



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

**Station Information**

<b>Station Number:</b> S-504	River Basin: Maine Coastal
Waterbody: Great Falls Branch - Station 504	HUC8 Name: Maine Coastal
Town: Deblois	Latitude: 44 42 54.3 N
Directions: OFF RT 193, 7.6 MILES NO OF RIDGE RD	Longitude: 67 58 5.55 W
	Stream Order: 3

**Sample Information**

<b>Log Number:</b> 2506	Type of Sample: ROCK BAG	Date Deployed: 7/26/2016
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/23/2016

**Classification Attainment**

<b>Statutory Class:</b> AA	<b>Final Determination:</b> A	Date: 8/3/2017
Model Result with $P \geq 0.6$ : B	<b>Reason for Determination: Best Professional Judgement</b>	
Date Last Calculated: 7/25/2017	Comments: Indeterminate for Class A (.57) raised to Class A based on sensitive taxa present.	

**Model Probabilities**

	<u>First Stage Model</u>			<u>C or Better Model</u>	
Class A	0.36	Class C	0.13	Class A, B, or C	1.00
Class B	0.51	NA	0.00	Non-Attainment	0.00
	<u>B or Better Model</u>			<u>A Model</u>	
Class A or B			0.98	Class A	0.57
Class C or Non-Attainment			0.02	Class B or C or Non-Attainment	0.43

**Model Variables**

01 Total Mean Abundance	200.00	18 Relative Abundance Ephemeroptera	0.28
02 Generic Richness	53.00	19 EPT Generic Richness	20.00
03 Plecoptera Mean Abundance	0.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	50.27
04 Ephemeroptera Mean Abundance	55.00	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	4.08	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	8.78
06 Hilsenhoff Biotic Index	5.35	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	25.65
07 Relative Abundance - Chironomidae	0.53	28 EP Generic Richness/14	0.71
08 Relative Generic Richness Diptera	0.38	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	2.40		
11 <i>Cheumatopsyche</i> Abundance	1.60		
12 EPT Generic Richness/ Diptera Generic Richness	1.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	6.50		
17 Chironomini Abundance (Family Functional Group)	29.75		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Micropsectra</i>	25.13
2	<i>Maccaffertium</i>	12.66
3	<i>Polypedilum</i>	11.11
4	<i>Acerpenna</i>	10.83
5	<i>Rheotanytarsus</i>	4.27



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**Log Number: 2506**      Waterbody: Great Falls Branch - Station 504      Date Retrieved: 8/23/2016

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature:                      23.9 deg C  
Dissolved Oxygen:              8.26 mg/l  
Dissolved Oxygen Saturation:    99.1 %  
Specific Conductance:            47.3 uS/cm  
Velocity:                          15.2 cm/s  
pH:                                 6.98  
Wetted Width:                    3.8 m  
Bankfull Width:                  5.4 m  
Depth:                              38 cm

**Waterbody Information - Retrieval**

Temperature:                      19.3 deg C  
Dissolved Oxygen:              9.27 mg/l  
Dissolved Oxygen Saturation:    100.3 %  
Specific Conductance:            43.9 uS/cm  
Velocity:                          21.3 cm/s  
pH:                                 6.56  
Wetted Width:                    5.4 m  
Bankfull Width:                  5.4 m  
Depth:                              46 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Swamp Hardwood	Dense	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Below Agriculture NPS	Boulder	25 %
	Below Road Crossing	Gravel	35 %
		Rubble/Cobble	10 %
		Sand	30 %

**Landcover Summary - 2004 Data**

Total Area (ac)	2481	High Int. Dev. %	0.4	Water %	0.2	Non-vegetated %	0.0
		Med Int. Dev. %	0.3	Wetland %	7.0	Tilled Agriculture %	0.0
		Low Int. Dev. %	1.4	Upland Woody %	90.7	Grassland %	0.0
		Development %	2.1	Natural %	56.3	Human Altered %	43.5
						Impervious %	1.9

**Sample Comments**

7/26/2016: FISH PRESENT.  
8/23/2016: FISH PRESENT.



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Waterbody: Great Falls Branch - Station 504

Town: Deblois

**Log Number: 2506**

Subsample Factor: X1

Replicates: 3

Calculated: 7/25/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Rhabditophora	0301	0.33	0.33		--	0.2	0.2
<i>Lumbriculus</i>	08020101002		0.33		CG		0.2
<i>Lumbriculus variegatus</i>	08020101002001	0.33			--	0.2	
<i>Leuctra</i>	09020204020	0.33	0.33	0	SH	0.2	0.2
<i>Acroneuria</i>	09020209042		0.33	0	PR		0.2
<i>Acroneuria lycorias</i>	09020209042125	0.33			--	0.2	
<i>Boyeria</i>	09020301004		1.00	2	PR		0.5
<i>Boyeria vinosa</i>	09020301004012	1.00			--	0.5	
<i>Calopteryx</i>	09020307043		0.33	5	PR		0.2
<i>Calopteryx maculata</i>	09020307043088	0.33			--	0.2	
Baetidae	09020401	0.33			--	0.2	
<i>Baetis</i>	09020401001	0.33	0.68	4	CG	0.2	0.3
<i>Baetis pluto</i>	09020401001009	0.33			--	0.2	
<i>Acerpenna</i>	09020401007	3.33	21.65	5	CG	1.7	10.8
<i>Acerpenna macdunnoughi</i>	09020401007001	8.67			--	4.3	
<i>Acerpenna pygmaea</i>	09020401007011	9.33			--	4.7	
<i>Labiobaetis</i>	09020401009		0.34		--		0.2
<i>Labiobaetis frondalis</i>	09020401009005	0.33			--	0.2	
Heptageniidae	09020402	1.33			--	0.7	
<i>Stenacron</i>	09020402014	0.33	0.35	7	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	12.67	25.32	4	SC	6.3	12.7
<i>Maccaffertium modestum</i>	09020402015051	11.33			--	5.7	
Leptophlebiidae	09020406	3.67			--	1.8	
<i>Paraleptophlebia</i>	09020406026	2.00	4.75	1	CG	1.0	2.4
<i>Neoleptophlebia</i>	09020406027	0.67	1.58		--	0.3	0.8
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.2	0.2
<i>Lype</i>	09020602004		0.33	2	SC		0.2
<i>Lype diversa</i>	09020602004005	0.33			--	0.2	
Polycentropodidae	09020603	0.33			--	0.2	
<i>Nyctiophylax</i>	09020603009		0.72	5	PR		0.4
<i>Nyctiophylax moestus</i>	09020603009013	0.67			--	0.3	
<i>Plectrocnemia</i>	09020603012	3.33	3.61	6	PR	1.7	1.8
Hydropsychidae	09020604	0.67			--	0.3	
<i>Cheumatopsyche</i>	09020604015	1.33	1.60	5	CF	0.7	0.8
<i>Hydropsyche</i>	09020604016	1.67	2.40	4	CF	0.8	1.2
<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.2	
<i>Micrasema</i>	09020609044		0.33	2	SH		0.2



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		Actual	Adjusted			Actual	Adjusted
<i>Micrasema rusticum group</i>	09020609044100	0.33			--	0.2	
Limnephilidae	09020610				--		
<i>Pycnopsyche</i>	09020610049	1.00	1.00	4	SH	0.5	0.5
<i>Psilotreta</i>	09020614068	1.33	4.67	0	SC	0.7	2.3
<i>Psilotreta frontalis</i>	09020614068134	3.33			--	1.7	
<i>Molanna</i>	09020615069		1.67	6	SC		0.8
<i>Molanna blenda</i>	09020615069133	1.67			--	0.8	
<i>Oecetis</i>	09020618078		0.33	8	PR		0.2
<i>Oecetis persimilis</i>	09020618078157	0.33			--	0.2	
<i>Nigronia</i>	09020701003		1.00	0	PR		0.5
<i>Nigronia serricornis</i>	09020701003003	1.00			--	0.5	
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.2	0.2
<i>Dicranota</i>	09021001005	1.00	1.00	3	PR	0.5	0.5
Chironomidae	09021011	2.67			--	1.3	
<i>Ablabesmyia</i>	09021011001		1.71	8	PR		0.9
<i>Ablabesmyia mallochii</i>	09021011001004	1.67			--	0.8	
<i>Conchapelopia</i>	09021011004	0.67	0.68	6	PR	0.3	0.3
<i>Labrundinia</i>	09021011008			7	PR		
<i>Meropelopia</i>	09021011010				--		
<i>Nilotanypus</i>	09021011012		1.71	6	PR		0.9
<i>Nilotanypus fimbriatus</i>	09021011012027	1.67			--	0.8	
<i>Trissopelopia</i>	09021011021		2.39		PR		1.2
<i>Trissopelopia ogemawi</i>	09021011021042	2.33			--	1.2	
<i>Zavrelimyia</i>	09021011022			8	PR		
<i>Chaetocladius</i>	09021011035	0.33	0.34	6	CG	0.2	0.2
<i>Corynoneura</i>	09021011036	0.67	0.68	7	CG	0.3	0.3
<i>Heterotrissocladius</i>	09021011044		0.34	0	CG		0.2
<i>Heterotrissocladius marcidus</i>	09021011044083	0.33			--	0.2	
<i>Nanocladius</i>	09021011049	0.33	0.34	3	CG	0.2	0.2
<i>Orthocladius</i>	09021011050		1.03	6	CG		0.5
<i>Orthocladius lignicola</i>	09021011050100	1.00			--	0.5	
<i>Thienemanniella</i>	09021011062		0.34	6	CG		0.2
<i>Thienemanniella xena</i>	09021011062110	0.33			--	0.2	
<i>Tvetenia</i>	09021011065		1.03	5	CG		0.5
<i>Tvetenia paucunca</i>	09021011065114	1.00			--	0.5	
<i>Micropsectra</i>	09021011070	49.00	50.27	7	CG	24.5	25.1
<i>Paratanytarsus</i>	09021011071			6	--		
<i>Rheotanytarsus</i>	09021011072		8.55	6	CF		4.3



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<i>Rheotanytarsus pellucidus</i>	09021011072128	8.33			CF	4.2	
<i>Stempellinella</i>	09021011074		1.03	2	--		0.5
<i>Stempellinella leptocelloides</i>	09021011074001	0.33			--	0.2	
<i>Stempellinella fimbriata</i>	09021011074002	0.67			--	0.3	
<i>Tanytarsus</i>	09021011076	5.33	5.47	6	CF	2.7	2.7
<i>Microtendipes</i>	09021011094		6.50	6	CF		3.2
<i>Microtendipes rydalensis group</i>	09021011094168	6.33			--	3.2	
<i>Polypedilum</i>	09021011102		22.23	6	SH		11.1
<i>Polypedilum aviceps</i>	09021011102181	21.67			--	10.8	
<i>Stenochironomus</i>	09021011105	1.00	1.03	5	CG	0.5	0.5
<i>Simulium venustum/verecundum complex</i>	09021012047072				CF		
<i>Roederiodes</i>	09021016058	1.33	1.33	3	PR	0.7	0.7
<i>Dubiraphia</i>	09021113064	2.00	2.33	6	--	1.0	1.2
<i>Dubiraphia minima</i>	09021113064036	0.33			--	0.2	
<i>Macronychus</i>	09021113065		0.33	4	--		0.2
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.2	
<i>Optioservus</i>	09021113067	0.33	0.67	3	SC	0.2	0.3
<i>Optioservus ovalis</i>	09021113067046	0.33			--	0.2	
<i>Promoresia</i>	09021113069		4.67		--		2.3
<i>Promoresia tardella</i>	09021113069052	4.67			--	2.3	
<i>Stenelmis</i>	09021113070	3.67	5.67	5	SC	1.8	2.8
<i>Stenelmis crenata</i>	09021113070055	2.00			--	1.0	
<i>Amnicola</i>	10010104013		0.67		SC		0.3
<i>Amnicola limosus</i>	10010104013018	0.67			--	0.3	
<i>Pisidium</i>	10020201002	2.00	2.00		CF	1.0	1.0