

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

STREAM: Miller Creek (L193)  
BASIN: Clatskanie River  
SURVEY TYPE: Pre-Tx  
DATE: March 28, 2005  
SURVEY CREW: Brian Duggan, Sheila Davis  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 13.0 km<sup>2</sup>  
USGS MAPS: Clatskanie  
ECOREGION: Coast Range Astoria Willapa

**GENERAL DESCRIPTION:**

The Miller Creek habitat survey extended 538 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 2.2 (range: 1.0-4.0). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 4.0 percent. Rapids (84%) dominated stream habitat. Cobble (28%) and gravel (26%) dominated stream substrate. Wood volume was very low at 4.5 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T07N-R04W-S35SW

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	0%
Moderate V-shape	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	2.2	VWI Range:	1 - 4

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	100%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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 Channel	538	2,521	0
Secondary Channel	30	51	0
Off-Channel Units	20	42	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 2
Width: 4.4	Width: 7.2	12.7 ( 9.4 - 17.1 )	15.0 ( 11 - 19 )
Depth: 0.41	Height: 0.5	0.9 ( 0.8 - 1.2 )	1.5 ( 1.3 - 1.7 )

W:D ratio: 16.2  
 Stream Flow Type: MF  
 Average Unit Gradient: 4.0%  
 Water temperature (°C): 7.5 - 7.5

Entrenchment (ACW:FPW ratio): 1.8  
 Habitat Units/100m (total channel length): 5.6  
 Habitat Units/100m (primary channel length): 6.1

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D30	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):	32	5.9
Volume (m <sup>3</sup> ):	24	4.5
Key pieces (>=12m x 0.60m):	1	0.2

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

3/28/2005

REACH 1		T07N-R04W-S35SW					REACH 1					
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
CULVERT CROSSING	1	24	1.9	0.60	46	0	0	0	0	0	0	100
POOL-BACKWATER	4	20	2.3	0.38	42	0	15	49	24	10	1	1
POOL-LATERAL SCOUR	2	27	9.0	1.00	283	0	2	10	31	32	20	5
POOL-PLUNGE	1	7	3.5	0.85	24	0	10	5	20	30	35	0
RAPID/BOULDERS	22	502	4.4	0.36	2,187	0	5	10	26	31	26	3
RIFFLE	1	7	3.6	0.40	26	0	5	10	65	15	5	0
STEP/LOG	2	1	4.8	0.18	6	0	5	13	20	40	22	0
<b>Total:</b>	<b>33</b>	<b>589</b>	<b>4.4</b>	<b>0.41</b>	<b>2,614</b>	<b>0</b>	<b>Avg: 6</b>	<b>14</b>	<b>26</b>	<b>28</b>	<b>21</b>	<b>5</b>

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	4	20	2.3	0.38	42	1.60%	0	0.0	
Scour Pools	3	34	7.2	0.95	307	11.73%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	1	7	3.6	0.40	26	1.01%	0	0.0	
Rapids	22	502	4.4	0.36	2,187	83.67%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	2	1	4.8	0.18	6	0.24%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	24	1.9	0.60	46	1.74%	0	0.0	

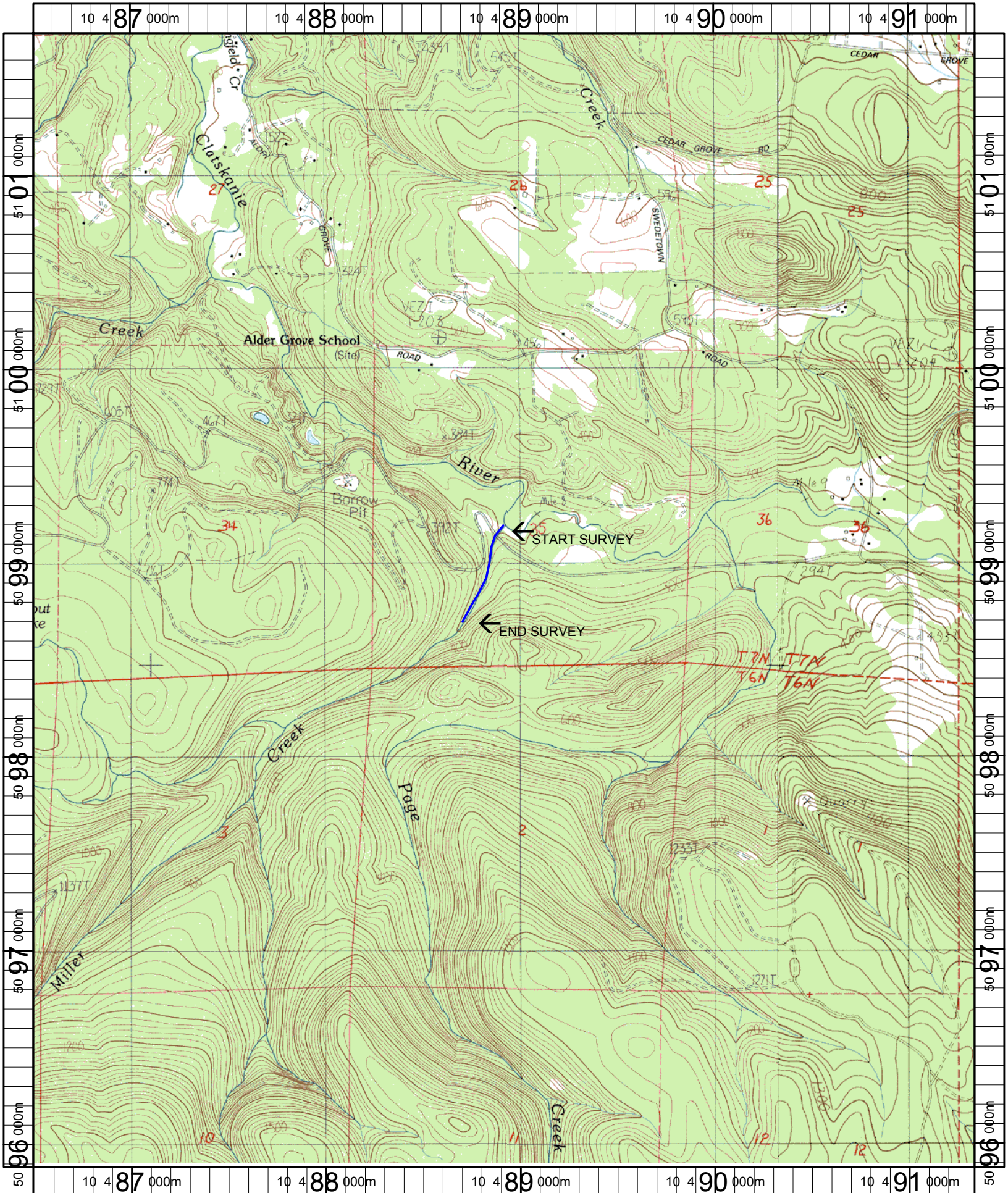
POOL SUMMARY				
	Total	Total of all Channel Lengths		Primary Channel Length
		# / Km	# / Km	# / Km
All Pools:	7	11.9		13.0
Pools >=1m deep:	1	1.7		1.9
Complex pools (LWD pieces>=3):	1	1.7		1.9
Pool frequency (channel widths/pool):	11.7			
Residual pool depth (avg):	0.65			

# Comment Summary

## Restoration Monitoring Sites 2005

MONITORING AREA: 7-L      SITE ID: 193      MILLER CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RB	00	11.7			CH MV D30 D15 ST LT
2	LP	00	29.4	CE		CABLES ACROSS POOL
3	CC	00	53.4	CC		H = 2.1, W=2.1
6	RB	01	142.2			CH MV D30 G ST LT
8	PP	00	149	DJ		
9	SL	00	149.8			H 0.35M
11	RB	00	195.8	SS/		
14	RB	01	260.1			CH MV D30 G ST LT
17	RB	01	299.8	BV		
18	RB	01	319.9	DJ		
20	RB	00	339.7	/SS		
22	RB	00	373.1	/SS		
25	SL	00	416.8			H = 0.45M
26	RB	00	426.5			CA CT D50 D15 ST LT
33	RB	00	538.4	/SS		CT MT D50 S ST YT



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

Location: 10 488918 E 5098806 N  
 Caption: MILLER CREEK RESTORATION SITE - CLATSKANIE BASIN