



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

Station Information

Station Number: S-599
Waterbody: Riggs Brook - Station 599
Town: Augusta
Directions: UPSTREAM OF RR BRIDGE WHERE IT JOINS
KENNEBEC RIVER

DEP Drainage: Kennebec
HUC8: 01030003
HUC8 Name: Lower Kennebec
Latitude: 44 20 20.1 N
Longitude: 69 45 33.75 W
Stream Order: 2

Sample Information

Log Number: 2099
Subsample Factor: X4
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/11/2012
Date Retrieved: 8/9/2012

Classification Attainment

Statutory Class: B
Model Result with P>.6: C
Date Last Calculated: 3/7/2013
Final Determination: C
Reason for Determination: Model
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.00	Class A, B, or C	1.00
Class B	0.03	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	0.01	Class A	0.01
Class C or Non-Attainment	0.99	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	1604.00	18 Relative Abundance Ephemeroptera	0.05
02 Generic Richness	54.00	19 EPT Generic Richness	16.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	84.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	4.29	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	263.02
06 Hilsenhoff Biotic Index	5.08	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	2.67
07 Relative Abundance - Chironomidae	0.52	28 EP Generic Richness/14	0.43
08 Relative Generic Richness Diptera	0.39	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	208.25		
11 <i>Cheumatopsyche</i> Abundance	14.42		
12 EPT Generic Richness/ Diptera Generic Richness	0.76		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	140.46		
17 Chironomini Abundance (Family Functional Group)	209.28		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	15.41
2	<i>Hydropsyche</i>	12.98
3	<i>Cricotopus</i>	10.95
4	<i>Microtendipes</i>	10.51
5	<i>Gammarus</i>	4.74



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23.8 deg C
Dissolved Oxygen: 8.4 mg/l
Specific Conductance: 137 uS/cm
Velocity: 29 cm/s
pH: 7.77
Wetted Width: 7 m
Bankfull Width: 8.5 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 24.6 deg C
Dissolved Oxygen: 8.4 mg/l
Specific Conductance: 251 uS/cm
Velocity: 11 cm/s
pH: 7.52
Wetted Width: 6.4 m
Bankfull Width: 8.5 m
Depth: 14 cm

Water Chemistry - 8/9/2012

Ammonia As Nitrogen	0.02 mg/l	Soluble Reactive Phosphorus	10 ug/l
Nitrate+nitrite As N	0.09 mg/l	Total Phosphorus	0.043 mg/l
Total Kjeldahl Nitrogen	0.5 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	6.7 mg/l	Total Dissolved Solids	130 mg/l

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	Boulder 70 %
		Rubble/Cobble 25 %
		Silt 5 %

Landcover Summary - 2004 Data

Total Area (ac)	8403	High Int. Dev. %	0.5	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.9	Wetland %	7.8	Tilled Agriculture %	5.7
		Low Int. Dev. %	4.7	Upland Woody %	67.0	Grassland %	8.9
		Development %	6.1	Natural %	75.0	Human Altered %	25.0
						Impervious %	3.6

Sample Comments

8/9/12: FISH OBSERVED.

7/11/12: BOTTOM SILTED, FILAMENTOUS ALGAE PRESENT.



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Subsample Factor: X4

Replicates: 3

Calculated: 3/7/2013

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	0.1	0.1
<i>Girardia</i>	03010102002		26.67		--		1.7
<i>Girardia tigrina</i>	03010102002001	26.67			--	1.7	
<i>Prostoma</i>	04010101001	9.33	9.33		--	0.6	0.6
<i>Pristina</i>	08020202004		6.67		--		0.4
<i>Pristina osborni</i>	08020202004007	6.67			--	0.4	
<i>Nais</i>	08020202009		10.67		CG		0.7
<i>Nais behningi</i>	08020202009003	2.67			--	0.2	
<i>Nais communis</i>	08020202009005	8.00			--	0.5	
<i>Aeolosoma</i>	08020301001	1.33	1.33		--	0.1	0.1
<i>Caecidotea</i>	09010101001	1.33	2.67	8	SH	0.1	0.2
<i>Caecidotea racovitzai racovitzai</i>	09010101001002	1.33			--	0.1	
<i>Gammarus</i>	09010201003		76.00	4	--		4.7
<i>Gammarus fasciatus</i>	09010201003003	76.00			--	4.7	
Baetidae	09020401	4.00			--	0.2	
<i>Baetis</i>	09020401001	8.00	68.96	4	CG	0.5	4.3
<i>Baetis flavistriga</i>	09020401001004	57.33			--	3.6	
<i>Acerpenna</i>	09020401007	2.67	5.63	5	CG	0.2	0.4
<i>Acerpenna pygmaea</i>	09020401007011	2.67			--	0.2	
<i>Procloeon</i>	09020401010	1.33	1.41		CG	0.1	0.1
Heptageniidae	09020402	4.00	4.00		--	0.2	0.2
<i>Maccaffertium</i>	09020402015	1.33	2.67	4	SC	0.1	0.2
<i>Maccaffertium luteum</i>	09020402015049	1.33			--	0.1	
<i>Serratella</i>	09020410037		1.33	2	CG		0.1
<i>Serratella serratoides</i>	09020410037124	1.33			--	0.1	
<i>Chimarra</i>	09020601003	70.67	70.67	2	CF	4.4	4.4
<i>Psychomyia</i>	09020602005		30.67	2	CG		1.9
<i>Psychomyia flavida</i>	09020602005006	30.67			--	1.9	
<i>Neureclipsis</i>	09020603008	1.33	1.33	7	CF	0.1	0.1
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.1	0.1
Hydropsychidae	09020604	37.33			--	2.3	
<i>Cheumatopsyche</i>	09020604015	12.00	14.42	5	CF	0.7	0.9
<i>Hydropsyche</i>	09020604016	149.33	208.25	4	CF	9.3	13.0
<i>Hydropsyche morosa</i>	09020604016030	2.67			--	0.2	
<i>Hydropsyche sparna</i>	09020604016032	2.67			--	0.2	
<i>Hydropsyche depravata complex</i>	09020604016041	18.67			CF	1.2	
Hydroptilidae	09020607				--		
<i>Hydroptila</i>	09020607026	53.33	53.33	6	P	3.3	3.3



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		Actual	Adjusted			Actual	Adjusted
<i>Leucotrichia</i>	09020607032	56.00	56.00	2	SC	3.5	3.5
<i>Micrasema</i>	09020609044	10.67	18.67	2	SH	0.7	1.2
<i>Micrasema wataga</i>	09020609044101	8.00			--	0.5	
<i>Oecetis</i>	09020618078	1.33	5.33	8	PR	0.1	0.3
<i>Oecetis persimilis</i>	09020618078157	4.00			--	0.2	
<i>Petrophila</i>	09020901004	1.33	1.33	5	SC	0.1	0.1
<i>Tipula</i>	09021001002	1.33	1.33	4	SH	0.1	0.1
<i>Antocha</i>	09021001004	12.00	12.00	3	CG	0.7	0.7
Chironomidae	09021011	42.67			--	2.7	
<i>Ablabesmyia</i>	09021011001		42.14	8	PR		2.6
<i>Ablabesmyia mallochii</i>	09021011001004	40.00			--	2.5	
<i>Labrundinia</i>	09021011008		1.40	7	PR		0.1
<i>Labrundinia pilosella</i>	09021011008022	1.33			--	0.1	
<i>Nilotanyus</i>	09021011012		7.02	6	PR		0.4
<i>Nilotanyus fimbriatus</i>	09021011012027	6.67			--	0.4	
<i>Paramerina</i>	09021011013	1.33	1.40		--	0.1	0.1
<i>Pentaneura</i>	09021011014		14.05	6	PR		0.9
<i>Pentaneura inconspicua</i>	09021011014028	13.33			--	0.8	
<i>Rheopelopia</i>	09021011017		74.44		PR		4.6
<i>Rheopelopia acra group</i>	09021011017036	70.67			--	4.4	
<i>Corynoneura</i>	09021011036	9.33	9.83	7	CG	0.6	0.6
<i>Cricotopus</i>	09021011037	8.00	175.57	7	SH	0.5	10.9
<i>Cricotopus bicinctus</i>	09021011037057	108.00			--	6.7	
<i>Cricotopus vierriensis</i>	09021011037071	4.00			--	0.2	
<i>Cricotopus triannulatus/infusatus</i>	09021011037078	46.67			SH	2.9	
<i>Nanocladius</i>	09021011049		1.40	3	CG		0.1
<i>Nanocladius spiniplenus</i>	09021011049090	1.33			--	0.1	
<i>Parametriocnemus</i>	09021011053	1.33	1.40	5	CG	0.1	0.1
<i>Rheocricotopus</i>	09021011057		5.62	6	CG		0.4
<i>Rheocricotopus robacki</i>	09021011057105	5.33			--	0.3	
<i>Synorthocladius</i>	09021011061	1.33	1.40	2	CG	0.1	0.1
<i>Thienemanniella</i>	09021011062	5.33	18.26	6	CG	0.3	1.1
<i>Thienemanniella xena</i>	09021011062110	10.67			--	0.7	
<i>Thienemanniella sp. B</i>	09021011062116	1.33			--	0.1	
<i>Rheotanytarsus</i>	09021011072	234.67	247.20	6	CF	14.6	15.4
<i>Tanytarsus</i>	09021011076	29.33	30.90	6	CF	1.8	1.9
<i>Microtendipes</i>	09021011094		168.55	6	CF		10.5
<i>Microtendipes pedellus group</i>	09021011094166	12.00			--	0.7	



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<i>Microtendipes rydalensis</i> group	09021011094168	148.00			--	9.2	
<i>Polypedilum</i>	09021011102	5.33	40.73	6	SH	0.3	2.5
<i>Polypedilum aviceps</i>	09021011102181	17.33			--	1.1	
<i>Polypedilum flavum</i>	09021011102182	12.00			--	0.7	
<i>Polypedilum scalaenum</i> group	09021011102189	4.00			--	0.2	
<i>Simulium</i>	09021012047	1.33	1.33	4	CF	0.1	0.1
<i>Hemerodromia</i>	09021016057	21.33	21.33	3	PR	1.3	1.3
<i>Dineutus</i>	09021104032	2.67	2.67	2	--	0.2	0.2
<i>Psephenus</i>	09021108058		29.33	4	SC		1.8
<i>Psephenus herricki</i>	09021108058028	29.33			--	1.8	
<i>Dubiraphia</i>	09021113064		1.33	6	--		0.1
<i>Dubiraphia minima</i>	09021113064036	1.33			--	0.1	
<i>Macronychus</i>	09021113065		2.67	4	--		0.2
<i>Macronychus glabratus</i>	09021113065040	2.67			--	0.2	
<i>Promoresia</i>	09021113069		1.33		--		0.1
<i>Promoresia tardella</i>	09021113069052	1.33			--	0.1	
<i>Stenelmis</i>	09021113070	1.33	4.00	5	SC	0.1	0.2
<i>Stenelmis crenata</i>	09021113070055	2.67			--	0.2	
Acariformes	090301	1.33	1.33		--	0.1	0.1
<i>Physa</i>	10010202026	4.00	4.00		SC	0.2	0.2