

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

STREAM: East Humbug Creek Tributary A (N-314)  
BASIN: Nehalem River  
SURVEY TYPE: Post-Tx  
DATE: August 29, 2006  
SURVEY CREW: Ben Walczak, Gordon Rose  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 3.7 km<sup>2</sup>  
USGS MAPS: Vinemaple  
ECOREGION: Coast Range Astoria Willapa

**GENERAL DESCRIPTION:**

The East Humbug Creek Tributary habitat survey extended 1,169 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 3.6 (range: 2.8-4.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 2.4 percent. Riffles (59%) dominated stream habitat. Gravel (38%) and cobble (24%) dominated stream substrate. Wood volume was high at 46.4 m<sup>3</sup>/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

T05N-R08W-S01SW

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	3.6	VWI Range:	2.8 - 4

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	1,169	3,707	0
Secondary Channel	11	11	1
Off-Channel Units	23	35	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 3.6	Width: 5.7	7.8 ( 6.8 - 9.2 )	9.6 ( 8.3 - 11 )
Depth: 0.17	Height: 0.3	0.6 ( 0.5 - 0.7 )	1.1 ( 0.8 - 1.3 )

W:D ratio: 19.4  
 Stream Flow Type: LF  
 Average Unit Gradient: 2.4%  
 Water temperature (°C): 13.0 - 13.0

Entrenchment (ACW:FPW ratio): 1.4  
 Habitat Units/100m (total channel length): 4.7  
 Habitat Units/100m (primary channel length): 4.8

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	19%	Reach avg: 76%
Undercut Banks:	5%	Range: 50 - 92

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	198	16.9
Volume (m <sup>3</sup> ):	542	46.4
Key pieces (>=12m x 0.60m):	32	2.7

OREGON DEPT OF FISH AND WILDLIFE

EAST HUMBUG TRIB A POST-TX (1-NC, 314)

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

8/29/2006

REACH 1		T05N-R08W-S01SW					REACH 1					
HABITAT DETAIL												
Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
POOL-ALCOVE	1	13	1.5	0.40	20	0	50	50	0	0	0	0
POOL-BEAVER DAM	2	47	4.8	0.38	241	1	28	33	28	10	3	0
POOL-LATERAL SCOUR	18	199	3.6	0.40	709	15	12	19	39	14	4	13
PUDDLED UNIT	1	11	1.0	0.00	11	0	30	30	30	10	0	0
RAPID/BOULDERS	4	136	3.1	0.04	417	86	0	3	30	35	16	16
RIFFLE	23	776	2.8	0.04	2,215	55	3	14	41	31	3	8
STEP/BEAVER DAM	3	7	7.3	0.01	57	0	20	27	37	17	0	0
STEP/COBBLE	2	9	4.5	0.04	45	0	0	10	48	40	3	0
STEP/LOG	2	6	7.5	0.01	38	0	5	15	40	40	0	0
<b>Total:</b>	56	1,203	3.6	0.17	3,753	157	<b>Avg:</b> 9	17	38	24	4	9

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )	
Dammed & BW Pools	3	60	3.7	0.38	261	6.94%	1	0.4	
Scour Pools	18	199	3.6	0.40	709	18.90%	15	2.1	
Glides	0	0			0	0.00%	0	0.0	
Riffles	23	776	2.8	0.04	2,215	59.02%	55	2.5	
Rapids	4	136	3.1	0.04	417	11.11%	86	20.6	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	7	22	6.6	0.02	140	3.73%	0	0.0	
Dry	1	11	1.0	0.00	11	0.29%	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:	21	17.5	18.0
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	7	5.8	6.0
Pool frequency (channel widths/pool):	10.0		
Residual pool depth (avg):	0.36		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

EAST HUMBUG TRIB A POST-TX  
GCG: 1-NC SITE ID: 314

Survey Date 8/29/2006  
Report Date: 3/5/2007

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	650
Total conifers/1000 ft	853
Total conifers >20" dbh/1000 ft	41
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	0.3	3.3	3.7	1.0	5.3	0.7	9.3	5.0
15-30cm	0.0	2.0	1.3	1.0	1.7	1.0	3.0	4.0
30-50cm	0.0	1.3	0.7	0.3	0.3	0.0	1.0	1.7
50-90cm	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0
>90cm	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total/100m2	0.7	6.7	6.0	2.3	7.3	1.7	4.7	3.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	84		73		73	
Shrub cover	19		17		20	
Grass/forb cover	75		59		53	

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		17		17	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		17	
Riprap	0		0		0	
Surface slope (%)	24		28		15	

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	650
Total conifers/1000 ft	853
Total conifers >20" dbh/1000 ft	41
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	9.3	5.0
15-30cm	3.0	4.0
30-50cm	1.0	1.7
50-90cm	0.3	0.0
>90cm	0.3	0.0

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**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		
18	LF	2	HS	60	85	30	60	Conifer		1					
								Hardwood	3						
18	LF	1	HS	80	85	50	40	Conifer	1						POOR GPS COVERAGE
								Hardwood	2						
18	LF	3	HS	30	85	30	60	Conifer			1				
								Hardwood							
18	RT	2	HT	0	80	10	90	Conifer				1			
								Hardwood	2	1					
18	RT	3	HT	0	70	10	90	Conifer		1					
								Hardwood							
18	RT	1	HT	0	80	5	95	Conifer							NO AMPHIBIANS
								Hardwood	4						
30	RT	1	HT	0	85	5	95	Conifer							
								Hardwood	1	5	1				
30	LF	1	HT	0	85	10	90	Conifer							UTM 0451567-5086194 (3D)
								Hardwood			1				
30	LF	3	HS	15	85	30	50	Conifer		1					
								Hardwood							
30	RT	2	HS	25	85	15	85	Conifer							
								Hardwood							
30	RT	3	HS	15	85	20	80	Conifer			2				
								Hardwood			3				
30	LF	2	HS	50	85	30	60	Conifer							
								Hardwood			1				
43	RT	2	RB	0	20	10	10	Conifer							
								Hardwood							
43	LF	1	HS	65	85	5	70	Conifer						1	UTM 0451463-5086402 (2D)
								Hardwood	3						
43	LF	2	HS	30	85	5	50	Conifer	11	3	2				
								Hardwood							
43	LF	3	HS	30	85	20	30	Conifer	16	1					
								Hardwood	2						
43	RT	3	RB	0	30	10	10	Conifer							
								Hardwood							
43	RT	1	HT	0	85	40	60	Conifer							
								Hardwood		1	2				

# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: 1-NC      SITE ID: 314      EAST HUMBUG TRIB A POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	42.5	HS	START AT CONFL. W/E. HUM	
2	LP	00	50.5	HS		
5	LP	00	81	BC, WL		RSN
6	RI	00	106	EA/		
8	SC	00	117		H=0.20M	
12	RB	00	201		WHERE CULVERT WAS	
18	RI	00	268.5		RIPARIAN #1	
20	LP	00	307	HS		
22	SD	00	328.5	BD	H=0.30M	
23	BP	00	346	BV		
25	LP	00	385.5	EA/, HS		
26	RI	00	443.5	HS, WL		RED-LEGGED TOAD
27	SD	00	445.5	BD	H=1.00M	
28	BP	01	474.5	BV, WL		RSN, TROUT, COHO
30	RI	00	537.5	HS	RIPARIAN #2	T=13.0C AT 9:30
33	LP	00	604	HS		
35	LP	00	681	HS		
36	SD	00	682	BD	H=0.70M	
38	RB	00	744	HS, DJ		
40	RI	00	777.5	EA/		
41	SL	00	781.5	EA/, DJ	H=0.60M	

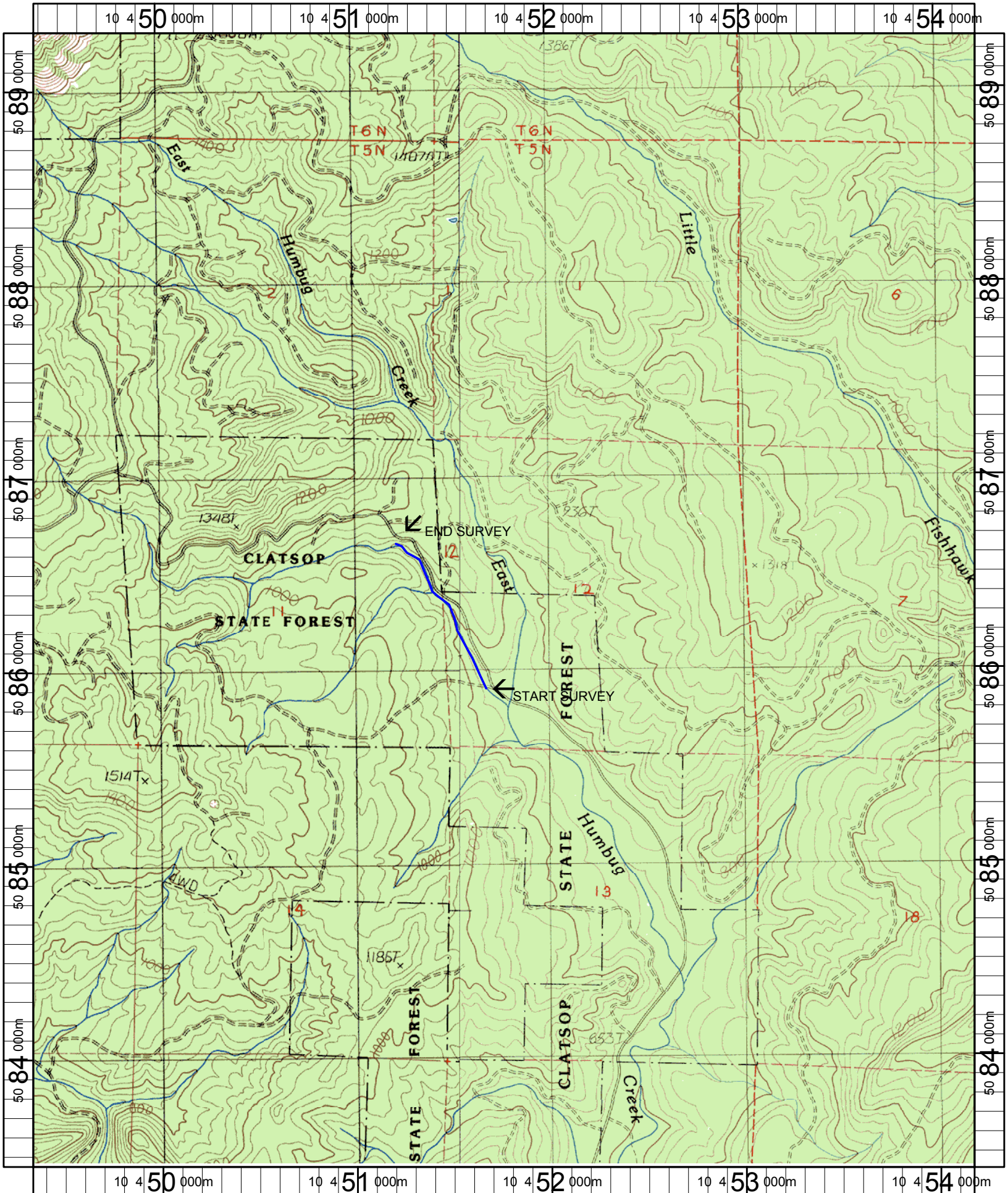
# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: 1-NC      SITE ID: 314      EAST HUMBUG TRIB A POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
43	RI	00	847	HS	RIPARIAN #3	
45	SC	00	867.5	HS	H=0.30M	
46	LP	00	875.5	HS		
47	RI	01	898	TJ/		POOR GPS COVERAGE
51	RB	00	995	HS		
53	SL	00	1026		H=0.70M	
55	RI	00	1126	EA/, WL		PACIFIC TREE FROG
56	RI	00	1168.5	WL	END SURVEY	SNAKE





Name: VINEMAPLE  
 Date: 6/9/2005  
 Scale: 1 inch equals 2000 feet

Location: 10 451773 E 5086359 N  
 Caption: EAST HUMBUG CREEK TRIB A RESTORATION SITE -  
 NEHALEM BASIN