



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

Station Information

Station Number: 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

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

Classification Attainment

Statutory Class: B Final Determination: Date:
Model Result with $P \geq 0.6$: B Reason for Determination:
Date Last Calculated: 3/3/2022 Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.66	Class A, B, or C	1.00
Class B	0.33	Non-Attainment	0.00
B or Better Model		A Model	
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



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

Station Number: S-388	Town: Sanford	Date Deployed: 7/22/2020
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



Maine Department of Environmental Protection

Biological Monitoring Program

Aquatic Life Taxonomic Inventory Report

Station Number: S-388

Waterbody: Mousam River - Station 388

Town: Sanford

Log Number: 2832

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
<i>Rhabditophora</i>	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 aequisetata</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



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

Station Number: S-388

Waterbody: Mousam River - Station 388

Town: Sanford

Log Number: 2832

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
<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>Nilotanytus</i>	09021011012		3.67	6	PR		1.0
<i>Nilotanytus 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>Microcylloepus</i>	09021113066	0.33	0.33	3	--	0.1	0.1
<i>Optioservus</i>	09021113067		5.67	3	SC		1.5



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

Station Number: S-388

Waterbody: Mousam River - Station 388

Town: Sanford

Log Number: 2832

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
<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	