



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

Station Information

**Station Number:** S-287  
**Waterbody:** Millinocket Stream - Station 287  
**Town:** Millinocket  
**Directions:** ABOVE TOWN  
**DEP Drainage:** Penobscot  
**HUC8:** 01020001  
**HUC8 Name:** West Branch Penobscot  
**Latitude:** 45 39 54.26 N  
**Longitude:** 68 42 29.19 W  
**Stream Order:** 5

Sample Information

**Log Number:** 2063  
**Subsample Factor:** X4  
**Type of Sample:** ROCK BAG  
**Replicates:** 3  
**Date Deployed:** 7/21/2011  
**Date Retrieved:** 9/21/2011

Classification Attainment

**Statutory Class:** B  
**Model Result with P>.6:** A  
**Date Last Calculated:** 6/29/2012  
**Final Determination:** A  
**Reason for Determination:** Model  
**Date:** 9/5/2012  
**Comments:**

Model Probabilities

| <u>First Stage Model</u>  |      |         |      | <u>C or Better Model</u>       |      |
|---------------------------|------|---------|------|--------------------------------|------|
| Class A                   | 0.49 | Class C | 0.01 | Class A, B, or C               | 1.00 |
| Class B                   | 0.49 | NA      | 0.00 | Non-Attainment                 | 0.00 |
| <u>B or Better Model</u>  |      |         |      | <u>A Model</u>                 |      |
| Class A or B              |      | 1.00    |      | Class A                        | 0.97 |
| Class C or Non-Attainment |      | 0.00    |      | Class B or C or Non-Attainment | 0.03 |

Model Variables

|  |        |   |       |
|--|--------|---|-------|
| 01 Total Mean Abundance                                    | 908.00 | 18 Relative Abundance Ephemeroptera   | 0.18  |
| 02 Generic Richness  | 29.00  | 19 EPT Generic Richness   | 19.00 |
| 03 Plecoptera Mean Abundance                               | 17.33  | 21 Sum of Abundances: <i>Dicrotendipes</i> ,<br><i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 0.00  |
| 04 Ephemeroptera Mean Abundance                            | 164.00 | 23 Relative Generic Richness- Plecoptera  | 0.17  |
| 05 Shannon-Wiener Generic Diversity                        | 2.67   | 25 Sum of Abundances: <i>Cheumatopsyche</i> ,<br><i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>     | 45.33 |
| 06 Hilsenhoff Biotic Index                                 | 3.13   | 26 Sum of Abundances: <i>Acroneuria</i> ,<br><i>Maccaffertium</i> , <i>Stenonema</i>                            | 6.67  |
| 07 Relative Abundance - Chironomidae                       | 0.04   | 28 EP Generic Richness/14   | 0.93  |
| 08 Relative Generic Richness Diptera                       | 0.21   | 30 Presence of Class A Indicator Taxa/7   | 0.57  |
| 09 <i>Hydropsyche</i> Abundance                            | 440.00 |   |       |
| 11 <i>Cheumatopsyche</i> Abundance                         | 45.33  |   |       |
| 12 EPT Generic Richness/ Diptera<br>Generic Richness       | 3.17   |   |       |
| 13 Relative Abundance - Oligochaeta                        | 0.00   |   |       |
| 15 Perlidae Mean Abundance (Family<br>Functional Group)    | 13.33  |   |       |
| 16 Tanypodinae Mean Abundance<br>(Family Functional Group) | 0.00   |   |       |
| 17 Chironomini Abundance (Family<br>Functional Group)      | 2.67   |   |       |

| Five Most Dominant Taxa |                       |         |
|-------------------------|-----------------------|---------|
| Rank                    | Taxon Name            | Percent |
| 1                       | <i>Hydropsyche</i>    | 48.46   |
| 2                       | <i>Chimarra</i>       | 18.65   |
| 3                       | <i>Epeorus</i>        | 6.86    |
| 4                       | <i>Ephemerella</i>    | 6.61    |
| 5                       | <i>Cheumatopsyche</i> | 4.99    |



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|                              |   |                           |
|------------------------------|---|---------------------------|
| <b>Station Number: S-287</b> | Town: Millinocket                           | Date Deployed: 7/21/2011  |
| <b>Log Number: 2063</b>      | Waterbody: Millinocket Stream - Station 287 | Date Retrieved: 9/21/2011 |

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

|                       |            |
|-----------------------|------------|
| Temperature:          | 24.6 deg C |
| Dissolved Oxygen:     | 8.2 mg/l   |
| Specific Conductance: | 17 uS/cm   |
| Velocity:             | 94 cm/s    |
| pH:                   | 6.6        |
| Wetted Width:         | 20 m       |
| Bankfull Width:       | 22 m       |
| Depth:                | 60 cm      |

**Waterbody Information - Retrieval**

|                       |          |
|-----------------------|----------|
| Temperature:          | 18 deg C |
| Dissolved Oxygen:     | 8.8 mg/l |
| Specific Conductance: | 13 uS/cm |
| Velocity:             | 142 cm/s |
| pH:                   | 6.85     |
| Wetted Width:         | 22 m     |
| Bankfull Width:       | 22 m     |
| Depth:                | 80 cm    |

**Water Chemistry**

**Summary of Habitat Characteristics**

Landuse Name

Swamp Hardwood

Upland Hardwood

Canopy Cover

Open

Terrain

Rolling

Potential Stressor

Nps Pollution

Location

Above Town

Substrate

|               |      |
|---------------|------|
| Boulder       | 5 %  |
| Gravel        | 20 % |
| Rubble/Cobble | 70 % |
| Sand          | 5 %  |

**Landcover Summary - 2004 Data**

**Sample Comments**

9/21/11: HIGH WATER.

SITE IS ADJACENT TO AN APARTMENT BUILDING. 7/21/11: FISH AND MACROPHYTES OBSERVED, DARK WATER.



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**Station Number: S-287**

Waterbody: Millinocket Stream - Station 287

Town: Millinocket

**Log Number: 2063**

Subsample Factor: X4

Replicates: 3

Calculated: 6/29/2012

| 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 |
| Perlodidae                                 | 09020207                   | 2.67                        | 2.67     |                               | --                             | 0.3                   | 0.3      |
| <i>Isoperla</i>                            | 09020207026                | 1.33                        | 1.33     | 2                             | PR                             | 0.1                   | 0.1      |
| <i>Acroneuria</i>                          | 09020209042                | 4.00                        | 6.67     | 0                             | PR                             | 0.4                   | 0.7      |
| <i>Acroneuria abnormis</i>                 | 09020209042121             | 2.67                        |          | 0                             | PR                             | 0.3                   |          |
| <i>Neoperla</i>                            | 09020209048                | 1.33                        | 1.33     | 1                             | PR                             | 0.1                   | 0.1      |
| <i>Paragnetina</i>                         | 09020209049                | 4.00                        | 5.33     | 1                             | PR                             | 0.4                   | 0.6      |
| <i>Paragnetina immarginata</i>             | 09020209049149             | 1.33                        |          |                               | --                             | 0.1                   |          |
| <i>Ophiogomphus</i>                        | 09020302015                |                             | 1.33     | 1                             | PR                             |                       | 0.1      |
| <i>Ophiogomphus mainensis</i>              | 09020302015034             | 1.33                        |          |                               | --                             | 0.1                   |          |
| Baetidae                                   | 09020401                   | 4.00                        |          |                               | --                             | 0.4                   |          |
| <i>Baetis</i>                              | 09020401001                | 6.67                        | 15.00    | 4                             | CG                             | 0.7                   | 1.7      |
| <i>Baetis brunneicolor</i>                 | 09020401001003             | 1.33                        |          |                               | --                             | 0.1                   |          |
| <i>Baetis flavistriga</i>                  | 09020401001004             | 2.67                        |          |                               | --                             | 0.3                   |          |
| <i>Baetis intercalaris</i>                 | 09020401001008             | 1.33                        |          |                               | --                             | 0.1                   |          |
| <i>Heterocloeon</i>                        | 09020401005                | 4.00                        | 5.00     | 2                             | SC                             | 0.4                   | 0.6      |
| Heptageniidae                              | 09020402                   | 5.33                        |          |                               | --                             | 0.6                   |          |
| <i>Epeorus</i>                             | 09020402009                | 56.00                       | 62.32    | 0                             | SC                             | 6.2                   | 6.9      |
| <i>Epeorus vitreus</i>                     | 09020402009033             | 1.33                        |          |                               | --                             | 0.1                   |          |
| <i>Rhithrogena</i>                         | 09020402013                | 4.00                        | 4.35     | 0                             | SC                             | 0.4                   | 0.5      |
| <i>Isonychia</i>                           | 09020404018                | 8.00                        | 8.00     | 2                             | CF                             | 0.9                   | 0.9      |
| <i>Ephemerella</i>                         | 09020410035                | 60.00                       | 60.00    | 1                             | CG                             | 6.6                   | 6.6      |
| <i>Eurylophella</i>                        | 09020410036                | 2.67                        | 2.67     | 3                             | CG                             | 0.3                   | 0.3      |
| <i>Serratella</i>                          | 09020410037                |                             | 6.67     | 2                             | CG                             |                       | 0.7      |
| <i>Serratella (Teloganopsis) deficiens</i> | 09020410037121             | 6.67                        |          |                               | --                             | 0.7                   |          |
| <i>Chimarra</i>                            | 09020601003                | 40.00                       | 169.33   | 2                             | CF                             | 4.4                   | 18.6     |
| <i>Chimarra obscura</i>                    | 09020601003003             | 9.33                        |          |                               | --                             | 1.0                   |          |
| <i>Chimarra socia</i>                      | 09020601003004             | 120.00                      |          |                               | --                             | 13.2                  |          |
| <i>Polycentropus</i>                       | 09020603010                | 1.33                        | 1.33     | 6                             | PR                             | 0.1                   | 0.1      |
| <i>Cheumatopsyche</i>                      | 09020604015                | 45.33                       | 45.33    | 5                             | CF                             | 5.0                   | 5.0      |
| <i>Hydropsyche</i>                         | 09020604016                | 306.67                      | 440.00   | 4                             | CF                             | 33.8                  | 48.5     |
| <i>Hydropsyche morosa</i>                  | 09020604016030             | 22.67                       |          |                               | --                             | 2.5                   |          |
| <i>Hydropsyche sparna</i>                  | 09020604016032             | 106.67                      |          |                               | --                             | 11.7                  |          |
| <i>Hydropsyche depravata complex</i>       | 09020604016041             | 4.00                        |          |                               | CF                             | 0.4                   |          |
| <i>Rhyacophila</i>                         | 09020605019                | 1.33                        | 1.33     | 2                             | PR                             | 0.1                   | 0.1      |
| <i>Glossosoma</i>                          | 09020606020                | 1.33                        | 1.33     | 0                             | SC                             | 0.1                   | 0.1      |
| <i>Corydalus</i>                           | 09020701002                |                             | 2.67     | 6                             | PR                             |                       | 0.3      |
| <i>Corydalus cornutus</i>                  | 09020701002002             | 2.67                        |          |                               | --                             | 0.3                   |          |
| <i>Rheocricotopus</i>                      | 09021011057                |                             | 1.33     | 6                             | CG                             |                       | 0.1      |



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| <b>Log Number: 2063</b>      | Subsample Factor: X4                        | Replicates: 3         |
|                              |   | Calculated: 6/29/2012 |

| 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>Rheocricotopus robacki</i>               | 09021011057105             | 1.33                        |          |                               | --                             | 0.1                   |          |
| <i>Tvetenia</i>                             | 09021011065                |                             | 22.67    | 5                             | CG                             |                       | 2.5      |
| <i>Tvetenia vitracies</i>                   | 09021011065113             | 21.33                       |          |                               | --                             | 2.3                   |          |
| <i>Tvetenia paucunca</i>                    | 09021011065114             | 1.33                        |          |                               | --                             | 0.1                   |          |
| <i>Rheotanytarsus</i>                       | 09021011072                | 6.67                        | 6.67     | 6                             | CF                             | 0.7                   | 0.7      |
| <i>Polypedilum</i>                          | 09021011102                |                             | 1.33     | 6                             | SH                             |                       | 0.1      |
| <i>Polypedilum aviceps</i>                  | 09021011102181             | 1.33                        |          |                               | --                             | 0.1                   |          |
| <i>Stenochironomus</i>                      | 09021011105                | 1.33                        | 1.33     | 5                             | CG                             | 0.1                   | 0.1      |
| <i>Simulium</i>                             | 09021012047                | 4.00                        | 21.33    | 4                             | CF                             | 0.4                   | 2.3      |
| <i>Simulium fibrinflatum</i>                | 09021012047059             | 2.67                        |          |                               | --                             | 0.3                   |          |
| <i>Simulium vittatum</i>                    | 09021012047064             | 4.00                        |          |                               | --                             | 0.4                   |          |
| <i>Simulium tuberosum</i>                   | 09021012047067             | 1.33                        |          |                               | --                             | 0.1                   |          |
| <i>Simulium jenningsi complex</i>           | 09021012047070             | 8.00                        |          |                               | CF                             | 0.9                   |          |
| <i>Simulium venustum/verecundum complex</i> | 09021012047072             | 1.33                        |          |                               | CF                             | 0.1                   |          |
| <i>Promoresia</i>                           | 09021113069                |                             | 4.00     |                               | --                             |                       | 0.4      |
| <i>Promoresia elegans</i>                   | 09021113069051             | 2.67                        |          |                               | --                             | 0.3                   |          |
| <i>Promoresia tardella</i>                  | 09021113069052             | 1.33                        |          |                               | --                             | 0.1                   |          |
| <i>Stenelmis</i>                            | 09021113070                | 1.33                        | 5.33     | 5                             | SC                             | 0.1                   | 0.6      |
| <i>Stenelmis concinna</i>                   | 09021113070054             | 4.00                        |          |                               | --                             | 0.4                   |          |