



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

Station Information

Station Number: W-202	Trip ID: 2009-202	River Basin:	St. John
Waterbody:	MALISEET POND	HUC8 Name:	Meduxnekeag
Town:	Littleton	Latitude:	46 12 5.11 N
Mitigation Monitoring Site:	No	Longitude:	67 47 43.27 W

Sample Information

Sample ID: DN-2009-202	Type of Sample: DIPNET	Sampling Organization:	BIOMONITORING UNIT
Date Sampled: 7/1/2009	Replicates: 3	Taxonomist:	LOTIC INC.
Subsample Factor:	X4		

Classification Attainment

Statutory Class:	GPA	Final Determination:	C	Date: 7/23/2019
Model Result with $P \geq 0.6$:	C	Reason for Determination:	Model	
Date Last Calculated:	12/20/2018	Comments:		

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A: 0.00	Class C: 0.96	Class A, B, or C	1.00
Class B: 0.04	NA: 0.00	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.04	Class A	0.00
Class C or Non-Attainment	0.96	Class B or C or Non-Attainment	1.00

Model Variables

		Reference Range (10th or 90th percentile value)
Abundance of Taxa in the Order Ephemeroptera	2.667	≥ 0.000
Relative Richness of Taxa in the Orders Ephemeroptera, Odonata and Tricoptera	0.147	≥ 0.140
Shannon-Wiener Diversity Index	2.743	≥ 2.497
Relative Abundance of Collector-Gatherer Taxa	0.190	≥ 0.131
Abundance of Sensitive Taxa	21.333	≥ 3.424
Richness of Sensitive Taxa	1.000	≥ 3.000
Maine Tolerance Index Score For Wetland Macroinvertebrates	33.491	≤ 29.776
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	0.018	≥ 0.334

Other Variables

Total Mean Abundance	2708
Generic Richness:	34
Hilsenhoff Biotic Index:	8.69

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Glyptotendipes</i>	41.75
2	<i>Tanytarsus</i>	19.25
3	<i>Procladius</i>	13.15
4	<i>Chironomus</i>	7.09
5	<i>Hyalella azteca</i>	3.64



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Surface Water Chemistry

Sample Date: 7/1/2009 10:15:00 AM

Collection Method	Parameter	Value	Units	Qualifier
Grab Sample	Chloride	5	mg/l	
Grab Sample	Chlorophyll A	0.084	mg/l	
Grab Sample	Chlorophyll A - Phaeophytin	0.0812	mg/l	
Grab Sample	Nitrate + Nitrite As Nitrogen		mg/l	U
Grab Sample	Orthophosphate As Phosphorus	25	ug/l	
Grab Sample	pH	8.6		
Grab Sample	Silica	4.1	mg/l	
Grab Sample	Silicon	1.9	mg/l	
Grab Sample	Specific Conductance	242	umhos/cm	
Grab Sample	Total Alkalinity	116	mg/l	
Grab Sample	Total Kjeldahl Nitrogen (organic And Nh3) As Nitrogen	1.2	mg/l	
Grab Sample	Total Phosphorus	0.11	mg/l	
Grab Sample	True Color	33	unit	
In-situ	Dissolved Oxygen	10.4	mg/l	
In-situ	pH	8.52		
In-situ	Specific Conductance	240	us/cm	
In-situ	Temperature	21.4	deg c	

Landcover Summary - 2004 Data

Total Area (ac)	97	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	14.7	Tilled Agriculture %	67.1
		Low Int. Dev. %	0.0	Upland Woody %	18.2	Grassland %	0.0
		Development %	0.0	Natural %	32.9	Human Altered %	67.1
						Impervious %	0.2
Total Land (ac)	97	High Int. Dev. %	0.0	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.0	Wetland %	14.7	Tilled Agriculture %	67.1
		Low Int. Dev. %	0.0	Upland Woody %	18.2	Grassland %	0.0
		Development %	0.0	Natural %	32.9	Human Altered %	67.1
						Impervious %	0.2



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Summary of Habitat Characteristics

<u>Human Disturbance</u>		<u>Landscape-level Cowardin Classification</u>		<u>Hydrogeomorphic Setting</u>	
Total Score:	16	System:	PALUSTRINE	Landscape Position:	TERRENE
Hydrologic Modifications:	3	Subsystem:		Lotic Gradient:	
Vegetative Modifications:	0	Class 1:	UNCONSOLIDATED	Flow Path:	OUTFLOW
Chemical Contaminants	5		BOTTOM		
Impervious Surface:	0	Subclass 1:	MUD	Land Form:	BASIN
Non-point Sources:	8	Class 2:		Land Form Type:	
		Subclass 2:		Waterbody Type:	POND
		Class 3:		Waterbody Subtype:	
		Subclass 3:			

Comments:

Dominant Plant Species: NUPHAR SP., SWEET GALE

Additional Plant Community Observations:

Habitat Classification:	Substrate Classification:
EMERGENT PERSISTENT VEGETATION	SILT/MUCK SUBSTRATE

Average Depth: 67 cm

Sample Comments: DOC sample given to Barry Mower for pesticide analysis.
NUMEROUS DEAD FISH & STRESSED TADPOLES. FIELD NEXT TO POND WAS SPRAYED
YESTERDAY, POSSIBLE SPRAYED WITH A FUNGICIDE. RECENT RAIN. DISSOLVED
ORGANIC CARBON SAMPLE GIVEN TO BARRY MOWER FOR PESTICIDE ANALYSIS.



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Additional Summary Variables

Station Number: W-202	Waterbody: MALISEET POND	Town: Littleton
Log Number: DN-2009-202	Subsample Factor: X4	Replicates: 3
		Calculated: 12/20/2018

	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	12.00	0.004	5	0.15
EPT Taxa:	12.00	0.004	5	0.15
Insects:	2580.00	0.953	24	0.71
Non-Insects:	128.00	0.047	10	0.29
Leeches:	18.67	0.007	5	0.15
Oligochaetes:	1.33	0.000	1	0.03
Snails:	1.33	0.000	1	0.03
Bivalves:	6.67	0.002	1	0.03
Isopods:	0.00	0.000	0	0.00
Amphipods:	98.67	0.036	1	0.03
Mites:	1.33	0.000	1	0.03
Stoneflies:	0.00	0.000	0	0.00
Mayflies:	2.67	0.001	2	0.06
Odonates:	0.00	0.000	0	0.00
Caddisflies:	9.33	0.003	3	0.09
Diptera:	2560.00	0.945	16	0.47
Hemiptera:	0.00	0.000	0	0.00
Beetles:	6.67	0.002	2	0.06
Chironomids:	2505.33	0.925	14	0.41
Tanypodinae Tribe:	356.00	0.131	1	0.03
Chironomiinae Tribe:	2149.33	0.794	13	0.38
Orthocloidiinae Tribe:	0.00	0.000	0	0.00
Collector-Filterers:	533.33	0.197	3	0.09
Collector-Gatherers:	513.33	0.190	6	0.18
Predators:	433.33	0.160	5	0.15
Piercers:	6.67	0.002	2	0.06
Shredders:	1166.67	0.431	4	0.12
Scrapers:	1.33	0.000	1	0.03
Maine Tolerance:				
Sensitive:	21.33	0.008	1	0.04
Intermediate:	1489.33	0.555	18	0.72
Eurytopic:	1172.00	0.437	6	0.24
Ratio of MTI Sensitive to Eurytopic	0.02	0.018	0.17	0.17



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Wetland Aquatic Life Classification Attainment Report**

Aquatic Life Taxonomic Inventory Report

Station Number: W-202

Waterbody: MALISEET POND

Town: Littleton

Log Number: DN-2009-202

Subsample Factor: X4

Replicates: 3

Calculated: 12/20/2018

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	1.33	1.33	--	--	--	--	Worm
Glossiphoniidae	08030101	1.33	1.33	--	--	--	--	Leech
Helobdella	08030101005	0.00	1.33	--	--	43-E	--	Leech
<i>Helobdella modesta</i>	08030101005004	1.33	0.00	--	--	--	--	Leech
Macrobdella	08030201002	1.33	1.33	--	--	--	--	Leech
Erpobdellidae	08030203	5.33	5.33	--	--	--	--	Leech
Erpobdella	08030203002	0.00	9.33	--	--	36.4-I	--	Leech
<i>Erpobdella punctata</i>	08030203002001	9.33	0.00	--	--	--	--	Leech
Hyaella	09010203006	0.00	98.67	8	CG	24.5-I	--	Amphipod
<i>Hyaella azteca</i>	09010203006011	98.67	0.00	--	--	--	--	Amphipod
Siphonuridae	09020405	1.33	1.33	--	--	--	--	Mayfly
Caenis	09020412040	1.33	1.33	7	CG	22.1-I	--	Mayfly
Phryganeidae	09020608	4.00	4.00	--	--	--	--	Caddisfly
Limnephilus	09020610055	2.67	2.67	3	SH	24.6-I	--	Caddisfly
Glyphopsyche	09020610059	0.00	2.67	1	--	--	--	Caddisfly
<i>Glyphopsyche irrorata</i>	09020610059119	2.67	0.00	--	--	--	--	Caddisfly
Lepidoptera	090209	1.33	1.33	--	--	--	--	Moth
Chaoborus	09021007025	2.67	2.67	8	PR	25-I	--	Fly: Phantom Midge
Bezzia/palpomyia	09021010043	52.00	52.00	6	PR	26.9-I	--	Fly: Biting Midge
Procladius	09021011015	356.00	356.00	9	PR	25.1-I	T	Fly: Midge
Cladotanytarsus	09021011068	86.67	86.67	7	CG	22.2-I	Y	Fly: Midge
Paratanytarsus	09021011071	1.33	1.33	6	--	43-E	Y	Fly: Midge
Tanytarsus	09021011076	521.33	521.33	6	CF	25.7-I	Y	Fly: Midge
Chironomus	09021011080	192.00	192.00	10	CG	27.4-I	C	Fly: Midge
Cladopelma	09021011081	38.67	38.67	9	CG	27.9-I	C	Fly: Midge
Cryptochironomus	09021011082	21.33	21.33	8	PR	31.3-I	C	Fly: Midge
Dicrotendipes	09021011085	96.00	96.00	8	CG	28.8-I	C	Fly: Midge
Endochironomus	09021011087	32.00	32.00	10	SH	50.2-E	C	Fly: Midge
Glyptotendipes	09021011088	1130.67	1130.67	10	SH	43-E	C	Fly: Midge
Microtendipes	09021011094	0.00	5.33	6	CF	22.3-I	C	Fly: Midge
<i>Microtendipes pedellus group</i>	09021011094166	5.33	0.00	--	--	--	C	Fly: Midge
Parachironomus	09021011097	1.33	1.33	10	PR	28.6-I	C	Fly: Midge
Polypedilum	09021011102	0.00	1.33	6	SH	24.2-I	C	Fly: Midge
<i>Polypedilum nubeculosum</i>	09021011102202	1.33	0.00	--	--	--	C	Fly: Midge
Zavreliella	09021011133	0.00	21.33	--	--	21.8-S	H	Fly: Midge



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		Actual	Adjusted					
<i>Zavreliella marmorata</i>	09021011133010	21.33	0.00	--	--	--	S	Fly: Midge
Haliphus	09021101001	2.67	2.67	--	P	67.1-E	--	Beetle
Peltodytes	09021101002	4.00	4.00	--	P	56.2-E	--	Beetle
Limnesia	09030112001	1.33	1.33	--	--	37-I	--	Mite
Gyraulus	10010203029	1.33	1.33	--	SC	37.2-I	--	Snail
Sphaeriidae	10020201	6.67	6.67	--	CF	--	--	Clam