



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

Station Information

Station Number: 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

Log Number: 2341	Type of Sample: ROCK BASKET	Date Deployed: 7/6/2015
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/3/2015

Classification Attainment

Statutory Class: AA	Final Determination: A	Date: 12/9/2015
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 12/8/2015	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.57	Class A, B, or C	1.00
Class B	0.43	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.92
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.08

Model Variables

01 Total Mean Abundance	1885.33	18 Relative Abundance Ephemeroptera	0.11
02 Generic Richness	48.00	19 EPT Generic Richness	25.00
03 Plecoptera Mean Abundance	18.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	208.00	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	3.58	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	216.60
06 Hilsenhoff Biotic Index	3.58	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	64.80
07 Relative Abundance - Chironomidae	0.21	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.29	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	120.24		
11 <i>Cheumatopsyche</i> Abundance	194.82		
12 EPT Generic Richness/ Diptera Generic Richness	1.79		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	18.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	34.02		
17 Chironomini Abundance (Family Functional Group)	176.91		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Chimarra</i>	39.25
2	<i>Cheumatopsyche</i>	10.33
3	<i>Polypedilum</i>	8.37
4	<i>Hydropsyche</i>	6.38
5	<i>Rheotanytarsus</i>	4.04



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Station Number: S-74 Town: Whitefield Date Deployed: 7/6/2015
Log Number: 2341 Waterbody: Sheepscoot River - Station 74 Date Retrieved: 8/3/2015

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 21.7 deg C
Dissolved Oxygen: 8.18 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 58.1 uS/cm
Velocity: 39.6 cm/s
pH: 7.29
Wetted Width: 32 m
Bankfull Width: 32 m
Depth: 45 cm

Waterbody Information - Retrieval

Temperature: 26 deg C
Dissolved Oxygen: 8.99 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 80.8 uS/cm
Velocity: 18.3 cm/s
pH: 7.97
Wetted Width: 27 m
Bankfull Width: 27 m
Depth: 40 cm

Water Chemistry - 8/3/2015

Nitrate+nitrite As N	<0.01 mg/l	Total Phosphorus	10 ug/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	2.6 mg/l	Total Dissolved Solids	57 mg/l
Orthophosphate As Phosphorus	1 ug/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

7/6/2015: 92.8% DO.
8/3/2015: 111.7% DO. CONSIDERABLE AMOUNT OF ALGAE.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-74
Log Number: 2341

Waterbody: Sheepscot River - Station 74
Subsample Factor: X4

Town: Whitefield
Calculated: 12/8/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Perlidae	09020209	4.00			--	0.2	
<i>Acroneuria</i>	09020209042	5.33	15.27	0	PR	0.3	0.8
<i>Acroneuria abnormis</i>	09020209042121	4.00		0	PR	0.2	
<i>Acroneuria internata</i>	09020209042124	2.67			--	0.1	
<i>Perlesta</i>	09020209046		3.39	5	PR		0.2
<i>Perlesta decipiens</i>	09020209046141	2.67			--	0.1	
<i>Hetaerina</i>	09020307044		1.33	6	PR		0.1
<i>Hetaerina americana</i>	09020307044001	1.33			--	0.1	
Baetidae	09020401	9.33			--	0.5	
<i>Baetis</i>	09020401001	4.00	9.24	4	CG	0.2	0.5
<i>Baetis flavistriga</i>	09020401001004	4.00			--	0.2	
<i>Acerpenna</i>	09020401007	13.33	52.39	5	CG	0.7	2.8
<i>Acerpenna pygmaea</i>	09020401007011	32.00			--	1.7	
<i>Plauditus</i>	09020401012	1.33	1.54		CG	0.1	0.1
<i>Iswaeon</i>	09020401015		6.16		--		0.3
<i>Iswaeon anoka</i>	09020401015001	5.33			--	0.3	
Heptageniidae	09020402	32.00			--	1.7	
<i>Epeorus</i>	09020402009	2.67	3.81	0	SC	0.1	0.2
<i>Leucrocuta</i>	09020402011	37.33	53.33	1	SC	2.0	2.8
<i>Maccaffertium</i>	09020402015	26.67	49.52	4	SC	1.4	2.6
<i>Maccaffertium mediopunctatum</i>	09020402015050	1.33			--	0.1	
<i>Maccaffertium modestum</i>	09020402015051	6.67			--	0.4	
<i>Isonychia</i>	09020404018	9.33	9.33	2	CF	0.5	0.5
Ephemerellidae	09020410	2.67			--	0.1	
<i>Ephemerella</i>	09020410035	5.33	6.04	1	CG	0.3	0.3
<i>Serratella</i>	09020410037		16.62	2	CG		0.9
<i>Serratella deficiens (Teloganopsis deficiens)</i>	09020410037121	4.00			--	0.2	
<i>Serratella serratoides</i>	09020410037124	10.67			--	0.6	
Philopotamidae	09020601	48.00	48.00		--	2.5	2.5
<i>Chimarra</i>	09020601003	276.00	740.00	2	CF	14.6	39.3
<i>Chimarra aterrima</i>	09020601003002	44.00			--	2.3	
<i>Chimarra obscura</i>	09020601003003	266.67			--	14.1	
<i>Chimarra socia</i>	09020601003004	153.33			--	8.1	
<i>Cernotina</i>	09020603006	2.67	2.67		PR	0.1	0.1
<i>Neureclipsis</i>	09020603008	53.33	53.33	7	CF	2.8	2.8
Hydropsychidae	09020604	41.33			--	2.2	
<i>Cheumatopsyche</i>	09020604015	170.67	194.82	5	CF	9.1	10.3



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Log Number: 2341 Subsample Factor: X4 Replicates: 3 Calculated: 12/8/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche</i>	09020604016	78.67	120.24	4	CF	4.2	6.4
<i>Hydropsyche morosa</i>	09020604016030	13.33			--	0.7	
<i>Hydropsyche sparna</i>	09020604016032	12.00			--	0.6	
<i>Hydropsyche depravata species group</i>	09020604016041	1.33			CF	0.1	
<i>Macrostemum</i>	09020604018		18.26	3	CF		1.0
<i>Macrostemum zebratum</i>	09020604018054	16.00			--	0.8	
Glossosomatidae	09020606				--		
Hydroptilidae	09020607				--		
<i>Hydroptila</i>	09020607026	13.33	13.33	6	P	0.7	0.7
<i>Brachycentrus</i>	09020609043		24.00	0	CF		1.3
<i>Brachycentrus appalachia</i>	09020609043096	24.00			--	1.3	
<i>Micrasema</i>	09020609044		4.00	2	SH		0.2
<i>Micrasema wataga</i>	09020609044101	4.00			--	0.2	
<i>Lepidostoma</i>	09020611064	5.33	5.33	1	SH	0.3	0.3
Leptoceridae	09020618	1.33	1.33		--	0.1	0.1
<i>Oecetis</i>	09020618078	1.33	4.00	8	PR	0.1	0.2
<i>Oecetis persimilis</i>	09020618078157	2.67			--	0.1	
Chironomidae	09021011	8.00			--	0.4	
<i>Nilotanypus</i>	09021011012		2.72	6	PR		0.1
<i>Nilotanypus fimbriatus</i>	09021011012027	2.67			--	0.1	
<i>Pentaneura</i>	09021011014		17.69	6	PR		0.9
<i>Pentaneura inconspicua</i>	09021011014028	17.33			--	0.9	
<i>Rheopelopia</i>	09021011017		12.25		PR		0.6
<i>Rheopelopia acra group</i>	09021011017036	12.00			--	0.6	
<i>Thienemannimyia</i>	09021011020		1.36	3	PR		0.1
<i>Thienemannimyia senata</i>	09021011020040	1.33			--	0.1	
<i>Corynoneura</i>	09021011036	1.33	1.36	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		21.77	7	SH		1.2
<i>Cricotopus bicinctus</i>	09021011037057	8.00			--	0.4	
<i>Cricotopus vierriensis</i>	09021011037071	12.00			--	0.6	
<i>Cricotopus luciae</i>	09021011037073	1.33			--	0.1	
<i>Nanocladius</i>	09021011049		4.08	3	CG		0.2
<i>Nanocladius branchicolus</i>	09021011049091	4.00			--	0.2	
<i>Rheocricotopus</i>	09021011057		36.74	6	CG		1.9
<i>Rheocricotopus robacki</i>	09021011057105	36.00			--	1.9	
<i>Tvetenia</i>	09021011065		44.91	5	CG		2.4
<i>Tvetenia vitracies</i>	09021011065113	44.00			--	2.3	



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<i>Rheotanytarsus</i>	09021011072		76.21	6	CF		4.0
<i>Rheotanytarsus exiguus group</i>	09021011072127	73.33			CF	3.9	
<i>Rheotanytarsus pellucidus</i>	09021011072128	1.33			CF	0.1	
<i>Microtendipes</i>	09021011094		13.61	6	CF		0.7
<i>Microtendipes rydalensis group</i>	09021011094168	13.33			--	0.7	
<i>Paratendipes</i>	09021011100	2.67	5.44	8	CG	0.1	0.3
<i>Paratendipes albimanus group</i>	09021011100176	2.67			--	0.1	
<i>Polypedilum</i>	09021011102		157.86	6	SH		8.4
<i>Polypedilum aviceps</i>	09021011102181	33.33			--	1.8	
<i>Polypedilum flavum</i>	09021011102182	121.33			--	6.4	
<i>Simulium</i>	09021012047	1.33	4.00	4	CF	0.1	0.2
<i>Simulium jenningsi species group</i>	09021012047070	2.67			CF	0.1	
<i>Dineutus</i>	09021104032	13.33	13.33	2	--	0.7	0.7
<i>Psephenus</i>	09021108058		1.33	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.1	
<i>Macronychus</i>	09021113065		1.33	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.1	
<i>Promoresia</i>	09021113069		4.00		--		0.2
<i>Promoresia elegans</i>	09021113069051	2.67			--	0.1	
<i>Promoresia tardella</i>	09021113069052	1.33			--	0.1	
<i>Stenelmis</i>	09021113070	1.33	2.67	5	SC	0.1	0.1
<i>Stenelmis concinna</i>	09021113070054	1.33			--	0.1	
<i>Clathrosperchon</i>	09030118001	1.33	1.33		--	0.1	0.1
<i>Amnicola</i>	10010104013		1.33		SC		0.1
<i>Amnicola limosus</i>	10010104013018	1.33			--	0.1	
<i>Ferrissia</i>	10010204035		2.67		SC		0.1
<i>Ferrissia rivularis</i>	10010204035066	2.67			--	0.1	