



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

Station Information

Station Number: S-486	DEP Drainage: Kennebec
Waterbody: East Branch Wesserunsett Stream - Station 486	HUC8: 01030003
Town: Athens	HUC8 Name: Lower Kennebec
Directions: (WES1) ABOVE RTE 150 NEAR REST AREA	Latitude: 44 57 24.29 N
	Longitude: 69 38 39.25 W
	Stream Order: 3

Sample Information

Log Number: 1662	Type of Sample: ROCK BAG	Date Deployed: 7/19/2007
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/16/2007

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 3/5/2008
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 3/18/2009	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.92	Class A, B, or C	1.00
Class B	0.08	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
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	136.67	18 Relative Abundance Ephemeroptera	0.27
02 Generic Richness	49.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	11.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	37.00	23 Relative Generic Richness- Plecoptera	0.06
05 Shannon-Wiener Generic Diversity	4.49	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	8.38
06 Hilsenhoff Biotic Index	3.70	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	24.97
07 Relative Abundance - Chironomidae	0.26	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.31	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	11.31		
11 <i>Cheumatopsyche</i> Abundance	1.03		
12 EPT Generic Richness/ Diptera Generic Richness	1.53		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	9.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.75		
17 Chironomini Abundance (Family Functional Group)	9.45		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Brachycentrus</i>	12.44
2	<i>Maccaffertium</i>	11.95
3	<i>Rheotanytarsus</i>	10.24
4	<i>Hydropsyche</i>	8.27
5	<i>Acroneuria</i>	6.32



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
 Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment		Waterbody Information - Retrieval	
Temperature:	17.9 deg C	Temperature:	17.2 deg C
Dissolved Oxygen:	9 mg/l	Dissolved Oxygen:	9.3 mg/l
Specific Conductance:	72 uS/cm	Specific Conductance:	73 uS/cm
Velocity:	14 cm/s	Velocity:	25 cm/s
pH:	7.64	pH:	7.94
Wetted Width:	11.1 m	Wetted Width:	8 m
Bankfull Width:	15.2 m	Bankfull Width:	15.2 m
Depth:	36 cm	Depth:	35 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.03 mg/l	Total Phosphorus	0.005 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	4.8 mg/l	Total Dissolved Solids	94 mg/l

Summary of Habitat Characteristics

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

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Above Road Crossing	Bedrock	5 %
		Boulder	75 %
		Gravel	5 %
		Rubble/Cobble	15 %

Landcover Summary - 2004 Data

Total Area (ac)	11673	High Int. Dev. %	0.0	Water %	1.5	Non-vegetated %	0.0
Total Land (ac)	11506	Med Int. Dev. %	0.1	Wetland %	2.1	Tilled Agriculture %	1.2
		Low Int. Dev. %	3.0	Upland Woody %	93.0	Human Altered %	4.9
		Development %	3.1	Natural %	95.1	Impervious %	0.9

Sample Comments



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Log Number: 1662

Subsample Factor: X1

Replicates: 3

Calculated: 3/18/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Aeolosoma</i>	08020301001	0.33	0.33		--	0.2	0.2
<i>Pteronarcys</i>	09020205023		1.67	0	SH		1.2
<i>Pteronarcys biloba</i>	09020205023061	1.67			--	1.2	
Perlidae	09020209	0.33			--	0.2	
<i>Acroneuria</i>	09020209042	0.33	8.64	0	PR	0.2	6.3
<i>Acroneuria lycorias</i>	09020209042125	8.00			--	5.9	
<i>Agnetina</i>	09020209050	0.67	0.69	2	PR	0.5	0.5
<i>Boyeria</i>	09020301004		0.33	2	PR		0.2
<i>Boyeria grafiana</i>	09020301004011	0.33			--	0.2	
Gomphidae	09020302	0.67	0.67		--	0.5	0.5
Baetidae	09020401	0.33			--	0.2	
<i>Baetis</i>	09020401001		0.70	4	CG		0.5
<i>Baetis intercalaris</i>	09020401001008	0.67			--	0.5	
<i>Acerpenna</i>	09020401007	1.33	4.55	5	CG	1.0	3.3
<i>Acerpenna macdunnoughi</i>	09020401007001	3.00			--	2.2	
<i>Plauditus</i>	09020401012	0.67	1.40		CG	0.5	1.0
<i>Plauditus cestus</i>	09020401012004	0.67				0.5	
<i>Dipheter</i>	09020401013		0.35		--		0.3
<i>Dipheter hageni</i>	09020401013001	0.33			--	0.2	
Heptageniidae	09020402	0.33			--	0.2	
<i>Leucrocuta</i>	09020402011	0.33	0.34	1	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	1.33	16.33	4	SC	1.0	11.9
<i>Maccaffertium luteum</i>	09020402015049	14.67			--	10.7	
Leptophlebiidae	09020406	0.33	0.33		--	0.2	0.2
<i>Ephemerella</i>	09020410035	6.00	6.00	1	CG	4.4	4.4
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.2	0.2
<i>Serratella</i>	09020410037		1.33	2	CG		1.0
<i>Serratella serratoides</i>	09020410037124	1.33			--	1.0	
<i>Tricorythodes</i>	09020411038	5.33	5.33	4	CG	3.9	3.9
<i>Metrobates</i>	09020506020	0.33	0.33		PR	0.2	0.2
<i>Neureclipsis</i>	09020603008	2.00	2.00	7	CF	1.5	1.5
Hydropsychidae	09020604	0.33			--	0.2	
<i>Cheumatopsyche</i>	09020604015	1.00	1.03	5	CF	0.7	0.8
<i>Hydropsyche</i>	09020604016	7.00	11.31	4	CF	5.1	8.3
<i>Hydropsyche bronta</i>	09020604016029	2.33			--	1.7	
<i>Hydropsyche morosa</i>	09020604016030	1.33			--	1.0	
<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.2	
<i>Brachycentrus</i>	09020609043		17.00	0	CF		12.4



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		Actual	Adjusted			Actual	Adjusted
<i>Brachycentrus appalachia</i>	09020609043096	17.00			--	12.4	
<i>Micrasema</i>	09020609044	0.33	0.33	2	SH	0.2	0.2
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.2	0.2
<i>Helicopsyche</i>	09020616070		3.33	3	SC		2.4
<i>Helicopsyche borealis</i>	09020616070137	3.33			--	2.4	
Leptoceridae	09020618				--		
<i>Nectopsyche</i>	09020618074	0.33	0.33	3	SH	0.2	0.2
<i>Oecetis</i>	09020618078	1.00	1.67	8	PR	0.7	1.2
<i>Oecetis persimilis</i>	09020618078157	0.67			--	0.5	
<i>Nigronia</i>	09020701003		0.33	0	PR		0.2
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.2	
Chironomidae	09021011	1.67			--	1.2	
<i>Conchapelopia</i>	09021011004			6	PR		
<i>Paramerina</i>	09021011013				--		
<i>Pentaneura</i>	09021011014		0.35	6	PR		0.3
<i>Pentaneura inconspicua</i>	09021011014028	0.33			--	0.2	
<i>Rheopelopia</i>	09021011017	1.00	1.40		PR	0.7	1.0
<i>Rheopelopia acra group</i>	09021011017036	0.33			--	0.2	
<i>Cricotopus</i>	09021011037	1.00	5.25	7	SH	0.7	3.8
<i>Cricotopus bicinctus</i>	09021011037057	4.00			--	2.9	
<i>Eukiefferiella</i>	09021011041		0.35	8	CG		0.3
<i>Eukiefferiella claripennis group</i>	09021011041075	0.33			--	0.2	
<i>Nanocladius</i>	09021011049		1.05	3	CG		0.8
<i>Nanocladius branchicolus</i>	09021011049091	0.67			--	0.5	
<i>Nanocladius downesi</i>	09021011049092	0.33			--	0.2	
<i>Rheocricotopus</i>	09021011057		0.35	6	CG		0.3
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.2	
<i>Tvetenia</i>	09021011065		0.35	5	CG		0.3
<i>Tvetenia vitracies</i>	09021011065113	0.33			--	0.2	
<i>Micropsectra</i>	09021011070			7	CG		
<i>Rheotanytarsus</i>	09021011072	13.33	14.00	6	CF	9.8	10.2
<i>Stempellinella sp. a epler</i>	09021011074002				--		
<i>Tanytarsus</i>	09021011076	1.00	2.10	6	CF	0.7	1.5
<i>Tanytarsus glabrescens group sp. 1</i>	09021011076137	1.00			CF	0.7	
<i>Microtendipes</i>	09021011094		5.25	6	CF		3.8
<i>Microtendipes pedellus group</i>	09021011094166	1.00			--	0.7	
<i>Microtendipes rydalensis group</i>	09021011094168	4.00			--	2.9	
<i>Phaenopsectra</i>	09021011101		0.70	7	SC		0.5



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<i>Phaenopsectra flavipes</i>	09021011101179	0.67			SC	0.5	
<i>Polypedilum</i>	090210111102		3.50	6	SH		2.6
<i>Polypedilum aviceps</i>	09021011102181	2.67			--	2.0	
<i>Polypedilum flavum</i>	09021011102182	0.33			--	0.2	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.2	
<i>Helopelopia</i>	090210111114	0.33	0.35	6	PR	0.2	0.3
<i>Simulium</i>	09021012047			4	CF		
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.2	0.2
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.2	0.2
<i>Psephenus</i>	09021108058		0.67	4	SC		0.5
<i>Psephenus herricki</i>	09021108058028	0.67			--	0.5	
<i>Dubiraphia</i>	09021113064	7.00	7.00	6	--	5.1	5.1
<i>Macronychus</i>	09021113065		0.67	4	--		0.5
<i>Macronychus glabratus</i>	09021113065040	0.67			--	0.5	
<i>Promoresia</i>	09021113069		4.33		--		3.2
<i>Promoresia elegans</i>	09021113069051	4.33			--	3.2	
<i>Stenelmis</i>	09021113070	0.33	0.33	5	SC	0.2	0.2
<i>Physa</i>	10010202026	0.67	0.67		SC	0.5	0.5