

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

STREAM: Deer Creek (NC-121)
BASIN: Nehalem River
SURVEY TYPE: Post-Tx
DATE: July 8, 1996
SURVEY CREW: Barry Thom, Matt Rowe
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 32.8 km²
USGS MAPS: Birkenfeld
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Deer Creek habitat survey extended 441 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 5.4 (range: 4.0 – 7.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 0.5 percent. Scour pools (37%), riffles (28%) and slackwater pools (24%) dominated stream habitat. Gravel (41%) and sand (35%) dominated stream substrate. Wood volume was high at 32.8 m³/100m.

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-R5W-S14NW

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: 5.4 range: 4.0-7.0

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	441	784	0
Secondary	59	103	1

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	1.6	Width	4.6	0.0	7.1
Depth	0.28	Height	0.4	0.0	0.9
		W:D ratio	11.1	Entrenchment	**.*

Stream Flow Type: LF Water Temp: 0.0-0.0°C
 Avg. Unit Gradient: 0.5% Habitat Units/100m: 13.0

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	0%	Reach avg: 98%
Undercut Banks	2%	Range: 61-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces (≥3m x 0.15m)	79	17.9
Volume (m ³)	145	32.8
Key pieces (≥10m x 0.6m)	5	1.1

REACH 1

T5N-R5W-S14NW

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
CULVERT CROSSING	1	16	1.1	0.20	18	0	70	30	0	0	0	0
DRY CHANNEL	1	13	1.8	0.00	23	0	0	90	10	0	0	0
GLIDE	6	42	1.4	0.18	58	0	19	39	42	0	0	0
POOL-BACKWATER	2	6	2.1	0.40	11	0	85	15	0	0	0	0
POOL-DAMMED	2	43	2.9	0.60	165	0	83	15	3	0	0	0
POOL-ISOLATED	1	8	5.0	0.60	40	0	100	0	0	0	0	0
POOL-LATERAL SCOUR	15	99	1.7	0.42	185	0	23	43	33	0	0	0
POOL-PLUNGE	6	26	2.8	0.70	80	0	38	48	14	0	0	0
POOL-STRAIGHT SCOUR	6	34	1.7	0.40	59	0	40	43	18	0	0	0
RIFFLER	23	200	1.1	0.06	219	0	7	26	67	0	0	0
RIFFLER W/ POCKETS	1	15	1.9	0.10	29	0	10	25	65	0	0	0
STEP/LOG	1	0	1.0	0.05	0	0	0	15	85	0	0	0
Total:	65	500	1.6	0.28	888	0	Avg:25	35	41	0	0	0

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m ²)	Percent	Large Boulders Number	Boulders #/100m ²
Dammed & BW Pools	5	57	3.0	0.52	217	24.39	0	0.0
Scour Pools	27	159	1.9	0.47	324	36.50	0	0.0
Glides	6	42	1.4	0.18	58	6.52	0	0.0
Riffles	24	215	1.1	0.06	248	27.93	0	0.0
Rapids	0	0	-	-	0	0.00	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	1	0	1.0	0.05	0	0.03	0	0.0
Dry	1	13	1.8	0.00	23	2.64	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	32	63.9
Pools ≥1m deep:	1	2.0
Complex pools (LWD pieces ≥3):	7	14.0
Pool Frequency (channel widths/pool):	3.4	
Residual pool depth (avg)	0.42m	

STREAM SUMMARY

DEER CREEK 1996 POST-TX

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	
65	500	1.6	0.28	888	25	35	41	0	0	0	0

Wetted Area

Habitat Group	(m ²)	Percent
Scour Pool	324	36.5
Backwater Pools	217	24.4
Glide	58	6.5
Riffle	248	27.9
Rapid	0	0.0
Cascade	0	0.0
Step	0	**.*
Dry	23	2.6

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	1,626
Total conifers/1000 ft	224
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	0.0	4.0	0.0	7.3	3.3	2.7	3.3	14.0
15-30cm	0.3	7.7	0.0	3.0	0.0	1.0	0.3	11.7
30-50cm	0.0	0.3	0.0	0.3	0.0	0.3	0.0	1.0
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 ²	0.3	12.0	0.0	10.7	3.3	4.0	1.2	8.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	67		64		39	
Shrub cover	22		42		63	
Grass/forb cover	68		58		37	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	0		33		67
High terrace	67		50		17	
Low terrace	33		17		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		17	
Riprap	0		0		0	
Surface slope (%)	0		7		13	

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	1,626
Total conifers/1000 ft	224
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	3.3	14.0
15-30cm	0.3	11.7
30-50cm	0.0	1.0
50-90cm	0.0	0.0
>90cm	0.0	0.0

STREAM HABITAT STATUS SHEET

STREAM NAME Deer Cr 1996 Port TX **CONTRACT** _____
BASIN Wheeler **CREW** B. Han, M. Paul

DATE FILENAME COMMENTS

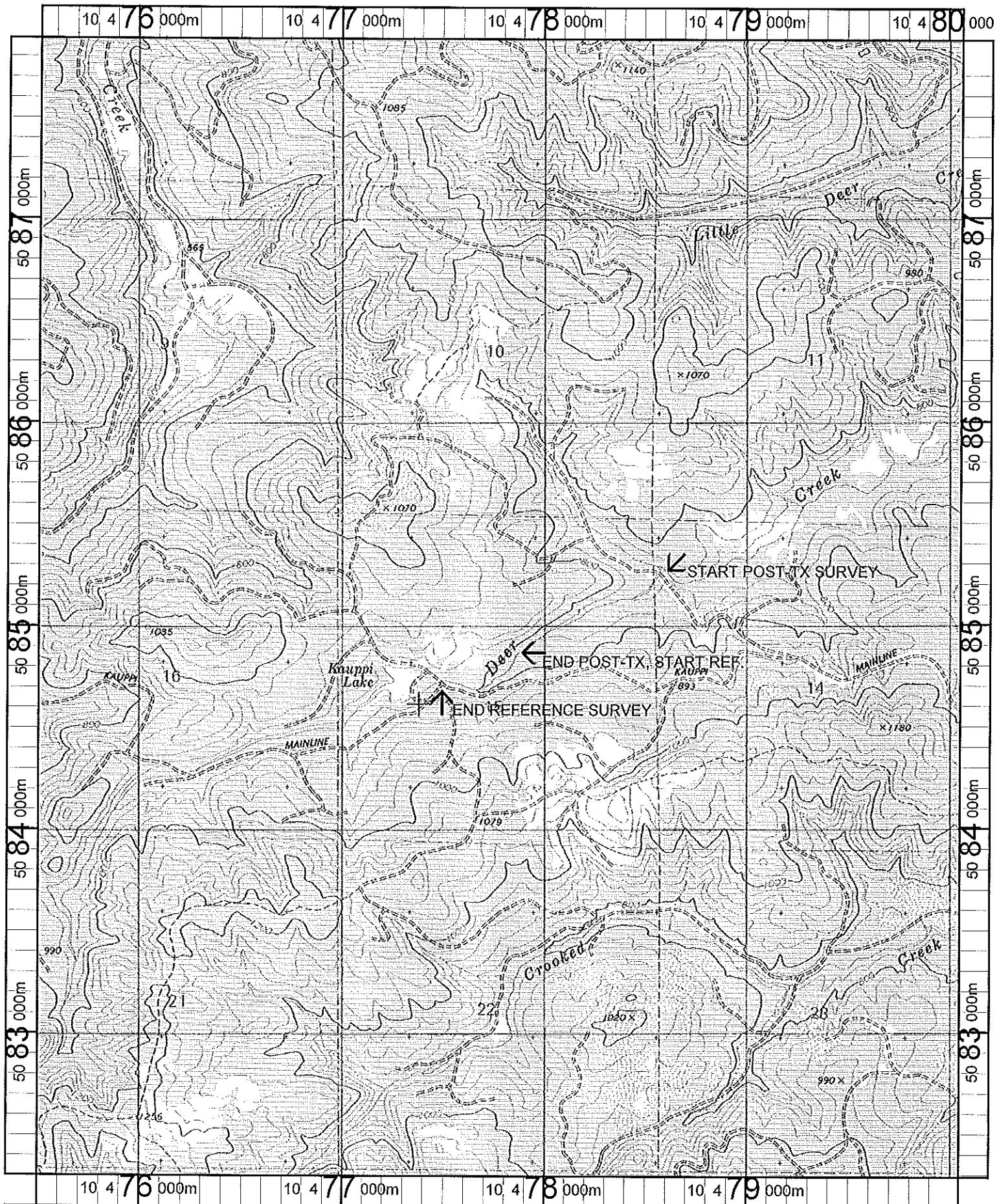
ENTRY		ENTERED BY:	
REACH	11/27/01	DE 96 P	HR.DBF
UNIT 1			U1.DBF
UNIT 2			U2.DBF
UNIT CHECK			CHK.DBF
RIPARIAN			RP.DBF
WOOD			WD.DBF

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

OREGON PLAN / REFERENCE SURVEYS			
BASIN AREA	BEAVER DAMS	#	MAJOR FAILURES
STREAM ORDER	BEAVER ACTIVITY	#	DEBRIS JAMS
JAMS FROM WOOD SHEETS # <u>3</u>	CULVERT CROSSINGS	# <u>1</u>	HABITAT STRUCTURES # <u>15</u>



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

Location: 10 477688 E 5085070 N
 Caption: 4 - 6 YEAR POST-TX AND REFERENCE SURVEYS -
 DEER CREEK - NEHALEM BASIN