

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

STREAM: Rasler Creek (MS-55)
 BASIN: Coquille River
 SURVEY TYPE: Pre and Post-Tx
 DATE: October 27, 2003
 REPORT PREPARED BY: Paul Jacobsen

The Rasler Creek restoration project extended approximately 400 meters, with the entire project being monitored for pre- and post-treatment conditions. Eleven habitat structures were created and 48 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, and enhanced salmonid rearing and over-wintering habitat. In the first seasons after restoration activities, large wood pieces, volume, and key pieces are increased as expected. Complex pools are higher as is winter riffle gravel.

	ODFW	Benchmark	Winter	Summer	Winter	Summer	
Habitat Variable	Desirable	Undesirable	Pre	Pre	Post	Post	
Reach #			2/28/00	7/19/00	2/21/01	7/19/01	
Pool Area	>35	<10	27.3	30.4	19.9	23.1	
Pool Frequency	5-8	>20	5.1	8.0	8.7	9.1	
Residual Pool Depth	>0.5-1.0m	<0.2-0.5m	.45	.49	.38	.37	
Complex Pools/km	>2.5	<1.0	5.2	2.3	12.3	7.6	
Width/Depth Ratio	<15	>30	10.2	8.8	9.9	10.1	
Riffle Gravel % area	>35	<15	26	43	31	32	
Silt-Sand-Organic %	<12	>25	3	15	22	33	
Shade %	>70	< 60		96		81	
LWD - pieces/100m	>20	<10	10.9	4.4	19.9	18.9	
LWD - Volume/100m	>30	<20	6.6	12.2	42.8	90.3	
LWD - Key pieces/ 100m	>3	<1	0.0	0.9	1.6	8.6	
Riparian Conifers>20" dbh/1000ft	>300	<150		20		102	
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. Nine habitat structures were also recorded.

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

STREAM: Rasler Creek (MS-55)
BASIN: Coquille River
SURVEY TYPE: Post-Tx
DATE: July 19, 2001
SURVEY CREW: Franklin Wall, John Blanchard
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 4.4 km²
USGS MAPS: Rasler Creek
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Rasler Creek habitat survey extended 397 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 4.4 (range: 3.0 – 6.0). Land use for the reach was mature (50-90 cm dbh) trees and light grazing. The average unit gradient was 3.1 percent. Riffles (49%), rapids (28%) and scour pools (23%) dominated stream habitat. Sand (29%), gravel (28%) and cobble (26%) dominated stream substrate. Wood volume was very high at 90.3 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

T30S-R11W-S23NE

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 avg: 4.4 range: 3.0-6.0

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0	Single Channel	0
Bedrock	0	Multiple Channel	0
Terrace	0	Braided Channel	0
Alt. Terrace/Hill	100		
Landuse	0		

Channel Characteristics

<u>Type</u>	<u>Length(m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary	397	850	0
Secondary	0	0	0

Channel Dimensions (m)

	<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>		<u>First Terrace</u>
Width	2.3	Width	4.4		5.6		6.8
Depth	0.21	Height	0.4		0.9		1.2
		W:D ratio	10.1	Entrenchment	1.3		

Stream Flow Type: LF Water Temp: 13.0-13.0°C
 Avg. Unit Gradient: 3.1% Habitat Units/100m: 7.1

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	MT	LG
Riparian Vegetation:	C30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	6%	Reach avg: 81%
Undercut Banks	3%	Range: 61- 89

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ($\geq 3m \times 0.15m$)	75	18.9
Volume (m ³)	358	90.3
Key pieces ($\geq 10m \times 0.6m$)	34	8.6

REACH 1

T30S-R11W-S23NE

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-LATERAL SCOUR	8	58	2.9	0.43	165	1	23	41	25	11	0	0
POOL-STRAIGHT SCOUR	2	11	3.0	0.40	32	0	25	40	20	15	0	0
RAPID/BOULDERS	7	119	1.8	0.11	235	45	8	20	29	34	8	2
RIFFLE	10	206	2.1	0.10	412	21	8	25	32	32	4	0
STEP/COBBLE	1	3	1.9	0.05	6	0	5	20	25	50	0	0
Total:	28	397	2.3	0.21	850	67	Avg:13	29	28	26	3	1

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m ²)	Percent	Large Boulders Number	#/100m ²
Dammed & BW Pools	0	0	-	-	0	0.00	0	0.0
Scour Pools	10	69	2.9	0.42	197	23.14	1	0.5
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	10	206	2.1	0.10	412	48.51	21	5.1
Rapids	7	119	1.8	0.11	235	27.68	45	19.1
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	1	3	1.9	0.05	6	0.67	0	0.0
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	10	25.2
Pools ≥1m deep:	0	0.0
Complex pools (LWD pieces ≥3):	3	7.6
Pool Frequency (channel widths/pool):	9.1	
Residual pool depth (avg)	0.37m	

STREAM SUMMARY

RASLER CREEK POST-TX (#55)

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	
28	397	2.3	0.21	850	13	29	28	26	3	1	67

Wetted Area

Habitat Group	(m ²)	Percent
Scour Pool	197	23.1
Backwater Pools	0	0.0
Glide	0	0.0
Riffle	412	48.5
Rapid	235	27.7
Cascade	0	0.0
Step	6	0.7
Dry	0	0.0

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	691
Total conifers/1000 ft	284
Total conifers >20" dbh/1000 ft	102
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	0.7	1.7	0.3	4.0	1.0	6.0
15-30cm	0.0	1.3	1.3	1.3	0.3	0.3	1.7	3.0
30-50cm	0.0	2.3	0.3	0.0	0.0	0.0	0.3	2.3
50-90cm	0.0	0.0	1.0	0.0	0.3	0.0	1.3	0.0
>90cm	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total/100m ²	0.3	4.0	3.3	3.0	1.0	4.3	1.6	3.8

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	62		58		53	
Shrub cover	47		24		31	
Grass/forb cover	32		40		37	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	50		33		83
High terrace	50		33		0	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		33		17	
Riprap	0		0		0	
Surface slope (%)	24		19		38	

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	691
Total conifers/1000 ft	284
Total conifers >20" dbh/1000 ft	102

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	1.0	6.0
15-30cm	1.7	3.0
30-50cm	0.3	2.3
50-90cm	1.3	0.0
>90cm	0.3	0.0

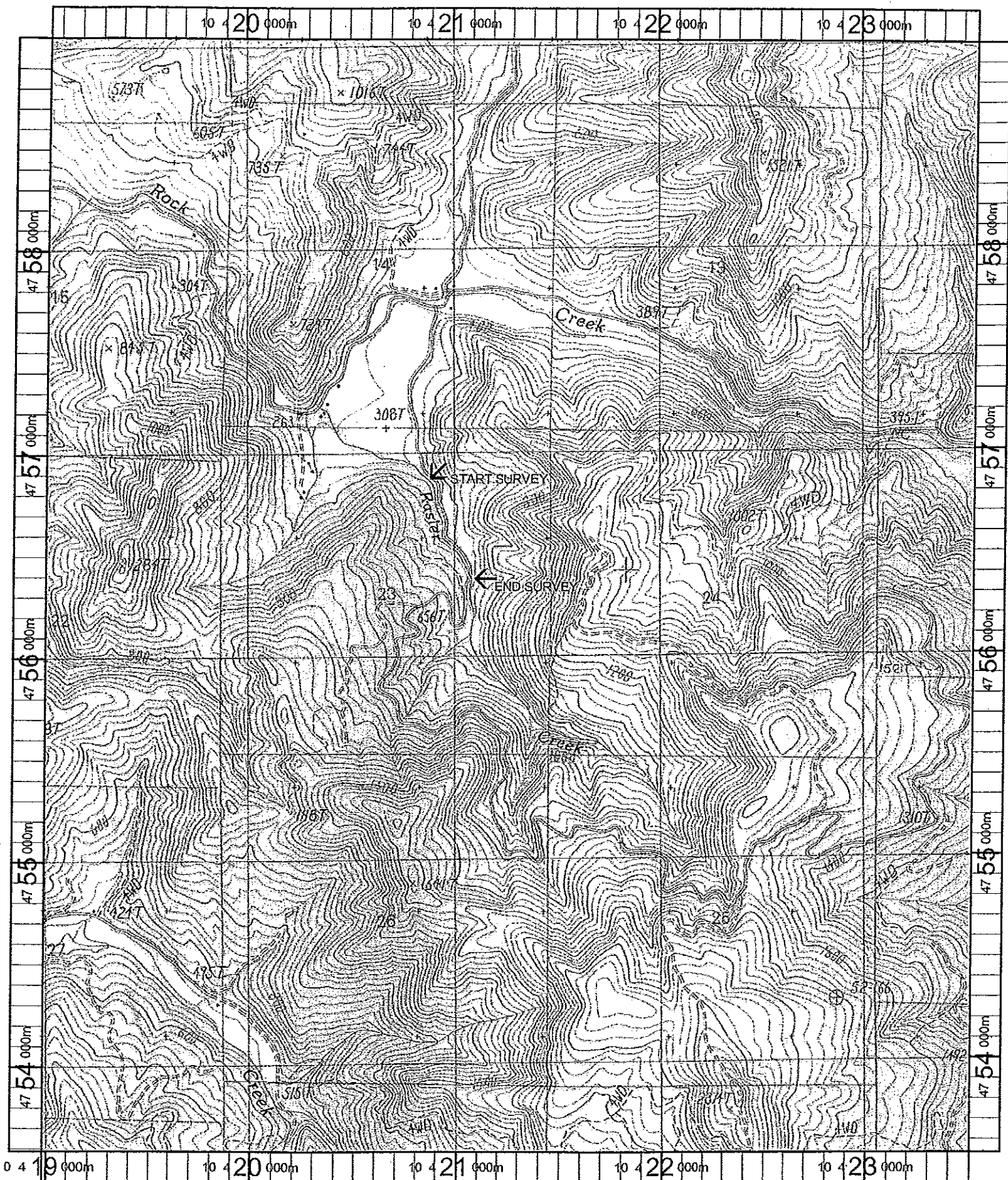
RIPARIAN ZONE VEGETATION

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	
8	LF	1	HS	70.0	35	70	20	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
8	LF	2	RB	0.0	10	25	20	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
8	LF	3	HS	30.0	25	50	20	Conifer	0	1	0	0	0	
								Hardwood	2	1	0	0	0	
8	RT	1	HT	1.0	80	0	80	Conifer	0	0	0	0	0	
								Hardwood	1	0	2	0	0	
8	RT	2	HT	1.0	100	0	70	Conifer	0	0	0	1	0	
								Hardwood	0	0	0	0	0	
8	RT	3	HS	60.0	80	5	70	Conifer	0	0	0	0	0	
								Hardwood	5	0	0	0	0	
17	LF	1	HT	0.0	50	70	20	Conifer	0	0	0	0	0	
								Hardwood	0	2	1	0	0	
17	LF	2	HT	0.0	80	70	20	Conifer	0	2	0	0	0	
								Hardwood	0	3	0	0	0	
17	LF	3	RB	0.0	40	20	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
17	RT	1	HS	45.0	65	80	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
17	RT	2	HS	70.0	40	30	60	Conifer	0	0	0	0	0	
								Hardwood	3	0	0	0	0	
17	RT	3	HS	60.0	70	70	20	Conifer	1	0	0	0	0	
								Hardwood	4	0	0	0	0	
21	LF	1	HS	20.0	60	20	40	Conifer	0	0	0	0	0	
								Hardwood	0	0	3	0	0	
21	LF	2	RB	0.0	30	20	10	Conifer	1	2	1	0	0	
								Hardwood	0	0	0	0	0	
21	LF	3	HS	30.0	20	40	40	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
21	RT	1	HT	5.0	80	40	20	Conifer	0	0	0	0	1	
								Hardwood	0	2	1	0	0	
21	RT	2	HS	45.0	90	0	60	Conifer	1	0	0	2	0	
								Hardwood	2	1	0	0	0	
21	RT	3	HS	50.0	80	0	60	Conifer	0	0	0	1	0	
								Hardwood	1	0	0	0	0	



<p>Name: RASLER CREEK Date: 11/7/100 Scale: 1 inch equals 2000 feet</p>	<p>Location: 10 421174 E 4756278 N Caption: RASLER CREEK RESTORATION SITE - COQUILLE BASIN</p>
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