

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

STREAM: Wolf Creek (MC-108)
BASIN: Yaquina River
SURVEY TYPE: Post-Tx
DATE: January 30, 2007
SURVEY CREW: Brian Bangs, Paul Jacobsen
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 6.9 km²
USGS MAPS: Harlan
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Wolf Creek habitat survey extended 486 meters. The channel was alternately constrained by hillslope and multiple terraces in a broad valley floor. The average valley width index was 8.4 (range: 4-15). Land use for the reach was second growth timber (15-30 cm dbh) and young timber (3-15 cm dbh). The average unit gradient was 1.1 percent. Scour pools (54%) and riffles (38%) dominated stream habitat. Sand (39%) and gravel (32%) dominated stream substrate. Wood volume was moderate at 24.0 m³/100m.

COMMENTS:

There were no potential barriers to upstream fish migration in the surveyed length.

A culvert (3.6m diameter, no step) was recorded 21 meters into the survey.

The crew noted several habitat structures during the survey.

Beaver activity and raccoon tracks were observed throughout the survey.

Stream Wolf Creek (MC-108)
 Basin Yaquina River
 Treatment Large Wood

	ODFW Benchmark		Pre	Post	Post		
Habitat Variable	Desirable	Undesirable	1/29/01	1/28/02	1/30/07		
% Pool Area	>35%	<10%	41.0	16.0	57.4		
Number of Pools			11	5	17		
Deep Pools/km (>1.0 m)			0.0	2.1	0.0		
% Off-Channel			1.7	0.4	3.6		
LWD – Pieces/100m	>20	<10	18.4	21.7	30.8		
LWD – Volume/100m	>30	<20	12.2	26.3	24		
LWD – Key Pieces/100m	>3	<1	0.0	1.4	0.0		
Large Wood Jams/km			18.4	14.5			
% Riffle Fines	<10	>20	28	38	33		
% Riffle Gravel	>35	<15	45	35	34		
% Bedrock			30	18	15		

Bold is noticeable change

Comments: Pool area and the number of pools have increased with time. Deep pools have decreased since 2002, but this may be due to between year variations in stream flow. Off channel habitat is higher as is large wood pieces. Large wood volume and key pieces have tapered off somewhat. Substrate is basically unchanged, although bedrock seems to be trending downward. It looks like the treatment has been successful, with more pool area and stable wood numbers.

REACH 1

T11S-R08W-S31NW

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	8.4	VWI Range:	4 - 15

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	Braided Channel	0%
Alt. Terrace/Hill	100%		
Landuse	0%		

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary Channel	486	2,165	0
Secondary Channel	0	0	0
Off-Channel Units	60	82	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 4
Width: 4.0	Width: 8.0	21.7 (17.3 - 25.6)	26.6 (22.1 - 32.2)
Depth: 0.36	Height: 0.7	1.4 (1.3 - 1.4)	1.7 (1.4 - 2)

W:D ratio: 11.8
 Stream Flow Type: MF
 Average Unit Gradient: 1.1%
 Water temperature (°C): 5.5 - 5.5

Entrenchment (ACW:FPW ratio): 2.8
 Habitat Units/100m (total channel length): 6.0
 Habitat Units/100m (primary channel length): 6.8

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):	150	30.8
Volume (m ³):	117	24.0
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

WOLF CREEK POST-TX (2-MC, 108)

HABITAT INVENTORY

Report Date: 4/25/2007

Survey Date:

1/30/2007

REACH 1		T11S-R08W-S31NW					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	12	4.3	0.20	52	0	5	35	35	10	0	15
POOL-ALCOVE	1	28	2.5	0.05	69	0	50	50	0	0	0	0
POOL-LATERAL SCOUR	16	261	4.7	0.60	1,222	0	7	53	27	3	2	8
RAPID/BOULDERS	2	17	0.4	0.02	6	0	10	10	66	5	0	10
RIFFLE	11	219	3.6	0.16	858	0	8	25	34	4	2	27
STEP/COBBLE	2	9	4.1	0.09	40	0	0	38	42	7	0	13
Total:	33	546	4.0	0.36	2,247	0	Avg: 8	39	32	4	1	15

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	28	2.5	0.05	69	3.07%	0	0.0	
Scour Pools	16	261	4.7	0.60	1,222	54.36%	0	0.0	
Glides	1	12	4.3	0.20	52	2.32%	0	0.0	
Riffles	11	219	3.6	0.16	858	38.19%	0	0.0	
Rapids	2	17	0.4	0.02	6	0.28%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	2	9	4.1	0.09	40	1.78%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

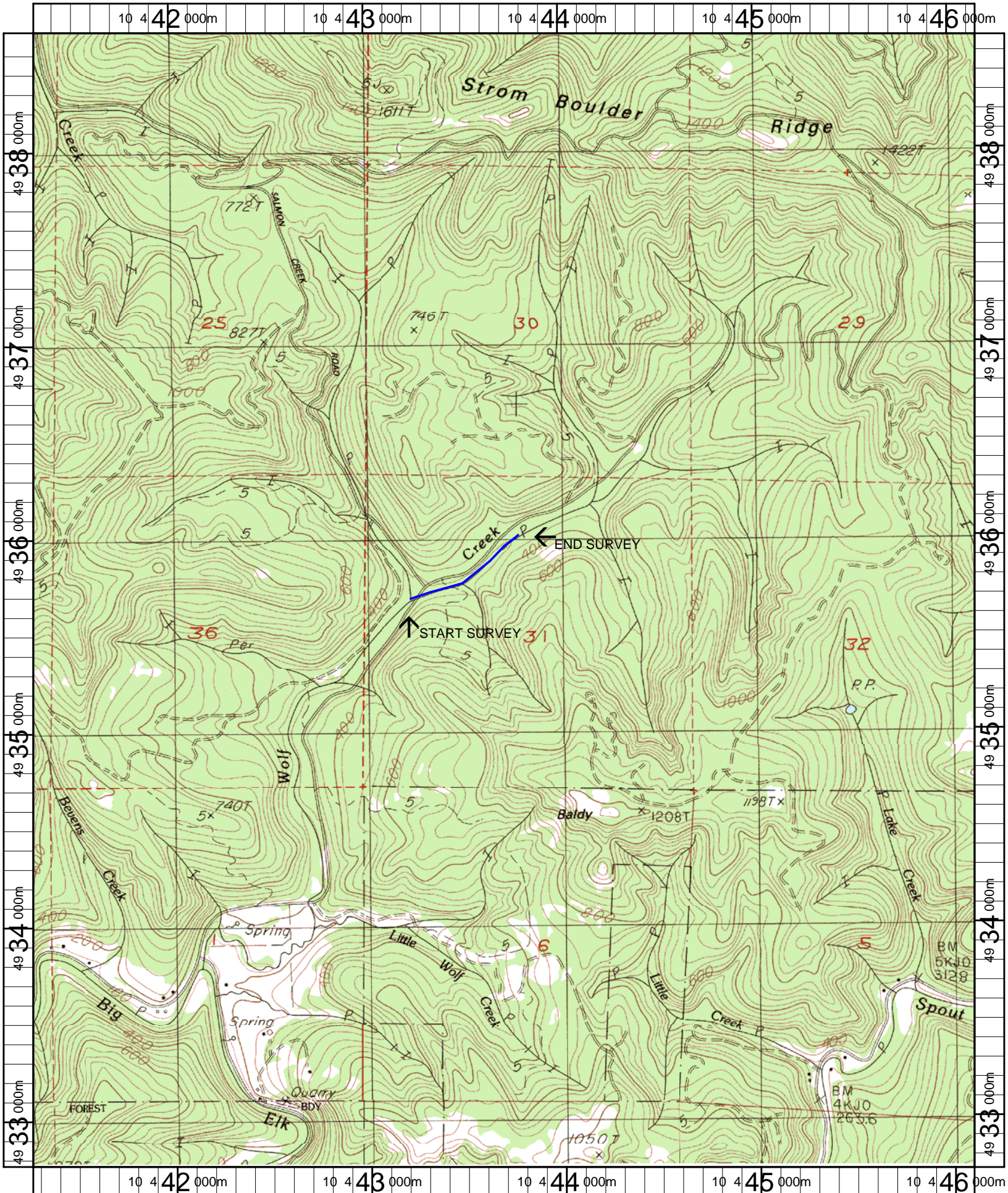
POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	17	31.1	35.0
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	10	18.3	20.6
Pool frequency (channel widths/pool):	4.0		
Residual pool depth (avg):	0.43		

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: **2-MC** SITE ID: **108** WOLF CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
1	LP	00	21.9	CC	DIA=3.6M, NO STEP, SUB FILLED
2	LP	00	30.7	BV	
3	RI	01	66.3	BV	
4	AL	10	66.3		POSSIBLE MAN-MADE
6	RI	00	91.6	HS	THRU UNIT 7
7	LP	00	100.6	WL, /SS	RACCOON TRACKS
9	LP	00	141.7	/SS	CA/CT/ST/YT/D30/S
10	RI	01	164.3	SS/TJ,HS	
11	RB	11	164.3		ACW=1.0M, T=6.5C
12	LP	00	180.9		T=5.5C
14	LP	00	232.3	HS	
16	RI	01	258.8	TJ	US/MT/ST/YT/C30/S
17	RI	11	258.8		ACW=1.0M, T=7.0C
18	LP	01	267.2	TJ	
19	RI	11	267.2		ACW=1.40M, T=5.0C
20	LP	00	291.6	HS, DJ	THRU UNIT 21
23	SC	00	340.7	WL	RACCOON TRACKS THRU/OUT
24	LP	00	359.4	BV	
26	LP	01	388.1	/TJ	
27	RB	11	388.1		ACW=1.00M, T=6.0C
33	GL	00	486.3		CA/MT/D30/S/ST



Name: HARLAN
 Date: 5/9/2007
 Scale: 1 inch equals 2000 feet

Location: 10 443701 E 4935674 N
 Caption: WOLF CREEK RESTORATION SITE - YAQUINA BASIN