



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

Station Information

Station Number: S-1141	River Basin: Androscoggin
Waterbody: Twitchell Brook - Station 1141	HUC8 Name: Lower Androscoggin
Town: Greenwood	Latitude: 44 19 33.67 N
Directions: ON RTE 219 (WEST PARIS ROAD), 0.2 MILES WEST OF LITTLE ANDROSCOGGIN RIVER CROSSING. LOOK FOR DOT MARKER ON TREE ON LEFT, ACROSS	Longitude: 70 37 31.69 W
	Stream Order: 4

Sample Information

Log Number: 2657	Type of Sample: ROCK BAG	Date Deployed: 7/16/2018
Subsample Factor: X2	Replicates: 3	Date Retrieved: 8/13/2018

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 12/11/2018
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 12/10/2018	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.43	Class C	0.02
Class B	0.55	NA	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	753.33	18 Relative Abundance Ephemeroptera	0.09
02 Generic Richness	46.00	19 EPT Generic Richness	24.00
03 Plecoptera Mean Abundance	16.00	21 Sum of Abundances: <i>Dicrotendipes,</i> <i>Micropsectra, Parachironomus, Helobdella</i>	0.67
04 Ephemeroptera Mean Abundance	70.00	23 Relative Generic Richness- Plecoptera	0.07
05 Shannon-Wiener Generic Diversity	3.54	25 Sum of Abundances: <i>Cheumatopsyche,</i> <i>Cricotopus, Tanytarsus, Ablabesmyia</i>	88.36
06 Hilsenhoff Biotic Index	4.24	26 Sum of Abundances: <i>Acroneuria,</i> <i>Maccaffertium, Stenonema</i>	16.37
07 Relative Abundance - Chironomidae	0.35	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.71
09 <i>Hydropsyche</i> Abundance	277.33		
11 <i>Cheumatopsyche</i> Abundance	18.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.41		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	15.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	6.70		
17 Chironomini Abundance (Family Functional Group)	53.60		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	36.81
2	<i>Rheotanytarsus</i>	14.14
3	<i>Cricotopus</i>	8.98
4	<i>Polypedilum</i>	6.05
5	<i>Brachycentrus</i>	5.66



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 25.1 deg C
Dissolved Oxygen: 9.65 mg/l
Dissolved Oxygen Saturation: 117.2 %
Specific Conductance: 53 uS/cm
Velocity: 18.3 cm/s
pH: 7.4
Wetted Width: 10.4 m
Bankfull Width: 15 m
Depth: 30 cm

Waterbody Information - Retrieval

Temperature: 20.6 deg C
Dissolved Oxygen: 10.84 mg/l
Dissolved Oxygen Saturation: 120.4 %
Specific Conductance: 46.2 uS/cm
Velocity: 39.6 cm/s
pH: 7.51
Wetted Width: 14.5 m
Bankfull Width: 15 m
Depth: 27 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Conifer	Open	Hilly	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nps Pollution	Above Road Crossing	Boulder	90 %
		Gravel	5 %
		Rubble/Cobble	5 %

Landcover Summary - 2004 Data

Sample Comments

FISH



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

Station Number: S-1141 Waterbody: Twitchell Brook - Station 1141 Town: Greenwood
Log Number: 2657 Subsample Factor: X2 Replicates: 3 Calculated: 12/10/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009	0.67	0.67		CG	0.1	0.1
<i>Pteronarcys</i>	09020205023		0.67	0	SH		0.1
<i>Pteronarcys biloba</i>	09020205023061	0.67			--	0.1	
Perlidae	09020209	2.00			--	0.3	
<i>Acroneuria</i>	09020209042	0.67	13.03	0	PR	0.1	1.7
<i>Acroneuria abnormis</i>	09020209042121	9.33		0	PR	1.2	
<i>Acroneuria lycorias</i>	09020209042125	1.33			--	0.2	
<i>Paragnetina</i>	09020209049		2.30	1	PR		0.3
<i>Paragnetina immarginata</i>	09020209049149	2.00			--	0.3	
<i>Boyeria</i>	09020301004		1.33	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.2	
<i>Baetis</i>	09020401001	0.67	17.33	4	CG	0.1	2.3
<i>Baetis intercalaris</i>	09020401001008	12.67			--	1.7	
<i>Baetis pluto</i>	09020401001009	4.00			--	0.5	
<i>Acerpenna</i>	09020401007	0.67	7.33	5	CG	0.1	1.0
<i>Acerpenna macdunnoughi</i>	09020401007001	6.67			--	0.9	
<i>Plauditus</i>	09020401012	5.33	5.33		CG	0.7	0.7
<i>Epeorus</i>	09020402009	1.33	1.33	0	SC	0.2	0.2
<i>Leucrocuta</i>	09020402011	6.00	6.00	1	SC	0.8	0.8
<i>Maccaffertium</i>	09020402015	0.67	3.33	4	SC	0.1	0.4
<i>Maccaffertium vicarium</i>	09020402015055	2.67			--	0.4	
<i>Isonychia</i>	09020404018	6.67	6.67	2	CF	0.9	0.9
<i>Neoleptophlebia</i>	09020406027	10.67	10.67		--	1.4	1.4
<i>Ephemerella</i>	09020410035	6.67	6.67	1	CG	0.9	0.9
<i>Serratella</i>	09020410037		2.67	2	CG		0.4
<i>Serratella serratoides</i>	09020410037124	2.67			--	0.4	
<i>Tricorythodes</i>	09020411038	2.67	2.67	4	CG	0.4	0.4
<i>Dolophilodes</i>	09020601001		26.00	0	CF		3.5
<i>Dolophilodes distincta</i>	09020601001001	26.00			--	3.5	
<i>Neureclipsis</i>	09020603008	4.67	4.67	7	CF	0.6	0.6
<i>Cheumatopsyche</i>	09020604015	18.00	18.00	5	CF	2.4	2.4
<i>Hydropsyche</i>	09020604016	106.67	277.33	4	CF	14.2	36.8
<i>Hydropsyche morosa</i>	09020604016030	55.33			--	7.3	
<i>Hydropsyche slossonae</i>	09020604016031	1.33			--	0.2	
<i>Hydropsyche sparna</i>	09020604016032	102.67			--	13.6	
<i>Hydropsyche betteni</i>	09020604016037	11.33			--	1.5	
<i>Rhyacophila</i>	09020605019		4.67	2	PR		0.6



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Town: Greenwood

Log Number: 2657

Subsample Factor: X2

Replicates: 3

Calculated: 12/10/2018

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		Actual	Adjusted			Actual	Adjusted
<i>Rhyacophila minora</i>	09020605019063	4.67			PR	0.6	
<i>Hydroptila</i>	09020607026	0.67	0.67	6	P	0.1	0.1
<i>Brachycentrus</i>	09020609043		42.67	0	CF		5.7
<i>Brachycentrus appalachia</i>	09020609043096	42.67			--	5.7	
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.1	0.1
<i>Psilotreta</i>	09020614068		4.00	0	SC		0.5
<i>Psilotreta labida</i>	09020614068133	4.00			--	0.5	
<i>Helicopsyche</i>	09020616070		0.67	3	SC		0.1
<i>Helicopsyche borealis</i>	09020616070137	0.67			--	0.1	
Chironomidae	09021011	1.33			--	0.2	
<i>Thienemannimyia</i>	09021011020		4.02	3	PR		0.5
<i>Thienemannimyia group</i>	09021011020041	4.00			--	0.5	
<i>Zavrelimyia</i>	09021011022	2.67	2.68	8	PR	0.4	0.4
<i>Pagastia</i>	09021011025	0.67	0.67	1	--	0.1	0.1
<i>Corynoneura</i>	09021011036	0.67	0.67	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037	6.67	67.68	7	SH	0.9	9.0
<i>Cricotopus bicinctus</i>	09021011037057	60.67			--	8.1	
<i>Rheocricotopus</i>	09021011057	4.00	4.02	6	CG	0.5	0.5
<i>Thienemanniella</i>	09021011062	0.67	0.67	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		20.10	5	CG		2.7
<i>Tvetenia vitracies</i>	09021011065113	14.67			--	1.9	
<i>Tvetenia paucunca</i>	09021011065114	5.33			--	0.7	
<i>Micropsectra</i>	09021011070	0.67	0.67	7	CG	0.1	0.1
<i>Rheotanytarsus</i>	09021011072		106.54	6	CF		14.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	79.33			CF	10.5	
<i>Rheotanytarsus pellucidus</i>	09021011072128	26.67			CF	3.5	
<i>Tanytarsus</i>	09021011076	2.67	2.68	6	CF	0.4	0.4
<i>Microtendipes</i>	09021011094		8.04	6	CF		1.1
<i>Microtendipes rydalensis group</i>	09021011094168	8.00			--	1.1	
<i>Polypedilum</i>	09021011102		45.56	6	SH		6.0
<i>Polypedilum aviceps</i>	09021011102181	44.00			--	5.8	
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.2	
<i>Simulium</i>	09021012047	2.00	2.00	4	CF	0.3	0.3
<i>Atherix</i>	09021015055	2.67	2.67	2	PR	0.4	0.4
Empididae	09021016	0.67	0.67	6	--	0.1	0.1
<i>Hemerodromia</i>	09021016057	0.67	0.67	3	PR	0.1	0.1
<i>Psephenus</i>	09021108058		2.00	4	SC		0.3
<i>Psephenus herricki</i>	09021108058028	2.00			--	0.3	



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<i>Promoresia</i>	09021113069		12.00		--		1.6
<i>Promoresia tardella</i>	09021113069052	12.00			--	1.6	
<i>Stenelmis</i>	09021113070	2.00	2.00	5	SC	0.3	0.3