

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

STREAM: Necanicum River (N-370)
BASIN: Necanicum River
SURVEY TYPE: Pre-Tx
DATE: July 12, 2007
SURVEY CREW: Trevor Diemer, Nathan Wilson
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 4.0 km²
USGS MAPS: Saddle Mountain
ECOREGION: Coast Range Coastal Uplands

GENERAL DESCRIPTION:

The Necanicum River habitat survey extended 698 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 6.3 (range: 5.0-7.0). Land use for the reach was young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 3.0 percent. Rapids (54%) and riffles (28%) dominated stream habitat. Gravel (47%) and cobble (35%) dominated stream substrate. Wood volume was very low at 3.2 m³/100m.

COMMENTS:

There were no potential barriers to upstream fish migration in the surveyed length.

REACH 1

T05N-R08W-S18SW

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	6.3	VWI Range:	5 - 7

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 Channel	698	2,403	0
Secondary Channel	31	32	0
Off-Channel Units	22	23	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 4	<u>First Terrace</u> n = 4
Width: 2.8	Width: 6.3	6.8 (5.25 - 8.5)	7.6 (6 - 9)
Depth: 0.27	Height: 0.2	0.4 (0.4 - 0.5)	0.9 (0.6 - 1.1)

W:D ratio: 30.0
 Stream Flow Type: LF
 Average Unit Gradient: 3.0%
 Water temperature (°C): 16.0 - 16.0

Entrenchment (ACW:FPW ratio): 1.1
 Habitat Units/100m (total channel length): 5.2
 Habitat Units/100m (primary channel length): 5.6

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	ST
Riparian Vegetation:	D15	C30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	1%	Reach avg: 98%
Undercut Banks:	9%	Range: 89 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	69	9.9
Volume (m ³):	22	3.2
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

NECANICUM RIVER PRE-TX (1-NC, 370)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/12/2007

REACH 1		T05N-R08W-S18SW					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-BACKWATER	2	7	1.5	0.28	9	0	25	23	30	20	3	0
POOL-LATERAL SCOUR	13	115	2.9	0.52	359	3	4	12	52	28	4	0
POOL-PLUNGE	2	17	5.0	0.75	76	2	2	12	47	33	7	0
RAPID/BOULDERS	16	436	2.7	0.08	1,321	70	1	7	45	40	7	0
RIFFLE	5	176	3.3	0.11	692	34	0	4	48	41	7	0
STEP/LOG	1	1	1.0	0.05	1	0	0	0	50	50	0	0
Total:	39	751	2.8	0.27	2,457	109	Avg: 3	9	47	35	6	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	2	7	1.5	0.28	9	0.37%	0	0.0	
Scour Pools	15	132	3.2	0.55	435	17.71%	5	1.1	
Glides	0	0			0	0.00%	0	0.0	
Riffles	5	176	3.3	0.11	692	28.15%	34	4.9	
Rapids	16	436	2.7	0.08	1,321	53.75%	70	5.3	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	1	1	1.0	0.05	1	0.02%	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>	Total of all Channel Lengths	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	17	22.6	24.3
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	5	6.7	7.2
Pool frequency (channel widths/pool):	7.1		
Residual pool depth (avg):	0.47		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

NECANICUM RIVER PRE-TX
GCG: 1-NC SITE ID: 370

Survey Date 7/12/2007

RIPARIAN ZONE

Report Date: 11/7/2007

VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	1321
Total conifers/1000 ft	203
Total conifers >20" dbh/1000 ft	20
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	5.0	0.0	2.0	0.0	1.7	0.3	8.7
15-30cm	0.0	3.3	0.7	1.7	1.0	1.3	1.7	6.3
30-50cm	0.0	1.7	0.0	2.3	1.0	2.0	1.0	6.0
50-90cm	0.3	0.3	0.0	0.3	0.0	0.0	0.3	0.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.7	10.3	0.7	6.3	2.0	5.0	1.1	7.2

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	72	82	88
Shrub cover	51	48	40
Grass/forb cover	49	53	60

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	0	33	50
High terrace	100	67	50
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 (%)	0	16	23

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	1321
Total conifers/1000 ft	203
Total conifers >20" dbh/1000 ft	20
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	0.3	8.7
15-30cm	1.7	6.3
30-50cm	1.0	6.0
50-90cm	0.3	0.7
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

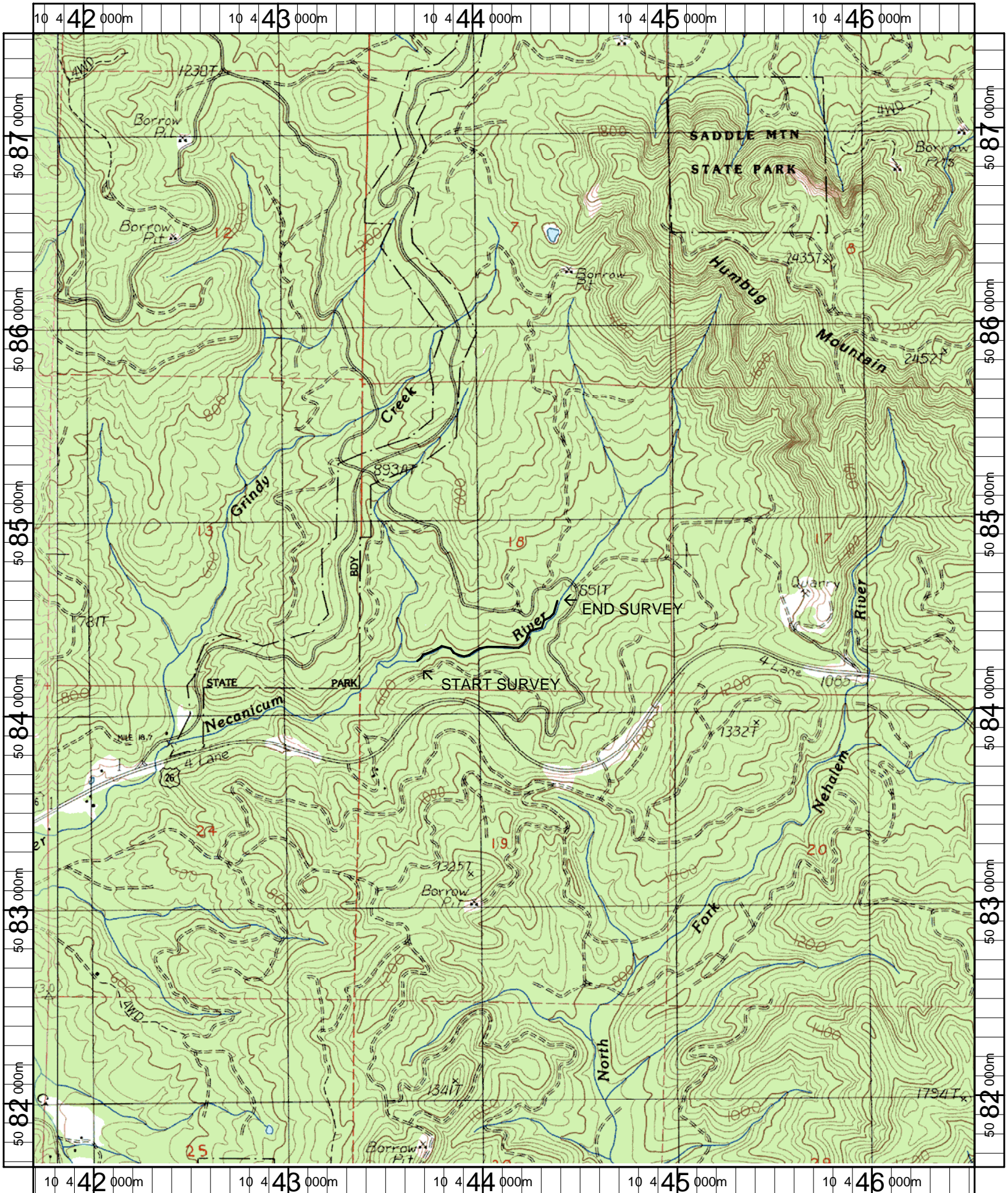
Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
1	LT	1	HT	0	90	30	70	Conifer							2D
								Hardwood	2	3		1			0443935 5084282\
1	LT	2	HT	0	90	40	60	Conifer							
								Hardwood	1	1	2				
1	LT	3	HT	0	90	40	60	Conifer							
								Hardwood	3	1	2				
1	RT	1	HT	0	90	50	50	Conifer	1						
								Hardwood	4	1	1				
1	RT	2	HS	50	95	60	40	Conifer							
								Hardwood	1	1	2				
1	RT	3	HS	50	95	40	60	Conifer							
								Hardwood							
8	LT	1	HT	0	70	60	40	Conifer							0444135
								Hardwood	1	1	3				5084339 3D
8	LT	2	HT	0	80	40	60	Conifer							
								Hardwood			1				
8	LT	3	HT	0	90	25	75	Conifer							
								Hardwood	2	2	1				
8	RT	1	HT	0	80	25	75	Conifer							
								Hardwood	1	2					
8	RT	2	HS	45	90	20	80	Conifer			1				
								Hardwood			1	2			
8	RT	3	HS	55	90	15	85	Conifer			2	1			
								Hardwood							
24	LT	1	HT	0	30	70	30	Conifer					1		0444290
								Hardwood			1	1			5084427 3D
24	LT	2	HT	0	60	60	40	Conifer							
								Hardwood	2	1		1			
24	LT	3	HS	35	80	50	50	Conifer							
								Hardwood			1	2			
24	RT	1	HT	0	70	70	30	Conifer							
								Hardwood	7	2					
24	RT	2	HT	0	75	65	35	Conifer			1				
								Hardwood	2	1					
24	RT	3	HT	0	80	70	30	Conifer			1	2			
								Hardwood				1			

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 370 STREAM: NECANICUM RIVER PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
2	LP	01	27	/TJ	
9	BW	10	249		SALMONIDS TRAPPED W/IN POOL
10	PP	00	256	/SS	
15	LP	00	315.5	/SS	
16	RB	01	375.5	/TJ	TRIB=14 C, MAIN=16 C
17	RB	11	375.5		10T 0444219 5084358
23	LP	00	485.5		HARDPAN
39	LP	00	698.4	DJ, HS	END SITE 370, BEGINNING SITE 61



Name: SADDLE MT
 Date: 4/25/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0444134 E 5084580 N
 Caption: UPPER NECANICUM RIVER RESTORATION SITE - NECANICUM BASIN