



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

Station Information

Station Number: S-827	River Basin: Penobscot
Waterbody: Sebec River - Station 827	HUC8 Name: Piscataquis
Town: Milo	Latitude: 45 14 55.62 N
Directions: DOWNSTREAM OF MILL	Longitude: 68 59 11.81 W
	Stream Order: 3

Sample Information

Log Number: 2490	Type of Sample: ROCK BAG	Date Deployed: 7/20/2016
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/17/2016

Classification Attainment

Statutory Class: B	Final Determination: B	Date: 5/10/2017
Model Result with $P \geq 0.6$: B	Reason for Determination: Model	
Date Last Calculated: 5/9/2017	Comments: Class A (.33).	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.13	Class C	0.14
Class B	0.73	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.99	Class A	0.33
Class C or Non-Attainment	0.01	Class B or C or Non-Attainment	0.67

Model Variables

01 Total Mean Abundance	1785.33	18 Relative Abundance Ephemeroptera	0.12
02 Generic Richness	36.00	19 EPT Generic Richness	21.00
03 Plecoptera Mean Abundance	10.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	222.67	23 Relative Generic Richness- Plecoptera	0.06
05 Shannon-Wiener Generic Diversity	3.23	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	219.73
06 Hilsenhoff Biotic Index	4.08	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	88.95
07 Relative Abundance - Chironomidae	0.14	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	649.83		
11 <i>Cheumatopsyche</i> Abundance	210.24		
12 EPT Generic Richness/ Diptera Generic Richness	1.75		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	10.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	6.78		
17 Chironomini Abundance (Family Functional Group)	47.45		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	36.40
2	<i>Macrostemum</i>	19.04
3	<i>Cheumatopsyche</i>	11.78
4	<i>Rheotanytarsus</i>	5.01
5	<i>Maccaffertium</i>	4.56



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Log Number: 2490 Waterbody: Sebec River - Station 827 Date Retrieved: 8/17/2016

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 24.6 deg C
Dissolved Oxygen: 9.19 mg/l
Dissolved Oxygen Saturation: 111 %
Specific Conductance: 30.8 uS/cm
Velocity: 42.7 cm/s
pH: 7.34
Wetted Width: 30 m
Bankfull Width: 45 m
Depth: 64 cm

Waterbody Information - Retrieval

Temperature: 22.9 deg C
Dissolved Oxygen: 9.36 mg/l
Dissolved Oxygen Saturation: 110.3 %
Specific Conductance: 29.5 uS/cm
Velocity: 48.8 cm/s
pH: 7.22
Wetted Width: 31 m
Bankfull Width: 45 m
Depth: 68 cm

Water Chemistry - 8/17/2016

Nitrate+nitrite As N	0.01 mg/l	Total Phosphorus	6 ug/l
Total Kjeldahl Nitrogen	0.2 mg/l	Total Suspended Solids	0.8 mg/l
Dissolved Organic Carbon	3.4 mg/l	Dissolved Organic Carbon	3.4 mg/l
Total Dissolved Solids	25 mg/l	Orthophosphate As Phosphorus	1 ug/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Open	Rolling	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Regulated Flows	Below Dam	Bedrock	5 %
Urban Runoff	Below Town	Boulder	20 %
		Gravel	10 %
		Rubble/Cobble	65 %

Landcover Summary - 2004 Data

Total Area (ac)	223904	High Int. Dev. %	0.1	Water %	7.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	2.9	Tilled Agriculture %	0.3
		Low Int. Dev. %	1.6	Upland Woody %	87.8	Grassland %	0.2
		Development %	1.7	Natural %	90.7	Human Altered %	2.3
						Impervious %	0.5

Sample Comments



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-827

Waterbody: Sebec River - Station 827

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Subsample Factor: X4

Replicates: 3

Calculated: 5/9/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Perlidae	09020209	1.33			--	0.1	
<i>Acroneuria</i>	09020209042		7.62	0	PR		0.4
<i>Acroneuria abnormis</i>	09020209042121	1.33		0	PR	0.1	
<i>Acroneuria arenosa</i>	09020209042122	5.33			--	0.3	
<i>Paragnetina</i>	09020209049		3.05	1	PR		0.2
<i>Paragnetina media</i>	09020209049151	2.67			--	0.1	
<i>Baetis</i>	09020401001		21.33	4	CG		1.2
<i>Baetis flavistriga</i>	09020401001004	2.67			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	18.67			--	1.0	
<i>Acerpenna</i>	09020401007	12.00	14.67	5	CG	0.7	0.8
<i>Acerpenna pygmaea</i>	09020401007011	2.67			--	0.1	
<i>Dipheter</i>	09020401013		4.00		--		0.2
<i>Dipheter hageni</i>	09020401013001	4.00			--	0.2	
<i>Epeorus</i>	09020402009		1.33	0	SC		0.1
<i>Epeorus vitreus</i>	09020402009033	1.33			--	0.1	
<i>Leucrocuta</i>	09020402011	20.00	20.00	1	SC	1.1	1.1
<i>Maccaffertium</i>	09020402015	65.33	81.33	4	SC	3.7	4.6
<i>Maccaffertium modestum</i>	09020402015051	8.00			--	0.4	
<i>Maccaffertium terminatum</i>	09020402015054	1.33			--	0.1	
<i>Maccaffertium vicarium</i>	09020402015055	6.67			--	0.4	
<i>Isonychia</i>	09020404018	29.33	29.33	2	CF	1.6	1.6
<i>Ephemerella</i>	09020410035	6.67	6.67	1	CG	0.4	0.4
<i>Serratella</i>	09020410037		34.67	2	CG		1.9
<i>Serratella deficiens (Teloganopsis deficiens)</i>	09020410037121	34.67			--	1.9	
<i>Tricorythodes</i>	09020411038	9.33	9.33	4	CG	0.5	0.5
<i>Chimarra</i>	09020601003		17.33	2	CF		1.0
<i>Chimarra obscura</i>	09020601003003	16.00			--	0.9	
<i>Chimarra socia</i>	09020601003004	1.33			--	0.1	
<i>Neureclipsis</i>	09020603008	45.33	45.33	7	CF	2.5	2.5
<i>Nyctiophylax</i>	09020603009	1.33	1.33	5	PR	0.1	0.1
Hydropsychidae	09020604	28.00			--	1.6	
<i>Cheumatopsyche</i>	09020604015	205.33	210.24	5	CF	11.5	11.8
<i>Hydropsyche</i>	09020604016	122.67	649.83	4	CF	6.9	36.4
<i>Hydropsyche bronta</i>	09020604016029	4.00			--	0.2	
<i>Hydropsyche morosa</i>	09020604016030	148.00			--	8.3	
<i>Hydropsyche sparna</i>	09020604016032	2.67			--	0.1	
<i>Hydropsyche scalaris species group</i>	09020604016048	357.33			--	20.0	



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<i>Macrostemum</i>	09020604018	332.00	339.93	3	CF	18.6	19.0
<i>Hydroptila</i>	09020607026	8.00	8.00	6	P	0.4	0.4
<i>Lepidostoma</i>	09020611064	9.33	9.33	1	SH	0.5	0.5
<i>Oecetis</i>	09020618078	4.00	4.00	8	PR	0.2	0.2
<i>Corydalus</i>	09020701002		1.33	6	PR		0.1
<i>Corydalus cornutus</i>	09020701002002	1.33			--	0.1	
Chironomidae	09021011	4.00			--	0.2	
<i>Nilotanytus</i>	09021011012	1.33	1.36	6	PR	0.1	0.1
<i>Thienemannimyia</i>	09021011020		5.42	3	PR		0.3
<i>Thienemannimyia group</i>	09021011020041	5.33			--	0.3	
<i>Corynoneura</i>	09021011036	4.00	4.07	7	CG	0.2	0.2
<i>Cricotopus</i>	09021011037	2.67	9.49	7	SH	0.1	0.5
<i>Cricotopus bicinctus</i>	09021011037057	6.67			--	0.4	
<i>Nanocladius</i>	09021011049	5.33	5.42	3	CG	0.3	0.3
<i>Rheocricotopus</i>	09021011057	6.67	6.78	6	CG	0.4	0.4
<i>Tvetenia</i>	09021011065		71.86	5	CG		4.0
<i>Tvetenia vitracies</i>	09021011065113	70.67			--	4.0	
<i>Rheotanytarsus</i>	09021011072	8.00	89.48	6	CF	0.4	5.0
<i>Rheotanytarsus exiguus group</i>	09021011072127	66.67			CF	3.7	
<i>Rheotanytarsus pellucidus</i>	09021011072128	13.33			CF	0.7	
<i>Phaenopsectra</i>	09021011101	2.67	2.71	7	SC	0.1	0.2
<i>Polypedilum</i>	09021011102		44.74	6	SH		2.5
<i>Polypedilum flavum</i>	09021011102182	42.67			--	2.4	
<i>Polypedilum tritum</i>	09021011102191	1.33			--	0.1	
<i>Simulium</i>	09021012047	6.67	6.67	4	CF	0.4	0.4
<i>Simulium fibrinflatum</i>	09021012047059				--		
<i>Hemerodromia</i>	09021016057	2.67	2.67	3	PR	0.1	0.1
<i>Optioservus</i>	09021113067	1.33	1.33	3	SC	0.1	0.1
<i>Stenelmis</i>	09021113070	13.33	13.33	5	SC	0.7	0.7