

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

STREAM: South Fork Little Nestucca River (N-176)  
BASIN: Nestucca River  
SURVEY TYPE: Post-Tx  
DATE: July 2, 2003  
SURVEY CREW: Jeff Snyder, Jim Andrews  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 19.0 km<sup>2</sup>  
USGS MAPS: Dolph  
ECOREGION: Coast Range Volcanic

**GENERAL DESCRIPTION:**

The South Fork Little Nestucca River habitat survey extended 541 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 5.9 (range: 4.0-7.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.3 percent. Scour pools (34%), rapids (27%) and riffles (24%) dominated stream habitat. Bedrock (58%) dominated stream substrate. Wood volume was moderate at 24.5 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.

**OREGON DEPT. FISH AND WILDLIFE**

**SF LITTLE NESTUCCA POST-TX (N-176)**

**HABITAT INVENTORY**

Report Date: 12/17/03

Survey Date:

7/2/03

**REACH 1**

**T05S-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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	5.9	VWI Range:	4 - 7

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	541	3,388	0
Secondary	11	20	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	5.8	Width	9.8	14.4	16.2
Depth	0.36	Height	0.5	0.9	1.2
		W:D ratio	22.6	Entrenchment	1.5

Stream Flow Type: LF Water temp (C): 10.5 - 10.5  
 Avg. Unit Gradient: 1.3% Habitat Units/100m: 7.6

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	M30	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	2%	Reach avg: 93%
Undercut Banks:	9%	Range: 58 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	55	10.2
Volume (m <sup>3</sup> ):	132	24.5
Key pieces (>=10m x 0.60m):	9	1.7

OREGON DEPARTMENT OF FISH AND WILDLIFE

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**REACH 1** **T05S-R10W-S36SE** **REACH 1**

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	Cbl	Bldr	Bdrk	
CASCADE/BEDROCK	1	14	4.6	0.25	63	0	0	10	0	0	0	0	90
POOL-BACKWATER	1	4	2.8	0.40	11	0	10	45	45	0	0	0	0
POOL-DAMMED	1	22	9.1	0.62	200	0	15	30	10	0	0	0	45
POOL-ISOLATED	1	2	0.6	0.07	1	0	10	0	0	0	0	0	90
POOL-LATERAL SCOUR	13	177	6.6	0.65	1,167	3	4	12	25	6	1	53	
RAPID/BEDROCK	11	160	5.2	0.21	850	3	0	9	10	5	0	77	
RAPID/BOULDERS	1	18	3.5	0.20	61	8	0	6	17	28	17	33	
RIFFLE	6	106	6.3	0.23	736	5	15	13	26	25	2	19	
RIFFLE W/ POCKETS	1	11	6.3	0.30	69	0	0	15	35	0	0	50	
STEP/BEDROCK	5	31	5.6	0.16	185	0	0	2	2	0	2	94	
STEP/COBBLE	1	9	7.4	0.15	64	0	0	10	70	20	0	0	
<b>Total:</b>	<b>42</b>	<b>552</b>	<b>5.8</b>	<b>0.36</b>	<b>3,408</b>	<b>19</b>	<b>Avg</b>	<b>4</b>	<b>11</b>	<b>18</b>	<b>8</b>	<b>1</b>	<b>58</b>

Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders	
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )
Dammed & BW Pools	3	28	4.2	0.36	212	6.22%	0	0.0
Scour Pools	13	177	6.6	0.65	1,167	34.24%	3	0.3
Glides	0	0			0	0.00%	0	0.0
Riffles	7	117	6.3	0.24	806	23.64%	5	0.6
Rapids	12	177	5.1	0.21	911	26.73%	11	1.2
Cascades	1	14	4.6	0.25	63	1.86%	0	0.0
Step/Falls	6	40	5.9	0.16	249	7.31%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

	<u>Total</u>	<u># / Km</u>
All Pools:	16	29.0
Pools >=1m deep:	2	3.6
Complex pools (LWD pieces>=3):	3	5.4
Pool frequency (channel widths/pool):	3.5	
Residual pool depth (avg):	0.48	

**STREAM SUMMARY**

**SF LITTLE NESTUCCA POST-TX (N-176)**

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area						Large Boulders (#>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
42	552	5.8	0.36	3,408	4	11	18	8	1	58	19

Habitat Group	Wetted Area	
	(m <sup>2</sup> )	Percent
Dammed & BW Pools	212	6.22%
Scour Pools	1,167	34.24%
Glides	0	0.00%
Riffles	806	23.64%
Rapids	911	26.73%
Cascades	63	1.86%
Step/Falls	249	7.31%
Dry	0	0.00%
Culverts	0	0.00%

**RIPARIAN ZONE VEGETATION SUMMARY**

**REACH 1** **REACH 1**

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

Total hardwoods/1000	305
Total conifers/1000 ft	996
Total conifers >20" dbh/1000 ft	20
Total conifers >35" dbh/1000 ft	0

**Average number of trees in a 5-meter wide band**

Diameter class (cm)	Zone 1		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.7	0.0	1.3	0.0	1.7	0.7	3.7	0.7
15-30cm	1.0	2.0	3.0	0.3	3.0	0.0	7.0	2.3
30-50cm	0.7	2.0	1.7	0.0	3.0	0.0	5.3	2.0
50-90cm	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	2.3	4.0	6.0	0.3	8.0	0.7	5.4	1.7

**Canopy closure and ground cover**

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	61		75		80	
Shrub cover	19		37		8	
Grass/forb cover	61		36		34	

**Predominant landform in each zone**

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		50		50	
High terrace	67		50		50	
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 (%)	24		28		31	

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

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

Total hardwoods/1000	305
Total conifers/1000 ft	996
Total conifers >20" dbh/1000 ft	20
Total conifers >35" dbh/1000 ft	0

**Average number of trees in a 5-m wide band**

Diameter class (cm)	Zones 1-3 <u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	3.7	0.7
15-30cm	7.0	2.3
30-50cm	5.3	2.0
50-90cm	0.3	0.0
>90cm	0.0	0.0

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**RIPARIAN ZONE VEGETATION**

Reach 1

Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)			Diameter class (cm)					Notes
					Canopy	Shrub	Grass	3-15	15-30	30-50	50-90	>90	
11	RT	3	HS	55	80	10	5	Conifer	1	1	2		
								Hardwood					
11	RT	2	HS	72	85		5	Conifer	1	2	1		95% LITTER
								Hardwood					
11	LF	3	HT	3	90		5	Conifer	3	2	1		95% LITTER
								Hardwood					
11	LF	2	HT	7	60		5	Conifer	1		1		95% LITTER
								Hardwood					
11	LF	1	HT	11	50		5	Conifer					95% LITTER
								Hardwood		2	2		
11	RT	1	HS	43	85	15	85	Conifer	2	2			
								Hardwood		4	1		
20	LF	1	HT	5		5	95	Conifer					
								Hardwood					
20	RT	3	HT	6	95		5	Conifer	1	2	2		95% LITTER
								Hardwood					
20	RT	2	HT	9	95			Conifer	2	6	3		BV 100% LITTER
								Hardwood					
20	RT	1	HT	4	30	20	80	Conifer					
								Hardwood					
20	LF	3	HS	52	90		15	Conifer		2	2	1	85% LITTER
								Hardwood					
20	LF	2	HS	16	70	50	50	Conifer					WL (TUNNELS)
								Hardwood		1			
32	RT	2	HS	60	80	20	80	Conifer		1			
								Hardwood					
32	RT	1	HS	73	40	35	60	Conifer					5% BARE
								Hardwood			1		
32	LF	3	HT	6	30	5	95	Conifer					
								Hardwood	2				
32	LF	2	HT	6	60	40	40	Conifer					20% LITTER
								Hardwood					
32	LF	1	HT	7	100	20	40	Conifer		1	2		WL (ELK TRACKS)
								Hardwood			2		
32	RT	3	HS	62	95	10	80	Conifer		2	2		10% BARE
								Hardwood					

# Comment Summary

## Oregon Plan Monitoring Sites 2003

MONITORING AREA: 1-NC      SITE ID: 176      SF LITTLE NESTUCCA POST-TX (N-1)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	15.1		FISH (COHO), WL (ELK TR	COHO PRESENT
2	SR	00	24.2		FISH (COHO)	COHO PRESENT
3	LP	00	37.1	HS, DJ, BV	HS, FISH , BV	COHO PRESENT
4	RI	00	62.1	WL, BV	BV	COHO PRESENT
5	LP	00	74.5		FISH (COHO)	COHO PRESENT
6	RB	00	92			COHO PRESENT
7	LP	00	97.1		WL (WATER ONZEL)	
8	RR	00	107.6	WL		DIPPER
9	RP	00	118.6		FISH	COHO PRESENT
10	LP	00	127.7	WL,HS,DJ	FISH, HS, DJ, BV	2 DIPPERS
11	RR	00	140.5	WL		BEAVER CUTTINGS
12	LP	00	148.2		FISH (COHO)	COHO PRESENT
13	SR	00	156.7	HS, DJ	HS	
14	DP	00	178.7		FISH (COHO), BLUE FLAG	COHO PRESENT
15	RI	00	190.2		FISH	COHO PRESENT
16	LP	00	199.8		FISH	COHO PRESENT
18	RR	00	244.6		BV, FISH	COHO
19	SR	00	251.6			STONEFLY HATCH
20	RR	00	266.1		WL (NEWT)	
22	LP	01	276		IP/	
25	RR	00	302		ORANGE FLAGGING	

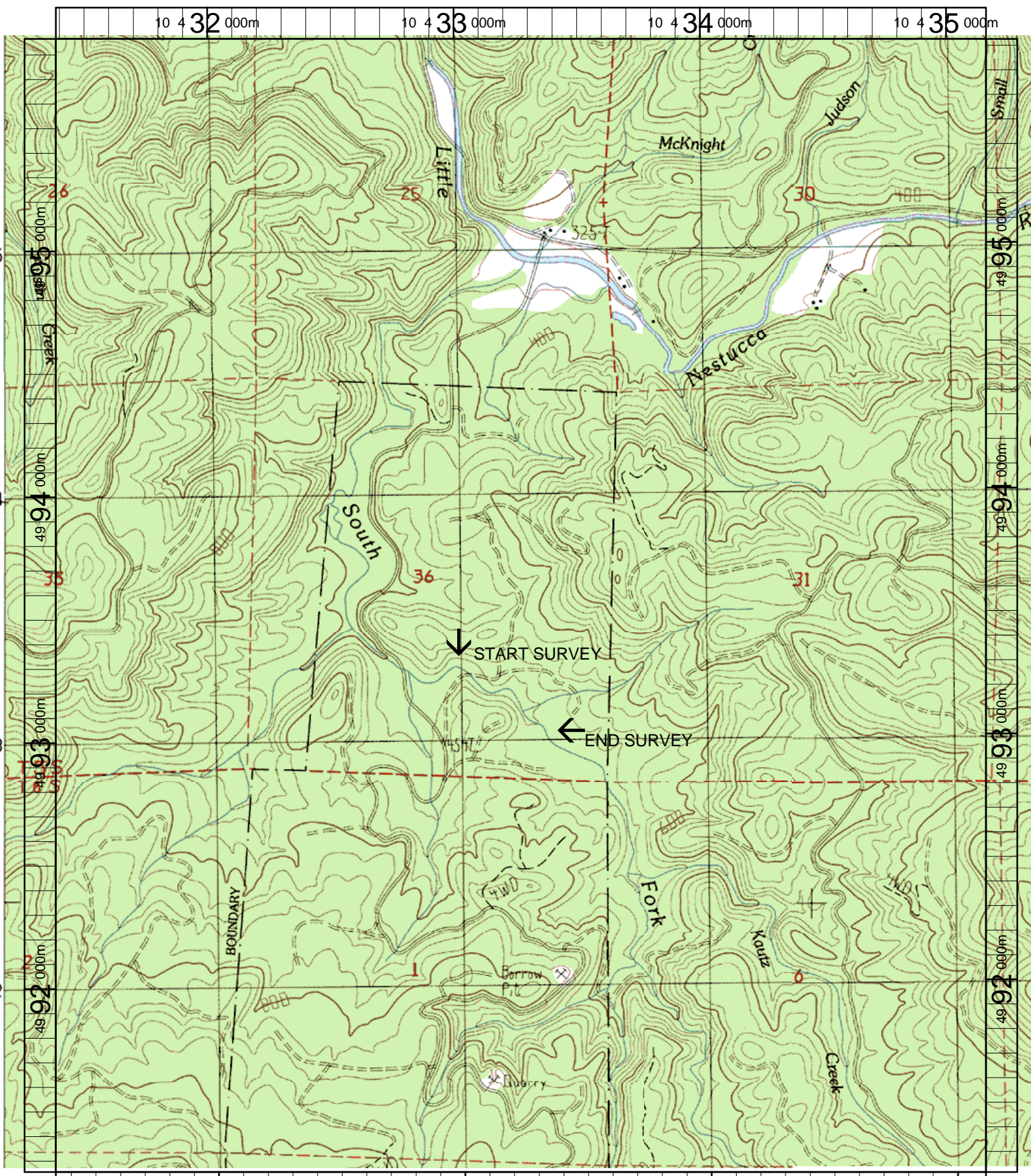


# Comment Summary

## Oregon Plan Monitoring Sites 2003

MONITORING AREA: 1-NC      SITE ID: 176      SF LITTLE NESTUCCA POST-TX (N-1)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
27	LP	00	335.5		FISH	COHO PRESENT
30	CR	00	388.5			CASCASDE
31	RI	01	400.5		/BW	
32	BW	10	400.5	DJ	FISH (COHO), BEHIND DJ	COHO PRESENT
33	RI	01	425.4		TJ/ (UNNAMED)	
34	RI	11	425.4	TJ	WL (ELK TRACKS)	H20 TEMP: 11 DEG C
35	LP	00	445.4	SS/	FISH SS/	DEE[ HOLE, COHO PRESENT
36	RR	00	446.7			COHO PRESENT
37	LP	00	462.6		FISH, BLUE TO PINK FLA	COHO PRESENT
40	LP	00	484.4		FISH	B
41	RI	00	511.4	WL, B	FISH (COHO)	COHO PRESENT
42	LP	00	540.6		BV, FISH (COHO) WL (ELK	DEEP HOLE



Name: DOLPH  
 Date: 6/11/2003  
 Scale: 1 inch equals 1666 feet

Location: 10 433245 E 4993544 N  
 Caption: SOUTH FORK LITTLE NESTUCCA RIVER RESTORATION  
 SITE - NESTUCCA BASIN