

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

STREAM: Kenusky Creek (NC-122)  
BASIN: Nehalem River  
SURVEY TYPE: Reference  
DATE: July 9, 1996  
SURVEY CREW: Barry Thom, Matt Rowe  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 19.5 km<sup>2</sup>  
USGS MAPS: Bacona  
ECOREGION: Coast Range Astoria Willapa

**GENERAL DESCRIPTION:**

The Kenusky Creek habitat survey extended 282 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 young (3-15 cm dbh) trees. The average unit gradient was 1.6 percent. Scour pools (42%) and riffles (28%) dominated stream habitat. Sand (33%) dominated stream substrate. Wood volume was high at 32.2 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T5N-R3W-S32SE

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: 5.7 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	282	753	0
Secondary	54	115	3

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<u>First Terrace</u>
Width 2.3	5.9	0.0	7.8
Depth 0.21	0.5	0.0	1.0
W:D ratio 12.0 Entrenchment ***			

Stream Flow Type: LF Water Temp: 0.0-0.0°C  
 Avg. Unit Gradient: 1.6% Habitat Units/100m: 9.8

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	
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: 92%
Undercut Banks	2%	Range: 61-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ( $\geq 3m \times 0.15m$ )	64	22.7
Volume (m <sup>3</sup> )	91	32.2
Key pieces ( $\geq 10m \times 0.6m$ )	2	0.7

REACH 1

T5N-R3W-S32SE

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
DRY CHANNEL	3	44	2.2	0.00	102	0	27	23	17	14	2	17
GLIDE	1	15	3.0	0.25	45	0	30	40	20	10	0	0
POOL-BACKWATER	1	4	1.5	0.32	6	0	50	46	2	2	0	0
POOL-ISOLATED	1	6	1.2	0.20	7	0	80	20	0	0	0	0
POOL-LATERAL SCOUR	5	56	2.6	0.45	147	0	19	48	8	6	1	19
POOL-PLUNGE	1	5	3.5	0.40	16	0	0	40	5	0	0	55
POOL-STRAIGHT SCOUR	5	62	3.0	0.38	198	0	38	50	4	4	0	4
RAPID/BEDROCK	1	12	3.0	0.10	36	0	0	5	0	0	0	95
RAPID/BOULDERS	2	23	1.9	0.09	43	0	0	55	28	15	3	0
RIFFLE	8	101	2.1	0.11	247	0	3	24	35	16	1	21
STEP/COBBLE	3	8	2.8	0.08	20	0	3	7	18	33	22	17
STEP/LOG	2	2	0.9	0.06	2	0	5	35	30	5	0	25
<b>Total:</b>	<b>33</b>	<b>336</b>	<b>2.3</b>	<b>0.21</b>	<b>869</b>	<b>0</b>	<b>Avg:17</b>	<b>33</b>	<b>18</b>	<b>11</b>	<b>3</b>	<b>18</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders Number	Boulders #/100m <sup>2</sup>
					(m <sup>2</sup> )	Percent		
Dammed & BW Pools	2	10	1.4	0.26	13	1.52	0	0.0
Scour Pools	11	122	2.9	0.41	361	41.52	0	0.0
Glides	1	15	3.0	0.25	45	5.18	0	0.0
Riffles	8	101	2.1	0.11	247	28.47	0	0.0
Rapids	3	35	2.3	0.09	79	9.10	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	5	9	2.1	0.07	22	2.48	0	0.0
Dry	3	44	2.2	0.00	102	11.74	0	0.0

POOL SUMMARY

	Total	#/Km
All Pools	13	38.7
Pools ≥1m deep:	0	0.0
Complex pools (LWD pieces ≥3):	5	14.9
Pool Frequency (channel widths/pool):	4.4	
Residual pool depth (avg)	0.31m	

STREAM SUMMARY

KENUSKY CREEK 1996 REFERENCE

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	
33	336	2.3	0.21	869	17	33	18	11	3	18	0

Wetted Area

Habitat Group	(m <sup>2</sup> )	Percent
Scour Pool	361	41.5
Backwater Pools	13	1.5
Glide	45	5.2
Riffle	247	28.5
Rapid	79	9.1
Cascade	0	0.0
Step	22	2.5
Dry	102	11.7

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REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	366
Total conifers/1000 ft	61
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	1.0	0.0	0.0	0.0	1.0	0.0	2.0
15-30cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30-50cm	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0
50-90cm	0.0	2.0	1.0	0.0	0.0	0.0	1.0	2.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m <sup>2</sup>	0.0	5.0	1.0	0.0	0.0	1.0	0.3	2.0

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	65		15		0	
Shrub cover	100		100		95	
Grass/forb cover	0		0		5	

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 (%)	0		65		65	

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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	366
Total conifers/1000 ft	61
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	0.0	2.0
15-30cm	0.0	0.0
30-50cm	0.0	2.0
50-90cm	1.0	2.0
>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	
120	LF	1	HT	0.0	40	100	0	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	2	0	
120	LF	2	HS	100.0	0	100	0	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
120	LF	3	HS	100.0	0	100	0	Conifer	0	0	0	0	0	
								Hardwood	1	0	0	0	0	
120	RT	1	HT	0.0	90	100	0	Conifer	0	0	0	0	0	
								Hardwood	1	0	2	0	0	
120	RT	2	HS	30.0	30	100	0	Conifer	0	0	0	1	0	
								Hardwood	0	0	0	0	0	
120	RT	3	HS	30.0	0	90	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	

# STREAM HABITAT STATUS SHEET

**STREAM NAME** Knusky Cr 1996 Reference **CONTRACT**  
**BASIN** Nphalom **CREW** B. Thom, M. Koval

**DATE                      FILENAME                      COMMENTS**

ENTRY		ENTERED BY:	
REACH	<u>11/27/01</u>	<u>11/27/01</u>	<u>HR.DBF</u>
UNIT 1			<u>U1.DBF</u>
UNIT 2			<u>U2.DBF</u>
UNIT CHECK			<u>CHK.DBF</u>
RIPARIAN			<u>RP.DBF</u>
WOOD			<u>WD.DBF</u>

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

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

**COMMENTS / NOTES**

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OREGON PLAN / REFERENCE SURVEYS			
BASIN AREA	BEAVER DAMS	#	MAJOR FAILURES
STREAM ORDER	BEAVER ACTIVITY	# <u>4</u>	DEBRIS JAMS
JAMS FROM WOOD SHEETS	CULVERT CROSSINGS	#	HABITAT STRUCTURES
# <u>2</u>			#