



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

Station Information

Station Number: S-22	DEP Drainage: Kennebec
Waterbody: Kennebec River - Station 22	HUC8: 01030003
Town: Madison	HUC8 Name: Lower Kennebec
Directions: 6.3 KM BELOW ANSON-MADISON POTW	Latitude: 44 45 16.11 N
	Longitude: 69 52 6.73 W
	Stream Order: 6

Sample Information

Log Number: 2112	Type of Sample: ROCK BASKET	Date Deployed: 7/17/2012
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/15/2012

Classification Attainment

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

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.49	Class A, B, or C	1.00
Class B	0.50	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
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	1261.33	18 Relative Abundance Ephemeroptera	0.41
02 Generic Richness	37.00	19 EPT Generic Richness	25.00
03 Plecoptera Mean Abundance	36.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	516.00	23 Relative Generic Richness- Plecoptera	0.14
05 Shannon-Wiener Generic Diversity	3.51	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	18.95
06 Hilsenhoff Biotic Index	3.49	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	61.46
07 Relative Abundance - Chironomidae	0.11	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.19	30 Presence of Class A Indicator Taxa/7	0.71
09 <i>Hydropsyche</i> Abundance	388.74		
11 <i>Cheumatopsyche</i> Abundance	16.25		
12 EPT Generic Richness/ Diptera Generic Richness	3.57		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	34.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.00		
17 Chironomini Abundance (Family Functional Group)	90.21		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	30.82
2	<i>Baetis</i>	17.84
3	<i>Heterocloeon</i>	9.42
4	<i>Polypedilum</i>	7.15
5	<i>Chimarra</i>	6.13



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	23.6 deg C
Dissolved Oxygen:	8.1 mg/l
Specific Conductance:	48 uS/cm
Velocity:	123.5 cm/s
pH:	6.89
Wetted Width:	163 m
Bankfull Width:	163 m
Depth:	70 cm

Waterbody Information - Retrieval

Temperature:	23.4 deg C
Dissolved Oxygen:	8.3 mg/l
Specific Conductance:	68 uS/cm
Velocity:	127.5 cm/s
pH:	7.44
Wetted Width:	163 m
Bankfull Width:	163 m
Depth:	55 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Upland Conifer

Upland Hardwood

Canopy Cover

Open

Terrain

Rolling

Potential Stressor

Regulated Flows

Location

Below Dam

Below Point Source

Substrate

Boulder	5 %
Gravel	20 %
Rubble/Cobble	65 %
Sand	10 %

Landcover Summary - 2004 Data

Sample Comments

RAINING DURING DEPLOYMENT AND RETRIEVAL.



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Aquatic Life Taxonomic Inventory Report**

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Waterbody: Kennebec River - Station 22

Town: Madison

Log Number: 2112

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
Perlodidae	09020207	1.33	1.33		--	0.1	0.1
Perlidae	09020209	17.33			--	1.4	
<i>Acroneuria</i>	09020209042	1.33	18.67	0	PR	0.1	1.5
<i>Acroneuria abnormis</i>	09020209042121	2.67		0	PR	0.2	
<i>Acroneuria lycorias</i>	09020209042125	5.33			--	0.4	
<i>Perlesta</i>	09020209046	2.67	5.33	5	PR	0.2	0.4
<i>Paragnetina</i>	09020209049	1.33	8.00	1	PR	0.1	0.6
<i>Paragnetina immarginata</i>	09020209049149	2.67			--	0.2	
<i>Agnatina</i>	09020209050		2.67	2	PR		0.2
<i>Agnatina capitata</i>	09020209050152	1.33		2	PR	0.1	
Gomphidae	09020302	1.33	1.33		--	0.1	0.1
Baetidae	09020401	20.00			--	1.6	
<i>Baetis</i>	09020401001	33.33	224.98	4	CG	2.6	17.8
<i>Baetis flavistriga</i>	09020401001004	10.67			--	0.8	
<i>Baetis intercalaris</i>	09020401001008	157.33			--	12.5	
<i>Baetis pluto</i>	09020401001009	10.67			--	0.8	
<i>Heterocloeon</i>	09020401005		118.86	2	SC		9.4
<i>Heterocloeon curiosum</i>	09020401005020	112.00			--	8.9	
<i>Plauditus</i>	09020401012	1.33	1.41		CG	0.1	0.1
<i>Iswaeon</i>	09020401015	1.33	1.41		--	0.1	0.1
Heptageniidae	09020402	34.67			--	2.7	
<i>Epeorus</i>	09020402009	4.00	19.26	0	SC	0.3	1.5
<i>Epeorus vitreus</i>	09020402009033	8.00			--	0.6	
<i>Leucrocuta</i>	09020402011	18.67	29.95	1	SC	1.5	2.4
<i>Maccaffertium</i>	09020402015	26.67	42.79	4	SC	2.1	3.4
<i>Isonychia</i>	09020404018	68.00	68.00	2	CF	5.4	5.4
<i>Ephemerella</i>	09020410035	4.00	4.00	1	CG	0.3	0.3
<i>Serratella</i>	09020410037		5.33	2	CG		0.4
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	4.00			--	0.3	
<i>Serratella serratoides</i>	09020410037124	1.33			--	0.1	
Philopotamidae	09020601	1.33	1.33		--	0.1	0.1
<i>Chimarra</i>	09020601003	41.33	77.33	2	CF	3.3	6.1
<i>Chimarra obscura</i>	09020601003003	32.00			--	2.5	
<i>Chimarra socia</i>	09020601003004	4.00			--	0.3	
Hydropsychidae	09020604	6.67			--	0.5	
<i>Cheumatopsyche</i>	09020604015	16.00	16.25	5	CF	1.3	1.3
<i>Hydropsyche</i>	09020604016	124.00	388.74	4	CF	9.8	30.8
<i>Hydropsyche morosa</i>	09020604016030	32.00			--	2.5	



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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>Hydropsyche sparna</i>	09020604016032	210.67			--	16.7	
<i>Hydropsyche depravata complex</i>	09020604016041	9.33			CF	0.7	
<i>Hydropsyche simulans</i>	09020604016049	1.33			--	0.1	
<i>Hydropsyche placoda</i>	09020604016059	5.33			--	0.4	
<i>Macrostemum</i>	09020604018		21.67	3	CF		1.7
<i>Macrostemum zebratum</i>	09020604018054	21.33			--	1.7	
<i>Rhyacophila</i>	09020605019		2.67	2	PR		0.2
<i>Rhyacophila minor</i>	09020605019063	2.67			PR	0.2	
<i>Glossosoma</i>	09020606020		2.67	0	SC		0.2
<i>Glossosoma intermedium</i>	09020606020066	2.67			SC	0.2	
<i>Brachycentrus</i>	09020609043		8.00	0	CF		0.6
<i>Brachycentrus appalachia</i>	09020609043096	8.00			--	0.6	
<i>Micrasema</i>	09020609044		9.33	2	SH		0.7
<i>Micrasema rusticum group</i>	09020609044100	8.00			--	0.6	
<i>Micrasema wataga</i>	09020609044101	1.33			--	0.1	
<i>Setodes</i>	09020618076	1.33	1.33	2	CG	0.1	0.1
Chironomidae	09021011	1.33			--	0.1	
<i>Cricotopus</i>	09021011037		2.69	7	SH		0.2
<i>Cricotopus vierriensis</i>	09021011037071	1.33			--	0.1	
<i>Cricotopus luciae</i>	09021011037073	1.33			--	0.1	
<i>Nanocladius</i>	09021011049	1.33	4.04	3	CG	0.1	0.3
<i>Nanocladius branchicolus</i>	09021011049091	1.33			--	0.1	
<i>Nanocladius downesi</i>	09021011049092	1.33			--	0.1	
<i>Rheocricotopus</i>	09021011057		1.35	6	CG		0.1
<i>Rheocricotopus robacki</i>	09021011057105	1.33			--	0.1	
<i>Tvetenia</i>	09021011065		13.46	5	CG		1.1
<i>Tvetenia vitracies</i>	09021011065113	13.33			--	1.1	
<i>Rheotanytarsus</i>	09021011072	25.33	25.58	6	CF	2.0	2.0
<i>Polypedilum</i>	09021011102		90.21	6	SH		7.2
<i>Polypedilum aviceps</i>	09021011102181	6.67			--	0.5	
<i>Polypedilum flavum</i>	09021011102182	80.00			--	6.3	
<i>Polypedilum illinoense group</i>	09021011102185	1.33			--	0.1	
<i>Polypedilum laetum</i>	09021011102186	1.33			--	0.1	
<i>Simulium</i>	09021012047		21.33	4	CF		1.7
<i>Simulium jenningsi complex</i>	09021012047070	21.33			CF	1.7	
<i>Psephenus</i>	09021108058		12.00	4	SC		1.0
<i>Psephenus herricki</i>	09021108058028	12.00			--	1.0	
<i>Stenelmis</i>	09021113070	1.33	5.33	5	SC	0.1	0.4



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<i>Stenelmis concinna</i>	09021113070054	4.00			--	0.3	
<i>Ferrissia</i>	10010204035		1.33		SC		0.1
<i>Ferrissia rivularis</i>	10010204035066	1.33			--	0.1	
<i>Pisidium</i>	10020201002	1.33	1.33		CF	0.1	0.1