

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

STREAM: Bewley Creek (NC-110)
BASIN: Tillamook River
SURVEY TYPE: Reference
DATE: August 29, 1996
SURVEY CREW: Barry Thom, Paul Jacobsen
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 15.5 km²
USGS MAPS: Tillamook
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Bewley Creek habitat survey extended 470 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.0. Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 0.3 percent. Scour pools (71%) and glides (18%) dominated stream habitat. Gravel (39%) and fines (21%) dominated stream substrate. Wood volume was low at 8.0 m³/100m.

COMMENTS:

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

REACH 1

T2S-R10W-S24NW

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 avg: 6.0 range: 6.0-6.0

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	470	1,945	0
Secondary	88	213	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	3.7	Width	6.7	0.0	8.0
Depth	0.45	Height	0.5	0.0	0.9
		W:D ratio	13.4	Entrenchment	**.*

Stream Flow Type: LF Water Temp: 0.0-0.0°C
 Avg. Unit Gradient: 0.3% Habitat Units/100m: 5.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	0%	Reach avg: 87%
Undercut Banks	12%	Range: 61-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ($\geq 3m \times 0.15m$)	48	10.2
Volume (m^3)	38	8.0
Key pieces ($\geq 10m \times 0.6m$)	2	0.4

REACH 1

T2S-R10W-S24NW

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
GLIDE	3	99	3.6	0.27	382	0	8	13	32	43	0	3
POOL-BACKWATER	1	5	1.4	0.15	7	0	100	0	0	0	0	0
POOL-DAMMED	1	9	4.0	0.45	36	0	50	20	30	0	0	0
POOL-LATERAL SCOUR	17	362	3.9	0.59	1,497	0	19	21	43	11	0	5
POOL-PLUNGE	1	8	5.0	0.50	40	0	60	20	20	0	0	0
RIFFLE	4	72	2.5	0.15	176	0	10	20	40	30	0	0
STEP/COBBLE	1	3	7.0	0.05	21	0	0	0	40	60	0	0
Total:	28	558	3.7	0.45	2,158	0	Avg:21	19	39	18	0	3

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	2	14	2.7	0.30	43	1.99	0	0.0
Scour Pools	18	370	4.0	0.59	1,537	71.21	0	0.0
Glides	3	99	3.6	0.27	382	17.69	0	0.0
Riffles	4	72	2.5	0.15	176	8.13	0	0.0
Rapids	0	0	-	-	0	0.00	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	1	3	7.0	0.05	21	0.97	0	0.0
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	20	35.8
Pools ≥1m deep:	0	0.0
Complex pools (LWD pieces ≥3):	7	12.5
Pool Frequency (channel widths/pool):	4.2	
Residual pool depth (avg)	0.44m	

STREAM SUMMARY

BEWLEY 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	
28	558	3.7	0.45	2,158	21	19	39	18	0	3	0

Wetted Area

Habitat Group	(m ²)	Percent
Scour Pool	1,537	71.2
Backwater Pools	43	2.0
Glide	382	17.7
Riffle	176	8.1
Rapid	0	0.0
Cascade	0	0.0
Step	21	1.0
Dry	0	0.0

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	914
Total conifers/1000 ft	549
Total conifers >20" dbh/1000 ft	61
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	7.0	1.0	5.0	5.0	3.0	6.0	15.0
15-30cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30-50cm	1.0	0.0	0.0	0.0	1.0	0.0	2.0	0.0
50-90cm	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m ²	1.0	7.0	2.0	5.0	6.0	3.0	3.0	5.0

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	60		60		70	
Shrub cover	65		30		45	
Grass/forb cover	35		25		35	

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	100		100		100	
Low terrace	0		0		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	

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	914
Total conifers/1000 ft	549
Total conifers >20" dbh/1000 ft	61

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	6.0	15.0
15-30cm	0.0	0.0
30-50cm	2.0	0.0
50-90cm	1.0	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	
85	LF	1	HT	0.0	90	60	40	Conifer	0	0	1	0	0	
								Hardwood	2	0	0	0	0	
85	LF	2	HT	0.0	100	10	0	Conifer	0	0	0	1	0	
								Hardwood	3	0	0	0	0	
85	LF	3	HT	0.0	100	10	60	Conifer	4	0	1	0	0	
								Hardwood	0	0	0	0	0	
85	RT	1	HT	0.0	30	70	30	Conifer	0	0	0	0	0	
								Hardwood	5	0	0	0	0	
85	RT	2	HT	0.0	20	50	50	Conifer	1	0	0	0	0	
								Hardwood	2	0	0	0	0	
85	RT	3	HT	0.0	40	80	10	Conifer	1	0	0	0	0	
								Hardwood	3	0	0	0	0	

STREAM HABITAT STATUS SHEET

STREAM NAME Bowley Cr 1996 Reference CONTRACT _____
 BASIN T. Hamook CREW B. Thom, P. Jambra

DATE FILENAME COMMENTS

ENTRY	DATE	FILENAME	ENTERED BY:
REACH	11/21/01	Be 96 r HR.DBF	<i>[Signature]</i>
UNIT 1		U1.DBF	
UNIT 2		U2.DBF	
UNIT CHECK		CHK.DBF	
RIPARIAN		RP.DBF	
WOOD		WD.DBF	

ANALYSIS	DATE	FILENAME	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	DATE	FILENAME	COMPLETED BY:
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 # <u>1</u>
STREAM ORDER	BEAVER ACTIVITY	# <u>1</u>	DEBRIS JAMS # <u>2</u>
JAMS FROM WOOD SHEETS # <u>4</u>	CULVERT CROSSINGS	#	HABITAT STRUCTURES #