

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

STREAM: Clear Creek #4 (L-311)
BASIN: Clackamas River
SURVEY TYPE: Pre-Tx
DATE: July 20, 2005
SURVEY CREW: Kaylea Foster, Jeff Snyder
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 185.0 km²
USGS MAPS: Redland
ECOREGION: Willamette Valley Foothills

GENERAL DESCRIPTION:

The Clear Creek habitat survey extended 618 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 4.2 (range: 2.5-6.0). Land use for the reach was greenway and rural residential. The average unit gradient was 0.5 percent. Scour pools (54%) and riffles (20%) dominated stream habitat. Gravel (35%) and cobble (34%) dominated stream substrate. Wood volume was low at 13.9 m³/100m.

COMMENTS:

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

REACH 1

T02S-R02E-S58SW

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	4.2	VWI Range:	2.5 - 6

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	618	8,333	0
Secondary Channel	45	225	0
Off-Channel Units	105	1,285	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 4
Width: 12.3	Width: 18.3	23.3 (16.7 - 30.7)	45.7 (24 - 100)
Depth: 0.48	Height: 0.6	1.3 (1 - 1.5)	2.9 (1.75 - 3.5)

W:D ratio: 29.4
 Stream Flow Type: MF
 Average Unit Gradient: 0.5%
 Water temperature (°C): 18.0 - 18.0

Entrenchment (ACW:FPW ratio): 1.3
 Habitat Units/100m (total channel length): 2.7
 Habitat Units/100m (primary channel length): 3.4

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	GN	RR
Riparian Vegetation:	G	M15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	17%	Reach avg: 54%
Undercut Banks:	3%	Range: 28 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	41	6.6
Volume (m ³):	86	13.9
Key pieces (>=12m x 0.60m):	5	0.8

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

7/20/2005

REACH 1		T02S-R02E-S58SW					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
CASCADE/BOULDERS	1	20	0.5	0.15	10	0	0	0	30	70	0	0
GLIDE	3	61	15.3	0.47	926	0	0	35	40	25	0	0
POOL-ALCOVE	1	85	15.0	0.70	1,275	0	100	0	0	0	0	0
POOL-LATERAL SCOUR	4	327	14.0	1.00	4,535	0	16	25	25	19	0	15
POOL-STRAIGHT SCOUR	1	50	15.0	0.90	750	0	10	25	30	35	0	0
RIFFLE	8	200	10.5	0.31	2,009	4	0	24	42	34	0	0
STEP/COBBLE	3	25	13.7	0.15	338	0	0	3	37	60	0	0
Total:	21	768	12.3	0.48	9,843	4	Avg: 8	21	35	34	0	3

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	1	85	15.0	0.70	1,275	12.95%	0	0.0	
Scour Pools	5	377	14.2	0.98	5,285	53.69%	0	0.0	
Glides	3	61	15.3	0.47	926	9.41%	0	0.0	
Riffles	8	200	10.5	0.31	2,009	20.41%	4	0.2	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	1	20	0.5	0.15	10	0.10%	0	0.0	
Step/Falls	3	25	13.7	0.15	338	3.43%	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:	6	7.8	9.7
Pools >=1m deep:	2	2.6	3.2
Complex pools (LWD pieces>=3):	1	1.3	1.6
Pool frequency (channel widths/pool):	7.0		
Residual pool depth (avg):	0.80		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

CLEAR CREEK #4 PRE-TX
GCG: 7-L SITE ID: 311

Survey Date 7/20/2005

RIPARIAN ZONE

Report Date: 4/26/2006

VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	467
Total conifers/1000 ft	20
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	0.3	0.7	0.0	0.0	0.0	0.0	0.3	0.7
15-30cm	0.0	0.0	0.0	2.0	0.0	1.7	0.0	3.7
30-50cm	0.0	1.0	0.0	0.3	0.0	1.3	0.0	2.7
50-90cm	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.3	1.7	0.0	2.3	0.0	3.7	0.1	2.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	33		48		55	
Shrub cover	30		33		32	
Grass/forb cover	70		67		68	

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		100		100	
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 (%)	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	467
Total conifers/1000 ft	20
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	0.7
15-30cm	0.0	3.7
30-50cm	0.0	2.7
50-90cm	0.0	0.7
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

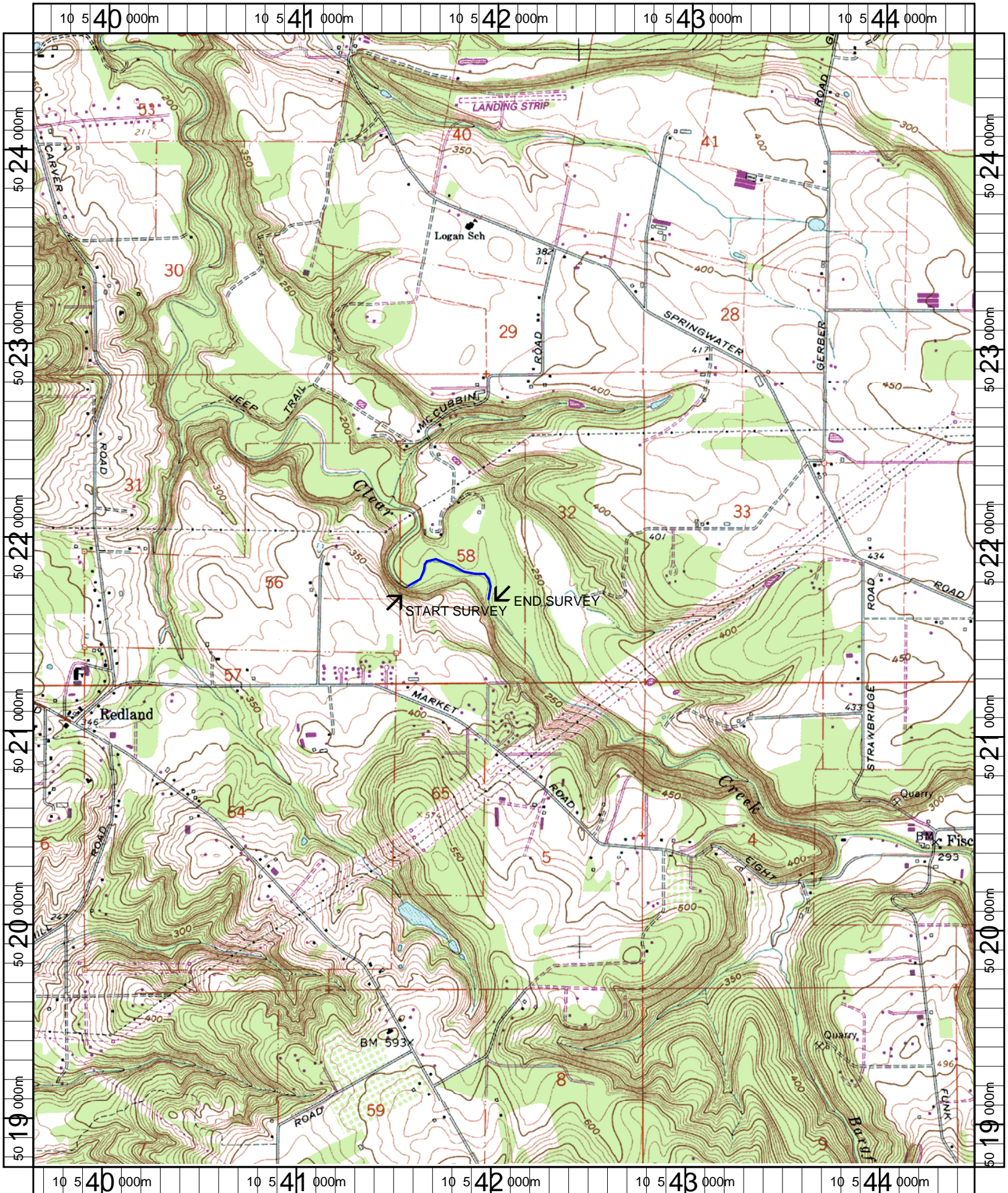
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
5	RT	3	HT	0	80	20	80	Conifer							
								Hardwood		2					
5	RT	2	HT	0	60	30	70	Conifer							
								Hardwood		1					
5	RT	1	HT	0	30	40	60	Conifer							
								Hardwood			1				
5	LF	3	HT	0	20	20	80	Conifer							
								Hardwood		1					
5	LF	2	HT	0	0	10	90	Conifer							
								Hardwood							
5	LF	1	HT	0	0	0	100	Conifer							
								Hardwood							
9	RT	3	HT	0	30	70	30	Conifer							
								Hardwood		1					
9	LF	1	HT	0	50	60	40	Conifer							
								Hardwood	2						
9	LF	2	HT	0	75	40	60	Conifer							
								Hardwood		1					
9	LF	3	HT	0	90	20	80	Conifer							
								Hardwood		1	3	1			
9	RT	1	HT	0	30	40	60	Conifer							
								Hardwood							
9	RT	2	HT	0	60	80	20	Conifer							
								Hardwood		2					
13	RT	2	HT	0	80	20	80	Conifer							
								Hardwood		2					
13	RT	1	HT	0	80	20	80	Conifer							
								Hardwood			1				
13	LF	1	HT	0	10	20	80	Conifer	1						
								Hardwood			1				
13	LF	3	HT	0	20	30	70	Conifer							
								Hardwood				1		ESTIMATED UNIT (BEHIND FENCE)	
13	LF	2	HT	0	10	20	80	Conifer						FENCE	
								Hardwood			1				
13	RT	3	HT	0	90	30	70	Conifer							
								Hardwood			1				

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 7-L SITE ID: 311 CLEAR CREEK #4 PRE-TX

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	RI	00	25	BV	0541555, 5021762	START SIGNS ON CEDAR, M
2	RI	00	50	BV		
3	RI	00	75	BV		
4	RI	00	92	BV		
5	LP	00	140	BV		
7	LP	01	294	DJ, TJ/		T = 18 C
14	RI	01	438	/DJ		
21	RI	00	618		0541958, 5021785	T = 20 C, END SIGN MAPLE



Name: REDLAND
 Date: 5/1/2006
 Scale: 1 inch equals 2000 feet

Location: 10 542047 E 5021692 N
 Caption: CLEAR CREEK #4 RESTORATION SITE - CLACKAMAS BASIN