

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

STREAM: North Fork Necanicum River Tributary A (N-175)
BASIN: Necanicum River
SURVEY TYPE: Post-Tx
DATE: July 8, 2003
SURVEY CREW: Trevor Diemer, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 6.7 km²
USGS MAPS: Necanicum Jct.
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The North Fork Necanicum River Tributary A habitat survey extended 477 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.4 (range: 4.0-10.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 3.1 percent. Rapids (65%) dominated stream habitat. Cobble (44%) and gravel (36%) dominated stream substrate. Wood volume was very high at 44.9 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

T05N-R09W-S09SW

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	6.4	VWI Range:	4 - 10

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	477	2,177	0
Secondary	44	167	2

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	4.8	Width	8.9	23.7	37.9
Depth	0.30	Height	0.5	1.1	1.4
		W:D ratio	17.0	Entrenchment	3.2

Stream Flow Type: LF Water temp (C): 13.0 - 13.0
 Avg. Unit Gradient: 3.1% Habitat Units/100m: 6.1

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	M30	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	8%	Reach avg: 90%
Undercut Banks:	12%	Range: 72 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	74	15.5
Volume (m ³):	214	44.9
Key pieces (>=10m x 0.60m):	23	4.8

OREGON DEPARTMENT OF FISH AND WILDLIFE

NF NECANICUM TRIB A POST TX (N-175)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

7/8/03

REACH 1

T05N-R09W-S09SW

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 UNIT	2	35	4.8	0.00	152	0	0	5	45	45	5	0
POOL-LATERAL SCOUR	9	78	5.9	0.63	426	25	4	11	36	37	12	0
RAPID/BOULDERS	16	340	4.4	0.19	1,513	222	0	4	35	46	15	0
RIFFLE	4	66	3.7	0.16	240	21	1	6	35	48	10	0
STEP/COBBLE	1	2	7.6	0.10	14	0	0	0	40	50	10	0
Total:	32	521	4.8	0.30	2,344	268	Avg 1	6	36	44	13	0

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	9	78	5.9	0.63	426	18.17%	25	5.9
Glides	0	0			0	0.00%	0	0.0
Riffles	4	66	3.7	0.16	240	10.24%	21	8.8
Rapids	16	340	4.4	0.19	1,513	64.53%	222	14.7
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	1	2	7.6	0.10	14	0.58%	0	0.0
Dry	2	35	4.8	0.00	152	6.48%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	Total	# / Km
All Pools:	9	17.3
Pools >=1m deep:	0	0.0
Complex pools (LWD pieces>=3):	5	9.6
Pool frequency (channel widths/pool):	6.5	
Residual pool depth (avg):	0.51	

STREAM SUMMARY

NF NECANICUM TRIB A POST TX (N-175)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate						Large Boulders (#>0.5m)
					Percent Wetted Area						
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
32	521	4.8	0.30	2,344	1	6	36	44	13	0	268

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	0	0.00%
Scour Pools	426	18.17%
Glides	0	0.00%
Riffles	240	10.24%
Rapids	1,513	64.53%
Cascades	0	0.00%
Step/Falls	14	0.58%
Dry	152	6.48%
Culverts	0	0.00%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1	REACH 1
Summary of Riparian Zone (0-30m) 3 transects	
Total hardwoods/1000	549
Total conifers/1000 ft	427
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 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	0.3	1.7	1.3	1.7	2.0	0.3	3.7	3.7
15-30cm	0.7	1.0	0.3	1.7	0.3	0.7	1.3	3.3
30-50cm	0.7	0.7	0.0	0.7	0.3	0.3	1.0	1.7
50-90cm	0.7	0.3	0.0	0.0	0.3	0.0	1.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	2.3	3.7	1.7	4.0	3.0	1.3	2.3	3.0

Canopy closure and ground cover

	Zone 1 0-10 meters	Zone 2 10 - 20 meters	Zone 3 20 - 30 meters
	(%)	(%)	(%)
Canopy closure	68	78	59
Shrub cover	7	7	6
Grass/forb cover	89	90	82

Predominant landform in each zone

	Zone 1 0-10 meters	Zone 2 10 - 20 meters	Zone 3 20 - 30 meters
	(%)	(%)	(%)
Hillslope	17	17	17
High terrace	50	67	33
Low terrace	33	17	17
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 (%)	3	4	5

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	549
Total conifers/1000 ft	427
Total conifers >20" dbh/1000 ft	61
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	3.7	3.7
15-30cm	1.3	3.3
30-50cm	1.0	1.7
50-90cm	1.0	0.3
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

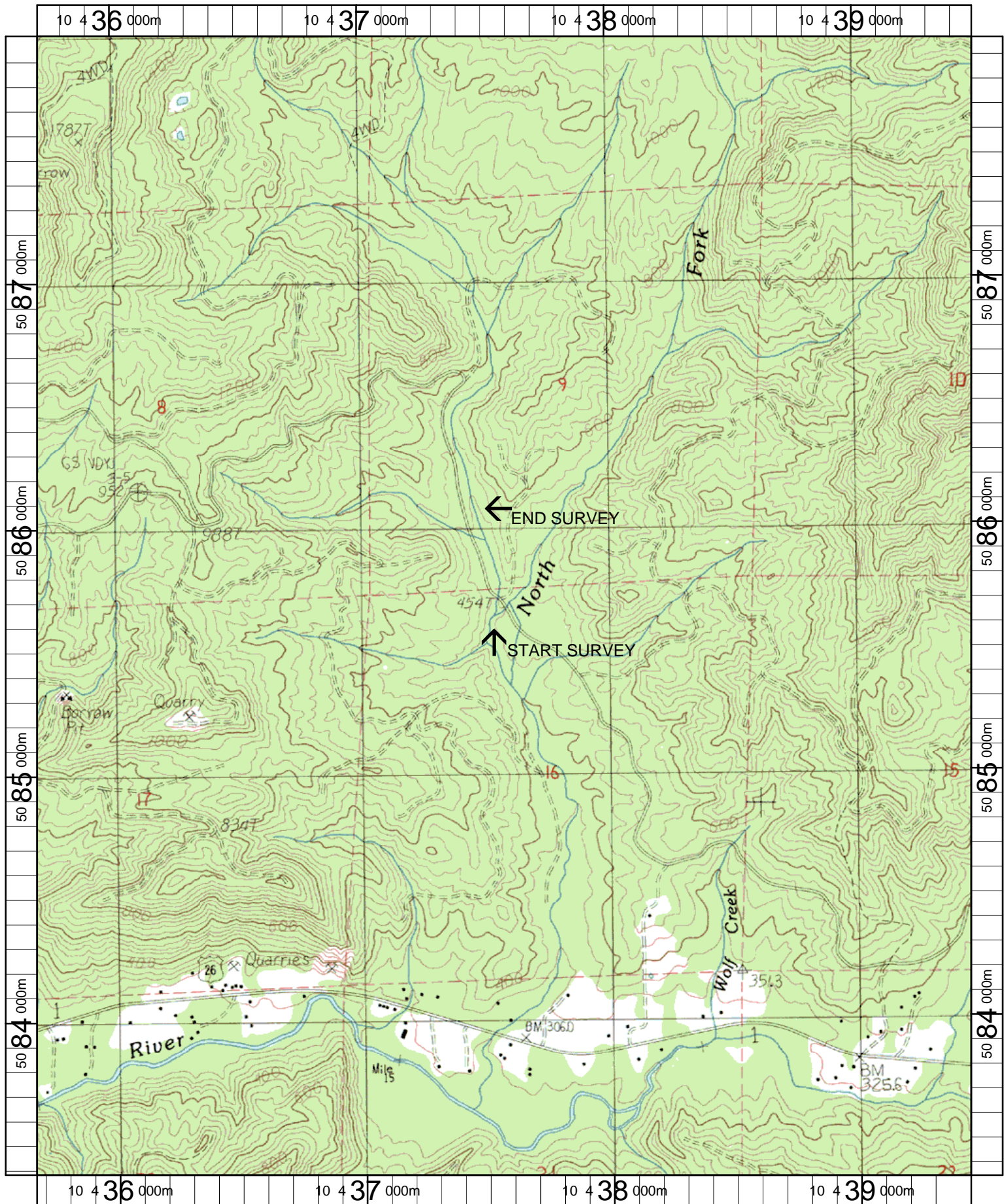
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
7	LF	3	RB	0	20	10	70	Conifer							
								Hardwood							
7	LF	1	HT	0	80	5	85	Conifer							10T 0437515
								Hardwood							5085780
7	RT	1	HT	0	30	5	95	Conifer							
								Hardwood	1		1	1			
7	RT	2	HT	0	85	5	95	Conifer							
								Hardwood	1	2					
7	LF	2	HT	0	70	10	85	Conifer							
								Hardwood			1				
7	RT	3	HT	0	80	5	95	Conifer							
								Hardwood							
14	RT	3	HT	0	85	5	90	Conifer	1						
								Hardwood							
14	LF	2	HT	0	80	5	95	Conifer							
								Hardwood			1				
14	LF	3	RB	0	0	5	60	Conifer							
								Hardwood							
14	RT	1	HT	0	90	5	90	Conifer	1		2	1			
								Hardwood							
14	RT	2	HT	0	85	5	90	Conifer	3	1					
								Hardwood							
14	LF	1	LT	0	75	5	95	Conifer		1					10T 0437500
								Hardwood		1	1				5085863
24	RT	2	HS	25	65	10	90	Conifer							3 VINE MAPLE
								Hardwood	3						
24	RT	1	HS	20	45	15	80	Conifer				1			2 VINE MAPLE
								Hardwood	2						
24	LF	3	LT	0	85	5	90	Conifer	3						
								Hardwood	1	2	1				
24	LF	2	LT	0	85	5	85	Conifer	1						
								Hardwood	1	3					
24	LF	1	LT	0	85	5	90	Conifer		1					10T 0437481
								Hardwood	2	2					5085971
24	RT	3	HS	30	85	5	85	Conifer	2	1	1	1			
								Hardwood							

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 1-NC SITE ID: 175 NF NECANICUM TRIB A POST TX (N-

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	RB	00	25		10T 0437536 5085645	13 DEG C @ 8:45 (N175S)
2	RB	00	50			MET/ @ TOP
5	LP	00	97.1	HS		RIP/MET (N175RI)
6	RB	00	119.1	HS		
7	RB	00	141.3	HS	10T 04437513 5085780 RI	
8	LP	00	151.6	HS		
11	SC	00	191.8		H=.30M	
12	RB	00	216.8	HS		
13	LP	00	222.1	HS		
15	LP	00	252.4		10T 0437500 5085863	RIP/MET (N175 R2)
19	LP	00	291.6	HS		THIS IS STARTING TO WORK
20	RI	00	306.4	HS		STARTING TO CUT 02
22	RI	00	332.1	HS		
24	RB	00	363.1		10T 0437481 5085971	MET/RIP (N175R3)
25	RB	01	389.1	HS		
26	DU	02	389.1	HS		GREAT 2ND CHANNEL
27	DU	02	389.1	HS		HIGH ACTIVE& FLOOD
28	LP	00	393.9	HS		
30	RB	00	443.9	HS		
32	RB	00	477.3		10T 0437447 5086101	N175E 10T 0437447 5086101



Name: NECANICUM JUNCTION
 Date: 6/11/2003
 Scale: 1 inch equals 1666 feet

Location: 10 437573 E 5085676 N
 Caption: NORTH FORK NECANICUM RIVER TRIBUTARY A
 RESTORATION SITE - NECANICUM BASIN