

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

STREAM: Long Prairie Creek Upper (MC-47)
BASIN: Siletz River
SURVEY TYPE: Post-Tx
DATE: March 14, 2006
SURVEY CREW: Trevan Cornwell, Brian Bangs
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 13.4 km³
USGS MAPS: Eddyville
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Long Prairie Creek habitat survey extended 621 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 7.4 (range: 7.0-8.5). Land use for the reach was young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 0.6 percent. Scour pools (66%) and riffles (24%) dominated stream habitat. Gravel (49%) and sand (21%) dominated stream substrate. Wood volume was moderate at 22.9 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.

Stream Long Prairie Creek Upper (MC-47)

Basin Siletz River

Treatment Large Wood

	ODFW Benchmark		Pre 2/26/99	Post 1/26/00	Post 3/14/06		
Habitat Variable	Desirable	Undesirable					
% Pool Area	>35%	<10%	32.8	57.7	69.6		
Number of Pools			16	25	23		
Deep Pools/km (>1.0 m)			5.1	5.3	1.5		
% Off-Channel			6.2	6.6	3.7		
LWD – Pieces/100m	>20	<10	2.5	9.0	15.8		
LWD – Volume/100m	>30	<20	1.7	22.7	22.9		
LWD – Key Pieces/100m	>3	<1	0	1.0	0.8		
Large Wood Jams/km			0	7.9	6.4		
% Riffle Fines	<10	>20	42	11	18		
% Riffle Gravel	>35	<15	37	62	59		
% Bedrock			22	16	13		

Bold is noticeable change

Comments: Since the treatment was large wood assembled in complex jams, it is no surprise that there was an increase in those variables. What is important is that the large wood is being retained in the treated reach and is accumulating additional wood pieces. Pool area and the number of pools increased, while deep pools were reduced. Riffle fines appear to have decreased while riffle gravel seems higher.

REACH 1

T10S-R09W-S15SE

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	7.4	VWI Range:	7 - 8.5

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	100%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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	621	2,519	0
Secondary Channel	0	0	0
Off-Channel Units	40	96	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 4	<u>First Terrace</u> n = 3
Width: 3.9	Width: 6.6	24.6 (15.7 - 44.3)	23.1 (22.5 - 24.1)
Depth: 0.50	Height: 0.6	1.2 (1.1 - 1.5)	1.5 (1.2 - 1.9)

W:D ratio: 11.1

Entrenchment (ACW:FPW ratio): 3.8

Stream Flow Type: LF

Habitat Units/100m (total channel length): 6.5

Average Unit Gradient: 0.6%

Habitat Units/100m (primary channel length): 6.9

Water temperature (°C): 8.0 - 8.0

Riparian, Bank, and Wood Summary

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

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):	98	15.8
Volume (m ³):	142	22.9
Key pieces (>=12m x 0.60m):	5	0.8

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

3/14/2006

REACH 1		T10S-R09W-S15SE					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-ALCOVE	1	25	3.0	0.30	74	0	95	5	0	0	0	0
POOL-BACKWATER	1	6	2.1	0.45	13	0	30	70	0	0	0	0
POOL-LATERAL SCOUR	19	388	4.3	0.77	1,631	0	8	25	38	9	2	19
POOL-PLUNGE	2	21	5.2	0.75	103	0	5	43	30	9	8	6
RIFFLE	11	153	3.2	0.25	495	0	5	13	59	6	1	15
RIFFLE W/ POCKETS	1	26	5.4	0.40	138	0	5	20	70	5	0	0
STEP/BOULDERS	1	4	2.8	0.40	11	0	5	10	10	14	48	14
STEP/COBBLE	6	37	4.0	0.18	149	0	3	11	84	3	0	0
STEP/LOG	1	0	2.3	0.10	1	0	0	20	80	0	0	0
Total:	43	661	3.9	0.50	2,615	0	Avg: 8	21	49	7	3	13

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	31	2.6	0.38	87	3.32%	0	0.0	
Scour Pools	21	409	4.4	0.77	1,734	66.30%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	12	179	3.4	0.27	633	24.20%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	8	42	3.6	0.20	162	6.18%	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
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	23	34.8	37.1
Pools >=1m deep:	1	1.5	1.6
Complex pools (LWD pieces>=3):	7	10.6	11.3
Pool frequency (channel widths/pool):	4.3		
Residual pool depth (avg):	0.55		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** SITE ID: **47** **LONG PRAIRIE CREEK POST-TX**

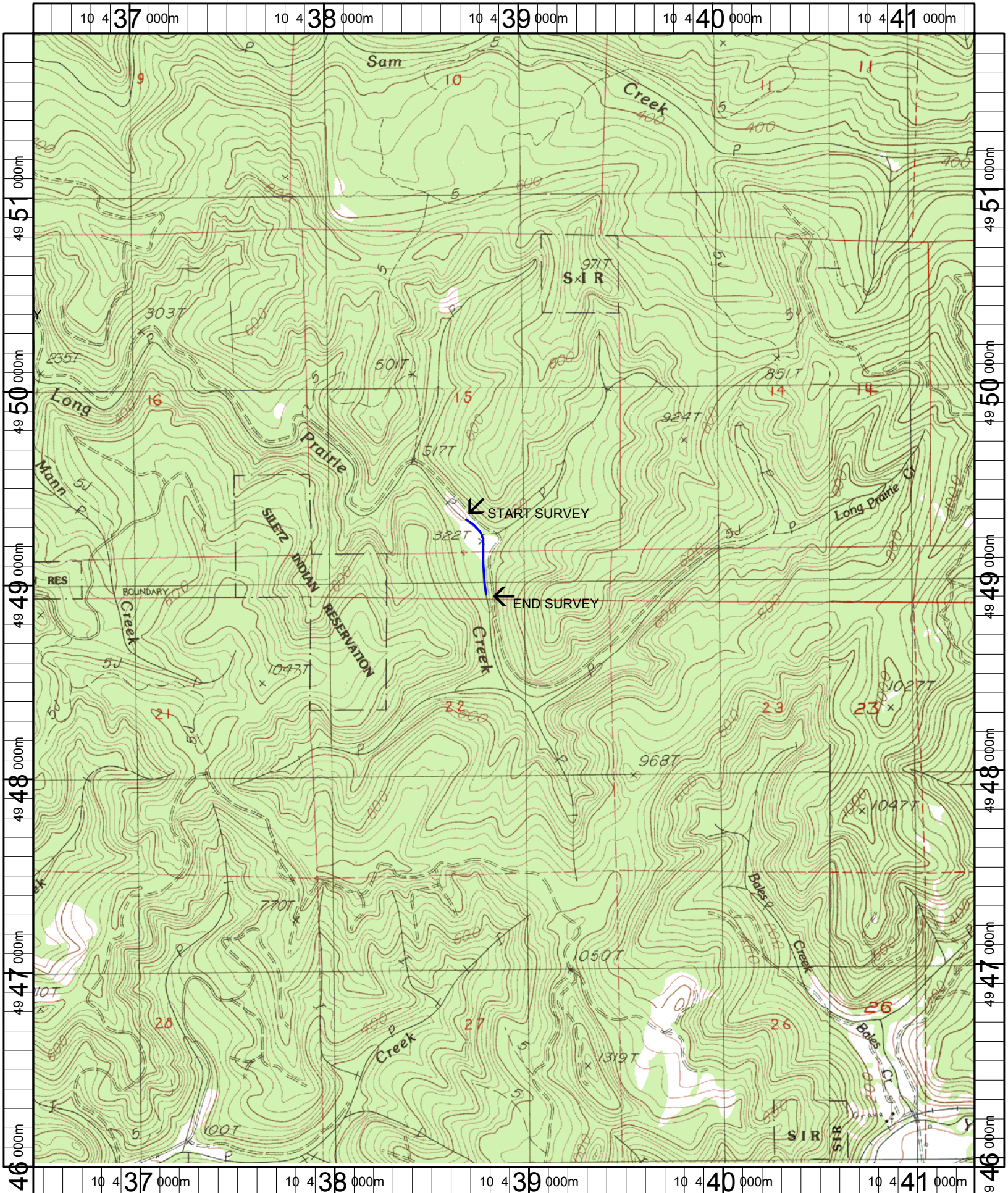
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	19.6	HS		START BELOW HAB STRUCTURE
2	LP	00	30.6	HS		
5	LP	00	78.5			CUTTING INTO BANK
8	LP	00	112.7	HS, /SS		
10	LP	00	146.2			REDD IN TAILOUT
13	LP	01	209.1	TJ/, HS		OLD REDD
14	RI	11	209.1			SPAWNING SURVEY SIGN ON TRIB
15	SL	11	209.1			H = 0.8, T = 8.0
16	SC	00	216.6			T = 8.0
17	LP	00	243.2	HS		SINGLE LOG STRUCTURE
18	RI	00	254.7	SS/, BV		
19	PP	00	268	CS/CS, BC		OLD METAL BRIDGE
20	SB	00	272.1	CS/, BV		OLD BEAVER DAM
22	AL	10	302.1			RSN, DEAD ALDERS, EGG MASSES
23	LP	00	336.7	BV		
27	LP	00	374.5	BV		
29	LP	00	400.9	HS, /SS		
32	RI	00	451	BV		
33	PP	00	458.6	/SS		
36	LP	00	525.5	BV		
38	RP	00	555.1	HS		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 2-MC SITE ID: 47 LONG PRAIRIE CREEK POST-TX

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
41	LP	00	589.8	BV		
42	LP	00	602	/SS		
43	RI	00	620.5	HS	END SURVEY	



Name: EDDYVILLE
 Date: 1/23/2006
 Scale: 1 inch equals 2000 feet

Location: 10 438898 E 4948901 N
 Caption: LONG PRAIRIE CREEK UPPER #47 RESTORATION SITE -
 SILETZ BASIN