

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

STREAM: Clackamas River Side Channel Upper (L-270)  
BASIN: Clackamas River  
SURVEY TYPE: Post-Tx  
DATE: November 16, 2005  
SURVEY CREW: Tory Fitchett, Brian Bangs  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: km<sup>2</sup>  
USGS MAPS: Damascus  
ECOREGION: Willamette Valley Prairie Terraces

**GENERAL DESCRIPTION:**

The Clackamas River Side Channel habitat survey extended 453 meters. The channel was constrained by terraces in a broad valley floor. Land use for the reach was greenway as it is owned by Metro. The average unit gradient was 0.9 percent. Scour pools (53%) and riffles (21%) dominated stream habitat. Gravel (53%) and cobble (26%) dominated stream substrate. Wood volume was very high at 84.8 m<sup>3</sup>/100m.

**COMMENTS:**

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

The crew noted several habitat structures during the survey.

REACH 1

T02S-R03E-S22NW

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		VWI Range: -	

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	453	2,132	0
Secondary Channel	75	315	1
Off-Channel Units	31	8	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 0</i>	<u>First Terrace</u>	<i>n = 0</i>
Width: 4.3	Width:	( - )		( - )	
Depth: 0.66	Height:	( - )		( - )	

W:D ratio:

Stream Flow Type: MF

Average Unit Gradient: 0.9%

Water temperature (°C): 8.0 - 8.0

Entrenchment (ACW:FPW ratio):

Habitat Units/100m (total channel length): 4.7

Habitat Units/100m (primary channel length): 5.7

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	GN	GN
Riparian Vegetation:	D30	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:		Reach avg: 75%
Undercut Banks:		Range: 58 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	288	63.5
Volume (m <sup>3</sup> ):	384	84.8
Key pieces (>=12m x 0.60m):	13	2.9

OREGON DEPT OF FISH AND WILDLIFE      CLACKAMAS SIDE CHANNEL UPPER      (7-L, 270)

HABITAT INVENTORY      Report Date: 4/26/2006      Survey Date: 11/16/2005

REACH 1		T02S-R03E-S22NW					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	31	0.3	0.00	8	4	40	0	0	40	20	0
DRY CHANNEL	1	75	4.2	0.00	315	3	90	0	0	10	0	0
GLIDE	1	50	3.2	0.60	160	1	3	10	73	15	0	0
POOL-LATERAL SCOUR	12	203	5.3	1.08	1,235	0	6	22	53	20	0	0
POOL-STRAIGHT SCOUR	1	15	4.2	1.00	63	0	0	10	60	30	0	0
RIFFLE	3	118	3.6	0.35	421	0	1	12	68	20	0	0
RIFFLE W/ POCKETS	1	25	4.1	0.30	102	0	0	5	60	35	0	0
STEP/COBBLE	6	43	3.7	0.20	151	0	0	0	59	41	0	0
<b>Total:</b>	26	559	4.3	0.66	2,454	8	<b>Avg:</b> 8	12	53	26	1	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	0	0			0	0.00%	0	0.0	
Scour Pools	13	218	5.2	1.08	1,298	52.87%	0	0.0	
Glides	1	50	3.2	0.60	160	6.52%	1	0.6	
Riffles	4	143	3.7	0.34	523	21.32%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	6	43	3.7	0.20	151	6.16%	0	0.0	
Dry	1	75	4.2	0.00	315	12.82%	3	1.0	
Culverts	1	31	0.3	0.00	8	0.31%	4	51.9	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	13	23.3	28.7
Pools >=1m deep:	10	17.9	22.1
Complex pools (LWD pieces>=3):	13	23.3	28.7
Pool frequency (channel widths/pool):			
Residual pool depth (avg):	0.88		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

CLACKAMAS SIDE CHANNEL UPPER  
GCG: 7-L SITE ID: 270

Survey Date 11/16/2005  
Report Date: 4/26/2006

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	1077
Total conifers/1000 ft	20
Total conifers >20" dbh/1000 ft	20
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	0.3	0.0	4.3	0.0	3.3	0.0	8.0
15-30cm	0.0	1.3	0.0	0.7	0.0	1.3	0.0	3.3
30-50cm	0.0	0.7	0.0	1.0	0.0	2.7	0.0	4.3
50-90cm	0.0	1.0	0.0	1.0	0.3	0.0	0.3	2.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	3.3	0.0	7.0	0.3	7.3	0.1	5.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	7		13		17	
Shrub cover	13		25		42	
Grass/forb cover	84		62		48	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		17		17	
High terrace	67		67		67	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		17	
Riprap	0		0		0	
Surface slope (%)	21		12		5	

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	1077
Total conifers/1000 ft	20
Total conifers >20" dbh/1000 ft	20
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	8.0
15-30cm	0.0	3.3
30-50cm	0.0	4.3
50-90cm	0.3	2.0
>90cm	0.0	0.0

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**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		
2	RT	1	HS	50	5	5	90	Conifer							
								Hardwood	1	1	1				
2	RT	2	RB	0	10	10	30	Conifer							
								Hardwood			1	1			
2	LF	3	HT	0	15	60	40	Conifer							
								Hardwood	3	2					
2	LF	2	HT	0	10	30	70	Conifer							
								Hardwood	3		1	1			
2	LF	1	HT	0	0	0	100	Conifer							
								Hardwood							
2	RT	3	HS	30	15	40	60	Conifer							
								Hardwood	2	1	2				
13	LF	1	HT	0	0	5	95	Conifer							
								Hardwood							
13	RT	3	RB	0	0	10	30	Conifer							
								Hardwood							
13	RT	2	HS	70	10	40	40	Conifer							ALSO ROAD BED
								Hardwood	4						
13	RT	1	HS	75	20	50	40	Conifer							
								Hardwood		2	1				
13	LF	2	HT	0	20	15	85	Conifer							
								Hardwood	2		1				
13	LF	3	HT	0	35	40	60	Conifer					1		
								Hardwood			1				
25	LF	3	HT	0	15	40	60	Conifer							
								Hardwood		1	2				
25	LF	2	HT	0	15	20	80	Conifer							
								Hardwood		1		1			
25	RT	1	HT	0	5	10	90	Conifer							
								Hardwood				3			
25	RT	2	HT	0	10	35	65	Conifer							
								Hardwood	4	1					
25	RT	3	HT	0	20	60	40	Conifer							
								Hardwood	5		3				
25	LF	1	HT	0	10	10	90	Conifer							
								Hardwood		1					

# Comment Summary

## Restoration Monitoring Sites 2005

MONITORING AREA: 7-L      SITE ID: 270      CLACKAMAS SIDE CHANNEL UPPER

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	GL	00	50	HS x 4	5 SALMON CARCASSES	
2	RI	00	96.7	HS x 2	3 SALMON CARCASSES	T = 8 C
3	SC	00	102.8		T = 8 C	
4	LP	00	116.9	HS	19 SALMON CARCASSES	
5	LP	00	129.2	HS	16 SALMON CARCASSES	REDD, 16 SALMON CARCA
7	LP	00	147.7	HS	16 SALMON CARCASSES	16 SALMON CARCASSES
8	LP	01	164.1			11 SALMON CARCASSES
9	DC	02	164.1	HS	DRY ALCOVE OR OLD 02	DRY ALCOVE
10	RI	00	197.2	HS	AL DOESN'T CONNECT Y	3 SALMON CARCASSES
11	LP	01	245.4	HS x 2	SALMON CARCASSES	12 SALMON CARCASSES
12	CC	11	245.4	CC	CULV IS GATED OFF	DRAINS TO LOWER SITE
13	LP	00	268.5	HS x 2		
14	SP	00	283.4	HS		
16	LP	00	302.4	HS		
17	LP	00	315.1	HS		
19	LP	00	336.2	HS		REDD
21	LP	00	355.1	HS		
23	LP	00	378.4	HS		
24	RP	00	403.3	HS		POCKETS UP TO .8 M DEEP
25	LP	00	414.8	HS		
26	RI	00	453.3	HS x 2		