



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

Station Information

Station Number: S-1177	River Basin: Penobscot
Waterbody: East Branch Seboeis Stream - Station 1177	HUC8 Name: Piscataquis
Town: Cedar Lake Township	Latitude: 45 30 14.0 N
Directions: DOWNSTREAM OF EAST BRANCH LAKE (EBLO1)	Longitude: 68 43 40.68 W
	Stream Order: 2

Sample Information

Log Number: 2797	Type of Sample: ROCK BAG	Date Deployed: 7/2/2018
Subsample Factor: X1	Replicates: 3	Date Retrieved: 7/31/2018

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 4/6/2020
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 4/6/2020	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.72	Class A, B, or C	1.00
Class B	0.27	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.99
Class A or B	1.00	Class B or C or Non-Attainment	0.01
Class C or Non-Attainment	0.00		

Model Variables

01 Total Mean Abundance	298.00	18 Relative Abundance Ephemeroptera	0.08
02 Generic Richness	49.00	19 EPT Generic Richness	21.00
03 Plecoptera Mean Abundance	17.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	23.33	23 Relative Generic Richness- Plecoptera	0.06
05 Shannon-Wiener Generic Diversity	3.99	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	69.66
06 Hilsenhoff Biotic Index	4.42	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	22.38
07 Relative Abundance - Chironomidae	0.27	28 EP Generic Richness/14	0.71
08 Relative Generic Richness Diptera	0.31	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	24.99		
11 <i>Cheumatopsyche</i> Abundance	69.33		
12 EPT Generic Richness/ Diptera Generic Richness	1.40		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	16.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	4.67		
17 Chironomini Abundance (Family Functional Group)	63.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Cheumatopsyche</i>	23.26
2	<i>Microtendipes</i>	11.41
3	<i>Polypedilum</i>	9.84
4	<i>Hydropsyche</i>	8.38
5	<i>Chimarra</i>	7.05



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Sample Collection and Processing Information

Sampling Organization: PENOBSCOT INDIAN NATION Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 24.1 deg C
Dissolved Oxygen: 8.12 mg/l
Dissolved Oxygen Saturation: 96.6 %
Specific Conductance: 20 uS/cm
Velocity:
pH: 6.61
Wetted Width: 4.5 m
Bankfull Width: 6 m
Depth: 30 cm

Waterbody Information - Retrieval

Temperature: 24.6 deg C
Dissolved Oxygen: 7.9 mg/l
Dissolved Oxygen Saturation: 95 %
Specific Conductance: 16.7 uS/cm
Velocity:
pH: 6.61
Wetted Width: 4.5 m
Bankfull Width: 6 m
Depth: 30 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Conifer	Partly Open	Hilly	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Lake Outlet	Below Road Crossing	Bedrock	0 %
Nps Pollution	Lake Outlet	Boulder	10 %
		Clay	0 %
		Detritus	0 %
		Gravel	20 %
		Muck	0 %
		Rubble/Cobble	60 %
		Sand	5 %
		Silt	5 %

Landcover Summary - 2004 Data

Sample Comments

BAGS SET 23.3 METERS DOWN STREAM FROM BRIDGE, SET MID CHANNEL



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Log Number: 2797 Subsample Factor: X1 Replicates: 3 Calculated: 4/6/2020

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Platyhelminthes	03	0.33	0.33		--	0.1	0.1
<i>Leuctra</i>	09020204020		0.33	0	SH		0.1
<i>Leuctra truncata</i>	09020204020058	0.33			--	0.1	
<i>Acroneuria</i>	09020209042	13.33	16.33	0	PR	4.5	5.5
<i>Acroneuria abnormis</i>	09020209042121	0.33		0	PR	0.1	
<i>Acroneuria internata</i>	09020209042124	2.67			--	0.9	
<i>Paragnetina</i>	09020209049		0.33	1	PR		0.1
<i>Paragnetina media</i>	09020209049151	0.33			--	0.1	
<i>Boyeria</i>	09020301004		2.33	2	PR		0.8
<i>Boyeria vinosa</i>	09020301004012	2.33			--	0.8	
Gomphidae	09020302	0.33	0.33		--	0.1	0.1
<i>Hagenius</i>	09020302008		0.33	1	PR		0.1
<i>Hagenius brevistylus</i>	09020302008015	0.33			PR	0.1	
Corduliidae	09020305	0.67	0.67		--	0.2	0.2
<i>Argia</i>	09020309048	1.67	3.00	7	PR	0.6	1.0
<i>Argia moesta</i>	09020309048096	1.33			--	0.4	
<i>Baetis</i>	09020401001		3.33	4	CG		1.1
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.4	
<i>Baetis pluto</i>	09020401001009	1.67			--	0.6	
<i>Baetis tricaudatus</i>	09020401001012	0.33			--	0.1	
Heptageniidae	09020402	0.67			--	0.2	
<i>Epeorus</i>	09020402009	4.33	4.62	0	SC	1.5	1.6
<i>Maccaffertium</i>	09020402015	5.00	6.04	4	SC	1.7	2.0
<i>Maccaffertium luteum</i>	09020402015049	0.33			--	0.1	
<i>Maccaffertium modestum</i>	09020402015051	0.33			--	0.1	
<i>Isonychia</i>	09020404018	4.00	4.00	2	CF	1.3	1.3
Leptophlebiidae	09020406	2.00	2.00		--	0.7	0.7
<i>Paraleptophlebia</i>	09020406026	1.67	2.00	1	CG	0.6	0.7
<i>Paraleptophlebia debilis</i>	09020406026079	0.33		1	CG	0.1	
<i>Serratella</i>	09020410037		1.33	2	CG		0.4
<i>Serratella serratoides</i>	09020410037124	1.33			--	0.4	
<i>Chimarra</i>	09020601003	1.00	21.00	2	CF	0.3	7.0
<i>Chimarra aterrima</i>	09020601003002	19.33			--	6.5	
<i>Chimarra obscura</i>	09020601003003	0.67			--	0.2	
<i>Cernotina</i>	09020603006	0.33	0.33		PR	0.1	0.1
<i>Neureclipsis</i>	09020603008	20.00	20.00	7	CF	6.7	6.7
Hydropsychidae	09020604	5.33			--	1.8	



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		Actual	Adjusted			Actual	Adjusted
<i>Cheumatopsyche</i>	09020604015	65.67	69.33	5	CF	22.0	23.3
<i>Hydropsyche</i>	09020604016	5.33	24.99	4	CF	1.8	8.4
<i>Hydropsyche bronta</i>	09020604016029	10.00			--	3.4	
<i>Hydropsyche morosa</i>	09020604016030	3.00			--	1.0	
<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.1	
<i>Hydropsyche depravata group</i>	09020604016041	5.00			CF	1.7	
<i>Macrostemum</i>	09020604018		6.69	3	CF		2.2
<i>Macrostemum zebratum</i>	09020604018054	6.33			--	2.1	
Brachycentridae	09020609				--		
<i>Brachycentrus</i>	09020609043		2.67	0	CF		0.9
<i>Brachycentrus appalachia</i>	09020609043096	2.67			--	0.9	
<i>Psilotreta</i>	09020614068		0.33	0	SC		0.1
<i>Psilotreta labida</i>	09020614068133	0.33			--	0.1	
<i>Helicopsyche</i>	09020616070		0.33	3	SC		0.1
<i>Helicopsyche borealis</i>	09020616070137	0.33			--	0.1	
<i>Mystacides</i>	09020618075		0.67	4	CG		0.2
<i>Mystacides sepulchralis</i>	09020618075147	0.67			--	0.2	
<i>Oecetis</i>	09020618078		0.33	8	PR		0.1
<i>Oecetis persimilis</i>	09020618078157	0.33			--	0.1	
<i>Nigronia</i>	09020701003		2.67	0	PR		0.9
<i>Nigronia serricornis</i>	09020701003003	2.67			--	0.9	
<i>Limonia</i>	09021001010	0.33	0.33	6	SH	0.1	0.1
<i>Conchapelopia</i>	09021011004	1.00	1.00	6	PR	0.3	0.3
<i>Nilotanypus</i>	09021011012		0.33	6	PR		0.1
<i>Nilotanypus fimbriatus</i>	09021011012027	0.33			--	0.1	
<i>Rheopelopia</i>	09021011017		3.33		PR		1.1
<i>Rheopelopia acra group</i>	09021011017036	3.33			--	1.1	
<i>Corynoneura</i>	09021011036	0.33	0.33	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		0.33	7	SH		0.1
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.1	
<i>Nanocladius</i>	09021011049	0.67	1.33	3	CG	0.2	0.4
<i>Nanocladius downesi</i>	09021011049092	0.67			--	0.2	
<i>Parametriocnemus</i>	09021011053	0.33	0.33	5	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		1.00	5	CG		0.3
<i>Tvetenia vitracies</i>	09021011065113	1.00			--	0.3	
<i>Rheotanytarsus</i>	09021011072		9.00	6	CF		3.0
<i>Rheotanytarsus exiguus group</i>	09021011072127	7.33			CF	2.5	
<i>Rheotanytarsus pellucidus</i>	09021011072128	1.67			CF	0.6	



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<i>Microtendipes</i>	09021011094		34.00	6	CF		11.4
<i>Microtendipes pedellus group</i>	09021011094166	33.67			--	11.3	
<i>Microtendipes rydalensis group</i>	09021011094168	0.33			--	0.1	
<i>Polypedilum</i>	09021011102		29.33	6	SH		9.8
<i>Polypedilum aviceps</i>	09021011102181	23.33			--	7.8	
<i>Polypedilum flavum</i>	09021011102182	6.00			--	2.0	
<i>Simulium</i>	09021012047	0.33	1.67	4	CF	0.1	0.6
<i>Simulium venustum/verecundum complex</i>	09021012047072	1.33			CF	0.4	
<i>Atherix</i>	09021015055	0.67	0.67	2	PR	0.2	0.2
<i>Hemerodromia</i>	09021016057	0.67	0.67	3	PR	0.2	0.2
<i>Psephenus</i>	09021108058		0.67	4	SC		0.2
<i>Psephenus herricki</i>	09021108058028	0.67			--	0.2	
<i>Dubiraphia</i>	09021113064		0.33	6	--		0.1
<i>Dubiraphia minima</i>	09021113064036	0.33			--	0.1	
<i>Macronychus</i>	09021113065		0.67	4	--		0.2
<i>Macronychus glabratus</i>	09021113065040	0.67			--	0.2	
<i>Promoesia</i>	09021113069		0.67		--		0.2
<i>Promoesia tardella</i>	09021113069052	0.67			--	0.2	
<i>Stenelmis</i>	09021113070	4.33	15.00	5	SC	1.5	5.0
<i>Stenelmis concinna</i>	09021113070054	5.00			--	1.7	
<i>Stenelmis crenata</i>	09021113070055	5.67			--	1.9	
Basommatophora	100102	0.33	0.33		--	0.1	0.1