

**ODFW AQUATIC INVENTORY PROJECT
RESTORATION MONITORING
STREAM HABITAT REPORT**

STREAM: NECANICUM RIVER
 GCG: 1-NC
 SITE ID: 370
 BASIN: NECANICUM
 TREATMENT DATE: 2007
 SURVEY DATE: 7/1/2008
 SURVEY CREW: Jitesh Pattni / Aaron Paloni
 USGS MAPS: SADDLE MOUNTAIN
 ECOREGION: Coastal Uplands
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

SURVEY DESCRIPTION:

Channel morphology: Constrained alternately by high terraces and hillslopes

Dominant landuse(s): Second growth timber (15-30 cm dbh)

Dominant riparian vegetation: Deciduous trees: size class 15-30cm dbh

Primary channel length (meters) and area (m²): 681 : 2,198

Secondary channel length (meters) and area (m²) 59 : 85

VWI average: 8.4 VWI Range: 4.5 - 14 Average Gradient: 2.8%

Pieces LWD per 100m: 33.8 Wood Volume (m³) per 100m: 49.2

Percent pools: 20% Complex pools (LWD pieces>=3): 7 Pools >=1m deep: 0

Percent substrate (avg):	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	11	12	52	20	4	1
Pool units	12	12	58	16	2	1
Fast water units	10	11	51	24	4	1

COMMENTS:

This is a post-treatment, restoration survey. The crew noted amphibians within the surveyed area.

**OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY**

**NECANICUM RIVER
GCG: 1-NC SITE ID: 370**

Survey Date: 7/1/2008

Report Date: 12/29/2008

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	8.4	VWI Range:	4.5 - 14

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	681	2,198	0
Secondary	59	85	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 4	<u>First Terrace</u> n = 4
Width: 3.0	Width: 6.1	8.7 (7.2 - 10.7)	11.0 (7.9 - 14)
Depth: 0.28	Height: 0.4	0.7 (0.4 - 1.2)	1.2 (0.8 - 1.9)

W:D ratio: 21.5

Stream Flow Type: LF

Average Unit Gradient: 2.8%

Water temperature (°C): -

Entrenchment (ACW:FPW ratio): 1.6

Habitat Units/100m (total channel length): 4.9

Habitat Units/100m (primary channel length): 5.3

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	YT
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:	0%	Range: 78 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	230	33.8
Volume (m ³):	335	49.2
Key pieces (>=12m x 0.60m):	23	3.4

OREGON DEPARTMENT OF FISH AND WILDLIFE

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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	12	3.6	0.20	43	0	0	0	32	42	16	11
POOL-BACKWATER	4	13	2.6	0.49	35	0	13	15	43	16	14	0
POOL-LATERAL SCOUR	10	106	4.3	0.57	465	4	12	12	58	16	2	1
RAPID/BOULDERS	6	173	2.2	0.11	508	25	14	12	41	27	7	0
RIFFLE	13	435	2.7	0.11	1,229	0	8	12	57	22	1	0
STEP/COBBLE	1	1	0.6	0.01	0	0	24	19	38	19	0	0
STEP/LOG	1	2	1.5	0.10	3	0	15	15	65	5	0	0
Total:	36	740	3.0	0.28	2,283	29	Avg: 11	12	52	20	4	1

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	4	13	2.6	0.49	35	1.52%	0	0.0
Scour Pools	10	106	4.3	0.57	465	20.37%	4	0.9
Glides	0	0			0	0.00%	0	0.0
Riffles	13	435	2.7	0.11	1,229	53.84%	0	0.0
Rapids	6	173	2.2	0.11	508	22.23%	25	4.9
Cascades	1	12	3.6	0.20	43	1.89%	0	0.0
Step/Falls	2	3	1.1	0.06	3	0.14%	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:	14	18.9	20.6
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	7	9.5	10.3
Pool frequency (channel widths/pool):	8.7		
Residual pool depth (avg):	0.48		

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RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 2 transects

Total hardwoods/1000	1463
Total conifers/1000 ft	91
Total conifers >20" dbh/1000 ft	30
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	4.0	0.0	4.5	0.0	8.5
15-30cm	0.0	2.0	0.0	2.5	0.5	4.5	0.5	9.0
30-50cm	0.0	1.0	0.0	2.5	0.5	3.0	0.5	6.5
50-90cm	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	3.0	0.5	9.0	1.0	12.0	0.5	8.0

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	60	65	88
Shrub cover	38	21	8
Grass/forb cover	38	58	68

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	0	0	50
High terrace	75	100	50
Low terrace	0	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	25	0	0
Riprap	0	0	0
Surface slope (%)	0	0	18

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

2 transects

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

Total hardwoods/1000	1463
Total conifers/1000 ft	91
Total conifers >20" dbh/1000 ft	30
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	8.5
15-30cm	0.5	9.0
30-50cm	0.5	6.5
50-90cm	0.5	0.0
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

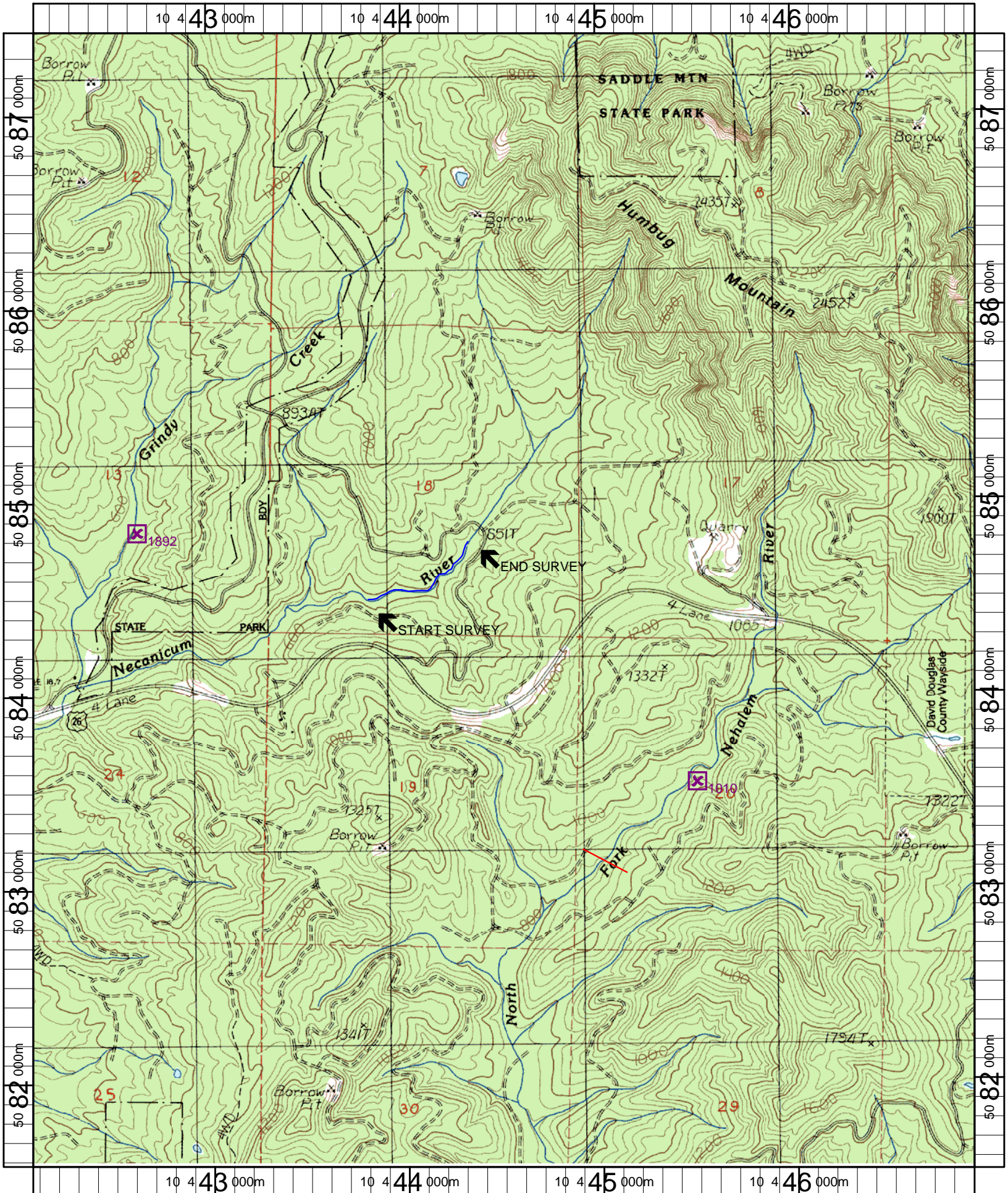
Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
14	LT	1	HT	0	50	0	80								444042E 5084539N D40
															ALDER DOW
14	LT	2	HT	0	40	5	70								D40 ALDER DOWN, 15 D3- 20 BRANC
14	LT	3	HS	19	70	5	40			1					
									1	7	3				
14	RT	1	HT	0	90	60	10								CROSSES SC 6-8M
										4	1				
14	RT	2	HT	0	95	40	30								
										4	3				
14	RT	3	HS	54	95	0	80								
									2	2	1				
30	LT	1	RB	0	50	30	40								OLD ROAD,HAB LOS ACROSS,
											1				
30	LT	2	HT	0	40	10	70						1		
30	LT	3	HT	0	95	20	70					1			SS CROSSING
									4						
30	RT	1	HT	0	50	60	20								3 HAB LOGS DOWN
30	RT	2	HT	0	85	30	60								
									8	1	2				
30	RT	3	HT	0	90	5	80								
									2		2				

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	CB	01	12		CA/CT D15/S ST/ T=11C
3	LP	01	40	/TJ	
4	RI	11	40		TRIB T=9C, MAINSTEM UPSTREAM OF TRIB T=11C
13	SL	01	252.5		H=0.40M
14	RI	01	302.5		CT/CT D15/S ST/
18	SC	02	302.5		H=0.80M
21	LP	00	333.5	/SS	
22	RI	01	383.5	/TJ	
23	RB	11	383.5		TRIB T=10C, MAINSTEM UPSTREAM OF TRIB T=12C
30	RI	00	531.5		CT/CT D30/C30 ST/
36	LP	00	681		CA/CT D15/C15 ST/



Name: SADDLE MT
 Date: 4/30/2008
 Scale: 1 inch equals 2000 feet

Location: 10 444509 E 5084485 N
 Caption: UPPER NECANICUM RIVER RESTORATION SITE - NECANICUM BASIN

NC-370 Necanicum River (Post-Treatment) 2008 Summer Habitat Survey Photographs



Reach photo