



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

**Station Information**

<b>Station Number:</b> S-74	River Basin: Maine Coastal
Waterbody: Sheepscot River - Station 74	HUC8 Name: St. George-Sheepscot
Town: Whitefield	Latitude: 44 13 23.47 N
Directions: ABOVE RT. 126 BRIDGE AT USGS GAGE	Longitude: 69 35 36.03 W
	Stream Order: 4

**Sample Information**

<b>Log Number:</b> 2547	Type of Sample: ROCK BASKET	Date Deployed: 7/5/2017
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/1/2017

**Classification Attainment**

<b>Statutory Class:</b> AA	<b>Final Determination:</b> A	Date: 11/6/2017
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 11/6/2017	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.87	Class C	0.00
Class B	0.13	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

**Model Variables**

01 Total Mean Abundance	665.67	18 Relative Abundance Ephemeroptera	0.26
02 Generic Richness	56.00	19 EPT Generic Richness	29.00
03 Plecoptera Mean Abundance	19.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	175.67	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.33	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	26.90
06 Hilsenhoff Biotic Index	3.35	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	42.33
07 Relative Abundance - Chironomidae	0.21	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.25	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	117.99		
11 <i>Cheumatopsyche</i> Abundance	24.20		
12 EPT Generic Richness/ Diptera Generic Richness	2.07		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	19.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	4.04		
17 Chironomini Abundance (Family Functional Group)	23.55		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	17.73
2	<i>Leucocuta</i>	11.57
3	<i>Brachycentrus</i>	9.56
4	<i>Rheotanytarsus</i>	8.90
5	<i>Tvetenia</i>	6.98



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature:                      22.4 deg C  
Dissolved Oxygen:                9.14 mg/l  
Dissolved Oxygen Saturation:    103.5 %  
Specific Conductance:            75 uS/cm  
Velocity:                            45.7 cm/s  
pH:                                    7.4  
Wetted Width:                      28 m  
Bankfull Width:                    30 m  
Depth:                                38 cm

**Waterbody Information - Retrieval**

Temperature:                      21.3 deg C  
Dissolved Oxygen:                8.37 mg/l  
Dissolved Oxygen Saturation:    93.4 %  
Specific Conductance:            101.5 uS/cm  
Velocity:                            18.3 cm/s  
pH:                                    7.43  
Wetted Width:                      27 m  
Bankfull Width:                    30 m  
Depth:                                16 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Partly Open	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nps Pollution	Above Road Crossing	Boulder	15 %
	Below Agriculture NPS	Gravel	15 %
		Rubble/Cobble	65 %
		Sand	5 %

**Landcover Summary - 2004 Data**

Total Area (ac)	89648	High Int. Dev. %	0.2	Water %	4.2	Non-vegetated %	0.3
		Med Int. Dev. %	0.4	Wetland %	8.7	Tilled Agriculture %	2.3
		Low Int. Dev. %	3.1	Upland Woody %	76.1	Grassland %	4.7
		Development %	3.7	Natural %	84.0	Human Altered %	11.8
						Impervious %	3.0

**Sample Comments**

7/5/17: FROGS, FISH PRESENT.  
78/1/17: FISH PRESENT.



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Town: Whitefield

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Subsample Factor: X1

Replicates: 3

Calculated: 11/6/2017

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
<i>Girardia</i>	03010102002	1.00	1.00		--	0.2	0.2
<i>Hyaella</i>	09010203006	3.00	3.00	8	CG	0.5	0.5
<i>Acroneuria</i>	09020209042	7.33	17.33	0	PR	1.1	2.6
<i>Acroneuria abnormis</i>	09020209042121	8.33		0	PR	1.3	
<i>Acroneuria arenosa</i>	09020209042122	1.67			--	0.3	
<i>Perlesta</i>	09020209046		1.00	5	PR		0.2
<i>Perlesta placida</i>	09020209046140	1.00			--	0.2	
<i>Paragnetina</i>	09020209049		1.00	1	PR		0.2
<i>Paragnetina media</i>	09020209049151	1.00			--	0.2	
<i>Baetis</i>	09020401001		10.33	4	CG		1.6
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.2	
<i>Baetis intercalaris</i>	09020401001008	7.67			--	1.2	
<i>Baetis pluto</i>	09020401001009	1.33			--	0.2	
<i>Heterocloeon</i>	09020401005		11.33	2	SC		1.7
<i>Heterocloeon curiosum</i>	09020401005020	11.33			--	1.7	
<i>Acerpenna</i>	09020401007		14.67	5	CG		2.2
<i>Acerpenna pygmaea</i>	09020401007011	14.67			--	2.2	
<i>Plauditus</i>	09020401012	3.67	3.67		CG	0.6	0.6
<i>Iswaeon</i>	09020401015		5.00		--		0.8
<i>Iswaeon anoka</i>	09020401015001	5.00			--	0.8	
<i>Epeorus</i>	09020402009		16.00	0	SC		2.4
<i>Epeorus vitreus</i>	09020402009033	16.00			--	2.4	
<i>Leucrocuta</i>	09020402011	77.00	77.00	1	SC	11.6	11.6
<i>Maccaffertium</i>	09020402015	21.33	25.00	4	SC	3.2	3.8
<i>Maccaffertium modestum</i>	09020402015051	3.00			--	0.5	
<i>Maccaffertium vicarium</i>	09020402015055	0.67			--	0.1	
<i>Isonychia</i>	09020404018		4.33	2	CF		0.7
<i>Isonychia bicolor</i>	09020404018059	4.33			--	0.7	
Ephemerellidae	09020410	0.33			--	0.1	
<i>Drunella</i>	09020410034		0.35	0	SC		0.1
<i>Drunella tuberculata</i>	09020410034101	0.33			--	0.1	
<i>Ephemerella</i>	09020410035	0.33	0.35	1	CG	0.1	0.1
<i>Serratella</i>	09020410037		7.64	2	CG		1.1
<i>Serratella deficiens (Teloganopsis deficiens)</i>	09020410037121	0.33			--	0.1	
<i>Serratella serratoides</i>	09020410037124	7.00			--	1.1	
<i>Chimarra</i>	09020601003	0.67	11.00	2	CF	0.1	1.7
<i>Chimarra obscura</i>	09020601003003	3.67			--	0.6	



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Chimarra socia</i>	09020601003004	6.67			--	1.0	
<i>Neureclipsis</i>	09020603008	12.67	12.67	7	CF	1.9	1.9
Hydropsychidae	09020604	1.33			--	0.2	
<i>Cheumatopsyche</i>	09020604015	24.00	24.20	5	CF	3.6	3.6
<i>Hydropsyche</i>	09020604016	39.33	117.99	4	CF	5.9	17.7
<i>Hydropsyche morosa</i>	09020604016030	38.33			--	5.8	
<i>Hydropsyche sparna</i>	09020604016032	24.33			--	3.7	
<i>Hydropsyche betteni</i>	09020604016037	6.33			--	1.0	
<i>Hydropsyche scalaris species group</i>	09020604016048	8.67			--	1.3	
<i>Macrostemum</i>	09020604018	16.33	16.47	3	CF	2.5	2.5
Glossosomatidae	09020606				--		
<i>Protoptila</i>	09020606022	0.67	0.67	1	SC	0.1	0.1
<i>Culoptila</i>	09020606023	0.67	0.67		--	0.1	0.1
Hydroptilidae	09020607				--		
<i>Hydroptila</i>	09020607026	1.00	1.00	6	P	0.2	0.2
<i>Mayatrichia</i>	09020607033	0.33	0.33		SC	0.1	0.1
<i>Brachycentrus</i>	09020609043		63.67	0	CF		9.6
<i>Brachycentrus appalachia</i>	09020609043096	63.33			--	9.5	
<i>Brachycentrus numerosus</i>	09020609043098	0.33			--	0.1	
<i>Lepidostoma</i>	09020611064	4.33	4.33	1	SH	0.7	0.7
<i>Helicopsyche</i>	09020616070	6.33	6.33	3	SC	1.0	1.0
<i>Ceraclea</i>	09020618072	0.33	0.33	3	CG	0.1	0.1
<i>Oecetis</i>	09020618078		0.33	8	PR		0.1
<i>Oecetis avara</i>	09020618078153	0.33			--	0.1	
Crambidae	09020905	0.33	0.33		SH	0.1	0.1
Chironomidae	09021011	1.33			--	0.2	
<i>Nilotanypus</i>	09021011012		2.02	6	PR		0.3
<i>Nilotanypus fimbriatus</i>	09021011012027	2.00			--	0.3	
<i>Pentaneura</i>	09021011014	1.33	1.35	6	PR	0.2	0.2
<i>Thienemannimyia</i>	09021011020		0.67	3	PR		0.1
<i>Thienemannimyia group</i>	09021011020041	0.67			--	0.1	
<i>Cricotopus</i>	09021011037	0.67	2.69	7	SH	0.1	0.4
<i>Cricotopus bicinctus</i>	09021011037057	2.00			--	0.3	
<i>Orthocladius</i>	09021011050		2.02	6	CG		0.3
<i>Orthocladius dubitatus</i>	09021011050103	2.00			--	0.3	
<i>Rheocricotopus</i>	09021011057	2.00	2.02	6	CG	0.3	0.3
<i>Synorthocladius</i>	09021011061	1.33	1.35	2	CG	0.2	0.2
<i>Thienemanniella</i>	09021011062	1.33	1.35	6	CG	0.2	0.2



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<i>Tvetenia</i>	09021011065		46.43	5	CG		7.0
<i>Tvetenia vitracies</i>	09021011065113	46.00			--	6.9	
<i>Rheotanytarsus</i>	09021011072		59.22	6	CF		8.9
<i>Rheotanytarsus exiguus group</i>	09021011072127	32.00			CF	4.8	
<i>Rheotanytarsus pellucidus</i>	09021011072128	26.67			CF	4.0	
<i>Microtendipes</i>	09021011094		1.35	6	CF		0.2
<i>Microtendipes rydalensis group</i>	09021011094168	1.33			--	0.2	
<i>Polypedilum</i>	09021011102		22.21	6	SH		3.3
<i>Polypedilum flavum</i>	09021011102182	22.00			--	3.3	
<i>Simulium</i>	09021012047	28.00	28.00	4	CF	4.2	4.2
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Dineutus</i>	09021104032	6.33	6.33	2	--	1.0	1.0
<i>Macronychus</i>	09021113065		0.33	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.1	
<i>Microcyloepus</i>	09021113066		0.33	3	--		0.1
<i>Microcyloepus pusillus</i>	09021113066041	0.33			--	0.1	
<i>Promoresia</i>	09021113069		1.33		--		0.2
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.2	
<i>Stenelmis</i>	09021113070		5.67	5	SC		0.9
<i>Stenelmis concinna</i>	09021113070054	5.67			--	0.9	
Acariformes	090301	0.33	0.33		--	0.1	0.1
<i>Arrenurus</i>	09030111001	0.33	0.33		--	0.1	0.1
<i>Hydrodroma</i>	09030113001	0.33	0.33		--	0.1	0.1
<i>Amnicola</i>	10010104013		19.33		SC		2.9
<i>Amnicola limosus</i>	10010104013018	19.33			--	2.9	
Physidae	10010202	0.33	0.33		SC	0.1	0.1
<i>Ferrissia</i>	10010204035	0.67	0.67		SC	0.1	0.1