

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

STREAM: East Humbug Creek #2 (N-308)
BASIN: Nehalem River
SURVEY TYPE: Post-Tx
DATE: August 29, 2006
SURVEY CREW: Gordon Rose, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 23.2 km²
USGS MAPS: Vinemaple
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The East Humbug Creek habitat survey extended 817 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 3.2 (range: 3.0-4.0). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 1.8 percent. Riffles (51%) and scour pools (28%) dominated stream habitat. Gravel (45%) and cobble (33%) dominated stream substrate. Wood volume was high at 35.7 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

T05N-R08W-S02SE

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	3.2	VWI Range:	3 - 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	817	3,920	0
Secondary Channel	191	767	6
Off-Channel Units	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 4.9	Width: 11.0	13.7 (10.4 - 17.6)	16.4 (13.7 - 19.2)
Depth: 0.27	Height: 0.5	1.1 (1 - 1.2)	1.3 (1.2 - 1.4)

W:D ratio: 20.6

Entrenchment (ACW:FPW ratio): 1.2

Stream Flow Type: LF

Habitat Units/100m (total channel length): 4.2

Average Unit Gradient: 1.8%

Habitat Units/100m (primary channel length): 5.1

Water temperature (°C): -

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D30	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	17%	Reach avg: 81%
Undercut Banks:	5%	Range: 69 - 89

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	134	16.4
Volume (m ³):	292	35.7
Key pieces (>=12m x 0.60m):	26	3.2

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

8/29/2006

REACH 1		T05N-R08W-S02SE					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	35	6.0	0.00	215	0	0	0	50	50	0	0
POOL-LATERAL SCOUR	15	255	5.2	0.65	1,299	15	7	14	39	26	5	9
PUDDLED UNIT	4	156	3.0	0.00	552	0	0	5	49	45	1	0
RAPID/BOULDERS	1	15	5.0	0.10	73	20	0	0	30	40	30	0
RIFFLE	18	534	4.4	0.08	2,409	211	1	7	48	33	8	3
STEP/COBBLE	2	14	9.5	0.08	139	9	0	10	45	33	13	0
Total:	42	1,008	4.9	0.27	4,687	255	Avg: 3	9	45	33	7	4

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	15	255	5.2	0.65	1,299	27.72%	15	1.2	
Glides	0	0			0	0.00%	0	0.0	
Riffles	18	534	4.4	0.08	2,409	51.40%	211	8.8	
Rapids	1	15	5.0	0.10	73	1.55%	20	27.6	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	2	14	9.5	0.08	139	2.97%	9	6.5	
Dry	6	191	4.0	0.00	767	16.37%	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:	15	14.9	18.4
Pools >=1m deep:	1	1.0	1.2
Complex pools (LWD pieces>=3):	8	7.9	9.8
Pool frequency (channel widths/pool):	6.1		
Residual pool depth (avg):	0.60		

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	610
Total conifers/1000 ft	549
Total conifers >20" dbh/1000 ft	81
Total conifers >35" dbh/1000 ft	81

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	1.0	2.3	1.3	2.7	1.7	5.0	4.0
15-30cm	0.0	0.7	0.7	1.3	1.7	1.0	2.3	3.0
30-50cm	0.0	1.7	0.3	0.7	0.0	0.3	0.3	2.7
50-90cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
>90cm	1.0	0.0	0.3	0.0	0.0	0.0	1.3	0.0
Total/100m2	1.0	3.7	3.7	3.3	4.3	3.0	3.0	3.3

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	71		74		78	
Shrub cover	20		18		15	
Grass/forb cover	71		72		66	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	17		50		50	
High terrace	67		50		50	
Low terrace	17		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 (%)	4		7		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	610
Total conifers/1000 ft	549
Total conifers >20" dbh/1000 ft	81
Total conifers >35" dbh/1000 ft	81

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	5.0	4.0
15-30cm	2.3	3.0
30-50cm	0.3	2.7
50-90cm	0.0	0.3
>90cm	1.3	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

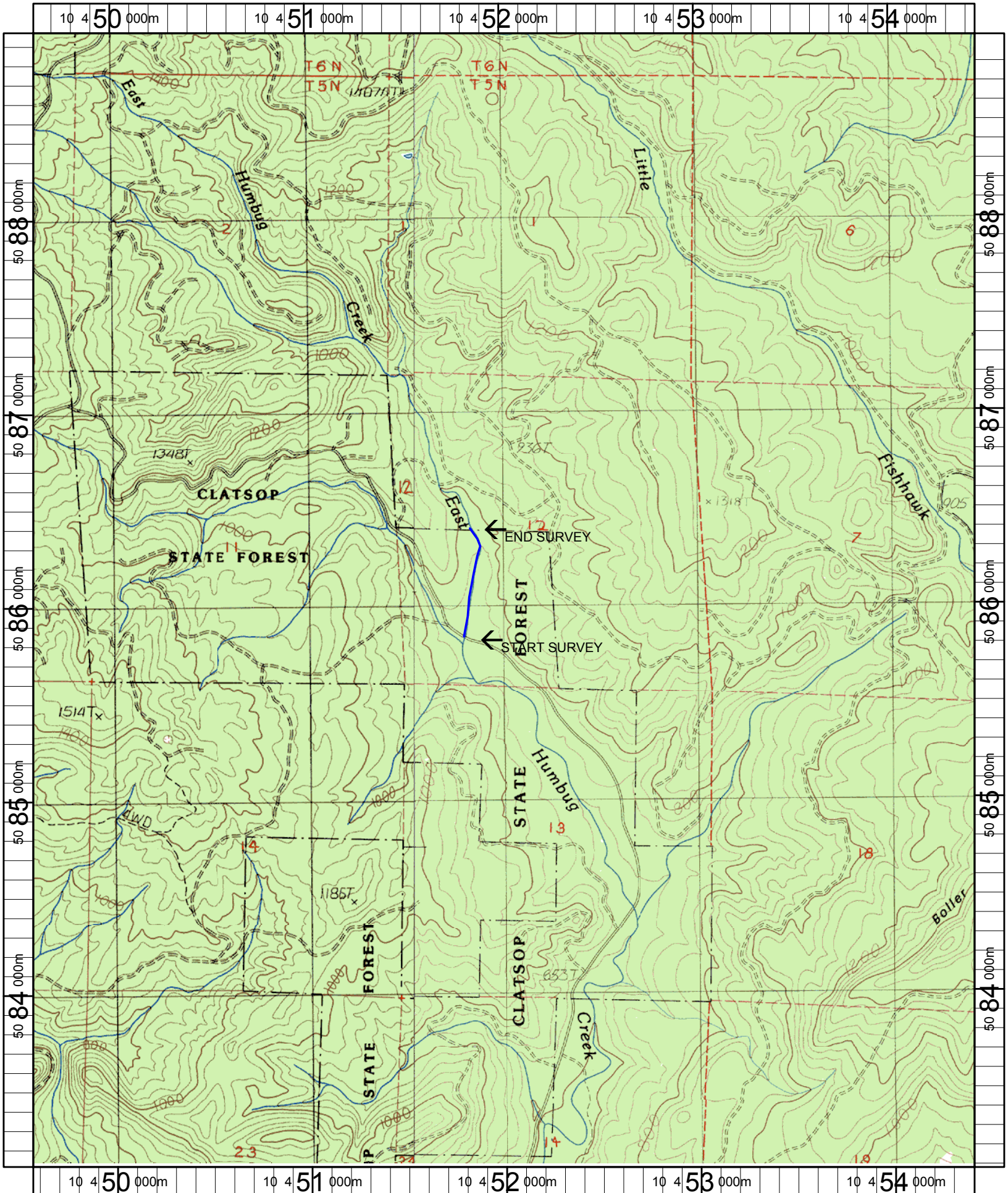
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
9	LF	2	HT	0	40	30	60	Conifer							
								Hardwood							
9	RT	1	HS	25	85	20	30	Conifer						2	
								Hardwood	1	1					
9	RT	2	HS	5	85	10	40	Conifer	2						
								Hardwood	2						
9	LF	3	HT	0	60	20	40	Conifer	3	2					
								Hardwood							
9	RT	3	HS	5	85	5	20	Conifer	4	1					
								Hardwood							
9	LF	1	HT	0	20	15	85	Conifer							UTM 0451861-5085932 (2D)
								Hardwood							
22	RT	1	HT	0	85	10	90	Conifer							NO AMPHIBIANS
								Hardwood			3				
22	RT	3	HS	20	85	5	95	Conifer		1					
								Hardwood		1	1				
22	LF	1	HT	0	70	40	60	Conifer							UTM 0451895-5086098 (2D)
								Hardwood	2		1				
22	RT	2	HS	20	85	0	100	Conifer	2		1			1	
								Hardwood	1	2	1				
22	LF	3	HT	0	70	20	80	Conifer		1					
								Hardwood	1						
22	LF	2	HT	0	70	30	70	Conifer	2	1					
								Hardwood	1						
35	RT	3	HS	15	85	10	90	Conifer	1						
								Hardwood	3						
35	RT	1	LT	0	85	5	90	Conifer						1	
								Hardwood				1			
35	LF	3	HT	0	80	30	70	Conifer							
								Hardwood	1	2					
35	LF	2	HT	0	80	30	70	Conifer	1	1					
								Hardwood							
35	LF	1	HT	0	80	30	70	Conifer							UTM 0451815-5086285 (2D)
								Hardwood			1	1			
35	RT	2	HS	15	85	10	90	Conifer							
								Hardwood		2	1				

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 1-NC SITE ID: 308 EAST HUMBUG CREEK #2 POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	01	48	/SS		RSN
4	RI	01	93	HS		
9	LP	00	197.5		RIPARIAN #1	
10	SC	01	202.5		H=0.40M	
17	LP	01	320.5	HS		
22	RI	00	405.5	HS	RIPARIAN #2	
28	RI	01	520	HS, /SS, DJ		DRY SEEP, FROGS
31	LP	00	568	HS		
32	RI	00	613	HS		
33	LP	00	627	HS, DJ		
34	SC	00	636		H=0.40M	
35	LP	00	663	HS		
38	RI	00	740.5	HS		
39	LP	00	771.5	HS		
42	RI	00	817		END SURVEY	



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

Location: 10 452006 E 5086026 N
 Caption: EAST HUMBUG CREEK #2 RESTORATION SITE - NEHALEM BASIN