



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

Station Information

Station Number: S-390	River Basin: Saco
Waterbody: Mousam River - Station 390	HUC8 Name: Piscataqua-Salmon Falls
Town: Sanford	Latitude: 43 24 37.21 N
Directions: ABOVE STP	Longitude: 70 43 35.54 W
	Stream Order: 3

Sample Information

Log Number: 2806	Type of Sample: ROCK BAG	Date Deployed: 7/9/2020
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/6/2020

Classification Attainment

Statutory Class: C	Final Determination: A	Date: 5/18/2021
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 5/17/2021	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.82	Class A, B, or C	1.00
Class B	0.18	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.99
Class A or B	1.00	Class B or C or Non-Attainment	0.01
Class C or Non-Attainment	0.00		

Model Variables

01 Total Mean Abundance	390.67	18 Relative Abundance Ephemeroptera	0.09
02 Generic Richness	41.00	19 EPT Generic Richness	16.00
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	35.00	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.10	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	37.67
06 Hilsenhoff Biotic Index	3.43	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	35.33
07 Relative Abundance - Chironomidae	0.18	28 EP Generic Richness/14	0.43
08 Relative Generic Richness Diptera	0.32	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	44.33		
11 <i>Cheumatopsyche</i> Abundance	27.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.23		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	16.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	7.33		
17 Chironomini Abundance (Family Functional Group)	7.67		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Chimarra</i>	21.59
2	<i>Hydropsyche</i>	11.35
3	<i>Rheotanytarsus</i>	11.01
4	<i>Cheumatopsyche</i>	6.91
5	<i>Lepidostoma</i>	6.40



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Station Number: S-390 Town: Sanford Date Deployed: 7/9/2020
Log Number: 2806 Waterbody: Mousam River - Station 390 Date Retrieved: 8/6/2020

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: LOTIC INC.

Waterbody Information - Deployment

Temperature: 26.4 deg C
Dissolved Oxygen: 8.96 mg/l
Dissolved Oxygen Saturation: 111.5 %
Specific Conductance: 134.2 uS/cm
Velocity: 70.1 cm/s
pH: 7.26
Wetted Width: 11.7 m
Bankfull Width: 11.7 m
Depth: 48 cm

Waterbody Information - Retrieval

Temperature: 24.2 deg C
Dissolved Oxygen: 10.22 mg/l
Dissolved Oxygen Saturation: 121.7 %
Specific Conductance: 150.6 uS/cm
Velocity: 28.4 cm/s
pH: 7.59
Wetted Width: 9.7 m
Bankfull Width: 11.7 m
Depth: 38 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood Urban	Dense	Flat
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above POTW	Boulder 5 % Gravel 30 % Rubble/Cobble 30 % Sand 30 %

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



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-390 Waterbody: Mousam River - Station 390 Town: Sanford
Log Number: 2806 Subsample Factor: X1 Replicates: 3 Calculated: 5/17/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Gammarus</i>	09010201003	10.67	10.67	4	--	2.7	2.7
<i>Acroneuria</i>	09020209042		13.00	0	PR		3.3
<i>Acroneuria abnormis</i>	09020209042121	13.00		0	PR	3.3	
<i>Paragnetina</i>	09020209049		3.00	1	PR		0.8
<i>Paragnetina media</i>	09020209049151	3.00			--	0.8	
<i>Boyeria</i>	09020301004		2.33	2	PR		0.6
<i>Boyeria vinosa</i>	09020301004012	2.33			--	0.6	
<i>Hagenius</i>	09020302008		0.33	1	PR		0.1
<i>Hagenius brevistylus</i>	09020302008015	0.33			PR	0.1	
<i>Lanthus</i>	09020302014	0.33	0.33		PR	0.1	0.1
<i>Calopteryx</i>	09020307043	0.67	0.67	5	PR	0.2	0.2
<i>Acerpenna</i>	09020401007		0.33	5	CG		0.1
<i>Acerpenna pygmaea</i>	09020401007011	0.33			--	0.1	
<i>Plauditus</i>	09020401012	1.00	1.00		CG	0.3	0.3
<i>Maccaffertium</i>	09020402015		22.33	4	SC		5.7
<i>Maccaffertium modestum</i>	09020402015051	22.33			--	5.7	
<i>Isonychia</i>	09020404018	11.33	11.33	2	CF	2.9	2.9
<i>Chimarra</i>	09020601003		84.33	2	CF		21.6
<i>Chimarra aterrima</i>	09020601003002	38.00			--	9.7	
<i>Chimarra obscura</i>	09020601003003	46.33			--	11.9	
<i>Neureclipsis</i>	09020603008	2.00	2.00	7	CF	0.5	0.5
<i>Cheumatopsyche</i>	09020604015	27.00	27.00	5	CF	6.9	6.9
<i>Hydropsyche</i>	09020604016		44.33	4	CF		11.3
<i>Hydropsyche sparna</i>	09020604016032	44.33			--	11.3	
<i>Macrostemum</i>	09020604018		5.67	3	CF		1.5
<i>Macrostemum zebratum</i>	09020604018054	5.67			--	1.5	
<i>Glossosoma</i>	09020606020	4.33	4.33	0	SC	1.1	1.1
<i>Oxyethira</i>	09020607028	0.33	0.33	3	P	0.1	0.1
<i>Brachycentrus</i>	09020609043		8.00	0	CF		2.0
<i>Brachycentrus lateralis</i>	09020609043097	8.00			--	2.0	
<i>Lepidostoma</i>	09020611064	25.00	25.00	1	SH	6.4	6.4
<i>Oecetis</i>	09020618078	5.00	5.00	8	PR	1.3	1.3
<i>Nigronia</i>	09020701003	2.33	2.33	0	PR	0.6	0.6
<i>Labrundinia</i>	09021011008	0.33	0.33	7	PR	0.1	0.1
<i>Thienemannimyia</i>	09021011020		3.67	3	PR		0.9
<i>Thienemannimyia group</i>	09021011020041	3.67			--	0.9	
<i>Zavrelimyia</i>	09021011022	3.33	3.33	8	PR	0.9	0.9



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		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
<i>Cricotopus</i>	09021011037	0.33	10.67	7	SH	0.1	2.7
<i>Cricotopus bicinctus</i>	09021011037057	4.33			--	1.1	
<i>Cricotopus sylvestris group</i>	09021011037079	6.00			SH	1.5	
<i>Orthocladus</i>	09021011050		0.67	6	CG		0.2
<i>Orthocladus annectens</i>	09021011050092	0.67			--	0.2	
<i>Parametriocnemus</i>	09021011053	1.33	1.33	5	CG	0.3	0.3
<i>Thienemanniella</i>	09021011062	0.67	0.67	6	CG	0.2	0.2
<i>Rheotanytarsus</i>	09021011072	43.00	43.00	6	CF	11.0	11.0
<i>Microtendipes</i>	09021011094		6.33	6	CF		1.6
<i>Microtendipes pedellus group</i>	09021011094166	6.33			--	1.6	
<i>Polypedilum</i>	09021011102		1.00	6	SH		0.3
<i>Polypedilum aviceps</i>	09021011102181	1.00			--	0.3	
<i>Stenochironomus</i>	09021011105	0.33	0.33	5	CG	0.1	0.1
<i>Simulium</i>	09021012047	4.33	4.33	4	CF	1.1	1.1
<i>Hemerodromia</i>	09021016057	1.67	1.67	3	PR	0.4	0.4
<i>Dineutus</i>	09021104032	0.33	0.33	2	--	0.1	0.1
<i>Optioservus</i>	09021113067	9.33	9.33	3	SC	2.4	2.4
<i>Promoresia</i>	09021113069	1.00	1.00		--	0.3	0.3
<i>Stenelmis</i>	09021113070	2.00	2.00	5	SC	0.5	0.5
<i>Amnicola</i>	10010104013	9.67	9.67		SC	2.5	2.5
<i>Sphaerium</i>	10020201003	17.33	17.33		CF	4.4	4.4