



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

Station Information

Station Number: S-48	River Basin: Saco
Waterbody: Goosefare Brook - Station 48	HUC8 Name: Presumpscot
Town: Saco	Latitude: 43 32 3.83 N
Directions: 75 M BELOW JENKINS RD. CROSSING	Longitude: 70 27 8.14 W
	Stream Order: 1

Sample Information

Log Number: 2385	Type of Sample: ROCK BAG	Date Deployed: 7/23/2015
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/20/2015

Classification Attainment

Statutory Class: B	Final Determination: B	Date: 6/8/2016
Model Result with $P \geq 0.6$: B	Reason for Determination: Best Professional Judgement	
Date Last Calculated: 6/8/2016	Comments: Indeterminate Class A (.44) not raised to Class A based on the number of sensitive taxa present.	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.58	Class A, B, or C	1.00
Class B	0.38	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.99	Class A	0.44
Class C or Non-Attainment	0.01	Class B or C or Non-Attainment	0.56

Model Variables

01 Total Mean Abundance	244.33	18 Relative Abundance Ephemeroptera	0.09
02 Generic Richness	52.00	19 EPT Generic Richness	17.00
03 Plecoptera Mean Abundance	1.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	12.88
04 Ephemeroptera Mean Abundance	22.33	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.17	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	78.80
06 Hilsenhoff Biotic Index	4.66	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	3.00
07 Relative Abundance - Chironomidae	0.63	28 EP Generic Richness/14	0.43
08 Relative Generic Richness Diptera	0.46	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.50		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.71		
13 Relative Abundance - Oligochaeta	0.04		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	13.49		
17 Chironomini Abundance (Family Functional Group)	25.91		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tanytarsus</i>	32.25
2	<i>Stempellinella</i>	6.97
3	Leptophlebiidae	6.55
4	<i>Microtendipes</i>	5.52
5	<i>Frenesia</i>	5.46



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

Station Number: S-48

Town: Saco

Date Deployed: 7/23/2015

Log Number: 2385

Waterbody: Goosefare Brook - Station 48

Date Retrieved: 8/20/2015

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 16.1 deg C
Dissolved Oxygen: 8.5 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 147.7 uS/cm
Velocity: 6.1 cm/s
pH: 6.98
Wetted Width: 1.6 m
Bankfull Width: 1.6 m
Depth: 19 cm

Waterbody Information - Retrieval

Temperature: 18.8 deg C
Dissolved Oxygen: 7.45 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 185.9 uS/cm
Velocity:
pH: 7.07
Wetted Width: 1.5 m
Bankfull Width: 1.6 m
Depth: 18.75 cm

Water Chemistry - 8/20/2015

Nitrate+nitrite As N	0.48 mg/l	Total Phosphorus	19 ug/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	2.6 mg/l
Dissolved Organic Carbon	1.4 mg/l	Total Dissolved Solids	120 mg/l
Orthophosphate As Phosphorus	4 ug/l		

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Upland Conifer

Dense

Flat

Upland Hardwood

Potential Stressor

Location

Substrate

Above In-place Contamination

Boulder 5 %

Above Urban NPS

Rubble/Cobble 20 %

Below Road Crossing

Sand 75 %

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

7/23/2015: 86.8% DO. FISH PRESENT.



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-48

Waterbody: Goosefare Brook - Station 48

Town: Saco

Log Number: 2385

Subsample Factor: X1

Replicates: 3

Calculated: 6/8/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Nematoda	05	0.33	0.33		--	0.1	0.1
<i>Lumbriculus</i>	08020101002		4.00		CG		1.6
<i>Lumbriculus variegatus</i>	08020101002001	4.00			--	1.6	
Tubificida	080202	6.33	6.33		--	2.6	2.6
<i>Helobdella</i>	08030101005		9.33		--		3.8
<i>Helobdella modesta</i>	08030101005004	9.33			--	3.8	
<i>Paracapnia</i>	09020203018	1.67	1.67	1	SH	0.7	0.7
<i>Boyeria</i>	09020301004		0.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	0.33			--	0.1	
<i>Cordulegaster</i>	09020303019	0.33	0.33	3	PR	0.1	0.1
Calopterygidae	09020307	1.00	1.00		--	0.4	0.4
<i>Proclotron</i>	09020401010	2.33	2.33		CG	1.0	1.0
Heptageniidae	09020402	0.33	0.33		--	0.1	0.1
<i>Maccaffertium</i>	09020402015	2.33	3.00	4	SC	1.0	1.2
<i>Maccaffertium modestum</i>	09020402015051	0.67			--	0.3	
Leptophlebiidae	09020406	16.00	16.00		--	6.5	6.5
<i>Paraleptophlebia</i>	09020406026	0.67	0.67	1	CG	0.3	0.3
<i>Phylocentropus</i>	09020603011		3.00	5	CF		1.2
<i>Phylocentropus placidus</i>	09020603011021	3.00			--	1.2	
<i>Plectrocnemia</i>	09020603012	3.00	3.33	6	PR	1.2	1.4
<i>Plectrocnemia remota</i>	09020603012001	0.33			--	0.1	
Hydropsychidae	09020604	0.33			--	0.1	
<i>Diplectrona</i>	09020604014		0.50	0	CF		0.2
<i>Diplectrona modesta</i>	09020604014025	0.33			--	0.1	
<i>Hydropsyche</i>	09020604016	0.33	0.50	4	CF	0.1	0.2
<i>Oligostomis</i>	09020608039	1.67	1.67	2	PR	0.7	0.7
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.1	0.1
<i>Frenesia</i>	09020610058		13.33	0	SH		5.5
<i>Frenesia difficilis</i>	09020610058117	13.33			--	5.5	
<i>Psilotreta</i>	09020614068	0.67	6.67	0	SC	0.3	2.7
<i>Psilotreta frontalis</i>	09020614068134	6.00			--	2.5	
<i>Molanna</i>	09020615069		5.33	6	SC		2.2
<i>Molanna blenda</i>	09020615069133	5.33			--	2.2	
<i>Heteroplectron</i>	09020617071		0.33		SH		0.1
<i>Heteroplectron americanum</i>	09020617071138	0.33			--	0.1	
<i>Goera</i>	09020620063		1.33	0	SC		0.5
<i>Goera fuscula</i>	09020620063125	1.33			--	0.5	



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-48

Waterbody: Goosefare Brook - Station 48

Town: Saco

Log Number: 2385

Subsample Factor: X1

Replicates: 3

Calculated: 6/8/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Sialis</i>	09020702004		1.67	4	PR		0.7
<i>Sialis mohri</i>	09020702004006	1.67			--	0.7	
<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	9.33			--	3.8	
<i>Conchapelopia</i>	09021011004	0.67	0.71	6	PR	0.3	0.3
<i>Labrundinia</i>	09021011008		0.71	7	PR		0.3
<i>Labrundinia pilosella</i>	09021011008022	0.67			--	0.3	
<i>Meropelopia</i>	09021011010	2.00	2.13		--	0.8	0.9
<i>Paramerina</i>	09021011013	5.67	6.03		--	2.3	2.5
<i>Trissopelopia</i>	09021011021		2.13		PR		0.9
<i>Trissopelopia ogemawi</i>	09021011021042	2.00			--	0.8	
<i>Zavrelimyia</i>	09021011022		1.77	8	PR		0.7
<i>Zavrelimyia thryptica group</i>	09021011022045	1.67			PR	0.7	
<i>Prodiamesa</i>	09021011031		1.06	3	CG		0.4
<i>Prodiamesa olivacea</i>	09021011031048	1.00			--	0.4	
<i>Corynoneura</i>	09021011036	0.33	0.35	7	CG	0.1	0.1
<i>Heterotrissocladius</i>	09021011044		0.71	0	CG		0.3
<i>Heterotrissocladius marcidus</i>	09021011044083	0.67			--	0.3	
<i>Limnophyes</i>	09021011047	0.67	0.71	8	CG	0.3	0.3
<i>Parametriocnemus</i>	09021011053	6.00	6.39	5	CG	2.5	2.6
<i>Micropsectra</i>	09021011070	2.67	3.55	7	CG	1.1	1.5
<i>Micropsectra polita</i>	09021011070124	0.67		7	--	0.3	
<i>Stempellinella</i>	09021011074		17.04	2	--		7.0
<i>Stempellinella leptocelloides</i>	09021011074001	16.00			--	6.5	
<i>Tanytarsus</i>	09021011076	74.00	78.80	6	CF	30.3	32.2
<i>Microtendipes</i>	09021011094		13.49	6	CF		5.5
<i>Microtendipes pedellus group</i>	09021011094166	12.67			--	5.2	
<i>Paratendipes</i>	09021011100	0.67	1.42	8	CG	0.3	0.6
<i>Paratendipes albimanus group</i>	09021011100176	0.67			--	0.3	
<i>Polypedilum</i>	09021011102		5.68	6	SH		2.3
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.5	
<i>Polypedilum illinoense group</i>	09021011102185	0.67			--	0.3	
<i>Polypedilum scalaenum group</i>	09021011102189	3.33			--	1.4	
<i>Tribelos</i>	09021011107		5.32	5	CG		2.2
<i>Tribelos jucundus</i>	09021011107198	5.00			--	2.0	
<i>Apsectrotanypus</i>	09021011109		2.84		--		1.2
<i>Apsectrotanypus johnsoni</i>	09021011109001	2.67			--	1.1	



Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report

Station Number: S-48

Waterbody: Goosefare Brook - Station 48

Town: Saco

Log Number: 2385

Subsample Factor: X1

Replicates: 3

Calculated: 6/8/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Macropelopia</i>	09021011111		2.48		P		1.0
<i>Macropelopia decedens</i>	09021011111002	2.33			--	1.0	
<i>Roederiodes</i>	09021016058	0.33	0.33	3	PR	0.1	0.1
<i>Neoplata</i>	09021016064	0.33	0.33		PR	0.1	0.1
<i>Stenelmis</i>	09021113070	1.33	1.67	5	SC	0.5	0.7
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.1	
Sphaeriidae	10020201	0.33	0.33		CF	0.1	0.1
<i>Pisidium</i>	10020201002	3.67	3.67		CF	1.5	1.5