



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

Station Information

Station Number: S-30
Waterbody: Bond Brook - Station 30
Town: Augusta
Directions: 24 M ABOVE I-95 OVERPASS

DEP Drainage: Kennebec
HUC8: 01030003
HUC8 Name: Lower Kennebec
Latitude: 44 20 15.03 N
Longitude: 69 48 27.49 W
Stream Order: 2

Sample Information

Log Number: 2092
Subsample Factor: X4

Type of Sample: ROCK BAG
Replicates: 3

Date Deployed: 7/9/2012
Date Retrieved: 8/7/2012

Classification Attainment

Statutory Class: B
Model Result with P>.6: B
Date Last Calculated: 4/16/2013

Final Determination: B
Reason for Determination: Model
Comments:

Date: 4/17/2013

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.13	Class A, B, or C	1.00
Class B	0.70	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.97	Class A	0.06
Class C or Non-Attainment	0.03	Class B or C or Non-Attainment	0.94

Model Variables

01 Total Mean Abundance	1537.33	18 Relative Abundance Ephemeroptera	0.12
02 Generic Richness	51.00	19 EPT Generic Richness	19.00
03 Plecoptera Mean Abundance	1.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	192.00	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	3.48	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	585.12
06 Hilsenhoff Biotic Index	5.05	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	31.95
07 Relative Abundance - Chironomidae	0.26	28 EP Generic Richness/14	0.57
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	131.54		
11 <i>Cheumatopsyche</i> Abundance	560.46		
12 EPT Generic Richness/ Diptera Generic Richness	1.12		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	1.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	17.81		
17 Chironomini Abundance (Family Functional Group)	73.97		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Cheumatopsyche</i>	36.46
2	<i>Rheotanytarsus</i>	18.09
3	<i>Hydropsyche</i>	8.56
4	<i>Neureclipsis</i>	5.22
5	<i>Acerpenna</i>	4.52



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	20.2 deg C
Dissolved Oxygen:	9.3 mg/l
Specific Conductance:	195 uS/cm
Velocity:	34 cm/s
pH:	8.23
Wetted Width:	10.4 m
Bankfull Width:	13.7 m
Depth:	40 cm

Waterbody Information - Retrieval

Temperature:	22 deg C
Dissolved Oxygen:	8.5 mg/l
Specific Conductance:	217 uS/cm
Velocity:	20 cm/s
pH:	8.06
Wetted Width:	9.5 m
Bankfull Width:	13.7 m
Depth:	35 cm

Water Chemistry - 8/7/2012

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	<0.01 mg/l	Total Phosphorus	0.012 mg/l
Total Kjeldahl Nitrogen	0.2 mg/l	Total Suspended Solids	2.1 mg/l
Dissolved Organic Carbon	2.3 mg/l	Total Dissolved Solids	120 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Partly Open	Rolling
Upland Hardwood		
Urban		

<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Urban Runoff	Below Urban NPS	Boulder 10 %
		Rubble/Cobble 75 %
		Sand 10 %
		Silt 5 %

Landcover Summary - 2004 Data

Total Area (ac)	8554	High Int. Dev. %	1.5	Water %	0.1	Non-vegetated %	2.7
		Med Int. Dev. %	1.7	Wetland %	3.2	Tilled Agriculture %	5.2
		Low Int. Dev. %	4.5	Upland Woody %	62.8	Grassland %	8.9
		Development %	7.7	Natural %	66.0	Human Altered %	33.9
						Impervious %	5.9

Sample Comments

8/7/12: HEAVY ALGAE ON BOTTOM (FILAMENTOUS). 8/7/12: MILKY, GREY-COLORED WATER.



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Calculated: 4/16/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Dugesidae	03010102	1.33	1.33		--	0.1	0.1
<i>Nais</i>	08020202009		4.00		CG		0.3
<i>Nais behningi</i>	08020202009003	4.00			--	0.3	
<i>Ophidonais</i>	08020202010		1.33		CG		0.1
<i>Ophidonais serpentina</i>	08020202010001	1.33			--	0.1	
<i>Slavina</i>	08020202012		1.33		--		0.1
<i>Slavina appendiculata</i>	08020202012001	1.33			--	0.1	
<i>Acroneuria</i>	09020209042		1.33	0	PR		0.1
<i>Acroneuria lycorias</i>	09020209042125	1.33			--	0.1	
<i>Boyeria</i>	09020301004		1.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.1	
<i>Calopteryx</i>	09020307043	4.00	4.00	5	PR	0.3	0.3
Baetidae	09020401	4.00			--	0.3	
<i>Acerpenna</i>	09020401007	54.67	69.48	5	CG	3.6	4.5
<i>Acerpenna macdunnoughi</i>	09020401007001	12.00			--	0.8	
<i>Iswaeon</i>	09020401015	28.00	29.18		--	1.8	1.9
Heptageniidae	09020402	5.33			--	0.3	
<i>Leucrocota</i>	09020402011	9.33	10.72	1	SC	0.6	0.7
<i>Maccaffertium</i>	09020402015	17.33	30.62	4	SC	1.1	2.0
<i>Maccaffertium luteum</i>	09020402015049	4.00			--	0.3	
<i>Maccaffertium modestum</i>	09020402015051	5.33			--	0.3	
<i>Isonychia</i>	09020404018	1.33	1.33	2	CF	0.1	0.1
<i>Ephemerella</i>	09020410035	40.00	40.00	1	CG	2.6	2.6
<i>Serratella</i>	09020410037		10.67	2	CG		0.7
<i>Serratella serratoides</i>	09020410037124	10.67			--	0.7	
<i>Chimarra</i>	09020601003	5.33	5.33	2	CF	0.3	0.3
Polycentropodidae	09020603	9.33			--	0.6	
<i>Cernotina</i>	09020603006	20.00	21.49		PR	1.3	1.4
<i>Neureclipsis</i>	09020603008	74.67	80.23	7	CF	4.9	5.2
<i>Nyctiophylax</i>	09020603009		2.87	5	PR		0.2
<i>Nyctiophylax celta</i>	09020603009012	2.67			--	0.2	
<i>Polycentropus</i>	09020603010	28.00	30.09	6	PR	1.8	2.0
Hydropsychidae	09020604	46.67			--	3.0	
<i>Cheumatopsyche</i>	09020604015	522.67	560.46	5	CF	34.0	36.5
<i>Hydropsyche</i>	09020604016	68.00	131.54	4	CF	4.4	8.6
<i>Hydropsyche bronta</i>	09020604016029	52.00			--	3.4	
<i>Hydropsyche morosa</i>	09020604016030	1.33			--	0.1	
<i>Hydropsyche sparna</i>	09020604016032	1.33			--	0.1	



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		Actual	Adjusted			Actual	Adjusted
<i>Rhyacophila</i>	09020605019	6.67	20.00	2	PR	0.4	1.3
<i>Rhyacophila fuscula</i>	09020605019060	13.33			PR	0.9	
<i>Hydroptila</i>	09020607026	8.00	8.00	6	P	0.5	0.5
<i>Helicopsyche</i>	09020616070		13.33	3	SC		0.9
<i>Helicopsyche borealis</i>	09020616070137	13.33			--	0.9	
<i>Oecetis</i>	09020618078	2.67	12.00	8	PR	0.2	0.8
<i>Oecetis avara</i>	09020618078153	1.33			--	0.1	
<i>Oecetis inconspicua complex</i>	09020618078156	1.33			--	0.1	
<i>Oecetis persimilis</i>	09020618078157	6.67			--	0.4	
Chironomidae	09021011	10.67			--	0.7	
<i>Ablabesmyia</i>	09021011001		1.37	8	PR		0.1
<i>Ablabesmyia mallochii</i>	09021011001004	1.33			--	0.1	
<i>Nilotanytus</i>	09021011012		4.11	6	PR		0.3
<i>Nilotanytus fimbriatus</i>	09021011012027	4.00			--	0.3	
<i>Paramerina</i>	09021011013	1.33	1.37		--	0.1	0.1
<i>Pentaneura</i>	09021011014		1.37	6	PR		0.1
<i>Pentaneura inconspicua</i>	09021011014028	1.33			--	0.1	
<i>Rheopelopia</i>	09021011017		9.59		PR		0.6
<i>Rheopelopia acra group</i>	09021011017036	9.33			--	0.6	
<i>Cricotopus</i>	09021011037		4.11	7	SH		0.3
<i>Cricotopus bicinctus</i>	09021011037057	2.67			--	0.2	
<i>Cricotopus trifascia</i>	09021011037070	1.33			--	0.1	
<i>Eukiefferiella</i>	09021011041	1.33	1.37	8	CG	0.1	0.1
<i>Thienemanniella</i>	09021011062		4.11	6	CG		0.3
<i>Thienemanniella xena</i>	09021011062110	4.00			--	0.3	
<i>Tvetenia</i>	09021011065		1.37	5	CG		0.1
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.1	
<i>Paratanytarsus</i>	09021011071			6	--		
<i>Rheotanytarsus</i>	09021011072	270.67	278.06	6	CF	17.6	18.1
<i>Stempellinella</i>	09021011074		1.37	2	--		0.1
<i>Stempellinella fimbriata</i>	09021011074002	1.33			--	0.1	
<i>Tanytarsus</i>	09021011076	18.67	19.18	6	CF	1.2	1.2
<i>Pseudochironomus</i>	09021011078	1.33	1.37	5	CG	0.1	0.1
<i>Microtendipes</i>	09021011094		54.79	6	CF		3.6
<i>Microtendipes pedellus group</i>	09021011094166	9.33			--	0.6	
<i>Microtendipes rydalensis group</i>	09021011094168	44.00			--	2.9	
<i>Nilothauma</i>	09021011095	2.67	2.74	2	--	0.2	0.2
<i>Polypedilum</i>	09021011102		15.07	6	SH		1.0



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<i>Polypedilum aviceps</i>	09021011102181	13.33			--	0.9	
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.1	
<i>Hemerodromia</i>	09021016057	8.00	8.00	3	PR	0.5	0.5
<i>Dineutus</i>	09021104032	4.00	4.00	2	--	0.3	0.3
<i>Psephenus</i>	09021108058		2.67	4	SC		0.2
<i>Psephenus herricki</i>	09021108058028	2.67			--	0.2	
<i>Dubiraphia</i>	09021113064		4.00	6	--		0.3
<i>Dubiraphia minima</i>	09021113064036	2.67			--	0.2	
<i>Dubiraphia quadrinotata</i>	09021113064037	1.33			--	0.1	
<i>Macronychus</i>	09021113065		8.00	4	--		0.5
<i>Macronychus glabratus</i>	09021113065040	8.00			--	0.5	
<i>Promoresia</i>	09021113069		4.00		--		0.3
<i>Promoresia elegans</i>	09021113069051	2.67			--	0.2	
<i>Promoresia tardella</i>	09021113069052	1.33			--	0.1	
<i>Stenelmis</i>	09021113070	1.33	9.33	5	SC	0.1	0.6
<i>Stenelmis crenata</i>	09021113070055	8.00			--	0.5	
<i>Atractides</i>	09030102002	1.33	1.33		--	0.1	0.1
<i>Hydrodroma</i>	09030113001	1.33	1.33		--	0.1	0.1
<i>Lymnaea</i>	10010201022	1.33	1.33		SC	0.1	0.1