



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

Station Information

Station Number: S-341
Waterbody: Hart Brook - Station 341
Town: Lewiston
Directions: BELOW GODDARD RD. CROSSING
DEP Drainage: Androscoggin
HUC8: 01040002
HUC8 Name: Lower Androscoggin
Latitude: 44 4 11.52 N
Longitude: 70 11 44.37 W
Stream Order: 1

Sample Information

Log Number: 1747
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/24/2008
Date Retrieved: 8/21/2008

Classification Attainment

Statutory Class: B
Model Result with P>.6: NA
Date Last Calculated: 3/18/2009
Final Determination: NA
Reason for Determination: Model
Date: 3/23/2009
Comments:

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.00
Class B	0.00	Non-Attainment	1.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.00
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	1.00

Model Variables

01 Total Mean Abundance	112.33	18 Relative Abundance Ephemeroptera	0.01
02 Generic Richness	28.00	19 EPT Generic Richness	7.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	14.40
04 Ephemeroptera Mean Abundance	1.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.24	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	8.56
06 Hilsenhoff Biotic Index	6.01	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.92	28 EP Generic Richness/14	0.14
08 Relative Generic Richness Diptera	0.54	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.33		
11 <i>Cheumatopsyche</i> Abundance	1.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.47		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.52		
17 Chironomini Abundance (Family Functional Group)	5.40		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Paratanytarsus</i>	64.73
2	<i>Micropsectra</i>	9.29
3	<i>Tanytarsus</i>	6.09
4	<i>Rheotanytarsus</i>	3.52
5	<i>Dicrotendipes</i>	3.52



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 21 deg C
Dissolved Oxygen: 7.7 mg/l
Specific Conductance: 135 uS/cm
Velocity: 74 cm/s
pH: 6.9
Wetted Width: 6.6 m
Bankfull Width: 6.6 m
Depth: 80 cm

Waterbody Information - Retrieval

Temperature: 16 deg C
Dissolved Oxygen: 5.9 mg/l
Specific Conductance: 576 uS/cm
Velocity:
pH: 7.09
Wetted Width: 4.05 m
Bankfull Width: 6.25 m
Depth: 35 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	0.1 mg/l	Soluble Reactive Phosphorus	3 ug/l
Nitrate+nitrite As N	0.08 mg/l	Total Phosphorus	0.034 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	4.2 mg/l
Dissolved Organic Carbon	5.3 mg/l	Total Dissolved Solids	52 mg/l

Summary of Habitat Characteristics

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

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Urban Runoff Stressor	Below Road Crossing	Gravel	25 %
	Below Urban NPS	Rubble/Cobble	30 %
		Sand	45 %

Landcover Summary - 2004 Data

Total Area (ac)	1781	High Int. Dev. %	16.6	Water %	0.0	Non-vegetated %	0.0
Total Land (ac)	1780	Med Int. Dev. %	10.5	Wetland %	1.6	Tilled Agriculture %	1.7
		Low Int. Dev. %	12.8	Upland Woody %	38.0	Human Altered %	60.4
		Development %	39.9	Natural %	39.6	Impervious %	26.3

Sample Comments

7/24/08: HEAVY RAINFALL IN PAST 24-48 HOURS, WATER MURKY

8/21/08: FLOW METER COULD NOT QUANTIFY FLOW, ALTHOUGH FLOW WAS VISIBLE



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Aquatic Life Taxonomic Inventory Report

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Calculated: 3/18/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Orconectes</i>	09010301008		0.33		CG		0.3
<i>Orconectes immunis</i>	09010301008018	0.33			--	0.3	
Coenagrionidae	09020309	0.33	0.33		--	0.3	0.3
Heptageniidae	09020402	0.33	0.33		--	0.3	0.3
<i>Tricorythodes</i>	09020411038	0.67	0.67	4	CG	0.6	0.6
<i>Chimarra</i>	09020601003	1.67	1.67	2	CF	1.5	1.5
<i>Cheumatopsyche</i>	09020604015	1.00	1.00	5	CF	0.9	0.9
<i>Hydropsyche</i>	09020604016	0.33	0.33	4	CF	0.3	0.3
<i>Oligostomis</i>	09020608039	0.33	0.33	2	PR	0.3	0.3
<i>Ptilostomis</i>	09020608041	0.33	0.33	5	SH	0.3	0.3
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.3	0.3
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.3	0.3
Chironomidae	09021011	7.67			--	6.8	
<i>Ablabesmyia</i>	09021011001		0.72	8	PR		0.6
<i>Ablabesmyia mallochi</i>	09021011001004	0.67			--	0.6	
<i>Conchapelopia</i>	09021011004			6	PR		
<i>Meropelopia</i>	09021011010	1.33	1.44		--	1.2	1.3
<i>Rheopelopia</i>	09021011017		0.36		PR		0.3
<i>Rheopelopia acra-grp.</i>	09021011017036	0.33			--	0.3	
<i>Thienemannimyia norena</i>	09021011020039				--		
<i>Corynoneura</i>	09021011036	0.33	0.36	7	CG	0.3	0.3
<i>Cricotopus</i>	09021011037			7	SH		
<i>Nanocladius</i>	09021011049	1.33	1.44	3	CG	1.2	1.3
<i>Micropsectra</i>	09021011070	9.67	10.44	7	CG	8.6	9.3
<i>Paratanytarsus</i>	09021011071	67.33	72.71	6	--	59.9	64.7
<i>Rheotanytarsus</i>	09021011072	3.67	3.96	6	CF	3.3	3.5
<i>Tanytarsus</i>	09021011076	6.33	6.84	6	CF	5.6	6.1
<i>Dicrotendipes</i>	09021011085	2.00	3.96	8	CG	1.8	3.5
<i>Dicrotendipes neomodestus</i>	09021011085152	1.67			--	1.5	
<i>Microtendipes</i>	09021011094		0.72	6	CF		0.6
<i>Microtendipes pedellus-grp.</i>	09021011094166	0.67			--	0.6	
<i>Phaenopsectra</i>	09021011101		0.72	7	SC		0.6
<i>Phaenopsectra flavipes</i>	09021011101179	0.67			SC	0.6	
<i>Polypedilum</i>	09021011102			6	SH		
<i>Simulium</i>	09021012047		0.67	4	CF		0.6
<i>Simulium jenningsi complex</i>	09021012047070	0.67			CF	0.6	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.3	0.3
<i>Physa</i>	10010202026	0.67	0.67		SC	0.6	0.6



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<i>Ferrissia</i>	10010204035	0.67	0.67		SC	0.6	0.6
Sphaeriidae	10020201	0.33	0.33		CF	0.3	0.3