



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

Station Information

Station Number: S-944 DEP Drainage: Kennebec
Waterbody: Stone Brook - Station 944 HUC8: 01030003
Town: Augusta HUC8 Name: Lower Kennebec
Directions: Latitude: 44 20 42.44 N
Longitude: 69 48 2.53 W
Stream Order: 2

Sample Information

Log Number: 2094 Type of Sample: ROCK BAG Date Deployed: 7/9/2012
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/7/2012

Classification Attainment

Statutory Class: B Final Determination: B Date: 12/6/2012
Model Result with P>.6: B Reason for Determination: Model
Date Last Calculated: 12/5/2012 Comments:

Model Probabilities

| First Stage Model | | | | C or Better Model | |
|---------------------------|------|---------|------|--------------------------------|------|
| Class A | 0.41 | Class C | 0.09 | Class A, B, or C | 1.00 |
| Class B | 0.50 | NA | 0.00 | Non-Attainment | 0.00 |
| B or Better Model | | | | A Model | |
| Class A or B | | 0.98 | | Class A | 0.09 |
| Class C or Non-Attainment | | 0.02 | | Class B or C or Non-Attainment | 0.91 |

Model Variables

| | | | |
|--------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------|-------|
| 01 Total Mean Abundance | 233.67 | 18 Relative Abundance Ephemeroptera | 0.04 |
| 02 Generic Richness | 53.00 | 19 EPT Generic Richness | 16.00 |
| 03 Plecoptera Mean Abundance | 2.00 | 21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 0.00 |
| 04 Ephemeroptera Mean Abundance | 8.33 | 23 Relative Generic Richness- Plecoptera | 0.02 |
| 05 Shannon-Wiener Generic Diversity | 4.02 | 25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i> | 12.11 |
| 06 Hilsenhoff Biotic Index | 5.47 | 26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i> | 6.31 |
| 07 Relative Abundance - Chironomidae | 0.30 | 28 EP Generic Richness/14 | 0.43 |
| 08 Relative Generic Richness Diptera | 0.38 | 30 Presence of Class A Indicator Taxa/7 | 0.00 |
| 09 <i>Hydropsyche</i> Abundance | 3.25 | | |
| 11 <i>Cheumatopsyche</i> Abundance | 1.08 | | |
| 12 EPT Generic Richness/ Diptera | 0.80 | | |
| Generic Richness | | | |
| 13 Relative Abundance - Oligochaeta | 0.00 | | |
| 15 Perlidae Mean Abundance (Family | 2.00 | | |
| Functional Group) | | | |
| 16 Tanypodinae Mean Abundance | 2.13 | | |
| (Family Functional Group) | | | |
| 17 Chironomini Abundance (Family | 44.09 | | |
| Functional Group) | | | |

| Five Most Dominant Taxa | | |
|-------------------------|----------------------|---------|
| Rank | Taxon Name | Percent |
| 1 | <i>Polycentropus</i> | 22.28 |
| 2 | <i>Microtendipes</i> | 16.59 |
| 3 | <i>Dubiraphia</i> | 12.84 |
| 4 | <i>Macronychus</i> | 8.27 |
| 5 | <i>Amnicola</i> | 6.28 |



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

Station Number: S-944

Town: Augusta

Date Deployed: 7/9/2012

Log Number: 2094

Waterbody: Stone Brook - Station 944

Date Retrieved: 8/7/2012

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 20.9 deg C
Dissolved Oxygen: 8.2 mg/l
Specific Conductance: 332 uS/cm
Velocity: 32 cm/s
pH: 7.88
Wetted Width: 5.7 m
Bankfull Width: 8.4 m
Depth: 25 cm

Waterbody Information - Retrieval

Temperature: 23.3 deg C
Dissolved Oxygen: 7.4 mg/l
Specific Conductance: 585 uS/cm
Velocity: 12.9 cm/s
pH: 7.88
Wetted Width: 5 m
Bankfull Width: 8.4 m
Depth: 12 cm

Water Chemistry - 8/7/2012

| | | | |
|--------------------------|-----------|-----------------------------|------------|
| Ammonia As Nitrogen | 0.01 mg/l | Soluble Reactive Phosphorus | 3 ug/l |
| Nitrate+nitrite As N | 0.07 mg/l | Total Phosphorus | 0.013 mg/l |
| Total Kjeldahl Nitrogen | 0.4 mg/l | Total Suspended Solids | <2 mg/l |
| Dissolved Organic Carbon | 4.4 mg/l | Total Dissolved Solids | 360 mg/l |

Summary of Habitat Characteristics

| | | |
|---------------------------|---------------------|--------------------|
| <u>Landuse Name</u> | <u>Canopy Cover</u> | <u>Terrain</u> |
| Upland Hardwood | Partly Open | Rolling |
| Urban | | |
| <u>Potential Stressor</u> | <u>Location</u> | <u>Substrate</u> |
| Nps Pollution | Below Urban NPS | Boulder 10 % |
| Urban Runoff | | Gravel 15 % |
| | | Rubble/Cobble 70 % |
| | | Silt 5 % |

Landcover Summary - 2004 Data

Sample Comments

7/9/12: WATER HAS MILKY COLOR.

8/7/12: SILTED BOTTOM. 8/7/12: FISH OBSERVED.



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

| | | |
|------------------------------|--------------------------------------|-----------------------|
| Station Number: S-944 | Waterbody: Stone Brook - Station 944 | Town: Augusta |
| Log Number: 2094 | Subsample Factor: X1 | Replicates: 3 |
| | | Calculated: 12/5/2012 |

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|-------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Prostoma</i> | 04010101001 | 2.00 | 2.00 | | -- | 0.9 | 0.9 |
| <i>Nais</i> | 08020202009 | | 1.00 | | CG | | 0.4 |
| <i>Nais communis</i> | 08020202009005 | 0.67 | | | -- | 0.3 | |
| <i>Nais simplex</i> | 08020202009008 | 0.33 | | | -- | 0.1 | |
| <i>Acroneuria</i> | 09020209042 | | 2.00 | 0 | PR | | 0.9 |
| <i>Acroneuria abnormis</i> | 09020209042121 | 2.00 | | 0 | PR | 0.9 | |
| <i>Boyeria</i> | 09020301004 | | 1.67 | 2 | PR | | 0.7 |
| <i>Boyeria vinosa</i> | 09020301004012 | 1.67 | | | -- | 0.7 | |
| Gomphidae | 09020302 | 0.33 | 0.33 | | -- | 0.1 | 0.1 |
| Calopterygidae | 09020307 | 0.67 | 0.67 | | -- | 0.3 | 0.3 |
| <i>Calopteryx</i> | 09020307043 | 1.33 | 1.33 | 5 | PR | 0.6 | 0.6 |
| <i>Argia</i> | 09020309048 | 0.33 | 0.67 | 7 | PR | 0.1 | 0.3 |
| <i>Argia apicalis</i> | 09020309048103 | 0.33 | | | -- | 0.1 | |
| <i>Acerpenna</i> | 09020401007 | | 1.00 | 5 | CG | | 0.4 |
| <i>Acerpenna macdunnoughi</i> | 09020401007001 | 0.33 | | | -- | 0.1 | |
| <i>Acerpenna pygmaea</i> | 09020401007011 | 0.67 | | | -- | 0.3 | |
| <i>Proclleon</i> | 09020401010 | 2.00 | 2.00 | | CG | 0.9 | 0.9 |
| Heptageniidae | 09020402 | 0.33 | | | -- | 0.1 | |
| <i>Stenacron</i> | 09020402014 | 0.33 | 0.36 | 7 | SC | 0.1 | 0.2 |
| <i>Maccaffertium</i> | 09020402015 | 3.33 | 4.31 | 4 | SC | 1.4 | 1.8 |
| <i>Maccaffertium modestum</i> | 09020402015051 | 0.67 | | | -- | 0.3 | |
| <i>Ephemerella</i> | 09020410035 | 0.67 | 0.67 | 1 | CG | 0.3 | 0.3 |
| Polycentropodidae | 09020603 | 1.67 | | | -- | 0.7 | |
| <i>Cernotina</i> | 09020603006 | 5.67 | 5.82 | | PR | 2.4 | 2.5 |
| <i>Nyctiophylax</i> | 09020603009 | | 4.45 | 5 | PR | | 1.9 |
| <i>Nyctiophylax moestus</i> | 09020603009013 | 4.33 | | | -- | 1.9 | |
| <i>Polycentropus</i> | 09020603010 | 50.67 | 52.06 | 6 | PR | 21.7 | 22.3 |
| Hydropsychidae | 09020604 | 0.33 | | | -- | 0.1 | |
| <i>Cheumatopsyche</i> | 09020604015 | 1.00 | 1.08 | 5 | CF | 0.4 | 0.5 |
| <i>Hydropsyche</i> | 09020604016 | 0.33 | 3.25 | 4 | CF | 0.1 | 1.4 |
| <i>Hydropsyche bronta</i> | 09020604016029 | 2.00 | | | -- | 0.9 | |
| <i>Hydropsyche sparna</i> | 09020604016032 | 0.67 | | | -- | 0.3 | |
| <i>Glossosoma</i> | 09020606020 | | | 0 | SC | | |
| Hydroptilidae | 09020607 | | | | -- | | |
| <i>Hydroptila</i> | 09020607026 | 0.33 | 0.33 | 6 | P | 0.1 | 0.1 |
| Phryganeidae | 09020608 | 0.33 | 0.33 | | -- | 0.1 | 0.1 |
| <i>Helicopsyche</i> | 09020616070 | | 1.00 | 3 | SC | | 0.4 |
| <i>Helicopsyche borealis</i> | 09020616070137 | 1.00 | | | -- | 0.4 | |



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

Station Number: S-944

Waterbody: Stone Brook - Station 944

Town: Augusta

Log Number: 2094

Subsample Factor: X1

Replicates: 3

Calculated: 12/5/2012

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|---------------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| Leptoceridae | 09020618 | 0.33 | | | -- | 0.1 | |
| <i>Mystacides</i> | 09020618075 | | 0.38 | 4 | CG | | 0.2 |
| <i>Mystacides sepulchralis</i> | 09020618075147 | 0.33 | | | -- | 0.1 | |
| <i>Oecetis</i> | 09020618078 | 1.67 | 2.63 | 8 | PR | 0.7 | 1.1 |
| <i>Oecetis persimilis</i> | 09020618078157 | 0.67 | | | -- | 0.3 | |
| <i>Nigronia</i> | 09020701003 | | 3.67 | 0 | PR | | 1.6 |
| <i>Nigronia serricornis</i> | 09020701003003 | 3.67 | | | -- | 1.6 | |
| <i>Antocha</i> | 09021001004 | 0.33 | 0.33 | 3 | CG | 0.1 | 0.1 |
| Chironomidae | 09021011 | 4.33 | | | -- | 1.9 | |
| <i>Ablabesmyia</i> | 09021011001 | | 0.36 | 8 | PR | | 0.2 |
| <i>Ablabesmyia mallochii</i> | 09021011001004 | 0.33 | | | -- | 0.1 | |
| <i>Labrundinia</i> | 09021011008 | | 0.71 | 7 | PR | | 0.3 |
| <i>Labrundinia pilosella</i> | 09021011008022 | 0.67 | | | -- | 0.3 | |
| <i>Nilotanytus</i> | 09021011012 | | 0.36 | 6 | PR | | 0.2 |
| <i>Nilotanytus fimbriatus</i> | 09021011012027 | 0.33 | | | -- | 0.1 | |
| <i>Paramerina</i> | 09021011013 | 0.33 | 0.36 | | -- | 0.1 | 0.2 |
| <i>Rheopelopia</i> | 09021011017 | | 0.36 | | PR | | 0.2 |
| <i>Rheopelopia acra group</i> | 09021011017036 | 0.33 | | | -- | 0.1 | |
| <i>Cricotopus</i> | 09021011037 | 1.00 | 5.69 | 7 | SH | 0.4 | 2.4 |
| <i>Cricotopus bicinctus</i> | 09021011037057 | 2.67 | | | -- | 1.1 | |
| <i>Cricotopus vierriensis</i> | 09021011037071 | 1.67 | | | -- | 0.7 | |
| <i>Parakiefferiella</i> | 09021011052 | 0.33 | 0.36 | | CG | 0.1 | 0.2 |
| <i>Parametriocnemus</i> | 09021011053 | | | 5 | CG | | |
| <i>Thienemanniella</i> | 09021011062 | 0.67 | 0.71 | 6 | CG | 0.3 | 0.3 |
| <i>Tvetenia</i> | 09021011065 | | 1.07 | 5 | CG | | 0.5 |
| <i>Tvetenia paucunca</i> | 09021011065114 | 1.00 | | | -- | 0.4 | |
| <i>Paratanytarsus</i> | 09021011071 | | 1.42 | 6 | -- | | 0.6 |
| <i>Paratanytarsus dissimilis</i> | 09021011071125 | 1.33 | | | -- | 0.6 | |
| <i>Rheotanytarsus</i> | 09021011072 | 8.33 | 8.89 | 6 | CF | 3.6 | 3.8 |
| <i>Tanytarsus</i> | 09021011076 | 4.67 | 4.98 | 6 | CF | 2.0 | 2.1 |
| <i>Microtendipes</i> | 09021011094 | | 38.76 | 6 | CF | | 16.6 |
| <i>Microtendipes pedellus group</i> | 09021011094166 | 3.33 | | | -- | 1.4 | |
| <i>Microtendipes rydalensis group</i> | 09021011094168 | 33.00 | | | -- | 14.1 | |
| <i>Nilothauma</i> | 09021011095 | 0.33 | 0.36 | 2 | -- | 0.1 | 0.2 |
| <i>Phaenopsectra</i> | 09021011101 | | 0.71 | 7 | SC | | 0.3 |
| <i>Phaenopsectra obediens</i> | 09021011101182 | 0.67 | | | SC | 0.3 | |
| <i>Polypedilum</i> | 09021011102 | | 3.91 | 6 | SH | | 1.7 |
| <i>Polypedilum aviceps</i> | 09021011102181 | 3.67 | | | -- | 1.6 | |



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

Station Number: S-944

Waterbody: Stone Brook - Station 944

Town: Augusta

Log Number: 2094

Subsample Factor: X1

Replicates: 3

Calculated: 12/5/2012

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Stenochironomus</i> | 09021011105 | 0.33 | 0.36 | 5 | CG | 0.1 | 0.2 |
| <i>Hemerodromia</i> | 09021016057 | 1.33 | 1.33 | 3 | PR | 0.6 | 0.6 |
| <i>Roederiodes</i> | 09021016058 | 0.67 | 0.67 | 3 | PR | 0.3 | 0.3 |
| <i>Sperchopsis</i> | 09021105050 | 0.33 | 0.33 | | -- | 0.1 | 0.1 |
| <i>Dubiraphia</i> | 09021113064 | | 30.00 | 6 | -- | | 12.8 |
| <i>Dubiraphia minima</i> | 09021113064036 | 30.00 | | | -- | 12.8 | |
| <i>Macronychus</i> | 09021113065 | | 19.33 | 4 | -- | | 8.3 |
| <i>Macronychus glabratus</i> | 09021113065040 | 19.33 | | | -- | 8.3 | |
| <i>Promoresia</i> | 09021113069 | | 0.33 | | -- | | 0.1 |
| <i>Promoresia tardella</i> | 09021113069052 | 0.33 | | | -- | 0.1 | |
| <i>Stenelmis</i> | 09021113070 | | 2.33 | 5 | SC | | 1.0 |
| <i>Stenelmis crenata</i> | 09021113070055 | 2.33 | | | -- | 1.0 | |
| Curculionidae | 09021115 | 0.33 | 0.33 | | -- | 0.1 | 0.1 |
| <i>Amnicola</i> | 10010104013 | | 14.67 | | SC | | 6.3 |
| <i>Amnicola limosa</i> | 10010104013018 | 14.67 | | | -- | 6.3 | |
| Basommatophora | 100102 | 0.33 | 0.33 | | -- | 0.1 | 0.1 |
| <i>Physa</i> | 10010202026 | 0.67 | 0.67 | | SC | 0.3 | 0.3 |
| <i>Gyraulus</i> | 10010203029 | | 0.67 | | SC | | 0.3 |
| <i>Gyraulus parvus</i> | 10010203029057 | 0.67 | | | -- | 0.3 | |