



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

**Station Information**

<b>Station Number:</b> S-81	River Basin:	Maine Coastal
Waterbody: Narraguagus River - Station 81	HUC8 Name:	Maine Coastal
Town: Cherryfield	Latitude:	44 36 19.05 N
Directions: 212M DOWNSTREAM OF NORTH STREET BRIDGE	Longitude:	67 55 39.39 W
	Stream Order:	5

**Sample Information**

<b>Log Number:</b> 2884	Type of Sample: ROCK BASKET	Date Deployed: 7/26/2021
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/24/2021

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> A	Date: 1/13/2023
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 4/20/2022	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.70	Class C	0.00
Class B	0.30	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

**Model Variables**

01 Total Mean Abundance	582.33	18 Relative Abundance Ephemeroptera	0.30
02 Generic Richness	46.00	19 EPT Generic Richness	28.00
03 Plecoptera Mean Abundance	17.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	177.33	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	3.71	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	53.24
06 Hilsenhoff Biotic Index	3.75	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	42.33
07 Relative Abundance - Chironomidae	0.14	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.28	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	167.75		
11 <i>Cheumatopsyche</i> Abundance	37.58		
12 EPT Generic Richness/ Diptera Generic Richness	2.15		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	17.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.67		
17 Chironomini Abundance (Family Functional Group)	32.33		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	28.81
2	<i>Baetis</i>	10.42
3	<i>Simulium</i>	10.36
4	<i>Maccaffertium</i>	6.87
5	<i>Cheumatopsyche</i>	6.45



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**Log Number: 2884**      Waterbody: Narraguagus River - Station 81      Date Retrieved: 8/24/2021

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature:                      23.5 deg C  
Dissolved Oxygen:                9.81 mg/l  
Dissolved Oxygen Saturation:    116.1 %  
Specific Conductance:            36.4 uS/cm  
Velocity:                          35.56 cm/s  
pH:                                 6.15  
Wetted Width:                    47 m  
Bankfull Width:                  54 m  
Depth:                              33 cm

**Waterbody Information - Retrieval**

Temperature:                      24.9 deg C  
Dissolved Oxygen:                9.64 mg/l  
Dissolved Oxygen Saturation:    116.5 %  
Specific Conductance:            40.3 uS/cm  
Velocity:                          25.4 cm/s  
pH:                                 6.15  
Wetted Width:                    48 m  
Bankfull Width:                  54 m  
Depth:                              35 cm

**Water Chemistry - 7/26/2021**

Nitrate + Nitrite As Nitrogen	0.02 mg/l	Nitrate As Nitrogen	0.02 mg/l
Nitrite As Nitrogen	mg/l	Orthophosphate As Phosphorus	1 ug/l
Total Alkalinity	12.5 mg/l	Total Kjeldahl Nitrogen (organic A	0.4 mg/l
Total Phosphorus Mixed Forms (po	24 ug/l		

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Urban	Open	Flat	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Chloride	Above Road Crossing	Bedrock	5 %
Nps Pollution	Above Town	Boulder	68 %
Pesticides	Below Agriculture NPS	Gravel	10 %
	Below Road Crossing	Rubble/Cobble	12 %
		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
Total Land (ac)    143373	High Int. Dev. %	0.1	Water %	N/A	Non-vegetated %	N/A
	Med Int. Dev. %	0.1	Wetland %	12.4	Tilled Agriculture %	0.2
	Low Int. Dev. %	0.6	Upland Woody %	86.0	Grassland %	0.6
	Development %	0.8	Natural %	92.6	Human Altered %	7.4
					Impervious %	0.6

**Sample Comments**





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Town: Cherryfield

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Subsample Factor: X1

Replicates: 3

Calculated: 4/20/2022

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009	1.00	1.00		CG	0.2	0.2
<i>Acroneuria</i>	09020209042		2.33	0	PR		0.4
<i>Acroneuria abnormis</i>	09020209042121	2.33		0	PR	0.4	
<i>Paragnetina</i>	09020209049	8.67	15.00	1	PR	1.5	2.6
<i>Paragnetina immarginata</i>	09020209049149	2.33			--	0.4	
<i>Paragnetina media</i>	09020209049151	4.00			--	0.7	
<i>Hagenius</i>	09020302008		0.33	1	PR		0.1
<i>Hagenius brevistylus</i>	09020302008015	0.33			PR	0.1	
<i>Baetis</i>	09020401001	10.33	60.67	4	CG	1.8	10.4
<i>Baetis flavistriga</i>	09020401001004	4.33			--	0.7	
<i>Baetis intercalaris</i>	09020401001008	17.00			--	2.9	
<i>Baetis pluto</i>	09020401001009	29.00			--	5.0	
<i>Heterocloeon</i>	09020401005	4.33	4.33	2	SC	0.7	0.7
<i>Acerpenna</i>	09020401007		0.33	5	CG		0.1
<i>Acerpenna pygmaea</i>	09020401007011	0.33			--	0.1	
<i>Iswaeon</i>	09020401015	0.67	0.67		--	0.1	0.1
<i>Epeorus</i>	09020402009	21.33	22.00	0	SC	3.7	3.8
<i>Epeorus vitreus</i>	09020402009033	0.67			--	0.1	
<i>Leucrocuta</i>	09020402011	20.00	20.00	1	SC	3.4	3.4
<i>Rhithrogena</i>	09020402013	1.00	1.00	0	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	29.67	40.00	4	SC	5.1	6.9
<i>Maccaffertium vicarium</i>	09020402015055	10.33			--	1.8	
<i>Ephemerella</i>	09020410035	23.67	23.67	1	CG	4.1	4.1
<i>Serratella</i>	09020410037		0.33	2	CG		0.1
<i>Serratella serratoides</i>	09020410037124	0.33			--	0.1	
<i>Teloganopsis</i>	09020410041	4.00	4.00		--	0.7	0.7
<i>Tricorythodes</i>	09020411038	0.33	0.33	4	CG	0.1	0.1
Philopotamidae	09020601	0.33	0.33		--	0.1	0.1
<i>Chimarra</i>	09020601003		25.67	2	CF		4.4
<i>Chimarra aterrima</i>	09020601003002	14.67			--	2.5	
<i>Chimarra obscura</i>	09020601003003	11.00			--	1.9	
Polycentropodidae	09020603	1.00			--	0.2	
<i>Neureclipsis</i>	09020603008	5.33	6.27	7	CF	0.9	1.1
<i>Nyctiophylax</i>	09020603009	0.33	0.39	5	PR	0.1	0.1
Hydropsychidae	09020604	1.33			--	0.2	
<i>Cheumatopsyche</i>	09020604015	37.33	37.58	5	CF	6.4	6.5
<i>Hydropsyche</i>	09020604016	40.00	167.75	4	CF	6.9	28.8



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Calculated: 4/20/2022

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche morosa</i>	09020604016030	78.33			--	13.5	
<i>Hydropsyche sparna</i>	09020604016032	47.00			--	8.1	
<i>Hydropsyche betteni</i>	09020604016037	0.33			--	0.1	
<i>Hydropsyche scalaris species group</i>	09020604016048	1.00			--	0.2	
<i>Macrostemum</i>	09020604018	0.33	0.34	3	CF	0.1	0.1
<i>Oxyethira</i>	09020607028	1.00	1.00	3	P	0.2	0.2
<i>Brachycentrus</i>	09020609043		1.33	0	CF		0.2
<i>Brachycentrus numerosus</i>	09020609043098	1.33			--	0.2	
<i>Micrasema</i>	09020609044	0.33	0.33	2	SH	0.1	0.1
<i>Lepidostoma</i>	09020611064	1.33	1.33	1	SH	0.2	0.2
<i>Helicopsyche</i>	09020616070		1.00	3	SC		0.2
<i>Helicopsyche borealis</i>	09020616070137	1.00			--	0.2	
<i>Ceraclea</i>	09020618072	0.33	0.33	3	CG	0.1	0.1
<i>Oecetis</i>	09020618078		0.33	8	PR		0.1
<i>Oecetis avara</i>	09020618078153	0.33			--	0.1	
Chironomidae	09021011				--		
<i>Thienemannimyia</i>	09021011020		0.67	3	PR		0.1
<i>Thienemannimyia group</i>	09021011020041	0.67			--	0.1	
<i>Brillia</i>	09021011033	1.33	1.33	5	SH	0.2	0.2
<i>Corynoneura</i>	09021011036	1.33	1.33	7	CG	0.2	0.2
<i>Cricotopus</i>	09021011037	1.33	15.67	7	SH	0.2	2.7
<i>Cricotopus bicinctus</i>	09021011037057	5.67			--	1.0	
<i>Cricotopus fugax</i>	09021011037062	8.67			--	1.5	
<i>Orthocladius</i>	09021011050	0.67	0.67	6	CG	0.1	0.1
<i>Rheocricotopus</i>	09021011057	5.67	5.67	6	CG	1.0	1.0
<i>Thienemanniella</i>	09021011062	0.67	0.67	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		20.67	5	CG		3.5
<i>Tvetenia vitracies</i>	09021011065113	14.67			--	2.5	
<i>Tvetenia paucunca</i>	09021011065114	6.00			--	1.0	
<i>Rheotanytarsus</i>	09021011072		1.00	6	CF		0.2
<i>Rheotanytarsus exiguus group</i>	09021011072127	0.67			CF	0.1	
<i>Rheotanytarsus pellucidus</i>	09021011072128	0.33			CF	0.1	
<i>Polypedilum</i>	09021011102		31.67	6	SH		5.4
<i>Polypedilum aviceps</i>	09021011102181	0.33			--	0.1	
<i>Polypedilum flavum</i>	09021011102182	31.33			--	5.4	
<i>Stenochironomus</i>	09021011105	0.67	0.67	5	CG	0.1	0.1
<i>Simulium</i>	09021012047	60.33	60.33	4	CF	10.4	10.4



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<i>Hemerodromia</i>	09021016057	0.67	0.67	3	PR	0.1	0.1
<i>Psephenus</i>	09021108058		0.67	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	0.67			--	0.1	
<i>Optioservus</i>	09021113067		0.33	3	SC		0.1
<i>Optioservus elegans</i>	09021113067051	0.33			--	0.1	
Limnocharidae	09030110	0.33	0.33		--	0.1	0.1