



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

Station Information

**Station Number: S-390**  
Waterbody: Mousam River - Station 390  
Town: Sanford  
Directions: ABOVE STP

DEP Drainage: Piscataqua - Presumpscot - Saco  
HUC8: 01060003  
HUC8 Name: Piscataqua-Salmon Falls  
Latitude: 43 24 37.21 N  
Longitude: 70 43 35.54 W  
Stream Order: 3

Sample Information

**Log Number: 1954**  
Subsample Factor: X4

Type of Sample: ROCK BASKET  
Replicates: 3

Date Deployed: 7/21/2010  
Date Retrieved: 8/23/2010

Classification Attainment

**Statutory Class: C**  
Model Result with P>.6: B  
Date Last Calculated: 6/8/2011

**Final Determination: B**  
**Reason for Determination: Model**  
Comments:

Date: 6/10/2011

Model Probabilities

First Stage Model				C or Better Model	
Class A	0.50	Class C	0.02	Class A, B, or C	1.00
Class B	0.48	NA	0.00	Non-Attainment	0.00
B or Better Model				A Model	
Class A or B		0.99		Class A	0.19
Class C or Non-Attainment		0.01		Class B or C or Non-Attainment	0.81

Model Variables

01 Total Mean Abundance	665.33	18 Relative Abundance Ephemeroptera	0.02
02 Generic Richness	23.00	19 EPT Generic Richness	11.00
03 Plecoptera Mean Abundance	16.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	10.67	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	2.70	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	139.86
06 Hilsenhoff Biotic Index	3.35	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	17.33
07 Relative Abundance - Chironomidae	0.11	28 EP Generic Richness/14	0.29
08 Relative Generic Richness Diptera	0.39	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	83.59		
11 <i>Cheumatopsyche</i> Abundance	139.86		
12 EPT Generic Richness/ Diptera Generic Richness	1.22		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	16.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	6.92		
17 Chironomini Abundance (Family Functional Group)	5.53		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Chimarra</i>	42.69
2	<i>Cheumatopsyche</i>	21.02
3	<i>Hydropsyche</i>	12.56
4	Philopotamidae	5.41
5	<i>Rheotanytarsus</i>	3.95



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Date Retrieved: 8/23/2010

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 26.3 deg C  
Dissolved Oxygen: 8.4 mg/l  
Specific Conductance: 98 uS/cm  
Velocity: 75 cm/s  
pH:  
Wetted Width: 10.2 m  
Bankfull Width: 12.5 m  
Depth: 32 cm

**Waterbody Information - Retrieval**

Temperature: 20.6 deg C  
Dissolved Oxygen: 7.8 mg/l  
Specific Conductance: 70 uS/cm  
Velocity: 46 cm/s  
pH: 6.51  
Wetted Width: 10.47 m  
Bankfull Width: 12.5 m  
Depth: 31 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

Landuse Name

Upland Hardwood

Potential Stressor

Canopy Cover

Dense

Location

Above POTW

Terrain

Rolling

Substrate

Gravel 10 %  
Rubble/Cobble 80 %  
Sand 10 %

**Landcover Summary - 2004 Data**

Total Area (ac)	29077	High Int. Dev. %	1.9	Water %	6.8	Non-vegetated %	0.0
		Med Int. Dev. %	2.0	Wetland %	3.9	Tilled Agriculture %	0.5
		Low Int. Dev. %	3.5	Upland Woody %	74.0	Grassland %	5.4
		Development %	7.5	Natural %	77.9	Human Altered %	15.2
						Impervious %	6.0

**Sample Comments**

7/21/2010 FISH.



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Aquatic Life Taxonomic Inventory Report**

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Subsample Factor: X4

Replicates: 3

Calculated: 6/8/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Acroneuria</i>	09020209042		16.00	0	PR		2.4
<i>Acroneuria abnormis</i>	09020209042121	9.33		0	PR	1.4	
<i>Acroneuria lycorias</i>	09020209042125	6.67			--	1.0	
<i>Boyeria</i>	09020301004		6.67	2	PR		1.0
<i>Boyeria vinosa</i>	09020301004012	6.67			--	1.0	
<i>Maccaffertium</i>	09020402015		1.33	4	SC		0.2
<i>Maccaffertium modestum</i>	09020402015051	1.33			--	0.2	
<i>Isonychia</i>	09020404018	8.00	8.00	2	CF	1.2	1.2
<i>Tricorythodes</i>	09020411038	1.33	1.33	4	CG	0.2	0.2
Philopotamidae	09020601	36.00	36.00		--	5.4	5.4
<i>Chimarra</i>	09020601003	284.00	284.00	2	CF	42.7	42.7
<i>Neureclipsis</i>	09020603008	2.67	2.67	7	CF	0.4	0.4
Hydropsychidae	09020604	38.67			--	5.8	
<i>Cheumatopsyche</i>	09020604015	116.00	139.86	5	CF	17.4	21.0
<i>Hydropsyche</i>	09020604016	6.67	83.59	4	CF	1.0	12.6
<i>Hydropsyche morosa</i>	09020604016030	2.67			--	0.4	
<i>Hydropsyche sparna</i>	09020604016032	37.33			--	5.6	
<i>Hydropsyche depravata complex</i>	09020604016041	22.67			CF	3.4	
<i>Macrostemum</i>	09020604018		3.22	3	CF		0.5
<i>Macrostemum zebratum</i>	09020604018054	2.67			--	0.4	
<i>Brachycentrus</i>	09020609043		5.33	0	CF		0.8
<i>Brachycentrus numerosus</i>	09020609043098	5.33			--	0.8	
<i>Parapoynx</i>	09020901002	1.33	1.33	5	SH	0.2	0.2
Chironomidae	09021011	2.67			--	0.4	
<i>Nilotanytus</i>	09021011012		1.38	6	PR		0.2
<i>Nilotanytus fimbriatus</i>	09021011012027	1.33			--	0.2	
<i>Pentaneura</i>	09021011014		5.53	6	PR		0.8
<i>Pentaneura inconspicua</i>	09021011014028	5.33			--	0.8	
<i>Nanocladius</i>	09021011049		1.38	3	CG		0.2
<i>Nanocladius spinipennis</i>	09021011049090	1.33			--	0.2	
<i>Parametriocnemus</i>	09021011053	1.33	1.38	5	CG	0.2	0.2
<i>Rheocricotopus</i>	09021011057	5.33	16.60	6	CG	0.8	2.5
<i>Rheocricotopus robacki</i>	09021011057105	10.67			--	1.6	
<i>Tvetenia</i>	09021011065		15.22	5	CG		2.3
<i>Tvetenia vitracies</i>	09021011065113	14.67			--	2.2	
<i>Rheotanytarsus</i>	09021011072	25.33	26.29	6	CF	3.8	4.0
<i>Microtendipes</i>	09021011094		4.15	6	CF		0.6
<i>Microtendipes rydalensis group</i>	09021011094168	4.00			--	0.6	



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		Actual	Adjusted			Actual	Adjusted
<i>Stenochironomus</i>	09021011105	1.33	1.38	5	CG	0.2	0.2
<i>Macronychus</i>	09021113065		2.67	4	--		0.4
<i>Macronychus glabratus</i>	09021113065040	2.67			--	0.4	