



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

Station Information

Station Number: S-850	River Basin: Maine Coastal
Waterbody: Little River - Station 850	HUC8 Name: Maine Coastal
Town: Belfast	Latitude: 44 24 18.29 N
Directions: 50M UPSTREAM OF RT. 52	Longitude: 69 1 52.49 W
	Stream Order: 2

Sample Information

Log Number: 2651	Type of Sample: ROCK BAG	Date Deployed: 7/12/2018
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/9/2018

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 12/3/2018
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 11/30/2018	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.42	Class C	0.04
Class B	0.54	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.89
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.11

Model Variables

01 Total Mean Abundance	603.00	18 Relative Abundance Ephemeroptera	0.08
02 Generic Richness	61.00	19 EPT Generic Richness	27.00
03 Plecoptera Mean Abundance	3.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.67
04 Ephemeroptera Mean Abundance	51.00	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	3.89	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	60.33
06 Hilsenhoff Biotic Index	4.96	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	12.03
07 Relative Abundance - Chironomidae	0.54	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.36	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	141.33		
11 <i>Cheumatopsyche</i> Abundance	1.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.23		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	50.67		
17 Chironomini Abundance (Family Functional Group)	165.67		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	23.44
2	<i>Polypedilum</i>	22.11
3	<i>Thienemannimyia</i>	7.52
4	<i>Cricotopus</i>	7.19
5	<i>Rheotanytarsus</i>	5.31



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Station Number: S-850 Town: Belfast Date Deployed: 7/12/2018
Log Number: 2651 Waterbody: Little River - Station 850 Date Retrieved: 8/9/2018

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 17.5 deg C
Dissolved Oxygen: 10.3 mg/l
Dissolved Oxygen Saturation: 105.6 %
Specific Conductance: 105.1 uS/cm
Velocity: 18.3 cm/s
pH: 7.33
Wetted Width: 4.3 m
Bankfull Width: 6.3 m
Depth: 15 cm

Waterbody Information - Retrieval

Temperature: 21.3 deg C
Dissolved Oxygen: 8.93 mg/l
Dissolved Oxygen Saturation: 100.3 %
Specific Conductance: 133.3 uS/cm
Velocity: 6.1 cm/s
pH: 7.25
Wetted Width: 3.5 m
Bankfull Width: 6.3 m
Depth: 11.5 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood	Partly Open	Rolling
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above Road Crossing	Boulder 5 %
		Gravel 30 %
		Rubble/Cobble 60 %
		Sand 5 %

Landcover Summary - 2004 Data

Total Area (ac)	7849	High Int. Dev. %	1.0	Water %	0.1	Non-vegetated %	0.1
		Med Int. Dev. %	0.9	Wetland %	4.5	Tilled Agriculture %	2.4
		Low Int. Dev. %	3.7	Upland Woody %	75.4	Grassland %	9.6
		Development %	5.7	Natural %	78.0	Human Altered %	22.0
						Impervious %	4.3

Sample Comments



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-850

Waterbody: Little River - Station 850

Town: Belfast

Log Number: 2651

Subsample Factor: X1

Replicates: 3

Calculated: 11/30/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002	0.67	0.67		--	0.1	0.1
Perlodidae	09020207	0.33	0.33		--	0.1	0.1
<i>Agnatina</i>	09020209050		2.67	2	PR		0.4
<i>Agnatina capitata</i>	09020209050152	2.67		2	PR	0.4	
Baetidae	09020401	0.33			--	0.1	
<i>Baetis</i>	09020401001	2.33	20.28	4	CG	0.4	3.4
<i>Baetis flavistriga</i>	09020401001004	0.33			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	17.33			--	2.9	
<i>Acerpenna</i>	09020401007		0.34	5	CG		0.1
<i>Acerpenna macdunnoughi</i>	09020401007001	0.33			--	0.1	
<i>Labiobaetis</i>	09020401009	0.33	0.34		--	0.1	0.1
<i>Proclleon</i>	09020401010	2.67	2.70		CG	0.4	0.4
<i>Neocloeon (Centroptilum)</i>	09020401017	0.33	0.34	2	CG	0.1	0.1
Heptageniidae	09020402	1.67			--	0.3	
<i>Epeorus</i>	09020402009	1.33	1.50	0	SC	0.2	0.2
<i>Stenacron</i>	09020402014	1.00	1.13	7	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	6.33	12.03	4	SC	1.1	2.0
<i>Maccaffertium vicarium</i>	09020402015055	4.33			--	0.7	
Leptophlebiidae	09020406	2.00	2.00		--	0.3	0.3
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.1	0.1
<i>Serratella</i>	09020410037		6.67	2	CG		1.1
<i>Serratella serrata</i>	09020410037123	2.33			--	0.4	
<i>Serratella serratoides</i>	09020410037124	4.33			--	0.7	
<i>Tricorythodes</i>	09020411038	3.33	3.33	4	CG	0.6	0.6
<i>Microvelia</i>	09020510025	1.67	1.67		PR	0.3	0.3
<i>Polycentropus</i>	09020603010	1.67	1.67	6	PR	0.3	0.3
<i>Cheumatopsyche</i>	09020604015	1.00	1.00	5	CF	0.2	0.2
<i>Hydropsyche</i>	09020604016	123.00	141.33	4	CF	20.4	23.4
<i>Hydropsyche alhedra</i>	09020604016028	3.67			--	0.6	
<i>Hydropsyche bronta</i>	09020604016029	4.00			--	0.7	
<i>Hydropsyche morosa</i>	09020604016030	0.33			--	0.1	
<i>Hydropsyche slossonae</i>	09020604016031	0.67			--	0.1	
<i>Hydropsyche sparna</i>	09020604016032	6.00			--	1.0	
<i>Hydropsyche betteni</i>	09020604016037	3.67			--	0.6	
<i>Rhyacophila</i>	09020605019	1.33	3.00	2	PR	0.2	0.5
<i>Rhyacophila fuscula</i>	09020605019060	1.67			PR	0.3	
Hydroptilidae	09020607				--		



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Replicates: 3

Calculated: 11/30/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydroptila</i>	09020607026	0.33	0.33	6	P	0.1	0.1
Limnephilidae	09020610	0.33	0.33		--	0.1	0.1
<i>Pycnopsyche</i>	09020610049	1.00	1.00	4	SH	0.2	0.2
<i>Lepidostoma</i>	09020611064	2.67	2.67	1	SH	0.4	0.4
<i>Psilotreta</i>	09020614068		0.67	0	SC		0.1
<i>Psilotreta labida</i>	09020614068133	0.67			--	0.1	
<i>Helicopsyche</i>	09020616070		8.33	3	SC		1.4
<i>Helicopsyche borealis</i>	09020616070137	8.33			--	1.4	
Leptoceridae	09020618	0.33			--	0.1	
<i>Mystacides</i>	09020618075		1.94	4	CG		0.3
<i>Mystacides sepulchralis</i>	09020618075147	1.67			--	0.3	
<i>Oecetis</i>	09020618078	0.33	0.39	8	PR	0.1	0.1
<i>Apatania</i>	09020619061	0.33	0.33		SC	0.1	0.1
<i>Nigronia</i>	09020701003		0.67	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.67			--	0.1	
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.1	0.1
Tipulidae	09021001	0.67			--	0.1	
<i>Tipula</i>	09021001002	0.67	1.00	4	SH	0.1	0.2
<i>Antocha</i>	09021001004	0.67	1.00	3	CG	0.1	0.2
Chironomidae	09021011				--		
<i>Ablabesmyia</i>	09021011001	2.67	2.67	8	PR	0.4	0.4
<i>Labrundinia</i>	09021011008	1.33	1.33	7	PR	0.2	0.2
<i>Paramerina</i>	09021011013	1.33	1.33		--	0.2	0.2
<i>Thienemannimyia</i>	09021011020		45.33	3	PR		7.5
<i>Thienemannimyia group</i>	09021011020041	45.33			--	7.5	
<i>Corynoneura</i>	09021011036	5.33	5.33	7	CG	0.9	0.9
<i>Cricotopus</i>	09021011037		43.33	7	SH		7.2
<i>Cricotopus bicinctus</i>	09021011037057	43.33			--	7.2	
<i>Eukiefferiella</i>	09021011041		2.00	8	CG		0.3
<i>Eukiefferiella brehmi group</i>	09021011041073	1.33			--	0.2	
<i>Eukiefferiella claripennis group</i>	09021011041075	0.67			--	0.1	
<i>Orthocladius</i>	09021011050		1.67	6	CG		0.3
<i>Orthocladius annectens</i>	09021011050092	1.33			--	0.2	
<i>Orthocladius dubitatus</i>	09021011050103	0.33			--	0.1	
<i>Parametriocnemus</i>	09021011053	4.00	4.00	5	CG	0.7	0.7
<i>Thienemanniella</i>	09021011062	2.67	2.67	6	CG	0.4	0.4
<i>Tvetenia</i>	09021011065		4.00	5	CG		0.7
<i>Tvetenia vitracies</i>	09021011065113	4.00			--	0.7	



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		Actual	Adjusted			Actual	Adjusted
<i>Rheotanytarsus</i>	09021011072		32.00	6	CF		5.3
<i>Rheotanytarsus exiguus group</i>	09021011072127	25.33			CF	4.2	
<i>Rheotanytarsus pellucidus</i>	09021011072128	6.67			CF	1.1	
<i>Tanytarsus</i>	09021011076	13.33	13.33	6	CF	2.2	2.2
<i>Dicrotendipes</i>	09021011085	1.67	1.67	8	CG	0.3	0.3
<i>Microtendipes</i>	09021011094		30.67	6	CF		5.1
<i>Microtendipes pedellus group</i>	09021011094166	1.33			--	0.2	
<i>Microtendipes rydalensis group</i>	09021011094168	29.33			--	4.9	
<i>Polypedilum</i>	09021011102		133.33	6	SH		22.1
<i>Polypedilum aviceps</i>	09021011102181	126.67			--	21.0	
<i>Polypedilum illinoense group</i>	09021011102185	6.67			--	1.1	
<i>Simulium</i>	09021012047	1.00	1.00	4	CF	0.2	0.2
<i>Atherix</i>	09021015055	0.67	0.67	2	PR	0.1	0.1
Empididae	09021016	1.67	1.67	6	--	0.3	0.3
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
Hydrophilidae	09021105	0.33	0.33		--	0.1	0.1
<i>Psephenus</i>	09021108058		8.33	4	SC		1.4
<i>Psephenus herricki</i>	09021108058028	8.33			--	1.4	
<i>Dubiraphia</i>	09021113064	3.33	3.33	6	--	0.6	0.6
<i>Promoresia</i>	09021113069		18.00		--		3.0
<i>Promoresia tardella</i>	09021113069052	18.00			--	3.0	
<i>Stenelmis</i>	09021113070	1.33	1.33	5	SC	0.2	0.2
Lymnaeidae	10010201	0.67	0.67		--	0.1	0.1
Physidae	10010202	19.00	19.00		SC	3.2	3.2
<i>Helisoma</i>	10010203030		1.33		SC		0.2
<i>Helisoma anceps</i>	10010203030058	1.33			--	0.2	