



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

Station Information

Station Number: S-74	DEP Drainage: 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: 2183	Type of Sample: ROCK BASKET	Date Deployed: 7/8/2013
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/5/2013

Classification Attainment

Statutory Class: AA	Final Determination: A	Date: 1/30/2014
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 1/27/2014	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.51	Class A, B, or C	1.00
Class B	0.48	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.98
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.02

Model Variables

01 Total Mean Abundance	962.67	18 Relative Abundance Ephemeroptera	0.17
02 Generic Richness	40.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	30.67	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	0.08
05 Shannon-Wiener Generic Diversity	4.06	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	40.31
06 Hilsenhoff Biotic Index	4.09	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	79.11
07 Relative Abundance - Chironomidae	0.33	28 EP Generic Richness/14	0.93
08 Relative Generic Richness Diptera	0.20	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	90.03		
11 <i>Cheumatopsyche</i> Abundance	40.31		
12 EPT Generic Richness/ Diptera	2.88		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family	30.67		
Functional Group)			
16 Tanypodinae Mean Abundance	1.34		
(Family Functional Group)			
17 Chironomini Abundance (Family	93.73		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	16.83
2	<i>Chimarra</i>	14.54
3	<i>Hydropsyche</i>	9.35
4	<i>Polypedilum</i>	9.04
5	<i>Simulium</i>	7.34



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	25 deg C
Dissolved Oxygen:	7.6 mg/l
Specific Conductance:	45 uS/cm
Velocity:	102.4 cm/s
pH:	6.2
Wetted Width:	29 m
Bankfull Width:	29 m
Depth:	45 cm

Waterbody Information - Retrieval

Temperature:	20.5 deg C
Dissolved Oxygen:	8.2 mg/l
Specific Conductance:	52 uS/cm
Velocity:	94.3 cm/s
pH:	6.6
Wetted Width:	29 m
Bankfull Width:	29 m
Depth:	40 cm

Water Chemistry - 8/5/2013

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.013 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	4.8 mg/l	Total Dissolved Solids	61 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

8/5/2013 - FISH PRESENT
7/8/2013- FISH PRESENT



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Aquatic Life Taxonomic Inventory Report**

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Waterbody: Sheepscot River - Station 74

Town: Whitefield

Log Number: 2183

Subsample Factor: X4

Replicates: 3

Calculated: 1/27/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Acroneuria</i>	09020209042	14.67	24.00	0	PR	1.5	2.5
<i>Acroneuria abnormis</i>	09020209042121	6.67		0	PR	0.7	
<i>Acroneuria lycorias</i>	09020209042125	2.67			--	0.3	
<i>Perlesta</i>	09020209046	5.33	5.33	5	PR	0.6	0.6
<i>Paragnetina</i>	09020209049		1.33	1	PR		0.1
<i>Paragnetina media</i>	09020209049151	1.33			--	0.1	
<i>Boyeria</i>	09020301004		5.33	2	PR		0.6
<i>Boyeria vinosa</i>	09020301004012	5.33			--	0.6	
<i>Hetaerina</i>	09020307044		1.33	6	PR		0.1
<i>Hetaerina americana</i>	09020307044001	1.33			--	0.1	
<i>Argia</i>	09020309048	1.33	1.33	7	PR	0.1	0.1
Baetidae	09020401	8.00			--	0.8	
<i>Baetis</i>	09020401001	16.00	38.60	4	CG	1.7	4.0
<i>Baetis flavistriga</i>	09020401001004	4.00			--	0.4	
<i>Baetis intercalaris</i>	09020401001008	9.33			--	1.0	
<i>Baetis pluto</i>	09020401001009	4.00			--	0.4	
<i>Heterocloeon</i>	09020401005		6.18	2	SC		0.6
<i>Heterocloeon curiosum</i>	09020401005020	5.33			--	0.6	
<i>Acerpenna</i>	09020401007	5.33	10.81	5	CG	0.6	1.1
<i>Acerpenna pygmaea</i>	09020401007011	4.00			--	0.4	
<i>Iswaeon</i>	09020401015	2.67	3.09		--	0.3	0.3
Heptageniidae	09020402	26.67			--	2.8	
<i>Epeorus</i>	09020402009	14.67	21.65	0	SC	1.5	2.2
<i>Leucrocuta</i>	09020402011	4.00	5.90	1	SC	0.4	0.6
<i>Maccaffertium</i>	09020402015	25.33	55.11	4	SC	2.6	5.7
<i>Maccaffertium modestum</i>	09020402015051	12.00			--	1.2	
<i>Isonychia</i>	09020404018	17.33	17.33	2	CF	1.8	1.8
<i>Serratella</i>	09020410037		8.00	2	CG		0.8
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	1.33			--	0.1	
<i>Serratella serratoides</i>	09020410037124	6.67			--	0.7	
<i>Tricorythodes</i>	09020411038	1.33	1.33	4	CG	0.1	0.1
<i>Chimarra</i>	09020601003	49.33	140.00	2	CF	5.1	14.5
<i>Chimarra obscura</i>	09020601003003	29.33			--	3.0	
<i>Chimarra socia</i>	09020601003004	61.33			--	6.4	
<i>Neureclipsis</i>	09020603008	25.33	25.33	7	CF	2.6	2.6
Hydropsychidae	09020604	1.33			--	0.1	
<i>Cheumatopsyche</i>	09020604015	40.00	40.31	5	CF	4.2	4.2
<i>Hydropsyche</i>	09020604016	38.67	90.03	4	CF	4.0	9.4



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche morosa</i>	09020604016030	29.33			--	3.0	
<i>Hydropsyche sparna</i>	09020604016032	17.33			--	1.8	
<i>Hydropsyche placoda</i>	09020604016059	4.00			--	0.4	
<i>Macrostemum</i>	09020604018		43.00	3	CF		4.5
<i>Macrostemum zebratum</i>	09020604018054	42.67			--	4.4	
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.1	0.1
<i>Brachycentrus</i>	09020609043		6.67	0	CF		0.7
<i>Brachycentrus appalachia</i>	09020609043096	6.67			--	0.7	
<i>Micrasema</i>	09020609044		1.33	2	SH		0.1
<i>Micrasema wataga</i>	09020609044101	1.33			--	0.1	
<i>Lepidostoma</i>	09020611064	1.33	1.33	1	SH	0.1	0.1
<i>Oecetis</i>	09020618078		1.33	8	PR		0.1
<i>Oecetis persimilis</i>	09020618078157	1.33			--	0.1	
Chironomidae	09021011	1.33			--	0.1	
<i>Pentaneura</i>	09021011014		1.34	6	PR		0.1
<i>Pentaneura inconspicua</i>	09021011014028	1.33			--	0.1	
<i>Nanocladius</i>	09021011049		2.68	3	CG		0.3
<i>Nanocladius branchicollis</i>	09021011049091	1.33			--	0.1	
<i>Nanocladius downesi</i>	09021011049092	1.33			--	0.1	
<i>Rheocricotopus</i>	09021011057		6.70	6	CG		0.7
<i>Rheocricotopus robacki</i>	09021011057105	6.67			--	0.7	
<i>Tvetenia</i>	09021011065		48.20	5	CG		5.0
<i>Tvetenia vitracies</i>	09021011065113	46.67			--	4.8	
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.1	
<i>Rheotanytarsus</i>	09021011072	161.33	162.02	6	CF	16.8	16.8
<i>Microtendipes</i>	09021011094		6.70	6	CF		0.7
<i>Microtendipes rydalensis group</i>	09021011094168	6.67			--	0.7	
<i>Polypedilum</i>	09021011102		87.04	6	SH		9.0
<i>Polypedilum aviceps</i>	09021011102181	17.33			--	1.8	
<i>Polypedilum flavum</i>	09021011102182	69.33			--	7.2	
<i>Simulium</i>	09021012047	1.33	70.67	4	CF	0.1	7.3
<i>Simulium jenningsi complex</i>	09021012047070	68.00			CF	7.1	
<i>Simulium venustum/verecundum complex</i>	09021012047072	1.33			CF	0.1	
<i>Dineutus</i>	09021104032	1.33	1.33	2	--	0.1	0.1
<i>Promoresia</i>	09021113069		1.33		--		0.1
<i>Promoresia tardella</i>	09021113069052	1.33			--	0.1	
<i>Stenelmis</i>	09021113070		2.67	5	SC		0.3



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<i>Stenelmis concinna</i>	09021113070054	1.33			--	0.1	
<i>Stenelmis crenata</i>	09021113070055	1.33			--	0.1	
Hydrobiidae	10010104	2.67	2.67		--	0.3	0.3
<i>Amnicola</i>	10010104013		9.33		SC		1.0
<i>Amnicola limosa</i>	10010104013018	9.33			--	1.0	
<i>Ferrissia</i>	10010204035		2.67		SC		0.3
<i>Ferrissia rivularis</i>	10010204035066	2.67			--	0.3	