



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

Station Information

Station Number: S-1004
Waterbody: West Branch Ellis River - Station 1004
Town: Andover
Directions: ROUTE 5 TO NEWTON STREET TO UPTON RD. PAST #468 AND BEFORE FIRE HYDRANT

DEP Drainage: Androscoggin
HUC8 Name: Lower Androscoggin
Latitude: 44 38 18.79 N
Longitude: 70 47 25.49 W
Stream Order: 3

Sample Information

Log Number: 2223
Subsample Factor: X4
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/25/2013
Date Retrieved: 8/26/2013

Classification Attainment

Statutory Class: A
Model Result with P>.6: A
Date Last Calculated: 3/17/2014
Final Determination: A
Reason for Determination: Model
Comments:

Date: 3/18/2014

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.26	Class A, B, or C	1.00
Class B	0.71	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
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	1390.67	18 Relative Abundance Ephemeroptera	0.11
02 Generic Richness	45.00	19 EPT Generic Richness	24.00
03 Plecoptera Mean Abundance	66.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	5.33
04 Ephemeroptera Mean Abundance	158.67	23 Relative Generic Richness- Plecoptera	0.18
05 Shannon-Wiener Generic Diversity	3.29	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	205.46
06 Hilsenhoff Biotic Index	4.29	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	16.39
07 Relative Abundance - Chironomidae	0.31	28 EP Generic Richness/14	1.21
08 Relative Generic Richness Diptera	0.40	30 Presence of Class A Indicator Taxa/7	0.71
09 <i>Hydropsyche</i> Abundance	579.88		
11 <i>Cheumatopsyche</i> Abundance	25.46		
12 EPT Generic Richness/ Diptera Generic Richness	1.33		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	26.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	12.00		
17 Chironomini Abundance (Family Functional Group)	46.67		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	41.70
2	<i>Cricotopus</i>	12.85
3	<i>Tvetenia</i>	7.96
4	<i>Baetis</i>	6.04
5	<i>Brachycentrus</i>	5.75



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	18 deg C
Dissolved Oxygen:	8.6 mg/l
Specific Conductance:	19 uS/cm
Velocity:	83.5 cm/s
pH:	6.52
Wetted Width:	18 m
Bankfull Width:	26 m
Depth:	50 cm

Waterbody Information - Retrieval

Temperature:	16.2 deg C
Dissolved Oxygen:	9.1 mg/l
Specific Conductance:	34 uS/cm
Velocity:	39.8 cm/s
pH:	6.15
Wetted Width:	15 m
Bankfull Width:	26 m
Depth:	36 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Open	Mountainous
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above Town	Boulder 80 %
	Minimally Disturbed	Gravel 5 %
		Rubble/Cobble 15 %

Landcover Summary - 2004 Data

Sample Comments



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Aquatic Life Taxonomic Inventory Report**

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Town: Andover

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Subsample Factor: X4

Replicates: 3

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>Pteronarcys</i>	09020205023		1.33	0	SH		0.1
<i>Pteronarcys biloba</i>	09020205023061	1.33			--	0.1	
<i>Tallaperla</i>	09020206025	1.33	1.33		SH	0.1	0.1
Perlodidae	09020207	29.33	29.33		--	2.1	2.1
<i>Isoperla</i>	09020207026	2.67	2.67	2	PR	0.2	0.2
<i>Haploperla</i>	09020208037		1.33	1	PR		0.1
<i>Haploperla brevis</i>	09020208037112	1.33			--	0.1	
<i>Sweltsa</i>	09020208040	4.00	4.00		PR	0.3	0.3
Perlidae	09020209	14.67			--	1.1	
<i>Paragnetina</i>	09020209049		2.96	1	PR		0.2
<i>Paragnetina immarginata</i>	09020209049149	1.33			--	0.1	
<i>Agneta</i>	09020209050		23.70	2	PR		1.7
<i>Agneta capitata</i>	09020209050152	10.67		2	PR	0.8	
Baetidae	09020401	18.67			--	1.3	
<i>Baetis</i>	09020401001	17.33	83.95	4	CG	1.2	6.0
<i>Baetis flavistriga</i>	09020401001004	26.67			--	1.9	
<i>Baetis intercalaris</i>	09020401001008	2.67			--	0.2	
<i>Baetis tricaudatus</i>	09020401001012	20.00			--	1.4	
<i>Centroptilum</i>	09020401003	2.67	3.36	2	CG	0.2	0.2
<i>Plautidius</i>	09020401012	2.67	3.36		CG	0.2	0.2
Heptageniidae	09020402	2.67			--	0.2	
<i>Epeorus</i>	09020402009	6.67	7.45	0	SC	0.5	0.5
<i>Leucrocota</i>	09020402011	1.33	1.49	1	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	9.33	16.39	4	SC	0.7	1.2
<i>Maccaffertium luteum</i>	09020402015049	5.33			--	0.4	
Leptophlebiidae	09020406	9.33	9.33		--	0.7	0.7
<i>Ephemerella</i>	09020410035	32.00	32.00	1	CG	2.3	2.3
<i>Eurylophella</i>	09020410036	1.33	1.33	3	CG	0.1	0.1
<i>Neureclipsis</i>	09020603008	4.00	4.00	7	CF	0.3	0.3
Hydropsychidae	09020604	34.67			--	2.5	
<i>Cheumatopsyche</i>	09020604015	24.00	25.46	5	CF	1.7	1.8
<i>Hydropsyche</i>	09020604016	322.67	579.88	4	CF	23.2	41.7
<i>Hydropsyche morosa</i>	09020604016030	1.33			--	0.1	
<i>Hydropsyche slossonae</i>	09020604016031	204.00			--	14.7	
<i>Hydropsyche sparna</i>	09020604016032	18.67			--	1.3	
<i>Rhyacophila</i>	09020605019		1.33	2	PR		0.1
<i>Rhyacophila fuscata</i>	09020605019060	1.33			PR	0.1	
<i>Glossosoma</i>	09020606020		1.33	0	SC		0.1



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		Actual	Adjusted			Actual	Adjusted
<i>Glossosoma nigrior</i>	09020606020068	1.33			SC	0.1	
<i>Hydroptila</i>	09020607026	2.67	2.67	6	P	0.2	0.2
<i>Brachycentrus</i>	09020609043	1.33	80.00	0	CF	0.1	5.8
<i>Brachycentrus americanus</i>	09020609043095	1.33			--	0.1	
<i>Brachycentrus appalachia</i>	09020609043096	73.33			--	5.3	
<i>Brachycentrus numerosus</i>	09020609043098	2.67			--	0.2	
<i>Brachycentrus solomoni</i>	09020609043102	1.33			--	0.1	
<i>Hexatoma</i>	09021001008	2.67	2.67	2	PR	0.2	0.2
Chironomidae	09021011				--		
<i>Meropelopia</i>	09021011010	2.67	2.67		--	0.2	0.2
<i>Rheopelopia</i>	09021011017		8.00		PR		0.6
<i>Rheopelopia acra group</i>	09021011017036	8.00			--	0.6	
<i>Trissopelopia</i>	09021011021		1.33		PR		0.1
<i>Trissopelopia ogemawi</i>	09021011021042	1.33			--	0.1	
<i>Pagastia</i>	09021011025		9.33	1	--		0.7
<i>Pagastia orthogonia</i>	09021011025001	9.33			--	0.7	
<i>Corynoneura</i>	09021011036	4.00	4.00	7	CG	0.3	0.3
<i>Cricotopus</i>	09021011037	2.67	178.67	7	SH	0.2	12.8
<i>Cricotopus bicinctus</i>	09021011037057	117.33			--	8.4	
<i>Cricotopus trifascia</i>	09021011037070	25.33			--	1.8	
<i>Cricotopus luciae</i>	09021011037073	28.00			--	2.0	
<i>Cricotopus annulator complex</i>	09021011037074	2.67			--	0.2	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	2.67			SH	0.2	
<i>Eukiefferiella</i>	09021011041		1.33	8	CG		0.1
<i>Eukiefferiella brehmi group</i>	09021011041073	1.33			--	0.1	
<i>Orthocladius</i>	09021011050	2.67	6.67	6	CG	0.2	0.5
<i>Orthocladius carlatus</i>	09021011050093	4.00			--	0.3	
<i>Parametriocnemus</i>	09021011053			5	CG		
<i>Rheocricotopus</i>	09021011057	2.67	2.67	6	CG	0.2	0.2
<i>Synorthocladius</i>	09021011061			2	CG		
<i>Tvetenia</i>	09021011065		110.67	5	CG		8.0
<i>Tvetenia vitracies</i>	09021011065113	16.00			--	1.2	
<i>Tvetenia paucunca</i>	09021011065114	94.67			--	6.8	
<i>Micropsectra</i>	09021011070	5.33	5.33	7	CG	0.4	0.4
<i>Paratanytarsus</i>	09021011071			6	--		
<i>Rheotanytarsus</i>	09021011072	58.67	58.67	6	CF	4.2	4.2
<i>Tanytarsus</i>	09021011076	1.33	1.33	6	CF	0.1	0.1
<i>Polypedilum</i>	09021011102		46.67	6	SH		3.4



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<i>Polypedilum aviceps</i>	09021011102181	46.67			--	3.4	
<i>Simulium</i>	09021012047	4.00	17.33	4	CF	0.3	1.2
<i>Simulium tuberosum</i>	09021012047067	13.33			--	1.0	
<i>Roederiodes</i>	09021016058	4.00	4.00	3	PR	0.3	0.3
<i>Neoplasta</i>	09021016064	1.33	1.33		PR	0.1	0.1
<i>Oulimnius</i>	09021113068		2.67		--		0.2
<i>Oulimnius latiusculus</i>	09021113068049	2.67			--	0.2	
<i>Promoresia</i>	09021113069		4.00		--		0.3
<i>Promoresia tardella</i>	09021113069052	4.00			--	0.3	
<i>Torrenticola</i>	09030104001	1.33	1.33		--	0.1	0.1