



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

Station Information

Station Number: S-219
Waterbody: Red Brook - Station 219
Town: Scarborough
Directions: 50 M BELOW RUNNING HILL RD. CROSSING; BELOW RWS LANDFILL

DEP Drainage: Piscataqua - Presumpscot - Saco
HUC8: 01060001
HUC8 Name: Presumpscot
Latitude: 43 38 0.49 N
Longitude: 70 22 35.71 W
Stream Order: 1

Sample Information

Log Number: 1968
Subsample Factor: X1
Type of Sample: ROCK BASKET
Replicates: 3
Date Deployed: 7/27/2010
Date Retrieved: 8/30/2010

Classification Attainment

Statutory Class: C
Model Result with P>.6: I
Date Last Calculated: 3/4/2011
Final Determination: I
Reason for Determination: Best Professional Judgement
Comments: Minimum Provision for Total Mean Abundance not met. Resample.
Date: 3/7/2011

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.00	Class A, B, or C	0.00
Class B	0.00	Non-Attainment	1.00
Class C			
	0.14		
NA			
	0.86		
B or Better Model		A Model	
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	41.33	18 Relative Abundance Ephemeroptera	0.01
02 Generic Richness	30.00	19 EPT Generic Richness	7.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.33
04 Ephemeroptera Mean Abundance	0.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.96	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	12.64
06 Hilsenhoff Biotic Index	5.15	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.55	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.40	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	0.58		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.06		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	3.05		
(Family Functional Group)			
17 Chironomini Abundance (Family	4.36		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tanytarsus</i>	27.42
2	<i>Phylocentropus</i>	11.29
3	<i>Stempellinella</i>	8.44
4	<i>Polycentropus</i>	6.45
5	<i>Frenesia</i>	5.44



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 18.5 deg C
Dissolved Oxygen: 8.3 mg/l
Specific Conductance: 137 uS/cm
Velocity:
pH:
Wetted Width: 2.2 m
Bankfull Width: 2.9 m
Depth: 60 cm

Waterbody Information - Retrieval

Temperature: 18.3 deg C
Dissolved Oxygen: 8.6 mg/l
Specific Conductance: 128 uS/cm
Velocity: 2 cm/s
pH: 6.58
Wetted Width: 2.2 m
Bankfull Width: 2.9 m
Depth: 60 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Upland Conifer

Dense

Flat

Upland Hardwood

Potential Stressor

Location

Substrate

Below Landfill

Gravel

40 %

Below Road Crossing

Sand

60 %

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

Sample Comments

7/27/2010 FLOW VISIBLE BUT VELOCITY NOT MEASURABLE



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

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Log Number: 1968

Subsample Factor: X1

Replicates: 3

Calculated: 3/4/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Prostoma</i>	04010101001	0.33	0.33		--	0.8	0.8
<i>Aulodrilus</i>	08020202018		1.00		--		2.4
<i>Aulodrilus pluriseta</i>	08020202018004	1.00			--	2.4	
<i>Limnodrilus</i>	08020202022		1.00		CG		2.4
<i>Limnodrilus hoffmeisteri</i>	08020202022003	1.00			--	2.4	
Lumbricidae	08020205	0.33	0.33		--	0.8	0.8
<i>Actinobdella</i>	08030101001		0.33		--		0.8
<i>Actinobdella inequiannulata</i>	08030101001001	0.33			--	0.8	
<i>Helobdella</i>	08030101005		0.33		--		0.8
<i>Helobdella stagnalis</i>	08030101005004	0.33			--	0.8	
<i>Cordulegaster</i>	09020303019	0.33	0.33	3	PR	0.8	0.8
Heptageniidae	09020402	0.33	0.33		--	0.8	0.8
<i>Polycentropus</i>	09020603010	2.67	2.67	6	PR	6.5	6.5
<i>Phylocentropus</i>	09020603011	4.67	4.67	5	CF	11.3	11.3
<i>Oligostomis</i>	09020608039		0.33	2	PR		0.8
<i>Oligostomis ocelligera</i>	09020608039091	0.33		2	--	0.8	
Limnephilidae	09020610	0.33			--	0.8	
<i>Pycnopsyche</i>	09020610049	0.67	0.75	4	SH	1.6	1.8
<i>Frenesia</i>	09020610058		2.25	0	SH		5.4
<i>Frenesia difficilis</i>	09020610058117	2.00			--	4.8	
<i>Molanna</i>	09020615069		0.33	6	SC		0.8
<i>Molanna blenda</i>	09020615069133	0.33			--	0.8	
<i>Nigronia</i>	09020701003		0.67	0	PR		1.6
<i>Nigronia serricornis</i>	09020701003003	0.67			--	1.6	
<i>Sialis</i>	09020702004	2.00	2.00	4	PR	4.8	4.8
<i>Bezzia/palpomyia</i>	09021010043	0.33	0.33	6	PR	0.8	0.8
Chironomidae	09021011	5.33			--	12.9	
<i>Ablabesmyia</i>	09021011001	0.33	1.31	8	PR	0.8	3.2
<i>Ablabesmyia mallochii</i>	09021011001004	0.67			--	1.6	
<i>Procladius</i>	09021011015	1.33	1.74	9	PR	3.2	4.2
<i>Cladotanytarsus</i>	09021011068	0.33	0.44	7	CG	0.8	1.1
<i>Stempellinella</i>	09021011074		3.49	2	--		8.4
<i>Stempellinella leptocelloides</i>	09021011074001	2.67			--	6.5	
<i>Tanytarsus</i>	09021011076	8.67	11.33	6	CF	21.0	27.4
<i>Chironomus</i>	09021011080	0.33	0.44	10	CG	0.8	1.1
<i>Cryptochironomus</i>	09021011082	0.33	0.44	8	PR	0.8	1.1
<i>Microtendipes</i>	09021011094		1.31	6	CF		3.2
<i>Microtendipes pedellus group</i>	09021011094166	1.00			--	2.4	



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<i>Pagastiella</i>	09021011096	0.33	0.44		--	0.8	1.1
<i>Paratendipes</i>	09021011100		0.87	8	CG		2.1
<i>Paratendipes albimanus group</i>	09021011100176	0.67			--	1.6	
<i>Polypedilum</i>	09021011102		0.87	6	SH		2.1
<i>Polypedilum fallax group</i>	09021011102183	0.33			--	0.8	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.8	
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	0.8	0.8
Unionidae	10020102	0.33	0.33		CF	0.8	0.8