

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

STREAM: Long Prairie Creek Lower (MC-46)
 BASIN: Siletz River
 SURVEY TYPE: Pre and Post-Tx
 DATE: October 27, 2003
 REPORT PREPARED BY: Paul Jacobsen

The Long Prairie Creek restoration project extended approximately 1,200 meters, with about 500 meters of the project being monitored for pre- and post-treatment conditions. Twelve habitat structures were created and 59 key pieces (according to the ODF Large Wood Placement Guide) were used. The intended goals of the project included increasing stream complexity, improved interaction with the floodplain, gravel retention, increased pool area, and enhanced salmonids spawning and rearing habitat. In the first seasons after restoration activities, large wood pieces, volume, and key pieces are increased as expected. In addition, pool area is greater, as is summer riffle gravel and winter complex pools.

	ODFW	Benchmark	Winter Pre	Summer Pre	Winter Post	Summer Post	
Habitat Variable	Desirable	Undesirable	1/26/00	6/29/00	2/20/01	7/19/01	
Reach #							
Pool Area	>35	<10	79.7	92.4	86.5	95.3	
Pool Frequency	5-8	>20	4.4	3.0	3.2	10.0	
Residual Pool Depth	>0.5-1.0m	<0.2-0.5m	.69	.50	.63	.95	
Complex Pools/km	>2.5	<1.0	7.6	13.9	9.7	10.6	
Width/Depth Ratio	<15	>30	7.5	14.3	13.4	11.9	
Riffle Gravel % area	>35	<15	78	35	45	61	
Silt-Sand-Organic %	<12	>25	17	10	15	26	
Shade %	>70	< 60		72		50	
LWD - pieces/100m	>20	<10	7.8	8.7	9.9	10.6	
LWD - Volume/100m	>30	<20	14.8	7.9	17.9	19.1	
LWD - Key pieces/ 100m	>3	<1	0.4	0.0	0.4	1.8	
Riparian Conifers>20" dbh/1000ft	>300	<150		41		0	
Riparian Conifers>35" dbh/1000ft	>200	<75		0		0	

COMMENTS:

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

The crew noted evidence of beaver activity during the survey. Four habitat structures were also recorded.

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

STREAM: Long Prairie Creek (MC-46)
BASIN: Siletz River
SURVEY TYPE: Post-Tx
DATE: July 19, 2001
SURVEY CREW: Russ Macal, Justin Gerding
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 555 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.5 (range: 4.5 – 10.0). Land use for the reach was old growth (90+ cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 0.7 percent. Slackwater pools (87%) dominated stream habitat. Sand (42%) and gravel (36%) dominated stream substrate. Wood volume was low at 19.1 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

T10S-R9W-S17NE

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 avg: 6.5 range: 4.5-10.0

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0	Single Channel	0
Bedrock	0	Multiple Channel	0
Terrace	100	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	555	3,440	0
Secondary	10	15	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	5.2	Width	8.1	10.9	13.1
Depth	0.47	Height	0.7	1.4	1.5
		W:D ratio	11.9	Entrenchment	1.4

Stream Flow Type: LF Water Temp: 13.0-13.0°C
 Avg. Unit Gradient: 0.7% Habitat Units/100m: 3.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	OG	ST
Riparian Vegetation:	S	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	3%	Reach avg: 50%
Undercut Banks	27%	Range: 42- 67

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ($\geq 3m \times 0.15m$)	59	10.6
Volume (m ³)	106	19.1
Key pieces ($\geq 10m \times 0.6m$)	10	1.8

REACH 1

T10S-R9W-S17NE

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	Cbbl	Bldr	Bdrk
POOL-BEAVER DAM	4	448	7.0	1.11	3,000	6	23	48	14	10	6	0
POOL-LATERAL SCOUR	3	61	4.6	0.87	293	0	7	55	33	5	0	0
RIFFLE	6	53	2.5	0.16	133	0	2	24	61	11	3	0
STEP/BEAVER DAM	4	4	7.8	0.01	29	0	19	53	24	5	0	0
Total:	17	565	5.2	0.47	3,455	6	Avg:11	42	36	8	2	0

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m ²)	Percent	Large Boulders Number	#/100m ²
Dammed & BW Pools	4	448	7.0	1.11	3,000	86.83	6	0.2
Scour Pools	3	61	4.6	0.87	293	8.48	0	0.0
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	6	53	2.5	0.16	133	3.85	0	0.0
Rapids	0	0	-	-	0	0.00	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	4	4	7.8	0.01	29	0.84	0	0.0
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	7	12.4
Pools ≥1m deep:	4	7.1
Complex pools (LWD pieces ≥3):	6	10.6
Pool Frequency (channel widths/pool):	10.0	
Residual pool depth (avg)	0.95m	

STREAM SUMMARY

LONG PRAIRIE CR POST-TX (#46)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Total Large Boulder
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
17	565	5.2	0.47	3,455	11	42	36	8	2	0	6

Wetted Area

Habitat Group	(m ²)	Percent
Scour Pool	293	8.5
Backwater Pools	3,000	86.8
Glide	0	0.0
Riffle	133	3.8
Rapid	0	0.0
Cascade	0	0.0
Step	29	0.8
Dry	0	0.0

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	345
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	1.0	0.0	0.0	0.0	1.0	0.0	2.0
15-30cm	0.0	0.0	0.0	0.7	0.0	1.0	0.0	1.7
30-50cm	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.7
50-90cm	0.0	0.7	0.0	0.3	0.0	0.0	0.0	1.0
>90cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
Total/100m ²	0.0	2.3	0.0	1.3	0.0	2.0	0.0	1.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	27		34		53	
Shrub cover	35		47		65	
Grass/forb cover	65		53		23	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	33		33		33
High terrace	67		67		50	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		17	
Riprap	0		0		0	
Surface slope (%)	15		10		7	

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

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

Total hardwoods/1000 ft	345
Total conifers/1000 ft	
Total conifers >20" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

<u>Diameter</u> <u>class (cm)</u>	<u>Zones 1-3</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.0	2.0
15-30cm	0.0	1.7
30-50cm	0.0	0.7
50-90cm	0.0	1.0
>90cm	0.0	0.3

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

VEGETATION DETAIL

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	
10	LF	1	HT	0.0	20	90	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
10	LF	2	HT	0.0	20	90	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
10	LF	3	HT	0.0	20	90	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
10	RT	1	HS	50.0	60	10	90	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	1	ALDER
10	RT	2	HS	40.0	40	10	90	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
10	RT	3	HS	20.0	70	30	70	Conifer	0	0	0	0	0	
								Hardwood	2	1	0	0	0	ELDERBERRY
15	LF	1	HT	0.0	0	50	50	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
15	LF	2	HT	0.0	0	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
15	LF	3	HT	0.0	70	60	40	Conifer	0	0	0	0	0	
								Hardwood	1	2	0	0	0	ELDERBERRY
15	RT	1	HS	40.0	0	20	80	Conifer	0	0	0	0	0	
								Hardwood	1	0	0	0	0	ELDERBERRY
15	RT	2	HS	20.0	70	50	50	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	1	0	ALDER
15	RT	3	HS	20.0	60	100	0	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
17	LF	1	HT	0.0	80	40	60	Conifer	0	0	0	0	0	
								Hardwood	2	0	1	2	0	ALDER, ELDERBERRY
17	LF	2	HT	0.0	75	40	60	Conifer	0	0	0	0	0	
								Hardwood	0	2	1	0	0	ALDER
17	LF	3	RB	0.0	80	10	20	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
17	RT	1	HT	0.0	0	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
17	RT	2	HT	0.0	0	90	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
17	RT	3	HT	0.0	20	100	0	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	

STREAM HABITAT STATUS SHEET

STREAM NAME *Long Prairie Cr Post-74* **CONTRACT**
BASIN *Siletz* **CREW** *R. Macal, J. Gending*

DATE FILENAME COMMENTS

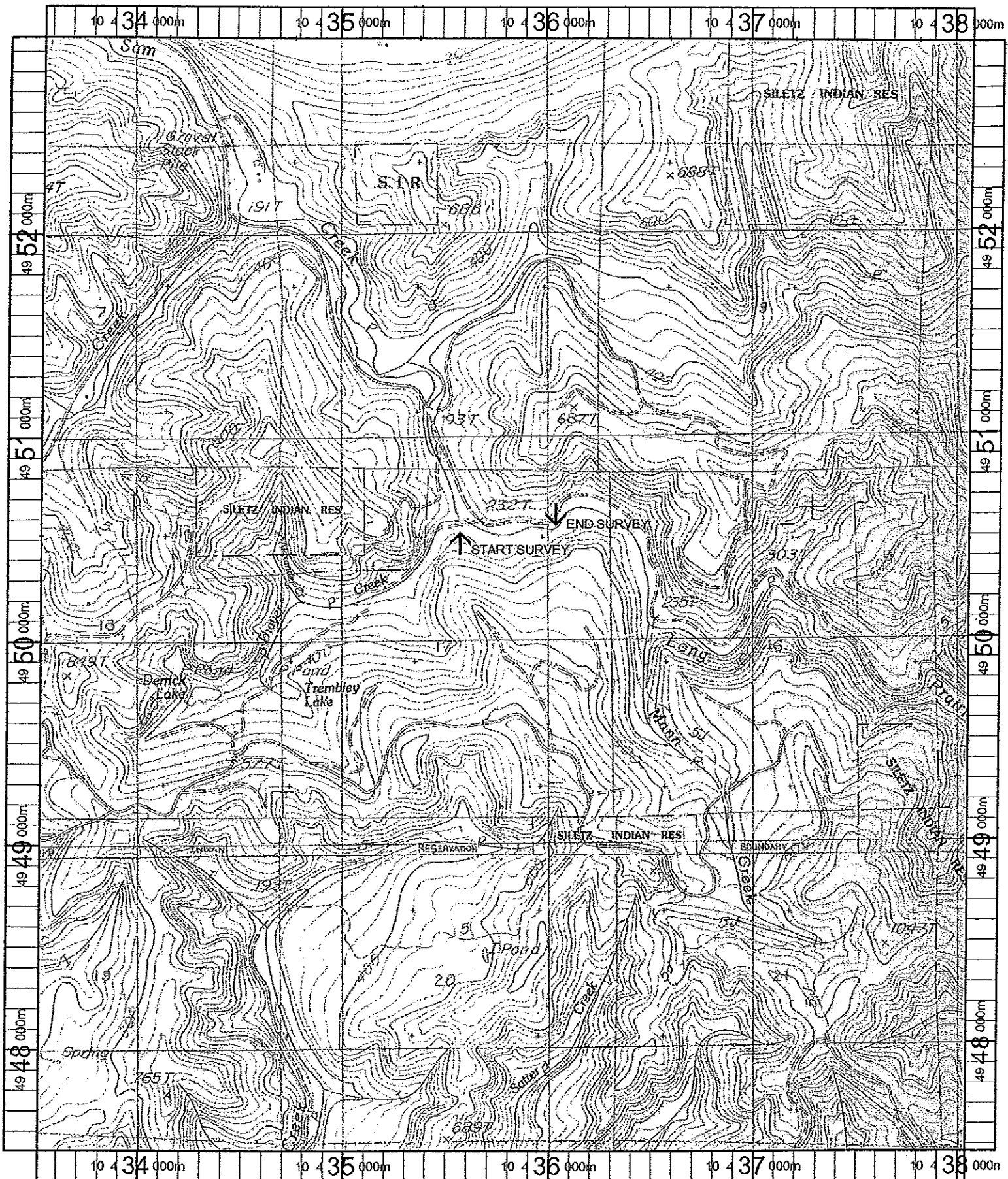
ENTRY			ENTERED BY:	
REACH	<i>11/6/01</i>	<i>Long</i>	HR.DBF	<i>[Signature]</i>
UNIT 1			U1.DBF	
UNIT 2			U2.DBF	
UNIT CHECK			CHK.DBF	
RIPARIAN			RP.DBF	
WOOD			WD.DBF	

ANALYSIS			ANALYZED BY:	
CALIBRATION			CAL.DBF	
MAP SUMMARY/CORRECTIONS				
WOOD EXPAND			WE.DBF	
UNIT LINK			UX.DBF	
UNIT LINK WITH WOOD			UX2.DBF	
PROFILES + COMMENT SUMMARY			PRO.XLS	
HABITAT REPORT LINK			LNK.DBF	
RIPARIAN LINK			RLK.DBF	

FINAL REPORT			COMPLETED BY:	
BAR GRAPHS			BAR.XLS	
COVER + REPORT			COV.DOC	
PHOTOS				
REPORT MAPS				
REACH ENTRY				

COMMENTS / NOTES

OREGON PLAN / REFERENCE SURVEYS					
BASIN AREA	BEAVER DAMS	#	<i>4</i>	MAJOR FAILURES	# <i>2</i>
STREAM ORDER	BEAVER ACTIVITY	#	<i>8</i>	DEBRIS JAMS	#
JAMS FROM WOOD SHEETS	CULVERT CROSSINGS	#		HABITAT STRUCTURES	# <i>4</i>



Name: EDDYVILLE
 Date: 11/8/100
 Scale: 1 inch equals 2000 feet

Location: 10 435698 E 4950202 N
 Caption: LONG PRAIRIE CREEK LOWER RESTORATION SITE - SILETZ BASIN