



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

**Station Information**

<b>Station Number:</b> S-1018	River Basin:	St. John
Waterbody: Amsden Brook - Station 1018	HUC8 Name:	Aroostook
Town: Fort Fairfield	Latitude:	46° 48' 34.213" N
Directions: 20 M UPSTREAM OF NORTH CARIBOU RD.	Longitude:	67° 52' 21.560" W
	Stream Order:	2

**Sample Information**

<b>Log Number:</b> 2754	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: 4/1/2020
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 3/30/2020	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.98	Class A, B, or C	1.00
Class B	0.02	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.99
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.01

**Model Variables**

01 Total Mean Abundance	133.67	18 Relative Abundance Ephemeroptera	0.13
02 Generic Richness	44.00	19 EPT Generic Richness	12.00
03 Plecoptera Mean Abundance	6.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	8.97
04 Ephemeroptera Mean Abundance	17.33	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.85	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	3.79
06 Hilsenhoff Biotic Index	1.96	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.22	28 EP Generic Richness/14	0.43
08 Relative Generic Richness Diptera	0.45	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	0.60		
13 Relative Abundance - Oligochaeta	0.02		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	3.10		
17 Chironomini Abundance (Family Functional Group)	1.72		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Psychoglypha</i>	37.64
2	<i>Micropsectra</i>	6.71
3	<i>Paraleptophlebia</i>	5.99
4	<i>Dicranota</i>	5.99
5	<i>Anafroptilum (centroptilum)</i>	4.74



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature: 14.2 deg C  
Dissolved Oxygen: 10.62 mg/l  
Dissolved Oxygen Saturation: 103.4 %  
Specific Conductance: 401.7 uS/cm  
Velocity: 3 cm/s  
pH: 8.2  
Wetted Width: 3 m  
Bankfull Width: 3.6 m  
Depth: 33 cm

**Waterbody Information - Retrieval**

**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	5 %
Nutrients		Clay	5 %
Sedimentation		Gravel	30 %
		Rubble/Cobble	25 %
		Sand	25 %
		Silt	10 %

**Landcover Summary - 2004 Data**

**Sample Comments**



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	5.00	5.00		PR	3.7	3.7
Oligochaeta	0802	1.67	1.67		--	1.2	1.2
Lumbriculidae	08020101	0.67	0.67		--	0.5	0.5
Naididae	08020202	0.33	0.33		--	0.2	0.2
<i>Nais</i>	08020202009	0.67	0.67		CG	0.5	0.5
<i>Glossiphonia</i>	08030101004		1.00		--		0.7
<i>Glossiphonia elegans</i>	08030101004001	1.00			--	0.7	
<i>Placobdella</i>	08030101006		0.67		--		0.5
<i>Placobdella ornata</i>	08030101006002	0.67			--	0.5	
<i>Paracapnia</i>	09020203018	1.00	1.00	1	SH	0.7	0.7
<i>Leuctra</i>	09020204020	5.67	5.67	0	SH	4.2	4.2
<i>Sympetrum</i>	09020306041	0.33	0.33	10	PR	0.2	0.2
<i>Baetis</i>	09020401001		2.67	4	CG		2.0
<i>Baetis flavistriga</i>	09020401001004	0.33			--	0.2	
<i>Baetis tricaudatus</i>	09020401001012	2.33			--	1.7	
<i>Anafroptilum (Centroptilum)</i>	09020401016	6.33	6.33	2	CG	4.7	4.7
<i>Paraleptophlebia</i>	09020406026		8.00	1	CG		6.0
<i>Paraleptophlebia debilis</i>	09020406026079	8.00		1	CG	6.0	
<i>Dannella</i>	09020410033		0.33	2	CG		0.2
<i>Dannella simplex</i>	09020410033097	0.33			CG	0.2	
<i>Hydropsyche</i>	09020604016	0.33	1.00	4	CF	0.2	0.7
<i>Hydropsyche sparna</i>	09020604016032	0.67			--	0.5	
<i>Hydroptila</i>	09020607026	0.33	0.33	6	P	0.2	0.2
Limnephilidae	09020610	1.00			--	0.7	
<i>Hesperophylax</i>	09020610054		0.34	3	SH		0.3
<i>Hesperophylax designatus</i>	09020610054110	0.33			--	0.2	
<i>Glyphopsyche</i>	09020610059		0.68	1	--		0.5
<i>Glyphopsyche irrorata</i>	09020610059119	0.67			--	0.5	
<i>Psychoglypha</i>	09020610060		50.31	0	SH		37.6
<i>Psychoglypha subborealis</i>	09020610060120	49.33			--	36.9	
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.2	0.2
<i>Dicranota</i>	09021001005	8.00	8.00	3	PR	6.0	6.0
<i>Pericoma</i>	09021002016	1.00	1.00	4	CG	0.7	0.7
Chironomidae	09021011	1.00			--	0.7	
<i>Thienemannimyia</i>	09021011020		2.76	3	PR		2.1
<i>Thienemannimyia group</i>	09021011020041	2.67			--	2.0	
<i>Trissopelopia</i>	09021011021	0.33	0.34		PR	0.2	0.3



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		Actual	Adjusted			Actual	Adjusted
		<i>Pagastia</i>	09021011025			1.33	1.38
<i>Prodiamesa</i>	09021011031	0.67	0.69	3	CG	0.5	0.5
<i>Acricotopus</i>	09021011032	0.67	0.69	10	--	0.5	0.5
<i>Cricotopus</i>	09021011037	0.67	0.69	7	SH	0.5	0.5
<i>Heterotrissocladius</i>	09021011044		3.45	0	CG		2.6
<i>Heterotrissocladius marcidus</i>	09021011044083	3.33			--	2.5	
<i>Parametriocnemus</i>	09021011053	4.33	4.48	5	CG	3.2	3.4
<i>Synorthocladius</i>	09021011061	0.67	0.69	2	CG	0.5	0.5
<i>Tvetenia</i>	09021011065		0.34	5	CG		0.3
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.2	
<i>Micropsectra</i>	09021011070	8.67	8.97	7	CG	6.5	6.7
<i>Rheotanytarsus</i>	09021011072		0.34	6	CF		0.3
<i>Rheotanytarsus exiguus group</i>	09021011072127	0.33			CF	0.2	
<i>Stempellinella</i>	09021011074	0.33	0.34	2	--	0.2	0.3
<i>Tanytarsus</i>	09021011076	3.00	3.10	6	CF	2.2	2.3
<i>Microtendipes</i>	09021011094		1.72	6	CF		1.3
<i>Microtendipes pedellus group</i>	09021011094166	1.67			--	1.2	
Simuliidae	09021012				--		
<i>Simulium</i>	09021012047	1.00	1.00	4	CF	0.7	0.7
Empididae	09021016			6	--		
<i>Neoplasta</i>	09021016064	0.33	0.33		PR	0.2	0.2
Muscidae	09021022	1.67	1.67	6	--	1.2	1.2
Dytiscidae	09021103	0.67	0.67		--	0.5	0.5
<i>Dubiraphia</i>	09021113064	0.67	0.67	6	--	0.5	0.5
<i>Lebertia</i>	09030105001	0.33	0.33		--	0.2	0.2
<i>Fossaria</i>	10010201021	0.33	0.33		--	0.2	0.2
<i>Physa</i>	10010202027	2.33	2.33		SC	1.7	1.7