

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

STREAM: Oxbow Creek (MC-53)  
BASIN: Siuslaw River  
SURVEY TYPE: Post-Tx  
DATE: January 23, 2007  
SURVEY CREW: Andy Lanier, Laurel Moulton  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 5.7 km<sup>2</sup>  
USGS MAPS: Gunter  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Oxbow Creek habitat survey extended 486 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 7 (range: 5-10). Land use for the reach was second growth timber (15-30 cm dbh). The average unit gradient was 0.9 percent. Scour pools (48%) and riffles (33%) dominated stream habitat. Gravel (46%) and bedrock (24%) dominated stream substrate. Wood volume was moderate at 28.7 m<sup>3</sup>/100m.

**COMMENTS:**

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

The crew noted several habitat structures during the survey.

Stream           Oxbow Creek (MC-53)  
 Basin             Siuslaw River  
 Treatment        Large Wood

	ODFW Benchmark		Pre	Post	Post	Post	
Habitat Variable	Desirable	Undesirable	3/6/02	2/3/03	2/23/04	1/23/07	
% Pool Area	>35%	<10%	27.7	44.1	49.5	49.0	
Number of Pools			12	17	21	18	
Deep Pools/km (>1.0 m)			0.0	0.0	0.0	0.0	
% Off-Channel			7.2	5.9	6.4	<b>9.2</b>	
LWD – Pieces/100m	>20	<10	8.8	16.8	21.3	<b>28.8</b>	
LWD – Volume/100m	>30	<20	7.0	23.9	29.6	28.7	
LWD – Key Pieces/100m	>3	<1	0.2	1.5	2.5	0.0	
Large Wood Jams/km			0	11.4	12.6		
% Riffle Fines	<10	>20	6	10	8	7	
% Riffle Gravel	>35	<15	39	56	65	45	
% Bedrock			47	32	19	<b>24</b>	

**Bold** is noticeable change

Comments: Pool area has increased since pre-treatment conditions, and has remained stable for several years. Off channel habitat appears to be increasing. Large wood pieces seem to be increasing, while wood volume remains stable since treatment. Key pieces have decreased, however, suggesting that while additional wood is being recruited, pieces tend to be smaller, with some of the larger pieces having left the reach. Bedrock numbers may be decreasing with time. The treatment seems to have been successful, with increased pool area and good large wood retention.

REACH 1

T20S-R7W-S04SE

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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	7.0	VWI Range:	5 - 10

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 (m2)</u>	<u>Dry Units</u>
Primary Channel	486	2,603	0
Secondary Channel	55	250	2
Off-Channel Units	8	15	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 5.3	Width: 7.8	11.5 ( 8.3 - 17.2 )	14.8 ( 9.3 - 24.5 )
Depth: 0.37	Height: 0.5	0.9 ( 0.7 - 1 )	1.6 ( 1.4 - 1.7 )

W:D ratio: 17.6  
 Stream Flow Type: MF  
 Average Unit Gradient: 0.9%  
 Water temperature (°C): 6.0 - 6.0

Entrenchment (ACW:FPW ratio): 1.5  
 Habitat Units/100m (total channel length): 6.8  
 Habitat Units/100m (primary channel length): 7.6

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D15	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):	140	28.8
Volume (m <sup>3</sup> ):	140	28.7
Key pieces (>=12m x 0.60m):	2	0.4

OREGON DEPT OF FISH AND WILDLIFE

OXBOW CREEK POST-TX (2-MC, 53)

HABITAT INVENTORY

Report Date: 4/25/2007

Survey Date:

1/23/2007

REACH 1		T20S-R7W-S04SE					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
POOL-BACKWATER	1	8	2.0	0.70	15	0	0	33	56	6	6	0
POOL-LATERAL SCOUR	16	240	5.7	0.57	1,378	0	2	26	43	4	2	23
POOL-PLUNGE	1	4	3.0	0.40	12	0	0	0	85	0	0	15
PUDDLED UNIT	2	55	4.5	0.13	250	0	5	58	38	0	0	0
RAPID/BOULDERS	1	20	5.0	0.15	100	0	0	0	14	0	5	81
RIFFLE	10	176	5.0	0.18	871	0	0	7	45	18	2	29
RIFFLE W/ POCKETS	1	20	4.5	0.20	90	0	0	0	24	10	5	62
STEP/COBBLE	4	26	5.8	0.14	149	0	1	5	75	19	0	0
STEP/LOG	1	1	7.0	0.50	4	0	0	0	20	0	0	80
<b>Total:</b>	<b>37</b>	<b>548</b>	<b>5.3</b>	<b>0.37</b>	<b>2,868</b>	<b>0</b>	<b>Avg: 1</b>	<b>18</b>	<b>46</b>	<b>9</b>	<b>2</b>	<b>24</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	1	8	2.0	0.70	15	0.52%	0	0.0	
Scour Pools	17	244	5.5	0.56	1,390	48.47%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	11	196	5.0	0.18	961	33.49%	0	0.0	
Rapids	1	20	5.0	0.15	100	3.49%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	5	26	6.0	0.21	153	5.32%	0	0.0	
Dry	2	55	4.5	0.13	250	8.72%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

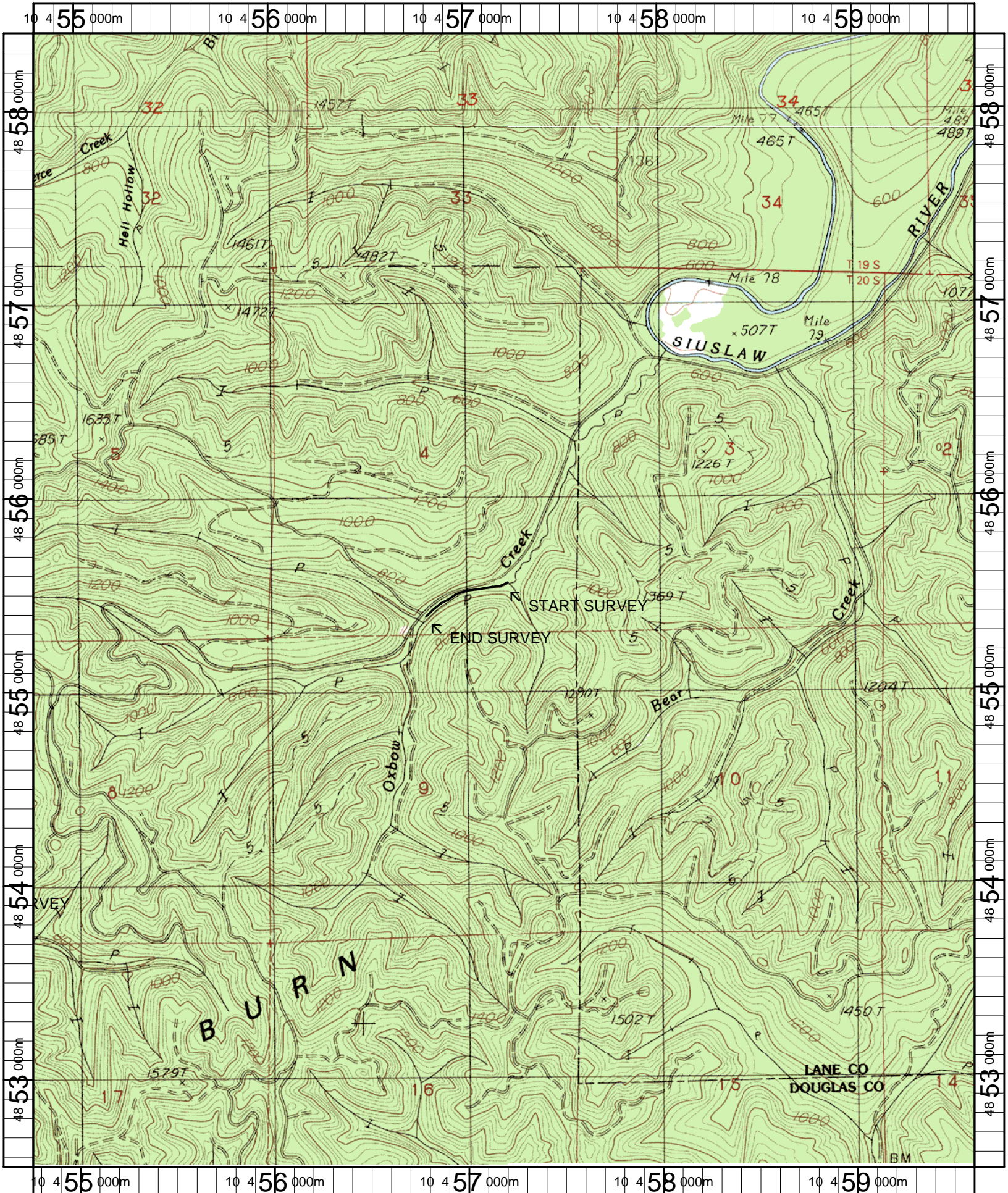
POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	18	32.8	37.1
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	13	23.7	26.8
Pool frequency (channel widths/pool):	3.9		
Residual pool depth (avg):	0.39		

# Comment Summary

## Restoration Monitoring Sites 2007

MONITORING AREA: **2-MC**      SITE ID: **53**      **OXBOW CREEK POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
1	SC	00	8.5		T=6.0°
2	LP	00	22.5	HS	HAB. SITE 10 SIGN. LOG JAM
6	LP	01	83	HS	LOG JAM
14	LP	00	156.5		REDD?
15	RI	00	185		REDD?
16	LP	00	206	/SS	REDD?
18	LP	00	232.5		REDDS
28	PP	00	387	HS	LOG JAM
29	SL	00	387.5	HS	PLACED LOG
32	LP	01	425	HS	LOG JAM
36	LP	00	465.5	HS	LOG JAM SIGN 14
37	RI	00	485.5		VWI INFLUENCED BY TRIB



Name: GUNTER (OR)  
 Date: 4/25/2007  
 Scale: 1 inch equals 2000 feet

Location: 10 0457196 E 4855462 N  
 Caption: OXBOW CREEK RESTORATION SITE - SIUSLAW BASIN