



**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> 2648	Type of Sample: ROCK BAG	Date Deployed: 7/11/2018
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/8/2018

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> A	Date: 10/24/2018
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 10/23/2018	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.90	Class C	0.00
Class B	0.10	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	368.67	18 Relative Abundance Ephemeroptera	0.22
02 Generic Richness	73.00	19 EPT Generic Richness	33.00
03 Plecoptera Mean Abundance	12.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	80.67	23 Relative Generic Richness- Plecoptera	0.07
05 Shannon-Wiener Generic Diversity	4.99	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	40.23
06 Hilsenhoff Biotic Index	4.33	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	18.07
07 Relative Abundance - Chironomidae	0.43	28 EP Generic Richness/14	1.43
08 Relative Generic Richness Diptera	0.34	30 Presence of Class A Indicator Taxa/7	0.71
09 <i>Hydropsyche</i> Abundance	27.91		
11 <i>Cheumatopsyche</i> Abundance	23.43		
12 EPT Generic Richness/ Diptera Generic Richness	1.32		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	9.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	10.76		
17 Chironomini Abundance (Family Functional Group)	49.08		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	12.67
2	<i>Polypedilum</i>	8.39
3	<i>Hydropsyche</i>	7.57
4	<i>Cheumatopsyche</i>	6.35
5	<i>Tricorythodes</i>	5.97



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

Waterbody Information - Deployment		Waterbody Information - Retrieval	
Temperature:	20.2 deg C	Temperature:	23.3 deg C
Dissolved Oxygen:	9.91 mg/l	Dissolved Oxygen:	9.54 mg/l
Dissolved Oxygen Saturation:	109 %	Dissolved Oxygen Saturation:	111.8 %
Specific Conductance:	78.6 uS/cm	Specific Conductance:	49.1 uS/cm
Velocity:	12.129 cm/s	Velocity:	27.432 cm/s
pH:	8.06	pH:	7.42
Wetted Width:	10 m	Wetted Width:	11.1 m
Bankfull Width:	15 m	Bankfull Width:	15 m
Depth:	28 cm	Depth:	45 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 %
Nps Pollution		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**

78M ABOVE RT 150 BRIDGE



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Subsample Factor: X1

Replicates: 3

Calculated: 10/23/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009	0.33	0.33		CG	0.1	0.1
<i>Leuctra</i>	09020204020	0.33	0.33	0	SH	0.1	0.1
<i>Pteronarcys</i>	09020205023	2.33	3.00	0	SH	0.6	0.8
<i>Pteronarcys biloba</i>	09020205023061	0.67			--	0.2	
Perlidae	09020209	4.33			--	1.2	
<i>Acroneuria</i>	09020209042		7.07	0	PR		1.9
<i>Acroneuria abnormis</i>	09020209042121	1.00		0	PR	0.3	
<i>Acroneuria lycorias</i>	09020209042125	2.67			--	0.7	
<i>Paragnetina</i>	09020209049	0.33	0.64	1	PR	0.1	0.2
<i>Aagnetina</i>	09020209050		1.29	2	PR		0.3
<i>Aagnetina capitata</i>	09020209050152	0.67		2	PR	0.2	
Gomphidae	09020302	0.33	0.33		--	0.1	0.1
<i>Cordulegaster</i>	09020303019	0.33	0.33	3	PR	0.1	0.1
Calopterygidae	09020307	0.67	0.67		--	0.2	0.2
Baetidae	09020401	0.33			--	0.1	
<i>Baetis</i>	09020401001		13.23	4	CG		3.6
<i>Baetis flavistriga</i>	09020401001004	0.33			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	12.67			--	3.4	
<i>Acerpenna</i>	09020401007		2.04	5	CG		0.6
<i>Acerpenna macdunnoughi</i>	09020401007001	1.67			--	0.5	
<i>Acerpenna pygmaea</i>	09020401007011	0.33			--	0.1	
<i>Procloeon</i>	09020401010	1.00	1.02		CG	0.3	0.3
<i>Plauditus</i>	09020401012	1.00	1.02		CG	0.3	0.3
<i>Diphettor</i>	09020401013		1.70		--		0.5
<i>Diphettor hageni</i>	09020401013001	1.67			--	0.5	
<i>Leucrocuta</i>	09020402011	1.33	1.33	1	SC	0.4	0.4
<i>Stenacron</i>	09020402014	0.33	0.33	7	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	5.33	11.00	4	SC	1.4	3.0
<i>Maccaffertium vicarium</i>	09020402015055	5.67			--	1.5	
<i>Isonychia</i>	09020404018		5.00	2	CF		1.4
<i>Isonychia bicolor</i>	09020404018059	5.00			--	1.4	
Leptophlebiidae	09020406	0.33	0.33		--	0.1	0.1
<i>Paraleptophlebia</i>	09020406026	1.67	1.67	1	CG	0.5	0.5
<i>Ephemerella</i>	09020410035	14.67	14.67	1	CG	4.0	4.0
<i>Eurylophella</i>	09020410036	0.33	2.00	3	CG	0.1	0.5
<i>Eurylophella funeralis</i>	09020410036115	1.67			SH	0.5	
<i>Serratella</i>	09020410037		3.33	2	CG		0.9



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		Actual	Adjusted			Actual	Adjusted
<i>Serratella deficiens (Teloganopsis deficiens)</i>	09020410037121	2.67			--	0.7	
<i>Serratella serratoides</i>	09020410037124	0.67			--	0.2	
<i>Tricorythodes</i>	09020411038	22.00	22.00	4	CG	6.0	6.0
<i>Dolophilodes</i>	09020601001		2.33	0	CF		0.6
<i>Dolophilodes distinctus</i>	09020601001001	2.33			--	0.6	
<i>Neureclipsis</i>	09020603008	3.00	3.00	7	CF	0.8	0.8
<i>Nyctiophylax</i>	09020603009	0.67	0.67	5	PR	0.2	0.2
<i>Polycentropus</i>	09020603010	1.00	1.00	6	PR	0.3	0.3
Hydropsychidae	09020604	1.67			--	0.5	
<i>Cheumatopsyche</i>	09020604015	22.67	23.43	5	CF	6.1	6.4
<i>Hydropsyche</i>	09020604016	24.33	27.91	4	CF	6.6	7.6
<i>Hydropsyche bronta</i>	09020604016029	0.33			--	0.1	
<i>Hydropsyche morosa</i>	09020604016030	1.67			--	0.5	
<i>Hydropsyche sparna</i>	09020604016032	0.67			--	0.2	
<i>Rhyacophila</i>	09020605019	0.33	0.33	2	PR	0.1	0.1
<i>Agapetus</i>	09020606021	0.33	0.33	0	SC	0.1	0.1
Hydroptilidae	09020607				--		
<i>Brachycentrus</i>	09020609043		11.33	0	CF		3.1
<i>Brachycentrus appalachia</i>	09020609043096	11.33			--	3.1	
<i>Lepidostoma</i>	09020611064	2.33	2.33	1	SH	0.6	0.6
<i>Helicopsyche</i>	09020616070		10.67	3	SC		2.9
<i>Helicopsyche borealis</i>	09020616070137	10.67			--	2.9	
Leptoceridae	09020618	0.33			--	0.1	
<i>Mystacides</i>	09020618075		3.15	4	CG		0.9
<i>Mystacides sepulchralis</i>	09020618075147	3.00			--	0.8	
<i>Oecetis</i>	09020618078	2.33	3.85	8	PR	0.6	1.0
<i>Oecetis avara</i>	09020618078153	0.33			--	0.1	
<i>Oecetis persimilis</i>	09020618078157	1.00			--	0.3	
<i>Nigronia</i>	09020701003		0.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.1	
Chironomidae	09021011	1.33			--	0.4	
<i>Ablabesmyia</i>	09021011001	1.33	1.34	8	PR	0.4	0.4
<i>Nilotanypus</i>	09021011012		2.69	6	PR		0.7
<i>Nilotanypus fimbriatus</i>	09021011012027	2.67			--	0.7	
<i>Thienemannimyia</i>	09021011020		5.38	3	PR		1.5
<i>Thienemannimyia group</i>	09021011020041	5.33			--	1.4	
<i>Trissopelopia</i>	09021011021	1.33	1.34		PR	0.4	0.4



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<i>Corynoneura</i>	09021011036	0.67	0.67	7	CG	0.2	0.2
<i>Cricotopus</i>	09021011037	4.67	10.76	7	SH	1.3	2.9
<i>Cricotopus bicinctus</i>	09021011037057	6.00			--	1.6	
<i>Orthocladius</i>	09021011050	1.33	2.02	6	CG	0.4	0.5
<i>Orthocladius dubitatus</i>	09021011050103	0.67			--	0.2	
<i>Parametriocnemus</i>	09021011053	2.00	2.02	5	CG	0.5	0.5
<i>Rheocricotopus</i>	09021011057	0.67	0.67	6	CG	0.2	0.2
<i>Thienemanniella</i>	09021011062	2.00	2.02	6	CG	0.5	0.5
<i>Tvetenia</i>	09021011065		20.84	5	CG		5.7
<i>Tvetenia vitracies</i>	09021011065113	20.67			--	5.6	
<i>Rheotanytarsus</i>	09021011072		46.73	6	CF		12.7
<i>Rheotanytarsus exiguus group</i>	09021011072127	41.00			CF	11.1	
<i>Rheotanytarsus pellucidus</i>	09021011072128	5.33			CF	1.4	
<i>Stempellina</i>	09021011073	0.67	0.67	2	CG	0.2	0.2
<i>Stempellinella</i>	09021011074	8.00	8.07	2	--	2.2	2.2
<i>Tanytarsus</i>	09021011076	4.67	4.71	6	CF	1.3	1.3
<i>Pseudochironomus</i>	09021011078	1.33	1.34	5	CG	0.4	0.4
<i>Lauterborniella</i>	09021011092	4.00	4.03		CG	1.1	1.1
<i>Microtendipes</i>	09021011094		11.43	6	CF		3.1
<i>Microtendipes pedellus group</i>	09021011094166	0.67			--	0.2	
<i>Microtendipes rydalensis group</i>	09021011094168	10.67			--	2.9	
<i>Nilothauma</i>	09021011095	0.67	0.67	2	--	0.2	0.2
<i>Phaenopsectra</i>	09021011101	0.67	0.67	7	SC	0.2	0.2
<i>Polypedilum</i>	09021011102		30.93	6	SH		8.4
<i>Polypedilum aviceps</i>	09021011102181	28.67			--	7.8	
<i>Polypedilum flavum</i>	09021011102182	2.00			--	0.5	
<i>Simulium</i>	09021012047	0.67	0.67	4	CF	0.2	0.2
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
Empididae	09021016	1.33	1.33	6	--	0.4	0.4
<i>Hemerodromia</i>	09021016057	2.00	2.00	3	PR	0.5	0.5
<i>Psephenus</i>	09021108058		3.00	4	SC		0.8
<i>Psephenus herricki</i>	09021108058028	3.00			--	0.8	
<i>Ectopria</i>	09021109059		0.33	5	SC		0.1
<i>Ectopria nervosa</i>	09021109059029	0.33			--	0.1	
<i>Dubiraphia</i>	09021113064	4.33	4.33	6	--	1.2	1.2
<i>Optioservus</i>	09021113067		0.33	3	SC		0.1
<i>Optioservus ovalis</i>	09021113067046	0.33			--	0.1	
<i>Promoresia</i>	09021113069		3.33		--		0.9



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<i>Promoresia elegans</i>	09021113069051	1.67			--	0.5	
<i>Promoresia tardella</i>	09021113069052	1.67			--	0.5	
<i>Stenelmis</i>	09021113070	1.67	1.67	5	SC	0.5	0.5
Physidae	10010202	5.00	5.00		SC	1.4	1.4
<i>Gyraulius</i>	10010203029	0.33	0.33		SC	0.1	0.1
<i>Menetus</i>	10010203031		0.33		--		0.1
<i>Menetus dilatatus</i>	10010203031059	0.33			--	0.1	
<i>Ferrissia</i>	10010204035	1.33	1.33		SC	0.4	0.4