



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

Station Information

Station Number: 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

Log Number: 2503	Type of Sample: ROCK BASKET	Date Deployed: 7/27/2016
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/23/2016

Classification Attainment

Statutory Class: B	Final Determination: B	Date: 8/3/2017
Model Result with $P \geq 0.6$: B	Reason for Determination: Model	
Date Last Calculated: 7/25/2017	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.22	Class C	0.08
Class B	0.70	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.22
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.78

Model Variables

01 Total Mean Abundance	830.67	18 Relative Abundance Ephemeroptera	0.20
02 Generic Richness	38.00	19 EPT Generic Richness	21.00
03 Plecoptera Mean Abundance	6.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	168.00	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.44	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	121.78
06 Hilsenhoff Biotic Index	4.61	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	105.88
07 Relative Abundance - Chironomidae	0.24	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.26	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	226.17		
11 <i>Cheumatopsyche</i> Abundance	115.12		
12 EPT Generic Richness/ Diptera Generic Richness	2.10		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	6.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.67		
17 Chironomini Abundance (Family Functional Group)	25.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	27.23
2	<i>Rheotanytarsus</i>	18.46
3	<i>Cheumatopsyche</i>	13.86
4	<i>Maccaffertium</i>	12.10
5	<i>Neureclipsis</i>	5.94



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

Station Number: S-81 Town: Cherryfield Date Deployed: 7/27/2016
Log Number: 2503 Waterbody: Narraguagus River - Station 81 Date Retrieved: 8/23/2016

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 28.4 deg C
Dissolved Oxygen: 9.11 mg/l
Dissolved Oxygen Saturation: 117.3 %
Specific Conductance: 39.8 uS/cm
Velocity: 33.5 cm/s
pH: 7.58
Wetted Width: 57 m
Bankfull Width: 57 m
Depth: 75 cm

Waterbody Information - Retrieval

Temperature: 24.3 deg C
Dissolved Oxygen: 9.6 mg/l
Dissolved Oxygen Saturation: 113.9 %
Specific Conductance: 41 uS/cm
Velocity: 39.6 cm/s
pH: 6.92
Wetted Width: 57 m
Bankfull Width: 57 m
Depth: 70 cm

Water Chemistry

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>	
	Below Agriculture NPS	Boulder	80 %
	Below Road Crossing	Gravel	5 %
	Main Stem	Rubble/Cobble	10 %
		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

FISH PRESENT.



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-81

Waterbody: Narraguagus River - Station 81

Town: Cherryfield

Log Number: 2503

Subsample Factor: X4

Replicates: 3

Calculated: 7/25/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Perlidae	09020209	1.33	1.33		--	0.2	0.2
<i>Acroneuria</i>	09020209042		5.33	0	PR		0.6
<i>Acroneuria abnormis</i>	09020209042121	1.33		0	PR	0.2	
<i>Acroneuria lycorias</i>	09020209042125	4.00			--	0.5	
<i>Boyeria</i>	09020301004		2.67	2	PR		0.3
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.3	
<i>Hagenius</i>	09020302008		1.33	1	PR		0.2
<i>Hagenius brevistylus</i>	09020302008015	1.33			PR	0.2	
Baetidae	09020401	4.00			--	0.5	
<i>Baetis</i>	09020401001	2.67	8.92	4	CG	0.3	1.1
<i>Baetis flavistriga</i>	09020401001004	2.67			--	0.3	
<i>Baetis intercalaris</i>	09020401001008	2.67			--	0.3	
<i>Heterocloeon</i>	09020401005		1.49	2	SC		0.2
<i>Heterocloeon curiosum</i>	09020401005020	1.33			--	0.2	
<i>Acerpenna</i>	09020401007	1.33	13.38	5	CG	0.2	1.6
<i>Acerpenna pygmaea</i>	09020401007011	10.67			--	1.3	
<i>Iswaeon</i>	09020401015		14.87		--		1.8
<i>Iswaeon anoka</i>	09020401015001	13.33			--	1.6	
Heptageniidae	09020402	4.00			--	0.5	
<i>Epeorus</i>	09020402009	2.67	4.13	0	SC	0.3	0.5
<i>Epeorus vitreus</i>	09020402009033	1.33			--	0.2	
<i>Leucrocuta</i>	09020402011	20.00	20.66	1	SC	2.4	2.5
<i>Maccaffertium</i>	09020402015	41.33	100.54	4	SC	5.0	12.1
<i>Maccaffertium luteum</i>	09020402015049	45.33			--	5.5	
<i>Maccaffertium mediopunctatum</i>	09020402015050	2.67			--	0.3	
<i>Maccaffertium modestum</i>	09020402015051	8.00			--	1.0	
<i>Serratella</i>	09020410037		1.33	2	CG		0.2
<i>Serratella deficiens (Teloganopsis deficiens)</i>	09020410037121	1.33			--	0.2	
<i>Tricorythodes</i>	09020411038	2.67	2.67	4	CG	0.3	0.3
<i>Chimarra</i>	09020601003	4.00	21.33	2	CF	0.5	2.6
<i>Chimarra obscura</i>	09020601003003	10.67			--	1.3	
<i>Chimarra socia</i>	09020601003004	6.67			--	0.8	
Polycentropodidae	09020603	2.67	2.67		--	0.3	0.3
<i>Neureclipsis</i>	09020603008	49.33	49.33	7	CF	5.9	5.9
Hydropsychidae	09020604	5.33			--	0.6	
<i>Cheumatopsyche</i>	09020604015	113.33	115.12	5	CF	13.6	13.9
<i>Hydropsyche</i>	09020604016	161.33	226.17	4	CF	19.4	27.2



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-81

Waterbody: Narraguagus River - Station 81

Town: Cherryfield

Log Number: 2503

Subsample Factor: X4

Replicates: 3

Calculated: 7/25/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche bronta</i>	09020604016029	41.33			--	5.0	
<i>Hydropsyche morosa</i>	09020604016030	4.00			--	0.5	
<i>Hydropsyche sparna</i>	09020604016032	14.67			--	1.8	
<i>Hydropsyche placoda</i>	09020604016059	1.33			--	0.2	
<i>Macrostemum</i>	09020604018		2.71	3	CF		0.3
<i>Macrostemum zebratum</i>	09020604018054	2.67			--	0.3	
Hydroptilidae	09020607				--		
<i>Hydroptila</i>	09020607026	4.00	4.00	6	P	0.5	0.5
<i>Oxyethira</i>	09020607028			3	P		
<i>Lepidostoma</i>	09020611064	6.67	6.67	1	SH	0.8	0.8
<i>Helicopsyche</i>	09020616070		1.33	3	SC		0.2
<i>Helicopsyche borealis</i>	09020616070137	1.33			--	0.2	
<i>Oecetis</i>	09020618078		1.33	8	PR		0.2
<i>Oecetis persimilis</i>	09020618078157	1.33			--	0.2	
<i>Nilotanytus</i>	09021011012		1.33	6	PR		0.2
<i>Nilotanytus fimbriatus</i>	09021011012027	1.33			--	0.2	
<i>Pentaneura</i>	09021011014		1.33	6	PR		0.2
<i>Pentaneura inconspicua</i>	09021011014028	1.33			--	0.2	
<i>Cricotopus</i>	09021011037		6.67	7	SH		0.8
<i>Cricotopus bicinctus</i>	09021011037057	6.67			--	0.8	
<i>Nanocladius</i>	09021011049		5.33	3	CG		0.6
<i>Nanocladius branchicolus</i>	09021011049091	1.33			--	0.2	
<i>Nanocladius downesi</i>	09021011049092	4.00			--	0.5	
<i>Tvetenia</i>	09021011065		5.33	5	CG		0.6
<i>Tvetenia vitracies</i>	09021011065113	5.33			--	0.6	
<i>Rheotanytarsus</i>	09021011072		153.33	6	CF		18.5
<i>Rheotanytarsus exiguus group</i>	09021011072127	153.33			CF	18.5	
<i>Microtendipes</i>	09021011094		10.67	6	CF		1.3
<i>Microtendipes rydalensis group</i>	09021011094168	10.67			--	1.3	
<i>Polypedilum</i>	09021011102		14.67	6	SH		1.8
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.2	
<i>Polypedilum flavum</i>	09021011102182	13.33			--	1.6	
<i>Simulium</i>	09021012047	6.67	13.33	4	CF	0.8	1.6
<i>Simulium fibrinflatum</i>	09021012047059	1.33			--	0.2	
<i>Simulium jenningsi species group</i>	09021012047070	5.33			CF	0.6	
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.2	0.2
<i>Psephenus</i>	09021108058		1.33	4	SC		0.2
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.2	



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-81

Waterbody: Narraguagus River - Station 81

Town: Cherryfield

Log Number: 2503

Subsample Factor: X4

Replicates: 3

Calculated: 7/25/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Promoresia</i>	09021113069		1.33		--		0.2
<i>Promoresia tardella</i>	09021113069052	1.33			--	0.2	
<i>Stenelmis</i>	09021113070		2.67	5	SC		0.3
<i>Stenelmis concinna</i>	09021113070054	1.33			--	0.2	
<i>Stenelmis crenata</i>	09021113070055	1.33			--	0.2	
<i>Rhyncholimnochares</i>	09030110001	1.33	1.33		--	0.2	0.2
Gastropoda	1001	1.33	1.33		--	0.2	0.2