

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

STREAM: North Fork Wolf Creek (NC-95)  
BASIN: Nehalem River  
SURVEY TYPE: Post-Tx  
DATE: July 2, 2002  
SURVEY CREW: Rachel Werner, John Baldwin  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 20.7 km<sup>2</sup>  
USGS MAPS: Clear Creek  
ECOREGION: Coast Range Volcanic

**GENERAL DESCRIPTION:**

The North Fork Wolf Creek habitat survey extended 657 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 2.6 (range: 1.4 – 6.5). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (41%) and riffles (36%) dominated stream habitat. Gravel (42%) and bedrock (30%) dominated stream substrate. Wood volume was low at 20.5 m<sup>3</sup>/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

T03N-R05W-S31SW

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	2.6	VWI Range:	1.4 - 6.5

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	657	4,070	0
Secondary	24	74	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	5.6	Width	10.8	13.3	14.8
Depth	0.36	Height	0.6	1.3	1.6
		W:D ratio	19.3	Entrenchment	1.2
Stream Flow Type:	LF	Water temp (C):	-		
Avg. Unit Gradient:	1.1%	Habitat Units/100m:	4.9		

**Riparian, Bank, and Wood Summary**

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	4%	Reach avg: 93%
Undercut Banks:	4%	Range: 72 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	139	21.2
Volume (m <sup>3</sup> ):	135	20.5
Key pieces (>=10m x 0.60m):	11	1.7

OREGON DEPARTMENT OF FISH AND WILDLIFE

N FK WOLF CREEK POST-TX (NC-95)

HABITAT INVENTORY

Report Date: 3/17/03

Survey Date:

7/2/02

REACH 1		T03N-R05W-S31SW					REACH 1						
HABITAT DETAIL													
Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area						
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
GLIDE	2	63	5.9	0.20	372	0	0	10	65	0	0	25	
POOL-BACKWATER	1	2	2.6	0.20	6	0	80	10	10	0	0	0	
POOL-DAMMED	1	46	7.7	0.35	357	0	5	5	45	5	0	40	
POOL-LATERAL SCOUR	13	270	6.0	0.62	1,697	0	10	10	30	7	0	42	
RAPID/BEDROCK	1	21	6.0	0.20	128	0	0	0	10	5	0	85	
RAPID/BOULDERS	1	21	3.2	0.20	68	0	0	5	25	70	0	0	
RIFFLE	10	213	5.9	0.18	1,374	0	2	7	55	13	0	24	
RIFFLE W/ POCKETS	2	34	3.4	0.13	110	0	0	10	60	25	0	5	
STEP/COBBLE	1	9	3.5	0.20	32	0	5	15	60	20	0	0	
<b>Total:</b>	<b>32</b>	<b>680</b>	<b>5.6</b>	<b>0.36</b>	<b>4,144</b>	<b>0</b>	<b>Avg 8</b>	<b>9</b>	<b>42</b>	<b>12</b>	<b>0</b>	<b>30</b>	

HABITAT SUMMARY								
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders	
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )
Dammed & BW Pools	2	49	5.2	0.28	362	8.75%	0	0.0
Scour Pools	13	270	6.0	0.62	1,697	40.95%	0	0.0
Glides	2	63	5.9	0.20	372	8.97%	0	0.0
Riffles	12	247	5.4	0.17	1,485	35.83%	0	0.0
Rapids	2	43	4.6	0.20	196	4.72%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	1	9	3.5	0.20	32	0.78%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY		
	<u>Total</u>	<u># / Km</u>
All Pools:	15	22.8
Pools >=1m deep:	1	1.5
Complex pools (LWD pieces>=3):	8	12.2
Pool frequency (channel widths/pool):	4.2	
Residual pool depth (avg):	0.47	

**RIPARIAN ZONE VEGETATION SUMMARY**

**REACH 1** **REACH 1**

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

Total hardwoods/1000	813
Total conifers/1000 ft	203
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	0.0	0.0	2.3	0.7	7.0	0.7	9.3
15-30cm	0.3	0.0	0.0	0.3	0.7	0.3	1.0	0.7
30-50cm	0.7	2.3	0.3	0.3	0.7	0.7	1.7	3.3
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	1.0	2.3	0.3	3.0	2.0	8.0	1.1	4.4

**Canopy closure and ground cover**

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Canopy closure	90	83	86
Shrub cover	24	26	36
Grass/forb cover	73	74	57

**Predominant landform in each zone**

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Hillslope	83	83	83
High terrace	17	17	17
Low terrace	0	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	0	0
Riprap	0	0	0
Surface slope (%)	35	13	10

**RIPARIAN ZONE VEGETATION**

Reach 1

Reach 1

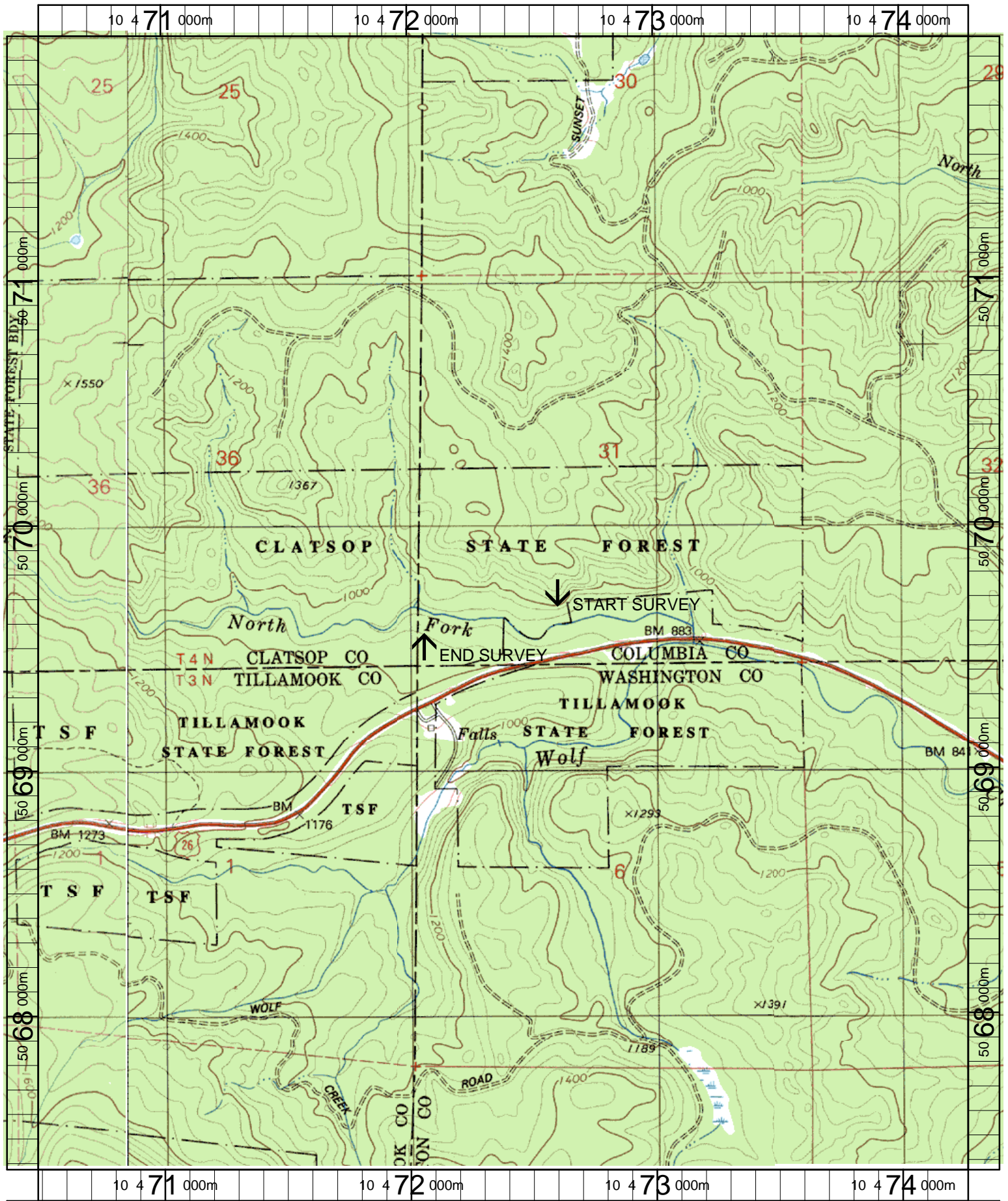
Unit	Side	Zone	Surface	Slope	Cover (percent)			Diameter class (cm)					Notes	
					Canopy	Shrub	Grass	3-15	15-30	30-50	50-90	>90		
12	LF	1	HS	70	95	10	90	Conifer			1			
								Hardwood						
12	LF	2	HS	30	80	15	85	Conifer			1			
								Hardwood		1				
12	LF	3	HS	30	60	10	70	Conifer						
								Hardwood						
12	RT	1	HS	17	90	10	90	Conifer		1	1			
								Hardwood			1			
12	RT	2	HS	14	65	15	85	Conifer						
								Hardwood						
12	RT	3	HS	1	80	25	75	Conifer	2		1			
								Hardwood						
19	LF	1	HS	70	75	10	75	Conifer						
								Hardwood						
19	LF	2	HS	4	85	20	80	Conifer						
								Hardwood	2					
19	LF	3	HS	2	95	15	85	Conifer				1		
								Hardwood						
19	RT	1	HT	13	90	70	30	Conifer						
								Hardwood			4			
19	RT	2	HT	6	90	60	40	Conifer						
								Hardwood	3					
19	RT	3	HT	5	95	70	30	Conifer						
								Hardwood		1	2			
27	LF	1	HS	18	95	35	65	Conifer						
								Hardwood			2			
27	LF	2	HS	11	95	30	70	Conifer						
								Hardwood	2		1			
27	LF	3	HS	14	100	85	10	Conifer						VINE MAPLE CLUMP
								Hardwood	20					
27	RT	1	HS	23	95	10	90	Conifer						
								Hardwood						
27	RT	2	HS	14	85	15	85	Conifer						
								Hardwood						
27	RT	3	HS	10	85	10	70	Conifer			2			
								Hardwood	1					

# Comment Summary

## Oregon Plan Monitoring Sites 2002

MONITORING AREA: 1-NC      SITE ID: 95      N FK WOLF CREEK POST-TX (NC-95)

<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	LP	01	10	HS	COHO, START	START SURVEY
2	RP	01	31.6	HS		
4	LP	00	58.7	HS		
6	LP	00	84.1	DJ		
10	LP	00	164.4	DJ	COHO	
12	LP	00	210.6		RIP#1	RIP#1
14	LP	00	254	HS		
19	LP	00	348.6	HS	RIP#2	RIP#2
20	RI	00	364.5		FRY	
21	LP	00	387.1	HS		
22	RI	00	419.1	HS,DJ		
23	RI	00	442.8	HS		
24	GL	00	470.5	HS		
26	LP	00	492.7	HS		
27	DP	00	539		RIP#3	RIP#3
32	RR	00	656.9	HS	END SURVEY	



Name: CLEAR CREEK  
 Date: 3/20/2003  
 Scale: 1 inch equals 1666 feet

Location: 10 472379 E 5069682 N  
 Caption: NORTH FORK WOLF CREEK RESTORATION SITE -  
 NEHALEM BASIN