

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

STREAM: Hamilton Creek (N107)
BASIN: Nehalem River
SURVEY TYPE: 6 Year Post-Tx
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 662 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.1 (range: 2.5 – 10.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.9 percent. Riffles (46%) and scour pools (41%) dominated stream habitat. Cobble (32) and gravel (23%) dominated stream substrate. Wood volume was low at 15.8 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

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	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	5.1	VWI Range:	2.5 - 10

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	662	7,148	0
Secondary	217	743	2

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 3
Width: 8.8	Width: 12.9	28.1 (13.6 - 37.8)	31.7 (15 - 40)
Depth: 0.55	Height: 0.6	1.2 (1.2 - 1.3)	1.5 (1.4 - 1.5)

W:D ratio: 21.3

Entrenchment (ACW:FPW ratio): 2.2

Stream Flow Type: MF

Habitat Units/100m (total channel length): 5.0

Average Unit Gradient: 1.9%

Habitat Units/100m (primary channel length): 6.6

Water temperature (°C): 5.5 - 5.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D30	C30

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):	112	16.9
Volume (m ³):	104	15.8
Key pieces (>=12m x 0.60m):	4	0.6

OREGON DEPARTMENT OF FISH AND WILDLIFE

HAMILTON CR POST-TX (N107)

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
DRY UNIT	1	6	1.7	0.00	10	0	0	30	10	35	25	0
POOL-ALCOVE	1	31	1.9	0.80	58	0	30	70	0	0	0	0
POOL-BACKWATER	2	14	2.1	0.40	27	0	8	35	33	23	3	0
POOL-DAMMED	1	15	7.2	1.40	107	0	6	11	28	33	22	0
POOL-LATERAL SCOUR	13	234	14.3	0.93	3,065	0	3	12	24	29	13	20
POOL-PLUNGE	1	14	5.5	0.90	75	0	0	5	15	45	35	0
POOL-STRAIGHT SCOUR	1	18	5.9	0.90	108	0	0	5	25	30	10	30
PUDDLED UNIT	1	44	1.4	0.70	62	0	17	44	22	11	6	0
RAPID/BOULDERS	4	82	7.6	0.35	624	0	0	4	23	34	21	19
RIFFLE	13	384	8.4	0.32	3,555	0	0	10	22	40	22	7
RIFFLE W/ POCKETS	1	12	4.4	0.50	53	0	0	10	35	35	20	0
STEP/BEDROCK	1	7	1.3	0.10	8	0	0	1	1	1	1	96
STEP/BOULDERS	2	11	11.4	0.20	128	0	0	0	15	55	30	0
STEP/COBBLE	2	9	2.9	0.08	12	0	0	10	40	18	33	0
Total:	44	879	8.8	0.55	7,891	0	Avg: 2	13	23	32	18	12

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	4	60	3.3	0.75	191	2.43%	0	0.0
Scour Pools	15	266	13.1	0.93	3,248	41.16%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	14	396	8.1	0.34	3,608	45.72%	0	0.0
Rapids	4	82	7.6	0.35	624	7.91%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	5	26	6.0	0.13	148	1.88%	0	0.0
Dry	2	50	1.6	0.35	72	0.91%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY			
	<u>Total</u>	<u>Total of all Channel Lengths # / Km</u>	<u>Primary Channel Length # / Km</u>
All Pools:	19	21.6	28.7
Pools >=1m deep:	7	8.0	10.6
Complex pools (LWD pieces>=3):	6	6.8	9.1
Pool frequency (channel widths/pool):	3.6		
Residual pool depth (avg):	0.73		

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: 1-NC SITE ID: 107 HAMILTON CR POST-TX (N107)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	01	33.8	HS	
6	LP	01	102.4	HS	LOGS
8	RB	01	139.7	TJ/	
9	SC	11	139.7		H = 1.2
11	LP	02	139.7	HS	
12	SB	02	139.7		H = .4
13	LP	00	153.7	HS	LOGS
15	LP	00	206.3	HS	LOGS
20	LP	00	321.2	HS	LOGS
21	SB	00	327.7		H = .5
23	LP	01	384.7	/TJ	
24	SR	11	384.7		H = 3.0
25	RB	01	407.7	HS	
31	SC	01	475.1		H = .3
32	DP	01	489.9	HS	LOGS
34	LP	02	489.9	/SS	
36	RI	01	544.2	TJ/	
40	RI	01	581.3	HS	LOGS
41	BW	10	581.3	SS/	
43	LP	00	632.8	HS	