



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

Station Information

Station Number: S-758	River Basin: Saco
Waterbody: Piscataqua River - Station 758	HUC8 Name: Presumpscot
Town: Cumberland	Latitude: 43 48 47.62 N
Directions: ~130M DOWNSTREAM OF MILLS ROAD, WALK DOWN FOOT PATH ALONG STREAM	Longitude: 70 18 7.52 W
	Stream Order: 3

Sample Information

Log Number: 2815	Type of Sample: ROCK BAG	Date Deployed: 7/6/2020
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/5/2020

Classification Attainment

Statutory Class: B	Final Determination: I	Date: 3/3/2022
Model Result with $P \geq 0.6$: I	Reason for Determination: Best Professional Judgement	
Date Last Calculated: 10/15/2021	Comments: Minimum provision for Total Mean Abundance not met. Resample.	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.86	Class A, B, or C	1.00
Class B	0.14	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.96
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.04

Model Variables

01 Total Mean Abundance	39.00	18 Relative Abundance Ephemeroptera	0.18
02 Generic Richness	23.00	19 EPT Generic Richness	10.00
03 Plecoptera Mean Abundance	3.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	7.00	23 Relative Generic Richness- Plecoptera	0.09
05 Shannon-Wiener Generic Diversity	3.95	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	2.67
06 Hilsenhoff Biotic Index	3.58	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	8.67
07 Relative Abundance - Chironomidae	0.28	28 EP Generic Richness/14	0.36
08 Relative Generic Richness Diptera	0.39	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.11		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	3.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.33		
17 Chironomini Abundance (Family Functional Group)	3.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Maccaffertium</i>	14.53
2	<i>Stenelmis</i>	13.62
3	<i>Boyeria</i>	8.55
4	<i>Acroneuria</i>	7.69
5	<i>Lepidostoma</i>	7.69
6	<i>Microtendipes</i>	7.69



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Aquatic Life Classification Attainment Report**

Station Number: S-758 Town: Cumberland Date Deployed: 7/6/2020
Log Number: 2815 Waterbody: Piscataqua River - Station 758 Date Retrieved: 8/5/2020

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: LOTIC INC.

Waterbody Information - Deployment

Temperature: 21.8 deg C
Dissolved Oxygen: 8.96 mg/l
Dissolved Oxygen Saturation: 101.5 %
Specific Conductance: 246 uS/cm
Velocity: 32.6 cm/s
pH: 7.08
Wetted Width: 5.4 m
Bankfull Width: 5.6 m
Depth: 43.3 cm

Waterbody Information - Retrieval

Temperature: 22.8 deg C
Dissolved Oxygen: 8.45 mg/l
Dissolved Oxygen Saturation: 98.3 %
Specific Conductance: 305.8 uS/cm
Velocity: 0.1 cm/s
pH: 7.02
Wetted Width: 2.3 m
Bankfull Width: 5.6 m
Depth: 28.7 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Conifer	Dense	Hilly	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nps Pollution	Below Dam	Boulder	15 %
	Below Road Crossing	Gravel	15 %
		Rubble/Cobble	

Landcover Summary - 2004 Data

Sample Comments

VISIBLE FLOW.



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

Station Number: S-758

Waterbody: Piscataqua River - Station 758

Town: Cumberland

Log Number: 2815

Subsample Factor: X1

Replicates: 3

Calculated: 10/15/2021

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
<i>Leuctra</i>	09020204020	0.67	0.67	0	SH	1.7	1.7
<i>Acroneuria</i>	09020209042	1.33	3.00	0	PR	3.4	7.7
<i>Acroneuria abnormis</i>	09020209042121	1.67		0	PR	4.3	
<i>Boyeria</i>	09020301004		3.33	2	PR		8.5
<i>Boyeria vinosa</i>	09020301004012	3.33			--	8.5	
<i>Leucrocuta</i>	09020402011	1.00	1.00	1	SC	2.6	2.6
<i>Maccaffertium</i>	09020402015	2.00	5.67	4	SC	5.1	14.5
<i>Maccaffertium modestum</i>	09020402015051	2.67			--	6.8	
<i>Maccaffertium vicarium</i>	09020402015055	1.00			--	2.6	
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	0.9	0.9
Polycentropodidae	09020603	0.67	0.67		--	1.7	1.7
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.9	0.9
Hydropsychidae	09020604	1.00	1.00		--	2.6	2.6
<i>Lepidostoma</i>	09020611064	3.00	3.00	1	SH	7.7	7.7
<i>Oecetis</i>	09020618078	1.33	1.33	8	PR	3.4	3.4
<i>Nigronia</i>	09020701003	2.00	2.00	0	PR	5.1	5.1
Chironomidae	09021011				--		
<i>Thienemannimyia</i>	09021011020		1.00	3	PR		2.6
<i>Thienemannimyia group</i>	09021011020041	1.00			--	2.6	
<i>Trissopelopia</i>	09021011021	0.33	0.33		PR	0.9	0.9
<i>Pagastia</i>	09021011025	0.33	0.33	1	--	0.9	0.9
<i>Nanocladius</i>	09021011049	0.33	0.33	3	CG	0.9	0.9
<i>Tvetenia</i>	09021011065		0.33	5	CG		0.9
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.9	
<i>Rheotanytarsus</i>	09021011072	2.67	2.67	6	CF	6.8	6.8
<i>Tanytarsus</i>	09021011076	2.67	2.67	6	CF	6.8	6.8
<i>Microtendipes</i>	09021011094		3.00	6	CF		7.7
<i>Microtendipes rydalensis group</i>	09021011094168	3.00			--	7.7	
<i>Polypedilum</i>	09021011102		0.33	6	SH		0.9
<i>Polypedilum aviceps</i>	09021011102181	0.33			--	0.9	
Elmidae	09021113	0.33			--	0.9	
<i>Macronychus</i>	09021113065	0.33	0.35	4	--	0.9	0.9
<i>Stenelmis</i>	09021113070	5.00	5.31	5	SC	12.8	13.6