



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

Station Information

| | |
|--|----------------------------|
| Station Number: S-501 | River Basin: Maine Coastal |
| Waterbody: Mopang Stream - Station 501 | HUC8 Name: Maine Coastal |
| Town: T30 Md Bpp | Latitude: 44 52 13.51 N |
| Directions: DOWNSTREAM OF RT. 9 CROSSING | Longitude: 67 56 27.73 W |
| | Stream Order: 2 |

Sample Information

| | | |
|-------------------------|--------------------------|---------------------------|
| Log Number: 2510 | Type of Sample: ROCK BAG | Date Deployed: 7/28/2016 |
| Subsample Factor: X1 | Replicates: 3 | Date Retrieved: 8/24/2016 |

Classification Attainment

| | | |
|------------------------------------|--|-----------------|
| Statutory Class: AA | Final Determination: A | Date: 6/19/2017 |
| Model Result with $P \geq 0.6$: A | Reason for Determination: Model | |
| Date Last Calculated: 6/14/2017 | Comments: | |

Model Probabilities

| <u>First Stage Model</u> | | <u>C or Better Model</u> | |
|---------------------------|------|--------------------------------|------|
| Class A | 0.81 | Class A, B, or C | 1.00 |
| Class B | 0.18 | Non-Attainment | 0.00 |
| | | <u>A Model</u> | |
| <u>B or Better Model</u> | | Class A | 1.00 |
| Class A or B | 1.00 | Class B or C or Non-Attainment | 0.00 |
| Class C or Non-Attainment | 0.00 | | |

Model Variables

| | | | |
|--|-------|---|-------|
| 01 Total Mean Abundance | 85.00 | 18 Relative Abundance Ephemeroptera | 0.55 |
| 02 Generic Richness | 27.00 | 19 EPT Generic Richness | 19.00 |
| 03 Plecoptera Mean Abundance | 7.00 | 21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i> | 0.00 |
| 04 Ephemeroptera Mean Abundance | 46.67 | 23 Relative Generic Richness- Plecoptera | 0.04 |
| 05 Shannon-Wiener Generic Diversity | 2.85 | 25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i> | 1.85 |
| 06 Hilsenhoff Biotic Index | 3.64 | 26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i> | 50.19 |
| 07 Relative Abundance - Chironomidae | 0.05 | 28 EP Generic Richness/14 | 0.57 |
| 08 Relative Generic Richness Diptera | 0.15 | 30 Presence of Class A Indicator Taxa/7 | 0.43 |
| 09 <i>Hydropsyche</i> Abundance | 2.59 | | |
| 11 <i>Cheumatopsyche</i> Abundance | 1.85 | | |
| 12 EPT Generic Richness/ Diptera Generic Richness | 4.75 | | |
| 13 Relative Abundance - Oligochaeta | 0.00 | | |
| 15 Perlidae Mean Abundance (Family Functional Group) | 7.00 | | |
| 16 Tanypodinae Mean Abundance (Family Functional Group) | 0.36 | | |
| 17 Chironomini Abundance (Family Functional Group) | 3.61 | | |

Five Most Dominant Taxa

| Rank | Taxon Name | Percent |
|------|----------------------|---------|
| 1 | <i>Maccaffertium</i> | 50.81 |
| 2 | <i>Brachycentrus</i> | 10.20 |
| 3 | <i>Acroneuria</i> | 8.24 |
| 4 | <i>Oecetis</i> | 6.27 |
| 5 | <i>Microtendipes</i> | 3.82 |



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Station Number: S-501 Town: T30 Md Bpp Date Deployed: 7/28/2016
Log Number: 2510 Waterbody: Mopang Stream - Station 501 Date Retrieved: 8/24/2016

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 26.1 deg C
 Dissolved Oxygen: 9.17 mg/l
 Dissolved Oxygen Saturation: 114.6 %
 Specific Conductance: 24.5 uS/cm
 Velocity: 24.4 cm/s
 pH: 6.62
 Wetted Width: 4.8 m
 Bankfull Width: 6.4 m
 Depth: 34 cm

Waterbody Information - Retrieval

Temperature: 22.1 deg C
 Dissolved Oxygen: 10.22 mg/l
 Dissolved Oxygen Saturation: 117.5 %
 Specific Conductance: 26.4 uS/cm
 Velocity: 6.1 cm/s
 pH: 6.62
 Wetted Width: 5 m
 Bankfull Width: 6.4 m
 Depth: 34 cm

Water Chemistry - 8/24/2016

| | | | |
|--------------------------|------------|------------------------------|----------|
| Nitrate+nitrite As N | <0.01 mg/l | Total Phosphorus | 9 ug/l |
| Total Kjeldahl Nitrogen | 0.3 mg/l | Total Suspended Solids | <2 mg/l |
| Dissolved Organic Carbon | 4.7 mg/l | Dissolved Organic Carbon | 4.7 mg/l |
| Total Dissolved Solids | 41 mg/l | Orthophosphate As Phosphorus | 1 ug/l |

Summary of Habitat Characteristics

| | | |
|---------------------------|---------------------|--------------------|
| <u>Landuse Name</u> | <u>Canopy Cover</u> | <u>Terrain</u> |
| Swamp Hardwood | Partly Open | Rolling |
| Upland Conifer | | |
| Upland Hardwood | | |
| <u>Potential Stressor</u> | <u>Location</u> | <u>Substrate</u> |
| Below Wetland | Below Road Crossing | Boulder 5 % |
| | Lake Outlet | Gravel 35 % |
| | | Rubble/Cobble 55 % |
| | | Sand 5 % |

Landcover Summary - 2004 Data

| | | | | | | | |
|-----------------|-------|------------------|-----|----------------|------|----------------------|-----|
| Total Area (ac) | 12138 | High Int. Dev. % | 0.0 | Water % | 14.9 | Non-vegetated % | 1.6 |
| | | Med Int. Dev. % | 0.0 | Wetland % | 4.9 | Tilled Agriculture % | 0.2 |
| | | Low Int. Dev. % | 0.4 | Upland Woody % | 79.2 | Grassland % | 0.4 |
| | | Development % | 0.4 | Natural % | 84.2 | Human Altered % | 0.9 |
| | | | | | | Impervious % | 0.2 |

Sample Comments

7/28/2016: VALLISNERIA; BLOB ALGAE; FISH AND FROGS PRESENT.
 8/24/2016: ALGAE; FISH AND FROGS; ABUNDANT BRACHYCENTRIS ON PLANTS IN WATER.



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-501
Log Number: 2510

Waterbody: Mopang Stream - Station 501
Subsample Factor: X1

Town: T30 Md Bpp
Calculated: 6/14/2017

| Taxon | Maine Taxonomic Code | Count (Mean of Samplers) | | Hilsenhoff Biotic Index | Functional Feeding Group | Relative Abundance % | |
|--------------------------------|----------------------|-----------------------------|----------|-------------------------|--------------------------|----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Acroneuria</i> | 09020209042 | 1.00 | 7.00 | 0 | PR | 1.2 | 8.2 |
| <i>Acroneuria lycorias</i> | 09020209042125 | 6.00 | | | -- | 7.1 | |
| Corduliidae | 09020305 | 0.33 | 0.33 | | -- | 0.4 | 0.4 |
| <i>Baetis</i> | 09020401001 | 0.33 | 0.33 | 4 | CG | 0.4 | 0.4 |
| <i>Acerpenna</i> | 09020401007 | | 0.33 | 5 | CG | | 0.4 |
| <i>Acerpenna pygmaea</i> | 09020401007011 | 0.33 | | | -- | 0.4 | |
| <i>Proclleon</i> | 09020401010 | 0.33 | 0.33 | | CG | 0.4 | 0.4 |
| Heptageniidae | 09020402 | 4.33 | | | -- | 5.1 | |
| <i>Leucrocota</i> | 09020402011 | 1.33 | 1.48 | 1 | SC | 1.6 | 1.7 |
| <i>Maccaffertium</i> | 09020402015 | 34.33 | 43.19 | 4 | SC | 40.4 | 50.8 |
| <i>Maccaffertium luteum</i> | 09020402015049 | 4.67 | | | -- | 5.5 | |
| Leptophlebiidae | 09020406 | 0.67 | 0.67 | | -- | 0.8 | 0.8 |
| <i>Caenis</i> | 09020412040 | 0.33 | 0.33 | 7 | CG | 0.4 | 0.4 |
| <i>Chimarra</i> | 09020601003 | | 0.67 | 2 | CF | | 0.8 |
| <i>Chimarra socia</i> | 09020601003004 | 0.67 | | | -- | 0.8 | |
| <i>Cernotina</i> | 09020603006 | 0.33 | 0.33 | | PR | 0.4 | 0.4 |
| <i>Neureclipsis</i> | 09020603008 | 2.33 | 2.33 | 7 | CF | 2.7 | 2.7 |
| Hydropsychidae | 09020604 | 0.67 | | | -- | 0.8 | |
| <i>Cheumatopsyche</i> | 09020604015 | 1.67 | 1.85 | 5 | CF | 2.0 | 2.2 |
| <i>Hydropsyche</i> | 09020604016 | 1.67 | 2.59 | 4 | CF | 2.0 | 3.1 |
| <i>Hydropsyche sparna</i> | 09020604016032 | 0.67 | | | -- | 0.8 | |
| <i>Macrostemum</i> | 09020604018 | | 2.22 | 3 | CF | | 2.6 |
| <i>Macrostemum zebratum</i> | 09020604018054 | 2.00 | | | -- | 2.4 | |
| <i>Brachycentrus</i> | 09020609043 | | 8.67 | 0 | CF | | 10.2 |
| <i>Brachycentrus numerosus</i> | 09020609043098 | 8.67 | | | -- | 10.2 | |
| <i>Psilotreta</i> | 09020614068 | | 0.33 | 0 | SC | | 0.4 |
| <i>Psilotreta indecisa</i> | 09020614068132 | 0.33 | | | -- | 0.4 | |
| <i>Nectopsyche</i> | 09020618074 | 0.33 | 0.33 | 3 | SH | 0.4 | 0.4 |
| <i>Mystacides</i> | 09020618075 | | 0.33 | 4 | CG | | 0.4 |
| <i>Mystacides sepulchralis</i> | 09020618075147 | 0.33 | | | -- | 0.4 | |
| <i>Oecetis</i> | 09020618078 | | 5.33 | 8 | PR | | 6.3 |
| <i>Oecetis avara</i> | 09020618078153 | 0.67 | | | -- | 0.8 | |
| <i>Oecetis persimilis</i> | 09020618078157 | 4.67 | | | -- | 5.5 | |
| Chironomidae | 09021011 | 0.33 | | | -- | 0.4 | |
| <i>Labrundinia</i> | 09021011008 | | 0.36 | 7 | PR | | 0.4 |
| <i>Labrundinia pilosella</i> | 09021011008022 | 0.33 | | | -- | 0.4 | |
| <i>Psectrocladius</i> | 09021011056 | | 0.36 | 8 | CG | | 0.4 |



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|---------------------------------------|----------------------|-----------------------------|----------|-------------------------|--------------------------|----------------------|----------|
| | | Actual | Adjusted | | | Actual | Adjusted |
| <i>Psectrocladius elatus</i> | 09021011056105 | 0.33 | | | -- | 0.4 | |
| <i>Microtendipes</i> | 09021011094 | | 3.25 | 6 | CF | | 3.8 |
| <i>Microtendipes rydalensis group</i> | 09021011094168 | 3.00 | | | -- | 3.5 | |
| <i>Polypedilum</i> | 09021011102 | | 0.36 | 6 | SH | | 0.4 |
| <i>Polypedilum aviceps</i> | 09021011102181 | 0.33 | | | -- | 0.4 | |
| <i>Dubiraphia</i> | 09021113064 | | 0.33 | 6 | -- | | 0.4 |
| <i>Dubiraphia minima</i> | 09021113064036 | 0.33 | | | -- | 0.4 | |
| <i>Promoresia</i> | 09021113069 | | 1.00 | | -- | | 1.2 |
| <i>Promoresia elegans</i> | 09021113069051 | 0.67 | | | -- | 0.8 | |
| <i>Promoresia tardella</i> | 09021113069052 | 0.33 | | | -- | 0.4 | |
| <i>Stenelmis</i> | 09021113070 | | 0.33 | 5 | SC | | 0.4 |
| <i>Stenelmis crenata</i> | 09021113070055 | 0.33 | | | -- | 0.4 | |