

ODFW AQUATIC INVENTORY PROJECT
OREGON PLAN FOR SALMON & WATERSHEDS
STREAM RESTORATION HABITAT REPORT

STREAM: Big Creek Tributary A (U-242)
BASIN: Umpqua River
SURVEY TYPE: Post-Tx
DATE: March 29, 2006
SURVEY CREW: Scott Venables, Seth Ring
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 3.1 km²
USGS MAPS: Twin Sisters
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Big Creek Tributary A habitat survey extended 1,669 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 9.0 (range: 5.0-20.0). Land use for the reach was second growth (15-30 cm dbh) trees and timber harvest. The average unit gradient was 1.6 percent. Scour pools (43%) and riffles (31%) dominated stream habitat. Gravel (32%) dominated stream substrate. Wood volume was moderate at 25.8 m³/100m.

COMMENTS:

There were no potential barriers to upstream fish migration in the surveyed length.

The crew noted several habitat structures during the survey.

REACH 1

T21S-R08W-S05SE

REACH 1

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0%	Constraining Terraces	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	9.0	VWI Range:	5 - 20

Channel Morphology (Percent Reach Length)

Constrained		Unconstrained	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	Braided Channel	0%
Alt. Terrace/Hill	100%		
Landuse	0%		

Channel Characteristics

Type	Length (m)	Area (m ²)	Dry Units
Primary Channel	1,669	6,524	0
Secondary Channel	0	0	0
Off-Channel Units	116	121	0

Channel Dimensions (m)

Wetted	Active	Floodprone	<i>n</i> = 6	First Terrace	<i>n</i> = 6
Width: 3.7	Width: 6.7	12.3	(6.3 - 20.8)	16.3	(8.1 - 27.2)
Depth: 0.37	Height: 0.8	1.5	(1.4 - 1.6)	1.9	(1.6 - 2.7)

W:D ratio: 8.9

Entrenchment (ACW:FPW ratio): 1.8

Stream Flow Type: MF

Habitat Units/100m (total channel length): 6.9

Average Unit Gradient: 1.6%

Habitat Units/100m (primary channel length): 7.4

Water temperature (°C): 9.0 - 9.0

Riparian, Bank, and Wood Summary

	Primary	Secondary
Land Use:	ST	TH
Riparian Vegetation:	D30	S

Bank Condition and Shade

Bank Status	Percent Reach Length	Shade (% of 180)
Actively Eroding:		Reach avg:
Undercut Banks:		Range: -

Large Wood Debris

	Total	Total / 100m primary channel
All pieces ($\geq 3m \times 0.15m$):	573	34.3
Volume (m ³):	431	25.8
Key pieces ($\geq 12m \times 0.60m$):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

BIG CREEK TRIB A POST-TX (4-UJP, 242)

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

3/29/2006

REACH 1		T21S-R08W-S05SE					REACH 1					
HABITAT DETAIL												
Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BEDROCK	4	93	3.7	0.16	347	0	6	26	13	24	4	27
CASCADE/BOULDERS	6	102	1.7	0.14	203	0	6	14	27	27	20	7
POOL-ALCOVE	2	9	2.5	0.53	22	0	60	23	18	0	0	0
POOL-BACKWATER	3	16	1.8	0.33	27	0	58	8	18	10	0	5
POOL-DAMMED	2	50	8.2	0.50	336	0	46	49	5	0	0	0
POOL-ISOLATED	1	9	0.9	0.20	8	0	0	10	90	0	0	0
POOL-LATERAL SCOUR	59	711	3.9	0.54	2,735	0	10	22	30	13	7	17
POOL-PLUNGE	4	29	4.7	0.55	140	0	7	22	27	7	11	26
RAPID/BEDROCK	4	178	3.7	0.18	662	0	0	5	7	11	7	70
RAPID/BOULDERS	3	21	3.7	0.20	84	0	2	3	30	27	25	14
RIFFLE	27	557	3.4	0.18	2,036	0	0	7	47	30	6	10
STEP/BEDROCK	3	7	3.9	0.04	32	0	0	2	16	27	8	47
STEP/LOG	5	4	4.1	0.07	14	0	3	29	26	13	11	18
Total:	123	1,785	3.7	0.37	6,645	0	Avg: 9	17	32	18	8	17

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	8	84	3.5	0.41	393	5.91%	0	0.0	
Scour Pools	63	739	4.0	0.54	2,875	43.26%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	27	557	3.4	0.18	2,036	30.64%	0	0.0	
Rapids	7	199	3.7	0.19	746	11.22%	0	0.0	
Cascades	10	195	2.5	0.15	550	8.27%	0	0.0	
Step/Falls	8	11	4.0	0.06	46	0.69%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	71	39.8	42.5
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	37	20.7	22.2
Pool frequency (channel widths/pool):	3.8		
Residual pool depth (avg):	0.43		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **4-UMP** SITE ID: **242** **BIG CREEK TRIB A POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
2	LP	00	19.8	HS	4 LOGS	
4	LP	00	32.4	HS	3 INCH FISH, 9 LOGS	
6	LP	00	64.6	HS	5 LOGS + BOULDERS, 9 X 1" FISH	
7	LP	00	75.2	HS	2 LOGS, 1 X 3" FISH	
8	LP	00	83.6	DJ		
10	LP	00	108.6	HS	7 LOGS	
12	LP	00	137.7	CC	H=1.25, W=2.2, L=13.3	
13	LP	00	143.9		CT-MT, ST, D30, S	
14	LP	00	151.2	HS	21 BOULDERS	
19	RI	00	242.5	HS	6 LOGS + BOULDERS	
20	LP	00	248.5	HS	6 LOGS+ BOULDERS	
24	SL	00	265.2	HS	3 LOGS + BOULDERS, H=0.80M	
25	LP	00	294.8	HS	5 LOGS	
28	RR	01	401.3	HS	12 LOGS	
29	BW	10	401.3		BUNCH OF 1" FISH	
30	LP	00	411.1	HS	7 LOGS, BUNCH OF 1" FISH	
32	SR	00	421.1		H=0.35M	
33	LP	00	436.6	HS	8 LOGS	
34	RI	00	499.5		CA-MT, ST, D30, F	
36	RI	00	533.5	/SS		
37	LP	00	539.8	HS	3 LOGS	

Comment Summary

Restoration Monitoring Sites 2006

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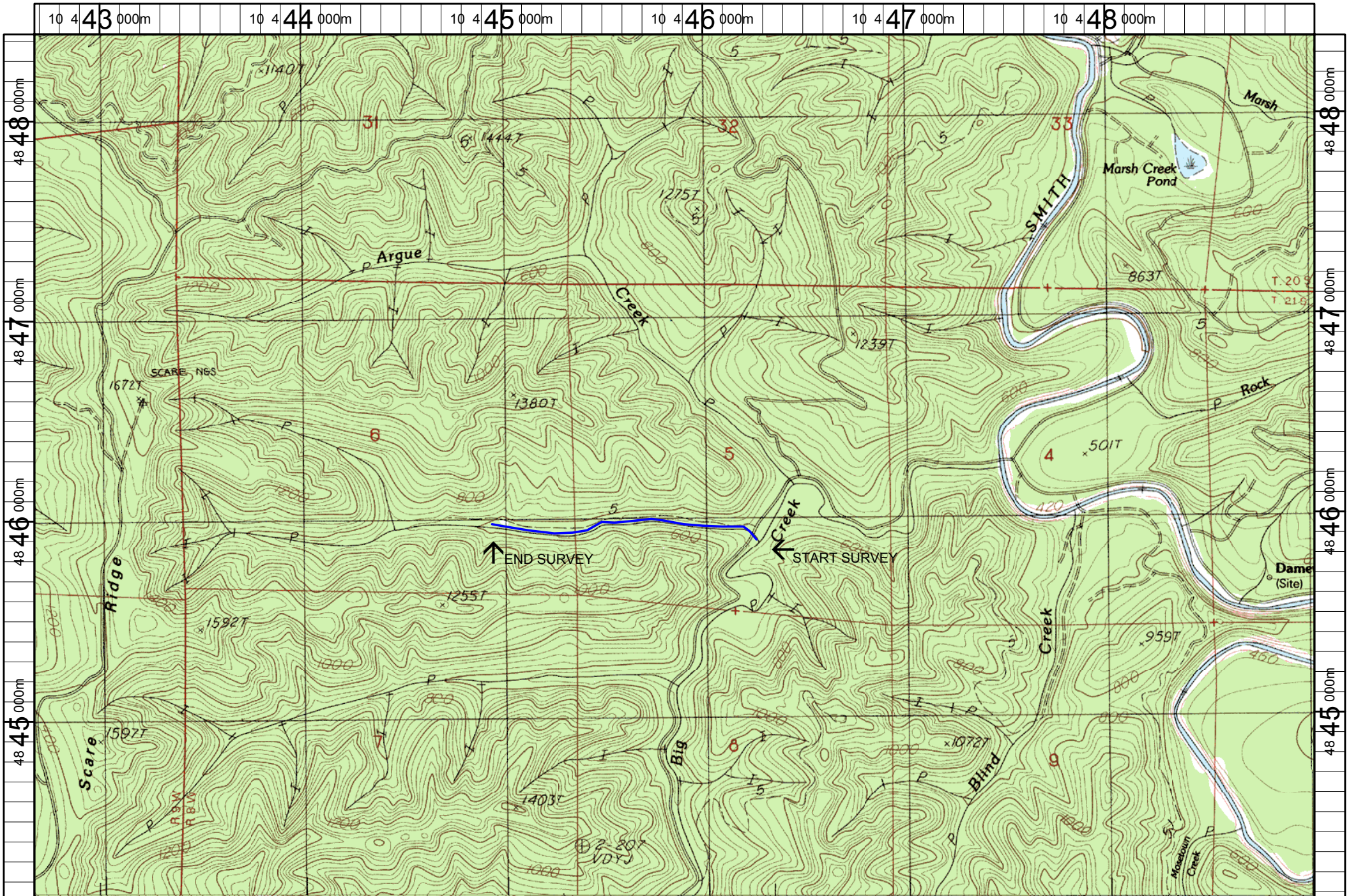
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
39	LP	00	557.8	HS	13 LOGS	
41	LP	00	579.8	HS	10 LOGS	
45	RR	00	620.8	HS	7 LOGS	
46	SL	00	621.45		H=0.70M	
48	PP	00	647.05	HS	11 LOGS	
49	SL	00	647.35		H=0.30M	
51	CR	00	701.45	HS	BOULDERS	
54	SL	00	747.65		H=0.50M	
55	RI	00	759.25		CA-MT, S, D30, S	
58	LP	00	780.25	HS	12 LOGS	
62	RR	01	878.35	TJ/,TJ,HS	25 LOGS	
63	CB	11	878.35		ACW=2.1M, T=7.0C AT 1:00PM	
64	CB	11	878.35		ACW=2.1M T=8.0C AT 1:15PM	
67	RI	00	929.75	SS/		
70	CR	00	955.75	HS	5 LOGS	
77	LP	00	1054.45	HS	4 LOGS	
78	RI	01	1079.15		CT-MT, ST, D40, S	
83	LP	00	1134.75		HARDPAN	
85	LP	00	1163.95	HS	3 LOGS	
86	RI	00	1180.55		HARDPAN	
88	RI	00	1205.05		US-MT, TH, D40, S	

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **4-UMP** SITE ID: **242** **BIG CREEK TRIB A POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
89	LP	00	1216.45	HS	15 LOGS	
91	LP	00	1258.45	HS	9 LOGS	
96	LP	00	1325.55	HS	3 LOGS	
98	RI	00	1375.45		HARDPAN	
99	LP	00	1381.15	SS/		
100	LP	00	1390.95		HARDPAN	
102	SL	00	1397.65	DJ	H=2.50M	
104	LP	00	1428.25	DJ		
105	RB	01	1440.95	TJ/		
107	RI	11	1440.95		ACW=2.1M, T=10.5C	
108	LP	00	1450.35	DJ		
109	RI	01	1475.05	/TJ		
110	CR	11	1475.05		ACW=1.9M, T=9.0C AT 4:45PM	
116	LP	00	1580.95		HARDPAN	
118	LP	01	1608.05	/TJ		
119	CB	11	1608.05		ACW=1.7M, T=9.5C AT 5:00PM	
120	LP	00	1619.85		CA-MT, TH, D35, S	
122	SR	11	1633.45		H=2.3M, DRY CHANNEL	
123	DP	00	1669.25	DJ	PHOTO	



Name: TWIN SISTERS
 Date: 6/13/2005
 Scale: 1 inch equals 2000 feet

Location: 10 445843 E 4846246 N
 Caption: BIG CREEK TRIBUTARY A RESTORATION SITE - SMITH BASIN