

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

STREAM: Klotchie Creek (NC-118)
BASIN: Necanicum River
SURVEY TYPE: Reference
DATE: July 29, 1996
SURVEY CREW: Barry Thom, Matt Rowe
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 13.0 km²
USGS MAPS: Necanicum Junction
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Klotchie Creek habitat survey extended 531 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.3 (range: 5.0 – 8.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 2.1 percent. Rapids (53%) and scour pools (23%) dominated stream habitat. Cobble (39%) and gravel (26%) dominated stream substrate. Wood volume was low at 12.4 m³/100m.

COMMENTS:

There were no potential barriers to upstream fish migration in the surveyed length.

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: 6.3 range: 5.0-8.0

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	531	2,808	0
Secondary	98	218	2

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<u>First Terrace</u>
Width 4.2	Width 8.6	0.0	9.7
Depth 0.34	Height 0.5	0.0	1.1
W:D ratio 16.4 Entrenchment ***			

Stream Flow Type: LF Water Temp: 0.0-0.0°C
 Avg. Unit Gradient: 2.1% Habitat Units/100m: 7.2

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: 99%
Undercut Banks	3%	Range: 89-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ($\geq 3m \times 0.15m$)	40	7.5
Volume (m ³)	66	12.4
Key pieces ($\geq 10m \times 0.6m$)	1	0.2

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 ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbbl	Bldr	Bdrk
DRY CHANNEL	2	32	4.0	0.00	128	0	35	0	24	24	17	0
GLIDE	3	47	6.2	0.22	296	0	0	3	43	50	3	0
POOL-ALCOVE	1	16	1.1	0.30	18	0	100	0	0	0	0	0
POOL-BACKWATER	2	9	2.2	0.46	17	0	63	13	20	5	0	0
POOL-ISOLATED	5	15	2.8	0.32	32	0	76	7	5	6	6	0
POOL-LATERAL SCOUR	10	117	3.9	0.69	464	0	16	4	22	43	17	0
POOL-PLUNGE	2	16	7.3	0.69	118	0	15	10	23	40	13	0
POOL-STRAIGHT SCOUR	2	24	3.8	0.50	100	0	0	0	15	55	30	0
RAPID/BOULDERS	10	286	5.3	0.15	1,605	0	0	3	40	45	13	0
RIFFLE	3	49	2.8	0.13	156	0	8	8	26	43	14	0
STEP/BOULDERS	1	7	7.0	0.24	49	0	0	0	40	40	20	0
STEP/COBBLE	4	11	3.8	0.12	43	0	0	0	30	68	3	0
Total:	45	628	4.2	0.34	3,026	0	Avg:20	4	26	39	12	0

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m ²)	Percent	Large Boulders Number	#/100m ²
Dammed & BW Pools	8	40	2.5	0.35	67	2.23	0	0.0
Scour Pools	14	157	4.3	0.66	682	22.53	0	0.0
Glides	3	47	6.2	0.22	296	9.77	0	0.0
Riffles	3	49	2.8	0.13	156	5.16	0	0.0
Rapids	10	286	5.3	0.15	1,605	53.04	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	5	18	4.4	0.14	92	3.04	0	0.0
Dry	2	32	4.0	0.00	128	4.23	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	22	35.0
Pools ≥1m deep:	0	0.0
Complex pools (LWD pieces ≥3):	5	8.0
Pool Frequency (channel widths/pool):	3.3	
Residual pool depth (avg)	0.52m	

STREAM SUMMARY

KLOOTCHIE CREEK 1996 REFERENCE

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Total Large Boulder
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
45	628	4.2	0.34	3,026	20	4	26	39	12	0	0

Wetted Area

Habitat Group	(m ²)	Percent
Scour Pool	682	22.5
Backwater Pools	67	2.2
Glide	296	9.8
Riffle	156	5.2
Rapid	1,605	53.0
Cascade	0	0.0
Step	92	3.0
Dry	128	4.2

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	853
Total conifers/1000 ft	1,067
Total conifers >20" dbh/1000 ft	213
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	1.5	0.5	0.5	2.5	0.5	3.0	2.5
15-30cm	2.0	5.0	2.0	1.5	1.5	1.5	5.5	8.0
30-50cm	2.5	2.5	2.0	0.0	1.0	1.0	5.5	3.5
50-90cm	1.5	0.0	1.5	0.0	0.5	0.0	3.5	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m ²	6.0	9.0	6.0	2.0	5.5	3.0	5.8	4.7

Canopy closure and ground cover

	Zone 1 0-10 meters	Zone 2 10-20 meters	Zone 3 20-30 meters
	(%)	(%)	(%)
Canopy closure	88	95	93
Shrub cover	3	0	0
Grass/forb cover	80	48	49

Predominant landform in each zone

	Zone 1 0-10 meters	Zone 2 10-20 meters	Zone 3 20-30 meters
	Hillslope	0	0
High terrace	0	50	75
Low terrace	100	50	25
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

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

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

Total hardwoods/1000 ft	853
Total conifers/1000 ft	1,067
Total conifers >20" dbh/1000 ft	213

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	2.5
15-30cm	5.5	8.0
30-50cm	5.5	3.5
50-90cm	3.5	0.0
>90cm	0.0	0.0

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	
1	LF	1	LT	0.0	100	10	30	Conifer	0	3	5	2	0	
								Hardwood	0	0	0	0	0	
1	LF	2	HT	0.0	100	0	5	Conifer	0	1	3	1	0	
								Hardwood	0	0	0	0	0	
1	LF	3	HT	0.0	100	0	5	Conifer	0	1	2	0	0	
								Hardwood	0	0	1	0	0	
1	RT	1	LT	0.0	80	0	100	Conifer	0	0	0	0	0	
								Hardwood	2	4	0	0	0	
1	RT	2	LT	0.0	90	0	100	Conifer	1	0	0	1	0	
								Hardwood	1	0	0	0	0	
1	RT	3	LT	0.0	90	0	90	Conifer	2	0	0	0	0	
								Hardwood	0	1	0	0	0	
34	LF	1	LT	0.0	90	0	90	Conifer	0	0	0	1	0	
								Hardwood	0	2	3	0	0	
34	LF	2	LT	0.0	90	0	75	Conifer	0	0	0	1	0	
								Hardwood	0	3	0	0	0	
34	LF	3	HT	0.0	100	0	70	Conifer	1	0	0	1	0	
								Hardwood	0	2	1	0	0	
34	RT	1	LT	0.0	80	0	100	Conifer	0	1	0	0	0	
								Hardwood	1	4	2	0	0	
34	RT	2	HT	0.0	100	0	10	Conifer	0	3	1	0	0	
								Hardwood	0	0	0	0	0	
34	RT	3	HT	0.0	80	0	30	Conifer	2	2	0	0	0	
								Hardwood	1	0	0	0	0	

STREAM HABITAT STATUS SHEET

STREAM NAME Wootchie Cr 1996 ReSurvey **CONTRACT** _____
BASIN Wetland **CREW** B. Thom, M. Rowe

DATE FILENAME COMMENTS

ENTRY	DATE	FILENAME	ENTERED BY:	COMMENTS
REACH	11/26/01	KL96R	HR.DBF	
UNIT 1			U1.DBF	
UNIT 2			U2.DBF	
UNIT CHECK			CHK.DBF	
RIPARIAN			RP.DBF	
WOOD			WD.DBF	

ANALYSIS	DATE	FILENAME	ANALYZED BY:	COMMENTS
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	DATE	FILENAME	COMPLETED BY:	COMMENTS
BAR GRAPHS			BAR.XLS	
COVER + REPORT			COV.DOC	
PHOTOS				
REPORT MAPS				
REACH ENTRY				

COMMENTS / NOTES

OREGON PLAN / REFERENCE SURVEYS			
BASIN AREA	BEAVER DAMS	#	MAJOR FAILURES #
STREAM ORDER	BEAVER ACTIVITY	#	DEBRIS JAMS #
JAMS FROM WOOD SHEETS # <u>4</u>	CULVERT CROSSINGS	#	HABITAT STRUCTURES #