

**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: Pre-Tx  
DATE: June 30, 2003  
SURVEY CREW: Alex Higgins, Jeremiah Bernier  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 67.7 km<sup>2</sup>  
USGS MAPS: Elk Peak  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The West Fork Millicoma River habitat survey extended 505 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 4.3 (range: 2.0-8.5). Land use for the reach was mature (50-90 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (68%) and riffles (22%) dominated stream habitat. Gravel (44%) and bedrock (20%) dominated stream substrate. Wood volume was very low at 5.1 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T23S-R10W-S08NW

REACH 1

**Valley and Channel Summary**

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0%	Constraining Terraces	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index 4.3		VWI Range: 2 - 8.5	

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

Type	Length (m)	Area (m2)	Dry Units
Primary	505	3,438	0
Secondary	58	135	0

Channel Dimensions (m)

Wetted		Active		Floodprone	First Terrace
Width	5.1	Width	7.5	16.2	22.5
Depth	0.35	Height	0.6	1.1	1.5
		W:D ratio	13.9	Entrenchment	2.6
Stream Flow Type:	MF	Water temp (C):	13.5 - 13.5		
Avg. Unit Gradient:	1.1%	Habitat Units/100m:	5.0		

**Riparian, Bank, and Wood Summary**

	Primary	Secondary
Land Use:	MT	YT
Riparian Vegetation:	M30	S

Bank Condition and Shade

Bank Status	Percent Reach Length	Shade (% of 180)
Actively Eroding:	5%	Reach avg: 88%
Undercut Banks:	11%	Range: 50 - 100

Large Wood Debris

	Total	Total / 100m
All pieces ( $\geq 3\text{m} \times 0.15\text{m}$ ):	40	7.9
Volume ( $\text{m}^3$ ):	26	5.1
Key pieces ( $\geq 10\text{m} \times 0.60\text{m}$ ):	2	0.4

OREGON DEPARTMENT OF FISH AND WILDLIFE

WEST FORK MILLICOMA PRE-TX (MS-219)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

6/30/03

REACH 1		T23S-R10W-S08NW					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	
CASCADE/BEDROCK	1	10	0.1	0.01	1	0	0	0	0	0	0	100	
CULVERT CROSSING	1	17	2.4	0.20	42	0	0	10	10	60	10	10	
GLIDE	1	15	4.5	0.25	65	6	0	15	30	5	5	45	
POOL-DAMMED	1	18	4.6	0.65	81	0	0	30	70	0	0	0	
POOL-LATERAL SCOUR	9	247	8.2	0.74	2,415	16	8	14	45	7	2	23	
RAPID/BOULDERS	2	38	3.3	0.23	121	23	0	20	28	23	23	8	
RIFFLE	6	107	3.8	0.10	431	6	0	10	76	13	1	0	
RIFFLE W/ POCKETS	3	94	3.7	0.22	338	30	0	10	25	18	17	30	
STEP/BEDROCK	1	6	5.5	0.08	30	0	0	0	5	5	0	90	
STEP/BOULDERS	1	1	5.7	0.10	7	4	0	15	30	5	50	0	
STEP/COBBLE	1	11	3.9	0.07	43	1	0	0	95	5	0	0	
STEP/STRUCTURE	1	0	1.5	0.05	0	0	0	10	10	60	10	10	
<b>Total:</b>	<b>28</b>	<b>563</b>	<b>5.1</b>	<b>0.35</b>	<b>3,573</b>	<b>86</b>	<b>Avg</b>	<b>3</b>	<b>12</b>	<b>44</b>	<b>14</b>	<b>7</b>	<b>20</b>

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		58
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )	
Dammed & BW Pools	1	18	4.6	0.65	81	2.25%	0	0.0	
Scour Pools	9	247	8.2	0.74	2,415	67.60%	16	0.7	
Glides	1	15	4.5	0.25	65	1.83%	6	9.2	
Riffles	9	201	3.8	0.14	769	21.53%	36	4.7	
Rapids	2	38	3.3	0.23	121	3.38%	23	19.1	
Cascades	1	10	0.1	0.01	1	0.01%	0	0.0	
Step/Falls	4	18	4.2	0.07	80	2.24%	5	6.3	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	17	2.4	0.20	42	1.16%	0	0.0	

POOL SUMMARY

	Total	# / Km
All Pools:	10	17.8
Pools >=1m deep:	1	1.8
Complex pools (LWD pieces>=3):	4	7.1
Pool frequency (channel widths/pool):	7.5	
Residual pool depth (avg):	0.65	

**STREAM SUMMARY**

**WEST FORK MILLICOMA PRE-TX (MS-219)**

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area						Large Boulders (#>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
28	563	5.1	0.35	3,573	3	12	44	14	7	20	86

Habitat Group	Wetted Area	
	(m <sup>2</sup> )	Percent
Dammed & BW Pools	81	2.25%
Scour Pools	2,415	67.60%
Glides	65	1.83%
Riffles	769	21.53%
Rapids	121	3.38%
Cascades	1	0.01%
Step/Falls	80	2.24%
Dry	0	0.00%
Culverts	42	1.16%

**RIPARIAN ZONE VEGETATION SUMMARY**

REACH 1

REACH 1

**Summary of Riparian Zone (0-30m)**

3 transects

Total hardwoods/1000	549
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	2.0	0.0	0.0	0.0	2.3
15-30cm	0.0	2.3	0.0	0.7	0.0	1.0	0.0	4.0
30-50cm	0.0	1.3	0.0	0.3	0.0	0.7	0.0	2.3
50-90cm	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	4.0	0.0	3.0	0.0	2.0	0.0	3.0

**Canopy closure and ground cover**

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Canopy closure	58	77	72
Shrub cover	67	72	68
Grass/forb cover	25	19	9

**Predominant landform in each zone**

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Hillslope	33	33	50
High terrace	50	50	17
Low terrace	17	17	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	0	33
Riprap	0	0	0
Surface slope (%)	8	6	11

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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	549
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	2.3
15-30cm	0.0	4.0
30-50cm	0.0	2.3
50-90cm	0.0	0.3
>90cm	0.0	0.0

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**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		
11	RT	1	HS	26	80	60	40	Conifer							
								Hardwood	1		1				
11	RT	2	HS	20	90	75	25	Conifer							
								Hardwood	3						
11	LF	2	HT	0	85	85	15	Conifer							
								Hardwood							
11	LF	1	HT	0	65	50	50	Conifer							
								Hardwood		4		3			
11	RT	3	HS	20	85	80	20	Conifer							
								Hardwood		1		1			
11	LF	3	HT	0	95	95	5	Conifer							
								Hardwood							
20	RT	2	LT	0	60	10	50	Conifer							SAND BANK
								Hardwood							
20	RT	3	HS	23	80	80	5	Conifer							
								Hardwood				1			
20	RT	1	LT	0	50	20	40	Conifer							SAND BANK
								Hardwood							
20	LF	3	HS	20	60	50	10	Conifer							
								Hardwood			1				
20	LF	2	HS	18	70	85	0	Conifer							
								Hardwood	3						
20	LF	1	HS	20	0	90	0	Conifer							
								Hardwood							
26	LF	2	HT	0	70	90	10	Conifer							
								Hardwood				1			
26	LF	3	RB	0	60	90	10	Conifer							
								Hardwood			1				
26	RT	1	HT	0	80	90	10	Conifer							
								Hardwood			1				
26	RT	2	HT	0	85	85	15	Conifer							
								Hardwood			2				
26	RT	3	RB	0	50	15	5	Conifer							
								Hardwood				1			
26	LF	1	HT	0	75	90	10	Conifer							PIC 100-0029
								Hardwood			2				

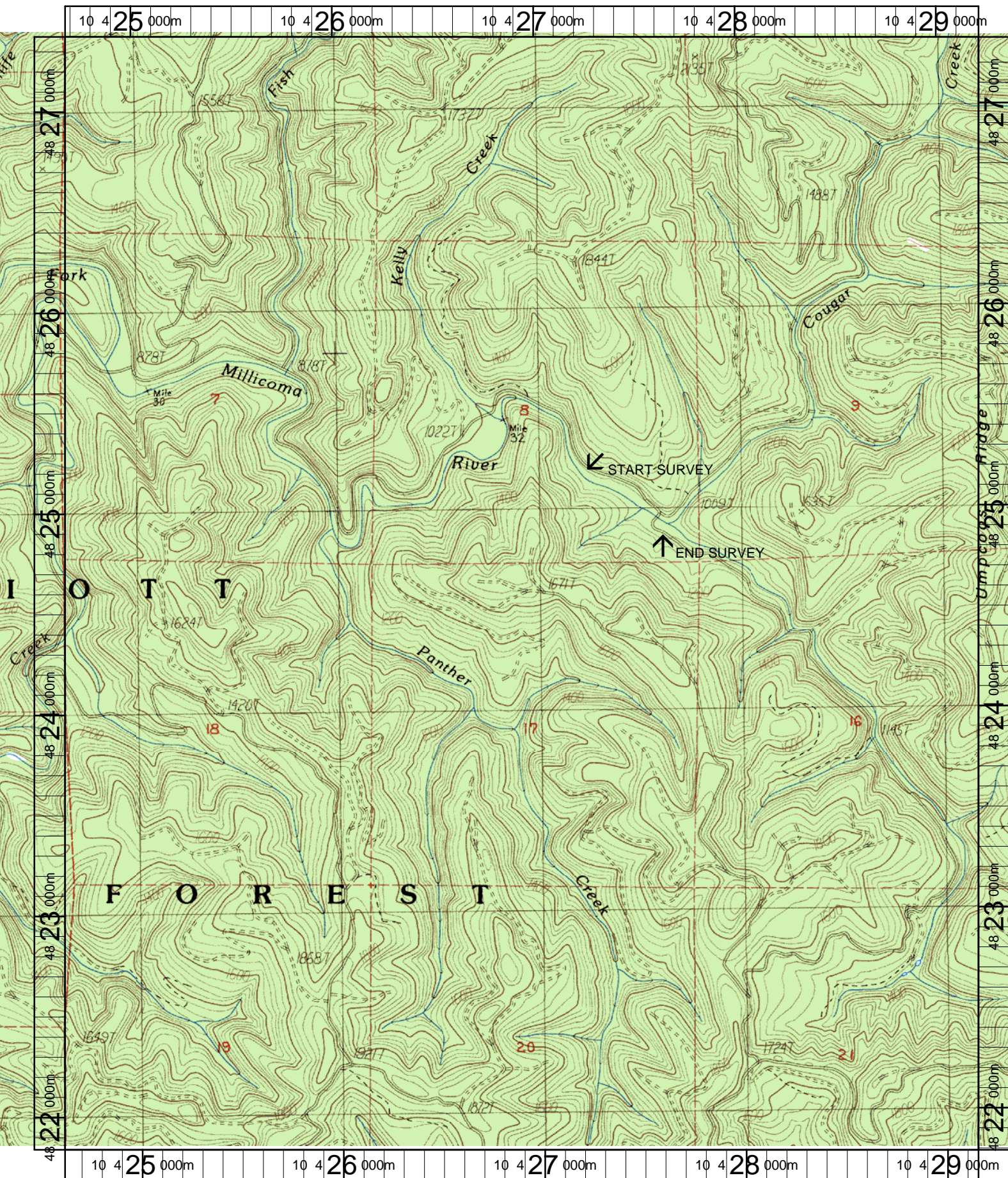
# Comment Summary

## Oregon Plan Monitoring Sites 2003

MONITORING AREA: **3-MS**      SITE ID: **219**      WEST FORK MILLICOMA PRE-TX (M

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	LP	01	19	/TJ	/TJ	NOT ON MAP
2	CR	11	19		ACW=1.6	TRIB
6	LP	00	110.5	CE/	CE/ SS/	
8	LP	00	166.3		FLAGGING SITE 5	YELLOW FLAG SITE # 15
9	LP	00	203.9		SEVERAL STRUCTURES	
10	SR	00	209.4		H=.3	
11	RP	00	237.6		SITE 6 ACCESS ?	YELLOW FLAG SITE #6 ACC
17	SB	01	333.7		H=.3	
24	SS	00	442.95		H=.43	
25	CC	00	460.25	CC	2.6 X 4.2 METAL CC	ROAD 8000- CORRUGATED
26	RP	00	495.95		CS/ /CS	
27	LP	01	504.85	TJ/	TJ/	COUGAR CR





Name: ELK PEAK  
 Date: 1/21/2004  
 Scale: 1 inch equals 2000 feet

Location: 10 426909 E 4824583 N  
 Caption: WF MILLICOMA #219 RESTORATION SITE - MILLICOMA BASIN