

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

STREAM: Smith River (U-247)  
BASIN: Smith River  
SURVEY TYPE: Pre-Tx  
DATE: February 11, 2004  
SURVEY CREW: Michael Scheu, Jeremiah Bernier  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: km<sup>2</sup>  
USGS MAPS: Beaver Creek  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Smith River habitat survey extended 2,553 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 6.9 (range: 2.8-12.0). Land use for the reach was timber harvest and large (30-50 cm dbh) trees. The average unit gradient was 0.6 percent. Scour pools (70%) dominated stream habitat. Bedrock (40%) and gravel (21%) dominated stream substrate. Wood volume was low at 6.3 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T21S-R06W-S06NW

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	6.9	VWI Range:	2.8 - 12

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	2,553	25,999	0
Secondary	105	141	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 10	<u>First Terrace</u> n = 10
Width: 9.3	Width: 13.9	19.4 ( 12.6 - 34.8 )	22.7 ( 14.6 - 40 )
Depth: 0.72	Height: 1.0	2.0 ( 1.4 - 2.4 )	2.4 ( 1.9 - 3.6 )

W:D ratio: 14.6  
Stream Flow Type: MF  
Avg. Unit Gradient: 0.6%

Entrenchment (ACW:FPW ratio): 1.4  
Water temp (°C): 5.0 - 5.0  
Habitat Units/100m: 2.8

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	TH	LT
Riparian Vegetation:	D30	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):	157	6.1
Volume (m <sup>3</sup> ):	161	6.3
Key pieces (>=10m x 0.60m):	12	0.5

**OREGON DEPARTMENT OF FISH AND WILDLIFE**

**SMITH RIVER PRE-TX (U-247)**

**HABITAT INVENTORY**

Report Date: 6/16/2004

Survey Date:

2/11/2004

**REACH 1**

**T21S-R06W-S06NW**

**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/BEDROCK	1	40	16.5	0.25	657	0	0	0	0	0	5	95
CASCADE/BOULDERS	2	27	4.7	0.26	110	0	5	45	3	3	30	15
POOL-BACKWATER	1	8	2.2	0.40	18	0	40	60	0	0	0	0
POOL-LATERAL SCOUR	40	1,782	10.1	1.06	18,209	0	1	10	17	13	8	50
PUDDLED UNIT	1	47	1.7	0.01	80	0	10	90	0	0	0	0
RAPID/BEDROCK	2	147	11.4	0.25	1,560	0	0	0	0	0	0	100
RAPID/BOULDERS	2	25	5.6	0.23	169	0	0	0	53	23	25	0
RIFFLE	12	504	8.7	0.43	4,565	0	0	2	28	23	13	34
STEP/BEDROCK	2	16	8.6	0.35	142	0	0	0	0	0	0	100
STEP/BOULDERS	4	20	9.5	0.38	189	0	0	0	9	24	66	1
STEP/COBBLE	6	42	10.3	0.33	443	0	0	0	49	36	7	8
STEP/STRUCTURE	1	1	0.2	0.01	0	0	0	0	50	0	50	0
<b>Total:</b>	<b>74</b>	<b>2,658</b>	<b>9.3</b>	<b>0.72</b>	<b>26,141</b>	<b>0</b>	<b>Avg: 1</b>	<b>9</b>	<b>21</b>	<b>16</b>	<b>13</b>	<b>40</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	8	2.2	0.40	18	0.07%	0	0.0
Scour Pools	40	1,782	10.1	1.06	18,209	69.66%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	12	504	8.7	0.43	4,565	17.46%	0	0.0
Rapids	4	172	8.5	0.24	1,729	6.61%	0	0.0
Cascades	3	66	8.6	0.26	766	2.93%	0	0.0
Step/Falls	13	79	9.0	0.32	774	2.96%	0	0.0
Dry	1	47	1.7	0.01	80	0.31%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

**POOL SUMMARY**

	<u>Total</u>	<u># / Km</u>	
All Pools:	41	15.4	105
Pools >=1m deep:	24	9.0	
Complex pools (LWD pieces>=3):	16	6.0	
Pool frequency (channel widths/pool):	4.7		
Residual pool depth (avg):	0.70		

**STREAM SUMMARY**

**SMITH RIVER PRE-TX (U-247)**

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate						Large Boulders (#>0.5m)
					Percent Wetted Area						
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
74	2,658	9.3	0.72	26,141	1	9	21	16	13	40	

Habitat Group	Wetted Area	
	(m <sup>2</sup> )	Percent
Dammed & BW Pools	18	0.07%
Scour Pools	18,209	69.66%
Glides	0	0.00%
Riffles	4,565	17.46%
Rapids	1,729	6.61%
Cascades	766	2.93%
Step/Falls	774	2.96%
Dry	80	0.31%
Culverts	0	0.00%

# Comment Summary

## Oregon Plan Monitoring Sites 2002

MONITORING AREA: **4-UMP**    SITE ID: **247**    **SMITH RIVER PRE-TX (U-247)**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	58		T=5C, RCH 2 U7, 10-03-01	
2	SC	00	66.7		SG=12	
9	RI	00	347.5		SG=8, REDD	
13	RI	01	455.8		SG=12	
17	LP	01	515.8	TJ/	NOT ON MAP	
18	CB	11	515.8		T=6C, ACW=1.0M	
21	RI	00	627.8		SPAWNING GROUND SU	
22	LP	01	721.3	TJ/	NOT ON MAP	
23	RB	11	721.3		T=6C, ACW=2.0M	
24	SS	11	721.3		H=0.6M	
25	RI	00	769.3		END SNORKEL SITE 78	
27	LP	00	889.3		1	
30	RI	00	948.7		SG=8	
31	LP	00	969.2		REDD, SG=4	
42	LP	00	1311.5		SITE 3 BLDRS	
43	LP	00	1341.2	SS/		
44	LP	00	1400.2	SS/		
50	RB	00	1540.7	CS/		
52	RI	00	1614.8		END U31 RI RCH 5	
55	LP	00	1839.8	/SS		
56	LP	00	1870.8	BV		

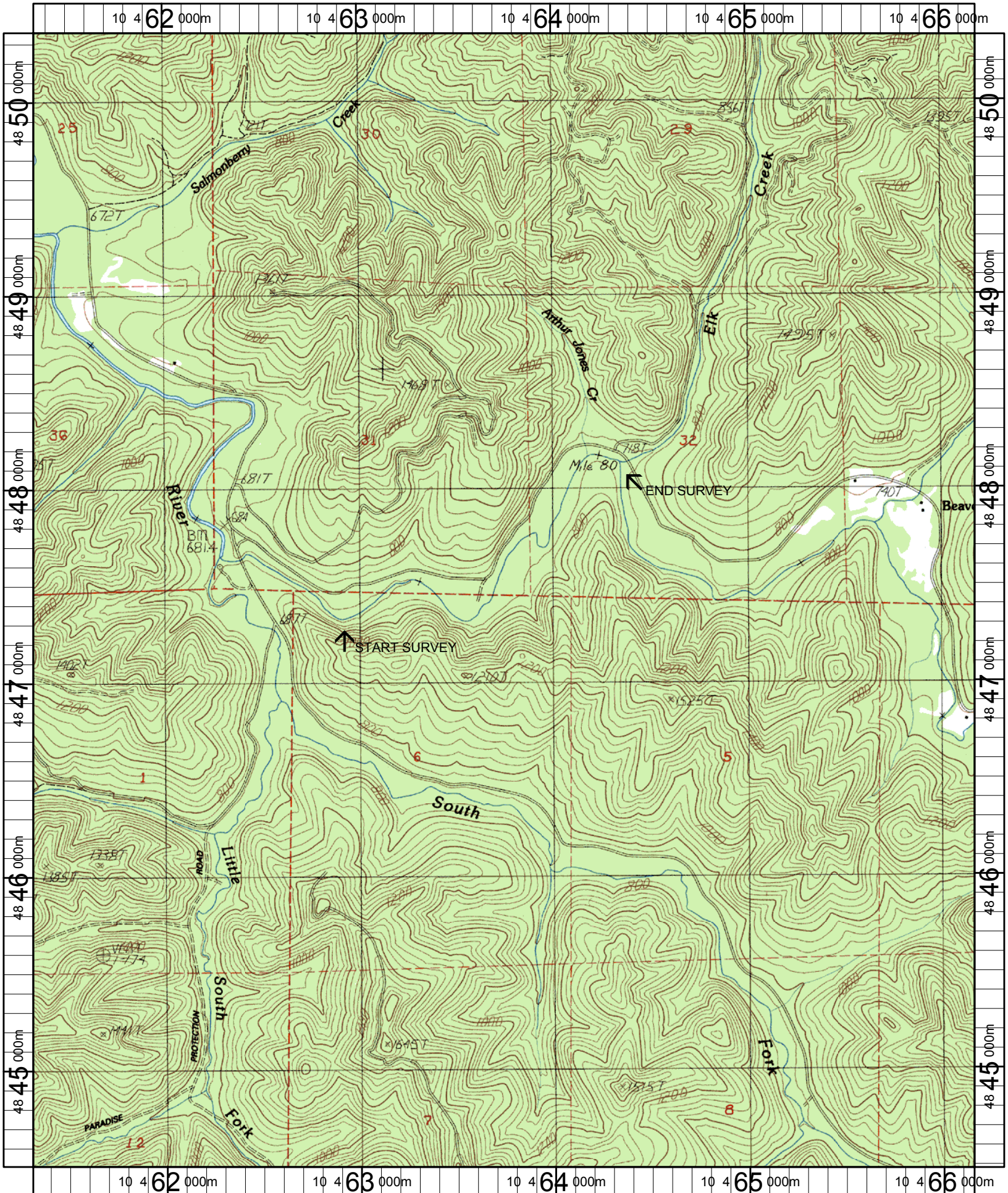
# Comment Summary

## Oregon Plan Monitoring Sites 2002

MONITORING AREA: 4-UMP    SITE ID: 247    SMITH RIVER PRE-TX (U-247)

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
57	LP	01	1917.3	BV		
66	LP	00	2253.5	SS/		
69	CR	00	2349.8	RF		
70	LP	01	2402.1	TJ/	ARTHUR JONES CR	
71	RI	11	2402.1		T=9C, ACW=1.4	
74	LP	00	2553.1		EOS	





Name: BEAVER CREEK  
 Date: 8/5/2004  
 Scale: 1 inch equals 2000 feet

Location: 10 463746 E 4847420 N  
 Caption: SMITH RIVER (TREATMENT) RESTORATION SITE - SMITH BASIN