

ROCKY

KNOB

1-DATE= 4/ 5/77

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36
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96

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120

ROCKY

KNOB

*** INPUT CARD PRINTOUT ***

	1	2	3	4	5	6	7	8
1	POCKY KNOR	10.50.100.8500	YR FLOODS	DUM 1-D	7 14 02 05 15			
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	390	390	390	760	760	760	960 960 960 960
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
20	DUM 2	0	14	3	3107	2580	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	3109	2790	99 99
5	33	0	1	31158	15	1	31130	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	31150	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 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	0	14	3	3115	3440	99 99	
5	53	0	1	31221	25	1	31191	30 1 31183 60 2 31175 60 2 31153
5	54	61	2	31143	64	2	31130	60 2 31130 60 3 31177 100 3 31160
5	55	140	3	31176	153	3	31182	175 3 31190 200 3 31221
6	57	2	3	045 035	4	5	060 050	2 3 045 035
3	60	0	13	3	3119	2790	99 99	
5	63	0	1	31251	30	1	31220	60 1 31213 80 2 31202 91 2 31186
5	64	32	2	31172	95	2	31174	97 2 31177 101 3 31205 130 3 31213
5	65	160	3	31216	184	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 31239 91 2 31207
5	74	93	2	31201	96	2	31206	98 3 31247 103 3 31240 130 3 31230
5	75	170	3	31244	200	3	31293	
6	77	1	2	045 045	5	6	060 050	1 2 045 045

INPUT SUMMARY FOR: ROCKY KNOR 10.50.100.8500 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 KNOR 10, 50, 100, & 500 YR FLOODS DUM 1-D
 SECID=DUM 1 AT DISTANCE= 2370 PART 1 OF 1

WS	A	K	ALPHA	R	D	LFW	RFW	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	600
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 KNOR 10, 50, 100, & 500 YR FLOODS DUM 1-D
 SECID=DUM 2 AT DISTANCE= 2580 PART 1 OF 1

WS	A	K	ALPHA	R	D	LFW	RFW	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 KNOL SECTION=DM 1 AT DISTANCE= 2370 PART 1 OF 1

US	A	K	ALPHA	B	Z	LSM	DSM	OC
3105.0	2	199	1.00	9	9	49	57	49
3105.5	13	358	1.00	10	11	49	59	95
3106.0	18	568	1.00	11	13	49	59	132
3106.5	24	767	1.00	15	17	48	63	176
3107.0	37	1153	1.10	36	36	32	66	207
3107.5	61	1927	1.20	99	99	28	135	252
3108.0	116	3910	1.10	115	117	24	138	600
3108.5	175	7014	1.07	122	125	19	141	1151
3109.0	239	11093	1.03	129	132	15	144	1410
3109.5	304	16225	1.01	133	136	12	145	2592
3110.0	371	22700	1.01	137	140	10	147	3447
3110.5	441	30405	1.03	141	144	7	148	4368
3111.0	512	38436	1.02	145	148	4	149	5403
3111.5	575	47165	1.02	149	152	2	150	6529
3111.8	630	52876	1.02	150	154	0	150	7256

CROSS-SECTION PROPERTIES FOR: ROCKY KNOL SECTION=DM 2 AT DISTANCE= 2530 PART 1 OF 1

US	A	K	ALPHA	B	Z	LSM	DSM	OC
3107.0	0	108	1.00	4	9	49	57	49
3107.5	13	358	1.00	10	11	49	59	85
3108.0	18	568	1.00	11	13	49	59	132
3108.5	24	767	1.00	15	17	48	63	176
3109.0	37	1153	1.10	34	34	32	66	207
3109.5	61	1927	1.20	99	99	28	135	252
3110.0	116	3910	1.10	115	117	24	138	600
3110.5	175	7014	1.07	122	125	19	141	1151
3111.0	239	11093	1.03	129	132	15	144	1410
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	30405	1.03	141	144	7	148	4368
3113.0	512	38436	1.02	145	148	4	149	5403
3113.5	575	47165	1.02	149	152	2	150	6529
3113.8	630	52876	1.02	150	154	0	150	7256

CROSS-SECTION PROPERTIES FOR: ROCKY KNOR 10,50,100, & 500 YR FLOODS DUM 1-0
 SECID=DUM 3 AT DISTANCE= 2790 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	RFW	QC
3109.0	8	198	1.00	9	9	49	57	49
3109.5	13	358	1.00	10	11	49	58	85
3110.0	18	568	1.00	11	13	48	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	585	47165	1.02	148	152	2	150	6528
3115.8	630	52876	1.02	150	154	0	150	7256

CROSS-SECTION PROPERTIES FOR: ROCKY KNOR 10,50,100, & 500 YR FLOODS DUM 1-0
 SECID=A AT DISTANCE= 3000 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	RFW	QC
3111.0	8	198	1.00	9	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 KNOR 10, 50, 100, & 500 YR FLOODS DUM 1-D
 SECID=B AT DISTANCE= 3440 PART 1 OF 1

WS	A	K	ALPHA	R	P	LEW	RFW	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	78608	1.03	200	204	0	200	8718

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

WS	A	K	ALPHA	R	P	LEW	RFW	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	69	119	208
3121.5	80	2724	1.45	94	96	56	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	293	13450	1.14	160	163	27	198	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	197	201	1	199	6385
3125.1	661	48462	1.05	200	203	0	200	6659

CROSS-SECTION PROPERTIES FOR: ROCKY MOUNTAIN 10.50, 100, 500 YR FLOODS DUM 1-D
 SECID=D AT DISTANCE= 4150 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	RFW	OC
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

107R

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

PAGE 1 OF 1

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	SECID	AT	WS ELEV	HW	HF	HE	APFA	CONVEYANCE	ALPHA	LEW	REW	ACC	ID
DUM 1	AT	2370	3108.03	0.19	0	390.	170.	4067.	1.18	23.	138.		*IS*
							3108.22	3.26	0.46				
DUM 2	AT	2580	3110.01	0.20	1.98	390.	117.	3973.	1.18	24.	138.		*XS*
							3110.21	3.32	0.47	0.009			
DUM 3	AT	2790	3112.02	0.20	2.00	390.	118.	4016.	1.18	24.	138.		*XS*
							3112.22	3.29	0.46	0.003			
A	AT	3000	3114.02	0.20	1.98	390.	118.	4016.	1.18	24.	138.		*XS*
							3114.22	3.29	0.46	0.020			
B	AT	3440	3118.10	0.19	4.06	390.	121.	4104.	1.17	35.	151.		*XS*
							3118.28	3.24	0.44	0.006			
C	AT	3790	3121.71	0.32	3.67	390.	102.	3535.	1.42	52.	163.		*XS*
							3122.04	3.83	0.53	0.015			
D	AT	4150	3125.11	0.14	3.20	390.	141.	4833.	1.14	42.	174.		*XS*
							3125.24	2.77	0.47	0.004			

END OF THIS PROFILE

USE

50YR

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WATER-SURFACE PROFILE FOR: ROCKY KNOR 10.50,100,5500 YR FLOODS DUM 1-D

PAGE 1 OF 1

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SECID	AT	DISTANCE	LENGTH	DISCHARGE	AREA	CONVEYANCE	ALPHA	IFW	RFW
WS ELEV	HV	HF	HE	EG	V	FN	ACC	ID*	
DUM 1	AT	2370	0	760.	191.	7979.	1.06	18.	142.
3108.63		0.25		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	3110.87		4.06	0.48	0.009	*XS*
DUM 3	AT	2790	210	760.	189.	7823.	1.06	18.	142.
3112.61		0.27	2.00	3112.88		4.03	0.48	0.002	*XS*
A	AT	3000	210	760.	189.	7823.	1.06	18.	142.
3114.61		0.27	1.98	3114.88		4.03	0.48	0.018	*XS*
B	AT	3440	440	760.	200.	7984.	1.09	27.	172.
3118.70		0.24	4.07	3118.95		3.80	0.57	0.003	*XS*
C	AT	3790	350	760.	177.	6953.	1.21	40.	181.
3122.31		0.35	3.64	3122.65		4.30	0.54	0.012	*XS*
D	AT	4150	360	760.	220.	9293.	1.05	32.	177.
3125.69		0.20	3.22	3125.87		3.45	0.51	0.001	*XS*

USE

END OF THIS PROFILE

100 YR

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

PAGE 1 OF 1

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SECID AT DISTANCE/ LENGTH/DISCHARGE/ AREA /CONVEYANCE/ ALPHA/ IFW / DEW
 WS ELEV / HV / HF / HE / FG / V / FN / ACC *TD*

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DUM 1 AT 2370 / 0 / 960. / 223. / 10016. / 1.03 / 16. / 144.
 3108.88 / 0.30 / / 3109.18 / 4.31 / 0.59 / *IS*

DUM 2 AT 2580 / 210 / 960. / 219. / 9795. / 1.04 / 16. / 144.
 3110.85 / 0.31 / 1.97 / 0.00 / 3111.16 / 4.38 / 0.60 / 0.006 *XS*

DUM 3 AT 2790 / 210 / 960. / 219. / 9795. / 1.04 / 16. / 144.
 3112.85 / 0.31 / 2.02 / 0.0 / 3113.16 / 4.38 / 0.60 / -0.018 *XS*

A AT 3000 / 210 / 960. / 219. / 9795. / 1.04 / 16. / 144.
 3114.85 / 0.31 / 2.02 / 0.0 / 3115.16 / 4.38 / 0.60 / -0.018 *XS*

B AT 3440 / 440 / 960. / 237. / 10199. / 1.06 / 26. / 176.
 3118.95 / 0.27 / 4.06 / 0.0 / 3119.22 / 4.05 / 0.58 / 0.002 *XS*

C AT 3790 / 350 / 960. / 208. / 8747. / 1.18 / 36. / 185.
 3122.52 / 0.39 / 3.62 / 0.06 / 3122.91 / 4.51 / 0.65 / 0.011 *XS*

D AT 4150 / 360 / 960. / 257. / 11701. / 1.04 / 28. / 178.
 3125.23 / 0.23 / 3.24 / 0.0 / 3126.15 / 3.74 / 0.52 / 0.001 *XS*

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END OF THIS PROFILE

USE

5007R

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WATER-SURFACE PROFILE FOR: ROCKY KNOR 10.50.100.8500 YR FLOODS DIM 1-0

PAGE 1 OF 1

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	SECTION	AT	WS ELEV	HV	HF	HE	EG	V	FN	ACC	#ID*
	QUM 1	AT	2370	0	1580.	308.	16560.	1.01	12.	145.	
			3109.53	0.41			3109.94	5.13	0.62		*IS*
	QUM 2	AT	2580	210	1580.	303.	16126.	1.01	12.	145.	
			3111.49	0.43	1.95	0.01	3111.92	5.22	0.64	0.005	*XS*
	QUM 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.	
			3115.40	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	3119.92	4.78	0.66	0.000	*XS*
	C	AT	3790	350	1580.	290.	14400.	1.14	27.	188.	
			3123.04	0.53	3.55	0.08	3123.57	5.45	0.69	0.006	*XS*
	D	AT	4150	350	1580.	355.	18938.	1.03	17.	182.	
			3126.55	0.32	3.30	0.0	3126.97	4.45	0.56	0.001	*XS*

END OF THIS PROFILE

USE

CROSS-SECTION PROPERTIES FOR: ROCKY KNOR
 SECID=E AT DISTANCE= 4267

X-SECTION PROPERTIES E
 PART 1 OF 2

WS	A	K	ALPHA	B	P	LEW	RFW	OC
3125.0	33	1279	1.00	15	18	81	96	283
3125.1	35	1358	1.00	15	18	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	2398	1.00	19	23	79	99	509
3126.3	56	2499	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	78	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	3068	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	36	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	107	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	215	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: ROCKY KNOR
 SECID=F AT DISTANCE= 4267

X-SECTION PROPERTIES F
 PART 2 OF 2

WS	A	K	ALPHA	R	P	LEW	PEW	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	15506	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	199	3911
3131.1	449	28988	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	4609
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	1.13	185	189	10	208	4982
3131.8	562	41581	1.19	199	202	20	209	5021
3131.9	590	43653	1.21	211	214	0	211	5081
3132.0	610	46004	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	54631	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	66364	1.18	224	228	0	224	7977
3133.0	828	68875	1.18	225	229	0	225	8310

ho

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

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	128.9	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	17.51	1503.1	3.67	11.59
4.400	18.31	1551.8	3.25	12.17
4.600	18.90	1579.9	2.71	12.86
4.800	19.37	1577.1	1.96	13.60
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

	ELEV H1	ELEV H4	D2	D3	TYPE	C	C ADJUSTED
100.0	25.72	*****	3.21	2.64	2	0.92	0.93
100.0	25.93	25.11	3.90	3.91	3	0.92	0.93
100.0	26.34	25.63	4.34	4.49	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	*****	4.91	3.99	2	0.84	0.84
195.0	29.66	25.68	4.93	4.49	3	0.84	0.84
195.0	29.77	25.93	5.00	4.73	3	0.84	0.84
195.0	29.74	26.55	5.00	5.00	4	0.85	0.85
340.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
340.0	39.28	*****	*****	*****	5	0.57	0.57
340.0	35.05	*****	*****	*****	6	0.85	0.85
340.0	35.77	26.55	5.00	5.00	4	0.85	0.85
480.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
480.0	46.92	*****	*****	*****	5	0.60	0.60
480.0	40.51	*****	*****	*****	6	0.85	0.85
480.0	42.96	26.55	5.00	5.00	4	0.85	0.85
600.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
600.0	61.48	*****	*****	*****	5	0.60	0.60
600.0	68.74	*****	*****	*****	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	62.91	*****	*****	*****	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	72.03	*****	*****	*****	6	0.85	0.85
900.0	83.39	26.55	5.00	5.00	4	0.85	0.85
1000.0	TYPE.. 2	ENERGY EQUATIONS NOT BALANCED					
1000.0	123.05	*****	*****	*****	5	0.60	0.60
1000.0	96.68	*****	*****	*****	6	0.85	0.85
1000.0	97.34	26.55	5.00	5.00	4	0.85	0.85

*** INPUT CARD PRINTOUT ***

	1	2	3	4	5	6	7	8
.....	5	0	5	0	5	0	5	0
1	1	ROCKY KNOR CREEK	10.50	1005500	YR FLOODS	F-H	6	4 02 05 15
2	2	312843	312918	312942	312992			
3	100	F	1	16	3 3125	4267	99	99
4	101		390	760	960	1580		
5	103		0	1 31316	30	1 31314	68	2 31293 30 2 31260 82 2 31237
5	104		83	2 31227	88	2 31217	92	2 31210 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	F	1	12	3 3128	4720	99	99
4	111		350	700	880	1450		
5	112		0	1 31330	10	1 31310	50	1 31290 100 1 31292 126 2 31280
5	113		120	2 31262	133	2 31250	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 31370	7	1 31371	11	1 31333 14 1 31301 14 1 31297
5	124		10	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	BO GH	2	6	1 3132	5175		30 31256 1 1
5	132		0	1 31356	0	1 31306	6	1 31306 7 1 31306 12 1 31308
5	133		12	1 31356				
6	134	1	2 020	015				
3	136	PTEP	3	2				7
5	137		1	31306	1	31356		
3	140	4-ADD	5	14	3 3133	5240	1	3
5	142		0	1 31304	10	1 31301	10	1 31350 14 2 31346 15 2 31333
5	143		16	2 31313	17	2 31304	22	2 31304 23 2 31311 25 2 31323
5	144		26	3 31326	29	3 31335	34	3 31375 42 3 31386
6	145	1	2 035	035	1	2 035	035	1 2 035 035

PAGE 1 OF EDITING NOTES FOR: ROCKY KNOL CREEK 10.50.1001500 YR FLOODS E-4

SECID	ERROR SEVERITY	FIRST VARIABLE NO.	ERROR MESSAGE	SECOND VARIABLE NO.	VALUE ASSUMED
00 GH	WARNING	03	1 104		

USGS STEP-BACKWATER PROGRAM - VERSION 76.170 *** PAGE COUNT= 3 DATE= 4/13/77

INPUT SUMMARY FOR: ROCKY KNOR CREEK 10.50.100&500 YR FLOODS E-H

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 KNOR CREEK 10,50,100&500 YR FLOODS F-H
 SECID=F 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	19	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	70	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	21501	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	69788	1.18	225	230	0	225	8209

CROSS-SECTION PROPERTIES FOR: ROCKY KNOR CREEK 10,50,100&500 YR FLOODS F-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	125	148	165
3129.0	38	1236	1.02	32	34	117	140	234
3129.5	53	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	17830	1.00	140	142	14	154	2877
3132.0	402	24054	1.00	146	149	9	155	3784
3132.5	476	31962	1.00	153	157	7	162	4737
3133.0	561	41601	1.03	185	187	4	189	5471
3133.5	654	52688	1.06	199	201	2	200	6628
3133.9	734	61198	1.06	209	203	0	200	7910

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

WS	A	K	ALPHA	R	D	LEW	REW	OC
3132.0	19	560	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	70	660
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	2154
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

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

WS	A	K	ALPHA	R	D	LEW	REW	OC
3132.0	14	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
3134.0	40	6704	1.00	12	19	0	12	410
3134.5	46	8158	1.00	12	20	0	12	514
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

$\frac{7}{15} = \frac{C}{20}$

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

WS	A	K	ALPHA	R	D	LEW	REW	OC
3133.0	20	1138	1.02	12	14	15	27	145
3133.5	27	1688	1.05	14	16	15	29	202
3134.0	34	2356	1.06	15	17	14	30	280
3134.5	42	3134	1.06	16	19	14	30	370
3135.0	51	4100	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 KNOR CREEK 10, 50, 100 & 500 YR FLOODS. F-H
 SECTION=H-APP AT DISTANCE= 5240 PART 2 OF 2

WS	A	K	ALPHA	R	D	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	39	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 KNOR CREEK 10, 50, 100 & 500 YR FLOODS F-H
INITIAL VALUES ARE: 0 = 390. H = 3129.43

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

G .KII/KD < 0.7 OR > 1.4

.USED COMPUTED WSII

H-APP, KII/KD < 0.7 OR > 1.4

.USED COMPUTED WSII

H-APP, WSII > REIMX (1)

.CHECKED ORO (2)

10 yr

===== WATER-SURFACE PROFILE FOR: ROCKY KNOP CREEK 10.50.100&500 YR FLOODS F-H
PAGE 1 OF 1

SECID	AT	DISCHARGE	AREA	CONVEYANCE	ALPHA	LEW	RFW			
WS ELEV	HV	HF	HF	EG	V	FM	ACC			
F	AT	4267	0	390.	135.	6639.	1.18	71.	147.	
3128.43	0.15			3128.58	2.89	0.30			*TS*	
F	AT	4720	453	350.	154.	5763.	1.08	74.	151.	
3130.13	0.09	1.62	0.0	3130.22	2.27	0.30	0.014		*XS*	
G	AT	5175	455	350.	58.	2331.	1.00	10.	40.	
3134.05	0.57	4.15	0.24	3134.62	6.06	0.70	0.007		*XS*	
===== BEGIN BRIDGE ANALYSIS =====										
R0	GH	AT	5175		352.	47.	11543.	1.00	0.	12.
3135.60	0.89		...	2...	(0.097)		7.57	0.63		*R0*
===== NO ROAD-GRADE DATA =====										
RG										
H-APP	AT	5240	65	350.	47.	3683.	1.07	12.	31.	
3134.20	0.93	0.93	0.18	3135.72	7.47	0.75	-0.000		*AS*	
M	=	****	/	F	=	****	/	K	=	****
3137.02	0.24			3137.26	3.66	0.31				*AS*
===== END BRIDGE ANALYSIS =====										

Culvert
Coated as
bridges

END OF THIS PROFILE

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

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

G . KH/KO < 0.7 OR > 1.4

H-APP. WSU > RELHX (1)

H-APP. MAX ORO < OT (2)

H-APP. ROAD NOT CODED

H-APP. RIGHT BANK EXTENDED

.USED COMPUTED WSU

.CHECKED ORO (2)

.CHECKED ORO

.ASSUMED WSU = GMAX

.USED COMPUTED WSU

50 YR

=====

WATER-SURFACE PROFILE FOR: ROCKY KNOR CREEK 10.50.100&500 YR FLOODS F-4

PAGE 1 OF 1

=====

SECTION	AT DISTANCE	LENGTH	DISCHARGE	AREA	CONVEYANCE	ALPHA	IFW	DFW
WS ELEV	HV	HF	HE	FG	V	FN	ACC	ID*
F	4267	0	760.	201.	10190.	1.17	68.	167.
3129.18	0.26			3129.44	3.79	0.38		#IS*
F	4720	453	700.	275.	13565.	1.01	20.	153.
3131.09	0.10	1.75	0.0	3131.19	2.55	0.33	0.009	#XS*
G	5175	455	700.	99.	4014.	1.24	9.	82.
3134.75	0.95	4.10	0.43	3135.70	7.04	0.84	-0.013	#XS*
===== BEGIN BRIDGE ANALYSIS =====								
R0 GR AT	5175		472.	47.	11543.	1.00	0.	12.
3135.60	1.60	...	2.... (0.097)		10.13	0.84		#R0*

NO ROAD-GRADE DATA

#OG*

H-APP AT	5240	65	700.	64.	5544.	1.12	10.	32.
3135.60	2.11	1.43	0.58	3137.71	10.99	1.05	-0.001	#AS*
H = #####	F = #####	K# = #####	170.	19674.	1.32	0.	42.	
3139.40	0.25			3134.75	4.12	0.33		#AS*

===== END BRIDGE ANALYSIS =====

END OF THIS PROFILE

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

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

F .KH/KD < 0.7 OR > 1.4

G .KH/KD < 0.7 OR > 1.4

H-APP.WSU > RFLMX (1)

H-APP.MAX ORO < QT (2)

H-APP.ROAD NOT CODED

H-APP.RIGHT BANK EXTENDED

•USED COMPUTED WSU

•USED COMPUTED WSU

•CHECKED ORO (2)

•CHECKED ORO

•ASSUMED WSU = GMAX

•USED COMPUTED WSU

100 YR

=====

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

PAGE 1 OF 1

=====

SECID AT DISTANCE/ LENGTH/DISCHARGE/ AREA /CONVEYANCE/ ALPHA/ LEW / REW

WS FLV / HV / HF / HF / FG / V / FN / ACC *ID*

=====

F 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. / 4905. / 1.22 / 9. / 86.

3135.02 / 1.03 / 3.99 / 0.46 / 3136.05 / 7.34 / 0.86 / 0.005 *XS*

===== BEGIN BRIDGE ANALYSIS =====

R0 G4 AT 5175 / / 479. / 47. / 11543. / 1.00 / 0. / 12.

3135.60 / 1.65 / ...2... (0.097) / 10.29 / 0.86 / *R0*

NO ROAD-GRADE DATA

PG

H-APP AT 5240 / 65 / 880. / 66. / 5023. / 1.12 / 10. / 32.

3135.71 / 3.11 / 1.73 / 1.04 / 3138.82 / 13.34 / 1.26 / -0.002 *AS*

M = **** / F = **** / 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

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOR CREEK 10.50.100&500 YR FLOODS E-H
INITIAL VALUES ARE: Q = 1580. H = 3129.92

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

F	.KII/KD < 0.7 OR > 1.4				
G	.KII/KD < 0.7 OR > 1.4				.USED COMPUTED WSU
H-APP.WS NOT FOUND BETWEEN					.USED COMPUTED WSU
		.LO = 3135.45	HI = 3139.40		
H-APP.WS NOT FOUND BETWEEN					.USED DFL = 0.25
		.LO = 3135.45	HI = 3139.40		
H-APP.WS NOT FOUND					.USED LOWER WS
					.ABORTED PROFILE

=====

WATER-SURFACE PROFILE FOR: ROCKY KNOB CREEK 10.50.100A 00 YR FLOODS E-H

PAGE 1 OF 1

=====

SECTION	AT	LENGTH	DISCHARGE	AREA	CONVEYANCE	ALPHA	LEW	RFW
MS ELEV.	HV	HF	HE	FG	V	FN	ACC	*TD*
F	AT 4267 /	0 /	1580. /	283. /	15785. /	1.13 /	59. /	182.
	3129.92 /	0.55 /		3130.47 /	5.59 /	0.53 /		*TS*
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

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB
SECID=H AT DISTANCE= 5240

X-SECTION PROPERTIES H
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	3323	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
 SECID=H AT DISTANCE= 5240

X-SECTION PROPERTIES H
 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	1860
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	2454
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	296	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 KNOR CREEK CUL G-H BASE ELEVATION = 30.60 Z = 0.30

APPROACH ELEVATION	AREA	CONVEYANCE	ALPHA	TOP WIDTH	OC
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
34.19	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	27000.0	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	12.80
0.200	2.40	77.9	12.00	13.60
0.400	4.80	237.5	12.00	14.40
0.600	7.20	449.3	12.00	15.20
0.800	9.60	700.1	12.00	16.00
1.000	12.00	981.3	12.00	16.80
1.200	14.40	1287.2	12.00	17.60
1.400	16.80	1613.5	12.00	18.40
1.600	19.20	1956.8	12.00	19.20
1.800	21.60	2314.6	12.00	20.00
2.000	24.00	2694.9	12.00	20.80
2.200	26.40	3065.9	12.00	21.60
2.400	28.80	3456.3	12.00	22.40
2.600	31.20	3855.0	12.00	23.20
2.800	33.60	4260.9	12.00	24.00
3.000	36.00	4673.3	12.00	24.80
3.200	38.40	5091.5	12.00	25.60
3.400	40.80	5514.9	12.00	26.40
3.600	43.20	5942.9	12.00	27.20
3.800	45.60	6375.1	12.00	28.00
4.000	48.00	6811.2	12.00	28.80
4.200	50.40	7250.9	12.00	29.60
4.400	52.80	7693.5	12.00	30.40
4.600	55.20	8139.1	12.00	31.20
4.800	57.60	8587.4	12.00	44.00
5.000	60.00	7309.3	12.00	

ROCKY KNOB CREEK

CUL 6-H

BASE ELEVATION = 30.60

Z = 0.30

0	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	*****	2.99	*****	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	35.78	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	35.12	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	41.29	*****	*****	*****	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	44.83	35.70	5.00	5.00	4	0.88	0.88
1450.0	52.56	*****	*****	*****	5	0.63	0.63
1450.0	47.06	*****	*****	*****	6	0.88	0.88
1450.0	49.03	35.70	5.00	5.00	4	0.88	0.88

3135.60

Roadway Min El = 3138.7

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB
 SECID=I-APP AT DISTANCE= 5372

X-SECTION PROPERTIES

I-APP
 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	6639	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: PART 2 OF 2
 SECID=I-APP AT DISTANCE= 5372

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-1

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	253.23
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

14

ROCKY KNOB

CULVERT H-1

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

US	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	86	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	179255	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 KNDB

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	1109.08
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
300.0	38.76	37.15	4.59	4.15	3	0.96	0.97
300.0	40.71	39.70	6.50	6.50	4	0.87	0.87
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	4	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

$h_u = 4.15$ $h_u/h_c > 1$
 $h_c = 3.30$
 Type 3 flow proved

*** INPUT CARD PRINTOUT ***

	1	2	3	4	5	6	7	8
1	1	ROCKY KNOR	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	J+0.1	0 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.	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 31397	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	

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
SECID=J AT DISTANCE= 5539

FLOOD PROFILES

J-K
PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	RFW	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	-24	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
SECID=J+0.1 AT DISTANCE= 5550

FLOOD PROFILES

J-K
PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	RFW	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	35676	1.26	257	261	3	260	3322
3142.0	614	49648	1.22	277	281	-10	266	4699
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 KNOR FLOOD PROFILES J-K
 SECID=K-2.7 AT DISTANCE= 5666 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	RFW	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	9	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	44695	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 KNOR FLOOD PROFILES J-K
 SECID=K-1FT AT DISTANCE= 5782 PART 1 OF 2

WS	A	K	ALPHA	B	P	LEW	RFW	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	41	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 KNOR 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 KNOR 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	9503
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 KNOR FLOOD PROFILES J-K
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

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

K-2.7; KH/KD < 0.7 OR > 1.4

ALERTED USER

WATER-SURFACE PROFILE FOR: ROCKY KNOR 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. / 3138.90	6941. / 2.92	1.09 / 0.29	112. /	161.	*IS*
J+0.1	AT	5550 / 3138.76	11 / 0.16	300. / 0.02	98. / 3138.92	6608. / 3.06	1.07 / 0.30	117. / -0.020	161.	*XS*
K-2.7	AT	5666 / 3139.36	116 / 0.26	300. / 0.64	91. / 3139.62	2466. / 3.31	1.51 / 0.69	47. / 0.009	208.	*XS*
K-IFT	AT	5782 / 3141.07	116 / 0.25	300. / 1.69	92. / 3141.32	2506. / 3.27	1.50 / 0.68	47. / 0.010	208.	*XS*
K	AT	5850 / 3142.06	68 / 0.26	300. / 0.99	90. / 3142.32	2456. / 3.33	1.51 / 0.69	47. / 0.001	208.	*XS*

END OF THIS PROFILE

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

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

ALERTED USER

: WS = 3141.74 & FR = 2.63:

K : KU/KD < 0.7 OR > 1.4

USED HIGHER WS

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			*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			*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			*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			*XS*

END OF THIS PROFILE

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

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

K-LET: KU/KD < 0.7 OR > 1.4

K ; FRDN FAILURE

ALERTED USER

WS = 3141.85 & FR = 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	FM	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-1RT: KU/KD < 0.7 OR > 1.4

ALERTED USER

K ; KU/KD < 0.7 OR > 1.4

ALERTED USER

WATER-SURFACE PROFILE FOR: ROCKY KNOR FLOOD PROFILES J-K
 PAGE 1 OF 1, PROFILE NUMBER 4, UPSTREAM COMPUTATIONS

SECTION	AT	WS ELEV	HV	HF	HE	AREA	CONVEYANCE	ALPHA	LEW	REW	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

*** INPUT CARD PRINTOUT ***

	1	2	3	4	5	6	7	8
.....	0	0	0	0	0	0	0	0
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	48 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	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	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	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			

INPUT SUMMARY FOR: ROCKY KNOB 100-YEAR FLOODWAY 4-0

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-0
 SECID=A AT DISTANCE= 3000 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	OC
3111.0	8	198	1.00	8	9	49	57	40
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	135	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-0
 SECID=B AT DISTANCE= 3440 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REW	OC
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	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	6385
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	138	119
3124.5	57	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 ***

	1	2	3	4	5	6	7	8
.....	5	0	5	0	5	0	5	0
7	10000			1				
8	10001			1				

*** INPUT CARD PRINTOUT ***

	1	2	3	4	5	6	7	8
9 10005	40	VHD 100	48	70	311485			
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			

CROSS-SECTION PROPERTIES FOR: ROCKY KNOR 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	RFW	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	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 KNOR 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	RFW	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

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	R	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	2558	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	2921

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	R	P	LEW	REW	QC
3122.0	0	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	62	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	4574
3129.5	389	35509	1.01	68	83	70	138	5250
3129.8	410	38483	1.01	68	84	70	138	5667

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

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=====
SECID AT DISTANCE/ LENGTH/DISCHARGE/ AREA /CONVEYANCE/ ALPHA/ LEW / REW
WS-ELEV/ HV / HF / HE / EG / V / FN / ACC *IO#
=====
A AT 3000 / 0 / 960. / 169. / 9794. / 1.00 / 48. / 101.
3115.85 / 0.50 / / 3116.35 / 5.68 / 0.49 / *IS#
-----
B AT 3440 / 440 / 960. / 155. / 10040. / 1.01 / 50. / 95.
3119.94 / 0.60 / 4.12 / 0.05 / 3120.54 / 6.20 / 0.49 / 0.014 *XS#
-----
C AT 3790 / 350 / 960. / 145. / 9405. / 1.07 / 80. / 125.
3123.29 / 0.73 / 3.42 / 0.07 / 3124.02 / 6.63 / 0.62 / 0.000 *XS#
-----
D AT 4150 / 360 / 960. / 199. / 11599. / 1.02 / 70. / 138.
3126.70 / 0.37 / 3.04 / 0.0 / 3127.07 / 4.93 / 0.55 / 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

SECID	CARD 3 SEQUENCE	FW TYPE	ENCROACHMENT OPTION	ENCROACHMENT		SURCHARGE		CHANNEL WIDTH	
				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 ***

	1	2	3	4	5	6	7	8
5	0	5	0	5	0	5	0	5
1	1	ROCKY KNOB	100-YEAR FLOODWAY	E-6	3	1	02	05 12
2	2	313042						
3	100	F	1 16	3 3125	4267	99	99	
4	101		960					
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	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				

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 KNOR 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	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	68788	1.18	225	230	0	225	8299

CROSS-SECTION PROPERTIES FOR: ROCKY KNOR 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	53	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
 SECID=6 AT DISTANCE= 5175

100-YEAR FLOODWAY E-G
 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	RFW	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	119	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.....5.....	0.....5.....
9 10005	100 VHD	100	68	100	312942			
9 10006	110 HOR	100	60	154	313149			
9 10007	120 HOR	100	9	35	313502			
9 10008	END			100-YEAR	DISCHARGE			

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

WS	A	K	ALPHA	B	P	LEW	RFW	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 KNOR 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	RFW	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	36	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	396	34563	1.00	74	84	80	154	5080

CROSS-SECTION PROPERTIES FOR: ROCKY KNOS 100-YEAR FLOODWAY E-6
 SECID=6 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	82	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-6
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

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	DISCHARGE	AREA	CONVEYANCE	ALPHA	LEW	REW	WS ELEV	HV	HF	HE	EG	V	FN	AGC	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	0.015							*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 Use 100 Yr Backwater

END OF THIS PROFILE

SUMMARY OF ENCROACHMENTS FOR: ROCKY KNOB 100-YEAR FLOODWAY E-6
 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	SEQUENCE	TYPE	OPTION	ENCROACHMENT		SURCHARGE		CHANNEL WIDTH	
				LEFT	RIGHT	IDEAL	ACTUAL	NATURAL	FLOODWAY
E	100	1	VHD	CONS	YES	1.00	1.00	*****	32
F	110	1	HOR	YES	YES	*****	0.93	*****	74'
B	120	0	HOR	YES	YES	*****	0.66	*****	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-6	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	2	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	6	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
 SECID=F AT DISTANCE= 4720

100-YEAR FLOODWAY PART 1 OF 1 F-G

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
3132.0	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
 SECID=G AT DISTANCE= 5175

100-YEAR FLOODWAY PART 1 OF 1 F-G

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

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

3

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB
 SECID=F AT DISTANCE= 4720 100-YEAR FLOODWAY F-G
 *** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE 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	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
 SECID=G AT DISTANCE= 5175 100-YEAR FLOODWAY F-G
 *** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE 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	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-6
PROFILE NUMBER 1, UPSTREAM COMPUTATIONS

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

6 ; KU/KD < 0.7 OR > 1.4 ; ALERTED USER

WATER-SURFACE PROFILE FOR: ROCKY KNOB 100-YEAR FLOODWAY F-6
 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*
F	AT	4720	0	880.	281.	19703.	1.00	80.	154.	3132.42	0.15			3132.57	3.14	0.30		IS*
G	AT	5175	455	880.	134.	5766.	1.19	9.	86.	3135.20	0.80	3.10	0.32	3136.00	6.58	0.75	0.005	XS*

END OF THIS PROFILE

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	58595	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	179255	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	37.27
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
300.0	38.76	37.15	4.59	4.15	3	0.96	0.97
300.0	40.71	39.70	6.50	6.50	4	0.87	0.87
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	4	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

$h_u = 4.15$ $h_u/h_c > 1$
 $h_c = 3.30$
 Type 3 flow proved

5.5

*** INPUT CARD PRINTOUT ***

5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0

1	2	3	4	5	6	7	8
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	J+0.1	0 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		

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

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	RFW	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	RFW	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	4699
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	RFW	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	205	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	44695	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	RFW	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	3871
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 KNOR 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 KNOR 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

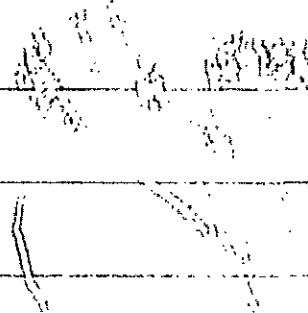
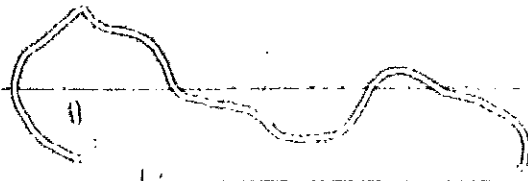
~~K-2.7; KU/KD < 0.7 OR > 1.4~~

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. / 3138.90	6941. / 2.92	1.00 / 0.29	112. /	161.	*IS*
J+0.1	AT	5550 / 3138.76	11 / 0.16	300. / 0.02	98. / 0.01 / 3138.92	6608. / 3.06	1.07 / 0.30	117. / -0.020	161.	*XS*
K-2.7	AT	5666 / 3139.36	116 / 0.26	300. / 0.64	91. / 0.05 / 3139.62	2466. / 3.21	1.51 / 0.69	47. / 0.009	208.	*XS*
K-1FT	AT	5782 / 3141.07	116 / 0.25	300. / 1.69	92. / 0.0 / 3141.32	2506. / 3.27	1.50 / 0.68	47. / 0.010	208.	*XS*
K	AT	5850 / 3142.06	68 / 0.26	300. / 0.99	90. / 0.01 / 3142.32	2456. / 3.33	1.51 / 0.69	47. / 0.001	208.	*XS*

END OF THIS PROFILE



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

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

ALERTED USER

; WS = 3141.74 & FR = 2.63;

K ; KU/KD < 0.7 OR > 1.4

USED HIGHER WS

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-1FT; KU/KD < 0.7 OR > 1.4

K ; FRDN FAILURE

ALERTED USER

; WS = 3141.85 & FR = 2.60;

K ; KU/KD < 0.7 OR > 1.4

USED HIGHER WS

ALERTED USER

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

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

END OF THIS PROFILE

*** INPUT CARD PRINTOUT ***

	1	2	3	4	5	6	7	8
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	48 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			
7	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	50 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 31254	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 31294				
6	77	1	2 045 045	5 6 060 050	1 2 045 045			

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	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	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	6385
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	28	1019	1.11	45	48	88	139	119
3124.5	57	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 ***

	1	2	3	4	5	6	7	8
9 10005	40	VHD	100	0	48	70	311485	
9 10006	50	VHD	100	0	50	69	311895	
9 10007	60	HOR	100	0	80	125	312252	
9 10008	70	HOR	100	0	70	138	312593	
9 10009	END 100-YEAR DISCHARGE							

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	RFW	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	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	1839
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	RFW	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	721	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

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

WS	A	K	ALPHA	R	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	2558	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	1569
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 KNOR 100-YEAR FLOODWAY A-D
 SECID=D AT DISTANCE= 4150 PART 1 OF 1
 *** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	R	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	23	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

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

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

SECID	SEQUENCE	TYPE	FW OPTION	ENCROACHMENT		SURCHARGE		CHANNEL WIDTH	
				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 ***

	1	2	3	4	5	6	7	8
	5	0	5	0	5	0	5	0
1	1	ROCKY KNOB	100-YEAR FLOODWAY	E-6	3	1	02	05 12
2	2	313042						
3	100	F	1 16	3 3125	4267	99	99	
4	101	960						
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	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	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 KNOS 100-YEAR FLOODWAY E-6

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	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	510	45997	1.22	212	216	0	212	5314
3132.5	717	56876	1.21	218	223	0	218	6709
3133.0	828	68788	1.15	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	1.19	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
 SECID=6 AT DISTANCE= 5175

100-YEAR FLOODWAY E-G
 PART 1 OF 1

WS	A	K	ALPHA	B	P	LEW	REN	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	84	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
9 10005	100	VHD	100	68	100	312942		
9 10006	110	HQR	100	80	154	313149		
9 10007	120	HQR	100	9	35	313502		
9 10008		END					100-YEAR DISCHARGE	

CROSS-SECTION PROPERTIES FOR: ROCKY KNOB 100-YEAR FLOODWAY E-6
 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-6
 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	3931	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-6
 SECID=6 AT DISTANCE= 5175 PART 1 OF 1
 *** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

WS	A	K	ALPHA	B	P	LEW	RFW	QC
3132.0	19	569	1.00	12	14	12	24	133
3132.5	25	791	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	3052	1.00	25	29	10	35	647
3135.0	82	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

PAGE 1 OF PROFILE NOTES FOR: ROCKY KNOB 100-YEAR FLOODWAY E-6
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

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 USE 100YR Boundary

END OF THIS PROFILE

SUMMARY OF ENCROACHMENTS FOR: ROCKY KNOB 100-YEAR FLOODWAY E-6
 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		SURCHARGE		CHANNEL WIDTH	
				LEFT	RIGHT	IDEAL	ACTUAL	NATURAL	FLOODWAY
E	100	1	VHD	CONS	YES	1.00	1.00	*****	32
F	110	1	HOR	YES	YES	*****	0.93	*****	74
G	120	0	HOR	YES	YES	*****	0.46	*****	26

*** INPUT CARD PRINTOUT ***

.....5.....0.....5.....0.....5.....0.....5.....0.....5.....0.....5.....0.....5.....0.....5.....0.....5.....0.....5.....0.....5.....0.....

1	1	ROCKY KNOB		100-YEAR FLOODWAY		F-6		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	31335	10	1	31318	50	1	31290	100	1	31292	126	2	31289
5	113		129	2	31252	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-6

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
 SECID=F AT DISTANCE= 4720 100-YEAR FLOODWAY F-G
 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
 SECID=G AT DISTANCE= 5175 100-YEAR FLOODWAY F-G
 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 ***

.....5.....¹0.....²5.....³0.....⁴5.....⁵0.....⁶5.....⁷0.....⁸5.....0

7 10000
8 10001

1
1

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

100-YEAR FLOODWAY F-6
 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	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
 SECID=G AT DISTANCE= 5175
 *** FLOODWAY ANALYSIS *** 100-YEAR DISCHARGE

100-YEAR FLOODWAY F-6
 PART 1 OF 1

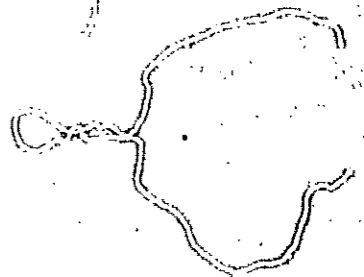
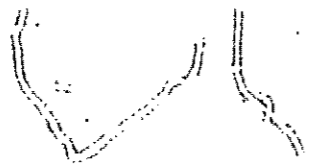
WS	A	K	ALPHA	B	P	LEW	REW	QC
3132.0	19	569	1.00	12	14	12	24	133
3132.5	25	781	1.00	16	18	12	28	180
3133.0	34	1157	1.00	19	22	11	31	260
3133.5	45	1652	1.00	22	25	11	33	362
3134.0	56	2258	1.00	25	28	10	35	484
3134.5	82	3264	1.20	69	72	10	79	460
3135.0	118	4905	1.22	77	80	9	86	750
3135.5	157	7180	1.13	77	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-6
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*
F	AT	4720	0	880.	281.	19703.	1.00	80.	154.
3132.42		0.15			3132.57	3.14	0.30		*IS*
G	AT	5175	455	880.	134.	5766.	1.19	9.	86.
3135.20		0.80	3.10	0.32	3136.00	6.58	0.75	0.005	*XS*

END OF THIS PROFILE

15

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		SURCHARGE		CHANNEL WIDTH	
				LEFT	RIGHT	IDEAL	ACTUAL	NATURAL	FLOODWAY
F	110	1	HOR	YES	YES	*****	0.93	*****	74
G	120	0	HOR	YES	YES	*****	0.18	*****	77

