



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

Station Information

Station Number: S-440
Waterbody: Little River - Station 440
Town: Lebanon
Directions: UPSTREAM FALL RD (USGS SITE)

DEP Drainage: Piscataqua - Presumpscot - Saco
HUC8: 01060003
HUC8 Name: Piscataqua-Salmon Falls
Latitude: 43 24 20.85 N
Longitude: 70 51 2.44 W
Stream Order: 3

Sample Information

Log Number: 1936
Subsample Factor: X1
Type of Sample: ROCK BASKET
Replicates: 3
Date Deployed: 7/14/2010
Date Retrieved: 8/17/2010

Classification Attainment

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

Date: 1/24/2011

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.70	Class A, B, or C	1.00
Class B	0.29	Non-Attainment	0.00
Class C			
	0.01		
	0.00		
B or Better Model		A Model	
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	141.00	18 Relative Abundance Ephemeroptera	0.47
02 Generic Richness	40.00	19 EPT Generic Richness	18.00
03 Plecoptera Mean Abundance	3.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	66.33	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.92	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	4.80
06 Hilsenhoff Biotic Index	4.25	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	43.54
07 Relative Abundance - Chironomidae	0.26	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	3.33		
11 <i>Cheumatopsyche</i> Abundance	2.67		
12 EPT Generic Richness/ Diptera	1.38		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	3.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	0.71		
(Family Functional Group)			
17 Chironomini Abundance (Family	19.24		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Maccaffertium</i>	28.75
2	<i>Brachycentrus</i>	9.93
3	<i>Rheotanytarsus</i>	7.07
4	<i>Polypedilum</i>	7.07
5	<i>Acerpenna</i>	6.62



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Date Retrieved: 8/17/2010

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 21.7 deg C
Dissolved Oxygen: 7.9 mg/l
Specific Conductance: 71 uS/cm
Velocity: 29 cm/s
pH:
Wetted Width: 9.7 m
Bankfull Width: 12.2 m
Depth: 30 cm

Waterbody Information - Retrieval

Temperature: 21.4 deg C
Dissolved Oxygen: 8.2 mg/l
Specific Conductance: 89 uS/cm
Velocity: 7 cm/s
pH: 6.98
Wetted Width: 6.3 m
Bankfull Width: 12.2 m
Depth: 16 cm

Water Chemistry - 8/17/2010

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.1 mg/l	Total Phosphorus	0.015 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	3.7 mg/l	Total Dissolved Solids	82 mg/l

Summary of Habitat Characteristics

Landuse Name

Upland Conifer

Upland Hardwood

Potential Stressor

Canopy Cover

Partly Open

Location

Above Road Crossing

Terrain

Rolling

Substrate

Boulder	5 %
Gravel	15 %
Rubble/Cobble	75 %
Sand	5 %

Landcover Summary - 2004 Data

Total Area (ac)	11318	High Int. Dev. %	0.3	Water %	0.3	Non-vegetated %	0.0
		Med Int. Dev. %	0.4	Wetland %	5.6	Tilled Agriculture %	0.7
		Low Int. Dev. %	2.4	Upland Woody %	80.2	Grassland %	10.0
		Development %	3.1	Natural %	85.9	Human Altered %	13.8
						Impervious %	2.8

Sample Comments

7/14/2010 DARK WATER STREAM.

8/17/2010 LOW FLOW, PROBABLY CLOSE TO BASE FLOW, FISH.



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

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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>Paracapnia</i>	09020203018	0.33	0.33	1	SH	0.2	0.2
<i>Acroneuria</i>	09020209042		3.00	0	PR		2.1
<i>Acroneuria lycorias</i>	09020209042125	3.00			--	2.1	
Gomphidae	09020302	0.33	0.33		--	0.2	0.2
Calopterygidae	09020307	0.33	0.33		--	0.2	0.2
<i>Calopteryx</i>	09020307043		0.33	5	PR		0.2
<i>Calopteryx maculata</i>	09020307043088	0.33			--	0.2	
<i>Baetis</i>	09020401001	0.33	6.67	4	CG	0.2	4.7
<i>Baetis flavistriga</i>	09020401001004	6.33			--	4.5	
<i>Acerpenna</i>	09020401007	1.33	9.33	5	CG	0.9	6.6
<i>Acerpenna macdunnoughi</i>	09020401007001	5.33			--	3.8	
<i>Acerpenna pygmaea</i>	09020401007011	2.67			--	1.9	
<i>Procloeon</i>	09020401010	1.67	1.67		CG	1.2	1.2
Heptageniidae	09020402	17.00			--	12.1	
<i>Leucrocuta</i>	09020402011	1.00	1.58	1	SC	0.7	1.1
<i>Stenacron</i>	09020402014	2.67	4.21	7	SC	1.9	3.0
<i>Maccaffertium</i>	09020402015	5.33	40.54	4	SC	3.8	28.8
<i>Maccaffertium luteum</i>	09020402015049	19.00			--	13.5	
<i>Maccaffertium modestum</i>	09020402015051	1.33			--	0.9	
Leptophlebiidae	09020406	0.67	0.67		--	0.5	0.5
<i>Ephemerella</i>	09020410035	1.33	1.33	1	CG	0.9	0.9
<i>Serratella</i>	09020410037		0.33	2	CG		0.2
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	0.33			--	0.2	
<i>Microvelia</i>	09020510025	0.67	0.67		PR	0.5	0.5
<i>Chimarra</i>	09020601003	0.33	0.33	2	CF	0.2	0.2
<i>Neureclipsis</i>	09020603008			7	CF		
<i>Polycentropus</i>	09020603010			6	PR		
<i>Cheumatopsyche</i>	09020604015	2.67	2.67	5	CF	1.9	1.9
<i>Hydropsyche</i>	09020604016	0.33	3.33	4	CF	0.2	2.4
<i>Hydropsyche slossonae</i>	09020604016031	0.67			--	0.5	
<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.2	
<i>Hydropsyche depravata complex</i>	09020604016041	2.00			CF	1.4	
Hydroptilidae	09020607				--		
<i>Brachycentrus</i>	09020609043		14.00	0	CF		9.9
<i>Brachycentrus numerosus</i>	09020609043098	14.00			--	9.9	
Limnephilidae	09020610				--		
<i>Psilotreta</i>	09020614068		0.33	0	SC		0.2
<i>Psilotreta labida</i>	09020614068133	0.33			--	0.2	



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		Actual	Adjusted			Actual	Adjusted
<i>Helicopsyche</i>	09020616070		3.33	3	SC		2.4
<i>Helicopsyche borealis</i>	09020616070137	3.33			--	2.4	
<i>Oecetis</i>	09020618078		6.67	8	PR		4.7
<i>Oecetis persimilis</i>	09020618078157	6.67			--	4.7	
Chironomidae	09021011	2.33			--	1.7	
<i>Ablabesmyia</i>	09021011001		0.36	8	PR		0.3
<i>Ablabesmyia mallochi</i>	09021011001004	0.33			--	0.2	
<i>Nilotanyus</i>	09021011012		0.36	6	PR		0.3
<i>Nilotanyus fimbriatus</i>	09021011012027	0.33			--	0.2	
<i>Corynoneura</i>	09021011036	0.67	0.71	7	CG	0.5	0.5
<i>Cricotopus</i>	09021011037		0.36	7	SH		0.3
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.2	
<i>Nanocladius</i>	09021011049		1.07	3	CG		0.8
<i>Nanocladius branchicollis</i>	09021011049091	0.33			--	0.2	
<i>Nanocladius downesi</i>	09021011049092	0.67			--	0.5	
<i>Parametriocnemus</i>	09021011053	0.33	0.36	5	CG	0.2	0.3
<i>Tvetenia</i>	09021011065		1.78	5	CG		1.3
<i>Tvetenia vitracies</i>	09021011065113	1.67			--	1.2	
<i>Rheotanytarsus</i>	09021011072	9.33	9.97	6	CF	6.6	7.1
<i>Stempellinella</i>	09021011074		0.71	2	--		0.5
<i>Stempellinella leptocelloides</i>	09021011074001	0.67			--	0.5	
<i>Tanytarsus</i>	09021011076	1.33	1.42	6	CF	0.9	1.0
<i>Microtendipes</i>	09021011094		8.91	6	CF		6.3
<i>Microtendipes rydalsensis group</i>	09021011094168	8.33			--	5.9	
<i>Nilothauma</i>	09021011095	0.33	0.36	2	--	0.2	0.3
<i>Polypedilum</i>	09021011102		9.97	6	SH		7.1
<i>Polypedilum aviceps</i>	09021011102181	5.67			--	4.0	
<i>Polypedilum illinoense group</i>	09021011102185	3.67			--	2.6	
<i>Psephenus</i>	09021108058		0.33	4	SC		0.2
<i>Psephenus herricki</i>	09021108058028	0.33			--	0.2	
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	0.2	0.2
<i>Promoresia</i>	09021113069		0.67		--		0.5
<i>Promoresia tardella</i>	09021113069052	0.67			--	0.5	
<i>Stenelmis</i>	09021113070		0.67	5	SC		0.5
<i>Stenelmis crenata</i>	09021113070055	0.67			--	0.5	
Acariformes	090301	0.67	0.67		--	0.5	0.5