

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

Station Information

Station Number: W-401	Trip ID: 2023-401	River Basin:
Waterbody: NORTH TWIN LAKE (S1)		HUC8 Name:
Town: T4 Indian Purchase Twp		Latitude:
Mitigation Monitoring Site: No		Longitude:

Sample Information

Sample ID: SB-2023-401	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: 0.40	Class C: 0.25	Class A, B, or C	1.00
Class B: 0.36	NA: 0.00	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.75	Class A	0.40
Class C or Non-Attainment	0.25	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	16.667	≥ 0.000
Relative Richness of Taxa in the Orders Ephemeroptera, Odonata and Tricoptera	0.310	≥ 0.140
Shannon-Wiener Diversity Index	3.964	≥ 2.497
Relative Abundance of Collector-Gatherer Taxa	0.642	≥ 0.131
Abundance of Sensitive Taxa	29.333	≥ 3.424
Richness of Sensitive Taxa	6.000	≥ 3.000
Maine Tolerance Index Score For Wetland Macroinvertebrates	42.653	≤ 29.776
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	0.633	≥ 0.334

Other Variables

Total Mean Abundance	122
Generic Richness:	42
Hilsenhoff Biotic Index:	5.54

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Nais</i>	19.95
2	<i>Stylaria lacustris</i>	19.13
3	<i>Micropsectra</i>	14.75
4	<i>Maccaffertium</i>	6.83

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5	<i>Problezzia</i>	3.83
5	<i>Tanytarsus</i>	3.83

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Surface Water Chemistry

Sample Date: 8/16/2023 8:01:00 AM

Collection Method	Parameter	Value	Units	Qualifier
In-situ	Dissolved Oxygen	8.22	mg/l	
In-situ	pH	6.89		
In-situ	Specific Conductance	25	us/cm	
In-situ	Temperature	20.78	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:	20.33	0.167	13	0.31
EPT Taxa:	20.33	0.167	13	0.31
Insects:	60.67	0.497	30	0.71
Non-Insects:	61.33	0.503	12	0.29
Leeches:	0.00	0.000	0	0.00
Oligochaetes:	51.33	0.421	8	0.19
Snails:	8.33	0.068	3	0.07
Bivalves:	0.00	0.000	0	0.00
Isopods:	0.00	0.000	0	0.00
Amphipods:	1.67	0.014	1	0.02
Mites:	0.00	0.000	0	0.00
Stoneflies:	0.33	0.003	1	0.02
Mayflies:	16.67	0.137	6	0.14
Odonates:	0.33	0.003	1	0.02
Caddisflies:	3.33	0.027	6	0.14
Diptera:	39.67	0.325	15	0.36
Hemiptera:	0.00	0.000	0	0.00
Beetles:	0.33	0.003	1	0.02
Chironomids:	31.67	0.260	11	0.26
Tanypodinae Tribe:	0.33	0.003	1	0.02
Chironomiinae Tribe:	27.33	0.224	8	0.19
Orthoclodiinae Tribe:	4.00	0.033	2	0.05
Collector-Filterers:	5.67	0.046	2	0.05
Collector-Gatherers:	78.33	0.642	14	0.33
Predators:	10.67	0.087	10	0.24
Piercers:	0.33	0.003	1	0.02
Shredders:	2.33	0.019	3	0.07
Scrapers:	17.00	0.139	5	0.12
Maine Tolerance:				
Sensitive:	29.33	0.300	6	0.26
Intermediate:	22.00	0.225	14	0.61
Eurytopic:	46.33	0.474	3	0.13
Ratio of MTI Sensitive to Eurytopic	0.63	0.633	2.00	2.00

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Aquatic Life Taxonomic Inventory Report

Station Number: W-401	Waterbody: NORTH TWIN LAKE (S1)	Town: T4 Indian Purchase T
Log Number: SB-2023-401	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					
Oligochaeta	0802	0.33	0.33	--	--	--	--	Oligochaete
Lumbriculus	08020101002	0.00	0.33	--	CG	35-I	--	Worm
<i>Lumbriculus variegatus</i>	08020101002001	0.33	0.00	--	--	--	--	Worm
Stylodrilus	08020101004	0.00	0.33	--	--	--	--	Worm
<i>Stylodrilus heringianus</i>	08020101004001	0.33	0.00	--	--	--	--	Worm
Enchytraeidae	08020201	0.67	0.67	--	--	--	--	Worm
Bratislavia	08020202003	0.33	0.33	--	--	--	--	Worm
Nais	08020202009	24.33	24.33	--	CG	43-E	--	Worm
Ripistes	08020202011	0.00	0.33	--	--	--	--	Worm
<i>Ripistes parasita</i>	08020202011001	0.33	0.00	--	--	--	--	Worm
Slavina	08020202012	0.00	1.33	--	--	4.2-S	--	Worm
<i>Slavina appendiculata</i>	08020202012001	1.33	0.00	--	--	--	--	Worm
Stylaria	08020202014	0.00	23.33	--	CG	18-S	--	Worm
<i>Stylaria lacustris</i>	08020202014002	23.33	0.00	--	--	--	--	Worm
Hyaella	09010203006	0.00	1.67	8	CG	24.5-I	--	Amphipod
<i>Hyaella azteca</i>	09010203006011	1.67	0.00	--	--	--	--	Amphipod
Acroneuria	09020209042	0.00	0.33	0	PR	--	--	Stonefly
<i>Acroneuria abnormis</i>	09020209042121	0.33	0.00	0	PR	--	--	Stonefly
Enallagma	09020309051	0.33	0.33	9	PR	26.2-I	--	Dragonfly/damselfly
Centropilum	09020401003	0.67	0.67	2	CG	--	--	Mayfly
Acentrella	09020401008	1.33	1.33	3	CG	--	--	Mayfly
Leucrocuta	09020402011	3.67	3.67	1	SC	--	--	Mayfly
Maccaffertium	09020402015	8.33	8.33	4	SC	--	--	Mayfly
Eurylophella	09020410036	1.00	1.00	3	CG	23.2-I	--	Mayfly
Caenis	09020412040	1.67	1.67	7	CG	22.1-I	--	Mayfly
Hydroptila	09020607026	0.33	0.33	6	P	--	--	Caddisfly
Brachycentrus	09020609043	1.00	1.00	0	CF	--	--	Caddisfly
Micrasema	09020609044	0.33	0.33	2	SH	--	--	Caddisfly
Lepidostoma	09020611064	0.67	0.67	1	SH	--	--	Caddisfly
Psilotreta	09020614068	0.67	0.67	0	SC	--	--	Caddisfly
Mystacides	09020618075	0.33	0.33	4	CG	18.2-S	--	Caddisfly
Probezzia	09021010041	4.67	4.67	6	PR	28.6-I	--	Fly: Biting Midge
Sphaeromyia	09021010042	0.33	0.33	6	PR	--	--	Fly: Biting Midge
Palpomyia	09021010044	1.67	1.67	6	PR	--	--	Fly: Biting Midge
Ablabesmyia	09021011001	0.33	0.33	8	PR	23.6-I	T	Fly: Midge

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		Actual	Adjusted						
Orthocladius	09021011050	0.33	0.33	6	CG	22-S	--	Fly: Midge	
Psectrocladius	09021011056	3.67	3.67	8	CG	22-S	--	Fly: Midge	
Cladotanytarsus	09021011068	0.67	0.67	7	CG	22.2-I	Y	Fly: Midge	
Micropsectra	09021011070	18.00	18.00	7	CG	98.1-E	Y	Fly: Midge	
Tanytarsus	09021011076	4.67	4.67	6	CF	25.7-I	Y	Fly: Midge	
Cryptochironomus	09021011082	0.00	0.33	8	PR	31.3-I	C	Fly: Midge	
<i>Cryptochironomus fulvus</i>	09021011082144	0.33	0.00	--	--	--	C	Fly: Midge	
Dicrotendipes	09021011085	1.00	1.00	8	CG	28.8-I	C	Fly: Midge	
Parachironomus	09021011097	1.00	1.00	10	PR	28.6-I	C	Fly: Midge	
Polypedilum	09021011102	0.00	1.33	6	SH	24.2-I	C	Fly: Midge	
<i>Polypedilum illinoense</i>	09021011102204	1.33	0.00	--	--	--	--	Fly: Midge	
Xenochironomus	09021011108	0.00	0.33	0	PR	1.5-S	C	Fly: Midge	
<i>Xenochironomus xenolabis</i>	09021011108200	0.33	0.00	--	--	--	C	Fly: Midge	
Hemerodromia	09021016057	1.33	1.33	3	PR	--	--	Fly: Aquatic Dance	
Oulimnius	09021113068	0.00	0.33	--	--	--	--	Beetle	
<i>Oulimnius latiusculus</i>	09021113068049	0.33	0.00	--	--	--	--	Beetle	
Fossaria	10010201021	4.00	4.00	--	--	56.1-E	--	Snail	
Physidae	10010202	1.33	1.33	--	SC	--	--	Snail	
Gyraulus	10010203029	3.00	3.00	--	SC	37.2-I	--	Snail	