



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

Station Information

Station Number: S-259 River Basin: Saco
Waterbody: Mousam River - Station 259 HUC8 Name: Piscataqua-Salmon Falls
Town: Sanford Latitude: 43 25 54.21 N
Directions: 20 M ABOVE SCHOOL ST. CROSSING; BELOW LANDFILL Longitude: 70 45 40.6 W
Stream Order: 3

Sample Information

Log Number: 2831 Type of Sample: ROCK BAG Date Deployed: 7/30/2020
Subsample Factor: X4 Replicates: 3 Date Retrieved: 8/18/2020

Classification Attainment

Statutory Class: C **Final Determination:** C Date: 3/3/2022
Model Result with $P \geq 0.6$: C **Reason for Determination:** Model
Date Last Calculated: 11/2/2021 **Comments:**

Model Probabilities

First Stage Model				C or Better Model	
Class A	0.00	Class C	0.88	Class A, B, or C	0.97
Class B	0.01	NA	0.11	Non-Attainment	0.03
B or Better Model				A Model	
Class A or B			0.00	Class A	0.00
Class C or Non-Attainment			1.00	Class B or C or Non-Attainment	1.00

Model Variables

01 Total Mean Abundance	1109.33	18 Relative Abundance Ephemeroptera	0.04
02 Generic Richness	44.00	19 EPT Generic Richness	13.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	13.33
04 Ephemeroptera Mean Abundance	42.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.42	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	753.33
06 Hilsenhoff Biotic Index	6.30	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	16.00
07 Relative Abundance - Chironomidae	0.74	28 EP Generic Richness/14	0.36
08 Relative Generic Richness Diptera	0.32	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	4.00		
11 <i>Cheumatopsyche</i> Abundance	4.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.93		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	18.67		
17 Chironomini Abundance (Family Functional Group)	58.67		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Cricotopus</i>	61.30
2	<i>Gammarus</i>	14.18
3	<i>Tanytarsus</i>	5.29
4	<i>Stenelmis</i>	2.52
5	<i>Microtendipes</i>	1.92



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Station Number: S-259	Town: Sanford	Date Deployed: 7/30/2020
Log Number: 2831	Waterbody: Mousam River - Station 259	Date Retrieved: 8/18/2020

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature:	26.5 deg C
Dissolved Oxygen:	8.6 mg/l
Dissolved Oxygen Saturation:	107.9 %
Specific Conductance:	144.5 uS/cm
Velocity:	6.1 cm/s
pH:	7.38
Wetted Width:	11.7 m
Bankfull Width:	13 m
Depth:	64.5 cm

Waterbody Information - Retrieval

Temperature:	24.5 deg C
Dissolved Oxygen:	9.75 mg/l
Dissolved Oxygen Saturation:	117.9 %
Specific Conductance:	134 uS/cm
Velocity:	6.1 cm/s
pH:	7.43
Wetted Width:	12.2 m
Bankfull Width:	13 m
Depth:	64.7 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Marsh	Partly Open	Flat
Upland Hardwood		
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Nps Pollution	Below Landfill	Boulder 5 %
Nutrients		Gravel 35 %
		Rubble/Cobble 35 %
		Sand 20 %
		Silt 5 %

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
Total Land (ac)	25764	High Int. Dev. %	1.7	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	1.8	Wetland %	3.8	Tilled Agriculture %	0.5
		Low Int. Dev. %	3.7	Upland Woody %	80.9	Grassland %	5.9
		Development %	7.2	Natural %	84.7	Human Altered %	15.3
						Impervious %	5.7

Sample Comments



**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: 2831

Subsample Factor: X4

Replicates: 3

Calculated: 11/2/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002	4.00	4.00		--	0.4	0.4
<i>Prostoma</i>	04010101001	6.67	6.67		--	0.6	0.6
<i>Nais</i>	08020202009	1.33	1.33		CG	0.1	0.1
<i>Gammarus</i>	09010201003	157.33	157.33	4	--	14.2	14.2
<i>Boyeria</i>	09020301004		1.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.1	
Gomphidae	09020302	2.67	2.67		--	0.2	0.2
<i>Hagenius</i>	09020302008		2.67	1	PR		0.2
<i>Hagenius brevistylus</i>	09020302008015	2.67			PR	0.2	
Coenagrionidae	09020309	4.00	4.00		--	0.4	0.4
<i>Argia</i>	09020309048	2.67	2.67	7	PR	0.2	0.2
<i>Labiobaetis</i>	09020401009	1.33	1.33		--	0.1	0.1
<i>Procloeon</i>	09020401010	14.67	14.67		CG	1.3	1.3
<i>Stenacron</i>	09020402014	9.33	9.33	7	SC	0.8	0.8
<i>Maccaffertium</i>	09020402015	13.33	16.00	4	SC	1.2	1.4
<i>Maccaffertium modestum</i>	09020402015051	2.67			--	0.2	
<i>Caenis</i>	09020412040	1.33	1.33	7	CG	0.1	0.1
<i>Chimarra</i>	09020601003		2.67	2	CF		0.2
<i>Chimarra obscura</i>	09020601003003	2.67			--	0.2	
<i>Neureclipsis</i>	09020603008	2.67	2.67	7	CF	0.2	0.2
<i>Polycentropus</i>	09020603010	2.67	2.67	6	PR	0.2	0.2
<i>Cheumatopsyche</i>	09020604015	4.00	4.00	5	CF	0.4	0.4
<i>Hydropsyche</i>	09020604016		4.00	4	CF		0.4
<i>Hydropsyche sparna</i>	09020604016032	1.33			--	0.1	
<i>Hydropsyche betteni</i>	09020604016037	2.67			--	0.2	
<i>Mystacides</i>	09020618075		1.33	4	CG		0.1
<i>Mystacides sepulchralis</i>	09020618075147	1.33			--	0.1	
<i>Trienodes</i>	09020618077	1.33	1.33	6	SH	0.1	0.1
<i>Oecetis</i>	09020618078	2.67	2.67	8	PR	0.2	0.2
Ceratopogonidae	09021010	1.33	1.33		--	0.1	0.1
<i>Ablabesmyia</i>	09021011001	10.67	10.67	8	PR	1.0	1.0
<i>Pentaneura</i>	09021011014	8.00	8.00	6	PR	0.7	0.7
<i>Cricotopus</i>	09021011037		680.00	7	SH		61.3
<i>Cricotopus politus</i>	09021011037077	680.00			--	61.3	
<i>Nanocladius</i>	09021011049	2.67	2.67	3	CG	0.2	0.2
<i>Rheocricotopus</i>	09021011057	2.67	2.67	6	CG	0.2	0.2
<i>Tanytarsus</i>	09021011076	58.67	58.67	6	CF	5.3	5.3



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<i>Cryptochironomus</i>	09021011082	2.67	2.67	8	PR	0.2	0.2
<i>Demicryptochironomus</i>	09021011084	5.33	5.33	8	CG	0.5	0.5
<i>Dicrotendipes</i>	09021011085	13.33	13.33	8	CG	1.2	1.2
<i>Microtendipes</i>	09021011094		21.33	6	CF		1.9
<i>Microtendipes pedellus group</i>	09021011094166	2.67			--	0.2	
<i>Microtendipes rydalensis group</i>	09021011094168	18.67			--	1.7	
<i>Phaenopsectra</i>	09021011101		5.33	7	SC		0.5
<i>Phaenopsectra punctipes group</i>	09021011101181	5.33			--	0.5	
<i>Polypedilum</i>	09021011102		5.33	6	SH		0.5
<i>Polypedilum flavum</i>	09021011102182	5.33			--	0.5	
<i>Stenochironomus</i>	09021011105	5.33	5.33	5	CG	0.5	0.5
<i>Gyrinus</i>	09021104033	1.33	1.33	2	PR	0.1	0.1
<i>Dubiraphia</i>	09021113064	2.67	2.67	6	--	0.2	0.2
<i>Microcylloepus</i>	09021113066		2.67	3	--		0.2
<i>Microcylloepus pusillus</i>	09021113066041	2.67			--	0.2	
<i>Promoresia</i>	09021113069	1.33	1.33		--	0.1	0.1
<i>Stenelmis</i>	09021113070	28.00	28.00	5	SC	2.5	2.5
<i>Amnicola</i>	10010104013	1.33	1.33		SC	0.1	0.1
<i>Helisoma</i>	10010203030		1.33		SC		0.1
<i>Helisoma anceps</i>	10010203030058	1.33			--	0.1	
<i>Pisidium</i>	10020201002	1.33	1.33		CF	0.1	0.1