



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

Station Information

**Station Number: S-48**  
Waterbody: Goosefare Brook - Station 48  
Town: Saco  
Directions: 75 M BELOW JENKINS RD. CROSSING

DEP Drainage: Piscataqua - Presumpscot - Saco  
HUC8: 01060001  
HUC8 Name: Presumpscot  
Latitude: 43 32 3.83 N  
Longitude: 70 27 8.14 W  
Stream Order: 1

Sample Information

**Log Number: 1958**  
Subsample Factor: X1  
Type of Sample: ROCK BASKET  
Replicates: 3  
Date Deployed: 7/22/2010  
Date Retrieved: 8/24/2010

Classification Attainment

**Statutory Class: B**  
Model Result with P>.6: C  
Date Last Calculated: 1/25/2011

**Final Determination: C**  
**Reason for Determination: Model**  
Comments: Probability of Attaining Class B (.33)

Date: 1/25/2011

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.21	Class A, B, or C	1.00
Class B	0.46	Non-Attainment	0.00
Class C			
0.32			
NA			
0.00			
B or Better Model		A Model	
Class A or B	0.33	Class A	0.06
Class C or Non-Attainment	0.67	Class B or C or Non-Attainment	0.94

Model Variables

01 Total Mean Abundance	142.67	18 Relative Abundance Ephemeroptera	0.11
02 Generic Richness	46.00	19 EPT Generic Richness	13.00
03 Plecoptera Mean Abundance	0.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	5.72
04 Ephemeroptera Mean Abundance	16.33	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	3.67	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	11.78
06 Hilsenhoff Biotic Index	5.40	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.69	28 EP Generic Richness/14	0.21
08 Relative Generic Richness Diptera	0.46	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.67		
12 EPT Generic Richness/ Diptera	0.62		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	7.99		
(Family Functional Group)			
17 Chironomini Abundance (Family	71.91		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Microtendipes</i>	41.39
2	<i>Leptophlebiidae</i>	10.75
3	<i>Tanytarsus</i>	6.57
4	<i>Polypedilum</i>	3.41
5	<i>Tribelos</i>	3.17



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Date Retrieved: 8/24/2010

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 20.1 deg C  
Dissolved Oxygen: 7.1 mg/l  
Specific Conductance: 87 uS/cm  
Velocity:  
pH:  
Wetted Width: 1.6 m  
Bankfull Width: 1.8 m  
Depth: 30 cm

**Waterbody Information - Retrieval**

Temperature: 16.3 deg C  
Dissolved Oxygen: 6.4 mg/l  
Specific Conductance: 136 uS/cm  
Velocity: 3 cm/s  
pH: 6.65  
Wetted Width: 1.6 m  
Bankfull Width: 1.8 m  
Depth: 17 cm

**Water Chemistry - 8/24/2010**

Ammonia As Nitrogen	0.02 mg/l	Soluble Reactive Phosphorus	3 ug/l
Nitrate+nitrite As N	0.25 mg/l	Total Phosphorus	0.013 mg/l
Total Kjeldahl Nitrogen	0.24 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	1.6 mg/l	Total Dissolved Solids	94 mg/l

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Dense	Flat
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above In-place Contamination	Detritus 5 %
	Above Urban NPS	Sand 95 %
	Below Road Crossing	

**Landcover Summary - 2004 Data**

Total Area (ac)	460	High Int. Dev. %	1.1	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	2.8	Wetland %	30.9	Tilled Agriculture %	0.2
		Low Int. Dev. %	5.5	Upland Woody %	48.4	Grassland %	0.0
		Development %	9.4	Natural %	79.3	Human Altered %	20.7
						Impervious %	5.6

**Sample Comments**

8/24/2010 FISH: LAKE CHUB AND BROOK TROUT.

7/22/2010 FLOW VISIBLE BUT VELOCITY NOT MEASURABLE



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Replicates: 3

Calculated: 1/25/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Lumbriculus</i>	08020101002		0.33		CG		0.2
<i>Lumbriculus variegatus</i>	08020101002001	0.33			--	0.2	
<i>Stylodrilus</i>	08020101004		0.33		--		0.2
<i>Stylodrilus heringianus</i>	08020101004001	0.33			--	0.2	
<i>Nais</i>	08020202009		1.33		CG		0.9
<i>Nais communis</i>	08020202009005	1.00			--	0.7	
<i>Nais variabilis</i>	08020202009009	0.33			--	0.2	
<i>Helobdella</i>	08030101005		4.33		--		3.0
<i>Helobdella stagnalis</i>	08030101005004	4.33			--	3.0	
Leuctridae	09020204	0.33	0.33		--	0.2	0.2
<i>Boyeria</i>	09020301004		0.33	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	0.33			--	0.2	
<i>Cordulegaster</i>	09020303019	1.33	1.67	3	PR	0.9	1.2
<i>Cordulegaster maculata</i>	09020303019042	0.33			--	0.2	
<i>Calopteryx</i>	09020307043		0.33	5	PR		0.2
<i>Calopteryx maculata</i>	09020307043088	0.33			--	0.2	
Leptophlebiidae	09020406	15.33	15.33		--	10.7	10.7
<i>Paraleptophlebia</i>	09020406026	1.00	1.00	1	CG	0.7	0.7
<i>Chimarra</i>	09020601003	0.33	0.33	2	CF	0.2	0.2
<i>Lype</i>	09020602004		0.33	2	SC		0.2
<i>Lype diversa</i>	09020602004005	0.33			--	0.2	
<i>Polycentropus</i>	09020603010	2.67	2.67	6	PR	1.9	1.9
<i>Phylocentropus</i>	09020603011	1.67	1.67	5	CF	1.2	1.2
<i>Cheumatopsyche</i>	09020604015	0.67	0.67	5	CF	0.5	0.5
<i>Oligostomis</i>	09020608039	3.67	3.67	2	PR	2.6	2.6
<i>Pycnopsyche</i>	09020610049	0.67	0.67	4	SH	0.5	0.5
<i>Frenesia</i>	09020610058		0.33	0	SH		0.2
<i>Frenesia difficilis</i>	09020610058117	0.33			--	0.2	
<i>Psilotreta</i>	09020614068	1.00	3.00	0	SC	0.7	2.1
<i>Psilotreta labida</i>	09020614068133	2.00			--	1.4	
<i>Molanna</i>	09020615069		1.33	6	SC		0.9
<i>Molanna blenda</i>	09020615069133	1.33			--	0.9	
Lepidoptera	090209	0.33	0.33		--	0.2	0.2
Chironomidae	09021011	4.00			--	2.8	
<i>Ablabesmyia</i>	09021011001		1.74	8	PR		1.2
<i>Ablabesmyia mallochi</i>	09021011001004	1.67			--	1.2	
<i>Meropelopia</i>	09021011010	0.33	0.35		--	0.2	0.2
<i>Natarsia</i>	09021011011	0.67	0.69	8	PR	0.5	0.5



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<i>Paramerina</i>	09021011013	3.00	3.13		--	2.1	2.2
<i>Procladius</i>	09021011015	0.33	0.35	9	PR	0.2	0.2
<i>Trissopelopia</i>	09021011021		0.69		PR		0.5
<i>Trissopelopia ogemawi</i>	09021011021042	0.67			--	0.5	
<i>Zavrelimyia</i>	09021011022	0.67	1.04	8	PR	0.5	0.7
<i>Zavrelimyia sinuosa group</i>	09021011022046	0.33			--	0.2	
<i>Heterotrissocladius</i>	09021011044		1.39	0	CG		1.0
<i>Heterotrissocladius marcidus</i>	09021011044083	1.33			--	0.9	
<i>Parametriocnemus</i>	09021011053	1.00	1.04	5	CG	0.7	0.7
<i>Micropsectra</i>	09021011070	1.33	1.39	7	CG	0.9	1.0
<i>Stempellinella</i>	09021011074		3.82	2	--		2.7
<i>Stempellinella leptocelloides</i>	09021011074001	3.67			--	2.6	
<i>Tanytarsus</i>	09021011076	9.00	9.38	6	CF	6.3	6.6
<i>Microtendipes</i>	09021011094		59.05	6	CF		41.4
<i>Microtendipes pedellus group</i>	09021011094166	56.67			--	39.7	
<i>Paratendipes</i>	09021011100		3.13	8	CG		2.2
<i>Paratendipes albimanus group</i>	09021011100176	3.00			--	2.1	
<i>Polypedilum</i>	09021011102		4.86	6	SH		3.4
<i>Polypedilum scalaenum group</i>	09021011102189	4.67			--	3.3	
<i>Stenochironomus</i>	09021011105	0.33	0.35	5	CG	0.2	0.2
<i>Tribelos</i>	09021011107		4.52	5	CG		3.2
<i>Tribelos jucundum</i>	09021011107198	4.33			--	3.0	
<i>Apsectrotanypus</i>	09021011109		0.35		--		0.2
<i>Apsectrotanypus johnsoni</i>	09021011109001	0.33			--	0.2	
<i>Macropelopia</i>	09021011111		1.04		P		0.7
<i>Macropelopia decedens</i>	09021011111002	1.00			--	0.7	
<i>Brundiniella</i>	09021011115		0.69		--		0.5
<i>Brundiniella eumorpha</i>	09021011115001	0.67			--	0.5	
Tabanidae	09021014	0.33	0.33		--	0.2	0.2
<i>Stenelmis</i>	09021113070		0.67	5	SC		0.5
<i>Stenelmis crenata</i>	09021113070055	0.67			--	0.5	
Curculionidae	09021115	0.33	0.33		--	0.2	0.2
<i>Aplexa</i>	10010202028		0.67		--		0.5
<i>Aplexa hypnorum</i>	10010202028054	0.67			--	0.5	
<i>Pisidium</i>	10020201002	1.00	1.33		CF	0.7	0.9
<i>Pisidium walkeri</i>	10020201002017	0.33			CF	0.2	