

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

STREAM: Molalla River Side Channel (W-327)  
BASIN: Molalla River  
SURVEY TYPE: Pre-Tx  
DATE: July 12, 2007  
SURVEY CREW: April Lewis, Paul Dunnette  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: km<sup>2</sup>  
USGS MAPS: Molalla  
ECOREGION: Willamette River and Tributaries Gallery Forest

**GENERAL DESCRIPTION:**

The Molalla River Side Channel habitat survey extended 507 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 20.0. Land use for the reach was rural residential and second growth (15-30 cm dbh) trees. The average unit gradient was 0.4 percent. Glides (86%) dominated stream habitat. Silt (54%) and cobble (36%) dominated stream substrate. Wood volume was very low at 1.8 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T04S-R02E-S37NW

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	20.0	VWI Range:	20 - 20

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	507	4,991	0
Secondary Channel	0	0	0
Off-Channel Units	24	81	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 8.9	Width: 8.3	12.7 ( 8.5 - 18 )	15.2 ( 12 - 19 )
Depth: 0.53	Height: 0.5	1.0 ( 0.6 - 1.2 )	1.9 ( 0.8 - 3.2 )

W:D ratio: 17.5  
 Stream Flow Type: MF  
 Average Unit Gradient: 0.4%  
 Water temperature (°C): 21.0 - 21.0

Entrenchment (ACW:FPW ratio): 1.7  
 Habitat Units/100m (total channel length): 4.7  
 Habitat Units/100m (primary channel length): 4.9

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	RR	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:	1%	Reach avg: 43%
Undercut Banks:	10%	Range: 22 - 56

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	24	4.7
Volume (m <sup>3</sup> ):	9	1.8
Key pieces (>=12m x 0.60m):	0	0.0

**OREGON DEPT OF FISH AND WILDLIFE MOLALLA RIVER SIDE CHANNEL PRE-TX (8-W, 327)**

**HABITAT INVENTORY**

Report Date: 11/14/2007

Survey Date:

7/18/2007

<b>REACH 1</b>		<b>T04S-R02E-S37NW</b>					<b>REACH 1</b>					
<b>HABITAT DETAIL</b>												
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	17	407	10.5	0.66	4,385	1	70	0	8	22	0	0
POOL-BACKWATER	1	14	3.3	0.40	46	0	100	0	0	0	0	0
POOL-DAMMED	1	8	10.0	0.70	80	0	10	0	10	80	0	0
RIFFLE	6	102	5.3	0.18	562	2	8	7	13	72	0	0
<b>Total:</b>	<b>25</b>	<b>531</b>	<b>8.9</b>	<b>0.53</b>	<b>5,072</b>	<b>3</b>	<b>Avg: 54</b>	<b>2</b>	<b>9</b>	<b>36</b>	<b>0</b>	<b>0</b>

<b>HABITAT SUMMARY</b>									
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	2	22	6.7	0.55	126	2.49%	0	0.0	
Scour Pools	0	0			0	0.00%	0	0.0	
Glides	17	407	10.5	0.66	4,385	86.44%	1	0.0	
Riffles	6	102	5.3	0.18	562	11.07%	2	0.4	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	0	0			0	0.00%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

<b>POOL SUMMARY</b>			
	<u>Total</u>	<u>Total of all Channel Lengths # / Km</u>	<u>Primary Channel Length # / Km</u>
All Pools:	2	3.8	3.9
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	31.9		
Residual pool depth (avg):	0.55		

Survey Date 7/18/2007  
Report Date: 11/7/2007

**RIPARIAN ZONE  
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	325
Total conifers/1000 ft	61
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	1.7	0.3	1.0	0.0	0.3	0.3	3.0
15-30cm	0.3	1.0	0.0	0.0	0.0	0.3	0.3	1.3
30-50cm	0.3	0.7	0.0	0.0	0.0	0.0	0.3	0.7
50-90cm	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.7	3.3	0.3	1.0	0.0	1.0	0.3	1.8

**Canopy closure and ground cover**

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	24		8		7	
Shrub cover	56		39		38	
Grass/forb cover	43		58		58	

**Predominant landform in each zone**

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		0		0	
High terrace	100		100		100	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	48		0		0	

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	325
Total conifers/1000 ft	61
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	3.0
15-30cm	0.3	1.3
30-50cm	0.3	0.7
50-90cm	0.0	0.3
>90cm	0.0	0.0

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**HABITAT INVENTORY** Report Date: 11/14/2007

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**GCG: 8-W SITE ID: 327**

**RIPARIAN ZONE VEGETATION**

Reach 1

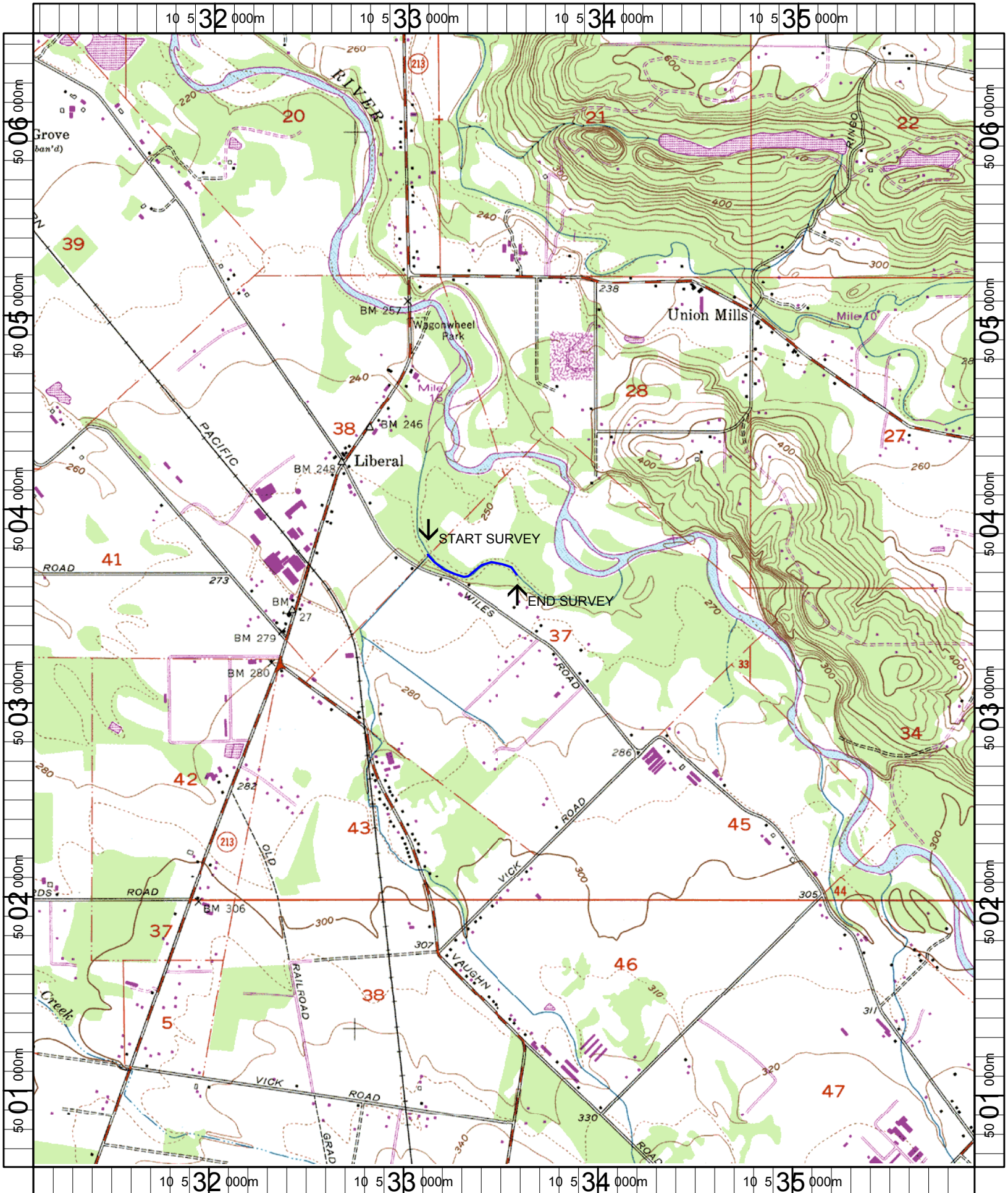
Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	
9	LT	1	HT	50	35	80	10	Conifer		1	1			TRANSITION
								Hardwood	1					
9	LT	2	HT	0	45	60	30	Conifer						
								Hardwood						
9	LT	3	HT	0	40	80	10	Conifer						
								Hardwood	1	1				
9	RT	1	HT	75	15	90	10	Conifer						
								Hardwood						
9	RT	2	HT	0	0	50	50	Conifer						
								Hardwood						
9	RT	3	HT	0	0	30	60	Conifer						
								Hardwood						
14	LT	1	HT	40	5	0	100	Conifer						TRANSITION ~3M
								Hardwood	1					
14	LT	2	HT	0	0	0	100	Conifer						
								Hardwood						
14	LT	3	HT	0	0	0	100	Conifer						
								Hardwood						
14	RT	1	HT	40	10	50	50	Conifer						TRANSITION ~3M
								Hardwood	1	2				
14	RT	2	HT	0	0	5	90	Conifer	1					
								Hardwood						
14	RT	3	HT	0	0	15	80	Conifer						
								Hardwood						
20	LT	1	HT	40	40	90	10	Conifer						TRANSITION ~3M
								Hardwood	1					
20	LT	2	HT	0	0	70	30	Conifer						ESTIMATED
								Hardwood						
20	LT	3	HT	0	0	50	50	Conifer						ESTIMATED
								Hardwood						
20	RT	1	HT	40	40	25	75	Conifer						TRANSITION ~3M
								Hardwood	1	1	2			
20	RT	2	HT	0	0	50	50	Conifer						
								Hardwood	3					
20	RT	3	HT	0	0	50	50	Conifer						ESTIMATED
								Hardwood				1		

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 327 STREAM: MOLALLA RIVER SIDE CHANNEL PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	15.5		MANY SMALL FISH
2	DP	00	23.5	DJ	FISH
4	GL	00	51.5	DJ	FISH
7	GL	00	101.5	AM	ROUGH SKINNED NEWT
10	GL	00	176.5		PLASTIC TUBING IN WATER
11	GL	01	201.5	WL, /TJ	FISH. DUCKS. TJ - SPRING-FED.
12	GL	11	201.5		SPRING-FED TRIB. NO NAME.
13	GL	00	226.5		FISH
14	RI	00	251.5		FISH
15	RI	00	267.5	BC	FOOT BRIDGE OVER CREEK.
16	GL	00	292.5		EGGS IN STREAM (DUCK?)
17	GL	00	312.5	RF	
18	RI	00	335.5	DJ	
22	GL	00	435.5		FISH
24	RI	00	482.5	WL	FISH. DUCKS.
25	GL	00	506.5		FISH



Name: MOLALLA  
 Date: 1/19/2006  
 Scale: 1 inch equals 2000 feet

Location: 10 533500 E 5003545 N  
 Caption: MOLALLA RIVER SIDE CHANNEL RESTORATION SITE -  
 MOLALLA BASIN