

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

STREAM: Miller Creek (L-193)
BASIN: Clatskanie River
SURVEY TYPE: Pre-Tx
DATE: July 1, 2003
SURVEY CREW: Trevor Diemer, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 13.0 km²
USGS MAPS: Clatskanie
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Miller Creek habitat survey extended 544 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 1.6 (range: 1.2-2.2). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 4.9 percent. Rapids (53%) and riffles (28%) dominated stream habitat. Cobble (38%) and gravel (37%) dominated stream substrate. Wood volume was low at 13.7 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 1

T07N-R04W-S35NW

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 1.6		VWI Range: 1.2 - 2.2	

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	544	2,937	0
Secondary	32	40	1

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	5.2	Width	9.6	14.9	10.4
Depth	0.30	Height	0.6	1.3	1.4
		W:D ratio	15.1	Entrenchment	1.6

Stream Flow Type:	LF	Water temp (C):	13.3 - 13.3
Avg. Unit Gradient:	4.9%	Habitat Units/100m:	5.6

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	6%	Reach avg: 74%
Undercut Banks:	6%	Range: 42 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces ($\geq 3m \times 0.15m$):	30	5.5
Volume (m^3):	75	13.7
Key pieces ($\geq 10m \times 0.60m$):	4	0.7

OREGON DEPARTMENT OF FISH AND WILDLIFE

MILLER CREEK PRE-TX (L-193)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

7/1/03

REACH 1		T07N-R04W-S35NW					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	Cbl	Bldr	Bdrk	
CASCADE/BOULDERS	2	31	4.1	0.23	126	27	0	0	30	55	15	0	
CULVERT CROSSING	1	37	2.2	0.25	81	0	10	19	57	10	5	0	
POOL-BACKWATER	1	7	1.5	0.20	11	0	25	50	20	5	0	0	
POOL-LATERAL SCOUR	5	34	4.4	0.59	151	17	2	14	39	32	9	5	
POOL-PLUNGE	1	3	9.2	0.50	26	0	5	21	37	37	0	0	
POOL-STRAIGHT SCOUR	1	12	12.6	1.00	147	3	5	10	35	45	5	0	
PUDDLED UNIT	1	25	1.2	0.05	30	0	20	33	33	13	0	0	
RAPID/BOULDERS	17	383	4.1	0.22	1,568	180	0	5	35	42	15	2	
RIFFLE	2	44	15.4	0.18	827	6	0	8	44	38	8	3	
STEP/LOG	1	1	9.8	0.15	11	0	0	0	50	50	0	0	
Total:	32	576	5.2	0.30	2,977	233	Avg	2	10	37	38	11	2

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		32
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	1	7	1.5	0.20	11	0.35%	0	0.0	
Scour Pools	7	49	6.3	0.64	324	10.87%	20	6.2	
Glides	0	0			0	0.00%	0	0.0	
Riffles	2	44	15.4	0.18	827	27.77%	6	0.7	
Rapids	17	383	4.1	0.22	1,568	52.67%	180	11.5	
Cascades	2	31	4.1	0.23	126	4.24%	27	21.4	
Step/Falls	1	1	9.8	0.15	11	0.36%	0	0.0	
Dry	1	25	1.2	0.05	30	1.00%	0	0.0	
Culverts	1	37	2.2	0.25	81	2.73%	0	0.0	

POOL SUMMARY		
	<u>Total</u>	<u># / Km</u>
All Pools:	8	13.9
Pools >=1m deep:	1	1.7
Complex pools (LWD pieces>=3):	1	1.7
Pool frequency (channel widths/pool):	7.5	
Residual pool depth (avg):	0.44	

STREAM SUMMARY

MILLER CREEK PRE-TX (L-193)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Large Boulders (>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
32	576	5.2	0.30	2,977	2	10	37	38	11	2	233

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	11	0.35%
Scour Pools	324	10.87%
Glides	0	0.00%
Riffles	827	27.77%
Rapids	1,568	52.67%
Cascades	126	4.24%
Step/Falls	11	0.36%
Dry	30	1.00%
Culverts	81	2.73%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1	REACH 1
Summary of Riparian Zone (0-30m) 3 transects	
Total hardwoods/1000	1118
Total conifers/1000 ft	406
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters		Zones 1-3 0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	4.7	0.7	3.3	2.7	3.7	3.3	11.7
15-30cm	0.3	1.7	0.7	2.3	1.7	1.0	2.7	5.0
30-50cm	0.3	0.0	0.0	0.7	0.3	0.0	0.7	0.7
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
Total/100m2	0.7	7.3	1.3	6.3	4.7	4.7	2.2	6.1

Canopy closure and ground cover

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Canopy closure	86	82	77
Shrub cover	41	41	43
Grass/forb cover	54	51	45

Predominant landform in each zone

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Hillslope	83	83	83
High terrace	17	17	17
Low terrace	0	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	0	0
Riprap	0	0	0
Surface slope (%)	53	51	44

Summary of Riparian Zone (0-30m) for all reaches 3 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000	1118
Total conifers/1000 ft	406
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-m wide band

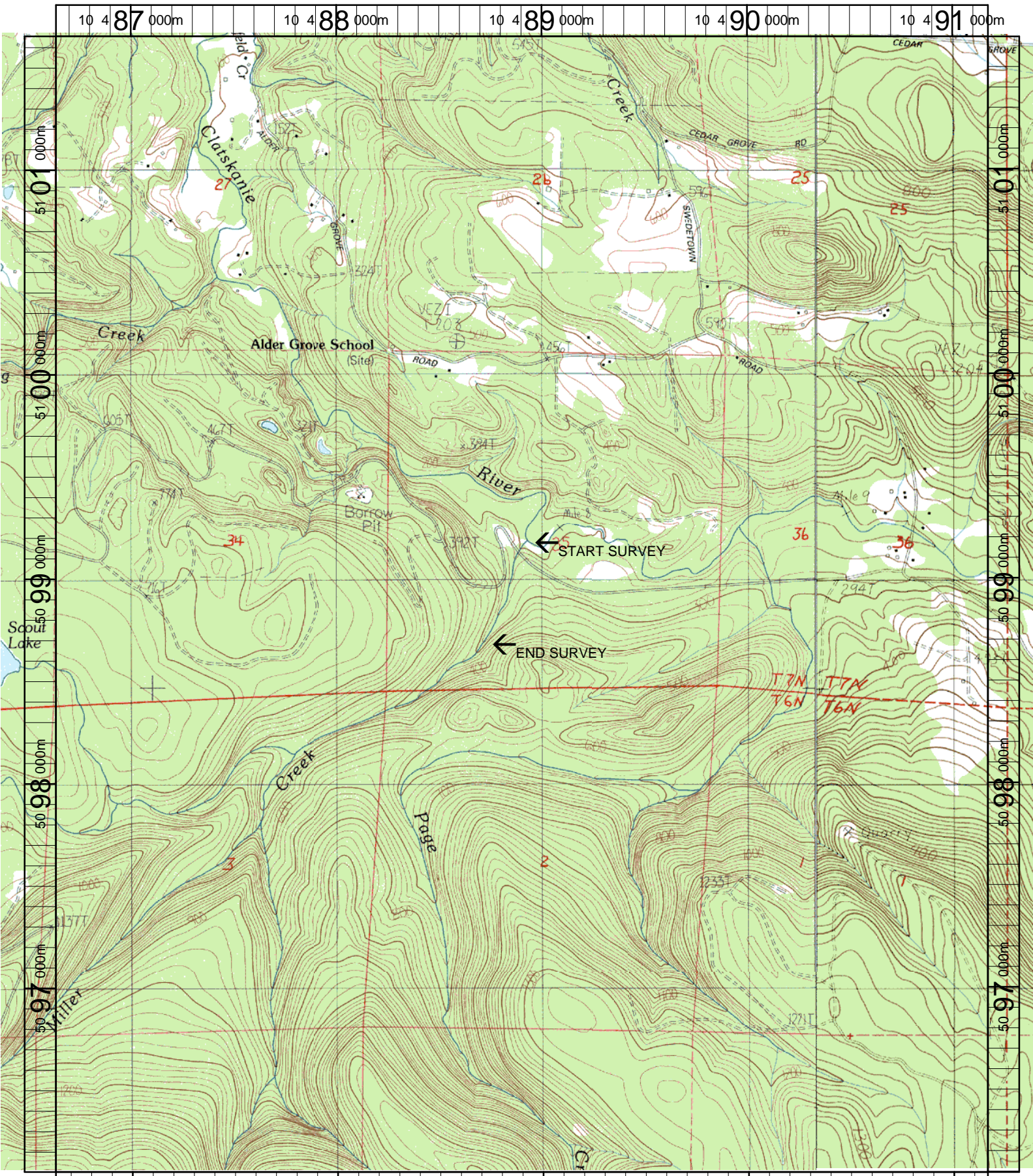
Diameter class (cm)	Zones 1-3 <u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	3.3	11.7
15-30cm	2.7	5.0
30-50cm	0.7	0.7
50-90cm	0.0	0.0
>90cm	0.0	1.0

Comment Summary

Oregon Plan Monitoring Sites 2003

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	CB	00	15.7		TEMP @ 11:00=13 DEG C	
2	SP	00	27.4	HS	METRICS INFLUENCED B	CABLED COBBLE BAGS IN S
3	CC	00	64.4	PA, CC		2.25 ROUND MODULAR CON
5	RI	00	107.6		RIPARIAN	2ND CLVRT RT SIDE OF LG
7	RB	00	149.6			ACTIVE EFFECT
9	RB	00	165.1	DJ		
10	LP	01	169.9	DJ HS		
11	BW	10	169.9	DJ		
14	RB	00	241.8		RIPARIAN	
21	RB	00	345.8	//SS	RIPARIAN	N193R3 RIP/MET
29	SL	00	469.8		H=.45M	
32	RB	00	543.8	-/SS	TEMP=13.5 DEG C @ 13:1	



Name: CLATSKANIE
 Date: 12/17/2003
 Scale: 1 inch equals 2000 feet

Location: 10 488895 E 5098879 N
 Caption: MILLER CREEK RESTORATION SITE - CLATSKANIE BASIN