



**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: 2361	Type of Sample: ROCK BAG	Date Deployed: 7/14/2015
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/11/2015

Classification Attainment

Statutory Class: B	Final Determination: B	Date: 3/9/2016
Model Result with $P \geq 0.6$: B	Reason for Determination: Best Professional Judgement	
Date Last Calculated: 3/11/2016	Comments: Indeterminate Class A (.51) not raised to Class A based on the number of sensitive taxa present.	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.58	Class A, B, or C	1.00
Class B	0.39	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.51
Class A or B	0.99	Class B or C or Non-Attainment	0.49
Class C or Non-Attainment	0.01		

Model Variables

01 Total Mean Abundance	286.00	18 Relative Abundance Ephemeroptera	0.04
02 Generic Richness	53.00	19 EPT Generic Richness	15.00
03 Plecoptera Mean Abundance	2.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	11.67	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	4.30	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	34.17
06 Hilsenhoff Biotic Index	4.89	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	9.67
07 Relative Abundance - Chironomidae	0.47	28 EP Generic Richness/14	0.50
08 Relative Generic Richness Diptera	0.26	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	1.07		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	43.98		
17 Chironomini Abundance (Family Functional Group)	72.06		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Phaenopsectra</i>	16.09
2	<i>Lepidostoma</i>	15.50
3	<i>Ablabesmyia</i>	10.53
4	<i>Cernotina</i>	6.06
5	<i>Polypedilum</i>	5.20



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Station Number: S-758 Town: Cumberland Date Deployed: 7/14/2015
Log Number: 2361 Waterbody: Piscataqua River - Station 758 Date Retrieved: 8/11/2015

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23.2 deg C
Dissolved Oxygen: 8.19 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 203.2 uS/cm
Velocity: 6.1 cm/s
pH: 7.59
Wetted Width: 5.4 m
Bankfull Width: 8 m
Depth: 45 cm

Waterbody Information - Retrieval

Temperature: 20.7 deg C
Dissolved Oxygen: 8.54 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 234.5 uS/cm
Velocity: 5.1 cm/s
pH: 7.4
Wetted Width: 2.5 m
Bankfull Width: 8 m
Depth: 18 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Dense	Hilly	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Below Road Crossing	Bedrock	60 %
		Boulder	30 %
		Rubble/Cobble	10 %

Landcover Summary - 2004 Data

Sample Comments

7/14/2015: 96.8% DO.
8/11/2015: BLACKNOSE DACE AND COMMON SHINER PRESENT.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-758

Waterbody: Piscataqua River - Station 758

Town: Cumberland

Log Number: 2361

Subsample Factor: X1

Replicates: 3

Calculated: 3/11/2016

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
<i>Hydra</i>	02010101001	0.67	0.67		PR	0.2	0.2
Rhabditophora	0301	1.00	1.00		--	0.3	0.3
<i>Prostoma</i>	04010101001	0.33	0.33		--	0.1	0.1
Nematoda	05	0.33	0.33		--	0.1	0.1
<i>Hyalella</i>	09010203006	0.33	0.33	8	CG	0.1	0.1
<i>Leuctra</i>	09020204020		0.67	0	SH		0.2
<i>Leuctra ferruginea</i>	09020204020050	0.67			--	0.2	
<i>Acroneuria</i>	09020209042		2.00	0	PR		0.7
<i>Acroneuria abnormis</i>	09020209042121	1.00		0	PR	0.3	
<i>Acroneuria internata</i>	09020209042124	1.00			--	0.3	
<i>Boyeria</i>	09020301004		1.67	2	PR		0.6
<i>Boyeria vinosa</i>	09020301004012	1.67			--	0.6	
<i>Stylogomphus</i>	09020302017		1.33	0	PR		0.5
<i>Stylogomphus albistylus</i>	09020302017037	1.33			--	0.5	
<i>Somatochlora</i>	09020305027	0.33	0.33	1	PR	0.1	0.1
Calopterygidae	09020307	0.67	0.67		--	0.2	0.2
<i>Calopteryx</i>	09020307043		0.33	5	PR		0.1
<i>Calopteryx maculata</i>	09020307043088	0.33			--	0.1	
<i>Baetis</i>	09020401001		0.33	4	CG		0.1
<i>Baetis flavistriga</i>	09020401001004	0.33			--	0.1	
Heptageniidae	09020402	0.33	0.33		--	0.1	0.1
<i>Maccaffertium</i>	09020402015	4.33	7.67	4	SC	1.5	2.7
<i>Maccaffertium luteum</i>	09020402015049	3.00			--	1.0	
<i>Maccaffertium modestum</i>	09020402015051	0.33			--	0.1	
Leptophlebiidae	09020406	3.00	3.00		--	1.0	1.0
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.1	0.1
Polycentropodidae	09020603	0.33	0.33		--	0.1	0.1
<i>Ceratotina</i>	09020603006	17.33	17.33		PR	6.1	6.1
Phryganeidae	09020608	0.33	0.33		--	0.1	0.1
<i>Lepidostoma</i>	09020611064	44.33	44.33	1	SH	15.5	15.5
<i>Psilotreta</i>	09020614068		1.00	0	SC		0.3
<i>Psilotreta indecisa</i>	09020614068132	1.00			--	0.3	
<i>Molanna</i>	09020615069		0.33	6	SC		0.1
<i>Molanna blenda</i>	09020615069133	0.33			--	0.1	
<i>Helicopsyche</i>	09020616070		1.33	3	SC		0.5
<i>Helicopsyche borealis</i>	09020616070137	1.33			--	0.5	
Leptoceridae	09020618				--		



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Log Number: 2361 Subsample Factor: X1 Replicates: 3 Calculated: 3/11/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Oecetis</i>	09020618078	7.00	12.33	8	PR	2.4	4.3
<i>Oecetis persimilis</i>	09020618078157	5.33			--	1.9	
<i>Nigronia</i>	09020701003		4.00	0	PR		1.4
<i>Nigronia serricornis</i>	09020701003003	4.00			--	1.4	
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.1	0.1
<i>Bezzia/palpomyia</i>	09021010043	0.33	0.33	6	PR	0.1	0.1
Chironomidae	09021011	2.00			--	0.7	
<i>Ablabesmyia</i>	09021011001		30.11	8	PR		10.5
<i>Ablabesmyia mallochii</i>	09021011001004	26.33			--	9.2	
<i>Ablabesmyia monilis</i>	09021011001009	3.33			--	1.2	
<i>Conchapelopia</i>	09021011004	13.33	13.53	6	PR	4.7	4.7
<i>Paramerina</i>	09021011013		0.34		--		0.1
<i>Paramerina anomala</i>	09021011013001	0.33			--	0.1	
<i>Nanocladius</i>	09021011049	2.00	3.72	3	CG	0.7	1.3
<i>Nanocladius branchicolus</i>	09021011049091	1.67			--	0.6	
<i>Tvetenia</i>	09021011065		0.34	5	CG		0.1
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.1	
<i>Rheotanytarsus exiguus group</i>	09021011072127				CF		
<i>Stempellinella</i>	09021011074		11.50	2	--		4.0
<i>Stempellinella fimbriata</i>	09021011074002	11.33			--	4.0	
<i>Tanytarsus</i>	09021011076	4.00	4.06	6	CF	1.4	1.4
<i>Cryptochironomus</i>	09021011082	2.33	2.37	8	PR	0.8	0.8
<i>Microtendipes</i>	09021011094		7.10	6	CF		2.5
<i>Microtendipes pedellus group</i>	09021011094166	3.00			--	1.0	
<i>Microtendipes rydalensis group</i>	09021011094168	4.00			--	1.4	
<i>Nilothauma</i>	09021011095	1.67	1.69	2	--	0.6	0.6
<i>Phaenopsectra</i>	09021011101		46.01	7	SC		16.1
<i>Phaenopsectra obediens</i>	09021011101182	45.33			SC	15.9	
<i>Polypedilum</i>	09021011102		14.89	6	SH		5.2
<i>Polypedilum aviceps</i>	09021011102181	0.33			--	0.1	
<i>Polypedilum albicorne</i>	09021011102195	13.67			--	4.8	
<i>Polypedilum illinoense</i>	09021011102204	0.67			--	0.2	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Ectopria</i>	09021109059	1.67	1.67	5	SC	0.6	0.6
<i>Dubiraphia</i>	09021113064		0.33	6	--		0.1
<i>Dubiraphia quadrinotata</i>	09021113064037	0.33			--	0.1	
<i>Macronychus</i>	09021113065		1.00	4	--		0.3
<i>Macronychus glabratus</i>	09021113065040	1.00			--	0.3	



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		Actual	Adjusted			Actual	Adjusted
<i>Microcylloepus</i>	09021113066	2.33	2.33	3	--	0.8	0.8
<i>Oulimnius</i>	09021113068		0.33		--		0.1
<i>Oulimnius latiusculus</i>	09021113068049	0.33			--	0.1	
<i>Promoesia</i>	09021113069		10.33		--		3.6
<i>Promoesia tardella</i>	09021113069052	10.33			--	3.6	
<i>Stenelmis</i>	09021113070	13.00	13.33	5	SC	4.5	4.7
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.1	
<i>Amnicola</i>	10010104013		0.67		SC		0.2
<i>Amnicola limosus</i>	10010104013018	0.67			--	0.2	
Basommatophora	100102	2.00	2.00		--	0.7	0.7
<i>Physa</i>	10010202027	7.67	7.67		SC	2.7	2.7
<i>Menetus</i>	10010203031		0.33		--		0.1
<i>Menetus dilatatus</i>	10010203031059	0.33			--	0.1	
Sphaeriidae	10020201	1.00	1.00		CF	0.3	0.3
<i>Pisidium</i>	10020201002	5.67	5.67		CF	2.0	2.0