



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: Maine 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: 2089
Subsample Factor: X4

Type of Sample: ROCK BASKET
Replicates: 3

Date Deployed: 7/5/2012
Date Retrieved: 8/6/2012

Classification Attainment

Statutory Class: AA
Model Result with P>.6: A
Date Last Calculated: 3/7/2013

Final Determination: A
Reason for Determination: Model
Comments:

Date: 3/7/2013

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.39	Class A, B, or C	1.00
Class B	0.60	Non-Attainment	0.00

B or Better Model		A Model	
Class A or B	1.00	Class A	0.82
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.18

Model Variables

01 Total Mean Abundance	1316.00	18 Relative Abundance Ephemeroptera	0.11
02 Generic Richness	46.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	25.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	146.67	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	3.71	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	82.40
06 Hilsenhoff Biotic Index	4.40	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	74.55
07 Relative Abundance - Chironomidae	0.47	28 EP Generic Richness/14	0.93
08 Relative Generic Richness Diptera	0.28	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	64.21		
11 <i>Cheumatopsyche</i> Abundance	75.73		
12 EPT Generic Richness/ Diptera Generic Richness	1.77		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	25.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	5.33		
17 Chironomini Abundance (Family Functional Group)	104.00		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	30.19
2	<i>Chimarra</i>	15.91
3	<i>Polypedilum</i>	7.60
4	<i>Tvetenia</i>	6.28
5	<i>Cheumatopsyche</i>	5.75



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	23.3 deg C
Dissolved Oxygen:	7.7 mg/l
Specific Conductance:	46 uS/cm
Velocity:	85 cm/s
pH:	6.99
Wetted Width:	29 m
Bankfull Width:	29 m
Depth:	55 cm

Waterbody Information - Retrieval

Temperature:	25.3 deg C
Dissolved Oxygen:	6.8 mg/l
Specific Conductance:	106 uS/cm
Velocity:	25 cm/s
pH:	7.11
Wetted Width:	27 m
Bankfull Width:	29 m
Depth:	17 cm

Water Chemistry - 8/6/2012

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	0.01 mg/l	Total Phosphorus	0.012 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	4.9 mg/l	Total Dissolved Solids	54 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

7/5/12: WATER LEVELS HIGH.

8/6/12: 2 BASKETS PARTIALLY EXPOSED, WATER LEVEL WAY DOWN. 8/6/12: FISH OBSERVED.



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Subsample Factor: X4

Replicates: 3

Calculated: 3/7/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002		1.33		--		0.1
<i>Girardia tigrina</i>	03010102002001	1.33			--	0.1	
Perlidae	09020209	2.67	2.67		--	0.2	0.2
<i>Acroneuria</i>	09020209042		22.67	0	PR		1.7
<i>Acroneuria abnormis</i>	09020209042121	22.67		0	PR	1.7	
<i>Boyeria</i>	09020301004		1.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.1	
<i>Hetaerina</i>	09020307044	1.33	1.33	6	PR	0.1	0.1
<i>Baetis</i>	09020401001	21.33	22.67	4	CG	1.6	1.7
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.1	
<i>Heterocloeon</i>	09020401005		1.33	2	SC		0.1
<i>Heterocloeon curiosum</i>	09020401005020	1.33			--	0.1	
<i>Acerpenna</i>	09020401007	1.33	8.00	5	CG	0.1	0.6
<i>Acerpenna pygmaea</i>	09020401007011	6.67			--	0.5	
<i>Iswaeon</i>	09020401015	1.33	1.33		--	0.1	0.1
Heptageniidae	09020402	16.00			--	1.2	
<i>Epeorus</i>	09020402009	18.67	23.43	0	SC	1.4	1.8
<i>Leucrocuta</i>	09020402011	2.67	3.35	1	SC	0.2	0.3
<i>Maccaffertium</i>	09020402015	30.67	51.89	4	SC	2.3	3.9
<i>Maccaffertium mediopunctatum</i>	09020402015050	1.33			--	0.1	
<i>Maccaffertium modestum</i>	09020402015051	9.33			--	0.7	
<i>Isonychia</i>	09020404018	25.33	25.33	2	CF	1.9	1.9
Ephemerellidae	09020410	2.67	2.67		--	0.2	0.2
<i>Serratella</i>	09020410037		5.33	2	CG		0.4
<i>Serratella serratoides</i>	09020410037124	5.33			--	0.4	
<i>Tricorythodes</i>	09020411038	1.33	1.33	4	CG	0.1	0.1
Philopotamidae	09020601	14.67	14.67		--	1.1	1.1
<i>Chimarra</i>	09020601003	84.00	209.33	2	CF	6.4	15.9
<i>Chimarra obscura</i>	09020601003003	85.33			--	6.5	
<i>Chimarra socia</i>	09020601003004	40.00			--	3.0	
Polycentropodidae	09020603	2.67	2.67		--	0.2	0.2
<i>Neureclipsis</i>	09020603008	45.33	45.33	7	CF	3.4	3.4
Hydropsychidae	09020604	36.00			--	2.7	
<i>Cheumatopsyche</i>	09020604015	61.33	75.73	5	CF	4.7	5.8
<i>Hydropsyche</i>	09020604016	40.00	64.21	4	CF	3.0	4.9
<i>Hydropsyche bronta</i>	09020604016029	4.00			--	0.3	
<i>Hydropsyche morosa</i>	09020604016030	2.67			--	0.2	
<i>Hydropsyche placoda</i>	09020604016059	5.33			--	0.4	



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		Actual	Adjusted			Actual	Adjusted
<i>Macrostemum</i>	09020604018		49.39	3	CF		3.8
<i>Macrostemum zebratum</i>	09020604018054	40.00			--	3.0	
<i>Brachycentrus</i>	09020609043		25.33	0	CF		1.9
<i>Brachycentrus appalachia</i>	09020609043096	25.33			--	1.9	
<i>Lepidostoma</i>	09020611064	5.33	5.33	1	SH	0.4	0.4
<i>Oecetis</i>	09020618078	1.33	1.33	8	PR	0.1	0.1
Diptera	090210				--		
<i>Pentaneura</i>	09021011014		2.67	6	PR		0.2
<i>Pentaneura inconspicua</i>	09021011014028	2.67			--	0.2	
<i>Rheopelopia</i>	09021011017		2.67		PR		0.2
<i>Rheopelopia acra group</i>	09021011017036	2.67			--	0.2	
<i>Corynoneura</i>	09021011036	5.33	5.33	7	CG	0.4	0.4
<i>Nanocladius</i>	09021011049		1.33	3	CG		0.1
<i>Nanocladius branchicolus</i>	09021011049091	1.33			--	0.1	
<i>Rheocricotopus</i>	09021011057		12.00	6	CG		0.9
<i>Rheocricotopus robacki</i>	09021011057105	12.00			--	0.9	
<i>Tvetenia</i>	09021011065		82.67	5	CG		6.3
<i>Tvetenia vitracies</i>	09021011065113	82.67			--	6.3	
<i>Rheotanytarsus</i>	09021011072	397.33	397.33	6	CF	30.2	30.2
<i>Tanytarsus</i>	09021011076	6.67	6.67	6	CF	0.5	0.5
<i>Microtendipes</i>	09021011094		4.00	6	CF		0.3
<i>Microtendipes rydalensis group</i>	09021011094168	4.00			--	0.3	
<i>Polypedilum</i>	09021011102		100.00	6	SH		7.6
<i>Polypedilum flavum</i>	09021011102182	100.00			--	7.6	
<i>Simulium</i>	09021012047	2.67	12.00	4	CF	0.2	0.9
<i>Simulium jenningsi</i>	09021012047060				--		
<i>Simulium jenningsi complex</i>	09021012047070	9.33			CF	0.7	
<i>Atherix</i>	09021015055	2.67	2.67	2	PR	0.2	0.2
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.1	0.1
<i>Dineutus</i>	09021104032	2.67	2.67	2	--	0.2	0.2
<i>Psephenus</i>	09021108058		1.33	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.1	
<i>Ectopria</i>	09021109059	1.33	1.33	5	SC	0.1	0.1
<i>Promoresia</i>	09021113069		4.00		--		0.3
<i>Promoresia elegans</i>	09021113069051	4.00			--	0.3	
<i>Stenelmis</i>	09021113070	2.67	4.00	5	SC	0.2	0.3
<i>Stenelmis crenata</i>	09021113070055	1.33			--	0.1	
<i>Amnicola</i>	10010104013		1.33		SC		0.1



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<i>Amnicola limosa</i>	10010104013018	1.33			--	0.1	
<i>Ferrissia</i>	10010204035		1.33		SC		0.1
<i>Ferrissia rivularis</i>	10010204035066	1.33			--	0.1	