



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

Station Information

Station Number: S-502
Waterbody: West Branch Narraguagus River - Station 502
Town: Cherryfield
Directions: END OF SPRAGUE FALLS RD

DEP Drainage: St. Croix - Coastal
HUC8: 01050002
HUC8 Name: Maine Coastal
Latitude: 44 38 41.61 N
Longitude: 67 59 33.88 W
Stream Order: 4

Sample Information

Log Number: 2059
Subsample Factor: X4

Type of Sample: ROCK BAG
Replicates: 3

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

Classification Attainment

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

Final Determination: B
Reason for Determination: Model
Comments:

Date: 1/27/2012

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.08	Class A, B, or C	1.00
Class B	0.62	Non-Attainment	0.00

B or Better Model		A Model	
Class A or B	0.76	Class A	0.02
Class C or Non-Attainment	0.24	Class B or C or Non-Attainment	0.98

Model Variables

01 Total Mean Abundance	1550.67	18 Relative Abundance Ephemeroptera	0.05
02 Generic Richness	30.00	19 EPT Generic Richness	17.00
03 Plecoptera Mean Abundance	8.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	76.00	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	2.21	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	105.15
06 Hilsenhoff Biotic Index	3.85	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	65.15
07 Relative Abundance - Chironomidae	0.03	28 EP Generic Richness/14	0.43
08 Relative Generic Richness Diptera	0.30	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	961.22		
11 <i>Cheumatopsyche</i> Abundance	105.15		
12 EPT Generic Richness/ Diptera Generic Richness	1.89		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	8.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.33		
17 Chironomini Abundance (Family Functional Group)	25.33		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	61.99
2	<i>Chimarra</i>	10.32
3	<i>Simulium</i>	7.22
4	<i>Cheumatopsyche</i>	6.78
5	<i>Maccaffertium</i>	3.69



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Date Retrieved: 8/25/2011

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23.3 deg C
Dissolved Oxygen: 7.1 mg/l
Specific Conductance: 21 uS/cm
Velocity: 51 cm/s
pH: 6.4
Wetted Width: 8 m
Bankfull Width: 15 m
Depth: 45 cm

Waterbody Information - Retrieval

Temperature: 20.2 deg C
Dissolved Oxygen: 7.7 mg/l
Specific Conductance: 17 uS/cm
Velocity: 98 cm/s
pH: 6.1
Wetted Width: 13 m
Bankfull Width: 15 m
Depth: 60 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Upland Conifer

Open

Rolling

Upland Hardwood

Potential Stressor

Location

Substrate

Above Town

Bedrock 5 %
Boulder 80 %
Gravel 5 %
Rubble/Cobble 10 %

Landcover Summary - 2004 Data

Total Area (ac)	48205	High Int. Dev. %	0.0	Water %	1.3	Non-vegetated %	0.2
		Med Int. Dev. %	0.0	Wetland %	12.7	Tilled Agriculture %	0.2
		Low Int. Dev. %	0.1	Upland Woody %	84.9	Grassland %	0.7
		Development %	0.1	Natural %	94.3	Human Altered %	4.5
						Impervious %	0.1

Sample Comments

8/25/11: VERY DARK WATER, FLOW ELEVATED.



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

Station Number: S-502

Waterbody: West Branch Narraguagus River - Station 50 Town: Cherryfield

Log Number: 2059

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		8.00	0	PR		0.5
<i>Acroneuria abnormis</i>	09020209042121	8.00		0	PR	0.5	
Calopterygidae	09020307	1.33	1.33		--	0.1	0.1
Baetidae	09020401	4.00			--	0.3	
<i>Baetis</i>	09020401001	2.67	10.00	4	CG	0.2	0.6
<i>Baetis brunneicolor</i>	09020401001003	4.00			--	0.3	
<i>Acerpenna</i>	09020401007	1.33	2.00	5	CG	0.1	0.1
Heptageniidae	09020402	2.67			--	0.2	
<i>Epeorus</i>	09020402009	4.00	4.18	0	SC	0.3	0.3
<i>Maccaffertium</i>	09020402015	40.00	57.15	4	SC	2.6	3.7
<i>Maccaffertium luteum</i>	09020402015049	10.67			--	0.7	
<i>Maccaffertium modestum</i>	09020402015051	4.00			--	0.3	
<i>Isonychia</i>	09020404018	2.67	2.67	2	CF	0.2	0.2
<i>Chimarra</i>	09020601003	81.33	160.00	2	CF	5.2	10.3
<i>Chimarra aterrima</i>	09020601003002	10.67			--	0.7	
<i>Chimarra obscura</i>	09020601003003	32.00			--	2.1	
<i>Chimarra socia</i>	09020601003004	36.00			--	2.3	
<i>Neureclipsis</i>	09020603008	13.33	13.33	7	CF	0.9	0.9
Hydropsychidae	09020604	12.00			--	0.8	
<i>Cheumatopsyche</i>	09020604015	104.00	105.15	5	CF	6.7	6.8
<i>Hydropsyche</i>	09020604016	490.67	961.22	4	CF	31.6	62.0
<i>Hydropsyche bronta</i>	09020604016029	5.33			--	0.3	
<i>Hydropsyche morosa</i>	09020604016030	6.67			--	0.4	
<i>Hydropsyche sparna</i>	09020604016032	412.00			--	26.6	
<i>Hydropsyche depravata complex</i>	09020604016041	36.00			CF	2.3	
<i>Macrostemum</i>	09020604018		26.96	3	CF		1.7
<i>Macrostemum zebratum</i>	09020604018054	26.67			--	1.7	
<i>Rhyacophila</i>	09020605019	1.33	1.33	2	PR	0.1	0.1
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.1	0.1
<i>Brachycentrus</i>	09020609043		6.67	0	CF		0.4
<i>Brachycentrus appalachia</i>	09020609043096	6.67			--	0.4	
<i>Micrasema</i>	09020609044		1.33	2	SH		0.1
<i>Micrasema rusticum group</i>	09020609044100	1.33			--	0.1	
<i>Lepidostoma</i>	09020611064	4.00	4.00	1	SH	0.3	0.3
<i>Oecetis</i>	09020618078		1.33	8	PR		0.1
<i>Oecetis avara</i>	09020618078153	1.33			--	0.1	
<i>Nilotanyus</i>	09021011012		1.33	6	PR		0.1
<i>Nilotanyus fimbriatus</i>	09021011012027	1.33			--	0.1	



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		Actual	Adjusted			Actual	Adjusted
<i>Corynoneura</i>	09021011036	1.33	1.33	7	CG	0.1	0.1
<i>Nanocladius</i>	09021011049		1.33	3	CG		0.1
<i>Nanocladius branchicolus</i>	09021011049091	1.33			--	0.1	
<i>Tvetenia</i>	09021011065		5.33	5	CG		0.3
<i>Tvetenia vitracies</i>	09021011065113	4.00			--	0.3	
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.1	
<i>Rheotanytarsus</i>	09021011072	9.33	9.33	6	CF	0.6	0.6
<i>Microtendipes</i>	09021011094		18.67	6	CF		1.2
<i>Microtendipes rydalensis group</i>	09021011094168	18.67			--	1.2	
<i>Polypedilum</i>	09021011102		6.67	6	SH		0.4
<i>Polypedilum aviceps</i>	09021011102181	2.67			--	0.2	
<i>Polypedilum flavum</i>	09021011102182	4.00			--	0.3	
<i>Simulium</i>	09021012047	4.00	112.00	4	CF	0.3	7.2
<i>Simulium fibrinflatum</i>	09021012047059	48.00			--	3.1	
<i>Simulium jenningsi</i>	09021012047060	6.67			--	0.4	
<i>Simulium tuberosum</i>	09021012047067	4.00			--	0.3	
<i>Simulium jenningsi complex</i>	09021012047070	49.33			CF	3.2	
<i>Atherix</i>	09021015055	6.67	6.67	2	PR	0.4	0.4
<i>Optioservus</i>	09021113067		1.33	3	SC		0.1
<i>Optioservus ovalis</i>	09021113067046	1.33			--	0.1	
<i>Promoresia</i>	09021113069		17.33		--		1.1
<i>Promoresia elegans</i>	09021113069051	17.33			--	1.1	
<i>Stenelmis</i>	09021113070		1.33	5	SC		0.1
<i>Stenelmis concinna</i>	09021113070054	1.33			--	0.1	