



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

Station Information

Station Number: S-375	River Basin:	St. John
Waterbody: Rocky Brook - Station 375	HUC8 Name:	Becaguimec Stream-Saint John Riv
Town: Mars Hill	Latitude:	46 31 16.88 N
Directions: BOYTON ROAD CROSSING	Longitude:	67 51 18.21 W
	Stream Order:	3

Sample Information

Log Number: 2735	Type of Sample: ROCK BAG	Date Deployed: 7/9/2019
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/6/2019

Classification Attainment

Statutory Class: B	Final Determination: B	Date: 4/1/2020
Model Result with P \geq 0.6: B	Reason for Determination: Model	
Date Last Calculated: 3/30/2020	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.40	Class C	0.03
Class B	0.57	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.37
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.63

Model Variables

01 Total Mean Abundance	480.33	18 Relative Abundance Ephemeroptera	0.06
02 Generic Richness	60.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	7.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	26.67
04 Ephemeroptera Mean Abundance	29.00	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	3.95	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	146.67
06 Hilsenhoff Biotic Index	5.49	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.67
07 Relative Abundance - Chironomidae	0.54	28 EP Generic Richness/14	0.93
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	37.33		
11 <i>Cheumatopsyche</i> Abundance	1.33		
12 EPT Generic Richness/ Diptera Generic Richness	1.15		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	22.67		
17 Chironomini Abundance (Family Functional Group)	58.67		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tanytarsus</i>	24.36
2	<i>Dubiraphia</i>	17.07
3	<i>Microtendipes</i>	8.88
4	<i>Hydropsyche</i>	7.77
5	<i>Polycentropus</i>	7.58



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Log Number: 2735

Town: Mars Hill
Waterbody: Rocky Brook - Station 375

Date Deployed: 7/9/2019
Date Retrieved: 8/6/2019

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 16.6 deg C
Dissolved Oxygen: 9.63 mg/l
Dissolved Oxygen Saturation: 98.9 %
Specific Conductance: 368.2 uS/cm
Velocity: 15.2 cm/s
pH: 8.15
Wetted Width:
Bankfull Width:
Depth: 37 cm

Waterbody Information - Retrieval

Temperature: 22.4 deg C
Dissolved Oxygen: 10.54 mg/l
Dissolved Oxygen Saturation: 121.6 %
Specific Conductance: 379.7 uS/cm
Velocity: 3 cm/s
pH: 8.29
Wetted Width: 10.7 m
Bankfull Width: 11.7 m
Depth: 32 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Partly Open	Rolling	
Upland Conifer			
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Agricultural Runoff	Below Road Crossing	Boulder	10 %
		Gravel	30 %
		Rubble/Cobble	40 %
		Sand	20 %

Landcover Summary - 2004 Data

Total Area (ac)	8925	High Int. Dev. %	0.1	Water %	0.2	Non-vegetated %	0.2
		Med Int. Dev. %	0.2	Wetland %	13.5	Tilled Agriculture %	46.1
		Low Int. Dev. %	1.5	Upland Woody %	30.6	Grassland %	6.4
		Development %	1.8	Natural %	44.2	Human Altered %	55.5
						Impervious %	1.7

Sample Comments

FISH (BLACKNOSE DACE, SCULPIN, UNIDENTIFIED) PRESENT



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Aquatic Life Taxonomic Inventory Report

Station Number: S-375

Waterbody: Rocky Brook - Station 375

Town: Mars Hill

Log Number: 2735

Subsample Factor: X1

Replicates: 3

Calculated: 3/30/2020

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
<i>Aulodrilus</i>	08020202018		0.33		--		0.1
<i>Aulodrilus pluriseta</i>	08020202018004	0.33			--	0.1	
Cambaridae	09010301	0.33	0.33		--	0.1	0.1
<i>Orconectes</i>	09010301008	0.33	0.33		CG	0.1	0.1
<i>Leuctra</i>	09020204020	4.67	4.67	0	SH	1.0	1.0
<i>Agnatina</i>	09020209050		2.67	2	PR		0.6
<i>Agnatina capitata</i>	09020209050152	2.67		2	PR	0.6	
Aeshnidae	09020301	0.33	0.33		--	0.1	0.1
<i>Boyeria</i>	09020301004		1.00	2	PR		0.2
<i>Boyeria grafiana</i>	09020301004011	1.00			--	0.2	
Calopterygidae	09020307	0.33	0.33		--	0.1	0.1
<i>Calopteryx</i>	09020307043	0.67	0.67	5	PR	0.1	0.1
<i>Acerpenna</i>	09020401007		1.33	5	CG		0.3
<i>Acerpenna macdunnoughi</i>	09020401007001	1.33			--	0.3	
<i>Procloeon</i>	09020401010	0.67	1.33		CG	0.1	0.3
<i>Procloeon rivulare</i>	09020401010004	0.67			--	0.1	
<i>Iswaeon</i>	09020401015		0.33		--		0.1
<i>Iswaeon anoka</i>	09020401015001	0.33			--	0.1	
<i>Anafroptilum (Centroptilum)</i>	09020401016	2.33	2.33	2	CG	0.5	0.5
<i>Leucrocuta</i>	09020402011	7.33	7.33	1	SC	1.5	1.5
<i>Stenacron</i>	09020402014		1.33	7	SC		0.3
<i>Stenacron interpunctatum</i>	09020402014045	1.33			--	0.3	
<i>Maccaffertium</i>	09020402015		0.67	4	SC		0.1
<i>Maccaffertium modestum</i>	09020402015051	0.67			--	0.1	
Leptophlebiidae	09020406	1.00	1.00		--	0.2	0.2
<i>Paraleptophlebia</i>	09020406026	1.00	2.67	1	CG	0.2	0.6
<i>Paraleptophlebia debilis</i>	09020406026079	1.67		1	CG	0.3	
<i>Ephemera</i>	09020407027	0.33	0.33	1	CG	0.1	0.1
<i>Tricorythodes</i>	09020411038	10.33	10.33	4	CG	2.2	2.2
<i>Psychomyia</i>	09020602005		1.00	2	CG		0.2
<i>Psychomyia flavida</i>	09020602005006	1.00			--	0.2	
Polycentropodidae	09020603	5.00			--	1.0	
<i>Nyctiophylax</i>	09020603009	1.67	1.92	5	PR	0.3	0.4
<i>Polycentropus</i>	09020603010	31.67	36.42	6	PR	6.6	7.6
Hydropsychidae	09020604				--		
<i>Cheumatopsyche</i>	09020604015	1.33	1.33	5	CF	0.3	0.3
<i>Hydropsyche</i>	09020604016	10.67	37.33	4	CF	2.2	7.8



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		Actual	Adjusted			Actual	Adjusted
		<i>Hydropsyche bronta</i>	09020604016029			25.67	
<i>Hydropsyche morosa</i>	09020604016030	1.00			--	0.2	
<i>Rhyacophila</i>	09020605019	0.33	0.67	2	PR	0.1	0.1
<i>Rhyacophila mainensis</i>	09020605019069	0.33			--	0.1	
<i>Pycnopsyche</i>	09020610049	2.33	2.33	4	SH	0.5	0.5
<i>Mystacides</i>	09020618075		0.33	4	CG		0.1
<i>Mystacides sepulchralis</i>	09020618075147	0.33			--	0.1	
<i>Oecetis</i>	09020618078	0.33	0.33	8	PR	0.1	0.1
<i>Apatania</i>	09020619061	0.67	0.67		SC	0.1	0.1
<i>Nigronia</i>	09020701003		1.00	0	PR		0.2
<i>Nigronia serricornis</i>	09020701003003	1.00			--	0.2	
<i>Sialis</i>	09020702004	1.67	1.67	4	PR	0.3	0.3
<i>Antocha</i>	09021001004	0.67	0.67	3	CG	0.1	0.1
<i>Ablabesmyia</i>	09021011001	0.33	0.33	8	PR	0.1	0.1
<i>Labrundinia</i>	09021011008		4.00	7	PR		0.8
<i>Labrundinia pilosella</i>	09021011008022	4.00			--	0.8	
<i>Thienemannimyia</i>	09021011020		16.33	3	PR		3.4
<i>Thienemannimyia group</i>	09021011020041	16.33			--	3.4	
<i>Zavrelimyia</i>	09021011022	2.00	2.00	8	PR	0.4	0.4
<i>Pagastia</i>	09021011025	0.33	0.33	1	--	0.1	0.1
<i>Cricotopus</i>	09021011037	4.00	28.00	7	SH	0.8	5.8
<i>Cricotopus bicinctus</i>	09021011037057	24.00			--	5.0	
<i>Parakiefferiella</i>	09021011052	1.33	1.33		CG	0.3	0.3
<i>Thienemanniella</i>	09021011062	5.33	5.33	6	CG	1.1	1.1
<i>Micropsectra</i>	09021011070	13.33	13.33	7	CG	2.8	2.8
<i>Paratanytarsus</i>	09021011071	1.33	1.33	6	--	0.3	0.3
<i>Rheotanytarsus</i>	09021011072		4.00	6	CF		0.8
<i>Rheotanytarsus exiguus group</i>	09021011072127	4.00			CF	0.8	
<i>Stempellinella</i>	09021011074	4.00	4.00	2	--	0.8	0.8
<i>Sublettea</i>	09021011075		2.67		--		0.6
<i>Sublettea coffmani</i>	09021011075131	2.67			--	0.6	
<i>Tanytarsus</i>	09021011076	117.00	117.00	6	CF	24.4	24.4
<i>Dicrotendipes</i>	09021011085	13.33	13.33	8	CG	2.8	2.8
<i>Microtendipes</i>	09021011094		42.67	6	CF		8.9
<i>Microtendipes pedellus group</i>	09021011094166	29.33			--	6.1	
<i>Microtendipes rydalensis group</i>	09021011094168	13.33			--	2.8	
<i>Phaenopsectra</i>	09021011101		1.33	7	SC		0.3
<i>Phaenopsectra obediens group</i>	09021011101180	1.33			--	0.3	



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<i>Polypedilum</i>	09021011102		1.33	6	SH		0.3
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.3	
<i>Hemerodromia</i>	09021016057	3.33	3.33	3	PR	0.7	0.7
<i>Psephenus</i>	09021108058		4.00	4	SC		0.8
<i>Psephenus herricki</i>	09021108058028	4.00			--	0.8	
<i>Ectopria</i>	09021109059	0.67	0.67	5	SC	0.1	0.1
<i>Dubiraphia</i>	09021113064	82.00	82.00	6	--	17.1	17.1
<i>Optioservus</i>	09021113067	1.67	1.67	3	SC	0.3	0.3
<i>Promoresia</i>	09021113069		3.33		--		0.7
<i>Promoresia elegans</i>	09021113069051	1.67			--	0.3	
<i>Promoresia tardella</i>	09021113069052	1.67			--	0.3	
<i>Stenelmis</i>	09021113070	0.67	0.67	5	SC	0.1	0.1
<i>Torrenticola</i>	09030104001	0.33	0.33		--	0.1	0.1
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.1	0.1