



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

Station Information

Station Number: S-511	River Basin: Penobscot
Waterbody: Penjajawoc Stream - Station 511	HUC8 Name: Lower Penobscot
Town: Bangor	Latitude: 44 50 14.08 N
Directions: ABOVE STILLWATER AVE.	Longitude: 68 45 1.36 W
	Stream Order: 1

Sample Information

Log Number: 2470	Type of Sample: ROCK BAG	Date Deployed: 7/11/2016
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/8/2016

Classification Attainment

Statutory Class: B	Final Determination: NA	Date: 8/3/2017
Model Result with $P \geq 0.6$: NA	Reason for Determination: Model	
Date Last Calculated: 7/21/2017	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.07
Class B	0.01	Non-Attainment	0.93
<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	475.00	18 Relative Abundance Ephemeroptera	0.01
02 Generic Richness	55.00	19 EPT Generic Richness	11.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	39.00
04 Ephemeroptera Mean Abundance	2.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	4.16	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	30.17
06 Hilsenhoff Biotic Index	6.23	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.25	28 EP Generic Richness/14	0.21
08 Relative Generic Richness Diptera	0.35	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.58		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	3.35		
17 Chironomini Abundance (Family Functional Group)	80.12		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hyalella</i>	15.58
2	<i>Caecidotea</i>	15.09
3	<i>Microtendipes</i>	12.42
4	<i>Helobdella</i>	8.21
5	<i>Stenelmis</i>	7.58



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Station Number: S-511 Town: Bangor Date Deployed: 7/11/2016
Log Number: 2470 Waterbody: Penjajawoc Stream - Station 511 Date Retrieved: 8/8/2016

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 17.6 deg C
Dissolved Oxygen: 9.96 mg/l
Dissolved Oxygen Saturation: 102.4 %
Specific Conductance: 314.2 uS/cm
Velocity: 12.2 cm/s
pH: 7.7
Wetted Width: 3.9 m
Bankfull Width: 5.3 m
Depth: 27 cm

Waterbody Information - Retrieval

Temperature: 20.2 deg C
Dissolved Oxygen: 9.58 mg/l
Dissolved Oxygen Saturation: 106.1 %
Specific Conductance: 1706 uS/cm
Velocity:
pH: 7.65
Wetted Width: 4 m
Bankfull Width: 5.3 m
Depth: 20 cm

Water Chemistry - 8/8/2016

Nitrate+nitrite As N	0.57 mg/l	Total Phosphorus	25 ug/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	8.8 mg/l
Dissolved Organic Carbon	4.2 mg/l	Total Dissolved Solids	980 mg/l
Orthophosphate As Phosphorus	5 ug/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Swamp Hardwood	Open	Flat	
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Urban Runoff	Above Road Crossing	Boulder	5 %
Wetland Headwaters	Below Wetland	Gravel	20 %
		Rubble/Cobble	65 %
		Sand	5 %
		Silt	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

7/11/2016: RAINED NIGHT BEFORE; WATER IN CHANNEL DRAINING FROM WALMART PARKING LOT HAS SPC OF 866 US/CM.
VISIBLE FLOW AT RETRIEVAL. 8/8/2016: WATER IN CHANNEL DRAINING FROM WALMART HAS SPC OF 1847 US/CM.



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-511

Waterbody: Penjajawoc Stream - Station 511

Town: Bangor

Log Number: 2470

Subsample Factor: X1

Replicates: 3

Calculated: 7/21/2017

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
<i>Girardia</i>	03010102002	7.00	7.00		--	1.5	1.5
<i>Prostoma</i>	04010101001	0.33	0.33		--	0.1	0.1
Naididae	08020202	5.00			--	1.1	
<i>Nais</i>	08020202009	1.00	4.75		CG	0.2	1.0
<i>Limnodrilus</i>	08020202022		1.58		CG		0.3
<i>Limnodrilus hoffmeisteri</i>	08020202022003	0.33			--	0.1	
<i>Alboglossiphonia</i>	08030101002		0.33		--		0.1
<i>Alboglossiphonia heteroclita</i>	08030101002001	0.33			--	0.1	
<i>Glossiphonia</i>	08030101004	3.00	3.00		--	0.6	0.6
<i>Helobdella</i>	08030101005	39.00	39.00		--	8.2	8.2
<i>Placobdella</i>	08030101006	2.00	2.00		--	0.4	0.4
Erpobdellidae	08030203	2.33	2.33		--	0.5	0.5
<i>Caecidotea</i>	09010101001	71.67	71.67	8	SH	15.1	15.1
<i>Hyaella</i>	09010203006	74.00	74.00	8	CG	15.6	15.6
Cambaridae	09010301	0.33	0.33		--	0.1	0.1
<i>Basiaeschna</i>	09020301003	0.33	0.33	6	PR	0.1	0.1
Coenagrionidae	09020309	1.67	1.67		--	0.4	0.4
<i>Cloeon</i>	09020401004	1.00	1.00	2	CG	0.2	0.2
<i>Procloeon</i>	09020401010	0.67	0.67		CG	0.1	0.1
Leptophlebiidae	09020406	1.00	1.00		--	0.2	0.2
<i>Nyctiophylax</i>	09020603009	1.00	1.00	5	PR	0.2	0.2
<i>Polycentropus</i>	09020603010	7.33	7.33	6	PR	1.5	1.5
Hydropsychidae	09020604	0.33	0.33		--	0.1	0.1
<i>Micrasema</i>	09020609044	1.00	1.00	2	SH	0.2	0.2
<i>Pycnopsyche</i>	09020610049	21.33	21.33	4	SH	4.5	4.5
<i>Lepidostoma</i>	09020611064	8.67	8.67	1	SH	1.8	1.8
<i>Helicopsyche</i>	09020616070	18.33	18.33	3	SC	3.9	3.9
<i>Mystacides</i>	09020618075		9.67	4	CG		2.0
<i>Mystacides sepulchralis</i>	09020618075147	9.67			--	2.0	
<i>Antocha</i>	09021001004	1.00	1.00	3	CG	0.2	0.2
Chironomidae	09021011	0.67			--	0.1	
<i>Paramerina</i>	09021011013	0.67	0.67		--	0.1	0.1
<i>Thienemannimyia</i>	09021011020		2.68	3	PR		0.6
<i>Thienemannimyia group</i>	09021011020041	2.67			--	0.6	
<i>Corynoneura</i>	09021011036	0.67	0.67	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		18.10	7	SH		3.8
<i>Cricotopus bicinctus</i>	09021011037057	14.00			--	2.9	



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Subsample Factor: X1

Replicates: 3

Calculated: 7/21/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Cricotopus luciae</i>	09021011037073	4.00			--	0.8	
<i>Nanocladius</i>	09021011049	0.67	0.67	3	CG	0.1	0.1
<i>Orthocladius</i>	09021011050	0.33	0.34	6	CG	0.1	0.1
<i>Thienemanniella</i>	09021011062	0.67	0.67	6	CG	0.1	0.1
<i>Paratanytarsus</i>	09021011071	2.00	2.01	6	--	0.4	0.4
<i>Rheotanytarsus</i>	09021011072		0.34	6	CF		0.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	0.33			CF	0.1	
<i>Stempellinella</i>	09021011074	0.67	0.67	2	--	0.1	0.1
<i>Tanytarsus</i>	09021011076	12.00	12.07	6	CF	2.5	2.5
<i>Microtendipes</i>	09021011094		59.00	6	CF		12.4
<i>Microtendipes pedellus group</i>	09021011094166	58.67			--	12.4	
<i>Paratendipes</i>	09021011100	18.67	18.77	8	CG	3.9	4.0
<i>Phaenopsectra</i>	09021011101	0.67	0.67	7	SC	0.1	0.1
<i>Polypedilum</i>	09021011102		1.68	6	SH		0.4
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.1	
<i>Polypedilum halterale group</i>	09021011102193	1.33			--	0.3	
<i>Simulium</i>	09021012047	0.33	0.33	4	CF	0.1	0.1
<i>Hemerodromia</i>	09021016057	10.33	10.33	3	PR	2.2	2.2
<i>Neoplasta</i>	09021016064	0.67	0.67		PR	0.1	0.1
<i>Psephenus</i>	09021108058		2.33	4	SC		0.5
<i>Psephenus herricki</i>	09021108058028	2.33			--	0.5	
<i>Dubiraphia</i>	09021113064	5.33	5.33	6	--	1.1	1.1
<i>Optioservus</i>	09021113067	1.00	1.00	3	SC	0.2	0.2
<i>Stenelmis</i>	09021113070	19.67	36.00	5	SC	4.1	7.6
<i>Stenelmis crenata</i>	09021113070055	16.33			--	3.4	
<i>Limnochares</i>	09030110002	0.33	0.33		--	0.1	0.1
Lymnaeidae	10010201	0.33	0.33		--	0.1	0.1
Physidae	10010202	0.33	0.33		SC	0.1	0.1
<i>Gyraulus</i>	10010203029	1.00	1.00		SC	0.2	0.2
<i>Helisoma</i>	10010203030		0.33		SC		0.1
<i>Helisoma trivolvis</i>	10010203030061	0.33			--	0.1	
<i>Promenetus</i>	10010203034		1.33		--		0.3
<i>Promenetus exacuous</i>	10010203034063	1.33			--	0.3	
<i>Ferrissia</i>	10010204035		16.67		SC		3.5
<i>Ferrissia parallelus</i>	10010204035065	16.67			--	3.5	