

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

STREAM: Pebble Creek (NC-257)
BASIN: Nehalem River
SURVEY TYPE: Post-Tx
DATE: February 15, 2005
SURVEY CREW: Brian Bangs, Sheila Davis
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 55.5 km²
USGS MAPS: Vernonia
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Pebble Creek habitat survey extended 741 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 12.5 (range: 5.0-20.0). Land use for the reach was timber harvest and large (30-50 cm dbh) trees. The average unit gradient was 0.5 percent. Scour pools (62%) and riffles (30%) dominated stream habitat. Sand (49%) and gravel (36%) dominated stream substrate. Wood volume was moderate at 28.9 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

T04N-R04W-S21NW

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	12.5	VWI Range:	5 - 20

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	741	4,151	0
Secondary Channel	50	189	1
Off-Channel Units	50	132	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 5.0	Width: 7.8	9.7 (8.2 - 11.6)	12.7 (10.6 - 15.6)
Depth: 0.56	Height: 0.6	1.1 (0.9 - 1.4)	3.0 (2.7 - 3.4)

W:D ratio: 14.1

Entrenchment (ACW:FPW ratio): 1.2

Stream Flow Type: LF

Habitat Units/100m (total channel length): 5.5

Average Unit Gradient: 0.5%

Habitat Units/100m (primary channel length): 6.2

Water temperature (°C): 10.0 - 10.0

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

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

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	268	36.2
Volume (m ³):	214	28.9
Key pieces (>=12m x 0.60m):	5	0.7

OREGON DEPT OF FISH AND WILDLIFE

PEBBLE CREEK POST-TX (1-NC, 257)

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

2/15/2005

REACH 1		T04N-R04W-S21NW					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
GLIDE	2	32	4.5	0.40	141	0	5	58	28	0	0	10
POOL-BACKWATER	5	37	3.0	0.26	117	0	22	72	4	0	0	2
POOL-LATERAL SCOUR	21	457	5.8	0.91	2,773	0	11	62	24	0	0	2
PUDDLED UNIT	1	27	3.6	0.15	98	0	10	25	25	25	0	15
RIFFLE	16	286	4.7	0.27	1,341	0	6	27	62	1	0	4
STEP/LOG	1	1	6.1	0.05	4	0	0	20	80	0	0	0
Total:	46	840	5.0	0.56	4,473	0	Avg: 10	49	36	1	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	5	37	3.0	0.26	117	2.61%	0	0.0	
Scour Pools	21	457	5.8	0.91	2,773	61.99%	0	0.0	
Glides	2	32	4.5	0.40	141	3.15%	0	0.0	
Riffles	16	286	4.7	0.27	1,341	29.98%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	1	1	6.1	0.05	4	0.08%	0	0.0	
Dry	1	27	3.6	0.15	98	2.18%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

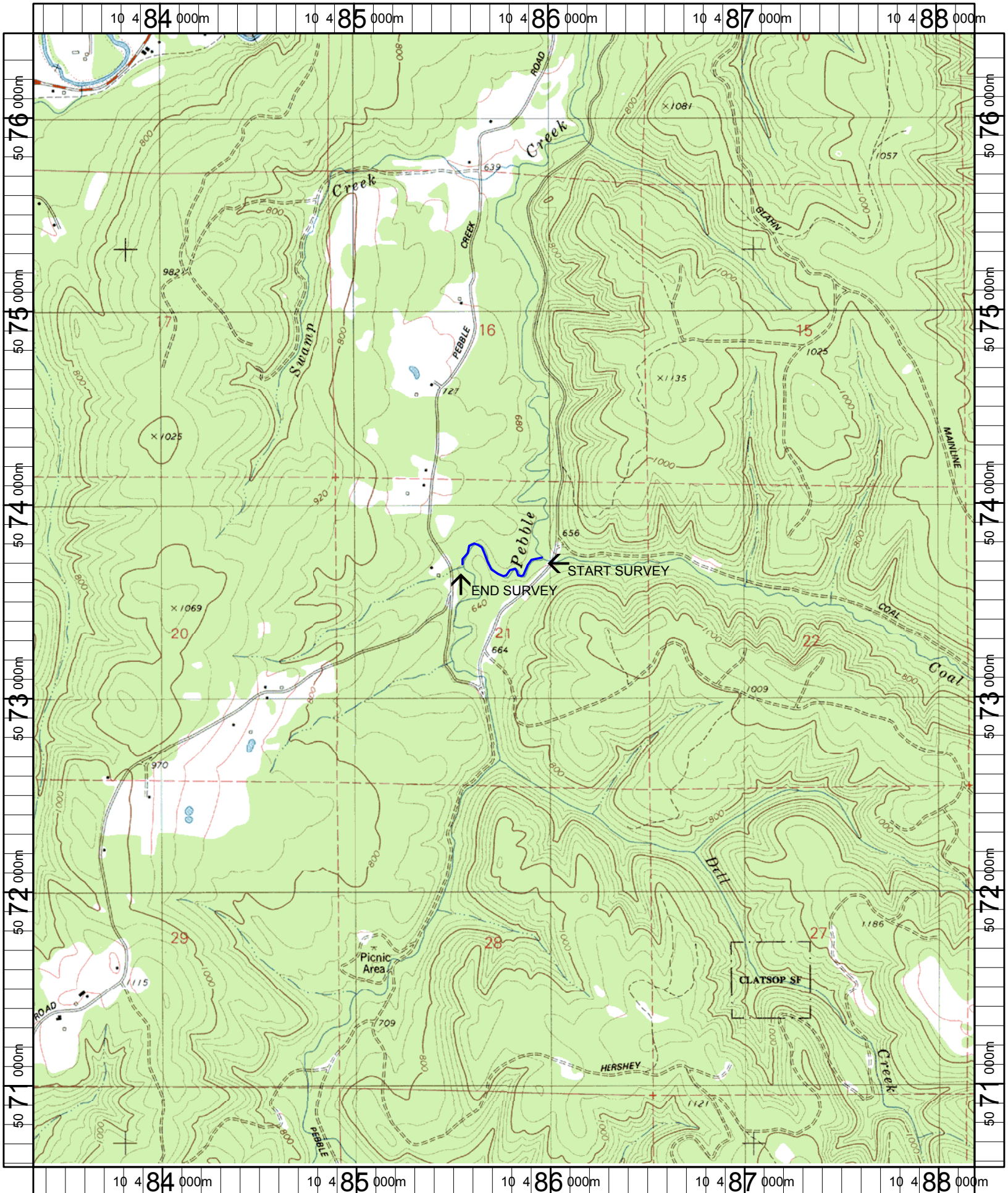
POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	
		<u># / Km</u>	<u>Primary Channel Length</u> <u># / Km</u>
All Pools:	26	31.0	35.1
Pools >=1m deep:	9	10.7	12.2
Complex pools (LWD pieces>=3):	14	16.7	18.9
Pool frequency (channel widths/pool):	4.1		
Residual pool depth (avg):	0.57		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **1-NC** SITE ID: **257** **PEBBLE CREEK POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	18.8	DJ	CT,CT,D30,M15,TH,LT	
3	LP	00	55.3	DJ		
5	SL	00	63.1	HS	H=15	
6	LP	00	98.6	HS, BV		
8	LP	00	163.7	SS/,HS,BV	CT,CT,K30,D50,TH,LT	
11	LP	00	214.7	HS		
12	LP	00	245.9	HS,DJ		
14	LP	00	306.9	HS,BV	CT,CT,D30,S,TH,LT	
15	RI	00	323.2	BV		
16	LP	00	349.6	HS,DJ		
17	LP	00	366.9	SS/		
18	GL	00	378.2		CT,CT,D30,S,TH,LT	
19	LP	00	424.6	BV		
23	RI	00	477.5	HS		
28	RI	00	549.3		OLD END SIGN	
34	RI	01	608.5	/SS		
36	BW	10	626.8	DJ		
40	LP	02	626.8		DEAD COHO	
45	RI	01	740.5		CA,CT,M30,D15,TH,LT	



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

Location: 10 485766 E 5073505 N
Caption: PEBBLE CREEK RESTORATION SITE - NEHALEM BASIN