

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

STREAM: Klotchie Creek (N-310)  
BASIN: Necanicum River  
SURVEY TYPE: Pre-Tx  
DATE: August 3, 2005  
SURVEY CREW: Ben Walczak, Scott Young  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 12.9 km<sup>2</sup>  
USGS MAPS: Necanicum Junction  
ECOREGION: Coast Range Coastal Uplands

**GENERAL DESCRIPTION:**

The Klotchie Creek habitat survey extended 429 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 2.0 (range: 1.1-5.0). Land use for the reach was timber harvest and second growth (15-30 cm dbh) trees. The average unit gradient was 6.0 percent. Rapids (65%) and riffles (22%) dominated stream habitat. Gravel (44%) and cobble (29%) dominated stream substrate. Wood volume was very low at 5.4 m<sup>3</sup>/100m.

**COMMENTS:**

There was one potential barrier to upstream fish migration in the surveyed length. This was a 2.0 m high bedrock step at unit 20 (297 m).

REACH 1

T05N-R09W-S07SW

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	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	2.0	VWI Range:	1.1 - 5

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	100%	Single Channel	0%
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	429	818	0
Secondary Channel	30	33	0
Off-Channel Units	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 1
Width: 1.9	Width: 4.6	5.8 ( 5 - 8.3 )	7.4 ( 7.4 - 7.4 )
Depth: 0.15	Height: 0.2	0.4 ( 0.3 - 0.5 )	0.7 ( 0.7 - 0.7 )

W:D ratio: 23.8  
 Stream Flow Type: MF  
 Average Unit Gradient: 6.0%  
 Water temperature (°C): 8.0 - 8.0

Entrenchment (ACW:FPW ratio): 1.3  
 Habitat Units/100m (total channel length): 6.3  
 Habitat Units/100m (primary channel length): 6.8

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	TH	ST
Riparian Vegetation:	D15	C15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	3%	Reach avg: 70%
Undercut Banks:	1%	Range: 56 - 83

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	46	10.7
Volume (m <sup>3</sup> ):	23	5.4
Key pieces (>=12m x 0.60m):	0	0.0

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

8/3/2005

REACH 1		T05N-R09W-S07SW					REACH 1					
HABITAT DETAIL												
Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BEDROCK	2	35	1.6	0.13	62	0	0	7	20	15	0	59
POOL-LATERAL SCOUR	2	11	1.8	0.25	19	0	8	35	31	26	0	0
POOL-PLUNGE	3	9	2.6	0.43	23	0	11	53	22	15	0	0
RAPID/BOULDERS	15	318	1.7	0.11	550	0	1	9	50	37	0	3
RIFFLE	3	80	2.1	0.10	185	0	0	11	67	19	0	4
STEP/BEDROCK	1	5	1.0	0.10	5	0	0	0	0	0	0	100
STEP/LOG	3	2	2.7	0.10	6	0	0	12	54	34	0	0
<b>Total:</b>	29	459	1.9	0.15	850	0	<b>Avg:</b> 2	15	44	29	0	9

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )	
Dammed & BW Pools	0	0			0	0.00%	0	0.0	
Scour Pools	5	19	2.3	0.36	42	4.96%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	3	80	2.1	0.10	185	21.76%	0	0.0	
Rapids	15	318	1.7	0.11	550	64.72%	0	0.0	
Cascades	2	35	1.6	0.13	62	7.24%	0	0.0	
Step/Falls	4	7	2.3	0.10	11	1.32%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	5	10.9	11.6
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	19.9		
Residual pool depth (avg):	0.26		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

KLOOTCHIE CREEK PRE-TX  
GCG: 1-NC SITE ID: 310

Survey Date 8/3/2005  
Report Date: 4/26/2006

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	163
Total conifers/1000 ft	163
Total conifers >20" dbh/1000 ft	0
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	0.7	0.3	0.7	0.3	0.0	0.0	1.3	0.7
15-30cm	0.7	0.0	0.0	1.0	0.3	0.7	1.0	1.7
30-50cm	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.3
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	1.7	0.7	0.7	1.3	0.3	0.7	0.9	0.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	74		68		63	
Shrub cover	9		19		19	
Grass/forb cover	91		81		72	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	100		67		83	
High terrace	0		0		0	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		33		17	
Riprap	0		0		0	
Surface slope (%)	59		45		53	

**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	163
Total conifers/1000 ft	163
Total conifers >20" dbh/1000 ft	0
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	1.3	0.7
15-30cm	1.0	1.7
30-50cm	0.3	0.3
50-90cm	0.0	0.0
>90cm	0.0	0.0

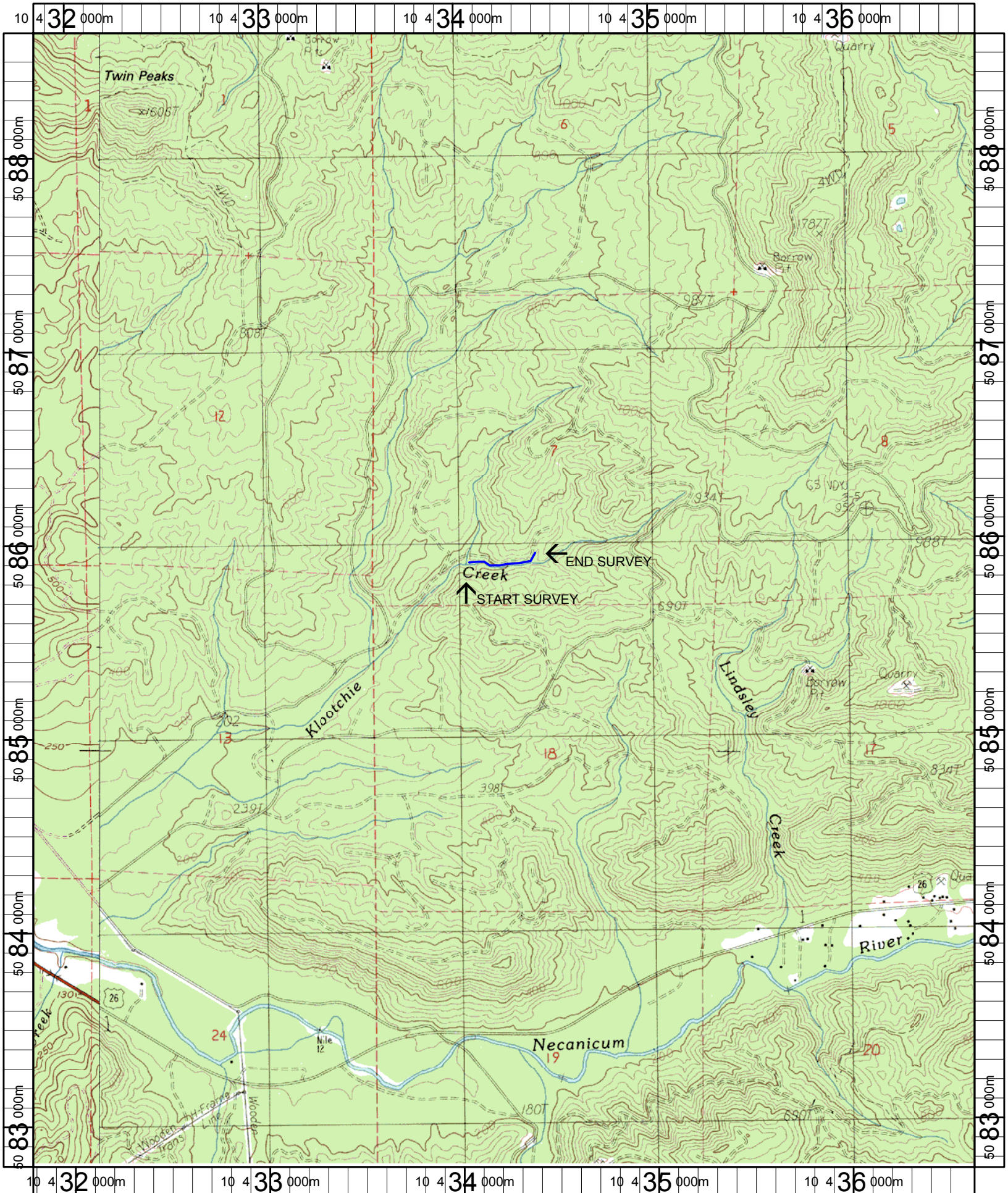


# Comment Summary

## Restoration Monitoring Sites 2005

MONITORING AREA: 1-NC      SITE ID: 310      KLOOTCHIE CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RB	00	31		START AT /SS	
6	RB	00	116			SPAWNING SURVEY SIGN
7	CR	00	139.7		RIPARIAN 1	
14	SL	00	223.4		H=0.3M	
16	RB	00	265.8		RIPARIAN 2	
18	SL	00	268.8		H=0.1M	
20	SR	00	296.6	PN	H=2.0M	
22	PP	00	307.25	/SS		
23	SL	00	308		H=0.25M	
24	RI	01	334	TJ/	HEAD LEFT AT TRIB, RIP	
25	RI	02	334		WATER SEEPING EVERY	
26	CR	00	345.3			HARD PAN CLAY
27	RI	00	379.3			END FISH USE SIGN
29	RB	00	429.3			END SURVEY



Name: NECANICUM JUNCTION  
 Date: 6/9/2005  
 Scale: 1 inch equals 2000 feet

Location: 10 434232 E 5085696 N  
 Caption: KLOOTCHIE CREEK RESTORATION SITE - NECANICUM BASIN