

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

STREAM: Gods Valley Creek #4 (Trib A) (N-330)
BASIN: Nehalem River
SURVEY TYPE: Pre-Tx
DATE: July 11, 2007
SURVEY CREW: Trevor Diemer, Nathan Wilson
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 1.6 km²
USGS MAPS: Hamlet
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Gods Valley Creek habitat survey extended 1,378 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 8.6 (range: 3.5-11.0). Land use for the reach was second growth (15-30 cm dbh) trees and timber harvest. The average unit gradient was 0.6 percent. Scour pools (62%) dominated stream habitat. Sand (43%), gravel (28%) and silt (27%) comprised stream substrate. Wood volume was low at 13.3 m³/100m.

COMMENTS:

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

The crew noted some beaver activity during the survey.

REACH 1 T04N-R09W-S36NW 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	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	8.6	VWI Range:	3.5 - 11

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	1,378	3,008	0
Secondary Channel	0	0	0
Off-Channel Units	2	2	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 7</i>	<u>First Terrace</u>	<i>n = 7</i>
Width: 2.0	Width: 3.3	4.2	(2.5 - 6)	6.8	(3.25 - 12)
Depth: 0.31	Height: 0.2	0.4	(0.4 - 0.4)	1.3	(0.9 - 1.8)

W:D ratio: 16.4 Entrenchment (ACW:FPW ratio): 1.3
 Stream Flow Type: LF Habitat Units/100m (total channel length): 8.2
 Average Unit Gradient: 0.6% Habitat Units/100m (primary channel length): 8.2
 Water temperature (°C): 15.0 - 15.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	TH
Riparian Vegetation:	D30	C30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	4%	Reach avg: 97%
Undercut Banks:	14%	Range: 75 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	236	17.1
Volume (m ³):	184	13.3
Key pieces (>=12m x 0.60m):	2	0.1

OREGON DEPT OF FISH AND WILDLIFE GODS VALLEY CR #4 (TRIB A) PRE-TX (1-NC, 330)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/11/2007

REACH 1		T04N-R09W-S36NW					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
POOL-BACKWATER	1	2	1.0	0.25	2	0	50	50	0	0	0	0
POOL-BEAVER DAM	2	78	6.3	1.00	523	0	43	43	15	0	0	0
POOL-LATERAL SCOUR	59	742	2.4	0.49	1,802	0	30	44	24	0	0	1
POOL-PLUNGE	2	12	6.0	0.85	70	0	23	45	28	5	0	0
RIFFLE	30	260	0.9	0.04	270	0	21	40	37	2	1	0
RIFFLE W/ POCKETS	15	284	1.2	0.07	337	0	25	46	29	1	0	0
STEP/BEAVER DAM	2	2	4.0	0.02	6	0	40	50	5	3	3	0
STEP/COBBLE	1	1	1.0	0.02	1	0	5	25	65	5	0	0
STEP/LOG	1	1	1.0	0.02	1	0	25	40	35	0	0	0
Total:	113	1,380	2.0	0.31	3,010	0	Avg: 27	43	28	1	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	3	80	4.5	0.75	525	17.42%	0	0.0	
Scour Pools	61	754	2.6	0.50	1,872	62.17%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	45	543	1.0	0.05	607	20.16%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	4	3	2.5	0.02	7	0.24%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	64	46.4	46.5
Pools >=1m deep:	2	1.4	1.5
Complex pools (LWD pieces>=3):	31	22.5	22.5
Pool frequency (channel widths/pool):	6.6		
Residual pool depth (avg):	0.48		

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

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

Summary of Riparian Zone (0-30m) 7 transects

Total hardwoods/1000	1071
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	17
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	1.7	0.7	1.4	1.9	0.4	3.3	3.6
15-30cm	0.1	1.6	0.4	2.9	0.4	2.1	1.0	6.6
30-50cm	0.3	3.3	0.6	2.0	0.6	1.9	1.4	7.1
50-90cm	0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	1.3	6.7	1.9	6.3	2.9	4.6	2.0	5.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	75		68		60	
Shrub cover	40		48		50	
Grass/forb cover	60		53		50	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	29		43		50	
High terrace	71		57		50	
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		20		22	

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

7 transects

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

Total hardwoods/1000	1071
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	17
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	3.3	3.6
15-30cm	1.0	6.6
30-50cm	1.4	7.1
50-90cm	0.3	0.3
>90cm	0.0	0.0

OREGON DEPT OF FISH AND WILDLIFE GODS VALLEY CR #4 (TRIB A) PRE-TX (1-NC, 330)

HABITAT INVENTORY Report Date: 11/14/2007

Survey Date: 7/11/2007

GCG: 1-NC SITE ID: 330

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	HT	0	75	75	25	Conifer							0442933
								Hardwood	3	1	1				5071441
1	LT	2	HT	0	70	80	20	Conifer							2D
								Hardwood		2	2				
1	LT	3	HT	0	75	80	20	Conifer							
								Hardwood		4					
1	RT	1	HT	0	75	40	60	Conifer							ROUGH SKINED
								Hardwood			1	1			NEWWR
1	RT	2	HT	0	75	50	50	Conifer							
								Hardwood	1	2	1				
1	RT	3	HT	0	80	50	50	Conifer							
								Hardwood		2	2				
20	LT	1	HT	0	85	20	80	Conifer							NO GPS
								Hardwood	1	3	4				
20	LT	2	HT	0	85	20	80	Conifer							
								Hardwood		4	2				
20	LT	3	HT	0	90	15	85	Conifer							
								Hardwood		2	2				
20	RT	1	HT	0	85	10	90	Conifer							
								Hardwood		1	4				
20	RT	2	HT	0	85	10	90	Conifer							
								Hardwood		2	1				
20	RT	3	HT	0	90	30	70	Conifer							
								Hardwood		2	1				
43	LT	1	HT	0	85	15	85	Conifer							0442655
								Hardwood			2				5071285
43	LT	2	HS	45	85	20	80	Conifer							
								Hardwood	6		1				
43	LT	3	HS	50	85	25	75	Conifer							
								Hardwood			2				
43	RT	1	HT	0	90	20	80	Conifer							
								Hardwood	3		1				
43	RT	2	HT	0	70	30	70	Conifer							
								Hardwood	2	4	1				
43	RT	3	HT	0	70	35	65	Conifer							
								Hardwood		2	1				

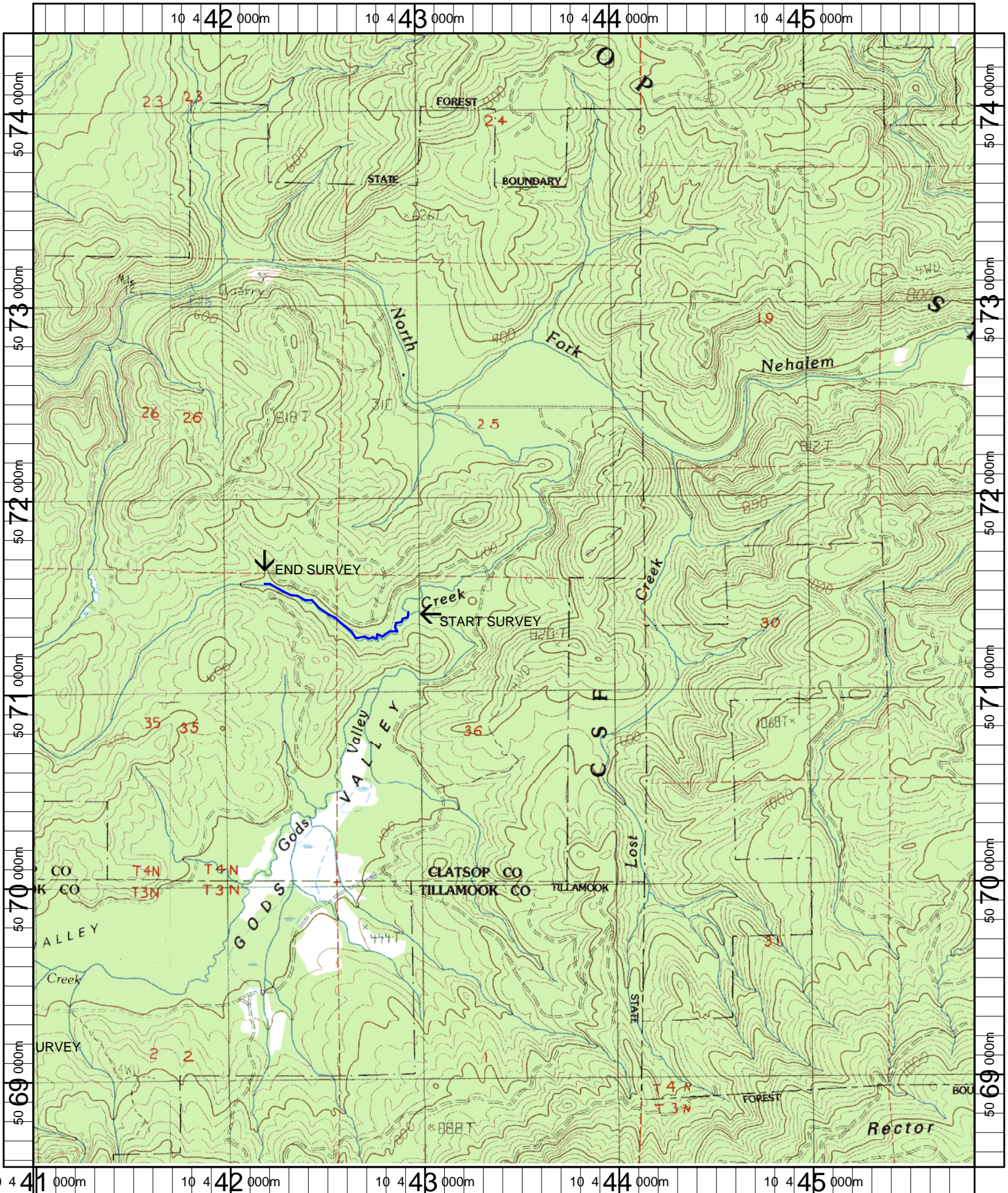
59	LT	1	HT	0	85	60	40	Conifer						
								Hardwood	2	1				
59	LT	2	HT	0	65	70	30	Conifer						
								Hardwood		2	2			
59	LT	3	HT	0	80	40	60	Conifer						
								Hardwood		1	2	1		
59	RT	1	HT	0	90	20	80	Conifer					1	
								Hardwood	3					
59	RT	2	HT	0	75	30	70	Conifer						
								Hardwood		2	1			
59	RT	3	HT	0	70	50	50	Conifer						
								Hardwood	1	2	2			
85	LT	1	HS	80	60	25	75	Conifer	1	1				0442355
								Hardwood		2				5071482
85	LT	2	HS	45	50	25	75	Conifer		1	2			
								Hardwood						
85	LT	3	HS	45	45	20	80	Conifer		1	2			
								Hardwood						
85	RT	1	HS	0	85	80	20	Conifer						RED LEGGED
								Hardwood			3			FROG
85	RT	2	HS	25	90	70	30	Conifer		1	2			
								Hardwood						
85	RT	3	HS	25	85	60	40	Conifer		1	1			
								Hardwood		0	1			
103	LT	1	HT	0	65	20	80	Conifer						0442151
								Hardwood		2	4			5071575
103	LT	2	HT	0	60	60	40	Conifer						
								Hardwood		1				
103	LT	3	HS	45	30	90	10	Conifer						
								Hardwood						
103	RT	1	HS	0	60	80	20	Conifer				1		
								Hardwood				1		
103	RT	2	HS	45	35	90	10	Conifer	5	1				
								Hardwood						
103	RT	3	HS	55	20	95	5	Conifer	6	1				
								Hardwood						
113	LT	1	HT	0	45	60	40	Conifer						0442089
								Hardwood		1	2			5071572
113	LT	2	HS	55	30	85	15	Conifer						
								Hardwood		1	3			
113	LT	3	HS	55	5	95	5	Conifer						
								Hardwood	2					
113	RT	1	HS	45	60	40	60	Conifer	4		1			
								Hardwood						
113	RT	2	HS	65	75	25	75	Conifer					1	
								Hardwood	1					

113 RT 3 HS 35 10 20 80 **Conifer** 7
Hardwood

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 330 STREAM: GODS VALLEY CR #4 (TRIB A) PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	14		RIP @ TOP
17	LP	00	241		BDRK HARDPAN
47	LP	00	600		BEDROCK HARDPAN
75	RI	00	898	DJ	
80	LP	00	966.5	WL	BEAVER DEN
91	SD	00	1055.5	BD	
92	BP	00	1084.5	BV	
95	RI	00	1123.5	CS, BC	
96	SD	00	1124.5	BD	
97	BP	00	1173.5	BV	VISUAL SIGHTING OF BEAVER



Name: HAMLET
 Date: 5/9/2007
 Scale: 1 inch equals 2000 feet

Location: 10 443432 E 5071470 N
 Caption: GODS VALLEY TRIBUTARY A RESTORATION SITE - NEHALEM BASIN