



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

Station Information

**Station Number:** S-74  
**Waterbody:** Sheepscot River - Station 74  
**Town:** Whitefield  
**Directions:** ABOVE RT. 126 BRIDGE AT USGS GAGE  
**DEP Drainage:** St. Croix - Coastal  
**HUC8:** 01050003  
**HUC8 Name:** St. George-Sheepscot  
**Latitude:** 44 13 23.47 N  
**Longitude:** 69 35 36.03 W  
**Stream Order:** 4

Sample Information

**Log Number:** 2020  
**Subsample Factor:** X4  
**Type of Sample:** ROCK BASKET  
**Replicates:** 3  
**Date Deployed:** 7/7/2011  
**Date Retrieved:** 8/8/2011

Classification Attainment

**Statutory Class:** AA  
**Model Result with P>.6:** A  
**Date Last Calculated:** 10/25/2011  
**Final Determination:** A  
**Reason for Determination:** Model  
**Date:** 10/28/2011  
**Comments:**

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.67	Class A, B, or C	1.00
Class B	0.33	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.96
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.04

Model Variables

01 Total Mean Abundance	700.00	18 Relative Abundance Ephemeroptera	0.24
02 Generic Richness	37.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	41.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	168.00	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.35	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	64.05
06 Hilsenhoff Biotic Index	3.80	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	91.56
07 Relative Abundance - Chironomidae	0.24	28 EP Generic Richness/14	0.71
08 Relative Generic Richness Diptera	0.24	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	52.60		
11 <i>Cheumatopsyche</i> Abundance	61.36		
12 EPT Generic Richness/ Diptera	2.44		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	41.33		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	2.69		
(Family Functional Group)			
17 Chironomini Abundance (Family	47.03		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	13.05
2	<i>Cheumatopsyche</i>	8.77
3	<i>Brachycentrus</i>	8.57
4	<i>Maccaffertium</i>	7.56
5	<i>Hydropsyche</i>	7.51



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**Log Number: 2020**

Town: Whitefield  
Waterbody: Sheepscot River - Station 74

Date Deployed: 7/7/2011  
Date Retrieved: 8/8/2011

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 23.9 deg C  
Dissolved Oxygen: 7.4 mg/l  
Specific Conductance: 62 uS/cm  
Velocity: 44 cm/s  
pH: 7.2  
Wetted Width: 27 m  
Bankfull Width: 27 m  
Depth: 45 cm

**Waterbody Information - Retrieval**

Temperature: 23 deg C  
Dissolved Oxygen: 7.6 mg/l  
Specific Conductance: 59 uS/cm  
Velocity: 51 cm/s  
pH:  
Wetted Width: 26 m  
Bankfull Width: 27 m  
Depth: 40 cm

**Water Chemistry - 8/8/2011**

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.017 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	4 mg/l	Total Dissolved Solids	50 mg/l

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Open	Rolling

Pasture  
Swamp Hardwood  
Upland Hardwood

<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Above Road Crossing	Boulder 55 %
	Main Stem	Gravel 10 %
		Rubble/Cobble 35 %

**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**

7/7/11: ALGAE AND FISH PRESENT.

MULTI-METER WOULD NOT MEASURE PH DURING RETRIEVAL. 8/8/11: FISH PRESENT. RAINED DAY BEFORE RETRIEVAL (8/7/11).



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Aquatic Life Taxonomic Inventory Report**

**Station Number: S-74**  
**Log Number: 2020**

Waterbody: Sheepscot River - Station 74  
Subsample Factor: X4

Town: Whitefield  
Calculated: 10/25/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Crangonyx</i>	09010202004	1.33	1.33	8	--	0.2	0.2
<i>Acroneuria</i>	09020209042	20.00	38.67	0	PR	2.9	5.5
<i>Acroneuria abnormis</i>	09020209042121	18.67		0	PR	2.7	
<i>Paragnetina</i>	09020209049		2.67	1	PR		0.4
<i>Paragnetina media</i>	09020209049151	2.67			--	0.4	
<i>Boyeria</i>	09020301004		1.33	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.2	
Baetidae	09020401	5.33			--	0.8	
<i>Baetis</i>	09020401001	8.00	20.13	4	CG	1.1	2.9
<i>Baetis intercalaris</i>	09020401001008	10.67			--	1.5	
<i>Callibaetis</i>	09020401002	1.33	1.44	9	CG	0.2	0.2
<i>Acerpenna</i>	09020401007	17.33	33.07	5	CG	2.5	4.7
<i>Acerpenna pygmaea</i>	09020401007011	13.33			--	1.9	
<i>Iswaeon</i>	09020401015		18.69		--		2.7
<i>Iswaeon anoka</i>	09020401015001	17.33			--	2.5	
Heptageniidae	09020402	26.67			--	3.8	
<i>Epeorus</i>	09020402009	12.00	17.00	0	SC	1.7	2.4
<i>Leucrocuta</i>	09020402011	14.67	20.78	1	SC	2.1	3.0
<i>Maccaffertium</i>	09020402015	25.33	52.89	4	SC	3.6	7.6
<i>Maccaffertium luteum</i>	09020402015049	5.33			--	0.8	
<i>Maccaffertium modestum</i>	09020402015051	6.67			--	1.0	
<i>Isonychia</i>	09020404018		4.00	2	CF		0.6
<i>Isonychia bicolor</i>	09020404018059	2.67			--	0.4	
<i>Isonychia rufa</i>	09020404018062	1.33			--	0.2	
Philopotamidae	09020601	2.67	2.67		--	0.4	0.4
<i>Chimarra</i>	09020601003	4.00	32.00	2	CF	0.6	4.6
<i>Chimarra obscura</i>	09020601003003	2.67			--	0.4	
<i>Chimarra socia</i>	09020601003004	25.33			--	3.6	
Polycentropodidae	09020603	1.33			--	0.2	
<i>Neureclipsis</i>	09020603008	33.33	34.62	7	CF	4.8	4.9
<i>Polycentropus</i>	09020603010	1.33	1.38	6	PR	0.2	0.2
Hydropsychidae	09020604	12.00			--	1.7	
<i>Cheumatopsyche</i>	09020604015	56.00	61.36	5	CF	8.0	8.8
<i>Hydropsyche</i>	09020604016	22.67	52.60	4	CF	3.2	7.5
<i>Hydropsyche morosa</i>	09020604016030	18.67			--	2.7	
<i>Hydropsyche sparna</i>	09020604016032	1.33			--	0.2	
<i>Hydropsyche placoda</i>	09020604016059	5.33			--	0.8	
<i>Macrostemum</i>	09020604018		23.38	3	CF		3.3



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		Actual	Adjusted			Actual	Adjusted
<i>Macrostemum zebratum</i>	09020604018054	21.33			--	3.0	
<i>Brachycentrus</i>	09020609043		60.00	0	CF		8.6
<i>Brachycentrus appalachia</i>	09020609043096	60.00			--	8.6	
<i>Micrasema</i>	09020609044		1.33	2	SH		0.2
<i>Micrasema rusticum group</i>	09020609044100	1.33			--	0.2	
<i>Lepidostoma</i>	09020611064	4.00	4.00	1	SH	0.6	0.6
Leptoceridae	09020618	2.67	2.67		--	0.4	0.4
<i>Oecetis</i>	09020618078		1.33	8	PR		0.2
<i>Oecetis persimilis</i>	09020618078157	1.33			--	0.2	
Chironomidae	09021011	1.33			--	0.2	
<i>Pentaneura</i>	09021011014		1.34	6	PR		0.2
<i>Pentaneura inconspicua</i>	09021011014028	1.33			--	0.2	
<i>Rheopelopia</i>	09021011017		1.34		PR		0.2
<i>Rheopelopia acra group</i>	09021011017036	1.33			--	0.2	
<i>Cricotopus</i>	09021011037	1.33	2.69	7	SH	0.2	0.4
<i>Cricotopus luciae</i>	09021011037073	1.33			--	0.2	
<i>Nanocladius</i>	09021011049	4.00	9.41	3	CG	0.6	1.3
<i>Nanocladius branchicolus</i>	09021011049091	1.33			--	0.2	
<i>Nanocladius downesi</i>	09021011049092	4.00			--	0.6	
<i>Tvetenia</i>	09021011065		17.47	5	CG		2.5
<i>Tvetenia vitracies</i>	09021011065113	17.33			--	2.5	
<i>Rheotanytarsus</i>	09021011072	90.67	91.38	6	CF	13.0	13.1
<i>Microtendipes</i>	09021011094		13.44	6	CF		1.9
<i>Microtendipes rydalensis group</i>	09021011094168	13.33			--	1.9	
<i>Polypedilum</i>	09021011102	2.67	33.60	6	SH	0.4	4.8
<i>Polypedilum flavum</i>	09021011102182	29.33			--	4.2	
<i>Polypedilum illinoense group</i>	09021011102185	1.33			--	0.2	
<i>Simulium</i>	09021012047		26.67	4	CF		3.8
<i>Simulium penobscotensis</i>	09021012047063	1.33			--	0.2	
<i>Simulium jenningsi complex</i>	09021012047070	25.33			CF	3.6	
<i>Dineutus</i>	09021104032	4.00	4.00	2	--	0.6	0.6
<i>Psephenus</i>	09021108058		1.33	4	SC		0.2
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.2	
<i>Promoresia</i>	09021113069		1.33		--		0.2
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.2	
<i>Stenelmis</i>	09021113070		6.67	5	SC		1.0
<i>Stenelmis concinna</i>	09021113070054	6.67			--	1.0	