



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

Station Information

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

Sample Information

Log Number:	2254	Type of Sample:	ROCK BAG	Date Deployed:	7/8/2014
Subsample Factor:	X4	Replicates:	3	Date Retrieved:	8/5/2014

Classification Attainment

Statutory Class:	AA	Final Determination:	A	Date:	11/4/2014
Model Result with $P \geq 0.6$:	A	Reason for Determination:	Model		
Date Last Calculated:	11/3/2014	Comments:			

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.83	Class A, B, or C	1.00
Class B	0.17	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	497.33	18 Relative Abundance Ephemeroptera	0.29
02 Generic Richness	61.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	10.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	146.67	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.53	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	11.29
06 Hilsenhoff Biotic Index	3.95	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	29.33
07 Relative Abundance - Chironomidae	0.19	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.36	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	133.20		
11 <i>Cheumatopsyche</i> Abundance	2.80		
12 EPT Generic Richness/ Diptera Generic Richness	1.00		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	9.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	14.14		
17 Chironomini Abundance (Family Functional Group)	19.80		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	26.78
2	<i>Baetis</i>	9.65
3	<i>Tricorythodes</i>	6.97
4	<i>Rheotanytarsus</i>	6.26
5	<i>Maccaffertium</i>	4.29



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Station Number: S-268	Town: China	Date Deployed: 7/8/2014
Log Number: 2254	Waterbody: West Branch Sheepscot River - Station 268	Date Retrieved: 8/5/2014

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	22.9 deg C
Dissolved Oxygen:	8.1 mg/l
Specific Conductance:	64 uS/cm
Velocity:	
pH:	6.75
Wetted Width:	5.4 m
Bankfull Width:	5.4 m
Depth:	65 cm

Waterbody Information - Retrieval

Temperature:	22.5 deg C
Dissolved Oxygen:	8.2 mg/l
Specific Conductance:	69 uS/cm
Velocity:	51 cm/s
pH:	7.03
Wetted Width:	
Bankfull Width:	5.4 m
Depth:	45 cm

Water Chemistry - 8/5/2014

Ammonia As Nitrogen	0.01 mg/l	Nitrate+nitrite As N	0.02 mg/l
Total Phosphorus	11 ug/l	Total Kjeldahl Nitrogen	0.3 mg/l
Total Suspended Solids	<2 mg/l	Dissolved Organic Carbon	4.4 mg/l
Total Dissolved Solids	60 mg/l	Orthophosphate As Phosphorus	2 ug/l

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Pasture
Swamp Hardwood
Upland Hardwood

Partly Open

Rolling

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

7/8/14-- WATER LEVEL VERY HIGH. QUESTIONABLE VELOCITY METER READING.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-268

Waterbody: West Branch Sheepscot River - Station 268 Town: China

Log Number: 2254

Subsample Factor: X4

Replicates: 3

Calculated: 11/3/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Dugesidae	03010102	1.33	1.33		--	0.3	0.3
<i>Nais</i>	08020202009		6.67		CG		1.3
<i>Nais behningi</i>	08020202009003	6.67			--	1.3	
<i>Leuctra</i>	09020204020		1.33	0	SH		0.3
<i>Leuctra truncata</i>	09020204020058	1.33			--	0.3	
<i>Acroneuria</i>	09020209042	4.00	8.00	0	PR	0.8	1.6
<i>Acroneuria lycorias</i>	09020209042125	4.00			--	0.8	
<i>Perlesta</i>	09020209046	1.33	1.33	5	PR	0.3	0.3
<i>Boyeria</i>	09020301004	5.33	6.67	2	PR	1.1	1.3
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.3	
Gomphidae	09020302	1.33	1.33		--	0.3	0.3
<i>Gomphus</i>	09020302012		1.33	5	PR		0.3
<i>Gomphus descriptus</i>	09020302012023	1.33		5	PR	0.3	
Calopterygidae	09020307	2.67	2.67		--	0.5	0.5
<i>Baetis</i>	09020401001	4.00	48.00	4	CG	0.8	9.7
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.3	
<i>Baetis intercalaris</i>	09020401001008	13.33			--	2.7	
<i>Baetis pluto</i>	09020401001009	29.33			--	5.9	
<i>Acerpenna</i>	09020401007	4.00	6.67	5	CG	0.8	1.3
<i>Acerpenna pygmaea</i>	09020401007011	2.67			--	0.5	
<i>Epeorus</i>	09020402009	4.00	4.00	0	SC	0.8	0.8
<i>Leucrocuta</i>	09020402011	8.00	8.00	1	SC	1.6	1.6
<i>Maccaffertium</i>	09020402015	20.00	21.33	4	SC	4.0	4.3
<i>Maccaffertium mediopunctatum</i>	09020402015050	1.33			--	0.3	
<i>Isonychia</i>	09020404018	5.33	5.33	2	CF	1.1	1.1
Leptophlebiidae	09020406	9.33	9.33		--	1.9	1.9
<i>Ephemerella</i>	09020410035	2.67	2.67	1	CG	0.5	0.5
<i>Serratella</i>	09020410037		5.33	2	CG		1.1
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	1.33			--	0.3	
<i>Serratella serratoides</i>	09020410037124	4.00			--	0.8	
<i>Tricorythodes</i>	09020411038	34.67	34.67	4	CG	7.0	7.0
<i>Caenis</i>	09020412040		1.33	7	CG		0.3
<i>Caenis macafferti</i>	09020412040132	1.33			--	0.3	
<i>Chimarra</i>	09020601003	13.33	13.33	2	CF	2.7	2.7
Hydropsychidae	09020604	6.67			--	1.3	
<i>Cheumatopsyche</i>	09020604015	2.67	2.80	5	CF	0.5	0.6
<i>Hydropsyche</i>	09020604016	65.33	133.20	4	CF	13.1	26.8
<i>Hydropsyche bronta</i>	09020604016029	1.33			--	0.3	



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Waterbody: West Branch Sheepscot River - Station 268 Town: China

Log Number: 2254

Subsample Factor: X4

Replicates: 3

Calculated: 11/3/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche morosa</i>	09020604016030	5.33			--	1.1	
<i>Hydropsyche sparna</i>	09020604016032	54.67			--	11.0	
<i>Glossosoma</i>	09020606020		5.33	0	SC		1.1
<i>Glossosoma nigrior</i>	09020606020068	5.33			SC	1.1	
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.3	0.3
<i>Mayatrichia</i>	09020607033	1.33	1.33		SC	0.3	0.3
<i>Pycnopsyche</i>	09020610049	2.67	2.67	4	SH	0.5	0.5
<i>Oecetis</i>	09020618078		1.33	8	PR		0.3
<i>Oecetis persimilis</i>	09020618078157	1.33			--	0.3	
<i>Nigronia</i>	09020701003		6.67	0	PR		1.3
<i>Nigronia serricornis</i>	09020701003003	6.67			--	1.3	
Chironomidae	09021011	5.33			--	1.1	
<i>Ablabesmyia</i>	09021011001		4.24	8	PR		0.9
<i>Ablabesmyia mallochi</i>	09021011001004	2.67			--	0.5	
<i>Ablabesmyia monilis</i>	09021011001009	1.33			--	0.3	
<i>Rheopelopia</i>	09021011017	6.67	9.90		PR	1.3	2.0
<i>Rheopelopia acra group</i>	09021011017036	2.67			--	0.5	
<i>Corynoneura</i>	09021011036	2.67	2.83	7	CG	0.5	0.6
<i>Cricotopus</i>	09021011037		2.83	7	SH		0.6
<i>Cricotopus bicinctus</i>	09021011037057	1.33			--	0.3	
<i>Cricotopus vierriensis</i>	09021011037071	1.33			--	0.3	
<i>Nanocladius</i>	09021011049		1.41	3	CG		0.3
<i>Nanocladius downesi</i>	09021011049092	1.33			--	0.3	
<i>Orthocladius</i>	09021011050	1.33	1.41	6	CG	0.3	0.3
<i>Rheocricotopus</i>	09021011057		5.66	6	CG		1.1
<i>Rheocricotopus robacki</i>	09021011057105	5.33			--	1.1	
<i>Synorthocladius</i>	09021011061	1.33	1.41	2	CG	0.3	0.3
<i>Thienemanniella</i>	09021011062	1.33	1.41	6	CG	0.3	0.3
<i>Tvetenia</i>	09021011065		9.90	5	CG		2.0
<i>Tvetenia vitracies</i>	09021011065113	1.33			--	0.3	
<i>Tvetenia paucunca</i>	09021011065114	8.00			--	1.6	
<i>Rheotanytarsus</i>	09021011072		31.11	6	CF		6.3
<i>Rheotanytarsus exiguus</i>	09021011072127	26.67			CF	5.4	
<i>Rheotanytarsus pellucidus</i>	09021011072128	2.67			CF	0.5	
<i>Tanytarsus</i>	09021011076	1.33	1.41	6	CF	0.3	0.3
<i>Lauterborniella</i>	09021011092		1.41		CG		0.3
<i>Lauterborniella agrayloides</i>	09021011092001	1.33			--	0.3	
<i>Microtendipes</i>	09021011094		2.83	6	CF		0.6



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		Actual	Adjusted			Actual	Adjusted
<i>Microtendipes pedellus group</i>	09021011094166	2.67			--	0.5	
<i>Nilothauma</i>	09021011095	1.33	1.41	2	--	0.3	0.3
<i>Polypedilum</i>	09021011102		12.73	6	SH		2.6
<i>Polypedilum aviceps</i>	09021011102181	8.00			--	1.6	
<i>Polypedilum fallax group</i>	09021011102183	4.00			--	0.8	
<i>Stenochironomus</i>	09021011105	1.33	1.41	5	CG	0.3	0.3
<i>Simulium</i>	09021012047	2.67	16.00	4	CF	0.5	3.2
<i>Simulium jenningsi</i>	09021012047060	1.33			--	0.3	
<i>Simulium tuberosum</i>	09021012047067	1.33			--	0.3	
<i>Simulium jenningsi species group</i>	09021012047070	8.00			CF	1.6	
<i>Simulium venustum/verecundum complex</i>	09021012047072	2.67			CF	0.5	
<i>Atherix</i>	09021015055	4.00	4.00	2	PR	0.8	0.8
<i>Hemerodromia</i>	09021016057	2.67	2.67	3	PR	0.5	0.5
<i>Roederiodes</i>	09021016058	1.33	1.33	3	PR	0.3	0.3
<i>Neoplasta</i>	09021016064	2.67	2.67		PR	0.5	0.5
<i>Psephenus</i>	09021108058		5.33	4	SC		1.1
<i>Psephenus herricki</i>	09021108058028	5.33			--	1.1	
<i>Ectopria</i>	09021109059	1.33	1.33	5	SC	0.3	0.3
Elmidae	09021113	2.67			--	0.5	
<i>Dubiraphia</i>	09021113064		1.56	6	--		0.3
<i>Dubiraphia minima</i>	09021113064036	1.33			--	0.3	
<i>Macronychus</i>	09021113065		1.56	4	--		0.3
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.3	
<i>Optioservus</i>	09021113067		1.56	3	SC		0.3
<i>Optioservus ovalis</i>	09021113067046	1.33			--	0.3	
<i>Promoresia</i>	09021113069		6.22		--		1.3
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.3	
<i>Promoresia tardella</i>	09021113069052	4.00			--	0.8	
<i>Stenelmis</i>	09021113070	4.00	7.78	5	SC	0.8	1.6
<i>Stenelmis concinna</i>	09021113070054	1.33			--	0.3	
<i>Stenelmis crenata</i>	09021113070055	1.33			--	0.3	
Acariformes	090301	1.33	1.33		--	0.3	0.3
Hydrobiidae	10010104	1.33	1.33		--	0.3	0.3
<i>Pisidium</i>	10020201002	4.00	4.00		CF	0.8	0.8