

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

STREAM: Clackamas River Side Channel Lower (L-255)
BASIN: Clackamas River
SURVEY TYPE: Post-Tx
DATE: November 16, 2005
SURVEY CREW: Trevan Cornwell, Paul Jacobsen
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: km²
USGS MAPS: Damascus
ECOREGION: Willamette Valley Prairie Terraces

GENERAL DESCRIPTION:

The Clackamas River Side Channel habitat survey extended 716 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 0.2 percent. Scour pools (84%) dominated stream habitat. Sand (33%), gravel (24%) and cobble (23%) dominated stream substrate. Wood volume was high at 38.2 m³/100m.

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	716	2,541	0
Secondary Channel	21	25	0
Off-Channel Units	0	0	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: 3.3	Width:	(-)		(-)	
Depth: 0.49	Height:	(-)		(-)	

W:D ratio: Entrenchment (ACW:FPW ratio):
Stream Flow Type: MF Habitat Units/100m (total channel length): 6.2
Average Unit Gradient: 0.2% Habitat Units/100m (primary channel length): 6.4
Water temperature (°C): 9.0 - 9.0

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	2%	Reach avg: 60%
Undercut Banks:		Range: 44 - 94

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	204	28.5
Volume (m ³):	273	38.2
Key pieces (>=12m x 0.60m):	10	1.4

OREGON DEPT OF FISH AND WILDLIFE CLACKAMAS SIDE CHANNEL LOWER (7-L, 255)

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 ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
GLIDE	3	51	2.5	0.20	118	0	27	53	15	5	0	0
POOL-LATERAL SCOUR	25	556	3.9	0.72	2,110	4	26	43	15	15	1	0
POOL-STRAIGHT SCOUR	1	9	4.1	0.86	35	0	30	50	10	10	0	0
RIFFLE	7	85	2.6	0.20	203	1	3	14	37	44	3	0
STEP/COBBLE	10	37	2.5	0.16	99	1	4	14	41	38	3	0
Total:	46	737	3.3	0.49	2,566	6	Avg: 18	33	24	23	2	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	0	0			0	0.00%	0	0.0	
Scour Pools	26	564	3.9	0.72	2,145	83.61%	4	0.2	
Glides	3	51	2.5	0.20	118	4.61%	0	0.0	
Riffles	7	85	2.6	0.20	203	7.90%	1	0.5	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	10	37	2.5	0.16	99	3.88%	1	1.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	<u>Total of all Channel Lengths # / Km</u>	<u>Primary Channel Length # / Km</u>
All Pools:	26	35.3	36.3
Pools >=1m deep:	2	2.7	2.8
Complex pools (LWD pieces>=3):	22	29.8	30.7
Pool frequency (channel widths/pool):			
Residual pool depth (avg):	0.51		

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	549
Total conifers/1000 ft	41
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	2.0	0.0	2.7	0.3	0.7	0.3	5.3
15-30cm	0.0	1.0	0.0	0.3	0.3	0.7	0.3	2.0
30-50cm	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.3
50-90cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	4.7	0.0	3.0	0.7	1.3	0.2	3.0

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	36		28		23	
Shrub cover	25		27		34	
Grass/forb cover	74		68		66	

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		83		100	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		0	
Riprap	0		0		0	
Surface slope (%)	0		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	549
Total conifers/1000 ft	41
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	5.3
15-30cm	0.3	2.0
30-50cm	0.0	1.3
50-90cm	0.0	0.3
>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		
12	LF	1	HT	0	0	30	70	Conifer							
								Hardwood							
12	RT	1	HT	0	50	20	80	Conifer							
								Hardwood	3	2					
12	LF	2	HT	0	15	40	60	Conifer							
								Hardwood	3						
12	LF	3	HT	0	5	85	15	Conifer							
								Hardwood							
12	RT	3	HT	0	40	10	90	Conifer							ALSO ROAD BED
								Hardwood	1	1					
12	RT	2	HT	0	45	10	90	Conifer							
								Hardwood	4	1					
25	RT	2	HT	0	10	0	90	Conifer							ALSO ROAD BED
								Hardwood							
25	LF	1	HT	0	30	5	95	Conifer							
								Hardwood	2						
25	RT	3	HT	0	0	0	100	Conifer							
								Hardwood							
25	LF	2	HT	0	60	5	95	Conifer							
								Hardwood							
25	LF	3	HT	0	50	90	10	Conifer							
								Hardwood							
25	RT	1	HT	0	90	0	95	Conifer							COTTONWOOD, ALSO FP
								Hardwood	1	4	1				
38	RT	2	HT	0	25	100	0	Conifer							
								Hardwood							
38	LF	3	HT	0	10	0	100	Conifer							
								Hardwood							
38	LF	2	RB	0	15	5	75	Conifer							
								Hardwood	1						
38	LF	1	HT	0	15	5	95	Conifer							
								Hardwood	1						
38	RT	1	HT	0	30	90	10	Conifer							
								Hardwood							
38	RT	3	HT	0	30	20	80	Conifer	1						
								Hardwood	1						

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 7-L SITE ID: 255 CLACKAMAS SIDE CHANNEL LOWE

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	01	59	BV, HS x 3	CARCASSES WITH CUT T	PLACED SALMON CARCASS
3	GL	00	75	HS		PILE OF FISH TAILS
5	LP	00	106.6	HS x 2	LANDSCAPE CLOTH	LANDSCAPE CLOTH
7	LP	00	132.2	HS x 2		U 7 - 12 = LOTS OF CARCAS
8	RI	00	155.4		PLANTED CEDARS, LAND	
9	LP	00	183.6	HS x 2	STILL MANY SALMON CA	
10	RI	00	196.6	HS		
11	LP	00	220	HS x 2		
12	LP	00	266.1	HS x 3		SM SLUMP LT, VERY SOFT B
13	LP	00	280.8	HS		
14	SC	00	284.8	HS		
15	LP	00	300.5	HS		LANDSCAPE CLOTH SLIPPIN
16	SC	00	307.2	HS		
17	LP	00	327.9	HS x 2		CARCASSES
18	RI	00	337.1	HS		CARCASSES
19	LP	00	353.9	HS		
20	RI	00	362.4	HS		
21	LP	00	370.7	HS		
22	RI	00	378.9	HS		
23	LP	00	390.3	HS		
24	LP	00	401.6	HS		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 7-L SITE ID: 255 CLACKAMAS SIDE CHANNEL LOWE

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
25	RI	00	411.2	HS		
26	LP	00	421.6	HS		
28	SP	00	435.9	HS		
29	RI	00	448.9	HS		
30	LP	00	457.1	HS		
31	LP	00	484.4	HS x 2		
33	LP	00	496.9	HS		
34	SC	00	498.1		H = .1 M	
35	LP	00	529.1	RF, HS	ROAD CROSSING	
36	LP	00	547.4	HS		
37	LP	00	588.9	HS x 2		
38	SC	00	592.9		H = .1 M	
39	LP	00	604.4	HS		FRY, SOFT BOTTOM
40	LP	00	622.4	HS		VERY SOFT BOTTOM, DACE
42	LP	00	640.4	HS		
43	LP	00	675.9	HS x 2		FRY
44	SC	00	677.7		H = .1 M	
45	GL	00	691.3	HS		
46	LP	00	716		ENDS AT PIPES UNDER R	FRY, T=9 C, END AT INLET PI