



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

Station Information

Station Number: S-999	River Basin: Androscoggin
Waterbody: Cupsuptic River - Station 999	HUC8 Name: Upper Androscoggin
Town: Upper Cupsuptic Twp	Latitude: 45° 04' 56.421" N
Directions: CAMPSITE W-12	Longitude: 70° 53' 31.275" W
	Stream Order: 3

Sample Information

Log Number: 3034	Type of Sample: ROCK BAG	Date Deployed: 7/24/2023
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/21/2023

Classification Attainment

Statutory Class: AA	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	0.96	Class C	0.00
Class B	0.04	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	288.00	18 Relative Abundance Ephemeroptera	0.16
02 Generic Richness	49.00	19 EPT Generic Richness	27.00
03 Plecoptera Mean Abundance	8.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	6.14
04 Ephemeroptera Mean Abundance	46.33	23 Relative Generic Richness- Plecoptera	0.10
05 Shannon-Wiener Generic Diversity	3.87	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	3.04
06 Hilsenhoff Biotic Index	2.35	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	1.09
07 Relative Abundance - Chironomidae	0.15	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	46.67		
11 <i>Cheumatopsyche</i> Abundance	1.33		
12 EPT Generic Richness/ Diptera Generic Richness	1.69		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	4.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.00		
17 Chironomini Abundance (Family Functional Group)	4.78		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Brachycentrus</i>	23.73
2	<i>Hydropsyche</i>	16.20
3	<i>Glossosoma</i>	13.77
4	<i>Baetis</i>	9.95
5	<i>Tvetenia</i>	4.86



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Station Number: S-999 Town: Upper Cupsuptic Twp Date Deployed: 7/24/2023
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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 18 deg C
Dissolved Oxygen: 9.41 mg/l
Dissolved Oxygen Saturation: 104 %
Specific Conductance: 26.1 uS/cm
Velocity: 41 cm/s
pH: 6.52
Wetted Width: 13 m
Bankfull Width: 13.5 m
Depth: 43 cm

Waterbody Information - Retrieval

Temperature: 16.4 deg C
Dissolved Oxygen: 9.82 mg/l
Dissolved Oxygen Saturation: 105.2 %
Specific Conductance: 24 uS/cm
Velocity: 49 cm/s
pH: 6.11
Wetted Width: 14 m
Bankfull Width: 14 m
Depth: 48 cm

Water Chemistry - 7/24/2023

Chloride	<1 mg/l	Nitrate + Nitrite As Nitrogen	0.095 mg/l
Nitrate As Nitrogen	0.09 mg/l	Nitrite As Nitrogen	<0.01 mg/l
Orthophosphate As Phosphorus	2 ug/l	Total Alkalinity	9 mg/l
Total Kjeldahl Nitrogen (organic A)	0.3 mg/l	Total Phosphorus Mixed Forms (po	11 ug/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Conifer	Open	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Logging	Above Forestry NPS	Boulder	50 %
	Below Forestry NPS	Gravel	15 %
		Rubble/Cobble	25 %
		Sand	10 %

Landcover Summary - 2004 Data

Sample Comments



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-999 Waterbody: Cupsuptic River - Station 999 Town: Upper Cupsuptic Twp
Log Number: 3034 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
DugesIIDae	03010102	0.33	0.33		--	0.1	0.1
<i>Nais</i>	08020202009	2.33	2.33		CG	0.8	0.8
Isotomidae	09020102	0.67	0.67		--	0.2	0.2
<i>Pteronarcys</i>	09020205023		2.00	0	SH		0.7
<i>Pteronarcys biloba</i>	09020205023061	2.00			--	0.7	
<i>Isoperla</i>	09020207026	1.33	1.33	2	PR	0.5	0.5
<i>Cultus</i>	09020207028	0.33	0.33		PR	0.1	0.1
Perlidae	09020209	1.00			--	0.3	
<i>Acroneuria</i>	09020209042	0.33	0.42	0	PR	0.1	0.1
<i>Agnatina</i>	09020209050	2.33	4.24	2	PR	0.8	1.5
<i>Agnatina capitata</i>	09020209050152	1.00		2	PR	0.3	
Aeshnidae	09020301	1.00	1.00		--	0.3	0.3
<i>Baetis</i>	09020401001	0.33	28.67	4	CG	0.1	10.0
<i>Baetis flavistriga</i>	09020401001004	1.67			--	0.6	
<i>Baetis pluto</i>	09020401001009	4.67			--	1.6	
<i>Baetis tricaudatus</i>	09020401001012	22.00			--	7.6	
<i>Iswaeon</i>	09020401015	1.00	1.00		--	0.3	0.3
<i>Epeorus</i>	09020402009	1.00	1.00	0	SC	0.3	0.3
<i>Heptagenia</i>	09020402010	0.33	0.33	2	SC	0.1	0.1
<i>Rhithrogena</i>	09020402013	4.33	4.33	0	SC	1.5	1.5
<i>Maccaffertium</i>	09020402015		0.67	4	SC		0.2
<i>Maccaffertium vicarium</i>	09020402015055	0.67			--	0.2	
Leptophlebiidae	09020406	1.67	1.67		--	0.6	0.6
<i>Paraleptophlebia</i>	09020406026	2.00	2.00	1	CG	0.7	0.7
<i>Ephemerella</i>	09020410035	4.33	5.00	1	CG	1.5	1.7
<i>Ephemerella aurivillii</i>	09020410035104	0.67			--	0.2	
<i>Serratella</i>	09020410037		1.67	2	CG		0.6
<i>Serratella serratoides</i>	09020410037124	1.67			--	0.6	
Philopotamidae	09020601				--		
<i>Dolophilodes</i>	09020601001		0.33	0	CF		0.1
<i>Dolophilodes distincta</i>	09020601001001	0.33			--	0.1	
<i>Arctopsyche</i>	09020604012		0.33		CF		0.1
<i>Arctopsyche ladogensis</i>	09020604012022	0.33			--	0.1	
<i>Cheumatopsyche</i>	09020604015	1.33	1.33	5	CF	0.5	0.5
<i>Hydropsyche</i>	09020604016	16.00	46.67	4	CF	5.6	16.2
<i>Hydropsyche morosa</i>	09020604016030	1.00			--	0.3	
<i>Hydropsyche slossonae</i>	09020604016031	1.00			--	0.3	



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche sparna</i>	09020604016032	28.67			--	10.0	
<i>Rhyacophila</i>	09020605019	0.67	3.67	2	PR	0.2	1.3
<i>Rhyacophila acutiloba</i>	09020605019056	0.67			PR	0.2	
<i>Rhyacophila fuscula</i>	09020605019060	2.33			PR	0.8	
<i>Glossosoma</i>	09020606020	39.67	39.67	0	SC	13.8	13.8
<i>Agapetus</i>	09020606021	0.33	0.33	0	SC	0.1	0.1
<i>Protoptila</i>	09020606022	2.33	2.33	1	SC	0.8	0.8
<i>Brachycentrus</i>	09020609043		68.33	0	CF		23.7
<i>Brachycentrus appalachia</i>	09020609043096	68.33			--	23.7	
<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>Apatania</i>	09020619061	0.67	0.67		SC	0.2	0.2
<i>Hexatoma</i>	09021001008	0.33	0.33	2	PR	0.1	0.1
<i>Limonia</i>	09021001010	0.33	0.33	6	SH	0.1	0.1
Chironomidae	09021011	1.00			--	0.3	
<i>Cricotopus</i>	09021011037	0.33	1.02	7	SH	0.1	0.4
<i>Cricotopus tremulus</i>	09021011037068	0.67			--	0.2	
<i>Eukiefferiella</i>	09021011041		1.37	8	CG		0.5
<i>Eukiefferiella brehmi group</i>	09021011041073	0.67			--	0.2	
<i>Eukiefferiella claripennis group</i>	09021011041075	0.67			--	0.2	
<i>Orthocladius</i>	09021011050	0.33	0.68	6	CG	0.1	0.2
<i>Orthocladius rivicola</i>	09021011050101	0.33			--	0.1	
<i>Parametriocnemus</i>	09021011053	1.00	1.02	5	CG	0.3	0.4
<i>Thienemanniella</i>	09021011062	1.00	1.02	6	CG	0.3	0.4
<i>Tvetenia</i>	09021011065		13.99	5	CG		4.9
<i>Tvetenia vitracies</i>	09021011065113	0.33			--	0.1	
<i>Tvetenia paucunca</i>	09021011065114	13.33			--	4.6	
<i>Micropsectra</i>	09021011070	6.00	6.14	7	CG	2.1	2.1
<i>Rheotanytarsus</i>	09021011072		8.87	6	CF		3.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	2.67			CF	0.9	
<i>Rheotanytarsus pellucidus</i>	09021011072128	6.00			CF	2.1	
<i>Stempellinella</i>	09021011074	2.67	2.73	2	--	0.9	0.9
<i>Tanytarsus</i>	09021011076	0.67	0.68	6	CF	0.2	0.2
<i>Polypedilum</i>	09021011102		4.78	6	SH		1.7
<i>Polypedilum aviceps</i>	09021011102181	4.33			--	1.5	
<i>Polypedilum tritum</i>	09021011102191	0.33			--	0.1	
<i>Odontomesa</i>	09021011121		0.34	4	--		0.1



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Town: Upper Cupsuptic Twp

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>Odontomesa fulva</i>	09021011121001	0.33			--	0.1	
<i>Simulium</i>	09021012047	11.33	11.33	4	CF	3.9	3.9
<i>Atherix</i>	09021015055	1.00	1.00	2	PR	0.3	0.3
<i>Optioservus</i>	09021113067	0.33	6.33	3	SC	0.1	2.2
<i>Optioservus ovalis</i>	09021113067046	1.67			--	0.6	
<i>Optioservus tardella</i>	09021113067052	4.33			--	1.5	
<i>Ferrissia</i>	10010204035	2.33	2.33		SC	0.8	0.8