

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

STREAM: Big Elk Creek (MC-307)
BASIN: Yaquina River
SURVEY TYPE: Pre-Tx
DATE: March 16, 2005
SURVEY CREW: Brian Bangs, Sheila Davis
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 24.6 km²
USGS MAPS: Harlan
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Big Elk Creek habitat survey extended 1,220 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 9.4 (range: 5.5-14.0). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 0.5 percent. Scour pools (72%) and riffles (24%) dominated stream habitat. Sand (44%) and gravel (33%) dominated stream substrate. Wood volume was very low at 3.5 m³/100m.

COMMENTS:

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

REACH 1

T12S-R08W-S15SE

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	9.4	VWI Range:	5.5 - 14

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	1,220	4,360	0
Secondary Channel	0	0	0
Off-Channel Units	87	97	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 6	<u>First Terrace</u> n = 6
Width: 3.2	Width: 5.9	7.6 (6 - 8.5)	10.8 (7.3 - 12.5)
Depth: 0.49	Height: 0.4	0.9 (0.6 - 1.2)	1.5 (1.2 - 1.7)

W:D ratio: 14.5

Entrenchment (ACW:FPW ratio): 1.3

Stream Flow Type: MF

Habitat Units/100m (total channel length): 6.7

Average Unit Gradient: 0.5%

Habitat Units/100m (primary channel length): 7.2

Water temperature (°C): 6.5 - 6.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	G	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):	103	8.4
Volume (m ³):	43	3.5
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

BIG ELK CREEK PRE-TX (2-MC, 307)

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

3/16/2005

REACH 1		T12S-R08W-S15SE					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/BEDROCK	1	14	4.5	0.05	61	0	5	5	5	0	0	85
GLIDE	1	6	1.9	0.25	12	0	0	35	59	5	1	0
POOL-BACKWATER	10	28	1.0	0.18	26	0	22	68	10	1	0	0
POOL-DAMMED	1	24	4.2	0.65	102	0	30	64	5	0	1	0
POOL-LATERAL SCOUR	47	855	3.9	0.76	3,202	0	20	50	25	3	0	2
RIFFLE	27	380	2.9	0.19	1,054	0	7	29	55	3	0	6
STEP/BEAVER DAM	1	0	0.8	0.15	0	0	10	10	30	0	0	50
Total:	88	1,307	3.2	0.49	4,458	0	Avg: 16	44	33	2	0	5

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	11	52	1.2	0.22	128	2.87%	0	0.0
Scour Pools	47	855	3.9	0.76	3,202	71.83%	0	0.0
Glides	1	6	1.9	0.25	12	0.26%	0	0.0
Riffles	27	380	2.9	0.19	1,054	23.65%	0	0.0
Rapids	0	0			0	0.00%	0	0.0
Cascades	1	14	4.5	0.05	61	1.37%	0	0.0
Step/Falls	1	0	0.8	0.15	0	0.01%	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	44.4	47.5
Pools >=1m deep:	3	2.3	2.5
Complex pools (LWD pieces>=3):	13	9.9	10.7
Pool frequency (channel widths/pool):	3.8		
Residual pool depth (avg):	0.49		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 2-MC SITE ID: 307 BIG ELK CREEK PRE-TX

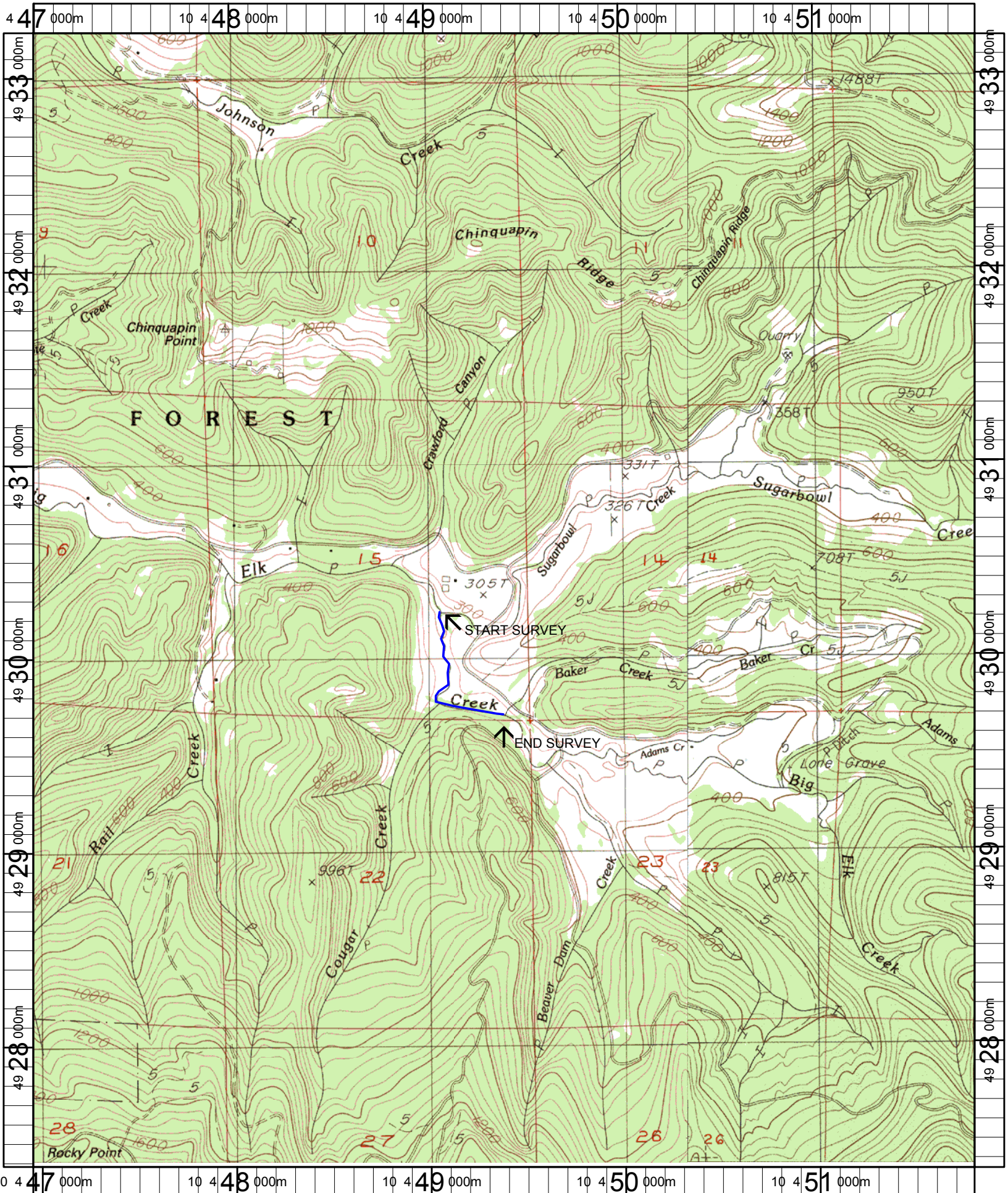
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	01	13.2	WL	CT MT G D3 ST LT, ELK	
8	LP	00	65.4	WL, DJ	RACCOON, REDDS	
10	SD	00	83.5	BD	H=0.3	
11	DP	00	107.7	BV, DJ		
12	LP	00	122.6	BV, DJ		
14	RI	00	151.8		ADULT STEELHEAD, FUNGI ON HEAD	
16	LP	00	170.5		CARCASS	
17	LP	00	184.2	DJ		
18	RI	00	197.8	WL	DEER	
20	RI	01	213.8	WL	DEER	
25	LP	00	251.5		CT MT G D30 ST LT	
26	LP	00	267.1	WL	RACCOON	
28	LP	00	283.5	WL	ELK	
32	LP	00	364.4	WL	ELK, ENTIRE POOL IS DEEP	
33	LP	00	410.5	WL	ELK	
34	LP	00	439.7	WL	ELK	
35	LP	00	516.9		D=0.7M FOR 30M FULL WIDTH	
36	LP	00	526.2	DJ	CT MT G S ST LT	
40	RI	00	587.4	WL	ELK	
42	LP	00	659	WL	DUCKS, OTTER TRACKS	
46	RI	00	762.1		CT CT G S ST LT	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **307** **BIG ELK CREEK PRE-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
49	LP	00	795.6	DJ		
56	LP	00	851.7	DJ		
57	RI	01	874.4	/TJ DJ WL	ELK	
58	RI	11	874.4	WL	ELK	
59	LP	00	888.5	DJ		
63	RI	00	914.1	/SS		
65	LP	00	938	DJ		
67	LP	00	963.4	DJ	CT CT S G ST LT	
69	BW	10	979.8		FISH SKELETON	
70	LP	00	993.2	DJ		
74	BW	10	1037.2		SALAMANDERS	
78	LP	00	1082.5	DJ		
80	RI	00	1141.3	DJ		
81	LP	00	1158	WL, DJ	DEER	
83	LP	00	1177	DJ	FRY	
84	RI	00	1191.6	WL		
86	LP	01	1208.7	TJ/, WL	DEER ELK	
87	RI	11	1208.7	BV		
88	RI	00	1220.3		CT CT D30 S ST LT	



Name: HARLAN
 Date: 1/21/2005
 Scale: 1 inch equals 2000 feet

Location: 10 449393 E 4930291 N
 Caption: BIG ELK CREEK RESTORATION SITE - YAQUINA BASIN