



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

Station Information

Station Number: S-746
Waterbody: Thacher Brook - Station 746
Town: Biddeford
Directions: ~250 M DOWNSTREAM OF TURNPIKE, KOHL'S STORE - BACK LEFT CORNER
DEP Drainage: Saco
HUC8: 01060002
HUC8 Name: Saco
Latitude: 43 28 49.43 N
Longitude: 70 30 11.45 W
Stream Order: 3

Sample Information

Log Number: 2136
Type of Sample: ROCK BAG
Date Deployed: 7/25/2012
Subsample Factor: X1
Replicates: 3
Date Retrieved: 8/21/2012

Classification Attainment

Statutory Class: B
Final Determination: C
Date: 8/28/2013
Model Result with P>.6: C
Reason for Determination: Model
Date Last Calculated: 7/17/2013
Comments:

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.00	Class C	0.96	Class A, B, or C	1.00
Class B	0.03	NA	0.01	Non-Attainment	0.00
<u>B or Better Model</u>				<u>A Model</u>	
Class A or B		0.01		Class A	0.01
Class C or Non-Attainment		0.99		Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	256.67	18 Relative Abundance Ephemeroptera	0.18
02 Generic Richness	44.00	19 EPT Generic Richness	15.00
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	46.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	4.36	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	45.33
06 Hilsenhoff Biotic Index	5.42	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	1.67
07 Relative Abundance - Chironomidae	0.22	28 EP Generic Richness/14	0.50
08 Relative Generic Richness Diptera	0.34	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	4.00		
11 <i>Cheumatopsyche</i> Abundance	17.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	18.33		
17 Chironomini Abundance (Family Functional Group)	6.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Polycentropus</i>	13.51
2	<i>Dubiraphia</i>	11.43
3	<i>Hyaella</i>	11.17
4	<i>Paraleptophlebia</i>	8.05
5	<i>Cheumatopsyche</i>	6.88



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

Station Number: S-746

Town: Biddeford

Date Deployed: 7/25/2012

Log Number: 2136

Waterbody: Thacher Brook - Station 746

Date Retrieved: 8/21/2012

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: LOTIC INC.

Waterbody Information - Deployment

Temperature: 21.8 deg C
Dissolved Oxygen: 7.51 mg/l
Specific Conductance: 367 uS/cm
Velocity: 22.8 cm/s
pH:
Wetted Width: 3.56 m
Bankfull Width: 6.22 m
Depth: 38 cm

Waterbody Information - Retrieval

Temperature: 19.9 deg C
Dissolved Oxygen: 8.61 mg/l
Specific Conductance: 393 uS/cm
Velocity: 19 cm/s
pH:
Wetted Width: 3.4 m
Bankfull Width: 5.9 m
Depth: 30 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Upland Hardwood
Urban

Canopy Cover

Partly Open

Terrain

Rolling

Potential Stressor

Chlorine
Nps Pollution
Urban Runoff

Location

Below Urban NPS
Main Stem

Substrate

Detritus 10 %
Gravel 35 %
Rubble/Cobble 55 %

Landcover Summary - 2004 Data

Total Area (ac)	3184	High Int. Dev. %	8.7	Water %	0.0	Non-vegetated %	0.1
		Med Int. Dev. %	3.3	Wetland %	5.8	Tilled Agriculture %	0.5
		Low Int. Dev. %	7.9	Upland Woody %	60.7	Grassland %	6.0
		Development %	19.9	Natural %	66.9	Human Altered %	33.0
						Impervious %	15.6

Sample Comments

7/25/12: MACROPHYTES PRESENT. 7/25/12: STREAM FLOW IS SLOW IN AREAS.



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-746

Waterbody: Thatcher Brook - Station 746

Town: Biddeford

Log Number: 2136

Subsample Factor: X1

Replicates: 3

Calculated: 7/17/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Caecidotea</i>	09010101001	1.67	1.67	8	SH	0.6	0.6
<i>Hyalella</i>	09010203006	28.67	28.67	8	CG	11.2	11.2
Cambaridae	09010301	1.00	1.00		--	0.4	0.4
Cladocera	090104	0.67	0.67		--	0.3	0.3
<i>Boyeria</i>	09020301004		3.33	2	PR		1.3
<i>Boyeria vinosa</i>	09020301004012	3.33			--	1.3	
<i>Calopteryx</i>	09020307043	7.67	7.67	5	PR	3.0	3.0
<i>Argia</i>	09020309048	4.33	4.33	7	PR	1.7	1.7
<i>Baetis</i>	09020401001		0.67	4	CG		0.3
<i>Baetis intercalaris</i>	09020401001008	0.67			--	0.3	
<i>Centroptilum</i>	09020401003	3.33	3.33	2	CG	1.3	1.3
<i>Plauditus</i>	09020401012		3.00		CG		1.2
<i>Plauditus punctiventris</i>	09020401012027	3.00			--	1.2	
<i>Maccaffertium</i>	09020402015	1.67	1.67	4	SC	0.6	0.6
<i>Paraleptophlebia</i>	09020406026	20.67	20.67	1	CG	8.1	8.1
<i>Hexagenia</i>	09020407028	0.67	0.67	6	CG	0.3	0.3
<i>Caenis</i>	09020412040	16.33	16.33	7	CG	6.4	6.4
<i>Lype</i>	09020602004	0.33	0.33	2	SC	0.1	0.1
<i>Nyctiophylax</i>	09020603009	0.33	0.33	5	PR	0.1	0.1
<i>Polycentropus</i>	09020603010	34.67	34.67	6	PR	13.5	13.5
<i>Cheumatopsyche</i>	09020604015	17.67	17.67	5	CF	6.9	6.9
<i>Hydropsyche</i>	09020604016		4.00	4	CF		1.6
<i>Hydropsyche alhedra</i>	09020604016028	4.00			--	1.6	
<i>Oxyethira</i>	09020607028	0.33	0.33	3	P	0.1	0.1
<i>Limnephilus</i>	09020610055	0.67	0.67	3	SH	0.3	0.3
<i>Oecetis</i>	09020618078	2.00	2.00	8	PR	0.8	0.8
<i>Nigronia</i>	09020701003		5.33	0	PR		2.1
<i>Nigronia serricornis</i>	09020701003003	5.33			--	2.1	
<i>Sialis</i>	09020702004	4.00	4.00	4	PR	1.6	1.6
<i>Ablabesmyia</i>	09021011001	5.00	6.33	8	PR	1.9	2.5
<i>Ablabesmyia peleensis</i>	09021011001006	1.33			--	0.5	
<i>Labrundinia</i>	09021011008		0.67	7	PR		0.3
<i>Labrundinia neopilosella</i>	09021011008021	0.67			--	0.3	
<i>Procladius</i>	09021011015	0.67	0.67	9	PR	0.3	0.3
<i>Thienemannimyia</i>	09021011020		10.67	3	PR		4.2
<i>Thienemannimyia/arctopelopia</i> <i>group</i>	09021011020041	10.67			--	4.2	
<i>Cricotopus</i>	09021011037	1.33	4.33	7	SH	0.5	1.7



Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report

Station Number: S-746	Waterbody: Thacher Brook - Station 746	Town: Biddeford
Log Number: 2136	Subsample Factor: X1	Replicates: 3
		Calculated: 7/17/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Cricotopus bicinctus</i>	09021011037057	3.00			--	1.2	
<i>Orthocladius</i>	09021011050		0.33	6	CG		0.1
<i>Orthocladius annectens</i>	09021011050092	0.33			--	0.1	
<i>Parametriocnemus</i>	09021011053	2.00	2.00	5	CG	0.8	0.8
<i>Paratanytarsus</i>	09021011071	7.00	7.00	6	--	2.7	2.7
<i>Tanytarsus</i>	09021011076	17.00	17.00	6	CF	6.6	6.6
<i>Cladopelma</i>	09021011081	1.33	1.33	9	CG	0.5	0.5
<i>Cryptotendipes</i>	09021011083	0.33	0.33	6	--	0.1	0.1
<i>Microtendipes</i>	09021011094		2.00	6	CF		0.8
<i>Microtendipes pedellus group</i>	09021011094166	1.00			--	0.4	
<i>Microtendipes rydalensis group</i>	09021011094168	1.00			--	0.4	
<i>Polypedilum</i>	09021011102		2.67	6	SH		1.0
<i>Polypedilum aviceps</i>	09021011102181	2.67			--	1.0	
<i>Simulium</i>	09021012047	0.67	0.67	4	CF	0.3	0.3
<i>Chrysops</i>	09021014052	4.67	4.67	6	CG	1.8	1.8
<i>Peltodytes</i>	09021101002	0.33	0.33		P	0.1	0.1
<i>Dubiraphia</i>	09021113064	29.33	29.33	6	--	11.4	11.4
<i>Optioservus</i>	09021113067	1.67	1.67	3	SC	0.6	0.6
<i>Stenelmis</i>	09021113070	1.00	1.00	5	SC	0.4	0.4
<i>Sphaerium</i>	10020201003	0.67	0.67		CF	0.3	0.3