



**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: 2291	Type of Sample:	ROCK BAG	Date Deployed:	7/24/2014	
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/21/2014

Classification Attainment

Statutory Class: B	Final Determination: A	Date:	1/14/2015
Model Result with $P \geq 0.6$:	A	Reason for Determination:	Model
Date Last Calculated:	1/13/2015	Comments:	

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.64	Class C	0.02	Class A, B, or C	1.00
Class B	0.34	NA	0.00	Non-Attainment	0.00
<u>B or Better Model</u>				<u>A Model</u>	
Class A or B			1.00	Class A	0.91
Class C or Non-Attainment			0.00	Class B or C or Non-Attainment	0.09

Model Variables

01 Total Mean Abundance	210.67	18 Relative Abundance Ephemeroptera	0.15
02 Generic Richness	60.00	19 EPT Generic Richness	26.00
03 Plecoptera Mean Abundance	3.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	3.73
04 Ephemeroptera Mean Abundance	31.00	23 Relative Generic Richness- Plecoptera	0.08
05 Shannon-Wiener Generic Diversity	4.69	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	27.09
06 Hilsenhoff Biotic Index	5.31	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	3.81
07 Relative Abundance - Chironomidae	0.30	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.32	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	5.13		
11 <i>Cheumatopsyche</i> Abundance	13.20		
12 EPT Generic Richness/ Diptera	1.37		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family	1.00		
Functional Group)			
16 Tanypodinae Mean Abundance	3.05		
(Family Functional Group)			
17 Chironomini Abundance (Family	21.00		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Dubiraphia</i>	17.88
2	<i>Microtendipes</i>	9.49
3	<i>Rheotanytarsus</i>	6.43
4	<i>Cheumatopsyche</i>	6.27
5	<i>Acerpenna</i>	5.95



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Log Number: 2291	Waterbody: Oliver Brook - Station 1005	Date Retrieved: 8/21/2014

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	20.4 deg C
Dissolved Oxygen:	8 mg/l
Specific Conductance:	330 uS/cm
Velocity:	19 cm/s
pH:	7.1
Wetted Width:	4.2 m
Bankfull Width:	6 m
Depth:	35 cm

Waterbody Information - Retrieval

Temperature:	20.1 deg C
Dissolved Oxygen:	8.16 mg/l
Specific Conductance:	368 uS/cm
Velocity:	5 cm/s
pH:	6.76
Wetted Width:	3.6 m
Bankfull Width:	6 m
Depth:	25 cm

Water Chemistry - 7/7/2014

Nitrate+nitrite As N	0.44 mg/l	Total Phosphorus	18 ug/l
Total Kjeldahl Nitrogen	0.4 mg/l	Orthophosphate As Phosphorus	9 ug/l
Total Alkalinity	102 mg/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Partly Open	Rolling
Swamp Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Below Road Crossing	Clay 7.5 %
		Gravel 55 %
		Sand 25 %
		Silt 7.5 %

Landcover Summary - 2004 Data

Sample Comments

7/24 AND 8/21 - FISH PRESENT, LOTS OF TROUT.

8/21 - NMRO METER USED FOR DO, TEMP, AND SPC READING. PH METER ACTING UP, SECOND NUMBER TAKEN BY NMRO PEN METER (8.10)



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-1005

Waterbody: Oliver Brook - Station 1005

Town: Hodgdon

Log Number: 2291

Subsample Factor: X1

Replicates: 3

Calculated: 1/13/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
DugesIIDae	03010102	0.67	0.67		--	0.3	0.3
<i>Hyaella</i>	09010203006	1.00	1.00	8	CG	0.5	0.5
<i>Paracapnia</i>	09020203018	0.67	0.67	1	SH	0.3	0.3
<i>Leuctra</i>	09020204020	1.00	1.00	0	SH	0.5	0.5
<i>Isoperla</i>	09020207026	0.33	0.33	2	PR	0.2	0.2
<i>Acroneuria</i>	09020209042		0.33	0	PR		0.2
<i>Acroneuria lyctorias</i>	09020209042125	0.33			--	0.2	
<i>Agnetina</i>	09020209050		0.67	2	PR		0.3
<i>Agnetina capitata</i>	09020209050152	0.67		2	PR	0.3	
<i>Boyeria</i>	09020301004	0.67	0.67	2	PR	0.3	0.3
Gomphidae	09020302	1.33	1.33		--	0.6	0.6
Calopterygidae	09020307	3.67	3.67		--	1.7	1.7
<i>Calopteryx</i>	09020307043		1.33	5	PR		0.6
<i>Calopteryx maculata</i>	09020307043088	1.33			--	0.6	
Baetidae	09020401	0.67			--	0.3	
<i>Acerpenna</i>	09020401007	2.00	12.53	5	CG	0.9	5.9
<i>Acerpenna macdunnoughi</i>	09020401007001	10.00			--	4.7	
<i>Procloeon</i>	09020401010	1.00	1.04		CG	0.5	0.5
<i>Iswaeon</i>	09020401015	1.67	1.74		--	0.8	0.8
<i>Neocloeon (Centroptilum)</i>	09020401017	0.33	0.35	2	CG	0.2	0.2
Heptageniidae	09020402	0.33			--	0.2	
<i>Leucrocota</i>	09020402011	1.00	1.04	1	SC	0.5	0.5
<i>Stenacron</i>	09020402014	0.67	3.82	7	SC	0.3	1.8
<i>Stenacron interpunctatum</i>	09020402014045	3.00			--	1.4	
<i>Maccaffertium</i>	09020402015	1.33	3.47	4	SC	0.6	1.6
<i>Maccaffertium luteum</i>	09020402015049	2.00			--	0.9	
Leptophlebiidae	09020406	5.67	5.67		--	2.7	2.7
<i>Paraleptophlebia</i>	09020406026	0.67	0.67	1	CG	0.3	0.3
<i>Ephemera</i>	09020407027	0.33	0.33	1	CG	0.2	0.2
<i>Caenis</i>	09020412040	0.33	0.33	7	CG	0.2	0.2
Polycentropodidae	09020603	0.33			--	0.2	
<i>Cernotina</i>	09020603006	8.67	8.80		PR	4.1	4.2
<i>Neureclipsis</i>	09020603008	0.33	0.34	7	CF	0.2	0.2
<i>Nyctiophylax</i>	09020603009		2.71	5	PR		1.3
<i>Nyctiophylax moestus</i>	09020603009013	2.67			--	1.3	
<i>Polycentropus</i>	09020603010	10.67	10.83	6	PR	5.1	5.1
Hydropsychidae	09020604	1.67			--	0.8	
<i>Cheumatopsyche</i>	09020604015	12.00	13.20	5	CF	5.7	6.3



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche</i>	09020604016	2.67	5.13	4	CF	1.3	2.4
<i>Hydropsyche bronta</i>	09020604016029	0.33			--	0.2	
<i>Hydropsyche morosa</i>	09020604016030	0.33			--	0.2	
<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.2	
<i>Hydropsyche depravata species group</i>	09020604016041	1.00			CF	0.5	
<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
Leptoceridae	09020618	0.33			--	0.2	
<i>Mystacides</i>	09020618075		1.08	4	CG		0.5
<i>Mystacides sepulchralis</i>	09020618075147	1.00			--	0.5	
<i>Oecetis</i>	09020618078		3.25	8	PR		1.5
<i>Oecetis inconspicua complex</i>	09020618078156	1.00			--	0.5	
<i>Oecetis persimilis</i>	09020618078157	2.00			--	0.9	
<i>Nigronia</i>	09020701003		2.00	0	PR		0.9
<i>Nigronia serricornis</i>	09020701003003	2.00			--	0.9	
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.2	0.2
Chironomidae	09021011	1.00			--	0.5	
<i>Ablabesmyia</i>	09021011001		0.68	8	PR		0.3
<i>Ablabesmyia mallochii</i>	09021011001004	0.67			--	0.3	
<i>Conchapelopia</i>	09021011004	0.67	0.68	6	PR	0.3	0.3
<i>Nilotanytus</i>	09021011012			6	PR		
<i>Trissopelopia</i>	09021011021		1.69		PR		0.8
<i>Trissopelopia ogemawi</i>	09021011021042	1.67			--	0.8	
<i>Pagastia</i>	09021011025		0.68	1	--		0.3
<i>Pagastia orthogonia</i>	09021011025001	0.67			--	0.3	
<i>Cricotopus</i>	09021011037		1.69	7	SH		0.8
<i>Cricotopus bicinctus</i>	09021011037057	1.33			--	0.6	
<i>Cricotopus annulator complex</i>	09021011037074	0.33			--	0.2	
<i>Orthocladus</i>	09021011050		0.68	6	CG		0.3
<i>Orthocladus annectens</i>	09021011050092	0.67			--	0.3	
<i>Parakiefferiella</i>	09021011052	0.33	0.34		CG	0.2	0.2
<i>Parametriocnemus</i>	09021011053	0.67	0.68	5	CG	0.3	0.3
<i>Rheocricotopus</i>	09021011057		0.34	6	CG		0.2
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.2	
<i>Tvetenia</i>	09021011065		0.34	5	CG		0.2
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.2	



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		Actual	Adjusted			Actual	Adjusted
<i>Micropsectra</i>	09021011070	3.67	3.73	7	CG	1.7	1.8
<i>Rheotanytarsus</i>	09021011072	1.67	13.55	6	CF	0.8	6.4
<i>Rheotanytarsus pellucidus</i>	09021011072128	11.67			CF	5.5	
<i>Stempellinella</i>	09021011074		4.74	2	--		2.3
<i>Stempellinella leptocelloides</i>	09021011074001	0.67			--	0.3	
<i>Stempellinella fimbriata</i>	09021011074002	4.00			--	1.9	
<i>Tanytarsus</i>	09021011076	7.00	11.52	6	CF	3.3	5.5
<i>Tanytarsus buckleyi</i>	09021011076139	1.00			CF	0.5	
<i>Tanytarsus gibbus</i>	09021011076140	3.33			CF	1.6	
<i>Microtendipes</i>	09021011094		19.99	6	CF		9.5
<i>Microtendipes pedellus group</i>	09021011094166	7.33			--	3.5	
<i>Microtendipes rydalensis group</i>	09021011094168	12.33			--	5.9	
<i>Phaenopsectra</i>	09021011101		1.02	7	SC		0.5
<i>Phaenopsectra obediens</i>	09021011101182	1.00			SC	0.5	
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.2	0.2
<i>Hemerodromia</i>	09021016057	4.00	4.00	3	PR	1.9	1.9
<i>Dubiraphia</i>	09021113064	4.33	37.67	6	--	2.1	17.9
<i>Dubiraphia quadrinotata</i>	09021113064037	33.33			--	15.8	
<i>Optioservus</i>	09021113067	3.00	3.00	3	SC	1.4	1.4
<i>Oulimnius</i>	09021113068		0.33		--		0.2
<i>Oulimnius latiusculus</i>	09021113068049	0.33			--	0.2	
<i>Promoresia</i>	09021113069		1.00		--		0.5
<i>Promoresia elegans</i>	09021113069051	0.67			--	0.3	
<i>Promoresia tardella</i>	09021113069052	0.33			--	0.2	
<i>Stenelmis</i>	09021113070		0.33	5	SC		0.2
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.2	
<i>Gyraulus</i>	10010203029		1.33		SC		0.6
<i>Gyraulus parvus</i>	10010203029057	1.33			--	0.6	
<i>Helisoma</i>	10010203030		1.67		SC		0.8
<i>Helisoma anceps</i>	10010203030058	1.67			--	0.8	
<i>Ferrissia</i>	10010204035		7.00		SC		3.3
<i>Ferrissia rivularis</i>	10010204035066	7.00			--	3.3	