



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

Station Information

Station Number: S-841	River Basin: Kennebec
Waterbody: North Brook - Station 841	HUC8 Name: Upper Kennebec
Town: Lily Bay Twp	Latitude: 45 36 25.54 N
Directions: ~35M UPSTRAM OF CASEY'S CAMP ROAD IN SOMEWHAT OPEN AREA	Longitude: 69 30 2.61 W
	Stream Order: 1

Sample Information

Log Number: 2584	Type of Sample: ROCK BAG	Date Deployed: 7/26/2017
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/23/2017

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 3/16/2018
Model Result with P \geq 0.6: A	Reason for Determination: Model	
Date Last Calculated: 3/15/2018	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.94	Class A, B, or C	1.00
Class B	0.06	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	147.67	18 Relative Abundance Ephemeroptera	0.48
02 Generic Richness	50.00	19 EPT Generic Richness	24.00
03 Plecoptera Mean Abundance	16.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	12.33
04 Ephemeroptera Mean Abundance	71.33	23 Relative Generic Richness- Plecoptera	0.14
05 Shannon-Wiener Generic Diversity	4.60	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.67
06 Hilsenhoff Biotic Index	3.45	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	14.67
07 Relative Abundance - Chironomidae	0.22	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.40	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	2.00		
11 <i>Cheumatopsyche</i> Abundance	0.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.20		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	7.67		
17 Chironomini Abundance (Family Functional Group)	2.00		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Habrophlebia</i>	10.08
2	<i>Maccaffertium</i>	9.93
3	<i>Paraleptophlebia</i>	9.34
4	<i>Micropsectra</i>	8.35
5	<i>Promoresia</i>	6.77



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 15.1 deg C
Dissolved Oxygen: 10.99 mg/l
Dissolved Oxygen Saturation: 111.3 %
Specific Conductance: 46.4 uS/cm
Velocity: 3.05 cm/s
pH: 7.57
Wetted Width: 2.7 m
Bankfull Width: 4.1 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 17.1 deg C
Dissolved Oxygen: 10.16 mg/l
Dissolved Oxygen Saturation: 105 %
Specific Conductance: 41.6 uS/cm
Velocity: 12.2 cm/s
pH: 6.88
Wetted Width: 3.2 m
Bankfull Width: 4.1 m
Depth: 25 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Swamp Conifer	Dense	Rolling	
Swamp Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Logging	Below Road Crossing	Detritus	10 %
		Gravel	45 %
		Sand	45 %

Landcover Summary - 2004 Data

Total Area (ac)	2183	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	0.7	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.3	Upland Woody %	98.9	Grassland %	0.0
		Development %	0.3	Natural %	99.7	Human Altered %	0.3
						Impervious %	0.3

Sample Comments

7/26/17: VERY ALDERY, LOW FLOW.
8/23/17: SAND MOVEMENT.



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Aquatic Life Taxonomic Inventory Report**

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Waterbody: North Brook - Station 841

Town: Lily Bay Twp

Log Number: 2584

Subsample Factor: X1

Replicates: 3

Calculated: 3/15/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Paracapnia</i>	09020203018	1.00	1.00	1	SH	0.7	0.7
<i>Leuctra</i>	09020204020	7.33	7.33	0	SH	5.0	5.0
<i>Pteronarcys</i>	09020205023		1.00	0	SH		0.7
<i>Pteronarcys biloba</i>	09020205023061	1.00			--	0.7	
Perlodidae	09020207	0.67			--	0.5	
<i>Isoperla</i>	09020207026	4.33	4.95	2	PR	2.9	3.4
<i>Malirekus</i>	09020207034		0.38		PR		0.3
<i>Malirekus iroquois</i>	09020207034101	0.33			--	0.2	
<i>Sweltsa</i>	09020208040	1.00	1.00		PR	0.7	0.7
<i>Agnatina</i>	09020209050		0.33	2	PR		0.2
<i>Agnatina capitata</i>	09020209050152	0.33		2	PR	0.2	
<i>Boyeria</i>	09020301004		0.67	2	PR		0.5
<i>Boyeria grafiana</i>	09020301004011	0.67			--	0.5	
<i>Cordulegaster</i>	09020303019	0.33	0.33	3	PR	0.2	0.2
<i>Heterocloeon</i>	09020401005		2.33	2	SC		1.6
<i>Heterocloeon curiosum</i>	09020401005020	2.33			--	1.6	
<i>Acerpenna</i>	09020401007		9.00	5	CG		6.1
<i>Acerpenna macdunnoughi</i>	09020401007001	9.00			--	6.1	
<i>Epeorus</i>	09020402009		0.33	0	SC		0.2
<i>Epeorus vitreus</i>	09020402009033	0.33			--	0.2	
<i>Heptagenia</i>	09020402010	0.67	0.67	2	SC	0.5	0.5
<i>Maccaffertium</i>	09020402015	13.33	14.67	4	SC	9.0	9.9
<i>Maccaffertium modestum</i>	09020402015051	0.33			--	0.2	
<i>Maccaffertium pudicum</i>	09020402015052	1.00			--	0.7	
Leptophlebiidae	09020406	2.33			--	1.6	
<i>Habrophlebia</i>	09020406023		14.88		--		10.1
<i>Habrophlebia vibrans</i>	09020406023072	13.67			--	9.3	
<i>Paraleptophlebia</i>	09020406026	3.00	13.79	1	CG	2.0	9.3
<i>Paraleptophlebia adoptiva</i>	09020406026078	9.67		1	CG	6.5	
<i>Ephemerella</i>	09020410035	7.33	7.33	1	CG	5.0	5.0
<i>Eurylophella</i>	09020410036	5.33	8.33	3	CG	3.6	5.6
<i>Eurylophella funeralis</i>	09020410036115	3.00			SH	2.0	
<i>Chimarra</i>	09020601003		2.67	2	CF		1.8
<i>Chimarra aterrima</i>	09020601003002	1.00			--	0.7	
<i>Chimarra obscura</i>	09020601003003	1.00			--	0.7	
<i>Chimarra socia</i>	09020601003004	0.67			--	0.5	
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.2	0.2



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		Actual	Adjusted			Actual	Adjusted
<i>Cheumatopsyche</i>	09020604015	0.67	0.67	5	CF	0.5	0.5
<i>Hydropsyche</i>	09020604016		2.00	4	CF		1.4
<i>Hydropsyche morosa</i>	09020604016030	1.33			--	0.9	
<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.2	
<i>Hydropsyche scalaris species group</i>	09020604016048	0.33			--	0.2	
<i>Oligostomis</i>	09020608039	0.67	0.67	2	PR	0.5	0.5
<i>Pycnopsyche</i>	09020610049			4	SH		
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.2	0.2
<i>Psilotreta</i>	09020614068	0.67	1.33	0	SC	0.5	0.9
<i>Psilotreta frontalis</i>	09020614068134	0.67			--	0.5	
<i>Apatania</i>	09020619061	0.33	0.33		SC	0.2	0.2
Tipulidae	09021001	0.33			--	0.2	
<i>Dicranota</i>	09021001005	0.33	0.50	3	PR	0.2	0.3
<i>Hexatoma</i>	09021001008	0.33	0.50	2	PR	0.2	0.3
<i>Dixa</i>	09021006023	0.67	0.67		CG	0.5	0.5
Chironomidae	09021011				--		
<i>Labrundinia</i>	09021011008	0.33	0.33	7	PR	0.2	0.2
<i>Paramerina</i>	09021011013	0.67	0.67		--	0.5	0.5
<i>Trissopelopia</i>	09021011021	2.33	2.33		PR	1.6	1.6
<i>Zavrelimyia</i>	09021011022	4.33	4.33	8	PR	2.9	2.9
<i>Pagastia</i>	09021011025	0.33	0.33	1	--	0.2	0.2
<i>Brillia</i>	09021011033	0.67	0.67	5	SH	0.5	0.5
<i>Heterotrissocladius</i>	09021011044		0.33	0	CG		0.2
<i>Heterotrissocladius marcidus</i>	09021011044083	0.33			--	0.2	
<i>Parametriocnemus</i>	09021011053	4.67	4.67	5	CG	3.2	3.2
<i>Rheocricotopus</i>	09021011057	2.00	2.00	6	CG	1.4	1.4
<i>Micropsectra</i>	09021011070	12.33	12.33	7	CG	8.4	8.4
<i>Rheotanytarsus</i>	09021011072		1.67	6	CF		1.1
<i>Rheotanytarsus pellucidus</i>	09021011072128	1.67			CF	1.1	
<i>Stempellinella</i>	09021011074	0.67	0.67	2	--	0.5	0.5
<i>Microtendipes</i>	09021011094		0.33	6	CF		0.2
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.2	
<i>Polypedilum</i>	09021011102		1.67	6	SH		1.1
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.9	
<i>Polypedilum tritum</i>	09021011102191	0.33			--	0.2	
<i>Simulium</i>	09021012047	3.33	3.33	4	CF	2.3	2.3
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.2	0.2
Empididae	09021016	0.33	0.33	6	--	0.2	0.2



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<i>Oulimnius</i>	09021113068		2.00		--		1.4
<i>Oulimnius latiusculus</i>	09021113068049	2.00			--	1.4	
<i>Promoesia</i>	09021113069		10.00		--		6.8
<i>Promoesia tardella</i>	09021113069052	10.00			--	6.8	
<i>Hygrobates</i>	09030102001	0.67	0.67		--	0.5	0.5
<i>Lebertia</i>	09030105001	0.33	0.33		--	0.2	0.2