

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: February 19, 2004
SURVEY CREW: Michael Scheu, Jeremiah Bernier
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 503 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 2.8 (range: 2.0-3.5). Land use for the reach was young (3-15 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 0.9 percent. Riffles (49%) and scour pools (27%) dominated stream habitat. Bedrock (65%) dominated stream substrate. Wood volume was low at 11.2 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	2.8	VWI Range:	2 - 3.5

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	503	4,360	0
Secondary	14	34	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 7.9	Width: 13.4	15.7 (14.2 - 17.4)	24.4 (17 - 37)
Depth: 0.58	Height: 1.1	2.2 (2 - 2.4)	3.2 (2.1 - 4.5)

W:D ratio: 12.4
 Stream Flow Type: MF
 Avg. Unit Gradient: 0.9%

Entrenchment (ACW:FPW ratio): 1.2
 Water temp (°C): 8.0 - 8.0
 Habitat Units/100m: 6.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	LT
Riparian Vegetation:	D15	C30

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</u>
All pieces (>=3m x 0.15m):	50	9.9
Volume (m ³):	56	11.2
Key pieces (>=10m x 0.60m):	1	0.2

OREGON DEPARTMENT OF FISH AND WILDLIFE

BIG CREEK PHASE 1 POST-TX (U-126)

HABITAT INVENTORY

Report Date: 6/16/2004

Survey Date:

2/19/2004

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/BOULDERS	2	6	0.5	0.05	3	0	0	6	26	52	17	0
POOL-BACKWATER	1	8	3.9	0.60	31	0	0	75	10	0	10	5
POOL-DAMMED	2	64	9.3	1.00	592	0	5	48	3	0	0	45
POOL-LATERAL SCOUR	4	108	8.4	1.03	950	0	1	22	4	1	3	69
POOL-PLUNGE	3	30	8.5	0.97	268	0	0	2	0	2	3	93
RAPID/BEDROCK	1	25	9.5	0.20	238	0	0	0	0	0	5	95
RIFFLE	12	256	8.3	0.50	2,137	0	0	7	6	4	4	78
STEP/BEDROCK	1	5	9.0	0.20	49	0	0	0	0	0	5	95
STEP/STRUCTURE	5	15	8.6	0.40	127	0	0	13	4	6	29	48
Total:	31	517	7.9	0.58	4,394	0	Avg: 0	14	6	6	9	65

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	3	72	7.5	0.87	623	14.17%	0	0.0
Scour Pools	7	138	8.5	1.00	1,218	27.72%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	12	256	8.3	0.50	2,137	48.64%	0	0.0
Rapids	1	25	9.5	0.20	238	5.40%	0	0.0
Cascades	2	6	0.5	0.05	3	0.07%	0	0.0
Step/Falls	6	20	8.7	0.37	176	4.00%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	Total	# / Km
All Pools:	10	19.3
Pools >=1m deep:	7	13.5
Complex pools (LWD pieces>=3):	3	5.8
Pool frequency (channel widths/pool):	3.9	
Residual pool depth (avg):	0.49	

STREAM SUMMARY

BIG CREEK PHASE 1 POST-TX (U-126)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate						Large Boulders (#>0.5m)
					Percent Wetted Area						
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
31	517	7.9	0.58	4,394	0	14	6	6	9	65	

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	623	14.17%
Scour Pools	1,218	27.72%
Glides	0	0.00%
Riffles	2,137	48.64%
Rapids	238	5.40%
Cascades	3	0.07%
Step/Falls	176	4.00%
Dry	0	0.00%
Culverts	0	0.00%

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **4-UMP** SITE ID: **126** **BIG CREEK PHASE 1 POST-TX (U-12)**

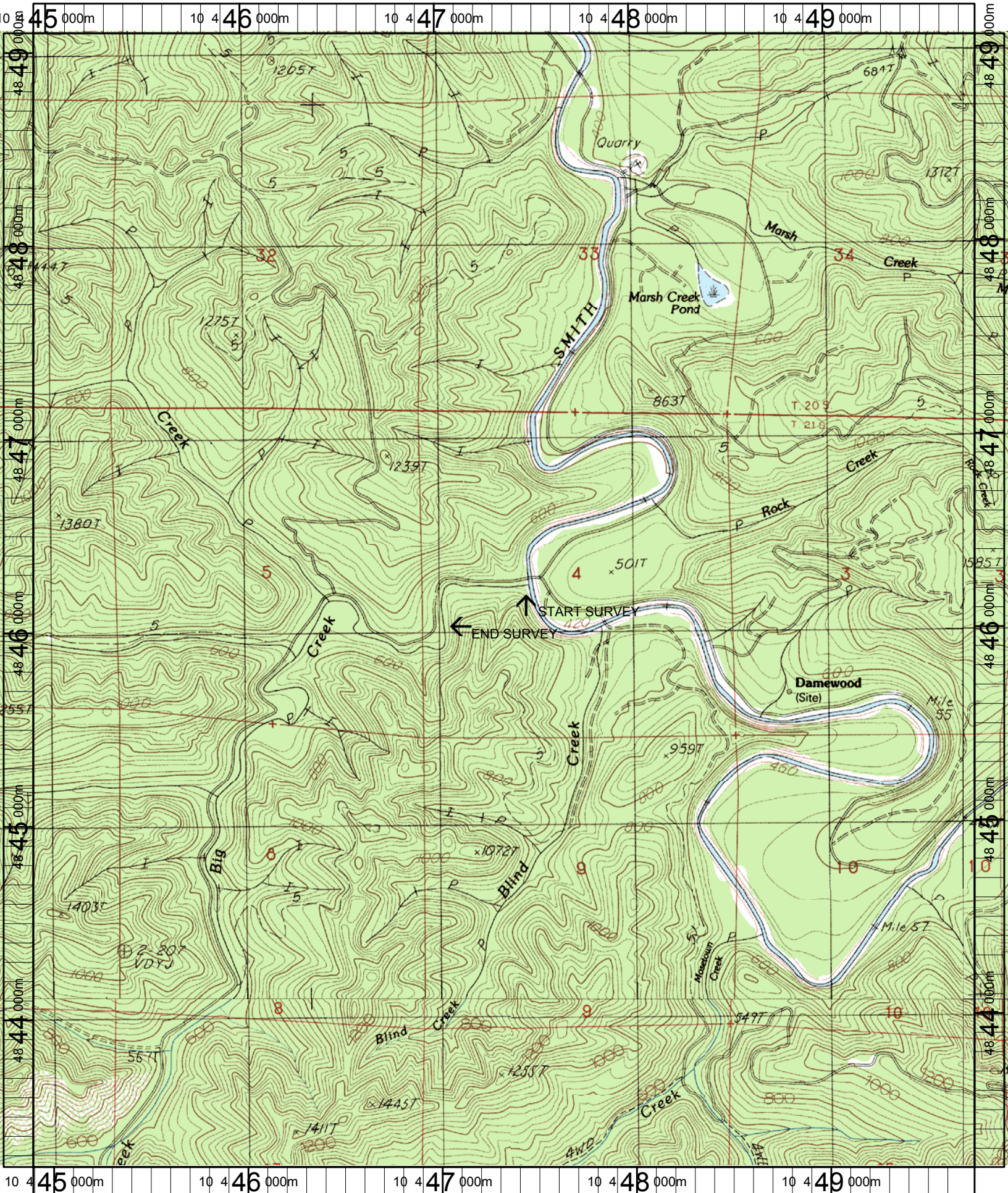
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	14		T=8C	
2	SS	00	16	HS	H=.9M, BLDRS/LOGS	
3	DP	00	47.1	HS	BLDRS	
4	LP	00	91.5	HS	BLDRS	
5	RI	00	116.5		PINK FLAG "BC 3 BLDR C	
6	RI	01	128.7	TJ/		
7	CB	11	128.7		ACW=1.0M, T=8C	
8	SS	00	130.7		BLDR CLUSTERS	
9	RI	00	154.9	SS/		
12	RI	00	201.9	HS	"START SNORKEL 15200"	
13	RI	00	220.9	HS	BLDR CLUSTER "SITE 6"	
15	RR	00	269.9	HS	SEVERAL LOGS	
16	RI	00	301.3	HS	SM LOG	
17	SS	00	302.3	HS	H=0.4M, BLDR CLUSTERS	
18	DP	00	335.3	/CE, HS	SM LOG	
20	BW	10	352.3	HS	"SITE 9 LOG BLDR WEDG	
22	SR	00	370.7	HS	BLDR	
24	RI	00	404.5	/CE,CS, HS	LOG	
25	PP	00	409.9	/CS	/CS	
26	RI	00	432.9	HS, /CS	BLDRS	
29	SS	00	489.7	HS	BLDRS	

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: 4-UMP SITE ID: 126 BIG CREEK PHASE 1 POST-TX (U-12)

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
31	SS	00	502.8	HS	BLDR WEIR	



Name: TWIN SISTERS
 Date: 8/4/2004
 Scale: 1 inch equals 2000 feet

Location: 10 447334 E 4846157 N
 Caption: BIG CREEK PHASE 1 RESTORATION SITE - SMITH BASIN