

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

STREAM: Molalla River Side Channel (L-327)
BASIN: Molalla River
SURVEY TYPE: Pre-Tx
DATE: July 10, 2006
SURVEY CREW: Annette Garrigues, Jeff Snyder, Kara Anlauf
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: km²
USGS MAPS: Molalla
ECOREGION: Willamette River and Tributaries Gallery Forest

GENERAL DESCRIPTION:

The Molalla River Side Channel habitat survey extended 552 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 light grazing. The average unit gradient was 0.4 percent. Dammed pools (81%) dominated stream habitat. Silt (38%) and cobble (24%) dominated stream substrate. Wood volume was very low at 3.2 m³/100m.

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	0%
Moderate V-shape	0%	Multiple Terraces	100%
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	552	6,357	0
Secondary Channel	0	0	0
Off-Channel Units	59	123	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 6.6	Width: 9.3	11.1 (8.7 - 16.1)	17.5 (11.6 - 23.8)
Depth: 0.52	Height: 0.4	0.9 (0.5 - 1)	1.7 (0.75 - 2.4)

W:D ratio: 23.1

Stream Flow Type: MF

Average Unit Gradient: 0.4%

Water temperature (°C): 19.0 - 19.0

Entrenchment (ACW:FPW ratio): 1.2

Habitat Units/100m (total channel length): 2.8

Habitat Units/100m (primary channel length): 3.1

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	RR	LG
Riparian Vegetation:	D30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	4%	Reach avg: 90%
Undercut Banks:	35%	Range: 78 - 94

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	35	6.3
Volume (m ³):	17	3.2
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE MOLALLA RIVER SIDE CHANNEL PRE-TX (7-L, 327)

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

7/10/2006

REACH 1		T04S-R02E-S37NW					REACH 1					
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
GLIDE	2	53	6.5	0.33	341	0	13	38	25	25	0	0
POOL-BACKWATER	1	17	2.0	0.30	34	0	100	0	0	0	0	0
POOL-DAMMED	2	358	14.0	2.00	5,216	0	78	10	5	8	0	0
POOL-LATERAL SCOUR	4	55	4.7	0.55	288	0	63	17	10	9	0	0
POOL-STRAIGHT SCOUR	1	29	7.0	0.50	202	0	10	35	50	5	0	0
RIFFLE	4	85	3.4	0.19	284	0	3	29	28	41	0	0
STEP/BEAVER DAM	1	2	10.0	0.10	17	0	100	0	0	0	0	0
STEP/COBBLE	2	12	9.8	0.20	98	0	0	5	28	68	0	0
Total:	17	611	6.6	0.52	6,480	0	Avg: 38	19	19	24	0	0

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	3	375	10.0	1.43	5,250	81.02%	0	0.0	
Scour Pools	5	84	5.2	0.54	490	7.56%	0	0.0	
Glides	2	53	6.5	0.33	341	5.26%	0	0.0	
Riffles	4	85	3.4	0.19	284	4.39%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	3	14	9.8	0.17	115	1.77%	0	0.0	
Dry	0	0			0	0.00%	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>
All Pools:	8	13.1	14.5
Pools >=1m deep:	2	3.3	3.6
Complex pools (LWD pieces>=3):	2	3.3	3.6
Pool frequency (channel widths/pool):	8.2		
Residual pool depth (avg):	0.81		

Survey Date 7/10/2006
Report Date: 3/5/2007

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

Summary of Riparian Zone (0-30m) 2 transects

Total hardwoods/1000	213
Total conifers/1000 ft	91
Total conifers >20" dbh/1000 ft	91
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15-30cm	0.0	1.0	0.0	0.5	0.0	0.0	0.0	1.5
30-50cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50-90cm	1.0	2.0	0.0	0.0	0.5	0.0	1.5	2.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	1.0	3.0	0.0	0.5	0.5	0.0	0.5	1.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	51		9		10	
Shrub cover	40		8		0	
Grass/forb cover	50		83		93	

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 (%)	15		1		1	

Summary of Riparian Zone (0-30m) for all reaches 2 transects

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

Total hardwoods/1000	213
Total conifers/1000 ft	91
Total conifers >20" dbh/1000 ft	91
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	0.0	0.0
15-30cm	0.0	1.5
30-50cm	0.0	0.0
50-90cm	1.5	2.0
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1 Reach 1

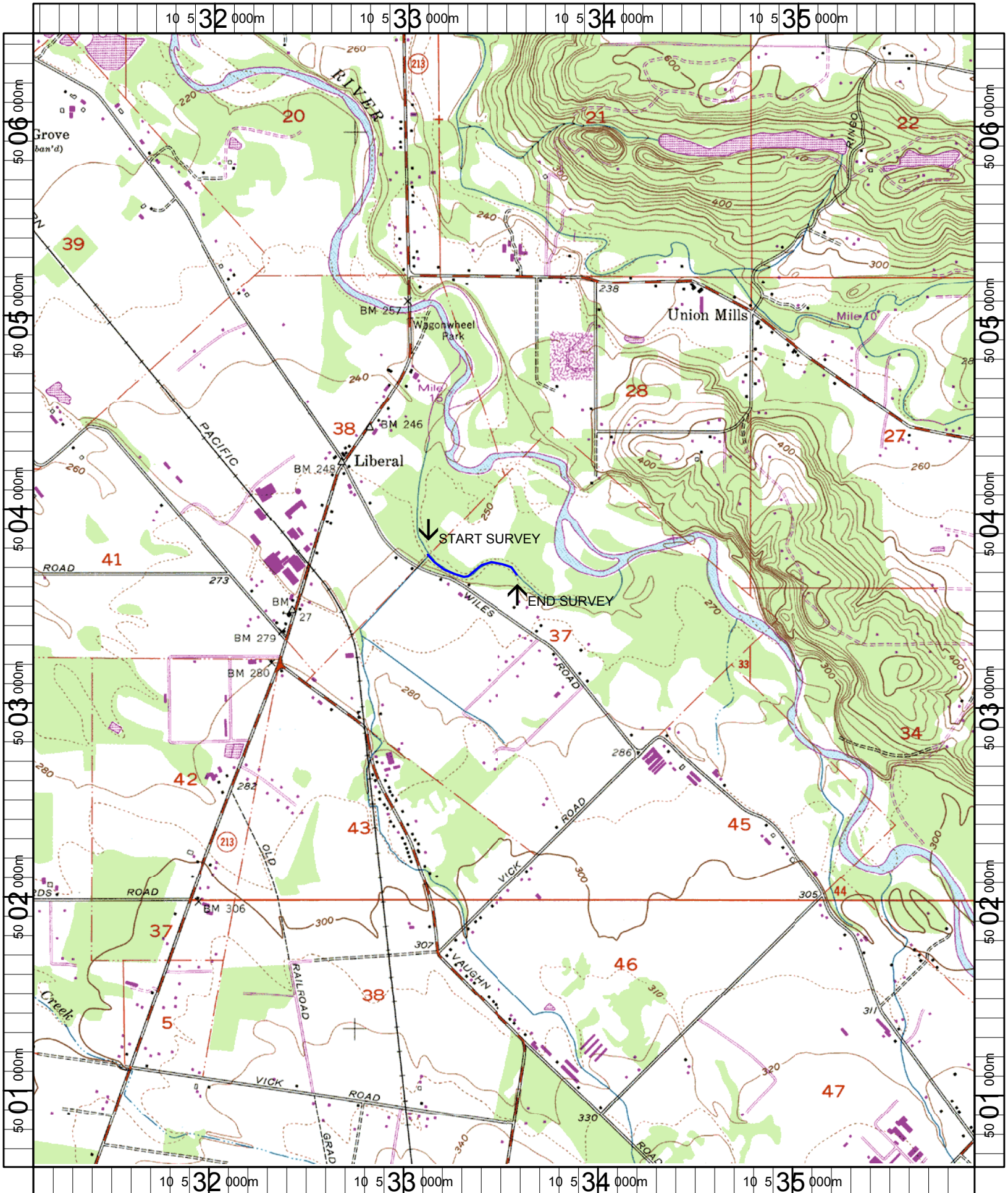
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
6	RT	1	HT	11	80	20	70	Conifer							TRANS
								Hardwood		2		3			
6	LF	3	HT	0	0	0	100	Conifer							
								Hardwood							
6	RT	2	HT	3	15	10	80	Conifer							
								Hardwood		1					
6	RT	3	HT	2	10	0	100	Conifer							
								Hardwood							
6	LF	1	HT	19	80	20	70	Conifer				2			UTM 0533358-5003692-3D
								Hardwood							
6	LF	2	HT	0	0	0	100	Conifer							
								Hardwood							
14	LF	1	HT	15	15	100	0	Conifer							TRANS
								Hardwood							
14	RT	2	HT	0	20	20	50	Conifer							UTM 0533491-5003755-3D
								Hardwood							
14	RT	3	HT	0	30	0	70	Conifer				1			
								Hardwood							
14	RT	1	HT	15	30	20	60	Conifer							TRANS
								Hardwood				1			
14	LF	3	HT	0	0	0	100	Conifer							PASTURE
								Hardwood							
14	LF	2	HT	0	0	0	100	Conifer							PASTURE
								Hardwood							

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 7-L SITE ID: 327 MOLALLA RIVER SIDE CHANNEL PR

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	18		CT,MT,D15 60%, C30 40%	T=19.0C AT 1000 HRS
3	SC	00	32.7		H=0.15M	H=0.15M
4	DP	01	261.6	BV		
9	SC	00	270.1		CT,MT,D30 95%	
11	SP	00	324.3	BC	BC	
13	RI	00	372.4	RF	CT,MT,D15	FRY
14	SD	00	374.1	BD	H=0.18M	
15	DP	00	503.6	BP, BV		
16	LP	00	531		CT,MT,D30	



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