

**ODFW AQUATIC INVENTORY PROJECT
RESTORATION MONITORING
STREAM HABITAT REPORT**

STREAM: BIG ELK CREEK SITE 1
 GCG: 2-MC
 SITE ID: 399
 BASIN: YAQUINA
 TREATMENT DATE: 2008
 SURVEY DATE: 6/24/2008
 SURVEY CREW: Sarah Yue / LaNoah Babcock
 USGS MAPS: ELK CITY
 ECOREGION: Mid-Coastal Sedimentary
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

SURVEY DESCRIPTION:

Channel morphology: Constrained by hillslopes

Dominant landuse(s): Young forest trees (3-15 cm dbh)

Dominant riparian vegetation: Deciduous trees: size class 30-50cm dbh

Primary channel length (meters) and area (m²): 321 : 6,451

Secondary channel length (meters) and area (m²) 0 : 0

VWI average: 1.5 VWI Range: 1.5 - 1.5 Average Gradient: 1.1%

Pieces LWD per 100m: 9.0 Wood Volume (m³) per 100m: 9.8

Percent pools: 29% Complex pools (LWD pieces>=3): 0 Pools >=1m deep: 1

Percent substrate (avg):	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	0	4	8	19	15	54
Pool units	0	2	8	0	3	87
Fast water units	1	5	9	28	22	36

COMMENTS:

This is a pre-treatment, restoration survey. Evidence of wildlife during the survey included a bald eagle and a turkey vulture.

Survey Date: 6/24/2008

Report Date: 12/29/2008

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	1.5	VWI Range:	1.5 - 1.5

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	321	6,451	0
Secondary	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 4	<u>First Terrace</u> n = 1
Width: 20.4	Width: 26.2	30.6 (28.3 - 34.4)	34.0 (34 - 34)
Depth: 0.38	Height: 0.8	1.7 (1.4 - 1.8)	2.8 (2.8 - 2.8)

W:D ratio: 32.4

Stream Flow Type: MF

Average Unit Gradient: 1.1%

Water temperature (°C): -

Entrenchment (ACW:FPW ratio): 1.2

Habitat Units/100m (total channel length): 4.4

Habitat Units/100m (primary channel length): 4.4

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	ST
Riparian Vegetation:	D30	P

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	0%	Reach avg: 80%
Undercut Banks:	0%	Range: 67 - 92

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	29	9.0
Volume (m ³):	31	9.8
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPARTMENT OF FISH AND WILDLIFE

BIG ELK CREEK SITE 1

HABITAT INVENTORY

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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
POOL-STRAIGHT SCOUR	3	94	20.0	0.57	1,880	31	0	2	8	0	3	87
RIFFLE	9	214	20.0	0.38	4,276	146	1	5	9	28	22	36
STEP/BEDROCK	1	7	25.0	0.01	175	2	0	0	0	5	5	90
STEP/BOULDERS	1	6	20.0	0.20	120	1	0	5	5	5	0	85
Total:	14	321	20.4	0.38	6,451	180	Avg: 0	4	8	19	15	54

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	0	0			0	0.00%	0	0.0
Scour Pools	3	94	20.0	0.57	1,880	29.14%	31	1.6
Glides	0	0			0	0.00%	0	0.0
Riffles	9	214	20.0	0.38	4,276	66.28%	146	3.4
Rapids	0	0			0	0.00%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	2	13	22.5	0.11	295	4.57%	3	1.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	3	9.4	9.4
Pools >=1m deep:	1	3.1	3.1
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	4.1		
Residual pool depth (avg):	0.37		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

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RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 2 transects

Total hardwoods/1000	61
Total conifers/1000 ft	122
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 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	0.0	0.0	0.0
15-30cm	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
30-50cm	0.0	0.0	1.5	0.0	0.5	0.0	2.0	0.0
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	0.0	1.5	0.0	0.5	1.0	0.7	0.3

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	59	68	75
Shrub cover	45	58	44
Grass/forb cover	55	25	51

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	100	75	75
High terrace	0	0	0
Low terrace	0	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	25	25
Riprap	0	0	0
Surface slope (%)	37	41	41

Summary of Riparian Zone (0-30m) for all reaches

2 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000	61
Total conifers/1000 ft	122
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

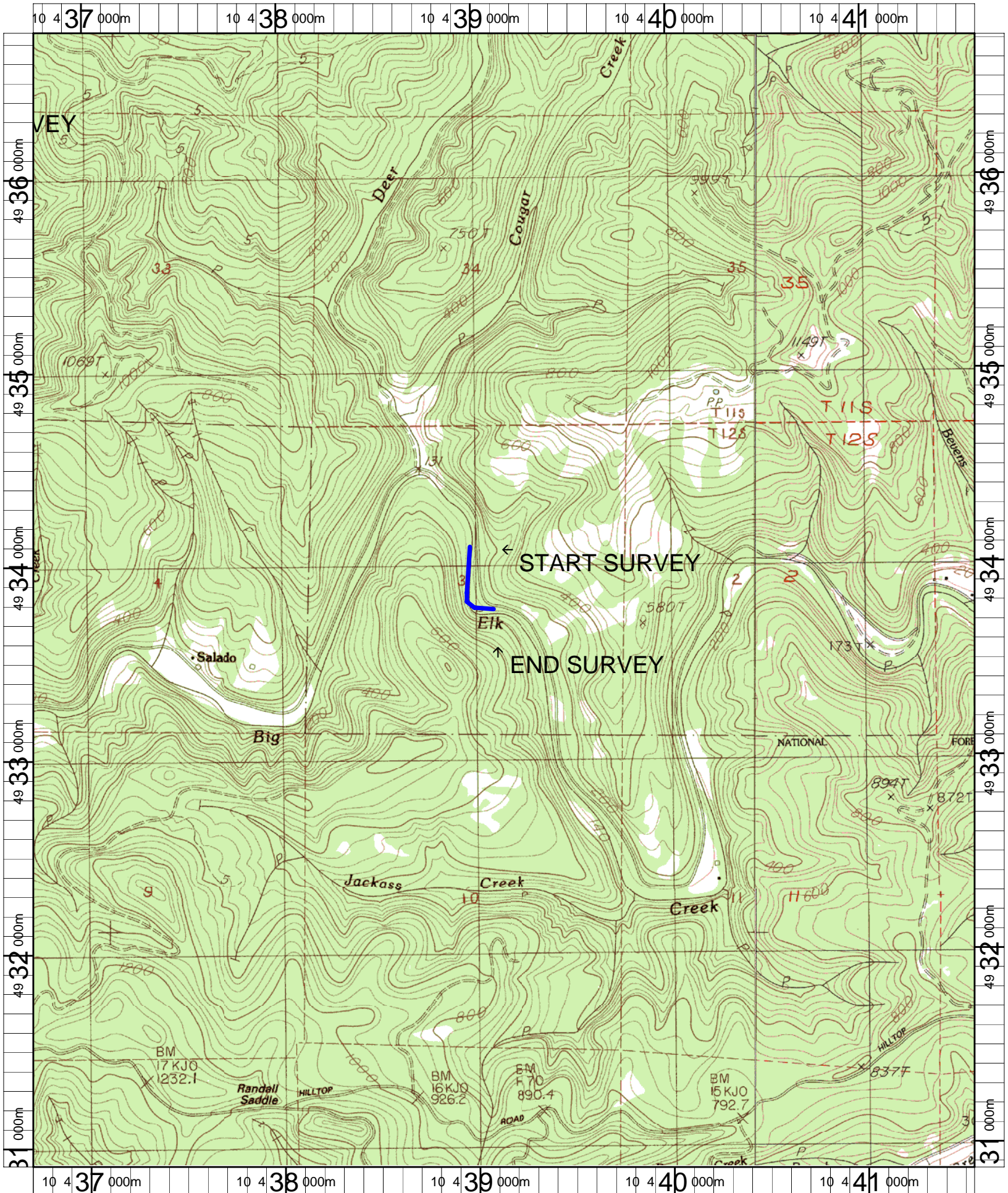
Average number of trees in a 5-m wide band

<u>Diameter</u> <u>class (cm)</u>	<u>Zones 1-3</u>	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.0	0.0
15-30cm	0.0	1.0
30-50cm	2.0	0.0
50-90cm	0.0	0.0
>90cm	0.0	0.0

COMMENT SUMMARY

MONITORING AREA: 2-MC SITE ID: 399 STREAM: BIG ELK CREEK SITE 1

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	RI	00	43.4		3 RSS(?)
3	SB	00	49.4		H=0.10M
9	RI	00	199.4	WL	MATURE BALD EAGLE DOWNSTREAM
14	SP	00	320.8	WL	TURKEY VULTURE



Name: ELK CITY (OR)
 Date: 3/3/2008
 Scale: 1 inch equals 2000 feet

Location: 10 0439144 E 4933817 N NAD 27
 Caption: BIG ELK CREEK SITE 1 RESTORATION SITE - YAQUINA BASIN