



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

Station Information

Station Number: S-361	River Basin: Maine Coastal
Waterbody: Heath Brook - Station 361	HUC8 Name: Maine Coastal
Town: Tremont	Latitude: 44 16 34.06 N
Directions: BELOW SEAL COVE RD. CROSSING	Longitude: 68 21 59.94 W
	Stream Order: 1

Sample Information

Log Number: 3004	Type of Sample: ROCK BAG	Date Deployed: 8/15/2022
Subsample Factor: X1	Replicates: 3	Date Retrieved: 9/12/2022

Classification Attainment

Statutory Class: AA	Final Determination: B	Date: 5/11/2023
Model Result with $P \geq 0.6$: C	Reason for Determination: Best Professional Judgement	
Date Last Calculated: 4/6/2023	Comments: Raised to Class B based on community structure and sensitive taxa.	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.16	Class A, B, or C	1.00
Class B	0.16	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.17	Class A	0.03
Class C or Non-Attainment	0.83	Class B or C or Non-Attainment	0.97

Model Variables

01 Total Mean Abundance	131.33	18 Relative Abundance Ephemeroptera	0.43
02 Generic Richness	26.00	19 EPT Generic Richness	12.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	56.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.44	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	6.17
06 Hilsenhoff Biotic Index	3.00	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	17.00
07 Relative Abundance - Chironomidae	0.12	28 EP Generic Richness/14	0.14
08 Relative Generic Richness Diptera	0.31	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	1.67		
11 <i>Cheumatopsyche</i> Abundance	0.83		
12 EPT Generic Richness/ Diptera Generic Richness	1.50		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	3.67		
17 Chironomini Abundance (Family Functional Group)	1.00		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Paraleptophlebia</i>	29.70
2	<i>Cernotina</i>	14.21
3	<i>Maccaffertium</i>	12.94
4	<i>Stenelmis</i>	10.41
5	<i>Chimarra</i>	6.85



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Aquatic Life Classification Attainment Report**

Station Number: S-361 Town: Tremont Date Deployed: 8/15/2022
Log Number: 3004 Waterbody: Heath Brook - Station 361 Date Retrieved: 9/12/2022

Sample Collection and Processing Information

Sampling Organization: ACADIA NATIONAL PARK Taxonomist: LOTIC INC.

Waterbody Information - Deployment

Temperature: 22.907 deg C
 Dissolved Oxygen: 5.03 mg/l
 Dissolved Oxygen Saturation: 57.6 %
 Specific Conductance: 48.8 uS/cm
 Velocity: 10 cm/s
 pH: 5.76
 Wetted Width: 2 m
 Bankfull Width: 2.8 m
 Depth: 5.67 cm

Waterbody Information - Retrieval

Temperature: 20.718 deg C
 Dissolved Oxygen: 5.14 mg/l
 Dissolved Oxygen Saturation: 57.3 %
 Specific Conductance: 49.2 uS/cm
 Velocity: 10 cm/s
 pH: 5.19
 Wetted Width: 2.8 m
 Bankfull Width: 3.5 m
 Depth: 7.33 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Conifer	Dense	Flat
Swamp Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Below Wetland		Bedrock 10 %
		Boulder 5 %
		Clay 0 %
		Detritus 1 %
		Gravel 10 %
		Muck 0 %
		Rubble/Cobble 73 %
		Sand 1 %
	Silt 0 %	

Landcover Summary - 2004 Data

Total Area (ac) 628	High Int. Dev. % 0.0	Water % 0.0	Non-vegetated % 0.0
	Med Int. Dev. % 0.0	Wetland % 4.2	Tilled Agriculture % 0.0
	Low Int. Dev. % 3.8	Upland Woody % 92.0	Grassland % 0.0
	Development % 3.8	Natural % 96.2	Human Altered % 3.8
			Impervious % 3.2
Total Land (ac) 627	High Int. Dev. % 0.0	Water % N/A	Non-vegetated % N/A
	Med Int. Dev. % 0.0	Wetland % 4.2	Tilled Agriculture % 0.0
	Low Int. Dev. % 3.8	Upland Woody % 92.0	Grassland % 0.0
	Development % 3.8	Natural % 96.2	Human Altered % 3.8
			Impervious % 3.2

Sample Comments



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

Station Number: S-361 Waterbody: Heath Brook - Station 361 Town: Tremont
Log Number: 3004 Subsample Factor: X1 Replicates: 3 Calculated: 4/6/2023

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hyalella</i>	09010203006	0.33	0.33	8	CG	0.3	0.3
<i>Calopteryx</i>	09020307043	3.33	3.33	5	PR	2.5	2.5
<i>Argia</i>	09020309048	0.67	0.67	7	PR	0.5	0.5
<i>Maccaffertium</i>	09020402015		17.00	4	SC		12.9
<i>Maccaffertium modestum</i>	09020402015051	17.00			--	12.9	
<i>Paraleptophlebia</i>	09020406026	39.00	39.00	1	CG	29.7	29.7
<i>Chimarra</i>	09020601003		9.00	2	CF		6.9
<i>Chimarra aterrima</i>	09020601003002	9.00			--	6.9	
<i>Cernotina</i>	09020603006	18.67	18.67		PR	14.2	14.2
Hydropsychidae	09020604	2.00			--	1.5	
<i>Diplectrona</i>	09020604014	0.33	0.83	0	CF	0.3	0.6
<i>Cheumatopsyche</i>	09020604015	0.33	0.83	5	CF	0.3	0.6
<i>Hydropsyche</i>	09020604016	0.67	1.67	4	CF	0.5	1.3
<i>Rhyacophila</i>	09020605019		0.33	2	PR		0.3
<i>Rhyacophila carolina group</i>	09020605019067	0.33			PR	0.3	
<i>Ptilostomis</i>	09020608041	0.67	0.67	5	SH	0.5	0.5
Limnephilidae	09020610	0.67	0.67		--	0.5	0.5
<i>Limnephilus</i>	09020610055	1.00	1.00	3	SH	0.8	0.8
<i>Psilotreta</i>	09020614068	1.33	1.33	0	SC	1.0	1.0
<i>Nigronia</i>	09020701003	1.00	1.00	0	PR	0.8	0.8
Chironomidae	09021011				--		
<i>Thienemannimyia</i>	09021011020		3.67	3	PR		2.8
<i>Thienemannimyia group</i>	09021011020041	3.67			--	2.8	
<i>Parametriocnemus</i>	09021011053	0.67	0.67	5	CG	0.5	0.5
<i>Rheocricotopus</i>	09021011057		2.67	6	CG		2.0
<i>Rheocricotopus tuberculatus</i>	09021011057106	2.67			--	2.0	
<i>Rheotanytarsus</i>	09021011072	3.00	3.00	6	CF	2.3	2.3
<i>Tanytarsus</i>	09021011076	5.33	5.33	6	CF	4.1	4.1
<i>Microtendipes</i>	09021011094		1.00	6	CF		0.8
<i>Microtendipes pedellus group</i>	09021011094166	1.00			--	0.8	
Stratiomyidae	09021013	0.33	0.33		--	0.3	0.3
<i>Hemerodromia</i>	09021016057	1.67	1.67	3	PR	1.3	1.3
<i>Promoresia</i>	09021113069	3.00	3.00		--	2.3	2.3
<i>Stenelmis</i>	09021113070	13.67	13.67	5	SC	10.4	10.4