

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

STREAM: WAPITI CREEK  
 GCG: 3-MS  
 SITE ID: 208  
 BASIN: NF COQUILLE  
 TREATMENT DATE: 2003  
 SURVEY DATE: 4/30/2009  
 SURVEY CREW: David Jones / Ryan Emig  
 USGS MAPS: DANIELS CREEK  
 ECOREGION: Mid-Coastal Sedimentary  
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

REACH: 1 LOCATION: T26S-R11W-S21NE

**SURVEY DESCRIPTION:**

Channel morphology: Constrained by high terraces  
 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>): 570 : 1,145  
 Secondary channel length (meters) and area (m<sup>2</sup>) 38 : 63  
 VWI average: 10.5 VWI Range: 2.5 - 19 Average Gradient: 6.0%  
 Pieces LWD per 100m: 27.5 Wood Volume (m<sup>3</sup>) per 100m: 32.3  
 Percent pools: 22% Complex pools (LWD pieces>=3): 2 Pools >=1m deep:0  
 Percent substrate (avg):

	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	1	12	36	31	17	3
Pool units	2	18	35	27	14	4
Fast water units	0	8	38	34	16	3

**SURVEY COMMENTS:**

The Wapiti Creek habitat survey is a post-treatment, long term monitoring site. The crew noted habitat structures throughout the survey. A potential barrier to upstream fish migration consisting of a step over a log was observed and noted approximately 260 meters upstream from the start of the survey. Juvenile salmonids were observed downstream of the step. A previous post-treatment habitat survey was conducted during the winter of 2004. Comparisons were made among key coho salmon habitat attributes: total secondary channel length, pieces of LWD per 100 m, wood volume per 100 m, percent pools, and complex pools. All key attributes decreased or remained approximately the same except percent pools, which showed a significant increase.

Survey Date: 4/30/2009

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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	10.5	VWI Range:	2.5 - 19

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	100%	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	570	1,145	0
Secondary	38	63	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.1	Width: 3.0	4.0 ( 3.2 - 4.6 )	6.8 ( 3.8 - 9 )
Depth: 0.23	Height: 0.3	0.5 ( 0.5 - 0.5 )	1.6 ( 0.75 - 2.45 )

W:D ratio: 12.2

Stream Flow Type:

Average Unit Gradient: 6.0%

Water temperature (°C): 9.0 - 9.0

Entrenchment (ACW:FPW ratio): 1.3

Habitat Units/100m (total channel length): 9.5

Habitat Units/100m (primary channel length): 10.2

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	YT
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):	157	27.5
Volume (m <sup>3</sup> ):	184	32.3
Key pieces (>=12m x 0.60m):	7	1.2

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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	1	13	1.8	0.15	23	0	0	5	10	10	5	70
CASCADE/BOULDERS	16	231	1.9	0.13	441	0	0	9	33	38	20	0
CULVERT CROSSING	2	33	1.0	0.08	34	0	10	20	25	25	20	0
POOL-BACKWATER	1	2	1.5	0.20	3	0	10	55	35	0	0	0
POOL-ISOLATED	1	2	1.6	0.40	3	0	5	15	20	45	15	0
POOL-LATERAL SCOUR	10	63	2.4	0.43	142	0	2	18	31	32	14	2
POOL-PLUNGE	7	33	3.1	0.48	98	0	2	20	35	21	14	7
POOL-STRAIGHT SCOUR	1	7	4.0	0.60	28	0	0	10	75	10	5	0
RAPID/BOULDERS	8	172	1.9	0.12	332	0	1	6	47	33	12	2
RIFFLE	2	40	1.7	0.15	72	0	0	8	60	25	8	0
STEP/BOULDERS	5	6	2.1	0.15	17	0	0	6	23	32	39	0
STEP/COBBLE	2	2	1.2	0.04	3	0	0	5	78	18	0	0
STEP/LOG	2	5	2.2	0.08	13	0	0	13	30	38	18	3
<b>Total:</b>	<b>58</b>	<b>608</b>	<b>2.1</b>	<b>0.23</b>	<b>1,208</b>	<b>0</b>	<b>Avg: 1</b>	<b>12</b>	<b>36</b>	<b>31</b>	<b>17</b>	<b>3</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	2	4	1.6	0.30	6	0.51%	0	0.0
Scour Pools	18	102	2.7	0.46	268	22.19%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	2	40	1.7	0.15	72	5.93%	0	0.0
Rapids	8	172	1.9	0.12	332	27.49%	0	0.0
Cascades	17	244	1.9	0.14	465	38.46%	0	0.0
Step/Falls	9	13	1.9	0.11	32	2.63%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	2	33	1.0	0.08	34	2.79%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

WAPITI CREEK  
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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:	20	32.9	35.1
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	2	3.3	3.5
Pool frequency (channel widths/pool):	10.0		
Residual pool depth (avg):	0.36		

OREGON DEPT OF FISH AND WILDLIFE  
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OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/30/2009

COMMENT SUMMARY

MONITORING AREA: 3-MS SITE ID: 208 STREAM: WAPITI CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	RB	00	11	HS	SGS SIGN START WAPITI CR
1	2	LP	00	17	HS	
1	3	RB	00	59	WL,HS	DEER MOUSE, UNKNOWN SALMONID FRY
1	8	RB	00	86	HS	
1	14	CC	00	113	CC	
1	16	LP	00	144		FRY
1	17	CB	00	159	HS	
1	18	PP	00	168	HS	
1	23	RB	00	219.5	HS	
1	26	IP	10	241.5	/SS	
1	29	SL	00	261.5	PN	
1	30	RI	01	290.5	HS	
1	34	CB	01	366.5	DJ	
1	35	CB	02	366.5	SS/,DJ	
1	38	CB	00	386.5	HS	
1	41	RB	00	401.5	DJ	
1	47	CB	01	459.5	TJ/	
1	50	CB	00	486.5	SS/	
1	51	CB	00	513.5	DJ	
1	57	CC	00	561	CC	





## Wapiti Creek (MS-208) 2009 Winter Habitat Survey Photographs



Unit 1 - Start of Wapiti Creek survey.



Downstream view of debris jam and active erosion near start of survey.



Upstream view of culvert and road crossing upstream from start.



Bedrock step with large wood debris jam in background.



Large wood debris jam.



Large wood debris jam build up throughout active channel.



**Wapiti Creek (MS-208) 2009 Winter Habitat Survey Photographs**



Downstream view of culvert near the end of the survey.



End of the Wapiti Creek survey just upstream from culvert crossing.