



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

Station Information

Station Number: S-643
Waterbody: Unnamed Stream (brunswick4) - Station 643
Town: Brunswick
Directions: 15 M DOWNSTREAM OF JORDAN AVE

DEP Drainage: Androscoggin
HUC8: 01040002
HUC8 Name: Lower Androscoggin
Latitude: 43 54 38.76 N
Longitude: 69 56 28.7 W
Stream Order:

Sample Information

Log Number: 1723
Subsample Factor: X1

Type of Sample: ROCK BAG
Replicates: 3

Date Deployed: 7/16/2008
Date Retrieved: 8/13/2008

Classification Attainment

Statutory Class: B
Model Result with P>.6: C
Date Last Calculated: 5/19/2009

Final Determination: C
Reason for Determination: Model
Comments:

Date: 5/20/2009

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.01	Class C	0.90	Class A, B, or C	0.97
Class B	0.04	NA	0.05	Non-Attainment	0.03
<u>B or Better Model</u>				<u>A Model</u>	
Class A or B		0.00		Class A	0.01
Class C or Non-Attainment		1.00		Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	144.67	18 Relative Abundance Ephemeroptera	0.05
02 Generic Richness	45.00	19 EPT Generic Richness	8.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	3.73
04 Ephemeroptera Mean Abundance	6.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	4.41	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	1.73
06 Hilsenhoff Biotic Index	4.88	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.20	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.56	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.67		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	0.32		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.12		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	1.38		
(Family Functional Group)			
17 Chironomini Abundance (Family	12.43		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Caecidotea</i>	14.29
2	<i>Synurella</i>	13.59
3	<i>Stylogrillus</i>	9.88
4	<i>Gammarus</i>	8.76
5	<i>Limnephilus</i>	5.18



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Date Retrieved: 8/13/2008

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 15.3 deg C
Dissolved Oxygen: 8.8 mg/l
Specific Conductance: 221 uS/cm
Velocity: 15 cm/s
pH: 6.93
Wetted Width: 2 m
Bankfull Width: 2.4 m
Depth: 30 cm

Waterbody Information - Retrieval

Temperature: 15 deg C
Dissolved Oxygen: 9.1 mg/l
Specific Conductance: 223 uS/cm
Velocity: 22 cm/s
pH: 6.66
Wetted Width: 2.4 m
Bankfull Width: 2.4 m
Depth: 35 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	0.02 mg/l	Soluble Reactive Phosphorus	5 ug/l
Nitrate+nitrite As N	0.42 mg/l	Total Phosphorus	0.018 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	3.5 mg/l
Dissolved Organic Carbon	5.5 mg/l	Total Dissolved Solids	140 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Canopy Dense	Rolling Terrain
Urban		

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Urban Runoff Stressor	Below Road Crossing	Gravel	15 %
	Below Urban NPS	Rubble/Cobble	10 %
		Sand	75 %

Landcover Summary - 2004 Data

Total Area (ac)	479	High Int. Dev. %	10.8	Water %	0.0	Non-vegetated %	0.0
Total Land (ac)	479	Med Int. Dev. %	16.9	Wetland %	3.3	Tilled Agriculture %	0.0
		Low Int. Dev. %	22.6	Upland Woody %	27.0	Human Altered %	69.7
		Development %	50.3	Natural %	30.3	Impervious %	28.7

Sample Comments

SOME SILT/CLAY UNDERNEATH THE COBBLE/GRAVEL/SAND SUBSTRATE



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Enchytraeidae	08020201	0.67	0.67		--	0.5	0.5
Tubificidae	08020203	0.33			--	0.2	
<i>Ilyodrilus</i>	08020203003		2.04		--		1.4
<i>Ilyodrilus templetoni</i>	08020203003001	2.00			--	1.4	
<i>Stylodrilus</i>	08020203011		14.29		--		9.9
<i>Stylodrilus heringianus</i>	08020203011001	14.00			--	9.7	
Lumbricidae	08020205	1.00	1.00		--	0.7	0.7
<i>Glossiphonia</i>	08030101004		0.67		--		0.5
<i>Glossiphonia complanata</i>	08030101004001	0.67			--	0.5	
<i>Helobdella</i>	08030101005		2.00		--		1.4
<i>Helobdella stagnalis</i>	08030101005004	2.00			--	1.4	
<i>Erpobdella</i>	08030301002		0.33		--		0.2
<i>Erpobdella punctata</i>	08030301002001	0.33			--	0.2	
<i>Caecidotea</i>	09010101001	12.67	20.67	8	SH	8.8	14.3
<i>Caecidotea racovitzai racovitzai</i>	09010101001002	8.00			--	5.5	
<i>Gammarus</i>	09010201003		12.67	4	--		8.8
<i>Gammarus fasciatus</i>	09010201003003	12.67			--	8.8	
<i>Synurella</i>	09010202006		19.67		--		13.6
<i>Synurella chamberlaini</i>	09010202006001	19.67			--	13.6	
<i>Baetis</i>	09020401001		6.67	4	CG		4.6
<i>Baetis tricaudatus</i>	09020401001012	6.67			--	4.6	
Trichoptera	090206				--		
<i>Phylocentropus</i>	09020603011	0.33	0.33	5	CF	0.2	0.2
<i>Diplectrona</i>	09020604014		0.33	0	CF		0.2
<i>Diplectrona modesta</i>	09020604014025	0.33			--	0.2	
<i>Hydropsyche</i>	09020604016	0.33	0.67	4	CF	0.2	0.5
<i>Hydropsyche depravata complex</i>	09020604016041	0.33			CF	0.2	
<i>Oligostomis</i>	09020608039	3.33	3.33	2	PR	2.3	2.3
Limnephilidae	09020610	0.33			--	0.2	
<i>Pycnopsyche</i>	09020610049	1.67	1.70	4	SH	1.2	1.2
<i>Limnephilus</i>	09020610055	7.33	7.50	3	SH	5.1	5.2
<i>Psychoglypha</i>	09020610060		6.13	0	SH		4.2
<i>Psychoglypha subborealis</i>	09020610060120	6.00			--	4.1	
<i>Lepidostoma</i>	09020611064			1	SH		
<i>Tipula</i>	09021001002	1.67	1.67	4	SH	1.2	1.2
<i>Dicranota</i>	09021001005	3.00	3.00	3	PR	2.1	2.1
<i>Limnophila</i>	09021001009	3.33	3.33	3	PR	2.3	2.3
Chironomidae	09021011	1.00			--	0.7	



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<i>Natarsia</i>	09021011011		1.38	8	PR		1.0
<i>Natarsia baltimorea</i>	09021011011026	1.33			--	0.9	
<i>Diamesa</i>	09021011024	0.33	0.35	5	CG	0.2	0.2
<i>Prodiamesa</i>	09021011031		3.80	3	CG		2.6
<i>Prodiamesa olivacea</i>	09021011031048	3.67			--	2.5	
<i>Brillia</i>	09021011033		1.04	5	SH		0.7
<i>Brillia parva</i>	09021011033050	1.00			--	0.7	
<i>Corynoneura</i>	09021011036	0.33	0.35	7	CG	0.2	0.2
<i>Eukiefferiella</i>	09021011041		0.69	8	CG		0.5
<i>Eukiefferiella claripennis group</i>	09021011041075	0.67			--	0.5	
<i>Heterotrissocladius</i>	09021011044		1.38	0	CG		1.0
<i>Heterotrissocladius marcidus</i>	09021011044083	1.33			--	0.9	
<i>Parametriocnemus</i>	09021011053	0.67	0.69	5	CG	0.5	0.5
<i>Tvetenia</i>	09021011065		0.35	5	CG		0.2
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.2	
<i>Micropsectra</i>	09021011070	1.67	1.73	7	CG	1.2	1.2
<i>Tanytarsus</i>	09021011076	1.67	1.73	6	CF	1.2	1.2
<i>Paracladopelma</i>	09021011098		0.35	7	--		0.2
<i>Paracladopelma undine</i>	09021011098177	0.33			--	0.2	
<i>Polypedilum</i>	09021011102		6.22	6	SH		4.3
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.9	
<i>Polypedilum laetum</i>	09021011102186	3.00			--	2.1	
<i>Polypedilum scalaenum group</i>	09021011102189	1.67			--	1.2	
<i>Stictochironomus</i>	09021011106	5.33	5.53	9	CG	3.7	3.8
<i>Tribelos</i>	09021011107		0.35	5	CG		0.2
<i>Tribelos jucundum</i>	09021011107198	0.33			--	0.2	
<i>Brundiniella</i>	09021011115		0.35		--		0.2
<i>Brundiniella eumorpha</i>	09021011115001	0.33			--	0.2	
<i>Odontomesa</i>	09021011121		1.73	4	--		1.2
<i>Odontomesa fulva</i>	09021011121001	1.67			--	1.2	
<i>Rheosmittia</i>	09021011122	0.67	0.69		--	0.5	0.5
<i>Simulium</i>	09021012047		4.67	4	CF		3.2
<i>Simulium tuberosum</i>	09021012047067	4.67			--	3.2	
<i>Tabanus</i>	09021014053	0.33	0.33	5	PR	0.2	0.2
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.2	0.2
<i>Neoplasta</i>	09021016064	0.33	0.33		PR	0.2	0.2
<i>Stenelmis</i>	09021113070	1.33	1.33	5	SC	0.9	0.9
<i>Physa</i>	10010202026	0.33	0.33		SC	0.2	0.2