ODFW AQUATIC INVENTORY PROJECT

OREGON PLAN FOR SALMON & WATERSHEDS

STREAM RESTORATION HABITAT REPORT

STREAM:	Deer Creek (NC-120)
BASIN:	Nehalem River
SURVEY TYPE:	Reference
DATE:	July 8, 1996
SURVEY CREW:	Barry Thom, Matt Rowe
REPORT PREPARED BY:	Paul Jacobsen
BASIN AREA:	32.8 km^2
USGS MAPS:	Birkenfeld
ECOREGION:	Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Deer Creek habitat survey extended 547 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 3.5 (range: 3.0 – 5.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (72%) and riffles (15%) dominated stream habitat. Sand (51%) and gravel (30%) dominated stream substrate. Wood volume was very low at 75.3 m^3/100m.

COMMENTS:

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

REACH 1 T5N-R5W-S15NE REACH 1

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
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: 3.5 range: 3.0-5.0

Channel Morphology (Percent Reach Length)

Constrained		Unconstrained	
Hillslope	0	Single Channel	0
Bedrock	0	Multiple Channel	0
Terrace	0	Braided Channel	0
Alt. Terrace/Hill	100		
Landuse	0		

Channel Characteristics

Type	Length(m)	Area (m2)	Dry Units
Primary	547	970	0
Secondary	2	2	0

Channel Dimensions(m)

Wetted		Active		Floodprone	First Terrace
Width	1.8	Width	4.4	0.0	6.3
Depth	0.33	Height	0.5	0.0	1.1
		W:D ratio	9.8	Entrenchment **.*	

Stream Flow Type: LF Water Temp: 0.0-0.0°C
Avg. Unit Gradient: 1.1% Habitat Units/100m: 14.0

Riparian, Bank, and Wood Summary

	Primary	Secondary
Land Use:	ST	
Riparian Vegetation:	D50	S

Bank Condition and Shade

Bank Status	Percent Reach Length	Shade (% of 180)
Actively Eroding	0%	Reach avg: 99%
Undercut Banks	5%	Range: 61-100

Large Woody Debris

	Total	Total/100m
All pieces (≥3m x 0.15m)	152	27.8
Volume (m^3)	412	75.3
Key pieces (≥10m x 0.6m)	17	3.1

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DEER CREEK 1996 REFERENCE
Survey Date: 07/08/96

REACH 1 T5N-R5W-S15NE 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	7	72	1.4	0.17	103	0	11	39	42	8	0	0
POOL-BACKWATER	1	2	1.0	0.31	2	0	70	20	10	0	0	0
POOL-LATERAL SCOUR	30	225	1.9	0.44	432	0	20	56	22	2	0	0
POOL-PLUNGE	8	40	3.1	0.62	121	0	17	58	20	5	0	0
POOL-STRAIGHT SCOUR	9	71	1.9	0.46	143	0	22	61	15	2	0	0
RIFFLE	11	90	1.1	0.09	105	0	3	40	57	0	0	0
RIFFLE W/ POCKETS	3	33	1.3	0.14	45	0	3	28	62	7	0	0
STEP/COBBLE	1	1	1.0	0.02	1	0	20	30	25	25	0	0
STEP/LOG	7	16	1.1	0.03	19	0	7	50	35	8	0	0
Total:	77	549	1.8	0.33	972	0	**Avg:** 15	51	30	4	0	0

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m^2)	Wetted Area Percent	Large Boulders Number	Large Boulders #/100m^2
Dammed & BW Pools	1	2	1.0	0.31	2	0.19	0	0.0
Scour Pools	47	336	2.1	0.47	696	71.62	0	0.0
Glides	7	72	1.4	0.17	103	10.62	0	0.0
Riffles	14	123	1.2	0.10	150	15.48	0	0.0
Rapids	0	0	-	-	0	0.00	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	8	17	1.1	0.03	20	2.09	0	0.0
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

	Total	#/Km
All Pools	48	87.5
Pools ≥1m deep:	2	3.6
Complex pools (LWD pieces≥3):	22	40.1
Pool Frequency (channel widths/pool):	2.6	
Residual pool depth (avg)	0.39m	

STREAM SUMMARY **DEER CREEK 1996 REFERENCE**

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m^2)	Substrate Percent Wetted Area S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	Total Large Boulder
77	549	1.8	0.33	972	15	51	30	4	0	0	0

Habitat Group	Wetted Area (m^2)	Percent
Scour Pool	696	71.6
Backwater Pools	2	0.2
Glide	103	10.6
Riffle	150	15.5
Rapid	0	0.0
Cascade	0	0.0
Step	20	2.1
Dry	0	0.0

REACH 1 RIPARIAN ZONE VEGETATION SUMMARY REACH 1

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

Total hardwoods/1000 ft	853
Total conifers/1000 ft	528
Total conifers >20" dbh/1000 ft	20
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters		Zones 1-3 0-30 meters	
Diameter class (cm)	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.3	1.0	3.7	6.7	4.0	2.7	8.0	10.3
15-30cm	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0
30-50cm	0.0	2.0	0.0	0.3	0.0	0.0	0.0	2.3
50-90cm	0.0	1.3	0.3	0.0	0.0	0.0	0.3	1.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m^2	0.7	4.3	4.0	7.0	4.0	2.7	2.9	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	55	25
Shrub cover	80	88	65
Grass/forb cover	20	13	32

Predominant landform in each zone

	Zone 1 0-10 meters	Zone 2 10-20 meters	Zone 3 20-30 meters
Hillslope	0	100	100
High terrace	100	0	0
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 (%)	2	50	47

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

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

Total hardwoods/1000 ft	853
Total conifers/1000 ft	528
Total conifers >20" dbh/1000 ft	20

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zones 1-3 Conifer	Hardwood
3-15cm	8.0	10.3
15-30cm	0.3	0.0
30-50cm	0.0	2.3
50-90cm	0.3	1.3
>90cm	0.0	0.0

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RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

VEGETATION DETAIL

					Cover (percent)				Diameter class (cm)					
Unit	Side	Zone	Surface	Slope	Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	Notes
70	LF	1	HT	0.0	90	40	60	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	2	0	
70	LF	2	HS	20.0	50	95	5	Conifer	0	0	0	0	0	
								Hardwood	8	0	0	0	0	
70	LF	3	HS	10.0	40	40	60	Conifer	4	0	0	0	0	
								Hardwood	5	0	0	0	0	
70	RT	1	HT	0.0	70	90	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	1	0	
70	RT	2	HS	20.0	60	100	0	Conifer	3	0	0	1	0	
								Hardwood	2	0	0	0	0	
70	RT	3	HS	40.0	0	40	60	Conifer	2	0	0	0	0	
								Hardwood	1	0	0	0	0	
91	LF	1	HT	0.0	100	80	20	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	1	0	
91	LF	2	HS	50.0	60	100	0	Conifer	2	0	0	0	0	
								Hardwood	3	0	0	0	0	
91	LF	3	HS	20.0	10	90	10	Conifer	2	0	0	0	0	
								Hardwood	0	0	0	0	0	
91	RT	1	HT	0.0	100	80	20	Conifer	0	0	0	0	0	
								Hardwood	0	0	3	0	0	
91	RT	2	HS	100.0	100	80	20	Conifer	2	0	0	0	0	
								Hardwood	5	0	1	0	0	
91	RT	3	HS	100.0	20	100	0	Conifer	0	0	0	0	0	
								Hardwood	1	0	0	0	0	
120	LF	1	HT	0.0	90	100	0	Conifer	0	0	0	0	0	
								Hardwood	0	0	3	0	0	
120	LF	2	HS	10.0	60	100	0	Conifer	3	0	0	0	0	
								Hardwood	2	0	0	0	0	
120	LF	3	HS	10.0	60	100	0	Conifer	2	0	0	0	0	
								Hardwood	1	0	0	0	0	
120	RT	1	HT	10.0	80	90	10	Conifer	1	1	0	0	0	
								Hardwood	3	0	0	0	0	
120	RT	2	HS	100.0	0	50	50	Conifer	1	0	0	0	0	
								Hardwood	0	0	0	0	0	
120	RT	3	HS	100.0	20	20	60	Conifer	2	0	0	0	0	
								Hardwood	0	0	0	0	0	