



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

Station Information

Station Number: S-814
Waterbody: Card Brook - Station 814
Town: Ellsworth
Directions: UPSTREAM OF RT 3 - TRAILOR PARK

DEP Drainage: Penobscot
HUC8: 01020005
HUC8 Name: Lower Penobscot
Latitude: 44 32 1.91 N
Longitude: 68 24 28.67 W
Stream Order: 3

Sample Information

Log Number: 2028
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/11/2011
Date Retrieved: 8/10/2011

Classification Attainment

Statutory Class: B
Model Result with P>.6: NA
Date Last Calculated: 2/27/2012
Final Determination: NA
Reason for Determination: Model
Comments:

Date: 2/29/2012

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.01	Class A, B, or C	0.02
Class B	0.02	Non-Attainment	0.98
Class C			
0.58			
NA			
0.39			
B or Better Model		A Model	
Class A or B	0.00	Class A	0.00
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	1.00

Model Variables

01 Total Mean Abundance	150.67	18 Relative Abundance Ephemeroptera	0.02
02 Generic Richness	34.00	19 EPT Generic Richness	11.00
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	2.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.76	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	21.27
06 Hilsenhoff Biotic Index	4.64	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.30	28 EP Generic Richness/14	0.14
08 Relative Generic Richness Diptera	0.18	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	11.42		
11 <i>Cheumatopsyche</i> Abundance	19.58		
12 EPT Generic Richness/ Diptera	1.83		
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	2.71		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	26.72
2	<i>Chimarra</i>	13.27
3	<i>Cheumatopsyche</i>	12.99
4	<i>Hydropsyche</i>	7.58
5	<i>Stenelmis</i>	4.87



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Date Retrieved: 8/10/2011

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23.9 deg C
Dissolved Oxygen: 5.7 mg/l
Specific Conductance: 192 uS/cm
Velocity: 31 cm/s
pH: 6.16
Wetted Width: 4.2 m
Bankfull Width: 4.2 m
Depth: 30 cm

Waterbody Information - Retrieval

Temperature: 18.7 deg C
Dissolved Oxygen: 5.3 mg/l
Specific Conductance: 226 uS/cm
Velocity: 22 cm/s
pH: 6.43
Wetted Width: 4.2 m
Bankfull Width: 4.2 m
Depth: 35 cm

Water Chemistry - 8/10/2011

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	4 ug/l
Nitrate+nitrite As N	0.01 mg/l	Total Phosphorus	0.024 mg/l
Total Kjeldahl Nitrogen	0.7 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	8.9 mg/l	Total Dissolved Solids	160 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Partly Open	Rolling
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Below Wetland	Below Urban NPS	Boulder 65 %
Bog Headwaters	Below Wetland	Gravel 5 %
Low Do		Rubble/Cobble 25 %
Urban Runoff		Sand 5 %

Landcover Summary - 2004 Data

Total Area (ac)	3889	High Int. Dev. %	2.9	Water %	0.0	Non-vegetated %	2.5
		Med Int. Dev. %	4.0	Wetland %	15.9	Tilled Agriculture %	5.4
		Low Int. Dev. %	7.4	Upland Woody %	55.5	Grassland %	4.4
		Development %	14.3	Natural %	71.5	Human Altered %	28.5
						Impervious %	6.2

Sample Comments

BELOW URBAN NPS: ABOVE MOST OF URBAN ELLSWORTH, BUT THERE ARE STILL SOME IMPACTS AT THIS LOCATION. URBAN NPS POTENTIAL STRESSOR: CAR WASH PROPERTY.
7/11/11: MACROPHYTES OBSERVED.
8/10/11: MACROPHYTES OBSERVED.



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

Station Number: S-814

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Subsample Factor: X1

Replicates: 3

Calculated: 2/27/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Turbellaria	0301	1.33	1.33		--	0.9	0.9
<i>Prostoma</i>	04010101001	4.33	4.33		--	2.9	2.9
Enchytraeidae	08020201	0.67	0.67		--	0.4	0.4
Lumbricidae	08020205	0.33	0.33		--	0.2	0.2
<i>Erpobdella</i>	08030203002	0.67	0.67		--	0.4	0.4
<i>Boyeria</i>	09020301004		1.00	2	PR		0.7
<i>Boyeria vinosa</i>	09020301004012	1.00			--	0.7	
<i>Cordulegaster</i>	09020303019	0.33	0.33	3	PR	0.2	0.2
Calopterygidae	09020307	2.33	2.33		--	1.5	1.5
Baetidae	09020401	0.33			--	0.2	
<i>Baetis</i>	09020401001	0.67	1.52	4	CG	0.4	1.0
<i>Baetis brunneicolor</i>	09020401001003	0.67			--	0.4	
<i>Acerpenna</i>	09020401007	0.67	1.14	5	CG	0.4	0.8
<i>Acerpenna pygmaea</i>	09020401007011	0.33			--	0.2	
Philopotamidae	09020601	0.33	0.33		--	0.2	0.2
<i>Chimarra</i>	09020601003	9.67	20.00	2	CF	6.4	13.3
<i>Chimarra aterrima</i>	09020601003002	10.33			--	6.9	
<i>Neureclipsis</i>	09020603008	0.33	0.33	7	CF	0.2	0.2
<i>Polycentropus</i>	09020603010	5.33	5.33	6	PR	3.5	3.5
Hydropsychidae	09020604	5.67			--	3.8	
<i>Cheumatopsyche</i>	09020604015	16.00	19.58	5	CF	10.6	13.0
<i>Hydropsyche</i>	09020604016	6.00	11.42	4	CF	4.0	7.6
<i>Hydropsyche depravata complex</i>	09020604016041	3.33			CF	2.2	
<i>Hydroptila</i>	09020607026	0.33	0.33	6	P	0.2	0.2
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.2	0.2
<i>Oecetis</i>	09020618078		0.33	8	PR		0.2
<i>Oecetis persimilis</i>	09020618078157	0.33			--	0.2	
<i>Nigronia</i>	09020701003		2.67	0	PR		1.8
<i>Nigronia serricornis</i>	09020701003003	2.67			--	1.8	
<i>Synclita</i>	09020901007	0.33	0.33		SH	0.2	0.2
Chironomidae	09021011	0.67			--	0.4	
<i>Labrundinia</i>	09021011008			7	PR		
<i>Cricotopus</i>	09021011037		1.69	7	SH		1.1
<i>Cricotopus bicinctus</i>	09021011037057	1.67			--	1.1	
<i>Nanocladius</i>	09021011049			3	CG		
<i>Tvetenia</i>	09021011065		1.01	5	CG		0.7
<i>Tvetenia vitracies</i>	09021011065113	0.67			--	0.4	
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.2	



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<i>Rheotanytarsus</i>	09021011072	39.67	40.25	6	CF	26.3	26.7
<i>Polypedilum</i>	09021011102		2.71	6	SH		1.8
<i>Polypedilum flavum</i>	09021011102182	2.33			--	1.5	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.2	
<i>Simulium</i>	09021012047	1.33	7.00	4	CF	0.9	4.6
<i>Simulium (Eusimulium)</i>	09021012047052	4.00			--	2.7	
<i>Simulium venustum/verecundum complex</i>	09021012047072	1.67			CF	1.1	
Empididae	09021016			6	--		
<i>Hemerodromia</i>	09021016057	1.00	1.00	3	PR	0.7	0.7
Elmidae	09021113	0.33	0.33		--	0.2	0.2
<i>Stenelmis</i>	09021113070	4.33	7.33	5	SC	2.9	4.9
<i>Stenelmis crenata</i>	09021113070055	3.00			--	2.0	
<i>Amnicola</i>	10010104013		6.67		SC		4.4
<i>Amnicola limosa</i>	10010104013018	6.67			--	4.4	
Basommatophora	100102	2.00	2.00		--	1.3	1.3
<i>Physa</i>	10010202026	2.67	4.00		SC	1.8	2.7
<i>Physa gyrina</i>	10010202026046	1.33			--	0.9	
<i>Aplexa</i>	10010202028		0.33		--		0.2
<i>Aplexa hypnorum</i>	10010202028054	0.33			--	0.2	
<i>Gyraulus</i>	10010203029		1.00		SC		0.7
<i>Gyraulus parvus</i>	10010203029057	1.00			--	0.7	
<i>Helisoma</i>	10010203030		0.67		SC		0.4
<i>Helisoma anceps</i>	10010203030058	0.67			--	0.4	