



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

Station Information

Station Number: S-350	DEP Drainage: Androscoggin
Waterbody: Merrill Brook - Station 350	HUC8: 01040002
Town: Newry	HUC8 Name: Lower Androscoggin
Directions: ABOVE MONKEY RD. BRIDGE CROSSING	Latitude: 44 28 56.42 N
	Longitude: 70 53 4.1 W
	Stream Order: 2

Sample Information

Log Number: 1739	Type of Sample: ROCK BAG	Date Deployed: 7/23/2008
Subsample Factor: X1	Replicates: 2	Date Retrieved: 8/20/2008

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 5/20/2009
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 5/19/2009	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.58	Class A, B, or C	1.00
Class B	0.41	Non-Attainment	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	367.50	18 Relative Abundance Ephemeroptera	0.26
02 Generic Richness	39.00	19 EPT Generic Richness	21.00
03 Plecoptera Mean Abundance	76.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	4.53
04 Ephemeroptera Mean Abundance	97.00	23 Relative Generic Richness- Plecoptera	0.18
05 Shannon-Wiener Generic Diversity	3.80	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.00
06 Hilsenhoff Biotic Index	4.48	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	1.05
07 Relative Abundance - Chironomidae	0.47	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.46	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	2.22		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	1.17		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	1.51		
(Family Functional Group)			
17 Chironomini Abundance (Family	126.24		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Polypedilum</i>	34.35
2	<i>Tallaperla</i>	6.67
3	Perlodidae	6.53
4	<i>Parametriocnemus</i>	6.16
5	<i>Ephemerella</i>	5.58



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Town: Newry

Date Deployed: 7/23/2008

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Waterbody: Merrill Brook - Station 350

Date Retrieved: 8/20/2008

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 15.8 deg C
Dissolved Oxygen: 9.1 mg/l
Specific Conductance: 23 uS/cm
Velocity: 40 cm/s
pH: 6.34
Wetted Width: 4.5 m
Bankfull Width: 7.8 m
Depth: 45 cm

Waterbody Information - Retrieval

Temperature: 12.5 deg C
Dissolved Oxygen: 9.4 mg/l
Specific Conductance: 35 uS/cm
Velocity: 13 cm/s
pH: 6.6
Wetted Width: 3.93 m
Bankfull Width: 7.8 m
Depth: 46 cm

Water Chemistry - Retrieval

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Upland Conifer

Canopy Partly Open

Mountainous Terrain

Upland Hardwood

Stressor

Location

Substrate

Above Road Crossing

Boulder 60 %

Main Stem

Gravel 5 %

Rubble/Cobble 30 %

Sand 5 %

Landcover Summary - 2004 Data

Total Area (ac)	1163	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.1
Total Land (ac)	1163	Med Int. Dev. %	0.0	Wetland %	0.0	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.5	Upland Woody %	75.2	Human Altered %	0.6
		Development %	0.5	Natural %	99.4	Impervious %	0.0

Sample Comments

BAG 3 HIGH AND DRY; BAG 2 DISTURBED (HAD SOME HOLES IN IT)



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

Station Number: S-350

Waterbody: Merrill Brook - Station 350

Town: Newry

Log Number: 1739

Subsample Factor: X1

Replicates: 2

Calculated: 5/19/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Amphinemura</i>	09020201001		1.00	2	SH		0.3
<i>Amphinemura wui</i>	09020201001003	1.00			--	0.3	
<i>Nemoura</i>	09020201002	1.00	1.00	1	SH	0.3	0.3
<i>Leuctra</i>	09020204020	7.00	8.00	0	SH	1.9	2.2
<i>Leuctra truncata</i>	09020204020058	1.00			--	0.3	
<i>Tallaperla</i>	09020206025	24.50	24.50		SH	6.7	6.7
Perlodidae	09020207	24.00	24.00		--	6.5	6.5
<i>Diura</i>	09020207030	2.50	2.50		PR	0.7	0.7
<i>Sweltsa</i>	09020208040	15.00	15.00		PR	4.1	4.1
<i>Baetis</i>	09020401001		20.00	4	CG		5.4
<i>Baetis flavistriga</i>	09020401001004	0.50			--	0.1	
<i>Baetis tricaudatus</i>	09020401001012	19.50			--	5.3	
<i>Acerpenna</i>	09020401007		10.50	5	CG		2.9
<i>Acerpenna macdunnoughi</i>	09020401007001	10.50			--	2.9	
Heptageniidae	09020402	0.50			--	0.1	
<i>Epeorus</i>	09020402009	0.50	0.52	0	SC	0.1	0.1
<i>Heptagenia</i>	09020402010		9.43	2	SC		2.6
<i>Heptagenia diabasia</i>	09020402010035	9.00			--	2.4	
<i>Maccaffertium</i>	09020402015	1.00	1.05	4	SC	0.3	0.3
Leptophlebiidae	09020406	16.50	16.50		--	4.5	4.5
<i>Paraleptophlebia</i>	09020406026	9.00	9.00	1	CG	2.4	2.4
<i>Ephemerella</i>	09020410035		20.50	1	CG		5.6
<i>Ephemerella invaria</i>	09020410035107	20.50			--	5.6	
<i>Eurylophella</i>	09020410036		9.50	3	CG		2.6
<i>Eurylophella funeralis</i>	09020410036115	9.50			SH	2.6	
Hydropsychidae	09020604	0.50			--	0.1	
<i>Parapsyche</i>	09020604013		2.78	0	CF		0.8
<i>Parapsyche apicalis</i>	09020604013023	2.50			--	0.7	
<i>Hydropsyche</i>	09020604016		2.22	4	CF		0.6
<i>Hydropsyche alhedra</i>	09020604016028	0.50			--	0.1	
<i>Hydropsyche ventura</i>	09020604016033	1.50			--	0.4	
<i>Rhyacophila</i>	09020605019	6.00	8.00	2	PR	1.6	2.2
<i>Rhyacophila fuscula</i>	09020605019060	1.50			PR	0.4	
<i>Rhyacophila minor</i>	09020605019063	0.50			PR	0.1	
<i>Psychoglypha</i>	09020610060		0.50	0	SH		0.1
<i>Psychoglypha subborealis</i>	09020610060120	0.50			--	0.1	
<i>Lepidostoma</i>	09020611064	1.00	1.00	1	SH	0.3	0.3
<i>Tipula</i>	09021001002	1.00	1.00	4	SH	0.3	0.3



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		Actual	Adjusted			Actual	Adjusted
<i>Dicranota</i>	09021001005	1.50	1.50	3	PR	0.4	0.4
<i>Hexatoma</i>	09021001008	2.00	2.00	2	PR	0.5	0.5
<i>Bezzia/palpomyia</i>	09021010043	0.50	0.50	6	PR	0.1	0.1
Chironomidae	09021011	1.00			--	0.3	
<i>Rheopelopia</i>	09021011017		0.50		PR		0.1
<i>Rheopelopia acra group</i>	09021011017036	0.50			--	0.1	
<i>Trissopelopia</i>	09021011021		1.01		PR		0.3
<i>Trissopelopia ogemawi</i>	09021011021042	1.00			--	0.3	
<i>Pagastia</i>	09021011025		1.01	1	--		0.3
<i>Pagastia orthogonia</i>	09021011025001	1.00			--	0.3	
<i>Brillia</i>	09021011033		7.04	5	SH		1.9
<i>Brillia parva</i>	09021011033050	4.00			--	1.1	
<i>Brillia sera</i>	09021011033051	3.00			--	0.8	
<i>Corynoneura</i>	09021011036	0.50	0.50	7	CG	0.1	0.1
<i>Eukiefferiella</i>	09021011041		4.53	8	CG		1.2
<i>Eukiefferiella brehmi group</i>	09021011041073	4.50			--	1.2	
<i>Parametriocnemus</i>	09021011053	22.50	22.63	5	CG	6.1	6.2
<i>Rheocricotopus</i>	09021011057	2.00	3.02	6	CG	0.5	0.8
<i>Rheocricotopus eminellobus</i>	09021011057109	1.00			--	0.3	
<i>Thienemanniella</i>	09021011062		0.50	6	CG		0.1
<i>Thienemanniella xena</i>	09021011062110	0.50			--	0.1	
<i>Micropsectra</i>	09021011070	4.50	4.53	7	CG	1.2	1.2
<i>Polypedilum</i>	09021011102		126.24	6	SH		34.3
<i>Polypedilum aviceps</i>	09021011102181	125.00			--	34.0	
<i>Polypedilum tritum</i>	09021011102191	0.50			--	0.1	
<i>Simulium</i>	09021012047		0.50	4	CF		0.1
<i>Simulium tuberosum</i>	09021012047067	0.50			--	0.1	
<i>Roederiodes</i>	09021016058	1.00	1.00	3	PR	0.3	0.3
<i>Neoplasta</i>	09021016064	2.00	2.00		PR	0.5	0.5