



**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: 30 METERS UPSTREAM OF RTE. 150, PARK ACROSS THE STREET AT AUSTIN ROAD (WE USED TO COLLECT ALGAE AT THE REST AREA FURTHER	Longitude: 69 38 39.25 W Stream Order: 3

Sample Information

Log Number: 2850	Type of Sample: ROCK BAG	Date Deployed: 9/2/2020
Subsample Factor: X1	Replicates: 3	Date Retrieved: 9/28/2020

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 2/23/2021
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 1/29/2021	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.94	Class A, B, or C	1.00
Class B	0.06	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	382.00	18 Relative Abundance Ephemeroptera	0.40
02 Generic Richness	59.00	19 EPT Generic Richness	36.00
03 Plecoptera Mean Abundance	56.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	154.67	23 Relative Generic Richness- Plecoptera	0.15
05 Shannon-Wiener Generic Diversity	4.48	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	21.39
06 Hilsenhoff Biotic Index	3.46	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	35.98
07 Relative Abundance - Chironomidae	0.12	28 EP Generic Richness/14	1.64
08 Relative Generic Richness Diptera	0.25	30 Presence of Class A Indicator Taxa/7	0.71
09 <i>Hydropsyche</i> Abundance	73.33		
11 <i>Cheumatopsyche</i> Abundance	8.00		
12 EPT Generic Richness/ Diptera Generic Richness	2.40		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	15.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	10.99		
17 Chironomini Abundance (Family Functional Group)	2.75		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	19.20
2	Perlodidae	9.77
3	<i>Ephemerella</i>	9.77
4	<i>Maccaffertium</i>	8.20
5	<i>Hydroptila</i>	4.54



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Station Number: S-486 Town: Athens Date Deployed: 9/2/2020
Log Number: 2850 Waterbody: East Branch Wesserunett Stream - Station 486 Date Retrieved: 9/28/2020

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 15.2 deg C
Dissolved Oxygen: 10.93 mg/l
Dissolved Oxygen Saturation: 109.6 %
Specific Conductance: 100.1 uS/cm
Velocity: 27.4 cm/s
pH: 7.77
Wetted Width: 5.4 m
Bankfull Width: 10 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 17.3 deg C
Dissolved Oxygen: 9.95 mg/l
Dissolved Oxygen Saturation: 104.6 %
Specific Conductance: 142.5 uS/cm
Velocity: 3 cm/s
pH: 7.72
Wetted Width: 5.1 m
Bankfull Width: 10 m
Depth: 18.3 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Marsh	Partly Open	Rolling	
Upland Conifer			
Upland Hardwood			
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Logging	Above Road Crossing	Boulder	35 %
Nps Pollution		Gravel	10 %
		Rubble/Cobble	55 %

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



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-486

Waterbody: East Branch Wesserunsett Stream - Station 4 Town: Athens

Log Number: 2850

Subsample Factor: X1

Replicates: 3

Calculated: 1/29/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002	0.33	0.33		--	0.1	0.1
<i>Prostoma</i>	04010101001	0.33	0.33		--	0.1	0.1
Nematoda	05	0.33	0.33		--	0.1	0.1
<i>Nais</i>	08020202009	5.33	5.33		CG	1.4	1.4
Taeniopterygidae	09020202	0.33	0.33		--	0.1	0.1
<i>Taeniopteryx</i>	09020202014	0.67	0.67	2	SH	0.2	0.2
Capniidae	09020203	1.00	1.00		--	0.3	0.3
<i>Pteronarcys</i>	09020205023		1.33	0	SH		0.3
<i>Pteronarcys biloba</i>	09020205023061	1.00			--	0.3	
<i>Pteronarcys comstocki</i>	09020205023062	0.33			--	0.1	
Perlodidae	09020207	37.33	37.33		--	9.8	9.8
<i>Isoperla</i>	09020207026	0.67	0.67	2	PR	0.2	0.2
Perlidae	09020209	1.00			--	0.3	
<i>Acroneuria</i>	09020209042	0.67	4.64	0	PR	0.2	1.2
<i>Acroneuria abnormis</i>	09020209042121	2.67		0	PR	0.7	
<i>Acroneuria lycorias</i>	09020209042125	1.00			--	0.3	
<i>Paragnetina</i>	09020209049	4.33	4.64	1	PR	1.1	1.2
<i>Aagnetina</i>	09020209050	0.33	5.71	2	PR	0.1	1.5
<i>Aagnetina capitata</i>	09020209050152	5.00		2	PR	1.3	
Gomphidae	09020302	0.33	0.33		--	0.1	0.1
<i>Baetis</i>	09020401001	1.33	7.33	4	CG	0.3	1.9
<i>Baetis flavistriga</i>	09020401001004	3.33			--	0.9	
<i>Baetis intercalaris</i>	09020401001008	2.33			--	0.6	
<i>Baetis pluto</i>	09020401001009	0.33			--	0.1	
<i>Acerpenna</i>	09020401007		6.67	5	CG		1.7
<i>Acerpenna macdunnoughi</i>	09020401007001	6.67			--	1.7	
<i>Plauditus</i>	09020401012	12.67	12.67		CG	3.3	3.3
<i>Diphedor</i>	09020401013		3.00		--		0.8
<i>Diphedor hageni</i>	09020401013001	3.00			--	0.8	
<i>Epeorus</i>	09020402009	9.67	9.67	0	SC	2.5	2.5
<i>Leucrocota</i>	09020402011	16.33	16.33	1	SC	4.3	4.3
<i>Stenacron</i>	09020402014	0.67	0.67	7	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	22.67	31.33	4	SC	5.9	8.2
<i>Maccaffertium vicarium</i>	09020402015055	8.67			--	2.3	
<i>Isonychia</i>	09020404018	4.33	4.33	2	CF	1.1	1.1
Leptophlebiidae	09020406	5.33			--	1.4	
<i>Paraleptophlebia</i>	09020406026	0.33	0.78	1	CG	0.1	0.2



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		Actual	Adjusted			Actual	Adjusted
		<i>Neoleptophlebia</i>	09020406027			3.67	8.56
<i>Ephemerella</i>	09020410035	9.00	37.33	1	CG	2.4	9.8
<i>Ephemerella subvaria</i>	09020410035111	28.33			--	7.4	
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.1	0.1
<i>Serratella</i>	09020410037		15.67	2	CG		4.1
<i>Serratella deficiens (Teloganopsis deficiens)</i>	09020410037121	15.67			--	4.1	
<i>Neureclipsis</i>	09020603008	1.33	1.33	7	CF	0.3	0.3
<i>Polycentropus</i>	09020603010	3.33	3.33	6	PR	0.9	0.9
<i>Cheumatopsyche</i>	09020604015	8.00	8.00	5	CF	2.1	2.1
<i>Hydropsyche</i>	09020604016	58.33	73.33	4	CF	15.3	19.2
<i>Hydropsyche bronta</i>	09020604016029	7.33			--	1.9	
<i>Hydropsyche morosa</i>	09020604016030	5.67			--	1.5	
<i>Hydropsyche sparna</i>	09020604016032	1.00			--	0.3	
<i>Hydropsyche betteni</i>	09020604016037	1.00			--	0.3	
<i>Rhyacophila</i>	09020605019	0.67	1.00	2	PR	0.2	0.3
<i>Rhyacophila fuscula</i>	09020605019060	0.33			PR	0.1	
<i>Hydroptila</i>	09020607026	17.33	17.33	6	P	4.5	4.5
<i>Brachycentrus</i>	09020609043		1.00	0	CF		0.3
<i>Brachycentrus appalachia</i>	09020609043096	1.00			--	0.3	
<i>Micrasema</i>	09020609044	1.00	1.00	2	SH	0.3	0.3
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.1	0.1
<i>Helicopsyche</i>	09020616070		0.67	3	SC		0.2
<i>Helicopsyche borealis</i>	09020616070137	0.67			--	0.2	
Leptoceridae	09020618	0.33			--	0.1	
<i>Ceraclea</i>	09020618072	0.33	0.36	3	CG	0.1	0.1
<i>Mystacides</i>	09020618075		0.72	4	CG		0.2
<i>Mystacides sepulchralis</i>	09020618075147	0.67			--	0.2	
<i>Oecetis</i>	09020618078	3.33	3.59	8	PR	0.9	0.9
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.1	0.1
Chironomidae	09021011	1.33			--	0.3	
<i>Thienemannimyia</i>	09021011020		10.99	3	PR		2.9
<i>Thienemannimyia group</i>	09021011020041	10.67			--	2.8	
<i>Corynoneura</i>	09021011036	5.33	5.49	7	CG	1.4	1.4
<i>Cricotopus</i>	09021011037	0.67	13.39	7	SH	0.2	3.5
<i>Cricotopus bicinctus</i>	09021011037057	12.33			--	3.2	
<i>Nanocladius</i>	09021011049	0.33	0.34	3	CG	0.1	0.1
<i>Orthocladius</i>	09021011050	0.67	0.69	6	CG	0.2	0.2



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		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
<i>Thienemanniella</i>	09021011062	2.67	2.75	6	CG	0.7	0.7
<i>Tvetenia</i>	09021011065		0.34	5	CG		0.1
<i>Tvetenia vitracies</i>	09021011065113	0.33			--	0.1	
<i>Rheotanytarsus</i>	09021011072	1.67	3.43	6	CF	0.4	0.9
<i>Rheotanytarsus exiguus group</i>	09021011072127	1.67			CF	0.4	
<i>Microtendipes</i>	09021011094		2.40	6	CF		0.6
<i>Microtendipes pedellus group</i>	09021011094166	0.67			--	0.2	
<i>Microtendipes rydalensis group</i>	09021011094168	1.67			--	0.4	
<i>Polypedilum</i>	09021011102		0.34	6	SH		0.1
<i>Polypedilum aviceps</i>	09021011102181	0.33			--	0.1	
<i>Stilocladus</i>	09021011118	5.33	5.49		--	1.4	1.4
<i>Simulium</i>	09021012047	2.33	2.33	4	CF	0.6	0.6
<i>Simulium venustum/verecundum complex</i>	09021012047072				CF		
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Hemerodromia</i>	09021016057	2.67	2.67	3	PR	0.7	0.7
<i>Optioservus</i>	09021113067		0.33	3	SC		0.1
<i>Optioservus elegans</i>	09021113067051	0.33			--	0.1	
<i>Stenelmis</i>	09021113070	0.33	0.33	5	SC	0.1	0.1
<i>Lebertia</i>	09030105001	0.33	0.33		--	0.1	0.1