ODFW AQUATIC INVENTORY PROJECT

OREGON PLAN FOR SALMON & WATERSHEDS

STREAM RESTORATION HABITAT REPORT

STREAM:	Salmon Creek (MC-58)
BASIN:	Yaquina River
SURVEY TYPE:	Post-Tx
DATE:	February 13, 2006
SURVEY CREW:	Paul Jacobsen, Brian Bangs
REPORT PREPARED BY:	Paul Jacobsen
BASIN AREA:	6.6 km^3
USGS MAPS:	Harlan
ECOREGION:	Coast Range Sedimentary

GENERAL DESCRIPTION:

The Salmon Creek habitat survey extended 370 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.0 (range: 5.3-6.5). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 1.9 percent. Riffles (40%) and scour pools (33%) dominated stream habitat. Bedrock (32%) and sand (26%) dominated stream substrate. Wood volume was moderate at 26.1 m^3/100m.

COMMENTS:

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

The crew noted several habitat structures during the survey.

Stream Salmon Creek (MC-58)

Basin Yaquina River

Treatment Large Wood

	ODFW Benchmark		Pre 2/4/99	Post 1/20/00	Post 2/13/06		
Habitat Variable	**Desirable**	**Undesirable**					
% Pool Area	>35%	<10%	57.9	52.6	**50.0**		
Number of Pools			17	18	**12**		
Deep Pools/km (>1.0 m)			2.4	2.6	**5.0**		
% Off-Channel			3.1	4.5	3.1		
LWD – Pieces/100m	>20	<10	9.5	**15.3**	**14.3**		
LWD – Volume/100m	>30	<20	5.6	**35.8**	**26.1**		
LWD – Key Pieces/100m	>3	<1	0	**2.8**	**1.4**		
Large Wood Jams/km			2.6	**11.4**	**10.8**		
% Riffle Fines	<10	>20	23	28	16		
% Riffle Gravel	>35	<15	24	46	35		
% Bedrock			28	32	32		

Bold is noticeable change

Comments: Since the treatment was large wood assembled in complex jams, it is no surprise that there was an increase in those variables. Large wood is being generally retained in the treated reach, although wood values are starting to degrade, suggesting that additional wood is not being recruited while some is leaving. Pool area and the number of pools have decreased, but deep pools have increased over time. Substrate has remained generally unchanged.

OREGON DEPT OF FISH AND WILDLIFE **SALMON CREEK POST-TX (2-MC, 58)**

HABITAT INVENTORY Report Date: 12/6/2006 Survey Date: 2/13/2006

REACH 1 **T11S-R09W-S13SW** **REACH 1**

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0%	Constraining Terraces	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%

Valley Width Index 6.0 VWI Range: 5.3 - 6.5

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

Type	Length (m)	Area (m2)	Dry Units
Primary Channel	370	1,875	0
Secondary Channel	0	0	0
Off-Channel Units	28	59	0

Channel Dimensions (m)

Wetted		Active		Floodprone *n* = 4	First Terrace *n* = 4
Width:	4.8	Width:	6.6	18.6 (12.3 - 29.6)	23.5 (15.7 - 34.6)
Depth:	0.39	Height:	0.5	1.0 (0.9 - 1.2)	1.5 (1.1 - 2.2)

W:D ratio: 13.1
Entrenchment (ACW:FPW ratio): 3.0
Stream Flow Type: MF
Habitat Units/100m (total channel length): 6.8
Average Unit Gradient: 1.9%
Habitat Units/100m (primary channel length): 7.3
Water temperature (°C): 8.0 - 8.0

Riparian, Bank, and Wood Summary

	Primary	Secondary
Land Use:	ST	LT
Riparian Vegetation:	D30	S

Bank Condition and Shade

Bank Status	Percent Reach Length	Shade (% of 180)
Actively Eroding:		Reach avg:
Undercut Banks:		Range: -

Large Wood Debris

	Total	Total / 100m primary channel
All pieces (>=3m x 0.15m):	53	14.3
Volume (m^3):	97	26.1
Key pieces (>=12m x 0.60m):	5	1.4

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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
CASCADE/BOULDERS	2	13	0.4	0.03	5	0		13	10	13	8	25	33
POOL-BACKWATER	1	8	4.4	0.35	37	0		20	80	0	0	0	0
POOL-DAMMED	1	24	11.5	1.55	271	0		8	87	0	0	0	5
POOL-ISOLATED	1	7	2.5	0.35	18	0		40	55	5	0	0	0
POOL-LATERAL SCOUR	9	127	5.0	0.66	643	0		7	26	16	9	4	38
RAPID/BOULDERS	1	15	4.5	0.25	69	0		5	10	50	20	15	0
RIFFLE	9	178	4.3	0.21	769	0		2	14	35	16	5	28
STEP/BEDROCK	2	25	4.7	0.08	112	0		0	0	0	0	0	99
STEP/LOG	1	1	12.0	0.10	10	0		5	80	15	0	0	0
Total:	27	398	4.8	0.39	1,934	0	**Avg:**	7	26	21	10	5	32

HABITAT SUMMARY

Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m^2)	Wetted Area Percent	Large Boulders Number	Large Boulders (# / $100m^2$)
Dammed & BW Pools	3	39	6.1	0.75	325	16.83%	0	0.0
Scour Pools	9	127	5.0	0.66	643	33.24%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	9	178	4.3	0.21	769	39.79%	0	0.0
Rapids	1	15	4.5	0.25	69	3.58%	0	0.0
Cascades	2	13	0.4	0.03	5	0.26%	0	0.0
Step/Falls	3	26	7.1	0.08	122	6.30%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

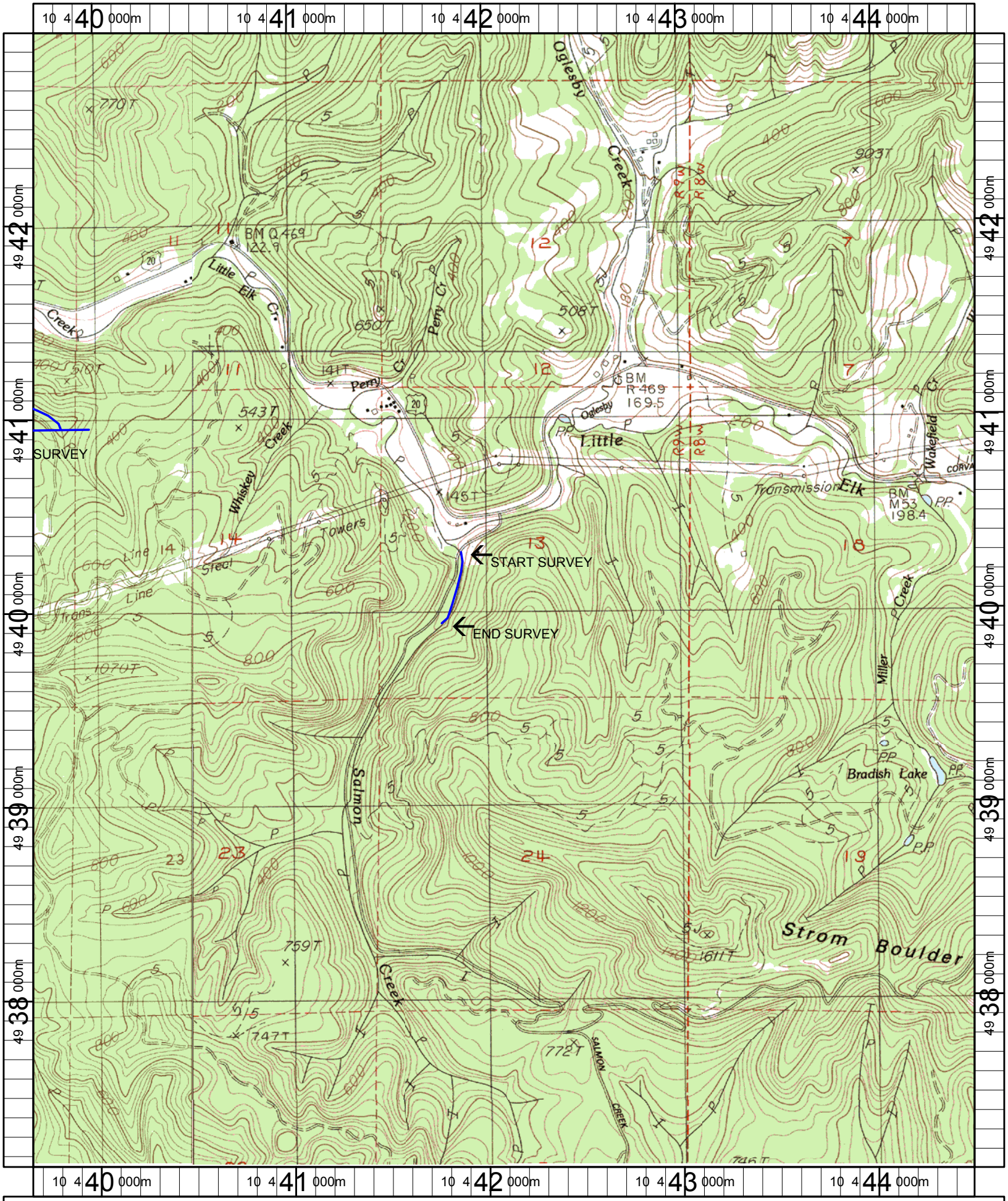
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	12	30.2	32.5
Pools >=1m deep:	2	5.0	5.4
Complex pools (LWD pieces>=3):	3	7.5	8.1
Pool frequency (channel widths/pool):	5.1		
Residual pool depth (avg):	0.54		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** **SITE ID:** **58** **SALMON CREEK POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
2	LP	00	33.2	UD		
4	IP	10	60.9		RSN	
5	RI	01	83.9	TJ/	T = 7.0	
6	CB	11	83.9		T = 8.0	
7	LP	00	96	HS		
14	LP	00	166.2	HS	COHO CARCASS	
15	RI	00	191	BV		
16	RI	00	224.7	HS	CARCASS	
17	LP	00	240.5	BV		
22	RB	01	309.2	TJ/		
23	CB	11	309.2		T = 7.5	
24	LP	00	324.8	BV		
25	SL	00	325.6	HS	H = 0.75	



Name: HARLAN
Date: 1/23/2006
Scale: 1 inch equals 2000 feet

Location: 10 442094 E 4940050 N
Caption: SALMON CREEK RESTORATION SITE - YAQUINA BASIN

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