



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

Station Information

Station Number:	S-687	River Basin:	St. John
Waterbody:	North Branch Presque Isle Stream - Station 687	HUC8 Name:	Aroostook
Town:	Mapleton	Latitude:	46 40 57.24 N
Directions:	MAPLETON ROAD CROSSING/ 60M DOWNSTREAM OF RAILROAD TRESSEL, UPSTREAM OF MAPLETON ROAD CROSSING	Longitude:	68 5 48.19 W
		Stream Order:	3

Sample Information

Log Number:	2278	Type of Sample:	ROCK BAG	Date Deployed:	7/22/2014
Subsample Factor:	X4	Replicates:	3	Date Retrieved:	8/20/2014

Classification Attainment

Statutory Class:	B	Final Determination:	A	Date:	2/11/2015
Model Result with $P \geq 0.6$:	A	Reason for Determination:	Model		
Date Last Calculated:	2/11/2015	Comments:			

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.47	Class C	0.03	Class A, B, or C	1.00
Class B	0.51	NA	0.00	Non-Attainment	0.00
<u>B or Better Model</u>				<u>A Model</u>	
Class A or B		1.00		Class A	0.91
Class C or Non-Attainment		0.00		Class B or C or Non-Attainment	0.09

Model Variables

01 Total Mean Abundance	497.33	18 Relative Abundance Ephemeroptera	0.35
02 Generic Richness	41.00	19 EPT Generic Richness	20.00
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	176.00	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.01	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	60.02
06 Hilsenhoff Biotic Index	4.48	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	75.13
07 Relative Abundance - Chironomidae	0.18	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.27	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	75.48		
11 <i>Cheumatopsyche</i> Abundance	48.52		
12 EPT Generic Richness/ Diptera Generic Richness	1.82		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	5.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.88		
17 Chironomini Abundance (Family Functional Group)	20.13		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	15.18
2	<i>Maccaffertium</i>	15.11
3	<i>Rheotanytarsus</i>	10.98
4	<i>Dubiraphia</i>	10.19
5	<i>Cheumatopsyche</i>	9.76



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Station Number: S-687

Town: Mapleton

Date Deployed: 7/22/2014

Log Number: 2278

Waterbody: North Branch Presque Isle Stream - Station 687

Date Retrieved: 8/20/2014

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 25.3 deg C
Dissolved Oxygen: 10.5 mg/l
Specific Conductance: 267 uS/cm
Velocity: 24 cm/s
pH: 8.52
Wetted Width: 9.8 m
Bankfull Width: 11.5 m
Depth: 55 cm

Waterbody Information - Retrieval

Temperature: 17 deg C
Dissolved Oxygen: 9.29 mg/l
Specific Conductance: 302 uS/cm
Velocity: 18 cm/s
pH: 8.3
Wetted Width: 9.6 m
Bankfull Width: 11.5 m
Depth: 50 cm

Water Chemistry - 7/31/2014

Nitrate+nitrite As N	0.35 mg/l	Total Phosphorus	26 ug/l
Total Kjeldahl Nitrogen	2.2 mg/l	Orthophosphate As Phosphorus	5 ug/l
Total Alkalinity	80 mg/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Open	Rolling
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Below Town	Boulder 45 % Gravel 5 % Rubble/Cobble 50 %

Landcover Summary - 2004 Data

Total Area (ac)	27219	High Int. Dev. %	0.1	Water %	0.1	Non-vegetated %	0.1
		Med Int. Dev. %	0.2	Wetland %	8.4	Tilled Agriculture %	25.1
		Low Int. Dev. %	2.2	Upland Woody %	59.0	Grassland %	4.8
		Development %	2.5	Natural %	67.7	Human Altered %	32.2
						Impervious %	1.4

Sample Comments

8/20 - NMRO METER USED FOR DO, TEMP AND SPC.

7/22 - FISH PRESENT, DIRTY ROCKS.



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Aquatic Life Taxonomic Inventory Report

Station Number: S-687

Waterbody: North Branch Presque Isle Stream - Station 6 Town: Mapleton

Log Number: 2278

Subsample Factor: X4

Replicates: 3

Calculated: 2/11/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		1.33		CG		0.3
<i>Nais bretscheri</i>	08020202009004	1.33			--	0.3	
<i>Erpobdella</i>	08030203002		1.33		--		0.3
<i>Erpobdella obscura</i>	08030203002006	1.33			--	0.3	
<i>Orconectes</i>	09010301008	1.33	1.33		CG	0.3	0.3
Perlodidae	09020207	1.33	1.33		--	0.3	0.3
<i>Agnatina</i>	09020209050		5.33	2	PR		1.1
<i>Agnatina capitata</i>	09020209050152	5.33		2	PR	1.1	
<i>Boyeria</i>	09020301004		4.00	2	PR		0.8
<i>Boyeria vinosa</i>	09020301004012	4.00			--	0.8	
Calopterygidae	09020307	1.33	1.33		--	0.3	0.3
Baetidae	09020401	1.33			--	0.3	
<i>Baetis</i>	09020401001	2.67	43.71	4	CG	0.5	8.8
<i>Baetis flavistriga</i>	09020401001004	38.67			--	7.8	
<i>Baetis intercalaris</i>	09020401001008	1.33			--	0.3	
<i>Acerpenna</i>	09020401007	4.00	6.83	5	CG	0.8	1.4
<i>Acerpenna macdunnoughi</i>	09020401007001	1.33			--	0.3	
<i>Acerpenna pygmaea</i>	09020401007011	1.33			--	0.3	
<i>Procloeon</i>	09020401010	5.33	5.46		CG	1.1	1.1
Heptageniidae	09020402	4.00			--	0.8	
<i>Epeorus</i>	09020402009	1.33	1.39	0	SC	0.3	0.3
<i>Leucrocota</i>	09020402011	17.33	18.09	1	SC	3.5	3.6
<i>Stenacron</i>	09020402014	1.33	1.39	7	SC	0.3	0.3
<i>Maccaffertium</i>	09020402015	29.33	75.13	4	SC	5.9	15.1
<i>Maccaffertium luteum</i>	09020402015049	42.67			--	8.6	
<i>Isonychia</i>	09020404018	4.00	4.00	2	CF	0.8	0.8
Leptophlebiidae	09020406	2.67	2.67		--	0.5	0.5
<i>Ephemerella</i>	09020410035	5.33	5.33	1	CG	1.1	1.1
<i>Serratella</i>	09020410037		10.67	2	CG		2.1
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	10.67			--	2.1	
<i>Caenis</i>	09020412040	1.33	1.33	7	CG	0.3	0.3
Hydropsychidae	09020604	1.33			--	0.3	
<i>Cheumatopsyche</i>	09020604015	48.00	48.52	5	CF	9.7	9.8
<i>Hydropsyche</i>	09020604016	36.00	75.48	4	CF	7.2	15.2
<i>Hydropsyche bronta</i>	09020604016029	25.33			--	5.1	
<i>Hydropsyche morosa</i>	09020604016030	5.33			--	1.1	
<i>Hydropsyche slossonae</i>	09020604016031	6.67			--	1.3	
<i>Hydropsyche sparna</i>	09020604016032	1.33			--	0.3	



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Log Number: 2278 Subsample Factor: X4 Replicates: 3 Calculated: 2/11/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Rhyacophila</i>	09020605019		1.33	2	PR		0.3
<i>Rhyacophila mainensis</i>	09020605019069	1.33			--	0.3	
Limnephilidae	09020610				--		
<i>Psilotreta</i>	09020614068		1.33	0	SC		0.3
<i>Psilotreta labida</i>	09020614068133	1.33			--	0.3	
Leptoceridae	09020618	1.33	1.33		--	0.3	0.3
<i>Oecetis</i>	09020618078		2.67	8	PR		0.5
<i>Oecetis persimilis</i>	09020618078157	2.67			--	0.5	
<i>Nigronia</i>	09020701003		1.33	0	PR		0.3
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.3	
<i>Antocha</i>	09021001004	2.67	2.67	3	CG	0.5	0.5
Chironomidae	09021011	6.67			--	1.3	
<i>Ablabesmyia</i>	09021011001		1.44	8	PR		0.3
<i>Ablabesmyia mallochii</i>	09021011001004	1.33			--	0.3	
<i>Nilotanytus</i>	09021011012		1.44	6	PR		0.3
<i>Nilotanytus fimbriatus</i>	09021011012027	1.33			--	0.3	
<i>Cricotopus</i>	09021011037		5.75	7	SH		1.2
<i>Cricotopus bicinctus</i>	09021011037057	1.33			--	0.3	
<i>Cricotopus trifascia</i>	09021011037070	1.33			--	0.3	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	2.67			SH	0.5	
<i>Parametriocnemus</i>	09021011053	1.33	1.44	5	CG	0.3	0.3
<i>Thienemanniella</i>	09021011062		1.44	6	CG		0.3
<i>Thienemanniella sp. B</i>	09021011062116	1.33			--	0.3	
<i>Tvetenia</i>	09021011065		1.44	5	CG		0.3
<i>Tvetenia vitracies</i>	09021011065113	1.33			--	0.3	
<i>Rheotanytarsus</i>	09021011072	49.33	54.63	6	CF	9.9	11.0
<i>Rheotanytarsus pellucidus</i>	09021011072128	1.33			CF	0.3	
<i>Tanytarsus</i>	09021011076	4.00	4.31	6	CF	0.8	0.9
<i>Microtendipes</i>	09021011094		15.81	6	CF		3.2
<i>Microtendipes pedellus group</i>	09021011094166	14.67			--	2.9	
<i>Polypedilum</i>	09021011102		4.31	6	SH		0.9
<i>Polypedilum aviceps</i>	09021011102181	2.67			--	0.5	
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.3	
<i>Hemerodromia</i>	09021016057			3	PR		
<i>Psephenus</i>	09021108058		21.33	4	SC		4.3
<i>Psephenus herricki</i>	09021108058028	21.33			--	4.3	
<i>Dubiraphia</i>	09021113064		50.67	6	--		10.2
<i>Dubiraphia minima</i>	09021113064036	24.00			--	4.8	



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<i>Dubiraphia quadrinotata</i>	09021113064037	26.67			--	5.4	
<i>Optioservus</i>	09021113067	1.33	1.33	3	SC	0.3	0.3
<i>Stenelmis</i>	09021113070		5.33	5	SC		1.1
<i>Stenelmis crenata</i>	09021113070055	5.33			--	1.1	