

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

STREAM: Peterson Creek (NC-54)  
BASIN: Miami River  
SURVEY TYPE: Pre-Tx  
DATE: June 19, 2000  
SURVEY CREW: Todd Boswell, Sean Allen  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 6.9 km<sup>2</sup>  
USGS MAPS: Garibaldi  
ECOREGION: Coast Range Sitka Spruce

**GENERAL DESCRIPTION:**

The Peterson Creek habitat survey extended 845 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 7.3 (range: 5.0 – 8.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 0.7 percent. Scour pools (60%) and riffles (33%) dominated stream habitat. Gravel (41%) and sand (35%) dominated stream substrate. Wood volume was low at 6.6 m<sup>3</sup>/100m.

**COMMENTS:**

There was one potential barrier to upstream fish migration in the surveyed length.

REACH 1

T1N-R10W-2NW

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: 7.3 range: 5.0-8.0

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	845	5,040	0
Secondary	91	238	0

Channel Dimensions (m)

	<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>		<u>First Terrace</u>
Width	5.3	Width	7.8		24.3		9.3
Depth	0.53	Height	0.5		1.0		0.7
		W:D ratio	15.7	Entrenchment	3.2		

Stream Flow Type: MF Water Temp: 11.0-11.0°C  
Avg. Unit Gradient: 0.7% Habitat Units/100m: 6.6

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	39%	Reach avg: 76%
Undercut Banks	15%	Range: 28-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ( $\geq 3m \times 0.15m$ )	62	7.3
Volume (m <sup>3</sup> )	56	6.6
Key pieces ( $\geq 10m \times 0.6m$ )	1	0.1

REACH 1

T1N-R10W-2NW

REACH 1

HABITAT DETAIL

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 S/O	Grvl	Cbbl	Bldr	Bdrk	
CULVERT CROSSING	1	25	2.0	0.30	50	0	50	50	0	0	0	0
GLIDE	1	23	6.1	0.25	139	0	10	25	65	0	0	0
POOL-BACKWATER	8	46	3.1	0.46	142	0	51	40	8	1	0	0
POOL-LATERAL SCOUR	26	437	5.7	0.78	2,470	0	19	39	39	2	0	1
POOL-PLUNGE	1	23	8.1	0.70	186	0	10	45	30	5	0	10
POOL-STRAIGHT SCOUR	2	39	11.6	1.20	527	0	30	45	20	5	0	0
RIFFLE	19	308	4.5	0.22	1,513	0	6	26	62	5	0	0
RIFFLE W/ POCKETS	2	32	7.5	0.38	223	0	15	28	58	0	0	0
STEP/LOG	1	4	7.0	0.10	25	0	20	20	30	30	0	0
STEP/STRUCTURE	1	1	6.0	0.30	3	0	50	50	0	0	0	0
<b>Total:</b>	<b>62</b>	<b>936</b>	<b>5.3</b>	<b>0.53</b>	<b>5,277</b>	<b>0</b>	<b>Avg: 20</b>	<b>35</b>	<b>41</b>	<b>3</b>	<b>0</b>	<b>0</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m <sup>2</sup> )	Wetted Area Percent	Large Boulders Number	Boulders #/100m <sup>2</sup>
Dammed & BW Pools	8	46	3.1	0.46	142	2.69	0	0.0
Scour Pools	29	499	6.2	0.81	3,183	60.32	0	0.0
Glides	1	23	6.1	0.25	139	2.62	0	0.0
Riffles	21	340	4.8	0.23	1,736	32.90	0	0.0
Rapids	0	0	-	-	0	0.00	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	2	4	6.5	0.20	28	0.52	0	0.0
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	37	39.5
Pools ≥1m deep:	7	7.5
Complex pools (LWD pieces ≥3):	10	10.7
Pool Frequency (channel widths/pool):	3.2	
Residual pool depth (avg)	0.66m	

**STREAM SUMMARY**

**PETERSON CREEK (PRE-TX)**

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area					Total Large Boulder	
					S/O	Sand	Grvl	Cbbl	Bldr		Bdrk
62	936	5.3	0.53	5,277	20	35	41	3	0	0	0

Wetted Area

Habitat Group	(m <sup>2</sup> )	Percent
Scour Pool	3,183	60.3
Backwater Pools	142	2.7
Glide	139	2.6
Riffle	1,736	32.9
Rapid	0	0.0
Cascade	0	0.0
Step	28	0.5
Dry	0	0.0

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REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	224
Total conifers/1000 ft	20
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	0.0	0.0	0.7	0.0	1.0	0.0	1.7
15-30cm	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
30-50cm	0.0	0.7	0.3	0.3	0.0	0.0	0.3	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	0.0	0.0	0.0	0.0
Total/100m <sup>2</sup>	0.0	0.7	0.3	1.0	0.0	2.0	0.1	1.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	50		48		48	
Shrub cover	47		43		55	
Grass/forb cover	48		66		64	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	17		33		50
High terrace	33		50		50	
Low terrace	50		17		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 (%)	10		23		23	

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	224
Total conifers/1000 ft	20
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	0.0	1.7
15-30cm	0.0	1.0
30-50cm	0.3	1.0
50-90cm	0.0	0.0
>90cm	0.0	0.0

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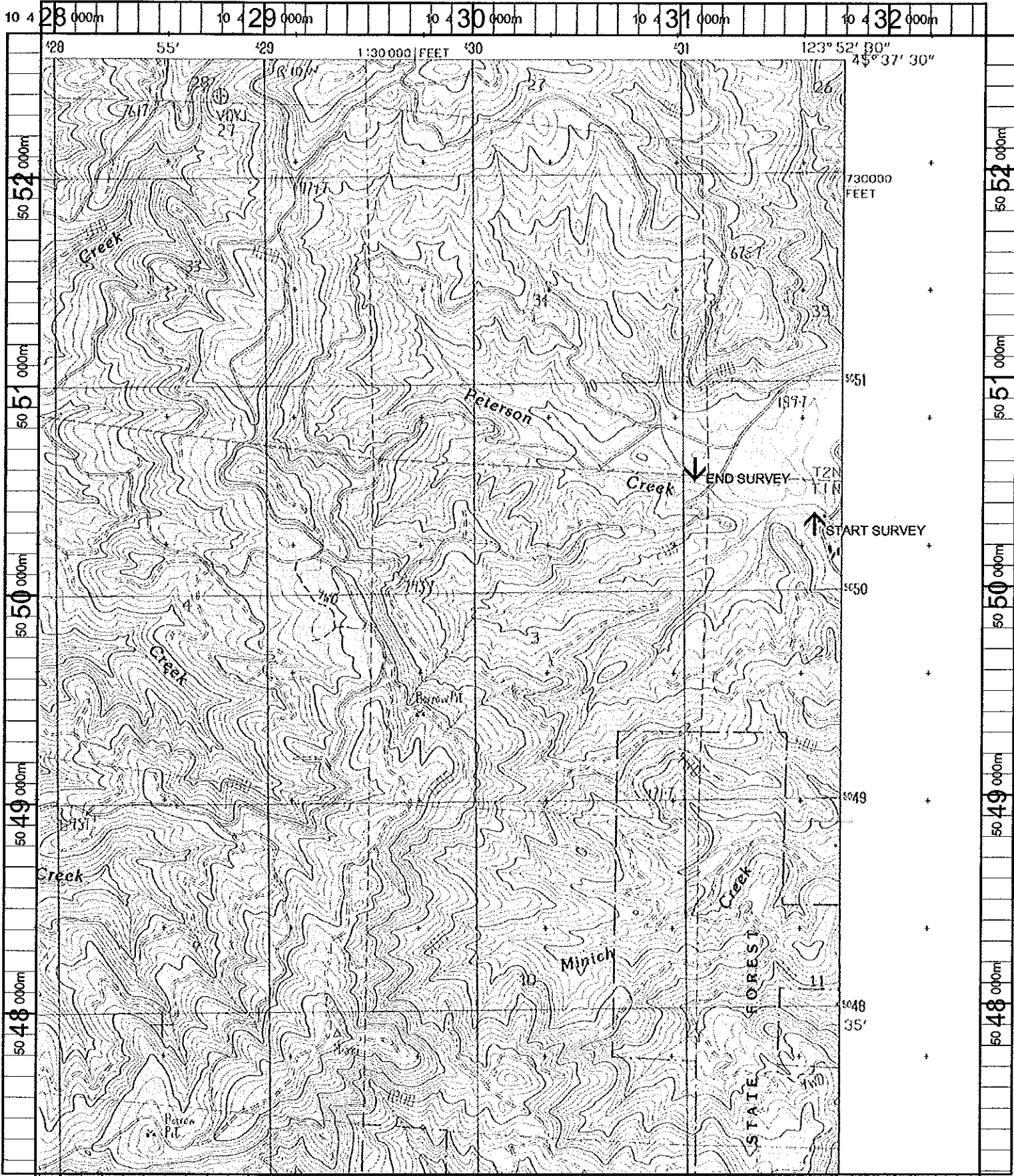
RIPARIAN ZONE VEGETATION

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	
12	LF	1	HS	33.0	40	40	40	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	STEEP BANK
12	LF	2	HS	65.0	60	60	60	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	STEEP BANK
12	LF	3	HS	50.0	50	70	70	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	STEEP BANK
12	RT	1	LT	16.0	50	50	85	Conifer	0	0	0	0	0	
								Hardwood	0	0	2	0	0	
12	RT	2	HT	1.0	90	10	70	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
12	RT	3	HT	0.0	70	30	75	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
33	LF	1	HT	8.0	60	40	75	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
33	LF	2	HS	70.0	15	10	85	Conifer	0	0	0	0	0	
								Hardwood	2	0	0	0	0	
33	LF	3	HS	55.0	80	20	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
33	RT	1	LT	1.0	50	50	30	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
33	RT	2	HT	2.0	60	40	80	Conifer	0	0	1	0	0	
								Hardwood	0	0	0	0	0	
33	RT	3	HT	1.0	30	70	80	Conifer	0	0	0	0	0	
								Hardwood	0	1	0	0	0	
62	LF	1	LT	1.0	50	50	0	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
62	LF	2	LT	0.0	40	60	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
62	LF	3	HS	28.0	40	60	65	Conifer	0	0	0	0	0	
								Hardwood	3	0	0	0	0	
62	RT	1	HT	1.0	50	50	60	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
62	RT	2	HT	2.0	20	80	90	Conifer	0	0	0	0	0	
								Hardwood	0	0	1	0	0	
62	RT	3	HT	5.0	20	80	85	Conifer	0	0	0	0	0	
								Hardwood	0	2	0	0	0	



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

Location: 10 430072 E 5049922 N  
 Caption: PETERSON CREEK RESTORATION SITE - MIAMI BASIN