

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

Station Information

Station Number: W-381	Trip ID: 2022-381	River Basin: Penobscot
Waterbody: RIPOGENUS LAKE (S2)		HUC8 Name: West Branch Penobscot
Town: T03 R12 Wels		Latitude: 45° 53' 04.632" N
Mitigation Monitoring Site: No		Longitude: 69° 13' 26.544" W

Sample Information

Sample ID: SB-2022-381	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 $P \geq 0.6$:	I	Reason for Determination: Best Professional Judgement		
Date Last Calculated:	12/21/2023	Comments: Sample method not appropriate for the model. Sample does met structure and function.		

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A: 0.92	Class C: 0.00	Class A, B, or C	1.00
Class B: 0.07	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	0.92
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.08

Model Variables

		Reference Range (10th or 90th percentile value)
Abundance of Taxa in the Order Ephemeroptera	5.333	≥ 0.000
Relative Richness of Taxa in the Orders Ephemeroptera, Odonata and Tricoptera	0.286	≥ 0.140
Shannon-Wiener Diversity Index	3.689	≥ 2.497
Relative Abundance of Collector-Gatherer Taxa	0.438	≥ 0.131
Abundance of Sensitive Taxa	8.333	≥ 3.424
Richness of Sensitive Taxa	5.000	≥ 3.000
Maine Tolerance Index Score For Wetland Macroinvertebrates	24.811	≤ 29.776
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	8.333	≥ 0.334

Other Variables

Total Mean Abundance	27
Generic Richness:	21
Hilsenhoff Biotic Index:	5.97

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Ablabesmyia</i>	16.25
2	<i>Orthocladius</i>	13.75
2	<i>Psectrocladius</i>	13.75
3	<i>Stenonema femoratum</i>	12.50

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3	<i>Tanytarsus</i>	12.50
4	<i>Stempellinella</i>	5.00
5	<i>Baetis</i>	2.50
5	<i>Dicrotendipes</i>	2.50
5	<i>Microtendipes pedellus</i> group	2.50
5	<i>Orconectes</i>	2.50
5	<i>Paraleptophlebia</i>	2.50
5	<i>Polypedilum illinoense</i> group	2.50

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Surface Water Chemistry

Sample Date: 8/3/2022 4:10:00 PM

Collection Method	Parameter	Value	Units	Qualifier
In-situ	Dissolved Oxygen	8.6	mg/l	
In-situ	Dissolved Oxygen Saturation	105.8	%	
In-situ	pH	6.92		
In-situ	Specific Conductance	27.7	us/cm	
In-situ	Temperature	26.3	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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		Calculated: 12/21/2023

	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	5.67	0.213	6	0.29
EPT Taxa:	5.67	0.213	6	0.29
Insects:	25.33	0.950	18	0.86
Non-Insects:	1.33	0.050	3	0.14
Leeches:	0.00	0.000	0	0.00
Oligochaetes:	0.33	0.013	1	0.05
Snails:	0.33	0.013	1	0.05
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:	0.00	0.000	0	0.00
Mayflies:	5.33	0.200	5	0.24
Odonates:	0.00	0.000	0	0.00
Caddisflies:	0.33	0.013	1	0.05
Diptera:	19.33	0.725	11	0.52
Hemiptera:	0.00	0.000	0	0.00
Beetles:	0.33	0.013	1	0.05
Chironomids:	19.33	0.725	11	0.52
Tanypodinae Tribe:	4.33	0.163	1	0.05
Chironomiinae Tribe:	7.00	0.263	6	0.29
Orthoclodiinae Tribe:	8.00	0.300	4	0.19
Collector-Filterers:	4.00	0.150	2	0.10
Collector-Gatherers:	11.67	0.438	11	0.52
Predators:	4.33	0.163	1	0.05
Piercers:	0.00	0.000	0	0.00
Shredders:	0.67	0.025	1	0.05
Scrapers:	4.00	0.150	3	0.14
Maine Tolerance:				
Sensitive:	8.33	0.403	5	0.36
Intermediate:	12.33	0.597	9	0.64
Eurytopic:	0.00	0.000	0	0.00
Ratio of MTI Sensitive to Eurytopic	8.33	40.323	5.00	35.71

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Aquatic Life Taxonomic Inventory Report

Station Number: W-381	Waterbody: RIPOGENUS LAKE (S2)	Town: T03 R12 Wels
Log Number: SB-2022-381	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	0.33	--	--	--	--	Worm
Orconectes	09010301008	0.67	0.67	--	CG	--	--	Crayfish
Baetis	09020401001	0.67	0.67	4	CG	29.9-I	--	Mayfly
Procloeon	09020401010	0.33	0.33	--	CG	21-S	--	Mayfly
Stenacron	09020402014	0.33	0.33	7	SC	--	--	Mayfly
Stenonema	09020402016	0.00	3.33	4	SC	--	--	Mayfly
<i>Stenonema femoratum</i>	09020402016001	3.33	0.00	4	SC	--	--	Mayfly
Paraleptophlebia	09020406026	0.67	0.67	1	CG	--	--	Mayfly
Mystacides	09020618075	0.33	0.33	4	CG	18.2-S	--	Caddisfly
Ablabesmyia	09021011001	4.33	4.33	8	PR	23.6-I	T	Fly: Midge
Corynoneura	09021011036	0.33	0.33	7	CG	40.1-I	--	Fly: Midge
Heterotrissocladius	09021011044	0.00	0.33	0	CG	--	--	Fly: Midge
<i>Heterotrissocladius marcidus</i>	09021011044083	0.33	0.00	--	--	--	--	Fly: Midge
Orthocladius	09021011050	3.67	3.67	6	CG	22-S	--	Fly: Midge
Psectrocladius	09021011056	3.67	3.67	8	CG	22-S	--	Fly: Midge
Stempellinella	09021011074	1.33	1.33	2	--	35.7-I	Y	Fly: Midge
Tanytarsus	09021011076	3.33	3.33	6	CF	25.7-I	Y	Fly: Midge
Dicrotendipes	09021011085	0.67	0.67	8	CG	28.8-I	C	Fly: Midge
Microtendipes	09021011094	0.00	0.67	6	CF	22.3-I	C	Fly: Midge
<i>Microtendipes pedellus group</i>	09021011094166	0.67	0.00	--	--	--	C	Fly: Midge
Paratendipes	09021011100	0.00	0.33	8	CG	20.8-S	C	Fly: Midge
<i>Paratendipes subaequalis group</i>	09021011100178	0.33	0.00	--	--	--	C	Fly: Midge
Polypedilum	09021011102	0.00	0.67	6	SH	24.2-I	C	Fly: Midge
<i>Polypedilum illinoense group</i>	09021011102185	0.67	0.00	--	--	--	C	Fly: Midge
Neoporus	09021103033	0.33	0.33	--	--	--	--	Beetle
Gyraulus	10010203029	0.33	0.33	--	SC	37.2-I	--	Snail