



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

Station Information

Station Number: S-815	River Basin: Maine Coastal
Waterbody: Card Brook - Station 815	HUC8 Name: Maine Coastal
Town: Ellsworth	Latitude: 44 31 51.95 N
Directions: 32 METERS DOWNSTREAM OF RT 230	Longitude: 68 25 5.99 W
	Stream Order: 3

Sample Information

Log Number: 2839	Type of Sample: ROCK BAG	Date Deployed: 7/27/2020
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/24/2020

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 3/17/2021
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 2/16/2021	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.42	Class A, B, or C	1.00
Class B	0.44	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.76
Class A or B	0.93	Class B or C or Non-Attainment	0.24
Class C or Non-Attainment	0.07		

Model Variables

01 Total Mean Abundance	222.33	18 Relative Abundance Ephemeroptera	0.08
02 Generic Richness	34.00	19 EPT Generic Richness	12.00
03 Plecoptera Mean Abundance	0.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	18.00	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	3.38	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	5.67
06 Hilsenhoff Biotic Index	4.07	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.15	28 EP Generic Richness/14	0.21
08 Relative Generic Richness Diptera	0.21	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	78.00		
11 <i>Cheumatopsyche</i> Abundance	3.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.71		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.33		
17 Chironomini Abundance (Family Functional Group)	0.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	35.08
2	<i>Rheotanytarsus</i>	13.34
3	<i>Ferrissia</i>	12.14
4	<i>Baetis</i>	7.95
5	<i>Gammarus</i>	3.75



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: ECOANALYSTS IDAHO

Waterbody Information - Deployment

Temperature: 24 deg C
Dissolved Oxygen: 8.82 mg/l
Dissolved Oxygen Saturation: 105.3 %
Specific Conductance: 469 uS/cm
Velocity:
pH: 7.64
Wetted Width: 6.4 m
Bankfull Width: 8 m
Depth:

Waterbody Information - Retrieval

Temperature: 19.8 deg C
Dissolved Oxygen:
Dissolved Oxygen Saturation: 107.8 %
Specific Conductance: 962 uS/cm
Velocity: 26.4 cm/s
pH: 7.73
Wetted Width: 6.2 m
Bankfull Width: 8 m
Depth: 23 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Dense	Rolling	
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Urban Runoff	Below Road Crossing	Boulder	30 %
	Below Urban NPS	Gravel	20 %
		Rubble/Cobble	448 %
		Sand	2 %

Landcover Summary - 2004 Data

Total Area (ac)	4539	High Int. Dev. %	5.9	Water %	0.0	Non-vegetated %	2.2
		Med Int. Dev. %	4.0	Wetland %	13.8	Tilled Agriculture %	4.7
		Low Int. Dev. %	7.4	Upland Woody %	54.8	Grassland %	3.9
		Development %	17.4	Natural %	68.7	Human Altered %	31.2
						Impervious %	9.6

Sample Comments

GREEN FROG AND SNAPPING TURTLE OBSERVED.
WHITE SUCKER, FALLFISH, GOLDEN SHINER, AND EEL OBSERVED



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: 2839

Subsample Factor: X1

Replicates: 3

Calculated: 2/16/2021

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
Platyhelminthes	03	4.33	4.33		--	1.9	1.9
<i>Prostoma</i>	04010101001	1.00	1.00		--	0.4	0.4
<i>Nais</i>	08020202009	0.67	0.67		CG	0.3	0.3
<i>Gammarus</i>	09010201003	8.33	8.33	4	--	3.7	3.7
<i>Paragnetina</i>	09020209049	0.33	0.33	1	PR	0.1	0.1
<i>Boyeria</i>	09020301004		6.00	2	PR		2.7
<i>Boyeria vinosa</i>	09020301004012	6.00			--	2.7	
<i>Baetis</i>	09020401001		17.67	4	CG		7.9
<i>Baetis flavistriga</i>	09020401001004	1.00			--	0.4	
<i>Baetis pluto</i>	09020401001009	16.67			--	7.5	
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.1	0.1
<i>Chimarra</i>	09020601003		7.67	2	CF		3.4
<i>Chimarra aterrima</i>	09020601003002	7.67			--	3.4	
<i>Polycentropus</i>	09020603010	2.67	2.67	6	PR	1.2	1.2
<i>Cheumatopsyche</i>	09020604015	3.67	3.67	5	CF	1.6	1.6
<i>Hydropsyche</i>	09020604016		78.00	4	CF		35.1
<i>Hydropsyche morosa</i>	09020604016030	2.67			--	1.2	
<i>Hydropsyche betteni</i>	09020604016037	75.33			--	33.9	
<i>Rhyacophila</i>	09020605019		1.00	2	PR		0.4
<i>Rhyacophila fuscula</i>	09020605019060	1.00			PR	0.4	
<i>Glossosoma</i>	09020606020	6.67	6.67	0	SC	3.0	3.0
<i>Hydroptila</i>	09020607026	0.33	0.33	6	P	0.1	0.1
<i>Lepidostoma</i>	09020611064	3.67	3.67	1	SH	1.6	1.6
<i>Apatania</i>	09020619061	0.33	0.33		SC	0.1	0.1
Lepidoptera	090209	0.33	0.33		--	0.1	0.1
<i>Labrundinia</i>	09021011008	0.33	0.33	7	PR	0.1	0.1
<i>Cricotopus</i>	09021011037	0.33	2.00	7	SH	0.1	0.9
<i>Cricotopus bicinctus</i>	09021011037057	1.67			--	0.7	
<i>Eukiefferiella</i>	09021011041		0.67	8	CG		0.3
<i>Eukiefferiella discoloripes</i>	09021011041085	0.67			--	0.3	
<i>Thienemanniella</i>	09021011062	0.33	0.33	6	CG	0.1	0.1
<i>Rheotanytarsus</i>	09021011072		29.67	6	CF		13.3
<i>Rheotanytarsus exiguus group</i>	09021011072127	5.67			CF	2.5	
<i>Rheotanytarsus pellucidus</i>	09021011072128	24.00			CF	10.8	
<i>Microtendipes</i>	09021011094		0.33	6	CF		0.1
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.1	
<i>Simulium</i>	09021012047	0.33	0.33	4	CF	0.1	0.1



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		Actual	Adjusted			Actual	Adjusted
		<i>Haliplus</i>	09021101001			0.33	0.33
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	0.1	0.1
<i>Optioservus</i>	09021113067		1.33	3	SC		0.6
<i>Optioservus tardella</i>	09021113067052	1.33			--	0.6	
<i>Stenelmis</i>	09021113070	2.00	2.00	5	SC	0.9	0.9
<i>Sperchon</i>	09030107001	0.33	0.33		--	0.1	0.1
<i>Amnicola</i>	10010104013	7.00	7.00		SC	3.1	3.1
<i>Physella</i>	10010202027	7.00	7.00		SC	3.1	3.1
<i>Planorbula</i>	10010203033		0.33		SC		0.1
<i>Planorbula armigera</i>	10010203033062	0.33			--	0.1	
<i>Ferrissia</i>	10010204035	27.00	27.00		SC	12.1	12.1