



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

Station Information

Station Number: S-698	DEP Drainage: Piscataqua - Presumpscot - Saco
Waterbody: Mill Brook - Station 698	HUC8: 01060002
Town: Porter	HUC8 Name: Saco
Directions: OLD COUNTY ROAD	Latitude: 43 47 47.24 N
	Longitude: 70 55 59.39 W
	Stream Order: 3

Sample Information

Log Number: 1962	Type of Sample: ROCK BAG	Date Deployed: 7/26/2010
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/25/2010

Classification Attainment

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

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.92	Class A, B, or C	1.00
Class B	0.08	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	94.00	18 Relative Abundance Ephemeroptera	0.22
02 Generic Richness	43.00	19 EPT Generic Richness	18.00
03 Plecoptera Mean Abundance	8.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	21.00	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.34	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	3.51
06 Hilsenhoff Biotic Index	3.55	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	26.70
07 Relative Abundance - Chironomidae	0.28	28 EP Generic Richness/14	0.64
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	0.33		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	1.29		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	8.33		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	0.70		
(Family Functional Group)			
17 Chironomini Abundance (Family	11.24		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Maccaffertium</i>	19.54
2	<i>Brachycentrus</i>	11.70
3	<i>Microtendipes</i>	9.34
4	<i>Acroneuria</i>	8.87
5	<i>Oecetis</i>	7.09



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Date Retrieved: 8/25/2010

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 22.6 deg C
Dissolved Oxygen: 8.5 mg/l
Specific Conductance: 36 uS/cm
Velocity: 22 cm/s
pH:
Wetted Width: 6.2 m
Bankfull Width: 8.6 m
Depth: 35 cm

Waterbody Information - Retrieval

Temperature: 18 deg C
Dissolved Oxygen: 7.9 mg/l
Specific Conductance: 29 uS/cm
Velocity: 7 cm/s
pH: 7.04
Wetted Width: 2.77 m
Bankfull Width: 8.6 m
Depth: 27 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Upland Hardwood

Dense

Rolling

Potential Stressor

Location

Substrate

Above Road Crossing

Boulder 55 %
Gravel 15 %
Rubble/Cobble 25 %
Sand 5 %

Landcover Summary - 2004 Data

Total Area (ac)	7947	High Int. Dev. %	0.0	Water %	5.2	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	3.5	Tilled Agriculture %	0.3
		Low Int. Dev. %	0.6	Upland Woody %	89.2	Grassland %	1.1
		Development %	0.7	Natural %	92.7	Human Altered %	2.2
						Impervious %	0.6

Sample Comments

8/25/2010 HEAVY RAIN.

7/26/2010 OLD MILL DAM ABOVE SITE, FISH.



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Aquatic Life Taxonomic Inventory Report

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Waterbody: Mill Brook - Station 698

Town: Porter

Log Number: 1962

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>Acroneuria</i>	09020209042		8.33	0	PR		8.9
<i>Acroneuria abnormis</i>	09020209042121	7.67		0	PR	8.2	
<i>Acroneuria lycorias</i>	09020209042125	0.67			--	0.7	
<i>Boyeria</i>	09020301004		3.00	2	PR		3.2
<i>Boyeria vinosa</i>	09020301004012	3.00			--	3.2	
Calopterygidae	09020307	1.00	1.00		--	1.1	1.1
<i>Calopteryx</i>	09020307043		1.00	5	PR		1.1
<i>Calopteryx maculata</i>	09020307043088	1.00			--	1.1	
<i>Argia</i>	09020309048	1.33	1.33	7	PR	1.4	1.4
<i>Acerpenna</i>	09020401007		0.33	5	CG		0.4
<i>Acerpenna pygmaea</i>	09020401007011	0.33			--	0.4	
Heptageniidae	09020402	6.00			--	6.4	
<i>Epeorus</i>	09020402009	0.33	0.48	0	SC	0.4	0.5
<i>Leucrocuta</i>	09020402011	0.33	0.48	1	SC	0.4	0.5
<i>Maccaffertium</i>	09020402015	6.67	18.37	4	SC	7.1	19.5
<i>Maccaffertium luteum</i>	09020402015049	4.33			--	4.6	
<i>Maccaffertium modestum</i>	09020402015051	1.67			--	1.8	
Leptophlebiidae	09020406	0.33	0.33		--	0.4	0.4
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.4	0.4
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.4	0.4
<i>Tricorythodes</i>	09020411038	0.33	0.33	4	CG	0.4	0.4
<i>Chimarra</i>	09020601003	1.67	1.67	2	CF	1.8	1.8
<i>Neureclipsis</i>	09020603008	0.33	0.33	7	CF	0.4	0.4
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.4	0.4
<i>Hydropsyche</i>	09020604016	0.33	0.33	4	CF	0.4	0.4
<i>Macrostemum</i>	09020604018		2.00	3	CF		2.1
<i>Macrostemum zebratum</i>	09020604018054	2.00			--	2.1	
<i>Brachycentrus</i>	09020609043		11.00	0	CF		11.7
<i>Brachycentrus appalachia</i>	09020609043096	11.00			--	11.7	
<i>Lepidostoma</i>	09020611064	1.00	1.00	1	SH	1.1	1.1
Leptoceridae	09020618	0.33	0.33		--	0.4	0.4
<i>Oecetis</i>	09020618078		6.67	8	PR		7.1
<i>Oecetis persimilis</i>	09020618078157	6.67			--	7.1	
<i>Nigronia</i>	09020701003		1.00	0	PR		1.1
<i>Nigronia serricornis</i>	09020701003003	1.00			--	1.1	
Chironomidae	09021011	1.33			--	1.4	
<i>Ablabesmyia</i>	09021011001		0.70	8	PR		0.7
<i>Ablabesmyia mallochii</i>	09021011001004	0.67			--	0.7	



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<i>Cricotopus</i>	09021011037		0.35	7	SH		0.4
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.4	
<i>Nanocladius</i>	09021011049		4.21	3	CG		4.5
<i>Nanocladius branchicolus</i>	09021011049091	1.00			--	1.1	
<i>Nanocladius downesi</i>	09021011049092	3.00			--	3.2	
<i>Parametriocnemus</i>	09021011053	0.67	0.70	5	CG	0.7	0.7
<i>Rheocricotopus</i>	09021011057		0.70	6	CG		0.7
<i>Rheocricotopus robacki</i>	09021011057105	0.67			--	0.7	
<i>Tvetenia</i>	09021011065		0.35	5	CG		0.4
<i>Tvetenia vitracies</i>	09021011065113	0.33			--	0.4	
<i>Rheotanytarsus</i>	09021011072	1.67	1.76	6	CF	1.8	1.9
<i>Stempellinella</i>	09021011074		2.81	2	--		3.0
<i>Stempellinella fimbriata</i>	09021011074002	2.67			--	2.8	
<i>Tanytarsus</i>	09021011076	2.33	2.46	6	CF	2.5	2.6
<i>Microtendipes</i>	09021011094		8.78	6	CF		9.3
<i>Microtendipes rydalensis group</i>	09021011094168	8.33			--	8.9	
<i>Polypedilum</i>	09021011102		2.46	6	SH		2.6
<i>Polypedilum aviceps</i>	09021011102181	2.33			--	2.5	
<i>Helopelopia</i>	09021011114	1.00	1.05	6	PR	1.1	1.1
<i>Atherix</i>	09021015055	1.00	1.00	2	PR	1.1	1.1
<i>Hemerodromia</i>	09021016057	0.67	0.67	3	PR	0.7	0.7
<i>Ancyronyx</i>	09021113063		0.33	6	--		0.4
<i>Ancyronyx variegatus</i>	09021113063034	0.33			CG	0.4	
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	0.4	0.4
<i>Macronychus</i>	09021113065		1.33	4	--		1.4
<i>Macronychus glabratus</i>	09021113065040	1.33			--	1.4	
<i>Microcylloepus</i>	09021113066	2.00	2.00	3	--	2.1	2.1
<i>Promoresia</i>	09021113069		1.00		--		1.1
<i>Promoresia tardella</i>	09021113069052	1.00			--	1.1	
<i>Aplexa</i>	10010202028		0.67		--		0.7
<i>Aplexa hypnorum</i>	10010202028054	0.67			--	0.7	