



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

Station Information

Station Number: S-268
Waterbody: West Branch Sheepscot River - Station 268
Town: China
Directions: WEEKS MILLS - 100 FT UPSTREAM OF DIRIGO RD CROSSING
DEP Drainage: St. Croix - Coastal
HUC8: 01050003
HUC8 Name: St. George-Sheepscot
Latitude: 44 22 4.48 N
Longitude: 69 31 52.65 W
Stream Order: 3

Sample Information

Log Number: 2088
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/5/2012
Date Retrieved: 8/6/2012

Classification Attainment

Statutory Class: AA
Model Result with P>.6: A
Date Last Calculated: 12/3/2012
Final Determination: A
Reason for Determination: Model
Date: 12/4/2012
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.67	Class A, B, or C	1.00
Class B	0.33	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.79
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.21

Model Variables

01 Total Mean Abundance	382.33	18 Relative Abundance Ephemeroptera	0.35
02 Generic Richness	69.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	6.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.34
04 Ephemeroptera Mean Abundance	134.00	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	3.87	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	29.21
06 Hilsenhoff Biotic Index	5.00	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	39.27
07 Relative Abundance - Chironomidae	0.45	28 EP Generic Richness/14	0.71
08 Relative Generic Richness Diptera	0.38	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.67		
11 <i>Cheumatopsyche</i> Abundance	0.67		
12 EPT Generic Richness/ Diptera Generic Richness	0.88		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	6.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	11.35		
17 Chironomini Abundance (Family Functional Group)	103.87		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Microtendipes</i>	25.28
2	<i>Tricorythodes</i>	23.45
3	<i>Maccaffertium</i>	8.79
4	<i>Rheotanytarsus</i>	7.02
5	<i>Tanytarsus</i>	4.77



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	22.6 deg C
Dissolved Oxygen:	8.2 mg/l
Specific Conductance:	63 uS/cm
Velocity:	80 cm/s
pH:	7.49
Wetted Width:	5.4 m
Bankfull Width:	5.4 m
Depth:	55 cm

Waterbody Information - Retrieval

Temperature:	22.1 deg C
Dissolved Oxygen:	7.8 mg/l
Specific Conductance:	118 uS/cm
Velocity:	7 cm/s
pH:	7.41
Wetted Width:	4 m
Bankfull Width:	5.4 m
Depth:	20 cm

Water Chemistry - 8/6/2012

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	0.1 mg/l	Total Phosphorus	0.013 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	4.8 mg/l	Total Dissolved Solids	63 mg/l

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Pasture

Partly Open

Rolling

Swamp Hardwood

Upland Hardwood

Potential Stressor

Location

Substrate

Agricultural Runoff

Above Road Crossing

Boulder	30 %
Gravel	20 %
Rubble/Cobble	35 %
Sand	10 %
Silt	5 %

Landcover Summary - 2004 Data

Total Area (ac)	9414	High Int. Dev. %	0.1	Water %	3.6	Non-vegetated %	0.4
		Med Int. Dev. %	0.3	Wetland %	8.4	Tilled Agriculture %	2.6
		Low Int. Dev. %	3.9	Upland Woody %	74.9	Grassland %	5.8
		Development %	4.3	Natural %	82.6	Human Altered %	13.8
						Impervious %	3.3

Sample Comments

8/6/12: LOW WATER.

7/5/12: WATER LEVEL VERY HIGH.



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Replicates: 3

Calculated: 12/3/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
DugesIIDae	03010102	0.33	0.33		--	0.1	0.1
<i>Girardia</i>	03010102002		0.33		--		0.1
<i>Girardia tigrina</i>	03010102002001	0.33			--	0.1	
<i>Prostoma</i>	04010101001	1.00	1.00		--	0.3	0.3
<i>Nais</i>	08020202009		0.67		CG		0.2
<i>Nais behningi</i>	08020202009003	0.33			--	0.1	
<i>Nais communis</i>	08020202009005	0.33			--	0.1	
<i>Acroneuria</i>	09020209042	0.67	5.67	0	PR	0.2	1.5
<i>Acroneuria lycorias</i>	09020209042125	5.00			--	1.3	
<i>Perlesta</i>	09020209046	0.33	0.33	5	PR	0.1	0.1
<i>Boyeria</i>	09020301004		6.00	2	PR		1.6
<i>Boyeria vinosa</i>	09020301004012	6.00			--	1.6	
<i>Gomphus</i>	09020302012	0.67	0.67	5	PR	0.2	0.2
Calopterygidae	09020307	1.33	1.33		--	0.3	0.3
<i>Calopteryx</i>	09020307043	0.33	3.00	5	PR	0.1	0.8
<i>Calopteryx aequabilis</i>	09020307043085	0.33			--	0.1	
<i>Calopteryx maculata</i>	09020307043088	2.33			--	0.6	
<i>Acerpenna</i>	09020401007	0.33	1.33	5	CG	0.1	0.3
<i>Acerpenna pygmaea</i>	09020401007011	1.00			--	0.3	
<i>Procloeon</i>	09020401010	4.67	4.67		CG	1.2	1.2
Heptageniidae	09020402	0.67			--	0.2	
<i>Leucrocota</i>	09020402011	3.00	3.06	1	SC	0.8	0.8
<i>Stenacron</i>	09020402014	0.33	0.34	7	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	19.33	33.61	4	SC	5.1	8.8
<i>Maccaffertium luteum</i>	09020402015049	13.00			--	3.4	
<i>Maccaffertium modestum</i>	09020402015051	0.67			--	0.2	
Leptophlebiidae	09020406	0.67	0.67		--	0.2	0.2
<i>Ephemerella</i>	09020410035	0.67	0.67	1	CG	0.2	0.2
<i>Tricorythodes</i>	09020411038	89.67	89.67	4	CG	23.5	23.5
<i>Chimarra</i>	09020601003	0.33	0.33	2	CF	0.1	0.1
<i>Neureclipsis</i>	09020603008	0.67	0.67	7	CF	0.2	0.2
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.1	0.1
<i>Cheumatopsyche</i>	09020604015	0.67	0.67	5	CF	0.2	0.2
<i>Hydropsyche</i>	09020604016		0.67	4	CF		0.2
<i>Hydropsyche morosa</i>	09020604016030	0.67			--	0.2	
<i>Hydroptila</i>	09020607026	0.67	0.67	6	P	0.2	0.2
<i>Oxyethira</i>	09020607028	2.67	2.67	3	P	0.7	0.7
<i>Pycnopsyche</i>	09020610049	2.00	2.00	4	SH	0.5	0.5



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Replicates: 3

Calculated: 12/3/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Apatania</i>	09020610061	0.67	0.67		SC	0.2	0.2
<i>Lepidostoma</i>	09020611064	1.67	1.67	1	SH	0.4	0.4
<i>Helicopsyche</i>	09020616070		3.33	3	SC		0.9
<i>Helicopsyche borealis</i>	09020616070137	3.33			--	0.9	
Leptoceridae	09020618	1.33			--	0.3	
<i>Mystacides</i>	09020618075		0.38	4	CG		0.1
<i>Mystacides sepulchralis</i>	09020618075147	0.33			--	0.1	
<i>Oecetis</i>	09020618078	3.00	11.63	8	PR	0.8	3.0
<i>Oecetis avara</i>	09020618078153	2.00			--	0.5	
<i>Oecetis persimilis</i>	09020618078157	5.33			--	1.4	
<i>Nigronia</i>	09020701003		2.00	0	PR		0.5
<i>Nigronia serricornis</i>	09020701003003	2.00			--	0.5	
Chironomidae	09021011	5.33			--	1.4	
<i>Ablabesmyia</i>	09021011001		4.82	8	PR		1.3
<i>Ablabesmyia mallochii</i>	09021011001004	4.33			--	1.1	
<i>Ablabesmyia monilis</i>	09021011001009	0.33			--	0.1	
<i>Labrundinia</i>	09021011008		1.03	7	PR		0.3
<i>Labrundinia pilosella</i>	09021011008022	1.00			--	0.3	
<i>Paramerina</i>	09021011013	2.00	2.06		--	0.5	0.5
<i>Pentaneura</i>	09021011014		1.72	6	PR		0.4
<i>Pentaneura inconspicua</i>	09021011014028	1.67			--	0.4	
<i>Rheopelopia</i>	09021011017		1.38		PR		0.4
<i>Rheopelopia acra group</i>	09021011017036	1.33			--	0.3	
<i>Thienemannimyia</i>	09021011020		0.34	3	PR		0.1
<i>Thienemannimyia norena</i>	09021011020039	0.33			--	0.1	
<i>Pagastia</i>	09021011025		0.34	1	--		0.1
<i>Pagastia orthogonia</i>	09021011025001	0.33			--	0.1	
<i>Corynoneura</i>	09021011036	0.33	0.34	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		5.50	7	SH		1.4
<i>Cricotopus vierriensis</i>	09021011037071	5.33			--	1.4	
<i>Nanocladius</i>	09021011049		1.72	3	CG		0.4
<i>Nanocladius spiniplenus</i>	09021011049090	0.67			--	0.2	
<i>Nanocladius branchicolus</i>	09021011049091	0.67			--	0.2	
<i>Nanocladius downesi</i>	09021011049092	0.33			--	0.1	
<i>Parachaetocladius</i>	09021011051	0.33	0.34		CG	0.1	0.1
<i>Synorthocladius</i>	09021011061			2	CG		
<i>Thienemanniella</i>	09021011062	1.00	1.03	6	CG	0.3	0.3
<i>Tvetenia</i>	09021011065		0.34	5	CG		0.1



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		Actual	Adjusted			Actual	Adjusted
<i>Tvetenia vitracies</i>	09021011065113	0.33			--	0.1	
<i>Micropsectra</i>	09021011070	0.33	0.34	7	CG	0.1	0.1
<i>Paratanytarsus</i>	09021011071		1.72	6	--		0.4
<i>Paratanytarsus dissimilis</i>	09021011071125	1.67			--	0.4	
<i>Rheotanytarsus</i>	09021011072	26.00	26.83	6	CF	6.8	7.0
<i>Stempellinella</i>	09021011074		0.69	2	--		0.2
<i>Stempellinella fimbriata</i>	09021011074002	0.67			--	0.2	
<i>Tanytarsus</i>	09021011076	17.67	18.23	6	CF	4.6	4.8
<i>Microtendipes</i>	09021011094		96.65	6	CF		25.3
<i>Microtendipes pedellus group</i>	09021011094166	60.67			--	15.9	
<i>Microtendipes rydalensis group</i>	09021011094168	33.00			--	8.6	
<i>Nilothauma</i>	09021011095	1.00	1.03	2	--	0.3	0.3
<i>Paratendipes</i>	09021011100		0.34	8	CG		0.1
<i>Paratendipes albimanus group</i>	09021011100176	0.33			--	0.1	
<i>Phaenopsectra</i>	09021011101		2.41	7	SC		0.6
<i>Phaenopsectra flavipes</i>	09021011101179	2.33			SC	0.6	
<i>Polypedilum</i>	09021011102		3.44	6	SH		0.9
<i>Polypedilum aviceps</i>	09021011102181	2.00			--	0.5	
<i>Polypedilum illinoense group</i>	09021011102185	1.33			--	0.3	
<i>Xylotopus</i>	09021011117		0.34	2	--		0.1
<i>Xylotopus par</i>	09021011117001	0.33			--	0.1	
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Hemerodromia</i>	09021016057	2.67	2.67	3	PR	0.7	0.7
<i>Gyrinus</i>	09021104033	1.00	1.00	2	PR	0.3	0.3
<i>Psephenus</i>	09021108058		0.33	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	0.33			--	0.1	
<i>Ectopria</i>	09021109059		0.33	5	SC		0.1
<i>Ectopria nervosa</i>	09021109059029	0.33			--	0.1	
<i>Ancyronyx</i>	09021113063		1.00	6	--		0.3
<i>Ancyronyx variegatus</i>	09021113063034	1.00			CG	0.3	
<i>Dubiraphia</i>	09021113064		16.67	6	--		4.4
<i>Dubiraphia minima</i>	09021113064036	16.67			--	4.4	
<i>Macronychus</i>	09021113065		1.33	4	--		0.3
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.3	
<i>Optioservus</i>	09021113067	0.33	0.33	3	SC	0.1	0.1
<i>Promoresia</i>	09021113069		2.00		--		0.5
<i>Promoresia tardella</i>	09021113069052	2.00			--	0.5	
<i>Stenelmis</i>	09021113070	0.67	1.67	5	SC	0.2	0.4



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		Actual	Adjusted			Actual	Adjusted
<i>Stenelmis crenata</i>	09021113070055	1.00			--	0.3	
<i>Physa</i>	10010202026	0.33	0.33		SC	0.1	0.1
<i>Ferrissia</i>	10010204035		0.33		SC		0.1
<i>Ferrissia rivularis</i>	10010204035066	0.33			--	0.1	