



**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: 2380	Type of Sample:	ROCK BASKET	Date Deployed:	7/22/2015	
Subsample Factor:	X4	Replicates:	3	Date Retrieved:	8/19/2015

Classification Attainment

Statutory Class: B	Final Determination: C	Date:	9/7/2016
Model Result with $P \geq 0.6$:	C	Reason for Determination:	Model
Date Last Calculated:	9/6/2016	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.02	Class C	0.57
Class B	0.41	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B		Class A	0.02
Class C or Non-Attainment	0.63	Class B or C or Non-Attainment	0.98

Model Variables

01 Total Mean Abundance	1989.33	18 Relative Abundance Ephemeroptera	0.08
02 Generic Richness	43.00	19 EPT Generic Richness	21.00
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	158.67	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	3.05	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	202.87
06 Hilsenhoff Biotic Index	4.95	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	2.67
07 Relative Abundance - Chironomidae	0.44	28 EP Generic Richness/14	0.64
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	624.73		
11 <i>Cheumatopsyche</i> Abundance	169.87		
12 EPT Generic Richness/ Diptera Generic Richness	1.31		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	1.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	12.37		
17 Chironomini Abundance (Family Functional Group)	295.60		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	31.40
2	<i>Rheotanytarsus</i>	25.78
3	<i>Polypedilum</i>	14.10
4	<i>Cheumatopsyche</i>	8.54
5	<i>Baetis</i>	4.79



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Station Number: S-270 Town: Kennebunk Date Deployed: 7/22/2015
Log Number: 2380 Waterbody: Kennebunk River - Station 270 Date Retrieved: 8/19/2015

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23.2 deg C
Dissolved Oxygen: 9.38 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 121.5 uS/cm
Velocity: 57.9 cm/s
pH: 7.57
Wetted Width: 15 m
Bankfull Width: 17 m
Depth: 60 cm

Waterbody Information - Retrieval

Temperature: 25.5 deg C
Dissolved Oxygen: 9.28 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 130 uS/cm
Velocity: 6.1 cm/s
pH: 7.58
Wetted Width: 11.9 m
Bankfull Width: 17 m
Depth: 46 cm

Water Chemistry - 8/19/2015

Nitrate+nitrite As N	0.01 mg/l	Total Phosphorus	30 ug/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	3.4 mg/l
Dissolved Organic Carbon	3 mg/l	Total Dissolved Solids	98 mg/l
Orthophosphate As Phosphorus	3 ug/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Open	Rolling	
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Above Road Crossing	Bedrock	40 %
		Boulder	40 %
		Gravel	10 %
		Rubble/Cobble	10 %

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

7/22/2015: 110.9% DO. RIVER RUNNING BROWN, BASKETS NOT VISIBLE.
8/19/2015: 113% DO. LESS BROWN. FALL FISH AND WHITE SUCKER PRESENT.



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-270
Log Number: 2380

Waterbody: Kennebunk River - Station 270
Subsample Factor: X4

Town: Kennebunk
Calculated: 9/6/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	1.33	1.33		PR	0.1	0.1
Rhabditophora	0301	9.33	9.33		--	0.5	0.5
<i>Girardia</i>	03010102002		6.67		--		0.3
<i>Girardia tigrina</i>	03010102002001	6.67			--	0.3	
<i>Paragnetina</i>	09020209049		1.33	1	PR		0.1
<i>Paragnetina media</i>	09020209049151	1.33			--	0.1	
Calopterygidae	09020307	1.33	1.33		--	0.1	0.1
Baetidae	09020401	17.33			--	0.9	
<i>Baetis</i>	09020401001	41.33	95.31	4	CG	2.1	4.8
<i>Baetis flavistriga</i>	09020401001004	33.33			--	1.7	
<i>Baetis intercalaris</i>	09020401001008	8.00			--	0.4	
<i>Acerpenna</i>	09020401007	4.00	10.76	5	CG	0.2	0.5
<i>Acerpenna pygmaea</i>	09020401007011	5.33			--	0.3	
<i>Plauditus</i>	09020401012	1.33	1.54		CG	0.1	0.1
<i>Iswaeon</i>	09020401015	20.00	23.06		--	1.0	1.2
Heptageniidae	09020402	5.33	5.33		--	0.3	0.3
<i>Maccaffertium</i>	09020402015	1.33	2.67	4	SC	0.1	0.1
<i>Maccaffertium luteum</i>	09020402015049	1.33			--	0.1	
<i>Ephemerella</i>	09020410035	18.67	18.67	1	CG	0.9	0.9
<i>Tricorythodes</i>	09020411038	1.33	1.33	4	CG	0.1	0.1
<i>Chimarra</i>	09020601003	6.67	22.67	2	CF	0.3	1.1
<i>Chimarra aterrima</i>	09020601003002	6.67			--	0.3	
<i>Chimarra obscura</i>	09020601003003	1.33			--	0.1	
<i>Chimarra socia</i>	09020601003004	8.00			--	0.4	
<i>Cernotina</i>	09020603006	1.33	1.33		PR	0.1	0.1
<i>Neureclipsis</i>	09020603008	21.33	21.33	7	CF	1.1	1.1
<i>Nyctiophylax</i>	09020603009		17.33	5	PR		0.9
<i>Nyctiophylax celta</i>	09020603009012	17.33			--	0.9	
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.1	0.1
Hydropsychidae	09020604	40.00			--	2.0	
<i>Cheumatopsyche</i>	09020604015	161.33	169.87	5	CF	8.1	8.5
<i>Hydropsyche</i>	09020604016	236.00	624.73	4	CF	11.9	31.4
<i>Hydropsyche bronta</i>	09020604016029	6.67			--	0.3	
<i>Hydropsyche morosa</i>	09020604016030	225.33			--	11.3	
<i>Hydropsyche sparna</i>	09020604016032	109.33			--	5.5	
<i>Hydropsyche depravata species group</i>	09020604016041	16.00			CF	0.8	
<i>Macrostemum</i>	09020604018		1.40	3	CF		0.1



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Station Number: S-270

Waterbody: Kennebunk River - Station 270

Town: Kennebunk

Log Number: 2380

Subsample Factor: X4

Replicates: 3

Calculated: 9/6/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Macrostemum zebratum</i>	09020604018054	1.33			--	0.1	
<i>Rhyacophila</i>	09020605019	6.67	26.67	2	PR	0.3	1.3
<i>Rhyacophila fuscula</i>	09020605019060	20.00			PR	1.0	
Hydroptilidae	09020607				--		
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.1	0.1
<i>Pycnopsyche</i>	09020610049	1.33	1.33	4	SH	0.1	0.1
<i>Helicopsyche</i>	09020616070		8.00	3	SC		0.4
<i>Helicopsyche borealis</i>	09020616070137	8.00			--	0.4	
<i>Petrophila</i>	09020901004	1.33	1.33	5	SC	0.1	0.1
Chironomidae	09021011	26.67			--	1.3	
<i>Nilotanytus</i>	09021011012		5.50	6	PR		0.3
<i>Nilotanytus fimbriatus</i>	09021011012027	5.33			--	0.3	
<i>Pentaneura</i>	09021011014		1.37	6	PR		0.1
<i>Pentaneura inconspicua</i>	09021011014028	1.33			--	0.1	
<i>Rheopelopia</i>	09021011017		5.50		PR		0.3
<i>Rheopelopia acra group</i>	09021011017036	5.33			--	0.3	
<i>Corynoneura</i>	09021011036	4.00	4.12	7	CG	0.2	0.2
<i>Cricotopus</i>	09021011037		8.25	7	SH		0.4
<i>Cricotopus bicinctus</i>	09021011037057	8.00			--	0.4	
<i>Nanocladius</i>	09021011049		1.37	3	CG		0.1
<i>Nanocladius spinipennis</i>	09021011049090	1.33			--	0.1	
<i>Parametriocnemus</i>	09021011053	1.33	1.37	5	CG	0.1	0.1
<i>Rheocricotopus</i>	09021011057	1.33	2.75	6	CG	0.1	0.1
<i>Rheocricotopus robacki</i>	09021011057105	1.33			--	0.1	
<i>Thienemanniella</i>	09021011062	1.33	1.37	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		17.87	5	CG		0.9
<i>Tvetenia vitracies</i>	09021011065113	17.33			--	0.9	
<i>Rheotanytarsus</i>	09021011072		512.83	6	CF		25.8
<i>Rheotanytarsus exiguus group</i>	09021011072127	462.67			CF	23.3	
<i>Rheotanytarsus pellucidus</i>	09021011072128	34.67			CF	1.7	
<i>Tanytarsus</i>	09021011076	17.33	24.75	6	CF	0.9	1.2
<i>Tanytarsus buckleyi</i>	09021011076139	6.67			CF	0.3	
<i>Microtendipes</i>	09021011094		13.75	6	CF		0.7
<i>Microtendipes rydalensis group</i>	09021011094168	13.33			--	0.7	
<i>Nilothauma</i>	09021011095	1.33	1.37	2	--	0.1	0.1
<i>Polypedilum</i>	09021011102		280.47	6	SH		14.1
<i>Polypedilum aviceps</i>	09021011102181	118.67			--	6.0	
<i>Polypedilum flavum</i>	09021011102182	153.33			--	7.7	



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Simulium</i>	09021012047	10.67	26.67	4	CF	0.5	1.3
<i>Simulium tuberosum</i>	09021012047067	2.67			--	0.1	
<i>Simulium jenningsi species group</i>	09021012047070	13.33			CF	0.7	
<i>Macronychus</i>	09021113065		1.33	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.1	
<i>Stenelmis</i>	09021113070		1.33	5	SC		0.1
<i>Stenelmis crenata</i>	09021113070055	1.33			--	0.1	