



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

Station Information

| | | | |
|------------------------|---|---------------|----------------------------------|
| Station Number: | S-3 | River Basin: | St. John |
| Waterbody: | Prestile Stream - Station 3 | HUC8 Name: | Becaguimec Stream-Saint John Riv |
| Town: | Blaine | Latitude: | 46 29 46.14 N |
| Directions: | BELOW MARS HILL POTW - PIERCE RD BRIDGE | Longitude: | 67 50 44.09 W |
| | | Stream Order: | 4 |

Sample Information

| | | | | | |
|--------------------|-------------|-----------------|----------|-----------------|-----------|
| Log Number: | 2284 | Type of Sample: | ROCK BAG | Date Deployed: | 7/23/2014 |
| Subsample Factor: | X4 | Replicates: | 3 | Date Retrieved: | 8/20/2014 |

Classification Attainment

| | | | | | |
|----------------------------------|-----------|----------------------------------|--|-------|-----------|
| Statutory Class: | B | Final Determination: | B | Date: | 3/26/2015 |
| Model Result with $P \geq 0.6$: | C | Reason for Determination: | Best Professional Judgement | | |
| Date Last Calculated: | 3/26/2015 | Comments: | Impoundment Effect. Class C raised to Class B based on sensitive taxa present. | | |

Model Probabilities

| | | | | | |
|---------------------------|--------------------------|---------|------|--------------------------------|------|
| | <u>First Stage Model</u> | | | <u>C or Better Model</u> | |
| Class A | 0.01 | Class C | 0.64 | Class A, B, or C | 1.00 |
| Class B | 0.35 | NA | 0.00 | Non-Attainment | 0.00 |
| | <u>B or Better Model</u> | | | <u>A Model</u> | |
| Class A or B | | | 0.33 | Class A | 0.23 |
| Class C or Non-Attainment | | | 0.67 | Class B or C or Non-Attainment | 0.77 |

Model Variables

| | | | |
|--|---------|---|--------|
| 01 Total Mean Abundance | 2720.00 | 18 Relative Abundance Ephemeroptera | 0.27 |
| 02 Generic Richness | 35.00 | 19 EPT Generic Richness | 19.00 |
| 03 Plecoptera Mean Abundance | 10.67 | 21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 0.00 |
| 04 Ephemeroptera Mean Abundance | 728.00 | 23 Relative Generic Richness- Plecoptera | 0.06 |
| 05 Shannon-Wiener Generic Diversity | 2.13 | 25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i> | 127.80 |
| 06 Hilsenhoff Biotic Index | 4.01 | 26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i> | 17.33 |
| 07 Relative Abundance - Chironomidae | 0.05 | 28 EP Generic Richness/14 | 0.93 |
| 08 Relative Generic Richness Diptera | 0.34 | 30 Presence of Class A Indicator Taxa/7 | 0.43 |
| 09 <i>Hydropsyche</i> Abundance | 1648.21 | | |
| 11 <i>Cheumatopsyche</i> Abundance | 86.45 | | |
| 12 EPT Generic Richness/ Diptera Generic Richness | 1.58 | | |
| 13 Relative Abundance - Oligochaeta | 0.00 | | |
| 15 Perlidae Mean Abundance (Family Functional Group) | 10.67 | | |
| 16 Tanypodinae Mean Abundance (Family Functional Group) | 2.95 | | |
| 17 Chironomini Abundance (Family Functional Group) | 50.21 | | |

| Five Most Dominant Taxa | | |
|--------------------------------|-----------------------|---------|
| Rank | Taxon Name | Percent |
| 1 | <i>Hydropsyche</i> | 60.60 |
| 2 | <i>Baetis</i> | 19.62 |
| 3 | <i>Plauditus</i> | 3.24 |
| 4 | <i>Cheumatopsyche</i> | 3.18 |
| 5 | <i>Simulium</i> | 2.65 |



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| Station Number: S-3 | Town: Blaine | Date Deployed: 7/23/2014 |
| Log Number: 2284 | Waterbody: Prestile Stream - Station 3 | Date Retrieved: 8/20/2014 |

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

| | |
|-----------------------|------------|
| Temperature: | 21.9 deg C |
| Dissolved Oxygen: | 10.5 mg/l |
| Specific Conductance: | 414 uS/cm |
| Velocity: | 114 cm/s |
| pH: | 7.32 |
| Wetted Width: | 27 m |
| Bankfull Width: | 27 m |
| Depth: | 40 cm |

Waterbody Information - Retrieval

| | |
|-----------------------|------------|
| Temperature: | 21.9 deg C |
| Dissolved Oxygen: | 12.41 mg/l |
| Specific Conductance: | 363 uS/cm |
| Velocity: | 104 cm/s |
| pH: | 8.52 |
| Wetted Width: | 27 m |
| Bankfull Width: | 27 m |
| Depth: | 30 cm |

Water Chemistry - 7/31/2014

| | | | |
|-------------------------|-----------|------------------------------|---------|
| Nitrate+nitrite As N | 0.53 mg/l | Total Phosphorus | 23 ug/l |
| Total Kjeldahl Nitrogen | 0.2 mg/l | Orthophosphate As Phosphorus | 2 ug/l |
| Total Alkalinity | 167 mg/l | | |

Summary of Habitat Characteristics

| | | | |
|---------------------------|---------------------|------------------|------|
| <u>Landuse Name</u> | <u>Canopy Cover</u> | <u>Terrain</u> | |
| Cultivated | Open | Rolling | |
| Urban | | | |
| <u>Potential Stressor</u> | <u>Location</u> | <u>Substrate</u> | |
| Agricultural Runoff | Above Road Crossing | Boulder | 20 % |
| Urban Runoff | Below Urban NPS | Gravel | 30 % |
| | | Rubble/Cobble | 50 % |

Landcover Summary - 2004 Data

| | | | | | | | |
|-----------------|------|------------------|-----|----------------|------|----------------------|------|
| Total Area (ac) | 5366 | High Int. Dev. % | 0.0 | Water % | 0.9 | Non-vegetated % | 0.1 |
| | | Med Int. Dev. % | 0.2 | Wetland % | 9.8 | Tilled Agriculture % | 24.4 |
| | | Low Int. Dev. % | 1.3 | Upland Woody % | 61.6 | Grassland % | 1.2 |
| | | Development % | 1.5 | Natural % | 71.4 | Human Altered % | 27.7 |
| | | | | | | Impervious % | 1.1 |

Sample Comments

8/20 - PH METER WAS ACTING UP. NMRO METER USED FOR ALL OTHER READINGS.
7/23 - ROCKS ARE GREEN.



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| | | |
|----------------------------|--|-----------------------|
| Station Number: S-3 | Waterbody: Prestile Stream - Station 3 | Town: Blaine |
| Log Number: 2284 | Subsample Factor: X4 | Replicates: 3 |
| | | Calculated: 3/26/2015 |

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance | |
|--|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| Perlidae | 09020209 | 2.67 | | | -- | 0.1 | |
| <i>Paragnetina</i> | 09020209049 | | 1.78 | 1 | PR | | 0.1 |
| <i>Paragnetina media</i> | 09020209049151 | 1.33 | | | -- | 0.0 | |
| <i>Agnetina</i> | 09020209050 | | 8.89 | 2 | PR | | 0.3 |
| <i>Agnetina capitata</i> | 09020209050152 | 6.67 | | 2 | PR | 0.2 | |
| Baetidae | 09020401 | 60.00 | | | -- | 2.2 | |
| <i>Baetis</i> | 09020401001 | 110.67 | 533.73 | 4 | CG | 4.1 | 19.6 |
| <i>Baetis flavistriga</i> | 09020401001004 | 38.67 | | | -- | 1.4 | |
| <i>Baetis intercalaris</i> | 09020401001008 | 101.33 | | | -- | 3.7 | |
| <i>Baetis pluto</i> | 09020401001009 | 1.33 | | | -- | 0.0 | |
| <i>Baetis tricaudatus</i> | 09020401001012 | 232.00 | | | -- | 8.5 | |
| <i>Acentrella</i> | 09020401008 | | 1.47 | 3 | CG | | 0.1 |
| <i>Acentrella turbida</i> | 09020401008021 | 1.33 | | | -- | 0.0 | |
| <i>Plauditus</i> | 09020401012 | 80.00 | 88.22 | | CG | 2.9 | 3.2 |
| <i>Dipheter</i> | 09020401013 | | 14.70 | | -- | | 0.5 |
| <i>Dipheter hageni</i> | 09020401013001 | 13.33 | | | -- | 0.5 | |
| <i>Iswaeon</i> | 09020401015 | 5.33 | 5.88 | | -- | 0.2 | 0.2 |
| <i>Epeorus</i> | 09020402009 | 4.00 | 4.00 | 0 | SC | 0.1 | 0.1 |
| <i>Maccaffertium</i> | 09020402015 | 13.33 | 17.33 | 4 | SC | 0.5 | 0.6 |
| <i>Maccaffertium luteum</i> | 09020402015049 | 2.67 | | | -- | 0.1 | |
| <i>Maccaffertium mediopunctatum</i> | 09020402015050 | 1.33 | | | -- | 0.0 | |
| <i>Isonychia</i> | 09020404018 | 1.33 | 1.33 | 2 | CF | 0.0 | 0.0 |
| Ephemerellidae | 09020410 | 1.33 | | | -- | 0.0 | |
| <i>Ephemerella</i> | 09020410035 | 37.33 | 38.18 | 1 | CG | 1.4 | 1.4 |
| <i>Serratella</i> | 09020410037 | | 21.82 | 2 | CG | | 0.8 |
| <i>Serratella (Teloganopsis) deficiens</i> | 09020410037121 | 18.67 | | | -- | 0.7 | |
| <i>Serratella serratoides</i> | 09020410037124 | 2.67 | | | -- | 0.1 | |
| <i>Caenis</i> | 09020412040 | | 1.33 | 7 | CG | | 0.0 |
| <i>Caenis tardata</i> | 09020412040137 | 1.33 | | | -- | 0.0 | |
| <i>Dolophilodes</i> | 09020601001 | | 5.33 | 0 | CF | | 0.2 |
| <i>Dolophilodes distinctus</i> | 09020601001001 | 5.33 | | | -- | 0.2 | |
| Hydropsychidae | 09020604 | 76.00 | | | -- | 2.8 | |
| <i>Cheumatopsyche</i> | 09020604015 | 82.67 | 86.45 | 5 | CF | 3.0 | 3.2 |
| <i>Hydropsyche</i> | 09020604016 | 1034.67 | 1648.21 | 4 | CF | 38.0 | 60.6 |
| <i>Hydropsyche bronta</i> | 09020604016029 | 37.33 | | | -- | 1.4 | |
| <i>Hydropsyche morosa</i> | 09020604016030 | 346.67 | | | -- | 12.7 | |
| <i>Hydropsyche slossonae</i> | 09020604016031 | 2.67 | | | -- | 0.1 | |
| <i>Hydropsyche sparna</i> | 09020604016032 | 98.67 | | | -- | 3.6 | |



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| Log Number: 2284 | | Subsample Factor: X4 | | Replicates: 3 | Calculated: 3/26/2015 | | |
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| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Hydropsyche leonardi</i> | 09020604016044 | 20.00 | | | -- | 0.7 | |
| <i>Hydropsyche placoda</i> | 09020604016059 | 36.00 | | | -- | 1.3 | |
| <i>Rhyacophila</i> | 09020605019 | | 1.33 | 2 | PR | | 0.0 |
| <i>Rhyacophila mainensis</i> | 09020605019069 | 1.33 | | | -- | 0.0 | |
| <i>Glossosoma</i> | 09020606020 | | 4.00 | 0 | SC | | 0.1 |
| <i>Glossosoma nigrior</i> | 09020606020068 | 4.00 | | | SC | 0.1 | |
| <i>Lepidostoma</i> | 09020611064 | 20.00 | 20.00 | 1 | SH | 0.7 | 0.7 |
| <i>Antocha</i> | 09021001004 | | | 3 | CG | | |
| Chironomidae | 09021011 | 13.33 | | | -- | 0.5 | |
| <i>Nilotanyus</i> | 09021011012 | | 1.48 | 6 | PR | | 0.1 |
| <i>Nilotanyus fimbriatus</i> | 09021011012027 | 1.33 | | | -- | 0.0 | |
| <i>Rheopelopia</i> | 09021011017 | | 1.48 | | PR | | 0.1 |
| <i>Rheopelopia acra group</i> | 09021011017036 | 1.33 | | | -- | 0.0 | |
| <i>Potthastia</i> | 09021011026 | | 13.29 | 2 | CG | | 0.5 |
| <i>Potthastia gaedii</i> | 09021011026045 | 12.00 | | | -- | 0.4 | |
| <i>Brillia</i> | 09021011033 | | 1.48 | 5 | SH | | 0.1 |
| <i>Brillia flavifrons</i> | 09021011033049 | 1.33 | | | -- | 0.0 | |
| <i>Cardiocladius</i> | 09021011034 | | 11.81 | 5 | PR | | 0.4 |
| <i>Cardiocladius obscurus</i> | 09021011034053 | 10.67 | | | -- | 0.4 | |
| <i>Corynoneura</i> | 09021011036 | 2.67 | 2.95 | 7 | CG | 0.1 | 0.1 |
| <i>Cricotopus</i> | 09021011037 | 16.00 | 41.35 | 7 | SH | 0.6 | 1.5 |
| <i>Cricotopus bicinctus</i> | 09021011037057 | 2.67 | | | -- | 0.1 | |
| <i>Cricotopus luciae</i> | 09021011037073 | 12.00 | | | -- | 0.4 | |
| <i>Cricotopus politus</i> | 09021011037077 | 4.00 | | | -- | 0.1 | |
| <i>Cricotopus triannulatus/infuscatus</i> | 09021011037078 | 2.67 | | | SH | 0.1 | |
| <i>Eukiefferiella</i> | 09021011041 | | 1.48 | 8 | CG | | 0.1 |
| <i>Eukiefferiella brehmi group</i> | 09021011041073 | 1.33 | | | -- | 0.0 | |
| <i>Parametriocnemus</i> | 09021011053 | | | 5 | CG | | |
| <i>Thienemanniella</i> | 09021011062 | 2.67 | 5.91 | 6 | CG | 0.1 | 0.2 |
| <i>Thienemanniella xena</i> | 09021011062110 | 2.67 | | | -- | 0.1 | |
| <i>Tvetenia</i> | 09021011065 | | 5.91 | 5 | CG | | 0.2 |
| <i>Tvetenia vitracies</i> | 09021011065113 | 1.33 | | | -- | 0.0 | |
| <i>Tvetenia paucunca</i> | 09021011065114 | 4.00 | | | -- | 0.1 | |
| <i>Rheotanytarsus</i> | 09021011072 | | | 6 | CF | | |
| <i>Polypedilum</i> | 09021011102 | | 50.21 | 6 | SH | | 1.8 |
| <i>Polypedilum aviceps</i> | 09021011102181 | 1.33 | | | -- | 0.0 | |
| <i>Polypedilum flavum</i> | 09021011102182 | 44.00 | | | -- | 1.6 | |
| <i>Simulium</i> | 09021012047 | 8.00 | 72.00 | 4 | CF | 0.3 | 2.6 |



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|---|----------------------------|-----------------------------|----------|-------------------------------|--------------------------------|-----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Simulium jenningsi</i> | 09021012047060 | 9.33 | | | -- | 0.3 | |
| <i>Simulium vittatum</i> | 09021012047064 | | | | -- | | |
| <i>Simulium tuberosum</i> | 09021012047067 | 18.67 | | | -- | 0.7 | |
| <i>Simulium jenningsi species group</i> | 09021012047070 | 36.00 | | | CF | 1.3 | |
| <i>Psephenus</i> | 09021108058 | | 1.33 | 4 | SC | | 0.0 |
| <i>Psephenus herricki</i> | 09021108058028 | 1.33 | | | -- | 0.0 | |
| <i>Stenelmis</i> | 09021113070 | 2.67 | 2.67 | 5 | SC | 0.1 | 0.1 |
| <i>Lymnaea</i> | 10010201022 | | 1.33 | | SC | | 0.0 |
| <i>Lymnaea columella</i> | 10010201022038 | 1.33 | | | -- | 0.0 | |
| <i>Helisoma</i> | 10010203030 | | 1.33 | | SC | | 0.0 |
| <i>Helisoma anceps</i> | 10010203030058 | 1.33 | | | -- | 0.0 | |