

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

STREAM: Battle Creek (N-209)
BASIN: Nehalem River
SURVEY TYPE: Pre-Tx
DATE: September 2, 2003
SURVEY CREW: Trevor Diemer, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 16.8 km²
USGS MAPS: Pittsburg
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Battle Creek habitat survey extended 575 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 4.3 (range: 1.5-5.0). Land use for the reach was second growth (15-30 cm dbh) trees and timber harvest. The average unit gradient was 1.3 percent. Scour pools (51%) and riffles (42%) dominated stream habitat. Gravel (40%) and cobble (32%) dominated stream substrate. Wood volume was very low at 8.7 m³/100m.

COMMENTS:

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

OREGON DEPARTMENT OF FISH AND WILDLIFE

BATTLE CREEK PRE-TX (N-209)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

9/2/03

REACH 1		T06N-R04W-S20NE					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	
DRY CHANNEL	1	7	2.6	0.00	18	0	0	16	37	47	0	0	
POOL-BACKWATER	1	4	1.5	0.20	6	0	10	15	50	25	0	0	
POOL-LATERAL SCOUR	23	261	3.3	0.46	849	0	9	19	33	25	0	14	
POOL-PLUNGE	1	6	6.3	0.45	35	3	10	19	48	19	5	0	
POOL-STRAIGHT SCOUR	1	8	3.9	0.50	31	3	10	19	48	19	5	0	
RAPID/BOULDERS	1	10	3.5	0.05	35	0	0	5	55	40	0	0	
RIFFLE	18	286	2.4	0.08	762	21	2	10	45	41	0	1	
STEP/COBBLE	4	13	4.8	0.05	66	0	3	19	43	35	0	1	
STEP/LOG	1	1	2.6	0.05	2	0	5	15	65	15	0	0	
Total:	51	596	3.1	0.26	1,803	27	Avg	6	15	40	32	0	7

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		21
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	1	4	1.5	0.20	6	0.36%	0	0.0	
Scour Pools	25	275	3.5	0.46	914	50.69%	6	0.7	
Glides	0	0			0	0.00%	0	0.0	
Riffles	18	286	2.4	0.08	762	42.23%	21	2.8	
Rapids	1	10	3.5	0.05	35	1.96%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	5	13	4.3	0.05	68	3.75%	0	0.0	
Dry	1	7	2.6	0.00	18	1.01%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY		
	<u>Total</u>	<u># / Km</u>
All Pools:	26	43.6
Pools >=1m deep:	0	0.0
Complex pools (LWD pieces>=3):	8	13.4
Pool frequency (channel widths/pool):	3.6	
Residual pool depth (avg):	0.41	

STREAM SUMMARY

BATTLE CREEK PRE-TX (N-209)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate						Large Boulders (#>0.5m)
					Percent Wetted Area						
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
51	596	3.1	0.26	1,803	6	15	40	32	0	7	27

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	6	0.36%
Scour Pools	914	50.69%
Glides	0	0.00%
Riffles	762	42.23%
Rapids	35	1.96%
Cascades	0	0.00%
Step/Falls	68	3.75%
Dry	18	1.01%
Culverts	0	0.00%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

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

Total hardwoods/1000	1199
Total conifers/1000 ft	0
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	1.7	0.0	3.0	0.0	2.7	0.0	7.3
15-30cm	0.0	1.7	0.0	1.7	0.0	2.7	0.0	6.0
30-50cm	0.0	2.0	0.0	1.0	0.0	3.3	0.0	6.3
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/100m2	0.0	5.3	0.0	5.7	0.0	8.7	0.0	6.6

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	78	86	88
Shrub cover	28	28	34
Grass/forb cover	73	72	66

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	100	100	100
Low terrace	0	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	1199
Total conifers/1000 ft	0
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-m wide band

<u>Diameter class (cm)</u>	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.0	7.3
15-30cm	0.0	6.0
30-50cm	0.0	6.3
50-90cm	0.0	0.0
>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		
11	RT	3	HT	0	90	65	35	Conifer							
								Hardwood	1	2	2				
11	RT	2	HT	0	90	60	40	Conifer							
								Hardwood	3		2				
11	RT	1	HT	0	80	60	40	Conifer							
								Hardwood	3	2	1				
11	LF	1	HT	0	35	30	70	Conifer							10T 0484962, 5092719
								Hardwood			2				
11	LF	3	HT	0	90	40	60	Conifer							
								Hardwood	1	1	2				
11	LF	2	HT	0	85	40	60	Conifer							
								Hardwood	3		1				
18	RT	3	HT	0	90	30	70	Conifer							
								Hardwood	2	3	1				
18	RT	2	HT	0	90	30	70	Conifer							
								Hardwood	2	3					
18	RT	1	HT	0	90	30	70	Conifer							
								Hardwood		1	2				
18	LF	2	HT	0	90	10	90	Conifer							
								Hardwood	1	2					
18	LF	1	HT	0	90	10	90	Conifer							10T 0485056, 5092727
								Hardwood		1					
18	LF	3	HT	0	90	30	70	Conifer							
								Hardwood	3	1	2				
31	RT	1	HT	0	90	10	90	Conifer							
								Hardwood			1				
31	LF	3	HT	0	75	35	65	Conifer							
								Hardwood	1	1	2				
31	LF	2	HT	0	70	25	75	Conifer							
								Hardwood							
31	RT	2	HT	0	90	5	95	Conifer							
								Hardwood							
31	LF	1	HT	0	80	25	75	Conifer							
								Hardwood	2	1					
31	RT	3	HT	0	90	5	95	Conifer							
								Hardwood			1				

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 1-NC SITE ID: 209 BATTLE CREEK PRE-TX (N-209)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	01	12.8	/TJ		
10	SC	00	127		H = .2	
11	LP	00	135		RIPARIAN 1	
18	LP	00	234.6		RIPARIAN 2	
22	SC	00	250.8		H = .35	
31	RI	00	361.4	WL	RIPARIAN 3	10T 0485123, 5092743
41	RI	00	476.1	WL		
44	LP	00	521.2			START HABITAT PROJECT
46	SC	00	543.5		H = 0.3	
50	SL	00	566.6		H = .3	
51	SP	00	574.5			10T 0485310, 5092735