



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

Station Information

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

Sample Information

Log Number: 1706	Type of Sample: ROCK BASKET	Date Deployed: 7/7/2008
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/4/2008

Classification Attainment

Statutory Class: AA	Final Determination: A	Date: 3/24/2009
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 3/17/2009	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.61	Class A, B, or C	1.00
Class B	0.38	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.97
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.03

Model Variables

01 Total Mean Abundance	462.67	18 Relative Abundance Ephemeroptera	0.13
02 Generic Richness	34.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	17.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	61.33	23 Relative Generic Richness- Plecoptera	0.09
05 Shannon-Wiener Generic Diversity	3.46	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	29.66
06 Hilsenhoff Biotic Index	3.83	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	20.00
07 Relative Abundance - Chironomidae	0.06	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.21	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	182.08		
11 <i>Cheumatopsyche</i> Abundance	28.32		
12 EPT Generic Richness/ Diptera Generic Richness	3.14		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	17.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.00		
17 Chironomini Abundance (Family Functional Group)	1.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	39.35
2	<i>Simulium</i>	10.37
3	<i>Baetis</i>	6.53
4	<i>Stenelmis</i>	6.34
5	<i>Cheumatopsyche</i>	6.12



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Log Number: 1706

Town: Whitefield
Waterbody: Sheepscot River - Station 74

Date Deployed: 7/7/2008
Date Retrieved: 8/4/2008

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment	
Temperature:	24 deg C
Dissolved Oxygen:	7.2 mg/l
Specific Conductance:	46.2 uS/cm
Velocity:	
pH:	
Wetted Width:	26 m
Bankfull Width:	27 m
Depth:	40 cm

Waterbody Information - Retrieval	
Temperature:	21.3 deg C
Dissolved Oxygen:	7.7 mg/l
Specific Conductance:	74 uS/cm
Velocity:	101 cm/s
pH:	6.93
Wetted Width:	27 m
Bankfull Width:	27 m
Depth:	60 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	0.04 mg/l	Total Phosphorus	0.021 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	8.6 mg/l	Total Dissolved Solids	72 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Canopy Open	Rolling Terrain
<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above Road Crossing	Boulder 20 %
	Main Stem	Gravel 40 %
		Rubble/Cobble 30 %
		Sand 10 %

Landcover Summary - 2004 Data

Total Area (ac)	89648	High Int. Dev. %	0.2	Water %	4.4	Non-vegetated %	0.3
Total Land (ac)	85854	Med Int. Dev. %	0.4	Wetland %	9.1	Tilled Agriculture %	2.4
		Low Int. Dev. %	3.2	Upland Woody %	79.5	Human Altered %	12.3
		Development %	3.9	Natural %	87.7	Impervious %	3.0

Sample Comments

8/4/08: WATER LEVEL VERY HIGH
7/7/08: FLOW METER NOT WORKING



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

Station Number: S-74 Waterbody: Sheepscot River - Station 74 Town: Whitefield
Log Number: 1706 Subsample Factor: X4 Replicates: 3 Calculated: 3/17/2009

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	0	PR		3.2
<i>Acroneuria abnormis</i>	09020209042121	13.33		0	PR	2.9	
<i>Acroneuria mela</i>	09020209042126	1.33			--	0.3	
<i>Attaneuria</i>	09020209043		1.33	1	--		0.3
<i>Attaneuria ruralis</i>	09020209043128	1.33			--	0.3	
<i>Perlesta</i>	09020209046	1.33	1.33	5	PR	0.3	0.3
<i>Boyeria</i>	09020301004		2.67	2	PR		0.6
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.6	
Baetidae	09020401	6.67			--	1.4	
<i>Baetis</i>	09020401001	13.33	30.21	4	CG	2.9	6.5
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.3	
<i>Baetis intercalaris</i>	09020401001008	6.67			--	1.4	
<i>Baetis pluto</i>	09020401001009	4.00			--	0.9	
<i>Heterocloeon</i>	09020401005		6.36	2	SC		1.4
<i>Heterocloeon curiosum</i>	09020401005020	5.33			--	1.2	
<i>Acerpenna</i>	09020401007		1.59	5	CG		0.3
<i>Acerpenna pygmaea</i>	09020401007011	1.33			--	0.3	
<i>Plauditus</i>	09020401012	2.67	3.18		CG	0.6	0.7
<i>Epeorus</i>	09020402009	1.33	1.33	0	CG	0.3	0.3
<i>Leucrocuta</i>	09020402011	5.33	5.33	1	SC	1.2	1.2
<i>Maccaffertium</i>	09020402015	4.00	5.33	4	SC	0.9	1.2
<i>Maccaffertium modestum</i>	09020402015051	1.33			--	0.3	
<i>Serratella</i>	09020410037		6.67	2	CG		1.4
<i>Serratella serrata</i>	09020410037123	2.67			CG	0.6	
<i>Serratella serratoides</i>	09020410037124	4.00			--	0.9	
<i>Tricorythodes</i>	09020411038	1.33	1.33	4	CG	0.3	0.3
<i>Neureclipsis</i>	09020603008	12.00	12.00	7	CF	2.6	2.6
Hydropsychidae	09020604	2.67			--	0.6	
<i>Cheumatopsyche</i>	09020604015	28.00	28.32	5	CF	6.1	6.1
<i>Hydropsyche</i>	09020604016	30.67	182.08	4	CF	6.6	39.4
<i>Hydropsyche bronta</i>	09020604016029	1.33			--	0.3	
<i>Hydropsyche morosa</i>	09020604016030	21.33			--	4.6	
<i>Hydropsyche sparna</i>	09020604016032	50.67			--	11.0	
<i>Hydropsyche depravata-complex</i>	09020604016041	2.67			CF	0.6	
<i>Hydropsyche scalaris-group</i>	09020604016048	73.33			--	15.9	
<i>Macrostemum</i>	09020604018		22.93	3	CF		5.0
<i>Macrostemum zebratum</i>	09020604018054	22.67			--	4.9	
<i>Hydroptila</i>	09020607026	2.67	2.67	6	P	0.6	0.6



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<i>Oxyethira</i>	09020607028	1.33	1.33	3	P	0.3	0.3
<i>Brachycentrus</i>	09020609043		13.33	0	CF		2.9
<i>Brachycentrus appalachia</i>	09020609043096	13.33			--	2.9	
<i>Micrasema</i>	09020609044		1.33	2	SH		0.3
<i>Micrasema wataga</i>	09020609044101	1.33			--	0.3	
<i>Lepidostoma</i>	09020611064	5.33	5.33	1	SH	1.2	1.2
<i>Helicopsyche</i>	09020616070		1.33	3	SC		0.3
<i>Helicopsyche borealis</i>	09020616070137	1.33			--	0.3	
<i>Cricotopus</i>	09021011037		1.33	7	SH		0.3
<i>Cricotopus cylindraceus</i>	09021011037058	1.33			--	0.3	
<i>Nanocladius</i>	09021011049		4.00	3	CG		0.9
<i>Nanocladius downesi</i>	09021011049092	4.00			--	0.9	
<i>Tvetenia</i>	09021011065		8.00	5	CG		1.7
<i>Tvetenia vitracies</i>	09021011065113	8.00			--	1.7	
<i>Rheotanytarsus</i>	09021011072	13.33	13.33	6	CF	2.9	2.9
<i>Stempellina</i>	09021011073		1.33	2	CG		0.3
<i>Stempellina johannsenii</i>	09021011073129	1.33			--	0.3	
<i>Polypedilum</i>	09021011102		1.33	6	SH		0.3
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.3	
<i>Simulium</i>	09021012047		48.00	4	CF		10.4
<i>Simulium fibrinflatum</i>	09021012047059	1.33			--	0.3	
<i>Simulium jenningsi</i>	09021012047060	30.67			--	6.6	
<i>Simulium jenningsi complex</i>	09021012047070	14.67			CF	3.2	
<i>Simulium venustum/verecundum complex</i>	09021012047072	1.33			CF	0.3	
<i>Dineutus</i>	09021104032	1.33	1.33	2	--	0.3	0.3
<i>Promoresia</i>	09021113069		1.33		--		0.3
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.3	
<i>Stenelmis</i>	09021113070	1.33	29.33	5	SC	0.3	6.3
<i>Stenelmis concinna</i>	09021113070054	28.00			--	6.1	
<i>Ferrissia</i>	10010204035		1.33		SC		0.3
<i>Ferrissia rivularis</i>	10010204035066	1.33			--	0.3	