



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

Station Information

Station Number: S-135 River Basin: Penobscot
Waterbody: Piscataquis River - Station 135 HUC8 Name: Piscataquis
Town: Sangerville Latitude: 45 10 19.13 N
Directions: 0.48 KM BELOW GUILFORD / SANGERVILLE POTW Longitude: 69 20 52.31 W
Stream Order: 4

Sample Information

Log Number: 2257 Type of Sample: ROCK BASKET Date Deployed: 7/10/2014
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/7/2014

Classification Attainment

Statutory Class: B **Final Determination:** A Date: 11/6/2014
Model Result with $P \geq 0.6$: A **Reason for Determination:** Model
Date Last Calculated: 11/6/2014 **Comments:**

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.77	Class A, B, or C	1.00
Class B	0.23	Non-Attainment	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	240.33	18 Relative Abundance Ephemeroptera	0.48
02 Generic Richness	58.00	19 EPT Generic Richness	30.00
03 Plecoptera Mean Abundance	4.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	114.67	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.98	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	18.34
06 Hilsenhoff Biotic Index	4.51	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	14.28
07 Relative Abundance - Chironomidae	0.18	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.28	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	10.34		
11 <i>Cheumatopsyche</i> Abundance	12.92		
12 EPT Generic Richness/ Diptera	1.88		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	4.33		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	4.06		
(Family Functional Group)			
17 Chironomini Abundance (Family	28.43		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tricorythodes</i>	31.07
2	<i>Neureclipsis</i>	11.73
3	<i>Microtendipes</i>	9.29
4	<i>Leucrocuta</i>	5.99
5	<i>Cheumatopsyche</i>	5.38



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Town: Sangerville

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Log Number: 2257

Waterbody: Piscataquis River - Station 135

Date Retrieved: 8/7/2014

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 24.3 deg C
Dissolved Oxygen: 9.4 mg/l
Specific Conductance: 31 uS/cm
Velocity:
pH: 7.13
Wetted Width: 53 m
Bankfull Width: 56 m
Depth: 73 cm

Waterbody Information - Retrieval

Temperature: 22.9 deg C
Dissolved Oxygen: 8.5 mg/l
Specific Conductance: 41 uS/cm
Velocity: 20 cm/s
pH: 6.82
Wetted Width: 50 m
Bankfull Width: 56 m
Depth: 60 cm

Water Chemistry - 8/7/2014

Ammonia As Nitrogen	0.01 mg/l	Nitrate+nitrite As N	0.02 mg/l
Total Phosphorus	10 ug/l	Total Kjeldahl Nitrogen	0.3 mg/l
Total Suspended Solids	<2 mg/l	Dissolved Organic Carbon	3.5 mg/l
Total Dissolved Solids	51 mg/l	Orthophosphate As Phosphorus	1 ug/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Open	Rolling
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Toxic Organics	Below Point Source	Gravel 20 %
	Main Stem	Rubble/Cobble 60 %
		Sand 20 %

Landcover Summary - 2004 Data

Total Area (ac)	172352	High Int. Dev. %	0.1	Water %	2.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.1	Wetland %	2.9	Tilled Agriculture %	0.7
		Low Int. Dev. %	2.9	Upland Woody %	90.6	Grassland %	0.5
		Development %	3.1	Natural %	93.5	Human Altered %	4.5
						Impervious %	0.8

Sample Comments

7/10/14- QUESTIONABLE VELOCITY METER READING.

8/7/14- POSSIBLE PH METER PROBLEMS.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-135

Waterbody: Piscataquis River - Station 135

Town: Sangerville

Log Number: 2257

Subsample Factor: X1

Replicates: 3

Calculated: 11/6/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Perlodidae	09020207	0.33	0.33		--	0.1	0.1
Perlidae	09020209	0.33	0.33		--	0.1	0.1
<i>Acroneuria</i>	09020209042		4.00	0	PR		1.7
<i>Acroneuria lycorias</i>	09020209042125	4.00			--	1.7	
<i>Boyeria</i>	09020301004		0.33	2	PR		0.1
<i>Boyeria grafiana</i>	09020301004011	0.33			--	0.1	
Corduliidae	09020305	0.33	0.33		--	0.1	0.1
<i>Neurocordulia</i>	09020305026	0.33	0.33	2	PR	0.1	0.1
<i>Argia</i>	09020309048	0.33	0.33	7	PR	0.1	0.1
Baetidae	09020401	0.33			--	0.1	
<i>Acerpenna</i>	09020401007		2.45	5	CG		1.0
<i>Acerpenna macdunnoughi</i>	09020401007001	0.33			--	0.1	
<i>Acerpenna pygmaea</i>	09020401007011	2.00			--	0.8	
<i>Labiobaetis</i>	09020401009		1.40		--		0.6
<i>Labiobaetis propinquus</i>	09020401009010	1.33			--	0.6	
<i>Procloeon</i>	09020401010	2.00	2.10		CG	0.8	0.9
<i>Plauditus</i>	09020401012	0.67	0.70		CG	0.3	0.3
<i>Iswaeon</i>	09020401015	0.33	0.35		--	0.1	0.1
Heptageniidae	09020402	0.67			--	0.3	
<i>Leucrocuta</i>	09020402011	14.00	14.39	1	SC	5.8	6.0
<i>Maccaffertium</i>	09020402015	8.00	10.28	4	SC	3.3	4.3
<i>Maccaffertium luteum</i>	09020402015049	2.00			--	0.8	
<i>Isonychia</i>	09020404018	6.00	6.00	2	CF	2.5	2.5
Leptophlebiidae	09020406	0.67	0.67		--	0.3	0.3
<i>Paraleptophlebia</i>	09020406026	0.67	0.67	1	CG	0.3	0.3
<i>Ephemerella</i>	09020410035	1.00	1.00	1	CG	0.4	0.4
<i>Tricorythodes</i>	09020411038	74.67	74.67	4	CG	31.1	31.1
<i>Chimarra</i>	09020601003		1.00	2	CF		0.4
<i>Chimarra obscura</i>	09020601003003	0.33			--	0.1	
<i>Chimarra socia</i>	09020601003004	0.67			--	0.3	
Polycentropodidae	09020603	0.67			--	0.3	
<i>Cernotina</i>	09020603006	3.00	3.06		PR	1.2	1.3
<i>Neureclipsis</i>	09020603008	27.67	28.18	7	CF	11.5	11.7
<i>Nyctiophylax</i>	09020603009		0.34	5	PR		0.1
<i>Nyctiophylax moestus</i>	09020603009013	0.33			--	0.1	
<i>Polycentropus</i>	09020603010	4.67	4.75	6	PR	1.9	2.0
Hydropsychidae	09020604	2.33			--	1.0	
<i>Cheumatopsyche</i>	09020604015	11.67	12.92	5	CF	4.9	5.4



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Town: Sangerville

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Replicates: 3

Calculated: 11/6/2014

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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche</i>	09020604016	5.67	10.34	4	CF	2.4	4.3
<i>Hydropsyche bronta</i>	09020604016029	0.33			--	0.1	
<i>Hydropsyche morosa</i>	09020604016030	2.67			--	1.1	
<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.1	
<i>Hydropsyche placoda</i>	09020604016059	0.33			--	0.1	
<i>Macrostemum</i>	09020604018		0.74	3	CF		0.3
<i>Macrostemum zebratum</i>	09020604018054	0.67			--	0.3	
<i>Rhyacophila</i>	09020605019		0.33	2	PR		0.1
<i>Rhyacophila minor</i>	09020605019063	0.33			PR	0.1	
<i>Protoptila</i>	09020606022		0.67	1	SC		0.3
<i>Protoptila maculata</i>	09020606022071	0.67			--	0.3	
<i>Hydroptila</i>	09020607026	1.00	1.00	6	P	0.4	0.4
<i>Brachycentrus</i>	09020609043		0.33	0	CF		0.1
<i>Brachycentrus appalachia</i>	09020609043096	0.33			--	0.1	
<i>Lepidostoma</i>	09020611064	1.00	1.00	1	SH	0.4	0.4
Leptoceridae	09020618				--		
<i>Ceraclea</i>	09020618072	0.67	0.67	3	CG	0.3	0.3
<i>Oecetis</i>	09020618078	1.33	2.33	8	PR	0.6	1.0
<i>Oecetis avara</i>	09020618078153	0.33			--	0.1	
<i>Oecetis persimilis</i>	09020618078157	0.67			--	0.3	
<i>Nigronia</i>	09020701003		0.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.1	
Chironomidae	09021011	0.67			--	0.3	
<i>Ablabesmyia</i>	09021011001		1.02	8	PR		0.4
<i>Ablabesmyia mallochii</i>	09021011001004	1.00			--	0.4	
<i>Nilotanyus</i>	09021011012		0.68	6	PR		0.3
<i>Nilotanyus fimbriatus</i>	09021011012027	0.67			--	0.3	
<i>Pentaneura</i>	09021011014		0.34	6	PR		0.1
<i>Pentaneura inconspicua</i>	09021011014028	0.33			--	0.1	
<i>Rheopelopia</i>	09021011017	0.67	2.03		PR	0.3	0.8
<i>Rheopelopia acra group</i>	09021011017036	1.33			--	0.6	
<i>Potthastia</i>	09021011026		0.68	2	CG		0.3
<i>Potthastia gaedii</i>	09021011026045	0.67			--	0.3	
<i>Cricotopus</i>	09021011037	0.33	3.05	7	SH	0.1	1.3
<i>Cricotopus bicinctus</i>	09021011037057	2.00			--	0.8	
<i>Cricotopus vierriensis</i>	09021011037071	0.67			--	0.3	
<i>Nanocladius</i>	09021011049		0.68	3	CG		0.3
<i>Nanocladius branchicollis</i>	09021011049091	0.67			--	0.3	



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<i>Tvetenia</i>	09021011065		2.03	5	CG		0.8
<i>Tvetenia vitracies</i>	09021011065113	2.00			--	0.8	
<i>Rheotanytarsus</i>	09021011072		4.06	6	CF		1.7
<i>Rheotanytarsus exiguus</i>	09021011072127	2.67			CF	1.1	
<i>Rheotanytarsus pellucidus</i>	09021011072128	1.33			CF	0.6	
<i>Tanytarsus</i>	09021011076	1.33	1.35	6	CF	0.6	0.6
<i>Microtendipes</i>	09021011094		22.34	6	CF		9.3
<i>Microtendipes rydalensis group</i>	09021011094168	22.00			--	9.2	
<i>Nilothauma</i>	09021011095	0.33	0.34	2	--	0.1	0.1
<i>Paracladopelma</i>	09021011098		0.34	7	--		0.1
<i>Paracladopelma undine</i>	09021011098177	0.33			--	0.1	
<i>Polypedilum</i>	09021011102		5.41	6	SH		2.3
<i>Polypedilum aviceps</i>	09021011102181	0.33			--	0.1	
<i>Polypedilum flavum</i>	09021011102182	4.67			--	1.9	
<i>Polypedilum laetum</i>	09021011102186	0.33			--	0.1	
<i>Simulium</i>	09021012047		1.00	4	CF		0.4
<i>Simulium jenningsi species group</i>	09021012047070	1.00			CF	0.4	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Gyrinus</i>	09021104033	0.33	0.33	2	PR	0.1	0.1
<i>Macronychus</i>	09021113065		0.33	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.1	
<i>Optioservus</i>	09021113067	0.33	0.33	3	SC	0.1	0.1
<i>Promoresia</i>	09021113069		1.00		--		0.4
<i>Promoresia elegans</i>	09021113069051	1.00			--	0.4	
<i>Stenelmis</i>	09021113070		3.33	5	SC		1.4
<i>Stenelmis crenata</i>	09021113070055	3.33			--	1.4	
<i>Helisoma</i>	10010203030		0.33		SC		0.1
<i>Helisoma anceps</i>	10010203030058	0.33			--	0.1	
<i>Ferrissia</i>	10010204035		0.33		SC		0.1
<i>Ferrissia rivularis</i>	10010204035066	0.33			--	0.1	