



**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: 2390	Type of Sample: ROCK BAG	Date Deployed: 7/27/2015
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/24/2015

Classification Attainment

Statutory Class: B	Final Determination: B	Date: 6/8/2016
Model Result with $P \geq 0.6$: B	Reason for Determination: Model	
Date Last Calculated: 6/8/2016	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.34	Class A, B, or C	1.00
Class B	0.57	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.88	Class A	0.09
Class C or Non-Attainment	0.12	Class B or C or Non-Attainment	0.91

Model Variables

01 Total Mean Abundance	576.00	18 Relative Abundance Ephemeroptera	0.16
02 Generic Richness	50.00	19 EPT Generic Richness	13.00
03 Plecoptera Mean Abundance	1.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	24.27
04 Ephemeroptera Mean Abundance	92.00	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.42	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	13.99
06 Hilsenhoff Biotic Index	5.04	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	54.67
07 Relative Abundance - Chironomidae	0.25	28 EP Generic Richness/14	0.21
08 Relative Generic Richness Diptera	0.30	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	2.67		
12 EPT Generic Richness/ Diptera Generic Richness	0.87		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	1.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	22.65		
17 Chironomini Abundance (Family Functional Group)	74.43		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Pisidium</i>	18.92
2	<i>Maccaffertium</i>	9.49
3	<i>Macronychus</i>	8.10
4	Leptophlebiidae	6.48
5	<i>Stenelmis</i>	6.25



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 19.6 deg C
Dissolved Oxygen: 8.11 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 208.9 uS/cm
Velocity: 12.2 cm/s
pH: 7.12
Wetted Width: 1.75 m
Bankfull Width: 1.9 m
Depth: 18 cm

Waterbody Information - Retrieval

Temperature: 21.2 deg C
Dissolved Oxygen: 7.56 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 178.5 uS/cm
Velocity: 12.2 cm/s
pH: 7.06
Wetted Width: 1.8 m
Bankfull Width: 1.9 m
Depth: 29 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Conifer	Partly Open	Rolling	
Upland Hardwood			
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Impounded	Below Urban NPS	Detritus	5 %
Nps Pollution	Impoundment	Gravel	30 %
Urban Runoff		Rubble/Cobble	5 %
		Sand	60 %

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

Sample Comments

7/27/2015: 88.7% DO.
8/24/2015: 85.4% DO.



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Town: Biddeford

Replicates: 3

Calculated: 6/8/2016

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
Rhabditophora	0301	24.00	24.00		--	4.2	4.2
<i>Aulodrilus</i>	08020202018		1.33		--		0.2
<i>Aulodrilus pluriseta</i>	08020202018004	1.33			--	0.2	
<i>Placobdella</i>	08030101006		1.33		--		0.2
<i>Placobdella papillifera</i>	08030101006003	1.33			--	0.2	
Perlidae	09020209	1.33	1.33		--	0.2	0.2
<i>Boyeria</i>	09020301004		6.67	2	PR		1.2
<i>Boyeria vinosa</i>	09020301004012	6.67			--	1.2	
Gomphidae	09020302	1.33	1.33		--	0.2	0.2
<i>Stylogomphus</i>	09020302017		1.33	0	PR		0.2
<i>Stylogomphus albistylus</i>	09020302017037	1.33			--	0.2	
<i>Cordulegaster</i>	09020303019	1.33	1.33	3	PR	0.2	0.2
Calopterygidae	09020307	1.33	1.33		--	0.2	0.2
<i>Calopteryx</i>	09020307043		2.67	5	PR		0.5
<i>Calopteryx maculata</i>	09020307043088	2.67			--	0.5	
<i>Maccaffertium</i>	09020402015	54.67	54.67	4	SC	9.5	9.5
Leptophlebiidae	09020406	37.33	37.33		--	6.5	6.5
<i>Chimarra</i>	09020601003	2.67	2.67	2	CF	0.5	0.5
<i>Plectrocnemia</i>	09020603012	2.67	2.67	6	PR	0.5	0.5
Hydropsychidae	09020604	1.33	1.33		--	0.2	0.2
<i>Cheumatopsyche</i>	09020604015	2.67	2.67	5	CF	0.5	0.5
<i>Pycnopsyche</i>	09020610049	2.67	2.67	4	SH	0.5	0.5
<i>Psilotreta</i>	09020614068		1.33	0	SC		0.2
<i>Psilotreta frontalis</i>	09020614068134	1.33			--	0.2	
<i>Ceraclea</i>	09020618072	2.67	2.67	3	CG	0.5	0.5
<i>Mystacides</i>	09020618075		2.67	4	CG		0.5
<i>Mystacides sepulchralis</i>	09020618075147	2.67			--	0.5	
<i>Triaenodes</i>	09020618077	1.33	1.33	6	SH	0.2	0.2
<i>Oecetis</i>	09020618078		17.33	8	PR		3.0
<i>Oecetis persimilis</i>	09020618078157	17.33			--	3.0	
<i>Nigronia</i>	09020701003		10.67	0	PR		1.9
<i>Nigronia serricornis</i>	09020701003003	10.67			--	1.9	
<i>Sialis</i>	09020702004		1.33	4	PR		0.2
<i>Sialis mohri</i>	09020702004006	1.33			--	0.2	
Chironomidae	09021011	25.33			--	4.4	
<i>Ablabesmyia</i>	09021011001	1.33	4.85	8	PR	0.2	0.8



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		Actual	Adjusted			Actual	Adjusted
<i>Ablabesmyia mallochi</i>	09021011001004	2.67			--	0.5	
<i>Conchapelopia</i>	09021011004	8.00	9.71	6	PR	1.4	1.7
<i>Natarsia</i>	09021011011	2.67	4.85	8	PR	0.5	0.8
<i>Natarsia baltimoreus</i>	09021011011026	1.33			--	0.2	
<i>Nilotanytus</i>	09021011012		1.62	6	PR		0.3
<i>Nilotanytus fimbriatus</i>	09021011012027	1.33			--	0.2	
<i>Zavrelimyia</i>	09021011022	1.33	1.62	8	PR	0.2	0.3
<i>Rheocricotopus</i>	09021011057		3.24	6	CG		0.6
<i>Rheocricotopus robacki</i>	09021011057105	2.67			--	0.5	
<i>Micropsectra</i>	09021011070	20.00	24.27	7	CG	3.5	4.2
<i>Stempellinella</i>	09021011074		11.33	2	--		2.0
<i>Stempellinella fimbriata</i>	09021011074002	9.33			--	1.6	
<i>Tanytarsus</i>	09021011076	5.33	6.47	6	CF	0.9	1.1
<i>Cryptochironomus</i>	09021011082			8	PR		
<i>Microtendipes</i>	09021011094		35.60	6	CF		6.2
<i>Microtendipes pedellus group</i>	09021011094166	4.00			--	0.7	
<i>Microtendipes rydalensis group</i>	09021011094168	25.33			--	4.4	
<i>Nilothauma</i>	09021011095	1.33	1.62	2	--	0.2	0.3
<i>Paratendipes</i>	09021011100		1.62	8	CG		0.3
<i>Paratendipes albimanus group</i>	09021011100176	1.33			--	0.2	
<i>Phaenopsectra</i>	09021011101		30.74	7	SC		5.3
<i>Phaenopsectra obediens</i>	09021011101182	25.33			SC	4.4	
<i>Polypedilum</i>	09021011102		4.85	6	SH		0.8
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.2	
<i>Polypedilum scalaenum group</i>	09021011102189	1.33			--	0.2	
<i>Polypedilum albicorne</i>	09021011102195	1.33			--	0.2	
<i>Neostempellina</i>	09021011146		1.62		--		0.3
<i>Neostempellina reissi</i>	09021011146001	1.33			--	0.2	
<i>Ancyronyx</i>	09021113063		2.67	6	--		0.5
<i>Ancyronyx variegatus</i>	09021113063034	2.67			CG	0.5	
<i>Macronychus</i>	09021113065		46.67	4	--		8.1
<i>Macronychus glabratus</i>	09021113065040	46.67			--	8.1	
<i>Optioservus</i>	09021113067	2.67	2.67	3	SC	0.5	0.5
<i>Stenelmis</i>	09021113070	21.33	36.00	5	SC	3.7	6.3
<i>Stenelmis crenata</i>	09021113070055	14.67			--	2.5	
Hydrobiidae	10010104	1.33	1.33		--	0.2	0.2
<i>Amnicola</i>	10010104013	1.33	1.33		SC	0.2	0.2
Basommatophora	100102	21.33	21.33		--	3.7	3.7



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		Actual	Adjusted			Actual	Adjusted
<i>Physa</i>	10010202027	16.00	16.00		SC	2.8	2.8
<i>Helisoma</i>	10010203030		1.33		SC		0.2
<i>Helisoma anceps</i>	10010203030058	1.33			--	0.2	
Sphaeriidae	10020201	98.67			CF	17.1	
<i>Musculium</i>	10020201001	1.33	8.38		CF	0.2	1.5
<i>Pisidium</i>	10020201002	17.33	108.95		CF	3.0	18.9