



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

Station Information

| | | |
|---|---------------|---------------|
| Station Number: S-1162 | River Basin: | St. John |
| Waterbody: Scarey Brook - Station 1162 | HUC8 Name: | Aroostook |
| Town: Nashville Plt | Latitude: | 46 41 33.68 N |
| Directions: COORDINATE WITH THE LOG YARD TO GET ACCESS TO THE SITE. UPSREAM OF THE CONFLUENCE WITH THE LITTLE MACHIAS RIVER | Longitude: | 68 28 42.49 W |
| | Stream Order: | 1 |

Sample Information

| | | |
|-------------------------|--------------------------|--------------------------|
| Log Number: 2728 | Type of Sample: ROCK BAG | Date Deployed: 7/8/2019 |
| Subsample Factor: X1 | Replicates: 3 | Date Retrieved: 8/5/2019 |

Classification Attainment

| | | |
|------------------------------------|--|----------------|
| Statutory Class: B | Final Determination: A | Date: 1/4/2021 |
| Model Result with $P \geq 0.6$: A | Reason for Determination: Model | |
| Date Last Calculated: 12/23/2020 | Comments: | |

Model Probabilities

| <u>First Stage Model</u> | | | <u>C or Better Model</u> | | |
|---------------------------|------|---------|--------------------------------|------------------|------|
| Class A | 0.70 | Class C | 0.02 | Class A, B, or C | 1.00 |
| Class B | 0.28 | 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 | 0.95 | |
| Class C or Non-Attainment | | 0.00 | Class B or C or Non-Attainment | 0.05 | |

Model Variables

| | | | |
|--|--------|---|-------|
| 01 Total Mean Abundance | 118.00 | 18 Relative Abundance Ephemeroptera | 0.28 |
| 02 Generic Richness | 41.00 | 19 EPT Generic Richness | 15.00 |
| 03 Plecoptera Mean Abundance | 3.00 | 21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 0.67 |
| 04 Ephemeroptera Mean Abundance | 33.00 | 23 Relative Generic Richness- Plecoptera | 0.05 |
| 05 Shannon-Wiener Generic Diversity | 4.38 | 25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i> | 3.00 |
| 06 Hilsenhoff Biotic Index | 4.57 | 26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i> | 8.33 |
| 07 Relative Abundance - Chironomidae | 0.21 | 28 EP Generic Richness/14 | 0.57 |
| 08 Relative Generic Richness Diptera | 0.29 | 30 Presence of Class A Indicator Taxa/7 | 0.29 |
| 09 <i>Hydropsyche</i> Abundance | 0.00 | | |
| 11 <i>Cheumatopsyche</i> Abundance | 1.33 | | |
| 12 EPT Generic Richness/ Diptera Generic Richness | 1.25 | | |
| 13 Relative Abundance - Oligochaeta | 0.00 | | |
| 15 Perlidae Mean Abundance (Family Functional Group) | 0.33 | | |
| 16 Tanypodinae Mean Abundance (Family Functional Group) | 7.00 | | |
| 17 Chironomini Abundance (Family Functional Group) | 4.67 | | |

Five Most Dominant Taxa

| Rank | Taxon Name | Percent |
|------|-------------------------|---------|
| 1 | <i>Dubiraphia</i> | 23.45 |
| 2 | <i>Stenacron</i> | 7.63 |
| 3 | <i>Maccaffertium</i> | 7.06 |
| 4 | <i>Paraleptophlebia</i> | 7.05 |
| 5 | <i>Polypedilum</i> | 3.95 |



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Station Number: S-1162 Town: Nashville Plt Date Deployed: 7/8/2019
Log Number: 2728 Waterbody: Scarey Brook - Station 1162 Date Retrieved: 8/5/2019

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 18.4 deg C
Dissolved Oxygen: 8.5 mg/l
Dissolved Oxygen Saturation: 91.4 %
Specific Conductance: 105.1 uS/cm
Velocity: 9.1 cm/s
pH: 7.36
Wetted Width: 4.3 m
Bankfull Width: 4.9 m
Depth: 27 cm

Waterbody Information - Retrieval

Temperature: 16.7 deg C
Dissolved Oxygen: 8.93 mg/l
Dissolved Oxygen Saturation: 92.5 %
Specific Conductance: 144.2 uS/cm
Velocity: 3 cm/s
pH: 7.66
Wetted Width: 3.8 m
Bankfull Width: 4.9 m
Depth: 18 cm

Water Chemistry

Summary of Habitat Characteristics

| | | | |
|---------------------------|---------------------|------------------|------|
| <u>Landuse Name</u> | <u>Canopy Cover</u> | <u>Terrain</u> | |
| Swamp Conifer | Dense | Rolling | |
| Swamp Hardwood | | | |
| <u>Potential Stressor</u> | <u>Location</u> | <u>Substrate</u> | |
| | | Gravel | 40 % |
| | | Rubble/Cobble | 30 % |
| | | Sand | 15 % |
| | | Silt | 15 % |

Landcover Summary - 2004 Data

Sample Comments

FISH PRESENT.



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

Station Number: S-1162

Waterbody: Scarey Brook - Station 1162

Town: Nashville Plt

Log Number: 2728

Subsample Factor: X1

Replicates: 3

Calculated: 12/23/2020

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance % | |
|---------------------------------|----------------------|-----------------------------|----------|-------------------------|--------------------------|----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Cambarus</i> | 09010301007 | 0.33 | 0.33 | | CG | 0.3 | 0.3 |
| <i>Leuctra</i> | 09020204020 | 2.67 | 2.67 | 0 | SH | 2.3 | 2.3 |
| Perlidae | 09020209 | 0.33 | 0.33 | | -- | 0.3 | 0.3 |
| <i>Boyeria</i> | 09020301004 | 0.67 | 1.33 | 2 | PR | 0.6 | 1.1 |
| <i>Boyeria grafiana</i> | 09020301004011 | 0.33 | | | -- | 0.3 | |
| <i>Boyeria vinosa</i> | 09020301004012 | 0.33 | | | -- | 0.3 | |
| Cordulegastridae | 09020303 | 0.33 | 0.33 | | -- | 0.3 | 0.3 |
| <i>Calopteryx</i> | 09020307043 | 2.33 | 2.33 | 5 | PR | 2.0 | 2.0 |
| <i>Acerpenna</i> | 09020401007 | | 3.67 | 5 | CG | | 3.1 |
| <i>Acerpenna macdunnoughi</i> | 09020401007001 | 3.67 | | | -- | 3.1 | |
| <i>Stenacron</i> | 09020402014 | 1.33 | 9.00 | 7 | SC | 1.1 | 7.6 |
| <i>Stenacron interpunctatum</i> | 09020402014045 | 7.67 | | | -- | 6.5 | |
| <i>Maccaffertium</i> | 09020402015 | 5.00 | 8.33 | 4 | SC | 4.2 | 7.1 |
| <i>Maccaffertium vicarium</i> | 09020402015055 | 3.33 | | | -- | 2.8 | |
| Leptophlebiidae | 09020406 | 0.33 | | | -- | 0.3 | |
| <i>Habrophlebia</i> | 09020406023 | | 0.35 | | -- | | 0.3 |
| <i>Habrophlebia vibrans</i> | 09020406023072 | 0.33 | | | -- | 0.3 | |
| <i>Paraleptophlebia</i> | 09020406026 | 8.00 | 8.32 | 1 | CG | 6.8 | 7.1 |
| <i>Eurylophella</i> | 09020410036 | | 3.33 | 3 | CG | | 2.8 |
| <i>Eurylophella funeralis</i> | 09020410036115 | 3.33 | | | SH | 2.8 | |
| Gerridae | 09020506 | 0.33 | 0.33 | | -- | 0.3 | 0.3 |
| <i>Microvelia</i> | 09020510025 | 0.67 | 0.67 | | PR | 0.6 | 0.6 |
| <i>Rhagovelia</i> | 09020510026 | 0.33 | 0.33 | | PR | 0.3 | 0.3 |
| Polycentropodidae | 09020603 | 0.33 | | | -- | 0.3 | |
| <i>Nyctiophylax</i> | 09020603009 | 1.33 | 1.47 | 5 | PR | 1.1 | 1.2 |
| <i>Polycentropus</i> | 09020603010 | 2.00 | 2.20 | 6 | PR | 1.7 | 1.9 |
| <i>Cheumatopsyche</i> | 09020604015 | 1.33 | 1.33 | 5 | CF | 1.1 | 1.1 |
| <i>Rhyacophila</i> | 09020605019 | | 2.33 | 2 | PR | | 2.0 |
| <i>Rhyacophila minora</i> | 09020605019063 | 2.00 | | | PR | 1.7 | |
| <i>Rhyacophila nigrita</i> | 09020605019064 | 0.33 | | | PR | 0.3 | |
| Limnephilidae | 09020610 | 0.33 | 0.33 | | -- | 0.3 | 0.3 |
| <i>Pycnopsyche</i> | 09020610049 | 4.33 | 4.33 | 4 | SH | 3.7 | 3.7 |
| <i>Psilotreta</i> | 09020614068 | 1.67 | 3.33 | 0 | SC | 1.4 | 2.8 |
| <i>Psilotreta frontalis</i> | 09020614068134 | 1.67 | | | -- | 1.4 | |
| <i>Sialis</i> | 09020702004 | 0.33 | 0.33 | 4 | PR | 0.3 | 0.3 |
| <i>Tipula</i> | 09021001002 | 1.33 | 1.33 | 4 | SH | 1.1 | 1.1 |
| Chironomidae | 09021011 | | | | -- | | |



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| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Thienemannimyia</i> | 09021011020 | | 4.33 | 3 | PR | | 3.7 |
| <i>Thienemannimyia group</i> | 09021011020041 | 4.33 | | | -- | 3.7 | |
| <i>Trissopelopia</i> | 09021011021 | 2.67 | 2.67 | | PR | 2.3 | 2.3 |
| <i>Brillia</i> | 09021011033 | 0.67 | 0.67 | 5 | SH | 0.6 | 0.6 |
| <i>Nanocladius</i> | 09021011049 | 0.33 | 0.33 | 3 | CG | 0.3 | 0.3 |
| <i>Parametrioconemus</i> | 09021011053 | 2.00 | 2.00 | 5 | CG | 1.7 | 1.7 |
| <i>Micropsectra</i> | 09021011070 | 0.67 | 0.67 | 7 | CG | 0.6 | 0.6 |
| <i>Paratanytarsus</i> | 09021011071 | 2.67 | 4.00 | 6 | -- | 2.3 | 3.4 |
| <i>Paratanytarsus longistylus</i> | 09021011071126 | 1.33 | | 6 | -- | 1.1 | |
| <i>Rheotanytarsus</i> | 09021011072 | | 3.33 | 6 | CF | | 2.8 |
| <i>Rheotanytarsus pellucidus</i> | 09021011072128 | 3.33 | | | CF | 2.8 | |
| <i>Stempellinella</i> | 09021011074 | 0.67 | 0.67 | 2 | -- | 0.6 | 0.6 |
| <i>Tanytarsus</i> | 09021011076 | 1.67 | 1.67 | 6 | CF | 1.4 | 1.4 |
| <i>Polypedilum</i> | 09021011102 | | 4.67 | 6 | SH | | 4.0 |
| <i>Polypedilum aviceps</i> | 09021011102181 | 4.67 | | | -- | 4.0 | |
| Empididae | 09021016 | | | 6 | -- | | |
| <i>Dubiraphia</i> | 09021113064 | 27.67 | 27.67 | 6 | -- | 23.4 | 23.4 |
| <i>Optioservus</i> | 09021113067 | 1.00 | 1.00 | 3 | SC | 0.8 | 0.8 |
| Acariformes | 090301 | 0.33 | 0.33 | | -- | 0.3 | 0.3 |
| <i>Physella</i> | 10010202027 | 0.33 | 0.33 | | SC | 0.3 | 0.3 |
| Sphaeriidae | 10020201 | 0.67 | 0.67 | | CF | 0.6 | 0.6 |
| <i>Pisidium</i> | 10020201002 | 4.33 | 4.33 | | CF | 3.7 | 3.7 |