

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

STREAM: Miller Creek (MC-178)
BASIN: Siuslaw River
SURVEY TYPE: Post-Tx
DATE: June 29, 2005
SURVEY CREW: Jennifer Jacobs, Andy Livesay
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 15.1 km²
USGS MAPS: Walton
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Miller Creek habitat survey extended 479 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 16.7 (range: 7.5-25.0). Land use for the reach was second growth (15-30 cm dbh) trees and timber harvest. The average unit gradient was 1.1 percent. Riffles (36%) and scour pools (34%) dominated stream habitat. Gravel (45%) and sand (36%) dominated stream substrate. Wood volume was high at 31.1 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

T17S-R07W-S19SW

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	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	16.7	VWI Range:	7.5 - 25

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	100%
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	479	1,616	0
Secondary Channel	99	95	3
Off-Channel Units	59	128	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.8	Width: 6.9	18.3 (10.6 - 31.7)	22.6 (13 - 40.7)
Depth: 0.31	Height: 0.5	1.0 (0.9 - 1.1)	1.7 (1.3 - 2.1)

W:D ratio: 13.7

Entrenchment (ACW:FPW ratio): 2.6

Stream Flow Type: MF

Habitat Units/100m (total channel length): 10.0

Average Unit Gradient: 1.1%

Habitat Units/100m (primary channel length): 13.4

Water temperature (°C): 11.0 - 11.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	TH
Riparian Vegetation:	D15	C30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	14%	Reach avg: 87%
Undercut Banks:	18%	Range: 47 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	110	23.0
Volume (m ³):	149	31.1
Key pieces (>=12m x 0.60m):	4	0.8

OREGON DEPT OF FISH AND WILDLIFE

MILLER CREEK POST-TX (2-MC, 178)

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

6/29/2005

REACH 1		T17S-R07W-S19SW					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	1	10	0.8	0.03	8	0	5	48	48	0	0	0
DRY CHANNEL	3	48	1.1	0.00	54	0	35	30	24	10	2	0
GLIDE	4	53	4.1	0.20	214	0	1	35	64	0	0	0
POOL-BACKWATER	8	42	2.3	0.36	112	0	43	37	19	1	0	0
POOL-LATERAL SCOUR	21	201	3.0	0.53	581	0	14	44	39	3	0	0
POOL-STRAIGHT SCOUR	2	14	3.5	0.51	45	0	0	45	55	0	0	0
PUDDLED UNIT	1	5	0.9	0.05	5	0	70	30	0	0	0	0
RAPID/BOULDERS	1	10	4.0	0.07	40	0	0	20	60	20	0	0
RIFFLE	14	209	3.0	0.17	664	0	11	30	55	3	0	0
STEP/COBBLE	9	45	2.5	0.16	116	0	0	26	67	6	0	0
Total:	64	638	2.8	0.31	1,839	0	Avg: 15	36	45	3	0	0

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	8	42	2.3	0.36	112	6.11%	0	0.0	
Scour Pools	23	216	3.0	0.53	626	34.03%	0	0.0	
Glides	4	53	4.1	0.20	214	11.66%	0	0.0	
Riffles	14	209	3.0	0.17	664	36.13%	0	0.0	
Rapids	1	10	4.0	0.07	40	2.15%	0	0.0	
Cascades	1	10	0.8	0.03	8	0.41%	0	0.0	
Step/Falls	9	45	2.5	0.16	116	6.30%	0	0.0	
Dry	4	54	1.1	0.01	59	3.21%	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:	31	48.6	64.7
Pools >=1m deep:	1	1.6	2.1
Complex pools (LWD pieces>=3):	8	12.5	16.7
Pool frequency (channel widths/pool):	3.0		
Residual pool depth (avg):	0.42		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

MILLER CREEK POST-TX
GCG: 2-MC SITE ID: 178

Survey Date 6/29/2005
Report Date: 4/26/2006

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	1524
Total conifers/1000 ft	163
Total conifers >20" dbh/1000 ft	81
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	2.3	0.0	6.3	0.0	5.3	0.0	14.0
15-30cm	0.0	3.7	0.0	0.7	1.3	2.3	1.3	6.7
30-50cm	0.0	1.0	0.0	1.3	0.0	2.0	0.0	4.3
50-90cm	0.3	0.0	0.3	0.0	0.7	0.0	1.3	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.3	7.0	0.3	8.3	2.0	9.7	0.9	8.3

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	56	65	74
Shrub cover	67	56	47
Grass/forb cover	23	37	27

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	0	0	17
High terrace	50	83	67
Low terrace	0	0	0
Floodplain	50	17	17
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	0	0
Riprap	0	0	0
Surface slope (%)	2	6	7

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	1524
Total conifers/1000 ft	163
Total conifers >20" dbh/1000 ft	81
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	14.0
15-30cm	1.3	6.7
30-50cm	0.0	4.3
50-90cm	1.3	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		
21	LF	1	FP	4	75	75	10	Conifer							
								Hardwood	1	6					
21	LF	2	HT	0	60	60	40	Conifer							
								Hardwood	5	1	1				
21	LF	3	FP	0	80	75	10	Conifer							
								Hardwood	3	1					
21	RT	1	FP	0	65	75	5	Conifer							
								Hardwood	3	2					
21	RT	2	FP	0	70	80	10	Conifer							
								Hardwood	3		1				
21	RT	3	HT	1	85	60	0	Conifer							
								Hardwood	5	1	1				
38	LF	2	HT	30	85	55	40	Conifer							
								Hardwood	7						
38	RT	3	HS	35	65	30	60	Conifer			4				
								Hardwood	1	4					
38	RT	2	HT	2	60	30	60	Conifer							
								Hardwood	2	1	1				
38	LF	3	HT	4	80	5	40	Conifer							
								Hardwood	7		2				
38	LF	1	FP	0	70	60	40	Conifer							
								Hardwood	3	1	2				
38	RT	1	HT	0	75	80	10	Conifer							
								Hardwood		2	1				
51	LF	1	HT	5	20	100	0	Conifer							
								Hardwood							
51	LF	2	HT	1	35	70	10	Conifer							
								Hardwood	1		1				
51	LF	3	HT	0	70	60	20	Conifer					2		
								Hardwood							
51	RT	1	HT	0	30	10	70	Conifer						1	
								Hardwood							
51	RT	2	HT	0	80	40	60	Conifer						1	
								Hardwood	1						
51	RT	3	HT	3	65	50	30	Conifer							
								Hardwood		1	3				

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **178** MILLER CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	SP	01	5.4			T = 11, COHO FRY
9	LP	01	52.15	/TJ		
12	DC	02	71.45		COHO FRY	
13	LP	00	80.15			FRY PRESENT
17	LP	00	105.75	HS, DJ		
21	RI	01	145.85	BV		
23	LP	01	157.35	HS		
25	LP	01	171.85			BRAIDED
27	GL	01	210.55			COHO FRY
33	RI	01	228.55	HS		
38	LP	00	267.85			COHO FRY
39	RI	01	277.35	HS, /TJ		
40	CB	11	277.35			T = 15
41	GL	00	287.65	HS		
44	GL	01	312.05			COHO FRY
47	LP	00	320.05	BV		
49	RI	00	344.05	BV		
52	LP	00	366.25	HS		SPANS LAST TWO UNITS
56	LP	00	405.15	HS		
57	LP	00	424.45	HS, DJ		
58	SC	00	428.25			COHO FRY

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 2-MC SITE ID: 178 MILLER CREEK POST-TX

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
61	LP	00	446.35			COHO FRY
64	RI	00	479.15	BV		

