



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

Station Information

Station Number: S-617 DEP Drainage: Kennebec
Waterbody: Sandy River - Station 617 HUC8: 01030003
Town: New Sharon HUC8 Name: Lower Kennebec
Directions: DWNSTRM OF RT 2/27 BRIDGE Latitude: 44 38 19.97 N
Longitude: 70 0 49.35 W
Stream Order: 4

Sample Information

Log Number: 2111 Type of Sample: ROCK BAG Date Deployed: 7/17/2012
Subsample Factor: X4 Replicates: 3 Date Retrieved: 8/15/2012

Classification Attainment

Statutory Class: B Final Determination: A Date: 3/7/2013
Model Result with P>.6: A Reason for Determination: Model
Date Last Calculated: 3/7/2013 Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.84	Class A, B, or C	1.00
Class B	0.16	Non-Attainment	0.00
B or Better Model		A Model	
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	634.67	18 Relative Abundance Ephemeroptera	0.55
02 Generic Richness	46.00	19 EPT Generic Richness	26.00
03 Plecoptera Mean Abundance	20.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.39
04 Ephemeroptera Mean Abundance	346.67	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.28	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	12.19
06 Hilsenhoff Biotic Index	3.47	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	160.78
07 Relative Abundance - Chironomidae	0.05	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.26	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	43.92		
11 <i>Cheumatopsyche</i> Abundance	9.41		
12 EPT Generic Richness/ Diptera Generic Richness	2.17		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	20.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	5.57		
17 Chironomini Abundance (Family Functional Group)	11.13		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Maccaffertium</i>	22.18
2	<i>Leucrocuta</i>	7.99
3	<i>Chimarra</i>	7.77
4	<i>Serratella</i>	7.56
5	<i>Hydropsyche</i>	6.92



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Waterbody: Sandy River - Station 617

Date Retrieved: 8/15/2012

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 25.7 deg C
Dissolved Oxygen: 7.6 mg/l
Specific Conductance: 79 uS/cm
Velocity: 39 cm/s
pH: 7.22
Wetted Width: 49 m
Bankfull Width: 57 m
Depth: 35 cm

Waterbody Information - Retrieval

Temperature: 23.6 deg C
Dissolved Oxygen: 7.6 mg/l
Specific Conductance: 81 uS/cm
Velocity: 46.8 cm/s
pH: 7.1
Wetted Width: 49 m
Bankfull Width: 57 m
Depth: 35 cm

Water Chemistry - 8/15/2012

Ammonia As Nitrogen	0.02 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	0.07 mg/l	Total Phosphorus	0.017 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	2.3 mg/l
Dissolved Organic Carbon	4.2 mg/l	Total Dissolved Solids	50 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Open	Rolling
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Above Road Crossing	Boulder 70 %
Nutrients	Main Stem	Gravel 5 %
		Rubble/Cobble 20 %
		Sand 5 %

Landcover Summary - 2004 Data

Total Area (ac)	166583	High Int. Dev. %	0.4	Water %	2.1	Non-vegetated %	0.2
		Med Int. Dev. %	0.4	Wetland %	3.4	Tilled Agriculture %	2.0
		Low Int. Dev. %	1.8	Upland Woody %	83.7	Grassland %	5.6
		Development %	2.6	Natural %	87.2	Human Altered %	10.7
						Impervious %	2.8

Sample Comments

RAINING DURING RETRIEVAL.



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Waterbody: Sandy River - Station 617

Town: New Sharon

Log Number: 2111

Subsample Factor: X4

Replicates: 3

Calculated: 3/7/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Cura</i>	03010102001	1.33	1.33		--	0.2	0.2
<i>Stylaria</i>	08020202014		1.33		CG		0.2
<i>Stylaria lacustris</i>	08020202014002	1.33			--	0.2	
<i>Acroneuria</i>	09020209042	9.33	20.00	0	PR	1.5	3.2
<i>Acroneuria abnormis</i>	09020209042121	1.33		0	PR	0.2	
<i>Acroneuria lycorias</i>	09020209042125	9.33			--	1.5	
<i>Gomphus</i>	09020302012		1.33	5	PR		0.2
<i>Gomphus externus</i>	09020302012029	1.33			--	0.2	
<i>Macromia</i>	09020304021		1.33	2	PR		0.2
<i>Macromia illinoiensis</i>	09020304021045	1.33			--	0.2	
Baetidae	09020401	2.67			--	0.4	
<i>Baetis</i>	09020401001	4.00	34.75	4	CG	0.6	5.5
<i>Baetis flavistriga</i>	09020401001004	10.67			--	1.7	
<i>Baetis intercalaris</i>	09020401001008	18.67			--	2.9	
<i>Acerpenna</i>	09020401007	9.33	25.02	5	CG	1.5	3.9
<i>Acerpenna pygmaea</i>	09020401007011	14.67			--	2.3	
<i>Procladius</i>	09020401010	2.67	2.78		CG	0.4	0.4
<i>Plautidius</i>	09020401012	1.33	1.39		CG	0.2	0.2
<i>Isonychia</i>	09020401015	1.33	1.39		--	0.2	0.2
Heptageniidae	09020402	56.00			--	8.8	
<i>Heptagenia</i>	09020402010	1.33	1.88	2	SC	0.2	0.3
<i>Leucrocota</i>	09020402011	36.00	50.68	1	SC	5.7	8.0
<i>Maccaffertium</i>	09020402015	54.67	140.78	4	SC	8.6	22.2
<i>Maccaffertium luteum</i>	09020402015049	20.00			--	3.2	
<i>Maccaffertium mediopunctatum</i>	09020402015050	16.00			--	2.5	
<i>Maccaffertium modestum</i>	09020402015051	9.33			--	1.5	
<i>Isonychia</i>	09020404018	24.00	24.00	2	CF	3.8	3.8
<i>Ephemerella</i>	09020410035	4.00	4.00	1	CG	0.6	0.6
<i>Serratella</i>	09020410037		48.00	2	CG		7.6
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	10.67			--	1.7	
<i>Serratella serratoides</i>	09020410037124	37.33			--	5.9	
<i>Tricorythodes</i>	09020411038	4.00	4.00	4	CG	0.6	0.6
<i>Caenis</i>	09020412040		8.00	7	CG		1.3
<i>Caenis tardella</i>	09020412040137	8.00			--	1.3	
<i>Chimarra</i>	09020601003	26.67	49.33	2	CF	4.2	7.8
<i>Chimarra obscura</i>	09020601003003	16.00			--	2.5	
<i>Chimarra socia</i>	09020601003004	6.67			--	1.1	
<i>Neureclipsis</i>	09020603008	13.33	13.33	7	CF	2.1	2.1



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Calculated: 3/7/2013

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		Actual	Adjusted			Actual	Adjusted
<i>Nyctiophylax</i>	09020603009		4.00	5	PR		0.6
<i>Nyctiophylax celta</i>	09020603009012	4.00			--	0.6	
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.2	0.2
Hydropsychidae	09020604	8.00			--	1.3	
<i>Cheumatopsyche</i>	09020604015	8.00	9.41	5	CF	1.3	1.5
<i>Hydropsyche</i>	09020604016	34.67	43.92	4	CF	5.5	6.9
<i>Hydropsyche sparna</i>	09020604016032	2.67			--	0.4	
<i>Hydroptila</i>	09020607026	12.00	12.00	6	P	1.9	1.9
<i>Brachycentrus</i>	09020609043		1.33	0	CF		0.2
<i>Brachycentrus appalachia</i>	09020609043096	1.33			--	0.2	
<i>Micrasema</i>	09020609044		1.33	2	SH		0.2
<i>Micrasema wataga</i>	09020609044101	1.33			--	0.2	
<i>Lepidostoma</i>	09020611064	4.00	4.00	1	SH	0.6	0.6
<i>Helicopsyche</i>	09020616070		33.33	3	SC		5.3
<i>Helicopsyche borealis</i>	09020616070137	33.33			--	5.3	
<i>Oecetis</i>	09020618078		9.33	8	PR		1.5
<i>Oecetis avara</i>	09020618078153	2.67			--	0.4	
<i>Oecetis persimilis</i>	09020618078157	6.67			--	1.1	
<i>Petrophila</i>	09020901004	1.33	1.33	5	SC	0.2	0.2
<i>Antocha</i>	09021001004	1.33	1.33	3	CG	0.2	0.2
Chironomidae	09021011	1.33			--	0.2	
<i>Ablabesmyia</i>	09021011001		1.39	8	PR		0.2
<i>Ablabesmyia mallochi</i>	09021011001004	1.33			--	0.2	
<i>Pentaneura</i>	09021011014		4.17	6	PR		0.7
<i>Pentaneura inconspicua</i>	09021011014028	4.00			--	0.6	
<i>Rheocricotopus</i>	09021011057		1.39	6	CG		0.2
<i>Rheocricotopus robacki</i>	09021011057105	1.33			--	0.2	
<i>Synorthocladius</i>	09021011061			2	CG		
<i>Tvetenia</i>	09021011065		1.39	5	CG		0.2
<i>Tvetenia vitracies</i>	09021011065113	1.33			--	0.2	
<i>Rheotanytarsus</i>	09021011072	10.67	11.13	6	CF	1.7	1.8
<i>Tanytarsus</i>	09021011076	1.33	1.39	6	CF	0.2	0.2
<i>Dicrotendipes</i>	09021011085		1.39	8	CG		0.2
<i>Dicrotendipes neomodestus</i>	09021011085152	1.33			--	0.2	
<i>Phaenopsectra</i>	09021011101		1.39	7	SC		0.2
<i>Phaenopsectra obediens</i>	09021011101182	1.33			SC	0.2	
<i>Polypedilum</i>	09021011102		8.35	6	SH		1.3
<i>Polypedilum flavum</i>	09021011102182	8.00			--	1.3	



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<i>Simulium</i>	09021012047	1.33	12.00	4	CF	0.2	1.9
<i>Simulium fibrinflatum</i>	09021012047059	1.33			--	0.2	
<i>Simulium jenningsi</i>	09021012047060	1.33			--	0.2	
<i>Simulium jenningsi complex</i>	09021012047070	8.00			CF	1.3	
<i>Atherix</i>	09021015055	13.33	13.33	2	PR	2.1	2.1
<i>Dineutus</i>	09021104032	1.33	1.33	2	--	0.2	0.2
<i>Promoresia</i>	09021113069		6.67		--		1.1
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.2	
<i>Promoresia tardella</i>	09021113069052	5.33			--	0.8	
<i>Stenelmis</i>	09021113070	1.33	12.00	5	SC	0.2	1.9
<i>Stenelmis crenata</i>	09021113070055	10.67			--	1.7	