



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

Station Information

Station Number: S-112	DEP Drainage: St. Croix - Coastal
Waterbody: Narraguagus River - Station 112	HUC8: 01050002
Town: Beddington	HUC8 Name: Maine Coastal
Directions: DIRECTLY ABOVE RT. 9 BRIDGE	Latitude: 44 50 37.7 N
	Longitude: 68 4 11.6 W
	Stream Order: 4

Sample Information

Log Number: 1578	Type of Sample: ROCK BAG	Date Deployed: 7/24/2006
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/21/2006

Classification Attainment

Statutory Class: AA	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	0.77	Class A, B, or C	1.00
Class B	0.23	Non-Attainment	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	440.00	18 Relative Abundance Ephemeroptera	0.18
02 Generic Richness	52.00	19 EPT Generic Richness	29.00
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	79.67	23 Relative Generic Richness- Plecoptera	0.08
05 Shannon-Wiener Generic Diversity	3.82	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	4.35
06 Hilsenhoff Biotic Index	3.71	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	21.45
07 Relative Abundance - Chironomidae	0.24	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.31	30 Presence of Class A Indicator Taxa/7	0.71
09 <i>Hydropsyche</i> Abundance	131.98		
11 <i>Cheumatopsyche</i> Abundance	3.35		
12 EPT Generic Richness/ Diptera Generic Richness	1.81		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	4.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.34		
17 Chironomini Abundance (Family Functional Group)	41.80		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	30.00
2	<i>Rheotanytarsus</i>	10.87
3	<i>Baetis</i>	8.86
4	<i>Polypedilum</i>	8.51
5	<i>Dolophilodes</i>	7.50



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Log Number: 1578

Town: Beddington
Waterbody: Narraguagus River - Station 112

Date Deployed: 7/24/2006
Date Retrieved: 8/21/2006

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment	
Temperature:	20.5 deg C
Dissolved Oxygen:	8 mg/l
Specific Conductance:	22 uS/cm
Velocity:	110 cm/s
pH:	
Wetted Width:	24 m
Bankfull Width:	24 m
Depth:	58 cm

Waterbody Information - Retrieval	
Temperature:	18.8 deg C
Dissolved Oxygen:	8.7 mg/l
Specific Conductance:	29 uS/cm
Velocity:	78 cm/s
pH:	6.59
Wetted Width:	24 m
Bankfull Width:	24 m
Depth:	30 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.01 mg/l	Total Phosphorus	0.012 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	0.8 mg/l
Dissolved Organic Carbon	7.7 mg/l	Total Dissolved Solids	32 mg/l

Summary of Habitat Characteristics

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

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Pristine Landscape	Boulder 20 %
		Gravel 30 %
		Rubble/Cobble 40 %
		Sand 10 %

Landcover Summary - 2004 Data

Total Area (ac)	46566	High Int. Dev. %	0.0	Water %	1.8	Non-vegetated %	0.4
Total Land (ac)	45762	Med Int. Dev. %	0.0	Wetland %	6.8	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.8	Upland Woody %	92.1	Human Altered %	0.9
		Development %	0.8	Natural %	99.1	Impervious %	0.3

Sample Comments



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Town: Beddington

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Subsample Factor: X1

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>Pristina</i>	08020202004		0.33		--		0.1
<i>Pristina aequisetata</i>	08020202004001	0.33			--	0.1	
Isotomidae	09020102	0.33	0.33		--	0.1	0.1
<i>Pteronarcys</i>	09020205023		0.67	0	SH		0.2
<i>Pteronarcys dorsata</i>	09020205023063	0.67			--	0.2	
Perlodidae	09020207	2.00	2.00		--	0.5	0.5
Perlidae	09020209	0.33			--	0.1	
<i>Acroneuria</i>	09020209042	0.67	2.18	0	PR	0.2	0.5
<i>Acroneuria abnormis</i>	09020209042121	0.67		0	PR	0.2	
<i>Acroneuria lycorias</i>	09020209042125	0.67			--	0.2	
<i>Agnetina</i>	09020209050		1.82	2	PR		0.4
<i>Agnetina capitata</i>	09020209050152	1.67		2	PR	0.4	
<i>Boyeria</i>	09020301004		0.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	0.33			--	0.1	
<i>Baetis</i>	09020401001	10.67	39.00	4	CG	2.4	8.9
<i>Baetis flavistriga</i>	09020401001004	8.67			--	2.0	
<i>Baetis intercalaris</i>	09020401001008	8.67			--	2.0	
<i>Baetis pluto</i>	09020401001009	11.00			--	2.5	
<i>Heterocloeon</i>	09020401005		0.67	2	SC		0.2
<i>Heterocloeon curiosum</i>	09020401005020	0.67			--	0.2	
<i>Acerpenna</i>	09020401007		0.67	5	CG		0.2
<i>Acerpenna pygmaea</i>	09020401007011	0.67			--	0.2	
<i>Plauditus</i>	09020401012	2.00	2.00		CG	0.5	0.5
Heptageniidae	09020402	1.00			--	0.2	
<i>Epeorus</i>	09020402009	1.33	1.38	0	SC	0.3	0.3
<i>Leucrocuta</i>	09020402011	11.00	11.35	1	SC	2.5	2.6
<i>Maccaffertium</i>	09020402015	9.67	19.27	4	SC	2.2	4.4
<i>Maccaffertium luteum</i>	09020402015049	8.33			--	1.9	
<i>Maccaffertium modestum</i>	09020402015051	0.67			--	0.2	
<i>Isonychia</i>	09020404018	0.33	0.33	2	CF	0.1	0.1
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	0.1	0.1
<i>Ephemerella</i>	09020410035	2.33	2.33	1	CG	0.5	0.5
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.1	0.1
<i>Tricorythodes</i>	09020411038	2.00	2.00	4	CG	0.5	0.5
<i>Dolophilodes</i>	09020601001	33.00	33.00	0	CF	7.5	7.5
<i>Chimarra</i>	09020601003	15.67	15.67	2	CF	3.6	3.6
<i>Neureclipsis</i>	09020603008	4.33	4.33	7	CF	1.0	1.0
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.1	0.1



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Hydropsychidae	09020604	0.67			--	0.2	
<i>Cheumatopsyche</i>	09020604015	3.33	3.35	5	CF	0.8	0.8
<i>Hydropsyche</i>	09020604016	37.67	131.98	4	CF	8.6	30.0
<i>Hydropsyche bronta</i>	09020604016029	7.00			--	1.6	
<i>Hydropsyche morosa</i>	09020604016030	71.00			--	16.1	
<i>Hydropsyche sparna</i>	09020604016032	15.67			--	3.6	
<i>Glossosoma</i>	09020606020	17.00	17.00	0	SC	3.9	3.9
<i>Hydroptila</i>	09020607026			6	P		
<i>Brachycentrus</i>	09020609043		7.33	0	CF		1.7
<i>Brachycentrus appalachia</i>	09020609043096	2.67			--	0.6	
<i>Brachycentrus numerosus</i>	09020609043098	4.67			--	1.1	
<i>Lepidostoma</i>	09020611064	9.33	9.33	1	SH	2.1	2.1
<i>Psilotreta</i>	09020614068		1.33	0	SC		0.3
<i>Psilotreta indecisa</i>	09020614068132	1.33			--	0.3	
<i>Helicopsyche</i>	09020616070		6.33	3	SC		1.4
<i>Helicopsyche borealis</i>	09020616070137	6.33			--	1.4	
<i>Nectopsyche</i>	09020618074	0.33	0.33	3	SH	0.1	0.1
<i>Oecetis</i>	09020618078	0.67	4.00	8	PR	0.2	0.9
<i>Oecetis avara</i>	09020618078153	1.00			--	0.2	
<i>Oecetis persimilis</i>	09020618078157	2.33			--	0.5	
Chironomidae	09021011	0.33			--	0.1	
<i>Paramerina</i>	09021011013				--		
<i>Pentaneura</i>	09021011014		0.67	6	PR		0.2
<i>Pentaneura inconspicua</i>	09021011014028	0.67			--	0.2	
<i>Rheopelopia</i>	09021011017	0.67	0.67		PR	0.2	0.2
<i>Corynoneura</i>	09021011036	1.00	1.00	7	CG	0.2	0.2
<i>Cricotopus</i>	09021011037		0.33	7	SH		0.1
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.1	
<i>Eukiefferiella</i>	09021011041		0.33	8	CG		0.1
<i>Eukiefferiella devonica</i>	09021011041078	0.33			--	0.1	
<i>Psectrocladius</i>	09021011056		0.33	8	CG		0.1
<i>Psectrocladius psilopterus grp.</i>	09021011056103	0.33			--	0.1	
<i>Rheocricotopus</i>	09021011057		1.00	6	CG		0.2
<i>Rheocricotopus robacki</i>	09021011057105	1.00			--	0.2	
<i>Thienemanniella</i>	09021011062		1.00	6	CG		0.2
<i>Thienemanniella xena</i>	09021011062110	1.00			--	0.2	
<i>Tvetenia</i>	09021011065		11.70	5	CG		2.7
<i>Tvetenia vitracies</i>	09021011065113	11.67			--	2.7	



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<i>Rheotanytarsus</i>	09021011072	47.67	47.82	6	CF	10.8	10.9
<i>Tanytarsus</i>	09021011076	0.33	0.67	6	CF	0.1	0.2
<i>Tanytarsus glabrescens</i>	09021011076134	0.33			--	0.1	
<i>Microtendipes</i>	09021011094		4.01	6	CF		0.9
<i>Microtendipes rydalensis-grp.</i>	09021011094168	4.00			--	0.9	
<i>Paratendipes</i>	09021011100	0.33	0.33	8	CG	0.1	0.1
<i>Polypedilum</i>	09021011102		37.45	6	SH		8.5
<i>Polypedilum aviceps</i>	09021011102181	34.67			--	7.9	
<i>Polypedilum flavum</i>	09021011102182	2.33			--	0.5	
<i>Polypedilum illinoense-grp.</i>	09021011102185	0.33			--	0.1	
<i>Simulium</i>	09021012047		5.00	4	CF		1.1
<i>Simulium fibrinflatum</i>	09021012047059				--		
<i>Simulium jenningsi</i>	09021012047060	5.00			--	1.1	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Dubiraphia</i>	09021113064	0.67	0.67	6	--	0.2	0.2
<i>Promoresia</i>	09021113069		4.00		--		0.9
<i>Promoresia elegans</i>	09021113069051	1.67			--	0.4	
<i>Promoresia tardella</i>	09021113069052	2.33			--	0.5	
<i>Stenelmis</i>	09021113070		0.33	5	SC		0.1
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.1	
<i>Amnicola</i>	10010104013		0.67		SC		0.2
<i>Amnicola limosa</i>	10010104013018	0.67			--	0.2	