

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

STREAM: Clear Creek #2 (L-231)
BASIN: Clackamas River
SURVEY TYPE: Post-Tx
DATE: July 19, 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 481 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 1.7 (range: 1.0-4.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.1 percent. Riffles (38%) and scour pools (33%) dominated stream habitat. Cobble (37%) and boulders (29%) dominated stream substrate. Wood volume was low at 16.2 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.

REACH 1

T03S-R03E-S53SE

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	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index 1.7		VWI Range: 1 - 4	

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	100%	Single Channel	0%
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	481	7,809	0
Secondary Channel	0	0	0
Off-Channel Units	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 2
Width: 16.5	Width: 17.6	20.6 (13.5 - 25.1)	32.3 (30.9 - 33.6)
Depth: 0.67	Height: 0.8	1.6 (1 - 3)	3.0 (2.5 - 3.4)

W:D ratio: 26.7
 Stream Flow Type: MF
 Average Unit Gradient: 1.1%
 Water temperature (°C): 16.0 - 16.0

Entrenchment (ACW:FPW ratio): 1.2
 Habitat Units/100m (total channel length): 3.5
 Habitat Units/100m (primary channel length): 3.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	M15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	2%	Reach avg: 69%
Undercut Banks:	14%	Range: 58 - 78

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	42	8.7
Volume (m ³):	78	16.2
Key pieces (>=12m x 0.60m):	5	1.0

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

7/19/2005

REACH 1		T03S-R03E-S53SE					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	50	15.0	0.48	750	26	5	15	10	40	25	5
POOL-LATERAL SCOUR	2	89	16.5	1.45	1,332	24	8	10	15	43	8	18
POOL-STRAIGHT SCOUR	1	46	14.0	1.20	644	35	10	10	15	25	25	15
POOL-TRENCH	1	40	15.0	1.70	600	6	10	15	20	30	10	15
RAPID/BOULDERS	4	86	13.8	0.53	1,249	417	1	6	18	29	41	5
RIFFLE	4	108	20.3	0.30	2,181	215	0	11	15	41	33	0
RIFFLE W/ POCKETS	2	50	16.5	0.58	825	220	0	13	18	30	40	0
STEP/COBBLE	1	12	19.0	0.15	228	10	0	5	10	75	10	0
Total:	17	481	16.5	0.67	7,809	953	Avg: 3	10	15	37	29	6

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	0	0			0	0.00%	0	0.0	
Scour Pools	4	175	15.5	1.45	2,576	32.99%	65	2.5	
Glides	2	50	15.0	0.48	750	9.60%	26	3.5	
Riffles	6	158	19.0	0.39	3,006	38.49%	435	14.5	
Rapids	4	86	13.8	0.53	1,249	15.99%	417	33.4	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	1	12	19.0	0.15	228	2.92%	10	4.4	
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	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	4	8.3	8.3
Pools >=1m deep:	4	8.3	8.3
Complex pools (LWD pieces>=3):	1	2.1	2.1
Pool frequency (channel widths/pool):	6.8		
Residual pool depth (avg):	1.21		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

CLEAR CREEK #2 POST-TX
GCG: 7-L SITE ID: 231

Survey Date 7/19/2005
Report Date: 4/26/2006

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	467
Total conifers/1000 ft	386
Total conifers >20" dbh/1000 ft	41
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	0.0	1.3	0.0	0.0	0.0	0.7	0.0	2.0
15-30cm	0.3	1.3	1.0	1.0	1.0	0.3	2.3	2.7
30-50cm	0.0	0.7	0.7	0.7	2.7	1.0	3.3	2.3
50-90cm	0.0	0.0	0.3	0.3	0.3	0.3	0.7	0.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.3	3.3	2.0	2.0	4.0	2.3	2.1	2.6

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	59	58	68
Shrub cover	34	50	42
Grass/forb cover	61	36	43

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	67	67	83
High terrace	33	17	17
Low terrace	0	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	17	0
Riprap	0	0	0
Surface slope (%)	27	25	28

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	386
Total conifers >20" dbh/1000 ft	41
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	0.0	2.0
15-30cm	2.3	2.7
30-50cm	3.3	2.3
50-90cm	0.7	0.7
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

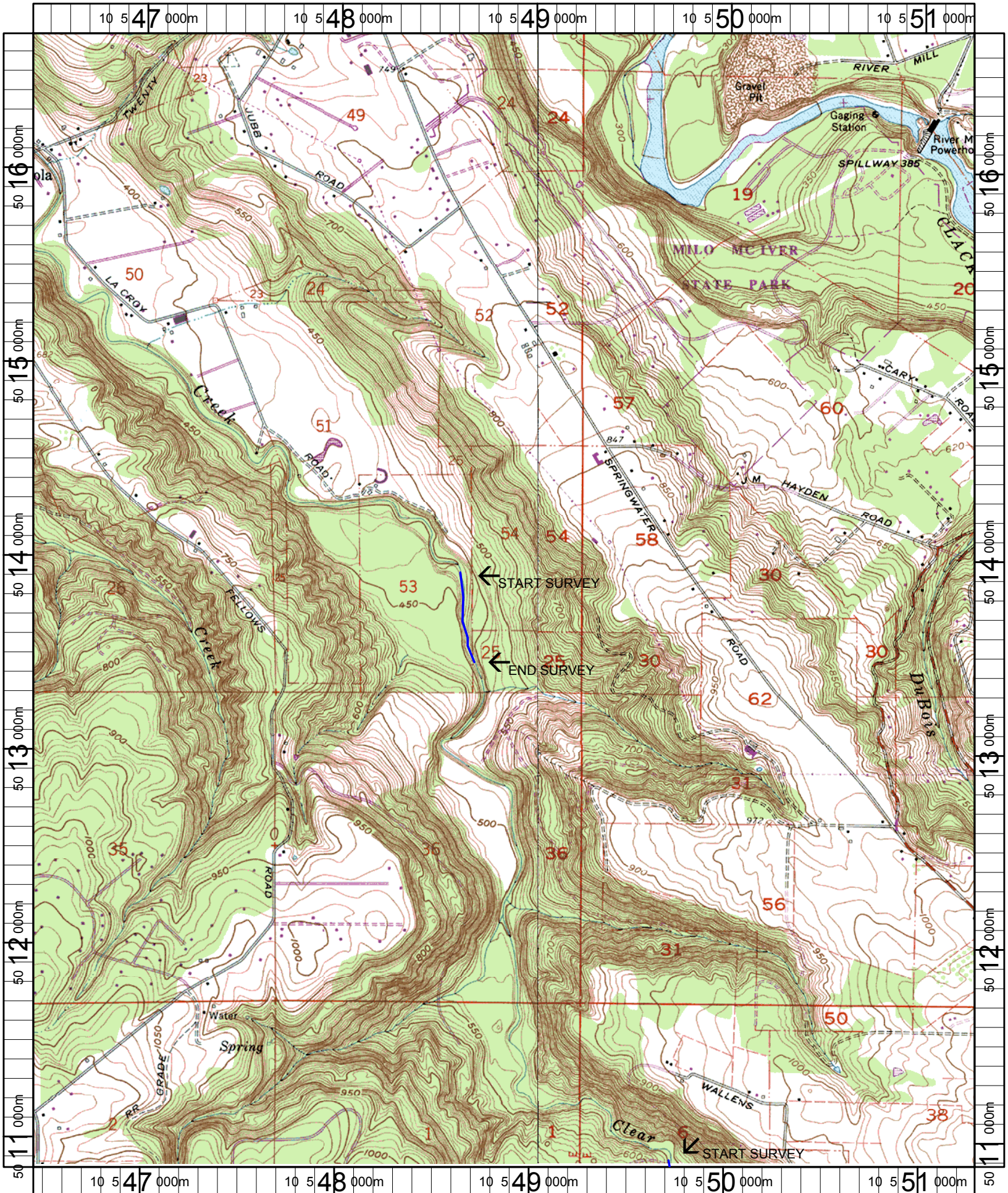
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
5	LF	2	HT	0	70	75	25	Conifer							
								Hardwood		1					
5	RT	3	HS	20	60	50	40	Conifer		1					ALSO ROAD BED
								Hardwood			1				
5	RT	1	HT	0	50	15	85	Conifer							
								Hardwood							
5	LF	3	HT	0	90	20	30	Conifer			3				
								Hardwood		1		1			
5	LF	1	HT	0	30	60	40	Conifer							
								Hardwood			1				
5	RT	2	HS	14	40	75	20	Conifer							
								Hardwood		1	1				
8	RT	3	HS	21	85	40	40	Conifer		1	2	1			SLOPE ESTIMATED
								Hardwood							
8	RT	2	RB	0	60	10	20	Conifer							ALSO HS
								Hardwood		1					
8	RT	1	HS	21	40	50	50	Conifer							
								Hardwood		3					
8	LF	3	HS	14	50	70	30	Conifer							
								Hardwood			1				
8	LF	2	HS	15	40	80	20	Conifer			1	1			
								Hardwood							
8	LF	1	HS	14	70	40	40	Conifer							
								Hardwood	2	1	1				
13	RT	2	HS	62	70	30	60	Conifer							
								Hardwood			1	1			
13	LF	2	HS	58	70	30	70	Conifer		3	1				
								Hardwood							
13	LF	3	HS	49	60	30	70	Conifer		1	2				NEAR A CLEARCUT
								Hardwood							
13	RT	1	HS	65	85	20	80	Conifer							LARGE 90 PLUS CONIF NEAR ZONE
								Hardwood							
13	RT	3	HS	65	60	40	50	Conifer				1			
								Hardwood	2	1					
13	LF	1	HS	61	80	20	70	Conifer			1				
								Hardwood	2						

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 7-L SITE ID: 231 CLEAR CREEK #2 POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	64	WL	METRICS DONE AT PTC	KINGFISHER, 0548532, 50139
2	RI	00	89			T = 15 C AT 1100
3	RI	00	113	WL		DIPPER
4	LP	00	138	HS, DJ		
6	RI	00	182	HS, DJ		
9	RP	00	280	/DJ		
10	RP	00	305	RF, /DJ		PLACED BOULDERS AT RF
11	RB	00	330	DJ		
12	RB	00	355	DJ		
13	RB	00	380	/SS		
14	GL	00	405	WL		KINGFISHER
15	GL	00	430	WL		HUMMINGBIRD
17	RB	00	481			T = 18 C AT 1420



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

Location: 10 548850 E 5013787 N
 Caption: CLEAR CREEK #2 RESTORATION SITE - CLACKAMAS BASIN