



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

**Station Information**

<b>Station Number:</b> S-612	River Basin:	Kennebec
Waterbody: Togus Stream - Station 612	HUC8 Name:	Lower Kennebec
Town: Pittston	Latitude:	44 14 2.47 N
Directions: UPSTRM OF PINKHAM RD	Longitude:	69 43 28.77 W
	Stream Order:	4

**Sample Information**

<b>Log Number:</b> 2568	Type of Sample: ROCK BAG	Date Deployed: 7/17/2017
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/14/2017

**Classification Attainment**

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

**Model Probabilities**

First Stage Model				C or Better Model	
Class A	0.60	Class C	0.01	Class A, B, or C	1.00
Class B	0.40	NA	0.00	Non-Attainment	0.00
B or Better Model				A Model	
Class A or B			1.00	Class A	0.99
Class C or Non-Attainment			0.00	Class B or C or Non-Attainment	0.01

**Model Variables**

01 Total Mean Abundance	880.67	18 Relative Abundance Ephemeroptera	0.04
02 Generic Richness	67.00	19 EPT Generic Richness	28.00
03 Plecoptera Mean Abundance	3.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	2.00
04 Ephemeroptera Mean Abundance	39.33	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	2.70	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	14.67
06 Hilsenhoff Biotic Index	4.66	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	16.00
07 Relative Abundance - Chironomidae	0.05	28 EP Generic Richness/14	0.93
08 Relative Generic Richness Diptera	0.19	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	7.00		
12 EPT Generic Richness/ Diptera Generic Richness	2.15		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	3.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	15.00		
17 Chironomini Abundance (Family Functional Group)	14.33		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Amnicola</i>	64.99
2	<i>Polycentropus</i>	3.48
3	<i>Promoresia</i>	3.03
4	<i>Helicopsyche</i>	2.23
5	<i>Dubiraphia</i>	1.89



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Waterbody: Togus Stream - Station 612

Date Retrieved: 8/14/2017

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature:	24.4 deg C
Dissolved Oxygen:	10.91 mg/l
Dissolved Oxygen Saturation:	128.7 %
Specific Conductance:	109.8 uS/cm
Velocity:	3 cm/s
pH:	7.74
Wetted Width:	10.9 m
Bankfull Width:	12 m
Depth:	22 cm

**Waterbody Information - Retrieval**

Temperature:	19.7 deg C
Dissolved Oxygen:	11.22 mg/l
Dissolved Oxygen Saturation:	121.1 %
Specific Conductance:	129.6 uS/cm
Velocity:	3 cm/s
pH:	7.22
Wetted Width:	10.6 m
Bankfull Width:	12 m
Depth:	18 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Open	Rolling
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Nps Pollution	Above Road Crossing	Boulder 15 %
	Main Stem	Gravel 10 %
		Rubble/Cobble 70 %
		Sand 5 %

**Landcover Summary - 2004 Data**

Total Area (ac)	17823	High Int. Dev. %	0.2	Water %	6.1	Non-vegetated %	0.0
		Med Int. Dev. %	0.4	Wetland %	8.8	Tilled Agriculture %	2.1
		Low Int. Dev. %	3.9	Upland Woody %	74.7	Grassland %	3.1
		Development %	4.5	Natural %	83.6	Human Altered %	10.3
						Impervious %	2.9

**Sample Comments**

7/17/17: TIERED APPEARANCE, RIFFLE AREAS ARE OUT OF WATER IN LINES. LOTS OF FISH OBSERVED, ALGAL MATS, LOW WATER OVERALL.

8/14/17: FISH, FROGS, AND EEL OBSERVED. VERY LOW WATER.



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Waterbody: Togus Stream - Station 612

Town: Pittston

**Log Number: 2568**

Subsample Factor: X1

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	0.67	0.67		PR	0.1	0.1
<i>Girardia</i>	03010102002	9.00	9.00		--	1.0	1.0
<i>Prostoma</i>	04010101001	0.33	0.33		--	0.0	0.0
<i>Gammarus</i>	09010201003	0.33	0.33	4	--	0.0	0.0
<i>Hyaella</i>	09010203006	1.33	1.33	8	CG	0.2	0.2
Cambaridae	09010301	0.33	0.33		--	0.0	0.0
<i>Leuctra</i>	09020204020	0.33	0.33	0	SH	0.0	0.0
<i>Acroneuria</i>	09020209042	2.67	3.00	0	PR	0.3	0.3
<i>Acroneuria lycorias</i>	09020209042125	0.33			--	0.0	
<i>Boyeria</i>	09020301004		3.00	2	PR		0.3
<i>Boyeria vinosa</i>	09020301004012	3.00			--	0.3	
Calopterygidae	09020307	1.33	1.33		--	0.2	0.2
<i>Calopteryx</i>	09020307043	3.00	3.00	5	PR	0.3	0.3
Coenagrionidae	09020309	7.00	7.00		--	0.8	0.8
<i>Argia</i>	09020309048	3.67	3.67	7	PR	0.4	0.4
<i>Acerpenna</i>	09020401007		10.33	5	CG		1.2
<i>Acerpenna pygmaea</i>	09020401007011	10.33			--	1.2	
<i>Procloeon</i>	09020401010	0.33	0.33		CG	0.0	0.0
<i>Leucrocuta</i>	09020402011	1.00	1.00	1	SC	0.1	0.1
<i>Stenacron</i>	09020402014	0.67	0.67	7	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	13.00	13.00	4	SC	1.5	1.5
Leptophlebiidae	09020406	0.33	0.33		--	0.0	0.0
<i>Paraleptophlebia</i>	09020406026	1.33	1.33	1	CG	0.2	0.2
<i>Ephemerella</i>	09020410035	3.33	3.33	1	CG	0.4	0.4
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.0	0.0
<i>Tricorythodes</i>	09020411038	5.67	5.67	4	CG	0.6	0.6
<i>Caenis</i>	09020412040	3.00	3.00	7	CG	0.3	0.3
<i>Microvelia</i>	09020510025	0.33	0.33		PR	0.0	0.0
<i>Polycentropus</i>	09020603010	30.67	30.67	6	PR	3.5	3.5
<i>Cheumatopsyche</i>	09020604015	7.00	7.00	5	CF	0.8	0.8
<i>Protoptila</i>	09020606022	4.00	4.00	1	SC	0.5	0.5
<i>Hydroptila</i>	09020607026	1.00	1.00	6	P	0.1	0.1
<i>Oxyethira</i>	09020607028	15.00	15.00	3	P	1.7	1.7
<i>Brachycentrus</i>	09020609043		0.33	0	CF		0.0
<i>Brachycentrus appalachia</i>	09020609043096	0.33			--	0.0	
<i>Micrasema</i>	09020609044	0.33	0.33	2	SH	0.0	0.0
<i>Pycnopsyche</i>	09020610049	1.00	1.00	4	SH	0.1	0.1



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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>Lepidostoma</i>	09020611064	6.33	6.33	1	SH	0.7	0.7
<i>Psilotreta</i>	09020614068		8.00	0	SC		0.9
<i>Psilotreta indecisa</i>	09020614068132	8.00			--	0.9	
<i>Helicopsyche</i>	09020616070	19.67	19.67	3	SC	2.2	2.2
<i>Ceraclea</i>	09020618072	0.67	0.67	3	CG	0.1	0.1
<i>Mystacides</i>	09020618075		0.33	4	CG		0.0
<i>Mystacides sepulchralis</i>	09020618075147	0.33			--	0.0	
<i>Oecetis</i>	09020618078	15.33	15.33	8	PR	1.7	1.7
<i>Apatania</i>	09020619061	0.33	0.33		SC	0.0	0.0
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.0	0.0
Chironomidae	09021011				--		
<i>Ablabesmyia</i>	09021011001	2.00	2.00	8	PR	0.2	0.2
<i>Labrundinia</i>	09021011008	0.33	0.33	7	PR	0.0	0.0
<i>Pentaneura</i>	09021011014	8.67	8.67	6	PR	1.0	1.0
<i>Thienemannimyia</i>	09021011020		4.00	3	PR		0.5
<i>Thienemannimyia group</i>	09021011020041	4.00			--	0.5	
<i>Cricotopus</i>	09021011037	0.67	2.67	7	SH	0.1	0.3
<i>Cricotopus bicinctus</i>	09021011037057	2.00			--	0.2	
<i>Synorthocladius</i>	09021011061	0.33	0.33	2	CG	0.0	0.0
<i>Rheotanytarsus</i>	09021011072		8.67	6	CF		1.0
<i>Rheotanytarsus exiguus group</i>	09021011072127	6.33			CF	0.7	
<i>Rheotanytarsus pellucidus</i>	09021011072128	2.33			CF	0.3	
<i>Stempellina</i>	09021011073	0.33	0.33	2	CG	0.0	0.0
<i>Tanytarsus</i>	09021011076	3.00	3.00	6	CF	0.3	0.3
<i>Dicrotendipes</i>	09021011085	2.00	2.00	8	CG	0.2	0.2
<i>Lauterborniella</i>	09021011092	0.67	0.67		CG	0.1	0.1
<i>Microtendipes</i>	09021011094		8.67	6	CF		1.0
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.0	
<i>Microtendipes rydalensis group</i>	09021011094168	8.33			--	0.9	
<i>Polypedilum</i>	09021011102		3.00	6	SH		0.3
<i>Polypedilum aviceps</i>	09021011102181	2.33			--	0.3	
<i>Polypedilum illinoense group</i>	09021011102185	0.67			--	0.1	
<i>Psephenus</i>	09021108058		6.67	4	SC		0.8
<i>Psephenus herricki</i>	09021108058028	6.67			--	0.8	
<i>Ectopria</i>	09021109059		0.33	5	SC		0.0
<i>Ectopria nervosa</i>	09021109059029	0.33			--	0.0	
<i>Dubiraphia</i>	09021113064	16.67	16.67	6	--	1.9	1.9
<i>Macronychus</i>	09021113065		1.00	4	--		0.1



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		Actual	Adjusted			Actual	Adjusted
<i>Macronychus glabratus</i>	09021113065040	1.00			--	0.1	
<i>Optioservus</i>	09021113067	1.00	1.00	3	SC	0.1	0.1
<i>Promoresia</i>	09021113069		26.67		--		3.0
<i>Promoresia elegans</i>	09021113069051	26.33			--	3.0	
<i>Promoresia tardella</i>	09021113069052	0.33			--	0.0	
<i>Stenelmis</i>	09021113070	5.67	5.67	5	SC	0.6	0.6
<i>Amnicola</i>	10010104013	572.33	572.33		SC	65.0	65.0
Physidae	10010202	8.67	8.67		SC	1.0	1.0
<i>Helisoma</i>	10010203030		12.00		SC		1.4
<i>Helisoma anceps</i>	10010203030058	12.00			--	1.4	
<i>Ferrissia</i>	10010204035	0.33	0.33		SC	0.0	0.0
Sphaeriidae	10020201	0.33			CF	0.0	
<i>Pisidium</i>	10020201002	1.00	1.25		CF	0.1	0.1
<i>Sphaerium</i>	10020201003	0.33	0.42		CF	0.0	0.0