



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Classification Attainment Report**

Station Information

Station Number: S-511	DEP Drainage: Penobscot
Waterbody: Penjajawoc Stream - Station 511	HUC8: 01020005
Town: Bangor	HUC8 Name: Lower Penobscot
Directions: ABOVE STILLWATER AVE.	Latitude: 44 50 13.16 N
	Longitude: 68 44 54.04 W
	Stream Order: 1

Sample Information

Log Number: 1711	Type of Sample: ROCK BAG	Date Deployed: 7/8/2008
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/5/2008

Classification Attainment

Statutory Class: B	Final Determination: C	Date: 3/24/2009
Model Result with P>.6: C	Reason for Determination: Model	
Date Last Calculated: 3/17/2009	Comments:	

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.01	Class C	0.81	Class A, B, or C	0.96
Class B	0.06	NA	0.12	Non-Attainment	0.04
<u>B or Better Model</u>				<u>A Model</u>	
Class A or B			0.00	Class A	0.01
Class C or Non-Attainment			1.00	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	203.67	18 Relative Abundance Ephemeroptera	0.10
02 Generic Richness	41.00	19 EPT Generic Richness	12.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.33
04 Ephemeroptera Mean Abundance	20.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.17	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	15.83
06 Hilsenhoff Biotic Index	4.47	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	12.33
07 Relative Abundance - Chironomidae	0.13	28 EP Generic Richness/14	0.43
08 Relative Generic Richness Diptera	0.32	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	105.33		
11 <i>Cheumatopsyche</i> Abundance	13.34		
12 EPT Generic Richness/ Diptera Generic Richness	0.92		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.84		
17 Chironomini Abundance (Family Functional Group)	9.60		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	51.72
2	<i>Cheumatopsyche</i>	6.55
3	<i>Maccaffertium</i>	6.06
4	<i>Microtendipes</i>	3.67
5	<i>Caecidotea</i>	3.60



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Town: Bangor

Date Deployed: 7/8/2008

Log Number: 1711

Waterbody: Penjajawoc Stream - Station 511

Date Retrieved: 8/5/2008

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 22.7 deg C
Dissolved Oxygen: 9 mg/l
Specific Conductance: 130 uS/cm
Velocity: 23 cm/s
pH:
Wetted Width: 2.7 m
Bankfull Width: 5.1 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 20.3 deg C
Dissolved Oxygen: 5.2 mg/l
Specific Conductance: 130 uS/cm
Velocity: 43 cm/s
pH: 6.48
Wetted Width: 4.2 m
Bankfull Width: 5.1 m
Depth: 33 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	3 ug/l
Nitrate+nitrite As N	0.01 mg/l	Total Phosphorus	0.029 mg/l
Total Kjeldahl Nitrogen	0.6 mg/l	Total Suspended Solids	2.7 mg/l
Dissolved Organic Carbon	13 mg/l	Total Dissolved Solids	95 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood	Canopy Open	Rolling Terrain
Urban		

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>
Bog Headwaters Stressor	Above Road Crossing	Boulder 10 %
Urban Runoff Stressor		Rubble/Cobble 60 %
		Sand 15 %
		Silt 15 %

Landcover Summary - 2004 Data

Total Area (ac)	3575	High Int. Dev. %	2.1	Water %	2.0	Non-vegetated %	0.1
Total Land (ac)	3505	Med Int. Dev. %	2.2	Wetland %	11.2	Tilled Agriculture %	7.7
		Low Int. Dev. %	3.7	Upland Woody %	59.3	Human Altered %	29.5
		Development %	8.0	Natural %	70.5	Impervious %	5.4

Sample Comments

8/5/08: HIGH WATER LEVELS

7/8/08: SPC AND DO METERS ACTING UP - MEASUREMENTS SOMEWHAT DUBIOUS; SITE MOVED ABOUT 100 FT UPSTREAM TO AVOID WAL-MART CONSTRUCTION



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

Station Number: S-511

Waterbody: Penjajawoc Stream - Station 511

Town: Bangor

Log Number: 1711

Subsample Factor: X1

Replicates: 3

Calculated: 3/17/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002	0.33	0.33		--	0.2	0.2
<i>Nais</i>	08020202009		0.33		CG		0.2
<i>Nais behningi</i>	08020202009003	0.33			--	0.2	
Lumbricidae	08020205	0.33	0.33		--	0.2	0.2
<i>Helobdella</i>	08030101005		0.33		--		0.2
<i>Helobdella stagnalis</i>	08030101005004	0.33			--	0.2	
<i>Caecidotea</i>	09010101001	4.33	7.33	8	SH	2.1	3.6
<i>Caecidotea communis</i>	09010101001001	3.00			--	1.5	
<i>Hyaella</i>	09010203006		0.67	8	CG		0.3
<i>Hyaella azteca</i>	09010203006011	0.67			--	0.3	
<i>Orconectes</i>	09010301008		0.33		CG		0.2
<i>Orconectes virilis</i>	09010301008016	0.33			--	0.2	
<i>Boyeria</i>	09020301004		1.67	2	PR		0.8
<i>Boyeria grafiana</i>	09020301004011	1.67			--	0.8	
Calopterygidae	09020307	2.67	2.67		--	1.3	1.3
<i>Calopteryx</i>	09020307043	4.33	4.33	5	PR	2.1	2.1
<i>Baetis</i>	09020401001		1.67	4	CG		0.8
<i>Baetis flavistriga</i>	09020401001004	1.67			--	0.8	
<i>Pseudocloeon</i>	09020401006		3.00	4	SC		1.5
<i>Pseudocloeon frondale</i>	09020401006029	3.00			--	1.5	
<i>Acerpenna</i>	09020401007	0.67	2.00	5	CG	0.3	1.0
<i>Acerpenna macdunnoughi</i>	09020401007001	1.33			--	0.7	
<i>Procloeon</i>	09020401010	1.00	1.00		CG	0.5	0.5
<i>Maccaffertium</i>	09020402015	3.33	12.33	4	SC	1.6	6.1
<i>Maccaffertium modestum</i>	09020402015051	9.00			--	4.4	
Leptophlebiidae	09020406	0.33	0.33		--	0.2	0.2
<i>Chimarra</i>	09020601003	1.33	1.33	2	CF	0.7	0.7
Hydropsychidae	09020604	3.00			--	1.5	
<i>Cheumatopsyche</i>	09020604015	13.00	13.34	5	CF	6.4	6.5
<i>Hydropsyche</i>	09020604016	41.00	105.33	4	CF	20.1	51.7
<i>Hydropsyche morosa</i>	09020604016030	0.33			--	0.2	
<i>Hydropsyche depravata-complex</i>	09020604016041	61.33			CF	30.1	
<i>Pycnopsyche</i>	09020610049	3.67	3.67	4	SH	1.8	1.8
<i>Lepidostoma</i>	09020611064	1.33	1.33	1	SH	0.7	0.7
<i>Mystacides</i>	09020618075	1.67	1.67	4	CG	0.8	0.8
<i>Antocha</i>	09021001004	1.00	1.00	3	CG	0.5	0.5
Chironomidae	09021011	1.67			--	0.8	
<i>Conchapelopia</i>	09021011004	2.67	2.84	6	PR	1.3	1.4



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		Actual	Adjusted			Actual	Adjusted
<i>Cricotopus</i>	09021011037		1.78	7	SH		0.9
<i>Cricotopus bicinctus</i>	09021011037057	1.67			--	0.8	
<i>Parametriocnemus</i>	09021011053	2.67	2.84	5	CG	1.3	1.4
<i>Rheocricotopus</i>	09021011057		0.36	6	CG		0.2
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.2	
<i>Thienemanniella</i>	09021011062			6	CG		
<i>Tvetenia</i>	09021011065		3.56	5	CG		1.7
<i>Tvetenia paucunca</i>	09021011065114	3.33			--	1.6	
<i>Rheotanytarsus</i>	09021011072	4.33	4.62	6	CF	2.1	2.3
<i>Stempellinella</i>	09021011074		0.36	2	--		0.2
<i>Stempellinella sp. a epler</i>	09021011074002	0.33			--	0.2	
<i>Tanytarsus</i>	09021011076	0.67	0.71	6	CF	0.3	0.3
<i>Microtendipes</i>	09021011094		7.47	6	CF		3.7
<i>Microtendipes pedellus-grp.</i>	09021011094166	6.67			--	3.3	
<i>Microtendipes rydalensis-grp.</i>	09021011094168	0.33			--	0.2	
<i>Paratendipes</i>	09021011100		0.36	8	CG		0.2
<i>Paratendipes albimanus-grp.</i>	09021011100176	0.33			--	0.2	
<i>Polypedilum</i>	09021011102		1.78	6	SH		0.9
<i>Polypedilum flavum</i>	09021011102182	1.67			--	0.8	
<i>Simulium venustum/verecundum</i> complex	09021012047072				CF		
Empididae	09021016			6	--		
<i>Hemerodromia</i>	09021016057	0.67	0.67	3	PR	0.3	0.3
<i>Macronychus</i>	09021113065		0.33	4	--		0.2
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.2	
<i>Optioservus</i>	09021113067		0.33	3	SC		0.2
<i>Optioservus fastiditus</i>	09021113067044	0.33			--	0.2	
<i>Stenelmis</i>	09021113070	2.67	3.00	5	SC	1.3	1.5
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.2	
<i>Amnicola</i>	10010104013		0.33		SC		0.2
<i>Amnicola grana</i>	10010104013019	0.33			--	0.2	
<i>Ferrissia</i>	10010204035		5.67		SC		2.8
<i>Ferrissia rivularis</i>	10010204035066	5.67			--	2.8	
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.2	0.2