

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

STREAM: West Fork Millicoma River (MS-64)
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 km²
USGS MAPS: Elk Peak
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The West Fork Millicoma River habitat survey extended 550 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 2.3 (range: 1.8-3.0). Land use for the reach was mature (50-90 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 1.2 percent. Scour pools (58%) and riffles (18%) dominated stream habitat. Gravel (38%) and bedrock (38%) dominated stream substrate. Wood volume was low at 19.6 m³/100m.

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)

<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	2.3	VWI Range:	1.8 - 3

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	550	2,836	0
Secondary	44	79	3

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	4.7	Width	9.4	12.8	15.5
Depth	0.36	Height	0.5	1.0	1.8
		W:D ratio	18.8	Entrenchment	1.4

Stream Flow Type: MF Water temp (C): 13.5 - 13.5
 Avg. Unit Gradient: 1.2% Habitat Units/100m: 5.9

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	MT	YT
Riparian Vegetation:	M30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	2%	Reach avg: 88%
Undercut Banks:	2%	Range: 72 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	57	10.4
Volume (m ³):	108	19.6
Key pieces (>=10m x 0.60m):	4	0.7

OREGON DEPARTMENT OF FISH AND WILDLIFE

WEST FORK MILLICOMA PRE-TX (MS-64)

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 ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area						
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
DRY CHANNEL	3	34	1.2	0.00	37	0	32	7	40	22	0	0	
GLIDE	1	21	5.1	0.30	107	1	0	10	35	35	0	20	
POOL-DAMMED	2	27	9.0	0.80	210	8	0	18	25	20	16	21	
POOL-LATERAL SCOUR	14	281	5.5	0.61	1,640	61	0	10	29	10	4	47	
POOL-STRAIGHT SCOUR	1	14	4.2	0.60	59	3	0	15	50	30	0	5	
RAPID/BEDROCK	4	67	4.1	0.11	278	6	0	4	4	0	0	92	
RIFFLE	8	140	3.7	0.13	532	17	0	3	69	8	2	18	
STEP/BEDROCK	1	9	4.5	0.05	38	0	0	0	0	0	0	100	
STEP/COBBLE	1	2	7.5	0.05	15	0	0	0	95	5	0	0	
Total:	35	595	4.7	0.36	2,915	96	Avg	3	7	38	11	3	38

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		44
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	2	27	9.0	0.80	210	7.19%	8	3.8	
Scour Pools	15	295	5.4	0.61	1,699	58.28%	64	3.8	
Glides	1	21	5.1	0.30	107	3.66%	1	0.9	
Riffles	8	140	3.7	0.13	532	18.24%	17	3.2	
Rapids	4	67	4.1	0.11	278	9.53%	6	2.2	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	2	11	6.0	0.05	53	1.83%	0	0.0	
Dry	3	34	1.2	0.00	37	1.28%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY		
	<u>Total</u>	<u># / Km</u>
All Pools:	17	28.6
Pools >=1m deep:	2	3.4
Complex pools (LWD pieces>=3):	9	15.1
Pool frequency (channel widths/pool):	3.7	
Residual pool depth (avg):	0.55	

STREAM SUMMARY

WEST FORK MILLICOMA PRE-TX (MS-64)

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	
35	595	4.7	0.36	2,915	3	7	38	11	3	38	96

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	210	7.19%
Scour Pools	1,699	58.28%
Glides	107	3.66%
Riffles	532	18.24%
Rapids	278	9.53%
Cascades	0	0.00%
Step/Falls	53	1.83%
Dry	37	1.28%
Culverts	0	0.00%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

REACH 1

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

Total hardwoods/1000	386
Total conifers/1000 ft	20
Total conifers >20" dbh/1000 ft	20
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	0.0	0.0	2.0	0.0	1.7	0.0	3.7
15-30cm	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7
30-50cm	0.0	0.7	0.0	0.3	0.0	0.3	0.0	1.3
50-90cm	0.3	0.0	0.0	0.7	0.0	0.0	0.3	0.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.3	0.7	0.0	3.7	0.0	2.0	0.1	2.1

Canopy closure and ground cover

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Canopy closure	63	66	33
Shrub cover	45	35	24
Grass/forb cover	47	40	36

Predominant landform in each zone

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Hillslope	50	67	50
High terrace	33	33	17
Low terrace	17	0	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 (%)	18	22	14

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	20
Total conifers >20" dbh/1000 ft	20
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	0.0	0.7
30-50cm	0.0	1.3
50-90cm	0.3	0.7
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

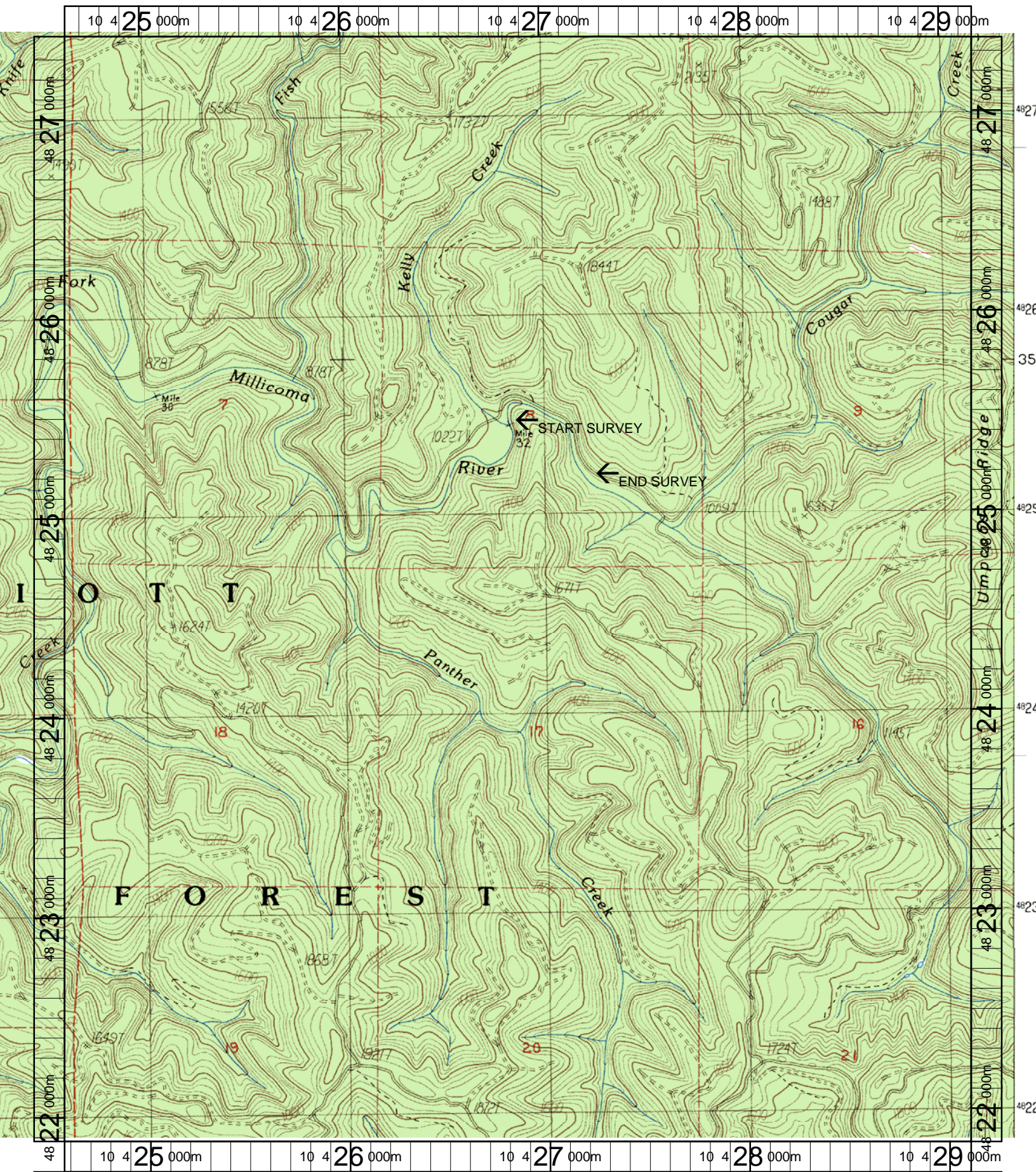
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
12	LF	1	HT	0	70	80	10	Conifer							PIC 100-0023
								Hardwood			1				
12	LF	2	HT	0	60	50	30	Conifer							DRY CHANNEL
								Hardwood			1	2			
12	LF	3	HT	0	5	50	20	Conifer							TRIB/ GRAVEL
								Hardwood							
12	RT	1	HS	45	70	70	20	Conifer							
								Hardwood			1				
12	RT	2	HS	36	70	70	20	Conifer							
								Hardwood		2					
12	RT	3	HS	36	55	70	20	Conifer							
								Hardwood							
22	LF	1	LT	12	85	0	80	Conifer							PIC 100-0024
								Hardwood							
22	RT	3	HS	15	45	5	90	Conifer							
								Hardwood	4						
22	RT	2	HT	0	50	0	80	Conifer							100 YEAR FLOOD PLAIN
								Hardwood	1						
22	RT	1	HS	20	45	10	90	Conifer					1		
								Hardwood							
22	LF	2	HS	40	75	5	60	Conifer							
								Hardwood	1						
22	LF	3	RB	0	10	0	10	Conifer							90% GRAVEL COVER
								Hardwood							
28	RT	1	HT	0	40	50	50	Conifer							
								Hardwood							
28	LF	1	HS	33	70	60	30	Conifer							100-0025
								Hardwood							
28	RT	3	HS	32	60	15	70	Conifer							
								Hardwood	1		1				
28	RT	2	HS	24	50	25	40	Conifer							
								Hardwood	4						
28	LF	2	HS	30	90	60	10	Conifer							
								Hardwood							
28	LF	3	RB	0	20	5	5	Conifer							90% ROAD BED
								Hardwood							

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 3-MS SITE ID: 64 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>
2	LP	00	39.2			ALL POOLS SALMONID FRY
10	LP	00	143.5	/LI		
11	SR	01	152	TJ/	TJ/ CE/	DRY CHANNEL
12	DC	11	152		ACW=1.5	
13	LP	00	173.5			YELLOW FLAG, SITE 1 SEDI
15	RI	01	195.5	TJ/	TJ/	
16	DC	11	195.5		ACW=1.4	
19	RI	00	230.9		BRAIDED CHANNEL	
20	LP	00	271.6	DJ	DJ	
21	DP	00	288.7	LI, CS/		
22	RI	01	299.9	TJ/	TJ/ CE/	
23	DC	11	299.9		ACW=2.2	
24	LP	00	315.2			YELLOW FLAG- SITE #31 PO
25	RI	00	327.5			BLUE WHITE FLAG OR PLAN
28	RI	00	421.5		RIP#3	
29	LP	00	471.5			YELLOW FLAG SITE #4 HABI
30	SC	00	473.5		H=.2	



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

Location: 10 426862 E 4824625 N
 Caption: WF MILLICOMA #64 RESTORATION SITE - MILLICOMA BASIN