



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

Station Information

Station Number:	S-1003	River Basin:	Androscoggin
Waterbody:	Bowley Brook - Station 1003	HUC8 Name:	Lower Androscoggin
Town:	Weld	Latitude:	44 41 25.17 N
Directions:	50 METERS UPSTREAM OF ROUTE 142 CROSSING	Longitude:	70 25 28.83 W
		Stream Order:	3

Sample Information

Log Number:	2674	Type of Sample:	ROCK BAG	Date Deployed:	7/24/2018
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/22/2018

Classification Attainment

Statutory Class:	B	Final Determination:	A	Date:	2/21/2019
Model Result with $P \geq 0.6$:	A	Reason for Determination:	Model		
Date Last Calculated:	2/19/2019	Comments:			

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.63	Class A, B, or C	1.00
Class B	0.37	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.99
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.01

Model Variables

01 Total Mean Abundance	327.67	18 Relative Abundance Ephemeroptera	0.19
02 Generic Richness	50.00	19 EPT Generic Richness	26.00
03 Plecoptera Mean Abundance	19.00	21 Sum of Abundances: <i>Dicrotendipes</i> ,	3.67
04 Ephemeroptera Mean Abundance	61.00	<i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	
05 Shannon-Wiener Generic Diversity	3.77	23 Relative Generic Richness- Plecoptera	0.16
06 Hilsenhoff Biotic Index	4.58	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	70.33
07 Relative Abundance - Chironomidae	0.37	<i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	
08 Relative Generic Richness Diptera	0.34	26 Sum of Abundances: <i>Acroneuria</i> ,	34.26
09 <i>Hydropsyche</i> Abundance	87.33	<i>Maccaffertium</i> , <i>Stenonema</i>	
11 <i>Cheumatopsyche</i> Abundance	21.00	28 EP Generic Richness/14	1.21
12 EPT Generic Richness/ Diptera	1.53	30 Presence of Class A Indicator Taxa/7	0.57
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family	11.00		
Functional Group)			
16 Tanypodinae Mean Abundance	7.00		
(Family Functional Group)			
17 Chironomini Abundance (Family	47.00		
Functional Group)			

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	26.65
2	<i>Cricotopus</i>	15.06
3	<i>Polypedilum</i>	14.04
4	<i>Maccaffertium</i>	9.16
5	<i>Cheumatopsyche</i>	6.41



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Station Number: S-1003	Town: Weld	Date Deployed: 7/24/2018
Log Number: 2674	Waterbody: Bowley Brook - Station 1003	Date Retrieved: 8/22/2018

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature:	21.5 deg C
Dissolved Oxygen:	9.79 mg/l
Dissolved Oxygen Saturation:	110.8 %
Specific Conductance:	46.4 uS/cm
Velocity:	21.3 cm/s
pH:	7.5
Wetted Width:	12.6 m
Bankfull Width:	13 m
Depth:	36 cm

Waterbody Information - Retrieval

Temperature:	17.4 deg C
Dissolved Oxygen:	10.36 mg/l
Dissolved Oxygen Saturation:	110 %
Specific Conductance:	45.9 uS/cm
Velocity:	18.3 cm/s
pH:	7.34
Wetted Width:	7.9 m
Bankfull Width:	13 m
Depth:	29 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Partly Open	Mountainous
Upland Hardwood		

<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Above Road Crossing	Boulder	65 %
		Gravel	5 %
		Rubble/Cobble	30 %

Landcover Summary - 2004 Data

Sample Comments

7/24 : Large downed tree, fish.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-1003

Waterbody: Bowley Brook - Station 1003

Town: Weld

Log Number: 2674

Subsample Factor: X1

Replicates: 3

Calculated: 2/19/2019

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009	0.33	0.33		CG	0.1	0.1
<i>Leuctra</i>	09020204020	0.33	0.33	0	SH	0.1	0.1
<i>Pteronarcys</i>	09020205023	0.33	2.00	0	SH	0.1	0.6
<i>Pteronarcys biloba</i>	09020205023061	1.67			--	0.5	
Perlodidae	09020207	4.67			--	1.4	
<i>Isoperla</i>	09020207026	0.33	2.67	2	PR	0.1	0.8
<i>Isogenoides</i>	09020207033	0.33	2.67	0	PR	0.1	0.8
<i>Sweltsa</i>	09020208040	0.33	0.33		PR	0.1	0.1
Perlidae	09020209	0.67			--	0.2	
<i>Acroneuria</i>	09020209042	0.67	4.26	0	PR	0.2	1.3
<i>Acroneuria abnormis</i>	09020209042121	1.33		0	PR	0.4	
<i>Acroneuria carolinensis</i>	09020209042123	2.00			--	0.6	
<i>Paragnetina</i>	09020209049	3.67	4.26	1	PR	1.1	1.3
<i>Paragnetina immarginata</i>	09020209049149	0.33			--	0.1	
<i>Agnetina</i>	09020209050		2.48	2	PR		0.8
<i>Agnetina capitata</i>	09020209050152	2.33		2	PR	0.7	
<i>Boyeria</i>	09020301004	0.67	1.00	2	PR	0.2	0.3
<i>Boyeria grafiana</i>	09020301004011	0.33			--	0.1	
<i>Calopteryx</i>	09020307043	0.33	0.33	5	PR	0.1	0.1
<i>Baetis</i>	09020401001	0.33	6.67	4	CG	0.1	2.0
<i>Baetis flavistriga</i>	09020401001004	5.67			--	1.7	
<i>Baetis intercalaris</i>	09020401001008	0.67			--	0.2	
<i>Acerpenna</i>	09020401007	0.67	4.33	5	CG	0.2	1.3
<i>Acerpenna macdunnoughi</i>	09020401007001	3.67			--	1.1	
<i>Plauditus</i>	09020401012	2.00	2.00		CG	0.6	0.6
<i>Epeorus</i>	09020402009	1.33	1.33	0	SC	0.4	0.4
<i>Leucrocuta</i>	09020402011	6.33	6.33	1	SC	1.9	1.9
<i>Maccaffertium</i>	09020402015	5.00	30.00	4	SC	1.5	9.2
<i>Maccaffertium vicarium</i>	09020402015055	25.00			--	7.6	
<i>Neoleptophlebia</i>	09020406027	6.67	6.67		--	2.0	2.0
<i>Ephemerella</i>	09020410035	1.67	1.67	1	CG	0.5	0.5
<i>Eurylophella</i>	09020410036		2.00	3	CG		0.6
<i>Eurylophella funeralis</i>	09020410036115	2.00			SH	0.6	
<i>Dolophilodes</i>	09020601001		0.67	0	CF		0.2
<i>Dolophilodes distincta</i>	09020601001001	0.67			--	0.2	
Hydropsychidae	09020604				--		
<i>Cheumatopsyche</i>	09020604015	21.00	21.00	5	CF	6.4	6.4



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Replicates: 3

Calculated: 2/19/2019

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche</i>	09020604016	48.33	87.33	4	CF	14.8	26.7
<i>Hydropsyche morosa</i>	09020604016030	0.33			--	0.1	
<i>Hydropsyche slossonae</i>	09020604016031	19.67			--	6.0	
<i>Hydropsyche sparna</i>	09020604016032	19.00			--	5.8	
<i>Brachycentrus</i>	09020609043		5.00	0	CF		1.5
<i>Brachycentrus appalachia</i>	09020609043096	5.00			--	1.5	
<i>Micrasema</i>	09020609044	0.33	0.33	2	SH	0.1	0.1
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.2	0.2
<i>Ceraclea</i>	09020618072	0.33	0.33	3	CG	0.1	0.1
<i>Mystacides</i>	09020618075		0.33	4	CG		0.1
<i>Mystacides sepulchralis</i>	09020618075147	0.33			--	0.1	
<i>Apatania</i>	09020619061	0.67	0.67		SC	0.2	0.2
<i>Nigronia</i>	09020701003		1.33	0	PR		0.4
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.4	
<i>Hexatoma</i>	09021001008	0.33	0.33	2	PR	0.1	0.1
Chironomidae	09021011				--		
<i>Nilotanytus</i>	09021011012		1.33	6	PR		0.4
<i>Nilotanytus fimbriatus</i>	09021011012027	1.33			--	0.4	
<i>Paramerina</i>	09021011013	0.33	0.33		--	0.1	0.1
<i>Thienemannimyia</i>	09021011020		1.00	3	PR		0.3
<i>Thienemannimyia group</i>	09021011020041	1.00			--	0.3	
<i>Trissopelopia</i>	09021011021	4.00	4.00		PR	1.2	1.2
<i>Zavrelimyia</i>	09021011022	0.33	0.33	8	PR	0.1	0.1
<i>Cricotopus</i>	09021011037	1.00	49.33	7	SH	0.3	15.1
<i>Cricotopus bicinctus</i>	09021011037057	48.33			--	14.8	
<i>Parametriocnemus</i>	09021011053	3.00	3.00	5	CG	0.9	0.9
<i>Micropsectra</i>	09021011070	3.67	3.67	7	CG	1.1	1.1
<i>Rheotanytarsus</i>	09021011072		12.00	6	CF		3.7
<i>Rheotanytarsus exiguus group</i>	09021011072127	7.67			CF	2.3	
<i>Rheotanytarsus pellucidus</i>	09021011072128	4.33			CF	1.3	
<i>Stempellinella</i>	09021011074	0.67	0.67	2	--	0.2	0.2
<i>Microtendipes</i>	09021011094		0.33	6	CF		0.1
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.1	
<i>Phaenopsectra</i>	09021011101	0.67	0.67	7	SC	0.2	0.2
<i>Polypedilum</i>	09021011102		46.00	6	SH		14.0
<i>Polypedilum aviceps</i>	09021011102181	46.00			--	14.0	
<i>Simulium</i>	09021012047	0.33	0.33	4	CF	0.1	0.1
Empididae	09021016			6	--		



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<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Roederiodes</i>	09021016058	2.33	2.33	3	PR	0.7	0.7
<i>Promoresia</i>	09021113069		1.67		--		0.5
<i>Promoresia tardella</i>	09021113069052	1.67			--	0.5	
<i>Helisoma</i>	10010203030		0.33		SC		0.1
<i>Helisoma anceps</i>	10010203030058	0.33			--	0.1	
<i>Ferrissia</i>	10010204035	0.33	0.33		SC	0.1	0.1