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

Station Information

Station Number:	**W-160**	Trip ID:	2012-160	River Basin:	Maine Coastal
Waterbody:	NORTH POND			HUC8 Name:	St. George-Sheepscot
Town:	Warren			Latitude:	44 8 37.21 N
Mitigation Monitoring Site:	No			Longitude:	69 16 50.66 W

Sample Information

Sample ID:	**DN-2012-160**	Type of Sample:	DIPNET	Date Sampled:	7/2/2012
Subsample Factor:	X1	Replicates:	3		

Classification Attainment

Statutory Class:	**GPA**	**Final Determination:**	**B**	Date:	2/28/2013
Model Result with P≥0.6:	B	**Reason for Determination:**	**Model**		
Date Last Calculated:	5/13/2014	Comments:			

Model Probabilities

First Stage Model

Class A:	0.11	Class C:	0.05
Class B:	0.85	NA:	0.00

B or Better Model

Class A or B	0.95
Class C or Non-Attainment	0.05

C or Better Model

Class A, B, or C	1.00
Non-Attainment	0.00

A Model

Class A	0.11
Class B or C or Non-Attainment	0.89

Model Variables

		Reference Range
Total Mean Abundance	649	< 787
Ephemeroptera Abundance	2.33	most > 35
Odonata Relative Abundance	0.008	most > 0.04
Trichoptera Relative Abundance	0.034	most > 0.02
Shredder Taxa Relative Abundance	0.05	< 0.2
Non-insect Taxa Relative Richness	0.42	< 0.4
MTI Sensitive Taxa Abundance	46.67	most > 30
MTI Sensitive Taxa Relative Abundance	0.08	most > 0.05
MTI Sensitive Taxa Richness	10	most > 7
MTI Intermediate Taxa Relative Abundance	0.86	> 0.5
MTI Intermediate Taxa Richness	27	< 25
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	1.10	most > 1

Other Variables

Generic Richness:	55
Hilsenhoff Biotic Index:	7.85
Shannon-Weiner Diversity:	2.27
Maine Tolerance Index:	26.41

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	*Hyalella*	70.48
2	*Hydrobiidae*	3.80
3	*Caecidotea*	3.44
4	*Ablabesmyia*	2.46
5	*Polycentropus*	1.85

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

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: ECOANALYSTS IDAHO

Water Chemistry

Sample Date: 7/2/2012 3:00:00 PM

Sample Type	Collection Method	Parameter	Value	Units	Qualifier
Surface Water	Grab Sample	Chloride	7	mg/l	
Surface Water	Grab Sample	Chlorophyll A	0.0071	mg/l	
Surface Water	Grab Sample	Chlorophyll A - Phaeophytin	0.0077	mg/l	
Surface Water	Grab Sample	Dissolved Organic Carbon	5.5	mg/l	
Surface Water	Grab Sample	Nitrate+nitrite As N		mg/l	U
Surface Water	Grab Sample	Orthophosphate As Phosphorus	1	ug/l	
Surface Water	Grab Sample	pH	7.3		
Surface Water	Grab Sample	Silica		mg/l	U
Surface Water	Grab Sample	Silicon		mg/l	U
Surface Water	Grab Sample	Specific Conductance	52.9	umhos/cm	
Surface Water	Grab Sample	Total Alkalinity	10	mg/l	
Surface Water	Grab Sample	Total Kjeldahl Nitrogen	0.4	mg/l	
Surface Water	Grab Sample	Total Phosphorus	0.017	mg/l	
Surface Water	Grab Sample	True Color	36	unit	
Surface Water	In-situ	Dissolved Oxygen	8.4	mg/l	
Surface Water	In-situ	pH	6.68		
Surface Water	In-situ	Specific Conductance	50	us/cm	
Surface Water	In-situ	Temperature	27.3	deg c	

Landcover Summary - 2004 Data

Total Area (ac)	11614	High Int. Dev. %	0.6	Water %	9.5	Non-vegetated %	1.2
		Med Int. Dev. %	0.5	Wetland %	9.0	Tilled Agriculture %	3.6
		Low Int. Dev. %	4.1	Upland Woody %	64.8	Grassland %	7.1
		Development %	5.1	Natural %	74.4	Human Altered %	16.0
						Impervious %	3.9
Total Land (ac)	10506	High Int. Dev. %	0.6	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.6	Wetland %	9.9	Tilled Agriculture %	4.0
		Low Int. Dev. %	4.5	Upland Woody %	71.6	Grassland %	7.9
		Development %	5.7	Natural %	82.3	Human Altered %	17.7
						Impervious %	4.3

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

Summary of Habitat Characteristics

Human Disturbance		Landscape-level Cowardin Classification		Hydrogeomorphic Setting	
Total Score:	12	System:	LACUSTRINE	Landscape Position:	LENTIC
Hydrologic Modifications:	0	Subsystem:	LITTORAL	Lotic Gradient:	
Vegetative Modifications:	1	Class 1:	UNCONSOLIDATED BOTTOM	Flow Path:	BIDIRECTIONAL FLOW-NONTIDAL
Chemical Contaminants	0				
Impervious Surface:	6	Subclass 1:	MUD	Land Form:	FRINGE
Non-point Sources:	5	Class 2:		Land Form Type:	LENTIC
		Subclass 2:		Waterbody Type:	LAKE
		Class 3:		Waterbody Subtype:	NATURAL
		Subclass 3:			
				Comments:	

Dominant Plant Species: PICKEREL WEED (PONTEDERIA CORDATA), WHITE WATER LILY (NYMPHAEA ODORATA), YELLOW WATER LILY (NUPHAR VARIEGATA), RUSHES (JUNCUS SPP.), UNKNOWN SUBMERGED/PARTIALLY EMERGENT PLANT, POSSIBLY LITTLE FLOATING HEART (NYMPHOIDES CORDATA), POTAMOGETON, BLADDERWORT (UTRICULARIA SP.)

Additional Plant Community Observations:

Habitat Classification:
AQUATIC MACROPHYTE BED
EMERGENT NON-PERSISTENT VEGETATION

Substrate Classification:
SILT/MUCK SUBSTRATE

Average Depth: 82 cm

Sample Comments: WATER LEVEL HIGH - PLANT STEMS EXTEND INTO DEEP WATER, LONG STEMS FOR PICKEREL WEED, RUSHES, ETC.
No soft algae data. Samples incompletely analyzed and data not recoverable.

Additional Summary Variables

Station Number: W-160 Waterbody: NORTH POND Town: Warren

Log Number: DN-2012-160 Subsample Factor: X1 Replicates: 3 Calculated: 5/13/2014

	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	29.67	0.046	9	0.16
EPT Taxa:	24.33	0.037	6	0.11
Insects:	88.33	0.136	32	0.58
Non-Insects:	561.00	0.864	23	0.42
Leeches:	11.33	0.017	2	0.04
Oligochaetes:	12.33	0.019	4	0.07
Snails:	44.33	0.068	7	0.13
Bivalves:	1.00	0.002	2	0.04
Isopods:	22.33	0.034	1	0.02
Amphipods:	458.00	0.705	2	0.04
Mites:	11.67	0.018	5	0.09
Stoneflies:	0.00	0.000	0	0.00
Mayflies:	2.33	0.004	2	0.04
Odonates:	5.33	0.008	3	0.05
Caddisflies:	22.00	0.034	4	0.07
Diptera:	50.00	0.077	14	0.25
Hemiptera:	2.00	0.003	2	0.04
Beetles:	5.00	0.008	6	0.11
Chironomids:	44.33	0.068	12	0.22
Tanypodinae Tribe:	17.00	0.026	3	0.05
Chironomiinae Tribe:	20.00	0.031	7	0.13
Orthoclodiinae Tribe:	7.33	0.011	2	0.04
Collector-Filterers:	6.00	0.009	4	0.07
Collector-Gatherers:	485.67	0.748	10	0.18
Predators:	47.12	0.073	12	0.22
Piercers:	4.33	0.007	2	0.04
Shredders:	33.29	0.051	5	0.09
Scrapers:	17.33	0.027	5	0.09
Maine Tolerance:				
Sensitive:	46.67	0.076	10	0.22
Intermediate:	529.07	0.856	27	0.60
Eurytopic:	42.26	0.068	8	0.18
Ratio of MTI Sensitive to Eurytopic	1.10	1.104	1.25	1.25

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

Aquatic Life Taxonomic Inventory Report

Station Number: W-160 Waterbody: NORTH POND Town: Warren

Log Number: DN-2012-160 Subsample Factor: X1 Replicates: 3 Calculated: 5/13/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samples) Actual	Count (Mean of Samples) Adjusted	Hilsen-hoff Biotic Index	Func-tional Feeding Group	Maine Toler-ance Index	Tribe	Taxa Group
Dero	08020202007	0.00	1.00	--	CG	37.9-I	--	Worm
Dero digitata	08020202007001	1.00	0.00	--	--	--	--	Worm
Haemonais	08020202008	0.00	0.33	--	--	86.1-E	--	Worm
Haemonais waldvogeli	08020202008001	0.33	0.00	--	--	--	--	Worm
Stylaria	08020202014	0.00	10.33	--	CG	18-S	--	Worm
Stylaria lacustris	08020202014002	10.33	0.00	--	--	--	--	Worm
Lumbricidae	08020205	0.67	0.67	--	--	--	--	Worm
Helobdella	08030101005	0.00	10.67	--	--	43-E	--	Leech
Helobdella modesta	08030101005004	10.67	0.00	--	--	--	--	Leech
Erpobdella	08030203002	0.67	0.67	--	--	36.4-I	--	Leech
Caecidotea	09010101001	22.33	22.33	8	SH	51.9-E	--	Isopod
Crangonyx	09010202004	0.33	0.33	8	--	17.2-S	--	Amphipod
Hyalella	09010203006	457.67	457.67	8	CG	24.5-I	--	Amphipod
Aeshnidae	09020301	0.33	0.33	--	--	--	--	Dragonfly/damselfly
Lestes	09020308045	0.33	0.33	9	PR	32.6-I	--	Dragonfly/damselfly
Ischnura	09020309052	4.67	4.67	9	PR	14.6-S	--	Dragonfly/damselfly
Callibaetis	09020401002	1.67	1.67	9	CG	40.5-I	--	Mayfly
Caenis	09020412040	0.67	0.67	7	CG	22.1-I	--	Mayfly
Pelocoris	09020504013	0.33	0.33	--	PR	24.7-I	--	True Bug
Neoplea	09020512016	1.67	1.67	--	PR	35.5-I	--	True Bug
Polycentropus	09020603010	12.00	12.00	6	PR	15.4-S	--	Caddisfly
Oxyethira	09020607028	4.00	4.00	3	P	22-S	--	Caddisfly
Leptoceridae	09020618	1.33	0.00	--	--	--	--	Caddisfly
Triaenodes	09020618077	1.00	1.29	6	SH	19.3-S	--	Caddisfly
Oecetis	09020618078	3.33	4.71	8	PR	16.3-S	--	Caddisfly
Oecetis cinerascens	09020618078154	0.33	0.00	--	--	--	--	Caddisfly
Crambidae	09020905	1.67	1.67	--	SH	--	--	Moth
Ceratopogonidae	09021010	0.33	0.33	--	--	--	--	Fly: Biting Midge
Bezzia/palpomyia	09021010043	5.33	5.33	6	PR	26.9-I	--	Fly: Biting Midge
Ablabesmyia	09021011001	16.00	16.00	8	PR	23.6-I	T	Fly: Midge
Procladius	09021011015	0.33	0.33	9	PR	25.1-I	T	Fly: Midge
Thienemannimyia	09021011020	0.67	0.67	3	PR	--	T	Fly: Midge
Psectrocladius	09021011056	6.67	6.67	8	CG	22-S	--	Fly: Midge
Synorthocladius	09021011061	0.67	0.67	2	CG	--	--	Fly: Midge
Tanytarsus	09021011076	1.33	1.33	6	CF	25.7-I	Y	Fly: Midge

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

Aquatic Life Taxonomic Inventory Report

Station Number: W-160 Waterbody: NORTH POND Town: Warren

Log Number: DN-2012-160 Subsample Factor: X1 Replicates: 3 Calculated: 5/13/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samples) Actual	Count (Mean of Samples) Adjusted	Hilsen-hoff Biotic Index	Func-tional Feeding Group	Maine Toler-ance Index	Tribe	Taxa Group
Chironomus	09021011080	1.00	1.00	10	CG	27.4-I	C	Fly: Midge
Dicrotendipes	09021011085	4.33	5.33	8	CG	28.8-I	C	Fly: Midge
Dicrotendipes modestus	09021011085151	1.00	0.00	--	--	--	C	Fly: Midge
Glyptotendipes	09021011088	1.33	1.33	10	SH	43-E	C	Fly: Midge
Lauterborniella	09021011092	0.00	0.67	--	CG	17.4-S	C	Fly: Midge
Lauterborniella agrayloides	09021011092001	0.67	0.00	--	--	--	C	Fly: Midge
Microtendipes	09021011094	0.00	3.67	6	CF	22.3-I	C	Fly: Midge
Microtendipes pedellus group	09021011094166	3.67	0.00	--	--	--	C	Fly: Midge
Polypedilum	09021011102	0.00	6.67	6	SH	24.2-I	C	Fly: Midge
Polypedilum tritum	09021011102191	3.00	0.00	--	--	--	C	Fly: Midge
Polypedilum sordens	09021011102201	3.67	0.00	--	--	--	--	Fly: Midge
Haliplus	09021101001	0.33	0.33	--	P	67.1-E	--	Beetle
Dytiscidae	09021103	0.33	0.00	--	--	--	--	Beetle
Laccophilus	09021103006	2.33	2.59	--	--	63.7-E	--	Beetle
Coptotomus	09021103023	0.67	0.74	--	PR	32-I	--	Beetle
Dineutus	09021104032	0.67	0.67	2	--	23.2-I	--	Beetle
Tropisternus	09021105038	0.33	0.33	--	PR	61.8-E	--	Beetle
Stenelmis	09021113070	0.33	0.33	5	SC	30.7-I	--	Beetle
Acariformes	090301	0.33	0.33	--	--	--	--	Mite
Unionicola	09030108001	4.67	4.67	--	--	24.8-I	--	Mite
Arrenurus	09030111001	3.67	3.67	--	--	23.8-I	--	Mite
Limnesia	09030112001	0.67	0.67	--	--	37-I	--	Mite
Hydrodroma	09030113001	2.00	2.00	--	--	14.8-S	--	Mite
Hydryphantes	09030114002	0.33	0.33	--	--	25.8-I	--	Mite
Hydrobiidae	10010104	24.67	24.67	--	--	--	--	Snail
Lymnaea	10010201022	0.00	4.33	--	SC	83.3-E	--	Snail
Lymnaea columella	10010201022038	4.33	0.00	--	--	--	--	Snail
Physa	10010202027	5.00	5.00	--	SC	34-I	--	Snail
Gyraulus	10010203029	6.33	6.33	--	SC	37.2-I	--	Snail
Helisoma	10010203030	1.33	1.33	--	SC	42.8-I	--	Snail
Menetus	10010203031	1.00	1.00	--	--	--	--	Snail
Promenetus	10010203034	0.00	1.67	--	--	33.4-I	--	Snail
Promenetus exacuous	10010203034063	1.67	0.00	--	--	--	--	Snail
Sphaeriidae	10020201	0.33	0.33	--	CF	--	--	Clam
Pisidium	10020201002	0.67	0.67	--	CF	--	--	Clam