

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

STREAM: Roberson Creek (N-318)
BASIN: Nehalem River
SURVEY TYPE: Pre-Tx
DATE: July 29, 2005
SURVEY CREW: Dave Stewart. Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 1.8 km²
USGS MAPS: Soapstone Lake
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Roberson Creek habitat survey extended 547 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.7 (range: 3.0-10.0). Land use for the reach was timber harvest and second growth (15-30 cm dbh) trees. The average unit gradient was 2.6 percent. Riffles (45%) and rapids (33%) dominated stream habitat. Gravel (69%) dominated stream substrate. Wood volume was very low at 5.3 m³/100m.

COMMENTS:

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

REACH 1

T03N-R09W-S03SE

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	5.7	VWI Range:	3 - 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	547	1,212	0
Secondary Channel	28	46	2
Off-Channel Units	13	10	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 6	<u>First Terrace</u> n = 6
Width: 2.2	Width: 4.3	5.7 (1.25 - 10.1)	7.0 (1.75 - 12.3)
Depth: 0.22	Height: 0.2	0.4 (0.2 - 0.4)	0.6 (0.5 - 0.7)

W:D ratio: 22.0

Entrenchment (ACW:FPW ratio): 1.4

Stream Flow Type: LF

Habitat Units/100m (total channel length): 6.6

Average Unit Gradient: 2.6%

Habitat Units/100m (primary channel length): 7.1

Water temperature (°C): -

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	TH	ST
Riparian Vegetation:	M30	

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	4%	Reach avg: 87%
Undercut Banks:	13%	Range: 78 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	47	8.6
Volume (m ³):	29	5.3
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

ROBERSON CREEK PRE-TX (1-NC, 318)

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

7/29/2005

REACH 1		T03N-R09W-S03SE					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
CULVERT CROSSING	1	9	1.0	0.05	9	0	5	5	80	10	0	0
DRY CHANNEL	1	9	1.0	0.00	9	0	25	25	50	0	0	0
POOL-BACKWATER	1	3	2.0	0.40	5	0	15	15	70	0	0	0
POOL-LATERAL SCOUR	12	81	2.4	0.41	196	0	12	13	67	9	0	0
POOL-PLUNGE	1	7	4.0	0.80	27	0	10	10	75	5	0	0
PUDDLED UNIT	1	19	2.0	0.00	37	0	10	10	70	10	0	0
RAPID/BOULDERS	9	195	2.0	0.11	413	0	9	10	65	16	0	0
RIFFLE	11	264	2.1	0.11	566	0	10	10	71	9	0	0
STEP/COBBLE	1	2	3.5	0.05	5	0	10	10	80	0	0	0
STEP/STRUCTURE	1	1	0.5	0.05	0	0	5	5	80	10	0	0
Total:	39	587	2.2	0.22	1,268	0	Avg: 11	11	69	10	0	0

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	1	3	2.0	0.40	5	0.39%	0	0.0	
Scour Pools	13	87	2.5	0.44	223	17.61%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	11	264	2.1	0.11	566	44.65%	0	0.0	
Rapids	9	195	2.0	0.11	413	32.54%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	2	2	2.0	0.05	6	0.43%	0	0.0	
Dry	2	28	1.5	0.00	46	3.66%	0	0.0	
Culverts	1	9	1.0	0.05	9	0.71%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	14	23.8	25.6
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	1	1.7	1.8
Pool frequency (channel widths/pool):	9.8		
Residual pool depth (avg):	0.37		

Survey Date 7/29/2005
Report Date: 4/26/2006

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	284
Total conifers/1000 ft	1260
Total conifers >20" dbh/1000 ft	102
Total conifers >35" dbh/1000 ft	20

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	2.0	1.0	0.0	1.0	0.0	2.7	2.0
15-30cm	1.7	0.3	2.0	0.3	2.3	0.7	6.0	1.3
30-50cm	2.0	0.7	3.0	0.3	5.3	0.3	10.3	1.3
50-90cm	0.3	0.0	0.3	0.0	0.7	0.0	1.3	0.0
>90cm	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0
Total/100m2	4.7	3.0	6.7	0.7	9.3	1.0	6.9	1.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	93		81		75	
Shrub cover	14		6		3	
Grass/forb cover	63		61		66	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		67		67	
High terrace	67		33		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 (%)	9		13		12	

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	284
Total conifers/1000 ft	1260
Total conifers >20" dbh/1000 ft	102
Total conifers >35" dbh/1000 ft	20

Average number of trees in a 5-m wide band

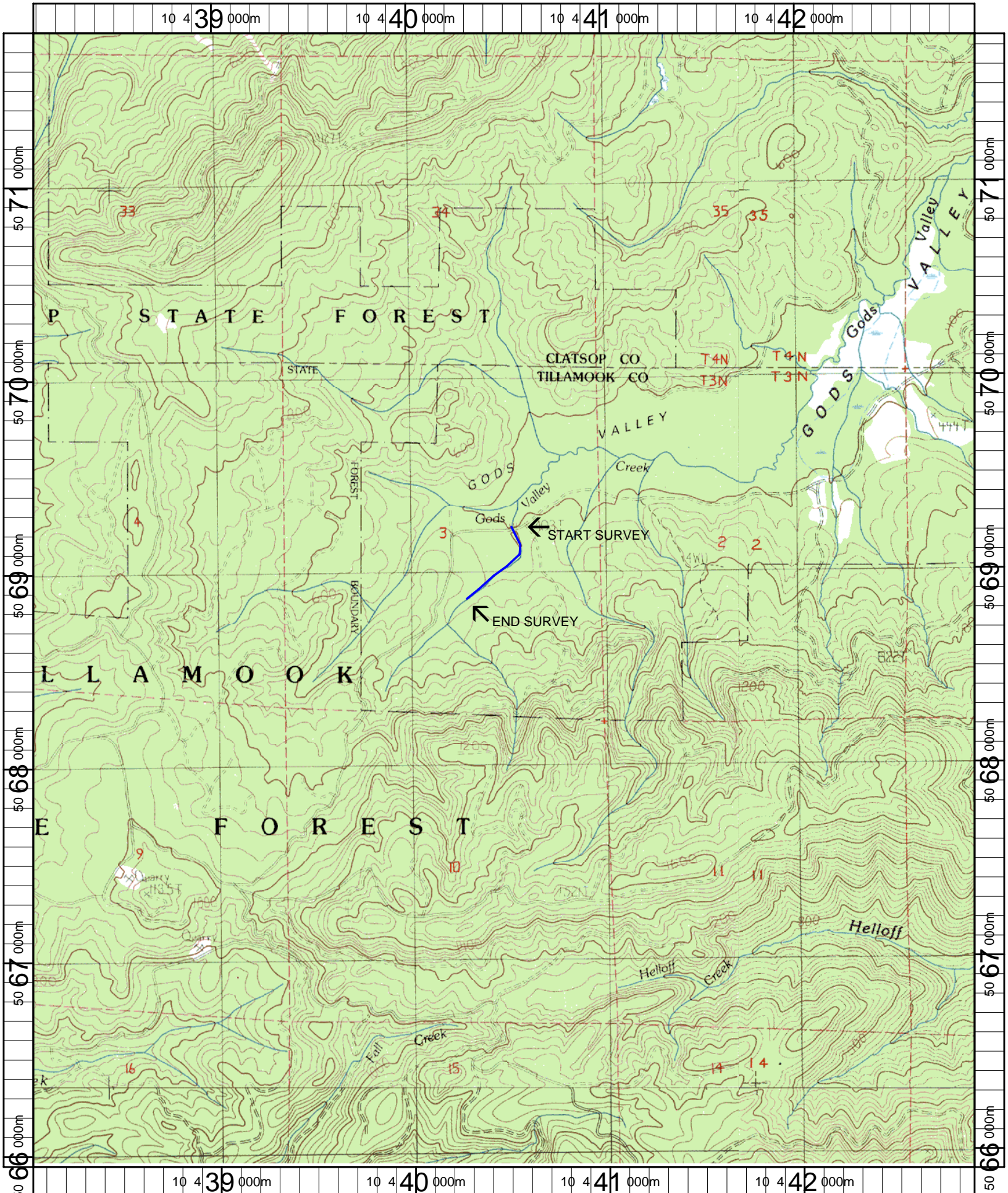
Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	2.7	2.0
15-30cm	6.0	1.3
30-50cm	10.3	1.3
50-90cm	1.3	0.0
>90cm	0.3	0.0

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 1-NC SITE ID: 318 ROBERSON CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	PP	00	6.7			START AT CULVERT PP
2	SS	00	7.2		H=0.1M	
3	CC	00	16.2	CC	1.25M GALVANIZED ROU	COUNTY LINE ROAD
4	RI	01	32.6		COUNTY LINE ROAD	
8	SC	00	66.6		H=0.1M	
12	RI	00	119.4	WL		ELK TRACKS
13	RI	01	153.9	WL	RIPARIAN 1	RIPARIAN 1
20	RI	00	284.1			RIPARIAN 2
22	LP	00	321	WL		ELK
25	RB	01	377.7	TJ/		
26	RB	11	377.7			3D 0440535/5068992
30	RB	00	422.9			RIPARIAN 3
39	PD	02	547.2		END AT ALDER RIGHT	END SURVEY



Name: SOAPSTONE LAKE
 Date: 5/2/2006
 Scale: 1 inch equals 2000 feet

Location: 10 440480 E 5068851 N
 Caption: ROBERSON CREEK RESTORATION SITE - NEHALEM BASIN