

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

STREAM: Pebble Creek (NC-259)
BASIN: Nehalem River
SURVEY TYPE: Reference
DATE: February 15, 2005
SURVEY CREW: Brain 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 610 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 8.8 (range: 5.5-14.0). 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 (67%) and riffles (23%) dominated stream habitat. Sand (54%) and gravel (32%) dominated stream substrate. Wood volume was low at 12.9 m³/100m.

COMMENTS:

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

REACH 1

T04N-R04W-S21NE

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	8.8	VWI Range:	5.5 - 14

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	610	3,643	0
Secondary Channel	0	0	0
Off-Channel Units	9	28	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 5.9	Width: 9.1	11.0 (10.1 - 12.5)	13.7 (12.2 - 16.2)
Depth: 0.83	Height: 0.7	1.3 (1.1 - 1.4)	2.9 (2 - 3.4)

W:D ratio: 14.2
 Stream Flow Type: LF
 Average Unit Gradient: 0.5%
 Water temperature (°C): 1.0 - 1.0

Entrenchment (ACW:FPW ratio): 1.2
 Habitat Units/100m (total channel length): 5.3
 Habitat Units/100m (primary channel length): 5.4

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):	147	24.1
Volume (m ³):	79	12.9
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

PEBBLE CREEK REFERENCE (1-NC, 259)

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

2/15/2005

REACH 1		T04N-R04W-S21NE					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	27	4.7	0.28	125	0	5	28	45	0	8	15
POOL-BACKWATER	1	9	3.2	0.40	28	0	10	75	15	0	0	0
POOL-BEAVER DAM	1	35	5.4	0.85	189	0	8	42	17	0	17	17
POOL-LATERAL SCOUR	17	395	6.1	1.25	2,473	0	11	69	16	0	0	4
RIFFLE	11	153	5.8	0.39	851	0	7	37	56	0	0	0
STEP/LOG	1	1	8.4	0.10	5	0	0	30	70	0	0	0
Total:	33	619	5.9	0.83	3,671	0	Avg: 9	54	32	0	1	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	2	44	4.3	0.63	217	5.90%	0	0.0	
Scour Pools	17	395	6.1	1.25	2,473	67.37%	0	0.0	
Glides	2	27	4.7	0.28	125	3.41%	0	0.0	
Riffles	11	153	5.8	0.39	851	23.19%	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	8.4	0.10	5	0.14%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

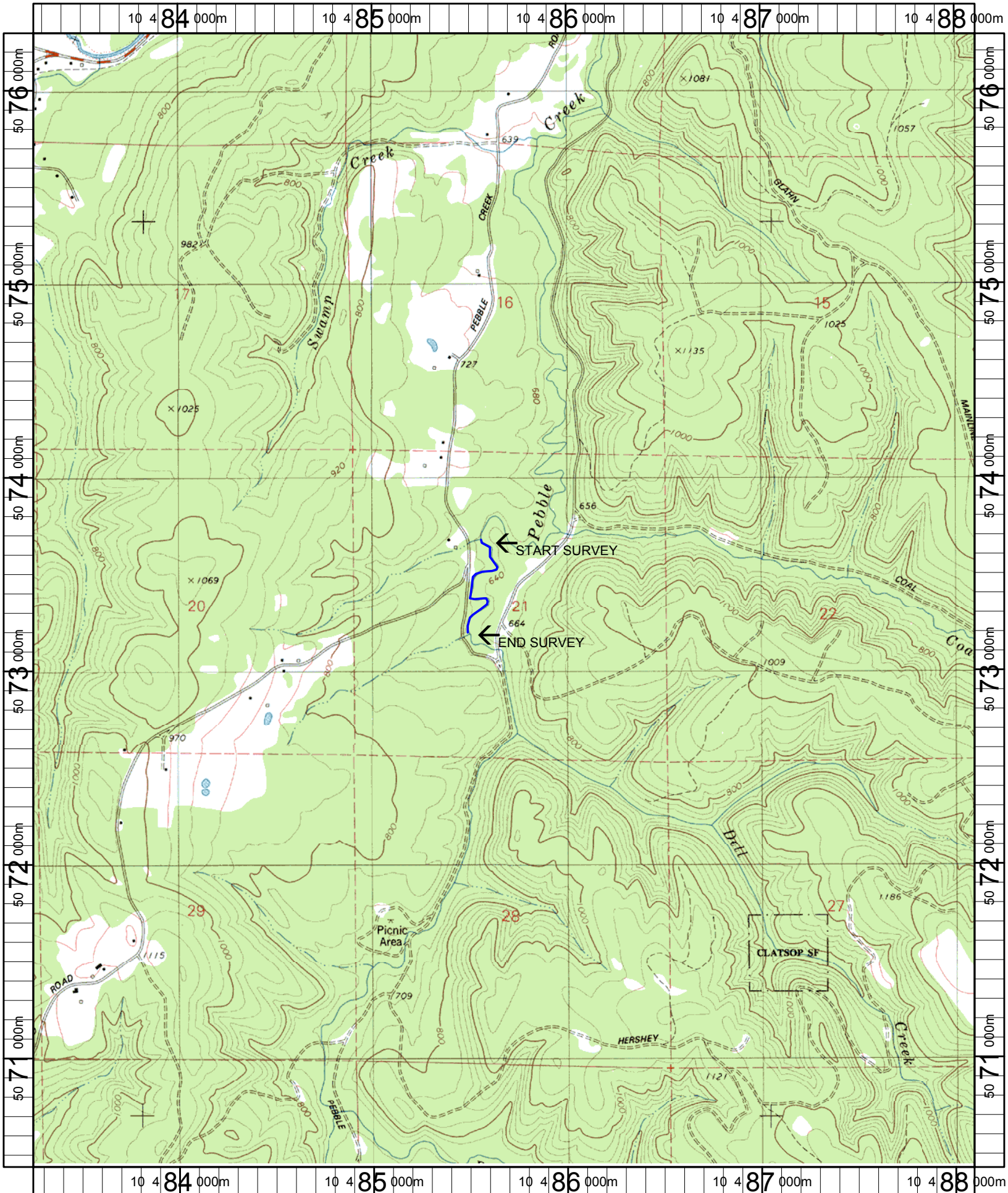
POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	19	30.7	31.2
Pools >=1m deep:	13	21.0	21.3
Complex pools (LWD pieces>=3):	14	22.6	23.0
Pool frequency (channel widths/pool):	3.6		
Residual pool depth (avg):	0.94		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **1-NC** SITE ID: **259** **PEBBLE CREEK REFERENCE**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	GL	00	13.5		CA,CT,M30,D15,TH,LT	
2	LP	00	45.6		STARTED AT TRIB RT	
6	SL	00	78.5		H=0.2	
7	LP	00	109.6	DJ		
9	LP	00	167		CA,CT,D30,C30,TH,LT	
13	LP	00	249.4	DJ		
14	RI	01	276.6		CT,CT,D30,C30,S,TH,LT	
17	LP	00	324.6	DJ	COHO CARCASS	
20	LP	00	377	DJ,DJ	CT,CT,D30,S,TH,LT	
27	LP	00	477.5	DJ		
29	LP	00	509.5	DJ	DEAD COHO	
31	RI	00	549.8	BV		
32	LP	00	574.9	BV	BEAVER DAM, FLOW THRU AROUND	
33	BP	00	609.9	BV	CA,CT,D30,S,LT,YT	



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

Location: 10 485675 E 5073364 N
 Caption: PEBBLE CREEK REFERENCE RESTORATION SITE - NEHALEM BASIN