



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

Station Information

Station Number: S-818	River Basin: Penobscot
Waterbody: West Seboeis Stream - Station 818	HUC8 Name: Piscataquis
Town: T04 R09 Nwp	Latitude: 45 31 22.23 N
Directions: ~46M DWNSTRM OF BRIDGE	Longitude: 68 52 50.03 W
	Stream Order: 3

Sample Information

Log Number: 2492	Type of Sample: ROCK BAG	Date Deployed: 7/20/2016
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/17/2016

Classification Attainment

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

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.72	Class A, B, or C	1.00
Class B	0.27	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	228.00	18 Relative Abundance Ephemeroptera	0.38
02 Generic Richness	42.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	9.33	21 Sum of Abundances: <i>Dicrotendipes,</i>	0.00
04 Ephemeroptera Mean Abundance	86.67	<i>Micropsectra, Parachironomus, Helobdella</i>	
05 Shannon-Wiener Generic Diversity	4.46	23 Relative Generic Richness- Plecoptera	0.05
06 Hilsenhoff Biotic Index	4.33	25 Sum of Abundances: <i>Cheumatopsyche,</i>	15.76
07 Relative Abundance - Chironomidae	0.20	<i>Cricotopus, Tanytarsus, Ablabesmyia</i>	
08 Relative Generic Richness Diptera	0.24	26 Sum of Abundances: <i>Acroneuria,</i>	29.67
09 <i>Hydropsyche</i> Abundance	23.67	<i>Maccaffertium, Stenonema</i>	
11 <i>Cheumatopsyche</i> Abundance	3.33	28 EP Generic Richness/14	0.93
12 EPT Generic Richness/ Diptera	2.20	30 Presence of Class A Indicator Taxa/7	0.71
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family	8.67		
Functional Group)			
16 Tanypodinae Mean Abundance	3.69		
(Family Functional Group)			
17 Chironomini Abundance (Family	7.72		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	10.38
2	<i>Maccaffertium</i>	9.21
3	<i>Promoresia</i>	8.19
4	<i>Rheotanytarsus</i>	8.10
5	<i>Acerpenna</i>	7.31



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 20.2 deg C
Dissolved Oxygen: 10.24 mg/l
Dissolved Oxygen Saturation: 114.5 %
Specific Conductance: 36 uS/cm
Velocity: 21.3 cm/s
pH: 7.15
Wetted Width: 6.1 m
Bankfull Width: 7.9 m
Depth: 31 cm

Waterbody Information - Retrieval

Temperature: 20 deg C
Dissolved Oxygen: 10.13 mg/l
Dissolved Oxygen Saturation: 113.4 %
Specific Conductance: 38.6 uS/cm
Velocity: 42.7 cm/s
pH: 9.98
Wetted Width: 7 m
Bankfull Width: 7.9 m
Depth: 43 cm

Water Chemistry - 8/17/2016

Nitrate+nitrite As N	0.03 mg/l	Total Phosphorus	16 ug/l
Total Kjeldahl Nitrogen	0.5 mg/l	Total Suspended Solids	4.7 mg/l
Dissolved Organic Carbon	8.9 mg/l	Dissolved Organic Carbon	8.9 mg/l
Total Dissolved Solids	40 mg/l	Orthophosphate As Phosphorus	1 ug/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood	Open	Rolling
Upland Conifer		
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Below Road Crossing	Boulder 65 %
		Gravel 5 %
		Rubble/Cobble 20 %
		Sand 10 %

Landcover Summary - 2004 Data

Total Area (ac)	12342	High Int. Dev. %	0.0	Water %	0.2	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	7.4	Tilled Agriculture %	0.0
		Low Int. Dev. %	1.9	Upland Woody %	89.9	Grassland %	0.5
		Development %	1.9	Natural %	97.4	Human Altered %	2.4
						Impervious %	0.3

Sample Comments

FISH PRESENT.



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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
<i>Pteronarcys</i>	09020205023	0.33	0.67	0	SH	0.1	0.3
<i>Pteronarcys biloba</i>	09020205023061	0.33			--	0.1	
<i>Acroneuria</i>	09020209042	4.00	8.67	0	PR	1.8	3.8
<i>Acroneuria abnormis</i>	09020209042121	0.67		0	PR	0.3	
<i>Acroneuria arenosa</i>	09020209042122	4.00			--	1.8	
<i>Boyeria</i>	09020301004		1.67	2	PR		0.7
<i>Boyeria grafiana</i>	09020301004011	0.33			--	0.1	
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.6	
<i>Baetis</i>	09020401001	0.33	9.33	4	CG	0.1	4.1
<i>Baetis flavistriga</i>	09020401001004	1.00			--	0.4	
<i>Baetis intercalaris</i>	09020401001008	7.33			--	3.2	
<i>Baetis pluto</i>	09020401001009	0.67			--	0.3	
<i>Acerpenna</i>	09020401007	4.33	16.67	5	CG	1.9	7.3
<i>Acerpenna macdunnoughi</i>	09020401007001	10.00			--	4.4	
<i>Acerpenna pygmaea</i>	09020401007011	2.33			--	1.0	
<i>Plauditus</i>	09020401012	1.67	1.67		CG	0.7	0.7
<i>Iswaeon</i>	09020401015		11.00		--		4.8
<i>Iswaeon anoka</i>	09020401015001	11.00			--	4.8	
<i>Leucrocuta</i>	09020402011	13.33	13.33	1	SC	5.8	5.8
<i>Stenacron</i>	09020402014		0.67	7	SC		0.3
<i>Stenacron interpunctatum</i>	09020402014045	0.67			--	0.3	
<i>Maccaffertium</i>	09020402015	10.00	21.00	4	SC	4.4	9.2
<i>Maccaffertium vicarium</i>	09020402015055	11.00			--	4.8	
Leptophlebiidae	09020406	0.33	0.33		--	0.1	0.1
<i>Eurylophella</i>	09020410036		0.67	3	CG		0.3
<i>Eurylophella funeralis</i>	09020410036115	0.67			SH	0.3	
<i>Serratella</i>	09020410037		0.33	2	CG		0.1
<i>Serratella serratoides</i>	09020410037124	0.33			--	0.1	
<i>Tricorythodes</i>	09020411038	11.67	11.67	4	CG	5.1	5.1
<i>Neureclipsis</i>	09020603008	5.00	5.00	7	CF	2.2	2.2
<i>Cheumatopsyche</i>	09020604015	3.33	3.33	5	CF	1.5	1.5
<i>Hydropsyche</i>	09020604016	8.33	23.67	4	CF	3.7	10.4
<i>Hydropsyche alhedra</i>	09020604016028	0.33			--	0.1	
<i>Hydropsyche bronta</i>	09020604016029	0.67			--	0.3	
<i>Hydropsyche morosa</i>	09020604016030	1.67			--	0.7	
<i>Hydropsyche sparna</i>	09020604016032	10.33			--	4.5	
<i>Hydropsyche betteni</i>	09020604016037	2.33			--	1.0	



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		Actual	Adjusted			Actual	Adjusted
<i>Glossosoma</i>	09020606020	0.33	0.33	0	SC	0.1	0.1
<i>Hydroptila</i>	09020607026	6.33	6.33	6	P	2.8	2.8
<i>Brachycentrus</i>	09020609043		4.00	0	CF		1.8
<i>Brachycentrus appalachia</i>	09020609043096	4.00			--	1.8	
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.1	0.1
<i>Helicopsyche</i>	09020616070	3.67	3.67	3	SC	1.6	1.6
<i>Oecetis</i>	09020618078		4.67	8	PR		2.0
<i>Oecetis persimilis</i>	09020618078157	4.67			--	2.0	
<i>Nigronia</i>	09020701003		0.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.1	
Chironomidae	09021011	0.33			--	0.1	
<i>Thienemannimyia</i>	09021011020		3.69	3	PR		1.6
<i>Thienemannimyia group</i>	09021011020041	3.67			--	1.6	
<i>Pagastia</i>	09021011025	0.33	0.34	1	--	0.1	0.1
<i>Cricotopus</i>	09021011037	10.67	11.42	7	SH	4.7	5.0
<i>Cricotopus tremulus</i>	09021011037068	0.67			--	0.3	
<i>Tvetenia</i>	09021011065		2.02	5	CG		0.9
<i>Tvetenia vitracies</i>	09021011065113	2.00			--	0.9	
<i>Paratanytarsus</i>	09021011071			6	--		
<i>Rheotanytarsus</i>	09021011072		18.47	6	CF		8.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	12.67			CF	5.6	
<i>Rheotanytarsus pellucidus</i>	09021011072128	5.67			CF	2.5	
<i>Tanytarsus</i>	09021011076	1.00	1.01	6	CF	0.4	0.4
<i>Microtendipes</i>	09021011094		1.01	6	CF		0.4
<i>Microtendipes rydalensis group</i>	09021011094168	1.00			--	0.4	
<i>Phaenopsectra</i>	09021011101	0.33	0.34	7	SC	0.1	0.1
<i>Polypedilum</i>	09021011102		6.38	6	SH		2.8
<i>Polypedilum aviceps</i>	09021011102181	6.33			--	2.8	
<i>Simulium venustum/verecundum complex</i>	09021012047072				CF		
<i>Hemerodromia</i>	09021016057	1.00	1.00	3	PR	0.4	0.4
<i>Ectopria</i>	09021109059		1.00	5	SC		0.4
<i>Ectopria nervosa</i>	09021109059029	1.00			--	0.4	
<i>Ancyronyx</i>	09021113063		0.33	6	--		0.1
<i>Ancyronyx variegatus</i>	09021113063034	0.33			CG	0.1	
<i>Dubiraphia</i>	09021113064	1.33	1.33	6	--	0.6	0.6
<i>Macronychus</i>	09021113065		0.33	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.1	



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		Actual	Adjusted			Actual	Adjusted
<i>Optioservus</i>	09021113067	0.33	0.33	3	SC	0.1	0.1
<i>Promoresia</i>	09021113069		18.67		--		8.2
<i>Promoresia elegans</i>	09021113069051	0.33			--	0.1	
<i>Promoresia tardella</i>	09021113069052	18.33			--	8.0	
<i>Stenelmis</i>	09021113070	1.00	10.67	5	SC	0.4	4.7
<i>Stenelmis crenata</i>	09021113070055	9.67			--	4.2	
<i>Sperchon</i>	09030107001	0.33	0.33		--	0.1	0.1