

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

STREAM: Long Prairie Creek (MC47)
BASIN: Siletz River
SURVEY TYPE: Post-Tx
DATE: July 13, 2006
SURVEY CREW: Annette Garrigues, Jeff Snyder
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 13.4 km²
USGS MAPS: Eddyville
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Long Prairie Creek habitat survey extended 609 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 10.7 (range: 9.5-14.6). Land use for the reach was young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 0.9 percent. Scour pools (63%) and riffles (24%) dominated stream habitat. Sand (34%) and gravel (34%) dominated stream substrate. Wood volume was moderate at 20.8 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 8/2/99	Post 6/27/00	Post 7/13/06		
Habitat Variable	Desirable	Undesirable					
% Pool Area	>35%	<10%	75.6	64.0	69.7		
Number of Pools			22	27	21		
Deep Pools/km (>1.0 m)			1.4	0.0	0.0		
% Off-Channel			0.2	10.9	1.1		
LWD – Pieces/100m	>20	<10	6.4	13.4	8.5		
LWD – Volume/100m	>30	<20	3.6	48.3	20.8		
LWD – Key Pieces/100m	>3	<1	0	4.2	2.1		
Large Wood Jams/km			0.0	8.8	9.9		
% Riffle Fines	<10	>20	22	9	32		
% Riffle Gravel	>35	<15	57	67	44		
% Bedrock			22	12	9		

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. However, with time, it appears to be leaving the reach with little additional recruitment. Deep pools were reduced, but that may be a symptom of stream flows rather than an actual change. Since the reach was pool-rich and had plenty of riffle gravel prior to treatment, it is unlikely that there will be significant increases in those characteristics.

REACH 1

T10S-R09W-S15SW

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	10.7	VWI Range:	9.5 - 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 Channel	609	2,070	0
Secondary Channel	0	0	0
Off-Channel Units	24	23	2

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 3.2	Width: 3.7	4.8 (3.9 - 5.8)	6.3 (5.2 - 8.1)
Depth: 0.29	Height: 0.4	0.7 (0.5 - 1)	1.2 (0.6 - 1.6)

W:D ratio: 10.7

Entrenchment (ACW:FPW ratio): 1.3

Stream Flow Type: MF

Habitat Units/100m (total channel length): 7.6

Average Unit Gradient: 0.9%

Habitat Units/100m (primary channel length): 7.9

Water temperature (°C): 14.0 - 14.0

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:	28%	Reach avg: 85%
Undercut Banks:	10%	Range: 50 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	52	8.5
Volume (m ³):	127	20.8
Key pieces (>=12m x 0.60m):	13	2.1

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

7/13/2006

REACH 1		T10S-R09W-S15SW					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
DRY UNIT	1	2	1.0	0.00	2	0	0	30	70	0	0	0
GLIDE	2	33	2.4	0.08	88	0	0	70	30	0	0	0
POOL-BACKWATER	1	16	0.9	0.10	14	0	40	60	0	0	0	0
POOL-DAMMED	1	39	3.5	0.70	135	0	25	20	15	10	0	30
POOL-LATERAL SCOUR	19	319	4.4	0.51	1,309	0	25	35	25	3	0	13
PUDDLED UNIT	1	6	1.1	0.05	7	0	0	50	40	10	0	0
RAPID/BEDROCK	1	4	1.8	0.10	8	0	0	20	0	0	0	80
RIFFLE	17	205	2.3	0.17	493	43	1	31	44	17	2	4
STEP/BEAVER DAM	1	2	3.5	0.01	6	0	100	0	0	0	0	0
STEP/COBBLE	4	9	3.8	0.08	32	0	0	30	58	13	0	0
Total:	48	634	3.2	0.29	2,093	43	Avg: 14	34	34	9	1	9

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	54	2.2	0.40	149	7.12%	0	0.0	
Scour Pools	19	319	4.4	0.51	1,309	62.54%	0	0.0	
Glides	2	33	2.4	0.08	88	4.20%	0	0.0	
Riffles	17	205	2.3	0.17	493	23.55%	43	8.7	
Rapids	1	4	1.8	0.10	8	0.38%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	5	10	3.7	0.06	37	1.78%	0	0.0	
Dry	2	8	1.1	0.03	9	0.43%	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:	21	33.1	34.5
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	5	7.9	8.2
Pool frequency (channel widths/pool):	8.2		
Residual pool depth (avg):	0.47		

Survey Date 7/13/2006
Report Date: 3/5/2007

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

Summary of Riparian Zone (0-30m) 3 transects

Total hardwoods/1000	20
Total conifers/1000 ft	0
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters		Zones 1-3 0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15-30cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30-50cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	34		15		27	
Shrub cover	12		18		30	
Grass/forb cover	85		81		67	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		17		50	
High terrace	100		83		50	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	16		7		15	

Summary of Riparian Zone (0-30m) for all reaches

3 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000	20
Total conifers/1000 ft	0
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-m wide band

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.0	0.0
15-30cm	0.0	0.0
30-50cm	0.0	0.3
50-90cm	0.0	0.0
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1 Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
10	RT	2	HT	2	0	0	100	Conifer							NO TREES
								Hardwood							
10	LF	2	HT	2	0	0	100	Conifer							UTM 0438755-4949268 3 D
								Hardwood							
10	LF	3	HT	1	0	30	50	Conifer							STREAM PERPENDICULAR TO HS
								Hardwood							NO TREES
10	RT	1	HT	14	50	0	100	Conifer							
								Hardwood							
10	LF	1	HT	33	70	0	100	Conifer							TRANS
								Hardwood							
10	RT	3	HT	3	0	0	100	Conifer							NO TREES
								Hardwood							
24	RT	3	HS	9	0	0	100	Conifer							INCLUDES RB, NO TREES
								Hardwood							
24	RT	2	HT	11	0	5	95	Conifer							NO TREES
								Hardwood							
24	RT	1	HT	12	5	0	100	Conifer							NO TREES
								Hardwood							
24	LF	3	HS	20	90	40	70	Conifer							NO TREES
								Hardwood							
24	LF	2	HT	4	50	0	100	Conifer							UTM 0438786-4949166 3D
								Hardwood							
24	LF	1	HT	14	10	0	100	Conifer							STREAM PERPENDICULAR TO HS
								Hardwood							TRANS, NO TREES
31	RT	1	HT	9	40	20	60	Conifer							
								Hardwood							
31	LF	2	HT	2	0	30	70	Conifer							UTM 0430755-4949150 3D
								Hardwood							
31	LF	3	HT	1	0	30	70	Conifer							NO TREES
								Hardwood							
31	LF	1	HT	14	30	50	50	Conifer							NO TREES
								Hardwood							
31	RT	2	HS	18	40	70	20	Conifer							NO TREES
								Hardwood							
31	RT	3	HS	55	70	80	10	Conifer							NO TREES
								Hardwood							

Comment Summary

Restoration Monitoring Sites 2006

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

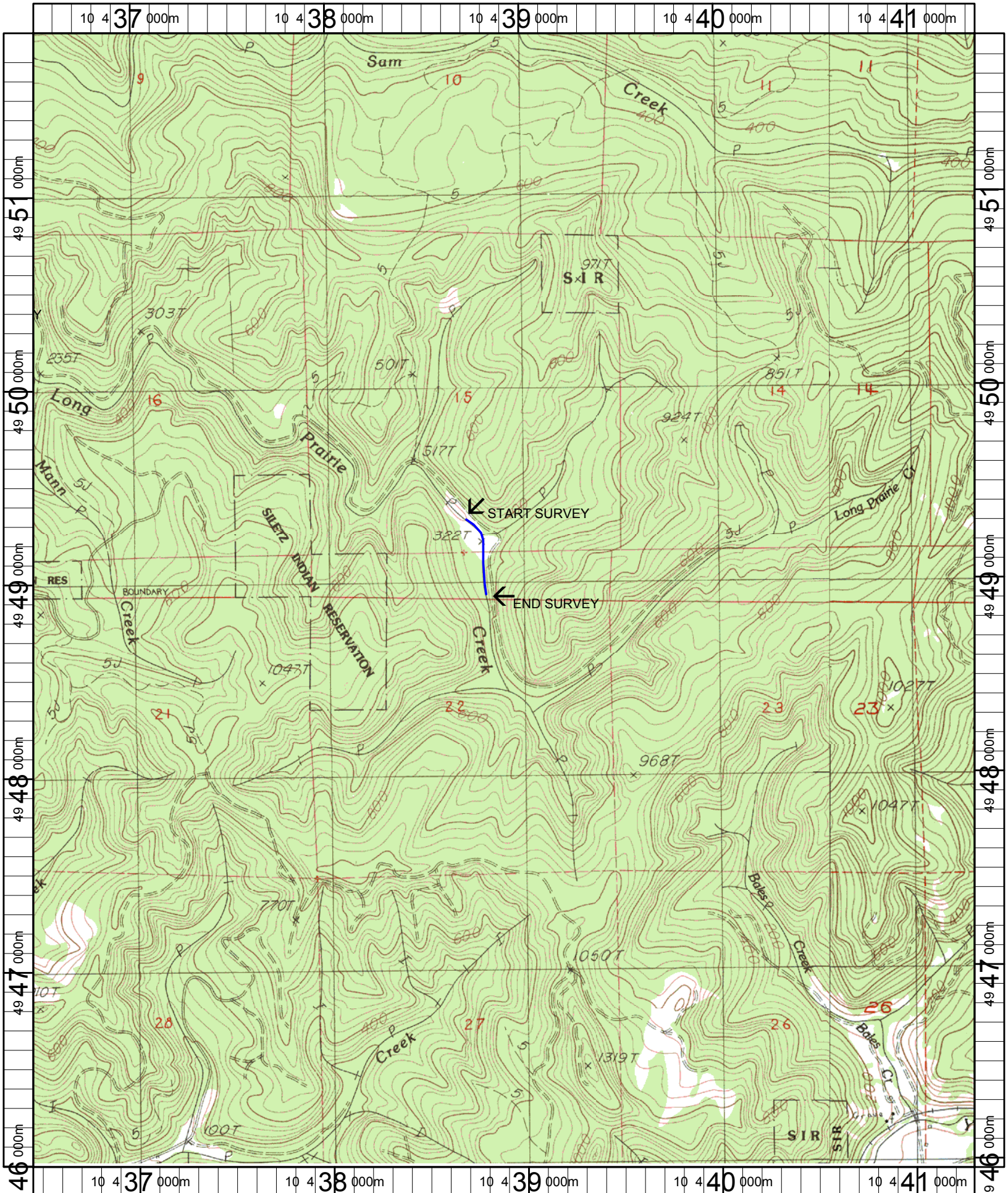
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	6.5	HS	HS #1	T=14.0C
4	SD	00	22.8	BD	H=0.20M, BV	H=0.20M
5	DP	00	61.3	BV, BP	FISH	FISH
7	LP	00	97.6	HS	HS #2	FISH
9	LP	00	128.1			FISH
10	RI	00	132.3		RIPARIAN #1	RIPARIAN #1
11	LP	00	152.7			FISH
13	LP	01	193.5	HS	HS #3	FISH
14	DU	11	193.5		ACW=1.0M	02 CHANNEL
15	PD	11	193.5		UTM 0438781-4949258 3D	02 CHANNEL
16	RI	00	206.6			FISH
17	LP	00	226.7	HS	HS #4	FISH
19	BW	10	240.1		BC	
21	RI	00	254.3	BC		
22	SC	00	256.3		H=0.10M	H=0.10M
24	SC	00	283.8		RIPARIAN #2	RIPARIAN #2
25	LP	00	311.5			FISH
27	LP	00	335.1			FISH
29	LP	00	358.6			FISH
31	LP	00	378.8	HS, /SS	HS #5, /SS	FISH
33	LP	00	404.6			FISH

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
34	RI	00	429.7		RIPARIAN #3	RIPARIAN #3
35	LP	00	436.5			FISH
37	GL	00	468.9			FISH
38	LP	00	506.1			FISH
40	LP	00	526.8	HS		FISH
41	RI	00	540.4		HS #6	
42	LP	00	548.7			COHO
44	SC	00	559.9		H=0.10M	H=0.10M
45	LP	00	574.9			FISH
46	SC	00	576.4		H=0.15M	H=0.15M
47	LP	00	589.3	HS	HS #7	FISH
48	RI	00	609.4			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