



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

**Station Information**

|  |                          |
|--|--------------------------|
| <b>Station Number:</b> S-675                     | River Basin: Saco        |
| Waterbody: Trout Brook - Station 675             | HUC8 Name: Presumpscot   |
| Town: South Portland                             | Latitude: 43 37 46.07 N  |
| Directions: APPROX 125 M UPSTREAM OF BOOTHBY AVE | Longitude: 70 14 45.17 W |
|  | Stream Order: 2          |

**Sample Information**

|                         |                          |                          |
|-------------------------|--------------------------|--------------------------|
| <b>Log Number:</b> 2818 | Type of Sample: ROCK BAG | Date Deployed: 7/7/2020  |
| Subsample Factor: X1    | Replicates: 3            | Date Retrieved: 8/5/2020 |

**Classification Attainment**

|                                     |  |                 |
|-------------------------------------|--|-----------------|
| <b>Statutory Class:</b> C           | <b>Final Determination:</b> NA         | Date: 2/22/2021 |
| Model Result with $P \geq 0.6$ : NA | <b>Reason for Determination:</b> Model |                 |
| Date Last Calculated: 1/29/2021     | Comments:                              |                 |

**Model Probabilities**

| <u>First Stage Model</u>  |      | <u>C or Better Model</u>       |      |
|---------------------------|------|--------------------------------|------|
| Class A                   | 0.00 | Class A, B, or C               | 0.00 |
| Class B                   | 0.00 | Non-Attainment                 | 1.00 |
|                           |      | <u>A Model</u>                 |      |
| <u>B or Better Model</u>  |      | Class A                        | 0.01 |
| Class A or B              | 0.00 | Class B or C or Non-Attainment | 0.99 |
| Class C or Non-Attainment | 1.00 |                                |      |

**Model Variables**

|  |        |   |      |
|--|--------|---|------|
| 01 Total Mean Abundance                                    | 113.00 | 18 Relative Abundance Ephemeroptera   | 0.00 |
| 02 Generic Richness  | 18.00  | 19 EPT Generic Richness   | 4.00 |
| 03 Plecoptera Mean Abundance                               | 0.00   | 21 Sum of Abundances: <i>Dicrotendipes</i> ,<br><i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 3.67 |
| 04 Ephemeroptera Mean Abundance                            | 0.00   | 23 Relative Generic Richness- Plecoptera  | 0.00 |
| 05 Shannon-Wiener Generic Diversity                        | 1.95   | 25 Sum of Abundances: <i>Cheumatopsyche</i> ,<br><i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>     | 1.33 |
| 06 Hilsenhoff Biotic Index                                 | 4.36   | 26 Sum of Abundances: <i>Acroneuria</i> ,<br><i>Maccaffertium</i> , <i>Stenonema</i>                            | 0.00 |
| 07 Relative Abundance - Chironomidae                       | 0.10   | 28 EP Generic Richness/14   | 0.00 |
| 08 Relative Generic Richness Diptera                       | 0.39   | 30 Presence of Class A Indicator Taxa/7   | 0.00 |
| 09 <i>Hydropsyche</i> Abundance                            | 0.33   |   |      |
| 11 <i>Cheumatopsyche</i> Abundance                         | 0.00   |   |      |
| 12 EPT Generic Richness/ Diptera<br>Generic Richness       | 0.57   |   |      |
| 13 Relative Abundance - Oligochaeta                        | 0.01   |   |      |
| 15 Perlidae Mean Abundance (Family<br>Functional Group)    | 0.00   |   |      |
| 16 Tanypodinae Mean Abundance<br>(Family Functional Group) | 2.00   |   |      |
| 17 Chironomini Abundance (Family<br>Functional Group)      | 0.33   |   |      |

**Five Most Dominant Taxa**

| Rank | Taxon Name          | Percent |
|------|---------------------|---------|
| 1    | <i>Gammarus</i>     | 68.14   |
| 2    | <i>Caecidotea</i>   | 9.44    |
| 3    | <i>Lepidostoma</i>  | 4.72    |
| 4    | <i>Limnephilus</i>  | 3.54    |
| 5    | <i>Micropsectra</i> | 3.24    |



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

**Station Number: S-675**  
**Log Number: 2818**

Town: South Portland  
Waterbody: Trout Brook - Station 675

Date Deployed: 7/7/2020  
Date Retrieved: 8/5/2020

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: ECOANALYSTS IDAHO

**Waterbody Information - Deployment**

Temperature: 15.2 deg C  
Dissolved Oxygen: 8.46 mg/l  
Dissolved Oxygen Saturation: 83.4 %  
Specific Conductance: 435.5 uS/cm  
Velocity: 18.3 cm/s  
pH: 6.94  
Wetted Width: 3.9 m  
Bankfull Width: 6 m  
Depth: 22 cm

**Waterbody Information - Retrieval**

Temperature: 15.2 deg C  
Dissolved Oxygen: 6.04 mg/l  
Dissolved Oxygen Saturation: 59.8 %  
Specific Conductance: 744 uS/cm  
Velocity: 0.1 cm/s  
pH: 6.63  
Wetted Width: 2.9 m  
Bankfull Width: 6 m  
Depth: 19 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

|                           |                     |                  |      |
|---------------------------|---------------------|------------------|------|
| <u>Landuse Name</u>       | <u>Canopy Cover</u> | <u>Terrain</u>   |      |
| Upland Hardwood           | Dense               | Rolling          |      |
| Urban                     |                     |                  |      |
| <u>Potential Stressor</u> | <u>Location</u>     | <u>Substrate</u> |      |
| Altered Hydrology         | Above Road Crossing | Boulder          | 20 % |
| Urban Runoff              |                     | Gravel           | 20 % |
|                           |                     | Rubble/Cobble    | 50 % |
|                           |                     | Sand             | 10 % |

**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**

VISIBLE FLOW. 9-SPINED STICKLEBACK AND BROOK TROUT.



**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: 2818**

Subsample Factor: X1

Replicates: 3

Calculated: 1/29/2021

| Taxon                          | Maine<br>Taxonomic<br>Code | Count<br>(Mean of Samplers) |          | Hilsenhoff<br>Biotic<br>Index | Functional<br>Feeding<br>Group | Relative<br>Abundance % |          |
|--------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-------------------------|----------|
|                                |                            | Actual                      | Adjusted |                               |                                | Actual                  | Adjusted |
| <i>Hydra</i>                   | 02010101001                | 0.33                        | 0.33     |                               | PR                             | 0.3                     | 0.3      |
| <i>Nais</i>                    | 08020202009                | 1.00                        | 1.00     |                               | CG                             | 0.9                     | 0.9      |
| <i>Caecidotea</i>              | 09010101001                | 10.67                       | 10.67    | 8                             | SH                             | 9.4                     | 9.4      |
| <i>Gammarus</i>                | 09010201003                | 77.00                       | 77.00    | 4                             | --                             | 68.1                    | 68.1     |
| <i>Diplectrona</i>             | 09020604014                |                             | 0.33     | 0                             | CF                             |                         | 0.3      |
| <i>Diplectrona modesta</i>     | 09020604014025             | 0.33                        |          |                               | --                             | 0.3                     |          |
| <i>Hydropsyche</i>             | 09020604016                | 0.33                        | 0.33     | 4                             | CF                             | 0.3                     | 0.3      |
| <i>Limnephilus</i>             | 09020610055                | 4.00                        | 4.00     | 3                             | SH                             | 3.5                     | 3.5      |
| <i>Lepidostoma</i>             | 09020611064                | 5.33                        | 5.33     | 1                             | SH                             | 4.7                     | 4.7      |
| <i>Thienemannimyia</i>         | 09021011020                |                             | 2.00     | 3                             | PR                             |                         | 1.8      |
| <i>Thienemannimyia group</i>   | 09021011020041             | 2.00                        |          |                               | --                             | 1.8                     |          |
| <i>Nanocladius</i>             | 09021011049                | 0.33                        | 0.33     | 3                             | CG                             | 0.3                     | 0.3      |
| <i>Parametriocnemus</i>        | 09021011053                | 1.33                        | 1.33     | 5                             | CG                             | 1.2                     | 1.2      |
| <i>Rheocricotopus</i>          | 09021011057                |                             |          | 6                             | CG                             |                         |          |
| <i>Tvetenia</i>                | 09021011065                |                             | 2.00     | 5                             | CG                             |                         | 1.8      |
| <i>Tvetenia bavarica group</i> | 09021011065111             | 2.00                        |          |                               | --                             | 1.8                     |          |
| <i>Micropsectra</i>            | 09021011070                | 3.67                        | 3.67     | 7                             | CG                             | 3.2                     | 3.2      |
| <i>Tanytarsus</i>              | 09021011076                | 1.33                        | 1.33     | 6                             | CF                             | 1.2                     | 1.2      |
| <i>Phaenopsectra</i>           | 09021011101                | 0.33                        | 0.33     | 7                             | SC                             | 0.3                     | 0.3      |
| Empididae                      | 09021016                   |                             |          | 6                             | --                             |                         |          |
| <i>Dubiraphia</i>              | 09021113064                | 0.33                        | 0.33     | 6                             | --                             | 0.3                     | 0.3      |
| <i>Stenelmis</i>               | 09021113070                | 1.67                        | 1.67     | 5                             | SC                             | 1.5                     | 1.5      |
| <i>Lebertia</i>                | 09030105001                | 1.00                        | 1.00     |                               | --                             | 0.9                     | 0.9      |