



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

Station Information

Station Number: S-1021
Waterbody: Cowett Brook - Station 1021
Town: Presque Isle
Directions: 30 M UPSTREAM OF FORT FAIRFIELD RD (ROUTE 167/163)

River Basin: St. John
HUC8 Name: Aroostook
Latitude: 46° 42' 21.635" N
Longitude: 67° 57' 20.977" W
Stream Order: 1

Sample Information

Log Number: 2276
Subsample Factor: X4
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/22/2014
Date Retrieved: 8/19/2014

Classification Attainment

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

Model Probabilities

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

Model Variables

01 Total Mean Abundance	629.33	18 Relative Abundance Ephemeroptera	0.43
02 Generic Richness	21.00	19 EPT Generic Richness	3.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	8.00
04 Ephemeroptera Mean Abundance	270.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.86	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	30.67
06 Hilsenhoff Biotic Index	5.32	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.47	28 EP Generic Richness/14	0.14
08 Relative Generic Richness Diptera	0.62	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	0.23		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.04		
15 Perlidae Mean Abundance (Family	0.00		
Functional Group)			
16 Tanypodinae Mean Abundance	0.00		
(Family Functional Group)			
17 Chironomini Abundance (Family	1.33		
Functional Group)			

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Baetis</i>	40.25
2	<i>Diplocladius</i>	19.70
3	<i>Prodiamesa</i>	10.59
4	<i>Eukiefferiella</i>	8.26
5	<i>Cricotopus</i>	4.87



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	10 deg C
Dissolved Oxygen:	10.3 mg/l
Specific Conductance:	511 uS/cm
Velocity:	42 cm/s
pH:	6.88
Wetted Width:	4.1 m
Bankfull Width:	6.1 m
Depth:	25 cm

Waterbody Information - Retrieval

Temperature:	10.9 deg C
Dissolved Oxygen:	10.29 mg/l
Specific Conductance:	510 uS/cm
Velocity:	33 cm/s
pH:	6.96
Wetted Width:	4.2 m
Bankfull Width:	6.1 m
Depth:	17 cm

Water Chemistry - 7/8/2014

Nitrate+nitrite As N	0.4 mg/l	Total Phosphorus	55 ug/l
Total Kjeldahl Nitrogen	0.3 mg/l	Orthophosphate As Phosphorus	32 ug/l
Total Alkalinity	187 mg/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Partly Open	Rolling
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Above Road Crossing	Boulder 5 %
		Gravel 60 %
		Rubble/Cobble 15 %
		Sand 20 %

Landcover Summary - 2004 Data

Sample Comments

8/19 - PH METER ACTING UP. NMRO METER USED FOR DO, TEMP AND SPC.



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Aquatic Life Taxonomic Inventory Report

Station Number: S-1021	Waterbody: Cowett Brook - Station 1021	Town: Presque Isle
Log Number: 2276	Subsample Factor: X4	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
Turbellaria	0301	8.00	8.00		--	1.3	1.3
Tubificida	080202	1.33	1.33		--	0.2	0.2
<i>Nais</i>	08020202009		4.00		CG		0.6
<i>Nais communis</i>	08020202009005	4.00			--	0.6	
<i>Ophidonais</i>	08020202010		17.33		CG		2.8
<i>Ophidonais serpentina</i>	08020202010001	17.33			--	2.8	
Lumbricidae	08020205	4.00	4.00		--	0.6	0.6
Baetidae	09020401	17.33	17.33		--	2.8	2.8
<i>Baetis</i>	09020401001	76.00	253.33	4	CG	12.1	40.3
<i>Baetis flavistriga</i>	09020401001004	21.33			--	3.4	
<i>Baetis tricaudatus</i>	09020401001012	156.00			--	24.8	
<i>Psychoglypha</i>	09020610060		2.67	0	SH		0.4
<i>Psychoglypha subborealis</i>	09020610060120	2.67			--	0.4	
<i>Dicranota</i>	09021001005	6.67	6.67	3	PR	1.1	1.1
<i>Prodiamesa</i>	09021011031	66.67	66.67	3	CG	10.6	10.6
<i>Brillia</i>	09021011033		6.67	5	SH		1.1
<i>Brillia parva</i>	09021011033050	6.67			--	1.1	
<i>Cricotopus</i>	09021011037	1.33	30.67	7	SH	0.2	4.9
<i>Cricotopus bicinctus</i>	09021011037057	22.67			--	3.6	
<i>Cricotopus annulator complex</i>	09021011037074	6.67			--	1.1	
<i>Diplocladius</i>	09021011038		124.00	8	CG		19.7
<i>Diplocladius cultriger</i>	09021011038001	124.00			--	19.7	
<i>Eukiefferiella</i>	09021011041	28.00	52.00	8	CG	4.4	8.3
<i>Eukiefferiella claripennis group</i>	09021011041075	24.00			--	3.8	
<i>Parakiefferiella</i>	09021011052		1.33		CG		0.2
<i>Parakiefferiella coronata</i>	09021011052002	1.33			--	0.2	
<i>Parametriocnemus</i>	09021011053	1.33	2.67	5	CG	0.2	0.4
<i>Parametriocnemus sp. F Epler</i>	09021011053101	1.33			--	0.2	
<i>Thienemanniella</i>	09021011062		1.33	6	CG		0.2
<i>Thienemanniella boltoni</i>	09021011062113	1.33			--	0.2	
<i>Tvetenia</i>	09021011065		1.33	5	CG		0.2
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.2	
<i>Micropsectra</i>	09021011070		8.00	7	CG		1.3
<i>Micropsectra polita</i>	09021011070124	8.00		7	--	1.3	
<i>Polypedilum</i>	09021011102		1.33	6	SH		0.2
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.2	
<i>Simulium</i>	09021012047		10.67	4	CF		1.7
<i>Simulium vittatum</i>	09021012047064	10.67			--	1.7	



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		Actual	Adjusted			Actual	Adjusted
<i>Lymnaea</i>	10010201022		8.00		SC		1.3
<i>Lymnaea columella</i>	10010201022038	8.00			--	1.3	