



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

**Station Information**

<b>Station Number:</b> S-513	River Basin: Penobscot
Waterbody: Penjajawoc Stream - Station 513	HUC8 Name: Lower Penobscot
Town: Bangor	Latitude: 44 49 33.95 N
Directions: SATURN DEALERSHIP	Longitude: 68 44 21.74 W
	Stream Order: 2

**Sample Information**

<b>Log Number:</b> 2471	Type of Sample: ROCK BAG	Date Deployed: 7/11/2016
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/8/2016

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> NA	Date: 8/3/2017
Model Result with $P \geq 0.6$ : NA	<b>Reason for Determination:</b> 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	0.00
Class B	0.00	Non-Attainment	1.00
<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	481.33	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	41.00	19 EPT Generic Richness	6.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.00
04 Ephemeroptera Mean Abundance	0.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.84	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	139.73
06 Hilsenhoff Biotic Index	4.94	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.30	28 EP Generic Richness/14	0.00
08 Relative Generic Richness Diptera	0.46	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	54.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.32		
13 Relative Abundance - Oligochaeta	0.03		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	5.69		
17 Chironomini Abundance (Family Functional Group)	5.36		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Girardia</i>	20.57
2	<i>Tanytarsus</i>	17.53
3	<i>Cheumatopsyche</i>	11.22
4	<i>Helicopsyche</i>	9.90
5	<i>Stenelmis</i>	6.93



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

**Station Number: S-513**      Town:      Bangor      Date Deployed: 7/11/2016  
**Log Number: 2471**      Waterbody: Penjajawoc Stream - Station 513      Date Retrieved: 8/8/2016

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature:                      19.2 deg C  
Dissolved Oxygen:                11.2 mg/l  
Dissolved Oxygen Saturation:    120.8 %  
Specific Conductance:            797 uS/cm  
Velocity:                            18.3 cm/s  
pH:                                  8.22  
Wetted Width:                      4.2 m  
Bankfull Width:                    7 m  
Depth:                                22 cm

**Waterbody Information - Retrieval**

Temperature:                      23.5 deg C  
Dissolved Oxygen:                13.51 mg/l  
Dissolved Oxygen Saturation:    159.2 %  
Specific Conductance:            1452 uS/cm  
Velocity:                            8.54  
pH:                                  8.54  
Wetted Width:                      3.9 m  
Bankfull Width:                    7 m  
Depth:                                17 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood	Open	Flat
Upland Hardwood		
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Nps Pollution	Below Road Crossing	Boulder                      10 %
Urban Runoff	Below Urban NPS	Gravel                        20 %
		Rubble/Cobble            60 %
		Sand                         10 %

**Landcover Summary - 2004 Data**

Total Area (ac)      4080	High Int. Dev. %      7.9	Water %                1.7	Non-vegetated %      0.0
	Med Int. Dev. %      3.2	Wetland %             9.6	Tilled Agriculture %    6.6
	Low Int. Dev. %      3.6	Upland Woody %      52.0	Grassland %            8.0
	Development %      14.7	Natural %              61.7	Human Altered %      36.6
			Impervious %        11.5

**Sample Comments**

7/11/2016: RAIN NIGHT BEFORE.  
VISIBLE FLOW AT RETRIEVAL.



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

**Station Number: S-513**

Waterbody: Penjajawoc Stream - Station 513

Town: Bangor

**Log Number: 2471**

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>Girardia</i>	03010102002	99.00	99.00		--	20.6	20.6
<i>Prostoma</i>	04010101001	0.67	0.67		--	0.1	0.1
Naididae	08020202	16.33	16.33		--	3.4	3.4
<i>Helobdella</i>	08030101005	1.00	1.00		--	0.2	0.2
<i>Caecidotea</i>	09010101001	2.00	2.00	8	SH	0.4	0.4
<i>Hyaella</i>	09010203006	1.33	1.33	8	CG	0.3	0.3
<i>Boyeria</i>	09020301004		1.67	2	PR		0.3
<i>Boyeria vinosa</i>	09020301004012	1.67			--	0.3	
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.3	0.3
<i>Cheumatopsyche</i>	09020604015	54.00	54.00	5	CF	11.2	11.2
<i>Hydroptila</i>	09020607026	2.33	2.33	6	P	0.5	0.5
<i>Micrasema</i>	09020609044	0.33	0.33	2	SH	0.1	0.1
<i>Helicopsyche</i>	09020616070	47.67	47.67	3	SC	9.9	9.9
<i>Mystacides</i>	09020618075		14.33	4	CG		3.0
<i>Mystacides sepulchralis</i>	09020618075147	14.33			--	3.0	
<i>Nigronia</i>	09020701003		0.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.1	
<i>Tipula</i>	09021001002	0.67	0.67	4	SH	0.1	0.1
Chironomidae	09021011	0.67			--	0.1	
<i>Thienemannimyia</i>	09021011020		5.69	3	PR		1.2
<i>Thienemannimyia group</i>	09021011020041	5.67			--	1.2	
<i>Diamesa</i>	09021011024	0.33	0.33	5	CG	0.1	0.1
<i>Pagastia</i>	09021011025	0.33	0.33	1	--	0.1	0.1
<i>Corynoneura</i>	09021011036	0.67	0.67	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		1.34	7	SH		0.3
<i>Cricotopus tremulus</i>	09021011037068	1.33			--	0.3	
<i>Limnophyes</i>	09021011047	0.67	0.67	8	CG	0.1	0.1
<i>Nanocladius</i>	09021011049	0.67	0.67	3	CG	0.1	0.1
<i>Orthocladius</i>	09021011050	8.67	8.71	6	CG	1.8	1.8
<i>Parakiefferiella</i>	09021011052	6.67	6.70		CG	1.4	1.4
<i>Parametriocnemus</i>	09021011053	16.33	16.41	5	CG	3.4	3.4
<i>Paratanytarsus</i>	09021011071	4.00	4.02	6	--	0.8	0.8
<i>Rheotanytarsus</i>	09021011072		9.38	6	CF		1.9
<i>Rheotanytarsus exiguus group</i>	09021011072127	9.33			CF	1.9	
<i>Tanytarsus</i>	09021011076	84.00	84.39	6	CF	17.5	17.5
<i>Pseudochironomus</i>	09021011078	0.33	0.33	5	CG	0.1	0.1
<i>Microtendipes</i>	09021011094		1.67	6	CF		0.3



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

**Station Number: S-513**

Waterbody: Penjajawoc Stream - Station 513

Town: Bangor

**Log Number: 2471**

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>Microtendipes pedellus group</i>	09021011094166	1.67			--	0.3	
<i>Paratendipes</i>	090210111100	0.33	0.33	8	CG	0.1	0.1
<i>Polypedilum</i>	090210111102		3.01	6	SH		0.6
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.1	
<i>Polypedilum halterale group</i>	09021011102193	2.67			--	0.6	
Empididae	09021016			6	--		
<i>Hemerodromia</i>	09021016057	6.33	6.33	3	PR	1.3	1.3
<i>Psephenus</i>	09021108058		12.33	4	SC		2.6
<i>Psephenus herricki</i>	09021108058028	12.33			--	2.6	
<i>Dubiraphia</i>	09021113064	23.00	23.00	6	--	4.8	4.8
<i>Macronychus</i>	09021113065		5.00	4	--		1.0
<i>Macronychus glabratus</i>	09021113065040	5.00			--	1.0	
<i>Optioservus</i>	09021113067	6.67	7.00	3	SC	1.4	1.5
<i>Optioservus fastiditus</i>	09021113067044	0.33			--	0.1	
<i>Stenelmis</i>	09021113070	17.00	33.33	5	SC	3.5	6.9
<i>Stenelmis crenata</i>	09021113070055	16.33			--	3.4	
<i>Amnicola</i>	10010104013		0.67		SC		0.1
<i>Amnicola limosus</i>	10010104013018	0.67			--	0.1	
<i>Stagnicola</i>	10010201025	1.67	1.67		--	0.3	0.3
<i>Pisidium</i>	10020201002	4.33	4.33		CF	0.9	0.9