



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

Station Information

**Station Number: S-504**  
Waterbody: Great Falls Branch - Station 504  
Town: Deblois  
Directions: OFF RT 193, 7.6 MILES NO OF RIDGE RD

DEP Drainage: St. Croix - Coastal  
HUC8: 01050002  
HUC8 Name: Maine Coastal  
Latitude: 44 42 54.3 N  
Longitude: 67 58 5.55 W  
Stream Order: 3

Sample Information

**Log Number: 2060** Type of Sample: ROCK BAG Date Deployed: 7/26/2011  
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/25/2011

Classification Attainment

**Statutory Class: AA** **Final Determination: NA** Date: 12/9/2011  
Model Result with P>.6: NA **Reason for Determination: Model**  
Date Last Calculated: 12/9/2011 Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.00	Class A, B, or C	0.00
Class B	0.00	Non-Attainment	1.00

  

B or Better Model		A Model	
Class A or B	0.00	Class A	0.02
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	0.98

Model Variables

01 Total Mean Abundance	143.33	18 Relative Abundance Ephemeroptera	0.02
02 Generic Richness	32.00	19 EPT Generic Richness	7.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.22
04 Ephemeroptera Mean Abundance	2.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.87	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.41
06 Hilsenhoff Biotic Index	5.37	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.52	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.50	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	1.67		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	0.44		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	2.44		
(Family Functional Group)			
17 Chironomini Abundance (Family	66.68		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Polypedilum</i>	44.54
2	<i>Nyctiophylax</i>	20.93
3	<i>Pycnopsyche</i>	6.74
4	<i>Simulium</i>	6.74
5	<i>Polycentropus</i>	3.49



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Waterbody: Great Falls Branch - Station 504

Date Retrieved: 8/25/2011

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 20.2 deg C  
Dissolved Oxygen: 6.8 mg/l  
Specific Conductance: 37 uS/cm  
Velocity: 11 cm/s  
pH: 6.23  
Wetted Width: 3.4 m  
Bankfull Width: 3.8 m  
Depth: 35 cm

**Waterbody Information - Retrieval**

Temperature: 19.8 deg C  
Dissolved Oxygen: 3.1 mg/l  
Specific Conductance: 70 uS/cm  
Velocity: 13 cm/s  
pH: 4.32  
Wetted Width: 3.7 m  
Bankfull Width: 3.8 m  
Depth: 35 cm

**Water Chemistry - 8/25/2011**

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	480 ug/l
Nitrate+nitrite As N	<0.01 mg/l	Total Phosphorus	0.67 mg/l
Total Kjeldahl Nitrogen	1 mg/l	Total Suspended Solids	6 mg/l
Dissolved Organic Carbon	98 mg/l	Total Dissolved Solids	200 mg/l

**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>
BOD (Low DO)	Below Agriculture NPS	Boulder 40 %
Organic Solids	Below Road Crossing	Gravel 20 %
Pesticides		Rubble/Cobble 20 %
		Sand 20 %

**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**

CANOPY COVER: APPROXIMATELY 75% SHADED. 7/26/11: SOME UNDERCUTTING OF BANK.  
8/25/11: SEWAGE FUNGUS ABUNDANT; STREAM HAD VERY BAD, STRONG ODOR. 8/25/11: SMELL  
AND FUNGUS ALSO UPSTREAM OF RTE. 193. LARGE FACILITY UPSTREAM ACROSS FROM  
AIRFIELD.



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Subsample Factor: X1

Replicates: 3

Calculated: 12/9/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Leptophlebiidae	09020406	2.33	2.33		--	1.6	1.6
<i>Chimarra</i>	09020601003	0.33	0.33	2	CF	0.2	0.2
<i>Nyctiophylax</i>	09020603009		30.00	5	PR		20.9
<i>Nyctiophylax moestus</i>	09020603009013	30.00			--	20.9	
<i>Polycentropus</i>	09020603010	5.00	5.00	6	PR	3.5	3.5
<i>Hydropsyche</i>	09020604016		1.67	4	CF		1.2
<i>Hydropsyche morosa</i>	09020604016030	0.33			--	0.2	
<i>Hydropsyche depravata complex</i>	09020604016041	1.33			CF	0.9	
<i>Pycnopsyche</i>	09020610049	9.67	9.67	4	SH	6.7	6.7
<i>Psilotreta</i>	09020614068	0.33	0.33	0	SC	0.2	0.2
<i>Nigronia</i>	09020701003		1.00	0	PR		0.7
<i>Nigronia serricornis</i>	09020701003003	1.00			--	0.7	
<i>Sialis</i>	09020702004	2.00	2.00	4	PR	1.4	1.4
Lepidoptera	090209	0.33	0.33		--	0.2	0.2
<i>Dicranota</i>	09021001005	0.33	0.33	3	PR	0.2	0.2
<i>Bezzia/palpomyia</i>	09021010043	0.33	0.33	6	PR	0.2	0.2
Chironomidae	09021011	13.33			--	9.3	
<i>Conchapelopia</i>	09021011004	0.67	0.81	6	PR	0.5	0.6
<i>Natarsia</i>	09021011011		0.41	8	PR		0.3
<i>Natarsia baltimorea</i>	09021011011026	0.33			--	0.2	
<i>Trissopelopia</i>	09021011021		1.22		PR		0.9
<i>Trissopelopia ogemawi</i>	09021011021042	1.00			--	0.7	
<i>Corynoneura</i>	09021011036	0.33	0.41	7	CG	0.2	0.3
<i>Orthocladius</i>	09021011050		0.41	6	CG		0.3
<i>Orthocladius annectens</i>	09021011050092	0.33			--	0.2	
<i>Parametriocnemus</i>	09021011053			5	CG		
<i>Psectrocladius</i>	09021011056		1.63	8	CG		1.1
<i>Psectrocladius simulans</i>	09021011056110	1.33			--	0.9	
<i>Tvetenia</i>	09021011065		0.41	5	CG		0.3
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.2	
<i>Micropsectra</i>	09021011070	1.00	1.22	7	CG	0.7	0.9
<i>Rheotanytarsus</i>	09021011072	0.33	0.41	6	CF	0.2	0.3
<i>Tanytarsus</i>	09021011076	0.33	0.41	6	CF	0.2	0.3
<i>Phaenopsectra</i>	09021011101		1.22	7	SC		0.9
<i>Phaenopsectra flavipes</i>	09021011101179	1.00			SC	0.7	
<i>Polypedilum</i>	09021011102		63.84	6	SH		44.5
<i>Polypedilum aviceps</i>	09021011102181	48.67			--	34.0	
<i>Polypedilum fallax group</i>	09021011102183	1.00			--	0.7	



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<i>Polypedilum illinoense group</i>	09021011102185	1.67			--	1.2	
<i>Polypedilum scalaenum group</i>	09021011102189	0.67			--	0.5	
<i>Polypedilum angulum</i>	09021011102198	0.33			--	0.2	
<i>Tribelos</i>	090210111107		1.63	5	CG		1.1
<i>Tribelos jucundum</i>	09021011107198	1.33			--	0.9	
<i>Simulium</i>	09021012047		9.67	4	CF		6.7
<i>Simulium (Eusimulium)</i>	09021012047052	1.33			--	0.9	
<i>Simulium fibrinflatum</i>	09021012047059	0.33			--	0.2	
<i>Simulium tuberosum</i>	09021012047067				--		
<i>Simulium venustum/verecundum complex</i>	09021012047072	8.00			CF	5.6	
<i>Macronychus</i>	09021113065		0.33	4	--		0.2
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.2	
<i>Optioservus</i>	09021113067		0.33	3	SC		0.2
<i>Optioservus fastiditus</i>	09021113067044	0.33			--	0.2	
<i>Promoresia</i>	09021113069		0.67		--		0.5
<i>Promoresia elegans</i>	09021113069051	0.67			--	0.5	
<i>Stenelmis</i>	09021113070	3.67	4.33	5	SC	2.6	3.0
<i>Stenelmis crenata</i>	09021113070055	0.67			--	0.5	
Sphaeriidae	10020201	0.33	0.33		CF	0.2	0.2
<i>Pisidium</i>	10020201002		0.33		CF		0.2
<i>Pisidium walkeri</i>	10020201002017	0.33			CF	0.2	