

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

Station Information

| | |
|--|---------------------------|
| Station Number: S312 | DEP Drainage: Penobscot |
| Waterbody: Birch Stream (Bangor) | HUC Code: 01020005 |
| Town: BANGOR | HUC Name: Lower Penobscot |
| Directions: dwnstrm of Ohio Street crossing | Latitude: Deg Min Sec |
| | Longitude: Deg Min Sec |
| | Stream Order: 1 |

Sample Information

| | | |
|-------------------------|-----------------------------|---------------------------|
| Log Number: 1401 | Type of Sample: Riffle Bags | Date Deployed: 28-JUL-04 |
| Subsample Factor: X1 | Replicates: 3 | Date Retrieved: 24-AUG-04 |

Classification Attainment

| | | |
|------------------------------|--------------------------------|-------|
| Statutory Class: B | Final Determination: NA | |
| Model Result with P > .6: NA | Reason for Determination: | Model |
| Date Last Calculated: | | |

Model Probabilities

| <u>First Stage Model</u> | | <u>C or Better Model</u> | |
|---------------------------|------|--------------------------------|------|
| Class A | 0.00 | Class A, B, or C | 0.02 |
| Class B | 0.00 | Non-Attainment | 0.98 |
| | | <u>A Model</u> | |
| <u>B or Better Model</u> | | Class A | 0.00 |
| Class A or B | 0.00 | Class B or C or Non-Attainment | 1.00 |
| Class C or Non-Attainment | 1.00 | | |

Model Variables

| | | | |
|--|--------|--|-------|
| 01 Total Abundance of Individuals | 190.67 | 18 Relative Abundance - Ephemeroptera | 0.02 |
| 02 Generic Richness | 31.00 | 19 EPT Generic Richness | 3.00 |
| 03 Plecoptera Abundance | 0.00 | 21 Sum of Abundances: <i>Dicrotendipes</i> , | 5.90 |
| 04 Ephemeroptera Abundance | 4.00 | <i>Micropsectra, Parachironomus, Helobdella</i> | |
| 05 Shannon - Wiener Diversity | 3.45 | 23 Relative Generic Richness- Plecoptera | 0.00 |
| 06 Hilsenhoff Biotic Index | 5.77 | 25 Sum of Abundances: <i>Cheumatopsyche</i> , | 40.63 |
| 07 Relative Abundance - Chironomidae | 0.35 | <i>Cricotopus, Tanytarsus, Ablabesmyia</i> | |
| 08 Relative Generic Richness - Diptera | 0.55 | 26 Sum of Abundances: <i>Acroneuria, Stenonema</i> | 0.00 |
| 09 <i>Hydropsyche</i> Abundance | 5.00 | 28 EP Generic Richness/14 | 0.07 |
| 11 <i>Cheumatopsyche</i> Abundance | 0.00 | 30 Presence of Class A Indicator Taxa/7 | 0.00 |
| 12 EPT Generic Richness/ Diptera Generic Richness | 0.18 | | |

Five Most Dominant Taxa

| | | Taxa Rank | Taxa Name | Percent |
|--|--|-----------|---------------|---------|
| | | 1 | Gyraulus | 22.38 |
| | | 2 | Cricotopus | 19.31 |
| | | 3 | Nephelopsis | 16.78 |
| | | 4 | Simulium | 9.27 |
| | | 5 | Conchapelopia | 8.38 |

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| Log Number: 1401 | Waterbody: Birch Stream (Bangor) | Date Retrieved: 24-AUG-04 |

Sample Collection and Processing Information

Sampling Organization:
Taxonomist: Michael Winnell

Waterbody Information

| | | |
|----------------------------|----------------------------------|------------------------|
| Water Temperature: 18.3 °C | Specific Conductance 666.0 uS/cm | Channel Width: 6.5 m |
| Velocity: 71 cm/s | Dissolved Oxygen: 8.7 ppm | Channel Depth: 25.0 cm |

Summary of Habitat Characteristics

| <u>Landuse Name</u> | <u>Canopy Cover</u> | <u>Stressor</u> | <u>Location</u> |
|---------------------|---------------------|-----------------|-----------------|
| Swamp Hardwood | Partly Open | | Below Urban NPS |
| Upland Conifer | | | |
| Upland Hardwood | | | |
| Urban | | | |

Substrate

| | | |
|---------|--------|--------|
| Boulder | Rubble | Gravel |
| 80% | 15% | 5% |

Comments about the Station or Sample

8/24/04 Data:
Flow:74.2 cm/s; Depth: 20cm; Temp: 21.2; SPC: 542uS/cm; DO: 12.1mg/L; pH:

Comments about the Final Determination

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Town: BANGOR

Log Number: 1401 Subsample: X1

Replicates: 3

Calculated:

BioME Aquatic Life Taxonomic Inventory Report

| Taxa | Code | Count (Average of Baskets) | | Biotic Index Value | Functional Feeding Group | Relative Abundance | |
|--|----------------|----------------------------------|----------|--------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Enchytraeidae</i> | 08020201 | 0.33 | 0.33 | | -- | 0.2 | 0.2 |
| <i>Nais</i> | 08020202009 | 0.00 | 1.00 | | CG | 0.0 | 0.5 |
| <i>Nais communis</i> | 08020202009005 | 0.33 | 0.00 | | -- | 0.2 | 0.0 |
| <i>Nais variabilis</i> | 08020202009009 | 0.67 | 0.00 | | -- | 0.4 | 0.0 |
| <i>Tubificidae</i> | 08020203 | 2.00 | 2.00 | | -- | 1.0 | 1.0 |
| <i>Lumbricidae</i> | 08020205 | 1.67 | 1.67 | | -- | 0.9 | 0.9 |
| <i>Nepheleopsis</i> | 08030301004 | 0.00 | 32.00 | | -- | 0.0 | 16.8 |
| <i>Nepheleopsis obscura</i> | 08030301004001 | 32.00 | 0.00 | | -- | 16.8 | 0.0 |
| <i>Baetis</i> | 09020401001 | 0.00 | 4.00 | 4 | CG | 0.0 | 2.1 |
| <i>Baetis flavistriga</i> | 09020401001004 | 4.00 | 0.00 | | -- | 2.1 | 0.0 |
| <i>Hydropsyche</i> | 09020604016 | 0.67 | 5.00 | 4 | CF | 0.4 | 2.6 |
| <i>Hydropsyche morosa</i> | 09020604016030 | 1.00 | 0.00 | | -- | 0.5 | 0.0 |
| <i>Hydropsyche depravata-complex</i> | 09020604016041 | 3.33 | 0.00 | | CF | 1.7 | 0.0 |
| <i>Hydroptila</i> | 09020607026 | 6.67 | 6.67 | 6 | P | 3.5 | 3.5 |
| <i>Lepidoptera</i> | 090209 | 0.33 | 0.33 | | -- | 0.2 | 0.2 |
| <i>Tipulidae</i> | 09021001 | 0.33 | 0.33 | | -- | 0.2 | 0.2 |
| <i>Limonia</i> | 09021001010 | 2.00 | 2.00 | 6 | SH | 1.0 | 1.0 |
| <i>Bezzia/Palpomyia</i> | 09021010043 | 0.33 | 0.33 | 6 | PR | 0.2 | 0.2 |
| <i>Chironomidae</i> | 09021011 | 2.67 | 0.00 | | -- | 1.4 | 0.0 |
| <i>Ablabesmyia</i> | 09021011001 | 0.00 | 0.35 | 8 | PR | 0.0 | 0.2 |
| <i>Ablabesmyia mallochi</i> | 09021011001004 | 0.33 | 0.00 | | -- | 0.2 | 0.0 |
| <i>Conchapelopia</i> | 09021011004 | 15.33 | 15.98 | 6 | PR | 8.0 | 8.4 |
| <i>Pagastia</i> | 09021011025 | 0.00 | 0.35 | 1 | -- | 0.0 | 0.2 |
| <i>Pagastia orthogonia</i> | 09021011025001 | 0.33 | 0.00 | | -- | 0.2 | 0.0 |
| <i>Cardiocladius</i> | 09021011034 | 0.00 | 0.35 | 5 | PR | 0.0 | 0.2 |
| <i>Cardiocladius obscurus</i> | 09021011034053 | 0.33 | 0.00 | | -- | 0.2 | 0.0 |
| <i>Cricotopus</i> | 09021011037 | 12.33 | 36.81 | 7 | SH | 6.5 | 19.3 |
| <i>Cricotopus bicinctus</i> | 09021011037057 | 22.33 | 0.00 | | -- | 11.7 | 0.0 |
| <i>Cricotopus sylvestris</i> | 09021011037067 | 0.67 | 0.00 | | -- | 0.4 | 0.0 |
| <i>Eukiefferiella</i> | 09021011041 | 0.00 | 0.35 | 8 | CG | 0.0 | 0.2 |
| <i>Eukiefferiella claripennis-grp.</i> | 09021011041075 | 0.33 | 0.00 | | -- | 0.2 | 0.0 |
| <i>Nanocladius</i> | 09021011049 | 0.00 | 0.35 | 3 | CG | 0.0 | 0.2 |
| <i>Nanocladius spiniplenus</i> | 09021011049090 | 0.33 | 0.00 | | -- | 0.2 | 0.0 |
| <i>Parametriocnemus</i> | 09021011053 | 1.67 | 1.74 | 5 | CG | 0.9 | 0.9 |
| <i>Micropsectra</i> | 09021011070 | 5.67 | 5.90 | 7 | CG | 3.0 | 3.1 |
| <i>Paratanytarsus</i> | 09021011071 | 0.67 | 0.69 | 6 | -- | 0.4 | 0.4 |

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|---------------------------|----------------|----------------------------------|-------------|--------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| | | <i>Tanytarsus</i> | 09021011076 | | | 3.33 | 3.47 |
| <i>Simulium</i> | 09021012047 | 0.00 | 17.67 | 4 | CF | 0.0 | 9.3 |
| <i>Simulium vittatum</i> | 09021012047064 | 17.67 | 0.00 | | -- | 9.3 | 0.0 |
| <i>Empididae</i> | 09021016 | 0.33 | 0.33 | 6 | -- | 0.2 | 0.2 |
| <i>Hemerodromia</i> | 09021016057 | 3.33 | 3.33 | 3 | PR | 1.7 | 1.7 |
| <i>Hydrozetes</i> | 09030115001 | 0.33 | 0.33 | | -- | 0.2 | 0.2 |
| <i>Gastropoda</i> | 1001 | 1.67 | 1.67 | | -- | 0.9 | 0.9 |
| <i>Fossaria</i> | 10010201021 | 0.67 | 0.67 | | -- | 0.4 | 0.4 |
| <i>Physa</i> | 10010202026 | 1.33 | 1.33 | | SC | 0.7 | 0.7 |
| <i>Gyraulus</i> | 10010203029 | 0.00 | 42.67 | | SC | 0.0 | 22.4 |
| <i>Gyraulus deflectus</i> | 10010203029056 | 42.67 | 0.00 | | -- | 22.4 | 0.0 |
| <i>Pisidium</i> | 10020201002 | 0.67 | 0.67 | | CF | 0.4 | 0.4 |