



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

**Station Information**

<b>Station Number:</b> S-1111	River Basin:	Kennebec
Waterbody: Moose Brook - Station 1111	HUC8 Name:	Upper Kennebec
Town: Big Moose Twp	Latitude:	45 29 6.4 N
Directions: IN GREENVILLE, TURN LEFT ON TO ROUTE 6 AND FOLLOW IT 5 MILES TO NORTH ROAD. IN 0.4 MILES, TURN LEFT ON TO A WOODS ROAD.	Longitude:	69 40 18.66 W
	Stream Order:	3

**Sample Information**

<b>Log Number:</b> 2993	Type of Sample: ROCK BAG	Date Deployed: 7/26/2022
Subsample Factor: X1	Replicates: 2	Date Retrieved: 8/23/2022

**Classification Attainment**

<b>Statutory Class:</b> A	<b>Final Determination:</b> A	Date: 5/1/2023
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 4/12/2023	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.68	Class A, B, or C	1.00
Class B	0.31	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.94
Class A or B	1.00	Class B or C or Non-Attainment	0.06
Class C or Non-Attainment	0.00		

**Model Variables**

01 Total Mean Abundance	129.50	18 Relative Abundance Ephemeroptera	0.25
02 Generic Richness	40.00	19 EPT Generic Richness	19.00
03 Plecoptera Mean Abundance	16.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	40.00
04 Ephemeroptera Mean Abundance	32.00	23 Relative Generic Richness- Plecoptera	0.13
05 Shannon-Wiener Generic Diversity	4.17	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	3.00
06 Hilsenhoff Biotic Index	4.68	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	5.50
07 Relative Abundance - Chironomidae	0.48	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	4.00		
11 <i>Cheumatopsyche</i> Abundance	2.50		
12 EPT Generic Richness/ Diptera Generic Richness	1.46		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	1.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	3.50		
17 Chironomini Abundance (Family Functional Group)	3.50		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Micropsectra</i>	30.89
2	<i>Parametrioctenus</i>	8.11
3	<i>Sweltsa</i>	4.63
4	<i>Baetis</i>	4.63
5	<i>Isoperla</i>	4.25
6	<i>Maccaffertium</i>	4.25
7	<i>Ephemerella</i>	4.25



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**Log Number: 2993**      Waterbody: Moose Brook - Station 1111      Date Retrieved: 8/23/2022

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature:                      17.6 deg C  
Dissolved Oxygen:                9.75 mg/l  
Dissolved Oxygen Saturation:    105.9 %  
Specific Conductance:            40 uS/cm  
Velocity:                            5 cm/s  
pH:                                  7.49  
Wetted Width:                      4.6 m  
Bankfull Width:                    7.6 m  
Depth:                                49 cm

**Waterbody Information - Retrieval**

Temperature:                      17 deg C  
Dissolved Oxygen:                10.2 mg/l  
Dissolved Oxygen Saturation:    109.6 %  
Specific Conductance:            35.1 uS/cm  
Velocity:                            10 cm/s  
pH:                                  7.49  
Wetted Width:                      5.6 m  
Bankfull Width:                    7.6 m  
Depth:                                59 cm

**Water Chemistry - 7/26/2022**

Chloride	<1 mg/l	Nitrate + Nitrite As Nitrogen	0.09 mg/l
Nitrate As Nitrogen	0.09 mg/l	Nitrite As Nitrogen	<0.01 mg/l
Total Alkalinity	15 mg/l	Total Kjeldahl Nitrogen (organic A	<0.3 mg/l
Total Phosphorus Mixed Forms (po	11 ug/l		

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Conifer	Dense	Hilly	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Logging	Below Forestry NPS	Boulder	5 %
	Minimally Disturbed	Gravel	25 %
		Rubble/Cobble	45 %
		Sand	25 %

**Landcover Summary - 2004 Data**

**Sample Comments**



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		Calculated: 4/12/2023

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
Lumbriculidae	08020101	0.50	0.50		--	0.4	0.4
Enchytraeidae	08020201	0.50	0.50		--	0.4	0.4
<i>Leuctra</i>	09020204020	3.00	3.00	0	SH	2.3	2.3
Perlodidae	09020207	0.50	0.50		--	0.4	0.4
<i>Isoperla</i>	09020207026	5.50	5.50	2	PR	4.2	4.2
<i>Sweltsa</i>	09020208040	6.00	6.00		PR	4.6	4.6
<i>Agnatina</i>	09020209050		1.00	2	PR		0.8
<i>Agnatina capitata</i>	09020209050152	1.00		2	PR	0.8	
<i>Boyeria</i>	09020301004		1.00	2	PR		0.8
<i>Boyeria grafiana</i>	09020301004011	1.00			--	0.8	
<i>Baetis</i>	09020401001		6.00	4	CG		4.6
<i>Baetis flavistriga</i>	09020401001004	0.50			--	0.4	
<i>Baetis pluto</i>	09020401001009	1.50			--	1.2	
<i>Baetis tricaudatus</i>	09020401001012	4.00			--	3.1	
<i>Dipheter</i>	09020401013		0.50		--		0.4
<i>Dipheter hageni</i>	09020401013001	0.50			--	0.4	
<i>Rhithrogena</i>	09020402013	2.50	2.50	0	SC	1.9	1.9
<i>Stenacron</i>	09020402014	1.00	1.00	7	SC	0.8	0.8
<i>Maccaffertium</i>	09020402015	5.00	5.50	4	SC	3.9	4.2
<i>Maccaffertium vicarium</i>	09020402015055	0.50			--	0.4	
Leptophlebiidae	09020406	1.50			--	1.2	
<i>Habrophlebiodes</i>	09020406024		3.04	6	SC		2.3
<i>Habrophlebiodes americana</i>	09020406024073	2.50			--	1.9	
<i>Neoleptophlebia</i>	09020406027	4.50	5.46		--	3.5	4.2
<i>Ephemerella</i>	09020410035	5.00	5.50	1	CG	3.9	4.2
<i>Ephemerella aurivillii</i>	09020410035104	0.50			--	0.4	
<i>Eurylophella</i>	09020410036	2.50	2.50	3	CG	1.9	1.9
<i>Diplectrona</i>	09020604014		1.50	0	CF		1.2
<i>Diplectrona modesta</i>	09020604014025	1.50			--	1.2	
<i>Cheumatopsyche</i>	09020604015	2.50	2.50	5	CF	1.9	1.9
<i>Hydropsyche</i>	09020604016	1.50	4.00	4	CF	1.2	3.1
<i>Hydropsyche sparna</i>	09020604016032	1.50			--	1.2	
<i>Hydropsyche ventura</i>	09020604016033	1.00			--	0.8	
<i>Rhyacophila</i>	09020605019	1.00	2.50	2	PR	0.8	1.9
<i>Rhyacophila acutiloba</i>	09020605019056	1.50			PR	1.2	
<i>Lepidostoma</i>	09020611064	1.00	1.00	1	SH	0.8	0.8
<i>Nigronia</i>	09020701003		1.50	0	PR		1.2



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		Actual	Adjusted			Actual	Adjusted
<i>Nigronia serricornis</i>	09020701003003	1.50			--	1.2	
<i>Tipula</i>	09021001002	1.00	1.00	4	SH	0.8	0.8
<i>Dicranota</i>	09021001005	0.50	0.50	3	PR	0.4	0.4
<i>Ablabesmyia</i>	09021011001	0.50	0.50	8	PR	0.4	0.4
<i>Nilotanytus</i>	09021011012		1.00	6	PR		0.8
<i>Nilotanytus fimbriatus</i>	09021011012027	1.00			--	0.8	
<i>Thienemannimyia</i>	09021011020		2.00	3	PR		1.5
<i>Thienemannimyia group</i>	09021011020041	2.00			--	1.5	
<i>Parametriocnemus</i>	09021011053	10.50	10.50	5	CG	8.1	8.1
<i>Rheocricotopus</i>	09021011057	1.00	1.00	6	CG	0.8	0.8
<i>Synorthocladius</i>	09021011061	1.00	1.00	2	CG	0.8	0.8
<i>Tvetenia</i>	09021011065		0.50	5	CG		0.4
<i>Tvetenia paucunca</i>	09021011065114	0.50			--	0.4	
<i>Micropsectra</i>	09021011070	40.00	40.00	7	CG	30.9	30.9
<i>Rheotanytarsus</i>	09021011072		2.00	6	CF		1.5
<i>Rheotanytarsus pellucidus</i>	09021011072128	2.00			CF	1.5	
<i>Microtendipes</i>	09021011094		2.00	6	CF		1.5
<i>Microtendipes rydalensis group</i>	09021011094168	2.00			--	1.5	
<i>Polypedilum</i>	09021011102		1.50	6	SH		1.2
<i>Polypedilum aviceps</i>	09021011102181	0.50			--	0.4	
<i>Polypedilum tritum</i>	09021011102191	1.00			--	0.8	
<i>Optioservus</i>	09021113067		1.50	3	SC		1.2
<i>Optioservus tardella</i>	09021113067052	1.50			--	1.2	
<i>Oulimnius</i>	09021113068	0.50	0.50		--	0.4	0.4
<i>Stenelmis</i>	09021113070	0.50	0.50	5	SC	0.4	0.4
<i>Ferrissia</i>	10010204035		0.50		SC		0.4
<i>Ferrissia rivularis</i>	10010204035066	0.50			--	0.4	