



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

**Station Information**

|                        |   |               |                |
|------------------------|---|---------------|----------------|
| <b>Station Number:</b> | <b>S-1111</b>   | River Basin:  | Kennebec       |
| Waterbody:             | Moose Brook - Station 1111  | HUC8 Name:    | Upper Kennebec |
| Town:                  | Big Moose Twp   | Latitude:     | 45 29 6.4 N    |
| Directions:            | IN GREENVILLE, TURN LEFT ON TO ROUTE 6 AND FOLLOW IT 5 MILES TO NORTH ROAD. IN 0.4 MILES, TURN LEFT ON TO A WOODS ROAD. | Longitude:    | 69 40 18.66 W  |
|                        |   | Stream Order: | 3              |

**Sample Information**

|                    |             |                 |          |                 |           |
|--------------------|-------------|-----------------|----------|-----------------|-----------|
| <b>Log Number:</b> | <b>2587</b> | Type of Sample: | ROCK BAG | Date Deployed:  | 7/26/2017 |
| Subsample Factor:  | X1          | Replicates:     | 3        | Date Retrieved: | 8/23/2017 |

**Classification Attainment**

|                                  |          |                                  |              |       |          |
|----------------------------------|----------|----------------------------------|--------------|-------|----------|
| <b>Statutory Class:</b>          | <b>A</b> | <b>Final Determination:</b>      | <b>A</b>     | Date: | 4/5/2018 |
| Model Result with $P \geq 0.6$ : | A        | <b>Reason for Determination:</b> | <b>Model</b> |       |          |
| Date Last Calculated:            | 4/2/2018 | Comments:                        |              |       |          |

**Model Probabilities**

| First Stage Model         |      |         |      | C or Better Model              |      |
|---------------------------|------|---------|------|--------------------------------|------|
| Class A                   | 0.91 | Class C | 0.00 | Class A, B, or C               | 1.00 |
| Class B                   | 0.08 | NA      | 0.00 | Non-Attainment                 | 0.00 |
| B or Better Model         |      |         |      | A Model                        |      |
| Class A or B              |      |         | 1.00 | Class A                        | 1.00 |
| Class C or Non-Attainment |      |         | 0.00 | Class B or C or Non-Attainment | 0.00 |

**Model Variables**

|  |       |   |       |
|--|-------|---|-------|
| 01 Total Mean Abundance                                    | 89.00 | 18 Relative Abundance Ephemeroptera   | 0.39  |
| 02 Generic Richness  | 42.00 | 19 EPT Generic Richness   | 25.00 |
| 03 Plecoptera Mean Abundance                               | 14.33 | 21 Sum of Abundances: <i>Dicrotendipes</i> ,<br><i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 9.80  |
| 04 Ephemeroptera Mean Abundance                            | 34.33 | 23 Relative Generic Richness- Plecoptera  | 0.14  |
| 05 Shannon-Wiener Generic Diversity                        | 4.68  | 25 Sum of Abundances: <i>Cheumatopsyche</i> ,<br><i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>     | 0.68  |
| 06 Hilsenhoff Biotic Index                                 | 3.80  | 26 Sum of Abundances: <i>Acroneuria</i> ,<br><i>Maccaffertium</i> , <i>Stenonema</i>                            | 4.96  |
| 07 Relative Abundance - Chironomidae                       | 0.27  | 28 EP Generic Richness/14   | 1.14  |
| 08 Relative Generic Richness Diptera                       | 0.26  | 30 Presence of Class A Indicator Taxa/7   | 0.29  |
| 09 <i>Hydropsyche</i> Abundance                            | 3.33  |   |       |
| 11 <i>Cheumatopsyche</i> Abundance                         | 0.00  |   |       |
| 12 EPT Generic Richness/ Diptera<br>Generic Richness       | 2.27  |   |       |
| 13 Relative Abundance - Oligochaeta                        | 0.00  |   |       |
| 15 Perlidae Mean Abundance (Family<br>Functional Group)    | 5.00  |   |       |
| 16 Tanypodinae Mean Abundance<br>(Family Functional Group) | 1.69  |   |       |
| 17 Chironomini Abundance (Family<br>Functional Group)      | 3.38  |   |       |

| Five Most Dominant Taxa |                         |         |
|-------------------------|-------------------------|---------|
| Rank                    | Taxon Name              | Percent |
| 1                       | <i>Micropsectra</i>     | 11.01   |
| 2                       | <i>Eurylophella</i>     | 10.86   |
| 3                       | Perlodidae              | 7.49    |
| 4                       | <i>Paraleptophlebia</i> | 6.33    |
| 5                       | <i>Maccaffertium</i>    | 5.57    |



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|                               |                                       |                           |
|-------------------------------|---------------------------------------|---------------------------|
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| <b>Log Number: 2587</b>       | Waterbody: Moose Brook - Station 1111 | Date Retrieved: 8/23/2017 |

**Sample Collection and Processing Information**

Sampling Organization: NIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

|                              |            |
|------------------------------|------------|
| Temperature:                 | 15.8 deg C |
| Dissolved Oxygen:            | 10.89 mg/l |
| Dissolved Oxygen Saturation: | 112 %      |
| Specific Conductance:        | 35.7 uS/cm |
| Velocity:                    | 21.3 cm/s  |
| pH:                          | 7.75       |
| Wetted Width:                | 4.2 m      |
| Bankfull Width:              | 7.2 m      |
| Depth:                       | 43 cm      |

**Waterbody Information - Retrieval**

|                              |            |
|------------------------------|------------|
| Temperature:                 | 18.7 deg C |
| Dissolved Oxygen:            | 10.19 mg/l |
| Dissolved Oxygen Saturation: | 113.2 %    |
| Specific Conductance:        | 39.1 uS/cm |
| Velocity:                    | 12.2 cm/s  |
| pH:                          | 6.79       |
| Wetted Width:                | 3.5 m      |
| Bankfull Width:              | 7.2 m      |
| Depth:                       | 50 cm      |

**Water Chemistry**

**Summary of Habitat Characteristics**

|                           |                     |                    |
|---------------------------|---------------------|--------------------|
| <u>Landuse Name</u>       | <u>Canopy Cover</u> | <u>Terrain</u>     |
| Upland Conifer            | Dense               | Hilly              |
| Upland Hardwood           |                     |                    |
| <u>Potential Stressor</u> | <u>Location</u>     | <u>Substrate</u>   |
| Logging                   |                     | Boulder 40 %       |
|                           |                     | Gravel 5 %         |
|                           |                     | Rubble/Cobble 50 % |
|                           |                     | Sand 5 %           |

**Landcover Summary - 2004 Data**

**Sample Comments**

UNDERCUT BANKS UPSTREAM OF SAMPLING SITE.



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

|                               |                                       |                      |
|-------------------------------|---------------------------------------|----------------------|
| <b>Station Number: S-1111</b> | Waterbody: Moose Brook - Station 1111 | Town: Big Moose Twp  |
| <b>Log Number: 2587</b>       | Subsample Factor: X1                  | Replicates: 3        |
|                               |                                       | Calculated: 4/2/2018 |

| Taxon                         | Maine<br>Taxonomic<br>Code | Count<br>(Mean of Samplers) |          | Hilsenhoff<br>Biotic<br>Index | Functional<br>Feeding<br>Group | Relative<br>Abundance % |          |
|-------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-------------------------|----------|
|                               |                            | Actual                      | Adjusted |                               |                                | Actual                  | Adjusted |
| <i>Leuctra</i>                | 09020204020                | 0.67                        | 1.67     | 0                             | SH                             | 0.7                     | 1.9      |
| <i>Leuctra ferruginea</i>     | 09020204020050             | 1.00                        |          |                               | --                             | 1.1                     |          |
| <i>Pteronarcys</i>            | 09020205023                | 0.33                        | 0.33     | 0                             | SH                             | 0.4                     | 0.4      |
| Perlodidae                    | 09020207                   | 6.67                        | 6.67     |                               | --                             | 7.5                     | 7.5      |
| <i>Sweltsa</i>                | 09020208040                | 0.67                        | 0.67     |                               | PR                             | 0.7                     | 0.7      |
| Perlidae                      | 09020209                   | 0.67                        | 0.67     |                               | --                             | 0.7                     | 0.7      |
| <i>Agnatina</i>               | 09020209050                | 2.33                        | 4.33     | 2                             | PR                             | 2.6                     | 4.9      |
| <i>Agnatina capitata</i>      | 09020209050152             | 2.00                        |          | 2                             | PR                             | 2.2                     |          |
| <i>Boyeria</i>                | 09020301004                | 0.67                        | 0.67     | 2                             | PR                             | 0.7                     | 0.7      |
| Baetidae                      | 09020401                   | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Baetis</i>                 | 09020401001                | 0.33                        | 1.39     | 4                             | CG                             | 0.4                     | 1.6      |
| <i>Baetis flavistriga</i>     | 09020401001004             | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Baetis tricaudatus</i>     | 09020401001012             | 0.67                        |          |                               | --                             | 0.7                     |          |
| <i>Acerpenna</i>              | 09020401007                | 0.33                        | 3.13     | 5                             | CG                             | 0.4                     | 3.5      |
| <i>Acerpenna macdunnoughi</i> | 09020401007001             | 2.67                        |          |                               | --                             | 3.0                     |          |
| <i>Diphetor</i>               | 09020401013                |                             | 3.48     |                               | --                             |                         | 3.9      |
| <i>Diphetor hageni</i>        | 09020401013001             | 3.33                        |          |                               | --                             | 3.7                     |          |
| Heptageniidae                 | 09020402                   | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Rhithrogena</i>            | 09020402013                | 0.67                        | 0.71     | 0                             | SC                             | 0.7                     | 0.8      |
| <i>Maccaffertium</i>          | 09020402015                | 3.00                        | 4.96     | 4                             | SC                             | 3.4                     | 5.6      |
| <i>Maccaffertium luteum</i>   | 09020402015049             | 1.67                        |          |                               | --                             | 1.9                     |          |
| Leptophlebiidae               | 09020406                   | 3.33                        |          |                               | --                             | 3.7                     |          |
| <i>Habrophlebia</i>           | 09020406023                |                             | 0.70     |                               | --                             |                         | 0.8      |
| <i>Habrophlebia vibrans</i>   | 09020406023072             | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Paraleptophlebia</i>       | 09020406026                | 2.67                        | 5.63     | 1                             | CG                             | 3.0                     | 6.3      |
| <i>Ephemerella</i>            | 09020410035                | 1.00                        | 3.00     | 1                             | CG                             | 1.1                     | 3.4      |
| <i>Ephemerella invaria</i>    | 09020410035107             | 2.00                        |          |                               | --                             | 2.2                     |          |
| <i>Eurylophella</i>           | 09020410036                | 9.67                        | 9.67     | 3                             | CG                             | 10.9                    | 10.9     |
| <i>Caenis</i>                 | 09020412040                |                             | 1.67     | 7                             | CG                             |                         | 1.9      |
| <i>Caenis macafferti</i>      | 09020412040132             | 1.67                        |          |                               | --                             | 1.9                     |          |
| <i>Chimarra</i>               | 09020601003                |                             | 0.33     | 2                             | CF                             |                         | 0.4      |
| <i>Chimarra obscura</i>       | 09020601003003             | 0.33                        |          |                               | --                             | 0.4                     |          |
| Hydropsychidae                | 09020604                   | 0.33                        | 0.33     |                               | --                             | 0.4                     | 0.4      |
| <i>Hydropsyche</i>            | 09020604016                | 2.67                        | 3.33     | 4                             | CF                             | 3.0                     | 3.7      |
| <i>Hydropsyche ventura</i>    | 09020604016033             | 0.67                        |          |                               | --                             | 0.7                     |          |
| <i>Rhyacophila</i>            | 09020605019                |                             | 0.33     | 2                             | PR                             |                         | 0.4      |
| <i>Rhyacophila fuscula</i>    | 09020605019060             | 0.33                        |          |                               | PR                             | 0.4                     |          |



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|                               |                                       | Calculated: 4/2/2018 |

| Taxon                                 | Maine<br>Taxonomic<br>Code | Count<br>(Mean of Samplers) |          | Hilsenhoff<br>Biotic<br>Index | Functional<br>Feeding<br>Group | Relative<br>Abundance % |          |
|---------------------------------------|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-------------------------|----------|
|                                       |                            | Actual                      | Adjusted |                               |                                | Actual                  | Adjusted |
| <i>Oligostomis</i>                    | 09020608039                | 0.67                        | 0.67     | 2                             | PR                             | 0.7                     | 0.7      |
| <i>Pycnopsyche</i>                    | 09020610049                | 0.33                        | 0.33     | 4                             | SH                             | 0.4                     | 0.4      |
| <i>Lepidostoma</i>                    | 09020611064                | 2.67                        | 2.67     | 1                             | SH                             | 3.0                     | 3.0      |
| <i>Psilotreta</i>                     | 09020614068                | 0.33                        | 0.33     | 0                             | SC                             | 0.4                     | 0.4      |
| <i>Oecetis</i>                        | 09020618078                |                             | 0.33     | 8                             | PR                             |                         | 0.4      |
| <i>Oecetis persimilis</i>             | 09020618078157             | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Sialis</i>                         | 09020702004                | 0.33                        | 0.33     | 4                             | PR                             | 0.4                     | 0.4      |
| <i>Hexatoma</i>                       | 09021001008                | 1.33                        | 1.33     | 2                             | PR                             | 1.5                     | 1.5      |
| Chironomidae                          | 09021011                   | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Trissopelopia</i>                  | 09021011021                |                             | 1.69     |                               | PR                             |                         | 1.9      |
| <i>Trissopelopia ogemawi</i>          | 09021011021042             | 1.67                        |          |                               | --                             | 1.9                     |          |
| <i>Cricotopus</i>                     | 09021011037                |                             | 0.68     | 7                             | SH                             |                         | 0.8      |
| <i>Cricotopus bicinctus</i>           | 09021011037057             | 0.67                        |          |                               | --                             | 0.7                     |          |
| <i>Parametriocnemus</i>               | 09021011053                | 4.00                        | 4.06     | 5                             | CG                             | 4.5                     | 4.6      |
| <i>Synorthocladius</i>                | 09021011061                | 0.33                        | 0.34     | 2                             | CG                             | 0.4                     | 0.4      |
| <i>Tvetenia</i>                       | 09021011065                |                             | 2.03     | 5                             | CG                             |                         | 2.3      |
| <i>Tvetenia paucunca</i>              | 09021011065114             | 2.00                        |          |                               | --                             | 2.2                     |          |
| <i>Micropsectra</i>                   | 09021011070                | 9.67                        | 9.80     | 7                             | CG                             | 10.9                    | 11.0     |
| <i>Rheotanytarsus</i>                 | 09021011072                |                             | 1.69     | 6                             | CF                             |                         | 1.9      |
| <i>Rheotanytarsus exiguus group</i>   | 09021011072127             | 1.00                        |          |                               | CF                             | 1.1                     |          |
| <i>Rheotanytarsus pellucidus</i>      | 09021011072128             | 0.67                        |          |                               | CF                             | 0.7                     |          |
| <i>Stempellinella</i>                 | 09021011074                |                             | 0.34     | 2                             | --                             |                         | 0.4      |
| <i>Stempellinella fimbriata</i>       | 09021011074002             | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Microtendipes</i>                  | 09021011094                |                             | 0.34     | 6                             | CF                             |                         | 0.4      |
| <i>Microtendipes rydalensis group</i> | 09021011094168             | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Polypedilum</i>                    | 09021011102                |                             | 3.04     | 6                             | SH                             |                         | 3.4      |
| <i>Polypedilum aviceps</i>            | 09021011102181             | 2.67                        |          |                               | --                             | 3.0                     |          |
| <i>Polypedilum albicorne</i>          | 09021011102195             | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Simulium tuberosum</i>             | 09021012047067             |                             |          |                               | --                             |                         |          |
| <i>Macronychus</i>                    | 09021113065                |                             | 0.67     | 4                             | --                             |                         | 0.7      |
| <i>Macronychus glabratus</i>          | 09021113065040             | 0.67                        |          |                               | --                             | 0.7                     |          |
| <i>Oulimnius</i>                      | 09021113068                |                             | 0.33     |                               | --                             |                         | 0.4      |
| <i>Oulimnius latiusculus</i>          | 09021113068049             | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Promoresia</i>                     | 09021113069                |                             | 3.00     |                               | --                             |                         | 3.4      |
| <i>Promoresia elegans</i>             | 09021113069051             | 0.33                        |          |                               | --                             | 0.4                     |          |
| <i>Promoresia tardella</i>            | 09021113069052             | 2.67                        |          |                               | --                             | 3.0                     |          |
| <i>Stenelmis</i>                      | 09021113070                | 1.33                        | 1.33     | 5                             | SC                             | 1.5                     | 1.5      |