



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

Station Information

Station Number:	S-1234	River Basin:	Penobscot
Waterbody:	West Branch Penobscot River - Station 1234	HUC8 Name:	West Branch Penobscot
Town:	Millinocket	Latitude:	45° 52' 42.361" N
Directions:	DOWNSTREAM OF MCKAY STATION, RIVER RIGHT	Longitude:	69° 09' 36.476" W
		Stream Order:	5

Sample Information

Log Number:	3175	Type of Sample:	ROCK BAG	Date Deployed:	7/24/2024
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/21/2024

Classification Attainment

Statutory Class:	A	Final Determination:	A	Date:	9/10/2025
Model Result with $P \geq 0.6$:	B	Reason for Determination:	Model		
Date Last Calculated:	5/29/2025	Comments:	Indeterminate for Class A ($p=0.45$). Raised to A due to community structure and sensitive taxa.		

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.19	Class A, B, or C	1.00
Class B	0.72	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.99	Class A	0.45
Class C or Non-Attainment	0.01	Class B or C or Non-Attainment	0.55

Model Variables

01 Total Mean Abundance	468.67	18 Relative Abundance Ephemeroptera	0.07
02 Generic Richness	22.00	19 EPT Generic Richness	16.00
03 Plecoptera Mean Abundance	12.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	32.33	23 Relative Generic Richness- Plecoptera	0.14
05 Shannon-Wiener Generic Diversity	1.90	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	79.60
06 Hilsenhoff Biotic Index	4.21	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	7.69
07 Relative Abundance - Chironomidae	0.12	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.18	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	321.73		
11 <i>Cheumatopsyche</i> Abundance	40.94		
12 EPT Generic Richness/ Diptera Generic Richness	4.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	12.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.33		
17 Chironomini Abundance (Family Functional Group)	10.33		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	68.65
2	<i>Cheumatopsyche</i>	8.73
3	<i>Cricotopus</i>	8.25
4	<i>Polypedilum</i>	2.20
5	<i>Epeorus</i>	1.70



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

Station Number: S-1234 Town: Millinocket Date Deployed: 7/24/2024
Log Number: 3175 Waterbody: West Branch Penobscot River - Station 1234 Date Retrieved: 8/21/2024

Sample Collection and Processing Information

Sampling Organization: MOODY MOUNTAIN
ENVIRONMENTAL

Taxonomist: PAUL LEEPER (MOODY MOUNTAIN
ENVIRONMENTAL)

Waterbody Information - Deployment

Temperature: 21.9 deg C
Dissolved Oxygen: 7.8 mg/l
Dissolved Oxygen Saturation:
Specific Conductance:
Velocity: 80 cm/s
pH:
Wetted Width: 21 m
Bankfull Width:
Depth: 30 cm

Waterbody Information - Retrieval

Temperature: 20.8 deg C
Dissolved Oxygen: 7.6 mg/l
Dissolved Oxygen Saturation:
Specific Conductance:
Velocity: 100 cm/s
pH:
Wetted Width: 21 m
Bankfull Width:
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>
Regulated Flows	Below Dam	Bedrock 80 %
	Main Stem	Boulder 20 %

Landcover Summary - 2004 Data

Total Area (ac)	909701	High Int. Dev. %	0.5	Water %	5.5	Non-vegetated %	0.2
		Med Int. Dev. %	0.0	Wetland %	6.8	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.0	Upland Woody %	85.5	Grassland %	0.2
		Development %	0.5	Natural %	92.6	Human Altered %	0.5
						Impervious %	0.2
Total Land (ac)	859510	High Int. Dev. %	0.6	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.0	Wetland %	7.2	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.0	Upland Woody %	90.5	Grassland %	0.2
		Development %	0.6	Natural %	98.0	Human Altered %	0.6
						Impervious %	0.2

Sample Comments

BEFORE FLOW CHANGE V=120 CM/S D=61 CM



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

Station Number: S-1234 Waterbody: West Branch Penobscot River - Station 1234 Town: Millinocket
Log Number: 3175 Subsample Factor: X1 Replicates: 3 Calculated: 5/29/2025

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Hirudinidae	08030201	1.67	1.67		--	0.4	0.4
<i>Acroneuria</i>	09020209042	2.00	2.00	0	PR	0.4	0.4
<i>Paragnetina</i>	09020209049	6.67	6.67	1	PR	1.4	1.4
<i>Agnetina</i>	09020209050	4.00	4.00	2	PR	0.9	0.9
Baetidae	09020401	2.00			--	0.4	
<i>Heterocloeon</i>	09020401005	1.67	1.90	2	SC	0.4	0.4
<i>Acerpenna</i>	09020401007	5.67	6.48	5	CG	1.2	1.4
<i>Plauditus</i>	09020401012	6.67	7.62		CG	1.4	1.6
Heptageniidae	09020402	1.67			--	0.4	
<i>Epeorus</i>	09020402009	7.00	7.97	0	SC	1.5	1.7
<i>Maccaffertium</i>	09020402015	5.00	5.69	4	SC	1.1	1.2
<i>Attenella</i>	09020410032	0.33	0.33	3	CG	0.1	0.1
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.1	0.1
<i>Serratella</i>	09020410037	2.00	2.00	2	CG	0.4	0.4
Hydropsychidae	09020604	5.33			--	1.1	
<i>Cheumatopsyche</i>	09020604015	40.33	40.94	5	CF	8.6	8.7
<i>Hydropsyche</i>	09020604016	317.00	321.73	4	CF	67.6	68.6
<i>Rhyacophila</i>	09020605019	1.33	1.33	2	PR	0.3	0.3
Hydroptilidae	09020607	0.33	0.33		--	0.1	0.1
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.1	0.1
<i>Thienemannimyia</i>	09021011020		0.33	3	PR		0.1
<i>Thienemannimyia group</i>	09021011020041	0.33			--	0.1	
<i>Cricotopus</i>	09021011037	38.67	38.67	7	SH	8.3	8.3
<i>Nanocladius</i>	09021011049	7.33	7.33	3	CG	1.6	1.6
<i>Polypedilum</i>	09021011102	10.33	10.33	6	SH	2.2	2.2
<i>Ancyronyx</i>	09021113063	0.67	0.67	6	--	0.1	0.1