

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

STREAM: Lost Creek (N-372)  
BASIN: Nehalem River  
SURVEY TYPE: Pre-Tx  
DATE: July 16, 2007  
SURVEY CREW: Trevor Diemer, Nathan Wilson  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 20.4 km<sup>2</sup>  
USGS MAPS: Foley Peak  
ECOREGION: Coast Range Volcanics

**GENERAL DESCRIPTION:**

The Lost Creek habitat survey extended 2,114 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.1 (range: 2.5-15.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 2.4 percent. Riffles (32%), scour pools (29%) and rapids (21%) dominated stream habitat. Gravel (30%), cobble (23%) and bedrock (21%) dominated stream substrate. Wood volume was moderate at 25.0 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T03N-R09W-S27SE

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	5.1	VWI Range:	2.5 - 15

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	2,114	10,182	0
Secondary Channel	617	1,015	8
Off-Channel Units	31	79	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 9	<u>First Terrace</u> n = 9
Width: 4.3	Width: 9.6	11.2 ( 7.5 - 17.5 )	14.7 ( 9 - 21 )
Depth: 0.39	Height: 0.2	0.4 ( 0.3 - 0.6 )	4.5 ( 1.1 - 11 )

W:D ratio: 45.1  
 Stream Flow Type: LF  
 Average Unit Gradient: 2.4%  
 Water temperature (°C): 14.0 - 14.0

Entrenchment (ACW:FPW ratio): 1.2  
 Habitat Units/100m (total channel length): 3.5  
 Habitat Units/100m (primary channel length): 4.5

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	YT
Riparian Vegetation:	C30	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	1%	Reach avg: 71%
Undercut Banks:	0%	Range: 22 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	471	22.3
Volume (m <sup>3</sup> ):	529	25.0
Key pieces (>=12m x 0.60m):	9	0.4

OREGON DEPT OF FISH AND WILDLIFE

LOST CREEK PRE-TX (1-NC, 372)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/16/2007

REACH 1

T03N-R09W-S27SE

REACH 1

HABITAT DETAIL

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
							CASCADE/BEDROCK	2	99	4.3	0.25	407
CASCADE/BOULDERS	6	126	4.1	0.18	558	83	0	2	10	28	25	36
DRY UNIT	8	358	1.5	0.02	567	0	3	30	45	23	0	0
GLIDE	1	25	6.0	0.25	150	0	0	29	43	19	0	10
POOL-BACKWATER	1	5	5.0	0.40	25	0	11	39	17	22	0	11
POOL-DAMMED	1	6	8.0	0.45	48	0	0	50	20	30	0	0
POOL-ISOLATED	1	6	4.0	0.40	24	0	0	19	24	29	0	29
POOL-LATERAL SCOUR	32	597	5.0	0.83	3,181	27	3	24	33	15	2	23
POOL-PLUNGE	1	6	11.0	0.40	66	0	0	38	57	5	0	0
POOL-TRENCH	1	13	2.0	0.70	26	0	0	5	19	0	0	76
PUDDLED UNIT	1	10	0.5	0.05	5	0	0	50	50	0	0	0
RAPID/BEDROCK	1	20	5.0	0.25	100	3	0	0	10	10	5	76
RAPID/BOULDERS	13	482	4.6	0.18	2,298	125	0	8	21	32	15	23
RIFFLE	19	878	3.8	0.16	3,244	102	2	16	37	30	7	8
RIFFLE W/ POCKETS	2	89	4.8	0.25	415	21	0	11	18	30	8	33
STEP/BEDROCK	2	14	2.5	0.23	38	3	0	2	10	5	5	78
STEP/BOULDERS	1	9	8.0	0.00	72	24	0	5	24	24	48	0
STEP/COBBLE	3	19	2.7	0.10	54	0	0	12	41	47	0	0
<b>Total:</b>	<b>96</b>	<b>2,762</b>	<b>4.3</b>	<b>0.39</b>	<b>11,276</b>	<b>406</b>	<b>Avg: 2</b>	<b>18</b>	<b>30</b>	<b>23</b>	<b>7</b>	<b>21</b>

HABITAT SUMMARY

Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders	
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )
Dammed & BW Pools	3	17	5.7	0.42	97	0.86%	0	0.0
Scour Pools	34	616	5.1	0.82	3,273	29.02%	27	0.8
Glides	1	25	6.0	0.25	150	1.33%	0	0.0
Riffles	21	967	3.9	0.17	3,659	32.45%	123	3.4
Rapids	14	502	4.6	0.19	2,398	21.26%	128	5.3
Cascades	8	225	4.1	0.20	964	8.55%	101	10.5
Step/Falls	6	42	3.5	0.13	164	1.45%	27	16.5
Dry	9	368	1.4	0.02	572	5.07%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

REACH 1

T03N-R09W-S27SE

REACH 1

**POOL SUMMARY**

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	37	13.4	17.5
Pools >=1m deep:	9	3.3	4.3
Complex pools (LWD pieces>=3):	16	5.8	7.6
Pool frequency (channel widths/pool):	7.8		
Residual pool depth (avg):	0.66		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

LOST CREEK PRE-TX  
GCG: 1-NC SITE ID: 372

Survey Date 7/16/2007  
Report Date: 11/7/2007

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 9 transects

Total hardwoods/1000	1192
Total conifers/1000 ft	393
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	0.7	3.0	2.0	1.0	2.2	2.7	4.9	6.7
15-30cm	0.0	3.6	0.2	1.8	0.6	1.4	0.8	6.8
30-50cm	0.1	2.2	0.2	1.8	0.4	2.0	0.8	6.0
50-90cm	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.8	8.9	2.4	4.6	3.2	6.1	2.1	6.5

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	76		66		60	
Shrub cover	34		37		40	
Grass/forb cover	64		57		57	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		39		44	
High terrace	50		56		56	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		6		0	
Riprap	0		0		0	
Surface slope (%)	33		21		22	

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

**9 transects**

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

Total hardwoods/1000	1192
Total conifers/1000 ft	393
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	4.9	6.7
15-30cm	0.8	6.8
30-50cm	0.8	6.0
50-90cm	0.0	0.1
>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	
3	LT	1	HS	80	85	40	50	Conifer				1		
								Hardwood	7					
3	LT	2	HT	0	90	50	35	Conifer	3			2		
								Hardwood						
3	LT	3	HT	0	90	50	40	Conifer						
								Hardwood			3			
3	RT	1	HS	80	60	55	40	Conifer						
								Hardwood	3					
3	RT	2	HT	0	70	65	30	Conifer						
								Hardwood			1	1		
3	RT	3	HT	0	30	70	30	Conifer	5					
								Hardwood						
12	LT	1	HS	80	80	40	50	Conifer						
								Hardwood				2		
12	LT	2	HT	0	40	45	45	Conifer	6					
								Hardwood						
12	LT	3	HT	0	20	40	50	Conifer	5					
								Hardwood				1		
12	RT	1	HS	60	95	35	60	Conifer						
								Hardwood	3	1				
12	RT	2	HS	60	95	50	45	Conifer						
								Hardwood				2		
12	RT	3	HS	60	90	50	40	Conifer						
								Hardwood			1	2		
21	LT	1	HT	0	75	30	70	Conifer						
								Hardwood			4			
21	LT	2	HT	0	40	30	70	Conifer						
								Hardwood			3			
21	LT	3	HT	0	35	35	65	Conifer	6					
								Hardwood						
21	RT	1	HS	70	95	80	20	Conifer						
								Hardwood	6			5		
21	RT	2	HS	65	100	70	25	Conifer						
								Hardwood	5			3		
21	RT	3	HS	55	100	65	30	Conifer				1		
								Hardwood	3			2		

27	LT	1	HT	0	40	20	80	Conifer				
								Hardwood	3	3		
27	LT	2	HT	0	25	20	80	Conifer				
								Hardwood				
27	LT	3	HT	0	20	15	85	Conifer				UTM'S AT
								Hardwood				0441385
27	RT	1	HS	80	90	45	55	Conifer				5062618
								Hardwood	2			
27	RT	2	HS	80	95	65	35	Conifer				
								Hardwood		3		
27	RT	3	HS	75	65	60	40	Conifer				
								Hardwood	4	2		
35	LT	1	HS	40	90	50	50	Conifer				
								Hardwood		8		
35	LT	2	RB	0	70	25	25	Conifer				
								Hardwood	2			
35	LT	3	HS	30	90	40	45	Conifer				2
								Hardwood	1	2		
35	RT	1	HS	50	85	40	50	Conifer				
								Hardwood	4	3		
35	RT	2	HS	40	75	35	50	Conifer				
								Hardwood	1	2		
35	RT	3	HS	30	45	35	65	Conifer				UTM'S
								Hardwood	2	3		0441378
48	LT	1	HT	0	95	5	95	Conifer				5062768 2D.
								Hardwood	4	5		
48	LT	2	HT	0	95	15	85	Conifer				
								Hardwood	1	2		
48	LT	3	HT	0	85	35	65	Conifer				
								Hardwood		2		
48	RT	1	HS	60	95	15	85	Conifer				
								Hardwood	3			
48	RT	2	HS	65	95	35	65	Conifer				
								Hardwood	4			
48	RT	3	HS	65	95	70	30	Conifer				2
								Hardwood				ROUGH
												SKINNED
												NEWTS
81	LT	1	HT	0	50	25	75	Conifer	2			
								Hardwood				
81	LT	2	HT	0	65	25	75	Conifer				
								Hardwood				
81	LT	3	HT	0	70	15	85	Conifer				1
								Hardwood				
81	RT	1	HT	0	90	5	90	Conifer				
								Hardwood		4		
81	RT	2	HS	30	95	15	80	Conifer				
								Hardwood	2	3		



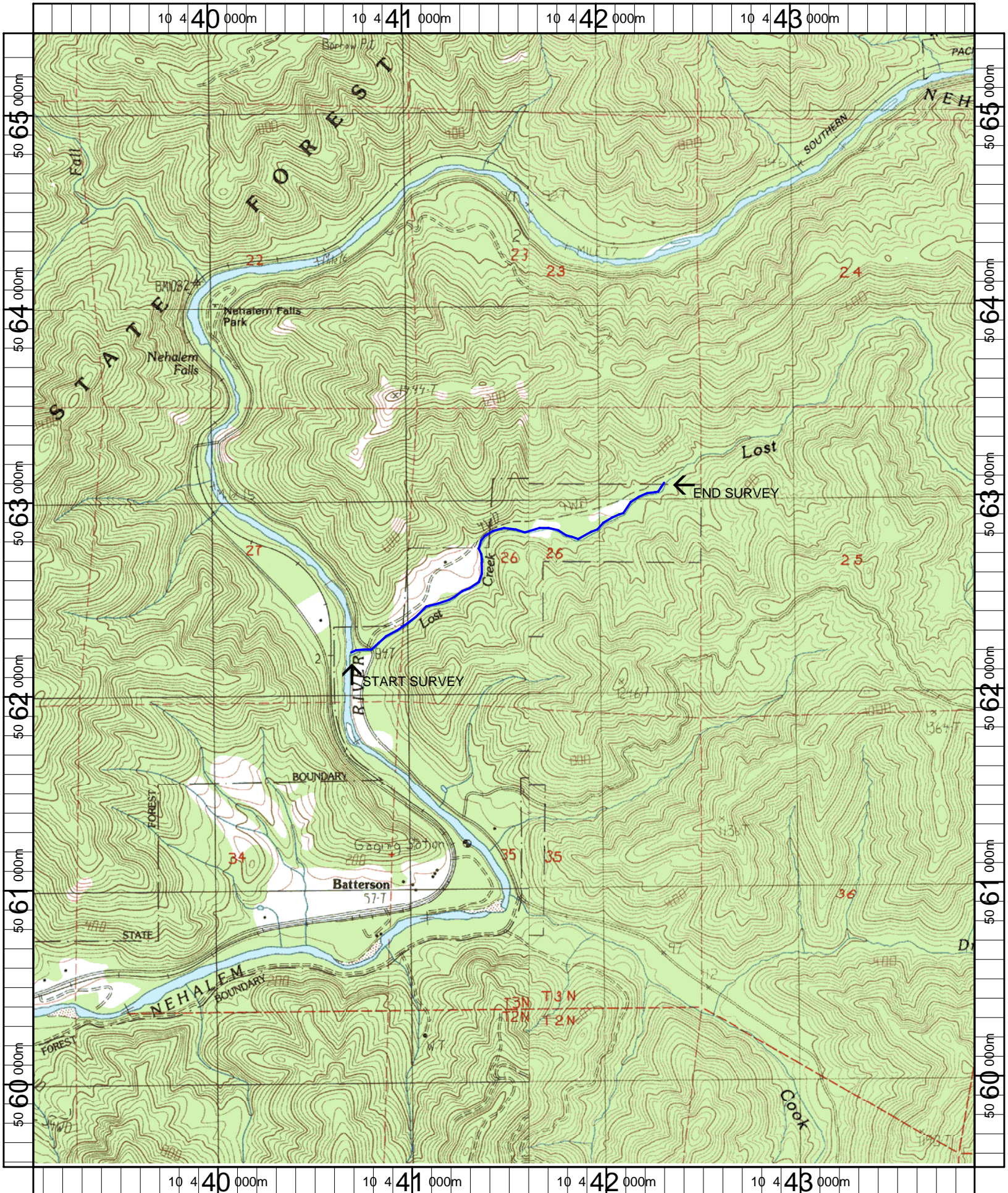
81	RT	3	HS	30	95	25	75	Conifer				
								Hardwood	2	4		
84	LT	1	HT	0	70	35	65	Conifer				
								Hardwood	2	1		
84	LT	2	HT	0	20	20	80	Conifer				
								Hardwood				
84	LT	3	HT	0	10	20	80	Conifer				
								Hardwood				
84	RT	1	HT	0	70	5	95	Conifer				
								Hardwood	1	2		
84	RT	2	HT	0	10	10	90	Conifer	3			
								Hardwood				
84	RT	3	HT	0	10	15	85	Conifer	1			
								Hardwood	7			
96	LT	1	HT	0	20	40	60	Conifer	4			
								Hardwood				
96	LT	2	HS	40	45	45	55	Conifer	4	2		
								Hardwood				
96	LT	3	HS	50	80	40	60	Conifer	1	4		
								Hardwood	5			
96	RT	1	HT	0	85	40	60	Conifer				
								Hardwood		3	1	
96	RT	2	HT	0	70	40	60	Conifer	2			
								Hardwood	4	2		
96	RT	3	HT	0	50	40	60	Conifer	2			
								Hardwood	4	1		

UTM'S  
0442147  
5062946

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 372 STREAM: LOST CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	CB	00	9		START SIGN RIGHT BANK ALDER ACROSS THE MOUTH FROM SPAWN SIGN
7	LP	00	122	BC	
8	RP	00	151		NEWT
10	LP	00	177		ROUGH SKINNED NEWT
22	RP	00	560		NEWT
23	RI	00	627		NEWT
25	RB	00	710		NEWT
26	LP	00	728	/SS	
34	LP	00	921	BC	
35	RB	01	966	SS/	
36	CB	10	966		TRIB=13.5 C
44	LP	01	1183	TJ	
54	RI	02	1351		CRAWDAD
70	LP	01	1525	DJ	
82	RI	00	1733	/SS	
84	RB	00	1818		NEWT
85	RB	00	1851		SPAWNING SURVEY SIGN RIGHT BANK ALDER
87	RI	00	1933		NEWT
96	LP	00	2114		END LEFT BANK ALDER



Name: COOK CREEK  
 Date: 1/3/2007  
 Scale: 1 inch equals 2000 feet

Location: 10 441499 E 5062478 N  
 Caption: LOST CREEK RESTORATION SITE #372 - NEHALEM BASIN