



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

Station Information

Station Number: S-748	River Basin: Saco
Waterbody: Goodall Brook - Station 748	HUC8 Name: Piscataqua-Salmon Falls
Town: Sanford	Latitude: 43 25 23.19 N
Directions: ~15M DOWNSTREAM OF DAYLIGHT AVE	Longitude: 70 46 20.35 W
	Stream Order: 1

Sample Information

Log Number: 2376	Type of Sample: ROCK BAG	Date Deployed: 7/21/2015
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/18/2015

Classification Attainment

Statutory Class: B	Final Determination: B	Date: 4/28/2016
Model Result with $P \geq 0.6$: B	Reason for Determination: Model	
Date Last Calculated: 4/26/2016	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.38	Class C	0.05
Class B	0.56	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.99	Class A	0.09
Class C or Non-Attainment	0.01	Class B or C or Non-Attainment	0.91

Model Variables

01 Total Mean Abundance	383.33	18 Relative Abundance Ephemeroptera	0.01
02 Generic Richness	71.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	3.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	14.76
04 Ephemeroptera Mean Abundance	4.67	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	3.70	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	170.49
06 Hilsenhoff Biotic Index	5.95	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.76	28 EP Generic Richness/14	0.57
08 Relative Generic Richness Diptera	0.38	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.44		
11 <i>Cheumatopsyche</i> Abundance	0.89		
12 EPT Generic Richness/ Diptera Generic Richness	0.81		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	22.71		
17 Chironomini Abundance (Family Functional Group)	73.28		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tanytarsus</i>	39.04
2	<i>Microtendipes</i>	16.06
3	<i>Stempellinella</i>	4.85
4	<i>Ablabesmyia</i>	4.67
5	<i>Hyalella</i>	3.74



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Log Number: 2376 Waterbody: Goodall Brook - Station 748 Date Retrieved: 8/18/2015

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 17.7 deg C
Dissolved Oxygen: 8.49 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 443 uS/cm
Velocity: 6.1 cm/s
pH: 6.88
Wetted Width: 5 m
Bankfull Width: 5 m
Depth: 40 cm

Waterbody Information - Retrieval

Temperature: 18.5 deg C
Dissolved Oxygen: 8.85 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 510 uS/cm
Velocity:
pH: 6.88
Wetted Width: 5 m
Bankfull Width: 5 m
Depth: 40 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Swamp Hardwood	Open	Flat	
Upland Hardwood			
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Below Urban NPS	Detritus	10 %
		Gravel	5 %
		Sand	80 %
		Silt	5 %

Landcover Summary - 2004 Data

Total Area (ac)	419	High Int. Dev. %	20.7	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	20.8	Wetland %	3.1	Tilled Agriculture %	0.3
		Low Int. Dev. %	8.9	Upland Woody %	16.9	Grassland %	0.0
		Development %	50.4	Natural %	20.0	Human Altered %	80.0
						Impervious %	34.4

Sample Comments

7/21/2015: 90.6% DO. VALESNERIA PRESENT. BEAVER ACTIVITY.
8/18/2015: 94.9% DO.



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Aquatic Life Taxonomic Inventory Report**

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Waterbody: Goodall Brook - Station 748

Town: Sanford

Log Number: 2376

Subsample Factor: X1

Replicates: 3

Calculated: 4/26/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	0.33	0.33		PR	0.1	0.1
Rhabditophora	0301	0.33	0.33		--	0.1	0.1
<i>Stylodrilus</i>	08020101004		0.33		--		0.1
<i>Stylodrilus heringianus</i>	08020101004001	0.33			--	0.1	
Tubificida	080202	0.67	0.67		--	0.2	0.2
<i>Nais</i>	08020202009		0.33		CG		0.1
<i>Nais communis</i>	08020202009005	0.33			--	0.1	
<i>Aulodrilus</i>	08020202018		3.67		--		1.0
<i>Aulodrilus plurisetia</i>	08020202018004	3.67			--	1.0	
<i>Limnodrilus</i>	08020202022		0.33		CG		0.1
<i>Limnodrilus hoffmeisteri</i>	08020202022003	0.33			--	0.1	
<i>Glossiphonia</i>	08030101004		1.67		--		0.4
<i>Glossiphonia elegans</i>	08030101004001	1.67			--	0.4	
<i>Helobdella</i>	08030101005		11.67		--		3.0
<i>Helobdella modesta</i>	08030101005004	11.67			--	3.0	
<i>Caecidotea</i>	09010101001	4.33	7.33	8	SH	1.1	1.9
<i>Caecidotea communis</i>	09010101001001	3.00			--	0.8	
<i>Hyalella</i>	09010203006	14.33	14.33	8	CG	3.7	3.7
<i>Leuctra</i>	09020204020	0.33	2.67	0	SH	0.1	0.7
<i>Leuctra ferruginea</i>	09020204020050	2.33			--	0.6	
Perlodidae	09020207	0.33	0.33		--	0.1	0.1
Calopterygidae	09020307	0.33	0.33		--	0.1	0.1
<i>Baetis</i>	09020401001		0.33	4	CG		0.1
<i>Baetis intercalaris</i>	09020401001008	0.33			--	0.1	
<i>Labiobaetis</i>	09020401009		0.67		--		0.2
<i>Labiobaetis frondalis</i>	09020401009005	0.67			--	0.2	
<i>Plauditus</i>	09020401012	0.33	0.33		CG	0.1	0.1
<i>Neocloeon (Centroptilum)</i>	09020401017	0.67	0.67	2	CG	0.2	0.2
Leptophlebiidae	09020406	2.33	2.33		--	0.6	0.6
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	0.1	0.1
Corixidae	09020501	2.00	2.00		--	0.5	0.5
<i>Sigara</i>	09020501007		1.67		P		0.4
<i>Sigara modesta</i>	09020501007002	1.67			--	0.4	
<i>Lype</i>	09020602004		0.33	2	SC		0.1
<i>Lype diversa</i>	09020602004005	0.33			--	0.1	
Polycentropodidae	09020603				--		
<i>Cernotina</i>	09020603006	8.00	8.00		PR	2.1	2.1



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		Actual	Adjusted			Actual	Adjusted
<i>Neureclipsis</i>	09020603008	0.33	0.33	7	CF	0.1	0.1
<i>Phylocentropus</i>	09020603011		2.00	5	CF		0.5
<i>Phylocentropus placidus</i>	09020603011021	2.00			--	0.5	
<i>Plectrocnemia</i>	09020603012		10.33	6	PR		2.7
<i>Plectrocnemia remota</i>	09020603012001	10.33			--	2.7	
Hydropsychidae	09020604	0.33			--	0.1	
<i>Cheumatopsyche</i>	09020604015	0.67	0.89	5	CF	0.2	0.2
<i>Hydropsyche</i>	09020604016		0.44	4	CF		0.1
<i>Hydropsyche depravata species group</i>	09020604016041	0.33			CF	0.1	
Phryganeidae	09020608	0.33	0.33		--	0.1	0.1
<i>Ptilostomis</i>	09020608041	0.33	0.33	5	SH	0.1	0.1
Limnephilidae	09020610	0.33			--	0.1	
<i>Pycnopsyche</i>	09020610049	0.33	0.50	4	SH	0.1	0.1
<i>Frenesia</i>	09020610058		0.50	0	SH		0.1
<i>Frenesia difficilis</i>	09020610058117	0.33			--	0.1	
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.2	0.2
<i>Molanna</i>	09020615069		0.33	6	SC		0.1
<i>Molanna blenda</i>	09020615069133	0.33			--	0.1	
<i>Oecetis</i>	09020618078	0.33	0.33	8	PR	0.1	0.1
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.1	0.1
<i>Anopheles</i>	09021008028	0.33	0.33		CF	0.1	0.1
<i>Probezzia</i>	09021010041	0.33	0.33	6	PR	0.1	0.1
<i>Bezzia/palpomyia</i>	09021010043	0.67	0.67	6	PR	0.2	0.2
Chironomidae	09021011	9.00			--	2.3	
<i>Ablabesmyia</i>	09021011001		17.89	8	PR		4.7
<i>Ablabesmyia mallochi</i>	09021011001004	17.33			--	4.5	
<i>Conchapelopia</i>	09021011004	1.33	1.38	6	PR	0.3	0.4
<i>Labrundinia</i>	09021011008		0.34	7	PR		0.1
<i>Labrundinia pilosella</i>	09021011008022	0.33			--	0.1	
<i>Meropelopia</i>	09021011010				--		
<i>Paramerina</i>	09021011013	1.33	1.38		--	0.3	0.4
<i>Trissopelopia ogemawi</i>	09021011021042				--		
<i>Zavreliomyia</i>	09021011022		1.72	8	PR		0.4
<i>Zavreliomyia thryptica group</i>	09021011022045	1.67			PR	0.4	
<i>Pagastia</i>	09021011025		0.34	1	--		0.1
<i>Pagastia orthogonia</i>	09021011025001	0.33			--	0.1	
<i>Corynoneura</i>	09021011036	0.33	0.34	7	CG	0.1	0.1



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<i>Cricotopus</i>	09021011037		2.06	7	SH		0.5
<i>Cricotopus bicinctus</i>	09021011037057	2.00			--	0.5	
<i>Orthocladius</i>	09021011050		2.41	6	CG		0.6
<i>Orthocladius annectens</i>	09021011050092	0.67			--	0.2	
<i>Orthocladius carlatus</i>	09021011050093	1.67			--	0.4	
<i>Parakiefferiella</i>	09021011052	1.67	1.72		CG	0.4	0.4
<i>Parametriocnemus</i>	09021011053	5.00	5.16	5	CG	1.3	1.3
<i>Psectrocladius</i>	09021011056		3.78	8	CG		1.0
<i>Psectrocladius simulans</i>	09021011056110	3.67			--	1.0	
<i>Rheocricotopus</i>	09021011057			6	CG		
<i>Micropsectra</i>	09021011070		1.38	7	CG		0.4
<i>Micropsectra polita</i>	09021011070124	1.33		7	--	0.3	
<i>Paratanytarsus</i>	09021011071		6.19	6	--		1.6
<i>Paratanytarsus dissimilis</i>	09021011071125	6.00			--	1.6	
<i>Rheotanytarsus pellucidus</i>	09021011072128				CF		
<i>Stempellinella</i>	09021011074		18.58	2	--		4.8
<i>Stempellinella leptocelloides</i>	09021011074001	18.00			--	4.7	
<i>Tanytarsus</i>	09021011076	139.67	149.65	6	CF	36.4	39.0
<i>Tanytarsus buckleyi</i>	09021011076139	5.33			CF	1.4	
<i>Cryptotendipes</i>	09021011083	2.00	2.06	6	--	0.5	0.5
<i>Dicrotendipes</i>	09021011085		1.72	8	CG		0.4
<i>Dicrotendipes neomodestus</i>	09021011085152	1.67			--	0.4	
<i>Microtendipes</i>	09021011094		61.58	6	CF		16.1
<i>Microtendipes pedellus group</i>	09021011094166	6.00			--	1.6	
<i>Microtendipes rydalensis group</i>	09021011094168	53.67			--	14.0	
<i>Paratendipes</i>	09021011100		0.69	8	CG		0.2
<i>Paratendipes albimanus group</i>	09021011100176	0.67			--	0.2	
<i>Polypedilum</i>	09021011102		7.22	6	SH		1.9
<i>Polypedilum aviceps</i>	09021011102181	5.00			--	1.3	
<i>Polypedilum fallax group</i>	09021011102183	0.33			--	0.1	
<i>Polypedilum scalaenum group</i>	09021011102189	1.67			--	0.4	
<i>Apsectrotanypus</i>	09021011109		2.06		--		0.5
<i>Apsectrotanypus johnsoni</i>	09021011109001	2.00			--	0.5	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Neoplasta</i>	09021016064	0.33	0.33		PR	0.1	0.1
<i>Neoporus</i>	09021103033	6.00	6.00		--	1.6	1.6
<i>Gyrinus</i>	09021104033	0.33	0.33	2	PR	0.1	0.1
<i>Dubiraphia</i>	09021113064		0.67	6	--		0.2



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<i>Dubiraphia robusta</i>	09021113064040	0.67			--	0.2	
<i>Oulimnius</i>	09021113068		0.33		--		0.1
<i>Oulimnius latiusculus</i>	09021113068049	0.33			--	0.1	
<i>Torrenticola</i>	09030104001	1.33	1.33		--	0.3	0.3
Lymnaeidae	10010201	1.00	1.00		--	0.3	0.3
<i>Physa</i>	10010202027	3.33	3.33		SC	0.9	0.9
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.1	0.1