



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

Station Information

Station Number: S-489	River Basin: Kennebec
Waterbody: Bond Brook - Unnamed Tributary - Station 489	HUC8 Name: Lower Kennebec
Town: Augusta	Latitude: 44 19 19.48 N
Directions: BELOW I-95	Longitude: 69 48 48.08 W
	Stream Order: 1

Sample Information

Log Number: 2570	Type of Sample: ROCK BAG	Date Deployed: 7/18/2017
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/15/2017

Classification Attainment

Statutory Class: B	Final Determination: C	Date: 3/16/2018
Model Result with $P \geq 0.6$: C	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	0.16	Class A, B, or C	0.85
Class B	0.36	Non-Attainment	0.15
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.01
Class A or B	0.02	Class B or C or Non-Attainment	0.99
Class C or Non-Attainment	0.98		

Model Variables

01 Total Mean Abundance	134.00	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	46.00	19 EPT Generic Richness	9.00
03 Plecoptera Mean Abundance	0.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	16.04
04 Ephemeroptera Mean Abundance	0.67	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	3.80	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	35.16
06 Hilsenhoff Biotic Index	5.74	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.74	28 EP Generic Richness/14	0.29
08 Relative Generic Richness Diptera	0.48	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.41		
13 Relative Abundance - Oligochaeta	0.02		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	7.85		
17 Chironomini Abundance (Family Functional Group)	4.44		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tanytarsus</i>	26.24
2	<i>Rheotanytarsus</i>	18.60
3	<i>Micropsectra</i>	11.46
4	Calopterygidae	6.47
5	<i>Parametriocnemus</i>	6.11



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Station Number: S-489 Town: Augusta Date Deployed: 7/18/2017
Log Number: 2570 Waterbody: Bond Brook - Unnamed Tributary - Station 489 Date Retrieved: 8/15/2017

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 17.6 deg C
Dissolved Oxygen: 9.92 mg/l
Dissolved Oxygen Saturation: 102.5 %
Specific Conductance: 1724 uS/cm
Velocity:
pH: 7.94
Wetted Width: 4.1 m
Bankfull Width: 5 m
Depth: 25 cm

Waterbody Information - Retrieval

Temperature: 16.5 deg C
Dissolved Oxygen: 9.89 mg/l
Dissolved Oxygen Saturation: 100.7 %
Specific Conductance: 1706 uS/cm
Velocity: 9.1 cm/s
pH: 7.87
Wetted Width: 4.1 m
Bankfull Width: 5 m
Depth: 25 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Dense	Rolling	
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Urban Runoff	Below Urban NPS	Boulder	60 %
		Gravel	5 %
		Rubble/Cobble	20 %
		Sand	10 %
		Silt	5 %

Landcover Summary - 2004 Data

Total Area (ac)	501	High Int. Dev. %	27.2	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	8.4	Wetland %	0.0	Tilled Agriculture %	1.1
		Low Int. Dev. %	16.0	Upland Woody %	19.8	Grassland %	0.1
		Development %	51.6	Natural %	19.8	Human Altered %	80.2
						Impervious %	37.6

Sample Comments

7/18/17: WATER HAS A MILKY APPEARANCE. FLOW VISIBLE.
8/15/17: WATER STILL HAS A MILKY APPEARANCE. 6 JARS USED FOR 3 BAGS DUE TO SAND IN SAMPLE.



Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report

Station Number: S-489

Waterbody: Bond Brook - Unnamed Tributary - Station 4 Town: Augusta

Log Number: 2570

Subsample Factor: X1

Replicates: 3

Calculated: 3/15/2018

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
<i>Girardia</i>	03010102002	0.33	0.33		--	0.2	0.2
<i>Prostoma</i>	04010101001	0.33	0.33		--	0.2	0.2
Lumbriculidae	08020101	0.33	0.33		--	0.2	0.2
Enchytraeidae	08020201	0.67	0.67		--	0.5	0.5
Naididae	08020202	1.67	1.67		--	1.2	1.2
<i>Helobdella</i>	08030101005		0.33		--		0.2
<i>Helobdella modesta</i>	08030101005004	0.33			--	0.2	
<i>Erpobdella</i>	08030203002	0.33	0.33		--	0.2	0.2
Perlodidae	09020207	0.33	0.33		--	0.2	0.2
Chloroperlidae	09020208	0.33	0.33		--	0.2	0.2
Aeshnidae	09020301	1.67	1.67		--	1.2	1.2
<i>Boyeria</i>	09020301004	0.33	0.33	2	PR	0.2	0.2
Calopterygidae	09020307	8.67	8.67		--	6.5	6.5
<i>Stenacron</i>	09020402014	0.33	0.33	7	SC	0.2	0.2
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.2	0.2
<i>Neureclipsis</i>	09020603008	0.33	0.33	7	CF	0.2	0.2
<i>Nyctiophylax</i>	09020603009	2.00	2.00	5	PR	1.5	1.5
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.2	0.2
<i>Oligostomis</i>	09020608039	0.33	0.33	2	PR	0.2	0.2
<i>Ceraclea</i>	09020618072	0.33	0.33	3	CG	0.2	0.2
<i>Tipula</i>	09021001002	2.00	2.00	4	SH	1.5	1.5
<i>Antocha</i>	09021001004	0.67	0.67	3	CG	0.5	0.5
<i>Dicranota</i>	09021001005	1.00	1.00	3	PR	0.7	0.7
<i>Bezzia/palpomyia</i>	09021010043	0.67	0.67	6	PR	0.5	0.5
Chironomidae	09021011	2.33			--	1.7	
<i>Larsia</i>	09021011009	0.33	0.34	6	PR	0.2	0.3
<i>Natarsia</i>	09021011011	0.67	0.68	8	PR	0.5	0.5
<i>Thienemannimyia</i>	09021011020		6.49	3	PR		4.8
<i>Thienemannimyia group</i>	09021011020041	6.33			--	4.7	
<i>Zavrelimyia</i>	09021011022	0.33	0.34	8	PR	0.2	0.3
<i>Diamesa</i>	09021011024	0.33	0.34	5	CG	0.2	0.3
<i>Pagastia</i>	09021011025	1.00	1.02	1	--	0.7	0.8
<i>Chaetocladius</i>	09021011035	0.67	0.68	6	CG	0.5	0.5
<i>Corynoneura</i>	09021011036	1.00	1.02	7	CG	0.7	0.8
<i>Parametriocnemus</i>	09021011053	8.00	8.19	5	CG	6.0	6.1
<i>Micropsectra</i>	09021011070	15.00	15.36	7	CG	11.2	11.5
<i>Rheotanytarsus</i>	09021011072		24.92	6	CF		18.6



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Rheotanytarsus exiguus group</i>	09021011072127	24.33			CF	18.2	
<i>Tanytarsus</i>	09021011076	34.33	35.16	6	CF	25.6	26.2
<i>Dicrotendipes</i>	09021011085	0.33	0.34	8	CG	0.2	0.3
<i>Paracladopelma</i>	09021011098	0.67	0.68	7	--	0.5	0.5
<i>Paratendipes</i>	09021011100	0.67	0.68	8	CG	0.5	0.5
<i>Polypedilum</i>	09021011102		2.73	6	SH		2.0
<i>Polypedilum scalaenum group</i>	09021011102189	2.67			--	2.0	
Empididae	09021016			6	--		
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.2	0.2
<i>Neoplasia</i>	09021016064	0.67	0.67		PR	0.5	0.5
Dytiscidae	09021103	1.00	1.00		--	0.7	0.7
<i>Dubiraphia</i>	09021113064	1.67	1.67	6	--	1.2	1.2
Lymnaeidae	10010201	4.00	4.00		--	3.0	3.0
Physidae	10010202	3.33	3.33		SC	2.5	2.5
<i>Gyraulus</i>	10010203029	0.33	0.33		SC	0.2	0.2