

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

STREAM: West Fork Millicoma River (MS-219)
BASIN: Millicoma River
SURVEY TYPE: Post-Tx
DATE: September 1, 2005
SURVEY CREW: Kevin Cellura, Eric Himmelreich
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 67.7 km²
USGS MAPS: Elk Peak
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The West Fork Millicoma River habitat survey extended 499 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 4.7 (range: 3.1-9.0). Land use for the reach was second growth (15-30 cm dbh) and mature (50-90 cm dbh) trees. The average unit gradient was 0.7 percent. Scour pools (66%) and riffles (25%) dominated stream habitat. There was no dominant substrate type. Wood volume was moderate at 29.0 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

T23S-R10W-S08SE

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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	4.7	VWI Range:	3.1 - 9

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	Braided Channel	0%
Alt. Terrace/Hill	100%		
Landuse	0%		

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary Channel	499	3,026	0
Secondary Channel	38	57	0
Off-Channel Units	5	4	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 4.6	Width: 10.0	12.2 (6 - 18.1)	13.1 (6.3 - 19.3)
Depth: 0.44	Height: 0.6	1.1 (0.8 - 1.3)	2.8 (1.1 - 8.8)

W:D ratio: 17.8

Entrenchment (ACW:FPW ratio): 1.2

Stream Flow Type: LF

Habitat Units/100m (total channel length): 5.4

Average Unit Gradient: 0.7%

Habitat Units/100m (primary channel length): 5.8

Water temperature (°C): 14.0 - 14.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	MT
Riparian Vegetation:	D30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	1%	Reach avg: 79%
Undercut Banks:	17%	Range: 44 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	96	19.2
Volume (m ³):	145	29.0
Key pieces (>=12m x 0.60m):	8	1.6

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

9/1/2005

REACH 1		T23S-R10W-S08SE					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/BEDROCK	1	5	0.7	0.01	4	0	0	10	20	10	0	60
CULVERT CROSSING	1	18	4.1	0.08	72	0	10	10	10	30	30	10
POOL-BEAVER DAM	1	20	6.2	0.95	126	3	20	20	30	5	5	20
POOL-LATERAL SCOUR	9	195	4.5	0.78	904	15	7	23	37	14	6	13
POOL-PLUNGE	2	50	17.0	1.28	1,122	6	5	19	34	10	10	24
RIFFLE	7	139	3.3	0.14	475	21	0	11	56	27	5	1
RIFFLE W/ POCKETS	2	87	3.2	0.15	300	20	10	24	24	10	10	24
STEP/BEAVER DAM	1	1	3.4	0.08	2	0	0	0	0	20	80	0
STEP/BEDROCK	1	4	5.1	0.20	22	0	0	0	0	10	10	80
STEP/COBBLE	3	22	2.8	0.13	59	12	0	10	50	33	7	0
STEP/STRUCTURE	1	0	1.5	0.05	1	0	17	17	17	17	17	17
Total:	29	542	4.6	0.44	3,086	77	Avg: 5	16	37	19	10	14

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	20	6.2	0.95	126	4.08%	3	2.4	
Scour Pools	11	245	6.8	0.87	2,026	65.65%	21	1.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	9	227	3.3	0.14	774	25.09%	41	5.3	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	1	5	0.7	0.01	4	0.11%	0	0.0	
Step/Falls	6	28	3.1	0.12	85	2.75%	12	14.2	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	18	4.1	0.08	72	2.32%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	12	22.2	24.0
Pools >=1m deep:	2	3.7	4.0
Complex pools (LWD pieces>=3):	6	11.1	12.0
Pool frequency (channel widths/pool):	4.5		
Residual pool depth (avg):	0.75		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

WEST FORK MILLICOMA POST-TX
GCG: 3-MS SITE ID: 219

Survey Date 9/1/2005
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	0
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	0.3	0.0	0.7	0.0	0.7	0.0	1.7
15-30cm	0.0	0.7	0.0	1.0	0.0	0.0	0.0	1.7
30-50cm	0.0	0.0	0.0	1.0	0.0	0.3	0.0	1.3
50-90cm	0.0	0.3	0.0	0.7	0.0	0.3	0.0	1.3
>90cm	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Total/100m2	0.0	1.3	0.0	3.7	0.0	1.3	0.0	2.1

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	67		74		76	
Shrub cover	64		58		47	
Grass/forb cover	27		23		38	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		33		67	
High terrace	50		50		33	
Low terrace	0		0		0	
Floodplain	17		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		0	
Riprap	0		0		0	
Surface slope (%)	17		27		36	

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	0
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	1.7
15-30cm	0.0	1.7
30-50cm	0.0	1.3
50-90cm	0.0	1.3
>90cm	0.0	0.3

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		
8	RT	3	HS	40	90	50	40	Conifer							
								Hardwood				1			
8	RT	2	HT	5	80	70	20	Conifer							
								Hardwood			2	1			
8	LF	1	FP	0	60	60	30	Conifer							427363, 4825151
								Hardwood							
8	RT	1	HT	0	80	50	40	Conifer							
								Hardwood		1					
8	LF	3	HS	75	65	20	40	Conifer							ALSO ROAD BED
								Hardwood							
8	LF	2	HS	75	80	60	30	Conifer							
								Hardwood				1			
13	LF	2	HT	0	80	70	20	Conifer							THIS RIPARIAN WAS
								Hardwood	2				1		427428, 4825047
13	LF	1	HT	0	90	70	20	Conifer							
								Hardwood							
13	LF	3	HT	0	70	60	30	Conifer							
								Hardwood	2						
13	RT	1	HS	80	95	45	45	Conifer							
								Hardwood	1	1					
13	RT	2	HS	80	95	60	35	Conifer							
								Hardwood			3	1			
13	RT	3	HS	80	90	40	50	Conifer							
								Hardwood							
22	RT	3	HT	0	90	90	5	Conifer							
								Hardwood				1			
22	LF	1	HS	20	10	80	15	Conifer							427529, 4825012
								Hardwood							
22	LF	2	RB	0	25	10	20	Conifer							
								Hardwood							
22	LF	3	HS	20	50	20	60	Conifer							
								Hardwood							
22	RT	1	HT	0	65	80	10	Conifer							
								Hardwood				1			
22	RT	2	HT	0	85	80	10	Conifer							
								Hardwood							

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS** SITE ID: **219** WEST FORK MILLICOMA POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	01	12.3	/TJ, BV		427236, 4825246
2	CR	11	12.3			TRIB 1 T = 12 AT 1500
3	RI	00	39.2	/SS		
4	LP	00	61.2	WL		GARTER SNAKE
6	LP	00	102.3	HS		FRY
7	LP	00	128.6	SS/, HS,BV		FRY
8	RI	00	144.4	HS		
9	LP	00	182.4	BV		FRY
10	PP	00	194.4	WL		TROUT, GAME TRAIL
11	SR	00	198.8		H = .3 M	
12	RP	00	248.4	HS, BV		
16	SD	01	318.1	BD		
17	BP	01	338.4	HS, BV		FRY
18	RP	02	338.4			ROUGH SKIN NEWT
22	LP	00	393.1	BV		
24	PP	00	435.9	BV		
25	SS	00	436.3		H = .5 M	
26	CC	00	453.8	CC	CULV HT = 2.6M, W = 4.1	
29	RI	00	499	TJ/		END AT COUGAR CR

