



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

Station Information

Station Number: S-111	River Basin: Maine Coastal
Waterbody: Narraguagus River - Station 111	HUC8 Name: Maine Coastal
Town: Deblois	Latitude: 44 44 28.84 N
Directions: DWNSTRM OF RT. 193 BRIDGE CROSSING	Longitude: 68 0 46.16 W
	Stream Order: 4

Sample Information

Log Number: 2507	Type of Sample: ROCK BASKET	Date Deployed: 7/26/2016
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/23/2016

Classification Attainment

Statutory Class: AA	Final Determination: A	Date: 8/3/2017
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 7/25/2017	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.81	Class C	0.00
Class B	0.18	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	128.00	18 Relative Abundance Ephemeroptera	0.50
02 Generic Richness	45.00	19 EPT Generic Richness	25.00
03 Plecoptera Mean Abundance	3.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	64.33	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.19	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	4.47
06 Hilsenhoff Biotic Index	4.26	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	19.11
07 Relative Abundance - Chironomidae	0.09	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.29	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	1.20		
11 <i>Cheumatopsyche</i> Abundance	0.80		
12 EPT Generic Richness/ Diptera Generic Richness	1.92		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	3.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.33		
17 Chironomini Abundance (Family Functional Group)	4.67		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Acerpenna</i>	16.73
2	<i>Helicopsyche</i>	14.32
3	<i>Neureclipsis</i>	12.50
4	<i>Maccaffertium</i>	12.06
5	<i>Leucrocuta</i>	5.36



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Station Number: S-111 Town: Deblois Date Deployed: 7/26/2016
Log Number: 2507 Waterbody: Narraguagus River - Station 111 Date Retrieved: 8/23/2016

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 25.3 deg C
Dissolved Oxygen: 9.19 mg/l
Dissolved Oxygen Saturation: 113.2 %
Specific Conductance: 34.5 uS/cm
Velocity: 15.2 cm/s
pH: 7.12
Wetted Width: 18 m
Bankfull Width: 25 m
Depth: 49 cm

Waterbody Information - Retrieval

Temperature: 20.5 deg C
Dissolved Oxygen: 10.47 mg/l
Dissolved Oxygen Saturation: 116 %
Specific Conductance: 35.4 uS/cm
Velocity: 15.2 cm/s
pH: 7.15
Wetted Width: 22 m
Bankfull Width: 25 m
Depth: 48 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Swamp Hardwood	Open	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Above Road Crossing	Boulder	5 %
	Below Agriculture NPS	Gravel	45 %
	Main Stem	Rubble/Cobble	40 %
		Sand	10 %

Landcover Summary - 2004 Data

Total Area (ac)	65294	High Int. Dev. %	0.1	Water %	3.5	Non-vegetated %	0.5
		Med Int. Dev. %	0.2	Wetland %	6.5	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.8	Upland Woody %	88.5	Grassland %	0.4
		Development %	1.0	Natural %	92.9	Human Altered %	3.6
						Impervious %	0.5

Sample Comments

7/26/2016: ALGAE; VALLISNERIA; FISH PRESENT.
8/23/2016: ALGAE ON ROCKS AND IN CLUMPS AMONG RUSHES; VALLISNERIA; FISH PRESENT.



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

Station Number: S-111
Log Number: 2507

Waterbody: Narraguagus River - Station 111
Subsample Factor: X1

Town: Deblois
Calculated: 7/25/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002	0.67	0.67		--	0.5	0.5
<i>Acroneuria</i>	09020209042		3.67	0	PR		2.9
<i>Acroneuria abnormis</i>	09020209042121	2.67		0	PR	2.1	
<i>Acroneuria arenosa</i>	09020209042122	1.00			--	0.8	
<i>Boyeria</i>	09020301004		0.33	2	PR		0.3
<i>Boyeria vinosa</i>	09020301004012	0.33			--	0.3	
<i>Hagenius</i>	09020302008		0.67	1	PR		0.5
<i>Hagenius brevistylus</i>	09020302008015	0.67			PR	0.5	
<i>Calopteryx</i>	09020307043	0.67	0.67	5	PR	0.5	0.5
Baetidae	09020401	1.33			--	1.0	
<i>Baetis</i>	09020401001		2.07	4	CG		1.6
<i>Baetis flavistriga</i>	09020401001004	2.00			--	1.6	
<i>Centroptilum</i>	09020401003	2.00	2.07	2	CG	1.6	1.6
<i>Acerpenna</i>	09020401007		21.41	5	CG		16.7
<i>Acerpenna pygmaea</i>	09020401007011	20.67			--	16.1	
<i>Labiobaetis</i>	09020401009	4.00	4.14		--	3.1	3.2
<i>Procladius</i>	09020401010	1.33	1.38		CG	1.0	1.1
<i>Plautidius</i>	09020401012	0.67	0.69		CG	0.5	0.5
<i>Isaia</i>	09020401015		6.56		--		5.1
<i>Isaia anoka</i>	09020401015001	6.33			--	4.9	
Heptageniidae	09020402	0.67			--	0.5	
<i>Leucrocota</i>	09020402011	6.67	6.86	1	SC	5.2	5.4
<i>Stenacron</i>	09020402014		1.03	7	SC		0.8
<i>Stenacron interpunctatum</i>	09020402014045	1.00			--	0.8	
<i>Maccaffertium</i>	09020402015	3.67	15.44	4	SC	2.9	12.1
<i>Maccaffertium modestum</i>	09020402015051	1.00			--	0.8	
<i>Maccaffertium vicarium</i>	09020402015055	10.33			--	8.1	
<i>Isonychia</i>	09020404018		0.33	2	CF		0.3
<i>Isonychia bicolor</i>	09020404018059	0.33			--	0.3	
Leptophlebiidae	09020406	0.33	0.33		--	0.3	0.3
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.3	0.3
<i>Tricorythodes</i>	09020411038	1.67	1.67	4	CG	1.3	1.3
<i>Neureclipsis</i>	09020603008	16.00	16.00	7	CF	12.5	12.5
Hydropsychidae	09020604	0.33			--	0.3	
<i>Cheumatopsyche</i>	09020604015	0.67	0.80	5	CF	0.5	0.6
<i>Hydropsyche</i>	09020604016	0.33	1.20	4	CF	0.3	0.9
<i>Hydropsyche bronta</i>	09020604016029	0.33			--	0.3	



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<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.3	
<i>Protoptila</i>	09020606022	0.33	0.33	1	SC	0.3	0.3
<i>Oxyethira</i>	09020607028	2.00	2.00	3	P	1.6	1.6
<i>Brachycentrus</i>	09020609043		1.33	0	CF		1.0
<i>Brachycentrus appalachia</i>	09020609043096	1.33			--	1.0	
<i>Psilotreta</i>	09020614068		0.67	0	SC		0.5
<i>Psilotreta labida</i>	09020614068133	0.67			--	0.5	
<i>Helicopsyche</i>	09020616070	18.33	18.33	3	SC	14.3	14.3
<i>Nectopsyche</i>	09020618074	1.67	1.67	3	SH	1.3	1.3
<i>Oecetis</i>	09020618078	0.33	1.33	8	PR	0.3	1.0
<i>Oecetis avara</i>	09020618078153	1.00			--	0.8	
Chironomidae	09021011				--		
<i>Ablabesmyia</i>	09021011001	0.67	0.67	8	PR	0.5	0.5
<i>Labrundinia</i>	09021011008	0.33	0.33	7	PR	0.3	0.3
<i>Pentaneura</i>	09021011014	0.33	0.33	6	PR	0.3	0.3
<i>Cricotopus</i>	09021011037		2.33	7	SH		1.8
<i>Cricotopus bicinctus</i>	09021011037057	2.00			--	1.6	
<i>Cricotopus tremulus</i>	09021011037068	0.33			--	0.3	
<i>Nanocladius</i>	09021011049	0.67	0.67	3	CG	0.5	0.5
<i>Rheocricotopus</i>	09021011057	0.67	0.67	6	CG	0.5	0.5
<i>Tvetenia</i>	09021011065		0.33	5	CG		0.3
<i>Tvetenia vitracies</i>	09021011065113	0.33			--	0.3	
<i>Rheotanytarsus</i>	09021011072		1.33	6	CF		1.0
<i>Rheotanytarsus exiguus group</i>	09021011072127	0.67			CF	0.5	
<i>Rheotanytarsus pellucidus</i>	09021011072128	0.67			CF	0.5	
<i>Tanytarsus</i>	09021011076	0.67	0.67	6	CF	0.5	0.5
<i>Microtendipes</i>	09021011094		4.00	6	CF		3.1
<i>Microtendipes rydalensis group</i>	09021011094168	4.00			--	3.1	
<i>Polypedilum</i>	09021011102		0.67	6	SH		0.5
<i>Polypedilum aviceps</i>	09021011102181	0.67			--	0.5	
<i>Simulium</i>	09021012047	0.33	0.33	4	CF	0.3	0.3
<i>Atherix</i>	09021015055	0.67	0.67	2	PR	0.5	0.5
<i>Stenelmis</i>	09021113070	0.33	0.33	5	SC	0.3	0.3
<i>Amnicola</i>	10010104013		0.33		SC		0.3
<i>Amnicola limosus</i>	10010104013018	0.33			--	0.3	
Physidae	10010202	0.33	0.33		SC	0.3	0.3