

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

Station Information

Station Number: W-372	Trip ID: 2022-372	River Basin: Penobscot
Waterbody: CHESUNCOOK LAKE (S1)		HUC8 Name: West Branch Penobscot
Town: T04 R12 Wels		Latitude: 45° 57' 22.572" N
Mitigation Monitoring Site: No		Longitude: 69° 19' 34.896" W

Sample Information

Sample ID: SB-2022-372	Type of Sample: SURBER	Sampling Organization: NORMANDEAU ASSOCIATES
Date Sampled: 8/2/2022	Replicates: 3	Taxonomist: NORMANDEAU ASSOCIATES
Subsample Factor: X1		

Classification Attainment

Statutory Class:	GPA	Final Determination:	I	Date: 12/21/2023
Model Result with $P \geq 0.6$:	I	Reason for Determination: Best Professional Judgement		
Date Last Calculated:	12/21/2023	Comments: Sample method not appropriate for model. Too few organisms to make attainment determination.		

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A: 0.06	Class C: 0.66	Class A, B, or C	1.00
Class B: 0.28	NA: 0.00	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.34	Class A	0.06
Class C or Non-Attainment	0.66	Class B or C or Non-Attainment	0.94

Model Variables

		Reference Range (10th or 90th percentile value)
Abundance of Taxa in the Order Ephemeroptera	1.000	≥ 0.000
Relative Richness of Taxa in the Orders Ephemeroptera, Odonata and Tricoptera	0.231	≥ 0.140
Shannon-Wiener Diversity Index	3.210	≥ 2.497
Relative Abundance of Collector-Gatherer Taxa	0.690	≥ 0.131
Abundance of Sensitive Taxa	3.000	≥ 3.424
Richness of Sensitive Taxa	2.000	≥ 3.000
Maine Tolerance Index Score For Wetland Macroinvertebrates	29.424	≤ 29.776
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	3.000	≥ 0.334

Other Variables

Total Mean Abundance	14
Generic Richness:	13
Hilsenhoff Biotic Index:	6.05

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Corynoneura</i>	28.57
2	<i>Microtendipes pedellus group</i>	14.29
3	<i>Orthocladius</i>	11.90
4	<i>Psectrocladius</i>	9.52

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5	<i>Ablabesmyia mallochi</i>	7.14
5	<i>Synorthocladius</i>	7.14

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Surface Water Chemistry

Sample Date: 8/2/2022 11:30:00 AM

Collection Method	Parameter	Value	Units	Qualifier
In-situ	Dissolved Oxygen	8.5	mg/l	
In-situ	Dissolved Oxygen Saturation	101.1	%	
In-situ	pH	6.91		
In-situ	Specific Conductance	27.2	us/cm	
In-situ	Temperature	23.9	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:	
	BOULDER SUBSTRATE	
	RUBBLE/COBBLE SUBSTRATE	
	SAND SUBSTRATE	
Average Depth:		
Sample Comments:		

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Additional Summary Variables

Station Number: W-372	Waterbody: CHESUNCOOK LAKE (S1)	Town: T04 R12 Wels
Log Number: SB-2022-372	Subsample Factor: X1	Replicates: 3
		Calculated: 12/21/2023

	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	1.00	0.071	3	0.23
EPT Taxa:	1.33	0.095	4	0.31
Insects:	13.67	0.976	12	0.92
Non-Insects:	0.33	0.024	1	0.08
Leeches:	0.00	0.000	0	0.00
Oligochaetes:	0.00	0.000	0	0.00
Snails:	0.33	0.024	1	0.08
Bivalves:	0.00	0.000	0	0.00
Isopods:	0.00	0.000	0	0.00
Amphipods:	0.00	0.000	0	0.00
Mites:	0.00	0.000	0	0.00
Stoneflies:	0.33	0.024	1	0.08
Mayflies:	1.00	0.071	3	0.23
Odonates:	0.00	0.000	0	0.00
Caddisflies:	0.00	0.000	0	0.00
Diptera:	12.33	0.881	8	0.62
Hemiptera:	0.00	0.000	0	0.00
Beetles:	0.00	0.000	0	0.00
Chironomids:	12.33	0.881	8	0.62
Tanypodinae Tribe:	1.00	0.071	1	0.08
Chironomiinae Tribe:	2.67	0.190	2	0.15
Orthoclodiinae Tribe:	8.67	0.619	5	0.38
Collector-Filterers:	2.00	0.143	1	0.08
Collector-Gatherers:	9.67	0.690	7	0.54
Predators:	1.00	0.071	1	0.08
Piercers:	0.00	0.000	0	0.00
Shredders:	0.33	0.024	1	0.08
Scrapers:	1.00	0.071	3	0.23
Maine Tolerance:				
Sensitive:	3.00	0.273	2	0.29
Intermediate:	8.00	0.727	5	0.71
Eurytopic:	0.00	0.000	0	0.00
Ratio of MTI Sensitive to Eurytopic	3.00	27.273	2.00	28.57

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Aquatic Life Taxonomic Inventory Report

Station Number: W-372

Waterbody: CHESUNCOOK LAKE (S1)

Town: T04 R12 Wels

Log Number: SB-2022-372

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					
Allocapnia	09020203015	0.33	0.33	3	SH	--	--	Stonefly
Leucrocuta	09020402011	0.33	0.33	1	SC	--	--	Mayfly
Stenonema	09020402016	0.00	0.33	4	SC	--	--	Mayfly
<i>Stenonema femoratum</i>	09020402016001	0.33	0.00	4	SC	--	--	Mayfly
Leptophlebia	09020406025	0.33	0.33	4	CG	--	--	Mayfly
Ablabesmyia	09021011001	0.00	1.00	8	PR	23.6-I	T	Fly: Midge
<i>Ablabesmyia mallochii</i>	09021011001004	1.00	0.00	--	--	--	T	Fly: Midge
Corynoneura	09021011036	4.00	4.00	7	CG	40.1-I	--	Fly: Midge
Orthocladius	09021011050	1.67	1.67	6	CG	22-S	--	Fly: Midge
Parametriocnemus	09021011053	0.67	0.67	5	CG	--	--	Fly: Midge
Psectrocladius	09021011056	1.33	1.33	8	CG	22-S	--	Fly: Midge
Synorthocladius	09021011061	1.00	1.00	2	CG	--	--	Fly: Midge
Cladotanytarsus	09021011068	0.67	0.67	7	CG	22.2-I	Y	Fly: Midge
Microtendipes	09021011094	0.00	2.00	6	CF	22.3-I	C	Fly: Midge
<i>Microtendipes pedellus group</i>	09021011094166	2.00	0.00	--	--	--	C	Fly: Midge
Helisoma	10010203030	0.33	0.33	--	SC	42.8-I	--	Snail