

**ODFW AQUATIC INVENTORY PROJECT
RESTORATION MONITORING
STREAM HABITAT REPORT**

STREAM: CHARLIE CREEK
 GCG: 1-NC
 SITE ID: 332
 BASIN: NECANICUM
 TREATMENT DATE: 2006
 SURVEY DATE: 7/7/2008
 SURVEY CREW: Jitesh Pattni / Aaron Paloni
 USGS MAPS: NECANICUM JUNCTION
 ECOREGION: Coastal Uplands
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

SURVEY DESCRIPTION:

Channel morphology: Constrained by high terraces

Dominant landuse(s): Rural residential

Dominant riparian vegetation: Deciduous trees: size class 30-50cm dbh

Primary channel length (meters) and area (m²): 1,506 : 3,437

Secondary channel length (meters) and area (m²) 0 : 1

VWI average: 20.0 VWI Range: 20 - 20 Average Gradient: 2.4%

Pieces LWD per 100m: 10.1 Wood Volume (m³) per 100m: 5.5

Percent pools: 38% Complex pools (LWD pieces \geq 3): 14 Pools \geq 1m deep: 2

Percent substrate (avg):	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	11	23	52	13	1	0
Pool units	23	31	41	6	0	0
Fast water units	1	14	66	17	2	0

COMMENTS:

This is a pre-treatment, restoration survey. The crew noted placed boulders for channel stabilization at various points throughout the survey.

**OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY**

**CHARLIE CREEK
GCG: 1-NC SITE ID: 332**

Survey Date: 7/7/2008

Report Date: 12/29/2008

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	20.0	VWI Range:	20 - 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	1,506	3,437	0
Secondary	0	1	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 8	<u>First Terrace</u> n = 8
Width: 2.4	Width: 3.2	6.1 (2.6 - 12)	8.9 (3.2 - 20)
Depth: 0.27	Height: 0.3	0.6 (0.4 - 0.6)	1.2 (0.8 - 1.4)

W:D ratio: 11.4

Stream Flow Type: LF

Average Unit Gradient: 2.4%

Water temperature (°C): 10.0 - 10.0

Entrenchment (ACW:FPW ratio): 1.9

Habitat Units/100m (total channel length): 7.4

Habitat Units/100m (primary channel length): 7.4

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	RR	
Riparian Vegetation:	D30	P

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	1%	Reach avg: 81%
Undercut Banks:	4%	Range: 39 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	152	10.1
Volume (m ³):	82	5.5
Key pieces (>=12m x 0.60m):	0	0.0

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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	2	50	3.0	0.15	150	24	0	11	63	21	5	0
POOL-ISOLATED	2	0	3.0	0.15	1	0	63	37	0	0	0	0
POOL-LATERAL SCOUR	48	468	2.8	0.48	1,298	0	23	31	41	6	0	0
RAPID/BOULDERS	4	24	1.9	0.10	46	2	0	5	29	45	21	0
RIFFLE	50	962	2.2	0.11	1,940	6	1	15	69	15	1	0
STEP/COBBLE	2	1	0.5	0.10	0	0	0	20	35	45	0	0
STEP/LOG	4	2	1.9	0.04	3	0	0	32	32	37	0	0
Total:	112	1,507	2.4	0.27	3,437	32	Avg: 11	23	52	13	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	2	0	3.0	0.15	1	0.03%	0	0.0
Scour Pools	48	468	2.8	0.48	1,298	37.75%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	50	962	2.2	0.11	1,940	56.44%	6	0.3
Rapids	4	24	1.9	0.10	46	1.33%	2	4.4
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	6	2	1.4	0.06	3	0.09%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	2	50	3.0	0.15	150	4.36%	24	16.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	50	33.2	33.2
Pools >=1m deep:	2	1.3	1.3
Complex pools (LWD pieces>=3):	14	9.3	9.3
Pool frequency (channel widths/pool):	9.6		
Residual pool depth (avg):	0.39		

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RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 2 transects

Total hardwoods/1000	61
Total conifers/1000 ft	274
Total conifers >20" dbh/1000 ft	122
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	0.0	1.0	0.0	1.0	0.0
15-30cm	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5
30-50cm	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.5
50-90cm	0.5	0.0	0.0	0.0	1.5	0.0	2.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	1.0	1.0	0.0	0.0	3.5	0.0	1.5	0.3

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	64		35		36	
Shrub cover	6		3		6	
Grass/forb cover	66		70		56	

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	50		75		75	
Low terrace	25		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	25		25		25	
Riprap	0		0		0	
Surface slope (%)	0		0		0	

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

2 transects

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

Total hardwoods/1000	61
Total conifers/1000 ft	274
Total conifers >20" dbh/1000 ft	122
Total conifers >35" dbh/1000 ft	0

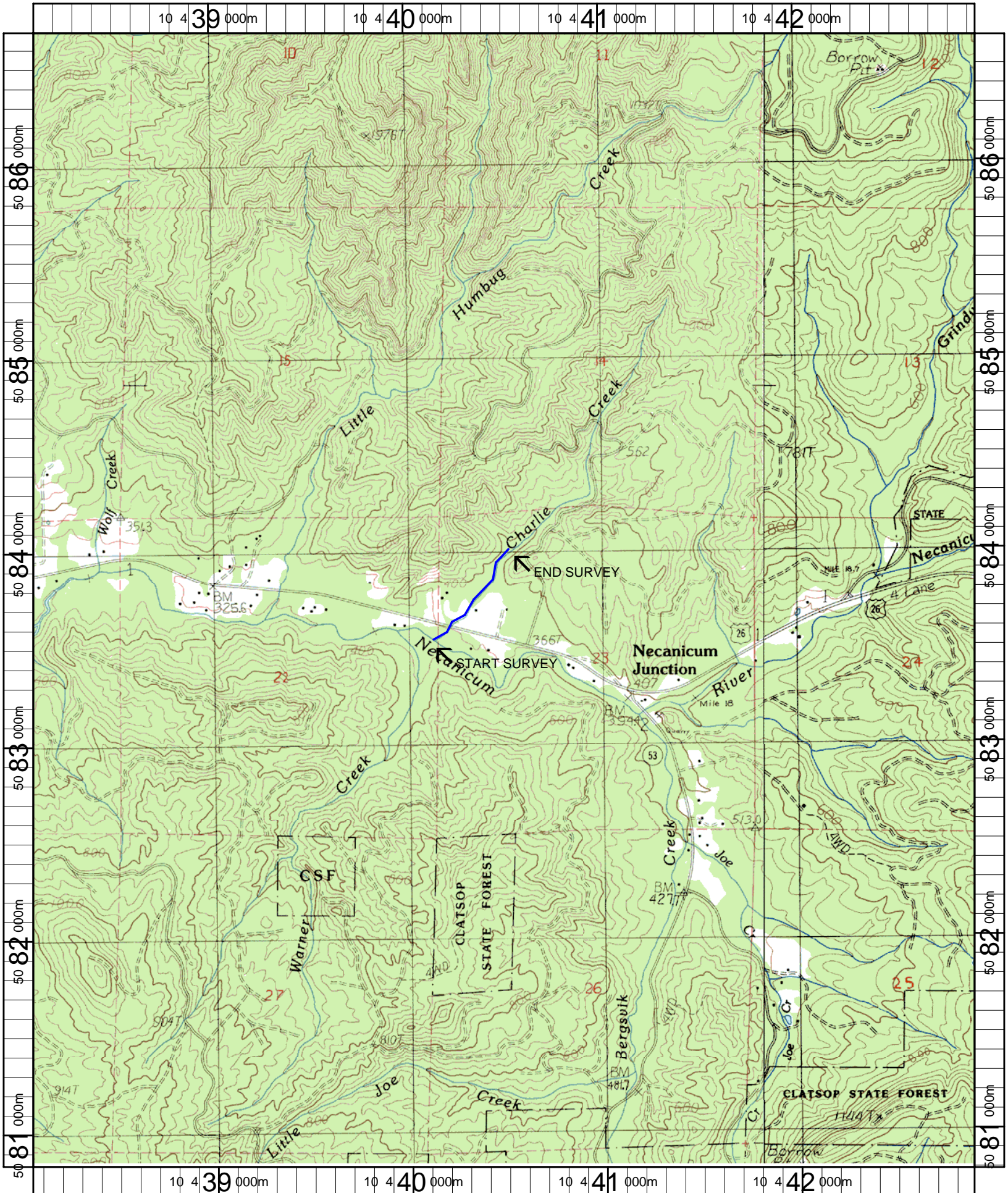
Average number of trees in a 5-m wide band

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	1.0	0.0
15-30cm	0.5	0.5
30-50cm	1.0	0.5
50-90cm	2.0	0.0
>90cm	0.0	0.0

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	01	100		CT/CT D30/D15 ST/, PHOTO #326, T:10.5C
1	RI	01	100		CT/CT D30/D15 ST/, PHOTO #326, T:10.5C
20	CC	00	504	CC	
20	CC	00	504	CC	
21	RI	00	544		CT/CT M30/G RR/
21	RI	00	544		CT/CT M30/G RR/
22	LP	00	564	BC, CS	RIPRAP PRESENT
22	LP	00	564	BC, CS	RIPRAP PRESENT
35	SL	00	888.8		H=0.50M
35	SL	00	888.8		H=0.50M
40	SC	00	951.6		H=0.45M
40	SC	00	951.6		H=0.45M
43	RI	00	1027.6		RIPRAP ALONG 10M ON LEFT BANK BELOW BUILDING
43	RI	00	1027.6		RIPRAP ALONG 10M ON LEFT BANK BELOW BUILDING
44	SL	00	1028.3		H=0.25M
44	SL	00	1028.3		H=0.25M
46	RI	00	1078.3		CT/CT M30/S RR/
46	RI	00	1078.3		CT/CT M30/S RR/
55	RI	00	1494.3		CT/CT D30/M15 RR/
55	RI	00	1494.3		CT/CT D30/M15 RR/



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