



**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: 1629	Type of Sample: ROCK BASKET	Date Deployed: 7/10/2007
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/7/2007

Classification Attainment

Statutory Class: AA	Final Determination: A	Date: 5/2/2008
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 3/18/2009	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	0.87
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.13

Model Variables

01 Total Mean Abundance	1329.33	18 Relative Abundance Ephemeroptera	0.06
02 Generic Richness	42.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	20.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	78.67	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	3.95	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	55.32
06 Hilsenhoff Biotic Index	3.72	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	28.40
07 Relative Abundance - Chironomidae	0.29	28 EP Generic Richness/14	0.64
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	207.11		
11 <i>Cheumatopsyche</i> Abundance	25.36		
12 EPT Generic Richness/ Diptera Generic Richness	1.64		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	20.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	36.77		
17 Chironomini Abundance (Family Functional Group)	95.34		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Chimarra</i>	24.47
2	<i>Hydropsyche</i>	15.58
3	<i>Tvetenia</i>	13.22
4	<i>Polypedilum</i>	6.56
5	<i>Macrostemum</i>	5.88



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 18.1 deg C
Dissolved Oxygen: 10.2 mg/l
Specific Conductance: 80 uS/cm
Velocity: 53 cm/s
pH: 6.85
Wetted Width: 26 m
Bankfull Width: 28 m
Depth: 40 cm

Waterbody Information - Retrieval

Temperature: 20.8 deg C
Dissolved Oxygen: 7.3 mg/l
Specific Conductance: 89 uS/cm
Velocity: 69 cm/s
pH: 6.77
Wetted Width: 28 m
Bankfull Width: 28 m
Depth: 40 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.011 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	4.5 mg/l	Total Dissolved Solids	53 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

BASKET 3 PASSED THROUGH LARGE-MESH SIEVE



**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: 1629 Subsample Factor: X4 Replicates: 3 Calculated: 3/18/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Acroneuria</i>	09020209042	12.00	20.00	0	PR	0.9	1.5
<i>Acroneuria abnormis</i>	09020209042121	6.67		0	PR	0.5	
<i>Acroneuria lycorias</i>	09020209042125	1.33			--	0.1	
Baetidae	09020401	1.33			--	0.1	
<i>Baetis</i>	09020401001	1.33	4.33	4	CG	0.1	0.3
<i>Baetis intercalaris</i>	09020401001008	1.33			--	0.1	
<i>Baetis pluto</i>	09020401001009	1.33			--	0.1	
<i>Acerpenna</i>	09020401007	1.33	7.22	5	CG	0.1	0.5
<i>Acerpenna pygmaea</i>	09020401007011	5.33			--	0.4	
<i>Plauditus</i>	09020401012	5.33	5.78		CG	0.4	0.4
Heptageniidae	09020402	9.33			--	0.7	
<i>Epeorus</i>	09020402009	9.33	11.75	0	SC	0.7	0.9
<i>Leucrocuta</i>	09020402011	20.00	25.19	1	SC	1.5	1.9
<i>Maccaffertium</i>	09020402015	4.00	8.40	4	SC	0.3	0.6
<i>Maccaffertium mediopunctatum</i>	09020402015050	1.33			--	0.1	
<i>Maccaffertium modestum</i>	09020402015051	1.33			--	0.1	
<i>Isonychia</i>	09020404018	4.00	4.00	2	CF	0.3	0.3
<i>Serratella</i>	09020410037		12.00	2	CG		0.9
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	5.33			--	0.4	
<i>Serratella serratoides</i>	09020410037124	6.67			--	0.5	
Trichoptera	090206	1.33	1.33		--	0.1	0.1
Philopotamidae	09020601	10.67	10.67		--	0.8	0.8
<i>Chimarra</i>	09020601003	325.33	325.33	2	CF	24.5	24.5
Polycentropodidae	09020603	4.00			--	0.3	
<i>Neureclipsis</i>	09020603008	33.33	37.04	7	CF	2.5	2.8
<i>Nyctiophylax</i>	09020603009		1.48	5	PR		0.1
<i>Nyctiophylax celta</i>	09020603009012	1.33			--	0.1	
<i>Polycentropus</i>	09020603010	1.33	1.48	6	PR	0.1	0.1
Hydropsychidae	09020604	114.67			--	8.6	
<i>Cheumatopsyche</i>	09020604015	16.00	25.36	5	CF	1.2	1.9
<i>Hydropsyche</i>	09020604016	74.67	207.11	4	CF	5.6	15.6
<i>Hydropsyche morosa</i>	09020604016030	26.67			--	2.0	
<i>Hydropsyche sparna</i>	09020604016032	8.00			--	0.6	
<i>Hydropsyche depravata complex</i>	09020604016041	4.00			CF	0.3	
<i>Hydropsyche scalaris group</i>	09020604016048	17.33			--	1.3	
<i>Macrostemum</i>	09020604018		78.20	3	CF		5.9
<i>Macrostemum zebratum</i>	09020604018054	49.33			--	3.7	
<i>Hydroptila</i>	09020607026	36.00	36.00	6	P	2.7	2.7



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		Actual	Adjusted			Actual	Adjusted
<i>Brachycentrus</i>	09020609043		30.67	0	CF		2.3
<i>Brachycentrus appalachia</i>	09020609043096	30.67			--	2.3	
<i>Micrasema</i>	09020609044	2.67	9.33	2	SH	0.2	0.7
<i>Micrasema wataga</i>	09020609044101	6.67			--	0.5	
<i>Lepidostoma</i>	09020611064	17.33	17.33	1	SH	1.3	1.3
<i>Helicopsyche</i>	09020616070		8.00	3	SC		0.6
<i>Helicopsyche borealis</i>	09020616070137	8.00			--	0.6	
<i>Oecetis</i>	09020618078	4.00	4.00	8	PR	0.3	0.3
<i>Tipula</i>	09021001002	1.33	1.33	4	SH	0.1	0.1
Chironomidae	09021011	8.00			--	0.6	
<i>Nilotanyus</i>	09021011012		1.36	6	PR		0.1
<i>Nilotanyus fimbriatus</i>	09021011012027	1.33			--	0.1	
<i>Pentaneura</i>	09021011014		16.34	6	PR		1.2
<i>Pentaneura inconspicua</i>	09021011014028	16.00			--	1.2	
<i>Rheopelopia</i>	09021011017	1.33	19.07		PR	0.1	1.4
<i>Rheopelopia acra group</i>	09021011017036	17.33			--	1.3	
<i>Corynoneura</i>	09021011036	1.33	1.36	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		29.96	7	SH		2.3
<i>Cricotopus bicinctus</i>	09021011037057	12.00			--	0.9	
<i>Cricotopus fugax</i>	09021011037062	2.67			--	0.2	
<i>Cricotopus vierriensis</i>	09021011037071	14.67			--	1.1	
<i>Nanocladius</i>	09021011049		2.72	3	CG		0.2
<i>Nanocladius downesi</i>	09021011049092	2.67			--	0.2	
<i>Orthocladius</i>	09021011050		9.53	6	CG		0.7
<i>Orthocladius carlatus</i>	09021011050093	9.33			--	0.7	
<i>Rheocricotopus</i>	09021011057		5.45	6	CG		0.4
<i>Rheocricotopus robacki</i>	09021011057105	5.33			--	0.4	
<i>Tvetenia</i>	09021011065		175.70	5	CG		13.2
<i>Tvetenia vitracies</i>	09021011065113	170.67			--	12.8	
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.1	
<i>Rheotanytarsus</i>	09021011072	22.67	23.15	6	CF	1.7	1.7
<i>Microtendipes</i>	09021011094		8.17	6	CF		0.6
<i>Microtendipes rydalensis group</i>	09021011094168	8.00			--	0.6	
<i>Polypedilum</i>	09021011102		87.17	6	SH		6.6
<i>Polypedilum aviceps</i>	09021011102181	4.00			--	0.3	
<i>Polypedilum flavum</i>	09021011102182	81.33			--	6.1	
<i>Simulium</i>	09021012047		29.33	4	CF		2.2
<i>Simulium jenningsi</i>	09021012047060	2.67			--	0.2	



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<i>Simulium jenningsi complex</i>	09021012047070	26.67			CF	2.0	
<i>Dineutus</i>	09021104032	4.00	4.00	2	--	0.3	0.3
<i>Microcylloepus</i>	09021113066	4.00	4.00	3	--	0.3	0.3
<i>Promoresia</i>	09021113069		9.33		--		0.7
<i>Promoresia elegans</i>	09021113069051	5.33			--	0.4	
<i>Promoresia tardella</i>	09021113069052	4.00			--	0.3	
<i>Stenelmis</i>	09021113070	5.33	8.00	5	SC	0.4	0.6
<i>Stenelmis crenata</i>	09021113070055	2.67			--	0.2	
<i>Physa</i>	10010202026	1.33	1.33		SC	0.1	0.1