

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

STREAM: Elk Creek Phase 2 (MS-325)
BASIN: Millicoma River
SURVEY TYPE: Post-Tx
DATE: March 7, 2007
SURVEY CREW: Laurel Moulton, Andy Lanier
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 13.3 km²
USGS MAPS: Elk Peak
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Elk Creek habitat survey extended 2,714 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 2.6 (range: 2.0-4.0). Land use for the reach was old growth (90+ cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 0.8 percent. Scour pools (51%) and riffles (27%) dominated stream habitat. Gravel (36%) and bedrock (26%) dominated stream substrate. Wood volume was moderate at 23.7 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-R11W-S24SE

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	2.6	VWI Range:	2 - 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	2,714	24,040	0
Secondary Channel	15	75	0
Off-Channel Units	97	210	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 6
Width: 7.9	Width: 11.4	18.7 (13 - 27)	23.0 (17 - 31)
Depth: 0.55	Height: 0.7	1.4 (1.4 - 1.4)	1.9 (1.7 - 2.5)

W:D ratio: 16.2
 Stream Flow Type: MF
 Average Unit Gradient: 0.8%
 Water temperature (°C): 9.0 - 9.0

Entrenchment (ACW:FPW ratio): 1.8
 Habitat Units/100m (total channel length): 4.2
 Habitat Units/100m (primary channel length): 4.3

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	OG	ST
Riparian Vegetation:	M50	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):	338	12.5
Volume (m ³):	642	23.7
Key pieces (>=12m x 0.60m):	46	1.7

OREGON DEPT OF FISH AND WILDLIFE

ELK CREEK PHASE 2 POST-TX (3-MS, 325)

HABITAT INVENTORY

Report Date: 5/3/2007

Survey Date:

3/7/2007

REACH 1		T23S-R11W-S24SE					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	1	8	0.6	0.02	5	0	0	0	70	30	0	0
POOL-BACKWATER	2	26	3.5	0.60	86	0	15	65	0	0	5	15
POOL-DAMMED	4	166	11.0	0.88	1,850	0	1	26	30	7	9	27
POOL-ISOLATED	2	14	2.3	0.58	31	0	35	60	4	0	0	0
POOL-LATERAL SCOUR	45	1,306	8.9	0.93	11,849	0	1	12	39	10	11	27
POOL-PLUNGE	3	33	7.7	0.75	355	0	2	7	54	10	8	20
POOL-STRAIGHT SCOUR	2	43	7.5	0.85	310	0	2	5	10	15	34	34
RAPID/BEDROCK	4	141	9.5	0.18	1,337	0	0	9	4	0	4	84
RAPID/BOULDERS	3	80	5.8	0.22	603	0	0	2	35	33	29	2
RIFFLE	9	195	5.9	0.19	1,398	0	0	8	59	18	5	10
RIFFLE W/ POCKETS	15	644	8.0	0.28	5,216	0	0	9	35	15	11	30
STEP/BEDROCK	4	22	6.6	0.18	164	0	0	0	1	1	0	98
STEP/BOULDERS	9	63	6.6	0.29	441	0	0	4	13	16	54	12
STEP/COBBLE	11	78	8.4	0.19	620	0	0	7	63	19	10	2
STEP/STRUCTURE	4	9	7.3	0.23	61	0	0	8	23	8	15	48
Total:	118	2,826	7.9	0.55	24,324	0	Avg: 1	11	36	12	13	26

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	8	206	6.9	0.73	1,967	8.08%	0	0.0
Scour Pools	50	1,381	8.8	0.92	12,513	51.44%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	24	839	7.2	0.25	6,614	27.19%	0	0.0
Rapids	7	221	7.9	0.19	1,940	7.98%	0	0.0
Cascades	1	8	0.6	0.02	5	0.02%	0	0.0
Step/Falls	28	171	7.4	0.22	1,286	5.29%	0	0.0
Dry	0	0			0	0.00%	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:	58	20.5	21.4
Pools >=1m deep:	19	6.7	7.0
Complex pools (LWD pieces>=3):	24	8.5	8.8
Pool frequency (channel widths/pool):	4.3		
Residual pool depth (avg):	0.65		

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: **3-MS** SITE ID: **325** ELK CREEK PHASE 2 POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
1	RI	01	39	BV	
2	LP	02	39	/TJ	JUVENILE COHO
5	SR	11	39	PB	BEDROCK IS CONGLOMERATE OF GRA
9	LP	00	95	HS	JUVENILE COHO= JC IN NOTES
10	LP	00	120	HS- CS/SS	JC, SOME APPROXIMATELY 6IN LON
12	SS	00	131	HS	LOGS
14	LP	00	183	BV	
15	SR	00	191	HS	LOGS PLACED
16	LP	00	209	BV	
20	RP	00	337	RF	
23	LP	00	408	SS/	ADULT CT
24	SC	00	425	CS/	
25	LP	01	456		SR=SALMON REDDS IN TAILOUT
31	LP	00	578		SR
35	LP	00	706	HS	BOULDERS + LOGS = BL
36	RP	00	756		ODFW AQ SIGN W/ A 1025 (OR 625
37	RP	00	799	HS	BL
38	DP	00	847		PICTURE LOOKING DOWNSTREAM, 00
39	RP	00	881		PICTURE LOOKING UPSTREAM 0039.
41	SP	01	916	/TJ	
42	SB	10	916		ACW=1.5

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: **3-MS** SITE ID: **325** ELK CREEK PHASE 2 POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
44	DP	00	967.5	HS	BL
46	LP	00	995.5		SR PRESENT, ADULT CT
47	LP	00	1036.5	CS/	SR
48	SC	00	1046.5	HS	LOGS PLACED
49	LP	00	1102.5	SS-/HS	LOGS PLACED
51	LP	00	1153.5	BV- /SS	SR
53	LP	00	1207.5	HS	LOGS PLACED = LP
54	LP	00	1235.5	HS	LP
56	LP	00	1277.5	HS	LP
57	SS	00	1280.5	HS	BL
58	DP	00	1324.5	HS	LP
60	PP	00	1348.5	CS/	JUVENILE SALMON
62	RI	01	1375.5	TJ/	ODFW SIGN, ELK CRK. SITE 1040
63	RI	11	1375.5	CE	CULVERT IS OVAL METAL, CORRUGA
64	LP	00	1403.5		ADULT SALMON, FUNGUS ON IT.
69	RP	00	1500.5		ADULT SALMONID
70	RP	00	1531.5	/SS	
71	LP	01	1551.5	/TJ	
72	CB	11	1551.5		ACW=1.8
74	LP	00	1582.5	BV	
75	LP	00	1613.5		SR

Comment Summary

Restoration Monitoring Sites 2007

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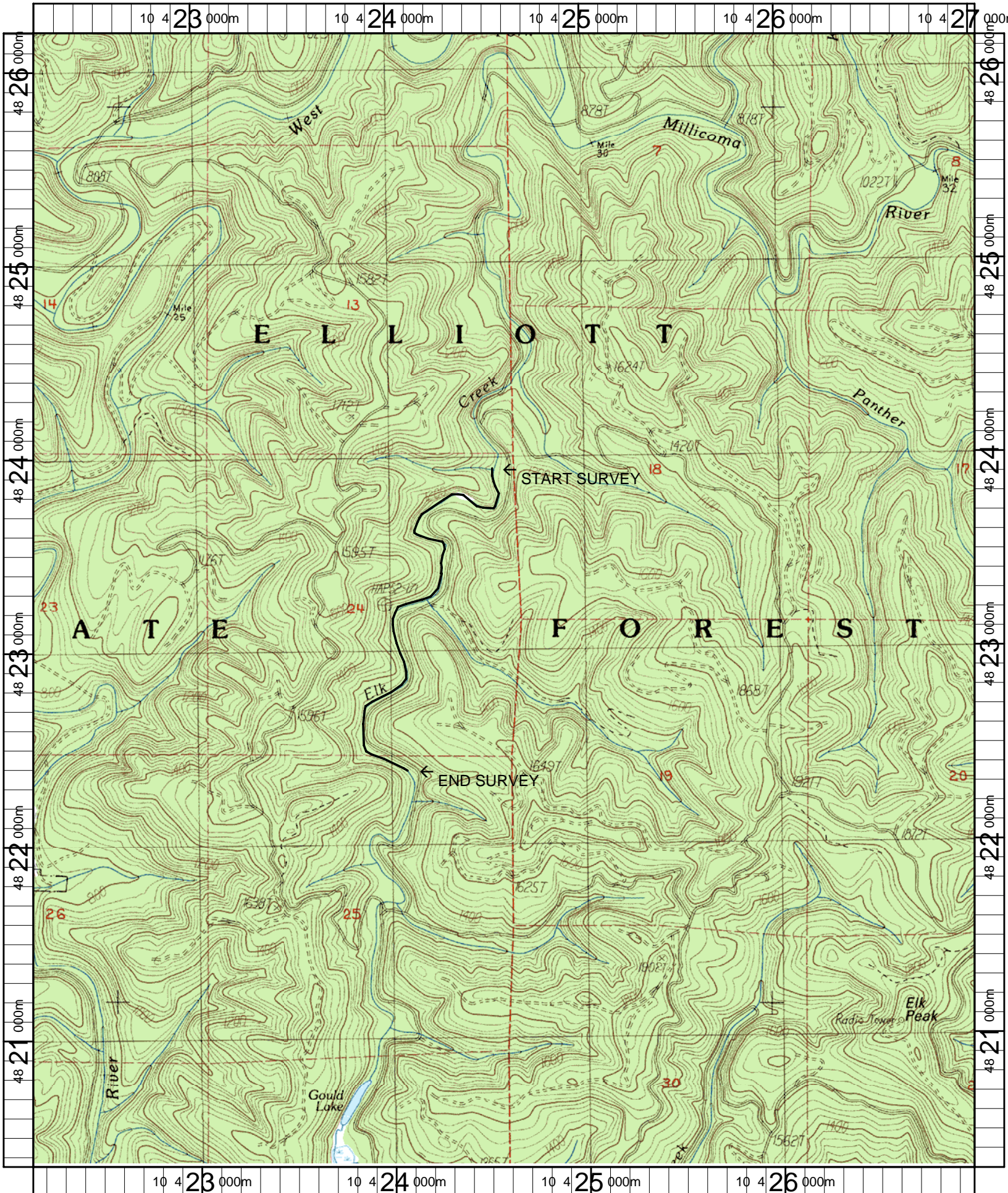
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
77	LP	00	1658.5	HS	SR. LOGS PLACED.
78	SS	00	1659.5	HS	LP.
79	LP	00	1719.5	HS	LP.
80	SS	00	1722.5	HS	LP
81	RP	00	1782.5	HS-BV	LP
82	LP	00	1826.5	BV	MULTIPLE SR. LOTS OF JUVENILE
86	SB	00	1938.5	SS/	
87	LP	00	1986.5	BV-HS	SR. JUVENILE COHO.
89	SC	00	2042	SS/	SR*2.
92	LP	01	2093.5	BV	SR*2. JSO.
93	IP	10	2093.5		ROUGHSKIN NEWTS.
94	LP	00	2123.5	/SS	
95	LP	00	2155.5	WL	ELK PRINTS
96	RI	00	2183.5		SR.
97	LP	00	2232.5	/SS*2	
98	LP	00	2256.5	HS	LOGS PLACED IN STREAM = LP. JS
100	LP	00	2357.5		JSO.
101	RP	01	2397.5	BV, WL-/TJ	ELK PRINTS
102	RB	11	2397.5		ACW=2.3M
103	RI	12	2397.5		ACW= 1M
104	LP	00	2423.5	HS	LP.

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: 3-MS SITE ID: 325 ELK CREEK PHASE 2 POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
105	RP	00	2446.5	BV	
106	LP	00	2474.5	HS	SR. LP.
108	LP	00	2518.5	HS	LP.
113	LP	00	2590.5	HS	ADULT SALMONID OBSERVED. APPROX
118	IP	10	2713.5		JSO. ROUGHSKIN NEWTS.



Name: ELK PEAK (OR)
 Date: 4/26/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0424584 E 4823252 N
 Caption: ELK CREEK #325 RESTORATION SITE - MILLICOMA BASIN