



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

Station Information

Station Number: S-359
Waterbody: Sabattus River - Station 359
Town: Sabattus
Directions: 50 M BELOW CROWLEY RD BRIDGE CROSSING

DEP Drainage: Androscoggin
HUC8: 01040002
HUC8 Name: Lower Androscoggin
Latitude: 44 4 24.34 N
Longitude: 70 6 17.27 W
Stream Order: 3

Sample Information

Log Number: 2203
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 2
Date Deployed: 7/18/2013
Date Retrieved: 8/15/2013

Classification Attainment

Statutory Class: C
Model Result with P>.6: B
Date Last Calculated: 11/18/2013
Final Determination: B
Reason for Determination: Model
Date: 11/21/2013
Comments:

Model Probabilities

| <u>First Stage Model</u> | | <u>C or Better Model</u> | |
|---------------------------|------|--------------------------------|------|
| Class A | 0.35 | Class A, B, or C | 1.00 |
| Class B | 0.57 | Non-Attainment | 0.00 |
| <u>B or Better Model</u> | | <u>A Model</u> | |
| Class A or B | 1.00 | Class A | 0.11 |
| Class C or Non-Attainment | 0.00 | Class B or C or Non-Attainment | 0.89 |

Model Variables

| | | | |
|------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------|-------|
| 01 Total Mean Abundance | 303.50 | 18 Relative Abundance Ephemeroptera | 0.42 |
| 02 Generic Richness | 30.00 | 19 EPT Generic Richness | 11.00 |
| 03 Plecoptera Mean Abundance | 2.50 | 21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 0.00 |
| 04 Ephemeroptera Mean Abundance | 126.00 | 23 Relative Generic Richness- Plecoptera | 0.03 |
| 05 Shannon-Wiener Generic Diversity | 3.00 | 25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i> | 61.20 |
| 06 Hilsenhoff Biotic Index | 4.44 | 26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i> | 54.50 |
| 07 Relative Abundance - Chironomidae | 0.05 | 28 EP Generic Richness/14 | 0.43 |
| 08 Relative Generic Richness Diptera | 0.30 | 30 Presence of Class A Indicator Taxa/7 | 0.14 |
| 09 <i>Hydropsyche</i> Abundance | 65.90 | | |
| 11 <i>Cheumatopsyche</i> Abundance | 60.10 | | |
| 12 EPT Generic Richness/ Diptera Generic Richness | 1.22 | | |
| 13 Relative Abundance - Oligochaeta | 0.01 | | |
| 15 Perlidae Mean Abundance (Family Functional Group) | 2.50 | | |
| 16 Tanypodinae Mean Abundance (Family Functional Group) | 0.00 | | |
| 17 Chironomini Abundance (Family Functional Group) | 11.59 | | |

| Five Most Dominant Taxa | | |
|-------------------------|-----------------------|---------|
| Rank | Taxon Name | Percent |
| 1 | <i>Baetis</i> | 22.90 |
| 2 | <i>Hydropsyche</i> | 21.71 |
| 3 | <i>Cheumatopsyche</i> | 19.80 |
| 4 | <i>Maccaffertium</i> | 17.96 |
| 5 | <i>Caecidotea</i> | 3.46 |



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| | | |
|------------------------------|-----------------------------------------|---------------------------|
| Station Number: S-359 | Town: Sabattus | Date Deployed: 7/18/2013 |
| Log Number: 2203 | Waterbody: Sabattus River - Station 359 | Date Retrieved: 8/15/2013 |

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

| | |
|-----------------------|------------|
| Temperature: | 27.4 deg C |
| Dissolved Oxygen: | 6.8 mg/l |
| Specific Conductance: | 128 uS/cm |
| Velocity: | 43.1 cm/s |
| pH: | 6.8 |
| Wetted Width: | 41 m |
| Bankfull Width: | 41 m |
| Depth: | 25 cm |

Waterbody Information - Retrieval

| | |
|-----------------------|------------|
| Temperature: | 21.9 deg C |
| Dissolved Oxygen: | 8.5 mg/l |
| Specific Conductance: | 73 uS/cm |
| Velocity: | 115.8 cm/s |
| pH: | 7.22 |
| Wetted Width: | 41 m |
| Bankfull Width: | 41 m |
| Depth: | 30 cm |

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Pasture
Swamp Hardwood
Upland Hardwood

Canopy Cover

Partly Open

Terrain

Flat

Potential Stressor

Agricultural Runoff
Lake Outlet

Location

Below Agriculture NPS
Below Road Crossing
Lake Outlet

Substrate

| | |
|---------------|------|
| Bedrock | 30 % |
| Boulder | 40 % |
| Rubble/Cobble | 30 % |

Landcover Summary - 2004 Data

| | | | | | | | |
|-----------------|-------|------------------|-----|----------------|------|----------------------|------|
| Total Area (ac) | 27029 | High Int. Dev. % | 0.4 | Water % | 7.4 | Non-vegetated % | 1.6 |
| | | Med Int. Dev. % | 0.9 | Wetland % | 9.0 | Tilled Agriculture % | 2.8 |
| | | Low Int. Dev. % | 5.0 | Upland Woody % | 57.6 | Grassland % | 14.4 |
| | | Development % | 6.2 | Natural % | 66.6 | Human Altered % | 26.0 |
| | | | | | | Impervious % | 5.2 |

Sample Comments

7/18/2013 - GREEN WITH SEWAGE ODOR
8/15/2013 - HIGH WATER LEVELS



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

Station Number: S-359

Waterbody: Sabattus River - Station 359

Town: Sabattus

Log Number: 2203

Subsample Factor: X1

Replicates: 2

Calculated: 11/18/2013

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|-----------------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| Turbellaria | 0301 | 0.50 | 0.50 | | -- | 0.2 | 0.2 |
| <i>Girardia</i> | 03010102002 | | 1.00 | | -- | | 0.3 |
| <i>Girardia tigrina</i> | 03010102002001 | 1.00 | | | -- | 0.3 | |
| <i>Pristina</i> | 08020202004 | | 0.50 | | -- | | 0.2 |
| <i>Pristina osborni</i> | 08020202004007 | 0.50 | | | -- | 0.2 | |
| <i>Nais</i> | 08020202009 | | 1.50 | | CG | | 0.5 |
| <i>Nais behningi</i> | 08020202009003 | 1.00 | | | -- | 0.3 | |
| <i>Nais communis</i> | 08020202009005 | 0.50 | | | -- | 0.2 | |
| <i>Erpobdella</i> | 08030203002 | | 0.50 | | -- | | 0.2 |
| <i>Erpobdella ferverda</i> | 08030203002002 | 0.50 | | | -- | 0.2 | |
| <i>Caecidotea</i> | 09010101001 | 7.00 | 10.50 | 8 | SH | 2.3 | 3.5 |
| <i>Caecidotea racovitzai racovitzai</i> | 09010101001002 | 3.50 | | | -- | 1.2 | |
| <i>Synurella</i> | 09010202006 | | 0.50 | | -- | | 0.2 |
| <i>Synurella chamberlaini</i> | 09010202006001 | 0.50 | | | -- | 0.2 | |
| <i>Paragnetina</i> | 09020209049 | | 2.50 | 1 | PR | | 0.8 |
| <i>Paragnetina media</i> | 09020209049151 | 2.50 | | | -- | 0.8 | |
| Baetidae | 09020401 | 1.00 | 1.00 | | -- | 0.3 | 0.3 |
| <i>Baetis</i> | 09020401001 | 5.00 | 69.50 | 4 | CG | 1.6 | 22.9 |
| <i>Baetis flavistriga</i> | 09020401001004 | 45.00 | | | -- | 14.8 | |
| <i>Baetis intercalaris</i> | 09020401001008 | 2.50 | | | -- | 0.8 | |
| <i>Baetis pluto</i> | 09020401001009 | 17.00 | | | -- | 5.6 | |
| Heptageniidae | 09020402 | 0.50 | 0.50 | | -- | 0.2 | 0.2 |
| <i>Maccaffertium</i> | 09020402015 | 9.00 | 54.50 | 4 | SC | 3.0 | 18.0 |
| <i>Maccaffertium modestum</i> | 09020402015051 | 45.50 | | | -- | 15.0 | |
| <i>Ephemerella</i> | 09020410035 | 0.50 | 0.50 | 1 | CG | 0.2 | 0.2 |
| Trichoptera | 090206 | | | | -- | | |
| <i>Chimarra</i> | 09020601003 | 1.00 | 3.00 | 2 | CF | 0.3 | 1.0 |
| <i>Chimarra obscura</i> | 09020601003003 | 2.00 | | | -- | 0.7 | |
| Hydropsychidae | 09020604 | 6.50 | | | -- | 2.1 | |
| <i>Cheumatopsyche</i> | 09020604015 | 57.00 | 60.10 | 5 | CF | 18.8 | 19.8 |
| <i>Hydropsyche</i> | 09020604016 | 25.00 | 65.90 | 4 | CF | 8.2 | 21.7 |
| <i>Hydropsyche bronta</i> | 09020604016029 | 4.00 | | | -- | 1.3 | |
| <i>Hydropsyche morosa</i> | 09020604016030 | 16.50 | | | -- | 5.4 | |
| <i>Hydropsyche sparna</i> | 09020604016032 | 1.00 | | | -- | 0.3 | |
| <i>Hydropsyche depravata complex</i> | 09020604016041 | 16.00 | | | CF | 5.3 | |
| <i>Micrasema</i> | 09020609044 | 0.50 | 0.50 | 2 | SH | 0.2 | 0.2 |
| <i>Pycnopsyche</i> | 09020610049 | 0.50 | 0.50 | 4 | SH | 0.2 | 0.2 |
| <i>Chaoborus</i> | 09021007025 | 0.50 | 0.50 | 8 | PR | 0.2 | 0.2 |



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| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|--------------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| Chironomidae | 09021011 | 1.50 | | | -- | 0.5 | |
| <i>Cricotopus</i> | 09021011037 | | 1.10 | 7 | SH | | 0.4 |
| <i>Cricotopus patens</i> | 09021011037075 | 1.00 | | | -- | 0.3 | |
| <i>Eukiefferiella</i> | 09021011041 | | 0.55 | 8 | CG | | 0.2 |
| <i>Eukiefferiella devonica group</i> | 09021011041083 | 0.50 | | | CG | 0.2 | |
| <i>Rheotanytarsus</i> | 09021011072 | 2.50 | 2.76 | 6 | CF | 0.8 | 0.9 |
| <i>Glyptotendipes</i> | 09021011088 | 1.00 | 1.10 | 10 | SH | 0.3 | 0.4 |
| <i>Polypedilum</i> | 09021011102 | | 10.48 | 6 | SH | | 3.5 |
| <i>Polypedilum flavum</i> | 09021011102182 | 9.50 | | | -- | 3.1 | |
| <i>Simulium</i> | 09021012047 | 0.50 | 6.00 | 4 | CF | 0.2 | 2.0 |
| <i>Simulium fibrinflatum</i> | 09021012047059 | 0.50 | | | -- | 0.2 | |
| <i>Simulium vittatum</i> | 09021012047064 | 2.00 | | | -- | 0.7 | |
| <i>Simulium decorum</i> | 09021012047065 | 0.50 | | | -- | 0.2 | |
| <i>Simulium jenningsi complex</i> | 09021012047070 | 2.50 | | | CF | 0.8 | |
| Empididae | 09021016 | 0.50 | 0.50 | 6 | -- | 0.2 | 0.2 |
| <i>Hemerodromia</i> | 09021016057 | 0.50 | 0.50 | 3 | PR | 0.2 | 0.2 |
| <i>Psephenus</i> | 09021108058 | | 2.50 | 4 | SC | | 0.8 |
| <i>Psephenus herricki</i> | 09021108058028 | 2.50 | | | -- | 0.8 | |
| <i>Stenelmis</i> | 09021113070 | 0.50 | 1.00 | 5 | SC | 0.2 | 0.3 |
| <i>Stenelmis crenata</i> | 09021113070055 | 0.50 | | | -- | 0.2 | |
| <i>Helisoma</i> | 10010203030 | 0.50 | 2.00 | | SC | 0.2 | 0.7 |
| <i>Helisoma campanulata</i> | 10010203030060 | 1.50 | | | -- | 0.5 | |
| <i>Sphaerium</i> | 10020201003 | | 1.00 | | CF | | 0.3 |
| <i>Sphaerium striatinum</i> | 10020201003024 | 1.00 | | | -- | 0.3 | |