

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

STREAM: Abernethy Creek (L-362)
BASIN: Willamette River
SURVEY TYPE: Pre-Tx
DATE: March 15, 2007
SURVEY CREW: Matt Strickland, Charlie Stein
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 92.7 km²
USGS MAPS: Oregon City
ECOREGION: Willamette Valley Prairie Terraces

GENERAL DESCRIPTION:

The Abernethy Creek habitat survey extended 535 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 16.8 (range: 4.0-20.0). Land use for the reach was industrial and rural residential. The average unit gradient was 0.1 percent. Scour pools (64%) and glides (36%) dominated stream habitat. Silt (48%) and sand (25%) dominated stream substrate. Wood volume was very low at 1.3 m³/100m.

COMMENTS:

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

REACH 1

T02S-R02E-S44NW

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	16.8	VWI Range:	4 - 20

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	Braided Channel	0%
Alt. Terrace/Hill	100%		
Landuse	0%		

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary Channel	535	4,471	0
Secondary Channel	0	0	0
Off-Channel Units	9	8	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 7.7	Width: 9.6	11.3 (10 - 12.4)	15.8 (11.8 - 22.7)
Depth: 1.61	Height: 1.4	2.7 (2.6 - 2.8)	3.8 (3.2 - 5.8)

W:D ratio: 7.1
 Stream Flow Type: HF
 Average Unit Gradient: 0.1%
 Water temperature (°C): 10.0 - 10.0

Entrenchment (ACW:FPW ratio): 1.2
 Habitat Units/100m (total channel length): 3.1
 Habitat Units/100m (primary channel length): 3.2

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	IN	RR
Riparian Vegetation:	D15	S

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):	20	3.7
Volume (m ³):	7	1.3
Key pieces (>=12m x 0.60m):	0	0.0

HABITAT INVENTORY

Report Date: 4/25/2007

Survey Date:

3/15/2007

REACH 1		T02S-R02E-S44NW					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	9	230	6.5	1.22	1,608	0	42	30	15	9	4	0
POOL-LATERAL SCOUR	7	313	9.0	2.30	2,863	0	54	21	15	6	4	0
STEP/LOG	1	1	8.8	0.35	7	0	55	20	15	5	5	0
Total:	17	544	7.7	1.61	4,479	0	Avg: 48	25	15	8	4	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	7	313	9.0	2.30	2,863	63.92%	0	0.0	
Glides	9	230	6.5	1.22	1,608	35.91%	0	0.0	
Riffles	0	0			0	0.00%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	1	1	8.8	0.35	7	0.17%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

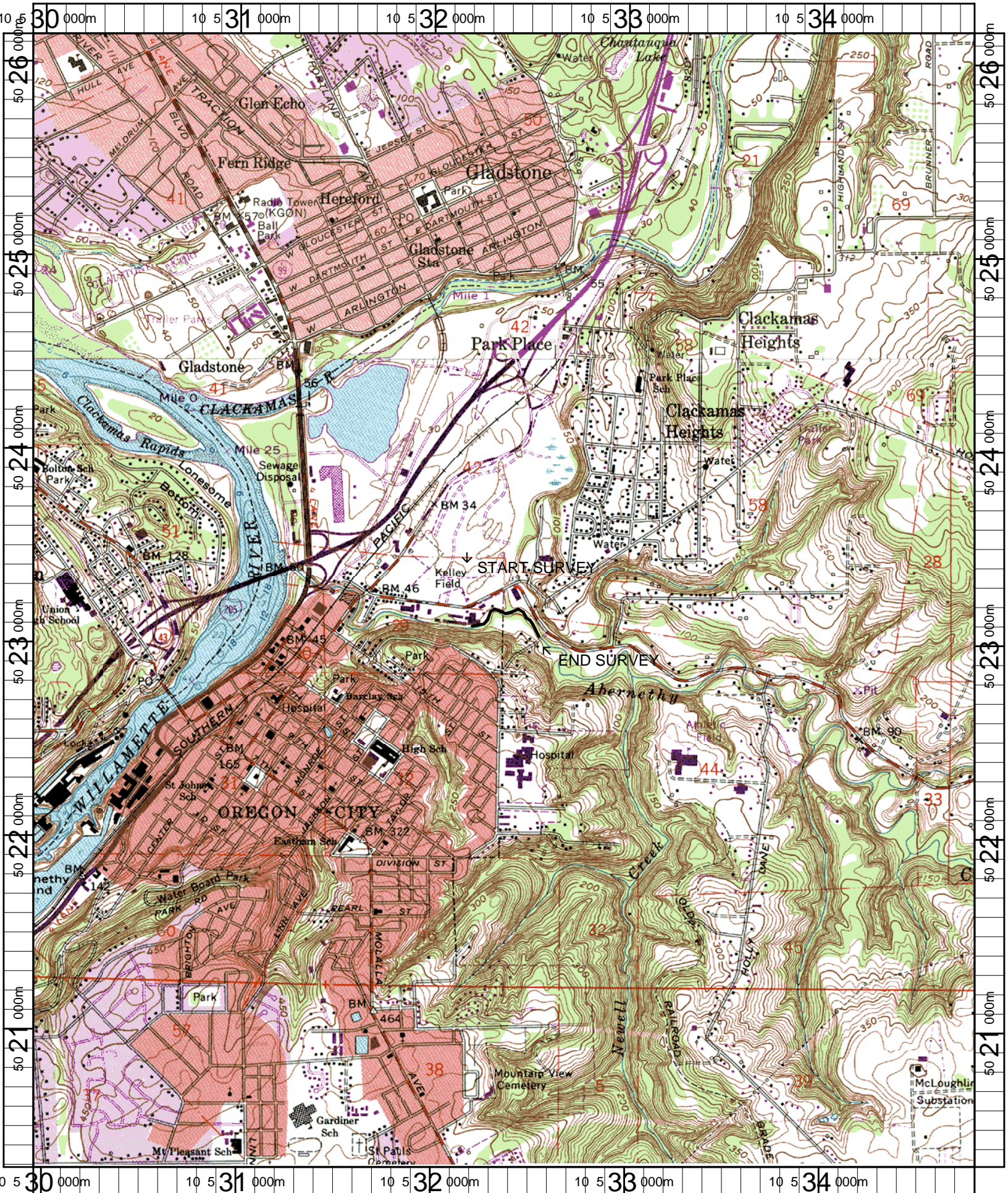
POOL SUMMARY			
	<u>Total</u>	<u>Total of all Channel Lengths # / Km</u>	<u>Primary Channel Length # / Km</u>
All Pools:	7	12.9	13.1
Pools >=1m deep:	7	12.9	13.1
Complex pools (LWD pieces>=3):	1	1.8	1.9
Pool frequency (channel widths/pool):	8.1		
Residual pool depth (avg):	1.31		

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: 7-L SITE ID: 362 ABERNETHY CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
1	GL	00	25	WL	BOULDER/COBBLE SUBSTRATE
8	LP	00	237.35	CS/	
9	LP	01	303.05	TJ/	
10	GL	11	303.05		ACW=1.8, TEMPERATURE =11.0
12	LP	00	385.05	CS/, CE/	PTC=1.3
14	GL	00	435.55	WL	NUTRIA
17	LP	00	534.65	/SS BC	ANCHOR WAY BRIDGE CROSSING.



Name: OREGON CITY
 Date: 4/25/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0532366 E 5023226 N
 Caption: ABERNETHY CREEK RESTORATION SITE - L
 COLUMBIA/WILLAMETTE BASIN