



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

Station Information

Station Number: S-486
Waterbody: East Branch Wesserunsett Stream - Station 486
Town: Athens
Directions: (WES1) ABOVE RTE 150 NEAR REST AREA
DEP Drainage: Kennebec
HUC8 Name: Lower Kennebec
Latitude: 44 57 24.29 N
Longitude: 69 38 39.25 W
Stream Order: 3

Sample Information

Log Number: 2198
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/19/2013
Date Retrieved: 8/13/2013

Classification Attainment

Statutory Class: B
Model Result with P>.6: A
Date Last Calculated: 1/29/2014
Final Determination: A
Reason for Determination: Model
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.73	Class A, B, or C	1.00
Class B	0.27	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	358.00	18 Relative Abundance Ephemeroptera	0.20
02 Generic Richness	48.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	16.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	72.67	23 Relative Generic Richness- Plecoptera	0.08
05 Shannon-Wiener Generic Diversity	3.52	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	2.34
06 Hilsenhoff Biotic Index	3.90	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	15.69
07 Relative Abundance - Chironomidae	0.29	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.38	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	129.33		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.28		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	13.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.01		
17 Chironomini Abundance (Family Functional Group)	49.16		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	36.13
2	<i>Polypedilum</i>	12.89
3	<i>Baetis</i>	11.42
4	<i>Tvetenia</i>	6.45
5	<i>Rheotanytarsus</i>	5.51



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 23 deg C
Dissolved Oxygen: 8.1 mg/l
Specific Conductance: 63 uS/cm
Velocity: 73.9 cm/s
pH: 7.19
Wetted Width: 11.3 m
Bankfull Width: 15 m
Depth: 45 cm

Waterbody Information - Retrieval

Temperature: 19 deg C
Dissolved Oxygen: 8.1 mg/l
Specific Conductance: 36 uS/cm
Velocity: 84.4 cm/s
pH: 7.24
Wetted Width: 12.2 m
Bankfull Width: 15 m
Depth: 55 cm

Water Chemistry - 8/13/2013

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.01 mg/l	Total Phosphorus	0.008 mg/l
Total Kjeldahl Nitrogen	0.2 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	3.2 mg/l	Total Dissolved Solids	47 mg/l

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Upland Conifer

Partly Open

Rolling

Upland Hardwood

Potential Stressor

Location

Substrate

Above Road Crossing

Bedrock	5 %
Boulder	75 %
Gravel	5 %
Rubble/Cobble	15 %

Landcover Summary - 2004 Data

Total Area (ac)	11673	High Int. Dev. %	0.0	Water %	1.4	Non-vegetated %	0.0
		Med Int. Dev. %	0.1	Wetland %	2.1	Tilled Agriculture %	1.2
		Low Int. Dev. %	3.0	Upland Woody %	91.7	Grassland %	0.6
		Development %	3.0	Natural %	93.8	Human Altered %	4.8
						Impervious %	0.9

Sample Comments

8/13/2013-FISH OBSERVED



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Replicates: 3

Calculated: 1/29/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Pteronarcys</i>	09020205023		3.00	0	SH		0.8
<i>Pteronarcys biloba</i>	09020205023061	2.67			--	0.7	
<i>Pteronarcys comstocki</i>	09020205023062	0.33			--	0.1	
Perlidae	09020209	4.00			--	1.1	
<i>Acroneuria</i>	09020209042	1.00	10.11	0	PR	0.3	2.8
<i>Acroneuria abnormis</i>	09020209042121	3.67		0	PR	1.0	
<i>Acroneuria lycorias</i>	09020209042125	2.33			--	0.7	
<i>Paragnetina</i>	09020209049		1.44	1	PR		0.4
<i>Paragnetina immarginata</i>	09020209049149	1.00			--	0.3	
<i>Agnatina</i>	09020209050		1.44	2	PR		0.4
<i>Agnatina capitata</i>	09020209050152	1.00		2	PR	0.3	
<i>Boyeria</i>	09020301004		0.33	2	PR		0.1
<i>Boyeria grafiana</i>	09020301004011	0.33			--	0.1	
<i>Hagenius</i>	09020302008		0.33	1	PR		0.1
<i>Hagenius brevistylus</i>	09020302008015	0.33			PR	0.1	
Baetidae	09020401	4.67			--	1.3	
<i>Baetis</i>	09020401001	8.33	40.87	4	CG	2.3	11.4
<i>Baetis flavistriga</i>	09020401001004	2.00			--	0.6	
<i>Baetis intercalaris</i>	09020401001008	17.33			--	4.8	
<i>Baetis pluto</i>	09020401001009	9.00			--	2.5	
<i>Centroptilum</i>	09020401003	0.33	0.37	2	CG	0.1	0.1
<i>Acerpenna</i>	09020401007	0.33	1.11	5	CG	0.1	0.3
<i>Acerpenna macdunnoughi</i>	09020401007001	0.67			--	0.2	
<i>Plauditus</i>	09020401012	1.33	1.49		CG	0.4	0.4
<i>Diphetor</i>	09020401013		1.49		--		0.4
<i>Diphetor hageni</i>	09020401013001	1.33			--	0.4	
Heptageniidae	09020402	0.67			--	0.2	
<i>Epeorus</i>	09020402009	9.33	9.76	0	SC	2.6	2.7
<i>Maccaffertium</i>	09020402015	3.67	5.58	4	SC	1.0	1.6
<i>Maccaffertium luteum</i>	09020402015049	1.67			--	0.5	
<i>Isonychia</i>	09020404018	1.67	1.67	2	CF	0.5	0.5
<i>Ephemerella</i>	09020410035	2.33	2.33	1	CG	0.7	0.7
<i>Serratella</i>	09020410037		3.67	2	CG		1.0
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	0.33			--	0.1	
<i>Serratella serratoides</i>	09020410037124	3.33			--	0.9	
<i>Tricorythodes</i>	09020411038	4.33	4.33	4	CG	1.2	1.2
<i>Dolophilodes</i>	09020601001	4.00	4.00	0	CF	1.1	1.1
<i>Neureclipsis</i>	09020603008	0.67	0.67	7	CF	0.2	0.2



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		Actual	Adjusted			Actual	Adjusted
<i>Nyctiophylax</i>	09020603009		0.33	5	PR		0.1
<i>Nyctiophylax celta</i>	09020603009012	0.33			--	0.1	
Hydropsychidae	09020604	2.33	2.33		--	0.7	0.7
<i>Hydropsyche</i>	09020604016	96.00	129.33	4	CF	26.8	36.1
<i>Hydropsyche bronta</i>	09020604016029	5.00			--	1.4	
<i>Hydropsyche morosa</i>	09020604016030	1.67			--	0.5	
<i>Hydropsyche sparna</i>	09020604016032	26.67			--	7.4	
<i>Brachycentrus</i>	09020609043		17.33	0	CF		4.8
<i>Brachycentrus appalachia</i>	09020609043096	17.33			--	4.8	
<i>Helicopsyche</i>	09020616070		1.33	3	SC		0.4
<i>Helicopsyche borealis</i>	09020616070137	1.33			--	0.4	
<i>Oecetis</i>	09020618078	0.33	0.33	8	PR	0.1	0.1
<i>Nigronia</i>	09020701003		0.67	0	PR		0.2
<i>Nigronia serricornis</i>	09020701003003	0.67			--	0.2	
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.1	0.1
Chironomidae	09021011	0.33			--	0.1	
<i>Nilotanyus</i>	09021011012		0.67	6	PR		0.2
<i>Nilotanyus fimbriatus</i>	09021011012027	0.67			--	0.2	
<i>Rheopelopia</i>	09021011017		1.34		PR		0.4
<i>Rheopelopia acra group</i>	09021011017036	1.33			--	0.4	
<i>Corynoneura</i>	09021011036	0.33	0.33	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		0.67	7	SH		0.2
<i>Cricotopus bicinctus</i>	09021011037057	0.67			--	0.2	
<i>Eukiefferiella</i>	09021011041		0.67	8	CG		0.2
<i>Eukiefferiella brehmi group</i>	09021011041073	0.67			--	0.2	
<i>Nanocladius</i>	09021011049	0.33	2.34	3	CG	0.1	0.7
<i>Nanocladius branchiculus</i>	09021011049091	0.33			--	0.1	
<i>Nanocladius downesi</i>	09021011049092	1.67			--	0.5	
<i>Orthocladius</i>	09021011050		1.34	6	CG		0.4
<i>Orthocladius carlatus</i>	09021011050093	1.33			--	0.4	
<i>Parametriocnemus</i>	09021011053	1.67	1.67	5	CG	0.5	0.5
<i>Tvetenia</i>	09021011065		23.07	5	CG		6.4
<i>Tvetenia vitracies</i>	09021011065113	21.67			--	6.1	
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.4	
<i>Rheotanytarsus</i>	09021011072	19.67	19.73	6	CF	5.5	5.5
<i>Stempellinella</i>	09021011074		0.33	2	--		0.1
<i>Stempellinella fimbriata</i>	09021011074002	0.33			--	0.1	
<i>Tanytarsus</i>	09021011076	1.67	1.67	6	CF	0.5	0.5



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<i>Microtendipes</i>	09021011094		3.01	6	CF		0.8
<i>Microtendipes rydalensis group</i>	09021011094168	3.00			--	0.8	
<i>Polypedilum</i>	09021011102		46.15	6	SH		12.9
<i>Polypedilum aviceps</i>	09021011102181	35.33			--	9.9	
<i>Polypedilum flavum</i>	09021011102182	10.67			--	3.0	
<i>Simulium</i>	09021012047		3.33	4	CF		0.9
<i>Simulium tuberosum</i>	09021012047067	2.67			--	0.7	
<i>Simulium jenningsi complex</i>	09021012047070	0.67			CF	0.2	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Roederiodes</i>	09021016058	3.33	3.33	3	PR	0.9	0.9
<i>Psephenus</i>	09021108058		1.00	4	SC		0.3
<i>Psephenus herricki</i>	09021108058028	1.00			--	0.3	
<i>Macronychus</i>	09021113065		0.33	4	--		0.1
<i>Macronychus glabratus</i>	09021113065040	0.33			--	0.1	
<i>Promoresia</i>	09021113069		0.33		--		0.1
<i>Promoresia tardella</i>	09021113069052	0.33			--	0.1	
<i>Stenelmis</i>	09021113070		0.33	5	SC		0.1
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.1	