



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

Station Information

Station Number: S-1025 River Basin: St. John
Waterbody: Hammond Brook - Station 1025 HUC8 Name: Little River-Saint John River
Town: Hamlin Latitude: 47° 8' 40.457" N
Directions: 50M UPSTREAM OF RTE 1A BRIDGE CROSSING. Longitude: 67° 55' 4.055" W
Stream Order: 3

Sample Information

Log Number: 2266 Type of Sample: ROCK BAG Date Deployed: 7/21/2014
Subsample Factor: X4 Replicates: 3 Date Retrieved: 8/18/2014

Classification Attainment

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

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.01	Class A, B, or C	1.00
Class B	0.42	Non-Attainment	0.00
Class C		0.56	
NA		0.00	
B or Better Model		A Model	
Class A or B	0.05	Class A	0.06
Class C or Non-Attainment	0.95	Class B or C or Non-Attainment	0.94

Model Variables

01 Total Mean Abundance	2430.67	18 Relative Abundance Ephemeroptera	0.08
02 Generic Richness	50.00	19 EPT Generic Richness	17.00
03 Plecoptera Mean Abundance	5.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	10.81
04 Ephemeroptera Mean Abundance	200.00	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	2.79	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	485.90
06 Hilsenhoff Biotic Index	4.96	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	24.00
07 Relative Abundance - Chironomidae	0.40	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.48	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	1095.39		
11 <i>Cheumatopsyche</i> Abundance	1.94		
12 EPT Generic Richness/ Diptera Generic Richness	0.71		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	4.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	10.81		
17 Chironomini Abundance (Family Functional Group)	206.83		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	45.07
2	<i>Cricotopus</i>	19.80
3	<i>Rheotanytarsus</i>	8.84
4	<i>Polypedilum</i>	7.73
5	<i>Baetis</i>	5.36



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	20 deg C
Dissolved Oxygen:	9.5 mg/l
Specific Conductance:	216 uS/cm
Velocity:	62 cm/s
pH:	7.48
Wetted Width:	6.45 m
Bankfull Width:	14 m
Depth:	27 cm

Waterbody Information - Retrieval

Temperature:	16.8 deg C
Dissolved Oxygen:	9.62 mg/l
Specific Conductance:	170 uS/cm
Velocity:	72 cm/s
pH:	8.2
Wetted Width:	6.2 m
Bankfull Width:	14 m
Depth:	28 cm

Water Chemistry - 7/30/2014

Nitrate+nitrite As N	0.24 mg/l	Total Phosphorus	24 ug/l
Total Kjeldahl Nitrogen	0.5 mg/l	Orthophosphate As Phosphorus	3 ug/l
Total Alkalinity	42 mg/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Open	Rolling
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Below Agriculture NPS	Boulder 10 %
	Below Road Crossing	Gravel 25 %
		Rubble/Cobble 60 %
		Sand 5 %

Landcover Summary - 2004 Data

Sample Comments

7/21 AND 8/18 - FISH PRESENT

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



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Log Number: 2266

Subsample Factor: X4

Replicates: 3

Calculated: 1/22/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Nematoda	05	1.33	1.33		--	0.1	0.1
<i>Nais</i>	08020202009		22.67		CG		0.9
<i>Nais behningi</i>	08020202009003	21.33			--	0.9	
<i>Nais communis</i>	08020202009005	1.33			--	0.1	
<i>Piquetiella</i>	08020202028	1.33	1.33		--	0.1	0.1
<i>Orconectes</i>	09010301008	1.33	1.33		CG	0.1	0.1
<i>Isoperla</i>	09020207026	1.33	1.33	2	PR	0.1	0.1
<i>Agnetina</i>	09020209050		4.00	2	PR		0.2
<i>Agnetina capitata</i>	09020209050152	4.00		2	PR	0.2	
<i>Hetaerina</i>	09020307044		1.33	6	PR		0.1
<i>Hetaerina americana</i>	09020307044001	1.33			--	0.1	
Baetidae	09020401	12.00			--	0.5	
<i>Baetis</i>	09020401001	26.67	130.19	4	CG	1.1	5.4
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	5.33			--	0.2	
<i>Baetis tricaudatus</i>	09020401001012	86.67			--	3.6	
<i>Acentrella</i>	09020401008		2.89	3	CG		0.1
<i>Acentrella turbida</i>	09020401008021	2.67			--	0.1	
<i>Plauditus</i>	09020401012	18.67	20.25		CG	0.8	0.8
Heptageniidae	09020402	5.33			--	0.2	
<i>Epeorus</i>	09020402009	1.33	1.60	0	SC	0.1	0.1
<i>Leucrocota</i>	09020402011	5.33	6.40	1	SC	0.2	0.3
<i>Maccaffertium</i>	09020402015	16.00	24.00	4	SC	0.7	1.0
<i>Maccaffertium luteum</i>	09020402015049	4.00			--	0.2	
Leptophlebiidae	09020406	1.33	1.33		--	0.1	0.1
<i>Ephemerella</i>	09020410035	1.33	1.33	1	CG	0.1	0.1
<i>Serratella</i>	09020410037		10.67	2	CG		0.4
<i>Serratella serratoides</i>	09020410037124	10.67			--	0.4	
<i>Baetisca</i>	09020413041		1.33	4	CG		0.1
<i>Baetisca lacustris</i>	09020413041132	1.33				0.1	
<i>Dolophilodes</i>	09020601001	29.33	29.33	0	CF	1.2	1.2
Hydropsychidae	09020604	344.00			--	14.2	
<i>Cheumatopsyche</i>	09020604015	1.33	1.94	5	CF	0.1	0.1
<i>Hydropsyche</i>	09020604016	448.00	1095.39	4	CF	18.4	45.1
<i>Hydropsyche bronta</i>	09020604016029	20.00			--	0.8	
<i>Hydropsyche morosa</i>	09020604016030	25.33			--	1.0	
<i>Hydropsyche slossonae</i>	09020604016031	8.00			--	0.3	
<i>Hydropsyche sparna</i>	09020604016032	250.67			--	10.3	



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Calculated: 1/22/2015

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		Actual	Adjusted			Actual	Adjusted
<i>Rhyacophila</i>	09020605019	2.67	2.67	2	PR	0.1	0.1
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.1	0.1
<i>Antocha</i>	09021001004	4.00	4.00	3	CG	0.2	0.2
<i>Dicranota</i>	09021001005	1.33	1.33	3	PR	0.1	0.1
<i>Bezzia/palpomyia</i>	09021010043	4.00	4.00	6	PR	0.2	0.2
Chironomidae	09021011	13.33			--	0.5	
<i>Ablabesmyia</i>	09021011001		2.70	8	PR		0.1
<i>Ablabesmyia mallochii</i>	09021011001004	2.67			--	0.1	
<i>Conchapelopia</i>	09021011004	5.33	5.41	6	PR	0.2	0.2
<i>Nilotanytus</i>	09021011012		1.35	6	PR		0.1
<i>Nilotanytus fimbriatus</i>	09021011012027	1.33			--	0.1	
<i>Rheopelopia</i>	09021011017		1.35		PR		0.1
<i>Rheopelopia acra group</i>	09021011017036	1.33			--	0.1	
<i>Potthastia</i>	09021011026		1.35	2	CG		0.1
<i>Potthastia gaedii</i>	09021011026045	1.33			--	0.1	
<i>Cardiocladius</i>	09021011034		1.35	5	PR		0.1
<i>Cardiocladius obscurus</i>	09021011034053	1.33			--	0.1	
<i>Corynoneura</i>	09021011036	8.00	8.11	7	CG	0.3	0.3
<i>Cricotopus</i>	09021011037	5.33	481.25	7	SH	0.2	19.8
<i>Cricotopus bicinctus</i>	09021011037057	205.33			--	8.4	
<i>Cricotopus trifascia</i>	09021011037070	12.00			--	0.5	
<i>Cricotopus vierriensis</i>	09021011037071	242.67			--	10.0	
<i>Cricotopus luciae</i>	09021011037073	1.33			--	0.1	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	8.00			SH	0.3	
<i>Eukiefferiella</i>	09021011041		12.17	8	CG		0.5
<i>Eukiefferiella brevicar group</i>	09021011041074	6.67			--	0.3	
<i>Eukiefferiella claripennis group</i>	09021011041075	2.67			--	0.1	
<i>Eukiefferiella pseudomontana group</i>	09021011041080	1.33			--	0.1	
<i>Eukiefferiella devonica group</i>	09021011041083	1.33			CG	0.1	
<i>Parametriocnemus</i>	09021011053	6.67	6.76	5	CG	0.3	0.3
<i>Synorthocladius</i>	09021011061	1.33	1.35	2	CG	0.1	0.1
<i>Thienemanniella</i>	09021011062	1.33	2.70	6	CG	0.1	0.1
<i>Thienemanniella sp. B</i>	09021011062116	1.33			--	0.1	
<i>Tvetenia</i>	09021011065		5.41	5	CG		0.2
<i>Tvetenia paucunca</i>	09021011065114	5.33			--	0.2	
<i>Cladotanytarsus</i>	09021011068	10.67	10.81	7	CG	0.4	0.4
<i>Micropsectra</i>	09021011070	10.67	10.81	7	CG	0.4	0.4
<i>Rheotanytarsus</i>	09021011072	68.00	214.94	6	CF	2.8	8.8



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<i>Rheotanytarsus pellucidus</i>	09021011072128	144.00			CF	5.9	
<i>Microtendipes</i>	09021011094		18.93	6	CF		0.8
<i>Microtendipes pedellus group</i>	09021011094166	18.67			--	0.8	
<i>Polypedilum</i>	09021011102		187.90	6	SH		7.7
<i>Polypedilum aviceps</i>	09021011102181	156.00			--	6.4	
<i>Polypedilum flavum</i>	09021011102182	29.33			--	1.2	
<i>Simulium</i>	09021012047	1.33	56.00	4	CF	0.1	2.3
<i>Simulium tuberosum</i>	09021012047067	53.33			--	2.2	
<i>Simulium jenningsi species group</i>	09021012047070	1.33			CF	0.1	
<i>Hemerodromia</i>	09021016057	10.67	10.67	3	PR	0.4	0.4
<i>Neoplasta</i>	09021016064	4.00	4.00		PR	0.2	0.2
<i>Promoresia</i>	09021113069		5.33		--		0.2
<i>Promoresia elegans</i>	09021113069051	5.33			--	0.2	
<i>Hygrobates</i>	09030102001	1.33	1.33		--	0.1	0.1
<i>Torrenticola</i>	09030104001	1.33	1.33		--	0.1	0.1
<i>Ferrissia</i>	10010204035		4.00		SC		0.2
<i>Ferrissia rivularis</i>	10010204035066	4.00			--	0.2	