

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

STREAM: Big Creek Phase 1 (U-126)  
BASIN: Umpqua River  
SURVEY TYPE: Post-Tx  
DATE: March 2, 2006  
SURVEY CREW: Scott Venables, Seth Ring  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 19.7 km<sup>2</sup>  
USGS MAPS: Twin Sisters  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Big Creek habitat survey extended 528 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 7.0 (range: 4.0-10.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (52%) and riffles (41%) dominated stream habitat. Bedrock (54%) dominated stream substrate. Wood volume was low at 6.7 m<sup>3</sup>/100m. This site was treated primarily with large boulders.

**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	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	7.0	VWI Range:	4 - 10

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	528	4,725	0
Secondary Channel	0	0	0
Off-Channel Units	14	25	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 8.3	Width: 12.7	17.1 ( 13.5 - 24.8 )	20.3 ( 14.4 - 27.3 )
Depth: 0.51	Height: 1.0	1.9 ( 1.8 - 2.2 )	3.4 ( 2.75 - 4.1 )

W:D ratio: 13.2  
 Stream Flow Type: MF  
 Average Unit Gradient: 1.1%  
 Water temperature (°C): 6.0 - 6.0

Entrenchment (ACW:FPW ratio): 1.3  
 Habitat Units/100m (total channel length): 5.7  
 Habitat Units/100m (primary channel length): 5.9

**Riparian, Bank, and Wood Summary**

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

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):	37	7.0
Volume (m <sup>3</sup> ):	36	6.7
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

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

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

3/2/2006

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 <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BOULDERS	2	7	0.6	0.03	4	0	0	5	40	15	38	3
POOL-BACKWATER	1	7	3.2	0.65	21	0	50	0	0	0	20	30
POOL-LATERAL SCOUR	13	277	8.8	0.83	2,455	0	8	9	11	5	11	57
RAPID/BEDROCK	2	30	7.5	0.30	221	0	2	12	14	12	14	45
RAPID/BOULDERS	1	9	10.6	0.35	95	0	5	5	10	20	30	30
RIFFLE	11	211	9.3	0.30	1,932	0	5	5	19	5	5	61
STEP/BEDROCK	1	2	10.0	0.10	21	0	0	0	0	0	0	100
<b>Total:</b>	<b>31</b>	<b>542</b>	<b>8.3</b>	<b>0.51</b>	<b>4,750</b>	<b>0</b>	<b>Avg: 7</b>	<b>7</b>	<b>15</b>	<b>6</b>	<b>11</b>	<b>54</b>

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )	
Dammed & BW Pools	1	7	3.2	0.65	21	0.45%	0	0.0	
Scour Pools	13	277	8.8	0.83	2,455	51.69%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	11	211	9.3	0.30	1,932	40.68%	0	0.0	
Rapids	3	39	8.5	0.32	316	6.66%	0	0.0	
Cascades	2	7	0.6	0.03	4	0.08%	0	0.0	
Step/Falls	1	2	10.0	0.10	21	0.44%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

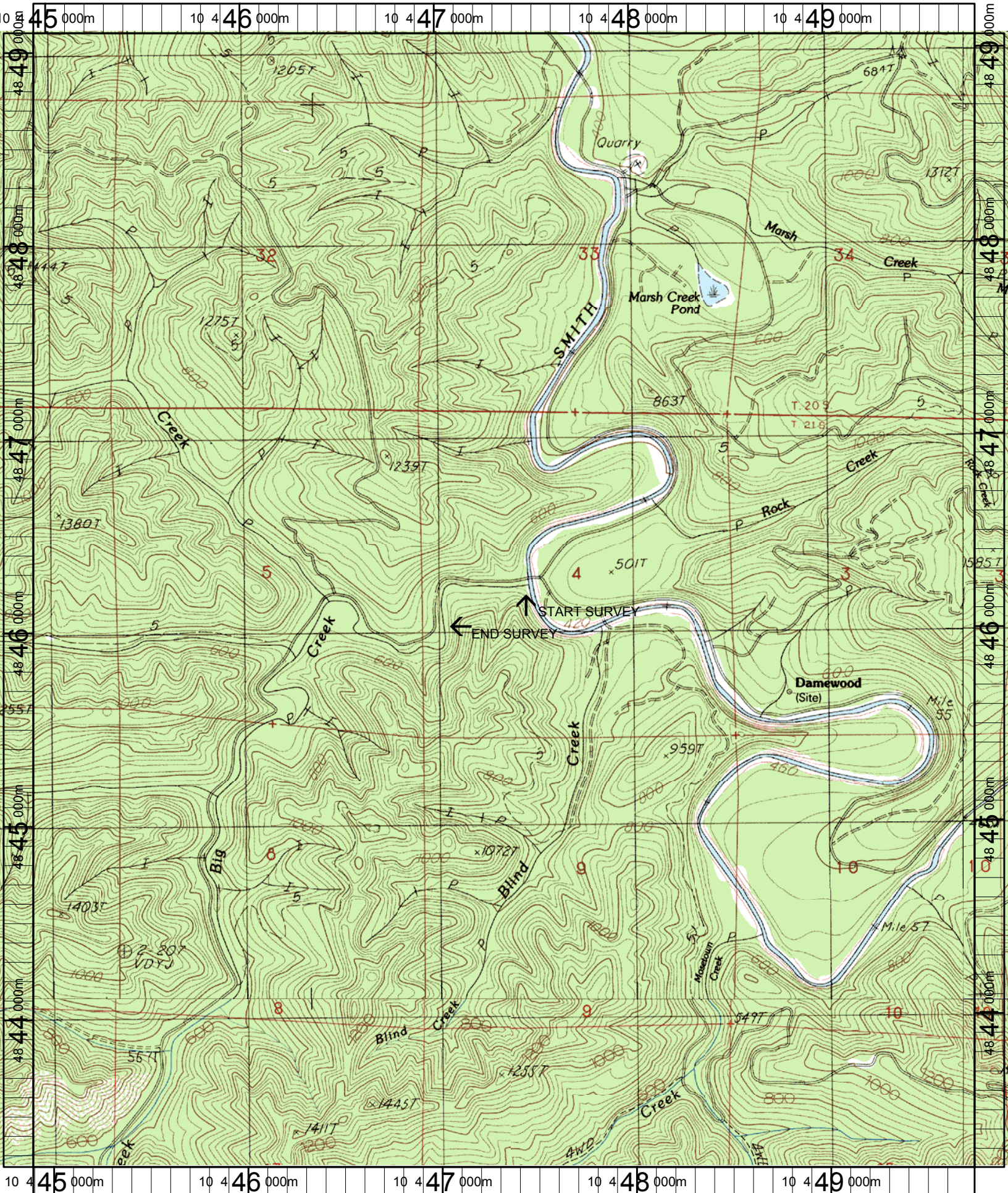
POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	Total	# / Km	# / Km
All Pools:	14	25.8	26.5
Pools >=1m deep:	2	3.7	3.8
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	3.1		
Residual pool depth (avg):	0.52		

# Comment Summary

## Restoration Monitoring Sites 2006

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	20.3	HS	T = 6.0 AT 9:45	
2	RR	00	40.3	HS	BOULDERS	
4	LP	00	95.5	HS		
6	RI	01	136.4	HS, TJ/	BOULDERS	
7	CB	11	136.4		ACW = 1.2, T = 6.0	
10	LP	01	190.7	/TJ		
11	CB	11	190.7		T = 6.5, ACW = 1.1	
12	RI	00	206.7	HS	BOULDERS	
13	LP	00	236.1	HS	BOULDERS	
14	LP	00	258.1	HS	LOGS	
15	RI	00	283.1	HS		
17	LP	00	316.2	HS	BOULDERS	
19	LP	01	366.7	HS	LOGS AND BOULDERS	
24	LP	00	409.1	HS	LOGS	
25	LP	00	422.7	HS, /SS	BOULDERS	
26	LP	00	435.8	HS	LOGS AND BOULDERS	
31	LP	00	528.1	HS	BOULDERS	



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