

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

STREAM: Charlie Creek (N-332)
BASIN: Necanicum River
SURVEY TYPE: Pre-Tx
DATE: July 12, 2007
SURVEY CREW: Trevor Diemer, Nathan Wilson
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 1.8 km²
USGS MAPS: Necanicum Junction
ECOREGION: Coast Range Coastal Uplands

GENERAL DESCRIPTION:

The Charlie Creek habitat survey extended 754 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 17.3 (range: 16.0-20.0). Land use for the reach was rural residential and second growth (15-30 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (52%) and riffles (40%) dominated stream habitat. Gravel (68%) dominated stream substrate. Wood volume was very low at 5.1 m³/100m.

COMMENTS:

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

REACH 1

T05N-R09W-S22NE

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	17.3	VWI Range:	16 - 20

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 Channel	754	1,175	0
Secondary Channel	0	0	0
Off-Channel Units	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 3</i>	<u>First Terrace</u>	<i>n = 3</i>
Width: 1.6	Width: 3.6	4.8	(3.5 - 7)	6.1	(4 - 9)
Depth: 0.25	Height: 0.2	0.5	(0.4 - 0.6)	0.9	(0.7 - 1)

W:D ratio: 15.9
 Stream Flow Type: LF
 Average Unit Gradient: 1.1%
 Water temperature (°C): 15.0 - 15.0

Entrenchment (ACW:FPW ratio): 1.3
 Habitat Units/100m (total channel length): 8.1
 Habitat Units/100m (primary channel length): 8.1

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	RR	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:	5%	Reach avg: 85%
Undercut Banks:	11%	Range: 47 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	52	6.9
Volume (m ³):	39	5.1
Key pieces (>=12m x 0.60m):	1	0.1

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/12/2007

REACH 1		T05N-R09W-S22NE					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	Cbl	Bldr	Bdrk
CULVERT CROSSING	1	27	2.5	0.02	68	0	0	5	70	25	0	0
POOL-LATERAL SCOUR	28	290	2.0	0.44	594	11	9	22	62	6	1	0
POOL-PLUNGE	1	5	4.0	1.10	20	0	9	27	64	0	0	0
RAPID/BOULDERS	2	20	1.1	0.04	23	0	0	8	68	25	0	0
RIFFLE	14	164	1.1	0.03	190	5	1	10	71	15	1	1
RIFFLE W/ POCKETS	12	246	1.1	0.08	275	0	1	12	78	9	0	0
STEP/COBBLE	2	3	2.0	0.02	5	0	0	5	68	28	0	0
STEP/LOG	1	0	1.0	0.02	0	0	0	5	95	0	0	0
Total:	61	754	1.6	0.25	1,175	16	Avg: 5	16	68	10	1	0

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	0	0			0	0.00%	0	0.0	
Scour Pools	29	295	2.1	0.46	614	52.26%	11	1.8	
Glides	0	0			0	0.00%	0	0.0	
Riffles	26	410	1.1	0.05	466	39.63%	5	1.1	
Rapids	2	20	1.1	0.04	23	1.93%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	3	3	1.7	0.02	5	0.45%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	27	2.5	0.02	68	5.75%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	29	38.4	38.4
Pools >=1m deep:	1	1.3	1.3
Complex pools (LWD pieces>=3):	2	2.7	2.7
Pool frequency (channel widths/pool):	7.2		
Residual pool depth (avg):	0.43		

Survey Date 7/12/2007
Report Date: 11/7/2007

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	427
Total conifers/1000 ft	244
Total conifers >20" dbh/1000 ft	81
Total conifers >35" dbh/1000 ft	20

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	0.3	0.7	0.0	0.0	0.3	0.7
15-30cm	0.3	2.0	0.0	1.3	0.3	0.7	0.7	4.0
30-50cm	0.7	1.0	0.7	0.7	0.3	0.3	1.7	2.0
50-90cm	0.3	0.3	0.3	0.0	0.3	0.0	1.0	0.3
>90cm	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total/100m2	1.7	3.3	1.3	2.7	1.0	1.0	1.3	2.3

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	65		40		22	
Shrub cover	19		20		18	
Grass/forb cover	81		80		82	

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	83		100		100	
Low terrace	17		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**3 transects****Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream**

Total hardwoods/1000	427
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Total conifers >20" dbh/1000 ft	81
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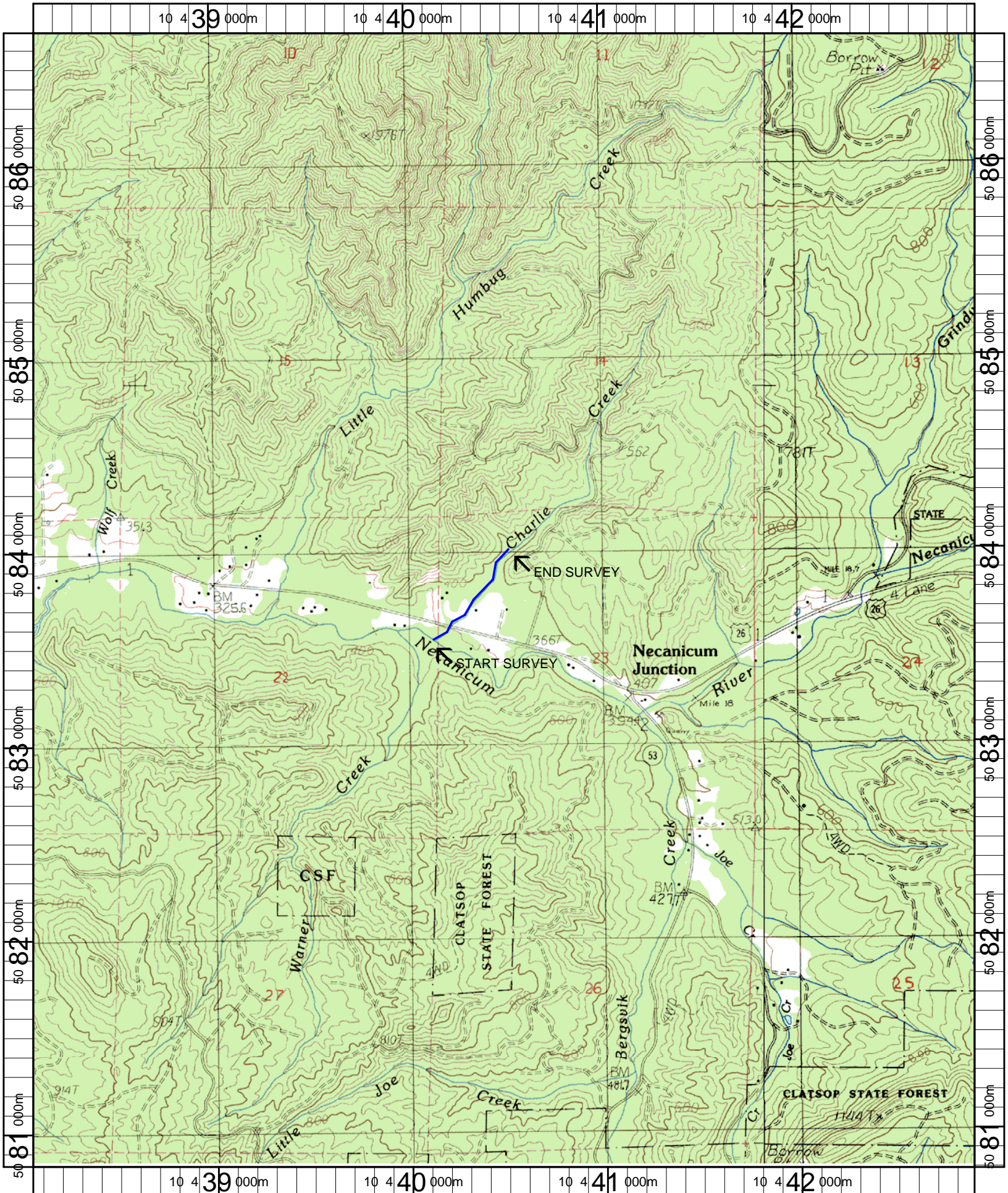
Average number of trees in a 5-m wide band

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.3	0.7
15-30cm	0.7	4.0
30-50cm	1.7	2.0
50-90cm	1.0	0.3
>90cm	0.3	0.0

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 332 STREAM: CHARLIE CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
19	RP	00	193.5		TRASH IN CREEK
24	CC	00	248.5	CC	CORREGATED GALV. STEEL CAPPED W/ CONCRETE HW 26
25	RI	00	269.5	CS	
26	LP	00	277.5	BC	BRIDGE TO CHARLIE CREEK RANCH
34	RI	00	381		HARDPAN CLAY BEDROCK
45	LP	00	475.75	CS	
46	RI	00	495.75	BC	FOOT BRIDGE
52	RI	00	588.25	RF	
55	RP	00	658.25	BC	FOOT BRIDGE
58	LP	00	688.25		GRAVEL HARDPAN
59	RP	00	712.25	BC	BRIDGE TO BARN



Name: NECANICUM JUNCTION
 Date: 5/9/2007
 Scale: 1 inch equals 2000 feet

Location: 10 440493 E 5083741 N
 Caption: CHARLIE CREEK RESTORATION SITE - NECANICUM BASIN