

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

STREAM: Hamilton Creek (W160)  
BASIN: South Santiam River  
SURVEY TYPE: Pre-Tx  
DATE: February 4, 2002  
SURVEY CREW: Russ Macal, Loren Stucker  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 85.0 km<sup>2</sup>  
USGS MAPS: Lacombe  
ECOREGION: Willamette Valley Foothills

**GENERAL DESCRIPTION:**

The Hamilton Creek habitat survey extended 536 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 10.0. Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 0.6 percent. Scour pools (59%) and riffles (28%) dominated stream habitat. Gravel (40%) and cobble (38%) dominated stream substrate. Wood volume was low at 5.0 m<sup>3</sup>/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

T12S-R1E-S17SW

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	10.0	VWI Range:	10 - 10

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	536	5,611	0
Secondary	147	340	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 8.4	Width: 15.1	19.7 ( 13.7 - 24.7 )	23.5 ( 14.2 - 39.5 )
Depth: 0.72	Height: 0.6	1.2 ( 1 - 1.4 )	1.4 ( 1.1 - 2 )

W:D ratio: 27.5

Entrenchment (ACW:FPW ratio): 1.3

Stream Flow Type: MF

Habitat Units/100m (total channel length): 3.8

Average Unit Gradient: 0.6%

Habitat Units/100m (primary channel length): 4.9

Water temperature (°C): 4.5 - 4.5

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D15	

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):	19	3.5
Volume (m <sup>3</sup> ):	27	5.0
Key pieces (>=12m x 0.60m):	2	0.4

OREGON DEPARTMENT OF FISH AND WILDLIFE

HAMILTON CREEK PRE-TX (W-160)

HABITAT INVENTORY

Report Date: 11/15/2013

Survey Date:

2/4/2002

REACH	T12S-R1E-S17SW							REACH					
HABITAT DETAIL													
Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area						
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
POOL-LATERAL SCOUR	11	363	9.2	1.26	3,538	0	4	17	35	36	5	3	
RAPID/BOULDERS	4	64	7.5	0.45	505	0	1	4	31	56	9	0	
RIFFLE	9	233	6.9	0.28	1,637	0	4	12	48	33	3	0	
STEP/COBBLE	2	22	12.0	0.30	272	0	0	3	50	43	5	0	
<b>Total:</b>	26	683	8.4	0.72	5,951	0	<b>Avg:</b> 3	12	40	38	5	1	

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )	
Dammed & BW Pools	0	0			0	0.00%	0	0.0	
Scour Pools	11	363	9.2	1.26	3,538	59.45%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	9	233	6.9	0.28	1,637	27.50%	0	0.0	
Rapids	4	64	7.5	0.45	505	8.48%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	2	22	12.0	0.30	272	4.57%	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	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	11	16.1	20.5
Pools >=1m deep:	9	13.2	16.8
Complex pools (LWD pieces>=3):	2	2.9	3.7
Pool frequency (channel widths/pool):	4.1		
Residual pool depth (avg):	0.89		

# Comment Summary

## Oregon Plan Monitoring Sites 2002

MONITORING AREA: **8-W**      SITE ID: **160**      **HAMILTON CREEK PRE-TX (W-160)**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	LP	00	20.3	CS/, BC	BEGIN AT BC
2	RB	01	30		SOMEWHAT CLOUDY WATER
3	LP	01	59.7	BV	
6	LP	01	129.8	BV	
11	LP	00	228	/SS	.2M STEP BETWEEN POOLS
18	LP	00	432.4	BV	
19	RB	01	457.4		90% OF FLOW
23	RI	03	522.7	SS/, TJ/	CS/
24	RI	11	522.7		TRIB ENTERS INTO 03 CHANNEL
26	SC	00	535.6	BV	END SIGN ON LARGE COTTONWOOD/