



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

Station Information

Station Number: S-52	River Basin:	Saco
Waterbody: Salmon Falls River - Station 52	HUC8 Name:	Piscataqua-Salmon Falls
Town: Berwick	Latitude:	43 15 13.17 N
Directions: 50 M BELOW BERWICK POTW	Longitude:	70 50 31.23 W
	Stream Order:	4

Sample Information

Log Number: 2849	Type of Sample: ROCK BAG	Date Deployed: 8/11/2020
Subsample Factor: X8	Replicates: 3	Date Retrieved: 9/10/2020

Classification Attainment

Statutory Class: C	Final Determination: C	Date: 3/3/2022
Model Result with $P \geq 0.6$: C	Reason for Determination: Model	
Date Last Calculated: 11/2/2021	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	1.00
Class B	0.01	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.00
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	1.00

Model Variables

01 Total Mean Abundance	1962.67	18 Relative Abundance Ephemeroptera	0.02
02 Generic Richness	48.00	19 EPT Generic Richness	14.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	236.02
04 Ephemeroptera Mean Abundance	48.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.75	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	741.76
06 Hilsenhoff Biotic Index	5.75	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	26.67
07 Relative Abundance - Chironomidae	0.24	28 EP Generic Richness/14	0.29
08 Relative Generic Richness Diptera	0.31	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	666.67		
12 EPT Generic Richness/ Diptera Generic Richness	0.93		
13 Relative Abundance - Oligochaeta	0.02		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	10.73		
17 Chironomini Abundance (Family Functional Group)	292.34		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Cheumatopsyche</i>	33.97
2	<i>Girardia</i>	12.91
3	<i>Dicrotendipes</i>	12.03
4	<i>Oecetis</i>	3.67
5	<i>Neureclipsis</i>	3.65
6	<i>Polycentropus</i>	3.65



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Station Number: S-52 Town: Berwick Date Deployed: 8/11/2020
Log Number: 2849 Waterbody: Salmon Falls River - Station 52 Date Retrieved: 9/10/2020

Sample Collection and Processing Information

Sampling Organization: BIOMONITROING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 25.9 deg C
Dissolved Oxygen: 8.66 mg/l
Dissolved Oxygen Saturation: 106.6 %
Specific Conductance: 243.4 uS/cm
Velocity: 15.2 cm/s
pH: 7.26
Wetted Width: 23.1 m
Bankfull Width: 30 m
Depth: 38 cm

Waterbody Information - Retrieval

Temperature: 22.3 deg C
Dissolved Oxygen: 9.77 mg/l
Dissolved Oxygen Saturation: 111.4 %
Specific Conductance: 321.5 uS/cm
Velocity: 13.2 cm/s
pH: 7.21
Wetted Width: 27 m
Bankfull Width: 30 m
Depth: 31 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Swamp Hardwood	Open	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nutrients	Below Dam	Boulder	60 %
Regulated Flows	Below POTW	Rubble/Cobble	30 %
		Sand	10 %

Landcover Summary - 2004 Data

Sample Comments



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

Station Number: S-52

Waterbody: Salmon Falls River - Station 52

Town: Berwick

Log Number: 2849

Subsample Factor: X8

Replicates: 3

Calculated: 11/2/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002	253.33	253.33		--	12.9	12.9
<i>Prostoma</i>	04010101001	24.00	24.00		--	1.2	1.2
<i>Chaetogaster</i>	08020202002	2.67	2.67		--	0.1	0.1
<i>Slavina</i>	08020202012		10.67		--		0.5
<i>Slavina appendiculata</i>	08020202012001	10.67			--	0.5	
<i>Stylaria</i>	08020202014		34.67		CG		1.8
<i>Stylaria lacustris</i>	08020202014002	34.67			--	1.8	
<i>Erpobdella</i>	08030203002	2.67	2.67		--	0.1	0.1
Gomphidae	09020302	2.67	2.67		--	0.1	0.1
Corduliidae	09020305	2.67	2.67		--	0.1	0.1
<i>Argia</i>	09020309048	8.00	8.00	7	PR	0.4	0.4
<i>Acerpenna</i>	09020401007	10.67	13.33	5	CG	0.5	0.7
<i>Acerpenna pygmaea</i>	09020401007011	2.67			--	0.1	
<i>Procloeon</i>	09020401010	5.33	5.33		CG	0.3	0.3
<i>Maccaffertium</i>	09020402015	13.33	26.67	4	SC	0.7	1.4
<i>Maccaffertium modestum</i>	09020402015051	13.33			--	0.7	
<i>Tricorythodes</i>	09020411038	2.67	2.67	4	CG	0.1	0.1
<i>Chimarra</i>	09020601003		61.33	2	CF		3.1
<i>Chimarra obscura</i>	09020601003003	61.33			--	3.1	
Polycentropodidae	09020603	24.00			--	1.2	
<i>Neureclipsis</i>	09020603008	61.33	71.56	7	CF	3.1	3.6
<i>Nyctiophylax</i>	09020603009	21.33	24.89	5	PR	1.1	1.3
<i>Polycentropus</i>	09020603010	61.33	71.56	6	PR	3.1	3.6
<i>Cheumatopsyche</i>	09020604015	666.67	666.67	5	CF	34.0	34.0
<i>Macrostemum</i>	09020604018	10.67	10.67	3	CF	0.5	0.5
Hydroptilidae	09020607				--		
<i>Hydroptila</i>	09020607026	5.33	5.33	6	P	0.3	0.3
<i>Micrasema</i>	09020609044	16.00	16.00	2	SH	0.8	0.8
<i>Ceraclea</i>	09020618072	5.33	5.33	3	CG	0.3	0.3
<i>Oecetis</i>	09020618078	50.67	72.00	8	PR	2.6	3.7
<i>Oecetis persimilis</i>	09020618078157	21.33			--	1.1	
<i>Petrophila</i>	09020901004	2.67	2.67	5	SC	0.1	0.1
Chironomidae	09021011	2.67			--	0.1	
<i>Ablabesmyia</i>	09021011001	5.33	5.36	8	PR	0.3	0.3
<i>Labrundinia</i>	09021011008	2.67	2.68	7	PR	0.1	0.1
<i>Nilotanypus</i>	09021011012		2.68	6	PR		0.1
<i>Nilotanypus fimbriatus</i>	09021011012027	2.67			--	0.1	



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Station Number: S-52

Waterbody: Salmon Falls River - Station 52

Town: Berwick

Log Number: 2849

Subsample Factor: X8

Replicates: 3

Calculated: 11/2/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Cricotopus</i>	09021011037	8.00	37.55	7	SH	0.4	1.9
<i>Cricotopus bicinctus</i>	09021011037057	2.67			--	0.1	
<i>Cricotopus vierriensis</i>	09021011037071	8.00			--	0.4	
<i>Cricotopus politus</i>	09021011037077	18.67			--	1.0	
<i>Nanocladius</i>	09021011049	2.67	2.68	3	CG	0.1	0.1
<i>Psectrocladius</i>	09021011056	21.33	21.46	8	CG	1.1	1.1
<i>Rheocricotopus</i>	09021011057	5.33	5.36	6	CG	0.3	0.3
<i>Synorthocladius</i>	09021011061	5.33	5.36	2	CG	0.3	0.3
<i>Rheotanytarsus</i>	09021011072	5.33	56.32	6	CF	0.3	2.9
<i>Rheotanytarsus exiguus group</i>	09021011072127	50.67			CF	2.6	
<i>Stempellinella</i>	09021011074	2.67	2.68	2	--	0.1	0.1
<i>Tanytarsus</i>	09021011076	32.00	32.18	6	CF	1.6	1.6
<i>Chironomus</i>	09021011080	2.67	2.68	10	CG	0.1	0.1
<i>Dicrotendipes</i>	09021011085	234.67	236.02	8	CG	12.0	12.0
<i>Microtendipes</i>	09021011094		10.73	6	CF		0.5
<i>Microtendipes rydalensis group</i>	09021011094168	10.67			--	0.5	
<i>Polypedilum</i>	09021011102		42.91	6	SH		2.2
<i>Polypedilum flavum</i>	09021011102182	37.33			--	1.9	
<i>Polypedilum illinoense group</i>	09021011102185	5.33			--	0.3	
<i>Psephenus</i>	09021108058		2.67	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	2.67			--	0.1	
<i>Dubiraphia</i>	09021113064	2.67	2.67	6	--	0.1	0.1
<i>Promoresia</i>	09021113069	5.33	5.33		--	0.3	0.3
<i>Stenelmis</i>	09021113070	18.67	21.33	5	SC	1.0	1.1
<i>Stenelmis crenata</i>	09021113070055	2.67			--	0.1	
Hydrobiidae	10010104	18.67	18.67		--	1.0	1.0
<i>Amnicola</i>	10010104013	18.67	18.67		SC	1.0	1.0
<i>Physella</i>	10010202027	10.67	10.67		SC	0.5	0.5
Sphaeriidae	10020201	16.00	16.00		CF	0.8	0.8
<i>Musculium</i>	10020201001	2.67	2.67		CF	0.1	0.1