

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

STREAM: Farmer Creek (NC-30)
BASIN: Nestucca River
SURVEY TYPE: Pre-Tx
DATE: June 20, 2000
SURVEY CREW: Ben Soeby, Victor Vrell
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 6.6 km²
USGS MAPS: Sand Lake
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Farmer Creek habitat survey extended 465 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 8.0 (range: 5.0 – 10.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 3.0 percent. Rapids (53%) and scour pools (26%) dominated stream habitat. Cobble (39%) and gravel (36%) dominated stream substrate. Wood volume was very low at 2.2 m³/100m.

COMMENTS:

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

REACH 1

T4S-R10W-S3NE

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: 8.0 range: 5.0-10.0

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0	Single Channel	0
Bedrock	0	Multiple Channel	0
Terrace	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	465	1,647	0
Secondary	29	99	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	3.8	Width	5.3	8.6	11.5
Depth	0.29	Height	0.5	1.0	1.2
		W:D ratio	10.0	Entrenchment	1.7

Stream Flow Type: MF Water Temp: 10.0-10.0°C
Avg. Unit Gradient: 3.0% Habitat Units/100m: 7.7

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D15	D30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	2%	Reach avg: 98%
Undercut Banks	18%	Range: 78-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces (≥3m x 0.15m)	16	3.4
Volume (m ³)	10	2.2
Key pieces (≥10m x 0.6m)	0	0.0

HABITAT UNIT SUMMARY

REACH 1

T4S-R10W-S3NE

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
POOL-LATERAL SCOUR	9	79	5.0	0.55	446	3	3	18	32	30	7	10
POOL-PLUNGE	1	3	4.0	0.50	12	0	0	5	70	25	0	0
RAPID/BOULDERS	21	341	2.8	0.19	930	27	0	10	34	45	10	1
RIFFLE	4	62	4.8	0.24	296	6	3	14	34	31	10	8
STEP/COBBLE	2	9	6.7	0.15	62	0	0	5	36	51	8	0
STEP/LOG	1	1	2.5	0.20	1	0	0	0	70	30	0	0
Total:	38	494	3.8	0.29	1,746	36	Avg: 1	12	36	39	8	4

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	0	0	-	-	0	0.00	0	0.0
Scour Pools	10	82	4.9	0.55	458	26.25	3	0.7
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	4	62	4.8	0.24	296	16.92	6	2.0
Rapids	21	341	2.8	0.19	930	53.23	27	2.9
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	3	10	5.3	0.17	63	3.60	0	0.0
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	10	20.2
Pools ≥1m deep:	0	0.0
Complex pools (LWD pieces ≥3):	0	0.0
Pool Frequency (channel widths/pool):	9.4	
Residual pool depth (avg)	0.29m	

STREAM SUMMARY

FARMER CREEK (PRE-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	494	3.8	0.29	1,746	1	12	36	39	8	4	36

Habitat Group	Wetted Area	
	(m ²)	Percent
Scour Pool	458	26.2
Backwater Pools	0	0.0
Glide	0	0.0
Riffle	296	16.9
Rapid	930	53.2
Cascade	0	0.0
Step	63	3.6
Dry	0	0.0

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	1,260
Total conifers/1000 ft	224
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 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	0.3	0.0	1.7	0.0	5.7	0.0	7.7
15-30cm	0.3	1.3	0.3	2.7	1.3	2.0	2.0	6.0
30-50cm	0.3	4.0	0.7	2.0	0.3	0.7	1.3	6.7
50-90cm	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m ²	1.0	6.0	1.0	6.3	1.7	8.3	1.2	6.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	96		92		88	
Shrub cover	63		43		41	
Grass/forb cover	38		48		57	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	17		17		83
High terrace	83		67		17	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		0	
Riprap	0		0		0	
Surface slope (%)	13		12		44	

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	1,260
Total conifers/1000 ft	224
Total conifers >20" dbh/1000 ft	20

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	0.0	7.7
15-30cm	2.0	6.0
30-50cm	1.3	6.7
50-90cm	0.3	0.3
>90cm	0.0	0.0

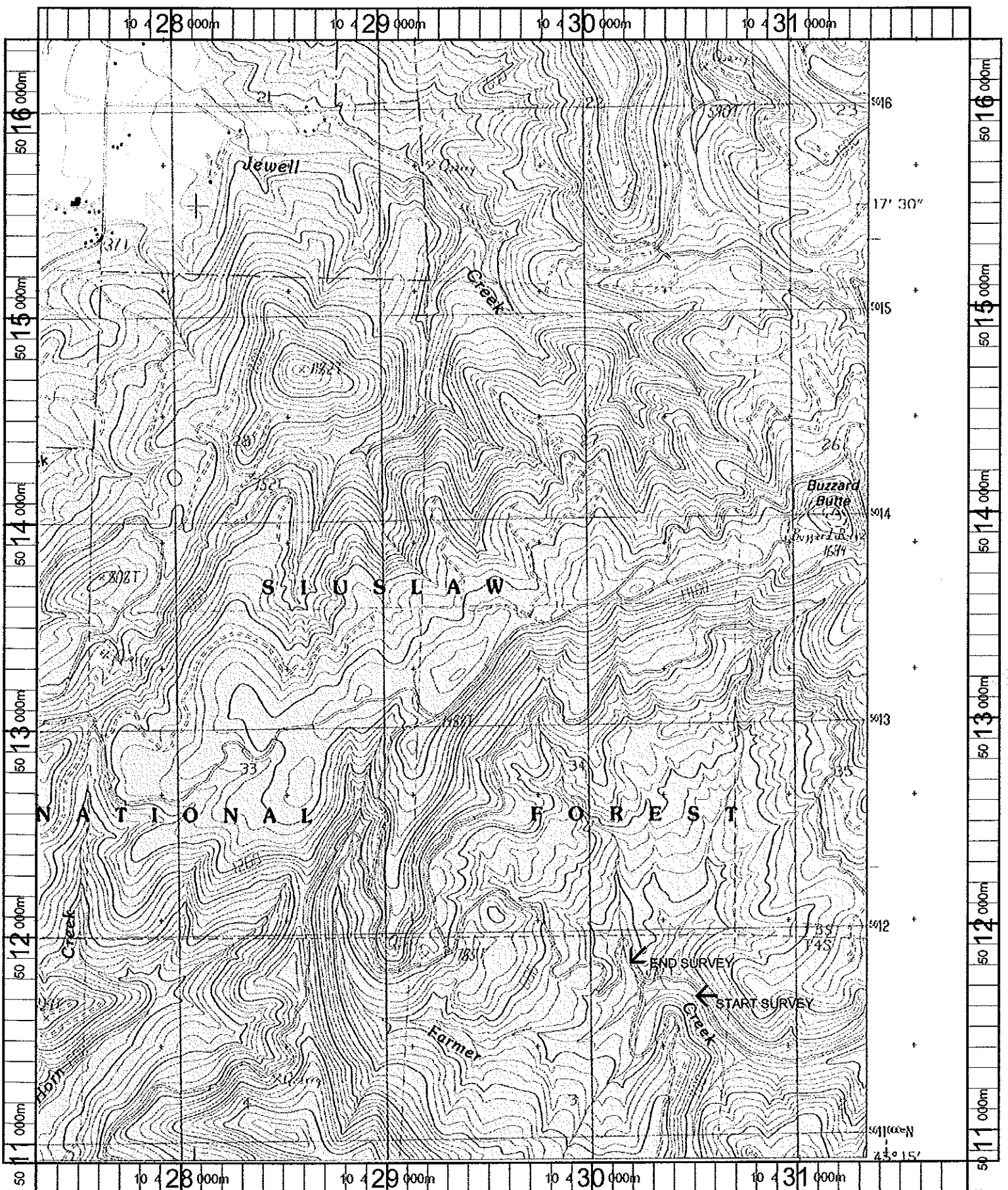
RIPARIAN ZONE VEGETATION

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	
10	LF	1	HT	5.0	90	70	30	Conifer	0	0	0	0	0	
								Hardwood	0	0	7	0	0	
10	LF	2	HT	7.0	90	30	70	Conifer	0	0	0	0	0	
								Hardwood	4	2	3	0	0	ALDER, ELDERBERRY
10	LF	3	HS	90.0	85	70	20	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	POSSIBLE OLD SLIDE
10	RT	1	HT	1.0	95	70	30	Conifer	0	0	0	0	0	
								Hardwood	0	1	1	0	0	
10	RT	2	HT	3.0	95	90	10	Conifer	0	0	0	0	0	
								Hardwood	1	1	2	0	0	
10	RT	3	HS	15.0	90	90	10	Conifer	0	0	0	0	0	
								Hardwood	1	6	1	0	0	
19	LF	1	HT	10.0	95	70	30	Conifer	0	0	0	0	0	
								Hardwood	0	2	1	0	0	
19	LF	2	HT	13.0	90	35	65	Conifer	0	0	0	0	0	
								Hardwood	0	5	1	0	0	
19	LF	3	HS	65.0	80	35	60	Conifer	0	0	0	0	0	
								Hardwood	3	0	0	0	0	
19	RT	1	HT	24.0	95	65	35	Conifer	0	0	0	0	0	
								Hardwood	1	1	2	0	0	
19	RT	2	HT	2.0	95	75	25	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
19	RT	3	HT	9.0	75	35	65	Conifer	0	0	0	0	0	
								Hardwood	0	0	1	0	0	
33	LF	1	HT	12.0	100	80	20	Conifer	0	0	0	0	0	
								Hardwood	0	0	1	1	0	
33	LF	2	HS	22.0	90	20	80	Conifer	0	1	2	0	0	
								Hardwood	0	0	0	0	0	
33	LF	3	HS	34.0	95	5	95	Conifer	0	2	1	0	0	
								Hardwood	2	0	0	0	0	
33	RT	1	HS	28.0	100	20	80	Conifer	0	1	1	1	0	
								Hardwood	0	0	0	0	0	
33	RT	2	RB	24.0	90	10	40	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	50% ROADBED
33	RT	3	HS	53.0	100	10	90	Conifer	0	2	0	0	0	
								Hardwood	11	0	0	0	0	



Name: SAND LAKE
 Date: 11/8/100
 Scale: 1 inch equals 2000 feet

Location: 10 429489 E 5013586 N
 Caption: FARMER CREEK RESTORATION SITE - NESTUCCA BASIN