



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

Station Information

Station Number: W-293	Trip ID: 2016-293	River Basin: Maine Coastal
Waterbody: SCAMMON POND		HUC8 Name: Maine Coastal
Town: Eastbrook		Latitude: 44 40 47.6 N
Mitigation Monitoring Site: No		Longitude: 68 15 22.43 W

Sample Information

Sample ID: DN-2016-293	Type of Sample: DIPNET	Date Sampled: 6/23/2016
Subsample Factor: X1	Replicates: 3	

Classification Attainment

Statutory Class:	GPA	Final Determination:	A	Date: 8/7/2017
Model Result with $P \geq 0.6$:	B	Reason for Determination:	Best Professional Judgement	
Date Last Calculated:	4/14/2017	Comments:	Indeterminate A (0.54) raised to A due to structure and function of macroinvertebrate community.	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A: 0.54	Class C: 0.01	Class A, B, or C	1.00
Class B: 0.45	NA: 0.00	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.99	Class A	0.54
Class C or Non-Attainment	0.01	Class B or C or Non-Attainment	0.46

Model Variables

		<u>Reference Range</u>
Total Mean Abundance	94	< 787
Ephemeroptera Abundance	0.67	most > 35
Odonata Relative Abundance	0.014	most > 0.04
Trichoptera Relative Abundance	0.046	most > 0.02
Shredder Taxa Relative Abundance	0.06	< 0.2
Non-insect Taxa Relative Richness	0.33	< 0.4
MTI Sensitive Taxa Abundance	11.79	most > 30
MTI Sensitive Taxa Relative Abundance	0.13	most > 0.05
MTI Sensitive Taxa Richness	8	most > 7
MTI Intermediate Taxa Relative Abundance	0.83	> 0.5
MTI Intermediate Taxa Richness	17	< 25
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	2.94	most > 1

Other Variables

Generic Richness:	33
Hilsenhoff Biotic Index:	7.67
Shannon-Weiner Diversity:	2.84
Maine Tolerance Index:	26.46

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hyalella azteca</i>	53.36
2	<i>Sphaerium</i>	12.72
3	<i>Psectrocladius</i>	3.89
4	<i>Amnicola limosus</i>	3.53
4	<i>Lymnaea columella</i>	3.53
5	<i>Polypedilum flavum</i>	2.47



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5 *Polypedilum tritum*

2.47



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: LOTIC INC.

Water Chemistry

Sample Date: 6/23/2016 2:00:00 PM

Sample Type	Collection Method	Parameter	Value	Units	Qualifier
Surface Water	Grab Sample	Chloride	3	mg/l	
Surface Water	Grab Sample	Chlorophyll A	0.0022	mg/l	
Surface Water	Grab Sample	Chlorophyll A - Phaeophytin	0.0022	mg/l	
Surface Water	Grab Sample	Dissolved Organic Carbon	4.7	mg/l	
Surface Water	Grab Sample	Nitrate+nitrite As N		mg/l	U
Surface Water	Grab Sample	Orthophosphate As Phosphorus		ug/l	U
Surface Water	Grab Sample	Total Alkalinity	4	mg/l	
Surface Water	Grab Sample	Total Kjeldahl Nitrogen	0.4	mg/l	
Surface Water	Grab Sample	Total Phosphorus	8	ug/l	
Surface Water	Grab Sample	True Color	32	ptco	
Surface Water	In-situ	Dissolved Oxygen	8.5	mg/l	
Surface Water	In-situ	Dissolved Oxygen Saturation	100.6	%	
Surface Water	In-situ	pH	6.7		
Surface Water	In-situ	Specific Conductance	27.8	us/cm	
Surface Water	In-situ	Temperature	23.5	deg c	

Landcover Summary - 2004 Data

Total Area (ac)	9642	High Int. Dev. %	0.1	Water %	22.1	Non-vegetated %	1.4
		Med Int. Dev. %	0.1	Wetland %	3.8	Tilled Agriculture %	2.2
		Low Int. Dev. %	1.3	Upland Woody %	69.9	Grassland %	0.4
		Development %	1.5	Natural %	73.7	Human Altered %	4.2
						Impervious %	1.5
Total Land (ac)	7509	High Int. Dev. %	0.1	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.2	Wetland %	4.9	Tilled Agriculture %	2.8
		Low Int. Dev. %	1.7	Upland Woody %	89.8	Grassland %	0.6
		Development %	2.0	Natural %	94.7	Human Altered %	5.3
						Impervious %	1.9



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Summary of Habitat Characteristics

<u>Human Disturbance</u>	<u>Landscape-level Cowardin Classification</u>	<u>Hydrogeomorphic Setting</u>
Total Score: 15	System:	Landscape Position:
Hydrologic Modifications: 3	Subsystem:	Lotic Gradient:
Vegetative Modifications: 1	Class 1:	Flow Path:
Chemical Pollutants: 1	Subclass 1:	Land Form:
Watershed: 10	Class 2:	Land Form Type:
Characterization and Non-point Sources:	Subclass 2:	Waterbody Type:
	Class 3:	Waterbody Subtype:
	Subclass 3:	
		Comments:

Dominant Plant Species:

Additional Plant Community Observations: RUSHES

Habitat Classification: EMERGENT NON-PERSISTENT VEGETATION	Substrate Classification: SILT/MUCK SUBSTRATE
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Average Depth: 74 cm Visible Flow: No Rain In Previous 24 Hours: Unknown

Sample Comments: THIN LAYER OF MUCK OVER SOLID BOTTOM

Common Plants Observed

Scientific Name	Common Name	Maine Taxonomic Code	Plant CoC Score	Wetland Indicator Status	Growth Form
<i>Potamogeton</i>		LW-34011101001			
<i>Nymphaea odorata</i>	American white waterlily	LW-34023103003002	5	OBL	FORB/HERB
<i>Nuphar lutea ssp. variegata</i>	Variegated yellow pond-lily	LW-34023103002002	4	OBL	FORB/HERB
<i>Brasenia schreberi</i>	Watershield	LW-34023103001001	6	OBL	FORB/HERB
<i>Pontederia cordata</i>	Pickerelweed	LW-34010906002002	4	OBL	FORB/HERB



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Additional Summary Variables

Station Number: W-293 Waterbody: SCAMMON POND Town: Eastbrook
Log Number: DN-2016-293 Subsample Factor: X1 Replicates: 3 Calculated: 4/14/2017

	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	6.33	0.067	8	0.24
EPT Taxa:	5.00	0.053	5	0.15
Insects:	22.00	0.233	22	0.67
Non-Insects:	72.33	0.767	11	0.33
Leeches:	0.33	0.004	1	0.03
Oligochaetes:	0.00	0.000	0	0.00
Snails:	7.33	0.078	3	0.09
Bivalves:	12.00	0.127	1	0.03
Isopods:	0.00	0.000	0	0.00
Amphipods:	50.33	0.534	1	0.03
Mites:	2.33	0.025	5	0.15
Stoneflies:	0.00	0.000	0	0.00
Mayflies:	0.67	0.007	1	0.03
Odonates:	1.33	0.014	3	0.09
Caddisflies:	4.33	0.046	4	0.12
Diptera:	14.67	0.155	11	0.33
Hemiptera:	0.00	0.000	0	0.00
Beetles:	0.67	0.007	2	0.06
Chironomids:	13.67	0.145	10	0.30
Tanypodinae Tribe:	2.39	0.025	4	0.12
Chironomiinae Tribe:	7.52	0.080	5	0.15
Orthocloidiinae Tribe:	3.76	0.040	1	0.03
Collector-Filterers:	12.00	0.127	1	0.03
Collector-Gatherers:	55.43	0.588	5	0.15
Predators:	5.73	0.061	10	0.30
Piercers:	3.33	0.035	2	0.06
Shredders:	5.81	0.062	2	0.06
Scrapers:	7.33	0.078	3	0.09
Maine Tolerance:				
Sensitive:	11.79	0.130	8	0.30
Intermediate:	75.18	0.826	17	0.63
Eurytopic:	4.02	0.044	2	0.07
Ratio of MTI Sensitive to Eurytopic	2.94	2.936	4.00	4.00



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Aquatic Life Taxonomic Inventory Report

Station Number: W-293 Waterbody: SCAMMON POND Town: Eastbrook
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Taxon	Maine Taxonomic Code	Count (Mean of Samples)		Hilsen-hoff Biotic Index	Functional Feeding Group	Maine Tolerance Index	Tribe	Taxa Group
		Actual	Adjusted					
Erpobdellidae	08030203	0.33	0.33	--	--	--	--	Leech
Hyaella	09010203006	0.00	50.33	8	CG	24.5-I	--	Amphipod
<i>Hyaella azteca</i>	09010203006011	50.33	0.00	--	--	--	--	Amphipod
Collembola	090201	0.33	0.33	--	--	--	--	Collembola
Leucorrhinia	09020306034	0.33	0.33	9	PR	24.7-I	--	Dragonfly/damselfly
Lestes	09020308045	0.67	0.67	9	PR	32.6-I	--	Dragonfly/damselfly
Argia	09020309048	0.33	0.33	7	PR	--	--	Dragonfly/damselfly
Caenis	09020412040	0.67	0.67	7	CG	22.1-I	--	Mayfly
Oxyethira	09020607028	1.67	1.67	3	P	22-S	--	Caddisfly
Orthotrichia	09020607031	1.67	1.67	--	P	--	--	Caddisfly
Mystacides	09020618075	0.33	0.33	4	CG	18.2-S	--	Caddisfly
Oecetis	09020618078	0.67	0.67	8	PR	16.3-S	--	Caddisfly
Bezzia/palpomyia	09021010043	1.00	1.00	6	PR	26.9-I	--	Fly: Biting Midge
Chironomidae	09021011	0.33	0.00	--	--	--	--	Fly: Midge
Ablabesmyia	09021011001	1.33	1.37	8	PR	23.6-I	T	Fly: Midge
Labrundinia	09021011008	0.00	0.34	7	PR	18.1-S	T	Fly: Midge
<i>Labrundinia neopilosella</i>	09021011008021	0.33	0.00	--	--	--	T	Fly: Midge
Procladius	09021011015	0.33	0.34	9	PR	25.1-I	T	Fly: Midge
Thienemannimyia	09021011020	0.00	0.34	3	PR	--	T	Fly: Midge
<i>Thienemannimyia group</i>	09021011020041	0.33	0.00	--	--	--	T	Fly: Midge
Psectrocladius	09021011056	3.67	3.76	8	CG	22-S	--	Fly: Midge
Chironomus	09021011080	0.33	0.34	10	CG	27.4-I	C	Fly: Midge
Glyptotendipes	09021011088	0.67	0.68	10	SH	43-E	C	Fly: Midge
Parachironomus	09021011097	0.33	0.34	10	PR	28.6-I	C	Fly: Midge
Polypedilum	09021011102	0.00	5.13	6	SH	24.2-I	C	Fly: Midge
<i>Polypedilum flavum</i>	09021011102182	2.33	0.00	--	--	--	C	Fly: Midge
<i>Polypedilum tritum</i>	09021011102191	2.33	0.00	--	--	--	C	Fly: Midge
<i>Polypedilum sordens</i>	09021011102201	0.33	0.00	--	--	--	--	Fly: Midge
Zavreliella	09021011133	0.00	1.03	--	--	21.8-S	H	Fly: Midge
<i>Zavreliella marmorata</i>	09021011133010	1.00	0.00	--	--	--	S	Fly: Midge
Dineutus	09021104032	0.33	0.33	2	--	23.2-I	--	Beetle
Curculionidae	09021115	0.33	0.33	--	--	--	--	Beetle
Unionicola	09030108001	0.33	0.33	--	--	24.8-I	--	Mite
Neolimnochares	09030110003	0.67	0.67	--	--	3.9-S	--	Mite
Arrenurus	09030111001	0.33	0.33	--	--	23.8-I	--	Mite
Limnesia	09030112001	0.67	0.67	--	--	37-I	--	Mite



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		Actual	Adjusted					
Eylais	09030117001	0.33	0.33	--	--	23-I	--	Mite
Amnicola	10010104013	0.00	3.33	--	SC	18.7-S	--	Snail
<i>Amnicola limosus</i>	10010104013018	3.33	0.00	--	--	--	--	Snail
Lymnaea	10010201022	0.00	3.33	--	SC	83.3-E	--	Snail
<i>Lymnaea columella</i>	10010201022038	3.33	0.00	--	--	--	--	Snail
Helisoma	10010203030	0.67	0.67	--	SC	42.8-I	--	Snail
Sphaerium	10020201003	12.00	12.00	--	CF	24.8-I	--	Clam