

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

Station Information

Station Number: S728	DEP Drainage: St. John
Waterbody: Big Brook (Madawaska)	HUC Code: 01010003
Town: MADAWASKA	HUC Name: Fish
Directions: 22m downstream of Lavertu Road	Latitude: Deg Min Sec
	Longitude: Deg Min Sec
	Stream Order:

Sample Information

Log Number: 1389	Type of Sample: Riffle Bags	Date Deployed: 21-JUL-04
Subsample Factor: X1	Replicates: 3	Date Retrieved: 18-AUG-04

Classification Attainment

Statutory Class: B	Final Determination: A	
Model Result with P > .6: A	Reason for Determination: Model	
Date Last Calculated:		

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.84	Class A, B, or C	1.00
Class B	0.16	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	1.00
Class A or B	1.00	Class B or C or Non-Attainment	0.00
Class C or Non-Attainment	0.00		

Model Variables

01 Total Abundance of Individuals	288.00	18 Relative Abundance - Ephemeroptera	0.19
02 Generic Richness	46.00	19 EPT Generic Richness	23.00
03 Plecoptera Abundance	18.33	21 Sum of Abundances: <i>Dicrotendipes</i> ,	2.00
04 Ephemeroptera Abundance	55.00	<i>Micropsectra, Parachironomus, Helobdella</i>	
05 Shannon - Wiener Diversity	3.64	23 Relative Generic Richness- Plecoptera	0.09
06 Hilsenhoff Biotic Index	3.59	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	12.87
07 Relative Abundance - Chironomidae	0.12	<i>Cricotopus, Tanytarsus, Ablabesmyia</i>	
08 Relative Generic Richness - Diptera	0.35	26 Sum of Abundances: <i>Acroneuria, Stenonema</i>	1.48
09 <i>Hydropsyche</i> Abundance	86.13	28 EP Generic Richness/14	1.07
11 <i>Cheumatopsyche</i> Abundance	11.87	30 Presence of Class A Indicator Taxa/7	0.43
12 EPT Generic Richness/ Diptera Generic Richness	1.44		

Five Most Dominant Taxa

	Taxa Rank	Taxa Name	Percent
13 Relative Abundance - Oligochaeta	1	Hydropsyche	29.91
15 Perlidae Abundance (Family Functional Group)	2	Baetis	14.13
16 Tanypodinae Abundance (Family Functional Group)	3	Promoresia	9.26
17 Chironomini Abundance (Family Functional Group)	4	Tvetenia	7.18
	5	Dolophilodes	6.25

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Sample Collection and Processing Information

Sampling Organization:
Taxonomist: Michael Winnell

Waterbody Information

Water Temperature: 19.7 °C	Specific Conductance 133.6 uS/cm	Channel Width: 7.0 m
Velocity: 74 cm/s	Dissolved Oxygen: 8.1 ppm	Channel Depth: 25.0 cm

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Stressor</u>	<u>Location</u>
Cultivated	Partly Open		Below Road Crossing

Substrate

Boulder	Rubble	Gravel	Sand
60%	25%	10%	5%

Comments about the Station or Sample

8/18/04 Data:
Flow: 74.1cm/s; Depth: 32cm; Temp: 16.1C; SPC: 84.4uS/cm; DO: 8.5mg/L; pH:

Comments about the Final Determination

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Replicates: 3

Calculated:

BioME Aquatic Life Taxonomic Inventory Report

Taxa	Code	Count (Average of Baskets)		Biotic Index Value	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
		<i>Cambarus</i>	09010301007			0.33	0.33
<i>Leuctra</i>	09020204020	0.33	0.33	0	SH	0.1	0.1
<i>Perlodidae</i>	09020207	0.33	0.33		--	0.1	0.1
<i>Perlidae</i>	09020209	1.33	0.00		--	0.5	0.0
<i>Acroneuria</i>	09020209042	0.00	0.72	0	PR	0.0	0.3
<i>Acroneuria carolinensis</i>	09020209042123	0.67	0.00		--	0.2	0.0
<i>Agnetina</i>	09020209050	0.00	16.95	2	PR	0.0	5.9
<i>Agnetina capitata</i>	09020209050152	15.67	0.00	2	PR	5.4	0.0
<i>Baetidae</i>	09020401	2.33	0.00		--	0.8	0.0
<i>Baetis</i>	09020401001	11.67	40.69	4	CG	4.1	14.1
<i>Baetis flavistriga</i>	09020401001004	2.33	0.00		--	0.8	0.0
<i>Baetis intercalaris</i>	09020401001008	1.67	0.00		--	0.6	0.0
<i>Baetis pluto</i>	09020401001009	23.00	0.00		--	8.0	0.0
<i>Acentrella</i>	09020401008	0.00	1.05	3	CG	0.0	0.4
<i>Acentrella turbida</i>	09020401008021	1.00	0.00		--	0.3	0.0
<i>Dipheter</i>	09020401013	0.00	5.26		--	0.0	1.8
<i>Dipheter hageni</i>	09020401013001	5.00	0.00		--	1.7	0.0
<i>Heptageniidae</i>	09020402	0.33	0.00		--	0.1	0.0
<i>Epeorus</i>	09020402009	0.33	0.38	0	CG	0.1	0.1
<i>Heptagenia</i>	09020402010	0.00	0.38	2	SC	0.0	0.1
<i>Heptagenia diabasia</i>	09020402010035	0.33	0.00		--	0.1	0.0
<i>Leucrocuta</i>	09020402011	1.00	1.14	1	SC	0.3	0.4
<i>Stenonema</i>	09020402015	0.67	0.76	4	SC	0.2	0.3
<i>Leptophlebiidae</i>	09020406	1.00	1.00		--	0.3	0.3
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	0.1	0.1
<i>Ephemerellidae</i>	09020410	2.67	0.00		--	0.9	0.0
<i>Ephemerella</i>	09020410035	0.33	1.00	1	CG	0.1	0.3
<i>Serratella</i>	09020410037	0.00	3.00	2	CG	0.0	1.0
<i>Serratella serratoides</i>	09020410037124	1.00	0.00		--	0.3	0.0
<i>Dolophilodes</i>	09020601001	18.00	18.00	0	CF	6.3	6.3
<i>Psychomyia</i>	09020602005	0.00	0.33	2	CG	0.0	0.1
<i>Psychomyia flavida</i>	09020602005006	0.33	0.00		--	0.1	0.0
<i>Hydropsychidae</i>	09020604	1.67	0.00		--	0.6	0.0
<i>Cheumatopsyche</i>	09020604015	11.67	11.87	5	CF	4.1	4.1
<i>Hydropsyche</i>	09020604016	24.33	86.13	4	CF	8.4	29.9
<i>Hydropsyche morosa</i>	09020604016030	0.33	0.00		--	0.1	0.0
<i>Hydropsyche slossonae</i>	09020604016031	27.00	0.00		--	9.4	0.0

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		Actual	Adjusted			Actual	Adjusted
		<i>Hydropsyche sparna</i>	09020604016032			33.00	0.00
<i>Rhyacophila</i>	09020605019	0.33	7.33	2	PR	0.1	2.5
<i>Rhyacophila fuscula</i>	09020605019060	7.00	0.00		PR	2.4	0.0
<i>Glossosoma</i>	09020606020	0.33	0.33	0	SC	0.1	0.1
<i>Apatania</i>	09020610061	0.33	0.33		SC	0.1	0.1
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.2	0.2
<i>Dicranota</i>	09021001005	0.33	0.33	3	PR	0.1	0.1
<i>Rheopelopia</i>	09021011017	0.00	1.00		PR	0.0	0.3
<i>Rheopelopia acra-grp.</i>	09021011017036	1.00	0.00		--	0.3	0.0
<i>Pagastia</i>	09021011025	0.00	0.33	1	--	0.0	0.1
<i>Pagastia orthogonia</i>	09021011025001	0.33	0.00		--	0.1	0.0
<i>Cricotopus</i>	09021011037	0.33	1.00	7	SH	0.1	0.3
<i>Cricotopus bicinctus</i>	09021011037057	0.67	0.00		--	0.2	0.0
<i>Eukiefferiella</i>	09021011041	0.00	1.33	8	CG	0.0	0.5
<i>Eukiefferiella brehmi-grp.</i>	09021011041073	0.33	0.00		--	0.1	0.0
<i>Eukiefferiella claripennis-grp.</i>	09021011041075	1.00	0.00		--	0.3	0.0
<i>Heterotrissocladius</i>	09021011044	0.00	0.33	0	CG	0.0	0.1
<i>Heterotrissocladius marcidus</i>	09021011044083	0.33	0.00		--	0.1	0.0
<i>Parakiefferiella</i>	09021011052	0.67	0.67		CG	0.2	0.2
<i>Parametriocnemus</i>	09021011053	2.67	2.67	5	CG	0.9	0.9
<i>Thienemanniella</i>	09021011062	0.67	0.67	6	CG	0.2	0.2
<i>Tvetenia</i>	09021011065	0.00	20.67	5	CG	0.0	7.2
<i>Tvetenia paucunca</i>	09021011065114	20.67	0.00		--	7.2	0.0
<i>Micropsectra</i>	09021011070	2.00	2.00	7	CG	0.7	0.7
<i>Rheotanytarsus</i>	09021011072	0.33	0.33	6	CF	0.1	0.1
<i>Polypedilum</i>	09021011102	0.00	4.33	6	SH	0.0	1.5
<i>Polypedilum aviceps</i>	09021011102181	4.33	0.00		--	1.5	0.0
<i>Simulium</i>	09021012047	0.67	7.33	4	CF	0.2	2.5
<i>Simulium tuberosum</i>	09021012047067	6.67	0.00		--	2.3	0.0
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Chelifera</i>	09021016060	0.33	0.33		--	0.1	0.1
<i>Psephenus</i>	09021108058	0.00	1.67	4	SC	0.0	0.6
<i>Psephenus herricki</i>	09021108058028	1.67	0.00		--	0.6	0.0
<i>Dubiraphia</i>	09021113064	0.67	0.67	6	CG	0.2	0.2
<i>Optioservus</i>	09021113067	10.67	16.00	3	SC	3.7	5.6
<i>Optioservus fastiditus</i>	09021113067044	4.00	0.00		--	1.4	0.0
<i>Optioservus ovalis</i>	09021113067046	1.00	0.00		--	0.3	0.0

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		<i>Optioservus trivittatus</i>	09021113067048			0.33	0.00
<i>Promoresia</i>	09021113069	0.00	26.67		--	0.0	9.3
<i>Promoresia elegans</i>	09021113069051	1.67	0.00		--	0.6	0.0
<i>Promoresia tardella</i>	09021113069052	25.00	0.00		--	8.7	0.0
<i>Stenelmis</i>	09021113070	0.00	0.33	5	SC	0.0	0.1
<i>Stenelmis crenata</i>	09021113070055	0.33	0.00		--	0.1	0.0
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.1	0.1