



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

Station Information

Station Number:	S-356	DEP Drainage:	Androscoggin
Waterbody:	Stetson Brook - Station 356	HUC8:	01040002
Town:	Lewiston	HUC8 Name:	Lower Androscoggin
Directions:	65 M BELOW STETSON RD. CROSSING	Latitude:	44 7 41.68 N
		Longitude:	70 10 56.56 W
		Stream Order:	1

Sample Information

Log Number:	1744	Type of Sample:	ROCK BAG	Date Deployed:	7/24/2008
Subsample Factor:	X4	Replicates:	3	Date Retrieved:	8/21/2008

Classification Attainment

Statutory Class:	B	Final Determination:	A	Date:	3/23/2009
Model Result with P>.6:	A	Reason for Determination:	Model		
Date Last Calculated:	3/18/2009	Comments:			

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.69	Class C	0.00	Class A, B, or C	1.00
Class B	0.30	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	0.93
Class C or Non-Attainment			0.00	Class B or C or Non-Attainment	0.07

Model Variables

01 Total Mean Abundance	481.33	18 Relative Abundance Ephemeroptera	0.38
02 Generic Richness	35.00	19 EPT Generic Richness	15.00
03 Plecoptera Mean Abundance	20.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	182.67	23 Relative Generic Richness- Plecoptera	0.11
05 Shannon-Wiener Generic Diversity	3.82	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	57.11
06 Hilsenhoff Biotic Index	3.71	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	104.92
07 Relative Abundance - Chironomidae	0.09	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.34	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	29.81		
11 <i>Cheumatopsyche</i> Abundance	52.85		
12 EPT Generic Richness/ Diptera Generic Richness	1.25		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	14.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.42		
17 Chironomini Abundance (Family Functional Group)	21.29		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Maccaffertium</i>	20.14
2	<i>Psephenus</i>	13.30
3	<i>Chimarra</i>	12.47
4	<i>Cheumatopsyche</i>	10.98
5	<i>Acerpenna</i>	8.15



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Town: Lewiston

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Log Number: 1744

Waterbody: Stetson Brook - Station 356

Date Retrieved: 8/21/2008

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 21.5 deg C
Dissolved Oxygen: 8.1 mg/l
Specific Conductance: 130 uS/cm
Velocity: 34 cm/s
pH: 6.95
Wetted Width: 11 m
Bankfull Width: 11 m
Depth: 25 cm

Waterbody Information - Retrieval

Temperature: 17.3 deg C
Dissolved Oxygen: 8.8 mg/l
Specific Conductance: 105 uS/cm
Velocity: 42 cm/s
pH: 7.1
Wetted Width: 11 m
Bankfull Width: 11 m
Depth: 23 cm

Water Chemistry - Retrieval

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Swamp Hardwood

Canopy Partly Open

Rolling Terrain

Upland Conifer

Upland Hardwood

Urban

Stressor

Location

Substrate

Urban Runoff Stressor

Below Road Crossing

Below Urban NPS

Boulder 10 %

Gravel 20 %

Rubble/Cobble 50 %

Sand 15 %

Silt 5 %

Landcover Summary - 2004 Data

Total Area (ac)	1554	High Int. Dev. %	0.3	Water %	0.0	Non-vegetated %	0.0
Total Land (ac)	1554	Med Int. Dev. %	0.4	Wetland %	4.5	Tilled Agriculture %	4.9
		Low Int. Dev. %	4.0	Upland Woody %	67.7	Human Altered %	27.7
		Development %	4.8	Natural %	72.3	Impervious %	4.6

Sample Comments

THIS STREAM MAY BE GETTING SOME URBAN RUNOFF



Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report

Station Number: S-356

Waterbody: Stetson Brook - Station 356

Town: Lewiston

Log Number: 1744

Subsample Factor: X4

Replicates: 3

Calculated: 3/18/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Caecidotea</i>	09010101001		1.33	8	SH		0.3
<i>Caecidotea racovitzai racovitzai</i>	09010101001002	1.33			--	0.3	
<i>Orconectes</i>	09010301008		1.33		CG		0.3
<i>Orconectes virilis</i>	09010301008016	1.33			--	0.3	
<i>Paracapnia</i>	09020203018	4.00	4.00	1	SH	0.8	0.8
Perlodidae	09020207	1.33	1.33		--	0.3	0.3
<i>Acroneuria</i>	09020209042		8.00	0	PR		1.7
<i>Acroneuria abnormis</i>	09020209042121	8.00		0	PR	1.7	
<i>Attaneuria</i>	09020209043		6.67	1	--		1.4
<i>Attaneuria ruralis</i>	09020209043128	6.67			--	1.4	
<i>Boyeria</i>	09020301004		5.33	2	PR		1.1
<i>Boyeria grafiana</i>	09020301004011	2.67			--	0.6	
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.6	
Gomphidae	09020302	1.33	1.33		--	0.3	0.3
Baetidae	09020401	2.67			--	0.6	
<i>Baetis</i>	09020401001	4.00	14.02	4	CG	0.8	2.9
<i>Baetis flavistriga</i>	09020401001004	8.00			--	1.7	
<i>Baetis pluto</i>	09020401001009	1.33			--	0.3	
<i>Acerpenna</i>	09020401007	20.00	39.25	5	CG	4.2	8.2
<i>Acerpenna pygmaea</i>	09020401007011	17.33			--	3.6	
<i>Diphetor</i>	09020401013		1.40		--		0.3
<i>Diphetor hageni</i>	09020401013001	1.33			--	0.3	
Heptageniidae	09020402	8.00			--	1.7	
<i>Leucrocota</i>	09020402011	25.33	27.08	1	SC	5.3	5.6
<i>Maccaffertium</i>	09020402015	61.33	96.92	4	SC	12.7	20.1
<i>Maccaffertium luteum</i>	09020402015049	28.00			--	5.8	
<i>Maccaffertium modestum</i>	09020402015051	1.33			--	0.3	
<i>Isonychia</i>	09020404018	2.67	2.67	2	CF	0.6	0.6
Ephemerellidae	09020410	1.33	1.33		--	0.3	0.3
<i>Chimarra</i>	09020601003	60.00	60.00	2	CF	12.5	12.5
Hydropsychidae	09020604	1.33			--	0.3	
<i>Cheumatopsyche</i>	09020604015	52.00	52.85	5	CF	10.8	11.0
<i>Hydropsyche</i>	09020604016	12.00	29.81	4	CF	2.5	6.2
<i>Hydropsyche sparna</i>	09020604016032	4.00			--	0.8	
<i>Hydropsyche depravata-complex</i>	09020604016041	13.33			CF	2.8	
<i>Glossosoma</i>	09020606020	1.33	1.33	0	SC	0.3	0.3
Limnephilidae	09020610				--		
<i>Nigronia</i>	09020701003		2.67	0	PR		0.6



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		Actual	Adjusted			Actual	Adjusted
<i>Nigronia serricornis</i>	09020701003003	2.67			--	0.6	
<i>Tipula</i>	09021001002	1.33	1.33	4	SH	0.3	0.3
Chironomidae	09021011	2.67			--	0.6	
<i>Ablabesmyia</i>	09021011001		1.42	8	PR		0.3
<i>Ablabesmyia mallochi</i>	09021011001004	1.33			--	0.3	
<i>Cricotopus</i>	09021011037			7	SH		
<i>Nanocladius</i>	09021011049	1.33	2.84	3	CG	0.3	0.6
<i>Nanocladius branchicolus</i>	09021011049091	1.33			--	0.3	
<i>Parametriocnemus</i>	09021011053	1.33	1.42	5	CG	0.3	0.3
<i>Rheocricotopus</i>	09021011057		1.42	6	CG		0.3
<i>Rheocricotopus robacki</i>	09021011057105	1.33			--	0.3	
<i>Tvetenia</i>	09021011065		2.84	5	CG		0.6
<i>Tvetenia paucunca</i>	09021011065114	2.67			--	0.6	
<i>Rheotanytarsus</i>	09021011072	6.67	7.10	6	CF	1.4	1.5
<i>Stempellinella</i>	09021011074		2.84	2	--		0.6
<i>Stempellinella sp. a epler</i>	09021011074002	2.67			--	0.6	
<i>Tanytarsus</i>	09021011076	2.67	2.84	6	CF	0.6	0.6
<i>Polypedilum</i>	09021011102		21.29	6	SH		4.4
<i>Polypedilum aviceps</i>	09021011102181	13.33			--	2.8	
<i>Polypedilum flavum</i>	09021011102182	6.67			--	1.4	
<i>Simulium</i>	09021012047		4.00	4	CF		0.8
<i>Simulium tuberosum</i>	09021012047067	2.67			--	0.6	
<i>Simulium jenningsi complex</i>	09021012047070	1.33			CF	0.3	
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.3	0.3
<i>Psephenus</i>	09021108058		64.00	4	SC		13.3
<i>Psephenus herricki</i>	09021108058028	64.00			--	13.3	
<i>Ferrissia</i>	10010204035		6.67		SC		1.4
<i>Ferrissia rivularis</i>	10010204035066	6.67			--	1.4	
<i>Pisidium</i>	10020201002	1.33	1.33		CF	0.3	0.3