



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

Station Information

**Station Number: S-921**  
Waterbody: St John River - Station 921  
Town: Frenchville  
Directions: RT. 1 NORTH OF MADAWASKA

DEP Drainage: St. John  
HUC8: 01010001  
HUC8 Name: St. John River at Bay of Fundy  
Latitude: 47 17 47.53 N  
Longitude: 68 22 33.57 W  
Stream Order: 5

Sample Information

**Log Number: 1848**  
Subsample Factor: X1  
Type of Sample: ROCK BAG  
Replicates: 3  
Date Deployed: 7/21/2009  
Date Retrieved: 8/18/2009

Classification Attainment

**Statutory Class: B**  
Model Result with P>.6: A  
Date Last Calculated: 4/15/2010  
**Final Determination: A**  
**Reason for Determination: Model**  
Comments:

Date: 4/16/2010

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.73	Class A, B, or C	1.00
Class B	0.26	Non-Attainment	0.00
Class C			
NA			
0.00			
B or Better Model		A Model	
Class A or B	1.00	Class A	0.99
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.01

Model Variables

01 Total Mean Abundance	133.00	18 Relative Abundance Ephemeroptera	0.35
02 Generic Richness	44.00	19 EPT Generic Richness	27.00
03 Plecoptera Mean Abundance	3.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.68
04 Ephemeroptera Mean Abundance	47.00	23 Relative Generic Richness- Plecoptera	0.09
05 Shannon-Wiener Generic Diversity	4.10	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	9.02
06 Hilsenhoff Biotic Index	4.39	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	19.12
07 Relative Abundance - Chironomidae	0.29	28 EP Generic Richness/14	1.21
08 Relative Generic Richness Diptera	0.32	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	13.33		
11 <i>Cheumatopsyche</i> Abundance	7.67		
12 EPT Generic Richness/ Diptera	1.93		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	2.33		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	1.02		
(Family Functional Group)			
17 Chironomini Abundance (Family	6.78		
Functional Group)			

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	20.40
2	<i>Maccaffertium</i>	13.13
3	<i>Hydropsyche</i>	10.03
4	<i>Chimarra</i>	9.02
5	<i>Acerpenna</i>	8.52



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 22.2 deg C  
Dissolved Oxygen: 8.6 mg/l  
Specific Conductance: 54 uS/cm  
Velocity: 54 cm/s  
pH: 7.36  
Wetted Width:  
Bankfull Width:  
Depth: 69.5 cm

**Waterbody Information - Retrieval**

Temperature: 25.8 deg C  
Dissolved Oxygen: 9 mg/l  
Specific Conductance: 67 uS/cm  
Velocity: 20 cm/s  
pH: 7.5  
Wetted Width: 185 m  
Bankfull Width: 205 m  
Depth: 46 cm

**Water Chemistry - 7/21/2009**

Soluble Reactive Phosphorus	1 ug/l	Nitrate+nitrite As N	0.03 mg/l
Total Phosphorus	0.013 mg/l	Total Kjeldahl Nitrogen	0.3 mg/l
Dissolved Organic Carbon	8.5 mg/l	Total Alkalinity	27 mg/l

**Summary of Habitat Characteristics**

Landuse Name

Canopy Cover

Terrain

Cultivated

Open

Hilly

Upland Hardwood

Urban

Potential Stressor

Location

Substrate

Urban Runoff

Below Point Source

Boulder 40 %

Main Stem

Gravel 20 %

Rubble/Cobble 40 %

**Landcover Summary - 2004 Data**

**Sample Comments**



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

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Waterbody: St John River - Station 921

Town: Frenchville

**Log Number: 1848**

Subsample Factor: X1

Replicates: 3

Calculated: 4/15/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Leuctra</i>	09020204020	0.67	0.67	0	SH	0.5	0.5
Perlodidae	09020207	0.67	0.67		--	0.5	0.5
Perlidae	09020209	0.67	0.67		--	0.5	0.5
<i>Acroneuria</i>	09020209042		1.67	0	PR		1.3
<i>Acroneuria abnormis</i>	09020209042121	0.33		0	PR	0.3	
<i>Acroneuria lycorias</i>	09020209042125	1.33			--	1.0	
<i>Baetis</i>	09020401001		1.33	4	CG		1.0
<i>Baetis flavistriga</i>	09020401001004	0.67			--	0.5	
<i>Baetis intercalaris</i>	09020401001008	0.67			--	0.5	
<i>Pseudocloeon</i>	09020401006		1.67	4	SC		1.3
<i>Pseudocloeon propinquum</i>	09020401006028	1.67			--	1.3	
<i>Acerpenna</i>	09020401007	1.00	11.33	5	CG	0.8	8.5
<i>Acerpenna pygmaea</i>	09020401007011	10.33			--	7.8	
<i>Plauditus</i>	09020401012	0.33	0.33		CG	0.3	0.3
Heptageniidae	09020402	3.00			--	2.3	
<i>Epeorus</i>	09020402009	0.67	0.76	0	SC	0.5	0.6
<i>Leucrocuta</i>	09020402011	2.33	2.66	1	SC	1.8	2.0
<i>Stenacron</i>	09020402014		3.79	7	SC		2.9
<i>Stenacron interpunctatum</i>	09020402014045	3.33			--	2.5	
<i>Maccaffertium</i>	09020402015	9.33	17.46	4	SC	7.0	13.1
<i>Maccaffertium luteum</i>	09020402015049	6.00			--	4.5	
<i>Isonychia</i>	09020404018	2.00	2.00	2	CF	1.5	1.5
Leptophlebiidae	09020406	0.67	0.67		--	0.5	0.5
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	0.3	0.3
<i>Ephemerella</i>	09020410035	1.33	1.67	1	CG	1.0	1.3
<i>Ephemerella invaria</i>	09020410035107	0.33			--	0.3	
<i>Tricorythodes</i>	09020411038	3.00	3.00	4	CG	2.3	2.3
<i>Chimarra</i>	09020601003	12.00	12.00	2	CF	9.0	9.0
<i>Neureclipsis</i>	09020603008	3.67	3.67	7	CF	2.8	2.8
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.3	0.3
<i>Cheumatopsyche</i>	09020604015	7.67	7.67	5	CF	5.8	5.8
<i>Hydropsyche</i>	09020604016	6.33	13.33	4	CF	4.8	10.0
<i>Hydropsyche morosa</i>	09020604016030	6.67			--	5.0	
<i>Hydropsyche slossonae</i>	09020604016031	0.33			--	0.3	
<i>Rhyacophila</i>	09020605019	0.33	0.33	2	PR	0.3	0.3
<i>Oxyethira</i>	09020607028	0.67	0.67	3	P	0.5	0.5
<i>Brachycentrus</i>	09020609043		1.67	0	CF		1.3
<i>Brachycentrus appalachia</i>	09020609043096	1.67			--	1.3	



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		Actual	Adjusted			Actual	Adjusted
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.3	0.3
<i>Ceraclea</i>	09020618072	0.33	0.33	3	CG	0.3	0.3
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.3	0.3
Chironomidae	09021011	0.67			--	0.5	
<i>Paramerina</i>	09021011013	0.67	0.68		--	0.5	0.5
<i>Rheopelopia</i>	09021011017		0.34		PR		0.3
<i>Rheopelopia acra group</i>	09021011017036	0.33			--	0.3	
<i>Cricotopus</i>	09021011037		0.34	7	SH		0.3
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.3	
<i>Heterotrissocladius</i>	09021011044		0.68	0	CG		0.5
<i>Heterotrissocladius marcidus</i>	09021011044083	0.67			--	0.5	
<i>Thienemanniella</i>	09021011062		0.34	6	CG		0.3
<i>Thienemanniella boltoni</i>	09021011062113	0.33			--	0.3	
<i>Tvetenia</i>	09021011065	0.33	0.34	5	CG	0.3	0.3
<i>Micropsectra</i>	09021011070	0.67	0.68	7	CG	0.5	0.5
<i>Rheotanytarsus</i>	09021011072	26.67	27.14	6	CF	20.1	20.4
<i>Tanytarsus</i>	09021011076	1.00	1.02	6	CF	0.8	0.8
<i>Microtendipes</i>	09021011094		0.34	6	CF		0.3
<i>Microtendipes rydalensis group</i>	09021011094168	0.33			--	0.3	
<i>Polypedilum</i>	09021011102		6.45	6	SH		4.8
<i>Polypedilum aviceps</i>	09021011102181	2.33			--	1.8	
<i>Polypedilum flavum</i>	09021011102182	3.67			--	2.8	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.3	
<i>Simulium</i>	09021012047		0.33	4	CF		0.3
<i>Simulium tuberosum</i>	09021012047067	0.33			--	0.3	
<i>Atherix</i>	09021015055	0.67	0.67	2	PR	0.5	0.5
<i>Dubiraphia</i>	09021113064	1.33	1.33	6	--	1.0	1.0
<i>Optioservus</i>	09021113067		0.67	3	SC		0.5
<i>Optioservus trivittatus</i>	09021113067048	0.67			--	0.5	
<i>Lebertia</i>	09030105001	0.33	0.33		--	0.3	0.3