

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

STREAM: Clear Creek #1 (L-230)
BASIN: Clackamas River
SURVEY TYPE: Pre-Tx
DATE: July 19, 2004
SURVEY CREW: Erin Richmond, Jennifer Jacobs
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 185.0 km²
USGS MAPS: Estacada
ECOREGION: Willamette Valley Foothills

GENERAL DESCRIPTION:

The Clear Creek habitat survey extended 1,029 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 4.7 (range: 3.0-5.5). Land use for the reach was mature (50-90 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 2.1 percent. Riffles (54%) and scour pools (41%) dominated stream habitat. Cobble (39%) and gravel (24%) dominated stream substrate. Wood volume was low at 11.3 m³/100m.

COMMENTS:

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

REACH 1

T04S-R04E-S06NW

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	4.7	VWI Range:	3 - 5.5

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	1,029	12,692	0
Secondary	247	200	3

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 10.7	Width: 21.1	22.6 (17.6 - 25.01)	24.3 (19.6 - 27.9)
Depth: 0.40	Height: 0.5	1.0 (0.82 - 1.2)	3.3 (1.6 - 6.2)

W:D ratio: 42.8

Stream Flow Type: MF

Average Unit Gradient: 2.1%

Water temperature (°C): 16.5 - 16.5

Entrenchment (ACW:FPW ratio): 1.1

Habitat Units/100m (total channel length): 2.4

Habitat Units/100m (primary channel length): 3.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	MT	LT
Riparian Vegetation:	C30	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	3%	Reach avg: 85%
Undercut Banks:	6%	Range: 61 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	125	12.1
Volume (m ³):	117	11.3
Key pieces (>=12m x 0.60m):	7	0.7

OREGON DEPARTMENT OF FISH AND WILDLIFE

CLEAR CREEK #1 PRE-TX (L-230)

HABITAT INVENTORY

Report Date: 10/27/2004

Survey Date:

7/19/2004

REACH 1

T04S-R04E-S06NW

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
DRY CHANNEL	1	117	0.7	0.00	82	0	77	15	0	8	0	0
DRY UNIT	1	88	0.8	0.00	70	0	0	43	43	14	0	0
POOL-LATERAL SCOUR	9	389	11.2	0.89	4,529	5	11	16	23	27	2	20
POOL-TRENCH	1	53	13.5	0.90	716	0	10	20	10	10	0	50
PUDDLED UNIT	1	32	0.8	0.40	26	0	43	43	14	0	0	0
RAPID/BEDROCK	1	28	8.2	0.20	230	0	0	0	20	40	0	40
RIFFLE	10	394	12.4	0.18	5,308	61	2	9	31	46	5	9
RIFFLE W/ POCKETS	3	150	10.7	0.27	1,600	80	5	5	15	40	32	3
STEP/COBBLE	4	25	12.5	0.07	332	3	0	0	23	78	0	0
Total:	31	1,276	10.7	0.40	12,892	149	Avg: 8	12	24	39	5	12

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	10	442	11.4	0.89	5,244	40.68%	5	0.1
Glides	0	0			0	0.00%	0	0.0
Riffles	13	544	12.0	0.20	6,908	53.58%	141	2.0
Rapids	1	28	8.2	0.20	230	1.78%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	4	25	12.5	0.07	332	2.58%	3	0.9
Dry	3	237	0.8	0.13	178	1.38%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	Total	# / Km	# / Km
All Pools:	10	7.8	9.7
Pools >=1m deep:	4	3.1	3.9
Complex pools (LWD pieces>=3):	6	4.7	5.8
Pool frequency (channel widths/pool):	6.1		
Residual pool depth (avg):	0.79		

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

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

Total hardwoods/1000	589
Total conifers/1000 ft	549
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.7	0.0	0.3	0.7	0.0	0.3	1.0	1.0
15-30cm	0.7	4.3	1.7	0.7	1.7	1.7	4.0	6.7
30-50cm	0.3	1.7	1.7	0.3	1.0	0.0	3.0	2.0
50-90cm	0.3	0.0	0.7	0.0	0.0	0.0	1.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	2.0	6.0	4.3	1.7	2.7	2.0	3.0	3.2

Canopy closure and ground cover

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	60		68		73	
Shrub cover	47		43		48	
Grass/forb cover	38		40		53	

Predominant landform in each zone

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		33		17	
High terrace	67		67		50	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		33	
Riprap	0		0		0	
Surface slope (%)	49		43		58	

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		
6	RT	1	HT	80	90	20	50	Conifer			1				
								Hardwood		3					
6	LF	1	HT	12	40	10	90	Conifer							
								Hardwood		5	4				
6	LF	3	HT	80	60	70	30	Conifer		1					
								Hardwood							
6	RT	2	HT	6	90	30	40	Conifer		1					
								Hardwood		2	1				
6	RT	3	HT		90	30	40	Conifer		1	2				
								Hardwood		2					
6	LF	2	HT	12	50	10	90	Conifer			3				
								Hardwood							
14	RT	1	HS	90	90	80	20	Conifer							
								Hardwood		1	1				
14	LF	1	HT	10	20	80	20	Conifer		2					
								Hardwood							
14	LF	3	RB				100	Conifer							RB=HAYFIELD
								Hardwood							
14	RT	2	HS	90	90	70	20	Conifer			1	2			
								Hardwood							
14	RT	3	HT	5	70	50	30	Conifer			2	1			
								Hardwood		1					
14	LF	2	HT	25	40	60	20	Conifer		1		1			
								Hardwood							
19	RT	1	HS	90	60	30	20	Conifer							
								Hardwood			3				
19	LF	1	HT	10	60	60	30	Conifer		2			1		
								Hardwood			1				
19	LF	3	RB				100	Conifer			1				RB=GRASSFIELD
								Hardwood							
19	RT	2	HS	110	70	40	20	Conifer							
								Hardwood		2					
19	RT	3	HS	90	70	40	20	Conifer							
								Hardwood		1	2				
19	LF	2	HT	12	70	50	50	Conifer			1	3			
								Hardwood							

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: 7-L SITE ID: 230 CLEAR CREEK #1 PRE-TX (L-230)

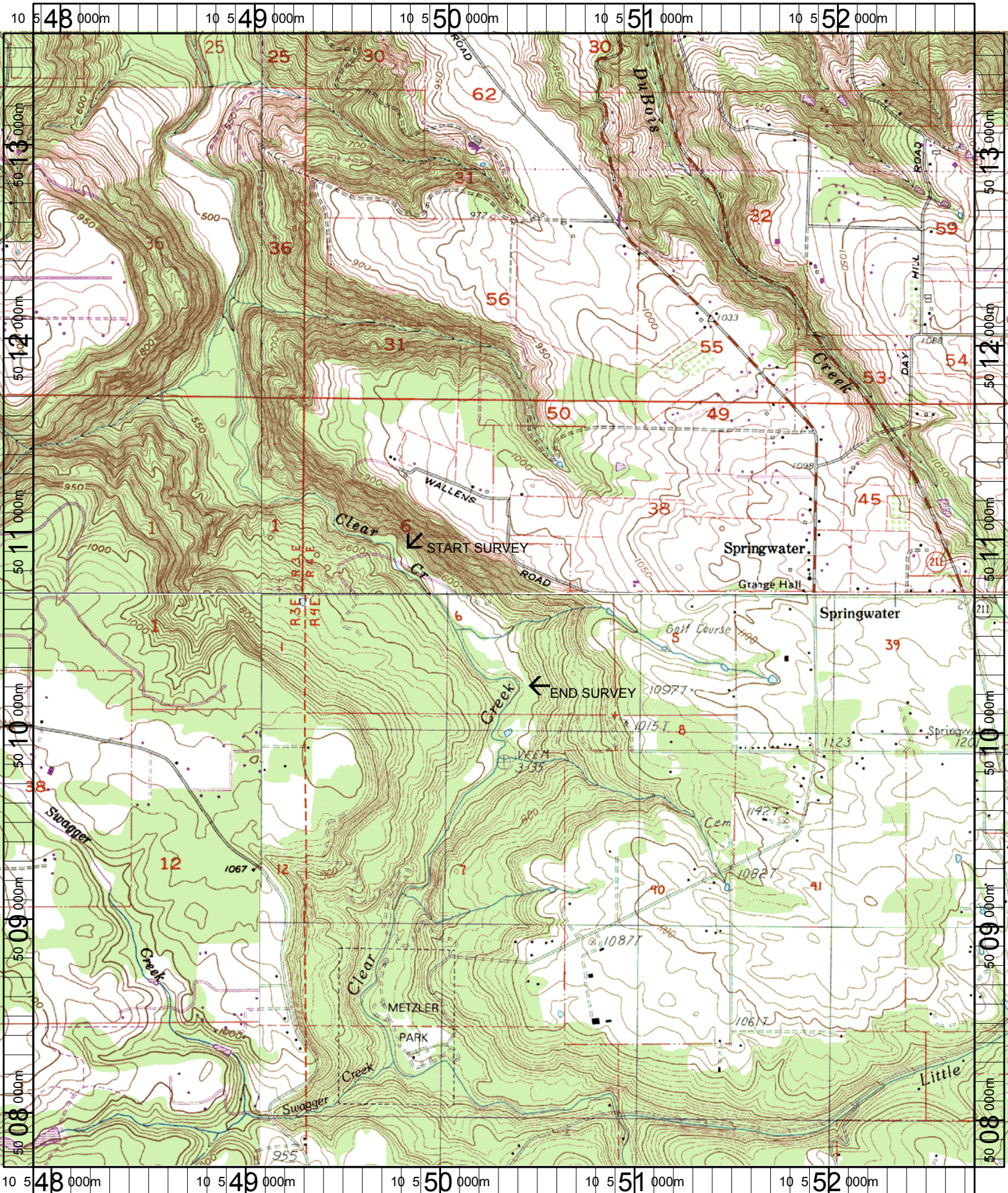
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	26.5	BC	START ALDER LF	T=16.5 DEG C AT12:00
2	SC	00	35		MAN MADE STEP	H=.1, MAN MADE STEP
3	LP	00	125	/DJ		CAUSED BY LANDOWNER C
4	RI	00	145		FENCING ALONG STREA	
5	LP	00	184.6			FISH- CO FRY
6	RI	01	217.6		RIP 1	RIP 1 METRICS
9	DC	02	320.6		ESTIMATED	
10	TP	00	373.6		FRY	
11	RI	00	423.6	DJ/		ALDER
14	RI	01	575.6	TJ/ WL	NEW START SIGN	SPAWNING SURVEY
15	RI	11	575.6		/TJ PHOTO	T=17 DEG C, ACW=3.2M
16	LP	00	607.4	/DJ	VW=97	WASH OFF HS
17	RP	00	657.4	/BV		
19	RP	00	757.4			RIP 3 AND METRICS
20	RI	01	789.4	DJ	RIP 3	
21	LP	01	805.4	/IL		BRAIDED CHANNEL
22	SC	01	808.4			H=.2M
23	LP	01	877.4			FRY COT
26	SC	00	889.4			BRAIDED CHANNEL
28	SC	00	918.7			H=.1
29	LP	00	951.4	/SS WL		

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: 7-L SITE ID: 230 CLEAR CREEK #1 PRE-TX (L-230)

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
31	RR	00	1029.4	WL	END AT RB VW=110	END SURVEY



Name: ELWOOD
 Date: 8/10/2004
 Scale: 1 inch equals 2000 feet

Location: 10 550300 E 5010671 N
 Caption: CLEAR CREEK #1 RESTORATION SITE - CLACKAMAS BASIN