



**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: 2362	Type of Sample: ROCK BASKET	Date Deployed: 7/15/2015
Subsample Factor: X10	Replicates: 3	Date Retrieved: 8/12/2015

Classification Attainment

Statutory Class: C	Final Determination: C	Date: 3/9/2016
Model Result with $P \geq 0.6$: C	Reason for Determination: Best Professional Judgement	
Date Last Calculated: 3/9/2016	Comments: Indeterminate Class B (.59) not raised to Class B based on the proportion of sensitive taxa present.	

Model Probabilities

First Stage Model				C or Better Model	
Class A	0.02	Class C	0.41	Class A, B, or C	1.00
Class B	0.57	NA	0.00	Non-Attainment	0.00
B or Better Model				A Model	
Class A or B			0.59	Class A	0.01
Class C or Non-Attainment			0.41	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	3986.67	18 Relative Abundance Ephemeroptera	0.08
02 Generic Richness	31.00	19 EPT Generic Richness	18.00
03 Plecoptera Mean Abundance	10.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	300.00	23 Relative Generic Richness- Plecoptera	0.06
05 Shannon-Wiener Generic Diversity	3.15	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	152.43
06 Hilsenhoff Biotic Index	4.50	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	70.33
07 Relative Abundance - Chironomidae	0.38	28 EP Generic Richness/14	0.57
08 Relative Generic Richness Diptera	0.29	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	741.08		
11 <i>Cheumatopsyche</i> Abundance	129.04		
12 EPT Generic Richness/ Diptera Generic Richness	2.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	10.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	3.34		
17 Chironomini Abundance (Family Functional Group)	210.46		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	27.15
2	<i>Macrostemum</i>	19.14
3	<i>Hydropsyche</i>	18.59
4	<i>Simulium</i>	8.03
5	<i>Polypedilum</i>	5.11



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Station Number: S-52	Town: Berwick	Date Deployed: 7/15/2015
Log Number: 2362	Waterbody: Salmon Falls River - Station 52	Date Retrieved: 8/12/2015

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	25.7 deg C
Dissolved Oxygen:	8.09 mg/l
Dissolved Oxygen Saturation:	
Specific Conductance:	170.6 uS/cm
Velocity:	70.1 cm/s
pH:	7.53
Wetted Width:	24 m
Bankfull Width:	27 m
Depth:	40 cm

Waterbody Information - Retrieval

Temperature:	24 deg C
Dissolved Oxygen:	8.56 mg/l
Dissolved Oxygen Saturation:	
Specific Conductance:	95.9 uS/cm
Velocity:	76.2 cm/s
pH:	7.39
Wetted Width:	25 m
Bankfull Width:	27 m
Depth:	44 cm

Water Chemistry - 8/12/2015

Nitrate+nitrite As N	0.2 mg/l	Total Phosphorus	17 ug/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	2.1 mg/l	Total Dissolved Solids	93 mg/l
Orthophosphate As Phosphorus	1 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>
	Below Dam	Boulder 55 %
		Gravel 5 %
		Rubble/Cobble 40 %

Landcover Summary - 2004 Data

Sample Comments

7/15/2015: 100.2% DO.
8/12/2015: 102.6% DO.



Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report

Station Number: S-52

Waterbody: Salmon Falls River - Station 52

Town: Berwick

Log Number: 2362

Subsample Factor: X10

Replicates: 3

Calculated: 3/9/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Rhabditophora	0301	6.67	6.67		--	0.2	0.2
<i>Girardia</i>	03010102002		3.33		--		0.1
<i>Girardia tigrina</i>	03010102002001	3.33			--	0.1	
<i>Nais</i>	08020202009		3.33		CG		0.1
<i>Nais behningi</i>	08020202009003	3.33			--	0.1	
Perlidae	09020209	3.33			--	0.1	
<i>Acroneuria</i>	09020209042		5.00	0	PR		0.1
<i>Acroneuria abnormis</i>	09020209042121	3.33		0	PR	0.1	
<i>Paragnetina</i>	09020209049		5.00	1	PR		0.1
<i>Paragnetina immarginata</i>	09020209049149	3.33			--	0.1	
<i>Boyeria</i>	09020301004		3.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	3.33			--	0.1	
Baetidae	09020401	43.33			--	1.1	
<i>Baetis</i>	09020401001	66.67	198.23	4	CG	1.7	5.0
<i>Baetis flavistriga</i>	09020401001004	30.00			--	0.8	
<i>Baetis intercalaris</i>	09020401001008	60.00			--	1.5	
<i>Plauditus</i>	09020401012	6.67	8.44		CG	0.2	0.2
Heptageniidae	09020402	20.00			--	0.5	
<i>Epeorus</i>	09020402009	3.33	4.67	0	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	23.33	65.33	4	SC	0.6	1.6
<i>Maccaffertium luteum</i>	09020402015049	6.67			--	0.2	
<i>Maccaffertium modestum</i>	09020402015051	16.67			--	0.4	
<i>Isonychia</i>	09020404018	16.67	16.67	2	CF	0.4	0.4
<i>Ephemerella</i>	09020410035	6.67	6.67	1	CG	0.2	0.2
Philopotamidae	09020601	3.33	3.33		--	0.1	0.1
<i>Chimarra</i>	09020601003		110.00	2	CF		2.8
<i>Chimarra obscura</i>	09020601003003	110.00			--	2.8	
Polycentropodidae	09020603				--		
<i>Neureclipsis</i>	09020603008	13.33	13.33	7	CF	0.3	0.3
<i>Nyctiophylax</i>	09020603009		36.67	5	PR		0.9
<i>Nyctiophylax celta</i>	09020603009012	36.67			--	0.9	
Hydropsychidae	09020604	156.67			--	3.9	
<i>Cheumatopsyche</i>	09020604015	116.67	129.04	5	CF	2.9	3.2
<i>Hydropsyche</i>	09020604016	386.67	741.08	4	CF	9.7	18.6
<i>Hydropsyche bronta</i>	09020604016029	10.00			--	0.3	
<i>Hydropsyche morosa</i>	09020604016030	123.33			--	3.1	
<i>Hydropsyche sparna</i>	09020604016032	73.33			--	1.8	



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Station Number: S-52

Waterbody: Salmon Falls River - Station 52

Town: Berwick

Log Number: 2362

Subsample Factor: X10

Replicates: 3

Calculated: 3/9/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche dicantha</i>	09020604016042	73.33			--	1.8	
<i>Hydropsyche placoda</i>	09020604016059	3.33			--	0.1	
<i>Macrostemum</i>	09020604018		763.21	3	CF		19.1
<i>Macrostemum zebratum</i>	09020604018054	690.00			--	17.3	
<i>Hydroptila</i>	09020607026	3.33	3.33	6	P	0.1	0.1
<i>Ceraclea</i>	09020618072	10.00	10.00	3	CG	0.3	0.3
<i>Oecetis</i>	09020618078	3.33	6.67	8	PR	0.1	0.2
<i>Oecetis persimilis</i>	09020618078157	3.33			--	0.1	
Chironomidae	09021011	3.33			--	0.1	
<i>Nilotanytus</i>	09021011012		3.34	6	PR		0.1
<i>Nilotanytus fimbriatus</i>	09021011012027	3.33			--	0.1	
<i>Cricotopus</i>	09021011037	6.67	16.70	7	SH	0.2	0.4
<i>Cricotopus bicinctus</i>	09021011037057	10.00			--	0.3	
<i>Rheocricotopus</i>	09021011057		6.68	6	CG		0.2
<i>Rheocricotopus robacki</i>	09021011057105	6.67			--	0.2	
<i>Tvetenia</i>	09021011065		183.74	5	CG		4.6
<i>Tvetenia vitracies</i>	09021011065113	176.67			--	4.4	
<i>Tvetenia paucunca</i>	09021011065114	6.67			--	0.2	
<i>Rheotanytarsus</i>	09021011072		1082.39	6	CF		27.2
<i>Rheotanytarsus exiguus group</i>	09021011072127	1080.00			CF	27.1	
<i>Tanytarsus</i>	09021011076		6.68	6	CF		0.2
<i>Tanytarsus buckleyi</i>	09021011076139	6.67			CF	0.2	
<i>Microtendipes</i>	09021011094		6.68	6	CF		0.2
<i>Microtendipes rydalensis group</i>	09021011094168	6.67			--	0.2	
<i>Polypedilum</i>	09021011102		203.78	6	SH		5.1
<i>Polypedilum flavum</i>	09021011102182	203.33			--	5.1	
<i>Simulium</i>	09021012047	10.00	320.00	4	CF	0.3	8.0
<i>Simulium fibrinflatum</i>	09021012047059	43.33			--	1.1	
<i>Simulium jenningsi</i>	09021012047060	26.67			--	0.7	
<i>Simulium tuberosum</i>	09021012047067	13.33			--	0.3	
<i>Simulium jenningsi species group</i>	09021012047070	226.67			CF	5.7	
<i>Stenelmis</i>	09021113070	3.33	13.33	5	SC	0.1	0.3
<i>Stenelmis concinna</i>	09021113070054	10.00			--	0.3	