

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

Station Information

Station Number: W-376	Trip ID: 2022-376	River Basin: Penobscot
Waterbody: CARIBOU LAKE (S1)		HUC8 Name: West Branch Penobscot
Town: T03 R13 Wels		Latitude: 45° 54' 21.204" N
Mitigation Monitoring Site: No		Longitude: 69° 21' 19.908" W

Sample Information

Sample ID: SB-2022-376	Type of Sample: SURBER	Sampling Organization: NORMANDEAU ASSOCIATES
Date Sampled: 8/3/2022	Replicates: 3	Taxonomist: NORMANDEAU ASSOCIATES
Subsample Factor: X1		

Classification Attainment

Statutory Class:	GPA	Final Determination:	C	Date: 12/21/2023
Model Result with $P \geq 0.6$:	A	Reason for Determination: Best Professional Judgement		
Date Last Calculated:	12/21/2023	Comments: Sample method not appropriate for model. Sample does meet structure and function.		

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A: 0.99	Class C: 0.00	Class A, B, or C	1.00
Class B: 0.01	NA: 0.00	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

		Reference Range (10th or 90th percentile value)
Abundance of Taxa in the Order Ephemeroptera	8.667	≥ 0.000
Relative Richness of Taxa in the Orders Ephemeroptera, Odonata and Tricoptera	0.476	≥ 0.140
Shannon-Wiener Diversity Index	2.519	≥ 2.497
Relative Abundance of Collector-Gatherer Taxa	0.839	≥ 0.131
Abundance of Sensitive Taxa	42.235	≥ 3.424
Richness of Sensitive Taxa	6.000	≥ 3.000
Maine Tolerance Index Score For Wetland Macroinvertebrates	22.980	≤ 29.776
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	23.933	≥ 0.334

Other Variables

Total Mean Abundance	60
Generic Richness:	21
Hilsenhoff Biotic Index:	6.78

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Psectrocladius</i>	59.67
2	<i>Paraleptophlebia</i>	7.18
3	<i>Stylaria lacustris</i>	4.97
4	<i>Ablabesmyia mallochi</i>	3.31

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2.76

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Surface Water Chemistry

Sample Date: 8/3/2022 10:30:00 AM

Collection Method	Parameter	Value	Units	Qualifier
In-situ	Dissolved Oxygen	8.4	mg/l	
In-situ	Dissolved Oxygen Saturation	96.9	%	
In-situ	pH	6.83		
In-situ	Specific Conductance	27.6	us/cm	
In-situ	Temperature	22.7	deg c	

Landcover Summary - 2004 Data

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Summary of Habitat Characteristics

<u>Human Disturbance</u>	<u>Landscape-level Cowardin Classification</u>	<u>Hydrogeomorphic Setting</u>
Total Score:	System:	Landscape Position:
Hydrologic Modifications:	Subsystem:	Lotic Gradient:
Vegetative Modifications:	Class 1:	Flow Path:
Chemical Pollutants:	Subclass 1:	Land Form:
Watershed	Class 2:	Land Form Type:
Characterization and	Subclass 2:	Waterbody Type:
Non-point Sources:	Class 3:	Waterbody Subtype:
	Subclass 3:	
		Comments:
Dominant Plant Species:		
Additional Plant Community Observations:		
Habitat Classification:	Substrate Classification:	
	GRAVEL SUBSTRATE	
	RUBBLE/COBBLE SUBSTRATE	
	SAND SUBSTRATE	
Average Depth:		
Sample Comments:		

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Additional Summary Variables

Station Number: W-376	Waterbody: CARIBOU LAKE (S1)	Town: T03 R13 Wels
Log Number: SB-2022-376	Subsample Factor: X1	Replicates: 3
		Calculated: 12/21/2023

	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	10.33	0.171	10	0.48
EPT Taxa:	10.33	0.171	10	0.48
Insects:	54.00	0.895	17	0.81
Non-Insects:	6.33	0.105	4	0.19
Leeches:	0.00	0.000	0	0.00
Oligochaetes:	6.00	0.099	3	0.14
Snails:	0.00	0.000	0	0.00
Bivalves:	0.00	0.000	0	0.00
Isopods:	0.00	0.000	0	0.00
Amphipods:	0.33	0.006	1	0.05
Mites:	0.00	0.000	0	0.00
Stoneflies:	0.00	0.000	0	0.00
Mayflies:	8.67	0.144	6	0.29
Odonates:	0.00	0.000	0	0.00
Caddisflies:	1.67	0.028	4	0.19
Diptera:	43.33	0.718	6	0.29
Hemiptera:	0.33	0.006	1	0.05
Beetles:	0.00	0.000	0	0.00
Chironomids:	43.33	0.718	6	0.29
Tanypodinae Tribe:	2.33	0.039	1	0.05
Chironomiinae Tribe:	2.33	0.039	2	0.10
Orthocloidiinae Tribe:	38.67	0.641	3	0.14
Collector-Filterers:	3.00	0.050	3	0.14
Collector-Gatherers:	50.65	0.839	8	0.38
Predators:	2.67	0.044	2	0.10
Piercers:	0.00	0.000	0	0.00
Shredders:	0.67	0.011	2	0.10
Scrapers:	2.33	0.039	3	0.14
Maine Tolerance:				
Sensitive:	42.24	0.823	6	0.46
Intermediate:	7.33	0.143	6	0.46
Eurytopic:	1.76	0.034	1	0.08
Ratio of MTI Sensitive to Eurytopic	23.93	23.933	6.00	6.00

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Aquatic Life Taxonomic Inventory Report

Station Number: W-376

Waterbody: CARIBOU LAKE (S1)

Town: T03 R13 Wels

Log Number: SB-2022-376

Subsample Factor: X1

Replicates: 3

Calculated: 12/21/2023

Taxon	Maine Taxonomic Code	Count (Mean of Samples)		Hilsen- hoff Biotic Index	Func- tional Feeding Group	Maine Toler- ance Index	Tribe Taxa Group	
		Actual	Adjusted					
Naididae	08020202	0.33	0.00	--	--	--	--	Worm
Nais	08020202009	1.67	1.76	--	CG	43-E	--	Worm
Slavina	08020202012	0.00	0.35	--	--	4.2-S	--	Worm
<i>Slavina appendiculata</i>	08020202012001	0.33	0.00	--	--	--	--	Worm
Stylaria	08020202014	0.00	3.88	--	CG	18-S	--	Worm
<i>Stylaria fossularis</i>	08020202014001	0.67	0.00	--	--	--	--	Worm
<i>Stylaria lacustris</i>	08020202014002	3.00	0.00	--	--	--	--	Worm
Gammarus	09010201003	0.00	0.33	4	--	40.3-I	--	Amphipod
<i>Gammarus fasciatus</i>	09010201003003	0.33	0.00	--	--	--	--	Amphipod
Leucrocuta	09020402011	0.67	0.67	1	SC	--	--	Mayfly
Maccaffertium	09020402015	0.33	0.33	4	SC	--	--	Mayfly
Stenonema	09020402016	0.00	1.33	4	SC	--	--	Mayfly
<i>Stenonema femoratum</i>	09020402016001	1.33	0.00	4	SC	--	--	Mayfly
Leptophlebia	09020406025	1.00	1.00	4	CG	--	--	Mayfly
Paraleptophlebia	09020406026	4.33	4.33	1	CG	--	--	Mayfly
Caenis	09020412040	1.00	1.00	7	CG	22.1-I	--	Mayfly
Palmacorixa	09020501005	0.33	0.33	--	--	--	--	True Bug
Polycentropus	09020603010	0.33	0.33	6	PR	15.4-S	--	Caddisfly
Brachycentrus	09020609043	0.67	0.67	0	CF	--	--	Caddisfly
Lepidostoma	09020611064	0.33	0.33	1	SH	--	--	Caddisfly
Trienodes	09020618077	0.33	0.33	6	SH	19.3-S	--	Caddisfly
Ablabesmyia	09021011001	0.33	2.33	8	PR	23.6-I	T	Fly: Midge
<i>Ablabesmyia mallochii</i>	09021011001004	2.00	0.00	--	--	--	T	Fly: Midge
Corynoneura	09021011036	1.33	1.33	7	CG	40.1-I	--	Fly: Midge
Orthocladius	09021011050	1.33	1.33	6	CG	22-S	--	Fly: Midge
Psectrocladius	09021011056	36.00	36.00	8	CG	22-S	--	Fly: Midge
Tanytarsus	09021011076	1.00	1.00	6	CF	25.7-I	Y	Fly: Midge
Microtendipes	09021011094	0.00	1.33	6	CF	22.3-I	C	Fly: Midge
<i>Microtendipes pedellus group</i>	09021011094166	1.33	0.00	--	--	--	C	Fly: Midge