



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

Station Information

Station Number: S-664	River Basin: Androscoggin
Waterbody: West Branch Nezinscot River - Station 664	HUC8 Name: Lower Androscoggin
Town: Sumner	Latitude: 44 19 5.01 N
Directions: UPSTREAM OF ATV CROSSING, APPROXIMATELY 1 KM UPSTREAM OF N. BUCKFIELD RD.	Longitude: 70 24 39.27 W
	Stream Order: 4

Sample Information

Log Number: 2661	Type of Sample: ROCK BAG	Date Deployed: 7/18/2018
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/15/2018

Classification Attainment

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

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.86	Class A, B, or C	1.00
Class B	0.13	Non-Attainment	0.00
	Class C	0.00	
	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	567.67	18 Relative Abundance Ephemeroptera	0.16
02 Generic Richness	58.00	19 EPT Generic Richness	28.00
03 Plecoptera Mean Abundance	13.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.67
04 Ephemeroptera Mean Abundance	89.67	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.86	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	24.71
06 Hilsenhoff Biotic Index	3.37	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	58.67
07 Relative Abundance - Chironomidae	0.18	28 EP Generic Richness/14	0.93
08 Relative Generic Richness Diptera	0.31	30 Presence of Class A Indicator Taxa/7	0.86
09 <i>Hydropsyche</i> Abundance	148.96		
11 <i>Cheumatopsyche</i> Abundance	19.71		
12 EPT Generic Richness/ Diptera Generic Richness	1.56		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	13.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	6.67		
17 Chironomini Abundance (Family Functional Group)	51.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	26.24
2	<i>Brachycentrus</i>	17.09
3	<i>Maccaffertium</i>	8.22
4	<i>Polypedilum</i>	7.75
5	<i>Chimarra</i>	6.69



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Station Number: S-664 Town: Sumner Date Deployed: 7/18/2018
Log Number: 2661 Waterbody: West Branch Nezinscot River - Station 664 Date Retrieved: 8/15/2018

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 20.2 deg C
Dissolved Oxygen: 8.57 mg/l
Dissolved Oxygen Saturation: 94.8 %
Specific Conductance: 39.1 uS/cm
Velocity: 45.7 cm/s
pH: 6.81
Wetted Width: 7.2 m
Bankfull Width: 13.3 m
Depth: 33 cm

Waterbody Information - Retrieval

Temperature: 21.8 deg C
Dissolved Oxygen: 8.92 mg/l
Dissolved Oxygen Saturation: 101.9 %
Specific Conductance: 38.3 uS/cm
Velocity: 45.7 cm/s
pH: 6.57
Wetted Width: 7.9 m
Bankfull Width: 13.3 m
Depth: 47 cm

Water Chemistry - 7/11/2018

Nitrate + Nitrite As Nitrogen	0.02 mg/l	Orthophosphate As Phosphorus	1 ug/l
Total Alkalinity	10.5 mg/l	Total Kjeldahl Nitrogen (organic A	0.3 mg/l
Total Phosphorus Mixed Forms (po	26 ug/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Conifer	Partly Open	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Main Stem	Bedrock	5 %
		Boulder	50 %
		Gravel	15 %
		Rubble/Cobble	25 %
		Sand	5 %

Landcover Summary - 2004 Data

Total Area (ac)	18439	High Int. Dev. %	0.0	Water %	1.3	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	4.1	Tilled Agriculture %	0.3
		Low Int. Dev. %	1.0	Upland Woody %	91.0	Grassland %	2.3
		Development %	1.1	Natural %	95.9	Human Altered %	2.8
						Impervious %	1.3
Total Land (ac)	18197	High Int. Dev. %	0.0	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.0	Wetland %	4.1	Tilled Agriculture %	0.3
		Low Int. Dev. %	1.0	Upland Woody %	92.2	Grassland %	2.3
		Development %	1.1	Natural %	97.2	Human Altered %	2.8
						Impervious %	1.3

Sample Comments

SCULPIN, SPIDER



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-664 Waterbody: West Branch Nezinscot River - Station 664 Town: Sumner
Log Number: 2661 Subsample Factor: X1 Replicates: 3 Calculated: 12/12/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Pteronarcys</i>	09020205023		0.33	0	SH		0.1
<i>Pteronarcys biloba</i>	09020205023061	0.33			--	0.1	
<i>Acroneuria</i>	09020209042	5.33	12.00	0	PR	0.9	2.1
<i>Acroneuria abnormis</i>	09020209042121	2.67		0	PR	0.5	
<i>Acroneuria lycorias</i>	09020209042125	4.00			--	0.7	
<i>Paragnetina</i>	09020209049	0.33	1.00	1	PR	0.1	0.2
<i>Paragnetina media</i>	09020209049151	0.67			--	0.1	
<i>Boyeria</i>	09020301004		0.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	0.33			--	0.1	
Gomphidae	09020302	0.33	0.33		--	0.1	0.1
<i>Hagenius</i>	09020302008		0.33	1	PR		0.1
<i>Hagenius brevistylus</i>	09020302008015	0.33			PR	0.1	
<i>Calopteryx</i>	09020307043	0.33	0.33	5	PR	0.1	0.1
<i>Baetis</i>	09020401001		4.67	4	CG		0.8
<i>Baetis intercalaris</i>	09020401001008	4.00			--	0.7	
<i>Baetis pluto</i>	09020401001009	0.67			--	0.1	
<i>Acerpenna</i>	09020401007		13.67	5	CG		2.4
<i>Acerpenna macdunnoughi</i>	09020401007001	2.00			--	0.4	
<i>Acerpenna pygmaea</i>	09020401007011	11.67			--	2.1	
<i>Iswaeon</i>	09020401015		1.67		--		0.3
<i>Iswaeon anoka</i>	09020401015001	1.67			--	0.3	
<i>Leucrocuta</i>	09020402011	1.33	1.33	1	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	23.33	46.67	4	SC	4.1	8.2
<i>Maccaffertium modestum</i>	09020402015051	0.67			--	0.1	
<i>Maccaffertium vicarium</i>	09020402015055	22.67			--	4.0	
<i>Isonychia</i>	09020404018	0.67	13.67	2	CF	0.1	2.4
<i>Isonychia bicolor</i>	09020404018059	13.00			--	2.3	
<i>Ephemerella</i>	09020410035	5.33	5.33	1	CG	0.9	0.9
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.1	0.1
<i>Serratella</i>	09020410037		0.33	2	CG		0.1
<i>Serratella serratoides</i>	09020410037124	0.33			--	0.1	
<i>Tricorythodes</i>	09020411038	2.00	2.00	4	CG	0.4	0.4
<i>Dolophilodes</i>	09020601001		0.33	0	CF		0.1
<i>Dolophilodes distincta</i>	09020601001001	0.33			--	0.1	
<i>Chimarra</i>	09020601003	19.33	38.00	2	CF	3.4	6.7
<i>Chimarra aterrima</i>	09020601003002	13.67			--	2.4	
<i>Chimarra socia</i>	09020601003004	5.00			--	0.9	



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		Actual	Adjusted			Actual	Adjusted
<i>Neureclipsis</i>	09020603008	5.00	5.00	7	CF	0.9	0.9
Hydropsychidae	09020604	0.33			--	0.1	
<i>Cheumatopsyche</i>	09020604015	19.67	19.71	5	CF	3.5	3.5
<i>Hydropsyche</i>	09020604016	81.33	148.96	4	CF	14.3	26.2
<i>Hydropsyche bronta</i>	09020604016029	3.67			--	0.6	
<i>Hydropsyche morosa</i>	09020604016030	22.67			--	4.0	
<i>Hydropsyche sparna</i>	09020604016032	16.33			--	2.9	
<i>Hydropsyche betteni</i>	09020604016037	24.33			--	4.3	
<i>Hydropsyche scalaris species group</i>	09020604016048	0.33			--	0.1	
<i>Macrostemum</i>	09020604018	1.00	1.00	3	CF	0.2	0.2
<i>Rhyacophila</i>	09020605019		0.33	2	PR		0.1
<i>Rhyacophila minora</i>	09020605019063	0.33			PR	0.1	
<i>Brachycentrus</i>	09020609043		97.00	0	CF		17.1
<i>Brachycentrus appalachia</i>	09020609043096	97.00			--	17.1	
<i>Lepidostoma</i>	09020611064	11.67	11.67	1	SH	2.1	2.1
<i>Psilotreta</i>	09020614068		0.67	0	SC		0.1
<i>Psilotreta labida</i>	09020614068133	0.67			--	0.1	
<i>Helicopsyche</i>	09020616070		5.33	3	SC		0.9
<i>Helicopsyche borealis</i>	09020616070137	5.33			--	0.9	
<i>Ceraclea</i>	09020618072	1.00	1.00	3	CG	0.2	0.2
<i>Setodes</i>	09020618076	0.33	0.33	2	CG	0.1	0.1
<i>Triaenodes</i>	09020618077	0.33	0.33	6	SH	0.1	0.1
<i>Oecetis</i>	09020618078	6.33	8.67	8	PR	1.1	1.5
<i>Oecetis avara</i>	09020618078153	2.00			--	0.4	
<i>Oecetis persimilis</i>	09020618078157	0.33			--	0.1	
<i>Nigronia</i>	09020701003		0.67	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.67			--	0.1	
Chironomidae	09021011				--		
<i>Nilotanypus</i>	09021011012		1.00	6	PR		0.2
<i>Nilotanypus fimbriatus</i>	09021011012027	1.00			--	0.2	
<i>Thienemannimyia</i>	09021011020		5.67	3	PR		1.0
<i>Thienemannimyia group</i>	09021011020041	5.67			--	1.0	
<i>Cricotopus</i>	09021011037	0.67	0.67	7	SH	0.1	0.1
<i>Nanocladius</i>	09021011049	1.33	1.33	3	CG	0.2	0.2
<i>Parametrioconemus</i>	09021011053	2.33	2.33	5	CG	0.4	0.4
<i>Rheocricotopus</i>	09021011057	1.00	1.00	6	CG	0.2	0.2
<i>Thienemanniella</i>	09021011062	0.33	0.33	6	CG	0.1	0.1



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<i>Tvetenia</i>	09021011065		3.00	5	CG		0.5
<i>Tvetenia vitracies</i>	09021011065113	2.33			--	0.4	
<i>Tvetenia paucunca</i>	09021011065114	0.67			--	0.1	
<i>Micropsectra</i>	09021011070	0.67	0.67	7	CG	0.1	0.1
<i>Rheotanytarsus</i>	09021011072		32.33	6	CF		5.7
<i>Rheotanytarsus exiguus group</i>	09021011072127	28.67			CF	5.0	
<i>Rheotanytarsus pellucidus</i>	09021011072128	3.67			CF	0.6	
<i>Stempellinella</i>	09021011074	1.00	1.00	2	--	0.2	0.2
<i>Tanytarsus</i>	09021011076	4.33	4.33	6	CF	0.8	0.8
<i>Microtendipes</i>	09021011094		7.33	6	CF		1.3
<i>Microtendipes rydalensis group</i>	09021011094168	7.33			--	1.3	
<i>Polypedilum</i>	09021011102		44.00	6	SH		7.8
<i>Polypedilum aviceps</i>	09021011102181	36.67			--	6.5	
<i>Polypedilum flavum</i>	09021011102182	7.33			--	1.3	
<i>Simulium</i>	09021012047	5.67	5.67	4	CF	1.0	1.0
<i>Atherix</i>	09021015055	2.33	2.33	2	PR	0.4	0.4
Empididae	09021016	0.33	0.33	6	--	0.1	0.1
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Psephenus</i>	09021108058		0.33	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	0.33			--	0.1	
<i>Ectopria</i>	09021109059		0.33	5	SC		0.1
<i>Ectopria nervosa</i>	09021109059029	0.33			--	0.1	
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	0.1	0.1
<i>Optioservus elegans</i>	09021113067051	0.67			--	0.1	
<i>Optioservus tardella</i>	09021113067052	4.67			--	0.8	
<i>Promoresia</i>	09021113069		5.33		--		0.9
<i>Stenelmis</i>	09021113070	2.67	2.67	5	SC	0.5	0.5
<i>Ferrissia</i>	10010204035	0.33	0.33		SC	0.1	0.1
<i>Sphaerium</i>	10020201003	1.33	1.33		CF	0.2	0.2