



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

Station Information

Station Number: S-978 DEP Drainage: Saco
Waterbody: Richardson Brook - Station 978 HUC8: 01060002
Town: Biddeford HUC8 Name: Saco
Directions: RT. 111; RIGHT ON BIDDEFORD CONNECTOR; RIGHT ON MORIN ST.; BEHIND STERLING ROPE Latitude: 43 27 49.57 N
Longitude: 70 29 39.55 W
Stream Order: 2

Sample Information

Log Number: 2138 Type of Sample: ROCK BAG Date Deployed: 7/25/2012
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/21/2012

Classification Attainment

Statutory Class: B Final Determination: I Date: 8/28/2013
Model Result with P>.6: I Reason for Determination: Best Professional Judgement
Date Last Calculated: 7/17/2013 Comments: Minimum provision for Total Mean Abundance not met.

Model Probabilities

First Stage Model			C or Better Model		
Class A	0.00	Class C	0.02	Class A, B, or C	0.00
Class B	0.00	NA	0.98	Non-Attainment	1.00
B or Better Model			A Model		
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	6.00	18 Relative Abundance Ephemeroptera	0.06
02 Generic Richness	11.00	19 EPT Generic Richness	2.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	0.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.19	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.67
06 Hilsenhoff Biotic Index	4.69	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.22	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.27	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	0.67		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family	0.00		
Functional Group)			
16 Tanypodinae Mean Abundance	0.33		
(Family Functional Group)			
17 Chironomini Abundance (Family	0.67		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Boyeria</i>	27.78
2	<i>Polycentropus</i>	11.11
3	<i>Phaenopsectra</i>	11.11
4	<i>Stenelmis</i>	11.11
5	<i>Hyaella</i>	5.56
6	Cambaridae	5.56
7	<i>Paraleptophlebia</i>	5.56
8	<i>Ablabesmyia</i>	5.56
9	<i>Tanytarsus</i>	5.56
10	<i>Dubiraphia</i>	5.56



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Station Number: S-978

Town: Biddeford

Date Deployed: 7/25/2012

Log Number: 2138

Waterbody: Richardson Brook - Station 978

Date Retrieved: 8/21/2012

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: LOTIC INC.

Waterbody Information - Deployment

Temperature: 19.8 deg C
Dissolved Oxygen: 6.88 mg/l
Specific Conductance: 329 uS/cm
Velocity: 26 cm/s
pH:
Wetted Width: 1.47 m
Bankfull Width: 2.69 m
Depth: 35.6 cm

Waterbody Information - Retrieval

Temperature: 20.1 deg C
Dissolved Oxygen: 6.76 mg/l
Specific Conductance: 351 uS/cm
Velocity: 18 cm/s
pH:
Wetted Width: 1.75 m
Bankfull Width: 2.23 m
Depth: 71 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Upland Hardwood
Urban

Canopy Cover

Dense

Terrain

Rolling

Potential Stressor

Nps Pollution
Urban Runoff

Location

Above Road Crossing
Below Urban NPS

Substrate

Bedrock	15 %
Boulder	25 %
Gravel	25 %
Rubble/Cobble	25 %
Sand	10 %

Landcover Summary - 2004 Data

Sample Comments

DISCHARGES - FOUNDATION DRAIN? - WAREHOUSE; IMPERVIOUS AREA RUNOFF - OUTFALL
(LARGE PARKING AREA - WAREHOUSES).



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Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report

Station Number: S-978	Waterbody: Richardson Brook - Station 978	Town: Biddeford
Log Number: 2138	Subsample Factor: X1	Replicates: 3
		Calculated: 7/17/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hyaella</i>	09010203006	0.33	0.33	8	CG	5.6	5.6
Cambaridae	09010301	0.33	0.33		--	5.6	5.6
<i>Boyeria</i>	09020301004		1.67	2	PR		27.8
<i>Boyeria vinosa</i>	09020301004012	1.67			--	27.8	
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	5.6	5.6
<i>Polycentropus</i>	09020603010	0.67	0.67	6	PR	11.1	11.1
<i>Ablabesmyia</i>	09021011001		0.33	8	PR		5.6
<i>Ablabesmyia mallochi</i>	09021011001004	0.33			--	5.6	
<i>Tanytarsus</i>	09021011076	0.33	0.33	6	CF	5.6	5.6
<i>Phaenopsectra</i>	09021011101		0.67	7	SC		11.1
<i>Phaenopsectra punctipes group</i>	09021011101181	0.67			--	11.1	
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	5.6	5.6
<i>Stenelmis</i>	09021113070	0.67	0.67	5	SC	11.1	11.1
<i>Lymnaea</i>	10010201022	0.33	0.33		SC	5.6	5.6