        1       2
```

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

          397           KK  SC501
          398           KM  Smith Creek 501 Runoff
          399           KO                                                22
          400           BA  0.1219
          401           PB        3
          402           LS        0       68
          403           UD   0.312

          404           KK  SC503
          405           KM  Smith Creek 503 Runoff
          406           KO                                                22
          407           BA  0.1193
          408           PB        3
          409           LS        0       68
          410           UD   0.334

          411           KK  SC505
          412           KM  Smith Creek 505 Runoff
          413           KO                                                22
          414           BA  0.1923
          415           PB        3
          416           LS        0       68
          417           UD   0.379

          418           KK  DP505
          419           KM  Combine SC501 SC503 and SC505
          420           KO                                                22
          421           HC        3

          422           KK  DP506
          423           KM  Combine RT407 and DP505
          424           KO                                                22
          425           HC        2

          426           KK  RT506
          427           KM  Smith Creek Route 506 to 507
          428           KO                                                22
          429           RK      750  0.0067  0.0978            TRAP        2         1

          430           KK  SC507
          431           KM  Smith Creek 507 Runoff
          432           KO                                                22
          433           BA  0.0958
          434           PB        3
          435           LS        0       68
          436           UD   0.229

          437           KK  DP507
          438           KM  Combine RT506 and SC507
          439           KO                                                22
          440           HC        2
```

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

           441         KK  RT507
           442         KM  Smith Creek Route 507 to 509
           443         KO                                         22
           444         RK    2010  0 0268  0.0978               TRAP        2        1

           445         KK  SC509
           446         KM  Smith Creek 509 Runoff
           447         KO                                         22
           448         BA  0.1514
           449         PB       3
           450         LS       0       68
           451         UD   0.405

           452         KK  DP509
           453         KM  Combine RT507 and SC509
           454         KO                                         22
           455         HC       2

           456         KK  RT509
           457         KM  Smith Creek Route 509 to 511
           458         KO                                         22
           459         RK    2650  0.0160  0.0978               TRAP        2        1

           460         KK  SC511
           461         KM  Smith Creek 511 Runoff
           462         KO                                         22
           463         BA  0.0907
           464         PB       3
           465         LS       0       68
           466         UD   0.305

           467         KK  DP511
           468         KM  Combine RT509 and SC511
           469         KO                                         22
           470         HC       2

           471         KK  RT511
           472         KM  Smith Creek Route 511 to 603
           473         KO                                         22
           474         RK     670  0.0373  0 0978               TRAP        2        1

           475         KK  SC601
           476         KM  Smith Creek 601 Runoff
           477         KO                                         22
           478         BA  0.0633
           479         PB       3
           480         LS       0       69
           481         UD   0.210
```

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

482          KK  RT601
483          KM  Tributary Route 601 to 603
484          KO                                          22
485          RK    1170  0.0359   0.090          TRAP                 2

486          KK  SC603
487          KM  Smith Creek 603 Runoff
488          KO                                          22
489          BA  0.2514
490          PB       3
491          LS       0       68
492          UD   0.289

493          KK  DP603
494          KM  Combine RT601 and SC603
495          KO                                          22
496          HC       2

497          KK  DP604
498          KM  Combine RT511 and DP603
499          KO                                          22
500          HC       2

501          KK  RT604
502          KM  Smith Creek Route 604 to 609
503          KO                                          22
504          RK    1380  0.0236  0.0928          TRAP        2        1

505          KK  SC607
506          KM  Smith Creek 607 Runoff
507          KO                                          22
508          BA  0.0840
509          PB       3
510          LS       0       69
511          UD   0.270

512          KK  SC609
513          KM  Smith Creek 609 Runoff
514          KO                                          22
515          BA  0.1389
516          PB       3
517          LS       0       69
518          UD   0.326

519          KK  DP609
520          KM  Combine RT604 SC607 and SC609
521          KO                                          22
522          HC       3
```

HEC-1 INPUT

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

  523          KK  RES610
  524          KM  Smith Creek Reservoir Route 610
  525          KO                                                  22
  526          RS       1    STOR      -1
  527          SA     2.2     2.7     3.3     3.8     4.4     5.1     5.8
  528          SE    6822    6823    6824    6825    6826    6827    6828
  529          SQ       0      11     701    2361    4843   10331   16010

  530          KK  SC605A
  531          KM  Smith Creek 605A Runoff
  532          KO                                                  22
  533          BA  0.0505
  534          PB       3
  535          LS       0      68
  536          UD   0.252

  537          KK  RT605
  538          KM  SMITH CREEK ROUTE 605 TO DP610
  539          KO                                                  22
  540          RK    2000    0.03   0.013            TRAP        2       2

  541          KK  SC605B
  542          KM  SMITH CREEK 605B RUNOFF
  543          KO                                                  22
  544          BA  0.0778
  545          PB       3
  546          LS       0      75
  547          UD   0.252

  548          KK  RES605
  549          KM  SMITH CREEK RESEVOIR ROUTE 605
  550          KO                                                  22
  551          RS       1    STOR      -1
  552          SV       0   0.099   0.218    0.36   0.526   0.718   0.937   1.185   1.463
1.773
  553          SV   2.117   2.496   2.912
  554          SE    6818    6819    6820    6821    6822    6823    6824    6825    6826
6827
  555          SE    6828    6829    6830
  556          SQ       0    5.18   19.37   40.40   65.78   92.88  119.23  143.30  162.05
176.76
  557          SQ  190.33  202.99  214.91
  558          SE    6818    6819    6820    6821    6822    6823    6824    6825    6826
6827
  559          SE    6828    6829    6830

  560          KK  DP610
  561          KM  COMBINE RES 610 RES 605 AND RT605
  562          KO                                                  22
  563          HC       3

  564          KK  RT610
  565          KM  Smith Creek Route 610 to 611
  566          KO                                                  22
  567          RK    3200  0.0226   0.090            TRAP        2       1
```

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

     568       KK   SC611
     569       KM   Smith Creek 611 Runoff
     570       KO                                                 22
     571       BA   0.1095
     572       PB        3
     573       LS        0        69
     574       UD    0.149

     575       KK   DP611
     576       KM   Combine RT610 and SC611
     577       KO                                                 22
     578       HC        2

     579       KK   RES612
     580       KM   Smith Creek Reservoir Route 612
     581       KO                                                 22
     582       RS        1      STOR       -1
     583       SA     1.82      2.77      3.72       4.5      5.28      5.78
     584       SE     6762      6763      6764      6765      6766    6766.5
     585       SQ        0       150       510      1160      2120      2680

     586       KK   RT612
     587       KM   Smith Creek Route 612 to 617
     588       KO                                                 22
     589       RK     2250    0.0240    0.0866                  TRAP         2         1

     590       KK   SC613
     591       KM   Smith Creek 613 Runoff
     592       KO                                                 22
     593       BA   0.1233
     594       PB        3
     595       LS        0        75
     596       UD    0.270

     597       KK   RES613
     598       KM   EXISTING POND 613
     599       KO                                                 22
     600       RS        1      STOR       -1
     601       SA     0.12      0.96      1.09      1.21      1.34      1.47
     602       SE     6794      6796      6798      6800      6802      6804
     603       SQ     4.67      7.44      9.43     22.99     29.35     34.42
     604       SE     6794      6796      6798      6800      6802      6804

     605       KK   RT618
     606       KM   SMITH CREEK ROUTE RES613 TO DP  618
     607       KO                                                 22
     608       RK     1100     0.030     0.013                  TRAP         2         2

     609       KK   SC617A
     610       KM
     611       KO                                                 22
     612       BA   0.0149
     613       PB        3
     614       LS        0        73
```

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

615          UD   0.162

616          KK  RES617
617          KM  SMITH CREEK RESEVOIR ROUTE 617
618          KO                                          22
619          RS       1     STOR      -1
620          SV       0      0.5      1.0      1.5
621          SE    6740     6745     6748     6750
622          SQ       0       30       40       63
623          SE    6740     6745     6748     6750

624          KK  SC618
625          KM  SMITH CREEK 618 RUNOFF
626          KO                                          22
627          BA   0.007
628          PB       3
629          LS       0       73
630          UD    0.15

631          KK  RES618
632          KM  SMITH CREEK RESEVOIR 618
633          KO                                          22
634          RS       1     STOR      -1
635          SV       0      0.5      1.0
636          SE    6768     6770     6772
637          SQ       0        3        6
638          SE    6768     6770     6772

639          KK  DP618
640          KM  COMBINE RES 613 RES 618 AND RT618
641          KO                                          22
642          HC       3

643          KK  SC615B
644          KM  Smith Creek 615B Runoff
645          KO                                          22
646          BA  0.0313
647          PB       3
648          LS       0       78
649          UD   0.160

650          KK  RES614
651          KM  EXISTING POND 614
652          KO                                          22
653          RS       1     STOR      -1
654          SV       0    0.067     0.32     0.67     1.16      1.5
655          SE    6722     6724     6726     6728     6730     6732
656          SQ       0        4        6       10     13.3       20
657          SE    6722     6724     6726     6728     6730     6732
```

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

658          KK  SC615A
659          KM  SMITH CREEK 615A
660          KO                                          22
661          BA  0.0567
662          PB       3
663          LS       0       74
664          UD    0.18

665          KK  RES615
666          KM  SMITH CREEK RESEVOIR ROUTE 615
667          KO                                          22
668          RS       1     STOR       -1
669          SV       0        1        2      2.5
670          SE    6726     6728     6730     6732
671          SQ       0        5       10     16.7
672          SE    6724     6726     6728     6729

673          KK  SC617C
674          KM  SMITH CREEK 617C Runoff
675          KO                                          22
676          BA   .0482
677          PB       3
678          LS       0       65
679          UD     .17

680          KK  DP613
681          KM  COMBINE DP 618 RES 615 RES 614 SC 617C AND RT 612
682          KO                                          22
683          HC       5

684          KK  RT614
685          KM  SMITH CREEK ROUTE 613 TO 617
686          KO                                          22
687          RK    1200    0.022    0.030             TRAP        2         4

688          KK  SC617B
689          KM  Smith Creek 617B Runoff
690          KO                                          22
691          BA  0.0215
692          PB       3
693          LS       0       69
694          UD   0.228

695          KK  DP617
696          KM  Combine RT614 AND SC617B
697          KO                                          22
698          HC       2

699          KK  RT617
700          KM  Smith Creek Route 617 to 703
701          KO                                          22
702          RK    1470   0.0061    0.085             TRAP        2         1
```

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

  703         KK  SC701
  704         KM  Smith Creek 701 Runoff
  705         KO                                              22
  706         BA  0.0722
  707         PB       3
  708         LS       0       92
  709         UD   0.360

  710         KK  SC703
  711         KM  Smith Creek 703 Runoff
  712         KO                                              22
  713         BA  0.1305
  714         PB       3
  715         LS       0       77
  716         UD   0.092

  717         KK  DP703
  718         KM  Combine RT617 SC701 and SC703
  719         KO                                              22
  720         HC       3

  721         KK  RT703
  722         KM  Smith Creek Route 703 to 705
  723         KO                                              22
  724         RK    2780  0.0338  0.0786            TRAP       3       1

  725         KK  SC705
  726         KM  Smith Creek 705 Runoff
  727         KO                                              22
  728         BA  0.0869
  729         PB       3
  730         LS       0       69
  731         UD   0.329

  732         KK  DP705
  733         KM  Combine RT703 and SC705
  734         KO                                              22
  735         HC       2
  736         ZZ
```

HEC1 S/N: 1343001909 HMVersion: 6.33 Data File C:\WINNT\TEMP\-vbh135E.TMP

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

MAXIMUM STAGE	TIME OF OPERATION MAX STAGE	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
	HYDROGRAPH AT	SC205	25.	6.00	5.	2.	1.	0.10
	ROUTED TO	RT205	25.	6.00	5.	2	1.	0.10
	HYDROGRAPH AT	SC207	28.	6.00	6.	2	1.	0.12
	HYDROGRAPH AT	SC213	27.	6.00	6.	2.	1.	0.12
	3 COMBINED AT	DP213	79.	6.00	16.	6.	2.	0.34
	ROUTED TO	RT213	75.	6.00	16.	6.	2.	0.34
	HYDROGRAPH AT	SC209	19.	6.00	4.	2.	1.	0.14
	HYDROGRAPH AT	SC211	8.	6.00	2.	1.	0.	0.08
	HYDROGRAPH AT	SC215	15.	6.00	3.	1.	0.	0.06
	4 COMBINED AT	DP215	118.	6.00	25.	9.	3.	0.62
	ROUTED TO	RT215	107.	6.00	25.	9.	3.	0.62
	HYDROGRAPH AT	SC219	15.	6.00	4.	1	0.	0.13
	2 COMBINED AT	DP219	122.	6.00	29.	10.	4.	0.75
	HYDROGRAPH AT	SC201	17.	6.00	4.	1.	0.	0.12
	ROUTED TO	RT201	15.	6.00	4	1.	0.	0.12
	HYDROGRAPH AT	SC203	13.	6.00	3.	1	0.	0.11
	2 COMBINED AT	DP203	28.	6.00	7	3.	1.	0.23
	ROUTED TO	RT203	25.	6.00	7	3	1.	0.23
	HYDROGRAPH AT	SC217	7.	5.75	2	1.	0	0.05
	2 COMBINED AT	DP217	32.	6.00	8.	3.	1.	0.29
	2 COMBINED AT	DP220	154.	6.00	37	14.	5	1.03
	ROUTED TO	RT220	148.	6.00	37	14	5	1.03
	HYDROGRAPH AT	SC301	31.	6.00	6	2.	1.	0.12

HYDROGRAPH AT	SC303	33.	6.00	6.	2.	1	0.13
2 COMBINED AT	DP303	65.	6.00	12.	4	1	0.25
ROUTED TO	RT303	63.	6.00	12.	4.	1.	0.25
HYDROGRAPH AT	SC305	16.	6.00	3.	1.	0	0.06
2 COMBINED AT	DP305	79	6.00	15.	5	2.	0.31
ROUTED TO	RT305	74.	6.00	15.	5.	2.	0.31
HYDROGRAPH AT	SC307	21.	6.25	5.	2.	1.	0.11
HYDROGRAPH AT	SC309	29.	6.00	6.	2	1	0.12
HYDROGRAPH AT	SC311	27.	6.00	5.	2	1.	0.11
4 COMBINED AT	DP311	150.	6.00	31.	11.	4.	0.65
ROUTED TO	RT311	131.	6.00	31.	11.	4.	0.65
HYDROGRAPH AT	SC313	33.	6.00	7.	2.	1.	0.15
HYDROGRAPH AT	SC315	23.	6.00	4.	1.	0.	0.09
3 COMBINED AT	DP315	187.	6.00	42.	15.	5.	0.89
2 COMBINED AT	DP316	335.	6.00	80.	29.	10.	1.92
ROUTED TO	RT316	312.	6.25	79.	29.	10.	1.92
HYDROGRAPH AT	SC401	35.	6.00	7.	3.	1.	0.15
2 COMBINED AT	DP401	340.	6.25	86.	31.	10	2.08
ROUTED TO	RT401	338.	6.25	86.	31.	10.	2.08
HYDROGRAPH AT	SC403	25.	6.00	5.	2.	1.	0.10
HYDROGRAPH AT	SC405	18.	6.00	3	1.	0	0.07
3 COMBINED AT	DP405	365.	6.25	94.	34	11	2.25
ROUTED TO	RT405	359.	6.25	94.	34.	11.	2.25
HYDROGRAPH AT	SC101	14.	6.00	3.	1.	0.	0.09
ROUTED TO	RT101	12.	6.00	3.	1.	0	0.09
HYDROGRAPH AT	SC103	30.	6.00	6.	2.	1	0.17
HYDROGRAPH AT							

		SC105A	20	6.00	4.	1	0.	0.07
	3 COMBINED AT	DP103	62.	6.00	13.	5.	2.	0.33
	ROUTED TO	RES106	49	6.25	13.	5	2.	0.33
7321.97	6.25							
	ROUTED TO	RT103	48.	6.25	13.	5.	2.	0.33
	HYDROGRAPH AT	SC105B	18.	6.00	4.	1.	0.	0.07
	2 COMBINED AT	DP105	61.	6.25	17.	6.	2.	0.40
	ROUTED TO	RT105A	59.	6.25	17.	6.	2.	0.40
	HYDROGRAPH AT	SC107A	39.	6.00	7.	2.	1.	0.14
	ROUTED TO	RES108	31.	6.00	7.	2	1	0.14
7342.79	6.00							
	2 COMBINED AT	DP107A	90.	6.25	24.	8.	3.	0.53
	ROUTED TO	RT105B	89.	6.25	24.	9.	3.	0.53
	HYDROGRAPH AT	SC107B	11.	6.00	2.	1	0.	0.04
	2 COMBINED AT	DP107B	94.	6.25	26.	9.	3.	0.57
	ROUTED TO	RT107	92.	6.25	26.	9.	3.	0.57
	HYDROGRAPH AT	SC109	44.	6.00	9.	3.	1.	0.16
	2 COMBINED AT	DP109	123.	6.25	34.	12.	4.	0.74
	ROUTED TO	RT109	119.	6.25	34.	12	4.	0.74
	HYDROGRAPH AT	SC111	47	6.00	10.	3.	1.	0.19
	2 COMBINED AT	DP111	157.	6.25	43.	16.	5.	0.93
	HYDROGRAPH AT	SC407	35.	6.00	8.	3	1.	0.17
	3 COMBINED AT	DP407	548.	6.25	146.	52.	18.	3.34
	ROUTED TO	RT407	532.	6.25	146.	53.	18.	3.34
	HYDROGRAPH AT	SC501	31.	6.00	6.	2.	1.	0.12
	HYDROGRAPH AT	SC503	30.	6.00	6.	2.	1.	0.12
	HYDROGRAPH AT	SC505	44.	6.00	9.	3	1.	0.19
	3 COMBINED AT	DP505	105	6.00	21.	7.	2.	0.43

2 COMBINED AT	DP506	608.	6.25	167.	60.	20.	3.77
ROUTED TO	RT506	595.	6.25	167	60.	20	3.77
HYDROGRAPH AT	SC507	24.	6.00	5.	2.	1.	0.10
2 COMBINED AT	DP507	607.	6.25	171.	62.	21.	3.87
ROUTED TO	RT507	583.	6.25	171	62	21.	3.87
HYDROGRAPH AT	SC509	33.	6.00	7.	3.	1.	0.15
2 COMBINED AT	DP509	612.	6.25	178.	64.	22.	4.02
ROUTED TO	RT509	581.	6.50	178.	64.	22.	4.02
HYDROGRAPH AT	SC511	23.	6.00	4.	2.	1.	0.09
2 COMBINED AT	DP511	590.	6.50	182.	66.	22.	4.11
ROUTED TO	RT511	589.	6.50	182.	66.	22.	4.11
HYDROGRAPH AT	SC601	19.	5.75	3.	1.	0.	0.06
ROUTED TO	RT601	18.	6.00	3.	1.	0.	0.06
HYDROGRAPH AT	SC603	66.	6.00	12.	4.	1.	0.25
2 COMBINED AT	DP603	83.	6.00	15.	5.	2.	0.31
2 COMBINED AT	DP604	619.	6.50	196.	71.	24.	4.43
ROUTED TO	RT604	618.	6.50	197.	72.	24.	4.43
HYDROGRAPH AT	SC607	24.	6.00	4.	2.	1.	0.08
HYDROGRAPH AT	SC609	39.	6.00	7.	3.	1.	0.14
3 COMBINED AT	DP609	642.	6.50	208.	76.	25.	4.65
ROUTED TO	RES610	641.	6.50	205.	75.	25.	4.65
6823.91	6.50						
HYDROGRAPH AT	SC605A	13.	6.00	2.	1.	0.	0.05
ROUTED TO	RT605	13.	6.00	2.	1.	0.	0.05
HYDROGRAPH AT	SC605B	35.	6.00	6.	2	1.	0.08
ROUTED TO	RES605	37.	6.00	6.	2.	1.	0.08
6820.83	6.00						

	3 COMBINED AT						
		DP610	658.	6.50	213.	78	26.	4.78
	ROUTED TO						
		RT610	655.	6.50	212	78.	26.	4.78
	HYDROGRAPH AT						
		SC611	46.	5.75	6.	2.	1.	0.11
	2 COMBINED AT						
		DP611	662.	6.50	217.	80.	27.	4.89
	ROUTED TO						
		RES612	653.	6.50	216.	80.	27.	4.89
6764.22	6.50						
	ROUTED TO						
		RT612	638.	6.75	216.	80.	27.	4.89
	HYDROGRAPH AT						
		SC613	55.	6.00	10.	3.	1.	0.12
	ROUTED TO						
		RES613	9.	7.00	8.	6.	5.	0.12
6797.48	7.00						
	ROUTED TO						
		RT618	9.	7.00	8.	6.	5.	0.12
	HYDROGRAPH AT						
		SC617A	8.	5.75	1.	0.	0.	0.01
	ROUTED TO						
		RES617	6.	6.00	1.	0.	0.	0.01
6740.95	6.00						
	HYDROGRAPH AT						
		SC618	4.	5.75	0.	0.	0.	0.01
	ROUTED TO						
		RES618	1.	6.50	0.	0.	0.	0.01
6768.48	6.50						
	3 COMBINED AT						
		DP618	14.	6.00	9.	6.	5.	0.15
	HYDROGRAPH AT						
		SC615B	24.	5.75	3.	1.	0.	0.03
	ROUTED TO						
		RES614	8.	6.25	3	1.	0.	0.03
6727.18	6.25						
	HYDROGRAPH AT						
		SC615A	31.	5.75	4.	1	0.	0.06
	ROUTED TO						
		RES615	9.	6.25	4	1.	0.	0.06
6727.50	6.25						
	HYDROGRAPH AT						
		SC617C	12.	5.75	2	1.	0.	0.05
	5 COMBINED AT						
		DP613	665.	6.75	233	89.	33.	5.17
	ROUTED TO						
		RT614	664.	6.75	233	89.	33.	5.17
	HYDROGRAPH AT						
		SC617B	6.	5.75	1	0.	0.	0.02
	2 COMBINED AT						
		DP617	665.	6.75	234.	90.	33.	5.19

ROUTED TO	RT617	658.	6. 75	234.	90.	33.	5. 19
HYDROGRAPH AT	SC701	83	6. 00	14.	4	1.	0. 07
HYDROGRAPH AT	SC703	108.	5. 75	12.	4.	1.	0. 13
3 COMBINED AT	DP703	684.	6. 75	256.	98.	36.	5. 39
ROUTED TO	RT703	672.	6. 75	255.	98.	36.	5. 39
HYDROGRAPH AT	SC705	24	6. 00	5.	2.	1.	0. 09
2 COMBINED AT	DP705	679.	6 75	260.	99.	36.	5. 48

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

	ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	INTERPOLATED TO COMPUTATION INTERVAL DT	PEAK	TIME TO PEAK	VOLUME
			(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
	RT205	MANE	1.53	25.01	361.82	0.63	15.00	24.55	360.00	0.63

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3242E+01 EXCESS=0.0000E+00 OUTFLOW=0.3242E+01 BASIN STORAGE=
0.6137E-09 PERCENT ERROR= 0.0

	RT213	MANE	0.89	78.80	362.18	0.61	15.00	75.25	360.00	0.61

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1115E+02 EXCESS=0.0000E+00 OUTFLOW=0.1115E+02 BASIN STORAGE=
0.2680E-08 PERCENT ERROR= 0.0

	RT215	MANE	1.76	116.95	363.39	0.55	15.00	106.55	360.00	0.55

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1798E+02 EXCESS=0.0000E+00 OUTFLOW=0.1797E+02 BASIN STORAGE=
0.1818E-07 PERCENT ERROR= 0.0

	RT201	MANE	1.57	17.03	362.72	0.43	15.00	15.44	360.00	0.43

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2807E+01 EXCESS=0.0000E+00 OUTFLOW=0.2807E+01 BASIN STORAGE=
0.9399E-09 PERCENT ERROR= 0.0

	RT203	MANE	2.03	27.87	363.92	0.40	15.00	25.46	360.00	0.40

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4988E+01 EXCESS=0.0000E+00 OUTFLOW=0.4988E+01 BASIN STORAGE=
0.7796E-08 PERCENT ERROR= 0.0

	RT220	MANE	0.62	154.03	361.35	0.49	15.00	148.25	360.00	0.49

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2698E+02 EXCESS=0.0000E+00 OUTFLOW=0.2699E+02 BASIN STORAGE=
0.1957E-07 PERCENT ERROR= 0.0

	RT303	MANE	0.86	64.04	361.56	0.63	15.00	62.61	360.00	0.63

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8341E+01 EXCESS=0.0000E+00 OUTFLOW=0.8342E+01 BASIN STORAGE=
0.1536E-09 PERCENT ERROR= 0.0

	RT305	MANE	1.58	77.52	362.28	0.63	15.00	73.76	360.00	0.63

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1047E+02 EXCESS=0.0000E+00 OUTFLOW=0.1048E+02 BASIN STORAGE=
0.3675E-08 PERCENT ERROR= 0.0

	RT311	MANE	2.48	148.41	364.63	0.63	15.00	130.68	360.00	0.63

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 2184E+02 EXCESS=0.0000E+00 OUTFLOW=0.2184E+02 BASIN STORAGE=
0.5873E-07 PERCENT ERROR= 0 0

RT316 MANE 2 35 330.44 364.70 0.55 15 00 311.91 375.00
0.55

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 5663E+02 EXCESS=0 0000E+00 OUTFLOW=0.5661E+02 BASIN STORAGE=
0.4681E-06 PERCENT ERROR= 0 0

RT401 MANE 0.60 339.37 375.64 0 56 15.00 338.30 375.00
0.56

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6175E+02 EXCESS=0.0000E+00 OUTFLOW=0.6175E+02 BASIN STORAGE=
0.1736E-06 PERCENT ERROR= 0.0

RT405 MANE 1 76 362.46 377.38 0.56 15.00 359.00 375.00
0.57

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6749E+02 EXCESS=0.0000E+00 OUTFLOW=0.6748E+02 BASIN STORAGE=
0.7610E-06 PERCENT ERROR= 0.0

RT101 MANE 2.15 14.22 363.91 0.47 15.00 12.19 360.00
0.47

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2300E+01 EXCESS=0.0000E+00 OUTFLOW=0.2300E+01 BASIN STORAGE=
0.1952E-08 PERCENT ERROR= 0.0

RT103 MANE 0.88 49.27 376.77 0.54 15.00 47.74 375.00
0.54

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.9452E+01 EXCESS=0.0000E+00 OUTFLOW=0.9453E+01 BASIN STORAGE=
0.4212E-08 PERCENT ERROR= 0.0

RT105A MANE 1.07 60.30 377.45 0.56 15.00 59.46 375.00
0.56

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1192E+02 EXCESS=0.0000E+00 OUTFLOW=0.1192E+02 BASIN STORAGE=
0.8741E-08 PERCENT ERROR= 0 0

RT105B MANE 0.95 89.62 376.94 0.59 15.00 88.57 375.00
0.59

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1683E+02 EXCESS=0.0000E+00 OUTFLOW=0.1683E+02 BASIN STORAGE=
0.1456E-07 PERCENT ERROR= 0.0

RT107 MANE 1.86 93.99 379.03 0.60 15.00 91.81 375.00
0.60

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1823E+02 EXCESS=0.0000E+00 OUTFLOW=0.1823E+02 BASIN STORAGE=
0.7563E-07 PERCENT ERROR= 0.0

RT109 MANE 4 24 121.75 384.26 0 61 15.00 118.50 375.00
0.61

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 2413E+02 EXCESS=0.0000E+00 OUTFLOW=0.2411E+02 BASIN STORAGE=
0.6139E-06 PERCENT ERROR= 0 1

RT407 MANE 1 20 544.27 376 83 0 58 15.00 532.48 375.00
0.59

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1041E+03 EXCESS=0.0000E+00 OUTFLOW=0.1041E+03 BASIN STORAGE=
0.1346E-05 PERCENT ERROR= 0.0

RT506 MANE 0.98 606.15 376.94 0.59 15.00 594.90 375.00
0.59

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1189E+03 EXCESS=0.0000E+00 OUTFLOW=0.1189E+03 BASIN STORAGE=
0.1709E-05 PERCENT ERROR= 0.0

RT507 MANE 1.40 606.75 377.78 0.59 15.00 583.13 375.00
0.59

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1224E+03 EXCESS=0.0000E+00 OUTFLOW=0.1224E+03 BASIN STORAGE=
0.3754E-05 PERCENT ERROR= 0.0

RT509 MANE 2.31 606.95 381.09 0.60 15.00 581.06 390.00
0.60

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1278E+03 EXCESS=0.0000E+00 OUTFLOW=0.1277E+03 BASIN STORAGE=
0.8741E-05 PERCENT ERROR= 0.0

RT511 MANE 0.43 589.67 390.44 0.60 15.00 589.30 390.00
0.60

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1308E+03 EXCESS=0.0000E+00 OUTFLOW=0.1308E+03 BASIN STORAGE=
0.2271E-05 PERCENT ERROR= 0.0

RT601 MANE 1.76 19.12 350.04 0.67 15.00 17.53 360.00
0.67

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2261E+01 EXCESS=0.0000E+00 OUTFLOW=0.2261E+01 BASIN STORAGE=
0.1563E-08 PERCENT ERROR= 0.0

RT604 MANE 1.09 618.36 390.32 0.60 15.00 618.25 390.00
0.60

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1416E+03 EXCESS=0.0000E+00 OUTFLOW=0.1416E+03 BASIN STORAGE=
0.6112E-05 PERCENT ERROR= 0.0

RT605 MANE 1.01 13.06 361.20 0.63 15.00 12.94 360.00
0.63

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1688E+01 EXCESS=0.0000E+00 OUTFLOW=0.1688E+01 BASIN STORAGE=
0.1351E-09 PERCENT ERROR= 0.0

RT610 MANE 2.27 656.53 392.52 0.61 15.00 655.14 390.00
0.61

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1555E+03 EXCESS=0.0000E+00 OUTFLOW=0.1555E+03 BASIN STORAGE=
0.2514E-04 PERCENT ERROR= 0.0

RT612 MANE 1.44 652.96 393.23 0.61 15.00 637.61 405.00
0.61

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1597E+03 EXCESS=0.0000E+00 OUTFLOW=0.1597E+03 BASIN STORAGE=
0.2262E-04 PERCENT ERROR= 0.0

RT618 MANE 0.68 8.91 420.89 4.49 15.00 8.91 420.00
4.48

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 2951E+02 EXCESS=0.0000E+00 OUTFLOW=0.2950E+02 BASIN STORAGE=
0.9394E-02 PERCENT ERROR= 0.0

RT614 MANE 0.58 664.60 405.67 0.71 15.00 664.01 405.00
0.71

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1963E+03 EXCESS=0.0000E+00 OUTFLOW=0.1963E+03 BASIN STORAGE=
0.7247E-02 PERCENT ERROR= 0.0

RT617 MANE 1.67 662.61 407.26 0.71 15.00 658.14 405.00
0.71

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1972E+03 EXCESS=0.0000E+00 OUTFLOW=0.1971E+03 BASIN STORAGE=
0.6045E-01 PERCENT ERROR= 0.0

RT703 MANE 1.53 681.02 408.60 0.74 15.00 672.41 405.00
0.74

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2131E+03 EXCESS=0.0000E+00 OUTFLOW=0.2130E+03 BASIN STORAGE=
0.7788E-01 PERCENT ERROR= 0.0

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

50 year future-Alternate 2
HEC1 S/N: 1343001909 HMVersion 6.33 Data File: C:\WINNT\TEMP\~vbh0944.TMP

```
*****************************************
*****************************************
*                                       *
*
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
U.S.  ARMY CORPS OF ENGINEERS      *
*                MAY   1991             *
HYDROLOGIC ENGINEERING CENTER     *
*             VERSION 4.0 1E            *
609 SECOND STREET           *
*                                       *
DAVIS, CALIFORNIA 95616        *
*  RUN DATE  06/19/2001  TIME  16:13:35 *
(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
```

```
:::::::::::::::::::::::::::::::::::::::::::::
:::::::::::::::::::::::::::::::::::::::::::::
:::                                       :::
:::   Full Microcomputer Implementation   :::
:::                   by                  :::
:::         Haestad Methods, Inc.         :::
:::                                       :::
:::::::::::::::::::::::::::::::::::::::::::::
:::::::::::::::::::::::::::::::::::::::::::::
```

37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.

THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81 THIS IS THE FORTRAN77 VERSION

NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,

DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION

KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

HEC-1 INPUT

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

    1     ID  Type IIA storm
    2     IT      15       0       0     288
    3     IO       5

    4     KK  SC205
    5     KM  Smith Creek 205 Runoff
    6     KO                                      22
    7     BA  0.0970
    8     PB       4
    9     IN      15
   10     PC  0.0005  0.0015  0.0030  0.0045  0.0060  0.0080  0.0100  0.0120  0.0143
0.0165
   11     PC  0.0188  0.0210  0.0233  0.0255  0.0278  0.0320  0.0390  0.0460  0.0530
0.0600
   12     PC  0.0750  0.1000  0.4000  0.7000  0.7250  0.7500  0.7650  0.7800  0.7900
0.8000
   13     PC  0.8100  0.8200  0.8250  0.8300  0.8350  0.8400  0.8450  0.8500  0.8550
0.8600
   14     PC  0.8638  0.8675  0.8713  0.8750  0.8788  0.8825  0.8863  0.8900  0.8938
0.8975
   15     PC  0.9013  0.9050  0.9083  0.9115  0.9148  0.9180  0.9210  0.9240  0.9270
0.9300
   16     PC  0.9325  0.9350  0.9375  0.9400  0.9425  0.9450  0.9475  0.9500  0.9525
0.9550
   17     PC  0.9575  0.9600  0.9625  0.9650  0.9675  0.9700  0.9725  0.9750  0.9775
0.9800
   18     PC  0.9813  0.9825  0.9838  0.9850  0.9863  0.9875  0.9888  0.9900  0.9913
0.9925
   19     PC  0.9938  0.9950  0.9963  0.9975  0.9988  1.0000
   20     LS       0      68
   21     UD  0.257

   22     KK  RT205
   23     KM  Smith Creek Route 205 to 213
   24     KO                                      22
   25     RK    1530  0.0431   0.055            TRAP                2

   26     KK  SC207
   27     KM  Smith Creek 207 Runoff
   28     KO                                      22
   29     BA   0.12
   30     PB       4
   31     LS       0      68
   32     UD  0.367

   33     KK  SC213
   34     KM  Smith Creek 213 Runoff
   35     KO                                      22
   36     BA  0.1243
   37     PB       4
   38     LS       0      67
   39     UD  0.361

   40     KK  DP213
   41     KM  Combine RT205 SC207 and SC213
   42     KO                                      22
   43     HC       3

   44     KK  RT213
   45     KM  Smith Creek Route 213 to 215
   46     KO                                      22
   47     RK    1360  0.0493   0.055            TRAP                2
```

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

  48          KK  SC209
  49          KM  Smith Creek 209 Runoff
  50          KO                                          22
  51          BA  0.1351
  52          PB       4
  53          LS       0       63
  54          UD   0.336

  55          KK  SC211
  56          KM  Smith Creek 211 Runoff
  57          KO                                          22
  58          BA  0.0799
  59          PB       4
  60          LS       0       62
  61          UD   0.418

  62          KK  SC215
  63          KM  Smith Creek 215 Runoff
  64          KO                                          22
  65          BA  0.0589
  66          PB       4
  67          LS       0       68
  68          UD   0.227

  69          KK  DP215
  70          KM  Combine RT213 SC209 SC211 and SC215
  71          KO                                          22
  72          HC       4

  73          KK  RT215
  74          KM  Smith Creek Route 215 to 219
  75          KO                                          22
  76          RK    2110  0.0446  0.0745             TRAP                2

  77          KK  SC219
  78          KM  Smith Creek 219 Runoff
  79          KO                                          22
  80          BA  0.1298
  81          PB       4
  82          LS       0       62
  83          UD   0.362

  84          KK  DP219
  85          KM  Combine RT215 and SC219
  86          KO                                          22
  87          HC       2

  88          KK  SC201
  89          KM  Smith Creek 201 Runoff
  90          KO                                          22
  91          BA  0.1216
  92          PB       4
  93          LS       0       63
  94          UD   0.340
```

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

      95        KK   RT201
      96        KM   Tributary Route 201 to 203
      97        KO                                        22
      98        RK     1650  0.0509   0.055             TRAP                  2

      99        KK   SC203
     100        KM   Smith Creek 203 Runoff
     101        KO                                        22
     102        BA   0.1113
     103        PB       4
     104        LS       0       61
     105        UD    0.223

     106        KK   DP203
     107        KM   Combine RT201 and SC203
     108        KO                                        22
     109        HC       2

     110        KK   RT203
     111        KM   Tributary Route 203 to 217
     112        KO                                        22
     113        RK     2010  0.0557  0.0698             TRAP                  2

     114        KK   SC217
     115        KM   Smith Creek 217 Runoff
     116        KO                                        22
     117        BA   0.0547
     118        PB       4
     119        LS       0       62
     120        UD    0.211

     121        KK   DP217
     122        KM   Combine RT203 and SC217
     123        KO                                        22
     124        HC       2

     125        KK   DP220
     126        KM   Combine DP217 and DP219
     127        KO                                        22
     128        HC       2

     129        KK   RT220
     130        KM   Smith Creek Route 220 to 316
     131        KO                                        22
     132        RK      646  0.0313  0.0829             TRAP         1        2

     133        KK   SC301
     134        KM   Smith Creek 301 Runoff
     135        KO                                        22
     136        BA   0.1196
     137        PB       4
     138        LS       0       68
     139        UD    0.279
```

HEC-1 INPUT

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

  140          KK  SC303
  141          KM  Smith Creek 303 Runoff
  142          KO                                          22
  143          BA  0.1300
  144          PB       4
  145          LS       0       68
  146          UD   0.314

  147          KK  DP303
  148          KM  Combine SC301 and SC303
  149          KO                                          22
  150          HC       2

  151          KK  RT303
  152          KM  Tributary Route 303 to 305
  153          KO                                          22
  154          RK     940  0.0372   0.055            TRAP              2

  155          KK  SC305
  156          KM  Smith Creek 305 Runoff
  157          KO                                          22
  158          BA  0.0629
  159          PB       4
  160          LS       0       68
  161          UD   0.261

  162          KK  DP305
  163          KM  Combine RT303 and SC305
  164          KO                                          22
  165          HC       2

  166          KK  RT305
  167          KM  Tributary Route 305 to 311
  168          KO                                          22
  169          RK    2150  0.0414   0.055            TRAP              2

  170          KK  SC307
  171          KM  Smith Creek 307 Runoff
  172          KO                                          22
  173          BA  0.1081
  174          PB       4
  175          LS       0       68
  176          UD   0.472

  177          KK  SC309
  178          KM  Smith Creek 309 Runoff
  179          KO                                          22
  180          BA  0.1240
  181          PB       4
  182          LS       0       68
  183          UD   0.366
```

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

184         KK  SC311
185         KM  Smith Creek 311 Runoff
186         KO                                          22
187         BA  0.1064
188         PB       4
189         LS       0       68
190         UD   0.234

191         KK  DP311
192         KM  Combine RT305 SC307 SC309 and SC311
193         KO                                          22
194         HC       4

195         KK  RT311
196         KM  Tributary Route 311 to 315
197         KO                                          22
198         RK    2860  0.0448  0.0888            TRAP                2

199         KK  SC313
200         KM  Smith Creek 313 Runoff
201         KO                                          22
202         BA  0.1520
203         PB       4
204         LS       0       67
205         UD   0.352

206         KK  SC315
207         KM  Smith Creek 315 Runoff
208         KO                                          22
209         BA  0.0886
210         PB       4
211         LS       0       68
212         UD   0.297

213         KK  DP315
214         KM  Combine RT311 SC313 and SC315
215         KO                                          22
216         HC       3

217         KK  DP316
218         KM  Combine RT220 and DP315
219         KO                                          22
220         HC       2

221         KK  RT316
222         KM  Smith Creek Route 316 to 401
223         KO                                          22
224         RK    2575  0.0361   0.120            TRAP        1       2
```

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

        225        KK  SC401
        226        KM  Smith Creek 401 Runoff
        227        KO                                           22
        228        BA  0.1524
        229        PB       4
        230        LS       0       68
        231        UD   0.377

        232        KK  DP401
        233        KM  Combine RT316 and SC401
        234        KO                                           22
        235        HC       2

        236        KK  RT401
        237        KM  Smith Creek Route 401 to 405
        238        KO                                           22
        239        RK     660   0.0548   0.120                TRAP        1        2

        240        KK  SC403
        241        KM  Smith Creek 403 Runoff
        242        KO                                           22
        243        BA  0.1007
        244        PB       4
        245        LS       0       68
        246        UD   0.332

        247        KK  SC405
        248        KM  Smith Creek 405 Runoff
        249        KO                                           22
        250        BA  0.0677
        251        PB       4
        252        LS       0       68
        253        UD   0.263

        254        KK  DP405
        255        KM  Combine RT401 SC403 and SC405
        256        KO                                           22
        257        HC       3

        258        KK  RT405
        259        KM  Smith Creek Route 405 to 407
        260        KO                                           22
        261        RK    1500   0.0210   0.120                TRAP        1        2

        262        KK  SC101
        263        KM  Smith Creek 101 Runoff
        264        KO                                           22
        265        BA  0.0920
        266        PB       4
        267        LS       0       64
        268        UD   0.353
```

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

         269          KK  RT101
         270          KM  Tributary Route 101 to 103
         271          KO                                      22
         272          RK    2050  0.0424   0.055            TRAP              2

         273          KK  SC103
         274          KM  Smith Creek 103 Runoff
         275          KO                                      22
         276          BA  0.1670
         277          PB       4
         278          LS       0       65
         279          UD   0.348

         280          KK  SC105A
         281          KM  Smith Creek 105A Runoff
         282          KO                                      22
         283          BA  0.0693
         284          PB       4
         285          LS       0       70
         286          UD   0.345

         287          KK  DP103
         288          KM  Combine RT101 SC105A and SC103
         289          KO                                      22
         290          HC       3

         291          KK  RES106
         292          KM  Exisitng Detention Pond 106
         293          KO                                      22
         294          RS       1    STOR      -1
         295          SA    0.43    0.54    0.65    0.80    0.94    1.00
         296          SE    7320    7322    7324    7326    7328    7330
         297          SQ       0      50      80     100     190     250
         298          SE    7320    7322    7324    7326    7328    7330

         299          KK  RT103
         300          KM  Tributary Route RES103 to 105
         301          KO                                      22
         302          RK    1150  0.0478   0.055            TRAP              2

         303          KK  SC105B
         304          KM  Smith Creek 105B Runoff
         305          KO                                      22
         306          BA  0.0686
         307          PB       4
         308          LS       0       69
         309          UD   0.345

         310          KK  DP105
         311          KM  Combine RT103 and SC105B
         312          KO                                      22
         313          HC       2
```

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

  314          KK  RT105A
  315          KM  Tributary Route 105 to 107A
  316          KO                                                      22
  317          RK    1000   0 0395   0 0727                 TRAP                 2

  318          KK  SC107A
  319          KM  Smith Creek 107A Runoff
  320          KO                                                      22
  321          BA  0 1367
  322          PB        4
  323          LS        0        69
  324          UD   0 273

  325          KK  RES108
  326          KM  EXISTING DETENTION POND 108
  327          KO                                                      22
  328          RS        1      STOR       -1
  329          SV      0 0      0 20      0 68      1 35      2 32
  330          SE     7340      7342      7344      7346      7348
  331          SQ        0        20        48       220       822
  332          SE     7340      7342      7344      7346      7348

  333          KK  DP107A
  334          KM  Combine RT105A and RES108
  335          KO                                                      22
  336          HC        2

  337          KK  RT105B
  338          KM  TRIBUTARY ROUTE 107A TO 107B
  339          KO                                                      22
  340          RK    1000   0 0395   0 0727                 TRAP                 2

  341          KK  SC107B
  342          KM  SMITH CREEK 107B RUNOFF
  343          KO                                                      22
  344          BA  0 0408
  345          PB        4
  346          LS        0        68
  347          UD   0 273

  348          KK  DP107B
  349          KM  COMBINE RT105B AND SC107B
  350          KO                                                      22
  351          HC        2

  352          KK  RT107
  353          KM  Tributary Route 107B to 109
  354          KO                                                      22
  355          RK    1420   0 0359   0 120                  TRAP                 2
```

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

  356          KK  SC109
  357          KM  Smith Creek 109 Runoff
  358          KO                                          22
  359          BA  0.1637
  360          PB       4
  361          LS       0       69
  362          UD   0.350

  363          KK  DP109
  364          KM  Combine RT107 and SC109
  365          KO                                          22
  366          HC       2

  367          KK  RT109
  368          KM  Tributary Route 109 to 111
  369          KO                                          22
  370          RK    3840  0.0453   0.120            TRAP                2

  371          KK  SC111
  372          KM  Smith Creek 111 Runoff
  373          KO                                          22
  374          BA  0.1894
  375          PB       4
  376          LS       0       69
  377          UD   0.382

  378          KK  DP111
  379          KM  Combine RT109 and SC111
  380          KO                                          22
  381          HC       2

  382          KK  SC407
  383          KM  Smith Creek 407 Runoff
  384          KO                                          22
  385          BA  0.1685
  386          PB       4
  387          LS       0       68
  388          UD   0.423

  389          KK  DP407
  390          KM  Combine DP111 RT405 and SC407
  391          KO                                          22
  392          HC       3

  393          KK  RT407
  394          KM  SMITH CREEK ROUTE 407 TO 506
  395          KO                                          22
  396          RK    1105  0.0210   0.120            TRAP        1       2
```

HEC-1 INPUT

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

397           KK  SC501
398           KM  Smith Creek 501 Runoff
399           KO                                          22
400           BA  0.1219
401           PB       4
402           LS       0       68
403           UD   0.312

404           KK  SC503
405           KM  Smith Creek 503 Runoff
406           KO                                          22
407           BA  0.1193
408           PB       4
409           LS       0       68
410           UD   0.334

411           KK  SC505
412           KM  Smith Creek 505 Runoff
413           KO                                          22
414           BA  0.1923
415           PB       4
416           LS       0       68
417           UD   0.379

418           KK  DP505
419           KM  Combine SC501 SC503 and SC505
420           KO                                          22
421           HC       3

422           KK  DP506
423           KM  Combine RT407 and DP505
424           KO                                          22
425           HC       2

426           KK  RT506
427           KM  Smith Creek Route 506 to 507
428           KO                                          22
429           RK     750  0.0067  0.0978            TRAP       2       1

430           KK  SC507
431           KM  Smith Creek 507 Runoff
432           KO                                          22
433           BA  0.0958
434           PB       4
435           LS       0       68
436           UD   0.229

437           KK  DP507
438           KM  Combine RT506 and SC507
439           KO                                          22
440           HC       2
```

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

      441        KK  RT507
      442        KM  Smith Creek Route 507 to 509
      443        KO                                          22
      444        RK    2010  0.0268  0.0978                TRAP        2         1

      445        KK  SC509
      446        KM  Smith Creek 509 Runoff
      447        KO                                          22
      448        BA  0.1514
      449        PB       4
      450        LS       0       68
      451        UD   0.405

      452        KK  DP509
      453        KM  Combine RT507 and SC509
      454        KO                                          22
      455        HC       2

      456        KK  RT509
      457        KM  Smith Creek Route 509 to 511
      458        KO                                          22
      459        RK    2650  0.0160  0.0978                TRAP        2         1

      460        KK  SC511
      461        KM  Smith Creek 511 Runoff
      462        KO                                          22
      463        BA  0.0907
      464        PB       4
      465        LS       0       68
      466        UD   0.305

      467        KK  DP511
      468        KM  Combine RT509 and SC511
      469        KO                                          22
      470        HC       2

      471        KK  RT511
      472        KM  Smith Creek Route 511 to 603
      473        KO                                          22
      474        RK     670  0.0373  0.0978                TRAP        2         1

      475        KK  SC601
      476        KM  Smith Creek 601 Runoff
      477        KO                                          22
      478        BA  0.0633
      479        PB       4
      480        LS       0       69
      481        UD   0.210
```

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

  482          KK  RT601
  483          KM  Tributary Route 601 to 603
  484          KO                                          22
  485          RK    1170  0.0359   0.090           TRAP                2

  486          KK  SC603
  487          KM  Smith Creek 603 Runoff
  488          KO                                          22
  489          BA  0.2514
  490          PB       4
  491          LS       0       68
  492          UD   0.289

  493          KK  DP603
  494          KM  Combine RT601 and SC603
  495          KO                                          22
  496          HC       2

  497          KK  DP604
  498          KM  Combine RT511 and DP603
  499          KO                                          22
  500          HC       2

  501          KK  RT604
  502          KM  Smith Creek Route 604 to 609
  503          KO                                          22
  504          RK    1380  0.0236  0.0928           TRAP        2       1

  505          KK  SC607
  506          KM  Smith Creek 607 Runoff
  507          KO                                          22
  508          BA  0.0840
  509          PB       4
  510          LS       0       69
  511          UD   0.270

  512          KK  SC609
  513          KM  Smith Creek 609 Runoff
  514          KO                                          22
  515          BA  0.1389
  516          PB       4
  517          LS       0       69
  518          UD   0.326

  519          KK  DP609
  520          KM  Combine RT604 SC607 and SC609
  521          KO                                          22
  522          HC       3
```

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

       523         KK  RES610
       524         KM  Smith Creek Reservoir Route 610
       525         KO                                           22
       526         RS       1    STOR      -1
       527         SA     2.2     2.7     3.3     3.8     4.4     5.1     5.8
       528         SE    6822    6823    6824    6825    6826    6827    6828
       529         SQ       0      11     701    2361    4843   10331   16010

       530         KK  SC605A
       531         KM  Smith Creek 605A Runoff
       532         KO                                           22
       533         BA  0.0505
       534         PB       4
       535         LS       0      68
       536         UD   0.252

       537         KK  RT605
       538         KM  SMITH CREEK ROUTE 605 TO DP610
       539         KO                                           22
       540         RK    2000    0.03   0.013            TRAP       2       2

       541         KK  SC605B
       542         KM  SMITH CREEK 605B RUNOFF
       543         KO                                           22
       544         BA  0.0778
       545         PB       4
       546         LS       0      75
       547         UD   0.252

       548         KK  RES605
       549         KM  SMITH CREEK RESEVOIR ROUTE 605
       550         KO                                           22
       551         RS       1    STOR      -1
       552         SV       0   0.099   0.218    0.36   0.526   0.718   0.937   1.185   1.463
1.773
       553         SV   2.117   2.496   2.912
       554         SE    6818    6819    6820    6821    6822    6823    6824    6825    6826
6827
       555         SE    6828    6829    6830
       556         SQ       0    5.18   19.37   40.40   65.78   92.88  119.23  143.30  162.05
176.76
       557         SQ  190.33  202.99  214.91
       558         SE    6818    6819    6820    6821    6822    6823    6824    6825    6826
6827
       559         SE    6828    6829    6830

       560         KK  DP610
       561         KM  COMBINE RES 610 RES 605 AND RT605
       562         KO                                           22
       563         HC       3

       564         KK  RT610
       565         KM  Smith Creek Route 610 to 611
       566         KO                                           22
       567         RK    3200  0.0226   0.090            TRAP       2       1
```

HEC-1 INPUT

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

          568        KK  SC611
          569        KM  Smith Creek 611 Runoff
          570        KO                                                    22
          571        BA  0.1095
          572        PB       4
          573        LS       0       69
          574        UD   0.149

          575        KK  DP611
          576        KM  Combine RT610 and SC611
          577        KO                                                    22
          578        HC       2

          579        KK  RES612
          580        KM  Smith Creek Reservoir Route 612
          581        KO                                                    22
          582        RS       1     STOR      -1
          583        SA    1.82     2.77    3.72     4.5    5.28    5.78
          584        SE    6762     6763    6764    6765    6766  6766.5
          585        SQ       0      150     510    1160    2120    2680

          586        KK  RT612
          587        KM  Smith Creek Route 612 to 617
          588        KO                                                    22
          589        RK    2250   0.0240  0.0866            TRAP       2       1

          590        KK  SC613
          591        KM  Smith Creek 613 Runoff
          592        KO                                                    22
          593        BA  0.1233
          594        PB       4
          595        LS       0       75
          596        UD   0.270

          597        KK  RES613
          598        KM  EXISTING POND 613
          599        KO                                                    22
          600        RS       1     STOR      -1
          601        SA    0.12     0.96    1.09    1.21    1.34    1.47
          602        SE    6794     6796    6798    6800    6802    6804
          603        SQ    4.67     7.44    9.43   22.99   29.35   34.42
          604        SE    6794     6796    6798    6800    6802    6804

          605        KK  RT618
          606        KM  SMITH CREEK ROUTE RES613 TO DP  618
          607        KO                                                    22
          608        RK    1100    0.030   0.013            TRAP       2       2

          609        KK  SC617A
          610        KM
          611        KO                                                    22
          612        BA  0.0149
          613        PB       4
          614        LS       0       73
```

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

615          UD   0.162

616          KK  RES617
617          KM  SMITH CREEK RESEVOIR ROUTE 617
618          KO                                                    22
619          RS       1     STOR      -1
620          SV       0      0.5      1.0      1.5
621          SE    6740     6745     6748     6750
622          SQ       0       30       40       63
623          SE    6740     6745     6748     6750

624          KK  SC618
625          KM  SMITH CREEK 618 RUNOFF
626          KO                                                    22
627          BA   0.007
628          PB       4
629          LS       0       73
630          UD    0.15

631          KK  RES618
632          KM  SMITH CREEK RESEVOIR 618
633          KO                                                    22
634          RS       1     STOR      -1
635          SV       0      0.5      1.0
636          SE    6768     6770     6772
637          SQ       0        3        6
638          SE    6768     6770     6772

639          KK  DP618
640          KM  COMBINE RES 613 RES 618 AND RT618
641          KO                                                    22
642          HC       3

643          KK  SC615B
644          KM  Smith Creek 615B Runoff
645          KO                                                    22
646          BA  0.0313
647          PB       4
648          LS       0       78
649          UD   0.160

650          KK  RES614
651          KM  EXISTING POND 614
652          KO                                                    22
653          RS       1     STOR      -1
654          SV       0    0.067     0.32     0.67     1.16      1.5
655          SE    6722     6724     6726     6728     6730     6732
656          SQ       0        4        6       10     13.3       20
657          SE    6722     6724     6726     6728     6730     6732
```

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

  658          KK  SC615A
  659          KM  SMITH CREEK 615A
  660          KO                                                    22
  661          BA  0.0567
  662          PB       4
  663          LS       0       74
  664          UD    0.18

  665          KK  RES615
  666          KM  SMITH CREEK RESEVOIR ROUTE 615
  667          KO                                                    22
  668          RS       1     STOR       -1
  669          SV       0        1        2      2.5
  670          SE    6726     6728     6730     6732
  671          SQ       0        5       10     16.7
  672          SE    6724     6726     6728     6729

  673          KK  SC617C
  674          KM  SMITH CREEK 617C Runoff
  675          KO                                                    22
  676          BA   .0482
  677          PB       4
  678          LS       0       65
  679          UD     .17

  680          KK  DP613
  681          KM  COMBINE DP 618 RES 615 RES 614 SC 617C AND RT 612
  682          KO                                                    22
  683          HC       5

  684          KK  RT614
  685          KM  SMITH CREEK ROUTE 613 TO 617
  686          KO                                                    22
  687          RK    1200    0.022    0.030             TRAP        2        4

  688          KK  SC617B
  689          KM  Smith Creek 617B Runoff
  690          KO                                                    22
  691          BA  0.0215
  692          PB       4
  693          LS       0       69
  694          UD   0.228

  695          KK  DP617
  696          KM  Combine RT614 AND SC617B
  697          KO                                                    22
  698          HC       2

  699          KK  RT617
  700          KM  Smith Creek Route 617 to 703
  701          KO                                                    22
  702          RK    1470  0.0061    0.085             TRAP        2        1
```

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

  703           KK  SC701
  704           KM  Smith Creek 701 Runoff
  705           KO                                          22
  706           BA  0 0722
  707           PB       4
  708           LS       0       92
  709           UD   0.360

  710           KK  SC703
  711           KM  Smith Creek 703 Runoff
  712           KO                                          22
  713           BA  0.1305
  714           PB       4
  715           LS       0       77
  716           UD   0.092

  717           KK  DP703
  718           KM  Combine RT617 SC701 and SC703
  719           KO                                          22
  720           HC       3

  721           KK  RT703
  722           KM  Smith Creek Route 703 to 705
  723           KO                                          22
  724           RK    2780  0.0338  0.0786            TRAP        3         1

  725           KK  SC705
  726           KM  Smith Creek 705 Runoff
  727           KO                                          22
  728           BA  0 0869
  729           PB       4
  730           LS       0       69
  731           UD   0.329

  732           KK  DP705
  733           KM  Combine RT703 and SC705
  734           KO                                          22
  735           HC       2
  736           ZZ
```

HEC1 S/N: 1343001909 HMVersion: 6.33 Data File C:\WINNT\TEMP\~vbh0944.TMP

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

MAXIMUM STAGE	TIME OF OPERATION MAX STAGE	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
	HYDROGRAPH AT	SC205	54	6.00	9.	3.	1.	0.10
	ROUTED TO	RT205	53.	6.00	9.	3.	1.	0.10
	HYDROGRAPH AT	SC207	62	6.00	12.	4.	1.	0.12
	HYDROGRAPH AT	SC213	60.	6.00	11.	4.	1.	0.12
	3 COMBINED AT	DP213	175	6.00	32.	11.	4.	0.34
	ROUTED TO	RT213	169.	6.00	33.	11.	4.	0.34
	HYDROGRAPH AT	SC209	51.	6.00	10.	3.	1.	0.14
	HYDROGRAPH AT	SC211	24.	6.00	5.	2.	1.	0.08
	HYDROGRAPH AT	SC215	34	5.75	6.	2.	1.	0.06
	4 COMBINED AT	DP215	275.	6.00	53.	18.	6.	0.62
	ROUTED TO	RT215	258.	6.00	54.	18.	6.	0.62
	HYDROGRAPH AT	SC219	43.	6.00	9.	3.	1.	0.13
	2 COMBINED AT	DP219	301.	6.00	62.	21.	7.	0.75
	HYDROGRAPH AT	SC201	46.	6.00	9.	3.	1.	0.12
	ROUTED TO	RT201	42.	6.00	9.	3.	1.	0.12
	HYDROGRAPH AT	SC203	37.	5.75	7.	2.	1.	0.11
	2 COMBINED AT	DP203	78.	6.00	16.	5.	2.	0.23
	ROUTED TO	RT203	74.	6.00	16.	5.	2.	0.23
	HYDROGRAPH AT	SC217	21	5.75	4.	1.	0	0.05
	2 COMBINED AT	DP217	93.	6.00	19.	7.	2.	0.29
	2 COMBINED AT	DP220	394	6.00	82.	28.	9	1.03
	ROUTED TO	RT220	384.	6.00	82.	28.	9.	1.03
	HYDROGRAPH AT	SC301	67.	6.00	12.	4.	1.	0.12

HYDROGRAPH AT	SC303	72.	6.00	13.	4	1	0.13
2 COMBINED AT	DP303	138.	6.00	24.	8	3.	0.25
ROUTED TO	RT303	136.	6.00	24.	8	3	0.25
HYDROGRAPH AT	SC305	35.	6.00	6.	2.	1.	0.06
2 COMBINED AT	DP305	171	6.00	30.	10.	3.	0.31
ROUTED TO	RT305	164.	6.00	31.	10	3	0.31
HYDROGRAPH AT	SC307	45.	6.00	10.	4.	1.	0.11
HYDROGRAPH AT	SC309	64.	6.00	12.	4.	1.	0.12
HYDROGRAPH AT	SC311	60.	5.75	10.	3.	1.	0.11
4 COMBINED AT	DP311	330.	6.00	63.	21.	7.	0.65
ROUTED TO	RT311	303.	6.00	64.	21.	7.	0.65
HYDROGRAPH AT	SC313	75.	6.00	14.	5.	2.	0.15
HYDROGRAPH AT	SC315	49.	6.00	9.	3.	1.	0.09
3 COMBINED AT	DP315	427.	6.00	86.	29.	10.	0.89
2 COMBINED AT	DP316	811.	6.00	168.	57.	19.	1.92
ROUTED TO	RT316	722.	6.00	168.	57.	19.	1.92
HYDROGRAPH AT	SC401	77.	6.00	15.	5.	2.	0.15
2 COMBINED AT	DP401	799.	6.00	183.	62.	21.	2.08
ROUTED TO	RT401	776.	6.00	183.	62.	21.	2.08
HYDROGRAPH AT	SC403	55.	6.00	10.	3.	1.	0.10
HYDROGRAPH AT	SC405	38.	6.00	7.	2.	1.	0.07
3 COMBINED AT	DP405	868.	6.00	199.	67.	23	2.25
ROUTED TO	RT405	822.	6.25	200	68.	23.	2.25
HYDROGRAPH AT	SC101	36.	6.00	7.	2	1.	0.09
ROUTED TO	RT101	33	6.00	7.	2	1.	0.09
HYDROGRAPH AT	SC103	72.	6.00	14.	5	2.	0.17
HYDROGRAPH AT							

		SC105A	42	6.00	8	2.	1.	0.07
	3 COMBINED AT	DP103	147	6.00	28.	10	3.	0.33
	ROUTED TO	RES106	89	6.25	28	10	3.	0.33
7324.95	6.25							
	ROUTED TO	RT103	89	6.50	28	10.	3.	0.33
	HYDROGRAPH AT	SC105B	39.	6.00	7	2.	1.	0.07
	2 COMBINED AT	DP105	114.	6.25	35.	12.	4	0.40
	ROUTED TO	RT105A	113.	6.25	35.	12.	4.	0.40
	HYDROGRAPH AT	SC107A	81.	6.00	14.	5.	2.	0.14
	ROUTED TO	RES108	81.	6.00	14.	5.	2.	0.14
7344.38	6.00							
	2 COMBINED AT	DP107A	184.	6.00	49.	17.	6.	0.53
	ROUTED TO	RT105B	174	6.00	49.	17.	6.	0.53
	HYDROGRAPH AT	SC107B	23.	6.00	4.	1.	0.	0.04
	2 COMBINED AT	DP107B	197.	6.00	53.	18.	6.	0.57
	ROUTED TO	RT107	183.	6.25	53.	18.	6.	0.57
	HYDROGRAPH AT	SC109	92.	6.00	17.	6.	2.	0.16
	2 COMBINED AT	DP109	268.	6.00	70.	24.	8.	0.74
	ROUTED TO	RT109	257.	6.25	69.	23.	8.	0.74
	HYDROGRAPH AT	SC111	102.	6.00	19.	6.	2.	0.19
	2 COMBINED AT	DP111	335.	6.25	88.	30.	10.	0.93
	HYDROGRAPH AT	SC407	79.	6.00	16.	5	2.	0.17
	3 COMBINED AT	DP407	1226.	6.25	304.	103.	34.	3.34
	ROUTED TO	RT407	1219.	6.25	305.	103	35.	3.34
	HYDROGRAPH AT	SC501	67	6.00	12.	4	1.	0.12
	HYDROGRAPH AT	SC503	65	6.00	12.	4	1.	0.12
	HYDROGRAPH AT	SC505	97	6.00	19.	6	2	0.19
	3 COMBINED AT	DP505	229	6.00	42.	14	5.	0.43

	2 COMBINED AT	DP506	1375.	6.25	347	117.	39.	3.77
	ROUTED TO	RT506	1369.	6.25	347	118.	39.	3.77
	HYDROGPAPH AT	SC507	55.	5.75	9.	3.	1.	0.10
	2 COMBINED AT	DP507	1393.	6.25	356	121.	40.	3.87
	ROUTED TO	RT507	1378.	6.25	357.	121.	41.	3.87
	HYDROGRAPH AT	SC509	73.	6.00	15.	5.	2.	0.15
	2 COMBINED AT	DP509	1439.	6.25	371.	126.	42.	4.02
	ROUTED TO	RT509	1394.	6.25	371.	126.	42.	4.02
	HYDROGRAPH AT	SC511	50.	6.00	9	3.	1.	0.09
	2 COMBINED AT	DP511	1423.	6.25	380.	129.	43.	4.11
	ROUTED TO	RT511	1409.	6.25	380.	129.	43.	4.11
	HYDROGRAPH AT	SC601	42.	5.75	7.	2.	1.	0.06
	ROUTED TO	RT601	36.	6.00	7.	2.	1.	0.06
	HYDROGRAPH AT	SC603	140.	6.00	24.	8.	3.	0.25
	2 COMBINED AT	DP603	176.	6.00	31.	10	3.	0.31
	2 COMBINED AT	DP604	1506.	6.25	411.	140.	47.	4.43
	ROUTED TO	RT604	1480.	6.25	411.	140.	47.	4.43
	HYDROGRAPH AT	SC607	50.	6.00	9.	3.	1.	0.08
	HYDROGRAPH AT	SC609	81.	6.00	14.	5	2.	0.14
	3 COMBINED AT	DP609	1556.	6.25	434.	148.	49.	4.65
	ROUTED TO	RES610	1538.	6.25	429.	147	49.	4.65
6824.50	6.25							
	HYDROGRAPH AT	SC605A	28.	6.00	5.	2.	1.	0.05
	ROUTED TO	RT605	28.	6.00	5.	2.	1.	0.05
	HYDROGRAPH AT	SC605B	64.	5.75	11	3	1.	0.08
	ROUTED TO	RES605	67.	6.00	11	3.	1.	0.08
6822.06	6.00							

	3 COMBINED AT	DP610	1594.	6.25	444.	152	51	4.78
	ROUTED TO	RT610	1537	6.25	444.	153.	51.	4.78
	HYDROGRAPH AT	SC611	96.	5.75	11	4.	1	0.11
	2 COMBINED AT	DP611	1559.	6.25	454.	156	53.	4.89
	ROUTED TO	RES612	1537.	6.50	453.	156.	53.	4.89
6765.39	6.50							
	ROUTED TO	RT612	1533.	6.50	454.	157.	53.	4.89
	HYDROGRAPH AT	SC613	101.	6.00	17	6.	2.	0.12
	ROUTED TO	RES613	20.	6.75	13.	7.	6.	0.12
6799.57	6.75							
	ROUTED TO	RT618	20.	6.75	13	7.	6.	0.12
	HYDROGRAPH AT	SC617A	16.	5.75	2.	1.	0.	0.01
	ROUTED TO	RES617	11.	6.00	2.	1.	0.	0.01
6741.82	6.00							
	HYDROGRAPH AT	SC618	8.	5.75	1.	0.	0.	0.01
	ROUTED TO	RES618	1.	6.25	1.	0.	0.	0.01
6768.93	6.25							
	3 COMBINED AT	DP618	25	6.25	15.	8.	6.	0.15
	HYDROGRAPH AT	SC615B	43.	5.75	5.	2.	1.	0.03
	ROUTED TO	RES614	13.	6.25	5.	2.	1.	0.03
6729.58	6.25							
	HYDROGRAPH AT	SC615A	59.	5.75	8.	2.	1.	0.06
	ROUTED TO	RES615	18.	6.25	8.	2.	1.	0.06
6729.23	6.25							
	HYDROGRAPH AT	SC617C	30.	5.75	4.	1.	0.	0.05
	5 COMBINED AT	DP613	1592.	6.50	485.	170.	60	5.17
	ROUTED TO	RT614	1585.	6.50	485.	170.	60.	5.17
	HYDROGRAPH AT	SC617B	13.	5.75	2.	1.	0.	0.02
	2 COMBINED AT	DP617	1589.	6.50	487	171.	61.	5.19

ROUTED TO	RT617	1563	6.50	487	171.	61.	5.19
HYDROGRAPH AT	SC701	121.	6.00	20.	6	2	0.07
HYDROGRAPH AT	SC703	189.	5.75	20.	6.	2.	0.13
3 COMBINED AT	DP703	1622.	6.50	523.	184.	65.	5.39
ROUTED TO	RT703	1591	6.50	523.	184.	65.	5.39
HYDROGRAPH AT	SC705	51	6.00	9.	3.	1.	0.09
2 COMBINED AT	DP705	1610.	6.50	532.	187	66.	5.48

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	INTERPOLATED TO COMPUTATION INTERVAL DT	PEAK	TIME TO PEAK	VOLUME
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
RT205	MANE	1.25	53.35	362.21	1.21	15.00	52.97	360.00	1.21

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6234E+01 EXCESS=0.0000E+00 OUTFLOW=0.6235E+01 BASIN STORAGE= 0.6823E-09 PERCENT ERROR= 0.0

RT213	MANE	0.81	174.53	361.65	1.19	15.00	169.14	360.00	1.19

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2157E+02 EXCESS=0.0000E+00 OUTFLOW=0.2158E+02 BASIN STORAGE= 0.2564E-08 PERCENT ERROR= 0.0

RT215	MANE	1.34	274.29	362.58	1.09	15.00	257.54	360.00	1.09

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3573E+02 EXCESS=0.0000E+00 OUTFLOW=0.3573E+02 BASIN STORAGE= 0.1824E-07 PERCENT ERROR= 0.0

RT201	MANE	1.30	45.01	363.07	0.92	15.00	42.40	360.00	0.92

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5952E+01 EXCESS=0.0000E+00 OUTFLOW=0.5952E+01 BASIN STORAGE= 0.6102E-09 PERCENT ERROR= 0.0

RT203	MANE	1.63	77.63	363.47	0.87	15.00	74.38	360.00	0.87

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1080E+02 EXCESS=0.0000E+00 OUTFLOW=0.1080E+02 BASIN STORAGE= 0.5881E-08 PERCENT ERROR= 0.0

RT220	MANE	0.58	391.10	360.89	1.00	15.00	383.84	360.00	1.01

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5525E+02 EXCESS=0.0000E+00 OUTFLOW=0.5525E+02 BASIN STORAGE= 0.1929E-07 PERCENT ERROR= 0.0

RT303	MANE	0.68	137.43	361.44	1.21	15.00	135.79	360.00	1.21

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1604E+02 EXCESS=0.0000E+00 OUTFLOW=0.1604E+02 BASIN STORAGE= 0.1514E-09 PERCENT ERROR= 0.0

RT305	MANE	1.39	168.95	362.51	1.21	15.00	163.66	360.00	1.22

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2014E+02 EXCESS=0.0000E+00 OUTFLOW=0.2014E+02 BASIN STORAGE= 0.3830E-08 PERCENT ERROR= 0.0

RT311	MANE	2.07	328.24	364.10	1.21	15.00	302.76	360.00	1.21

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4201E+02 EXCESS=0.0000E+00 OUTFLOW=0.4200E+02 BASIN STORAGE=
0.5631E-07 PERCENT ERROR= 0.0

	RT316	MANE	1.93	797.95	365.01	1.10	15.00	722.04	360.00
1.10									

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1125E+03 EXCESS=0.0000E+00 OUTFLOW=0.1124E+03 BASIN STORAGE=
0.4319E-06 PERCENT ERROR= 0.0

	RT401	MANE	0.50	798.80	361.01	1.11	15.00	775.50	360.00
1.11									

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1227E+03 EXCESS=0.0000E+00 OUTFLOW=0.1227E+03 BASIN STORAGE=
0.1722E-06 PERCENT ERROR= 0.0

	RT405	MANE	1.31	865.60	363.23	1.12	15.00	822.04	375.00
1.12									

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1337E+03 EXCESS=0.0000E+00 OUTFLOW=0.1338E+03 BASIN STORAGE=
0.7839E-06 PERCENT ERROR= 0.0

	RT101	MANE	1.75	36.12	363.22	0.97	15.00	32.69	360.00
0.98									

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4771E+01 EXCESS=0.0000E+00 OUTFLOW=0.4772E+01 BASIN STORAGE=
0.2332E-08 PERCENT ERROR= 0.0

	RT103	MANE	0.88	89.45	376.93	1.08	15.00	88.76	390.00
1.08									

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1887E+02 EXCESS=0.0000E+00 OUTFLOW=0.1887E+02 BASIN STORAGE=
0.4357E-08 PERCENT ERROR= 0.0

	RT105A	MANE	0.88	113.93	376.70	1.11	15.00	113.48	375.00
1.11									

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2354E+02 EXCESS=0.0000E+00 OUTFLOW=0.2354E+02 BASIN STORAGE=
0.9400E-08 PERCENT ERROR= 0.0

	RT105B	MANE	0.71	183.30	361.35	1.15	15.00	174.09	360.00
1.16									

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3282E+02 EXCESS=0.0000E+00 OUTFLOW=0.3282E+02 BASIN STORAGE=
0.1373E-07 PERCENT ERROR= 0.0

	RT107	MANE	1.56	195.65	364.00	1.16	15.00	183.26	375.00
1.16									

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3551E+02 EXCESS=0.0000E+00 OUTFLOW=0.3550E+02 BASIN STORAGE=
0.7782E-07 PERCENT ERROR= 0.0

	RT109	MANE	3.43	265.18	369.00	1.18	15.00	256.51	375.00
1.18									

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4665E+02 EXCESS=0.0000E+00 OUTFLOW=0.4659E+02 BASIN STORAGE=
0.8432E-06 PERCENT ERROR= 0.1

	RT407	MANE	0.97	1222.27	376.56	1.15	15.00	1218.51	375.00
1.15									

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2043E+03 EXCESS=0.0000E+00 OUTFLOW=0.2044E+03 BASIN STORAGE=
0.1208E-05 PERCENT ERROR= 0.0

RT506 MANE 0.84 1371.68 375.77 1.16 15.00 1368.95 375.00
1.16

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2328E+03 EXCESS=0.0000E+00 OUTFLOW=0.2328E+03 BASIN STORAGE=
0.1730E-05 PERCENT ERROR= 0.0

RT507 MANE 1.23 1386.71 376.57 1.16 15.00 1377.85 375.00
1.16

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2395E+03 EXCESS=0.0000E+00 OUTFLOW=0.2395E+03 BASIN STORAGE=
0.3781E-05 PERCENT ERROR= 0.0

RT509 MANE 1.85 1426.23 377.77 1.17 15.00 1393.75 375.00
1.17

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2499E+03 EXCESS=0.0000E+00 OUTFLOW=0.2499E+03 BASIN STORAGE=
0.9452E-05 PERCENT ERROR= 0.0

RT511 MANE 0.34 1422.21 375.70 1.17 15.00 1408.99 375.00
1.17

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2566E+03 EXCESS=0.0000E+00 OUTFLOW=0.2566E+03 BASIN STORAGE=
0.2267E-05 PERCENT ERROR= 0.0

RT601 MANE 1.53 41.85 348.83 1.27 15.00 36.06 360.00
1.28

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4276E+01 EXCESS=0.0000E+00 OUTFLOW=0.4277E+01 BASIN STORAGE=
0.1154E-08 PERCENT ERROR= 0.0

RT604 MANE 0.80 1500.70 376.28 1.17 15.00 1480.03 375.00
1.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2773E+03 EXCESS=0.0000E+00 OUTFLOW=0.2773E+03 BASIN STORAGE=
0.5885E-05 PERCENT ERROR= 0.0

RT605 MANE 0.75 27.76 360.87 1.21 15.00 27.68 360.00
1.21

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3245E+01 EXCESS=0.0000E+00 OUTFLOW=0.3246E+01 BASIN STORAGE=
0.1227E-09 PERCENT ERROR= 0.0

RT610 MANE 1.80 1587.87 379.08 1.19 15.00 1537.46 375.00
1.19

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3031E+03 EXCESS=0.0000E+00 OUTFLOW=0.3031E+03 BASIN STORAGE=
0.2519E-04 PERCENT ERROR= 0.0

RT612 MANE 1.27 1534.89 391.32 1.19 15.00 1533.17 390.00
1.20

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3113E+03 EXCESS=0.0000E+00 OUTFLOW=0.3114E+03 BASIN STORAGE=
0.2354E-04 PERCENT ERROR= 0.0

RT618 MANE 0.55 20.07 405.99 4.99 15.00 20.06 405.00
4.99

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3284E+02 EXCESS=0.0000E+00 OUTFLOW=0.3284E+02 BASIN STORAGE=
0.1004E-01 PERCENT ERROR= 0.0

RT614 MANE 0.45 1589.10 390.67 1.30 15.00 1585.40 390.00
1.30

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3573E+03 EXCESS=0.0000E+00 OUTFLOW=0.3573E+03 BASIN STORAGE=
0.2386E-01 PERCENT ERROR= 0.0

RT617 MANE 1.27 1585.45 392.34 1.30 15.00 1563.31 390.00
1.30

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3590E+03 EXCESS=0.0000E+00 OUTFLOW=0.3590E+03 BASIN STORAGE=
0.9092E-01 PERCENT ERROR= 0.0

RT703 MANE 1.23 1616.59 392.20 1.34 15.00 1591.29 390.00
1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3842E+03 EXCESS=0.0000E+00 OUTFLOW=0.3842E+03 BASIN STORAGE=
0.9094E-01 PERCENT ERROR= 0.0

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