



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

Station Information

Station Number:	S-1000	River Basin:	Androscoggin
Waterbody:	Frye Brook - Station 1000	HUC8 Name:	Lower Androscoggin
Town:	Andover West Surplus Twp	Latitude:	44 38 27.82 N
Directions:	ROUTE 5 TO NEWTON STREET ON LEFT, CONTINUE ON UPTON ROAD SEVERAL MILES TO HIKING TRAIL IN STATE PRESERVE ON LEFT, BEFORE BRIDGE.	Longitude:	70 51 24.98 W
		Stream Order:	2

Sample Information

Log Number:	2678	Type of Sample:	ROCK BAG	Date Deployed:	8/1/2018
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/27/2018

Classification Attainment

Statutory Class:	A	Final Determination:	I	Date:	10/24/2018
Model Result with $P \geq 0.6$:	I	Reason for Determination:	Best Professional Judgement		
Date Last Calculated:	10/23/2018	Comments:	Minimum Provision for Total Mean Abundance not met. Resample.		

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.95	Class C	0.00	Class A, B, or C	1.00
Class B	0.04	NA	0.00	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	34.67	18 Relative Abundance Ephemeroptera	0.46
02 Generic Richness	31.00	19 EPT Generic Richness	16.00
03 Plecoptera Mean Abundance	5.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.33
04 Ephemeroptera Mean Abundance	16.00	23 Relative Generic Richness- Plecoptera	0.13
05 Shannon-Wiener Generic Diversity	4.47	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.67
06 Hilsenhoff Biotic Index	3.15	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	2.33
07 Relative Abundance - Chironomidae	0.18	28 EP Generic Richness/14	0.93
08 Relative Generic Richness Diptera	0.35	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.45		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	1.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.00		
17 Chironomini Abundance (Family Functional Group)	0.67		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Eurylophella</i>	12.50
2	<i>Ephemerella</i>	8.65
3	<i>Rhyacophila</i>	7.69
4	<i>Isoperla</i>	6.73
5	<i>Acerpenna</i>	6.73
6	<i>Maccaffertium</i>	6.73



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

Station Number: S-1000	Town: Andover West Surplus Twp	Date Deployed: 8/1/2018
Log Number: 2678	Waterbody: Frye Brook - Station 1000	Date Retrieved: 8/27/2018

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature:	17.3 deg C
Dissolved Oxygen:	10.33 mg/l
Dissolved Oxygen Saturation:	109.2 %
Specific Conductance:	19.5 uS/cm
Velocity:	18.288 cm/s
pH:	6.85
Wetted Width:	5.8 m
Bankfull Width:	10.3 m
Depth:	45 cm

Waterbody Information - Retrieval

Temperature:	17.8 deg C
Dissolved Oxygen:	10.43 mg/l
Dissolved Oxygen Saturation:	111.4 %
Specific Conductance:	22.9 uS/cm
Velocity:	3.048 cm/s
pH:	6.88
Wetted Width:	6.2 m
Bankfull Width:	10.3 m
Depth:	45 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Partly Open	Mountainous
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above Road Crossing	Bedrock 10 %
	Pristine Landscape	Boulder 50 %
		Gravel 10 %
		Rubble/Cobble 30 %

Landcover Summary - 2004 Data

Sample Comments



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

Station Number: S-1000	Waterbody: Frye Brook - Station 1000	Town: Andover West Surplus Twp
Log Number: 2678	Subsample Factor: X1	Replicates: 3
		Calculated: 10/23/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Pteronarcys</i>	09020205023	1.00	1.00	0	SH	2.9	2.9
<i>Tallaperla</i>	09020206025	1.00	1.00		SH	2.9	2.9
<i>Isoperla</i>	09020207026	2.33	2.33	2	PR	6.7	6.7
<i>Agnetina</i>	09020209050		1.00	2	PR		2.9
<i>Agnetina capitata</i>	09020209050152	1.00		2	PR	2.9	
<i>Baetis</i>	09020401001		0.67	4	CG		1.9
<i>Baetis flavistriga</i>	09020401001004	0.33			--	1.0	
<i>Baetis tricaudatus</i>	09020401001012	0.33			--	1.0	
<i>Acerpenna</i>	09020401007	0.33	2.33	5	CG	1.0	6.7
<i>Acerpenna macdunnoughi</i>	09020401007001	1.67			--	4.8	
<i>Acerpenna pygmaea</i>	09020401007011	0.33			--	1.0	
<i>Heptagenia</i>	09020402010	0.33	0.33	2	SC	1.0	1.0
<i>Leucrocota</i>	09020402011	0.33	0.33	1	SC	1.0	1.0
<i>Maccaffertium</i>	09020402015	2.33	2.33	4	SC	6.7	6.7
Leptophlebiidae	09020406	0.67	0.67		--	1.9	1.9
<i>Habrophlebia</i>	09020406023		2.00		--		5.8
<i>Habrophlebia vibrans</i>	09020406023072	2.00			--	5.8	
<i>Ephemerella</i>	09020410035	2.00	3.00	1	CG	5.8	8.7
<i>Ephemerella aurivillii</i>	09020410035104	1.00			--	2.9	
<i>Eurylophella</i>	09020410036		4.33	3	CG		12.5
<i>Eurylophella funeralis</i>	09020410036115	4.33			SH	12.5	
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	1.0	1.0
<i>Rhyacophila</i>	09020605019	2.67	2.67	2	PR	7.7	7.7
<i>Lepidostoma</i>	09020611064	2.00	2.00	1	SH	5.8	5.8
<i>Nigronia</i>	09020701003		0.33	0	PR		1.0
<i>Nigronia serricornis</i>	09020701003003	0.33			--	1.0	
<i>Hexatoma</i>	09021001008	0.33	0.33	2	PR	1.0	1.0
<i>Trissopelopia</i>	09021011021	1.00	1.00		PR	2.9	2.9
<i>Cricotopus</i>	09021011037		0.33	7	SH		1.0
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	1.0	
<i>Parametriocnemus</i>	09021011053	0.33	0.33	5	CG	1.0	1.0
<i>Rheocricotopus</i>	09021011057	0.33	0.33	6	CG	1.0	1.0
<i>Synorthocladius</i>	09021011061	0.33	0.33	2	CG	1.0	1.0
<i>Thienemanniella</i>	09021011062	1.00	1.00	6	CG	2.9	2.9
<i>Micropsectra</i>	09021011070	1.33	1.33	7	CG	3.8	3.8
<i>Rheotanytarsus</i>	09021011072		0.67	6	CF		1.9
<i>Rheotanytarsus pellucidus</i>	09021011072128	0.67			CF	1.9	



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

Station Number: S-1000	Waterbody: Frye Brook - Station 1000	Town: Andover West Surplus Twp
Log Number: 2678	Subsample Factor: X1	Replicates: 3
		Calculated: 10/23/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Tanytarsus</i>	09021011076	0.33	0.33	6	CF	1.0	1.0
<i>Polypedilum</i>	09021011102		0.67	6	SH		1.9
<i>Polypedilum aviceps</i>	09021011102181	0.67			--	1.9	
<i>Simulium</i>	09021012047			4	CF		
<i>Dubiraphia</i>	09021113064	0.33	0.33	6	--	1.0	1.0
<i>Oulimnius</i>	09021113068		0.67		--		1.9
<i>Oulimnius latiusculus</i>	09021113068049	0.67			--	1.9	
<i>Promoresia</i>	09021113069		0.33		--		1.0
<i>Promoresia tardella</i>	09021113069052	0.33			--	1.0	