



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

**Station Information**

<b>Station Number:</b> 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**

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

**Classification Attainment**

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

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.97
Class B	0.01	Non-Attainment	0.03
<u>B or Better Model</u>		<u>A Model</u>	
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, Micropsectra, Parachironomus, 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, Cricotopus, Tanytarsus, Ablabesmyia</i>	753.33
06 Hilsenhoff Biotic Index	6.30	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, 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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**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**



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Waterbody: Mousam River - Station 259

Town: Sanford

**Log Number: 2831**

Subsample Factor: X4

Replicates: 3

Calculated: 11/2/2021

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				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>Proclleon</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>Triaenodes</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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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<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>Microcyloepus</i>	09021113066		2.67	3	--		0.2
<i>Microcyloepus 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