



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

Station Information

Station Number: S-74	River Basin: 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: 2252	Type of Sample: ROCK BASKET	Date Deployed: 7/8/2014
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/5/2014

Classification Attainment

Statutory Class: AA	Final Determination: A	Date: 11/6/2014
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 11/6/2014	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.28	Class A, B, or C	1.00
Class B	0.68	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.75
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.25

Model Variables

01 Total Mean Abundance	921.33	18 Relative Abundance Ephemeroptera	0.09
02 Generic Richness	31.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	9.33	21 Sum of Abundances: <i>Dicrotendipes</i> ,	0.00
04 Ephemeroptera Mean Abundance	85.33	<i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	
05 Shannon-Wiener Generic Diversity	2.75	23 Relative Generic Richness- Plecoptera	0.06
06 Hilsenhoff Biotic Index	3.96	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	2.70
07 Relative Abundance - Chironomidae	0.18	<i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	
08 Relative Generic Richness Diptera	0.19	26 Sum of Abundances: <i>Acroneuria</i> ,	12.13
09 <i>Hydropsyche</i> Abundance	218.62	<i>Maccaffertium</i> , <i>Stenonema</i>	
11 <i>Cheumatopsyche</i> Abundance	2.70	28 EP Generic Richness/14	0.71
12 EPT Generic Richness/ Diptera	3.67	30 Presence of Class A Indicator Taxa/7	0.43
Generic Richness			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Simulium</i>	41.39
2	<i>Hydropsyche</i>	23.73
3	<i>Rheotanytarsus</i>	10.71
4	<i>Tvetenia</i>	5.50
5	<i>Baetis</i>	3.59



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	22.4 deg C
Dissolved Oxygen:	7.9 mg/l
Specific Conductance:	41 uS/cm
Velocity:	
pH:	6.89
Wetted Width:	32 m
Bankfull Width:	32 m
Depth:	100 cm

Waterbody Information - Retrieval

Temperature:	22.8 deg C
Dissolved Oxygen:	7.9 mg/l
Specific Conductance:	47 uS/cm
Velocity:	76 cm/s
pH:	6.36
Wetted Width:	30 m
Bankfull Width:	32 m
Depth:	55 cm

Water Chemistry - 8/5/2014

Ammonia As Nitrogen	0.01 mg/l	Nitrate+nitrite As N	0.02 mg/l
Total Phosphorus	12 ug/l	Total Kjeldahl Nitrogen	0.3 mg/l
Total Suspended Solids	<2 mg/l	Dissolved Organic Carbon	5 mg/l
Total Dissolved Solids	52 mg/l	Orthophosphate As Phosphorus	2 ug/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

7/8/14--WATER LEVEL IS AS HIGH AS LEON HAS EVER SEEN IT. QUESTIONABLE VELOCITY METER READING.



**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: 2252

Subsample Factor: X4

Replicates: 3

Calculated: 11/6/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Acroneuria</i>	09020209042	2.67	8.00	0	PR	0.3	0.9
<i>Acroneuria abnormis</i>	09020209042121	5.33		0	PR	0.6	
<i>Perlesta</i>	09020209046	1.33	1.33	5	PR	0.1	0.1
<i>Boyeria</i>	09020301004		1.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.1	
Baetidae	09020401	2.67			--	0.3	
<i>Baetis</i>	09020401001	4.00	33.12	4	CG	0.4	3.6
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	18.67			--	2.0	
<i>Baetis pluto</i>	09020401001009	6.67			--	0.7	
<i>Heterocloeon</i>	09020401005	2.67	2.88	2	SC	0.3	0.3
Heptageniidae	09020402	1.33			--	0.1	
<i>Epeorus</i>	09020402009	21.33	28.93	0	SC	2.3	3.1
<i>Epeorus vitreus</i>	09020402009033	6.67			--	0.7	
<i>Leucrocuta</i>	09020402011	8.00	8.27	1	SC	0.9	0.9
<i>Maccaffertium</i>	09020402015	4.00	4.13	4	SC	0.4	0.4
<i>Isonychia</i>	09020404018	2.67	2.67	2	CF	0.3	0.3
Ephemerellidae	09020410	2.67	2.67		--	0.3	0.3
<i>Serratella</i>	09020410037		2.67	2	CG		0.3
<i>Serratella serratoides</i>	09020410037124	2.67			--	0.3	
<i>Chimarra</i>	09020601003	18.67	32.00	2	CF	2.0	3.5
<i>Chimarra obscura</i>	09020601003003	9.33			--	1.0	
<i>Chimarra socia</i>	09020601003004	4.00			--	0.4	
<i>Neureclipsis</i>	09020603008	1.33	1.33	7	CF	0.1	0.1
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.1	0.1
Hydropsychidae	09020604	2.67			--	0.3	
<i>Cheumatopsyche</i>	09020604015	2.67	2.70	5	CF	0.3	0.3
<i>Hydropsyche</i>	09020604016	45.33	218.62	4	CF	4.9	23.7
<i>Hydropsyche bronta</i>	09020604016029	1.33			--	0.1	
<i>Hydropsyche morosa</i>	09020604016030	68.00			--	7.4	
<i>Hydropsyche sparna</i>	09020604016032	100.00			--	10.9	
<i>Hydropsyche depravata species group</i>	09020604016041	1.33			CF	0.1	
<i>Macrostemum</i>	09020604018		1.35	3	CF		0.1
<i>Macrostemum zebratum</i>	09020604018054	1.33			--	0.1	
<i>Protoptila</i>	09020606022	1.33	1.33	1	SC	0.1	0.1
<i>Mayatrichia</i>	09020607033				SC		
<i>Brachycentrus</i>	09020609043		9.33	0	CF		1.0



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<i>Brachycentrus appalachia</i>	09020609043096	9.33			--	1.0	
<i>Micrasema</i>	09020609044		4.00	2	SH		0.4
<i>Micrasema wataga</i>	09020609044101	4.00			--	0.4	
Limnephilidae	09020610	1.33	1.33		--	0.1	0.1
<i>Lepidostoma</i>	09020611064	2.67	2.67	1	SH	0.3	0.3
<i>Helicopsyche</i>	09020616070		1.33	3	SC		0.1
<i>Helicopsyche borealis</i>	09020616070137	1.33			--	0.1	
<i>Cardiocladius</i>	09021011034		1.33	5	PR		0.1
<i>Cardiocladius obscurus</i>	09021011034053	1.33			--	0.1	
<i>Nanocladius</i>	09021011049		1.33	3	CG		0.1
<i>Nanocladius downesi</i>	09021011049092	1.33			--	0.1	
<i>Tvetenia</i>	09021011065		50.67	5	CG		5.5
<i>Tvetenia vitracies</i>	09021011065113	48.00			--	5.2	
<i>Tvetenia paucunca</i>	09021011065114	2.67			--	0.3	
<i>Rheotanytarsus</i>	09021011072		98.67	6	CF		10.7
<i>Rheotanytarsus exiguus</i>	09021011072127	54.67			CF	5.9	
<i>Rheotanytarsus pellucidus</i>	09021011072128	44.00			CF	4.8	
<i>Polypedilum</i>	09021011102		9.33	6	SH		1.0
<i>Polypedilum aviceps</i>	09021011102181	8.00			--	0.9	
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.1	
<i>Polypedilum ontario</i>	09021011102194				--		
<i>Simulium</i>	09021012047	52.00	381.33	4	CF	5.6	41.4
<i>Simulium fibrinflatum</i>	09021012047059	20.00			--	2.2	
<i>Simulium jenningsi</i>	09021012047060	17.33			--	1.9	
<i>Simulium tuberosum</i>	09021012047067	1.33			--	0.1	
<i>Simulium jenningsi species group</i>	09021012047070	290.67			CF	31.5	
Hydrobiidae	10010104	2.67	2.67		--	0.3	0.3
<i>Ferrissia</i>	10010204035		2.67		SC		0.3
<i>Ferrissia rivularis</i>	10010204035066	2.67			--	0.3	