



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

Station Information

Station Number: S-330	River Basin: Saco
Waterbody: Mare Brook - Unnamed Tributary - Station 330	HUC8 Name: Presumpscot
Town: Brunswick	Latitude: 43 53 6.1 N
Directions: BELOW PICNIC POND	Longitude: 69 55 15.62 W
	Stream Order: 2

Sample Information

Log Number: 2346	Type of Sample: ROCK BAG	Date Deployed: 7/8/2015
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/5/2015

Classification Attainment

Statutory Class: B	Final Determination: NA	Date: 12/9/2015
Model Result with $P \geq 0.6$: NA	Reason for Determination: Model	
Date Last Calculated: 12/8/2015	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.27
Class B	0.01	Non-Attainment	0.73
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.01
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	1672.00	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	55.00	19 EPT Generic Richness	12.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	20.64
04 Ephemeroptera Mean Abundance	1.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	4.05	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	74.56
06 Hilsenhoff Biotic Index	5.81	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.52	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.38	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	86.19		
11 <i>Cheumatopsyche</i> Abundance	56.47		
12 EPT Generic Richness/ Diptera Generic Richness	0.57		
13 Relative Abundance - Oligochaeta	0.02		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	114.10		
17 Chironomini Abundance (Family Functional Group)	499.55		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Polypedilum</i>	24.63
2	<i>Caecidotea</i>	18.34
3	<i>Nanocladius</i>	5.66
4	<i>Mystacides</i>	5.36
5	<i>Hydropsyche</i>	5.16



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Log Number: 2346 Waterbody: Mare Brook - Unnamed Tributary - Station 330 Date Retrieved: 8/5/2015

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 19.8 deg C
Dissolved Oxygen: 7.74 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 247 uS/cm
Velocity: 9.1 cm/s
pH: 6.9
Wetted Width: 3 m
Bankfull Width: 4.3 m
Depth: 32 cm

Waterbody Information - Retrieval

Temperature: 21.4 deg C
Dissolved Oxygen: 6.8 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 221.7 uS/cm
Velocity: 12.2 cm/s
pH: 6.92
Wetted Width: 3.2 m
Bankfull Width: 4.3 m
Depth: 25 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood	Partly Open	Flat
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Below Wetland	Gravel 30 %
		Sand 50 %
		Silt 20 %

Landcover Summary - 2004 Data

Total Area (ac)	723	High Int. Dev. %	40.1	Water %	0.8	Non-vegetated %	0.4
		Med Int. Dev. %	12.2	Wetland %	3.3	Tilled Agriculture %	0.0
		Low Int. Dev. %	11.0	Upland Woody %	23.9	Grassland %	0.0
		Development %	63.4	Natural %	27.2	Human Altered %	72.0
						Impervious %	52.6

Sample Comments

7/8/2015 - 84.9 % DO. SLIGHT MILKY COLOR.
8/5/2015 - 77.3% DO.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-330

Waterbody: Mare Brook - Unnamed Tributary - Station 3 Town: Brunswick

Log Number: 2346

Subsample Factor: X4

Replicates: 3

Calculated: 12/8/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	2.67	2.67		PR	0.2	0.2
Rhabditophora	0301	1.33	1.33		--	0.1	0.1
<i>Nais</i>	08020202009		22.67		CG		1.4
<i>Nais behningi</i>	08020202009003	17.33			--	1.0	
<i>Nais variabilis</i>	08020202009009	5.33			--	0.3	
<i>Ripistes</i>	08020202011		9.33		--		0.6
<i>Ripistes parasita</i>	08020202011001	9.33			--	0.6	
<i>Glossiphonia</i>	08030101004		2.67		--		0.2
<i>Glossiphonia elegans</i>	08030101004001	2.67			--	0.2	
<i>Helobdella</i>	08030101005		5.33		--		0.3
<i>Helobdella modesta</i>	08030101005004	5.33			--	0.3	
<i>Erpobdella</i>	08030203002		1.33		--		0.1
<i>Erpobdella fervida</i>	08030203002002	1.33			--	0.1	
<i>Caecidotea</i>	09010101001	260.00	306.67	8	SH	15.6	18.3
<i>Caecidotea racovitzai racovitzai</i>	09010101001002	46.67			--	2.8	
<i>Hyaella</i>	09010203006	6.67	6.67	8	CG	0.4	0.4
<i>Aeshna</i>	09020301001	1.33	1.33	5	PR	0.1	0.1
<i>Boyeria</i>	09020301004		2.67	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.2	
Calopterygidae	09020307	2.67	2.67		--	0.2	0.2
<i>Labiobaetis</i>	09020401009		1.33		--		0.1
<i>Labiobaetis frondalis</i>	09020401009005	1.33			--	0.1	
<i>Lype</i>	09020602004		1.33	2	SC		0.1
<i>Lype diversa</i>	09020602004005	1.33			--	0.1	
Polycentropodidae	09020603	1.33			--	0.1	
<i>Cernotina</i>	09020603006	48.00	49.09		PR	2.9	2.9
<i>Polycentropus</i>	09020603010	10.67	10.91	6	PR	0.6	0.7
Hydropsychidae	09020604	14.67			--	0.9	
<i>Cheumatopsyche</i>	09020604015	50.67	56.47	5	CF	3.0	3.4
<i>Hydropsyche</i>	09020604016	50.67	86.19	4	CF	3.0	5.2
<i>Hydropsyche depravata species group</i>	09020604016041	26.67			CF	1.6	
<i>Pycnopsyche</i>	09020610049	1.33	1.33	4	SH	0.1	0.1
<i>Frenesia</i>	09020610058		1.33	0	SH		0.1
<i>Frenesia difficilis</i>	09020610058117	1.33			--	0.1	
<i>Psilotreta</i>	09020614068	2.67	2.67	0	SC	0.2	0.2
Leptoceridae	09020618	18.67			--	1.1	
<i>Ceraclea</i>	09020618072		1.60	3	CG		0.1



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Ceraclea alces</i>	09020618072144	1.33			--	0.1	
<i>Mystacides</i>	09020618075		89.60	4	CG		5.4
<i>Mystacides sepulchralis</i>	09020618075147	74.67			--	4.5	
<i>Oecetis</i>	09020618078	10.67	20.80	8	PR	0.6	1.2
<i>Oecetis persimilis</i>	09020618078157	6.67			--	0.4	
<i>Dicranota</i>	09021001005	1.33	1.33	3	PR	0.1	0.1
Chironomidae	09021011	36.00			--	2.2	
<i>Conchapelopia</i>	09021011004	33.33	34.79	6	PR	2.0	2.1
<i>Meropelopia</i>	09021011010	13.33	13.91		--	0.8	0.8
<i>Paramerina</i>	09021011013	12.00	12.52		--	0.7	0.7
<i>Rheopelopia</i>	09021011017		44.53		PR		2.7
<i>Rheopelopia acra group</i>	09021011017036	42.67			--	2.6	
<i>Trissopelopia</i>	09021011021		5.57		PR		0.3
<i>Trissopelopia ogemawi</i>	09021011021042	5.33			--	0.3	
<i>Zavrelimyia</i>	09021011022		2.78	8	PR		0.2
<i>Zavrelimyia sinuosa group</i>	09021011022046	2.67			--	0.2	
<i>Corynoneura</i>	09021011036	1.33	1.39	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		4.17	7	SH		0.2
<i>Cricotopus bicinctus</i>	09021011037057	2.67			--	0.2	
<i>Cricotopus annulator complex</i>	09021011037074	1.33			--	0.1	
<i>Nanocladius</i>	09021011049	5.33	94.62	3	CG	0.3	5.7
<i>Nanocladius spiniplenus</i>	09021011049090	85.33			--	5.1	
<i>Orthocladius</i>	09021011050		13.91	6	CG		0.8
<i>Orthocladius annectens</i>	09021011050092	13.33			--	0.8	
<i>Parametricnemus</i>	09021011053	46.67	48.70	5	CG	2.8	2.9
<i>Micropsectra</i>	09021011070	14.67	15.31	7	CG	0.9	0.9
<i>Rheotanytarsus</i>	09021011072		55.66	6	CF		3.3
<i>Rheotanytarsus exiguus group</i>	09021011072127	18.67			CF	1.1	
<i>Rheotanytarsus pellucidus</i>	09021011072128	34.67			CF	2.1	
<i>Tanytarsus</i>	09021011076	5.33	13.91	6	CF	0.3	0.8
<i>Tanytarsus buckleyi</i>	09021011076139	8.00			CF	0.5	
<i>Microtendipes</i>	09021011094		84.88	6	CF		5.1
<i>Microtendipes pedellus group</i>	09021011094166	20.00			--	1.2	
<i>Microtendipes rydalensis group</i>	09021011094168	61.33			--	3.7	
<i>Phaenopsectra</i>	09021011101		2.78	7	SC		0.2
<i>Phaenopsectra obediens</i>	09021011101182	2.67			SC	0.2	
<i>Polypedilum</i>	09021011102		411.88	6	SH		24.6
<i>Polypedilum aviceps</i>	09021011102181	341.33			--	20.4	



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<i>Polypedilum flavum</i>	09021011102182	45.33			--	2.7	
<i>Polypedilum laetum</i>	09021011102186	8.00			--	0.5	
<i>Simulium</i>	09021012047	2.67	26.67	4	CF	0.2	1.6
<i>Simulium vittatum</i>	09021012047064	5.33			--	0.3	
<i>Simulium tuberosum</i>	09021012047067	1.33			--	0.1	
<i>Simulium jenningsi species group</i>	09021012047070	1.33			CF	0.1	
<i>Simulium venustum/verecundum complex</i>	09021012047072	16.00			CF	1.0	
<i>Hemerodromia</i>	09021016057	37.33	37.33	3	PR	2.2	2.2
<i>Roederiodes</i>	09021016058	1.33	1.33	3	PR	0.1	0.1
<i>Neoporus</i>	09021103033	1.33	1.33		--	0.1	0.1
<i>Gyrinus</i>	09021104033	1.33	1.33	2	PR	0.1	0.1
<i>Stenelmis</i>	09021113070	6.67	12.00	5	SC	0.4	0.7
<i>Stenelmis crenata</i>	09021113070055	5.33			--	0.3	
Curculionidae	09021115	1.33	1.33		--	0.1	0.1
Basommatophora	100102	9.33	9.33		--	0.6	0.6
<i>Physa</i>	10010202027	2.67	2.67		SC	0.2	0.2
<i>Gyraulus</i>	10010203029		1.33		SC		0.1
<i>Gyraulus circumstriatus</i>	10010203029054	1.33			--	0.1	
<i>Helisoma</i>	10010203030		2.67		SC		0.2
<i>Helisoma anceps</i>	10010203030058	2.67			--	0.2	
<i>Ferrissia</i>	10010204035		14.67		SC		0.9
<i>Ferrissia rivularis</i>	10010204035066	14.67			--	0.9	
Sphaeriidae	10020201	8.00	8.00		CF	0.5	0.5
<i>Pisidium</i>	10020201002	1.33	1.33		CF	0.1	0.1