

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

STREAM: Elk Creek (N-316)
BASIN: Nehalem River
SURVEY TYPE: Pre-Tx
DATE: June 26, 2006
SURVEY CREW: Gordon Rose, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 8.8 km²
USGS MAPS: Bacona
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Elk Creek habitat survey extended 1,144 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 5.4 (range: 4.0-10.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 0.5 percent. Beaver pools (51%) and scour pools (37%) dominated stream habitat. Sand (37%), silt (30%) and gravel (30%) dominated stream substrate. Wood volume was low at 15.7 m³/100m.

COMMENTS:

There were two potential barriers to upstream fish migration in the surveyed length. Both were culverts – one with a 0.5 m high step and sheet flow over a concrete floor at unit 12 (227 m) and the other with a 0.7 m high step at unit 25 (465 m).

OREGON DEPT OF FISH AND WILDLIFE

ELK CREEK PRE-TX (1-NC, 316)

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

6/26/2006

REACH 1		T05N-R04W-S36SE					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
CULVERT CROSSING	2	40	1.7	0.03	69	0	18	28	34	21	0	0
GLIDE	2	94	1.5	0.55	137	0	40	40	20	0	0	0
POOL-BEAVER DAM	5	450	5.2	1.08	2,142	0	38	40	22	0	0	0
POOL-LATERAL SCOUR	17	368	3.4	0.85	1,149	0	27	39	32	0	0	2
POOL-PLUNGE	2	50	8.0	1.10	414	0	25	40	35	0	0	0
PUDDLED UNIT	1	5	1.0	0.01	5	0	40	40	20	0	0	0
RAPID/BOULDERS	1	10	0.3	0.05	3	0	40	40	20	0	0	0
RIFFLE	10	168	1.6	0.14	290	0	32	36	31	0	0	2
STEP/BEAVER DAM	5	5	5.0	0.05	25	0	36	38	26	0	0	0
STEP/COBBLE	1	1	3.0	0.10	3	0	10	30	60	0	0	0
STEP/STRUCTURE	2	1	3.0	0.06	2	0	18	28	34	21	0	0
Total:	48	1,191	3.3	0.52	4,239	0	Avg: 30	37	30	2	0	1

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	5	450	5.2	1.08	2,142	50.54%	0	0.0	
Scour Pools	19	418	3.8	0.87	1,563	36.87%	0	0.0	
Glides	2	94	1.5	0.55	137	3.24%	0	0.0	
Riffles	10	168	1.6	0.14	290	6.84%	0	0.0	
Rapids	1	10	0.3	0.05	3	0.07%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	8	7	4.3	0.06	30	0.70%	0	0.0	
Dry	1	5	1.0	0.01	5	0.12%	0	0.0	
Culverts	2	40	1.7	0.03	69	1.62%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	24	20.1	21.0
Pools >=1m deep:	13	10.9	11.4
Complex pools (LWD pieces>=3):	13	10.9	11.4
Pool frequency (channel widths/pool):	8.5		
Residual pool depth (avg):	0.83		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

ELK CREEK PRE-TX
GCG: 1-NC SITE ID: 316

Survey Date 6/26/2006
Report Date: 3/5/2007

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	264
Total conifers/1000 ft	142
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	41

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters		Zones 1-3 0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
	3-15cm	0.0	0.0	0.0	0.0	0.0	1.7	0.0
15-30cm	0.0	0.7	0.3	0.7	0.7	0.0	1.0	1.3
30-50cm	0.3	0.7	0.0	0.0	0.0	0.3	0.3	1.0
50-90cm	0.0	0.0	0.3	0.0	0.0	0.3	0.3	0.3
>90cm	0.3	0.0	0.0	0.0	0.3	0.0	0.7	0.0
Total/100m2	0.7	1.3	0.7	0.7	1.0	2.3	0.8	1.4

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	Conifer		Conifer		Conifer	
	(%)	(%)	(%)	(%)	(%)	(%)
Canopy closure	38	51	50			
Shrub cover	4	8	10			
Grass/forb cover	96	92	90			

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	Conifer		Conifer		Conifer	
	(%)	(%)	(%)	(%)	(%)	(%)
Hillslope	0	33	33			
High terrace	100	67	67			
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 (%)	0	15	18			

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	264
Total conifers/1000 ft	142
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	41

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	0.0	1.7
15-30cm	1.0	1.3
30-50cm	0.3	1.0
50-90cm	0.3	0.3
>90cm	0.7	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		
13	LF	1	HT	0	40	10	90	Conifer						1	UTM 0490442-5079428-3D
								Hardwood							
13	LF	3	HT	0	60	10	90	Conifer							
								Hardwood				1			
13	RT	1	HT	0	30	5	95	Conifer							
								Hardwood							
13	RT	2	HT	0	40	10	90	Conifer							
								Hardwood							
13	RT	3	HT	0	40	10	90	Conifer							
								Hardwood			1				
13	LF	2	HT	0	70	10	90	Conifer							
								Hardwood							
26	LF	1	HT	0	10	0	100	Conifer							POOR GPS COVERAGE
								Hardwood							
26	LF	2	HT	0	20	0	100	Conifer							
								Hardwood							
26	LF	3	HT	30	40	10	90	Conifer						1	NO AMPHIBIANS ALL ZONES
								Hardwood							
26	RT	1	HT	0	80	10	90	Conifer			1				
								Hardwood		1					
26	RT	2	HT	40	85	10	90	Conifer		1		1			
								Hardwood							
26	RT	3	HT	10	70	10	90	Conifer			2				
								Hardwood	2						
36	RT	1	HT	0	50	0	100	Conifer							
								Hardwood		1	2				
36	LF	1	HT	0	20	0	100	Conifer							UTM 0490191-5079249-2D
								Hardwood							
36	LF	3	HS	40	30	10	90	Conifer							
								Hardwood							
36	RT	2	HS	30	60	10	90	Conifer							
								Hardwood		1					
36	RT	3	HS	30	60	10	90	Conifer							VINE MAPLE
								Hardwood	3						
36	LF	2	HS	20	30	10	90	Conifer							
								Hardwood		1					

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 1-NC SITE ID: 316 ELK CREEK PRE-TX

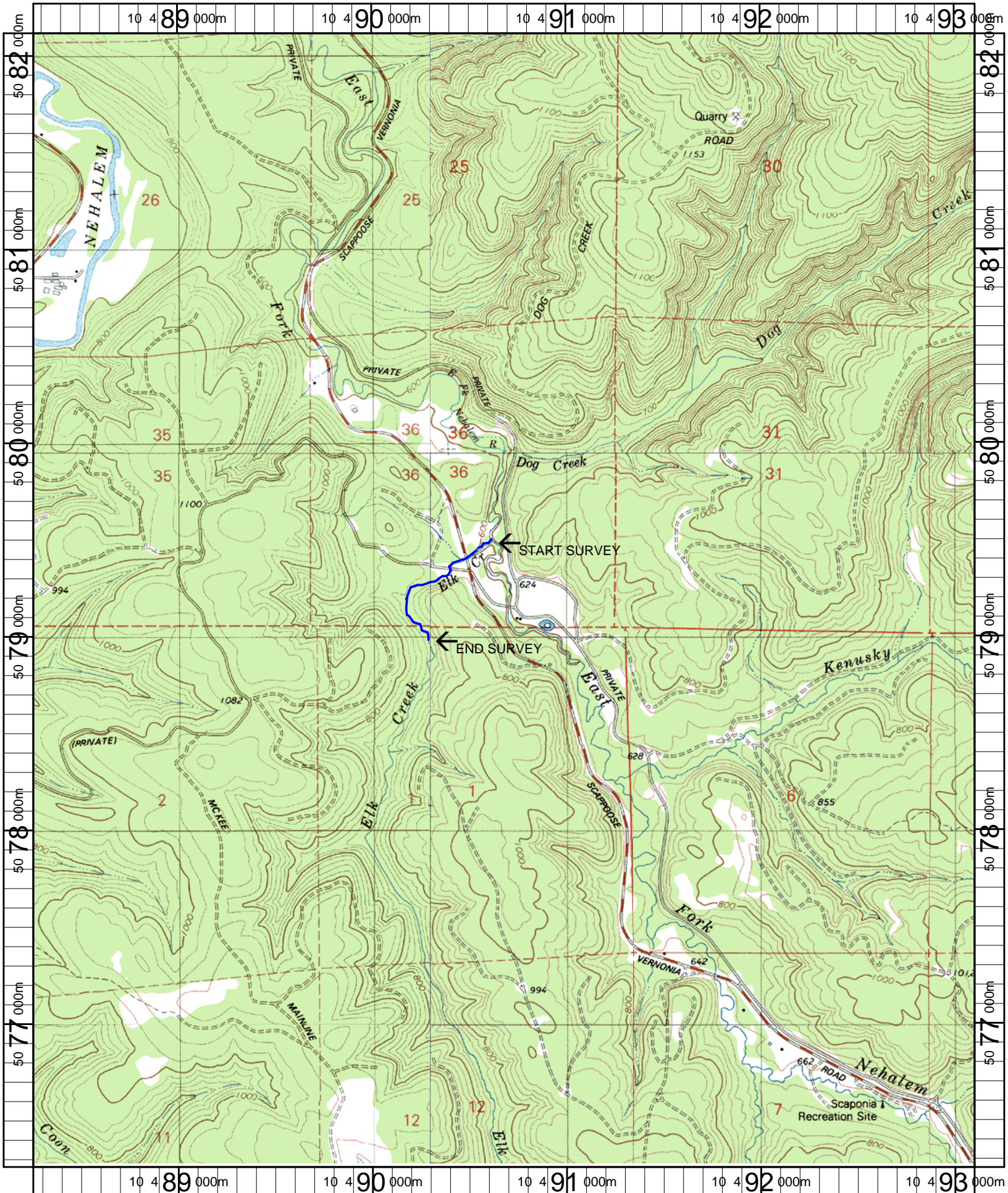
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	39.9			START AT CONFL. W/E.FK
2	SD	00	40.9	BD	H=0.60M	
3	BP	00	95.9	BV		
4	RI	00	112.6			BEDROCK=HARDPAN
5	LP	00	134.8	WL		
6	LP	00	153	BV		STICKS
7	LP	01	163.3			BEDROCK=HARDPAN
9	LP	00	186.1		UNIDENTIFIED FROG	
10	PP	00	204.8			PHOTO #1
11	SS	00	205	PA	H=0.50M	LOW FLOW (ALMOST NO
12	CC	00	227	PA, CC		1.8X2.3 CONCRETE, SCAP
13	LP	00	266.6		T=17.0C AT 11:30	RIPARIAN #1, BEDROCK=
14	LP	00	280.2	HS		
15	SC	00	281.2		H=0.15M	
16	LP	00	310.4		RED LEG TOAD	
17	LP	00	321.6		RSN	
18	LP	00	346.9	/SS		
24	SS	00	446.6	PA	H=0.70M	
25	CC	00	464.6	PA, CC		MCKEE CR MAINLINE 2M
26	GL	00	514.6	SS/	POOR GPS COVERAGE	RIPARIAN #2
30	LP	00	592.3			BEDROCK=HARDPAN

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 1-NC SITE ID: 316 ELK CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
33	RI	01	679.5	/TJ		
35	SD	00	680.5	BD	H=0.50M	
36	BP	00	755.5	BV		RIPARIAN #3
37	SD	00	756.2	BD	H=0.50M, POWER LINES	
38	BP	01	786.3	BV		
39	SD	01	787.8	BD	H=0.80M	
40	BP	01	1007.8	/TJ, BV		
44	LP	00	1036	DJ		
47	SD	00	1074.4	BD	H=0.50M	
48	BP	00	1144.4	BV		END SURVEY



Name: BACONA
 Date: 1/25/2007
 Scale: 1 inch equals 2000 feet

Location: 10 490679 E 5079188 N
 Caption: ELK CREEK #316 RESTORATION SITE - NEHALEM BASIN