



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: 2022
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/7/2011
Date Retrieved: 8/8/2011

Classification Attainment

Statutory Class: AA
Model Result with P>.6: A
Date Last Calculated: 1/17/2012
Final Determination: A
Reason for Determination: Model
Date: 1/25/2012
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.68	Class A, B, or C	1.00
Class B	0.32	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.99
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.01

Model Variables

01 Total Mean Abundance	586.67	18 Relative Abundance Ephemeroptera	0.24
02 Generic Richness	78.00	19 EPT Generic Richness	31.00
03 Plecoptera Mean Abundance	4.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.34
04 Ephemeroptera Mean Abundance	142.33	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	4.03	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	29.47
06 Hilsenhoff Biotic Index	5.03	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	45.29
07 Relative Abundance - Chironomidae	0.45	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.36	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	32.62		
11 <i>Cheumatopsyche</i> Abundance	22.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.11		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	3.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	3.40		
17 Chironomini Abundance (Family Functional Group)	54.01		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	33.35
2	<i>Tricorythodes</i>	12.27
3	<i>Maccaffertium</i>	7.15
4	<i>Hydropsyche</i>	5.56
5	<i>Polypedilum</i>	4.40



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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:	8.1 mg/l
Specific Conductance:	53 uS/cm
Velocity:	39 cm/s
pH:	6.86
Wetted Width:	5.4 m
Bankfull Width:	5.4 m
Depth:	47 cm

Waterbody Information - Retrieval

Temperature:	23.2 deg C
Dissolved Oxygen:	8.1 mg/l
Specific Conductance:	60 uS/cm
Velocity:	28 cm/s
pH:	
Wetted Width:	5.4 m
Bankfull Width:	5.4 m
Depth:	40 cm

Water Chemistry - 8/8/2011

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.03 mg/l	Total Phosphorus	0.012 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	4 mg/l	Total Dissolved Solids	46 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Pasture	Partly Open	Rolling

Swamp Hardwood
Upland Hardwood

<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	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

7/7/11: FISH, MUSSELS, EVIDENCE OF LAMPREYS OBSERVED.
MULTI-METER WOULD NOT MEASURE PH AT RETRIEVAL. 8/8/11: FISH OBSERVED. RAINED
LIGHTLY DURING SITE VISIT, RAINED DAY BEFORE RETRIEVAL (8/7/11).



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Station Number: S-268

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Log Number: 2022

Subsample Factor: X1

Replicates: 3

Calculated: 1/17/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		2.00		CG		0.3
<i>Nais behningi</i>	08020202009003	2.00			--	0.3	
<i>Paracapnia</i>	09020203018	0.67	0.67	1	SH	0.1	0.1
<i>Leuctra</i>	09020204020		0.67	0	SH		0.1
<i>Leuctra truncata</i>	09020204020058	0.67			--	0.1	
<i>Acroneuria</i>	09020209042	2.33	3.33	0	PR	0.4	0.6
<i>Acroneuria lycorias</i>	09020209042125	1.00			--	0.2	
<i>Boyeria</i>	09020301004		2.67	2	PR		0.5
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.5	
Gomphidae	09020302	1.00	1.00		--	0.2	0.2
<i>Gomphus</i>	09020302012	0.67	0.67	5	PR	0.1	0.1
<i>Macromia</i>	09020304021	0.33	0.33	2	PR	0.1	0.1
Corduliidae	09020305	1.67	1.67		--	0.3	0.3
Calopterygidae	09020307	15.00	15.00		--	2.6	2.6
<i>Calopteryx</i>	09020307043		1.33	5	PR		0.2
<i>Calopteryx maculata</i>	09020307043088	1.33			--	0.2	
<i>Argia</i>	09020309048	0.33	0.33	7	PR	0.1	0.1
Baetidae	09020401	0.33			--	0.1	
<i>Baetis</i>	09020401001	1.33	5.46	4	CG	0.2	0.9
<i>Baetis brunneicolor</i>	09020401001003	0.33			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	3.67			--	0.6	
<i>Acerpenna</i>	09020401007	0.33	4.10	5	CG	0.1	0.7
<i>Acerpenna macdunnoughi</i>	09020401007001	1.00			--	0.2	
<i>Acerpenna pygmaea</i>	09020401007011	2.67			--	0.5	
<i>Procloeon</i>	09020401010	1.00	1.02		CG	0.2	0.2
<i>Dipheter</i>	09020401013		2.39		--		0.4
<i>Dipheter hageni</i>	09020401013001	2.33			--	0.4	
<i>Iswaeon</i>	09020401015		1.02		--		0.2
<i>Iswaeon anoka</i>	09020401015001	1.00			--	0.2	
Heptageniidae	09020402	3.00			--	0.5	
<i>Leucrocota</i>	09020402011	5.67	6.04	1	SC	1.0	1.0
<i>Maccaffertium</i>	09020402015	25.67	41.96	4	SC	4.4	7.2
<i>Maccaffertium luteum</i>	09020402015049	13.67			--	2.3	
<i>Isonychia</i>	09020404018	2.00	2.00	2	CF	0.3	0.3
Leptophlebiidae	09020406	3.67	3.67		--	0.6	0.6
<i>Ephemerella</i>	09020410035	1.67	1.67	1	CG	0.3	0.3
<i>Serratella</i>	09020410037	0.67	0.67	2	CG	0.1	0.1
<i>Tricorythodes</i>	09020411038	72.00	72.00	4	CG	12.3	12.3



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Replicates: 3

Calculated: 1/17/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Caenis</i>	09020412040		0.33	7	CG		0.1
<i>Caenis macafferti</i>	09020412040132	0.33			--	0.1	
Trichoptera	090206	0.33	0.33		--	0.1	0.1
<i>Chimarra</i>	09020601003	0.33	0.33	2	CF	0.1	0.1
<i>Neureclipsis</i>	09020603008	1.00	1.00	7	CF	0.2	0.2
<i>Polycentropus</i>	09020603010	0.67	0.67	6	PR	0.1	0.1
Hydropsychidae	09020604	6.67			--	1.1	
<i>Cheumatopsyche</i>	09020604015	19.33	22.00	5	CF	3.3	3.8
<i>Hydropsyche</i>	09020604016	11.67	32.62	4	CF	2.0	5.6
<i>Hydropsyche morosa</i>	09020604016030	5.33			--	0.9	
<i>Hydropsyche sparna</i>	09020604016032	7.00			--	1.2	
<i>Hydropsyche depravata complex</i>	09020604016041	4.67			CF	0.8	
<i>Macrostemum</i>	09020604018		0.38	3	CF		0.1
<i>Macrostemum zebratum</i>	09020604018054	0.33			--	0.1	
<i>Glossosoma</i>	09020606020			0	SC		
<i>Hydroptila</i>	09020607026	0.67	0.67	6	P	0.1	0.1
<i>Oxyethira</i>	09020607028	1.00	1.00	3	P	0.2	0.2
<i>Brachycentrus</i>	09020609043		0.33	0	CF		0.1
<i>Brachycentrus appalachia</i>	09020609043096	0.33			--	0.1	
<i>Pycnopsyche</i>	09020610049	3.33	3.33	4	SH	0.6	0.6
<i>Molanna</i>	09020615069		0.67	6	SC		0.1
<i>Molanna blenda</i>	09020615069133	0.67			--	0.1	
<i>Helicopsyche</i>	09020616070		9.33	3	SC		1.6
<i>Helicopsyche borealis</i>	09020616070137	9.33			--	1.6	
Leptoceridae	09020618	0.33			--	0.1	
<i>Ceraclea</i>	09020618072	1.67	1.70	3	CG	0.3	0.3
<i>Mystacides</i>	09020618075		3.39	4	CG		0.6
<i>Mystacides sepulchralis</i>	09020618075147	3.33			--	0.6	
<i>Oecetis</i>	09020618078	0.67	14.25	8	PR	0.1	2.4
<i>Oecetis avara</i>	09020618078153	3.33			--	0.6	
<i>Oecetis inconspicua complex</i>	09020618078156	0.67			--	0.1	
<i>Oecetis persimilis</i>	09020618078157	9.33			--	1.6	
<i>Nigronia</i>	09020701003		5.33	0	PR		0.9
<i>Nigronia serricornis</i>	09020701003003	5.33			--	0.9	
Chironomidae	09021011	5.00			--	0.9	
<i>Ablabesmyia</i>	09021011001		1.36	8	PR		0.2
<i>Ablabesmyia mallochii</i>	09021011001004	1.33			--	0.2	
<i>Conchapelopia</i>	09021011004			6	PR		



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<i>Nilotanyus</i>	09021011012		0.68	6	PR		0.1
<i>Nilotanyus fimbriatus</i>	09021011012027	0.67			--	0.1	
<i>Paramerina</i>	09021011013	0.33	0.34		--	0.1	0.1
<i>Pentaneura</i>	09021011014		0.68	6	PR		0.1
<i>Pentaneura inconspicua</i>	09021011014028	0.67			--	0.1	
<i>Rheopelopia</i>	09021011017		0.34		PR		0.1
<i>Rheopelopia acra group</i>	09021011017036	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	0.67	0.68	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		2.72	7	SH		0.5
<i>Cricotopus bicinctus</i>	09021011037057	1.67			--	0.3	
<i>Cricotopus vierriensis</i>	09021011037071	1.00			--	0.2	
<i>Nanocladius</i>	09021011049	0.33	0.68	3	CG	0.1	0.1
<i>Nanocladius downesi</i>	09021011049092	0.33			--	0.1	
<i>Parametriocnemus</i>	09021011053	0.33	0.34	5	CG	0.1	0.1
<i>Thienemanniella</i>	09021011062	0.33	1.36	6	CG	0.1	0.2
<i>Thienemanniella xena</i>	09021011062110	0.67			--	0.1	
<i>Thienemanniella lobapodema</i>	09021011062114	0.33			--	0.1	
<i>Tvetenia</i>	09021011065		3.06	5	CG		0.5
<i>Tvetenia vitracies</i>	09021011065113	1.00			--	0.2	
<i>Tvetenia paucunca</i>	09021011065114	2.00			--	0.3	
<i>Micropsectra</i>	09021011070	0.33	0.34	7	CG	0.1	0.1
<i>Rheotanytarsus</i>	09021011072	192.00	195.67	6	CF	32.7	33.4
<i>Stempellina</i>	09021011073	0.67	0.68	2	CG	0.1	0.1
<i>Tanytarsus</i>	09021011076	3.33	3.40	6	CF	0.6	0.6
<i>Pseudochironomus</i>	09021011078	0.67	0.68	5	CG	0.1	0.1
<i>Lauterborniella</i>	09021011092		2.04		CG		0.3
<i>Lauterborniella agrayloides</i>	09021011092001	2.00			--	0.3	
<i>Microtendipes</i>	09021011094		22.42	6	CF		3.8
<i>Microtendipes pedellus group</i>	09021011094166	11.00			--	1.9	
<i>Microtendipes rydalensis group</i>	09021011094168	11.00			--	1.9	
<i>Nilothauma</i>	09021011095	0.33	0.34	2	--	0.1	0.1
<i>Paratendipes</i>	09021011100		0.34	8	CG		0.1
<i>Paratendipes albimanus group</i>	09021011100176	0.33			--	0.1	
<i>Phaenopsectra</i>	09021011101		1.02	7	SC		0.2
<i>Phaenopsectra obediens</i>	09021011101182	1.00			SC	0.2	
<i>Polypedilum</i>	09021011102		25.82	6	SH		4.4



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		Actual	Adjusted			Actual	Adjusted
<i>Polypedilum aviceps</i>	09021011102181	24.33			--	4.1	
<i>Polypedilum illinoense group</i>	09021011102185	1.00			--	0.2	
<i>Stenochironomus</i>	090210111105			5	CG		
<i>Tribelos</i>	090210111107		1.36	5	CG		0.2
<i>Tribelos jucundum</i>	090210111107198	1.33			--	0.2	
<i>Simulium</i>	09021012047	1.33	2.67	4	CF	0.2	0.5
<i>Simulium jenningsi complex</i>	09021012047070	0.67			CF	0.1	
<i>Simulium venustum/verecundum complex</i>	09021012047072	0.67			CF	0.1	
<i>Atherix</i>	09021015055	2.67	2.67	2	PR	0.5	0.5
<i>Hemerodromia</i>	09021016057	5.67	5.67	3	PR	1.0	1.0
<i>Neoplasta</i>	09021016064	0.33	0.33		PR	0.1	0.1
<i>Dineutus</i>	09021104032	0.33	0.33	2	--	0.1	0.1
<i>Psephenus</i>	09021108058		4.00	4	SC		0.7
<i>Psephenus herricki</i>	09021108058028	4.00			--	0.7	
Elmidae	09021113	0.33			--	0.1	
<i>Dubiraphia</i>	09021113064	21.67	21.89	6	--	3.7	3.7
<i>Macronychus</i>	09021113065		0.67	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	0.67			--	0.1	
<i>Promoresia</i>	09021113069		7.07		--		1.2
<i>Promoresia elegans</i>	09021113069051	2.67			--	0.5	
<i>Promoresia tardella</i>	09021113069052	4.33			--	0.7	
<i>Stenelmis</i>	09021113070	0.33	2.69	5	SC	0.1	0.5
<i>Stenelmis crenata</i>	09021113070055	2.33			--	0.4	
<i>Hydrozetes</i>	09030115001	0.33	0.33		--	0.1	0.1
<i>Clathrosperchon</i>	09030118001	0.33	0.33		--	0.1	0.1
<i>Ferrissia</i>	10010204035	1.67	2.00		SC	0.3	0.3
<i>Ferrissia rivularis</i>	10010204035066	0.33			--	0.1	