

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

STREAM: Salmonberry Creek (UMP-99)  
BASIN: Smith River  
SURVEY TYPE: Post-Tx  
DATE: March 22, 2007  
SURVEY CREW: Andy Lanier, Laurel Moulton  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 3.5 km<sup>2</sup>  
USGS MAPS: Beaver Creek  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Salmonberry Creek habitat survey extended 516 meters. The channel was alternately constrained by hillslope and terrace in a broad valley floor. The average valley width index was 3.8 (range: 3.5). Land use for the reach was timber harvest and young timber (3-15 cm dbh). The average unit gradient was 1.0 percent. Scour pools (74%) and riffles (17%) dominated stream habitat. Gravel (79%) and sand (15%) dominated stream substrate. Wood volume was very high at 56.4 m<sup>3</sup>/100m.

**COMMENTS:**

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

The crew noted several habitat structures during the survey.

Salmonid fry, Cutthroat trout, Rough-skinned newts, and sculpin were observed during the survey.

Stream Salmonberry Creek (U-99)  
 Basin Smith River  
 Treatment Large Wood

	ODFW Benchmark		Pre	Post	Post	Post	
Habitat Variable	Desirable	Undesirable	2/25/01	3/6/02	2/25/03	3/22/07	
% Pool Area	>35%	<10%	50.1	63.3	66.3	<b>75.7</b>	
Number of Pools			23	23	37	36	
Deep Pools/km (>1.0 m)			2.0	4.0	3.9	<b>0.0</b>	
% Off-Channel			1.5	0.7	2.9	<b>0.8</b>	
LWD – Pieces/100m	>20	<10	11.0	15.9	23.6	<b>18.8</b>	
LWD – Volume/100m	>30	<20	6.1	27.6	59.1	<b>56.4</b>	
LWD – Key Pieces/100m	>3	<1	0.2	0.4	7.0	6.2	
Large Wood Jams/km			2.0	17.9	17.6		
% Riffle Fines	<10	>20	24	22	18	4	
% Riffle Gravel	>35	<15	76	79	82	95	
% Bedrock			0	0	0	0	

**Bold** is noticeable change

Comments: Pool area and the number of pools have been steadily increasing since treatment. However, deep pools have dropped to zero in the last survey. The loss of deep pools may merely be due to variation in stream flows between survey years. Off channel habitat appears to have decreased since the last survey. In addition, all wood values are on the decline, suggesting that wood is leaving the reach without being replenished from the riparian area. Substrate is basically unchanged, although fines appear to be decreasing and gravel increasing in riffles. With the increased pool area, it appears that the treatment was successful, although if wood continues to have a net export rate, stream improvements may be lost.

REACH 1

T20S-R06W-S30SW

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	3.8	VWI Range:	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 (m<sup>2</sup>)</u>	<u>Dry Units</u>
Primary Channel	516	1,143	0
Secondary Channel	0	0	0
Off-Channel Units	8	9	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.1	Width: 4.3	6.1 ( 4.5 - 10 )	7.2 ( 5.5 - 11 )
Depth: 0.36	Height: 0.5	0.9 ( 0.9 - 1 )	1.2 ( 1.1 - 1.3 )

W:D ratio: 9.2

Entrenchment (ACW:FPW ratio): 1.4

Stream Flow Type: MF

Habitat Units/100m (total channel length): 11.6

Average Unit Gradient: 1.0%

Habitat Units/100m (primary channel length): 11.8

Water temperature (°C): 8.0 - 8.0

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	TH	YT
Riparian Vegetation:	D30	S

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):	97	18.8
Volume (m <sup>3</sup> ):	291	56.4
Key pieces (>=12m x 0.60m):	32	6.2

OREGON DEPT OF FISH AND WILDLIFE

SALMONBERRY CREEK POST-TX (4-UMP, 99)

HABITAT INVENTORY

Report Date: 5/3/2007

Survey Date:

3/22/2007

REACH 1		T20S-R06W-S30SW					REACH 1					
HABITAT DETAIL												
Habitat Type	Number	Total	Avg	Avg	Total	Large	Substrate					
	Units	Length	Width	Depth	Area	Boulders	Percent Wetted Area					
		(m)	(m)	(m)	(m <sup>2</sup> )	(#>0.5m)	S/O	Snd	Grvl	Cbl	Bldr	Bdrk
POOL-DAMMED	1	10	1.7	0.40	17	0	0	25	75	0	0	0
POOL-LATERAL SCOUR	34	345	2.4	0.57	846	0	3	22	74	1	0	0
POOL-PLUNGE	1	3	4.0	0.40	10	0	0	10	62	29	0	0
RIFFLE	8	92	1.8	0.09	159	0	0	4	95	1	0	0
RIFFLE W/ POCKETS	2	26	1.6	0.10	42	0	0	2	88	7	2	0
STEP/COBBLE	11	41	1.5	0.08	68	0	0	8	82	1	9	0
STEP/LOG	4	7	2.4	0.08	12	0	0	0	90	10	0	0
<b>Total:</b>	<b>61</b>	<b>524</b>	<b>2.1</b>	<b>0.36</b>	<b>1,152</b>	<b>0</b>	<b>Avg: 1</b>	<b>15</b>	<b>79</b>	<b>2</b>	<b>2</b>	<b>0</b>

HABITAT SUMMARY									
Habitat Group	Number	Total	Avg	Avg	Wetted Area		Large Boulders		
	Units	Length	Width	Depth	(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )	
		(m)	(m)	(m)					
Dammed & BW Pools	1	10	1.7	0.40	17	1.48%	0	0.0	
Scour Pools	35	348	2.4	0.56	856	74.26%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	10	118	1.7	0.09	200	17.38%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	15	48	1.7	0.08	79	6.89%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	36	68.7	69.8
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	12	22.9	23.3
Pool frequency (channel widths/pool):	3.4		
Residual pool depth (avg):	0.45		

# Comment Summary

## Restoration Monitoring Sites 2007

MONITORING AREA: **4-UMP**    SITE ID: **99**    **SALMONBERRY CREEK POST-TX**

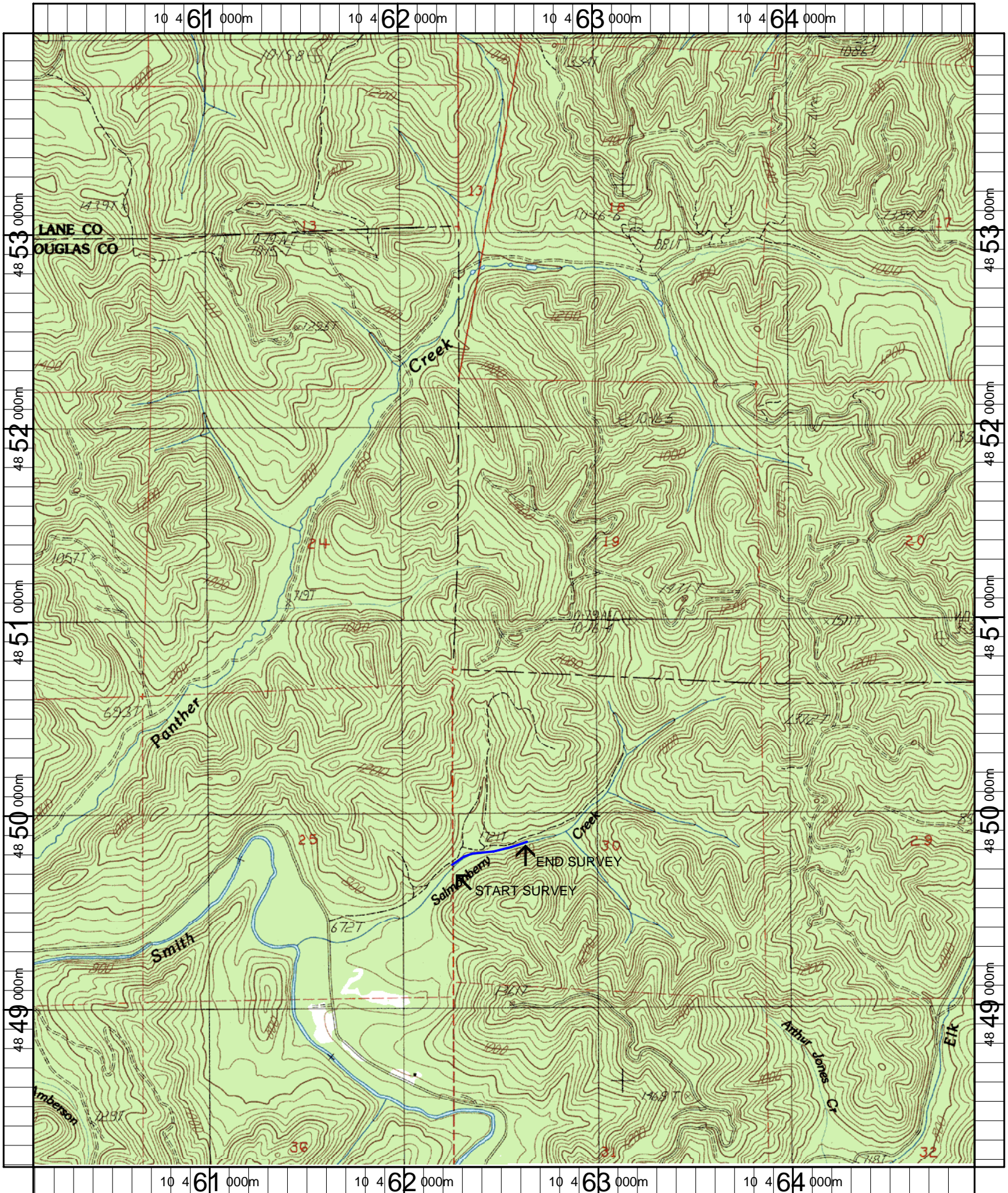
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
1	LP	00	8		TEMPERATURE =7
3	LP	00	20	HS	
6	LP	00	44.5		0-AGE SALMONID
7	SL	00	44.8	HS	LOGS
8	DP	00	54.8		MANY 0 AGE SALMONID
11	LP	00	84.3	HS	LOGS
12	RI	00	101.3		MAYBE REDDS
13	LP	00	113.8		MANY JUVENILE SALMONID
16	LP	00	135.8		2 CUTTROAT 10CM AND 15CM
17	RI	01	150.3	TJ/	DRIVING REACH PHOTO
18	SC	11	150.3		TRIB HAS PB. CULVERT IS META
19	LP	11	150.3		JUVENILE SALMONIDS
21	LP	00	157.3		JUVENILE SALMONIDS
22	LP	00	172.8		2 FISH. 15CM CUTTROAT (?), 7CM
24	LP	00	203.8		10CM CUTTROAT
26	LP	00	223.3	HS	SCULPIN. REDD (?)
27	LP	00	231.3	HS, SS/	
29	LP	00	244.3	HS	
31	LP	00	263.3	HS	
34	LP	00	288.3		7CM FISH
37	LP	00	307.3	HS, SS/	

# Comment Summary

## Restoration Monitoring Sites 2007

MONITORING AREA: 4-UMP    SITE ID: 99    SALMONBERRY CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
42	LP	00	350.8		15CM TROUT
43	LP	00	367.8		10CM TROUT (?)
44	LP	00	385.8	HS	RS NEWT
46	LP	00	395.8	HS	
48	RP	00	417.8		REDD (?)
51	LP	00	446.7	HS	
52	LP	00	454.7	HS	10CM FISH, 15CM FISH
54	LP	00	473.2		REDDS (?)
58	LP	00	488	HS	



Name: BEAVER CREEK  
 Date: 1/9/2007  
 Scale: 1 inch equals 2000 feet

Location: 10 462529 E 4851101 N  
 Caption: SALMONBERRY CREEK RESTORATION SITE - SMITH BASIN