



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

Station Information

Station Number: S-457	River Basin: Saco
Waterbody: Mare Brook - Station 457	HUC8 Name: Presumpscot
Town: Brunswick	Latitude: 43 52 55.05 N
Directions: ABOVE PICNIC POND CONFLUENCE	Longitude: 69 55 25.2 W
	Stream Order: 2

Sample Information

Log Number: 2811	Type of Sample: ROCK BAG	Date Deployed: 7/17/2020
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/10/2020

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 5/14/2021
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 4/22/2021	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.56	Class A, B, or C	1.00
Class B	0.43	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.93
Class A or B	1.00	Class B or C or Non-Attainment	0.07
Class C or Non-Attainment	0.00		

Model Variables

01 Total Mean Abundance	1118.67	18 Relative Abundance Ephemeroptera	0.05
02 Generic Richness	81.00	19 EPT Generic Richness	20.00
03 Plecoptera Mean Abundance	1.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.33
04 Ephemeroptera Mean Abundance	50.67	23 Relative Generic Richness- Plecoptera	0.01
05 Shannon-Wiener Generic Diversity	4.26	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	17.00
06 Hilsenhoff Biotic Index	4.98	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.55	28 EP Generic Richness/14	0.50
08 Relative Generic Richness Diptera	0.42	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	28.67		
11 <i>Cheumatopsyche</i> Abundance	4.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.59		
13 Relative Abundance - Oligochaeta	0.10		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	6.00		
17 Chironomini Abundance (Family Functional Group)	35.33		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	27.44
2	<i>Chimarra</i>	8.52
3	<i>Nais</i>	7.48
4	<i>Rheocricotopus</i>	6.41
5	<i>Paratanytarsus</i>	6.35



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: ECOANALYSTS IDAHO

Waterbody Information - Deployment

Temperature: 15.3 deg C
Dissolved Oxygen: 10.07 mg/l
Dissolved Oxygen Saturation: 99.4 %
Specific Conductance: 252.7 uS/cm
Velocity: 39.6 cm/s
pH: 6.99
Wetted Width: 3.1 m
Bankfull Width: 3.1 m
Depth: 36 cm

Waterbody Information - Retrieval

Temperature: 19.6 deg C
Dissolved Oxygen: 9.3 mg/l
Dissolved Oxygen Saturation: 101.1 %
Specific Conductance: 267.8 uS/cm
Velocity: 30.5 cm/s
pH: 6.99
Wetted Width: 2.95 m
Bankfull Width: 3.1 m
Depth: 30 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Partly Open	Rolling
Upland Hardwood		
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Metals	Above Confluence	Sand 95 %
Nps Pollution		Silt 5 %
Toxic Organics		
Urban Runoff		

Landcover Summary - 2004 Data

Total Area (ac)	2004	High Int. Dev. %	3.0	Water %	0.3	Non-vegetated %	0.0
		Med Int. Dev. %	10.7	Wetland %	4.0	Tilled Agriculture %	0.3
		Low Int. Dev. %	23.2	Upland Woody %	29.6	Grassland %	2.3
		Development %	36.9	Natural %	33.8	Human Altered %	65.9
						Impervious %	22.9

Sample Comments



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Aquatic Life Taxonomic Inventory Report

Station Number: S-457

Waterbody: Mare Brook - Station 457

Town: Brunswick

Log Number: 2811

Subsample Factor: X1

Replicates: 3

Calculated: 4/22/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	0.67	0.67		PR	0.1	0.1
Platyhelminthes	03	5.00	5.00		--	0.4	0.4
<i>Prostoma</i>	04010101001	2.00	2.00		--	0.2	0.2
Lumbriculidae	08020101	2.67	2.67		--	0.2	0.2
Enchytraeidae	08020201	0.33	0.33		--	0.0	0.0
<i>Chaetogaster</i>	08020202002		0.33		--		0.0
<i>Chaetogaster diaphanus</i>	08020202002001	0.33			--	0.0	
<i>Pristina</i>	08020202004		1.33		--		0.1
<i>Pristina aequisetata</i>	08020202004001	0.33			--	0.0	
<i>Pristina jenkiniae</i>	08020202004010	1.00			--	0.1	
<i>Dero</i>	08020202007	21.67	21.67		CG	1.9	1.9
<i>Nais</i>	08020202009	15.33	83.67		CG	1.4	7.5
<i>Nais behningi</i>	08020202009003	68.33			--	6.1	
<i>Aulodrilus</i>	08020202018		1.67		--		0.1
<i>Aulodrilus plurisetata</i>	08020202018004	1.67			--	0.1	
<i>Aeolosoma</i>	08020301001	0.33	0.33		--	0.0	0.0
<i>Caecidotea</i>	09010101001	56.00	56.00	8	SH	5.0	5.0
<i>Gammarus</i>	09010201003	8.00	8.00	4	--	0.7	0.7
<i>Synurella</i>	09010202006	15.33	15.33		--	1.4	1.4
Plecoptera	090202	1.00	1.00		--	0.1	0.1
Aeshnidae	09020301	0.33	0.33		--	0.0	0.0
<i>Boyeria</i>	09020301004		1.00	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	1.00			--	0.1	
<i>Cordulegaster</i>	09020303019		0.67	3	PR		0.1
<i>Cordulegaster maculata</i>	09020303019042	0.67			--	0.1	
Calopterygidae	09020307	3.00	3.00		--	0.3	0.3
<i>Baetis</i>	09020401001	1.33	1.33	4	CG	0.1	0.1
<i>Acentrella</i>	09020401008	30.33	30.33	3	CG	2.7	2.7
<i>Labiobaetis</i>	09020401009		17.33		--		1.5
<i>Labiobaetis frondalis</i>	09020401009005	17.33			--	1.5	
<i>Anafroptilum (Centroptilum)</i>	09020401016	0.67	0.67	2	CG	0.1	0.1
<i>Leucrocuta</i>	09020402011	0.67	0.67	1	SC	0.1	0.1
<i>Serratella</i>	09020410037	0.33	0.33	2	CG	0.0	0.0
<i>Dolophilodes</i>	09020601001	0.33	0.33	0	CF	0.0	0.0
<i>Chimarra</i>	09020601003		95.33	2	CF		8.5
<i>Chimarra aterrima</i>	09020601003002	95.33			--	8.5	
Polycentropodidae	09020603	0.33	0.33		--	0.0	0.0



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		Actual	Adjusted			Actual	Adjusted
<i>Diplectrona</i>	09020604014		28.33	0	CF		2.5
<i>Diplectrona modesta</i>	09020604014025	28.33			--	2.5	
<i>Cheumatopsyche</i>	09020604015	4.00	4.00	5	CF	0.4	0.4
<i>Hydropsyche</i>	09020604016	28.67	28.67	4	CF	2.6	2.6
<i>Protoptila</i>	09020606022	0.33	0.33	1	SC	0.0	0.0
Hydroptilidae	09020607	0.33	0.33		--	0.0	0.0
<i>Oligostomis</i>	09020608039	1.00	1.00	2	PR	0.1	0.1
<i>Brachycentrus</i>	09020609043		10.33	0	CF		0.9
<i>Brachycentrus numerosus</i>	09020609043098	10.33			--	0.9	
Limnephilidae	09020610	0.67	0.67		--	0.1	0.1
<i>Lepidostoma</i>	09020611064	2.33	2.33	1	SH	0.2	0.2
<i>Oecetis</i>	09020618078	0.33	0.33	8	PR	0.0	0.0
Tipulidae	09021001	3.33			--	0.3	
<i>Dicranota</i>	09021001005	1.00	1.91	3	PR	0.1	0.2
<i>Hexatoma</i>	09021001008	0.67	1.27	2	PR	0.1	0.1
<i>Limnophila</i>	09021001009	2.00	3.82	3	PR	0.2	0.3
<i>Ablabesmyia</i>	09021011001		0.33	8	PR		0.0
<i>Ablabesmyia mallochii</i>	09021011001004	0.33			--	0.0	
<i>Thienemannimyia</i>	09021011020		5.67	3	PR		0.5
<i>Thienemannimyia group</i>	09021011020041	5.67			--	0.5	
<i>Pagastia</i>	09021011025	0.67	0.67	1	--	0.1	0.1
<i>Potthastia</i>	09021011026		2.67	2	CG		0.2
<i>Potthastia longimana</i>	09021011026046	2.67			--	0.2	
<i>Brillia</i>	09021011033	2.00	2.00	5	SH	0.2	0.2
<i>Corynoneura</i>	09021011036	1.33	1.33	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037	2.00	3.67	7	SH	0.2	0.3
<i>Cricotopus bicinctus</i>	09021011037057	1.67			--	0.1	
<i>Diplocladius</i>	09021011038	1.00	1.00	8	CG	0.1	0.1
<i>Eukiefferiella</i>	09021011041		0.33	8	CG		0.0
<i>Eukiefferiella claripennis group</i>	09021011041075	0.33			--	0.0	
<i>Heterotrissocladius</i>	09021011044		0.33	0	CG		0.0
<i>Heterotrissocladius marcidus</i>	09021011044083	0.33			--	0.0	
<i>Parakiefferiella</i>	09021011052	7.00	7.00		CG	0.6	0.6
<i>Parametriocnemus</i>	09021011053	16.00	16.00	5	CG	1.4	1.4
<i>Rheocricotopus</i>	09021011057	71.67	71.67	6	CG	6.4	6.4
<i>Thienemanniella</i>	09021011062	4.00	4.00	6	CG	0.4	0.4
<i>Tvetenia</i>	09021011065		51.00	5	CG		4.6
<i>Tvetenia bavarica group</i>	09021011065111	51.00			--	4.6	



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		<i>Micropsectra</i>	09021011070			0.33	0.33
<i>Paratanytarsus</i>	09021011071	63.33	71.00	6	--	5.7	6.3
<i>Paratanytarsus longistylus</i>	09021011071126	7.67		6	--	0.7	
<i>Rheotanytarsus</i>	09021011072		307.00	6	CF		27.4
<i>Rheotanytarsus exiguus group</i>	09021011072127	304.33			CF	27.2	
<i>Rheotanytarsus pellucidus</i>	09021011072128	2.67			CF	0.2	
<i>Tanytarsus</i>	09021011076	9.00	9.00	6	CF	0.8	0.8
<i>Cryptochironomus</i>	09021011082	0.33	0.33	8	PR	0.0	0.0
<i>Microtendipes</i>	09021011094		4.67	6	CF		0.4
<i>Microtendipes rydalensis group</i>	09021011094168	4.67			--	0.4	
<i>Paracladopelma</i>	09021011098	5.33	5.33	7	--	0.5	0.5
<i>Polypedilum</i>	09021011102		25.00	6	SH		2.2
<i>Polypedilum aviceps</i>	09021011102181	17.67			--	1.6	
<i>Polypedilum flavum</i>	09021011102182	1.67			--	0.1	
<i>Polypedilum illinoense group</i>	09021011102185	0.67			--	0.1	
<i>Polypedilum laetum</i>	09021011102186	0.33			--	0.0	
<i>Polypedilum scalaenum group</i>	09021011102189	1.33			--	0.1	
<i>Polypedilum halterale group</i>	09021011102193	3.00			--	0.3	
<i>Polypedilum epleri</i>	09021011102203	0.33			--	0.0	
<i>Brundiniella</i>	09021011115	0.67	0.67		--	0.1	0.1
<i>Odontomesa</i>	09021011121	6.67	6.67	4	--	0.6	0.6
<i>Rheosmittia</i>	09021011122	20.67	20.67		--	1.8	1.8
<i>Simulium</i>	09021012047	34.33	34.33	4	CF	3.1	3.1
<i>Chrysops</i>	09021014052	1.33	1.33	6	CG	0.1	0.1
<i>Atherix</i>	09021015055	6.33	6.33	2	PR	0.6	0.6
<i>Hemerodromia</i>	09021016057	3.33	3.33	3	PR	0.3	0.3
<i>Neoplasta</i>	09021016064	4.67	4.67		PR	0.4	0.4
<i>Ancyronyx</i>	09021113063		0.67	6	--		0.1
<i>Ancyronyx variegatus</i>	09021113063034	0.67			CG	0.1	
<i>Macronychus</i>	09021113065		4.67	4	--		0.4
<i>Macronychus glabratus</i>	09021113065040	4.67			--	0.4	
<i>Stenelmis</i>	09021113070	4.00	4.00	5	SC	0.4	0.4
<i>Torrenticola</i>	09030104001	2.33	2.33		--	0.2	0.2
<i>Lebertia</i>	09030105001	0.33	0.33		--	0.0	0.0
<i>Sperchon</i>	09030107001	1.33	1.33		--	0.1	0.1
Ostracoda	0906	0.33	0.33			0.0	0.0
Gastropoda	1001	0.33	0.33		--	0.0	0.0
Sphaeriidae	10020201	1.33	1.33		CF	0.1	0.1