

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

STREAM: Johnson Creek (NC-38)
BASIN: Necanicum River
SURVEY TYPE: Post-Tx
DATE: February 20, 2001
SURVEY CREW: Sean Allen, Todd Boswell
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 2.1 km²
USGS MAPS: Tillamook Head
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Johnson Creek habitat survey extended 478 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 4.2 (range: 3.5 – 5.5). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 2.9 percent. Riffles (51%) and rapids (28%) dominated stream habitat. Gravel (41%) and sand (37%) dominated stream substrate. Wood volume was low at 18.6 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 SUMMARY

REACH 1

T5N-R10W-S23SE

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	0
Moderate V-shape	0	Multiple Terraces	100
Open V-shape	0	Wide Floodplain	0

Valley Width Index avg: 4.2 range: 3.5-5.5

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0	Single Channel	100
Bedrock	0	Multiple Channel	0
Terrace	0	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	478	1,721	0
Secondary	230	397	1

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	3.9	Width	5.6	17.6	10.4
Depth	0.37	Height	0.5	1.0	0.8
		W:D ratio	11.2	Entrenchment	3.3

Stream Flow Type: HF Water Temp: 7.0-7.0°C
Avg. Unit Gradient: 2.9% Habitat Units/100m: 6.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	YT
Riparian Vegetation:	D30	C15

Bank Condition and Shade

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

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces (≥3m x 0.15m)	115	24.1
Volume (m ³)	89	18.6
Key pieces (≥10m x 0.6m)	3	0.6

HABITAT UNIT SUMMARY

REACH 1

T5N-R10W-S23SE

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
CASCADE/BOULDERS	2	15	0.6	0.05	8	0	0	38	33	30	0	0
POOL-BACKWATER	8	30	2.7	0.46	74	0	6	64	26	3	1	0
POOL-LATERAL SCOUR	9	64	3.5	0.56	224	0	3	35	39	23	0	0
POOL-PLUNGE	3	14	4.1	0.63	61	0	3	37	35	20	5	0
PUDDLED CHANNEL	1	47	1.0	0.05	47	0	5	25	45	25	0	0
RAPID/BOULDERS	6	207	3.2	0.27	601	0	3	28	42	25	3	1
RIFFLE	14	329	3.3	0.27	1,080	0	1	27	50	20	2	0
STEP/LOG	3	2	16.0	0.20	24	0	0	33	47	18	2	0
Total:	46	708	3.9	0.37	2,118	0	Avg: 3	37	41	19	2	0

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	8	30	2.7	0.46	74	3.50	0	0.0
Scour Pools	12	78	3.7	0.58	285	13.44	0	0.0
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	14	329	3.3	0.27	1,080	50.98	0	0.0
Rapids	6	207	3.2	0.27	601	28.35	0	0.0
Cascades	2	15	0.6	0.05	8	0.38	0	0.0
Step/Falls	3	2	16.0	0.20	24	1.13	0	0.0
Dry	1	47	1.0	0.05	47	2.21	0	0.0

POOL SUMMARY

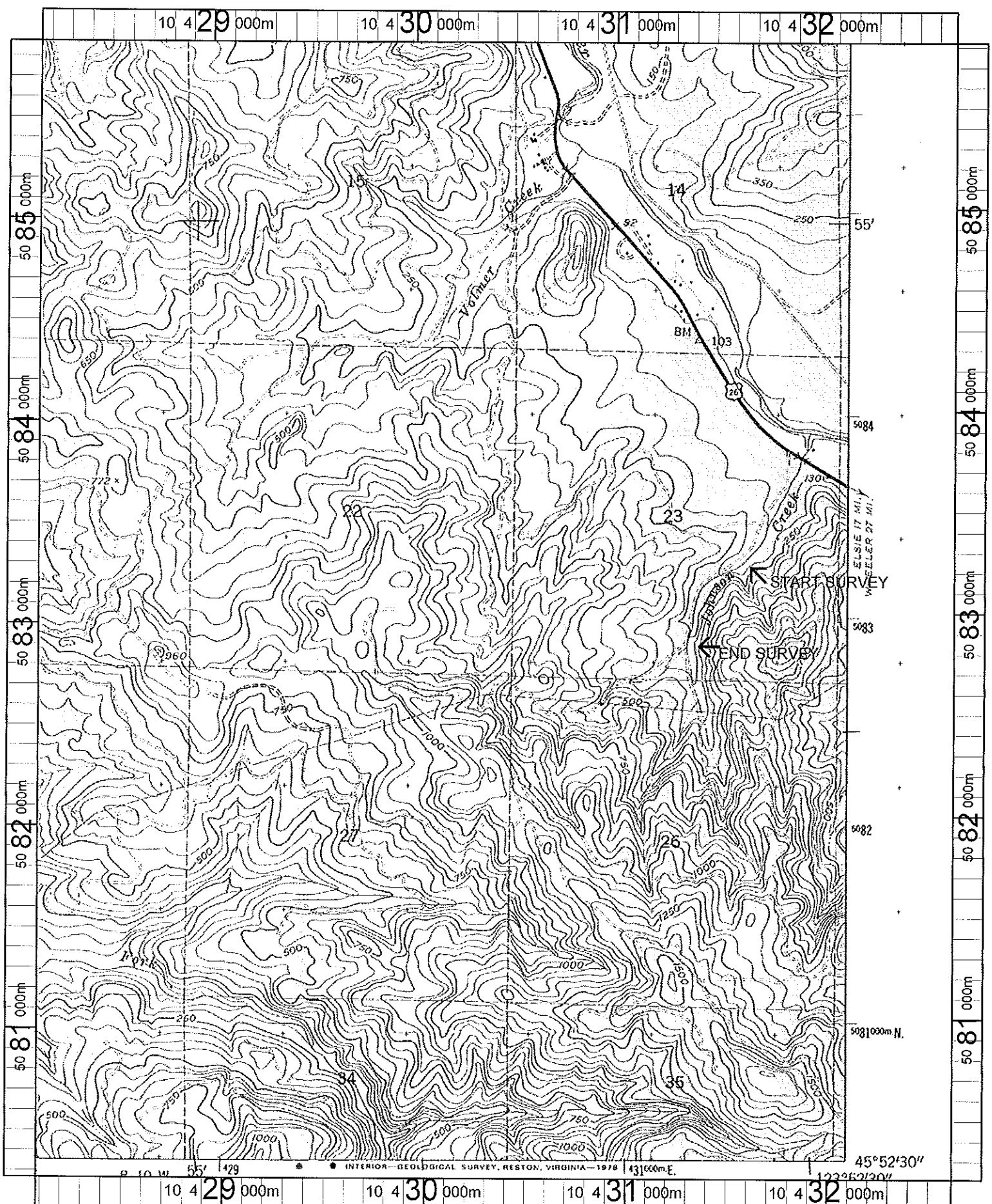
All Pools	<u>Total</u>	<u>#/Km</u>
	20	28.3
Pools ≥1m deep:	0	0.0
Complex pools (LWD pieces ≥3):	3	4.2
Pool Frequency (channel widths/pool):	6.3	
Residual pool depth (avg)	0.42m	

STREAM SUMMARY

JOHNSON CREEK 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
46	708	3.9	0.37	2,118	3	37	41	19	2	0	0

Habitat Group	Wetted Area	
	(m ²)	Percent
Scour Pool	285	13.4
Backwater Pools	74	3.5
Glide	0	0.0
Riffle	1,080	51.0
Rapid	601	28.4
Cascade	8	0.4
Step	24	1.1
Dry	47	2.2



Name: TILLAMOOK HEAD
 Date: 10/3/101
 Scale: 1 inch equals 2000 feet

Location: 10 430285 E 5083026 N
 Caption: JOHNSON CREEK RESTORATION SITE -
 NECANICUM BASIN