



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

Station Information

Station Number: S-474 River Basin: Saco
Waterbody: Tannery Brook - Station 474 HUC8 Name: Presumpscot
Town: Gorham Latitude: 43 42 4.88 N
Directions: L1/LIBBY AVE TO QUEEN STREET DRIVE Longitude: 70 26 10.61 W
Stream Order: 2

Sample Information

Log Number: 2847 Type of Sample: ROCK BASKET Date Deployed: 7/29/2020
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/27/2020

Classification Attainment

Statutory Class: B Final Determination: NA Date: 3/3/2022
Model Result with $P \geq 0.6$: I Reason for Determination: Best Professional Judgement
Date Last Calculated: 10/19/2021 Comments: Minimum provision for Total Mean Abundance not met, but sensitive taxa lacking and community declined since 2015 when model result was NA.

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.00	Class A, B, or C	0.00
Class B	0.00	Non-Attainment	1.00
B or Better Model		A Model	
Class A or B	0.00	Class A	0.00
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	1.00

Model Variables

01 Total Mean Abundance	49.00	18 Relative Abundance Ephemeroptera	0.01
02 Generic Richness	36.00	19 EPT Generic Richness	8.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	0.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	4.36	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	6.67
06 Hilsenhoff Biotic Index	5.32	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.50	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.50	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	3.33		
11 <i>Cheumatopsyche</i> Abundance	3.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.44		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	5.67		
17 Chironomini Abundance (Family Functional Group)	10.00		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Microtendipes</i>	18.37
2	<i>Stenelmis</i>	11.56
3	<i>Hydropsyche</i>	6.80
4	<i>Zavreliomyia</i>	6.80
5	<i>Tanytarsus</i>	6.80



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Town: Gorham

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Log Number: 2847

Waterbody: Tannery Brook - Station 474

Date Retrieved: 8/27/2020

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: ECOANALYSTS IDAHO

Waterbody Information - Deployment

Temperature: 20.1 deg C
Dissolved Oxygen: 9.3 mg/l
Dissolved Oxygen Saturation: 102.7 %
Specific Conductance: 570 uS/cm
Velocity: 0.1 cm/s
pH: 7.69
Wetted Width: 4.6 m
Bankfull Width: 7.25 m
Depth: 42 cm

Waterbody Information - Retrieval

Temperature: 14.8 deg C
Dissolved Oxygen: 10.48 mg/l
Dissolved Oxygen Saturation: 104.1 %
Specific Conductance: 540 uS/cm
Velocity: 0.1 cm/s
pH: 7.78
Wetted Width: 5.25 m
Bankfull Width: 7.25 m
Depth: 51 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name	Canopy Cover	Terrain
Urban	Partly Open	Rolling
Potential Stressor	Location	Substrate
Nps Pollution	Below Urban NPS	Boulder 10 % Detritus 5 % Gravel 10 % Rubble/Cobble 50 % Sand 5 % Silt 20 %

Landcover Summary - 2004 Data

Total Area (ac)	1721	High Int. Dev. %	3.8	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	3.9	Wetland %	1.7	Tilled Agriculture %	2.4
		Low Int. Dev. %	6.8	Upland Woody %	54.7	Grassland %	14.3
		Development %	14.4	Natural %	56.5	Human Altered %	43.5
						Impervious %	11.6
Total Land (ac)	1720	High Int. Dev. %	3.8	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	3.9	Wetland %	1.7	Tilled Agriculture %	2.4
		Low Int. Dev. %	6.8	Upland Woody %	54.7	Grassland %	14.3
		Development %	14.4	Natural %	56.5	Human Altered %	43.5
						Impervious %	11.6

Sample Comments

VISIBLE FLOW. HORSE-HAIR WORMS OBSERVED.



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Aquatic Life Taxonomic Inventory Report

Station Number: S-474	Waterbody: Tannery Brook - Station 474	Town: Gorham
Log Number: 2847	Subsample Factor: X1	Replicates: 3
		Calculated: 10/19/2021

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		0.33		CG		0.7
<i>Nais behningi</i>	08020202009003	0.33			--	0.7	
<i>Orconectes</i>	09010301008	0.33	0.33		CG	0.7	0.7
<i>Boyeria</i>	09020301004	1.00	1.00	2	PR	2.0	2.0
<i>Calopteryx</i>	09020307043	2.33	2.33	5	PR	4.8	4.8
<i>Argia</i>	09020309048	0.67	0.67	7	PR	1.4	1.4
<i>Anafroptilum (Centroptilum)</i>	09020401016	0.33	0.33	2	CG	0.7	0.7
<i>Chimarra</i>	09020601003		0.67	2	CF		1.4
<i>Chimarra aterrima</i>	09020601003002	0.67			--	1.4	
<i>Nyctiophylax</i>	09020603009	1.67	1.67	5	PR	3.4	3.4
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	2.7	2.7
<i>Phylocentropus</i>	09020603011	0.33	0.33	5	CF	0.7	0.7
<i>Cheumatopsyche</i>	09020604015	3.00	3.00	5	CF	6.1	6.1
<i>Hydropsyche</i>	09020604016		3.33	4	CF		6.8
<i>Hydropsyche morosa</i>	09020604016030	3.00			--	6.1	
<i>Hydropsyche betteni</i>	09020604016037	0.33			--	0.7	
Limnephilidae	09020610				--		
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.7	0.7
<i>Nigronia</i>	09020701003		1.33	0	PR		2.7
<i>Nigronia serricornis</i>	09020701003003	1.33			--	2.7	
<i>Labrundinia</i>	09021011008	0.67	0.67	7	PR	1.4	1.4
<i>Procladius</i>	09021011015	1.67	1.67	9	PR	3.4	3.4
<i>Zavrelimyia</i>	09021011022	3.33	3.33	8	PR	6.8	6.8
<i>Brillia</i>	09021011033	0.33	0.33	5	SH	0.7	0.7
<i>Cricotopus</i>	09021011037		0.33	7	SH		0.7
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.7	
<i>Eukiefferiella</i>	09021011041		0.33	8	CG		0.7
<i>Eukiefferiella discoloripes</i>	09021011041085	0.33			--	0.7	
<i>Nanocladius</i>	09021011049	0.67	0.67	3	CG	1.4	1.4
<i>Parametriocnemus</i>	09021011053	0.33	0.33	5	CG	0.7	0.7
<i>Thienemanniella</i>	09021011062	0.33	0.33	6	CG	0.7	0.7
<i>Tvetenia</i>	09021011065		0.33	5	CG		0.7
<i>Tvetenia bavarica group</i>	09021011065111	0.33			--	0.7	
<i>Paratanytarsus</i>	09021011071	1.00	1.00	6	--	2.0	2.0
<i>Rheotanytarsus</i>	09021011072		0.33	6	CF		0.7
<i>Rheotanytarsus exiguus group</i>	09021011072127	0.33			CF	0.7	
<i>Rheotanytarsus pellucidus</i>	09021011072128				CF		



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		Actual	Adjusted			Actual	Adjusted
<i>Stempellinella</i>	09021011074	1.67	1.67	2	--	3.4	3.4
<i>Tanytarsus</i>	09021011076	3.33	3.33	6	CF	6.8	6.8
<i>Microtendipes</i>	09021011094		9.00	6	CF		18.4
<i>Microtendipes pedellus group</i>	09021011094166	7.67			--	15.6	
<i>Microtendipes rydalensis group</i>	09021011094168	1.33			--	2.7	
<i>Paratendipes</i>	09021011100	0.33	0.33	8	CG	0.7	0.7
<i>Polypedilum</i>	09021011102		0.67	6	SH		1.4
<i>Polypedilum flavum</i>	09021011102182	0.67			--	1.4	
<i>Simulium</i>	09021012047	0.33	0.33	4	CF	0.7	0.7
<i>Dubiraphia</i>	09021113064	0.67	0.67	6	--	1.4	1.4
<i>Macronychus</i>	09021113065		0.33	4	--		0.7
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.7	
<i>Oulimnius</i>	09021113068	0.33	0.33		--	0.7	0.7
<i>Stenelmis</i>	09021113070	5.67	5.67	5	SC	11.6	11.6