



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

Station Information

Station Number: S-271
Waterbody: Goosefare Brook - Station 271
Town: Saco
Directions: 80 M ABOVE INDUSTRIAL PARK RD. CROSSING

DEP Drainage: Piscataqua - Presumpscot - Saco
HUC8: 01060001
HUC8 Name: Presumpscot
Latitude: 43 31 24.63 N
Longitude: 70 26 52.18 W
Stream Order: 1

Sample Information

Log Number: 1959
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/22/2010
Date Retrieved: 8/24/2010

Classification Attainment

Statutory Class: B
Model Result with P>.6: I
Date Last Calculated: 1/24/2011
Final Determination: I
Reason for Determination: Best Professional Judgement
Comments: Minimum Provision for Total Mean Abundance not met. Resample.
Date: 1/25/2011

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.44	Class A, B, or C	0.95
Class B	0.20	Non-Attainment	0.05
Class C			
0.24			
NA			
0.12			
B or Better Model		A Model	
Class A or B	0.10	Class A	0.18
Class C or Non-Attainment	0.90	Class B or C or Non-Attainment	0.82

Model Variables

01 Total Mean Abundance	12.00	18 Relative Abundance Ephemeroptera	0.06
02 Generic Richness	22.00	19 EPT Generic Richness	10.00
03 Plecoptera Mean Abundance	0.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.33
04 Ephemeroptera Mean Abundance	0.67	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.19	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.67
06 Hilsenhoff Biotic Index	4.93	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.36	28 EP Generic Richness/14	0.21
08 Relative Generic Richness Diptera	0.36	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.33		
12 EPT Generic Richness/ Diptera	1.25		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	0.67		
(Family Functional Group)			
17 Chironomini Abundance (Family	0.00		
Functional Group)			

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	13.89
2	<i>Caecidotea</i>	11.11
3	<i>Hyaella</i>	8.33
4	<i>Oligostomis</i>	8.33
5	Calopterygidae	5.56
6	<i>Chimarra</i>	5.56
7	<i>Parametriocnemus</i>	5.56



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

Station Number: S-271

Town: Saco

Date Deployed: 7/22/2010

Log Number: 1959

Waterbody: Goosefare Brook - Station 271

Date Retrieved: 8/24/2010

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 20.6 deg C
Dissolved Oxygen: 6.7 mg/l
Specific Conductance: 397 uS/cm
Velocity: 17 cm/s
pH:
Wetted Width: 2.2 m
Bankfull Width: 2.8 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 16.1 deg C
Dissolved Oxygen: 7.3 mg/l
Specific Conductance: 565 uS/cm
Velocity: 6 cm/s
pH: 6.81
Wetted Width: 2.1 m
Bankfull Width: 2.8 m
Depth: 19 cm

Water Chemistry - 8/24/2010

Ammonia As Nitrogen	0.07 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	0.2 mg/l	Total Phosphorus	0.015 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	2.2 mg/l	Total Dissolved Solids	330 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Dense	Flat
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Nps Pollution	Below In-place Contamination	Boulder 5 %
Urban Runoff	Below Urban NPS	Rubble/Cobble 25 %
		Sand 70 %

Landcover Summary - 2004 Data

Total Area (ac)	585	High Int. Dev. %	2.8	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	2.4	Wetland %	24.2	Tilled Agriculture %	0.2
		Low Int. Dev. %	6.3	Upland Woody %	47.9	Grassland %	0.0
		Development %	11.4	Natural %	72.1	Human Altered %	27.9
						Impervious %	7.5

Sample Comments

8/24/2010 SAW AN EEL.
7/22/2010 UNDERCUT BANKS



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

Station Number: S-271

Waterbody: Goosefare Brook - Station 271

Town: Saco

Log Number: 1959

Subsample Factor: X1

Replicates: 3

Calculated: 1/24/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Caecidotea</i>	09010101001	1.00	1.33	8	SH	8.3	11.1
<i>Caecidotea communis</i>	09010101001001	0.33			--	2.8	
<i>Hyalella</i>	09010203006		1.00	8	CG		8.3
<i>Hyalella azteca</i>	09010203006011	1.00			--	8.3	
<i>Leuctra</i>	09020204020	0.33	0.33	0	SH	2.8	2.8
Calopterygidae	09020307	0.67	0.67		--	5.6	5.6
Leptophlebiidae	09020406	0.33	0.33		--	2.8	2.8
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	2.8	2.8
<i>Chimarra</i>	09020601003	0.67	0.67	2	CF	5.6	5.6
<i>Cheumatopsyche</i>	09020604015	0.33	0.33	5	CF	2.8	2.8
<i>Macrostemum</i>	09020604018		0.33	3	CF		2.8
<i>Macrostemum zebratum</i>	09020604018054	0.33			--	2.8	
<i>Oligostomis</i>	09020608039	1.00	1.00	2	PR	8.3	8.3
Limnephilidae	09020610	0.33	0.33		--	2.8	2.8
<i>Frenesia</i>	09020610058		0.33	0	SH		2.8
<i>Frenesia difficilis</i>	09020610058117	0.33			--	2.8	
<i>Molanna</i>	09020615069	0.33	0.33	6	SC	2.8	2.8
<i>Meropelopia</i>	09021011010	0.33	0.33		--	2.8	2.8
<i>Zavrelimyia</i>	09021011022		0.33	8	PR		2.8
<i>Zavrelimyia sinuosa group</i>	09021011022046	0.33			--	2.8	
<i>Parametriocnemus</i>	09021011053	0.67	0.67	5	CG	5.6	5.6
<i>Rheocricotopus</i>	09021011057		0.33	6	CG		2.8
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	2.8	
<i>Micropsectra</i>	09021011070	0.33	0.33	7	CG	2.8	2.8
<i>Rheotanytarsus</i>	09021011072	1.67	1.67	6	CF	13.9	13.9
<i>Tanytarsus</i>	09021011076	0.33	0.33	6	CF	2.8	2.8
<i>Pseudorthocladius</i>	09021011125	0.33	0.33	0	CG	2.8	2.8
<i>Paracymus</i>	09021105049	0.33	0.33		--	2.8	2.8