

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

STREAM: Charlie Creek (NC-332)
BASIN: Necanicum River
SURVEY TYPE: Pre-Tx
DATE: 9/6/2006
SURVEY CREW: Ben Walczak, Gordon Rose
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 734 meters. The channel was constrained by multiple terraces within a broad valley floor. The average valley width index was 7.8 (range: 4-10). Land uses for the reach were rural residential and second growth timber (15-30 cm dbh). The average unit gradient was 1.6 percent. Dry units (58%) and scour pools (30%) dominated stream habitat. Gravel (68%) and fines (23%) dominated stream substrate. Wood volume was low at 8.5 m³/100m.

COMMENTS:

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

The bedrock substrate type was used to identify hardpan clay in many units within this survey.

REACH 1

T05N-R09W-S23NW

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	7.8	VWI Range:	4 - 10

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	734	2,066	14
Secondary Channel	21	21	1
Off-Channel Units	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.7	Width: 3.6	4.3 (2.8 - 5.4)	5.4 (3.4 - 8.2)
Depth: 0.23	Height: 0.2	0.5 (0.4 - 0.5)	1.2 (1 - 1.4)

W:D ratio: 14.8
 Stream Flow Type: LF
 Average Unit Gradient: 1.6%
 Water temperature (°C): 13.0 - 13.0

Entrenchment (ACW:FPW ratio): 1.2
 Habitat Units/100m (total channel length): 5.8
 Habitat Units/100m (primary channel length): 6.0

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	22%	Reach avg: 76%
Undercut Banks:	13%	Range: 44 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	43	5.9
Volume (m ³):	62	8.5
Key pieces (>=12m x 0.60m):	1	0.1

OREGON DEPT OF FISH AND WILDLIFE

CHARLIE CREEK PRE-TX (1-NC, 332)

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

9/6/2006

REACH 1		T05N-R09W-S23NW					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	2.9	0.00	77	12	0	5	70	15	10	0
DRY UNIT	1	13	5.0	0.00	65	0	5	5	90	0	0	0
POOL-LATERAL SCOUR	16	200	2.8	0.54	566	0	13	21	58	3	0	5
POOL-PLUNGE	2	21	2.5	0.65	58	0	20	35	30	0	0	15
PUDDLED UNIT	14	368	2.8	0.00	1,138	24	6	9	76	6	2	1
RIFFLE	6	118	1.4	0.05	150	0	3	6	87	4	0	0
STEP/COBBLE	1	6	4.0	0.01	24	0	0	5	95	0	0	0
STEP/LOG	3	3	3.3	0.01	10	1	15	15	63	3	3	0
Total:	44	755	2.7	0.23	2,087	37	Avg: 9	14	68	4	1	3

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	18	221	2.8	0.56	624	29.89%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	6	118	1.4	0.05	150	7.19%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	4	9	3.5	0.01	34	1.61%	1	3.0	
Dry	15	381	3.0	0.00	1,203	57.64%	24	2.0	
Culverts	1	27	2.9	0.00	77	3.68%	12	15.6	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	18	23.9	24.5
Pools >=1m deep:	1	1.3	1.4
Complex pools (LWD pieces>=3):	3	4.0	4.1
Pool frequency (channel widths/pool):	11.8		
Residual pool depth (avg):	0.55		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

CHARLIE CREEK PRE-TX
GCG: 1-NC SITE ID: 332

Survey Date 9/6/2006

RIPARIAN ZONE

Report Date: 3/5/2007

VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	406
Total conifers/1000 ft	528
Total conifers >20" dbh/1000 ft	122
Total conifers >35" dbh/1000 ft	61

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	3.7	2.3	0.3	0.0	0.3	2.3	4.3
15-30cm	0.3	0.7	1.7	0.0	1.7	0.0	3.7	0.7
30-50cm	0.0	1.7	0.7	0.0	0.0	0.0	0.7	1.7
50-90cm	0.7	0.0	0.3	0.0	0.0	0.0	1.0	0.0
>90cm	0.3	0.0	0.0	0.0	0.7	0.0	1.0	0.0
Total/100m2	1.3	6.0	5.0	0.3	2.3	0.3	2.9	2.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	68		57		47	
Shrub cover	36		13		8	
Grass/forb cover	51		66		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	83		83		67	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	17		17		33	
Riprap	0		0		0	
Surface slope (%)	0		3		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	406
Total conifers/1000 ft	528
Total conifers >20" dbh/1000 ft	122
Total conifers >35" dbh/1000 ft	61

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	2.3	4.3
15-30cm	3.7	0.7
30-50cm	0.7	1.7
50-90cm	1.0	0.0
>90cm	1.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1 Reach 1

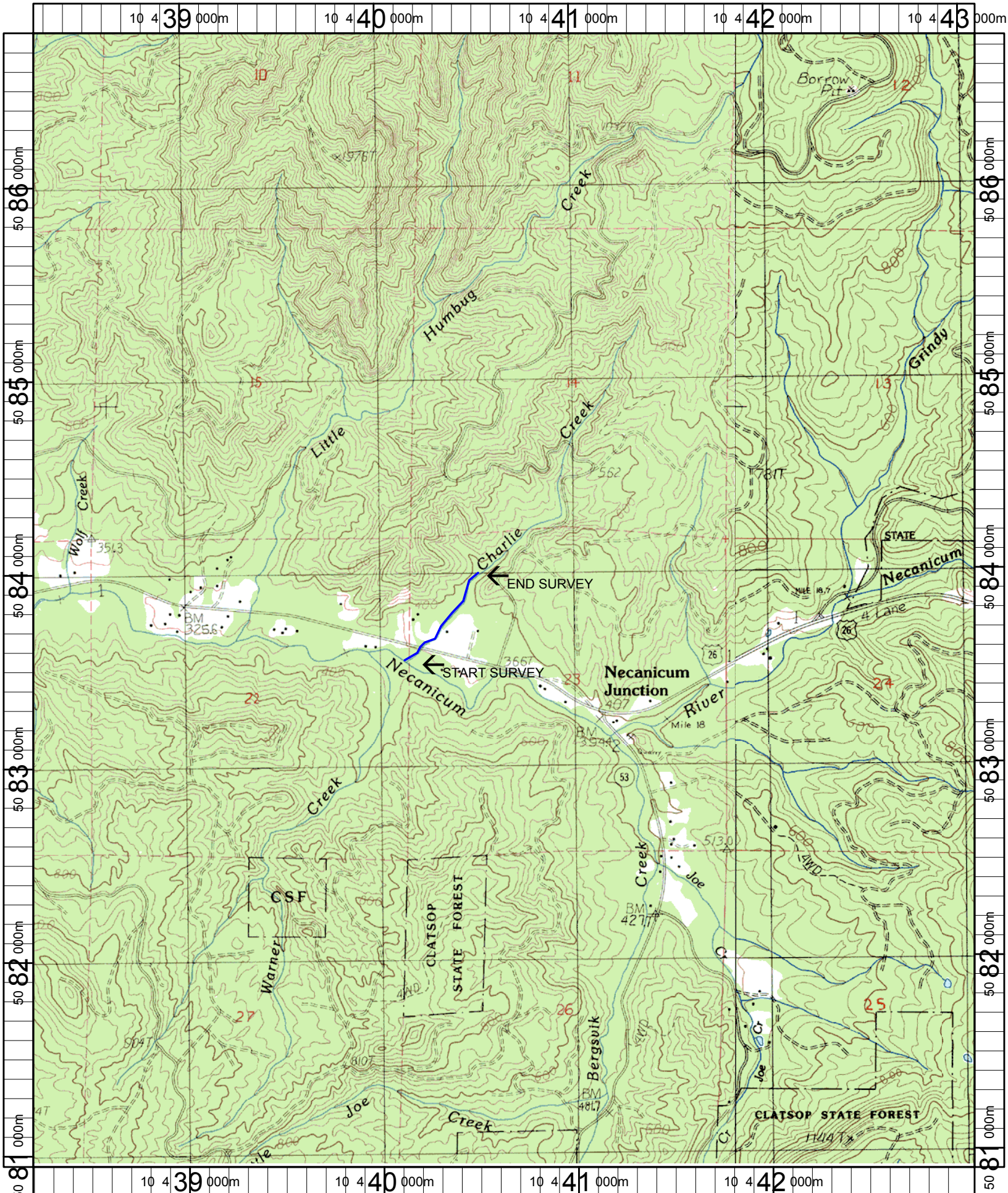
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
9	LF	2	HT	5	85	5	60	Conifer		3	1				
								Hardwood	1						
9	RT	2	HT	0	85	10	85	Conifer				1			
								Hardwood							
9	LF	3	HT	0	85	30	60	Conifer		1			1		
								Hardwood	1						
9	LF	1	HT	0	85	10	85	Conifer					1	UTM 0440184-5083611-2D	
								Hardwood							
9	RT	3	HT	0	85	10	85	Conifer					1		
								Hardwood							
9	RT	1	HT	0	85	10	85	Conifer				1			
								Hardwood							
18	LF	1	HT	0	85	70	30	Conifer		1				POOR GPS COVERAGE	
								Hardwood	5	1	1				
18	LF	3	RB	0	75	10	10	Conifer		4					
								Hardwood							
18	RT	1	HT	0	50	90	10	Conifer							
								Hardwood	6						
18	RT	2	HT	0	30	0	100	Conifer						YARD	
								Hardwood							
18	RT	3	HT	0	15	0	100	Conifer						YARD	
								Hardwood							
18	LF	2	HT	10	80	40	60	Conifer	7	1	1				
								Hardwood							
34	RT	3	HT	0	10	0	70	Conifer						MEADOW	
								Hardwood							
34	LF	1	RB	0	30	5	65	Conifer						UTM 0440393-5083856-2D	
								Hardwood		1	4				
34	LF	2	RB	0	10	0	30	Conifer						YARD	
								Hardwood							
34	LF	3	RB	0	10	0	10	Conifer						HOUSE	
								Hardwood							
34	RT	2	HT	5	50	20	60	Conifer		1				MEADOW	
								Hardwood							
34	RT	1	HT	0	70	30	30	Conifer				1			
								Hardwood							

Comment Summary

Restoration Monitoring Sites 2006

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	PD	01	50	SS/	START AT CONFLUENCE	
4	SL	00	67		H=0.25M	
9	LP	00	189		RIPARIAN #1	
11	CC	00	253.5	CC	HWY 26, GOOD COND. META GRAVEL IN BOTTOM	
12	PD	00	303.5	BC, /CS	CHARLIE CR RANCH DRIVE	
14	LP	00	347.5		SITE 7 FLAGGING	
17	PD	00	385			BEDROCK=HARDPAN
18	LP	00	394		RIPARIAN #2	BEDROCK=HARDPAN
19	PD	00	401			T=13.0C AT 11:00
20	PP	00	406			BEDROCK=HARDPAN
21	SL	00	406.5		H=0.30M	
25	SC	00	454.5		H=0.25M	
27	SL	00	465.5		H=0.30M	
34	RI	00	598.5		RIPARIAN #3 (HOUSE W/TER	
37	LP	00	643			BEDROCK=HARDPAN
39	LP	00	659			BEDROCK=HARDPAN
43	LP	00	725.5			BEDROCK=HARDPAN
44	RI	00	733.5		END SURVEY	



Name: NECANICUM JUNCTION
 Date: 1/19/2006
 Scale: 1 inch equals 2000 feet

Location: 10 440641 E 5083851 N
 Caption: CHARLIE CREEK RESTORATION SITE - NECANICUM BASIN