

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

STREAM: Square Creek (N-256)
BASIN: Necanicum River
SURVEY TYPE: Post-Tx
DATE: March 21, 2006
SURVEY CREW: Brian Cannon, Jon Nott
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 1.8 km³
USGS MAPS: Tillamook Head
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Square Creek habitat survey extended 543 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 7.0 (range: 5.0-10.0). Land use for the reach was large (30-50 cm dbh) trees and timber harvest. The average unit gradient was 3.6 percent. Rapids (47%) and riffles (22%) dominated stream habitat. Gravel (46%) and cobble (40%) dominated stream substrate. Wood volume was high at 33.7 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.

REACH 1

T05W-R10W-S04NE

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	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	7.0	VWI Range:	5 - 10

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	100%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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	543	1,609	0
Secondary Channel	0	0	0
Off-Channel Units	13	11	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 5</i>	<u>First Terrace</u>	<i>n = 0</i>
Width: 3.0	Width: 5.4	26.0	(16 - 40)	(-)	
Depth: 0.28	Height: 0.6	1.2	(1 - 1.4)	(-)	

W:D ratio: 9.7
 Stream Flow Type: MF
 Average Unit Gradient: 3.6%
 Water temperature (°C): 10.0 - 10.0

Entrenchment (ACW:FPW ratio): 4.9
 Habitat Units/100m (total channel length): 6.7
 Habitat Units/100m (primary channel length): 6.8

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LT	TH
Riparian Vegetation:	D30	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):	138	25.4
Volume (m ³):	183	33.7
Key pieces (>=12m x 0.60m):	9	1.7

OREGON DEPT OF FISH AND WILDLIFE

SQUARE CREEK POST-TX (1-NC, 256)

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

3/21/2006

REACH 1		T05W-R10W-S04NE					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	3	42	1.6	0.11	103	0	0	5	47	45	3	0
CULVERT CROSSING	1	6	0.8	0.15	5	0	0	18	45	36	0	0
POOL-DAMMED	3	32	3.5	0.57	115	0	12	23	45	20	0	0
POOL-LATERAL SCOUR	10	75	2.8	0.47	220	0	1	8	46	41	5	0
RAPID/BOULDERS	10	260	2.8	0.20	757	0	1	5	46	42	6	0
RIFFLE	6	132	2.8	0.18	362	0	0	4	54	41	1	0
STEP/BEAVER DAM	1	4	9.0	0.10	32	0	0	0	50	50	0	0
STEP/COBBLE	2	6	4.0	0.18	24	0	0	5	40	48	8	0
STEP/LOG	1	0	6.0	0.10	2	0	60	20	20	0	0	0
Total:	37	556	3.0	0.28	1,620	0	Avg: 3	8	46	40	4	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	3	32	3.5	0.57	115	7.08%	0	0.0	
Scour Pools	10	75	2.8	0.47	220	13.57%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	6	132	2.8	0.18	362	22.35%	0	0.0	
Rapids	10	260	2.8	0.20	757	46.75%	0	0.0	
Cascades	3	42	1.6	0.11	103	6.38%	0	0.0	
Step/Falls	4	10	5.8	0.14	58	3.57%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	6	0.8	0.15	5	0.30%	0	0.0	

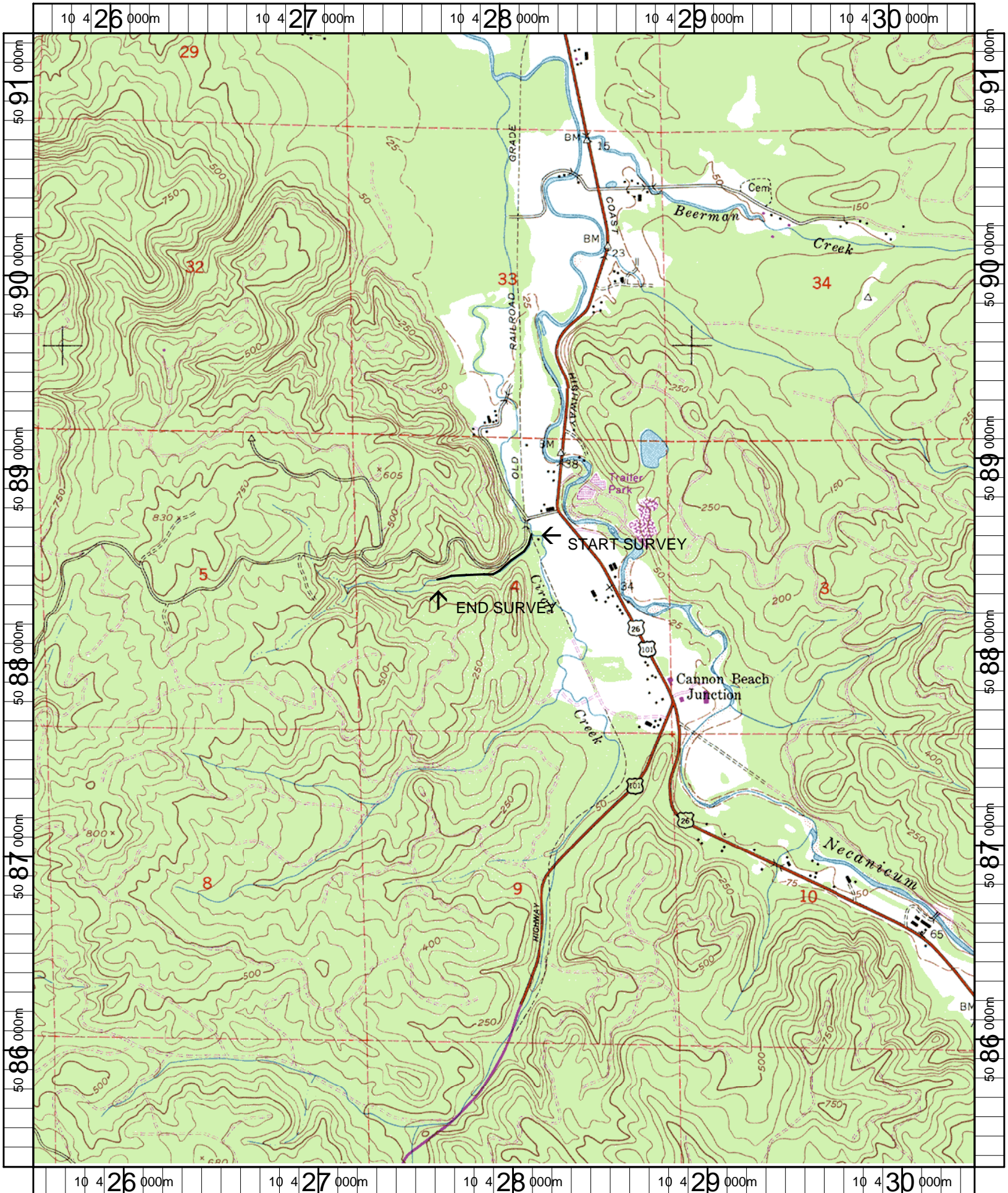
POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	13	23.4	23.9
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	5	9.0	9.2
Pool frequency (channel widths/pool):	7.9		
Residual pool depth (avg):	0.33		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 1-NC SITE ID: 256 SQUARE CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RB	00	23		T = 10.0	
3	RI	00	40.3	BC		
4	LP	00	47.5	HS	4 LOGS	
6	CC	00	61.4	CC	2 SIDE BY SIDE SMOOTH METAL	
7	RB	00	86.4	HS		
8	RI	00	116.4	HS, /SS		
11	LP	00	154.6	HS		
12	RB	00	161.8	HS	7 LOGS	
13	LP	00	167.1	HS		
15	RI	00	213.2	HS	5 LOGS	
16	LP	00	219.3	HS	7 LOGS, COHO FRY	
19	SL	00	259.7	DJ	H = 0.5	
20	DP	00	273.2		WINDFALL LOGJAM	
21	RI	00	298.2	HS	6 LOGS	
24	DP	01	327.7	TJ/		
25	CB	11	327.7		ACW = 1.2m	
26	RI	00	350.9	HS	7 LOGS	
27	SC	00	352.9	DJ		
33	RB	01	483.1	/TJ		
34	CB	11	483.1		T=9.0, ACW = 1.4 m	
36	SD	00	515.6	BD	OLD BV DAM	



Name: TILLAMOOK HEAD (OR)
 Date: 2/15/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0427987 E 5088295 N
 Caption: SQUARE CREEK RESTORATION SITE - NECANICUM BASIN