



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

Station Information

Station Number: S-636
Waterbody: Kennebec River - Station 636
Town: Bingham
Directions: DOWNSTREAM OF STP AND 50 M DOWNSTREAM OF JACKSON BROOK
DEP Drainage: Kennebec
HUC8: 01030003
HUC8 Name: Lower Kennebec
Latitude: 45 1 59.8 N
Longitude: 69 51 52.48 W
Stream Order: 5

Sample Information

Log Number: 2119
Subsample Factor: X4
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/24/2012
Date Retrieved: 8/20/2012

Classification Attainment

Statutory Class: A
Model Result with P>.6: A
Date Last Calculated: 4/17/2013
Final Determination: A
Reason for Determination: Model
Date: 4/18/2013
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.87	Class A, B, or C	1.00
Class B	0.13	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	536.00	18 Relative Abundance Ephemeroptera	0.09
02 Generic Richness	56.00	19 EPT Generic Richness	25.00
03 Plecoptera Mean Abundance	13.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	17.33
04 Ephemeroptera Mean Abundance	50.67	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.60	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	40.32
06 Hilsenhoff Biotic Index	3.71	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	11.60
07 Relative Abundance - Chironomidae	0.09	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.20	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	120.98		
11 <i>Cheumatopsyche</i> Abundance	38.98		
12 EPT Generic Richness/ Diptera Generic Richness	2.27		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	12.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.00		
17 Chironomini Abundance (Family Functional Group)	29.33		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	22.57
2	<i>Rhyacophila</i>	7.46
3	<i>Cheumatopsyche</i>	7.27
4	<i>Ferrissia</i>	5.47
5	<i>Caecidotea</i>	4.73
6	<i>Brachycentrus</i>	4.73



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 21.5 deg C
Dissolved Oxygen: 8.1 mg/l
Specific Conductance: 60 uS/cm
Velocity: 118.9 cm/s
pH: 6.61
Wetted Width: 15 m
Bankfull Width: 18 m
Depth: 65 cm

Waterbody Information - Retrieval

Temperature: 19 deg C
Dissolved Oxygen: 8.3 mg/l
Specific Conductance: 47 uS/cm
Velocity: 102 cm/s
pH: 6.95
Wetted Width: 16 m
Bankfull Width: 18 m
Depth: 60 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Open	Rolling
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Nutrients	Below Dam	Boulder 5 %
Regulated Flows	Below Point Source	Gravel 20 %
	Below POTW	Rubble/Cobble 75 %

Landcover Summary - 2004 Data

Sample Comments

7/24/12: SURFACE SHEEN NEAR SHORE. 7/24/12: POTAMOGETON OBSERVED.
FISH OBSERVED DURING DEPLOYMENT AND RETRIEVAL.



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Subsample Factor: X4

Replicates: 3

Calculated: 4/17/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Prostoma</i>	04010101001	1.33	1.33		--	0.2	0.2
Enchytraeidae	08020201	1.33	1.33		--	0.2	0.2
<i>Nais</i>	08020202009		1.33		CG		0.2
<i>Nais simplex</i>	08020202009008	1.33			--	0.2	
<i>Glossiphonia</i>	08030101004		1.33		--		0.2
<i>Glossiphonia complanata</i>	08030101004001	1.33			--	0.2	
<i>Helobdella</i>	08030101005		8.00		--		1.5
<i>Helobdella stagnalis</i>	08030101005004	8.00			--	1.5	
<i>Erpobdella</i>	08030203002		2.67		--		0.5
<i>Erpobdella punctata</i>	08030203002001	2.67			--	0.5	
<i>Caecidotea</i>	09010101001	14.67	25.33	8	SH	2.7	4.7
<i>Caecidotea racovitzai racovitzai</i>	09010101001002	10.67			--	2.0	
<i>Crangonyx</i>	09010202004	1.33	1.33	8	--	0.2	0.2
<i>Hyaella</i>	09010203006		1.33	8	CG		0.2
<i>Hyaella azteca</i>	09010203006011	1.33			--	0.2	
<i>Orconectes</i>	09010301008		1.33		CG		0.2
<i>Orconectes limosus</i>	09010301008013	1.33			--	0.2	
<i>Leuctra</i>	09020204020		1.33	0	SH		0.2
<i>Leuctra ferruginea</i>	09020204020050	1.33			--	0.2	
Perlidae	09020209	6.67			--	1.2	
<i>Acroneuria</i>	09020209042		6.00	0	PR		1.1
<i>Acroneuria abnormis</i>	09020209042121	1.33		0	PR	0.2	
<i>Acroneuria lycorias</i>	09020209042125	1.33			--	0.2	
<i>Agnetina</i>	09020209050	1.33	6.00	2	PR	0.2	1.1
<i>Agnetina capitata</i>	09020209050152	1.33		2	PR	0.2	
<i>Baetis</i>	09020401001	4.00	13.33	4	CG	0.7	2.5
<i>Baetis flavistriga</i>	09020401001004	4.00			--	0.7	
<i>Baetis intercalaris</i>	09020401001008	5.33			--	1.0	
<i>Plauditus</i>	09020401012	2.67	2.67		CG	0.5	0.5
<i>Iswaeon</i>	09020401015	6.67	6.67		--	1.2	1.2
Heptageniidae	09020402	2.67			--	0.5	
<i>Epeorus</i>	09020402009	1.33	1.87	0	SC	0.2	0.3
<i>Rhithrogena</i>	09020402013	1.33	1.87	0	SC	0.2	0.3
<i>Maccaffertium</i>	09020402015	2.67	5.60	4	SC	0.5	1.0
<i>Maccaffertium luteum</i>	09020402015049	1.33			--	0.2	
Leptophlebiidae	09020406	1.33	1.33		--	0.2	0.2
<i>Ephemerella</i>	09020410035	6.67	6.67	1	CG	1.2	1.2
<i>Serratella</i>	09020410037		10.67	2	CG		2.0



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		Actual	Adjusted			Actual	Adjusted
<i>Serratella serratooides</i>	09020410037124	10.67			--	2.0	
<i>Dolophilodes</i>	09020601001	4.00	4.00	0	CF	0.7	0.7
<i>Chimarra</i>	09020601003	12.00	24.00	2	CF	2.2	4.5
<i>Chimarra socia</i>	09020601003004	12.00			--	2.2	
Hydropsychidae	09020604	1.33			--	0.2	
<i>Diplectrona</i>	09020604014		1.34	0	CF		0.3
<i>Diplectrona modesta</i>	09020604014025	1.33			--	0.2	
<i>Cheumatopsyche</i>	09020604015	38.67	38.98	5	CF	7.2	7.3
<i>Hydropsyche</i>	09020604016	64.00	120.98	4	CF	11.9	22.6
<i>Hydropsyche bronta</i>	09020604016029	6.67			--	1.2	
<i>Hydropsyche morosa</i>	09020604016030	18.67			--	3.5	
<i>Hydropsyche slossonae</i>	09020604016031	4.00			--	0.7	
<i>Hydropsyche depravata complex</i>	09020604016041	4.00			CF	0.7	
<i>Hydropsyche placoda</i>	09020604016059	22.67			--	4.2	
<i>Macrostemum</i>	09020604018		2.69	3	CF		0.5
<i>Macrostemum zebratum</i>	09020604018054	2.67			--	0.5	
<i>Rhyacophila</i>	09020605019		40.00	2	PR		7.5
<i>Rhyacophila minor</i>	09020605019063	38.67			PR	7.2	
<i>Rhyacophila mainensis</i>	09020605019069	1.33			--	0.2	
<i>Glossosoma</i>	09020606020	9.33	9.33	0	SC	1.7	1.7
<i>Protoptila</i>	09020606022	1.33	1.33	1	SC	0.2	0.2
<i>Brachycentrus</i>	09020609043		25.33	0	CF		4.7
<i>Brachycentrus appalachia</i>	09020609043096	25.33			--	4.7	
<i>Pycnopsyche</i>	09020610049	1.33	1.33	4	SH	0.2	0.2
<i>Lepidostoma</i>	09020611064	2.67	2.67	1	SH	0.5	0.5
<i>Psilotreta</i>	09020614068	1.33	1.33	0	SC	0.2	0.2
<i>Corydalus</i>	09020701002		1.33	6	PR		0.2
<i>Corydalus cornutus</i>	09020701002002	1.33			--	0.2	
<i>Tipula</i>	09021001002	4.00	4.00	4	SH	0.7	0.7
<i>Cricotopus</i>	09021011037		1.33	7	SH		0.2
<i>Cricotopus bicinctus</i>	09021011037057	1.33			--	0.2	
<i>Parametriocnemus</i>	09021011053	2.67	2.67	5	CG	0.5	0.5
<i>Tvetenia</i>	09021011065		4.00	5	CG		0.7
<i>Tvetenia vitracies</i>	09021011065113	2.67			--	0.5	
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.2	
<i>Rheotanytarsus</i>	09021011072	12.00	12.00	6	CF	2.2	2.2
<i>Dicrotendipes</i>	09021011085		9.33	8	CG		1.7
<i>Dicrotendipes neomodestus</i>	09021011085152	9.33			--	1.7	



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<i>Microtendipes</i>	09021011094		1.33	6	CF		0.2
<i>Microtendipes pedellus group</i>	09021011094166	1.33			--	0.2	
<i>Polypedilum</i>	09021011102		18.67	6	SH		3.5
<i>Polypedilum aviceps</i>	09021011102181	16.00			--	3.0	
<i>Polypedilum flavum</i>	09021011102182	2.67			--	0.5	
<i>Simulium</i>	09021012047		21.33	4	CF		4.0
<i>Simulium fibrinflatum</i>	09021012047059	4.00			--	0.7	
<i>Simulium jenningsi</i>	09021012047060	1.33			--	0.2	
<i>Simulium tuberosum</i>	09021012047067	5.33			--	1.0	
<i>Simulium jenningsi complex</i>	09021012047070	10.67			CF	2.0	
<i>Atherix</i>	09021015055	6.67	6.67	2	PR	1.2	1.2
<i>Hemerodromia</i>	09021016057	2.67	2.67	3	PR	0.5	0.5
<i>Psephenus</i>	09021108058		1.33	4	SC		0.2
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.2	
<i>Dubiraphia</i>	09021113064	1.33	5.33	6	--	0.2	1.0
<i>Dubiraphia quadrinotata</i>	09021113064037	4.00			--	0.7	
<i>Oulimnius</i>	09021113068		1.33		--		0.2
<i>Oulimnius latiusculus</i>	09021113068049	1.33			--	0.2	
<i>Promoresia</i>	09021113069		5.33		--		1.0
<i>Promoresia elegans</i>	09021113069051	2.67			--	0.5	
<i>Promoresia tardella</i>	09021113069052	2.67			--	0.5	
<i>Stenelmis</i>	09021113070	6.67	13.33	5	SC	1.2	2.5
<i>Stenelmis crenata</i>	09021113070055	4.00			--	0.7	
<i>Stenelmis mera</i>	09021113070058	2.67			--	0.5	
<i>Lymnaea</i>	10010201022	1.33	1.33		SC	0.2	0.2
<i>Ferrissia</i>	10010204035		29.33		SC		5.5
<i>Ferrissia rivularis</i>	10010204035066	29.33			--	5.5	
Sphaeriidae	10020201	8.00	8.00		CF	1.5	1.5
<i>Pisidium</i>	10020201002	2.67	2.67		CF	0.5	0.5