

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

STREAM: Hamilton Creek (N106)
BASIN: Nehalem River
SURVEY TYPE: Reference
DATE: February 6, 2002
SURVEY CREW: Rachel Werner, Sean Allen
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 16.8 km²
USGS MAPS: Vinemaple
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Hamilton Creek habitat survey extended 613 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 10.8 (range: 5 - 20). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.2 percent. Scour pools (65%) and riffles (16%) dominated stream habitat. Cobble (27%), bedrock (25%) and gravel (24%) dominated stream substrate. Wood volume was low at 6.3 m³/100m.

COMMENTS:

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

The crew noted evidence of beaver activity during the survey.

REACH

T6N-R7W-S32SE

REACH

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	10.8	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	613	5,081	0
Secondary	48	131	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 7.6	Width: 11.5	22.4 (16.8 - 30.5)	26.4 (20 - 40)
Depth: 0.76	Height: 0.6	1.2 (1.1 - 1.2)	1.3 (1.2 - 1.5)

W:D ratio: 19.2

Entrenchment (ACW:FPW ratio): 4.7

Stream Flow Type: MF

Habitat Units/100m (total channel length): 4.8

Average Unit Gradient: 1.2%

Habitat Units/100m (primary channel length): 5.2

Water temperature (°C): 5.0 - 5.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D3	D30

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):	56	9.1
Volume (m ³):	39	6.3
Key pieces (>=12m x 0.60m):	1	0.2

OREGON DEPARTMENT OF FISH AND WILDLIFE

HAMILTON CR REFERENCE (N106)

HABITAT INVENTORY

Report Date: 11/15/2013

Survey Date:

2/6/2002

REACH	T6N-R7W-S32SE							REACH				
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
POOL-BACKWATER	2	23	4.6	0.50	99	0	16	75	10	0	0	0
POOL-LATERAL SCOUR	12	249	8.5	1.18	2,208	0	1	5	24	28	9	33
POOL-PLUNGE	1	15	8.1	1.50	120	0	1	4	10	15	30	40
POOL-STRAIGHT SCOUR	4	129	7.8	0.93	1,036	0	1	5	19	20	10	46
PUDDLED UNIT	1	16	1.4	0.30	23	0	10	80	10	0	0	0
RAPID/BEDROCK	1	18	8.5	0.25	151	0	0	0	25	30	15	30
RAPID/BOULDERS	4	59	8.4	0.26	474	0	0	0	33	43	24	1
RIFFLE	4	113	7.4	0.39	822	0	0	2	31	31	12	24
STEP/BOULDERS	1	2	9.3	0.30	15	0	0	0	30	45	25	0
STEP/COBBLE	1	8	1.1	0.05	9	0	0	30	40	30	0	0
STEP/LOG	1	29	8.8	0.30	255	0	0	0	20	20	20	40
Total:	32	661	7.6	0.76	5,212	0	Avg: 2	11	24	27	12	25

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	23	4.6	0.50	99	1.90%	0	0.0
Scour Pools	17	393	8.3	1.14	3,365	64.55%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	4	113	7.4	0.39	822	15.76%	0	0.0
Rapids	5	76	8.4	0.26	625	11.99%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	3	39	6.4	0.22	279	5.35%	0	0.0
Dry	1	16	1.4	0.30	23	0.44%	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:	19	28.8	31.0
Pools >=1m deep:	11	16.6	17.9
Complex pools (LWD pieces>=3):	7	10.6	11.4
Pool frequency (channel widths/pool):	3.0		
Residual pool depth (avg):	0.86		

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: 1-NC SITE ID: 106 HAMILTON CR REFERENCE (N106)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	SB	00	12.7		H = .3
8	SP	00	188.9	BV	
25	SP	01	491.7	/TJ	
30	SL	00	569.4		H = .3
31	LP	00	593.9	/LA	