



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

Station Information

Station Number: S-1026	River Basin:	St. John	
Waterbody:	Hockenhull Brook - Station 1026	HUC8 Name:	Aroostook
Town:	Fort Fairfield	Latitude:	46° 46' 50.682" N
Directions:	21 M FROM ROAD (PARALLEL TO ROAD), UPSTREAM OF ROUTE 161 (SOUTH CARIBOU RD)	Longitude:	67° 50' 55.491" W
		Stream Order:	3

Sample Information

Log Number: 2732	Type of Sample:	ROCK BAG	Date Deployed:	7/10/2019	
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/6/2019

Classification Attainment

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

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.64	Class C	0.01
Class B	0.35	NA	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	697.33	18 Relative Abundance Ephemeroptera	0.28
02 Generic Richness	68.00	19 EPT Generic Richness	24.00
03 Plecoptera Mean Abundance	5.67	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	3.56
04 Ephemeroptera Mean Abundance	194.67	23 Relative Generic Richness- Plecoptera	0.07
05 Shannon-Wiener Generic Diversity	4.31	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	34.07
06 Hilsenhoff Biotic Index	4.66	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	6.00
07 Relative Abundance - Chironomidae	0.26	28 EP Generic Richness/14	1.21
08 Relative Generic Richness Diptera	0.38	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	162.00		
11 <i>Cheumatopsyche</i> Abundance	1.33		
12 EPT Generic Richness/ Diptera Generic Richness	0.92		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	25.62		
17 Chironomini Abundance (Family Functional Group)	73.30		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	23.23
2	<i>Tricorythodes</i>	19.60
3	<i>Dubiraphia</i>	5.21
4	<i>Polypedilum</i>	4.08
5	<i>Hydroptila</i>	4.06



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

Station Number: S-1026 Town: Fort Fairfield Date Deployed: 7/10/2019
Log Number: 2732 Waterbody: Hockenhull Brook - Station 1026 Date Retrieved: 8/6/2019

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 18.4 deg C
Dissolved Oxygen: 10.05 mg/l
Dissolved Oxygen Saturation: 106.4 %
Specific Conductance: 385.1 uS/cm
Velocity: 21.3 cm/s
pH: 8.29
Wetted Width: 4.91 m
Bankfull Width: 9.2 m
Depth: 68 cm

Waterbody Information - Retrieval

Temperature: 20.8 deg C
Dissolved Oxygen: 16.23 mg/l
Dissolved Oxygen Saturation: 181.3 %
Specific Conductance: 356.1 uS/cm
Velocity: 9.1 cm/s
pH: 8.78
Wetted Width: 3.8 m
Bankfull Width: 10.2 m
Depth: 58 cm

Water Chemistry - 7/10/2019

Nitrate + Nitrite As Nitrogen	1.1 mg/l	Nitrate As Nitrogen	1.1 mg/l
Nitrite As Nitrogen	<0.01 mg/l	Orthophosphate As Phosphorus	7 ug/l
Total Alkalinity	178 mg/l	Total Kjeldahl Nitrogen (organic A	0.3 mg/l
Total Phosphorus Mixed Forms (po	15 ug/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Open	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Altered Habitat	Above Road Crossing	Boulder	10 %
Altered Hydrology		Gravel	30 %
		Rubble/Cobble	40 %
		Sand	10 %
		Silt	10 %

Landcover Summary - 2004 Data

Sample Comments

SCULPIN, BLACKNOSE DACE & STICKLEBACK IN SIEVE BUCKET. STRONG UNKNOWN & MANURE ODOR.



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-1026

Waterbody: Hockenhull Brook - Station 1026

Town: Fort Fairfield

Log Number: 2732

Subsample Factor: X1

Replicates: 3

Calculated: 12/23/2020

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	16.00	16.00		PR	2.3	2.3
DugesIIDae	03010102	5.33	5.33		--	0.8	0.8
<i>Nais</i>	08020202009	1.00	1.33		CG	0.1	0.2
<i>Nais bretscheri</i>	08020202009004	0.33			--	0.0	
<i>Ophidonais</i>	08020202010		0.67		CG		0.1
<i>Ophidonais serpentina</i>	08020202010001	0.67			--	0.1	
<i>Glossiphonia</i>	08030101004		3.00		--		0.4
<i>Glossiphonia elegans</i>	08030101004001	3.00			--	0.4	
<i>Placobdella</i>	08030101006	0.67	0.67		--	0.1	0.1
<i>Leuctra</i>	09020204020	2.67	2.67	0	SH	0.4	0.4
<i>Pteronarcys</i>	09020205023	2.00	2.00	0	SH	0.3	0.3
<i>Isoperla</i>	09020207026	0.33	0.33	2	PR	0.0	0.0
<i>Sweltsa</i>	09020208040	0.33	0.33		PR	0.0	0.0
<i>Agnetina</i>	09020209050		0.33	2	PR		0.0
<i>Agnetina capitata</i>	09020209050152	0.33		2	PR	0.0	
<i>Baetis</i>	09020401001		21.00	4	CG		3.0
<i>Baetis flavistriga</i>	09020401001004	19.67			--	2.8	
<i>Baetis tricaudatus</i>	09020401001012	1.33			--	0.2	
<i>Centroptilum</i>	09020401003	2.00	2.00	2	CG	0.3	0.3
<i>Plauditius</i>	09020401012	0.33	0.33		CG	0.0	0.0
<i>Dipheter</i>	09020401013		6.00		--		0.9
<i>Dipheter hageni</i>	09020401013001	6.00			--	0.9	
<i>Heptagenia</i>	09020402010	0.67	0.67	2	SC	0.1	0.1
<i>Leucrocuta</i>	09020402011	6.00	6.00	1	SC	0.9	0.9
<i>Stenacron</i>	09020402014	3.67	9.67	7	SC	0.5	1.4
<i>Stenacron interpunctatum</i>	09020402014045	6.00			--	0.9	
<i>Maccaffertium</i>	09020402015	5.67	6.00	4	SC	0.8	0.9
<i>Maccaffertium vicarium</i>	09020402015055	0.33			--	0.0	
<i>Paraleptophlebia</i>	09020406026	2.67	2.67	1	CG	0.4	0.4
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.0	0.0
<i>Serratella</i>	09020410037		3.33	2	CG		0.5
<i>Serratella serrata</i>	09020410037123	1.67			--	0.2	
<i>Serratella serratoides</i>	09020410037124	1.67			--	0.2	
<i>Tricorythodes</i>	09020411038	136.67	136.67	4	CG	19.6	19.6
Hydropsychidae	09020604				--		
<i>Cheumatopsyche</i>	09020604015	1.33	1.33	5	CF	0.2	0.2
<i>Hydropsyche</i>	09020604016	46.67	162.00	4	CF	6.7	23.2



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-1026

Waterbody: Hockenhull Brook - Station 1026

Town: Fort Fairfield

Log Number: 2732

Subsample Factor: X1

Replicates: 3

Calculated: 12/23/2020

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche bronta</i>	09020604016029	43.67			--	6.3	
<i>Hydropsyche morosa</i>	09020604016030	18.67			--	2.7	
<i>Hydropsyche slossonae</i>	09020604016031	9.00			--	1.3	
<i>Hydropsyche sparna</i>	09020604016032	37.67			--	5.4	
<i>Hydropsyche betteni</i>	09020604016037	6.33			--	0.9	
<i>Glossosoma</i>	09020606020	1.67	1.67	0	SC	0.2	0.2
<i>Protoptila</i>	09020606022	0.67	0.67	1	SC	0.1	0.1
<i>Hydroptila</i>	09020607026	28.33	28.33	6	P	4.1	4.1
<i>Pycnopsyche</i>	09020610049	0.67	0.67	4	SH	0.1	0.1
<i>Mystacides</i>	09020618075	0.33	0.33	4	CG	0.0	0.0
Crambidae	09020905	0.67	0.67		SH	0.1	0.1
<i>Antocha</i>	09021001004	1.67	1.67	3	CG	0.2	0.2
Chironomidae	09021011	11.33			--	1.6	
<i>Ablabesmyia</i>	09021011001	7.33	7.83	8	PR	1.1	1.1
<i>Nilotanytus</i>	09021011012		0.71	6	PR		0.1
<i>Nilotanytus fimbriatus</i>	09021011012027	0.67			--	0.1	
<i>Pentaneura</i>	09021011014	0.67	0.71	6	PR	0.1	0.1
<i>Thienemannimyia</i>	09021011020		16.37	3	PR		2.3
<i>Thienemannimyia group</i>	09021011020041	15.33			--	2.2	
<i>Pagastia</i>	09021011025	5.33	5.69	1	--	0.8	0.8
<i>Corynoneura</i>	09021011036	2.67	2.85	7	CG	0.4	0.4
<i>Cricotopus</i>	09021011037	10.00	14.94	7	SH	1.4	2.1
<i>Cricotopus bicinctus</i>	09021011037057	4.00			--	0.6	
<i>Eukiefferiella</i>	09021011041		1.42	8	CG		0.2
<i>Eukiefferiella devonica group</i>	09021011041083	1.33			CG	0.2	
<i>Nanocladius</i>	09021011049			3	CG		
<i>Parakiefferiella</i>	09021011052	1.33	1.42		CG	0.2	0.2
<i>Parametriocnemus</i>	09021011053	0.67	0.71	5	CG	0.1	0.1
<i>Synorthocladius</i>	09021011061	1.33	1.42	2	CG	0.2	0.2
<i>Thienemanniella</i>	09021011062	8.00	8.54	6	CG	1.1	1.2
<i>Tvetenia</i>	09021011065		0.71	5	CG		0.1
<i>Tvetenia paucunca</i>	09021011065114	0.67			--	0.1	
<i>Cladotanytarsus</i>	09021011068	12.00	12.81	7	CG	1.7	1.8
<i>Paratanytarsus</i>	09021011071	1.33	1.42	6	--	0.2	0.2
<i>Rheotanytarsus</i>	09021011072		14.23	6	CF		2.0
<i>Rheotanytarsus exiguus group</i>	09021011072127	10.00			CF	1.4	
<i>Rheotanytarsus pellucidus</i>	09021011072128	3.33			CF	0.5	
<i>Stempellinella</i>	09021011074	4.00	4.27	2	--	0.6	0.6



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-1026 Waterbody: Hockenhull Brook - Station 1026 Town: Fort Fairfield
Log Number: 2732 Subsample Factor: X1 Replicates: 3 Calculated: 12/23/2020

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Tanytarsus</i>	09021011076	9.33	9.96	6	CF	1.3	1.4
<i>Dicrotendipes</i>	09021011085	3.33	3.56	8	CG	0.5	0.5
<i>Microtendipes</i>	09021011094		25.62	6	CF		3.7
<i>Microtendipes pedellus group</i>	09021011094166	24.00			--	3.4	
<i>Phaenopsectra</i>	09021011101		15.66	7	SC		2.2
<i>Phaenopsectra obediens group</i>	09021011101180	14.67			--	2.1	
<i>Polypedilum</i>	09021011102		28.47	6	SH		4.1
<i>Polypedilum aviceps</i>	09021011102181	10.00			--	1.4	
<i>Polypedilum flavum</i>	09021011102182	14.67			--	2.1	
<i>Polypedilum illinoense group</i>	09021011102185	1.33			--	0.2	
<i>Polypedilum tritum</i>	09021011102191	0.67			--	0.1	
<i>Simulium</i>	09021012047	0.33	0.33	4	CF	0.0	0.0
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.0	0.0
Empididae	09021016			6	--		
<i>Hemerodromia</i>	09021016057	2.67	2.67	3	PR	0.4	0.4
<i>Nebrioporus</i>	09021103034	2.00	2.00		PR	0.3	0.3
<i>Helophorus</i>	09021105034	0.33	0.33		SH	0.0	0.0
<i>Dubiraphia</i>	09021113064	36.33	36.33	6	--	5.2	5.2
<i>Optioservus</i>	09021113067	2.67	5.67	3	SC	0.4	0.8
<i>Optioservus fastiditus</i>	09021113067044	2.67			--	0.4	
<i>Optioservus ovalis</i>	09021113067046	0.33			--	0.0	
<i>Promoresia</i>	09021113069		7.67		--		1.1
<i>Promoresia elegans</i>	09021113069051	0.33			--	0.0	
<i>Promoresia tardella</i>	09021113069052	7.33			--	1.1	
<i>Hygrobates</i>	09030102001	2.67	2.67		--	0.4	0.4
<i>Lebertia</i>	09030105001	0.67	0.67		--	0.1	0.1
Gastropoda	1001	8.67	8.67		--	1.2	1.2
Lymnaeidae	10010201	0.33	0.33		--	0.0	0.0
<i>Physella</i>	10010202027	20.33	20.33		SC	2.9	2.9
Planorbidae	10010203	0.67			--	0.1	
<i>Gyraulus</i>	10010203029		3.05		SC		0.4
<i>Gyraulus parvus</i>	10010203029057	2.67			--	0.4	
<i>Helisoma</i>	10010203030	0.33	2.29		SC	0.0	0.3
<i>Helisoma anceps</i>	10010203030058	1.67			--	0.2	