

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

STREAM: Cedar Creek (N-312)  
BASIN: Nehalem River  
SURVEY TYPE: Post-Tx  
DATE: August 8, 2007  
SURVEY CREW: Trevor Diemer, Nathan Wilson  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 8.3 km<sup>2</sup>  
USGS MAPS: Pittsburg  
ECOREGION: Coast Range Willapa Hills

**GENERAL DESCRIPTION:**

The Cedar Creek habitat survey extended 1,064 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 5.5 (range: 1.0-10.0). Land use for the reach was young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 2.0 percent. Beaver pools (38%) and riffles (31%) dominated stream habitat. Gravel (40%) and sand (29%) dominated stream substrate. Wood volume was low at 17.7 m<sup>3</sup>/100m.

**COMMENTS:**

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

The crew noted several habitat structures during the survey, as well as several beaver ponds.

REACH 1

T06N-R04W-S34NE

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	5.5	VWI Range:	1 - 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	1,064	4,303	0
Secondary Channel	130	1,166	0
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 = 4
Width: 4.1	Width: 6.3	7.0 ( 4.25 - 10 )	9.0 ( 8 - 10 )
Depth: 0.30	Height: 0.2	0.4 ( 0.4 - 0.5 )	1.1 ( 0.6 - 2.2 )

W:D ratio: 28.3

Entrenchment (ACW:FPW ratio): 1.1

Stream Flow Type: LF

Habitat Units/100m (total channel length): 7.5

Average Unit Gradient: 2.0%

Habitat Units/100m (primary channel length): 8.4

Water temperature (°C): 14.0 - 14.0

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	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:	1%	Reach avg: 93%
Undercut Banks:	2%	Range: 53 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	136	12.8
Volume (m <sup>3</sup> ):	188	17.7
Key pieces (>=12m x 0.60m):	10	0.9

OREGON DEPT OF FISH AND WILDLIFE

CEDAR CREEK POST-TX (1-NC, 312)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

8/8/2007

REACH 1		T06N-R04W-S34NE					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 Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
POOL-BEAVER DAM	5	115	15.4	1.02	2,072	0	39	48	10	3	0	0
POOL-LATERAL SCOUR	31	291	3.6	0.53	1,046	0	13	37	39	10	0	1
POOL-PLUNGE	1	10	3.0	0.60	30	0	14	45	32	9	0	0
RAPID/BOULDERS	14	183	2.3	0.13	437	0	14	26	38	23	0	0
RIFFLE	24	543	2.6	0.08	1,630	0	1	19	50	27	0	3
RIFFLE W/ POCKETS	1	22	4.0	0.10	88	0	0	11	50	39	0	0
STEP/BEAVER DAM	6	11	9.0	0.04	102	0	34	43	15	8	0	0
STEP/COBBLE	4	16	3.6	0.10	55	0	0	10	56	34	0	0
STEP/LOG	3	3	2.7	0.05	10	0	0	22	47	31	0	0
<b>Total:</b>	<b>89</b>	<b>1,194</b>	<b>4.1</b>	<b>0.30</b>	<b>5,469</b>	<b>0</b>	<b>Avg: 12</b>	<b>29</b>	<b>40</b>	<b>18</b>	<b>0</b>	<b>1</b>

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )	
Dammed & BW Pools	5	115	15.4	1.02	2,072	37.89%	0	0.0	
Scour Pools	32	301	3.6	0.54	1,076	19.67%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	25	565	2.6	0.08	1,718	31.41%	0	0.0	
Rapids	14	183	2.3	0.13	437	7.98%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	13	30	5.9	0.06	167	3.05%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	37	31.0	34.8
Pools >=1m deep:	3	2.5	2.8
Complex pools (LWD pieces>=3):	7	5.9	6.6
Pool frequency (channel widths/pool):	5.2		
Residual pool depth (avg):	0.54		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

CEDAR CREEK POST-TX  
GCG: 1-NC SITE ID: 312

Survey Date 8/8/2007  
Report Date: 11/7/2007

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 5 transects

Total hardwoods/1000	1585
Total conifers/1000 ft	475
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	3.0	0.4	5.4	1.2	4.6	1.6	13.0
15-30cm	0.0	2.0	2.0	4.0	2.8	3.6	4.8	9.6
30-50cm	0.2	0.8	0.6	0.8	0.6	0.8	1.4	2.4
50-90cm	0.0	0.8	0.0	0.0	0.0	0.2	0.0	1.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.2	6.6	3.0	10.2	4.6	9.2	2.6	8.7

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	76		81		88	
Shrub cover	52		53		48	
Grass/forb cover	45		47		53	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	30		30		70	
High terrace	70		50		30	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		20		0	
Riprap	0		0		0	
Surface slope (%)	13		15		30	

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

5 transects

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

Total hardwoods/1000	1585
Total conifers/1000 ft	475
Total conifers >20" dbh/1000 ft	0
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	1.6	13.0
15-30cm	4.8	9.6
30-50cm	1.4	2.4
50-90cm	0.0	1.0
>90cm	0.0	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		
1	LT	1	HT	0	95	40	60	Conifer							
								Hardwood	1	2	2				
1	LT	2	HT	0	90	65	35	Conifer							
								Hardwood	3	2	2				
1	LT	3	HT	0	95	70	30	Conifer							
								Hardwood	2	2	1	1			
1	RT	1	HT	0	55	60	40	Conifer							
								Hardwood	1	1					
1	RT	2	HT	0	95	50	50	Conifer		2	2				
								Hardwood	1		1				
1	RT	3	HT	0	95	20	80	Conifer			1	3		10T 0487332	
								Hardwood		1	1			5089414, 3D	
20	RT	3	HS	25	85	80	20	Conifer			1				
								Hardwood	2	1					
22	LT	1	HT	0	75	60	40	Conifer							
								Hardwood	2	2	1				
22	LT	2	RB	0	85	80	20	Conifer							
								Hardwood	3	4					
22	LT	3	HS	50	85	40	60	Conifer	1	5					
								Hardwood							
22	RT	1	HT	0	60	75	25	Conifer							
								Hardwood	1			1			
22	RT	2	HT	0	65	70	30	Conifer							
								Hardwood	3	1					
52	LT	1	HT	0	75	50	50	Conifer							
								Hardwood				1			
52	LT	2	HT	0	65	60	40	Conifer							
								Hardwood							
52	LT	3	HT	0	50	60	40	Conifer							
								Hardwood	2						
52	RT	1	HS	55	80	45	55	Conifer						10T 0487714	
								Hardwood	2	2	1			5089579, 3D	
52	RT	2	HS	55	90	40	60	Conifer			2				
								Hardwood	2	3					
52	RT	3	HS	55	95	40	60	Conifer	1	1					
								Hardwood	1	5					

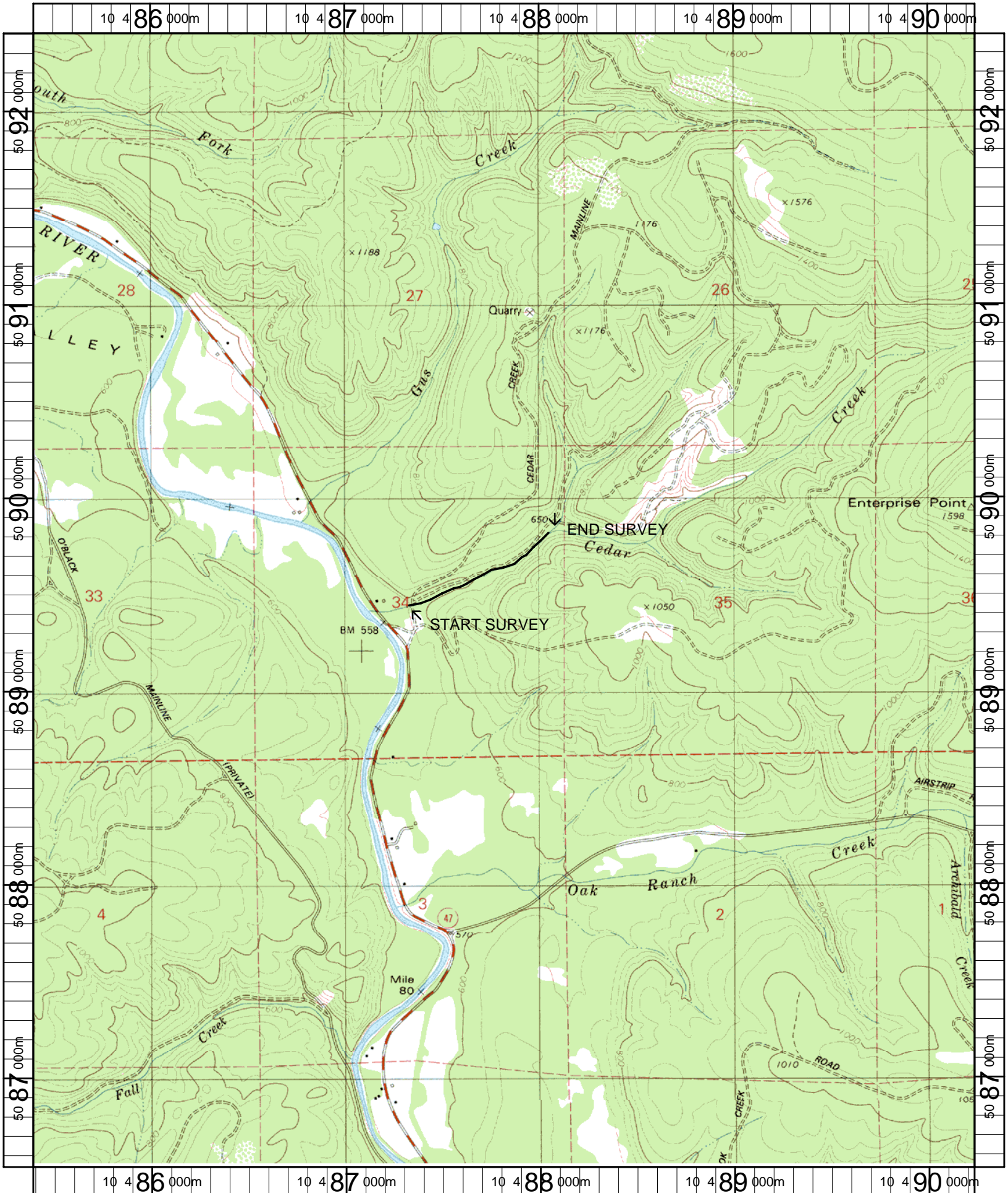
70	LT	1	HT	0	70	55	45	Conifer						
								Hardwood	4					
70	LT	2	HT	0	90	60	40	Conifer						
								Hardwood	2	2	1			
70	LT	3	HS	0	95	50	50	Conifer						
								Hardwood	1	2	2			
70	RT	1	HT	0	90	30	70	Conifer						10T 0487893
								Hardwood	1	3		1		5089672, 3D
70	RT	2	HS	45	95	25	75	Conifer						
								Hardwood	4	6				
70	RT	3	HS	60	95	20	80	Conifer						
								Hardwood	5	5				
90	LT	1	HS	45	75	35	35	Conifer						10T 0488076
								Hardwood				1		5089857, 3D
90	LT	2	RB	0	50	20	70	Conifer		3	1			
								Hardwood	1	1				
90	LT	3	HS	55	95	35	65	Conifer	1	3				
								Hardwood	3					
90	RT	1	HS	30	80	70	30	Conifer				1		
								Hardwood	3					
90	RT	2	HS	50	85	55	45	Conifer	2	3				
								Hardwood	8	1				
90	RT	3	HS	50	90	60	40	Conifer	3	3				
								Hardwood	7	2				

COMMENT SUMMARY

MONITORING AREA: 1-NC      SITE ID: 312      STREAM: CEDAR CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	52		START SIGN ON L BANK ALDER JUST UP FROM BRIDGE CROSSING
27	RI	00	303	SS/	
28	LP	00	311	HS SS/	8 LOGS SET IN RIVER
32	LP	00	349	BV	
34	SD	00	384	BD	
35	BP	00	393	BV	
37	SD	01	401	BD	
38	BP	01	411	BV	
40	SD	01	443	BD	
43	SD	02	443	BD	
44	BP	02	443	BV	
45	SD	02	443	BD	
49	BP	00	475	BV	
50	SD	00	477	BD	
51	BP	00	516	BV	
52	RI	00	558		OLD BEAVER DAM
76	RI	00	836	HS	
77	LP	00	842	HS	
78	RI	01	876	HS, DJ	
90	RI	00	1064	HS	END 1065M UP FROM START WHERE CREEK SPLITS. SIGN ON LARGE ALDER LE





Name: PITTSBURG  
 Date: 4/25/2007  
 Scale: 1 inch equals 2000 feet

Location: 10 0487815 E 5089468 N  
 Caption: CEDAR CREEK RESTORATION SITE - NEHALEM BASIN