

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

STREAM: Clear Creek #3 (L-254)
BASIN: Clackamas River
SURVEY TYPE: Post-Tx
DATE: 8/3/2006
SURVEY CREW: Annette Garrigues, Jeff Snyder
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 185 km²
USGS MAPS: Redland
ECOREGION: Willamette Valley Plains

GENERAL DESCRIPTION:

The Clear Creek #3 habitat survey extended 530 meters. The channel was unconstrained within multiple terraces on a broad valley floor. The average valley width index was 5.2 (range: 4.35-5.7). Land uses for the reach were large timber (30-50 cm dbh) and rural residential. The average unit gradient was 0.5 percent. Scour pools (55%) dominated stream habitat. Fines (36%), gravel (32%) and cobble (28%) dominated stream substrate. Wood volume was high at 56.5 m³/100m.

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 beaver activity, many unknown fish, and several red legged frogs within the surveyed reach.

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	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	5.2	VWI Range:	4.35 - 5.7

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	100%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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	530	6,390	0
Secondary Channel	34	134	0
Off-Channel Units	245	1,347	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 8.5	Width: 18.3	25.9 (12.9 - 46.2)	35.7 (14.7 - 56.5)
Depth: 0.52	Height: 0.5	1.1 (0.9 - 1.2)	1.9 (1.7 - 2.2)

W:D ratio: 34.1

Entrenchment (ACW:FPW ratio): 1.4

Stream Flow Type: MF

Habitat Units/100m (total channel length): 3.1

Average Unit Gradient: 0.5%

Habitat Units/100m (primary channel length): 4.7

Water temperature (°C): 17.0 - 17.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LT	RR
Riparian Vegetation:	D30	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	18%	Reach avg: 63%
Undercut Banks:	8%	Range: 39 - 89

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	89	16.8
Volume (m ³):	300	56.5
Key pieces (>=12m x 0.60m):	38	7.2

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

8/3/2006

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	63	13.0	0.40	822	0	0	10	20	50	20	0
POOL-BACKWATER	5	245	4.2	0.30	1,347	2	71	15	4	10	0	0
POOL-LATERAL SCOUR	6	291	11.5	1.18	3,935	0	11	31	39	15	0	4
POOL-STRAIGHT SCOUR	1	42	8.8	0.95	370	0	0	40	50	10	0	0
RIFFLE	6	134	8.5	0.33	1,154	0	0	18	42	33	7	0
STEP/COBBLE	5	34	7.2	0.15	243	0	0	8	40	52	0	0
Total:	25	809	8.5	0.52	7,871	2	Avg: 17	19	32	28	3	1

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	5	245	4.2	0.30	1,347	17.12%	2	0.1	
Scour Pools	7	334	11.1	1.14	4,306	54.70%	0	0.0	
Glides	2	63	13.0	0.40	822	10.44%	0	0.0	
Riffles	6	134	8.5	0.33	1,154	14.66%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	5	34	7.2	0.15	243	3.09%	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	14.8	22.6
Pools >=1m deep:	3	3.7	5.7
Complex pools (LWD pieces>=3):	4	4.9	7.5
Pool frequency (channel widths/pool):	3.7		
Residual pool depth (avg):	1.07		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

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

Survey Date 8/3/2006
Report Date: 3/5/2007

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	102
Total conifers/1000 ft	183
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	20

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	0.0	0.3	0.0	0.3	0.0	0.3	0.0	1.0
15-30cm	0.0	0.0	0.3	0.0	0.7	0.0	1.0	0.0
30-50cm	0.3	0.7	0.3	0.0	0.3	0.0	1.0	0.7
50-90cm	0.3	0.0	0.0	0.0	0.3	0.0	0.7	0.0
>90cm	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total/100m2	1.0	1.0	0.7	0.3	1.3	0.3	1.0	0.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	30		38		50	
Shrub cover	12		13		11	
Grass/forb cover	48		60		56	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	17		17		17	
High terrace	33		50		67	
Low terrace	0		17		0	
Floodplain	50		17		17	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	16		6		9	

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	102
Total conifers/1000 ft	183
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	20

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	0.0	1.0
15-30cm	1.0	0.0
30-50cm	1.0	0.7
50-90cm	0.7	0.0
>90cm	0.3	0.0

RIPARIAN ZONE VEGETATION

Reach 1 Reach 1

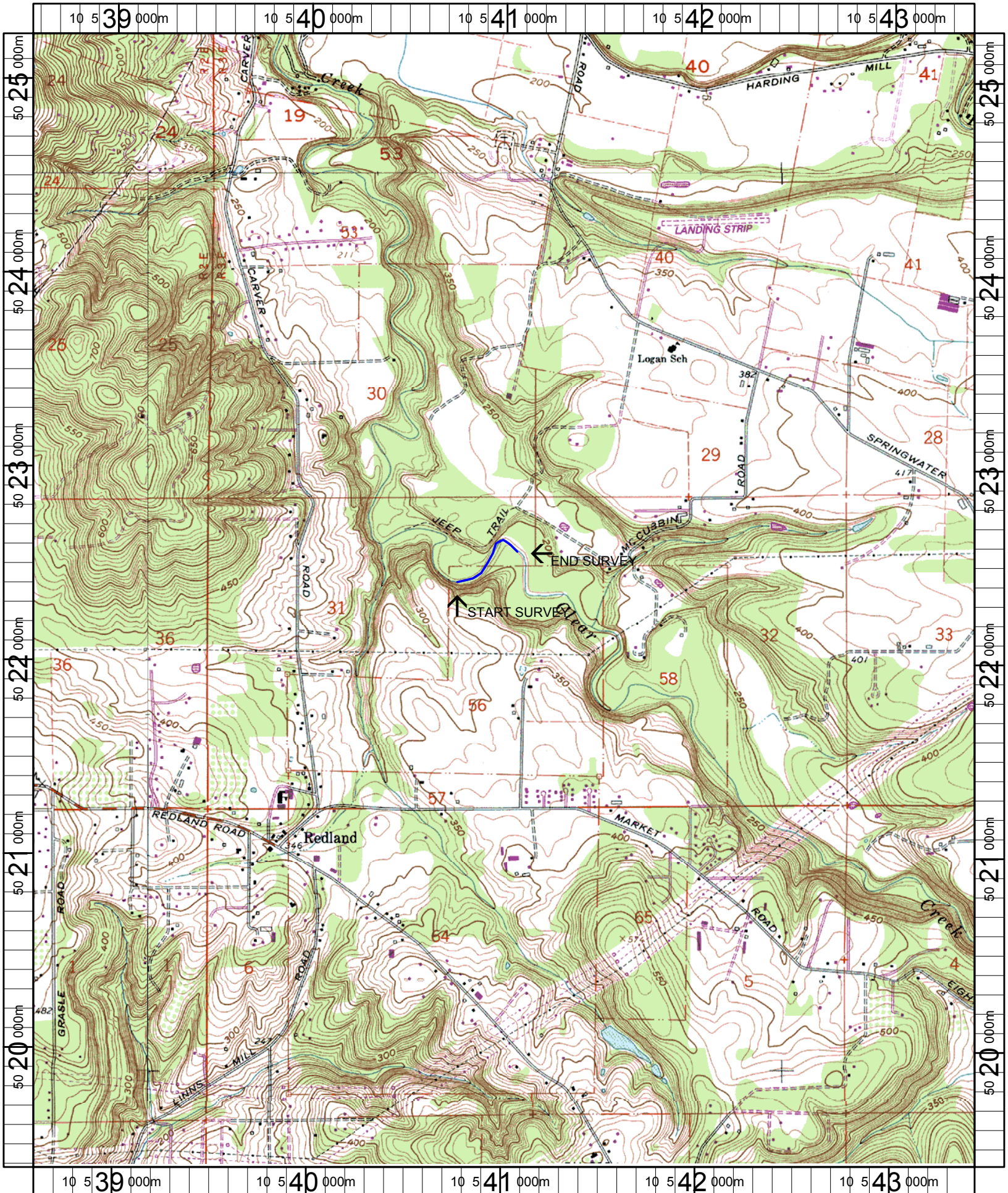
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
4	LF	1	FP	7	0	0	100	Conifer							UTM 0540924-5022502-3D
								Hardwood			1				
4	RT	2	HS	28	70	20	15	Conifer		1	1				
								Hardwood							
4	LF	2	FP	4	10	0	100	Conifer							
								Hardwood							
4	RT	3	HS	32	80	30	30	Conifer		2	1				
								Hardwood							
4	LF	3	FP	8	70	0	30	Conifer							
								Hardwood							
4	RT	1	HS	36	50	30	50	Conifer							TRANS
								Hardwood	1						
15	RT	2	HT	8	80	30	50	Conifer							
								Hardwood							
15	LF	1	FP	0	0	0	10	Conifer							UTM 0540994-5022614-3D, TRANS HT/FP
								Hardwood							
15	LF	2	HT	1	0	0	40	Conifer							
								Hardwood							
15	LF	3	HT	4	10	0	60	Conifer							
								Hardwood							
15	RT	1	HT	32	70	20	60	Conifer			1				TRANS
								Hardwood			1				
15	RT	3	HT	4	80	20	70	Conifer				1			HT/HS
								Hardwood							
22	RT	3	HT	1	0	5	95	Conifer							
								Hardwood							
22	LF	1	HT	12	60	20	40	Conifer				1	1		UTM 0541073-5022618-3D, TRANS
								Hardwood							
22	LF	2	LT	-6	70	20	60	Conifer							
								Hardwood	1						
22	LF	3	HT	4	60	10	50	Conifer							
								Hardwood	1						
22	RT	2	HT	1	0	5	95	Conifer							
								Hardwood							
22	RT	1	FP	7	0	0	30	Conifer							
								Hardwood							

Comment Summary

Restoration Monitoring Sites 2006

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	81.6		RED-LEGGED FROG	T=17.0C AT 1124 HRS
2	RI	00	107.1	BV		
5	BW	10	161	WL		RED-LEGGED FROG
6	BW	10	161		ALGAE, FISH	FISH
8	LP	00	197.4		FISH ALL OVER	FISH
10	LP	00	245.8			FISH
12	LP	01	330.6		RED-LEGGED FROG	FISH
14	BW	10	330.6	HS x 7,BV		RED-LEGGED FROGS, FIS
17	RI	00	385.5			FISH
20	LP	02	418			FISH
21	RI	02	418			FISH
22	SC	02	418	BV		
23	LP	00	467.2	HS		FISH
24	GL	00	494.3			FISH
25	GL	00	530.4			FISH, END SURVEY



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