



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

Station Information

Station Number: S-83	DEP Drainage: Penobscot
Waterbody: Piscataquis River - Station 83	HUC8: 01020004
Town: Abbot	HUC8 Name: Piscataquis
Directions: 0.45 KM ABOVE RT. 16 BRIDGE	Latitude: 45 11 15.76 N
	Longitude: 69 26 51.65 W
	Stream Order: 4

Sample Information

Log Number: 2051	Type of Sample: ROCK BAG	Date Deployed: 7/20/2011
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/23/2011

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 1/27/2012
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 1/24/2012	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.90	Class A, B, or C	1.00
Class B	0.10	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	336.33	18 Relative Abundance Ephemeroptera	0.44
02 Generic Richness	47.00	19 EPT Generic Richness	28.00
03 Plecoptera Mean Abundance	2.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	148.00	23 Relative Generic Richness- Plecoptera	0.09
05 Shannon-Wiener Generic Diversity	4.01	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	13.30
06 Hilsenhoff Biotic Index	3.05	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	36.77
07 Relative Abundance - Chironomidae	0.05	28 EP Generic Richness/14	1.21
08 Relative Generic Richness Diptera	0.19	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	29.37		
11 <i>Cheumatopsyche</i> Abundance	12.63		
12 EPT Generic Richness/ Diptera	3.11		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	1.67		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	0.33		
(Family Functional Group)			
17 Chironomini Abundance (Family	0.67		
Functional Group)			

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Simulium</i>	16.95
2	<i>Epeorus</i>	15.48
3	<i>Maccaffertium</i>	10.68
4	<i>Promoresia</i>	9.45
5	<i>Hydropsyche</i>	8.73



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Date Retrieved: 8/23/2011

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 24.4 deg C
Dissolved Oxygen: 8 mg/l
Specific Conductance: 34 uS/cm
Velocity: 28 cm/s
pH: 6.89
Wetted Width: 16 m
Bankfull Width: 19 m
Depth: 45 cm

Waterbody Information - Retrieval

Temperature: 19.9 deg C
Dissolved Oxygen: 8.8 mg/l
Specific Conductance: 18 uS/cm
Velocity: 74 cm/s
pH: 7.18
Wetted Width: 19 m
Bankfull Width: 19 m
Depth: 70 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Upland Hardwood

Open

Rolling

Potential Stressor

Location

Substrate

Above Road Crossing

Boulder 5 %

Main Stem

Gravel 15 %

Minimally Disturbed

Rubble/Cobble 75 %

Sand 5 %

Landcover Summary - 2004 Data

Total Area (ac)	86902	High Int. Dev. %	0.0	Water %	2.0	Non-vegetated %	0.1
		Med Int. Dev. %	0.0	Wetland %	3.1	Tilled Agriculture %	0.3
		Low Int. Dev. %	2.0	Upland Woody %	92.3	Grassland %	0.2
		Development %	2.0	Natural %	95.3	Human Altered %	2.6
						Impervious %	0.5

Sample Comments

SIGNIFICANT RAINFALL ON 8/21/11. 8/23/11: ELEVATED FLOW.

SOME BANK SLOUGHING. 7/20/11: FISH OBSERVED.



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Aquatic Life Taxonomic Inventory Report**

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Town: Abbot

Log Number: 2051

Subsample Factor: X1

Replicates: 3

Calculated: 1/24/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Perlodidae	09020207	0.67	0.67		--	0.2	0.2
Perlidae	09020209	0.33			--	0.1	
<i>Acroneuria</i>	09020209042	0.33	0.83	0	PR	0.1	0.2
<i>Acroneuria lycorias</i>	09020209042125	0.33			--	0.1	
<i>Neoperla</i>	09020209048	0.33	0.42	1	PR	0.1	0.1
<i>Agnatina</i>	09020209050	0.33	0.42	2	PR	0.1	0.1
<i>Boyeria</i>	09020301004		0.67	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	0.67			--	0.2	
Gomphidae	09020302	0.33	0.33		--	0.1	0.1
Corduliidae	09020305	0.33	0.33		--	0.1	0.1
Calopterygidae	09020307	0.67	0.67		--	0.2	0.2
<i>Baetis</i>	09020401001	1.67	7.67	4	CG	0.5	2.3
<i>Baetis intercalaris</i>	09020401001008	6.00			--	1.8	
<i>Acerpenna</i>	09020401007	2.33	5.67	5	CG	0.7	1.7
<i>Acerpenna macdunnoughi</i>	09020401007001	0.33			--	0.1	
<i>Acerpenna pygmaea</i>	09020401007011	3.00			--	0.9	
<i>Plauditus</i>	09020401012	1.00	1.00		CG	0.3	0.3
<i>Iswaeon</i>	09020401015		2.67		--		0.8
<i>Iswaeon anoka</i>	09020401015001	2.67			--	0.8	
Heptageniidae	09020402	8.67			--	2.6	
<i>Epeorus</i>	09020402009	47.33	52.07	0	SC	14.1	15.5
<i>Leucrocuta</i>	09020402011	6.00	6.60	1	SC	1.8	2.0
<i>Rhithrogena</i>	09020402013	0.67	0.73	0	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	11.33	35.93	4	SC	3.4	10.7
<i>Maccaffertium luteum</i>	09020402015049	18.33			--	5.5	
<i>Maccaffertium mediopunctatum</i>	09020402015050	1.33			--	0.4	
<i>Maccaffertium modestum</i>	09020402015051	1.67			--	0.5	
<i>Isonychia</i>	09020404018	16.67	19.00	2	CF	5.0	5.6
<i>Isonychia bicolor</i>	09020404018059	0.67			--	0.2	
<i>Isonychia rufa</i>	09020404018062	1.67			--	0.5	
Leptophlebiidae	09020406	3.33	3.33		--	1.0	1.0
Ephemerellidae	09020410	0.33			--	0.1	
<i>Ephemerella</i>	09020410035	11.33	11.63	1	CG	3.4	3.5
<i>Eurylophella</i>	09020410036	1.33	1.37	3	CG	0.4	0.4
<i>Tricorythodes</i>	09020411038	0.33	0.33	4	CG	0.1	0.1
<i>Chimarra</i>	09020601003	2.00	6.33	2	CF	0.6	1.9
<i>Chimarra socia</i>	09020601003004	4.33			--	1.3	
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.1	0.1



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		Actual	Adjusted			Actual	Adjusted
Hydropsychidae	09020604	1.00			--	0.3	
<i>Cheumatopsyche</i>	09020604015	12.33	12.63	5	CF	3.7	3.8
<i>Hydropsyche</i>	09020604016	16.67	29.37	4	CF	5.0	8.7
<i>Hydropsyche bronta</i>	09020604016029	1.67			--	0.5	
<i>Hydropsyche morosa</i>	09020604016030	8.33			--	2.5	
<i>Hydropsyche sparna</i>	09020604016032	2.00			--	0.6	
<i>Rhyacophila</i>	09020605019		0.67	2	PR		0.2
<i>Rhyacophila fuscula</i>	09020605019060	0.67			PR	0.2	
<i>Brachycentrus</i>	09020609043		2.33	0	CF		0.7
<i>Brachycentrus appalachia</i>	09020609043096	2.33			--	0.7	
<i>Lepidostoma</i>	09020611064	4.00	4.00	1	SH	1.2	1.2
<i>Psilotreta</i>	09020614068		0.33	0	SC		0.1
<i>Psilotreta indecisa</i>	09020614068132	0.33			--	0.1	
<i>Helicopsyche</i>	09020616070		0.33	3	SC		0.1
<i>Helicopsyche borealis</i>	09020616070137	0.33			--	0.1	
<i>Mystacides</i>	09020618075		0.67	4	CG		0.2
<i>Mystacides sepulchralis</i>	09020618075147	0.67			--	0.2	
<i>Oecetis</i>	09020618078		1.67	8	PR		0.5
<i>Oecetis persimilis</i>	09020618078157	1.67			--	0.5	
<i>Rheopelopia</i>	09021011017		0.33		PR		0.1
<i>Rheopelopia acra group</i>	09021011017036	0.33			--	0.1	
<i>Cricotopus</i>	09021011037	0.33	0.67	7	SH	0.1	0.2
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.1	
<i>Nanocladius</i>	09021011049		0.33	3	CG		0.1
<i>Nanocladius branchicolus</i>	09021011049091	0.33			--	0.1	
<i>Synorthocladius</i>	09021011061			2	CG		
<i>Tvetenia</i>	09021011065		1.33	5	CG		0.4
<i>Tvetenia vitracies</i>	09021011065113	1.33			--	0.4	
<i>Rheotanytarsus</i>	09021011072	14.67	14.67	6	CF	4.4	4.4
<i>Stempellinella leptocelloides</i>	09021011074001				--		
<i>Microtendipes</i>	09021011094		0.67	6	CF		0.2
<i>Microtendipes rydalensis group</i>	09021011094168	0.67			--	0.2	
<i>Simulium</i>	09021012047	1.00	57.00	4	CF	0.3	16.9
<i>Simulium fibrinflatum</i>	09021012047059	5.00			--	1.5	
<i>Simulium jenningsi</i>	09021012047060				--		
<i>Simulium tuberosum</i>	09021012047067	8.33			--	2.5	
<i>Simulium jenningsi complex</i>	09021012047070	42.67			CF	12.7	
<i>Atherix</i>	09021015055	1.67	1.67	2	PR	0.5	0.5



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<i>Hemerodromia</i>	09021016057	1.67	1.67	3	PR	0.5	0.5
<i>Psephenus</i>	09021108058		1.00	4	SC		0.3
<i>Psephenus herricki</i>	09021108058028	1.00			--	0.3	
<i>Helichus</i>	09021112062		0.33	5	SH		0.1
<i>Helichus basalis</i>	09021112062031	0.33			--	0.1	
Elmidae	09021113	4.00			--	1.2	
<i>Dubiraphia</i>	09021113064	1.00	1.10	6	--	0.3	0.3
<i>Macronychus</i>	09021113065		0.37	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.1	
<i>Promoresia</i>	09021113069		31.78		--		9.5
<i>Promoresia elegans</i>	09021113069051	27.67			--	8.2	
<i>Promoresia tardella</i>	09021113069052	1.33			--	0.4	
<i>Stenelmis</i>	09021113070		12.42	5	SC		3.7
<i>Stenelmis bicarinata</i>	09021113070053	9.00			--	2.7	
<i>Stenelmis concinna</i>	09021113070054	2.00			--	0.6	
<i>Stenelmis mera</i>	09021113070058	0.33			--	0.1	