



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

**Station Information**

<b>Station Number:</b> S-143	River Basin: Saco
Waterbody: Mare Brook - Station 143	HUC8 Name: Presumpscot
Town: Brunswick	Latitude: 43 53 42.87 N
Directions: ~348 FT OFF OF JONATHAN STREET	Longitude: 69 57 7.68 W
	Stream Order: 2

**Sample Information**

<b>Log Number:</b> 2348	Type of Sample: ROCK BAG	Date Deployed: 7/8/2015
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/5/2015

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> C	Date: 12/9/2015
Model Result with $P \geq 0.6$ : C	<b>Reason for Determination:</b> Model	
Date Last Calculated: 12/8/2015	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.83
Class B	0.00	Non-Attainment	0.17
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.00
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	1.00

**Model Variables**

01 Total Mean Abundance	525.33	18 Relative Abundance Ephemeroptera	0.03
02 Generic Richness	32.00	19 EPT Generic Richness	10.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.71
04 Ephemeroptera Mean Abundance	17.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.10	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	12.30
06 Hilsenhoff Biotic Index	5.97	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	13.33
07 Relative Abundance - Chironomidae	0.08	28 EP Generic Richness/14	0.21
08 Relative Generic Richness Diptera	0.34	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	21.33		
11 <i>Cheumatopsyche</i> Abundance	8.89		
12 EPT Generic Richness/ Diptera Generic Richness	0.91		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.00		
17 Chironomini Abundance (Family Functional Group)	8.53		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Caecidotea</i>	45.94
2	<i>Synurella</i>	12.18
3	<i>Frenesia</i>	7.61
4	<i>Girardia</i>	6.35
5	<i>Hydropsyche</i>	4.06



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 19.2 deg C  
Dissolved Oxygen: 8.45 mg/l  
Dissolved Oxygen Saturation:  
Specific Conductance: 297.8 uS/cm  
Velocity: 21.3 cm/s  
pH: 6.99  
Wetted Width: 3.1 m  
Bankfull Width: 3.7 m  
Depth: 40 cm

**Waterbody Information - Retrieval**

Temperature: 19.4 deg C  
Dissolved Oxygen: 8.08 mg/l  
Dissolved Oxygen Saturation:  
Specific Conductance: 279.2 uS/cm  
Velocity: 21.3 cm/s  
pH: 7.1  
Wetted Width: 3.1 m  
Bankfull Width: 3.7 m  
Depth: 38.5 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Conifer	Partly Open	Flat
Upland Hardwood		
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above In-place Contamination	Detritus 5 %
	Below Road Crossing	Sand 80 %
		Silt 15 %

**Landcover Summary - 2004 Data**

Total Area (ac)	1267	High Int. Dev. %	3.3	Water %	0.5	Non-vegetated %	0.0
		Med Int. Dev. %	12.5	Wetland %	4.8	Tilled Agriculture %	0.1
		Low Int. Dev. %	26.6	Upland Woody %	22.9	Grassland %	2.9
		Development %	42.4	Natural %	27.7	Human Altered %	71.8
						Impervious %	24.4

**Sample Comments**

88.2% DO ON RETRIEVAL. IF&W ELECTRO-SHOCKED ON 7/28/2015.  
7/8/2015: 91.7% DO. VALSENARIA WITH BLACK FLIES PRESENT.



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Waterbody: Mare Brook - Station 143

Town: Brunswick

**Log Number: 2348**

Subsample Factor: X4

Replicates: 3

Calculated: 12/8/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002		33.33		--		6.3
<i>Girardia tigrina</i>	03010102002001	33.33			--	6.3	
<i>Stylodrilus</i>	08020101004		2.67		--		0.5
<i>Stylodrilus heringianus</i>	08020101004001	2.67			--	0.5	
Naididae	08020202	2.67	2.67		--	0.5	0.5
<i>Caecidotea</i>	09010101001	186.67	241.33	8	SH	35.5	45.9
<i>Caecidotea racovitzai racovitzai</i>	09010101001002	54.67			--	10.4	
<i>Synurella</i>	09010202006		64.00		--		12.2
<i>Synurella chamberlaini</i>	09010202006001	64.00			--	12.2	
<i>Boyeria</i>	09020301004		1.33	2	PR		0.3
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.3	
Calopterygidae	09020307	5.33	5.33		--	1.0	1.0
<i>Calopteryx</i>	09020307043		1.33	5	PR		0.3
<i>Calopteryx maculata</i>	09020307043088	1.33			--	0.3	
<i>Baetis</i>	09020401001	2.67	2.67	4	CG	0.5	0.5
<i>Plauditus</i>	09020401012	1.33	1.33		CG	0.3	0.3
<i>Maccaffertium</i>	09020402015	4.00	13.33	4	SC	0.8	2.5
<i>Maccaffertium modestum</i>	09020402015051	9.33			--	1.8	
Hydropsychidae	09020604	8.00			--	1.5	
<i>Diplectrona</i>	09020604014		1.78	0	CF		0.3
<i>Diplectrona modesta</i>	09020604014025	1.33			--	0.3	
<i>Cheumatopsyche</i>	09020604015	6.67	8.89	5	CF	1.3	1.7
<i>Hydropsyche</i>	09020604016	16.00	21.33	4	CF	3.0	4.1
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.3	0.3
<i>Pycnopsyche</i>	09020610049	9.33	9.33	4	SH	1.8	1.8
<i>Frenesia</i>	09020610058		40.00	0	SH		7.6
<i>Frenesia difficilis</i>	09020610058117	40.00			--	7.6	
<i>Lepidostoma</i>	09020611064	12.00	12.00	1	SH	2.3	2.3
<i>Sialis</i>	09020702004	1.33	1.33	4	PR	0.3	0.3
Chironomidae	09021011	9.33			--	1.8	
<i>Pagastia</i>	09021011025		1.71	1	--		0.3
<i>Pagastia orthogonia</i>	09021011025001	1.33			--	0.3	
<i>Prodiamesa</i>	09021011031		1.71	3	CG		0.3
<i>Prodiamesa olivacea</i>	09021011031048	1.33			--	0.3	
<i>Brillia</i>	09021011033		1.71	5	SH		0.3
<i>Brillia parva</i>	09021011033050	1.33			--	0.3	
<i>Parametriocnemus</i>	09021011053	14.67	18.77	5	CG	2.8	3.6
<i>Tvetenia</i>	09021011065		3.41	5	CG		0.6



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		Actual	Adjusted			Actual	Adjusted
<i>Tvetenia paucunca</i>	09021011065114	2.67			--	0.5	
<i>Micropsectra</i>	09021011070	1.33	1.71	7	CG	0.3	0.3
<i>Stempellinella</i>	09021011074		1.71	2	--		0.3
<i>Stempellinella leptocelloides</i>	09021011074001	1.33			--	0.3	
<i>Tanytarsus</i>	09021011076	2.67	3.41	6	CF	0.5	0.6
<i>Polypedilum</i>	09021011102	1.33	8.53	6	SH	0.3	1.6
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.3	
<i>Polypedilum laetum</i>	09021011102186	4.00			--	0.8	
<i>Simulium</i>	09021012047		10.67	4	CF		2.0
<i>Simulium (Eusimulium)</i>	09021012047052	1.33			--	0.3	
<i>Simulium venustum/verecundum complex</i>	09021012047072	9.33			CF	1.8	
<i>Neoplasta</i>	09021016064	1.33	1.33		PR	0.3	0.3
<i>Macronychus</i>	09021113065		4.00	4	--		0.8
<i>Macronychus glabratus</i>	09021113065040	4.00			--	0.8	
Acariformes	090301	1.33	1.33		--	0.3	0.3