

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

STREAM: Elk Creek (MS-292)  
BASIN: Coquille River  
SURVEY TYPE: Reference  
DATE: July 13, 2006  
SURVEY CREW: Lisa Biggs, Peter Cole  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 39.0 km<sup>2</sup>  
USGS MAPS: Remote  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Elk Creek habitat survey extended 537 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 12.5 (range: 10.0-15.0). Land use for the reach was timber harvest and mature (50-90 cm dbh) trees. The average unit gradient was 0.9 percent. Scour pools (88%) dominated stream habitat. Gravel (34%) and bedrock (20%) dominated stream substrate. Wood volume was very low at 3.7 m<sup>3</sup>/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

T28S-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	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	12.5	VWI Range:	10 - 15

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	100%	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	537	3,466	0
Secondary Channel	0	0	0
Off-Channel Units	114	95	2

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 4	<u>First Terrace</u> n = 4
Width: 4.4	Width: 10.2	11.3 ( 10.4 - 13 )	15.0 ( 11.5 - 20.2 )
Depth: 0.38	Height: 0.6	1.1 ( 1 - 1.2 )	2.0 ( 1.2 - 3.7 )

W:D ratio: 18.6  
 Stream Flow Type: LF  
 Average Unit Gradient: 0.9%  
 Water temperature (°C): 15.0 - 15.0

Entrenchment (ACW:FPW ratio): 1.1  
 Habitat Units/100m (total channel length): 5.4  
 Habitat Units/100m (primary channel length): 6.5

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	TH	MT
Riparian Vegetation:	D30	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	11%	Reach avg: 84%
Undercut Banks:	9%	Range: 44 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	41	7.6
Volume (m <sup>3</sup> ):	20	3.7
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

ELK CREEK REFERENCE (3-MS, 292)

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

7/13/2006

REACH 1		T28S-R11W-S27NE					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	8	0.3	0.01	2	0	0	0	4	26	0	70
CASCADE/BOULDERS	1	10	0.1	0.01	1	0	0	10	30	30	30	0
DRY UNIT	2	35	0.6	0.00	18	0	0	0	20	20	0	60
POOL-BACKWATER	3	25	2.5	0.38	57	6	10	32	45	13	0	0
POOL-ISOLATED	1	4	1.3	0.20	5	0	10	10	80	0	0	0
POOL-LATERAL SCOUR	11	438	7.3	0.91	3,098	95	7	22	42	7	4	18
POOL-PLUNGE	1	10	5.5	0.70	53	0	20	60	20	0	0	0
RAPID/BEDROCK	1	17	0.3	0.01	4	0	0	0	40	30	0	30
RIFFLE	4	68	2.1	0.07	138	0	2	34	59	5	0	0
RIFFLE W/ POCKETS	1	12	8.0	0.20	93	0	0	10	30	0	0	60
STEP/BEDROCK	3	4	5.5	0.07	14	42	0	0	2	0	32	67
STEP/BOULDERS	4	6	4.5	0.10	25	86	0	0	6	0	94	0
STEP/COBBLE	2	15	3.7	0.05	54	3	0	0	50	50	0	0
<b>Total:</b>	<b>35</b>	<b>651</b>	<b>4.4</b>	<b>0.38</b>	<b>3,562</b>	<b>232</b>	<b>Avg: 4</b>	<b>16</b>	<b>34</b>	<b>10</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	4	29	2.2	0.34	62	1.75%	6	9.6	
Scour Pools	12	448	7.2	0.89	3,151	88.46%	95	3.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	5	80	3.3	0.09	231	6.47%	0	0.0	
Rapids	1	17	0.3	0.01	4	0.12%	0	0.0	
Cascades	2	18	0.2	0.01	3	0.10%	0	0.0	
Step/Falls	9	25	4.6	0.08	93	2.60%	131	141.5	
Dry	2	35	0.6	0.00	18	0.51%	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:	16	24.6	29.8
Pools >=1m deep:	4	6.1	7.4
Complex pools (LWD pieces>=3):	6	9.2	11.2
Pool frequency (channel widths/pool):	4.0		
Residual pool depth (avg):	0.80		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

ELK CREEK REFERENCE  
GCG: 3-MS SITE ID: 292

Survey Date 7/13/2006  
Report Date: 3/5/2007

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	2032
Total conifers/1000 ft	20
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		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	3.0	0.0	7.0	0.3	6.7	0.3	16.7
15-30cm	0.0	5.0	0.0	2.3	0.0	2.3	0.0	9.7
30-50cm	0.0	1.7	0.0	2.7	0.0	1.7	0.0	6.0
50-90cm	0.0	0.3	0.0	0.7	0.0	0.0	0.0	1.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	10.0	0.0	12.7	0.3	10.7	0.1	11.1

Canopy closure and ground cover

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	81		88		88	
Shrub cover	9		7		8	
Grass/forb cover	61		73		68	

Predominant landform in each zone

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		17		17	
High terrace	50		83		83	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	44		3		2	

**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	2032
Total conifers/1000 ft	20
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	0.3	16.7
15-30cm	0.0	9.7
30-50cm	0.0	6.0
50-90cm	0.0	1.0
>90cm	0.0	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		
10	RT	3	HT	0	85	0	80	Conifer							
								Hardwood	2						
10	LF	2	HT	0	85	5	65	Conifer							MYRTLWOOD CLUMPS THROUGHOU
								Hardwood	7	3					
10	LF	3	HS	10	80	35	25	Conifer	1						
								Hardwood	2	2					
10	RT	1	HS	80	90	0	80	Conifer							HS/HT, SLOPE HS=80%,
								Hardwood	2		1				
10	RT	2	HT	0	85	0	75	Conifer							
								Hardwood	3	1					
10	LF	1	HT	8	75	0	75	Conifer							HT/HS, SLOPE HT=8%,
								Hardwood		4					
13	LF	2	HT	0	90	5	60	Conifer							
								Hardwood	2		2	2			
13	LF	3	HT	0	90	0	50	Conifer							
								Hardwood	3	4	4				
13	RT	1	HT	0	60	40	20	Conifer							
								Hardwood			1				
13	LF	1	HS	35	80	10	40	Conifer							HS/HT, SLOPE HS=35%,
								Hardwood	1	7	2				HS/HT, SLOPE HS=30%,
13	RT	2	HT	0	90	20	70	Conifer	3		5				
								Hardwood							
13	RT	3	HT	0	90	5	90	Conifer							
								Hardwood	4		1				
29	LF	2	HS	15	90	0	95	Conifer							2M BDH STUMP
								Hardwood		3	1				
29	RT	3	HT	0	90	0	70	Conifer							
								Hardwood	2	1					
29	RT	2	HT	0	90	10	70	Conifer							
								Hardwood	6						
29	LF	3	HT	0	90	5	90	Conifer							
								Hardwood	7						
29	LF	1	HT	0	90	5	75	Conifer							
								Hardwood	1	1	1	1			
29	RT	1	HS	140	90	0	75	Conifer							
								Hardwood	5	3					

# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: **3-MS**      SITE ID: **292**      ELK CREEK REFERENCE

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	01	25.2	TJ/	T=15.5C AT 13:40, 3 RSN	START AT END LP FROM 3
2	CB	11	25.2		ACW=0.90M	
5	SR	00	35.7		H=0.55M	
7	LP	00	66			EROSION FROM HIGH FLO
9	LP	00	106.6			BOULDER WEIR AT TOP
10	SR	00	107.4	HS		BOULDER WEIR
11	LP	00	168.5			BOULDER WEIR AT TOP &
12	SB	00	170.3	HS	H=0.20M	BOULDER WEIR
13	LP	01	236.2	/TJ	1 RSN	
15	RR	11	236.2		ACH=0.15M, ACW=.70M	
16	SB	00	237.4	HS		BOULDER WEIR
18	BW	10	259.6		1 RSN	
21	IP	10	318.5		SALMONIDS	
22	SC	01	324.6	TJ/	TJ/	
23	DU	11	324.6		ACW=0.70M, H=3.0M, WATE	
24	DU	11	324.6		ACW=0.50M, ACH=0.20M	
26	BW	10	338.7			BOULDER WEIR AT TOP
27	SB	00	340.7	HS	H=0.30M	BOULDER WEIR
28	LP	00	372.9			BOULDER WEIR AT TOP
29	SB	00	373.6	HS		BOULDER WEIR
30	LP	00	435.9	LI		LI 4X4

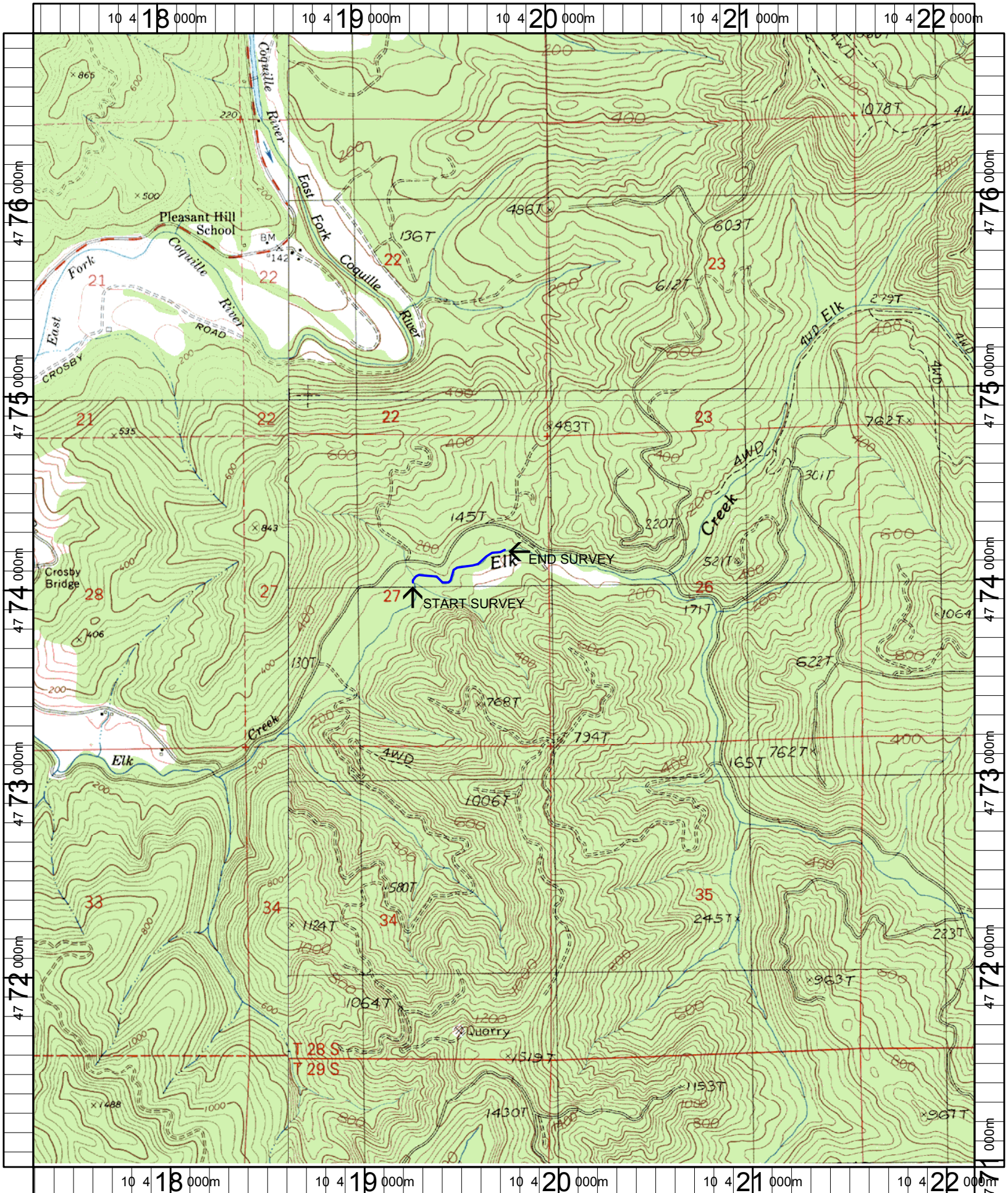
# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: 3-MS      SITE ID: 292      ELK CREEK REFERENCE

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
31	RI	00	451		T=17.0C AT 16:02	
35	LP	00	537.4		5 RSN	





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

Location: 10 419752 E 4773921 N  
 Caption: ELK CREEK REFERENCE SITE - COQUILLE BASIN