



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

Station Information

Station Number: S-813 DEP Drainage: Penobscot  
Waterbody: Cove Brook - Station 813 HUC8: 01020005  
Town: Winterport HUC8 Name: Lower Penobscot  
Directions: DOWNSTREAM OF PIPELINE CROSSING Latitude: 44 41 31.64 N  
Longitude: 68 51 4.94 W  
Stream Order: 2

Sample Information

Log Number: 2038 Type of Sample: ROCK BAG Date Deployed: 7/13/2011  
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/15/2011

Classification Attainment

Statutory Class: AA Final Determination: A Date: 9/5/2012  
Model Result with P>.6: A Reason for Determination: Model  
Date Last Calculated: 6/29/2012 Comments:

Model Probabilities

First Stage Model				C or Better Model	
Class A	0.63	Class C	0.02	Class A, B, or C	1.00
Class B	0.35	NA	0.00	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	329.67	18 Relative Abundance Ephemeroptera	0.41
02 Generic Richness	53.00	19 EPT Generic Richness	20.00
03 Plecoptera Mean Abundance	1.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.02
04 Ephemeroptera Mean Abundance	136.33	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.08	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	5.79
06 Hilsenhoff Biotic Index	4.47	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	99.74
07 Relative Abundance - Chironomidae	0.19	28 EP Generic Richness/14	0.71
08 Relative Generic Richness Diptera	0.38	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	3.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	1.00		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family	1.67		
Functional Group)			
16 Tanypodinae Mean Abundance	2.38		
(Family Functional Group)			
17 Chironomini Abundance (Family	43.61		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Maccaffertium</i>	30.25
2	<i>Dubiraphia</i>	7.99
3	<i>Polycentropus</i>	7.87
4	<i>Polypedilum</i>	7.23
5	<i>Lepidostoma</i>	5.56



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature:	19.5 deg C
Dissolved Oxygen:	8.4 mg/l
Specific Conductance:	119 uS/cm
Velocity:	30 cm/s
pH:	7.5
Wetted Width:	5.2 m
Bankfull Width:	6.9 m
Depth:	45 cm

**Waterbody Information - Retrieval**

Temperature:	18.6 deg C
Dissolved Oxygen:	8.6 mg/l
Specific Conductance:	182 uS/cm
Velocity:	30 cm/s
pH:	8.18
Wetted Width:	4.8 m
Bankfull Width:	6.9 m
Depth:	35 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

Landuse Name

Swamp Hardwood

Upland Conifer

Upland Hardwood

Canopy Cover

Partly Open

Terrain

Rolling

Potential Stressor

Location

Above Road Crossing

Substrate

Boulder	65 %
Gravel	5 %
Rubble/Cobble	25 %
Sand	5 %

**Landcover Summary - 2004 Data**

Total Area (ac)	6558	High Int. Dev. %	0.1	Water %	0.2	Non-vegetated %	6.8
		Med Int. Dev. %	0.3	Wetland %	2.8	Tilled Agriculture %	4.2
		Low Int. Dev. %	4.2	Upland Woody %	73.9	Grassland %	7.4
		Development %	4.6	Natural %	76.6	Human Altered %	23.2
						Impervious %	3.4

**Sample Comments**

LOCATION: ABOVE 1A ROAD CROSSING.

FISH OBSERVED DURING RETRIEVAL.



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Subsample Factor: X1

Replicates: 3

Calculated: 6/29/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Erpobdella</i>	08030203002	0.33	0.33		--	0.1	0.1
<i>Agnetina</i>	09020209050		1.67	2	PR		0.5
<i>Agnetina capitata</i>	09020209050152	1.67		2	PR	0.5	
<i>Boyeria</i>	09020301004		4.00	2	PR		1.2
<i>Boyeria vinosa</i>	09020301004012	4.00			--	1.2	
Calopterygidae	09020307	0.33	0.33		--	0.1	0.1
<i>Calopteryx</i>	09020307043		0.33	5	PR		0.1
<i>Calopteryx maculata</i>	09020307043088	0.33			--	0.1	
Baetidae	09020401	0.67			--	0.2	
<i>Baetis</i>	09020401001	0.67	8.97	4	CG	0.2	2.7
<i>Baetis flavistriga</i>	09020401001004	8.00			--	2.4	
<i>Acerpenna</i>	09020401007	3.00	6.21	5	CG	0.9	1.9
<i>Acerpenna macdunnoughi</i>	09020401007001	3.00			--	0.9	
<i>Procloeon</i>	09020401010	4.33	4.49		CG	1.3	1.4
Heptageniidae	09020402	3.33			--	1.0	
<i>Leucrocuta</i>	09020402011	4.67	4.81	1	SC	1.4	1.5
<i>Stenacron</i>	09020402014	3.67	3.78	7	SC	1.1	1.1
<i>Maccaffertium</i>	09020402015	36.33	99.74	4	SC	11.0	30.3
<i>Maccaffertium luteum</i>	09020402015049	60.33			--	18.3	
<i>Ephemerella</i>	09020410035	6.33	6.33	1	CG	1.9	1.9
<i>Eurylophella</i>	09020410036	1.67	1.67	3	CG	0.5	0.5
<i>Serratella</i>	09020410037		0.33	2	CG		0.1
<i>Serratella serratoides</i>	09020410037124	0.33			--	0.1	
Polycentropodidae	09020603	0.33			--	0.1	
<i>Cernotina</i>	09020603006	5.00	5.05		PR	1.5	1.5
<i>Polycentropus</i>	09020603010	25.67	25.95	6	PR	7.8	7.9
Hydropsychidae	09020604				--		
<i>Hydropsyche</i>	09020604016	1.67	3.00	4	CF	0.5	0.9
<i>Hydropsyche slossonae</i>	09020604016031	0.67			--	0.2	
<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.1	
<i>Hydropsyche depravata complex</i>	09020604016041	0.33			CF	0.1	
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.1	0.1
<i>Apatania</i>	09020610061	0.33	0.33		SC	0.1	0.1
<i>Lepidostoma</i>	09020611064	18.33	18.33	1	SH	5.6	5.6
<i>Psilotreta</i>	09020614068	0.33	0.33	0	SC	0.1	0.1
<i>Helicopsyche</i>	09020616070		11.67	3	SC		3.5
<i>Helicopsyche borealis</i>	09020616070137	11.67			--	3.5	
Leptoceridae	09020618				--		



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		Actual	Adjusted			Actual	Adjusted
<i>Mystacides</i>	09020618075		2.00	4	CG		0.6
<i>Mystacides sepulchralis</i>	09020618075147	2.00			--	0.6	
<i>Oecetis</i>	09020618078	0.33	2.33	8	PR	0.1	0.7
<i>Oecetis inconspicua complex</i>	09020618078156	0.33			--	0.1	
<i>Oecetis persimilis</i>	09020618078157	1.67			--	0.5	
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.1	0.1
<i>Antocha</i>	09021001004	0.67	0.67	3	CG	0.2	0.2
Chironomidae	09021011	1.33			--	0.4	
<i>Ablabesmyia</i>	09021011001		1.36	8	PR		0.4
<i>Ablabesmyia mallochii</i>	09021011001004	1.33			--	0.4	
<i>Conchapelopia</i>	09021011004	0.33	0.34	6	PR	0.1	0.1
<i>Paramerina</i>	09021011013	0.33	0.34		--	0.1	0.1
<i>Rheopelopia</i>	09021011017		0.34		PR		0.1
<i>Rheopelopia acra group</i>	09021011017036	0.33			--	0.1	
<i>Cricotopus</i>	09021011037	0.33	1.02	7	SH	0.1	0.3
<i>Cricotopus bicinctus</i>	09021011037057	0.67			--	0.2	
<i>Parametriocnemus</i>	09021011053	2.67	2.73	5	CG	0.8	0.8
<i>Thienemanniella</i>	09021011062	0.33	0.34	6	CG	0.1	0.1
<i>Micropsectra</i>	09021011070	1.00	1.02	7	CG	0.3	0.3
<i>Rheotanytarsus</i>	09021011072	6.00	6.13	6	CF	1.8	1.9
<i>Stempellinella</i>	09021011074		1.02	2	--		0.3
<i>Stempellinella fimbriata</i>	09021011074002	1.00			--	0.3	
<i>Tanytarsus</i>	09021011076	3.33	3.41	6	CF	1.0	1.0
<i>Microtendipes</i>	09021011094		11.58	6	CF		3.5
<i>Microtendipes pedellus group</i>	09021011094166	7.33			--	2.2	
<i>Microtendipes rydalensis group</i>	09021011094168	4.00			--	1.2	
<i>Phaenopsectra</i>	09021011101		7.84	7	SC		2.4
<i>Phaenopsectra obediens</i>	09021011101182	7.67			SC	2.3	
<i>Polypedilum</i>	09021011102		23.85	6	SH		7.2
<i>Polypedilum aviceps</i>	09021011102181	20.00			--	6.1	
<i>Polypedilum scalaenum group</i>	09021011102189	0.67			--	0.2	
<i>Polypedilum albicorne</i>	09021011102195	2.67			--	0.8	
<i>Tribelos</i>	09021011107		0.34	5	CG		0.1
<i>Tribelos jucundum</i>	09021011107198	0.33			--	0.1	
<i>Atherix</i>	09021015055	1.33	1.33	2	PR	0.4	0.4
<i>Hemerodromia</i>	09021016057	1.00	1.00	3	PR	0.3	0.3
<i>Roederiodes</i>	09021016058	1.00	1.00	3	PR	0.3	0.3
<i>Neoporus</i>	09021103033	0.33	0.33		--	0.1	0.1



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<i>Psephenus</i>	09021108058		1.33	4	SC		0.4
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.4	
<i>Dubiraphia</i>	09021113064	26.33	26.33	6	--	8.0	8.0
<i>Promoresia</i>	09021113069		2.00		--		0.6
<i>Promoresia elegans</i>	09021113069051	0.33			--	0.1	
<i>Promoresia tardella</i>	09021113069052	1.67			--	0.5	
<i>Hygrobates</i>	09030102001	0.33	0.33		--	0.1	0.1
<i>Hydrozetes</i>	09030115001	1.00	1.00		--	0.3	0.3
Basommatophora	100102	0.33	0.33		--	0.1	0.1
<i>Stagnicola</i>	10010201025		16.67		--		5.1
<i>Stagnicola catascopium</i>	10010201025041	16.67			--	5.1	
<i>Physa</i>	10010202026	2.67	2.67		SC	0.8	0.8
<i>Helisoma</i>	10010203030		0.33		SC		0.1
<i>Helisoma anceps</i>	10010203030058	0.33			--	0.1	