



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

**Station Information**

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

<b>Log Number: 2182</b>	Type of Sample: ROCK BAG	Date Deployed: 7/8/2013
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/5/2013

**Classification Attainment**

<b>Statutory Class: AA</b>	<b>Final Determination: A</b>	Date: 1/30/2014
Model Result with P>.6: A	<b>Reason for Determination: Model</b>	
Date Last Calculated: 1/27/2014	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.51	Class A, B, or C	1.00
Class B	0.48	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.87
Class A or B	1.00	Class B or C or Non-Attainment	0.13
Class C or Non-Attainment	0.00		

**Model Variables**

01 Total Mean Abundance	509.33	18 Relative Abundance Ephemeroptera	0.34
02 Generic Richness	49.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	9.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	172.00	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	4.00	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	22.65
06 Hilsenhoff Biotic Index	4.64	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	35.84
07 Relative Abundance - Chironomidae	0.41	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.31	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	38.84		
11 <i>Cheumatopsyche</i> Abundance	14.39		
12 EPT Generic Richness/ Diptera Generic Richness	1.53		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	9.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	9.64		
17 Chironomini Abundance (Family Functional Group)	37.20		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	26.51
2	<i>Baetis</i>	16.72
3	<i>Hydropsyche</i>	7.63
4	<i>Polypedilum</i>	7.03
5	<i>Tricorythodes</i>	6.54



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature:	22.3 deg C
Dissolved Oxygen:	8.4 mg/l
Specific Conductance:	63 uS/cm
Velocity:	44.8 cm/s
pH:	6.94
Wetted Width:	5.4 m
Bankfull Width:	5.4 m
Depth:	42 cm

**Waterbody Information - Retrieval**

Temperature:	20.6 deg C
Dissolved Oxygen:	8.5 mg/l
Specific Conductance:	58 uS/cm
Velocity:	72.5 cm/s
pH:	6.82
Wetted Width:	5.4 m
Bankfull Width:	5.4 m
Depth:	45 cm

**Water Chemistry - 8/5/2013**

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.012 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	4.3 mg/l	Total Dissolved Solids	64 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**

7/8/13-HIGH WATER LEVELS

8/5/2013- WATER LEVEL STILL HIGH, FISH OBSERVED



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

**Log Number: 2182**

Subsample Factor: X4

Replicates: 3

Calculated: 1/27/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		1.33		CG		0.3
<i>Nais behningi</i>	08020202009003	1.33			--	0.3	
<i>Placobdella</i>	08030101006		2.67		--		0.5
<i>Placobdella papillifera</i>	08030101006003	2.67			--	0.5	
Perlidae	09020209	1.33			--	0.3	
<i>Acroneuria</i>	09020209042	1.33	7.78	0	PR	0.3	1.5
<i>Acroneuria lycorias</i>	09020209042125	5.33			--	1.0	
<i>Perlesta</i>	09020209046	1.33	1.56	5	PR	0.3	0.3
<i>Boyeria</i>	09020301004		5.33	2	PR		1.0
<i>Boyeria grafiana</i>	09020301004011	1.33			--	0.3	
<i>Boyeria vinosa</i>	09020301004012	4.00			--	0.8	
Calopterygidae	09020307	1.33	1.33		--	0.3	0.3
Baetidae	09020401	1.33			--	0.3	
<i>Baetis</i>	09020401001	20.00	85.18	4	CG	3.9	16.7
<i>Baetis flavistriga</i>	09020401001004	2.67			--	0.5	
<i>Baetis intercalaris</i>	09020401001008	28.00			--	5.5	
<i>Baetis pluto</i>	09020401001009	33.33			--	6.5	
<i>Acerpenna</i>	09020401007		1.35	5	CG		0.3
<i>Acerpenna pygmaea</i>	09020401007011	1.33			--	0.3	
<i>Acentrella</i>	09020401008	1.33	1.35	3	CG	0.3	0.3
<i>Diphedor</i>	09020401013		6.76		--		1.3
<i>Diphedor hageni</i>	09020401013001	6.67			--	1.3	
<i>Iswaeon</i>	09020401015	1.33	1.35		--	0.3	0.3
Heptageniidae	09020402	6.67			--	1.3	
<i>Epeorus</i>	09020402009	5.33	6.60	0	SC	1.0	1.3
<i>Maccaffertium</i>	09020402015	18.67	28.06	4	SC	3.7	5.5
<i>Maccaffertium luteum</i>	09020402015049	4.00			--	0.8	
<i>Isonychia</i>	09020404018	1.33	1.33	2	CF	0.3	0.3
Leptophlebiidae	09020406	4.00	4.00		--	0.8	0.8
Ephemerellidae	09020410	1.33	1.33		--	0.3	0.3
<i>Serratella</i>	09020410037		1.33	2	CG		0.3
<i>Serratella serratooides</i>	09020410037124	1.33			--	0.3	
<i>Tricorythodes</i>	09020411038	33.33	33.33	4	CG	6.5	6.5
<i>Chimarra</i>	09020601003	6.67	6.67	2	CF	1.3	1.3
<i>Neureclipsis</i>	09020603008	2.67	2.67	7	CF	0.5	0.5
Hydropsychidae	09020604	4.00			--	0.8	
<i>Cheumatopsyche</i>	09020604015	13.33	14.39	5	CF	2.6	2.8
<i>Hydropsyche</i>	09020604016	13.33	38.84	4	CF	2.6	7.6



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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	1.33			--	0.3	
<i>Hydropsyche sparna</i>	09020604016032	12.00			--	2.4	
<i>Hydropsyche depravata complex</i>	09020604016041	9.33			CF	1.8	
<i>Macrostemum</i>	09020604018		1.44	3	CF		0.3
<i>Macrostemum zebratum</i>	09020604018054	1.33			--	0.3	
<i>Glossosoma</i>	09020606020		1.33	0	SC		0.3
<i>Glossosoma nigrior</i>	09020606020068	1.33			SC	0.3	
<i>Pycnopsyche</i>	09020610049	1.33	1.33	4	SH	0.3	0.3
<i>Helicopsyche</i>	09020616070		1.33	3	SC		0.3
<i>Helicopsyche borealis</i>	09020616070137	1.33			--	0.3	
<i>Oecetis</i>	09020618078	1.33	1.33	8	PR	0.3	0.3
<i>Nigronia</i>	09020701003		4.00	0	PR		0.8
<i>Nigronia serricornis</i>	09020701003003	4.00			--	0.8	
Chironomidae	09021011	6.67			--	1.3	
<i>Conchapelopia</i>	09021011004	1.33	1.38	6	PR	0.3	0.3
<i>Rheopelopia</i>	09021011017	4.00	8.27		PR	0.8	1.6
<i>Rheopelopia acra group</i>	09021011017036	4.00			--	0.8	
<i>Corynoneura</i>	09021011036	1.33	1.38	7	CG	0.3	0.3
<i>Cricotopus</i>	09021011037	1.33	5.51	7	SH	0.3	1.1
<i>Cricotopus bicinctus</i>	09021011037057	2.67			--	0.5	
<i>Cricotopus vierriensis</i>	09021011037071	1.33			--	0.3	
<i>Nanocladius</i>	09021011049	1.33	2.76	3	CG	0.3	0.5
<i>Nanocladius downesi</i>	09021011049092	1.33			--	0.3	
<i>Parametriocnemus</i>	09021011053	1.33	1.38	5	CG	0.3	0.3
<i>Rheocricotopus</i>	09021011057		2.76	6	CG		0.5
<i>Rheocricotopus robacki</i>	09021011057105	2.67			--	0.5	
<i>Tvetenia</i>	09021011065		8.27	5	CG		1.6
<i>Tvetenia paucunca</i>	09021011065114	8.00			--	1.6	
<i>Rheotanytarsus</i>	09021011072	130.67	135.02	6	CF	25.7	26.5
<i>Tanytarsus</i>	09021011076	2.67	2.76	6	CF	0.5	0.5
<i>Polypedilum</i>	09021011102		35.82	6	SH		7.0
<i>Polypedilum aviceps</i>	09021011102181	33.33			--	6.5	
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.3	
<i>Stenochironomus</i>	09021011105	1.33	1.38	5	CG	0.3	0.3
<i>Simulium</i>	09021012047	4.00	12.00	4	CF	0.8	2.4
<i>Simulium vittatum</i>	09021012047064	1.33			--	0.3	
<i>Simulium tuberosum</i>	09021012047067	5.33			--	1.0	



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		Actual	Adjusted			Actual	Adjusted
<i>Simulium venustum/verecundum</i> <i>complex</i>	09021012047072	1.33			CF	0.3	
<i>Atherix</i>	09021015055	5.33	5.33	2	PR	1.0	1.0
<i>Hemerodromia</i>	09021016057	2.67	2.67	3	PR	0.5	0.5
<i>Dubiraphia</i>	09021113064	1.33	6.67	6	--	0.3	1.3
<i>Dubiraphia quadrinotata</i>	09021113064037	5.33			--	1.0	
<i>Macronychus</i>	09021113065		2.67	4	--		0.5
<i>Macronychus glabratus</i>	09021113065040	2.67			--	0.5	
<i>Promoresia</i>	09021113069		2.67		--		0.5
<i>Promoresia tardella</i>	09021113069052	2.67			--	0.5	
<i>Stenelmis</i>	09021113070	1.33	2.67	5	SC	0.3	0.5
<i>Stenelmis crenata</i>	09021113070055	1.33			--	0.3	
<i>Ferrissia</i>	10010204035	1.33	1.33		SC	0.3	0.3
Sphaeriidae	10020201	1.33	1.33		CF	0.3	0.3