



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

Station Information

**Station Number:** S-1036 River Basin: St. John  
**Waterbody:** Bither Brook - Station 1036 HUC8 Name: Meduxnekeag  
**Town:** New Limerick Latitude: 46° 6' 3.479" N  
**Directions:** TURN ON TO GRAVEL ROAD ON SOUTH SIDE OF DREWS LAKE ROAD, WHICH IS ON THE EAST SIDE OF THE STREAM AND APPROXIMATELY 100M EAST Longitude: 67° 57' 38.999" W  
Stream Order: 2

Sample Information

**Log Number:** 2294 Type of Sample: ROCK BAG Date Deployed: 7/24/2014  
**Subsample Factor:** X4 Replicates: 3 Date Retrieved: 8/22/2014

Classification Attainment

**Statutory Class:** B **Final Determination:** A Date: 11/3/2014  
**Model Result with  $P \geq 0.6$ :** A **Reason for Determination:** Model  
**Date Last Calculated:** 11/3/2014 **Comments:** Enriched.

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.38	Class A, B, or C	1.00
Class B	0.61	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.90
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.10

Model Variables

01 Total Mean Abundance	1776.00	18 Relative Abundance Ephemeroptera	0.17
02 Generic Richness	38.00	19 EPT Generic Richness	20.00
03 Plecoptera Mean Abundance	37.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	306.67	23 Relative Generic Richness- Plecoptera	0.11
05 Shannon-Wiener Generic Diversity	3.10	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	9.53
06 Hilsenhoff Biotic Index	3.21	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	15.17
07 Relative Abundance - Chironomidae	0.17	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	645.13		
11 <i>Cheumatopsyche</i> Abundance	8.20		
12 EPT Generic Richness/ Diptera Generic Richness	1.43		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	22.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	14.67		
17 Chironomini Abundance (Family Functional Group)	34.67		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	36.33
2	<i>Dolophilodes</i>	21.77
3	<i>Baetis</i>	11.28
4	<i>Rheotanytarsus</i>	8.56
5	<i>Parametriocnemus</i>	3.45



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<b>Log Number: 2294</b>	Waterbody: Bither Brook - Station 1036	Date Retrieved: 8/22/2014

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature:	19.3 deg C
Dissolved Oxygen:	9.4 mg/l
Specific Conductance:	295 uS/cm
Velocity:	57 cm/s
pH:	7.13
Wetted Width:	5.4 m
Bankfull Width:	5.4 m
Depth:	20 cm

**Waterbody Information - Retrieval**

Temperature:	18 deg C
Dissolved Oxygen:	8.9 mg/l
Specific Conductance:	303 uS/cm
Velocity:	84 cm/s
pH:	6.81
Wetted Width:	5 m
Bankfull Width:	5.4 m
Depth:	19 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood	Partly Open	Rolling
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Below Road Crossing	Boulder 30 %
		Rubble/Cobble 70 %

**Landcover Summary - 2004 Data**

**Sample Comments**



**Maine Department of Environmental Protection**  
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**Aquatic Life Taxonomic Inventory Report**

**Station Number: S-1036**

Waterbody: Bither Brook - Station 1036

Town: New Limerick

**Log Number: 2294**

Subsample Factor: X4

Replicates: 3

Calculated: 11/3/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Perlodidae	09020207	14.67	14.67		--	0.8	0.8
Perlidae	09020209	1.33			--	0.1	
<i>Acroneuria</i>	09020209042	1.33	8.50	0	PR	0.1	0.5
<i>Acroneuria abnormis</i>	09020209042121	6.67		0	PR	0.4	
<i>Paragnetina</i>	09020209049		12.75	1	PR		0.7
<i>Paragnetina media</i>	09020209049151	12.00			--	0.7	
<i>Agnetina</i>	09020209050	1.33	1.42	2	PR	0.1	0.1
<i>Boyeria</i>	09020301004		1.33	2	PR		0.1
<i>Boyeria grafiana</i>	09020301004011	1.33			--	0.1	
Baetidae	09020401	20.00			--	1.1	
<i>Baetis</i>	09020401001	33.33	200.34	4	CG	1.9	11.3
<i>Baetis flavistriga</i>	09020401001004	4.00			--	0.2	
<i>Baetis intercalaris</i>	09020401001008	16.00			--	0.9	
<i>Baetis pluto</i>	09020401001009	110.67			--	6.2	
<i>Baetis tricaudatus</i>	09020401001012	18.67			--	1.1	
<i>Acerpenna</i>	09020401007	2.67	4.39	5	CG	0.2	0.2
<i>Acerpenna macdunnoughi</i>	09020401007001	1.33			--	0.1	
<i>Plauditus</i>	09020401012	10.67	11.70		CG	0.6	0.7
<i>Dipheter</i>	09020401013		10.24		--		0.6
<i>Dipheter hageni</i>	09020401013001	9.33			--	0.5	
Heptageniidae	09020402	6.67			--	0.4	
<i>Epeorus</i>	09020402009	18.67	25.00	0	SC	1.1	1.4
<i>Epeorus vitreus</i>	09020402009033	1.33			--	0.1	
<i>Leucrocuta</i>	09020402011	1.33	1.67	1	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	5.33	6.67	4	SC	0.3	0.4
<i>Isonychia</i>	09020404018	10.67	10.67	2	CF	0.6	0.6
Leptophlebiidae	09020406	8.00	8.00		--	0.5	0.5
<i>Ephemerella</i>	09020410035	28.00	28.00	1	CG	1.6	1.6
<i>Dolophilodes</i>	09020601001		386.67	0	CF		21.8
<i>Dolophilodes distinctus</i>	09020601001001	386.67			--	21.8	
<i>Chimarra</i>	09020601003	1.33	1.33	2	CF	0.1	0.1
Hydropsychidae	09020604	16.00			--	0.9	
<i>Cheumatopsyche</i>	09020604015	8.00	8.20	5	CF	0.5	0.5
<i>Hydropsyche</i>	09020604016	276.00	645.13	4	CF	15.5	36.3
<i>Hydropsyche bronta</i>	09020604016029	2.67			--	0.2	
<i>Hydropsyche morosa</i>	09020604016030	29.33			--	1.7	
<i>Hydropsyche slossonae</i>	09020604016031	184.00			--	10.4	
<i>Hydropsyche sparna</i>	09020604016032	136.00			--	7.7	



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche depravata species group</i>	09020604016041	1.33			CF	0.1	
<i>Rhyacophila</i>	09020605019		16.00	2	PR		0.9
<i>Rhyacophila fuscula</i>	09020605019060	10.67			PR	0.6	
<i>Rhyacophila minor</i>	09020605019063	5.33			PR	0.3	
<i>Glossosoma</i>	09020606020	1.33	1.33	0	SC	0.1	0.1
<i>Tipula</i>	09021001002	2.67	2.67	4	SH	0.2	0.2
<i>Conchapelopia</i>	09021011004	12.00	12.00	6	PR	0.7	0.7
<i>Nilotanytus</i>	09021011012		2.67	6	PR		0.2
<i>Nilotanytus fimbriatus</i>	09021011012027	2.67			--	0.2	
<i>Corynoneura</i>	09021011036	4.00	4.00	7	CG	0.2	0.2
<i>Parametriocnemus</i>	09021011053	61.33	61.33	5	CG	3.5	3.5
<i>Tvetenia</i>	09021011065		42.67	5	CG		2.4
<i>Tvetenia paucunca</i>	09021011065114	42.67			--	2.4	
<i>Rheotanytarsus</i>	09021011072		152.00	6	CF		8.6
<i>Rheotanytarsus exiguus</i>	09021011072127	20.00			CF	1.1	
<i>Rheotanytarsus pellucidus</i>	09021011072128	132.00			CF	7.4	
<i>Tanytarsus</i>	09021011076	1.33	1.33	6	CF	0.1	0.1
<i>Microtendipes</i>	09021011094		6.67	6	CF		0.4
<i>Microtendipes rydalensis group</i>	09021011094168	6.67			--	0.4	
<i>Polypedilum</i>	09021011102		28.00	6	SH		1.6
<i>Polypedilum aviceps</i>	09021011102181	20.00			--	1.1	
<i>Polypedilum flavum</i>	09021011102182	8.00			--	0.5	
<i>Simulium</i>	09021012047	32.00	36.00	4	CF	1.8	2.0
<i>Simulium venustum/verecundum complex</i>	09021012047072	4.00			CF	0.2	
<i>Atherix</i>	09021015055	5.33	5.33	2	PR	0.3	0.3
<i>Hemerodromia</i>	09021016057	5.33	5.33	3	PR	0.3	0.3
<i>Roederiodes</i>	09021016058	1.33	1.33	3	PR	0.1	0.1
<i>Psephenus</i>	09021108058		2.67	4	SC		0.2
<i>Psephenus herricki</i>	09021108058028	2.67			--	0.2	
<i>Macronychus</i>	09021113065		1.33	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.1	
<i>Promoresia</i>	09021113069		6.67		--		0.4
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.1	
<i>Promoresia tardella</i>	09021113069052	5.33			--	0.3	