

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

STREAM: Richardson Creek (L158)  
BASIN: Clackamas River  
SURVEY TYPE: Pre-Tx  
DATE: February 27, 2002  
SURVEY CREW: Loren Stucker, Russ Macal  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 10.3 km<sup>2</sup>  
USGS MAPS: Damascus  
ECOREGION: Willamette Valley Foothills

**GENERAL DESCRIPTION:**

The Richardson Creek habitat survey extended 518 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 10.0. Land use for the reach was young (3-15 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 0.8 percent. Scour pools (46%), glides (23%) and riffles (20%) dominated stream habitat. Gravel (39%) and sand (35%) dominated stream substrate. Wood volume was low at 3.9 m<sup>3</sup>/100m.

**COMMENTS:**

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

The crew noted evidence of beaver activity during the survey.

REACH

**T2S-R3E-S18SE**

REACH

**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	10.0	VWI Range:	10 - 10

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	100%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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	518	2,428	0
Secondary	51	93	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 4.0	Width: 6.2	23.4 ( 8.8 - 42.3 )	31.3 ( 12 - 53 )
Depth: 0.71	Height: 0.7	1.5 ( 1 - 2 )	1.9 ( 1.1 - 2.5 )

W:D ratio: 9.7  
Stream Flow Type: LF  
Average Unit Gradient: 0.8%  
Water temperature (°C): 6.0 - 6.0

Entrenchment (ACW:FPW ratio): 4.1  
Habitat Units/100m (total channel length): 4.6  
Habitat Units/100m (primary channel length): 5.0

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	LT
Riparian Vegetation:	P	D30

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):	21	4.1
Volume (m <sup>3</sup> ):	20	3.9
Key pieces (>=12m x 0.60m):	1	0.2

OREGON DEPARTMENT OF FISH AND WILDLIFE

RICHARDSON CREEK PRE-TX (L158)

HABITAT INVENTORY

Report Date: 11/15/2013

Survey Date:

2/27/2002

REACH		T2S-R3E-S18SE					REACH					
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
GLIDE	5	120	4.7	0.86	568	0	28	59	13	0	0	0
POOL-BEAVER DAM	1	33	5.8	1.70	189	0	30	60	10	0	0	0
POOL-LATERAL SCOUR	6	147	4.8	1.04	863	0	15	32	38	8	7	0
POOL-STRAIGHT SCOUR	2	66	4.5	1.60	295	0	30	60	10	0	0	0
PUDDLED UNIT	1	17	1.8	0.10	30	0	10	20	60	10	0	0
RAPID/BOULDERS	1	22	2.8	0.25	61	0	0	5	75	20	0	0
RIFFLE	10	165	3.3	0.28	516	0	9	22	57	11	3	0
<b>Total:</b>	26	569	4.0	0.71	2,521	0	<b>Avg:</b> 16	35	39	7	3	0

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	33	5.8	1.70	189	7.48%	0	0.0
Scour Pools	8	213	4.7	1.18	1,158	45.94%	0	0.0
Glides	5	120	4.7	0.86	568	22.51%	0	0.0
Riffles	10	165	3.3	0.28	516	20.48%	0	0.0
Rapids	1	22	2.8	0.25	61	2.41%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	0	0			0	0.00%	0	0.0
Dry	1	17	1.8	0.10	30	1.18%	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:	9	15.8	17.4
Pools >=1m deep:	5	8.8	9.7
Complex pools (LWD pieces>=3):	1	1.8	1.9
Pool frequency (channel widths/pool):	10.1		
Residual pool depth (avg):	0.73		

# Comment Summary

## Oregon Plan Monitoring Sites 2002

MONITORING AREA: 7-L      SITE ID: 158      RICHARDSON CREEK PRE-TX (L158)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	SP	00	29	BV	START AT MOUTH
2	GL	00	54	BV	
3	LP	00	104	BV	
4	GL	00	129	BV	
5	GL	00	154	SS/	
8	LP	00	267.2	BV	
9	BP	00	299.7	BV	OLD POND, NO STEP
12	GL	00	356.7	BV	
13	RI	00	361.9		OUT OF CLACKAMAS INFLUENCE
15	RI	11	380.9	CS	DIVERTED FROM POND @ HOUSE
17	LP	00	417.7		SG = 1 SQ M
19	LP	01	433		SG = 1 SQ M
21	RI	11	445.3		TRIB FLOW FROM PIPE ON HWY 224
24	RI	00	486.4	CS	RIP-RAP ON RIGHT BANK
26	RI	00	517.8		END SIGN COTTONWOOD LEFT