



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

Station Information

Station Number: S-797	River Basin: Saco
Waterbody: West Brook - Station 797	HUC8 Name: Saco
Town: Biddeford	Latitude: 43 28 20.52 N
Directions: 65 M DOWNSTREAM OF WEST STREET	Longitude: 70 27 18.56 W
	Stream Order: 1

Sample Information

Log Number: 2845	Type of Sample: ROCK BAG	Date Deployed: 7/28/2020
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/26/2020

Classification Attainment

Statutory Class: B	Final Determination: NA	Date: 3/3/2022
Model Result with $P \geq 0.6$: NA	Reason for Determination: Model	
Date Last Calculated: 11/2/2021	Comments: Indeterminate for Class C. Not raised to Class C due to community structure and low numbers of sensitive taxa.	

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.00	Class C	0.83	Class A, B, or C	0.46
Class B	0.00	NA	0.16	Non-Attainment	0.54
<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	644.00	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	37.00	19 EPT Generic Richness	5.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	2.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.89	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	50.83
06 Hilsenhoff Biotic Index	5.85	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.66	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.46	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.29		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	77.58		
17 Chironomini Abundance (Family Functional Group)	331.71		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tribelos</i>	33.02
2	<i>Ablabesmyia</i>	6.65
3	Ceratopogonidae	6.63
4	<i>Paratendipes</i>	6.23
5	<i>Macronychus</i>	5.59



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature:	25.2 deg C
Dissolved Oxygen:	7.42 mg/l
Dissolved Oxygen Saturation:	90.7 %
Specific Conductance:	173.4 uS/cm
Velocity:	0.1 cm/s
pH:	7.25
Wetted Width:	3.2 m
Bankfull Width:	4.05 m
Depth:	38.3 cm

Waterbody Information - Retrieval

Temperature:	20.7 deg C
Dissolved Oxygen:	8.34 mg/l
Dissolved Oxygen Saturation:	93.4 %
Specific Conductance:	221.1 uS/cm
Velocity:	0.1 cm/s
pH:	7.25
Wetted Width:	3.57 m
Bankfull Width:	4.05 m
Depth:	44.3 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Dense	Flat
Pasture		
Upland Hardwood		
Urban		

<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Nps Pollution	Below Road Crossing	Clay 5 %
		Muck 5 %
		Sand 85 %

Landcover Summary - 2004 Data

Total Area (ac)	528	High Int. Dev. %	1.5	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	1.8	Wetland %	10.3	Tilled Agriculture %	0.1
		Low Int. Dev. %	16.2	Upland Woody %	55.6	Grassland %	0.6
		Development %	19.5	Natural %	65.9	Human Altered %	34.1
						Impervious %	12.4
Total Land (ac)	528	High Int. Dev. %	1.5	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	1.8	Wetland %	10.3	Tilled Agriculture %	0.1
		Low Int. Dev. %	16.2	Upland Woody %	55.6	Grassland %	0.6
		Development %	19.5	Natural %	65.9	Human Altered %	34.1
						Impervious %	12.4

Sample Comments

VISIBLE FLOW.



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Subsample Factor: X4

Replicates: 3

Calculated: 11/2/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	1.33	1.33		PR	0.2	0.2
<i>Prostoma</i>	04010101001	2.67	2.67		--	0.4	0.4
Naididae	08020202	2.67	2.67		--	0.4	0.4
<i>Limnodrilus</i>	08020202022		4.00		CG		0.6
<i>Limnodrilus hoffmeisteri</i>	08020202022003	4.00			--	0.6	
<i>Boyeria</i>	09020301004	1.33	1.33	2	PR	0.2	0.2
Gomphidae	09020302	1.33	1.33		--	0.2	0.2
<i>Calopteryx</i>	09020307043	6.67	6.67	5	PR	1.0	1.0
Leptophlebiidae	09020406	2.67	2.67		--	0.4	0.4
<i>Phylocentropus</i>	09020603011	1.33	1.33	5	CF	0.2	0.2
<i>Molanna</i>	09020615069	20.00	20.00	6	SC	3.1	3.1
Leptoceridae	09020618	1.33			--	0.2	
<i>Mystacides</i>	09020618075	2.67	2.96	4	CG	0.4	0.5
<i>Oecetis</i>	09020618078	9.33	10.37	8	PR	1.4	1.6
<i>Nigronia</i>	09020701003		1.33	0	PR		0.2
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.2	
<i>Sialis</i>	09020702004	2.67	2.67	4	PR	0.4	0.4
<i>Pericoma</i>	09021002016	1.33	1.33	4	CG	0.2	0.2
Ceratopogonidae	09021010	42.67	42.67		--	6.6	6.6
Chironomidae	09021011	1.33			--	0.2	
<i>Ablabesmyia</i>	09021011001	42.67	42.80	8	PR	6.6	6.6
<i>Natarsia</i>	09021011011	1.33	1.34	8	PR	0.2	0.2
<i>Procladius</i>	09021011015	17.33	17.39	9	PR	2.7	2.7
<i>Thienemannimyia</i>	09021011020		16.05	3	PR		2.5
<i>Thienemannimyia</i> group	09021011020041	16.00			--	2.5	
<i>Parachaetocladius</i>	09021011051	6.67	6.69		CG	1.0	1.0
<i>Tvetenia</i>	09021011065		1.34	5	CG		0.2
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.2	
<i>Tanytarsus</i>	09021011076	8.00	8.03	6	CF	1.2	1.2
<i>Cryptochironomus</i>	09021011082	18.67	18.73	8	PR	2.9	2.9
<i>Microtendipes</i>	09021011094		26.75	6	CF		4.2
<i>Microtendipes pedellus</i> group	09021011094166	1.33			--	0.2	
<i>Microtendipes rydalensis</i> group	09021011094168	25.33			--	3.9	
<i>Paralauterborniella</i>	09021011099	16.00	16.05	8	CG	2.5	2.5
<i>Paratendipes</i>	09021011100	40.00	40.13	8	CG	6.2	6.2
<i>Phaenopsectra</i>	09021011101		13.38	7	SC		2.1
<i>Phaenopsectra obediens</i> group	09021011101180	13.33			--	2.1	



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<i>Polypedilum</i>	09021011102		4.01	6	SH		0.6
<i>Polypedilum aviceps</i>	09021011102181	4.00			--	0.6	
<i>Tribelos</i>	09021011107	212.00	212.67	5	CG	32.9	33.0
<i>Hemerodromia</i>	09021016057	2.67	2.67	3	PR	0.4	0.4
<i>Ancyronyx</i>	09021113063		5.33	6	--		0.8
<i>Ancyronyx variegatus</i>	09021113063034	5.33			CG	0.8	
<i>Dubiraphia</i>	09021113064	20.00	20.00	6	--	3.1	3.1
<i>Macronychus</i>	09021113065		36.00	4	--		5.6
<i>Macronychus glabratus</i>	09021113065040	36.00			--	5.6	
<i>Stenelmis</i>	09021113070	32.00	33.33	5	SC	5.0	5.2
<i>Stenelmis crenata</i>	09021113070055	1.33			--	0.2	
<i>Campeloma</i>	10010102004	10.67	10.67		SC	1.7	1.7
<i>Physella</i>	10010202027	5.33	5.33		SC	0.8	0.8