



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 14.08 N
	Longitude: 68 45 1.36 W
	Stream Order: 1

Sample Information

Log Number: 2026	Type of Sample: ROCK BAG	Date Deployed: 7/8/2011
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/9/2011

Classification Attainment

Statutory Class: B	Final Determination: C	Date: 1/25/2012
Model Result with P>.6: C	Reason for Determination: Model	
Date Last Calculated: 1/17/2012	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	1.00
Class B	0.01	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.00
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	1.00

Model Variables

01 Total Mean Abundance	132.33	18 Relative Abundance Ephemeroptera	0.26
02 Generic Richness	33.00	19 EPT Generic Richness	8.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.52
04 Ephemeroptera Mean Abundance	34.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.66	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	9.93
06 Hilsenhoff Biotic Index	5.88	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	19.33
07 Relative Abundance - Chironomidae	0.25	28 EP Generic Richness/14	0.29
08 Relative Generic Richness Diptera	0.45	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	1.83		
11 <i>Cheumatopsyche</i> Abundance	9.17		
12 EPT Generic Richness/ Diptera	0.53		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	1.52		
(Family Functional Group)			
17 Chironomini Abundance (Family	2.66		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Caecidotea</i>	24.94
2	<i>Rheotanytarsus</i>	15.48
3	<i>Maccaffertium</i>	14.61
4	<i>Labiobaetis</i>	8.52
5	<i>Cheumatopsyche</i>	6.93



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Town: Bangor

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Waterbody: Penjajawoc Stream - Station 511

Date Retrieved: 8/9/2011

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 21.7 deg C
Dissolved Oxygen: 6.6 mg/l
Specific Conductance: 143 uS/cm
Velocity: 11 cm/s
pH: 6.6
Wetted Width: 2.6 m
Bankfull Width: 5.1 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 19.4 deg C
Dissolved Oxygen: 6.6 mg/l
Specific Conductance: 362 uS/cm
Velocity: 32 cm/s
pH: 7.3
Wetted Width: 2.6 m
Bankfull Width: 5.1 m
Depth: 10 cm

Water Chemistry - 8/9/2011

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	8 ug/l
Nitrate+nitrite As N	0.22 mg/l	Total Phosphorus	0.04 mg/l
Total Kjeldahl Nitrogen	0.6 mg/l	Total Suspended Solids	5.1 mg/l
Dissolved Organic Carbon	6.1 mg/l	Total Dissolved Solids	190 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood	Partly Open	Flat
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Below Wetland	Above Road Crossing	Boulder 5 %
Urban Runoff	Below Wetland	Gravel 20 %
		Rubble/Cobble 70 %
		Sand 5 %

Landcover Summary - 2004 Data

Total Area (ac)	3575	High Int. Dev. %	2.1	Water %	2.0	Non-vegetated %	0.1
		Med Int. Dev. %	2.2	Wetland %	11.0	Tilled Agriculture %	7.5
		Low Int. Dev. %	3.6	Upland Woody %	58.1	Grassland %	8.7
		Development %	7.9	Natural %	69.1	Human Altered %	28.9
						Impervious %	5.4

Sample Comments

CANOPY IS APPROXIMATELY 75% SHADED. 7/8/11: COVERED WITH VEGETATION, PICKEREL WEED DOWNSTREAM.

8/9/11: A LOT OF EMERGENT VEGETATION, DOMINANT SPECIES SPARGANIUM, FISH OBSERVED, LOW WATER LEVEL.



**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: 2026

Subsample Factor: X1

Replicates: 3

Calculated: 1/17/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Cura</i>	03010102001	0.33	0.33		--	0.3	0.3
<i>Nais</i>	08020202009	0.33	1.33		CG	0.3	1.0
<i>Nais behningi</i>	08020202009003	0.33			--	0.3	
<i>Nais pardalis</i>	08020202009007	0.67			--	0.5	
<i>Caecidotea</i>	09010101001	22.00	33.00	8	SH	16.6	24.9
<i>Caecidotea communis</i>	09010101001001	11.00			--	8.3	
<i>Orconectes</i>	09010301008		0.33		CG		0.3
<i>Orconectes virilis</i>	09010301008016	0.33			--	0.3	
<i>Boyeria</i>	09020301004		2.33	2	PR		1.8
<i>Boyeria vinosa</i>	09020301004012	2.33			--	1.8	
Calopterygidae	09020307	5.67	5.67		--	4.3	4.3
<i>Calopteryx</i>	09020307043		1.00	5	PR		0.8
<i>Calopteryx maculata</i>	09020307043088	1.00			--	0.8	
Baetidae	09020401	0.33			--	0.3	
<i>Baetis</i>	09020401001	0.33	2.39	4	CG	0.3	1.8
<i>Baetis flavistriga</i>	09020401001004	2.00			--	1.5	
<i>Labiobaetis</i>	09020401009		11.28		--		8.5
<i>Labiobaetis frondalis</i>	09020401009005	11.00			--	8.3	
<i>Maccaffertium</i>	09020402015	15.00	19.33	4	SC	11.3	14.6
<i>Maccaffertium modestum</i>	09020402015051	4.33			--	3.3	
Leptophlebiidae	09020406	1.67	1.67		--	1.3	1.3
<i>Rhagovelia</i>	09020510026	0.33	0.33		PR	0.3	0.3
<i>Chimarra</i>	09020601003		0.33	2	CF		0.3
<i>Chimarra socia</i>	09020601003004	0.33			--	0.3	
<i>Psychomyia</i>	09020602005		0.33	2	CG		0.3
<i>Psychomyia flavida</i>	09020602005006	0.33			--	0.3	
Hydropsychidae	09020604	1.00			--	0.8	
<i>Cheumatopsyche</i>	09020604015	8.33	9.17	5	CF	6.3	6.9
<i>Hydropsyche</i>	09020604016	1.00	1.83	4	CF	0.8	1.4
<i>Hydropsyche morosa</i>	09020604016030	0.67			--	0.5	
<i>Tipula</i>	09021001002	0.67	0.67	4	SH	0.5	0.5
Chironomidae	09021011	4.00			--	3.0	
<i>Ablabesmyia</i>	09021011001		0.38	8	PR		0.3
<i>Ablabesmyia mallochii</i>	09021011001004	0.33			--	0.3	
<i>Conchapelopia</i>	09021011004	0.33	0.38	6	PR	0.3	0.3
<i>Paramerina</i>	09021011013	0.67	0.76		--	0.5	0.6
<i>Cricotopus</i>	09021011037		0.38	7	SH		0.3
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.3	



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<i>Eukiefferiella</i>	09021011041		0.38	8	CG		0.3
<i>Eukiefferiella brehmi</i> group	09021011041073	0.33			--	0.3	
<i>Nanocladius</i>	09021011049	0.33	0.38	3	CG	0.3	0.3
<i>Parametriocnemus</i>	09021011053	1.67	1.90	5	CG	1.3	1.4
<i>Tvetenia</i>	09021011065		2.66	5	CG		2.0
<i>Tvetenia vitracies</i>	09021011065113	1.33			--	1.0	
<i>Tvetenia paucunca</i>	09021011065114	1.00			--	0.8	
<i>Micropsectra</i>	09021011070	1.33	1.52	7	CG	1.0	1.1
<i>Paratanytarsus</i>	09021011071	1.00	1.14	6	--	0.8	0.9
<i>Rheotanytarsus</i>	09021011072	18.00	20.48	6	CF	13.6	15.5
<i>Microtendipes</i>	09021011094		0.38	6	CF		0.3
<i>Microtendipes pedellus</i> group	09021011094166	0.33			--	0.3	
<i>Polypedilum</i>	09021011102		2.28	6	SH		1.7
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	1.0	
<i>Polypedilum flavum</i>	09021011102182	0.67			--	0.5	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.3	0.3
<i>Stenelmis</i>	09021113070	0.67	4.67	5	SC	0.5	3.5
<i>Stenelmis crenata</i>	09021113070055	4.00			--	3.0	
<i>Ferrissia</i>	10010204035		3.00		SC		2.3
<i>Ferrissia rivularis</i>	10010204035066	3.00			--	2.3	