



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

Station Information

**Station Number:** S-597  
**Waterbody:** Bond Brook - Station 597  
**Town:** Augusta  
**Directions:** UPSTREAM OF BALL FIELDS ON RT 11/27 -  
DOWNSTREAM OF LARGE POWERLINES  
**DEP Drainage:** Kennebec  
**HUC8:** 01030003  
**HUC8 Name:** Lower Kennebec  
**Latitude:** 44 19 37 N  
**Longitude:** 69 46 54.71 W  
**Stream Order:** 3

Sample Information

**Log Number:** 2093  
**Subsample Factor:** X4  
**Type of Sample:** ROCK BAG  
**Replicates:** 3  
**Date Deployed:** 7/9/2012  
**Date Retrieved:** 8/7/2012

Classification Attainment

**Statutory Class:** B  
**Model Result with P>.6:** B  
**Date Last Calculated:** 4/16/2013  
**Final Determination:** B  
**Reason for Determination:** Model  
**Date:** 4/17/2013  
**Comments:**

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.17	Class A, B, or C	1.00
Class B	0.64	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	0.85	Class A	0.02
Class C or Non-Attainment	0.15	Class B or C or Non-Attainment	0.98

Model Variables

01 Total Mean Abundance	577.33	18 Relative Abundance Ephemeroptera	0.07
02 Generic Richness	53.00	19 EPT Generic Richness	19.00
03 Plecoptera Mean Abundance	2.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	2.75
04 Ephemeroptera Mean Abundance	38.67	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	4.22	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	155.17
06 Hilsenhoff Biotic Index	5.78	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	10.13
07 Relative Abundance - Chironomidae	0.64	28 EP Generic Richness/14	0.71
08 Relative Generic Richness Diptera	0.42	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	35.72		
11 <i>Cheumatopsyche</i> Abundance	9.62		
12 EPT Generic Richness/ Diptera Generic Richness	0.86		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	1.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	31.58		
17 Chironomini Abundance (Family Functional Group)	140.06		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Microtendipes</i>	21.41
2	<i>Tanytarsus</i>	16.41
3	<i>Rheotanytarsus</i>	10.23
4	<i>Hydropsyche</i>	6.19
5	<i>Polycentropus</i>	5.08



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature:	21.4 deg C
Dissolved Oxygen:	9.4 mg/l
Specific Conductance:	279 uS/cm
Velocity:	18 cm/s
pH:	8
Wetted Width:	8.3 m
Bankfull Width:	10 m
Depth:	50 cm

**Waterbody Information - Retrieval**

Temperature:	20.7 deg C
Dissolved Oxygen:	9.3 mg/l
Specific Conductance:	324 uS/cm
Velocity:	12.1 cm/s
pH:	8.01
Wetted Width:	9 m
Bankfull Width:	10 m
Depth:	40 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

Landuse Name

Upland Hardwood  
Urban

Canopy Cover

Open

Terrain

Rolling

Potential Stressor

Urban Runoff

Location

Below Urban NPS

Substrate

Gravel	30 %
Rubble/Cobble	60 %
Sand	10 %

**Landcover Summary - 2004 Data**

Total Area (ac)	10876	High Int. Dev. %	4.3	Water %	0.1	Non-vegetated %	2.2
		Med Int. Dev. %	2.5	Wetland %	2.5	Tilled Agriculture %	4.2
		Low Int. Dev. %	6.3	Upland Woody %	58.7	Grassland %	7.1
		Development %	13.1	Natural %	61.2	Human Altered %	38.7
						Impervious %	9.7

**Sample Comments**

8/7/12: HEAVY SILT. 8/7/12: ELVER (BABY EEL) OBSERVED.

7/9/12: EROSION, SEVERAL SAND/GRAVEL BARS, MACROALGAE ALONG BANKS. FISH OBSERVED DURING DEPLOYMENT AND RETRIEVAL.



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Subsample Factor: X4

Replicates: 3

Calculated: 4/16/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		4.00		CG		0.7
<i>Nais behningi</i>	08020202009003	2.67			--	0.5	
<i>Nais variabilis</i>	08020202009009	1.33			--	0.2	
<i>Gammarus</i>	09010201003		2.67	4	--		0.5
<i>Gammarus fasciatus</i>	09010201003003	2.67			--	0.5	
<i>Orconectes</i>	09010301008		1.33		CG		0.2
<i>Orconectes limosus</i>	09010301008013	1.33			--	0.2	
<i>Isoperla</i>	09020207026	1.33	1.33	2	PR	0.2	0.2
<i>Acroneuria</i>	09020209042		1.33	0	PR		0.2
<i>Acroneuria lycorias</i>	09020209042125	1.33			--	0.2	
<i>Aeshna</i>	09020301001	1.33	1.33	5	PR	0.2	0.2
Gomphidae	09020302	1.33	1.33		--	0.2	0.2
Calopterygidae	09020307	2.67	2.67		--	0.5	0.5
<i>Calopteryx</i>	09020307043		2.67	5	PR		0.5
<i>Calopteryx aequabilis</i>	09020307043085	1.33			--	0.2	
<i>Calopteryx maculata</i>	09020307043088	1.33			--	0.2	
<i>Centropilum</i>	09020401003	1.33	1.33	2	CG	0.2	0.2
<i>Acerpenna</i>	09020401007	1.33	1.33	5	CG	0.2	0.2
<i>Proclleon</i>	09020401010	10.67	10.67		CG	1.8	1.8
<i>Iswaeon</i>	09020401015	2.67	2.67		--	0.5	0.5
Heptageniidae	09020402	8.00			--	1.4	
<i>Stenacron</i>	09020402014	2.67	5.87	7	SC	0.5	1.0
<i>Maccaffertium</i>	09020402015	1.33	8.80	4	SC	0.2	1.5
<i>Maccaffertium luteum</i>	09020402015049	2.67			--	0.5	
<i>Ephemerella</i>	09020410035	6.67	6.67	1	CG	1.2	1.2
<i>Tricorythodes</i>	09020411038	1.33	1.33	4	CG	0.2	0.2
Polycentropodidae	09020603				--		
<i>Cernotina</i>	09020603006	14.67	14.67		PR	2.5	2.5
<i>Neureclipsis</i>	09020603008	4.00	4.00	7	CF	0.7	0.7
<i>Nyctiophylax</i>	09020603009		1.33	5	PR		0.2
<i>Nyctiophylax moestus</i>	09020603009013	1.33			--	0.2	
<i>Polycentropus</i>	09020603010	29.33	29.33	6	PR	5.1	5.1
Hydropsychidae	09020604	1.33			--	0.2	
<i>Cheumatopsyche</i>	09020604015	9.33	9.62	5	CF	1.6	1.7
<i>Hydropsyche</i>	09020604016	2.67	35.72	4	CF	0.5	6.2
<i>Hydropsyche bronta</i>	09020604016029	30.67			--	5.3	
<i>Hydropsyche morosa</i>	09020604016030	1.33			--	0.2	
<i>Hydroptila</i>	09020607026	2.67	2.67	6	P	0.5	0.5



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		Actual	Adjusted			Actual	Adjusted
<i>Lepidostoma</i>	09020611064	1.33	1.33	1	SH	0.2	0.2
Leptoceridae	09020618				--		
<i>Oecetis</i>	09020618078	1.33	8.00	8	PR	0.2	1.4
<i>Oecetis avara</i>	09020618078153	1.33			--	0.2	
<i>Oecetis persimilis</i>	09020618078157	5.33			--	0.9	
Chironomidae	09021011	10.67			--	1.8	
<i>Ablabesmyia</i>	09021011001		21.97	8	PR		3.8
<i>Ablabesmyia mallochi</i>	09021011001004	21.33			--	3.7	
<i>Labrundinia</i>	09021011008			7	PR		
<i>Meropelopia</i>	09021011010				--		
<i>Nilotanyus</i>	09021011012		1.37	6	PR		0.2
<i>Nilotanyus fimbriatus</i>	09021011012027	1.33			--	0.2	
<i>Paramerina</i>	09021011013	1.33	1.37		--	0.2	0.2
<i>Pentaneura</i>	09021011014		4.12	6	PR		0.7
<i>Pentaneura inconspicua</i>	09021011014028	4.00			--	0.7	
<i>Rheopelopia</i>	09021011017		2.75		PR		0.5
<i>Rheopelopia acra group</i>	09021011017036	2.67			--	0.5	
<i>Corynoneura</i>	09021011036	5.33	5.49	7	CG	0.9	1.0
<i>Cricotopus</i>	09021011037		28.84	7	SH		5.0
<i>Cricotopus bicinctus</i>	09021011037057	24.00			--	4.2	
<i>Cricotopus vierriensis</i>	09021011037071	4.00			--	0.7	
<i>Doncricotopus</i>	09021011039	1.33	1.37		--	0.2	0.2
<i>Parametriocnemus</i>	09021011053	1.33	1.37	5	CG	0.2	0.2
<i>Thienemanniella</i>	09021011062	1.33	1.37	6	CG	0.2	0.2
<i>Rheotanytarsus</i>	09021011072	57.33	59.04	6	CF	9.9	10.2
<i>Stempellinella</i>	09021011074		2.75	2	--		0.5
<i>Stempellinella leptocelloides</i>	09021011074001	2.67			--	0.5	
<i>Sublettea</i>	09021011075		1.37		--		0.2
<i>Sublettea coffmani</i>	09021011075131	1.33			--	0.2	
<i>Tanytarsus</i>	09021011076	92.00	94.75	6	CF	15.9	16.4
<i>Cryptochironomus</i>	09021011082	1.33	1.37	8	PR	0.2	0.2
<i>Dicrotendipes</i>	09021011085		2.75	8	CG		0.5
<i>Dicrotendipes neomodestus</i>	09021011085152	2.67			--	0.5	
<i>Microtendipes</i>	09021011094		123.58	6	CF		21.4
<i>Microtendipes pedellus group</i>	09021011094166	34.67			--	6.0	
<i>Microtendipes rydalensis group</i>	09021011094168	85.33			--	14.8	
<i>Nilothauma</i>	09021011095	1.33	1.37	2	--	0.2	0.2
<i>Phaenopsectra</i>	09021011101		4.12	7	SC		0.7



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<i>Phaenopsectra obediens</i>	09021011101182	4.00			SC	0.7	
<i>Polypedilum</i>	090210111102		6.87	6	SH		1.2
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.2	
<i>Polypedilum flavum</i>	09021011102182	5.33			--	0.9	
Empididae	09021016	1.33	1.33	6	--	0.2	0.2
<i>Hemerodromia</i>	09021016057	6.67	6.67	3	PR	1.2	1.2
<i>Dubiraphia</i>	09021113064		20.00	6	--		3.5
<i>Dubiraphia minima</i>	09021113064036	1.33			--	0.2	
<i>Dubiraphia quadrinotata</i>	09021113064037	18.67			--	3.2	
<i>Macronychus</i>	09021113065		8.00	4	--		1.4
<i>Macronychus glabratus</i>	09021113065040	8.00			--	1.4	
<i>Promoresia</i>	09021113069		1.33		--		0.2
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.2	
<i>Stenelmis</i>	09021113070		6.67	5	SC		1.2
<i>Stenelmis crenata</i>	09021113070055	6.67			--	1.2	
<i>Lymnaea</i>	10010201022		1.33		SC		0.2
<i>Lymnaea columella</i>	10010201022038	1.33			--	0.2	