

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

STREAM: Clear Creek #5 (L-328)  
BASIN: Clackamas River  
SURVEY TYPE: Pre-Tx  
DATE: July 2, 2007  
SURVEY CREW: Paul Dunnette, April Lewis  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 99.1 km<sup>2</sup>  
USGS MAPS: Redland  
ECOREGION: Willamette Valley Plains

**GENERAL DESCRIPTION:**

The Clear Creek habitat survey extended 914 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.2 (range: 3.0-10.0). Land use for the reach was second growth (15-30 cm dbh) trees and timber harvest. The average unit gradient was 1.9 percent. Riffles (60%) and rapids (26%) dominated stream habitat. Cobble (34%) and bedrock (31%) dominated stream substrate. Wood volume was very low at 4.1 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T03S-R03E-S36NE

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	5.2	VWI Range:	3 - 10

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	914	8,823	0
Secondary Channel	0	0	0
Off-Channel Units	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 5</i>	<u>First Terrace</u>	<i>n = 5</i>
Width: 9.8	Width: 12.9	14.8	( 10.2 - 18 )	24.0	( 20 - 31 )
Depth: 0.45	Height: 0.9	1.7	( 1.6 - 1.8 )	4.3	( 2 - 6 )

W:D ratio: 15.1  
 Stream Flow Type: MF  
 Average Unit Gradient: 1.9%  
 Water temperature (°C): 16.0 - 16.0

Entrenchment (ACW:FPW ratio): 1.2  
 Habitat Units/100m (total channel length): 2.4  
 Habitat Units/100m (primary channel length): 2.4

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	TH
Riparian Vegetation:	D3	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	11%	Reach avg: 56%
Undercut Banks:	6%	Range: 36 - 72

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	60	6.6
Volume (m <sup>3</sup> ):	37	4.1
Key pieces (>=12m x 0.60m):	2	0.2

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/2/2007

REACH 1		T03S-R03E-S36NE					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
GLIDE	1	50	9.0	0.40	450	8	0	5	10	75	5	5
POOL-STRAIGHT SCOUR	2	80	9.0	1.50	700	48	2	7	5	7	10	69
RAPID/BOULDERS	5	231	9.8	0.30	2,298	193	0	6	14	38	36	6
RIFFLE	11	495	9.4	0.40	4,731	202	0	4	14	38	15	29
RIFFLE W/ POCKETS	1	50	11.0	0.40	550	26	0	5	15	50	30	0
STEP/BEDROCK	1	5	10.0	0.10	50	0	0	0	0	0	0	100
STEP/STRUCTURE	1	3	16.0	0.10	45	8	0	0	0	0	0	100
<b>Total:</b>	<b>22</b>	<b>914</b>	<b>9.8</b>	<b>0.45</b>	<b>8,823</b>	<b>485</b>	<b>Avg: 0</b>	<b>4</b>	<b>12</b>	<b>34</b>	<b>18</b>	<b>31</b>

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	2	80	9.0	1.50	700	7.93%	48	6.9	
Glides	1	50	9.0	0.40	450	5.10%	8	1.8	
Riffles	12	545	9.5	0.40	5,281	59.85%	228	4.3	
Rapids	5	231	9.8	0.30	2,298	26.04%	193	8.4	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	2	8	13.0	0.10	95	1.07%	8	8.4	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	2	2.2	2.2
Pools >=1m deep:	2	2.2	2.2
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	35.4		
Residual pool depth (avg):	1.25		

**OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY**

**CLEAR CREEK #5 PRE-TX  
GCG: 7-L SITE ID: 328**

**Survey Date 7/2/2007  
Report Date: 11/7/2007**

**RIPARIAN ZONE  
VEGETATION SUMMARY**

**REACH 1**

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

Total hardwoods/1000	1300
Total conifers/1000 ft	508
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	0.7	5.7	0.7	5.3	1.0	2.0	2.3
15-30cm	0.0	2.3	1.7	3.3	4.3	1.3	6.0	7.0
30-50cm	0.0	0.3	0.0	0.7	0.0	0.3	0.0	1.3
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.7	8.3	2.3	9.3	5.3	3.7	2.8	7.1

**Canopy closure and ground cover**

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	56	73	58
Shrub cover	13	24	29
Grass/forb cover	78	65	66

**Predominant landform in each zone**

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	83	67	50
High terrace	17	33	50
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 (%)	47	22	23

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	1300
Total conifers/1000 ft	508
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	2.3	13.0
15-30cm	6.0	7.0
30-50cm	0.0	1.3
50-90cm	0.0	0.0
>90cm	0.0	0.0

**RIPARIAN ZONE VEGETATION**

Reach 1

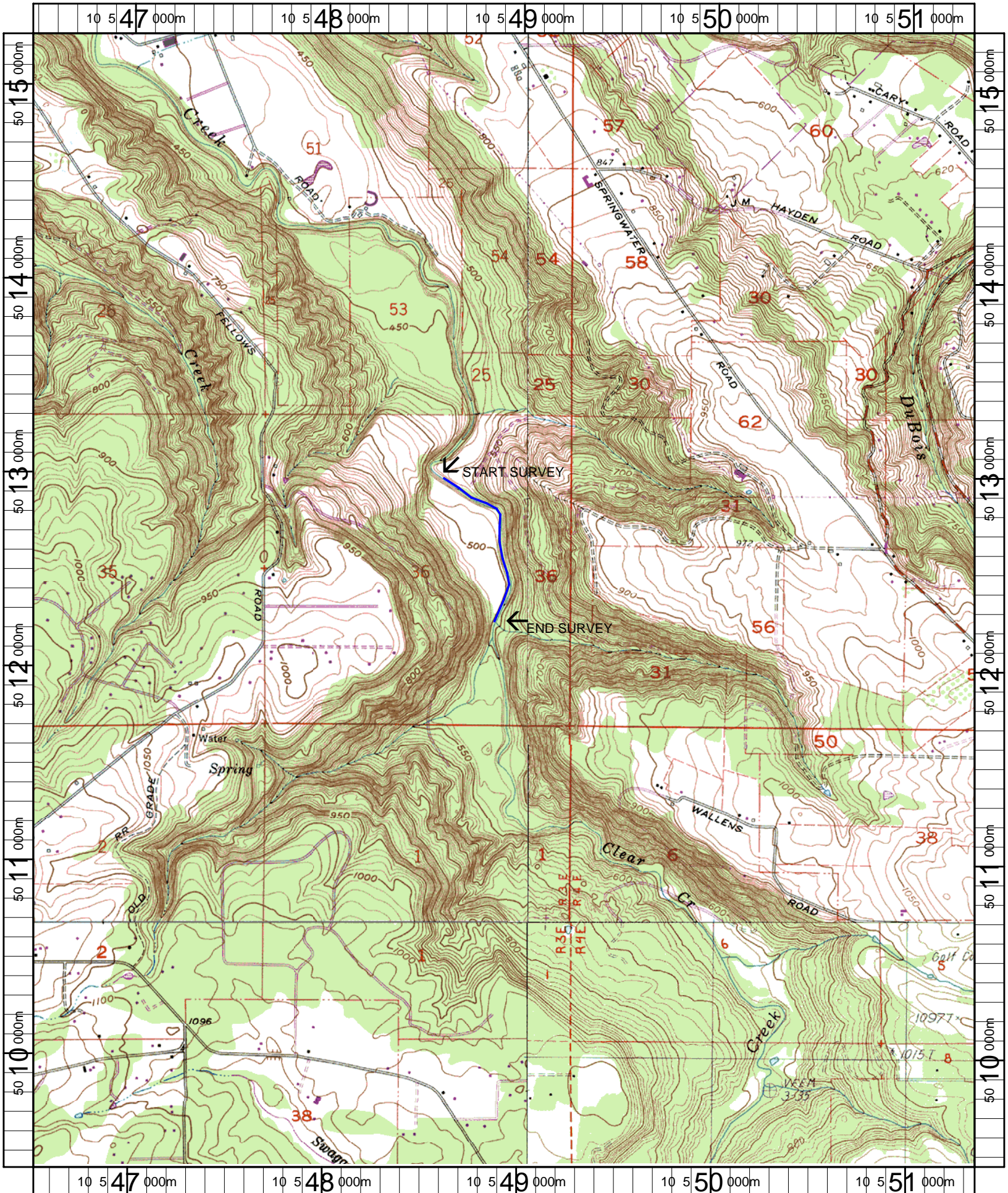
Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
7	LT	1	HS	40	60	10	80	Conifer							
								Hardwood	2	1					
7	LT	2	HS	40	65	20	80	Conifer	1						
								Hardwood	2	3					
7	LT	3	HS	40	65	60	40	Conifer	1	1					
								Hardwood	2	3	1				
7	RT	1	HT	60	50	20	75	Conifer	1						STEEP TRANSITION TO TERRACE
								Hardwood	2						
7	RT	2	HT	5	70	45	55	Conifer	1	1					
								Hardwood	2	3					
7	RT	3	HT	5	55	60	40	Conifer	2	1					
								Hardwood		1					
12	LT	1	HS	40	70	10	80	Conifer							
								Hardwood	2	1	1				
12	LT	2	HS	40	70	5	95	Conifer							
								Hardwood	5	2	2				
12	LT	3	HS	80	0	40	60	Conifer							ZONE 3 LEFT SIDE, CLEARCUT.
								Hardwood							
12	RT	1	HS	60	70	5	80	Conifer							
								Hardwood	1	3					
12	RT	2	HT	0	85	0	60	Conifer			3				ATV TRAIL, ZONE 2.
								Hardwood							
12	RT	3	HT	0	85	0	85	Conifer			3				
								Hardwood							
18	LT	1	HS	40	65	30	65	Conifer							
								Hardwood	8	1					
18	LT	2	HS	28	75	10	80	Conifer							
								Hardwood	7	2					
18	LT	3	HS	15	60	10	80	Conifer			4				
								Hardwood	4						
18	RT	1	HS	40	20	5	85	Conifer	1						
								Hardwood	2	1					
18	RT	2	HS	20	70	65	20	Conifer			1				
								Hardwood							
18	RT	3	HT	0	80	5	90	Conifer			4				ATV TRAIL IN ZONE 2
								Hardwood							

**COMMENT SUMMARY**

MONITORING AREA: 7-L      SITE ID: 328      STREAM: CLEAR CREEK #5 PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
3	SS	00	89.8		CONCRETE RIVER CROSSING
12	RB	00	490.8		FISH
15	RI	00	621.8	WL	DEER TRACKS
16	RB	00	671.8	WL	DEER TRACKS
22	RI	01	913.8		END AT TRIB



Name: REDLAND  
 Date: 5/9/2007  
 Scale: 1 inch equals 2000 feet

Location: 10 548914 E 5012357 N  
 Caption: CLEAR CREEK #5 RESTORATION SITE - CLACKAMAS BASIN