

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

Station Information

Station Number: W-380	Trip ID: 2022-380	River Basin: Penobscot
Waterbody: RIPOGENUS LAKE (S1)		HUC8 Name: West Branch Penobscot
Town: T03 R12 Wels		Latitude: 45° 54' 29.700" N
Mitigation Monitoring Site: No		Longitude: 69° 13' 41.700" W

Sample Information

Sample ID: SB-2022-380	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: 1/3/2024
Model Result with $P \geq 0.6$:	I	Reason for Determination: Best Professional Judgement		
Date Last Calculated:	1/3/2024	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: 0.71	Class C: 0.16	Class A, B, or C	1.00
Class B: 0.13	NA: 0.00	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.84	Class A	0.71
Class C or Non-Attainment	0.16	Class B or C or Non-Attainment	0.29

Model Variables

		Reference Range (10th or 90th percentile value)
Abundance of Taxa in the Order Ephemeroptera	10.000	≥ 0.000
Relative Richness of Taxa in the Orders Ephemeroptera, Odonata and Tricoptera	0.357	≥ 0.140
Shannon-Wiener Diversity Index	4.410	≥ 2.497
Relative Abundance of Collector-Gatherer Taxa	0.493	≥ 0.131
Abundance of Sensitive Taxa	1.667	≥ 3.424
Richness of Sensitive Taxa	4.000	≥ 3.000
Maine Tolerance Index Score For Wetland Macroinvertebrates	28.272	≤ 29.776
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	0.833	≥ 0.334

Other Variables

Total Mean Abundance	23
Generic Richness:	28
Hilsenhoff Biotic Index:	5.06

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Choroterpes</i>	10.14
1	<i>Microtendipes pedellus group</i>	10.14
2	<i>Ablabesmyia mallochii</i>	7.25
2	<i>Caenis</i>	7.25

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2	<i>Paraleptophlebia</i>	7.25
3	<i>Caecidotea</i>	5.80
4	<i>Heterotrissocladius</i>	4.35
4	<i>Leptophlebia</i>	4.35
4	<i>Stenacron</i>	4.35
4	<i>Stenonema femoratum</i>	4.35
5	<i>Ablabesmyia</i>	2.90
5	<i>Ephemera</i>	2.90
5	<i>Neoporus</i>	2.90
5	<i>Phaenopsectra obediens group</i>	2.90
5	<i>Psectrocladius</i>	2.90

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Surface Water Chemistry

Sample Date: 8/3/2022 2:40:00 PM

Collection Method	Parameter	Value	Units	Qualifier
In-situ	Dissolved Oxygen	8.3	mg/l	
In-situ	Dissolved Oxygen Saturation	101.2	%	
In-situ	pH	6.93		
In-situ	Specific Conductance	28	us/cm	
In-situ	Temperature	25.6	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

SAND SUBSTRATE

Average Depth:

Sample Comments:

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Additional Summary Variables

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Log Number: SB-2022-380	Subsample Factor: X1	Replicates: 3
		Calculated: 1/3/2024

	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	10.33	0.449	10	0.36
EPT Taxa:	10.00	0.435	9	0.32
Insects:	20.67	0.899	24	0.86
Non-Insects:	2.33	0.101	4	0.14
Leeches:	0.00	0.000	0	0.00
Oligochaetes:	0.33	0.014	1	0.04
Snails:	0.67	0.029	2	0.07
Bivalves:	0.00	0.000	0	0.00
Isopods:	1.33	0.058	1	0.04
Amphipods:	0.00	0.000	0	0.00
Mites:	0.00	0.000	0	0.00
Stoneflies:	0.00	0.000	0	0.00
Mayflies:	10.00	0.435	9	0.32
Odonates:	0.33	0.014	1	0.04
Caddisflies:	0.00	0.000	0	0.00
Diptera:	9.33	0.406	12	0.43
Hemiptera:	0.00	0.000	0	0.00
Beetles:	1.00	0.043	2	0.07
Chironomids:	9.33	0.406	12	0.43
Tanypodinae Tribe:	2.33	0.101	1	0.04
Chironomiinae Tribe:	4.33	0.188	6	0.21
Orthoclodiinae Tribe:	2.67	0.116	5	0.18
Collector-Filterers:	2.67	0.116	2	0.07
Collector-Gatherers:	11.33	0.493	14	0.50
Predators:	2.67	0.116	2	0.07
Piercers:	0.00	0.000	0	0.00
Shredders:	1.33	0.058	1	0.04
Scrapers:	4.00	0.174	7	0.25
Maine Tolerance:				
Sensitive:	1.67	0.139	4	0.27
Intermediate:	8.33	0.694	9	0.60
Eurytopic:	2.00	0.167	2	0.13
Ratio of MTI Sensitive to Eurytopic	0.83	0.833	2.00	2.00

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Aquatic Life Taxonomic Inventory Report

Station Number: W-380	Waterbody: RIPOGENUS LAKE (S1)	Town: T03 R12 Wels
Log Number: SB-2022-380	Subsample Factor: X1	Replicates: 3
		Calculated: 1/3/2024

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	0.33	--	--	--	--	Worm
Caecidotea	09010101001	1.33	1.33	8	SH	51.9-E	--	Isopod
Libellula	09020306035	0.33	0.33	9	PR	15-S	--	Dragonfly/damselfly
Stenacron	09020402014	1.00	1.00	7	SC	--	--	Mayfly
Maccaffertium	09020402015	0.33	0.33	4	SC	--	--	Mayfly
Stenonema	09020402016	0.00	1.00	4	SC	--	--	Mayfly
<i>Stenonema femoratum</i>	09020402016001	1.00	0.00	4	SC	--	--	Mayfly
Choroterpes	09020406022	2.33	2.33	2	CG	--	--	Mayfly
Leptophlebia	09020406025	1.00	1.00	4	CG	--	--	Mayfly
Paraleptophlebia	09020406026	1.67	1.67	1	CG	--	--	Mayfly
Ephemera	09020407027	0.67	0.67	1	CG	--	--	Mayfly
Tricorythodes	09020411038	0.33	0.33	4	CG	--	--	Mayfly
Caenis	09020412040	1.67	1.67	7	CG	22.1-I	--	Mayfly
Ablabesmyia	09021011001	0.67	2.33	8	PR	23.6-I	T	Fly: Midge
<i>Ablabesmyia mallochii</i>	09021011001004	1.67	0.00	--	--	--	T	Fly: Midge
Corynoneura	09021011036	0.33	0.33	7	CG	40.1-I	--	Fly: Midge
Heterotrissocladius	09021011044	1.00	1.00	0	CG	--	--	Fly: Midge
Orthocladius	09021011050	0.33	0.33	6	CG	22-S	--	Fly: Midge
Psectrocladius	09021011056	0.67	0.67	8	CG	22-S	--	Fly: Midge
Tvetenia	09021011065	0.00	0.33	5	CG	--	--	Fly: Midge
<i>Tvetenia vitracies</i>	09021011065113	0.33	0.00	--	--	--	--	Fly: Midge
Cladotanytarsus	09021011068	0.33	0.33	7	CG	22.2-I	Y	Fly: Midge
Stempellina	09021011073	0.33	0.33	2	CG	--	Y	Fly: Midge
Tanytarsus	09021011076	0.33	0.33	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	2.33	6	CF	22.3-I	C	Fly: Midge
<i>Microtendipes pedellus group</i>	09021011094166	2.33	0.00	--	--	--	C	Fly: Midge
Phaenopsectra	09021011101	0.00	0.67	7	SC	44.2-E	C	Fly: Midge
<i>Phaenopsectra obediens group</i>	09021011101180	0.67	0.00	--	--	--	C	Fly: Midge
Neoporus	09021103033	0.67	0.67	--	--	--	--	Beetle
Stenelmis	09021113070	0.33	0.33	5	SC	30.7-I	--	Beetle
Amnicola	10010104013	0.33	0.33	--	SC	18.7-S	--	Snail
Helisoma	10010203030	0.33	0.33	--	SC	42.8-I	--	Snail