



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

Station Information

Station Number: S-875	River Basin:	Saco
Waterbody: Lord's Brook - Station 875	HUC8 Name:	Piscataqua-Salmon Falls
Town: Lyman	Latitude:	43 30 4.85 N
Directions: ROUTE 111 TO ROUTE 35; TURN ONTO DAVIS RD., FOLLOW ROAD TO STREAM	Longitude:	70 37 7.2 W
	Stream Order:	1

Sample Information

Log Number: 2392	Type of Sample: ROCK BAG	Date Deployed: 7/28/2015
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/25/2015

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 9/7/2016
Model Result with $P \geq 0.6$: A	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	0.69	Class A, B, or C	1.00
Class B	0.29	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.81
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.19

Model Variables

01 Total Mean Abundance	194.00	18 Relative Abundance Ephemeroptera	0.35
02 Generic Richness	43.00	19 EPT Generic Richness	15.00
03 Plecoptera Mean Abundance	1.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	25.92
04 Ephemeroptera Mean Abundance	67.33	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.82	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	3.65
06 Hilsenhoff Biotic Index	3.97	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	11.00
07 Relative Abundance - Chironomidae	0.36	28 EP Generic Richness/14	0.43
08 Relative Generic Richness Diptera	0.44	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.79		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	6.94		
17 Chironomini Abundance (Family Functional Group)	23.37		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	Leptophlebiidae	24.05
2	<i>Frenesia</i>	15.64
3	<i>Micropsectra</i>	13.36
4	<i>Microtendipes</i>	6.59
5	<i>Maccaffertium</i>	5.67



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Log Number: 2392 Waterbody: Lord's Brook - Station 875 Date Retrieved: 8/25/2015

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 17.8 deg C
Dissolved Oxygen: 8.16 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 138.5 uS/cm
Velocity: 3 cm/s
pH: 6.83
Wetted Width: 3.1 m
Bankfull Width: 4.3 m
Depth: 24 cm

Waterbody Information - Retrieval

Temperature: 19.2 deg C
Dissolved Oxygen: 7.77 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 136.9 uS/cm
Velocity: 6.1 cm/s
pH: 6.89
Wetted Width: 3 m
Bankfull Width: 4.3 m
Depth: 29 cm

Water Chemistry - 8/25/2015

Nitrate+nitrite As N	0.24 mg/l	Total Phosphorus	60 ug/l
Total Kjeldahl Nitrogen	0.7 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	10 mg/l	Total Dissolved Solids	220 mg/l
Orthophosphate As Phosphorus	30 ug/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Dense	Rolling
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
		Boulder 10 %
		Gravel 20 %
		Rubble/Cobble 50 %
		Sand 20 %

Landcover Summary - 2004 Data

Total Area (ac)	643	High Int. Dev. %	0.3	Water %	0.0	Non-vegetated %	4.7
		Med Int. Dev. %	0.7	Wetland %	0.0	Tilled Agriculture %	1.1
		Low Int. Dev. %	3.3	Upland Woody %	87.8	Grassland %	1.5
		Development %	4.3	Natural %	88.8	Human Altered %	11.2
						Impervious %	3.8

Sample Comments

7/28/2015: 86.3% DO.
8/25/2015: 84.7% DO.



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Aquatic Life Taxonomic Inventory Report**

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Subsample Factor: X1

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>Hydra</i>	02010101001	0.33	0.33		PR	0.2	0.2
Rhabditophora	0301	4.00	4.00		--	2.1	2.1
Leuctridae	09020204	0.33	0.33		--	0.2	0.2
<i>Leuctra</i>	09020204020		1.33	0	SH		0.7
<i>Leuctra ferruginea</i>	09020204020050	1.33			--	0.7	
<i>Aeshna</i>	09020301001		0.33	5	PR		0.2
<i>Aeshna umbrosa</i>	09020301001006	0.33			--	0.2	
<i>Boyeria</i>	09020301004		2.00	2	PR		1.0
<i>Boyeria vinosa</i>	09020301004012	2.00			--	1.0	
<i>Calopteryx</i>	09020307043		0.33	5	PR		0.2
<i>Calopteryx maculata</i>	09020307043088	0.33			--	0.2	
<i>Acerpenna</i>	09020401007	0.33	2.00	5	CG	0.2	1.0
<i>Acerpenna macdunnoughi</i>	09020401007001	1.67			--	0.9	
<i>Maccaffertium</i>	09020402015	4.67	11.00	4	SC	2.4	5.7
<i>Maccaffertium modestum</i>	09020402015051	6.33			--	3.3	
Leptophlebiidae	09020406	46.67	46.67		--	24.1	24.1
<i>Paraleptophlebia</i>	09020406026	7.67	7.67	1	CG	4.0	4.0
<i>Lype</i>	09020602004		0.67	2	SC		0.3
<i>Lype diversa</i>	09020602004005	0.67			--	0.3	
Polycentropodidae	09020603	1.00			--	0.5	
<i>Nyctiophylax</i>	09020603009		1.47	5	PR		0.8
<i>Nyctiophylax moestus</i>	09020603009013	1.33			--	0.7	
<i>Plectrocnemia</i>	09020603012	8.67	9.53	6	PR	4.5	4.9
<i>Rhyacophila</i>	09020605019	0.67	0.67	2	PR	0.3	0.3
Phryganeidae	09020608	0.67	0.67		--	0.3	0.3
<i>Oligostomis</i>	09020608039	0.67	0.67	2	PR	0.3	0.3
Limnephilidae	09020610				--		
<i>Pycnopsyche</i>	09020610049	0.67	0.67	4	SH	0.3	0.3
<i>Frenesia</i>	09020610058		30.33	0	SH		15.6
<i>Frenesia difficilis</i>	09020610058117	30.33			--	15.6	
<i>Psilotreta</i>	09020614068		0.67	0	SC		0.3
<i>Psilotreta frontalis</i>	09020614068134	0.67			--	0.3	
<i>Nigronia</i>	09020701003		2.00	0	PR		1.0
<i>Nigronia serricornis</i>	09020701003003	2.00			--	1.0	
Chironomidae	09021011	6.00			--	3.1	
<i>Ablabesmyia</i>	09021011001		0.73	8	PR		0.4
<i>Ablabesmyia mallochii</i>	09021011001004	0.67			--	0.3	



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<i>Conchapelopia</i>	09021011004	0.33	0.37	6	PR	0.2	0.2
<i>Labrundinia</i>	09021011008		0.37	7	PR		0.2
<i>Labrundinia pilosella</i>	09021011008022	0.33			--	0.2	
<i>Paramerina</i>	09021011013		2.19		--		1.1
<i>Paramerina anomala</i>	09021011013001	2.00			--	1.0	
<i>Trissopelopia</i>	09021011021		3.29		PR		1.7
<i>Trissopelopia ogemawi</i>	09021011021042	3.00			--	1.5	
<i>Brillia</i>	09021011033		0.37	5	SH		0.2
<i>Brillia flavifrons</i>	09021011033049	0.33			--	0.2	
<i>Corynoneura</i>	09021011036	0.33	0.37	7	CG	0.2	0.2
<i>Nanocladius</i>	09021011049	0.33	0.37	3	CG	0.2	0.2
<i>Parametriocnemus</i>	09021011053	6.67	7.30	5	CG	3.4	3.8
<i>Micropsectra</i>	09021011070	23.67	25.92	7	CG	12.2	13.4
<i>Paratanytarsus</i>	09021011071		0.73	6	--		0.4
<i>Paratanytarsus longistylus</i>	09021011071126	0.67		6	--	0.3	
<i>Stempellinella</i>	09021011074		0.73	2	--		0.4
<i>Stempellinella leptocelloides</i>	09021011074001	0.67			--	0.3	
<i>Tanytarsus</i>	09021011076	2.67	2.92	6	CF	1.4	1.5
<i>Microtendipes</i>	09021011094		12.78	6	CF		6.6
<i>Microtendipes pedellus group</i>	09021011094166	11.33			--	5.8	
<i>Microtendipes rydalensis group</i>	09021011094168	0.33			--	0.2	
<i>Nilothauma</i>	09021011095	0.67	0.73	2	--	0.3	0.4
<i>Phaenopsectra</i>	09021011101		0.37	7	SC		0.2
<i>Phaenopsectra flavipes</i>	09021011101179	0.33			SC	0.2	
<i>Polypedilum</i>	09021011102		8.76	6	SH		4.5
<i>Polypedilum aviceps</i>	09021011102181	5.00			--	2.6	
<i>Polypedilum fallax group</i>	09021011102183	1.00			--	0.5	
<i>Polypedilum albicorne</i>	09021011102195	1.67			--	0.9	
<i>Polypedilum illinoense</i>	09021011102204	0.33			--	0.2	
<i>Tribelos</i>	09021011107		0.73	5	CG		0.4
<i>Tribelos jucundus</i>	09021011107198	0.67			--	0.3	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.2	0.2
<i>Dubiraphia</i>	09021113064		0.67	6	--		0.3
<i>Dubiraphia quadrinotata</i>	09021113064037	0.67			--	0.3	
<i>Promoesia</i>	09021113069		0.33		--		0.2
<i>Promoesia elegans</i>	09021113069051	0.33			--	0.2	
<i>Physa</i>	10010202027	0.33	0.33		SC	0.2	0.2