



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

**Station Information**

<b>Station Number:</b> S-759	River Basin: Saco
Waterbody: Piscataqua River - Station 759	HUC8 Name: Presumpscot
Town: Falmouth	Latitude: 43 44 15.5 N
Directions: ~65 M DOWNSTREAM OF LEIGHTON ROAD	Longitude: 70 17 33.83 W
	Stream Order: 3

**Sample Information**

<b>Log Number:</b> 2817	Type of Sample: ROCK BAG	Date Deployed: 7/6/2020
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/5/2020

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> B	Date: 2/22/2021
Model Result with $P \geq 0.6$ : B	<b>Reason for Determination:</b> Model	
Date Last Calculated: 1/29/2021	Comments: Indeterminate Class A (0.51) remains Class B because of abundance of Chamaopsyche and relatively high Hilsenhoff Biotic Index	

**Model Probabilities**

<u>First Stage Model</u>			<u>C or Better Model</u>		
Class A	0.40	Class C	0.03	Class A, B, or C	1.00
Class B	0.57	NA	0.00	Non-Attainment	0.00
<u>B or Better Model</u>			<u>A Model</u>		
Class A or B		1.00	Class A	0.51	
Class C or Non-Attainment		0.00	Class B or C or Non-Attainment	0.49	

**Model Variables**

01 Total Mean Abundance	831.00	18 Relative Abundance Ephemeroptera	0.09
02 Generic Richness	58.00	19 EPT Generic Richness	20.00
03 Plecoptera Mean Abundance	4.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.33
04 Ephemeroptera Mean Abundance	76.33	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.50	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	263.00
06 Hilsenhoff Biotic Index	4.76	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	63.00
07 Relative Abundance - Chironomidae	0.30	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.34	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	134.67		
11 <i>Cheumatopsyche</i> Abundance	260.33		
12 EPT Generic Richness/ Diptera Generic Richness	1.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	3.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	5.00		
17 Chironomini Abundance (Family Functional Group)	94.33		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Cheumatopsyche</i>	31.33
2	<i>Hydropsyche</i>	16.21
3	<i>Rheotanytarsus</i>	11.11
4	<i>Polypedilum</i>	8.38
5	<i>Maccaffertium</i>	7.18



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**Log Number: 2817**

Town: Falmouth  
Waterbody: Piscataqua River - Station 759

Date Deployed: 7/6/2020  
Date Retrieved: 8/5/2020

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature: 18.5 deg C  
Dissolved Oxygen: 9.76 mg/l  
Dissolved Oxygen Saturation: 103.3 %  
Specific Conductance: 309.5 uS/cm  
Velocity: 64 cm/s  
pH: 7.32  
Wetted Width: 7.8 m  
Bankfull Width: 12 m  
Depth: 35 cm

**Waterbody Information - Retrieval**

Temperature: 22.1 deg C  
Dissolved Oxygen: 10.22 mg/l  
Dissolved Oxygen Saturation: 116.8 %  
Specific Conductance: 447.4 uS/cm  
Velocity: 33.5 cm/s  
pH: 7.61  
Wetted Width: 7.2 m  
Bankfull Width: 12 m  
Depth: 21 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Dense	Rolling	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nps Pollution	Below Road Crossing	Bedrock	30 %
		Gravel	10 %
		Rubble/Cobble	30 %
		Sand	30 %

**Landcover Summary - 2004 Data**

Total Area (ac)	7950	High Int. Dev. %	1.6	Water %	0.0	Non-vegetated %	0.7
		Med Int. Dev. %	1.2	Wetland %	1.1	Tilled Agriculture %	0.8
		Low Int. Dev. %	6.7	Upland Woody %	74.7	Grassland %	12.1
		Development %	9.5	Natural %	75.8	Human Altered %	24.2
						Impervious %	9.0

**Sample Comments**



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**Station Number: S-759**      Waterbody: Piscataqua River - Station 759      Town: Falmouth  
**Log Number: 2817**      Subsample Factor: X1      Replicates: 3      Calculated: 1/29/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Erpobdella</i>	08030203002	0.33	0.33		--	0.0	0.0
<i>Gammarus</i>	09010201003	22.33	22.33	4	--	2.7	2.7
<i>Leuctra</i>	09020204020	0.33	0.33	0	SH	0.0	0.0
<i>Acroneuria</i>	09020209042	3.00	3.33	0	PR	0.4	0.4
<i>Acroneuria lycorias</i>	09020209042125	0.33			--	0.0	
<i>Paragnetina</i>	09020209049	0.33	0.33	1	PR	0.0	0.0
<i>Boyeria</i>	09020301004		1.00	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	1.00			--	0.1	
Calopterygidae	09020307	0.33	0.33		--	0.0	0.0
Baetidae	09020401	0.33			--	0.0	
<i>Baetis</i>	09020401001		4.49	4	CG		0.5
<i>Baetis flavistriga</i>	09020401001004	1.67			--	0.2	
<i>Baetis intercalaris</i>	09020401001008	1.67			--	0.2	
<i>Baetis pluto</i>	09020401001009	1.00			--	0.1	
<i>Acerpenna</i>	09020401007	1.33	2.42	5	CG	0.2	0.3
<i>Acerpenna macdunnoughi</i>	09020401007001	1.00			--	0.1	
<i>Plauditus</i>	09020401012	0.67	0.69		CG	0.1	0.1
<i>Isxaeon</i>	09020401015		2.07		--		0.2
<i>Isxaeon anoka</i>	09020401015001	2.00			--	0.2	
<i>Maccaffertium</i>	09020402015	52.67	59.67	4	SC	6.3	7.2
<i>Maccaffertium modestum</i>	09020402015051	7.00			--	0.8	
<i>Isonychia</i>	09020404018	5.67	5.67	2	CF	0.7	0.7
Leptophlebiidae	09020406	0.33	0.33		--	0.0	0.0
<i>Serratella</i>	09020410037		0.67	2	CG		0.1
<i>Serratella serratoides</i>	09020410037124	0.67			--	0.1	
<i>Tricorythodes</i>	09020411038	0.33	0.33	4	CG	0.0	0.0
Corixidae	09020501	0.33	0.33		--	0.0	0.0
<i>Chimarra</i>	09020601003	0.67	29.67	2	CF	0.1	3.6
<i>Chimarra aterrima</i>	09020601003002	27.67			--	3.3	
<i>Chimarra obscura</i>	09020601003003	1.33			--	0.2	
<i>Lype</i>	09020602004		0.33	2	SC		0.0
<i>Lype diversa</i>	09020602004005	0.33			--	0.0	
<i>Polycentropus</i>	09020603010	2.00	2.00	6	PR	0.2	0.2
Hydropsychidae	09020604				--		
<i>Cheumatopsyche</i>	09020604015	260.33	260.33	5	CF	31.3	31.3
<i>Hydropsyche</i>	09020604016	32.33	134.67	4	CF	3.9	16.2
<i>Hydropsyche bronta</i>	09020604016029	7.67			--	0.9	



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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>Hydropsyche morosa</i>	09020604016030	0.33			--	0.0	
<i>Hydropsyche sparna</i>	09020604016032	49.67			--	6.0	
<i>Hydropsyche betteni</i>	09020604016037	44.67			--	5.4	
<i>Rhyacophila</i>	09020605019	0.67	2.00	2	PR	0.1	0.2
<i>Rhyacophila fuscula</i>	09020605019060	1.33			PR	0.2	
Glossosomatidae	09020606				--		
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.1	0.1
<i>Oecetis</i>	09020618078	2.00	2.33	8	PR	0.2	0.3
<i>Oecetis persimilis</i>	09020618078157	0.33			--	0.0	
<i>Nigronia</i>	09020701003		1.00	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	1.00			--	0.1	
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.0	0.0
Chironomidae	09021011				--		
<i>Pentaneura</i>	09021011014	0.33	0.33	6	PR	0.0	0.0
<i>Thienemannimyia</i>	09021011020		4.67	3	PR		0.6
<i>Thienemannimyia group</i>	09021011020041	4.67			--	0.6	
<i>Pagastia</i>	09021011025	0.33	0.33	1	--	0.0	0.0
<i>Brillia</i>	09021011033	5.67	5.67	5	SH	0.7	0.7
<i>Corynoneura</i>	09021011036	0.33	0.33	7	CG	0.0	0.0
<i>Eukiefferiella</i>	09021011041		0.33	8	CG		0.0
<i>Eukiefferiella brehmi group</i>	09021011041073	0.33			--	0.0	
<i>Nanocladius</i>	09021011049	0.67	0.67	3	CG	0.1	0.1
<i>Parametriocnemus</i>	09021011053	4.33	4.33	5	CG	0.5	0.5
<i>Rheocricotopus</i>	09021011057	26.67	26.67	6	CG	3.2	3.2
<i>Tvetenia</i>	09021011065		13.67	5	CG		1.6
<i>Tvetenia paucunca</i>	09021011065114	13.67			--	1.6	
<i>Micropsectra</i>	09021011070	0.33	0.33	7	CG	0.0	0.0
<i>Rheotanytarsus</i>	09021011072		92.33	6	CF		11.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	63.00			CF	7.6	
<i>Rheotanytarsus pellucidus</i>	09021011072128	29.33			CF	3.5	
<i>Tanytarsus</i>	09021011076	2.67	2.67	6	CF	0.3	0.3
<i>Microtendipes</i>	09021011094		24.33	6	CF		2.9
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.0	
<i>Microtendipes rydalensis group</i>	09021011094168	24.00			--	2.9	
<i>Phaenopsectra</i>	09021011101		0.33	7	SC		0.0
<i>Phaenopsectra obediens group</i>	09021011101180	0.33			--	0.0	
<i>Polypedilum</i>	09021011102		69.67	6	SH		8.4
<i>Polypedilum aviceps</i>	09021011102181	43.00			--	5.2	



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<i>Polypedilum flavum</i>	09021011102182	26.67			--	3.2	
<i>Simulium</i>	09021012047	7.67	7.67	4	CF	0.9	0.9
<i>Atherix</i>	09021015055	2.33	2.33	2	PR	0.3	0.3
<i>Hemerodromia</i>	09021016057	6.67	6.67	3	PR	0.8	0.8
<i>Neoplasta</i>	09021016064	0.33	0.33		PR	0.0	0.0
<i>Dineutus</i>	09021104032	0.67	0.67	2	--	0.1	0.1
<i>Psephenus</i>	09021108058		0.33	4	SC		0.0
<i>Psephenus herricki</i>	09021108058028	0.33			--	0.0	
Elmidae	09021113	3.33			--	0.4	
<i>Dubiraphia</i>	09021113064	0.67	0.76	6	--	0.1	0.1
<i>Macronychus</i>	09021113065		1.14	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	1.00			--	0.1	
<i>Optioservus</i>	09021113067	1.33	7.25	3	SC	0.2	0.9
<i>Optioservus ovalis</i>	09021113067046	0.33			--	0.0	
<i>Optioservus tardella</i>	09021113067052	4.67			--	0.6	
<i>Oulimnius</i>	09021113068	1.00	1.14		--	0.1	0.1
<i>Stenelmis</i>	09021113070	7.00	16.03	5	SC	0.8	1.9
<i>Stenelmis crenata</i>	09021113070055	7.00			--	0.8	
Acariformes	090301	0.67	0.67		--	0.1	0.1
<i>Physella</i>	10010202027	0.33	0.33		SC	0.0	0.0
<i>Helisoma</i>	10010203030	0.33	0.33		SC	0.0	0.0
<i>Ferrissia</i>	10010204035		0.67		SC		0.1
<i>Ferrissia fragilis</i>	10010204035064	0.67			--	0.1	