



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

Station Information

Station Number: S-17	River Basin: Kennebec
Waterbody: Sandy River - Station 17	HUC8 Name: Lower Kennebec
Town: Phillips	Latitude: 44 51 19.02 N
Directions: 2 KM ABOVE RT. 142 CROSSING	Longitude: 70 21 43.28 W
	Stream Order: 4

Sample Information

Log Number: 2580	Type of Sample: ROCK BAG	Date Deployed: 7/24/2017
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/21/2017

Classification Attainment

Statutory Class: AA	Final Determination: A	Date: 3/16/2018
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 3/15/2018	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.42	Class A, B, or C	1.00
Class B	0.56	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	1.00
Class A or B	1.00	Class B or C or Non-Attainment	0.00
Class C or Non-Attainment	0.00		

Model Variables

01 Total Mean Abundance	1018.67	18 Relative Abundance Ephemeroptera	0.21
02 Generic Richness	43.00	19 EPT Generic Richness	28.00
03 Plecoptera Mean Abundance	17.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	216.00	23 Relative Generic Richness- Plecoptera	0.12
05 Shannon-Wiener Generic Diversity	3.38	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	64.00
06 Hilsenhoff Biotic Index	3.87	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	65.33
07 Relative Abundance - Chironomidae	0.13	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.26	30 Presence of Class A Indicator Taxa/7	0.86
09 <i>Hydropsyche</i> Abundance	452.00		
11 <i>Cheumatopsyche</i> Abundance	54.67		
12 EPT Generic Richness/ Diptera Generic Richness	2.55		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	5.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	8.00		
17 Chironomini Abundance (Family Functional Group)	41.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	44.37
2	<i>Brachycentrus</i>	7.85
3	<i>Maccaffertium</i>	6.41
4	<i>Cheumatopsyche</i>	5.37
5	<i>Baetis</i>	5.10



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Town: Phillips

Date Deployed: 7/24/2017

Log Number: 2580

Waterbody: Sandy River - Station 17

Date Retrieved: 8/21/2017

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 17.9 deg C
 Dissolved Oxygen: 10.84 mg/l
 Dissolved Oxygen Saturation: 115.1 %
 Specific Conductance: 36.6 uS/cm
 Velocity: 24.4 cm/s
 pH: 7.71
 Wetted Width: 43 m
 Bankfull Width: 48 m
 Depth: 55 cm

Waterbody Information - Retrieval

Temperature: 22.8 deg C
 Dissolved Oxygen: 10.17 mg/l
 Dissolved Oxygen Saturation: 119.1 %
 Specific Conductance: 37 uS/cm
 Velocity: 24.4 cm/s
 pH: 7.14
 Wetted Width: 45 m
 Bankfull Width: 48 m
 Depth: 60 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Open	Rolling	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Gravel Pit	Main Stem	Boulder	30 %
Logging		Gravel	5 %
		Rubble/Cobble	65 %

Landcover Summary - 2004 Data

Total Area (ac)	84801	High Int. Dev. %	0.0	Water %	0.5	Non-vegetated %	0.1
		Med Int. Dev. %	0.0	Wetland %	0.7	Tilled Agriculture %	0.1
		Low Int. Dev. %	0.9	Upland Woody %	96.5	Grassland %	0.2
		Development %	1.0	Natural %	97.4	Human Altered %	2.0
						Impervious %	0.6

Sample Comments

7/24/17: RAINING.

8/21/17: SOLAR ECLIPSE OCCURED DURING ROCK BAG CLEANING.



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

Station Number: S-17

Waterbody: Sandy River - Station 17

Town: Phillips

Log Number: 2580

Subsample Factor: X4

Replicates: 3

Calculated: 3/15/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
		<i>Pteronarcys</i>	09020205023			2.67	2.67
<i>Tallaperla</i>	09020206025	6.67	6.67		SH	0.7	0.7
Perlodidae	09020207	2.67	2.67		--	0.3	0.3
<i>Paragnetina</i>	09020209049		4.00	1	PR		0.4
<i>Paragnetina immarginata</i>	09020209049149	4.00			--	0.4	
<i>Aagnetina</i>	09020209050		1.33	2	PR		0.1
<i>Aagnetina capitata</i>	09020209050152	1.33		2	PR	0.1	
<i>Boyeria</i>	09020301004	1.33	1.33	2	PR	0.1	0.1
<i>Baetis</i>	09020401001		52.00	4	CG		5.1
<i>Baetis flavistriga</i>	09020401001004	5.33			--	0.5	
<i>Baetis intercalaris</i>	09020401001008	25.33			--	2.5	
<i>Baetis pluto</i>	09020401001009	21.33			--	2.1	
<i>Acerpenna</i>	09020401007		17.33	5	CG		1.7
<i>Acerpenna macdunnoughi</i>	09020401007001	13.33			--	1.3	
<i>Acerpenna pygmaea</i>	09020401007011	4.00			--	0.4	
<i>Dipheter</i>	09020401013		1.33		--		0.1
<i>Dipheter hageni</i>	09020401013001	1.33			--	0.1	
<i>Epeorus</i>	09020402009		1.33	0	SC		0.1
<i>Epeorus vitreus</i>	09020402009033	1.33			--	0.1	
<i>Leucrocuta</i>	09020402011	12.00	12.00	1	SC	1.2	1.2
<i>Maccaffertium</i>	09020402015	56.00	65.33	4	SC	5.5	6.4
<i>Maccaffertium vicarium</i>	09020402015055	9.33			--	0.9	
<i>Isonychia</i>	09020404018	9.33	9.33	2	CF	0.9	0.9
<i>Attenella</i>	09020410032		1.33	3	CG		0.1
<i>Attenella attenuata</i>	09020410032095	1.33			CG	0.1	
<i>Ephemerella</i>	09020410035	8.00	8.00	1	CG	0.8	0.8
<i>Serratella</i>	09020410037		8.00	2	CG		0.8
<i>Serratella serrata</i>	09020410037123	8.00			--	0.8	
<i>Tricorythodes</i>	09020411038	40.00	40.00	4	CG	3.9	3.9
<i>Neureclipsis</i>	09020603008	17.33	17.33	7	CF	1.7	1.7
<i>Polycentropus</i>	09020603010	2.67	2.67	6	PR	0.3	0.3
<i>Cheumatopsyche</i>	09020604015	54.67	54.67	5	CF	5.4	5.4
<i>Hydropsyche</i>	09020604016	326.67	452.00	4	CF	32.1	44.4
<i>Hydropsyche bronta</i>	09020604016029	82.67			--	8.1	
<i>Hydropsyche morosa</i>	09020604016030	32.00			--	3.1	
<i>Hydropsyche sparna</i>	09020604016032	10.67			--	1.0	
<i>Rhyacophila</i>	09020605019		1.33	2	PR		0.1



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		Actual	Adjusted			Actual	Adjusted
<i>Rhyacophila mainensis</i>	09020605019069	1.33			--	0.1	
<i>Glossosoma</i>	09020606020	5.33	5.33	0	SC	0.5	0.5
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.1	0.1
<i>Brachycentrus</i>	09020609043		80.00	0	CF		7.9
<i>Brachycentrus appalachia</i>	09020609043096	80.00			--	7.9	
<i>Lepidostoma</i>	09020611064	10.67	10.67	1	SH	1.0	1.0
<i>Psilotreta</i>	09020614068		1.33	0	SC		0.1
<i>Psilotreta labida</i>	09020614068133	1.33			--	0.1	
<i>Helicopsyche</i>	09020616070	1.33	1.33	3	SC	0.1	0.1
<i>Nectopsyche</i>	09020618074	1.33	1.33	3	SH	0.1	0.1
Chironomidae	09021011				--		
<i>Pentaneura</i>	09021011014	2.67	2.67	6	PR	0.3	0.3
<i>Thienemannimyia</i>	09021011020		5.33	3	PR		0.5
<i>Thienemannimyia group</i>	09021011020041	5.33			--	0.5	
<i>Corynoneura</i>	09021011036	5.33	5.33	7	CG	0.5	0.5
<i>Cricotopus</i>	09021011037	4.00	9.33	7	SH	0.4	0.9
<i>Cricotopus bicinctus</i>	09021011037057	5.33			--	0.5	
<i>Rheocricotopus</i>	09021011057	1.33	1.33	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		28.00	5	CG		2.7
<i>Tvetenia vitracies</i>	09021011065113	28.00			--	2.7	
<i>Rheotanytarsus</i>	09021011072		44.00	6	CF		4.3
<i>Rheotanytarsus exiguus group</i>	09021011072127	18.67			CF	1.8	
<i>Rheotanytarsus pellucidus</i>	09021011072128	25.33			CF	2.5	
<i>Microtendipes</i>	09021011094		5.33	6	CF		0.5
<i>Microtendipes pedellus group</i>	09021011094166	1.33			--	0.1	
<i>Microtendipes rydalensis group</i>	09021011094168	4.00			--	0.4	
<i>Polypedilum</i>	09021011102		36.00	6	SH		3.5
<i>Polypedilum aviceps</i>	09021011102181	26.67			--	2.6	
<i>Polypedilum flavum</i>	09021011102182	9.33			--	0.9	
<i>Simulium</i>	09021012047	2.67	2.67	4	CF	0.3	0.3
<i>Atherix</i>	09021015055	1.33	1.33	2	PR	0.1	0.1
<i>Dineutus</i>	09021104032	1.33	1.33	2	--	0.1	0.1
<i>Dubiraphia</i>	09021113064	6.67	6.67	6	--	0.7	0.7
<i>Promoresia</i>	09021113069	2.67	5.33		--	0.3	0.5
<i>Promoresia tardella</i>	09021113069052	2.67			--	0.3	