PAGE 1 OF EDITING NOTES FOR: GAP CREEK FLOODWAY K THRU P-2 3RD TRY

SECID	ERROR SEVERITY	FIRST VARIABLE	NO.	ERROR MESSAGE	SECOND VARIABLE	NO.	VALUE ASSUMED
L-2.8	WARNING	HSUBO		IS LESS THAN	GMIN		> GMIN
BO OP	WARNING	STATION	8	IS LESS THAN	STATION	7	

INPUT SUMMARY FOR: GAP CREEK FLOODWAY K THRU P-2 3RD TRY

14 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 14 TYPE 3 CARDS

KEPT 14 CROSS SECTIONS FOR EDITING

14 " " VALID FOR PROPERTY COMPUTATIONS

14 " " " " PROFILE "

*** INPUT CARD PRINTOUT ***

```
      1       2       3       4       5       6       7       8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0
7   800                             1
8   801                             1
```

*** INPUT CARD PRINTOUT ***

```
      1       2       3       4       5       6       7       8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0
9   810   300 VHD 100   85  190 309200
9   811   400 VHD 100  182  287 309203
9   812   500 HOR       54   98 309467
9   820       END                   FIRST TRY
```

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK FLOODWAY K THRU P-2 3RD TRY
PROFILE NUMBER 1. UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
K-1	KU/KD < 0.7 OR > 1.4		ALERTED USER
L	KU/KD < 0.7 OR > 1.4		ALERTED USER
L-1	TOL FAILURE BETWEEN	WS = 2993.74 & WS = 2993.99	USED HIGHER WS
L-1	KU/KD < 0.7 OR > 1.4		ALERTED USER
L-2	WS TOO LOW		USED WSMIN = WSC
M	WS TOO LOW		USED WSMIN = WSC
M	KU/KD < 0.7 OR > 1.4		ALERTED USER
P APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
P-2	KU/KD < 0.7 OR > 1.4		ALERTED USER

WATER-SURFACE PROFILE FOR: GAP CREEK FLOODWAY, K THRU P-2 3RD TRY
PAGE 1 OF 1, PROFILE NUMBER 1, UPSTREAM COMPUTATIONS
*** FLOODWAY ANALYSIS *** K-APP TO END 80'TRY

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC									*ID*
K APP AT	5290 /	0 /	1650. /	535. /	63140. /	1.03 /	234. /	314.	
2991.11 /	0.15 /			/ 2991.26 /	3.08 /	0.19 /			*IS*
K-1 AT	5750 /	460 /	1650. /	350. /	33585. /	1.10 /	55. /	135.	
2991.59 /	0.38 /	0.59 /	0.11 /	2991.97 /	4.72 /	0.37 /	0.000		*XS*
L-2.8 AT	6000 /	250 /	1650. /	339. /	28225. /	1.00 /	87. /	166.	
2992.32 /	0.37 /	0.72 /	0.0 /	2992.69 /	4.87 /	0.41 /	0.002		*XS*
L AT	6325 /	325 /	1650. /	251. /	17258. /	1.00 /	88. /	164.	
2993.99 /	0.67 /	1.82 /	0.15 /	2994.66 /	6.56 /	0.63 /	0.002		*XS*
L-1 AT	6900 /	575 /	1300. /	187. /	11928. /	1.02 /	182. /	262.	
3000.02 /	0.76 /	6.08 /	0.05 /	3000.78 /	6.95 /	0.56 /	0.002		*XS*
L-2 AT	7420 /	520 /	1300. /	190. /	11559. /	1.27 /	365. /	445.	
3006.33 /	0.92 /	6.37 /	0.08 /	3007.25 /	6.83 /	0.71 /	0.019		*XS*
M AT	8160 /	740 /	1300. /	228. /	16589. /	1.07 /	130. /	210.	
3013.24 /	0.54 /	6.52 /	0.0 /	3013.78 /	5.71 /	0.58 /	0.002		*XS*
M-2 AT	8700 /	540 /	1300. /	211. /	14488. /	1.04 /	31. /	111.	
3016.99 /	0.61 /	3.80 /	0.04 /	3017.60 /	6.15 /	0.64 /	-0.012		*XS*
N AT	9110 /	410 /	1300. /	214. /	14768. /	1.01 /	178. /	263.	
3020.27 /	0.58 /	3.24 /	0.0 /	3020.85 /	6.06 /	0.59 /	0.009		*XS*
O-TW AT	9690 /	580 /	1300. /	240. /	16258. /	1.52 /	188. /	344.	
3024.31 /	0.69 /	4.08 /	0.06 /	3025.01 /	5.41 /	0.69 /	0.019		*XS*
========== BEGIN BRIDGE ANALYSIS ==========									
BO OP AT	9690 /	/	802. /	87. /	3813. /	1.00 /	0. /	21.	
3023.60 /	1.32 /		...3...	(-.001)	/ 9.23 /	0.80 /			*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 413. / RIGHT 82. /									*RG*
P APP AT	9736 /	46 /	1300. /	213. /	8088. /	1.25 /	240. /	383.	
3024.91 /	0.73 /	0.59 /	0.02 /	3025.63 /	6.09 /	0.63 /	0.019		*AS*
M = **** / E = **** / K* = **** /				426. /	23885. /	1.10 /	240. /	415.	
3026.22 /	0.16 /			/ 3026.38 /	3.05 /	0.40 /			*AS*
========== END BRIDGE ANALYSIS ==========									
P-2 AT	10080 /	344 /	1300. /	187. /	12082. /	1.77 /	208. /	343.	
3027.65 /	1.32 /	2.01 /	0.58 /	3028.97 /	6.93 /	0.95 /	-0.000		*XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK FLOODWAY K THRU B-2 3RD TRY
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID	L-2	M
WSC	3006.24	3012.49

SUMMARY OF ENCROACHMENTS FOR: GAP CREEK FLOODWAY K THRU P-2 3RD TRY
RESULTS OF THE FLOODWAY ANALYSIS ENTITLED K-APP TO END 80 TRY (PROFILE NUMBER 1, UPSTREAM COMPUTATIONS) ARE COMPARED TO THE RESULTS OF THE BASE PROFILE (PROFILE NUMBER 1, UPSTREAM COMPUTATIONS). PAGE 1 OF 1

SECID	CARD 3 SEQUENCE	TYPE	FW OPTION	ENCROACHMENT LEFT	ENCROACHMENT RIGHT	SURCHARGE IDEAL	SURCHARGE ACTUAL	CHANNEL WIDTH NATURAL	CHANNEL WIDTH FLOODWAY
K APP	1400	1	HOR	YES	YES	******	0.0	******	80
K-1	1449	0	HOR	YES	YES	******	0.36	******	80
L-2.8	1470	0	HOR	YES	YES	******	0.68	******	79
L	1500	0	HOR	YES	YES	******	-0.01	******	75
L-1	1530	1	HOR	YES	YES	******	0.17	******	80
L-2	1550	0	HOR	YES	YES	******	0.98	******	80
M	1600	0	HOR	YES	YES	******	0.90	******	80
M-2	1650	0	HOR	YES	YES	******	0.75	******	80
N	1700	0	HOR	YES	YES	******	0.99	******	85
O-TW	1800	0	HOR	YES	YES	******	0.04	******	156
BO OP	1900	2	N.A.	N.A.	N.A.	******	-0.670	******	21
ROAD	2000	4	N.A.	N.A.	N.A.	******	******	******	******
P APP	2100	5	HOR	YES	YES	******	-0.070	******	175
P-2	2150	0	HOR	YES	YES	******	-0.470	******	134

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
1     1 GAP CREEK FLOODWAY  I+2.3 TO K-1          1ST TRY   5  1 02 99 10
2     2 298407
3  1150 I+2.3 1  17  3 2978    4625 99 99
4  1151   1650
5  1155        0  1 29901   37  1 29858   77  1 29839  113  2 29842  121  2 29794
5  1156      128  2 29770  140  2 29775  150  2 29770  151  2 29778  157  2 29817
5  1157      165  3 29836  198  3 29836  223  3 29828  260  3 29836  297  3 29864
5  1158      301  3 29874  310  3 29933
6  1159  1  2 040 035  2  6 045 035  1  2 040 035
3  1200 J-TW  0  16  1 2980    5187 99 99
5  1205        0  1 29941   10  1 29885   13  1 29849   19  1 29815   20  1 29798
5  1206       22  1 29792   25  1 29793   30  1 29794   31  1 29811   43  1 29832
5  1207       60  1 29840   77  1 29880  121  1 29891  150  1 29893  181  1 29911
5  1208      200  1 29961
6  1210  1  4 045 040
3  1300 BO JK 2  14  1 2980    5187       45 29924 1 0
5  1305        0  1 29924    0  1 29829    1  1 29829    2  1 29810    3  1 29796
5  1306        6  1 29798    9  1 29806   19  1 29815   25  1 29809   28  1 29814
5  1307       29  1 29829   30  1 29829   30  1 29924    0 -9 29924
6  1310  1  2 040 040
3  1400 K APP 5  21  3 2981    5290  1  3
5  1405        0  1 29915   80  1 29883  150  1 29872  228  1 29872  264  1 29854
5  1406      274  2 29838  278  2 29831  280  2 29811  284  2 29807  288  2 29804
5  1407      292  2 29806  294  2 29811  295  2 29830  300  2 29837  304  3 29847
5  1408      318  3 29884  363  3 29889  423  3 29894  450  3 29900  536  3 29923
5  1409      600  3 29933
6  1410  1  2 045 035  1  2 050 050  1  2 045 045
3  1449 K-1    0  22  3 2984    5750 99 99
5  1451      -15  1 29948    0  1 29926   50  1 29894   75  2 29883   80  2 29868
5  1452       85  2 29848   87  2 29836   91  2 29838   97  2 29839  100  2 29839
5  1453      102  2 29844  108  2 29860  111  2 29863  112  3 29894  150  3 29888
5  1454      200  3 29885  250  3 29886  300  3 29888  350  3 29899  400  3 29916
5  1455      450  3 29928  500  3 29948
6  1456  1  2 045 035  1  2 045 045  1  2 040 040
```

Floodway
Ck 1 - RL

PAGE 1 OF EDITING NOTES FOR: GAP CREEK FLOODWAY I+2.3 TO K-1 1ST TRY

SECID	ERROR SEVERITY	FIRST VARIABLE	NO.	ERROR MESSAGE	SECOND VARIABLE	NO.	VALUE ASSUMED
BO JK	WARNING	STATION	14	IS LESS THAN	STATION	13	

INPUT SUMMARY FOR: GAP CREEK FLOODWAY I+2.3 TO K-1 1ST TRY

5 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 5 TYPE 3 CARDS

KEPT 5 CROSS SECTIONS FOR EDITING

5 " " VALID FOR PROPERTY COMPUTATIONS

5 " " " " PROFILE "

*** INPUT CARD PRINTOUT ***

```
        1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
7  5500                                    1
8  5550                                    1
```

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
9  5600  1150 HOR      113  168 298404
9  5700  1200 HOR       12   71 298669
9  5800  1400 HOR      234  314 299111
9  5900  1449 HOR       55  135 299123
9  6000       END                    FIX UP
```

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 8,DATE= 1/25/78

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK FLOODWAY I+2.3 TO K-1 1ST TRY
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
K-1	KU/KD < 0.7 OR > 1.4		ALERTED USER

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 9.DATE= 1/25/78

WATER-SURFACE PROFILE FOR: GAP CREEK FLOODWAY I+2.3 TO K-1 1ST TRY
PAGE 1 OF 1. PROFILE NUMBER 1. UPSTREAM COMPUTATIONS
*** FLOODWAY ANALYSIS *** FIX UP

SECID AT DISTANCE / WS ELEV	LENGTH / HV	DISCHARGE / HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	*ID*
I+2.3 AT 4625 /	0 /	1650. /	247. /	26086. /	1.01 /	113. /	168.	
2984.07 /	0.70 /		/ 2984.77 /	6.68 /	0.54/			*IS*
J-TW AT 5187 /	562 /	1650. /	238. /	21222. /	1.00 /	12. /	71.	
2986.81 /	0.75 /	2.76 /	0.03 / 2987.56 /	6.95 /	0.61 /	0.002		*XS*
========== BEGIN BRIDGE ANALYSIS ==========								
BO JK AT 5187 /	/	1650. /	123. /	11060. /	1.00 /	0. /	30.	
2986.81 /	2.82 /	...1...	(-.001)	/ 13.47 /	0.99 /			*BO*
NO EMBANKMENT CROSS SECTION								
K APP AT 5290 /	103 /	1650. /	246. /	18662. /	1.13 /	234. /	314.	
2987.50 /	0.79 /	0.71 /	0.02 / 2988.29 /	6.70 /	0.59 /	-0.001		*AS*
M = 0.46 / E = 0.15 / K* = 0.86 /		489. /	54804. /	1.03 /	234. /	314.		
2990.54 /	0.18 /		/ 2990.72 /	3.37 /	0.21 /			*AS*
========== END BRIDGE ANALYSIS ==========								
K-1 AT 5750 /	460 /	1650. /	317. /	29087. /	1.11 /	55. /	135.	
2991.18 /	0.47 /	-0.79 /	0.14 / 2991.65 /	5.20 /	0.42 /	0.000		*XS*

END OF THIS PROFILE

SUMMARY OF ENCROACHMENTS FOR: GAP CREEK FLOODWAY I+2.3 TO K-1 1ST TRY
RESULTS OF THE FLOODWAY ANALYSIS ENTITLED FIX UP (PROFILE
NUMBER 1, UPSTREAM COMPUTATIONS) ARE COMPARED TO THE RESULTS OF THE
BASE PROFILE (PROFILE NUMBER 1, UPSTREAM COMPUTATIONS). PAGE 1 OF 1

SECID	CARD 3 SEQUENCE	TYPE	FW OPTION	ENCROACHMENT LEFT	ENCROACHMENT RIGHT	SURCHARGE IDEAL	SURCHARGE ACTUAL	CHANNEL WIDTH NATURAL	CHANNEL WIDTH FLOODWAY
I+2.3	1150	1	HOR	YES	YES	******	0.03	******	55
J-TW	1200	0	HOR	YES	YES	******	0.12	******	59
BO JK	1300	2	N.A.	N.A.	N.A.	******	0.12	******	21
K APP	1400	5	HOR	YES	YES	******	-0.57	******	80
K-1	1449	0	HOR	YES	YES	******	-0.05	******	80

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 1.DATE=12/21/77

*** INPUT CARD PRINTOUT ***

A to I+22

```
                1         2         3         4         5         6         7         8
 ....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

 1      1 GAP CREEK FLOODWAY ROAD ENCROACH ALLOWED A TO K   19  1 02 99 10
 2      2 296400
 3      3       A 1   21   3 2956         0 99 99
 4      4     2010
 5    105         0  1 29690    78  1 29659   175  1 29630   215  1 29619   239  1 29614
 5    106       288  1 29612   371  1 29607   396  2 29600   403  2 29556   404  2 29556
 5    107       410  2 29553   414  2 29552   417  2 29559   426  2 29599   448  3 29617
 5    108       468  3 29616   515  3 29619   558  3 29621   598  3 29622   628  3 29632
 5    109       665  3 29683
 6    110   1   2 070 070   2   5 045 060   1   2 065 065
 3    200       B 0   21   1 2959       510 99 99
 5    205         0  1 29708    40  1 29647    80  1 29639   120  1 29639   178  1 29612
 5    206       187  1 29590   194  1 29589   203  1 29606   230  1 29610   232  1 29600
 5    207       235  1 29580   240  1 29574   246  1 29580   250  1 29595   282  1 29618
 5    208       300  1 29618   350  1 29628   400  1 29636   450  1 29647   500  1 29679
 5    209       543  1 29706
 6    210   1   2 040 040
 3    300       C 0   18   3 2960       915 99 99                                   08
 5    305         0  1 29725    50  1 29690   100  1 29680   150  1 29660   198  2 29646
 5    306       217  2 29625   221  2 29600   224  2 29595   231  2 29589   237  2 29582
 5    307       241  2 29595   253  3 29642   300  3 29655   350  3 29662   400  3 29670
 5    308       433  3 29685   450  3 29703   457  3 29717
 6    309   1   2 040 035   2   5 045 035   1   2 040 035
 3    400       D 0   15   3 2962      1520 99 99
 5    405         0  1 29738    29  1 29695    51  1 29649    56  2 29637    57  2 29611
 5    406        64  2 29607    73  2 29611    86  3 29657   120  3 29682   150  3 29683
 5    407       200  3 29681   250  3 29680   273  3 29682   282  3 29737   309  3 29722
 6    408   1   2 040 035   1   4 045 035   1   2 040 035
 3    500 F T-W 0   19   3 2965      2118 99 99
 5    505         0  1 29780    50  1 29747   100  1 29718   137  1 29706   146  2 29706
 5    506       150  2 29643   152  2 29638   157  2 29638   160  2 29638   163  2 29643
 5    507       165  2 29656   168  3 29685   205  3 29705   252  3 29696   300  3 29699
 5    508       350  3 29698   380  3 29707   389  3 29765   401  3 29781
 6    509   1   2 040 035   1   4 045 035   1   2 040 035
 3    600 80 EF 2    9   1 2964      2118          .15 29714 3 0
 5    605         0  1 29716     3  1 29764     6  1 29643    13  1 29638    15  1 29637
 5    606        20  1 29643    24  1 29684    26  1 29712     0 -9 29716
 6    608   1   2 050 050
 3    650 ROAD  4    6  2   14            1  2              2 2               2
 5    655       152  1 29800   153  1 29734   167  2 29732   181  2 29731   227  2 29726
 5    656       227  2 29800
 3    700 F APP 5   23   3 2966      2176  1  3
 5    705         0  1 29790    49  1 29759    93  1 29731   150  1 29717   173  1 29666
 5    706       176  1 29655   177  1 29653   178  1 29656   180  1 29668   189  2 29670
 5    707       196  2 29644   200  2 29640   202  2 29639   206  2 29640   209  2 29644
```

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
5   708     216  3 29691  252  3 29691  300  3 29693  337  3 29693  375  3 29697
5   709     400  3 29713  434  3 29771  457  3 29786
6   710  1  2 045 035  2  4 045 035  1  2 040 035
3   751 G TW  0  19  3 2967    2870 99 99
5   752       0  1 29810   50  1 29777  100  1 29749  150  2 29735  160  2 29712
5   753     164  2 29681  169  2 29674  177  2 29661  179  2 29664  182  2 29674
5   754     187  2 29705  193  3 29730  246  3 29728  284  3 29735  300  3 29736
5   755     339  3 29742  390  3 29763  425  3 29786  450  3 29814
6   756  1  2 040 035  1  2 045 035  1  2 040 035
3   800 G TW  0  19  3 2967    2889 99 99
5   805       0  1 29810   50  1 29777  100  1 29749  150  2 29735  160  2 29712
5   806     164  2 29601  169  2 29674  177  2 29661  179  2 29664  182  2 29674
5   807     187  2 29705  193  3 29730  246  3 29728  284  3 29735  300  3 29736
5   808     339  3 29742  390  3 29763  425  3 29786  450  3 29814
6   810  1  2 040 035  1  2 045 035  1  2 040 035
3   950 80 40 0  20  3 2968    2896 99 99                                   10
5   951       0  1 29816   43  1 29785  135  1 29761  159  1 29744  159  2 29730
5   952     164  2 29694  167  2 29675  171  2 29679  172  2 29680  173  2 29664
5   953     177  2 29669  180  2 29679  184  2 29710  185  3 29734  185  3 29746
5   954     260  3 29747  300  3 29749  333  3 29749  390  3 29765  450  3 29829
6   955  1  2 040 035  2  4 045 035  1  2 040 035
3   974 H-0.4 0  17  3 2967    2905 99 99
5   975       0  1 29801   72  1 29769  120  1 29753  150  1 29744  187  2 29725
5   976     191  2 29678  195  2 29665  200  2 29672  205  2 29678  211  2 29710
5   977     222  3 29737  262  3 29739  300  3 29738  346  3 29746  381  3 29754
5   978     423  3 29772  450  3 29795
6   980  1  2 040 035  2  4 045 035  1  2 040 035
3  1000 H APP 0  18  3 2968    2931  1  3
5  1005       0  1 29805   72  1 29773  120  1 29757  150  1 29743  187  2 29729
5  1006     191  2 29682  195  2 29669  200  2 29676  205  2 29682  211  2 29714
5  1007     213  3 29719  222  3 29741  262  3 29743  300  3 29742  346  3 29750
5  1008     381  3 29758  423  3 29776  450  3 29799
6  1010  1  2 040 035  1  4 045 035  1  2 040 035
3  1050 1-4.1 0  17  3 2972    3500 99 99
5  1055       0  1 29837   37  1 29794   77  1 29775  113  2 29778  121  2 29730
5  1056     128  2 29714  140  2 29711  150  2 29706  151  2 29714  157  2 29753
5  1057     165  3 29772  198  3 29772  223  3 29764  260  3 29772  297  3 29800
5  1058     301  3 29810  310  3 29869
6  1060  1  2 040 035  2  6 045 035  1  2 040 035
3  1100 1     1  17  3 2975    4095 99 99
4  1111   1650
5  1115       0  1 29878   37  1 29835   77  1 29816  113  2 29819  121  2 29771
5  1116     128  2 29755  140  2 29752  150  2 29747  151  2 29755  157  2 29794
5  1117     165  3 29813  198  3 29813  223  3 29805  260  3 29813  297  3 29841
5  1118     301  3 29851  310  3 29910
```

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
6  1120  1  2 040 035  2  6 045 035  1  2 040 035
3  1150 1+2.3 0  17  3 2978    4625 99 99
5  1155       0  1 29901   37  1 29858   77  1 29839  113  2 29842  121  2 29794
5  1156     128  2 29778  140  2 29775  150  2 29770  151  2 29778  157  2 29817
5  1157     165  3 29836  198  3 29836  223  3 29828  260  3 29836  297  3 29864
5  1158     301  3 29874  310  3 29933
6  1159  2 040 035  2  6 045 035  1  2 040 035
3  1200 J-TW  0  16  1 2980    5187 99 99
5  1205       0  1 29941   10  1 29885   13  1 29849   19  1 29815   20  1 29798
5  1206      22  1 29792   25  1 29793   30  1 29794   31  1 29811   43  1 29832
5  1207      60  1 29840   77  1 29880  121  1 29891  150  1 29893  181  1 29911
5  1208     200  1 29961
6  1210  1  4 045 040
3  1300 80 JK 2  14  1 2980    5187       45 29924 1 0
5  1305       0  1 29924    0  1 29829    1  1 29829    2  1 29810    3  1 29796
5  1306       6  1 29798    9  1 29806   19  1 29815   25  1 29809   28  1 29814
5  1307      29  1 29829   30  1 29829   30  1 29924    0 -9 29924
6  1310  1  2 040 040
3  1400 K APP 5  21  3 2981    5290  1  3
5  1405       0  1 29915   80  1 29883  150  1 29872  228  1 29872  264  1 29854
5  1406     274  2 29838  278  2 29831  280  2 29811  284  2 29807  288  2 29804
5  1407     292  2 29806  294  2 29811  295  2 29830  300  2 29837  304  3 29847
5  1408     318  3 29884  363  3 29889  423  3 29894  450  3 29900  536  3 29923
5  1409     600  3 29933
6  1410  1  2 045 035  1  2 050 050  1  2 045 045
```

PAGE 1 OF EDITING NOTES FOR: GAP CREEK FLOODWAY ROAD ENCROACH ALLOWED A TO K

SECID	ERROR SEVERITY	FIRST VARIABLE	NO.	ERROR MESSAGE	SECOND VARIABLE	NO.	VALUE ASSUMED
BO EF	WARNING	STATION	9	IS LESS THAN	STATION	8	
BO JK	WARNING	STATION	14	IS LESS THAN	STATION	13	

INPUT SUMMARY FOR: GAP CREEK FLOODWAY ROAD ENCROACH ALLOWED A TO K

19 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 19 TYPE 3 CARDS.

KEPT 19 CROSS SECTIONS FOR EDITING

19 " " VALID FOR PROPERTY COMPUTATIONS

19 " " " " PROFILE "

*** INPUT CARD PRINTOUT ***

```
        1       2       3       4       5       6       7       8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0
7  5500                                  1
8  5550                                  1
```

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
9  5600     3 VHD 100   396   448 296300
9  5610   200 HOR       180   260 296439
9  5620   300 HOR       187   267 296555
9  5630   400 HOR        33   113 296858
9  5640   500 HOR       137   217 297110
9  5650   700 HOR       182   262 297392
9  5660   751 HOR       135   215 297409
9  5670   800 HOR       135   215 297456
9  5680   950 HOR       156   185 297460
9  5690   974 HOR       156   226 297720
9  5700  1000 HOR       156   226 297720
9  5710  1050 HOR       108   168 297779
9  5720  1100 HOR       108   168 298103
9  5730  1150 HOR       108   168 298404
9  5740  1200 HOR        12    71 290669
9  5750  1400 HOR       253   323 299111
9  5760       END                      REDUCING VEL ETC
```

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK FLOODWAY ROAD ENCROACH ALLOWED A TO K
PROFILE NUMBER 1. UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
B	KU/KD < 0.7 OR > 1.4		ALERTED USER
E T-W	KU/KD < 0.7 OR > 1.4		ALERTED USER
F APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
G TW	KU/KD < 0.7 OR > 1.4		ALERTED USER
BD RD	KU/KD < 0.7 OR > 1.4		ALERTED USER
H-0.4	KU/KD < 0.7 OR > 1.4		ALERTED USER
I	KU/KD < 0.7 OR > 1.4		ALERTED USER

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 17.DATE=12/21/77

Floodway USGS 60-ft

WATER-SURFACE PROFILE FOR: GAP CREEK FLOODWAY ROAD ENCROACH ALLOWED A TO K
PAGE 1 OF 2. PROFILE NUMBER 1. UPSTREAM COMPUTATIONS
*** FLOODWAY ANALYSIS *** REDUCING VEL ETC

SECID AT DISTANCE / WS ELEV	LENGTH / HV	DISCHARGE / HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	*ID*
A AT 0	0	2010.	512.	31587.	1.14	330.	448.	
2964.00	0.27			2964.27	3.93	0.35		*IS*
B AT 510	510	2010.	449.	48403.	1.00	180.	260.	
2965.33	0.31	1.35	0.02	2965.64	4.47	0.33	0.001	*XS*
C AT 915	405	2010.	311.	34031.	1.10	187.	267.	
2966.24	0.72	0.99	0.33	2966.96	6.47	0.56	0.002	*XS*
D AT 1520	605	2010.	283.	32095.	1.26	35.	113.	
~~2968.35~~	0.99	2.24	0.14	2969.34	7.11	0.60	0.001	*XS*
E T-W AT 2118	598	2010.	227.	22346.	1.37	137.	217.	
2971.38	1.66	3.37	0.34	2973.04	8.84	0.80	0.000	*XS*
BEGIN BRIDGE ANALYSIS								
BO EF AT 2118		1547.	127.	8064.	1.00	4.	26.	
2971.38	2.29	...1...	(-.001)		12.14	0.87		*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 62. / RIGHT 393.								*RG*
F APP AT 2176	58	2010.	418.	52787.	1.18	182.	262.	
2972.82	0.42	0.20	0.0	2973.24	4.81	0.38	-0.001	*AS*
M = 0.27 / E = 0.20 / K* = 0.61			545.	79069.	1.14	182.	262.	
2974.41	0.24			2974.65	3.69	0.26		*AS*
END BRIDGE ANALYSIS								
G TW AT 2870	694	2010.	317.	36551.	1.17	135.	215.	
2975.13	0.73	0.97	0.25	2975.86	6.35	0.53	-0.000	*XS*
G TW AT 2889	19	2010.	324.	37678.	1.17	135.	215.	
2975.22	0.70	0.06	0.0	2975.92	6.21	0.51	-0.002	*XS*
BO RD AT 2896	7	2010.	173.	21605.	1.02	156.	185.	
2975.25	2.15	0.03	1.45	2977.40	11.63	0.81	-0.000	*XS*
H-0.4 AT 2905	9	2010.	387.	51210.	1.13	156.	226.	
2976.96	0.48	0.03	0.0	2977.43	5.20	0.39	-0.001	*XS*
H APP AT 2931	26	2010.	359.	46477.	1.21	156.	226.	
2976.96	0.59	0.04	0.06	2977.55	5.60	0.42	0.013	*XS*
I-4.1 AT 3500	569	2010.	286.	33787.	1.03	108.	168.	
2978.32	0.79	1.46	0.10	2979.11	7.04	0.54	0.001	*XS*
I AT 4095	595	1650.	213.	20444.	1.00	114.	164.	
2981.14	0.93	2.88	0.07	2982.07	7.73	0.66	0.001	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK FLOODWAY ROAD ENCROACH ALLOWED A TO K
PAGE 2 OF 2, PROFILE NUMBER 1, UPSTREAM COMPUTATIONS
*** FLOODWAY ANALYSIS *** REDUCING VEL ETC

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV	HV	HF	HE	EG	V	FN	ACC	*ID*
I*2.3 AT 4625	530	1650.	247.	26128.	1.01	113.	168.	
2984.07	0.70	2.70	0.0	2984.77	6.67	0.54	0.002	*XS*
J-TW AT 5187	562	1650.	238.	21222.	1.00	12.	71.	
2986.81	0.75	2.76	0.03	2987.56	6.95	0.61	0.003	*XS*
BEGIN BRIDGE ANALYSIS								
BO JK AT 5187		1650.	123.	11060.	1.00	0.	30.	
2986.81	2.82	...1...	(-.001)		13.47	0.99		*BO*
NO EMBANKMENT CROSS SECTION								
K APP AT 5290	103	1650.	224.	18011.	1.06	253.	314.	
2987.47	0.90	0.73	0.07	2988.37	7.37	0.61	0.000	*AS*
M = 0.36 / E = 0.33 / K* = 0.71			402.	42298.	1.07	253.	323.	
2990.10	0.28		2990.38		0.28			*AS*
END BRIDGE ANALYSIS								

END OF THIS PROFILE

Floodway ok A- ~~B- K~~ A to I +2.3

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 19.DATE=12/21/77

SUMMARY OF ENCROACHMENTS FOR: GAP CREEK FLOODWAY ROAD ENCROACH ALLOWED A TO K
RESULTS OF THE FLOODWAY ANALYSIS ENTITLED REDUCING VEL ETC (PROFILE NUMBER 1, UPSTREAM COMPUTATIONS) ARE COMPARED TO THE RESULTS OF THE BASE PROFILE (PROFILE NUMBER 1, UPSTREAM COMPUTATIONS). PAGE 1 OF 1

SECID	CARD 3 SEQUENCE	TYPE	FW OPTION	ENCROACHMENT LEFT	ENCROACHMENT RIGHT	SURCHARGE IDEAL	SURCHARGE ACTUAL	CHANNEL WIDTH NATURAL	CHANNEL WIDTH FLOODWAY
A	3	1	VHD	YES	YES	1.00	1.00	******	119
B	200	0	HOR	YES	YES	******	0.94	******	80
C	300	0	HOR	YES	YES	******	0.69	******	80
D	400	0	HOR	YES	YES	******	-0.23	******	78
E T-W	500	0	HOR	YES	YES	******	0.28	******	80
BO EF	600	2	N.A.	N.A.	N.A.	******	0.28	******	21
ROAD	650	4	N.A.	N.A.	N.A.	******	******	******	******
F APP	700	5	HOR	YES	YES	******	0.49	******	80
G TW	751	0	HOR	YES	YES	******	1.04	******	80
G TW	800	0	HOR	YES	YES	******	0.66	******	80
BO RD	950	0	HOR	YES	YES	******	0.65	******	29
H-0.4	974	0	HOR	YES	YES	******	-0.24	******	70
H APP	1000	0	HOR	YES	YES	******	-0.24	******	70
I-4.1	1050	0	HOR	YES	YES	******	0.53	******	60
I	1100	0	HOR	YES	YES	******	0.11	******	50
ok I+2.3	1150	0	HOR	YES	YES	******	0.03	******	55
J-TW	1200	0	HOR	YES	YES	******	80.12	******	59
BO JK	1300	2	N.A.	N.A.	N.A.	******	80.12	******	21
K APP	1400	5	HOR	YES	YES	******	-1.01	******	70

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT=   1,DATE= 6/28/77

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

1      1 GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T   32  4 01 05 12
2      2 296195 296273 296300 296368
3   100      A 1  21  3 2956         0 99 99
4   104     950    1680   2010    3080
5   105       0  1 29690    78  1 29659   175  1 29630   215  1 29619   239  1 29614
5   106     288  1 29612   371  1 29607   396  2 29600   403  2 29556   404  2 29556
5   107     410  2 29553   414  2 29552   417  2 29559   426  2 29599   448  3 29617
5   108     468  3 29616   515  3 29619   558  3 29621   598  3 29622   628  3 29632
5   109     665  3 29683
6   110  1  2 070 070  2  5 045 060  1  2 065 065
3   200      B 0  21  1 2959       510 99 99
5   205       0  1 29708    40  1 29647    80  1 29639   120  1 29639   178  1 29612
5   206     187  1 29590   194  1 29589   203  1 29606   230  1 29610   232  1 29600
5   207     235  1 29580   240  1 29574   246  1 29580   250  1 29595   282  1 29618
5   208     300  1 29618   350  1 29628   400  1 29636   450  1 29647   500  1 29679
5   209     543  1 29706
6   210  1  2 040 040
3   300      C 0  18  3 2960       915 99 99                                   08
5   305       0  1 29725    50  1 29690   100  1 29680   150  1 29660   198  2 29646
5   306     217  2 29625   221  2 29600   224  2 29595   231  2 29589   237  2 29582
5   307     241  2 29595   253  3 29642   300  3 29655   350  3 29662   400  3 29670
5   308     433  3 29685   450  3 29703   457  3 29717
6   309  1  2 040 035  2  5 045 035  1  2 040 035
3   400      D 0  15  3 2962      1520 99 99
5   405       0  1 29738    29  1 29695    51  1 29649    56  2 29637    57  2 29611
5   406      64  2 29607    73  2 29611    86  3 29657   120  3 29682   150  3 29683
5   407     200  3 29681   250  3 29680   273  3 29682   282  3 29737   309  3 29722
6   408  1  2 040 035  1  4 045 035  1  2 040 035
3   500 F T-W 0  19  3 2965      2118 99 99
5   505       0  1 29780    50  1 29747   100  1 29718   137  1 29706   146  2 29706
5   506     150  2 29643   152  2 29638   157  2 29638   160  2 29638   163  2 29643
5   507     165  2 29656   168  3 29685   205  3 29705   252  3 29696   300  3 29699
5   508     350  3 29698   380  3 29707   389  3 29765   401  3 29781
6   509  1  2 040 035  1  4 045 035  1  2 040 035
3   600 BO EF 2   9  1 2964      2118          15 29714 3 0
5   605       0  1 29716     3  1 29764     6  1 29643    13  1 29638    15  1 29637
5   606      20  1 29643    24  1 29684    26  1 29712     0 -9 29716
6   608  1  2 050 050
3   650 ROAD  4  10  2  13            1  2           2 2            2
5   655       0  1 29800   100  1 29747   153  1 29734   168  2 29732   181  2 29731
5   656     255  2 29723   300  2 29725   349  2 29731   387  2 29753   411  2 29783
3   700 F APP 5  23  3 2966      2176  1  3
5   705       0  1 29790    49  1 29759    93  1 29731   150  1 29717   173  1 29666
5   706     176  1 29655   177  1 29653   178  1 29656   180  1 29668   189  2 29670
5   707     196  2 29644   200  2 29640   202  2 29639   206  2 29640   209  2 29644
```

ALL FLOODS
SECTIONS A to I-41

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
5   708      216  3 29691  252  3 29691  300  3 29693  337  3 29693  375  3 29697
5   709      400  3 29713  434  3 29771  457  3 29786
6   710  1   2 045 035  2   4 045 035  1   2 040 035
3   751 G TW  0  19  3 2967    2870 99 99
5   752       0  1 29810   50  1 29777  100  1 29749  150  2 29735  160  2 29712
5   753      164  2 29681  169  2 29674  177  2 29661  179  2 29664  182  2 29674
5   754      187  2 29705  193  3 29730  246  3 29728  284  3 29735  300  3 29736
5   755      339  3 29742  390  3 29763  425  3 29786  450  3 29814
6   756  1   2 040 035  1   2 045 035  1   2 040 035
3   800 G TW  0  19  3 2967    2889 99 99
5   805       0  1 29810   50  1 29777  100  1 29749  150  2 29735  160  2 29712
5   806      164  2 29681  169  2 29674  177  2 29661  179  2 29664  182  2 29674
5   807      187  2 29705  193  3 29730  246  3 29728  284  3 29735  300  3 29736
5   808      339  3 29742  390  3 29763  425  3 29786  450  3 29814
6   810  1   2 040 035  1   2 045 035  1   2 040 035
3   950 RD RD 0  20  3 2968    2896 99 99                                    10
5   951       0  1 29816   43  1 29785  135  1 29761  159  1 29744  159  2 29730
5   952      164  2 29694  167  2 29675  171  2 29679  172  2 29680  173  2 29664
5   953      177  2 29669  180  2 29679  184  2 29710  185  3 29734  185  3 29746
5   954      260  3 29747  300  3 29749  333  3 29749  390  3 29765  450  3 29829
6   955  1   2 040 035  2   4 045 035  1   2 040 035
3   974 H-0.4 0  17  3 2967    2905 99 99
5   975       0  1 29801   72  1 29769  120  1 29753  150  1 29744  187  2 29725
5   976      191  2 29678  195  2 29665  200  2 29672  205  2 29678  211  2 29710
5   977      222  3 29737  262  3 29739  300  3 29738  346  3 29746  381  3 29754
5   978      423  3 29772  450  3 29795
6   980  1   2 040 035  2   4 045 035  1   2 040 035
3  1000 H APP 0  18  3 2968    2931  1   3
5  1005       0  1 29805   72  1 29773  120  1 29757  150  1 29748  187  2 29729
5  1006      191  2 29682  195  2 29669  200  2 29676  205  2 29682  211  2 29714
5  1007      213  3 29719  222  3 29741  262  3 29743  300  3 29742  346  3 29750
5  1008      381  3 29758  423  3 29776  450  3 29799
6  1010  1   2 040 035  1   4 045 035  1   2 040 035
3  1050 I-4.1 0  17  3 2972    3500 99 99
5  1055       0  1 29837   37  1 29794   77  1 29775  113  2 29778  121  2 29730
5  1056      128  2 29714  140  2 29711  150  2 29706  151  2 29714  157  2 29753
5  1057      165  3 29772  198  3 29772  223  3 29764  260  3 29772  297  3 29800
5  1058      301  3 29810  310  3 29869
6  1060  1   2 040 035  2   6 045 035  1   2 040 035
3  1100 I      1  17  3 2975    4095 99 99
4  1111    750   1360   1650
                          M                                    **ERROR(S)**
5  1115       0  1 29878   37  1 29835   77  1 29816  113  2 29819  121  2 29771
5  1116      128  2 29755  140  2 29752  150  2 29747  151  2 29755  157  2 29794
5  1117      165  3 29813  198  3 29813  223  3 29805  260  3 29813  297  3 29841
5  1118      301  3 29851  310  3 29910
```

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
6  1120  1  2 040 035  2  6 045 035  1  2 040 035
3  1150 I+2.3 0  17  3 2978    4625 99 99
5  1155       0  1 29901   37  1 29858   77  1 29839  113  2 29842  121  2 29794
5  1156     128  2 29778  140  2 29775  150  2 29770  151  2 29778  157  2 29817
5  1157     165  3 29836  198  3 29836  223  3 29828  260  3 29836  297  3 29864
5  1158     301  3 29874  310  3 29933
6  1159  1  2 040 035  2  6 045 035  1  2 040 035
3  1200 J-TW  0  16  1 2980    5187 99 99
5  1205       0  1 29941   10  1 29885   13  1 29849   19  1 29815   20  1 29798
5  1206      22  1 29792   25  1 29793   30  1 29794   31  1 29811   43  1 29832
5  1207      60  1 29840   77  1 29880  121  1 29891  150  1 29893  181  1 29911
5  1208     200  1 29961
6  1210  1  4 045 040
3  1300 BO JK 2  14  1 2980    5187       45 29924 1 0
5  1305       0  1 29924    0  1 29829    1  1 29829    2  1 29810    3  1 29796
5  1306       6  1 29798    9  1 29806   19  1 29815   25  1 29809   28  1 29814
5  1307      29  1 29829   30  1 29829   30  1 29924    0 -9 29924
6  1310  1  2 040 040
3  1400 K APP 5  21  3 2981    5290  1  3
5  1405       0  1 29915   80  1 29883  150  1 29872  228  1 29872  264  1 29854
5  1406     274  2 29838  278  2 29831  280  2 29811  284  2 29807  288  2 29804
5  1407     292  2 29806  294  2 29811  295  2 29830  300  2 29837  304  3 29847
5  1408     318  3 29884  363  3 29889  423  3 29894  450  3 29900  536  3 29923
5  1409     600  3 29933
6  1410  1  2 045 035  1  2 050 050  1  2 045 045
3  1450 L-4.6 0  17  3 2985    5750 99 99
5  1451       0  1 29957   25  1 29911   55  1 29901   87  2 29902   92  2 29865
5  1452     112  2 29848  116  2 29842  118  2 29840  124  2 29848  150  2 29868
5  1453     171  3 29908  214  3 29910  252  3 29915  281  3 29917  300  3 29918
5  1454     352  3 29935  434  3 29963
6  1455  1  2 045 045  2  5 050 045  1  2 045 045
3  1500 L      0  17  3 2989    6325 99 99
5  1505       0  1 30003   25  1 29957   55  1 29947   87  2 29948   92  2 29911
5  1506     112  2 29894  116  2 29888  118  2 29886  124  2 29894  150  2 29914
5  1507     171  3 29954  214  3 29956  252  3 29961  281  3 29963  300  3 29964
5  1508     352  3 29981  434  3 30009
6  1510  1  2 045 045  2  5 050 045  1  2 045 045
3  1550 M-9.0 0  19  3 2999    7250 99 99
5  1552       0  1 30097   67  1 30046  116  1 30030  150  2 30025  156  2 30005
5  1553     157  2 29986  158  2 29980  162  2 29982  164  2 29980  166  2 29986
5  1554     167  2 30004  185  2 30013  200  3 30024  243  3 30020  291  3 30021
5  1555     300  3 30024  341  3 30034  350  3 30058  356  3 30082
6  1556  1  2 035 035  2  5 050 035  1  2 045 045
3  1600 M      1  19  3 3008    8160 99 99
4  1601    570   1060   1300   2050
```

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
5  1605       0  1 30187   67  1 30136  116  1 30120  150  2 30115  156  2 30095
5  1606     157  2 30076  158  2 30070  162  2 30072  164  2 30070  166  2 30076
5  1607     167  2 30094  185  2 30103  200  3 30114  243  3 30110  291  3 30111
5  1608     300  3 30113  341  3 30124  350  3 30148  356  3 30172
6  1610  1  2 035 035  2  5 050 035  1  2 045 045
3  1700 N      0  19  3 3015    9110 99 99
5  1705       0  1 30253   31  1 30208   49  1 30192  118  1 30182  145  1 30182
5  1706     180  1 30182  207  2 30185  217  2 30171  219  2 30147  220  2 30143
5  1707     222  2 30143  224  2 30144  225  2 30160  231  3 30182  279  3 30177
5  1708     300  3 30179  350  3 30198  394  3 30211  412  3 30250
6  1710  1  2 045 035  1  2 045 045  1  2 045 035
3  1800 O-TW  0  18  3 3020    9690 99 99
5  1805       0  1 30310   22  1 30289   25  1 30288   35  1 30273   45  1 30270
5  1806     130  1 30251  200  1 30241  285  1 30221  287  2 30205  289  2 30198
5  1807     294  2 30199  304  2 30197  308  2 30202  311  3 30235  324  3 30229
5  1808     359  3 30253  383  3 30290  396  3 30321
6  1810  1  2 035 035  1  5 045 035  1  2 035 035
3  1900 RO OP 2   8  1 3019    9690        0 30235 3 0
5  1905       0  1 30236    0  1 30214    3  1 30205    6  1 30195   10  1 30184
5  1906      21  1 30194   21  1 30234    0 -9 30236
6  1910  1  2 050 050
3  2000 ROAD  4   8  3   24         1  3          2 2 2              2
5  2005       0  1 30310  100  1 30278  200  1 30260  300  1 30252  364  2 30250
5  2006     385  3 30249  400  3 30252  500  3 30315
3  2100 P APP 5   22  3 3019    9736  1  3
5  2105       0  1 30315   80  1 30267  120  1 30251  200  1 30241  250  1 30242
5  2106     300  1 30235  309  1 30237  320  1 30249  335  1 30239  339  2 30228
5  2107     341  2 30207  345  2 30185  349  2 30185  353  2 30186  354  2 30207
5  2108     360  3 30226  364  3 30238  385  3 30250  403  3 30255  415  3 30261
5  2109     420  3 30295  450  3 30312
6  2110  1  2 050 040  2  4 050 080  1  2 055 055
3  2200 O      0  19  3 3029   10730 99 99
5  2205       0  1 30404   44  1 30372  100  1 30335  128  2 30319  134  2 30296
5  2206     136  2 30283  139  2 30283  145  2 30294  152  3 30318  200  3 30321
5  2207     300  3 30325  400  3 30326  485  3 30322  487  3 30306  489  3 30304
5  2208     491  3 30306  493  3 30316  501  3 30330  560  3 30404
6  2210  1  2 035 035  2  4 045 035  1  2 040 035
3  2300 P      1  14  3 3044   12405 99 99
4  2301    450    830   1030   1600
5  2305       0  1 30561  100  1 30511  200  1 30479  322  2 30459  324  2 30452
5  2306     327  2 30439  331  2 30447  336  2 30449  338  2 30454  339  3 30471
5  2307     390  3 30465  400  3 30480  420  3 30543  431  3 30565
6  2310  1  2 040 035  1  2 045 045  1  2 045 035
3  2400 S      0  14  3 3060   13560 99 99
5  2405       0  1 30702   72  1 30673  100  1 30654  162  1 30625  200  2 30608
```

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

5  2406      201  2 30596  202  2 30593  204  2 30591  207  2 30592  208  2 30597
5  2407      209  3 30609  255  3 30648  286  3 30696  290  3 30706
6  2410  1   2 045 035  1  2 045 045  1  2 045 035
3  2500 T      0  17  3 3069   14375 99 99
5  2505        0  1 30802   25  1 30784   85  1 30746   95  2 30732  100  2 30699
5  2506      101  2 30693  104  2 30690  111  2 30699  115  3 30737  180  3 30744
5  2507      200  3 30741  235  3 30738  244  3 30720  250  3 30732  282  3 30752
5  2508      314  3 30769  350  3 30825
6  2510  1   2 050 050  1  2 045 045  1  2 035 035
```

PAGE 1 OF EDITING NOTES FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T

SECID	ERROR SEVERITY	FIRST VARIABLE	NO.	ERROR MESSAGE	SECOND VARIABLE	NO.	VALUE ASSUMED
BO FF	WARNING	STATION	9	IS LESS THAN	STATION	8	
I	WARNING	NPR		WRONG			3
BO JK	WARNING	STATION	14	IS LESS THAN	STATION	13	
M	WARNING	NPR		WRONG			4
BO OP	WARNING	STATION	8	IS LESS THAN	STATION	7	
T	WARNING	HSUBO		IS LESS THAN	GMIN		> GMIN

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 7.DATE= 6/28/77

INPUT SUMMARY FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STH-T

32 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 32 TYPE 3 CARDS

KEPT 32 CROSS SECTIONS FOR EDITING

32 " " VALID FOR PROPERTY COMPUTATIONS

32 " " " " PROFILE "

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
B	KU/KD < 0.7 OR > 1.4		ALERTED USER
C	KU/KD < 0.7 OR > 1.4		ALERTED USER
D	KU/KD < 0.7 OR > 1.4		ALERTED USER
E T-W	KU/KD < 0.7 OR > 1.4		ALERTED USER
F APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
G TW	KU/KD < 0.7 OR > 1.4		ALERTED USER
I	KU/KD < 0.7 OR > 1.4		ALERTED USER
L	WS TOO LOW		USED WSMIN = WSC
L	KU/KD < 0.7 OR > 1.4		ALERTED USER
M-9.0	WS TOO LOW		USED WSMIN = WSC
M	WS TOO LOW		USED WSMIN = WSC
N	WS TOO LOW		USED WSMIN = WSC
O-TW	WS TOO LOW		USED WSMIN = WSC
P APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
P APP	WSU > BELMX (1)		CHECKED QBO (2)
Q	WS TOO LOW		USED WSMIN = WSC
Q	WS NOT FOUND BETWEEN	WS = 3032.74 & WS = 3040.40	USED DEL = 0.25
Q	WS NOT FOUND		ASSUMED WS = WSC
R	WS TOO LOW		USED WSMIN = WSC
R	WS NOT FOUND BETWEEN	WS = 3047.24 & WS = 3056.50	USED DEL = 0.25
R	WS NOT FOUND		ASSUMED WS = WSC
S	WS TOO LOW		USED WSMIN = WSC
S	WS NOT FOUND BETWEEN	WS = 3062.72 & WS = 3070.60	USED DEL = 0.25
S	WS NOT FOUND		ASSUMED WS = WSC
T	WS TOO LOW		USED WSMIN = WSC

10 YR

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 15TH-T
PAGE 1 OF 3, PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID AT DISTANCE/ LENGTH/DISCHARGE/ AREA /CONVEYANCE/ ALPHA/ LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*
A AT 0 / 0 / 950. / 360. / 14904. / 1.89 / 213. / 526. 2961.95 / 0.20 / / 2962.15 / 2.64 / 0.38/ *IS*
B AT 510 / 510 / 950. / 465. / 26395. / 1.00 / 134. / 379. 2963.26 / 0.06 / 1.17 / 0.0 / 2963.33 / 2.04 / 0.26 / 0.003 *XS*
C AT 915 / 405 / 950. / 163. / 12146. / 1.00 / 201. / 257. 2964.31 / 0.53 / 1.14 / 0.37 / 2964.84 / 5.84 / 0.59 / 0.001 *XS*
D AT 1520 / 605 / 950. / 174. / 17824. / 1.18 / 42. / 101. 2966.83 / 0.54 / 2.52 / 0.01 / 2967.37 / 5.46 / 0.49 / 0.003 *XS*
E T-W AT 2118 / 598 / 950. / 104. / 9995. / 1.11 / 147. / 185. 2969.41 / 1.45 / 3.03 / 0.45 / 2970.86 / 9.17 / 0.81 / 0.002 *XS*
BEGIN BRIDGE ANALYSIS
BO EF AT 2118 / / 835. / 89. / 6025. / 1.00 / 5. / 25. 2969.41 / 1.38 / ...1... (-.001) / 9.42 / 0.78 / *BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 0. / RIGHT 121. / *RG*
F APP AT 2176 / 58 / 950. / 539. / 44609. / 1.51 / 154. / 394. 2970.91 / 0.07 / 0.12 / 0.0 / 2970.98 / 1.76 / 0.20 / 0.005 *AS*
M = 0.67 / E = 0.35 / K* = 1.49 / 1110. / 116457. / 1.24 / 96. / 410. 2973.02 / 0.01 / / 2973.04 / 0.86 / 0.08 / *AS*
END BRIDGE ANALYSIS
G TW AT 2870 / 694 / 950. / 173. / 16244. / 1.13 / 152. / 262. 2973.10 / 0.53 / 0.33 / 0.26 / 2973.63 / 5.49 / 0.52 / -0.000 *XS*
G TW AT 2889 / 19 / 950. / 185. / 17001. / 1.19 / 151. / 268. 2973.20 / 0.49 / 0.06 / 0.0 / 2973.69 / 5.15 / 0.50 / -0.001 *XS*
BO RD AT 2896 / 7 / 950. / 118. / 12150. / 1.00 / 159. / 185. 2973.23 / 1.01 / 0.03 / 0.52 / 2974.24 / 8.06 / 0.67 / -0.000 *XS*
H-0.4 AT 2905 / 9 / 950. / 158. / 15256. / 1.11 / 165. / 222. 2973.65 / 0.63 / 0.04 / 0.0 / 2974.28 / 6.02 / 0.55 / -0.001 *XS*
H APP AT 2931 / 26 / 950. / 137. / 14268. / 1.12 / 172. / 220. 2973.65 / 0.84 / 0.11 / 0.11 / 2974.50 / 6.95 / 0.60 / 0.000 *XS*
I-4.1 AT 3500 / 569 / 950. / 179. / 15879. / 1.00 / 115. / 161. 2976.33 / 0.44 / 2.27 / 0.0 / 2976.77 / 5.30 / 0.47 / 0.002 *XS*
I AT 4095 / 595 / 750. / 126. / 9396. / 1.00 / 118. / 157. 2979.16 / 0.55 / 2.88 / 0.06 / 2979.71 / 5.97 / 0.59 / 0.006 *XS*

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PAGE 2 OF 3, PROFILE NUMBER 1. UPSTREAM COMPUTATIONS

SECID AT DISTANCE/ LENGTH/DISCHARGE/ AREA /CONVEYANCE/ ALPHA/ LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*
I+2.3 AT 4625 / 530 / 750. / 147. / 11872. / 1.00 / 117. / 158. 2981.98 / 0.41 / 2.67 / 0.0 / 2982.39 / 5.11 / 0.48 / 0.003 *XS*
J-TW AT 5187 / 562 / 750. / 136. / 8778. / 1.00 / 13. / 64. 2984.98 / 0.48 / 3.03 / 0.03 / 2985.46 / 5.53 / 0.60 / 0.001 *XS*
========== BEGIN BRIDGE ANALYSIS ==========
BO JK AT 5187 / / 750. / 84. / 6351. / 1.00 / 0. / 30. 2984.98 / 1.25 / ...1... (-.001) / 8.96 / 0.79 / *BO*
NO EMBANKMENT CROSS SECTION
K APP AT 5290 / 103 / 750. / 125. / 7766. / 1.11 / 257. / 308. 2985.76 / 0.63 / 0.85 / 0.08 / 2986.38 / 6.02 / 0.60 / 0.000 *AS*
M = 0.07 / E = 0.16 / K* = 0.12 / 138. / 8808. / 1.14 / 252. / 309. 2986.00 / 0.53 / / 2986.53 / 5.44 / 0.53 / *AS*
========== END BRIDGE ANALYSIS ==========
L-4.6 AT 5750 / 460 / 750. / 202. / 12282. / 1.00 / 89. / 160. 2988.71 / 0.21 / 2.39 / 0.0 / 2988.93 / 3.72 / 0.39 / 0.004 *XS*
L AT 6325 / 575 / 750. / 140. / 6923. / 1.00 / 90. / 155. 2992.40 / 0.45 / 3.80 / 0.12 / 2992.85 / 5.36 / 0.64 / 0.000 *XS*
M-9.0 AT 7250 / 925 / 750. / 190. / 7278. / 1.30 / 126. / 319. 3002.86 / 0.32 / 10.33 / 0.0 / 3003.17 / 3.95 / 0.60 / 0.001 *XS*
M AT 8160 / 910 / 570. / 168. / 6197. / 1.30 / 134. / 316. 3011.73 / 0.23 / 8.79 / 0.0 / 3011.97 / 3.39 / 0.53 / 0.002 *XS*
N AT 9110 / 950 / 570. / 212. / 7019. / 1.45 / 70. / 326. 3018.90 / 0.16 / 7.10 / 0.0 / 3019.07 / 2.69 / 0.51 / 0.002 *XS*
O-TW AT 9690 / 580 / 570. / 96. / 6028. / 1.28 / 243. / 327. 3023.09 / 0.70 / 4.45 / 0.27 / 3023.79 / 5.93 / 0.72 / -0.000 *XS*
========== BEGIN BRIDGE ANALYSIS ==========
BO OP AT 9690 / / 567. / 87. / 3813. / 1.00 / 0. / 21. 3023.60 / 0.66 / ...2... (-.001) / 6.52 / 0.56 / *BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 0. / RIGHT 0. / *RG*
P APP AT 9736 / 46 / 570. / 88. / 3530. / 1.12 / 280. / 364. 3023.78 / 0.73 / 0.70 / 0.01 / 3024.51 / 6.47 / 0.63 / 0.094 *AS*
M = **** / E = **** / K* = **** / 156. / 5219. / 1.54 / 178. / 374. 3024.38 / 0.32 / / 3024.70 / 3.65 / 0.42 / *AS*
========== END BRIDGE ANALYSIS ==========
O AT 10730 / 994 / 570. / 227. / 8581. / 2.47 / 113. / 500. 3032.74 / 0.24 /******* /******* / 3032.98 / 2.51 / 0.50 /******* *XS*

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PAGE 3 OF 3. PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID	AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW							
	WS ELEV / HV / HF / HE / EG / V / FN / ACC							*ID*
R	AT 12405 / 1675 / 450. / 119. / 4280. / 1.54 / 240. / 395.							
	3047.24 / 0.34 /******* /******* / 3047.58 / 3.77 / 0.67 /*******							*XS*
S	AT 13560 / 1155 / 450. / 90. / 3867. / 1.46 / 157. / 230.							
	3062.72 / 0.57 /******* /******* / 3063.29 / 5.01 / 0.76 /*******							*XS*
T	AT 14375 / 815 / 450. / 68. / 3985. / 1.10 / 94. / 252.							
	3073.34 / 0.75 / 10.71 / 0.09 / 3074.09 / 6.64 / 0.73 / -0.000							*XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PROFILE NUMBER 1. UPSTREAM COMPUTATIONS

SECID	L	M-9.0	M	N	O-TW	O	R	S
WSC	2991.81	3002.69	3011.50	3018.71	3022.99	3032.74	3047.24	3062.72

SECID	T
WSC	3073.01

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PROFILE NUMBER 2, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
B	KU/KD < 0.7 OR > 1.4		ALERTED USER
C	KU/KD < 0.7 OR > 1.4		ALERTED USER
F APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
G TW	KU/KD < 0.7 OR > 1.4		ALERTED USER
BO RD	KU/KD < 0.7 OR > 1.4		ALERTED USER
H-0.4	KU/KD < 0.7 OR > 1.4		ALERTED USER
I-4.1	KU/KD < 0.7 OR > 1.4		ALERTED USER
L-4.6	KU/KD < 0.7 OR > 1.4		ALERTED USER
L	KU/KD < 0.7 OR > 1.4		ALERTED USER
M-9.0	WS TOO LOW		USED WSMIN = WSC
M	WS TOO LOW		USED WSMIN = WSC
N	WS TOO LOW		USED WSMIN = WSC
O-TW	WS TOO LOW		USED WSMIN = WSC
O-TW	WS NOT FOUND BETWEEN	WS = 3023.96 & WS = 3032.10	
			USED DEL = 0.25
			ASSUMED WS = WSC
			ALERTED USER
O-TW	WS NOT FOUND		USED WSMIN = WSC
P APP	KU/KD < 0.7 OR > 1.4	WS = 3033.00 & WS = 3040.40	
			USED DEL = 0.25
			ASSUMED WS = WSC
Q	WS TOO LOW		USED WSMIN = WSC
Q	WS NOT FOUND BETWEEN		ALERTED USER
			USED WSMIN = WSC
Q	WS NOT FOUND	WS = 3063.37 & WS = 3070.60	
R	WS TOO LOW		USED DEL = 0.25
R	KU/KD < 0.7 OR > 1.4		ASSUMED WS = WSC
S	WS TOO LOW		USED WSMIN = WSC
S	WS NOT FOUND BETWEEN		ALERTED USER
			USED WSMIN = WSC
S	WS NOT FOUND	WS = 3074.60 & WS = 3082.50	
T	WS TOO LOW		USED DEL = 0.25
T	WS NOT FOUND BETWEEN		ASSUMED WS = WSC
			USED WSMIN = WSC

T ! WS NOT FOUND

USED DEL = 0.25

ASSUMED WS = WSC

50 YR

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PAGE 1 OF 3, PROFILE NUMBER 2, UPSTREAM COMPUTATIONS

SECID AT DISTANCE/ LENGTH/DISCHARGE/ AREA /CONVEYANCE/ ALPHA/ LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*								
A AT	0 /	0 /	1680. /	665. /	26304. /	1.87 /	185. /	614.
2962.73 /	0.19 /			/ 2962.92 /	2.52 /	0.37/		*IS*
B AT	510 /	510 /	1680. /	716. /	42372. /	1.00 /	69. /	424.
2964.13 /	0.09 /	1.29 /	0.0 /	2964.21 /	2.35 /	0.29 /	0.005	*XS*
C AT	915 /	405 /	1680. /	244. /	20751. /	1.17 /	175. /	292.
2965.27 /	0.86 /	1.30 /	0.62 /	2966.14 /	6.89 /	0.67 /	0.003	*XS*
D AT	1520 /	605 /	1680. /	275. /	28791. /	1.47 /	35. /	267.
2968.14 /	0.85 /	2.86 /	0.0 /	2969.00 /	6.12 /	0.56 /	0.002	*XS*
E T-W AT	2118 /	598 /	1680. /	325. /	21894. /	2.19 /	131. /	380.
2970.79 /	0.91 /	2.68 /	0.03 /	2971.71 /	5.18 /	0.67 /	-0.000	*XS*
========== BEGIN BRIDGE ANALYSIS ==========								
BO EF AT	2118 /	/	1109. /	116. /	8777. /	1.00 /	4. /	26.
2970.79 /	1.42 /	...1...	(-.001)	/	9.54 /	0.71 /		*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT		14. / RIGHT		568. /				*RG*
F APP AT	2176 /	58 /	1680. /	737. /	69508. /	1.29 /	150. /	402.
2971.71 /	0.10 /	0.11 /	0.0 /	2971.81 /	2.28 /	0.21 /	-0.000	*AS*
M = 0.61 / E = 0.67 / K* = 1.36 /				1332. /	151076. /	1.19 /	83. /	414.
2973.71 /	0.03 /			/ 2973.74 /	1.26 /	0.11 /		*AS*
========== END BRIDGE ANALYSIS ==========								
G TW AT	2870 /	694 /	1680. /	277. /	23540. /	1.52 /	138. /	316.
2973.84 /	0.87 /	0.55 /	0.42 /	2974.71 /	6.07 /	0.66 /	-0.002	*XS*
G TW AT	2889 /	19 /	1680. /	337. /	28030. /	1.65 /	127. /	336.
2974.15 /	0.64 /	0.08 /	0.0 /	2974.79 /	4.98 /	0.56 /	-0.002	*XS*
BO RD AT	2896 /	7 /	1680. /	143. /	16699. /	1.00 /	159. /	185.
2974.20 /	2.15 /	0.04 /	1.51 /	2976.34 /	11.75 /	0.88 /	-0.000	*XS*
H-0.4 AT	2905 /	9 /	1680. /	724. /	63245. /	1.63 /	92. /	400.
2976.23 /	0.14 /	0.02 /	0.0 /	2976.37 /	2.32 /	0.26 /	-0.001	*XS*
H APP AT	2931 /	26 /	1680. /	597. /	50342. /	1.93 /	105. /	390.
2976.20 /	0.24 /	0.02 /	0.05 /	2976.44 /	2.81 /	0.32 /	-0.001	*XS*
I-4.1 AT	3500 /	569 /	1680. /	262. /	23212. /	1.22 /	114. /	261.
2977.30 /	0.78 /	1.37 /	0.27 /	2978.09 /	6.42 /	0.60 /	0.001	*XS*
I AT	4095 /	595 /	1360. /	193. /	17490. /	1.01 /	115. /	232.
2980.69 /	0.78 /	3.39 /	0.0 /	2981.47 /	7.04 /	0.62 /	0.001	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR ISTM-T
PAGE 2 OF 3, PROFILE NUMBER 2, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH/DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*
I+2.3 AT 4625 / 530 / 1360. / 237. / 21369. / 1.13 / 114. / 256. 2983.52 / 0.58 / 2.62 / 0.0 / 2984.09 / 5.74 / 0.52 / -0.003 *XS*
J-TW AT 5187 / 562 / 1360. / 209. / 17134. / 1.00 / 12. / 70. 2986.32 / 0.66 / 2.84 / 0.04 / 2986.98 / 6.52 / 0.61 / 0.003 *XS*
========== BEGIN BRIDGE ANALYSIS ==========
BO JK AT 5187 / / 1360. / 112. / 9729. / 1.00 / 0. / 30. 2986.32 / 2.29 / ...1... (-.001) / 12.14 / 0.93 / *BO*
NO EMBANKMENT CROSS SECTION
K APP AT 5290 / 103 / 1360. / 207. / 14362. / 1.23 / 232. / 313. 2987.01 / 0.82 / 0.77 / 0.08 / 2987.83 / 6.55 / 0.62 / -0.000 *AS*
M = 0.66 / E = 0.13 / K* = 0.95 / 993. / 79054. / 1.26 / 38. / 449. 2989.97 / 0.04 / / 2990.01 / 1.37 / 0.15 / *AS*
========== END BRIDGE ANALYSIS ==========
L-4.6 AT 5750 / 460 / 1360. / 326. / 25267. / 1.02 / 50. / 168. 2990.28 / 0.28 / 0.43 / 0.12 / 2990.56 / 4.17 / 0.37 / 0.000 *XS*
L AT 6325 / 575 / 1360. / 207. / 12779. / 1.00 / 89. / 160. 2993.38 / 0.67 / 3.29 / 0.20 / 2994.06 / 6.57 / 0.68 / 0.009 *XS*
M-9.0 AT 7250 / 925 / 1360. / 306. / 13764. / 1.27 / 104. / 341. 3003.39 / 0.39 / 9.73 / 0.0 / 3003.79 / 4.44 / 0.63 / 0.003 *XS*
M AT 8160 / 910 / 1060. / 262. / 11089. / 1.28 / 110. / 333. 3012.19 / 0.33 / 8.73 / 0.0 / 3012.52 / 4.05 / 0.59 / 0.003 *XS*
N AT 9110 / 950 / 1060. / 343. / 13686. / 1.23 / 47. / 339. 3019.37 / 0.18 / 7.03 / 0.0 / 3019.56 / 3.00 / 0.49 / 0.006 *XS*
O-TW AT 9690 / 580 / 1060. / 189. / 12385. / 1.49 / 206. / 340. 3023.96 / 0.73 /******* /******* / 3024.69 / 5.59 / 0.71 /******* *XS*
========== BEGIN BRIDGE ANALYSIS ==========
BO OP AT 9690 / / 803. / 87. / 3813. / 1.00 / 0. / 21. 3023.60 / 1.33 / ...3... (-.001) / 9.24 / 0.80 / *BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 224. / RIGHT 48. / *RG*
P APP AT 9736 / 46 / 1060. / 231. / 7659. / 1.48 / 149. / 381. 3024.74 / 0.49 / 0.54 / 0.0 / 3025.23 / 4.59 / 0.54 / -0.006 *AS*
M = **** / E = **** / K* = **** / 577. / 27232. / 1.06 / 98. / 413. 3025.98 / 0.06 / / 3026.03 / 1.84 / 0.25 / *AS*
========== END BRIDGE ANALYSIS ==========
O AT 10730 / 994 / 1060. / 329. / 13544. / 2.05 / 109. / 501. 3033.00 / 0.33 /******* /******* / 3033.33 / 3.23 / 0.48 /******* *XS*

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PAGE 3 OF 3, PROFILE NUMBER 2. UPSTREAM COMPUTATIONS

SECID	AT	DISTANCE	LENGTH	DISCHARGE	AREA	CONVEYANCE	ALPHA	LEW	REW
	WS ELEV	HV	HF	HE	EG	V	FN	ACC	*ID*
R	AT	12405	1675	830.	189.	7521.	1.36	215.	398.
	3047.65	0.41	14.69	0.04	3048.06	4.40	0.71	0.001	*XS*
S	AT	13560	1155	830.	145.	7186.	1.28	143.	238.
	3063.37	0.65	*******	*******	3064.03	5.73	0.75	*******	*XS*
T	AT	14375	815	830.	200.	10419.	1.61	85.	272.
	3074.60	0.43	*******	*******	3075.03	4.15	0.54	*******	*XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PROFILE NUMBER 2. UPSTREAM COMPUTATIONS

SECID	M-9.0	M	N	O-TW	Q	R	S	T
WSC	3003.18	3011.96	3019.03	3023.96	3033.00	3047.62	3063.37	3074.60

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
B	KU/KD < 0.7 OR > 1.4		ALERTED USER
C	KU/KD < 0.7 OR > 1.4		ALERTED USER
D	KU/KD < 0.7 OR > 1.4		ALERTED USER
F APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
G TW	KU/KD < 0.7 OR > 1.4		ALERTED USER
BD RD	KU/KD < 0.7 OR > 1.4		ALERTED USER
H-0.4	KU/KD < 0.7 OR > 1.4		ALERTED USER
I-4.1	KU/KD < 0.7 OR > 1.4		ALERTED USER
I	KU/KD < 0.7 OR > 1.4		ALERTED USER
L-4.6	KU/KD < 0.7 OR > 1.4		ALERTED USER
L	KU/KD < 0.7 OR > 1.4		ALERTED USER
M-9.0	WS TOO LOW		ALERTED USER
M	WS TOO LOW		USED WSMIN = WSC
N	WS TOO LOW		USED WSMIN = WSC
O-TW	WS TOO LOW		USED WSMIN = WSC
O-TW	WS NOT FOUND BETWEEN	WS = 3024.19 & WS = 3032.10	USED DEL = 0.25
O-TW	WS NOT FOUND		ASSUMED WS = WSC
Q	WS TOO LOW		USED WSMIN = WSC
Q	WS NOT FOUND BETWEEN	WS = 3033.12 & WS = 3040.40	USED DEL = 0.25
Q	WS NOT FOUND		ASSUMED WS = WSC
R	WS TOO LOW		USED WSMIN = WSC
R	KU/KD < 0.7 OR > 1.4		ALERTED USER
S	WS TOO LOW		USED WSMIN = WSC
S	WS NOT FOUND BETWEEN	WS = 3063.62 & WS = 3070.60	USED DEL = 0.25
S	WS NOT FOUND		ASSUMED WS = WSC
T	WS TOO LOW		USED WSMIN = WSC

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T     ! WS NOT FOUND BETWEEN
                                  ! WS = 3074.75  & WS = 3082.50!
                                  !                              USED DEL = 0.25
T     ! WS NOT FOUND
                                  !                              ASSUMED WS = WSC
```

100 YR

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PAGE 1 OF 3, PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / WS ELEV	LENGTH / HV	DISCHARGE / HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	*ID*
A AT 0	0	2010.	784.	31563.	1.75	175.	622.	
2963.00	0.18			2963.18	2.56	0.36		*IS*
B AT 510	510	2010.	813.	50104.	1.00	55.	436.	
2964.39	0.09	1.30	0.0	2964.49	2.47	0.30	0.004	*XS*
C AT 915	405	2010.	279.	24370.	1.25	165.	304.	
2965.55	1.01	1.34	0.73	2966.56	7.20	0.71	0.003	*XS*
D AT 1520	605	2010.	373.	35165.	1.84	33.	274.	
2968.58	0.83	2.85	0.0	2969.41	5.39	0.55	-0.001	*XS*
E T-W AT 2118	598	2010.	403.	27978.	1.99	122.	381.	
2971.10	0.77	2.46	0.0	2971.87	4.99	0.63	-0.001	*XS*
BEGIN BRIDGE ANALYSIS								
BO EF AT 2118		1200.	123.	9446.	1.00	4.	26.	
2971.10	1.49	...1...	(-.001)		9.79	0.71		*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT		30. / RIGHT		763.				*RG*
F APP AT 2176	58	2010.	773.	73350.	1.28	144.	403.	
2971.85	0.13	0.11	0.0	2971.99	2.60	0.24	0.002	*AS*
M = 0.59 / E = 0.78 / K* = 1.32			1401.	162569.	1.18	80.	415.	
2973.92	0.04			2973.96	1.43	0.12		*AS*
END BRIDGE ANALYSIS								
G TW AT 2870	694	2010.	324.	27037.	1.63	129.	332.	
2974.09	0.97	0.64	0.47	2975.06	6.21	0.69	-0.002	*XS*
G TW AT 2889	19	2010.	427.	35505.	1.70	112.	348.	
2974.56	0.58	0.08	0.0	2975.14	4.71	0.53	-0.003	*XS*
BO RD AT 2896	7	2010.	154.	18786.	1.00	156.	185.	
2974.60	2.67	0.04	2.08	2977.26	13.07	0.95	-0.000	*XS*
H-0.4 AT 2905	9	2010.	1049.	101780.	1.43	65.	423.	
2977.20	0.08	0.02	0.0	2977.28	1.92	0.20	-0.000	*XS*
H APP AT 2931	26	2010.	910.	85244.	1.58	75.	414.	
2977.20	0.12	0.01	0.02	2977.32	2.21	0.20	0.007	*XS*
I-4.1 AT 3500	569	2010.	340.	29959.	1.38	71.	268.	
2977.79	0.75	0.90	0.32	2978.54	5.91	0.58	-0.001	*XS*
I AT 4095	595	1650.	219.	19906.	1.08	114.	248.	
2981.04	0.95	3.34	-0.10	2981.99	7.52	0.67	0.008	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PAGE 2 OF 3. PROFILE NUMBER 3. UPSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV / HV / HF / HE / EG / V / FN / ACC								*ID*
I+2.3 AT	4625 /	530 /	1650. /	313. /	27650. /	1.33 /	74. /	266.
2984.04 /	0.58 /	2.62 /	0.0 /	2984.61 /	5.28 /	0.51 /	0.002	*XS*
J-TW AT	5187 /	562 /	1650. /	231. /	20032. /	1.00 /	12. /	71.
2986.69 /	0.80 /	2.76 /	0.11 /	2987.49 /	7.15 /	0.64 /	0.003	*XS*
BEGIN BRIDGE ANALYSIS								
BO JK AT	5187 /	/	1650. /	120. /	10739. /	1.00 /	0. /	30.
2986.69 /	2.94 /		...1...	(-.001)	/ 13.75 /	1.02 /		*BO*
NO EMBANKMENT CROSS SECTION								
K APP AT	5290 /	103 /	1650. /	265. /	16688. /	1.61 /	135. /	314.
2987.44 /	0.97 /	0.84 /	0.09 /	2988.41 /	6.23 /	0.65 /	-0.002	*AS*
M = 0.75 / E = 0.21 / K* = 0.93 /				1500. /	134001. /	1.21 /	10. /	491.
2991.11 /	0.02 /			/ 2991.13 /	1.10 /	0.11 /		*AS*
END BRIDGE ANALYSIS								
L-4.6 AT	5750 /	460 /	1650. /	474. /	38844. /	1.20 /	24. /	233.
2991.25 /	0.23 /	0.24 /	0.10 /	2991.47 /	3.48 /	0.31 /	0.000	*XS*
L AT	6325 /	575 /	1650. /	228. /	14843. /	1.00 /	89. /	162.
2993.67 /	0.81 /	2.72 /	0.29 /	2994.49 /	7.24 /	0.72 /	0.005	*XS*
M-9.0 AT	7250 /	925 /	1650. /	364. /	17784. /	1.24 /	47. /	342.
3003.63 /	0.40 /	9.54 /	0.0 /	3004.03 /	4.53 /	0.62 /	0.000	*XS*
M AT	8160 /	910 /	1300. /	291. /	12819. /	1.27 /	106. /	338.
3012.32 /	0.39 /	8.68 /	0.0 /	3012.71 /	4.47 /	0.64 /	-0.000	*XS*
N AT	9110 /	950 /	1300. /	404. /	17780. /	1.16 /	45. /	344.
3019.58 /	0.19 /	7.04 /	0.0 /	3019.77 /	3.22 /	0.49 /	0.009	*XS*
O-TW AT	9690 /	580 /	1300. /	222. /	14795. /	1.52 /	194. /	343.
3024.19 /	0.81 /	******* /	******* /	3025.01 /	5.86 /	0.75 /	*******	*XS*
BEGIN BRIDGE ANALYSIS								
BO OP AT	9690 /	/	813. /	87. /	3813. /	1.00 /	0. /	21.
3023.60 /	1.36 /		...3...	(-.001)	/ 9.36 /	0.81 /		*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 393. / RIGHT 79. /								*RG*
P APP AT	9736 /	46 /	1300. /	329. /	11508. /	1.32 /	119. /	390.
3025.13 /	0.32 /	0.46 /	0.0 /	3025.46 /	3.95 /	0.44 /	-0.007	*AS*
M = **** / E = **** / K* = **** /				666. /	34964. /	1.05 /	91. /	415.
3026.25 /	0.06 /			/ 3026.32 /	1.95 /	0.26 /		*AS*
END BRIDGE ANALYSIS								
Q AT	10730 /	994 /	1300. /	375. /	16238. /	1.90 /	107. /	502.
3033.12 /	0.35 /	******* /	******* /	3033.48 /	3.46 /	0.51 /	*******	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PAGE 3 OF 3, PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*								
R AT	12405 /	1675 /	1030. /	226. /	9488. /	1.30 /	203. /	399.
	3047.85 /	0.42 /	14.76 /	0.03 /	3048.27 /	4.56 /	0.71 /	0.000 *XS*
S AT	13560 /	1155 /	1030. /	169. /	8936. /	1.22 /	138. /	241.
	3063.62 /	0.70 /	******* /	******* /	3064.32 /	6.08 /	0.79 /	******* *XS*
T AT	14375 /	815 /	1030. /	229. /	12251. /	1.52 /	83. /	275.
	3074.75 /	0.48 /	******* /	******* /	3075.23 /	4.50 /	0.58 /	******* *XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PROFILE NUMBER 3. UPSTREAM COMPUTATIONS

SECID	M-9.0	M	N	O-TW	Q	R	S	T
WSC	3003.36	3012.13	3019.17	3024.19	3033.12	3047.77	3063.62	3074.75

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
B	KU/KD < 0.7 OR > 1.4		ALERTED USER
C	KU/KD < 0.7 OR > 1.4		ALERTED USER
D	KU/KD < 0.7 OR > 1.4		ALERTED USER
F APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
G TW	KU/KD < 0.7 OR > 1.4		ALERTED USER
BO RD	KU/KD < 0.7 OR > 1.4		ALERTED USER
H-0.4	KU/KD < 0.7 OR > 1.4		ALERTED USER
I-4.1	KU/KD < 0.7 OR > 1.4		ALERTED USER
I	KU/KD < 0.7 OR > 1.4		ALERTED USER
I+2.3	KU/KD < 0.7 OR > 1.4		ALERTED USER
J-TW	KU/KD < 0.7 OR > 1.4		ALERTED USER
K APP	HIN TOO LOW		ALERTED USER
			USED HIN = WSD+0.01
K APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
L-4.6	WS TOO LOW		USED WSMIN = WSC
L-4.6	WS NOT FOUND BETWEEN	WS = 2984.20 & WS = 2996.30	
			USED DEL = 0.25
L-4.6	WS NOT FOUND		ASSUMED WS = WSC
L	WS TOO LOW		USED WSMIN = WSC
L	WS NOT FOUND BETWEEN	WS = 2988.80 & WS = 3000.90	
			USED DEL = 0.25
L	WS NOT FOUND		ASSUMED WS = WSC
M-9.0	WS TOO LOW		USED WSMIN = WSC
M-9.0	WS NOT FOUND BETWEEN	WS = 2998.20 & WS = 3009.70	
			USED DEL = 0.25
M-9.0	WS NOT FOUND		ASSUMED WS = WSC
M	WS TOO LOW		USED WSMIN = WSC
M	WS NOT FOUND BETWEEN	WS = 3012.57 & WS = 3018.70	
			USED DEL = 0.25
M	WS NOT FOUND		ASSUMED WS = WSC
N	WS TOO LOW		

N	KU/KD < 0.7 OR > 1.4		USED WSMIN = WSC
			ALERTED USER
O-TW	FRDN FAILURE	WS = 3020.25 & FR = 73.96	
			USED HIGHER WS
O-TW	KU/KD < 0.7 OR > 1.4		ALERTED USER
P APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
P APP	MAX QBO < QT (3)		CHECKED QRD
Q	WS TOO LOW		USED WSMIN = WSC
Q	WS NOT FOUND BETWEEN	WS = 3033.40 & WS = 3040.40	
			USED DEL = 0.25
Q	WS NOT FOUND		ASSUMED WS = WSC
R	WS TOO LOW		USED WSMIN = WSC
R	KU/KD < 0.7 OR > 1.4		ALERTED USER
S	WS TOO LOW		USED WSMIN = WSC
S	WS NOT FOUND BETWEEN	WS = 3064.16 & WS = 3070.60	
			USED DEL = 0.25
S	WS NOT FOUND		ASSUMED WS = WSC
T	WS TOO LOW		USED WSMIN = WSC
T	WS NOT FOUND BETWEEN	WS = 3075.11 & WS = 3082.50	
			USED DEL = 0.25
T	WS NOT FOUND		ASSUMED WS = WSC

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PAGE 1 OF 3, PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / WS ELEV	LENGTH/DISCHARGE / HV	HF	HE	AREA / EG	CONVEYANCE / V	ALPHA / FN	LEW / ACC	REW / *ID*
A AT	0 /	0 /	3080. /	1100. /	48163. /	1.50 /	152. /	631.
2963.68 /	0.18 /			2963.86 /	2.80 /	0.36 /		*IS*
B AT	510 /	510 /	3080. /	1085. /	76130. /	1.00 /	38. /	456.
2965.06 /	0.13 /	1.32 /	0.0 /	2965.19 /	2.84 /	0.31 /	0.005	*XS*
C AT	915 /	405 /	3080. /	395. /	35641. /	1.51 /	145. /	351.
2966.22 /	1.43 /	1.42 /	1.04 /	2967.65 /	7.80 /	0.81 /	0.002	*XS*
D AT	1520 /	605 /	3080. /	633. /	61338. /	1.70 /	28. /	275.
2969.65 /	0.63 /	2.63 /	0.0 /	2970.27 /	4.87 /	0.50 /	-0.000	*XS*
E T-W AT	2118 /	598 /	3080. /	564. /	44014. /	1.56 /	103. /	382.
2971.70 /	0.73 /	2.10 /	0.05 /	2972.43 /	5.46 /	0.57 /	0.000	*XS*
========== BEGIN BRIDGE ANALYSIS ==========								
BO EF AT	2118 /		1413. /	128. /	6629. /	1.00 /	0. /	26.
2971.70 /	1.91 /	...1...		(-.001) /	11.07 /	0.87 /		*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT		148. / RIGHT		1569. /				*RG*
F APP AT	2176 /	58 /	3080. /	905. /	89045. /	1.26 /	124. /	406.
2972.34 /	0.23 /	0.14 /	0.0 /	2972.56 /	3.40 /	0.31 /	-0.001	*AS*
M = 0.49 /	E = 0.57 /	K* = 1.11 /		1643. /	204440. /	1.15 /	69. /	419.
2974.63 /	0.06 /			2974.69 /	1.87 /	0.15 /		*AS*
========== END BRIDGE ANALYSIS ==========								
G TW AT	2870 /	694 /	3080. /	520. /	44215. /	1.66 /	99. /	357.
2974.93 /	0.91 /	0.73 /	0.42 /	2975.84 /	5.93 /	0.66 /	-0.002	*XS*
G TW AT	2889 /	19 /	3080. /	614. /	54066. /	1.58 /	93. /	365.
2975.29 /	0.62 /	0.08 /	0.0 /	2975.91 /	5.02 /	0.55 /	-0.005	*XS*
BO RD AT	2896 /	7 /	3080. /	269. /	25246. /	1.81 /	146. /	348.
2975.33 /	3.69 /	0.05 /	3.06 /	2979.02 /	11.43 /	1.10 /	-0.000	*XS*
H-0.4 AT	2905 /	9 /	3080. /	1738. /	202385. /	1.24 /	25. /	444.
2978.98 /	0.06 /	0.02 /	0.0 /	2979.04 /	1.77 /	0.14 /	-0.000	*XS*
H APP AT	2931 /	26 /	3080. /	1573. /	176743. /	1.29 /	34. /	439.
2978.98 /	0.08 /	0.01 /	0.01 /	2979.05 /	1.96 /	0.16 /	0.001	*XS*
I-4.1 AT	3500 /	569 /	3080. /	659. /	65896. /	1.47 /	41. /	287.
2979.23 /	0.50 /	0.46 /	0.21 /	2979.72 /	4.67 /	0.46 /	-0.003	*XS*
I AT	4095 /	595 /	0. /	205. /	18689. /	1.04 /	115. /	240.
2980.87 /	0.0 /	1.15 /	0.0 /	2980.87 /	0.0 /	0.0 /	0.001	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PAGE 2 OF 3, PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / WS ELEV	LENGTH/DISCHARGE / HV	HF	HE	AREA / EG	CONVEYANCE / V	ALPHA / FN	LEW / ACC	REW / *ID*
I+2.3 AT 4625 / 2980.87	530 / 0.0	0. / 0.0	103. / 0.0	6847. / 2980.87	1.00 / 0.0	119. / 0.0	156.	*XS*
J-TW AT 5187 / 2980.87	562 / 0.0	0. / 0.0	16. / 0.0	629. / 2980.87	1.00 / 0.0	19. / 0.0	31.	*XS*
BEGIN BRIDGE ANALYSIS								
BO JK AT 5187 / 2980.87	/ 0.0	0. / ...1...	5. / (-.001)	119. / 0.0	1.00 / 0.0	2. /	12.	*BO*
NO EMBANKMENT CROSS SECTION								
K APP AT 5290 / 2980.88	103 / 0.0	0. / 0.02	3. / 2980.88	41. / 0.0	1.00 / 0.0	282. / -0.011	293.	*AS*
M = 0.0 / E = 1.00 / K* = 0.01 / 2980.88			3. /	41. / 0.0	1.00 / 0.0	282. /	293.	*AS*
END BRIDGE ANALYSIS								
L-4.6 AT 5750 / 2984.20	460 / 0.0	0. / *******	0. / *******	2. / 2984.20	1.00 / 0.0	116. / 0.0	120.	*XS*
L AT 6325 / 2988.80	575 / 0.0	0. / *******	0. / *******	2. / 2988.80	1.00 / 0.0	116. / 0.0	119.	*XS*
M-9.0 AT 7250 / 2998.20	925 / 0.0	0. / *******	1. / *******	4. / 2998.20	1.00 / 0.0	158. / 0.0	165.	*XS*
M AT 8160 / 3012.57	910 / 0.66	2050. / *******	350. / 3013.23	16734. / 5.86	1.24 / 0.81	99. / *******	342.	*XS*
N AT 9110 / 3020.16	950 / 0.20	2050. / 7.13	585. / 0.0	33466. / 3020.36	1.04 / 3.50	38. / 0.45	362. / 0.004	*XS*
O-TW AT 9690 / 3024.19	580 / 2.03	2050. / 4.94	221. / 0.92	14740. / 3026.22	1.52 / 9.28	194. / 1.18	343. / 0.001	*XS*
BEGIN BRIDGE ANALYSIS								
BD OP AT 9690 / 3023.60	/ 1.77	926. / ...3...	87. / (-.001)	3813. / 10.65	1.00 / 0.92	0. /	21.	*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 935. / RIGHT 177. /								*RG*
P APP AT 9736 / 3026.42	46 / 0.13	2050. / 0.33	719. / 0.0	40178. / 3026.55	1.05 / 2.85	87. / 0.37	415. / 0.000	*AS*
M = **** / E = **** / K* = **** / 3026.85		863. / 0.09	/ 3026.94	53438. / 2.37	1.04 / 0.29	78. /	416.	*AS*
END BRIDGE ANALYSIS								
Q AT 10730 / 3033.40	994 / 0.45	2050. / *******	486. / *******	23627. / 3033.85	1.64 / 4.22	102. / 0.58	504. / *******	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PAGE 3 OF 3. PROFILE NUMBER 4. UPSTREAM COMPUTATIONS

SECID	AT	DISTANCE / WS ELEV	LENGTH / HV	DISCHARGE / HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	*ID*
R	AT	12405	1675	1600.	316.	15866.	1.13	188.	401.	
		3048.29	0.45	14.88	0.0	3048.74	5.06	0.71	0.001	*XS*
S	AT	13560	1155	1600.	230.	13915.	1.12	126.	247.	
		3064.16	0.84	*******	*******	3065.01	6.95	0.87	*******	*XS*
T	AT	14375	815	1600.	299.	17273.	1.35	77.	281.	
		3075.11	0.60	*******	*******	3075.71	5.36	0.71	*******	*XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK FINAL RUN A-L 10,50,100,500 YR 1STM-T
PROFILE NUMBER 4. . UPSTREAM COMPUTATIONS

SECID	L-4.6	L	M-9.0	M	N	O	R	S
WSC	2984.20	2988.80	2998.20	3012.57	3019.52	3033.40	3048.15	3064.16

SECID	T
WSC	3075.11

ALL FLOODS I 4.1 - K-1

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 1 DATE= 7/21/77

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

    1     1 GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO 30  4 01 05 12
    2     2 297633 297730 297779 297923
    3  1050 I-4.1 1  17  3 2972    3500 99 99
    4  1051    950   1680   2010   3080
    5  1055      0  1 29837   37  1 29794   77  1 29775  113  2 29778  121  2 29730
    5  1056    128  2 29714  140  2 29711  150  2 29706  151  2 29714  157  2 29753
    5  1057    165  3 29772  198  3 29772  223  3 29764  260  3 29772  297  3 29800
    5  1058    301  3 29810  310  3 29869
    6  1060  1  2 040 035  2  6 045 035  1  2 040 035
    3  1100 I     1  17  3 2975    4095 99 99
    4  1111    750   1360   1650   2560
    5  1115      0  1 29878   37  1 29835   77  1 29816  113  2 29819  121  2 29771
    5  1116    128  2 29755  140  2 29752  150  2 29747  151  2 29755  157  2 29794
    5  1117    165  3 29813  198  3 29813  223  3 29805  260  3 29813  297  3 29841
    5  1118    301  3 29851  310  3 29910
    6  1120  1  2 040 035  2  6 045 035  1  2 040 035
    3  1150 I+2.3 0  17  3 2978    4625 99 99
    5  1155      0  1 29901   37  1 29858   77  1 29839  113  2 29842  121  2 29794
    5  1156    128  2 29778  140  2 29775  150  2 29770  151  2 29778  157  2 29817
    5  1157    165  3 29836  198  3 29836  223  3 29828  260  3 29836  297  3 29864
    5  1158    301  3 29874  310  3 29933
    6  1159  1  2 040 035  2  6 045 035  1  2 040 035
    3  1200 J-TW  0  16  1 2980    5187 99 99
    5  1205      0  1 29941   10  1 29885   13  1 29849   19  1 29815   20  1 29798
    5  1206     22  1 29792   25  1 29793   30  1 29794   31  1 29811   43  1 29832
    5  1207     60  1 29840   77  1 29880  121  1 29891  150  1 29893  181  1 29911
    5  1208    200  1 29961
    6  1210  1  4 045 040
    3  1300 BO JK 2  14  1 2980    5187      45 29924 1 0
    5  1305      0  1 29924    0  1 29829    1  1 29829    2  1 29810    3  1 29796
    5  1306      6  1 29798    9  1 29806   19  1 29815   25  1 29809   28  1 29814
    5  1307     29  1 29829   30  1 29829   30  1 29924    0 -9 29924
    6  1310  1  2 040 040
    3  1400 K APP 5  21  3 2981    5290  1  3
    5  1405      0  1 29915   80  1 29883  150  1 29872  228  1 29872  264  1 29854
    5  1406    274  2 29838  278  2 29831  280  2 29811  284  2 29807  288  2 29804
    5  1407    292  2 29806  294  2 29811  295  2 29830  300  2 29837  304  3 29847
    5  1408    318  3 29884  363  3 29889  423  3 29894  450  3 29900  536  3 29923
    5  1409    600  3 29933
    6  1410  1  2 045 035  1  2 050 050  1  2 045 045
    3  1450 K-1   0  22  3 2984    5750 99 99
    5  1451    -15  1 29948    0  1 29926   50  1 29894   75  2 29883   80  2 29868
    5  1452     85  2 29848   87  2 29836   91  2 29838   97  2 29839  100  2 29839
    5  1453    102  2 29844  108  2 29860  111  2 29863  112  3 29894  150  3 29888
    5  1454    200  3 29885  250  3 29886  300  3 29888  350  3 29899  400  3 29916
```

*** INPUT CARD PRINTOUT ***

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         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
5  1455      450  3 29928  500  3 29948
6  1456  1  2 045 035  1  2 045 045  1  2 040 040
3  1500 L      0  17  3 2989     6325 99 99
5  1505        0  1 30003   25  1 29957   55  1 29947   87  2 29948   92  2 29911
5  1506      112  2 29894  116  2 29888  118  2 29886  124  2 29894  150  2 29914
5  1507      171  3 29954  214  3 29956  252  3 29961  281  3 29963  300  3 29964
5  1508      352  3 29981  434  3 30009
6  1510  1  2 045 045  2  5 050 045  1  2 045 045
3  1530 L-1    1  21  3 2994     6900 99 99
4  1531     570   1060   1300   2050
5  1532        0  1 30058   50  1 30010  100  1 30002  150  1 30007  182  2 30003
5  1533      182  2 29965  192  2 29955  192  2 29947  194  2 29943  198  2 29933
5  1534      206  2 29942  215  2 29954  220  3 29999  232  3 30005  250  3 30000
5  1535      300  3 29989  350  3 29995  400  3 30006  440  3 30032  500  3 30042
5  1536      524  3 30059
6  1537  1  2 045 035  2  4 050 060  1  2 045 035
3  1550 L-2    0  19  3 3001     7420 99 99
5  1555      -40  1 30120    0  1 30089   50  1 30050  100  1 30051  150  1 30057
5  1556      200  1 30044  250  1 30042  300  1 30041  350  1 30040  392  2 30052
5  1557      396  2 30036  397  2 30021  401  2 30013  406  2 30006  413  2 30009
5  1558      418  3 30046  450  3 30056  475  3 30098  500  3 30125
6  1560  1  2 040 035  1  2 050 050  2  4 065 080
3  1600 M      1  19  3 3008     8160 99 99
4  1601     570   1060   1300   2050
5  1605        0  1 30187   67  1 30136  116  1 30120  150  2 30115  156  2 30095
5  1606      157  2 30076  158  2 30070  162  2 30072  164  2 30070  166  2 30076
5  1607      167  2 30094  185  2 30103  200  3 30114  243  3 30110  291  3 30111
5  1608      300  3 30113  341  3 30124  350  3 30148  356  3 30172
6  1610  1  2 035 035  2  5 050 035  1  2 045 045
3  1650 M-2    0  16  3 3012     8700 99 99
5  1652        0  1 30223   40  1 30145   50  1 30144   58  2 30141   59  2 30131
5  1653       62  2 30110   65  2 30110   69  2 30116   70  3 30142   77  3 30148
5  1654      100  3 30151  148  3 30139  200  3 30146  215  3 30153  235  3 30173
5  1655      248  3 30223
6  1660  1  2 040 035  1  2 050 050  1  2 045 040  1  2 080 080
                                                  U  U UUU UUU
3  1700 N      0  19  3 3015     9110 99 99
5  1705        0  1 30253   31  1 30208   49  1 30192  118  1 30182  145  1 30182
5  1706      180  1 30182  207  2 30185  217  2 30171  219  2 30147  220  2 30143
5  1707      222  2 30143  224  2 30144  225  2 30160  231  3 30182  279  3 30177
5  1708      300  3 30179  350  3 30198  394  3 30211  412  3 30250
6  1710  1  2 045 035  1  2 045 045  1  2 045 035
3  1800 O-TW   0  18  3 3020     9690 99 99
5  1805        0  1 30310   22  1 30289   25  1 30288   35  1 30273   45  1 30270
5  1806      130  1 30251  200  1 30241  285  1 30221  287  2 30205  289  2 30198
5  1807      294  2 30199  304  2 30197  308  2 30202  311  3 30235  324  3 30229
```

ERROR(S)

*** INPUT CARD PRINTOUT ***

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         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

5  1808      359  3 30253  383  3 30290  396  3 30321
6  1810  1  2 035 035  1  5 045 035  1  2 035 035
3  1900 RO OP 2   8  1 3019    9690        0 30235 3 0
5  1905       0  1 30236    0  1 30214    3  1 30205    6  1 30195   10  1 30184
5  1906      21  1 30194   21  1 30234    0 -9 30236
6  1910  1  2 050 050
3  2000 ROAD  4   8  3   24          1  3          2 2 2              2
5  2005       0  1 30310  100  1 30278  200  1 30260  300  1 30252  364  2 30250
5  2006     385  3 30249  400  3 30252  500  3 30315
3  2100 P APP 5  22  3 3019    9736  1  3
5  2105       0  1 30315   80  1 30267  120  1 30251  200  1 30241  250  1 30242
5  2106     300  1 30235  309  1 30237  320  1 30249  335  1 30239  339  2 30228
5  2107     341  2 30207  345  2 30185  349  2 30185  353  2 30186  354  2 30207
5  2108     360  3 30226  364  3 30238  385  3 30250  403  3 30255  415  3 30261
5  2109     420  3 30295  450  3 30312
6  2110  1  2 050 040  2  4 050 080  1  2 055 055
3  2150 P-2   0  19  3 3023   10080 99 99
5  2155     -50  1 30351    0  1 30325   50  1 30299  100  1 30287  150  1 30285
5  2156     200  1 30278  250  1 30269  280  2 30261  283  2 30252  291  2 30243
5  2157     292  2 30229  296  2 30225  299  2 30224  302  2 30230  306  3 30262
5  2158     329  3 30263  346  3 30280  350  3 30285  378  3 30353
6  2160  1  2 045 035  1  2 050 035  1  2 045 035
3  2200 Q     0  19  3 3029   10730 99 99
5  2205       0  1 30404   44  1 30372  100  1 30335  128  2 30319  134  2 30296
5  2206     136  2 30283  139  2 30283  145  2 30294  152  3 30318  200  3 30321
5  2207     300  3 30325  400  3 30326  485  3 30322  487  3 30306  489  3 30304
5  2208     491  3 30306  493  3 30316  501  3 30330  560  3 30404
6  2210  1  2 035 035  2  4 045 035  1  2 040 035
3  2220 DAMTW 1  18  1 3034   11360 99 99
4  2221    450    830   1030   1600
5  2222     -10  1 30458    0  1 30428   39  1 30386   39  1 30363   42  1 30341
5  2223      47  1 30341   47  1 30337   50  1 30332   56  1 30338   63  1 30342
5  2224      66  1 30342   70  1 30351   76  1 30367   94  1 30358   97  1 30393
5  2225     109  1 30424  117  1 30434  124  1 30434
6  2226  1  2 045 045
3  2250 DAM   0  21  2 3035   11400 99 99
5  2255      71  1 30442   74  1 30390   77  1 30359   80  1 30346   84  1 30342
5  2256      89  1 30345   93  1 30346   99  1 30393  100  2 30432  150  2 30433
5  2257     200  2 30431  250  2 30432  300  2 30430  350  2 30426  400  2 30426
5  2258     450  2 30419  500  2 30426  530  2 30425  550  2 30427  600  2 30441
5  2259     638  2 30462
6  2260  1  2 045 045  1  2 035 035
3  2280 0 APP 0  18  2 3035   11430 99 99
5  2281       0  1 30447   24  1 30428   32  1 30412   33  1 30404   46  1 30388
5  2282      47  1 30354   49  1 30351   53  1 30349   56  1 30340   61  1 30343
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*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
5  2283       64  1 30351   67  1 30358   69  1 30366   72  1 30386   86  1 30392
5  2284       96  2 30399  625  2 30399  640  2 30447
6  2285  1  2 045 045  1  2 035 035
3  2290 R-2.1 0  14  3 3042   12600 99 99
5  2291        0  1 30540  100  1 30490  200  1 30458  322  2 30438  324  2 30431
5  2292      327  2 30418  331  2 30426  336  2 30428  338  2 30433  339  3 30450
5  2293      390  3 30444  400  3 30459  420  3 30522  431  3 30544
6  2294  1  2 040 035  1  2 045 045  1  2 045 035
3  2300 R      0  14  3 3044   12905 99 99
5  2305        0  1 30561  100  1 30511  200  1 30479  322  2 30459  324  2 30452
5  2306      327  2 30439  331  2 30447  336  2 30449  338  2 30454  339  3 30471
5  2307      390  3 30465  400  3 30480  420  3 30543  431  3 30565
6  2310  1  2 040 035  1  2 045 045  1  2 045 035
3  2330 R+5.1 0  14  3 3050   13300 99 99
5  2331        0  1 30612  100  1 30562  200  1 30530  322  2 30510  324  2 30503
5  2332      327  2 30460  331  2 30498  336  2 30500  338  2 30505  339  3 30522
5  2333      390  3 30516  400  3 30531  420  3 30594  431  3 30616
6  2334  1  2 040 035  1  2 045 045  1  2 045 035
3  2350 S-5.1 0  14  3 3055   13675 99 99
5  2351        0  1 30651   72  1 30622  100  1 30603  162  1 30574  200  2 30557
5  2352      201  2 30545  202  2 30542  204  2 30540  207  2 30541  208  2 30546
5  2353      209  3 30558  255  3 30597  286  3 30645  290  3 30655
6  2355  1  2 045 035  1  2 045 045  1  2 045 035
3  2400 S      0  14  3 3060   14060 99 99
5  2405        0  1 30702   72  1 30673  100  1 30654  162  1 30625  200  2 30608
5  2406      201  2 30596  202  2 30593  204  2 30591  207  2 30592  208  2 30597
5  2407      209  3 30609  255  3 30648  286  3 30696  290  3 30706
6  2410  1  2 045 035  1  2 045 045  1  2 045 035
3  2430 S+3.6 0  14  3 3064   14350 99 99
5  2431        0  1 30738   72  1 30709  100  1 30687  162  1 30661  200  2 30644
5  2432      201  2 30632  202  2 30629  204  2 30627  207  2 30628  208  2 30643
5  2433      209  3 30645  255  3 30684  286  3 30732  290  3 30742
6  2435  1  2 045 035  1  2 045 045  1  2 045 035
3  2450 T-3.2 0  17  3 3066   14600 99 99
5  2451        0  1 30770   25  1 30752   85  1 30714   95  2 30700  100  2 30667
5  2452      101  2 30661  104  2 30658  111  2 30668  115  3 30705  180  3 30712
5  2453      200  3 30709  235  3 30706  244  3 30688  250  3 30700  282  3 30720
5  2454      314  3 30737  350  3 30793
6  2455  1  2 050 050  1  2 045 045  1  2 035 035
3  2500 T      0  17  3 3070   14875 99 99
5  2505        0  1 30802   25  1 30784   85  1 30746   95  2 30732  100  2 30699
5  2506      101  2 30693  104  2 30690  111  2 30699  115  3 30737  180  3 30744
5  2507      200  3 30741  235  3 30738  244  3 30720  250  3 30732  282  3 30752
5  2508      314  3 30769  350  3 30825
6  2510  1  2 050 050  1  2 045 045  1  2 035 035
```

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 5.DATE= 7/21/77

PAGE 1 OF EDITING NOTES FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO

SECID	ERROR SEVERITY	FIRST VARIABLE	NO.	ERROR MESSAGE	SECOND VARIABLE	NO.	VALUE ASSUMED
BO JK	WARNING	STATION	14	IS LESS THAN	STATION	13	
M-2	WARNING	NSA		WRONG			4
M-2	WARNING	NSA		> MAX. VALUE OF	SA		3
BO OP	WARNING	STATION	8	IS LESS THAN	STATION	7	

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 6,DATE= 7/21/77

INPUT SUMMARY FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO

30 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 30 TYPE 3 CARDS

KEPT 30 CROSS SECTIONS FOR EDITING

30 " " VALID FOR PROPERTY COMPUTATIONS

30 " " " " PROFILE "

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 28.DATE= 7/21/77

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
I	KU/KD < 0.7 OR > 1.4		ALERTED USER
L	WS TOO LOW		USED WSMIN = WSC
L-1	WS TOO LOW		USED WSMIN = WSC
L-2	WS TOO LOW		USED WSMIN = WSC
L-2	WS NOT FOUND BETWEEN	WS = 3004.69 & WS = 3012.50	USED DEL = 0.25
L-2	WS NOT FOUND		ASSUMED WS = WSC
M	WS TOO LOW		USED WSMIN = WSC
M-2	KU/KD < 0.7 OR > 1.4		ALERTED USER
N	KU/KD < 0.7 OR > 1.4		ALERTED USER
O-TW	WS TOO LOW		USED WSMIN = WSC
O-TW	KU/KD < 0.7 OR > 1.4		ALERTED USER
P APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
P APP	WSU > BELMX (1)		CHECKED QBO (2)
Q	WS TOO LOW		USED WSMIN = WSC
Q	WS NOT FOUND BETWEEN	WS = 3032.74 & WS = 3040.40	USED DEL = 0.25
Q	WS NOT FOUND		ASSUMED WS = WSC
DAMTW	WS TOO LOW		USED WSMIN = WSC
DAMTW	KU/KD < 0.7 OR > 1.4		ALERTED USER
DAM	FRDN FAILURE	WS = 3036.81 & FR = 1.44	USED HIGHER WS
DAM	WS NOT FOUND BETWEEN	WS = 3036.54 & WS = 3046.20	USED DEL = 0.25
DAM	FRDN FAILURE	WS = 3036.81 & FR = 1.44	USED HIGHER WS
DAM	WS NOT FOUND BETWEEN	WS = 3036.54 & WS = 3046.20	USED WSMIN = WSC
DAM	WS NOT FOUND		

			ASSUMED WS = WSC
D APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
R-2.1	WS TOO LOW		USED WSMIN = WSC
R+5.1	TOL FAILURE BETWEEN	WS = 3047.34 & WS = 3047.59	USED HIGHER WS
R+5.1	KU/KD < 0.7 OR > 1.4		ALERTED USER
S-5.1	WS TOO LOW		USED WSMIN = WSC
S	WS TOO LOW		USED WSMIN = WSC
S	WS NOT FOUND BETWEEN	WS = 3062.72 & WS = 3070.60	USED DEL = 0.25
S	WS NOT FOUND		ASSUMED WS = WSC
S+3.6	WS TOO LOW		USED WSMIN = WSC
T-3.2	TOL FAILURE BETWEEN	WS = 3066.19 & WS = 3066.44	USED HIGHER WS
T	KU/KD < 0.7 OR > 1.4		ALERTED USER

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 29.DATE= 7/21/77

10YR

WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PAGE 1 OF 3, PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / WS ELEV	LENGTH/DISCHARGE / HV	/ HF	/ HE	AREA / EG	/CONVEYANCE / V	ALPHA / FN	/ LEW	/ ACC	REW *ID*
I-4.1 AT 3500 /	0 /	950. /	179. /	15877. /	1.00 /	115. /	161.		
2976.33 /	0.44 /		/ 2976.77 /	5.30 /	0.47/				*IS*
I AT 4095 /	595 /	750. /	126. /	9395. /	1.00 /	118. /	157.		
2979.16 /	0.55 /	2.88 /	0.06 / 2979.71 /	5.97 /	0.59 /	0.005	*XS*		
I+2.3 AT 4625 /	530 /	750. /	147. /	11872. /	1.00 /	117. /	158.		
2981.98 /	0.41 /	2.67 /	0.0 / 2982.39 /	5.11 /	0.48 /	0.002	*XS*		
J-TW AT 5187 /	562 /	750. /	136. /	8778. /	1.00 /	13. /	64.		
2984.98 /	0.48 /	3.03 /	0.03 / 2985.46 /	5.53 /	0.60 /	0.001	*XS*		
BEGIN BRIDGE ANALYSIS									
BO JK AT 5187 /	/	750. /	84. /	6351. /	1.00 /	0. /	30.		
2984.98 /	1.25 /	...1...	(-.001)	/ 8.96 /	0.79 /		*BO*		
NO EMBANKMENT CROSS SECTION									
K APP AT 5290 /	103 /	750. /	125. /	7766. /	1.11 /	257. /	308.		
2985.76 /	0.63 /	0.85 /	0.08 / 2986.38 /	6.02 /	0.60 /	0.000	*AS*		
M = 0.07 / E = 0.16 / K* = 0.12 /		138. /	8808. /	1.14 /	252. /	309.			
2986.00 /	0.53 /		/ 2986.53 /	5.44 /	0.53 /		*AS*		
END BRIDGE ANALYSIS									
K-1 AT 5750 /	460 /	750. /	172. /	10768. /	1.39 /	63. /	302.		
2988.85 /	0.41 /	2.73 /	0.0 / 2989.26 /	4.35 /	0.48 /	-0.002	*XS*		
L AT 6325 /	575 /	750. /	154. /	8055. /	1.00 /	90. /	156.		
2992.62 /	0.37 /	3.73 /	0.0 / 2992.98 /	4.87 /	0.56 /	-0.000	*XS*		
L-1 AT 6900 /	575 /	570. /	109. /	5788. /	1.00 /	182. /	218.		
2997.96 /	0.43 /	5.37 /	0.03 / 2998.38 /	5.23 /	0.53 /	0.000	*XS*		
L-2 AT 7420 /	520 /	570. /	160. /	6059. /	1.62 /	189. /	421.		
3004.69 /	0.32 /*******	/*******	/ 3005.01 /	3.57 /	0.55 /*******		*XS*		
M AT 8160 /	740 /	570. /	158. /	5725. /	1.30 /	138. /	314.		
3011.68 /	0.26 /	6.93 /	0.0 / 3011.94 /	3.61 /	0.56 /	0.001	*XS*		
M-2 AT 8700 /	540 /	570. /	210. /	8257. /	1.33 /	35. /	217.		
3015.50 /	0.15 /	3.71 /	0.0 / 3015.65 /	2.71 /	0.40 /	0.001	*XS*		
N AT 9110 /	410 /	570. /	160. /	4936. /	1.59 /	84. /	321.		
3018.69 /	0.31 /	3.27 /	0.08 / 3019.01 /	3.57 /	0.71 /	0.001	*XS*		
O-TW AT 9690 /	580 /	570. /	126. /	7949. /	1.40 /	228. /	332.		
3023.43 /	0.44 /	4.80 /	0.06 / 3023.87 /	4.51 /	0.56 /	0.000	*XS*		

WATER-SURFACE PROFILE FOR: GAP CREEK 1-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PAGE 2 OF 3. PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC	*ID*
========== BEGIN BRIDGE ANALYSIS ==========	
BO OP AT 9690 / / 572. / 87. / 3813. / 1.00 / 0. / 21. 3023.60 / 0.67 / ...2... (-.001) / 6.58 / 0.57 /	*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 0. / RIGHT 0. /	*RG*
P APP AT 9736 / 46 / 570. / 91. / 3595. / 1.15 / 277. / 364. 3023.83 / 0.70 / 0.52 / 0.13 / 3024.52 / 6.26 / 0.61 / -0.001	*AS*
M = **** / E = **** / K* = **** / 164. / 5456. / 1.55 / 174. / 375. 3024.42 / 0.29 / / 3024.71 / 3.47 / 0.40 /	*AS*
========== END BRIDGE ANALYSIS ==========	
P-2 AT 10080 / 344 / 570. / 115. / 7519. / 1.52 / 244. / 336. 3027.01 / 0.58 / 2.72 / 0.14 / 3027.59 / 4.96 / 0.65 / 0.009	*XS*
Q AT 10730 / 650 / 570. / 227. / 8581. / 2.47 / 113. / 500. 3032.74 / 0.24 /******* /******* / 3032.98 / 2.51 / 0.50 /*******	*XS*
DAMTW AT 11360 / 630 / 450. / 99. / 4675. / 1.00 / 39. / 95. 3036.79 / 0.32 / 4.08 / 0.04 / 3037.11 / 4.54 / 0.60 / -0.002	*XS*
DAM AT 11400 / 40 / 450. / 51. / 2901. / 1.00 / 76. / 97. 3037.40 / 1.20 /******* /******* / 3038.60 / 8.78 / 0.99 /*******	*XS*
D APP AT 11430 / 30 / 450. / 85. / 5679. / 1.00 / 46. / 72. 3038.53 / 0.44 / 0.37 / 0.0 / 3038.97 / 5.32 / 0.52 / 0.003	*XS*
R-2.1 AT 12600 / 1170 / 450. / 165. / 6317. / 1.42 / 224. / 397. 3045.41 / 0.16 / 6.60 / 0.0 / 3045.58 / 2.73 / 0.46 / 0.001	*XS*
R AT 12905 / 305 / 450. / 135. / 4965. / 1.50 / 234. / 396. 3047.34 / 0.26 / 1.97 / 0.05 / 3047.60 / 3.32 / 0.58 / 0.002	*XS*
R+5.1 AT 13300 / 395 / 450. / 85. / 3301. / 1.53 / 260. / 393. 3052.01 / 0.67 / 4.88 / 0.21 / 3052.69 / 5.32 / 0.79 / 0.001	*XS*
S-5.1 AT 13675 / 375 / 450. / 96. / 4177. / 1.45 / 156. / 231. 3057.70 / 0.50 / 5.51 / 0.0 / 3058.19 / 4.70 / 0.70 / -0.001	*XS*
S AT 14060 / 385 / 450. / 90. / 3867. / 1.46 / 157. / 230. 3062.72 / 0.57 /******* /******* / 3063.29 / 5.01 / 0.76 /*******	*XS*
S+3.6 AT 14350 / 290 / 450. / 98. / 4206. / 1.41 / 154. / 232. 3066.44 / 0.46 / 3.61 / 0.0 / 3066.90 / 4.59 / 0.69 / -0.000	*XS*
T-3.2 AT 14600 / 250 / 450. / 58. / 3283. / 1.07 / 95. / 249. 3069.83 / 1.02 / 3.67 / 0.28 / 3070.85 / 7.81 / 0.87 / 0.008	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW							
WS ELEV	HV	HF	HE	EG	V	FN	ACC *ID*
T AT 14875	275	450.	83.	5004.	1.16	91.	258.
3073.72	0.53	3.39	0.0	3074.24	5.39	0.59	0.002 *XS*

END OF THIS PROFILE

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 32.DATE= 7/21/77

COMPUTED WSC VALUES FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PROFILE NUMBER 1. UPSTREAM COMPUTATIONS

SECID	L	L-1	L-2	M	O-TW	Q	DAMTW	DAM
WSC	2991.81	2996.88	3004.69	3011.50	3022.99	3032.74	3036.04	3037.40

SECID	R-2.1	S-S.1	S	S+3.6
WSC	3045.14	3057.63	3062.72	3066.33

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 33,DATE= 7/21/77

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PROFILE NUMBER 2, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
K-1	KU/KD < 0.7 OR > 1.4		ALERTED USER
L	KU/KD < 0.7 OR > 1.4		ALERTED USER
L-1	WS TOO LOW		USED WSMIN = WSC
L-2	WS TOO LOW		USED WSMIN = WSC
L-2	WS NOT FOUND BETWEEN	WS = 3004.99 & WS = 3012.50	USED DEL = 0.25
L-2	WS NOT FOUND		ASSUMED WS = WSC
M	WS TOO LOW		USED WSMIN = WSC
M	KU/KD < 0.7 OR > 1.4		ALERTED USER
N	FRDN FAILURE	WS = 3015.84 & FR = 19.71	USED HIGHER WS
O-TW	WS TOO LOW		USED WSMIN = WSC
O-TW	WS NOT FOUND BETWEEN	WS = 3023.96 & WS = 3032.10	USED DEL = 0.25
O-TW	WS NOT FOUND		ASSUMED WS = WSC
P APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
P-2	FRDN FAILURE	WS = 3026.91 & FR = 1.30	USED HIGHER WS
P-2	WS NOT FOUND BETWEEN	WS = 3025.73 & WS = 3035.30	USED DEL = 0.25
P-2	FRDN FAILURE	WS = 3026.92 & FR = 1.30	USED HIGHER WS
P-2	WS NOT FOUND BETWEEN	WS = 3025.73 & WS = 3035.30	USED WSMIN = WSC
P-2	WS NOT FOUND		ASSUMED WS = WSC
Q	WS TOO LOW		USED WSMIN = WSC
Q	WS NOT FOUND BETWEEN	WS = 3033.00 & WS = 3040.40	USED DEL = 0.25
Q	WS NOT FOUND		ASSUMED WS = WSC
DAMTW	WS TOO LOW		

DAMTW	KU/KD < 0.7 OR > 1.4	USED WSMIN = WSC
DAM	WS NOT FOUND BETWEEN	ALERTED USER
	WS = 3037.39 & WS = 3046.20	USED DEL = 0.25
DAM	WS NOT FOUND BETWEEN	
		USED WSMIN = WSC
DAM	WS NOT FOUND	ASSUMED WS = WSC ✓
D APP	KU/KD < 0.7 OR > 1.4	ALERTED USER
R-2.1	WS TOO LOW	USED WSMIN = WSC
R-2.1	KU/KD < 0.7 OR > 1.4	ALERTED USER
R	KU/KD < 0.7 OR > 1.4	ALERTED USER
R+5.1	FRDN FAILURE	
	WS = 3049.02 & FR = 15.00	USED HIGHER WS
R+5.1	KU/KD < 0.7 OR > 1.4	ALERTED USER
S-5.1	WS TOO LOW	USED WSMIN = WSC
S-5.1	KU/KD < 0.7 OR > 1.4	ALERTED USER
S	WS TOO LOW	USED WSMIN = WSC
S	WS NOT FOUND BETWEEN	
	WS = 3063.37 & WS = 3070.60	USED DEL = 0.25
S	WS NOT FOUND	ASSUMED WS = WSC ✓
S+3.6	TOL FAILURE BETWEEN	
	WS = 3063.37 & WS = 3063.62	USED HIGHER WS
T-3.2	KU/KD < 0.7 OR > 1.4	ALERTED USER
T	KU/KD < 0.7 OR > 1.4	ALERTED USER

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WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PAGE 1 OF 3, PROFILE NUMBER 2, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / WS ELEV	LENGTH/DISCHARGE / HV	HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	*ID*
I-4.1 AT 3500 / 2977.30	0 / 0.79	1680.	261. /	23161. / 2978.09	1.22 / 6.43	114. / 0.60	261.	*IS*
I AT 4095 / 2980.70	595 / 0.78	1360. / 3.39	193. / 0.0	17509. / 2981.48	1.01 / 7.04	115. / 0.62	232. / 0.001	*XS*
I+2.3 AT 4625 / 2983.51	530 / 0.58	1360. / 2.62	237. / 0.0	21363. / 2984.09	1.13 / 5.74	114. / 0.52	256. / -0.004	*XS*
J-TW AT 5187 / 2986.32	562 / 0.66	1360. / 2.84	209. / 0.04	17134. / 2986.98	1.00 / 6.52	12. / 0.61	70. / 0.003	*XS*
BEGIN BRIDGE ANALYSIS								
BO JK AT 5187 / 2986.32	/ 2.29	1360. / ...1...	112. / (-.001)	9729. / 12.14	1.00 / 0.93	0. /	30.	*BO*
NO EMBANKMENT CROSS SECTION								
K APP AT 5290 / 2987.01	103 / 0.82	1360. / 0.77	207. / 0.08	14362. / 2987.83	1.23 / 6.55	232. / 0.62	313. / -0.000	*AS*
M = 0.66 / E = 0.13 / K* = 0.95 / 2989.97	/ 0.04		993. /	79054. / 2990.01	1.26 / 1.37	38. / 0.15	449. /	*AS*
END BRIDGE ANALYSIS								
K-1 AT 5750 / 2990.24	460 / 0.13	1360. / 0.32	560. / 0.05	33768. / 2990.38	1.47 / 2.43	37. / 0.29	360. / 0.000	*XS*
L AT 6325 / 2992.97	575 / 0.91	1360. / 3.11	178. / 0.39	10118. / 2993.88	1.00 / 7.63	89. / 0.84	158. / 0.003	*XS*
L-1 AT 6900 / 2999.92	575 / 0.38	1060. / 6.42	245. / 0.0	12956. / 3000.30	1.31 / 4.32	182. / 0.42	369. / 0.001	*XS*
L-2 AT 7420 / 3004.99	520 / 0.47	1060. / *******	229. / *******	9113. / 3005.47	1.43 / 4.62	177. / 0.69	431. / *******	*XS*
M AT 8160 / 3012.32	740 / 0.26	1060. / 7.11	291. / 0.0	12829. / 3012.58	1.27 / 3.64	106. / 0.52	338. / 0.004	*XS*
M-2 AT 8700 / 3015.91	540 / 0.25	1060. / 3.57	285. / 0.0	13263. / 3016.15	1.14 / 3.72	33. / 0.51	221. / 0.002	*XS*
N AT 9110 / 3019.18	410 / 0.28	1060. / 3.29	288. / 0.02	10554. / 3019.46	1.32 / 3.69	50. / 0.60	334. / 0.003	*XS*
O-TW AT 9690 / 3023.96	580 / 0.73	1060. / *******	189. / *******	12385. / 3024.69	1.49 / 5.59	206. / 0.71	340. / *******	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV	HV	HF	HE	EG	V	FN	ACC	*ID*
BEGIN BRIDGE ANALYSIS								
BO OP AT 9690		803.	87.	3813.	1.00	0.	21.	
3023.60	1.33	...3...	(-.001)		9.24	0.80		*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 224. / RIGHT 48. /								*RG*
P APP AT 9736	46	1060.	231.	7659.	1.48	149.	381.	
3024.74	0.49	0.54	0.0	3025.23	4.59	0.54	-0.006	*AS*
M = **** / E = **** / K* = ****			577.	27232.	1.06	98.	413.	
3025.98	0.06			3026.03	1.84	0.25		*AS*
END BRIDGE ANALYSIS								
P-2 AT 10080	344	1060.	204.	13183.	1.79	202.	344.	
3027.77	0.75	*******	*******	3028.52	5.19	0.72	*******	*XS*
Q AT 10730	650	1060.	329.	13544.	2.05	109.	501.	
3033.00	0.33	*******	*******	3033.33	3.23	0.48	*******	*XS*
DAMTW AT 11360	630	830.	147.	8824.	1.00	39.	96.	
3037.64	0.50	4.71	0.08	3038.13	5.64	0.62	0.009	*XS*
DAM AT 11400	40	830.	80.	5533.	1.00	74.	98.	
3030.70	1.66	*******	*******	3040.36	10.32	0.99	*******	*XS*
D APP AT 11430	30	830.	481.	20164.	1.50	33.	627.	
3040.47	0.07	0.19	0.0	3040.54	1.73	0.27	-0.001	*XS*
R-2.1 AT 12600	1170	830.	191.	7608.	1.36	215.	398.	
3045.56	0.40	5.25	0.17	3045.96	4.36	0.70	-0.000	*XS*
R AT 12905	305	830.	267.	12170.	1.21	195.	400.	
3048.05	0.18	2.27	0.0	3048.23	3.11	0.46	0.002	*XS*
R+5.1 AT 13300	395	830.	124.	4750.	1.58	243.	395.	
3052.30	1.09	4.71	0.46	3053.40	6.68	1.03	-0.001	*XS*
S-5.1 AT 13675	375	830.	179.	9679.	1.20	136.	242.	
3058.61	0.40	5.62	0.0	3059.02	4.63	0.60	0.001	*XS*
S AT 14060	385	830.	145.	7186.	1.28	143.	238.	
3063.37	0.65	*******	*******	3064.03	5.73	0.75	*******	*XS*
S+3.6 AT 14350	290	830.	155.	7720.	1.24	139.	239.	
3067.08	0.55	3.60	0.0	3067.63	5.34	0.71	0.002	*XS*
T-3.2 AT 14600	250	830.	93.	5372.	1.33	90.	261.	
3070.69	1.63	4.15	0.54	3072.32	8.88	1.02	-0.001	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PAGE 3 OF 3, PROFILE NUMBER 2, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV	HV	HF	HE	EG	V	FN	ACC	*ID*
T AT	14875	275	830.	237.	12782.	1.49	82.	276.
3074.80	0.29	2.76	0.0	3075.08	3.51	0.44	0.000	*XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PROFILE NUMBER 2, UPSTREAM COMPUTATIONS

SECID	L-1	L-2	M	O-TW	P-2	Q	OAMTW	OAM
WSC	2997.94	3004.99	3011.96	3023.96	3027.77	3033.00	3036.92	3038.70

SECID	R-2.1	S-5.1	S
WSC	3045.53	3058.27	3063.37

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PAGE 1 OF PROFILE NOTES FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
I	KU/KD < 0.7 OR > 1.4		ALERTED USER
K-1	KU/KD < 0.7 OR > 1.4		ALERTED USER
L	KU/KD < 0.7 OR > 1.4		ALERTED USER
L-1	WS TOO LOW		USED WSMIN = WSC
L-1	KU/KD < 0.7 OR > 1.4		ALERTED USER
L-2	WS TOO LOW		USED WSMIN = WSC
L-2	WS NOT FOUND BETWEEN	WS = 3005.26 & WS = 3012.50	USED DEL = 0.25
L-2	WS NOT FOUND		ASSUMED WS = WSC
M	WS TOO LOW		USED WSMIN = WSC
N	FRDN FAILURE	WS = 3016.36 & FR = 0.10	USED HIGHER WS
O-TW	WS TOO LOW		USED WSMIN = WSC
P-2	FRDN FAILURE	WS = 3027.00 & FR = 1.51	USED HIGHER WS
P-2	WS NOT FOUND BETWEEN	WS = 3026.00 & WS = 3035.30	USED DEL = 0.25
P-2	FRDN FAILURE	WS = 3027.00 & FR = 1.51	USED HIGHER WS
P-2	WS NOT FOUND BETWEEN	WS = 3026.00 & WS = 3035.30	USED WSMIN = WSC
P-2	WS NOT FOUND		ASSUMED WS = WSC
Q	WS TOO LOW		USED WSMIN = WSC
Q	WS NOT FOUND BETWEEN	WS = 3033.12 & WS = 3040.40	USED DEL = 0.25
Q	WS NOT FOUND		ASSUMED WS = WSC
DAMTW	WS TOO LOW		USED WSMIN = WSC
DAMTW	KU/KD < 0.7 OR > 1.4		ALERTED USER
DAM	WS NOT FOUND BETWEEN	WS = 3037.71 & WS = 3046.20	

	DAM	WS NOT FOUND BETWEEN	USED DEL = 0.25
		WS = 3037.71 & WS = 3046.20	
			USED WSMIN = WSC
	DAM	WS NOT FOUND	
			ASSUMED WS = WSC
	D APP	KU/KD < 0.7 OR > 1.4	
			ALERTED USER
	R-2.1	WS TOO LOW	
			USED WSMIN = WSC
	R-2.1	WS NOT FOUND BETWEEN	
		WS = 3045.67 & WS = 3054.40	
			USED DEL = 0.25
	R-2.1	WS NOT FOUND	
			ASSUMED WS = WSC
	R	KU/KD < 0.7 OR > 1.4	
			ALERTED USER
	R+5.1	FRDN FAILURE	
		WS = 3049.75 & FR = 10.86	
			USED HIGHER WS
	R+5.1	KU/KD < 0.7 OR > 1.4	
			ALERTED USER
	S-5.1	WS TOO LOW	
			USED WSMIN = WSC
	S-5.1	KU/KD < 0.7 OR > 1.4	
			ALERTED USER
	S	WS TOO LOW	
			USED WSMIN = WSC
	S	WS NOT FOUND BETWEEN	
		WS = 3063.62 & WS = 3070.60	
			USED DEL = 0.25
	S	WS NOT FOUND	
			ASSUMED WS = WSC
	S+3.6	FRDN FAILURE	
		WS = 3063.92 & FR = 25.41	
			USED HIGHER WS
	T-3.2	KU/KD < 0.7 OR > 1.4	
			ALERTED USER
	T	KU/KD < 0.7 OR > 1.4	
			ALERTED USER

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WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PAGE 1 OF 3, PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / WS ELEV	LENGTH / HV	DISCHARGE / HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	
I-4.1 AT 3500 / 2977.79	0 / 0.75	2010. /	341. / 2978.54	30026. / 5.89	1.39 / 0.58	71. /	268.	*IS*
I AT 4095 / 2981.03	595 / 0.96	1650. / 3.34	219. / 0.10 / 2981.98	19855. / 7.54	1.08 / 0.68	114. / -0.000	247.	*XS*
I+2.3 AT 4625 / 2984.04	530 / 0.58	1650. / 2.63	313. / 0.0 / 2984.61	27661. / 5.27	1.33 / 0.51	74. / -0.000	266.	*XS*
J-TW AT 5187 / 2986.69	562 / 0.80	1650. / 2.76	231. / 0.11 / 2987.49	20030. / 7.15	1.00 / 0.64	12. / 0.003	71.	*XS*
BEGIN BRIDGE ANALYSIS								
BO JK AT 5187 / 2986.69	/ 2.94	1650. / ...1...	120. / (-.001)	10738. / 13.75	1.00 / 1.02	0. /	30.	*BO*
NO EMBANKMENT CROSS SECTION								
K APP AT 5290 / 2987.44	103 / 0.97	1650. / 0.84	265. / 0.09 / 2988.41	16686. / 6.23	1.61 / 0.65	135. / -0.002	314.	*AS*
M = 0.75 / E = 0.21 / K* = 0.93 / 2991.11	1500. / 0.02		/ 2991.13	134014. / 1.10	1.21 / 0.11	10. /	491.	*AS*
END BRIDGE ANALYSIS								
K-1 AT 5750 / 2991.23	460 / 0.06	1650. / 0.15	903. / 0.02 / 2991.30	64404. / 1.83	1.23 / 0.19	21. / 0.000	389.	*XS*
L AT 6325 / 2992.98	575 / 1.32	1650. / 2.39	179. / 0.63 / 2994.31	10180. / 9.22	1.00 / 1.01	89. / -0.008	158.	*XS*
L-1 AT 6900 / 3000.54	575 / 0.28	1300. / 6.51	372. / 0.0 / 3000.81	18865. / 3.50	1.45 / 0.36	79. / -0.006	397.	*XS*
L-2 AT 7420 / 3005.26	520 / 0.40	1300. / *******	312. / ******* / 3005.66	12171. / 4.16	1.47 / 0.67	47. / *******	439.	*XS*
M AT 8160 / 3012.43	740 / 0.33	1300. / 7.10	317. / 0.0 / 3012.76	14471. / 4.10	1.26 / 0.58	103. / -0.000	341.	*XS*
M-2 AT 8700 / 3016.17	540 / 0.25	1300. / 3.65	334. / 0.0 / 3016.42	17273. / 3.89	1.08 / 0.51	31. / 0.008	224.	*XS*
N AT 9110 / 3019.31	410 / 0.31	1300. / 3.17	325. / 0.03 / 3019.63	12641. / 4.00	1.26 / 0.64	48. / 0.003	337.	*XS*
O-TW AT 9690 / 3024.22	580 / 0.79	1300. / 5.14	226. / 0.24 / 3025.01	15096. / 5.76	1.53 / 0.74	192. / 0.007	343.	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PAGE 2 OF 3, PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV / HV / HF / HE / EG / V / FN / ACC								*ID*
BEGIN BRIDGE ANALYSIS								
BO OP AT	9690 /	/	807. /	87. /	3813. /	1.00 /	0. /	21.
3023.60 /	1.34 /	...3...	(-.001)	/	9.29 /	0.80 /		*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT			391. /	RIGHT	79. /			*RG*
P APP AT	9736 /	46 /	1300. /	326. /	11359. /	1.33 /	119. /	389.
3025.12 /	0.33 /	0.45 /	0.0 /	3025.45 /	3.99 /	0.45 /	-0.008	*AS*
M = **** / E = **** / K* = **** /				664. /	34844. /	1.05 /	91. /	415.
3026.25 /	0.06 /			/ 3026.31 /	1.96 /	0.26 /		*AS*
END BRIDGE ANALYSIS								
P-2 AT	10080 /	344 /	1300. /	251. /	16345. /	1.83 /	180. /	347.
3028.08 /	0.76 /	******* /	******* /	3028.84 /	5.18 /	0.72 /	*******	*XS*
Q AT	10730 /	650 /	1300. /	375. /	16238. /	1.90 /	107. /	502.
3033.12 /	0.35 /	******* /	******* /	3033.48 /	3.46 /	0.51 /	*******	*XS*
DAMTW AT	11360 /	630 /	1030. /	165. /	10620. /	1.00 /	39. /	96.
3037.96 /	0.60 /	4.96 /	0.13 /	3038.56 /	6.24 /	0.64 /	0.002	*XS*
DAM AT	11400 /	40 /	1030. /	94. /	6902. /	1.00 /	74. /	99.
3039.25 /	1.87 /	******* /	******* /	3041.12 /	10.96 /	1.00 /	*******	*XS*
D APP AT	11430 /	30 /	1030. /	909. /	50801. /	1.10 /	32. /	629.
3041.19 /	0.02 /	0.09 /	0.0 /	3041.21 /	1.13 /	0.16 /	0.001	*XS*
R-2.1 AT	12600 /	1170 /	1030. /	212. /	8729. /	1.32 /	208. /	398.
3045.67 /	0.49 /	******* /	******* /	3046.16 /	4.86 /	0.77 /	*******	*XS*
R AT	12905 /	305 /	1030. /	318. /	15995. /	1.13 /	188. /	401.
3048.29 /	0.18 /	2.32 /	0.0 /	3048.48 /	3.24 /	0.46 /	0.001	*XS*
R+5.1 AT	13300 /	395 /	1030. /	145. /	5639. /	1.53 /	235. /	396.
3052.43 /	1.20 /	4.65 /	0.51 /	3053.63 /	7.10 /	1.09 /	0.001	*XS*
S-5.1 AT	13675 /	375 /	1030. /	213. /	12377. /	1.14 /	130. /	246.
3058.92 /	0.42 /	5.70 /	0.0 /	3059.33 /	4.85 /	0.61 /	0.001	*XS*
S AT	14060 /	385 /	1030. /	169. /	8936. /	1.22 /	138. /	241.
3063.62 /	0.70 /	******* /	******* /	3064.32 /	6.08 /	0.79 /	*******	*XS*
S+3.6 AT	14350 /	290 /	1030. /	181. /	9569. /	1.19 /	133. /	242.
3067.32 /	0.60 /	3.60 /	0.0 /	3067.92 /	5.69 /	0.74 /	0.001	*XS*
T-3.2 AT	14600 /	250 /	1030. /	124. /	6591. /	1.60 /	88. /	265.
3070.96 /	1.72 /	4.21 /	-0.56 /	3072.68 /	8.32 /	1.04 /	-0.005	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PAGE 3 OF 3, PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID	AT	DISTANCE/	LENGTH/	DISCHARGE/	AREA	/CONVEYANCE/	ALPHA/	LEW	/	REW
WS ELEV	/	HV	/	HF	/	HE	/	EG	/	V	/	FN	/	ACC	*ID*
T	AT	14875	/	275	/	1030.	/	291.	/	16700.	/	1.36	/	78.	/	280.
3075.07	/	0.27	/	2.65	/	0.0	/	3075.34	/	3.54	/	0.47	/	0.000	*XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID	L-1	L-2	M	O-TW	P-2	Q	DAMTW	DAM
WSC	2998.39	3005.26	3012.13	3024.19	3028.08	3033.12	3037.22	3039.25

SECID	R-2.1	S-5.1	S
WSC	3045.67	3058.52	3063.62

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PAGE 1 OF PROFILE NOTES FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
I	KU/KD < 0.7 OR > 1.4		ALERTED USER
I+2.3	KU/KD < 0.7 OR > 1.4		ALERTED USER
J-TW	KU/KD < 0.7 OR > 1.4		ALERTED USER
K APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
K APP	WSU > BELMX (1)		CHECKED QBO (2)
K APP	MAX QBO < QT (2)		CHECKED QRD
K APP	ROAD NOT CODED		ASSUMED WSU = GMAX
K APP	LEFT BANK EXTENDED		ALERTED USER
K-1	KU/KD < 0.7 OR > 1.4		ALERTED USER
L	KU/KD < 0.7 OR > 1.4		ALERTED USER
L	KU/KD < 0.7 OR > 1.4		ALERTED USER
L-1	TOL FAILURE BETWEEN	WS = 2993.87 & WS = 2994.12	USED HIGHER WS
L-1	KU/KD < 0.7 OR > 1.4		ALERTED USER
L-2	FRDN FAILURE	WS = 3001.75 & FR = 34.51	USED HIGHER WS
L-2	KU/KD < 0.7 OR > 1.4		ALERTED USER
M	WS TOO LOW		USED WSMIN = WSC
M	KU/KD < 0.7 OR > 1.4		ALERTED USER
N	TOL FAILURE BETWEEN	WS = 3017.02 & WS = 3017.27	USED HIGHER WS
O-TW	WS TOO LOW		USED WSMIN = WSC
O-TW	WS NOT FOUND BETWEEN	WS = 3024.91 & WS = 3032.10	USED DEL = 0.25
O-TW	WS NOT FOUND		ASSUMED WS = WSC
P APP	MAX QBO < QT (3)		CHECKED QRD
P-2	WS NOT FOUND BETWEEN	WS = 3026.69 & WS = 3035.30	USED DEL = 0.25
P-2	WS NOT FOUND BETWEEN	WS = 3026.69 & WS = 3035.30	

	P-2	WS NOT FOUND	USED WSMIN = WSC
	Q	TOL FAILURE BETWEEN WS = 3029.39 & WS = 3029.64	ASSUMED WS = WSC USED HIGHER WS
	DAMTW	WS TOO LOW	USED WSMIN = WSC
	DAM	WS NOT FOUND BETWEEN WS = 3038.67 & WS = 3046.20	USED DEL = 0.25
	DAM	WS NOT FOUND BETWEEN WS = 3038.67 & WS = 3046.20	USED WSMIN = WSC
	DAM	WS NOT FOUND	ASSUMED WS = WSC
	D APP	KU/KD < 0.7 OR > 1.4	ALERTED USER
	R-2.1	WS NOT FOUND BETWEEN WS = 3042.79 & WS = 3054.40	USED DEL = 0.25
	R-2.1	WS NOT FOUND BETWEEN WS = 3042.79 & WS = 3054.40	USED WSMIN = WSC
	R-2.1	WS NOT FOUND	ASSUMED WS = WSC
	R	KU/KD < 0.7 OR > 1.4	ALERTED USER
	R+5.1	FRDN FAILURE WS = 3050.16 & FR = 15.20	USED HIGHER WS
	R+5.1	KU/KD < 0.7 OR > 1.4	ALERTED USER
	S-5.1	WS TOO LOW	USED WSMIN = WSC
	S-5.1	KU/KD < 0.7 OR > 1.4	ALERTED USER
	S	FRDN FAILURE WS = 3061.13 & FR = 14.55	USED HIGHER WS
	S	KU/KD < 0.7 OR > 1.4	ALERTED USER
	S+3.6	FRDN FAILURE WS = 3064.40 & FR = 22.71	USED HIGHER WS
	S+3.6	KU/KD < 0.7 OR > 1.4	ALERTED USER
	T-3.2	FRDN FAILURE WS = 3068.18 & FR = 9.08	USED HIGHER WS
	T-3.2	FRDN FAILURE WS = 3071.29 & FR = 1.20	USED HIGHER WS
	T-3.2	WS NOT FOUND BETWEEN WS = 3067.86 & WS = 3079.30	USED DEL = 0.25

PAGE 2 OF PROFILE NOTES FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PROFILE NUMBER 4. UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
T-3.2	FRDN FAILURE	WS = 3068.18 & FR = 9.08	USED HIGHER WS
T-3.2	FRDN FAILURE	WS = 3071.29 & FR = 1.21	USED HIGHER WS
T-3.2	WS NOT FOUND BETWEEN	WS = 3067.86 & WS = 3079.30	USED WSMIN = WSC
T-3.2	WS NOT FOUND		ASSUMED WS = WSC

USGS STEP-BACKWATER PROGRAM - VERSION 77.180 *** PAGE COUNT= 45,DATE= 7/21/77

WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PAGE 1 OF 3, PROFILE NUMBER 4,. UPSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV / HV / HF / HE / EG / V / FN / ACC								*ID*
I-4.1 AT	3500 /	0 /	3080. /	660. /	66019. /	1.47 /	41. /	287.
2979.23 /	0.50 /			2979.73 /	4.66 /	0.46/		*IS*
I AT	4095 /	595 /	2560. /	282. /	24932. /	1.27 /	114. /	263.
2981.54 /	1.63 /	2.87 /	0.57 /	2983.17 /	9.08 /	0.86 /	0.001	*XS*
I+2.3 AT	4625 /	530 /	2560. /	568. /	54613. /	1.51 /	49. /	282.
2985.25 /	0.48 /	2.55 /	0.0 /	2985.72 /	4.50 /	0.45 /	0.002	*XS*
J-TW AT	5187 /	562 /	2560. /	275. /	25955. /	1.00 /	11. /	75.
2987.41 /	1.35 /	2.60 /	0.44 /	2988.76 /	9.30 /	0.79 /	0.002	*XS*
BEGIN BRIDGE ANALYSIS								
BO JK AT	5187 /	/	1631. /	241. /	21550. /	1.00 /	0. /	30.
2992.40 /	0.71 /		...2...	(-.001)	/ 6.77 /	0.35 /		*BO*
NO EMBANKMENT CROSS SECTION								
K APP AT	5290 /	103 /	2560. /	631. /	44405. /	1.36 /	63. /	374.
2988.99 /	0.35 /	0.59 /	0.0 /	2989.34 /	4.06 /	0.45 /	-0.002	*AS*
M = **** /	E = **** /	K* = **** /	2679. /	298464. /	1.21 /	0. /	600.	
2993.30 /	0.02 /		/ 2993.32 /	0.96 /	0.08 /		*AS*	
END BRIDGE ANALYSIS								
K-1 AT	5750 /	460 /	2560. /	1797. /	168558. /	1.08 /	-5. /	464.
2993.35 /	0.03 /	0.06 /	0.01 /	2993.39 /	1.42 /	0.12 /	-0.000	*XS*
L AT	6325 /	575 /	2560. /	243. /	16342. /	1.00 /	88. /	163.
2993.87 /	1.73 /	1.37 /	0.85 /	2995.60 /	10.55 /	1.03 /	0.000	*XS*
L-1 AT	6900 /	575 /	2050. /	592. /	32091. /	1.30 /	48. /	409.
3001.18 /	0.24 /	5.83 /	0.0 /	3001.43 /	3.46 /	0.34 /	-0.000	*XS*
L-2 AT	7420 /	520 /	2050. /	377. /	15286. /	1.39 /	44. /	445.
3005.45 /	0.64 /	4.45 /	0.20 /	3006.08 /	5.44 /	0.86 /	0.004	*XS*
M AT	8160 /	740 /	2050. /	486. /	27671. /	1.19 /	82. /	344.
3013.11 /	0.33 /	7.35 /	0.0 /	3013.44 /	4.21 /	0.54 /	0.000	*XS*
M-2 AT	8700 /	540 /	2050. /	403. /	23747. /	1.03 /	30. /	227.
3016.52 /	0.41 /	3.45 /	0.04 /	3016.94 /	5.08 /	0.62 /	0.001	*XS*
N AT	9110 /	410 /	2050. /	468. /	22789. /	1.09 /	42. /	350.
3019.79 /	0.33 /	3.18 /	0.0 /	3020.12 /	4.38 /	0.59 /	-0.001	*XS*
O-TW AT	9690 /	580 /	2050. /	352. /	24920. /	1.60 /	143. /	353.
3024.91 /	0.85 /	******* /	******* /	3025.76 /	5.83 /	0.76 /	********	*XS*

WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV / HV / HF / HE / EG / V / FN / ACC								*ID*
BEGIN BRIDGE ANALYSIS								
BO OP AT	9690 /	/	811. /	87. /	3813. /	1.00 /	0. /	21.
3023.60 /	1.35 /	...3...	(-.001)	/	9.33 /	0.81 /		*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT		1029. /	RIGHT	194. /				*RG*
P APP AT	9736 /	46 /	2050. /	534. /	23871. /	1.08 /	102. /	410.
3025.84 /	0.25 /	0.32 /	0.0 /	3026.08 /	3.84 /	0.54 /	-0.002	*AS*
M = **** /	E = **** /	K* = **** /	894. /	56424. /	1.04 /	76. /	416.	
3026.94 /	0.09 /		/ 3027.02 /	2.29 /	0.28 /			*AS*
END BRIDGE ANALYSIS								
P-2 AT	10080 /	344 /	2050. /	424. /	28519. /	1.89 /	92. /	352.
3028.89 /	0.69 /	*******	******* /	3029.58 /	4.84 /	0.67 /	*******	*XS*
Q AT	10730 /	650 /	2050. /	470. /	22437. /	1.68 /	102. /	504.
3033.36 /	0.50 /	4.27 /	0.0 /	3033.85 /	4.36 /	0.61 /	0.003	*XS*
DAMTW AT	11360 /	630 /	1600. /	221. /	16358. /	1.00 /	36. /	97.
3038.92 /	0.82 /	5.72 /	0.16 /	3039.74 /	7.25 /	0.67 /	0.003	*XS*
DAM AT	11400 /	40 /	1600. /	128. /	10857. /	1.00 /	73. /	99.
3040.59 /	2.42 /	*******	******* /	3043.01 /	12.47 /	0.99 /	*******	*XS*
D APP AT	11430 /	30 /	1600. /	2025. /	182941. /	1.00 /	21. /	635.
3043.04 /	0.01 /	0.04 /	0.0 /	3043.04 /	0.79 /	0.08 /	-0.000	*XS*
R-2.1 AT	12600 /	1170 /	1600. /	287. /	13588. /	1.17 /	192. /	400.
3046.05 /	0.57 /	*******	******* /	3046.61 /	5.58 /	0.81 /	*******	*XS*
R AT	12905 /	305 /	1600. /	412. /	24427. /	1.06 /	174. /	402.
3048.72 /	0.25 /	2.35 /	0.0 /	3048.97 /	3.89 /	0.50 /	0.001	*XS*
R+5.1 AT	13300 /	395 /	1600. /	215. /	9048. /	1.36 /	210. /	398.
3052.83 /	1.18 /	4.58 /	0.46 /	3054.01 /	7.45 /	1.07 /	0.002	*XS*
S-5.1 AT	13675 /	375 /	1600. /	271. /	17789. /	1.08 /	120. /	251.
3059.39 /	0.59 /	5.96 /	0.0 /	3059.97 /	5.91 /	0.72 /	-0.001	*XS*
S AT	14060 /	385 /	1600. /	202. /	11516. /	1.16 /	132. /	245.
3063.93 /	1.13 /	4.81 /	0.27 /	3065.05 /	7.91 /	1.00 /	-0.001	*XS*
S+3.6 AT	14350 /	290 /	1600. /	278. /	17904. /	1.08 /	114. /	252.
3068.11 /	0.55 /	3.60 /	0.0 /	3068.66 /	5.76 /	0.71 /	0.008	*XS*
T-3.2 AT	14600 /	250 /	1600. /	298. /	17202. /	1.35 /	77. /	281.
3071.91 /	0.60 /	*******	******* /	3072.51 /	5.37 /	0.71 /	*******	*XS*

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WATER-SURFACE PROFILE FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PAGE 3 OF 3, PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

SECID AT DISTANCE/ LENGTH/DISCHARGE/ AREA /CONVEYANCE/ ALPHA/ LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*								
T	AT	14875 /	275 /	1600. /	242. /	13133. /	1.48 /	81. / 276.
	3074.82 /	1.01 /	3.12 /	0.20 /	3075.83 /	6.61 /	0.84 /	0.000 *XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK I-4.1 TO T 1ST TRY W/NEW SECTS ALL FLOO
PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

SECID	M	O-TW	P-2	DAMTW	DAM	R-2.1	S-5.1	T-3.2
WSC	3012.57	3024.91	3028.89	3037.97	3040.59	3046.05	3059.06	3071.91

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0 ...5....0....5....0....5....0....5....0....5....0....5....0

 1     1 GAP CREEK  SECT K1 TO Q                    ALL  2ND 13  8 01 05 10
R2     2 298885 299024 299123 299335 -99999 -99999 -99999 -99999
 3  1449 K-1    0  22  3 2984     5750 99 99
 4  1450     750   1360   1650   2560     750   1360   1650   2560
 5  1451      -15  1 29948     0  1 29926    50  1 29894    75  2 29883    80  2 29868
 5  1452       85  2 29848    87  2 29836    91  2 29838    97  2 29839   100  2 29839
 5  1453      102  2 29844   108  2 29860   111  2 29863   112  3 29894   150  3 29888
 5  1454      200  3 29885   250  3 29886   300  3 29888   350  3 29899   400  3 29916
 5  1455      450  3 29928   500  3 29948
 6  1456  1  2 045 035  1  2 045 045  1  2 040 040
 3  1470 L-2.8 0  17  3 2986     6000 99 99                                      08
 5  1472        0  1 29975    25  1 29929    55  1 29919    87  2 29920    92  2 29883
 5  1473      112  2 29866   116  2 29860   118  2 29860   124  2 29866   150  2 29886
 5  1474      171  3 29926   214  3 29928   252  3 29933   281  3 29935   300  3 29936
 5  1475      352  3 29953   434  3 29981
 6  1476  1  2 045 045  2  5 050 045  1  2 045 045
 3  1500 L      0  17  3 2989     6325 99 99
 5  1505        0  1 30003    25  1 29957    55  1 29947    87  2 29948    92  2 29911
 5  1506      112  2 29894   116  2 29888   118  2 29886   124  2 29894   150  2 29914
 5  1507      171  3 29954   214  3 29956   252  3 29961   281  3 29963   300  3 29964
 5  1508      352  3 29981   434  3 30009
 6  1510  1  2 045 045  2  5 050 045  1  2 045 045
 3  1530 L-1    1  21  3 2994     6900 99 99
 4  1531     570   1060   1300   2050     570   1060   1300   2050
 5  1532        0  1 30058    50  1 30010   100  1 30002   150  1 30007   182  2 30003
 5  1533      182  2 29965   192  2 29955   192  2 29947   194  2 29943   198  2 29933
 5  1534      206  2 29942   215  2 29954   220  3 29999   232  3 30005   250  3 30000
 5  1535      300  3 29989   350  3 29995   400  3 30006   440  3 30032   500  3 30042
 5  1536      524  3 30059
 6  1537  1  2 045 035  2  4 05  060  1  2 045 035
 3  1550 L-2    0  19  3 3001     7420 99 99
 5  1555      -40  1 30120     0  1 30089    50  1 30050   100  1 30051   150  1 30057
 5  1556      200  1 30044   250  1 30042   300  1 30041   350  1 30040   392  2 30052
 5  1557      396  2 30036   397  2 30021   401  2 30013   406  2 30006   413  2 30009
 5  1558      418  3 30046   450  3 30056   475  3 30098   500  3 30125
 6  1560  1  2 040 035  1  2 050 050  2  4 065 080
 3  1600 M      1  19  3 3008     8160 99 99
 4  1601     570   1060   1300   2050     570   1060   1300   2050
 5  1605        0  1 30187    67  1 30136   116  1 30120   150  2 30115   156  2 30095
 5  1606      157  2 30076   158  2 30070   162  2 30072   164  2 30070   166  2 30076
 5  1607      167  2 30094   185  2 30103   200  3 30114   243  3 30110   291  3 30111
 5  1608      300  3 30113   341  3 30124   350  3 30148   356  3 30172
 6  1610  1  2 035 035  2  5 050 035  1  2 045 045
 3  1650 M-2    0  16  3 3012     8700 99 99
 5  1652        0  1 30223    40  1 30145    50  1 30144    58  2 30141    59  2 30131
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*** INPUT CARD PRINTOUT ***

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         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0
5  1653      62  2 30110   65  2 30110   69  2 30116   70  3 30142   77  3 30148
5  1654     100  3 30151  148  3 30139  200  3 30146  215  3 30153  235  3 30173
5  1655     248  3 30223
6  1660  1  2 040 035  1  2 050 050  1  2 045 040
3  1700 N      0  19  3 3015    9110 99 99
5  1705        0  1 30253   31  1 30208   49  1 30192  118  1 30182  145  1 30182
5  1706     180  1 30182  207  2 30185  217  2 30171  219  2 30147  220  2 30143
5  1707     222  2 30143  224  2 30144  225  2 30160  231  3 30182  279  3 30177
5  1708     300  3 30179  350  3 30198  394  3 30211  412  3 30250
6  1710  1  2 045 035  1  2 045 045  1  2 045 035
3  1800 O-TW  0  18  3 3020    9690 99 99
5  1805        0  1 30310   22  1 30289   25  1 30288   35  1 30273   45  1 30270
5  1806     130  1 30251  200  1 30241  285  1 30221  287  2 30205  289  2 30198
5  1807     294  2 30199  304  2 30197  308  2 30202  311  3 30235  324  3 30229
5  1808     359  3 30253  383  3 30290  396  3 30321
6  1810  1  2 035 035  1  5 045 035  1  2 035 035
3  1900 BO OP 2   8  1 3019    9690         0 30235 3 0
5  1905        0  1 30236    0  1 30214    3  1 30205    6  1 30195   10  1 30184
5  1906       21  1 30194   21  1 30234    0 -9 30236
6  1910  1  2 050 050
3  2000 ROAD  4   8  3   24          1  3          2 2 2                2
5  2005        0  1 30310  100  1 30278  200  1 30260  300  1 30252  364  2 30250
5  2006     385  3 30249  400  3 30252  500  3 30315
3  2100 P APP 5  22  3 3019    9736  1  3
5  2105        0  1 30315   80  1 30267  120  1 30251  200  1 30241  250  1 30242
5  2106     300  1 30235  309  1 30237  320  1 30249  335  1 30239  339  2 30228
5  2107     341  2 30207  345  2 30185  349  2 30185  353  2 30186  354  2 30207
5  2108     360  3 30226  364  3 30238  385  3 30250  403  3 30255  415  3 30261
5  2109     420  3 30295  450  3 30312
6  2110  1  2 050 040  2  4 050 080  1  2 055 055
3  2150 P-2   0  19  3 3023   10080 99 99
5  2155     -50  1 30351    0  1 30325   50  1 30299  100  1 30287  150  1 30285
5  2156     200  1 30278  250  1 30269  280  2 30261  283  2 30252  291  2 30243
5  2157     292  2 30229  296  2 30225  299  2 30224  302  2 30230  306  3 30262
5  2158     329  3 30263  346  3 30280  350  3 30285  378  3 30353
6  2160  1  2 045 035  1  2 050 035  1  2 045 035
3  2200 Q      0  19  3 3029   10730 99 99
5  2205        0  1 30404   44  1 30372  100  1 30335  128  2 30319  134  2 30296
5  2206     136  2 30283  139  2 30283  145  2 30294  152  3 30318  200  3 30321
5  2207     300  3 30325  400  3 30326  485  3 30322  487  3 30306  489  3 30304
5  2208     491  3 30306  493  3 30316  501  3 30330  560  3 30404
6  2210  1  2 035 035  2  4 045 035  1  2 040 035
```

PAGE 1 OF EDITING NOTES FOR: GAP CREEK SECT K1 TO Q ALL 2ND

SECID	ERROR SEVERITY	FIRST VARIABLE	NO.	ERROR MESSAGE	SECOND VARIABLE	NO.	VALUE ASSUMED
K-1	WARNING	TYPE		WRONG			1
L-2.8	WARNING	HSUBO		IS LESS THAN	GMIN		> GMIN
BO OP	WARNING	STATION	8	IS LESS THAN	STATION	7	

INPUT SUMMARY FOR: GAP CREEK SECT K1 TO 0 ALL 2ND

13 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 14 TYPE 3 CARDS

KEPT 14 CROSS SECTIONS FOR EDITING

14 " " VALID FOR PROPERTY COMPUTATIONS

14 " " " " PROFILE "

*** INPUT CARD PRINTOUT ***

```
         1         2         3         4         5         6         7         8
....5....0....5....0....5....0....5....0....5....0....5....0....5....0....5....0

7 10000                                  0 0 0 0 2 2 2 2
8 10001                                  0 0 0 0 0 0 0 0
```

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
L-1	WS TOO LOW		USED WSMIN = WSC
L-2	WS TOO LOW		USED WSMIN = WSC
L-2	WS NOT FOUND BETWEEN	WS = 3004.69 & WS = 3012.50	
			USED DEL = 0.25
L-2	WS NOT FOUND		ASSUMED WS = WSC
M	WS TOO LOW		USED WSMIN = WSC
M-2	KU/KD < 0.7 OR > 1.4		ALERTED USER
N	KU/KD < 0.7 OR > 1.4		ALERTED USER
O-TW	WS TOO LOW		USED WSMIN = WSC
O-TW	KU/KD < 0.7 OR > 1.4		ALERTED USER
P APP	KU/KD < 0.7 OR > 1.4		ALERTED USER
P APP	WSU > BELMX (1)		CHECKED QBO (2)
Q	WS TOO LOW		USED WSMIN = WSC
Q	WS NOT FOUND BETWEEN	WS = 3032.74 & WS = 3040.40	
			USED DEL = 0.25
Q	WS NOT FOUND		ASSUMED WS = WSC

WATER-SURFACE PROFILE FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PAGE 1 OF 1, PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*
K-1 AT 5750 / 0 / 750. / 173. / 10801. / 1.40 / 63. / 302. 2988.85 / 0.41 / / 2989.26 / 4.33 / 0.48 / *IS*
L-2.8 AT 6000 / 250 / 750. / 182. / 10458. / 1.00 / 89. / 159. 2990.24 / 0.26 / 1.24 / 0.0 / 2990.51 / 4.12 / 0.45 / 0.003 *XS*
L AT 6325 / 325 / 750. / 147. / 7488. / 1.00 / 90. / 156. 2992.51 / 0.40 / 2.33 / 0.07 / 2992.91 / 5.10 / 0.60 / 0.003 *XS*
L-1 AT 6900 / 575 / 570. / 113. / 6035. / 1.00 / 182. / 218. 2998.06 / 0.40 / 5.54 / 0.0 / 2998.46 / 5.07 / 0.50 / 0.001 *XS*
L-2 AT 7420 / 520 / 570. / 160. / 6059. / 1.62 / 189. / 421. 3004.69 / 0.32 /******* /******* / 3005.01 / 3.57 / 0.55 /******* *XS*
M AT 8160 / 740 / 570. / 158. / 5725. / 1.30 / 138. / 314. 3011.68 / 0.26 / 6.93 / 0.0 / 3011.94 / 3.61 / 0.56 / 0.001 *XS*
M-2 AT 8700 / 540 / 570. / 210. / 8257. / 1.33 / 35. / 217. 3015.50 / 0.15 / 3.71 / 0.0 / 3015.65 / 2.71 / 0.40 / 0.001 *XS*
N AT 9110 / 410 / 570. / 160. / 4936. / 1.59 / 84. / 321. 3018.69 / 0.31 / 3.27 / 0.08 / 3019.01 / 3.57 / 0.71 / 0.001 *XS*
Q-TW AT 9690 / 580 / 570. / 126. / 7949. / 1.40 / 228. / 332. 3023.43 / 0.44 / 4.80 / 0.06 / 3023.87 / 4.51 / 0.56 / 0.000 *XS*
========== BEGIN BRIDGE ANALYSIS ==========
BO OP AT 9690 / / 572. / 87. / 3813. / 1.00 / 0. / 21. 3023.60 / 0.67 / ...2... (-.001) / 6.58 / 0.57 / *BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 0. / RIGHT 0. / *RG*
P APP AT 9736 / 46 / 570. / 91. / 3595. / 1.15 / 277. / 364. 3023.83 / 0.70 / 0.52 / 0.13 / 3024.52 / 6.26 / 0.61 / -0.001 *AS*
M = **** / E = **** / K* = **** / 164. / 5456. / 1.55 / 174. / 375. 3024.42 / 0.29 / / 3024.71 / 3.47 / 0.40 / *AS*
========== END BRIDGE ANALYSIS ==========
Q-2 AT 10080 / 344 / 570. / 115. / 7519. / 1.52 / 244. / 336. 3027.01 / 0.58 / 2.72 / 0.14 / 3027.59 / 4.96 / 0.65 / 0.009 *XS*
Q AT 10730 / 650 / 570. / 227. / 8581. / 2.47 / 113. / 500. 3032.74 / 0.24 /******* /******* / 3032.98 / 2.51 / 0.50 /******* *XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID	L-1	L-2	M	O-TW	Q
WSC	2996.88	3004.69	3011.50	3022.99	3032.74

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 2, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
L-2.8	KU/KD < 0.7 OR > 1.4		
			ALERTED USER
L-1	TOL FAILURE BETWEEN		
		WS = 2993.62 & WS = 2993.87	
			USED HIGHER WS
L-1	KU/KD < 0.7 OR > 1.4		
			ALERTED USER
L-2	WS TOO LOW		
			USED WSMIN = WSC
M	WS TOO LOW		
			USED WSMIN = WSC
N	FRDN FAILURE		
		WS = 3016.06 & FR = 15.73	
			USED HIGHER WS
N	KU/KD < 0.7 OR > 1.4		
			ALERTED USER
O-TW	WS TOO LOW		
			USED WSMIN = WSC
P APP	KU/KD < 0.7 OR > 1.4		
			ALERTED USER
P-2	FRDN FAILURE		
		WS = 3026.93 & FR = 1.29	
			USED HIGHER WS
P-2	WS NOT FOUND BETWEEN		
		WS = 3025.71 & WS = 3035.30	
			USED DEL = 0.25
P-2	FRDN FAILURE		
		WS = 3026.93 & FR = 1.29	
			USED HIGHER WS
P-2	WS NOT FOUND BETWEEN		
		WS = 3025.71 & WS = 3035.30	
			USED WSMIN = WSC
P-2	WS NOT FOUND		
			ASSUMED WS = WSC
Q	WS TOO LOW		
			USED WSMIN = WSC
Q	WS NOT FOUND BETWEEN		
		WS = 3033.00 & WS = 3040.40	
			USED DEL = 0.25
Q	WS NOT FOUND		
			ASSUMED WS = WSC

WATER-SURFACE PROFILE FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PAGE 1 OF 1, PROFILE NUMBER 2, UPSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*								
K-1 AT	5750 /	0 /	1360. /	559. /	33706. /	1.47 /	37. /	360.
2990.24 /	0.14 /			2990.38 /	2.43 /	0.29 /		*IS*
L-2.8 AT	6000 /	250 /	1360. /	239. /	15915. /	1.00 /	88. /	163.
2991.03 /	0.51 /	0.86 /	0.30 /	2991.53 /	5.70 /	0.56 /	0.001	*XS*
L AT	6325 /	325 /	1360. /	224. /	14431. /	1.00 /	89. /	162.
2993.62 /	0.57 /	2.62 /	0.03 /	2994.19 /	6.07 /	0.61 /	0.006	*XS*
L-1 AT	6900 /	575 /	1060. /	180. /	10023. /	1.14 /	182. /	344.
2999.42 /	0.62 /	5.82 /	0.02 /	3000.04 /	5.88 /	0.54 /	0.005	*XS*
L-2 AT	7420 /	520 /	1060. /	279. /	10668. /	1.52 /	48. /	436.
3005.16 /	0.34 /	5.46 /	0.0 /	3005.50 /	3.80 /	0.61 /	0.001	*XS*
M AT	8160 /	740 /	1060. /	262. /	11117. /	1.28 /	110. /	333.
3012.19 /	0.32 /	7.01 /	0.0 /	3012.52 /	4.04 /	0.59 /	0.004	*XS*
M-2 AT	8700 /	540 /	1060. /	304. /	14760. /	1.11 /	32. /	222.
3016.01 /	0.21 /	3.70 /	0.0 /	3016.22 /	3.49 /	0.47 /	0.000	*XS*
N AT	9110 /	410 /	1060. /	273. /	9827. /	1.34 /	54. /	332.
3019.13 /	0.31 /	3.18 /	0.05 /	3019.45 /	3.88 /	0.64 /	-0.000	*XS*
O-TW AT	9690 /	580 /	1060. /	199. /	13072. /	1.50 /	203. /	340.
3024.03 /	0.66 /	5.07 /	0.17 /	3024.69 /	5.34 /	0.68 /	-0.000	*XS*
BEGIN BRIDGE ANALYSIS								
BO OP AT	9690 /	/	787. /	87. /	3813. /	1.00 /	0. /	21.
3023.60 /	1.27 /	...3...	(-.001)	/	9.05 /	0.78 /		*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 216. / RIGHT 47. /								*RG*
P APP AT	9736 /	46 /	1060. /	222. /	7352. /	1.50 /	152. /	380.
3024.70 /	0.53 /	0.54 /	0.0 /	3025.23 /	4.77 /	0.56 /	0.002	*AS*
M = **** / E = **** / K* = **** /				572. /	26040. /	1.06 /	98. /	412.
3025.96 /	0.06 /			/ 3026.02 /	1.85 /	0.26 /		*AS*
END BRIDGE ANALYSIS								
P-2 AT	10080 /	344 /	1060. /	204. /	13183. /	1.79 /	202. /	344.
3027.77 /	0.75 / *******	*******	******* /	3028.52 /	5.19 /	0.72 /	*******	*XS*
Q AT	10730 /	650 /	1060. /	329. /	13544. /	2.05 /	109. /	501.
3033.00 /	0.33 / *******	*******	******* /	3033.33 /	3.23 /	0.48 /	*******	*XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 2, UPSTREAM COMPUTATIONS

SECID	L-2	M	O-TW	P-2	Q
WSC	3004.99	3011.96	3023.96	3027.77	3033.00

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
L-2.8	KU/KD < 0.7 OR > 1.4		
			ALERTED USER
L-1	TOL FAILURE BETWEEN		
		WS = 2993.75 & WS = 2994.00	
			USED HIGHER WS
L-2	WS TOO LOW		
			USED WSMIN = WSC
M	WS TOO LOW		
			USED WSMIN = WSC
M-2	KU/KD < 0.7 OR > 1.4		
			ALERTED USER
N	FRDN FAILURE		
		WS = 3016.51 & FR = 13.42	
			USED HIGHER WS
N	KU/KD < 0.7 OR > 1.4		
			ALERTED USER
O-TW	WS TOO LOW		
			USED WSMIN = WSC
P-2	FRDN FAILURE		
		WS = 3026.93 & FR = 1.58	
			USED HIGHER WS
P-2	FRDN FAILURE		
		WS = 3026.95 & FR = 1.56	
			USED HIGHER WS
P-2	WS NOT FOUND BETWEEN		
		WS = 3026.04 & WS = 3035.30	
			USED DEL = 0.25
P-2	FRDN FAILURE		
		WS = 3026.94 & FR = 1.56	
			USED HIGHER WS
P-2	WS NOT FOUND BETWEEN		
		WS = 3026.04 & WS = 3035.30	
			USED WSMIN = WSC
P-2	WS NOT FOUND		
			ASSUMED WS = WSC
Q	WS TOO LOW		
			USED WSMIN = WSC
Q	WS NOT FOUND BETWEEN		
		WS = 3033.12 & WS = 3040.40	
			USED DEL = 0.25
Q	WS NOT FOUND		
			ASSUMED WS = WSC

100 YR

WATER-SURFACE PROFILE FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PAGE 1 OF 1, PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID AT	DISTANCE / HV /	LENGTH / HF /	DISCHARGE / HE /	AREA / EG /	CONVEYANCE / V /	ALPHA / FN /	LEW / ACC /	REW *ID*
K-1 AT	5750 /	0 /	1650. /	901. /	64278. /	1.23 /	21. /	389.
2991.23 /	0.06 /		/	2991.29 /	1.83 /	0.19/		*IS*
L-2.8 AT	6000 /	250 /	1650. /	286. /	21016. /	1.00 /	87. /	166.
2991.64 /	0.52 /	0.50 /	0.36 /	2992.16 /	5.78 /	0.53 /	0.001	*XS*
L AT	6325 /	325 /	1650. /	252. /	17362. /	1.00 /	88. /	164.
2994.00 /	0.66 /	2.42 /	0.07 /	2994.67 /	6.54 /	0.63 /	0.004	*XS*
L-1 AT	6900 /	575 /	1300. /	234. /	12436. /	1.29 /	182. /	366.
2999.85 /	0.62 /	5.79 /	0.0 /	3000.47 /	5.55 /	0.54 /	0.007	*XS*
L-2 AT	7420 /	520 /	1300. /	342. /	13586. /	1.43 /	46. /	442.
3005.35 /	0.32 /	5.20 /	0.0 /	3005.67 /	3.80 /	0.61 /	0.002	*XS*
M AT	8160 /	740 /	1300. /	296. /	13118. /	1.27 /	106. /	339.
3012.34 /	0.38 /	7.02 /	0.03 /	3012.72 /	4.39 /	0.63 /	0.004	*XS*
M-2 AT	8700 /	540 /	1300. /	349. /	18561. /	1.06 /	31. /	224.
3016.24 /	0.23 /	3.75 /	0.0 /	3016.47 /	3.73 /	0.48 /	0.002	*XS*
N AT	9110 /	410 /	1300. /	315. /	12080. /	1.27 /	48. /	336.
3019.28 /	0.34 /	3.09 /	0.05 /	3019.62 /	4.12 /	0.66 /	0.000	*XS*
O-TW AT	9690 /	580 /	1300. /	233. /	15634. /	1.54 /	188. /	344.
3024.27 /	0.74 /	5.19 /	0.20 /	3025.01 /	5.57 /	0.71 /	C.000	*XS*
BEGIN BRIDGE ANALYSIS								
BO OP AT	9690 /	/	805. /	8?. /	3813. /	1.00 /	0. /	21.
3023.60 /	1.33 /	...3...	(-.001)	/	9.26 /	0.80 /		*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 416. / RIGHT 83. /								*RG*
P APP AT	9736 /	46 /	1300. /	322. /	11182. /	1.34 /	120. /	389.
3025.11 /	0.34 /	0.44 /	0.0 /	3025.45 /	4.04 /	0.46 /	-0.008	*AS*
M = **** / E = **** / K* = **** /				677. /	35990. /	1.05 /	90. /	415.
3026.29 /	0.06 /		/	3026.35 /	1.92 /	0.26 /		*AS*
END BRIDGE ANALYSIS								
P-2 AT	10080 /	344 /	1300. /	251. /	16345. /	1.83 /	180. /	347.
3028.08 /	0.76 /*******	/*******	/	3028.84 /	5.18 /	0.72 /*******		*XS*
Q AT	10730 /	650 /	1300. /	375. /	16238. /	1.90 /	107. /	502.
3033.12 /	0.35 /*******	/*******	/	3033.48 /	3.46 /	0.51 /*******		*XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 3. UPSTREAM COMPUTATIONS

SECID	L-2	M	O-TW	P-2	Q
WSC	3005.26	3012.13	3024.19	3028.08	3033.12

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
L-2.8	KU/KD < 0.7 OR > 1.4		
			ALERTED USER
L	KU/KD < 0.7 OR > 1.4		
			ALERTED USER
L-2	WS TOO LOW		
			USED WSMIN = WSC
M	WS TOO LOW		
			USED WSMIN = WSC
N	FROM FAILURE		
		WS = 3017.36 & FR = 12.23	
			USED HIGHER WS
O-TW	WS TOO LOW		
			USED WSMIN = WSC
O-TW	WS NOT FOUND BETWEEN		
		WS = 3024.91 & WS = 3032.10	
			USED DEL = 0.25
O-TW	WS NOT FOUND		
			ASSUMED WS = WSC
P APP	MAX QBO < QT (3)		
			CHECKED QRD
P-2	WS NOT FOUND BETWEEN		
		WS = 3026.69 & WS = 3035.30	
			USED DEL = 0.25
P-2	WS NOT FOUND BETWEEN		
		WS = 3026.69 & WS = 3035.30	
			USED WSMIN = WSC
P-2	WS NOT FOUND		
			ASSUMED WS = WSC
Q	TOL FAILURE BETWEEN		
		WS = 3029.39 & WS = 3029.64	
			USED HIGHER WS

WATER-SURFACE PROFILE FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PAGE 1 OF 1, PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

SECID	AT	DISTANCE / WS ELEV	LENGTH / HV	DISCHARGE / HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	*ID*
K-1	AT	5750 / 2993.35	0 / 0.03	2560. /	1796. /	168464. / 2993.38	1.08 / 1.43	-5. / 0.12	464.	*IS*
L-2.8	AT	6000 / 2993.48	250 / 0.41	2560. / 0.21	573. / 0.30	47194. / 2993.89	1.30 / 4.47	22. / 0.41	278. / -0.000	*XS*
K	AT	6325 / 2994.95	325 / 0.95	2560. / 1.73	334. / 0.27	26017. / 2995.89	1.04 / 7.66	48. / 0.69	169. / 0.000	*XS*
L-1	AT	6900 / 3000.74	575 / 0.50	2050. / 5.34	435. / 0.0	21986. / 3001.24	1.46 / 4.71	66. / 0.49	402. / 0.008	*XS*
L-2	AT	7420 / 3005.70	520 / 0.37	2050. / 4.83	477. / 0.0	20565. / 3006.08	1.30 / 4.30	41. / 0.66	451. / 0.001	*XS*
M	AT	8160 / 3012.80	740 / 0.48	2050. / 7.15	408. / 0.05	21145. / 3013.28	1.21 / 5.02	91. / 0.67	343. / 0.000	*XS*
M-2	AT	8700 / 3016.74	540 / 0.33	2050. / 3.80	448. / 0.0	28264. / 3017.08	1.02 / 4.58	28. / 0.54	229. / 0.001	*XS*
N	AT	9110 / 3019.70	410 / 0.38	2050. / 2.98	440. / 0.02	20488. / 3020.08	1.12 / 4.66	43. / 0.63	347. / 0.002	*XS*
O-TW	AT	9690 / 3024.91	580 / 0.85	2050. / *******	352. / *******	24920. / 3025.76	1.60 / 5.83	143. / 0.76	353. / *******	*XS*
BEGIN BRIDGE ANALYSIS										
BO OP	AT	9690 / 3023.60	/ 1.35	811. / ...3...	87. / (-.001)	3813. / 9.33	1.00 / 0.81	0. /	21. /	*BO*
EMBANKMENT OVERFLOW (CFS) / LEFT 1029. / RIGHT 194. /										*RG*
P APP	AT	9736 / 3025.84	46 / 0.25	2050. / 0.32	534. / 0.0	23871. / 3026.08	1.08 / 3.84	102. / 0.54	410. / -0.002	*AS*
M = **** / E = **** / K* = ****					894. /	56424. / 3027.02	1.04 / 2.29	76. / 0.28	416. /	*AS*
END BRIDGE ANALYSIS										
P-2	AT	10080 / 3028.89	344 / 0.69	2050. / *******	424. / *******	28519. / 3029.58	1.69 / 4.84	92. / 0.67	352. / *******	*XS*
Q	AT	10730 / 3033.36	650 / 0.50	2050. / 4.27	470. / 0.0	22437. / 3033.85	1.68 / 4.36	102. / 0.61	504. / 0.003	*XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

SECID	L-2	M	O-TW	P-2
WSC	3005.58	3012.57	3024.91	3028.89

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 5, DOWNSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
Q	WS TOO LOW		ASSUMED WS = WSC
P-2	KU/KD < 0.7 OR > 1.4		ALERTED USER
P-2	SUPERCRITICAL WS		COMPUTED WSA
P APP	WS NOT FOUND BETWEEN	WS = 3022.85 & WS = 3018.70	
P APP	WS NOT FOUND BETWEEN	WS = 3022.85 & WS = 3018.70	USED DEL = 0.25
P APP	WS NOT FOUND		USED KE = 0.5
BO OP	WS NOT FOUND BETWEEN	WS = 3022.21 & WS = 3018.60	ASSUMED WS = WSC
BO OP	WS NOT FOUND BETWEEN	WS = 3022.21 & WS = 3018.60	USED DEL = 0.25
BO OP	WS NOT FOUND		USED KE = 0.5
O-TW	SUPERCRITICAL WS		ASSUMED WS = WSC
N	WS NOT FOUND BETWEEN	WS = 3018.71 & WS = 3014.50	COMPUTED WSA
N	WS NOT FOUND BETWEEN	WS = 3018.71 & WS = 3014.50	USED DEL = 0.25
N	WS NOT FOUND		USED KE = 0.5
M-2	WS NOT FOUND BETWEEN	WS = 3015.20 & WS = 3011.20	ASSUMED WS = WSC
M-2	WS NOT FOUND BETWEEN	WS = 3015.20 & WS = 3011.20	USED DEL = 0.25
M-2	WS NOT FOUND		USED KE = 0.5
M	WS NOT FOUND BETWEEN	WS = 3011.50 & WS = 3007.20	ASSUMED WS = WSC
M	WS NOT FOUND BETWEEN	WS = 3011.50 & WS = 3007.20	USED DEL = 0.25
M	WS NOT FOUND		USED KE = 0.5
L-2	WS NOT FOUND BETWEEN	WS = 3004.69 & WS = 3000.80	ASSUMED WS = WSC
L-2	WS NOT FOUND BETWEEN	WS = 3004.69 & WS = 3000.80	USED DEL = 0.25
L-2	WS NOT FOUND		USED KE = 0.5

L-1	WS NOT FOUND BETWEEN		ASSUMED WS = WSC
		WS = 2996.88 & WS = 2993.50	
			USED DEL = 0.25
L-1	WS NOT FOUND BETWEEN		
		WS = 2996.88 & WS = 2993.50	
			USED KE = 0.5
L-1	WS NOT FOUND		
			ASSUMED WS = WSC
L	WS NOT FOUND BETWEEN		
		WS = 2991.81 & WS = 2988.80	
			USED DEL = 0.25
L	WS NOT FOUND BETWEEN		
		WS = 2991.81 & WS = 2988.80	
			USED KE = 0.5
L	WS NOT FOUND		
			ASSUMED WS = WSC
L-2.8	WS NOT FOUND BETWEEN		
		WS = 2989.02 & WS = 2986.20	
			USED DEL = 0.25
L-2.8	WS NOT FOUND BETWEEN		
		WS = 2989.02 & WS = 2986.20	
			USED KE = 0.5
L-2.8	WS NOT FOUND		
			ASSUMED WS = WSC
K-1	WS NOT FOUND BETWEEN		
		WS = 2987.35 & WS = 2983.80	
			USED DEL = 0.25
K-1	WS NOT FOUND		
			ASSUMED WS = WSC
			ASSUMED WS = WSC

WATER-SURFACE PROFILE FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PAGE 1 OF 1, PROFILE NUMBER 5, DOWNSTREAM COMPUTATIONS

SECID AT DISTANCE/ LENGTH/DISCHARGE/ AREA /CONVEYANCE/ ALPHA/ LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*
Q AT 10730 / 0 / 570. / 227. / 8581. / 2.47 / 113. / 500. 3032.74 / 0.24 / / 3032.98 / 2.51 / 0.91/ *IS*
P-2 AT 10080 / -650 / 570. / 67. / 4599. / 1.12 / 269. / 330. 3026.38 / 1.25 / 5.35 / 0.0 / 3027.63 / 8.47 / 1.50 / -0.000 *XS*
P APP AT 9736 / -344 / 570. / 60. / 2619. / 1.00 / 339. / 361. 3022.85 / 1.40 /******* /******* / 3024.24 / 9.46 / 1.01 /******* *AS*
BO OP AT 9690 / -46 / 570. / 60. / 3192. / 1.00 / 0. / 21. 3022.21 / 1.41 /******* /******* / 3023.62 / 9.51 / 0.99 /******* *BO*
O-TW AT 9690 / 0 / 570. / 53. / 3046. / 1.04 / 280. / 310. 3022.21 / 1.87 /******* /******* / 3024.09 / 10.73 / 1.45 /******* *XS*
N AT 9110 / -580 / 570. / 163. / 5072. / 1.58 / 83. / 321. 3018.71 / 0.30 /******* /******* / 3019.01 / 3.49 / 0.93 /******* *XS*
M-2 AT 8700 / -410 / 570. / 155. / 5463. / 1.58 / 36. / 213. 3015.20 / 0.33 /******* /******* / 3015.53 / 3.67 / 0.87 /******* *XS*
M AT 8160 / -540 / 570. / 128. / 4474. / 1.31 / 150. / 307. 3011.50 / 0.40 /******* /******* / 3011.90 / 4.45 / 1.00 /******* *XS*
L-2 AT 7420 / -740 / 570. / 160. / 6059. / 1.62 / 189. / 421. 3004.69 / 0.32 /******* /******* / 3005.01 / 3.57 / 0.92 /******* *XS*
L-1 AT 6900 / -520 / 570. / 71. / 3250. / 1.00 / 182. / 217. 2996.88 / 1.01 /******* /******* / 2997.89 / 8.06 / 0.99 /******* *XS*
L AT 6325 / -575 / 750. / 102. / 4285. / 1.00 / 91. / 152. 2991.81 / 0.83 /******* /******* / 2992.64 / 7.32 / 1.00 /******* *XS*
L-2.8 AT 6000 / -325 / 750. / 103. / 4295. / 1.00 / 91. / 152. 2989.02 / 0.83 /******* /******* / 2989.85 / 7.31 / 0.99 /******* *XS*
K-1 AT 5750 / -250 / 750. / 84. / 4935. / 1.00 / 78. / 111. 2987.35 / 1.25 /******* /******* / 2988.60 / 8.98 / 1.00 /******* *XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 5, DOWNSTREAM COMPUTATIONS

SECID	K-1	L-2.8	L	L-1	L-2	M	M-2	N
WSC	2987.35	2989.02	2991.81	2996.88	3004.69	3011.50	3015.20	3018.71

SECID	O-TW	BO OP	P APP	P-2	Q
WSC	3022.99	3022.21	3022.85	3026.77	3032.74

COMPUTED WSA VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 5, DOWNSTREAM COMPUTATIONS

SECID	O-TW	P-2
WSA	3023.83	3027.14

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 6. DOWNSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
Q	WS TOO LOW		ASSUMED WS = WSC
P-2	SUPERCRITICAL WS		COMPUTED WSA
P APP	WS NOT FOUND BETWEEN	WS = 3024.78 & WS = 3018.70	USED DEL = 0.25
P APP	WS NOT FOUND BETWEEN	WS = 3024.78 & WS = 3018.70	USED KE = 0.5
P APP	WS NOT FOUND		ASSUMED WS = WSC
BO OP	WS NOT FOUND BETWEEN	WS = 3023.43 & WS = 3018.60	USED DEL = 0.25
BO OP	WS NOT FOUND BETWEEN	WS = 3023.43 & WS = 3018.60	USED KE = 0.5
BO OP	WS NOT FOUND		ASSUMED WS = WSC
O-TW	SUPERCRITICAL WS		COMPUTED WSA
N	WS NOT FOUND BETWEEN	WS = 3019.03 & WS = 3014.50	USED DEL = 0.25
N	WS NOT FOUND BETWEEN	WS = 3019.03 & WS = 3014.50	USED KE = 0.5
N	WS NOT FOUND		ASSUMED WS = WSC
M-2	WS NOT FOUND BETWEEN	WS = 3015.57 & WS = 3011.20	USED DEL = 0.25
M-2	WS NOT FOUND BETWEEN	WS = 3015.57 & WS = 3011.20	USED KE = 0.5
M-2	WS NOT FOUND		ASSUMED WS = WSC
M	WS NOT FOUND BETWEEN	WS = 3011.96 & WS = 3007.20	USED DEL = 0.25
M	WS NOT FOUND BETWEEN	WS = 3011.96 & WS = 3007.20	USED KE = 0.5
M	WS NOT FOUND		ASSUMED WS = WSC
L-2	WS NOT FOUND BETWEEN	WS = 3004.99 & WS = 3000.80	USED DEL = 0.25
L-2	WS NOT FOUND BETWEEN	WS = 3004.99 & WS = 3000.80	USED KE = 0.5
L-2	WS NOT FOUND		ASSUMED WS = WSC
L-1	WS NOT FOUND BETWEEN		

		WS = 2997.94 & WS = 2993.50	
			USED DEL = 0.25
L-1	WS NOT FOUND BETWEEN		
		WS = 2997.94 & WS = 2993.50	
			USED KE = 0.5
L-1	WS NOT FOUND		
			ASSUMED WS = WSC
L	WS NOT FOUND BETWEEN		
		WS = 2992.65 & WS = 2988.80	
			USED DEL = 0.25
L	WS NOT FOUND BETWEEN		
		WS = 2992.65 & WS = 2988.80	
			USED KE = 0.5
L	WS NOT FOUND		
			ASSUMED WS = WSC
L-2.8	WS NOT FOUND BETWEEN		
		WS = 2989.87 & WS = 2986.20	
			USED DEL = 0.25
L-2.8	WS NOT FOUND BETWEEN		
		WS = 2989.87 & WS = 2986.20	
			USED KE = 0.5
L-2.8	WS NOT FOUND		
			ASSUMED WS = WSC
K-1	WS NOT FOUND BETWEEN		
		WS = 2989.37 & WS = 2983.80	
			USED DEL = 0.25
K-1	WS NOT FOUND		
			ASSUMED WS = WSC

WATER-SURFACE PROFILE FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PAGE 1 OF 1, PROFILE NUMBER 6, DOWNSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*
Q AT 10730 / 0 / 1060. / 329. / 13544. / 2.05 / 109. / 501. 3033.00 / 0.33 / / 3033.33 / 3.23 / 0.89 / *IS*
P-2 AT 10080 / -650 / 1060. / 175. / 11280. / 1.75 / 213. / 342. 3027.56 / 1.00 / 4.78 / 0.0 / 3028.55 / 6.05 / 1.21 / -0.000 *XS*
P APP AT 9736 / -344 / 1060. / 240. / 7972. / 1.47 / 145. / 381. 3024.78 / 0.45 /******* /******* / 3025.23 / 4.42 / 0.93 /******* *AS*
BO OP AT 9690 / -46 / 1060. / 86. / 4999. / 1.00 / 0. / 21. 3023.43 / 2.39 /******* /******* / 3025.82 / 12.39 / 0.99 /******* *BO*
O-TW AT 9690 / 0 / 1060. / 127. / 7971. / 1.40 / 228. / 332. 3023.43 / 1.52 /******* /******* / 3024.96 / 8.36 / 1.56 /******* *XS*
N AT 9110 / -580 / 1060. / 246. / 8514. / 1.39 / 61. / 330. 3019.03 / 0.40 /******* /******* / 3019.43 / 4.32 / 0.94 /******* *XS*
M-2 AT 8700 / -410 / 1060. / 222. / 8945. / 1.29 / 35. / 218. 3015.57 / 0.46 /******* /******* / 3016.02 / 4.78 / 0.87 /******* *XS*
M AT 8160 / -540 / 1060. / 212. / 8336. / 1.30 / 119. / 325. 3011.96 / 0.51 /******* /******* / 3012.46 / 5.01 / 0.99 /******* *XS*
L-2 AT 7420 / -740 / 1060. / 229. / 9113. / 1.43 / 177. / 431. 3004.99 / 0.47 /******* /******* / 3005.47 / 4.62 / 1.01 /******* *XS*
L-1 AT 6900 / -520 / 1060. / 108. / 5751. / 1.00 / 182. / 218. 2997.94 / 1.49 /******* /******* / 2999.43 / 9.78 / 0.99 /******* *XS*
L AT 6325 / -575 / 1360. / 157. / 8264. / 1.00 / 90. / 157. 2992.65 / 1.17 /******* /******* / 2993.83 / 8.69 / 1.00 /******* *XS*
L-2.8 AT 6000 / -325 / 1360. / 157. / 8279. / 1.00 / 90. / 157. 2989.87 / 1.17 /******* /******* / 2991.04 / 8.67 / 1.00 /******* *XS*
K-1 AT 5750 / -250 / 1360. / 298. / 16433. / 1.74 / 51. / 326. 2989.37 / 0.56 /******* /******* / 2989.93 / 4.57 / 1.02 /******* *XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 6, DOWNSTREAM COMPUTATIONS

SECID	K-1	L-2.8	L	L-1	L-2	M	M-2	N
WSC	2989.37	2989.87	2992.65	2997.94	3004.99	3011.96	3015.57	3019.03

SECID	O-TW	BO OP	P APP	P-2	Q
WSC	3023.96	3023.43	3024.78	3027.77	3033.00

COMPUTED WSA VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 6, DOWNSTREAM COMPUTATIONS

SECID	O-TW	P-2
WSA	3024.65	3027.97

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 7, DOWNSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
Q	WS TOO LOW		ASSUMED WS = WSC
P-2	SUPERCRITICAL WS		COMPUTED WSA
P APP	WS NOT FOUND BETWEEN	WS = 3024.95 & WS = 3018.70	USED DEL = 0.25
P APP	WS NOT FOUND BETWEEN	WS = 3024.95 & WS = 3018.70	USED KE = 0.5
P APP	WS NOT FOUND		ASSUMED WS = WSC
BO OP	WS NOT FOUND BETWEEN	WS = 3023.49 & WS = 3018.60	USED DEL = 0.25
BO OP	WS NOT FOUND BETWEEN	WS = 3023.49 & WS = 3018.60	USED KE = 0.5
BO OP	WS NOT FOUND		ASSUMED WS = WSC
O-TW	SUPERCRITICAL WS		COMPUTED WSA
N	WS NOT FOUND BETWEEN	WS = 3019.17 & WS = 3014.50	USED DEL = 0.25
N	WS NOT FOUND BETWEEN	WS = 3019.17 & WS = 3014.50	USED KE = 0.5
N	WS NOT FOUND		ASSUMED WS = WSC
M-2	WS NOT FOUND BETWEEN	WS = 3015.71 & WS = 3011.20	USED DEL = 0.25
M-2	WS NOT FOUND BETWEEN	WS = 3015.71 & WS = 3011.20	USED KE = 0.5
M-2	WS NOT FOUND		ASSUMED WS = WSC
M	WS NOT FOUND BETWEEN	WS = 3012.13 & WS = 3007.20	USED DEL = 0.25
M	WS NOT FOUND BETWEEN	WS = 3012.13 & WS = 3007.20	USED KE = 0.5
M	WS NOT FOUND		ASSUMED WS = WSC
L-2	WS NOT FOUND BETWEEN	WS = 3005.26 & WS = 3000.80	USED DEL = 0.25
L-2	WS NOT FOUND BETWEEN	WS = 3005.26 & WS = 3000.80	USED KE = 0.5
L-2	WS NOT FOUND		ASSUMED WS = WSC
L-1	WS NOT FOUND BETWEEN		

		WS = 2998.39 & WS = 2993.50	
			USED DEL = 0.25
L-1	WS NOT FOUND BETWEEN		
		WS = 2998.39 & WS = 2993.50	
			USED KE = 0.5
L-1	WS NOT FOUND		
			ASSUMED WS = WSC
L	WS NOT FOUND BETWEEN		
		WS = 2993.02 & WS = 2988.80	
			USED DEL = 0.25
L	WS NOT FOUND BETWEEN		
		WS = 2993.02 & WS = 2988.80	
			USED KE = 0.5
L	WS NOT FOUND		
			ASSUMED WS = WSC
L-2.8	WS NOT FOUND BETWEEN		
		WS = 2990.23 & WS = 2986.20	
			USED DEL = 0.25
L-2.8	WS NOT FOUND BETWEEN		
		WS = 2990.23 & WS = 2986.20	
			USED KE = 0.5
L-2.8	WS NOT FOUND		
			ASSUMED WS = WSC
K-1	WS NOT FOUND BETWEEN		
		WS = 2989.59 & WS = 2983.80	
			USED DEL = 0.25
K-1	WS NOT FOUND		
			ASSUMED WS = WSC

WATER-SURFACE PROFILE FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PAGE 1 OF 1, PROFILE NUMBER 7, DOWNSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC *ID*								
Q AT	10730	0	1300.	375.	16238.	1.90	107.	502.
3033.12	0.35			3033.48	3.46	0.86		*IS*
P-2 AT	10080	-650	1300.	226.	14643.	1.82	191.	345.
3027.92	0.93	4.62	0.0	3028.85	5.75	1.13	0.001	*XS*
P APP AT	9736	-344	1300.	282.	9546.	1.40	132.	384.
3024.95	0.46	*******	*******	3025.42	4.61	0.91	*******	*AS*
BO OP AT	9690	-46	1300.	86.	4561.	1.00	0.	21.
3023.49	3.53	*******	*******	3027.02	15.07	1.31	*******	*BO*
O-TW AT	9690	0	1300.	132.	8306.	1.42	226.	333.
3023.49	2.13	*******	*******	3025.62	9.84	1.85	*******	*XS*
N AT	9110	-580	1300.	284.	10374.	1.33	51.	333.
3019.17	0.43	*******	*******	3019.60	4.58	0.93	*******	*XS*
M-2 AT	8700	-410	1300.	248.	10656.	1.21	34.	219.
3015.71	0.52	*******	*******	3016.23	5.24	0.88	*******	*XS*
M AT	8160	-540	1300.	248.	10268.	1.28	112.	331.
3012.13	0.55	*******	*******	3012.68	5.25	0.99	*******	*XS*
L-2 AT	7420	-740	1300.	312.	12171.	1.47	47.	439.
3005.26	0.40	*******	*******	3005.66	4.16	0.93	*******	*XS*
L-1 AT	6900	-520	1300.	124.	6859.	1.00	182.	218.
2998.39	1.70	*******	*******	3000.09	10.45	1.00	*******	*XS*
L AT	6325	-575	1650.	181.	10384.	1.00	89.	158.
2993.02	1.29	*******	*******	2994.31	9.11	0.99	*******	*XS*
L-2.8 AT	6000	-325	1650.	181.	10366.	1.00	89.	159.
2990.23	1.29	*******	*******	2991.52	9.11	0.99	*******	*XS*
K-1 AT	5750	-250	1650.	360.	19936.	1.70	47.	336.
2989.59	0.56	*******	*******	2990.15	4.59	0.95	*******	*XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 7, DOWNSTREAM COMPUTATIONS

SECID	K-1	L-2.8	L	L-1	L-2	M	M-2	N
WSC	2989.59	2990.23	2993.02	2998.39	3005.26	3012.13	3015.71	3019.17

SECID	O-TW	BO OP	P APP	P-2	Q
WSC	3024.19	3023.49	3024.95	3028.08	3033.12

COMPUTED WSA VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 7, DOWNSTREAM COMPUTATIONS

SECID	O-TW	P-2
WSA	3025.44	3028.21

PAGE 1 OF PROFILE NOTES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 8, DOWNSTREAM COMPUTATIONS

SECID	ERROR(WARNING) MESSAGE	INTERMEDIATE RESULTS(IF ANY)	ACTION TAKEN
Q	WS TOO LOW		ASSUMED WS = WSC
P-2	SUPERCRITICAL WS		COMPUTED WSA
P APP	WS NOT FOUND BETWEEN	WS = 3025.34 & WS = 3018.70	USED DEL = 0.25
P APP	WS NOT FOUND BETWEEN	WS = 3025.34 & WS = 3018.70	USED KE = 0.5
P APP	WS NOT FOUND		ASSUMED WS = WSC
BO OP	WS NOT FOUND BETWEEN	WS = 3023.55 & WS = 3018.60	USED DEL = 0.25
BO OP	WS NOT FOUND BETWEEN	WS = 3023.55 & WS = 3018.60	USED KE = 0.5
BO OP	WS NOT FOUND		ASSUMED WS = WSC
O-TW	SUPERCRITICAL WS		COMPUTED WSA
N	WS NOT FOUND BETWEEN	WS = 3019.52 & WS = 3014.50	USED DEL = 0.25
N	WS NOT FOUND BETWEEN	WS = 3019.52 & WS = 3014.50	USED KE = 0.5
N	WS NOT FOUND		ASSUMED WS = WSC
M-2	WS NOT FOUND BETWEEN	WS = 3016.08 & WS = 3011.20	USED DEL = 0.25
M-2	WS NOT FOUND BETWEEN	WS = 3016.08 & WS = 3011.20	USED KE = 0.5
M-2	WS NOT FOUND		ASSUMED WS = WSC
M	WS NOT FOUND BETWEEN	WS = 3012.57 & WS = 3007.20	USED DEL = 0.25
M	WS NOT FOUND BETWEEN	WS = 3012.57 & WS = 3007.20	USED KE = 0.5
M	WS NOT FOUND		ASSUMED WS = WSC
L-2	WS NOT FOUND BETWEEN	WS = 3005.58 & WS = 3000.80	USED DEL = 0.25
L-2	WS NOT FOUND BETWEEN	WS = 3005.58 & WS = 3000.80	USED KE = 0.5
L-2	WS NOT FOUND		ASSUMED WS = WSC
L-1	WS NOT FOUND BETWEEN		

		WS = 3000.42 & WS = 2993.50	USED DEL = 0.25
L-1	WS NOT FOUND BETWEEN		
		WS = 3000.42 & WS = 2993.50	USED KE = 0.5
L-1	WS NOT FOUND		
			ASSUMED WS = WSC
L	WS NOT FOUND BETWEEN		
		WS = 2993.96 & WS = 2988.80	USED DEL = 0.25
L	WS NOT FOUND BETWEEN		
		WS = 2993.96 & WS = 2988.80	USED KE = 0.5
L	WS NOT FOUND		
			ASSUMED WS = WSC
L-2.8	WS NOT FOUND BETWEEN		
		WS = 2991.18 & WS = 2986.20	USED DEL = 0.25
L-2.8	WS NOT FOUND BETWEEN		
		WS = 2991.18 & WS = 2986.20	USED KE = 0.5
L-2.8	WS NOT FOUND		
			ASSUMED WS = WSC
K-1	WS NOT FOUND BETWEEN		
		WS = 2990.04 & WS = 2983.80	USED DEL = 0.25
K-1	WS NOT FOUND		
			ASSUMED WS = WSC

WATER-SURFACE PROFILE FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PAGE 1 OF 1, PROFILE NUMBER 8, DOWNSTREAM COMPUTATIONS

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC / *ID*
Q AT 10730 / 0 / 2050. / 486. / 23627. / 1.64 / 102. / 504. 3033.40 / 0.45 / / 3033.85 / 4.22 / 0.87 / *IS*
P-2 AT 10080 / -650 / 2050. / 406. / 27101. / 1.92 / 95. / 351. 3028.83 / 0.76 / 4.27 / 0.0 / 3029.59 / 5.05 / 0.98 / -0.001 *XS*
P APP AT 9736 / -344 / 2050. / 385. / 14284. / 1.23 / 114. / 397. 3025.34 / 0.54 /******* /******* / 3025.88 / 5.32 / 0.89 /******* *AS*
BO OP AT 9690 / -46 / 2050. / 87. / 4081. / 1.00 / 0. / 21. 3023.55 / 8.66 /******* /******* / 3032.22 / 23.60 / 2.05 /******* *BO*
O-TW AT 9690 / 0 / 2050. / 140. / 8808. / 1.43 / 223. / 334. 3023.55 / 4.81 /******* /******* / 3028.36 / 14.68 / 2.76 /******* *XS*
N AT 9110 / -580 / 2050. / 384. / 16373. / 1.18 / 45. / 343. 3019.52 / 0.52 /******* /******* / 3020.04 / 5.33 / 0.90 /******* *XS*
M-2 AT 8700 / -410 / 2050. / 317. / 15845. / 1.09 / 32. / 223. 3016.08 / 0.71 /******* /******* / 3016.79 / 6.46 / 0.92 /******* *XS*
M AT 8160 / -540 / 2050. / 350. / 16734. / 1.24 / 99. / 342. 3012.57 / 0.66 /******* /******* / 3013.23 / 5.86 / 0.96 /******* *XS*
L-2 AT 7420 / -740 / 2050. / 427. / 17847. / 1.34 / 43. / 449. 3005.58 / 0.48 /******* /******* / 3006.06 / 4.80 / 0.94 /******* *XS*
L-1 AT 6900 / -520 / 2050. / 340. / 17457. / 1.42 / 86. / 392. 3000.42 / 0.80 /******* /******* / 3001.22 / 6.02 / 1.09 /******* *XS*
L AT 6325 / -575 / 2560. / 249. / 17043. / 1.00 / 88. / 163. 2993.96 / 1.64 /******* /******* / 2995.60 / 10.27 / 0.99 /******* *XS*
L-2.8 AT 6000 / -325 / 2560. / 250. / 17062. / 1.00 / 88. / 164. 2991.18 / 1.64 /******* /******* / 2992.81 / 10.26 / 0.99 /******* *XS*
K-1 AT 5750 / -250 / 2560. / 496. / 28905. / 1.54 / 40. / 354. 2990.04 / 0.64 /******* /******* / 2990.68 / 5.17 / 0.90 /******* *XS*

END OF THIS PROFILE

COMPUTED WSC VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 8, DOWNSTREAM COMPUTATIONS

SECID	K-1	L-2.8	L	L-1	L-2	M	M-2	N
WSC	2990.04	2991.18	2993.96	3000.42	3005.58	3012.57	3016.08	3019.52

SECID	O-TW	BO OP	P APP	P-2	Q
WSC	3024.91	3023.55	3025.34	3028.89	3033.40

COMPUTED WSA VALUES FOR: GAP CREEK SECT K1 TO Q ALL 2ND
PROFILE NUMBER 8, DOWNSTREAM COMPUTATIONS

SECID	O-TW	P-2
WSA	3028.32	3025.97