

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

STREAM: Gods Valley Creek #4 (Tributary A) (N-330)
BASIN: Nehalem River
SURVEY TYPE: Pre-Tx
DATE: September 12, 2006
SURVEY CREW: Gordon Rose, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 1.6 km²
USGS MAPS: Hamlet
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Gods Valley Creek Tributary A habitat survey extended 1,467 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 7.9 (range: 1.5-10.0). Land use for the reach was timber harvest and young (3-15 cm dbh) trees. The average unit gradient was 0.9 percent. Dry channel units (67%) and scour pools (32%) dominated stream habitat. Gravel (68%) dominated stream substrate. Wood volume was low at 15.0 m³/100m.

COMMENTS:

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

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	7.9	VWI Range:	1.5 - 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 Channel	1,467	2,785	29
Secondary Channel	14	9	2
Off-Channel Units	8	4	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 4
Width: 2.0	Width: 3.4	4.1 (3.8 - 4.8)	4.9 (4.2 - 6.2)
Depth: 0.23	Height: 0.3	0.6 (0.5 - 0.7)	1.0 (0.95 - 1.1)

W:D ratio: 10.8 Entrenchment (ACW:FPW ratio): 1.2
 Stream Flow Type: LF Habitat Units/100m (total channel length): 4.0
 Average Unit Gradient: 0.9% Habitat Units/100m (primary channel length): 4.1
 Water temperature (°C): 11.0 - 11.0

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	18%	Reach avg: 89%
Undercut Banks:	11%	Range: 78 - 94

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	228	15.5
Volume (m ³):	220	15.0
Key pieces (>=12m x 0.60m):	6	0.4

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

HABITAT INVENTORY Report Date: 3/5/2007 Survey Date: 9/12/2006

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
DRY CHANNEL	2	14	0.6	0.00	9	0	5	15	80	0	0	0
DRY UNIT	2	64	2.5	0.00	160	0	8	25	68	0	0	0
POOL-LATERAL SCOUR	24	374	2.4	0.54	894	0	9	20	67	0	0	4
POOL-PLUNGE	1	3	3.0	0.55	8	0	10	30	50	0	0	10
PUDDLED UNIT	28	1,027	1.6	0.02	1,697	17	7	17	71	2	1	2
STEP/COBBLE	2	7	4.0	0.01	27	0	0	3	55	43	0	0
STEP/LOG	1	1	4.0	0.01	4	0	10	40	50	0	0	0
Total:	60	1,489	2.0	0.23	2,798	17	Avg: 7	19	68	2	0	3

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	25	377	2.4	0.54	901	32.20%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	0	0			0	0.00%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	3	8	4.0	0.01	31	1.11%	0	0.0	
Dry	32	1,105	1.6	0.01	1,866	66.69%	17	0.9	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	25	16.8	17.0
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	15	10.1	10.2
Pool frequency (channel widths/pool):	17.5		
Residual pool depth (avg):	0.54		

Survey Date 9/12/2006

RIPARIAN ZONE

Report Date: 3/5/2007

VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	1138
Total conifers/1000 ft	508
Total conifers >20" dbh/1000 ft	20
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	0.0	2.3	0.3	3.0	0.0	2.3	0.3	7.7
15-30cm	0.0	2.3	2.3	4.7	3.3	2.0	5.7	9.0
30-50cm	0.3	0.3	0.3	1.3	1.3	0.0	2.0	1.7
50-90cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0
Total/100m2	0.3	5.3	3.0	9.0	5.0	4.3	2.8	6.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	61		73		85	
Shrub cover	20		46		53	
Grass/forb cover	80		54		47	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		0		17	
High terrace	100		100		83	
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 (%)	0		0		7	

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	1138
Total conifers/1000 ft	508
Total conifers >20" dbh/1000 ft	20
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	0.3	7.7
15-30cm	5.7	9.0
30-50cm	2.0	1.7
50-90cm	0.0	0.3
>90cm	0.3	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		
13	LF	2	HT	0	85	20	80	Conifer		4	1				
								Hardwood	3	2					
13	RT	3	HT	0	85	5	95	Conifer		9	3				
								Hardwood							
13	LF	1	HT	0	85	5	95	Conifer							POOR GPS
								Hardwood	4	3					CVG, RED-LEGGED
13	RT	1	HT	0	85	5	95	Conifer				1			
								Hardwood	1						
13	LF	3	HT	0	85	20	80	Conifer							
								Hardwood							
13	RT	2	HT	0	85	15	85	Conifer							
								Hardwood	4	5	2				
23	LF	1	HT	0	40	10	90	Conifer							UTM 0442572-5071271 (2D)
								Hardwood							
23	RT	3	HT	0	85	90	10	Conifer				1			
								Hardwood		2					
23	RT	1	HT	0	85	10	90	Conifer							
								Hardwood	1	4	1	1			
23	RT	2	HT	0	85	60	40	Conifer							
								Hardwood				1			
23	LF	2	HT	0	85	60	40	Conifer							
								Hardwood	2	6	1				
23	LF	3	HT	0	85	90	10	Conifer							
								Hardwood	7	2					
37	RT	2	HT	0	45	100	0	Conifer	1	3					
								Hardwood		1					
37	RT	1	HT	0	35	80	20	Conifer							
								Hardwood	1						
37	LF	3	HS	40	85	15	85	Conifer							1
								Hardwood		1					
37	LF	2	HT	0	55	20	80	Conifer							
								Hardwood							
37	LF	1	HT	0	35	10	90	Conifer							UTM 0442426-5071496 (3D)
								Hardwood							
37	RT	3	HT	0	85	100	0	Conifer			1				
								Hardwood			1				

Comment Summary

Restoration Monitoring Sites 2006

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

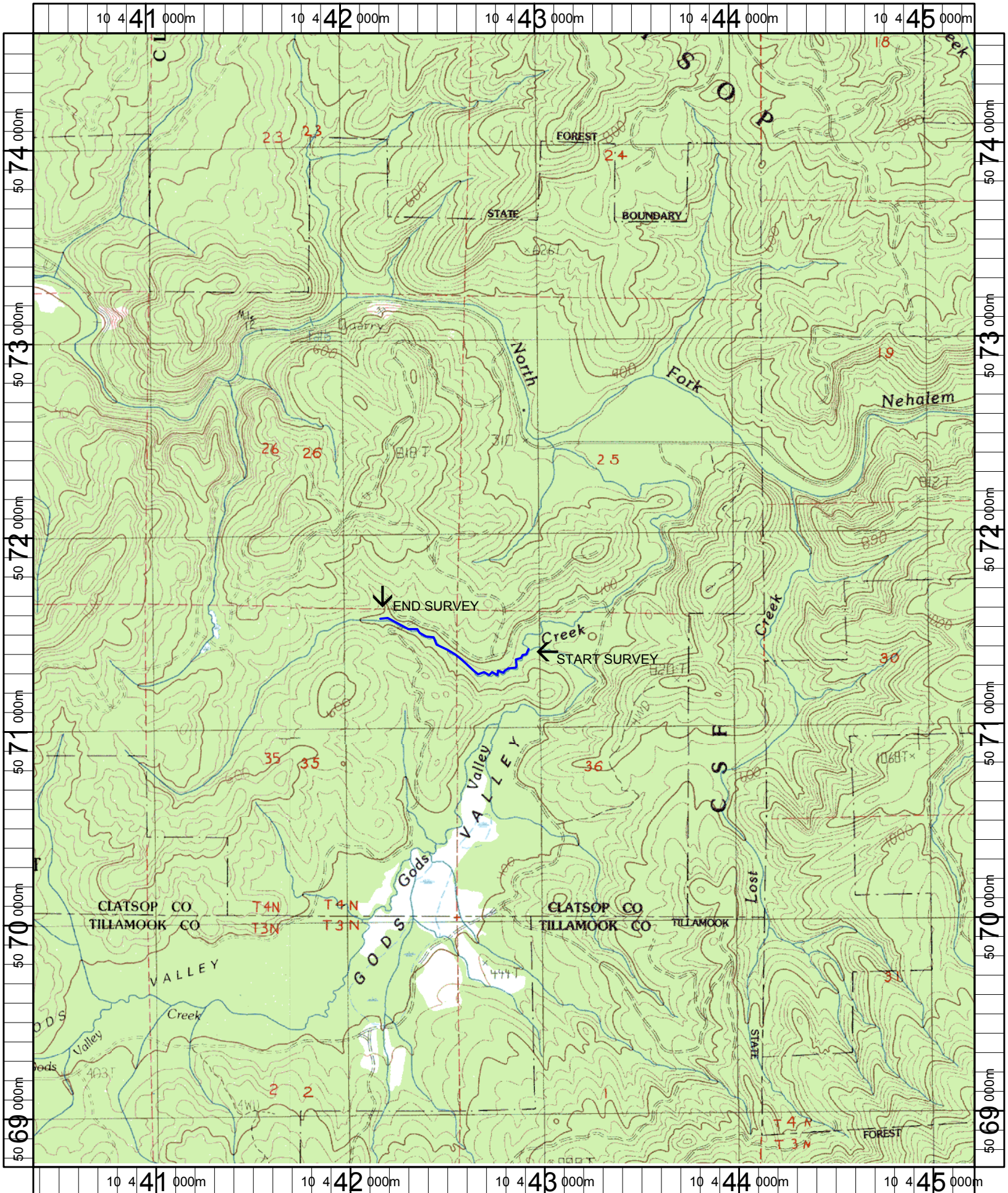
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
2	PP	00	21			BEDROCK=HARDPAN
3	SL	00	22		H=0.90M	
5	LP	00	91.5			BEDROCK=HARDPAN
8	PD	00	178.5	WL		TOAD-SPECIES UNKNOW
9	PD	00	224.5			BEDROCK=HARDPAN
10	LP	00	246			BEDROCK=HARDPAN
13	PD	00	324.5		RIPARIAN #1, RSN, SITE #3	BEDROCK=HARDPAN
14	LP	00	337			T=11.0C AT 10:30
18	LP	00	387			BEDROCK=HARDPAN
19	PD	00	437			BEDROCK=HARDPAN
21	PD	00	537			BEDROCK=HARDPAN
22	PD	00	587			BEDROCK=HARDPAN
23	PD	00	637	WL	RIPARIAN #2	RED-LEGGED FROG
24	PD	00	679			BEDROCK=HARDPAN
27	LP	00	767		SITE #18	
29	LP	00	809.5			BEDROCK=HARDPAN
30	LP	00	823.5			BEDROCK=HARDPAN
31	PD	00	872.5			BEDROCK=HARDPAN
32	LP	00	887			BEDROCK=HARDPAN
37	LP	00	983.5		RIPARIAN #3	BEDROCK=HARDPAN
38	PD	00	1003.5			BEDROCK=HARDPAN

Comment Summary

Restoration Monitoring Sites 2006

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
40	PD	00	1075			BEDROCK=HARDPAN
42	LP	00	1108.5			BEDROCK=HARDPAN
43	SC	00	1111.5		H=0.25M	
45	SC	00	1131.5		H=0.35M	
46	PD	00	1160.3	CS/CS,BC		
48	LP	00	1204.3	EA/		BEDROCK=HARDPAN
49	LP	00	1220.8			BEDROCK=HARDPAN
50	PD	01	1245.8	/TJ		POOR GPS COVERAGE
57	LP	00	1355.3			UTM 0442151-5071609 (2D)
59	PD	01	1467.3		END SURVEY	



Name: HAMLET
 Date: 1/19/2006
 Scale: 1 inch equals 2000 feet

Location: 10 442816 E 5071658 N
 Caption: GODS VALLEY TRIBUTARY A RESTORATION SITE - NEHALEM BASIN