



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

Station Information

Station Number: 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

Log Number: 2817	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: B	Date: 2/22/2021
Model Result with $P \geq 0.6$: B	Reason for Determination: 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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Station Number: S-759	Town: Falmouth	Date Deployed: 7/6/2020
Log Number: 2817	Waterbody: Piscataqua River - Station 759	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



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

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>Iswaeon</i>	09020401015		2.07		--		0.2
<i>Iswaeon 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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		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>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	