

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

STREAM: Fish Creek (MS-32)
BASIN: Millicoma River
SURVEY TYPE: Post-Tx
DATE: August 7, 2007
SURVEY CREW: Peter Cole, Lisa Biggs
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 3.5 km²
USGS MAPS: Elk Peak
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Fish Creek habitat survey extended 811 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 2.9 (range: 1.0-7.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 2.7 percent. Rapids (35%) and scour pools (35%) dominated stream habitat. Bedrock (28%) and gravel (21%) dominated stream substrate. Wood volume was high at 42.6 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-S06NE

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	2.9	VWI Range:	1 - 7

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 Channel	811	2,947	0
Secondary Channel	0	0	0
Off-Channel Units	53	77	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 3
Width: 3.4	Width: 6.2	8.7 (4.5 - 11.7)	12.3 (7.6 - 15.7)
Depth: 0.25	Height: 0.6	1.2 (1 - 1.4)	1.9 (1.5 - 2.5)

W:D ratio: 10.8
 Stream Flow Type: MF
 Average Unit Gradient: 2.7%
 Water temperature (°C): 13.0 - 13.0

Entrenchment (ACW:FPW ratio): 1.4
 Habitat Units/100m (total channel length): 7.5
 Habitat Units/100m (primary channel length): 8.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	M30	P

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	2%	Reach avg: 97%
Undercut Banks:	14%	Range: 72 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	309	38.1
Volume (m ³):	345	42.6
Key pieces (>=12m x 0.60m):	26	3.2

OREGON DEPT OF FISH AND WILDLIFE

FISH CREEK POST-TX (3-MS, 32)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

8/6/2007

REACH 1		T23S-R10W-S06NE					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	4	54	1.9	0.14	125	63	13	17	18	20	27	5
CULVERT CROSSING	1	15	0.2	0.02	2	0	50	0	50	0	0	0
POOL-BACKWATER	5	24	2.3	0.44	55	10	28	31	11	8	2	20
POOL-LATERAL SCOUR	19	228	4.4	0.53	978	87	20	24	21	12	8	16
POOL-STRAIGHT SCOUR	1	12	5.8	0.50	67	10	16	11	5	5	0	63
RAPID/BEDROCK	13	256	3.8	0.06	1,003	144	1	6	2	2	3	86
RAPID/BOULDERS	2	16	2.9	0.09	43	27	0	8	40	40	13	0
RIFFLE	14	195	2.7	0.09	544	56	1	15	32	37	8	6
RIFFLE W/ POCKETS	3	57	3.0	0.12	181	15	8	23	40	10	2	17
STEP/BEDROCK	1	1	3.8	0.02	3	0	0	0	0	0	0	100
STEP/COBBLE	2	6	3.9	0.10	23	6	0	18	39	25	18	0
Total:	65	863	3.4	0.25	3,024	418	Avg: 10	17	21	16	7	28

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	5	24	2.3	0.44	55	1.80%	10	18.3	
Scour Pools	20	240	4.5	0.53	1,045	34.56%	97	9.3	
Glides	0	0			0	0.00%	0	0.0	
Riffles	17	252	2.7	0.09	725	23.97%	71	9.8	
Rapids	15	271	3.7	0.07	1,046	34.60%	171	16.3	
Cascades	4	54	1.9	0.14	125	4.13%	63	50.5	
Step/Falls	3	7	3.8	0.07	26	0.86%	6	23.1	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	15	0.2	0.02	2	0.07%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	25	29.0	30.8
Pools >=1m deep:	1	1.2	1.2
Complex pools (LWD pieces>=3):	11	12.7	13.6
Pool frequency (channel widths/pool):	5.6		
Residual pool depth (avg):	0.45		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

FISH CREEK POST-TX
GCG: 3-MS SITE ID: 32

Survey Date 8/6/2007
Report Date: 11/7/2007

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	914
Total conifers/1000 ft	366
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	1.0	0.0	1.7	1.3	2.0	1.3	4.7
15-30cm	0.0	3.3	1.3	1.7	1.7	0.7	3.0	5.7
30-50cm	0.0	2.7	1.0	0.3	0.7	1.0	1.7	4.0
50-90cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Total/100m2	0.0	7.3	2.3	3.7	3.7	4.0	2.0	5.0

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	95		90		91	
Shrub cover	25		8		12	
Grass/forb cover	58		82		88	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		83		100	
High terrace	33		0		0	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	33		17		0	
Riprap	0		0		0	
Surface slope (%)	14		65		83	

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	914
Total conifers/1000 ft	366
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	1.3	4.7
15-30cm	3.0	5.7
30-50cm	1.7	4.0
50-90cm	0.0	0.3
>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		
21	LT	1	RB	0	95	10	40	Conifer							
								Hardwood			0	1			
21	LT	2	HS	110	100	5	85	Conifer							
								Hardwood	3						
21	LT	3	HS	90	90	5	95	Conifer							
								Hardwood	5					1	
21	RT	1	HT	0	100	10	90	Conifer							
								Hardwood	2	4	1				
21	RT	2	HS	25	90	0	100	Conifer							
								Hardwood	1	3					
21	RT	3	HS	30	85	0	100	Conifer	1	4					
								Hardwood		1					
35	LT	1	RB	0	95	15	30	Conifer							
								Hardwood	1	1	2				
35	LT	2	HS	85	90	20	80	Conifer							
								Hardwood		1					
35	LT	3	HS	90	90	35	65	Conifer				1			
								Hardwood				1			
35	RT	1	HT	5	100	45	55	Conifer							
								Hardwood			2	2			
35	RT	2	HS	90	90	15	85	Conifer							
								Hardwood	1						
35	RT	3	HS	80	85	25	75	Conifer					1		
								Hardwood	1						
48	LT	1	HS	60	80	45	55	Conifer							
								Hardwood			1	1			
48	LT	2	RB	0	70	10	40	Conifer							
								Hardwood							
48	LT	3	HS	120	95	5	95	Conifer	3	1					
								Hardwood							
48	RT	1	HS	20	100	25	75	Conifer							
								Hardwood			2	2			
48	RT	2	HS	80	100	0	100	Conifer							
								Hardwood			2	1			
48	RT	3	HS	90	100	0	100	Conifer							
								Hardwood			1	2			

COMMENT SUMMARY

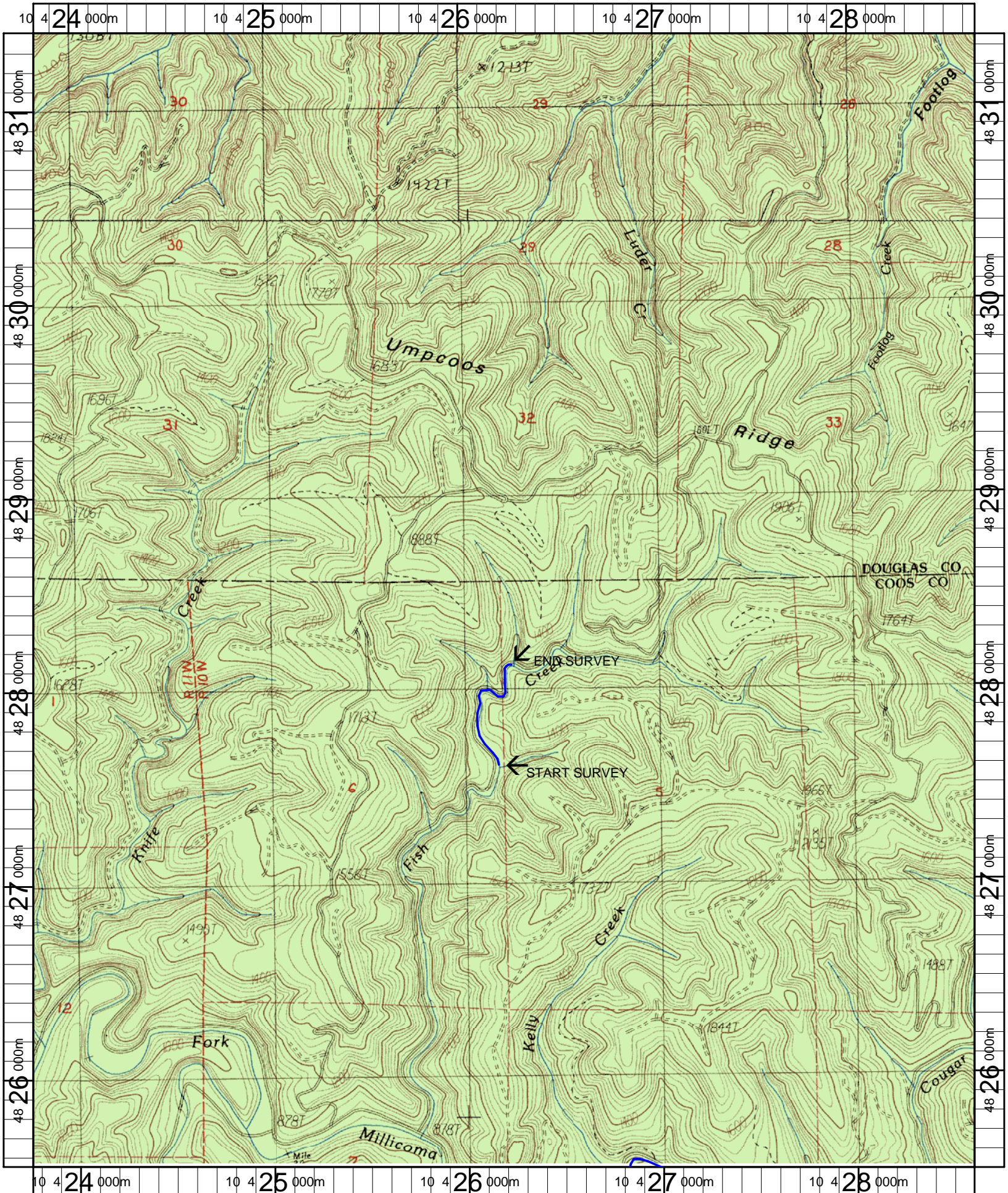
MONITORING AREA: 3-MS SITE ID: 32 STREAM: FISH CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	01	9.5	HS	PICTURE, T=13°C, HS(LWD) THROUGH U5
6	LP	00	38.4		LOTS OF COHO
8	LP	00	69.4	HS	LWD
10	LP	00	94.8	HS	HS EXTENDS INTO U11, LWD
12	LP	00	113.6	HS	HS EXTENDS THROUGH U14, LWD
16	LP	00	150	HS-LWD,DJ	
17	RI	00	175	CS	RIP_RAP
20	LP	00	194.3	HS-LWD,DJ	
21	RI	00	219.3		RIP#1
24	RI	01	274.8	TJ,HS_LWD	
25	CB	11	274.8		TRIB A, ACW=.8
27	LP	01	301.4	HS, DJ	LWD
29	RP	00	325.1	HS	LWD
34	RR	00	401.5	AM	4" PGS & 7" PGS EATING BITES OF MY SANDWICH
35	LP	00	412.8		RIP#2
38	LP	00	453.5	SS/	
40	RR	01	493.5	TJ/	PICTURE
41	CB	11	493.5		TRIB B, ACW=2.3
42	CC	11	493.5	CC	H=.9, W=1.1 CMP WHICH IS RUSTED AND CRUSHED @OUTFLOW
48	RR	00	619.4	HS	LWD
49	RR	01	631.6	HS	LWD
54	LP	00	666.5	HS	LWD

COMMENT SUMMARY

MONITORING AREA: 3-MS SITE ID: 32 STREAM: FISH CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
60	CB	00	749.2	DJ	
64	LP	01	788.6	HS	
65	CB	00	810.6	TJ/	END



Name: ELK PEAK
 Date: 1/9/2007
 Scale: 1 inch equals 2000 feet

Location: 10 426207 E 4828454 N
 Caption: FISH CREEK RESTORATION SITE - MILLICOMA BASIN