

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

STREAM: Klotchie Creek (NC-119)  
BASIN: Necanicum River  
SURVEY TYPE: Post-Tx  
DATE: July 29, 1996  
SURVEY CREW: Barry Thom, Matt Rowe  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 13.0 km<sup>2</sup>  
USGS MAPS: Necanicum Junction  
ECOREGION: Coast Range Sitka Spruce

**GENERAL DESCRIPTION:**

The Klotchie Creek habitat survey extended 421 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 5.7 (range: 5.0 – 6.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 2.2 percent. Scour pools (33%), rapids (29%) and slackwater pools (27%) dominated stream habitat. Gravel (36%) and cobble (26%) dominated stream substrate. Wood volume was low at 17.6 m<sup>3</sup>/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

T5N-R10W-S13NE

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 avg: 5.7 range: 5.0-6.0

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	421	1,884	0
Secondary	97	505	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width 4.6	Width	11.2	0.0	12.2
Depth 0.43	Height	0.5	0.0	1.1
	W:D ratio	22.4	Entrenchment	***

Stream Flow Type: LF Water Temp: 0.0-0.0°C  
 Avg. Unit Gradient: 2.2% Habitat Units/100m: 8.1

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	M30	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	0%	Reach avg: 100%
Undercut Banks	2%	Range: 94-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces (≥3m x 0.15m)	74	17.6
Volume (m <sup>3</sup> )	74	17.6
Key pieces (≥10m x 0.6m)	0	0.0

REACH 1

T5N-R10W-S13NE

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	Cbbl	Bldr	Bdrk
CULVERT CROSSING	1	15	2.2	0.05	33	0	0	0	10	0	0	90
GLIDE	1	10	6.0	0.30	60	0	25	25	25	25	0	0
POOL-ALCOVE	3	68	6.7	0.60	444	0	100	0	0	0	0	0
POOL-BACKWATER	2	10	1.2	0.17	14	0	25	48	23	5	0	0
POOL-DAMMED	3	33	6.0	0.43	188	0	23	38	23	14	2	0
POOL-ISOLATED	1	2	1.1	0.30	2	0	40	30	20	10	0	0
POOL-LATERAL SCOUR	9	94	4.4	0.70	415	1	11	15	40	29	5	0
POOL-PLUNGE	1	5	8.0	0.90	40	0	5	5	45	45	0	0
POOL-STRAIGHT SCOUR	6	74	4.3	0.77	331	0	8	12	50	28	3	0
RAPID/BOULDERS	7	172	4.1	0.15	700	4	0	1	46	46	7	0
RIFFLE	2	17	3.8	0.11	72	0	8	30	45	18	0	0
STEP/BOULDERS	1	0	7.0	0.06	2	6	0	0	0	0	100	0
STEP/COBBLE	4	15	4.5	0.17	65	0	0	0	58	43	0	0
STEP/LOG	1	3	8.0	0.05	24	0	30	40	20	5	5	0
<b>Total:</b>	<b>42</b>	<b>517</b>	<b>4.6</b>	<b>0.43</b>	<b>2,389</b>	<b>11</b>	<b>Avg:16</b>	<b>14</b>	<b>36</b>	<b>26</b>	<b>5</b>	<b>2</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m <sup>2</sup> )	Percent	Large Boulders Number	#/100m <sup>2</sup>
Dammed & BW Pools	9	113	4.6	0.41	648	27.12	0	0.0
Scour Pools	16	173	4.6	0.74	786	32.89	1	0.1
Glides	1	10	6.0	0.30	60	2.51	0	0.0
Riffles	2	17	3.8	0.11	72	3.01	0	0.0
Rapids	7	172	4.1	0.15	700	29.29	4	0.6
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	6	18	5.5	0.13	91	3.80	6	6.6
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	25	48.3
Pools ≥1m deep:	3	5.8
Complex pools (LWD pieces ≥3):	8	15.5
Pool Frequency (channel widths/pool):	1.8	
Residual pool depth (avg)	0.56m	

STREAM SUMMARY

KLOOTCHIE CREEK 1996 POST-TX

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area						Total Large Boulder
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
42	517	4.6	0.43	2,389	16	14	36	26	5	2	11

Wetted Area

Habitat Group	(m <sup>2</sup> )	Percent
Scour Pool	786	32.9
Backwater Pools	648	27.1
Glide	60	2.5
Riffle	72	3.0
Rapid	700	29.3
Cascade	0	0.0
Step	91	3.8
Dry	0	0.0

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REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) (1 transects)

Total hardwoods/1000 ft	1,158
Total conifers/1000 ft	792
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	2.0	3.0	0.0	0.0	1.0	1.0	3.0	4.0
15-30cm	2.0	5.0	4.0	0.0	1.0	1.0	7.0	6.0
30-50cm	2.0	4.0	1.0	3.0	0.0	2.0	3.0	9.0
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/100m <sup>2</sup>	6.0	12.0	5.0	3.0	2.0	4.0	4.3	6.3

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	80		93		90	
Shrub cover	0		0		5	
Grass/forb cover	85		50		90	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	0		0		0
High terrace	0		50		100	
Low terrace	100		50		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 (%)	0		0		0	

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Summary of Riparian Zone (0-30m) for all reaches ( 1 transects)

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

Total hardwoods/1000 ft	1,158
Total conifers/1000 ft	792
Total conifers >20" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

<u>Diameter</u> <u>class (cm)</u>	<u>Zones 1-3</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	3.0	4.0
15-30cm	7.0	6.0
30-50cm	3.0	9.0
50-90cm	0.0	0.0
>90cm	0.0	0.0

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RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

VEGETATION DETAIL

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	
60	LF	1	LT	0.0	100	0	80	Conifer	2	2	0	0	0	
								Hardwood	0	1	4	0	0	
60	LF	2	LT	0.0	85	0	30	Conifer	0	0	0	0	0	
								Hardwood	0	0	3	0	0	
60	LF	3	HT	0.0	100	0	90	Conifer	1	1	0	0	0	
								Hardwood	0	0	1	0	0	
60	RT	1	LT	0.0	60	0	90	Conifer	0	0	2	0	0	
								Hardwood	3	4	0	0	0	
60	RT	2	HT	0.0	100	0	70	Conifer	0	4	1	0	0	
								Hardwood	0	0	0	0	0	
60	RT	3	HT	0.0	80	10	90	Conifer	0	0	0	0	0	
								Hardwood	1	1	1	0	0	

# STREAM HABITAT STATUS SHEET

STREAM NAME Klutch Cr 1996 Post 7x CONTRACT \_\_\_\_\_  
 BASIN Nearicum CREW S. Thom, M. Row

DATE                      FILENAME                      COMMENTS

ENTRY			ENTERED BY:	
REACH	11/24/01	KL 96 P	HR.DBF	<i>[Signature]</i>
UNIT 1			U1.DBF	
UNIT 2			U2.DBF	
UNIT CHECK			CHK.DBF	
RIPARIAN			RP.DBF	
WOOD			WD.DBF	

ANALYSIS			ANALYZED BY:	
CALIBRATION			CAL.DBF	
MAP SUMMARY/CORRECTIONS				
WOOD EXPAND			WE.DBF	
UNIT LINK			UX.DBF	
UNIT LINK WITH WOOD			UX2.DBF	
PROFILES + COMMENT SUMMARY			PRO.XLS	
HABITAT REPORT LINK			LNK.DBF	
RIPARIAN LINK			RLK.DBF	

FINAL REPORT			COMPLETED BY:	
BAR GRAPHS			BAR.XLS	
COVER + REPORT			COV.DOC	
PHOTOS				
REPORT MAPS				
REACH ENTRY				

COMMENTS / NOTES

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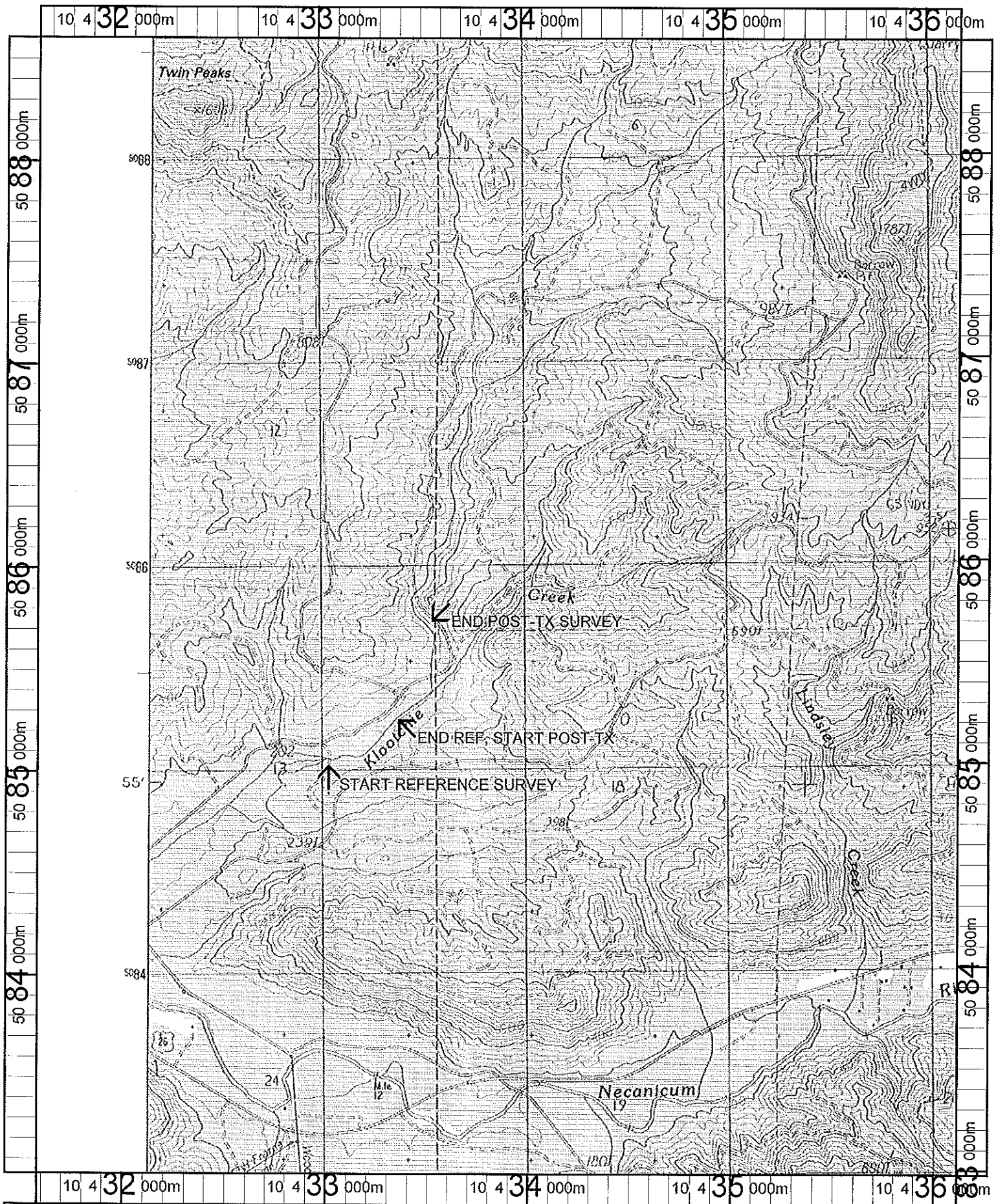
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OREGON PLAN / REFERENCE SURVEYS					
BASIN AREA	BEAVER DAMS	#	MAJOR FAILURES	#	
STREAM ORDER	BEAVER ACTIVITY	#	DEBRIS JAMS	#	
JAMS FROM WOOD SHEETS # <u>5</u>	CULVERT CROSSINGS	# <u>1</u>	HABITAT STRUCTURES	# <u>9</u>	





Name: NECANICUM JUNCTION  
 Date: 5/30/101  
 Scale: 1 inch equals 2000 feet

Location: 10 433778 E 5085774 N  
 Caption: 4 - 6 YEAR POST-TX AND REFERENCE SURVEYS -  
 KLOOTCHIE CREEK - NECANICUM BASIN