

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

Station Information

Station Number: W-403	Trip ID: 2023-403	River Basin:
Waterbody: NORTH TWIN LAKE (S2)		HUC8 Name:
Town: T4 Indian Purchase Twp		Latitude:
Mitigation Monitoring Site: No		Longitude:

Sample Information

Sample ID: SB-2023-403	Type of Sample: SURBER	Sampling Organization: NORMANDEAU ASSOCIATES
Date Sampled: 8/16/2023	Replicates: 3	Taxonomist: NORMANDEAU ASSOCIATES
Subsample Factor: X1		

Classification Attainment

Statutory Class:	GPA	Final Determination:	C	Date: 1/3/2025
Model Result with $P \geq 0.6$:	B	Reason for Determination: Best Professional Judgement		
Date Last Calculated:	11/21/2024	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: 0.32	Class C: 0.08	Class A, B, or C	1.00
Class B: 0.60	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	0.32
Class C or Non-Attainment	0.08	Class B or C or Non-Attainment	0.68

Model Variables

		Reference Range (10th or 90th percentile value)
Abundance of Taxa in the Order Ephemeroptera	9.333	≥ 0.000
Relative Richness of Taxa in the Orders Ephemeroptera, Odonata and Tricoptera	0.314	≥ 0.140
Shannon-Wiener Diversity Index	3.616	≥ 2.497
Relative Abundance of Collector-Gatherer Taxa	0.390	≥ 0.131
Abundance of Sensitive Taxa	30.048	≥ 3.424
Richness of Sensitive Taxa	7.000	≥ 3.000
Maine Tolerance Index Score For Wetland Macroinvertebrates	32.559	≤ 29.776
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	0.866	≥ 0.334

Other Variables

Total Mean Abundance	159
Generic Richness:	35
Hilsenhoff Biotic Index:	6.04

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tanytarsus</i>	23.06
2	<i>Problezzia</i>	14.05
3	<i>Stylaria lacustris</i>	13.21
4	<i>Nais</i>	10.06

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5 *Fossaria*

8.18

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Surface Water Chemistry

Sample Date: 8/16/2023 9:13:00 AM

Collection Method	Parameter	Value	Units	Qualifier
In-situ	Dissolved Oxygen	8.59	mg/l	
In-situ	pH	7.01		
In-situ	Specific Conductance	25	us/cm	
In-situ	Temperature	21.85	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:

OPEN WATER STANDING

Substrate Classification:

BOULDER SUBSTRATE

GRAVEL SUBSTRATE

RUBBLE/COBBLE SUBSTRATE

Average Depth:

Visible Flow: No

Rain In Previous 24 Hours: No

Sample Comments:

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Additional Summary Variables

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		Calculated: 11/21/2024

	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	12.00	0.075	11	0.31
EPT Taxa:	12.33	0.078	12	0.34
Insects:	88.00	0.553	25	0.71
Non-Insects:	71.00	0.447	10	0.29
Leeches:	1.00	0.006	1	0.03
Oligochaetes:	39.00	0.245	4	0.11
Snails:	19.33	0.122	3	0.09
Bivalves:	0.33	0.002	1	0.03
Isopods:	0.00	0.000	0	0.00
Amphipods:	11.33	0.071	1	0.03
Mites:	0.00	0.000	0	0.00
Stoneflies:	0.33	0.002	1	0.03
Mayflies:	9.33	0.059	5	0.14
Odonates:	0.00	0.000	0	0.00
Caddisflies:	2.67	0.017	6	0.17
Diptera:	75.67	0.476	13	0.37
Hemiptera:	0.00	0.000	0	0.00
Beetles:	0.00	0.000	0	0.00
Chironomids:	51.33	0.323	8	0.23
Tanypodinae Tribe:	1.01	0.006	2	0.06
Chironomiinae Tribe:	43.28	0.272	4	0.11
Orthoclodiinae Tribe:	7.05	0.044	2	0.06
Collector-Filterers:	37.57	0.236	3	0.09
Collector-Gatherers:	62.08	0.390	9	0.26
Predators:	25.34	0.159	7	0.20
Piercers:	0.33	0.002	1	0.03
Shredders:	1.67	0.010	3	0.09
Scrapers:	15.33	0.096	6	0.17
Maine Tolerance:				
Sensitive:	30.05	0.208	7	0.35
Intermediate:	79.58	0.551	9	0.45
Eurytopic:	34.70	0.240	4	0.20
Ratio of MTI Sensitive to Eurytopic	0.87	0.866	1.75	1.75

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Aquatic Life Taxonomic Inventory Report

Station Number: W-403	Waterbody: NORTH TWIN LAKE (S2)	Town: T4 Indian Purchase T
Log Number: SB-2023-403	Subsample Factor: X1	Replicates: 3 Calculated: 11/21/2024

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					
Enchytraeidae	08020201	1.00	1.00	--	--	--	--	Worm
Nais	08020202009	16.00	16.00	--	CG	43-E	--	Worm
Slavina	08020202012	0.00	1.00	--	--	4.2-S	--	Worm
<i>Slavina appendiculata</i>	08020202012001	1.00	0.00	--	--	--	--	Worm
Stylaria	08020202014	0.00	21.00	--	CG	18-S	--	Worm
<i>Stylaria lacustris</i>	08020202014002	21.00	0.00	--	--	--	--	Worm
Erpobdella	08030203002	1.00	1.00	--	--	36.4-I	--	Leech
Hyaella	09010203006	0.00	11.33	8	CG	24.5-I	--	Amphipod
<i>Hyaella azteca</i>	09010203006011	11.33	0.00	--	--	--	--	Amphipod
Perlinella	09020209047	0.33	0.33	1	--	--	--	Stonefly
Heterocloeon	09020401005	1.33	1.33	2	SC	--	--	Mayfly
Leucrocuta	09020402011	1.33	1.33	1	SC	--	--	Mayfly
Maccaffertium	09020402015	6.00	6.00	4	SC	--	--	Mayfly
Hexagenia	09020407028	0.33	0.33	6	CG	--	--	Mayfly
Eurylophella	09020410036	0.33	0.33	3	CG	23.2-I	--	Mayfly
Oxyethira	09020607028	0.33	0.33	3	P	22-S	--	Caddisfly
Brachycentrus	09020609043	0.33	0.33	0	CF	--	--	Caddisfly
Micrasema	09020609044	0.67	0.67	2	SH	--	--	Caddisfly
Lepidostoma	09020611064	0.67	0.67	1	SH	--	--	Caddisfly
Psilotreta	09020614068	0.33	0.33	0	SC	--	--	Caddisfly
Oecetis	09020618078	0.33	0.33	8	PR	16.3-S	--	Caddisfly
Probezzia	09021010041	22.33	22.33	6	PR	28.6-I	--	Fly: Biting Midge
Sphaeromyias	09021010042	0.67	0.67	6	PR	--	--	Fly: Biting Midge
Palpomyia	09021010044	0.33	0.33	6	PR	--	--	Fly: Biting Midge
Ceratopogon	09021010046	0.33	0.33	--	--	71.5-E	--	Fly: Biting Midge
Chironomidae	09021011	0.33	0.00	--	--	--	--	Fly: Midge
Ablabesmyia	09021011001	0.67	0.67	8	PR	23.6-I	T	Fly: Midge
Labrundinia	09021011008	0.33	0.34	7	PR	18.1-S	T	Fly: Midge
Orthocladius	09021011050	1.00	1.01	6	CG	22-S	--	Fly: Midge
Psectrocladius	09021011056	6.00	6.04	8	CG	22-S	--	Fly: Midge
Micropsectra	09021011070	5.33	5.37	7	CG	98.1-E	Y	Fly: Midge
Tanytarsus	09021011076	36.67	36.91	6	CF	25.7-I	Y	Fly: Midge
Dicrotendipes	09021011085	0.00	0.67	8	CG	28.8-I	C	Fly: Midge
<i>Dicrotendipes neomodestus</i>	09021011085152	0.67	0.00	--	--	--	C	Fly: Midge
Polypedilum	09021011102	0.33	0.34	6	SH	24.2-I	C	Fly: Midge

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		Actual	Adjusted					
Hemerodromia	09021016057	0.67	0.67	3	PR	--	--	Fly: Aquatic Dance
Fossaria	10010201021	13.00	13.00	--	--	56.1-E	--	Snail
Physidae	10010202	0.33	0.33	--	SC	--	--	Snail
Gyraulus	10010203029	6.00	6.00	--	SC	37.2-I	--	Snail
Pisidium	10020201002	0.33	0.33	--	CF	--	--	Clam