



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

Station Information

Station Number: S-550	River Basin:	Maine Coastal
Waterbody: West Branch Sheepscot River - Station 550	HUC8 Name:	St. George-Sheepscot
Town: Whitefield	Latitude:	44 14 36.42 N
Directions: BELOW HOWE ROAD	Longitude:	69 34 30.98 W
	Stream Order:	3

Sample Information

Log Number: 2642	Type of Sample:	ROCK BAG	Date Deployed:	7/9/2018
Subsample Factor: X4	Replicates:	3	Date Retrieved:	8/6/2018

Classification Attainment

Statutory Class: AA	Final Determination: A	Date:	10/24/2018
Model Result with $P \geq 0.6$: A	Reason for Determination: Model		
Date Last Calculated: 10/23/2018	Comments:		

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.60	Class C	0.01
Class B	0.40	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.95
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.05

Model Variables

01 Total Mean Abundance	788.00	18 Relative Abundance Ephemeroptera	0.37
02 Generic Richness	48.00	19 EPT Generic Richness	20.00
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	290.67	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	3.70	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	33.69
06 Hilsenhoff Biotic Index	4.10	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	30.67
07 Relative Abundance - Chironomidae	0.10	28 EP Generic Richness/14	0.71
08 Relative Generic Richness Diptera	0.31	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	4.00		
11 <i>Cheumatopsyche</i> Abundance	22.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.33		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	6.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	11.03		
17 Chironomini Abundance (Family Functional Group)	38.60		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Acerpenna</i>	30.29
2	<i>Helicopsyche</i>	23.01
3	<i>Brachycentrus</i>	6.26
4	<i>Polycentropus</i>	3.65
5	<i>Microtendipes</i>	3.32



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Station Number: S-550 Town: Whitefield Date Deployed: 7/9/2018
Log Number: 2642 Waterbody: West Branch Sheepscot River - Station 550 Date Retrieved: 8/6/2018

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 23.6 deg C
Dissolved Oxygen: 8.77 mg/l
Dissolved Oxygen Saturation: 101.7 %
Specific Conductance: 135.1 uS/cm
Velocity: 21.336 cm/s
pH: 7.67
Wetted Width: 19 m
Bankfull Width: 19 m
Depth: 36 cm

Waterbody Information - Retrieval

Temperature: 24 deg C
Dissolved Oxygen: 9.42 mg/l
Dissolved Oxygen Saturation: 110.3 %
Specific Conductance: 174.1 uS/cm
Velocity: 18.288 cm/s
pH: 7.76
Wetted Width: 15 m
Bankfull Width: 19 m
Depth: 33 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Open	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nps Pollution	Below Road Crossing	Bedrock	45 %
		Boulder	25 %
		Gravel	10 %
		Rubble/Cobble	20 %

Landcover Summary - 2004 Data

Total Area (ac)	32348	High Int. Dev. %	0.5	Water %	1.6	Non-vegetated %	0.3
		Med Int. Dev. %	0.7	Wetland %	6.3	Tilled Agriculture %	3.1
		Low Int. Dev. %	4.3	Upland Woody %	74.1	Grassland %	9.0
		Development %	5.4	Natural %	79.7	Human Altered %	18.7
						Impervious %	4.2

Sample Comments



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-550 Waterbody: West Branch Sheepscot River - Station 550 Town: Whitefield
Log Number: 2642 Subsample Factor: X4 Replicates: 3 Calculated: 10/23/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Hydridae	02010101	1.33	1.33		--	0.2	0.2
<i>Acroneuria</i>	09020209042	1.33	6.67	0	PR	0.2	0.8
<i>Acroneuria abnormis</i>	09020209042121	5.33		0	PR	0.7	
<i>Boyeria</i>	09020301004		1.33	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.2	
Gomphidae	09020302	5.33	5.33		--	0.7	0.7
Coenagrionidae	09020309	4.00	4.00		--	0.5	0.5
<i>Baetis</i>	09020401001		1.33	4	CG		0.2
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.2	
<i>Acerpenna</i>	09020401007		238.67	5	CG		30.3
<i>Acerpenna pygmaea</i>	09020401007011	238.67			--	30.3	
<i>Plauditus</i>	09020401012	2.67	2.67		CG	0.3	0.3
<i>Dipheter</i>	09020401013		1.33		--		0.2
<i>Dipheter hageni</i>	09020401013001	1.33			--	0.2	
<i>Leucrocuta</i>	09020402011	14.67	14.67	1	SC	1.9	1.9
<i>Maccaffertium</i>	09020402015	10.67	24.00	4	SC	1.4	3.0
<i>Maccaffertium modestum</i>	09020402015051	4.00			--	0.5	
<i>Maccaffertium vicarium</i>	09020402015055	9.33			--	1.2	
<i>Serratella</i>	09020410037		1.33	2	CG		0.2
<i>Serratella serratoides</i>	09020410037124	1.33			--	0.2	
<i>Tricorythodes</i>	09020411038	5.33	5.33	4	CG	0.7	0.7
<i>Caenis</i>	09020412040	1.33	1.33	7	CG	0.2	0.2
Polycentropodidae	09020603	1.33			--	0.2	
<i>Neureclipsis</i>	09020603008	18.67	19.19	7	CF	2.4	2.4
<i>Nyctiophylax</i>	09020603009	1.33	1.37	5	PR	0.2	0.2
<i>Polycentropus</i>	09020603010	28.00	28.78	6	PR	3.6	3.7
<i>Cheumatopsyche</i>	09020604015	22.67	22.67	5	CF	2.9	2.9
<i>Hydropsyche</i>	09020604016	4.00	4.00	4	CF	0.5	0.5
<i>Brachycentrus</i>	09020609043		49.33	0	CF		6.3
<i>Brachycentrus appalachia</i>	09020609043096	49.33			--	6.3	
<i>Micrasema</i>	09020609044	6.67	6.67	2	SH	0.8	0.8
<i>Lepidostoma</i>	09020611064	1.33	1.33	1	SH	0.2	0.2
<i>Helicopsyche</i>	09020616070		181.33	3	SC		23.0
<i>Helicopsyche borealis</i>	09020616070137	181.33			--	23.0	
<i>Oecetis</i>	09020618078		2.67	8	PR		0.3
<i>Oecetis avara</i>	09020618078153	2.67			--	0.3	
Chironomidae	09021011	2.67			--	0.3	



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		Actual	Adjusted			Actual	Adjusted
<i>Ablabesmyia</i>	09021011001	1.33	1.38	8	PR	0.2	0.2
<i>Labrundinia</i>	09021011008	1.33	1.38	7	PR	0.2	0.2
<i>Pentaneura</i>	09021011014	6.67	6.89	6	PR	0.8	0.9
<i>Thienemannimyia</i>	09021011020		1.38	3	PR		0.2
<i>Thienemannimyia group</i>	09021011020041	1.33			--	0.2	
<i>Nanocladius</i>	09021011049	1.33	1.38	3	CG	0.2	0.2
<i>Rheotanytarsus</i>	09021011072		15.16	6	CF		1.9
<i>Rheotanytarsus exiguus group</i>	09021011072127	12.00			CF	1.5	
<i>Rheotanytarsus pellucidus</i>	09021011072128	2.67			CF	0.3	
<i>Stempellina</i>	09021011073	2.67	2.76	2	CG	0.3	0.3
<i>Stempellinella</i>	09021011074	2.67	2.76	2	--	0.3	0.3
<i>Tanytarsus</i>	09021011076	9.33	9.65	6	CF	1.2	1.2
<i>Lauterborniella</i>	09021011092	5.33	5.51		CG	0.7	0.7
<i>Microtendipes</i>	09021011094		26.19	6	CF		3.3
<i>Microtendipes pedellus group</i>	09021011094166	4.00			--	0.5	
<i>Microtendipes rydalensis group</i>	09021011094168	21.33			--	2.7	
<i>Nilothauma</i>	09021011095	1.33	1.38	2	--	0.2	0.2
<i>Phaenopsectra</i>	09021011101	1.33	1.38	7	SC	0.2	0.2
<i>Polypedilum</i>	09021011102		2.76	6	SH		0.3
<i>Polypedilum flavum</i>	09021011102182	2.67			--	0.3	
<i>Xenochironomus</i>	09021011108		1.38	0	PR		0.2
<i>Xenochironomus xenolabis</i>	09021011108200	1.33			--	0.2	
<i>Dineutus</i>	09021104032	4.00	4.00	2	--	0.5	0.5
<i>Psephenus</i>	09021108058		5.33	4	SC		0.7
<i>Psephenus herricki</i>	09021108058028	5.33			--	0.7	
<i>Dubiraphia</i>	09021113064	12.00	12.00	6	--	1.5	1.5
<i>Promoesia</i>	09021113069		18.67		--		2.4
<i>Promoesia elegans</i>	09021113069051	14.67			--	1.9	
<i>Promoesia tardella</i>	09021113069052	4.00			--	0.5	
<i>Stenelmis</i>	09021113070	22.67	22.67	5	SC	2.9	2.9
<i>Sperchonopsis</i>	09030107002	1.33	1.33		--	0.2	0.2
<i>Amnicola</i>	10010104013	13.33	13.33		SC	1.7	1.7
Physidae	10010202	1.33	1.33		SC	0.2	0.2
<i>Helisoma</i>	10010203030		1.33		SC		0.2
<i>Helisoma anceps</i>	10010203030058	1.33			--	0.2	