



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

Station Information

Station Number: S-270	River Basin: Saco
Waterbody: Kennebunk River - Station 270	HUC8 Name: Piscataqua-Salmon Falls
Town: Kennebunk	Latitude: 43 24 12.59 N
Directions: BARTLETT MILLS - 15 M ABOVE RT 1 BRIDGE	Longitude: 70 31 36.89 W
	Stream Order: 3

Sample Information

Log Number: 2846	Type of Sample: ROCK BAG	Date Deployed: 7/29/2020
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/27/2020

Classification Attainment

Statutory Class: B	Final Determination: B	Date: 2/22/2021
Model Result with $P \geq 0.6$: B	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	0.09	Class A, B, or C	1.00
Class B	0.62	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.97	Class A	0.31
Class C or Non-Attainment	0.03	Class B or C or Non-Attainment	0.69

Model Variables

01 Total Mean Abundance	1069.33	18 Relative Abundance Ephemeroptera	0.32
02 Generic Richness	30.00	19 EPT Generic Richness	20.00
03 Plecoptera Mean Abundance	1.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	340.00	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	3.22	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	41.33
06 Hilsenhoff Biotic Index	4.34	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	117.33
07 Relative Abundance - Chironomidae	0.19	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.20	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	330.67		
11 <i>Cheumatopsyche</i> Abundance	41.33		
12 EPT Generic Richness/ Diptera Generic Richness	3.33		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	1.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	5.33		
17 Chironomini Abundance (Family Functional Group)	84.00		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	30.92
2	<i>Baetis</i>	16.96
3	<i>Maccaffertium</i>	10.85
4	<i>Rheotanytarsus</i>	10.72
5	<i>Polypedilum</i>	7.36



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Log Number: 2846

Town: Kennebunk
Waterbody: Kennebunk River - Station 270

Date Deployed: 7/29/2020
Date Retrieved: 8/27/2020

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 25.6 deg C
Dissolved Oxygen: 10.26 mg/l
Dissolved Oxygen Saturation: 125.4 %
Specific Conductance: 113.7 uS/cm
Velocity: 23.2 cm/s
pH: 7.75
Wetted Width: 18.3 m
Bankfull Width: 19.4 m
Depth: 37 cm

Waterbody Information - Retrieval

Temperature: 17.7 deg C
Dissolved Oxygen: 11.14 mg/l
Dissolved Oxygen Saturation: 117.3 %
Specific Conductance: 132.1 uS/cm
Velocity: 14 cm/s
pH: 7.75
Wetted Width: 15 m
Bankfull Width: 19.4 m
Depth: 35.3 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Partly Open	Rolling	
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nps Pollution	Above Road Crossing	Bedrock	90 %
		Boulder	8 %
		Rubble/Cobble	2 %

Landcover Summary - 2004 Data

Total Area (ac)	27180	High Int. Dev. %	0.7	Water %	1.0	Non-vegetated %	0.5
		Med Int. Dev. %	0.6	Wetland %	6.4	Tilled Agriculture %	1.4
		Low Int. Dev. %	3.8	Upland Woody %	73.7	Grassland %	10.3
		Development %	5.0	Natural %	80.1	Human Altered %	18.9
						Impervious %	4.8

Sample Comments



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Aquatic Life Taxonomic Inventory Report

Station Number: S-270	Waterbody: Kennebunk River - Station 270	Town: Kennebunk
Log Number: 2846	Subsample Factor: X4	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	56.00	56.00		--	5.2	5.2
<i>Acroneuria</i>	09020209042		1.33	0	PR		0.1
<i>Acroneuria abnormis</i>	09020209042121	1.33		0	PR	0.1	
<i>Baetis</i>	09020401001	1.33	181.33	4	CG	0.1	17.0
<i>Baetis flavistriga</i>	09020401001004	70.67			--	6.6	
<i>Baetis intercalaris</i>	09020401001008	44.00			--	4.1	
<i>Baetis pluto</i>	09020401001009	65.33			--	6.1	
<i>Heterocloeon</i>	09020401005	9.33	9.33	2	SC	0.9	0.9
<i>Acerpenna</i>	09020401007		18.67	5	CG		1.7
<i>Acerpenna pygmaea</i>	09020401007011	18.67			--	1.7	
<i>Iswaeon</i>	09020401015	4.00	4.00		--	0.4	0.4
<i>Epeorus</i>	09020402009		2.67	0	SC		0.2
<i>Epeorus vitreus</i>	09020402009033	2.67			--	0.2	
<i>Leucrocuta</i>	09020402011	2.67	2.67	1	SC	0.2	0.2
<i>Stenacron</i>	09020402014	2.67	2.67	7	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	10.67	116.00	4	SC	1.0	10.8
<i>Maccaffertium vicarium</i>	09020402015055	105.33			--	9.9	
<i>Eurylophella</i>	09020410036	1.33	1.33	3	CG	0.1	0.1
<i>Tricorythodes</i>	09020411038	1.33	1.33	4	CG	0.1	0.1
<i>Chimarra</i>	09020601003		45.33	2	CF		4.2
<i>Chimarra aterrima</i>	09020601003002	45.33			--	4.2	
<i>Neureclipsis</i>	09020603008	8.00	8.00	7	CF	0.7	0.7
<i>Cheumatopsyche</i>	09020604015	41.33	41.33	5	CF	3.9	3.9
<i>Hydropsyche</i>	09020604016	54.67	330.67	4	CF	5.1	30.9
<i>Hydropsyche morosa</i>	09020604016030	253.33			--	23.7	
<i>Hydropsyche sparna</i>	09020604016032	20.00			--	1.9	
<i>Hydropsyche betteni</i>	09020604016037	1.33			--	0.1	
<i>Hydropsyche scalaris species group</i>	09020604016048	1.33			--	0.1	
<i>Rhyacophila</i>	09020605019		2.67	2	PR		0.2
<i>Rhyacophila fuscula</i>	09020605019060	2.67			PR	0.2	
<i>Psilotreta</i>	09020614068		1.33	0	SC		0.1
<i>Psilotreta labida</i>	09020614068133	1.33			--	0.1	
<i>Helicopsyche</i>	09020616070		2.67	3	SC		0.2
<i>Helicopsyche borealis</i>	09020616070137	2.67			--	0.2	
<i>Ceraclea</i>	09020618072	1.33	1.33	3	CG	0.1	0.1
<i>Oecetis</i>	09020618078	2.67	2.67	8	PR	0.2	0.2
<i>Thienemannimyia</i>	09021011020		5.33	3	PR		0.5



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<i>Thienemannimyia group</i>	09021011020041	5.33			--	0.5	
<i>Corynoneura</i>	09021011036	1.33	1.33	7	CG	0.1	0.1
<i>Rheotanytarsus</i>	09021011072		114.67	6	CF		10.7
<i>Rheotanytarsus exiguus group</i>	09021011072127	114.67			CF	10.7	
<i>Microtendipes</i>	09021011094		5.33	6	CF		0.5
<i>Microtendipes rydalensis group</i>	09021011094168	5.33			--	0.5	
<i>Polypedilum</i>	09021011102		78.67	6	SH		7.4
<i>Polypedilum aviceps</i>	09021011102181	5.33			--	0.5	
<i>Polypedilum flavum</i>	09021011102182	73.33			--	6.9	
<i>Simulium</i>	09021012047	26.67	26.67	4	CF	2.5	2.5
<i>Simulium venustum/verecundum complex</i>	09021012047072				CF		
<i>Psephenus</i>	09021108058		1.33	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.1	
<i>Macronychus</i>	09021113065		1.33	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.1	
<i>Optioservus</i>	09021113067		1.33	3	SC		0.1
<i>Optioservus elegans</i>	09021113067051	1.33			--	0.1	