

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

STREAM: Clear Creek #3 (L-254)
BASIN: Clackamas River
SURVEY TYPE: Pre-Tx
DATE: July 21, 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 509 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 4.4 (range: 3.0-8.0). Land use for the reach was not identified. The average unit gradient was 0.3 percent. Scour pools (48%) and riffles (31%) dominated stream habitat. Gravel (34%) and cobble (25%) dominated stream substrate. Wood volume was low at 18.3 m³/100m.

COMMENTS:

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

REACH 1

T02S-R03E-S56NW

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	4.4	VWI Range:	3 - 8

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	509	5,787	0
Secondary Channel	0	0	0
Off-Channel Units	66	739	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 10.3	Width: 14.7	20.0 (13.6 - 28.2)	22.2 (14 - 29)
Depth: 0.66	Height: 0.6	1.2 (0.9 - 1.62)	1.7 (1.3 - 2.5)

W:D ratio: 25.4
 Stream Flow Type: MF
 Average Unit Gradient: 0.3%
 Water temperature (°C): 19.0 - 19.0

Entrenchment (ACW:FPW ratio): 1.4
 Habitat Units/100m (total channel length): 4.2
 Habitat Units/100m (primary channel length): 4.7

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	NU	
Riparian Vegetation:	G	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	18%	Reach avg: 47%
Undercut Banks:	5%	Range: 22 - 67

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	41	8.1
Volume (m ³):	93	18.3
Key pieces (>=12m x 0.60m):	4	0.8

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

7/21/2005

REACH 1		T02S-R03E-S56NW					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	2	47	13.5	0.38	624	0	0	13	53	35	0	0
POOL-BACKWATER	4	66	9.3	0.78	739	0	65	25	8	3	0	0
POOL-LATERAL SCOUR	8	260	10.9	1.14	3,115	0	24	29	29	13	0	5
RIFFLE	10	202	9.7	0.30	2,048	1	0	13	44	41	0	2
Total:	24	575	10.3	0.66	6,526	1	Avg: 19	20	34	25	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	4	66	9.3	0.78	739	11.32%	0	0.0	
Scour Pools	8	260	10.9	1.14	3,115	47.73%	0	0.0	
Glides	2	47	13.5	0.38	624	9.56%	0	0.0	
Riffles	10	202	9.7	0.30	2,048	31.38%	1	0.0	
Rapids	0	0			0	0.00%	0	0.0	
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			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	12	20.9	23.6
Pools >=1m deep:	5	8.7	9.8
Complex pools (LWD pieces>=3):	3	5.2	5.9
Pool frequency (channel widths/pool):	3.3		
Residual pool depth (avg):	0.96		

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

**CLEAR CREEK #3 PRE-TX
GCG: 7-L SITE ID: 254**

**Survey Date 7/21/2005
Report Date: 4/26/2006**

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	406
Total conifers/1000 ft	81
Total conifers >20" dbh/1000 ft	20
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	1.0	0.0	0.3	0.0	1.0	0.7	2.3
15-30cm	0.0	0.0	0.0	1.0	0.0	0.7	0.0	1.7
30-50cm	0.0	0.0	0.0	0.7	0.3	1.3	0.3	2.0
50-90cm	0.0	0.0	0.0	0.0	0.3	0.7	0.3	0.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.7	1.0	0.0	2.0	0.7	3.7	0.4	2.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	18		45		63	
Shrub cover	9		22		40	
Grass/forb cover	86		73		52	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		33		33	
High terrace	67		67		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 (%)	30		30		31	

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	406
Total conifers/1000 ft	81
Total conifers >20" dbh/1000 ft	20
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	0.7	2.3
15-30cm	0.0	1.7
30-50cm	0.3	2.0
50-90cm	0.3	0.7
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

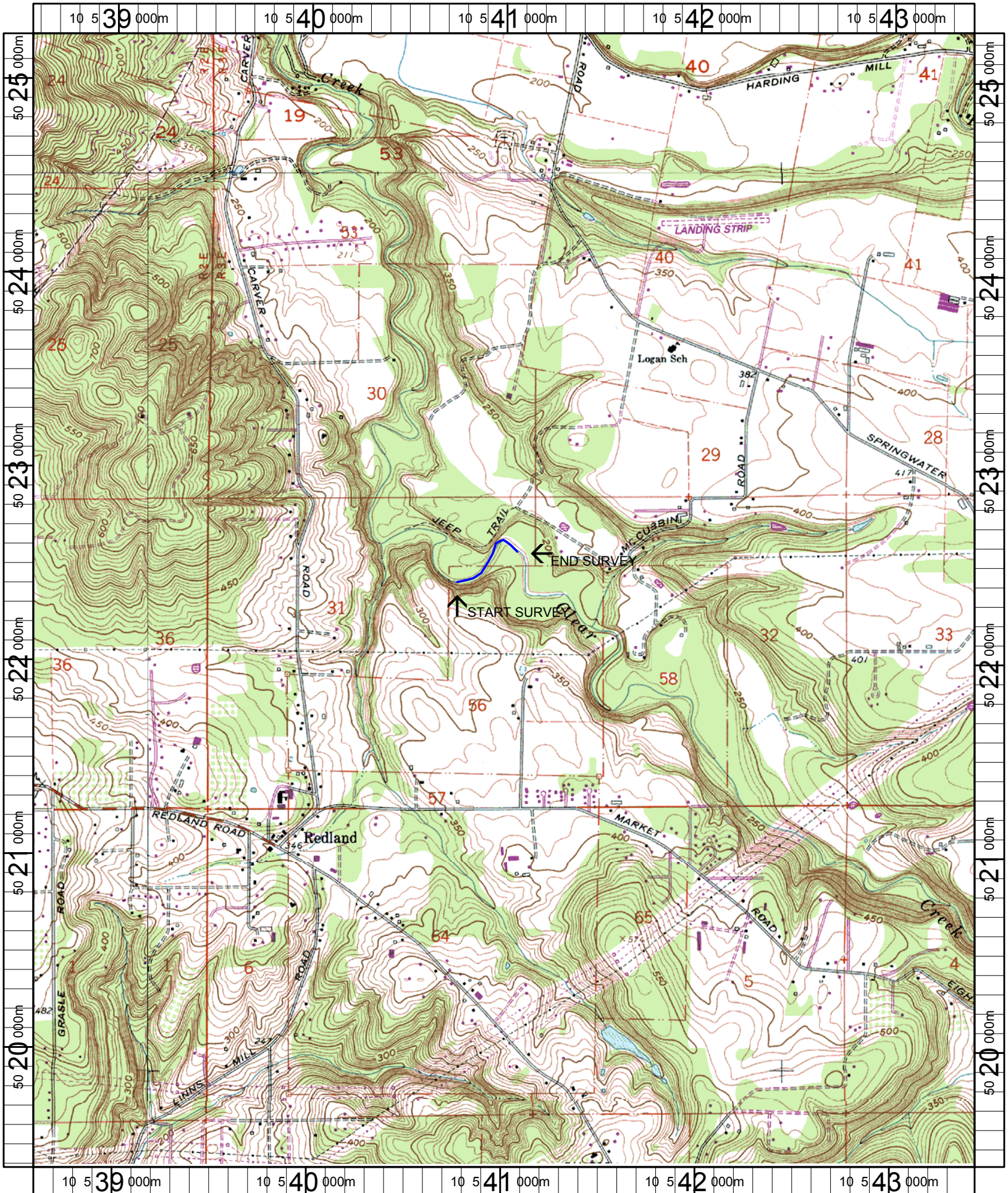
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
3	RT	3	HS	55	90	60	40	Conifer							
								Hardwood			1				
3	RT	1	HS	52	10	20	80	Conifer							
								Hardwood							
3	LF	3	HT	0	0	10	90	Conifer							
								Hardwood			1				
3	LF	2	HT	0	0	10	90	Conifer							REED CANARY GRASS
								Hardwood	1						
3	RT	2	HS	50	70	30	70	Conifer							
								Hardwood		1					
3	LF	1	HT	0	0	5	95	Conifer							REED CANARY GRASS
								Hardwood							
12	LF	3	HS	130	90	10	50	Conifer					1		
								Hardwood							
12	RT	3	HT	0	30	30	70	Conifer							
								Hardwood	1	2	1				
12	RT	2	HT	0	0	30	70	Conifer							
								Hardwood		2	1				
12	RT	1	HT	0	0	20	80	Conifer							REED CANARY GRASS
								Hardwood							
12	LF	1	HS	130	90	10	60	Conifer	2						
								Hardwood	3						
12	LF	2	HS	130	90	10	60	Conifer							
								Hardwood			1				
19	RT	3	HT	0	80	60	30	Conifer				1			
								Hardwood	2				1		
19	LF	2	HT	0	50	40	60	Conifer							
								Hardwood							
19	LF	3	HT	0	90	70	30	Conifer							
								Hardwood			1	1			
19	RT	1	HT	0	0	0	100	Conifer							
								Hardwood							
19	RT	2	HT	0	60	10	90	Conifer							
								Hardwood							
19	LF	1	HT	0	10	0	100	Conifer							REED CANARY GRASS
								Hardwood							

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 7-L SITE ID: 254 CLEAR CREEK #3 PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	17	WL		BEDROCK = HARDPAN
2	LP	00	70	BV, WL		GAMETRAIL
3	RI	00	97			T = 18 C AT 1100
4	RI	01	122			START=0540778,5022402, JV
6	LP	01	137	BV		JV SALMON
8	RI	00	157	BV		JV SALMON
9	LP	00	208	BV	BEAVERS, MALLARD W/	JV SALMON
11	LP	00	237			JV SALMON
14	BW	10	288			OVER 2.0 M DEEP
16	LP	01	326			JV SALMON
17	BW	10	326			JV SALMON
18	RI	00	351			JV SALMON
20	LP	00	406		CHANNEL BRAIDS	JV SALMON
21	RI	00	412		CHANNEL BRAIDS	
22	LP	00	457			JV SALMON
23	RI	00	482			JV SALMON, T = 20 C
24	GL	00	509			JV SALMON, 0541127, 50256



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

Location: 10 541000 E 5022323 N
 Caption: CLEAR CREEK #3 (METRO#1) RESTORATION SITE -
 CLACKAMAS BASIN