



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

Station Information

Station Number: S-866
Waterbody: Bear River - Station 866
Town: Newry
Directions: ON ROUTE 26, 4.9 MILES FROM THE INTERSECTION WITH ROUTE 2; SITE IS ON THE WEST SIDE OF THE ROAD, 45 M DOWNSTREAM

DEP Drainage: Androscoggin
HUC8: 01040002
HUC8 Name: Lower Androscoggin
Latitude: 44 32 26.76 N
Longitude: 70 49 52.77 W
Stream Order: 3

Sample Information

Log Number: 1742
Subsample Factor: X1

Type of Sample: ROCK BAG
Replicates: 3

Date Deployed: 7/23/2008
Date Retrieved: 8/20/2008

Classification Attainment

Statutory Class: AA
Model Result with P>.6: A
Date Last Calculated: 4/6/2009

Final Determination: A
Reason for Determination: Model
Comments:

Date: 4/6/2009

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.96	Class C	0.00	Class A, B, or C	1.00
Class B	0.04	NA	0.00	Non-Attainment	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	374.67	18 Relative Abundance Ephemeroptera	0.06
02 Generic Richness	58.00	19 EPT Generic Richness	25.00
03 Plecoptera Mean Abundance	13.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	16.07
04 Ephemeroptera Mean Abundance	22.67	23 Relative Generic Richness- Plecoptera	0.10
05 Shannon-Wiener Generic Diversity	3.23	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	13.10
06 Hilsenhoff Biotic Index	2.28	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	9.67
07 Relative Abundance - Chironomidae	0.25	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.43	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	43.82		
11 <i>Cheumatopsyche</i> Abundance	2.16		
12 EPT Generic Richness/ Diptera Generic Richness	1.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	1.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.74		
17 Chironomini Abundance (Family Functional Group)	7.18		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Brachycentrus</i>	48.13
2	<i>Hydropsyche</i>	11.70
3	<i>Tvetenia</i>	6.48
4	<i>Micropsectra</i>	4.29
5	<i>Rheotanytarsus</i>	4.11



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 16.4 deg C
Dissolved Oxygen: 9 mg/l
Specific Conductance: 13 uS/cm
Velocity: 54 cm/s
pH: 5.38
Wetted Width: 19 m
Bankfull Width: 19 m
Depth: 40 cm

Waterbody Information - Retrieval

Temperature: 14.6 deg C
Dissolved Oxygen: 9.7 mg/l
Specific Conductance: 17 uS/cm
Velocity: 27 cm/s
pH: 6.33
Wetted Width: 19 m
Bankfull Width: 19 m
Depth: 38 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.005 mg/l
Total Kjeldahl Nitrogen	0.1 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	3.2 mg/l	Total Dissolved Solids	29 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Canopy Open	Hilly Terrain
Upland Hardwood		

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Main Stem	Boulder 15 %
	Pristine Landscape	Gravel 10 %
		Rubble/Cobble 60 %
		Sand 15 %

Landcover Summary - 2004 Data

Sample Comments



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Aquatic Life Taxonomic Inventory Report**

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Subsample Factor: X1

Replicates: 3

Calculated: 4/6/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Lumbriculus</i>	08020101002		0.33		CG		0.1
<i>Lumbriculus variegatus</i>	08020101002001	0.33			--	0.1	
<i>Pristina</i>	08020202004	0.33	0.33		--	0.1	0.1
<i>Leuctra</i>	09020204020		1.33	0	SH		0.4
<i>Leuctra truncata</i>	09020204020058	1.33			--	0.4	
<i>Pteronarcys</i>	09020205023		5.33	0	SH		1.4
<i>Pteronarcys biloba</i>	09020205023061	5.33			--	1.4	
Perlodidae	09020207	3.67	3.67		--	1.0	1.0
<i>Haploperla</i>	09020208037	0.67	0.67	1	PR	0.2	0.2
<i>Sweltsa</i>	09020208040	1.33	1.33		PR	0.4	0.4
<i>Agnetina</i>	09020209050		1.00	2	PR		0.3
<i>Agnetina capitata</i>	09020209050152	1.00		2	PR	0.3	
<i>Boyeria</i>	09020301004		0.67	2	PR		0.2
<i>Boyeria grafiana</i>	09020301004011	0.67			--	0.2	
Libellulidae	09020306	0.33	0.33		--	0.1	0.1
Baetidae	09020401	0.33			--	0.1	
<i>Baetis</i>	09020401001		7.59	4	CG		2.0
<i>Baetis flavistriga</i>	09020401001004	7.33			--	2.0	
<i>Acerpenna</i>	09020401007	1.33	1.72	5	CG	0.4	0.5
<i>Acerpenna macdunnoughi</i>	09020401007001	0.33			--	0.1	
<i>Acentrella</i>	09020401008	0.67	0.69	3	CG	0.2	0.2
<i>Heptagenia</i>	09020402010		0.33	2	SC		0.1
<i>Heptagenia diabasia</i>	09020402010035	0.33			--	0.1	
<i>Maccaffertium</i>	09020402015	8.67	9.67	4	SC	2.3	2.6
<i>Maccaffertium luteum</i>	09020402015049	1.00			--	0.3	
Leptophlebiidae	09020406	0.33	0.33		--	0.1	0.1
<i>Habrophlebia</i>	09020406023	0.33	0.33		--	0.1	0.1
<i>Ephemerella</i>	09020410035	1.33	1.67	1	CG	0.4	0.4
<i>Ephemerella invaria</i>	09020410035107	0.33			--	0.1	
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.1	0.1
<i>Rhagovelia</i>	09020510026	0.33	0.33		PR	0.1	0.1
<i>Lype</i>	09020602004		0.33	2	SC		0.1
<i>Lype diversa</i>	09020602004005	0.33			--	0.1	
Hydropsychidae	09020604	3.33			--	0.9	
<i>Parapsyche</i>	09020604013		0.36	0	CF		0.1
<i>Parapsyche apicalis</i>	09020604013023	0.33			--	0.1	
<i>Cheumatopsyche</i>	09020604015	2.00	2.16	5	CF	0.5	0.6
<i>Hydropsyche</i>	09020604016	26.33	43.82	4	CF	7.0	11.7



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche bronta</i>	09020604016029	1.00			--	0.3	
<i>Hydropsyche morosa</i>	09020604016030	0.67			--	0.2	
<i>Hydropsyche slossonae</i>	09020604016031	4.00			--	1.1	
<i>Hydropsyche sparna</i>	09020604016032	8.33			--	2.2	
<i>Hydropsyche ventura</i>	09020604016033	0.33			--	0.1	
<i>Rhyacophila</i>	09020605019		1.67	2	PR		0.4
<i>Rhyacophila acutiloba</i>	09020605019056	1.33			PR	0.4	
<i>Rhyacophila fuscua</i>	09020605019060	0.33			PR	0.1	
<i>Brachycentrus</i>	09020609043		180.33	0	CF		48.1
<i>Brachycentrus appalachia</i>	09020609043096	180.33			--	48.1	
<i>Micrasema</i>	09020609044		0.33	2	SH		0.1
<i>Micrasema sprulesi</i>	09020609044102	0.33			--	0.1	
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.1	0.1
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.2	0.2
<i>Helicopsyche</i>	09020616070		0.67	3	SC		0.2
<i>Helicopsyche borealis</i>	09020616070137	0.67			--	0.2	
<i>Nigronia</i>	09020701003		1.33	0	PR		0.4
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.4	
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.1	0.1
<i>Dicranota</i>	09021001005	0.33	0.33	3	PR	0.1	0.1
<i>Hexatoma</i>	09021001008	1.33	1.33	2	PR	0.4	0.4
<i>Bezzia/palpomyia</i>	09021010043	1.00	1.00	6	PR	0.3	0.3
Chironomidae	09021011	2.33			--	0.6	
<i>Conchapelopia</i>	09021011004	0.33	0.34	6	PR	0.1	0.1
<i>Rheopelopia</i>	09021011017		2.05		PR		0.5
<i>Rheopelopia acra group</i>	09021011017036	2.00			--	0.5	
<i>Trissopelopia</i>	09021011021		0.34		PR		0.1
<i>Trissopelopia ogemawi</i>	09021011021042	0.33			--	0.1	
<i>Pagastia</i>	09021011025		4.79	1	--		1.3
<i>Pagastia orthogonia</i>	09021011025001	4.67			--	1.2	
<i>Corynoneura</i>	09021011036	0.33	0.34	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		8.89	7	SH		2.4
<i>Cricotopus bicinctus</i>	09021011037057	4.00			--	1.1	
<i>Cricotopus luciae</i>	09021011037073	2.67			--	0.7	
<i>Cricotopus annulator complex</i>	09021011037074	2.00			--	0.5	
<i>Eukiefferiella</i>	09021011041	0.67	3.08	8	CG	0.2	0.8
<i>Eukiefferiella brehmi group</i>	09021011041073	1.00			--	0.3	
<i>Eukiefferiella claripennis group</i>	09021011041075	0.33			--	0.1	



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<i>Eukiefferiella pseudomontana</i>	09021011041080	0.67			--	0.2	
<i>Eukiefferiella devonica group</i>	09021011041083	0.33			CG	0.1	
<i>Limnophyes</i>	09021011047			8	CG		
<i>Nanocladius</i>	09021011049	0.33	0.34	3	CG	0.1	0.1
<i>Parametriocnemus</i>	09021011053	1.33	1.37	5	CG	0.4	0.4
<i>Rheocricotopus</i>	09021011057	2.00	3.42	6	CG	0.5	0.9
<i>Rheocricotopus eminellobus</i>	09021011057109	0.33			--	0.1	
<i>Rheocricotopus pauciseta</i>	09021011057111	1.00			--	0.3	
<i>Thienemanniella</i>	09021011062	0.67	1.37	6	CG	0.2	0.4
<i>Thienemanniella xena</i>	09021011062110	0.67			--	0.2	
<i>Tvetenia</i>	09021011065		24.28	5	CG		6.5
<i>Tvetenia vitracies</i>	09021011065113	14.67			--	3.9	
<i>Tvetenia paucunca</i>	09021011065114	9.00			--	2.4	
<i>Micropsectra</i>	09021011070	15.67	16.07	7	CG	4.2	4.3
<i>Rheotanytarsus</i>	09021011072	15.00	15.39	6	CF	4.0	4.1
<i>Stempellinella</i>	09021011074		0.34	2	--		0.1
<i>Stempellinella sp. a epler</i>	09021011074002	0.33			--	0.1	
<i>Tanytarsus</i>	09021011076	2.00	2.05	6	CF	0.5	0.5
<i>Polypedilum</i>	09021011102	0.33	7.18	6	SH	0.1	1.9
<i>Polypedilum aviceps</i>	09021011102181	6.67			--	1.8	
<i>Pseudorthocladius</i>	09021011125	0.33	0.34	0	CG	0.1	0.1
<i>Simulium</i>	09021012047		0.67	4	CF		0.2
<i>Simulium tuberosum</i>	09021012047067	0.67			--	0.2	
<i>Atherix</i>	09021015055	0.67	0.67	2	PR	0.2	0.2
<i>Neoplasta</i>	09021016064	0.33	0.33		PR	0.1	0.1
<i>Optioservus</i>	09021113067	0.33	0.33	3	SC	0.1	0.1
<i>Promoresia</i>	09021113069		7.67		--		2.0
<i>Promoresia tardella</i>	09021113069052	7.67			--	2.0	