



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

**Station Information**

<b>Station Number:</b> S-388	River Basin:	Saco
Waterbody: Mousam River - Station 388	HUC8 Name:	Piscataqua-Salmon Falls
Town: Sanford	Latitude:	43 28 45.08 N
Directions: ABOVE - BUTLERS CORNER RD BELOW CROSSING	Longitude:	70 48 31.81 W
	Stream Order:	3

**Sample Information**

<b>Log Number:</b> 2832	Type of Sample: ROCK BAG	Date Deployed: 7/22/2020
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/18/2020

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> B	Date: 3/7/2022
Model Result with $P \geq 0.6$ : B	<b>Reason for Determination:</b> Model	
Date Last Calculated: 3/3/2022	Comments: Indeterminate for Class A (0.43). Not raised to Class A based on community structure.	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.66	Class A, B, or C	1.00
Class B	0.33	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.43
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.57

**Model Variables**

01 Total Mean Abundance	385.33	18 Relative Abundance Ephemeroptera	0.18
02 Generic Richness	54.00	19 EPT Generic Richness	16.00
03 Plecoptera Mean Abundance	7.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.33
04 Ephemeroptera Mean Abundance	70.00	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.60	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	22.67
06 Hilsenhoff Biotic Index	4.68	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	31.33
07 Relative Abundance - Chironomidae	0.28	28 EP Generic Richness/14	0.50
08 Relative Generic Richness Diptera	0.30	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	33.67		
11 <i>Cheumatopsyche</i> Abundance	7.33		
12 EPT Generic Richness/ Diptera Generic Richness	1.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	7.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	10.33		
17 Chironomini Abundance (Family Functional Group)	48.33		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Microtendipes</i>	9.95
2	<i>Hydropsyche</i>	8.74
3	<i>Isonychia</i>	8.22
4	<i>Rheotanytarsus</i>	8.13
5	<i>Simulium</i>	7.27



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**Log Number: 2832**      Waterbody: Mousam River - Station 388      Date Retrieved: 8/18/2020

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: ECOANALYSTS IDAHO

**Waterbody Information - Deployment**

Temperature: 24.8 deg C  
Dissolved Oxygen: 8.27 mg/l  
Dissolved Oxygen Saturation: 100.1 %  
Specific Conductance: 96.3 uS/cm  
Velocity: 51.8 cm/s  
pH: 7.25  
Wetted Width: 11.2 m  
Bankfull Width: 13.8 m  
Depth: 43.3 cm

**Waterbody Information - Retrieval**

Temperature: 23.4 deg C  
Dissolved Oxygen: 8.8 mg/l  
Dissolved Oxygen Saturation: 104.9 %  
Specific Conductance: 94 uS/cm  
Velocity: 13.1 cm/s  
pH: 7.26  
Wetted Width: 11.9 m  
Bankfull Width: 13.8 m  
Depth: 35.3 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Dense	Rolling
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above Town	Boulder 25 %
	Below Road Crossing	Detritus 5 %
		Gravel 15 %
		Rubble/Cobble 40 %
		Sand 15 %

**Landcover Summary - 2004 Data**

Total Area (ac)	20559	High Int. Dev. %	0.3	Water %	9.2	Non-vegetated %	0.0
		Med Int. Dev. %	0.3	Wetland %	3.4	Tilled Agriculture %	0.6
		Low Int. Dev. %	2.8	Upland Woody %	78.2	Grassland %	5.0
		Development %	3.4	Natural %	81.7	Human Altered %	9.1
						Impervious %	2.9
Total Land (ac)	18659	High Int. Dev. %	0.3	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.4	Wetland %	3.8	Tilled Agriculture %	0.6
		Low Int. Dev. %	3.1	Upland Woody %	86.2	Grassland %	5.5
		Development %	3.8	Natural %	90.0	Human Altered %	10.0
						Impervious %	3.2

**Sample Comments**



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Subsample Factor: X1

Replicates: 3

Calculated: 3/3/2022

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Rhabditophora	0301	1.33	1.33		--	0.3	0.3
<i>Prostoma</i>	04010101001	0.33	0.33		--	0.1	0.1
<i>Pristina</i>	08020202004		0.33		--		0.1
<i>Pristina aequiseta</i>	08020202004001	0.33			--	0.1	
<i>Nais</i>	08020202009	0.67	1.00		CG	0.2	0.3
<i>Nais behningi</i>	08020202009003	0.33			--	0.1	
<i>Gammarus</i>	09010201003	11.33	11.33	4	--	2.9	2.9
<i>Hyaella</i>	09010203006	0.33	0.33	8	CG	0.1	0.1
<i>Acroneuria</i>	09020209042		7.00	0	PR		1.8
<i>Acroneuria abnormis</i>	09020209042121	7.00		0	PR	1.8	
<i>Boyeria</i>	09020301004	1.00	4.33	2	PR	0.3	1.1
<i>Boyeria vinosa</i>	09020301004012	3.33			--	0.9	
<i>Argia</i>	09020309048	1.33	1.33	7	PR	0.3	0.3
<i>Baetis</i>	09020401001	0.67	8.33	4	CG	0.2	2.2
<i>Baetis flavistriga</i>	09020401001004	2.67			--	0.7	
<i>Baetis pluto</i>	09020401001009	5.00			--	1.3	
<i>Heterocloeon</i>	09020401005		4.00	2	SC		1.0
<i>Heterocloeon frivolum</i>	09020401005022	4.00			--	1.0	
<i>Iswaeon</i>	09020401015		0.67		--		0.2
<i>Iswaeon anoka</i>	09020401015001	0.67			--	0.2	
<i>Maccaffertium</i>	09020402015	0.33	24.33	4	SC	0.1	6.3
<i>Maccaffertium modestum</i>	09020402015051	24.00			--	6.2	
<i>Isonychia</i>	09020404018	31.67	31.67	2	CF	8.2	8.2
<i>Tricorythodes</i>	09020411038	1.00	1.00	4	CG	0.3	0.3
<i>Chimarra</i>	09020601003		19.67	2	CF		5.1
<i>Chimarra aterrima</i>	09020601003002	19.33			--	5.0	
<i>Chimarra obscura</i>	09020601003003	0.33			--	0.1	
<i>Neureclipsis</i>	09020603008	15.33	15.33	7	CF	4.0	4.0
<i>Cheumatopsyche</i>	09020604015	7.33	7.33	5	CF	1.9	1.9
<i>Hydropsyche</i>	09020604016		33.67	4	CF		8.7
<i>Hydropsyche morosa</i>	09020604016030	2.00			--	0.5	
<i>Hydropsyche sparna</i>	09020604016032	15.00			--	3.9	
<i>Hydropsyche betteni</i>	09020604016037	16.67			--	4.3	
<i>Agraylea</i>	09020607024	0.67	0.67	8	P	0.2	0.2
<i>Hydroptila</i>	09020607026	17.33	17.33	6	P	4.5	4.5
<i>Oxyethira</i>	09020607028	0.33	0.33	3	P	0.1	0.1
<i>Lepidostoma</i>	09020611064	4.33	4.33	1	SH	1.1	1.1



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		Actual	Adjusted			Actual	Adjusted
<i>Oecetis</i>	09020618078	8.33	23.00	8	PR	2.2	6.0
<i>Oecetis persimilis</i>	09020618078157	14.67			--	3.8	
<i>Corydalus</i>	09020701002		1.00	6	PR		0.3
<i>Corydalus cornutus</i>	09020701002002	1.00			--	0.3	
<i>Ablabesmyia</i>	09021011001		0.33	8	PR		0.1
<i>Ablabesmyia mallochi</i>	09021011001004	0.33			--	0.1	
<i>Nilotanypus</i>	09021011012		3.67	6	PR		1.0
<i>Nilotanypus fimbriatus</i>	09021011012027	3.67			--	1.0	
<i>Pentaneura</i>	09021011014	1.33	1.33	6	PR	0.3	0.3
<i>Thienemannimyia</i>	09021011020		5.00	3	PR		1.3
<i>Thienemannimyia group</i>	09021011020041	5.00			--	1.3	
<i>Corynoneura</i>	09021011036	0.33	0.33	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037	14.33	15.00	7	SH	3.7	3.9
<i>Cricotopus bicinctus</i>	09021011037057	0.67			--	0.2	
<i>Eukiefferiella</i>	09021011041		2.33	8	CG		0.6
<i>Eukiefferiella discoloripes</i>	09021011041085	2.33			--	0.6	
<i>Parametriocnemus</i>	09021011053	1.00	1.00	5	CG	0.3	0.3
<i>Psectrocladius</i>	09021011056	0.33	0.33	8	CG	0.1	0.1
<i>Thienemanniella</i>	09021011062	0.67	0.67	6	CG	0.2	0.2
<i>Rheotanytarsus</i>	09021011072		31.33	6	CF		8.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	31.33			CF	8.1	
<i>Dicrotendipes</i>	09021011085	0.33	0.33	8	CG	0.1	0.1
<i>Microtendipes</i>	09021011094		38.33	6	CF		9.9
<i>Microtendipes rydalensis group</i>	09021011094168	38.33			--	9.9	
<i>Polypedilum</i>	09021011102		9.67	6	SH		2.5
<i>Polypedilum aviceps</i>	09021011102181	8.33			--	2.2	
<i>Polypedilum flavum</i>	09021011102182	1.00			--	0.3	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.1	
<i>Simulium</i>	09021012047	28.00	28.00	4	CF	7.3	7.3
<i>Hemerodromia</i>	09021016057	1.00	1.00	3	PR	0.3	0.3
<i>Psephenus</i>	09021108058		0.33	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	0.33			--	0.1	
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	0.1	0.1
<i>Macronychus</i>	09021113065		2.33	4	--		0.6
<i>Macronychus glabratus</i>	09021113065040	2.33			--	0.6	
<i>Microcyloepus</i>	09021113066	0.33	0.33	3	--	0.1	0.1
<i>Optioservus</i>	09021113067		5.67	3	SC		1.5



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<i>Optioservus elegans</i>	09021113067051	5.00			--	1.3	
<i>Optioservus tardella</i>	09021113067052	0.67			--	0.2	
<i>Oulimnius</i>	09021113068	0.33	0.33		--	0.1	0.1
<i>Stenelmis</i>	09021113070	1.67	1.67	5	SC	0.4	0.4
<i>Sperchon</i>	09030107001	0.67	0.67		--	0.2	0.2
<i>Clathrosperchon</i>	09030118001	0.67	0.67		--	0.2	0.2
Gastropoda	1001	0.67	0.67		--	0.2	0.2
<i>Amnicola</i>	10010104013	2.00	2.00		SC	0.5	0.5
<i>Physella</i>	10010202027	7.67	7.67		SC	2.0	2.0
<i>Ferrissia</i>	10010204035	1.00	1.00		SC	0.3	0.3
<i>Laevapex</i>	10010204046		3.00		--		0.8
<i>Laevapex fuscus</i>	10010204046068	3.00			--	0.8	