

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

STREAM: Lost Creek (N-346)
BASIN: Nehalem River
SURVEY TYPE: Pre-Tx
DATE: July 12, 2006
SURVEY CREW: Gordon Rose, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 4.6 km²
USGS MAPS: Hamlet
ECOREGION: Coast Range Willapa Hills

GENERAL DESCRIPTION:

The Lost Creek habitat survey extended 1,722 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 4.9 (range: 1.0-10.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 3.8 percent. Rapids (46%) and riffles (30%) dominated stream habitat. Gravel (47%), cobble (24%) and bedrock (21%) dominated stream substrate. Wood volume was moderate at 20.2 m³/100m.

COMMENTS:

There were several potential barriers to upstream fish migration in the surveyed length. The first was a 1.5 m high bedrock step at unit 6 (69 m). The second was a 1.7 m high step over log at unit 9 (142 m). The third was a high gradient bedrock rapid at unit 54 (1,123 m). The fourth was a high gradient bedrock rapid at unit 59 (1,214 m). The fifth was a 1.35 m high bedrock step at unit 60 (1,221 m). The sixth was a high gradient bedrock rapid at unit 61 (1,244 m). The seventh was a 1.2 m high bedrock step at unit 74 (1,477 m). The last was a high gradient bedrock cascade at unit 75 (1,500 m).

REACH 1

T04N-R08W-S30NW

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	4.9	VWI Range:	1 - 10

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	1,722	8,339	0
Secondary Channel	30	30	0
Off-Channel Units	29	33	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 4	<u>First Terrace</u> n = 3
Width: 4.7	Width: 9.3	11.4 (6 - 17)	17.7 (10 - 25.5)
Depth: 0.27	Height: 0.5	1.1 (0.7 - 1.2)	1.4 (0.8 - 2)

W:D ratio: 17.4
 Stream Flow Type: MF
 Average Unit Gradient: 3.8%
 Water temperature (°C): -

Entrenchment (ACW:FPW ratio): 1.2
 Habitat Units/100m (total channel length): 4.5
 Habitat Units/100m (primary channel length): 4.7

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	8%	Reach avg: 92%
Undercut Banks:	3%	Range: 75 - 99

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	294	17.1
Volume (m ³):	347	20.2
Key pieces (>=12m x 0.60m):	9	0.5

OREGON DEPT OF FISH AND WILDLIFE

LOST CREEK PRE-TX (1-NC, 346)

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

7/12/2006

REACH 1		T04N-R08W-S30NW					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
CASCADE/BOULDERS	1	23	2.0	0.10	46	0	0	0	40	50	0	10
POOL-BACKWATER	2	16	1.5	0.20	20	0	10	25	55	10	0	0
POOL-ISOLATED	1	3	1.0	0.10	3	0	10	20	40	30	0	0
POOL-LATERAL SCOUR	21	289	5.1	0.64	1,502	0	5	12	55	19	0	11
POOL-PLUNGE	1	7	8.0	0.80	57	0	6	11	56	28	0	0
POOL-TRENCH	2	16	2.1	0.70	33	0	3	10	8	0	0	80
RAPID/BEDROCK	8	233	5.0	0.10	1,180	3	0	1	8	4	1	86
RAPID/BOULDERS	18	623	4.0	0.09	2,652	6	1	2	44	48	1	5
RIFFLE	15	520	5.0	0.11	2,550	0	0	3	67	21	0	10
STEP/BEDROCK	4	24	6.1	0.09	147	0	0	0	3	0	0	98
STEP/COBBLE	5	25	6.1	0.10	203	0	0	3	54	43	0	0
STEP/LOG	3	2	3.8	0.08	10	0	0	7	87	7	0	0
Total:	81	1,781	4.7	0.27	8,401	9	Avg: 2	6	47	24	0	21

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	3	19	1.3	0.17	23	0.27%	0	0.0	
Scour Pools	24	313	5.0	0.65	1,592	18.94%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	15	520	5.0	0.11	2,550	30.36%	0	0.0	
Rapids	26	856	4.3	0.09	3,832	45.61%	9	0.2	
Cascades	1	23	2.0	0.10	46	0.54%	0	0.0	
Step/Falls	12	51	5.5	0.09	360	4.28%	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:	27	15.2	15.7
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	12	6.7	7.0
Pool frequency (channel widths/pool):	7.1		
Residual pool depth (avg):	0.55		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

LOST CREEK PRE-TX
GCG: 1-NC SITE ID: 346

Survey Date 7/12/2006

RIPARIAN ZONE

Report Date: 3/5/2007

VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	467
Total conifers/1000 ft	81
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	0.3	0.0	0.3	0.0	0.3	0.3	1.0	0.3
15-30cm	0.3	3.0	0.0	1.3	0.0	1.3	0.3	5.7
30-50cm	0.0	1.0	0.0	0.3	0.0	0.0	0.0	1.3
50-90cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.7	4.3	0.3	1.7	0.3	1.7	0.4	2.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	68		63		62	
Shrub cover	34		34		38	
Grass/forb cover	66		66		62	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		50		67	
High terrace	50		50		33	
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 (%)	18		20		24	

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	467
Total conifers/1000 ft	81
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	1.0	0.3
15-30cm	0.3	5.7
30-50cm	0.0	1.3
50-90cm	0.0	0.3
>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		
26	LF	3	HS	35	60	30	70	Conifer							
								Hardwood		1					
26	RT	3	HS	40	70	40	60	Conifer							
								Hardwood		2					
26	RT	1	HS	30	70	35	65	Conifer							
								Hardwood			2				
26	LF	1	HT	0	80	30	70	Conifer							UTM 0444430-5071747-2D
								Hardwood		2					
26	RT	2	HS	30	70	35	65	Conifer							
								Hardwood		1					
26	LF	2	HT	0	60	30	70	Conifer	1						
								Hardwood		1					
46	LF	1	HT	0	70	30	70	Conifer							UTM 0444177-5021547-3D
								Hardwood		3					
46	LF	2	HT	0	70	30	70	Conifer							
								Hardwood							
46	LF	3	HT	0	70	30	70	Conifer							
								Hardwood							
46	RT	1	HS	35	60	30	70	Conifer	1	1					
								Hardwood		2	1				
46	RT	2	HS	40	55	30	70	Conifer							
								Hardwood		1					
46	RT	3	HS	30	50	30	70	Conifer							
								Hardwood							
66	LF	1	HT	0	60	20	80	Conifer							UTM 0444275-5071264-2D
								Hardwood		1		1			
66	RT	3	HS	40	60	80	20	Conifer	1						
								Hardwood	1						
66	RT	2	HS	50	60	60	40	Conifer							
								Hardwood							
66	RT	1	HS	40	70	60	40	Conifer							
								Hardwood		1					
66	LF	2	HT	0	60	20	80	Conifer							
								Hardwood		1	1				
66	LF	3	HT	0	60	20	80	Conifer							
								Hardwood		1					

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 1-NC SITE ID: 346 LOST CREEK PRE-TX

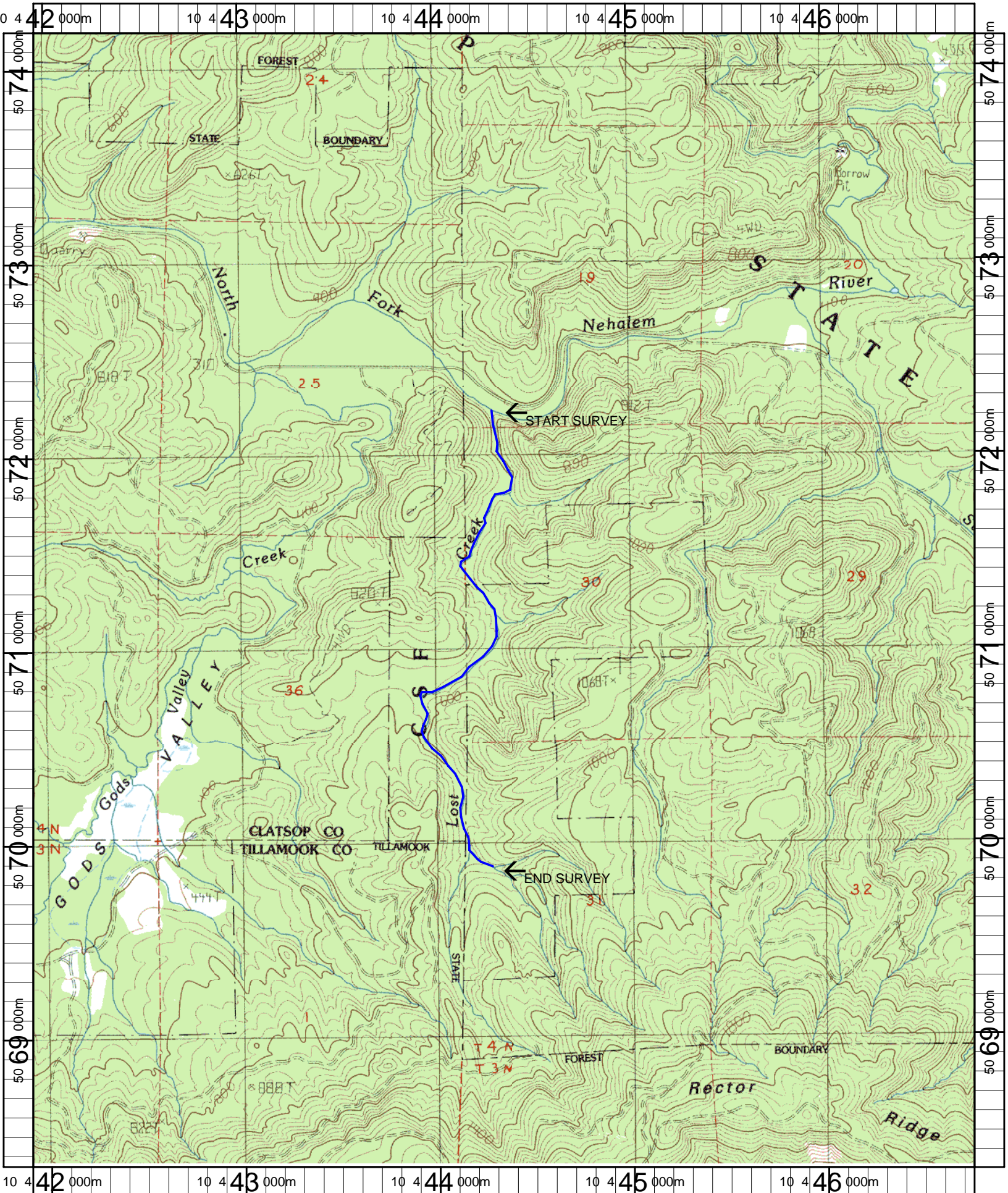
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
6	SR	00	68.6	PN	H=1.5M	LOW FLOW
8	RI	00	141.9	DJ		
9	SL	00	142.4	PN, DJ	H=1.7M	
14	SC	00	224		H=0.4M	
21	SC	00	358.1		H=0.3M	
23	SL	00	366.2		H=0.4M	
26	LP	01	507	TJ/		
27	RB	11	507		UTM 0444350-5071872-2D	
38	SC	00	760.7		H=0.3M	
42	LP	00	835.4	ES/		
43	SC	00	836.4		H=0.15M	
54	RR	00	1123.2	PN		TO COHO
57	SL	00	1160.2		H=0.50M	
59	RR	00	1213.8	PN		
60	SR	00	1221	PN	H=1.35	
61	RR	00	1244.1	PN		SALMON SPAWNING SUR
62	RI	00	1257.3			UTM 0444236-5071306-2D
63	LP	00	1273.3	SS/		
64	SC	00	1276.3		H=1.0M	
68	RB	00	1387.6	/SS		
70	LP	01	1444.7	TJ/		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 1-NC SITE ID: 346 LOST CREEK PRE-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>
73	TP	00	1466.7	SS/		
74	SR	00	1476.7	PN, DJ	H=1.2M	
75	CB	00	1499.5	PN		
78	RI	00	1617.2	/SS		
79	RI	00	1663.4	SS/		



Name: HAMLET
 Date: 5/22/2006
 Scale: 1 inch equals 2000 feet

Location: 10 444351 E 5071251 N
 Caption: LOST CREEK RESTORATION SITE - NEHALEM BASIN