



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

Station Information

Station Number: S-1100	River Basin: Maine Coastal
Waterbody: Great Marsh Stream - Station 1100	HUC8 Name: Maine Coastal
Town: Columbia	Latitude: 44 37 57.14 N
Directions: TURN LEFT ON SACARAP RD FROM RT 1 (HEADED EAST), SECOND STREAM CROSSING.	Longitude: 67 49 57.11 W
	Stream Order: 3

Sample Information

Log Number: 2502	Type of Sample: ROCK BAG	Date Deployed: 7/27/2016
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/23/2016

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 6/23/2017
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 6/22/2017	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.48	Class A, B, or C	1.00
Class B	0.43	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.84
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.16

Model Variables

01 Total Mean Abundance	287.00	18 Relative Abundance Ephemeroptera	0.34
02 Generic Richness	49.00	19 EPT Generic Richness	20.00
03 Plecoptera Mean Abundance	0.33	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	0.33
04 Ephemeroptera Mean Abundance	98.00	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.17	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	2.67
06 Hilsenhoff Biotic Index	4.56	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	68.67
07 Relative Abundance - Chironomidae	0.19	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	20.33		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.25		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.67		
17 Chironomini Abundance (Family Functional Group)	16.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Maccaffertium</i>	23.81
2	<i>Rheotanytarsus</i>	10.45
3	<i>Oecetis</i>	8.48
4	<i>Hydropsyche</i>	7.08
5	<i>Lepidostoma</i>	6.97



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Station Number: S-1100 Town: Columbia Date Deployed: 7/27/2016
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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: ECOANALYSTS IDAHO

Waterbody Information - Deployment

Temperature: 25.7 deg C
Dissolved Oxygen: 8.45 mg/l
Dissolved Oxygen Saturation: 103.8 %
Specific Conductance: 46.4 uS/cm
Velocity: 12.2 cm/s
pH: 6.87
Wetted Width: 5.5 m
Bankfull Width: 6.3 m
Depth: 43 cm

Waterbody Information - Retrieval

Temperature: 19.6 deg C
Dissolved Oxygen: 9.45 mg/l
Dissolved Oxygen Saturation: 102.6 %
Specific Conductance: 41.8 uS/cm
Velocity: 39.62 cm/s
pH: 6.73
Wetted Width: 5.1 m
Bankfull Width: 6.3 m
Depth: 48 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Swamp Hardwood	Partly Open	Rolling	
Upland Conifer			
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Above Road Crossing	Boulder	75 %
		Gravel	5 %
		Rubble/Cobble	15 %
		Sand	5 %

Landcover Summary - 2004 Data

Sample Comments

7/27/2016: DARK WATER.
8/23/2016: DARK WATER; WATER LEVEL HIGH AT RETRIEVAL; A BIT CLOUDY, NOT LIKE TROUT BROOK.



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

Station Number: S-1100

Waterbody: Great Marsh Stream - Station 1100

Town: Columbia

Log Number: 2502

Subsample Factor: X1

Replicates: 3

Calculated: 6/22/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Rhabditophora	0301	0.33	0.33		--	0.1	0.1
<i>Acroneuria</i>	09020209042		0.33	0	PR		0.1
<i>Acroneuria abnormis</i>	09020209042121	0.33		0	PR	0.1	
Calopterygidae	09020307	3.33	3.33		--	1.2	1.2
<i>Baetis</i>	09020401001		7.33	4	CG		2.6
<i>Baetis flavistriga</i>	09020401001004	5.33			--	1.9	
<i>Baetis pluto</i>	09020401001009	2.00			--	0.7	
<i>Acerpenna</i>	09020401007		5.33	5	CG		1.9
<i>Acerpenna macdunnoughi</i>	09020401007001	2.33			--	0.8	
<i>Acerpenna pygmaea</i>	09020401007011	3.00			--	1.0	
<i>Plauditus</i>	09020401012	3.67	3.67		CG	1.3	1.3
<i>Isxaeon</i>	09020401015	3.00	3.00		--	1.0	1.0
<i>Epeorus</i>	09020402009	0.33	0.33	0	SC	0.1	0.1
<i>Leucrocota</i>	09020402011	5.67	5.67	1	SC	2.0	2.0
<i>Maccaffertium</i>	09020402015		68.33	4	SC		23.8
<i>Maccaffertium vicarium</i>	09020402015055	68.33			--	23.8	
<i>Paraleptophlebia</i>	09020406026	0.67	0.67	1	CG	0.2	0.2
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.1	0.1
<i>Tricorythodes</i>	09020411038	3.33	3.33	4	CG	1.2	1.2
<i>Neureclipsis</i>	09020603008	5.00	5.00	7	CF	1.7	1.7
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.5	0.5
<i>Hydropsyche</i>	09020604016	20.33	20.33	4	CF	7.1	7.1
<i>Rhyacophila</i>	09020605019	0.67	2.00	2	PR	0.2	0.7
<i>Rhyacophila fuscula</i>	09020605019060	1.33			PR	0.5	
<i>Hydroptila</i>	09020607026	12.00	12.00	6	P	4.2	4.2
<i>Lepidostoma</i>	09020611064	20.00	20.00	1	SH	7.0	7.0
<i>Psilotreta</i>	09020614068	2.33	2.33	0	SC	0.8	0.8
<i>Helicopsyche</i>	09020616070		11.67	3	SC		4.1
<i>Helicopsyche borealis</i>	09020616070137	11.67			--	4.1	
<i>Oecetis</i>	09020618078		24.33	8	PR		8.5
<i>Oecetis persimilis</i>	09020618078157	24.33			--	8.5	
<i>Nigronia</i>	09020701003		0.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.1	
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.1	0.1
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.1	0.1
<i>Labrundinia</i>	09021011008	0.33	0.33	7	PR	0.1	0.1
<i>Pentaneura</i>	09021011014	0.33	0.33	6	PR	0.1	0.1



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Thienemannimyia</i>	09021011020		2.00	3	PR		0.7
<i>Thienemannimyia group</i>	09021011020041	2.00			--	0.7	
<i>Zavrelimyia</i>	09021011022			8	PR		
<i>Cricotopus</i>	09021011037		2.33	7	SH		0.8
<i>Cricotopus bicinctus</i>	09021011037057	2.33			--	0.8	
<i>Eukiefferiella</i>	09021011041		0.67	8	CG		0.2
<i>Eukiefferiella brehmi group</i>	09021011041073	0.33			--	0.1	
<i>Eukiefferiella discoloripes</i>	09021011041085	0.33			--	0.1	
<i>Nanocladius</i>	09021011049	0.33	0.33	3	CG	0.1	0.1
<i>Micropsectra</i>	09021011070	0.33	0.33	7	CG	0.1	0.1
<i>Rheotanytarsus</i>	09021011072		30.00	6	CF		10.5
<i>Rheotanytarsus exiguus group</i>	09021011072127	23.67			CF	8.2	
<i>Rheotanytarsus pellucidus</i>	09021011072128	6.33			CF	2.2	
<i>Stempellinella</i>	09021011074	0.33	0.33	2	--	0.1	0.1
<i>Tanytarsus</i>	09021011076	0.33	0.33	6	CF	0.1	0.1
<i>Microtendipes</i>	09021011094		7.33	6	CF		2.6
<i>Microtendipes rydalensis group</i>	09021011094168	7.33			--	2.6	
<i>Polypedilum</i>	09021011102		9.00	6	SH		3.1
<i>Polypedilum aviceps</i>	09021011102181	8.67			--	3.0	
<i>Polypedilum flavum</i>	09021011102182	0.33			--	0.1	
<i>Simulium</i>	09021012047	2.67	2.67	4	CF	0.9	0.9
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Psephenus</i>	09021108058		1.33	4	SC		0.5
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.5	
<i>Ectopria</i>	09021109059	0.67	0.67	5	SC	0.2	0.2
<i>Dubiraphia</i>	09021113064	0.67	0.67	6	--	0.2	0.2
<i>Macronychus</i>	09021113065		1.00	4	--		0.3
<i>Macronychus glabratus</i>	09021113065040	1.00			--	0.3	
<i>Optioservus</i>	09021113067		0.33	3	SC		0.1
<i>Optioservus ovalis</i>	09021113067046	0.33			--	0.1	
<i>Promoesia</i>	09021113069		12.33		--		4.3
<i>Promoesia elegans</i>	09021113069051	1.67			--	0.6	
<i>Promoesia tardella</i>	09021113069052	10.67			--	3.7	
<i>Stenelmis</i>	09021113070	7.00	7.00	5	SC	2.4	2.4
<i>Sperchon</i>	09030107001	0.33	0.33		--	0.1	0.1
<i>Sperchonopsis</i>	09030107002	0.33	0.33		--	0.1	0.1
Hydrobiidae	10010104	4.67	4.67		--	1.6	1.6