



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

Station Information

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

Sample Information

Log Number: 1707	Type of Sample: ROCK BAG	Date Deployed: 7/7/2008
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/4/2008

Classification Attainment

Statutory Class: AA	Final Determination: B	Date: 3/24/2009
Model Result with P>.6: B	Reason for Determination: Model	
Date Last Calculated: 3/17/2009	Comments: 34% probability Class A.	

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.44	Class C	0.03	Class A, B, or C	1.00
Class B	0.53	NA	0.00	Non-Attainment	0.00
<u>B or Better Model</u>				<u>A Model</u>	
Class A or B			1.00	Class A	0.34
Class C or Non-Attainment			0.00	Class B or C or Non-Attainment	0.66

Model Variables

01 Total Mean Abundance	518.67	18 Relative Abundance Ephemeroptera	0.26
02 Generic Richness	46.00	19 EPT Generic Richness	15.00
03 Plecoptera Mean Abundance	6.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	136.00	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	4.20	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	61.83
06 Hilsenhoff Biotic Index	4.69	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	33.44
07 Relative Abundance - Chironomidae	0.38	28 EP Generic Richness/14	0.71
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	59.68		
11 <i>Cheumatopsyche</i> Abundance	48.32		
12 EPT Generic Richness/ Diptera Generic Richness	0.88		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	5.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	9.46		
17 Chironomini Abundance (Family Functional Group)	54.07		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	21.11
2	<i>Hydropsyche</i>	11.51
3	<i>Cheumatopsyche</i>	9.32
4	<i>Polypedilum</i>	9.12
5	<i>Tricorythodes</i>	7.46



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Town: China

Date Deployed: 7/7/2008

Log Number: 1707

Waterbody: West Branch Sheepscot River - Station 2

Date Retrieved: 8/4/2008

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 22 deg C
Dissolved Oxygen: 8.5 mg/l
Specific Conductance: 19.8 uS/cm
Velocity: 20 cm/s
pH:
Wetted Width: 6.5 m
Bankfull Width: 6.5 m
Depth: 26 cm

Waterbody Information - Retrieval

Temperature: 21.4 deg C
Dissolved Oxygen: 8.6 mg/l
Specific Conductance: 63 uS/cm
Velocity: 52 cm/s
pH: 7.25
Wetted Width: 6.5 m
Bankfull Width: 6.5 m
Depth: 38 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.03 mg/l	Total Phosphorus	0.013 mg/l
Total Kjeldahl Nitrogen	0.5 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	8.7 mg/l	Total Dissolved Solids	51 mg/l

Summary of Habitat Characteristics

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

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above Road Crossing	Boulder 10 %
		Gravel 20 %
		Rubble/Cobble 60 %
		Sand 10 %

Landcover Summary - 2004 Data

Total Area (ac)	9414	High Int. Dev. %	0.1	Water %	3.8	Non-vegetated %	0.4
Total Land (ac)	9070	Med Int. Dev. %	0.3	Wetland %	8.7	Tilled Agriculture %	2.7
		Low Int. Dev. %	4.1	Upland Woody %	77.7	Human Altered %	14.3
		Development %	4.5	Natural %	85.7	Impervious %	3.3

Sample Comments

8/4/08: VERY HIGH WATER LEVELS



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Aquatic Life Taxonomic Inventory Report

Station Number: S-268

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Log Number: 1707

Subsample Factor: X4

Replicates: 3

Calculated: 3/17/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002	2.67	2.67		--	0.5	0.5
<i>Nais</i>	08020202009		1.33		CG		0.3
<i>Nais behningi</i>	08020202009003	1.33			--	0.3	
<i>Leuctra</i>	09020204020		1.33	0	SH		0.3
<i>Leuctra truncata</i>	09020204020058	1.33			--	0.3	
<i>Acroneuria</i>	09020209042		5.33	0	PR		1.0
<i>Acroneuria lycorias</i>	09020209042125	5.33			--	1.0	
<i>Basiaeschna</i>	09020301003		1.33	6	PR		0.3
<i>Basiaeschna janata</i>	09020301003010	1.33			--	0.3	
<i>Boyeria</i>	09020301004		5.33	2	PR		1.0
<i>Boyeria grafiana</i>	09020301004011	2.67			--	0.5	
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.5	
<i>Neurocordulia</i>	09020305026	1.33	1.33	2	PR	0.3	0.3
<i>Calopteryx</i>	09020307043	5.33	5.33	5	PR	1.0	1.0
<i>Argia</i>	09020309048	1.33	1.33	7	PR	0.3	0.3
Baetidae	09020401	2.67			--	0.5	
<i>Baetis</i>	09020401001	2.67	7.25	4	CG	0.5	1.4
<i>Baetis intercalaris</i>	09020401001008	4.00			--	0.8	
<i>Acerpenna</i>	09020401007	8.00	26.09	5	CG	1.5	5.0
<i>Acerpenna macdunnoughi</i>	09020401007001	16.00			--	3.1	
Heptageniidae	09020402	2.67			--	0.5	
<i>Leucrocuta</i>	09020402011	22.67	23.89	1	SC	4.4	4.6
<i>Maccaffertium</i>	09020402015	22.67	28.11	4	SC	4.4	5.4
<i>Maccaffertium luteum</i>	09020402015049	4.00			--	0.8	
<i>Isonychia</i>	09020404018	4.00	4.00	2	CF	0.8	0.8
<i>Ephemerella</i>	09020410035	6.67	6.67	1	CG	1.3	1.3
<i>Tricorythodes</i>	09020411038	38.67	38.67	4	CG	7.5	7.5
<i>Caenis</i>	09020412040	1.33	1.33	7	CG	0.3	0.3
<i>Chimarra</i>	09020601003	4.00	4.00	2	CF	0.8	0.8
Hydropsychidae	09020604	6.67			--	1.3	
<i>Cheumatopsyche</i>	09020604015	45.33	48.32	5	CF	8.7	9.3
<i>Hydropsyche</i>	09020604016	25.33	59.68	4	CF	4.9	11.5
<i>Hydropsyche morosa</i>	09020604016030	6.67			--	1.3	
<i>Hydropsyche sparna</i>	09020604016032	4.00			--	0.8	
<i>Hydropsyche depravata-complex</i>	09020604016041	20.00			CF	3.9	
<i>Pycnopsyche</i>	09020610049	4.00	4.00	4	SH	0.8	0.8
<i>Oecetis</i>	09020618078		5.33	8	PR		1.0
<i>Oecetis avara</i>	09020618078153	1.33			--	0.3	



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Replicates: 3

Calculated: 3/17/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Oecetis persimilis</i>	09020618078157	4.00			--	0.8	
<i>Nigronia</i>	09020701003		2.67	0	PR		0.5
<i>Nigronia serricornis</i>	09020701003003	2.67			--	0.5	
Chironomidae	09021011	2.67			--	0.5	
<i>Ablabesmyia</i>	09021011001		1.35	8	PR		0.3
<i>Ablabesmyia monilis</i>	09021011001009	1.33			--	0.3	
<i>Conchapelopia</i>	09021011004	2.67	2.70	6	PR	0.5	0.5
<i>Paramerina</i>	09021011013	1.33	1.35		--	0.3	0.3
<i>Rheopelopia</i>	09021011017	1.33	4.06		PR	0.3	0.8
<i>Rheopelopia acra-grp.</i>	09021011017036	2.67			--	0.5	
<i>Potthastia</i>	09021011026		1.35	2	CG		0.3
<i>Potthastia gaedii</i>	09021011026045	1.33			--	0.3	
<i>Cricotopus</i>	09021011037	1.33	12.17	7	SH	0.3	2.3
<i>Cricotopus bicinctus</i>	09021011037057	5.33			--	1.0	
<i>Cricotopus vierriensis</i>	09021011037071	5.33			--	1.0	
<i>Nanocladius</i>	09021011049		1.35	3	CG		0.3
<i>Nanocladius downesi</i>	09021011049092	1.33			--	0.3	
<i>Parametriocnemus</i>	09021011053	1.33	1.35	5	CG	0.3	0.3
<i>Synorthocladius</i>	09021011061	1.33	1.35	2	CG	0.3	0.3
<i>Tvetenia</i>	09021011065		4.06	5	CG		0.8
<i>Tvetenia paucunca</i>	09021011065114	4.00			--	0.8	
<i>Rheotanytarsus</i>	09021011072	108.00	109.50	6	CF	20.8	21.1
<i>Lauterborniella agrayloides</i>	09021011092001				--		
<i>Microtendipes</i>	09021011094		5.41	6	CF		1.0
<i>Microtendipes pedellus-grp.</i>	09021011094166	2.67			--	0.5	
<i>Microtendipes rydalensis-grp.</i>	09021011094168	2.67			--	0.5	
<i>Phaenopsectra</i>	09021011101		1.35	7	SC		0.3
<i>Phaenopsectra obediens</i>	09021011101182	1.33			SC	0.3	
<i>Polypedilum</i>	09021011102		47.31	6	SH		9.1
<i>Polypedilum aviceps</i>	09021011102181	46.67			--	9.0	
<i>Simulium</i>	09021012047		8.00	4	CF		1.5
<i>Simulium jenningsi</i>	09021012047060	2.67			--	0.5	
<i>Simulium jenningsi complex</i>	09021012047070	5.33			CF	1.0	
<i>Atherix</i>	09021015055	2.67	2.67	2	PR	0.5	0.5
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.3	0.3
<i>Psephenus</i>	09021108058		2.67	4	SC		0.5
<i>Psephenus herricki</i>	09021108058028	2.67			--	0.5	
<i>Dubiraphia</i>	09021113064	6.67	6.67	6	CG	1.3	1.3



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<i>Macronychus</i>	09021113065		1.33	4	--		0.3
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.3	
<i>Promoresia</i>	09021113069		4.00		--		0.8
<i>Promoresia elegans</i>	09021113069051	4.00			--	0.8	
<i>Stenelmis</i>	09021113070	1.33	10.67	5	SC	0.3	2.1
<i>Stenelmis crenata</i>	09021113070055	9.33			--	1.8	
<i>Clathrosperchon</i>	09030118001	1.33	1.33		--	0.3	0.3