



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

Station Information

Station Number: S-815	DEP Drainage: Penobscot
Waterbody: Card Brook - Station 815	HUC8: 01020005
Town: Ellsworth	HUC8 Name: Lower Penobscot
Directions: 32 METERS DOWNSTREAM OF RT 230	Latitude: 44 31 51.95 N
	Longitude: 68 25 5.99 W
	Stream Order:

Sample Information

Log Number: 1548	Type of Sample: ROCK BAG	Date Deployed: 7/11/2006
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/8/2006

Classification Attainment

Statutory Class: B	Final Determination: NA	Date:
Model Result with P>.6: NA	Reason for Determination: Model	
Date Last Calculated: 5/3/2007	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.00
Class B	0.00	Non-Attainment	1.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.01
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	477.67	18 Relative Abundance Ephemeroptera	0.03
02 Generic Richness	27.00	19 EPT Generic Richness	6.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	12.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	1.37	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	3.19
06 Hilsenhoff Biotic Index	4.05	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.33
07 Relative Abundance - Chironomidae	0.03	28 EP Generic Richness/14	0.14
08 Relative Generic Richness Diptera	0.41	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	369.48		
11 <i>Cheumatopsyche</i> Abundance	2.85		
12 EPT Generic Richness/ Diptera	0.55		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	0.00		
(Family Functional Group)			
17 Chironomini Abundance (Family	1.03		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	77.35
2	<i>Simulium</i>	12.28
3	<i>Baetis</i>	2.44
4	<i>Prostoma</i>	1.61
5	<i>Stylodrilus</i>	1.33



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Waterbody: Card Brook - Station 815

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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23.6 deg C
Dissolved Oxygen: 8.1 mg/l
Specific Conductance: 282 uS/cm
Velocity: 20 cm/s
pH:
Wetted Width: 7.6 m
Bankfull Width:
Depth: 30 cm

Waterbody Information - Retrieval

Temperature: 22.8 deg C
Dissolved Oxygen: 7.9 mg/l
Specific Conductance: 254 uS/cm
Velocity: 26 cm/s
pH: 7.46
Wetted Width: 6 m
Bankfull Width:
Depth: 30 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	0.03 mg/l	Soluble Reactive Phosphorus	3 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.031 mg/l
Total Kjeldahl Nitrogen	0.8 mg/l	Total Suspended Solids	5 mg/l
Dissolved Organic Carbon	19 mg/l	Total Dissolved Solids	170 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Canopy Dense	Rolling Terrain
Urban		

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Below Urban NPS	Boulder 70 %
		Gravel 5 %
		Rubble/Cobble 20 %
		Sand 5 %

Landcover Summary - 2004 Data

Sample Comments



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

Station Number: S-815

Waterbody: Card Brook - Station 815

Town: Ellsworth

Log Number: 1548

Subsample Factor: X1

Replicates: 3

Calculated: 5/3/2007

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Prostoma</i>	04010101001	7.67	7.67		--	1.6	1.6
<i>Nais</i>	08020202009		0.67		CG		0.1
<i>Nais communis</i>	08020202009005	0.67			--	0.1	
<i>Stylodrilus</i>	08020203011		6.33		--		1.3
<i>Stylodrilus heringianus</i>	08020203011001	6.33			--	1.3	
<i>Boyeria</i>	09020301004		0.67	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	0.67			--	0.1	
<i>Baetis</i>	09020401001	8.00	11.67	4	CG	1.7	2.4
<i>Baetis pluto</i>	09020401001009	3.67			--	0.8	
<i>Maccaffertium</i>	09020402015		0.33	4	SC		0.1
<i>Maccaffertium luteum</i>	09020402015049	0.33			--	0.1	
<i>Chimarra</i>	09020601003	2.00	2.00	2	CF	0.4	0.4
Hydropsychidae	09020604	67.33			--	14.1	
<i>Cheumatopsyche</i>	09020604015	2.33	2.85	5	CF	0.5	0.6
<i>Hydropsyche</i>	09020604016	240.67	369.48	4	CF	50.4	77.4
<i>Hydropsyche morosa</i>	09020604016030	1.67			--	0.3	
<i>Hydropsyche depravata-complex</i>	09020604016041	60.33			CF	12.6	
<i>Glossosoma</i>	09020606020	1.00	1.00	0	SC	0.2	0.2
<i>Tipula</i>	09021001002	1.00	1.00	4	SH	0.2	0.2
Chironomidae	09021011	0.33			--	0.1	
<i>Brillia</i>	09021011033		0.68	5	SH		0.1
<i>Brillia flavifrons</i>	09021011033049	0.67			--	0.1	
<i>Cardiocladius</i>	09021011034	0.33	0.34	5	PR	0.1	0.1
<i>Cricotopus</i>	09021011037		0.34	7	SH		0.1
<i>Cricotopus trifascia</i>	09021011037070	0.33			--	0.1	
<i>Eukiefferiella</i>	09021011041		3.42	8	CG		0.7
<i>Eukiefferiella claripennis-grp.</i>	09021011041075	3.33			--	0.7	
<i>Parametriocnemus</i>	09021011053	0.67	0.68	5	CG	0.1	0.1
<i>Thienemanniella</i>	09021011062		0.34	6	CG		0.1
<i>Thienemanniella xena</i>	09021011062110	0.33			--	0.1	
<i>Tvetenia</i>	09021011065		0.68	5	CG		0.1
<i>Tvetenia paucunca</i>	09021011065114	0.67			--	0.1	
<i>Rheotanytarsus</i>	09021011072	5.67	5.81	6	CF	1.2	1.2
<i>Polypedilum</i>	09021011102		1.03	6	SH		0.2
<i>Polypedilum aviceps</i>	09021011102181	0.67			--	0.1	
<i>Polypedilum flavum</i>	09021011102182	0.33			--	0.1	
<i>Simulium</i>	09021012047	45.67	58.67	4	CF	9.6	12.3
<i>Simulium tuberosum</i>	09021012047067	13.00			--	2.7	
<i>Anacaena</i>	09021105041	0.33	0.33		--	0.1	0.1
<i>Stenelmis</i>	09021113070		0.33	5	SC		0.1
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.1	
<i>Lebertia</i>	09030105001	0.33	0.33		--	0.1	0.1



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<i>Fossaria</i>	10010201021	0.33	0.33		--	0.1	0.1
<i>Planorbella</i>	10010203032		0.33		SC		0.1
<i>Planorbella campanulata</i>	10010203032060	0.33			--	0.1	
<i>Ferrissia</i>	10010204035	0.33	0.33		SC	0.1	0.1