

**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: August 13, 2007  
SURVEY CREW: Andy Livesay, Ryan Lande  
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 515 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.1 (range: 3.0-10.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.0 percent. Scour pools (54%) and riffles (28%) dominated stream habitat. Gravel (43%), bedrock (22%) and cobble (21%) dominated stream substrate. Wood volume was moderate at 23.5 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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	6.1	VWI Range:	3 - 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	515	1,419	0
Secondary Channel	77	169	1
Off-Channel Units	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.9	Width: 6.2	7.8 ( 7.1 - 8.4 )	9.1 ( 8.2 - 10 )
Depth: 0.23	Height: 0.3	0.6 ( 0.5 - 0.72 )	1.2 ( 0.75 - 1.7 )

W:D ratio: 19.9

Entrenchment (ACW:FPW ratio): 1.3

Stream Flow Type: LF

Habitat Units/100m (total channel length): 6.4

Average Unit Gradient: 1.0%

Habitat Units/100m (primary channel length): 7.4

Water temperature (°C): 14.0 - 14.0

**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:	8%	Reach avg: 96%
Undercut Banks:	9%	Range: 64 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	107	20.8
Volume (m <sup>3</sup> ):	121	23.5
Key pieces (>=12m x 0.60m):	2	0.4

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

8/13/2007

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 CHANNEL	1	77	2.2	0.00	169	0	5	15	70	10	0	0
POOL-LATERAL SCOUR	18	247	3.5	0.43	862	5	3	17	38	14	0	27
RAPID/BEDROCK	1	24	3.2	0.10	77	1	0	5	0	15	0	80
RIFFLE	14	236	2.0	0.05	449	15	0	6	50	30	1	13
STEP/BEDROCK	1	0	3.5	0.02	1	0	0	0	0	0	0	100
STEP/COBBLE	3	8	3.1	0.06	31	0	0	5	62	33	0	0
<b>Total:</b>	<b>38</b>	<b>592</b>	<b>2.9</b>	<b>0.23</b>	<b>1,589</b>	<b>21</b>	<b>Avg: 1</b>	<b>11</b>	<b>43</b>	<b>21</b>	<b>1</b>	<b>22</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	0	0			0	0.00%	0	0.0	
Scour Pools	18	247	3.5	0.43	862	54.25%	5	0.6	
Glides	0	0			0	0.00%	0	0.0	
Riffles	14	236	2.0	0.05	449	28.29%	15	3.3	
Rapids	1	24	3.2	0.10	77	4.83%	1	1.3	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	4	9	3.2	0.05	31	1.97%	0	0.0	
Dry	1	77	2.2	0.00	169	10.66%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY				
	<u>Total</u>	Total of all Channel Lengths		Primary Channel Length
		<u># / Km</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	18	30.4		34.9
Pools >=1m deep:	0	0.0		0.0
Complex pools (LWD pieces>=3):	10	16.9		19.4
Pool frequency (channel widths/pool):	5.3			
Residual pool depth (avg):	0.39			

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OXBOW CREEK POST-TX  
GCG: 2-MC SITE ID: 53

Survey Date 8/13/2007

RIPARIAN ZONE

Report Date: 11/7/2007

VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 3 transects

Total hardwoods/1000	752
Total conifers/1000 ft	163
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 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters		Zones 1-3 0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	2.3	0.0	2.7	0.3	2.0	0.3	7.0
15-30cm	0.3	2.0	1.0	2.0	1.0	1.3	2.3	5.3
30-50cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	0.3	4.3	1.0	4.7	1.3	3.3	0.9	4.1

Canopy closure and ground cover

	Zone 1 0-10 meters (%)		Zone 2 10 - 20 meters (%)		Zone 3 20 - 30 meters (%)	
Canopy closure	78		68		83	
Shrub cover	65		42		28	
Grass/forb cover	32		35		59	

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	17	17	83
High terrace	83	50	0
Low terrace	0	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	33	17
Riprap	0	0	0
Surface slope (%)	3	8	48

Summary of Riparian Zone (0-30m) for all reaches

3 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000	752
Total conifers/1000 ft	163
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

**Average number of trees in a 5-m wide band**

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.3	7.0
15-30cm	2.3	5.3
30-50cm	0.0	0.0
50-90cm	0.0	0.0
>90cm	0.0	0.0

**RIPARIAN ZONE VEGETATION**

Reach 1

Reach 1

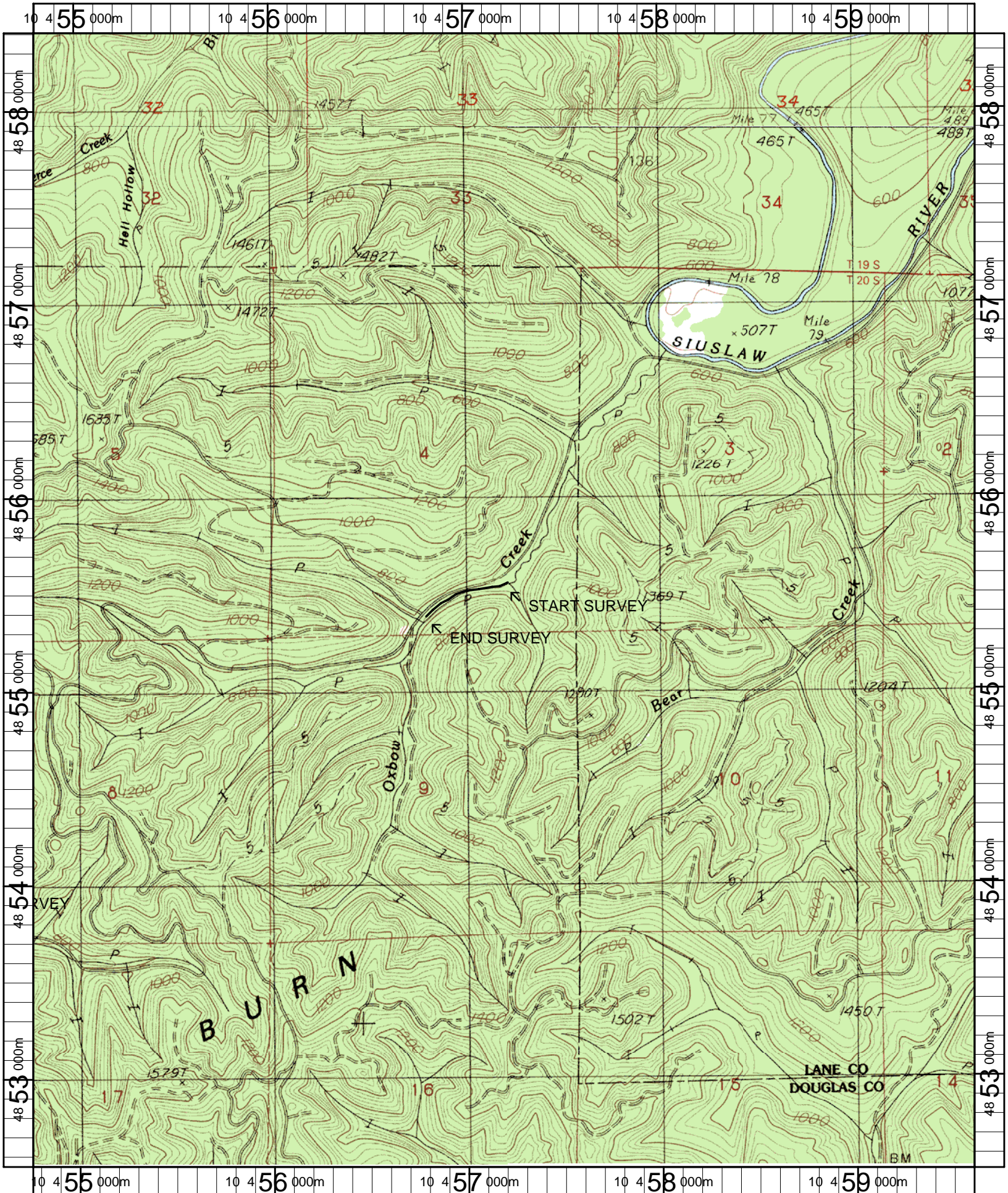
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
14	LT	1	HT	0	75	80	20	Conifer							
								Hardwood	1	2					
14	LT	2	HT	0	50	90	10	Conifer							
								Hardwood	1	3					
14	LT	3	HS	80	85	55	40	Conifer			1				
								Hardwood	1						
14	RT	1	HT	0	80	60	30	Conifer							
								Hardwood	2						
14	RT	2	RB	0	40	20	10	Conifer							
								Hardwood							
14	RT	3	HS	30	80	40	55	Conifer							
								Hardwood		2					
20	LT	1	HT	0	75	80	20	Conifer				1			
								Hardwood	1	1					
20	LT	2	HS	50	90	10	80	Conifer				1			
								Hardwood	6						
20	LT	3	HS	55	85	0	95	Conifer	1						
								Hardwood	2						
20	RT	1	HS	20	75	75	15	Conifer							
								Hardwood		2					
20	RT	2	RB	0	70	30	15	Conifer							
								Hardwood			1				
20	RT	3	HS	75	85	30	65	Conifer							
								Hardwood	1	2					
29	LT	1	HT	0	75	70	30	Conifer							
								Hardwood							
29	LT	2	HT	0	80	80	15	Conifer				1			
								Hardwood	1	1					
29	LT	3	HS	45	85	20	80	Conifer				2			
								Hardwood							
29	RT	1	HT	0	85	25	75	Conifer							
								Hardwood	3	1					
29	RT	2	HT	0	80	20	80	Conifer				1			
								Hardwood				1			
29	RT	3	RB	0	80	25	20	Conifer							
								Hardwood	2						

**COMMENT SUMMARY**

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	LP	01	21.8	HS	PLACED LOGS
8	LP	01	88.2	HS	PLACED LOGS
25	LP	00	327.5		LOTS OF COHO FRY
30	LP	00	409.5	HS, DJ	
31	RI	00	424.9	HS	
34	LP	00	450.5	HS	PLACED LOGS, BOULDERS
38	RI	00	515.2	HS, DJ	PLACED LOGS,BOULDERS





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