

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

STREAM: South Fork Little Nestucca River (NC-113)
BASIN: Nestucca River
SURVEY TYPE: Reference
DATE: August 27, 1996
SURVEY CREW: Barry Thom, Paul Jacobsen
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 16.4 km²
USGS MAPS: Dolph
ECOREGION: Coast Range Volcanic

GENERAL DESCRIPTION:

The South Fork Little Nestucca River habitat survey extended 617 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 4.3 (range: 3.0 – 5.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.3 percent. Riffles (53%) and scour pools (22%) dominated stream habitat. Gravel (26%), bedrock (22%) and cobble (20%) dominated stream substrate. Wood volume was low at 9.7 m³/100m.

COMMENTS:

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

REACH 1

T5S-R10W-S36SE

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: 4.3 range: 3.0-5.0

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	617	3,698	0
Secondary	72	104	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<u>First Terrace</u>
Width 4.9	Width 10.4	0.0	12.2
Depth 0.39	Height 0.5	0.0	0.9
	W:D ratio 22.3	Entrenchment **.*	

Stream Flow Type: LF Water Temp: 12.5-12.5°C
 Avg. Unit Gradient: 1.3% Habitat Units/100m: 4.9

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
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: 87%
Undercut Banks	5%	Range: 53-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ($\geq 3m \times 0.15m$)	32	5.2
Volume (m ³)	60	9.7
Key pieces ($\geq 10m \times 0.6m$)	4	0.6

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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
GLIDE	2	28	5.0	0.30	138	0	5	15	30	30	0	20
POOL-ALCOVE	1	20	1.0	0.40	20	0	60	30	10	0	0	0
POOL-BACKWATER	1	10	2.4	0.30	24	0	40	50	10	0	0	0
POOL-ISOLATED	2	5	1.0	0.33	4	0	55	20	25	0	0	0
POOL-LATERAL SCOUR	8	130	4.6	0.76	597	2	15	17	33	24	3	9
POOL-PLUNGE	1	5	6.0	0.80	30	0	10	19	29	5	0	38
POOL-STRAIGHT SCOUR	2	28	8.0	0.95	224	8	8	15	28	25	5	20
RAPID/BEDROCK	2	26	9.0	0.13	238	2	0	5	5	3	3	85
RAPID/BOULDERS	2	63	7.5	0.15	463	10	0	10	23	23	10	35
RIFFLE	11	360	4.7	0.17	1,996	33	5	14	29	25	6	20
STEP/BEDROCK	1	13	5.0	0.15	65	0	0	0	0	0	0	100
STEP/LOG	1	1	3.0	0.10	3	0	0	10	40	50	0	0
Total:	34	689	4.9	0.39	3,802	55	Avg:12	15	26	20	4	22

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	4	35	1.4	0.34	48	1.27	0	0.0
Scour Pools	11	163	5.4	0.80	851	22.37	10	1.2
Glides	2	28	5.0	0.30	138	3.63	0	0.0
Riffles	11	360	4.7	0.17	1,996	52.50	33	1.7
Rapids	4	89	8.3	0.14	701	18.44	12	1.7
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	2	14	4.0	0.13	68	1.79	0	0.0
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	15	<u>#/Km</u>	21.8
Pools ≥1m deep:		2		2.9
Complex pools (LWD pieces ≥3):		2		2.9
Pool Frequency (channel widths/pool):		4.4		
Residual pool depth (avg)		0.60m		

STREAM SUMMARY

SF L NESTUCCA 1996 REFERENCE

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	
34	689	4.9	0.39	3,802	12	15	26	20	4	22	55

Wetted Area

Habitat Group	(m ²)	Percent
Scour Pool	851	22.4
Backwater Pools	48	1.3
Glide	138	3.6
Riffle	1,996	52.5
Rapid	701	18.4
Cascade	0	0.0
Step	68	1.8
Dry	0	0.0

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	732
Total conifers/1000 ft	1,097
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	2.0	13.0	0.0	2.0	3.0	15.0	5.0
15-30cm	0.0	0.0	1.0	0.0	2.0	5.0	3.0	5.0
30-50cm	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
50-90cm	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m ²	0.0	4.0	14.0	0.0	4.0	8.0	6.0	4.0

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	50		60		85	
Shrub cover	30		15		25	
Grass/forb cover	70		55		35	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	0		0		0
High terrace	100		100		100	
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		0		0	

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	732
Total conifers/1000 ft	1,097
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	15.0	5.0
15-30cm	3.0	5.0
30-50cm	0.0	1.0
50-90cm	0.0	1.0
>90cm	0.0	0.0
