



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

Station Information

Station Number: S-612

Waterbody: Togus Stream - Station 612

Town: Pittston

Directions: UPSTRM OF PINKHAM RD

DEP Drainage:

HUC8: 01030003

HUC8 Name: Lower Kennebec

Latitude: 44 14 2.47 N

Longitude: 69 43 28.77 W

Stream Order: 4

Sample Information

Log Number: 2101

Type of Sample: ROCK BAG

Date Deployed: 7/11/2012

Subsample Factor: X1

Replicates: 3

Date Retrieved: 8/9/2012

Classification Attainment

Statutory Class: B

Final Determination: A

Date: 1/16/2013

Model Result with P>.6: A

Reason for Determination: Model

Date Last Calculated: 1/10/2013

Comments:

Model Probabilities

First Stage Model

Class A	0.65	Class C	0.01
Class B	0.35	NA	0.00

B or Better Model

Class A or B	1.00
Class C or Non-Attainment	0.00

C or Better Model

Class A, B, or C	1.00
Non-Attainment	0.00

A Model

Class A	0.97
Class B or C or Non-Attainment	0.03

Model Variables

01 Total Mean Abundance	415.67	18 Relative Abundance Ephemeroptera	0.10
02 Generic Richness	64.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	4.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.35
04 Ephemeroptera Mean Abundance	43.00	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.02	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	31.05
06 Hilsenhoff Biotic Index	4.97	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	28.88
07 Relative Abundance - Chironomidae	0.25	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.28	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	0.34		
11 <i>Cheumatopsyche</i> Abundance	25.66		
12 EPT Generic Richness/ Diptera Generic Richness	1.28		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	4.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	5.72		
17 Chironomini Abundance (Family Functional Group)	65.96		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Amnicola</i>	27.27
2	<i>Microtendipes</i>	14.82
3	<i>Rheotanytarsus</i>	7.21
4	<i>Cheumatopsyche</i>	6.17
5	<i>Maccaffertium</i>	5.83



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature:	23.2 deg C
Dissolved Oxygen:	8.6 mg/l
Specific Conductance:	71 uS/cm
Velocity:	27 cm/s
pH:	7.08
Wetted Width:	16 m
Bankfull Width:	18 m
Depth:	30 cm

**Waterbody Information - Retrieval**

Temperature:	26 deg C
Dissolved Oxygen:	8.5 mg/l
Specific Conductance:	121 uS/cm
Velocity:	10.5 cm/s
pH:	7.92
Wetted Width:	17 m
Bankfull Width:	18 m
Depth:	24 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

Landuse Name

Upland Conifer

Upland Hardwood

Canopy Cover

Open

Terrain

Rolling

Potential Stressor

Nps Pollution

Location

Main Stem

Substrate

Boulder	15 %
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**

FISH OBSERVED DURING DEPLOYMENT AND RETRIEVAL.  
BAG 3 DISTURBED.



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Replicates: 3

Calculated: 1/10/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
DugesIIDae	03010102	0.33	0.33		--	0.1	0.1
Nematoda	05	0.33	0.33		--	0.1	0.1
Polychaeta	0801	0.33	0.33		--	0.1	0.1
<i>Dero</i>	08020202007		0.33		CG		0.1
<i>Dero nivea</i>	08020202007003	0.33			--	0.1	
<i>Acroneuria</i>	09020209042	3.33	4.67	0	PR	0.8	1.1
<i>Acroneuria abnormis</i>	09020209042121	0.67		0	PR	0.2	
<i>Acroneuria lycorias</i>	09020209042125	0.67			--	0.2	
<i>Boyeria</i>	09020301004		4.67	2	PR		1.1
<i>Boyeria vinosa</i>	09020301004012	4.67			--	1.1	
Gomphidae	09020302	0.33	0.33		--	0.1	0.1
Calopterygidae	09020307	1.33	1.33		--	0.3	0.3
<i>Calopteryx</i>	09020307043	3.00	4.00	5	PR	0.7	1.0
<i>Calopteryx maculata</i>	09020307043088	1.00			--	0.2	
Coenagrionidae	09020309	0.33	0.33		--	0.1	0.1
<i>Argia</i>	09020309048	4.33	4.33	7	PR	1.0	1.0
Baetidae	09020401	0.33			--	0.1	
<i>Acerpenna</i>	09020401007		1.14	5	CG		0.3
<i>Acerpenna pygmaea</i>	09020401007011	1.00			--	0.2	
<i>Procloeon</i>	09020401010	0.67	0.76		CG	0.2	0.2
<i>Plauditus</i>	09020401012	0.67	0.76		CG	0.2	0.2
Heptageniidae	09020402	3.33			--	0.8	
<i>Leucrocuta</i>	09020402011	6.33	7.08	1	SC	1.5	1.7
<i>Stenacron</i>	09020402014		0.37	7	SC		0.1
<i>Stenacron interpunctatum</i>	09020402014045	0.33			--	0.1	
<i>Maccaffertium</i>	09020402015	11.67	24.22	4	SC	2.8	5.8
<i>Maccaffertium luteum</i>	09020402015049	4.67			--	1.1	
<i>Maccaffertium mediopunctatum</i>	09020402015050	0.33			--	0.1	
<i>Maccaffertium modestum</i>	09020402015051	5.00			--	1.2	
Leptophlebiidae	09020406	1.00	1.00		--	0.2	0.2
<i>Ephemerella</i>	09020410035	1.00	1.00	1	CG	0.2	0.2
<i>Serratella</i>	09020410037		0.33	2	CG		0.1
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	0.33			--	0.1	
<i>Tricorythodes</i>	09020411038	6.33	6.33	4	CG	1.5	1.5
<i>Neureclipsis</i>	09020603008	6.00	6.00	7	CF	1.4	1.4
<i>Polycentropus</i>	09020603010	9.67	9.67	6	PR	2.3	2.3
Hydropsychidae	09020604	0.33			--	0.1	
<i>Cheumatopsyche</i>	09020604015	25.33	25.66	5	CF	6.1	6.2



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche</i>	09020604016		0.34	4	CF		0.1
<i>Hydropsyche morosa</i>	09020604016030	0.33			--	0.1	
<i>Hydroptila</i>	09020607026	0.33	0.33	6	P	0.1	0.1
<i>Brachycentrus</i>	09020609043		0.67	0	CF		0.2
<i>Brachycentrus appalachia</i>	09020609043096	0.67			--	0.2	
<i>Apatania</i>	09020610061	0.33	0.33		SC	0.1	0.1
<i>Neophylax</i>	09020610062	0.33	0.33	3	SC	0.1	0.1
<i>Lepidostoma</i>	09020611064	5.00	5.00	1	SH	1.2	1.2
<i>Helicopsyche</i>	09020616070		17.33	3	SC		4.2
<i>Helicopsyche borealis</i>	09020616070137	17.33			--	4.2	
Leptoceridae	09020618				--		
<i>Ceraclea</i>	09020618072	0.67	0.67	3	CG	0.2	0.2
<i>Oecetis</i>	09020618078	1.00	4.33	8	PR	0.2	1.0
<i>Oecetis avara</i>	09020618078153	1.00			--	0.2	
<i>Oecetis inconspicua complex</i>	09020618078156	0.33			--	0.1	
<i>Oecetis persimilis</i>	09020618078157	2.00			--	0.5	
Lepidoptera	090209	0.33	0.33		--	0.1	0.1
<i>Bezzia/palpomyia</i>	09021010043	0.33	0.33	6	PR	0.1	0.1
Chironomidae	09021011	1.00			--	0.2	
<i>Ablabesmyia</i>	09021011001		2.69	8	PR		0.6
<i>Ablabesmyia mallochii</i>	09021011001004	2.67			--	0.6	
<i>Labrundinia</i>	09021011008		0.34	7	PR		0.1
<i>Labrundinia pilosella</i>	09021011008022	0.33			--	0.1	
<i>Nilotanypus</i>	09021011012		0.34	6	PR		0.1
<i>Nilotanypus fimbriatus</i>	09021011012027	0.33			--	0.1	
<i>Pentaneura</i>	09021011014		1.35	6	PR		0.3
<i>Pentaneura inconspicua</i>	09021011014028	1.33			--	0.3	
<i>Rheopelopia</i>	09021011017		0.67		PR		0.2
<i>Rheopelopia acra group</i>	09021011017036	0.67			--	0.2	
<i>Thienemannimyia</i>	09021011020		0.34	3	PR		0.1
<i>Thienemannimyia norena</i>	09021011020039	0.33			--	0.1	
<i>Corynoneura</i>	09021011036	0.33	0.34	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		0.67	7	SH		0.2
<i>Cricotopus bicinctus</i>	09021011037057	0.67			--	0.2	
<i>Parakiefferiella</i>	09021011052	0.33	0.34		CG	0.1	0.1
<i>Tvetenia</i>	09021011065		0.34	5	CG		0.1
<i>Tvetenia vitracies</i>	09021011065113	0.33			--	0.1	
<i>Rheotanytarsus</i>	09021011072	29.67	29.95	6	CF	7.1	7.2



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		Actual	Adjusted			Actual	Adjusted
<i>Tanytarsus</i>	09021011076	2.00	2.02	6	CF	0.5	0.5
<i>Dicrotendipes</i>	09021011085		1.35	8	CG		0.3
<i>Dicrotendipes neomodestus</i>	09021011085152	1.33			--	0.3	
<i>Microtendipes</i>	09021011094		61.58	6	CF		14.8
<i>Microtendipes rydalsensis group</i>	09021011094168	61.00			--	14.7	
<i>Nilothauma</i>	09021011095	1.67	1.68	2	--	0.4	0.4
<i>Polypedilum</i>	09021011102		1.35	6	SH		0.3
<i>Polypedilum aviceps</i>	09021011102181	0.33			--	0.1	
<i>Polypedilum flavum</i>	09021011102182	0.33			--	0.1	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.1	
<i>Polypedilum angulum</i>	09021011102198	0.33			--	0.1	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Psephenus</i>	09021108058		15.00	4	SC		3.6
<i>Psephenus herricki</i>	09021108058028	15.00			--	3.6	
<i>Ectopria</i>	09021109059	0.33	0.33	5	SC	0.1	0.1
Elmidae	09021113	0.33			--	0.1	
<i>Dubiraphia</i>	09021113064		18.82	6	--		4.5
<i>Dubiraphia minima</i>	09021113064036	18.67			--	4.5	
<i>Macronychus</i>	09021113065		0.67	4	--		0.2
<i>Macronychus glabratus</i>	09021113065040	0.67			--	0.2	
<i>Optioservus</i>	09021113067	0.33	0.34	3	SC	0.1	0.1
<i>Promoresia</i>	09021113069		16.47		--		4.0
<i>Promoresia elegans</i>	09021113069051	12.00			--	2.9	
<i>Promoresia tardella</i>	09021113069052	4.33			--	1.0	
<i>Stenelmis</i>	09021113070	1.67	3.36	5	SC	0.4	0.8
<i>Stenelmis crenata</i>	09021113070055	1.67			--	0.4	
Acariformes	090301	0.33	0.33		--	0.1	0.1
<i>Amnicola</i>	10010104013		113.33		SC		27.3
<i>Amnicola limosa</i>	10010104013018	113.33			--	27.3	
<i>Physa</i>	10010202026	4.67	4.67		SC	1.1	1.1
<i>Ferrissia</i>	10010204035		1.00		SC		0.2
<i>Ferrissia rivularis</i>	10010204035066	1.00			--	0.2	
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.1	0.1