

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

STREAM: North Fork Rock Creek Lower (NC-103)
BASIN: Nehalem River
SURVEY TYPE: Post-Tx
DATE: July 15, 1996
SURVEY CREW: Barry Thom, Matt Rowe
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 17.9 km²
USGS MAPS: Sunset Spring
ECOREGION: Coast Range Volcanic

GENERAL DESCRIPTION:

The North Fork Rock Creek habitat survey extended 623 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 2.8 (range: 1.5 – 4.0). Land use for the reach was mature (50-90 cm dbh) trees and timber harvest. The average unit gradient was 1.7 percent. Scour pools (37%) and rapids (32%) dominated stream habitat. Gravel (30%) and sand (26%) dominated stream substrate. Wood volume was high at 36.0 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

T4N-R6W-S16SW

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 avg: 2.8 range: 1.5-4.0

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	623	3,220	0
Secondary	387	1,133	3

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	4.0	Width	12.4	0.0	15.8
Depth	0.37	Height	0.6	0.0	1.0
		W:D ratio	22.8	Entrenchment	***

Stream Flow Type: LF Water Temp: 0.0-0.0°C
Avg. Unit Gradient: 1.7% Habitat Units/100m: 7.8

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	MT	TH
Riparian Vegetation:	D30	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	0%	Reach avg: 97%
Undercut Banks	1%	Range: 56-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces (≥3m x 0.15m)	129	20.7
Volume (m ³)	224	36.0
Key pieces (≥10m x 0.6m)	19	3.1

REACH 1

T4N-R6W-S16SW

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
DRY CHANNEL	1	47	6.0	0.00	282	0	0	60	40	0	0	0
GLIDE	3	47	4.6	0.23	287	0	13	33	48	5	0	0
POOL-ALCOVE	1	4	1.5	0.28	6	0	60	30	10	0	0	0
POOL-BACKWATER	8	40	2.5	0.38	100	0	44	39	13	3	1	0
POOL-DAMMED	2	18	7.5	0.56	120	0	40	40	20	0	0	0
POOL-ISOLATED	2	6	1.5	0.35	8	0	85	15	0	0	0	0
POOL-LATERAL SCOUR	17	220	3.9	0.62	935	0	19	23	29	20	8	1
POOL-PLUNGE	4	37	5.9	0.73	218	0	25	23	35	8	8	3
POOL-STRAIGHT SCOUR	7	104	4.3	0.73	454	4	13	24	21	21	16	5
PUDDLED CHANNEL	2	65	1.0	0.14	65	0	35	30	15	15	5	0
RAPID/BEDROCK	2	37	5.0	0.21	180	0	10	18	18	13	5	38
RAPID/BOULDERS	13	239	3.9	0.17	1,221	7	1	12	35	31	19	3
RIFFLE	8	123	2.2	0.17	287	0	11	29	48	11	1	0
STEP/COBBLE	3	14	7.3	0.10	132	0	7	10	50	23	10	0
STEP/LOG	6	10	6.3	0.04	60	0	13	52	33	3	0	0
Total:	79	1,010	4.0	0.37	4,353	11	Avg:19	26	30	15	8	2

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	13	68	3.0	0.40	234	5.37	0	0.0
Scour Pools	28	361	4.3	0.67	1,606	36.89	4	0.2
Glides	3	47	4.6	0.23	287	6.59	0	0.0
Riffles	8	123	2.2	0.17	287	6.60	0	0.0
Rapids	15	276	4.1	0.17	1,401	32.18	7	0.5
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	9	24	6.6	0.06	192	4.40	0	0.0
Dry	3	112	2.7	0.09	347	7.97	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	41	<u>#/Km</u>	40.6
Pools ≥1m deep:		2		2.0
Complex pools (LWD pieces≥3):		9		8.9
Pool Frequency (channel widths/pool):		2.0		
Residual pool depth (avg)				0.46m

STREAM SUMMARY

NF ROCK LOWER 1996 POST-TX

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	
79	1,010	4.0	0.37	4,353	19	26	30	15	8	2	11

Wetted Area

Habitat Group	(m ²)	Percent
Scour Pool	1,606	36.9
Backwater Pools	234	5.4
Glide	287	6.6
Riffle	287	6.6
Rapid	1,401	32.2
Cascade	0	0.0
Step	192	4.4
Dry	347	8.0

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) (2 transects)

Total hardwoods/1000 ft	1,280
Total conifers/1000 ft	61
Total conifers >20" dbh/1000 ft	0
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	13.5	1.0	0.0	0.0	0.0	1.0	13.5
15-30cm	0.0	0.5	0.0	0.0	0.0	0.5	0.0	1.0
30-50cm	0.0	2.0	0.0	1.5	0.0	0.5	0.0	4.0
50-90cm	0.0	1.0	0.0	1.5	0.0	0.0	0.0	2.5
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m ²	0.0	17.0	1.0	3.0	0.0	1.0	0.3	7.0

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	94		88		48	
Shrub cover	10		4		3	
Grass/forb cover	78		56		73	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	25		50		25
High terrace	0		0		25	
Low terrace	75		25		25	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		25		0	
Roadbed/Railroad	0		0		25	
Riprap	0		0		0	
Surface slope (%)	25		50		20	

Summary of Riparian Zone (0-30m) for all reaches (2 transects)

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

Total hardwoods/1000 ft	1,280
Total conifers/1000 ft	61
Total conifers >20" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zones 1-3	
	Conifer	Hardwood
3-15cm	1.0	13.5
15-30cm	0.0	1.0
30-50cm	0.0	4.0
50-90cm	0.0	2.5
>90cm	0.0	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	
90	LF	1	LT	0.0	100	0	100	Conifer	0	0	0	0	0	
								Hardwood	25	0	0	1	0	
90	LF	2	HS	100.0	100	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	1	1	0	
90	LF	3	HS	80.0	10	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
90	RT	1	LT	0.0	100	0	100	Conifer	0	0	0	0	0	
								Hardwood	2	0	0	1	0	
90	RT	2	LT	0.0	100	10	90	Conifer	2	0	0	0	0	
								Hardwood	0	0	2	2	0	
90	RT	3	HT	0.0	80	10	90	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
120	LF	1	HS	100.0	75	0	70	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
120	LF	2	HS	100.0	60	0	30	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
120	LF	3	RB	0.0	0	0	0	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
120	RT	1	LT	0.0	100	40	40	Conifer	0	0	0	0	0	
								Hardwood	0	1	4	0	0	
120	RT	2	SC	0.0	90	5	5	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
120	RT	3	LT	0.0	100	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	1	1	0	0	

STREAM HABITAT STATUS SHEET

STREAM NAME NF Rock Creek 1996 Part 17X CONTRACT _____
 BASIN Nebo CREW S. Thom, M. Cowley

DATE FILENAME COMMENTS

ENTRY			ENTERED BY:	
REACH	11/27/01	RL96P	HR.DBF	<i>[Signature]</i>
UNIT 1			U1.DBF	
UNIT 2			U2.DBF	
UNIT CHECK			CHK.DBF	
RIPARIAN			RP.DBF	
WOOD			WD.DBF	

ANALYSIS			ANALYZED BY:	
CALIBRATION			CAL.DBF	
MAP SUMMARY/CORRECTIONS				
WOOD EXPAND			WE.DBF	
UNIT LINK		↓	UX.DBF	
UNIT LINK WITH WOOD			UX2.DBF	
PROFILES + COMMENT SUMMARY			PRO.XLS	
HABITAT REPORT LINK		↓	LNK.DBF	
RIPARIAN LINK			RLK.DBF	

FINAL REPORT			COMPLETED BY:	
BAR GRAPHS			BAR.XLS	
COVER + REPORT			COV.DOC	
PHOTOS				
REPORT MAPS				
REACH ENTRY				

COMMENTS / NOTES

OREGON PLAN / REFERENCE SURVEYS			
BASIN AREA	BEAVER DAMS	#	MAJOR FAILURES #
STREAM ORDER	BEAVER ACTIVITY	# 1	DEBRIS JAMS #
JAMS FROM WOOD SHEETS # 6	CULVERT CROSSINGS	#	HABITAT STRUCTURES # 12