



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

Station Information

Station Number: S-1030 River Basin: St. John
Waterbody: Unnamed Brook (madawaska) - Station 1030 HUC8 Name: Fish
Town: Madawaska Latitude: 47° 13' 0.029" N
Directions: 50M UPSTREAM OF LAKE SHORE DRIVE. FIRST STREAM CROSSING NORTHWEST OF THE GOLF COURSE (150M FROM GOLF COURSE ROAD) Longitude: 68° 14' 4.162" W
Stream Order: 1

Sample Information

Log Number: 2267 Type of Sample: ROCK BAG Date Deployed: 7/21/2014
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/18/2014

Classification Attainment

Statutory Class: B **Final Determination:** A Date: 1/22/2015
Model Result with $P \geq 0.6$: A **Reason for Determination:** Model
Date Last Calculated: 1/21/2015 **Comments:**

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.97	Class C	0.00	Class A, B, or C	1.00
Class B	0.03	NA	0.00	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	127.67	18 Relative Abundance Ephemeroptera	0.23
02 Generic Richness	51.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	14.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.67
04 Ephemeroptera Mean Abundance	30.00	23 Relative Generic Richness- Plecoptera	0.08
05 Shannon-Wiener Generic Diversity	4.62	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.34
06 Hilsenhoff Biotic Index	2.88	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.22	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	4.67		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.21		
13 Relative Abundance - Oligochaeta	0.02		
15 Perlidae Mean Abundance (Family Functional Group)	0.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	4.72		
17 Chironomini Abundance (Family Functional Group)	2.02		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Optioservus</i>	16.19
2	<i>Parametriocnemus</i>	10.57
3	<i>Heptagenia</i>	7.57
4	<i>Paracapnia</i>	6.53
5	<i>Leptophlebiidae</i>	6.27



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	18.5 deg C
Dissolved Oxygen:	8.8 mg/l
Specific Conductance:	267 uS/cm
Velocity:	15 cm/s
pH:	7.12
Wetted Width:	1.7 m
Bankfull Width:	3 m
Depth:	25 cm

Waterbody Information - Retrieval

Temperature:	16.3 deg C
Dissolved Oxygen:	9.67 mg/l
Specific Conductance:	268 uS/cm
Velocity:	17 cm/s
pH:	7.95
Wetted Width:	2 m
Bankfull Width:	3 m
Depth:	23 cm

Water Chemistry - 7/9/2014

Nitrate+nitrite As N	1.5 mg/l	Total Phosphorus	29 ug/l
Total Kjeldahl Nitrogen	0.6 mg/l	Orthophosphate As Phosphorus	14 ug/l
Total Alkalinity	70 mg/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Partly Open	Rolling
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Above Road Crossing	Gravel 50 %
		Rubble/Cobble 40 %
		Sand 10 %

Landcover Summary - 2004 Data

Sample Comments

8/18 - NMRO METER USED FOR DO, TEMP AND SPC.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-1030 Waterbody: Unnamed Brook (madawaska) - Station 103 Town: Madawaska
Log Number: 2267 Subsample Factor: X1 Replicates: 3 Calculated: 1/21/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Stylodrilus</i>	08020101004		1.67		--		1.3
<i>Stylodrilus heringianus</i>	08020101004001	1.67			--	1.3	
Lumbricidae	08020205	0.67	0.67		--	0.5	0.5
<i>Paracapnia</i>	09020203018	8.33	8.33	1	SH	6.5	6.5
<i>Leuctra</i>	09020204020	5.33	5.33	0	SH	4.2	4.2
<i>Sweltsa</i>	09020208040	0.33	0.33		PR	0.3	0.3
Perlidae	09020209	0.33	0.33		--	0.3	0.3
<i>Boyeria</i>	09020301004		0.33	2	PR		0.3
<i>Boyeria vinosa</i>	09020301004012	0.33			--	0.3	
<i>Baetis</i>	09020401001	0.33	4.00	4	CG	0.3	3.1
<i>Baetis flavistriga</i>	09020401001004	1.33			--	1.0	
<i>Baetis tricaudatus</i>	09020401001012	2.33			--	1.8	
<i>Acerpenna</i>	09020401007		0.67	5	CG		0.5
<i>Acerpenna macdunnoughi</i>	09020401007001	0.33			--	0.3	
<i>Acerpenna pygmaea</i>	09020401007011	0.33			--	0.3	
<i>Plauditus</i>	09020401012	0.33	0.33		CG	0.3	0.3
<i>Heptagenia</i>	09020402010	9.67	9.67	2	SC	7.6	7.6
Leptophlebiidae	09020406	8.00	8.00		--	6.3	6.3
<i>Paraleptophlebia</i>	09020406026	3.33	3.33	1	CG	2.6	2.6
<i>Ephemerella</i>	09020410035	3.33	3.33	1	CG	2.6	2.6
<i>Eurylophella</i>	09020410036	0.67	0.67	3	CG	0.5	0.5
<i>Phylocentropus</i>	09020603011	0.33	0.33	5	CF	0.3	0.3
<i>Diplectrona</i>	09020604014		0.33	0	CF		0.3
<i>Diplectrona modesta</i>	09020604014025	0.33			--	0.3	
<i>Hydropsyche</i>	09020604016	4.00	4.67	4	CF	3.1	3.7
<i>Hydropsyche sparna</i>	09020604016032	0.67			--	0.5	
<i>Rhyacophila</i>	09020605019	0.67	1.00	2	PR	0.5	0.8
<i>Rhyacophila minor</i>	09020605019063	0.33			PR	0.3	
Glossosomatidae	09020606				--		
<i>Oligostomis</i>	09020608039	3.33	3.33	2	PR	2.6	2.6
Limnephilidae	09020610	0.33			--	0.3	
<i>Onocosmoecus</i>	09020610046		0.71	2	SH		0.6
<i>Onocosmoecus unicolor</i>	09020610046103	0.67			--	0.5	
<i>Pycnopsyche</i>	09020610049	2.33	2.50	4	SH	1.8	2.0
<i>Frenesia</i>	09020610058		0.36	0	SH		0.3
<i>Frenesia difficilis</i>	09020610058117	0.33			--	0.3	
<i>Psychoglypha</i>	09020610060		1.43	0	SH		1.1
<i>Psychoglypha subborealis</i>	09020610060120	1.33			--	1.0	



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.5	0.5
<i>Psilotreta</i>	09020614068		6.33	0	SC		5.0
<i>Psilotreta frontalis</i>	09020614068134	6.33			--	5.0	
<i>Sialis</i>	09020702004	1.67	1.67	4	PR	1.3	1.3
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.3	0.3
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.3	0.3
Chironomidae	09021011	0.33			--	0.3	
<i>Ablabesmyia</i>	09021011001		0.34	8	PR		0.3
<i>Ablabesmyia mallochii</i>	09021011001004	0.33			--	0.3	
<i>Nilotanyus</i>	09021011012		2.70	6	PR		2.1
<i>Nilotanyus fimbriatus</i>	09021011012027	2.67			--	2.1	
<i>Paramerina</i>	09021011013	1.33	1.35		--	1.0	1.1
<i>Zavrelimyia</i>	09021011022	0.33	0.34	8	PR	0.3	0.3
<i>Prodiamesa</i>	09021011031		0.34	3	CG		0.3
<i>Prodiamesa olivacea</i>	09021011031048	0.33			--	0.3	
<i>Brillia</i>	09021011033		2.02	5	SH		1.6
<i>Brillia parva</i>	09021011033050	2.00			--	1.6	
<i>Heterotrissocladius</i>	09021011044		1.01	0	CG		0.8
<i>Heterotrissocladius marcidus</i>	09021011044083	1.00			--	0.8	
<i>Orthocladius</i>	09021011050		0.34	6	CG		0.3
<i>Orthocladius lignicola</i>	09021011050100	0.33			--	0.3	
<i>Parametriocnemus</i>	09021011053	11.00	13.49	5	CG	8.6	10.6
<i>Parametriocnemus sp. F Epler</i>	09021011053101	2.33			--	1.8	
<i>Tvetenia</i>	09021011065		2.36	5	CG		1.8
<i>Tvetenia paucunca</i>	09021011065114	2.33			--	1.8	
<i>Micropsectra</i>	09021011070	0.67	0.67	7	CG	0.5	0.5
<i>Rheotanytarsus</i>	09021011072		1.35	6	CF		1.1
<i>Rheotanytarsus pellucidus</i>	09021011072128	1.33			CF	1.0	
<i>Phaenopsectra</i>	09021011101		0.34	7	SC		0.3
<i>Phaenopsectra flavipes</i>	09021011101179	0.33			SC	0.3	
<i>Polypedilum</i>	09021011102		1.69	6	SH		1.3
<i>Polypedilum aviceps</i>	09021011102181	1.00			--	0.8	
<i>Polypedilum albicorne</i>	09021011102195	0.67			--	0.5	
<i>Macropelopia</i>	09021011111		0.34		P		0.3
<i>Macropelopia decedens</i>	09021011111002	0.33			--	0.3	
<i>Simulium</i>	09021012047	0.33	0.33	4	CF	0.3	0.3
<i>Chrysops</i>	09021014052	0.33	0.33	6	CG	0.3	0.3
<i>Optioservus</i>	09021113067	13.33	20.67	3	SC	10.4	16.2



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		Actual	Adjusted			Actual	Adjusted
<i>Optioservus ovalis</i>	09021113067046	7.33			--	5.7	
<i>Oulimnius</i>	09021113068	0.67	0.67		--	0.5	0.5
<i>Promoresia</i>	09021113069		4.33		--		3.4
<i>Promoresia tardella</i>	09021113069052	4.33			--	3.4	
Sphaeriidae	10020201	0.33	0.33		CF	0.3	0.3
<i>Pisidium</i>	10020201002	0.67	1.33		CF	0.5	1.0
<i>Pisidium casertanum</i>	10020201002006	0.67			CF	0.5	