

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

STREAM: Elkhorn Creek (MC-373)
BASIN: Pacific Ocean
SURVEY TYPE: Pre-Tx
DATE: January 24, 2007
SURVEY CREW: Matt Strickland, Sharon Tippery
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 10.9 km²
USGS MAPS: Tidewater
ECOREGION: Coast Range Coastal Uplands

GENERAL DESCRIPTION:

The Elkhorn Creek habitat survey extended 2,338 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 2.4 (range: 1.0-4.0). Land use for the reach was young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (48%) and riffles (42%) dominated stream habitat. Gravel (38%) and cobble (20%) dominated stream substrate. Wood volume was low at 17.9 m³/100m.

COMMENTS:

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

REACH 1

T12S-R11W-S27NE

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	2.4	VWI Range:	1 - 4

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	2,338	15,582	0
Secondary Channel	53	122	1
Off-Channel Units	129	144	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 3
Width: 5.6	Width: 8.6	10.6 (6.8 - 13.7)	14.0 (11.8 - 15.5)
Depth: 0.48	Height: 0.4	0.8 (0.7 - 0.96)	3.6 (1 - 8.7)

W:D ratio: 21.7
 Stream Flow Type: MF
 Average Unit Gradient: 1.1%
 Water temperature (°C): 7.0 - 7.0

Entrenchment (ACW:FPW ratio): 1.2
 Habitat Units/100m (total channel length): 6.3
 Habitat Units/100m (primary channel length): 6.8

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	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:		Reach avg:
Undercut Banks:		Range: -

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	473	20.2
Volume (m ³):	418	17.9
Key pieces (>=12m x 0.60m):	12	0.5

OREGON DEPT OF FISH AND WILDLIFE

ELKHORN CREEK PRE-TX (2-MC, 373)

HABITAT INVENTORY

Report Date: 4/25/2007

Survey Date:

1/24/2007

REACH 1		T12S-R11W-S27NE					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	7	42	1.1	0.09	43	0	0	1	16	55	26	2
DRY UNIT	1	4	2.3	0.00	8	0	25	45	25	5	0	0
GLIDE	1	27	7.3	0.35	193	0	5	10	50	15	10	10
POOL-BACKWATER	2	28	1.9	0.50	47	0	77	15	3	0	0	5
POOL-ISOLATED	1	3	1.2	0.15	4	0	79	21	0	0	0	0
POOL-LATERAL SCOUR	52	957	6.8	0.85	6,792	0	5	19	48	16	5	7
POOL-PLUNGE	14	143	5.5	0.76	810	0	3	15	27	19	9	28
RAPID/BEDROCK	4	41	4.8	0.28	196	0	0	0	1	9	9	81
RAPID/BOULDERS	7	136	4.5	0.28	685	0	1	8	27	33	21	11
RIFFLE	41	1,063	5.7	0.28	6,634	0	4	13	47	24	9	3
STEP/BEDROCK	11	31	4.8	0.15	156	0	0	0	0	1	11	88
STEP/COBBLE	8	40	6.7	0.17	252	0	0	10	64	21	5	0
STEP/LOG	8	6	4.4	0.13	25	0	5	17	48	24	4	2
STEP/STRUCTURE	1	1	1.0	1.00	1	0	0	0	0	14	23	64
Total:	158	2,521	5.6	0.48	15,848	0	Avg: 5	13	38	20	9	15

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	3	31	1.7	0.38	50	0.32%	0	0.0	
Scour Pools	66	1,099	6.5	0.83	7,603	47.97%	0	0.0	
Glides	1	27	7.3	0.35	193	1.22%	0	0.0	
Riffles	41	1,063	5.7	0.28	6,634	41.86%	0	0.0	
Rapids	11	178	4.6	0.28	881	5.56%	0	0.0	
Cascades	7	42	1.1	0.09	43	0.27%	0	0.0	
Step/Falls	28	78	5.1	0.18	435	2.74%	0	0.0	
Dry	1	4	2.3	0.00	8	0.05%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	69	27.4	29.5
Pools >=1m deep:	14	5.6	6.0
Complex pools (LWD pieces>=3):	37	14.7	15.8
Pool frequency (channel widths/pool):	4.3		
Residual pool depth (avg):	0.59		

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: **2-MC** SITE ID: **373** ELKHORN CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
2	RB	11	26.5		ACW=3.2
8	LP	00	175	BV /SS	
10	LP	01	196.2	TJ/	
11	CB	11	196.2		ACW=1.0, TEMP=8.0
14	LP	00	247.2	BV	
17	RI	11	284.1		ACW=0.5, TEMP.=7.0
20	RI	02	304.4	/SS	
23	RI	01	335.4	/TJ	
24	RI	11	335.4		ACW=0.8, TEMP.=7.5
34	RI	11	565		ACW=5.0, TEMP.=7.5
43	RI	00	722.6	SS/	
44	LP	01	752.6	TJ/TJ	
45	CB	11	752.6		ACW=1.8, TEMP.=7.5
46	RI	11	752.6		ACW=1.4, TEMP.=7.5
50	LP	01	816.4	/TJ	
51	RB	11	816.4		ACW=1.6, TEMP.=8.0
61	LP	01	998.2	/TJ	
62	CB	11	998.2		ACW=1.9, TEMP.=8.0
72	BW	10	1127.6		COHO FRY
79	RI	11	1187.4		ACW=2.2, TEMP.=8.0
83	RI	00	1219	/SS	

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: **2-MC** SITE ID: **373** ELKHORN CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
85	RI	00	1274.7	/SS	
87	RI	00	1350.6	/SS	
91	RI	00	1431.7	/SS	
101	SR	01	1546.1	TJ/	
103	SS	11	1546.1	CE	CULVERT 1.0m DIAMETER
106	RI	00	1605.3	/SS	
124	LP	01	1879.1	/TJ	
125	CB	11	1879.1		ACW=2.0, TEMP.=8.0
132	CB	11	2042.2		ACW=1.8, TEMP.=8.0
150	CB	11	2265.2		ACW=1.2, TEMP.=8.0
157	SR	01	2330.6	/TJ	
158	RR	00	2338.1		ACW=5.4, TEMP.=8.0

