



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

Station Information

Station Number: S-823	DEP Drainage: Penobscot
Waterbody: East Branch Penobscot River - Station 823	HUC8: 01020002
Town: T03 R07 Wels	HUC8 Name: East Branch Penobscot
Directions: DOWNSTRM OF OLD MATAGAMAN TOTE RD	Latitude: 45 51 37.58 N
	Longitude: 68 37 24.39 W
	Stream Order: 5

Sample Information

Log Number: 1589	Type of Sample: ROCK BAG	Date Deployed: 7/28/2006
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/24/2006

Classification Attainment

Statutory Class: AA	Final Determination: A	Date: 6/22/2007
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 3/13/2009	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.65	Class A, B, or C	1.00
Class B	0.34	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
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	342.00	18 Relative Abundance Ephemeroptera	0.42
02 Generic Richness	58.00	19 EPT Generic Richness	28.00
03 Plecoptera Mean Abundance	10.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	143.33	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.48	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	28.21
06 Hilsenhoff Biotic Index	4.94	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	25.49
07 Relative Abundance - Chironomidae	0.39	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.36	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	6.67		
11 <i>Cheumatopsyche</i> Abundance	1.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.33		
13 Relative Abundance - Oligochaeta	0.03		
15 Perlidae Mean Abundance (Family Functional Group)	4.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	42.51		
17 Chironomini Abundance (Family Functional Group)	10.54		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Acerpenna</i>	17.32
2	<i>Psectrocladius</i>	11.73
3	<i>Pentaneura</i>	9.85
4	<i>Maccaffertium</i>	6.19
5	<i>Tricorythodes</i>	5.56



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Log Number: 1589

Town: T03 R07 Wels
Waterbody: East Branch Penobscot River - Station 8

Date Deployed: 7/28/2006
Date Retrieved: 8/24/2006

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23.1 deg C
Dissolved Oxygen: 8.8 mg/l
Specific Conductance: 30 uS/cm
Velocity: 45 cm/s
pH:
Wetted Width: 75 m
Bankfull Width: 75 m
Depth: 65 cm

Waterbody Information - Retrieval

Temperature: 17 deg C
Dissolved Oxygen: 9.4 mg/l
Specific Conductance: 29 uS/cm
Velocity: 24 cm/s
pH: 6.85
Wetted Width: 75 m
Bankfull Width:
Depth: 50 cm

Water Chemistry - Retrieval

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood	Canopy Open	Hilly Terrain
Upland Conifer		
Upland Hardwood		

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Pristine Landscape	Bedrock	70 %
		Boulder	10 %
		Gravel	5 %
		Rubble/Cobble	15 %

Landcover Summary - 2004 Data

Total Area (ac)	579873	High Int. Dev. %	0.0	Water %	5.3	Non-vegetated %	0.2
Total Land (ac)	550923	Med Int. Dev. %	0.0	Wetland %	6.0	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.5	Upland Woody %	92.8	Human Altered %	0.6
		Development %	0.5	Natural %	99.4	Impervious %	0.1

Sample Comments



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-823 Waterbody: East Branch Penobscot River - Station 823 Town: T03 R07 Wels
Log Number: 1589 Subsample Factor: X1 Replicates: 3 Calculated: 3/13/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	0.33	0.33		PR	0.1	0.1
<i>Stylaria</i>	08020202014		8.67		CG		2.5
<i>Stylaria lacustris</i>	08020202014002	8.67			--	2.5	
<i>Hyalella</i>	09010203006		0.33	8	CG		0.1
<i>Hyalella azteca</i>	09010203006011	0.33			--	0.1	
<i>Pteronarcys</i>	09020205023		0.67	0	SH		0.2
<i>Pteronarcys dorsata</i>	09020205023063	0.67			--	0.2	
Perlodidae	09020207	5.00	5.00		--	1.5	1.5
<i>Acroneuria</i>	09020209042	1.00	4.33	0	PR	0.3	1.3
<i>Acroneuria lycorias</i>	09020209042125	3.33			--	1.0	
<i>Boyeria</i>	09020301004		0.33	2	PR		0.1
<i>Boyeria grafiana</i>	09020301004011	0.33			--	0.1	
Gomphidae	09020302	1.00	1.00		--	0.3	0.3
<i>Argia</i>	09020309048	1.00	1.00	7	PR	0.3	0.3
Ephemeroptera	090204	0.33	0.33		--	0.1	0.1
Baetidae	09020401	2.33			--	0.7	
<i>Baetis</i>	09020401001		1.38	4	CG		0.4
<i>Baetis intercalaris</i>	09020401001008	1.33			--	0.4	
<i>Acerpenna</i>	09020401007	2.67	59.24	5	CG	0.8	17.3
<i>Acerpenna macdunnoughi</i>	09020401007001	2.67			--	0.8	
<i>Acerpenna pygmaea</i>	09020401007011	52.00			--	15.2	
<i>Plauditus</i>	09020401012	11.33	11.71		CG	3.3	3.4
Heptageniidae	09020402	5.00			--	1.5	
<i>Leucrocota</i>	09020402011	7.33	8.78	1	SC	2.1	2.6
<i>Stenacron</i>	09020402014		0.40	7	SC		0.1
<i>Stenacron interpunctatum</i>	09020402014045	0.33			--	0.1	
<i>Maccaffertium</i>	09020402015	10.33	21.15	4	SC	3.0	6.2
<i>Maccaffertium luteum</i>	09020402015049	6.33			--	1.9	
<i>Maccaffertium modestum</i>	09020402015051	1.00			--	0.3	
Leptophlebiidae	09020406	6.00	6.00		--	1.8	1.8
<i>Paraleptophlebia</i>	09020406026	11.67	11.67	1	CG	3.4	3.4
<i>Ephemerella</i>	09020410035	1.67	1.67	1	CG	0.5	0.5
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.1	0.1
<i>Serratella</i>	09020410037		1.33	2	CG		0.4
<i>Serratella serratoides</i>	09020410037124	1.33			--	0.4	
<i>Tricorythodes</i>	09020411038	19.00	19.00	4	CG	5.6	5.6
<i>Caenis</i>	09020412040	0.33	0.33	7	CG	0.1	0.1
<i>Chimarra</i>	09020601003	0.67	0.67	2	CF	0.2	0.2



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		Actual	Adjusted			Actual	Adjusted
<i>Neureclipsis</i>	09020603008	1.33	1.33	7	CF	0.4	0.4
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.1	0.1
<i>Cheumatopsyche</i>	09020604015	1.00	1.00	5	CF	0.3	0.3
<i>Hydropsyche</i>	09020604016	4.33	6.67	4	CF	1.3	1.9
<i>Hydropsyche morosa</i>	09020604016030	1.67			--	0.5	
<i>Hydropsyche sparna</i>	09020604016032	0.67			--	0.2	
<i>Protoptila</i>	09020606022	0.33	0.33	1	SC	0.1	0.1
<i>Hydroptila</i>	09020607026	1.67	1.67	6	P	0.5	0.5
Limnephilidae	09020610	0.67	0.67		--	0.2	0.2
<i>Lepidostoma</i>	09020611064	13.00	13.00	1	SH	3.8	3.8
<i>Helicopsyche</i>	09020616070		0.33	3	SC		0.1
<i>Helicopsyche borealis</i>	09020616070137	0.33			--	0.1	
<i>Triaenodes</i>	09020618077	0.33	0.33	6	SH	0.1	0.1
<i>Oecetis</i>	09020618078		0.33	8	PR		0.1
<i>Oecetis persimilis</i>	09020618078157	0.33			--	0.1	
Chironomidae	09021011	2.67			--	0.8	
<i>Ablabesmyia</i>	09021011001		3.06	8	PR		0.9
<i>Ablabesmyia mallochii</i>	09021011001004	3.00			--	0.9	
<i>Nilotanytus</i>	09021011012		2.38	6	PR		0.7
<i>Nilotanytus fimbriatus</i>	09021011012027	2.33			--	0.7	
<i>Paramerina</i>	09021011013				--		
<i>Pentaneura</i>	09021011014		33.67	6	PR		9.8
<i>Pentaneura inconspicua</i>	09021011014028	33.00			--	9.6	
<i>Rheopelopia</i>	09021011017	2.00	3.40		PR	0.6	1.0
<i>Rheopelopia acra group</i>	09021011017036	1.33			--	0.4	
<i>Corynoneura</i>	09021011036	0.33	0.34	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037	0.67	6.46	7	SH	0.2	1.9
<i>Cricotopus bicinctus</i>	09021011037057	5.67			--	1.7	
<i>Eukiefferiella</i>	09021011041		0.34	8	CG		0.1
<i>Eukiefferiella devonica</i>	09021011041078	0.33			--	0.1	
<i>Nanocladius</i>	09021011049	0.67	3.06	3	CG	0.2	0.9
<i>Nanocladius downesi</i>	09021011049092	2.33			--	0.7	
<i>Orthocladius</i>	09021011050		0.68	6	CG		0.2
<i>Orthocladius annectens</i>	09021011050092	0.67			--	0.2	
<i>Psectrocladius</i>	09021011056		40.13	8	CG		11.7
<i>Psectrocladius simulans</i>	09021011056110	39.33			--	11.5	
<i>Rheocricotopus</i>	09021011057		3.74	6	CG		1.1
<i>Rheocricotopus robacki</i>	09021011057105	3.67			--	1.1	



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<i>Thienemanniella</i>	09021011062	0.33	0.34	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		2.04	5	CG		0.6
<i>Tvetenia vitracies</i>	09021011065113	2.00			--	0.6	
<i>Rheotanytarsus</i>	09021011072	1.00	1.02	6	CF	0.3	0.3
<i>Stempellinella</i>	09021011074		5.10	2	--		1.5
<i>Stempellinella sp. a epler</i>	09021011074002	5.00			--	1.5	
<i>Tanytarsus</i>	09021011076	10.67	17.69	6	CF	3.1	5.2
<i>Tanytarsus glabrescens</i>	09021011076134	6.67			--	1.9	
<i>Cryptochironomus</i>	09021011082	1.33	1.36	8	PR	0.4	0.4
<i>Microtendipes</i>	09021011094		5.78	6	CF		1.7
<i>Microtendipes rydalensis group</i>	09021011094168	5.67			--	1.7	
<i>Phaenopsectra</i>	09021011101		0.34	7	SC		0.1
<i>Phaenopsectra obediens group</i>	09021011101180	0.33			--	0.1	
<i>Polypedilum</i>	09021011102		3.06	6	SH		0.9
<i>Polypedilum aviceps</i>	09021011102181	1.00			--	0.3	
<i>Polypedilum flavum</i>	09021011102182	2.00			--	0.6	
<i>Simulium fibrinflatum</i>	09021012047059				--		
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	0.1	0.1
<i>Promoresia</i>	09021113069		14.33		--		4.2
<i>Promoresia elegans</i>	09021113069051	5.33			--	1.6	
<i>Promoresia tardella</i>	09021113069052	9.00			--	2.6	
<i>Stenelmis</i>	09021113070	1.00	1.33	5	SC	0.3	0.4
<i>Stenelmis concinna</i>	09021113070054	0.33			--	0.1	