

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

STREAM: Big Creek Tributary B (U-243)
BASIN: Umpqua River
SURVEY TYPE: Post-Tx
DATE: March 28, 2006
SURVEY CREW: Paul Jacobsen, Brian Bangs
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 3.2 km²
USGS MAPS: Twin Sisters
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Big Creek Tributary B habitat survey extended 1,158 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 3.4 (range: 1.3-4.5). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 1.9 percent. Scour pools (51%) and riffles (35%) dominated stream habitat. Gravel (51%) and sand (22%) dominated stream substrate. Wood volume was moderate at 22.5 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-S08NW

REACH 1

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

<u>Narrow Valley Floor</u>		<u>Broad Valley Floor</u>	
Steep V-shape	0%	Constraining Terraces	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	3.4	VWI Range:	1.3 - 4.5

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary Channel	1,158	3,483	0
Secondary Channel	11	17	1
Off-Channel Units	30	26	2

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.9	Width: 7.5	16.9 (8.7 - 27.5)	19.4 (9.9 - 29)
Depth: 0.35	Height: 0.7	1.3 (1.2 - 1.6)	1.9 (1.5 - 2.3)

W:D ratio: 11.4
 Stream Flow Type: LF
 Average Unit Gradient: 1.9%
 Water temperature (°C): 7.0 - 7.0

Entrenchment (ACW:FPW ratio): 2.2
 Habitat Units/100m (total channel length): 8.1
 Habitat Units/100m (primary channel length): 8.4

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D30	S

Bank Condition and Shade

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

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	243	21.0
Volume (m ³):	260	22.5
Key pieces (>=12m x 0.60m):	1	0.1

OREGON DEPT OF FISH AND WILDLIFE

BIG CREEK TRIB B POST-TX (4-UJP, 243)

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

3/28/2006

REACH 1		T21S-R08W-S08NW					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/BOULDERS	2	14	0.6	0.05	8	0	18	31	38	13	0	0
DRY CHANNEL	3	28	1.2	0.00	35	0	20	22	42	14	2	0
POOL-DAMMED	1	15	2.5	1.05	38	0	5	45	40	10	0	0
POOL-LATERAL SCOUR	42	549	3.1	0.62	1,731	0	8	33	39	8	5	7
POOL-PLUNGE	3	19	3.9	0.50	71	0	5	22	61	12	1	0
RAPID/BOULDERS	6	101	2.9	0.18	294	0	2	12	51	22	10	3
RIFFLE	23	406	2.8	0.13	1,161	0	2	10	68	16	3	1
RIFFLE W/ POCKETS	1	34	2.6	0.25	89	0	1	5	79	10	5	0
STEP/BOULDERS	2	4	3.1	0.13	13	0	1	13	26	10	31	20
STEP/COBBLE	12	28	3.0	0.09	80	0	1	8	68	22	0	0
STEP/LOG	2	2	2.1	0.05	5	0	8	50	30	13	0	0
Total:	97	1,200	2.9	0.35	3,526	0	Avg: 5	22	51	13	4	4

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	1	15	2.5	1.05	38	1.08%	0	0.0	
Scour Pools	45	568	3.2	0.61	1,802	51.10%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	24	441	2.8	0.13	1,250	35.47%	0	0.0	
Rapids	6	101	2.9	0.18	294	8.33%	0	0.0	
Cascades	2	14	0.6	0.05	8	0.24%	0	0.0	
Step/Falls	16	34	2.9	0.09	99	2.80%	0	0.0	
Dry	3	28	1.2	0.00	35	0.98%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	46	38.3	39.7
Pools >=1m deep:	2	1.7	1.7
Complex pools (LWD pieces>=3):	17	14.2	14.7
Pool frequency (channel widths/pool):	3.5		
Residual pool depth (avg):	0.51		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **4-UMP** SITE ID: **243** **BIG CREEK TRIB B POST-TX**

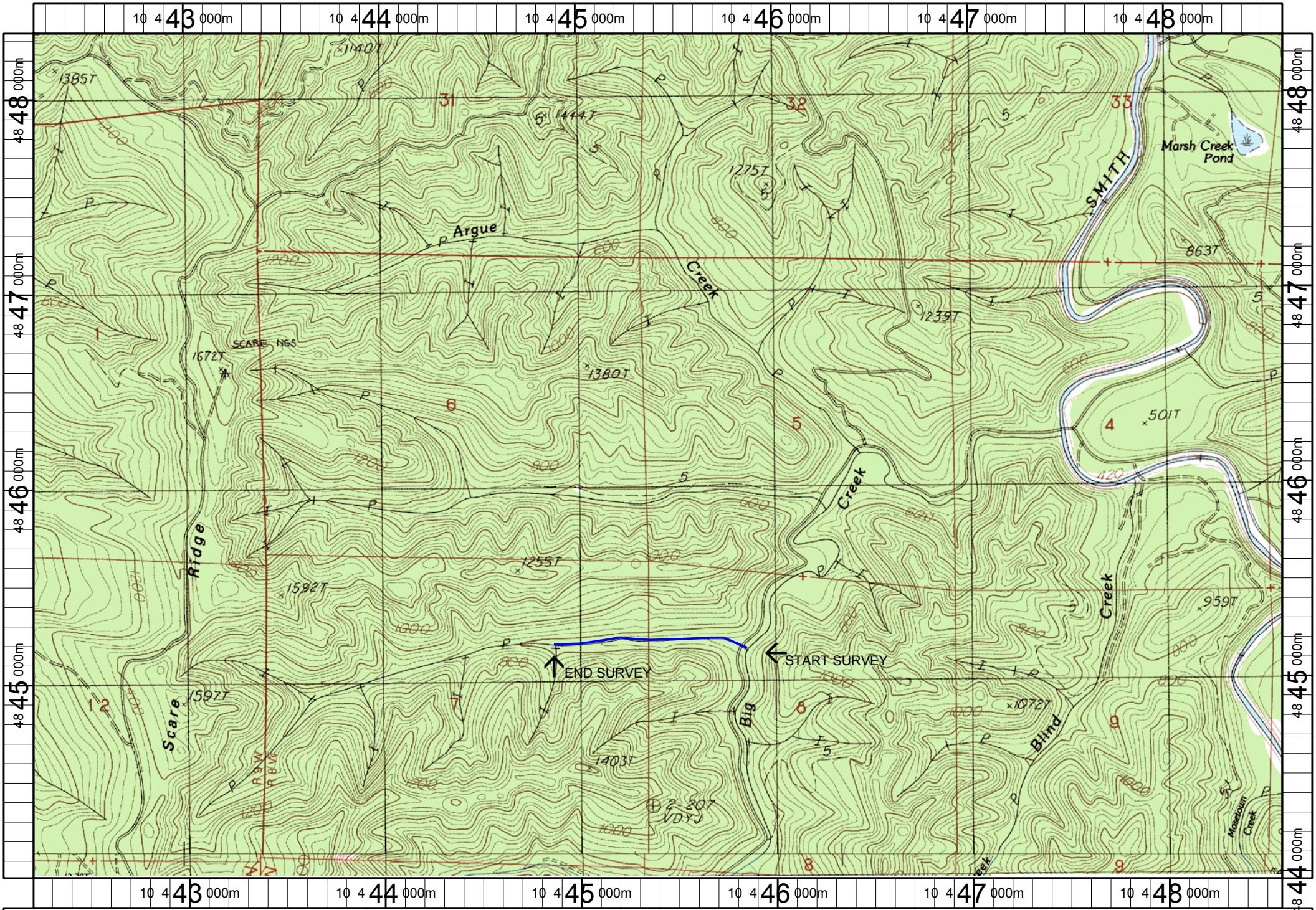
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	42.9	BC, HS	T=7.0C	
2	RI	00	63.8		LONGS + BOULDERS	
3	LP	00	78.2	HS	COHO FRY	
4	LP	00	86.7		STCHO REDD FRY	
5	SC	00	88.7		H=0.20M	
6	LP	00	99.3	HS	FRY	
8	LP	00	124.2	HS	7 BOULDERS, FRY	
9	SC	00	126.5		H=0.20M	
10	LP	00	138.5	HS	1 LOG, 7 BOULDERS	
11	SB	01	139.2	HS	6 BOULDERS, H=0.40M	
12	LP	01	147.8	HS	3 BOULDERS. FRY	
14	SB	00	150.8	HS	6 BOULDERS	
15	LP	00	175.3	HS	5 BOULDERS, LOGS, REDD, FRY	
16	RI	00	212.5	HS, HS	FRY, 15 BOULDERS, LOGS	
18	SL	00	218.1		H=0.90M	
19	DP	00	233.4		2 TROUT (3 INCH), FRY	
21	LP	00	268.5		FRY	
22	SC	00	269.9		H=0.15M	
23	LP	00	288.5		SNORKEL POOL #6	
29	LP	00	339.8		FRY	
32	RB	00	403.2	HS	LOGS	

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **4-UMP** SITE ID: **243** **BIG CREEK TRIB B POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
33	LP	00	412.8	HS	LOGS, SNORKEL POOL #8	
34	RI	01	456.4	/TJ, TJ/		
35	CB	11	456.4		T=9.0C, ACW=0.60M	
36	DC	11	456.4		ACW=1.30M	
40	RB	00	508.5	DJ		
45	LP	00	551.5	DJ		
48	SC	00	587.1	DJ	H=0.50M	
53	RB	00	673.9	DJ		
56	LP	00	699.8		FRY	
59	RB	01	773.9	/TJ, TJ/		
60	CB	11	773.9		ACW=0.85M	
61	DC	11	773.9		ACW=0.80M	
62	LP	00	791.7		FRY	
73	LP	00	901.6	DJ		
87	LP	00	1053.1		FRY	
89	SL	00	1061.4		H=0.50M	
97	RB	00	1158.2		METRIC @ SHARP CORNER-FP WIDER	



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

Location: 10 445406 E 4846151 N
 Caption: BIG CREEK TRIBUTARY B RESTORATION SITE - SMITH BASIN