

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

STREAM: COAL CREEK  
 GCG: 1-NC  
 SITE ID: 317  
 BASIN: KILCHIS  
 TREATMENT DATE: 2006  
 SURVEY DATE: 4/9/2009  
 SURVEY CREW: Ryan Jacobsen / Miles Johnson  
 USGS MAPS: KILCHIS RIVER  
 ECOREGION: Coastal Uplands  
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

REACH: 1 LOCATION: T01S-R09W-S08SW

**SURVEY DESCRIPTION:**

Channel morphology: Constrained by hillslopes  
 Dominant landuse(s): Second growth timber (15-30 cm dbh)  
 Dominant riparian vegetation: Deciduous trees: size class 30-50cm dbh  
 Primary channel length (meters) and area (m<sup>2</sup>): 604 : 1,981  
 Secondary channel length (meters) and area (m<sup>2</sup>) 52 : 59  
 VWI average: 1.8 VWI Range: 1 - 2.5 Average Gradient: 4.3%  
 Pieces LWD per 100m: 20.2 Wood Volume (m<sup>3</sup>) per 100m: 34.6  
 Percent pools: 9% Complex pools (LWD pieces>=3): 0 Pools >=1m deep:1  
Percent substrate (avg): Silt / organics Sand Gravel Cobble Boulder Bedrock

All units	1	14	38	26	10	12
Pool units	1	25	41	19	4	10
Fast water units	0	12	40	26	11	11

**SURVEY COMMENTS:**

The Coal Creek survey is a pre-treatment, restoration site. The crew noted pre-existing habitat structures consisting of logs and boulders throughout the survey. Juvenile salmonids were observed near the beginning of the survey. There were no potential barriers to upstream fish migration observed within the survey reach.

Survey Date: 4/9/2009

Report Date: 2/16/2010

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**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 (m<sup>2</sup>)</u>	<u>Dry Units</u>
Primary	604	1,981	0
Secondary	52	59	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 0
Width: 3.1	Width: 4.5	5.9 (4.5 - 8.1 )	( - )
Depth: 0.28	Height: 0.3	0.6 (0.6 - 0.7 )	( - )

W:D ratio: 14.2

Stream Flow Type: MF

Average Unit Gradient: 4.3%

Water temperature (°C): 8.0 - 8.0

Entrenchment (ACW:FPW ratio): 1.4

Habitat Units/100m (total channel length): 5.5

Habitat Units/100m (primary channel length): 6.0

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
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):	122	20.2
Volume (m <sup>3</sup> ):	209	34.6
Key pieces (>=12m x 0.60m):	23	3.8

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HABITAT DETAIL

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BEDROCK	3	59	2.6	0.07	185	0	3	8	27	5	5	51
CASCADE/BOULDERS	2	44	2.1	0.20	91	0	0	10	35	33	18	5
POOL-LATERAL SCOUR	4	33	4.4	0.53	109	0	3	24	45	17	5	6
POOL-PLUNGE	4	20	3.5	0.71	70	0	0	25	37	22	4	13
RAPID/BEDROCK	2	45	3.7	0.18	164	0	0	13	23	13	10	40
RAPID/BOULDERS	15	372	3.1	0.20	1,150	0	0	12	40	33	14	2
RIFFLE	3	78	3.3	0.17	262	0	0	17	66	15	2	0
STEP/BEDROCK	1	1	2.0	0.25	2	0	0	0	0	0	20	80
STEP/COBBLE	1	3	2.0	0.20	5	0	0	6	28	67	0	0
STEP/LOG	1	1	2.1	0.25	2	0	0	0	33	67	0	0
<b>Total:</b>	<b>36</b>	<b>656</b>	<b>3.1</b>	<b>0.28</b>	<b>2,040</b>	<b>0</b>	<b>Avg: 1</b>	<b>14</b>	<b>38</b>	<b>26</b>	<b>10</b>	<b>12</b>

HABITAT SUMMARY

Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders	
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )
Dammed & BW Pools	0	0			0	0.00%	0	0.0
Scour Pools	8	53	4.0	0.62	178	8.74%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	3	78	3.3	0.17	262	12.83%	0	0.0
Rapids	17	417	3.2	0.20	1,314	64.42%	0	0.0
Cascades	5	103	2.4	0.12	276	13.55%	0	0.0
Step/Falls	3	5	2.0	0.23	10	0.47%	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

COAL CREEK  
GCG: 1-NC SITE ID: 317

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POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	8	12.2	13.3
Pools >=1m deep:	1	1.5	1.7
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	18.3		
Residual pool depth (avg):	0.47		

OREGON DEPT OF FISH AND WILDLIFE  
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OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/9/2009

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 317 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	7	LP	00	131		(2) SALMONIDS AT 100MM
1	8	RB	00	154	SS/	
1	10	RB	00	204	/SS	
1	11	RR	00	229	SS/	
1	14	CR	00	277.8	HS	LOGS AND BOULDERS, NO CABLES, POSSIBLE PN
1	15	RB	00	302.8	HS	LOGS AND BOULDERS, NO CABLES
1	18	RB	01	389.8	/TJ,HS	LOGS AND BOULDERS, NO CABLES, T=8.5C
1	19	CR	11	389.8		ACW=1.3M, T=9C
1	22	LP	00	409.3	CS/,HS	LOGS AND BOULDERS, NO CABLE
1	23	RB	00	441.3	SS/	
1	26	CB	01	479.5	HS	LOGS AND BOULDERS, NO CABLE
1	35	RB	01	603.6	TJ/	
1	36	RB	11	603.6		ACW=2.2M, T=9C



## Coal Creek (NC-317) 2009 Winter Habitat Survey Photographs



Unit 1 - Upstream view of Coal Creek survey start.



Unit 10 - Looking upstream at a rapid over bedrock.



Unit 14 - Upstream view of large wood placement.



Unit 36 - Small tributary channel at the end of the survey.



Un-used culvert near mid-point of survey.



Unit 35 - right side of old, dismantled dam near the end of the survey.

**Coal Creek (NC-317) 2009 Winter Habitat Survey Photographs**



Unit 35 - Upstream view of the end of the Coal Creek survey.



Unit 35 - Downstream view of the end of the Coal Creek survey.