



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

**Station Information**

<b>Station Number:</b> S-1021	River Basin:	St. John	
Waterbody:	Cowett Brook - Station 1021	HUC8 Name:	Aroostook
Town:	Presque Isle	Latitude:	46° 42' 21.635" N
Directions:	30 M UPSTREAM OF FORT FAIRFIELD RD (ROUTE 167/163)	Longitude:	67° 57' 20.977" W
		Stream Order:	1

**Sample Information**

<b>Log Number:</b> 2730	Type of Sample:	ROCK BAG	Date Deployed:	7/10/2019	
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/6/2019

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> NA	Date:	1/4/2021
Model Result with $P \geq 0.6$ :	NA	<b>Reason for Determination:</b>	Model
Date Last Calculated:	12/23/2020	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.00
Class B	0.00	Non-Attainment	1.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.01
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	0.99

**Model Variables**

01 Total Mean Abundance	363.33	18 Relative Abundance Ephemeroptera	0.01
02 Generic Richness	32.00	19 EPT Generic Richness	5.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	9.67
04 Ephemeroptera Mean Abundance	5.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.31	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	2.00
06 Hilsenhoff Biotic Index	5.52	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.27	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.47	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	1.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.33		
13 Relative Abundance - Oligochaeta	0.67		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	3.33		
17 Chironomini Abundance (Family Functional Group)	0.00		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Ophidonais</i>	59.91
2	<i>Pseudodiamesa</i>	16.51
3	<i>Nais</i>	5.96
4	<i>Micropsectra</i>	2.66
5	<i>Diplocladius</i>	1.74



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

Waterbody Information - Deployment		Waterbody Information - Retrieval	
Temperature:	9.4 deg C	Temperature:	9.7 deg C
Dissolved Oxygen:	11.15 mg/l	Dissolved Oxygen:	12.11 mg/l
Dissolved Oxygen Saturation:	96.9 %	Dissolved Oxygen Saturation:	106.5 %
Specific Conductance:	461 uS/cm	Specific Conductance:	470 uS/cm
Velocity:	7 cm/s	Velocity:	6.1 cm/s
pH:	7.94	pH:	8.14
Wetted Width:	1.8 m	Wetted Width:	3 m
Bankfull Width:	3.25 m	Bankfull Width:	4 m
Depth:	45 cm	Depth:	20 cm

**Water Chemistry - 7/10/2019**

Nitrate + Nitrite As Nitrogen	4 mg/l	Nitrate As Nitrogen	4 mg/l
Nitrite As Nitrogen	<0.01 mg/l	Orthophosphate As Phosphorus	13 ug/l
Total Alkalinity	189 mg/l	Total Kjeldahl Nitrogen (organic A	0.2 mg/l
Total Phosphorus Mixed Forms (po	40 ug/l		

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Partly Open	Rolling	
Swamp Conifer			
Swamp Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Altered Hydrology	Above Road Crossing	Boulder	5 %
		Gravel	55 %
		Rubble/Cobble	20 %
		Sand	10 %
		Silt	10 %

**Landcover Summary - 2004 Data**

**Sample Comments**



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Waterbody: Cowett Brook - Station 1021

Town: Presque Isle

**Log Number: 2730**

Subsample Factor: X1

Replicates: 3

Calculated: 12/23/2020

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
DugesIIDae	03010102	0.33	0.33		--	0.1	0.1
<i>Girardia</i>	03010102002	0.33	0.33		--	0.1	0.1
Enchytraeidae	08020201	0.33	0.33		--	0.1	0.1
<i>Chaetogaster</i>	08020202002	1.33	1.33		--	0.4	0.4
<i>Nais</i>	08020202009	21.67	21.67		CG	6.0	6.0
<i>Ophidonais</i>	08020202010		217.67		CG		59.9
<i>Ophidonais serpentina</i>	08020202010001	217.67			--	59.9	
Lumbricidae	08020205	3.00	3.00		--	0.8	0.8
Aeshnidae	09020301	1.00	1.00		--	0.3	0.3
<i>Baetis</i>	09020401001		5.33	4	CG		1.5
<i>Baetis flavistriga</i>	09020401001004	3.00			--	0.8	
<i>Baetis tricaudatus</i>	09020401001012	2.33			--	0.6	
<i>Hydropsyche</i>	09020604016	1.00	1.00	4	CF	0.3	0.3
<i>Rhyacophila</i>	09020605019		0.33	2	PR		0.1
<i>Rhyacophila fuscula</i>	09020605019060	0.33			PR	0.1	
<i>Glyphopsyche</i>	09020610059		0.67	1	--		0.2
<i>Glyphopsyche irrorata</i>	09020610059119	0.67			--	0.2	
<i>Psychoglypha</i>	09020610060		3.00	0	SH		0.8
<i>Psychoglypha subborealis</i>	09020610060120	3.00			--	0.8	
<i>Paramerina</i>	09021011013	2.33	2.33		--	0.6	0.6
<i>Procladius</i>	09021011015	0.33	0.33	9	PR	0.1	0.1
<i>Thienemannimyia</i>	09021011020		0.67	3	PR		0.2
<i>Thienemannimyia group</i>	09021011020041	0.67			--	0.2	
<i>Pagastia</i>	09021011025	2.00	2.00	1	--	0.6	0.6
<i>Pseudodiamesa</i>	09021011028	60.00	60.00		CG	16.5	16.5
<i>Brillia</i>	09021011033	4.67	4.67	5	SH	1.3	1.3
<i>Chaetocladius</i>	09021011035	1.00	1.00	6	CG	0.3	0.3
<i>Corynoneura</i>	09021011036	0.33	0.33	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		2.00	7	SH		0.6
<i>Cricotopus bicinctus</i>	09021011037057	2.00			--	0.6	
<i>Diplocladius</i>	09021011038	6.33	6.33	8	CG	1.7	1.7
<i>Eukiefferiella</i>	09021011041		3.67	8	CG		1.0
<i>Eukiefferiella claripennis group</i>	09021011041075	3.67			--	1.0	
<i>Orthocladius</i>	09021011050	1.33	1.33	6	CG	0.4	0.4
<i>Thienemanniella</i>	09021011062	0.67	0.67	6	CG	0.2	0.2
<i>Tvetenia</i>	09021011065		3.33	5	CG		0.9
<i>Tvetenia paucunca</i>	09021011065114	3.33			--	0.9	



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		Actual	Adjusted			Actual	Adjusted
<i>Micropsectra</i>	09021011070	9.67	9.67	7	CG	2.7	2.7
<i>Agabus</i>	09021103016	1.00	1.00		PR	0.3	0.3
Ostracoda	0906	2.33	2.33			0.6	0.6
<i>Stagnicola</i>	10010201025	4.33	4.33		--	1.2	1.2
<i>Gyraulus</i>	10010203029	0.67	1.33		SC	0.2	0.4
<i>Gyraulus parvus</i>	10010203029057	0.67			--	0.2	