

**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: Pre-Tx  
DATE: March 9, 2006  
SURVEY CREW: Scott Venables, Seth Ring  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 17.6 km<sup>3</sup>  
USGS MAPS: Elk Peak  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Elk Creek habitat survey extended 2,907 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 3.3 (range: 1.3-15.0). Land use for the reach was mature (50-90 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 0.5 percent. Scour pools (63%) and riffles (29%) dominated stream habitat. Gravel (29%) and bedrock (20%) dominated stream substrate. Wood volume was low at 11.5 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T23S-R11W-S24NE

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	3.3	VWI Range:	1.3 - 15

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	2,907	25,270	0
Secondary Channel	18	106	0
Off-Channel Units	254	687	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 8	<u>First Terrace</u> n = 8
Width: 7.4	Width: 13.6	19.9 ( 15.8 - 31.1 )	24.8 ( 17.8 - 42.3 )
Depth: 0.69	Height: 0.8	1.7 ( 1.5 - 1.9 )	2.5 ( 1.75 - 2.9 )

W:D ratio: 16.5

Entrenchment (ACW:FPW ratio): 1.5

Stream Flow Type: MF

Habitat Units/100m (total channel length): 3.1

Average Unit Gradient: 0.5%

Habitat Units/100m (primary channel length): 3.4

Water temperature (°C): 5.0 - 5.0

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	MT	ST
Riparian Vegetation:	D30	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):	436	15.0
Volume (m <sup>3</sup> ):	334	11.5
Key pieces (>=12m x 0.60m):	5	0.2

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

3/9/2006

REACH 1		T23S-R11W-S24NE					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	2	69	5.6	0.19	318	0	0	5	19	2	0	74
CASCADE/BOULDERS	6	95	3.9	0.18	398	0	0	7	19	12	52	11
POOL-BACKWATER	9	64	4.7	0.59	306	0	21	23	11	6	3	37
POOL-LATERAL SCOUR	49	1,926	8.4	1.03	16,138	0	5	22	32	15	13	13
POOL-PLUNGE	2	23	8.9	0.75	288	0	2	10	34	35	7	12
RAPID/BEDROCK	2	30	4.5	0.30	149	0	2	0	30	7	2	58
RAPID/BOULDERS	3	107	8.0	0.52	856	0	0	5	11	15	59	10
RIFFLE	19	746	7.7	0.34	6,352	0	0	5	37	30	11	17
RIFFLE W/ POCKETS	2	117	10.3	0.43	1,247	0	3	0	35	15	2	44
STEP/BEDROCK	4	1	3.9	0.04	5	0	0	0	35	23	0	43
STEP/BOULDERS	1	1	8.1	0.30	6	0	0	5	5	5	85	0
<b>Total:</b>	<b>99</b>	<b>3,179</b>	<b>7.4</b>	<b>0.69</b>	<b>26,063</b>	<b>0</b>	<b>Avg: 4</b>	<b>15</b>	<b>29</b>	<b>17</b>	<b>15</b>	<b>20</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	9	64	4.7	0.59	306	1.18%	0	0.0	
Scour Pools	51	1,949	8.4	1.02	16,425	63.02%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	21	863	7.9	0.35	7,600	29.16%	0	0.0	
Rapids	5	138	6.6	0.43	1,005	3.85%	0	0.0	
Cascades	8	164	4.3	0.18	716	2.75%	0	0.0	
Step/Falls	5	2	4.7	0.09	11	0.04%	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	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	60	18.9	20.6
Pools >=1m deep:	26	8.2	8.9
Complex pools (LWD pieces>=3):	29	9.1	10.0
Pool frequency (channel widths/pool):	3.9		
Residual pool depth (avg):	0.65		

# Comment Summary

## Restoration Monitoring Sites 2006

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

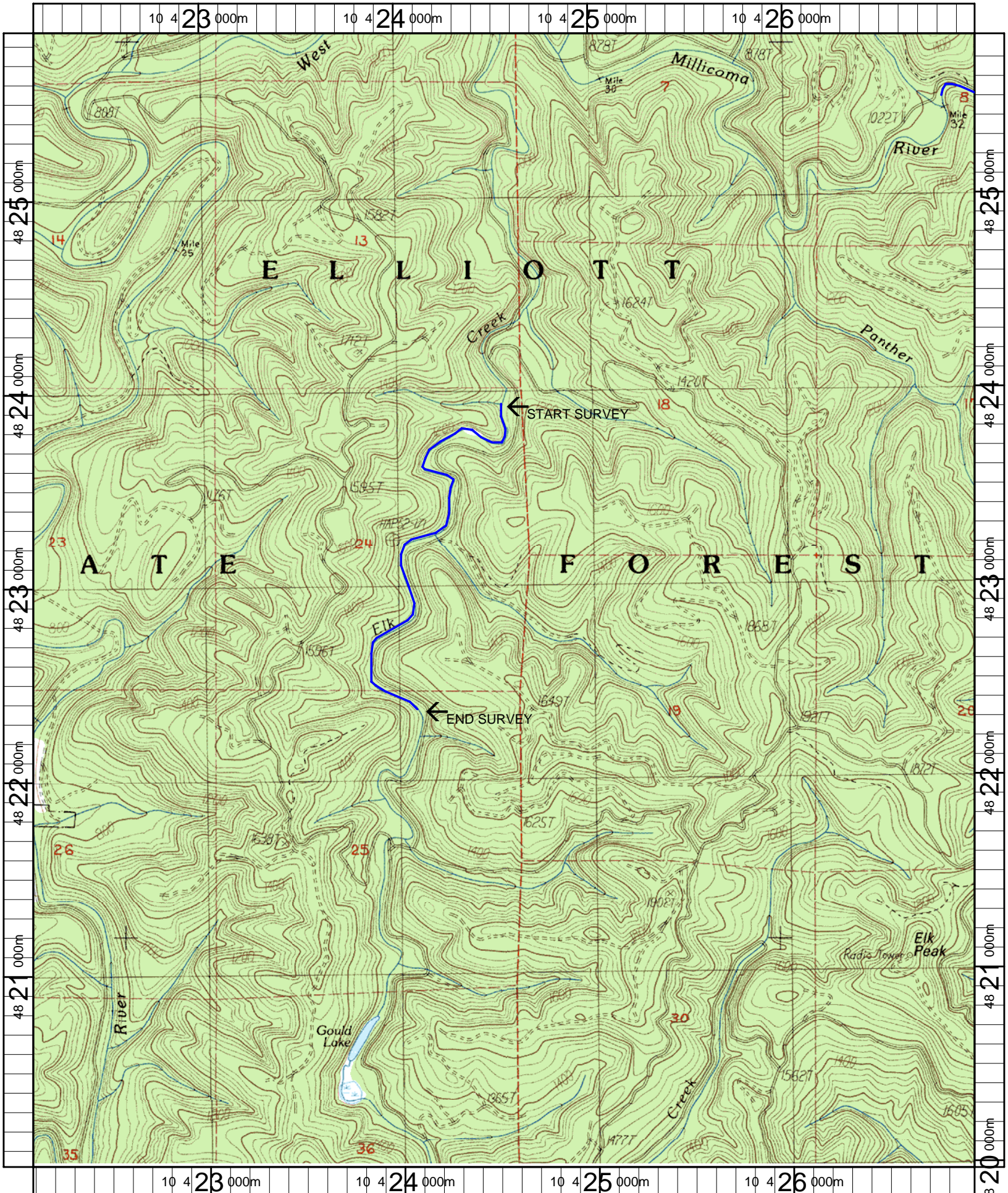
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	01	10.4	/TJ	T = 4.5 AT 10:30	
4	RI	11	38.6		ACW = 3.6, T = 5.0	
5	SR	11	38.6		H = 1.7	
15	SR	00	278.5		H = 0.35	
17	RI	01	350.5	CS/CS	FORMER ROAD CROSSING	
21	LP	01	451.4	TJ/, CS/CS		
22	CB	11	451.4		ACW = 2.4, T = 5.0 AT 12:30	
30	RI	01	927.3	/TJ		
31	PP	11	927.3		ACW = 0.75, T = 6.5 AT 3PM	
32	SR	11	927.3		H = 0.95	
35	LP	01	993.2	/TJ		
36	CB	11	993.2		ACW = 2.3, T = 5.0 AT 3:25	
37	LP	00	1049.4	SS/		
47	SB	00	1454.05		H = 0.53	
48	LP	01	1480.65	TJ/, CS/CS	SALMON SPAWNING SIGN	
49	RI	11	1480.65	CC	1.5m x 2.5m, T = 6.0, ACW=5.7	
51	LP	00	1538.15	/CS	T = 5.0 AT 9AM	
54	RB	00	1648.85	/SS		
55	LP	01	1680.55	SS/TJ		
56	CB	11	1680.55		ACW = 1.7, T = 5.0 AT 9:15	
57	LP	01	1709.05		STEELHEAD REDD	

# Comment Summary

## Restoration Monitoring Sites 2006

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
59	RI	00	1756.15	/SS		
61	LP	01	1856.55	/TJ	ORIGINAL START SIGN FOR PROJCT	
62	SR	11	1856.55		H = 0.7, STEELHEAD	
63	RR	11	1856.55		ACW = 1.9, T = 4.0	
67	RI	00	1930.05	CS/SS		
72	RB	01	2087.45	CS/TJ		
73	CB	11	2087.45		H = 3.8, ACW = 1.2, T = 6.0	
77	LP	00	2195.65	SS/	5 MARKED STEELHEAD REDDS	
78	RI	00	2224.25	SS/		
81	LP	00	2329.65	SS/		
83	LP	01	2397.05	/TJ	STEELHEAD REDD	
84	CR	11	2397.05		ACW = 2.9, T = 6.0 AT 12:00	
85	LP	00	2452.35		STEELHEAD	
86	LP	00	2538.35	/SS	ADULT STEELHEAD	
87	LP	01	2567.05	/TJ		
88	RI	11	2567.05		ACW = 1.8, T = 6.0	
89	LP	00	2598.55	/SS		
96	RB	00	2821.25	/SS		
99	LP	00	2906.75	SS/		



Name: ELK PEAK  
 Date: 5/22/2006  
 Scale: 1 inch equals 2000 feet

Location: 10 424539 E 4822918 N  
 Caption: ELK CREEK #325 RESTORATION SITE - MILLICOMA BASIN