



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

Station Information

**Station Number: S-749**  
Waterbody: Whitney Brook - Station 749  
Town: Bridgewater  
Directions: 23 M UPSTREAM OF BOUNDARY LINE ROAD

DEP Drainage: St. John  
HUC8: 01010005  
HUC8 Name: Big Presque Isle Stream-Meduxnek  
Latitude: 46 26 52.49 N  
Longitude: 67 47 32.6 W  
Stream Order: 3

Sample Information

**Log Number: 1845**  
Subsample Factor: X4

Type of Sample: ROCK BAG  
Replicates: 3

Date Deployed: 7/20/2009  
Date Retrieved: 8/17/2009

Classification Attainment

**Statutory Class: B**  
Model Result with P>.6: A  
Date Last Calculated: 4/15/2010

**Final Determination: A**  
**Reason for Determination: Model**  
Comments: Enriched.

Date: 4/16/2010

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.62	Class A, B, or C	1.00
Class B	0.38	Non-Attainment	0.00

  

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

Model Variables

01 Total Mean Abundance	1800.00	18 Relative Abundance Ephemeroptera	0.27
02 Generic Richness	57.00	19 EPT Generic Richness	25.00
03 Plecoptera Mean Abundance	92.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	8.17
04 Ephemeroptera Mean Abundance	490.67	23 Relative Generic Richness- Plecoptera	0.12
05 Shannon-Wiener Generic Diversity	4.39	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	240.70
06 Hilsenhoff Biotic Index	4.11	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	61.43
07 Relative Abundance - Chironomidae	0.36	28 EP Generic Richness/14	1.29
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	183.08		
11 <i>Cheumatopsyche</i> Abundance	58.25		
12 EPT Generic Richness/ Diptera	1.19		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	82.67		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	6.81		
(Family Functional Group)			
17 Chironomini Abundance (Family	227.38		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Baetis</i>	13.40
2	<i>Polypedilum</i>	11.42
3	<i>Hydropsyche</i>	10.17
4	<i>Cricotopus</i>	9.30
5	<i>Ephemerella</i>	7.70



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Waterbody: Whitney Brook - Station 749

Date Retrieved: 8/17/2009

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 22.7 deg C  
Dissolved Oxygen: 9.4 mg/l  
Specific Conductance: 204 uS/cm  
Velocity: 35 cm/s  
pH: 8.22  
Wetted Width: 8.3 m  
Bankfull Width: 10.7 m  
Depth: 36 cm

**Waterbody Information - Retrieval**

Temperature: 24 deg C  
Dissolved Oxygen: 8.4 mg/l  
Specific Conductance: 262 uS/cm  
Velocity: 53 cm/s  
pH: 8.34  
Wetted Width: 10.4 m  
Bankfull Width: 8.4 m  
Depth: 35 cm

**Water Chemistry - 7/20/2009**

Soluble Reactive Phosphorus	1 ug/l	Nitrate+nitrite As N	0.1 mg/l
Total Phosphorus	0.01 mg/l	Total Kjeldahl Nitrogen	<0.1 mg/l
Dissolved Organic Carbon	5.2 mg/l	Total Alkalinity	114 mg/l

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Open	Flat
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Below Agriculture NPS	Boulder 35 %
	Below Town	Gravel 20 %
		Rubble/Cobble 35 %
		Sand 10 %

**Landcover Summary - 2004 Data**

**Sample Comments**



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Town: Bridgewater

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Subsample Factor: X4

Replicates: 3

Calculated: 4/15/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Lumbriculidae	08020101	1.33	1.33		--	0.1	0.1
<i>Paracapnia</i>	09020203018	1.33	1.33	1	SH	0.1	0.1
<i>Leuctra</i>	09020204020	1.33	1.33	0	SH	0.1	0.1
<i>Pteronarcys</i>	09020205023		4.00	0	SH		0.2
<i>Pteronarcys comstocki</i>	09020205023062	4.00			--	0.2	
Perlodidae	09020207	1.33	1.33		--	0.1	0.1
<i>Sweltsa</i>	09020208040	1.33	1.33		PR	0.1	0.1
Perlidae	09020209	20.00			--	1.1	
<i>Acroneuria</i>	09020209042		17.59	0	PR		1.0
<i>Acroneuria abnormis</i>	09020209042121	13.33		0	PR	0.7	
<i>Agnetina</i>	09020209050		65.08	2	PR		3.6
<i>Agnetina capitata</i>	09020209050152	49.33		2	PR	2.7	
Gomphidae	09020302	2.67	2.67		--	0.1	0.1
<i>Ophiogomphus</i>	09020302015	1.33	1.33	1	PR	0.1	0.1
Baetidae	09020401	46.67			--	2.6	
<i>Baetis</i>	09020401001	32.00	241.13	4	CG	1.8	13.4
<i>Baetis flavistriga</i>	09020401001004	13.33			--	0.7	
<i>Baetis intercalaris</i>	09020401001008	29.33			--	1.6	
<i>Baetis tricaudatus</i>	09020401001012	121.33			--	6.7	
<i>Plauditus</i>	09020401012	6.67	8.20		CG	0.4	0.5
Heptageniidae	09020402	12.00			--	0.7	
<i>Epeorus</i>	09020402009	4.00	5.06	0	SC	0.2	0.3
<i>Leucrocuta</i>	09020402011	6.67	8.43	1	SC	0.4	0.5
<i>Maccaffertium</i>	09020402015	25.33	43.84	4	SC	1.4	2.4
<i>Maccaffertium luteum</i>	09020402015049	9.33			--	0.5	
<i>Isonychia</i>	09020404018	10.67	10.67	2	CF	0.6	0.6
Leptophlebiidae	09020406	14.67	14.67		--	0.8	0.8
<i>Ephemera</i>	09020407027	1.33	1.33	1	CG	0.1	0.1
Ephemerellidae	09020410	1.33			--	0.1	
<i>Ephemerella</i>	09020410035	137.33	138.62	1	CG	7.6	7.7
<i>Serratella</i>	09020410037		5.38	2	CG		0.3
<i>Serratella serratoidea</i>	09020410037124	5.33			--	0.3	
<i>Caenis</i>	09020412040		13.33	7	CG		0.7
<i>Caenis maccafferti</i>	09020412040132	13.33			--	0.7	
<i>Dolophilodes</i>	09020601001	20.00	20.00	0	CF	1.1	1.1
Hydropsychidae	09020604	9.33			--	0.5	
<i>Cheumatopsyche</i>	09020604015	56.00	58.25	5	CF	3.1	3.2
<i>Hydropsyche</i>	09020604016	68.00	183.08	4	CF	3.8	10.2



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		Calculated: 4/15/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche bronta</i>	09020604016029	2.67			--	0.1	
<i>Hydropsyche morosa</i>	09020604016030	61.33			--	3.4	
<i>Hydropsyche slossonae</i>	09020604016031	2.67			--	0.1	
<i>Hydropsyche sparna</i>	09020604016032	32.00			--	1.8	
<i>Hydropsyche scalaris group</i>	09020604016048	9.33			--	0.5	
<i>Rhyacophila</i>	09020605019		14.67	2	PR		0.8
<i>Rhyacophila fuscula</i>	09020605019060	10.67			PR	0.6	
<i>Rhyacophila minor</i>	09020605019063	4.00			PR	0.2	
Limnephilidae	09020610				--		
<i>Apatania</i>	09020610061	13.33	13.33		SC	0.7	0.7
<i>Neophylax</i>	09020610062			3	SC		
<i>Lepidostoma</i>	09020611064	21.33	21.33	1	SH	1.2	1.2
<i>Psilotreta</i>	09020614068	1.33	1.33	0	SC	0.1	0.1
<i>Nigronia</i>	09020701003		1.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.1	
<i>Antocha</i>	09021001004	5.33	5.33	3	CG	0.3	0.3
<i>Hexatoma</i>	09021001008	6.67	6.67	2	PR	0.4	0.4
<i>Bezzia/palpomyia</i>	09021010043	8.00	8.00	6	PR	0.4	0.4
Chironomidae	09021011	13.33			--	0.7	
<i>Conchapelopia</i>	09021011004			6	PR		
<i>Rheopelopia</i>	09021011017		6.81		PR		0.4
<i>Rheopelopia acra group</i>	09021011017036	6.67			--	0.4	
<i>Potthastia</i>	09021011026		104.84	2	CG		5.8
<i>Potthastia gaedii</i>	09021011026045	102.67			--	5.7	
<i>Corynoneura</i>	09021011036	2.67	2.72	7	CG	0.1	0.2
<i>Cricotopus</i>	09021011037		167.47	7	SH		9.3
<i>Cricotopus bicinctus</i>	09021011037057	56.00			--	3.1	
<i>Cricotopus trifascia</i>	09021011037070	10.67			--	0.6	
<i>Cricotopus vierriensis</i>	09021011037071	4.00			--	0.2	
<i>Cricotopus luciae</i>	09021011037073	93.33			--	5.2	
<i>Eukiefferiella</i>	09021011041		4.08	8	CG		0.2
<i>Eukiefferiella brehmi group</i>	09021011041073	1.33			--	0.1	
<i>Eukiefferiella devonica group</i>	09021011041083	2.67			CG	0.1	
<i>Parametriocnemus</i>	09021011053	12.00	12.25	5	CG	0.7	0.7
<i>Thienemanniella</i>	09021011062		9.53	6	CG		0.5
<i>Thienemanniella boltoni</i>	09021011062113	9.33			--	0.5	
<i>Tvetenia</i>	09021011065		76.25	5	CG		4.2
<i>Tvetenia vitracies</i>	09021011065113	57.33			--	3.2	



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		Actual	Adjusted			Actual	Adjusted
<i>Tvetenia paucunca</i>	09021011065114	17.33			--	1.0	
<i>Micropsectra</i>	09021011070	8.00	8.17	7	CG	0.4	0.5
<i>Rheotanytarsus</i>	09021011072	6.67	6.81	6	CF	0.4	0.4
<i>Stempellinella</i>	09021011074		1.36	2	--		0.1
<i>Stempellinella fimbriata</i>	09021011074002	1.33			--	0.1	
<i>Tanytarsus</i>	09021011076	14.67	14.98	6	CF	0.8	0.8
<i>Microtendipes</i>	09021011094		20.42	6	CF		1.1
<i>Microtendipes pedellus group</i>	09021011094166	1.33			--	0.1	
<i>Microtendipes rydalensis group</i>	09021011094168	18.67			--	1.0	
<i>Polypedilum</i>	09021011102	5.33	205.60	6	SH	0.3	11.4
<i>Polypedilum aviceps</i>	09021011102181	188.00			--	10.4	
<i>Polypedilum flavum</i>	09021011102182	6.67			--	0.4	
<i>Polypedilum illinoense group</i>	09021011102185	1.33			--	0.1	
<i>Stenochironomus</i>	09021011105	1.33	1.36	5	CG	0.1	0.1
<i>Simulium</i>	09021012047	4.00	93.33	4	CF	0.2	5.2
<i>Simulium jenningsi</i>	09021012047060				--		
<i>Simulium tuberosum</i>	09021012047067	34.67			--	1.9	
<i>Simulium jenningsi complex</i>	09021012047070	54.67			CF	3.0	
<i>Atherix</i>	09021015055	6.67	6.67	2	PR	0.4	0.4
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.1	0.1
<i>Psephenus</i>	09021108058		6.67	4	SC		0.4
<i>Psephenus herricki</i>	09021108058028	6.67			--	0.4	
<i>Dubiraphia</i>	09021113064	4.00	4.00	6	--	0.2	0.2
<i>Optioservus</i>	09021113067	21.33	26.67	3	SC	1.2	1.5
<i>Optioservus fastiditus</i>	09021113067044	4.00			--	0.2	
<i>Optioservus trivittatus</i>	09021113067048	1.33			--	0.1	
<i>Promoresia</i>	09021113069		5.33		--		0.3
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.1	
<i>Promoresia tardella</i>	09021113069052	4.00			--	0.2	
<i>Stenelmis</i>	09021113070	86.67	89.33	5	SC	4.8	5.0
<i>Stenelmis crenata</i>	09021113070055	2.67			--	0.1	
Acariformes	090301	1.33	1.33		--	0.1	0.1
<i>Pisidium</i>	10020201002		1.33		CF		0.1
<i>Pisidium walkeri</i>	10020201002017	1.33			CF	0.1	