



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

Station Information

Station Number: S-1005	River Basin:	St. John	
Waterbody:	Oliver Brook - Station 1005	HUC8 Name:	Meduxnekeag
Town:	Hodgdon	Latitude:	46 5 26.88 N
Directions:	10M DOWNSTREAM OF BANGOR STREET	Longitude:	67 53 57.84 W
		Stream Order:	2

Sample Information

Log Number: 2738	Type of Sample:	ROCK BAG	Date Deployed:	7/11/2019	
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/7/2019

Classification Attainment

Statutory Class: B	Final Determination: C	Date:	4/1/2020
Model Result with $P \geq 0.6$:	C	Reason for Determination:	Model
Date Last Calculated:	3/30/2020	Comments:	Low DO could impact macroinvertebrate assemblage

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.01	Class C	0.92
Class B	0.06	Class A, B, or C	1.00
		Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.01	Class A	0.01
Class C or Non-Attainment	0.99	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	509.00	18 Relative Abundance Ephemeroptera	0.31
02 Generic Richness	48.00	19 EPT Generic Richness	15.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	7.33
04 Ephemeroptera Mean Abundance	155.67	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.99	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	131.67
06 Hilsenhoff Biotic Index	5.04	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.42	28 EP Generic Richness/14	0.64
08 Relative Generic Richness Diptera	0.17	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.88		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	19.33		
17 Chironomini Abundance (Family Functional Group)	28.00		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tanytarsus</i>	23.25
2	Leptophlebiidae	14.15
3	<i>Paraleptophlebia</i>	11.79
4	<i>Paratanytarsus</i>	8.91
5	<i>Dubiraphia</i>	7.14



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature:	19 deg C
Dissolved Oxygen:	9.91 mg/l
Dissolved Oxygen Saturation:	106.5 %
Specific Conductance:	366.7 uS/cm
Velocity:	
pH:	8.02
Wetted Width:	4.53 m
Bankfull Width:	5.34 m
Depth:	50 cm

Waterbody Information - Retrieval

Temperature:	20.3 deg C
Dissolved Oxygen:	5.83 mg/l
Dissolved Oxygen Saturation:	64.6 %
Specific Conductance:	413.4 uS/cm
Velocity:	1.5 cm/s
pH:	7.96
Wetted Width:	3 m
Bankfull Width:	4.5 m
Depth:	37 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Partly Open	Flat
Pasture		
Swamp Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Low Gradient	Below Road Crossing	Rubble/Cobble 80 %
Nps Pollution		Silt 20 %

Landcover Summary - 2004 Data

Sample Comments

TADPOLES & FISH PRESENT.



Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report

Station Number: S-1005	Waterbody: Oliver Brook - Station 1005	Town: Hodgdon
Log Number: 2738	Subsample Factor: X1	Replicates: 3
		Calculated: 3/30/2020

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	8.00	8.00		PR	1.6	1.6
Nematoda	05	0.33	0.33		--	0.1	0.1
Naididae	08020202	0.33			--	0.1	
<i>Dero</i>	08020202007	0.33	0.44		CG	0.1	0.1
<i>Aulodrilus</i>	08020202018		0.89		--		0.2
<i>Aulodrilus pluriseta</i>	08020202018004	0.67			--	0.1	
<i>Glossiphonia</i>	08030101004		0.33		--		0.1
<i>Glossiphonia elegans</i>	08030101004001	0.33			--	0.1	
<i>Placobdella</i>	08030101006		0.67		--		0.1
<i>Placobdella ornata</i>	08030101006002	0.33			--	0.1	
<i>Placobdella papillifera</i>	08030101006003	0.33			--	0.1	
<i>Erpobdella</i>	08030203002		0.33		--		0.1
<i>Erpobdella punctata</i>	08030203002001	0.33			--	0.1	
<i>Hyaella</i>	09010203006	6.00	6.00	8	CG	1.2	1.2
Aeshnidae	09020301	2.33	2.33		--	0.5	0.5
<i>Aeshna</i>	09020301001	1.00	1.00	5	PR	0.2	0.2
Corduliidae	09020305	2.67	2.67		--	0.5	0.5
Coenagrionidae	09020309	4.33	4.33		--	0.9	0.9
Baetidae	09020401	2.67			--	0.5	
<i>Cloeon</i>	09020401004		3.14	2	CG		0.6
<i>Cloeon dipterum</i>	09020401004020	2.33			--	0.5	
<i>Procloeon</i>	09020401010	1.00	1.35		CG	0.2	0.3
<i>Anafroptilum (Centroptilum)</i>	09020401016	0.33	0.45	2	CG	0.1	0.1
<i>Neocloeon (Centroptilum)</i>	09020401017	4.00	5.39	2	CG	0.8	1.1
<i>Stenacron</i>	09020402014	6.67	6.67	7	SC	1.3	1.3
Leptophlebiidae	09020406	72.00	72.00		--	14.1	14.1
<i>Paraleptophlebia</i>	09020406026	59.00	60.00	1	CG	11.6	11.8
<i>Paraleptophlebia debilis</i>	09020406026079	1.00		1	CG	0.2	
<i>Tricorythodes</i>	09020411038	0.33	0.33	4	CG	0.1	0.1
<i>Caenis</i>	09020412040	6.33	6.33	7	CG	1.2	1.2
Polycentropodidae	09020603	3.67			--	0.7	
<i>Polycentropus</i>	09020603010	0.67	3.11	6	PR	0.1	0.6
<i>Phylocentropus</i>	09020603011	0.33	1.56	5	CF	0.1	0.3
<i>Oxyethira</i>	09020607028			3	P		
<i>Pycnopsyche</i>	09020610049	7.33	7.33	4	SH	1.4	1.4
<i>Nemotaulius</i>	09020610056		1.33	3	SH		0.3
<i>Nemotaulius hostilis</i>	09020610056115	1.33			--	0.3	



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		Actual	Adjusted			Actual	Adjusted
<i>Glyphopsyche</i>	09020610059		5.00	1	--		1.0
<i>Glyphopsyche irrorata</i>	09020610059119	5.00			--	1.0	
<i>Mystacides</i>	09020618075	0.33	0.33	4	CG	0.1	0.1
<i>Sialis</i>	09020702004	5.33	5.33	4	PR	1.0	1.0
Chironomidae	09021011				--		
<i>Ablabesmyia</i>	09021011001	13.33	13.33	8	PR	2.6	2.6
<i>Procladius</i>	09021011015	0.67	0.67	9	PR	0.1	0.1
<i>Thienemannimyia</i>	09021011020		5.33	3	PR		1.0
<i>Thienemannimyia group</i>	09021011020041	5.33			--	1.0	
<i>Cladotanytarsus</i>	09021011068			7	CG		
<i>Paratanytarsus</i>	09021011071	45.33	45.33	6	--	8.9	8.9
<i>Stempellinella</i>	09021011074	0.67	0.67	2	--	0.1	0.1
<i>Tanytarsus</i>	09021011076	118.33	118.33	6	CF	23.2	23.2
<i>Dicrotendipes</i>	09021011085	7.33	7.33	8	CG	1.4	1.4
<i>Microtendipes</i>	09021011094		20.67	6	CF		4.1
<i>Microtendipes pedellus group</i>	09021011094166	20.67			--	4.1	
Dytiscidae	09021103	3.00	3.00		--	0.6	0.6
<i>Dubiraphia</i>	09021113064	36.33	36.33	6	--	7.1	7.1
<i>Optioservus</i>	09021113067		0.33	3	SC		0.1
<i>Optioservus fastiditus</i>	09021113067044	0.33			--	0.1	
<i>Promoresia</i>	09021113069		0.67		--		0.1
<i>Promoresia elegans</i>	09021113069051	0.33			--	0.1	
<i>Promoresia tardella</i>	09021113069052	0.33			--	0.1	
<i>Hygrobates</i>	09030102001	1.33	1.33		--	0.3	0.3
<i>Mideopsis</i>	09030116001	0.67	0.67		--	0.1	0.1
Cladocera	090504	6.67	6.67		--	1.3	1.3
Gastropoda	1001	5.67	5.67		--	1.1	1.1
Hydrobiidae	10010104	0.67	0.67		--	0.1	0.1
<i>Physa</i>	10010202027	17.67	17.67		SC	3.5	3.5
Planorbidae	10010203	0.33			--	0.1	
<i>Gyraulus</i>	10010203029	4.33	11.98		SC	0.9	2.4
<i>Gyraulus parvus</i>	10010203029057	7.33			--	1.4	
<i>Helisoma</i>	10010203030	0.67	0.68		SC	0.1	0.1
<i>Ferrissia</i>	10010204035	0.67	4.67		SC	0.1	0.9
<i>Ferrissia fragilis</i>	10010204035064	4.00			--	0.8	