

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

STREAM: BIG ELK CREEK SITE 3
 GCG: 2-MC
 SITE ID: 401
 BASIN: YAQUINA
 TREATMENT DATE: 2008
 SURVEY DATE: 7/14/2008
 SURVEY CREW: Gwyn Woolley-Scott / Linda Campbell
 USGS MAPS: HARLAN
 ECOREGION: Mid-Coastal Sedimentary
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

SURVEY DESCRIPTION:

Channel morphology: Constrained by hillslopes

Dominant landuse(s): Mature timber (50-90 cm dbh)

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

Primary channel length (meters) and area (m²): 170 : 3,077

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

VWI average: 2.3 VWI Range: 2 - 2.5 Average Gradient: 0.4%

Pieces LWD per 100m: 1.8 Wood Volume (m³) per 100m: 0.8

Percent pools: 70% Complex pools (LWD pieces>=3): 0 Pools >=1m deep: 2

Percent substrate (avg):	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	5	8	10	7	25	45
Pool units	9	13	16	12	43	7
Fast water units	3	5	8	5	20	60

COMMENTS:

This is a pre-treatment, restoration survey. The crew noted observing redbside shiners and beaver activity.

**OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY**

**BIG ELK CREEK SITE 3
GCG: 2-MC SITE ID: 401**

Survey Date: 7/14/2008

Report Date: 12/29/2008

T12S-R09W-S2SE

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	2.3	VWI Range:	2 - 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	170	3,077	0
Secondary	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 3	<u>First Terrace</u> n = 3
Width: 17.6	Width: 18.8	21.0 (18.9 - 24.4)	23.6 (22 - 26.8)
Depth: 0.60	Height: 0.9	1.9 (1.6 - 2)	3.5 (2.6 - 4.5)

W:D ratio: 20.3

Stream Flow Type: MF

Average Unit Gradient: 0.4%

Water temperature (°C): 13.0 - 13.0

Entrenchment (ACW:FPW ratio): 1.1

Habitat Units/100m (total channel length): 2.9

Habitat Units/100m (primary channel length): 2.9

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	0%	Reach avg: 74%
Undercut Banks:	3%	Range: 69 - 83

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	3	1.8
Volume (m ³):	1	0.8
Key pieces (>=12m x 0.60m):	0	0.0

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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	2	113	19.5	1.10	2,155	41	9	13	16	12	43	7
RIFFLE	2	41	16.0	0.30	654	12	3	5	8	5	20	60
STEP/BEDROCK	1	16	17.0	0.20	267	15	0	5	5	0	0	90
Total:	5	170	17.6	0.60	3,077	68	Avg: 5	8	10	7	25	45

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	2	113	19.5	1.10	2,155	70.05%	41	1.9
Glides	0	0			0	0.00%	0	0.0
Riffles	2	41	16.0	0.30	654	21.27%	12	1.8
Rapids	0	0			0	0.00%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	1	16	17.0	0.20	267	8.68%	15	5.6
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:	2	11.8	11.8
Pools >=1m deep:	2	11.8	11.8
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	4.5		
Residual pool depth (avg):	1.00		

OREGON DEPARTMENT OF FISH AND WILDLIFE
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RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	152
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	0.5	0.0	0.5	0.0
15-30cm	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5
30-50cm	0.0	0.0	0.5	0.0	1.0	1.0	1.5	1.0
50-90cm	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5
>90cm	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5
Total/100m2	0.0	0.5	0.5	1.0	1.5	1.0	0.7	0.8

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	59	98	100
Shrub cover	16	58	69
Grass/forb cover	84	43	31

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	50	50	50
High terrace	50	50	50
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 (%)	55	45	43

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	152
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

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.5	0.0
15-30cm	0.0	0.5
30-50cm	1.5	1.0
50-90cm	0.0	0.5
>90cm	0.0	0.5

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		
3	LT	1	HT	40	95	10	90	Conifer							OREGON ASH
								Hardwood				1			
3	LT	2	HT	7	90	50	50	Conifer			1				
								Hardwood							
3	LT	3	HT	3	100	85	15	Conifer			2				NETTLE, ELDERBERRY, VINEMAPLE
								Hardwood							
3	RT	1	HS	78	90	5	95	Conifer							
								Hardwood							
3	RT	2	HS	96	100	10	90	Conifer							
								Hardwood					1		
3	RT	3	HS	82	100	10	90	Conifer							
								Hardwood							
5	LT	1	HT	35	0	5	95	Conifer							
								Hardwood							
5	LT	2	HT	2	100	90	10	Conifer							
								Hardwood							
5	LT	3	HT	2	100	90	10	Conifer	1						
								Hardwood							
5	RT	1	HS	68	50	45	55	Conifer			2				
								Hardwood							
5	RT	2	HS	75	100	80	20	Conifer							
								Hardwood			1				
5	RT	3	HS	85	100	90	10	Conifer							
								Hardwood							

COMMENT SUMMARY

MONITORING AREA: 2-MC SITE ID: 401 STREAM: BIG ELK CREEK SITE 3

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	17.9	BV	CH/MV, D30/G, MT
2	SP	00	93.3		RED-SIDE SHINER
3	RI	00	116	WL	CH/MV,D30/G, MT
5	SR	00	169.7	WL	CH/MV, D30/G, MT, H=20M



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

Location: 10 0440945 E 4933443 N NAD 27
 Caption: BIG ELK CREEK SITE 3 RESTORATION SITE - YAQUINA BASIN