

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

STREAM: West Fork Ecola Creek (NC-115)
BASIN: Ecola Creek
SURVEY TYPE: Post- Tx
DATE: September 18, 1996
SURVEY CREW: Barry Thom, Chris Mease
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 24.3 km²
USGS MAPS: Arch Cape
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The West Fork Ecola Creek habitat survey extended 745 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 7.0. Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 0.7 percent. Scour pools (54%) and riffles (32%) dominated stream habitat. Gravel (67%) dominated stream substrate. Wood volume was high at 31.8 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-R10W-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	0
Moderate V-shape	0	Multiple Terraces	100
Open V-shape	0	Wide Floodplain	0

Valley Width Index avg: 7.0 range: 7.0-7.0

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

<u>Type</u>	<u>Length(m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary	745	4,969	0
Secondary	132	459	1

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	5.6	Width	12.3	0.0	18.3
Depth	0.66	Height	0.8	0.0	1.6
		W:D ratio	15.4	Entrenchment **.*	

Stream Flow Type: LF Water Temp: 0.0-0.0°C
 Avg. Unit Gradient: 0.7% Habitat Units/100m: 4.3

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: 84%
Undercut Banks	3%	Range: 50-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces (≥3m x 0.15m)	138	18.5
Volume (m ³)	237	31.8
Key pieces (≥10m x 0.6m)	13	1.7

REACH 1

T5N-R10W-S5NW

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
DRY UNITS	1	20	4.5	0.00	90	0	0	5	80	15	0	0
GLIDE	1	23	12.0	0.12	276	0	2	5	78	15	0	0
POOL-BACKWATER	6	91	3.3	0.65	310	0	26	25	48	2	0	0
POOL-ISOLATED	1	8	2.5	0.65	20	0	10	10	70	10	0	0
POOL-LATERAL SCOUR	17	445	6.3	1.11	2,882	0	5	18	67	11	0	0
POOL-STRAIGHT SCOUR	1	13	3.0	0.55	39	0	10	10	70	10	0	0
RAPID/BOULDERS	1	12	4.0	0.10	48	0	0	0	65	35	0	0
RIFFLE	8	258	6.4	0.09	1,729	0	1	7	75	17	0	0
STEP/COBBLE	2	7	4.8	0.07	34	0	0	5	80	15	0	0
Total:	38	877	5.6	0.66	5,428	0	Avg: 7	15	67	12	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	Boulders #/100m ²
Dammed & BW Pools	7	99	3.1	0.65	330	6.07	0	0.0
Scour Pools	18	458	6.1	1.08	2,921	53.82	0	0.0
Glides	1	23	12.0	0.12	276	5.09	0	0.0
Riffles	8	258	6.4	0.09	1,729	31.86	0	0.0
Rapids	1	12	4.0	0.10	48	0.88	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	2	7	4.8	0.07	34	0.63	0	0.0
Dry	1	20	4.5	0.00	90	1.66	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	25	28.5
Pools ≥1m deep:	12	13.7
Complex pools (LWD pieces ≥3):	14	16.0
Pool Frequency (channel widths/pool):	2.9	
Residual pool depth (avg)	1.05m	

STREAM SUMMARY

WF ECOLA 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	
38	877	5.6	0.66	5,428	7	15	67	12	0	0	0

Wetted Area

Habitat Group	(m ²)	Percent
Scour Pool	2,921	53.8
Backwater Pools	330	6.1
Glide	276	5.1
Riffle	1,729	31.9
Rapid	48	0.9
Cascade	0	0.0
Step	34	0.6
Dry	90	1.7

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) (2 transects)

Total hardwoods/1000 ft	1,554
Total conifers/1000 ft	152
Total conifers >20" dbh/1000 ft	30
Total conifers >35" dbh/1000 ft	30

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	0.5	5.5	0.0	0.5	0.0	2.0	0.5	8.0
15-30cm	0.0	8.5	1.0	4.5	0.5	3.5	1.5	16.5
30-50cm	0.0	0.5	0.0	0.5	0.0	0.0	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	0.5	0.0	0.5	0.0
Total/100m ²	0.5	14.5	1.0	5.5	1.0	5.5	0.8	8.5

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	88		88		80	
Shrub cover	0		0		5	
Grass/forb cover	99		100		88	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	0		0		25
High terrace	50		75		75	
Low terrace	50		25		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 (%)	3		0		13	

Summary of Riparian Zone (0-30m) for all reaches (2 transects)

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

Total hardwoods/1000 ft	1,554
Total conifers/1000 ft	152
Total conifers >20" dbh/1000 ft	30

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zones 1-3	
	Conifer	Hardwood
3-15cm	0.5	8.0
15-30cm	1.5	16.5
30-50cm	0.0	1.0
50-90cm	0.0	0.0
>90cm	0.5	0.0

STREAM HABITAT STATUS SHEET

STREAM NAME WF Ecolog 1996 Post-7 CONTRACT _____
 BASIN Ecolog CREW G. Muc. B. Thom

DATE FILENAME COMMENTS

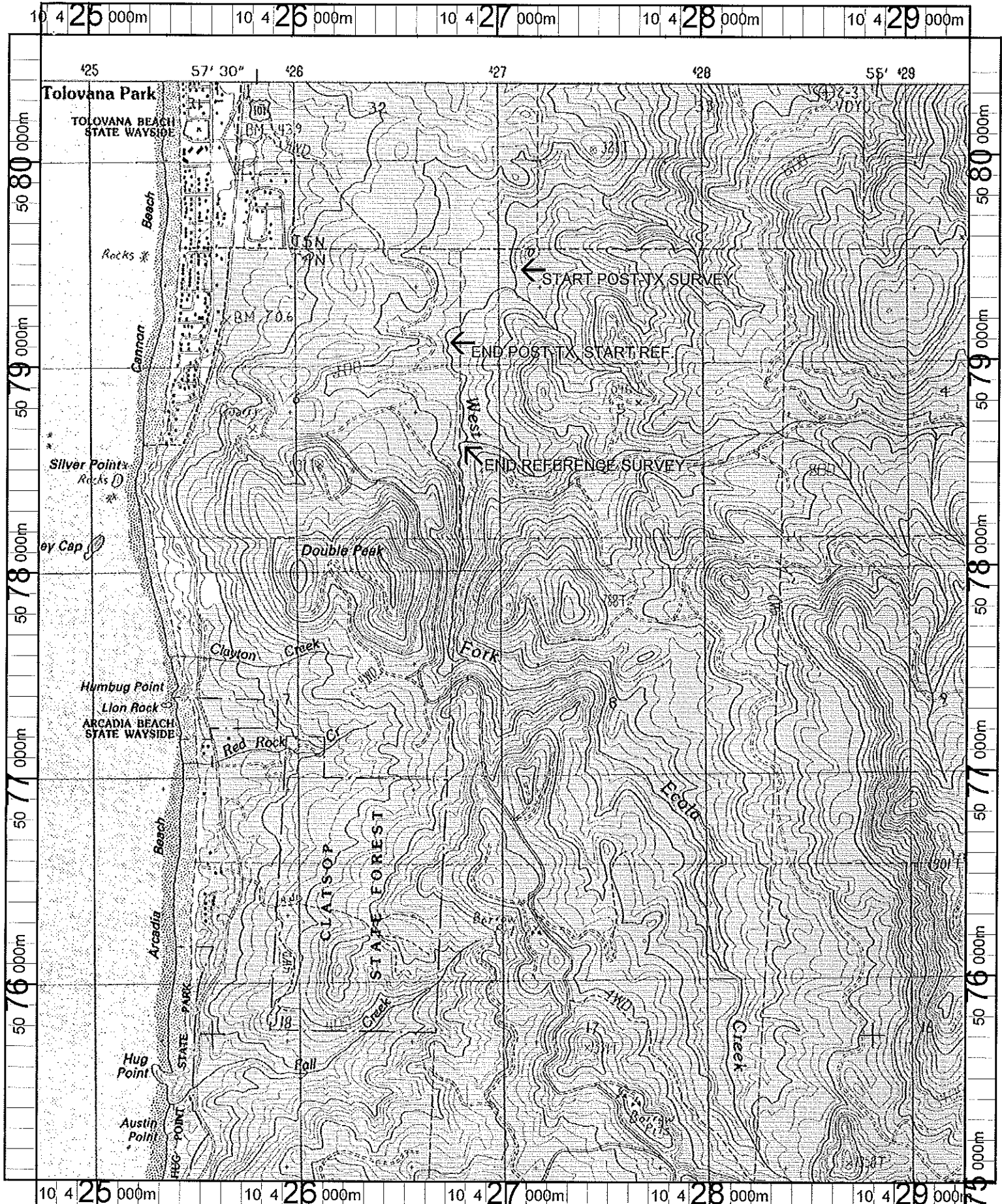
ENTRY	DATE	FILENAME	ENTERED BY
REACH	11/23/01	WF967 HR.DBF	<i>[Signature]</i>
UNIT 1		U1.DBF	
UNIT 2		U2.DBF	
UNIT CHECK		CHK.DBF	
RIPARIAN		RP.DBF	
WOOD		WD.DBF	

ANALYSIS	DATE	FILENAME	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	DATE	FILENAME	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 # <u>4</u>
JAMS FROM WOOD SHEETS # <u>7</u>	CULVERT CROSSINGS	#	HABITAT STRUCTURES # <u>11</u>



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

Location: 10 426912 E 5077790 N
 Caption: 4 - 6 YEAR POST-TX AND REFERENCE SURVEYS -
 OF LITTLE NESTUCCA BASIN - NESTUCCA BASIN

W.F. Ecola Creek