

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

STREAM: Kenusky Creek (NC-123)  
BASIN: Nehalem River  
SURVEY TYPE: Post-Tx  
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 700 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 7.4 (range: 7.0 – 10.0). Land use for the reach was young (3-15 cm dbh) trees. The average unit gradient was 1.3 percent. Scour pools (49%) dominated stream habitat. Sand (29%), fines (21%) and gravel (21%) dominated stream substrate. Wood volume was moderate at 25.6 m<sup>3</sup>/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-R3W-S5NW

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: 7.4 range: 7.0-10.0

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	700	2,239	0
Secondary	146	292	5

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<u>First Terrace</u>
Width 2.8	Width 6.7	0.0	9.0
Depth 0.27	Height 0.6	0.0	1.2
	W:D ratio 11.9	Entrenchment **.*	

Stream Flow Type: LF Water Temp: 0.0-0.0°C  
Avg. Unit Gradient: 1.3% 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: 91%
Undercut Banks	2%	Range: 56-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ( $\geq 3m \times 0.15m$ )	158	22.6
Volume (m <sup>3</sup> )	179	25.6
Key pieces ( $\geq 10m \times 0.6m$ )	7	1.0

REACH 1

T5N-R3W-S5NW

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	5	40	3.5	0.00	142	0	13	47	18	22	0	0
GLIDE	5	73	2.9	0.24	225	0	7	24	12	9	3	45
POOL-BACKWATER	4	14	2.2	0.26	29	0	71	26	1	1	0	0
POOL-DAMMED	1	36	5.5	1.00	198	0	80	20	0	0	0	0
POOL-ISOLATED	3	19	1.8	0.33	43	0	93	7	0	0	0	0
POOL-LATERAL SCOUR	23	251	3.1	0.49	808	0	22	39	16	10	2	12
POOL-PLUNGE	3	17	4.7	0.38	84	0	46	48	4	2	0	0
POOL-STRAIGHT SCOUR	8	104	3.0	0.37	356	0	12	32	19	7	10	20
RAPID/BEDROCK	1	21	3.5	0.07	74	0	0	5	5	5	0	85
RAPID/BOULDERS	14	137	2.4	0.10	305	0	1	16	36	36	8	3
RIFFLE	7	82	2.0	0.09	138	0	15	18	33	20	0	14
RIFFLE W/ POCKETS	3	40	2.0	0.12	85	0	22	39	34	5	0	0
STEP/COBBLE	3	11	3.2	0.10	37	0	0	13	47	33	7	0
STEP/LOG	3	4	2.7	0.05	9	0	30	37	28	5	0	0
<b>Total:</b>	<b>83</b>	<b>846</b>	<b>2.8</b>	<b>0.27</b>	<b>2,531</b>	<b>0</b>	<b>Avg:21</b>	<b>29</b>	<b>21</b>	<b>15</b>	<b>3</b>	<b>11</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m <sup>2</sup> )	Percent	Large Boulders Number	Boulders #/100m <sup>2</sup>
Dammed & BW Pools	8	69	2.5	0.38	270	10.66	0	0.0
Scour Pools	34	371	3.2	0.45	1,247	49.27	0	0.0
Glides	5	73	2.9	0.24	225	8.88	0	0.0
Riffles	10	122	2.0	0.10	223	8.82	0	0.0
Rapids	15	158	2.5	0.10	378	14.94	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	6	15	2.9	0.08	46	1.82	0	0.0
Dry	5	40	3.5	0.00	142	5.61	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	42	49.6
Pools ≥1m deep:	2	2.4
Complex pools (LWD pieces ≥3):	15	17.7
Pool Frequency (channel widths/pool):	3.0	
Residual pool depth (avg)	0.37m	

STREAM SUMMARY

KENUSKY CREEK 1996 POST-TX

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	
83	846	2.8	0.27	2,531	21	29	21	15	3	11	0

Wetted Area

Habitat Group	(m <sup>2</sup> )	Percent
Scour Pool	1,247	49.3
Backwater Pools	270	10.7
Glide	225	8.9
Riffle	223	8.8
Rapid	378	14.9
Cascade	0	0.0
Step	46	1.8
Dry	142	5.6

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REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	102
Total conifers/1000 ft	183
Total conifers >20" dbh/1000 ft	41
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	0.0	0.3	0.0	1.3	0.0	1.7	0.0
15-30cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
30-50cm	0.3	0.7	0.3	0.0	0.0	0.0	0.7	0.7
50-90cm	0.3	0.7	0.3	0.0	0.0	0.0	0.7	0.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m <sup>2</sup>	0.7	1.7	1.0	0.0	1.3	0.0	1.0	0.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	67		16		10	
Shrub cover	97		50		45	
Grass/forb cover	3		50		55	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	0		17		17
High terrace	83		83		67	
Low terrace	17		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		17	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	0		10		10	

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	102
Total conifers/1000 ft	183
Total conifers >20" dbh/1000 ft	41

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	1.7	0.0
15-30cm	0.0	0.3
30-50cm	0.7	0.7
50-90cm	0.7	0.7
>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	
4	LF	1	HT	0.0	80	90	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	1	0	
4	LF	2	HT	0.0	0	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
4	LF	3	HT	0.0	0	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
4	RT	1	HT	0.0	65	100	0	Conifer	0	0	0	1	0	
								Hardwood	0	0	0	0	0	
4	RT	2	HT	0.0	65	100	0	Conifer	0	0	1	0	0	
								Hardwood	0	0	0	0	0	
4	RT	3	TC	0.0	50	100	0	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
31	LF	1	HT	0.0	50	100	0	Conifer	0	0	1	0	0	
								Hardwood	0	0	0	0	0	
31	LF	2	HT	0.0	0	10	90	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
31	LF	3	HT	0.0	0	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
31	RT	1	LT	0.0	70	100	0	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
31	RT	2	HT	0.0	20	100	0	Conifer	0	0	0	1	0	
								Hardwood	0	0	0	0	0	
31	RT	3	HT	0.0	10	100	0	Conifer	3	0	0	0	0	
								Hardwood	0	0	0	0	0	
60	LF	1	HT	0.0	85	100	0	Conifer	0	0	0	0	0	
								Hardwood	0	1	2	1	0	
60	LF	2	HT	0.0	10	40	60	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
60	LF	3	HT	0.0	0	30	70	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
60	RT	1	HT	0.0	50	90	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
60	RT	2	HS	60.0	0	50	50	Conifer	1	0	0	0	0	
								Hardwood	0	0	0	0	0	
60	RT	3	HS	60.0	0	40	60	Conifer	1	0	0	0	0	
								Hardwood	0	0	0	0	0	

# STREAM HABITAT STATUS SHEET

**STREAM NAME** Konusky Cr 1996 Part 7x **CONTRACT** \_\_\_\_\_  
**Basin** Wphalon **CREW** B. Han, M. Powell

**DATE                      FILENAME                      COMMENTS**

ENTRY			ENTERED BY:	
REACH	11/27/01	KE96P	HR.DBF	<i>Paul Jacobs</i>
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**

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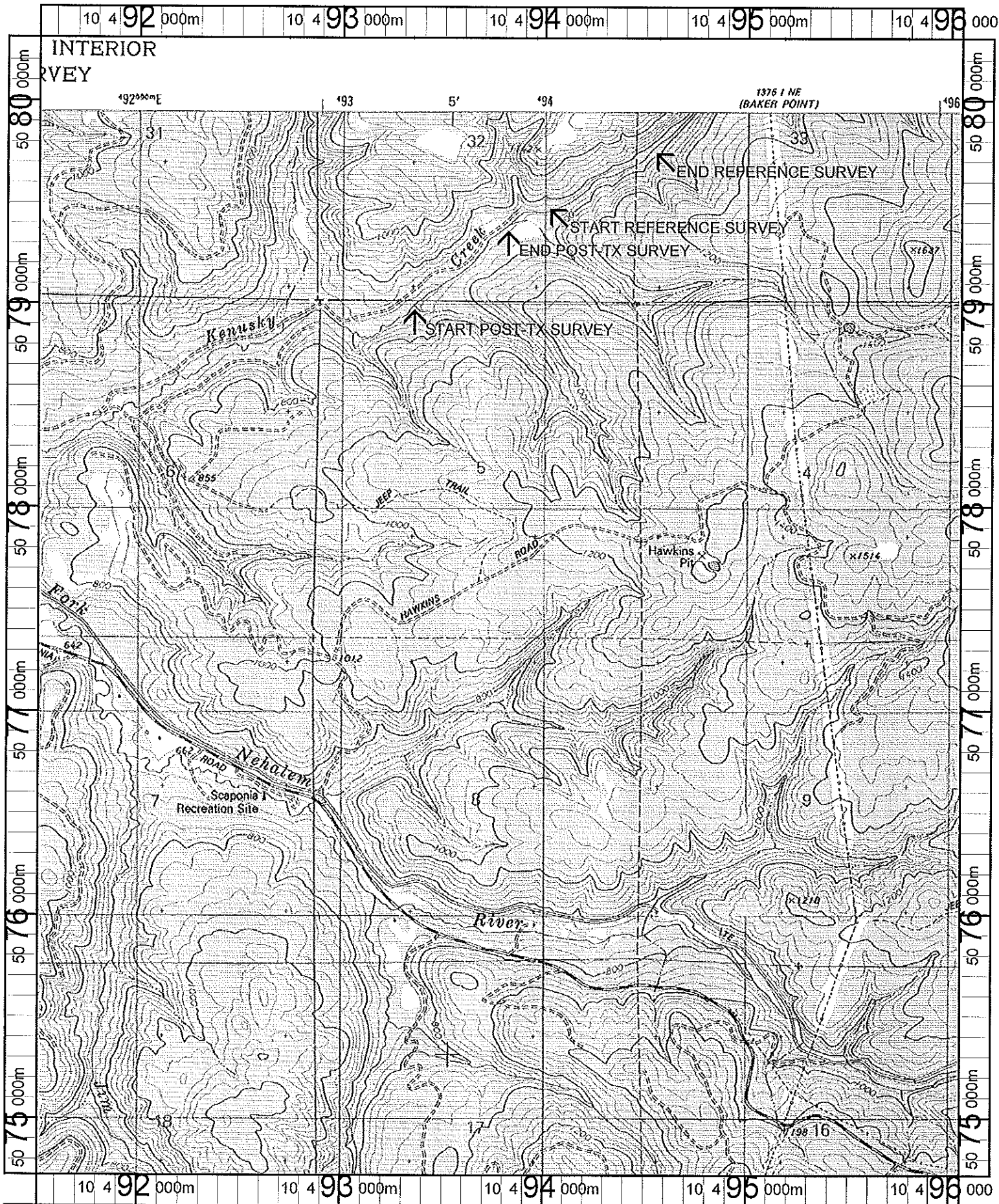
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OREGON PLAN / REFERENCE SURVEYS					
BASIN AREA	BEAVER DAMS	#	MAJOR FAILURES	#	
STREAM ORDER	BEAVER ACTIVITY	#	DEBRIS JAMS	#	<del>1</del> 1
JAMS FROM WOOD SHEETS # 10	CULVERT CROSSINGS	#	HABITAT STRUCTURES	#	7





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

Location: 10 493688 E 5077496 N  
 Caption: 4 - 6 YEAR POST-TX AND REFERENCE SURVEYS -  
 KENUSKY CREEK - NEHALEM BASIN