

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

STREAM: Smith River (U-248)
BASIN: Smith River
SURVEY TYPE: Reference
DATE: February 11, 2004
SURVEY CREW: Michael Scheu, Jeremiah Bernier
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: km²
USGS MAPS: Beaver Creek
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Smith River habitat survey extended 514 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 9.6 (range: 4.5-14.6). Land use for the reach was timber harvest and young (3-15 cm dbh) trees. The average unit gradient was 0.6 percent. Scour pools (60%) and riffles (28%) dominated stream habitat. There was no dominant substrate type. Wood volume was high at 31.7 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

T20S-R06W-S32SW

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	9.6	VWI Range:	4.5 - 14.6

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	514	4,396	0
Secondary	36	104	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: 13.7	25.1 (16 - 29)	29.1 (25 - 32.8)
Depth: 0.66	Height: 1.0	2.0 (1.8 - 2.2)	2.4 (2 - 2.8)

W:D ratio: 13.8
Stream Flow Type: MF
Avg. Unit Gradient: 0.6%

Entrenchment (ACW:FPW ratio): 1.9
Water temp (°C): 6.0 - 6.0
Habitat Units/100m: 4.7

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	TH	YT
Riparian Vegetation:	C90	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</u>
All pieces (>=3m x 0.15m):	83	16.2
Volume (m ³):	163	31.7
Key pieces (>=10m x 0.60m):	15	2.9

OREGON DEPARTMENT OF FISH AND WILDLIFE

SMITH RIVER REFERENCE (U-248)

HABITAT INVENTORY

Report Date: 6/16/2004

Survey Date:

2/11/2004

REACH 1

T20S-R06W-S32SW

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
POOL-BACKWATER	1	5	2.0	0.70	10	0	40	60	0	0	0	0
POOL-DAMMED	1	28	9.8	1.00	274	0	0	90	5	5	0	0
POOL-LATERAL SCOUR	10	279	8.6	0.87	2,500	0	0	22	23	17	9	30
POOL-STRAIGHT SCOUR	1	21	9.3	1.20	193	0	0	11	28	22	6	33
RIFFLE	8	181	7.3	0.46	1,251	0	0	16	18	21	3	43
STEP/BOULDERS	1	9	4.3	0.50	39	0	0	0	20	50	30	0
STEP/COBBLE	3	22	6.4	0.30	132	0	0	0	47	47	7	0
STEP/LOG	1	6	17.0	0.40	102	0	0	90	5	5	0	0
Total:	26	550	7.9	0.66	4,500	0	Avg: 2	23	22	21	6	26

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	2	33	5.9	0.85	284	6.32%	0	0.0
Scour Pools	11	299	8.7	0.90	2,692	59.83%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	8	181	7.3	0.46	1,251	27.80%	0	0.0
Rapids	0	0			0	0.00%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	5	37	8.1	0.36	272	6.05%	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:	13	23.6	36
Pools >=1m deep:	5	9.1	
Complex pools (LWD pieces>=3):	4	7.3	
Pool frequency (channel widths/pool):	3.1		
Residual pool depth (avg):	0.53		

STREAM SUMMARY

SMITH RIVER REFERENCE (U-248)

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	
26	550	7.9	0.66	4,500	2	23	22	21	6	26	

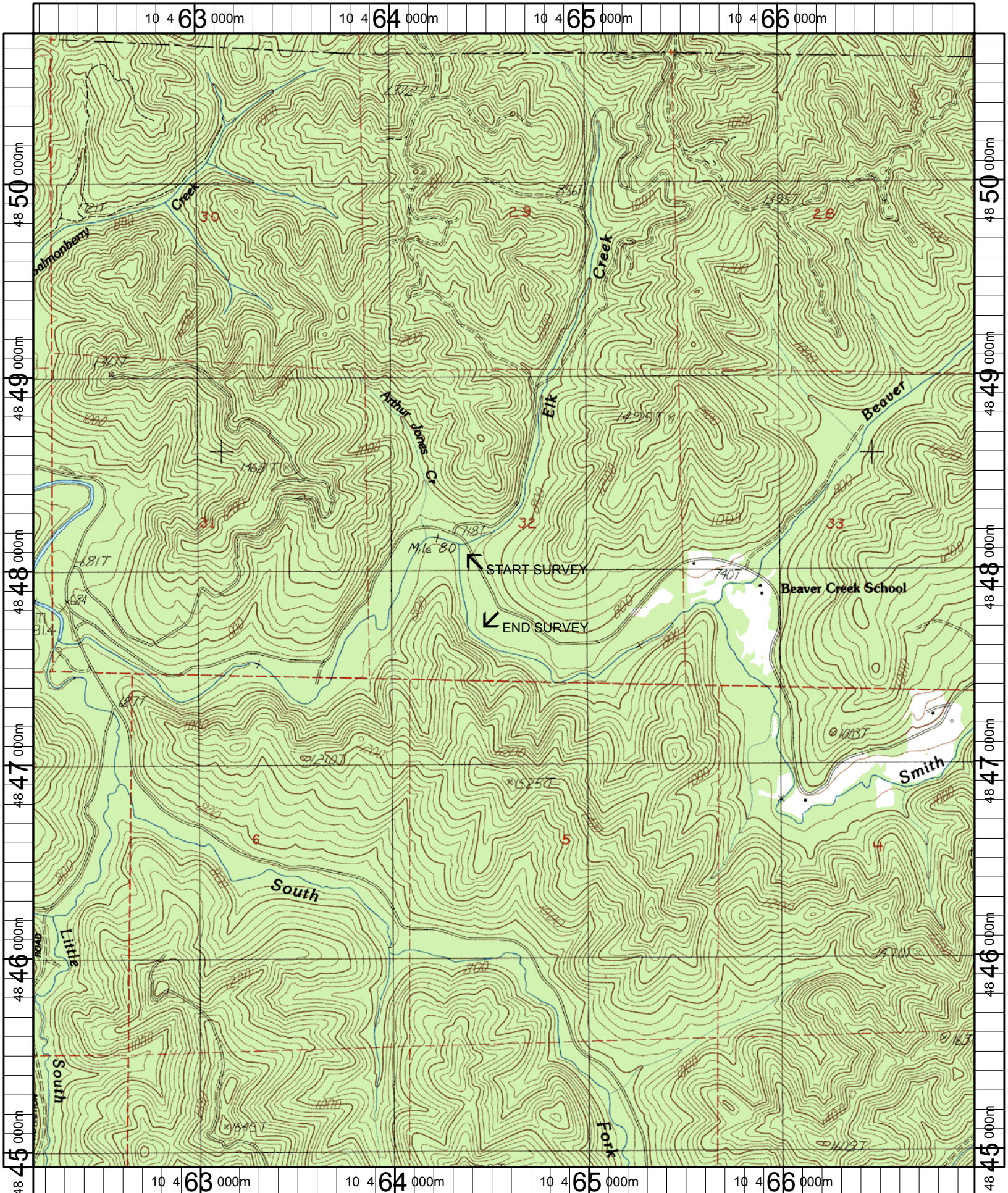
Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	284	6.32%
Scour Pools	2,692	59.83%
Glides	0	0.00%
Riffles	1,251	27.80%
Rapids	0	0.00%
Cascades	0	0.00%
Step/Falls	272	6.05%
Dry	0	0.00%
Culverts	0	0.00%

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: 4-UMP SITE ID: 248 SMITH RIVER REFERENCE (U-248)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	16		T=6C	
2	LP	00	67		CARCASS	
5	RI	01	150.9		RCH 5, UNIT 51-SP, AQI 2	
26	LP	00	513.7		CARCASS	



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

Location: 10 464576 E 4847841 N
 Caption: SMITH RIVER (REFERENCE) RESTORATION SITE - SMITH BASIN