

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

STREAM: Big Creek Phase 1 (U-126)
BASIN: Smith River
SURVEY TYPE: Post-Tx
DATE: March 1, 2005
SURVEY CREW: Neil Jensen, Jennifer Schmitt
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 19.7 km²
USGS MAPS: Twin Sisters
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Big Creek habitat survey extended 511 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.2 (range: 4.8-6.5). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (55%) dominated stream habitat. Bedrock (73%) dominated stream substrate. Wood volume was low at 10.7 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-S04SW

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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	5.2	VWI Range:	4.8 - 6.5

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary Channel	511	3,001	0
Secondary Channel	0	0	0
Off-Channel Units	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 5.4	Width: 10.3	13.1 (10.4 - 15.5)	17.7 (13.9 - 25.5)
Depth: 0.34	Height: 0.6	1.2 (1.08 - 1.26)	2.6 (2.26 - 3.05)

W:D ratio: 18.0
 Stream Flow Type: LF
 Average Unit Gradient: 1.1%
 Water temperature (°C): 6.5 - 6.5

Entrenchment (ACW:FPW ratio): 1.3
 Habitat Units/100m (total channel length): 6.1
 Habitat Units/100m (primary channel length): 6.1

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D30	D15

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):	48	9.4
Volume (m ³):	55	10.7
Key pieces (>=12m x 0.60m):	2	0.4

OREGON DEPT OF FISH AND WILDLIFE

BIG CREEK PHASE 1 POST-TX (4-JUMP, 126)

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

3/1/2005

REACH 1		T21S-R08W-S04SW					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	1	17	4.9	0.35	84	0	1	0	0	0	5	94
CASCADE/BOULDERS	1	35	6.3	0.20	220	0	2	5	36	21	10	26
POOL-DAMMED	1	29	5.7	0.40	165	0	12	77	5	0	0	5
POOL-LATERAL SCOUR	9	236	5.9	0.63	1,419	0	4	19	8	1	5	64
POOL-PLUNGE	4	37	6.5	0.54	237	0	3	11	0	5	11	71
RAPID/BEDROCK	4	65	5.4	0.13	383	0	0	1	9	4	3	83
RIFFLE	4	75	5.5	0.15	418	0	1	5	5	0	1	88
STEP/BEDROCK	6	16	4.4	0.09	71	0	0	0	3	0	4	92
STEP/COBBLE	1	2	1.7	0.20	4	0	3	5	51	0	0	41
Total:	31	511	5.4	0.34	3,001	0	Avg: 2	10	8	2	5	73

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	29	5.7	0.40	165	5.51%	0	0.0
Scour Pools	13	273	6.1	0.60	1,656	55.19%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	4	75	5.5	0.15	418	13.93%	0	0.0
Rapids	4	65	5.4	0.13	383	12.75%	0	0.0
Cascades	2	52	5.6	0.28	304	10.12%	0	0.0
Step/Falls	7	18	4.0	0.11	75	2.50%	0	0.0
Dry	0	0			0	0.00%	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:	14	27.4	27.4
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	3	5.9	5.9
Pool frequency (channel widths/pool):	3.6		
Residual pool depth (avg):	0.37		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 4-UMP SITE ID: 126 BIG CREEK PHASE 1 POST-TX

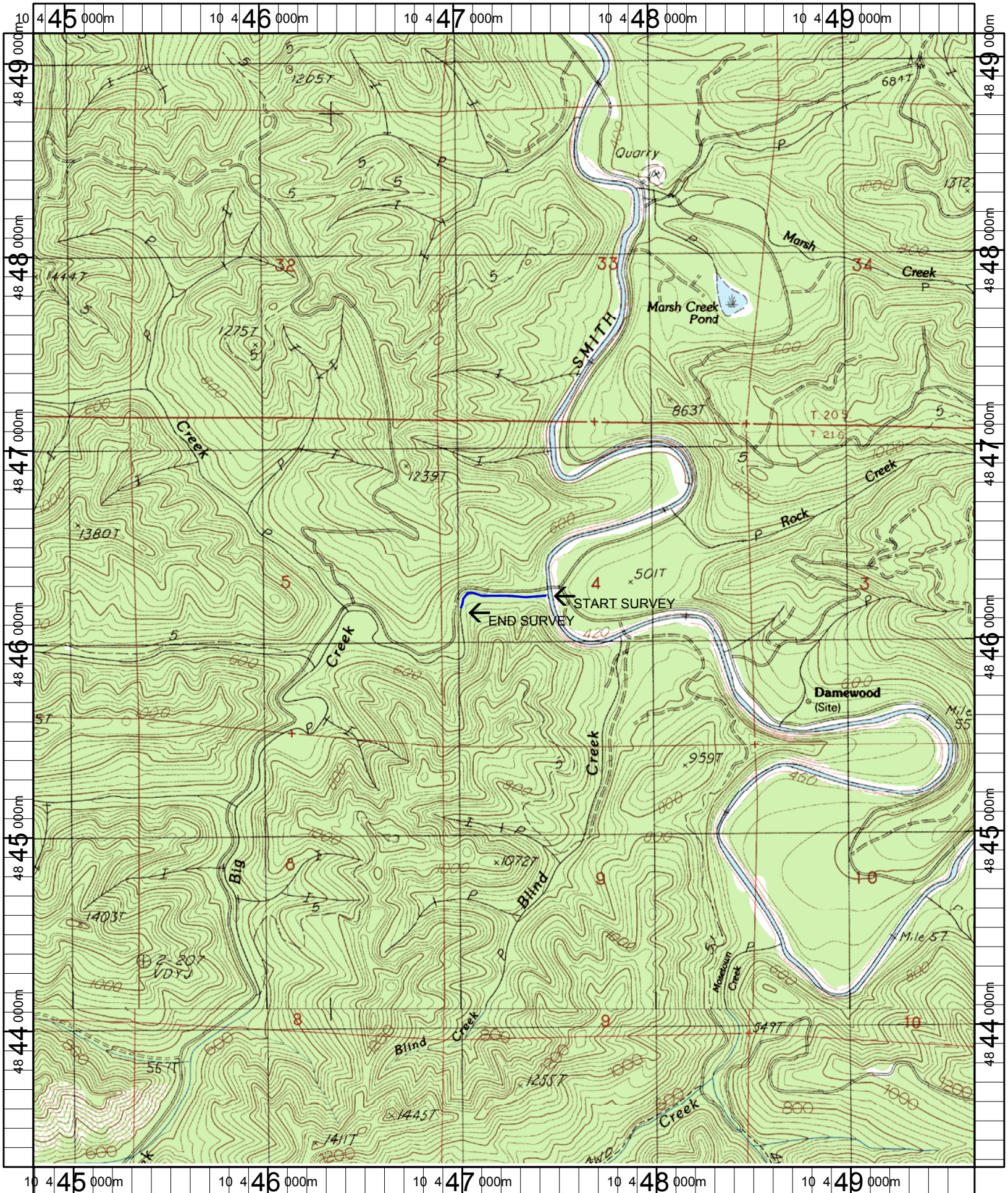
<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	LP	00	14.9	BV, HS, DJ	PLACED WOOD AND BOULDERS	
2	DP	00	43.9	WL, HS	SALMONID FRY, HS=WOOD,RACCOON	
3	SC	00	46.3		CT,CT,D30,D15,ST,TH	
4	LP	00	77.6	WL, HS	PLACED BLDRS,STEELHEAD SPAWNX2	
5	RI	00	99.6	HS, SS/	BOULDERS = BLDRS	
6	SR	00	102.9	SS/		
7	RI	00	122.7	SS/		
9	SR	00	132.8	HS	BLDRS	
10	LP	00	156.6	HS	PLACED LOGS,(CT,CT,D30,G,ST,LT	
12	LP	00	180.9	HS, SS/	PLACED BLDRS	
13	RR	00	193.2	HS	PLACED BLDRS	
14	LP	00	247	WL, HS	PLACED LOG BLDRS,FLAG-BC-6,FRY	
15	RR	00	279		CA,CT,D30,D1,ST,MT	
16	LP	00	302.4	WL	REDD, STEELHEAD SMOLT	
17	SR	00	302.75		H= 0.1	
18	PP	00	309.45	HS	PLACED BLDRS	
19	SR	00	309.95	HS,	PLACED BLDRS, H= 0.15	
20	LP	00	339.15	WL, HS	PLACED BLDRS,LOGS, STLD SMOLTS	
21	RR	00	348.85	SS/, HS	PLACED LOGS	
22	LP	00	365.35	HS, SS/	PLACED BLDRS AND LOGS	
23	PP	00	374.35		SM.STEP BETWEEN U-22&23	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 4-UMP SITE ID: 126 BIG CREEK PHASE 1 POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
25	LP	00	410.35	WL,HS, /SS	PLACED BLDERS, LOGS,CA,CT,D30,	
26	CR	00	427.45	WL, HS	PLACED BLDERS, LOGS ADULT STLD	
27	RI	00	450.95	HS, WL	PLACED BLDERS, STLD SMOLT	
28	CB	00	485.85	SS/	STEELHEAD	
29	RR	00	496.65	HS	PLACED BLDERS	
30	PP	00	509.15	HS	PLACED BLDERS	
31	SR	00	511.25	HS	PLACED BLDERS,E.O.S, CA,CT,ST,L	



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

Location: 10 447237 E 4846210 N
 Caption: BIG CREEK PHASE 1 RESTORATION SITE - SMITH BASIN