



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

Station Information

Station Number: S-1239 River Basin: Penobscot
Waterbody: West Branch Penobscot River - Station 1239 HUC8 Name: West Branch Penobscot
Town: Millinocket Latitude: 45° 38' 13.979" N
Directions: DOWNSTREAM OF STONE DAM IN RIVER LEFT CHANNEL Longitude: 68° 43' 32.394" W
Stream Order: 5

Sample Information

Log Number: 3101 Type of Sample: ROCK BASKET Date Deployed: 8/2/2023
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/30/2023

Classification Attainment

Statutory Class: C Final Determination: I Date: 5/20/2024
Model Result with $P \geq 0.6$: I Reason for Determination: Best Professional Judgement
Date Last Calculated: 4/26/2024 Comments: Minimum provisions for Total Mean Abundance not met. Results consistent with 2022 sampling.

Model Probabilities

First Stage Model				C or Better Model	
Class A	0.00	Class C	0.30	Class A, B, or C	0.00
Class B	0.00	NA	0.70	Non-Attainment	1.00
B or Better Model				A Model	
Class A or B		0.00		Class A	0.03
Class C or Non-Attainment		1.00		Class B or C or Non-Attainment	0.97

Model Variables

01 Total Mean Abundance	30.33	18 Relative Abundance Ephemeroptera	0.08
02 Generic Richness	20.00	19 EPT Generic Richness	7.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	2.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.73	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.33
06 Hilsenhoff Biotic Index	5.22	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	1.00
07 Relative Abundance - Chironomidae	0.11	28 EP Generic Richness/14	0.21
08 Relative Generic Richness Diptera	0.20	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.33		
11 <i>Cheumatopsyche</i> Abundance	0.33		
12 EPT Generic Richness/ Diptera Generic Richness	1.75		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.48		
17 Chironomini Abundance (Family Functional Group)	1.43		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	Tricladida	16.48
2	<i>Physella</i>	16.48
3	<i>Hyaella</i>	15.38
4	<i>Simulium</i>	7.69
5	<i>Macronychus</i>	5.49



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Station Number: S-1239 Town: Millinocket Date Deployed: 8/2/2023
Log Number: 3101 Waterbody: West Branch Penobscot River - Station 1239 Date Retrieved: 8/30/2023

Sample Collection and Processing Information

Sampling Organization: NORMANDEAU ASSOCIATES

Taxonomist: NORMANDEAU ASSOCIATES

Waterbody Information - Deployment

Temperature: 19.4 deg C
Dissolved Oxygen: 8.3 mg/l
Dissolved Oxygen Saturation: 88.3 %
Specific Conductance: 36.1 uS/cm
Velocity: 0.61 cm/s
pH: 6.57
Wetted Width: 40 m
Bankfull Width:
Depth: 79 cm

Waterbody Information - Retrieval

Temperature: 21 deg C
Dissolved Oxygen: 8.82 mg/l
Dissolved Oxygen Saturation: 98 %
Specific Conductance: 28.8 uS/cm
Velocity: 0.3 cm/s
pH: 7.08
Wetted Width: 40 m
Bankfull Width:
Depth: 70 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Open	Rolling
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Regulated Flows	Below Dam	Boulder 20 %
	Main Stem	Gravel 5 %
		Rubble/Cobble 70 %
		Sand 5 %

Landcover Summary - 2004 Data

Sample Comments

DOWNSTREAM OF STONE DAM IN NORTHEAST CHANNEL, TDS 23PPM
TDS 19PPM



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Aquatic Life Taxonomic Inventory Report

Station Number: S-1239 Waterbody: West Branch Penobscot River - Station 1239 Town: Millinocket
Log Number: 3101 Subsample Factor: X1 Replicates: 3 Calculated: 4/26/2024

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Tricladida	030101	5.00	5.00		--	16.5	16.5
<i>Hyalella</i>	09010203006		4.67	8	CG		15.4
<i>Hyalella azteca</i>	09010203006011	4.67			--	15.4	
<i>Maccaffertium</i>	09020402015	1.00	1.00	4	SC	3.3	3.3
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	1.1	1.1
<i>Serratella</i>	09020410037	1.00	1.00	2	CG	3.3	3.3
<i>Dolophilodes</i>	09020601001	0.33	0.33	0	CF	1.1	1.1
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	1.1	1.1
<i>Cheumatopsyche</i>	09020604015	0.33	0.33	5	CF	1.1	1.1
<i>Hydropsyche</i>	09020604016		0.33	4	CF		1.1
<i>Hydropsyche morosa</i>	09020604016030	0.33			--	1.1	
Chironomidae	09021011	1.00			--	3.3	
<i>Thienemannimyia</i>	09021011020		0.48	3	PR		1.6
<i>Thienemannimyia group</i>	09021011020041	0.33			--	1.1	
<i>Tvetenia</i>	09021011065		1.43	5	CG		4.7
<i>Tvetenia vitracies</i>	09021011065113	1.00			--	3.3	
<i>Polypedilum</i>	09021011102		1.43	6	SH		4.7
<i>Polypedilum flavum</i>	09021011102182	0.33			--	1.1	
<i>Polypedilum illinoense</i>	09021011102204	0.67			--	2.2	
<i>Simulium</i>	09021012047	2.33	2.33	4	CF	7.7	7.7
<i>Macronychus</i>	09021113065		1.67	4	--		5.5
<i>Macronychus glabratus</i>	09021113065040	1.67			--	5.5	
<i>Stenelmis</i>	09021113070	0.33	0.33	5	SC	1.1	1.1
<i>Valvata</i>	10010101001	1.33	1.33		SC	4.4	4.4
Hydrobiidae	10010104	1.33	1.33		--	4.4	4.4
Lymnaeidae	10010201	1.00	1.00		--	3.3	3.3
<i>Physella</i>	10010202027	5.00	5.00		SC	16.5	16.5
<i>Gyraulus</i>	10010203029	0.67	0.67		SC	2.2	2.2