

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

STREAM: Clear Creek #6 (L-329)  
BASIN: Clackamas River  
SURVEY TYPE: Pre-Tx  
DATE: 7/12/2006  
SURVEY CREW: Nathan Wilson, Audrey Addison  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 185 km<sup>2</sup>  
USGS MAPS: Redland  
ECOREGION: Willamette Valley Plains

**GENERAL DESCRIPTION:**

The Clear Creek #6 habitat survey extended 513 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 9 (range: 7-10). Land use for the reach was rural residential and large timber (15-30 cm dbh). The average unit gradient was 0.8 percent. Scour pools (66%) and riffles (32%) dominated stream habitat. Cobble (32%), bedrock (23%), fines (22%) and gravel (20%) dominated stream substrate. Wood volume was low at 19.2 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

T03S-R03E-S48NW

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	9.0	VWI Range:	7 - 10

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	513	6,827	0
Secondary Channel	0	0	0
Off-Channel Units	9	32	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 12.4	Width: 18.0	20.4 ( 18.3 - 22.4 )	27.5 ( 20.8 - 40.7 )
Depth: 0.62	Height: 0.5	1.0 ( 0.8 - 1.2 )	3.1 ( 2 - 5 )

W:D ratio: 36.4  
 Stream Flow Type: MF  
 Average Unit Gradient: 0.8%  
 Water temperature (°C): 16.0 - 16.0

Entrenchment (ACW:FPW ratio): 1.1  
 Habitat Units/100m (total channel length): 2.5  
 Habitat Units/100m (primary channel length): 2.5

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	RR	LT
Riparian Vegetation:	C30	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	2%	Reach avg: 46%
Undercut Banks:		Range: 28 - 75

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	31	6.0
Volume (m <sup>3</sup> ):	24	4.7
Key pieces (>=12m x 0.60m):	1	0.2

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

7/12/2006

REACH 1		T03S-R03E-S48NW					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
POOL-ISOLATED	1	9	3.5	0.50	32	0	22	11	22	22	1	22
POOL-LATERAL SCOUR	5	336	13.7	1.20	4,533	11	10	25	17	18	3	27
RAPID/BEDROCK	1	18	6.3	0.25	116	2	1	1	10	15	0	72
RIFFLE	6	159	13.9	0.21	2,178	7	2	12	22	48	3	13
<b>Total:</b>	13	523	12.4	0.62	6,860	20	<b>Avg:</b> 7	16	20	32	2	23

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	1	9	3.5	0.50	32	0.47%	0	0.0	
Scour Pools	5	336	13.7	1.20	4,533	66.09%	11	0.2	
Glides	0	0			0	0.00%	0	0.0	
Riffles	6	159	13.9	0.21	2,178	31.75%	7	0.3	
Rapids	1	18	6.3	0.25	116	1.69%	2	1.7	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	0	0			0	0.00%	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 <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	6	11.5	11.7
Pools >=1m deep:	4	7.7	7.8
Complex pools (LWD pieces>=3):	3	5.7	5.8
Pool frequency (channel widths/pool):	4.8		
Residual pool depth (avg):	1.02		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

CLEAR CREEK #6 PRE-TX  
GCG: 7-L SITE ID: 329

Survey Date 7/12/2006  
Report Date: 3/5/2007

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	305
Total conifers/1000 ft	508
Total conifers >20" dbh/1000 ft	163
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	2.0	3.0	1.3	0.7	0.0	0.0	3.3	3.7
15-30cm	0.7	0.0	0.0	0.0	0.3	0.0	1.0	0.0
30-50cm	0.3	1.3	0.7	0.0	0.3	0.0	1.3	1.3
50-90cm	2.3	0.0	0.0	0.0	0.3	0.0	2.7	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	5.3	4.3	2.0	0.7	1.0	0.0	2.8	1.7

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	53		23		9	
Shrub cover	17		11		7	
Grass/forb cover	67		79		91	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		0		17	
High terrace	100		100		83	
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 (%)	3		1		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	305
Total conifers/1000 ft	508
Total conifers >20" dbh/1000 ft	163
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	3.3	3.7
15-30cm	1.0	0.0
30-50cm	1.3	1.3
50-90cm	2.7	0.0
>90cm	0.0	0.0

**RIPARIAN ZONE VEGETATION**

Reach 1

Reach 1

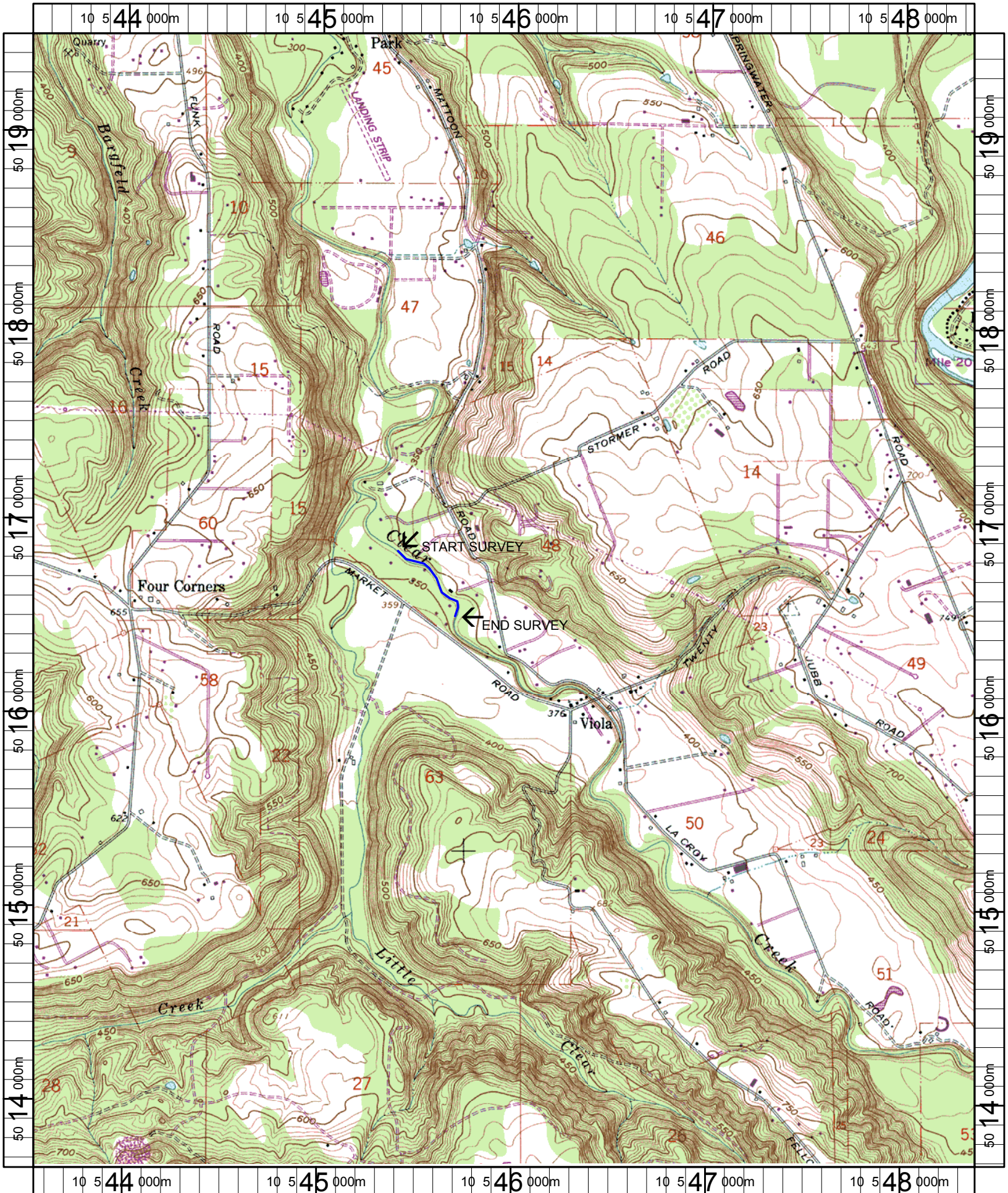
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
2	LF	3	HT	0	0	0	100	Conifer		1					UTM 0545522-5016796-3D
								Hardwood							
2	LF	2	HT	0	100	10	35	Conifer	2		2				60% DUFF
								Hardwood	2						
2	LF	1	HT	0	100	10	30	Conifer	4		1	3			70% DUFF
								Hardwood	4						
2	RT	2	HT	5	0	0	100	Conifer							
								Hardwood							
2	RT	3	HS	0	0	0	100	Conifer							
								Hardwood							
2	RT	1	HT	18	20	5	100	Conifer				3			NEW HOUSE BEING BUILT
								Hardwood							
6	RT	2	HT	0	40	40	50	Conifer	2						
								Hardwood							
6	LF	3	HT	0	0	0	100	Conifer							
								Hardwood							
6	LF	2	HT	0	0	0	100	Conifer							UTM 0545604-5016700-3D
								Hardwood							
6	RT	1	HT	0	85	30	40	Conifer				1			
								Hardwood	1		1				
6	LF	1	HT	0	5	0	100	Conifer							HOUSE & MOWED GRASS TO
								Hardwood			3				
6	RT	3	HT	0	40	40	50	Conifer							
								Hardwood							
9	LF	1	HT	0	95	5	80	Conifer	2	2					HOUSE & YARD JUST OFF RIVER
								Hardwood	4						
9	LF	2	HT	0	0	15	90	Conifer							
								Hardwood							
9	LF	3	HT	0	0	0	100	Conifer							
								Hardwood							
9	RT	1	HT	0	10	50	50	Conifer							MOWED YARD
								Hardwood							
9	RT	2	HT	0	0	0	100	Conifer							
								Hardwood							
9	RT	3	HT	0	15	0	95	Conifer			1	1			
								Hardwood							

# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: 7-L      SITE ID: 329      CLEAR CREEK #6 PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	76		CT-CT,D30/S,RR/LT,MF, T=15	LOTS OF SNAILS
2	LP	00	129	CF	CT-CT,C30/G,RR/LT,MF	CLAY/BEDROCK BANKS
5	LP	00	238.1		PIPE CROSSING	LOW PVC PIPE
6	RI	00	258.1		SMALL FISH, CT-CT,C30/G,R	
8	LP	00	334.4			20+ LANDSCAPE BLDRS A
9	RI	00	381.4		CT-CT,C30/G,RR/LT,MF	20+ LANDSCAPE BLDRS A
12	RI	01	513.3	WL		MERGANSER WITH 20 CHI
13	IP	10	513.3		CT-CT,C30/G,RR/LT,MF	



Name: REDLAND  
 Date: 1/19/2006  
 Scale: 1 inch equals 2000 feet

Location: 10 545944 E 5016593 N  
 Caption: CLEAR CREEK #6 RESTORATION SITE - CLACKAMAS BASIN