



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

Station Information

Station Number: S-520	River Basin: Maine Coastal
Waterbody: Sam Hill Brook - Station 520	HUC8 Name: Maine Coastal
Town: T25 Md Bpp	Latitude: 44 52 38.73 N
Directions: AT WEIR	Longitude: 67 44 5.18 W
	Stream Order: 1

Sample Information

Log Number: 2889	Type of Sample: ROCK BAG	Date Deployed: 7/27/2021
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/25/2021

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 1/13/2023
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 10/31/2022	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.95	Class A, B, or C	1.00
Class B	0.04	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	111.33	18 Relative Abundance Ephemeroptera	0.28
02 Generic Richness	41.00	19 EPT Generic Richness	17.00
03 Plecoptera Mean Abundance	15.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	7.67
04 Ephemeroptera Mean Abundance	31.33	23 Relative Generic Richness- Plecoptera	0.07
05 Shannon-Wiener Generic Diversity	4.33	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.33
06 Hilsenhoff Biotic Index	2.90	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	1.33
07 Relative Abundance - Chironomidae	0.24	28 EP Generic Richness/14	0.57
08 Relative Generic Richness Diptera	0.41	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.33		
12 EPT Generic Richness/ Diptera Generic Richness	1.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	8.67		
17 Chironomini Abundance (Family Functional Group)	3.00		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Paraleptophlebia</i>	18.56
2	<i>Sweltsa</i>	9.88
3	<i>Psilotreta</i>	8.98
4	<i>Micropsectra</i>	6.89
5	<i>Pisidium</i>	6.29



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

Station Number: S-520 Town: T25 Md Bpp Date Deployed: 7/27/2021
Log Number: 2889 Waterbody: Sam Hill Brook - Station 520 Date Retrieved: 8/25/2021

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Waterbody Information - Retrieval

Temperature: 17.9 deg C
Dissolved Oxygen: 9.47 mg/l
Dissolved Oxygen Saturation: 99.8 %
Specific Conductance: 28.4 uS/cm
Velocity: 2.03 cm/s
pH: 5.56
Wetted Width: 5.1 m
Bankfull Width: 5.4 m
Depth: 24 cm

Water Chemistry - 7/27/2021

Nitrate + Nitrite As Nitrogen	0.06 mg/l	Nitrate As Nitrogen	0.06 mg/l
Nitrite As Nitrogen	mg/l	Orthophosphate As Phosphorus	2 ug/l
Total Alkalinity	9.5 mg/l	Total Kjeldahl Nitrogen (organic A	0.3 mg/l
Total Phosphorus Mixed Forms (po	17 ug/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Dense	Hilly
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Above Agriculture NPS	
Low Gradient	Below Agriculture NPS	
Nps Pollution		
Nutrients		
Pesticides		

Landcover Summary - 2004 Data

Total Area (ac)	1040	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	6.6	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.9	Upland Woody %	92.5	Grassland %	0.0
		Development %	0.9	Natural %	67.9	Human Altered %	32.1
						Impervious %	1.0
Total Land (ac)	1040	High Int. Dev. %	0.0	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.0	Wetland %	6.6	Tilled Agriculture %	0.0
		Low Int. Dev. %	0.9	Upland Woody %	92.5	Grassland %	0.0
		Development %	0.9	Natural %	67.9	Human Altered %	32.1
						Impervious %	1.0

Sample Comments



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

Station Number: S-520

Waterbody: Sam Hill Brook - Station 520

Town: T25 Md Bpp

Log Number: 2889

Subsample Factor: X1

Replicates: 3

Calculated: 10/31/2022

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Erpobdellidae	08030203	0.33	0.33		--	0.3	0.3
<i>Leuctra</i>	09020204020	3.67	3.67	0	SH	3.3	3.3
Perlodidae	09020207	0.67	0.67		--	0.6	0.6
<i>Sweltsa</i>	09020208040	11.00	11.00		PR	9.9	9.9
Gomphidae	09020302	0.33	0.33		--	0.3	0.3
<i>Lanthus</i>	09020302014	1.00	1.00		PR	0.9	0.9
<i>Acerpenna</i>	09020401007		0.33	5	CG		0.3
<i>Acerpenna macdunnoughi</i>	09020401007001	0.33			--	0.3	
<i>Maccaffertium</i>	09020402015	1.00	1.33	4	SC	0.9	1.2
<i>Maccaffertium modestum</i>	09020402015051	0.33			--	0.3	
<i>Paraleptophlebia</i>	09020406026	20.67	20.67	1	CG	18.6	18.6
<i>Ephemerella</i>	09020410035		2.33	1	CG		2.1
<i>Ephemerella aurivillii</i>	09020410035104	2.33			--	2.1	
<i>Eurylophella</i>	09020410036		6.67	3	CG		6.0
<i>Eurylophella funeralis</i>	09020410036115	6.67			SH	6.0	
Polycentropodidae	09020603	0.33			--	0.3	
<i>Neureclipsis</i>	09020603008	0.33	0.39	7	CF	0.3	0.3
<i>Polycentropus</i>	09020603010	1.67	1.94	6	PR	1.5	1.7
<i>Cheumatopsyche</i>	09020604015	0.33	0.33	5	CF	0.3	0.3
<i>Rhyacophila</i>	09020605019	0.67	2.33	2	PR	0.6	2.1
<i>Rhyacophila fuscula</i>	09020605019060	0.33			PR	0.3	
<i>Rhyacophila minora</i>	09020605019063	1.33			PR	1.2	
<i>Agapetus</i>	09020606021	0.33	0.33	0	SC	0.3	0.3
<i>Oligostomis</i>	09020608039	1.00	1.00	2	PR	0.9	0.9
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.6	0.6
<i>Psilotreta</i>	09020614068	8.00	10.00	0	SC	7.2	9.0
<i>Psilotreta frontalis</i>	09020614068134	2.00			--	1.8	
<i>Molanna</i>	09020615069	1.00	1.00	6	SC	0.9	0.9
<i>Dicranota</i>	09021001005	0.33	0.33	3	PR	0.3	0.3
Ceratopogonidae	09021010	0.33	0.33		--	0.3	0.3
<i>Labrundinia</i>	09021011008		1.00	7	PR		0.9
<i>Labrundinia pilosella</i>	09021011008022	1.00			--	0.9	
<i>Thienemannimyia</i>	09021011020		2.67	3	PR		2.4
<i>Thienemannimyia group</i>	09021011020041	2.67			--	2.4	
<i>Trissopelopia</i>	09021011021		5.00		PR		4.5
<i>Trissopelopia ogemawi</i>	09021011021042	5.00			--	4.5	
<i>Brillia</i>	09021011033	0.33	0.33	5	SH	0.3	0.3



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

Station Number: S-520

Waterbody: Sam Hill Brook - Station 520

Town: T25 Md Bpp

Log Number: 2889

Subsample Factor: X1

Replicates: 3

Calculated: 10/31/2022

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Parametrioconemus</i>	09021011053	1.33	1.33	5	CG	1.2	1.2
<i>Psectrocladius</i>	09021011056	0.33	0.33	8	CG	0.3	0.3
<i>Rheocricotopus</i>	09021011057	1.67	1.67	6	CG	1.5	1.5
<i>Micropsectra</i>	09021011070	7.67	7.67	7	CG	6.9	6.9
<i>Rheotanytarsus</i>	09021011072		4.00	6	CF		3.6
<i>Rheotanytarsus pellucidus</i>	09021011072128	4.00			CF	3.6	
<i>Microtendipes</i>	09021011094		0.33	6	CF		0.3
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.3	
<i>Phaenopsectra</i>	09021011101	0.33	0.33	7	SC	0.3	0.3
<i>Polypedilum</i>	09021011102		2.00	6	SH		1.8
<i>Polypedilum aviceps</i>	09021011102181	1.67			--	1.5	
<i>Polypedilum fallax group</i>	09021011102183	0.33			--	0.3	
<i>Tribelos</i>	09021011107		0.33	5	CG		0.3
<i>Tribelos jucundus</i>	09021011107198	0.33			--	0.3	
<i>Simulium</i>	09021012047	6.00	6.00	4	CF	5.4	5.4
Tabanidae	09021014	0.33	0.33		--	0.3	0.3
<i>Optioservus</i>	09021113067		0.67	3	SC		0.6
<i>Optioservus tardella</i>	09021113067052	0.67			--	0.6	
<i>Amnicola</i>	10010104013	0.33	0.33		SC	0.3	0.3
Sphaeriidae	10020201	3.00	3.00		CF	2.7	2.7
<i>Pisidium</i>	10020201002	7.00	7.00		CF	6.3	6.3