



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

Station Information

Station Number: S-1006	River Basin: St. John
Waterbody: Craig Brook-station 1006	HUC8 Name: Meduxnekeag
Town: Littleton	Latitude: 46 13 49.69 N
Directions:	Longitude: 67 48 28.86 W
	Stream Order: 4

Sample Information

Log Number: 2286	Type of Sample: ROCK BAG	Date Deployed: 7/23/2014
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/21/2014

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 2/11/2015
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 2/11/2015	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.84	Class A, B, or C	1.00
Class B	0.15	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	236.33	18 Relative Abundance Ephemeroptera	0.12
02 Generic Richness	65.00	19 EPT Generic Richness	30.00
03 Plecoptera Mean Abundance	15.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.68
04 Ephemeroptera Mean Abundance	28.33	23 Relative Generic Richness- Plecoptera	0.08
05 Shannon-Wiener Generic Diversity	4.90	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	62.96
06 Hilsenhoff Biotic Index	4.74	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	2.86
07 Relative Abundance - Chironomidae	0.44	28 EP Generic Richness/14	1.29
08 Relative Generic Richness Diptera	0.32	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	24.09		
11 <i>Cheumatopsyche</i> Abundance	7.57		
12 EPT Generic Richness/ Diptera	1.43		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	7.33		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	5.78		
(Family Functional Group)			
17 Chironomini Abundance (Family	19.37		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tanytarsus</i>	12.08
2	<i>Cricotopus</i>	10.78
3	<i>Hydropsyche</i>	10.20
4	<i>Rheotanytarsus</i>	6.47
5	<i>Dubiraphia</i>	4.80



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Date Retrieved: 8/21/2014

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 21.3 deg C
Dissolved Oxygen: 8.4 mg/l
Specific Conductance: 351 uS/cm
Velocity: 19 cm/s
pH: 8.31
Wetted Width: 3.7 m
Bankfull Width: 5.6 m
Depth: 35 cm

Waterbody Information - Retrieval

Temperature: 16.4 deg C
Dissolved Oxygen: 8.73 mg/l
Specific Conductance: 390 uS/cm
Velocity: 10 cm/s
pH: 8.35
Wetted Width: 3.7 m
Bankfull Width: 5.6 m
Depth: 26 cm

Water Chemistry - 7/10/2014

Nitrate+nitrite As N 1.6 mg/l
Total Kjeldahl Nitrogen 0.4 mg/l
Total Alkalinity 133 mg/l

Total Phosphorus 21 ug/l
Orthophosphate As Phosphorus 9 ug/l

Summary of Habitat Characteristics

Landuse Name

Cultivated
Swamp Hardwood

Canopy Cover

Partly Open

Terrain

Rolling

Potential Stressor

Agricultural Runoff

Location

Above Road Crossing

Substrate

Boulder 2 %
Gravel 28 %
Rubble/Cobble 15 %
Sand 55 %

Landcover Summary - 2004 Data

Sample Comments

8/21 - NMRO METER USED FOR DO AND SPC READINGS/



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Subsample Factor: X1

Replicates: 3

Calculated: 2/11/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Erpobdella</i>	08030203002		0.33		--		0.1
<i>Erpobdella fervida</i>	08030203002002	0.33			--	0.1	
<i>Cambarus</i>	09010301007		0.33		CG		0.1
<i>Cambarus bartonii</i>	09010301007012	0.33			--	0.1	
<i>Leuctra</i>	09020204020	1.00	2.00	0	SH	0.4	0.8
<i>Leuctra ferruginea</i>	09020204020050	1.00			--	0.4	
<i>Pteronarcys</i>	09020205023		0.67	0	SH		0.3
<i>Pteronarcys biloba</i>	09020205023061	0.67			--	0.3	
Perlodidae	09020207	0.33	0.33		--	0.1	0.1
<i>Isoperla</i>	09020207026	4.67	4.67	2	PR	2.0	2.0
<i>Agneta</i>	09020209050		7.33	2	PR		3.1
<i>Agneta capitata</i>	09020209050152	7.33		2	PR	3.1	
<i>Boyeria</i>	09020301004	0.33	3.67	2	PR	0.1	1.6
<i>Boyeria vinosa</i>	09020301004012	3.33			--	1.4	
Calopterygidae	09020307	2.67	2.67		--	1.1	1.1
<i>Calopteryx</i>	09020307043		0.67	5	PR		0.3
<i>Calopteryx maculata</i>	09020307043088	0.67			--	0.3	
Baetidae	09020401	0.33			--	0.1	
<i>Baetis</i>	09020401001		0.34	4	CG		0.1
<i>Baetis flavistriga</i>	09020401001004	0.33			--	0.1	
<i>Acerpenna</i>	09020401007	1.33	5.16	5	CG	0.6	2.2
<i>Acerpenna macdunnoughi</i>	09020401007001	3.67			--	1.6	
<i>Labiobaetis</i>	09020401009		0.34		--		0.1
<i>Labiobaetis frondalis</i>	09020401009005	0.33			--	0.1	
<i>Proclleon</i>	09020401010	0.33	0.34		CG	0.1	0.1
<i>Anafroptilum (Centroptilum)</i>	09020401016	4.00	4.13	2	CG	1.7	1.7
<i>Neocloeon (Centroptilum)</i>	09020401017	0.33	0.34	2	CG	0.1	0.1
Heptageniidae	09020402	0.67			--	0.3	
<i>Leucrocuta</i>	09020402011	3.00	3.21	1	SC	1.3	1.4
<i>Stenacron</i>	09020402014	1.00	3.93	7	SC	0.4	1.7
<i>Stenacron interpunctatum</i>	09020402014045	2.67			--	1.1	
<i>Maccaffertium</i>	09020402015	2.00	2.86	4	SC	0.8	1.2
<i>Maccaffertium luteum</i>	09020402015049	0.67			--	0.3	
Leptophlebiidae	09020406	2.00	2.00		--	0.8	0.8
<i>Paraleptophlebia</i>	09020406026	1.33	1.33	1	CG	0.6	0.6
<i>Ephemerella</i>	09020410035	0.67	0.67	1	CG	0.3	0.3
<i>Tricorythodes</i>	09020411038	3.67	3.67	4	CG	1.6	1.6
<i>Nyctiophylax</i>	09020603009		0.67	5	PR		0.3



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		Actual	Adjusted			Actual	Adjusted
<i>Nyctiophylax moestus</i>	09020603009013	0.67			--	0.3	
<i>Polycentropus</i>	09020603010	1.67	1.67	6	PR	0.7	0.7
Hydropsychidae	09020604	1.00			--	0.4	
<i>Cheumatopsyche</i>	09020604015	7.33	7.57	5	CF	3.1	3.2
<i>Hydropsyche</i>	09020604016	12.00	24.09	4	CF	5.1	10.2
<i>Hydropsyche morosa</i>	09020604016030	0.33			--	0.1	
<i>Hydropsyche slossonae</i>	09020604016031	5.67			--	2.4	
<i>Hydropsyche sparna</i>	09020604016032	5.33			--	2.3	
<i>Rhyacophila</i>	09020605019	2.67	2.67	2	PR	1.1	1.1
<i>Glossosoma</i>	09020606020		4.00	0	SC		1.7
<i>Glossosoma lividum</i>	09020606020067	0.67			--	0.3	
<i>Glossosoma nigrior</i>	09020606020068	3.33			SC	1.4	
Hydroptilidae	09020607				--		
<i>Hydroptila</i>	09020607026	1.00	1.00	6	P	0.4	0.4
<i>Oligostomis</i>	09020608039	2.00	2.00	2	PR	0.8	0.8
Limnephilidae	09020610				--		
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.1	0.1
<i>Psilotreta</i>	09020614068		0.33	0	SC		0.1
<i>Psilotreta labida</i>	09020614068133	0.33			--	0.1	
Leptoceridae	09020618				--		
<i>Mystacides</i>	09020618075		0.33	4	CG		0.1
<i>Mystacides sepulchralis</i>	09020618075147	0.33			--	0.1	
<i>Triaenodes</i>	09020618077	0.33	0.33	6	SH	0.1	0.1
<i>Antocha</i>	09021001004	0.67	0.67	3	CG	0.3	0.3
<i>Dicranota</i>	09021001005	0.33	0.33	3	PR	0.1	0.1
Chironomidae	09021011	2.00			--	0.8	
<i>Ablabesmyia</i>	09021011001		1.36	8	PR		0.6
<i>Ablabesmyia mallochii</i>	09021011001004	1.33			--	0.6	
<i>Conchapelopia</i>	09021011004	0.33	0.34	6	PR	0.1	0.1
<i>Labrundinia</i>	09021011008		1.02	7	PR		0.4
<i>Labrundinia pilosella</i>	09021011008022	1.00			--	0.4	
<i>Paramerina</i>	09021011013	1.00	1.02		--	0.4	0.4
<i>Rheopelopia</i>	09021011017		1.70		PR		0.7
<i>Rheopelopia acra group</i>	09021011017036	1.67			--	0.7	
<i>Zavrelimyia</i>	09021011022	0.33	0.34	8	PR	0.1	0.1
<i>Cricotopus</i>	09021011037	1.00	25.49	7	SH	0.4	10.8
<i>Cricotopus bicinctus</i>	09021011037057	15.33			--	6.5	
<i>Cricotopus annulator complex</i>	09021011037074	0.33			--	0.1	



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<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	8.33			SH	3.5	
<i>Parametriocnemus</i>	09021011053	3.67	3.74	5	CG	1.6	1.6
<i>Thienemanniella</i>	09021011062	0.33	1.36	6	CG	0.1	0.6
<i>Thienemanniella sp. B</i>	09021011062116	1.00			--	0.4	
<i>Tvetenia</i>	09021011065		0.34	5	CG		0.1
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.1	
<i>Micropsectra</i>	09021011070	0.67	0.68	7	CG	0.3	0.3
<i>Rheotanytarsus</i>	09021011072	0.67	15.29	6	CF	0.3	6.5
<i>Rheotanytarsus pellucidus</i>	09021011072128	14.33			CF	6.1	
<i>Stempellinella</i>	09021011074		4.42	2	--		1.9
<i>Stempellinella fimbriata</i>	09021011074002	4.33			--	1.8	
<i>Tanytarsus</i>	09021011076	20.00	28.54	6	CF	8.5	12.1
<i>Tanytarsus buckleyi</i>	09021011076139	8.00			CF	3.4	
<i>Microtendipes</i>	09021011094		6.80	6	CF		2.9
<i>Microtendipes pedellus group</i>	09021011094166	3.33			--	1.4	
<i>Microtendipes rydalensis group</i>	09021011094168	3.33			--	1.4	
<i>Phaenopsectra</i>	09021011101		5.10	7	SC		2.2
<i>Phaenopsectra obediens</i>	09021011101182	5.00			SC	2.1	
<i>Polypedilum</i>	09021011102		7.48	6	SH		3.2
<i>Polypedilum aviceps</i>	09021011102181	6.00			--	2.5	
<i>Polypedilum albicorne</i>	09021011102195	0.67			--	0.3	
<i>Polypedilum angulum</i>	09021011102198	0.67			--	0.3	
<i>Simulium</i>	09021012047		0.33	4	CF		0.1
<i>Simulium tuberosum</i>	09021012047067	0.33			--	0.1	
<i>Atherix</i>	09021015055	3.33	3.33	2	PR	1.4	1.4
<i>Psephenus</i>	09021108058		1.67	4	SC		0.7
<i>Psephenus herricki</i>	09021108058028	1.67			--	0.7	
<i>Dubiraphia</i>	09021113064	0.67	11.33	6	--	0.3	4.8
<i>Dubiraphia minima</i>	09021113064036	1.33			--	0.6	
<i>Dubiraphia quadrinotata</i>	09021113064037	9.33			--	3.9	
<i>Optioservus</i>	09021113067	9.00	9.00	3	SC	3.8	3.8
<i>Oulimnius</i>	09021113068		1.00		--		0.4
<i>Oulimnius latiusculus</i>	09021113068049	1.00			--	0.4	
<i>Promoresia</i>	09021113069		5.67		--		2.4
<i>Promoresia elegans</i>	09021113069051	2.00			--	0.8	
<i>Promoresia tardella</i>	09021113069052	3.67			--	1.6	
<i>Stenelmis</i>	09021113070	0.33	0.33	5	SC	0.1	0.1
<i>Physa</i>	10010202027	0.67	0.67		SC	0.3	0.3



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<i>Gyraulus</i>	10010203029		0.67		SC		0.3
<i>Gyraulus circumstriatus</i>	10010203029054	0.67			--	0.3	
<i>Pisidium</i>	10020201002		0.33		CF		0.1
<i>Pisidium casertanum</i>	10020201002006	0.33			CF	0.1	