

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

STREAM: Russell Creek (W-298)  
BASIN: Molalla River  
SURVEY TYPE: Pre-Tx  
DATE: February 3, 2005  
SURVEY CREW: Brian Bangs, Sheila Davis  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 7.5 km<sup>2</sup>  
USGS MAPS: Wilhoit  
ECOREGION: Willamette River and Tributaries Gallery Forest

**GENERAL DESCRIPTION:**

The Russell Creek habitat survey extended 527 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 15.1 (range: 5.0-30.0). Land use for the reach was wetland and mature (50-90 cm dbh) trees. The average unit gradient was 3.3 percent. Beaver ponds (92%) dominated stream habitat. Silt (35%), cobble (29%) and boulders (22%) dominated stream substrate. Wood volume was low at 19.1 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T05S-R02E-S36NW

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	15.1	VWI Range:	5 - 30

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	527	12,312	0
Secondary Channel	169	238	0
Off-Channel Units	14	7	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 4	<u>First Terrace</u> n = 3
Width: 5.0	Width: 26.6	40.1 ( 10.6 - 115 )	21.3 ( 15.1 - 28.7 )
Depth: 0.29	Height: 0.5	1.0 ( 0.8 - 1.2 )	3.1 ( 1.55 - 6 )

W:D ratio: 64.0  
 Stream Flow Type: LF  
 Average Unit Gradient: 3.3%  
 Water temperature (°C): 5.0 - 5.0

Entrenchment (ACW:FPW ratio): 2.4  
 Habitat Units/100m (total channel length): 5.5  
 Habitat Units/100m (primary channel length): 7.6

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	WL	MT
Riparian Vegetation:	D50	C50

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):	95	18.0
Volume (m <sup>3</sup> ):	100	19.1
Key pieces (>=12m x 0.60m):	4	0.8

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

2/3/2005

REACH 1		T05S-R02E-S36NW					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
CULVERT CROSSING	1	30	0.8	0.10	24	0	10	0	0	70	20	0
POOL-BEAVER DAM	4	298	17.8	1.15	11,519	0	94	3	1	1	1	0
POOL-LATERAL SCOUR	6	32	3.1	0.33	100	0	51	6	8	15	20	0
POOL-PLUNGE	1	12	7.3	1.20	90	0	45	5	0	20	30	0
RAPID/BOULDERS	5	69	3.4	0.18	246	0	6	0	3	26	63	2
RIFFLE	17	271	1.7	0.12	431	0	25	4	16	43	11	0
STEP/BEAVER DAM	3	3	4.9	0.08	16	0	47	0	0	10	17	27
STEP/BOULDERS	2	9	19.6	0.15	159	0	35	5	3	10	48	0
STEP/STRUCTURE	1	1	2.4	0.20	2	0	0	0	0	50	50	0
<b>Total:</b>	<b>40</b>	<b>725</b>	<b>5.0</b>	<b>0.29</b>	<b>12,587</b>	<b>0</b>	<b>Avg: 35</b>	<b>3</b>	<b>9</b>	<b>29</b>	<b>22</b>	<b>2</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	4	298	17.8	1.15	11,519	91.51%	0	0.0	
Scour Pools	7	44	3.7	0.45	190	1.51%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	17	271	1.7	0.12	431	3.42%	0	0.0	
Rapids	5	69	3.4	0.18	246	1.96%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	6	13	9.4	0.13	177	1.41%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	30	0.8	0.10	24	0.19%	0	0.0	

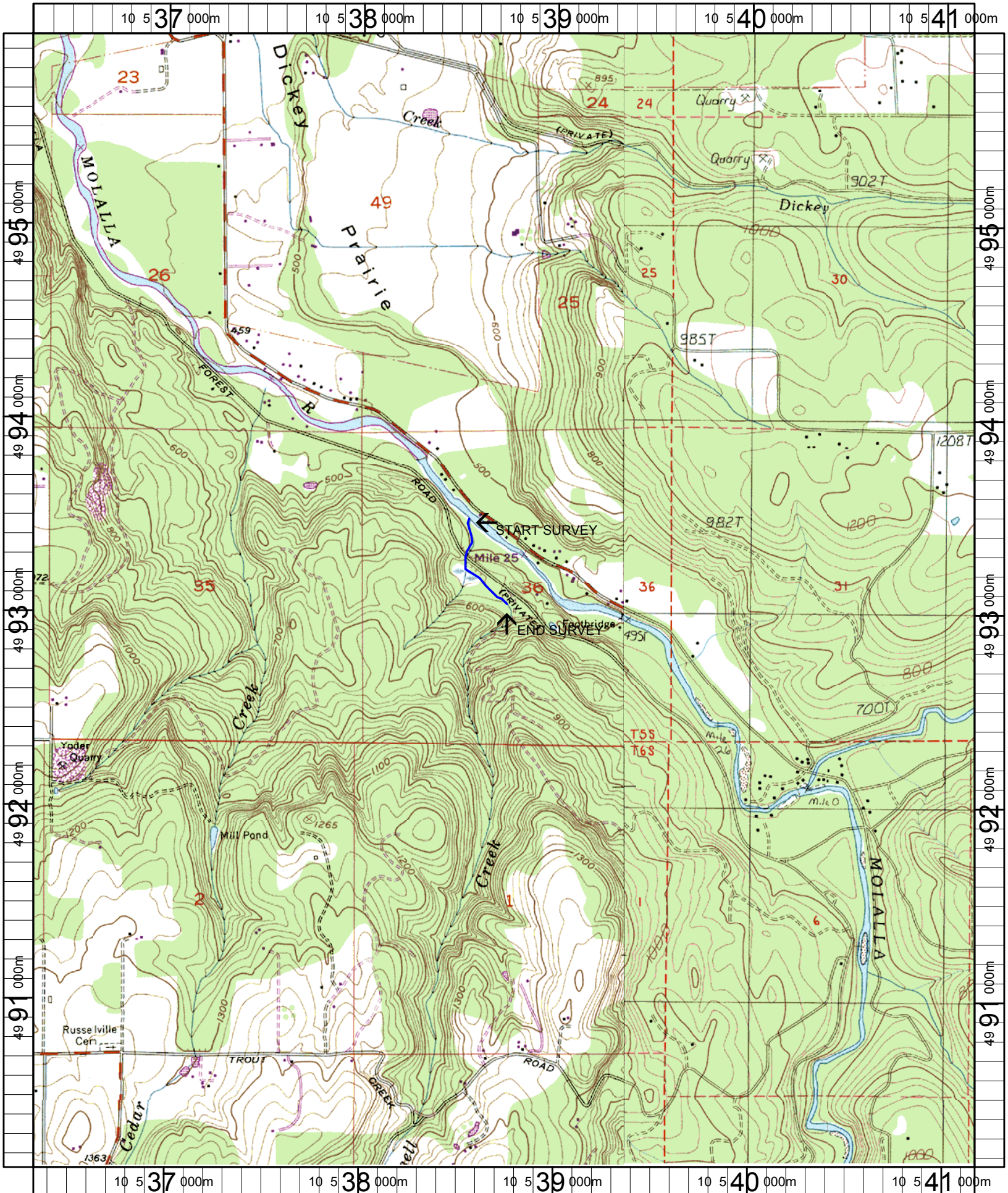
POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	11	15.2	20.9
Pools >=1m deep:	3	4.1	5.7
Complex pools (LWD pieces>=3):	5	6.9	9.5
Pool frequency (channel widths/pool):	2.5		
Residual pool depth (avg):	0.56		

# Comment Summary

## Restoration Monitoring Sites 2005

MONITORING AREA: **8-W**      SITE ID: **298**      **RUSSELL CREEK PRE-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
2	SD	00	1.8	BD	H=0.55m	
3	BP	00	29.5	BV		
4	RI	00	38.4		CTMT C50G MTST	
6	RI	01	55.7	/TJ		
8	LP	00	62.5		FRY	
25	LP	00	146.3		CTCT C50G MT	
29	CC	00	200.7	CC, PA	H=2.3m	
30	RB	00	223.2		2m x 2m WOOD SLAT CULVERT	
33	RI	00	251.3		CTCT D15G ST	
34	SD	00	252	BD	H=0.55m	
35	BP	01	273	BV		
36	SB	01	277	BV	H=1.6m	
38	BP	00	477	BV	DEPTH, WIDTH, WOOD ESTIMATED	
39	SD	00	477.9	BD	H=0.55m	
40	BP	00	526.9	BV	USWF D50S WLMT	



Name: FERNWOOD  
 Date: 1/6/2005  
 Scale: 1 inch equals 2000 feet

Location: 10 538732 E 4993066 N  
 Caption: RUSSELL CREEK RESTORATION SITE - MOLALLA BASIN