

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

STREAM: Gods Valley Creek #1 (N-207)
BASIN: Nehalem River
SURVEY TYPE: Post-Tx
DATE: August 13, 2004
SURVEY CREW: Scott Young, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 21.5 km²
USGS MAPS: Soapstone Lake
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Gods Valley Creek habitat survey extended 469 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 9.6 (range: 8.0-10.0). Land uses for the reach was large (30-50 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 0.4 percent. Scour pools (63%) and riffles (29%) dominated stream habitat. Gravel (42%), sand (31%) and fines (27%) dominated stream substrate. Wood volume was moderate at 27.7 m³/100m.

COMMENTS:

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

The crew noted several habitat structures during the survey.

REACH 1 T03N-R09W-S03NE 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	9.6	VWI Range:	8 - 10

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	100%	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	469	1,626	0
Secondary	31	51	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 3.2	Width: 8.5	10.2 (7 - 16.2)	12.2 (9.9 - 18.5)
Depth: 0.38	Height: 0.6	1.2 (1 - 1.4)	1.6 (1.4 - 1.9)

W:D ratio: 14.9 Entrenchment (ACW:FPW ratio): 1.2
Stream Flow Type: MF Habitat Units/100m (total channel length): 4.2
Average Unit Gradient: 0.4% Habitat Units/100m (primary channel length): 4.5
Water temperature (°C): -

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LT	ST
Riparian Vegetation:	C30	D3

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	16%	Reach avg: 86%
Undercut Banks:	3%	Range: 78 - 89

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	142	30.3
Volume (m ³):	130	27.7
Key pieces (>=12m x 0.60m):	0	0.0

REACH 1		T03N-R09W-S03NE					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	
GLIDE	2	36	3.4	0.33	128	0	21	36	43	0	0	0	
POOL-LATERAL SCOUR	8	255	4.3	0.74	1,053	0	50	30	20	0	0	0	
RAPID/BOULDERS	1	10	1.5	0.20	15	0	11	47	42	0	0	0	
RIFFLE	10	198	2.4	0.12	482	0	13	28	59	0	0	0	
Total:	21	500	3.2	0.38	1,678	0	Avg: 27	31	42	0	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	0	0			0	0.00%	0	0.0	
Scour Pools	8	255	4.3	0.74	1,053	62.73%	0	0.0	
Glides	2	36	3.4	0.33	128	7.66%	0	0.0	
Riffles	10	198	2.4	0.12	482	28.72%	0	0.0	
Rapids	1	10	1.5	0.20	15	0.89%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	0	0			0	0.00%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	8	16.0	17.1
Pools >=1m deep:	3	6.0	6.4
Complex pools (LWD pieces>=3):	8	16.0	17.1
Pool frequency (channel widths/pool):	7.4		
Residual pool depth (avg):	0.63		

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

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

Total hardwoods/1000	122
Total conifers/1000 ft	650
Total conifers >20" dbh/1000 ft	81
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7
15-30cm	0.0	0.0	0.0	0.0	1.0	0.3	1.0	0.3
30-50cm	2.0	0.7	3.7	0.0	2.7	0.3	8.3	1.0
50-90cm	1.3	0.0	0.0	0.0	0.0	0.0	1.3	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	3.3	1.3	3.7	0.0	3.7	0.7	3.6	0.7

Canopy closure and ground cover

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	73		73		76	
Shrub cover	5		5		6	
Grass/forb cover	48		51		43	

Predominant landform in each zone

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		0		0	
High terrace	83		100		100	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	17		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	

Surface slope (%)

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

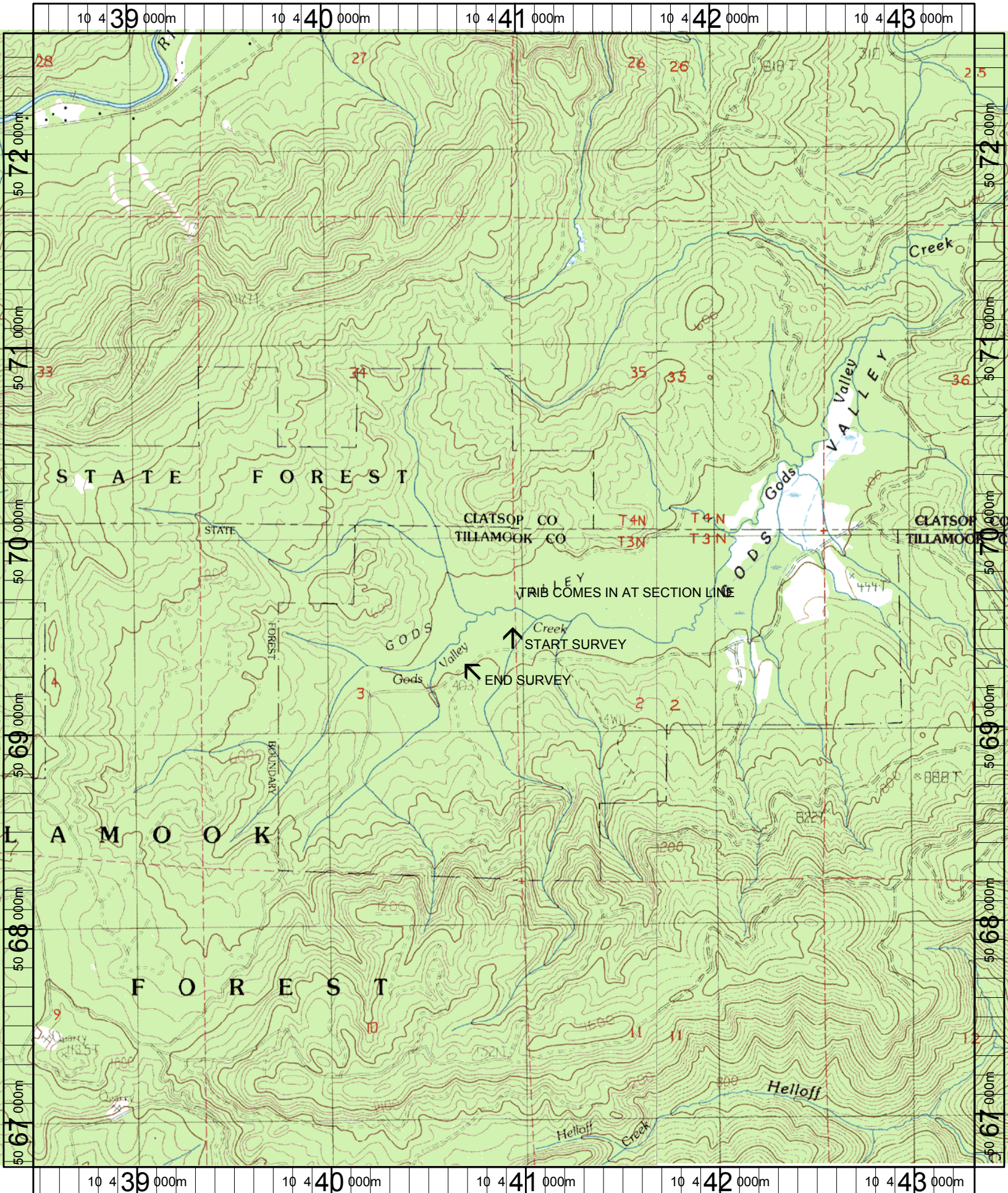
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
5	RT	2	HT		80		40	Conifer			2				
								Hardwood							
5	LF	1	HT		75		45	Conifer				2		BARE SOIL	
								Hardwood							
5	LF	2	HT		80	5	65	Conifer			2			BARE SOIL	
								Hardwood							
5	RT	1	HT		75		60	Conifer			2				
								Hardwood	1						
5	RT	3	HT		80	5	40	Conifer		1	2				
								Hardwood							
5	LF	3	HT		80	5	65	Conifer		1	2			BARE SOIL	
								Hardwood							
12	RT	2	HT		80		40	Conifer			2				
								Hardwood							
12	LF	1	HT		70		40	Conifer				1			
								Hardwood	1						
12	LF	2	HT		55		40	Conifer			2				
								Hardwood							
12	LF	3	HT		75		20	Conifer		1	2				
								Hardwood							
12	RT	1	TC		80		20	Conifer							
								Hardwood			1				
12	RT	3	HT		80		15	Conifer			1				
								Hardwood							
18	RT	2	HT		80	5	35	Conifer			3				
								Hardwood							
18	RT	1	HT		70	5	35	Conifer			2	1			
								Hardwood							
18	LF	3	HT		60	5	85	Conifer							
								Hardwood			1				
18	LF	2	HT		60		85	Conifer							
								Hardwood							
18	LF	1	HT		70	5	85	Conifer			2				
								Hardwood			1				
18	RT	3	HT		80	10	35	Conifer			1				
								Hardwood		1					

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: 1-NC SITE ID: 207 GODS VALLEY CREEK #1 POST-TX (

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	01	50	TJ/	10T 0440943 5069608	
2	RB	11	50		LEADS INTO BV COMPLE	
4	RI	00	97.5	WL		
5	LP	00	125.3		POOR COVERAGE	
9	RI	00	204.2	HS		
10	LP	01	226	HS		
12	RI	00	238.3		POOR COVERAGE	
13	GL	00	253.4	/SS		
15	RI	00	300.1	HS		
16	LP	00	328.9	HS		
17	RI	00	353.9	WL, HS		
18	LP	00	402.9	SS/, HS	PHOTO 28 AT 13:30	
20	RI	00	436.2	HS		
21	LP	00	468.8	HS	10T 0440679 5069447	



Name: SOAPSTONE LAKE
 Date: 7/22/2004
 Scale: 1 inch equals 2000 feet

Location: 10 440911 E 5069678 N
 Caption: GODS VALLEY CREEK PHASE 1 RESTORATION SITE -
 NEHALEM BASIN