

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

STREAM: Fish Creek (MS-290)  
BASIN: Millicoma River  
SURVEY TYPE: Pre-Tx  
DATE: July 5, 2005  
SURVEY CREW: Kevin Cellura, Eric Himmelreich  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 6.0 km<sup>2</sup>  
USGS MAPS: Elk Peak  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Fish Creek habitat survey extended 534 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 3.8 (range: 1.1-7.5). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 3.1 percent. Riffles (60%) and rapids (26%) dominated stream habitat. Gravel (47%) and cobble (22%) dominated stream substrate. Wood volume was low at 16.9 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T23S-R10W-S05NE

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	3.8	VWI Range:	1.1 - 7.5

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	534	882	0
Secondary Channel	0	0	0
Off-Channel Units	39	29	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 3
Width: 1.6	Width: 2.7	3.8 ( 2.7 - 5.2 )	4.3 ( 3.9 - 4.9 )
Depth: 0.20	Height: 0.4	0.8 ( 0.7 - 0.8 )	1.1 ( 0.9 - 1.4 )

W:D ratio: 7.1  
 Stream Flow Type: LF  
 Average Unit Gradient: 3.1%  
 Water temperature (°C): 12.0 - 12.0

Entrenchment (ACW:FPW ratio): 1.4  
 Habitat Units/100m (total channel length): 7.7  
 Habitat Units/100m (primary channel length): 8.2

**Riparian, Bank, and Wood Summary**

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	8%	Reach avg: 90%
Undercut Banks:	3%	Range: 64 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	148	27.7
Volume (m <sup>3</sup> ):	90	16.9
Key pieces (>=12m x 0.60m):	1	0.2

OREGON DEPT OF FISH AND WILDLIFE

FISH CREEK PRE-TX (3-MS, 290)

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

7/5/2005

REACH 1		T23S-R10W-S05NE					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	14	0.3	0.05	4	0	0	0	5	5	0	90
CASCADE/BOULDERS	2	16	1.6	0.18	22	5	13	29	50	5	3	0
POOL-ALCOVE	1	8	1.6	0.50	13	0	76	24	0	0	0	0
POOL-LATERAL SCOUR	5	34	1.6	0.35	56	0	13	25	44	13	0	6
POOL-PLUNGE	2	5	3.1	0.45	16	3	5	49	38	3	5	0
POOL-STRAIGHT SCOUR	2	7	2.0	0.50	14	0	0	30	50	20	0	0
RAPID/BOULDERS	11	171	1.3	0.11	240	92	9	12	42	26	9	2
RIFFLE	18	316	1.7	0.17	547	25	0	14	55	30	2	0
STEP/BEDROCK	1	1	0.3	0.02	0	0	0	40	60	0	0	0
STEP/LOG	1	0	1.7	0.10	1	0	0	21	63	16	0	0
<b>Total:</b>	<b>44</b>	<b>573</b>	<b>1.6</b>	<b>0.20</b>	<b>912</b>	<b>125</b>	<b>Avg: 6</b>	<b>18</b>	<b>47</b>	<b>22</b>	<b>3</b>	<b>3</b>

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )	
Dammed & BW Pools	1	8	1.6	0.50	13	1.40%	0	0.0	
Scour Pools	9	47	2.0	0.41	85	9.32%	3	3.5	
Glides	0	0			0	0.00%	0	0.0	
Riffles	18	316	1.7	0.17	547	59.97%	25	4.6	
Rapids	11	171	1.3	0.11	240	26.38%	92	38.3	
Cascades	3	30	1.2	0.13	26	2.83%	5	19.4	
Step/Falls	2	1	1.0	0.06	1	0.09%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	10	17.5	18.7
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	4	7.0	7.5
Pool frequency (channel widths/pool):	21.1		
Residual pool depth (avg):	0.34		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

FISH CREEK PRE-TX  
GCG: 3-MS SITE ID: 290

Survey Date 7/5/2005  
Report Date: 4/26/2006

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	467
Total conifers/1000 ft	81
Total conifers >20" dbh/1000 ft	81
Total conifers >35" dbh/1000 ft	41

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	2.0	0.0	3.7	0.0	0.0	0.0	5.7
15-30cm	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.7
30-50cm	0.0	0.3	0.0	0.0	0.0	1.0	0.0	1.3
50-90cm	0.0	0.0	0.3	0.0	0.3	0.0	0.7	0.0
>90cm	0.0	0.0	0.0	0.0	0.7	0.0	0.7	0.0
Total/100m2	0.0	2.7	0.3	4.0	1.0	1.0	0.4	2.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	78		83		85	
Shrub cover	43		39		43	
Grass/forb cover	49		44		43	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		100		100	
High terrace	17		0		0	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	33		0		0	
Riprap	0		0		0	
Surface slope (%)	26		73		78	

**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	467
Total conifers/1000 ft	81
Total conifers >20" dbh/1000 ft	81
Total conifers >35" dbh/1000 ft	41

**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	5.7
15-30cm	0.0	0.7
30-50cm	0.0	1.3
50-90cm	0.7	0.0
>90cm	0.7	0.0

**RIPARIAN ZONE VEGETATION**

Reach 1

Reach 1

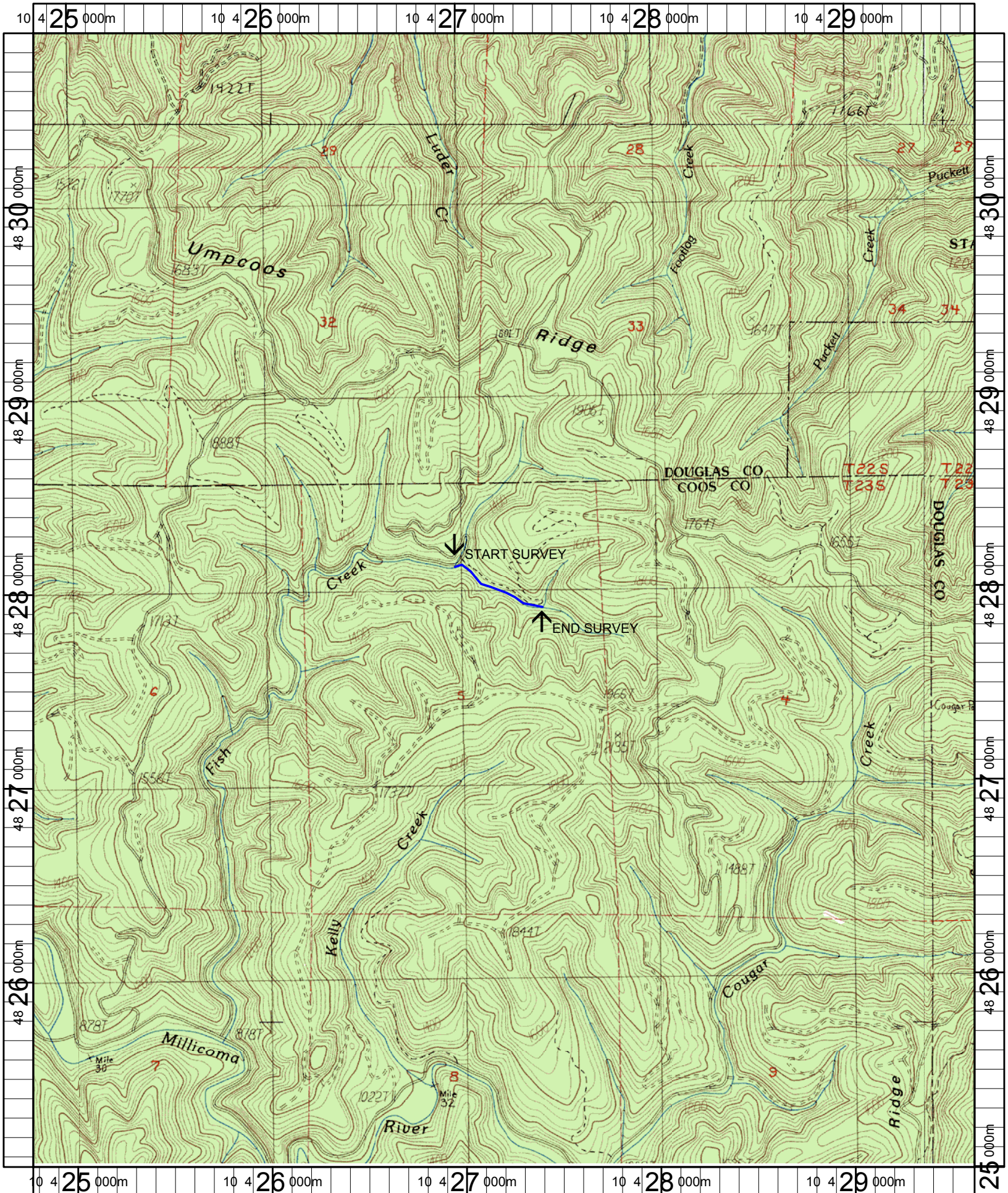
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
14	LF	2	HS	80	90	50	40	Conifer							
								Hardwood	5						
14	LF	3	HS	80	85	60	30	Conifer							
								Hardwood							
14	RT	1	HT	0	60	60	35	Conifer							
								Hardwood	5						
14	RT	2	HS	120	85	20	50	Conifer							
								Hardwood	1						
14	RT	3	HS	120	80	20	60	Conifer						2	
								Hardwood							
14	LF	1	HS	80	80	50	50	Conifer							0427135,
								Hardwood	1						4828142
22	RT	1	HS	25	75	85	10	Conifer							
								Hardwood							
22	RT	3	HS	40	85	40	30	Conifer							
								Hardwood			3				
22	LF	2	HS	80	80	60	35	Conifer							
								Hardwood	4						ZONES 2 AND
22	LF	1	RB	0	85	5	90	Conifer							LEFT AND
								Hardwood							0427177,
22	LF	3	HS	80	80	50	35	Conifer							4828034
								Hardwood							
22	RT	2	HS	40	60	30	30	Conifer							RT SIDE OF
								Hardwood							THIS RIP
22	RT	2	HS	40	60	30	30	Conifer							ESTIMATED
								Hardwood							
34	LF	1	RB	0	85	30	60	Conifer							0427293,
								Hardwood							4827970
34	LF	2	HS	60	95	15	80	Conifer							
								Hardwood							
34	LF	3	HS	60	95	15	80	Conifer							
								Hardwood							
34	RT	1	HS	50	85	30	50	Conifer							
								Hardwood			1	1			
34	RT	2	HS	60	85	60	30	Conifer							
								Hardwood	1	1					
34	RT	3	HS	90	85	70	25	Conifer							
								Hardwood							

# Comment Summary

## Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS**      SITE ID: **290**      FISH CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
5	SL	00	29.8		H = .5 M	
6	RI	00	46.9		/SS	
12	LP	00	121.1		SS/	
13	RB	00	132.4		SS/	
16	RB	00	188.2	DJ	DJ	
18	RI	01	216.7		TJ/, 427102, 4828003	
19	RB	11	216.7	TJ/	TRIB 1 T = 13.5 C AT 1500	TRIB 1, VERY MARSHY
21	LP	01	238.3		T = 13 C AT 1500	
22	CR	11	238.3	/TJ	TRIB 2 T = 13.5 C AT 1000	0427168, 4828016
23	RB	00	247.4		T = 12 C AT 1000	
24	LP	00	251.7	SS/		
25	RB	00	262		PACIFIC GIANT SALAMAN	
27	RB	00	284.4	/SS		
29	SR	00	287.4		H = 1.4 M	
30	RI	00	313.2	SS/		
31	RI	00	334.9	SS/	SS/	
32	RI	00	360.1		PACIFIC GIANT SALAMAN	
38	RB	00	444.3		FRY	
43	RI	01	533.5		T = 11 C	ENDS AT TRIB
44	CB	11	533.5		TRIB 3 T = 12.5 C	



Name: ELK PEAK  
Date: 1/6/2005  
Scale: 1 inch equals 2000 feet

Location: 10 427221 E 4827947 N  
Caption: FISH CREEK RESTORATION SITE - MILLICOMA BASIN