



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

Station Information

Station Number: S-451	River Basin: Saco
Waterbody: Thacher Brook - Station 451	HUC8 Name: Saco
Town: Biddeford	Latitude: 43 29 21.14 N
Directions: SOUTH ST TO VILLAGE LN TO GLAUDE AVE - WALK DOWN TRAIL TO STREAM - LEFT	Longitude: 70 28 55.19 W
	Stream Order: 3

Sample Information

Log Number: 2844	Type of Sample: ROCK BAG	Date Deployed: 7/28/2020
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/26/2020

Classification Attainment

Statutory Class: B	Final Determination: NA	Date: 3/30/2021
Model Result with P \geq 0.6: NA	Reason for Determination: Model	
Date Last Calculated: 3/30/2021	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.00
Class B	0.00	Non-Attainment	1.00
<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	116.33	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	35.00	19 EPT Generic Richness	7.00
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	0.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.36	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	7.67
06 Hilsenhoff Biotic Index	6.46	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.44	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.67		
11 <i>Cheumatopsyche</i> Abundance	0.33		
12 EPT Generic Richness/ Diptera Generic Richness	0.54		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.00		
17 Chironomini Abundance (Family Functional Group)	38.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Caecidotea</i>	29.23
2	<i>Microtendipes</i>	28.08
3	<i>Tanytarsus</i>	6.30
4	<i>Crangonyx</i>	6.02
5	<i>Chimarra</i>	5.73



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Town: Biddeford
Waterbody: Thacher Brook - Station 451

Date Deployed: 7/28/2020
Date Retrieved: 8/26/2020

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 24.6 deg C
Dissolved Oxygen: 8.43 mg/l
Dissolved Oxygen Saturation: 101.8 %
Specific Conductance: 793 uS/cm
Velocity: 0.1 cm/s
pH: 7.7
Wetted Width: 6.2 m
Bankfull Width: 6.55 m
Depth: 32.3 cm

Waterbody Information - Retrieval

Temperature: 19.6 deg C
Dissolved Oxygen: 9.01 mg/l
Dissolved Oxygen Saturation: 99.3 %
Specific Conductance: 688 uS/cm
Velocity: 12.2 cm/s
pH: 7.42
Wetted Width: 7.65 m
Bankfull Width: 6.55 m
Depth: 44.7 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Swamp Hardwood	Dense	Rolling	
Upland Conifer			
Upland Hardwood			
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nps Pollution	Below Urban NPS	Bedrock	10 %
		Boulder	25 %
		Gravel	20 %
		Rubble/Cobble	30 %
		Silt	15 %

Landcover Summary - 2004 Data

Total Area (ac)	4155	High Int. Dev. %	10.6	Water %	0.0	Non-vegetated %	0.1
		Med Int. Dev. %	3.6	Wetland %	4.9	Tilled Agriculture %	0.9
		Low Int. Dev. %	8.7	Upland Woody %	57.8	Grassland %	5.0
		Development %	22.9	Natural %	63.1	Human Altered %	36.9
						Impervious %	17.8

Sample Comments

VISIBLE FLOW.



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

Station Number: S-451	Waterbody: Thacher Brook - Station 451	Town: Biddeford
Log Number: 2844	Subsample Factor: X1	Replicates: 3
		Calculated: 3/30/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Enchytraeidae	08020201	0.33	0.33		--	0.3	0.3
Naididae	08020202	0.33			--	0.3	
<i>Pristina</i>	08020202004	0.33	0.50		--	0.3	0.4
<i>Nais</i>	08020202009	0.33	0.50		CG	0.3	0.4
<i>Caecidotea</i>	09010101001	34.00	34.00	8	SH	29.2	29.2
<i>Gammarus</i>	09010201003	2.00	2.00	4	--	1.7	1.7
Crangonyctidae	09010202	0.33	0.33		--	0.3	0.3
<i>Crangonyx</i>	09010202004	7.00	7.00	8	--	6.0	6.0
Cambaridae	09010301	1.00	1.00		--	0.9	0.9
<i>Orconectes</i>	09010301008	0.67	0.67		CG	0.6	0.6
<i>Baetis</i>	09020401001		0.33	4	CG		0.3
<i>Baetis intercalaris</i>	09020401001008	0.33			--	0.3	
<i>Chimarra</i>	09020601003		6.67	2	CF		5.7
<i>Chimarra aterrima</i>	09020601003002	6.67			--	5.7	
<i>Nyctiophylax</i>	09020603009	3.67	3.67	5	PR	3.2	3.2
<i>Polycentropus</i>	09020603010	2.00	2.00	6	PR	1.7	1.7
<i>Cheumatopsyche</i>	09020604015	0.33	0.33	5	CF	0.3	0.3
<i>Hydropsyche</i>	09020604016	0.33	0.67	4	CF	0.3	0.6
<i>Hydropsyche betteni</i>	09020604016037	0.33			--	0.3	
Limnephilidae	09020610				--		
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.3	0.3
<i>Natarsia</i>	09021011011	0.33	0.33	8	PR	0.3	0.3
<i>Nilotanytus</i>	09021011012		0.33	6	PR		0.3
<i>Nilotanytus fimbriatus</i>	09021011012027	0.33			--	0.3	
<i>Thienemannimyia</i>	09021011020		1.33	3	PR		1.1
<i>Thienemannimyia group</i>	09021011020041	1.33			--	1.1	
<i>Parametriocnemus</i>	09021011053	0.33	0.33	5	CG	0.3	0.3
<i>Paratanytarsus</i>	09021011071	1.67	1.67	6	--	1.4	1.4
<i>Rheotanytarsus</i>	09021011072		1.67	6	CF		1.4
<i>Rheotanytarsus exiguus group</i>	09021011072127	1.67			CF	1.4	
<i>Stempellinella</i>	09021011074	0.33	0.33	2	--	0.3	0.3
<i>Tanytarsus</i>	09021011076	7.33	7.33	6	CF	6.3	6.3
<i>Chironomus</i>	09021011080	3.33	3.33	10	CG	2.9	2.9
<i>Microtendipes</i>	09021011094		32.67	6	CF		28.1
<i>Microtendipes pedellus group</i>	09021011094166	29.00			--	24.9	
<i>Microtendipes rydalensis group</i>	09021011094168	3.67			--	3.2	
<i>Paratendipes</i>	09021011100	0.67	0.67	8	CG	0.6	0.6



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<i>Polypedilum</i>	09021011102		1.33	6	SH		1.1
<i>Polypedilum flavum</i>	09021011102182	1.33			--	1.1	
<i>Stictochironomus</i>	09021011106	0.33	0.33	9	CG	0.3	0.3
<i>Simulium</i>	09021012047			4	CF		
<i>Macronychus</i>	09021113065		1.00	4	--		0.9
<i>Macronychus glabratus</i>	09021113065040	1.00			--	0.9	
<i>Microcylloepus</i>	09021113066		0.33	3	--		0.3
<i>Microcylloepus pusillus</i>	09021113066041	0.33			--	0.3	
<i>Stenelmis</i>	09021113070	1.33	1.33	5	SC	1.1	1.1
<i>Helisoma</i>	10010203030	0.67	0.67		SC	0.6	0.6
<i>Ferrissia</i>	10010204035	0.67	0.67		SC	0.6	0.6
Sphaeriidae	10020201	0.33	0.33		CF	0.3	0.3