



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

Station Information

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

Sample Information

Log Number: 2573	Type of Sample: ROCK BAG	Date Deployed: 7/18/2017
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/15/2017

Classification Attainment

Statutory Class: B	Final Determination: B	Date: 3/16/2018
Model Result with P \geq 0.6: B	Reason for Determination: Model	
Date Last Calculated: 3/15/2018	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.25	Class A, B, or C	1.00
Class B	0.62	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.05
Class A or B	0.83	Class B or C or Non-Attainment	0.95
Class C or Non-Attainment	0.17		

Model Variables

01 Total Mean Abundance	714.67	18 Relative Abundance Ephemeroptera	0.01
02 Generic Richness	45.00	19 EPT Generic Richness	16.00
03 Plecoptera Mean Abundance	2.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	2.67
04 Ephemeroptera Mean Abundance	6.67	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	3.58	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	108.00
06 Hilsenhoff Biotic Index	4.89	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	2.67
07 Relative Abundance - Chironomidae	0.32	28 EP Generic Richness/14	0.36
08 Relative Generic Richness Diptera	0.36	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	69.33		
11 <i>Cheumatopsyche</i> Abundance	8.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	28.00		
17 Chironomini Abundance (Family Functional Group)	81.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Gammarus</i>	35.26
2	<i>Microtendipes</i>	10.26
3	<i>Tanytarsus</i>	10.26
4	<i>Hydropsyche</i>	9.70
5	<i>Oecetis</i>	4.29



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Station Number: S-597 Town: Augusta Date Deployed: 7/18/2017
Log Number: 2573 Waterbody: Bond Brook - Station 597 Date Retrieved: 8/15/2017

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 19.6 deg C
Dissolved Oxygen: 10.4 mg/l
Dissolved Oxygen Saturation: 111.6 %
Specific Conductance: 346.7 uS/cm
Velocity: 15.2 cm/s
pH: 8.22
Wetted Width: 6.9 m
Bankfull Width: 11.2 m
Depth: 34 cm

Waterbody Information - Retrieval

Temperature: 20.6 deg C
Dissolved Oxygen: 12.25 mg/l
Dissolved Oxygen Saturation: 134.9 %
Specific Conductance: 315 uS/cm
Velocity: 9.1 cm/s
pH: 8.46
Wetted Width: 7.2 m
Bankfull Width: 11.2 m
Depth: 37 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Open	Rolling	
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Urban Runoff	Below Urban NPS	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

7/18/17: SMALL FISH OBSERVED. SILT ON ROCKS AND FILAMENTOUS ALGAE.
8/15/17: FISH OBSERVED, ALGAE AND SILT ON ROCKS.



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

Station Number: S-597

Waterbody: Bond Brook - Station 597

Town: Augusta

Log Number: 2573

Subsample Factor: X4

Replicates: 3

Calculated: 3/15/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	1.33	1.33		PR	0.2	0.2
Naididae	08020202	1.33	1.33		--	0.2	0.2
<i>Helobdella</i>	08030101005	2.67	2.67		--	0.4	0.4
<i>Gammarus</i>	09010201003	252.00	252.00	4	--	35.3	35.3
Cambaridae	09010301	1.33	1.33		--	0.2	0.2
<i>Acroneuria</i>	09020209042	2.67	2.67	0	PR	0.4	0.4
<i>Boyeria</i>	09020301004	2.67	5.33	2	PR	0.4	0.7
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.4	
<i>Acerpenna</i>	09020401007		1.33	5	CG		0.2
<i>Acerpenna pygmaea</i>	09020401007011	1.33			--	0.2	
<i>Leucrocuta</i>	09020402011	1.33	1.33	1	SC	0.2	0.2
<i>Ephemerella</i>	09020410035	2.67	2.67	1	CG	0.4	0.4
<i>Tricorythodes</i>	09020411038	1.33	1.33	4	CG	0.2	0.2
<i>Neureclipsis</i>	09020603008	2.67	2.67	7	CF	0.4	0.4
<i>Polycentropus</i>	09020603010	17.33	17.33	6	PR	2.4	2.4
<i>Cheumatopsyche</i>	09020604015	8.00	8.00	5	CF	1.1	1.1
<i>Hydropsyche</i>	09020604016		69.33	4	CF		9.7
<i>Hydropsyche bronta</i>	09020604016029	68.00			--	9.5	
<i>Hydropsyche sparna</i>	09020604016032	1.33			--	0.2	
<i>Hydroptila</i>	09020607026	17.33	17.33	6	P	2.4	2.4
Phryganeidae	09020608	1.33	1.33		--	0.2	0.2
<i>Micrasema</i>	09020609044	1.33	1.33	2	SH	0.2	0.2
<i>Helicopsyche</i>	09020616070	2.67	2.67	3	SC	0.4	0.4
<i>Mystacides</i>	09020618075		1.33	4	CG		0.2
<i>Mystacides sepulchralis</i>	09020618075147	1.33			--	0.2	
<i>Oecetis</i>	09020618078	24.00	30.67	8	PR	3.4	4.3
<i>Oecetis avara</i>	09020618078153	6.67			--	0.9	
<i>Apatania</i>	09020619061	2.67	2.67		SC	0.4	0.4
Chironomidae	09021011				--		
<i>Nilotanyus</i>	09021011012		1.33	6	PR		0.2
<i>Nilotanyus fimbriatus</i>	09021011012027	1.33			--	0.2	
<i>Thienemannimyia</i>	09021011020		26.67	3	PR		3.7
<i>Thienemannimyia group</i>	09021011020041	26.67			--	3.7	
<i>Corynoneura</i>	09021011036	1.33	1.33	7	CG	0.2	0.2
<i>Cricotopus</i>	09021011037	1.33	26.67	7	SH	0.2	3.7
<i>Cricotopus bicinctus</i>	09021011037057	25.33			--	3.5	
<i>Parametriocnemus</i>	09021011053	1.33	1.33	5	CG	0.2	0.2



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		Actual	Adjusted			Actual	Adjusted
<i>Synorthocladius</i>	09021011061	2.67	2.67	2	CG	0.4	0.4
<i>Cladotanytarsus</i>	09021011068	1.33	1.33	7	CG	0.2	0.2
<i>Rheotanytarsus</i>	09021011072		8.00	6	CF		1.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	8.00			CF	1.1	
<i>Stempellinella</i>	09021011074	1.33	1.33	2	--	0.2	0.2
<i>Sublettea</i>	09021011075		4.00		--		0.6
<i>Sublettea coffmani</i>	09021011075131	4.00			--	0.6	
<i>Tanytarsus</i>	09021011076	73.33	73.33	6	CF	10.3	10.3
<i>Microtendipes</i>	09021011094		73.33	6	CF		10.3
<i>Microtendipes pedellus group</i>	09021011094166	32.00			--	4.5	
<i>Microtendipes rydalensis group</i>	09021011094168	41.33			--	5.8	
<i>Nilothauma</i>	09021011095	2.67	2.67	2	--	0.4	0.4
<i>Phaenopsectra</i>	09021011101	2.67	2.67	7	SC	0.4	0.4
<i>Polypedilum</i>	09021011102		2.67	6	SH		0.4
<i>Polypedilum flavum</i>	09021011102182	2.67			--	0.4	
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.2	0.2
<i>Dubiraphia</i>	09021113064	29.33	29.33	6	--	4.1	4.1
<i>Macronychus</i>	09021113065		2.67	4	--		0.4
<i>Macronychus glabratus</i>	09021113065040	2.67			--	0.4	
<i>Optioservus</i>	09021113067	1.33	1.33	3	SC	0.2	0.2
<i>Optioservus ovalis</i>	09021113067046				--		
<i>Stenelmis</i>	09021113070	6.67	6.67	5	SC	0.9	0.9
<i>Lebertia</i>	09030105001	1.33	1.33		--	0.2	0.2
Physidae	10010202	10.67	10.67		SC	1.5	1.5
<i>Helisoma</i>	10010203030		4.00		SC		0.6
<i>Helisoma anceps</i>	10010203030058	4.00			--	0.6	