

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

Station Information

Station Number: W-373	Trip ID: 2022-373	River Basin: Penobscot
Waterbody: CHESUNCOOK LAKE (S2)		HUC8 Name: West Branch Penobscot
Town: T03 R13 Wels		Latitude: 45° 55' 42.744" N
Mitigation Monitoring Site: No		Longitude: 69° 19' 30.828" W

Sample Information

Sample ID: SB-2022-373	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: 0.40	Class C: 0.08	Class A, B, or C	1.00
Class B: 0.52	NA: 0.00	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.92	Class A	0.40
Class C or Non-Attainment	0.08	Class B or C or Non-Attainment	0.60

Model Variables

		Reference Range (10th or 90th percentile value)
Abundance of Taxa in the Order Ephemeroptera	1.333	≥ 0.000
Relative Richness of Taxa in the Orders Ephemeroptera, Odonata and Tricoptera	0.214	≥ 0.140
Shannon-Wiener Diversity Index	2.960	≥ 2.497
Relative Abundance of Collector-Gatherer Taxa	0.597	≥ 0.131
Abundance of Sensitive Taxa	10.667	≥ 3.424
Richness of Sensitive Taxa	3.000	≥ 3.000
Maine Tolerance Index Score For Wetland Macroinvertebrates	25.072	≤ 29.776
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	10.667	≥ 0.334

Other Variables

Total Mean Abundance	21
Generic Richness:	14
Hilsenhoff Biotic Index:	6.39

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Psectrocladius</i>	45.16
2	<i>Leucrocuta</i>	6.45
2	<i>Thienemannimyia</i> group	6.45
3	<i>Microtendipes pedellus</i> group	4.84

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3	<i>Paratanytarsus</i>	4.84
3	<i>Paratendipes albimanus</i> group	4.84
3	<i>Tanytarsus</i>	4.84
4	<i>Ablabesmyia</i>	3.23
4	<i>Ablabesmyia mallochi</i>	3.23
4	<i>Brachycentrus</i>	3.23
4	<i>Chaetocladius</i>	3.23
4	<i>Corynoneura</i>	3.23
4	<i>Gammarus fasciatus</i>	3.23
5	<i>Dicrotendipes</i>	1.61
5	<i>Mystacides</i>	1.61

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Surface Water Chemistry

Sample Date: 8/2/2022 1:35:00 PM

Collection Method	Parameter	Value	Units	Qualifier
In-situ	Dissolved Oxygen	8.6	mg/l	
In-situ	Dissolved Oxygen Saturation	100.5	%	
In-situ	pH	6.71		
In-situ	Specific Conductance	27	us/cm	
In-situ	Temperature	23.2	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
GRAVEL SUBSTRATE
RUBBLE/COBBLE SUBSTRATE
SILT/MUCK SUBSTRATE

Average Depth:

Sample Comments:

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Additional Summary Variables

Station Number: W-373	Waterbody: CHESUNCOOK LAKE (S2)	Town: T03 R13 Wels
Log Number: SB-2022-373	Subsample Factor: X1	Replicates: 3
		Calculated: 12/21/2023

	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	2.33	0.113	3	0.21
EPT Taxa:	2.33	0.113	3	0.21
Insects:	20.00	0.968	13	0.93
Non-Insects:	0.67	0.032	1	0.07
Leeches:	0.00	0.000	0	0.00
Oligochaetes:	0.00	0.000	0	0.00
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:	0.67	0.032	1	0.07
Mites:	0.00	0.000	0	0.00
Stoneflies:	0.00	0.000	0	0.00
Mayflies:	1.33	0.065	1	0.07
Odonates:	0.00	0.000	0	0.00
Caddisflies:	1.00	0.048	2	0.14
Diptera:	17.67	0.855	10	0.71
Hemiptera:	0.00	0.000	0	0.00
Beetles:	0.00	0.000	0	0.00
Chironomids:	17.67	0.855	10	0.71
Tanypodinae Tribe:	2.67	0.129	2	0.14
Chironomiinae Tribe:	4.33	0.210	5	0.36
Orthoclodiinae Tribe:	10.67	0.516	3	0.21
Collector-Filterers:	2.67	0.129	3	0.21
Collector-Gatherers:	12.33	0.597	6	0.43
Predators:	2.67	0.129	2	0.14
Piercers:	0.00	0.000	0	0.00
Shredders:	0.00	0.000	0	0.00
Scrapers:	1.33	0.065	1	0.07
Maine Tolerance:				
Sensitive:	10.67	0.640	3	0.30
Intermediate:	5.00	0.300	6	0.60
Eurytopic:	1.00	0.060	1	0.10
Ratio of MTI Sensitive to Eurytopic	10.67	10.667	3.00	3.00

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Aquatic Life Taxonomic Inventory Report

Station Number: W-373

Waterbody: CHESUNCOOK LAKE (S2)

Town: T03 R13 Wels

Log Number: SB-2022-373

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					
Gammarus	09010201003	0.00	0.67	4	--	40.3-I	--	Amphipod
<i>Gammarus fasciatus</i>	09010201003003	0.67	0.00	--	--	--	--	Amphipod
Leucrocuta	09020402011	1.33	1.33	1	SC	--	--	Mayfly
Brachycentrus	09020609043	0.67	0.67	0	CF	--	--	Caddisfly
Mystacides	09020618075	0.33	0.33	4	CG	18.2-S	--	Caddisfly
Ablabesmyia	09021011001	0.67	1.33	8	PR	23.6-I	T	Fly: Midge
<i>Ablabesmyia mallochi</i>	09021011001004	0.67	0.00	--	--	--	T	Fly: Midge
Thienemannimyia	09021011020	0.00	1.33	3	PR	--	T	Fly: Midge
<i>Thienemannimyia group</i>	09021011020041	1.33	0.00	--	--	--	T	Fly: Midge
Chaetocladius	09021011035	0.67	0.67	6	CG	--	--	Fly: Midge
Corynoneura	09021011036	0.67	0.67	7	CG	40.1-I	--	Fly: Midge
Psectrocladius	09021011056	9.33	9.33	8	CG	22-S	--	Fly: Midge
Paratanytarsus	09021011071	1.00	1.00	6	--	43-E	Y	Fly: Midge
Tanytarsus	09021011076	1.00	1.00	6	CF	25.7-I	Y	Fly: Midge
Dicrotendipes	09021011085	0.33	0.33	8	CG	28.8-I	C	Fly: Midge
Microtendipes	09021011094	0.00	1.00	6	CF	22.3-I	C	Fly: Midge
<i>Microtendipes pedellus group</i>	09021011094166	1.00	0.00	--	--	--	C	Fly: Midge
Paratendipes	09021011100	0.00	1.00	8	CG	20.8-S	C	Fly: Midge
<i>Paratendipes albimanus group</i>	09021011100176	1.00	0.00	--	--	--	C	Fly: Midge