

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 6, 2005
SURVEY CREW: Scott Young, 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 542 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 2.6 (range: 2.0-4.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 4.0 percent. Rapids (80%) dominated stream habitat. Gravel (46%) and cobble (45%) dominated stream substrate. Wood volume was very low at 4.4 m³/100m.

COMMENTS:

There were two potential barriers to upstream fish migration in the surveyed length. One was a 0.5 m step to a culvert and the two culverts at the beginning of the survey, and the second was a high gradient boulder step at unit 6 (79 m).

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	2.6	VWI Range:	2 - 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	542	2,168	0
Secondary Channel	95	104	0
Off-Channel Units	1	6	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 2
Width: 4.0	Width: 6.1	6.7 (4.2 - 11.5)	5.2 (4.2 - 6.2)
Depth: 0.18	Height: 0.4	0.8 (0.8 - 0.8)	0.9 (0.85 - 0.85)

W:D ratio: 15.4
 Stream Flow Type: MF
 Average Unit Gradient: 4.0%
 Water temperature (°C): -

Entrenchment (ACW:FPW ratio): 1.1
 Habitat Units/100m (total channel length): 4.9
 Habitat Units/100m (primary channel length): 5.7

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:	4%	Reach avg: 74%
Undercut Banks:	1%	Range: 44 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	45	8.3
Volume (m ³):	24	4.4
Key pieces (>=12m x 0.60m):	0	0.0

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

7/6/2005

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 ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CULVERT CROSSING	2	65	1.5	0.16	100	0	0	0	50	50	0	0
POOL-BACKWATER	1	1	6.0	0.25	6	0	5	10	50	35	0	0
POOL-LATERAL SCOUR	1	9	3.4	0.55	31	0	0	10	50	40	0	0
POOL-PLUNGE	2	21	8.8	0.88	226	0	5	10	55	30	0	0
POOL-STRAIGHT SCOUR	1	8	2.2	0.55	18	3	0	0	40	40	5	15
RAPID/BOULDERS	21	521	3.5	0.10	1,816	85	0	2	45	46	5	0
STEP/BOULDERS	1	6	6.7	0.10	40	6	0	0	30	30	40	0
STEP/LOG	1	1	3.5	0.05	2	0	0	0	50	50	0	0
STEP/STRUCTURE	1	6	6.7	0.01	40	0	0	0	50	50	0	0
Total:	31	638	4.0	0.18	2,278	94	Avg: 0	3	46	45	5	1

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	1	1	6.0	0.25	6	0.26%	0	0.0	
Scour Pools	4	38	5.8	0.71	274	12.04%	3	1.1	
Glides	0	0			0	0.00%	0	0.0	
Riffles	0	0			0	0.00%	0	0.0	
Rapids	21	521	3.5	0.10	1,816	79.70%	85	4.7	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	3	13	5.6	0.05	82	3.61%	6	7.3	
Dry	0	0			0	0.00%	0	0.0	
Culverts	2	65	1.5	0.16	100	4.39%	0	0.0	

POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	5	7.8	9.2
Pools >=1m deep:	1	1.6	1.8
Complex pools (LWD pieces>=3):	2	3.1	3.7
Pool frequency (channel widths/pool):	20.8		
Residual pool depth (avg):	0.61		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

MILLER CREEK PRE-TX
GCG: 7-L SITE ID: 193

Survey Date 7/6/2005
Report Date: 4/26/2006

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	386
Total conifers/1000 ft	122
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	1.7	0.0	0.3	0.0	1.7	0.0	3.7
15-30cm	0.0	1.3	1.0	0.7	1.0	0.7	2.0	2.7
30-50cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	3.0	1.0	1.0	1.0	2.3	0.7	2.1

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	74		77		78	
Shrub cover	8		5		5	
Grass/forb cover	85		88		89	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	67		100		100	
High terrace	33		0		0	
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 (%)	28		43		37	

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	386
Total conifers/1000 ft	122
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	0.0	3.7
15-30cm	2.0	2.7
30-50cm	0.0	0.0
50-90cm	0.0	0.0
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

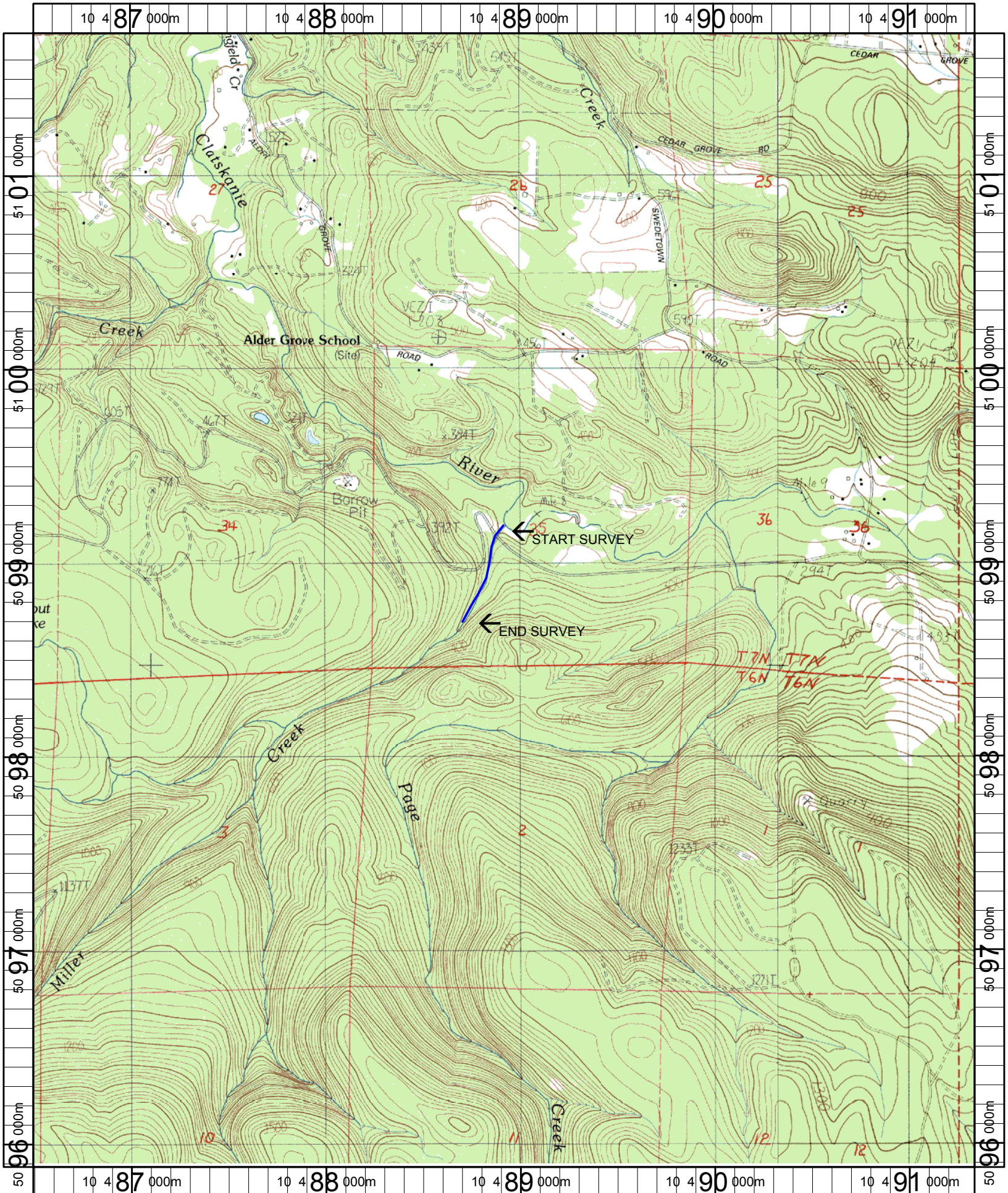
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
9	LF	3	HS	50	85	5	95	Conifer		1					
								Hardwood							
9	LF	2	HS	50	85	5	95	Conifer		1					
								Hardwood							
9	LF	1	HS	35	85	10	80	Conifer							
								Hardwood	3	2					
9	RT	2	HS	70	85	0	60	Conifer			1				
								Hardwood							
9	RT	1	HS	70	85	0	70	Conifer							CLIFF
								Hardwood							
9	RT	3	HS	60	85	0	70	Conifer							
								Hardwood							
15	LF	2	HS	40	85	10	90	Conifer			1				
								Hardwood							
15	LF	1	HS	40	80	10	90	Conifer							
								Hardwood		2					
15	RT	1	HT	0	60	5	95	Conifer							
								Hardwood							
15	LF	3	HS	40	85	10	90	Conifer			1				
								Hardwood							
15	RT	2	HS	40	70	5	95	Conifer							
								Hardwood		1					
15	RT	3	HS	0	70	5	95	Conifer							
								Hardwood		1					
23	LF	1	HT	0	65	20	80	Conifer							0488756, 5098849
								Hardwood							
23	RT	1	HS	20	70	5	95	Conifer							
								Hardwood	2						
23	RT	2	HS	40	70	0	95	Conifer							
								Hardwood		1					
23	RT	3	HS	40	70	0	95	Conifer			1				
								Hardwood			1				
23	LF	2	HS	20	65	10	90	Conifer							
								Hardwood	1						
23	LF	3	HS	30	70	10	90	Conifer							VINE MAPLES
								Hardwood	5						

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	15			UNIT WAS A STEP, NOW BL
3	CC	01	67	CC		CULV DIAM 2 M, NO STEP
4	SS	01	73	PA	H = .5 M	
5	CC	02	73	CC		OVERFLOW CULV, .8 M DIA
6	SB	00	79	PN		
11	SL	00	165.5		H = .3 M	
17	RB	01	315.5	BV		FRESH BV CUT TREES IN C
18	RB	02	315.5	BV		
19	RB	02	315.5	BV		
20	RB	00	349.5	/SS		
22	RB	00	382.5	BV		TREES WITH FRESH BV CUT
29	RB	00	489.5	BV		TREES WITH FRESH BV CUT
30	RB	00	514.5	BV		TREES WITH FRESH BV CUT



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