

**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: 1/26/2009
 SURVEY CREW: Matt Strickland / Charlie Stein
 USGS MAPS: ELK CITY
 ECOREGION: Mid-Coastal Sedimentary
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

REACH: 1 LOCATION: T12S-R09W-S04SW

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): 271 : 6,741
 Secondary channel length (meters) and area (m²) 8 : 44
 VWI average: 1.8 VWI Range: 1 - 2.5 Average Gradient: 0.9%
 Pieces LWD per 100m: 19.2 Wood Volume (m³) per 100m: 84.3
 Percent pools: 17% Complex pools (LWD pieces>=3): 2 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	2	7	7	12	13	61
Pool units	5	10	5	10	10	60
Fast water units	0	5	5	10	11	69

SURVEY COMMENTS:

Big Elk Creek Site 1 is a post-treatment, restoration site. The crew noted habitat structures throughout consisting of placed boulder wings and logs. They also noted some beaver activity and a adult coho carcass. There were no potential barriers to upstream fish migration observed within the survey reach.

Survey Date: 1/26/2009

Report Date: 2/16/2010

T12S-R09W-S04SW

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	1.8	VWI Range:	1 - 2.5

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	271	6,741	0
Secondary	8	44	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> <i>n</i> = 3	<u>First Terrace</u> <i>n</i> = 2
Width: 22.1	Width: 27.1	31.7 (30.1 - 32.9)	39.3 (37.4 - 41.1)
Depth: 0.47	Height: 0.8	1.6 (1.6 - 1.6)	3.9 (3.8 - 4)

W:D ratio: 33.9

Stream Flow Type: LF

Average Unit Gradient: 0.9%

Water temperature (°C): 6.0 - 6.0

Entrenchment (ACW:FPW ratio): 1.2

Habitat Units/100m (total channel length): 2.5

Habitat Units/100m (primary channel length): 2.6

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	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):	52	19.2
Volume (m ³):	228	84.3
Key pieces (>=12m x 0.60m):	26	9.6

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
GLIDE	1	45	23.7	0.30	1,062	0	0	5	5	5	5	80
POOL-BACKWATER	1	8	5.4	0.55	44	0	6	11	17	28	28	11
POOL-LATERAL SCOUR	1	47	24.8	1.10	1,156	0	5	10	5	10	10	60
RIFFLE	3	125	25.2	0.33	3,160	0	0	5	5	10	12	68
RIFFLE W/ POCKETS	1	55	24.8	0.35	1,364	0	0	5	5	10	10	70
Total:	7	279	22.1	0.47	6,786	0	Avg: 2	7	7	12	13	61

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	1	8	5.4	0.55	44	0.65%	0	0.0
Scour Pools	1	47	24.8	1.10	1,156	17.03%	0	0.0
Glides	1	45	23.7	0.30	1,062	15.65%	0	0.0
Riffles	4	180	25.1	0.34	4,524	66.67%	0	0.0
Rapids	0	0			0	0.00%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	0	0			0	0.00%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

BIG ELK CREEK SITE 1
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T12S-R09W-S04SW

REACH 1

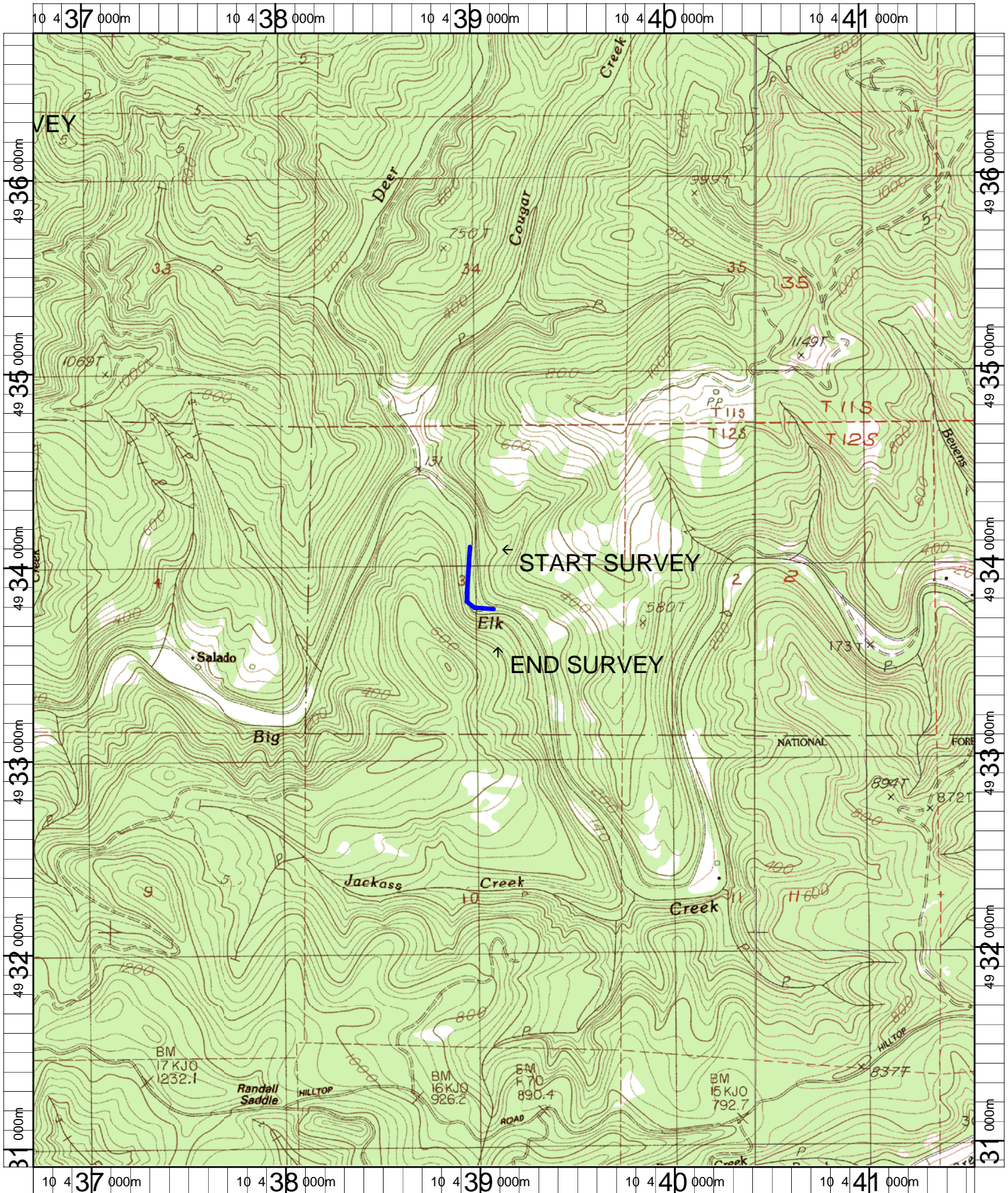
POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	2	7.2	7.4
Pools >=1m deep:	1	3.6	3.7
Complex pools (LWD pieces>=3):	2	7.2	7.4
Pool frequency (channel widths/pool):	5.2		
Residual pool depth (avg):	0.70		

COMMENT SUMMARY

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

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	RP	00	55	HS	LOGS/BOULDERS
1	2	RI	00	100	HS,WL	BOULDER WING, TRACKS
1	3	RI	00	155	HS,BV	LOG/BOULDER, STICKS, COHO CARCASS
1	4	RI	01	179.6	HS,/SS	BOULDER WING
1	6	GL	00	224.4	HS	LOGS/BOULDERS, FRESHWATER MUSSELS
1	7	LP	00	271	HS,DJ	LOGS



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

Big Elk Creek Site 1 (MC-399) 2009 Winter Habitat Survey Photographs



Upstream view of the survey reach.



Upstream view of placed boulders on left bank.



Downstream view of the survey reach.



Placed boulders for habitat structure.



Large wood and boulder placement.