

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

STREAM: Lost Creek (N-346)
BASIN: North Fork Nehalem River
SURVEY TYPE: Pre-Tx
DATE: June 25, 2007
SURVEY CREW: Trevor Diemer, Nathan Wilson
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 2,880 meters. The channel was primarily constrained by alternating hillslopes and terraces in a broad valley floor. The average valley width index was 3.0 (range: 1.5-11.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 3.3 percent. Riffles (42%), rapids (28%) and scour pools (26%) dominated stream habitat. Gravel (41%) and cobble (29%) dominated stream substrate. Wood volume was moderate at 21.5 m³/100m.

COMMENTS:

There were five potential barriers to upstream fish migration in the surveyed length. Three were bedrock steps that may be low flow barriers (units 5, 96 and 116). Another was a 1.1 m high step over log at unit 118. The last was a collapsed log bridge at unit 120.

The crew noted some beaver activity during the survey.

REACH 1

T04N-R08W-S19SW

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	60%
Moderate V-shape	40%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	3.0	VWI Range:	1.5 - 11

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	40%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	Braided Channel	0%
Alt. Terrace/Hill	60%		
Landuse	0%		

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary Channel	2,880	7,249	0
Secondary Channel	83	44	1
Off-Channel Units	47	36	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 15	<u>First Terrace</u> n = 6
Width: 2.6	Width: 6.1	8.5 (4.75 - 19)	11.0 (5.25 - 20)
Depth: 0.26	Height: 0.4	0.8 (0.7 - 1.2)	1.4 (1 - 2.5)

W:D ratio: 15.4

Entrenchment (ACW:FPW ratio): 1.4

Stream Flow Type: LF

Habitat Units/100m (total channel length): 7.4

Average Unit Gradient: 3.3%

Habitat Units/100m (primary channel length): 7.7

Water temperature (°C): 11.0 - 11.0

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	7%	Reach avg: 92%
Undercut Banks:	9%	Range: 50 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	638	22.2
Volume (m ³):	619	21.5
Key pieces (>=12m x 0.60m):	4	0.1

OREGON DEPT OF FISH AND WILDLIFE

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

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

6/27/2007

REACH 1

T04N-R08W-S19SW

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	4	22	0.9	0.05	21	9	1	13	36	26	11	13
CULVERT CROSSING	1	13	3.7	0.05	48	0	0	5	30	45	20	0
POOL-BACKWATER	3	7	1.5	0.27	10	0	50	47	3	0	0	0
POOL-ISOLATED	1	3	1.0	0.30	3	0	50	50	0	0	0	0
POOL-LATERAL SCOUR	73	570	2.6	0.52	1,581	12	4	13	44	25	3	11
POOL-PLUNGE	11	54	5.5	0.64	307	1	4	19	50	24	0	2
POOL-STRAIGHT SCOUR	2	15	1.9	0.33	28	0	3	18	65	15	0	0
POOL-TRENCH	1	5	2.0	0.60	10	0	5	10	10	10	0	65
PUDDLED UNIT	1	78	0.5	0.10	39	0	45	50	5	0	0	0
RAPID/BEDROCK	8	166	2.6	0.11	447	18	1	4	9	7	5	75
RAPID/BOULDERS	41	819	1.8	0.07	1,576	126	1	7	33	43	15	2
RIFFLE	57	1,206	2.7	0.09	3,075	23	1	6	51	33	4	5
RIFFLE W/ POCKETS	1	19	1.5	0.10	29	0	0	10	30	50	10	0
STEP/BEDROCK	4	11	3.6	0.06	45	0	0	0	0	0	0	100
STEP/COBBLE	5	14	4.4	0.07	79	4	0	4	45	48	3	0
STEP/LOG	8	6	3.5	0.06	21	0	1	10	58	32	0	0
STEP/STRUCTURE	1	3	4.0	0.02	12	0	0	20	80	0	0	0
Total:	222	3,010	2.6	0.26	7,329	193	Avg: 3	11	41	29	5	10

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	4	10	1.4	0.28	13	0.17%	0	0.0
Scour Pools	87	644	3.0	0.53	1,926	26.28%	13	0.7
Glides	0	0			0	0.00%	0	0.0
Riffles	58	1,225	2.6	0.09	3,104	42.35%	23	0.7
Rapids	49	985	1.9	0.07	2,023	27.60%	144	7.1
Cascades	4	22	0.9	0.05	21	0.28%	9	43.9
Step/Falls	18	34	3.8	0.06	156	2.13%	4	2.6
Dry	1	78	0.5	0.10	39	0.53%	0	0.0
Culverts	1	13	3.7	0.05	48	0.66%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

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

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

6/27/2007

REACH 1

T04N-R08W-S19SW

REACH 1

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	91	30.2	31.6
Pools >=1m deep:	1	0.3	0.3
Complex pools (LWD pieces>=3):	40	13.3	13.9
Pool frequency (channel widths/pool):	5.4		
Residual pool depth (avg):	0.46		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

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

Survey Date 6/25/2007
Report Date: 11/7/2007

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 12 transects

Total hardwoods/1000	569
Total conifers/1000 ft	244
Total conifers >20" dbh/1000 ft	25
Total conifers >35" dbh/1000 ft	5

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	1.1	0.7	0.8	0.5	1.0	1.5	2.9
15-30cm	0.4	1.8	0.6	1.1	0.4	1.8	1.4	4.7
30-50cm	0.0	0.8	0.2	0.7	0.5	0.3	0.7	1.8
50-90cm	0.1	0.0	0.1	0.0	0.2	0.0	0.3	0.0
>90cm	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total/100m2	0.9	3.7	1.5	2.6	1.6	3.1	1.3	3.1

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	73		73		74	
Shrub cover	63		63		64	
Grass/forb cover	37		37		36	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	79		79		92	
High terrace	25		17		8	
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 (%)	23		32		40	

Summary of Riparian Zone (0-30m) for all reaches**12 transects****Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream**

Total hardwoods/1000	569
Total conifers/1000 ft	244
Total conifers >20" dbh/1000 ft	25
Total conifers >35" dbh/1000 ft	5

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	1.5	2.9
15-30cm	1.4	4.7
30-50cm	0.7	1.8
50-90cm	0.3	0.0
>90cm	0.1	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			
1	LT	1	HS	30	20	95	5									
1	LT	2	HS	30	85	40	60				1	1				
1	LT	3	HS	30	100	15	85			1	1	1				
1	RT	1	HS	50	70	80	20									
1	RT	2	HS	40	80	60	40									
1	RT	3	HS	60	90	90	10						1			
24	LT	1	HT	0	75	10	90									
24	LT	2	HT	0	80	20	80				1					
24	LT	3	HS	35	85	40	60									
24	RT	1	HS	35	10	100	0									
24	RT	2	HS	35	10	100	0									
24	RT	3	HS	45	35	95	5									
47	LT	1	HS	15	90	65	35			1	1					
47	LT	2	HS	25	90	50	50			1	1					
47	LT	3	HS	45	95	45	55									
47	RT	1	HS	25	95	80	20									
47	RT	1	HT	0	90	50	50			1						
47	RT	3	HS	55	95	95	5									

GPS
10T 0444346
UTM 5071982
0444339
5071801

70	LT	1	HT	0	90	25	75	Conifer						0444219
								Hardwood		3				5071666
70	LT	2	HT	0	95	60	40	Conifer	3					
								Hardwood			1			
70	LT	3	HT	0	90	70	30	Conifer						
								Hardwood			2			
70	RT	1	HS	50	90	60	40	Conifer						
								Hardwood		1		1		
70	RT	2	HS	55	95	75	25	Conifer	4					
								Hardwood						
70	RT	3	HS	15	75	45	55	Conifer	2					SKIDDER ROAD
								Hardwood			1			
92	LT	1	HT	0	80	85	15	Conifer						0444153
								Hardwood			3			5071473
92	LT	2	HT	0	85	90	10	Conifer						
								Hardwood			1			
92	LT	3	HT	0	70	65	35	Conifer					1	
								Hardwood					1	
92	RT	1	HT	0	50	55	45	Conifer						
								Hardwood	1					
92	RT	2	HS	45	55	65	35	Conifer						
								Hardwood					2	
92	RT	3	HS	40	70	70	30	Conifer					1	
								Hardwood	1					
128	LT	1	HS	45	95	75	25	Conifer						0444311
								Hardwood	2		2			5071072
128	LT	2	HS	45	95	85	15	Conifer						OLD ROAD BED THAT IS OVER GROW
								Hardwood					1	
128	LT	3	HS	55	95	80	20	Conifer						
								Hardwood			1			
128	RT	1	HS	25	80	20	80	Conifer			1			
								Hardwood			1			
128	RT	2	HS	40	70	35	65	Conifer			1			
								Hardwood			1		1	
128	RT	3	HS	50	90	40	60	Conifer						
								Hardwood			2			
149	LT	1	HS	0	90	40	60	Conifer					1	0444149
								Hardwood						5070921
149	LT	2	HS	30	90	10	90	Conifer			1		1	
								Hardwood						
149	LT	3	HS	20	95	10	90	Conifer	2		1			
								Hardwood						
149	RT	1	HS	45	85	70	30	Conifer	1					
								Hardwood	2		1			
149	RT	2	HS	45	85	65	35	Conifer						
								Hardwood	1		2			

149	RT	3	HS	35	85	85	15	Conifer					
								Hardwood	1	2			
166	LT	1	HS	80	90	50	50	Conifer					NO GPS
								Hardwood	1				POOR
166	LT	2	HS	85	70	55	45	Conifer					COVERAGE
								Hardwood	3				VINE MAPLE
166	LT	3	HS	80	60	70	30	Conifer					
								Hardwood	2	2			
166	RT	1	HS	10	50	90	10	Conifer					SALMONBERR
								Hardwood			1		Y
166	RT	2	HS	15	45	95	5	Conifer					LOTS AND
								Hardwood					LOTS OF
166	RT	3	HS	20	50	90	10	Conifer			2		SALMONBERR
								Hardwood					AGAIN MORE
184	LT	1	HS	25	45	90	10	Conifer					SALMONBERR
								Hardwood	3				Y
184	LT	2	HS	45	55	85	15	Conifer					0444040
								Hardwood	2				5070444
184	LT	3	HS	80	65	80	20	Conifer					
								Hardwood		2			
184	RT	1	HS	35	5	85	15	Conifer					
								Hardwood					
184	RT	2	HS	65	5	80	20	Conifer					
								Hardwood					
184	RT	3	HS	75	0	60	40	Conifer					
								Hardwood	1				
199	LT	1	HS	25	85	90	10	Conifer					0444132
								Hardwood	1				5070270
199	LT	2	HS	35	85	90	10	Conifer					
								Hardwood	2	2			
199	LT	3	HS	30	90	95	5	Conifer					
								Hardwood	2	1	1		
199	RT	1	HT	0	80	60	40	Conifer					
								Hardwood		3	1		
199	RT	2	HT	0	75	55	45	Conifer			2	0	
								Hardwood	1				
199	RT	3	HS	45	10	40	60	Conifer					ROAD BED
								Hardwood	1				AND CLEAR
216	LT	1	HS	25	80	45	55	Conifer					CUT
								Hardwood		1	2		NO GPS
216	LT	2	HS	45	80	40	60	Conifer					
								Hardwood		2			
216	LT	3	HS	65	85	60	40	Conifer					
								Hardwood	2	1	1		
216	RT	1	HS	45	90	40	60	Conifer	1	2			
								Hardwood					

216	RT	2	HS	35	75	50	50	Conifer		2		
								Hardwood		1		
216	RT	3	HS	45	90	45	55	Conifer	1	2		
								Hardwood				
222	LT	1	HS	5	95	95	5	Conifer				
								Hardwood	1	2	1	
222	LT	2	HS	10	95	95	5	Conifer				
								Hardwood	1	1	2	
222	LT	3	HS	15	95	95	5	Conifer				
								Hardwood	1	2		
222	RT	1	HS	15	90	25	75	Conifer		1		1
								Hardwood	2			
222	RT	2	HS	10	70	45	55	Conifer				
								Hardwood		1	1	
222	RT	3	HS	15	60	50	50	Conifer	1	1		
								Hardwood	1	1		

END OF
SURVEY
LEFT BANK

COMMENT SUMMARY

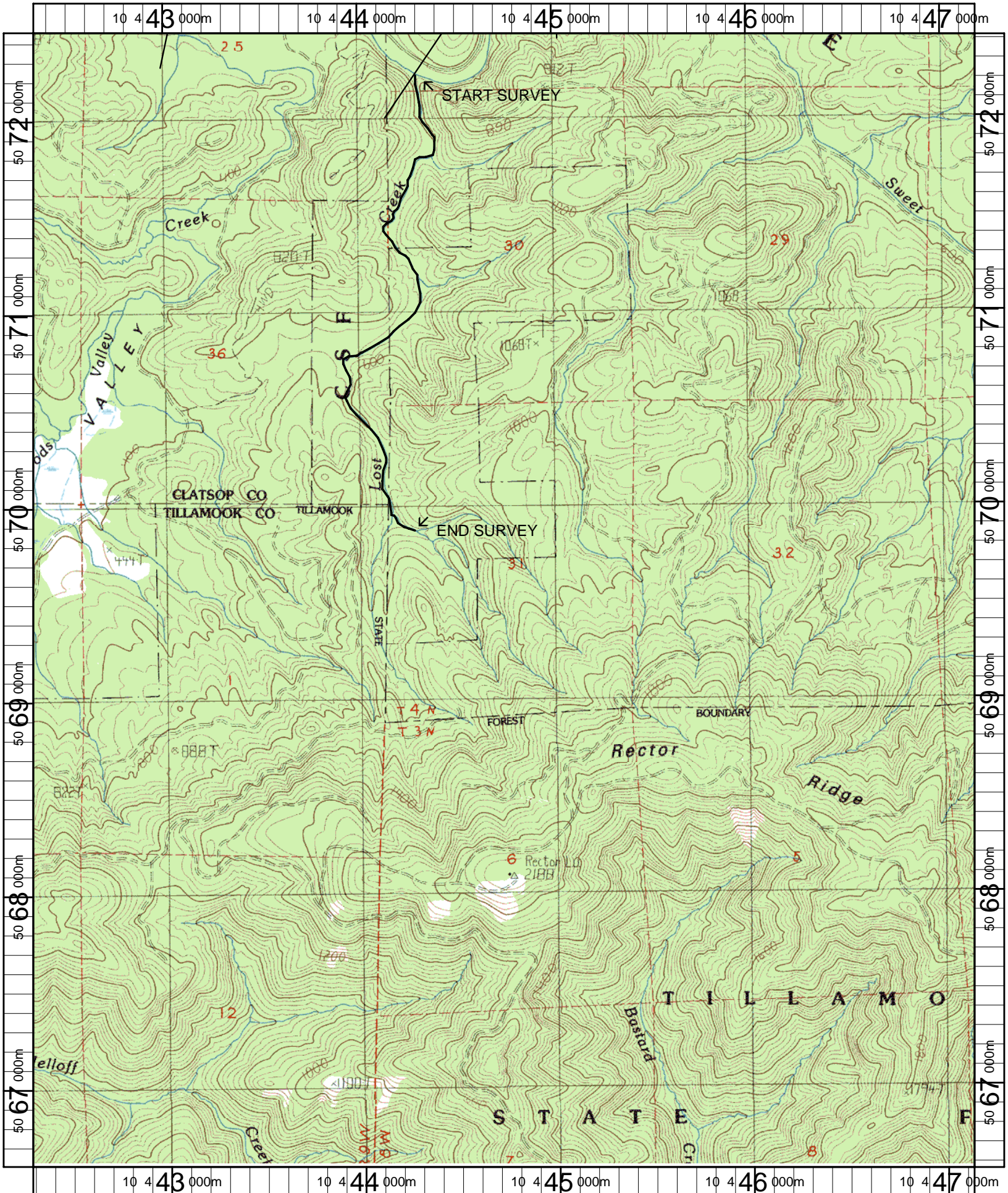
MONITORING AREA: 1-NC SITE ID: 346 STREAM: LOST CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	LP	00	42		FISH
5	SR	00	66	PN	
11	RR	00	139.4	DJ	
19	LP	00	221	BV, /SS	STICKS
21	LP	00	250	BV	STICK
35	RI	00	347	DJ	
40	LP	00	411		STARTED 6/26
45	RI	01	467.5	TJ/	TJ AT 10T0444330,5071873,3D
48	LP	00	527.5		RIP @ TOP
56	LP	00	596.5	BV	STICK
67	RI	00	731	BV	STICK
77	LP	00	818.5	AE/	
81	RI	00	859.5	SS/	
88	RB	01	948.5	/TJ	
92	LP	00	987.5		METRICS @TOP
96	RR	00	1065.5	PN	POSS. LOW FLOW BARRIER
102	RR	00	1168.5		SPAWNING SURVEY SIGN
104	SC	00	1176.3		START REACH 3
109	LP	00	1250.3		HARDPAN W/ GRAVEL, MET @ TOP
112	PP	01	1358.8	TJ/	
116	SR	00	1379.8	PN	START OF DJ
117	LP	00	1387.8	SS/, DJ	

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
118	SL	00	1388.8	PN, DJ	
119	PP	00	1393.8	DJ	
120	SS	00	1396.8	PN, DJ	OLD COLLAPSED LOG BRIDGE, POT. BARRIER TO COHO, POSS. REACH CHANG
121	RI	00	1412.8	DJ	END OF DJ
131	RI	01	1569.8	SS/	
137	LP	01	1655.8	TJ/	
146	RI	00	1722.3		HARDPAN CLAY
166	RB	01	2058.05	/TJ	
174	LP	00	2156.05		LAND USE CHANGE, POSSIBLE REACH CHANGE
199	LP	00	2488.5		RIP & METRICS @ TOP OF POOL
203	RB	01	2564.5	TJ/	
206	CC	00	2604.5	CC	1.7M X 3.7M, CORREGATED GALV. METAL
222	RB	01	2879.5	TJ X 2 /	TWO.SEPARATE.TRIB.JUNCTIONS, UPSTREAM.30M.FROM.HAB.SURVEY SIGN,M



Name: HAMLET
 Date: 4/26/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0444733 E 5069512 N
 Caption: LOST CREEK RESTORATION SITE - NEHALEM BASIN