

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

STREAM: Northrup Creek Upper (N-203)
BASIN: Nehalem River
SURVEY TYPE: Post-Tx
DATE: July 7, 2003
SURVEY CREW: Trevor Diemer, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 29.6 km²
USGS MAPS: Nicolai Mtn.
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Northrup Creek habitat survey extended 544 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.6 (range: 6.0-9.0). Land use for the reach was second growth (15-30 cm dbh) and mature (50-90 cm dbh) trees. The average unit gradient was 1.0 percent. Scour pools (61%) and riffles (33%) dominated stream habitat. Gravel (58%) dominated stream substrate. Wood volume was very high at 71.3 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

T06N-R06W-S08NW

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 6.6		VWI Range: 6 - 9	

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	544	2,979	0
Secondary	14	14	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	5.0	Width	7.8	10.5	14.9
Depth	0.46	Height	0.6	1.2	1.4
		W:D ratio	12.8	Entrenchment	1.4
Stream Flow Type:	LF	Water temp (C): 14.0 - 14.0			
Avg. Unit Gradient:	1.0%	Habitat Units/100m: 6.1			

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	19%	Reach avg: 82%
Undercut Banks:	6%	Range: 42 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	94	17.3
Volume (m ³):	388	71.3
Key pieces (>=10m x 0.60m):	49	9.0

OREGON DEPARTMENT OF FISH AND WILDLIFE NORTHROP CREEK UPPER POST-TX (N-203)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

7/7/03

REACH 1		T06N-R06W-S08NW					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	
POOL-BEAVER DAM	1	18	6.8	0.90	123	0	10	30	60	0	0	0	
POOL-ISOLATED	1	4	2.2	0.20	9	0	25	50	25	0	0	0	
POOL-LATERAL SCOUR	15	305	6.0	0.81	1,840	0	12	25	48	2	0	13	
RIFFLE	15	224	4.0	0.14	977	0	3	10	69	4	0	14	
STEP/BEAVER DAM	1	1	7.4	0.10	6	0	10	20	70	0	0	0	
STEP/COBBLE	1	6	6.4	0.10	39	0	0	10	50	40	0	0	
Total:	34	558	5.0	0.46	2,993	0	Avg 8	18	58	4	0	12	

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		14
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	2	22	4.5	0.55	132	4.41%	0	0.0	
Scour Pools	15	305	6.0	0.81	1,840	61.46%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	15	224	4.0	0.14	977	32.63%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	2	7	6.9	0.10	45	1.50%	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:	17	30.4
Pools >=1m deep:	3	5.4
Complex pools (LWD pieces>=3):	7	12.5
Pool frequency (channel widths/pool):	4.2	
Residual pool depth (avg):	0.71	

STREAM SUMMARY

NORTHRUP CREEK UPPER POST-TX (N-203)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Large Boulders (>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
34	558	5.0	0.46	2,993	8	18	58	4	0	12	

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	132	4.41%
Scour Pools	1,840	61.46%
Glides	0	0.00%
Riffles	977	32.63%
Rapids	0	0.00%
Cascades	0	0.00%
Step/Falls	45	1.50%
Dry	0	0.00%
Culverts	0	0.00%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1	REACH 1
Summary of Riparian Zone (0-30m) 3 transects	
Total hardwoods/1000	1097
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	1.7	0.0	5.0	0.0	5.3	0.0	12.0
15-30cm	0.0	0.7	0.0	1.0	0.0	0.7	0.0	2.3
30-50cm	0.7	2.0	0.3	0.0	0.0	0.7	1.0	2.7
50-90cm	0.0	0.7	0.0	0.0	0.0	0.3	0.0	1.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.7	5.0	0.3	6.0	0.0	7.0	0.3	6.0

Canopy closure and ground cover

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Canopy closure	54	63	77
Shrub cover	8	17	20
Grass/forb cover	90	86	79

Predominant landform in each zone

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Hillslope	0	0	17
High terrace	50	100	83
Low terrace	50	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 (%)	0	0	2

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	1097
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-m wide band

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.0	12.0
15-30cm	0.0	2.3
30-50cm	1.0	2.7
50-90cm	0.0	1.0
>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		
9	LF	2	HT	0	30	20	80	Conifer							VINE MAPLES
								Hardwood	6						
9	LF	3	HT	0	80	10	90	Conifer							VINE MAPLES
								Hardwood	10						
9	RT	1	HT	0	90		70	Conifer				2			
								Hardwood							
9	RT	2	HT	0	90		70	Conifer				1			VINE MAPLES
								Hardwood	6						
9	RT	3	HT	0	90		60	Conifer							VINE MAPLES
								Hardwood	3						
9	LF	1	LT	0	10	10	90	Conifer							10T 0404898
								Hardwood							5095983
17	LF	2	HT	0	85		95	Conifer							
								Hardwood							
17	RT	2	HT	0	75	20	80	Conifer							VINE MAPLE
								Hardwood	3						
17	LF	3	HT	0	85		95	Conifer							
								Hardwood				1			
17	RT	3	HT	0	75	20	80	Conifer							
								Hardwood				1			
17	LF	1	LT	0	40		95	Conifer							10T 0464851
								Hardwood	1			2			5096142
17	RT	1	LT	0	75	5	95	Conifer							
								Hardwood	3			2	1		
26	RT	3	HT	0	60	30	70	Conifer							
								Hardwood							
26	RT	2	HT	0	40		100	Conifer							
								Hardwood							
26	RT	1	HT	0	50		100	Conifer							
								Hardwood					1		
26	LF	3	HS	10	70	20	80	Conifer							
								Hardwood	3	2					
26	LF	1	HT	0	60	10	90	Conifer							10T 0464920
								Hardwood	1	2	2				5096277
26	LF	2	HT		60	10	90	Conifer							
								Hardwood			3				

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 1-NC SITE ID: 203 NORTHRUP CREEK UPPER POST-TX

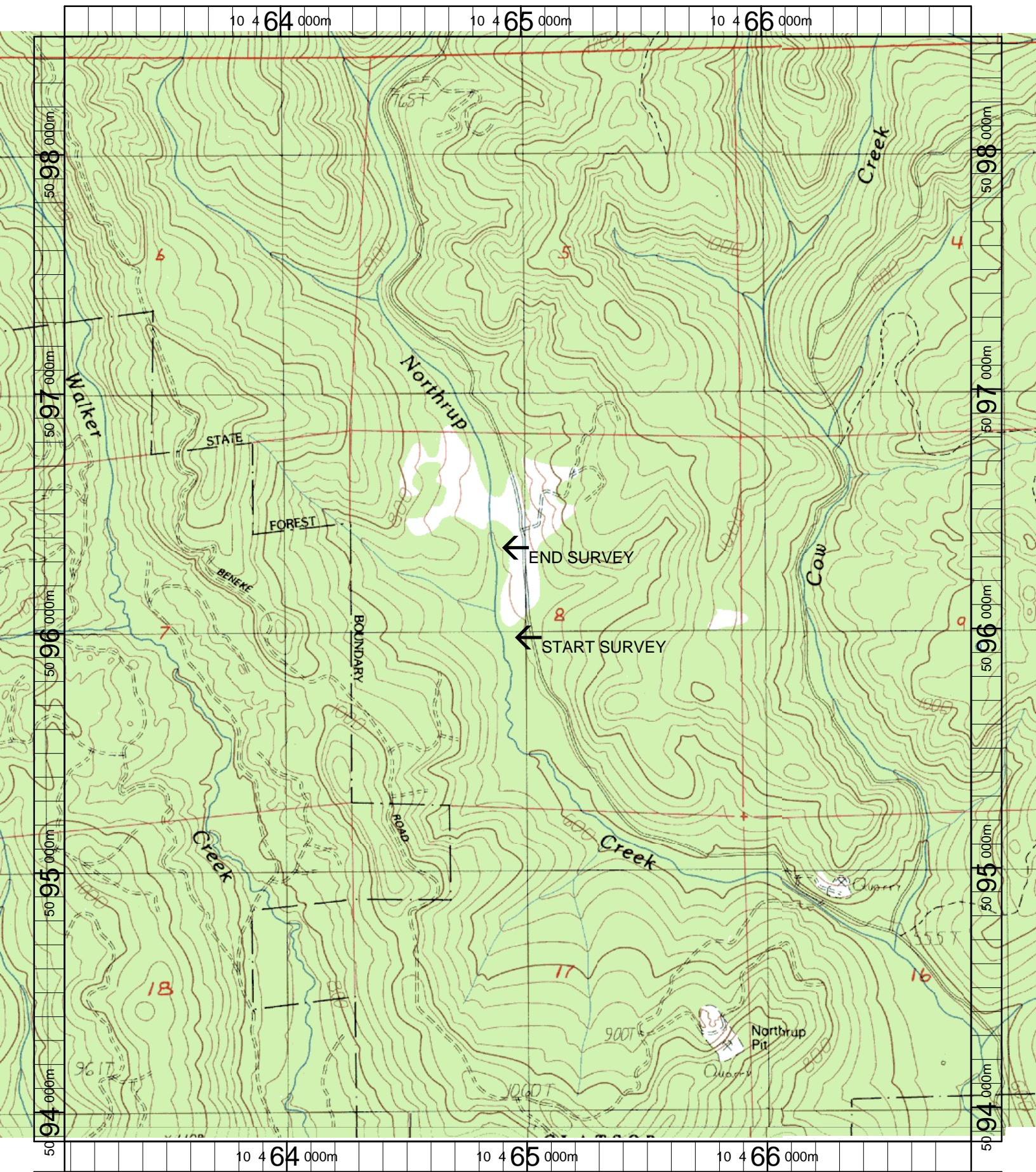
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	23.8		@ TOP OF UNIT	
3	SD	00	35.9	BV, BD	H=.30M	FRESH DAM
4	BP	00	54	BV		STICKS
5	RI	01	83.8	TJ/ ; HS	SORRY ABOUT LENGTH	
7	LP	00	98.7	SS/		
8	RI	00	106.5	BV		STICKS
9	LP	00	126.7	BV	MET/RIP	RIP.T. #4
10	LP	00	147.4	HS	13.5 DEG C@ 12:30	
11	RI	00	152.9	BV		STICKS
12	LP	00	172	HS		COHO FRY
13	RI	00	192.2	HS		
14	LP	00	210			HARDPAN CLAY BEDROCK
16	LP	00	243.6			HARDPAN CLAY BDRK
17	RI	00	251.4	HS	MET/ RIP (N203R2)	RIP.T. #2
21	LP	00	297.7	HS		
22	SC	00	303.8		H=.35M	
23	LP	00	328.9	WL		
25	LP	00	380.6			COHO FRY
26	RI	00	399.3	BV	10T 0464920 5096299 MET	STICKS
28	LP	00	429.1	HS		
29	RI	00	446.8	HS		

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 1-NC SITE ID: 203 NORTHRUP CREEK UPPER POST-TX

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
32	RI	00	509	HS; DJ		
33	LP	00	534.3	HS		



Name: NICOLAI MT
 Date: 6/11/2003
 Scale: 1 inch equals 1666 feet

Location: 10 464970 E 5096179 N
 Caption: NORTHRUP CREEK UPPER RESTORATION SITE -
 NEHALEM BASIN