



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

Station Information

Station Number: S-219	River Basin:	Saco
Waterbody: Red Brook - Station 219	HUC8 Name:	Presumpscot
Town: Scarborough	Latitude:	43 38 0.49 N
Directions: 50 M BELOW RUNNING HILL RD. CROSSING; BELOW RWS LANDFILL	Longitude:	70 22 35.71 W
	Stream Order:	1

Sample Information

Log Number: 2804	Type of Sample: ROCK BASKET	Date Deployed: 7/8/2020
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/10/2020

Classification Attainment

Statutory Class: C	Final Determination: C	Date: 3/3/2022
Model Result with $P \geq 0.6$: C	Reason for Determination: Model	
Date Last Calculated: 10/14/2021	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.03	Class A, B, or C	1.00
Class B	0.34	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.01	Class A	0.01
Class C or Non-Attainment	0.99	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	594.67	18 Relative Abundance Ephemeroptera	0.01
02 Generic Richness	40.00	19 EPT Generic Richness	8.00
03 Plecoptera Mean Abundance	2.67	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	4.00	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	3.95	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	184.03
06 Hilsenhoff Biotic Index	6.29	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.76	28 EP Generic Richness/14	0.21
08 Relative Generic Richness Diptera	0.55	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.36		
13 Relative Abundance - Oligochaeta	0.02		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	205.68		
17 Chironomini Abundance (Family Functional Group)	66.31		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tanytarsus</i>	25.03
2	<i>Natarsia</i>	17.98
3	<i>Phylocentropus</i>	6.95
4	<i>Ablabesmyia</i>	5.92
5	<i>Procladius</i>	5.92



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 18 deg C
Dissolved Oxygen: 9.64 mg/l
Dissolved Oxygen Saturation: 101.5 %
Specific Conductance: 157.7 uS/cm
Velocity: 2 cm/s
pH: 7.35
Wetted Width: 2.6 m
Bankfull Width: 2.9 m
Depth: 32 cm

Waterbody Information - Retrieval

Temperature: 19.5 deg C
Dissolved Oxygen: 9.44 mg/l
Dissolved Oxygen Saturation: 102.4 %
Specific Conductance: 101.2 uS/cm
Velocity: 0.1 cm/s
pH: 7.21
Wetted Width: 2.1 m
Bankfull Width: 2.9 m
Depth: 28 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Conifer	Dense	Rolling
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Altered Hydrology	Below Landfill	Detritus 30 %
	Below Road Crossing	Sand 70 %

Landcover Summary - 2004 Data

Total Area (ac)	795	High Int. Dev. %	1.8	Water %	3.6	Non-vegetated %	0.1
		Med Int. Dev. %	1.2	Wetland %	12.4	Tilled Agriculture %	0.3
		Low Int. Dev. %	10.2	Upland Woody %	49.8	Grassland %	8.3
		Development %	13.2	Natural %	62.9	Human Altered %	33.5
						Impervious %	10.8
Total Land (ac)	766	High Int. Dev. %	1.9	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	1.3	Wetland %	12.8	Tilled Agriculture %	0.3
		Low Int. Dev. %	10.5	Upland Woody %	51.6	Grassland %	8.6
		Development %	13.7	Natural %	65.2	Human Altered %	34.8
						Impervious %	11.2

Sample Comments

VISIBLE FLOW.



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

Station Number: S-219

Waterbody: Red Brook - Station 219

Town: Scarborough

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Subsample Factor: X4

Replicates: 3

Calculated: 10/14/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Lumbriculidae	08020101	2.67	2.67		--	0.4	0.4
Naididae	08020202	1.33	1.33		--	0.2	0.2
<i>Aulodrilus</i>	08020202018		8.00		--		1.3
<i>Aulodrilus pluriseta</i>	08020202018004	8.00			--	1.3	
Capniidae	09020203	2.67	2.67		--	0.4	0.4
Aeshnidae	09020301	1.33	1.33		--	0.2	0.2
<i>Calopteryx</i>	09020307043	1.33	1.33	5	PR	0.2	0.2
Leptophlebiidae	09020406	2.67	2.67		--	0.4	0.4
Ephemerae	09020407	1.33	1.33		--	0.2	0.2
<i>Phylocentropus</i>	09020603011	41.33	41.33	5	CF	7.0	7.0
<i>Oligostomis</i>	09020608039	4.00	4.00	2	PR	0.7	0.7
<i>Pycnopsyche</i>	09020610049	21.33	21.33	4	SH	3.6	3.6
<i>Psilotreta</i>	09020614068		1.33	0	SC		0.2
<i>Psilotreta frontalis</i>	09020614068134	1.33			--	0.2	
<i>Molanna</i>	09020615069	5.33	5.33	6	SC	0.9	0.9
<i>Nigronia</i>	09020701003		2.67	0	PR		0.4
<i>Nigronia serricornis</i>	09020701003003	2.67			--	0.4	
<i>Sialis</i>	09020702004	24.00	24.00	4	PR	4.0	4.0
Ceratopogonidae	09021010	8.00	8.00		--	1.3	1.3
Chironomidae	09021011	6.67			--	1.1	
<i>Ablabesmyia</i>	09021011001	34.67	35.18	8	PR	5.8	5.9
<i>Labrundinia</i>	09021011008		5.41	7	PR		0.9
<i>Labrundinia pilosella</i>	09021011008022	5.33			--	0.9	
<i>Natarsia</i>	09021011011	105.33	106.90	8	PR	17.7	18.0
<i>Procladius</i>	09021011015	34.67	35.18	9	PR	5.8	5.9
<i>Thienemannimyia</i>	09021011020		18.94	3	PR		3.2
<i>Thienemannimyia group</i>	09021011020041	18.67			--	3.1	
<i>Zavrelimyia</i>	09021011022	4.00	4.06	8	PR	0.7	0.7
<i>Prodiamesa</i>	09021011031	2.67	2.71	3	CG	0.4	0.5
<i>Heterotrissocladius</i>	09021011044	2.67	2.71	0	CG	0.4	0.5
<i>Nanocladius</i>	09021011049	2.67	2.71	3	CG	0.4	0.5
<i>Parametrioecnemus</i>	09021011053	1.33	1.35	5	CG	0.2	0.2
<i>Stempellinella</i>	09021011074	13.33	13.53	2	--	2.2	2.3
<i>Tanytarsus</i>	09021011076	146.67	148.85	6	CF	24.7	25.0
<i>Chironomus</i>	09021011080	5.33	5.41	10	CG	0.9	0.9
<i>Cryptochironomus</i>	09021011082	2.67	2.71	8	PR	0.4	0.5
<i>Microtendipes</i>	09021011094		2.71	6	CF		0.5



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<i>Microtendipes pedellus group</i>	09021011094166	2.67			--	0.4	
<i>Nilothauma</i>	09021011095	2.67	2.71	2	--	0.4	0.5
<i>Paralauterborniella</i>	09021011099	28.00	28.42	8	CG	4.7	4.8
<i>Paratendipes</i>	09021011100	6.67	6.77	8	CG	1.1	1.1
<i>Polypedilum</i>	09021011102		8.12	6	SH		1.4
<i>Polypedilum halterale group</i>	09021011102193	8.00			--	1.3	
<i>Tribelos</i>	09021011107	1.33	9.47	5	CG	0.2	1.6
<i>Tribelos jucundus</i>	09021011107198	8.00			--	1.3	
<i>Macropelopia</i>	09021011111	10.67	10.83		P	1.8	1.8
<i>Macronychus</i>	09021113065		2.67	4	--		0.4
<i>Macronychus glabratus</i>	09021113065040	2.67			--	0.4	
Physidae	10010202	1.33	1.33		SC	0.2	0.2
Sphaeriidae	10020201	6.67	6.67		CF	1.1	1.1