



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

Station Information

Station Number: S-444	River Basin:	Androscoggin
Waterbody: Sunday River - Station 444	HUC8 Name:	Lower Androscoggin
Town: Newry	Latitude:	44 29 30.32 N
Directions: COVERED BRIDGE OFF OF SUNDAY RIVER RD - 100 YDS UPSTREAM	Longitude:	70 50 40.74 W
	Stream Order:	4

Sample Information

Log Number: 2682	Type of Sample:	ROCK BAG	Date Deployed:	7/31/2018
Subsample Factor: X1	Replicates:	3	Date Retrieved:	8/28/2018

Classification Attainment

Statutory Class: A	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	0.59	Class A, B, or C	1.00
Class B	0.40	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.95
Class A or B	1.00	Class B or C or Non-Attainment	0.05
Class C or Non-Attainment	0.00		

Model Variables

01 Total Mean Abundance	344.67	18 Relative Abundance Ephemeroptera	0.13
02 Generic Richness	51.00	19 EPT Generic Richness	25.00
03 Plecoptera Mean Abundance	19.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	13.47
04 Ephemeroptera Mean Abundance	44.67	23 Relative Generic Richness- Plecoptera	0.14
05 Shannon-Wiener Generic Diversity	4.10	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	46.13
06 Hilsenhoff Biotic Index	4.78	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	7.00
07 Relative Abundance - Chironomidae	0.55	28 EP Generic Richness/14	1.21
08 Relative Generic Richness Diptera	0.43	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	62.00		
11 <i>Cheumatopsyche</i> Abundance	1.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.14		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	1.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	15.50		
17 Chironomini Abundance (Family Functional Group)	20.21		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Orthocladius</i>	21.21
2	<i>Hydropsyche</i>	17.99
3	<i>Cricotopus</i>	10.95
4	<i>Paraleptophlebia</i>	6.57
5	<i>Polypedilum</i>	5.28



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Station Number: S-444 Town: Newry Date Deployed: 7/31/2018
Log Number: 2682 Waterbody: Sunday River - Station 444 Date Retrieved: 8/28/2018

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 18.5 deg C
Dissolved Oxygen: 9.81 mg/l
Dissolved Oxygen Saturation: 104.6 %
Specific Conductance: 22.7 uS/cm
Velocity: 27.4 cm/s
pH: 6.27
Wetted Width: 24 m
Bankfull Width: 33 m
Depth: 36 cm

Waterbody Information - Retrieval

Temperature: 19.6 deg C
Dissolved Oxygen: 10.1 mg/l
Dissolved Oxygen Saturation: 111 %
Specific Conductance: 25.7 uS/cm
Velocity: 18.3 cm/s
pH: 6.41
Wetted Width: 22 m
Bankfull Width: 33 m
Depth: 30 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Open	Mountainous	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Above Road Crossing	Bedrock	10 %
	Main Stem	Boulder	20 %
		Gravel	15 %
		Rubble/Cobble	40 %
		Sand	15 %

Landcover Summary - 2004 Data

Total Area (ac)	26827	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	0.2	Tilled Agriculture %	0.2
		Low Int. Dev. %	0.3	Upland Woody %	97.4	Grassland %	1.2
		Development %	0.3	Natural %	99.5	Human Altered %	0.5
						Impervious %	0.1

Sample Comments

Fish, salamander.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-444

Waterbody: Sunday River - Station 444

Town: Newry

Log Number: 2682

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>Pteronarcys</i>	09020205023	1.00	2.33	0	SH	0.3	0.7
<i>Pteronarcys biloba</i>	09020205023061	1.33			--	0.4	
Perlodidae	09020207	1.67	1.67		--	0.5	0.5
<i>Isoperla</i>	09020207026	12.00	12.00	2	PR	3.5	3.5
<i>Haploperla</i>	09020208037	0.67	0.67	1	PR	0.2	0.2
<i>Sweltsa</i>	09020208040	1.67	1.67		PR	0.5	0.5
<i>Acroneuria</i>	09020209042	0.33	0.33	0	PR	0.1	0.1
<i>Agnetina</i>	09020209050		0.67	2	PR		0.2
<i>Agnetina capitata</i>	09020209050152	0.67		2	PR	0.2	
<i>Boyeria</i>	09020301004	0.33	0.33	2	PR	0.1	0.1
<i>Centroptilum</i>	09020401003	0.67	0.67	2	CG	0.2	0.2
<i>Acerpenna</i>	09020401007		4.67	5	CG		1.4
<i>Acerpenna macdunnoughi</i>	09020401007001	4.33			--	1.3	
<i>Acerpenna pygmaea</i>	09020401007011	0.33			--	0.1	
<i>Plauditus</i>	09020401012	3.00	3.00		CG	0.9	0.9
<i>Iswaeon</i>	09020401015		1.67		--		0.5
<i>Iswaeon anoka</i>	09020401015001	1.67			--	0.5	
<i>Stenacron</i>	09020402014		0.33	7	SC		0.1
<i>Stenacron interpunctatum</i>	09020402014045	0.33			--	0.1	
<i>Maccaffertium</i>	09020402015	2.00	6.67	4	SC	0.6	1.9
<i>Maccaffertium vicarium</i>	09020402015055	4.67			--	1.4	
Leptophlebiidae	09020406	0.33			--	0.1	
<i>Habrophlebia</i>	09020406023		0.34		--		0.1
<i>Habrophlebia vibrans</i>	09020406023072	0.33			--	0.1	
<i>Paraleptophlebia</i>	09020406026	22.33	22.66	1	CG	6.5	6.6
<i>Ephemerella</i>	09020410035	2.00	2.00	1	CG	0.6	0.6
<i>Eurylophella</i>	09020410036		2.67	3	CG		0.8
<i>Eurylophella funeralis</i>	09020410036115	2.67			SH	0.8	
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.1	0.1
<i>Cheumatopsyche</i>	09020604015	1.67	1.67	5	CF	0.5	0.5
<i>Hydropsyche</i>	09020604016	34.33	62.00	4	CF	10.0	18.0
<i>Hydropsyche bronta</i>	09020604016029	1.67			--	0.5	
<i>Hydropsyche morosa</i>	09020604016030	1.00			--	0.3	
<i>Hydropsyche slossonae</i>	09020604016031	22.33			--	6.5	
<i>Hydropsyche sparna</i>	09020604016032	2.67			--	0.8	
<i>Rhyacophila</i>	09020605019		1.33	2	PR		0.4



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Replicates: 3

Calculated: 2/19/2019

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		Actual	Adjusted			Actual	Adjusted
<i>Rhyacophila acutiloba</i>	09020605019056	0.33			PR	0.1	
<i>Rhyacophila minora</i>	09020605019063	1.00			PR	0.3	
<i>Hydroptila</i>	09020607026	6.67	6.67	6	P	1.9	1.9
<i>Oxyethira</i>	09020607028	2.33	2.33	3	P	0.7	0.7
<i>Oligostomis</i>	09020608039	0.33	0.33	2	PR	0.1	0.1
<i>Brachycentrus</i>	09020609043		5.33	0	CF		1.5
<i>Brachycentrus appalachia</i>	09020609043096	5.33			--	1.5	
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.1	0.1
<i>Hexatoma</i>	09021001008	0.33	0.33	2	PR	0.1	0.1
<i>Bezzia/palpomyia</i>	09021010043	0.33	0.33	6	PR	0.1	0.1
Chironomidae	09021011	2.00			--	0.6	
<i>Ablabesmyia</i>	09021011001	2.67	2.69	8	PR	0.8	0.8
<i>Nilotanytus</i>	09021011012		1.35	6	PR		0.4
<i>Nilotanytus fimbriatus</i>	09021011012027	1.33			--	0.4	
<i>Paramerina</i>	09021011013	4.67	4.72		--	1.4	1.4
<i>Thienemannimyia</i>	09021011020		5.39	3	PR		1.6
<i>Thienemannimyia group</i>	09021011020041	5.33			--	1.5	
<i>Trissopelopia</i>	09021011021	1.33	1.35		PR	0.4	0.4
<i>Potthastia</i>	09021011026		8.76	2	CG		2.5
<i>Potthastia gaedii</i>	09021011026045	8.67			--	2.5	
<i>Cricotopus</i>	09021011037	11.33	37.73	7	SH	3.3	10.9
<i>Cricotopus bicinctus</i>	09021011037057	26.00			--	7.5	
<i>Limnophyes</i>	09021011047	0.67	0.67	8	CG	0.2	0.2
<i>Orthocladius</i>	09021011050	6.00	73.10	6	CG	1.7	21.2
<i>Orthocladius annectens</i>	09021011050092	65.00			--	18.9	
<i>Orthocladius lignicola</i>	09021011050100	1.33			--	0.4	
<i>Parametriocnemus</i>	09021011053	7.33	7.41	5	CG	2.1	2.2
<i>Psectrocladius</i>	09021011056	2.67	2.69	8	CG	0.8	0.8
<i>Rheocricotopus</i>	09021011057	1.33	1.35	6	CG	0.4	0.4
<i>Tvetenia</i>	09021011065		0.67	5	CG		0.2
<i>Tvetenia vitracies</i>	09021011065113	0.67			--	0.2	
<i>Micropsectra</i>	09021011070	13.33	13.47	7	CG	3.9	3.9
<i>Rheotanytarsus</i>	09021011072		5.39	6	CF		1.6
<i>Rheotanytarsus exiguus group</i>	09021011072127	2.00			CF	0.6	
<i>Rheotanytarsus pellucidus</i>	09021011072128	3.33			CF	1.0	
<i>Tanytarsus</i>	09021011076	4.00	4.04	6	CF	1.2	1.2
<i>Microtendipes</i>	09021011094		2.02	6	CF		0.6
<i>Microtendipes pedellus group</i>	09021011094166	2.00			--	0.6	



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<i>Polypedilum</i>	09021011102		18.19	6	SH		5.3
<i>Polypedilum aviceps</i>	09021011102181	17.33			--	5.0	
<i>Polypedilum illinoense group</i>	09021011102185	0.67			--	0.2	
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	0.1	0.1
<i>Promoresia</i>	09021113069		7.33		--		2.1
<i>Promoresia tardella</i>	09021113069052	7.33			--	2.1	