

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

STREAM: Clear Creek #1 (L-230)  
BASIN: Clackamas River  
SURVEY TYPE: Post-Tx  
DATE: 7/17/2006  
SURVEY CREW: Annette Garrigues, Jeff Snyder  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 185 km<sup>2</sup>  
USGS MAPS: Estacada, Elwood  
ECOREGION: Willamette Valley Plains

**GENERAL DESCRIPTION:**

The Clear Creek #1 habitat survey extended 1073 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 5.5 (range: 3.75-7.88). Land uses for the reach were large timber (30-50 cm dbh) and second growth timber (15-30 cm dbh). The average unit gradient was 0.9 percent. Riffles (60%) and scour pools (33%) dominated stream habitat. Cobble (30%) and gravel (28%) dominated stream substrate. Wood volume was low at 7.6 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.

The crew observed many unknown fish and two red legged frogs within the surveyed reach.

REACH 1

T04S-R04E-S06SW

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	5.5	VWI Range:	3.75 - 7.88

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	1,073	12,979	0
Secondary Channel	0	0	0
Off-Channel Units	18	23	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 10.9	Width: 16.2	17.8 ( 13.6 - 23.4 )	19.9 ( 14.8 - 26.2 )
Depth: 0.49	Height: 0.6	1.2 ( 1.1 - 1.4 )	1.8 ( 1.65 - 2.1 )

W:D ratio: 26.3  
 Stream Flow Type: MF  
 Average Unit Gradient: 0.9%  
 Water temperature (°C): 14.0 - 14.0

Entrenchment (ACW:FPW ratio): 1.1  
 Habitat Units/100m (total channel length): 2.9  
 Habitat Units/100m (primary channel length): 3.0

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LT	ST
Riparian Vegetation:	M30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	22%	Reach avg: 84%
Undercut Banks:	3%	Range: 64 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	55	5.1
Volume (m <sup>3</sup> ):	81	7.6
Key pieces (>=12m x 0.60m):	9	0.8

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

7/17/2006

REACH 1		T04S-R04E-S06SW					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	2	100	13.0	0.40	1,303	4	0	9	28	40	22	0
POOL-BACKWATER	1	7	1.9	0.10	14	0	30	40	30	0	0	0
POOL-LATERAL SCOUR	8	323	11.6	1.06	3,760	5	13	24	22	17	3	23
RIFFLE	16	504	10.6	0.29	5,744	409	0	11	34	35	15	5
RIFFLE W/ POCKETS	3	145	14.5	0.35	2,093	275	0	12	13	27	48	0
STEP/COBBLE	2	12	7.8	0.23	88	0	0	5	30	45	0	20
<b>Total:</b>	<b>32</b>	<b>1,091</b>	<b>10.9</b>	<b>0.49</b>	<b>13,001</b>	<b>693</b>	<b>Avg: 4</b>	<b>15</b>	<b>28</b>	<b>30</b>	<b>14</b>	<b>9</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	1	7	1.9	0.10	14	0.11%	0	0.0
Scour Pools	8	323	11.6	1.06	3,760	28.92%	5	0.1
Glides	2	100	13.0	0.40	1,303	10.02%	4	0.3
Riffles	19	649	11.2	0.30	7,837	60.28%	684	8.7
Rapids	0	0			0	0.00%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	2	12	7.8	0.23	88	0.68%	0	0.0
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:	9	8.2	8.4
Pools >=1m deep:	6	5.5	5.6
Complex pools (LWD pieces>=3):	5	4.6	4.7
Pool frequency (channel widths/pool):	7.5		
Residual pool depth (avg):	0.94		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

CLEAR CREEK #1 POST-TX  
GCG: 7-L SITE ID: 230

Survey Date 7/17/2006  
Report Date: 3/5/2007

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	203
Total conifers/1000 ft	528
Total conifers >20" dbh/1000 ft	142
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	0.0	0.7	0.3	0.3	0.0	1.7	0.3
15-30cm	0.7	0.7	1.0	0.3	1.0	0.3	2.7	1.3
30-50cm	0.7	0.0	0.7	0.7	0.7	0.3	2.0	1.0
50-90cm	0.3	0.7	1.7	0.0	0.3	0.0	2.3	0.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	2.3	1.3	4.0	1.3	2.3	0.7	2.9	1.1

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	77	83	67
Shrub cover	26	33	18
Grass/forb cover	64	36	52

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	0	17	33
High terrace	100	83	67
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 (%)	46	15	39

**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	203
Total conifers/1000 ft	528
Total conifers >20" dbh/1000 ft	142
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	1.7	0.3
15-30cm	2.7	1.3
30-50cm	2.0	1.0
50-90cm	2.3	0.7
>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		
9	LF	3	HT	72	75	30	60	Conifer							TRANS
								Hardwood							
9	LF	2	HT	3	75	60	50	Conifer							
								Hardwood							
9	LF	1	HT	14	30	10	70	Conifer							UTM 0549876-5010726-3D
								Hardwood		1					
9	RT	2	HT	11	80	0	40	Conifer			1				RECENTLY LOGGED
								Hardwood							
9	RT	1	HT	54	80	20	60	Conifer	1						TRANS
								Hardwood		1		1			
9	RT	3	HT	2	80	0	50	Conifer	1	3	1				
								Hardwood							
14	RT	2	HT	9	80	0	40	Conifer		2	2	1			HT/HS
								Hardwood							
14	RT	3	HS	3	0	10	50	Conifer							RECENT LOGGING
								Hardwood							
14	RT	1	HT	63	95	10	60	Conifer	1	2	2	1			TRANS
								Hardwood							
14	LF	3	HT	43	80	0	60	Conifer			1	1			TRANS
								Hardwood		1					
14	LF	2	HT	9	90	0	75	Conifer	2			3			
								Hardwood							
14	LF	1	HT	21	80	10	80	Conifer							UTM 0550037-5010517-3D
								Hardwood							
21	RT	3	HS	72	90	60	10	Conifer							
								Hardwood			1				
21	LF	2	HT	0	80	60	4	Conifer							
								Hardwood	1	1					
21	LF	3	HT	44	75	10	80	Conifer							
								Hardwood							
21	RT	1	HT	68	90	40	40	Conifer							
								Hardwood				1			
21	RT	2	HS	60	90	80	5	Conifer					1		
								Hardwood			2				
21	LF	1	HT	55	85	65	75	Conifer							TRANS
								Hardwood							

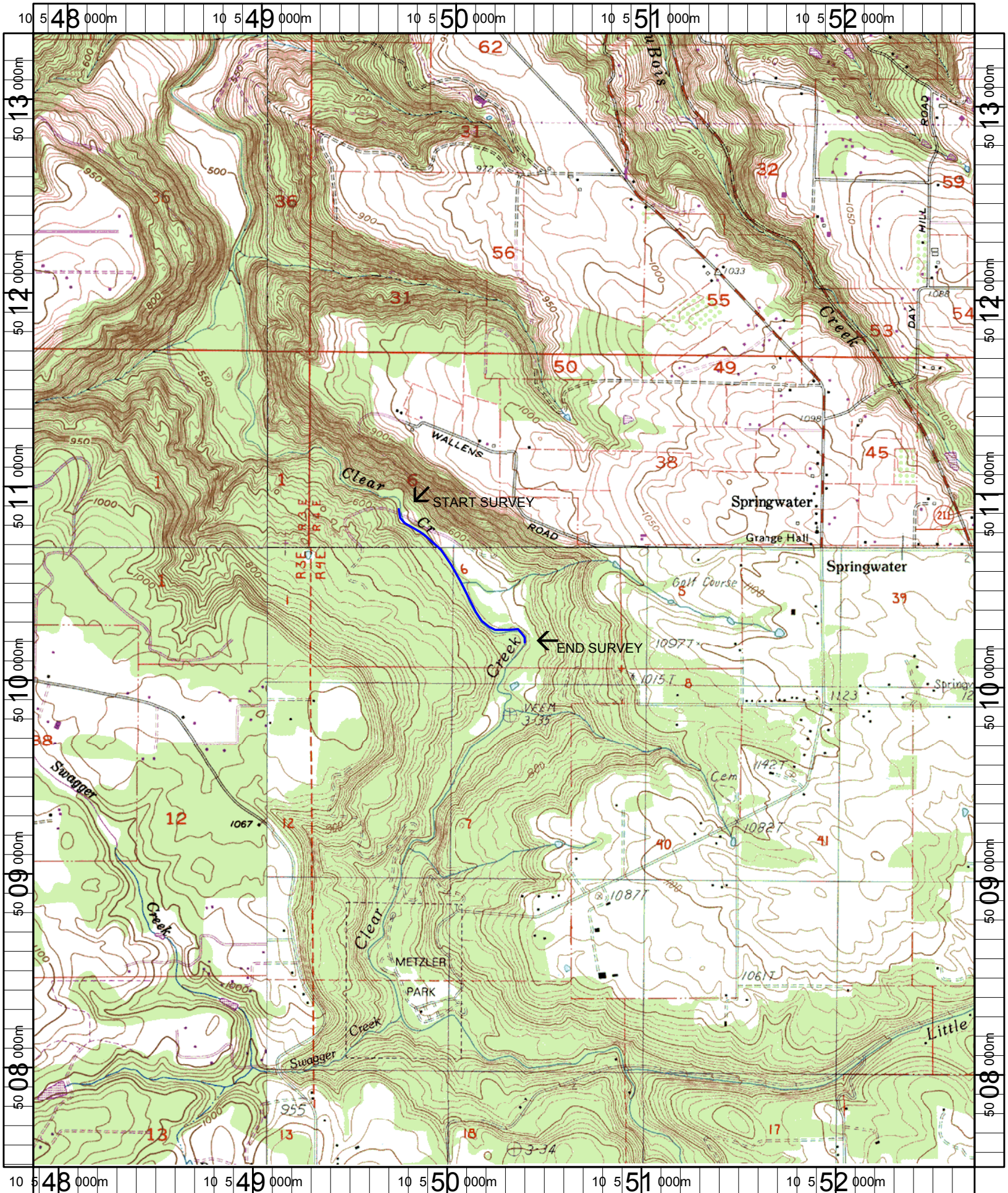
# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: 7-L      SITE ID: 230      CLEAR CREEK #1 POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	SC	00	3.5		LOGS & DEBRIS AT SIDE OF	T=14.0C AT 1044 HRS
2	LP	00	29.6	BC	BC	FISH
3	RI	00	44.3	/SS	/SS	
4	LP	00	94.4			FISH
6	LP	00	185.8			FISH
7	RI	00	220.9	WL		RED-LEGGED FROG, FISH
8	GL	00	271			FISH
10	LP	00	386.3			FISH
11	RI	00	436.2			FISH
15	RI	11	572.9	TJ/		
16	LP	00	603			UTM 0550060-0510485-3D
21	RI	00	803.8	DJ		
23	LP	00	861.5	HS, DJ		FISH
24	RI	00	875.9	DJ		
27	LP	01	953.7	DJ		FISH
28	BW	10	953.7	WL		RED-LEGGED FROG
31	SC	00	1023.3		SS/	
32	LP	00	1073.2	SS/		END SURVEY





Name: ELWOOD  
 Date: 6/9/2005  
 Scale: 1 inch equals 2000 feet

Location: 10 550268 E 5010432 N  
 Caption: CLEAR CREEK #1 RESTORATION SITE - CLACKAMAS BASIN