

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

STREAM: Necanicum River (N-61)
BASIN: Necanicum River
SURVEY TYPE: Post-Tx
DATE: July 13, 2007
SURVEY CREW: Trevor Diemer, Nathan Wilson
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 3.1 km²
USGS MAPS: Saddle Mountain
ECOREGION: Coast Range Coastal Uplands

GENERAL DESCRIPTION:

The Necanicum River habitat survey extended 426 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 5.2 (range: 4.0-6.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 2.5 percent. Scour pools (50%) and riffles (26%) dominated stream habitat. Gravel (47%) and cobble (33%) dominated stream substrate. Wood volume was low at 18.3 m³/100m.

COMMENTS:

There was one potential barrier to upstream fish migration at low flows in the surveyed length. This was a step over log at unit 9.

The crew noted several habitat structures during the survey.

REACH 1

T05N-R08W-S18SE

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	5.2	VWI Range:	4 - 6

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 Channel	426	1,036	0
Secondary Channel	0	0	0
Off-Channel Units	5	10	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.6	Width: 5.4	6.4 (6 - 7.5)	8.2 (6.5 - 12)
Depth: 0.23	Height: 0.2	0.4 (0.4 - 0.5)	0.8 (0.75 - 1)

W:D ratio: 24.8

Entrenchment (ACW:FPW ratio): 1.2

Stream Flow Type: LF

Habitat Units/100m (total channel length): 7.4

Average Unit Gradient: 2.5%

Habitat Units/100m (primary channel length): 7.5

Water temperature (°C): 15.0 - 15.0

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	3%	Reach avg: 95%
Undercut Banks:	4%	Range: 78 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	88	20.7
Volume (m ³):	78	18.3
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

NECANICUM RIVER POST-TX (1-NC, 61)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/13/2007

REACH 1		T05N-R08W-S18SE					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
CASCADE/BOULDERS	1	13	2.0	0.07	26	0	0	22	39	39	0	0
POOL-BACKWATER	1	3	2.0	0.30	6	0	25	50	25	0	0	0
POOL-LATERAL SCOUR	12	154	2.6	0.43	399	0	3	24	44	27	2	0
POOL-PLUNGE	1	5	4.0	0.30	20	0	0	20	50	30	0	0
POOL-STRAIGHT SCOUR	1	27	3.8	0.50	101	0	5	10	60	25	0	0
RAPID/BOULDERS	7	96	2.1	0.07	201	1	1	11	47	40	1	0
RIFFLE	6	125	2.1	0.07	267	5	0	8	49	41	2	0
STEP/COBBLE	1	4	2.0	0.07	8	0	0	0	50	50	0	0
STEP/LOG	2	4	4.5	0.04	18	0	3	10	63	25	0	0
Total:	32	431	2.6	0.23	1,046	6	Avg: 2	17	47	33	1	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	1	3	2.0	0.30	6	0.57%	0	0.0	
Scour Pools	14	186	2.8	0.42	521	49.75%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	6	125	2.1	0.07	267	25.52%	5	1.9	
Rapids	7	96	2.1	0.07	201	19.19%	1	0.5	
Cascades	1	13	2.0	0.07	26	2.49%	0	0.0	
Step/Falls	3	8	3.7	0.05	26	2.49%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	15	34.8	35.2
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	3	7.0	7.0
Pool frequency (channel widths/pool):	5.3		
Residual pool depth (avg):	0.35		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

NECANICUM RIVER POST-TX
GCG: 1-NC SITE ID: 61

Survey Date 7/13/2007

RIPARIAN ZONE

Report Date: 11/7/2007

VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 5 transects

Total hardwoods/1000	1170
Total conifers/1000 ft	646
Total conifers >20" dbh/1000 ft	12
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	1.0	1.4	0.8	1.0	0.0	0.2	1.8	2.6
15-30cm	1.4	4.0	2.2	3.2	1.0	3.6	4.6	10.8
30-50cm	1.0	3.0	1.4	0.8	1.6	1.8	4.0	5.6
50-90cm	0.0	0.2	0.0	0.0	0.2	0.0	0.2	0.2
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	3.4	8.6	4.4	5.0	2.8	5.6	3.5	6.4

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	80	76	76
Shrub cover	33	31	34
Grass/forb cover	67	70	66

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	10	10	50
High terrace	90	90	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 (%)	4	4	21

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

5 transects

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

Total hardwoods/1000	1170
Total conifers/1000 ft	646
Total conifers >20" dbh/1000 ft	12
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	1.8	2.6
15-30cm	4.6	10.8
30-50cm	4.0	5.6
50-90cm	0.2	0.2
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

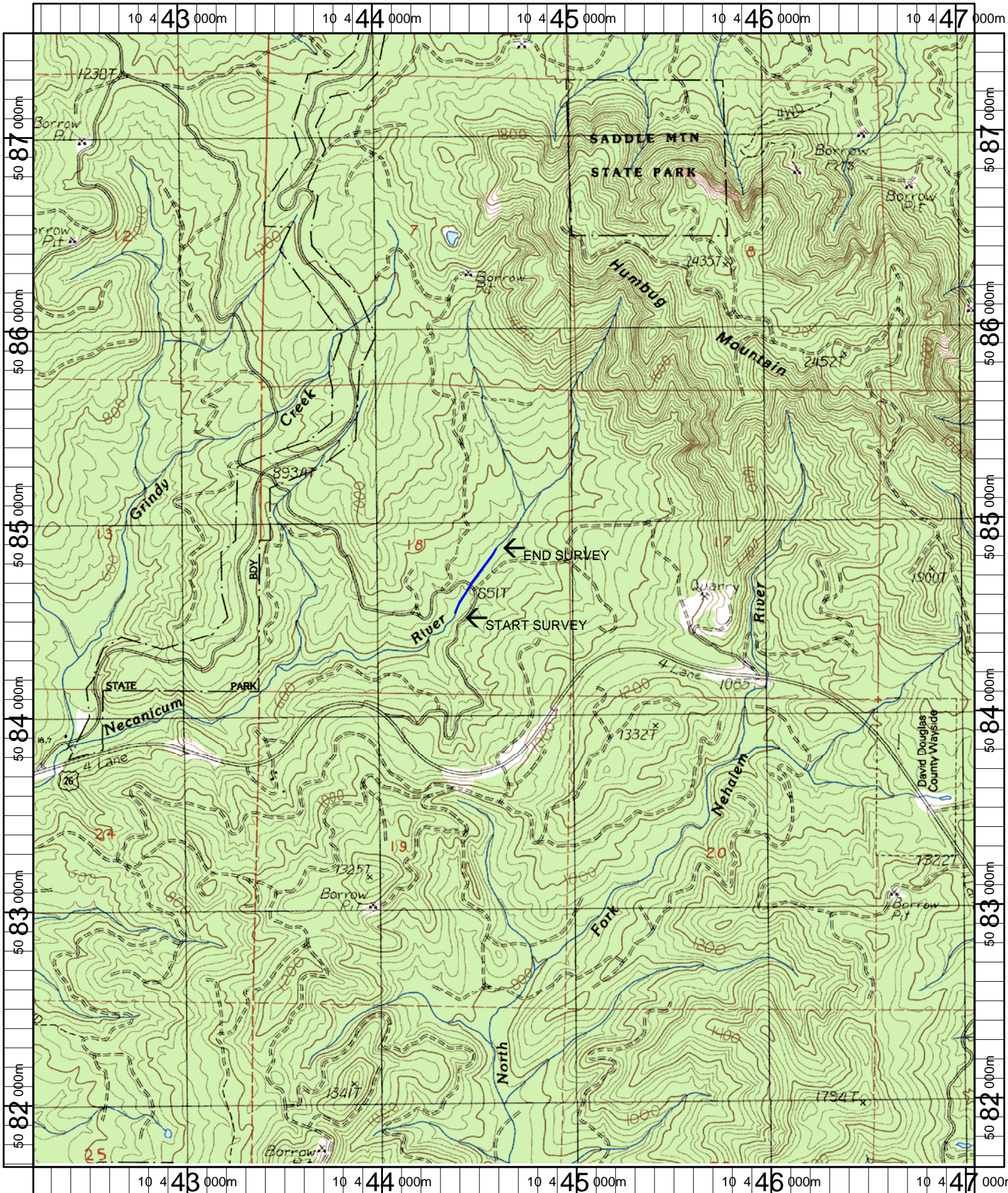
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
1	LT	1	HT	0	85	20	80	Conifer							
								Hardwood	2	4	3				
1	LT	2	HT	0	60	15	85	Conifer		1					
								Hardwood		4					
1	LT	3	HT	0	30	30	70	Conifer							
								Hardwood	1	2					
1	RT	1	HT	0	70	80	20	Conifer		1	1				
								Hardwood	1	3					
1	RT	2	HT	0	50	80	20	Conifer				2			
								Hardwood		3					
1	RT	3	HT	0	70	50	50	Conifer		1	1				
								Hardwood		3	2				
8	LT	1	HT	0	35	35	65	Conifer		1					0444444
								Hardwood			1				5084655
															2D
8	LT	2	HT	0	50	15	85	Conifer	2	2					
								Hardwood							
8	LT	3	HS	45	80	5	95	Conifer			2	1			
								Hardwood							
8	RT	1	HT	0	70	15	85	Conifer		2					
								Hardwood			3				
8	RT	2	HT	0	60	45	55	Conifer							
								Hardwood		2					
8	RT	3	HT	0	70	35	65	Conifer				1			
								Hardwood		2	1				
16	LT	1	HT	0	90	50	50	Conifer							0444506
								Hardwood		1	4	1			5084695
															3D
16	LT	2	HT	0	90	40	60	Conifer	2						
								Hardwood		2	1				
16	LT	3	HT	0	85	40	60	Conifer							
								Hardwood		3	1				
16	RT	1	HS	35	95	30	70	Conifer	5	2	1				
								Hardwood		2					
16	RT	2	HS	40	85	50	50	Conifer		2	1				
								Hardwood							
16	RT	3	HS	0	60	80	20	Conifer							ROAD BED
								Hardwood							

21	LT	1	HT	0	85	20	80	Conifer					
								Hardwood	1	3			
21	LT	2	HT	0	90	25	75	Conifer		2			
								Hardwood	3	1			
21	LT	3	HS	55	90	50	50	Conifer		1	2		
								Hardwood			1		
21	RT	1	HT	0	90	10	90	Conifer		1	3		NURSERY
								Hardwood		1			STUMP 4M
21	RT	2	HT	0	90	10	90	Conifer		3	2		DBH
								Hardwood					
21	RT	3	HS	45	90	20	80	Conifer					
								Hardwood		5	2		
32	LT	1	HT	0	90	10	90	Conifer					
								Hardwood		4	3		
32	LT	2	HT	0	95	10	90	Conifer		1	2		
								Hardwood	1	1			
32	LT	3	HS	65	95	10	90	Conifer		3	2		
								Hardwood					
32	RT	1	HT	0	90	60	40	Conifer					NEWT
								Hardwood	3	2	1		RED LEGGED
32	RT	2	HT	0	90	15	85	Conifer					FROG
								Hardwood	1	3	3		
32	RT	3	HT	0	85	20	80	Conifer					
								Hardwood		3	2		

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 61 STREAM: NECANICUM RIVER POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RB	01	35	/TJ, HS	
3	BW	10	35		FED BY TRIB
4	LP	00	46.5	HS	
5	RB	00	58.5	HS	
6	LP	00	65.5	HS	
8	PP	00	82.5	HS, DJ	
9	SL	00	84.5	PN	FISH VISABLE ABOVE
10	RI	00	118.5	HS	
13	LP	00	159.5	BC	MUNCIE RD.
14	RI	00	173.5	BC	MUNCIE RD.
18	RB	00	232.5	HS	
19	LP	00	253.5	HS	
21	LP	00	297.5	HS	



Name: SADDLE MT
 Date: 1/9/2007
 Scale: 1 inch equals 2000 feet

Location: 10 444652 E 5084591 N
 Caption: NECANICUM RIVER #61 RESTORATION SITE - NECANICUM BASIN