

Rosgen Channel Typing
Project No. 184

September 21, 1999

Prepared for:

El Dorado Irrigation District
Hydroelectric Department
Pollock Pines California

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Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		0	0.00	100.00				0	0.00	100.00	4096
L Boulder	2048	11	0	0.00		0	0.00	100.00				0	0.00	100.00	2048
M Boulder	1024	10	1	0.81	100.00	0	0.00	100.00	1	1.00	100.00	2	0.54	100.00	1024
S Boulder	512	9	1	0.81	99.19	0	0.00	100.00	4	4.00	99.00	5	1.36	99.46	512
L Cobble	256	8	16	12.90	98.39	8	5.52	100.00	6	6.00	95.00	30	8.13	98.10	256
S Cobble	128	7	22	17.74	85.48	15	10.34	94.48	8	8.00	89.00	45	12.20	89.97	128
VC Gravel	64	6	20	16.13	67.74	18	12.41	84.14	11	11.00	81.00	49	13.28	77.78	64
C Gravel	32	5	15	12.10	51.61	26	17.93	71.72	12	12.00	70.00	53	14.36	64.50	32
M Gravel	16	4	17	13.71	39.52	23	15.86	53.79	13	13.00	58.00	53	14.36	50.14	16
F Gravel	8	3	9	7.26	25.81	15	10.34	37.93	7	7.00	45.00	31	8.40	35.77	8
VF Gravel	4	2	3	2.42	18.55	8	5.52	27.59	8	8.00	38.00	19	5.15	27.37	4
VC Sand	2	1	7	5.65	16.13	9	6.21	22.07	0	0.00	30.00	16	4.34	22.22	2
Sand	1		13	10.48	10.48	23	15.86	15.86	30	30.00	30.00	66	17.89	17.89	1
Silt/clay			0	0.00		0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			124	100		145	100.00		100	100.00		369	100.00		

China Flat Rosgen

Rosgen classification for China Flat reach, Silver Fork SFAR							
	XS 1	Dist	XS 2	Dist	XS 3	Reach	
Bankfull height elevation	83.9	316	81.41	526.00	80.21		
Slope		0.00788		0.002281		0.004382	
Max Bankfull Depth							
	5.03		4.87		5.84	5.25	
Avg Bankfull depth							
	2.93		2.51		3.79	3.08	
Weighted mean bed elevation							
	80.97		78.90		76.42		
Bed slope							
		0.00655		0.00471		0.005404	
Bankfull width							
	103.0		153		84	113.3	
Bankfull W/D ratio							
	35.2		61.0		22.2	36.8	
Elev @ 2x Bankfull depth							
	88.92		86.28		86.05		
Width @ 2x Bankfull depth							
	154.0		175		160	163.0	
Ratio of 2x width / bankfull width							
						1.44	
d50	28		15		18	20	
Entrenchment							
W/D						1.44	
Slope						36.8	
						0.005	
Rosgen classification							B4c

China Flat XS 1

Silver Fork SFAR @ China Flat XS 1											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		5.38			105.38	100.00					
BM2				13.83		91.55			Bankfull height elevation		
BM2		0.31			91.86	91.55					
RBXS1	104		0.74			91.12			83.90		
0.0	104		7.97			83.89	0.01	QbkfIR	Max Bankfull Depth		
-6.0	110		5.31			86.55			5.03		
-10.0	114		2.37			89.49			Avg Bankfull depth		
6.0	98		10.92			80.94	2.96		2.93		
BM3				6.47		85.39			Bankfull width		
BM3		0.13			85.52	85.39			103.0		
1.0	103		2.23			83.29	0.61		Bankfull W/D ratio		
6.3	98		3.52			82.00	1.90	REW			
6.5	98		4.47			81.05	2.85		35.2		
8.0	96		6.19			79.33	4.57		Elev @ 2x Bankfull depth		
10.5	94		6.60			78.92	4.98		88.92		
14.0	90		6.61			78.91	4.99		Width @ 2x Bankfull depth		
17.0	87		6.65			78.87	5.03	Thalweg	154.0		
20.4	84		6.04			79.48	4.42				
24.0	80		5.87			79.65	4.25	Submgd Cobble bar			
28.5	76		5.63			79.89	4.01	Submgd Cobble bar			
32.7	71		5.52			80.00	3.90	Submgd Cobble bar			
35.0	69		5.48			80.04	3.86	Submgd Cobble bar			
37.0	67		5.36			80.16	3.74	Submgd Cobble bar			
39.0	65		5.18			80.34	3.56	Submgd Cobble bar			
41.0	63		5.33			80.19	3.71	Submgd Cobble bar			
43.5	61		5.45			80.07	3.83	Submgd Cobble bar			
45.0	59		5.40			80.12	3.78	Submgd Cobble bar			
48.0	56		5.36			80.16	3.74	Submgd Cobble bar			
50.0	54		5.34			80.18	3.72	Submgd Cobble bar			
52.3	52		5.38			80.14	3.76	Submgd Cobble bar			
55.5	49		5.21			80.31	3.59	Submgd Cobble bar			
57.5	47		5.42			80.10	3.80	Submgd Cobble bar			
59.0	45		5.40			80.12	3.78	Submgd Cobble bar			
61.5	43		5.63			79.89	4.01	Submgd Cobble bar			
63.0	41		5.32			80.20	3.70	Submgd Cobble bar			

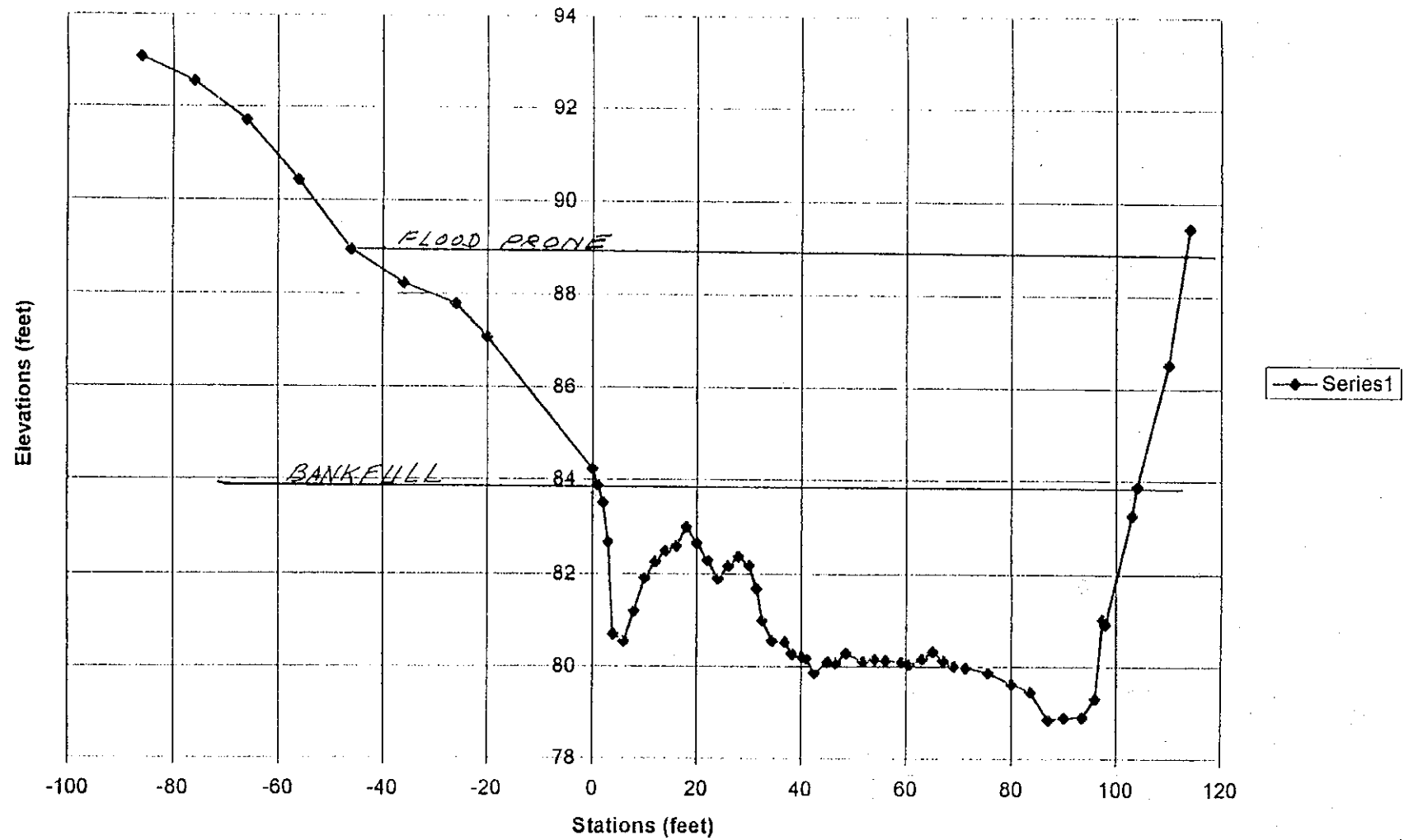
China Flat XS 1

Silver Fork SFAR @ China Flat XS 1									
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes
64.0	40		5.27			80.25	3.65	Submgd Cobble bar	
65.7	38		5.22			80.30	3.60	Submgd Cobble bar	
67.2	37		4.97			80.55	3.35	Submgd Cobble bar	
69.5	35		4.94			80.58	3.32		
71.5	33		4.50			81.02	2.88	LEW	
72.5	32		3.82			81.70	2.20		
74.0	30		3.31			82.21	1.69		
76.0	28		3.13			82.39	1.51		
78.0	26		3.33			82.19	1.71		
80.0	24		3.60			81.92	1.98		
82.0	22		3.20			82.32	1.58		
84.0	20		2.84			82.68	1.22		
86.0	18		2.50			83.02	0.88		
88.0	16		2.91			82.61	1.29		
90.0	14		3.00			82.52	1.38		
92.0	12		3.24			82.28	1.62		
94.0	10		3.59			81.93	1.97		
96.0	8		4.30			81.22	2.68		
98.0	6		4.95			80.57	3.33		
100.0	4		4.80			80.72	3.18		
101.0	3		2.82			82.70	1.20		
102.0	2		1.99			83.53	0.37		
103.0	1					83.90	0.00	Qbkfil	
104.0	0		1.28			84.24			
BM3				0.13	85.52	85.39			
BM3		8.21			93.60	85.39			
124	-20		6.52			87.08			
130	-26		5.80			87.80			
140	-36		5.35			88.25			
150	-46		4.63			88.97			
160	-56		3.16			90.44			
170	-66		1.88			91.72			
180	-76		1.02			92.58			
190	-86		0.49			93.11			
RBXS1				2.48		91.12			

China Flat XS2

Silver Fork SFAR @ China Flat XS 2											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
180.0	28		7.27			86.13					
182.0	26		7.03			86.37					
184.0	24		6.93			86.47					
186.0	22		6.81			86.59					
188.0	20		6.62			86.78					
190.0	18		6.41			86.99					
192	16		6.13			87.27					
194	14		5.85			87.55					
196	12		5.48			87.92					
198	10		5.23			88.17					
200	8		5.02			88.38					
202	6		4.83			88.57					
204	4		4.63			88.77					
206	2		4.53			88.87					
207.6	0.0		4.24			89.16					
207.6	0.0		1.54			91.86					
LBXS2/BM7				1.44		91.96					
230	-22		2.54			90.86					
BM7		1.10			93.06	91.96					
BM5				3.48		89.58					

Silver Fork @ China Flat XS1



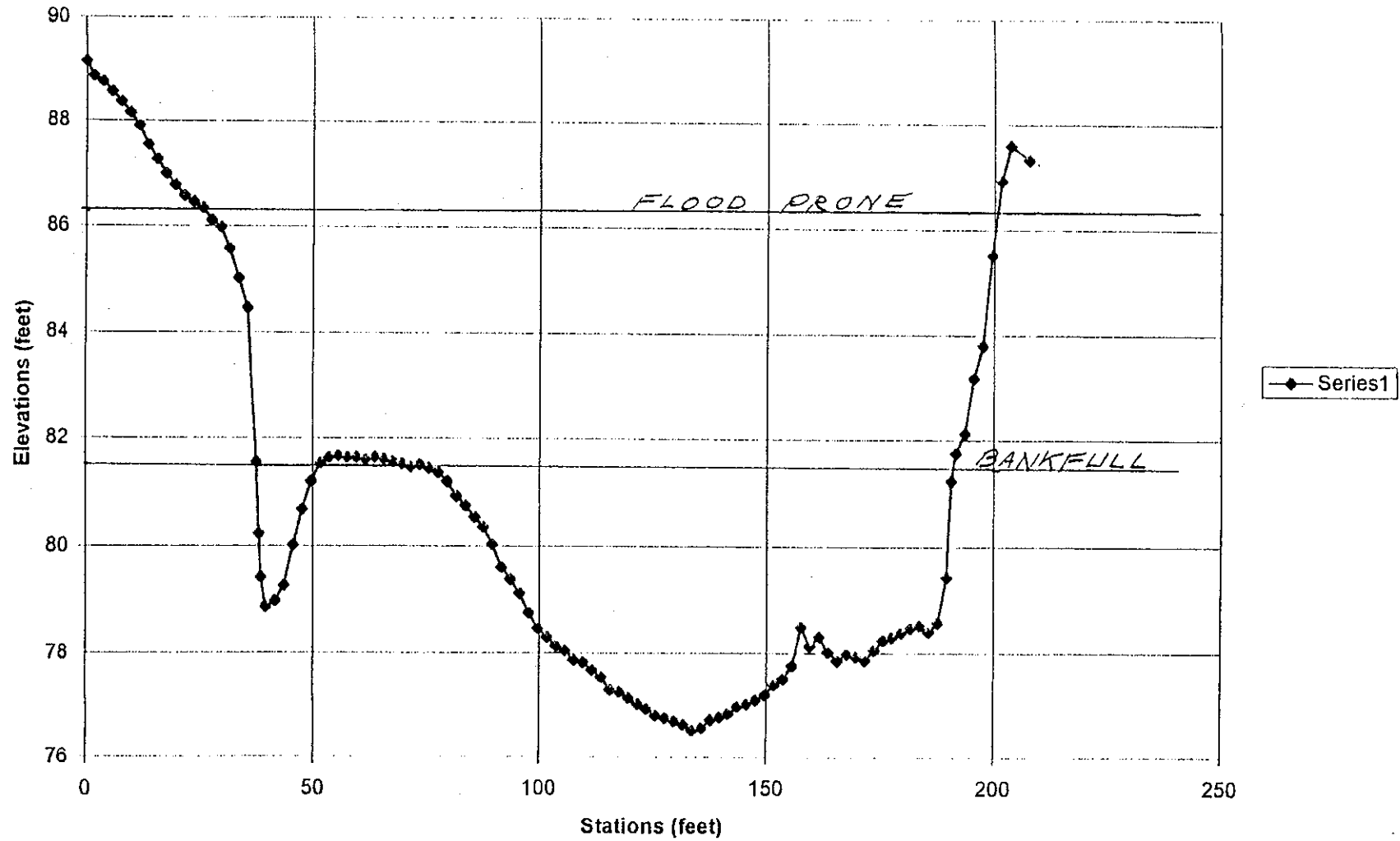
China Flat XS2

Silver Fork SFAR @ China Flat XS 2											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		2.47			102.47	100.00			Bankfull height elevation		
BM5				12.90		89.57					
BM5		3.83			93.40	89.57					
RBXS2	208		3.83			89.57			81.41		
0.0	208		6.06			87.34			Max Bankfull Depth		
4.0	204		5.79			87.61			4.87		
6.0	202		6.46			86.94			Avg Bankfull depth		
8.0	200		7.87			85.53			2.51		
10.0	198		9.59			83.81			Bankfull width		
12.0	196		10.21			83.19			153.0		
14.0	194		11.25			82.15			Bankfull W/D ratio		
16.0	192		11.63			81.77					
17.0	191		12.15			81.25		QbkflR	61.1		
18.0	190		13.95			79.45	1.96		Elev @ 2x Bankfull depth		
20.0	188		14.80			78.60	2.81	REW	86.28		
22.0	186		14.97			78.43	2.98		Width @ 2x Bankfull depth		
24.0	184		14.88			78.54	2.87	Thalweg	175.0		
26.0	182		14.90			78.50	2.91				
28.0	180		14.99			78.41	3.00	Submgd Cobble bar			
30.0	178		15.08			78.32	3.09	Submgd Cobble bar			
32.0	176		15.14			78.26	3.15	Submgd Cobble bar			
34.0	174		15.32			78.08	3.33	Submgd Cobble bar			
36.0	172		15.51			77.89	3.52	Submgd Cobble bar			
38.0	170		15.44			77.96	3.45	Submgd Cobble bar			
40.0	168		15.40			78.00	3.41	Submgd Cobble bar			
42.0	166		15.52			77.88	3.53	Submgd Cobble bar			
44.0	164		15.36			78.04	3.37	Submgd Cobble bar			
46.0	162		15.07			78.33	3.08	Submgd Cobble bar			
48.0	160		15.24			78.16	3.25	Submgd Cobble bar			
50.0	158		14.89			78.51	2.90	Man-made summer dam			
52.0	156		15.62			77.78	3.63				
54.0	154		15.87			77.53	3.88				
56.0	152		15.98			77.42	3.99	Sand			
58.0	150		16.18			77.22	4.19	Sand			
60.0	148		16.27			77.13	4.28	Sand			
62.0	146		16.35			77.05	4.36	Sand			
64.0	144		16.40			77.00	4.41	Sand			
66.0	142		16.53			76.87	4.54	Sand			
68.0	140		16.60			76.80	4.61	Sand			
70.0	138		16.66			76.74	4.67	Sand			
72.0	136		16.81			76.59	4.82	Sand			
74.0	134		16.86			76.54	4.87	Thalweg			
76.0	132		16.74			76.66	4.75				
78.0	130		16.68			76.72	4.69				
80.0	128		16.62			76.78	4.63				
82.0	126		16.57			76.83	4.58				
84.0	124		16.45			76.95	4.46				
86.0	122		16.35			77.05	4.36				

China Flat XS2

Silver Fork SFAR @ China Flat XS 2										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
88.0	120		16.23			77.17	4.24			
90.0	118		16.12			77.28	4.13			
92.0	116		16.08			77.32	4.09			
94.0	114		15.84			77.56	3.85			
96.0	112		15.70			77.70	3.71			
98.0	110		15.56			77.84	3.57			
100.0	108		15.51			77.89	3.52			
102.0	106		15.33			78.07	3.34			
104.0	104		15.24			78.16	3.25			
106.0	102		15.08			78.32	3.09			
108.0	100		14.91			78.49	2.92			
110.0	98		14.62			78.78	2.63			
112.0	96		14.26			79.14	2.27			
114.0	94		14			79.40	2.01	LEW		
116.0	92		13.78			79.62	1.79			
118.0	90		13.35			80.05	1.36			
120.0	88		13.03			80.37	1.04			
122.0	86		12.84			80.56	0.85			
124.0	84		12.63			80.77	0.64			
126.0	82		12.46			80.94	0.47			
128.0	80		12.19			81.21	0.20			
130.0	78		12.02			81.38	0.03			
132.0	76		11.95			81.45	-0.04			
134.0	74		11.88			81.52	-0.11			
136.0	72		11.92			81.48	-0.07			
138.0	70		11.86			81.54	-0.13			
140.0	68		11.82			81.58	-0.17			
142.0	66		11.77			81.63	-0.22			
144.0	64		11.74			81.68	-0.25			
146.0	62		11.78			81.62	-0.21			
148.0	60		11.74			81.66	-0.25			
150.0	58		11.74			81.66	-0.25			
152.0	56		11.72			81.68	-0.27			
154.0	54		11.74			81.66	-0.25			
156.0	52		11.85			81.55	-0.14			
158.0	50		12.19			81.21	0.20			
160.0	48		12.70			80.70	0.71			
162.0	46		13.36			80.04	1.37			
164.0	44		14.11			79.29	2.12			
166.0	42		14.39			79.01	2.40			
168.0	40		14.50			78.90	2.51			
169.0	39		13.96			79.44	1.97			
169.5	38		13.15			80.25	1.16			
170.0	38		11.83			81.57		Qbkfil		
172.0	36		8.93			84.47				
174.0	34		8.38			85.02				
176.0	32		7.81			85.59				
178.0	30		7.40			86.00				

Silver Fork @ China Flat XS2



China Flat XS3

Silver Fork SFAR @ China Flat XS 3										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
3M1		2.47			102.47	100.00			Bankfull height elevation	
BM5				12.90		89.57			80.21	
3M5		3.83			93.40	89.57			Max Bankfull Depth	
3M7			1.44			91.96			5.84	
BM8				3.18		90.22			Avg Bankfull depth	
BM8		3.99			94.21	90.22			3.79	
N.Val. Wall	170		2.03			92.18			Bankfull width	
RBXS3	110		3.53			90.68			84.0	
0.0	110		10.50			82.90			Bankfull W/D ratio	
2.0	108		10.45			82.95			22.2	
4.0	106		11.19			82.21			Elev @ 2x Bankfull depth	
6.0	104		11.82			81.58			86.05	
8.0	102		12.50			80.90			Width @ 2x Bankfull depth	
10.0	100		13.22			80.18	0.03	QbkflR	160.0	
11.0	99		13.46			79.94	0.27			
12.0	98		15.62			77.78	2.43			
14.0	96		16.71			76.69	3.52	REW		
16.0	94		18.31			75.09	5.12			
18.0	92		18.98			74.42	5.79			
20.0	90		19.03			74.37	5.84	Thalweg		
22.0	88		18.96			74.44	5.77			
24.0	86		18.32			75.08	5.13			
26.0	84		18.19			75.21	5.00			
28.0	82		18.04			75.36	4.85			
30.0	80		18.00			75.40	4.81			
32.0	78		17.89			75.51	4.70			
34.0	76		17.94			75.46	4.75			
36.0	74		17.92			75.48	4.73			
38.0	72		17.63			75.77	4.44			
40.0	70		17.34			76.06	4.15			
42.0	68		17.30			76.10	4.11			
44.0	66		17.23			76.17	4.04			
46.0	64		17.29			76.11	4.10			
48.0	62		17.54			75.86	4.35			
50.0	60		17.63			75.77	4.44			
52.0	58		17.70			75.70	4.51			
54.0	56		17.51			75.89	4.32			
56.0	54		17.36			76.04	4.17			
58.0	52		17.74			75.66	4.55			
60.0	50		17.75			75.65	4.56			
62.0	48		17.39			76.01	4.20			
64.0	46		17.40			76.00	4.21			
66.0	44		17.31			76.09	4.12			
68.0	42		17.22			76.18	4.03			
70.0	40		17.32			76.08	4.13			
72.0	38		17.30			76.10	4.11			
74.0	36		17.28			76.12	4.09			
76.0	34		16.95			76.45	3.76			

China Flat XS3

Silver Fork SFAR @ China Flat XS 3

Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
78.0	32		16.56			76.84	3.37	LEW			
80.0	30		16.54			76.86	3.35				
82.0	28		15.69			77.71	2.50				
84.0	26		14.64			78.76	1.45				
90.0	20		14.19			79.21	1.00				
92.0	18		13.68			79.72	0.49				
94.0	16		13.16			80.24	-0.03	Qbkfil			
96.0	14		12.41			80.99					
98.0	12		11.88			81.52					
100.0	10		11.18			82.22					
102.0	8		10.69			82.71					
104.0	6		10.01			83.39					
106.0	4		9.18			84.22					
108.0	2		8.15			85.25					
110.0	0		7.15			86.25					
195.0	-85		9.86			83.54		base of S.Valley Wall			
BM8		2.92			93.14	90.22					
BM7				1.18	93.14	91.96					
BM7		1.11			93.07	91.96					
BM5				3.50	93.07	89.57					

Silver Fork @ China Flat XS3

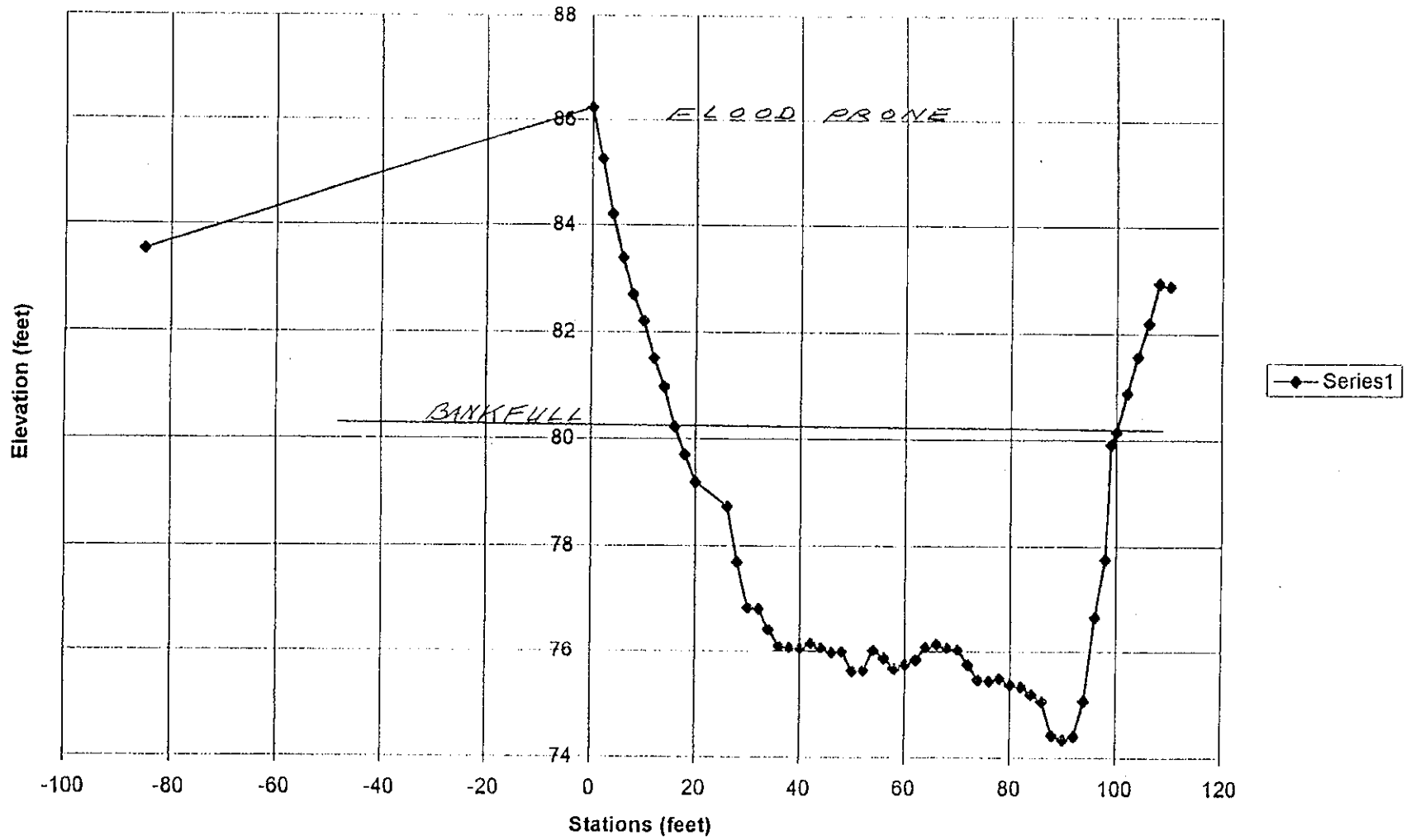
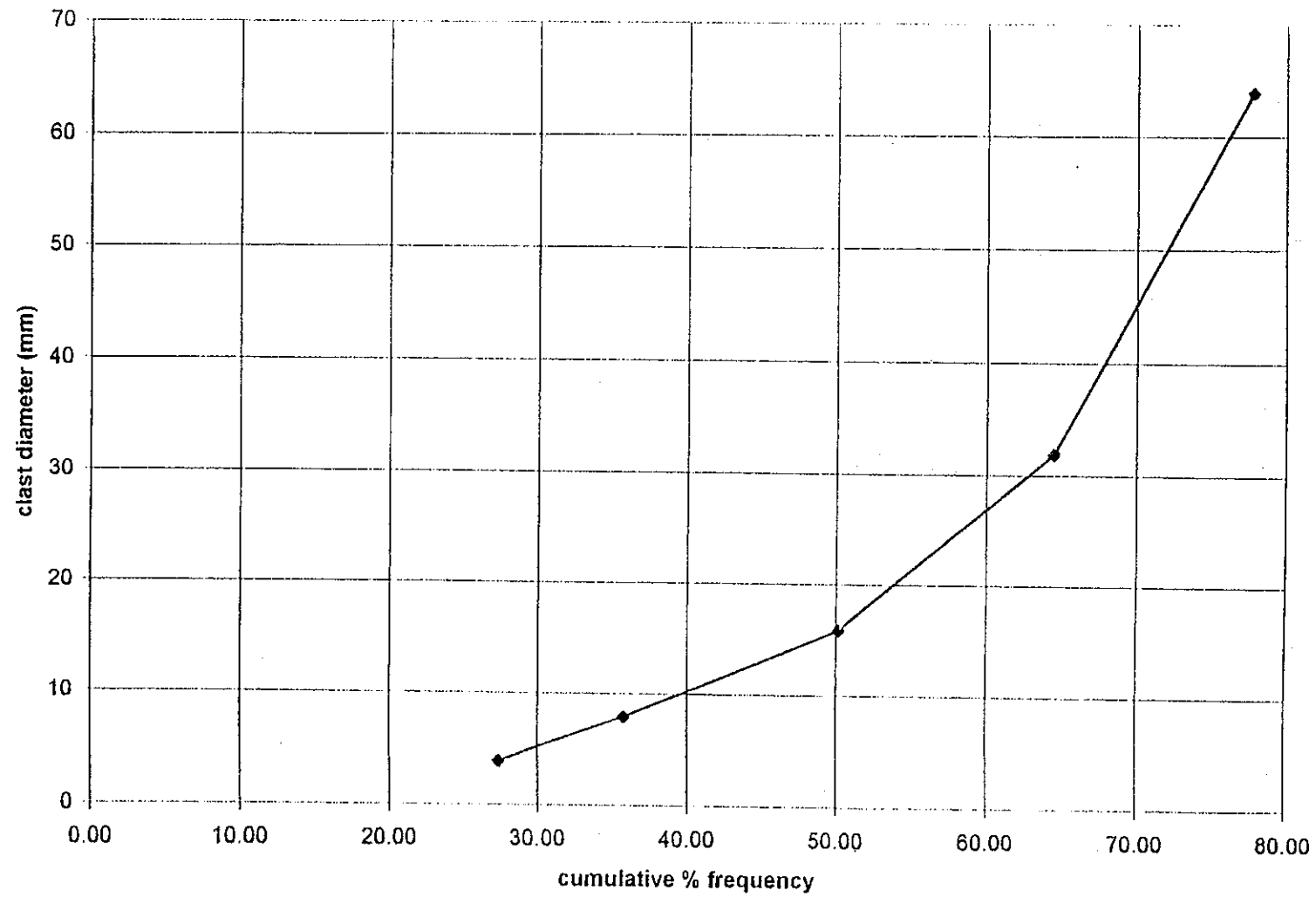
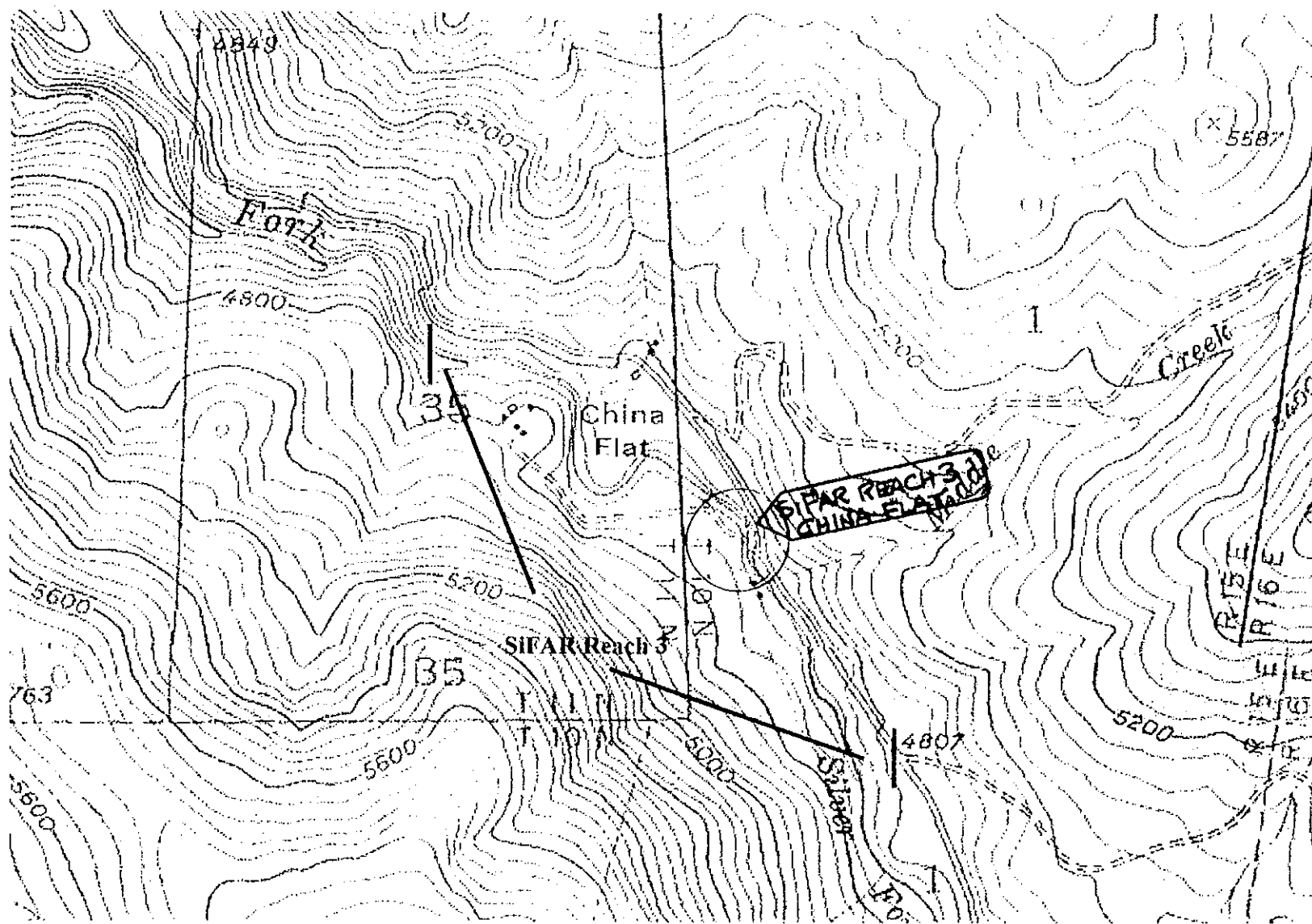


Chart4

Silver Fork @ China Flat



ROGGEN
SIFAR REACH 3 CHINA FLAT



TN * MN
15 1/2°

0 1/2 MILE
1000 0 1000 2000 3000 4000 FEET

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KYBURZ ROAD

Map 7
Silver Fk, CHINA FLAT

Forgot Rosgen

Rosgen classification for Forgotten Flat reach of Silver Fork SFAR							
	XS 1	Dist	XS 2	Dist	XS 3	Reach	
Bankfull height elevation	289.69	209	288.66	255.00	287.39		
Slope		0.004928		0.00498		0.004957	
Max Bankfull Depth							
	2.17		2.32		3.36	2.62	
Avg Bankfull depth							
	0.96		1.63		2.00	1.53	
Weighted mean bed elevation							
	288.73		287.03		285.39		
Bed slope		0.008134		0.006431		0.007198	
Bankfull width							
	44.0		43.5		30.3	39.3	
Bankfull W/D ratio							
	45.8		26.7		15.2	25.7	
Elev @ 2x Bankfull depth							
	291.86		290.67		290.57		
Width @ 2x Bankfull depth							
	51.5		56.5		61	56.3	
Ratio of 2x width / bankfull width							
						1.43	
d50	21		35		17	24	
Entrenchment							1.43
W/D							25.7
Slope							0.007
Rosgen classification							B4c

Forgot XS1

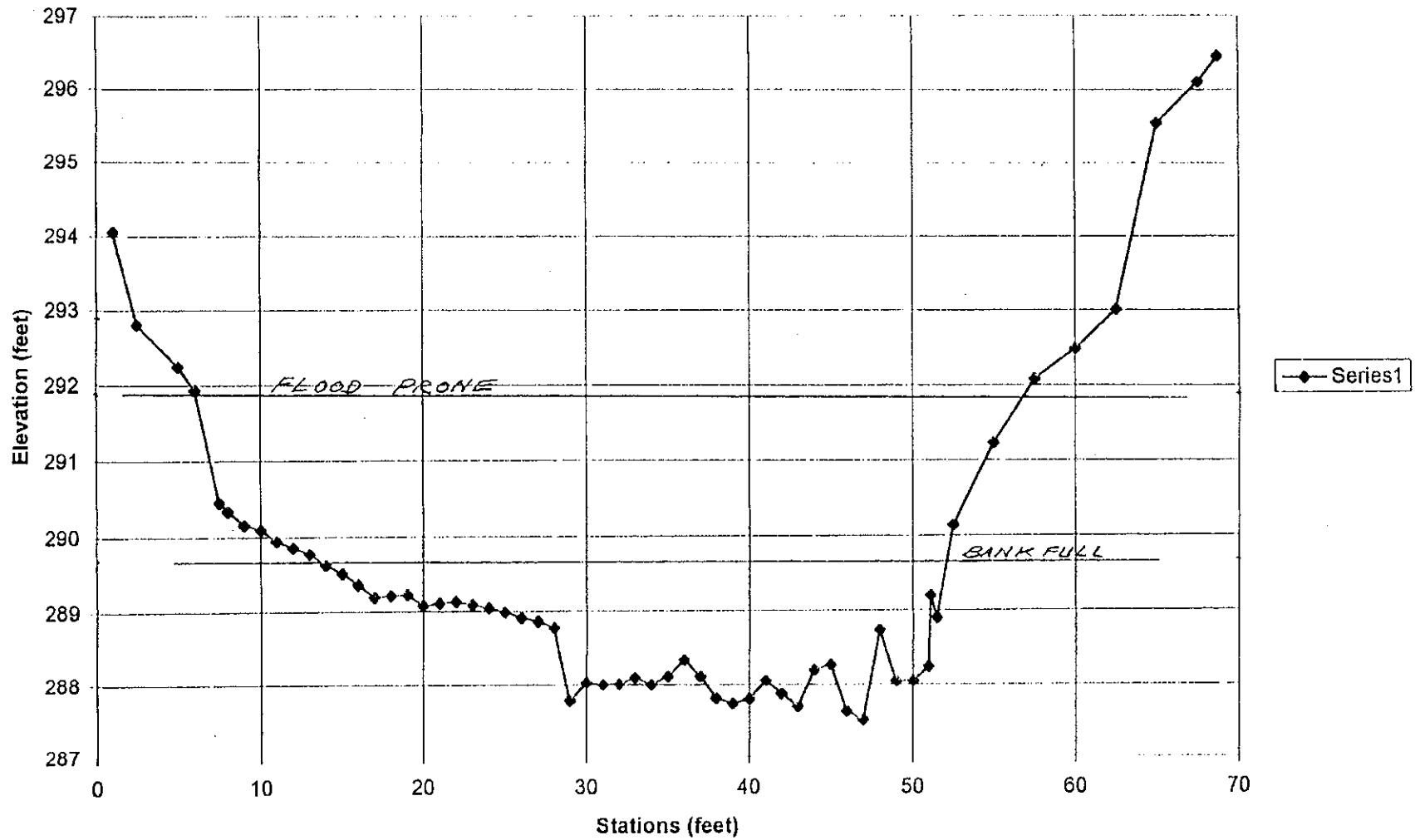
Silver Fork SFAR @ Forgotten Flat XS1										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		0.70			300.70	300.00				
LBXS1	0.0		6.24			294.46			Bankfull height elevation	
1.0	0.0		6.63			294.07			289.69	
2.5	1.5		7.88			292.82			Max Bankfull Depth	
5.0	4.0		8.45			292.25			2.17	
6.0	5.0		8.76			291.94			Avg Bankfull depth	
7.5	6.5		10.23			290.47	-0.78	Qbkf/L	0.96	
8.0	7.0		10.34			290.36	-0.67		Bankfull width	
9.0	8.0		10.53			290.17	-0.48		44.0	
10.0	9.0		10.59			290.11	-0.42		Bankfull W/D ratio	
11.0	10.0		10.75			289.95	-0.26		46.0	
12.0	11.0		10.84			289.86	-0.17		Elev @ 2x Bankfull depth	
13.0	12.0		10.92			289.78	-0.09		291.86	
14.0	13.0		11.07			289.63	0.06		Width @ 2x Bankfull depth	
15.0	14.0		11.19			289.51	0.18		51.5	
16.0	15.0		11.33			289.37	0.32			
17.0	16.0		11.50			289.20	0.49			
18.0	17.0		11.48			289.22	0.47			
19.0	18.0		11.46			289.24	0.45			
20.0	19.0		11.61			289.09	0.60			
21.0	20.0		11.58			289.12	0.57			
22.0	21.0		11.56			289.14	0.55			
23.0	22.0		11.60			289.10	0.59			
24.0	23.0		11.64			289.06	0.63			
25.0	24.0		11.70			289.00	0.69			
26.0	25.0		11.77			288.93	0.76			
27.0	26.0		11.82			288.88	0.81	LEW		
28.0	27.0		11.91			288.79	0.90			
29.0	28.0		12.91			287.79	1.90			
30.0	29.0		12.66			288.04	1.65			
31.0	30.0		12.69			288.01	1.68			
32.0	31.0		12.68			288.02	1.67			
33.0	32.0		12.59			288.11	1.58			
34.0	33.0		12.69			288.01	1.68			
35.0	34.0		12.58			288.12	1.57			
36.0	35.0		12.35			288.35	1.34			
37.0	36.0		12.58			288.12	1.57			
38.0	37.0		12.88			287.82	1.87			
39.0	38.0		12.95			287.75	1.94			
40.0	39.0		12.89			287.81	1.88			
41.0	40.0		12.63			288.07	1.62			
42.0	41.0		12.82			287.88	1.81			
43.0	42.0		12.99			287.71	1.98			
44.0	43.0		12.49			288.21	1.48			
45.0	44.0		12.42			288.28	1.41			
46.0	45.0		13.06			287.64	2.05			
47.0	46.0		13.18			287.52	2.17	Thalweg		
48.0	47.0		11.95			288.75	0.94			

Forgot XS1

Silver Fork SFAR @ Forgotten Flat XS1											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
49.0	48.0		12.64			288.06	1.63				
50.0	49.0		12.64			288.06	1.63				
51.0	50.0		12.45			288.25	1.44				
51.1	50.1		11.49			289.21	0.48	REW			
51.5	50.5		11.79			288.91	0.78	QbkfIR			
52.5	51.5		10.55			290.15					
55.0	54.0		9.46			291.24					
57.5	56.5		8.61			292.09					
60.0	59.0		8.20			292.50					
62.5	61.5		7.68			293.02					
65.0	64.0		5.14			295.56					
67.5	66.5		4.58			296.12					
68.7	67.7		4.22			296.48					
RBXS1	67.7		3.50			297.20					
BM1				0.7		300.00					

Chart1

Silver Fork @ Forgotten Flat XS1

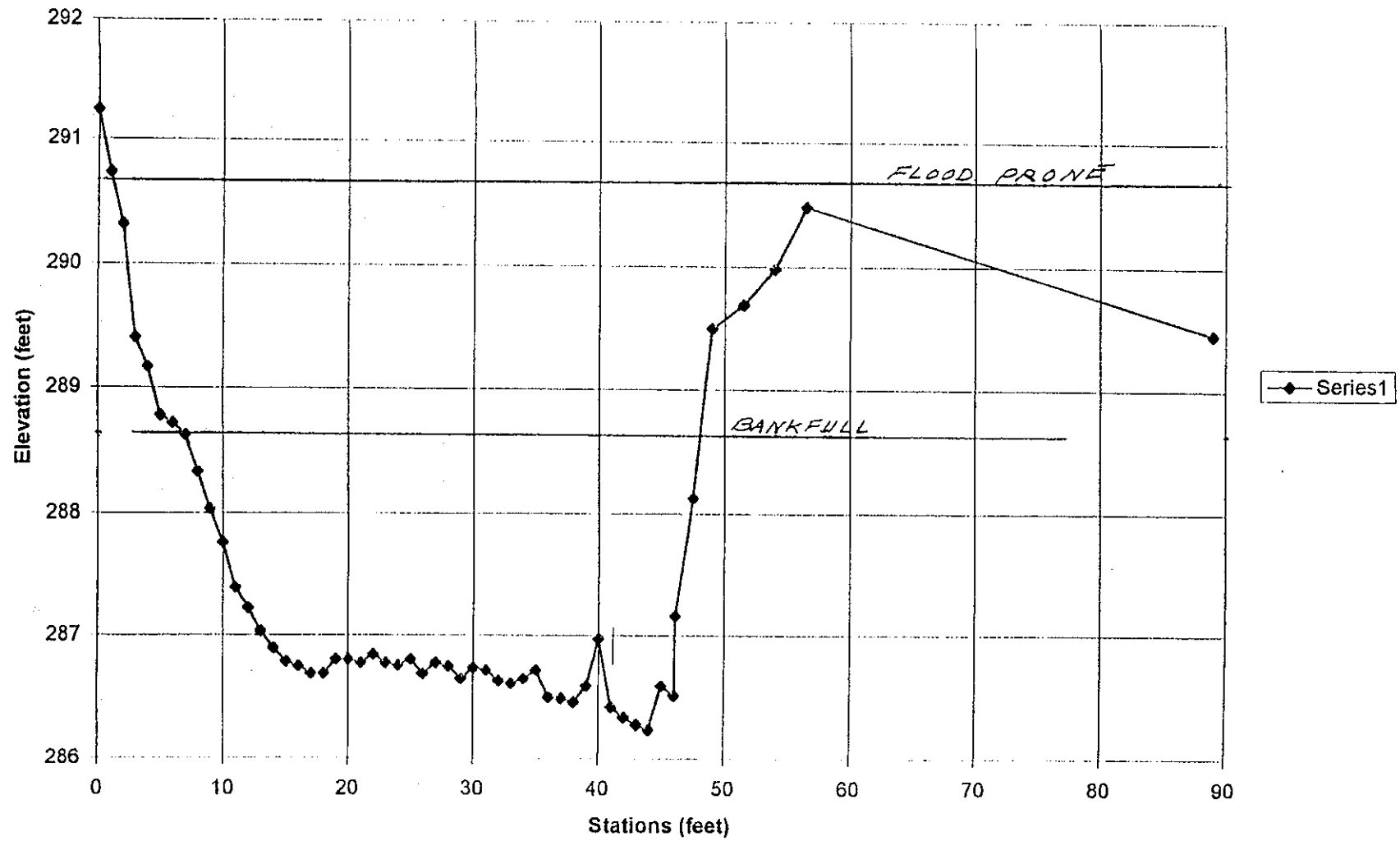


Silver Fork SFAR @ Forgotten Flat XS2										
Book	Adj.	Back	Intern.	Fore	Hght. of		Depth @		Rosgen	
Statio	Station	Sight	Sight	Sight	Inst.	Elevation	bankfull	Notes	notes	
BM1		0.70			300.70	300.00				
BM2				7.06		293.64			Bankfull height elevation	
BM2		4.03			297.67	293.64			288.66	
LBXS2	0.0		6.19			291.48			Max Bankfull Depth	
1.0	0.0		6.42			291.25			2.32	
2.0	1.0		6.93			290.74			Avg Bankfull depth	
3.0	2.0		7.34			290.33			1.63	
4.0	3.0		8.25			289.42			Bankfull width	
5.0	4.0		8.49			289.18	-0.52	QbkfL	43.5	
6.0	5.0		8.88			288.79	-0.13		Bankfull W/D ratio	
7.0	6.0		8.94			288.73	-0.07		26.7	
8.0	7.0		9.03			288.64	0.01		Elev @ 2x Bankfull depth	
9.0	8.0		9.33			288.34	0.31		290.97	
10.0	9.0		9.63			288.04	0.62		Width @ 2x Bankfull depth	
11.0	10.0		9.90			287.77	0.88		56.5	
12.0	11.0		10.27			287.40	1.26			
13.0	12.0		10.44			287.23	1.43			
14.0	13.0		10.63			287.04	1.62	LEW		
15.0	14.0		10.77			286.90	1.76			
16.0	15.0		10.88			286.79	1.87			
17.0	16.0		10.92			286.75	1.91			
18.0	17.0		10.98			286.69	1.97			
19.0	18.0		10.98			286.69	1.97			
20.0	19.0		10.86			286.81	1.85			
21.0	20.0		10.86			286.81	1.85			
22.0	21.0		10.89			286.78	1.88			
23.0	22.0		10.82			286.85	1.81	LEW		
24.0	23.0		10.89			286.78	1.88			
25.0	24.0		10.91			286.76	1.90			
26.0	25.0		10.86			286.81	1.85			
27.0	26.0		10.98			286.69	1.97			
28.0	27.0		10.89			286.78	1.88			
29.0	28.0		10.92			286.75	1.91			
30.0	29.0		11.02			286.65	2.01			
31.0	30.0		10.93			286.74	1.92			
32.0	31.0		10.95			286.72	1.94			
33.0	32.0		11.04			286.63	2.03			
34.0	33.0		11.06			286.61	2.05			
35.0	34.0		11.02			286.65	2.01			
36.0	35.0		10.95			286.72	1.94			
37.0	36.0		11.17			286.50	2.16			
38.0	37.0		11.18			286.49	2.17			
39.0	38.0		11.21			286.46	2.19			
40.0	39.0		11.08			286.59	2.07			
41.0	40.0		10.69			286.98	1.68			
42.0	41.0		11.25			286.42	2.24			
43.0	42.0		11.33			286.34	2.32	Thalweg		
44.0	43.0		11.39			286.28	2.38			

Forgot XS2

Silver Fork SFAR @ Forgotten Flat XS2											
Book Statio	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
45.0	44.0		11.43			286.24	2.42				
46.0	45.0		11.08			286.59	2.07				
47.0	46.0		11.16			286.51	2.15				
47.1	46.1		10.50			287.17	1.49	REW			
47.5	47.5		9.54			288.13	0.53	QbkflR			
50.0	49.0		8.16			289.51					
52.5	51.5		7.97			289.70					
55.0	54.0		7.68			289.99					
57.5	56.5		7.18			290.49					
RBXS2	56.5		7.08			290.59					
90.0	89.0		8.20			289.47		CL trail			
BM2				4.03		293.64					
BM2		9.00			302.64	293.64					
BM1				2.64		300.00					

Silver Fork @ Forgotten Flat XS2



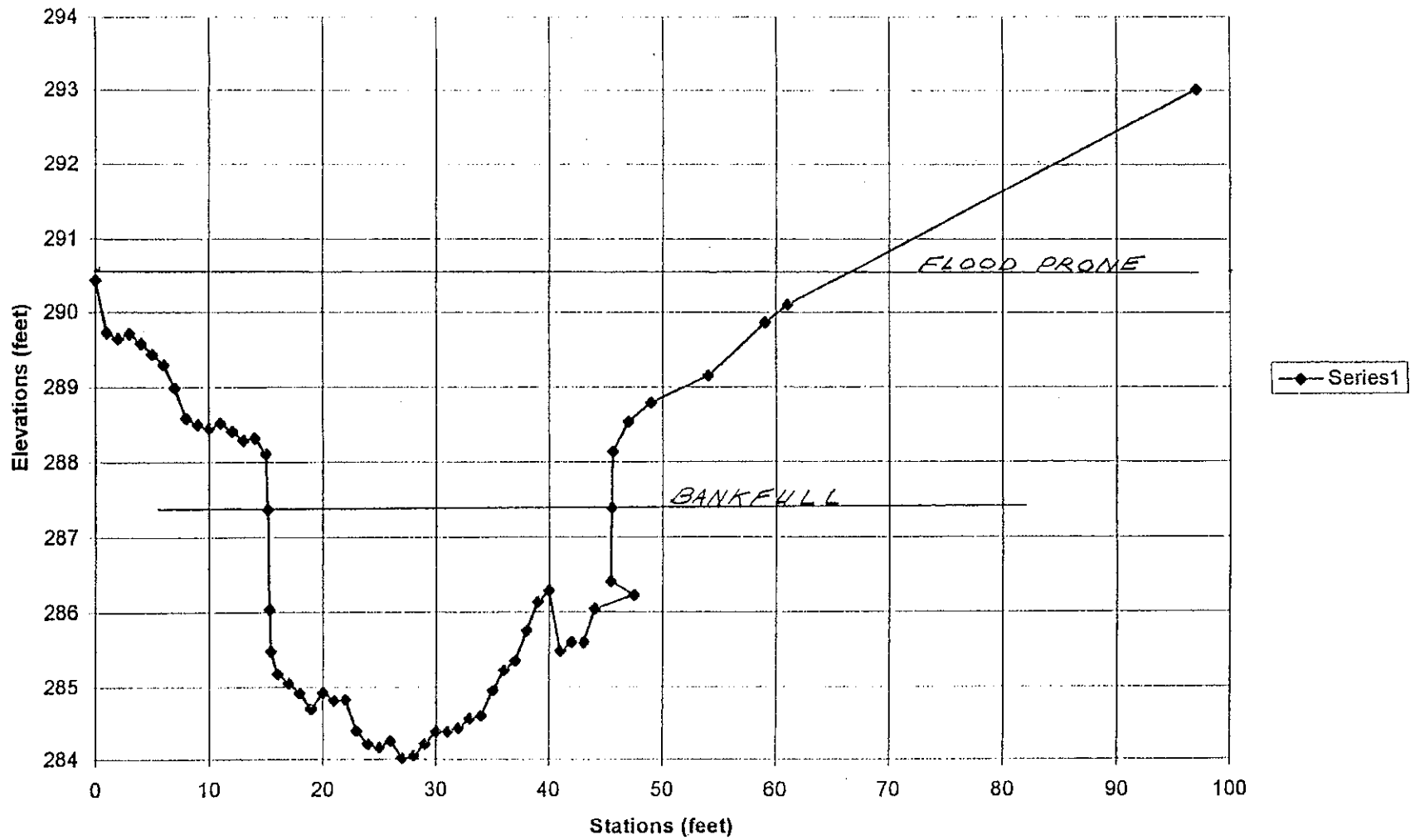
Forgot XS3

Silver Fork SFAR @ Forgotten Flat XS3										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM2		4.38			298.02	293.64				
BM3				7.08		290.94			Bankfull height elevation	
BM3		2.29			293.23	290.94			287.39	
LBXS3	0.0		2.66			290.57			Max Bankfull Depth	
1.0	0.0		2.78			290.45			3.36	
2.0	1.0		3.48			289.75			Avg Bankfull depth	
3.0	2.0		3.56			289.67			2.20	
4.0	3.0		3.50			289.73			Bankfull width	
5.0	4.0		3.63			289.60			30.3	
6.0	5.0		3.77			289.46			Bankfull W/D ratio	
7.0	6.0		3.92			289.31			13.8	
8.0	7.0		4.23			289.00			Elev @ 2x Bankfull depth	
9.0	8.0		4.64			288.59			290.75	
10.0	9.0		4.72			288.51			Width @ 2x Bankfull depth	
11.0	10.0		4.77			288.46			61.0	
12.0	11.0		4.70			288.53				
13.0	12.0		4.81			288.42				
14.0	13.0		4.93			288.30				
15.0	14.0		4.90			288.33				
16.0	15.0		5.11			288.12				
16.2	15.2		5.85			287.38	0.01	QbkfIL		
16.3	15.3		7.18			286.05	1.34	LEW		
16.4	15.4		7.73			285.50	1.89			
17.0	16.0		8.04			285.19	2.20			
18.0	17.0		8.17			285.06	2.33			
19.0	18.0		8.31			284.92	2.47			
20.0	19.0		8.53			284.70	2.69			
21.0	20.0		8.30			284.93	2.46			
22.0	21.0		8.41			284.82	2.57			
23.0	22.0		8.40			284.83	2.56			
24.0	23.0		8.83			284.40	2.99			
25.0	24.0		9.01			284.22	3.17			
26.0	25.0		9.06			284.17	3.22			
27.0	26.0		8.97			284.26	3.13			
28.0	27.0		9.20			284.03	3.36	Thalweg		
29.0	28.0		9.17			284.06	3.33			
30.0	29.0		9.01			284.22	3.17			
31.0	30.0		8.84			284.39	3.00			
32.0	31.0		8.84			284.39	3.00			
33.0	32.0		8.79			284.44	2.95			
34.0	33.0		8.66			284.57	2.82			
35.0	34.0		8.62			284.61	2.78			
36.0	35.0		8.27			284.96	2.43			
37.0	36.0		7.99			285.24	2.15			
38.0	37.0		7.86			285.37	2.02			
39.0	38.0		7.46			285.77	1.62			
40.0	39.0		7.08			286.15	1.24			
41.0	40.0		6.93			286.30	1.09			

Silver Fork SFAR @ Forgotten Flat XS3										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
42.0	41.0		7.73			285.50	1.89			
43.0	42.0		7.61			285.62	1.77			
44.0	43.0		7.61			285.62	1.77			
45.0	44.0		7.17			286.06	1.33	REW		
46.0	47.5		6.99			286.24	1.15			
46.4	45.4		6.81			286.42	0.97			
46.5	45.5		5.83			287.40	-0.01	QbkflR		
46.6	45.6		5.09			288.14				
48.0	47.0		4.69			288.54				
50.0	49.0		4.43			288.80				
55.0	54.0		4.07			289.16				
60.0	59.0		3.35			289.88				
62.0	61.0		3.11			290.12				
RBXS3	61.0		2.04			291.19				
98	97.0		0.2			293.03				
BM3			2.29			290.94		Level check		
BM3		6.90			297.84	290.94				
BM2				4.20		293.64				

Chart3

Silver Fork @ Forgotten Flat XS3

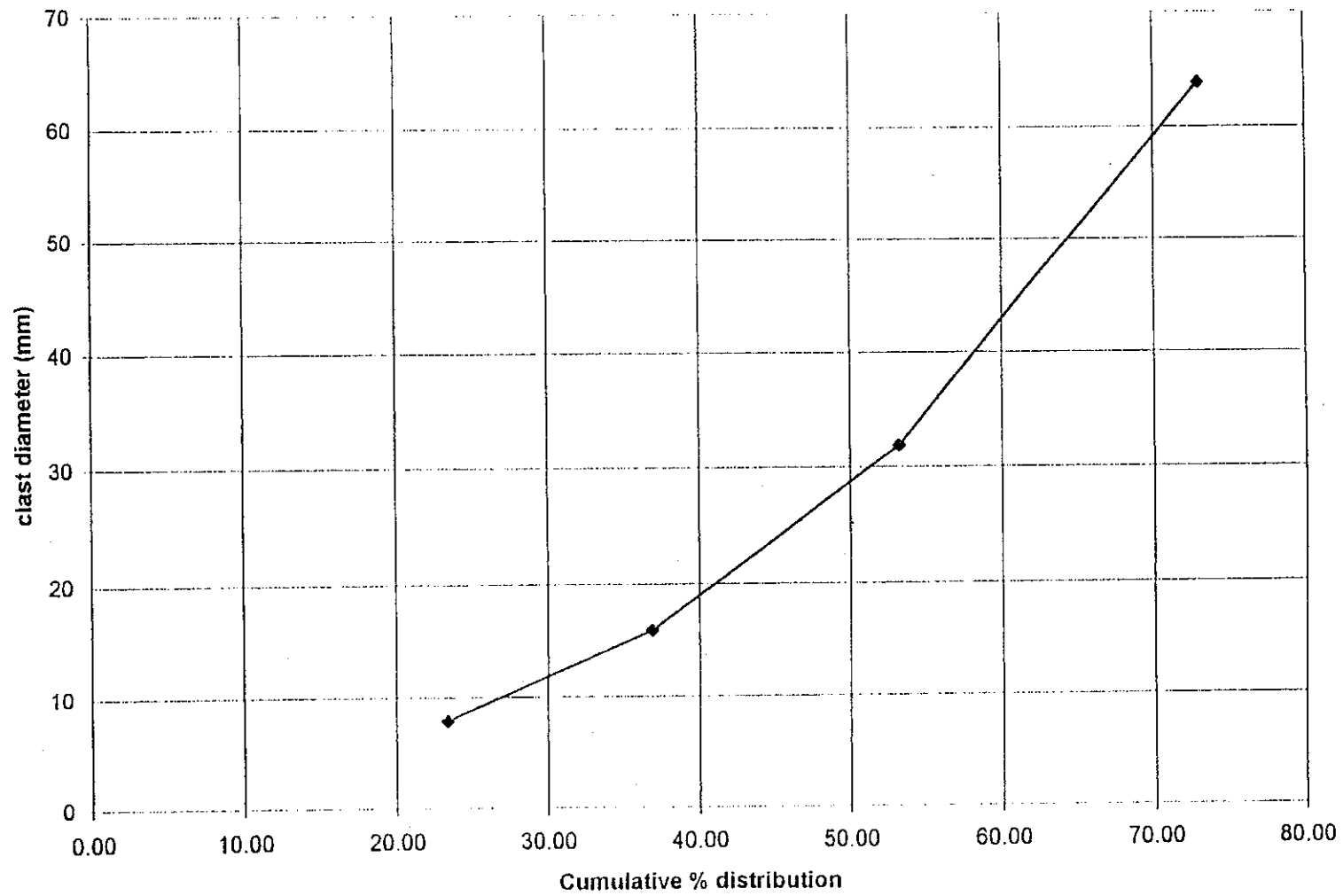


Silver Fork @ Forgotten Flat

Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		0	0.00	100.00	0			0	0.00	100.00	4096
L Boulder	2048	11	0	0.00		0	0.00	100.00	0			0	0.00	100.00	2048
M Boulder	1024	10	3	2.46		0	0.00	100.00	2	1.67	100.00	5	1.41	100.00	1024
S Boulder	512	9	2	1.64		0	0.00	100.00	0	0.00	98.33	2	0.56	98.59	512
L Cobble	256	8	6	4.92	95.90	11	9.73	100.00	9	7.50	98.33	26	7.32	98.03	256
S Cobble	128	7	25	20.49	90.98	20	17.70	90.27	18	15.00	90.83	63	17.75	90.70	128
VC Gravel	64	6	26	21.31	70.49	30	26.55	72.57	14	11.67	75.83	70	19.72	72.96	64
C Gravel	32	5	20	16.39	49.18	17	15.04	46.02	21	17.50	64.17	58	16.34	53.24	32
M Gravel	16	4	16	13.11	32.79	12	10.62	30.97	20	16.67	46.67	48	13.52	36.90	16
F Gravel	8	3	5	4.10	19.67	8	7.08	20.35	10	8.33	30.00	23	6.48	23.38	8
VF Gravel	4	2	6	4.92	15.57	7	6.19	13.27	6	5.00	21.67	19	5.35	16.90	4
VC Sand	2	1	13	10.66	10.66	8	7.08	7.08	20	16.67	16.67	41	11.55	11.55	2
Sand	1		0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1
Silt/clay			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			122	100		113	100.00		120	100.00		355	100.00		

Chart3

Silver Fork @ Forgotten Flat



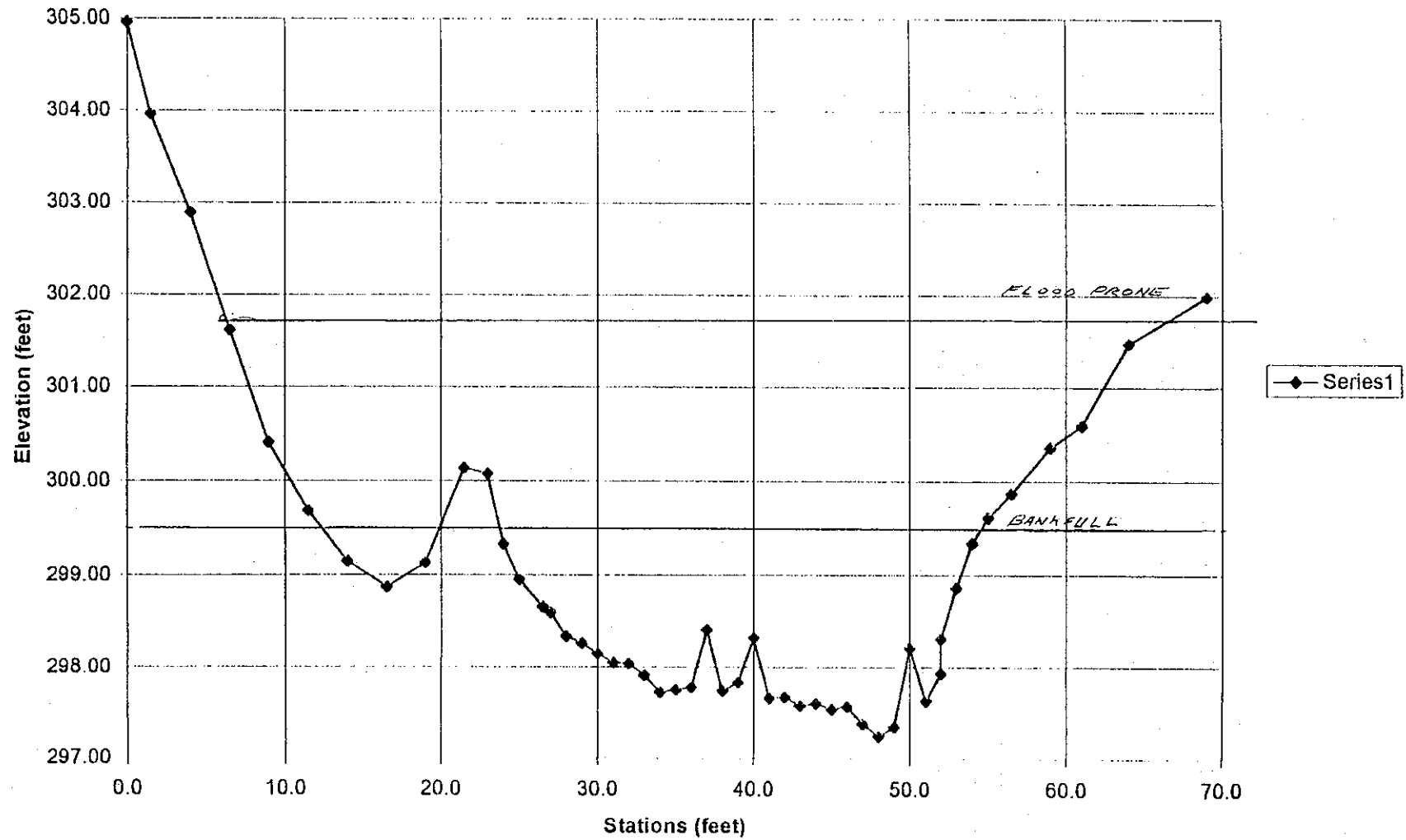
SilverFk@CG Rosgen

Rosgen classification for Silver Fork @ PG&E Campground							
		XS 1	Dist	XS 2	Dist	XS 3	Reach
Bankfull height elevation		299.48	134	297.66	83.00	295.75	
Slope			0.013619		0.023012		0.01721
Max Bankfull Depth							
		2.22		2.76		2.67	2.55
Avg Bankfull depth							
		1.42		1.27		1.58	1.42
Weighted mean bed elevation @Qbkfl							
		298.06		296.39		294.17	
Bed slope							
			0.012520		0.026717		0.01795
Bankfull width							
		31.0		51.5		33.5	38.7
Bankfull W/D ratio							
		21.9		40.60		21.3	27.2
Elev @ 2x Bankfull depth							
		301.70		300.42		298.41	
Width @ 2x Bankfull depth							
		57.5		80		55	64.2
Ratio of 2x width / bankfull width							
							1.66
d50		45		65		45	52
Entrenchment							1.66
W/D							27.2
Slope							0.017
Rosgen classification							B4c

Silver Fk@PG&E CG

Silver Fork@PG&E CG XS#1										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
E 11		6.77			306.77	300.00			Bankfull height elevation	
LBXS1	0.0		1.74			305.03			299.48	
1.0	0.0		1.80			304.97			Max Bankfull Depth	
2.5	1.5		2.80			303.97			2.22	
5.0	4.0		3.87			302.90			Avg Bankfull depth	
7.5	6.5		5.15			301.62			1.42	
10.0	9.0		6.35			300.42			Bankfull width	
12.5	11.5		7.08			299.69			31.0	
15.0	14.0		7.61			299.16		Begin high flow ch	Bankfull W/D ratio	
17.5	16.5		7.89			298.88			21.9	
20.0	19.0		7.63			299.14			Elev @ 2x Bankfull depth	
22.5	21.5		6.62			300.15			301.70	
24.0	23.0		6.68			300.09			Width @ 2x Bankfull depth	
25.0	24.0		7.43			299.34	0.14	Qbfl moderate	57.5	
26.0	25.0		7.81			298.96	0.52			
27.5	26.5		8.10			298.67	0.81			
28.0	27.0		8.16			298.61	0.87			
29.0	28.0		8.42			298.35	1.13	LEW		
30.0	29.0		8.49			298.28	1.20			
31.0	30.0		8.61			298.16	1.32			
32.0	31.0		8.71			298.06	1.42			
33.0	32.0		8.72			298.05	1.43			
34.0	33.0		8.85			297.92	1.56			
35.0	34.0		9.04			297.73	1.75			
36.0	35.0		9.01			297.76	1.72			
37.0	36.0		8.98			297.79	1.69			
38.0	37.0		8.35			298.42	1.06	Rock		
39.0	38.0		9.02			297.75	1.73			
40.0	39.0		8.93			297.84	1.64			
41.0	40.0		8.43			298.34	1.14	Rock		
42.0	41.0		9.10			297.67	1.81			
43.0	42.0		9.09			297.68	1.80			
44.0	43.0		9.18			297.59	1.89			
45.0	44.0		9.16			297.61	1.87			
46.0	45.0		9.22			297.55	1.93			
47.0	46.0		9.19			297.58	1.90			
48.0	47.0		9.38			297.39	2.09			
49.0	48.0		9.51			297.26	2.22	Thalweg		
50.0	49.0		9.41			297.36	2.12			
51.0	50.0		8.55			298.22	1.26	Rock		
52.0	51.0		9.13			297.64	1.84			
53.0	52.0		8.83			297.94	1.54			
53.0	52.0		8.45			298.32	1.16	REW		
54.0	53.0		7.90			298.87	0.61			
55.0	54.0		7.42			299.35	0.13			
56.0	55.0		7.15			299.62		QbkifR		
57.5	56.5		6.89			299.88				
60.0	59.0		6.40			300.37				
62.0	61.0		6.17			300.60				
62.1	61.1		3.72			303.05				
65.0	64.0		5.29			301.48				
70.0	69.0		4.77			302.00				
BM1				6.77		300.00				

Silver Fork@PG&E CG XS1



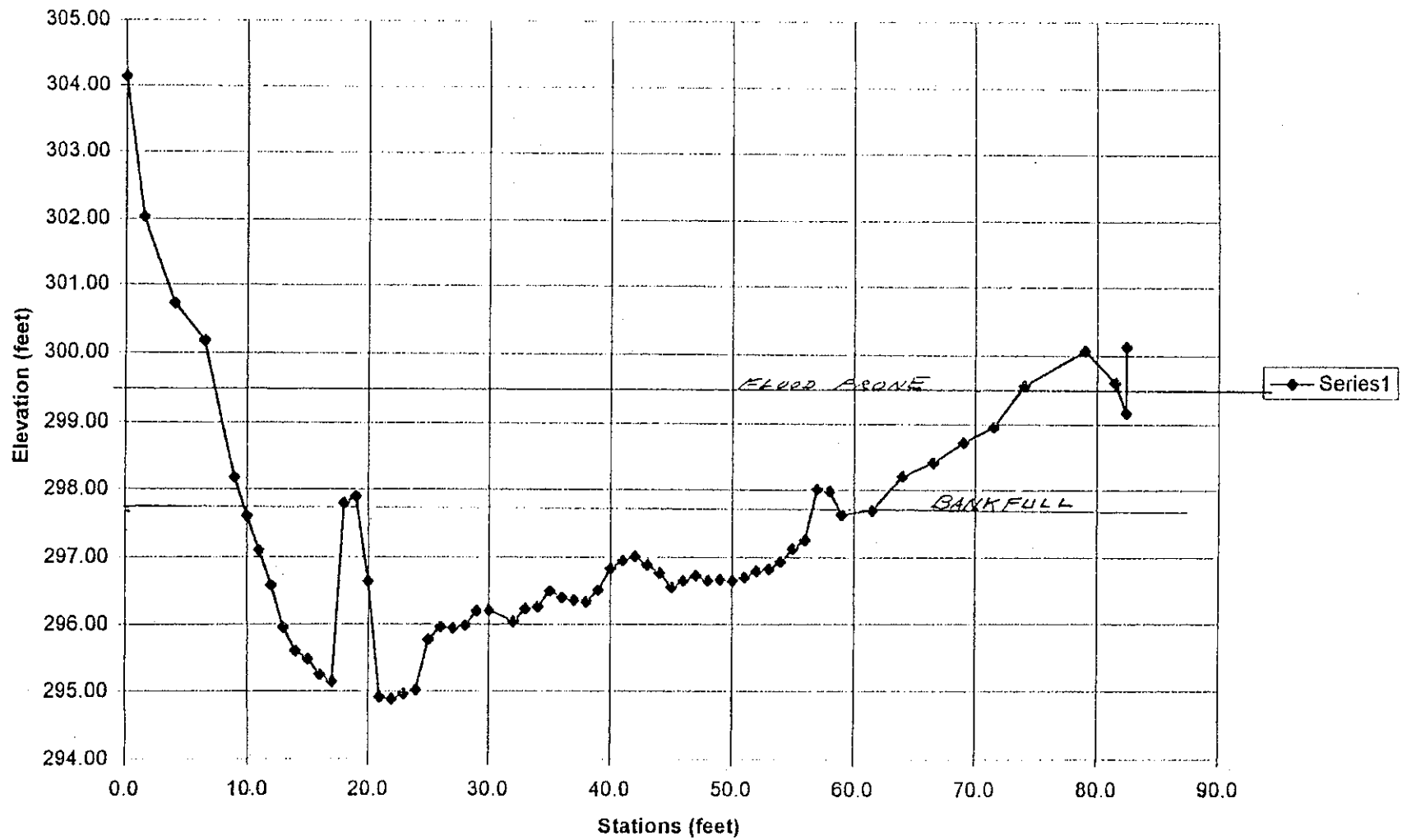
Silver Fk@PG&E CG XS2

Silver Fork@PG&E CG XS#2										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		5.40			305.40	300.00			Bankfull height elevation	
LBXS1	0.0		1.19			304.21			297.66	
1.0	0.0		1.25			304.15			Max Bankfull Depth	
2.5	1.5		3.35			302.05			2.76	
5.0	4.0		4.66			300.74			Avg Bankfull depth	
7.5	6.5		5.21			300.19			1.27	
10.0	9.0		7.21			298.19			Bankfull width	
11.0	10.0		7.79			297.61	0.05	QbkfL	51.5	
12.0	11.0		8.29			297.11	0.55		Bankfull W/D ratio	
13.0	12.0		8.82			296.58	1.07	LEW	40.6	
14.0	13.0		9.44			295.96	1.69		Elev @ 2x Bankfull depth	
15.0	14.0		9.79			295.61	2.05		300.42	
16.0	15.0		9.91			295.49	2.17		Width @ 2x Bankfull depth	
17.0	16.0		10.14			295.26	2.39		80.0	
18.0	17.0		10.25			295.15	2.51			
19.0	18.0		7.60			297.80	-0.14	Rock		
20.0	19.0		7.50			297.90	-0.25	Rock		
21.0	20.0		8.76			296.64	1.01	Rock		
22.0	21.0		10.48			294.92	2.74			
23.0	22.0		10.51			294.89	2.76	Thalweg		
24.0	23.0		10.43			294.97	2.69			
25.0	24.0		10.37			295.03	2.63			
26.0	25.0		9.62			295.78	1.88			
27.0	26.0		9.43			295.97	1.69			
28.0	27.0		9.45			295.95	1.70			
29.0	28.0		9.41			295.99	1.67			
30.0	29.0		9.20			296.20	1.45			
31.0	30.0		9.19			296.21	1.44			
33.0	32.0		9.35			296.05	1.61			
34.0	33.0		9.17			296.23	1.43			
35.0	34.0		9.14			296.26	1.39			
36.0	35.0		8.90			296.50	1.15			
37.0	36.0		9.00			296.40	1.26			
38.0	37.0		9.04			296.36	1.30			
39.0	38.0		9.06			296.34	1.32			
40.0	39.0		8.89			296.51	1.14	REW		
41.0	40.0		8.56			296.84	0.81			
42.0	41.0		8.44			296.96	0.69			
43.0	42.0		8.38			297.02	0.63			
44.0	43.0		8.51			296.89	0.76			
45.0	44.0		8.63			296.77	0.88			
46.0	45.0		8.84			296.56	1.09			
47.0	46.0		8.74			296.66	1.00			
48.0	47.0		8.67			296.73	0.93			
49.0	48.0		8.74			296.66	1.00			
50.0	49.0		8.73			296.67	0.99			
51.0	50.0		8.74			296.66	1.00			
52.0	51.0		8.69			296.71	0.94			

Silver Fk@PG&E CG XS2

Silver Fork@PG&E CG XS#2											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
53.0	52.0		8.60			296.80	0.86				
54.0	53.0		8.57			296.83	0.82				
55.0	54.0		8.46			296.95	0.71				
56.0	55.0		8.26			297.14	0.51				
57.0	56.0		8.13			297.27	0.38				
58.0	57.0		7.38			298.02		Rock			
59.0	58.0		7.41			297.99		Rock			
60.0	59.0		7.76			297.64	0.01	Rock			
62.5	61.5		7.70			297.70		QbkflR			
65.0	64.0		7.18			298.22					
67.5	66.5		6.98			298.42					
70.0	69.0		6.67			298.73					
72.5	71.5		6.43			298.97					
75.0	74.0		5.83			299.57					
80.0	79.0		5.31			300.09					
82.5	81.5		5.78			299.62					
83.4	82.4		6.22			299.18					
83.4	82.4		5.25			300.15					
BM1				5.40		300.00					

Silver Fork @ PG&E CG XS2

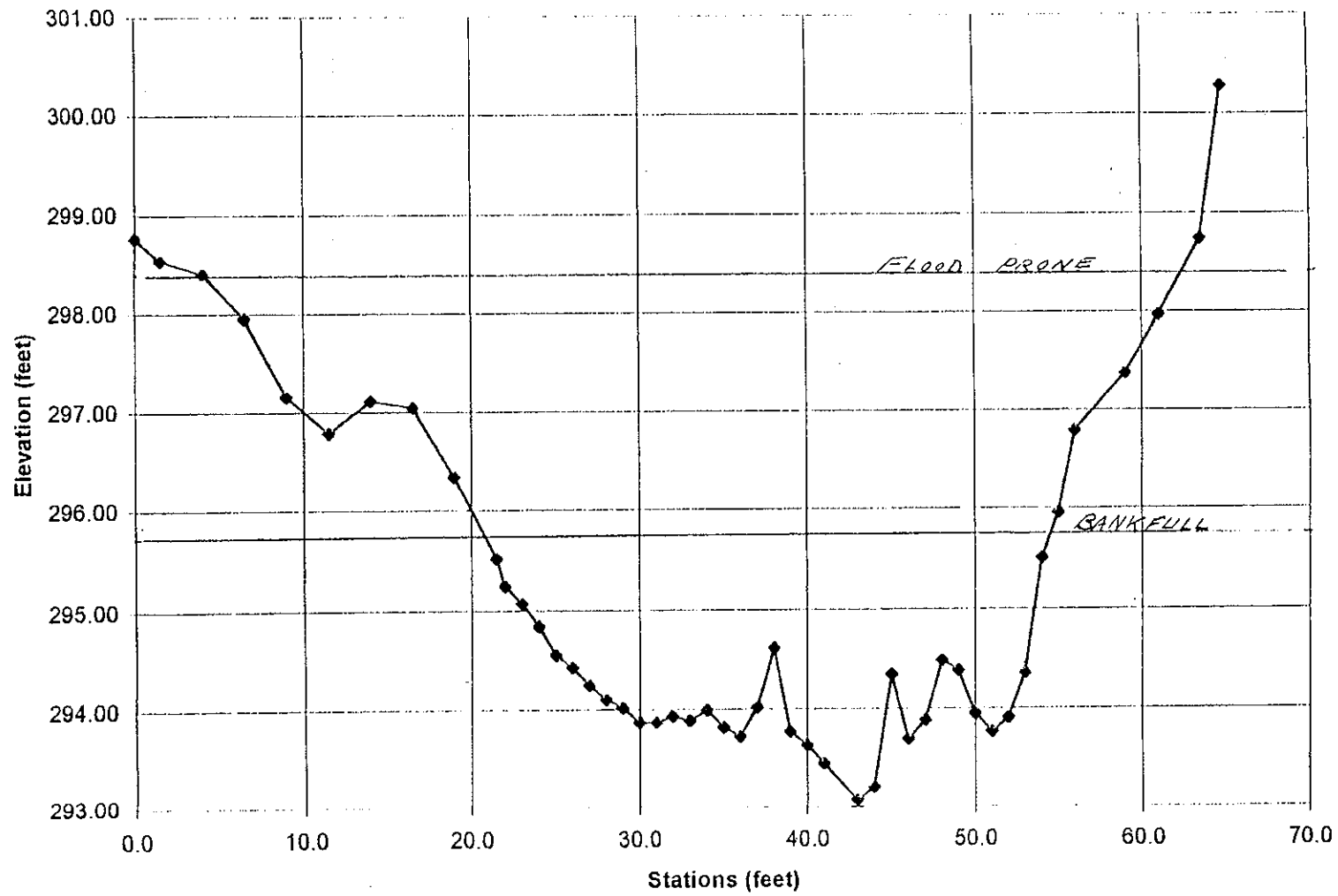


Silver Fk@PG&E CG XS3

Silver Fork@PG&E CG XS#3										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		5.78			305.78	300.00			Bankfull height elevation	
LBXS1	0.0		6.00			299.78			295.75	
1.0	0.0		7.00			298.78			Max Bankfull Depth	
2.5	1.5		7.23			298.55			2.67	
5.0	4.0		7.36			298.42			Avg Bankfull depth	
7.5	6.5		7.82			297.96			1.58	
10.0	9.0		8.62			297.16			Bankfull width	
12.5	11.5		8.98			296.80			33.5	
15.0	14.0		8.66			297.12			Bankfull W/D ratio	
17.5	16.5		8.73			297.05			21.3	
20.0	19.0		9.43			296.35			Elev @ 2x Bankfull depth	
22.5	21.5		10.25			295.53	0.22	QbkfL	298.41	
23.0	22.0		10.52			295.26	0.49		Width @ 2x Bankfull depth	
24.0	23.0		10.70			295.08	0.67		55.0	
25.0	24.0		10.93			294.85	0.90			
26.0	25.0		11.21			294.57	1.18			
27.0	26.0		11.34			294.44	1.31	LEW		
28.0	27.0		11.52			294.26	1.49			
29.0	28.0		11.67			294.11	1.64			
30.0	29.0		11.75			294.03	1.72			
31.0	30.0		11.90			293.88	1.87			
32.0	31.0		11.90			293.88	1.87			
33.0	32.0		11.84			293.94	1.81			
34.0	33.0		11.88			293.90	1.85			
35.0	34.0		11.78			294.00	1.75			
36.0	35.0		11.95			293.83	1.92			
37.0	36.0		12.04			293.74	2.01			
38.0	37.0		11.75			294.03	1.72			
39.0	38.0		11.15			294.63	1.12			
40.0	39.0		11.99			293.79	1.96			
41.0	40.0		12.13			293.65	2.10			
42.0	41.0		12.32			293.46	2.29			
44.0	43.0		12.70			293.08	2.67	Thalweg		
45.0	44.0		12.56			293.22	2.53			
46.0	45.0		11.42			294.36	1.39			
47.0	46.0		12.07			293.71	2.04			
48.0	47.0		11.88			293.90	1.85			
49.0	48.0		11.28			294.50	1.25			
50.0	49.0		11.38			294.40	1.35			
51.0	50.0		11.82			293.96	1.79			
52.0	51.0		12.00			293.78	1.97			
53.0	52.0		11.86			293.92	1.83			
54.0	53.0		11.41			294.37	1.38	REW		
55.0	54.0		10.26			295.52	0.23			
56.0	55.0		9.82			295.96		QbfIR		
57.0	56.0		8.98			296.80				
60.0	59.0		8.40			297.38				
62.0	61.0		7.80			297.98				
64.5	63.5		7.02			298.76				
65.8	64.8		5.49			300.29				
65.8	64.8		5.45			300.33				
BM1				5.79		299.99				

Chart11

Silver Fork @ PG&E XS3

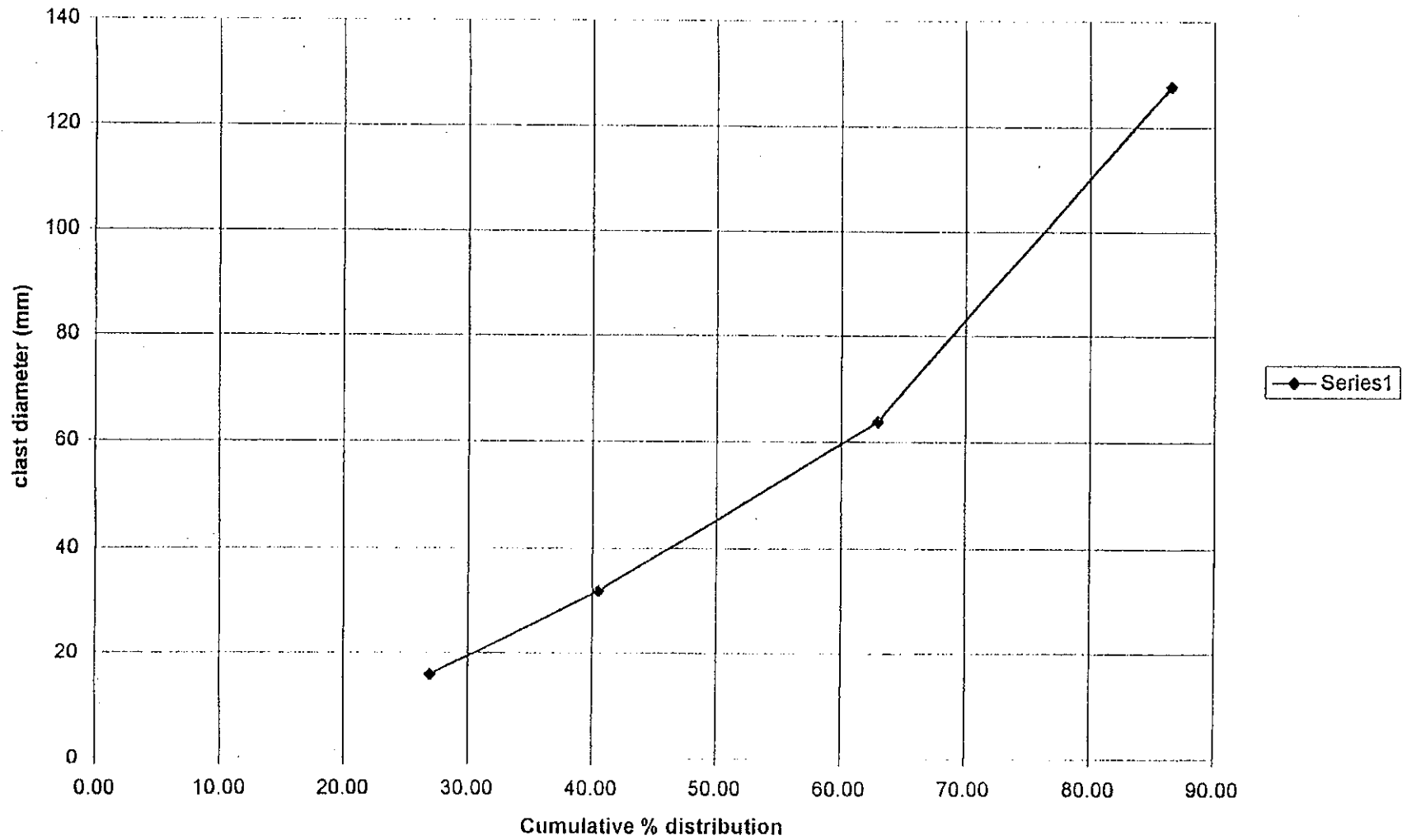


Silver Fork @ PG&E Campground

Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		2	1.92	100.00				2	0.61	100.00	4096
L Boulder	2048	11	0	0.00		0	0.00	98.08				0	0.00	99.39	2048
M Boulder	1024	10	0	0.00		0	0.00	96.08				0	0.00	99.39	1024
S Boulder	512	9	0	0.00		2	1.92	98.08	10	10.00	100.00	12	3.68	99.39	512
L Cobble	256	8	8	6.56	100.00	14	13.46	96.15	8	8.00	90.00	30	9.20	95.71	256
S Cobble	128	7	29	23.77	93.44	28	26.92	82.69	20	20.00	82.00	77	23.62	86.50	128
VC Gravel	64	6	34	27.87	69.67	21	20.19	55.77	18	18.00	62.00	73	22.39	62.88	64
C Gravel	32	5	18	14.75	41.80	10	9.62	35.56	16	16.00	44.00	44	13.50	40.49	32
M Gravel	16	4	13	10.66	27.05	7	6.73	25.96	9	9.00	28.00	29	8.90	26.99	16
F Gravel	8	3	9	7.38	16.39	6	5.77	19.23	9	9.00	19.00	24	7.36	18.10	8
VF Gravel	4	2	10	8.20	9.02	13	12.50	13.46	10	10.00	10.00	33	10.12	10.74	4
VC Sand	2	1	1	0.82	0.82	1	0.96	0.96	0	0.00	0.00	2	0.61	0.61	2
Sand	1		0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1
Silt/clay			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			122	100		104	100.00		100	100.00		326	100.00		

Chart2

Silver Fork @ PG&E CG



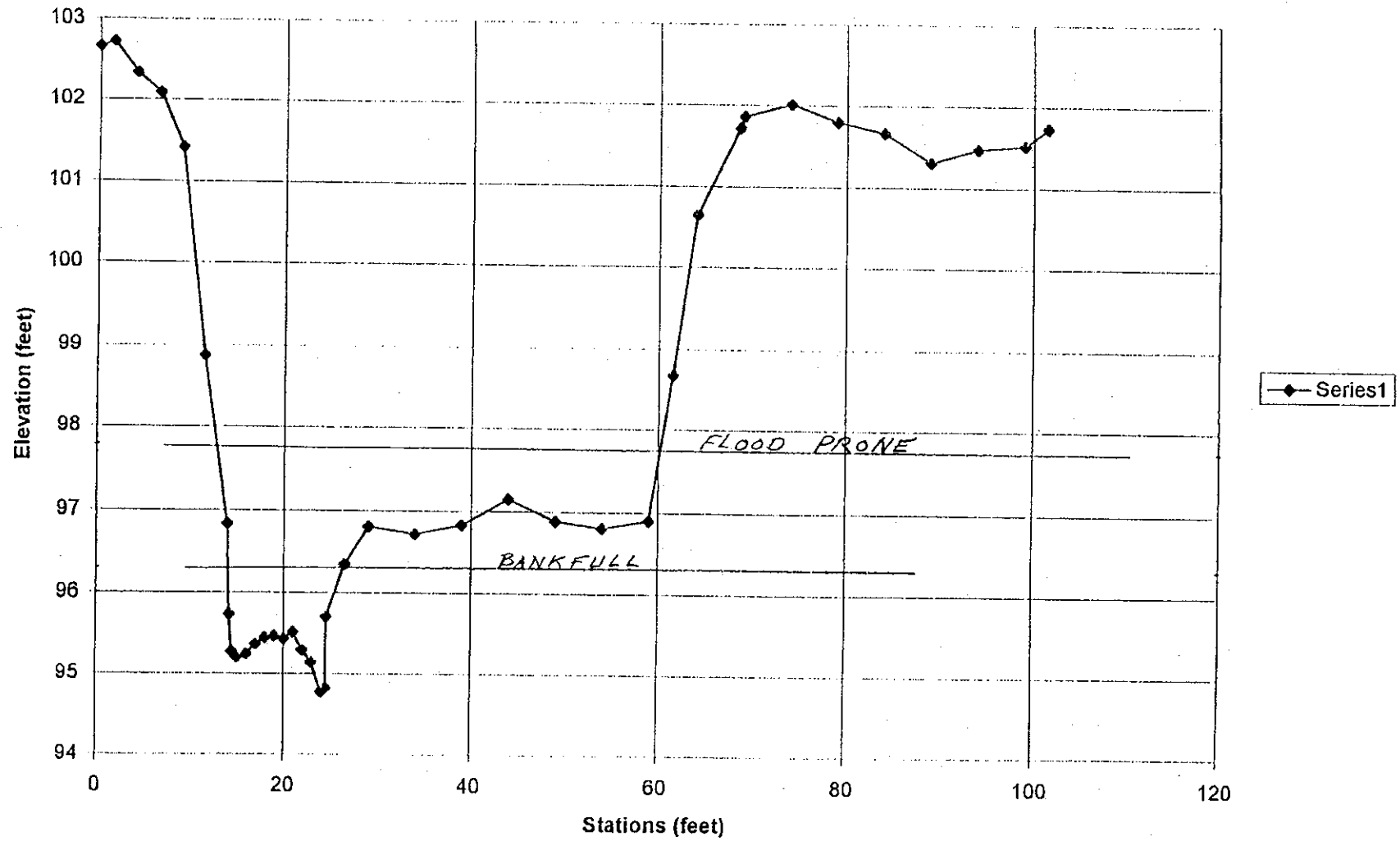
Big Oyster Rosgen

Rosgen classification for Oyster Creek meadow below Hwy 88							
	XS 1	Dist	XS 2	Dist	XS 3	Reach	
Bankfull height elevation	96.29	163	95.14	106.00	93.46		
Slope		0.007055		0.015849		0.01052	
Max Bankfull Depth	1.51		1.65		1.13	1.43	
Avg Bankfull depth	0.85		0.88		0.76	0.83	
Mean bed elevation	95.44		94.26		92.70		
Bed slope		0.00724		0.01472		0.01019	
Bankfull width	10.5		11.5		13.0	11.7	
Bankfull W/D ratio	12.4		13.1		17.1	14.1	
Elev @ 2x Bankfull depth	97.79		96.79		94.58		
Width @ 2x Bankfull depth	48.0		66		16	43.3	
Ratio of 2x width / bankfull width						3.71	
d50	11		10		11	11	
Entrenchment						3.71	
W/D						14.1	
Slope						0.011	
Rosgen classification						C4	

Big Oyster XS1

Oyster Creek meadow below Hwy 88, XS1										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		5.95			105.95	100.00				
BM2				2.32		103.63			Bankfull height elevation	
BM2		3.09			106.72	103.63			96.29	
LBXS1	0.0		3.97			102.75			Max Bankfull Depth	
	1.0	0.0	4.04			102.68			1.51	
	2.5	1.5	3.98			102.74			Avg Bankfull depth	
	5.0	4.0	4.37			102.35			0.85	
	7.5	6.5	4.62			102.10			Bankfull width	
	10.0	9.0	5.29			101.43			10.5	
	12.5	11.5	7.83			98.89			Bankfull W/D ratio	
	15.0	14.0	9.87			96.85	-0.56	QbkfIL	12.3	
	15.2	14.2	10.97			95.75	0.53	LEW	Elev @ 2x Bankfull depth	
	15.5	14.5	11.43			95.29	0.99		97.79	
	16.0	15.0	11.50			95.22	1.07		Width @ 2x Bankfull depth	
	17.0	16.0	11.46			95.26	1.02		48.0	
	18.0	17.0	11.34			95.38	0.91			
	19.0	18.0	11.26			95.46	0.83			
	20.0	19.0	11.24			95.48	0.80			
	21.0	20.0	11.27			95.45	0.83			
	22.0	21.0	11.19			95.53	0.75			
	23.0	22.0	11.41			95.31	0.97			
	24.0	23.0	11.57			95.15	1.14			
	25.0	24.0	11.94			94.78	1.51	Thalweg		
	25.5	24.5	11.89			94.83	1.46	REW		
	25.5	24.5	11.00			95.72	0.56	QbkfIR		
	27.5	26.5	10.36			96.36				
	30.0	29.0	9.90			96.82				
	35.0	34.0	9.99			96.73				
	40.0	39.0	9.88			96.84				
	45.0	44.0	9.56			97.16				
	50.0	49.0	9.82			96.90				
	55.0	54.0	9.90			96.82				
	60.0	59.0	9.81			96.91				
	62.5	61.5	8.04			98.68				
	65.0	64.0	6.06			100.66				
	69.5	68.5	4.99			101.73				
	70.0	69.0	4.85			101.87				
	75.0	74.0	4.69			102.03				
	80.0	79.0	4.91			101.81				
	85.0	84.0	5.04			101.68				
	90.0	89.0	5.40			101.32				
	95.0	94.0	5.23			101.49				
	100.0	99.0	5.19			101.53				
	102.5	101.5	4.97			101.75				
RBXS1	101.5		4.99			101.73				
BM1				6.71		100.01				

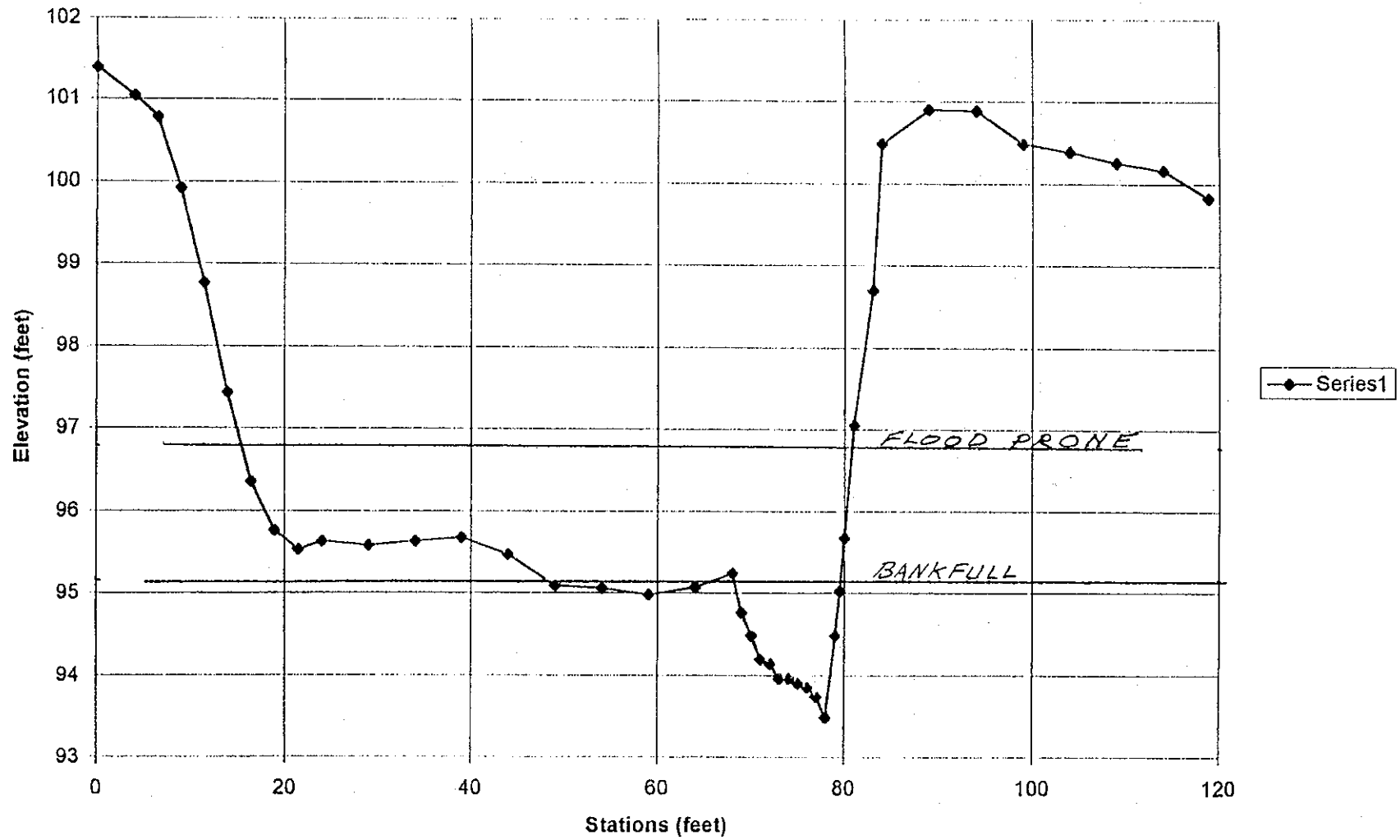
Oyster Creek in meadow below Hwy 88 XS1



Big Oyster XS2

Upper Creek meadow below Hwy 88, XS2											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM		5.95			105.95	100.00					
LBXS2	0.0		4.24			101.71			Bankfull height elevation		
1.0	0.0		4.55			101.40			95.14		
5.0	4.0		4.90			101.05			Max Bankfull Depth		
7.5	6.5		5.15			100.80			1.65		
10.0	9.0		6.02			99.93			Avg Bankfull depth		
12.5	11.5		7.17			98.78			0.88		
15.0	14.0		8.50			97.45			Bankfull width		
17.5	16.5		9.58			96.37			11.5		
20.0	19.0		10.18			95.77			Bankfull W/D ratio		
22.5	21.5		10.41			95.54			13.0		
25.0	24.0		10.31			95.64			Elev @ 2x Bankfull depth		
30.0	29.0		10.36			95.59			96.79		
35.0	34.0		10.31			95.64			Width @ 2x Bankfull depth		
40.0	39.0		10.27			95.68			66.0		
45.0	44.0		10.47			95.48					
50.0	49.0		10.85			95.10					
55.0	54.0		10.88			95.07					
60.0	59.0		10.96			94.99					
65.0	64.0		10.87			95.08					
69.0	68.0		10.70			95.25	-0.11	QbkfL			
70.0	69.0		11.18			94.77	0.37				
71.0	70.0		11.46			94.49	0.65				
72.0	71.0		11.74			94.21	0.93				
73.0	72.0		11.80			94.15	0.99				
74.0	73.0		11.98			93.97	1.17				
75.0	74.0		11.98			93.97	1.17				
76.0	75.0		12.04			93.91	1.23				
77.0	76.0		12.09			93.86	1.28				
78.0	77.0		12.20			93.75	1.39				
79.0	78.0		12.46			93.49	1.65	Thalweg			
80.0	79.0		11.46			94.49	0.65				
80.5	79.5		10.92			95.03	0.11	QbkfR			
81.0	80.0		10.27			95.68					
82.0	81.0		8.88			97.07					
84.0	83.0		7.24			98.71					
85.0	84.0		5.45			100.50					
90	89.0		5.04			100.91					
95	94.0		5.05			100.90					
100	99.0		5.45			100.50					
105	104.0		5.55			100.40					
110	109.0		5.68			100.27					
115	114.0		5.77			100.18					
119.8	118.8		6.11			99.84					
F XS2	118.8		5.96			99.99					
BM1				5.95		100.00					

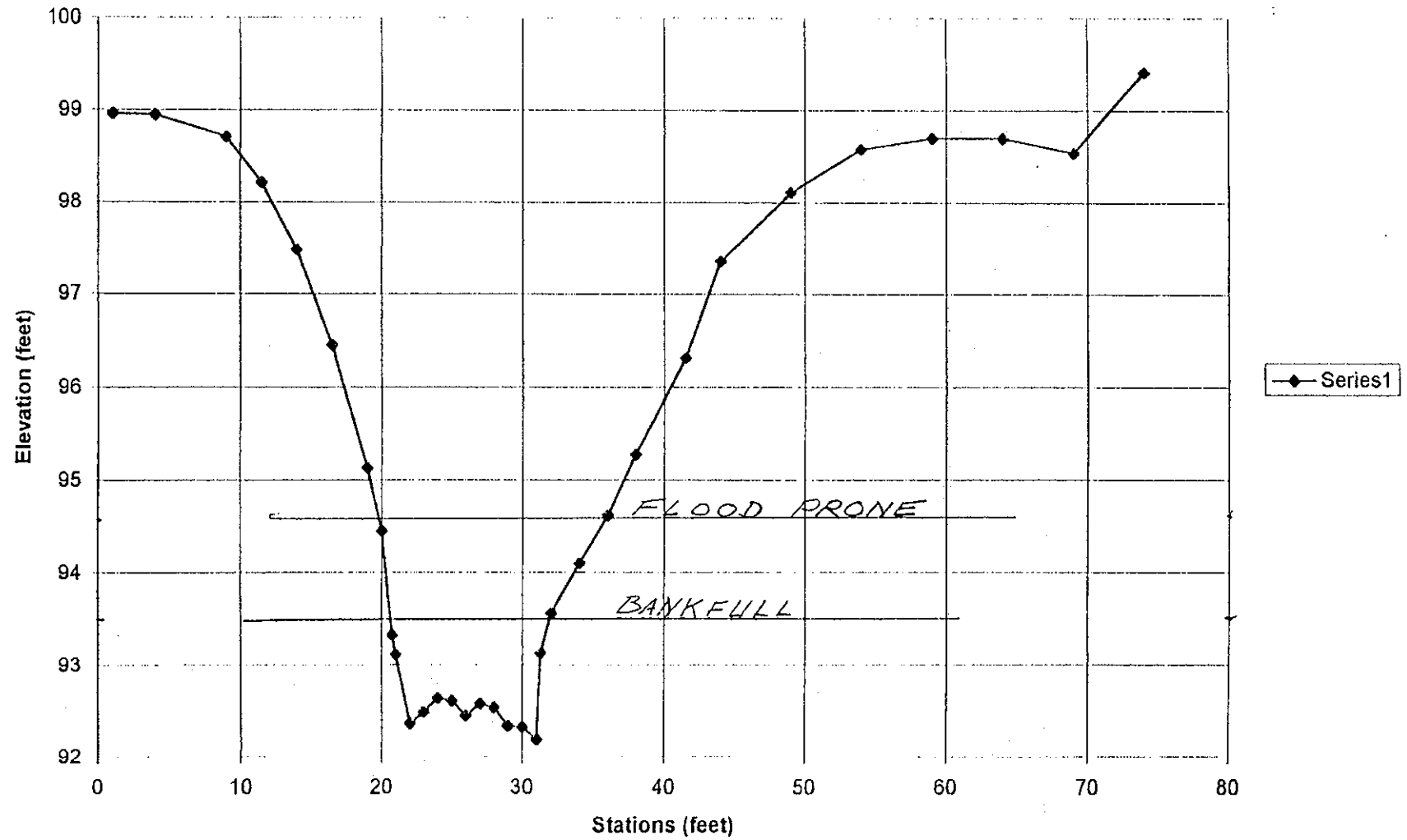
Oyster Creek in meadow below Hwy 88, XS2



Big Oyster XS3

Oyster Creek meadow below Hwy 88, XS3										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		3.54			103.54	100.00				
LBXS1	0.0		4.43			99.11			Bankfull height elevation	
	2.0	1.0	4.57			98.97			93.46	
	5.0	4.0	4.58			98.96			Max Bankfull Depth	
	10.0	9.0	4.82			98.72			1.13	
	12.5	11.5	5.32			98.22			Avg Bankfull depth	
	15.0	14.0	6.05			97.49			0.76	
	17.5	16.5	7.08			96.46			Bankfull width	
	20.0	19.0	8.40			95.14			13.0	
	21.0	20.0	9.08			94.46			Bankfull W/D ratio	
	21.8	20.8	10.20			93.34	0.12	QbkfIL?	17.1	
	22.0	21.0	10.41			93.13	0.33	LEW	Elev @ 2x Bankfull depth	
	23.0	22.0	11.17			92.37	1.09		94.58	
	24.0	23.0	11.05			92.49	0.97		Width @ 2x Bankfull depth	
	25.0	24.0	10.90			92.64	0.82		16.0	
	26.0	25.0	10.93			92.61	0.84			
	27.0	26.0	11.09			92.45	1.01			
	28.0	27.0	10.96			92.58	0.88			
	29.0	28.0	11.00			92.54	0.92			
	30.0	29.0	11.20			92.34	1.12			
	31.0	30.0	11.21			92.33	1.13	Thalweg		
	32.0	31.0	11.34			92.20	1.26			
	32.3	31.3	10.40			93.14	0.32	REW		
	33.0	32.0	9.97			93.57	-0.11	QbfIR		
	35.0	34.0	9.43			94.11				
	37.0	36.0	8.91			94.63				
	39.0	38.0	8.26			95.28				
	42.5	41.5	7.22			96.32				
	45.0	44.0	6.17			97.37				
	50.0	49.0	5.42			98.12				
	55.0	54.0	4.95			98.59				
	60.0	59.0	4.83			98.71				
	65.0	64.0	4.83			98.71				
	70.0	69.0	4.99			98.55				
	75.0	74.0	4.11			99.43				
RBXS3	74.7		3.82			99.72				
BM1				0.90		103.54				

Oyster Creek in meadow below Hwy 88, XS3



ThunderPeakCr XS1

Oyster Creek hillslope fork above Hwy 88, XS1											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
38.0	37.0		5.43			98.33					
39.0	38.0		5.44			98.32					
40.0	39.0		5.59			98.17					
41.0	40.0		5.62			98.14					
42.0	41.0		5.62			98.14					
43.0	42.0		5.49			98.27					
44.0	43.0		5.26			98.50					
44.8	43.8		5.09			98.67					
RBSX1	43.8		2.84			100.92					
BM1				3.76		100.00					

ThunderPeakCr XS1

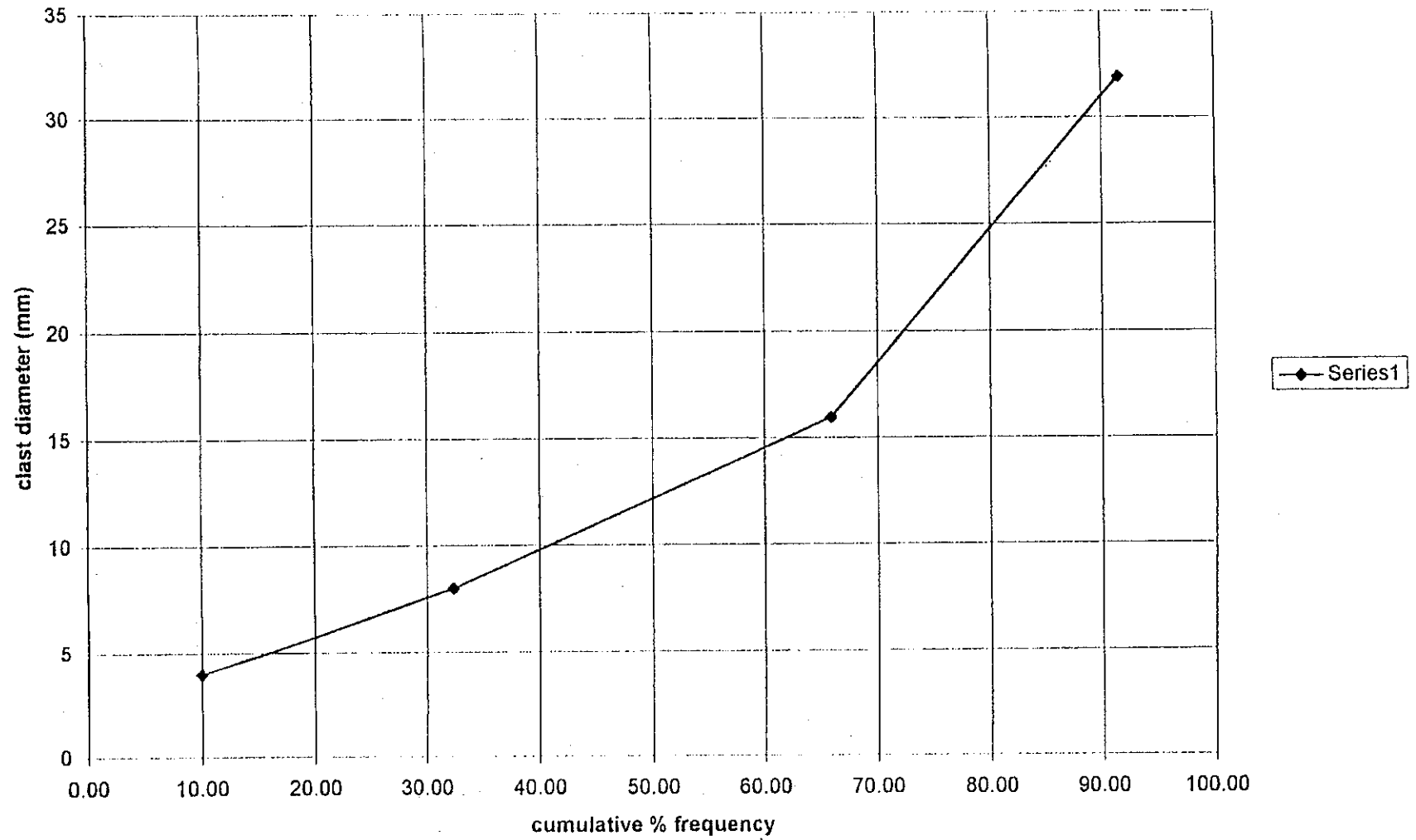
Oyster Creek hillslope fork above Hwy 88, XS1											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		3.76			103.76	100.00			Bankfull height elevation		
LBXS1	0.0		0.46			103.30			97.04		
1.0	0.0		0.92			102.84			Max Bankfull Depth		
2.5	1.5		1.21			102.55			0.98		
5.0	4.0		2.08			101.68			Avg Bankfull depth		
7.5	6.5		3.13			100.63			0.60		
9.0	8.0		3.67			100.09			Bankfull width		
11.0	10.0		3.93			99.83			4.3		
12.0	11.0		4.04			99.72			Bankfull W/D ratio		
13.0	12.0		4.08			99.68			7.1		
14.0	13.0		4.15			99.61			Elev @ 2x Bankfull depth		
15.0	14.0		4.22			99.54			98.02		
16.0	15.0		4.36			99.40			Width @ 2x Bankfull depth		
17.0	16.0		4.49			99.27			16.0		
18.0	17.0		4.64			99.12					
19.0	18.0		5.01			98.75					
20.0	19.0		5.30			98.46					
21.0	20.0		5.66			98.10					
22.0	21.0		6.18			97.58					
23.0	22.0		6.55			97.21					
24.0	23.0		6.61			97.15					
25.0	24.0		6.71			97.05		QbkfL			
25.25	24.25		7.11			96.65	0.39				
25.5	24.5		7.18			96.58	0.46				
25.75	24.75		7.20			96.56	0.48				
26.0	25.0		7.19			96.57	0.47				
26.25	25.25		7.22			96.54	0.50				
26.5	25.5		7.26			96.50	0.54				
26.75	25.75		7.25			96.51	0.53				
27.0	26.0		7.21			96.55	0.49				
27.25	26.25		7.46			96.30	0.74				
27.5	26.5		7.50			96.26	0.78	LEW			
27.75	26.75		7.57			96.19	0.85				
28.0	27.0		7.66			96.10	0.94				
28.25	27.25		7.67			96.09	0.95				
28.5	27.5		7.70			96.06	0.98	Thalweg			
28.75	27.75		7.52			96.24	0.80	REW			
29.0	28.0		7.01			96.75	0.29				
29.25	28.25		6.73			97.03	0.01	QbfR			
29.5	28.5		6.59			97.17					
30.0	29.0		6.48			97.28					
31.0	30.0		6.25			97.51					
32.0	31.0		6.18			97.58					
33.0	32.0		6.06			97.70					
34.0	33.0		5.98			97.78					
35.0	34.0		5.86			97.90					
36.0	35.0		5.83			97.93					
37.0	36.0		5.34			98.42					

ThunderPk Cr Rosgen

Rosgen classification for Oyster Creek hillslope fork above Hwy 88							
		XS 1	Dist	XS 2	Dist	XS 3	Reach
Bankfull height elevation		97.04	45	94.86	25.00	93.11	
Slope			0.048444		0.07		0.056143
Max Bankfull Depth		0.98		1.69		0.52	1.06
Avg Bankfull depth		0.60		1.26		0.35	0.74
Mean bed elevation		96.44		93.60		92.76	
Bed slope			0.06311		0.03360		0.05257
Bankfull width		4.3		4		1.9	3.4
Bankfull W/D ratio		7.2		3.2		5.4	4.6
Elev @ 2x Bankfull depth		98.02		96.55		93.63	
Width @ 2x Bankfull depth		16.0		32		3.4	17.1
Ratio of 2x width / bankfull width							5.04
d50		5		16		9.5	10
Entrenchment							5.04
W/D							4.6
Slope							0.056
Rosgen classification							E4b

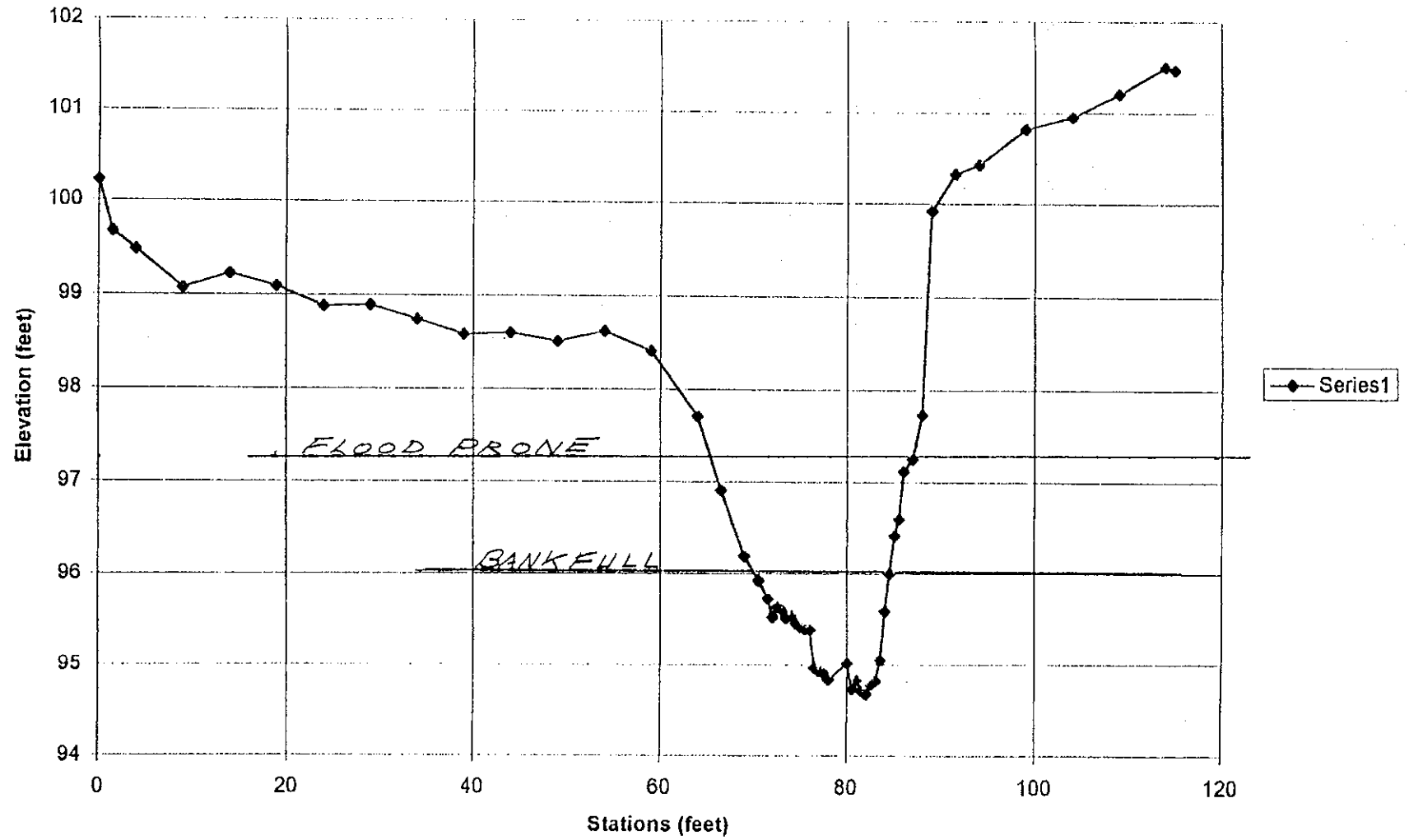
Chart8

Oyster Creek above Hwy 88



Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		0	0.00	100.00				0	0.00	100.00	4096
L Boulder	2048	11	0	0.00		0	0.00	100.00				0	0.00	100.00	2048
M Boulder	1024	10	0	0.00		0	0.00	100.00				0	0.00	100.00	1024
S Boulder	512	9	0	0.00		0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	512
L Cobble	256	8	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	256
S Cobble	128	7	2	1.71	100.00	1	0.85	100.00	1	0.94	100.00	4	1.18	100.00	128
VC Gravel	64	6	7	5.98	98.29	6	5.13	99.15	12	11.32	99.06	25	7.35	98.82	64
C Gravel	32	5	34	29.06	92.31	26	22.22	94.02	27	25.47	87.74	87	25.59	91.47	32
M Gravel	16	4	41	35.04	63.25	39	33.33	71.79	34	32.08	62.26	114	33.53	65.88	16
F Gravel	8	3	24	20.51	28.21	32	27.35	38.46	20	18.87	30.19	76	22.35	32.35	8
VF Gravel	4	2	8	6.84	7.69	11	9.40	11.11	9	8.49	11.32	28	8.24	10.00	4
VC Sand	2	1	1	0.85	0.85	2	1.71	1.71	3	2.83	2.83	6	1.76	1.76	2
Sand	1		0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1
Silt/clay			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			117	100		117	100.00		106	100.00		340	100.00		

Oyster Creek above Hwy 88 XS3

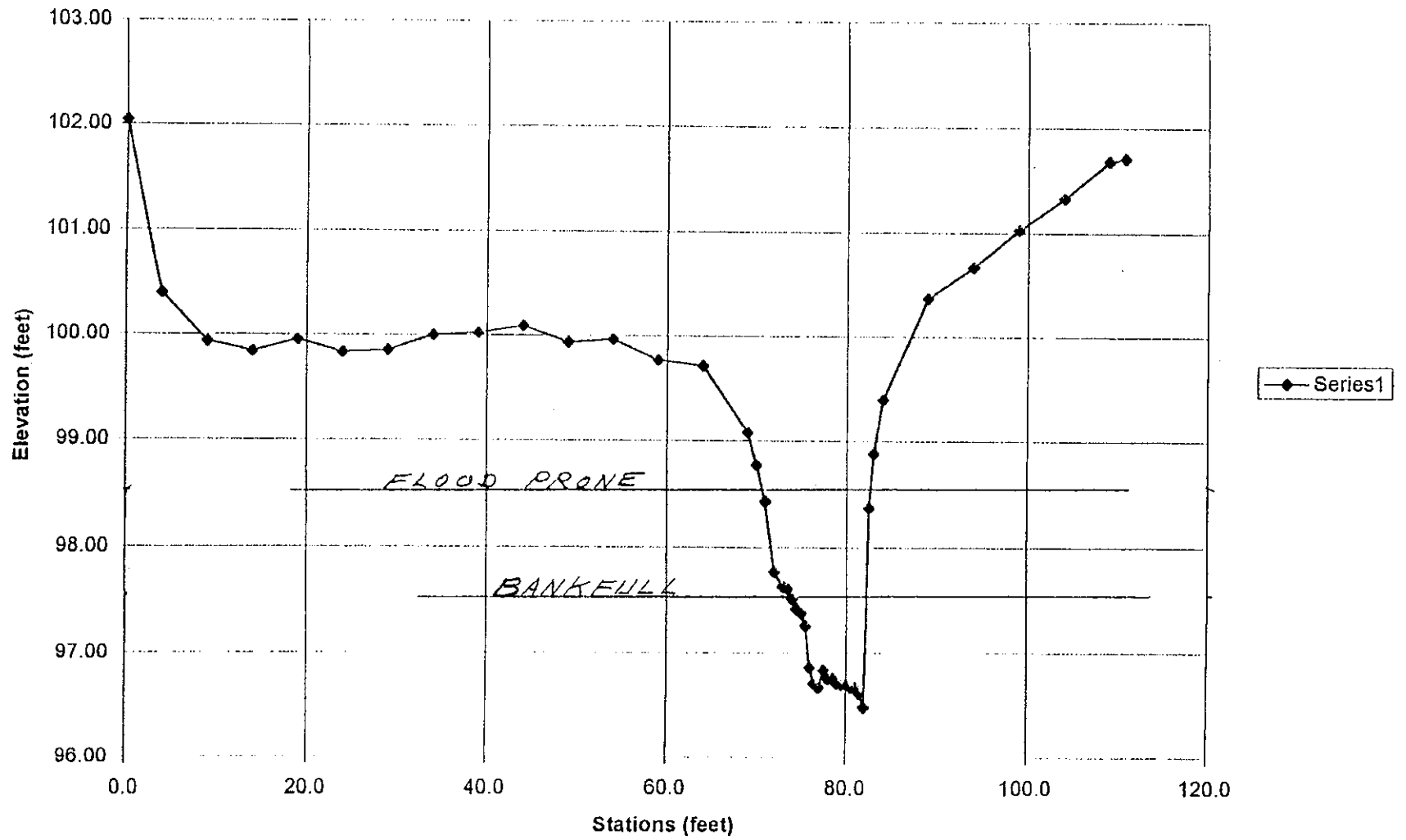


Sheet6

Oyster Creek Meadow above Hwy 88, XS3											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
105.0	104.0		3.37			100.96					
110.0	109.0		3.11			101.22					
115.0	114.0		2.81			101.52					
116.0	115.0		2.84			101.49					
RBXS3	115.0		2.41			101.92					
BM1				4.33		100.00					

Oyster Creek Meadow above Hwy 88, XS3.											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		4.33			104.33	100.00			Bankfull height elevation		
LBXS1	0.0		3.94			100.39			95.97		
1.0	0.0		4.10			100.23			Max Bankfull Depth		
2.5	1.5		4.65			99.68			1.29		
5.0	4.0		4.84			99.49			Avg Bankfull depth		
10.0	9.0		5.25			99.08			0.75		
15.0	14.0		5.10			99.23			Bankfull width		
20.0	19.0		5.23			99.10			12.0		
25.0	24.0		5.44			98.89			Bankfull W/D ratio		
30.0	29.0		5.43			98.90			16.0		
35.0	34.0		5.58			98.75			Elev @ 2x Bankfull depth		
40.0	39.0		5.74			98.59			97.26		
45.0	44.0		5.72			98.61			Width @ 2x Bankfull depth		
50.0	49.0		5.81			98.52			21.0		
55.0	54.0		5.70			98.63					
60.0	59.0		5.91			98.42					
65.0	64.0		6.62			97.71					
67.5	66.5		7.41			96.92					
70.0	69.0		8.13			96.20					
71.5	70.5		8.40			95.93	0.04	QbkfL			
72.5	71.5		8.59			95.74	0.23				
73.0	72.0		8.79			95.54	0.43				
73.5	72.5		8.68			95.65	0.32				
74.0	73.0		8.71			95.62	0.35				
74.5	73.5		8.80			95.53	0.44				
75.0	74.0		8.78			95.55	0.42				
75.5	74.5		8.86			95.47	0.50				
76.0	75.0		8.90			95.43	0.54				
76.5	75.5		8.92			95.41	0.56				
77.0	76.0		8.93			95.40	0.57	LEW			
77.5	76.5		9.35			94.98	0.99				
78.0	77.0		9.39			94.94	1.03				
78.5	77.5		9.41			94.92	1.05				
79.0	78.0		9.48			94.85	1.12				
81.0	80.0		9.30			95.03	0.94				
81.5	80.5		9.59			94.74	1.23				
82.0	81.0		9.49			94.84	1.13				
82.5	81.5		9.61			94.72	1.25				
83.0	82.0		9.65			94.68	1.29	Thalweg			
83.5	82.5		9.54			94.79	1.18				
84.0	83.0		9.50			94.83	1.14				
84.5	83.5		9.27			95.06	0.91				
85.0	84.0		8.73			95.60	0.37	REW			
85.5	84.5		8.32			96.01		QbkfR			
86.0	85.0		7.90			96.43					
86.5	85.5		7.72			96.61					
87.0	86.0		7.20			97.13					
88.0	87.0		7.07			97.26					
89.0	88.0		6.59			97.74					
90.0	89.0		4.40			99.93		top of bank			
92.5	91.5		4.00			100.33					
95.0	94.0		3.90			100.43					
100.0	99.0		3.50			100.83					

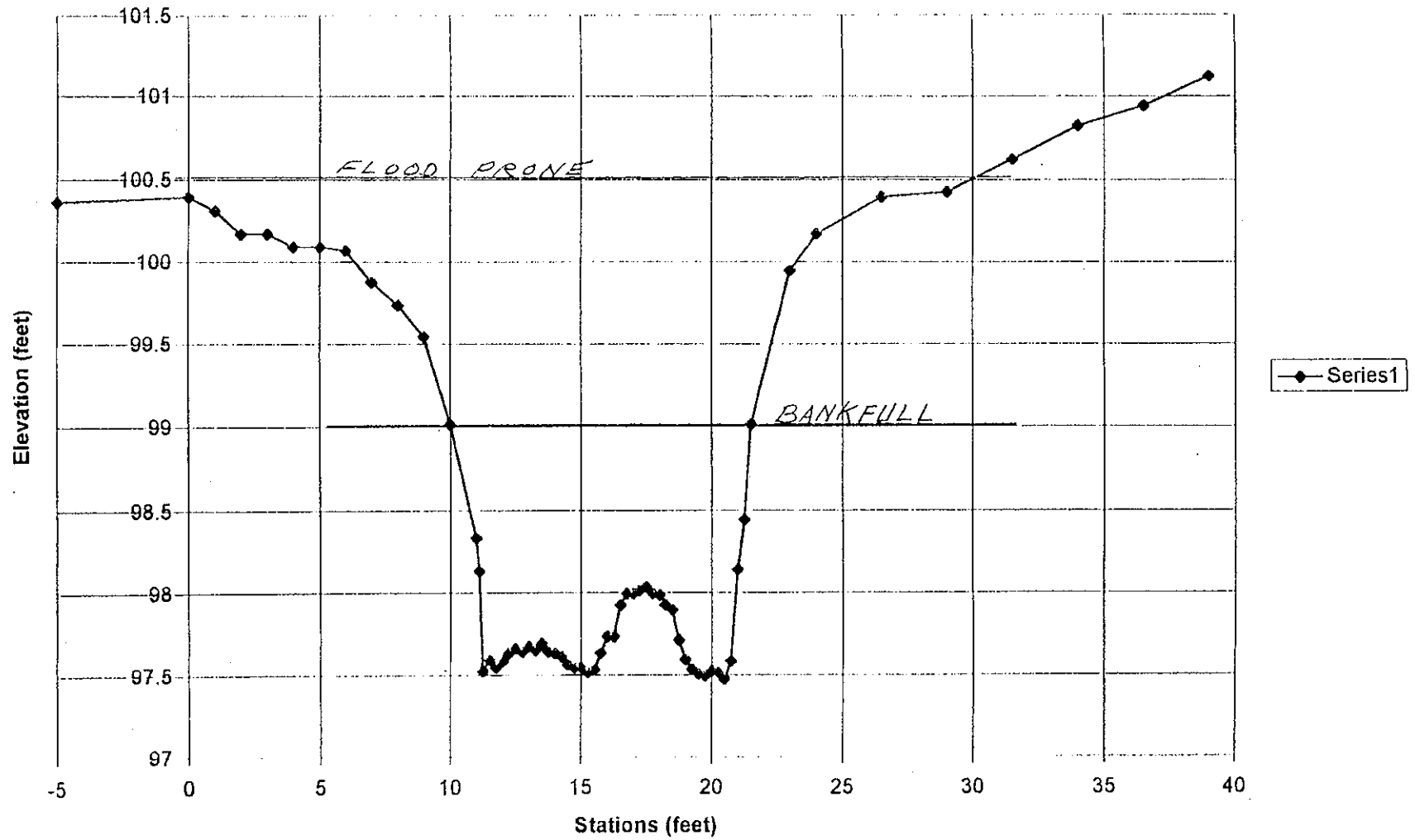
Oyster Creek above Hwy 88 XS2



OYCMAR XS2

Oyster Creek Meadow above Hwy 88, XS2										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		4.33			104.33	100.00			Bankfull height elevation	
LBXS1	0.0		2.20			102.13			97.62	
1.0	0.0		2.28			102.05			Max Bankfull Depth	
5.0	4.0		3.92			100.41			1.00	
10.0	9.0		4.39			99.94			Avg Bankfull depth	
15.0	14.0		4.48			99.85			0.74	
20.0	19.0		4.37			99.96			Bankfull width	
25.0	24.0		4.49			99.84			9.0	
30.0	29.0		4.47			99.86			Bankfull W/D ratio	
35.0	34.0		4.32			100.01			12.1	
40.0	39.0		4.30			100.03			Elev @ 2x Bankfull depth	
45.0	44.0		4.23			100.10			98.62	
50.0	49.0		4.39			99.94			Width @ 2x Bankfull depth	
55.0	54.0		4.36			99.97			12.0	
60.0	59.0		4.56			99.77				
65.0	64.0		4.61			99.72				
70.0	69.0		5.24			99.09				
71.0	70.0		5.55			98.78				
72.0	71.0		5.89			98.44				
73.0	72.0		6.55			97.78				
74.0	73.0		6.69			97.64				
74.5	73.5		6.71			97.62	0.00	QbkfIL		
75.0	74.0		6.81			97.52	0.10			
75.5	74.5		6.90			97.43	0.19			
76.0	75.0		6.94			97.39	0.23	LEW		
76.5	75.5		7.06			97.27	0.35			
77.0	76.0		7.46			96.87	0.75			
77.5	76.5		7.61			96.72	0.90			
78.0	77.0		7.65			96.68	0.94			
78.5	77.5		7.48			96.85	0.77			
79.0	78.0		7.57			96.76	0.86			
79.5	78.5		7.56			96.77	0.85			
80.0	79.0		7.61			96.72	0.90			
80.5	79.5		7.62			96.71	0.91			
81.0	80.0		7.62			96.71	0.91			
81.5	80.5		7.65			96.68	0.94			
82.0	81.0		7.64			96.69	0.93			
82.5	81.5		7.71			96.62	1.00	Thalweg		
83.0	82.0		7.84			96.49	1.13	REW		
83.5	82.5		5.95			98.38		QbfIR		
84.0	83.0		5.44			98.89				
85.0	84.0		4.93			99.40				
90.0	89.0		3.95			100.38				
95.0	94.0		3.65			100.68				
100.0	99.0		3.29			101.04				
105.0	104.0		2.99			101.34				
110.0	109.0		2.64			101.69				
111.8	110.8		2.61			101.72				
RBXS2	110.8		2.25			102.08				
BM1				4.33		100.00				

Oyster Creek above Hwy 88 XS1



OYCMAR XS1

Oyster Creek Meadow above Hwy 88, XS1										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
20.25	19.25		6.79			97.54	1.48			
20.5	19.5		6.82			97.51	1.51			
20.75	19.75		6.83			97.50	1.52			
21.0	20.0		6.80			97.53	1.49			
21.25	20.25		6.81			97.52	1.50			
21.5	20.5		6.85			97.48	1.54	Thalweg		
21.75	20.75		6.74			97.59	1.43			
22.0	21.0		6.18			98.15	0.87	REW		
22.25	21.25		5.88			98.45	0.57			
22.5	21.5		5.31			99.02	0.00	QbfIR		
24.0	23.0		4.38			99.95				
25.0	24.0		4.15			100.18				
27.5	26.5		3.93			100.40				
30.0	29.0		3.90			100.43				
32.5	31.5		3.70			100.63				
35.0	34.0		3.50			100.83				
37.5	36.5		3.38			100.95				
40.0	39.0		3.20			101.13				
58.3	57.3		1.62			102.71				
RBXS1	57.3		1.53			102.80				
BM1				4.33		100.00				

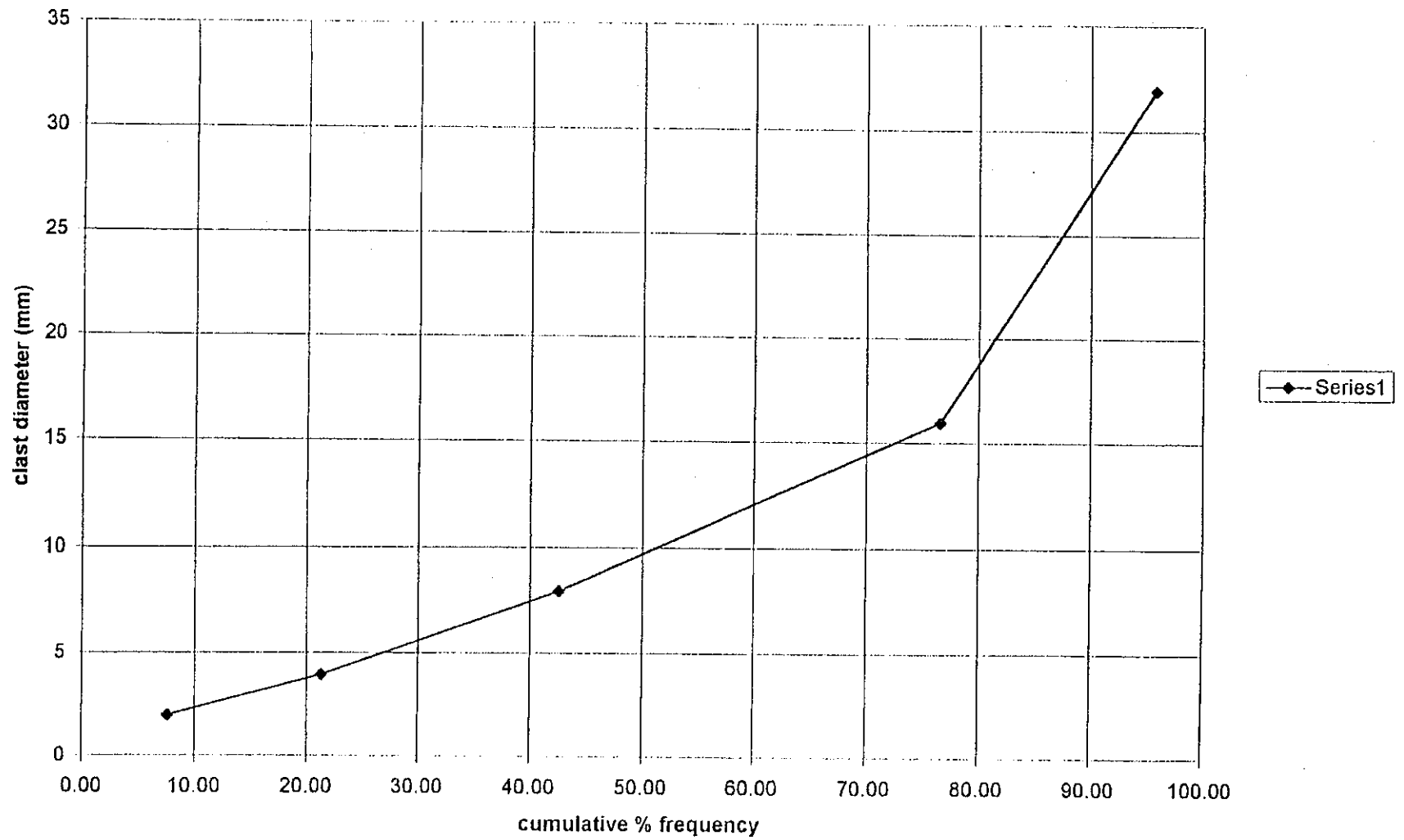
OYCMAR XS1

Oyster Creek Meadow above Hwy 88, XS1											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		4.33			104.33	100.00					
-5.0	-5.0		3.96			100.37			Bankfull height elevation		
LBXS1	0.0		2.15			102.18			99.02		
1.0	0.0		3.93			100.40			Max Bankfull Depth		
2.0	1.0		4.01			100.32			1.54		
3.0	2.0		4.15			100.18			Avg Bankfull depth		
4.0	3.0		4.15			100.18			1.28		
5.0	4.0		4.23			100.10			Bankfull width		
6.0	5.0		4.23			100.10			11.5		
7.0	6.0		4.25			100.08			Bankfull W/D ratio		
8.0	7.0		4.45			99.88			9.0		
9.0	8.0		4.59			99.74			Elev @ 2x Bankfull depth		
10.0	9.0		4.78			99.55			100.56		
11.0	10.0		5.31			99.02	0.00	QbkfIL	Width @ 2x Bankfull depth		
12.0	11.0		5.99			98.34	0.68		60.0		
12.1	11.1		6.19			98.14	0.88	LEW			
12.25	11.25		6.80			97.53	1.49				
12.5	11.5		6.73			97.60	1.42				
12.75	11.75		6.78			97.55	1.47				
13.0	12.0		6.74			97.59	1.43				
13.25	12.25		6.69			97.64	1.38				
13.5	12.5		6.66			97.67	1.35				
13.75	12.75		6.68			97.65	1.37				
14.0	13.0		6.65			97.68	1.34				
14.25	13.25		6.67			97.66	1.36				
14.5	13.5		6.63			97.70	1.32				
14.75	13.75		6.68			97.65	1.37				
15.0	14.0		6.69			97.64	1.38				
15.25	14.25		6.71			97.62	1.40				
15.5	14.5		6.76			97.57	1.45				
15.75	14.75		6.78			97.55	1.47				
16.0	15.0		6.78			97.55	1.47				
16.25	15.25		6.81			97.52	1.50				
16.5	15.5		6.79			97.54	1.48				
16.75	15.75		6.69			97.64	1.38				
17.0	16.0		6.59			97.74	1.28				
17.25	16.25		6.59			97.74	1.28				
17.5	16.5		6.40			97.93	1.09				
17.75	16.75		6.33			98.00	1.02				
18.0	17.0		6.33			98.00	1.02				
18.25	17.25		6.31			98.02	1.00				
18.5	17.5		6.29			98.04	0.98				
18.75	17.75		6.33			98.00	1.02				
19.0	18.0		6.34			97.99	1.03				
19.25	18.25		6.40			97.93	1.09				
19.5	18.5		6.43			97.90	1.12				
19.75	18.75		6.61			97.72	1.30				
20.0	19.0		6.73			97.60	1.42				

Oyster Cr abv Hwy 88 Rosgen

Rosgen classification for Oyster Creek above Hwy 88							
	XS 1	Dist	XS 2	Dist	XS 3	Reach	
Bankfull height elevation	99.02	109	97.62	126.00	95.97		
Slope		0.012844		0.013095		0.012979	
Max Bankfull Depth	1.54		1.00		1.29	1.28	
Avg Bankfull depth	1.28		0.74		0.75	0.92	
Weighted mean bed elevation	97.74		96.88		95.22		
Bed slope		0.0093		0.0081		0.003660	
Bankfull width	11.5		9		12	10.8	
Bankfull W/D ratio	9.0		12.2		16.0	11.7	
Elev @ 2x Bankfull depth	100.56		98.62		97.26		
Width @ 2x Bankfull depth	60.0		12		21	31.0	
Ratio of 2x width / bankfull width						2.86	
d50	45		65		45	52	
Entrenchment						2.86	
W/D						11.7	
Slope						0.013	
Rosgen classification :						E4	

Oyster Creek in meadow below Hwy 88

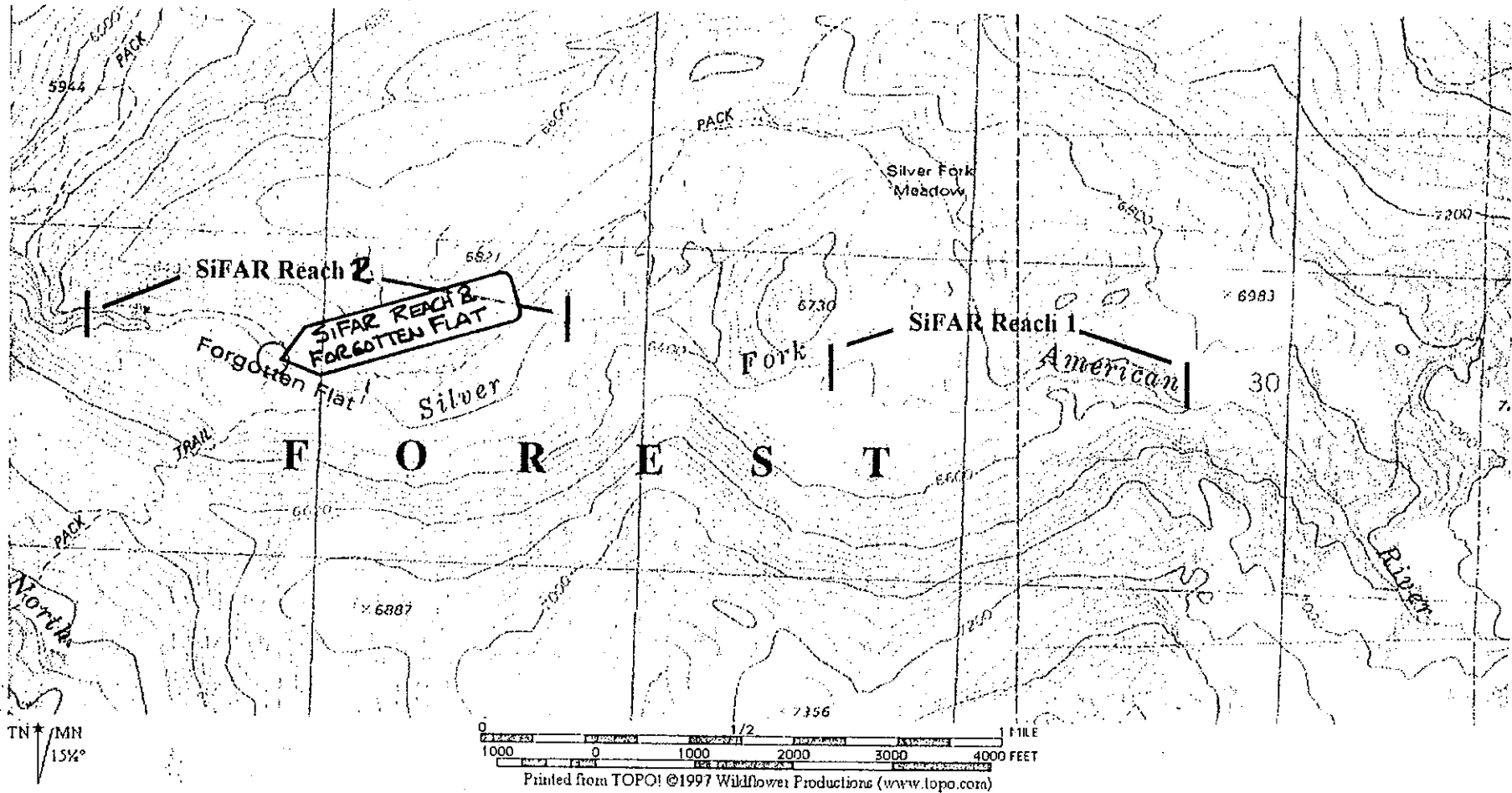


Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		0	0.00	100.00				0	0.00	100.00	4096
L Boulder	2048	11	0	0.00		0	0.00	100.00				0	0.00	100.00	2048
M Boulder	1024	10	0	0.00		0	0.00	100.00				0	0.00	100.00	1024
S Boulder	512	9	0	0.00		0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	512
L Cobble	256	8	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	256
S Cobble	128	7	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	128
VC Gravel	64	6	8	7.21	100.00	4	3.45	100.00	2	1.96	100.00	14	4.26	100.00	64
C Gravel	32	5	21	18.92	92.79	21	18.10	96.55	21	20.59	98.04	63	19.15	95.74	32
M Gravel	16	4	33	29.73	73.87	50	43.10	78.45	29	28.43	77.45	112	34.04	76.60	16
F Gravel	8	3	24	21.62	44.14	20	17.24	35.34	26	25.49	49.02	70	21.28	42.55	8
VF Gravel	4	2	16	14.41	22.52	13	11.21	18.10	16	15.69	23.53	45	13.68	21.28	4
VC Sand	2	1	9	8.11	8.11	8	6.90	6.90	8	7.84	7.84	25	7.60	7.60	2
Sand	1		0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1
Silt/clay			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			111	100		116	100.00		102	100.00		329	100.00		

Caples@ J Schneider Rosgen

Rosgen classification for Caples Creek @ Jake Schneider Meadow								
		XS 1	Dist	XS 2	Dist	XS 3	Reach	
Bankfull height elevation		295.76	300	294.74	431.00	294.13		
Slope			0.0034		0.001415			0.00223
Max Bankfull Depth		3.51		2.73		2.74		2.99
Avg Bankfull depth		2.61		1.55		1.86		2.01
Mean bed elevation		293.15		293.19		292.27		
Bed slope			-0.00013		0.002135			0.00120
Thalweg elevation		292.25		292.01		291.39		
Thalweg slope			0.00080		0.001439			0.00033
Bankfull width		56.4		41		49.6		49.0
Bankfull W/D ratio		21.6		26.5		26.7		24.4
Elev @ 2x Bankfull depth		299.27		297.46		296.86		
Width @ 2x Bankfull depth		69.0		55		67.3		63.8
Ratio of 2x width / bankfull width								1.30
d50		28		54		14		32
Entrenchment								1.30
W/D								24.4
Slope								0.002
Rosgen classification								F4

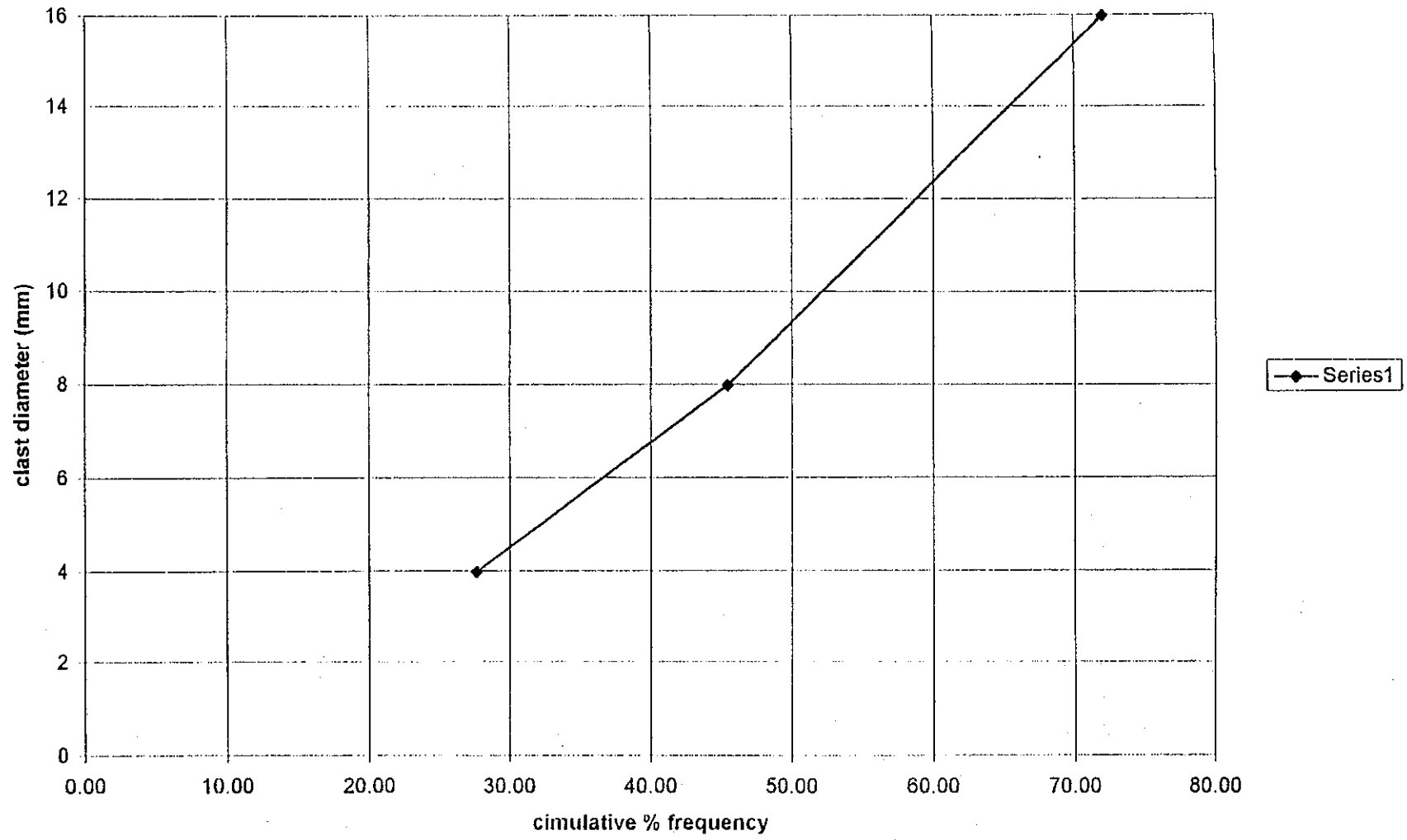
ROSGEN
SIFAR REACH 2 - FORGOTTEN FLAT



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Chart7

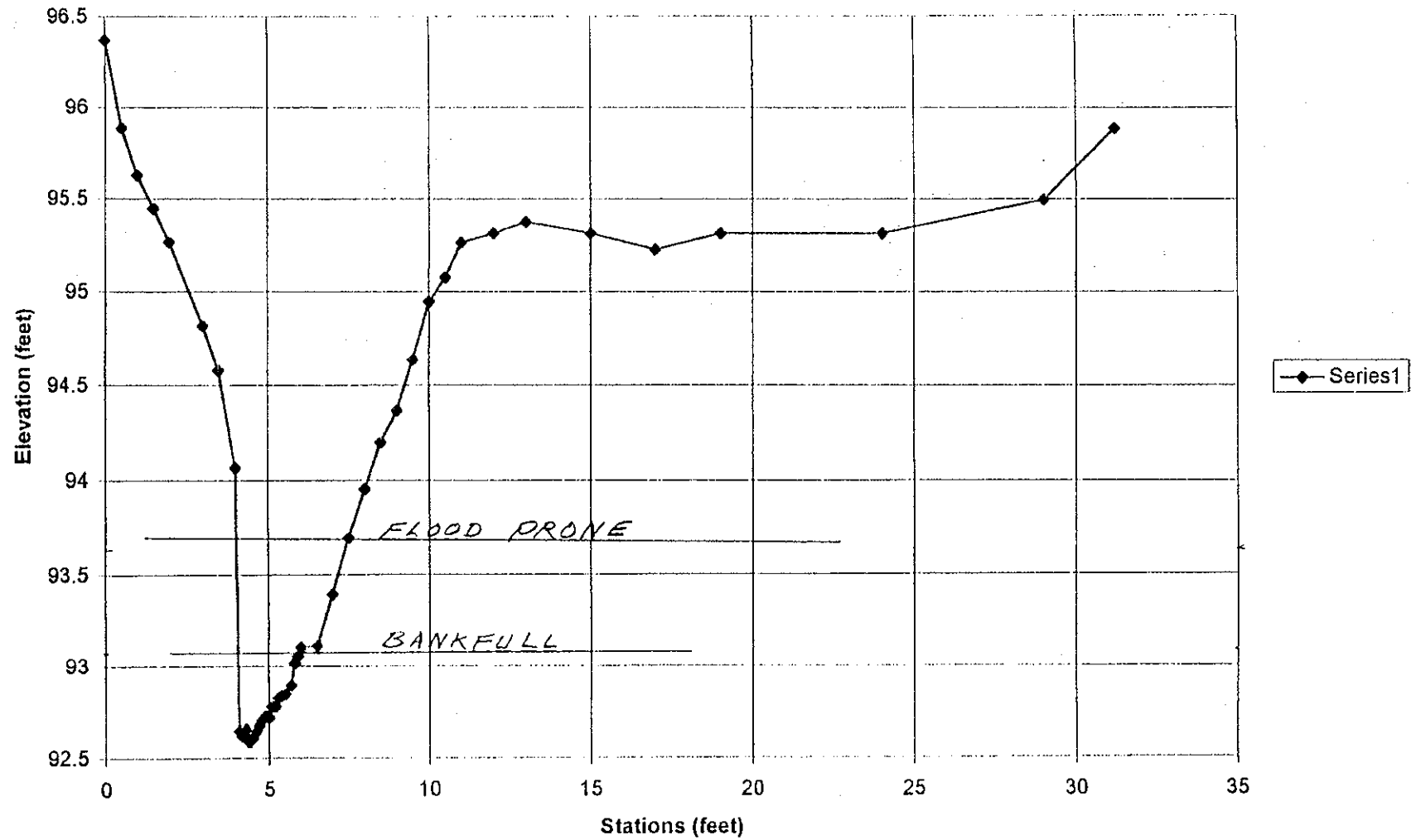
Oyster Cr hillslope tributary



Thunder/Mtn trib

Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		0	0.00	100.00				0	0.00	100.00	4096
L Boulder	2048	11	0	0.00		0	0.00	100.00				0	0.00	100.00	2048
M Boulder	1024	10	0	0.00		0	0.00	100.00				0	0.00	100.00	1024
S Boulder	512	9	0	0.00		0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	512
L Cobble	256	8	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	256
S Cobble	128	7	2	1.98	100.00	2	1.80	100.00	1	0.97	100.00	5	1.59	100.00	128
VC Gravel	64	6	5	4.95	98.02	10	9.01	98.20	14	13.59	99.03	29	9.21	98.41	64
C Gravel	32	5	7	6.93	93.07	11	9.91	89.19	36	34.95	85.44	54	17.14	89.21	32
M Gravel	16	4	17	16.83	86.14	37	33.33	79.28	30	29.13	50.49	84	26.67	72.06	16
F Gravel	8	3	27	26.73	69.31	24	21.62	45.95	5	4.85	21.36	56	17.78	45.40	8
VF Gravel	4	2	28	27.72	42.57	16	14.41	24.32	6	5.83	16.50	50	15.87	27.62	4
VC Sand	2	1	15	14.85	14.85	11	9.91	9.91	11	10.68	10.68	37	11.75	11.75	2
Sand	1		0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1
Silt/clay			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			101	100		111	100.00		103	100.00		315	100.00		

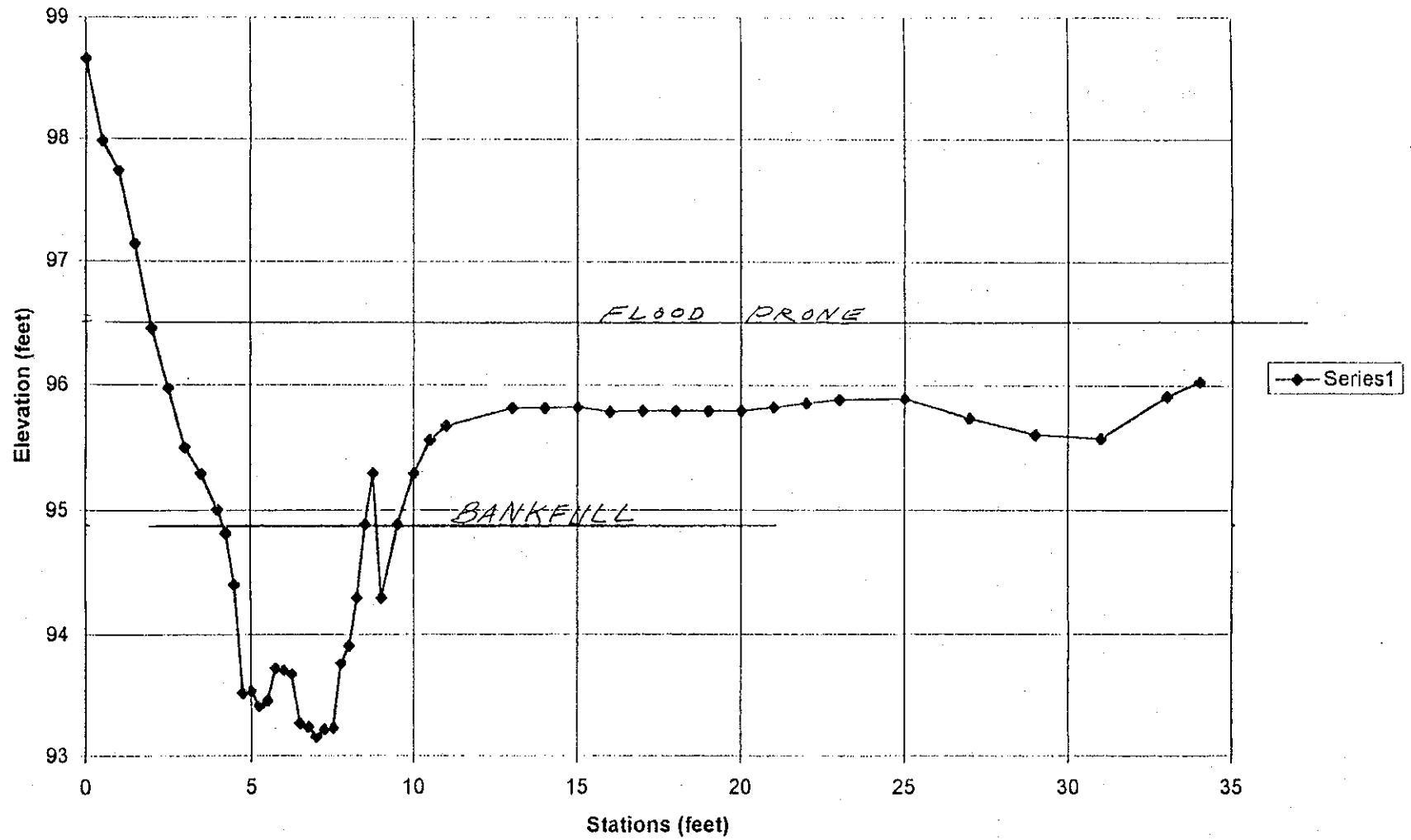
Oyster Cr hillslope tributary, XS3



ThunderPeakCr XS3

Oyster Creek hillslope fork above Hwy 88, XS3										
Book	Adj.	Back	Interm.	Fore	Hght. of		Depth @		Rosgen	
Station	Station	Sight	Sight	Sight	Inst.	Elevation	bankfull	Notes	notes	
BM1		3.76			103.76	100.00			Bankfull height elevation	
LBXS1	0.0		7.34			96.42			93.11	
1.0	0.0		7.38			96.38			Max Bankfull Depth	
1.5	0.5		7.87			95.89			0.52	
2.0	1.0		8.13			95.63			Avg Bankfull depth	
2.5	1.5		8.31			95.45			0.35	
3.0	2.0		8.49			95.27			Bankfull width	
4.0	3.0		8.94			94.82			1.9	
4.5	3.5		9.18			94.58			Bankfull W/D ratio	
5.0	4.0		9.69			94.07			5.4	
5.1	4.1		11.11			92.65	0.46	LEW	Elev @ 2x Bankfull depth	
5.2	4.2		11.14			92.62	0.49		93.63	
5.3	4.3		11.10			92.66	0.45		Width @ 2x Bankfull depth	
5.4	4.4		11.17			92.59	0.52	Thalweg	3.4	
5.5	4.5		11.15			92.61	0.50			
5.6	4.6		11.11			92.65	0.46	REW		
5.7	4.7		11.08			92.68	0.43			
5.8	4.8		11.05			92.71	0.40	Rock		
5.9	4.9		11.03			92.73	0.38	Rock		
6.0	5.0		11.04			92.72	0.39			
6.1	5.1		10.98			92.78	0.33			
6.2	5.2		10.98			92.78	0.33			
6.3	5.3		10.93			92.83	0.28			
6.4	5.4		10.92			92.84	0.27			
6.5	5.5		10.91			92.85	0.26			
6.7	5.7		10.86			92.90	0.21			
6.8	5.8		10.74			93.02	0.09			
6.9	5.9		10.70			93.06	0.05			
7.0	6.0		10.65			93.11		QbflR		
7.5	6.5		10.64			93.12				
8.0	7.0		10.36			93.40				
8.5	7.5		10.06			93.70				
9.0	8.0		9.80			93.96				
9.5	8.5		9.56			94.20				
10.0	9.0		9.39			94.37				
10.5	9.5		9.12			94.64				
11.0	10.0		8.81			94.95				
11.5	10.5		8.68			95.08				
12.0	11.0		8.49			95.27				
13.0	12.0		8.44			95.32				
14.0	13.0		8.38			95.38				
16.0	15.0		8.44			95.32				
18.0	17.0		8.53			95.23				
20.0	19.0		8.44			95.32				
25.0	24.0		8.44			95.32				
30.0	29.0		8.26			95.50				
32.2	31.2		7.87			95.89				
RBXS3	31.2		8.02			95.74				
BM1				3.76		100.00				

Oyster Cr hillslope tributary, XS2

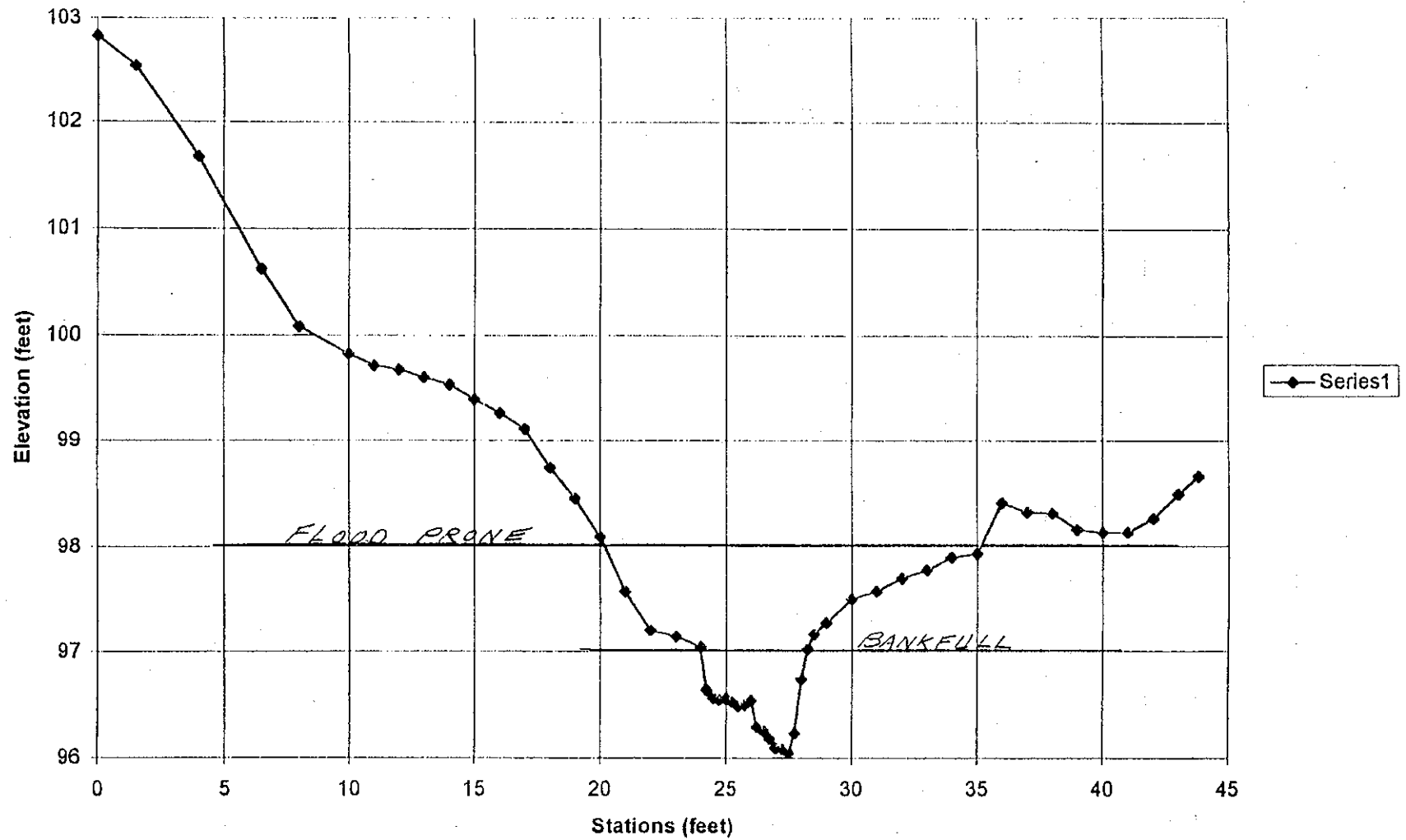


ThunderPeakCr XS2

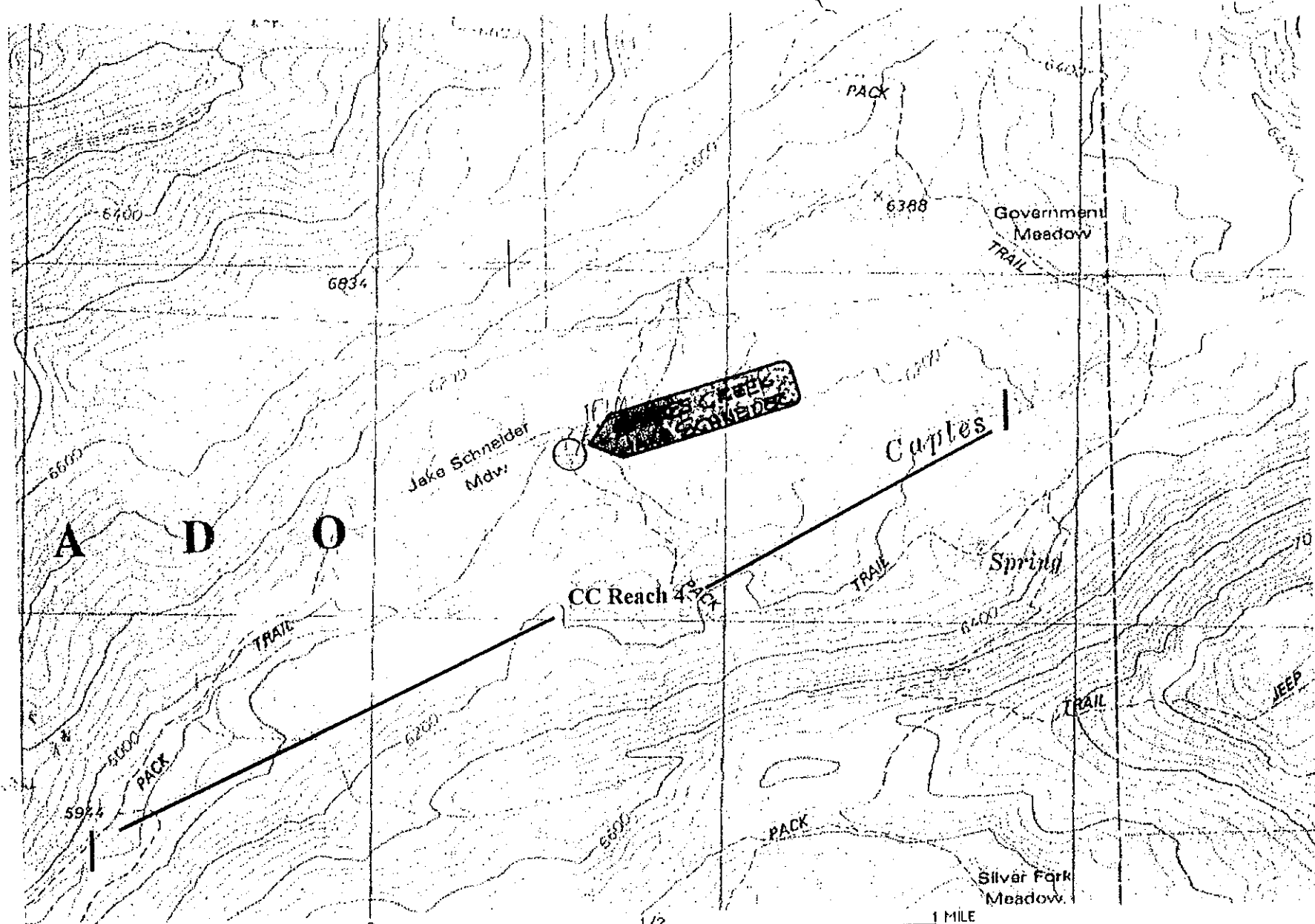
Oyster Creek hillslope fork above Hwy 88, XS2											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		3.76			103.76	100.00			Bankfull height elevation		
LBXS1	0.0		4.94			98.82			94.86		
1.0	0.0		5.09			98.67			Max Bankfull Depth		
1.5	0.5		5.77			97.99			1.69		
2.0	1.0		6.02			97.74			Avg Bankfull depth		
2.5	1.5		6.61			97.15			1.26		
3.0	2.0		7.29			96.47			Bankfull width		
3.5	2.5		7.78			95.98			4.0		
4.0	3.0		8.25			95.51			Bankfull W/D ratio		
4.5	3.5		8.46			95.30			3.2		
5.0	4.0		8.75			95.01			Elev @ 2x Bankfull depth		
5.25	4.25		8.94			94.82	0.03	QbkfL	96.55		
5.5	4.5		9.35			94.41	0.44		Width @ 2x Bankfull depth		
5.75	4.75		10.25			93.51	1.35	LEW	32.0		
6.0	5.0		10.23			93.53	1.33				
6.25	5.25		10.35			93.41	1.44				
6.5	5.5		10.31			93.45	1.41				
6.75	5.75		10.04			93.72	1.14	Rock			
7.0	6.0		10.06			93.70	1.16	Rock			
7.25	6.25		10.09			93.67	1.19				
7.5	6.5		10.49			93.27	1.58				
7.75	6.75		10.52			93.24	1.61				
8.0	7.0		10.60			93.16	1.69	Thalweg			
8.25	7.25		10.54			93.22	1.64				
8.50	7.50		10.53			93.23	1.63	REW			
8.75	7.75		10.00			93.76	1.10				
9.00	8.00		9.85			93.91	0.94				
9.25	8.25		9.46			94.30	0.55				
9.50	8.50		8.87			94.89		QbkfR			
9.75	8.75		8.46			95.30					
10.00	9.00		9.46			94.30					
10.5	9.5		8.87			94.89					
11.00	10.00		8.46			95.30					
11.5	10.5		8.19			95.57					
12.00	11.00		8.08			95.68					
14.0	13.0		7.94			95.82					
15.00	14.00		7.94			95.82					
16.0	15.0		7.93			95.83					
17.00	16.00		7.97			95.79					
18.0	17.0		7.96			95.80					
19.0	18.0		7.96			95.80					
20.0	19.0		7.96			95.80					
21.0	20.0		7.96			95.80					
22.0	21.0		7.93			95.83					
23.0	22.0		7.90			95.86					
24.0	23.0		7.87			95.89					
26.0	25.0		7.86			95.90					
28.0	27.0		8.02			95.74					
30.0	29.0		8.15			95.61					
32.0	31.0		8.18			95.58					
34.0	33.0		7.84			95.92					
35.0	34.0		7.72			96.04					
RBXS2	34.0		7.44			96.32					
BM1				3.76		100.00					

Chart1

Oyster Cr hillslope tributary, XS1



KIDGEN-
CAPLES CREEK (ILL REACH 4)
JAKE SCHNEIDER MEADOWS



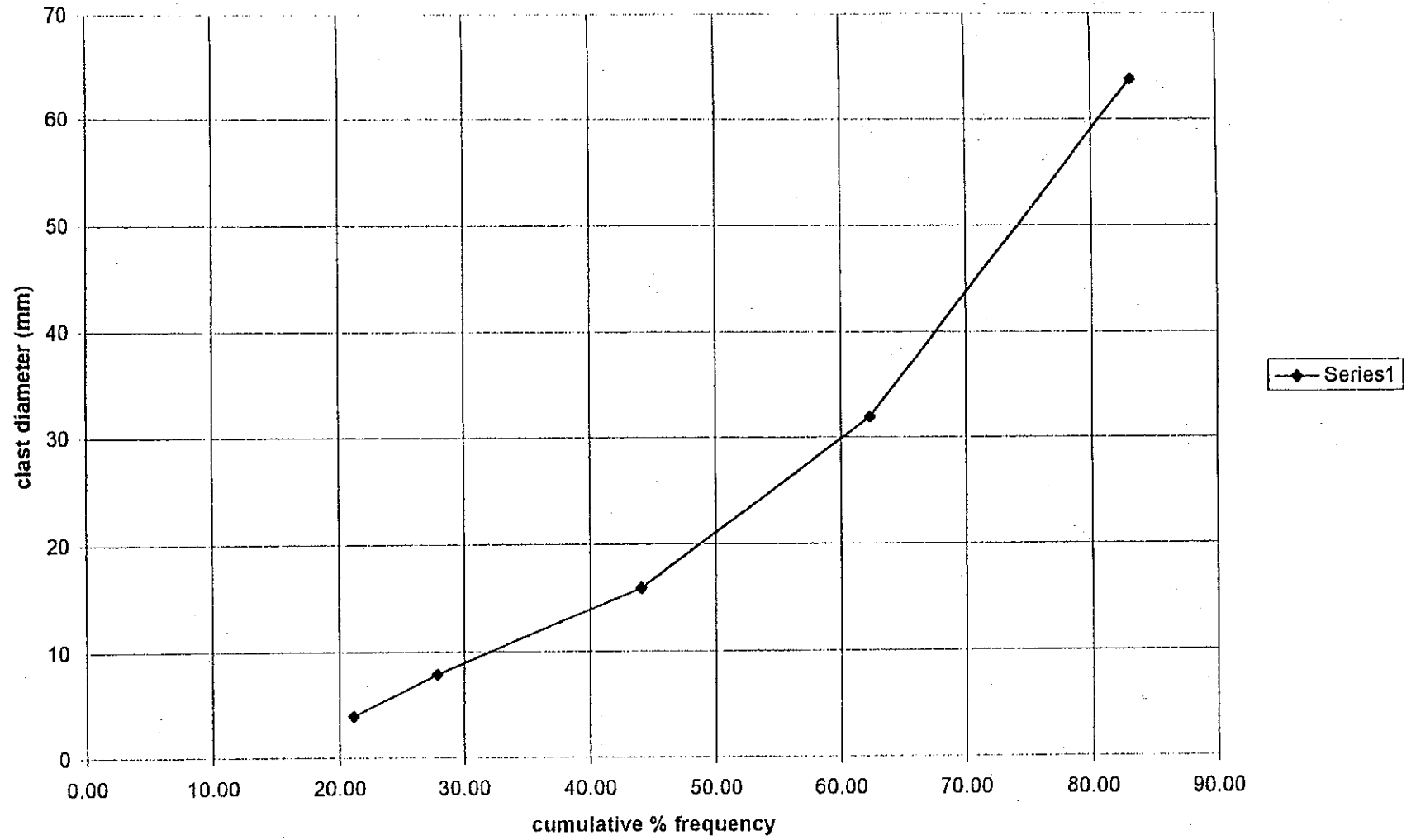
TN * MN
154°

0 1000 0 1000 2000 3000 4000 FEET
1 MILE
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Map 5
CAPLES CR, JAKE SCHNEIDER

Chart9

Caples Cr near Jake Schneider meadow

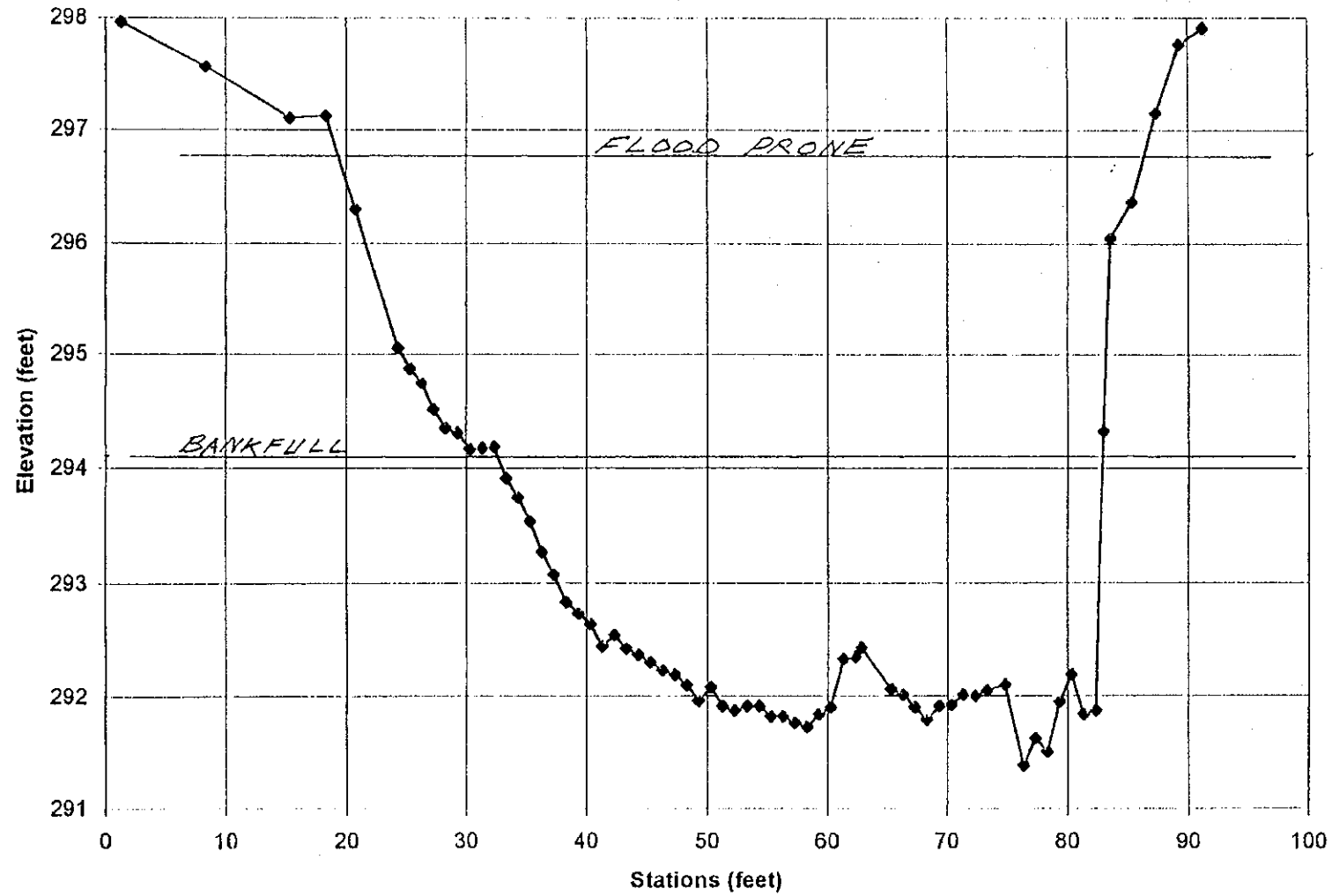


Jake Schneider

Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		0	0.00	100.00				0	0.00	100.00	4096
L Boulder	2048	11	0	0.00		0	0.00	100.00				0	0.00	100.00	2048
M Boulder	1024	10	0	0.00		0	0.00	100.00				0	0.00	100.00	1024
S Boulder	512	9	0	0.00		5	4.10	100.00	0	0.00	100.00	5	1.45	100.00	512
L Cobble	256	8	1	0.87	100.00	2	1.64	95.90	0	0.00	100.00	3	0.87	98.55	256
S Cobble	128	7	19	16.52	99.13	25	20.49	94.26	6	5.56	100.00	50	14.49	97.68	128
VC Gravel	64	6	22	19.13	82.61	33	27.05	73.77	17	15.74	94.44	72	20.87	83.19	64
C Gravel	32	5	18	15.65	63.48	21	17.21	46.72	24	22.22	78.70	63	18.26	62.32	32
M Gravel	16	4	21	18.26	47.83	13	10.66	29.51	22	20.37	56.48	56	16.23	44.06	16
F Gravel	8	3	9	7.83	29.57	6	4.92	18.85	8	7.41	36.11	23	6.67	27.83	8
VF Gravel	4	2	9	7.83	21.74	4	3.28	13.93	10	9.26	28.70	23	6.67	21.16	4
VC Sand	2	1	16	13.91	13.91	13	10.66	10.66	21	19.44	19.44	50	14.49	14.49	2
Sand	1		0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1
Silt/clay			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			115	100		122	100.00		108	100.00		345	100.00		

Chart13

Caples Cr near Jake Schneider meadow, XS3



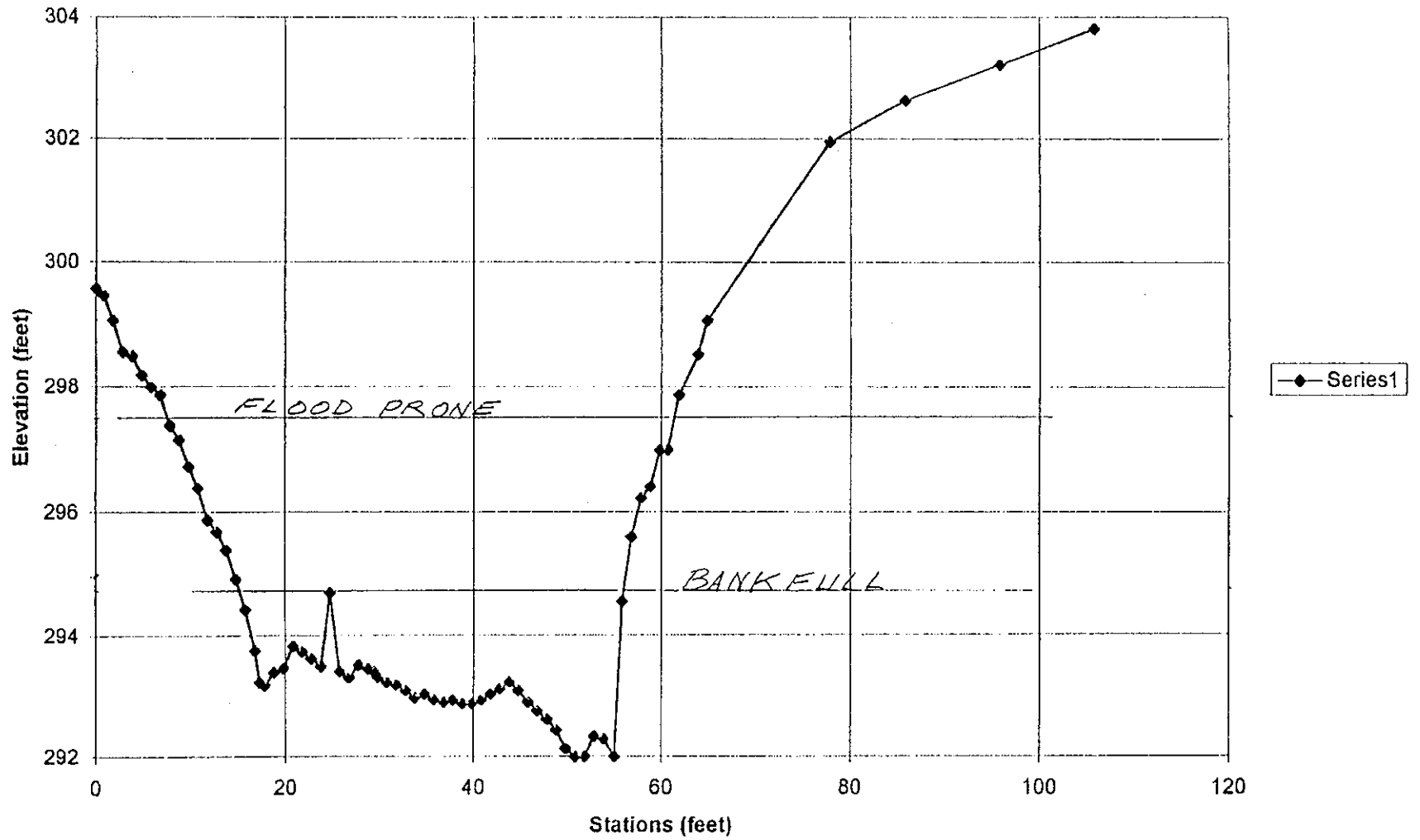
Jake XS3

Caples Creek in Jake Schneider Meadow, XS3											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
45.0	46.3		9.79			292.24	1.89				
46.0	45.3		9.72			292.31	1.82				
47.0	44.3		9.65			292.38	1.75				
48.0	43.3		9.60			292.43	1.70				
49.0	42.3		9.48			292.55	1.58	LEW			
50.0	41.3		9.58			292.45	1.68				
51.0	40.3		9.38			292.65	1.48				
52.0	39.3		9.29			292.74	1.39				
53.0	38.3		9.19			292.84	1.29				
54.0	37.3		8.95			293.08	1.05				
55.0	36.3		8.75			293.28	0.85				
56.0	35.3		8.49			293.54	0.59				
57.0	34.3		8.28			293.75	0.38				
58.0	33.3		8.11			293.92	0.21	Qbkfl			
59.0	32.3		7.84			294.19					
60.0	31.3		7.85			294.18					
61.0	30.3		7.86			294.17					
62.0	29.3		7.72			294.31					
63.0	28.3		7.68			294.35					
64.0	27.3		7.52			294.51					
65.0	26.3		7.28			294.75					
66.0	25.3		7.15			294.88					
67.0	24.3		6.97			295.06					
70.5	20.8		5.72			296.31					
73.0	18.3		4.90			297.13					
76.0	15.3		4.92			297.11					
83.0	8.3		4.46			297.57					
90.0	1.3		4.06			297.97					
LBXS3	0.0		3.10			298.93					
TP3				1.54		300.49					
TP3		2.77			303.26	300.49					
TP2				2.16		301.10					

Jake XS3

Caples Creek in Jake Schneider Meadow, XS3											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
RBXS2		6.12			306.12	300.00					
TP2				5.02		301.10		Rebar on RB bridge abutmt	Bankfull height elevation		
TP2		2.16			303.26	301.10			294.13		
TP3				2.77		300.49			Max Bankfull Depth		
TP3		1.54			302.03	300.49			2.74		
RBXS3	91.3		3.69			298.34			Avg Bankfull depth		
0.0	91.3		4.11			297.92			1.86		
2.0	89.3		4.25			297.78			Bankfull width		
4.0	87.3		4.87			297.16			49.6		
6.0	85.3		5.65			296.38			Bankfull W/D ratio		
7.8	83.5		5.97			296.06			26.6		
8.4	82.9		7.70			294.33	-0.20	QbkflR	Elev @ 2x Bankfull depth		
9.0	82.3		10.15			291.88	2.25		296.86		
10.0	81.3		10.18			291.85	2.28	REW	Width @ 2x Bankfull depth		
11.0	80.3		9.83			292.20	1.93		67.3		
12.0	79.3		10.07			291.96	2.17				
13.0	78.3		10.52			291.51	2.62				
14.0	77.3		10.40			291.63	2.50				
15.0	76.3		10.64			291.39	2.74	Thalweg			
16.5	74.8		9.92			292.11	2.02				
18.0	73.3		9.97			292.06	2.07				
19.0	72.3		10.02			292.01	2.12				
20.0	71.3		10.01			292.02	2.11				
21.0	70.3		10.10			291.93	2.20				
22.0	69.3		10.11			291.92	2.21				
23.0	68.3		10.23			291.80	2.33				
24.0	67.3		10.12			291.91	2.22				
25.0	66.3		10.01			292.02	2.11				
26.0	65.3		9.96			292.07	2.06				
28.5	62.8		9.59			292.44	1.69				
29.0	62.3		9.67			292.36	1.77				
30.0	61.3		9.69			292.34	1.79				
31.0	60.3		10.12			291.91	2.22				
32.0	59.3		10.18			291.85	2.28				
33.0	58.3		10.30			291.73	2.40				
34.0	57.3		10.26			291.77	2.36				
35.0	56.3		10.20			291.83	2.30				
36.0	55.3		10.20			291.83	2.30				
37.0	54.3		10.11			291.92	2.21				
38.0	53.3		10.11			291.92	2.21				
39.0	52.3		10.15			291.88	2.25				
40.0	51.3		10.11			291.92	2.21				
41.0	50.3		9.94			292.09	2.04				
42.0	49.3		10.06			291.97	2.16				
43.0	48.3		9.92			292.11	2.02				
44.0	47.3		9.83			292.20	1.93				

Caples Cr near Jake Schneider meadow, XS2



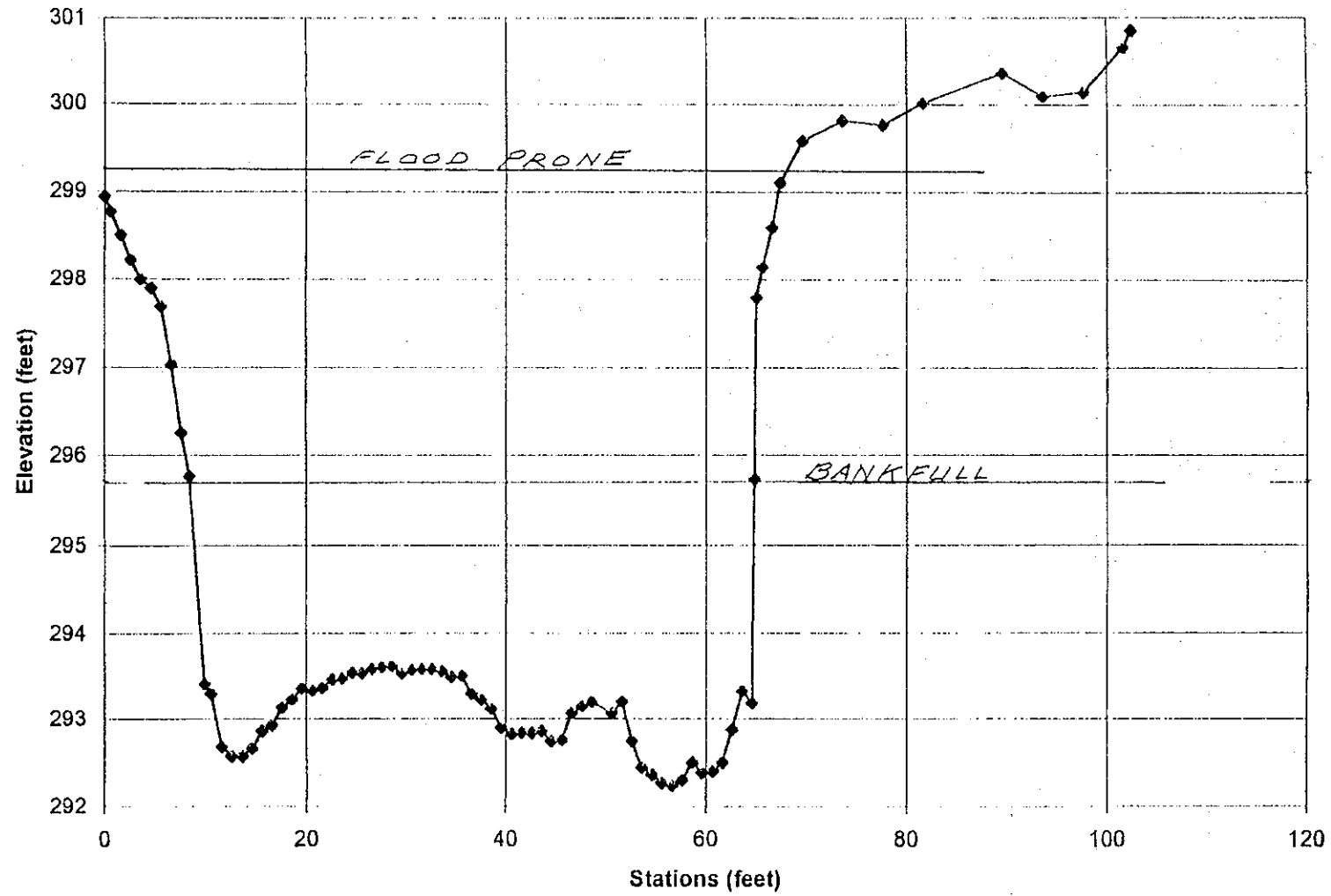
Jake XS2

Daples Creek in Jake Schneider Meadow, XS2										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
43.0	22.8		12.49			293.63	1.11			
44.0	21.8		12.38			293.74	1.00			
45.0	20.8		12.29			293.83	0.91			
46.0	19.8		12.65			293.47	1.26			
47.0	18.8		12.72			293.40	1.34			
48.0	17.8		12.93			293.19	1.55			
48.5	17.3		12.88			293.24	1.50			
49.0	16.8		12.36			293.76	0.98			
50.0	15.8		11.69			294.43	0.31			
51.0	14.8		11.20			294.92	-0.19	Qbkfil		
52.0	13.8		10.72			295.40				
53.0	12.8		10.43			295.69				
54.0	11.8		10.24			295.88				
55.0	10.8		9.72			296.40				
56.0	9.8		9.36			296.76				
57.0	8.8		8.94			297.18				
58.0	7.8		8.72			297.40				
59.0	6.8		8.24			297.88				
60.0	5.8		8.11			298.01				
61.0	4.8		7.92			298.20				
62.0	3.8		7.61			298.51				
63.0	2.8		7.55			298.57				
64.0	1.8		7.05			299.07				
65.0	0.8		6.65			299.47				
65.8	0.0		6.54			299.58				
BXS2	0.0		5.91			300.21				
145.0	-41.4		5.57			300.55				
RBXS2				6.12		300.00				

Jake XS2

Caples Creek in Jake Schneider Meadow, XS2										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
RBXS2		6.12			306.12	300.00				
-40.0	105.8		2.29			303.83			Bankfull height elevation	
-30.0	95.8		2.88			303.24			294.74	
-20.0	85.8		3.48			302.64			Max Bankfull Depth	
-12.0	77.8		4.15			301.97			2.73	
RBXS2	64.8		6.12			300.00			Avg Bankfull depth	
1.0	64.8		7.05			299.07			1.55	
2.0	63.8		7.59			298.53			Bankfull width	
4.0	61.8		8.24			297.88			41.0	
5.2	60.6		9.10			297.02			Bankfull W/D ratio	
6.0	59.8		9.11			297.01			26.4	
7.0	58.8		9.69			296.43			Elev @ 2x Bankfull depth	
8.0	57.8		9.88			296.24			297.46	
9.0	56.8		10.51			295.61			Width @ 2x Bankfull depth	
10.0	55.8		11.57			294.55	0.19	QbkfIR	55.0	
10.8	55.0		14.11			292.01	2.73	Edge of bank/REW		
12.0	53.8		13.82			292.30	2.44			
13.0	52.8		13.78			292.34	2.39			
14.0	51.8		14.11			292.01	2.73	Thalweg		
15.0	50.8		14.11			292.01	2.73			
16.0	49.8		13.98			292.14	2.60			
17.0	48.8		13.68			292.44	2.30			
18.0	47.8		13.50			292.62	2.12			
19.0	46.8		13.36			292.76	1.98			
20.0	45.8		13.21			292.91	1.82			
21.0	44.8		13.02			293.10	1.63			
22.0	43.8		12.88			293.24	1.50			
23.0	42.8		13.00			293.12	1.62			
24.0	41.8		13.08			293.04	1.69			
25.0	40.8		13.18			292.94	1.80			
26.0	39.8		13.24			292.88	1.86			
27.0	38.8		13.24			292.88	1.86			
28.0	37.8		13.18			292.94	1.80			
29.0	36.8		13.21			292.91	1.82	RE log pile		
30.0	35.8		13.17			292.95	1.79			
31.0	34.8		13.08			293.04	1.69			
32.0	33.8		13.14			292.98	1.76	LE log pile		
33.0	32.8		13.02			293.10	1.63			
34.0	31.8		12.92			293.20	1.54			
35.0	30.8		12.88			293.24	1.50			
36.0	29.8		12.79			293.33	1.41			
36.4	29.4		12.70			293.42	1.32	LEW		
37.0	28.8		12.66			293.46	1.28			
38.0	27.8		12.60			293.52	1.22			
39.0	26.8		12.80			293.32	1.42			
40.0	25.8		12.70			293.42	1.32			
41.0	24.8		11.42			294.70	0.04			
42.0	23.8		12.62			293.50	1.24			

Caples Cr near Jake Schneider meadow, XS1



Jake XS1

Caples Creek in Jake Schneider Meadow, XS1										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
70.0	33.6		10.97			293.57	2.19			
71.0	32.6		10.95			293.59	2.17			
72.0	31.6		10.95			293.59	2.17			
73.0	30.6		10.96			293.58	2.18			
74.0	29.6		11.00			293.54	2.22			
75.0	28.6		10.92			293.62	2.14			
76.0	27.6		10.93			293.61	2.15			
77.0	26.6		10.95			293.59	2.17			
78.0	25.6		11.00			293.54	2.22			
79.0	24.6		10.99			293.55	2.21			
80.0	23.6		11.06			293.48	2.28			
81.0	22.6		11.07			293.47	2.29			
82.0	21.6		11.17			293.37	2.39			
83.0	20.6		11.20			293.34	2.42			
84.0	19.6		11.18			293.36	2.40			
85.0	18.6		11.31			293.23	2.53			
86.0	17.6		11.40			293.14	2.62			
87.0	16.6		11.61			292.93	2.83			
88.0	15.6		11.67			292.87	2.89			
89.0	14.6		11.87			292.67	3.09			
90.0	13.6		11.96			292.58	3.18			
91.0	12.6		11.96			292.58	3.18			
92.0	11.6		11.85			292.69	3.07			
93.0	10.6		11.24			293.30	2.46			
93.7	9.9		11.12			293.42	2.34	LEW		
95.2	8.4		8.76			295.78	-0.02	QbkfIL		
96.0	7.6		8.28			296.26				
97.0	6.6		7.50			297.04				
98.0	5.6		6.85			297.69				
99.0	4.6		6.64			297.90				
100.0	3.6		6.53			298.01				
101.0	2.6		6.30			298.24				
102.0	1.6		6.02			298.52				
103.0	0.6		5.76			298.78				
103.6	0.0		5.59			298.95				
LBXS1	0		4.42			300.12				
TP1				1.72		302.82				
TP1		4.00			306.82	302.82				
RBXS2				6.80		300.02				

Jake XS1

Caples Creek in Jake Schneider Meadow, XS1							Depth @ bankfull	Notes	Rosgen notes		
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation					
RBXS2		6.12			306.12	300.00					
TP1				3.30	306.12	302.82					
TP1		1.72			304.54	302.82					
RBXS1	102.5		2.46			302.08			Bankfull height elevation		
	1.1	102.5	3.67			300.87			295.76		
	2.0	101.6	3.86			300.68			Max Bankfull Depth		
	6.0	97.6	4.38			300.16			3.51		
	10.0	93.6	4.43			300.11			Avg Bankfull depth		
	14.0	89.6	4.16			300.38			2.61		
	22.0	81.6	4.51			300.03			Bankfull width		
	26.0	77.6	4.76			299.78			56.4		
	30.0	73.6	4.71			299.83			Bankfull W/D ratio		
	34.0	69.6	4.94			299.60			21.6		
	36.2	67.4	5.42			299.12		Edge of bank	Elev @ 2x Bankfull depth		
	37.0	66.6	5.93			298.61			299.27		
	38.0	65.6	6.38			298.16			Width @ 2x Bankfull depth		
	38.6	65.0	6.74			297.80			69.0		
	38.8	64.8	8.80			295.74	0.02	QbkfIR			
	39.0	64.6	11.35			293.19	2.57	REW			
	40.0	63.6	11.21			293.33	2.43	backwater			
	41.0	62.6	11.66			292.88	2.88				
	42.0	61.6	12.03			292.51	3.25				
	43.0	60.6	12.13			292.41	3.35				
	44.0	59.6	12.15			292.39	3.37				
	45.0	58.6	12.03			292.51	3.25				
	46.0	57.6	12.23			292.31	3.45				
	47.0	56.6	12.29			292.25	3.51	Thalweg			
	48.0	55.6	12.26			292.28	3.48				
	49.0	54.6	12.17			292.37	3.39				
	50.0	53.6	12.09			292.45	3.31				
	51.0	52.6	11.79			292.75	3.01				
	52.0	51.6	11.33			293.21	2.55	RE log pile			
	53.0	50.6	11.47			293.07	2.69				
	55.0	48.6	11.34			293.20	2.56				
	56.0	47.6	11.39			293.15	2.61	LE log pile			
	57.0	46.6	11.47			293.07	2.69				
	58.0	45.6	11.78			292.76	3.00				
	59.0	44.6	11.79			292.75	3.01				
	60.0	43.6	11.68			292.86	2.90				
	61.0	42.6	11.70			292.84	2.92				
	62.0	41.6	11.70			292.84	2.92				
	63.0	40.6	11.71			292.83	2.93				
	64.0	39.6	11.64			292.90	2.86				
	65.0	38.6	11.42			293.12	2.64				
	66.0	37.6	11.31			293.23	2.53				
	67.0	36.6	11.24			293.30	2.46				
	68.0	35.6	11.03			293.51	2.25				
	69.0	34.6	11.04			293.50	2.26				

Riverton Rosgen

Rosgen classification for mainstem South Fork American River @ Riverton							
		XS 1	Dist	XS 2	Dist	XS 3	Reach
Bankfull height elevation		298.53	453	292.75	260.00	289.73	
Slope			0.012759		0.011615		0.012342
Max Bankfull Depth		3.81		3.73		4.63	4.06
Avg Bankfull depth		1.17		2.18		2.23	1.86
Mean bed elevation		297.36		290.57		287.50	
Bed slope			0.014989		0.011808		0.013829
Bankfull width		85.0		125		142.5	117.5
Bankfull W/D ratio		72.6		57.3		63.9	63.2
Elev @ 2x Bankfull depth		302.34		296.48		294.36	
Width @ 2x Bankfull depth		155.0		144		167	155.3
Ratio of 2x width / bankfull width							1.32
d50		170		150		50	123
Entrenchment							1.32
W/D							63.2
Slope							0.012
Rosgen classification							F3

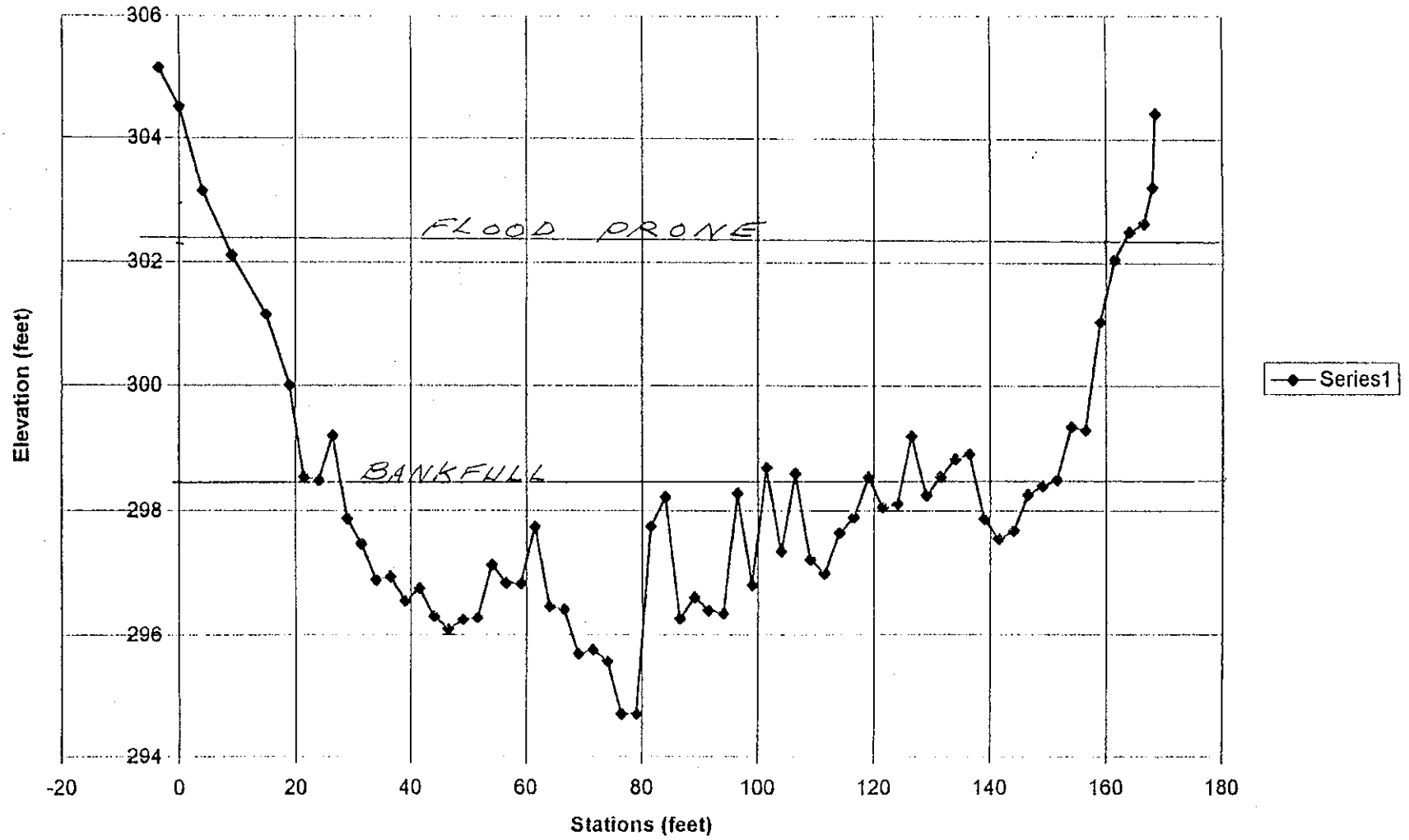
Riverton XS1

South Fork American River @ Riverton, XS1											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		6.76			306.76	300.00					
LBXS3	0.0		2.34			304.42			Bankfull height elevation		
1.0	0.0		2.24			304.52			298.53		
-2.5	-3.5		1.60			305.16			Max Bankfull Depth		
5.0	4.0		3.58			303.18			3.81		
10.0	9.0		4.63			302.13			Avg Bankfull depth		
16.0	15.0		5.60			301.16			1.17		
20.0	19.0		6.74			300.02			Bankfull width		
22.5	21.5		8.21			298.55	-0.02	QbkfL	85.0		
25.0	24.0		8.26			298.50	0.03		Bankfull W/D ratio		
27.5	26.5		7.55			299.21	-0.68		72.3		
30.0	29.0		8.88			297.88	0.65	LEW	Elev @ 2x Bankfull depth		
32.5	31.5		9.29			297.47	1.06		302.34		
35.0	34.0		9.86			296.90	1.63		Width @ 2x Bankfull depth		
37.5	36.5		9.81			296.95	1.58		155.0		
40.0	39.0		10.19			296.57	1.96				
42.5	41.5		9.99			296.77	1.76				
45.0	44.0		10.45			296.31	2.22				
47.5	46.5		10.65			296.11	2.42				
50.0	49.0		10.50			296.26	2.27				
52.5	51.5		10.46			296.30	2.23				
55.0	54.0		9.63			297.13	1.40				
57.5	56.5		9.91			296.85	1.68				
60.0	59.0		9.92			296.84	1.69				
62.5	61.5		9.01			297.75	0.78				
65.0	64.0		10.28			296.48	2.05				
67.5	66.5		10.33			296.43	2.10				
70.0	69.0		11.06			295.70	2.83				
72.5	71.5		10.99			295.77	2.76				
75.0	74.0		11.18			295.58	2.95				
77.5	76.5		12.04			294.72	3.81	Thalweg			
80.0	79.0		11.16			294.72	3.81				
82.5	81.5		9.00			297.76	0.77				
85.0	84.0		8.53			298.23	0.30				
87.5	86.5		10.48			296.28	2.25				
90.0	89.0		10.14			296.62	1.91				
92.5	91.5		10.35			296.41	2.12				
95.0	94.0		10.40			296.36	2.17				
97.5	96.5		8.47			298.29	0.24				
100.0	99.0		9.94			296.82	1.71				
102.5	101.5		8.06			298.70	-0.17				
105.0	104.0		9.41			297.35	1.18				
107.5	106.5		8.15			298.61	-0.08				
110.0	109.0		9.54			297.22	1.31				
112.5	111.5		9.76			297.00	1.53				
115.0	114.0		9.11			297.65	0.88	REW			
117.5	116.5		8.85			297.91	0.62				
120.0	119.0		8.21			298.55	-0.02				

Riverton XS1

South Fork American River @ Riverton, XS1											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
122.5	121.5		8.69			298.07	0.46				
125.0	124.0		8.63			298.13	0.40				
127.5	126.5		7.55			299.21	-0.68				
130.0	129.0		8.50			298.26	0.27				
132.5	131.5		8.20			298.56	-0.03				
135.0	134.0		7.92			298.84	-0.31				
137.5	136.5		7.84			298.92	-0.39				
140.0	139.0		8.88			297.88	0.65				
142.5	141.5		9.20			297.56	0.97				
145.0	144.0		9.07			297.69	0.84				
147.5	146.5		8.49			298.27	0.26				
150.0	149.0		8.35			298.41	0.12				
152.5	151.5		8.25			298.51	0.02	QbkfIR			
155.0	154.0		7.40			299.36					
157.5	156.5		7.45			299.31					
160.0	159.0		5.70			301.06					
162.5	161.5		4.68			302.08					
165.0	164.0		4.23			302.53					
167.5	166.5		4.09			302.67					
169.0	168.0		3.50			303.26					
169.5	168.5		2.32			304.44					
RBXS1	168.5		2.17			304.59					
BM1				6.75		300.01					

SoFAR @ Riverton XS1



Riverton XS2

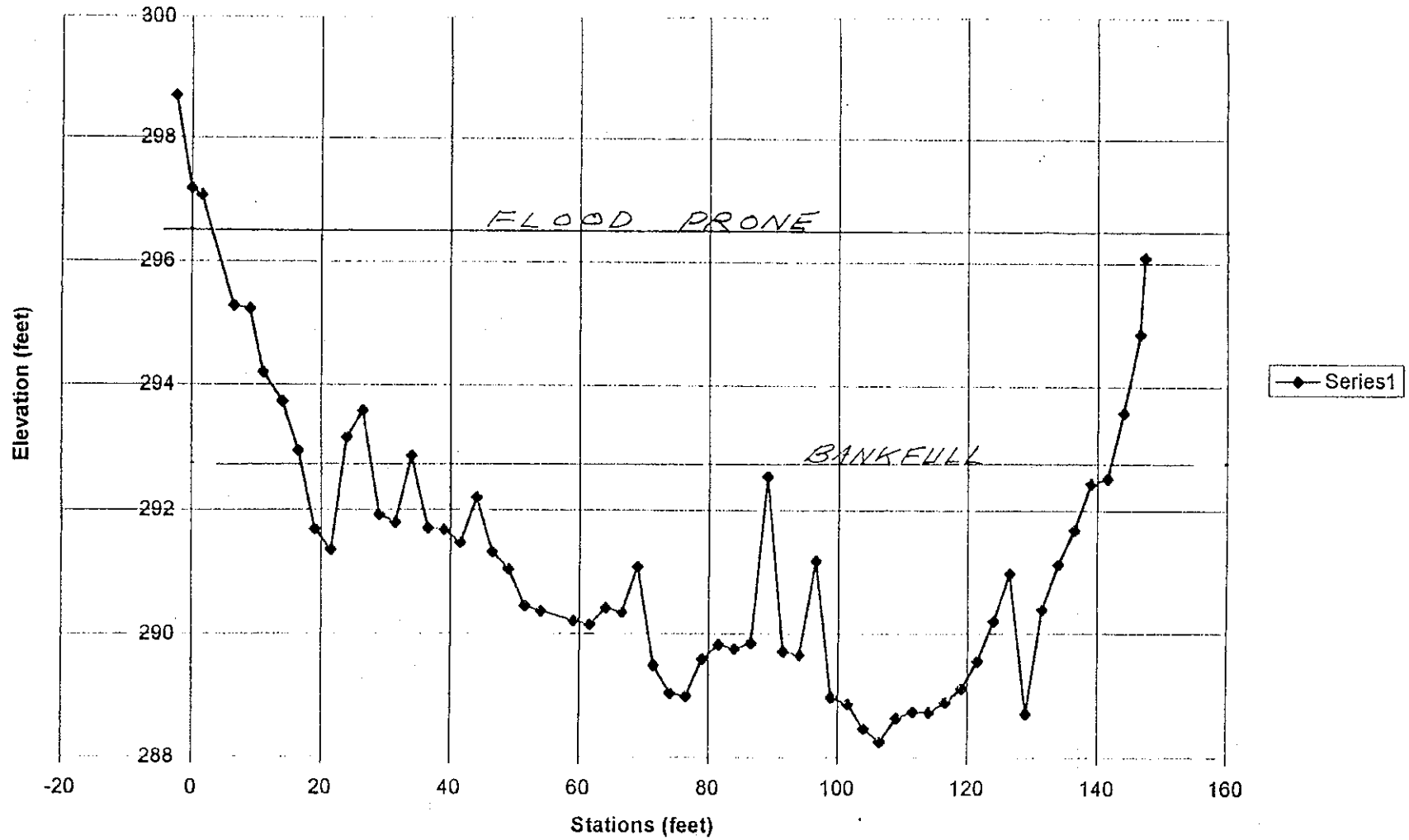
South Fork American River @ Riverton, XS2										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		6.75			306.75	300.00				
RBXS2				10.46		296.29			Bankfull height elevation	
RBXS2		2.56			298.85	296.29			292.75	
LBXS3	0.0		1.25			297.60			Max Bankfull Depth	
1.0	0.0		1.65			297.20			3.73	
-1.5	-2.5		0.15			298.70			Avg Bankfull depth	
2.5	1.5		1.76			297.09			2.18	
7.5	6.5		3.55			295.30			Bankfull width	
10.0	9.0		3.60			295.25			125.0	
12.0	11.0		4.63			294.22			Bankfull W/D ratio	
15.0	14.0		5.10			293.75			57.4	
17.5	16.5		5.89			292.96	-0.22	QbkfIL	Elev @ 2x Bankfull depth	
20.0	19.0		7.15			291.70	1.04		296.48	
22.5	21.5		7.49			291.36	1.38		Width @ 2x Bankfull depth	
25.0	24.0		5.67			293.18	-0.44		144.0	
27.5	26.5		5.24			293.61	-0.87			
30.0	29.0		6.92			291.93	0.81			
32.5	31.5		7.04			291.81	0.94			
35.0	34.0		5.97			292.88	-0.13			
37.5	36.5		7.13			291.72	1.02			
40.0	39.0		7.16			291.69	1.06			
42.5	41.5		7.37			291.48	1.26			
45.0	44.0		6.64			292.21	0.53			
47.5	46.5		7.52			291.33	1.41			
50.0	49.0		7.80			291.05	1.69	LEW		
52.5	51.5		8.39			290.46	2.28			
55.0	54.0		8.47			290.38	2.37			
60.0	59.0		8.63			290.22	2.52			
62.5	61.5		8.69			290.16	2.58			
65.0	64.0		8.42			290.43	2.32			
67.5	66.5		8.49			290.36	2.38			
70.0	69.0		7.76			291.09	1.65			
72.5	71.5		9.35			289.50	3.25			
75.0	74.0		9.79			289.06	3.69			
77.5	76.5		9.84			289.01	3.73	Thalweg		
80.0	79.0		9.25			289.60	3.14			
82.5	81.5		9.02			289.83	2.91			
85.0	84.0		9.08			289.77	2.97			
87.5	86.5		8.99			289.86	2.88			
90.0	89.0		6.30			292.55	0.19			
92.5	91.5		9.12			289.73	3.01			
95.0	94.0		9.18			289.67	3.07			
97.5	96.5		7.66			291.19	1.56			
100.0	99.0		9.86			288.99	3.76			
102.5	101.5		9.97			288.88	3.87			
105.0	104.0		10.36			288.49	4.26			
107.5	106.5		10.58			288.27	4.47			
110.0	109.0		10.19			288.66	4.08			

Riverton XS2

South Fork American River @ Riverton, XS2											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
112.5	111.5		10.09			288.76	3.98				
115.0	114.0		10.10			288.75	4.00				
117.5	116.5		9.94			288.91	3.83				
120.0	119.0		9.72			289.13	3.62				
122.5	121.5		9.28			289.57	3.17				
125.0	124.0		8.64			290.21	2.53				
127.5	126.5		7.87			290.98	1.76				
130.0	129.0		10.12			288.73	4.01				
132.5	131.5		8.45			290.40	2.34	REW			
135.0	134.0		7.72			291.13	1.62				
137.5	136.5		7.16			291.69	1.06				
140.0	139.0		6.40			292.45	0.29				
142.5	141.5		6.32			292.53	0.21	QbkflR			
145.0	144.0		5.25			293.60					
147.5	146.5		3.98			294.87					
148.3	147.3		2.74			296.11					
RBXS2	147.3		2.56			296.29					
BM1		0.75			300.75	300.00					
LBXS1				3.14		297.61					

Chart12

SoFAR @ Riverton, XS2



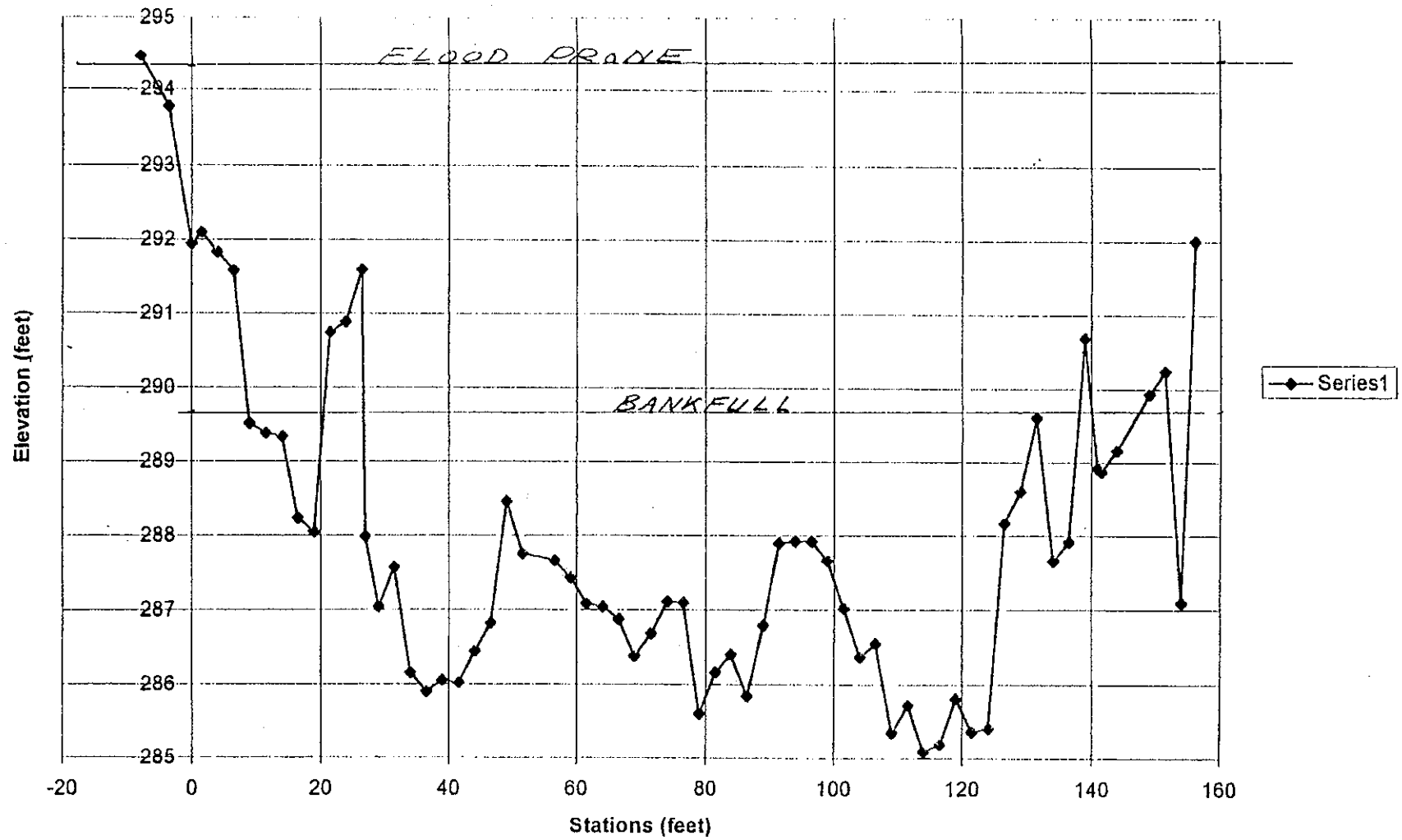
Riverton XS3

South Fork American River @ Riverton, XS3										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		0.75			300.75	300.00				
BM2				3.80		296.95			Bankfull height elevation	
BM2		0.07			297.02	296.95			289.73	
LBXS3	0.0		4.73			292.29			Max Bankfull Depth	
-7.0	-8.0		2.54			294.48			4.63	
-2.5	-3.5		3.24			293.78			Avg Bankfull depth	
1.0	0.0		5.06			291.96			2.23	
2.5	1.5		4.91			292.11			Bankfull width	
5.0	4.0		5.18			291.84			142.5	
7.5	6.5		5.43			291.59			Bankfull W/D ratio	
10.0	9.0		7.50			289.52	0.21	QbkfIL	64.0	
12.5	11.5		7.63			289.39	0.34		Elev @ 2x Bankfull depth	
15.0	14.0		7.68			289.34	0.39		294.36	
17.5	16.5		8.78			288.24	1.49		Width @ 2x Bankfull depth	
20.0	19.0		8.96			288.06	1.67		167.0	
22.5	21.5		6.26			290.76	-1.03			
25.0	24.0		6.12			290.90	-1.17			
27.5	26.5		5.41			291.61	-1.88			
28.0	27.0		9.02			288.00	1.73	LEW		
30.0	29.0		9.96			287.06	2.67			
32.5	31.5		9.44			287.58	2.15			
35.0	34.0		10.85			286.17	3.56			
37.5	36.5		11.11			285.91	3.82			
40.0	39.0		10.95			286.07	3.66			
42.5	41.5		10.99			286.03	3.70	LEW		
45.0	44.0		10.56			286.46	3.27			
47.5	46.5		10.18			286.84	2.89			
50.0	49.0		8.55			288.47	1.26			
52.5	51.5		9.25			287.77	1.96			
57.5	56.5		9.34			287.68	2.05			
60.0	59.0		9.58			287.44	2.29			
62.5	61.5		9.92			287.10	2.63			
65.0	64.0		9.96			287.06	2.67			
67.5	66.5		10.13			286.89	2.84			
70.0	69.0		10.62			286.40	3.33			
72.5	71.5		10.32			286.70	3.03			
75.0	74.0		9.89			287.13	2.60			
77.5	76.5		9.91			287.11	2.62			
80.0	79.0		11.41			285.61	4.12			
82.5	81.5		10.84			286.18	3.55			
85.0	84.0		10.60			286.42	3.31			
87.5	86.5		11.17			285.85	3.88			
90.0	89.0		10.21			286.81	2.92			
92.5	91.5		9.11			287.91	1.82			
95.0	94.0		9.08			287.94	1.79			
97.5	96.5		9.08			287.94	1.79			
100.0	99.0		9.34			287.68	2.05			
102.5	101.5		9.98			287.04	2.69			

Riverton XS3

South Fork American River @ Riverton, XS3										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
105.0	104.0		10.64			286.38	3.35			
107.5	106.5		10.46			286.56	3.17			
110.0	109.0		11.66			285.36	4.37			
112.5	111.5		11.29			285.73	4.00			
115.0	114.0		11.92			285.10	4.63	Thalweg		
117.5	116.5		11.82			285.20	4.53			
120.0	119.0		11.20			285.82	3.91			
122.5	121.5		11.65			285.37	4.36			
125.0	124.0		11.60			285.42	4.31			
127.5	126.5		8.84			288.18	1.55	REW		
130.0	129.0		8.41			288.61	1.12			
132.5	131.5		7.40			289.62	0.11			
135.0	134.0		9.34			287.68	2.05			
137.5	136.5		9.09			287.93	1.80			
140.0	139.0		6.32			290.70	-0.97			
142.0	141.0		8.09			288.93	0.80			
142.5	141.5		8.14			288.88	0.85			
145.0	144.0		7.85			289.17	0.56			
150.0	149.0		7.08			289.94	-0.21	QbkfIR		
152.5	151.5		6.77			290.25				
155	154.0		9.91			287.11				
157.1	156.1		5.00			292.02				
RBXS2	156.1		4.85			292.17				
BM2				0.07		296.95				

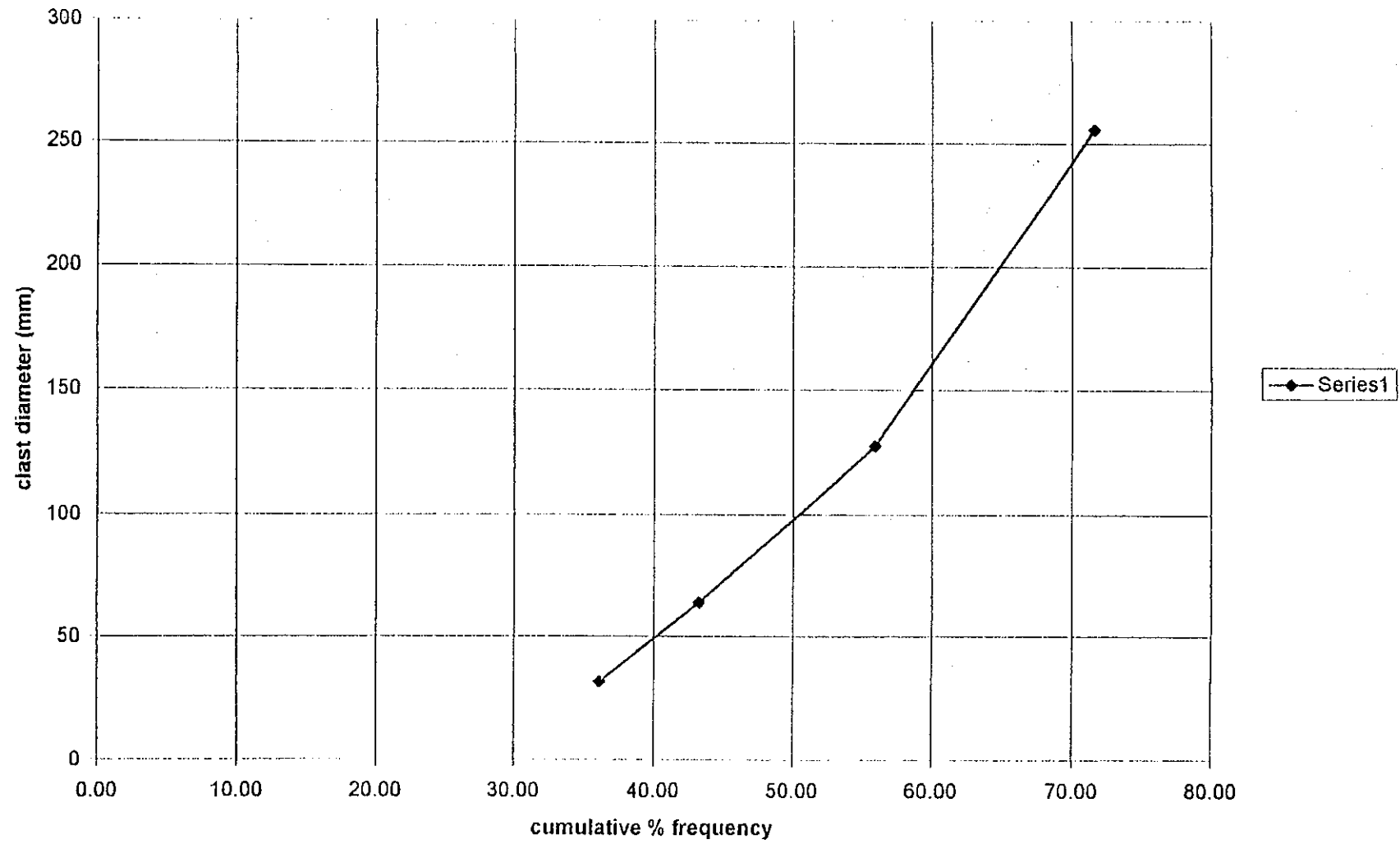
SoFAR @ Riverton, XS3



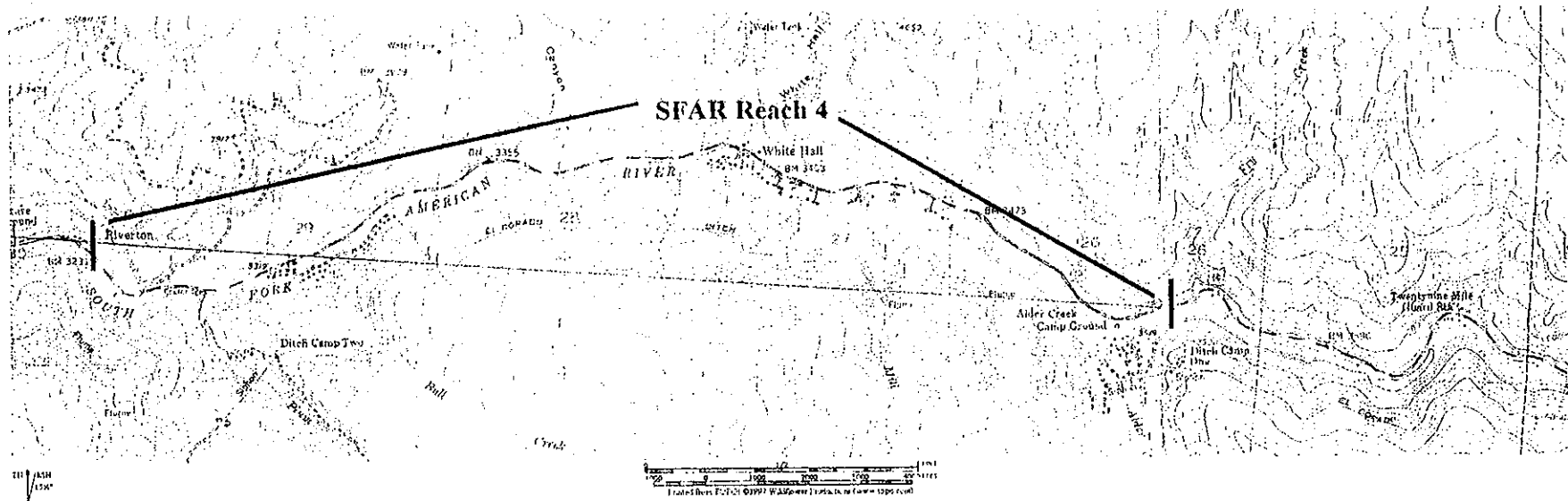
Riverton

Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		0	0.00	100.00	1	0.88	100.00	1	0.28	100.00	4096
L Boulder	2048	11	0	0.00		0	0.00	100.00	1	0.88	99.12	1	0.28	99.72	2048
M Boulder	1024	10	15	11.28		10	8.55	100.00	10	8.85	98.23	35	9.64	99.45	1024
S Boulder	512	9	27	20.30		25	21.37	91.45	14	12.39	89.38	66	18.18	89.81	512
L Cobble	256	8	22	16.54	68.42	23	19.66	70.09	12	10.62	76.99	57	15.70	71.63	256
S Cobble	128	7	17	12.78	51.88	14	11.97	50.43	15	13.27	66.37	46	12.67	55.92	128
VC Gravel	64	6	11	8.27	39.10	4	3.42	38.46	11	9.73	53.10	26	7.16	43.25	64
C Gravel	32	5	8	6.02	30.83	5	4.27	35.04	14	12.39	43.36	27	7.44	36.09	32
M Gravel	16	4	3	2.26	24.81	3	2.56	30.77	11	9.73	30.97	17	4.68	28.65	16
F Gravel	8	3	5	3.76	22.56	4	3.42	28.21	5	4.42	21.24	14	3.86	23.97	8
VF Gravel	4	2	7	5.26	18.80	9	7.69	24.79	9	7.96	16.81	25	6.89	20.11	4
VC Sand	2	1	18	13.53	13.53	20	17.09	17.09	10	8.85	8.85	48	13.22	13.22	2
Sand	1		0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1
Silt/clay			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			133	100		117	100.00		113	100.00		363	100.00		

SoFAR @ Riverton



ROSGEN
SFAR REACH 4 RIVERTON



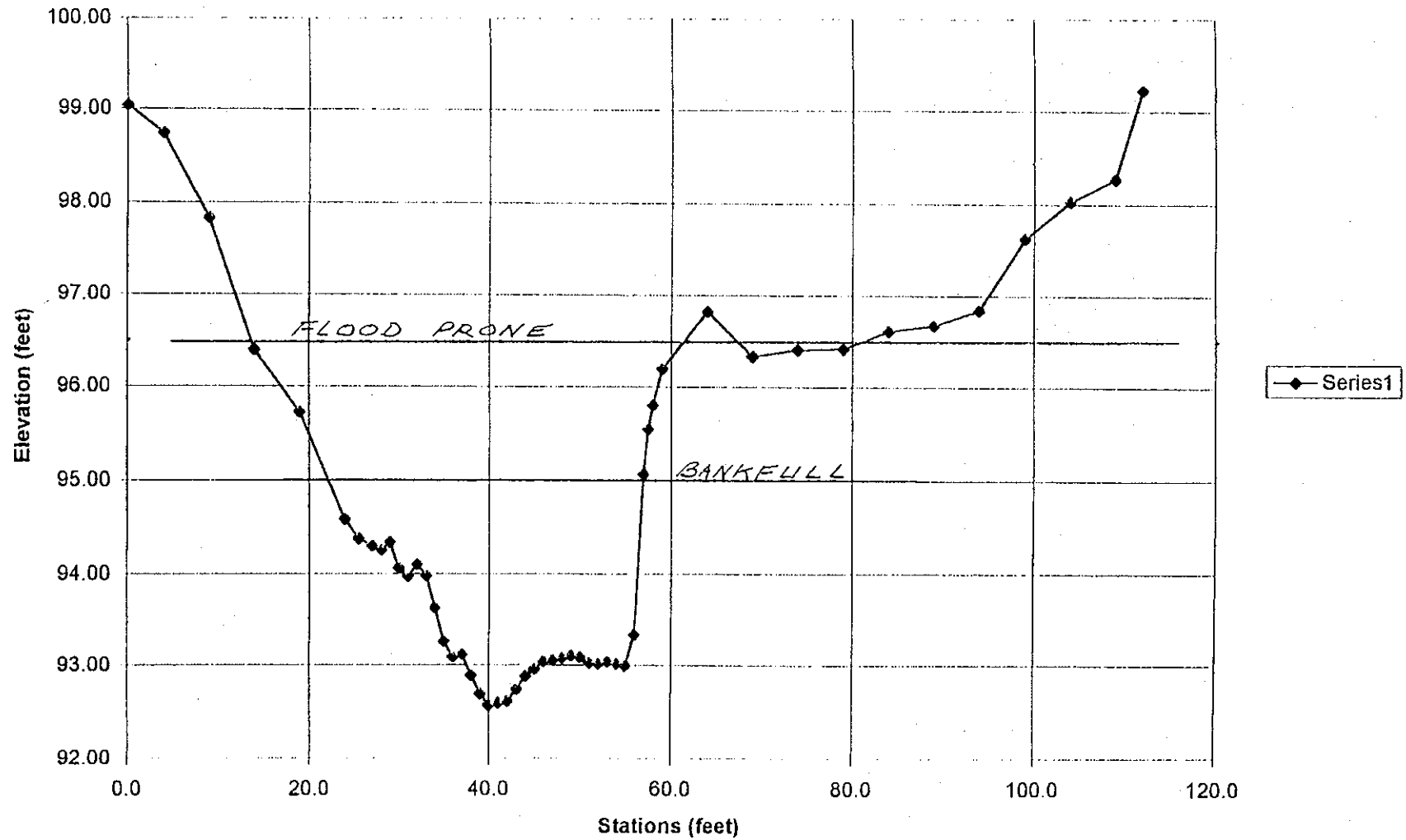
Lost Axe Rosgen

Rosgen classification for unnamed stream tributary to Caples Creek							
	XS 1	Dist	XS 2	Dist	XS 3	Reach	
Bankfull height elevation	94.97	94	94.13	106.00	92.94		
Slope		0.008936		0.011226		0.01015	
Max Bankfull Depth	2.39		1.86		1.97	2.07	
Avg Bankfull depth	1.54		1.16		1.04	1.25	
Mean bed elevation	93.43		92.97		91.90		
Bed slope		0.004894		0.010094		0.007650	
Bankfull width	32.0		24		22.0	26.0	
Bankfull W/D ratio	20.8		20.7		21.2	20.9	
Elev @ 2x Bankfull depth	97.36		95.99		94.91		
Width @ 2x Bankfull depth	85.0		46		49.5	60.2	
Ratio of 2x width / bankfull width							2.31
d50	8		13		4	8	
Entrenchment							2.31
W/D							20.9
Slope							0.010
Rosgen classification							C4c

Lost Axe XS1

Unnamed Tributary to Caples Creek, XS1											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		0.90			100.90	100.00					
BM3				2.19		98.71			Bankfull height elevation		
BM3		2.19			100.90	98.71			94.97		
LBXS1	0.0		1.51			99.39			Max Bankfull Depth		
1.0	0.0		1.85			99.05			2.39		
5.0	4.0		2.15			98.75			Avg Bankfull depth		
10.0	9.0		3.06			97.84			1.54		
15.0	14.0		4.50			96.40			Bankfull width		
20.0	19.0		5.17			95.73			32.0		
25.0	24.0		6.30			94.60			Bankfull W/D ratio		
26.5	25.5		6.51			94.39	0.58	QbkfL?	20.8		
28.0	27.0		6.59			94.31	0.66		Elev @ 2x Bankfull depth		
29.0	28.0		6.63			94.27	0.70		97.36		
30.0	29.0		6.55			94.35	0.62		Width @ 2x Bankfull depth		
31.0	30.0		6.83			94.07	0.90		85.0		
32.0	31.0		6.92			93.98	0.99				
33.0	32.0		6.79			94.11	0.86				
34.0	33.0		6.91			93.99	0.98				
35.0	34.0		7.26			93.64	1.33				
36.0	35.0		7.63			93.27	1.70				
37.0	36.0		7.80			93.10	1.87				
38.0	37.0		7.77			93.13	1.84				
39.0	38.0		8.00			92.90	2.07				
40.0	39.0		8.20			92.70	2.27				
41.0	40.0		8.32			92.58	2.39	Thalweg			
42.0	41.0		8.30			92.60	2.37				
43.0	42.0		8.28			92.62	2.35				
44.0	43.0		8.15			92.75	2.22				
45.0	44.0		8.01			92.89	2.08				
46.0	45.0		7.93			92.97	2.00				
47.0	46.0		7.85			93.05	1.92				
48.0	47.0		7.83			93.07	1.90				
49.0	48.0		7.81			93.09	1.88				
50.0	49.0		7.78			93.12	1.85				
51.0	50.0		7.80			93.10	1.87				
52.0	51.0		7.86			93.04	1.93				
53.0	52.0		7.87			93.03	1.94				
54.0	53.0		7.85			93.05	1.92				
55.0	54.0		7.87			93.03	1.94				
56.0	55.0		7.89			93.01	1.96				
57.0	56.0		7.55			93.35	1.62				
58.0	57.0		5.82			95.08	-0.11				
58.5	57.5		5.35			95.55	-0.58	QbkfR			
59.0	58.0		5.09			95.81					
60.0	59.0		4.70			96.20					
65.0	64.0		4.07			96.83					
70.0	69.0		4.56			96.34					
75.0	74.0		4.49			96.41					
80.0	79.0		4.48			96.42					
85.0	84.0		4.28			96.62					
90.0	89.0		4.22			96.68					
95.0	94.0		4.05			96.85					
100.0	99.0		3.26			97.64					
105.0	104.0		2.86			98.04					
110.0	109.0		2.62			98.28					
113.0	112.0		1.66			99.24					
RBXS1	112.6		0.75			100.15					
BM1				0.90		100.00					

Unnamed tributary of Caples Creek (control) XS1



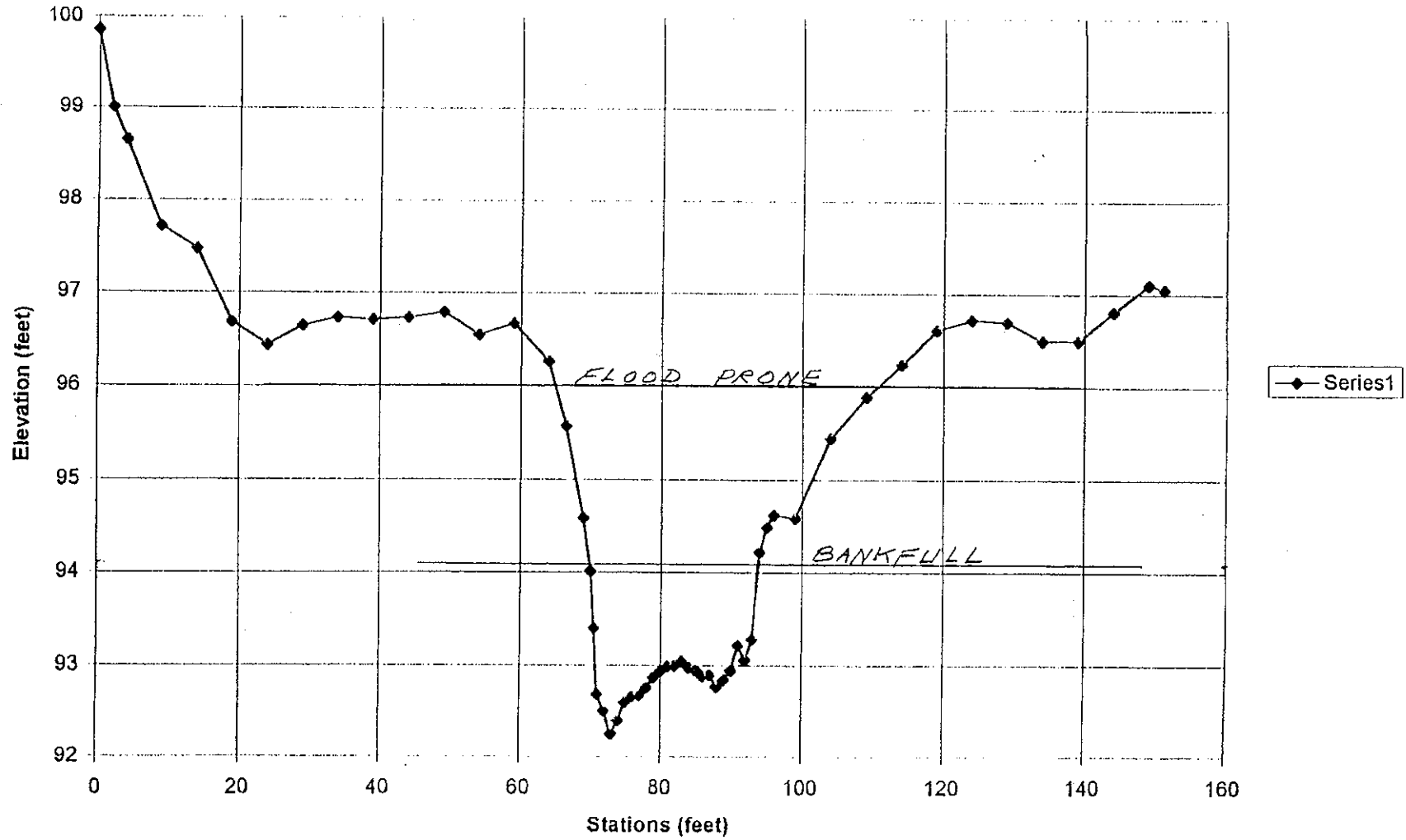
Lost Axe XS2

Unnamed Tributary to Caples Creek, XS2										
Book	Adj.	Back	Intern.	Fore	Hght. of	Elevation	Depth @	Notes	Rosgen	
Station	Station	Sight	Sight	Sight	Inst.		bankfull		notes	
E 11		1.03			101.03	100.00				
LBXS2	0.0		1.16			99.87			Bankfull height elevation	
3.0	2.0		2.02			99.01			94.13	
5.0	4.0		2.37			98.66			Max Bankfull Depth	
10.0	9.0		3.31			97.72			1.86	
15.0	14.0		3.55			97.48			Avg Bankfull depth	
20.0	19.0		4.34			96.69		Begin meadow	1.16	
25.0	24.0		4.58			96.45			Bankfull width	
30.0	29.0		4.38			96.65			24.0	
35.0	34.0		4.29			96.74			Bankfull W/D ratio	
40.0	39.0		4.31			96.72			20.7	
45.0	44.0		4.29			96.74			Elev @ 2x Bankfull depth	
50.0	49.0		4.23			96.80			95.99	
55.0	54.0		4.47			96.56			Width @ 2x Bankfull depth	
60.0	59.0		4.35			96.68			46.0	
65.0	64.0		4.75			96.28		end meadow		
67.5	66.5		5.45			95.58				
70.0	69.0		6.43			94.60				
71.0	70.0		7.01			94.02	0.11	QbkfIL		
71.5	70.5		7.62			93.41	0.72			
72.0	71.0		8.33			92.70	1.43			
73.0	72.0		8.52			92.51	1.61			
74.0	73.0		8.77			92.26	1.86	Thalweg		
75.0	74.0		8.62			92.41	1.72			
76.0	75.0		8.42			92.61	1.52			
77.0	76.0		8.36			92.67	1.46			
78.0	77.0		8.34			92.69	1.44			
79.0	78.0		8.26			92.77	1.36			
80.0	79.0		8.15			92.88	1.25			
81.0	80.0		8.08			92.95	1.18			
82.0	81.0		8.03			93.00	1.13			
83.0	82.0		8.02			93.01	1.11			
84.0	83.0		7.98			93.05	1.08			
85.0	84.0		8.04			92.99	1.13			
86.0	85.0		8.07			92.96	1.16			
87.0	86.0		8.13			92.90	1.22			
88.0	87.0		8.12			92.91	1.22			
89.0	88.0		8.25			92.78	1.35			
90.0	89.0		8.17			92.86	1.27			
91.0	90.0		8.07			92.96	1.16			
92.0	91.0		7.81			93.22	0.91			
93.0	92.0		7.96			93.07	1.05			
94.0	93.0		7.74			93.29	0.83			
95.0	94.0		6.80			94.23	-0.11	QbkfIR		
96.0	95.0		6.53			94.50				
97.0	96.0		6.40			94.63				
100.0	99.0		6.43			94.60				
105.0	104.0		5.58			95.45				

Lost Axe XS2

Damaged Tributary to Caples Creek, XS2											
Book	Adj.	Back	Interm.	Fore	Hght. of		Depth @				
Station	Station	Sight	Sight	Sight	Inst.	Elevation	bankfull	Notes	Rosgen		
0.0	109.0		5.14			95.89					
115.0	114.0		4.78			96.25					
20.0	119.0		4.41			96.62		LEW			
25.0	124.0		4.30			96.73					
130.0	129.0		4.32			96.71					
35.0	134.0		4.52			96.51					
40.0	139.0		4.52			96.51					
145.0	144.0		4.21			96.82					
150.0	149.0		3.92			97.11					
52.2	151.2		3.97			97.06					
End XS2	151.2		0.91			100.12					
BM1				1.03		100.00					

Unnamed tributary of Caples Creek (control XS2)



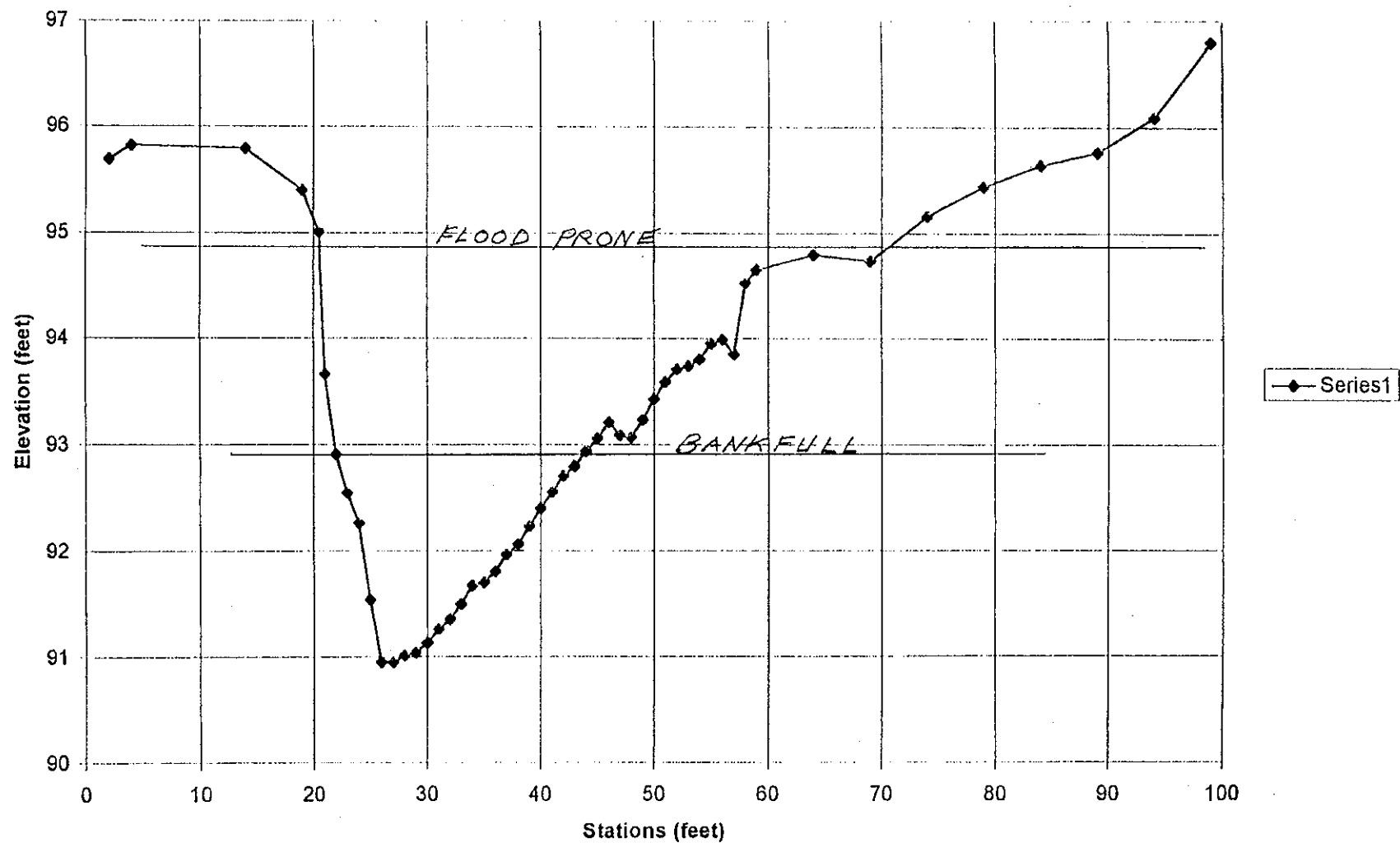
Lost Axe XS3

Unnamed Tributary to Caples Creek, XS3										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		1.03			101.03	100.00				
TP1				3.48		97.55			Bankfull height elevation	
TP1		2.74			100.29	97.55			92.94	
BM2			3.02			97.27			Max Bankfull Depth	
LBXS3	0.0		2.62			97.67			1.97	
	3.0	2.0	4.59			95.70			Avg Bankfull depth	
	5.0	4.0	4.46			95.83			1.04	
	15.0	14.0	4.49			95.80			Bankfull width	
	20.0	19.0	4.88			95.41			22.0	
	21.5	20.5	5.27			95.02			Bankfull W/D ratio	
	22.0	21.0	6.62			93.67			21.1	
	23.0	22.0	7.37			92.92	0.02	QbkfL?	Elev @ 2x Bankfull depth	
	24.0	23.0	7.73			92.56	0.38		94.91	
	25.0	24.0	8.02			92.27	0.66		Width @ 2x Bankfull depth	
	26.0	25.0	8.74			91.55	1.38		49.5	
	27.0	26.0	9.33			90.96	1.97	Thalweg		
	28.0	27.0	9.33			90.96	1.97			
	29.0	28.0	9.27			91.02	1.91			
	30.0	29.0	9.24			91.05	1.88			
	31.0	30.0	9.15			91.14	1.80			
	32.0	31.0	9.02			91.27	1.66			
	33.0	32.0	8.92			91.37	1.57			
	34.0	33.0	8.78			91.51	1.43			
	35.0	34.0	8.61			91.68	1.26			
	36.0	35.0	8.58			91.71	1.22			
	37.0	36.0	8.48			91.81	1.13			
	38.0	37.0	8.32			91.97	0.96			
	39.0	38.0	8.22			92.07	0.86			
	40.0	39.0	8.05			92.24	0.69			
	41.0	40.0	7.88			92.41	0.52			
	42.0	41.0	7.72			92.57	0.36			
	43.0	42.0	7.57			92.72	0.21			
	44.0	43.0	7.48			92.81	0.13			
	45.0	44.0	7.34			92.95	-0.02	QbkfR		
	46.0	45.0	7.22			93.07				
	47.0	46.0	7.07			93.22				
	48.0	47.0	7.19			93.10				
	49.0	48.0	7.21			93.08				
	50.0	49.0	7.05			93.24				
	51.0	50.0	6.85			93.44				
	52.0	51.0	6.69			93.60				
	53.0	52.0	6.57			93.72				
	54.0	53.0	6.54			93.75				
	55.0	54.0	6.48			93.81				
	56.0	55.0	6.33			93.96				
	57.0	56.0	6.29			94.00				
	58.0	57.0	6.43			93.86				

Lost Axe XS3

Unnamed Tributary to Caples Creek, XS3											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
59.0	58.0		5.75			94.54					
60.0	59.0		5.62			94.67					
65.0	64.0		5.48			94.81					
70.0	69.0		5.54			94.75					
75.0	74.0		5.12			95.17					
80.0	79.0		4.84			95.45					
85.0	84.0		4.64			95.65					
90.0	89.0		4.52			95.77					
95.0	94.0		4.19			96.10					
100.0	99.0		3.48			96.81					
RBXS3	99.2		3.19			97.10					
BM2		3.02			100.29	97.27					
TP1				2.74		97.55					
TP1		3.28			100.83	97.55					
BM1				0.84		99.99					

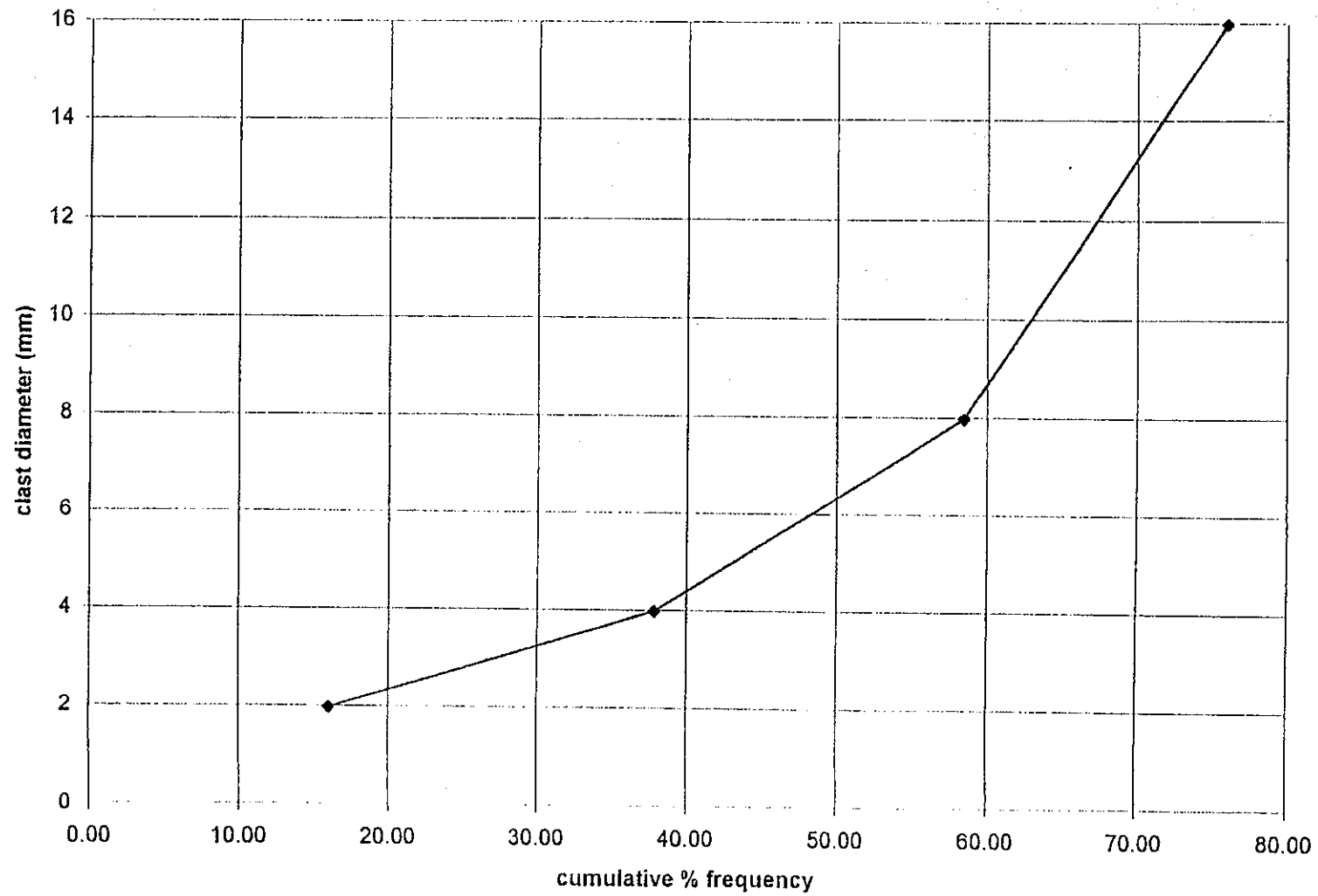
Unnamed tributary of Caples Creek XS3



Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		0	0.00	100.00				0	0.00	100.00	4096
L Boulder	2048	11	0	0.00		0	0.00	100.00				0	0.00	100.00	2048
M Boulder	1024	10	0	0.00		0	0.00	100.00				0	0.00	100.00	1024
S Boulder	512	9	0	0.00		0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	512
L Cobble	256	8	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	256
S Cobble	128	7	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	128
VC Gravel	64	6	3	2.78	100.00	14	13.33	100.00	0	0.00	100.00	17	5.23	100.00	64
C Gravel	32	5	22	20.37	97.22	30	28.57	86.67	9	8.04	100.00	61	18.77	94.77	32
M Gravel	16	4	23	21.30	76.85	18	17.14	58.10	16	14.29	91.96	57	17.54	76.00	16
F Gravel	8	3	23	21.30	55.56	17	16.19	40.95	27	24.11	77.68	67	20.62	58.46	8
VF Gravel	4	2	26	24.07	34.26	11	10.48	24.76	34	30.36	53.57	71	21.85	37.85	4
VC Sand	2	1	11	10.19	10.19	15	14.29	14.29	26	23.21	23.21	52	16.00	16.00	2
Sand	1		0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1
Silt/clay			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			108	100		105	100.00		112	100.00		325	100.00		

Chart1

Unnamed tributary of Caples Creek (control)



Kirkwood Rosgen

Rosgen classification for Caples Creek below Kirkwood Creek confluence							
	XS 1	Dist	XS 2	Dist	XS 3	Reach	
Bankfull height elevation	97.73	180	97.04	138.00	96.74		
Slope		0.003833		0.002174		0.003113	
Max Bankfull Depth	2.19		1.79		2.27	2.08	
Avg Bankfull depth	1.12		0.78		0.85	0.92	
Mean bed elevation	96.61		96.26		95.89		
Bed slope		0.00194		0.00268		0.00226	
Bankfull width							
Bankfull W/D ratio	43.8		57.5		59.4	53.6	
Elev @ 2x Bankfull depth	39.1		73.7		69.9	58.4	
Width @ 2x Bankfull depth	99.92		98.82		99.01		
Ratio of 2x width / bankfull width	200.0		200		200	200.0	
d50	11		17		9	12	
Entrenchment							
W/D						3.73	
Slope						58.4	
						0.003	
Rosgen classification							C4c

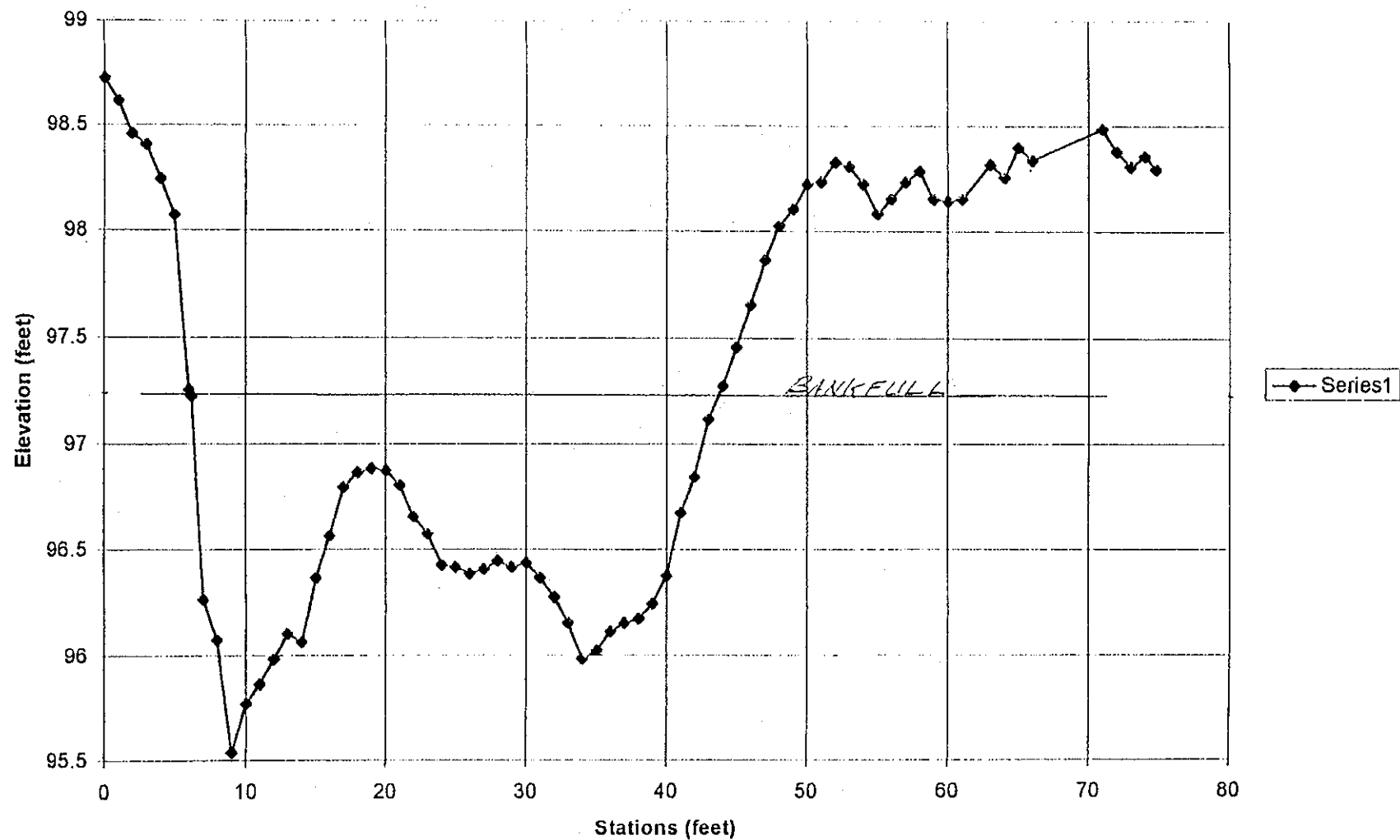
Kirkwood XS1

Caples Creek below Kirkwood Creek confluence, XS1										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		1.61			101.61	100.00				
BM2			2.38			99.23			Bankfull height elevation	
LBXS1	0.0		2.66			98.95			97.73	
1.0	0.0		2.88			98.73			Max Bankfull Depth	
2.0	1.0		2.99			98.62			2.19	
3.0	2.0		3.15			98.46			Avg Bankfull depth	
4.0	3.0		3.20			98.41			1.12	
5.0	4.0		3.36			98.25			Bankfull width	
6.0	5.0		3.53			98.08			43.8	
7.0	6.0		4.35			97.26			Bankfull W/D ratio	
7.2	6.2		4.38			97.23	0.50	Qbkfil	39.2	
8.0	7.0		5.34			96.27	1.46	LEW	Elev @ 2x Bankfull depth	
9.0	8.0		5.53			96.08	1.65		99.92	
10.0	9.0		6.07			95.54	2.19	L. thalweg	Width @ 2x Bankfull depth	
11.0	10.0		5.83			95.78	1.95		200.0	
12.0	11.0		5.74			95.87	1.86			
13.0	12.0		5.62			95.99	1.74			
14.0	13.0		5.50			96.11	1.62			
15.0	14.0		5.54			96.07	1.66			
16.0	15.0		5.24			96.37	1.36			
17.0	16.0		5.04			96.57	1.16			
18.0	17.0		4.81			96.80	0.93			
19.0	18.0		4.74			96.87	0.86			
20.0	19.0		4.72			96.89	0.84			
21.0	20.0		4.73			96.88	0.85			
22.0	21.0		4.80			96.81	0.92			
23.0	22.0		4.95			96.66	1.07			
24.0	23.0		5.03			96.58	1.15			
25.0	24.0		5.18			96.43	1.30			
26.0	25.0		5.19			96.42	1.31			
27.0	26.0		5.22			96.39	1.34			
28.0	27.0		5.20			96.41	1.32			
29.0	28.0		5.16			96.45	1.28			
30.0	29.0		5.19			96.42	1.31			
31.0	30.0		5.17			96.44	1.29			
32.0	31.0		5.24			96.37	1.36			
33.0	32.0		5.33			96.28	1.45			
34.0	33.0		5.45			96.16	1.57			
35.0	34.0		5.62			95.99	1.74			
36.0	35.0		5.58			96.03	1.70			
37.0	36.0		5.49			96.12	1.61			
38.0	37.0		5.45			96.16	1.57			
39.0	38.0		5.43			96.18	1.55			
40.0	39.0		5.36			96.25	1.48			
41.0	40.0		5.23			96.38	1.35			
42.0	41.0		4.93			96.68	1.05			
43.0	42.0		4.76			96.85	0.88			
44.0	43.0		4.49			97.12	0.61			

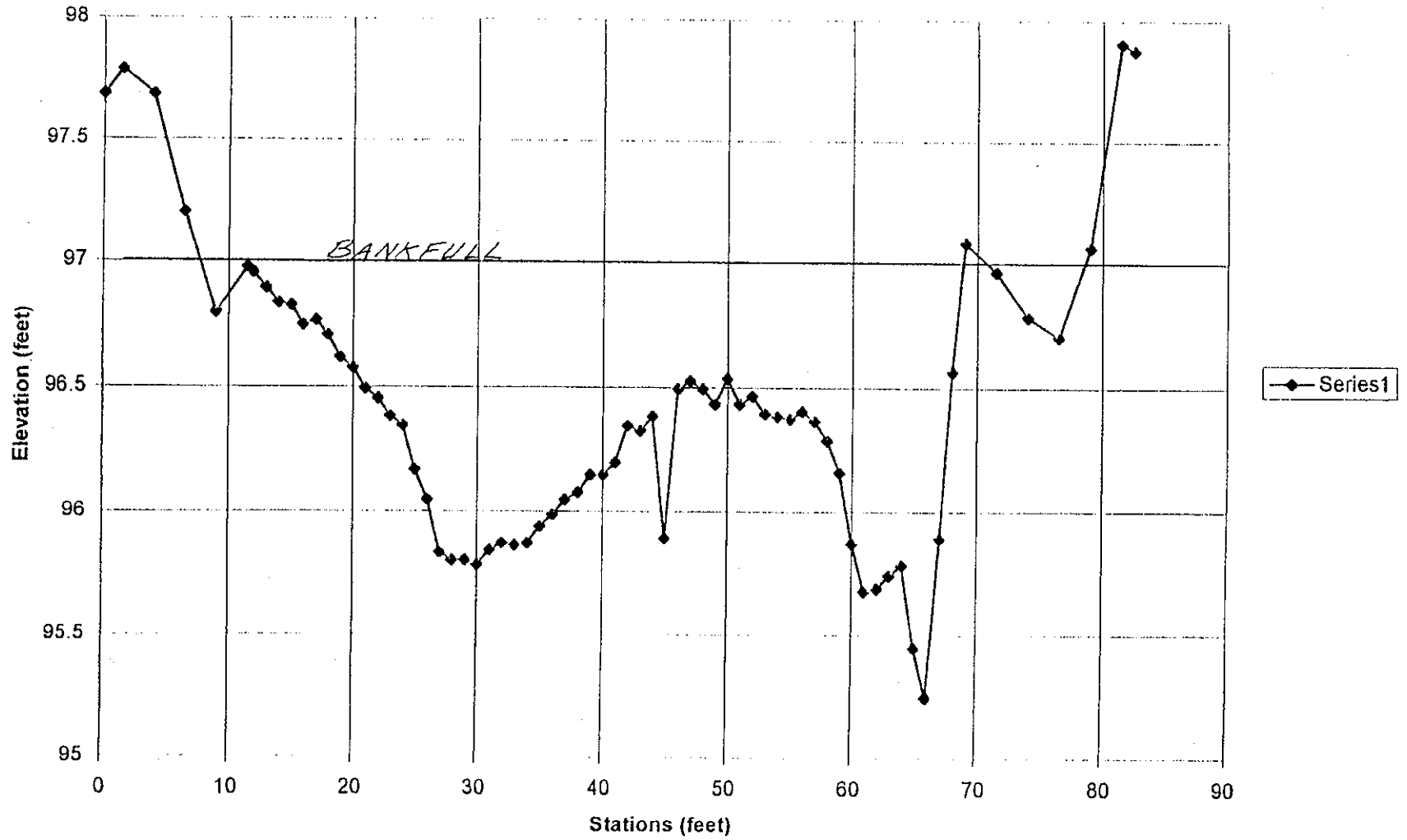
Kirkwood XS1

Caples Creek below Kirkwood Creek confluence, XS1										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
45.0	44.0		4.33			97.28	0.45			
46.0	45.0		4.15			97.46	0.27			
47.0	46.0		3.95			97.66	0.07			
48.0	47.0		3.74			97.87	-0.14			
49.0	48.0		3.58			98.03	-0.30			
50.0	49.0		3.50			98.11	-0.38			
51.0	50.0		3.38			98.23	-0.50	QbkflR		
52.0	51.0		3.37			98.24				
53.0	52.0		3.28			98.33				
54.0	53.0		3.30			98.31				
55.0	54.0		3.38			98.23				
56.0	55.0		3.52			98.09				
57.0	56.0		3.45			98.16				
58.0	57.0		3.37			98.24				
59.0	58.0		3.32			98.29				
60.0	59.0		3.45			98.16				
61.0	60.0		3.46			98.15				
62.0	61.0		3.45			98.16				
64.0	63.0		3.29			98.32				
65.0	64.0		3.35			98.26				
66.0	65.0		3.21			98.40				
67.0	66.0		3.27			98.34				
72.0	71.0		3.12			98.49				
73.0	72.0		3.23			98.38				
74.0	73.0		3.30			98.31				
75.0	74.0		3.25			98.36				
75.8	74.8		3.31			98.30				
RBXS1	74.8		3.19			98.42				
BM1				1.61		100.00				

Caples Cr below Kirkwood confl XS1



Caples Cr below Kirkwood confl. XS2



Kirkwood XS2

Caples Creek below Kirkwood Creek confluence, XS2											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		1.49			101.49	100.00					
LBXS2	0.0		3.37			98.12			Bankfull height elevation		
1.0	0.0		3.80			97.69			97.04		
2.5	1.5		3.70			97.79			Max Bankfull Depth		
5.0	4.0		3.80			97.69			1.79		
7.5	6.5		4.28			97.21			Avg Bankfull depth		
10.0	9.0		4.69			96.80			0.78		
12.5	11.5		4.51			96.98	0.06	QbkfL	Bankfull width		
13.0	12.0		4.53			96.96	0.08		57.5		
14.0	13.0		4.59			96.90	0.14		Bankfull W/D ratio		
15.0	14.0		4.65			96.84	0.20		73.4		
16.0	15.0		4.66			96.83	0.20		Elev @ 2x Bankfull depth		
17.0	16.0		4.74			96.75	0.28		98.82		
18.0	17.0		4.72			96.77	0.27		Width @ 2x Bankfull depth		
19.0	18.0		4.78			96.71	0.33		200.0		
20.0	19.0		4.87			96.62	0.42				
21.0	20.0		4.91			96.58	0.45				
22.0	21.0		4.99			96.50	0.53				
23.0	22.0		5.03			96.46	0.58				
24.0	23.0		5.10			96.39	0.64	LEW			
25.0	24.0		5.14			96.35	0.69				
26.0	25.0		5.32			96.17	0.87				
27.0	26.0		5.44			96.05	0.98				
28.0	27.0		5.66			95.83	1.21				
29.0	28.0		5.69			95.80	1.24				
30.0	29.0		5.69			95.80	1.24				
31.0	30.0		5.71			95.78	1.26				
32.0	31.0		5.65			95.84	1.20				
33.0	32.0		5.62			95.87	1.17				
34.0	33.0		5.63			95.86	1.18				
35.0	34.0		5.62			95.87	1.17				
36.0	35.0		5.55			95.94	1.10				
37.0	36.0		5.50			95.99	1.05				
38.0	37.0		5.44			96.05	0.98				
39.0	38.0		5.41			96.08	0.95				
40.0	39.0		5.34			96.15	0.89				
41.0	40.0		5.34			96.15	0.89				
42.0	41.0		5.29			96.20	0.84				
43.0	42.0		5.14			96.35	0.69				
44.0	43.0		5.16			96.33	0.70				
45.0	44.0		5.10			96.39	0.64	REW			
46.0	45.0		5.60			95.89	1.15				
47.0	46.0		4.99			96.50	0.53				
48.0	47.0		4.96			96.53	0.50				
49.0	48.0		4.99			96.50	0.53				
50.0	49.0		5.05			96.44	0.59				
51.0	50.0		4.95			96.54	0.50				
52.0	51.0		5.05			96.44	0.59				

Kirkwood XS2

Caples Creek below Kirkwood Creek confluence, XS2											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
53.0	52.0		5.02			96.47	0.56				
54.0	53.0		5.09			96.40	0.64				
55.0	54.0		5.10			96.39	0.64				
56.0	55.0		5.11			96.38	0.66				
57.0	56.0		5.08			96.41	0.63				
58.0	57.0		5.12			96.37	0.67				
59.0	58.0		5.20			96.29	0.75				
60.0	59.0		5.33			96.16	0.88				
61.0	60.0		5.62			95.87	1.17				
62.0	61.0		5.81			95.68	1.36				
63.0	62.0		5.80			95.69	1.35				
64.0	63.0		5.75			95.74	1.30				
65.0	64.0		5.71			95.78	1.26				
66.0	65.0		6.04			95.45	1.59				
67.0	66.0		6.24			95.25	1.79	Thalweg			
68.0	67.0		5.60			95.89	1.15	REW			
69.0	68.0		4.92			96.57	0.47				
70.0	69.0		4.40			97.09	-0.05	QbkflR			
72.5	71.5		4.52			96.97					
75.0	74.0		4.70			96.79					
77.5	76.5		4.78			96.71					
80.0	79.0		4.42			97.07					
82.5	81.5		3.58			97.91					
83.5	82.5		3.61			97.88					
RBXS2	82.5		2.90			98.59					
BM1				1.50		99.99					

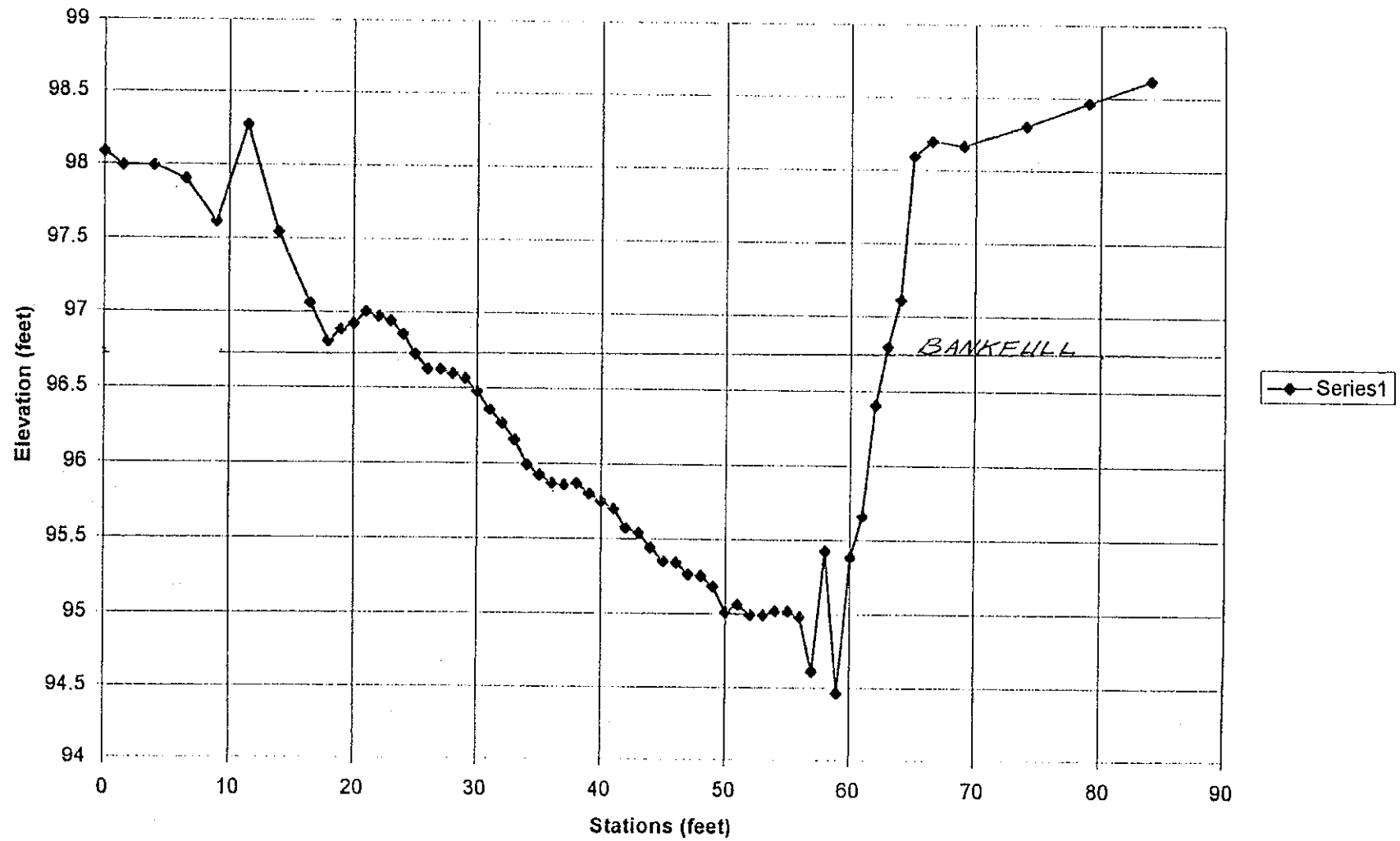
Kirkwood XS3

Caples Creek below Kirkwood Creek confluence, XS3										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		1.50			101.50	100.00				
LBXS2	0.0		3.03			98.47			Bankfull height elevation	
1.0	0.0		3.41			98.09			96.74	
2.5	1.5		3.50			98.00			Max Bankfull Depth	
5.0	4.0		3.50			98.00			2.27	
7.5	6.5		3.59			97.91			Avg Bankfull depth	
10.0	9.0		3.88			97.62			0.85	
12.5	11.5		3.22			98.28			Bankfull width	
15.0	14.0		3.95			97.55			50.5	
17.5	16.5		4.43			97.07	-0.33	QbkfL	Bankfull W/D ratio	
19.0	18.0		4.69			96.81	-0.07		59.4	
20.0	19.0		4.61			96.89	-0.15		Elev @ 2x Bankfull depth	
21.0	20.0		4.57			96.93	-0.19		99.01	
22.0	21.0		4.49			97.01	-0.27		Width @ 2x Bankfull depth	
23.0	22.0		4.52			96.98	-0.24		200.0	
24.0	23.0		4.55			96.95	-0.21			
25.0	24.0		4.64			96.86	-0.12			
26.0	25.0		4.77			96.73	0.01			
27.0	26.0		4.87			96.63	0.11			
28.0	27.0		4.87			96.63	0.11	LEW		
29.0	28.0		4.90			96.60	0.14			
30.0	29.0		4.93			96.57	0.17			
31.0	30.0		5.02			96.48	0.26			
32.0	31.0		5.14			96.36	0.38			
33.0	32.0		5.23			96.27	0.47			
34.0	33.0		5.34			96.16	0.58			
35.0	34.0		5.50			96.00	0.74			
36.0	35.0		5.57			95.93	0.81			
37.0	36.0		5.62			95.88	0.86			
38.0	37.0		5.63			95.87	0.87			
39.0	38.0		5.62			95.88	0.86			
40.0	39.0		5.69			95.81	0.93			
41.0	40.0		5.74			95.76	0.98			
42.0	41.0		5.79			95.71	1.03			
43.0	42.0		5.92			95.58	1.16			
44.0	43.0		5.95			95.55	1.19			
45.0	44.0		6.05			95.45	1.29			
46.0	45.0		6.14			95.36	1.38			
47.0	46.0		6.15			95.35	1.39			
48.0	47.0		6.23			95.27	1.47			
49.0	48.0		6.24			95.26	1.48			
50.0	49.0		6.31			95.19	1.55			
51.0	50.0		6.48			95.02	1.72			
52.0	51.0		6.43			95.07	1.67			
53.0	52.0		6.50			95.00	1.74			
54.0	53.0		6.50			95.00	1.74			
55.0	54.0		6.47			95.03	1.71			
56.0	55.0		6.47			95.03	1.71			

Kirkwood XS3

Caples Creek below Kirkwood Creek confluence, XS3										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
57.0	56.0		6.51			94.99	1.75			
58.0	57.0		6.88			94.62	2.12			
59.0	58.0		6.07			95.43	1.31			
60.0	59.0		7.03			94.47	2.27	Thalweg		
61.0	60.0		6.11			95.39	1.35	REW		
62.0	61.0		5.83			95.67	1.07			
63.0	62.0		5.09			96.41	0.33	QbkflR		
64.0	63.0		4.70			96.80				
65.0	64.0		4.38			97.12				
66.0	65.0		3.40			98.10				
67.5	66.5		3.30			98.20				
70.0	69.0		3.33			98.17				
75.0	74.0		3.19			98.31				
80.0	79.0		3.03			98.47				
85.0	84.0		2.87			98.63				
RBXS3	84.0		2.74			98.76				
BM1				1.50		100.00				

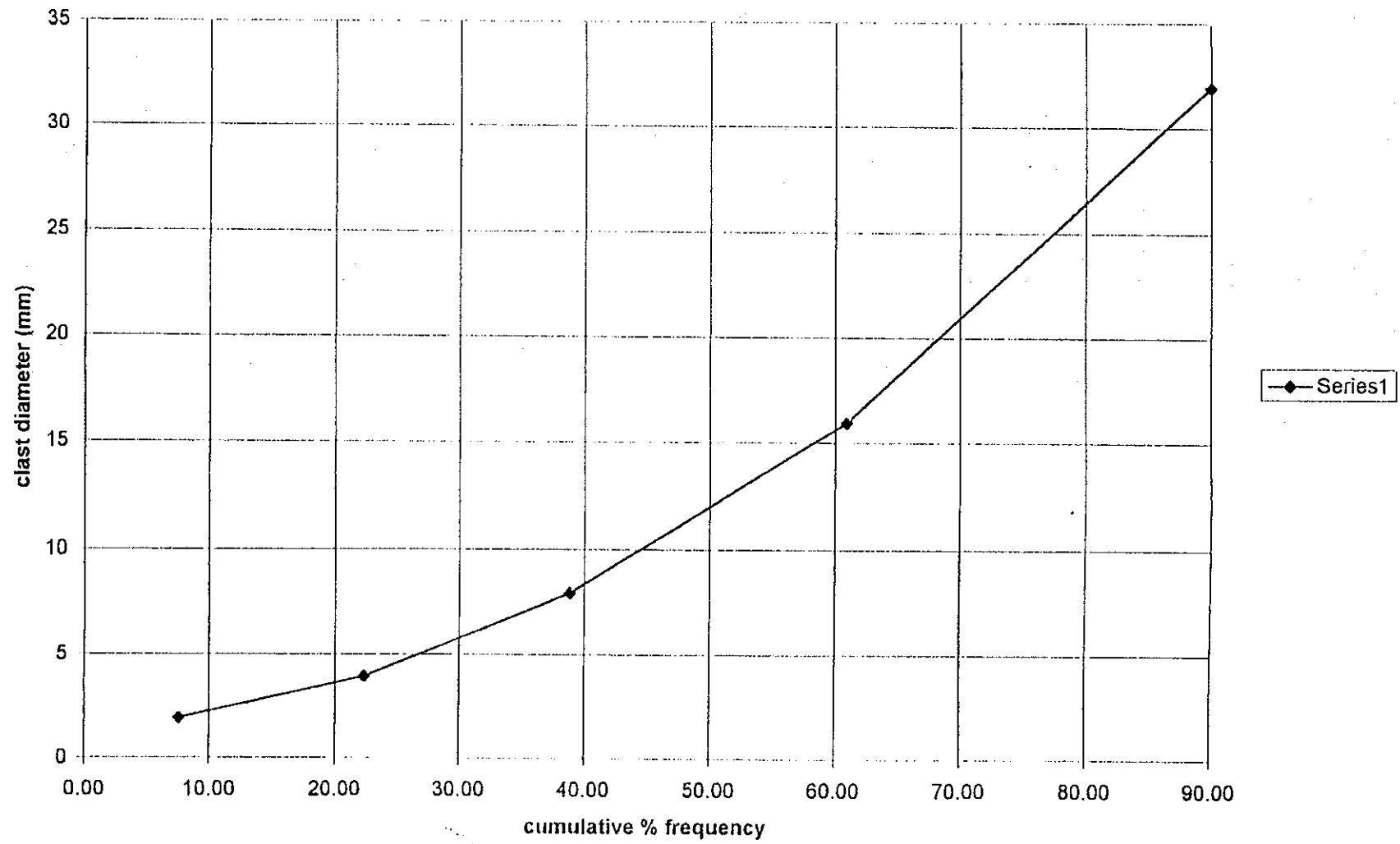
Caples Cr below Kirkwood confl XS3



Caples below Kirkwd

Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		0	0.00	100.00				0	0.00	100.00	4096
L Boulder	2048	11	0	0.00		0	0.00	100.00				0	0.00	100.00	2048
M Boulder	1024	10	0	0.00		0	0.00	100.00				0	0.00	100.00	1024
S Boulder	512	9	0	0.00		0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	512
L Cobble	256	8	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	0	0.00	100.00	256
S Cobble	128	7	0	0.00	100.00	1	0.96	100.00	0	0.00	100.00	1	0.28	100.00	128
VC Gravel	64	6	10	9.71	100.00	20	19.23	99.04	5	3.31	100.00	35	9.78	99.72	64
C Gravel	32	5	33	32.04	90.29	34	32.69	79.81	37	24.50	96.69	104	29.05	89.94	32
M Gravel	16	4	17	16.50	58.25	22	21.15	47.12	40	26.49	72.19	79	22.07	60.89	16
F Gravel	8	3	20	19.42	41.75	13	12.50	25.96	26	17.22	45.70	59	16.48	38.83	8
VF Gravel	4	2	15	14.56	22.33	9	8.65	13.46	29	19.21	28.48	53	14.80	22.35	4
VC Sand	2	1	8	7.77	7.77	5	4.81	4.81	14	9.27	9.27	27	7.54	7.54	2
Sand	1		0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1
Silt/clay			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			103	100		104	100.00		151	100.00		358	100.00		

Caples Cr below Kirkwood Cr. confluence



Caples overflow Rosgen

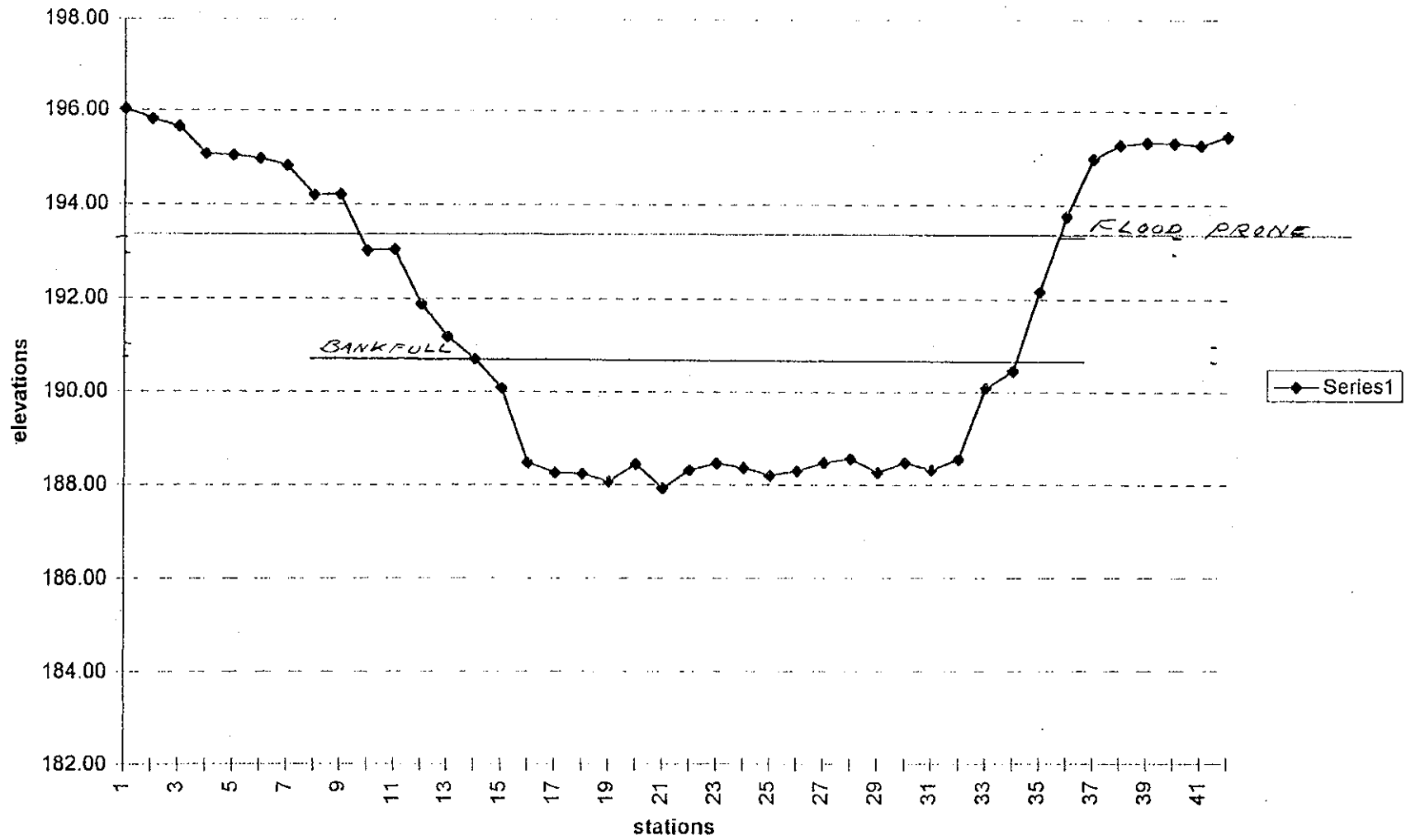
Rosgen classification for Caples Lake overflow channel							
	XS 1	Dist	XS 2	Dist	XS 3	Reach	
Bankfull height elevation	190.66	141	189.95	178.00	188.91		
Slope		0.005035		0.005843		0.005486	
Max Bankfull Depth	2.71		3.38		2.55	2.88	
Avg Bankfull depth	2.12		2.31		1.91	2.11	
Mean bed elevation	188.54		187.64		187.00		
Bed slope		0.006383		0.003596		0.004828	
Bankfull width	20.5		30.7		33.0	28.1	
Bankfull W/D ratio	9.7		13.3		17.3	13.3	
Elev @ 2x Bankfull depth	193.37		193.33		191.46		
Width @ 2x Bankfull depth	29.0		41.5		40.6	37.0	
Ratio of 2x width / bankfull width						1.32	
d50	35		15		9	20	
Entrenchment						1.32	
W/D						13.3	
Slope						0.005	
Rosgen classification						F4	

Caples overflow XS1

Caples Creek overflow XS 1											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		0.23			200.23	200.00			Bankfull height elevation		
RBXS1	53		3.91			196.32			190.66		
0.0	53		4.74			195.49			Max Bankfull Depth		
2.0	51		4.93			195.30			2.71		
4.0	49		4.88			195.35			Avg Bankfull depth		
6.0	47		4.87			195.36			2.12		
8.0	45		4.93			195.30			Bankfull width		
9.1	43.7		5.22			195.01			20.5		
10.0	43		6.45			193.78			Bankfull W/D ratio		
12.0	41		8.04			192.19			9.7		
14.0	39		9.76			190.47			Elev @ 2x Bankfull depth		
14.5	38.3		10.13			190.10	0.55	QbkfLR	193.37		
16.0	37		11.67			188.56	2.09	REW	Width @ 2x Bankfull depth		
17.0	36		11.90			188.33	2.32		29.0		
18.0	35		11.74			188.49	2.16				
19.0	34		11.95			188.28	2.37				
20.0	33		11.66			188.57	2.08				
21.0	32		11.74			188.49	2.16				
22.0	31		11.92			188.31	2.34				
23.0	30		12.02			188.21	2.44				
24.0	29		11.85			188.38	2.27				
25.0	28		11.75			188.48	2.17				
26.0	27		11.91			188.32	2.33				
27.0	26		12.29			187.94	2.71	Thalweg			
28.0	25		11.78			188.45	2.20				
29.0	24		12.15			188.08	2.57				
30.0	23		11.98			188.25	2.40				
31.0	22		11.96			188.27	2.38				
32.0	21		11.74			188.49	2.16	LEW/bdrk			
33.0	20		10.14			190.09	0.56	bdrk			
34.0	19		9.50			190.73		bdrk			
35.0	17.8		9.02			191.21		QbkfLR			
36.0	17		8.32			191.91		bdrk			
37.0	16		7.17			193.06		bdrk			
38.0	15		7.19			193.04		bdrk			
39.0	14		6.00			194.23		bdrk			
40.0	13		6.01			194.22		bdrk			
41.0	12		5.39			194.84		bdrk			
42.0	11		5.23			195.00		bdrk			
43.0	10		5.17			195.06		end bdrk			
44.0	9		5.13			195.10					
48.0	5		4.56			195.67					
50.0	3		4.39			195.84					
52.0	1		4.18			196.05					
52.8	0		3.58			196.65					
LBXS1	0		3.28			196.95					
BM1				0.23		200.00					

Chart4

Caples overflow XS1



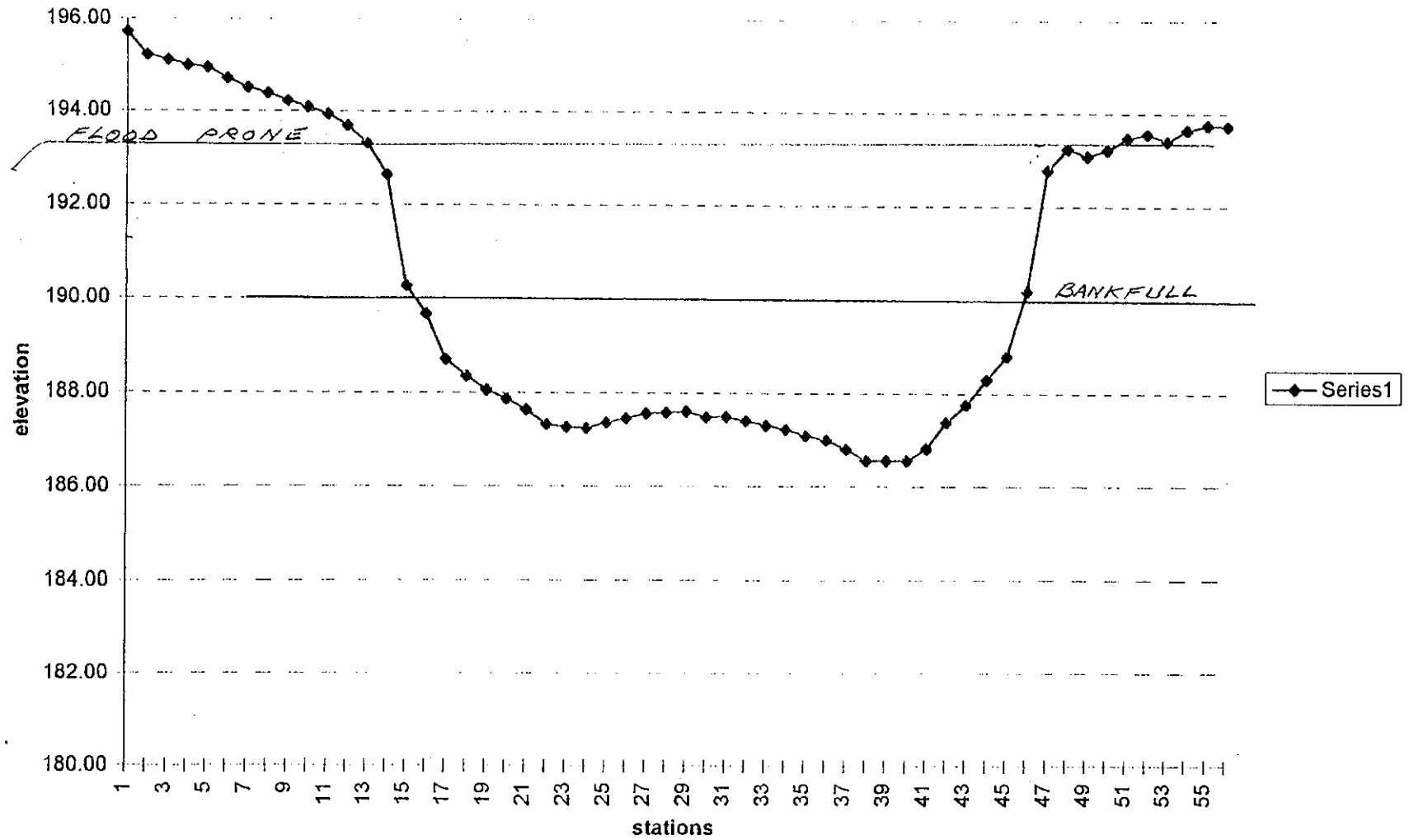
Caples overflow XS2

Caples Creek overflow XS 2											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		0.19			200.19	200.00			Bankfull height elevation		
LBXS2				3.49	200.19	196.70			189.95		
LBXS2		1.52			198.22	196.70			Max Bankfull Depth		
RBXS2	79.3		1.57			196.65			3.38		
0.0	79		4.47			193.75			Avg Bankfull depth		
2.0	77		4.45			193.77			2.31		
4.0	75		4.56			193.66			Bankfull width		
6.0	73		4.80			193.42			30.7		
8.0	71		4.64			193.58			Bankfull W/D ratio		
10.0	69		4.73			193.49			13.3		
12.0	67		4.99			193.23			Elev @ 2x Bankfull depth		
14.0	65		5.12			193.10			193.33		
16.0	63		4.97			193.25			Width @ 2x Bankfull depth		
18.5	61		5.42			192.80			41.5		
19.7	60		8.01			190.21	-0.26	QbkfLR			
21.0	58		9.41			188.81	1.14				
22.0	57		9.91			188.31	1.64				
23.0	56		10.44			187.78	2.17				
24.0	55		10.82			187.40	2.55	REW			
25.0	54		11.39			186.83	3.12				
26.0	53		11.65			186.57	3.38	Thalweg			
27.0	52		11.64			186.58	3.37				
28.0	51		11.64			186.58	3.37				
29.0	50		11.41			186.81	3.14				
30.0	49		11.21			187.01	2.94				
31.0	48		11.11			187.11	2.84				
32.0	47		10.98			187.24	2.71				
33.0	46		10.89			187.33	2.62				
34.0	45		10.79			187.43	2.52				
35.0	44		10.71			187.51	2.44				
36.0	43		10.72			187.50	2.45				
37.0	42		10.60			187.62	2.33				
38.0	41		10.62			187.60	2.35				
39.0	40		10.64			187.58	2.37				
40.0	39		10.74			187.48	2.47				
41.0	38		10.84			187.38	2.57				
42.0	37		10.96			187.26	2.69				
43.0	36		10.93			187.29	2.66				
44.0	35		10.88			187.34	2.61				
45.0	34		10.56			187.66	2.29				
46.0	33		10.34			187.88	2.07				
47.0	32		10.15			188.07	1.88				
48.0	31		9.85			188.37	1.58				
49.0	30		9.50			188.72	1.23				
50.4	29		8.53			189.69	0.26	QbkfL			
51.0	28		7.92			190.30					
52.0	27		5.56			192.66					
53.5	26		4.90			193.32					

Caples overflow XS2

Caples Creek overflow XS 2											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
55.0	24		4.51			193.71					
57.0	22		4.26			193.96					
59.0	20		4.11			194.11					
61.0	18		3.98			194.24					
63.0	16		3.82			194.40					
65.0	14		3.69			194.53					
67.0	12		3.5			194.72					
69.0	10		3.27			194.95					
71.0	8		3.22			195.00					
73.0	6		3.11			195.11					
75.0	4		2.99			195.23					
78.0	1		2.48			195.74					
79.3	0		2.25			195.97					
LBXS2	0.0			1.52		196.70					

Caples overflow XS2



Caples overflow XS3

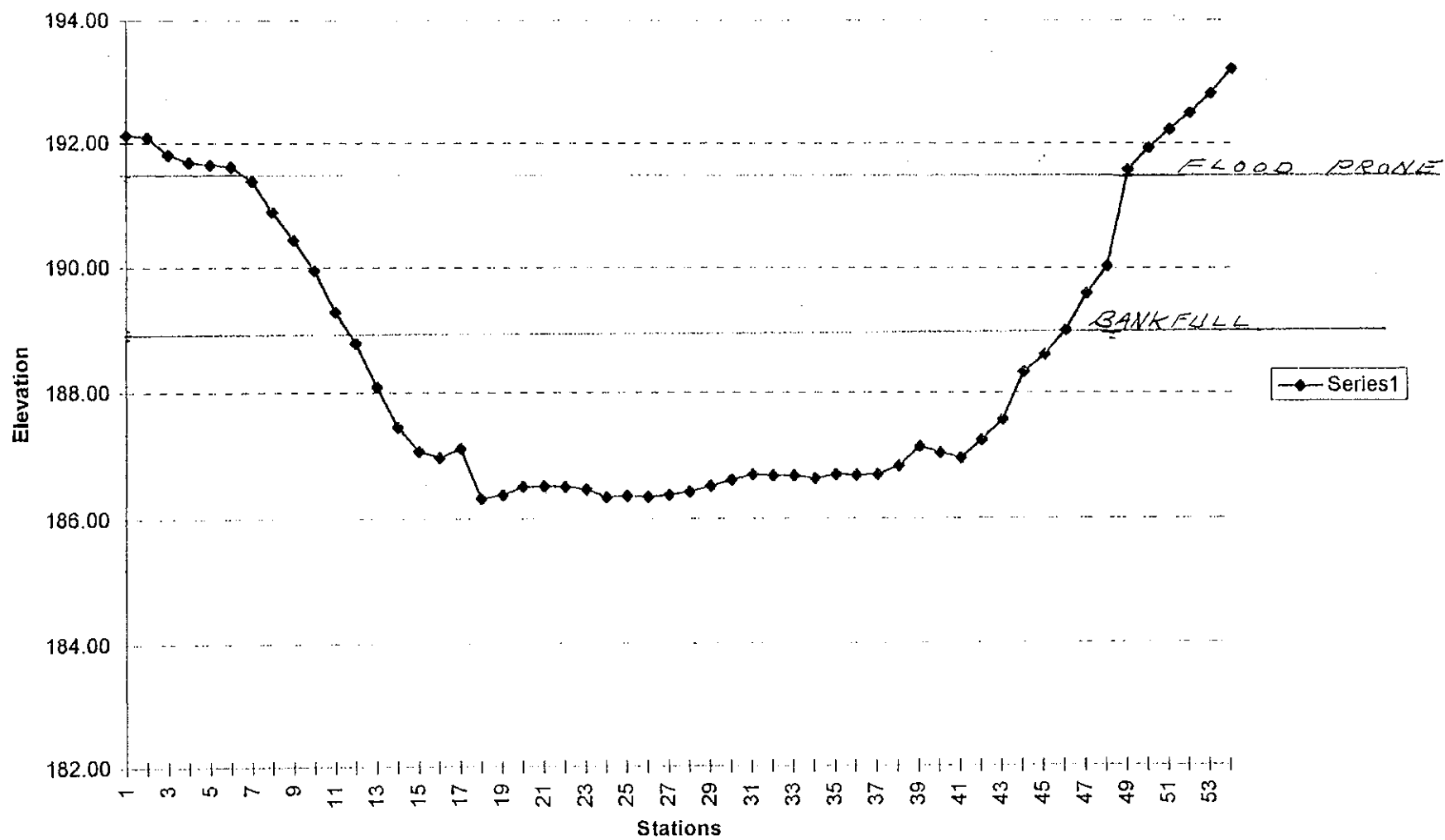
Caples Creek overflow XS 3											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
BM1		0.19			200.19	200.00			Bankfull height elevation		
LBXS2				3.49	200.19	196.70			188.91		
LBXS2		1.52			198.22	196.70			Max Bankfull Depth		
TP#1				2.50	198.22	195.72			2.55		
TP#1		1.73			197.45	195.72			Avg Bankfull depth		
RBXS3	56.0		3.93			193.52			1.91		
0.0	56		4.22			193.23			Bankfull width		
2.0	54		4.63			192.82			33.0		
4.0	52		4.94			192.51			Bankfull W/D ratio		
6.0	50		5.21			192.24			17.3		
8.0	48		5.51			191.94			Elev @ 2x Bankfull depth		
9.7	46		5.85			191.60			191.46		
11.0	45		7.41			190.04	-1.13		Width @ 2x Bankfull depth		
12.0	44		7.84			189.61	-0.70		40.6		
13.0	43		8.43			189.02	-0.11	QbkflR			
14.0	42		8.82			188.63	0.28				
15.0	41		9.10			188.35	0.56				
16.0	40		9.86			187.59	1.32				
17.0	39		10.19			187.26	1.65				
18.0	38		10.48			186.97	1.94				
19.0	37		10.40			187.05	1.86				
20.0	36		10.30			187.15	1.76				
21.0	35		10.61			186.84	2.07				
21.5	35		10.74			186.71	2.20	REW			
22.0	34		10.75			186.70	2.21				
23.0	33		10.74			186.71	2.20				
24.0	32		10.80			186.65	2.26				
25.0	31		10.76			186.69	2.22				
26.0	30		10.76			186.69	2.22				
27.0	29		10.74			186.71	2.20				
28.0	28		10.82			186.63	2.28				
29.0	27		10.92			186.53	2.38				
30.0	26		11.01			186.44	2.47				
31.0	25		11.06			186.39	2.52				
32.0	24		11.09			186.36	2.55	Thalweg			
33.0	23		11.08			186.37	2.54				
34.0	22		11.09			186.36	2.55				
35.0	21		10.97			186.48	2.43				
36.0	20		10.93			186.52	2.39				
37.0	19		10.92			186.53	2.38				
38.0	18		10.93			186.52	2.39				
39.0	17		11.06			186.39	2.52				
40.0	16		11.12			186.33	2.58				
41.0	15		10.33			187.12	1.79				
42.0	14		10.47			186.98	1.93				
43.0	13		10.37			187.08	1.83				
44.0	12		9.99			187.46	1.45				
45.0	11		9.34			188.11	0.80				

Caples overflow XS3

Caples Creek overflow XS 3											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
46.0	10		8.65			188.80	0.11	QbkfIL			
47.0	9		8.14			189.31	-0.40				
48.0	8		7.48			189.97					
49.0	7		7.00			190.45					
50.0	6		6.54			190.91					
50.3	6		6.04			191.41					
51.0	5		5.81			191.64					
52.0	4		5.78			191.67					
53.0	3		5.74			191.71					
54.0	2		5.62			191.83					
55.0	1		5.34			192.11					
55.6	0		5.31			192.14					
LBXS3	0	4.48				197.45	192.97				
TP#1				1.73		197.45	195.72				
TP#1		3.46				199.18	195.72				
LBXS2				2.46		199.18	196.72				
LBXS2		3.92				200.64	196.72				
BM1				0.62		200.64	200.02				

Caples overflow 3

Caples overflow XS 3

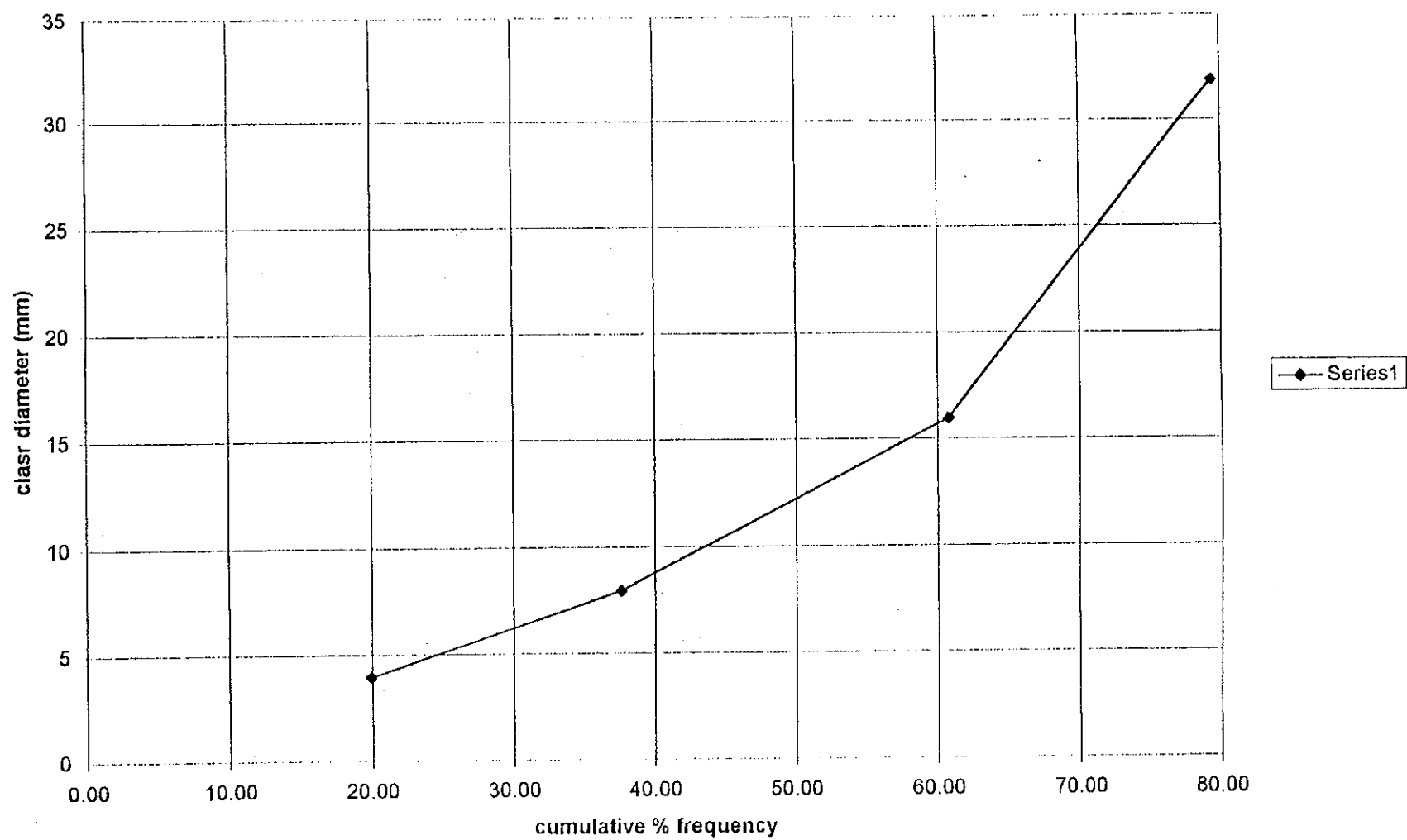


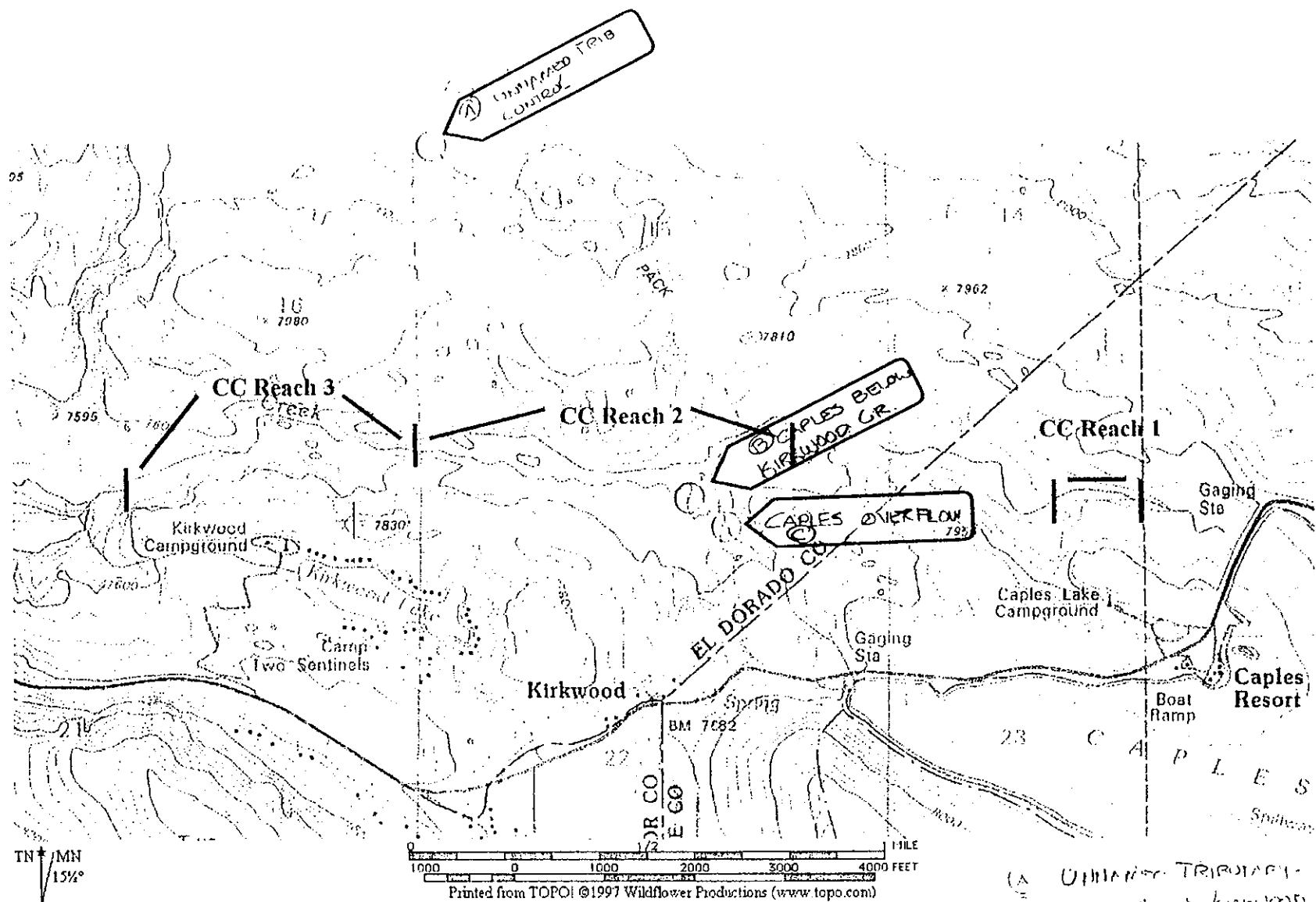
Caples overflow

Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock			2	2.00	100.00							2	0.64	100.00	
VL Boulder	4096	12	0	0.00	98.00	0	0.00	100.00				0	0.00	99.36	4096
L Boulder	2048	11	0	0.00	98.00	0	0.00	100.00				0	0.00	99.36	2048
M Boulder	1024	10	0	0.00	98.00	0	0.00	100.00				0	0.00	99.36	1024
S Boulder	512	9	3	3.00	98.00	0	0.00	100.00	0	0.00	100.00	3	0.96	99.36	512
L Cobble	256	8	10	10.00	95.00	1	1.00	100.00	0	0.00	100.00	11	3.54	98.39	256
S Cobble	128	7	15	15.00	85.00	3	3.00	99.00	0	0.00	100.00	18	5.79	94.86	128
VC Gravel	64	6	16	16.00	70.00	12	12.00	96.00	2	1.80	100.00	30	9.65	89.07	64
C Gravel	32	5	21	21.00	54.00	17	17.00	84.00	20	18.02	98.20	58	18.65	79.42	32
M Gravel	16	4	15	15.00	33.00	24	24.00	67.00	33	29.73	80.18	72	23.15	60.77	16
F Gravel	8	3	8	8.00	18.00	16	16.00	43.00	31	27.93	50.45	55	17.68	37.62	8
VF Gravel	4	2	1	1.00	10.00	5	5.00	27.00	14	12.61	22.52	20	6.43	19.94	4
VC Sand	2	1	4	4.00	9.00	2	2.00	22.00	9	8.11	9.91	15	4.82	13.50	2
Sand	1		5	5.00	5.00	10	10.00	20.00	2	1.80	1.80	17	5.47	8.68	1
Silt/clay			0	0	0.00	10	10.00	10.00	0	0.00	0.00	10	3.22	3.22	
Total clasts			100	100		100	100.00		111	100.00		311	100.00		

Chart5

Caples Lake spillway channel





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CAPLES RIVER ROAD

- (A) UTMARCA TRIBUTARY CONTROL
- (B) CAPLES BELOW KIRKWOOD CR. (MENDOCINO)
- (C) CAPLES OVERFLOW

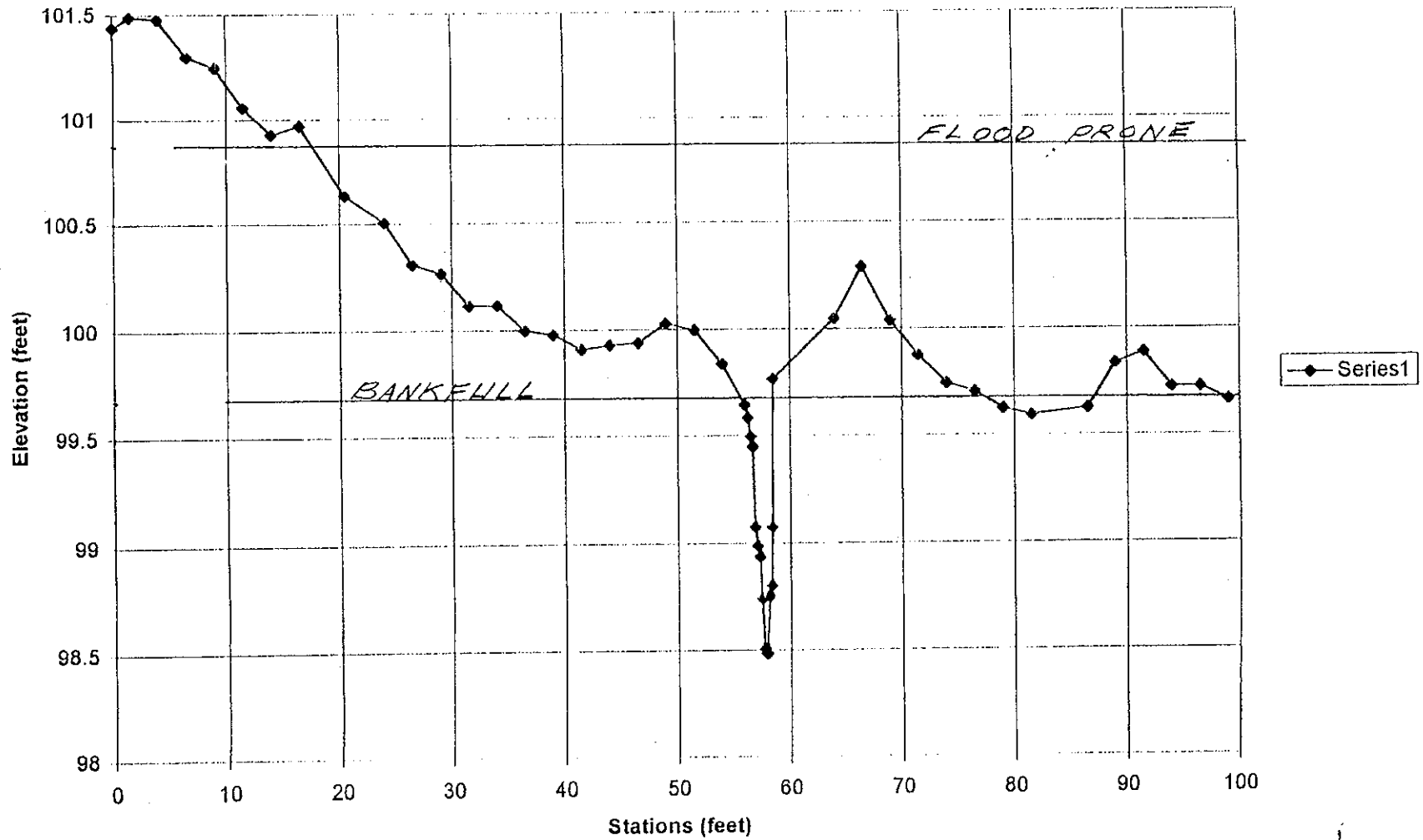
MARSH ROSEN

Rosgen classification for upper South Fork American River in marsh nr Hwy 50							
	XS 1	Dist	XS 2	Dist	XS 3	Reach	
Bankfull height elevation	99.68	201	98.86	107.00	98.49		
Slope		0.00408		0.003458		0.003864	
Max Bankfull Depth	1.19		0.88		0.36	0.81	
Avg Bankfull depth	0.62		0.46		0.16	0.41	
Mean bed elevation	99.06		98.40		98.33		
Bed slope		0.00328		0.00065		0.00237	
Bankfull width	2.2		4.5		5.0	3.9	
Bankfull W/D ratio	3.5		9.8		31.3	9.4	
Elev @ 2x Bankfull depth	100.87		99.74		98.85		
Width @ 2x Bankfull depth	83.5		155		125	121.2	
Ratio of 2x width / bankfull width						31.07	
d50	silt		silt		silt	silt	
Entrenchment						31.07	
W/D						9.4	
Slope						0.004	
Rosgen classification						E6	

MARSH XS1

Upper South Fork American River in marsh, XS1										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM2		5.86			105.86	100.00				
RBXS1	0.0		5.86			100.00			Bankfull height elevation	
100.0	99.0		4.72			101.14		Top of pin	99.68	
100.0	99.0		6.19			99.67			Max Bankfull Depth	
97.5	96.5		6.13			99.73			1.19	
95.0	94.0		6.13			99.73			Avg Bankfull depth	
92.5	91.5		5.97			99.89			0.62	
90.0	89.0		6.02			99.84			Bankfull width	
87.5	86.5		6.23			99.63			2.2	
82.5	81.5		6.26			99.60			Bankfull W/D ratio	
80.0	79.0		6.23			99.63			3.5	
77.5	76.5		6.15			99.71			Elev @ 2x Bankfull depth	
75.0	74.0		6.11			99.75			100.87	
72.5	71.5		5.98			99.88			Width @ 2x Bankfull depth	
70.0	69.0		5.82			100.04			83.5	
67.5	66.5		5.57			100.29				
65.0	64.0		5.81			100.05				
59.5	58.5		6.09			99.77	-0.09	QbkfL		
59.4	58.4		6.78			99.08	0.60	LEW		
59.3	58.3		7.05			98.81	0.87			
59.1	58.1		7.10			98.76	0.92			
58.9	57.9		7.37			98.49	1.19	Thalweg		
58.7	57.7		7.35			98.51	1.17			
58.5	57.5		7.11			98.75	0.93			
58.3	57.3		6.92			98.94	0.74			
58.1	57.1		6.87			98.99	0.69			
57.9	56.9		6.78			99.08	0.60	REW		
57.7	56.7		6.41			99.45	0.23			
57.5	56.5		6.36			99.50	0.18			
57.3	56.3		6.27			99.59	0.09	QbkfR		
57.0	56.0		6.21			99.65				
55.0	54.0		6.02			99.84				
52.5	51.5		5.86			100.00				
50.0	49.0		5.83			100.03				
47.5	46.5		5.92			99.94				
45.0	44.0		5.93			99.93				
42.5	41.5		5.95			99.91				
40.0	39.0		5.88			99.98				
37.5	36.5		5.86			100.00				
35.0	34.0		5.74			100.12				
32.5	31.5		5.74			100.12				
30.0	29.0		5.59			100.27				
27.5	26.5		5.55			100.31				
25.0	24.0		5.35			100.51				
21.5	20.5		5.22			100.64				
17.5	16.5		4.89			100.97				
15.0	14.0		4.93			100.93				
12.5	11.5		4.80			101.06				
10.0	9.0		4.61			101.25				
7.5	6.5		4.56			101.30				
5.0	4.0		4.38			101.48				
2.5	1.5		4.37			101.49				
1.0	0.0		4.42			101.44				
1.0	0.0		3.95			101.91				
BM2				5.86		100.00				

SoFAR in marsh near Hwy 50, XS1

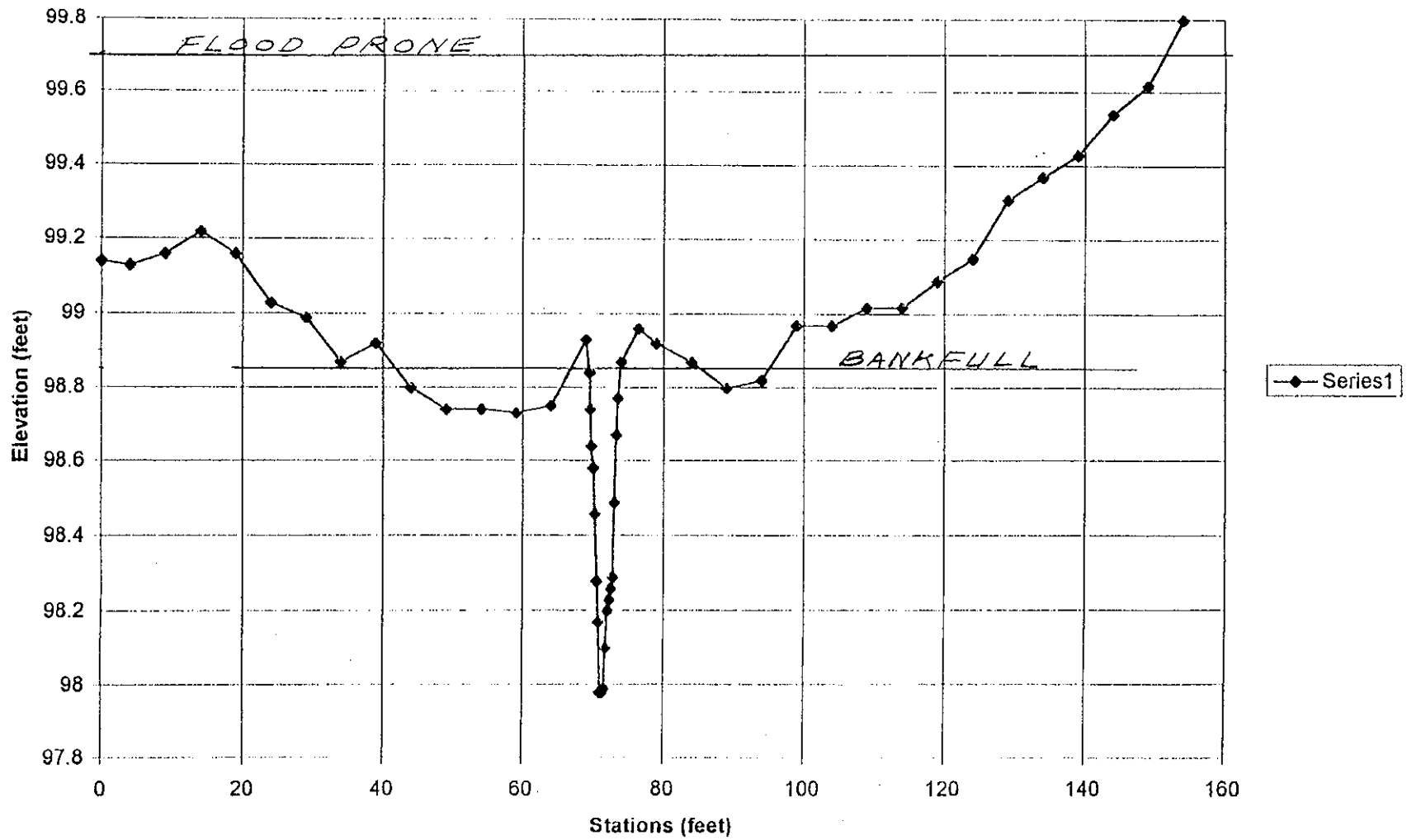


MARSH XS2

Upper South Fork American River in marsh, XS2										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM2		5.86			105.86	100.00				
BM1				3.95		101.91				
BM1		3.95			105.86	101.91				
LBXS2	0.0		5.99			99.87				
1.0	0.0		6.72			99.14			Bankfull height elevation	
5.0	4.0		6.73			99.13		Top of pin	98.86	
10.0	9.0		6.70			99.16			Max Bankfull Depth	
15.0	14.0		6.64			99.22			0.88	
20.0	19.0		6.70			99.16			Avg Bankfull depth	
25.0	24.0		6.83			99.03			0.46	
30.0	29.0		6.87			98.99			Bankfull width	
35.0	34.0		6.99			98.87			4.5	
40.0	39.0		6.94			98.92			Bankfull W/D ratio	
45.0	44.0		7.06			98.80			9.8	
50.0	49.0		7.12			98.74			Elev @ 2x Bankfull depth	
55.0	54.0		7.12			98.74			99.73	
60.0	59.0		7.13			98.73			Width @ 2x Bankfull depth	
65.0	64.0		7.11			98.75			155.0	
70.0	69.0		6.93			98.93				
70.5	69.5		7.02			98.84	0.02	QbkfIL		
70.6	69.6		7.12			98.74	0.12			
70.75	69.75		7.22			98.64	0.22			
71.00	70.00		7.28			98.58	0.28	LEW		
71.25	70.25		7.40			98.46	0.40			
71.50	70.50		7.58			98.28	0.58			
71.75	70.75		7.69			98.17	0.69			
72.00	71.00		7.88			97.98	0.88			
72.25	71.25		7.88			97.98	0.88	Thalweg		
72.50	71.50		7.87			97.99	0.87			
72.75	71.75		7.76			98.10	0.76			
73.00	72.00		7.66			98.20	0.66			
73.25	72.25		7.63			98.23	0.63			
73.50	72.50		7.60			98.26	0.59			
73.75	72.75		7.57			98.29	0.57			
74.00	73.00		7.37			98.49	0.37	REW		
74.25	73.25		7.19			98.67	0.19			
74.50	73.50		7.09			98.77	0.09			
75.0	74.0		6.99			98.87	-0.02	QbkfIR		
77.5	76.5		6.90			98.96				
80.0	79.0		6.94			98.92				
85.0	84.0		6.99			98.87				
90.0	89.0		7.06			98.80				
95.0	94.0		7.04			98.82				
100.0	99.0		6.89			98.97				
105.0	104.0		6.89			98.97				
110.0	109.0		6.84			99.02				
115.0	114.0		6.84			99.02				
120.0	119.0		6.77			99.09				
125.0	124.0		6.71			99.15				
130.0	129.0		6.55			99.31				
135.0	134.0		6.49			99.37				
140.0	139.0		6.43			99.43				
145.0	144.0		6.32			99.54				
150.0	149.0		6.24			99.62				
155.1	154.1		6.06			99.80				
155.1	154.1		5.78			100.08	top of pin			
BM2				5.86		100.00				

Chart6

SoFAR in marsh near Hwy 50, XS2

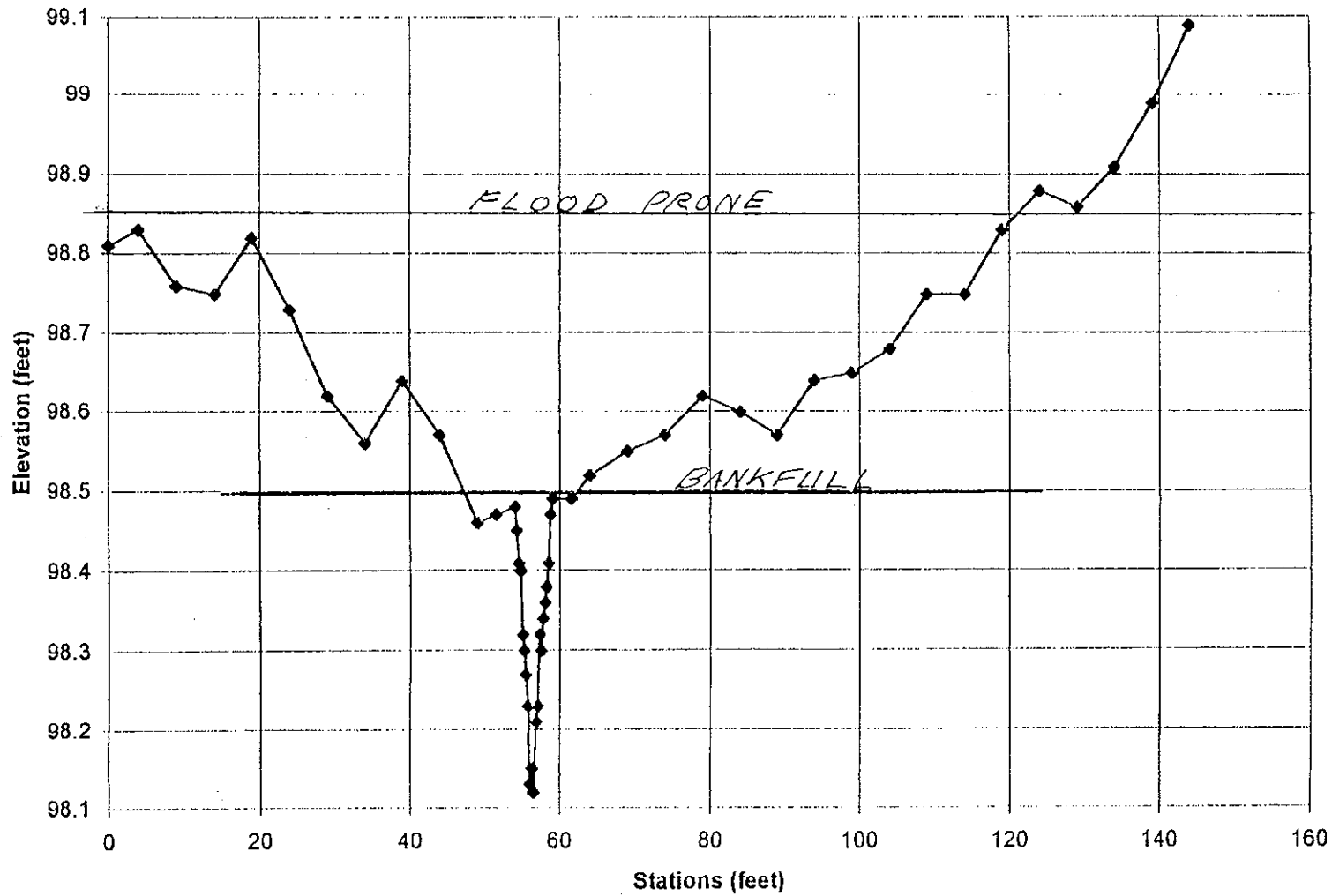


MARSH XS3

Upper South Fork American River in marsh, XS3										
Book	Adj.	Back	Intern.	Fore	Hght. of	Elevation	Depth @	Notes	Rosgen	
Statio	Station	Sight	Sight	Sight	Inst.		bankfull		notes	
BM2		5.86			105.86	100.00				
BM1				3.95		101.91				
BM1		3.95			105.86	101.91				
LBXS3	0.0		6.64			99.22				
1.0	0.0		7.05			98.81			Bankfull height elevation	
5.0	4.0		7.03			98.83		Top of pin	98.49	
10.0	9.0		7.10			98.76			Max Bankfull Depth	
15.0	14.0		7.11			98.75			0.36	
20.0	19.0		7.04			98.82			Avg Bankfull depth	
25.0	24.0		7.13			98.73			0.16	
30.0	29.0		7.24			98.62			Bankfull width	
35.0	34.0		7.30			98.56			5.0	
40.0	39.0		7.22			98.64			Bankfull W/D ratio	
45.0	44.0		7.29			98.57			30.7	
50.0	49.0		7.40			98.46			Elev @ 2x Bankfull depth	
52.5	51.5		7.39			98.47			98.85	
55.0	54.0		7.38			98.48	0.00	QbkfIL	Width @ 2x Bankfull depth	
55.25	54.25		7.41			98.45	0.03	LEW	125.0	
55.50	54.50		7.45			98.41	0.08			
55.75	54.75		7.46			98.40	0.08			
56.00	55.00		7.54			98.32	0.17			
56.25	55.25		7.56			98.30	0.19			
56.50	55.50		7.59			98.27	0.22			
56.75	55.75		7.63			98.23	0.25			
57.00	56.00		7.73			98.13	0.36			
57.25	56.25		7.71			98.15	0.33			
57.50	56.50		7.74			98.12	0.36	Thalweg		
57.75	56.75		7.65			98.21	0.28			
58.00	57.00		7.63			98.23	0.25			
58.25	57.25		7.54			98.32	0.17			
58.50	57.50		7.56			98.30	0.19			
58.75	57.75		7.52			98.34	0.14			
59.00	58.00		7.50			98.36	0.13			
59.25	58.25		7.48			98.38	0.11			
59.50	58.50		7.45			98.41	0.08	REW		
59.75	58.75		7.39			98.47	0.02			
60.00	59.00		7.37			98.49	0.00	QbkfIR		
62.5	61.5		7.37			98.49				
65.0	64.0		7.34			98.52				
70.0	69.0		7.31			98.55				
75.0	74.0		7.29			98.57				
80.0	79.0		7.24			98.62				
85.0	84.0		7.26			98.60				
90.0	89.0		7.29			98.57				
95.0	94.0		7.22			98.64				
100.0	99.0		7.21			98.65				
105.0	104.0		7.18			98.68				
110.0	109.0		7.11			98.75				
115.0	114.0		7.11			98.75				
120.0	119.0		7.03			98.83				
125.0	124.0		6.98			98.88				
130.0	129.0		7.00			98.86				
135.0	134.0		6.95			98.91				
140.0	139.0		6.87			98.99				
145.0	144.0		6.77			99.09				
145.0	144.0		5.85			100.01		top of pin		
BM2				5.86		100.00				

Chart7

SoFAR in marsh near Hwy 50, XS3



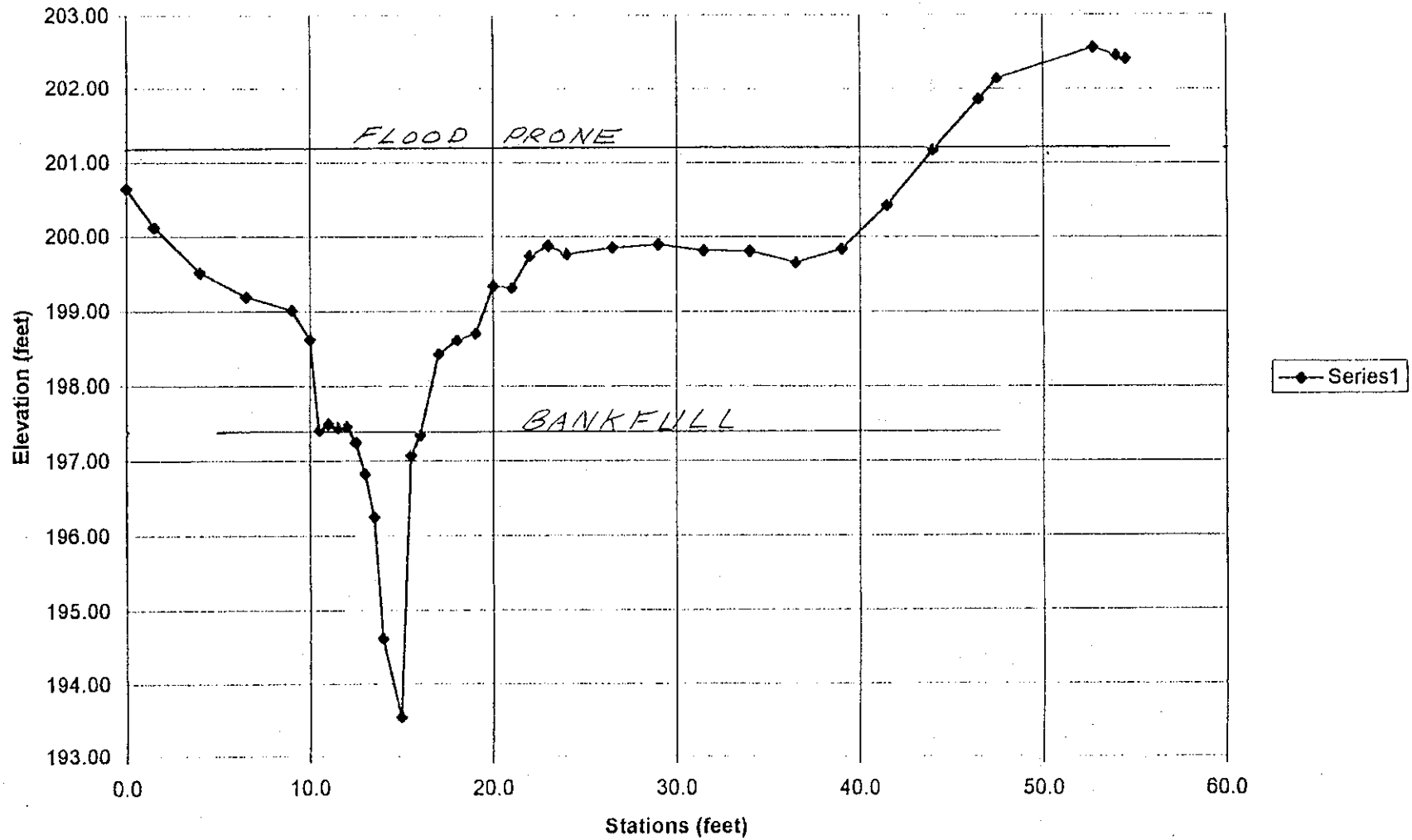
Above Marsh Rosgen

Rosgen classification for upper South Fork American River above marsh nr Hwy 50							
	XS 1	Dist	XS 2	Dist	XS 3	Reach	
Bankfull height elevation	197.39	95	196.73	97.00	196.08		
Slope		0.006947		0.006701		0.006823	
Max Bankfull Depth	3.83		1.72		1.51	2.35	
Avg Bankfull depth	0.77		1.20		1.18	1.05	
Mean bed elevation	196.62		195.53		194.90		
Bed slope		0.01147		0.00649		0.00896	
Bankfull width	5.5		9.8		8.0	7.8	
Bankfull W/D ratio	7.1		8.2		6.8	7.4	
Elev @ 2x Bankfull depth	201.22		198.45		197.59		
Width @ 2x Bankfull depth	45.0		26		13.5	28.2	
Ratio of 2x width / bankfull width						3.63	
d50	3		5		2	3.3	
Entrenchment						3.63	
W/D						7.4	
Slope						0.007	
Rosgen classification :						E4	

Above Marsh XS1

Upper South Fork American River above marsh, XS1										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
RBXS2&3		3.62			204.42	200.80				
LBXS2	0.0		2.15			202.27				
1.0	0.0		3.76			200.66				
2.5	1.5		4.28			200.14				
5.0	4.0		4.89			199.53			Bankfull height elevation	
7.5	6.5		5.21			199.21		Top of pin	197.39	
10.0	9.0		5.39			199.03			Max Bankfull Depth	
11.0	10.0		5.79			198.63			3.83	
11.5	10.5		7.00			197.42	-0.03	QbkfL	Avg Bankfull depth	
12.0	11.0		6.92			197.50	-0.12		0.77	
12.5	11.5		6.97			197.45	-0.06		Bankfull width	
13.0	12.0		6.95			197.47	-0.09		5.5	
13.5	12.5		7.17			197.25	0.13		Bankfull W/D ratio	
14.0	13.0		7.58			196.84	0.55	LEW	7.2	
14.5	13.5		8.16			196.26	1.13		Elev @ 2x Bankfull depth	
15.00	14.00		9.79			194.63	2.76		201.21	
16.00	15.00		10.86			193.56	3.83	Thalweg	Width @ 2x Bankfull depth	
16.50	15.50		7.34			197.08	0.31	REW	45.0	
17.00	16.00		7.07			197.35	0.03	QbkfR		
18.00	17.00		5.98			198.44				
19.00	18.00		5.80			198.62				
20.00	19.00		5.71			198.71				
21.00	20.00		5.07			199.35				
22.00	21.00		5.09			199.33				
23.00	22.00		4.67			199.75				
24.00	23.00		4.53			199.89				
25.00	24.00		4.64			199.78				
27.50	26.50		4.56			199.86				
30.00	29.00		4.52			199.90				
32.50	31.50		4.59			199.83				
35.00	34.00		4.60			199.82				
37.50	36.50		4.75			199.67				
40.00	39.00		4.57			199.85				
42.50	41.50		3.98			200.44				
45.00	44.00		3.24			201.18				
47.5	46.5		2.55			201.87				
48.5	47.5		2.26			202.16				
53.8	52.8		1.84			202.58				
55.0	54.0		1.94			202.48				
55.5	54.5		1.99			202.43				
RBXS1	54.5		1.76			202.66				
RBXS2&3	54.5			3.62		200.80				

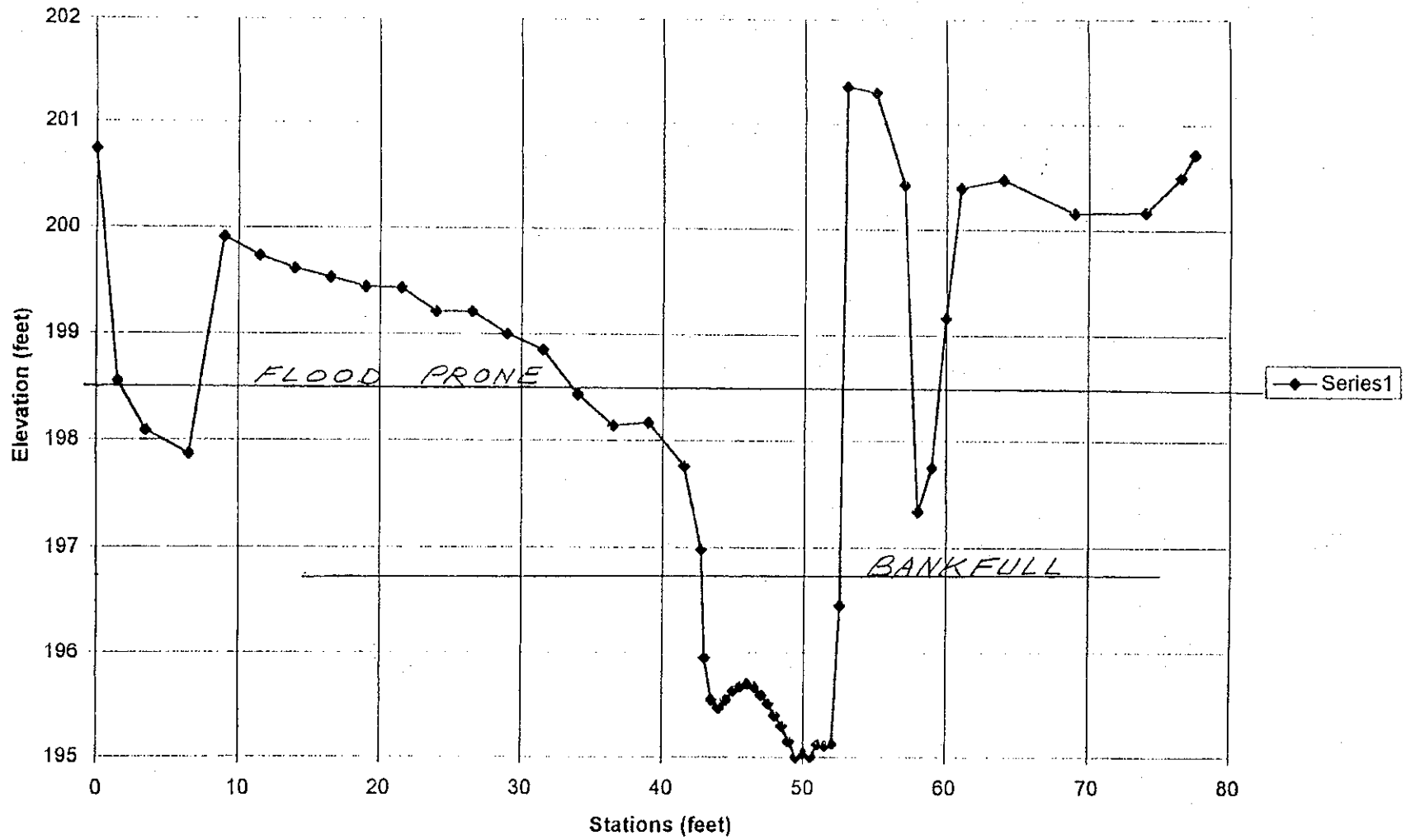
SoFAR above marsh, XS1



Above Marsh XS2

Upper South Fork American River above marsh, XS2										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
RBXS2&3		3.62			204.42	200.80				
LBXS2	0.0		2.15			202.27				
1.0	0.0		3.68			200.74				
2.5	1.5		5.86			198.56				
4.5	3.5		6.32			198.10			Bankfull height elevation	
7.5	6.5		6.54			197.88		Top of pin	196.73	
10.0	9.0		4.50			199.92			Max Bankfull Depth	
12.5	11.5		4.68			199.74			1.72	
15.0	14.0		4.80			199.62			Avg Bankfull depth	
17.5	16.5		4.88			199.54			1.20	
20.0	19.0		4.97			199.45			Bankfull width	
22.5	21.5		4.98			199.44			9.8	
25.0	24.0		5.20			199.22			Bankfull W/D ratio	
27.5	26.5		5.20			199.22			8.1	
30.0	29.0		5.41			199.01			Elev @ 2x Bankfull depth	
32.50	31.50		5.56			198.86			198.45	
35.00	34.00		5.98			198.44			Width @ 2x Bankfull depth	
37.50	36.50		6.27			198.15			26.0	
40.00	39.00		6.24			198.18				
42.50	41.50		6.65			197.77				
43.75	42.75		7.43			196.99	-0.26	QbkfIL		
44.00	43.00		8.46			195.96	0.77			
44.50	43.50		8.86			195.56	1.17			
45.00	44.00		8.94			195.48	1.25			
45.50	44.50		8.86			195.56	1.17			
46.00	45.00		8.78			195.64	1.09			
46.50	45.50		8.74			195.68	1.05			
47.00	46.00		8.71			195.71	1.02			
47.50	46.50		8.74			195.68	1.05			
48.00	47.00		8.82			195.60	1.13			
48.50	47.50		8.90			195.52	1.21			
49.00	48.00		9.01			195.41	1.32			
49.50	48.50		9.11			195.31	1.42			
50.00	49.00		9.26			195.16	1.57	LEW		
50.50	49.50		9.41			195.01	1.72			
51.0	50.0		9.37			195.05	1.68			
51.5	50.5		9.41			195.01	1.72	Thalweg		
52.0	51.0		9.29			195.13	1.60			
52.5	51.5		9.30			195.12	1.61			
53.0	52.0		9.28			195.14	1.59	REW		
53.5	52.5		7.95			196.47	0.26	QbkfIR		
54.0	53.0		3.05			201.37				
56.0	55.0		3.11			201.31				
58.0	57.0		3.99			200.43				
59.0	58.0		7.07			197.35				
60.0	59.0		6.66			197.76				
61.0	60.0		5.25			199.17				
62.0	61.0		4.02			200.40				
65.0	64.0		3.94			200.48				
70.0	69.0		4.25			200.17				
75.0	74.0		4.24			200.18				
77.5	76.5		3.92			200.50				
78.5	77.5		3.70			200.72				
78.5	77.5		3.62			200.80		on pin		
RBXS2&3			3.62			200.80				

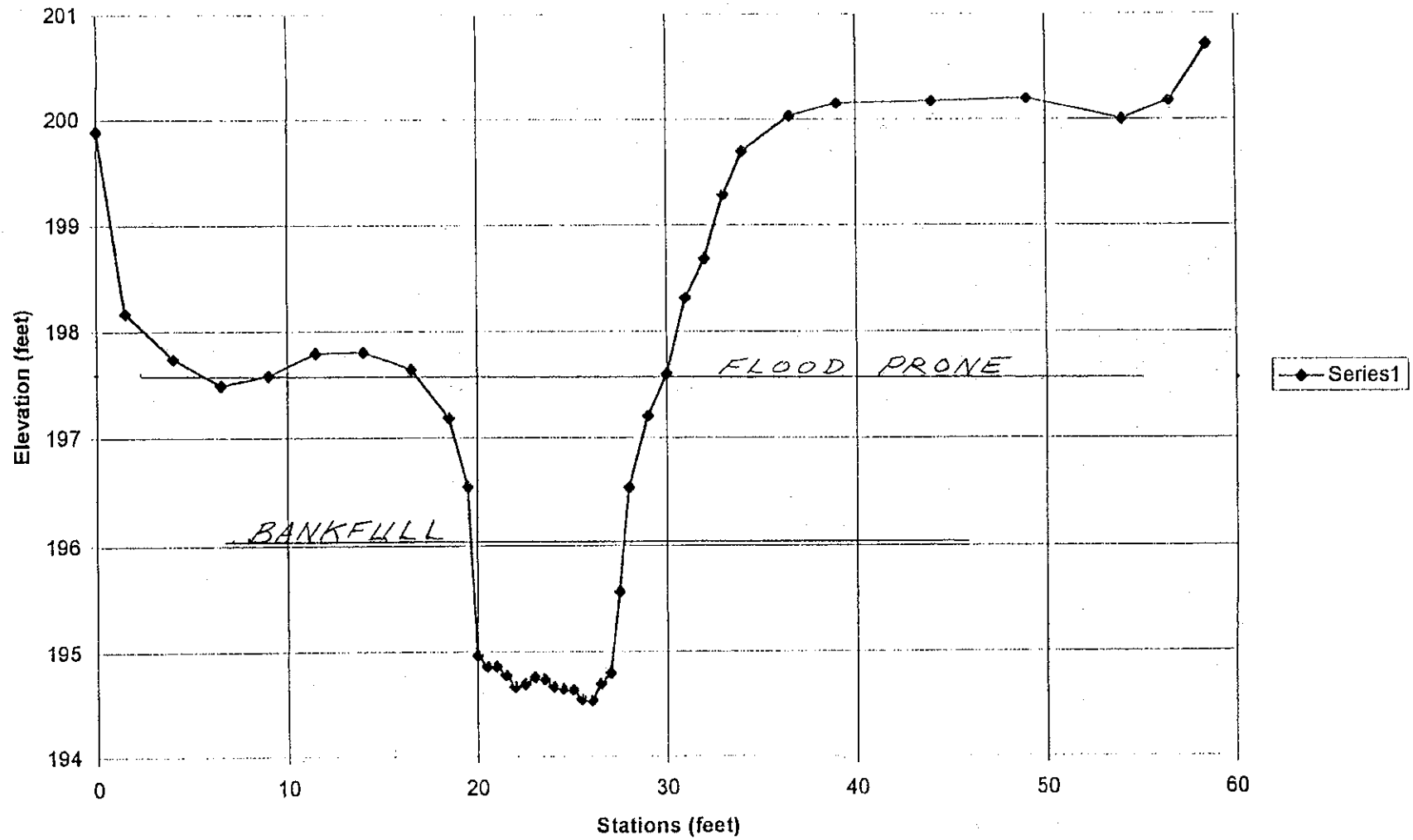
SoFAR above marsh, XS2



Upper South Fork American River above marsh, XS3										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
LBXS3		4.42			204.42	200.00				
LBXS3	0.0		4.42			200.00				
1.0	0.0		4.53			199.89				
2.5	1.5		6.24			198.18				
5.0	4.0		6.67			197.75			Bankfull height elevation	
7.5	6.5		6.92			197.50		Top of pin	196.08	
10.0	9.0		6.83			197.59			Max Bankfull Depth	
12.5	11.5		6.62			197.80			1.51	
15.0	14.0		6.61			197.81			Avg Bankfull depth	
17.5	16.5		6.77			197.65			1.18	
19.5	18.5		7.23			197.19			Bankfull width	
20.5	19.5		7.85			196.57	-0.50	QbkfL	8.0	
21.0	20.0		9.44			194.98	1.10		Bankfull W/D ratio	
21.5	20.5		9.55			194.87	1.21		6.8	
22.0	21.0		9.55			194.87	1.21		Elev @ 2x Bankfull depth	
22.50	21.50		9.63			194.79	1.29		197.59	
23.00	22.00		9.74			194.68	1.40		Width @ 2x Bankfull depth	
23.50	22.50		9.71			194.71	1.37		13.5	
24.00	23.00		9.65			194.77	1.31			
24.50	23.50		9.67			194.75	1.32	LEW		
25.00	24.00		9.74			194.68	1.40			
25.50	24.50		9.76			194.66	1.41			
26.00	25.00		9.77			194.65	1.43			
26.50	25.50		9.86			194.56	1.51	Thalweg		
27.00	26.00		9.87			194.55	1.53			
27.50	26.50		9.71			194.71	1.37			
28.00	27.00		9.61			194.81	1.26	REW		
28.50	27.50		8.84			195.58	0.50	QbkfR		
29.00	28.00		7.86			196.56				
30.00	29.00		7.21			197.21				
31.00	30.00		6.81			197.61				
32.00	31.00		6.09			198.33				
33.00	32.00		5.72			198.70				
34.00	33.00		5.12			199.30				
35.00	34.00		4.71			199.71				
37.5	36.5		4.38			200.04				
40.0	39.0		4.26			200.16				
45.0	44.0		4.24			200.18				
50.0	49.0		4.21			200.21				
55.0	54.0		4.41			200.01				
57.5	56.5		4.23			200.19				
59.5	58.5		3.69			200.73				
RBXS3	58.5		7.22			197.20				
LBXS3				4.42		200.00				

Chart4

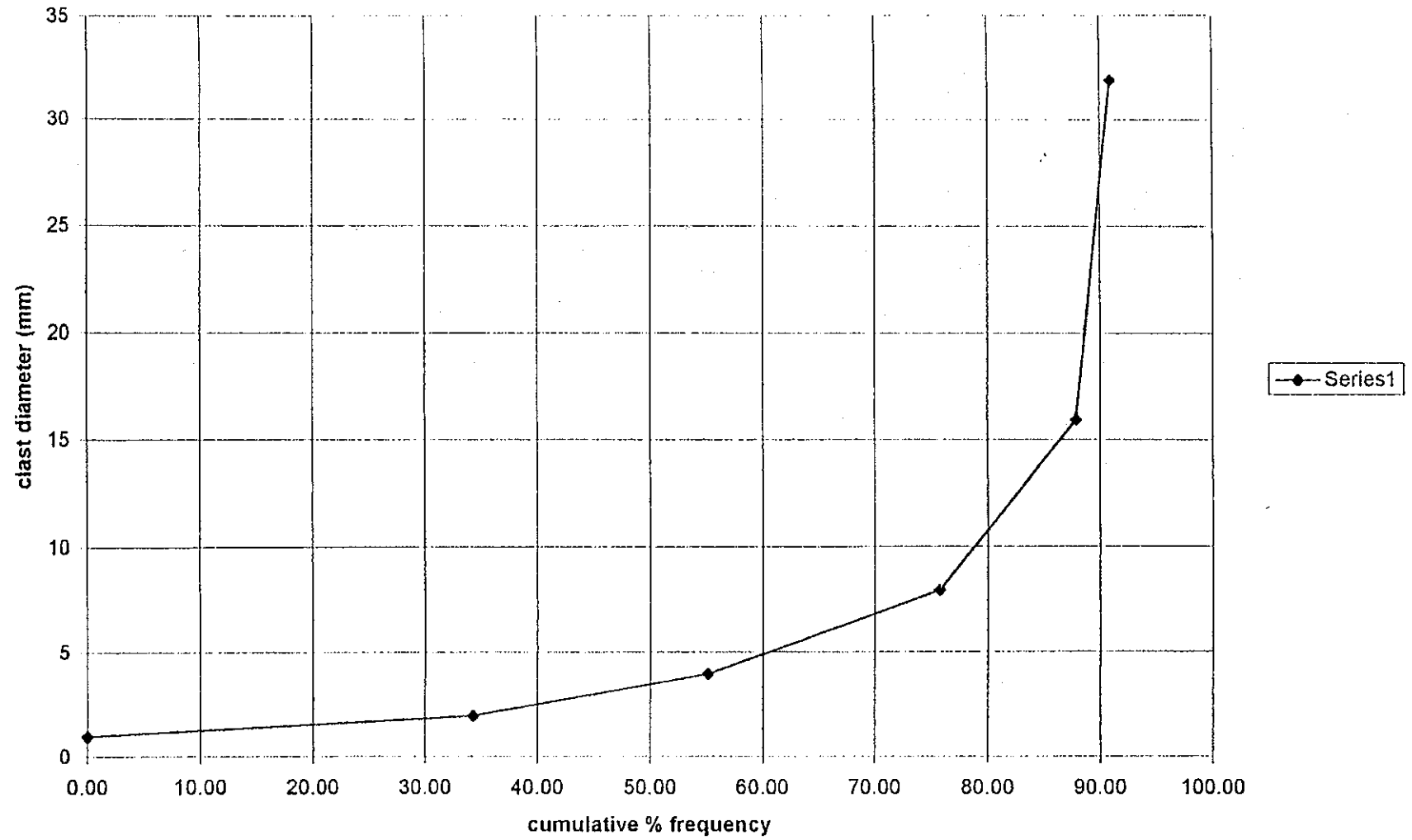
SoFAR above marsh, XS3



Scout camp

Pebble count data															
Particle size	Max. Size of range (mm)	Wentworth size class	XS1 # of clasts	XS1 percent distribution	XS1 cumulative percent distribution	XS2 # of clasts	XS2 percent distribution	XS2 cumulative percent distribution	XS3 # of clasts	XS3 percent distribution	XS3 cumulative percent distribution	Total # of clasts	Total percent distribution	Total cumulative percent distribution	Max. Size of range (mm)
Bedrock															
VL Boulder	4096	12	0	0.00		0	0.00	100.00				0	0.00	100.00	4096
L Boulder	2048	11	30	25.86	100.00	0	0.00	100.00				30	9.09	100.00	2048
M Boulder	1024	10	0	0.00	74.14	0	0.00	100.00				0	0.00	90.91	1024
S Boulder	512	9	0	0.00	74.14	0	0.00	100.00	0	0.00	100.00	0	0.00	90.91	512
L Cobble	256	8	0	0.00	74.14	0	0.00	100.00	0	0.00	100.00	0	0.00	90.91	256
S Cobble	128	7	0	0.00	74.14	0	0.00	100.00	0	0.00	100.00	0	0.00	90.91	128
VC Gravel	64	6	0	0.00	74.14	0	0.00	100.00	0	0.00	100.00	0	0.00	90.91	64
C Gravel	32	5	0	0.00	74.14	7	6.31	100.00	3	2.91	100.00	10	3.03	90.91	32
M Gravel	16	4	4	3.45	74.14	24	21.62	93.69	12	11.65	97.09	40	12.12	87.88	16
F Gravel	8	3	14	12.07	70.69	21	18.92	72.07	33	32.04	85.44	68	20.61	75.76	8
VF Gravel	4	2	28	24.14	58.62	26	23.42	53.15	15	14.56	53.40	69	20.91	55.15	4
VC Sand	2	1	40	34.48	34.48	33	29.73	29.73	40	38.83	38.83	113	34.24	34.24	2
Sand	1		0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1
Silt/clay			0	0	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	
Total clasts			116	100		111	100.00		103	100.00		330	100.00		

SoFAR above marsh



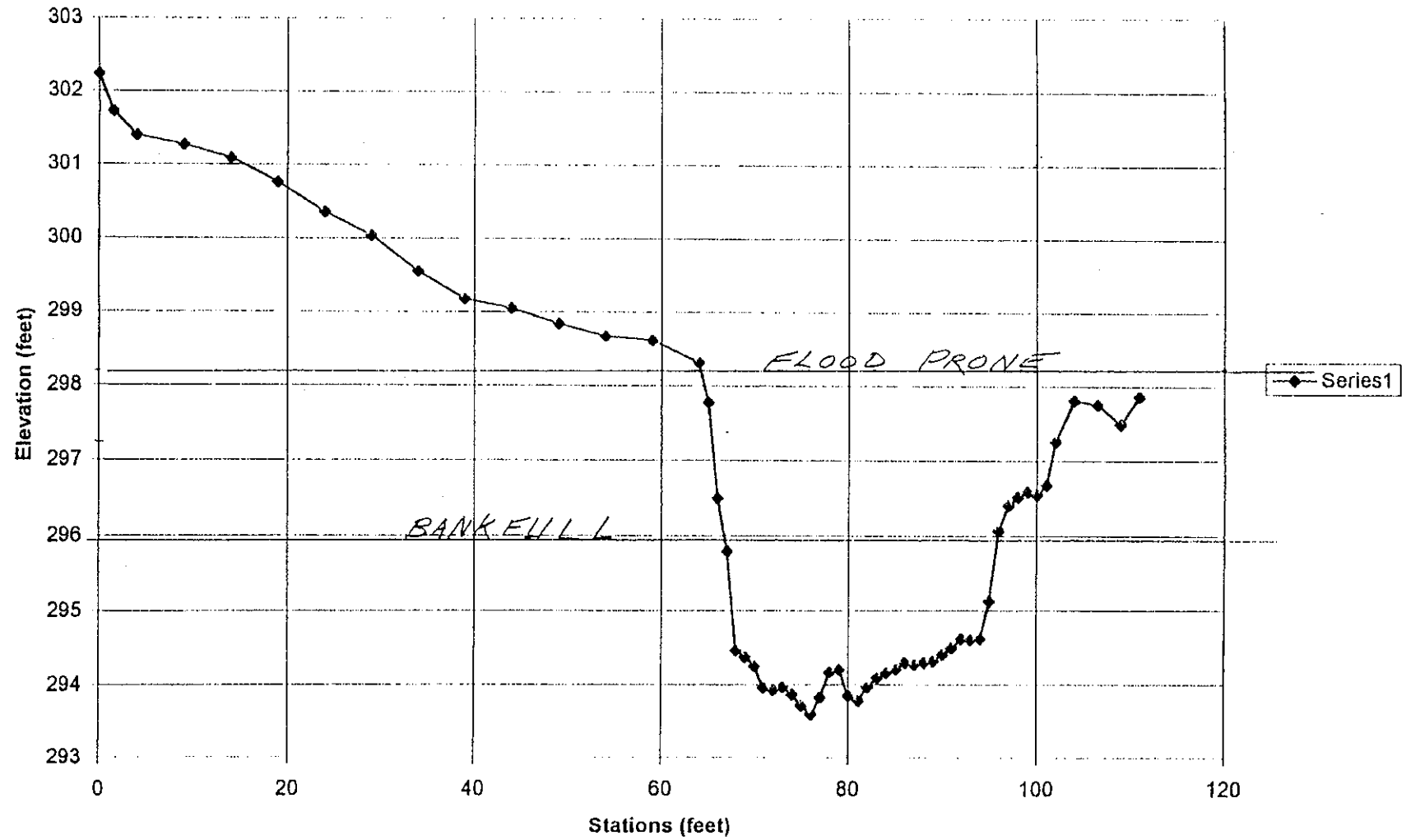
Phillips Rosgen

Rosgen classification for upper South Fork American River @ Phillips							
		XS 1	Dist	XS 2	Dist	XS 3	Reach
Bankfull height elevation		295.95	78	295.20	182.00	294.93	
Slope			0.009615		0.001484		0.003923
Max Bankfull Depth		2.33		1.97		1.25	1.85
Avg Bankfull depth		1.62		1.49		0.86	1.32
Mean bed elevation		294.33		293.71		294.07	
Bed slope			0.00795		-0.00198		0.00100
Bankfull width		29.0		12.5		23.0	21.5
Bankfull W/D ratio		17.9		8.4		26.7	16.2
Elev @ 2x Bankfull depth		298.28		297.17		296.18	
Width @ 2x Bankfull depth		47.0		30		24	33.7
Ratio of 2x width / bankfull width							1.57
d50		2		3		2	2.3
Entrenchment							1.57
W/D							16.2
Slope							0.004
Rosgen classification							B5c

Upper South Fork American River @ Phillips XS1										
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		3.69			303.69	300.00				
LBXS1	0.0		1.16			302.53				
1.0	0.0		1.45			302.24				
2.5	1.5		1.95			301.74				
5.0	4.0		2.28			301.41			Bankfull height elevation	
10.0	9.0		2.41			301.28			295.95	
15.0	14.0		2.59			301.10			Max Bankfull Depth	
20.0	19.0		2.92			300.77			2.33	
25.0	24.0		3.32			300.37			Avg Bankfull depth	
30.0	29.0		3.64			300.05			1.62	
35.0	34.0		4.13			299.56			Bankfull width	
40.0	39.0		4.50			299.19			29.0	
45.0	44.0		4.63			299.06			Bankfull W/D ratio	
50.0	49.0		4.84			298.85			17.9	
55.0	54.0		5.01			298.68			Elev @ 2x Bankfull depth	
60.0	59.0		5.07			298.62			298.28	
65.0	64.0		5.37			298.32			Width @ 2x Bankfull depth	
66.0	65.0		5.91			297.78			47.0	
67.0	66.0		7.18			296.51				
68.0	67.0		7.88			295.81	0.13	QbkfIL		
69.0	68.0		9.22			294.47	1.48			
70.0	69.0		9.31			294.38	1.57			
71.0	70.0		9.43			294.26	1.69	LEW		
72.0	71.0		9.72			293.97	1.98			
73.0	72.0		9.75			293.94	2.01			
74.0	73.0		9.71			293.98	1.96			
75.0	74.0		9.81			293.88	2.07			
76.0	75.0		9.96			293.73	2.21			
77.0	76.0		10.08			293.61	2.33	Thalweg		
78.0	77.0		9.85			293.84	2.11			
79.0	78.0		9.51			294.18	1.76			
80.0	79.0		9.48			294.21	1.74			
81.0	80.0		9.83			293.86	2.08			
82.0	81.0		9.89			293.80	2.14			
83.0	82.0		9.71			293.98	1.96			
84.0	83.0		9.59			294.10	1.84			
85.0	84.0		9.52			294.17	1.77			
86.0	85.0		9.47			294.22	1.73			
87.0	86.0		9.38			294.31	1.63			
88.0	87.0		9.41			294.28	1.67			
89.0	88.0		9.38			294.31	1.63			
90.0	89.0		9.36			294.33	1.62			
91.0	90.0		9.27			294.42	1.52	REW		
92.0	91.0		9.18			294.51	1.44			
93.0	92.0		9.06			294.63	1.32			
94.0	93.0		9.07			294.62	1.32			
95.0	94.0		9.06			294.63	1.32			
96.0	95.0		8.55			295.14	0.81			

Upper South Fork American River @ Phillips XS1											
Book Station	Adj. Station	Back Sight	Interm. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
97.0	96.0		7.61			296.08	-0.13	QbkfR			
98.0	97.0		7.27			296.42					
99.0	98.0		7.16			296.53					
100.0	99.0		7.09			296.60					
101.0	100.0		7.13			296.56					
102.0	101.0		7.00			296.69					
103.0	102.0		6.42			297.27					
105.0	104.0		5.87			297.82					
107.5	106.5		5.93			297.76					
110.0	109.0		6.19			297.50					
112.0	111.0		5.82			297.87					
RBXS1	111.0		5.41			298.28					
BM1				3.68		300.01					

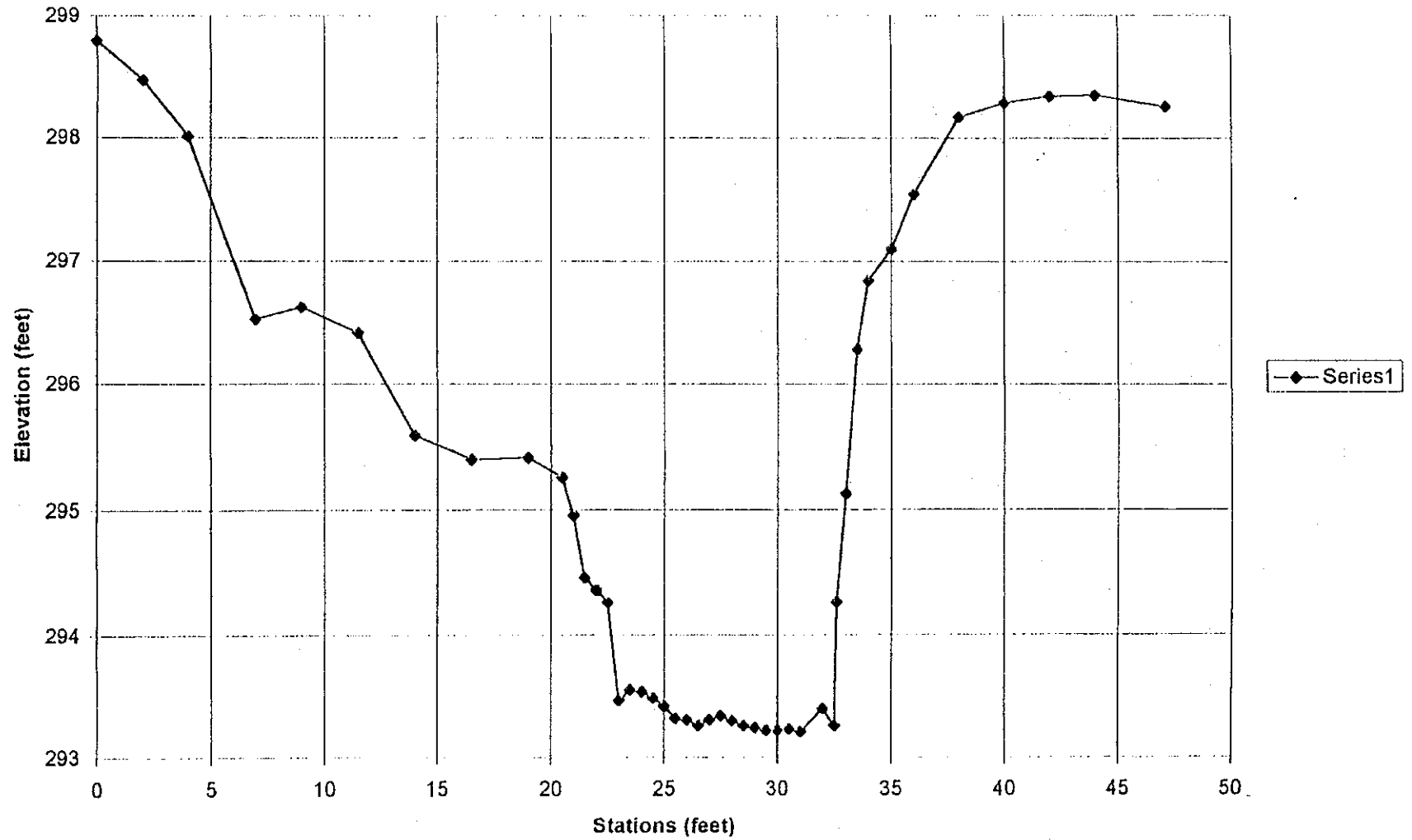
SoFAR @ Phillips, XS1



Phillips XS2

Upper South Fork American River @ Phillips XS2									
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes
BM1		3.68			303.68	300.00			
LBXS2	0.0		3.95			299.73			
1.0	0.0		4.88			298.80			
3.0	2.0		5.20			298.48			
5.0	4.0		5.66			298.02		Bankfull height elevation	
8.0	7.0		7.15			296.53		295.20	
10.0	9.0		7.05			296.63		Max Bankfull Depth	
12.5	11.5		7.26			296.42		1.97	
15.0	14.0		8.09			295.59		Avg Bankfull depth	
17.5	16.5		8.28			295.40		1.49	
20.0	19.0		8.27			295.41		Bankfull width	
21.5	20.5		8.42			295.26	-0.06	QbkfIL	12.5
22.0	21.0		8.72			294.96	0.24	Bankfull W/D ratio	
22.5	21.5		9.21			294.47	0.72	8.4	
23.0	22.0		9.31			294.37	0.82	Elev @ 2x Bankfull depth	
23.5	22.5		9.41			294.27	0.93	LEW	297.17
24.0	23.0		10.20			293.48	1.71	Width @ 2x Bankfull depth	
24.5	23.5		10.12			293.56	1.63	30.0	
25.0	24.0		10.13			293.55	1.64		
25.5	24.5		10.18			293.50	1.69		
26.0	25.0		10.25			293.43	1.76		
26.5	25.5		10.35			293.33	1.87		
27.0	26.0		10.36			293.32	1.88		
27.5	26.5		10.41			293.27	1.93		
28.0	27.0		10.36			293.32	1.88		
28.5	27.5		10.33			293.35	1.84		
29.0	28.0		10.37			293.31	1.88		
29.5	28.5		10.41			293.27	1.93		
30.0	29.0		10.43			293.25	1.94		
30.5	29.5		10.45			293.23	1.96		
31.0	30.0		10.45			293.23	1.96		
31.5	30.5		10.44			293.24	1.95		
32.0	31.0		10.46			293.22	1.97	Thalweg	
33.0	32.0		10.27			293.41	1.78		
33.5	32.5		10.41			293.27	1.93		
33.6	32.6		9.41			294.27	0.93	REW	
34.0	33.0		8.55			295.13	0.06	QbkfIR	
34.5	33.5		7.39			296.29			
35.0	34.0		6.83			296.85			
36.0	35.0		6.57			297.11			
37.0	36.0		6.12			297.56			
39.0	38.0		5.50			298.18			
41.0	40.0		5.38			298.30			
43.0	42.0		5.33			298.35			
45.0	44.0		5.32			298.36			
48.1	47.1		5.41			298.27			
RBXS2	47.1		5.28			298.40			
BM1				3.68		300.00			

SoFAR @ Phillips, XS2



Phillips XS3

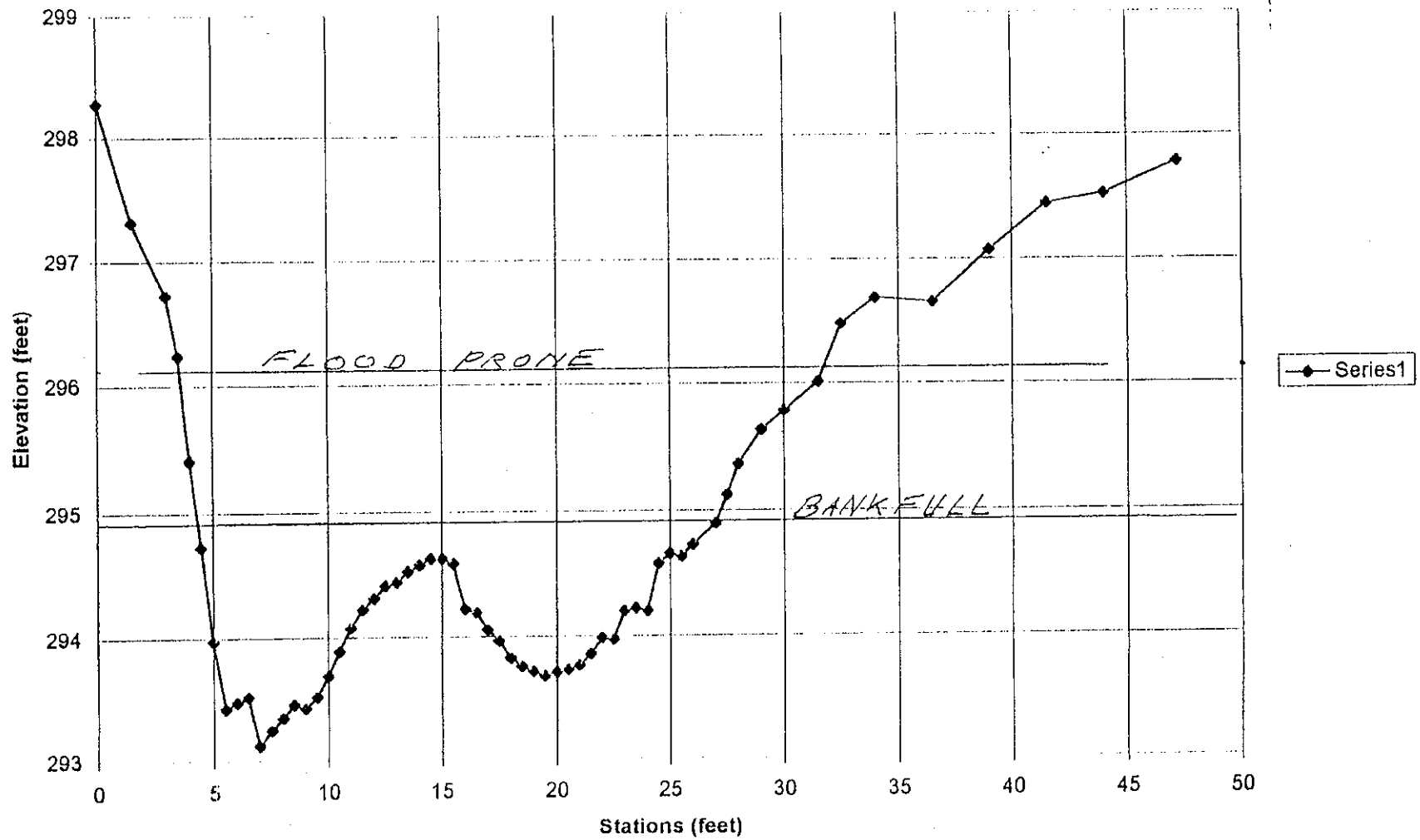
Upper South Fork American River @ Phillips XS3										
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes	
BM1		2.23			302.23	300.00				
LBXS3	0.0		3.88			298.35				
1.0	0.0		3.95			298.28				
2.5	1.5		4.91			297.32				
4.0	3.0		5.50			296.73			Bankfull height elevation	
4.5	3.5		5.99			296.24			294.93	
5.0	4.0		6.81			295.42			Max Bankfull Depth	
5.5	4.5		7.50			294.73	0.20	QbkfL	1.25	
6.0	5.0		8.25			293.98	0.95	LEW	Avg Bankfull depth	
6.5	5.5		8.80			293.43	1.50		0.86	
7.0	6.0		8.75			293.48	1.45		Bankfull width	
7.5	6.5		8.71			293.52	1.41		23.0	
8.0	7.0		9.10			293.13	1.80		Bankfull W/D ratio	
8.5	7.5		8.98			293.25	1.68		26.7	
9.0	8.0		8.88			293.35	1.58		Elev @ 2x Bankfull depth	
9.5	8.5		8.77			293.46	1.47		296.18	
10.0	9.0		8.80			293.43	1.50		Width @ 2x Bankfull depth	
10.5	9.5		8.71			293.52	1.41		24.0	
11.0	10.0		8.54			293.69	1.24			
11.5	10.5		8.34			293.89	1.04			
12.0	11.0		8.15			294.08	0.85			
12.5	11.5		8.00			294.23	0.70			
13.0	12.0		7.91			294.32	0.61			
13.5	12.5		7.81			294.42	0.51			
14.0	13.0		7.78			294.45	0.48			
14.5	13.5		7.70			294.53	0.40			
15.0	14.0		7.65			294.58	0.35			
15.5	14.5		7.60			294.63	0.30			
16.0	15.0		7.60			294.63	0.30			
16.5	15.5		7.64			294.59	0.34			
17.0	16.0		8.00			294.23	0.70			
17.5	16.5		8.03			294.20	0.73			
18.0	17.0		8.17			294.06	0.87			
18.5	17.5		8.26			293.97	0.96			
19.0	18.0		8.40			293.83	1.10			
19.5	18.5		8.47			293.76	1.17			
20.0	19.0		8.51			293.72	1.21			
20.5	19.5		8.55			293.68	1.25	Thalweg		
21.0	20.0		8.52			293.71	1.22			
21.5	20.5		8.50			293.73	1.20			
22.0	21.0		8.46			293.77	1.16			
22.5	21.5		8.37			293.86	1.07			
23.0	22.0		8.24			293.99	0.94	REW		
23.5	22.5		8.25			293.98	0.95			
24.0	23.0		8.02			294.21	0.72			
24.5	23.5		8.00			294.23	0.70			
25.0	24.0		8.02			294.21	0.72			
25.5	24.5		7.65			294.58	0.35			

Phillips XS3

Upper South Fork American River @ Phillips XS3											
Book Station	Adj. Station	Back Sight	Intern. Sight	Fore Sight	Hght. of Inst.	Elevation	Depth @ bankfull	Notes	Rosgen notes		
26.0	25.0		7.57			294.66	0.27				
26.5	25.5		7.59			294.64	0.29				
27.0	26.0		7.50			294.73	0.20				
28.0	27.0		7.33			294.90	0.03				
28.5	27.5		7.10			295.13	-0.20	QbkflR			
29.0	28.0		6.86			295.37					
30.0	29.0		6.59			295.64					
31.0	30.0		6.44			295.79					
32.5	31.5		6.21			296.02					
33.5	32.5		5.75			296.48					
35.0	34.0		5.54			296.69					
37.5	36.5		5.57			296.66					
40.0	39.0		5.15			297.08					
42.5	41.5		4.78			297.45					
45.0	44.0		4.70			297.53					
48.2	47.2		4.44			297.79					
RBXS3	47.2		4.20			298.03					
BM1				2.22		300.01					

Chart10

SoFAR @ Phillips, XS3



SoFAR @ Phillips

