



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

Station Information

Station Number:	S-330	River Basin:	Saco
Waterbody:	Mare Brook - Unnamed Tributary - Station 330	HUC8 Name:	Presumpscot
Town:	Brunswick	Latitude:	43 53 6.1 N
Directions:	BELOW PICNIC POND	Longitude:	69 55 15.62 W
		Stream Order:	2

Sample Information

Log Number:	2813	Type of Sample:	ROCK BAG	Date Deployed:	7/17/2020
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/10/2020

Classification Attainment

Statutory Class:	B	Final Determination:	NA	Date:	5/12/2021
Model Result with $P \geq 0.6$:	NA	Reason for Determination:	Model		
Date Last Calculated:	5/12/2021	Comments:			

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.03	Class A, B, or C	0.01
Class B	0.07	Non-Attainment	0.99
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.01
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	802.00	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	35.00	19 EPT Generic Richness	8.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.33
04 Ephemeroptera Mean Abundance	1.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.91	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	7.33
06 Hilsenhoff Biotic Index	3.06	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.06	28 EP Generic Richness/14	0.14
08 Relative Generic Richness Diptera	0.43	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	29.33		
11 <i>Cheumatopsyche</i> Abundance	7.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.53		
13 Relative Abundance - Oligochaeta	0.10		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.67		
17 Chironomini Abundance (Family Functional Group)	1.67		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Chimarra</i>	46.92
2	<i>Stenelmis</i>	11.01
3	<i>Nais</i>	9.56
4	<i>Girardia</i>	7.02
5	Philopotamidae	4.45



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Log Number: 2813	Waterbody: Mare Brook - Unnamed Tributary - Station 330	Date Retrieved: 8/10/2020

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature:	19.2 deg C
Dissolved Oxygen:	8.42 mg/l
Dissolved Oxygen Saturation:	90.1 %
Specific Conductance:	381.6 uS/cm
Velocity:	42.7 cm/s
pH:	6.82
Wetted Width:	2.6 m
Bankfull Width:	2.7 m
Depth:	15 cm

Waterbody Information - Retrieval

Temperature:	22.3 deg C
Dissolved Oxygen:	7.93 mg/l
Dissolved Oxygen Saturation:	90.8 %
Specific Conductance:	457 uS/cm
Velocity:	36.6 cm/s
pH:	9.61
Wetted Width:	2.6 m
Bankfull Width:	2.7 m
Depth:	16 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Dense	Rolling
Upland Hardwood		
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Metals	Below Road Crossing	Gravel 50 %
Nps Pollution		Sand 40 %
Toxic Organics		Silt 10 %
Urban Runoff		

Landcover Summary - 2004 Data

Total Area (ac)	723	High Int. Dev. %	40.1	Water %	0.8	Non-vegetated %	0.4
		Med Int. Dev. %	12.2	Wetland %	3.3	Tilled Agriculture %	0.0
		Low Int. Dev. %	11.0	Upland Woody %	23.9	Grassland %	0.0
		Development %	63.4	Natural %	27.2	Human Altered %	72.0
						Impervious %	52.6

Sample Comments



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-330 Waterbody: Mare Brook - Unnamed Tributary - Station 3 Town: Brunswick
Log Number: 2813 Subsample Factor: X1 Replicates: 3 Calculated: 5/12/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	0.67	0.67		PR	0.1	0.1
<i>Girardia</i>	03010102002	56.33	56.33		--	7.0	7.0
<i>Prostoma</i>	04010101001	3.67	3.67		--	0.5	0.5
<i>Nais</i>	08020202009	76.67	76.67		CG	9.6	9.6
<i>Helobdella</i>	08030101005	0.67	1.33		--	0.1	0.2
<i>Helobdella stagnalis complex</i>	08030101005004	0.67			--	0.1	
<i>Gammarus</i>	09010201003	25.67	25.67	4	--	3.2	3.2
Cordulegastridae	09020303	0.33	0.33		--	0.0	0.0
Calopterygidae	09020307	2.00	2.00		--	0.2	0.2
Baetidae	09020401	0.33	0.33		--	0.0	0.0
<i>Labioabaetis</i>	09020401009	1.33	1.33		--	0.2	0.2
Philopotamidae	09020601	35.67	35.67		--	4.4	4.4
<i>Chimarra</i>	09020601003		376.33	2	CF		46.9
<i>Chimarra aterrima</i>	09020601003002	376.33			--	46.9	
<i>Diplectrona</i>	09020604014		0.67	0	CF		0.1
<i>Diplectrona modesta</i>	09020604014025	0.67			--	0.1	
<i>Cheumatopsyche</i>	09020604015	7.00	7.00	5	CF	0.9	0.9
<i>Hydropsyche</i>	09020604016		29.33	4	CF		3.7
<i>Hydropsyche betteni</i>	09020604016037	29.33			--	3.7	
<i>Oecetis</i>	09020618078	0.67	5.00	8	PR	0.1	0.6
<i>Oecetis persimilis</i>	09020618078157	4.33			--	0.5	
<i>Tipula</i>	09021001002	1.00	1.00	4	SH	0.1	0.1
<i>Thienemannimyia</i>	09021011020		2.67	3	PR		0.3
<i>Thienemannimyia group</i>	09021011020041	2.67			--	0.3	
<i>Corynoneura</i>	09021011036	2.33	2.33	7	CG	0.3	0.3
<i>Cricotopus</i>	09021011037	0.33	0.33	7	SH	0.0	0.0
<i>Eukiefferiella</i>	09021011041		1.00	8	CG		0.1
<i>Eukiefferiella claripennis group</i>	09021011041075	1.00			--	0.1	
<i>Parametriocnemus</i>	09021011053	7.67	7.67	5	CG	1.0	1.0
<i>Rheocricotopus</i>	09021011057	1.33	1.33	6	CG	0.2	0.2
<i>Thienemanniella</i>	09021011062	7.00	7.00	6	CG	0.9	0.9
<i>Tvetenia</i>	09021011065		24.67	5	CG		3.1
<i>Tvetenia paucunca</i>	09021011065114	24.67			--	3.1	
<i>Rheotanytarsus</i>	09021011072		2.00	6	CF		0.2
<i>Rheotanytarsus exiguus group</i>	09021011072127	1.67			CF	0.2	
<i>Rheotanytarsus pellucidus</i>	09021011072128	0.33			CF	0.0	
<i>Microtendipes</i>	09021011094		1.00	6	CF		0.1



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<i>Microtendipes rydalensis group</i>	09021011094168	1.00			--	0.1	
<i>Polypedilum</i>	090210111102		0.67	6	SH		0.1
<i>Polypedilum aviceps</i>	090210111102181	0.33			--	0.0	
<i>Polypedilum scalaenum group</i>	090210111102189	0.33			--	0.0	
<i>Simulium</i>	09021012047	29.33	29.33	4	CF	3.7	3.7
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.2	0.2
<i>Neoplasta</i>	09021016064	0.67	0.67		PR	0.1	0.1
<i>Stenelmis</i>	09021113070	70.67	88.33	5	SC	8.8	11.0
<i>Stenelmis crenata</i>	09021113070055	17.67			--	2.2	
<i>Sperchon</i>	09030107001	5.00	5.00		--	0.6	0.6
Sphaeriidae	10020201	2.33			CF	0.3	
<i>Musculium</i>	10020201001	0.33	1.11		CF	0.0	0.1
<i>Sphaerium</i>	10020201003	0.67	2.22		CF	0.1	0.3