

**ODFW AQUATIC INVENTORY PROJECT  
RESTORATION MONITORING  
STREAM HABITAT REPORT**

STREAM: LOST CREEK  
 GCG: 1-NC  
 SITE ID: 346  
 BASIN: NF NEHALEM  
 TREATMENT DATE: 2007  
 SURVEY DATE: 7/1/2008  
 SURVEY CREW: Jitesh Pattni / Aaron Paloni  
 USGS MAPS: HAMLET  
 ECOREGION: Volcanics  
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

**SURVEY DESCRIPTION:**

Channel morphology: Constrained by hillslopes  
 Dominant landuse(s): Second growth timber (15-30 cm dbh)  
 Dominant riparian vegetation: Deciduous trees: size class 30-50cm dbh  
 Primary channel length (meters) and area (m<sup>2</sup>): 3,053 : 9,773  
 Secondary channel length (meters) and area (m<sup>2</sup>) 139 : 161  
 VWI average: 2.3 VWI Range: 1 - 8 Average Gradient: 2.4%  
 Pieces LWD per 100m: 18.2 Wood Volume (m<sup>3</sup>) per 100m: 16.7  
 Percent pools: 20% Complex pools (LWD pieces>=3): 23 Pools >=1m deep: 3  
 Percent substrate (avg):

	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	9	17	34	24	3	13
Pool units	18	26	30	11	1	13
Fast water units	4	12	37	30	4	12

**COMMENTS:**

This is a pre-treatment, restoration survey. The crew noted several tributaries and steps consisting of steps over logs near the end of the survey.

**OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY**

**LOST CREEK  
GCG: 1-NC SITE ID: 346**

**Survey Date: 7/1/2008**

**Report Date: 12/29/2008**

**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	0%
Moderate V-shape	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	2.3	VWI Range:	1 - 8

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	100%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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	3,053	9,773	0
Secondary	139	161	2

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 13	<u>First Terrace</u> n = 3
Width: 3.2	Width: 5.3	6.9 ( 4.1 - 11.8 )	7.3 ( 6.4 - 8.4 )
Depth: 0.28	Height: 0.3	0.7 ( 0.4 - 0.9 )	1.1 ( 0.9 - 1.3 )

W:D ratio: 16.6

Stream Flow Type: LF

Average Unit Gradient: 2.4%

Water temperature (°C): 12.0 - 12.0

Entrenchment (ACW:FPW ratio): 1.4

Habitat Units/100m (total channel length): 4.7

Habitat Units/100m (primary channel length): 4.9

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	TH
Riparian Vegetation:	D30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	10%	Reach avg: 86%
Undercut Banks:	2%	Range: 53 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	557	18.2
Volume (m <sup>3</sup> ):	509	16.7
Key pieces (>=12m x 0.60m):	4	0.1

OREGON DEPT OF FISH AND WILDLIFE

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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	8	132	2.2	0.15	354	22	0	6	15	13	4	63
CASCADE/BOULDERS	7	71	1.8	0.09	142	0	12	20	36	32	0	0
CULVERT CROSSING	1	14	2.0	0.10	28	0	0	10	50	40	0	0
DRY CHANNEL	2	27	2.5	0.00	72	4	3	8	39	41	10	0
POOL-LATERAL SCOUR	39	436	4.4	0.59	1,882	2	19	26	30	12	1	12
POOL-PLUNGE	4	23	4.3	0.68	93	0	15	29	32	5	0	19
RAPID/BEDROCK	9	279	2.7	0.18	829	49	1	7	20	12	3	58
RAPID/BOULDERS	25	890	2.8	0.17	2,645	196	3	11	35	41	7	2
RIFFLE	39	1,262	2.8	0.16	3,628	110	4	14	48	30	3	1
RIFFLE W/ POCKETS	1	44	5.0	0.20	220	0	21	16	42	21	0	0
STEP/BEDROCK	2	2	3.0	0.15	6	0	0	0	0	0	0	100
STEP/COBBLE	1	4	2.0	0.15	8	2	0	0	20	60	20	0
STEP/LOG	10	7	3.1	0.20	21	0	15	22	29	30	2	3
STEP/STRUCTURE	2	3	2.3	0.23	7	0	33	40	23	5	0	0
<b>Total:</b>	150	3,192	3.2	0.28	9,934	385	<b>Avg:</b> 9	17	34	24	3	13

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	0	0			0	0.00%	0	0.0
Scour Pools	43	458	4.3	0.60	1,975	19.88%	2	0.1
Glides	0	0			0	0.00%	0	0.0
Riffles	40	1,306	2.8	0.16	3,848	38.73%	110	2.9
Rapids	34	1,169	2.8	0.17	3,474	34.97%	245	7.1
Cascades	15	203	2.0	0.12	495	4.98%	22	4.4
Step/Falls	15	16	2.9	0.19	42	0.42%	2	4.8
Dry	2	27	2.5	0.00	72	0.72%	4	5.6
Culverts	1	14	2.0	0.10	28	0.28%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE  
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REACH 1

POOL SUMMARY

	<u>Total</u>	<u>Total of all Channel Lengths # / Km</u>	<u>Primary Channel Length # / Km</u>
All Pools:	43	13.5	14.1
Pools >=1m deep:	3	0.9	1.0
Complex pools (LWD pieces>=3):	23	7.2	7.5
Pool frequency (channel widths/pool):	13.9		
Residual pool depth (avg):	0.45		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
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RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 11 transects

Total hardwoods/1000	482
Total conifers/1000 ft	133
Total conifers >20" dbh/1000 ft	17
Total conifers >35" dbh/1000 ft	6

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	0.1	0.4	0.3	0.6	0.2	0.5	0.5	1.5
15-30cm	0.5	1.7	0.5	1.5	0.2	1.7	1.1	4.9
30-50cm	0.0	0.6	0.2	0.6	0.1	0.2	0.3	1.5
50-90cm	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0
>90cm	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Total/100m2	0.5	2.7	1.2	2.7	0.5	2.5	0.7	2.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	70		67		67	
Shrub cover	79		83		82	
Grass/forb cover	15		8		8	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	64		77		73	
High terrace	36		23		23	
Low terrace	5		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 (%)	20		30		31	

**Summary of Riparian Zone (0-30m) for all reaches****11 transects****Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream**

Total hardwoods/1000	482
Total conifers/1000 ft	133
Total conifers >20" dbh/1000 ft	17
Total conifers >35" dbh/1000 ft	6

**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	0.5	1.5
15-30cm	1.1	4.9
30-50cm	0.3	1.5
50-90cm	0.2	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		
20	LT	1	HT	0	50	80	10	Conifer							
								Hardwood		2					
20	LT	2	HS	60	65	90	5	Conifer							
								Hardwood							
20	LT	3	HS	60	90	90	5	Conifer							
								Hardwood							
20	RT	1	HT	0	50	80	15	Conifer							
								Hardwood		2					
20	RT	2	HS	55	50	90	0	Conifer							
								Hardwood		1					
20	RT	3	HS	55	50	90	5	Conifer							
								Hardwood							
31	LT	1	HT	0	85	75	25	Conifer							
								Hardwood		1	2				
31	LT	2	HT	0	80	80	10	Conifer	1						
								Hardwood							
31	LT	3	HT	0	90	75	10	Conifer							
								Hardwood		1					
31	RT	1	HS	25	80	85	10	Conifer							
								Hardwood		2					
31	RT	2	HS	28	70	90	5	Conifer							
								Hardwood			1				
31	RT	3	HS	28	60	90	5	Conifer							
								Hardwood			1				
40	LT	1	HT	0	85	45	40	Conifer							
								Hardwood		1					
40	LT	2	HT	0	80	65	10	Conifer	2						
								Hardwood		1	1				
40	LT	3	HT	0	85	70	10	Conifer							
								Hardwood		2					
40	RT	1	HS	60	75	70	25	Conifer							
								Hardwood		2					
40	RT	2	HS	65	65	70	20	Conifer			1				
								Hardwood	1						
40	RT	3	HS	65	70	70	10	Conifer			2				
								Hardwood							

48	LT	1	LT	0	60	70	25	Conifer					
								Hardwood					
48	LT	2	HT	0	75	80	10	Conifer					
								Hardwood	1	3			
48	LT	3	HT	0	75	80	10	Conifer					
								Hardwood	1	3			
48	RT	1	HT	0	80	75	20	Conifer					
								Hardwood		2	1		
48	RT	2	HT	0	80	80	5	Conifer		1	1		
								Hardwood		1			
48	RT	3	HT	0	70	70	10	Conifer					
								Hardwood	1	1			
61	LT	1	HT	0	65	90	10	Conifer					
								Hardwood					
61	LT	2	HT	0	70	85	10	Conifer					1
								Hardwood					
61	LT	3	HT	0	80	75	15	Conifer					
								Hardwood		3			
61	RT	1	HS	46	70	90	0	Conifer					
								Hardwood					
61	RT	2	HS	50	90	90	10	Conifer					
								Hardwood		1			
61	RT	3	HS	54	90	90	5	Conifer					
								Hardwood		1			
74	LT	1	HS	45	80	75	20	Conifer					
								Hardwood			3		
74	LT	2	HS	60	80	80	10	Conifer					
								Hardwood					
74	LT	3	HS	60	80	65	15	Conifer					
								Hardwood	2				
74	RT	1	HS	25	85	85	5	Conifer			1		
								Hardwood					
74	RT	2	HS	28	80	80	10	Conifer			2		
								Hardwood	1	2			
74	RT	3	HS	30	80	80	5	Conifer					
								Hardwood		2	1		
84	LT	1	HS	20	90	80	10	Conifer					
								Hardwood	1				
84	LT	1	HS	25	80	75	10	Conifer	1	3			
								Hardwood					
84	LT	2	HS	25	90	75	15	Conifer		1	1	1	
								Hardwood	2	2			
84	RT	1	HS	35	90	85	5	Conifer					
								Hardwood					
84	RT	2	HS	35	80	80	5	Conifer					
								Hardwood		1			



84	RT	3	HS	37	75	85	5	Conifer	1		
								Hardwood		1	
97	LT	1	HT	0	90	80	20	Conifer		1	
								Hardwood			
97	LT	2	HS	25	90	90	5	Conifer			
								Hardwood			
97	LT	3	HS	29	90	90	5	Conifer			
								Hardwood			
97	RT	1	HS	25	80	85	5	Conifer			
								Hardwood		3	1
97	RT	2	HS	25	80	80	10	Conifer			
								Hardwood	1	2	
97	RT	3	HS	25	85	80	10	Conifer	1		
								Hardwood	1	2	
105	LT	1	HS	35	75	90	5	Conifer			
								Hardwood			
105	LT	2	HS	40	75	80	15	Conifer			
								Hardwood		4	
105	LT	3	HS	40	70	75	25	Conifer		1	
								Hardwood			
105	RT	1	HS	25	10	75	25	Conifer			
								Hardwood			
105	RT	2	HS	28	0	95	5	Conifer			
								Hardwood			
105	RT	3	HS	28	0	90	5	Conifer			
								Hardwood			
122	LT	1	HT	0	70	70	15	Conifer			
								Hardwood			
122	LT	2	HS	40	90	70	10	Conifer			
								Hardwood	1	2	
122	LT	3	HS	40	85	70	10	Conifer			
								Hardwood		2	
122	RT	1	HS	40	0	100	0	Conifer			
								Hardwood			
122	RT	2	HS	40	0	100	0	Conifer			
								Hardwood			
122	RT	3	HS	40	0	100	0	Conifer			
								Hardwood			
138	LT	1	HS	15	90	90	5	Conifer			
								Hardwood	2	2	
138	LT	2	HS	20	90	90	5	Conifer			1
								Hardwood		1	
138	LT	3	HS	20	85	85	5	Conifer			
								Hardwood	1	1	
138	RT	1	HS	35	65	60	40	Conifer			
								Hardwood	1	2	



COMMENT SUMMARY

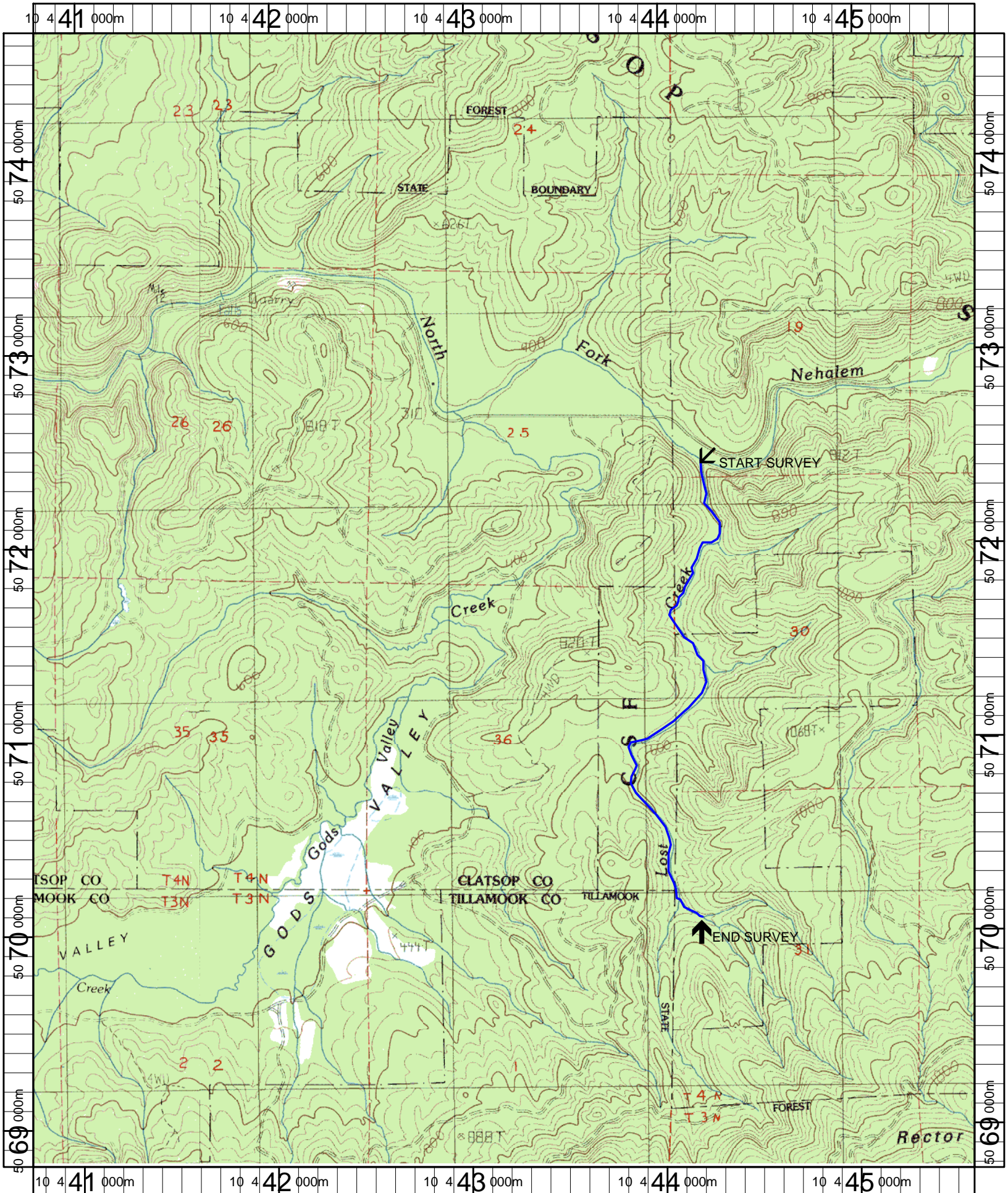
MONITORING AREA: 1-NC      SITE ID: 346      STREAM: LOST CREEK

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	CR	00	17		CT/CT D30/C30 ST/TH
5	SR	00	56.5		H=1.50M
9	SR	00	113.3		H=0.60M
12	LP	00	189.3	SS/	
13	SL	00	189.8		H=0.70M
15	LP	01	212.8	/TJ	
20	LP	00	274.8		CTMV D30/C30 ST/TH
29	RI	00	486.8		SPLIT CHANNEL IN ACTIVE CHANNEL
31	RB	00	556.8		CA/MV 30/S ST/TH
34	SL	00	593.1		H=0.30M
37	RB	00	706.1		SPLIT CHANNEL IN ACTIVE CHANNEL
38	RB	01	756.1	/TJ	SPLIT CHANNEL IN ACTIVE CHANNEL
40	LP	00	770.1		CA/CT D30/S ST/TH
48	RB	00	1029.1		CTMT D30/C30 ST/TH
51	SL	00	1060.9		H=0.50M
60	RB	00	1258.9		SPLIT CHANNEL IN ACTIVE CHANNEL
62	RB	01	1331.9	TJ/	
63	RB	11	1331.9		T=12C
66	LP	01	1406.9	TJ/	
67	RR	11	1406.9		TRIB T=11C, MAINSTEM T=12C
70	SL	00	1432.4		H=0.70M
72	SS	00	1447.4		H=2.4M, STEP OVER POSSIBLE BLOWN OUT HAB STRUCTURE

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
73	RI	00	1497.4		BRAIDED CHANNEL IN ACTIVE CHANNEL
77	RI	00	1625.4		BRAIDED CHANNEL IN ACTIVE CHANNEL
78	RI	00	1658.4		BRAIDED CHANNEL IN ACTIVE CHANNEL
82	SL	00	1699.9		H=0.55M
89	SL	00	1863.5		H=0.40M
90	RI	00	1895.5		SPLIT CHANNEL IN ACTIVE CHANNEL
103	RB	00	2215	/SS	
105	RI	00	2289		/CLEARCUT= NO SHADE ON RIGHT SIDE
110	SL	00	2346.3		H=0.35M
116	SS	00	2462.2		H=1.10M
120	SL	00	2489.5		H=0.40M
124	SL	00	2547		H=0.45M
130	SL	01	2655.75		H=0.70M
134	RB	01	2729.75	TJ/	
135	CB	11	2729.75		TRIB T=12C
136	RB	01	2753.75	TJ/	
137	CB	11	2753.75		TRIB T=12C
139	CC	00	2787.75	CC	PHOTO #325



Name: HAMLET  
 Date: 4/29/2008  
 Scale: 1 inch equals 2000 feet

Location: 10 443184 E 5071717 N  
 Caption: LOST CREEK RESTORATION SITE - NEHALEM BASIN