

**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: July 19, 2004  
SURVEY CREW: Peter Baki, Jeremiah Bernier  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 9.6 km<sup>2</sup>  
USGS MAPS: Gunter  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Oxbow Creek habitat survey extended 514 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 8.0 (range: 5.7-14.0). Land use for the reach was large (30-50 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (54%) and riffles (21%) dominated stream habitat. Gravel (29%) and sand (24%) dominated stream substrate. Wood volume was moderate at 25.4 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.

REACH 1

T20S-R07W-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	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	8.0	VWI Range:	5.7 - 14

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	514	1,215	0
Secondary	69	192	2

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.2	Width: 5.9	13.9 ( 6.5 - 21.8 )	17.9 ( 8 - 27.8 )
Depth: 0.22	Height: 0.5	1.1 ( 1 - 1.1 )	1.7 ( 1.6 - 1.8 )

W:D ratio: 11.2

Stream Flow Type: LF

Average Unit Gradient: 1.1%

Water temperature (°C): 15.0 - 15.0

Entrenchment (ACW:FPW ratio): 2.3

Habitat Units/100m (total channel length): 9.1

Habitat Units/100m (primary channel length): 10.3

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LT	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:	25%	Reach avg: 98%
Undercut Banks:	7%	Range: 55 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	84	16.3
Volume (m <sup>3</sup> ):	131	25.4
Key pieces (>=12m x 0.60m):	7	1.4

OREGON DEPARTMENT OF FISH AND WILDLIFE

OXBOW CREEK POST-TX (MC-53)

HABITAT INVENTORY

Report Date: 10/27/2004

Survey Date:

7/19/2004

REACH 1		T20S-R07W-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	
DRY UNIT	1	21	4.0	0.00	84	0	0	20	30	50	0	0	
POOL-BACKWATER	1	4	6.0	0.35	24	0	25	40	35	0	0	0	
POOL-ISOLATED	2	7	1.5	0.28	9	0	30	43	5	0	0	23	
POOL-LATERAL SCOUR	19	259	2.7	0.38	720	7	5	31	26	14	4	19	
POOL-PLUNGE	4	19	2.4	0.33	46	0	21	49	15	3	0	13	
PUDDLED UNIT	1	31	2.0	0.25	62	0	15	15	50	20	0	0	
RAPID/BEDROCK	1	18	2.2	0.09	40	2	0	0	0	0	0	100	
RAPID/BOULDERS	2	25	2.1	0.09	59	9	0	5	13	40	43	0	
RIFFLE	9	128	1.9	0.06	222	1	0	12	41	28	6	13	
RIFFLE W/ POCKETS	1	25	2.7	0.40	68	0	0	5	10	80	5	0	
STEP/BEDROCK	3	6	1.4	0.02	11	3	10	0	0	0	5	85	
STEP/COBBLE	7	31	1.6	0.05	54	2	0	17	61	16	4	1	
STEP/STRUCTURE	2	10	1.0	0.13	9	0	0	42	17	0	0	41	
<b>Total:</b>	<b>53</b>	<b>583</b>	<b>2.2</b>	<b>0.22</b>	<b>1,407</b>	<b>24</b>	<b>Avg: 6</b>	<b>24</b>	<b>29</b>	<b>17</b>	<b>5</b>	<b>19</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	3	11	3.0	0.30	33	2.38%	0	0.0	
Scour Pools	23	278	2.6	0.37	766	54.43%	7	0.9	
Glides	0	0			0	0.00%	0	0.0	
Riffles	10	153	1.9	0.10	290	20.60%	1	0.3	
Rapids	3	43	2.1	0.09	98	6.99%	11	11.2	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	12	47	1.5	0.06	73	5.19%	5	6.8	
Dry	2	52	3.0	0.13	146	10.41%	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:	26	44.6	50.6
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	6	10.3	11.7
Pool frequency (channel widths/pool):	3.8		
Residual pool depth (avg):	0.35		

**RIPARIAN ZONE VEGETATION SUMMARY**

REACH 1

REACH 1

**Summary of Riparian Zone (0-30m)**

3 transects

Total hardwoods/1000	447
Total conifers/1000 ft	224
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	0.7	0.7	0.7	0.7	1.0	1.3	2.3
15-30cm	0.0	2.0	0.3	0.3	0.7	0.7	1.0	3.0
30-50cm	0.0	1.3	0.7	0.3	0.7	0.3	1.3	2.0
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	0.0	4.0	1.7	1.3	2.0	2.0	1.2	2.4

**Canopy closure and ground cover**

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	62		72		69	
Shrub cover	67		43		43	
Grass/forb cover	33		45		45	

**Predominant landform in each zone**

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	17		33		67	
High terrace	50		50		17	
Low terrace	33		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		17	
Riprap	0		0		0	
Surface slope (%)	14		13		23	

**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		
18	LF	3	HS	55	85	10	90	Conifer		1	1				
								Hardwood							
18	RT	1	LT	0	65	80	20	Conifer							
								Hardwood		3					
18	RT	2	HT	0	50	75	25	Conifer							
								Hardwood	1	1	1				
18	RT	3	HT	0	40	75	25	Conifer							
								Hardwood	1						
18	LF	2	HS	50	75	0	100	Conifer							
								Hardwood	1						
18	LF	1	HS	50	65	5	95	Conifer							
								Hardwood		1					
26	LF	2	HT	15	75	50	50	Conifer				1			
								Hardwood							
26	RT	3	HS	5	75	50	50	Conifer							
								Hardwood		2					
26	RT	2	RB	5	75	20	5	Conifer					1		
								Hardwood							
26	LF	3	HS	35	75	50	50	Conifer		1	1				
								Hardwood							
26	LF	1	HT	20	80	80	20	Conifer							
								Hardwood		1	2				
26	RT	1	LT	15	7	85	15	Conifer							
								Hardwood	2						
38	RT	1	HT	0	75	60	40	Conifer							
								Hardwood				1			
38	LF	1	HT	0	80	90	10	Conifer							
								Hardwood		1	1				
38	LF	2	HT	0	75	90	10	Conifer							
								Hardwood							
38	LF	3	HS	45	75	70	30	Conifer	1						
								Hardwood				1			
38	RT	2	HS	10	80	20	80	Conifer	2	1					
								Hardwood							
38	RT	3	RB	0	65	5	25	Conifer	1						
								Hardwood	2						

# Comment Summary

## Oregon Plan Monitoring Sites 2002

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

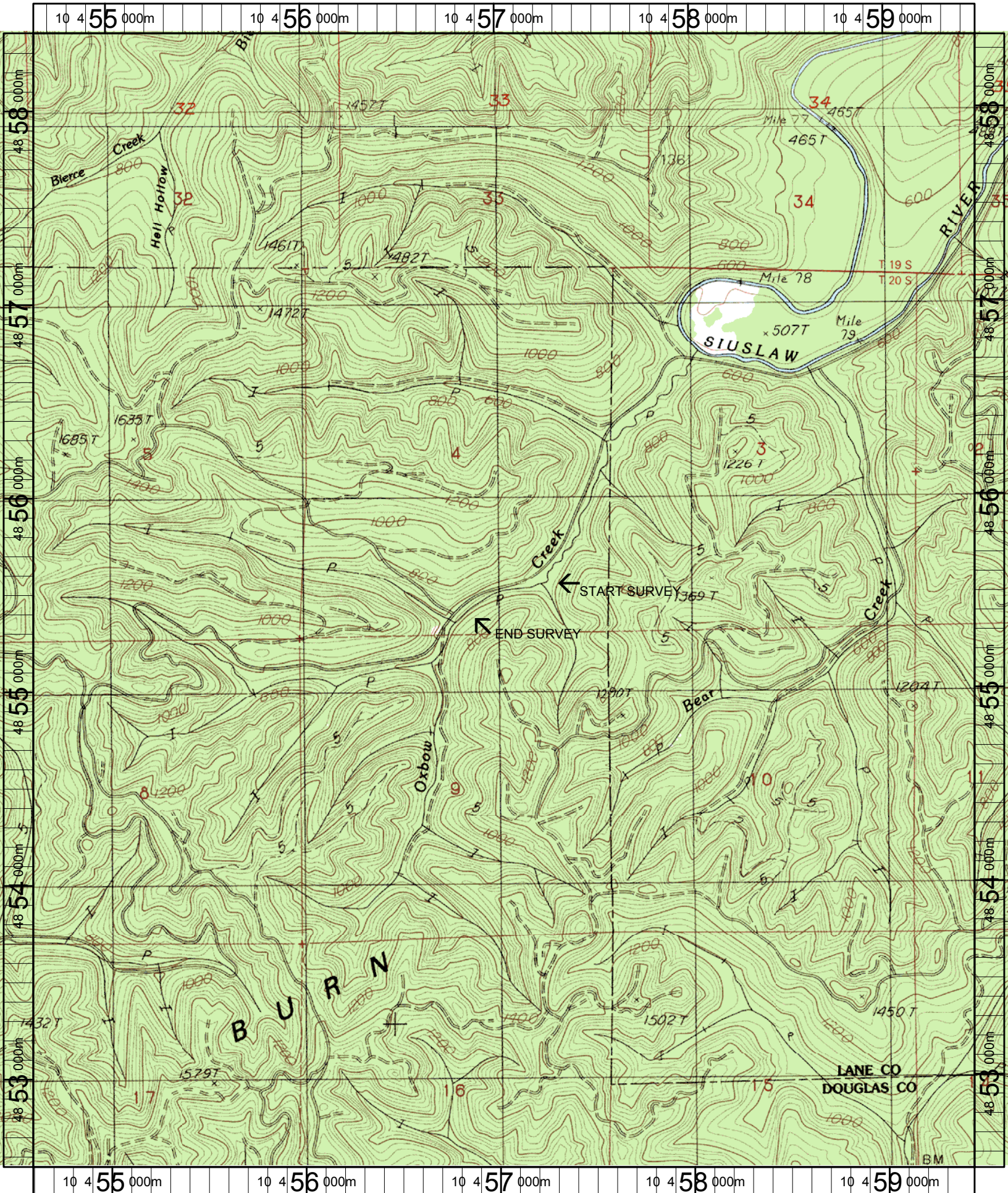
<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	LP	01	12.4			SG=2 START SIGN ON LF T=
4	LP	00	26.6	HS		5 HAB LOGS
6	LP	01	44.3	BV		SG=4
8	PP	01	54.8			SG=2
9	RB	01	63.2	BV		
12	PP	01	86.3	DJ		
13	PD	02	86.3		COHO IN PUDDLES	
15	DU	02	86.3	DJ, HS		SAME DJ AS U. 12 3 HAB LO
16	SC	00	93.6	DJ		
19	LP	00	132.9		RIP 1	SG=12
21	LP	00	155.3			SG=4
24	LP	00	224.6			SG=2
26	LP	00	254.4		RIP 2	SG=2
38	RI	00	391.8		RIP 3	
39	RI	00	404.8	HS		8 LOGS, SITE 12 SIGN
40	SS	01	410.8		H=0.7	
41	IP	10	410.8			FISH FRY
43	LP	00	429.9			SG=2
44	LP	01	442.9	HS		SG=4, 5 LOGS, 2 BLDRS SIT
47	LP	00	457.1			SG=6
49	LP	00	477.9			SG=10

# Comment Summary

## Oregon Plan Monitoring Sites 2002

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

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
51	LP	00	487.1			SG=2
52	SS	00	490.8	HS, DJ		SITE 14 7 LOGS
53	RI	00	514.2			END ON LF



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

Location: 10 457029 E 4855464 N  
 Caption: OXBOW CREEK RESTORATION SITE - SIUSLAW BASIN