



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

**Station Information**

<b>Station Number:</b> S-733	River Basin:	St. John
Waterbody: Coloney Brook - Station 733	HUC8 Name:	Aroostook
Town: Fort Fairfield	Latitude:	46 51 20.95 N
Directions: 29 M BELOW MARTIN RD CULVERT	Longitude:	67 47 59.99 W
	Stream Order:	2

**Sample Information**

<b>Log Number:</b> 2752	Type of Sample: ROCK BAG	Date Deployed: 7/9/2019
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/5/2019

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> A	Date: 11/12/2019
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 11/5/2019	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.52	Class A, B, or C	1.00
Class B	0.46	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.86
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.14

**Model Variables**

01 Total Mean Abundance	537.00	18 Relative Abundance Ephemeroptera	0.25
02 Generic Richness	49.00	19 EPT Generic Richness	18.00
03 Plecoptera Mean Abundance	6.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	9.33
04 Ephemeroptera Mean Abundance	135.00	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	3.28	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	9.33
06 Hilsenhoff Biotic Index	4.13	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.71
07 Relative Abundance - Chironomidae	0.32	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	178.67		
11 <i>Cheumatopsyche</i> Abundance	0.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	15.00		
17 Chironomini Abundance (Family Functional Group)	11.33		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	33.27
2	<i>Baetis</i>	21.27
3	<i>Rheotanytarsus</i>	14.28
4	<i>Pagastia</i>	6.27
5	<i>Simulium</i>	4.47



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

Waterbody Information - Deployment		Waterbody Information - Retrieval	
Temperature:	15.3 deg C	Temperature:	17.4 deg C
Dissolved Oxygen:	10.7 mg/l	Dissolved Oxygen:	13.18 mg/l
Dissolved Oxygen Saturation:	107.2 %	Dissolved Oxygen Saturation:	137.8 %
Specific Conductance:	408.1 uS/cm	Specific Conductance:	400.3 uS/cm
Velocity:	27.4 cm/s	Velocity:	18.3 cm/s
pH:	8.27	pH:	8.62
Wetted Width:	6.2 m	Wetted Width:	5.3 m
Bankfull Width:	7 m	Bankfull Width:	7.7 m
Depth:	31 cm	Depth:	24 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Cultivated	Partly Open	Rolling	
Pasture			
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Agricultural Runoff	Below Agriculture NPS	Boulder	15 %
Nutrients		Gravel	35 %
Sedimentation		Rubble/Cobble	40 %
		Sand	10 %

**Landcover Summary - 2004 Data**

Total Area (ac)	4549	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.2	Wetland %	6.0	Tilled Agriculture %	70.7
		Low Int. Dev. %	2.0	Upland Woody %	20.8	Grassland %	0.3
		Development %	2.2	Natural %	26.8	Human Altered %	73.2
						Impervious %	1.5
Total Land (ac)	4549	High Int. Dev. %	0.0	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.2	Wetland %	6.0	Tilled Agriculture %	70.7
		Low Int. Dev. %	2.0	Upland Woody %	20.8	Grassland %	0.3
		Development %	2.2	Natural %	26.8	Human Altered %	73.2
						Impervious %	1.5

**Sample Comments**

SLIMY SCULPINS (~7) IN SEIVE BUCKETS/DIP NETS



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Waterbody: Coloney Brook - Station 733

Town: Fort Fairfield

**Log Number: 2752**

Subsample Factor: X1

Replicates: 3

Calculated: 11/5/2019

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
<i>Hydra</i>	02010101001	0.33	0.33		PR	0.1	0.1
<i>Erpobdella</i>	08030203002		0.33		--		0.1
<i>Erpobdella obscura</i>	08030203002006	0.33			--	0.1	
<i>Paracapnia</i>	09020203018	5.67	5.67	1	SH	1.1	1.1
<i>Leuctra</i>	09020204020	0.67	0.67	0	SH	0.1	0.1
<i>Boyeria</i>	09020301004		0.33	2	PR		0.1
<i>Boyeria grafiana</i>	09020301004011	0.33			--	0.1	
Baetidae	09020401	4.00			--	0.7	
<i>Baetis</i>	09020401001		114.22	4	CG		21.3
<i>Baetis flavistriga</i>	09020401001004	61.00			--	11.4	
<i>Baetis tricaudatus</i>	09020401001012	49.67			--	9.2	
<i>Centroptilum</i>	09020401003	10.00	10.32	2	CG	1.9	1.9
<i>Acerpenna</i>	09020401007		3.10	5	CG		0.6
<i>Acerpenna macdunnoughi</i>	09020401007001	3.00			--	0.6	
<i>Acentrella</i>	09020401008		0.34	3	CG		0.1
<i>Acentrella turbida</i>	09020401008021	0.33			--	0.1	
<i>Dipheter</i>	09020401013		0.69		--		0.1
<i>Dipheter hageni</i>	09020401013001	0.67			--	0.1	
Heptageniidae	09020402	0.33			--	0.1	
<i>Heptagenia</i>	09020402010	4.67	4.94	2	SC	0.9	0.9
<i>Leucrocuta</i>	09020402011	0.33	0.35	1	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	0.67	0.71	4	SC	0.1	0.1
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	0.1	0.1
Gerridae	09020506	0.33	0.33		--	0.1	0.1
<i>Dolophilodes</i>	09020601001		0.33	0	CF		0.1
<i>Dolophilodes distincta</i>	09020601001001	0.33			--	0.1	
<i>Chimarra</i>	09020601003		0.33	2	CF		0.1
<i>Chimarra aterrima</i>	09020601003002	0.33			--	0.1	
Hydropsychidae	09020604				--		
<i>Cheumatopsyche</i>	09020604015	0.67	0.67	5	CF	0.1	0.1
<i>Hydropsyche</i>	09020604016	37.67	178.67	4	CF	7.0	33.3
<i>Hydropsyche morosa</i>	09020604016030	5.00			--	0.9	
<i>Hydropsyche slossonae</i>	09020604016031	3.00			--	0.6	
<i>Hydropsyche sparna</i>	09020604016032	133.00			--	24.8	
<i>Rhyacophila</i>	09020605019	0.33	2.00	2	PR	0.1	0.4
<i>Rhyacophila fuscula</i>	09020605019060	1.33			PR	0.2	
<i>Rhyacophila minora</i>	09020605019063	0.33			PR	0.1	



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Town: Fort Fairfield  
Replicates: 3  
Calculated: 11/5/2019

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Glossosoma</i>	09020606020	2.00	2.00	0	SC	0.4	0.4
<i>Lepidostoma</i>	09020611064	1.33	1.33	1	SH	0.2	0.2
Chironomidae	09021011				--		
<i>Nilotanytus</i>	09021011012		2.67	6	PR		0.5
<i>Nilotanytus fimbriatus</i>	09021011012027	2.67			--	0.5	
<i>Thienemannimyia</i>	09021011020		4.67	3	PR		0.9
<i>Thienemannimyia group</i>	09021011020041	4.67			--	0.9	
<i>Trissopelopia</i>	09021011021	5.67	5.67		PR	1.1	1.1
<i>Zavrelimyia</i>	09021011022	2.00	2.00	8	PR	0.4	0.4
<i>Pagastia</i>	09021011025	33.67	33.67	1	--	6.3	6.3
<i>Brillia</i>	09021011033	1.33	1.33	5	SH	0.2	0.2
<i>Cricotopus</i>	09021011037			7	SH		
<i>Nanocladius</i>	09021011049	3.00	3.00	3	CG	0.6	0.6
<i>Thienemanniella</i>	09021011062	1.33	1.33	6	CG	0.2	0.2
<i>Tvetenia</i>	09021011065		9.33	5	CG		1.7
<i>Tvetenia paucunca</i>	09021011065114	9.33			--	1.7	
<i>Micropsectra</i>	09021011070	9.33	9.33	7	CG	1.7	1.7
<i>Rheotanytarsus</i>	09021011072		76.67	6	CF		14.3
<i>Rheotanytarsus exiguus group</i>	09021011072127	1.67			CF	0.3	
<i>Rheotanytarsus pellucidus</i>	09021011072128	75.00			CF	14.0	
<i>Stempellinella</i>	09021011074	1.33	1.33	2	--	0.2	0.2
<i>Tanytarsus</i>	09021011076	8.67	8.67	6	CF	1.6	1.6
<i>Microtendipes</i>	09021011094	1.33	2.67	6	CF	0.2	0.5
<i>Microtendipes rydalensis group</i>	09021011094168	1.33			--	0.2	
<i>Polypedilum</i>	09021011102		8.67	6	SH		1.6
<i>Polypedilum aviceps</i>	09021011102181	7.33			--	1.4	
<i>Polypedilum tritum</i>	09021011102191	1.33			--	0.2	
<i>Simulium</i>	09021012047	24.00	24.00	4	CF	4.5	4.5
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Neoplasta</i>	09021016064	1.00	1.00		PR	0.2	0.2
<i>Dubiraphia</i>	09021113064	2.00	2.00	6	--	0.4	0.4
<i>Optioservus</i>	09021113067		2.33	3	SC		0.4
<i>Optioservus ovalis</i>	09021113067046	2.33			--	0.4	
Acariformes	090301	0.33	0.33		--	0.1	0.1
<i>Hygrobates</i>	09030102001	0.33	0.33		--	0.1	0.1
<i>Atractides</i>	09030102002	0.67	0.67		--	0.1	0.1
<i>Torrenticola</i>	09030104001	0.33	0.33		--	0.1	0.1
<i>Testudacarus</i>	09030104002	0.33	0.33		--	0.1	0.1



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		Actual	Adjusted			Actual	Adjusted
<i>Lebertia</i>	09030105001	0.33	0.33		--	0.1	0.1
<i>Sperchon</i>	09030107001	0.67	0.67		--	0.1	0.1
<i>Physa</i>	10010202027	5.33	5.33		SC	1.0	1.0