



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

Station Information

Station Number: S-869
Waterbody: Burnham Brook - Station 869
Town: Big Moose Twp
Directions: 45 METERS BELOW BRIDGE CROSSING

DEP Drainage: Kennebec
HUC8: 01030001
HUC8 Name: Upper Kennebec
Latitude: 45 32 36.59 N
Longitude: 69 45 19.38 W
Stream Order: 1

Sample Information

Log Number: 1730
Subsample Factor: X4

Type of Sample: ROCK BAG
Replicates: 3

Date Deployed: 7/17/2008
Date Retrieved: 8/15/2008

Classification Attainment

Statutory Class: A
Model Result with P>.6: B
Date Last Calculated: 3/23/2009

Final Determination: B
Reason for Determination: Model
Comments: 32% probability Class A.

Date: 3/24/2009

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.32	Class C	0.05	Class A, B, or C	1.00
Class B	0.62	NA	0.00	Non-Attainment	0.00

<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.98	Class A	0.32
Class C or Non-Attainment	0.02	Class B or C or Non-Attainment	0.68

Model Variables

01 Total Mean Abundance	394.67	18 Relative Abundance Ephemeroptera	0.20
02 Generic Richness	40.00	19 EPT Generic Richness	16.00
03 Plecoptera Mean Abundance	12.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	6.91
04 Ephemeroptera Mean Abundance	78.67	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.92	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	42.62
06 Hilsenhoff Biotic Index	5.05	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	20.00
07 Relative Abundance - Chironomidae	0.47	28 EP Generic Richness/14	0.57
08 Relative Generic Richness Diptera	0.43	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	49.33		
11 <i>Cheumatopsyche</i> Abundance	6.67		
12 EPT Generic Richness/ Diptera Generic Richness	0.94		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	10.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	6.91		
17 Chironomini Abundance (Family Functional Group)	9.68		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	30.83
2	<i>Hydropsyche</i>	12.50
3	<i>Acerpenna</i>	8.11
4	<i>Leptophlebiidae</i>	6.76
5	<i>Tanytarsus</i>	4.90



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23.8 deg C
Dissolved Oxygen: 7.9 mg/l
Specific Conductance: 64 uS/cm
Velocity: 15 cm/s
pH: 7.36
Wetted Width: 6.65 m
Bankfull Width: 7.65 m
Depth: 35 cm

Waterbody Information - Retrieval

Temperature: 19.1 deg C
Dissolved Oxygen: 9.1 mg/l
Specific Conductance: 55 uS/cm
Velocity: 46 cm/s
pH: 6.96
Wetted Width: 7.65 m
Bankfull Width: 7.65 m
Depth: 48 cm

Water Chemistry - Retrieval

Summary of Habitat Characteristics

Landuse Name

Swamp Conifer

Swamp Hardwood

Canopy Cover

Canopy Open

Terrain

Rolling Terrain

Stressor

Location

Below Road Crossing

Pristine Landscape

Substrate

Boulder 10 %

Gravel 35 %

Rubble/Cobble 45 %

Sand 10 %

Landcover Summary - 2004 Data

Sample Comments



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Replicates: 3

Calculated: 3/23/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Leuctra</i>	09020204020		1.33	0	SH		0.3
<i>Leuctra ferruginea</i>	09020204020050	1.33			--	0.3	
<i>Acroneuria</i>	09020209042		10.67	0	PR		2.7
<i>Acroneuria lycorias</i>	09020209042125	10.67			--	2.7	
<i>Boyeria</i>	09020301004		4.00	2	PR		1.0
<i>Boyeria grafiana</i>	09020301004011	4.00			--	1.0	
<i>Cordulegaster</i>	09020303019	1.33	1.33	3	PR	0.3	0.3
Calopterygidae	09020307	1.33	1.33		--	0.3	0.3
<i>Calopteryx</i>	09020307043		1.33	5	PR		0.3
<i>Calopteryx maculata</i>	09020307043088	1.33			--	0.3	
<i>Baetis</i>	09020401001	1.33	5.33	4	CG	0.3	1.4
<i>Baetis flavistriga</i>	09020401001004	2.67			--	0.7	
<i>Baetis pluto</i>	09020401001009	1.33			--	0.3	
<i>Acerpenna</i>	09020401007	18.67	32.00	5	CG	4.7	8.1
<i>Acerpenna macdunnoughi</i>	09020401007001	13.33			--	3.4	
<i>Maccaffertium</i>	09020402015	5.33	9.33	4	SC	1.4	2.4
<i>Maccaffertium ithaca</i>	09020402015048	1.33			--	0.3	
<i>Maccaffertium luteum</i>	09020402015049	2.67			--	0.7	
Leptophlebiidae	09020406	26.67	26.67		--	6.8	6.8
<i>Eurylophella</i>	09020410036	2.67	2.67	3	CG	0.7	0.7
<i>Caenis</i>	09020412040	2.67	2.67	7	CG	0.7	0.7
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.3	0.3
<i>Cheumatopsyche</i>	09020604015	6.67	6.67	5	CF	1.7	1.7
<i>Hydropsyche</i>	09020604016	37.33	49.33	4	CF	9.5	12.5
<i>Hydropsyche depravata-complex</i>	09020604016041	12.00			CF	3.0	
<i>Rhyacophila</i>	09020605019	2.67	2.67	2	PR	0.7	0.7
<i>Hydroptila</i>	09020607026	12.00	12.00	6	P	3.0	3.0
<i>Pycnopsyche</i>	09020610049			4	SH		
<i>Psilotreta</i>	09020614068	2.67	2.67	0	SC	0.7	0.7
Leptoceridae	09020618	1.33	1.33		--	0.3	0.3
<i>Mystacides</i>	09020618075		12.00	4	CG		3.0
<i>Mystacides sepulchralis</i>	09020618075147	12.00			--	3.0	
Chironomidae	09021011	6.67			--	1.7	
<i>Ablabesmyia</i>	09021011001		1.38	8	PR		0.4
<i>Ablabesmyia mallochii</i>	09021011001004	1.33			--	0.3	
<i>Conchapelopia</i>	09021011004	1.33	1.38	6	PR	0.3	0.4
<i>Nilotanyus</i>	09021011012		1.38	6	PR		0.4
<i>Nilotanyus fimbriatus</i>	09021011012027	1.33			--	0.3	



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		Actual	Adjusted			Actual	Adjusted
<i>Trissopelopia</i>	09021011021		2.77		PR		0.7
<i>Trissopelopia ogemawi</i>	09021011021042	2.67			--	0.7	
<i>Pagastia</i>	09021011025		1.38	1	--		0.4
<i>Pagastia orthogonia</i>	09021011025001	1.33			--	0.3	
<i>Cricotopus</i>	09021011037		15.21	7	SH		3.9
<i>Cricotopus bicinctus</i>	09021011037057	13.33			--	3.4	
<i>Cricotopus fugax</i>	09021011037062	1.33			--	0.3	
<i>Nanocladius</i>	09021011049	1.33	1.38	3	CG	0.3	0.4
<i>Parametriocnemus</i>	09021011053	1.33	1.38	5	CG	0.3	0.4
<i>Micropsectra</i>	09021011070	6.67	6.91	7	CG	1.7	1.8
<i>Rheotanytarsus</i>	09021011072	117.33	121.68	6	CF	29.7	30.8
<i>Stempellinella</i>	09021011074		2.77	2	--		0.7
<i>Stempellinella sp. a epler</i>	09021011074002	2.67			--	0.7	
<i>Tanytarsus</i>	09021011076	18.67	19.36	6	CF	4.7	4.9
<i>Microtendipes</i>	09021011094		6.91	6	CF		1.8
<i>Microtendipes pedellus-grp.</i>	09021011094166	4.00			--	1.0	
<i>Microtendipes rydalensis-grp.</i>	09021011094168	2.67			--	0.7	
<i>Polypedilum</i>	09021011102		2.77	6	SH		0.7
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.3	
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.3	
<i>Simulium</i>	09021012047	1.33	1.33	4	CF	0.3	0.3
<i>Simulium tuberosum</i>	09021012047067				--		
<i>Simulium venustum/verecundum</i> complex	09021012047072				CF		
<i>Hemerodromia</i>	09021016057	5.33	5.33	3	PR	1.4	1.4
<i>Neoplasta</i>	09021016064	2.67	2.67		PR	0.7	0.7
<i>Dubiraphia</i>	09021113064	6.67	6.67	6	CG	1.7	1.7
<i>Macronychus</i>	09021113065		4.00	4	--		1.0
<i>Macronychus glabratus</i>	09021113065040	4.00			--	1.0	
<i>Promoresia</i>	09021113069		1.33		--		0.3
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.3	