



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

Station Information

Station Number: S-17
Waterbody: Sandy River - Station 17
Town: Phillips
Directions: 2 KM ABOVE RT. 142 CROSSING

DEP Drainage: Kennebec
HUC8: 01030003
HUC8 Name: Lower Kennebec
Latitude: 44 51 19.02 N
Longitude: 70 21 43.28 W
Stream Order: 4

Sample Information

Log Number: 2122
Subsample Factor: X4

Type of Sample: ROCK BAG
Replicates: 3

Date Deployed: 7/23/2012
Date Retrieved: 8/21/2012

Classification Attainment

Statutory Class: AA
Model Result with P>.6: A
Date Last Calculated: 4/17/2013

Final Determination: A
Reason for Determination: Model
Comments:

Date: 4/18/2013

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.47	Class A, B, or C	1.00
Class B	0.52	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	1173.33	18 Relative Abundance Ephemeroptera	0.21
02 Generic Richness	53.00	19 EPT Generic Richness	31.00
03 Plecoptera Mean Abundance	26.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	8.10
04 Ephemeroptera Mean Abundance	245.33	23 Relative Generic Richness- Plecoptera	0.09
05 Shannon-Wiener Generic Diversity	3.97	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	94.77
06 Hilsenhoff Biotic Index	4.24	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	125.99
07 Relative Abundance - Chironomidae	0.27	28 EP Generic Richness/14	1.29
08 Relative Generic Richness Diptera	0.32	30 Presence of Class A Indicator Taxa/7	1.00
09 <i>Hydropsyche</i> Abundance	370.77		
11 <i>Cheumatopsyche</i> Abundance	78.56		
12 EPT Generic Richness/ Diptera Generic Richness	1.82		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	16.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	17.55		
17 Chironomini Abundance (Family Functional Group)	170.14		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	31.60
2	<i>Polypedilum</i>	10.70
3	<i>Maccaffertium</i>	10.49
4	<i>Cheumatopsyche</i>	6.70
5	<i>Microtendipes</i>	3.68



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	21.5 deg C
Dissolved Oxygen:	8.8 mg/l
Specific Conductance:	50 uS/cm
Velocity:	71.8 cm/s
pH:	7.26
Wetted Width:	32 m
Bankfull Width:	47 m
Depth:	50 cm

Waterbody Information - Retrieval

Temperature:	20.8 deg C
Dissolved Oxygen:	8.8 mg/l
Specific Conductance:	32 uS/cm
Velocity:	36 cm/s
pH:	7.34
Wetted Width:	37.5 m
Bankfull Width:	47 m
Depth:	54 cm

Water Chemistry - 8/21/2012

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	3 ug/l
Nitrate+nitrite As N	0.05 mg/l	Total Phosphorus	0.005 mg/l
Total Kjeldahl Nitrogen	0.2 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	2.9 mg/l	Total Dissolved Solids	40 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>
Gravel Pit	Main Stem	Boulder 30 %
Logging		Gravel 20 %
		Rubble/Cobble 50 %

Landcover Summary - 2004 Data

Total Area (ac)	84801	High Int. Dev. %	0.0	Water %	0.5	Non-vegetated %	0.1
		Med Int. Dev. %	0.0	Wetland %	0.7	Tilled Agriculture %	0.1
		Low Int. Dev. %	0.9	Upland Woody %	96.5	Grassland %	0.2
		Development %	1.0	Natural %	97.4	Human Altered %	2.0
						Impervious %	0.6

Sample Comments

7/23/12: LOTS OF FILAMENTOUS ALGAE, VERY LARGE (2") WATER BUG.



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Replicates: 3

Calculated: 4/17/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		1.33		CG		0.1
<i>Nais behningi</i>	08020202009003	1.33			--	0.1	
Perlodidae	09020207	6.67			--	0.6	
<i>Isoperla</i>	09020207026	1.33	3.56	2	PR	0.1	0.3
<i>Malirekus</i>	09020207034		7.11		PR		0.6
<i>Malirekus iroquois</i>	09020207034101	2.67			--	0.2	
Perlidae	09020209	1.33			--	0.1	
<i>Acroneuria</i>	09020209042	1.33	2.91	0	PR	0.1	0.2
<i>Acroneuria abnormis</i>	09020209042121	1.33		0	PR	0.1	
<i>Paragnetina</i>	09020209049	2.67	2.91	1	PR	0.2	0.2
<i>Agneta</i>	09020209050	4.00	10.18	2	PR	0.3	0.9
<i>Agneta capitata</i>	09020209050152	5.33		2	PR	0.5	
Gomphidae	09020302	4.00	4.00		--	0.3	0.3
Baetidae	09020401	1.33			--	0.1	
<i>Baetis</i>	09020401001	6.67	28.88	4	CG	0.6	2.5
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	13.33			--	1.1	
<i>Baetis pluto</i>	09020401001009	5.33			--	0.5	
<i>Baetis tricaudatus</i>	09020401001012	1.33			--	0.1	
<i>Acerpenna</i>	09020401007	2.67	2.75	5	CG	0.2	0.2
<i>Plauditus</i>	09020401012	10.67	11.00		CG	0.9	0.9
<i>Iswaeon</i>	09020401015	1.33	1.38		--	0.1	0.1
Heptageniidae	09020402	10.67			--	0.9	
<i>Epeorus</i>	09020402009	8.00	8.69	0	SC	0.7	0.7
<i>Leucrocuta</i>	09020402011	2.67	2.90	1	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	77.33	123.08	4	SC	6.6	10.5
<i>Maccaffertium luteum</i>	09020402015049	36.00			--	3.1	
<i>Isonychia</i>	09020404018	14.67	14.67	2	CF	1.3	1.3
Leptophlebiidae	09020406	1.33	1.33		--	0.1	0.1
Ephemerellidae	09020410	1.33			--	0.1	
<i>Ephemerella</i>	09020410035	30.67	31.80	1	CG	2.6	2.7
<i>Eurylophella</i>	09020410036	1.33	1.38	3	CG	0.1	0.1
<i>Serratella</i>	09020410037		4.15	2	CG		0.4
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	2.67			--	0.2	
<i>Serratella serratoides</i>	09020410037124	1.33			--	0.1	
<i>Tricorythodes</i>	09020411038	13.33	13.33	4	CG	1.1	1.1
<i>Dolophilodes</i>	09020601001	8.00	8.00	0	CF	0.7	0.7
<i>Chimarra</i>	09020601003	41.33	41.33	2	CF	3.5	3.5



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		Actual	Adjusted			Actual	Adjusted
<i>Neureclipsis</i>	09020603008	9.33	9.33	7	CF	0.8	0.8
Hydropsychidae	09020604	14.67			--	1.3	
<i>Cheumatopsyche</i>	09020604015	76.00	78.56	5	CF	6.5	6.7
<i>Hydropsyche</i>	09020604016	200.00	370.77	4	CF	17.0	31.6
<i>Hydropsyche bronta</i>	09020604016029	36.00			--	3.1	
<i>Hydropsyche morosa</i>	09020604016030	64.00			--	5.5	
<i>Hydropsyche slossonae</i>	09020604016031	24.00			--	2.0	
<i>Hydropsyche sparna</i>	09020604016032	34.67			--	3.0	
<i>Rhyacophila</i>	09020605019	1.33	6.67	2	PR	0.1	0.6
<i>Rhyacophila fuscula</i>	09020605019060	4.00			PR	0.3	
<i>Rhyacophila mainensis</i>	09020605019069	1.33			--	0.1	
<i>Glossosoma</i>	09020606020	1.33	1.33	0	SC	0.1	0.1
<i>Hydroptila</i>	09020607026	17.33	17.33	6	P	1.5	1.5
<i>Brachycentrus</i>	09020609043		16.00	0	CF		1.4
<i>Brachycentrus americanus</i>	09020609043095	1.33			--	0.1	
<i>Brachycentrus appalachia</i>	09020609043096	14.67			--	1.3	
<i>Lepidostoma</i>	09020611064	5.33	5.33	1	SH	0.5	0.5
<i>Psilotreta</i>	09020614068		1.33	0	SC		0.1
<i>Psilotreta labida</i>	09020614068133	1.33			--	0.1	
<i>Helicopsyche</i>	09020616070		1.33	3	SC		0.1
<i>Helicopsyche borealis</i>	09020616070137	1.33			--	0.1	
<i>Oecetis</i>	09020618078		6.67	8	PR		0.6
<i>Oecetis avara</i>	09020618078153	4.00			--	0.3	
<i>Oecetis persimilis</i>	09020618078157	2.67			--	0.2	
Chironomidae	09021011	4.00			--	0.3	
<i>Conchapelopia</i>	09021011004			6	PR		
<i>Pentaneura</i>	09021011014		2.70	6	PR		0.2
<i>Pentaneura inconspicua</i>	09021011014028	2.67			--	0.2	
<i>Rheopelopia</i>	09021011017	6.67	13.50		PR	0.6	1.2
<i>Rheopelopia acra group</i>	09021011017036	6.67			--	0.6	
<i>Trissopelopia</i>	09021011021		1.35		PR		0.1
<i>Trissopelopia ogemawi</i>	09021011021042	1.33			--	0.1	
<i>Pagastia</i>	09021011025		2.70	1	--		0.2
<i>Pagastia orthogonia</i>	09021011025001	2.67			--	0.2	
<i>Cricotopus</i>	09021011037		6.75	7	SH		0.6
<i>Cricotopus bicinctus</i>	09021011037057	6.67			--	0.6	
<i>Parametriocnemus</i>	09021011053	18.67	18.90	5	CG	1.6	1.6
<i>Rheocricotopus</i>	09021011057		6.75	6	CG		0.6



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<i>Rheocricotopus robacki</i>	09021011057105	6.67			--	0.6	
<i>Thienemanniella</i>	09021011062	1.33	1.35	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		37.81	5	CG		3.2
<i>Tvetenia vitracies</i>	09021011065113	30.67			--	2.6	
<i>Tvetenia paucunca</i>	09021011065114	6.67			--	0.6	
<i>Micropsectra</i>	09021011070	8.00	8.10	7	CG	0.7	0.7
<i>Rheotanytarsus</i>	09021011072	37.33	37.81	6	CF	3.2	3.2
<i>Stempellinella</i>	09021011074		1.35	2	--		0.1
<i>Stempellinella fimbriata</i>	09021011074002	1.33			--	0.1	
<i>Sublettea coffmani</i>	09021011075131				--		
<i>Tanytarsus</i>	09021011076	9.33	9.45	6	CF	0.8	0.8
<i>Microtendipes</i>	09021011094		43.21	6	CF		3.7
<i>Microtendipes rydalensis group</i>	09021011094168	42.67			--	3.6	
<i>Nilothauma</i>	09021011095	1.33	1.35	2	--	0.1	0.1
<i>Phaenopsectra obediens</i>	09021011101182				SC		
<i>Polypedilum</i>	09021011102		125.58	6	SH		10.7
<i>Polypedilum aviceps</i>	09021011102181	110.67			--	9.4	
<i>Polypedilum flavum</i>	09021011102182	9.33			--	0.8	
<i>Polypedilum angulum</i>	09021011102198	4.00			--	0.3	
<i>Simulium</i>	09021012047	1.33	5.33	4	CF	0.1	0.5
<i>Simulium tuberosum</i>	09021012047067	2.67			--	0.2	
<i>Simulium jenningsi complex</i>	09021012047070	1.33			CF	0.1	
<i>Psephenus</i>	09021108058		1.33	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.1	
<i>Dubiraphia</i>	09021113064		1.33	6	--		0.1
<i>Dubiraphia minima</i>	09021113064036	1.33			--	0.1	
<i>Promoresia</i>	09021113069		5.33		--		0.5
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.1	
<i>Promoresia tardella</i>	09021113069052	4.00			--	0.3	