



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

**Station Information**

<b>Station Number:</b> S-659	River Basin: Androscoggin
Waterbody: Bull Branch Sunday River - Station 659	HUC8 Name: Lower Androscoggin
Town: Riley Twp	Latitude: 44 30 12.18 N
Directions: UPSTREAM OF BRIDGE IN KETCHUM	Longitude: 70 54 53.71 W
	Stream Order: 4

**Sample Information**

<b>Log Number:</b> 2837	Type of Sample: ROCK BAG	Date Deployed: 7/24/2020
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/21/2020

**Classification Attainment**

<b>Statutory Class:</b> A	<b>Final Determination:</b> A	Date: 3/3/2022
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 10/18/2021	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.48	Class A, B, or C	1.00
Class B	0.52	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.96
Class A or B	1.00	Class B or C or Non-Attainment	0.04
Class C or Non-Attainment	0.00		

**Model Variables**

01 Total Mean Abundance	1188.33	18 Relative Abundance Ephemeroptera	0.07
02 Generic Richness	59.00	19 EPT Generic Richness	27.00
03 Plecoptera Mean Abundance	67.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	5.67
04 Ephemeroptera Mean Abundance	89.00	23 Relative Generic Richness- Plecoptera	0.07
05 Shannon-Wiener Generic Diversity	3.56	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	176.67
06 Hilsenhoff Biotic Index	4.43	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	21.00
07 Relative Abundance - Chironomidae	0.35	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.36	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	436.33		
11 <i>Cheumatopsyche</i> Abundance	3.33		
12 EPT Generic Richness/ Diptera Generic Richness	1.29		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	37.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	8.00		
17 Chironomini Abundance (Family Functional Group)	71.67		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	36.72
2	<i>Cricotopus</i>	14.19
3	<i>Brachycentrus</i>	7.21
4	<i>Polypedilum</i>	6.00
5	<i>Rheotanytarsus</i>	5.33



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**Station Number: S-659**      Town: Riley Twp      Date Deployed: 7/24/2020  
**Log Number: 2837**      Waterbody: Bull Branch Sunday River - Station 659      Date Retrieved: 8/21/2020

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: ECOANALYSTS IDAHO

**Waterbody Information - Deployment**

Temperature: 20.4 deg C  
 Dissolved Oxygen: 9.48 mg/l  
 Dissolved Oxygen Saturation: 107.6 %  
 Specific Conductance: 16.8 uS/cm  
 Velocity: 1.1 cm/s  
 pH: 6.45  
 Wetted Width: 13.3 m  
 Bankfull Width: 17.6 m  
 Depth: 36.3 cm

**Waterbody Information - Retrieval**

Temperature: 17.9 deg C  
 Dissolved Oxygen: 9.93 mg/l  
 Dissolved Oxygen Saturation: 108.1 %  
 Specific Conductance: 20.4 uS/cm  
 Velocity: 0.7 cm/s  
 pH: 6.53  
 Wetted Width: 11.8 m  
 Bankfull Width: 17.6 m  
 Depth: 28.7 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Partly Open	Mountainous	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Logging	Below Road Crossing	Bedrock	5 %
		Boulder	20 %
		Gravel	35 %
		Rubble/Cobble	40 %

**Landcover Summary - 2004 Data**

Total Area (ac)	10867	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	0.0	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.0	Upland Woody %	98.6	Grassland %	0.0
		Development %	0.0	Natural %	100.0	Human Altered %	0.0
						Impervious %	0.0
Total Land (ac)	10866	High Int. Dev. %	0.0	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.0	Wetland %	0.0	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.0	Upland Woody %	98.6	Grassland %	0.0
		Development %	0.0	Natural %	100.0	Human Altered %	0.0
						Impervious %	0.0

**Sample Comments**



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**Station Number: S-659**

Waterbody: Bull Branch Sunday River - Station 659

Town: Riley Twp

**Log Number: 2837**

Subsample Factor: X1

Replicates: 3

Calculated: 10/18/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		1.00		CG		0.1
<i>Nais behningi</i>	08020202009003	1.00			--	0.1	
<i>Pteronarcys</i>	09020205023	4.67	4.67	0	SH	0.4	0.4
Perlodidae	09020207	26.00	26.00		--	2.2	2.2
<i>Paragnetina</i>	09020209049	15.33	29.67	1	PR	1.3	2.5
<i>Paragnetina immarginata</i>	09020209049149	14.33			--	1.2	
<i>Agnatina</i>	09020209050		7.33	2	PR		0.6
<i>Agnatina capitata</i>	09020209050152	7.33		2	PR	0.6	
Aeshnidae	09020301	0.33	0.33		--	0.0	0.0
<i>Boyeria</i>	09020301004	1.00	1.00	2	PR	0.1	0.1
<i>Cordulegaster</i>	09020303019	0.33	0.33	3	PR	0.0	0.0
<i>Hetaerina</i>	09020307044	0.33	0.33	6	PR	0.0	0.0
<i>Baetis</i>	09020401001	0.33	22.67	4	CG	0.0	1.9
<i>Baetis flavistriga</i>	09020401001004	18.33			--	1.5	
<i>Baetis pluto</i>	09020401001009	4.00			--	0.3	
<i>Acerpenna</i>	09020401007	0.67	0.67	5	CG	0.1	0.1
<i>Acentrella</i>	09020401008		0.67	3	CG		0.1
<i>Acentrella turbida</i>	09020401008021	0.67			--	0.1	
<i>Plauditus</i>	09020401012	2.33	2.33		CG	0.2	0.2
<i>Heptagenia</i>	09020402010	1.67	1.67	2	SC	0.1	0.1
<i>Stenacron</i>	09020402014	1.00	1.00	7	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015		21.00	4	SC		1.8
<i>Maccaffertium luteum</i>	09020402015049	21.00			--	1.8	
Leptophlebiidae	09020406	1.00	1.00		--	0.1	0.1
<i>Ephemerella</i>	09020410035	6.67	6.67	1	CG	0.6	0.6
<i>Eurylophella</i>	09020410036	0.33	31.33	3	CG	0.0	2.6
<i>Eurylophella funeralis</i>	09020410036115	31.00			SH	2.6	
<i>Arctopsyche</i>	09020604012		28.33		CF		2.4
<i>Arctopsyche ladogensis</i>	09020604012022	28.33			--	2.4	
<i>Parapsyche</i>	09020604013	7.00	7.00	0	CF	0.6	0.6
<i>Cheumatopsyche</i>	09020604015	3.33	3.33	5	CF	0.3	0.3
<i>Hydropsyche</i>	09020604016	17.00	436.33	4	CF	1.4	36.7
<i>Hydropsyche bronta</i>	09020604016029	4.33			--	0.4	
<i>Hydropsyche morosa</i>	09020604016030	1.00			--	0.1	
<i>Hydropsyche sparna</i>	09020604016032	94.67			--	8.0	
<i>Hydropsyche leonardi</i>	09020604016044	319.33			--	26.9	
<i>Rhyacophila</i>	09020605019	0.67	5.33	2	PR	0.1	0.4



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**Log Number: 2837**      Subsample Factor: X1      Replicates: 3      Calculated: 10/18/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Rhyacophila acutiloba</i>	09020605019056	0.33			PR	0.0	
<i>Rhyacophila fuscula</i>	09020605019060	4.33			PR	0.4	
<i>Glossosoma</i>	09020606020	2.00	2.00	0	SC	0.2	0.2
<i>Hydroptila</i>	09020607026	0.33	0.33	6	P	0.0	0.0
<i>Brachycentrus</i>	09020609043		85.67	0	CF		7.2
<i>Brachycentrus appalachia</i>	09020609043096	85.67			--	7.2	
<i>Micrasema</i>	09020609044	0.33	0.33	2	SH	0.0	0.0
<i>Lepidostoma</i>	09020611064	2.33	2.33	1	SH	0.2	0.2
<i>Helicopsyche</i>	09020616070		1.67	3	SC		0.1
<i>Helicopsyche borealis</i>	09020616070137	1.67			--	0.1	
<i>Ceraclea</i>	09020618072	7.33	7.33	3	CG	0.6	0.6
<i>Apatania</i>	09020619061	1.00	1.00		SC	0.1	0.1
<i>Nigronia</i>	09020701003		0.33	0	PR		0.0
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.0	
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.0	0.0
<i>Thienemannimyia</i>	09021011020		8.00	3	PR		0.7
<i>Thienemannimyia group</i>	09021011020041	8.00			--	0.7	
<i>Potthastia</i>	09021011026		3.67	2	CG		0.3
<i>Potthastia gaedii</i>	09021011026045	3.67			--	0.3	
<i>Corynoneura</i>	09021011036	0.67	0.67	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		168.67	7	SH		14.2
<i>Cricotopus bicinctus</i>	09021011037057	168.67			--	14.2	
<i>Eukiefferiella</i>	09021011041		61.00	8	CG		5.1
<i>Eukiefferiella brehmi group</i>	09021011041073	5.67			--	0.5	
<i>Eukiefferiella devonica group</i>	09021011041083	1.67			CG	0.1	
<i>Eukiefferiella discoloripes</i>	09021011041085	53.67			--	4.5	
<i>Nanocladius</i>	09021011049			3	CG		
<i>Parametriocnemus</i>	09021011053	1.00	1.00	5	CG	0.1	0.1
<i>Rheocricotopus</i>	09021011057	2.00	2.00	6	CG	0.2	0.2
<i>Synorthocladius</i>	09021011061	0.67	0.67	2	CG	0.1	0.1
<i>Thienemanniella</i>	09021011062	15.33	15.33	6	CG	1.3	1.3
<i>Tvetenia</i>	09021011065		11.00	5	CG		0.9
<i>Tvetenia bavarica group</i>	09021011065111	11.00			--	0.9	
<i>Micropsectra</i>	09021011070	5.67	5.67	7	CG	0.5	0.5
<i>Rheotanytarsus</i>	09021011072		63.33	6	CF		5.3
<i>Rheotanytarsus exiguus group</i>	09021011072127	23.00			CF	1.9	
<i>Rheotanytarsus pellucidus</i>	09021011072128	40.33			CF	3.4	



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		Actual	Adjusted			Actual	Adjusted
<i>Sublettea</i>	09021011075	1.67	1.67		--	0.1	0.1
<i>Tanytarsus</i>	09021011076	4.67	4.67	6	CF	0.4	0.4
<i>Microtendipes</i>	09021011094		0.33	6	CF		0.0
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.0	
<i>Polypedilum</i>	09021011102		71.33	6	SH		6.0
<i>Polypedilum aviceps</i>	09021011102181	71.33			--	6.0	
<i>Simulium</i>	09021012047	3.00	3.00	4	CF	0.3	0.3
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.0	0.0
<i>Roederiodes</i>	09021016058	0.67	0.67	3	PR	0.1	0.1
<i>Neoplasta</i>	09021016064	4.33	4.33		PR	0.4	0.4
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	0.0	0.0
<i>Optioservus</i>	09021113067		16.67	3	SC		1.4
<i>Optioservus elegans</i>	09021113067051	1.00			--	0.1	
<i>Optioservus tardella</i>	09021113067052	15.67			--	1.3	
<i>Stenelmis</i>	09021113070	1.33	1.33	5	SC	0.1	0.1
<i>Atractides</i>	09030102002	1.00	1.00		--	0.1	0.1
<i>Amnicola</i>	10010104013	0.33	0.33		SC	0.0	0.0