

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

STREAM: GODS VALLEY CREEK #4 (TRIB
 GCG: 1-NC
 SITE ID: 330
 BASIN: NEHALEM
 TREATMENT DATE: 2007
 SURVEY DATE: 7/6/2008
 SURVEY CREW: Jitesh Pattni / Aaron Paloni
 USGS MAPS: HAMLET
 ECOREGION: Coastal Uplands
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

SURVEY DESCRIPTION:

Channel morphology: Constrained by high terraces
 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 (m²): 1,333 : 3,636
 Secondary channel length (meters) and area (m²) 28 : 34
 VWI average: 7.3 VWI Range: 3 - 10 Average Gradient: 1.1%
 Pieces LWD per 100m: 17.2 Wood Volume (m³) per 100m: 11.0
 Percent pools: 72% Complex pools (LWD pieces>=3): 19 Pools >=1m deep: 4
 Percent substrate (avg):

	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	30	26	43	1	0	0
Pool units	40	27	32	0	0	1
Fast water units	14	22	61	2	0	0

COMMENTS:

This is a pre-treatment, restoration survey. The crew noted beaver activity throughout the survey. Beaver activity consisted of dams, pools, a pond, and chewed sticks. The crew also noted observing rough-skinned newts.

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

**GODS VALLEY CREEK #4 (TRIB A)
GCG: 1-NC SITE ID: 330**

Survey Date: 7/6/2008

Report Date: 12/29/2008

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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	7.3	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	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	1,333	3,636	0
Secondary	28	34	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 7
Width: 2.8	Width: 3.5	4.2 (2.6 - 5.9)	4.8 (3.3 - 6.4)
Depth: 0.41	Height: 0.4	0.8 (0.5 - 1)	1.2 (0.7 - 1.5)

W:D ratio: 9.5

Stream Flow Type: LF

Average Unit Gradient: 1.1%

Water temperature (°C): 12.0 - 12.0

Entrenchment (ACW:FPW ratio): 1.2

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

Habitat Units/100m (primary channel length): 5.0

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:	16%	Reach avg: 79%
Undercut Banks:	4%	Range: 33 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	229	17.2
Volume (m ³):	146	11.0
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPARTMENT OF FISH AND WILDLIFE

GODS VALLEY CREEK #4 (TRIB A)

HABITAT INVENTORY

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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-BEAVER DAM	2	62	7.4	1.30	555	0	75	15	10	0	0	0
POOL-LATERAL SCOUR	30	628	3.3	0.65	2,105	0	37	28	34	0	0	1
RAPID/BOULDERS	1	31	1.5	0.15	47	12	0	10	35	55	0	0
RIFFLE	23	628	1.4	0.17	923	0	15	23	62	0	0	0
STEP/BEAVER DAM	6	9	3.8	0.21	30	0	42	28	30	0	0	0
STEP/LOG	5	4	3.2	0.11	11	0	31	33	36	0	0	0
Total:	67	1,361	2.8	0.41	3,670	12	Avg: 30	26	43	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	2	62	7.4	1.30	555	15.13%	0	0.0
Scour Pools	30	628	3.3	0.65	2,105	57.35%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	23	628	1.4	0.17	923	25.16%	0	0.0
Rapids	1	31	1.5	0.15	47	1.27%	12	25.8
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	11	13	3.5	0.16	40	1.10%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	32	23.5	24.0
Pools >=1m deep:	4	2.9	3.0
Complex pools (LWD pieces>=3):	19	14.0	14.3
Pool frequency (channel widths/pool):	12.1		
Residual pool depth (avg):	0.58		

OREGON DEPARTMENT OF FISH AND WILDLIFE
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RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 5 transects

Total hardwoods/1000	951
Total conifers/1000 ft	146
Total conifers >20" dbh/1000 ft	73
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	0.0	1.2	0.0	2.0	0.0	1.4	0.0	4.6
15-30cm	0.0	3.4	0.6	2.2	0.6	3.8	1.2	9.4
30-50cm	0.0	0.4	0.0	0.4	0.0	0.8	0.0	1.6
50-90cm	0.4	0.0	0.6	0.0	0.2	0.0	1.2	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.4	5.0	1.2	4.6	0.8	6.0	0.8	5.2

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	74	76	74
Shrub cover	45	49	48
Grass/forb cover	49	44	44

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	10	20	40
High terrace	80	80	60
Low terrace	10	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 (%)	3	11	19

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

5 transects

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

Total hardwoods/1000	951
Total conifers/1000 ft	146
Total conifers >20" dbh/1000 ft	73
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	0.0	4.6
15-30cm	1.2	9.4
30-50cm	0.0	1.6
50-90cm	1.2	0.0
>90cm	0.0	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		
12	LT	1	HT	0	75	75	20	Conifer							
								Hardwood	1	3	2				
12	LT	2	HT	0	70	70	30	Conifer							
								Hardwood							
12	LT	3	HT	0	70	70	30	Conifer							
								Hardwood							
12	RT	1	HT	0	90	25	75	Conifer							
								Hardwood	1	3					
12	RT	2	HT	0	90	30	70	Conifer							
								Hardwood	1	4					
12	RT	3	HT	0	90	40	60	Conifer							
								Hardwood	1	6					
23	LT	1	HS	30	90	10	80	Conifer							
								Hardwood		1					
23	LT	2	HS	65	90	10	80	Conifer					2		
								Hardwood							
23	LT	3	HS	65	85	10	80	Conifer			2				
								Hardwood	1	2					
23	RT	1	HT	0	90	65	30	Conifer							
								Hardwood	3	6					
23	RT	2	HT	0	80	75	20	Conifer							
								Hardwood	7	5					
23	RT	3	HT	0	80	45	55	Conifer							
								Hardwood	2	2					
33	LT	1	HT	0	75	10	90	Conifer							
								Hardwood							
33	LT	2	HT	0	70	0	100	Conifer		3			1		
								Hardwood							
33	LT	3	HT	0	55	0	85	Conifer							
								Hardwood		2					
33	RT	1	HT	0	85	10	90	Conifer						2	
								Hardwood							
33	RT	2	HT	0	80	10	80	Conifer							
								Hardwood				1			
33	RT	3	HS	32	85	0	75	Conifer			1		1		
								Hardwood		1	3				

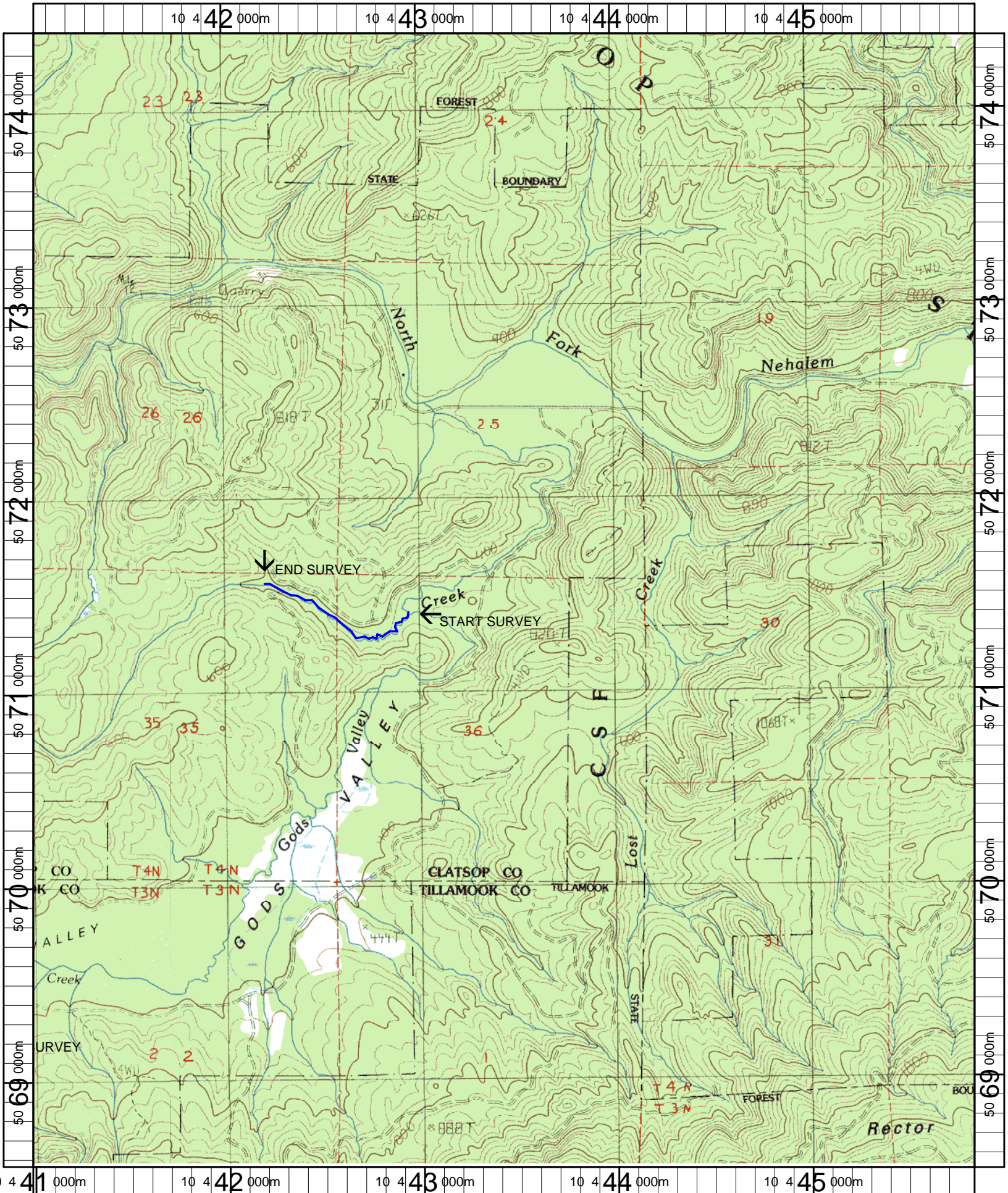
48	LT	1	HT	0	40	40	40	Conifer				
								Hardwood				
48	LT	2	HS	40	50	60	20	Conifer				
								Hardwood	1			
48	LT	3	HS	55	55	75	20	Conifer				
								Hardwood	2			
48	RT	1	HT	0	60	90	10	Conifer				
								Hardwood	1			
48	RT	2	HT	0	80	70	15	Conifer				
								Hardwood	2	1		
48	RT	3	HT	0	75	75	20	Conifer				
								Hardwood	1	2	1	
64	LT	1	HT	0	75	80	10	Conifer				
								Hardwood		4		
64	LT	2	HT	0	75	90	0	Conifer				
								Hardwood			1	
64	LT	3	HS	35	65	90	5	Conifer				
								Hardwood	2			
64	RT	1	LT	0	60	40	40	Conifer				
								Hardwood				
64	RT	2	HT	0	75	70	20	Conifer				
								Hardwood				
64	RT	3	HT	0	75	75	10	Conifer				
								Hardwood	2			

BLOW
DOWNS ON
LT SIDE OF
1 HUGE >90
CONIFER
BROKEN OFF

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	25		PHOTO #323, T=11.5C, CTCT
3	SL	00	29.5		H=0.30M
13	LP	00	311.5	AM	ROUGH-SKINNED NEWT
33	LP	00	772.5		CT/CT D30/C30 ST/TH
41	SL	00	914.6		H=0.40M
44	SD	00	944.1	BD	H=0.50M
45	BP	00	955.6	BV	
46	SD	00	957.6	BD	H=0.80M
47	LP	00	1007.6	AM	ROUGH-SKINNED NEWT
48	RI	00	1047.6		CT/CT D15/C30 ST/TH
50	SL	00	1050.8		H=0.50M
53	SD	00	1085.7	BD	H=1.0M
55	SL	00	1131.9		H=0.25M
57	RB	00	1174.9	BC	
58	SD	00	1176.3	BD	H=1.6M, PHOTO 324
59	BP	00	1226.3	BV	
60	SD	00	1227	BD	H=1.1M
61	LP	01	1277	/TJ	SEE GPS COORDINATES
63	SL	11	1277		H=1.1M
64	LP	00	1302		CT/CT D30/C30 ST/TH
65	SD	00	1304	BD	H=0.90M
67	RI	00	1333		CA/MV 30/S ST/TH



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