

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

STREAM: Cherry Creek (MC-15)
 BASIN: Alsea River
 SURVEY TYPE: Pre and Post-Tx
 DATE: October 23, 2003
 REPORT PREPARED BY: Paul Jacobsen

The Cherry Creek restoration project extended approximately 800 meters, with about 500 meters of the project being monitored for pre- and post-treatment conditions. Eight habitat structures were completed and 32 key pieces (according to the ODF Large Wood Placement Guide) were used. The intended goals of the project included increasing stream complexity, improved interaction with the floodplain, gravel retention, increased pool area, and enhanced salmonids spawning and rearing habitat. In the first seasons after restoration activities, summer large wood pieces, volume, and key pieces were increased as expected. Winter pool area and pool frequency had improvements, and there were more complex pools.

	ODFW	Benchmark	Winter	Summer	Winter	Summer	
Habitat Variable	Desirable	Undesirable	Pre	Pre	Post	Post	
Reach #			1/25/00	7/19/00	2/1/01	7/16/01	
Pool Area	>35	<10	59.3	71.0	67.9	70.8	
Pool Frequency	5-8	>20	4.9	4.1	3.5	3.9	
Residual Pool Depth	>0.5-1.0m	<0.2-0.5m	.53	.51	.48	.41	
Complex Pools/km	>2.5	<1.0	9.0	5.8	10.4	13.4	
Width/Depth Ratio	<15	>30	8.1	13.3	15.2	14.1	
Riffle Gravel % area	>35	<15	69	39	58	53	
Silt-Sand-Organic %	<12	>25	13	23	21	24	
Shade %	>70	< 60		70		80	
LWD - pieces/100m	>20	<10	15.4	10.1	10.8	11.7	
LWD - Volume/100m	>30	<20	18.5	7.7	18.0	10.8	
LWD - Key pieces/ 100m	>3	<1	0.4	0	0.2	0.6	
Riparian Conifers>20" dbh/1000ft	>300	<150		0		41	
Riparian Conifers>35" dbh/1000ft	>200	<75		0		20	

COMMENTS:

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

The crew noted evidence of beaver activity during the survey.

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

STREAM: Cherry Creek (MC-15)
BASIN: Alsea River
SURVEY TYPE: Post-Tx
DATE: July 16, 2001
SURVEY CREW: Carmen Vandyke, Loren Stucker
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 4.4 km²
USGS MAPS: Five Rivers
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Cherry Creek habitat survey extended 519 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 3.8 (range: 1.3 – 10.0). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 1.8 percent. Scour pools (48%), slackwater pools (21%) and riffles (20%) dominated stream habitat. Gravel (30%) and fines (26%) dominated stream substrate. Wood volume was low at 10.8 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

T14S-R10W-S36SE

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 avg: 3.8 range: 1.3-10.0

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	519	1,849	0
Secondary	5	3	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	3.4	Width	5.9	9.4	14.0
Depth	0.30	Height	0.4	0.8	1.0
		W:D ratio	14.1	Entrenchment	1.6

Stream Flow Type: LF Water Temp: 12.5-12.5°C
Avg. Unit Gradient: 1.8% Habitat Units/100m: 8.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	P	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	4%	Reach avg: 80%
Undercut Banks	9%	Range: 53-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ($\geq 3\text{m} \times 0.15\text{m}$)	61	11.7
Volume (m ³)	56	10.8
Key pieces ($\geq 10\text{m} \times 0.6\text{m}$)	3	0.6

REACH 1

T14S-R10W-S36SE

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	Cbbl	Bldr	Bdrk
POOL-BEAVER DAM	3	82	4.3	0.70	347	6	67	12	13	7	2	0
POOL-DAMMED	2	19	4.0	0.40	75	2	48	15	8	5	3	23
POOL-LATERAL SCOUR	8	132	3.4	0.54	457	0	24	10	22	13	0	31
POOL-PLUNGE	4	28	4.3	0.45	127	35	47	10	20	3	6	13
POOL-STRAIGHT SCOUR	6	91	3.3	0.40	305	11	48	15	24	7	2	5
RAPID/BEDROCK	3	35	2.9	0.12	127	0	3	7	10	2	0	78
RIFFLE	9	109	2.4	0.06	295	1	6	18	53	17	4	2
RIFFLE W/ POCKETS	1	18	4.1	0.10	75	5	0	10	10	10	10	60
STEP/BEAVER DAM	3	4	5.2	0.04	21	0	13	38	33	15	0	0
STEP/LOG	2	6	2.8	0.05	23	8	5	13	45	28	10	0
STEP/STRUCTURE	1	1	0.9	0.05	1	0	0	0	77	24	0	0
Total:	42	524	3.4	0.30	1,851	68	Avg:26	15	30	11	3	16

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m ²)	Wetted Area Percent	Large Boulders Number	Boulders #/100m ²
Dammed & BW Pools	5	101	4.1	0.58	422	22.80	8	1.9
Scour Pools	18	251	3.6	0.47	888	47.96	46	5.2
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	10	128	2.6	0.07	370	19.99	6	1.6
Rapids	3	35	2.9	0.12	127	6.83	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	6	10	3.7	0.05	45	2.41	8	17.9
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	23	43.9
Pools ≥1m deep:	0	0.0
Complex pools (LWD pieces ≥3):	7	13.4
Pool Frequency (channel widths/pool):	3.9	
Residual pool depth (avg)	0.41m	

STREAM SUMMARY

CHERRY CREEK POST-TX (#15)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Total Large Boulder
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
42	524	3.4	0.30	1,851	26	15	30	11	3	16	68

Wetted Area

Habitat Group	(m ²)	Percent
Scour Pool	888	48.0
Backwater Pools	422	22.8
Glide	0	0.0
Riffle	370	20.0
Rapid	127	6.8
Cascade	0	0.0
Step	45	2.4
Dry	0	0.0

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	711
Total conifers/1000 ft	102
Total conifers >20" dbh/1000 ft	41
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	1.7	0.0	1.7	0.0	2.7	0.0	6.0
15-30cm	0.0	0.0	0.0	1.0	1.0	2.7	1.0	3.7
30-50cm	0.0	1.0	0.0	0.3	0.0	0.0	0.0	1.3
50-90cm	0.0	0.3	0.3	0.0	0.0	0.0	0.3	0.3
>90cm	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.3
Total/100m ²	0.3	3.0	0.3	3.3	1.0	5.3	0.6	3.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	46		59		40	
Shrub cover	9		21		33	
Grass/forb cover	88		78		67	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	67		100		83
High terrace	17		0		0	
Low terrace	0		0		0	
Floodplain	17		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		17	
Riprap	0		0		0	
Surface slope (%)	18		28		33	

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

Summary of riparian zone (0-100ft) extrapolated to 1,000 feet along stream

Total hardwoods/1000 ft	711
Total conifers/1000 ft	102
Total conifers >20" dbh/1000 ft	41

Average number of trees in a 5-meter wide band

<u>Diameter</u> <u>class (cm)</u>	<u>Zones 1-3</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.0	6.0
15-30cm	1.0	3.7
30-50cm	0.0	1.3
50-90cm	0.3	0.3
>90cm	0.3	0.3

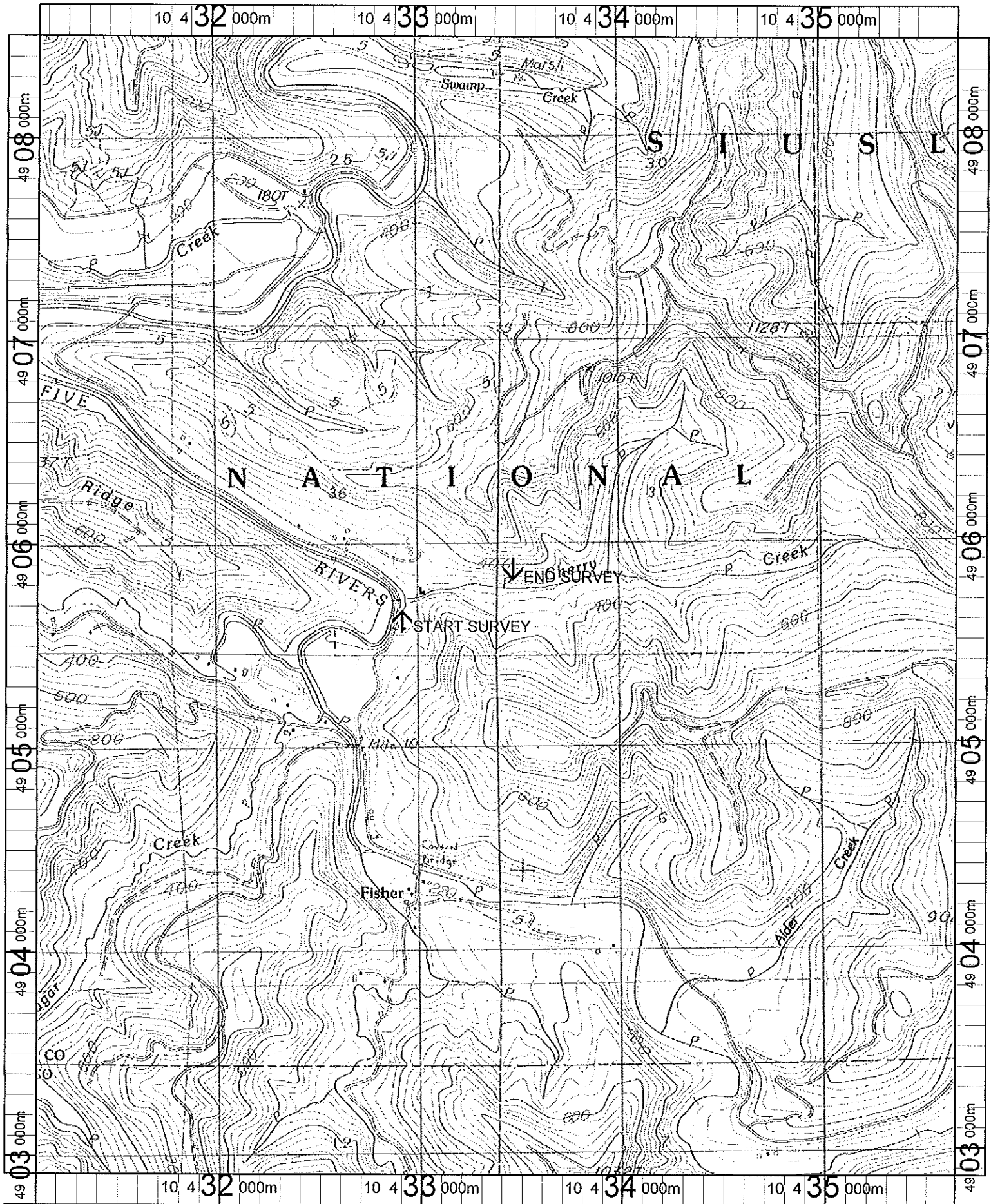
RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

VEGETATION DETAIL

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	
14	LF	1	HS	20.0	0	5	95	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
14	LF	2	HS	10.0	0	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
14	LF	3	HS	25.0	0	10	90	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
14	RT	1	FP	0.0	0	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
14	RT	2	HS	60.0	25	65	30	Conifer	0	0	0	0	0	
								Hardwood	3	0	0	0	0	
14	RT	3	RB	20.0	15	60	40	Conifer	0	0	0	0	0	
								Hardwood	1	1	0	0	0	
22	LF	1	HS	20.0	0	5	95	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
22	LF	2	HS	30.0	80	10	90	Conifer	0	0	0	0	0	
								Hardwood	1	3	1	0	0	ALDER
22	LF	3	HS	45.0	5	5	95	Conifer	0	3	0	0	0	
								Hardwood	0	0	0	0	0	
22	RT	1	HS	35.0	90	15	80	Conifer	0	0	0	0	0	
								Hardwood	5	0	1	0	0	
22	RT	2	HS	40.0	85	30	70	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	1	
22	RT	3	HS	45.0	85	40	60	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
33	LF	1	HS	30.0	90	25	75	Conifer	0	0	0	0	1	
								Hardwood	0	0	2	0	0	
33	LF	2	HS	20.0	65	10	90	Conifer	0	0	0	0	0	
								Hardwood	1	0	0	0	0	
33	LF	3	HS	45.0	40	50	50	Conifer	0	0	0	0	0	
								Hardwood	5	0	0	0	0	
33	RT	1	HT	0.0	95	5	80	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	1	0	
33	RT	2	HS	5.0	100	10	85	Conifer	0	0	0	1	0	
								Hardwood	0	0	0	0	0	
33	RT	3	HS	20.0	95	35	65	Conifer	0	0	0	0	0	
								Hardwood	2	7	0	0	0	



Name: FIVE RIVERS
 Date: 1/10/2002
 Scale: 1 inch equals 2000 feet

Location: 10 43398 E 4905684 N
 Caption: CHERRY CREEK RESTORATION SITE - ALSA BASIN