



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

**Station Information**

<b>Station Number:</b> S-277	River Basin: Penobscot
Waterbody: West Branch Penobscot River - Station 277	HUC8 Name: West Branch Penobscot
Town: Millinocket	Latitude: 45 38 19.22 N
Directions: BELOW MILLINOCKET POTW, BELOW GNPP, ABOVE DOLBY POND	Longitude: 68 40 5.69 W
	Stream Order: 7

**Sample Information**

<b>Log Number:</b> 2623	Type of Sample: CONE	Date Deployed: 7/6/2017
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/2/2017

**Classification Attainment**

<b>Statutory Class:</b> C	<b>Final Determination:</b> B	Date: 3/19/2018
Model Result with $P \geq 0.6$ : B	<b>Reason for Determination:</b> Model	
Date Last Calculated: 3/19/2018	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.15	Class A, B, or C	1.00
Class B	0.75	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.18
Class A or B	0.98	Class B or C or Non-Attainment	0.82
Class C or Non-Attainment	0.02		

**Model Variables**

01 Total Mean Abundance	2766.67	18 Relative Abundance Ephemeroptera	0.10
02 Generic Richness	39.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	13.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.33
04 Ephemeroptera Mean Abundance	289.33	23 Relative Generic Richness- Plecoptera	0.08
05 Shannon-Wiener Generic Diversity	2.66	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	613.04
06 Hilsenhoff Biotic Index	4.12	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	14.22
07 Relative Abundance - Chironomidae	0.01	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.21	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	705.39		
11 <i>Cheumatopsyche</i> Abundance	611.71		
12 EPT Generic Richness/ Diptera Generic Richness	2.75		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	13.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	6.67		
17 Chironomini Abundance (Family Functional Group)	4.00		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Macrostemum</i>	28.68
2	<i>Hydropsyche</i>	25.50
3	<i>Cheumatopsyche</i>	22.11
4	<i>Tricorythodes</i>	8.34
5	<i>Neureclipsis</i>	7.90



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**Sample Collection and Processing Information**

Sampling Organization: PENOBSCOT INDIAN NATION      Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 21.6 deg C  
Dissolved Oxygen: 8.44 mg/l  
Dissolved Oxygen Saturation: 95.8 %  
Specific Conductance: 25.8 uS/cm  
Velocity: 51.8 cm/s  
pH: 6.95  
Wetted Width: 107.5 m  
Bankfull Width: 107.5 m  
Depth: 150 cm

**Waterbody Information - Retrieval**

Temperature: 23.1 deg C  
Dissolved Oxygen: 8.28 mg/l  
Dissolved Oxygen Saturation: 96.8 %  
Specific Conductance: 25.6 uS/cm  
Velocity: 97.5 cm/s  
pH: 7.09  
Wetted Width: 103 m  
Bankfull Width: 107.5 m  
Depth: 80 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Cultivated	Open	Rolling	
Swamp Conifer			
Swamp Hardwood			
Upland Conifer			
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Altered Hydrology	Below POTW	Boulder	10 %
Nutrients		Gravel	20 %
		Rubble/Cobble	60 %
		Sand	10 %

**Landcover Summary - 2004 Data**

**Sample Comments**

(8-2-17) WATER IN DOLBY IMPOUNDMENT (DOWNSTREAM) WAS LOWERED BY 3FT FOR BRIDGEWORK



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Aquatic Life Taxonomic Inventory Report**

**Station Number: S-277**      Waterbody: West Branch Penobscot River - Station 277    Town: Millinocket  
**Log Number: 2623**      Subsample Factor: X4      Replicates: 3      Calculated: 3/19/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	1.33	1.33		PR	0.0	0.0
<i>Nais</i>	08020202009		2.67		CG		0.1
<i>Nais communis</i>	08020202009005	2.67			--	0.1	
<i>Stylaria</i>	08020202014		1.33		CG		0.0
<i>Stylaria lacustris</i>	08020202014002	1.33			--	0.0	
<i>Hyalella</i>	09010203006	1.33	1.33	8	CG	0.0	0.0
Collembola	090201	1.33	1.33		--	0.0	0.0
Perlidae	09020209	1.33			--	0.0	
<i>Acroneuria</i>	09020209042	5.33	8.89	0	PR	0.2	0.3
<i>Acroneuria lycorias</i>	09020209042125	2.67			--	0.1	
<i>Perlesta</i>	09020209046	2.67	2.96	5	PR	0.1	0.1
<i>Paragnetina</i>	09020209049		1.48	1	PR		0.1
<i>Paragnetina media</i>	09020209049151	1.33			--	0.0	
<i>Hagenius</i>	09020302008		1.33	1	PR		0.0
<i>Hagenius brevistylus</i>	09020302008015	1.33			PR	0.0	
Baetidae	09020401	1.33			--	0.0	
<i>Heterocloeon</i>	09020401005	1.33	1.67	2	SC	0.0	0.1
<i>Acerpenna</i>	09020401007	1.33	3.33	5	CG	0.0	0.1
<i>Acerpenna pygmaea</i>	09020401007011	1.33			--	0.0	
<i>Plauditus</i>	09020401012	1.33	1.67		CG	0.0	0.1
Heptageniidae	09020402	4.00	4.00		--	0.1	0.1
<i>Maccaffertium</i>	09020402015	5.33	5.33	4	SC	0.2	0.2
<i>Isonychia</i>	09020404018	1.33	1.33	2	CF	0.0	0.0
Leptophlebiidae	09020406	4.00	4.00		--	0.1	0.1
<i>Drunella</i>	09020410034		4.00	0	SC		0.1
<i>Drunella lata</i>	09020410034100	4.00			--	0.1	
<i>Serratella</i>	09020410037		32.00	2	CG		1.2
<i>Serratella deficiens (Teloganopsis deficiens)</i>	09020410037121	6.67			--	0.2	
<i>Serratella serratoides</i>	09020410037124	25.33			--	0.9	
<i>Tricorythodes</i>	09020411038	230.67	230.67	4	CG	8.3	8.3
<i>Caenis</i>	09020412040	1.33	1.33	7	CG	0.0	0.0
<i>Chimarra</i>	09020601003	8.00	66.67	2	CF	0.3	2.4
<i>Chimarra obscura</i>	09020601003003	46.67			--	1.7	
<i>Chimarra socia</i>	09020601003004	12.00			--	0.4	
<i>Neureclipsis</i>	09020603008	218.67	218.67	7	CF	7.9	7.9
Hydropsychidae	09020604	68.00			--	2.5	
<i>Cheumatopsyche</i>	09020604015	592.00	611.71	5	CF	21.4	22.1



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche</i>	09020604016	397.33	705.39	4	CF	14.4	25.5
<i>Hydropsyche bronta</i>	09020604016029	1.33			--	0.0	
<i>Hydropsyche morosa</i>	09020604016030	282.67			--	10.2	
<i>Hydropsyche placoda</i>	09020604016059	1.33			--	0.0	
<i>Macrostemum</i>	09020604018		793.57	3	CF		28.7
<i>Macrostemum zebratum</i>	09020604018054	768.00			--	27.8	
Leptoceridae	09020618				--		
<i>Ceraclea</i>	09020618072	2.67	2.67	3	CG	0.1	0.1
<i>Mystacides</i>	09020618075		1.33	4	CG		0.0
<i>Mystacides sepulchralis</i>	09020618075147	1.33			--	0.0	
<i>Oecetis</i>	09020618078		16.00	8	PR		0.6
<i>Oecetis avara</i>	09020618078153	5.33			--	0.2	
<i>Oecetis persimilis</i>	09020618078157	10.67			--	0.4	
<i>Ablabesmyia</i>	09021011001		1.33	8	PR		0.0
<i>Ablabesmyia mallochi</i>	09021011001004	1.33			--	0.0	
<i>Conchapelopia</i>	09021011004	2.67	2.67	6	PR	0.1	0.1
<i>Pentaneura</i>	09021011014		2.67	6	PR		0.1
<i>Pentaneura inconspicua</i>	09021011014028	2.67			--	0.1	
<i>Psectrocladius</i>	09021011056		2.67	8	CG		0.1
<i>Psectrocladius elatus</i>	09021011056105	2.67			--	0.1	
<i>Tvetenia</i>	09021011065		6.67	5	CG		0.2
<i>Tvetenia vitracies</i>	09021011065113	6.67			--	0.2	
<i>Parachironomus</i>	09021011097		1.33	10	PR		0.0
<i>Parachironomus tenuicaudatus</i> <i>complex</i>	09021011097179	1.33			--	0.0	
<i>Polypedilum</i>	09021011102		2.67	6	SH		0.1
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.0	
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.0	
<i>Simulium</i>	09021012047		9.33	4	CF		0.3
<i>Simulium jenningsi species group</i>	09021012047070	8.00			CF	0.3	
<i>Simulium tuberosum complex</i>	09021012047071	1.33			CF	0.0	
<i>Dineutus</i>	09021104032	1.33	1.33	2	--	0.0	0.0
<i>Stenelmis</i>	09021113070	4.00	4.00	5	SC	0.1	0.1
Basommatophora	100102	1.33	1.33		--	0.0	0.0
<i>Physa</i>	10010202027	2.67	2.67		SC	0.1	0.1