



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

Station Information

Station Number: S-863	River Basin:	Saco
Waterbody: Lord's Brook - Station 863	HUC8 Name:	Piscataqua-Salmon Falls
Town: Lyman	Latitude:	43 29 31.89 N
Directions: DOWNSTREAM OF DAM, NEAR END OF LORD'S LANE	Longitude:	70 37 21.45 W
	Stream Order:	2

Sample Information

Log Number: 2393	Type of Sample: ROCK BAG	Date Deployed: 7/28/2015
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/25/2015

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	0.00	Class A, B, or C	0.96
Class B	0.02	Non-Attainment	0.04
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.01
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	980.00	18 Relative Abundance Ephemeroptera	0.02
02 Generic Richness	32.00	19 EPT Generic Richness	10.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.33
04 Ephemeroptera Mean Abundance	20.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.81	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	1.33
06 Hilsenhoff Biotic Index	4.59	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	13.33
07 Relative Abundance - Chironomidae	0.05	28 EP Generic Richness/14	0.29
08 Relative Generic Richness Diptera	0.34	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	2.67		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.91		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	16.00		
17 Chironomini Abundance (Family Functional Group)	24.00		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Musculium</i>	47.45
2	<i>Girardia</i>	17.69
3	<i>Amnicola</i>	7.21
4	<i>Physa</i>	6.26
5	Basommatophora	3.40



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Station Number: S-863 Town: Lyman Date Deployed: 7/28/2015
Log Number: 2393 Waterbody: Lord's Brook - Station 863 Date Retrieved: 8/25/2015

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 21.3 deg C
Dissolved Oxygen: 7.94 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 99.3 uS/cm
Velocity: 9.1 cm/s
pH: 6.85
Wetted Width: 4.9 m
Bankfull Width: 6.2 m
Depth: 34 cm

Waterbody Information - Retrieval

Temperature: 21 deg C
Dissolved Oxygen: 7.8 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 108.5 uS/cm
Velocity: 3 cm/s
pH: 6.83
Wetted Width: 4.8 m
Bankfull Width: 7 m
Depth: 39 cm

Water Chemistry - 8/25/2015

Nitrate+nitrite As N	0.2 mg/l	Total Phosphorus	35 ug/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	6.1 mg/l	Total Dissolved Solids	96 mg/l
Orthophosphate As Phosphorus	11 ug/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Dense	Rolling	
Upland Conifer			
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
		Boulder	40 %
		Gravel	10 %
		Rubble/Cobble	40 %
		Sand	10 %

Landcover Summary - 2004 Data

Sample Comments

7/28/2015: 90.1% DO.
8/25/2015: 88% DO.



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

Station Number: S-863

Waterbody: Lord's Brook - Station 863

Town: Lyman

Log Number: 2393

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>Girardia</i>	03010102002		173.33		--		17.7
<i>Girardia tigrina</i>	03010102002001	173.33			--	17.7	
<i>Boyeria</i>	09020301004		2.67	2	PR		0.3
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.3	
Calopterygidae	09020307	1.33	1.33		--	0.1	0.1
<i>Calopteryx</i>	09020307043		1.33	5	PR		0.1
<i>Calopteryx maculata</i>	09020307043088	1.33			--	0.1	
Baetidae	09020401	1.33	1.33		--	0.1	0.1
<i>Acerpenna</i>	09020401007	1.33	4.00	5	CG	0.1	0.4
<i>Acerpenna pygmaea</i>	09020401007011	2.67			--	0.3	
<i>Maccaffertium</i>	09020402015	12.00	13.33	4	SC	1.2	1.4
<i>Maccaffertium modestum</i>	09020402015051	1.33			--	0.1	
Leptophlebiidae	09020406	1.33	1.33		--	0.1	0.1
<i>Gerris</i>	09020506017	1.33	1.33		PR	0.1	0.1
<i>Chimarra</i>	09020601003	2.67	24.00	2	CF	0.3	2.4
<i>Chimarra aterrima</i>	09020601003002	20.00			--	2.0	
<i>Chimarra obscura</i>	09020601003003	1.33			--	0.1	
<i>Plectrocnemia</i>	09020603012	20.00	20.00	6	PR	2.0	2.0
<i>Hydropsyche</i>	09020604016	2.67	2.67	4	CF	0.3	0.3
Limnephilidae	09020610				--		
<i>Pycnopsyche</i>	09020610049	1.33	1.33	4	SH	0.1	0.1
Leptoceridae	09020618	1.33			--	0.1	
<i>Ceraclea</i>	09020618072	22.67	23.54	3	CG	2.3	2.4
<i>Oecetis</i>	09020618078	1.33	12.46	8	PR	0.1	1.3
<i>Oecetis persimilis</i>	09020618078157	10.67			--	1.1	
<i>Nigronia</i>	09020701003		4.00	0	PR		0.4
<i>Nigronia serricornis</i>	09020701003003	4.00			--	0.4	
<i>Tipula</i>	09021001002	1.33	1.33	4	SH	0.1	0.1
Chironomidae	09021011				--		
<i>Conchapelopia</i>	09021011004	16.00	16.00	6	PR	1.6	1.6
<i>Corynoneura</i>	09021011036	1.33	1.33	7	CG	0.1	0.1
<i>Nanocladius</i>	09021011049	2.67	2.67	3	CG	0.3	0.3
<i>Parametriocnemus</i>	09021011053	2.67	2.67	5	CG	0.3	0.3
<i>Rheotanytarsus</i>	09021011072		1.33	6	CF		0.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	1.33			CF	0.1	
<i>Rheotanytarsus pellucidus</i>	09021011072128				CF		
<i>Tanytarsus</i>	09021011076	1.33	1.33	6	CF	0.1	0.1



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		Actual	Adjusted			Actual	Adjusted
<i>Microtendipes</i>	09021011094		6.67	6	CF		0.7
<i>Microtendipes pedellus group</i>	09021011094166	1.33			--	0.1	
<i>Microtendipes rydalensis group</i>	09021011094168	5.33			--	0.5	
<i>Parachironomus</i>	09021011097		1.33	10	PR		0.1
<i>Parachironomus pectinatellae</i>	09021011097178	1.33			--	0.1	
<i>Polypedilum</i>	09021011102	1.33	16.00	6	SH	0.1	1.6
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.1	
<i>Polypedilum flavum</i>	09021011102182	13.33			--	1.4	
<i>Polypedilum fallax group</i>	09021011102183				--		
<i>Simulium tuberosum</i>	09021012047067				--		
<i>Atherix</i>	09021015055	1.33	1.33	2	PR	0.1	0.1
<i>Stenelmis</i>	09021113070	2.67	4.00	5	SC	0.3	0.4
<i>Stenelmis crenata</i>	09021113070055	1.33			--	0.1	
<i>Amnicola</i>	10010104013		70.67		SC		7.2
<i>Amnicola limosus</i>	10010104013018	70.67			--	7.2	
Basommatophora	100102	33.33	33.33		--	3.4	3.4
<i>Physa</i>	10010202027	61.33	61.33		SC	6.3	6.3
Sphaeriidae	10020201	140.00			CF	14.3	
<i>Musculium</i>	10020201001	58.67	464.97		CF	6.0	47.4
<i>Musculium securis</i>	10020201001003	268.00			CF	27.3	
<i>Pisidium</i>	10020201002	4.00	5.69		CF	0.4	0.6