

**ODFW AQUATIC INVENTORY PROJECT**  
**OREGON PLAN FOR SALMON & WATERSHEDS**  
**STREAM RESTORATION HABITAT REPORT**

STREAM: Wapiti Creek (MS-208)  
BASIN: Coquille River  
SURVEY TYPE: Post-Tx  
DATE: July 26, 2004  
SURVEY CREW: Alex Dale, Kevin Cellura  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 42.0 km<sup>2</sup>  
USGS MAPS: Daniels Creek  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Wapiti Creek habitat survey extended 524 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 10.8 (range: 5.0-20.0). Land use for the reach was young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 6.0 percent. Dry channel (26%) and riffles (25%) dominated stream habitat. Gravel (38%) dominated stream substrate. Wood volume was high at 41.0 m<sup>3</sup>/100m.

**COMMENTS:**

There were two potential barriers to upstream fish migration in the surveyed length. The first is a completely blocked culvert at unit nine (106 m). The second is a 2.3 m high step over log at unit 17 (240 m).

The crew noted several habitat structures during the survey.

REACH 1

T26S-R11W-S21NE

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	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	10.8	VWI Range:	5 - 20

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	100%
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	524	873	3
Secondary	152	291	4

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 4
Width: 1.7	Width: 6.8	29.4 ( 14.9 - 56 )	34.8 ( 16.9 - 57 )
Depth: 0.16	Height: 0.5	1.0 ( 0.9 - 1.2 )	1.4 ( 1.25 - 1.7 )

W:D ratio: 13.8  
Stream Flow Type: LF  
Average Unit Gradient: 6.0%  
Water temperature (°C): 16.0 - 16.0

Entrenchment (ACW:FPW ratio): 4.6  
Habitat Units/100m (total channel length): 7.5  
Habitat Units/100m (primary channel length): 9.7

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	ST
Riparian Vegetation:	M15	D30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	8%	Reach avg: 72%
Undercut Banks:	2%	Range: 36 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	241	46.0
Volume (m <sup>3</sup> ):	215	41.0
Key pieces (>=12m x 0.60m):	2	0.4

OREGON DEPARTMENT OF FISH AND WILDLIFE

WAPITI CREEK POST-TX (MS-208)

HABITAT INVENTORY

Report Date: 10/27/2004

Survey Date:

7/26/2004

REACH 1		T26S-R11W-S21NE					REACH 1					
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	25	2.4	0.20	60	20	0	5	14	19	14	48
CASCADE/BOULDERS	6	114	1.4	0.09	166	151	2	15	39	22	23	0
CULVERT CROSSING	1	23	0.5	0.10	12	0	5	15	60	20	0	0
DRY CHANNEL	4	94	2.7	0.00	250	75	0	13	40	28	20	0
POOL-BACKWATER	1	10	1.6	0.48	16	3	10	30	40	10	10	0
POOL-LATERAL SCOUR	3	16	2.5	0.46	40	2	8	23	45	20	3	0
POOL-PLUNGE	8	31	2.4	0.52	77	28	11	24	37	16	13	0
PUDDLED UNIT	3	26	2.0	0.14	52	22	2	10	39	30	20	0
RAPID/BOULDERS	6	133	1.2	0.05	185	48	3	18	45	19	12	3
RIFFLE	9	193	1.4	0.06	292	26	3	20	55	17	4	0
STEP/BEDROCK	1	0	0.3	0.01	0	0	0	0	0	0	0	100
STEP/BOULDERS	4	5	1.4	0.03	8	2	0	0	3	11	66	20
STEP/COBBLE	1	1	0.5	0.03	1	0	0	0	0	80	20	0
STEP/LOG	3	5	1.4	0.01	7	8	13	20	30	7	20	10
<b>Total:</b>	51	676	1.7	0.16	1,164	385	<b>Avg:</b> 4	16	38	19	17	5

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	1	10	1.6	0.48	16	1.33%	3	19.3
Scour Pools	11	46	2.4	0.50	116	9.99%	30	25.8
Glides	0	0			0	0.00%	0	0.0
Riffles	9	193	1.4	0.06	292	25.10%	26	8.9
Rapids	6	133	1.2	0.05	185	15.87%	48	26.0
Cascades	7	139	1.6	0.10	226	19.42%	171	75.7
Step/Falls	9	11	1.2	0.02	16	1.39%	10	61.9
Dry	7	121	2.4	0.06	302	25.91%	97	32.2
Culverts	1	23	0.5	0.10	12	0.99%	0	0.0

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	12	17.8	22.9
Pools >=1m deep:	1	1.5	1.9
Complex pools (LWD pieces>=3):	2	3.0	3.8
Pool frequency (channel widths/pool):	8.3		
Residual pool depth (avg):	0.46		

**RIPARIAN ZONE VEGETATION SUMMARY**

REACH 1	REACH 1
<b>Summary of Riparian Zone (0-30m) 3 transects</b>	
Total hardwoods/1000	650
Total conifers/1000 ft	914
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		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	3.0	3.0	4.0	2.0	2.3	5.0	9.3
15-30cm	1.0	0.0	3.0	0.0	5.3	0.3	9.3	0.3
30-50cm	0.3	0.0	0.0	0.3	0.3	0.7	0.7	1.0
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	1.3	3.0	6.0	4.3	7.7	3.3	5.0	3.6

**Canopy closure and ground cover**

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	40		68		73	
Shrub cover	31		43		37	
Grass/forb cover	20		25		23	

**Predominant landform in each zone**

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		50		83	
High terrace	17		33		17	
Low terrace	0		0		0	
Floodplain	50		17		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	15		32		35	

**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		
11	LF	2	HT	5	80	70	10	Conifer	1	2					
								Hardwood	6						
11	LF	1	FP	5	30	40	20	Conifer						418099	
								Hardwood	1					4795690	
11	LF	3	HS	30	95	15	10	Conifer	1	1	1				
								Hardwood	1						
11	RT	2	HS	40	95	20	50	Conifer	5	1					
								Hardwood	6						
11	RT	3	HS	20	95	15	5	Conifer	1	9					
								Hardwood	4						
11	RT	1	HS	10	95	10	60	Conifer		2					
								Hardwood	8						
19	LF	3	HS	50	90	25	15	Conifer	1	4					
								Hardwood							
19	LF	2	HS	60	85	25	15	Conifer	2	4					
								Hardwood							
19	RT	1	FP	5	65	25	5	Conifer						ALL TREES	
								Hardwood						RECENTLY	
														DIED	
19	RT	2	HT	10	80	20	30	Conifer	1	2					
								Hardwood				1			
19	RT	3	HS	20	90	40	40	Conifer	3	2					
								Hardwood	2						
19	LF	1	HT	10	40	20	20	Conifer		1	1			418195	
								Hardwood						4795711 3D	
29	LF	3	HT	10	65	65	30	Conifer						1.2 DBH	
								Hardwood		1	2			SNAG, WOOD	
29	LF	1	FP	0	5	5	5	Conifer						PECKER	
								Hardwood						418296	
														4795674 DJ IN	
29	RT	3	HS	80	5	60	35	Conifer						FP	
								Hardwood							
29	RT	1	HS	60	6	85	10	Conifer							
								Hardwood							
29	RT	2	HS	60	50	70	25	Conifer							
								Hardwood							
29	LF	2	FP	15	15	55	20	Conifer						DJ IN FP	
								Hardwood							

# Comment Summary

## Oregon Plan Monitoring Sites 2002

MONITORING AREA: **3-MS**      SITE ID: **208**      WAPITI CREEK POST-TX (MS-208)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RB	00	15.9		REACH PHOTO 16 T=16 D	
2	PP	00	18.5	SS/ WL HS	SS/	FRY. NW GARTERSNAKE
3	SR	00	18.6			BEDROCK= HARDPAN
5	LP	00	29.5	DJ		FRY-COHO
6	RI	00	54.5	HS		
7	RI	01	83	HS	CULVERT IS COMPLETEL	COHO FRY
8	BW	10	83			COHO FRY
9	CC	00	106	CC, PN		W=1.5, H=1.0CULVERT BLOC
11	RI	00	146.2	HS	10T 0418099 4795690	
17	SL	00	240.4	PN, HS	H=2.3	
18	RI	00	253.4		15 DEG AT 9:30	
19	RI	00	278.4		GPS=10T 0418195 479571	
22	PP	00	324.2	DJ		
23	SL	00	324.6	DJ	H=1.5	
25	PP	00	343.3	HS		
26	SB	00	343.8		H=1.05	BR=HARDPAN
27	CB	00	368.8	SS/, HS	SS/	
29	CB	00	409.2		GPS=10T 0418296 479567	
30	RB	01	437.5	HS		SCUM WATER
31	PP	01	441			HUGE WASHOUT AREA
32	SB	01	443	DJ	H=1.1	WOOD FLOODED OUT OF C

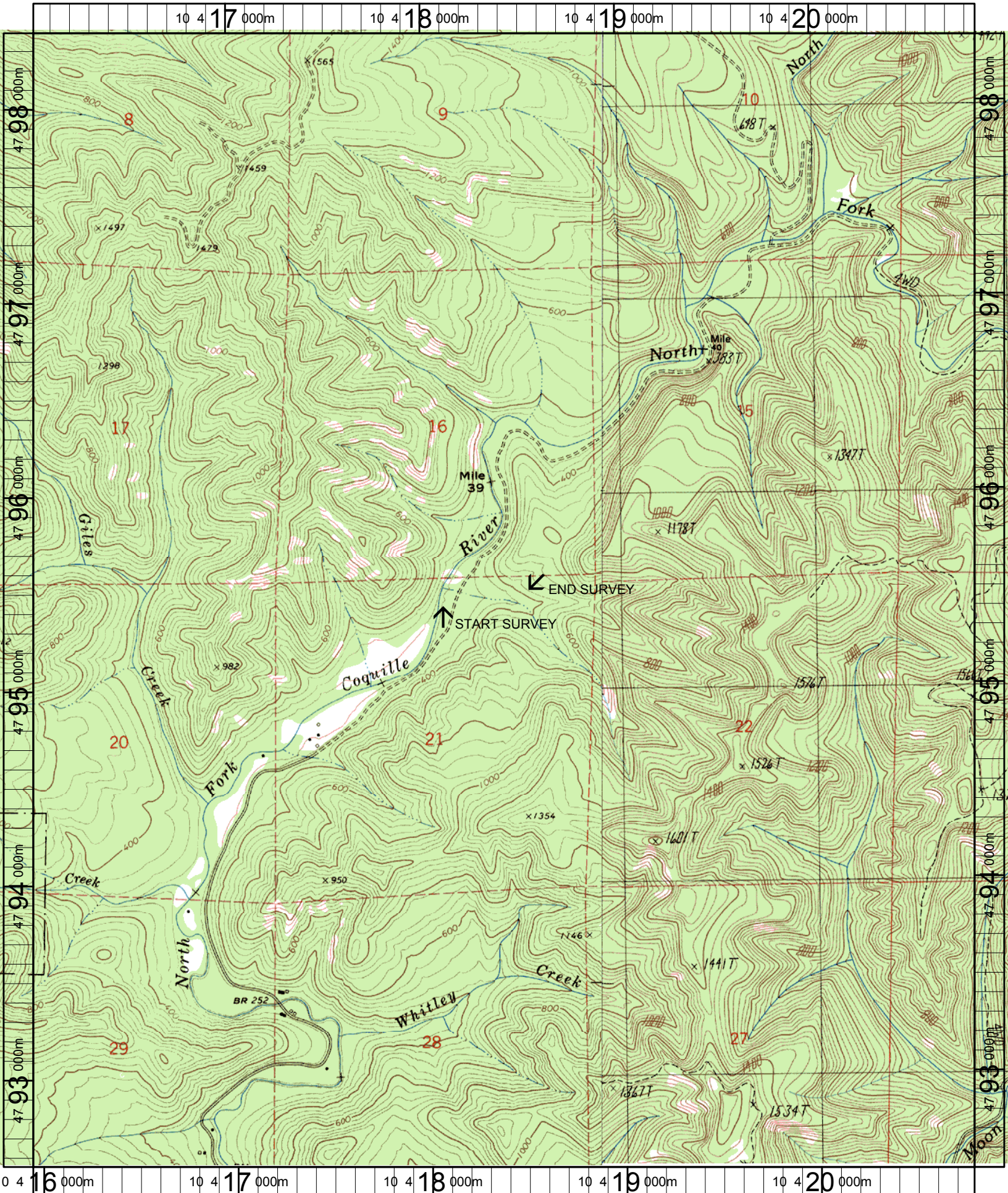
# Comment Summary

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MONITORING AREA: **3-MS**      SITE ID: **208**      WAPITI CREEK POST-TX (MS-208)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
34	SB	01	446.7		H=1.2	BEDROCK=HARDPAN
35	CB	01	468.2	/SS		
37	DC	01	512.4	RF	CLEARCUTS ON RIGHT	SMASHED CULVERT
40	PP	02	523.8	/SS		
41	SC	02	523.8		H=.55	
43	PP	02	523.8	WL		FROG TADPOLE
46	DC	02	523.8	RF		HIGH STEP IN DC
47	PD	02	523.8	WL		FROG TADPOLES 02 CONTI
51	DC	03	523.8	HS		





Name: DANIELS CREEK  
 Date: 6/14/2004  
 Scale: 1 inch equals 2000 feet

Location: 10 418395 E 4795449 N  
 Caption: WAPITI CREEK RESTORATION SITE - NF COQUILLE BASIN