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

Station Information

Station Number: S-259
Waterbody: Mousam River - Station 259
Town: Sanford
Directions: 20 M ABOVE SCHOOL ST. CROSSING; BELOW LANDFILL

DEP Drainage: Piscataqua - Presumpscot - Saco
HUC8: 01060003
HUC8 Name: Piscataqua-Salmon Falls
Latitude: 43 25 54.21 N
Longitude: 70 45 40.6 W
Stream Order: 3

Sample Information

Log Number: 1951 Type of Sample: ROCK BASKET Date Deployed: 7/21/2010
Subsample Factor: X4 Replicates: 2 Date Retrieved: 8/23/2010

Classification Attainment

Statutory Class: C **Final Determination: C** Date: 3/4/2011
Model Result with P>.6: C **Reason for Determination: Model**
Date Last Calculated: 3/4/2011 Comments:

Model Probabilities

First Stage Model			
Class A	0.06	Class C	0.74
Class B	0.20	NA	0.00

C or Better Model	
Class A, B, or C	1.00
Non-Attainment	0.00

B or Better Model	
Class A or B	0.01
Class C or Non-Attainment	0.99

A Model	
Class A	0.01
Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	1400.00
02 Generic Richness	39.00
03 Plecoptera Mean Abundance	0.00
04 Ephemeroptera Mean Abundance	260.00
05 Shannon-Wiener Generic Diversity	2.98
06 Hilsenhoff Biotic Index	3.05
07 Relative Abundance - Chironomidae	0.05
08 Relative Generic Richness Diptera	0.33
09 *Hydropsyche* Abundance	71.08
11 *Cheumatopsyche* Abundance	54.92
12 EPT Generic Richness/ Diptera Generic Richness	1.08
13 Relative Abundance - Oligochaeta	0.00
15 Perlidae Mean Abundance (Family Functional Group)	0.00
16 Tanypodinae Mean Abundance (Family Functional Group)	18.55
17 Chironomini Abundance (Family Functional Group)	6.18
18 Relative Abundance Ephemeroptera	0.19
19 EPT Generic Richness	14.00
21 Sum of Abundances: *Dicrotendipes, Micropsectra, Parachironomus, Helobdella*	2.06
23 Relative Generic Richness- Plecoptera	0.00
25 Sum of Abundances: *Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia*	77.59
26 Sum of Abundances: *Acroneuria, Maccaffertium, Stenonema*	0.00
28 EP Generic Richness/14	0.43
30 Presence of Class A Indicator Taxa/7	0.00

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	*Chimarra*	49.86
2	*Pseudocloeon*	9.07
3	*Iswaeon*	8.19
4	Philopotamidae	5.57
5	*Hydropsyche*	5.08

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Log Number: 1951 Waterbody: Mousam River - Station 259 Date Retrieved: 8/23/2010

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment			Waterbody Information - Retrieval		
Temperature:	27.8	deg C	Temperature:	21.6	deg C
Dissolved Oxygen:	9	mg/l	Dissolved Oxygen:	8.1	mg/l
Specific Conductance:	94	uS/cm	Specific Conductance:	78	uS/cm
Velocity:	50	cm/s	Velocity:	54	cm/s
pH:			pH:	6.7	
Wetted Width:	11	m	Wetted Width:	11.3	m
Bankfull Width:	11.7	m	Bankfull Width:	11.7	m
Depth:	36	cm	Depth:	33	cm

Water Chemistry - 8/23/2010

Ammonia As Nitrogen	0.03	mg/l	Soluble Reactive Phosphorus	<1	ug/l
Nitrate+nitrite As N	0.03	mg/l	Total Phosphorus	0.011	mg/l
Total Kjeldahl Nitrogen	0.2	mg/l	Total Suspended Solids	<2	mg/l
Dissolved Organic Carbon	2.1	mg/l	Total Dissolved Solids	55	mg/l

Summary of Habitat Characteristics

Landuse Name	Canopy Cover	Terrain	
Upland Hardwood	Open	Flat	
Urban			
Potential Stressor	**Location**	**Substrate**	
Metals	Above Road Crossing	Gravel	15 %
Toxic Organics	Below Landfill	Rubble/Cobble	70 %
		Sand	15 %

Landcover Summary - 2004 Data

Total Area (ac)	27754	High Int. Dev. %	1.6	Water %	7.2	Non-vegetated %	0.0
		Med Int. Dev. %	1.7	Wetland %	3.5	Tilled Agriculture %	0.5
		Low Int. Dev. %	3.4	Upland Woody %	75.1	Grassland %	5.5
		Development %	6.7	Natural %	78.6	Human Altered %	14.2
						Impervious %	5.3

Sample Comments

8/23/2010 STILL LOTS OF ALGAE, LOST ONE BASKET.
7/21/2010 BOTTOM COVERED WITH FILAMENTOUS ALGAE, MACROPHYTES.

Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report

Station Number: S-259 Waterbody: Mousam River - Station 259 Town: Sanford

Log Number: 1951 Subsample Factor: X4 Replicates: 2 Calculated: 3/4/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers) Actual	Count (Mean of Samplers) Adjusted	Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance Actual	Relative Abundance Adjusted
Girardia	03010102002		26.00		--		1.9
Girardia tigrina	03010102002001	26.00			--	1.9	
Nais	08020202009		2.00		CG		0.1
Nais simplex	08020202009008	2.00			--	0.1	
Hyalella	09010203006		6.00	8	CG		0.4
Hyalella azteca	09010203006011	6.00			--	0.4	
Boyeria	09020301004		2.00	2	PR		0.1
Boyeria vinosa	09020301004012	2.00			--	0.1	
Stylurus	09020302018		6.00	4	PR		0.4
Stylurus lacustris	09020302018040	6.00			PR	0.4	
Baetidae	09020401	6.00			--	0.4	
Heterocloeon	09020401005		2.05	2	SC		0.1
Heterocloeon amplum	09020401005021	2.00			--	0.1	
Pseudocloeon	09020401006		126.93	4	SC		9.1
Pseudocloeon propinquum	09020401006028	124.00			--	8.9	
Acerpenna	09020401007	6.00	12.28	5	CG	0.4	0.9
Acerpenna pygmaea	09020401007011	6.00			--	0.4	
Acentrella	09020401008		2.05	3	CG		0.1
Acentrella parvula	09020401008002	2.00			--	0.1	
Plauditus	09020401012	2.00	2.05		CG	0.1	0.1
Iswaeon	09020401015		114.65		--		8.2
Iswaeon anoka	09020401015001	112.00			--	8.0	
Philopotamidae	09020601	78.00	78.00		--	5.6	5.6
Chimarra	09020601003	698.00	698.00	2	CF	49.9	49.9
Neureclipsis	09020603008	22.00	22.00	7	CF	1.6	1.6
Hydropsychidae	09020604	48.00			--	3.4	
Cheumatopsyche	09020604015	34.00	54.92	5	CF	2.4	3.9
Hydropsyche	09020604016	28.00	71.08	4	CF	2.0	5.1
Hydropsyche sparna	09020604016032	6.00			--	0.4	
Hydropsyche depravata complex	09020604016041	10.00			CF	0.7	
Hydroptila	09020607026	12.00	12.00	6	P	0.9	0.9
Mystacides	09020618075		8.00	4	CG		0.6
Mystacides sepulchralis	09020618075147	8.00			--	0.6	
Oecetis	09020618078		4.00	8	PR		0.3
Oecetis persimilis	09020618078157	4.00			--	0.3	
Paraponyx	09020901002	2.00	2.00	5	SH	0.1	0.1
Chironomidae	09021011	2.00			--	0.1	
Nilotanypus	09021011012		6.18	6	PR		0.4

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Taxon	Maine Taxonomic Code	Count (Mean of Samplers) Actual	Count (Mean of Samplers) Adjusted	Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance Actual	Relative Abundance Adjusted
Nilotanypus fimbriatus	09021011012027	6.00			--	0.4	
Pentaneura	09021011014		12.36	6	PR		0.9
Pentaneura inconspicua	09021011014028	12.00			--	0.9	
Corynoneura	09021011036	2.00	2.06	7	CG	0.1	0.1
Cricotopus	09021011037		10.30	7	SH		0.7
Cricotopus bicinctus	09021011037057	6.00			--	0.4	
Cricotopus vierriensis	09021011037071	4.00			--	0.3	
Orthocladius	09021011050		2.06	6	CG		0.1
Orthocladius annectens	09021011050092	2.00			--	0.1	
Rheocricotopus	09021011057		2.06	6	CG		0.1
Rheocricotopus robacki	09021011057105	2.00			--	0.1	
Tvetenia	09021011065		2.06	5	CG		0.1
Tvetenia vitracies	09021011065113	2.00			--	0.1	
Rheotanytarsus	09021011072	12.00	12.36	6	CF	0.9	0.9
Tanytarsus	09021011076	12.00	12.36	6	CF	0.9	0.9
Dicrotendipes	09021011085	2.00	2.06	8	CG	0.1	0.1
Microtendipes	09021011094		2.06	6	CF		0.1
Microtendipes pedellus group	09021011094166	2.00			--	0.1	
Polypedilum	09021011102		2.06	6	SH		0.1
Polypedilum flavum	09021011102182	2.00			--	0.1	
Simulium	09021012047		12.00	4	CF		0.9
Simulium tuberosum	09021012047067	4.00			--	0.3	
Simulium jenningsi complex	09021012047070	4.00			CF	0.3	
Simulium venustum/verecundum complex	09021012047072	4.00			CF	0.3	
Peltodytes	09021101002	2.00	2.00		P	0.1	0.1
Hygrotus	09021103014	2.00	2.00		PR	0.1	0.1
Acariformes	090301	2.00	2.00		--	0.1	0.1
Sperchonopsis	09030107002	2.00	2.00		--	0.1	0.1
Aturus	09030120001	2.00	2.00		--	0.1	0.1
Amnicola	10010104013		54.00		SC		3.9
Amnicola limosa	10010104013018	54.00			--	3.9	
Bivalvia	1002	2.00	2.00		CF	0.1	0.1
Musculium	10020201001	2.00	2.00		CF	0.1	0.1