



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

Station Information

Station Number: S-299
Waterbody: Sebasticook River - Station 299
Town: Benton
Directions: 0.18 KM BELOW DAM

DEP Drainage: Kennebec
HUC8: 01030003
HUC8 Name: Lower Kennebec
Latitude: 44 34 40.76 N
Longitude: 69 33 24.59 W
Stream Order: 4

Sample Information

Log Number: 2106
Subsample Factor: X1
Type of Sample: ROCK BASKET
Replicates: 3
Date Deployed: 7/16/2012
Date Retrieved: 8/14/2012

Classification Attainment

Statutory Class: C
Model Result with P>.6: B
Date Last Calculated: 1/18/2013
Final Determination: B
Reason for Determination: Model
Comments:

Date: 1/22/2013

Model Probabilities

| First Stage Model | | C or Better Model | |
|---------------------------|------|--------------------------------|------|
| Class A | 0.32 | Class A, B, or C | 1.00 |
| Class B | 0.65 | Non-Attainment | 0.00 |
| B or Better Model | | A Model | |
| Class A or B | 0.98 | Class A | 0.15 |
| Class C or Non-Attainment | 0.02 | Class B or C or Non-Attainment | 0.85 |

Model Variables

| | | | |
|--------------------------------------|--------|---|-------|
| 01 Total Mean Abundance | 699.00 | 18 Relative Abundance Ephemeroptera | 0.02 |
| 02 Generic Richness | 57.00 | 19 EPT Generic Richness | 18.00 |
| 03 Plecoptera Mean Abundance | 13.67 | 21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 44.91 |
| 04 Ephemeroptera Mean Abundance | 13.67 | 23 Relative Generic Richness- Plecoptera | 0.02 |
| 05 Shannon-Wiener Generic Diversity | 3.02 | 25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i> | 14.63 |
| 06 Hilsenhoff Biotic Index | 5.62 | 26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i> | 18.19 |
| 07 Relative Abundance - Chironomidae | 0.13 | 28 EP Generic Richness/14 | 0.50 |
| 08 Relative Generic Richness Diptera | 0.23 | 30 Presence of Class A Indicator Taxa/7 | 0.14 |
| 09 <i>Hydropsyche</i> Abundance | 0.00 | | |
| 11 <i>Cheumatopsyche</i> Abundance | 0.67 | | |
| 12 EPT Generic Richness/ Diptera | 1.38 | | |
| Generic Richness | | | |
| 13 Relative Abundance - Oligochaeta | 0.01 | | |
| 15 Perlidae Mean Abundance (Family | 13.67 | | |
| Functional Group) | | | |
| 16 Tanypodinae Mean Abundance | 7.15 | | |
| (Family Functional Group) | | | |
| 17 Chironomini Abundance (Family | 71.54 | | |
| Functional Group) | | | |

Five Most Dominant Taxa

| Rank | Taxon Name | Percent |
|------|----------------------|---------|
| 1 | <i>Amnicola</i> | 45.64 |
| 2 | <i>Laevapex</i> | 21.84 |
| 3 | <i>Dicrotendipes</i> | 6.04 |
| 4 | <i>Polypedilum</i> | 3.56 |
| 5 | <i>Girardia</i> | 2.53 |



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| | | |
|------------------------------|--|---------------------------|
| Station Number: S-299 | Town: Benton | Date Deployed: 7/16/2012 |
| Log Number: 2106 | Waterbody: Sebasticook River - Station 299 | Date Retrieved: 8/14/2012 |

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

| | |
|-----------------------|-----------|
| Temperature: | 28 deg C |
| Dissolved Oxygen: | 8.4 mg/l |
| Specific Conductance: | 101 uS/cm |
| Velocity: | 62 cm/s |
| pH: | 6.76 |
| Wetted Width: | 88 m |
| Bankfull Width: | 88 m |
| Depth: | 70 cm |

Waterbody Information - Retrieval

| | |
|-----------------------|------------|
| Temperature: | 27.2 deg C |
| Dissolved Oxygen: | 7.9 mg/l |
| Specific Conductance: | 99 uS/cm |
| Velocity: | 10 cm/s |
| pH: | 7.79 |
| Wetted Width: | 83 m |
| Bankfull Width: | 88 m |
| Depth: | 50 cm |

Water Chemistry

Summary of Habitat Characteristics

| | | |
|---------------------------|---------------------|--------------------|
| <u>Landuse Name</u> | <u>Canopy Cover</u> | <u>Terrain</u> |
| Upland Hardwood | Open | Rolling |
| <u>Potential Stressor</u> | <u>Location</u> | <u>Substrate</u> |
| Regulated Flows | Below Dam | Boulder 30 % |
| | | Gravel 20 % |
| | | Rubble/Cobble 50 % |

Landcover Summary - 2004 Data

| | | | | | | | |
|-----------------|--------|------------------|-----|----------------|------|----------------------|------|
| Total Area (ac) | 552246 | High Int. Dev. % | 0.3 | Water % | 3.8 | Non-vegetated % | 0.2 |
| | | Med Int. Dev. % | 0.4 | Wetland % | 9.4 | Tilled Agriculture % | 5.1 |
| | | Low Int. Dev. % | 3.8 | Upland Woody % | 71.1 | Grassland % | 5.7 |
| | | Development % | 4.4 | Natural % | 80.6 | Human Altered % | 15.7 |
| | | | | | | Impervious % | 2.8 |

Sample Comments

8/14/12: 2 EELS SEEN/COLLECTED IN BASKET, ONE BASKET LOOKED CRUSHED.
7/16/12: NUMEROUS FILAMENTOUS ALGAE.



Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report

Station Number: S-299

Waterbody: Sebasticook River - Station 299

Town: Benton

Log Number: 2106

Subsample Factor: X1

Replicates: 3

Calculated: 1/18/2013

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|---------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Hydra</i> | 02010101001 | 1.00 | 1.00 | | PR | 0.1 | 0.1 |
| Dugesidae | 03010102 | 7.00 | 7.00 | | -- | 1.0 | 1.0 |
| <i>Girardia</i> | 03010102002 | | 17.67 | | -- | | 2.5 |
| <i>Girardia tigrina</i> | 03010102002001 | 17.67 | | | -- | 2.5 | |
| <i>Prostoma</i> | 04010101001 | 0.33 | 0.33 | | -- | 0.0 | 0.0 |
| <i>Stylaria</i> | 08020202014 | | 6.00 | | CG | | 0.9 |
| <i>Stylaria lacustris</i> | 08020202014002 | 6.00 | | | -- | 0.9 | |
| Lumbricidae | 08020205 | 0.33 | 0.33 | | -- | 0.0 | 0.0 |
| <i>Helobdella</i> | 08030101005 | | 2.67 | | -- | | 0.4 |
| <i>Helobdella papillata</i> | 08030101005003 | 2.67 | | | -- | 0.4 | |
| <i>Hyaella</i> | 09010203006 | | 16.33 | 8 | CG | | 2.3 |
| <i>Hyaella azteca</i> | 09010203006011 | 16.33 | | | -- | 2.3 | |
| Isotomidae | 09020102 | 1.00 | 1.00 | | -- | 0.1 | 0.1 |
| <i>Acroneuria</i> | 09020209042 | 1.00 | 13.67 | 0 | PR | 0.1 | 2.0 |
| <i>Acroneuria abnormis</i> | 09020209042121 | 0.33 | | 0 | PR | 0.0 | |
| <i>Acroneuria lycorias</i> | 09020209042125 | 4.00 | | | -- | 0.6 | |
| <i>Acroneuria mela</i> | 09020209042126 | 8.33 | | | -- | 1.2 | |
| <i>Boyeria</i> | 09020301004 | | 2.00 | 2 | PR | | 0.3 |
| <i>Boyeria vinosa</i> | 09020301004012 | 2.00 | | | -- | 0.3 | |
| Coenagrionidae | 09020309 | 0.33 | 0.33 | | -- | 0.0 | 0.0 |
| <i>Argia</i> | 09020309048 | 1.67 | 1.67 | 7 | PR | 0.2 | 0.2 |
| <i>Acerpenna</i> | 09020401007 | 0.67 | 3.00 | 5 | CG | 0.1 | 0.4 |
| <i>Acerpenna pygmaea</i> | 09020401007011 | 2.33 | | | -- | 0.3 | |
| Heptageniidae | 09020402 | 0.33 | | | -- | 0.0 | |
| <i>Stenacron</i> | 09020402014 | 1.67 | 3.48 | 7 | SC | 0.2 | 0.5 |
| <i>Stenacron interpunctatum</i> | 09020402014045 | 1.67 | | | -- | 0.2 | |
| <i>Maccaffertium</i> | 09020402015 | 1.33 | 4.52 | 4 | SC | 0.2 | 0.6 |
| <i>Maccaffertium modestum</i> | 09020402015051 | 3.00 | | | -- | 0.4 | |
| Leptophlebiidae | 09020406 | 0.33 | 0.33 | | -- | 0.0 | 0.0 |
| <i>Ephemerella</i> | 09020410035 | 0.33 | 0.33 | 1 | CG | 0.0 | 0.0 |
| <i>Tricorythodes</i> | 09020411038 | 2.00 | 2.00 | 4 | CG | 0.3 | 0.3 |
| <i>Neureclipsis</i> | 09020603008 | 1.00 | 1.00 | 7 | CF | 0.1 | 0.1 |
| <i>Polycentropus</i> | 09020603010 | 1.33 | 1.33 | 6 | PR | 0.2 | 0.2 |
| <i>Cheumatopsyche</i> | 09020604015 | 0.67 | 0.67 | 5 | CF | 0.1 | 0.1 |
| <i>Hydroptila</i> | 09020607026 | 3.00 | 3.00 | 6 | P | 0.4 | 0.4 |
| <i>Brachycentrus</i> | 09020609043 | | 5.67 | 0 | CF | | 0.8 |
| <i>Brachycentrus numerosus</i> | 09020609043098 | 5.67 | | | -- | 0.8 | |
| <i>Lepidostoma</i> | 09020611064 | 1.33 | 1.33 | 1 | SH | 0.2 | 0.2 |



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Aquatic Life Taxonomic Inventory Report

Station Number: S-299

Waterbody: Sebasticook River - Station 299

Town: Benton

Log Number: 2106

Subsample Factor: X1

Replicates: 3

Calculated: 1/18/2013

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|---------------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Helicopsyche</i> | 09020616070 | | 0.67 | 3 | SC | | 0.1 |
| <i>Helicopsyche borealis</i> | 09020616070137 | 0.67 | | | -- | 0.1 | |
| Leptoceridae | 09020618 | 0.67 | | | -- | 0.1 | |
| <i>Ceraclea</i> | 09020618072 | 3.67 | 5.49 | 3 | CG | 0.5 | 0.8 |
| <i>Ceraclea slossonae</i> | 09020618072145 | 1.67 | | | -- | 0.2 | |
| <i>Nectopsyche</i> | 09020618074 | | 12.01 | 3 | SH | | 1.7 |
| <i>Nectopsyche exquisita</i> | 09020618074147 | 11.67 | | | -- | 1.7 | |
| <i>Triaenodes</i> | 09020618077 | 1.67 | 1.72 | 6 | SH | 0.2 | 0.2 |
| <i>Oecetis</i> | 09020618078 | 1.67 | 4.12 | 8 | PR | 0.2 | 0.6 |
| <i>Oecetis persimilis</i> | 09020618078157 | 2.33 | | | -- | 0.3 | |
| Chironomidae | 09021011 | 2.00 | | | -- | 0.3 | |
| <i>Ablabesmyia</i> | 09021011001 | | 3.75 | 8 | PR | | 0.5 |
| <i>Ablabesmyia mallochii</i> | 09021011001004 | 3.00 | | | -- | 0.4 | |
| <i>Ablabesmyia monilis</i> | 09021011001009 | 0.67 | | | -- | 0.1 | |
| <i>Labrundinia</i> | 09021011008 | | 0.68 | 7 | PR | | 0.1 |
| <i>Labrundinia pilosella</i> | 09021011008022 | 0.67 | | | -- | 0.1 | |
| <i>Pentaneura</i> | 09021011014 | | 2.73 | 6 | PR | | 0.4 |
| <i>Pentaneura inconspicua</i> | 09021011014028 | 2.67 | | | -- | 0.4 | |
| <i>Cricotopus</i> | 09021011037 | 5.67 | 6.81 | 7 | SH | 0.8 | 1.0 |
| <i>Cricotopus bicinctus</i> | 09021011037057 | 0.33 | | | -- | 0.0 | |
| <i>Cricotopus vierriensis</i> | 09021011037071 | 0.67 | | | -- | 0.1 | |
| <i>Synorthocladius</i> | 09021011061 | 1.00 | 1.02 | 2 | CG | 0.1 | 0.1 |
| <i>Rheotanytarsus</i> | 09021011072 | 1.33 | 1.36 | 6 | CF | 0.2 | 0.2 |
| <i>Tanytarsus</i> | 09021011076 | 3.33 | 3.41 | 6 | CF | 0.5 | 0.5 |
| <i>Dicrotendipes</i> | 09021011085 | | 42.25 | 8 | CG | | 6.0 |
| <i>Dicrotendipes neomodestus</i> | 09021011085152 | 41.33 | | | -- | 5.9 | |
| <i>Microtendipes</i> | 09021011094 | | 3.75 | 6 | CF | | 0.5 |
| <i>Microtendipes rydalensis group</i> | 09021011094168 | 3.67 | | | -- | 0.5 | |
| <i>Phaenopsectra</i> | 09021011101 | | 0.68 | 7 | SC | | 0.1 |
| <i>Phaenopsectra obediens</i> | 09021011101182 | 0.67 | | | SC | 0.1 | |
| <i>Polypedilum</i> | 09021011102 | | 24.87 | 6 | SH | | 3.6 |
| <i>Polypedilum flavum</i> | 09021011102182 | 18.67 | | | -- | 2.7 | |
| <i>Polypedilum illinoense group</i> | 09021011102185 | 5.67 | | | -- | 0.8 | |
| <i>Helopelopia</i> | 09021011114 | 1.00 | 1.02 | 6 | PR | 0.1 | 0.1 |
| <i>Xestochironomus</i> | 09021011143 | 0.33 | 0.34 | | PR | 0.0 | 0.0 |
| <i>Hemerodromia</i> | 09021016057 | | | 3 | PR | | |
| <i>Berosus</i> | 09021105040 | 0.33 | 0.33 | | P | 0.0 | 0.0 |
| <i>Psephenus</i> | 09021108058 | | 2.00 | 4 | SC | | 0.3 |



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Aquatic Life Taxonomic Inventory Report

Station Number: S-299

Waterbody: Sebasticook River - Station 299

Town: Benton

Log Number: 2106

Subsample Factor: X1

Replicates: 3

Calculated: 1/18/2013

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|----------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Psephenus herricki</i> | 09021108058028 | 2.00 | | | -- | 0.3 | |
| <i>Microcyloepus</i> | 09021113066 | 0.67 | 0.67 | 3 | -- | 0.1 | 0.1 |
| <i>Optioservus</i> | 09021113067 | 0.33 | 0.33 | 3 | SC | 0.0 | 0.0 |
| <i>Promoresia</i> | 09021113069 | | 1.00 | | -- | | 0.1 |
| <i>Promoresia elegans</i> | 09021113069051 | 1.00 | | | -- | 0.1 | |
| <i>Stenelmis</i> | 09021113070 | 0.33 | 0.33 | 5 | SC | 0.0 | 0.0 |
| <i>Lebertia</i> | 09030105001 | 0.67 | 0.67 | | -- | 0.1 | 0.1 |
| <i>Amnicola</i> | 10010104013 | | 319.00 | | SC | | 45.6 |
| <i>Amnicola limosa</i> | 10010104013018 | 319.00 | | | -- | 45.6 | |
| <i>Physa</i> | 10010202026 | 4.00 | 4.00 | | SC | 0.6 | 0.6 |
| <i>Gyraulus</i> | 10010203029 | | 0.67 | | SC | | 0.1 |
| <i>Gyraulus parvus</i> | 10010203029057 | 0.67 | | | -- | 0.1 | |
| <i>Ferrissia</i> | 10010204035 | | 0.67 | | SC | | 0.1 |
| <i>Ferrissia rivularis</i> | 10010204035066 | 0.67 | | | -- | 0.1 | |
| <i>Laevapex</i> | 10010204046 | | 152.67 | | -- | | 21.8 |
| <i>Laevapex fuscus</i> | 10010204046068 | 152.67 | | | -- | 21.8 | |
| Sphaeriidae | 10020201 | 1.33 | | | CF | 0.2 | |
| <i>Musculium</i> | 10020201001 | 1.67 | 2.78 | | CF | 0.2 | 0.4 |
| <i>Pisidium</i> | 10020201002 | | 0.56 | | CF | | 0.1 |
| <i>Pisidium casertanum</i> | 10020201002006 | 0.33 | | | CF | 0.0 | |