



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

Station Information

Station Number: S-285 DEP Drainage: Penobscot
Waterbody: Silver Lake Outlet Stream - Station 285 HUC8: 01020005
Town: Bucksport HUC8 Name: Lower Penobscot
Directions: BELOW BUCKS MILL RD. BRIDGE Latitude: 44 34 37.33 N
Longitude: 68 47 26.81 W
Stream Order: 1

Sample Information

Log Number: 2046 Type of Sample: ROCK BAG Date Deployed: 7/19/2011
Subsample Factor: X4 Replicates: 3 Date Retrieved: 8/18/2011

Classification Attainment

Statutory Class: B Final Determination: C Date: 2/29/2012
Model Result with P>.6: C Reason for Determination: Model
Date Last Calculated: 2/27/2012 Comments:

Model Probabilities

| First Stage Model | | C or Better Model | |
|---------------------------|------|--------------------------------|------|
| Class A | 0.00 | Class A, B, or C | 0.91 |
| Class B | 0.02 | Non-Attainment | 0.09 |
| 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 | 1316.00 | 18 Relative Abundance Ephemeroptera | 0.01 |
| 02 Generic Richness | 47.00 | 19 EPT Generic Richness | 10.00 |
| 03 Plecoptera Mean Abundance | 0.00 | 21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 0.00 |
| 04 Ephemeroptera Mean Abundance | 6.67 | 23 Relative Generic Richness- Plecoptera | 0.00 |
| 05 Shannon-Wiener Generic Diversity | 3.25 | 25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i> | 53.14 |
| 06 Hilsenhoff Biotic Index | 4.54 | 26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i> | 0.00 |
| 07 Relative Abundance - Chironomidae | 0.38 | 28 EP Generic Richness/14 | 0.21 |
| 08 Relative Generic Richness Diptera | 0.38 | 30 Presence of Class A Indicator Taxa/7 | 0.00 |
| 09 <i>Hydropsyche</i> Abundance | 309.78 | | |
| 11 <i>Cheumatopsyche</i> Abundance | 47.55 | | |
| 12 EPT Generic Richness/ Diptera Generic Richness | 0.56 | | |
| 13 Relative Abundance - Oligochaeta | 0.00 | | |
| 15 Perlidae Mean Abundance (Family Functional Group) | 0.00 | | |
| 16 Tanypodinae Mean Abundance (Family Functional Group) | 13.96 | | |
| 17 Chironomini Abundance (Family Functional Group) | 411.80 | | |

| Five Most Dominant Taxa | | |
|-------------------------|-------------------------|---------|
| Rank | Taxon Name | Percent |
| 1 | <i>Polypedilum</i> | 27.69 |
| 2 | <i>Hydropsyche</i> | 23.54 |
| 3 | <i>Chimarra</i> | 18.84 |
| 4 | <i>Stenelmis</i> | 4.96 |
| 5 | <i>Parametriocnemus</i> | 3.82 |



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Aquatic Life Classification Attainment Report**

| | | |
|------------------------------|--|---------------------------|
| Station Number: S-285 | Town: Bucksport | Date Deployed: 7/19/2011 |
| Log Number: 2046 | Waterbody: Silver Lake Outlet Stream - Station 285 | Date Retrieved: 8/18/2011 |

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

| | |
|-----------------------|------------|
| Temperature: | 24.9 deg C |
| Dissolved Oxygen: | 5.7 mg/l |
| Specific Conductance: | 82 uS/cm |
| Velocity: | 37 cm/s |
| pH: | 6.64 |
| Wetted Width: | 1.4 m |
| Bankfull Width: | 2.4 m |
| Depth: | 23 cm |

Waterbody Information - Retrieval

| | |
|-----------------------|------------|
| Temperature: | 20.4 deg C |
| Dissolved Oxygen: | 5.8 mg/l |
| Specific Conductance: | 74 uS/cm |
| Velocity: | 33 cm/s |
| pH: | 6.64 |
| Wetted Width: | 2 m |
| Bankfull Width: | 2.4 m |
| Depth: | 25 cm |

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Swamp Hardwood
Upland Hardwood
Urban

Canopy Cover

Partly Open

Terrain

Rolling

Potential Stressor

Lake Outlet
Nps Pollution
Regulated Flows

Location

Lake Outlet

Substrate

| | |
|---------------|------|
| Boulder | 15 % |
| Gravel | 15 % |
| Rubble/Cobble | 25 % |
| Sand | 45 % |

Landcover Summary - 2004 Data

Sample Comments

JAPANESE KNOTWEED, GRAPEVINES AT SITE.
8/18/11: FISH OBSERVED.



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

Station Number: S-285

Waterbody: Silver Lake Outlet Stream - Station 285

Town: Bucksport

Log Number: 2046

Subsample Factor: X4

Replicates: 3

Calculated: 2/27/2012

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|--------------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| Turbellaria | 0301 | 24.00 | 24.00 | | -- | 1.8 | 1.8 |
| <i>Prostoma</i> | 04010101001 | 1.33 | 1.33 | | -- | 0.1 | 0.1 |
| Nematoda | 05 | 1.33 | 1.33 | | -- | 0.1 | 0.1 |
| <i>Stylodrilus</i> | 08020101004 | | 2.67 | | -- | | 0.2 |
| <i>Stylodrilus heringianus</i> | 08020101004001 | 2.67 | | | -- | 0.2 | |
| <i>Pristina</i> | 08020202004 | 1.33 | 1.33 | | -- | 0.1 | 0.1 |
| <i>Slavina</i> | 08020202012 | | 1.33 | | -- | | 0.1 |
| <i>Slavina appendiculata</i> | 08020202012001 | 1.33 | | | -- | 0.1 | |
| <i>Orconectes</i> | 09010301008 | | 1.33 | | CG | | 0.1 |
| <i>Orconectes limosus</i> | 09010301008013 | 1.33 | | | -- | 0.1 | |
| <i>Boyeria</i> | 09020301004 | | 2.67 | 2 | PR | | 0.2 |
| <i>Boyeria vinosa</i> | 09020301004012 | 2.67 | | | -- | 0.2 | |
| Calopterygidae | 09020307 | 1.33 | 1.33 | | -- | 0.1 | 0.1 |
| <i>Calopteryx</i> | 09020307043 | | 1.33 | 5 | PR | | 0.1 |
| <i>Calopteryx maculata</i> | 09020307043088 | 1.33 | | | -- | 0.1 | |
| <i>Baetis</i> | 09020401001 | 1.33 | 2.67 | 4 | CG | 0.1 | 0.2 |
| <i>Baetis brunneicolor</i> | 09020401001003 | 1.33 | | | -- | 0.1 | |
| <i>Acerpenna</i> | 09020401007 | 1.33 | 2.67 | 5 | CG | 0.1 | 0.2 |
| <i>Acerpenna macdunnoughi</i> | 09020401007001 | 1.33 | | | -- | 0.1 | |
| <i>Iswaeon</i> | 09020401015 | 1.33 | 1.33 | | -- | 0.1 | 0.1 |
| <i>Rhagovelia</i> | 09020510026 | 2.67 | 2.67 | | PR | 0.2 | 0.2 |
| Philopotamidae | 09020601 | 2.67 | 2.67 | | -- | 0.2 | 0.2 |
| <i>Chimarra</i> | 09020601003 | 160.00 | 248.00 | 2 | CF | 12.2 | 18.8 |
| <i>Chimarra aterrima</i> | 09020601003002 | 88.00 | | | -- | 6.7 | |
| <i>Polycentropus</i> | 09020603010 | 18.67 | 18.67 | 6 | PR | 1.4 | 1.4 |
| Hydropsychidae | 09020604 | 6.67 | | | -- | 0.5 | |
| <i>Cheumatopsyche</i> | 09020604015 | 46.67 | 47.55 | 5 | CF | 3.5 | 3.6 |
| <i>Hydropsyche</i> | 09020604016 | 290.67 | 309.78 | 4 | CF | 22.1 | 23.5 |
| <i>Hydropsyche depravata complex</i> | 09020604016041 | 13.33 | | | CF | 1.0 | |
| <i>Pycnopsyche</i> | 09020610049 | 1.33 | 1.33 | 4 | SH | 0.1 | 0.1 |
| <i>Oecetis</i> | 09020618078 | 9.33 | 20.00 | 8 | PR | 0.7 | 1.5 |
| <i>Oecetis persimilis</i> | 09020618078157 | 10.67 | | | -- | 0.8 | |
| <i>Nigronia</i> | 09020701003 | | 6.67 | 0 | PR | | 0.5 |
| <i>Nigronia serricornis</i> | 09020701003003 | 6.67 | | | -- | 0.5 | |
| <i>Bezzia/palpomyia</i> | 09021010043 | 1.33 | 1.33 | 6 | PR | 0.1 | 0.1 |
| Chironomidae | 09021011 | 22.67 | | | -- | 1.7 | |
| <i>Conchapelopia</i> | 09021011004 | 1.33 | 1.40 | 6 | PR | 0.1 | 0.1 |
| <i>Nilotanytus</i> | 09021011012 | | 11.17 | 6 | PR | | 0.8 |



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Station Number: S-285

Waterbody: Silver Lake Outlet Stream - Station 285

Town: Bucksport

Log Number: 2046

Subsample Factor: X4

Replicates: 3

Calculated: 2/27/2012

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|---|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Nilotanypus fimbriatus</i> | 09021011012027 | 10.67 | | | -- | 0.8 | |
| <i>Trissopelopia</i> | 09021011021 | | 1.40 | | PR | | 0.1 |
| <i>Trissopelopia ogemawi</i> | 09021011021042 | 1.33 | | | -- | 0.1 | |
| <i>Pagastia</i> | 09021011025 | | 2.79 | 1 | -- | | 0.2 |
| <i>Pagastia orthogonia</i> | 09021011025001 | 2.67 | | | -- | 0.2 | |
| <i>Corynoneura</i> | 09021011036 | 8.00 | 8.38 | 7 | CG | 0.6 | 0.6 |
| <i>Cricotopus</i> | 09021011037 | | 1.40 | 7 | SH | | 0.1 |
| <i>Cricotopus bicinctus</i> | 09021011037057 | 1.33 | | | -- | 0.1 | |
| <i>Diplocladius</i> | 09021011038 | | 5.58 | 8 | CG | | 0.4 |
| <i>Diplocladius cultriger</i> | 09021011038001 | 5.33 | | | -- | 0.4 | |
| <i>Parametriocnemus</i> | 09021011053 | 48.00 | 50.25 | 5 | CG | 3.6 | 3.8 |
| <i>Tvetenia</i> | 09021011065 | | 2.79 | 5 | CG | | 0.2 |
| <i>Tvetenia vitracies</i> | 09021011065113 | 1.33 | | | -- | 0.1 | |
| <i>Tvetenia paucunca</i> | 09021011065114 | 1.33 | | | -- | 0.1 | |
| <i>Rheotanytarsus</i> | 09021011072 | 4.00 | 4.19 | 6 | CF | 0.3 | 0.3 |
| <i>Tanytarsus</i> | 09021011076 | 4.00 | 4.19 | 6 | CF | 0.3 | 0.3 |
| <i>Cryptochironomus</i> | 09021011082 | 4.00 | 4.19 | 8 | PR | 0.3 | 0.3 |
| <i>Microtendipes</i> | 09021011094 | | 43.27 | 6 | CF | | 3.3 |
| <i>Microtendipes rydalensis group</i> | 09021011094168 | 41.33 | | | -- | 3.1 | |
| <i>Polypedilum</i> | 09021011102 | | 364.34 | 6 | SH | | 27.7 |
| <i>Polypedilum aviceps</i> | 09021011102181 | 346.67 | | | -- | 26.3 | |
| <i>Polypedilum scalaenum group</i> | 09021011102189 | 1.33 | | | -- | 0.1 | |
| <i>Simulium</i> | 09021012047 | 4.00 | 10.67 | 4 | CF | 0.3 | 0.8 |
| <i>Simulium (Eusimulium)</i> | 09021012047052 | 1.33 | | | -- | 0.1 | |
| <i>Simulium tuberosum</i> | 09021012047067 | 2.67 | | | -- | 0.2 | |
| <i>Simulium venustum/verecundum complex</i> | 09021012047072 | 2.67 | | | CF | 0.2 | |
| <i>Hemerodromia</i> | 09021016057 | 2.67 | 2.67 | 3 | PR | 0.2 | 0.2 |
| <i>Roederiodes</i> | 09021016058 | 1.33 | 1.33 | 3 | PR | 0.1 | 0.1 |
| <i>Psephenus</i> | 09021108058 | | 4.00 | 4 | SC | | 0.3 |
| <i>Psephenus herricki</i> | 09021108058028 | 4.00 | | | -- | 0.3 | |
| <i>Dubiraphia</i> | 09021113064 | 1.33 | 1.33 | 6 | -- | 0.1 | 0.1 |
| <i>Macronychus</i> | 09021113065 | | 9.33 | 4 | -- | | 0.7 |
| <i>Macronychus glabratus</i> | 09021113065040 | 9.33 | | | -- | 0.7 | |
| <i>Stenelmis</i> | 09021113070 | 58.67 | 65.33 | 5 | SC | 4.5 | 5.0 |
| <i>Stenelmis crenata</i> | 09021113070055 | 6.67 | | | -- | 0.5 | |
| <i>Physa</i> | 10010202026 | 1.33 | 1.33 | | SC | 0.1 | 0.1 |
| Sphaeriidae | 10020201 | 4.00 | 4.00 | | CF | 0.3 | 0.3 |



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|------------------------------|--|-----------------------|
| Station Number: S-285 | Waterbody: Silver Lake Outlet Stream - Station 285 | Town: Bucksport |
| Log Number: 2046 | Subsample Factor: X4 | Replicates: 3 |
| | | Calculated: 2/27/2012 |

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|----------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Pisidium</i> | 10020201002 | | 6.67 | | CF | | 0.5 |
| <i>Pisidium casertanum</i> | 10020201002006 | 6.67 | | | CF | 0.5 | |