ROCKY KNOB

= 1.DATE= 4/ 5/77.

.8
.0

34
76

56
96

76
14

94
34

53
68

84
13

107
130

ROCKY KNOB

*** 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
1     1 ROCKY KNOB      10.50.106,8500 YR FLOODS  DUM 1-D    7 14 02 05 15
2     2 310790 310803 310815 310850 310863 310875 310835 310875 310888 310900
2     3 310940 310940 310953 310965
3     5 DUM 1 1  14  3 3105     2370 99 99
4     6     290     390     390     760     760     760     960     960     960
4     7     960    1580    1580    1580
5     8       0  1 31118   15  1 31090   35  1 31067   48  2 31067   50  2 31036
5     9      53  2 31036   56  2 31043   60  2 31063   64  2 31066   70  3 31076
5    10     100  3 31073  135  3 31075  144  3 31080  150  3 31115
6    12   1  2 045 045  4  5 060 050  1  2 045 045
3    20 DUM 2 0  14  3 3107     2590 99 99
5    23       0  1 31138   15  1 31110   35  1 31087   48  2 31087   50  2 31056
5    24      53  2 31056   56  2 31063   60  2 31083   64  2 31086   70  3 31096
5    25     100  3 31093  135  3 31095  144  3 31100  150  3 31135
6    27   1  2 045 045  4  5 060 050  1  2 045 045
3    30 DUM 3 0  14  3 3100     2730 99 99
5    33       0  1 31158   15  1 31131   35  1 31107   48  2 31107   50  2 31076
5    34      53  2 31076   56  2 31083   60  2 31103   64  2 31106   70  3 31116
5    35     100  3 31113  135  3 31115  144  3 31120  150  3 31155
6    37   1  2 045 045  4  5 060 050  1  2 045 045
3    40 *     0  14  3 3111     3000 99 99
5    43       0  1 31178   15  1 31153   35  1 31127   48  2 31127   50  2 31096
5    44      53  2 31096   56  2 31103   60  2 31123   64  2 31126   70  3 31134
5    45     100  3 31133  135  3 31135  144  3 31140  150  3 31175
6    47   1  2 045 045  4  5 060 050  1  2 045 045
3    50 *     0  14  3 3115     3440 99 99
5    53       0  1 31221   35  1 31191   39  1 31193   50  2 31175   60  2 31153
5    54      61  2 31143   64  2 31133   69  2 31130   80  3 31177  100  3 31160
5    55     140  3 31176  153  3 31182  175  3 31150  200  3 31221
6    57   2  3 045 035  4  5 060 050  2  3 045 035
3    60 *     0  13  3 3110     3750 99 99
5    63       0  1 31251   30  1 31221   60  1 31213   89  2 31202   91  2 31164
5    64      92  2 31172   95  2 31174   97  2 31177  101  3 31205  130  3 31213
5    65     160  3 31216  144  3 31224  210  3 31251
6    67   1  2 045 045  4  5 060 050  1  2 045 045
3    70 *     0  12  3 3122     4150 99 99
5    73       0  1 31276   30  1 31250   60  1 31240   87  2 31240   91  2 31207
5    74      93  2 31201   96  2 31206   98  3 31247  103  3 31240  130  3 31230
5    75     170  3 31240  200  3 31209
6    77   1  2 045 045  5  4 060 050  1  2 045 045
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USGS STEP-BACKWATER PROGRAM - VERSION 76.170 *** PAGE COUNT= 2 DATE= 4/ 5/77

INPUT SUMMARY FOR: ROCKY KNOB 10,50,100,500 YR FLOODS DUM 1-D

7 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 7 TYPE 3 CARDS

KEPT 7 CROSS SECTIONS FOR EDITING

7 " " VALID FOR PROPERTY COMPUTATIONS

7 " " " " PROFILE "

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 10,50,100,&500 YR FLOODS DUM 1-D
SECID=DUM 1 AT DISTANCE= 2370 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3105.0	8	198	1.00	8	9	49	57	49
3105.5	13	358	1.00	10	11	49	58	85
3106.0	18	568	1.00	11	13	48	59	132
3106.5	24	767	1.00	15	17	48	63	176
3107.0	37	1153	1.10	34	36	32	66	207
3107.5	61	1927	1.20	96	99	28	135	252
3108.0	116	3910	1.19	115	117	24	138	609
3108.5	175	7014	1.07	122	125	19	141	1151
3109.0	238	11093	1.03	129	132	15	144	1810
3109.5	304	16226	1.01	133	136	12	145	2592
3110.0	371	22700	1.01	137	140	10	147	3447
3110.5	441	30406	1.03	141	144	7	148	4368
3111.0	512	38436	1.02	145	148	4	149	5403
3111.5	585	47165	1.02	148	152	2	150	6528
3111.8	630	52876	1.02	150	154	0	150	7256

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 10,50,100,&500 YR FLOODS DUM 1-D
SECID=DUM 2 AT DISTANCE= 2580 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3107.0	8	198	1.00	8	9	49	57	49
3107.5	13	358	1.00	10	11	49	58	85
3108.0	18	568	1.00	11	13	48	59	132
3108.5	24	767	1.00	15	17	48	63	176
3109.0	37	1153	1.10	34	36	32	66	207
3109.5	61	1927	1.20	96	99	28	135	252

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 10,50,100,&500 YR FLOODS DUM 1-D
SECID=DUM 1 AT DISTANCE= 2370 PART 1 OF 1

WS	A	K	ALPHA	R	P	LEW	REW	QC
3105.0	8	198	1.00	8	9	49	57	49
3105.5	13	358	1.00	10	11	49	58	85
3106.0	18	568	1.00	11	13	48	59	132
3106.5	24	767	1.00	15	17	48	63	176
3107.0	37	1153	1.10	34	36	32	66	207
3107.5	61	1927	1.20	96	99	28	135	252
3108.0	116	3910	1.19	115	117	24	138	609
3108.5	175	7014	1.07	122	125	19	141	1151
3109.0	239	11093	1.03	129	132	15	144	1810
3109.5	304	16226	1.01	133	136	12	145	2592
3110.0	371	22700	1.01	137	140	10	147	3447
3110.5	441	30406	1.03	141	144	7	148	4368
3111.0	512	38436	1.02	145	148	4	149	5403
3111.5	585	47165	1.02	148	152	2	150	6528
3111.9	630	52876	1.02	150	154	0	150	7256

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 10,50,100,&500 YR FLOODS DUM 1-D
SECID=DUM 2 AT DISTANCE= 2530 PART 1 OF 1

WS	A	K	ALPHA	R	P	LEW	REW	QC
3107.0	8	198	1.00	8	9	49	57	49
3107.5	13	358	1.00	10	11	49	58	85
3108.0	18	568	1.00	11	13	48	59	132
3108.5	24	767	1.00	15	17	48	63	176
3109.0	37	1153	1.10	34	36	32	66	207
3109.5	61	1927	1.20	96	99	28	135	252
3110.0	116	3910	1.19	115	117	24	138	609
3110.5	175	7014	1.07	122	125	19	141	1151
3111.0	239	11093	1.03	129	132	15	144	1810
3111.5	304	16226	1.01	133	136	12	145	2592
3112.0	371	22700	1.01	137	140	10	147	3447
3112.5	441	30406	1.03	141	144	7	148	4368
3113.0	512	38436	1.02	145	148	4	149	5403
3113.5	585	47165	1.02	148	152	2	150	6528
3113.8	630	52876	1.02	150	154	0	150	7256

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 10,50,100,&500 YR FLOODS DUM 1-D
SECID=DUM 3 AT DISTANCE= 2790 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3109.0	8	198	1.00	8	9	49	57	49
3109.5	13	358	1.00	10	11	49	58	85
3110.0	18	568	1.00	11	13	49	59	132
3110.5	24	767	1.00	15	17	48	63	176
3111.0	37	1153	1.10	34	36	32	66	207
3111.5	61	1927	1.20	96	99	28	135	252
3112.0	116	3910	1.19	115	117	24	138	609
3112.5	175	7014	1.07	122	125	19	141	1151
3113.0	238	11093	1.03	129	132	15	144	1810
3113.5	304	16226	1.01	133	136	12	145	2592
3114.0	371	22700	1.01	137	140	10	147	3447
3114.5	441	30406	1.03	141	144	7	148	4368
3115.0	512	38436	1.02	145	148	4	149	5403
3115.5	595	47165	1.02	148	152	2	150	6528
3115.8	630	52876	1.02	150	154	0	150	7256

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 10,50,100,&500 YR FLOODS DUM 1-D
SECID=A AT DISTANCE= 3000 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3111.0	8	198	1.00	8	9	49	57	49
3111.5	13	358	1.00	10	11	49	58	85
3112.0	18	568	1.00	11	13	48	59	132
3112.5	24	767	1.00	15	17	48	63	176
3113.0	37	1153	1.10	34	36	32	66	207
3113.5	61	1927	1.20	96	99	28	135	252
3114.0	116	3910	1.19	115	117	24	138	609
3114.5	175	7014	1.07	122	125	19	141	1151
3115.0	238	11093	1.03	129	132	15	144	1810
3115.5	304	16226	1.01	133	136	12	145	2592
3116.0	371	22700	1.01	137	140	10	147	3447
3116.5	441	30406	1.03	141	144	7	148	4368
3117.0	512	38436	1.02	145	148	4	149	5403
3117.5	595	47165	1.02	148	152	2	150	6528
3117.8	630	52876	1.02	150	154	0	150	7256

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 10,50,100,500 YR FLOODS DUM 1-D
SECID=B AT DISTANCE= 3440 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3115.0	8	164	1.00	8	9	60	68	41
3115.5	12	304	1.00	9	11	59	68	75
3116.0	17	484	1.00	12	14	57	69	116
3116.5	23	731	1.00	14	17	55	69	172
3117.0	33	1067	1.07	33	36	52	110	178
3117.5	61	1804	1.29	78	82	50	135	268
3118.0	110	3628	1.19	111	115	37	149	567
3118.5	171	6499	1.11	135	139	29	164	1040
3119.0	244	10653	1.05	151	155	26	177	1713
3119.5	321	16269	1.03	159	162	22	180	2554
3120.0	403	24444	1.03	167	170	17	184	3492
3120.5	488	35629	1.04	175	178	13	188	4528
3121.0	577	48663	1.05	183	186	9	192	5672
3121.5	670	61268	1.05	190	195	5	195	6977
3122.0	768	75541	1.04	198	203	1	199	8415
3122.1	788	79608	1.03	200	204	0	200	8718

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 10,50,100,500 YR FLOODS DUM 1-D
SECID=C AT DISTANCE= 3790 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3119.0	10	272	1.00	8	10	90	98	66
3119.5	15	446	1.00	10	11	90	100	105
3120.0	20	668	1.00	11	13	89	100	154
3120.5	27	972	1.06	20	22	81	101	174
3121.0	45	1571	1.31	51	53	60	113	208
3121.5	80	2724	1.45	94	96	54	150	345
3122.0	136	4989	1.30	126	129	46	172	702
3122.5	205	8554	1.18	149	151	36	185	1256
3123.0	283	13850	1.14	160	163	27	188	1990
3123.5	365	20441	1.12	170	172	21	191	2868
3124.0	452	27924	1.08	179	182	14	193	3918
3124.5	544	36561	1.06	189	191	8	196	5090
3125.0	641	46359	1.05	198	201	1	199	6385
3125.1	661	48462	1.05	200	203	0	200	6659

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 10,50,100,500 YR FLOODS (DUM 1-D
SECID=D AT DISTANCE= 4150 PART 1 OF 1

MS	A	K	ALPHA	B	P	LEW	REW	QC
3122.0	9	252	1.00	7	8	90	97	63
3122.5	13	396	1.00	8	10	89	97	97
3123.0	17	569	1.00	8	11	89	97	138
3123.5	21	774	1.00	9	12	88	97	187
3124.0	28	1019	1.11	45	48	88	138	119
3124.5	67	1912	1.51	105	109	52	171	246
3125.0	127	4154	1.18	130	135	43	173	653
3125.5	194	7733	1.07	141	146	35	176	1253
3126.0	268	12445	1.04	152	157	27	179	1977
3126.5	347	18263	1.03	163	168	18	182	2820
3127.0	431	25400	1.03	174	179	10	184	3783
3127.5	521	33910	1.04	186	190	2	187	4861
3128.0	615	43909	1.03	190	195	0	190	6195
3128.5	711	54983	1.02	193	199	0	193	7681
3129.0	808	67121	1.01	196	202	0	196	9271
3129.5	907	80286	1.01	198	205	0	198	10961
3129.8	966	88662	1.00	200	207	0	200	12022

USGS STEP-BACKWATER PROGRAM - VERSION 76.170 *** PAGE COUNT= 8.DATE= 4/ 5/77

10 YR

WATER-SURFACE PROFILE FOR: ROCKY KNOB 10,50,100,&500 YR FLOODS DUM 1-0
PAGE 1 OF 1

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV / HV / HF / HE / FG / V / FN / ACC *ID*								
DUM 1 AT	2370 /	0 /	390. /	120. /	4067. /	1.18 /	23. /	138.
3108.03 /	0.19 /		/ 3108.22 /	3.26 /	0.46 /			*TS*
DUM 2 AT	2580 /	210 /	390. /	117. /	3973. /	1.18 /	24. /	138.
3110.01 /	0.20 /	1.99 /	0.00 /	3110.21 /	3.32 /	0.47 /	0.009	*XS*
DUM 3 AT	2790 /	210 /	390. /	118. /	4016. /	1.18 /	24. /	138.
3112.02 /	0.20 /	2.00 /	0.0 /	3112.22 /	3.29 /	0.46 /	0.003	*XS*
A AT	3000 /	210 /	390. /	118. /	4016. /	1.18 /	24. /	138.
3114.02 /	0.20 /	1.99 /	0.0 /	3114.22 /	3.29 /	0.46 /	0.020	*XS*
B AT	3440 /	440 /	390. /	121. /	4104. /	1.17 /	35. /	151.
3119.10 /	0.19 /	4.06 /	0.0 /	3119.29 /	3.24 /	0.44 /	0.006	*XS*
C AT	3790 /	350 /	390. /	102. /	3535. /	1.42 /	52. /	163.
3121.71 /	0.32 /	3.67 /	-0.07 /	3122.04 /	3.83 /	0.53 /	0.015	*XS*
D AT	4150 /	360 /	390. /	141. /	4833. /	1.14 /	42. /	174.
3125.11 /	0.14 /	3.20 /	0.0 /	3125.24 /	2.77 /	0.47 /	0.004	*XS*

USE

END OF THIS PROFILE

50YR

WATER-SURFACE PROFILE FOR: ROCKY KNOB 10,50,100,&500 YR FLOODS DUM 1-D

SECID AT / WS ELEV	DISTANCE / HV	LENGTH / HF	DISCHARGE / HE	AREA / EG	CONVEYANCE / V	ALPHA / FN	LEW / ACC	REW / *ID*
DUM 1 AT	2370	0	760.	191.	7979.	1.06	18.	142.
3108.63	0.26			3108.89	3.97	0.47		*IS*
DUM 2 AT	2580	210	760.	187.	7736.	1.06	18.	142.
3110.60	0.27	1.97	0.01	3110.87	4.06	0.48	0.009	*XS*
DUM 3 AT	2790	210	760.	189.	7823.	1.05	18.	142.
3112.61	0.27	2.00	0.0	3112.88	4.03	0.48	0.002	*XS*
A AT	3000	210	760.	199.	7823.	1.06	18.	142.
3114.61	0.27	1.98	0.0	3114.88	4.03	0.49	0.018	*XS*
B AT	3440	440	760.	200.	7984.	1.09	27.	172.
3118.70	0.24	4.07	0.0	3118.95	3.80	0.57	0.003	*XS*
C AT	3790	350	760.	177.	6953.	1.21	40.	191.
3122.31	0.35	3.64	0.05	3122.65	4.30	0.54	0.012	*XS*
D AT	4150	360	760.	220.	9293.	1.05	32.	177.
3125.68	0.20	3.22	0.0	3125.87	3.45	0.51	0.001	*XS*

USE

END OF THIS PROFILE

USGS STEP-BACKWATER PROGRAM - VERSION 76.170 *** PAGE COUNT= 17.DATE= 4/ 5/77

100YR

WATER-SURFACE PROFILE FOR: ROCKY KNOB 10,50,100,&500 YR FLOODS DUM 1-D
PAGE 1 OF 1

SECID AT DISTANCE / WS ELEV	LENGTH / HV	DISCHARGE / HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	*ID*
DUM 1 AT 2370 / 3108.88	0 / 0.30	960. /	223. /	10016. / 3109.18	1.03 / 4.31	16. / 0.59	144. /	*IS*
DUM 2 AT 2580 / 3110.85	210 / 0.31	960. / 1.97	219. / 0.00	9795. / 3111.16	1.04 / 4.38	16. / 0.60	144. / 0.006	*XS*
DUM 3 AT 2790 / 3112.85	210 / 0.31	960. / 2.02	219. / 0.0	9795. / 3113.16	1.04 / 4.38	16. / 0.60	144. / -0.018	*XS*
A AT 3000 / 3114.85	210 / 0.31	960. / 2.02	219. / 0.0	9795. / 3115.16	1.04 / 4.38	16. / 0.60	144. / -0.018	*XS*
B AT 3440 / 3118.95	440 / 0.27	960. / 4.06	237. / 0.0	10199. / 3119.22	1.06 / 4.05	26. / 0.58	176. / 0.002	*XS*
C AT 3790 / 3122.52	350 / 0.39	960. / 3.62	208. / 0.06	8747. / 3122.91	1.18 / 4.61	36. / 0.65	185. / 0.011	*XS*
D AT 4150 / 3125.93	360 / 0.23	960. / 3.24	257. / 0.0	11701. / 3126.15	1.04 / 3.74	28. / 0.52	178. / 0.001	*XS*

END OF THIS PROFILE

500YR

WATER-SURFACE PROFILE FOR: ROCKY KNOB 10,50,100,500 YR FLOODS DUM 1-D

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW WS ELEV / HV / HF / HE / EG / V / FN / ACC								
DUM 1 AT	2370 /	0 /	1580. /	308. /	16560. /	1.01 /	12. /	145.
3109.53 /	0.41 /		/ 3109.94 /	5.13 /	0.62 /			*IS*
DUM 2 AT	2580 /	210 /	1580. /	303. /	16126. /	1.01 /	12. /	145.
3111.49 /	0.43 /	1.96 /	0.01 / 3111.92 /	5.22 /	0.64 /	0.005		*XS*
DUM 3 AT	2790 /	210 /	1580. /	303. /	16126. /	1.01 /	12. /	145.
3113.49 /	0.43 /	2.02 /	0.0 / 3113.92 /	5.22 /	0.64 /	-0.016		*XS*
A AT	3000 /	210 /	1580. /	303. /	16126. /	1.01 /	12. /	145.
3115.49 /	0.43 /	2.02 /	0.0 / 3115.92 /	5.22 /	0.64 /	-0.016		*XS*
B AT	3440 /	440 /	1580. /	331. /	17041. /	1.03 /	21. /	181.
3119.56 /	0.37 /	4.00 /	0.0 / 3119.93 /	4.78 /	0.60 /	0.009		*XS*
C AT	3790 /	350 /	1580. /	290. /	14400. /	1.14 /	27. /	188.
3123.04 /	0.53 /	3.56 /	0.08 / 3123.57 /	5.45 /	0.69 /	0.006		*XS*
D AT	4150 /	360 /	1580. /	355. /	18939. /	1.03 /	17. /	182.
3126.55 /	0.32 /	3.30 /	0.0 / 3126.87 /	4.45 /	0.56 /	0.001		*XS*

USE

END OF THIS PROFILE

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB X-SECTION PROPERTIES E
SECID=E AT DISTANCE= 4267 PART 1 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	QC
3125.0	33	1279	1.00	15	18	81	96	283
3125.1	35	1358	1.00	15	19	81	96	299
3125.2	37	1440	1.00	16	18	81	96	316
3125.3	38	1524	1.00	16	19	81	97	334
3125.4	40	1612	1.00	16	19	81	97	352
3125.5	41	1702	1.00	17	19	80	97	370
3125.6	43	1795	1.00	17	20	80	97	389
3125.7	45	1892	1.00	17	20	80	98	409
3125.8	47	1991	1.00	18	21	80	98	429
3125.9	48	2093	1.00	18	21	80	98	450
3126.0	50	2199	1.00	18	21	80	98	471
3126.1	52	2291	1.00	19	22	80	98	490
3126.2	54	2388	1.00	19	23	79	99	509
3126.3	56	2489	1.00	20	23	79	99	529
3126.4	58	2596	1.00	21	24	79	99	550
3126.5	60	2706	1.00	21	24	79	99	572
3126.6	62	2822	1.00	22	25	78	100	595
3126.7	64	2942	1.00	22	25	77	100	618
3126.8	67	3066	1.00	23	26	77	100	643
3126.9	69	3217	1.00	25	28	77	102	651
3127.0	72	3372	1.01	27	30	76	103	661
3127.1	74	3534	1.01	29	32	76	105	674
3127.2	77	3703	1.02	31	34	76	106	689
3127.3	80	3880	1.03	32	36	75	108	707
3127.4	84	4066	1.04	34	38	75	109	727
3127.5	87	4262	1.05	35	40	75	111	750
3127.6	91	4468	1.06	38	42	74	112	775
3127.7	95	4684	1.06	40	44	74	114	803
3127.8	99	4912	1.07	42	46	73	115	833
3127.9	103	5152	1.08	44	47	73	117	866
3128.0	108	5378	1.10	50	53	73	123	860
3128.1	113	5630	1.12	56	59	72	128	865
3128.2	119	5906	1.14	62	65	72	134	879
3128.3	126	6206	1.16	68	71	72	139	901
3128.4	133	6534	1.18	74	77	71	145	931
3128.5	140	6893	1.19	79	83	71	150	972
3128.6	148	7301	1.19	82	86	71	152	1037
3128.7	157	7735	1.19	85	89	70	155	1107
3128.8	165	8194	1.19	88	91	70	157	1181
3128.9	174	8682	1.19	91	94	69	160	1260
3129.0	184	9196	1.18	93	97	69	163	1344
3129.1	193	9737	1.17	96	100	69	165	1432
3129.2	203	10306	1.16	99	103	68	167	1524
3129.3	213	10905	1.16	102	106	68	170	1622
3129.4	223	11591	1.15	106	110	67	172	1712

Approach to Cul D-E

USGS STEP-BACKWATER PROGRAM - VERSION 76.170 *** PAGE COUNT= 5.DATE= 3/16/77

CROSS-SECTION PROPERTIES FOR: POCKY KNOB X-SECTION PROPERTIES E
SECID=E AT DISTANCE= 4267 PART 2 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	OC
3129.5	234	12307	1.15	110	114	65	175	1807
3129.6	245	13082	1.14	113	117	64	177	1917
3129.7	257	13891	1.14	116	120	62	178	2031
3129.8	268	14731	1.13	119	123	61	180	2149
3129.9	280	15606	1.13	122	126	59	181	2271
3130.0	293	16516	1.12	125	129	58	183	2398
3130.1	305	17458	1.12	128	132	56	184	2528
3130.2	318	18437	1.12	131	135	55	186	2664
3130.3	332	19450	1.11	134	138	53	187	2803
3130.4	345	20502	1.11	137	141	52	189	2947
3130.5	359	21591	1.11	140	144	50	191	3096
3130.6	373	22715	1.11	143	147	49	192	3249
3130.7	388	23879	1.10	146	150	48	194	3408
3130.8	402	25080	1.10	149	153	46	195	3570
3130.9	418	26323	1.10	152	156	45	197	3738
3131.0	433	27605	1.10	155	159	43	198	3911
3131.1	449	28928	1.10	158	162	42	200	4085
3131.2	465	30635	1.11	161	165	40	201	4257
3131.3	481	32342	1.11	164	168	39	203	4431
3131.4	497	34119	1.12	167	171	37	204	4608
3131.5	514	35965	1.13	169	173	36	205	4787
3131.6	531	37877	1.13	172	176	34	207	4969
3131.7	549	39651	1.14	185	189	10	208	4983
3131.8	568	41581	1.18	199	202	20	209	5021
3131.9	589	43653	1.21	211	214	0	211	5081
3132.0	610	45004	1.22	212	215	0	212	5315
3132.1	631	48333	1.23	213	217	0	213	5560
3132.2	653	50394	1.22	214	218	0	214	5838
3132.3	674	52507	1.22	216	220	0	216	6122
3132.4	696	54691	1.21	217	221	0	217	6414
3132.5	717	56911	1.21	218	222	0	218	6713
3132.6	739	59190	1.20	220	224	0	220	7019
3132.7	761	61531	1.19	221	225	0	221	7332
3132.8	784	63920	1.19	222	226	0	222	7651
3132.9	806	66369	1.18	224	228	0	224	7977
3133.0	828	68876	1.18	225	229	0	225	8310

ROCKY KNOB TWO BARREL CULVERT CUL D-E BASE ELEVATION = 21.20 Z = 0.25

APPROACH ELEVATION	AREA	CONVEYANCE	ALPHA	TOP WIDTH	QC
21.37	0.0	0.0	0.0	0.0	0.0
21.79	0.1	0.3	1.000	2.2	0.12
22.21	2.3	27.6	1.000	6.7	7.72
22.63	5.6	98.1	1.000	9.1	25.19
23.05	9.7	221.8	1.000	10.0	54.06
23.47	14.0	386.0	1.000	10.6	91.22
23.89	18.6	580.1	1.000	11.6	134.18
24.31	23.8	807.4	1.000	12.9	183.29
24.73	29.5	1079.1	1.000	14.2	240.96
25.15	35.7	1397.8	1.000	15.5	307.58
25.57	42.5	1766.3	1.000	16.8	383.54
25.99	49.9	2187.4	1.000	18.2	469.21
26.41	58.0	2605.7	1.000	20.6	552.50
26.83	67.2	3110.4	1.000	23.5	645.22
27.25	78.8	3788.3	1.026	31.5	706.63
27.67	93.7	4616.1	1.061	39.5	818.31
28.09	112.7	5682.1	1.119	55.2	913.24
28.51	140.9	7528.7	1.207	76.3	1086.58
28.93	175.1	10140.0	1.241	86.7	1412.06
29.35	214.7	12744.2	1.259	102.7	1761.76
29.77	261.4	16192.9	1.254	117.8	2209.68
30.19	313.5	20330.5	1.238	130.2	2761.10
30.61	370.8	25114.3	1.225	142.5	3394.01
31.03	433.2	30592.9	1.213	154.8	4112.21
31.45	500.8	36793.0	1.202	166.9	4922.04

ROCKY KNOB TWO BARREL CULVERT CUL D-E BASE ELEVATION = 21.20 Z = 0.25

BARREL DEPTH	AREA	CONVEYANCE	TOP WIDTH	WETTED PERIMETER
0.0	0.0	0.0	0.0	
0.200	0.26	4.4	1.96	2.01
0.400	0.74	19.2	2.71	2.87
0.600	1.33	45.0	3.25	3.54
0.800	2.03	81.7	3.67	4.12
1.000	2.80	128.0	4.00	4.64
1.200	3.62	185.9	4.27	5.12
1.400	4.50	252.1	4.49	5.58
1.600	5.42	326.4	4.66	6.01
1.800	6.36	408.1	4.80	6.44
2.000	7.33	496.1	4.90	6.85
2.200	8.32	589.2	4.96	7.25
2.400	9.32	686.3	5.00	7.65
2.600	10.32	786.3	5.00	8.05
2.800	11.31	887.6	4.96	8.46
3.000	12.30	989.0	4.90	8.86
3.200	13.27	1088.9	4.80	9.27
3.400	14.22	1185.8	4.66	9.70
3.600	15.13	1277.7	4.49	10.13
3.800	16.01	1362.9	4.27	10.59
4.000	16.84	1438.9	4.00	11.07
4.200	17.61	1503.1	3.67	11.59
4.400	18.30	1551.8	3.25	12.17
4.600	18.90	1579.9	2.71	12.84
4.800	19.37	1577.1	1.96	13.69
5.000	19.63	1472.1	0.0	15.71

ROCKY KNOB TWO BARREL CULVERT CUL D-E BASE ELEVATION = 21.20 Z = 0.25

Q	ELEV H1	ELEV H4	D2	D3	TYPE	C	C ADJUSTED
100.0	25.72	********	3.21	2.84	2	0.93	0.93
100.0	25.93	25.11	3.80	3.91	3	0.92	0.93
100.0	26.34	25.68	4.34	4.48	3	0.91	0.92
100.0	26.56	25.93	4.60	4.73	3	0.90	0.91
100.0	27.26	26.55	5.00	5.00	4	0.85	0.85
195.0	28.74	********	4.81	3.99	2	0.84	0.84
195.0	28.66	25.68	4.93	4.48	3	0.84	0.84
195.0	28.77	25.93	5.00	4.73	3	0.84	0.84
195.0	29.24	26.55	5.00	5.00	4	0.85	0.85
390.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
390.0	38.28	********	*******	*******	5	0.57	0.57
390.0	35.05	********	*******	*******	6	0.85	0.85
390.0	36.77	26.55	5.00	5.00	4	0.85	0.85
480.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
480.0	44.94	********	*******	*******	5	0.60	0.60
480.0	40.51	********	*******	*******	6	0.85	0.85
480.0	42.56	26.55	5.00	5.00	4	0.85	0.85
600.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
600.0	61.49	********	*******	*******	5	0.60	0.60
600.0	48.36	********	*******	*******	6	0.85	0.85
600.0	52.03	26.55	5.00	5.00	4	0.85	0.85
790.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
790.0	91.02	********	*******	*******	5	0.60	0.60
790.0	63.01	********	*******	*******	6	0.85	0.85
790.0	70.73	26.55	5.00	5.00	4	0.85	0.85
900.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
900.0	111.32	********	*******	*******	5	0.60	0.60
900.0	72.04	********	*******	*******	6	0.85	0.85
900.0	83.99	26.55	5.00	5.00	4	0.85	0.85
1000.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
1000.0	133.00	********	*******	*******	5	0.60	0.60
1000.0	80.65	********	*******	*******	6	0.85	0.85
1000.0	97.34	26.55	5.00	5.00	4	0.85	0.85

*** 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
1     1 ROCKY KNOB CREEK 10.50.100&500 YR FLOODS     E-H   6  4 02 05 15
2     2 312843 312918 312942 312992
3   100 E     1  16  3 3125    4267 99 99
4   101    390    760    960   1580
5   103      0  1 31316   30  1 31319   68  2 31293   80  2 31260   82  2 31237
5   104     83  2 31227   88  2 31217   92  2 31219   93  2 31237  100  3 31268
5   105    117  3 31279  145  3 31284  150  3 31285  175  3 31295  200  3 31311
5   106    225  3 31330
6   109  1  2 045 045  6  7 060 050  1  2 045 045
3   110 E     1  12  3 3128    4220 99 99
4   111    350    700    880   1450
5   112      0  1 31330   10  1 31319   50  1 31299  100  1 31292  125  2 31289
5   113    129  2 31262  133  2 31250  135  2 31261  139  2 31278  148  2 31284
5   114    156  3 31324  200  3 31332
6   117  1  2 045 045  4  5 060 050  1  2 045 045
3   120 G     0  14  2 3132    5175 99 99
5   123      0  1 31379    7  1 31371   11  1 31333   14  1 31301   14  1 31297
5   124     19  1 31302   22  1 31304   24  1 31321   29  1 31326   35  2 31340
5   125     77  2 31344  110  2 31366  150  2 31371  200  2 31384
6   127  5  6 060 050  2  3 050 045
3   130 20 GH 2    6  1 3132    5175        30 31356 1 1
5   132      0  1 31356    0  1 31306    5  1 31305    7  1 31306   12  1 31308
5   133     12  1 31356
6   134  1  2 020 015
3   136 RTFD  3    2                                   7
5   137      1    31306    1    31356
3   140 W-APP 5  14  3 3133    5240  1  3
5   142      0  1 31394   16  1 31301   16  1 31350   14  2 31346   15  2 31333
5   143     16  2 31313   17  2 31304   22  2 31309   23  2 31311   25  2 31323
5   144     26  3 31326   29  3 31335   34  3 31375   42  3 31396
6   145  1  2 035 035  1  2 035 035  1  2 035 035
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PAGE 1 OF EDITING NOTES FOR: ROCKY KNOB CREEK 10.50.100&500 YR FLOODS E-H

SECID	ERROR SEVERITY	FIRST VARIABLE	NO.	ERROR MESSAGE	SECOND VARIABLE	NO.	VALUE ASSUMED
RO GH	WARNING	N3	1	LOW			

INPUT SUMMARY FOR: ROCKY KNOB CREEK 10,50,100&500 YR FLOODS E-W

6 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 6 TYPE 3 CARDS

KEPT 6 CROSS SECTIONS FOR EDITING

6 " " " VALID FOR PROPERTY COMPUTATIONS

6 " " " " PROFILE "

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB CREEK 10,50,100&500 YR FLOODS E-H
SECID=E AT DISTANCE= 4267 PART 1 OF 1

WS	A	K	ALPHA	R	P	LEW	REW	OC
3125.0	33	1279	1.00	15	18	81	96	283
3125.5	41	1702	1.00	17	19	80	97	370
3126.0	50	2199	1.00	18	21	80	98	471
3126.5	60	2706	1.00	21	24	78	99	572
3127.0	72	3372	1.01	27	30	76	103	661
3127.5	87	4262	1.05	36	40	75	111	750
3128.0	108	5378	1.10	50	53	73	123	860
3128.5	140	6893	1.19	79	83	71	150	972
3129.0	184	9196	1.18	93	97	69	163	1344
3129.5	234	12307	1.15	110	114	65	175	1807
3130.0	293	16516	1.12	125	129	58	183	2398
3130.5	359	21591	1.11	140	144	50	191	3096
3131.0	433	27605	1.10	155	159	43	198	3911
3131.5	514	35965	1.13	169	173	36	205	4787
3132.0	610	45997	1.22	212	216	0	212	5314
3132.5	717	56876	1.21	218	223	0	218	6709
3133.0	828	68798	1.18	225	230	0	225	8299

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB CREEK 10,50,100&500 YR FLOODS E-H
SECID=F AT DISTANCE= 4720 PART 1 OF 1

WS	A	K	ALPHA	R	P	LEW	REW	OC
3128.0	17	453	1.00	14	16	127	141	106
3128.5	26	716	1.00	22	23	126	148	165
3129.0	38	1235	1.02	32	34	117	149	234
3129.5	83	2497	1.31	107	109	43	150	362
3130.0	139	4951	1.10	115	117	36	151	821
3130.5	199	8361	1.03	124	126	29	152	1406
3131.0	262	12663	1.01	132	134	21	153	2092
3131.5	330	17839	1.00	140	142	14	154	2877
3132.0	402	24054	1.00	146	149	9	155	3784
3132.5	476	31962	1.00	155	157	7	162	4737
3133.0	561	41601	1.03	185	187	4	189	5471
3133.5	659	52088	1.06	198	201	2	200	6629
3133.9	738	61198	1.06	209	213	0	209	7910

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB CREEK 10,50,100&500 YR FLOODS E-H
SECID=G AT DISTANCE= 5175 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	OC
3132.0	19	569	1.00	12	14	12	24	133
3132.5	25	781	1.00	16	18	12	28	180
3133.0	34	1157	1.00	19	22	11	31	260
3133.5	45	1652	1.00	22	25	11	33	362
3134.0	56	2258	1.00	25	28	10	35	484
3134.5	82	3264	1.20	69	72	10	79	460
3135.0	118	4905	1.22	77	80	9	86	750
3135.5	158	7095	1.17	85	88	9	94	1136
3136.0	203	9825	1.12	93	97	8	101	1605
3136.5	251	13109	1.09	101	105	8	109	2156
3137.0	309	15938	1.16	135	139	7	142	2462
3137.5	384	19997	1.12	162	166	3	165	3173
3138.0	471	25430	1.07	185	189	0	185	4119
3138.4	548	31748	1.07	200	205	0	200	4972

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB CREEK 10,50,100&500 YR FLOODS E-H
SECID=RO GH AT DISTANCE= 5175 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	OC
3132.0	16	1436	1.00	12	15	0	12	108
3132.5	22	2686	1.00	12	16	0	12	172
3133.0	28	4013	1.00	12	17	0	12	247
3133.5	34	5317	1.00	12	18	0	12	329
3133.65 3134.0	40	6704	1.00	12	19	0	12	419
3134.5	46	8158	1.00	12	20	0	12	516
3135.0	52	9669	1.00	12	21	0	12	619
3135.5	58	11227	1.00	12	22	0	12	729
3135.6	60	11543	1.00	12	22	0	12	752

3.60

$\frac{.5}{.5} = \frac{51}{100}$

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB CREEK 10,50,100&500 YR FLOODS E-H
SECID=H-APP AT DISTANCE= 5240 PART 1 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	OC
3133.0	20	1138	1.02	12	14	15	27	145
3133.5	27	1689	1.05	14	16	15	29	202
3134.0	34	2356	1.06	15	18	14	30	280
3134.5	42	3134	1.06	16	19	14	30	370
3135.0	51	4109	1.09	21	24	10	31	432
3135.5	61	5288	1.12	22	25	10	32	557
3136.0	72	6625	1.13	22	27	10	32	698
3136.5	84	8107	1.14	23	28	10	33	852

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB CREEK 10.50.1006500 YR FLOODS E-H
SECTO=H-APP AT DISTANCE= 5240 PART 2 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	QC
3137.0	95	9727	1.14	23	29	10	33	1018
3137.5	107	11481	1.15	24	31	10	34	1195
3138.0	120	13117	1.21	28	35	10	38	1289
3138.5	135	14931	1.28	34	42	7	41	1343
3139.0	154	17384	1.31	39	47	3	42	1513
3139.4	170	19634	1.32	42	50	0	42	1687

USGS STEP-BACKWATER PROGRAM - VERSION 76.170 *** PAGE COUNT= 7 DATE= 4/13/77

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB CREEK 10,50,100&500 YR FLOODS E-H
INITIAL VALUES ARE: Q = 390. H = 3128.43

SECID,ERROR OR WARNING MESSAGE,INTERMEDIATE RESULTS(IF ANY),ACTION TAKEN

G ,KU/KD < 0.7 OR > 1.4 ,USED COMPUTED WSU

H-APP,KU/KD < 0.7 OR > 1.4 ,USED COMPUTED WSU

H-APP,WSU > BELMX (1) ,CHECKED QBO (2)

10 YR

WATER-SURFACE PROFILE FOR: ROCKY KNOB CREEK 10,50,100&500 YR FLOODS E-H

SECID AT DISTANCE/ WS ELEV	LENGTH/ HV	DISCHARGE/ HF	AREA / HE	CONVEYANCE/ EG	V	ALPHA/ EN	LEW / ACC	REW *TO*
E AT 4267 / 3128.43	0 / 0.15	390. /	135. / 3129.58	6639. / 2.89	1.18 / 0.30	71. /	147.	*TS*
E AT 4720 / 3130.13	453 / 0.09	350. / 1.62	154. / 0.0 / 3130.22	5763. / 2.27	1.08 / 0.30	34. / 0.014	151.	*XS*
GG AT 5175 / 3134.05	455 / 0.57	350. / 4.15	58. / 0.24 / 3134.62	2331. / 6.06	1.00 / 0.70	10. / 0.007	40.	*XS*
BEGIN BRIDGE ANALYSIS								
BR GH AT 5175 / 3135.60	/ 0.89	352. / ...2...	47% / (0.097)	11543. / 7.57	1.00 / 0.63	0. /	12.	*BR*
NO ROAD-GRADE DATA								*RG*
H-APP AT 5240 / 3134.80	65 / 0.93	350. / 0.93	47. / 0.18 / 3135.72	3683. / 7.47	1.07 / 0.76	12. / -0.006	31.	*AS*
M = **** / F = **** / K = **** / 3137.02	/ 0.24		96. / / 3137.26	9806. / 3.66	1.14 / 0.31	10. /	33.	*AS*

END BRIDGE ANALYSIS

Culvert Coded as Bridge

END OF THIS PROFILE

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB CREEK 10.50.100&500 YR FLOODS E-H
INITIAL VALUES ARE: Q = 760. H = 3129.18

SECID	ERROR OR WARNING MESSAGE	INTERMEDIATE RESULTS (IF ANY)	ACTION TAKEN
G	KU/KD < 0.7 OR > 1.4		USED COMPUTED WSU
H-APP	WSU > RFLMX (1)		CHECKED QBO (2)
H-APP	MAX QBO < QT (2)		CHECKED QPO
H-APP	ROAD NOT CODED		ASSUMED WSU = GMAX
H-APP	RIGHT BANK EXTENDED		USED COMPUTED WSU

50 YR

WATER-SURFACE PROFILE FOR: ROCKY KNOB CREEK 10.50.100&500 YR FLOODS E-W

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / TEW / REW								
WS ELEV / HV / HF / HE / EG / V / FN / ACC / *TD*								
F AT	4267 /	0 /	760. /	201. /	10190. /	1.17 /	68. /	167.
3129.18 /	0.26 /		/ 3129.44 /	3.79 /	0.28 /			*TS*
F AT	4720 /	453 /	700. /	275. /	13565. /	1.01 /	20. /	153.
3131.09 /	0.10 /	1.75 /	0.00 / 3131.19 /	2.55 /	0.33 /	0.009		*XS*
G AT	5175 /	455 /	700. /	99. /	4014. /	1.24 /	9. /	82.
3134.75 /	0.95 /	4.10 /	0.430/ 3135.70 /	7.04 /	0.84 /	-0.013		*XS*
========== BEGIN BRIDGE ANALYSIS ==========								
BR GR AT	5175 /	/	472. /	47. /	11543. /	1.00 /	0. /	12.
3135.60 /	1.60 /		...?... (0.097)	/ 10.13 /	0.84 /			*BR*
NO ROAD-GRADE DATA								
								RG
H-APP AT	5240 /	65 /	700. /	64. /	5548. /	1.12 /	0.10 /	32.
3135.60 /	2.11 /	1.43 /	0.58 / 3137.71 /	10.99 /	1.05 /	-0.001		*AS*
K = **** / C = **** / K# = **** /				170. /	19634. /	1.32 /	0. /	42.
3139.40 /	0.35 /		/ 3139.75 /	4.12 /	0.33 /			*AS*
========== END BRIDGE ANALYSIS ==========								

END OF THIS PROFILE

USGS STEP-BACKWATER PROGRAM - VERSION 76.170 *** PAGE COUNT= 11.DATE= 4/13/77

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB CREEK 10.50.100&500 YR FLOODS E-H
INITIAL VALUES ARE: Q = 960. H = 3129.42

SECID.ERROR OR WARNING MESSAGE.INTERMEDIATE RESULTS(IF ANY).ACTION TAKEN

F .KU/KD < 0.7 OR > 1.4 .USED COMPUTED WSU

G .KU/KD < 0.7 OR > 1.4 .USED COMPUTED WSU

H-APP.WSU > BELMX (1) .CHECKED QBO (2)

H-APP.MAX QBO < QT (2) .CHECKED QBO

H-APP.ROAD NOT CODED .ASSUMED WSU = GMAX

H-APP.RIGHT BANK EXTENDED .USED COMPUTED WSU

100 YR

WATER-SURFACE PROFILE FOR: ROCKY KNOB CREEK 10.50.100&500 YR FLOODS E-H

SECID AT DISTANCE / LENGTH / DISCHARGE / AREA / CONVEYANCE / ALPHA / LEW / REW								
WS ELEV /	HV /	HF /	HE /	FG /	V /	FN /	ACC	*ID*
E AT	4267 /	0 /	960. /	225. /	11731. /	1.15 /	66. /	173.
3129.42 /	0.32 /		/ 3129.74 /	4.26 /	0.43/			*IS*
F AT	4720 /	453 /	880. /	328. /	17688. /	1.00 /	14. /	154.
3131.49 /	0.11 /	1.85 /	0.0 /	3131.60 /	2.68 /	0.33 /	0.005	*XS*
G AT	5175 /	455 /	880. /	120. /	4995. /	1.22 /	9. /	86.
3135.02 /	1.03 /	3.99 /	0.46 /	3136.05 /	7.34 /	0.86 /	0.005	*XS*
========== BEGIN BRIDGE ANALYSIS ==========								
BO GH AT	5175 /	/	479. /	47. /	11543. /	1.00 /	0. /	12.
3135.60 /	1.65 /	...?...	(0.097)	/	10.29 /	0.86 /		*BO*
NO ROAD-GRADE DATA								*RG*
H-APP AT	5240 /	65 /	880. /	66. /	5823. /	1.12 /	10. /	32.
3135.71 /	3.11 /	1.73 /	1.04 /	3138.82 /	13.34 /	1.26 /	-0.002	*AS*
M = **** / E = **** / K* = **** /			170. /	19634. /	1.32 /	0. /		42.
3139.40 /	0.55 /		/ 3139.95 /	5.19 /	0.42 /			*AS*
========== END BRIDGE ANALYSIS ==========								

END OF THIS PROFILE

USGS STEP-BACKWATER PROGRAM - VERSION 76.170 *** PAGE COUNT= 13.DATE= 4/13/77

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB CREEK 10.50.100&500 YR FLOODS E-H
INITIAL VALUES ARE: Q = 1590. H = 3129.92

SECID.ERROR OR WARNING MESSAGE.INTERMEDIATE RESULTS(IF ANY).ACTION TAKEN

F .KU/KD < 0.7 OR > 1.4 .USED COMPUTED WSU

G .KU/KD < 0.7 OR > 1.4 .USED COMPUTED WSU

H-APP.WS NOT FOUND BETWEEN
.LO = 3135.45 HI = 3139.40 .USED DEL = 0.25

H-APP.WS NOT FOUND BETWEEN
.LO = 3135.45 HI = 3139.40 .USED LOWER WS

H-APP.WS NOT FOUND .ABORTED PROFILE

WATER-SURFACE PROFILE FOR: ROCKY KNOB CREEK 10.50.100&500 YR FLOODS E-H

SECID AT DISTANCE/ LENGTH/DISCHARGE/ AREA /CONVEYANCE/ ALPHA/ LEW / REW WS ELEV / HV / HF / HE / EG / V / EN / ACC *ID*
E AT 4267 / 0 / 1580. / 283. / 15785. / 1.13 / 59. / 182. 3129.92 / 0.55 / / 3130.47 / 5.59 / 0.53/ *IS*
F AT 4720 / 453 / 1450. / 468. / 30991. / 1.00 / 7. / 158. 3132.44 / 0.15 / 2.13 / 0.0 / 3132.59 / 3.10 / 0.32 / 0.002 *XS*
G AT 5175 / 455 / 1450. / 176. / 8146. / 1.15 / 8. / 97. 3135.70 / 1.21 / 3.79 / 0.53 / 3136.92 / 8.23 / 0.99 / 0.001 *XS*

END OF THIS PROFILE

Approach for Culvert G-H

USGS STEP-BACKWATER PROGRAM -- VERSION 76.170 *** PAGE COUNT= 4 DATE= 5/10/77

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB X-SECTION PROPERTIES H
SECID=H AT DISTANCE= 5240 PART 1 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	QC
3133.0	20	1082	1.00	12	14	15	27	146
3133.1	21	1170	1.00	13	15	15	28	157
3133.2	23	1262	1.00	13	15	15	28	169
3133.3	24	1360	1.00	13	15	15	28	181
3133.4	25	1461	1.00	14	16	15	29	194
3133.5	27	1567	1.00	14	16	15	29	207
3133.6	28	1690	1.00	14	17	15	29	222
3133.7	30	1817	1.00	15	17	15	29	238
3133.8	31	1948	1.00	15	17	15	29	254
3133.9	32	2083	1.00	15	18	15	29	271
3134.0	34	2223	1.00	15	18	14	30	288
3134.1	35	2366	1.00	15	18	14	30	306
3134.2	37	2514	1.00	16	18	14	30	324
3134.3	39	2666	1.00	16	19	14	30	343
3134.4	40	2823	1.00	16	19	14	30	362
3134.5	42	2984	1.00	16	19	14	30	381
3134.6	43	3148	1.00	16	20	14	30	401
3134.7	45	3229	1.00	18	21	13	30	411
3134.8	47	3023	1.00	19	22	12	31	422
3134.9	49	3432	1.00	20	23	11	31	436
3135.0	51	3555	1.00	21	24	10	31	451
3135.1	53	3775	1.00	21	24	10	31	477
3135.2	55	4000	1.00	21	25	10	31	504
3135.3	57	4230	1.00	21	25	10	31	532
3135.4	59	4465	1.00	21	25	10	31	561
3135.5	61	4705	1.00	22	25	10	32	590
3135.6	64	4950	1.00	22	26	10	32	619
3135.7	66	5199	1.00	22	26	10	32	649
3135.8	68	5453	1.00	22	26	10	32	680
3135.9	70	5712	1.00	22	27	10	32	711
3136.0	72	5976	1.00	22	27	10	32	743
3136.1	75	6244	1.00	22	27	10	32	775
3136.2	77	6517	1.00	22	27	10	32	807
3136.3	79	6794	1.00	22	28	10	32	841
3136.4	81	7076	1.00	23	28	10	33	875
3136.5	84	7362	1.00	23	28	10	33	909
3136.6	86	7652	1.00	23	28	10	33	944
3136.7	88	7948	1.00	23	29	10	33	979
3136.8	90	8247	1.00	23	29	10	33	1015
3136.9	93	8551	1.00	23	29	10	33	1051
3137.0	95	8860	1.00	23	29	10	33	1088
3137.1	97	9172	1.00	23	30	10	33	1126
3137.2	100	9490	1.00	24	30	10	34	1164
3137.3	102	9811	1.00	24	30	10	34	1202
3137.4	105	10137	1.00	24	30	10	34	1241

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB X-SECTION PROPERTIES H
SECID=H AT DISTANCE= 5240 PART 2 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	QC
3137.5	107	10467	1.00	24	31	10	34	1281
3137.6	109	10675	1.00	25	32	10	35	1305
3137.7	112	10895	1.00	25	32	10	35	1331
3137.8	114	11126	1.00	26	33	10	36	1358
3137.9	117	11370	1.00	27	34	10	37	1386
3138.0	121	9194	1.00	43	50	10	109	1144
3138.1	126	8173	1.00	59	67	10	122	1039
3138.2	133	7667	1.00	76	84	9	135	991
3138.3	141	7516	1.00	93	101	8	148	983
3138.4	151	7608	1.00	110	118	8	161	1004
3138.5	163	7894	1.00	127	135	7	174	1048
3138.6	177	8491	1.00	140	147	6	180	1126
3138.7	191	8989	1.00	158	165	5	186	1196
3138.8	208	9637	1.00	176	183	5	192	1283
3138.9	227	10433	1.00	194	202	4	198	1389
3139.0	246	11731	1.00	201	208	3	204	1548
3139.1	267	12929	1.00	213	220	-19	210	1698
3139.2	289	14236	1.00	224	232	-19	216	1866
3139.3	312	15822	1.00	232	239	-19	217	2051
3139.4	335	17510	1.00	239	247	-19	219	2253
3139.5	360	19170	1.00	249	257	-72	220	2464
3139.6	385	20932	1.00	259	267	-81	222	2665
3139.7	411	22808	1.00	268	277	-89	223	2889
3139.8	439	24791	1.00	278	287	-97	225	3125
3139.9	467	26894	1.00	288	297	-106	226	3374
3140.0	496	29114	1.00	298	307	-114	228	3635
3140.1	527	31449	1.00	308	317	-122	229	3908
3140.2	558	33913	1.00	317	327	-131	231	4195
3140.3	590	36496	1.00	327	337	-139	232	4494
3140.4	623	39214	1.00	337	347	-147	234	4808
3140.5	658	42062	1.00	347	357	-156	235	5135
3140.6	693	45056	1.00	357	367	-164	237	5477
3140.7	729	48851	1.00	358	369	-164	238	5895
3140.8	765	52760	1.00	360	370	-164	240	6322
3140.9	801	56803	1.00	361	372	-164	241	6761
3141.0	837	60967	1.00	363	374	-164	243	7210
3141.1	873	65241	1.00	364	376	-164	244	7669
3141.2	910	69644	1.00	366	377	-164	246	8138
3141.3	946	74154	1.00	367	379	-164	247	8617
3141.4	983	78791	1.00	369	381	-164	249	9106
3141.5	1020	83545	1.00	370	382	-164	250	9605
3141.6	1057	88401	1.00	372	384	-164	252	10113
3141.7	1094	93383	1.00	373	386	-164	253	10631
3141.8	1132	98465	1.00	375	387	-164	255	11157
3141.9	1169	103678	1.00	376	389	-164	256	11695

ROCKY KNOB CREEK CUL G-H BASE ELEVATION = 30.60 Z = 0.30

APPROACH ELEVATION	AREA	CONVEYANCE	ALPHA	TOP WIDTH	QC
30.82	1.0	14.4	1.000	4.7	2.55
31.24	3.6	93.3	1.000	7.2	14.47
31.66	6.8	243.1	1.000	8.1	35.43
32.08	10.4	450.4	1.000	9.0	63.47
32.50	14.4	703.8	1.000	10.3	97.04
32.92	19.1	1013.1	1.000	11.9	137.19
33.34	24.4	1394.0	1.000	13.6	185.62
33.76	30.6	1856.2	1.000	15.7	242.50
34.18	37.5	2436.1	1.000	17.4	312.64
34.60	45.2	3120.8	1.000	19.2	394.09
35.02	53.7	3921.9	1.000	20.9	488.08
35.44	62.6	4914.2	1.000	21.4	606.64
35.86	71.7	5990.2	1.000	21.9	734.88
36.28	81.0	7146.9	1.000	22.5	872.57
36.70	90.5	8382.4	1.000	23.0	1019.51
37.12	100.3	9695.0	1.000	23.5	1175.55
37.54	110.3	11028.9	1.000	24.3	1334.01
37.96	121.2	11996.8	1.000	27.3	1447.16
38.38	133.6	12802.2	1.000	32.6	1535.58
38.80	148.4	14080.7	1.000	37.4	1678.33
39.22	164.8	15902.3	1.000	40.6	1883.95
39.64	182.3	18301.8	1.000	42.0	2155.67
40.06	200.0	21112.9	1.000	42.0	2475.96
40.48	217.6	24045.1	1.000	42.0	2810.70
40.90	235.2	27040.0	1.000	42.0	3159.30

ROCKY KNOB CREEK CUL G-H BASE ELEVATION = 30.60 Z = 0.30

BARREL DEPTH	AREA	CONVEYANCE	TOP WIDTH	WETTED PERIMETER
0.0	0.0	0.0	12.00	
0.200	2.40	77.9	12.00	12.80
0.400	4.80	237.5	12.00	13.60
0.600	7.20	449.3	12.00	14.40
0.800	9.60	700.1	12.00	15.20
1.000	12.00	981.3	12.00	16.00
1.200	14.40	1287.2	12.00	16.80
1.400	16.80	1613.5	12.00	17.60
1.600	19.20	1956.8	12.00	18.40
1.800	21.60	2314.6	12.00	19.20
2.000	24.00	2684.9	12.00	20.00
2.200	26.40	3065.9	12.00	20.80
2.400	28.80	3456.3	12.00	21.60
2.600	31.20	3855.0	12.00	22.40
2.800	33.60	4260.9	12.00	23.20
3.000	36.00	4673.3	12.00	24.00
3.200	38.40	5091.5	12.00	24.80
3.400	40.80	5514.9	12.00	25.60
3.600	43.20	5942.9	12.00	26.40
3.800	45.60	6375.1	12.00	27.20
4.000	48.00	6811.2	12.00	28.00
4.200	50.40	7250.8	12.00	28.80
4.400	52.80	7693.5	12.00	29.60
4.600	55.20	8139.1	12.00	30.40
4.800	57.60	8587.4	12.00	31.20
5.000	60.00	7309.3	12.00	44.00

ROCKY KNOB CREEK CUL G-H BASE ELEVATION = 30.60 Z = 0.30

Q	ELEV H1	ELEV H4	D2	D3	TYPE	C	C ADJUSTED
200.0	NO SOLUTION TYPE ONE FLOW---SUPERCRITICAL FLOW AT APPROACH SECTION						
350.0	34.79	********	2.98	*******	1	0.98	0.98
350.0	NO SOLUTION TYPE THREE FLOW						
350.0	35.15	34.75	3.82	4.15	3	0.98	0.98
350.0	35.38	35.02	4.10	4.42	3	0.98	0.98
350.0	36.48	35.70	5.00	5.00	4	0.88	0.88
500.0	36.12	********	3.78	*******	1	0.98	0.98
500.0	35.99	34.75	5.00	4.15	3	0.98	0.98
500.0	36.11	35.02	4.03	4.42	3	0.98	0.98
500.0	37.28	35.70	5.00	5.00	4	0.88	0.88
700.0	37.59	********	4.73	*******	1	0.98	0.98
700.0	38.81	35.70	5.00	5.00	4	0.88	0.88
880.0	41.39	********	*******	*******	5	0.56	0.56
880.0	39.51	********	*******	*******	6	0.88	0.88
880.0	40.61	35.70	5.00	5.00	4	0.88	0.88
1200.0	47.38	********	*******	*******	5	0.61	0.61
1200.0	43.31	********	*******	*******	6	0.88	0.88
1200.0	44.93	35.70	5.00	5.00	4	0.88	0.88
1450.0	53.56	********	*******	*******	5	0.63	0.63
1450.0	47.04	********	*******	*******	6	0.88	0.88
1450.0	49.03	35.70	5.00	5.00	4	0.88	0.88

Roadway Min El = 3138.7

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB X-SECTION PROPERTIES I-APP
SECID=I-APP AT DISTANCE= 5372 PART 1 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	QC
3135.0	24	1316	1.00	15	16	124	139	171
3135.1	26	1436	1.00	16	17	124	139	185
3135.2	27	1562	1.00	16	17	124	140	200
3135.3	29	1693	1.00	16	18	124	140	216
3135.4	30	1830	1.00	17	18	124	140	233
3135.5	32	1973	1.00	17	18	123	140	250
3135.6	34	2121	1.00	17	19	123	141	267
3135.7	35	2275	1.00	18	19	123	141	285
3135.8	37	2434	1.00	18	20	123	141	304
3135.9	39	2599	1.00	18	20	123	141	324
3136.0	41	2771	1.00	19	20	123	142	344
3136.1	43	2948	1.00	19	21	123	142	364
3136.2	45	3131	1.00	19	21	123	142	386
3136.3	47	3320	1.00	20	22	123	142	408
3136.4	49	3515	1.00	20	22	122	142	430
3136.5	51	3717	1.00	20	22	122	143	453
3136.6	53	3925	1.00	21	23	122	143	477
3136.7	55	4139	1.00	21	23	122	143	502
3136.8	57	4359	1.00	21	24	122	143	527
3136.9	59	4586	1.00	22	24	122	144	553
3137.0	61	4819	1.00	22	24	122	144	579
3137.1	63	5059	1.00	22	25	122	144	606
3137.2	66	5305	1.00	23	25	122	144	634
3137.3	68	5558	1.00	23	26	121	145	662
3137.4	70	5818	1.00	23	26	121	145	692
3137.5	73	6085	1.00	24	26	121	145	722
3137.6	75	6357	1.00	24	27	121	145	752
3137.7	78	6638	1.00	24	27	121	145	783
3137.8	80	6925	1.00	25	28	121	146	815
3137.9	83	7219	1.00	25	28	121	146	848
3138.0	85	7521	1.00	25	28	121	146	881
3138.1	88	7829	1.00	26	29	121	146	915
3138.2	91	7103	1.00	33	36	120	215	849
3138.3	94	6706	1.00	41	44	120	220	815
3138.4	99	6523	1.00	48	51	120	225	804
3138.5	106	5201	1.00	83	86	120	258	682
3138.6	115	5320	1.00	99	102	120	271	706
3138.7	126	5599	1.00	115	118	120	285	749
3138.8	138	6216	1.00	123	127	120	291	828
3138.9	151	6693	1.00	139	142	120	297	894
3139.0	166	7288	1.00	154	158	120	303	974
3139.1	182	7996	1.00	170	173	119	309	1068
3139.2	200	8822	1.00	185	189	119	315	1176
3139.3	220	9353	1.00	216	220	95	321	1257
3139.4	242	10380	1.00	237	240	85	327	1392

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB X-SECTION PROPERTIES I-APP
SECID=I-APP AT DISTANCE= 5372 PART 2 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	QC
3139.5	267	11672	1.00	253	257	76	328	1556
3139.6	293	13228	1.00	264	268	66	330	1749
3139.7	320	14910	1.00	275	279	56	331	1955
3139.8	348	16803	1.00	284	288	49	333	2183
3139.9	377	18821	1.00	292	296	42	334	2424
3140.0	406	20960	1.00	301	305	35	336	2678
3140.1	437	23216	1.00	309	313	28	337	2944
3140.2	468	25602	1.00	318	322	21	339	3223
3140.3	500	28108	1.00	326	330	14	340	3514
3140.4	533	30748	1.00	335	339	7	342	3819
3140.5	567	33521	1.00	343	347	0	343	4137
3140.6	602	36634	1.00	348	352	-3	345	4488
3140.7	637	39882	1.00	353	357	-6	346	4851
3140.8	673	43251	1.00	359	362	-10	348	5225
3140.9	709	46756	1.00	364	367	-13	349	5612
3141.0	745	50391	1.00	369	372	-17	351	6011
3141.1	782	54145	1.00	374	378	-21	352	6421
3141.2	820	58039	1.00	379	383	-24	354	6844
3141.3	858	62052	1.00	384	388	-28	355	7278
3141.4	897	66205	1.00	389	393	-31	357	7724
3141.5	936	70489	1.00	394	398	-35	358	8183
3141.6	976	74894	1.00	399	403	-39	360	8652
3141.7	1016	79441	1.00	404	408	-42	361	9134
3141.8	1057	84109	1.00	409	413	-46	363	9627
3141.9	1098	88921	1.00	414	418	-49	364	10134
3142.0	1140	93867	1.00	420	423	-53	366	10652
3142.1	1182	98944	1.00	425	428	-57	367	11182
3142.2	1224	104165	1.00	430	433	-60	368	11725
3142.3	1268	109507	1.00	435	439	-64	370	12278
3142.4	1311	114999	1.00	440	444	-67	371	12845
3142.5	1356	120627	1.00	445	449	-71	373	13424
3142.6	1400	126378	1.00	450	454	-75	374	14014
3142.7	1446	132281	1.00	455	459	-78	376	14617
3142.8	1491	138308	1.00	460	464	-82	377	15231
3142.9	1538	144489	1.00	465	469	-85	379	15859
3143.0	1584	150812	1.00	470	474	-89	380	16499
3143.1	1631	158286	1.00	470	474	-89	380	17238
3143.2	1678	165920	1.00	470	474	-89	380	17989
3143.3	1725	173676	1.00	470	474	-89	380	18748
3143.4	1772	181590	1.00	470	475	-89	380	19520
3143.5	1819	189641	1.00	470	475	-89	380	20303
3143.6	1866	197809	1.00	470	475	-89	380	21093
3143.7	1913	206131	1.00	470	475	-89	380	21896
3143.8	1960	214566	1.00	470	475	-89	380	22707
3143.9	2007	223155	1.00	470	476	-89	380	23529

ROCKY KNOB CULVERT H-I BASE ELEVATION = 31.50 Z = 0.50

APPROACH ELEVATION	AREA	CONVEYANCE	ALPHA	TOP WIDTH	QC
32.00	0.0	0.0	0.0	0.0	0.0
32.53	4.0	92.0	1.000	10.1	14.48
33.06	9.9	361.4	1.000	11.8	51.13
33.59	16.6	776.2	1.000	13.5	104.19
34.12	24.2	1334.7	1.000	15.1	173.14
34.65	32.6	2041.8	1.000	16.7	258.23
35.18	41.9	2899.8	1.000	18.3	359.40
35.71	52.0	3914.8	1.000	19.9	477.09
36.24	63.0	5093.7	1.000	21.5	611.79
36.77	74.8	6443.5	1.000	23.1	764.01
37.30	87.5	7971.5	1.000	24.7	934.30
37.83	101.0	9684.7	1.000	26.3	1123.16
38.36	121.6	7713.6	1.000	63.0	959.27
38.89	179.8	8182.1	1.000	158.4	1086.72
39.42	287.1	13467.6	1.000	243.9	1767.34
39.95	431.3	23337.2	1.000	296.6	2950.75
40.48	600.4	36915.9	1.000	341.6	4516.84
41.01	788.9	55287.6	1.000	369.2	6544.22
41.54	991.8	77277.9	1.000	396.1	8904.54
42.07	1208.9	102913.8	1.000	423.1	11595.21
42.60	1440.2	132318.5	1.000	449.8	14622.74
43.13	1685.2	166958.6	1.000	470.0	18107.93
43.66	1934.3	209772.2	1.000	470.0	22267.70
44.19	2183.4	256321.2	1.000	470.0	26704.73
44.72	2432.5	306435.7	1.000	470.0	31402.64

ROCKY KNOB CULVERT H-I BASE ELEVATION = 31.50 Z = 0.50

BARREL DEPTH	AREA	CONVEYANCE	TOP WIDTH	WETTED PERIMETER
0.0	0.0	0.0	0.0	
0.254	0.93	15.6	5.46	5.49
0.508	2.61	69.8	7.61	7.71
0.762	4.67	169.5	8.47	8.71
1.016	6.89	307.8	8.95	9.41
1.270	9.20	479.0	9.25	10.00
1.524	11.58	678.1	9.44	10.54
1.778	13.99	900.3	9.53	11.06
2.032	16.41	1109.4	9.52	12.05
2.286	18.82	1356.3	9.47	12.56
2.540	21.22	1612.4	9.39	13.08
2.794	23.59	1874.5	9.28	13.59
3.048	25.93	2139.7	9.14	14.12
3.302	28.23	2405.0	8.97	14.66
3.556	30.48	2667.6	8.77	15.20
3.810	32.68	2924.4	8.53	15.76
4.064	34.81	3172.5	8.26	16.34
4.318	36.87	3408.5	7.94	16.94
4.572	38.85	3629.0	7.58	17.57
4.826	40.72	3830.3	7.16	18.22
5.080	42.48	4007.9	6.68	18.92
5.334	44.10	4156.7	6.12	19.68
5.588	45.58	4270.0	5.45	20.52
5.842	46.86	4337.9	4.63	21.48
6.096	47.91	4343.1	3.57	22.66
6.350	48.62	4232.5	1.86	24.45

3226

14

ROCKY KNOB CULVERT H-I BASE ELEVATION = 31.50 Z = 0.50

Q	ELEV H1	ELEV H4	D2	D3	TYPE	C	C ADJUSTED
300.0	37.15	********34.79	4.02	3.40	2	0.96	0.97
300.0	38.50	37.59	5.83	6.09	3	0.93	0.94
300.0	38.77	37.84	6.10	6.34	3	0.93	0.93
300.0	40.40	39.34	6.35	6.35	4	0.87	0.87
610.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
TYPE.. 5	H NOT IN THE RANGE OF H5...H= 10.0250						
610.0	42.13	********	*******	*******	5	0.49	0.49
610.0	43.74	39.34	6.35	6.35	4	0.87	0.87
780.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
TYPE.. 5	H NOT IN THE RANGE OF H5...H= 10.0250						
780.0	45.43	********	*******	*******	5	0.55	0.55
780.0	43.74	********	*******	*******	6	0.87	0.87
780.0	46.54	39.34	6.35	6.35	4	0.87	0.87
1300.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
TYPE.. 5	H NOT IN THE RANGE OF H5...H= 10.0250						
1300.0	61.44	********	*******	*******	5	0.61	0.61
1300.0	55.25	********	*******	*******	6	0.87	0.87
1300.0	59.33	39.34	6.35	6.35	4	0.87	0.87

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB X-SECTION PROPERTIES J
SECID=J AT DISTANCE= 5539 PART 1 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	QC
3138.0	75	4633	1.01	30	33	131	161	664
3138.1	78	4903	1.02	31	34	129	161	690
3138.2	81	5183	1.03	33	36	128	161	718
3138.3	85	5474	1.03	34	37	127	161	747
3138.4	88	5777	1.04	35	38	126	161	777
3138.5	92	6093	1.04	36	39	125	161	810
3138.6	95	6396	1.06	41	44	120	161	800
3138.7	100	6730	1.08	46	50	115	161	801
3138.8	105	7089	1.09	51	55	110	161	810
3138.9	110	7477	1.11	56	60	105	161	827
3139.0	116	7895	1.13	62	65	100	162	850
3139.1	122	8336	1.15	68	71	94	162	870
3139.2	130	8817	1.17	74	78	88	162	898
3139.3	137	9338	1.19	80	84	81	162	933
3139.4	146	9905	1.20	87	90	75	162	975
3139.5	155	10518	1.22	93	97	69	162	1025
3139.6	164	11180	1.22	99	103	63	162	1082
3139.7	174	11896	1.23	106	110	56	162	1145
3139.8	186	12698	1.24	115	119	50	165	1201
3139.9	197	13623	1.23	121	125	47	168	1287
3140.0	210	14609	1.23	127	131	44	172	1379
3140.1	223	15654	1.22	133	137	41	175	1478
3140.2	237	16764	1.22	140	143	38	178	1583
3140.3	251	17938	1.21	146	149	35	181	1694
3140.4	266	19182	1.21	152	156	32	184	1813
3140.5	281	20494	1.21	158	162	29	187	1938
3140.6	297	21875	1.20	164	168	26	190	2070
3140.7	314	23331	1.20	170	174	24	194	2209
3140.8	334	24756	1.23	215	219	21	251	2131
3140.9	357	26416	1.25	235	239	18	252	2230
3141.0	381	28250	1.26	239	243	15	254	2426
3141.1	405	30189	1.27	243	247	12	255	2633
3141.2	429	32239	1.27	247	251	9	256	2852
3141.3	454	34389	1.26	252	255	6	257	3082
3141.4	480	36650	1.26	256	260	3	259	3324
3141.5	506	39023	1.25	260	264	0	260	3577
3141.6	532	41508	1.24	264	268	-2	261	3841
3141.7	558	44102	1.23	268	272	-4	263	4116
3141.8	585	46792	1.23	272	276	-7	264	4400
3141.9	613	49591	1.22	276	280	-10	265	4695
3142.0	641	52492	1.21	280	284	-12	267	5000
3142.1	669	55489	1.20	284	288	-15	268	5313
3142.2	697	58596	1.19	288	292	-18	269	5637
3142.3	726	61799	1.19	292	296	-20	271	5969
3142.4	756	65113	1.18	296	300	-23	272	6312

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB X-SECTION PROPERTIES J
SECID=J AT DISTANCE= 5539 PART 2 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	QC
3142.5	786	68531	1.17	300	304	-26	273	6664
3142.6	816	72044	1.16	304	308	-28	275	7024
3142.7	846	75671	1.16	308	312	-31	276	7394
3142.8	877	79394	1.15	312	316	-34	277	7773
3142.9	909	83233	1.15	316	320	-36	279	8162
3143.0	941	87177	1.14	320	324	-39	280	8559
3143.1	973	91787	1.13	320	324	-39	280	9029
3143.2	1005	96514	1.13	320	324	-39	280	9508
3143.3	1037	101334	1.12	320	325	-39	280	9992
3143.4	1069	106270	1.12	320	325	-39	280	10483
3143.5	1101	111309	1.11	320	325	-39	280	10982
3143.6	1133	116435	1.11	320	325	-39	280	11486
3143.7	1165	121675	1.10	320	325	-39	280	11998
3143.8	1197	126999	1.10	320	326	-39	280	12515
3143.9	1229	132434	1.10	320	326	-39	280	13039
3144.0	1261	137966	1.09	320	326	-39	280	13569
3144.1	1293	143579	1.09	320	326	-39	280	14105
3144.2	1325	149299	1.09	320	326	-39	280	14647
3144.3	1357	155099	1.09	320	327	-39	280	15195
3144.4	1389	161006	1.09	320	327	-39	280	15750
3144.5	1421	167004	1.08	320	327	-39	280	16310
3144.6	1453	173077	1.08	320	327	-39	280	16875
3144.7	1485	179256	1.08	320	327	-39	280	17447
3144.8	1517	185507	1.08	320	328	-39	280	18024
3144.9	1549	191861	1.08	320	328	-39	280	18607
3145.0	1581	198303	1.08	320	328	-39	280	19197

ROCKY KNOB CULVERT I-J BASE ELEVATION = 33.00 Z = 0.40

APPROACH ELEVATION	AREA	CONVEYANCE	ALPHA	TOP WIDTH	QC
33.40	0.0	0.0	0.0	0.0	0.0
33.95	2.4	32.4	1.000	8.7	6.96
34.50	7.6	200.1	1.000	10.2	37.22
35.05	13.6	475.1	1.000	11.5	83.56
35.60	20.8	789.8	1.000	15.6	136.16
36.15	30.8	1288.2	1.000	20.0	216.54
36.70	42.3	2040.0	1.000	22.1	332.47
37.25	55.0	2961.9	1.000	24.2	471.21
37.80	69.1	4118.6	1.005	27.9	617.03
38.35	86.2	5621.9	1.033	34.4	774.61
38.90	110.0	7473.6	1.112	56.4	871.68
39.45	150.0	10201.1	1.209	89.9	1099.08
40.00	209.7	14597.0	1.228	127.4	1527.28
40.55	289.0	21161.8	1.205	161.0	2197.78
41.10	404.7	30169.9	1.266	243.2	2961.78
41.65	544.7	42758.0	1.238	266.0	4423.71
42.20	697.1	58555.0	1.193	288.0	6154.18
42.75	861.5	77475.8	1.156	310.0	8150.03
43.30	1036.3	101287.6	1.122	320.0	10581.93
43.85	1212.3	129649.0	1.098	320.0	13389.13
44.40	1388.3	160941.3	1.085	320.0	16408.23
44.95	1564.3	194997.6	1.078	320.0	19625.34
45.50	1740.3	231677.8	1.074	320.0	23028.90
46.05	1916.3	270861.9	1.071	320.0	26609.25
46.60	2092.3	312443.8	1.070	320.0	30358.00

ROCKY KNOB CULVERT I-J BASE ELEVATION = 33.00 Z = 0.40

BARREL DEPTH	AREA	CONVEYANCE	TOP WIDTH	WETTED PERIMETER
0.0	0.0	0.0	0.0	
0.260	0.96	13.8	5.53	5.57
0.520	2.71	61.8	7.79	7.89
0.780	4.92	150.6	8.99	9.20
1.040	7.34	277.8	9.55	9.96
1.300	9.87	437.1	9.89	10.59
1.560	12.47	623.8	10.11	11.15
1.820	15.11	833.3	10.22	11.68
2.080	17.77	1020.8	10.21	12.92
2.340	20.42	1253.1	10.15	13.45
2.600	23.05	1494.6	10.07	13.97
2.860	25.66	1742.4	9.96	14.51
3.120	28.23	1993.9	9.81	15.04
3.380	30.76	2246.4	9.64	15.59
3.640	33.24	2497.2	9.44	16.15
3.900	35.66	2743.7	9.20	16.72
4.160	38.02	2983.1	8.93	17.31
4.420	40.30	3212.6	8.61	17.92
4.680	42.49	3429.2	8.25	18.55
4.940	44.59	3629.6	7.85	19.21
5.200	46.57	3810.2	7.38	19.91
5.460	48.42	3966.8	6.84	20.66
5.720	50.12	4094.2	6.21	21.48
5.980	51.64	4185.3	5.46	22.39
6.240	52.94	4229.5	4.53	23.46
6.500	53.96	4204.8	3.26	24.82

ROCKY KNOB CULVERT I-J BASE ELEVATION = 33.00 Z = 0.40

Q	ELEV H1	ELEV H4	D2	D3	TYPE	C	C ADJUSTED	
300.0	38.79	********	4.57	3.30	2	0.96	0.97	$h_4 = 4.15$, $h_4/h_c > 1$
300.0	(38.76)	37.15	4.59	4.15	3	0.96	0.97	$h_c = 3.30$
300.0	40.71	39.70	6.50	6.50	4	0.87	0.87	Type 3 flow proved
610.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED						
610.0	43.88	39.70	6.50	6.50	4	0.87	0.87	
780.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED						
780.0	45.36	********	*******	*******	5	0.52	0.52	
780.0	45.18	********	*******	*******	6	0.87	0.87	
780.0	46.53	39.70	6.50	6.50	3	0.87	0.87	
1300.0	58.29	********	*******	*******	5	0.60	0.60	
1300.0	56.35	********	*******	*******	6	0.87	0.87	
1300.0	58.68	39.70	6.50	6.50	4	0.87	0.87	

*** 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
1     1 ROCKY KNOB        FLOOD PROFILES              J-K    5  4 02 05 12
2     2 313876 314149 314179 314231
3   150 J      1  20  3 3138     5539 99 99
4   151     300     610     780    1300
5   153      -40  1 31450   -40  1 31430     0  1 31415   50  1 31398  100  1 31390
5   154      125  1 31385   135  2 31376   140  2 31360   147  2 31352  149  2 31340
5   155      150  2 31337   157  2 31336   158  2 31340   162  3 31397  200  3 31409
5   156      225  3 31407   250  3 31407   260  3 31415   280  3 31430  280  3 31450
6   158  1   2 030 030  1   2 045 045  1   2 040 040
3   159  1   2  20  3 3138     5550 99 99                                        08
5   160      -40  1 31450   -40  1 31431     0  1 31416   50  1 31399  100  1 31391
5   161      125  1 31386   135  2 31377   140  2 31361   147  2 31353  149  2 31340
5   162      150  2 31338   157  2 31337   158  2 31341   162  3 31398  200  3 31410
5   163      225  3 31408   250  3 31408   261  3 31416   280  3 31431  280  3 31451
6   165  1   2 030 030  1   2 045 045  1   2 040 040
3   180 K-2.7 0  16  3 3136     5666 99 99
5   181      -22  1 31473     0  1 31430     5  1 31418   15  1 31400   50  1 31393
5   182      100  1 31388   150  1 31391   172  2 31382   172  2 31358  174  2 31355
5   183      176  2 31360   179  3 31388   200  3 31385   225  3 31412  250  3 31440
5   184      282  3 31473
6   185  1   2 040 040  1   2 050 050  1   2 045 045
3   200 K-1FT 0  16  3 3140     5782 99 99
5   201      -22  1 31490     0  1 31447     5  1 31435   15  1 31417   50  1 31410
5   202      100  1 31405   150  1 31408   172  2 31399   172  2 31376  174  2 31372
5   203      176  2 31377   179  3 31405   200  3 31402   225  3 31429  250  3 31457
5   204      282  3 31490
6   205  1   2 040 040  1   2 050 050  1   2 045 045
3   260 K      0  16  3 3140     5850 99 99
5   263      -22  1 31500     0  1 31457     5  1 31445   15  1 31427   50  1 31420
5   264      100  1 31415   150  1 31418   172  2 31409   172  2 31386  174  2 31382
5   265      176  2 31387   179  3 31415   200  3 31412   225  3 31439  250  3 31467
5   266      282  3 31500
6   267  1   2 040 040  1   2 050 050  1   2 045 045
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INPUT SUMMARY FOR: ROCKY KNOB FLOOD PROFILES J-K

5 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 5 TYPE 3 CARDS

KEPT 5 CROSS SECTIONS FOR EDITING

5 " " " VALID FOR PROPERTY COMPUTATIONS

5 " " " " " PROFILE "

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB FLOOD PROFILES J-K
SECID=J AT DISTANCE= 5539 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3138.0	75	4633	1.01	30	33	131	161	664
3138.5	92	6093	1.04	36	39	125	161	810
3139.0	116	7895	1.13	62	65	100	162	850
3139.5	155	10518	1.22	93	97	69	162	1025
3140.0	210	14609	1.23	127	131	44	172	1379
3140.5	281	20494	1.21	158	162	29	187	1938
3141.0	381	28250	1.26	239	243	15	254	2426
3141.5	506	39023	1.25	260	264	0	260	3577
3142.0	641	52492	1.21	280	284	-12	267	5000
3142.5	786	68531	1.17	300	304	-26	273	6664
3143.0	941	87177	1.14	320	324	-39	280	8559
3143.5	1101	111309	1.11	320	325	-39	280	10982
3144.0	1261	137966	1.09	320	326	-39	280	13569
3144.5	1421	167004	1.08	320	327	-39	280	16310
3145.0	1581	198303	1.08	320	328	-39	280	19197

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB FLOOD PROFILES J-K
SECID=J+0.1 AT DISTANCE= 5550 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3138.0	72	4386	1.01	29	32	132	161	641
3138.5	88	5792	1.04	35	38	126	161	780
3139.0	110	7493	1.11	56	60	105	161	829
3139.5	146	9922	1.20	87	90	75	162	977
3140.0	198	13643	1.23	121	125	47	168	1289
3140.5	266	19203	1.21	152	156	32	184	1815
3141.0	357	26439	1.25	235	239	18	253	2231
3141.5	480	36676	1.26	257	261	3	260	3322
3142.0	614	49648	1.22	277	281	-10	266	4690
3142.5	757	65211	1.18	296	300	-23	272	6324
3143.0	910	83375	1.15	316	320	-36	279	8183
3143.5	1070	106441	1.12	320	325	-39	280	10509
3144.0	1230	132623	1.10	320	326	-39	280	13066
3144.5	1390	161212	1.08	320	327	-39	280	15779
3145.0	1550	192084	1.08	320	328	-39	280	18638
3145.1	1582	198513	1.08	320	328	-39	280	19226

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB FLOOD PROFILES J-K
SECID=K-2.7 AT DISTANCE= 5666 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3136.0	1	15	1.00	4	4	172	176	4
3136.5	3	71	1.00	5	6	172	177	16
3137.0	6	153	1.00	5	7	172	177	35
3137.5	8	259	1.00	6	8	172	178	58
3138.0	11	388	1.00	6	9	172	178	87
3138.5	16	563	1.09	14	17	165	179	90
3139.0	40	1057	1.92	106	109	80	205	100
3139.5	114	3341	1.32	169	173	40	209	460
3140.0	206	7653	1.08	199	203	15	214	1142
3140.5	307	14319	1.02	206	210	12	219	2104
3141.0	412	22771	1.01	214	218	9	223	3226
3141.5	521	32905	1.02	221	225	7	228	4503
3142.0	633	44685	1.02	228	232	4	232	5929
3142.5	749	58080	1.02	235	239	2	237	7498
3143.0	868	73008	1.03	241	245	0	241	9204
3143.5	990	89341	1.03	248	252	-2	246	11034
3144.0	1116	107165	1.04	255	259	-4	250	12997
3144.5	1245	126406	1.04	263	267	-7	255	15074
3145.0	1378	147136	1.05	270	274	-9	260	17282
3145.5	1515	169358	1.05	277	282	-12	265	19619
3146.0	1656	193076	1.05	285	289	-14	269	22085
3146.5	1800	218297	1.05	292	297	-17	274	24682
3147.0	1948	245029	1.06	300	304	-19	279	27408
3147.3	2038	261801	1.06	304	309	-21	282	29108

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB FLOOD PROFILES J-K
SECID=K-1FT AT DISTANCE= 5782 PART 1 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	QC
3140.0	13	478	1.01	9	12	170	178	91
3140.5	24	772	1.44	45	49	157	203	85
3141.0	81	2143	1.62	157	161	50	207	259
3141.5	167	5694	1.14	187	191	25	212	840
3142.0	266	11421	1.03	203	207	13	217	1697
3142.5	370	19175	1.01	211	214	11	221	2756
3143.0	477	28645	1.01	218	222	8	226	3971
3143.5	588	39754	1.02	225	229	5	230	5337
3144.0	702	52526	1.02	232	236	3	235	6851
3144.5	820	66844	1.03	238	243	1	239	8503
3145.0	941	82618	1.03	245	249	-1	244	10283
3145.5	1065	99847	1.04	252	257	-3	248	12193
3146.0	1193	118525	1.04	260	264	-6	253	14225
3146.5	1325	138661	1.04	267	271	-8	258	16381

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB FLOOD PROFILES J-K
SECID=K-1FT AT DISTANCE= 5782 PART 2 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	QC
3147.0	1460	160287	1.05	274	279	-11	263	18666
3147.5	1599	183408	1.05	282	286	-13	267	21081
3148.0	1742	208028	1.05	289	294	-16	272	23625
3148.5	1888	234156	1.06	297	301	-18	277	26300
3149.0	2038	261804	1.06	304	309	-21	282	29105

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB FLOOD PROFILES J-K
SECID=K AT DISTANCE= 5850 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3140.0	7	211	1.00	5	7	172	177	47
3140.5	10	331	1.00	6	9	172	178	74
3141.0	13	478	1.01	9	12	170	178	91
3141.5	24	772	1.44	45	49	157	203	85
3142.0	81	2143	1.62	157	161	50	207	259
3142.5	167	5694	1.14	187	191	25	212	840
3143.0	266	11421	1.03	203	207	13	217	1697
3143.5	370	19175	1.01	211	214	11	221	2756
3144.0	477	28645	1.01	218	222	8	226	3971
3144.5	588	39754	1.02	225	229	5	230	5337
3145.0	702	52526	1.02	232	236	3	235	6851
3145.5	820	66844	1.03	238	243	1	239	8503
3146.0	941	82618	1.03	245	249	-1	244	10283
3146.5	1065	99847	1.04	252	257	-3	248	12193
3147.0	1193	118525	1.04	260	264	-6	253	14225
3147.5	1325	138661	1.04	267	271	-8	258	16381
3148.0	1460	160287	1.05	274	279	-11	263	18666
3148.5	1599	183408	1.05	282	286	-13	267	21081
3149.0	1742	208028	1.05	289	294	-16	272	23625
3149.5	1888	234156	1.06	297	301	-18	277	26300
3150.0	2038	261804	1.06	304	309	-21	282	29105

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 6.DATE= 6/16/77

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB FLOOD PROFILES J-K
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID:	ERROR(WARNING) MESSAGE:	INTERMEDIATE RESULTS(IF ANY):	ACTION TAKEN
K-2.7:	KU/KD < 0.7 OR > 1.4	:	ALERTED USER

WATER-SURFACE PROFILE FOR: ROCKY KNOB FLOOD PROFILES J-K
PAGE 1 OF 1, PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

SECID AT	DISTANCE / WS ELEV	LENGTH / HV	DISCHARGE / HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	*ID*
J AT	5539 / 3138.76	0 / 0.14	300. /	103. /	6941. / 3138.90	1.09 / 2.92	112. / 0.29	161.	*IS*
J+0.1 AT	5550 / 3138.76	11 / 0.16	300. / 0.02	98. / 0.01	6608. / 3138.92	1.07 / 3.06	117. / 0.30	161. / -0.020	*XS*
K-2.7 AT	5666 / 3139.36	116 / 0.26	300. / 0.64	91. / 0.05	2466. / 3139.62	1.51 / 3.31	47. / 0.69	208. / 0.009	*XS*
K-1FT AT	5782 / 3141.07	116 / 0.25	300. / 1.69	92. / 0.0	2506. / 3141.32	1.50 / 3.27	47. / 0.68	208. / 0.010	*XS*
K AT	5850 / 3142.06	68 / 0.26	300. / 0.99	90. / 0.01	2456. / 3142.32	1.51 / 3.33	47. / 0.69	208. / 0.001	*XS*

END OF THIS PROFILE

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB FLOOD PROFILES J-K
PROFILE NUMBER 2. UPSTREAM COMPUTATIONS

SECID:	ERROR(WARNING) MESSAGE:	INTERMEDIATE RESULTS(IF ANY):	ACTION TAKEN
K-1FT:	KU/KD < 0.7 OR > 1.4		
K	: FRDN FAILURE	: WS = 3141.74 & FR = 2.63:	ALERTED USER
			USED HIGHER WS
K	: KU/KD < 0.7 OR > 1.4		ALERTED USER

WATER-SURFACE PROFILE FOR: ROCKY KNOB FLOOD PROFILES J-K
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*
J AT 5539 / 0 / 610. / 503. / 38773. / 1.25 / 0. / 260. 3141.49 / 0.03 / / 3141.52 / 1.21 / 0.15 / *IS*
J+0.1 AT 5550 / 11 / 610. / 478. / 36445. / 1.26 / 3. / 259. 3141.49 / 0.03 / 0.00 / 0.00 / 3141.52 / 1.28 / 0.16 / -0.002 *XS*
K-2.7 AT 5666 / 116 / 610. / 529. / 33701. / 1.02 / 6. / 228. 3141.54 / 0.02 / 0.04 / 0.0 / 3141.56 / 1.15 / 0.14 / 0.000 *XS*
K-1FT AT 5782 / 116 / 610. / 195. / 7063. / 1.10 / 18. / 213. 3141.64 / 0.17 / 0.18 / 0.07 / 3141.81 / 3.13 / 0.55 / -0.001 *XS*
K AT 5850 / 68 / 610. / 141. / 4502. / 1.20 / 32. / 211. 3142.36 / 0.35 / 0.80 / 0.09 / 3142.71 / 4.32 / 0.83 / 0.010 *XS*

END OF THIS PROFILE

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB FLOOD PROFILES J-K
PROFILE NUMBER 3, UPSTREAM COMPUTATIONS

SECID; ERROR(WARNING) MESSAGE;	INTERMEDIATE RESULTS(IF ANY);	ACTION TAKEN
K-LFT; KU/KD <.0.7 OR >.1.4		
K ; FRDN FAILURE		ALERTED USER
	WS = 3141.85 & ER = 2.60;	USED HIGHER WS
K ; KU/KD < 0.7 OR > 1.4		ALERTED USER

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 11.DATE= 6/16/77

WATER-SURFACE PROFILE FOR: ROCKY KNOB FLOOD PROFILES J-K
PAGE 1 OF 1. 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*	
J AT	5539 /	0 /	780. /	583. /	46518. /	1.23 /	-8. /	264.	
3141.79 /	0.03 /		/	3141.82 /	1.34 /	0.17/		*IS*	
J+0.1 AT	5550 /	11 /	780. /	557. /	43874. /	1.24 /	-5. /	263.	
3141.79 /	0.04 /	0.00 /	0.00 /	3141.83 /	1.40 /	0.17 /	-0.003	*XS*	
K-2.7 AT	5666 /	116 /	780. /	597. /	40736. /	1.02 /	5. /	231.	
3141.84 /	0.03 /	0.04 /	0.0 /	3141.87 /	1.31 /	0.15 /	0.000	*XS*	
K-1FT AT	5782 /	116 /	780. /	254. /	10627. /	1.04 /	14. /	216.	
3141.94 /	0.15 /	0.16 /	0.06 /	3142.09 /	3.07 /	0.49 /	0.000	*XS*	
K AT	5850 /	68 /	780. /	169. /	5771. /	1.14 /	25. /	212.	
3142.51 /	0.38 /	0.67 /	0.11 /	3142.89 /	4.62 /	0.85 /	0.005	*XS*	

END OF THIS PROFILE

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 12,DATE= 6/16/77

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB FLOOD PROFILES J-K
PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

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

WATER-SURFACE PROFILE FOR: ROCKY KNOB FLOOD PROFILES J-K
PAGE 1 OF 1, 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*
J AT 5539 / 0 / 1300. / 729. / 62126. / 1.18 / -22. / 271. 3142.31 / 0.06 / / 3142.37 / 1.78 / 0.21 / *IS*
J+0.1 AT 5550 / 11 / 1300. / 701. / 58987. / 1.19 / -19. / 270. 3142.31 / 0.06 / 0.01 / 0.00 / 3142.37 / 1.85 / 0.22 / -0.004 *XS*
K-2.7 AT 5666 / 116 / 1300. / 721. / 54795. / 1.02 / 3. / 236. 3142.38 / 0.05 / 0.06 / 0.0 / 3142.43 / 1.80 / 0.19 / -0.000 *XS*
K-1FT AT 5782 / 116 / 1300. / 369. / 19141. / 1.01 / 11. / 221. 3142.50 / 0.20 / 0.19 / 0.07 / 3142.69 / 3.52 / 0.49 / 0.000 *XS*
K AT 5850 / 68 / 1300. / 256. / 10727. / 1.04 / 14. / 216. 3142.95 / 0.42 / 0.56 / 0.11 / 3143.37 / 5.08 / 0.81 / 0.002 *XS*

END OF THIS PROFILE

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 1.DATE= 6/16/77

*** INPUT CARD PRINTOUT ***

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1     1 ROCKY KNOR          100-YEAR FLOODWAY          A-D     4  1 02 05 12
2     2 311585
3    40 A     1  14  3 3111     3000 99 99
4    41    960
5    43       0  1 31178   15  1 31150   35  1 31127   40  2 31127   50  2 31096
5    44      53  2 31096   56  2 31103   60  2 31123   64  2 31126   70  3 31136
5    45     100  3 31133  135  3 31135  144  3 31149  150  3 31175
6    47  1  2 045 045  4  5 060 050  1  2 045 045
3    50 B     0  14  3 3115     3440 99 99
5    53       0  1 31221   25  1 31191   30  1 31183   50  2 31175   60  2 31153
5    54      61  2 31143   64  2 31139   68  2 31139   69  3 31177  100  3 31168
5    55     140  3 31176  153  3 31182  175  3 31188  200  3 31221
6    57  2  3 045 035  4  5 060 050  2  3 045 035
3    60 C     0  13  3 3119     3790 99 99
5    63       0  1 31251   30  1 31228   60  1 31213   89  2 31202   91  2 31186
5    64      92  2 31172   95  2 31174   97  2 31177  101  3 31205  130  3 31213
5    65     160  3 31216  184  3 31224  200  3 31251
6    67  1  2 045 045  4  5 060 050  1  2 045 045
3    70 D     0  12  3 3122     4150 99 99
5    73       0  1 31276   30  1 31258   60  1 31240   87  2 31249   91  2 31207
5    74      93  2 31201   96  2 31206   98  3 31247  103  3 31240  130  3 31239
5    75     170  3 31244  200  3 31298
6    77  1  2 045 045  5  6 060 050  1  2 045 045
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INPUT SUMMARY FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D

4 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 4 TYPE 3 CARDS

KEPT 4 CROSS SECTIONS FOR EDITING

4 " " VALID FOR PROPERTY COMPUTATIONS

4 " " " " PROFILE "

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D
SECID=A AT DISTANCE= 3000 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3111.0	8	198	1.00	8	9	49	57	49
3111.5	13	358	1.00	10	11	49	58	85
3112.0	18	568	1.00	11	13	48	59	132
3112.5	24	767	1.00	15	17	48	63	176
3113.0	37	1153	1.10	34	36	32	66	207
3113.5	61	1927	1.20	96	99	28	135	252
3114.0	116	3910	1.19	115	117	24	138	609
3114.5	175	7014	1.07	122	125	19	141	1151
3115.0	238	11093	1.03	129	132	15	144	1810
3115.5	304	16226	1.01	133	136	12	145	2592
3116.0	371	22700	1.01	137	140	10	147	3447
3116.5	441	30406	1.03	141	144	7	148	4368
3117.0	512	38436	1.02	145	148	4	149	5403
3117.5	585	47165	1.02	148	152	2	150	6528
3117.8	630	52876	1.02	150	154	0	150	7256

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D
SECID=B AT DISTANCE= 3440 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3115.0	8	164	1.00	8	9	60	68	41
3115.5	12	304	1.00	9	11	59	68	75
3116.0	17	484	1.00	12	14	57	69	116
3116.5	23	731	1.00	14	17	55	69	172
3117.0	33	1067	1.07	33	36	52	110	178
3117.5	61	1804	1.29	78	82	50	135	268
3118.0	110	3628	1.19	111	115	37	149	567
3118.5	171	6499	1.11	135	139	29	164	1040
3119.0	244	10653	1.05	151	155	26	177	1713
3119.5	321	16269	1.03	159	162	22	180	2554
3120.0	403	24444	1.03	167	170	17	184	3492
3120.5	488	35629	1.04	175	178	13	188	4528
3121.0	577	48663	1.05	133	186	9	192	5672
3121.5	670	61268	1.05	190	195	5	195	6977
3122.0	768	75541	1.04	198	203	1	199	8415
3122.1	788	78608	1.03	200	204	0	200	8718

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D
SECID=C AT DISTANCE= 3790 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3119.0	10	272	1.00	8	10	90	99	66
3119.5	15	446	1.00	10	11	90	100	105
3120.0	20	668	1.00	11	13	89	100	154
3120.5	27	972	1.06	20	22	81	101	174
3121.0	45	1571	1.31	51	53	68	119	208
3121.5	80	2724	1.45	94	96	56	150	345
3122.0	136	4989	1.30	126	128	46	172	702
3122.5	205	8554	1.18	149	151	36	185	1256
3123.0	283	13850	1.14	160	163	27	188	1990
3123.5	365	20441	1.12	170	172	21	191	2868
3124.0	452	27924	1.08	179	182	14	193	3918
3124.5	544	36561	1.06	189	191	8	196	5090
3125.0	641	46359	1.05	198	201	1	199	6345
3125.1	661	48462	1.05	200	203	0	200	6659

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D
SECID=D AT DISTANCE= 4150 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3122.0	9	252	1.00	7	8	90	97	63
3122.5	13	396	1.00	8	10	89	97	97
3123.0	17	569	1.00	8	11	89	97	138
3123.5	21	774	1.00	9	12	88	97	187
3124.0	29	1019	1.11	45	48	88	133	119
3124.5	67	1912	1.51	105	109	52	171	246
3125.0	127	4154	1.18	130	135	43	173	653
3125.5	194	7733	1.07	141	146	35	176	1253
3126.0	268	12445	1.04	152	157	27	179	1977
3126.5	347	18263	1.03	163	168	18	182	2820
3127.0	431	25400	1.03	174	179	10	184	3783
3127.5	521	33910	1.04	186	190	2	187	4861
3128.0	615	43909	1.03	190	195	0	190	6195
3128.5	711	54983	1.02	193	199	0	193	7681
3129.0	808	67121	1.01	196	202	0	196	9271
3129.5	907	80286	1.01	198	205	0	198	10961
3129.8	966	88662	1.00	200	207	0	200	12022

*** INPUT CARD PRINTOUT ***

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8 10001                                  1
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*** INPUT CARD PRINTOUT ***

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9 10006    50 VHD 100   50   69 311895
9 10007    60 HOR 100   80  125 312252
9 10008    70 HOR 100   70  138 312593
9 10009    END                        100-YEAR DISCHARGE
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USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 7.DATE= 6/16/77

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D
SECID=A AT DISTANCE= 3000 PART 1 OF 1
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	B	P	LEW	REW	QC
3111.0	8	198	1.00	8	9	49	57	49
3111.5	13	358	1.00	10	11	49	59	85
3112.0	18	568	1.00	11	13	48	59	132
3112.5	24	767	1.00	15	17	48	63	176
3113.0	33	1083	1.00	18	21	48	66	245
3113.5	45	1539	1.07	43	46	48	101	251
3114.0	71	2549	1.13	53	57	48	101	435
3114.5	97	4022	1.05	53	58	48	101	728
3115.0	124	5829	1.01	53	59	48	101	1065
3115.5	150	7920	1.00	53	60	48	101	1434
3116.0	177	10695	1.00	53	61	48	101	1830
3116.5	203	14045	1.01	53	62	48	101	2251
3117.0	230	17140	1.00	53	63	48	101	2710
3117.5	257	20323	1.00	53	64	48	101	3197
3117.8	273	22320	1.00	53	65	48	101	3500

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D
SECID=B AT DISTANCE= 3440 PART 1 OF 1
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	B	P	LEW	REW	QC
3115.0	8	164	1.00	8	9	60	68	41
3115.5	12	304	1.00	9	11	59	68	75
3116.0	17	484	1.00	12	14	57	69	116
3116.5	23	731	1.00	14	17	55	69	172
3117.0	31	1055	1.00	19	22	52	93	228
3117.5	45	1541	1.11	38	42	50	76	266
3118.0	67	2489	1.11	45	50	50	95	444
3118.5	90	3800	1.04	45	51	50	95	707
3119.0	113	5372	1.01	45	52	50	95	1003
3119.5	135	7368	1.00	45	53	50	95	1325
3120.0	158	10465	1.01	45	54	50	95	1665
3120.5	180	14063	1.02	45	55	50	95	2024
3121.0	203	16981	1.03	45	56	50	95	2405
3121.5	225	20083	1.04	45	57	50	95	2805
3122.0	248	23354	1.05	45	58	50	95	3224
3122.1	252	24027	1.05	45	59	50	95	3310

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 8.DATE= 6/16/77

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D
SECID=C AT DISTANCE= 3790 PART 1 OF 1
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	B	P	LEW	REW	QC
3119.0	10	272	1.00	8	10	90	99	66
3119.5	15	446	1.00	10	11	90	100	105
3120.0	20	668	1.00	11	13	89	100	154
3120.5	27	972	1.06	20	22	81	101	174
3121.0	42	1553	1.21	39	42	80	119	225
3121.5	64	2556	1.18	45	49	80	125	401
3122.0	87	3933	1.08	45	50	80	125	655
3122.5	109	5667	1.05	45	51	80	125	942
3123.0	132	7913	1.06	45	52	80	125	1243
3123.5	154	10414	1.06	45	53	80	125	1568
3124.0	177	12848	1.05	45	54	80	125	1936
3124.5	199	15462	1.04	45	55	80	125	2326
3125.0	222	18242	1.04	45	56	80	125	2737
3125.1	226	18816	1.04	45	56	80	125	2821

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D
SECID=D AT DISTANCE= 4150 PART 1 OF 1
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	B	P	LEW	REW	QC
3122.0	9	252	1.00	7	8	90	97	63
3122.5	13	396	1.00	8	10	89	97	97
3123.0	17	569	1.00	8	11	89	97	138
3123.5	21	774	1.00	9	12	88	97	187
3124.0	28	1019	1.11	45	48	88	138	119
3124.5	52	1714	1.25	54	59	75	138	257
3125.0	83	3032	1.13	68	74	70	138	491
3125.5	117	5020	1.05	68	75	70	138	850
3126.0	151	7483	1.03	68	76	70	138	1263
3126.5	185	10353	1.02	68	77	70	138	1719
3127.0	219	13794	1.01	68	78	70	138	2216
3127.5	253	17808	1.02	68	79	70	138	2750
3128.0	287	21947	1.02	68	80	70	138	3323
3128.5	321	26210	1.01	68	81	70	138	3933
3129.0	355	30737	1.01	68	82	70	138	4576
3129.5	389	35509	1.01	68	83	70	138	5250
3129.8	410	38483	1.01	68	84	70	138	5667

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 9.DATE= 6/16/77

WATER-SURFACE PROFILE FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D
PAGE 1 OF 1, PROFILE NUMBER 1, UPSTREAM COMPUTATIONS
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

SECID	AT	DISTANCE / WS ELEV	LENGTH / HV	DISCHARGE / HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	*ID*
A	AT	3000 / 3115.85	0 / 0.50	960. /	169. /	9794. / 3116.35	1.00 / 5.68	48. / 0.49	101.	*IS*
B	AT	3440 / 3119.94	440 / 0.60	960. / 4.12	155. / 0.05	10040. / 3120.54	1.01 / 6.20	50. / 0.49	95. / 0.014	*XS*
C	AT	3790 / 3123.29	350 / 0.73	960. / 3.42	145. / 0.07	9405. / 3124.02	1.07 / 6.63	80. / 0.62	125. / -0.000	*XS*
D	AT	4150 / 3126.70	360 / 0.37	960. / 3.04	199. / 0.0	11599. / 3127.07	1.02 / 4.83	70. / 0.55	138. / -0.003	*XS*

END OF THIS PROFILE

SUMMARY OF ENCROACHMENTS FOR: ROCKY KNOB 100-YEAR FLOODWAY A-D
RESULTS OF THE FLOODWAY ANALYSIS ENTITLED 100-YEAR DISCHARGE (PROFILE NUMBER 1, UPSTREAM COMPUTATIONS) ARE COMPARED TO THE RESULTS OF THE BASE PROFILE (PROFILE NUMBER 1, UPSTREAM COMPUTATIONS). PAGE 1 OF 1

	CARD 3		FW	ENCROACHMENT		SURCHARGE		CHANNEL WIDTH	
SECID	SEQUENCE	TYPE	OPTION	LEFT	RIGHT	IDEAL	ACTUAL	NATURAL	FLOODWAY
A	40	1	VHD	CONS	YES	1.00	1.00	******	53
B	50	0	VHD	CONS	YES	1.00	0.99	******	45
C	60	0	HOR	YES	YES	******	0.77	******	45
D	70	0	HOR	YES	YES	******	0.77	******	68

*** 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
1     1 ROCKY KNOB          100-YEAR FLOODWAY          E-G     3  1 02 05 12
2     2 313042
3   100 E       1  16  3 3125     4267 99 99
4   101     960
5   103         0  1 31316   30  1 31319   56  2 31293   80  2 31260   82  2 31237
5   104        83  2 31227   88  2 31217   92  2 31219   93  2 31237  100  3 31268
5   105       117  3 31279  145  3 31284  150  3 31285  175  3 31295  200  3 31311
5   106       225  3 31330
6   109  1  2 045 045  6  7 060 050  1  2 045 045
3   110 E       1  12  3 3128     4720 99 99
4   111     880
5   112         0  1 31339   10  1 31318   50  1 31290  100  1 31292  126  2 31289
5   113       129  2 31262  133  2 31259  135  2 31261  138  2 31278  148  2 31284
5   114       156  3 31324  200  3 31332
6   117  1  2 045 045  4  5 060 050  1  2 045 045
3   120 C       0  14  2 3132     5175 99 99
5   123         0  1 31379    7  1 31371   11  1 31333   14  1 31301   14  1 31297
5   124        19  1 31302   22  1 31304   24  1 31321   29  1 31326   35  2 31340
5   125        77  2 31344  110  2 31366  150  2 31371  200  2 31384
6   127  5  6 060 050  2  3 050 045
```

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 2.DATE= 6/16/77

INPUT SUMMARY FOR: ROCKY KNOB 100-YEAR FLOODWAY E-G

3 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 3 TYPE 3 CARDS

KEPT 3 CROSS SECTIONS FOR EDITING

3 " " VALID FOR PROPERTY COMPUTATIONS

3 " " " ". PROFILE "

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY E-G
SECID=E AT DISTANCE= 4267 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3125.0	33	1279	1.00	15	18	81	96	283
3125.5	41	1702	1.00	17	19	80	97	370
3126.0	50	2199	1.00	18	21	80	98	471
3126.5	60	2706	1.00	21	24	78	99	572
3127.0	72	3372	1.01	27	30	76	103	661
3127.5	87	4262	1.05	36	40	75	111	750
3128.0	108	5378	1.10	50	53	73	123	860
3128.5	140	6893	1.19	79	83	71	150	972
3129.0	194	9196	1.18	93	97	69	163	1344
3129.5	234	12307	1.15	110	114	65	175	1807
3130.0	293	16516	1.12	125	129	58	183	2398
3130.5	359	21591	1.11	140	144	50	191	3096
3131.0	433	27605	1.10	155	159	43	198	3911
3131.5	514	35965	1.13	169	173	36	205	4787
3132.0	610	45997	1.22	212	216	0	212	5314
3132.5	717	56876	1.21	218	223	0	218	6709
3133.0	828	68788	1.19	225	230	0	225	8299

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY E-G
SECID=F AT DISTANCE= 4720 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3128.0	17	453	1.00	14	16	127	141	106
3128.5	26	716	1.00	22	23	126	148	165
3129.0	38	1236	1.02	32	34	117	149	234
3129.5	83	2497	1.31	107	109	43	150	362
3130.0	139	4951	1.10	115	117	36	151	821
3130.5	199	8361	1.03	124	126	29	152	1406
3131.0	262	12663	1.01	132	134	21	153	2092
3131.5	330	17839	1.00	140	142	14	154	2877
3132.0	402	24054	1.00	146	149	9	155	3784
3132.5	476	31962	1.00	155	157	7	162	4737
3133.0	561	41601	1.03	185	187	4	189	5471
3133.5	659	52088	1.06	198	201	2	200	6628
3133.9	738	61198	1.06	200	203	0	200	7810

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY E-G
SECID=G AT DISTANCE= 5175 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	OC
3132.0	19	569	1.00	12	14	12	24	133
3132.5	25	781	1.00	16	18	12	28	180
3133.0	34	1157	1.00	19	22	11	31	260
3133.5	45	1652	1.00	22	25	11	33	362
3134.0	56	2258	1.00	25	28	10	35	484
3134.5	82	3264	1.20	69	72	10	79	460
3135.0	118	4905	1.22	77	80	9	86	750
3135.5	158	7096	1.17	85	88	9	94	1136
3136.0	203	9826	1.12	93	97	8	101	1605
3136.5	251	13109	1.09	101	105	8	109	2156
3137.0	309	15938	1.16	135	139	7	142	2462
3137.5	384	19997	1.12	162	166	3	165	3173
3138.0	471	25430	1.07	185	189	0	185	4118
3138.4	548	31748	1.07	200	205	0	200	4972

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 5.DATE= 6/16/77

*** 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
7 10000                                 1
8 10001                                 1
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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
9 10005   100 VHD 100    58  100 312942
9 10006   110 HOR 100    80  154 313149
9 10007   120 HOR 100     9   35 313502
9 10008       END                        100-YEAR DISCHARGE
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USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 7,DATE= 6/16/77

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY E-G
SECID=E AT DISTANCE= 4267 PART 1 OF 1
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	B	P	LEW	REW	QC
3125.0	33	1279	1.00	15	18	81	96	283
3125.5	41	1702	1.00	17	19	80	97	370
3126.0	50	2199	1.00	18	21	80	98	471
3126.5	60	2706	1.00	21	24	78	99	572
3127.0	71	3370	1.00	24	27	76	100	701
3127.5	83	4200	1.00	25	30	75	100	857
3128.0	97	5142	1.00	27	32	73	100	1032
3128.5	111	6200	1.00	29	34	71	100	1225
3129.0	126	7381	1.00	31	37	69	100	1438
3129.5	142	8773	1.00	32	39	68	100	1689
3130.0	158	10391	1.00	32	40	68	100	1983
3130.5	174	12098	1.00	32	41	68	100	2293
3131.0	190	13888	1.00	32	42	68	100	2617
3131.5	206	16956	1.00	32	43	68	100	2956
3132.0	222	20921	1.00	32	44	68	100	3307
3132.5	238	23647	1.00	32	45	68	100	3672
3133.0	254	26137	1.00	32	46	68	100	4049

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY E-G
SECID=F AT DISTANCE= 4720 PART 1 OF 1
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	B	P	LEW	REW	QC
3128.0	17	453	1.00	14	16	127	141	106
3128.5	26	716	1.00	22	23	126	148	165
3129.0	38	1236	1.02	32	34	117	149	234
3129.5	68	2225	1.21	70	72	80	150	346
3130.0	103	3935	1.08	71	74	80	151	682
3130.5	139	6180	1.02	72	76	80	152	1088
3131.0	176	8888	1.00	73	77	80	153	1542
3131.5	212	12031	1.00	74	79	80	154	2042
3132.0	249	15772	1.00	74	80	80	154	2596
3132.5	286	20511	1.00	74	81	80	154	3197
3133.0	323	25693	1.00	74	82	80	154	3833
3133.5	360	30508	1.00	74	83	80	154	4512
3133.9	390	34563	1.00	74	84	80	154	5080

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY E-G
SECID=G AT DISTANCE= 5175 PART 1 OF 1
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	B	P	LEW	REW	QC
3132.0	19	569	1.00	12	14	12	24	133
3132.5	25	781	1.00	16	18	12	28	180
3133.0	34	1157	1.00	19	22	11	31	260
3133.5	45	1652	1.00	22	25	11	33	362
3134.0	56	2258	1.00	25	28	10	35	484
3134.5	69	3062	1.00	25	29	10	35	647
3135.0	92	3952	1.00	26	30	9	35	825
3135.5	95	4934	1.00	26	31	9	35	1026
3136.0	108	5986	1.00	26	32	9	35	1244
3136.5	121	7091	1.00	26	33	9	35	1476
3137.0	134	8446	1.00	26	34	9	35	1720
3137.5	147	10573	1.00	26	35	9	35	1977
3138.0	160	12808	1.00	26	36	9	35	2245
3138.4	170	14021	1.00	26	37	9	35	2468

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 9.DATE= 6/16/77

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB 100-YEAR FLOODWAY E-G
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

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

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 10.DATE= 6/16/77

WATER-SURFACE PROFILE FOR: ROCKY KNOB 100-YEAR FLOODWAY E-G
PAGE 1 OF 1, PROFILE NUMBER 1, UPSTREAM COMPUTATIONS
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

SECID	AT	DISTANCE	LENGTH	DISCHARGE	AREA	CONVEYANCE	ALPHA	LEW	REW
	WS ELEV	HV	HF	HE	EG	V	FN	ACC	*ID*
E	AT	4267	0	960.	171.	11819.	1.00	68.	100.
	3130.42	0.49			3130.91	5.61	0.43		*IS*
F	AT	4720	453	880.	281.	19703.	1.00	80.	154.
	3132.42	0.15	1.65	0.0	3132.57	3.14	0.30	0.016	*XS*
G	AT	5175	455	880.	94.	4890.	1.00	9.	35.
	3135.48	1.36	3.66	0.60	3136.84	9.34	0.87	0.004	*XS*

No floodway at G per 1978 Study

END OF THIS PROFILE

USGS STEP-BACKWATER PROGRAM - VERSION 77.091 *** PAGE COUNT= 11.DATE= 6/16/77

SUMMARY OF ENCROACHMENTS FOR: ROCKY KNOB 100-YEAR FLOODWAY E-G
RESULTS OF THE FLOODWAY ANALYSIS ENTITLED 100-YEAR DISCHARGE (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
E	100	1	VHD	CONS	YES	1.00	1.00	******	32
F	110	1	HOR	YES	YES	******	0.93	******	74
~~S~~	~~120~~	~~0~~	~~HOR~~	~~YES~~	~~YES~~	~~******~~	~~0.46~~	~~******~~	~~26~~

*** 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 ROCKY KNOB          100-YEAR FLOODWAY          F-G      2  1 02 05 12
2     2 313242
3   110 F       1  12  3 3128     4720 99 99
4   111     880
5   112         0  1 31339   10  1 31318   50  1 31290  100  1 31292  126  2 31289
5   113       129  2 31262  133  2 31259  135  2 31261  138  2 31278  148  2 31284
5   114       156  3 31324  200  3 31332
6   117  1  2 045 045  4  5 060 050  1  2 045 045
3   120 G       0  14  2 3132     5175 99 99
5   123         0  1 31379    7  1 31371   11  1 31333   14  1 31301   14  1 31297
5   124        19  1 31302   22  1 31304   24  1 31321   29  1 31326   35  2 31340
5   125        77  2 31344  110  2 31366  150  2 31371  200  2 31384
6   127  5  6 060 050  2  3 050 045
```

INPUT SUMMARY FOR: ROCKY KNOB 100-YEAR FLOODWAY F-G

2 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 2 TYPE 3 CARDS

KEPT 2 CROSS SECTIONS FOR EDITING

2 " " VALID FOR PROPERTY COMPUTATIONS

2 " " " " PROFILE "

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY F-G
SECID=F AT DISTANCE= 4720 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3128.0	17	453	1.00	14	16	127	141	106
3128.5	26	716	1.00	22	23	126	148	165
3129.0	38	1236	1.02	32	34	117	149	234
3129.5	83	2497	1.31	107	109	43	150	362
3130.0	139	4951	1.10	115	117	36	151	821
3130.5	199	8361	1.03	124	126	29	152	1406
3131.0	262	12663	1.01	132	134	21	153	2092
3131.5	330	17839	1.00	140	142	14	154	2877
3132.0	402	24054	1.00	146	149	9	155	3784
3132.5	476	31962	1.00	155	157	7	162	4737
3133.0	561	41601	1.03	185	187	4	189	5471
3133.5	659	52088	1.06	198	201	2	200	6628
3133.9	738	61198	1.06	200	203	0	200	7810

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY F-G
SECID=G AT DISTANCE= 5175 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	QC
3132.0	19	569	1.00	12	14	12	24	133
3132.5	25	781	1.00	16	18	12	28	180
3133.0	34	1157	1.00	19	22	11	31	260
3133.5	45	1652	1.00	22	25	11	33	362
3134.0	56	2258	1.00	25	28	10	35	484
3134.5	82	3264	1.20	69	72	10	79	460
3135.0	118	4905	1.22	77	80	9	86	750
3135.5	158	7096	1.17	85	88	9	94	1136
3136.0	203	9826	1.12	93	97	8	101	1605
3136.5	251	13109	1.09	101	105	8	109	2156
3137.0	309	15938	1.16	135	139	7	142	2462
3137.5	384	19997	1.12	162	166	3	165	3173
3138.0	471	25430	1.07	185	189	0	185	4118
3138.4	548	31748	1.07	200	205	0	200	4972

*** 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 10000                                 1
8 10001                                 1
```

*** 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

9 10005   110 HOR        80   154 313149
9 10007   120 HOR         9    86 313502
9 10008       END                        100-YEAR DISCHARGE
```

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY F-G
SECID=F AT DISTANCE= 4720 PART 1 OF 1
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	B	P	LEW	REW	QC
3128.0	17	453	1.00	14	16	127	141	106
3128.5	26	716	1.00	22	23	126	148	165
3129.0	38	1236	1.02	32	34	117	149	234
3129.5	68	2225	1.21	70	72	80	150	346
3130.0	103	3935	1.08	71	74	80	151	682
3130.5	139	6180	1.02	72	76	80	152	1088
3131.0	176	8888	1.00	73	77	80	153	1542
3131.5	212	12031	1.00	74	79	80	154	2042
3132.0	249	15772	1.00	74	80	80	154	2596
3132.5	286	20511	1.00	74	81	80	154	3197
3133.0	323	25693	1.00	74	82	80	154	3833
3133.5	360	30508	1.00	74	83	80	154	4512
3133.9	390	34563	1.00	74	84	80	154	5080

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY F-G
SECID=G AT DISTANCE= 5175 PART 1 OF 1
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	B	P	LEW	REW	QC
3132.0	19	569	1.00	12	14	12	24	133
3132.5	25	781	1.00	16	18	12	28	180
3133.0	34	1157	1.00	19	22	11	31	260
3133.5	45	1652	1.00	22	25	11	33	362
3134.0	56	2258	1.00	25	28	10	35	484
3134.5	82	3264	1.20	69	72	10	79	460
3135.0	118	4905	1.22	77	80	9	86	750
3135.5	157	7180	1.13	77	81	9	86	1189
3136.0	195	9924	1.07	77	82	9	86	1701
3136.5	234	13192	1.03	77	83	9	86	2274
3137.0	272	17392	1.01	77	84	9	86	2890
3137.5	311	22775	1.01	77	85	9	86	3524
3138.0	349	28313	1.01	77	86	9	86	4190
3138.4	380	32327	1.01	77	87	9	86	4769

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB 100-YEAR FLOODWAY F-G
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

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

WATER-SURFACE PROFILE FOR: ROCKY KNOB 100-YEAR FLOODWAY F-G
PAGE 1 OF 1, PROFILE NUMBER 1, UPSTREAM COMPUTATIONS
*** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

SECID	AT	DISTANCE / WS ELEV	LENGTH / HV	DISCHARGE / HF	AREA / HE	CONVEYANCE / EG	ALPHA / V	LEW / FN	REW / ACC	*ID*
F	AT	4720 / 3132.42	0 / 0.15	880. /	281. /	19703. / 3132.57	1.00 / 3.14	80. / 0.30	154.	*IS*
G	AT	5175 / 3135.20	455 / 0.80	880. / 3.10	134. / 0.32	5766. / 3136.00	1.19 / 6.58	9. / 0.75	86. / 0.005	*XS*

END OF THIS PROFILE

SUMMARY OF ENCROACHMENTS FOR: ROCKY KNOB 100-YEAR FLOODWAY F-G
RESULTS OF THE FLOODWAY ANALYSIS ENTITLED 100-YEAR DISCHARGE (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
F	110	1	HOR	YES	YES	******	0.93	******	74
G	120	0	HOR	YES	YES	******	0.18	******	77