



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

Station Information

Station Number: S-81
Waterbody: Narraguagus River - Station 81
Town: Cherryfield
Directions: 212M DOWNSTREAM OF NORTH STREET BRIDGE

DEP Drainage: St. Croix - Coastal
HUC8: 01050002
HUC8 Name: Maine Coastal
Latitude: 44 36 19.05 N
Longitude: 67 55 39.39 W
Stream Order: 5

Sample Information

Log Number: 2058
Subsample Factor: X4

Type of Sample: ROCK BAG
Replicates: 3

Date Deployed: 7/26/2011
Date Retrieved: 8/25/2011

Classification Attainment

Statutory Class: B
Model Result with P>.6: A
Date Last Calculated: 1/24/2012

Final Determination: A
Reason for Determination: Model
Comments:

Date: 1/27/2012

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.30	Class A, B, or C	1.00
Class B	0.64	Non-Attainment	0.00

B or Better Model		A Model	
Class A or B	1.00	Class A	0.86
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.14

Model Variables

01 Total Mean Abundance	797.33	18 Relative Abundance Ephemeroptera	0.15
02 Generic Richness	34.00	19 EPT Generic Richness	21.00
03 Plecoptera Mean Abundance	5.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	117.33	23 Relative Generic Richness- Plecoptera	0.06
05 Shannon-Wiener Generic Diversity	2.82	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	78.25
06 Hilsenhoff Biotic Index	3.89	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	49.74
07 Relative Abundance - Chironomidae	0.07	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.21	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	405.82		
11 <i>Cheumatopsyche</i> Abundance	76.85		
12 EPT Generic Richness/ Diptera	3.00		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	5.33		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	0.00		
(Family Functional Group)			
17 Chironomini Abundance (Family	29.37		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	50.90
2	<i>Cheumatopsyche</i>	9.64
3	<i>Simulium</i>	7.36
4	<i>Maccaffertium</i>	6.07
5	<i>Chimarra</i>	5.85



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23.9 deg C
Dissolved Oxygen: 8.1 mg/l
Specific Conductance: 26 uS/cm
Velocity: 52 cm/s
pH: 6.97
Wetted Width: 48 m
Bankfull Width: 48 m
Depth: 40 cm

Waterbody Information - Retrieval

Temperature: 21.6 deg C
Dissolved Oxygen: 8.5 mg/l
Specific Conductance: 23 uS/cm
Velocity: 78 cm/s
pH: 6.99
Wetted Width: 48 m
Bankfull Width: 48 m
Depth: 54 cm

Water Chemistry - 8/25/2011

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	<0.01 mg/l	Total Phosphorus	0.016 mg/l
Total Kjeldahl Nitrogen	0.5 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	6.7 mg/l	Total Dissolved Solids	42 mg/l

Summary of Habitat Characteristics

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

<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Below Agriculture NPS	Boulder 90 %
	Below Road Crossing	Gravel 5 %
	Main Stem	Sand 5 %

Landcover Summary - 2004 Data

Total Area (ac)	146759	High Int. Dev. %	0.1	Water %	2.3	Non-vegetated %	0.4
		Med Int. Dev. %	0.1	Wetland %	12.1	Tilled Agriculture %	0.2
		Low Int. Dev. %	0.6	Upland Woody %	84.0	Grassland %	0.6
		Development %	0.8	Natural %	90.5	Human Altered %	7.2
						Impervious %	0.6

Sample Comments

8/25/11: FOAM OBSERVED.

LAND USE: URBAN IS URBAN/RESIDENTIAL. SITE IS BELOW WYMAN'S BLUEBERRY PROCESSING PLANT. 7/26/11: MACROPHYTES AND FOAM OBSERVED. WATER VERY DARK.



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

Station Number: S-81

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Subsample Factor: X4

Replicates: 3

Calculated: 1/24/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Acroneuria</i>	09020209042		1.33	0	PR		0.2
<i>Acroneuria abnormis</i>	09020209042121	1.33		0	PR	0.2	
<i>Paragnetina</i>	09020209049	2.67	4.00	1	PR	0.3	0.5
<i>Paragnetina immarginata</i>	09020209049149	1.33			--	0.2	
<i>Boyeria</i>	09020301004		1.33	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.2	
Corduliidae	09020305	1.33	1.33		--	0.2	0.2
Calopterygidae	09020307	1.33	1.33		--	0.2	0.2
Baetidae	09020401	5.33			--	0.7	
<i>Baetis</i>	09020401001	1.33	23.06	4	CG	0.2	2.9
<i>Baetis brunneicolor</i>	09020401001003	14.67			--	1.8	
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.2	
<i>Baetis intercalaris</i>	09020401001008	1.33			--	0.2	
<i>Heterocloeon</i>	09020401005		1.65	2	SC		0.2
<i>Heterocloeon curiosum</i>	09020401005020	1.33			--	0.2	
<i>Plauditus</i>	09020401012	2.67	3.29		CG	0.3	0.4
Heptageniidae	09020402	5.33			--	0.7	
<i>Epeorus</i>	09020402009	29.33	31.32	0	SC	3.7	3.9
<i>Leucrocuta</i>	09020402011	4.00	4.27	1	SC	0.5	0.5
<i>Maccaffertium</i>	09020402015	18.67	48.41	4	SC	2.3	6.1
<i>Maccaffertium luteum</i>	09020402015049	17.33			--	2.2	
<i>Maccaffertium modestum</i>	09020402015051	9.33			--	1.2	
<i>Isonychia</i>	09020404018		1.33	2	CF		0.2
<i>Isonychia bicolor</i>	09020404018059	1.33			--	0.2	
<i>Ephemerella</i>	09020410035	1.33	1.33	1	CG	0.2	0.2
<i>Serratella</i>	09020410037		1.33	2	CG		0.2
<i>Serratella serratoides</i>	09020410037124	1.33			--	0.2	
<i>Tricorythodes</i>	09020411038	1.33	1.33	4	CG	0.2	0.2
<i>Chimarra</i>	09020601003	4.00	46.67	2	CF	0.5	5.9
<i>Chimarra aterrima</i>	09020601003002	12.00			--	1.5	
<i>Chimarra obscura</i>	09020601003003	16.00			--	2.0	
<i>Chimarra socia</i>	09020601003004	14.67			--	1.8	
Polycentropodidae	09020603	1.33	1.33		--	0.2	0.2
<i>Neureclipsis</i>	09020603008	2.67	2.67	7	CF	0.3	0.3
Hydropsychidae	09020604	5.33			--	0.7	
<i>Cheumatopsyche</i>	09020604015	76.00	76.85	5	CF	9.5	9.6
<i>Hydropsyche</i>	09020604016	138.67	405.82	4	CF	17.4	50.9
<i>Hydropsyche bronta</i>	09020604016029	17.33			--	2.2	



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche morosa</i>	09020604016030	12.00			--	1.5	
<i>Hydropsyche sparna</i>	09020604016032	218.67			--	27.4	
<i>Hydropsyche depravata complex</i>	09020604016041	14.67			CF	1.8	
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.2	0.2
<i>Brachycentrus</i>	09020609043		2.67	0	CF		0.3
<i>Brachycentrus numerosus</i>	09020609043098	2.67			--	0.3	
<i>Lepidostoma</i>	09020611064	4.00	4.00	1	SH	0.5	0.5
<i>Oecetis</i>	09020618078		1.33	8	PR		0.2
<i>Oecetis persimilis</i>	09020618078157	1.33			--	0.2	
<i>Nigronia</i>	09020701003		1.33	0	PR		0.2
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.2	
Chironomidae	09021011	2.67			--	0.3	
<i>Corynoneura</i>	09021011036	2.67	2.80	7	CG	0.3	0.4
<i>Cricotopus</i>	09021011037		1.40	7	SH		0.2
<i>Cricotopus bicinctus</i>	09021011037057	1.33			--	0.2	
<i>Nanocladius</i>	09021011049	1.33	1.40	3	CG	0.2	0.2
<i>Tvetenia</i>	09021011065		5.59	5	CG		0.7
<i>Tvetenia vitracies</i>	09021011065113	4.00			--	0.5	
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.2	
<i>Rheotanytarsus</i>	09021011072	16.00	16.78	6	CF	2.0	2.1
<i>Polypedilum</i>	09021011102		29.37	6	SH		3.7
<i>Polypedilum flavum</i>	09021011102182	28.00			--	3.5	
<i>Simulium</i>	09021012047		58.67	4	CF		7.4
<i>Simulium fibrinflatum</i>	09021012047059	24.00			--	3.0	
<i>Simulium jenningsi</i>	09021012047060	1.33			--	0.2	
<i>Simulium tuberosum</i>	09021012047067	4.00			--	0.5	
<i>Simulium jenningsi complex</i>	09021012047070	29.33			CF	3.7	
Elmidae	09021113	1.33			--	0.2	
<i>Promoresia</i>	09021113069		7.62		--		1.0
<i>Promoresia elegans</i>	09021113069051	6.67			--	0.8	
<i>Stenelmis</i>	09021113070	2.67	3.05	5	SC	0.3	0.4