



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

Station Information

Station Number: S-675
Waterbody: Trout Brook - Station 675
Town: South Portland
Directions: APPROX 125 M UPSTREAM OF BOOTHBY AVE
DEP Drainage: Piscataqua - Presumpscot - Saco
HUC8: 01060001
HUC8 Name: Presumpscot
Latitude: 43 37 46.07 N
Longitude: 70 14 45.17 W
Stream Order: 2

Sample Information

Log Number: 1928
Subsample Factor: X4
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/12/2010
Date Retrieved: 8/13/2010

Classification Attainment

Statutory Class: C
Model Result with P>.6: NA
Date Last Calculated: 3/2/2011
Final Determination: NA
Reason for Determination: Model
Date: 3/4/2011
Comments:

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 |
| 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 | 633.33 | 18 Relative Abundance Ephemeroptera | 0.00 |
| 02 Generic Richness | 25.00 | 19 EPT Generic Richness | 5.00 |
| 03 Plecoptera Mean Abundance | 0.00 | 21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 35.83 |
| 04 Ephemeroptera Mean Abundance | 1.33 | 23 Relative Generic Richness- Plecoptera | 0.00 |
| 05 Shannon-Wiener Generic Diversity | 2.35 | 25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i> | 347.70 |
| 06 Hilsenhoff Biotic Index | 6.02 | 26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i> | 0.00 |
| 07 Relative Abundance - Chironomidae | 0.69 | 28 EP Generic Richness/14 | 0.07 |
| 08 Relative Generic Richness Diptera | 0.48 | 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 | 0.42 | | |
| Generic Richness | | | |
| 13 Relative Abundance - Oligochaeta | 0.00 | | |
| 15 Perlidae Mean Abundance | 0.00 | | |
| (Family Functional Group) | | | |
| 16 Tanypodinae Mean Abundance | 35.87 | | |
| (Family Functional Group) | | | |
| 17 Chironomini Abundance (Family | 2.76 | | |
| Functional Group) | | | |

Five Most Dominant Taxa

| Rank | Taxon Name | Percent |
|------|---------------------|---------|
| 1 | <i>Tanytarsus</i> | 54.90 |
| 2 | <i>Dubiraphia</i> | 16.63 |
| 3 | <i>Caecidotea</i> | 9.05 |
| 4 | <i>Micropsectra</i> | 5.45 |
| 5 | <i>Meropelopia</i> | 4.14 |



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Aquatic Life Classification Attainment Report**

Station Number: S-675

Town: South Portland

Date Deployed: 7/12/2010

Log Number: 1928

Waterbody: Trout Brook - Station 675

Date Retrieved: 8/13/2010

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 14.8 deg C
Dissolved Oxygen: 5.5 mg/l
Specific Conductance: 749 uS/cm
Velocity: 7 cm/s
pH:
Wetted Width: 3.7 m
Bankfull Width: 7.7 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 14 deg C
Dissolved Oxygen: 5.2 mg/l
Specific Conductance: 975 uS/cm
Velocity: 5 cm/s
pH: 6.37
Wetted Width: 3.5 m
Bankfull Width: 7.7 m
Depth: 20 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Upland Hardwood
Urban

Dense

Rolling

Potential Stressor

Location

Substrate

Nps Pollution
Urban Runoff

Below Urban NPS

Boulder 5 %
Gravel 15 %
Rubble/Cobble 75 %
Sand 5 %

Landcover Summary - 2004 Data

| | | | | | | | |
|-----------------|------|------------------|------|----------------|------|----------------------|------|
| Total Area (ac) | 1182 | High Int. Dev. % | 0.1 | Water % | 0.3 | Non-vegetated % | 0.1 |
| | | Med Int. Dev. % | 2.7 | Wetland % | 6.8 | Tilled Agriculture % | 4.2 |
| | | Low Int. Dev. % | 24.0 | Upland Woody % | 43.6 | Grassland % | 1.6 |
| | | Development % | 26.9 | Natural % | 50.9 | Human Altered % | 48.8 |
| | | | | | | Impervious % | 15.5 |

Sample Comments

7/12/2010 BOTTOM COVERED WITH SILT.

8/13/2010 SMALL FISH AND SALAMANDER IN SAMPLE, RELEASED.



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

| | | |
|------------------------------|--------------------------------------|----------------------|
| Station Number: S-675 | Waterbody: Trout Brook - Station 675 | Town: South Portland |
| Log Number: 1928 | Subsample Factor: X4 | Replicates: 3 |
| | | Calculated: 3/2/2011 |

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|--------------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Glossiphonia</i> | 08030101004 | | 1.33 | | -- | | 0.2 |
| <i>Glossiphonia complanata</i> | 08030101004001 | 1.33 | | | -- | 0.2 | |
| <i>Helobdella</i> | 08030101005 | | 1.33 | | -- | | 0.2 |
| <i>Helobdella stagnalis</i> | 08030101005004 | 1.33 | | | -- | 0.2 | |
| <i>Erpobdella</i> | 08030203002 | 1.33 | 1.33 | | -- | 0.2 | 0.2 |
| <i>Caecidotea</i> | 09010101001 | 46.67 | 57.33 | 8 | SH | 7.4 | 9.1 |
| <i>Caecidotea communis</i> | 09010101001001 | 10.67 | | | -- | 1.7 | |
| <i>Ischnura</i> | 09020309052 | 1.33 | 1.33 | 9 | PR | 0.2 | 0.2 |
| Leptophlebiidae | 09020406 | 1.33 | 1.33 | | -- | 0.2 | 0.2 |
| <i>Ptilostomis</i> | 09020608041 | 1.33 | 1.33 | 5 | SH | 0.2 | 0.2 |
| <i>Frenesia</i> | 09020610058 | | 14.67 | 0 | SH | | 2.3 |
| <i>Frenesia difficilis</i> | 09020610058117 | 14.67 | | | -- | 2.3 | |
| <i>Lepidostoma</i> | 09020611064 | 4.00 | 4.00 | 1 | SH | 0.6 | 0.6 |
| <i>Molanna</i> | 09020615069 | 2.67 | 2.67 | 6 | SC | 0.4 | 0.4 |
| <i>Tipula</i> | 09021001002 | 1.33 | 1.33 | 4 | SH | 0.2 | 0.2 |
| Chironomidae | 09021011 | 14.67 | | | -- | 2.3 | |
| <i>Conchapelopia</i> | 09021011004 | 5.33 | 5.52 | 6 | PR | 0.8 | 0.9 |
| <i>Meropelopia</i> | 09021011010 | 25.33 | 26.22 | | -- | 4.0 | 4.1 |
| <i>Paramerina</i> | 09021011013 | 2.67 | 2.76 | | -- | 0.4 | 0.4 |
| <i>Zavrelimyia</i> | 09021011022 | | 1.38 | 8 | PR | | 0.2 |
| <i>Zavrelimyia sinuosa group</i> | 09021011022046 | 1.33 | | | -- | 0.2 | |
| <i>Parametriocnemus</i> | 09021011053 | 1.33 | 1.38 | 5 | CG | 0.2 | 0.2 |
| <i>Synorthocladius</i> | 09021011061 | 5.33 | 5.52 | 2 | CG | 0.8 | 0.9 |
| <i>Micropsectra</i> | 09021011070 | 33.33 | 34.49 | 7 | CG | 5.3 | 5.4 |
| <i>Rheotanytarsus</i> | 09021011072 | 5.33 | 5.52 | 6 | CF | 0.8 | 0.9 |
| <i>Stempellinella</i> | 09021011074 | | 2.76 | 2 | -- | | 0.4 |
| <i>Stempellinella leptocelloides</i> | 09021011074001 | 2.67 | | | -- | 0.4 | |
| <i>Tanytarsus</i> | 09021011076 | 336.00 | 347.70 | 6 | CF | 53.1 | 54.9 |
| <i>Paratendipes</i> | 09021011100 | | 2.76 | 8 | CG | | 0.4 |
| <i>Paratendipes albimanus group</i> | 09021011100176 | 2.67 | | | -- | 0.4 | |
| <i>Dubiraphia</i> | 09021113064 | 105.33 | 105.33 | 6 | -- | 16.6 | 16.6 |
| <i>Stenelmis</i> | 09021113070 | | 2.67 | 5 | SC | | 0.4 |
| <i>Stenelmis crenata</i> | 09021113070055 | 2.67 | | | -- | 0.4 | |
| <i>Arrenurus</i> | 09030111001 | 1.33 | 1.33 | | -- | 0.2 | 0.2 |