



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: 2132
Subsample Factor: X1

Type of Sample: ROCK BAG
Replicates: 3

Date Deployed: 7/25/2012
Date Retrieved: 8/23/2012

Classification Attainment

Statutory Class: A
Model Result with P>.6: A
Date Last Calculated: 1/18/2013

Final Determination: A
Reason for Determination: Model
Comments:

Date: 1/22/2013

Model Probabilities

First Stage Model				C or Better Model	
Class A	0.64	Class C	0.01	Class A, B, or C	1.00
Class B	0.35	NA	0.00	Non-Attainment	0.00

B or Better Model		A Model	
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	369.00	18 Relative Abundance Ephemeroptera	0.28
02 Generic Richness	63.00	19 EPT Generic Richness	29.00
03 Plecoptera Mean Abundance	11.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	11.84
04 Ephemeroptera Mean Abundance	102.67	23 Relative Generic Richness- Plecoptera	0.08
05 Shannon-Wiener Generic Diversity	4.54	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	37.70
06 Hilsenhoff Biotic Index	5.14	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	10.67
07 Relative Abundance - Chironomidae	0.51	28 EP Generic Richness/14	1.29
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	16.20		
11 <i>Cheumatopsyche</i> Abundance	1.80		
12 EPT Generic Richness/ Diptera Generic Richness	1.26		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	7.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	4.07		
17 Chironomini Abundance (Family Functional Group)	45.90		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	Leptophlebiidae	16.44
2	<i>Rheotanytarsus</i>	14.55
3	<i>Microtendipes</i>	10.13
4	<i>Tanytarsus</i>	7.72
5	<i>Parametriocnemus</i>	5.12



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

Station Number: S-869	Town: Big Moose Twp	Date Deployed: 7/25/2012
Log Number: 2132	Waterbody: Burnham Brook - Station 869	Date Retrieved: 8/23/2012

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	23.8 deg C
Dissolved Oxygen:	7.7 mg/l
Specific Conductance:	115 uS/cm
Velocity:	29 cm/s
pH:	7.56
Wetted Width:	4.7 m
Bankfull Width:	4.7 m
Depth:	27 cm

Waterbody Information - Retrieval

Temperature:	21 deg C
Dissolved Oxygen:	7.8 mg/l
Specific Conductance:	115 uS/cm
Velocity:	42.5 cm/s
pH:	6.37
Wetted Width:	4.7 m
Bankfull Width:	4.7 m
Depth:	35 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Swamp Conifer
Swamp Hardwood

Canopy Cover

Open

Terrain

Rolling

Potential Stressor

Lake Outlet

Location

Below Road Crossing
Lake Outlet
Minimally Disturbed

Substrate

Boulder	10 %
Gravel	35 %
Rubble/Cobble	45 %
Sand	10 %

Landcover Summary - 2004 Data

Total Area (ac)	5515	High Int. Dev. %	0.0	Water %	7.6	Non-vegetated %	0.3
		Med Int. Dev. %	0.0	Wetland %	6.5	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.6	Upland Woody %	85.2	Grassland %	0.0
		Development %	0.6	Natural %	91.7	Human Altered %	0.7
						Impervious %	0.4

Sample Comments

7/25/12: FISH AND CRAYFISH OBSERVED.



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

Station Number: S-869

Waterbody: Burnham Brook - Station 869

Town: Big Moose Twp

Log Number: 2132

Subsample Factor: X1

Replicates: 3

Calculated: 1/18/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	1.00	1.00		PR	0.3	0.3
Plecoptera	090202	0.33	0.33		--	0.1	0.1
<i>Leuctra</i>	09020204020	1.33	1.33	0	SH	0.4	0.4
Perlodidae	09020207	1.33	1.33		--	0.4	0.4
<i>Isoperla</i>	09020207026	0.33	0.33	2	PR	0.1	0.1
<i>Sweltsa</i>	09020208040	0.33	0.33		PR	0.1	0.1
<i>Acroneuria</i>	09020209042	2.33	7.33	0	PR	0.6	2.0
<i>Acroneuria lyctorias</i>	09020209042125	5.00			--	1.4	
<i>Boyeria</i>	09020301004		2.33	2	PR		0.6
<i>Boyeria vinosa</i>	09020301004012	2.33			--	0.6	
Gomphidae	09020302	1.33			--	0.4	
<i>Hagenius</i>	09020302008		1.56	1	PR		0.4
<i>Hagenius brevistylus</i>	09020302008015	0.67			PR	0.2	
<i>Gomphus</i>	09020302012	0.33	0.78	5	PR	0.1	0.2
Calopterygidae	09020307	2.67	2.67		--	0.7	0.7
<i>Calopteryx</i>	09020307043	1.33	2.67	5	PR	0.4	0.7
<i>Calopteryx maculata</i>	09020307043088	1.33			--	0.4	
<i>Baetis</i>	09020401001	0.67	3.33	4	CG	0.2	0.9
<i>Baetis flavistriga</i>	09020401001004	2.33			--	0.6	
<i>Baetis pluto</i>	09020401001009	0.33			--	0.1	
<i>Acerpenna</i>	09020401007	2.33	8.00	5	CG	0.6	2.2
<i>Acerpenna macdunnoughi</i>	09020401007001	5.67			--	1.5	
<i>Labiobaetis</i>	09020401009		0.33		--		0.1
<i>Labiobaetis frondalis</i>	09020401009005	0.33			--	0.1	
<i>Procloeon</i>	09020401010	1.33	1.33		CG	0.4	0.4
<i>Diphetor</i>	09020401013		0.33		--		0.1
<i>Diphetor hageni</i>	09020401013001	0.33			--	0.1	
<i>Maccaffertium</i>	09020402015	1.33	3.33	4	SC	0.4	0.9
<i>Maccaffertium luteum</i>	09020402015049	2.00			--	0.5	
Leptophlebiidae	09020406	60.67	60.67		--	16.4	16.4
<i>Habrophlebia</i>	09020406023		7.00		--		1.9
<i>Habrophlebia vibrans</i>	09020406023072	7.00			--	1.9	
<i>Ephemerella</i>	09020410035	5.00	5.00	1	CG	1.4	1.4
<i>Eurylophella</i>	09020410036	7.67	7.67	3	CG	2.1	2.1
<i>Serratella</i>	09020410037		2.00	2	CG		0.5
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	2.00			--	0.5	
<i>Tricorythodes</i>	09020411038	0.33	0.33	4	CG	0.1	0.1
<i>Caenis</i>	09020412040	1.67	3.33	7	CG	0.5	0.9



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

Station Number: S-869

Waterbody: Burnham Brook - Station 869

Town: Big Moose Twp

Log Number: 2132

Subsample Factor: X1

Replicates: 3

Calculated: 1/18/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Caenis tardella</i>	09020412040137	1.67			--	0.5	
<i>Chimarra</i>	09020601003	5.33	5.33	2	CF	1.4	1.4
<i>Polycentropus</i>	09020603010	1.00	1.00	6	PR	0.3	0.3
Hydropsychidae	09020604	1.33			--	0.4	
<i>Cheumatopsyche</i>	09020604015	1.67	1.80	5	CF	0.5	0.5
<i>Hydropsyche</i>	09020604016	6.33	16.20	4	CF	1.7	4.4
<i>Hydropsyche depravata complex</i>	09020604016041	8.67			CF	2.3	
<i>Glossosoma</i>	09020606020		0.33	0	SC		0.1
<i>Glossosoma lividum</i>	09020606020067	0.33			--	0.1	
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.1	0.1
<i>Psilotreta</i>	09020614068		2.00	0	SC		0.5
<i>Psilotreta frontalis</i>	09020614068134	2.00			--	0.5	
<i>Molanna</i>	09020615069		0.33	6	SC		0.1
<i>Molanna blenda</i>	09020615069133	0.33			--	0.1	
<i>Ceraclea</i>	09020618072	0.67	0.67	3	CG	0.2	0.2
<i>Mystacides</i>	09020618075		3.33	4	CG		0.9
<i>Mystacides sepulchralis</i>	09020618075147	3.33			--	0.9	
<i>Oecetis</i>	09020618078	0.33	11.00	8	PR	0.1	3.0
<i>Oecetis inconspicua complex</i>	09020618078156	0.67			--	0.2	
<i>Oecetis persimilis</i>	09020618078157	10.00			--	2.7	
<i>Nigronia</i>	09020701003		0.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.1	
<i>Gonomyia</i>	09021001019	0.33	0.33		--	0.1	0.1
<i>Bezzia/palpomyia</i>	09021010043	1.00	1.00	6	PR	0.3	0.3
Chironomidae	09021011	18.67			--	5.1	
<i>Ablabesmyia</i>	09021011001		1.85	8	PR		0.5
<i>Ablabesmyia mallochi</i>	09021011001004	1.67			--	0.5	
<i>Nilotanyus</i>	09021011012		1.48	6	PR		0.4
<i>Nilotanyus fimbriatus</i>	09021011012027	1.33			--	0.4	
<i>Trissopelopia</i>	09021011021		0.74		PR		0.2
<i>Trissopelopia ogemawi</i>	09021011021042	0.67			--	0.2	
<i>Potthastia</i>	09021011026		0.37	2	CG		0.1
<i>Potthastia longimana</i>	09021011026046	0.33			--	0.1	
<i>Cricotopus</i>	09021011037		5.55	7	SH		1.5
<i>Cricotopus bicinctus</i>	09021011037057	5.00			--	1.4	
<i>Nanocladius</i>	09021011049		1.48	3	CG		0.4
<i>Nanocladius spinipennis</i>	09021011049090	0.67			--	0.2	
<i>Nanocladius branchiculus</i>	09021011049091	0.67			--	0.2	



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

Station Number: S-869

Waterbody: Burnham Brook - Station 869

Town: Big Moose Twp

Log Number: 2132

Subsample Factor: X1

Replicates: 3

Calculated: 1/18/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Parametriocnemus</i>	09021011053	17.00	18.88	5	CG	4.6	5.1
<i>Rheocricotopus</i>	09021011057		9.99	6	CG		2.7
<i>Rheocricotopus robacki</i>	09021011057105	9.00			--	2.4	
<i>Thienemanniella</i>	09021011062		0.37	6	CG		0.1
<i>Thienemanniella xena</i>	09021011062110	0.33			--	0.1	
<i>Tvetenia</i>	09021011065		0.37	5	CG		0.1
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.1	
<i>Micropsectra</i>	09021011070	10.67	11.84	7	CG	2.9	3.2
<i>Rheotanytarsus</i>	09021011072	48.33	53.67	6	CF	13.1	14.5
<i>Stempellinella</i>	09021011074		6.66	2	--		1.8
<i>Stempellinella fimbriata</i>	09021011074002	6.00			--	1.6	
<i>Tanytarsus</i>	09021011076	25.67	28.50	6	CF	7.0	7.7
<i>Microtendipes</i>	09021011094		37.39	6	CF		10.1
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.1	
<i>Microtendipes rydalensis group</i>	09021011094168	33.33			--	9.0	
<i>Phaenopsectra</i>	09021011101		6.29	7	SC		1.7
<i>Phaenopsectra obediens</i>	09021011101182	5.67			SC	1.5	
<i>Polypedilum</i>	09021011102		2.22	6	SH		0.6
<i>Polypedilum aviceps</i>	09021011102181	1.67			--	0.5	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.1	
<i>Simulium</i>	09021012047		2.00	4	CF		0.5
<i>Simulium venustum/verecundum complex</i>	09021012047072	2.00			CF	0.5	
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Hemerodromia</i>	09021016057	2.67	2.67	3	PR	0.7	0.7
<i>Roederiodes</i>	09021016058	0.33	0.33	3	PR	0.1	0.1
<i>Dubiraphia</i>	09021113064		3.67	6	--		1.0
<i>Dubiraphia minima</i>	09021113064036	3.67			--	1.0	
<i>Macronychus</i>	09021113065		1.67	4	--		0.5
<i>Macronychus glabratus</i>	09021113065040	1.67			--	0.5	
<i>Stenelmis</i>	09021113070	0.33	1.00	5	SC	0.1	0.3
<i>Stenelmis crenata</i>	09021113070055	0.67			--	0.2	
Sphaeriidae	10020201	1.00	1.00		CF	0.3	0.3