



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

Station Information

Station Number: S-81	DEP Drainage: St. Croix - Coastal
Waterbody: Narraguagus River - Station 81	HUC8: 01050002
Town: Cherryfield	HUC8 Name: Maine Coastal
Directions: 212M DOWNSTREAM OF NORTH STREET BRIDGE	Latitude: 44 36 19.05 N
	Longitude: 67 55 39.39 W
	Stream Order: 5

Sample Information

Log Number: 1576	Type of Sample: ROCK BAG	Date Deployed: 7/24/2006
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/21/2006

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 1/3/2008
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 3/13/2009	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.61	Class A, B, or C	1.00
Class B	0.37	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.95
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.05

Model Variables

01 Total Mean Abundance	732.00	18 Relative Abundance Ephemeroptera	0.19
02 Generic Richness	40.00	19 EPT Generic Richness	21.00
03 Plecoptera Mean Abundance	2.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	140.00	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.80	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	74.06
06 Hilsenhoff Biotic Index	3.56	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	61.11
07 Relative Abundance - Chironomidae	0.11	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.25	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	54.48		
11 <i>Cheumatopsyche</i> Abundance	62.86		
12 EPT Generic Richness/ Diptera Generic Richness	2.10		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.40		
17 Chironomini Abundance (Family Functional Group)	50.40		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Chimarra</i>	32.60
2	<i>Cheumatopsyche</i>	8.59
3	<i>Maccaffertium</i>	8.17
4	<i>Hydropsyche</i>	7.44
5	<i>Simulium</i>	5.83



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Town: Cherryfield
Waterbody: Narraguagus River - Station 81

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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 21.1 deg C
Dissolved Oxygen: 8.4 mg/l
Specific Conductance: 21 uS/cm
Velocity: 98 cm/s
pH:
Wetted Width: 58 m
Bankfull Width: 59 m
Depth: 75 cm

Waterbody Information - Retrieval

Temperature: 20.6 deg C
Dissolved Oxygen: 8.3 mg/l
Specific Conductance: 33 uS/cm
Velocity: 26 cm/s
pH: 6.75
Wetted Width: 50 m
Bankfull Width: 50 m
Depth: 32 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.015 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	1 mg/l
Dissolved Organic Carbon	7.6 mg/l	Total Dissolved Solids	32 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Canopy Open	Rolling Terrain
Urban		
<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Below Point Source	

Landcover Summary - 2004 Data

Total Area (ac)	146759	High Int. Dev. %	0.1	Water %	2.4	Non-vegetated %	0.4
Total Land (ac)	143373	Med Int. Dev. %	0.1	Wetland %	12.4	Tilled Agriculture %	0.2
		Low Int. Dev. %	0.6	Upland Woody %	86.0	Human Altered %	7.4
		Development %	0.8	Natural %	92.6	Impervious %	0.6

Sample Comments



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-81

Waterbody: Narraguagus River - Station 81

Town: Cherryfield

Log Number: 1576

Subsample Factor: X4

Replicates: 3

Calculated: 3/13/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002		1.33		--		0.2
<i>Girardia tigrina</i>	03010102002001	1.33			--	0.2	
<i>Acroneuria</i>	09020209042	1.33	1.33	0	PR	0.2	0.2
<i>Attaneuria</i>	09020209043		1.33	1	--		0.2
<i>Attaneuria ruralis</i>	09020209043128	1.33			--	0.2	
<i>Boyeria</i>	09020301004		9.33	2	PR		1.3
<i>Boyeria vinosa</i>	09020301004012	9.33			--	1.3	
Corduliidae	09020305	1.33	1.33		--	0.2	0.2
<i>Argia</i>	09020309048	1.33	1.33	7	PR	0.2	0.2
<i>Baetis</i>	09020401001	4.00	38.67	4	CG	0.5	5.3
<i>Baetis flavistriga</i>	09020401001004	6.67			--	0.9	
<i>Baetis pluto</i>	09020401001009	28.00			--	3.8	
<i>Acerpenna</i>	09020401007	4.00	17.33	5	CG	0.5	2.4
<i>Acerpenna pygmaea</i>	09020401007011	13.33			--	1.8	
<i>Plauditus</i>	09020401012	8.00	8.00		CG	1.1	1.1
Heptageniidae	09020402	2.67			--	0.4	
<i>Epeorus</i>	09020402009	2.67	2.78	0	SC	0.4	0.4
<i>Leucrocuta</i>	09020402011	2.67	2.78	1	SC	0.4	0.4
<i>Maccaffertium</i>	09020402015	34.67	59.77	4	SC	4.7	8.2
<i>Maccaffertium luteum</i>	09020402015049	12.00			--	1.6	
<i>Maccaffertium modestum</i>	09020402015051	10.67			--	1.5	
<i>Isonychia</i>	09020404018	6.67	6.67	2	CF	0.9	0.9
<i>Ephemerella</i>	09020410035	1.33	1.33	1	CG	0.2	0.2
<i>Serratella</i>	09020410037		2.67	2	CG		0.4
<i>Serratella serratoides</i>	09020410037124	2.67			--	0.4	
<i>Chimarra</i>	09020601003	238.67	238.67	2	CF	32.6	32.6
<i>Neureclipsis</i>	09020603008	13.33	13.33	7	CF	1.8	1.8
Hydropsychidae	09020604	5.33			--	0.7	
<i>Cheumatopsyche</i>	09020604015	60.00	62.86	5	CF	8.2	8.6
<i>Hydropsyche</i>	09020604016	34.67	54.48	4	CF	4.7	7.4
<i>Hydropsyche morosa</i>	09020604016030	9.33			--	1.3	
<i>Hydropsyche sparna</i>	09020604016032	6.67			--	0.9	
<i>Hydropsyche scalaris-group</i>	09020604016048	1.33			--	0.2	
<i>Hydroptila</i>	09020607026	2.67	2.67	6	P	0.4	0.4
<i>Oxyethira</i>	09020607028	1.33	1.33	3	P	0.2	0.2
<i>Brachycentrus</i>	09020609043		4.00	0	CF		0.5
<i>Brachycentrus numerosus</i>	09020609043098	4.00			--	0.5	
<i>Lepidostoma</i>	09020611064	22.67	22.67	1	SH	3.1	3.1



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		Actual	Adjusted			Actual	Adjusted
<i>Helicopsyche</i>	09020616070		8.00	3	SC		1.1
<i>Helicopsyche borealis</i>	09020616070137	8.00			--	1.1	
<i>Oecetis</i>	09020618078	4.00	5.33	8	PR	0.5	0.7
<i>Oecetis avara</i>	09020618078153	1.33			--	0.2	
Chironomidae	09021011	4.00			--	0.5	
<i>Nilotanytus</i>	09021011012		1.40	6	PR		0.2
<i>Nilotanytus fimbriatus</i>	09021011012027	1.33			--	0.2	
<i>Cricotopus</i>	09021011037	1.33	9.80	7	SH	0.2	1.3
<i>Cricotopus bicinctus</i>	09021011037057	4.00			--	0.5	
<i>Cricotopus patens</i>	09021011037075	4.00			--	0.5	
<i>Rheocricotopus</i>	09021011057		7.00	6	CG		1.0
<i>Rheocricotopus robacki</i>	09021011057105	6.67			--	0.9	
<i>Tvetenia</i>	09021011065		2.80	5	CG		0.4
<i>Tvetenia vitracies</i>	09021011065113	1.33			--	0.2	
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.2	
<i>Rheotanytarsus</i>	09021011072	10.67	11.20	6	CF	1.5	1.5
<i>Tanytarsus</i>	09021011076	1.33	1.40	6	CF	0.2	0.2
<i>Microtendipes</i>	09021011094		11.20	6	CF		1.5
<i>Microtendipes rydalensis-grp.</i>	09021011094168	10.67			--	1.5	
<i>Polypedilum</i>	09021011102		39.20	6	SH		5.4
<i>Polypedilum aviceps</i>	09021011102181	8.00			--	1.1	
<i>Polypedilum flavum</i>	09021011102182	29.33			--	4.0	
<i>Simulium</i>	09021012047		42.67	4	CF		5.8
<i>Simulium jenningsi</i>	09021012047060	41.33			--	5.6	
<i>Simulium tuberosum</i>	09021012047067	1.33			--	0.2	
Empididae	09021016	1.33	1.33	6	--	0.2	0.2
<i>Psephenus</i>	09021108058		4.00	4	SC		0.5
<i>Psephenus herricki</i>	09021108058028	4.00			--	0.5	
<i>Promoresia</i>	09021113069		5.33		--		0.7
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.2	
<i>Promoresia tardella</i>	09021113069052	4.00			--	0.5	
<i>Stenelmis</i>	09021113070	1.33	4.00	5	SC	0.2	0.5
<i>Stenelmis crenata</i>	09021113070055	2.67			--	0.4	
<i>Amnicola</i>	10010104013		20.00		SC		2.7
<i>Amnicola limosa</i>	10010104013018	20.00			--	2.7	
<i>Phya</i>	10010202026	1.33	1.33		SC	0.2	0.2