

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

STREAM: Coal Creek (NC-16)
BASIN: Nehalem River
SURVEY TYPE: Post-Tx
DATE: February 21, 2001
SURVEY CREW: Todd Boswell, Sean Allen
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 8.5 km²
USGS MAPS: Vernonia
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Coal Creek habitat survey extended 552 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 8.0. Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 0.9 percent. Riffles (59%) and scour pools (34%) dominated stream habitat. Gravel (40%) and sand (35%) dominated stream substrate. Wood volume was high at 36.6 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 SUMMARY

REACH 1

T4N-R4W-S23SW

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 avg: 8.0 range: 8.0-8.0

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	552	2,794	0
Secondary	128	433	1

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	4.5	Width	6.8	11.4	15.1
Depth	0.41	Height	0.5	0.9	1.3
		W:D ratio	13.5	Entrenchment	1.7

Stream Flow Type: MF Water Temp: 4.0-4.0°C
Avg. Unit Gradient: 0.9% Habitat Units/100m: 6.2

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	0%	Reach avg: 0%
Undercut Banks	0%	Range: 0- 0

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ($\geq 3m \times 0.15m$)	201	36.4
Volume (m ³)	202	36.6
Key pieces ($\geq 10m \times 0.6m$)	6	1.1

HABITAT UNIT SUMMARY

REACH 1

T4N-R4W-S23SW

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	Cbbl	Bldr	Bdrk
DRY CHANNEL	1	28	4.0	0.00	110	0	10	45	45	0	0	0
POOL-BACKWATER	7	39	2.7	0.39	117	0	8	67	20	5	0	0
POOL-LATERAL SCOUR	15	200	5.0	0.66	1,011	0	4	44	34	17	1	0
POOL-STRAIGHT SCOUR	1	19	5.3	0.50	101	0	5	40	35	20	0	0
RIFFLE	17	364	4.6	0.21	1,683	0	0	14	54	28	3	0
RIFFLE W/ POCKETS	1	30	6.8	0.45	205	0	0	25	55	20	0	0
Total:	42	680	4.5	0.41	3,227	0	Avg: 3	35	40	19	2	0

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m ²)	Percent	Large Boulders Number	#/100m ²
Dammed & BW Pools	7	39	2.7	0.39	117	3.61	0	0.0
Scour Pools	16	219	5.1	0.65	1,112	34.47	0	0.0
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	18	395	4.7	0.23	1,888	58.51	0	0.0
Rapids	0	0	-	-	0	0.00	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	0	0	-	-	0	0.00	0	0.0
Dry	1	28	4.0	0.00	110	3.41	0	0.0

POOL SUMMARY

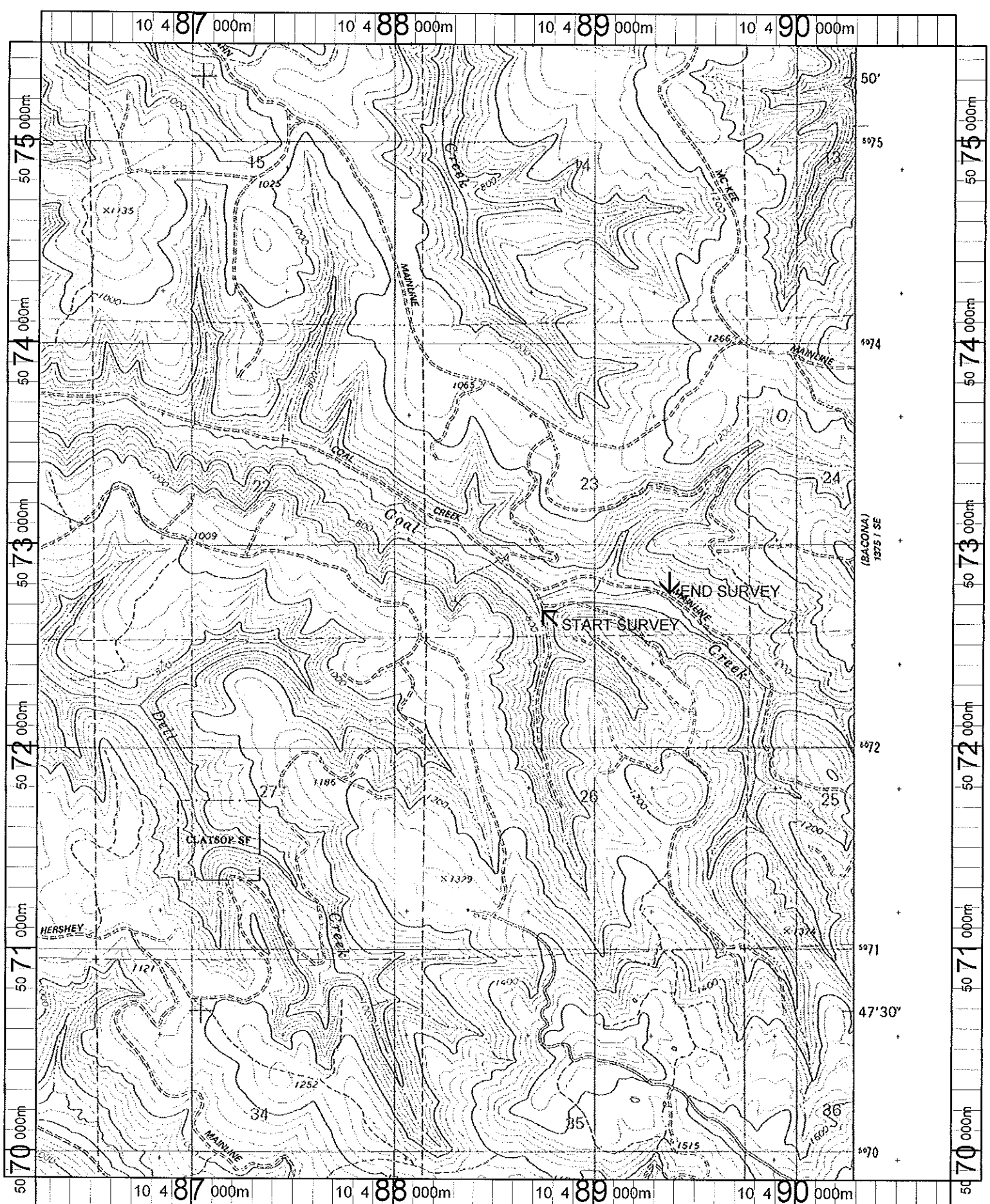
All Pools	<u>Total</u>	<u>#/Km</u>
	23	33.8
Pools ≥1m deep:	1	1.5
Complex pools (LWD pieces ≥3):	12	17.6
Pool Frequency (channel widths/pool):	4.4	
Residual pool depth (avg)	0.50m	

STREAM SUMMARY

COAL CREEK POST-TX

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area					Total Large Boulder	
					S/O	Sand	Grvl	Cbbl	Bldr		Bdrk
42	680	4.5	0.41	3,227	3	35	40	19	2	0	0

Habitat Group	Wetted Area	
	(m ²)	Percent
Scour Pool	1,112	34.5
Backwater Pools	117	3.6
Glide	0	0.0
Riffle	1,888	58.5
Rapid	0	0.0
Cascade	0	0.0
Step	0	0.0
Dry	110	3.4



Name: VERNONIA
 Date: 10/3/101
 Scale: 1 inch equals 2000 feet

Location: 10 488415 E 5072647 N
 Caption: COAL CREEK RESTORATION SITE - NEHALEM
 BASIN