



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

Station Information

Station Number: S-823
Waterbody: East Branch Penobscot River - Station 823
Town: T03 R07 Wels
Directions: DOWNSTRM OF OLD MATAGAMAN TOTE RD

DEP Drainage: Penobscot
HUC8: 01020002
HUC8 Name: East Branch Penobscot
Latitude: 45 51 37.58 N
Longitude: 68 37 24.39 W
Stream Order: 5

Sample Information

Log Number: 2064
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 2
Date Deployed: 7/28/2011
Date Retrieved: 9/21/2011

Classification Attainment

Statutory Class: AA
Model Result with P>.6: A
Date Last Calculated: 2/10/2012
Final Determination: A
Reason for Determination: Model
Comments: High Water. Sampler Retrieval difficult.
Date: 2/13/2012

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.81	Class A, B, or C	1.00
Class B	0.17	Non-Attainment	0.00
Class C			
0.02			
NA			
0.00			
B or Better Model		A Model	
Class A or B	1.00	Class A	0.99
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.01

Model Variables

01 Total Mean Abundance	65.50	18 Relative Abundance Ephemeroptera	0.15
02 Generic Richness	21.00	19 EPT Generic Richness	14.00
03 Plecoptera Mean Abundance	0.50	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	9.50	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	2.65	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	1.00
06 Hilsenhoff Biotic Index	3.14	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.02	28 EP Generic Richness/14	0.50
08 Relative Generic Richness Diptera	0.24	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	34.50		
11 <i>Cheumatopsyche</i> Abundance	1.00		
12 EPT Generic Richness/ Diptera	2.80		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	0.00		
(Family Functional Group)			
17 Chironomini Abundance (Family	0.00		
Functional Group)			

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	52.67
2	<i>Chimarra</i>	14.50
3	<i>Rhithrogena</i>	6.87
4	<i>Simulium</i>	6.11
5	<i>Epeorus</i>	3.05



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Waterbody: East Branch Penobscot River - Station 823

Date Retrieved: 9/21/2011

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 22.2 deg C
Dissolved Oxygen: 8.5 mg/l
Specific Conductance: 21 uS/cm
Velocity: 39 cm/s
pH: 7.07
Wetted Width: 75 m
Bankfull Width: 78 m
Depth: 45 cm

Waterbody Information - Retrieval

Temperature: 15.7 deg C
Dissolved Oxygen: 8.7 mg/l
Specific Conductance: 19 uS/cm
Velocity: 110 cm/s
pH: 6.95
Wetted Width: 78 m
Bankfull Width: 78 m
Depth: 125 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Swamp Hardwood

Open

Hilly

Upland Conifer

Upland Hardwood

Potential Stressor

Location

Substrate

Below Road Crossing

Bedrock 70 %

Minimally Disturbed

Boulder 10 %

Gravel 5 %

Rubble/Cobble 15 %

Landcover Summary - 2004 Data

Total Area (ac)	579873	High Int. Dev. %	0.0	Water %	5.0	Non-vegetated %	0.2
		Med Int. Dev. %	0.0	Wetland %	5.7	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.5	Upland Woody %	88.2	Grassland %	0.1
		Development %	0.5	Natural %	94.5	Human Altered %	0.6
						Impervious %	0.1

Sample Comments

7/28/11: FISH AND ALGAE OBSERVED. 8/28/11: HURRICANE IRENE. VISITED SITE ON 9/1/11: WATER TOO HIGH AND RAPID TO RETRIEVE BAGS; BEDROCK UNDER WATER.

9/21/11: ONE BAG LOST, 2 BAGS DISTURBED; HAD TO RETRIEVE BAGS WITH A RAKE DUE TO DEPTH - LIKELY SOME BUGS LOST IN RETRIEVAL.



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

Station Number: S-823 Waterbody: East Branch Penobscot River - Station 823 Town: T03 R07 Wels
Log Number: 2064 Subsample Factor: X1 Replicates: 2 Calculated: 2/10/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Perlodidae	09020207	0.50	0.50		--	0.8	0.8
<i>Baetis</i>	09020401001	0.50	1.00	4	CG	0.8	1.5
<i>Baetis intercalaris</i>	09020401001008	0.50			--	0.8	
<i>Epeorus</i>	09020402009	2.00	2.00	0	SC	3.1	3.1
<i>Rhithrogena</i>	09020402013	4.50	4.50	0	SC	6.9	6.9
<i>Paraleptophlebia</i>	09020406026	0.50	0.50	1	CG	0.8	0.8
<i>Ephemerella</i>	09020410035	1.00	1.00	1	CG	1.5	1.5
<i>Serratella</i>	09020410037		0.50	2	CG		0.8
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	0.50			--	0.8	
<i>Chimarra</i>	09020601003	5.00	9.50	2	CF	7.6	14.5
<i>Chimarra obscura</i>	09020601003003	0.50			--	0.8	
<i>Chimarra socia</i>	09020601003004	4.00			--	6.1	
<i>Cheumatopsyche</i>	09020604015	1.00	1.00	5	CF	1.5	1.5
<i>Hydropsyche</i>	09020604016	10.50	34.50	4	CF	16.0	52.7
<i>Hydropsyche bronta</i>	09020604016029	0.50			--	0.8	
<i>Hydropsyche morosa</i>	09020604016030	12.00			--	18.3	
<i>Hydropsyche sparna</i>	09020604016032	11.50			--	17.6	
<i>Macrostemum</i>	09020604018		0.50	3	CF		0.8
<i>Macrostemum zebratum</i>	09020604018054	0.50			--	0.8	
<i>Brachycentrus</i>	09020609043		0.50	0	CF		0.8
<i>Brachycentrus appalachia</i>	09020609043096	0.50			--	0.8	
<i>Lepidostoma</i>	09020611064	1.00	1.00	1	SH	1.5	1.5
<i>Helicopsyche</i>	09020616070		0.50	3	SC		0.8
<i>Helicopsyche borealis</i>	09020616070137	0.50			--	0.8	
<i>Tvetenia</i>	09021011065		0.50	5	CG		0.8
<i>Tvetenia vitracies</i>	09021011065113	0.50			--	0.8	
<i>Rheotanytarsus</i>	09021011072	0.50	0.50	6	CF	0.8	0.8
<i>Simulium</i>	09021012047	3.00	4.00	4	CF	4.6	6.1
<i>Simulium tuberosum</i>	09021012047067				--		
<i>Simulium jenningsi complex</i>	09021012047070	1.00			CF	1.5	
<i>Atherix</i>	09021015055	1.00	1.00	2	PR	1.5	1.5
<i>Hemerodromia</i>	09021016057	0.50	0.50	3	PR	0.8	0.8
<i>Promoresia</i>	09021113069		0.50		--		0.8
<i>Promoresia elegans</i>	09021113069051	0.50			--	0.8	
<i>Stenelmis</i>	09021113070	0.50	1.00	5	SC	0.8	1.5
<i>Stenelmis crenata</i>	09021113070055	0.50			--	0.8	