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

Station Information

Station Number: S-594
Waterbody: Aroostook River - Station 594
Town: Presque Isle
Directions: UPSTREAM OF PRESQUE ISLE STREAM

DEP Drainage: St. John
HUC8: 01010004
HUC8 Name: Aroostook River
Latitude: 46 42 48.19 N
Longitude: 68 1 7.3 W
Stream Order: 5

Sample Information

Log Number: 1857 Type of Sample: ROCK BAG Date Deployed: 7/22/2009
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/19/2009

Classification Attainment

Statutory Class: B **Final Determination: A** Date: 1/14/2010
Model Result with P>.6: A **Reason for Determination: Model**
Date Last Calculated: 1/12/2010 Comments:

Model Probabilities

First Stage Model			
Class A	0.91	Class C	0.00
Class B	0.09	NA	0.00

C or Better Model	
Class A, B, or C	1.00
Non-Attainment	0.00

B or Better Model	
Class A or B	1.00
Class C or Non-Attainment	0.00

A Model	
Class A	1.00
Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	73.67
02 Generic Richness	38.00
03 Plecoptera Mean Abundance	9.67
04 Ephemeroptera Mean Abundance	36.67
05 Shannon-Wiener Generic Diversity	4.35
06 Hilsenhoff Biotic Index	3.78
07 Relative Abundance - Chironomidae	0.15
08 Relative Generic Richness Diptera	0.24
09 *Hydropsyche* Abundance	1.33
11 *Cheumatopsyche* Abundance	0.67
12 EPT Generic Richness/ Diptera Generic Richness	2.44
13 Relative Abundance - Oligochaeta	0.00
15 Perlidae Mean Abundance (Family Functional Group)	9.33
16 Tanypodinae Mean Abundance (Family Functional Group)	0.33
17 Chironomini Abundance (Family Functional Group)	3.33
18 Relative Abundance Ephemeroptera	0.50
19 EPT Generic Richness	22.00
21 Sum of Abundances: *Dicrotendipes, Micropsectra, Parachironomus, Helobdella*	0.00
23 Relative Generic Richness- Plecoptera	0.05
25 Sum of Abundances: *Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia*	3.33
26 Sum of Abundances: *Acroneuria, Maccaffertium, Stenonema*	19.75
28 EP Generic Richness/14	1.00
30 Presence of Class A Indicator Taxa/7	0.43

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	*Maccaffertium*	14.14
2	*Acroneuria*	12.67
3	*Leucrocuta*	8.48
4	*Procloeon*	7.69
5	*Dubiraphia*	7.24

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

Station Number: S-594 Town: Presque Isle Date Deployed: 7/22/2009
Log Number: 1857 Waterbody: Aroostook River - Station 594 Date Retrieved: 8/19/2009

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment			Waterbody Information - Retrieval		
Temperature:	21.6	deg C	Temperature:	28.2	deg C
Dissolved Oxygen:	8.3	mg/l	Dissolved Oxygen:	8.3	mg/l
Specific Conductance:	72	uS/cm	Specific Conductance:	78	uS/cm
Velocity:	6	cm/s	Velocity:	6	cm/s
pH:	7.99		pH:	7.72	
Wetted Width:			Wetted Width:		
Bankfull Width:			Bankfull Width:		
Depth:	56	cm	Depth:	44	cm

Water Chemistry - 7/22/2009

Soluble Reactive Phosphorus	1	ug/l	Nitrate+nitrite As N	0.03	mg/l
Total Phosphorus	0.015	mg/l	Total Kjeldahl Nitrogen	0.4	mg/l
Dissolved Organic Carbon	6.2	mg/l	Total Alkalinity	81	mg/l

Summary of Habitat Characteristics

Landuse Name	Canopy Cover	Terrain	
Upland Hardwood	Open	Rolling	
Potential Stressor	**Location**	**Substrate**	
	Main Stem	Boulder	10 %
		Gravel	40 %
		Rubble/Cobble	50 %

Landcover Summary - 2004 Data

Sample Comments

THICK MAT OF BROWN ALGAE.

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

Station Number: S-594 Waterbody: Aroostook River - Station 594 Town: Presque Isle

Log Number: 1857 Subsample Factor: X1 Replicates: 3 Calculated: 1/12/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers) Actual	Count (Mean of Samplers) Adjusted	Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance Actual	Relative Abundance Adjusted
Hyalella	09010203006		2.00	8	CG		2.7
Hyalella azteca	09010203006011	2.00			--	2.7	
Capniidae	09020203	0.33	0.33		--	0.5	0.5
Acroneuria	09020209042		9.33	0	PR		12.7
Acroneuria lycorias	09020209042125	9.33			--	12.7	
Neurocordulia	09020305026		0.33	2	PR		0.5
Neurocordulia michaeli	09020305026054	0.33			--	0.5	
Calopteryx	09020307043		0.67	5	PR		0.9
Calopteryx aequabilis	09020307043085	0.67			--	0.9	
Baetis	09020401001	1.00	2.00	4	CG	1.4	2.7
Baetis intercalaris	09020401001008	0.67			--	0.9	
Baetis tricaudatus	09020401001012	0.33			--	0.5	
Acerpenna	09020401007		2.67	5	CG		3.6
Acerpenna pygmaea	09020401007011	2.67			--	3.6	
Procloeon	09020401010	5.67	5.67		CG	7.7	7.7
Heptageniidae	09020402	4.33			--	5.9	
Leucrocuta	09020402011	5.00	6.25	1	SC	6.8	8.5
Stenacron	09020402014	2.00	5.00	7	SC	2.7	6.8
Stenacron interpunctatum	09020402014045	2.00			--	2.7	
Maccaffertium	09020402015	6.33	10.42	4	SC	8.6	14.1
Maccaffertium luteum	09020402015049	2.00			--	2.7	
Leptophlebiidae	09020406	0.67	0.67		--	0.9	0.9
Ephemerella	09020410035	0.67	0.67	1	CG	0.9	0.9
Eurylophella	09020410036	1.00	1.00	3	CG	1.4	1.4
Tricorythodes	09020411038	1.33	1.33	4	CG	1.8	1.8
Caenis	09020412040	0.67	0.67	7	CG	0.9	0.9
Baetisca	09020413041	0.33	0.33	4	CG	0.5	0.5
Chimarra	09020601003	0.33	0.33	2	CF	0.5	0.5
Polycentropus	09020603010	0.33	0.33	6	PR	0.5	0.5
Cheumatopsyche	09020604015	0.67	0.67	5	CF	0.9	0.9
Hydropsyche	09020604016		1.33	4	CF		1.8
Hydropsyche morosa	09020604016030	0.33			--	0.5	
Hydropsyche sparna	09020604016032	1.00			--	1.4	
Brachycentrus	09020609043		0.33	0	CF		0.5
Brachycentrus appalachia	09020609043096	0.33			--	0.5	
Limnephilidae	09020610				--		
Lepidostoma	09020611064	1.67	1.67	1	SH	2.3	2.3
Helicopsyche	09020616070		0.33	3	SC		0.5

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

Station Number: S-594 Waterbody: Aroostook River - Station 594 Town: Presque Isle

Log Number: 1857 Subsample Factor: X1 Replicates: 3 Calculated: 1/12/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers) Actual	Count (Mean of Samplers) Adjusted	Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance Actual	Relative Abundance Adjusted
Helicopsyche borealis	09020616070137	0.33			--	0.5	
Oecetis	09020618078	0.33	1.00	8	PR	0.5	1.4
Oecetis avara	09020618078153	0.67			--	0.9	
Ablabesmyia	09021011001		0.33	8	PR		0.5
Ablabesmyia mallochi	09021011001004	0.33			--	0.5	
Nanocladius	09021011049		4.33	3	CG		5.9
Nanocladius branchicolus	09021011049091	2.33			--	3.2	
Nanocladius downesi	09021011049092	2.00			--	2.7	
Symbiocladius	09021011059	0.33	0.33		PA	0.5	0.5
Stempellina	09021011073	0.33	0.33	2	CG	0.5	0.5
Stempellinella	09021011074		0.33	2	--		0.5
Stempellinella sp. a epler	09021011074002	0.33			--	0.5	
Tanytarsus	09021011076	2.33	2.33	6	CF	3.2	3.2
Microtendipes	09021011094		2.67	6	CF		3.6
Microtendipes pedellus group	09021011094166	2.33			--	3.2	
Microtendipes rydalensis group	09021011094168	0.33			--	0.5	
Phaenopsectra	09021011101		0.33	7	SC		0.5
Phaenopsectra obediens	09021011101182	0.33			SC	0.5	
Polypedilum	09021011102		0.33	6	SH		0.5
Polypedilum flavum	09021011102182	0.33			--	0.5	
Hayesomyia senata	09021011112001				--		
Psephenus	09021108058		0.33	4	SC		0.5
Psephenus herricki	09021108058028	0.33			--	0.5	
Dubiraphia	09021113064	5.33	5.33	6	--	7.2	7.2
Optioservus	09021113067	0.33	0.33	3	SC	0.5	0.5
Stenelmis	09021113070	0.33	1.00	5	SC	0.5	1.4
Stenelmis crenata	09021113070055	0.67			--	0.9	