

**2006 Painted Rock Study**

Station: Lake Creek 4-1

Slope: 0.0446429

Bankfull Width (ft)

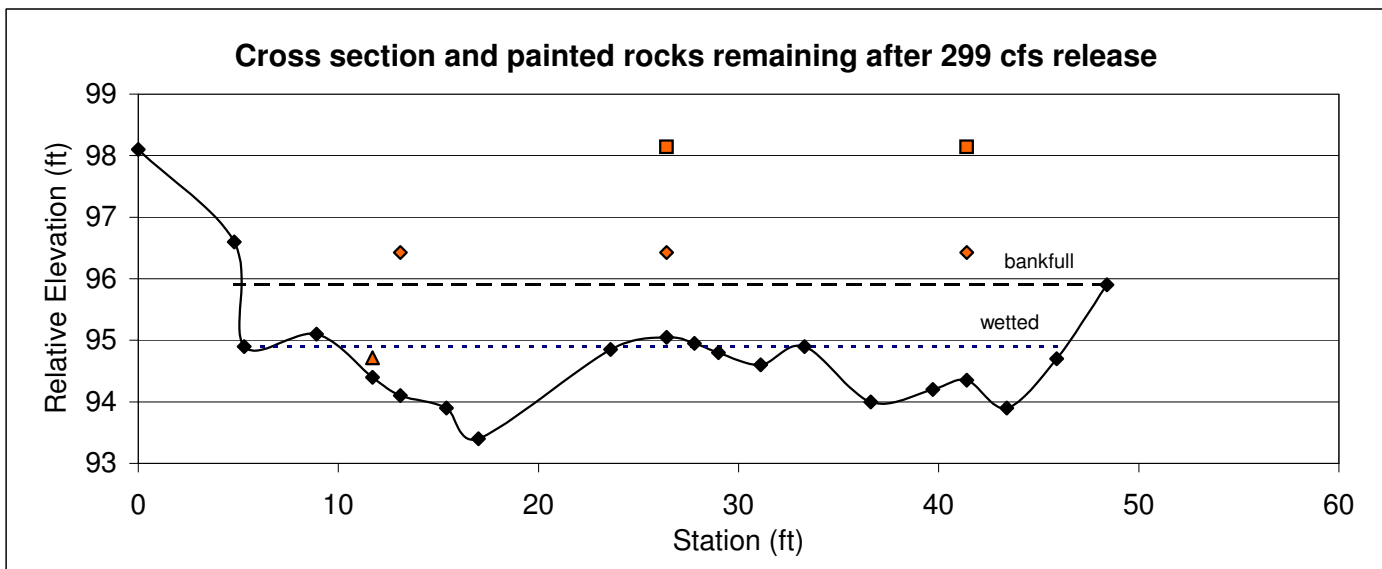
40.7

H I: 100.3 ft

Sta (ft)	BS (ft)	FS (ft)	Elev (ft)	Notes	No. of Painted Rocks Placed	Movement 16 cfs?	Movement 35 cfs?	Movement high flow (299 cfs)?
47.3	0.3		100	BM LBHP				All rocks gone
48.4		4.4	95.9	BF WE				except:
45.9		5.6	94.7	WE				HW 45.5 (1.5D)
43.4		6.4	93.9		2	extra 0.5 here		
41.4		5.95	94.35		4			2", 3"
39.7		6.1	94.2		2		1" moved 1 ft downstream	
36.6		6.3	94		4	0.5 missing		
33.3		5.4	94.9		4			
31.1		5.7	94.6		4			
29		5.5	94.8		4			
27.8		5.35	94.95		4		0.5" moved 3 ft toward RB and 1 ft. downstream	
26.4		5.25	95.05		4			3", 2" moved 1 ft
23.6		5.45	94.85		4	0.5" moved 6 ft laterally	0.5 gone	
17		6.9	93.4		2			
15.4		6.4	93.9		3			
13.1		6.2	94.1		4		2" covered w/ sand	two 2" rocks
11.7		5.9	94.4		3			1"
8.9		5.2	95.1		4		0.5" moved 0.5 ft downstream	
5.3		5.4	94.9	WE				
4.8		3.7	96.6	BF WE				HW 4.8
0		2.2	98.1	HP				

Missing 2-4" rocks seen up to 20' downstream

Abbreviations: BM = Benchmark; LBHP = Left Bank Head Pin; WE = Water's edge; BFW = Bankfull water's edge; HW = High water



Station: Lake Creek 4-2

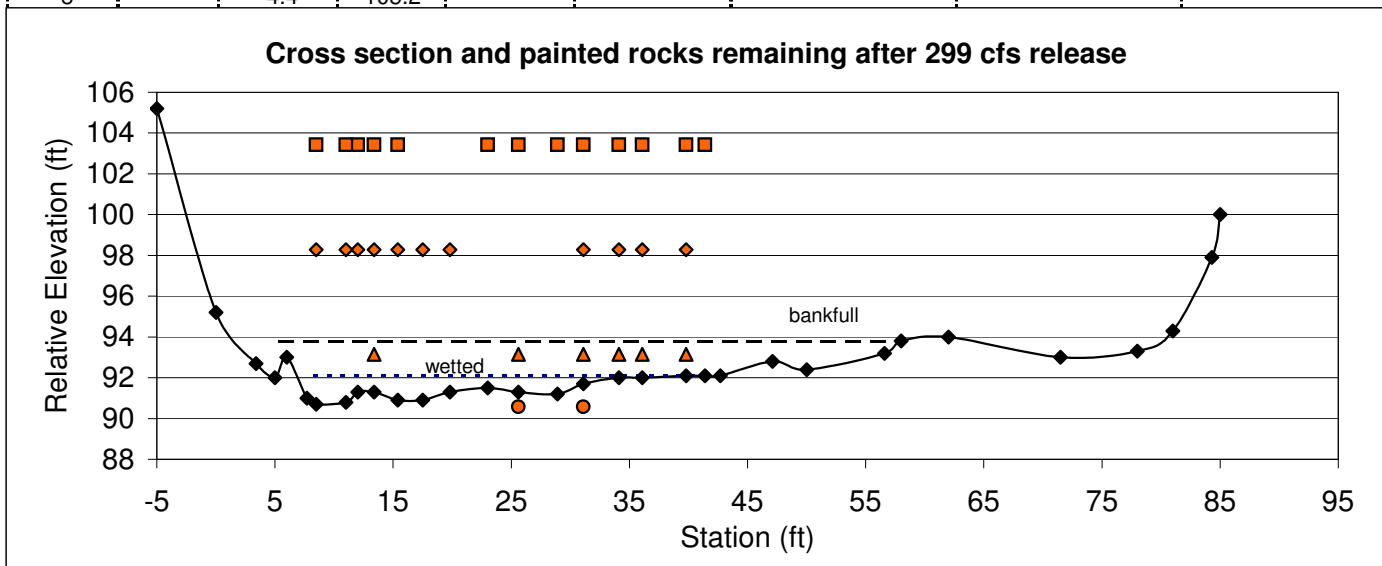
Slope: 0.0303571

Bankful Width (ft)

47.6

H I: 100.8

Sta (ft)	BS (ft)	FS (ft)	Elev (ft)	Notes	No. of Painted Rocks Placed	Movement 16 cfs?	Movement 35 cfs?	Movement high flow (299 cfs)?
BM	0.8		100	BM LBHP				
85		0.8	100					
84.3		2.9	97.9					
81		6.5	94.3					
78		7.5	93.3					
71.5		7.8	93					
62		6.8	94					
58		7	93.8					
56.6		7.6	93.2	BF WE				
50		8.4	92.4					HW 51
47.1		8	92.8				45.2 WE	
42.7		8.7	92.1	WE				
41.4		8.7	92.1		2			2" moved 2'
39.8		8.7	92.1		4			0.5" gone
36.1		8.8	92		4			0.5" gone
34.1		8.8	92		4			0.5" moved 2'
31.1		9.1	91.7		4			
28.9		9.6	91.2		4		2" moved 3-4" DS	0.5", 1", 2" gone
25.6		9.5	91.3		4		2" moved 1' DS	2" moved 2'
								0.5", 1" gone; 2" moved 2'
23		9.3	91.5		4			
19.8		9.5	91.3		4		0.5" moved .5' DS	0.5", 1", 3" gone
17.5		9.9	90.9		4			0.5", 1", 3" gone
15.4		9.9	90.9		4			0.5", 1" moved
13.4		9.5	91.3		4			0.5" gone
12		9.5	91.3		4			0.5", 1" gone
11		10	90.8		4			0.5", 1" gone
8.5		10.1	90.7		4			0.5", 1" gone
7.7		9.8	91	WE				
6		7.8	93					
5		8.8	92	BF WE				
3.4		8.1	92.7				4.2 WE	HW 3.4
0		5.6	95.2	HP				
-5		-4.4	105.2					



Station: Lake Creek 4-3

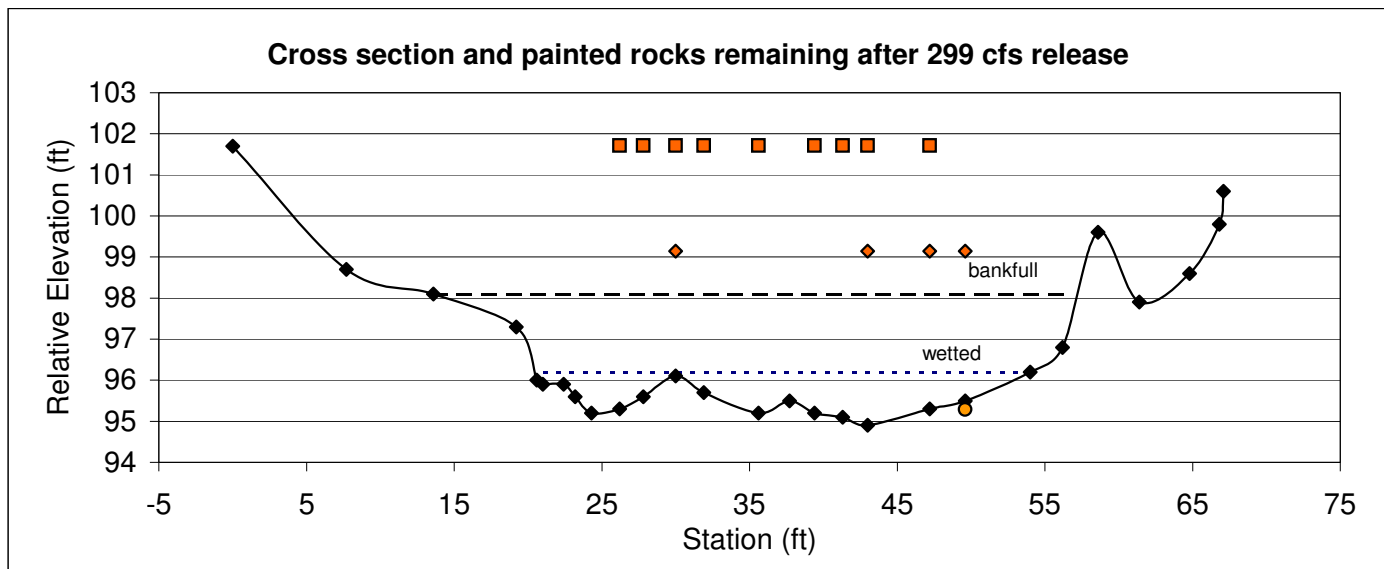
Slope: 0.0482143

Bankful Width (ft)

49

H I: 101.7

Sta (ft)	BS (ft)	FS (ft)	Elev (ft)	Notes	No. of Painted Rocks Placed	Movement 16 cfs?	Movement 35 cfs?	Movement high flow (299 cfs)?
BM	1.7		100	BM				
67.1		1.1	100.6	RBHP				
66.8		1.9	99.8					
64.8		3.1	98.6					
61.4		3.8	97.9					HW 62
58.6		2.1	99.6					
56.2		4.9	96.8	BF WE				
54		5.5	96.2	WE			WE, 0.4' deep	
49.6		6.2	95.5		4			0.5", 1", 2" gone
47.2		6.4	95.3		4			0.5", 1" gone
43		6.8	94.9		4			0.5", 1" gone, 2" moved 1'
41.3		6.6	95.1		4			1", 3" gone, 0.5" moved 1'
39.4		6.5	95.2		4		1" moved 6"	0.5", 1" gone
37.7		6.2	95.5		4	0.5" rock gone	1" moved 2.5' ds; 0.5" gone	0.5", 1" gone
35.6		6.5	95.2		4		2" turned over; 1" covered	0.5", 1", 2" gone, 3" moved 1'
31.9		6	95.7		4			0.5", 1", 2" gone, 3" moved 1'
30		5.6	96.1		3			all gone
27.8		6.1	95.6		4			0.5", 1", 2" gone
26.2		6.4	95.3		4			0.5", 1", 2" gone, 3" moved 1'
24.3		6.5	95.2		4			0.5", 1" gone 2" moved 1'
23.2		6.1	95.6		4		.5" moved to 1" space	0.5", 1", 2" gone
22.4		5.8	95.9		4			0.5", 1", 2" gone
21		5.8	95.9		2			all gone
20.6		5.7	96	WE				
19.2		4.4	97.3					
13.6		3.6	98.1	BF WE			15.5 WE	HW 13
7.7		3	98.7					
0		0	101.7	LBHP				



Station: Lake Creek 3-1

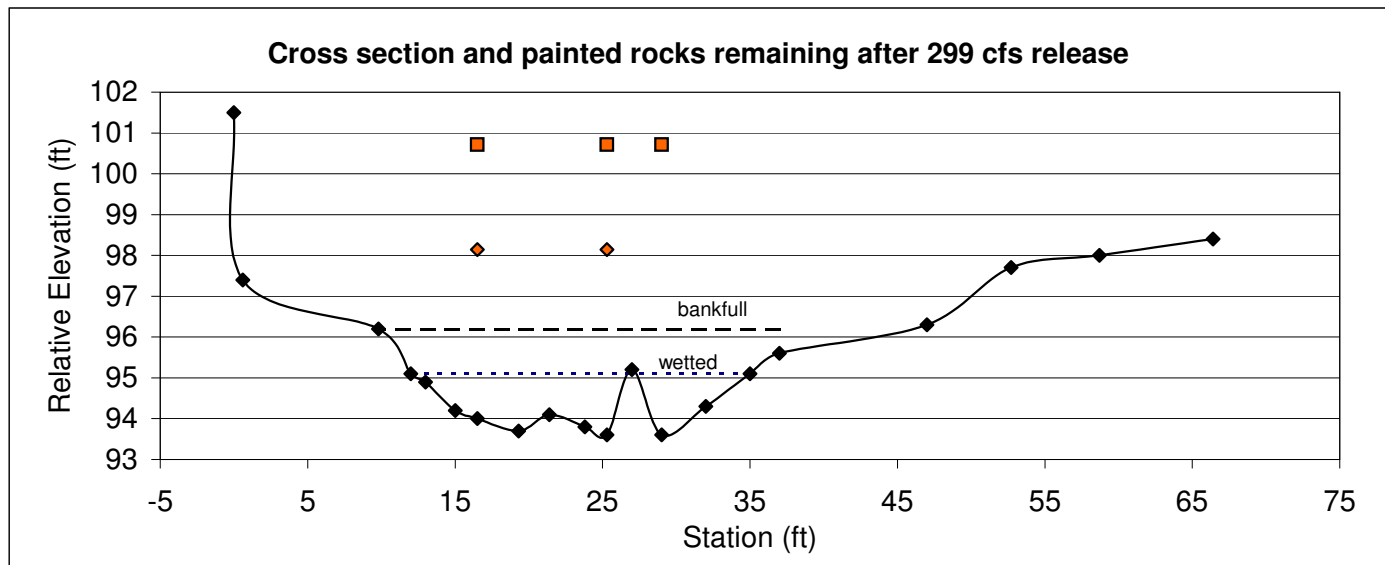
Slope: 0.0392857

Bankful Width (ft)

42

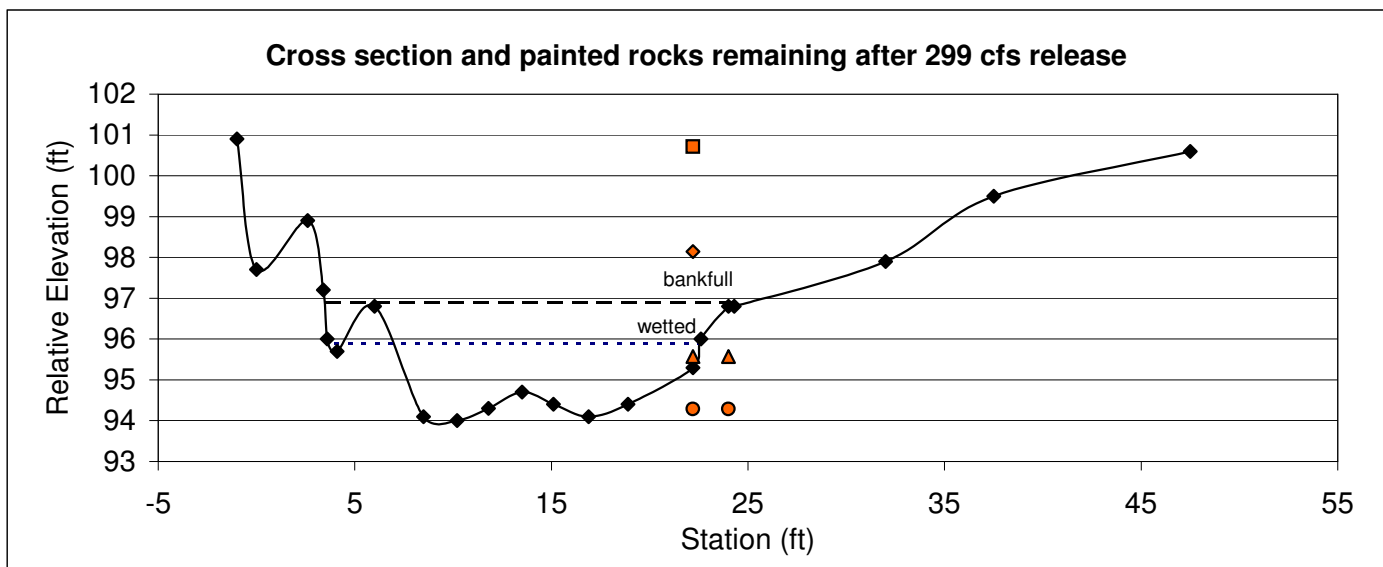
HI: 102.7

Sta (ft)	BS (ft)	FS (ft)	Elev (ft)	Notes	No. of Painted Rocks Placed	Movement 16 cfs?	Movement 35 cfs?	Movement high flow (299 cfs)?
BM	2.7		100	BM				
0		1.2	101.5	LBHP				
0.6		5.3	97.4					
9.8		6.5	96.2	BF WE				HW 4
12		7.6	95.1	WE			WE 10.5	
13		7.8	94.9		4			gone or covered
15		8.5	94.2		4			gone or covered
16.5		8.7	94		4			0.5", 1" gone, 2" moved to 3' spot
19.3		9	93.7		4		.5" moved 6" ds and covered w/sand	
21.4		8.6	94.1		4			all gone
23.8		8.9	93.8		4			all gone
25.3		9.1	93.6		4			0.5", 1" gone
27		7.5	95.2	Bldr	4			all gone
29		9.1	93.6		4			0.5", 1", 2" gone
32		8.4	94.3		4			all gone
35		7.6	95.1	WE	4		WE; 0.3' deep	gone or covered
37		7.1	95.6	BF WE				
47		6.4	96.3					HW 46
52.7		5	97.7					
58.7		4.7	98					
66.4		4.3	98.4	RBHP				



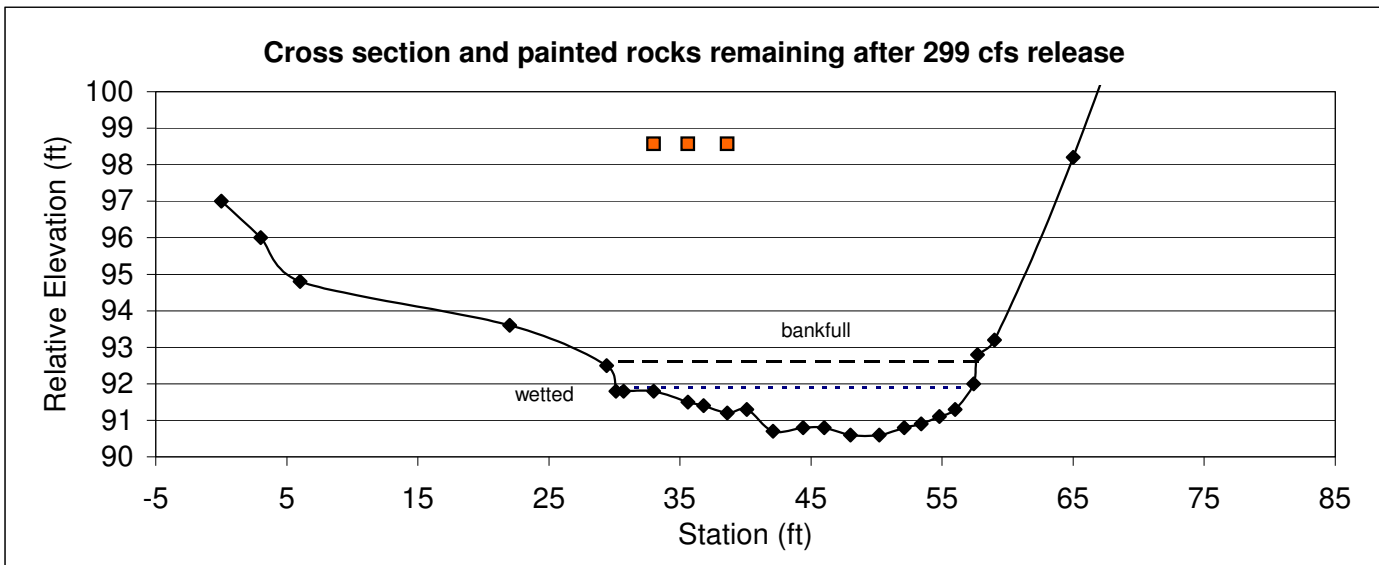
Station: **Lake Creek 3-2** Slope: 0.0339286 Bankful Width (ft) 29.5  
H I: 102.9

Sta (ft)	BS (ft)	FS (ft)	Elev (ft)	Notes	No. of Painted Rocks Placed	Movement 16 cfs?	Movement 35 cfs?	Movement high flow (299 cfs)?
BM	2.9		100	BM				
47.5		2.3	100.6					
37.5		3.4	99.5	RBHP				
32		5	97.9					HW 33 (2' deeper)
24.3		6.1	96.8	BF WE				
24		6.1	96.8		4		0.5", 1" gone	2", 3" gone (upstream)
22.6		6.9	96	WE			0.5" moved	
22.2		7.6	95.3		4		0.5" moved	no movement
18.9		8.5	94.4		4		0.5" gone	all gone
16.9		8.8	94.1		4		0.5" gone	all gone
15.1		8.5	94.4		4			all gone
13.5		8.2	94.7		4		0.5" gone	all gone
11.8		8.6	94.3		4		0.5", 1" gone	all gone
10.2		8.9	94		4		0.5", 1" gone	all gone
8.5		8.8	94.1		4		0.5" moved 1", 1" gone	all gone
6		6.1	96.8					
4.1		7.2	95.7					
3.6		6.9	96	WE				
3.4		5.7	97.2	BF WE				HW 3.5
2.6		4	98.9					
0		5.2	97.7	LBHP				
-1		2	100.9					



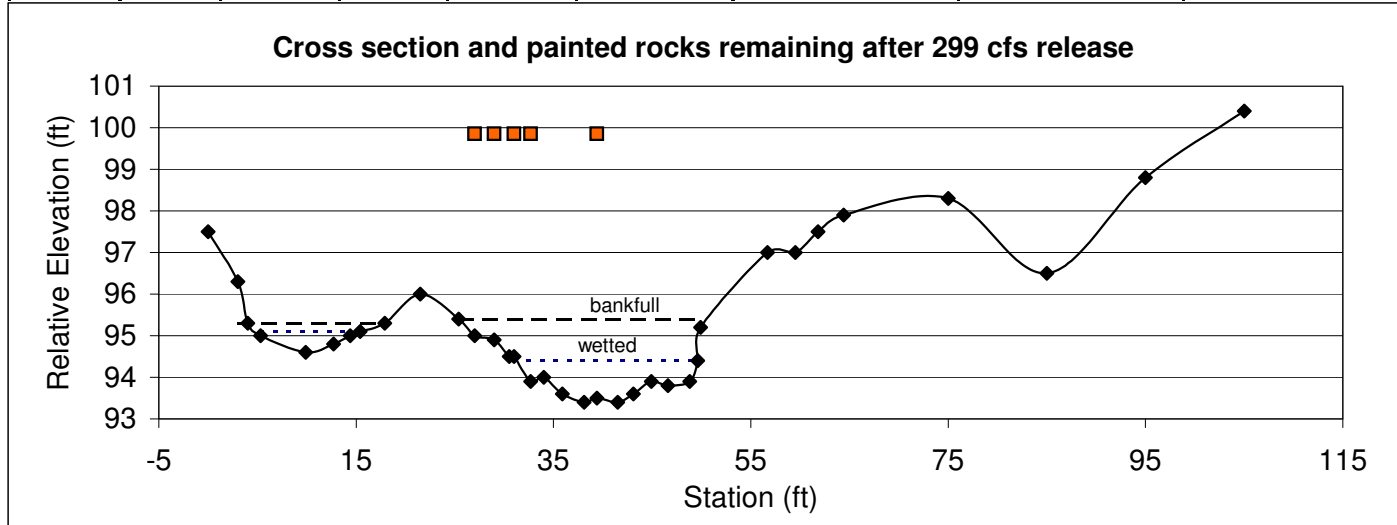
Station: **Lake Creek 2** Slope: 0.0142857 Bankful Width (ft) 35.7  
H I: 100.7

Sta (ft)	BS (ft)	FS (ft)	Elev (ft)	Notes	No. of Painted Rocks Placed	Movement 16 cfs?	Movement 35 cfs?	Movement high flow (299 cfs)?
BM	0.7		100	BM				
0		3.7	97	LBHP				
3		4.7	96					
6		5.9	94.8					
22		7.1	93.6					HW 22
29.4		8.2	92.5	BF WE				
30.1		8.9	91.8	WE				
30.7		8.9	91.8		4			all gone
33		8.9	91.8		4			0.5" 1" 2" gone
35.6		9.2	91.5		4			0.5" 1" 2" gone, 3"
36.8		9.3	91.4		4			moved 1'
38.6		9.5	91.2		4		.5" gone	0.5" 1" 2" gone
40.1		9.4	91.3		4		.5" moved 1.5' ds	all gone
42.1		10	90.7		4	.5" and 1" gone	.5" gone	all gone
44.4		9.9	90.8		4			0.5" 1" 2" gone, 3"
46		9.9	90.8		4			moved 2'
48		10.1	90.6		4			all gone
50.2		10.1	90.6		4			all gone
52.1		9.9	90.8		4			0.5" 1" 2" gone, 3"
53.4		9.8	90.9		4		.5" gone	moved 3'
54.8		9.6	91.1		4			all gone
56		9.4	91.3		4	.5" gone	.5" gone	all gone
57.4		8.7	92	WE				
57.7		7.9	92.8	BF WE				HW; 1.5' deeper
59		7.5	93.2	RBHP				
65		2.5	98.2					
75		-7.5	108.2					
85		-40	140.7					



Station: **Lake Creek 1** Slope: 0.0196429 Bankful Width (ft) 50  
H I: 100.8

Sta (ft)	BS (ft)	FS (ft)	Elev (ft)	Notes	# Painted Rocks Placed	Movement 16 cfs?	Movement 35 cfs?	Movement high flow (299 cfs)?
BM	0.8		100	BM				
0		3.3	97.5	LBHP BM				
3		4.5	96.3	BF WE				HW 3
4		5.5	95.3					
5.3		5.8	95	WE				
9.9		6.2	94.6					
12.7		6	94.8		2			all gone
14.4		5.8	95	WE				
15.4		5.7	95.1		3			all gone
17.9		5.5	95.3	BF WE				
21.5		4.8	96	bar				HW 1'deep
25.4		5.4	95.4	BF WE				
27		5.8	95		4			0.5", 1", 2" gone
29		5.9	94.9		4			0.5", 1", 2" gone
30.5		6.3	94.5		4			all gone
31		6.3	94.5	WE				0.5", 1", 2" gone
32.7		6.9	93.9		4			0.5", 1", 2" gone
34		6.8	94		4	0.5" moved 2' US	0.5" moved 1.5 ft ds	all gone
35.9		7.2	93.6		4			all gone
38.1		7.4	93.4		3		1" gone	all gone
39.4		7.3	93.5		4		0.5" moved 1.5 ft ds	0.5", 1", 2" gone
41.5		7.4	93.4		4		0.5" moved 1 ft ds	all gone
43.1		7.2	93.6		4			all gone
44.9		6.9	93.9		4			all gone
46.6		7	93.8		4			all gone
48.8		6.9	93.9		4			all gone
49.6		6.4	94.4	WE				
49.9		5.6	95.2	BF WE				
56.7		3.8	97					HW 53
59.5		3.8	97					
61.8		3.3	97.5					
64.4		2.9	97.9	RBHP				several 2" moved
75		2.5	98.3					five feet downstream
85		4.3	96.5					
95		2	98.8					
105		0.4	100.4					



**Flow Releases during 2005 Painted Rock Study Period (9/05 through 6/06)**

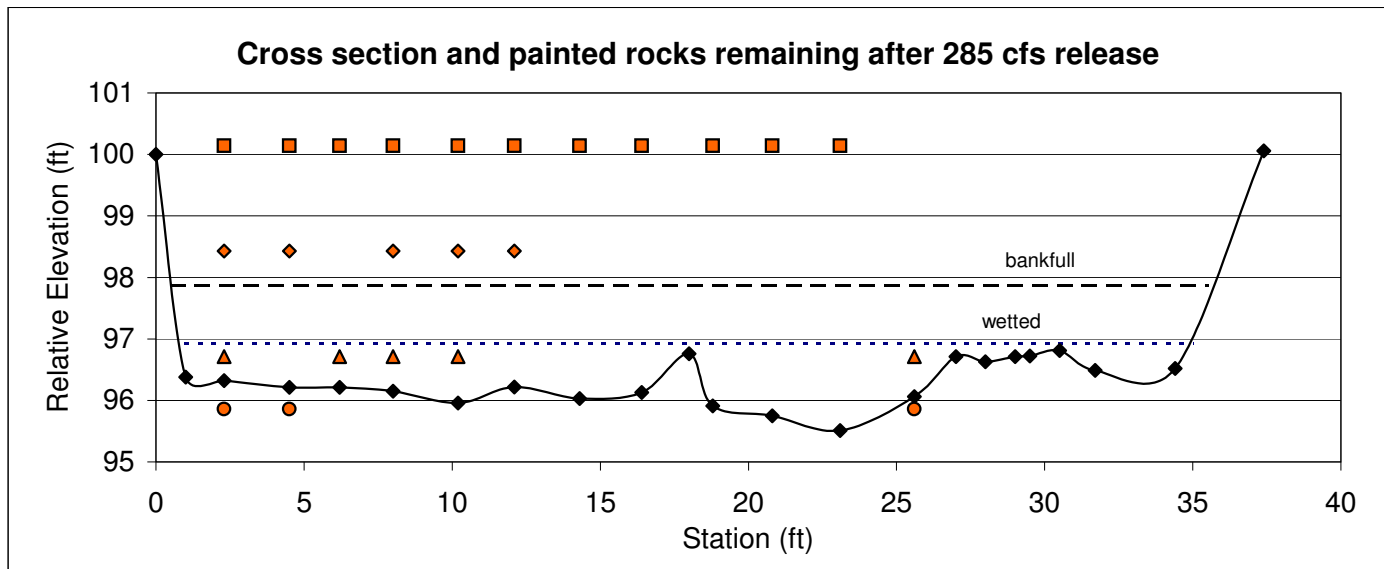
<b>Date</b>	<b>Mean Daily Flow (cfs)</b>
9/11/2005	14
9/13/2005	22
1/9/2006	65
1/12/2006	45
1/13/2006	20
5/17/2006	119
5/18/2006	294
5/19/2006	264
5/20/2006	246
5/21/2006	190
5/22/2006	180
5/23/2006	133
5/24/2006	119
5/25/2006	99
5/26/2006	72
5/27/2006	43
5/28/2006	56
5/29/2006	32
5/30/2006	18
5/31/2006	4
6/1/2006	3
6/2/2006	11
6/3/2006	82
6/4/2006	47
6/5/2006	142
6/6/2006	113
6/7/2006	69
6/8/2006	43
6/9/2006	11
6/10/2006	3
6/11/2006	3
6/12/2006	3
6/13/2006	26
6/14/2006	41
6/15/2006	37
6/16/2006	43
6/17/2006	41
6/18/2006	13
6/19/2006	3

**2007 Painted Rock Study**

Station: Lake Creek 2-1 Slope: 0.0178 Flood slp 0.03405 Bankful Width (ft) 35  
In Canyon ds of falls H I: 104.92

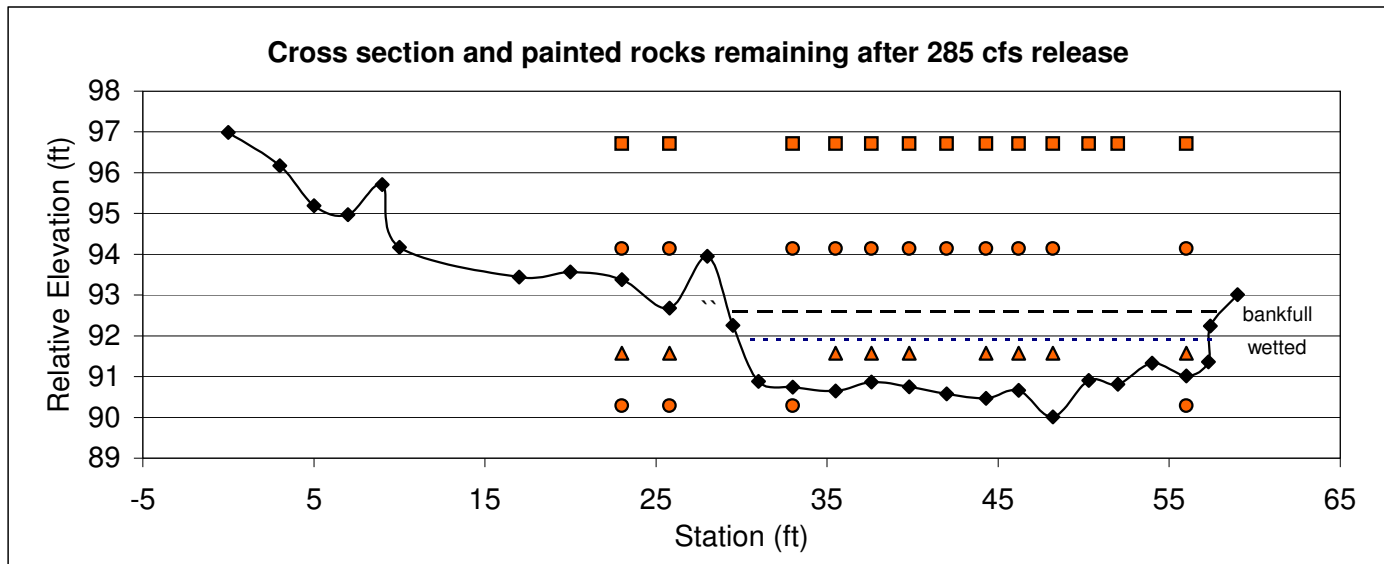
Sta	BS	FS	Elev	Notes	Painted Rocks	Movement 16 cfs?	Movement 35 cfs?	Movement high flow?
0	4.92		100	BM LBHP				
1		8.54	96.38	WE				
2.3		8.6	96.32		4			
4.5		8.71	96.21		4			1" gone
6.2		8.71	96.21		4		0.5" gone	0.5", 2" gone
8		8.77	96.15		4	0.5" gone	0.5" gone	0.5" gone
10.2		8.96	95.96		4		0.5" moved 1'	0.5" gone
12.1		8.7	96.22		4			0.5" 1" gone
14.3		8.89	96.03		4			0.5" 1" 2" gone
16.4		8.79	96.13		4			0.5" 1" 2" gone
18		8.16	96.76	Boulder				
18.8		9.01	95.91		4			0.5" 1" 2" gone
20.8		9.17	95.75		4		0.5" gone	0.5" 1" 2" gone
23.1		9.41	95.51		4			0.5" 1" 2" gone
25.6		8.86	96.06		4	0.5" gone	0.5" gone	2" 3" gone
27		8.21	96.71	Boulder				
28		8.29	96.63	Boulder				
29		8.21	96.71	Boulder				
29.5		8.2	96.72		4			all gone
30.5		8.11	96.81	Boulder				
31.7		8.43	96.49		4			all gone
34.4		8.4	96.52	WE	4			all gone
37.4		4.86	100.06	HP				

Missing 3-4" rocks seen up to 5-10' downstream



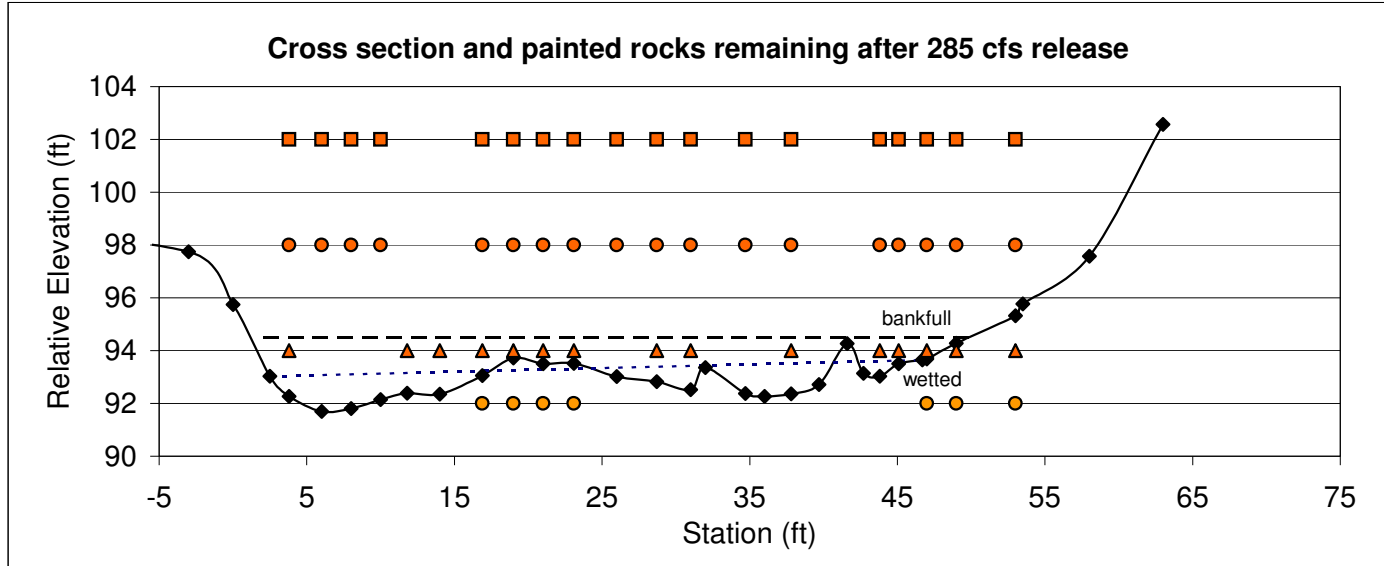
Station: **Lake Creek 2-2** Slope: 0.03655 Flood slp 0.0349 Bankful Width (ft) 36  
(2005 Site 2) H I: 102.8

Sta	BS	FS	Elev	Notes	Painted Rocks	Movement 16 cfs?	Movement 35 cfs?	Movement high flow?
BM	2.8		100	BM				
0		5.81	96.99	LBHP				
3		6.63	96.17					
5		7.61	95.19	Nov. WE				
7		7.83	94.97					
9		7.09	95.71					
10		8.63	94.17					
17		9.36	93.44					
20		9.23	93.57					
23		9.42	93.38		4			
25.8		10.12	92.68		4			
28		8.85	93.95					
29.5		10.54	92.26	WE				
31		11.92	90.88		4			all gone
33		12.06	90.74		4			1" gone
35.5		12.15	90.65		4			0.5" gone, 1" moved
37.6		11.93	90.87		4			1.5'
39.8		12.05	90.75		4			0.5" gone
42		12.22	90.58		4			0.5" gone
44.3		12.33	90.47		4		0.5" gone	0.5" gone
46.2		12.14	90.66		4	0.5" gone	0.5" gone	0.5" gone, 1" moved
48.2		12.79	90.01		4			1'
50.3		11.89	90.91		4			0.5" gone
52		11.99	90.81		4			0.5", 1", 2" gone
54		11.47	91.33		4			0.5", 1", 2" gone
56		11.78	91.02		4			all gone
57.3		11.44	91.36					
57.4		10.56	92.24	WE				HW; 1.5' deeper
59		9.79	93.01	RBHP				
		8.63	94.17	Nov. WE				



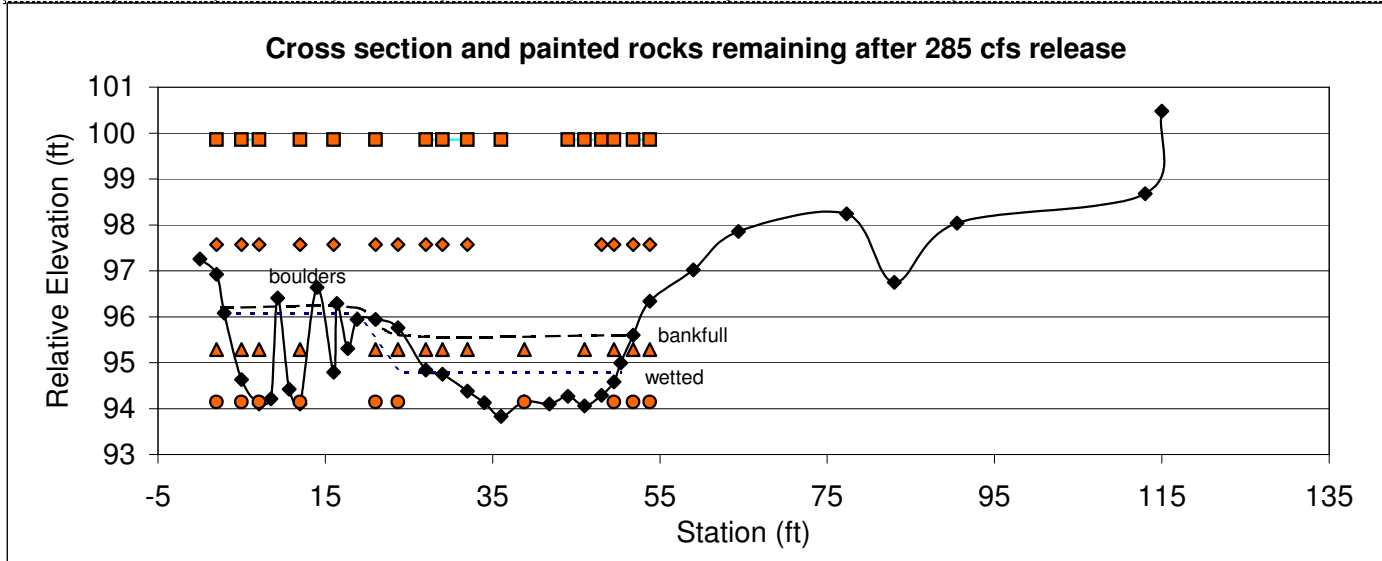
Station: **Lake Creek 1-1** Slope: 0.028 Flood slp 0.02415 Bankful Width (ft) 48  
H I: 104.48

Sta	BS	FS	Elev	Notes	Painted Rocks	Movement 16 cfs?	Movement 35 cfs?	Movement high flow?
BM	4.48		100	BM				
-20		5.72	98.76	terrace				
-3		6.74	97.74	top of bank				
0		8.73	95.75	BFWE				HWE 2.1
2.5		11.45	93.03					
3.8		12.21	92.27		4			0.5" gone
6		12.78	91.7	BF WE	4	0.5", 1" gone	0.5", 1" gone	0.5", 1" gone, 2" moved 1'
8		12.67	91.81	WE	4			0.5", 1" gone, 2" moved 1.5'
10		12.34	92.14		4			0.5", 1" gone
11.8		12.09	92.39		4			0.5", 2", 3" gone
14		12.13	92.35		4			0.5", 2", 3" gone
16.9		11.43	93.05	WE	4			
19		10.76	93.72	bar	4			
21		10.98	93.5	bar	4			1" moved 1'
23.1		10.96	93.52	WE	4			2" moved 1'
26		11.46	93.02		4			0.5", 1" gone
28.7		11.66	92.82		4			0.5" gone
31		11.96	92.52		4			0.5" gone
32		11.12	93.36					
34.7		12.1	92.38		4			0.5", 1" gone 2" moved 1'
36		12.21	92.27					
37.8		12.12	92.36		4			0.5" gone
39.7		11.77	92.71					
41.6		10.21	94.27					
42.7		11.34	93.14					
43.8		11.45	93.03		4			0.5", 1" moved 1'
45.1		10.98	93.5		4			0.5", 1" moved 1'
46.7		10.83	93.65	WE				
47		10.8	93.68		4			0.5" moved 1'
49		10.2	94.28	BFWE	4			HWE 49.8
53		9.16	95.32		4			
53.5		8.71	95.77	RBHP				
58		6.91	97.57					
63		1.91	102.57	terrace				



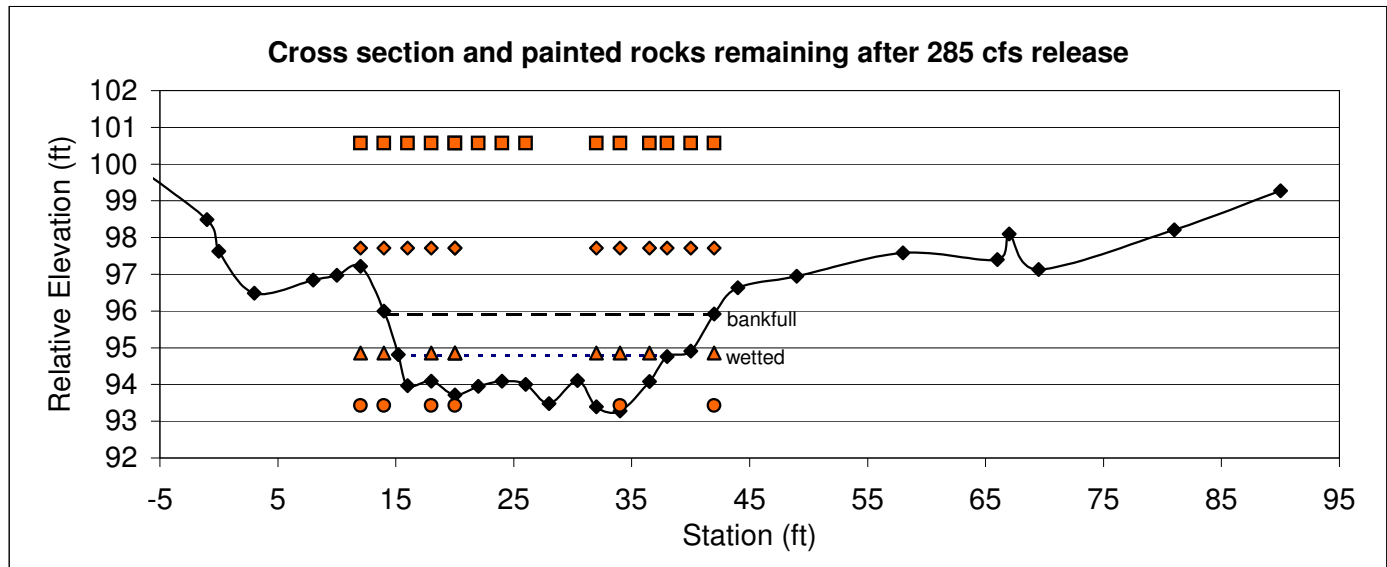
Station: **Lake Creek 1-2** Slope: 0.04335 Flood slp 0.0441 Bankful Width (ft) 48  
H I: 103.55

Sta	BS	FS	Elev	Notes	Painted Rocks	Movement 16 cfs?	Movement 35 cfs?	Movement high flow?
BM	3.55		100	BM				
0		6.29	97.26	LBHP				
2		6.63	96.92	BF WE	4			
2.9		7.47	96.08	WE				
5		8.92	94.63		4			
7.1		9.45	94.1		4			
8.5		9.34	94.21	on bldr				
9.3		7.14	96.41					
10.7		9.13	94.42					
12		9.45	94.1		4			
14		6.91	96.64	on bldr				
16		8.76	94.79		4			0.5", 1" gone
16.4		7.26	96.29					
17.7		8.24	95.31					
18.8		7.61	95.94	WE				
21		7.61	95.94	bar	4			
23.7		7.79	95.76	bar	4			3" moved 2'
27		8.71	94.84	WE	4			0.5" gone
29		8.8	94.75		4		0.5" moved 0.5'	0.5" gone
32		9.17	94.38		4			0.5" gone
34		9.42	94.13		4			all gone
36		9.72	93.83		4			0.5", 1", 2" gone
38.8		9.4	94.15		4			2", 3" gone
41.8		9.45	94.1		4			all gone
44		9.28	94.27		4			0.5", 1", 2" gone
46		9.49	94.06		4			0.5", 2" gone
48		9.26	94.29		4			0.5", 1" gone
49.5		8.97	94.58		4			
50.3		8.56	94.99	WE				
51.8		7.95	95.6	BFW	4			
53.8		7.21	96.34		4			
59		6.53	97.02					
64.4		5.69	97.86					
77.3		5.31	98.24					
83		6.8	96.75					
90.5		5.51	98.04					
113		4.87	98.68					
115		3.07	100.48					



Station: **Lake Creek 1-3** Slope: 0.04055 Flood slp 0.0388 Bankful Width (ft) 28  
H I: 104.13

Sta	BS	FS	Elev	Notes	Painted Rocks	Movement 16 cfs?	Movement 35 cfs?	Movement high flow?
BM	4.13		100	BM				
-10		3.5	100.63					
-1		5.64	98.49					
0		6.5	97.63	LBHP				
3		7.64	96.49					
8		7.29	96.84					
10		7.16	96.97					
12		6.91	97.22		4			
14		8.13	96	BFW	4			
15.2		9.32	94.81	WE				
16		10.16	93.97		4			0.5", 1" gone
18		10.04	94.09		4			
20		10.41	93.72		4			0.5" gone
22		10.18	93.95		4			0.5", 1", 2" gone
24		10.04	94.09		4			0.5", 1", 2" gone
26		10.13	94		4		0.5" moved 0.5"	0.5", 1", 2" gone
28		10.65	93.48		4			all gone
30.4		10.02	94.11					
32		10.74	93.39		4			0.5" gone
34		10.85	93.28		4			
36.5		10.05	94.08		4			0.5" gone 2" moved 1'
38		9.37	94.76	WE	4			0.5", 1" gone
40		9.22	94.91		4			0.5", 1" gone
42		8.21	95.92	BFW	4			
44		7.5	96.63		4			
49		7.18	96.95					
58		6.55	97.58	pin=54.3				
66		6.73	97.4					
67		6.03	98.1					
69.5		7	97.13					
81		5.92	98.21					
90		4.86	99.27					



**Flow Releases during 2007 Painted Rock Study Period (5/07 through 6/07)**

<b>Date</b>	<b>Mean Daily Flow (cfs)</b>
5/1/2007	4
5/2/2007	4
5/3/2007	4
5/4/2007	4
5/5/2007	4
5/6/2007	4
5/7/2007	16
5/8/2007	34
5/9/2007	3
5/10/2007	3
5/11/2007	3
5/12/2007	4
5/13/2007	4
5/14/2007	4
5/15/2007	4
5/16/2007	4
5/17/2007	4
5/18/2007	4
5/19/2007	4
5/20/2007	4
5/21/2007	4
5/22/2007	4
5/23/2007	4
5/24/2007	4
5/25/2007	4
5/26/2007	4
5/27/2007	4
5/28/2007	4
5/29/2007	4
5/30/2007	4
5/31/2007	4
6/1/2007	7
6/2/2007	7
6/3/2007	6
6/4/2007	6
6/5/2007	282
6/6/2007	244
6/7/2007	16
6/8/2007	7