



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

Station Information

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

Sample Information

Log Number: 2255 Type of Sample: ROCK BAG Date Deployed: 7/9/2014
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/6/2014

Classification Attainment

Statutory Class: B **Final Determination:** A Date: 12/9/2014
Model Result with $P \geq 0.6$: A **Reason for Determination:** Model
Date Last Calculated: 12/8/2014 **Comments:**

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.84	Class A, B, or C	1.00
Class B	0.16	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	333.00	18 Relative Abundance Ephemeroptera	0.17
02 Generic Richness	55.00	19 EPT Generic Richness	27.00
03 Plecoptera Mean Abundance	18.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	58.00	23 Relative Generic Richness- Plecoptera	0.09
05 Shannon-Wiener Generic Diversity	3.94	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	9.99
06 Hilsenhoff Biotic Index	3.82	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	14.84
07 Relative Abundance - Chironomidae	0.33	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.36	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	86.67		
11 <i>Cheumatopsyche</i> Abundance	4.99		
12 EPT Generic Richness/ Diptera	1.35		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	13.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	2.00		
(Family Functional Group)			
17 Chironomini Abundance (Family	39.33		
Functional Group)			

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	26.03
2	<i>Rheotanytarsus</i>	12.81
3	<i>Polypedilum</i>	11.51
4	<i>Brachycentrus</i>	9.41
5	<i>Baetis</i>	6.99



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	22.2 deg C
Dissolved Oxygen:	8.4 mg/l
Specific Conductance:	47 uS/cm
Velocity:	
pH:	7.15
Wetted Width:	11 m
Bankfull Width:	15 m
Depth:	50 cm

Waterbody Information - Retrieval

Temperature:	18.8 deg C
Dissolved Oxygen:	9 mg/l
Specific Conductance:	39 uS/cm
Velocity:	105 cm/s
pH:	7.13
Wetted Width:	11 m
Bankfull Width:	15 m
Depth:	70 cm

Water Chemistry - 8/6/2014

Ammonia As Nitrogen	<0.01 mg/l	Nitrate+nitrite As N	0.02 mg/l
Total Phosphorus	21 ug/l	Total Kjeldahl Nitrogen	0.4 mg/l
Total Suspended Solids	2.8 mg/l	Dissolved Organic Carbon	6.2 mg/l
Total Dissolved Solids	56 mg/l	Orthophosphate As Phosphorus	1 ug/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Partly Open	Rolling
Upland Hardwood		
<u>Potential 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 %	1.4	Non-vegetated %	0.0
		Med Int. Dev. %	0.1	Wetland %	2.1	Tilled Agriculture %	1.2
		Low Int. Dev. %	3.0	Upland Woody %	91.7	Grassland %	0.6
		Development %	3.0	Natural %	93.8	Human Altered %	4.8
						Impervious %	0.9

Sample Comments

7/9/14 - QUESTIONABLE VELOCITY METER READING.



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Log Number: 2255

Subsample Factor: X1

Replicates: 3

Calculated: 12/8/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Pteronarcys</i>	09020205023		5.00	0	SH		1.5
<i>Pteronarcys biloba</i>	09020205023061	5.00			--	1.5	
Perlodidae	09020207	0.67	0.67		--	0.2	0.2
Perlidae	09020209	0.33			--	0.1	
<i>Acroneuria</i>	09020209042	0.67	6.84	0	PR	0.2	2.1
<i>Acroneuria abnormis</i>	09020209042121	3.67		0	PR	1.1	
<i>Acroneuria lycorias</i>	09020209042125	2.33			--	0.7	
<i>Perlesta</i>	09020209046	0.33	0.34	5	PR	0.1	0.1
<i>Paragnetina</i>	09020209049	4.00	5.82	1	PR	1.2	1.7
<i>Paragnetina immarginata</i>	09020209049149	1.00			--	0.3	
<i>Paragnetina media</i>	09020209049151	0.67			--	0.2	
<i>Boyeria</i>	09020301004	1.00	1.00	2	PR	0.3	0.3
Baetidae	09020401	0.33			--	0.1	
<i>Baetis</i>	09020401001	5.33	23.29	4	CG	1.6	7.0
<i>Baetis flavistriga</i>	09020401001004	0.33			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	9.33			--	2.8	
<i>Baetis pluto</i>	09020401001009	8.00			--	2.4	
<i>Plautidius</i>	09020401012	2.67	2.70		CG	0.8	0.8
<i>Dipheter</i>	09020401013		1.01		--		0.3
<i>Dipheter hageni</i>	09020401013001	1.00			--	0.3	
<i>Epeorus</i>	09020402009	12.33	12.33	0	SC	3.7	3.7
<i>Leucrocota</i>	09020402011	0.67	0.67	1	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	5.33	8.00	4	SC	1.6	2.4
<i>Maccaffertium luteum</i>	09020402015049	2.67			--	0.8	
<i>Isonychia</i>	09020404018	1.00	1.00	2	CF	0.3	0.3
Leptophlebiidae	09020406	0.33	0.33		--	0.1	0.1
<i>Ephemerella</i>	09020410035	1.33	1.33	1	CG	0.4	0.4
<i>Serratella</i>	09020410037	1.67	1.67	2	CG	0.5	0.5
<i>Tricorythodes</i>	09020411038	5.67	5.67	4	CG	1.7	1.7
<i>Rhagovelia</i>	09020510026	0.33	0.33		PR	0.1	0.1
<i>Dolophilodes</i>	09020601001		0.33	0	CF		0.1
<i>Dolophilodes distinctus</i>	09020601001001	0.33			--	0.1	
<i>Cernotina</i>	09020603006	0.33	0.33		PR	0.1	0.1
<i>Neureclipsis</i>	09020603008	0.67	0.67	7	CF	0.2	0.2
Hydropsychidae	09020604	6.00			--	1.8	
<i>Cheumatopsyche</i>	09020604015	4.67	4.99	5	CF	1.4	1.5
<i>Hydropsyche</i>	09020604016	65.33	86.67	4	CF	19.6	26.0
<i>Hydropsyche bronta</i>	09020604016029	10.00			--	3.0	



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche morosa</i>	09020604016030	1.00			--	0.3	
<i>Hydropsyche sparna</i>	09020604016032	4.67			--	1.4	
<i>Rhyacophila</i>	09020605019	0.33	0.33	2	PR	0.1	0.1
Hydroptilidae	09020607				--		
<i>Hydroptila</i>	09020607026	0.67	0.67	6	P	0.2	0.2
<i>Ochrotrichia</i>	09020607027	0.67	0.67	4	P	0.2	0.2
<i>Brachycentrus</i>	09020609043		31.33	0	CF		9.4
<i>Brachycentrus appalachia</i>	09020609043096	31.33			--	9.4	
<i>Helicopsyche</i>	09020616070		1.33	3	SC		0.4
<i>Helicopsyche borealis</i>	09020616070137	1.33			--	0.4	
<i>Ceraclea</i>	09020618072	0.67	0.67	3	CG	0.2	0.2
<i>Nigronia</i>	09020701003		0.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.1	
Chironomidae	09021011				--		
<i>Conchapelopia</i>	09021011004	0.33	0.33	6	PR	0.1	0.1
<i>Nilotanyus</i>	09021011012		1.00	6	PR		0.3
<i>Nilotanyus fimbriatus</i>	09021011012027	1.00			--	0.3	
<i>Rheopelopia</i>	09021011017	0.33	0.67		PR	0.1	0.2
<i>Rheopelopia acra group</i>	09021011017036	0.33			--	0.1	
<i>Corynoneura</i>	09021011036	0.33	0.33	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		1.00	7	SH		0.3
<i>Cricotopus bicinctus</i>	09021011037057				--		
<i>Cricotopus vierriensis</i>	09021011037071	1.00			--	0.3	
<i>Eukiefferiella</i>	09021011041		1.00	8	CG		0.3
<i>Eukiefferiella brehmi group</i>	09021011041073	1.00			--	0.3	
<i>Nanocladius</i>	09021011049		5.00	3	CG		1.5
<i>Nanocladius branchicolus</i>	09021011049091	2.33			--	0.7	
<i>Nanocladius downesi</i>	09021011049092	2.67			--	0.8	
<i>Orthocladius</i>	09021011050		2.33	6	CG		0.7
<i>Orthocladius carlatus</i>	09021011050093	0.33			--	0.1	
<i>Orthocladius dubitatus</i>	09021011050103	2.00			--	0.6	
<i>Thienemanniella</i>	09021011062		0.33	6	CG		0.1
<i>Thienemanniella xena</i>	09021011062110	0.33			--	0.1	
<i>Tvetenia</i>	09021011065		11.67	5	CG		3.5
<i>Tvetenia vitracies</i>	09021011065113	11.67			--	3.5	
<i>Cladotanytarsus</i>	09021011068	0.33	0.33	7	CG	0.1	0.1
<i>Paratanytarsus</i>	09021011071		0.33	6	--		0.1
<i>Paratanytarsus longistylus</i>	09021011071126	0.33		6	--	0.1	



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<i>Rheotanytarsus</i>	09021011072		42.67	6	CF		12.8
<i>Rheotanytarsus exiguus</i>	09021011072127	9.67			CF	2.9	
<i>Rheotanytarsus pellucidus</i>	09021011072128	33.00			CF	9.9	
<i>Tanytarsus</i>	09021011076	4.00	4.00	6	CF	1.2	1.2
<i>Microtendipes</i>	09021011094		1.00	6	CF		0.3
<i>Microtendipes rydalensis group</i>	09021011094168	1.00			--	0.3	
<i>Polypedilum</i>	09021011102		38.33	6	SH		11.5
<i>Polypedilum aviceps</i>	09021011102181	31.67			--	9.5	
<i>Polypedilum flavum</i>	09021011102182	6.00			--	1.8	
<i>Polypedilum tritum</i>	09021011102191	0.67			--	0.2	
<i>Simulium</i>	09021012047	2.67	4.33	4	CF	0.8	1.3
<i>Simulium tuberosum</i>	09021012047067	1.67			--	0.5	
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Hemerodromia</i>	09021016057	5.33	5.33	3	PR	1.6	1.6
<i>Roederiodes</i>	09021016058	0.67	0.67	3	PR	0.2	0.2
<i>Psephenus</i>	09021108058		1.33	4	SC		0.4
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.4	
<i>Macronychus</i>	09021113065		0.33	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.1	
<i>Promoresia</i>	09021113069		2.00		--		0.6
<i>Promoresia elegans</i>	09021113069051	2.00			--	0.6	
<i>Stenelmis</i>	09021113070		1.67	5	SC		0.5
<i>Stenelmis crenata</i>	09021113070055	1.67			--	0.5	
<i>Physa</i>	10010202027	0.33	0.33		SC	0.1	0.1