



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

Station Information

Station Number: S-953	DEP Drainage: Piscataqua - Presumpscot - Saco
Waterbody: Phillips Brook - Station 953	HUC8: 01060001
Town: Scarborough	HUC8 Name: Presumpscot
Directions: PAYNE ROAD, NEAR ROUTE 1, BEHIND TOWN OF SCARBOROUGH ASPHALT/GRAVEL PILE-WALK BEHIND PILE (TRAIL)	Latitude: 43 34 27.62 N Longitude: 70 23 10.86 W Stream Order: 1

Sample Information

Log Number: 1931	Type of Sample: ROCK BAG	Date Deployed: 7/19/2010
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/16/2010

Classification Attainment

Statutory Class: C	Final Determination: I	Date: 10/24/2011
Model Result with P>.6: I	Reason for Determination: Best Professional Judgement	
Date Last Calculated: 10/18/2011	Comments: Minimum Provision for Total Mean Abundance not met. Resample.	

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.03	Class C	0.83	Class A, B, or C	0.91
Class B	0.04	NA	0.09	Non-Attainment	0.09
<u>B or Better Model</u>				<u>A Model</u>	
Class A or B		0.00		Class A	0.02
Class C or Non-Attainment		1.00		Class B or C or Non-Attainment	0.98

Model Variables

01 Total Mean Abundance	36.33	18 Relative Abundance Ephemeroptera	0.27
02 Generic Richness	25.00	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>	1.00
04 Ephemeroptera Mean Abundance	9.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.89	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	7.67
06 Hilsenhoff Biotic Index	4.15	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.37	28 EP Generic Richness/14	0.21
08 Relative Generic Richness Diptera	0.44	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.33		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	0.64		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	4.33		
(Family Functional Group)			
17 Chironomini Abundance (Family	3.67		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	Leptophlebiidae	17.43
2	<i>Physa</i>	12.84
3	<i>Tanytarsus</i>	11.93
4	<i>Frenesia</i>	10.09
5	<i>Ablabesmyia</i>	9.17



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Date Retrieved: 8/16/2010

Sample Collection and Processing Information

Sampling Organization: DEP DWM

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	21.4 deg C
Dissolved Oxygen:	7.53 mg/l
Specific Conductance:	364 uS/cm
Velocity:	5.5 cm/s
pH:	7.26
Wetted Width:	2.2 m
Bankfull Width:	5.2 m
Depth:	13 cm

Waterbody Information - Retrieval

Temperature:	17.7 deg C
Dissolved Oxygen:	6.68 mg/l
Specific Conductance:	388 uS/cm
Velocity:	4.4 cm/s
pH:	7.3
Wetted Width:	2.7 m
Bankfull Width:	3.7 m
Depth:	16.5 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Urban	Dense	Rolling	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Altered Habitat	Below Urban NPS	Bedrock	5 %
Altered Hydrology		Boulder	5 %
Nps Pollution		Gravel	50 %
Sedimentation		Rubble/Cobble	5 %
		Sand	30 %
		Silt	5 %

Landcover Summary - 2004 Data

Sample Comments

7/19/2010 OLD CULVERT NEXT TO STREAM, CHUNKS OF ASPHALT UPSTREAM, OLD CONCRETE DEBRIS. D.O. METER: HACH OPTICAL METER USED, CALIBRATED IN OFFICE (DOES NOT NEED TO BE CALIBRATED DAILY), PH METER: YSI85 CALIBRATED BEFORE EACH DAY OF SAMPLING
8/16/2010 WATERFALL BELOW SITE, EEL IN ROCK BAG, . D.O. METER: HACH OPTICAL METER USED, CALIBRATED IN OFFICE (DOES NOT NEED TO BE CALIBRATED DAILY), PH METER: YSI85 CALIBRATED BEFORE EACH DAY OF SAMPLING



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Aquatic Life Taxonomic Inventory Report**

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Town: Scarborough

Log Number: 1931

Subsample Factor: X1

Replicates: 3

Calculated: 10/18/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Chaetogaster</i>	08020202002		0.33		--		0.9
<i>Chaetogaster limnaei</i>	08020202002004	0.33			--	0.9	
<i>Helobdella</i>	08030101005		0.33		--		0.9
<i>Helobdella stagnalis</i>	08030101005004	0.33			--	0.9	
<i>Aeshna</i>	09020301001	0.33	0.67	5	PR	0.9	1.8
<i>Aeshna umbrosa</i>	09020301001006	0.33			--	0.9	
<i>Boyeria</i>	09020301004		0.67	2	PR		1.8
<i>Boyeria vinosa</i>	09020301004012	0.67			--	1.8	
<i>Calopteryx</i>	09020307043		0.33	5	PR		0.9
<i>Calopteryx maculata</i>	09020307043088	0.33			--	0.9	
<i>Centroptilum</i>	09020401003	0.67	0.67	2	CG	1.8	1.8
Leptophlebiidae	09020406	6.33	6.33		--	17.4	17.4
<i>Paraleptophlebia</i>	09020406026	2.67	2.67	1	CG	7.3	7.3
<i>Hydropsyche</i>	09020604016	0.33	0.33	4	CF	0.9	0.9
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.9	0.9
<i>Frenesia</i>	09020610058		3.67	0	SH		10.1
<i>Frenesia difficilis</i>	09020610058117	3.67			--	10.1	
<i>Psilotreta</i>	09020614068		1.00	0	SC		2.8
<i>Psilotreta frontalis</i>	09020614068134	1.00			--	2.8	
<i>Dicranota</i>	09021001005	0.33	0.33	3	PR	0.9	0.9
Chironomidae	09021011				--		
<i>Ablabesmyia</i>	09021011001		3.33	8	PR		9.2
<i>Ablabesmyia mallochi</i>	09021011001004	3.33			--	9.2	
<i>Paramerina</i>	09021011013	0.33	0.33		--	0.9	0.9
<i>Trissopelopia</i>	09021011021		0.67		PR		1.8
<i>Trissopelopia ogemawi</i>	09021011021042	0.67			--	1.8	
<i>Pagastia</i>	09021011025		0.33	1	--		0.9
<i>Pagastia orthogonia</i>	09021011025001	0.33			--	0.9	
<i>Paratanytarsus</i>	09021011071	0.33	0.33	6	--	0.9	0.9
<i>Rheotanytarsus</i>	09021011072	0.33	0.33	6	CF	0.9	0.9
<i>Tanytarsus</i>	09021011076	4.33	4.33	6	CF	11.9	11.9
<i>Dicrotendipes</i>	09021011085		0.67	8	CG		1.8
<i>Dicrotendipes neomodestus</i>	09021011085152	0.67			--	1.8	
<i>Microtendipes</i>	09021011094		1.33	6	CF		3.7
<i>Microtendipes pedellus group</i>	09021011094166	1.33			--	3.7	
<i>Polypedilum</i>	09021011102		1.67	6	SH		4.6
<i>Polypedilum aviceps</i>	09021011102181	0.33			--	0.9	
<i>Polypedilum illinoense group</i>	09021011102185	1.33			--	3.7	



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		Actual	Adjusted			Actual	Adjusted
<i>Dubiraphia</i>	09021113064	0.67	0.67	6	--	1.8	1.8
<i>Physa</i>	10010202026	4.67	4.67		SC	12.8	12.8