



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

Station Information

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

Sample Information

Log Number: 2215
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 1
Date Deployed: 7/23/2013
Date Retrieved: 8/21/2013

Classification Attainment

Statutory Class: A
Model Result with P>.6: A
Date Last Calculated: 3/17/2014
Final Determination: A
Reason for Determination: Model
Date: 3/18/2014
Comments: Disturbed samples. Only one of three samplers recovered.

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.75	Class A, B, or C	1.00
Class B	0.25	Non-Attainment	0.00
Class C			
	NA		
0.00			
B or Better Model		A Model	
Class A or B	1.00	Class A	0.96
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.04

Model Variables

01 Total Mean Abundance	119.00	18 Relative Abundance Ephemeroptera	0.50
02 Generic Richness	24.00	19 EPT Generic Richness	14.00
03 Plecoptera Mean Abundance	22.00	21 Sum of Abundances: <i>Dicrotendipes</i> ,	2.00
04 Ephemeroptera Mean Abundance	59.00	<i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	
05 Shannon-Wiener Generic Diversity	4.03	23 Relative Generic Richness- Plecoptera	0.17
06 Hilsenhoff Biotic Index	3.86	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	1.00
07 Relative Abundance - Chironomidae	0.23	<i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	
08 Relative Generic Richness Diptera	0.42	26 Sum of Abundances: <i>Acroneuria</i> ,	10.00
09 <i>Hydropsyche</i> Abundance	2.00	<i>Maccaffertium</i> , <i>Stenonema</i>	
11 <i>Cheumatopsyche</i> Abundance	0.00	28 EP Generic Richness/14	0.79
12 EPT Generic Richness/ Diptera	1.40	30 Presence of Class A Indicator Taxa/7	0.14
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family	0.00		
Functional Group)			
16 Tanypodinae Mean Abundance	4.00		
(Family Functional Group)			
17 Chironomini Abundance (Family	9.00		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Baetis</i>	17.65
2	<i>Acerpenna</i>	10.08
3	<i>Sweltsa</i>	8.40
4	<i>Maccaffertium</i>	8.40
5	<i>Polypedilum</i>	7.56



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Town: Newry

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Log Number: 2215

Waterbody: Merrill Brook - Station 350

Date Retrieved: 8/21/2013

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 16.4 deg C
Dissolved Oxygen: 8.8 mg/l
Specific Conductance: 60 uS/cm
Velocity: 33.7 cm/s
pH: 6.44
Wetted Width: 5.5 m
Bankfull Width: 7.8 m
Depth: 35 cm

Waterbody Information - Retrieval

Temperature: 16.3 deg C
Dissolved Oxygen: 7.7 mg/l
Specific Conductance: 44 uS/cm
Velocity: 8.7 cm/s
pH: 6.3
Wetted Width: 5.2 m
Bankfull Width: 7.8 m
Depth: 30 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Upland Conifer

Upland Hardwood

Canopy Cover

Partly Open

Terrain

Mountainous

Potential Stressor

Nps Pollution

Location

Above Road Crossing

Main Stem

Substrate

Boulder	60 %
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
		Med Int. Dev. %	0.0	Wetland %	0.0	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.5	Upland Woody %	75.2	Grassland %	22.5
		Development %	0.5	Natural %	99.4	Human Altered %	0.6
						Impervious %	0.0

Sample Comments

8/21/2013 - 2 BAGS WASHED OUT AND DRY, HOBO WAS IN ONE OF THE BAGS THAT WAS DRY



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: 2215

Subsample Factor: X1

Replicates: 1

Calculated: 3/17/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Leuctra</i>	09020204020	6.00	8.00	0	SH	5.0	6.7
<i>Leuctra ferruginea</i>	09020204020050	2.00			--	1.7	
Perlodidae	09020207	3.00	3.00		--	2.5	2.5
<i>Malirekus</i>	09020207034		1.00		PR		0.8
<i>Malirekus iroquois</i>	09020207034101	1.00			--	0.8	
<i>Sweltsa</i>	09020208040	10.00	10.00		PR	8.4	8.4
<i>Baetis</i>	09020401001	4.00	21.00	4	CG	3.4	17.6
<i>Baetis intercalaris</i>	09020401001008	2.00			--	1.7	
<i>Baetis tricaudatus</i>	09020401001012	15.00			--	12.6	
<i>Acerpenna</i>	09020401007	3.00	12.00	5	CG	2.5	10.1
<i>Acerpenna macdunnoughi</i>	09020401007001	9.00			--	7.6	
<i>Heptagenia</i>	09020402010	4.00	4.00	2	SC	3.4	3.4
<i>Maccaffertium</i>	09020402015	9.00	10.00	4	SC	7.6	8.4
<i>Maccaffertium luteum</i>	09020402015049	1.00			--	0.8	
Leptophlebiidae	09020406	4.00	4.00		--	3.4	3.4
<i>Ephemerella</i>	09020410035	2.00	2.00	1	CG	1.7	1.7
<i>Eurylophella</i>	09020410036	6.00	6.00	3	CG	5.0	5.0
<i>Hydropsyche</i>	09020604016	2.00	2.00	4	CF	1.7	1.7
<i>Rhyacophila</i>	09020605019	5.00	7.00	2	PR	4.2	5.9
<i>Rhyacophila fuscula</i>	09020605019060	1.00			PR	0.8	
<i>Rhyacophila minor</i>	09020605019063	1.00			PR	0.8	
<i>Lepidostoma</i>	09020611064	1.00	1.00	1	SH	0.8	0.8
<i>Thienemannimyia</i>	09021011020	1.00	1.00	3	PR	0.8	0.8
<i>Trissopelopia</i>	09021011021		3.00		PR		2.5
<i>Trissopelopia ogemawi</i>	09021011021042	3.00			--	2.5	
<i>Brillia</i>	09021011033		1.00	5	SH		0.8
<i>Brillia parva</i>	09021011033050	1.00			--	0.8	
<i>Corynoneura</i>	09021011036	3.00	3.00	7	CG	2.5	2.5
<i>Parametriocnemus</i>	09021011053	6.00	6.00	5	CG	5.0	5.0
<i>Micropsectra</i>	09021011070	2.00	2.00	7	CG	1.7	1.7
<i>Rheotanytarsus</i>	09021011072	1.00	1.00	6	CF	0.8	0.8
<i>Tanytarsus</i>	09021011076	1.00	1.00	6	CF	0.8	0.8
<i>Polypedilum</i>	09021011102		9.00	6	SH		7.6
<i>Polypedilum aviceps</i>	09021011102181	9.00			--	7.6	
<i>Neoplasta</i>	09021016064	1.00	1.00		PR	0.8	0.8