



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: 1918
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/7/2010
Date Retrieved: 8/10/2010

Classification Attainment

Statutory Class: AA
Model Result with P>.6: A
Date Last Calculated: 3/4/2011
Final Determination: A
Reason for Determination: Model
Date: 3/7/2011
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.76	Class A, B, or C	1.00
Class B	0.24	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	287.33	18 Relative Abundance Ephemeroptera	0.16
02 Generic Richness	71.00	19 EPT Generic Richness	28.00
03 Plecoptera Mean Abundance	7.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.35
04 Ephemeroptera Mean Abundance	47.33	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	4.72	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	49.98
06 Hilsenhoff Biotic Index	5.18	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	18.80
07 Relative Abundance - Chironomidae	0.47	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.35	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	1.33		
11 <i>Cheumatopsyche</i> Abundance	2.00		
12 EPT Generic Richness/ Diptera	1.12		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	5.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	2.76		
(Family Functional Group)			
17 Chironomini Abundance (Family	63.86		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Microtendipes</i>	18.38
2	<i>Tanytarsus</i>	14.42
3	<i>Dubiraphia</i>	5.92
4	<i>Oecetis</i>	5.68
5	<i>Tricorythodes</i>	5.34



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Date Retrieved: 8/10/2010

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 25.7 deg C
Dissolved Oxygen: 7.9 mg/l
Specific Conductance: 65 uS/cm
Velocity: 15 cm/s
pH:
Wetted Width: 5.4 m
Bankfull Width: 5.4 m
Depth: 30 cm

Waterbody Information - Retrieval

Temperature: 22.1 deg C
Dissolved Oxygen: 7.9 mg/l
Specific Conductance: 78 uS/cm
Velocity: 9 cm/s
pH: 7.19
Wetted Width: 5.4 m
Bankfull Width: 5.4 m
Depth: 30 cm

Water Chemistry - 8/10/2010

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	<1 ug/l
Nitrate+nitrite As N	0.05 mg/l	Total Phosphorus	0.01 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	3.6 mg/l	Total Dissolved Solids	53 mg/l

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Pasture

Partly Open

Rolling

Swamp Hardwood

Upland Hardwood

Potential Stressor

Location

Substrate

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

7/7/2010 MANY FISH PRESENT, NOT MUCH ALGAE.

8/10/2010 CONSIDERABLE AMOUNT OF IRON BACTERIA, NEW ROAD, MANY FISH.



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Replicates: 3

Calculated: 3/4/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		0.67		CG		0.2
<i>Nais behningi</i>	08020202009003	0.67			--	0.2	
<i>Placobdella</i>	08030101006		0.67		--		0.2
<i>Placobdella phalera</i>	08030101006006	0.67			--	0.2	
<i>Hyalella</i>	09010203006		0.33	8	CG		0.1
<i>Hyalella azteca</i>	09010203006011	0.33			--	0.1	
<i>Leuctra</i>	09020204020		2.33	0	SH		0.8
<i>Leuctra truncata</i>	09020204020058	2.33			--	0.8	
Perlidae	09020209	0.33	0.33		--	0.1	0.1
<i>Acroneuria</i>	09020209042		4.67	0	PR		1.6
<i>Acroneuria lycorias</i>	09020209042125	4.67			--	1.6	
<i>Boyeria</i>	09020301004		2.00	2	PR		0.7
<i>Boyeria vinosa</i>	09020301004012	2.00			--	0.7	
Gomphidae	09020302	3.67	3.67		--	1.3	1.3
<i>Gomphus</i>	09020302012	0.67	1.33	5	PR	0.2	0.5
<i>Gomphus adelphus</i>	09020302012028	0.67			--	0.2	
Corduliidae	09020305	5.00	5.00		--	1.7	1.7
Calopterygidae	09020307	2.33	2.33		--	0.8	0.8
<i>Calopteryx</i>	09020307043		3.33	5	PR		1.2
<i>Calopteryx maculata</i>	09020307043088	3.33			--	1.2	
<i>Baetis</i>	09020401001	0.33	0.67	4	CG	0.1	0.2
<i>Baetis flavistriga</i>	09020401001004	0.33			--	0.1	
<i>Centropetium</i>	09020401003	1.33	1.33	2	CG	0.5	0.5
<i>Acerpenna</i>	09020401007	0.67	2.00	5	CG	0.2	0.7
<i>Acerpenna pygmaea</i>	09020401007011	1.33			--	0.5	
<i>Procladius</i>	09020401010	3.67	3.67		CG	1.3	1.3
Heptageniidae	09020402	2.00			--	0.7	
<i>Epeorus</i>	09020402009	0.33	0.38	0	SC	0.1	0.1
<i>Leucrocuta</i>	09020402011	1.00	1.15	1	SC	0.3	0.4
<i>Maccaffertium</i>	09020402015	7.00	14.14	4	SC	2.4	4.9
<i>Maccaffertium luteum</i>	09020402015049	5.00			--	1.7	
<i>Maccaffertium modestum</i>	09020402015051	0.33			--	0.1	
Leptophlebiidae	09020406	4.67	4.67		--	1.6	1.6
<i>Ephemerella</i>	09020410035	3.33	3.33	1	CG	1.2	1.2
<i>Serratella</i>	09020410037	0.33	0.67	2	CG	0.1	0.2
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	0.33			--	0.1	
<i>Tricorythodes</i>	09020411038	15.33	15.33	4	CG	5.3	5.3
<i>Chimarra</i>	09020601003	3.33	3.33	2	CF	1.2	1.2



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Replicates: 3

Calculated: 3/4/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.5	0.5
<i>Cheumatopsyche</i>	09020604015	2.00	2.00	5	CF	0.7	0.7
<i>Hydropsyche</i>	09020604016	0.33	1.33	4	CF	0.1	0.5
<i>Hydropsyche sparna</i>	09020604016032	0.67			--	0.2	
<i>Hydropsyche depravata complex</i>	09020604016041	0.33			CF	0.1	
<i>Macrostemum</i>	09020604018		0.67	3	CF		0.2
<i>Macrostemum zebratum</i>	09020604018054	0.67			--	0.2	
<i>Hydroptila</i>	09020607026	3.33	3.33	6	P	1.2	1.2
<i>Oxyethira</i>	09020607028	4.33	4.33	3	P	1.5	1.5
<i>Brachycentrus</i>	09020609043		0.67	0	CF		0.2
<i>Brachycentrus appalachia</i>	09020609043096	0.67			--	0.2	
<i>Pycnopsyche</i>	09020610049	2.67	2.67	4	SH	0.9	0.9
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.1	0.1
<i>Helicopsyche</i>	09020616070		2.33	3	SC		0.8
<i>Helicopsyche borealis</i>	09020616070137	2.33			--	0.8	
Leptoceridae	09020618				--		
<i>Ceraclea</i>	09020618072	1.00	1.00	3	CG	0.3	0.3
<i>Mystacides</i>	09020618075		2.67	4	CG		0.9
<i>Mystacides sepulchralis</i>	09020618075147	2.67			--	0.9	
<i>Oecetis</i>	09020618078	2.33	16.33	8	PR	0.8	5.7
<i>Oecetis inconspicua complex</i>	09020618078156	2.67			--	0.9	
<i>Oecetis persimilis</i>	09020618078157	11.33			--	3.9	
<i>Nigronia</i>	09020701003		0.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.1	
Chironomidae	09021011	4.67			--	1.6	
<i>Ablabesmyia</i>	09021011001	1.33	1.38	8	PR	0.5	0.5
<i>Labrundinia</i>	09021011008		0.35	7	PR		0.1
<i>Labrundinia pilosella</i>	09021011008022	0.33			--	0.1	
<i>Nilotanytus</i>	09021011012		0.35	6	PR		0.1
<i>Nilotanytus fimbriatus</i>	09021011012027	0.33			--	0.1	
<i>Paramerina</i>	09021011013	0.33	0.35		--	0.1	0.1
<i>Rheopelopia</i>	09021011017	0.33	0.35		PR	0.1	0.1
<i>Brillia</i>	09021011033		0.35	5	SH		0.1
<i>Brillia flavifrons</i>	09021011033049	0.33			--	0.1	
<i>Corynoneura</i>	09021011036	0.33	0.35	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037	3.67	5.18	7	SH	1.3	1.8
<i>Cricotopus vierriensis</i>	09021011037071	1.33			--	0.5	
<i>Nanocladius</i>	09021011049		1.38	3	CG		0.5



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		Actual	Adjusted			Actual	Adjusted
<i>Nanocladius branchicollis</i>	09021011049091	1.33			--	0.5	
<i>Parakiefferiella</i>	09021011052	0.67	0.69		CG	0.2	0.2
<i>Psectrocladius</i>	09021011056		2.42	8	CG		0.8
<i>Psectrocladius simulans</i>	09021011056110	2.33			--	0.8	
<i>Rheocricotopus</i>	09021011057		0.35	6	CG		0.1
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.1	
<i>Micropsectra</i>	09021011070	0.33	0.35	7	CG	0.1	0.1
<i>Paratanytarsus</i>	09021011071	1.33	1.38	6	--	0.5	0.5
<i>Rheotanytarsus</i>	09021011072	11.00	11.39	6	CF	3.8	4.0
<i>Stempellina</i>	09021011073	2.33	2.42	2	CG	0.8	0.8
<i>Stempellinella</i>	09021011074		1.38	2	--		0.5
<i>Stempellinella fimbriata</i>	09021011074002	1.33			--	0.5	
<i>Tanytarsus</i>	09021011076	40.00	41.42	6	CF	13.9	14.4
<i>Lauterborniella</i>	09021011092		2.76		CG		1.0
<i>Lauterborniella agrayloides</i>	09021011092001	2.67			--	0.9	
<i>Microtendipes</i>	09021011094		52.82	6	CF		18.4
<i>Microtendipes pedellus group</i>	09021011094166	38.33			--	13.3	
<i>Microtendipes rydalensis group</i>	09021011094168	12.67			--	4.4	
<i>Nilothauma</i>	09021011095	3.00	3.11	2	--	1.0	1.1
<i>Phaenopsectra</i>	09021011101		3.80	7	SC		1.3
<i>Phaenopsectra obediens</i>	09021011101182	3.67			SC	1.3	
<i>Polypedilum</i>	09021011102		1.38	6	SH		0.5
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.5	
<i>Simulium</i>	09021012047		0.33	4	CF		0.1
<i>Simulium jenningsi complex</i>	09021012047070	0.33			CF	0.1	
<i>Hemerodromia</i>	09021016057	0.67	0.67	3	PR	0.2	0.2
<i>Gyrinus</i>	09021104033	0.33	0.33	2	PR	0.1	0.1
<i>Psephenus</i>	09021108058		0.67	4	SC		0.2
<i>Psephenus herricki</i>	09021108058028	0.67			--	0.2	
<i>Ectopria</i>	09021109059		0.67	5	SC		0.2
<i>Ectopria nervosa</i>	09021109059029	0.67			--	0.2	
<i>Dubiraphia</i>	09021113064	17.00	17.00	6	--	5.9	5.9
<i>Macronychus</i>	09021113065		1.33	4	--		0.5
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.5	
<i>Promoresia</i>	09021113069		1.33		--		0.5
<i>Promoresia elegans</i>	09021113069051	0.67			--	0.2	
<i>Promoresia tardella</i>	09021113069052	0.67			--	0.2	
<i>Stenelmis</i>	09021113070	2.00	12.33	5	SC	0.7	4.3



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		Actual	Adjusted			Actual	Adjusted
<i>Stenelmis crenata</i>	09021113070055	10.33			--	3.6	
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.1	0.1