



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

Station Information

Station Number: S-106
Waterbody: Branch Brook - Station 106
Town: Sanford
Directions: RT 109 CROSSING AT SAM ALLEN RD.
DEP Drainage: Piscataqua - Presumpscot - Saco
HUC8: 01060003
HUC8 Name: Piscataqua-Salmon Falls
Latitude: 43 23 1.02 N
Longitude: 70 41 23.65 W
Stream Order: 1

Sample Information

Log Number: 1952
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/21/2010
Date Retrieved: 8/23/2010

Classification Attainment

Statutory Class: A
Model Result with P>.6: A
Date Last Calculated: 1/21/2011
Final Determination: A
Reason for Determination: Model
Date: 1/24/2011
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.48	Class A, B, or C	1.00
Class B	0.48	Non-Attainment	0.00
Class C			
0.03			
0.00			
B or Better Model		A Model	
Class A or B	1.00	Class A	0.89
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.11

Model Variables

01 Total Mean Abundance	164.67	18 Relative Abundance Ephemeroptera	0.15
02 Generic Richness	50.00	19 EPT Generic Richness	19.00
03 Plecoptera Mean Abundance	7.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	21.05
04 Ephemeroptera Mean Abundance	24.33	23 Relative Generic Richness- Plecoptera	0.08
05 Shannon-Wiener Generic Diversity	3.80	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	5.09
06 Hilsenhoff Biotic Index	5.36	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.67	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.44	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	2.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	0.86		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	5.09		
(Family Functional Group)			
17 Chironomini Abundance (Family	67.57		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Polypedilum</i>	39.59
2	<i>Micropsectra</i>	12.78
3	<i>Acerpenna</i>	5.74
4	<i>Iswaeon</i>	3.83
5	<i>Parametriocnemus</i>	2.47
6	<i>Tanytarsus</i>	2.47



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Waterbody: Branch Brook - Station 106

Date Retrieved: 8/23/2010

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 17.4 deg C
Dissolved Oxygen: 7.9 mg/l
Specific Conductance: 69 uS/cm
Velocity: 45 cm/s
pH:
Wetted Width: 2.6 m
Bankfull Width: 3.2 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 15.4 deg C
Dissolved Oxygen: 7.8 mg/l
Specific Conductance: 65 uS/cm
Velocity: 11 cm/s
pH: 6.72
Wetted Width: 2.8 m
Bankfull Width: 3.2 m
Depth: 17 cm

Water Chemistry - 8/23/2010

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.164 mg/l	Total Phosphorus	0.005 mg/l
Total Kjeldahl Nitrogen	0.1 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	1.2 mg/l	Total Dissolved Solids	54 mg/l

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Upland Conifer

Dense

Rolling

Upland Hardwood

Potential Stressor

Location

Substrate

Above Road Crossing

Detritus 5 %

Below Airport

Gravel 40 %

Sand 55 %

Landcover Summary - 2004 Data

Total Area (ac)	1078	High Int. Dev. %	8.2	Water %	0.0	Non-vegetated %	0.6
		Med Int. Dev. %	2.2	Wetland %	25.7	Tilled Agriculture %	0.3
		Low Int. Dev. %	9.1	Upland Woody %	26.2	Grassland %	1.0
		Development %	19.5	Natural %	52.3	Human Altered %	47.7
						Impervious %	17.2

Sample Comments

7/21/2010 UNDERCUT BANKS.



Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report

Station Number: S-106

Waterbody: Branch Brook - Station 106

Town: Sanford

Log Number: 1952

Subsample Factor: X1

Replicates: 3

Calculated: 1/21/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Caecidotea</i>	09010101001	0.33	0.33	8	SH	0.2	0.2
Isotomidae	09020102	0.33	0.33		--	0.2	0.2
<i>Leuctra</i>	09020204020		2.00	0	SH		1.2
<i>Leuctra ferruginea</i>	09020204020050	2.00			--	1.2	
Perlodidae	09020207	3.00	3.00		--	1.8	1.8
<i>Isoperla</i>	09020207026	1.00	1.00	2	PR	0.6	0.6
<i>Sweltsa</i>	09020208040	1.00	1.00		PR	0.6	0.6
<i>Boyeria</i>	09020301004		2.00	2	PR		1.2
<i>Boyeria vinosa</i>	09020301004012	2.00			--	1.2	
Calopterygidae	09020307	1.33	1.33		--	0.8	0.8
Baetidae	09020401	1.00			--	0.6	
<i>Baetis</i>	09020401001	3.33	3.50	4	CG	2.0	2.1
<i>Pseudocloeon</i>	09020401006		1.40	4	SC		0.9
<i>Pseudocloeon propinquum</i>	09020401006028	1.33			--	0.8	
<i>Acerpenna</i>	09020401007	0.33	9.45	5	CG	0.2	5.7
<i>Acerpenna macdunnoughi</i>	09020401007001	7.33			--	4.5	
<i>Acerpenna pygmaea</i>	09020401007011	1.33			--	0.8	
<i>Acentrella</i>	09020401008	0.33	0.35	3	CG	0.2	0.2
<i>Iswaeon</i>	09020401015		6.30		--		3.8
<i>Iswaeon anoka</i>	09020401015001	6.00			--	3.6	
Leptophlebiidae	09020406	0.67	0.67		--	0.4	0.4
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	0.2	0.2
<i>Eurylophella</i>	09020410036	2.33	2.33	3	CG	1.4	1.4
<i>Chimarra</i>	09020601003	2.67	2.67	2	CF	1.6	1.6
<i>Polycentropus</i>	09020603010	0.67	0.67	6	PR	0.4	0.4
<i>Diplectrona</i>	09020604014		0.67	0	CF		0.4
<i>Diplectrona modesta</i>	09020604014025	0.67			--	0.4	
<i>Hydropsyche</i>	09020604016	1.67	2.00	4	CF	1.0	1.2
<i>Hydropsyche depravata complex</i>	09020604016041	0.33			CF	0.2	
<i>Rhyacophila</i>	09020605019	1.67	4.00	2	PR	1.0	2.4
<i>Rhyacophila fuscata</i>	09020605019060	2.33			PR	1.4	
<i>Oligostomis</i>	09020608039	0.33	0.33	2	PR	0.2	0.2
<i>Psilotreta</i>	09020614068	1.33	2.67	0	SC	0.8	1.6
<i>Psilotreta labida</i>	09020614068133	1.33			--	0.8	
<i>Nigronia</i>	09020701003		0.67	0	PR		0.4
<i>Nigronia serricornis</i>	09020701003003	0.67			--	0.4	
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.2	0.2
<i>Dicranota</i>	09021001005	0.67	0.67	3	PR	0.4	0.4



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Calculated: 1/21/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Chaoborus</i>	09021007025	0.33	0.33	8	PR	0.2	0.2
Chironomidae	09021011	2.00			--	1.2	
<i>Ablabesmyia</i>	09021011001		0.68	8	PR		0.4
<i>Ablabesmyia mallochi</i>	09021011001004	0.67			--	0.4	
<i>Conchapelopia</i>	09021011004	1.00	1.02	6	PR	0.6	0.6
<i>Labrundinia</i>	09021011008		1.02	7	PR		0.6
<i>Labrundinia pilosella</i>	09021011008022	1.00			--	0.6	
<i>Nilotanytus</i>	09021011012		1.70	6	PR		1.0
<i>Nilotanytus fimbriatus</i>	09021011012027	1.67			--	1.0	
<i>Trissopelopia</i>	09021011021		0.68		PR		0.4
<i>Trissopelopia ogemawi</i>	09021011021042	0.67			--	0.4	
<i>Brillia</i>	09021011033	0.67	1.02	5	SH	0.4	0.6
<i>Brillia flavifrons</i>	09021011033049	0.33			--	0.2	
<i>Corynoneura</i>	09021011036	1.00	1.02	7	CG	0.6	0.6
<i>Cricotopus</i>	09021011037		0.34	7	SH		0.2
<i>Cricotopus vierriensis</i>	09021011037071	0.33			--	0.2	
<i>Parametriocnemus</i>	09021011053	4.00	4.07	5	CG	2.4	2.5
<i>Rheocricotopus</i>	09021011057		0.34	6	CG		0.2
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.2	
<i>Thienemanniella</i>	09021011062		1.36	6	CG		0.8
<i>Thienemanniella xena</i>	09021011062110	1.33			--	0.8	
<i>Micropsectra</i>	09021011070	20.67	21.05	7	CG	12.6	12.8
<i>Rheotanytarsus</i>	09021011072	3.00	3.06	6	CF	1.8	1.9
<i>Stempellinella</i>	09021011074		0.68	2	--		0.4
<i>Stempellinella leptocelloides</i>	09021011074001	0.33			--	0.2	
<i>Stempellinella fimbriata</i>	09021011074002	0.33			--	0.2	
<i>Tanytarsus</i>	09021011076	4.00	4.07	6	CF	2.4	2.5
<i>Microtendipes</i>	09021011094		1.70	6	CF		1.0
<i>Microtendipes rydalensis group</i>	09021011094168	1.67			--	1.0	
<i>Phaenopsectra</i>	09021011101		0.68	7	SC		0.4
<i>Phaenopsectra flavipes</i>	09021011101179	0.67			SC	0.4	
<i>Polypedilum</i>	09021011102		65.19	6	SH		39.6
<i>Polypedilum aviceps</i>	09021011102181	62.67			--	38.1	
<i>Polypedilum fallax group</i>	09021011102183	1.33			--	0.8	
<i>Simulium</i>	09021012047	0.33	0.67	4	CF	0.2	0.4
<i>Simulium tuberosum</i>	09021012047067	0.33			--	0.2	
<i>Peltodytes</i>	09021101002	0.33	0.33		P	0.2	0.2
<i>Oulimnius</i>	09021113068	2.33	2.33		--	1.4	1.4



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		Actual	Adjusted			Actual	Adjusted
<i>Stenelmis</i>	09021113070	0.67	1.00	5	SC	0.4	0.6
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.2	
<i>Physa</i>	10010202026	0.33	0.33		SC	0.2	0.2