



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

Station Information

Station Number: S-356	River Basin: Androscoggin
Waterbody: Stetson Brook - Station 356	HUC8 Name: Lower Androscoggin
Town: Lewiston	Latitude: 44° 07' 41.710" N
Directions: 65 M BELOW STETSON RD. CROSSING	Longitude: 70° 10' 56.559" W
	Stream Order: 1

Sample Information

Log Number: 3053	Type of Sample: ROCK BAG	Date Deployed: 7/19/2023
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/16/2023

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 6/26/2024
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 6/3/2024	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.74	Class A, B, or C	1.00
Class B	0.25	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.99
Class A or B	1.00	Class B or C or Non-Attainment	0.01
Class C or Non-Attainment	0.00		

Model Variables

01 Total Mean Abundance	332.33	18 Relative Abundance Ephemeroptera	0.32
02 Generic Richness	61.00	19 EPT Generic Richness	17.00
03 Plecoptera Mean Abundance	2.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.34
04 Ephemeroptera Mean Abundance	105.33	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.68	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	16.34
06 Hilsenhoff Biotic Index	4.51	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	65.00
07 Relative Abundance - Chironomidae	0.28	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.44	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	27.02		
11 <i>Cheumatopsyche</i> Abundance	12.31		
12 EPT Generic Richness/ Diptera Generic Richness	0.63		
13 Relative Abundance - Oligochaeta	0.09		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	26.19		
17 Chironomini Abundance (Family Functional Group)	22.16		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Maccaffertium</i>	19.56
2	<i>Hydropsyche</i>	8.13
3	<i>Rheotanytarsus</i>	6.16
4	<i>Nilotanypus</i>	6.06
5	<i>Chimarra</i>	5.82



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

Station Number: S-356 Town: Lewiston Date Deployed: 7/19/2023
Log Number: 3053 Waterbody: Stetson Brook - Station 356 Date Retrieved: 8/16/2023

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment		Waterbody Information - Retrieval	
Temperature:	25.1 deg C	Temperature:	19.7 deg C
Dissolved Oxygen:	8.14 mg/l	Dissolved Oxygen:	8.97 mg/l
Dissolved Oxygen Saturation:	99.1 %	Dissolved Oxygen Saturation:	98.3 %
Specific Conductance:	126.5 uS/cm	Specific Conductance:	113.9 uS/cm
Velocity:	22 cm/s	Velocity:	9 cm/s
pH:	7.28	pH:	6.98
Wetted Width:	4.3 m	Wetted Width:	4.4 m
Bankfull Width:	4.4 m	Bankfull Width:	
Depth:	32 cm	Depth:	35 cm

Water Chemistry - 7/19/2023

Chloride	14 mg/l	Nitrate + Nitrite As Nitrogen	0.065 mg/l
Nitrate As Nitrogen	0.06 mg/l	Nitrite As Nitrogen	<0.01 mg/l
Orthophosphate As Phosphorus	8 ug/l	Total Alkalinity	30 mg/l
Total Kjeldahl Nitrogen (organic A)	0.8 mg/l	Total Phosphorus Mixed Forms (po	49 ug/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Dense	Flat
Upland Conifer		
Upland Hardwood		
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Below Agriculture NPS	Boulder 30 %
Urban Runoff	Below Urban NPS	Gravel 15 %
		Rubble/Cobble 35 %
		Sand 20 %

Landcover Summary - 2004 Data

Total Area (ac)	1554	High Int. Dev. %	0.3	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.4	Wetland %	4.5	Tilled Agriculture %	4.9
		Low Int. Dev. %	4.0	Upland Woody %	67.7	Grassland %	16.6
		Development %	4.8	Natural %	72.3	Human Altered %	27.7
						Impervious %	4.6
Total Land (ac)	1554	High Int. Dev. %	0.3	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.4	Wetland %	4.5	Tilled Agriculture %	4.9
		Low Int. Dev. %	4.0	Upland Woody %	67.7	Grassland %	16.6
		Development %	4.8	Natural %	72.3	Human Altered %	27.7
						Impervious %	4.6

SEWER SMELL



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

Station Number: S-356

Waterbody: Stetson Brook - Station 356

Town: Lewiston

Log Number: 3053

Subsample Factor: X1

Replicates: 3

Calculated: 6/3/2024

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Prostoma</i>	04010101001	2.00	2.00		--	0.6	0.6
Lumbriculidae	08020101	6.33	6.33		--	1.9	1.9
<i>Stylogrilus</i>	08020101004		1.00		--		0.3
<i>Stylogrilus heringianus</i>	08020101004001	1.00			--	0.3	
Enchytraeidae	08020201	0.33	0.33		--	0.1	0.1
Naididae	08020202	14.00			--	4.2	
<i>Pristina</i>	08020202004	0.33	1.03		--	0.1	0.3
<i>Dero</i>	08020202007	2.67	8.27		CG	0.8	2.5
<i>Nais</i>	08020202009	3.67	11.37		CG	1.1	3.4
<i>Caecidotea</i>	09010101001	0.33	0.33	8	SH	0.1	0.1
<i>Synurella</i>	09010202006		1.33		--		0.4
<i>Synurella chamberlaini</i>	09010202006001	1.33			--	0.4	
<i>Paracapnia</i>	09020203018	2.33	2.33	1	SH	0.7	0.7
<i>Boyeria</i>	09020301004		0.67	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	0.67			--	0.2	
<i>Baetis</i>	09020401001		13.00	4	CG		3.9
<i>Baetis flavistriga</i>	09020401001004	3.00			--	0.9	
<i>Baetis pluto</i>	09020401001009	10.00			--	3.0	
<i>Acerpenna</i>	09020401007		6.33	5	CG		1.9
<i>Acerpenna macdunnoughi</i>	09020401007001	2.33			--	0.7	
<i>Acerpenna pygmaea</i>	09020401007011	4.00			--	1.2	
<i>Dipheter</i>	09020401013		5.00		--		1.5
<i>Dipheter hageni</i>	09020401013001	5.00			--	1.5	
<i>Leucrocota</i>	09020402011	4.00	4.00	1	SC	1.2	1.2
<i>Maccaffertium</i>	09020402015	54.00	65.00	4	SC	16.2	19.6
<i>Maccaffertium modestum</i>	09020402015051	1.00			--	0.3	
<i>Maccaffertium vicarium</i>	09020402015055	10.00			--	3.0	
<i>Isonychia</i>	09020404018	3.00	3.00	2	CF	0.9	0.9
Leptophlebiidae	09020406	2.33	2.33		--	0.7	0.7
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.1	0.1
<i>Eurylophella</i>	09020410036	1.00	1.00	3	CG	0.3	0.3
<i>Teloganopsis</i>	09020410041	5.33	5.33		--	1.6	1.6
<i>Chimarra</i>	09020601003		19.33	2	CF		5.8
<i>Chimarra aterrima</i>	09020601003002	19.33			--	5.8	
<i>Polycentropus</i>	09020603010	2.00	2.00	6	PR	0.6	0.6
Hydropsychidae	09020604	1.00			--	0.3	
<i>Cheumatopsyche</i>	09020604015	12.00	12.31	5	CF	3.6	3.7



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

Station Number: S-356
Log Number: 3053

Waterbody: Stetson Brook - Station 356
Subsample Factor: X1

Town: Lewiston
Replicates: 3
Calculated: 6/3/2024

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche</i>	09020604016	4.33	27.02	4	CF	1.3	8.1
<i>Hydropsyche sparna</i>	09020604016032	7.33			--	2.2	
<i>Hydropsyche betteni</i>	09020604016037	14.67			--	4.4	
Glossosomatidae	09020606				--		
<i>Glossosoma</i>	09020606020	0.33	0.33	0	SC	0.1	0.1
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.1	0.1
<i>Nigronia</i>	09020701003		1.67	0	PR		0.5
<i>Nigronia serricornis</i>	09020701003003	1.67			--	0.5	
<i>Limonia</i>	09021001010	0.33	0.33	6	SH	0.1	0.1
Chironomidae	09021011	0.67			--	0.2	
<i>Ablabesmyia</i>	09021011001	2.33	2.35	8	PR	0.7	0.7
<i>Nilotanytus</i>	09021011012		20.14	6	PR		6.1
<i>Nilotanytus fimbriatus</i>	09021011012027	20.00			--	6.0	
<i>Rheopelopia</i>	09021011017				PR		
<i>Thienemannimyia</i>	09021011020		3.69	3	PR		1.1
<i>Thienemannimyia group</i>	09021011020041	3.67			--	1.1	
<i>Cardiocladius</i>	09021011034	0.33	0.34	5	PR	0.1	0.1
<i>Corynoneura</i>	09021011036	2.33	2.35	7	CG	0.7	0.7
<i>Cricotopus</i>	09021011037		0.34	7	SH		0.1
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.1	
<i>Eukiefferiella</i>	09021011041		0.67	8	CG		0.2
<i>Eukiefferiella brehmi group</i>	09021011041073	0.67			--	0.2	
<i>Orthocladius</i>	09021011050			6	CG		
<i>Parametriocnemus</i>	09021011053	3.33	3.36	5	CG	1.0	1.0
<i>Rheocricotopus</i>	09021011057	1.00	1.01	6	CG	0.3	0.3
<i>Thienemanniella</i>	09021011062	8.67	8.73	6	CG	2.6	2.6
<i>Tvetenia</i>	09021011065		3.02	5	CG		0.9
<i>Tvetenia vitracies</i>	09021011065113	0.33			--	0.1	
<i>Tvetenia paucunca</i>	09021011065114	2.67			--	0.8	
<i>Cladotanytarsus</i>	09021011068	1.33	1.34	7	CG	0.4	0.4
<i>Rheotanytarsus</i>	09021011072		20.48	6	CF		6.2
<i>Rheotanytarsus exiguus group</i>	09021011072127	19.67			CF	5.9	
<i>Rheotanytarsus pellucidus</i>	09021011072128	0.67			CF	0.2	
<i>Stempellinella</i>	09021011074	1.33	1.34	2	--	0.4	0.4
<i>Tanytarsus</i>	09021011076	1.33	1.34	6	CF	0.4	0.4
<i>Cryptochironomus</i>	09021011082	2.00	2.01	8	PR	0.6	0.6
<i>Dicrotendipes</i>	09021011085	0.33	0.34	8	CG	0.1	0.1



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

Station Number: S-356
Log Number: 3053

Waterbody: Stetson Brook - Station 356
Subsample Factor: X1

Town: Lewiston
Replicates: 3
Calculated: 6/3/2024

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Microtendipes</i>	09021011094		2.35	6	CF		0.7
<i>Microtendipes pedellus group</i>	09021011094166	2.33			--	0.7	
<i>Paratendipes</i>	09021011100	0.67	0.67	8	CG	0.2	0.2
<i>Polypedilum</i>	09021011102		12.42	6	SH		3.7
<i>Polypedilum aviceps</i>	09021011102181	7.00			--	2.1	
<i>Polypedilum flavum</i>	09021011102182	2.33			--	0.7	
<i>Polypedilum scalaenum group</i>	09021011102189	3.00			--	0.9	
<i>Stenochironomus</i>	09021011105	0.33	0.34	5	CG	0.1	0.1
<i>Stictochironomus</i>	09021011106	3.00	3.02	9	CG	0.9	0.9
<i>Tribelos</i>	09021011107	1.00	1.01	5	CG	0.3	0.3
<i>Rheosmittia</i>	09021011122	0.67	0.67		--	0.2	0.2
<i>Simulium</i>	09021012047	14.33	14.33	4	CF	4.3	4.3
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Psephenus</i>	09021108058		2.00	4	SC		0.6
<i>Psephenus herricki</i>	09021108058028	2.00			--	0.6	
<i>Microcyloopus</i>	09021113066		0.67	3	--		0.2
<i>Microcyloopus pusillus</i>	09021113066041	0.67			--	0.2	
<i>Optioservus</i>	09021113067		0.33	3	SC		0.1
<i>Optioservus tardella</i>	09021113067052	0.33			--	0.1	
<i>Stenelmis</i>	09021113070	8.00	8.33	5	SC	2.4	2.5
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.1	
<i>Ferrissia</i>	10010204035	0.67	0.67		SC	0.2	0.2
<i>Pisidium</i>	10020201002	8.67	8.67		CF	2.6	2.6