

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

STREAM: Beerman Creek (N-6)
BASIN: Necanicum River
SURVEY TYPE: Post-Tx
DATE: March 28, 2007
SURVEY CREW: Jeff O'Leary, Sheri Etchemendy
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 6.6 km²
USGS MAPS: Tillamook Head
ECOREGION: Coast Range Coastal Uplands

GENERAL DESCRIPTION:

The Beerman Creek habitat survey extended 494 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 14.0 (range: 8.0-20.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 1.6 percent. Riffles (59%) and scour pools (31%) dominated stream habitat. Gravel (58%) and cobble (21%) dominated stream substrate. Wood volume was high at 31.7 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.

Stream Beerman Creek (N-6)
 Basin Necanicum River
 Treatment Large Wood

	ODFW Benchmark		Pre	Post	Post		
Habitat Variable	Desirable	Undesirable	2/22/00	2/6/01	3/28/07		
% Pool Area	>35%	<10%	18.1	22.4	32.4		
Number of Pools			11	12	16		
Deep Pools/km (>1.0 m)			5.7	3.4	8.8		
% Off-Channel			1.4	2.7	4.6		
LWD – Pieces/100m	>20	<10	6.8	19.1	23.7		
LWD – Volume/100m	>30	<20	9.2	39.9	31.7		
LWD – Key Pieces/100m	>3	<1	0.2	4.0	2.0		
Large Wood Jams/km			0	22.7			
% Riffle Fines	<10	>20	14	24	7		
% Riffle Gravel	>35	<15	49	37	62		
% Bedrock			0	0	0		

Bold is noticeable change

Comments: Pool area, the number of pools, and the number of deep pools have all increased since the treatment of large wood was applied. Although large wood pieces have increased with time, both the volume and number of key pieces have decreased, suggesting that some of the large sticks have moved out of the system, and are being replaced by smaller material from the riparian area. Riffle fines appear to have decreased, while riffle gravel appears higher, suggesting that the large wood has captured substrates. It appears that the treatment has been effective.

REACH 1

T06N-R10W-S34NE

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	14.0	VWI Range:	8 - 20

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	494	2,771	0
Secondary Channel	0	0	0
Off-Channel Units	75	135	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 5.3	Width: 7.6	9.7 (7 - 11)	12.6 (7.5 - 16)
Depth: 0.51	Height: 0.5	1.1 (1 - 1.1)	1.3 (1.2 - 1.5)

W:D ratio: 14.5
 Stream Flow Type: MF
 Average Unit Gradient: 1.6%
 Water temperature (°C): 9.0 - 9.0

Entrenchment (ACW:FPW ratio): 1.3
 Habitat Units/100m (total channel length): 6.5
 Habitat Units/100m (primary channel length): 7.5

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

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

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	117	23.7
Volume (m ³):	156	31.7
Key pieces (>=12m x 0.60m):	10	2.0

HABITAT INVENTORY

Report Date: 4/25/2007

Survey Date:

3/28/2007

REACH 1		T06N-R10W-S34NE					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	2	26	3.4	0.20	71	0	0	8	49	31	13	0
POOL-ISOLATED	1	8	5.1	0.45	41	0	15	35	35	15	0	0
POOL-LATERAL SCOUR	15	156	5.7	0.86	902	0	5	17	56	17	5	0
RAPID/BOULDERS	2	25	5.7	0.28	144	0	0	7	50	29	14	0
RIFFLE	14	320	5.1	0.27	1,524	0	1	6	62	22	8	0
RIFFLE W/ POCKETS	1	27	6.8	0.30	180	0	0	5	63	26	5	0
STEP/COBBLE	1	6	6.2	0.20	40	0	0	5	52	33	10	0
STEP/LOG	1	1	5.2	0.15	4	0	0	10	75	15	0	0
Total:	37	569	5.3	0.51	2,906	0	Avg: 3	11	58	21	7	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	8	5.1	0.45	41	1.40%	0	0.0	
Scour Pools	15	156	5.7	0.86	902	31.04%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	15	346	5.2	0.27	1,705	58.65%	0	0.0	
Rapids	2	25	5.7	0.28	144	4.96%	0	0.0	
Cascades	2	26	3.4	0.20	71	2.44%	0	0.0	
Step/Falls	2	7	5.7	0.18	44	1.51%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

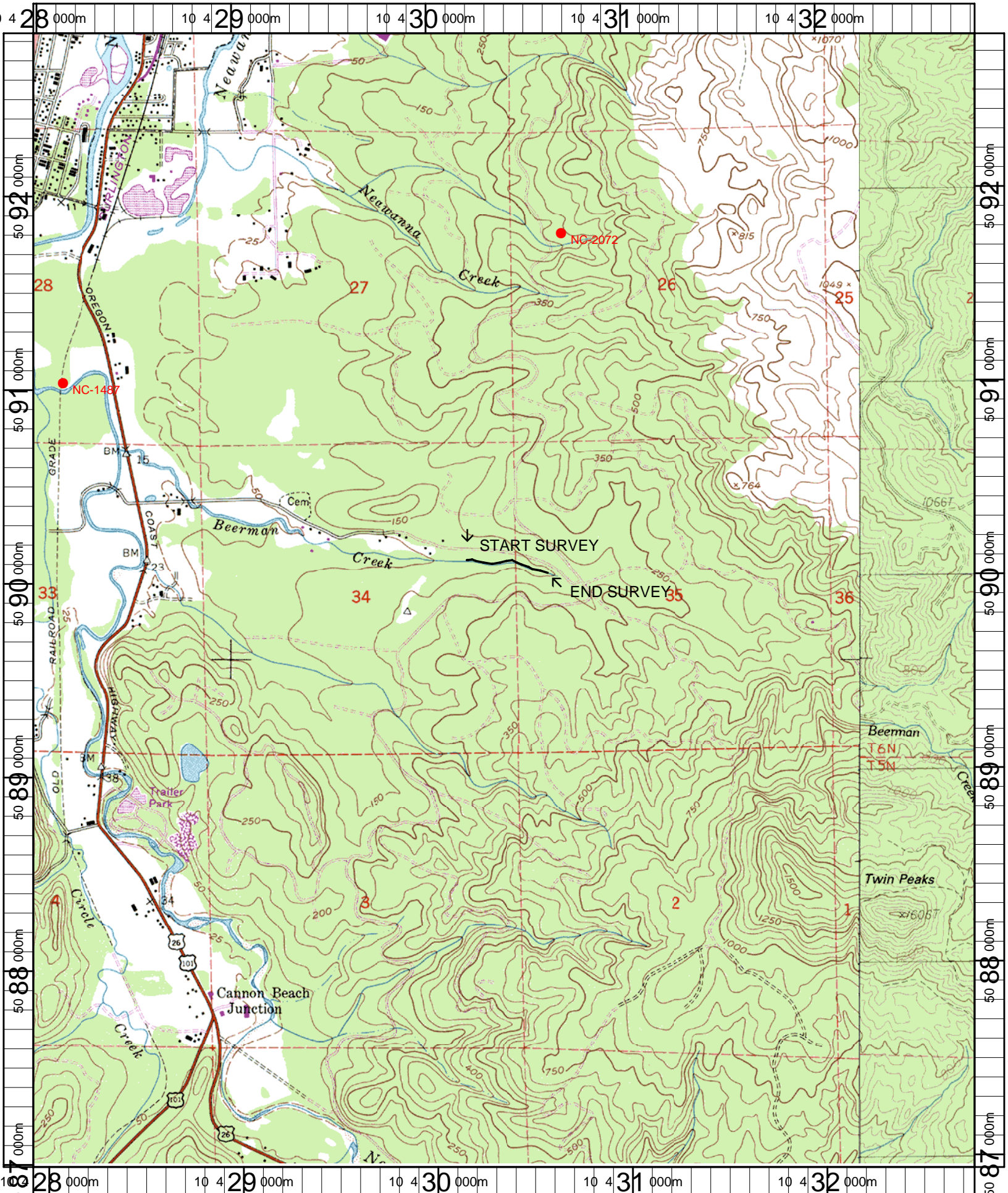
POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	16	28.1	32.4
Pools >=1m deep:	5	8.8	10.1
Complex pools (LWD pieces>=3):	10	17.6	20.2
Pool frequency (channel widths/pool):	4.7		
Residual pool depth (avg):	0.56		

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: 1-NC SITE ID: 6 BEERMAN CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
1	LP	01	7.5	HS	
2	IP	10	7.5		LOTS OF COHO FRY
4	LP	00	37.1	HS	
6	LP	01	56.3	/TJ	
7	CB	11	56.3		ACW=1.40, T=10.5
9	LP	00	90	HS	
11	RI	00	149.3	HS	
14	LP	00	179.4	HS, WL	RSN
17	LP	00	234.1	HS	
20	LP	00	305.4	HS	
26	RP	00	375.5	HS, WL	MAX DEPTH=0.60, DEER
28	LP	00	399.8	/SS, HS	
30	LP	01	426.2	TJ/, HS	
31	RI	11	426.2		ACW=3.4, T=10
37	LP	00	493.9	HS	



Name: TILLAMOOK HEAD
 Date: 4/25/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0430369 E 5089888 N
 Caption: BEERMAN CREEK RESTORATION SITE - NECANICUM BASIN