



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: 1919
Subsample Factor: X4

Type of Sample: ROCK BASKET
Replicates: 3

Date Deployed: 7/7/2010
Date Retrieved: 8/10/2010

Classification Attainment

Statutory Class: AA
Model Result with P>.6: A
Date Last Calculated: 3/4/2011

Final Determination: A
Reason for Determination: Model
Comments:

Date: 3/7/2011

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.62	Class A, B, or C	1.00
Class B	0.37	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	1340.00	18 Relative Abundance Ephemeroptera	0.11
02 Generic Richness	44.00	19 EPT Generic Richness	24.00
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	145.33	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.77	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	124.60
06 Hilsenhoff Biotic Index	3.46	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	82.40
07 Relative Abundance - Chironomidae	0.19	28 EP Generic Richness/14	0.93
08 Relative Generic Richness Diptera	0.27	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	155.02		
11 <i>Cheumatopsyche</i> Abundance	105.64		
12 EPT Generic Richness/ Diptera Generic Richness	2.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	18.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	18.96		
17 Chironomini Abundance (Family Functional Group)	93.47		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Chimarra</i>	33.53
2	<i>Hydropsyche</i>	11.57
3	<i>Cheumatopsyche</i>	7.88
4	<i>Macrostemum</i>	5.32
5	<i>Maccaffertium</i>	4.97



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 26.7 deg C
Dissolved Oxygen: 6.7 mg/l
Specific Conductance: 50 uS/cm
Velocity: 39 cm/s
pH:
Wetted Width: 26 m
Bankfull Width: 27 m
Depth: 40 cm

Waterbody Information - Retrieval

Temperature: 23.8 deg C
Dissolved Oxygen: 6.8 mg/l
Specific Conductance: 67 uS/cm
Velocity: 48 cm/s
pH: 6.78
Wetted Width: 25 m
Bankfull Width: 27 m
Depth: 35 cm

Water Chemistry - 8/10/2010

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	<1 ug/l
Nitrate+nitrite As N	<0.01 mg/l	Total Phosphorus	0.011 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	3.8 mg/l	Total Dissolved Solids	41 mg/l

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Cultivated

Open

Rolling

Pasture

Swamp Hardwood

Upland Hardwood

Potential Stressor

Location

Substrate

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

7/7/2010 FISH PRESENT.

8/10/2010 FISH PRESENT, CONSIDERABLE AMOUNT OF FILAMENTOUS ALGAE.



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Town: Whitefield

Log Number: 1919

Subsample Factor: X4

Replicates: 3

Calculated: 3/4/2011

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	1.33			--	0.1	
<i>Acroneuria</i>	09020209042		15.79	0	PR		1.2
<i>Acroneuria abnormis</i>	09020209042121	14.67		0	PR	1.1	
<i>Attaneuria</i>	09020209043	2.67	2.87	1	--	0.2	0.2
<i>Boyeria</i>	09020301004		2.67	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.2	
Baetidae	09020401	6.67			--	0.5	
<i>Baetis</i>	09020401001	1.33	18.53	4	CG	0.1	1.4
<i>Baetis brunneicolor</i>	09020401001003	6.67			--	0.5	
<i>Baetis flavistriga</i>	09020401001004	6.67			--	0.5	
<i>Heterocloeon</i>	09020401005		3.37	2	SC		0.3
<i>Heterocloeon curiosum</i>	09020401005020	2.67			--	0.2	
<i>Acerpenna</i>	09020401007		5.05	5	CG		0.4
<i>Acerpenna pygmaea</i>	09020401007011	4.00			--	0.3	
<i>Plauditus</i>	09020401012	4.00	5.05		CG	0.3	0.4
Heptageniidae	09020402	30.67			--	2.3	
<i>Epeorus</i>	09020402009	6.67	10.41	0	SC	0.5	0.8
<i>Leucrocuta</i>	09020402011	5.33	8.33	1	SC	0.4	0.6
<i>Maccaffertium</i>	09020402015	33.33	66.60	4	SC	2.5	5.0
<i>Maccaffertium luteum</i>	09020402015049	2.67			--	0.2	
<i>Maccaffertium modestum</i>	09020402015051	6.67			--	0.5	
<i>Isonychia</i>	09020404018	14.67	20.00	2	CF	1.1	1.5
<i>Isonychia bicolor</i>	09020404018059	2.67			--	0.2	
<i>Isonychia rufa</i>	09020404018062	2.67			--	0.2	
Ephemereillidae	09020410	4.00	4.00		--	0.3	0.3
<i>Serratella</i>	09020410037		2.67	2	CG		0.2
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	2.67			--	0.2	
<i>Tricorythodes</i>	09020411038	1.33	1.33	4	CG	0.1	0.1
Philopotamidae	09020601	2.67	2.67		--	0.2	0.2
<i>Chimarra</i>	09020601003	449.33	449.33	2	CF	33.5	33.5
<i>Cernotina</i>	09020603006	1.33	1.33		PR	0.1	0.1
<i>Neureclipsis</i>	09020603008	34.67	34.67	7	CF	2.6	2.6
<i>Polycentropus</i>	09020603010	2.67	2.67	6	PR	0.2	0.2
Hydropsychidae	09020604	9.33			--	0.7	
<i>Cheumatopsyche</i>	09020604015	102.67	105.64	5	CF	7.7	7.9
<i>Hydropsyche</i>	09020604016	33.33	155.02	4	CF	2.5	11.6



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche morosa</i>	09020604016030	32.00			--	2.4	
<i>Hydropsyche sparna</i>	09020604016032	45.33			--	3.4	
<i>Hydropsyche depravata complex</i>	09020604016041	14.67			CF	1.1	
<i>Hydropsyche placoda</i>	09020604016059	25.33			--	1.9	
<i>Macrostemum</i>	09020604018		71.34	3	CF		5.3
<i>Macrostemum zebratum</i>	09020604018054	69.33			--	5.2	
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.1	0.1
<i>Brachycentrus</i>	09020609043		28.00	0	CF		2.1
<i>Brachycentrus appalachia</i>	09020609043096	28.00			--	2.1	
<i>Lepidostoma</i>	09020611064	25.33	25.33	1	SH	1.9	1.9
<i>Chauliodes</i>	09020701001	1.33	1.33	4	PR	0.1	0.1
Chironomidae	09021011	4.00			--	0.3	
<i>Pentaneura</i>	09021011014		9.48	6	PR		0.7
<i>Pentaneura inconspicua</i>	09021011014028	9.33			--	0.7	
<i>Rheopelopia</i>	09021011017	2.67	9.48		PR	0.2	0.7
<i>Rheopelopia acra group</i>	09021011017036	6.67			--	0.5	
<i>Cricotopus</i>	09021011037	1.33	13.55	7	SH	0.1	1.0
<i>Cricotopus bicinctus</i>	09021011037057	5.33			--	0.4	
<i>Cricotopus vierriensis</i>	09021011037071	1.33			--	0.1	
<i>Cricotopus luciae</i>	09021011037073	5.33			--	0.4	
<i>Nanocladius</i>	09021011049		4.06	3	CG		0.3
<i>Nanocladius branchicolus</i>	09021011049091	4.00			--	0.3	
<i>Rheocricotopus</i>	09021011057		6.77	6	CG		0.5
<i>Rheocricotopus robacki</i>	09021011057105	6.67			--	0.5	
<i>Tvetenia</i>	09021011065		65.02	5	CG		4.9
<i>Tvetenia vitracies</i>	09021011065113	62.67			--	4.7	
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.1	
<i>Rheotanytarsus</i>	09021011072	46.67	47.41	6	CF	3.5	3.5
<i>Tanytarsus</i>	09021011076	5.33	5.42	6	CF	0.4	0.4
<i>Microtendipes</i>	09021011094		27.09	6	CF		2.0
<i>Microtendipes rydalensis group</i>	09021011094168	26.67			--	2.0	
<i>Polypedilum</i>	09021011102	34.67	66.38	6	SH	2.6	5.0
<i>Polypedilum flavum</i>	09021011102182	30.67			--	2.3	
<i>Simulium</i>	09021012047	1.33	13.33	4	CF	0.1	1.0
<i>Simulium jenningsi complex</i>	09021012047070	12.00			CF	0.9	
<i>Atherix</i>	09021015055	4.00	4.00	2	PR	0.3	0.3
<i>Dineutus</i>	09021104032	4.00	4.00	2	--	0.3	0.3
<i>Psephenus</i>	09021108058		1.33	4	SC		0.1



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<i>Psephenus herricki</i>	09021108058028	1.33			--	0.1	
<i>Promoresia</i>	09021113069		1.33		--		0.1
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.1	
<i>Stenelmis</i>	09021113070	2.67	12.00	5	SC	0.2	0.9
<i>Stenelmis concinna</i>	09021113070054	9.33			--	0.7	
<i>Ferrissia</i>	10010204035		2.67		SC		0.2
<i>Ferrissia rivularis</i>	10010204035066	2.67			--	0.2	