



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

**Station Information**

<b>Station Number:</b> 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**

<b>Log Number:</b> 2561	Type of Sample: ROCK BAG	Date Deployed: 7/12/2017
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/9/2017

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> A	Date: 1/23/2018
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 1/22/2018	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.87	Class C	0.00
Class B	0.13	NA	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	265.00	18 Relative Abundance Ephemeroptera	0.27
02 Generic Richness	53.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	18.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.34
04 Ephemeroptera Mean Abundance	72.67	23 Relative Generic Richness- Plecoptera	0.09
05 Shannon-Wiener Generic Diversity	4.47	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	35.03
06 Hilsenhoff Biotic Index	4.00	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	16.00
07 Relative Abundance - Chironomidae	0.18	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.34	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	49.00		
11 <i>Cheumatopsyche</i> Abundance	30.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.22		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	15.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	3.36		
17 Chironomini Abundance (Family Functional Group)	10.07		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	18.49
2	<i>Cheumatopsyche</i>	11.57
3	<i>Tricorythodes</i>	7.67
4	<i>Rheotanytarsus</i>	7.35
5	<i>Brachycentrus</i>	5.03



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**Log Number: 2561**      Waterbody: East Branch Wesserunsett Stream - Station 486      Date Retrieved: 8/9/2017

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature: 20.8 deg C  
Dissolved Oxygen: 10.25 mg/l  
Dissolved Oxygen Saturation: 114.5 %  
Specific Conductance: 56 uS/cm  
Velocity: 24.4 cm/s  
pH: 7.89  
Wetted Width: 11 m  
Bankfull Width: 15 m  
Depth: 40 cm

**Waterbody Information - Retrieval**

Temperature: 17.9 deg C  
Dissolved Oxygen: 11.38 mg/l  
Dissolved Oxygen Saturation: 119.7 %  
Specific Conductance: 101.3 uS/cm  
Velocity: 9.1 cm/s  
pH: 8.26  
Wetted Width: 7.4 m  
Bankfull Width: 15 m  
Depth: 32 cm

**Water Chemistry**

**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>	
Logging	Above Road Crossing	Bedrock	15 %
		Boulder	70 %
		Gravel	5 %
		Rubble/Cobble	10 %

**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**

7/12/17: FISH PRESENT.  
8/9/17: LOW WATER, FISH PRESENT.



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**Log Number: 2561**

Subsample Factor: X1

Replicates: 3

Calculated: 1/22/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Pteronarcys</i>	09020205023	3.00	3.00	0	SH	1.1	1.1
Perlodidae	09020207	0.33	0.33		--	0.1	0.1
<i>Acroneuria</i>	09020209042	3.33	5.67	0	PR	1.3	2.1
<i>Acroneuria carolinensis</i>	09020209042123	2.33			--	0.9	
<i>Paragnetina</i>	09020209049	8.33	8.33	1	PR	3.1	3.1
<i>Aagnetina</i>	09020209050		1.33	2	PR		0.5
<i>Aagnetina capitata</i>	09020209050152	1.33		2	PR	0.5	
Gomphidae	09020302	0.67	0.67		--	0.3	0.3
<i>Calopteryx</i>	09020307043	0.33	0.33	5	PR	0.1	0.1
<i>Baetis</i>	09020401001		11.00	4	CG		4.2
<i>Baetis flavistriga</i>	09020401001004	2.00			--	0.8	
<i>Baetis intercalaris</i>	09020401001008	9.00			--	3.4	
<i>Acerpenna</i>	09020401007	1.33	8.00	5	CG	0.5	3.0
<i>Acerpenna macdunnoughi</i>	09020401007001	5.67			--	2.1	
<i>Acerpenna pygmaea</i>	09020401007011	1.00			--	0.4	
<i>Procloeon</i>	09020401010	2.00	2.00		CG	0.8	0.8
<i>Dipheter</i>	09020401013		6.00		--		2.3
<i>Dipheter hageni</i>	09020401013001	6.00			--	2.3	
<i>Epeorus</i>	09020402009		1.67	0	SC		0.6
<i>Epeorus vitreus</i>	09020402009033	1.67			--	0.6	
<i>Leucrocuta</i>	09020402011	2.33	2.33	1	SC	0.9	0.9
<i>Maccaffertium</i>	09020402015	4.00	10.33	4	SC	1.5	3.9
<i>Maccaffertium vicarium</i>	09020402015055	6.33			--	2.4	
<i>Isonychia</i>	09020404018		4.33	2	CF		1.6
<i>Isonychia bicolor</i>	09020404018059	4.33			--	1.6	
<i>Ephemerella</i>	09020410035	4.00	4.00	1	CG	1.5	1.5
<i>Serratella</i>	09020410037		2.67	2	CG		1.0
<i>Serratella deficiens (Teloganopsis deficiens)</i>	09020410037121	1.33			--	0.5	
<i>Serratella serratoides</i>	09020410037124	1.33			--	0.5	
<i>Tricorythodes</i>	09020411038	20.33	20.33	4	CG	7.7	7.7
<i>Neureclipsis</i>	09020603008	6.33	6.33	7	CF	2.4	2.4
<i>Cheumatopsyche</i>	09020604015	30.67	30.67	5	CF	11.6	11.6
<i>Hydropsyche</i>	09020604016	38.00	49.00	4	CF	14.3	18.5
<i>Hydropsyche morosa</i>	09020604016030	9.00			--	3.4	
<i>Hydropsyche sparna</i>	09020604016032	2.00			--	0.8	
<i>Brachycentrus</i>	09020609043		13.33	0	CF		5.0
<i>Brachycentrus appalachia</i>	09020609043096	13.33			--	5.0	



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		Actual	Adjusted			Actual	Adjusted
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.1	0.1
<i>Oecetis</i>	09020618078		0.67	8	PR		0.3
<i>Oecetis avara</i>	09020618078153	0.67			--	0.3	
<i>Nigronia</i>	09020701003		1.00	0	PR		0.4
<i>Nigronia serricornis</i>	09020701003003	1.00			--	0.4	
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.1	0.1
Chironomidae	09021011	0.33			--	0.1	
<i>Nilotanytus</i>	09021011012	0.33	0.34	6	PR	0.1	0.1
<i>Thienemannimyia</i>	09021011020		3.02	3	PR		1.1
<i>Thienemannimyia group</i>	09021011020041	3.00			--	1.1	
<i>Pagastia</i>	09021011025	0.33	0.34	1	--	0.1	0.1
<i>Cricotopus</i>	09021011037	2.00	4.36	7	SH	0.8	1.6
<i>Cricotopus bicinctus</i>	09021011037057	2.33			--	0.9	
<i>Nanocladius</i>	09021011049	0.33	0.34	3	CG	0.1	0.1
<i>Orthocladius</i>	09021011050	0.33	0.34	6	CG	0.1	0.1
<i>Parametriocnemus</i>	09021011053	0.33	0.34	5	CG	0.1	0.1
<i>Rheocricotopus</i>	09021011057	1.67	1.68	6	CG	0.6	0.6
<i>Thienemanniella</i>	09021011062	0.33	0.34	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		5.71	5	CG		2.2
<i>Tvetenia vitracies</i>	09021011065113	5.67			--	2.1	
<i>Micropsectra</i>	09021011070	0.33	0.34	7	CG	0.1	0.1
<i>Rheotanytarsus</i>	09021011072		19.47	6	CF		7.3
<i>Rheotanytarsus exiguus group</i>	09021011072127	18.00			CF	6.8	
<i>Rheotanytarsus pellucidus</i>	09021011072128	1.33			CF	0.5	
<i>Stempellinella</i>	09021011074	0.67	0.67	2	--	0.3	0.3
<i>Microtendipes</i>	09021011094		2.35	6	CF		0.9
<i>Microtendipes pedellus group</i>	09021011094166	1.33			--	0.5	
<i>Microtendipes rydalisensis group</i>	09021011094168	1.00			--	0.4	
<i>Polypedilum</i>	09021011102		7.72	6	SH		2.9
<i>Polypedilum aviceps</i>	09021011102181	7.67			--	2.9	
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
Empididae	09021016			6	--		
<i>Neoplasta</i>	09021016064	0.33	0.33		PR	0.1	0.1
<i>Psephenus</i>	09021108058		4.33	4	SC		1.6
<i>Psephenus herricki</i>	09021108058028	4.33			--	1.6	
<i>Ectopria</i>	09021109059		1.33	5	SC		0.5
<i>Ectopria nervosa</i>	09021109059029	1.33			--	0.5	
<i>Dubiraphia</i>	09021113064	9.33	9.33	6	--	3.5	3.5



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		Actual	Adjusted			Actual	Adjusted
<i>Optioservus</i>	09021113067	0.33	0.33	3	SC	0.1	0.1
<i>Promoresia</i>	09021113069		5.67		--		2.1
<i>Promoresia elegans</i>	09021113069051	4.33			--	1.6	
<i>Promoresia tardella</i>	09021113069052	1.33			--	0.5	
<i>Stenelmis</i>	09021113070	0.33	0.67	5	SC	0.1	0.3
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.1	
Acariformes	090301	0.33	0.33		--	0.1	0.1
Physidae	10010202	0.33	0.33		SC	0.1	0.1
Ancylidae	10010204	0.33	0.33		SC	0.1	0.1
<i>Ferrissia</i>	10010204035		0.33		SC		0.1
<i>Ferrissia rivularis</i>	10010204035066	0.33			--	0.1	