



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

Station Information

Station Number: S-977	River Basin: Kennebec
Waterbody: Perkins Stream - Station 977	HUC8 Name: Lower Kennebec
Town: Waterville	Latitude: 44 33 28.15 N
Directions: COLBY COLLEGE CAMPUS - PERKINS ARBORETUM, BLUE TRAIL	Longitude: 69 39 20.09 W
	Stream Order: 3

Sample Information

Log Number: 2253	Type of Sample: ROCK BAG	Date Deployed: 7/9/2014
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/5/2014

Classification Attainment

Statutory Class: B	Final Determination: NA	Date: 11/3/2014
Model Result with $P \geq 0.6$: I	Reason for Determination: Best Professional Judgement	
Date Last Calculated: 11/3/2014	Comments: Minimum Provisions for Total Mean Abundance and Generic Richness not met. Community exhibiting a toxic response.	

Model Probabilities

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

Model Variables

01 Total Mean Abundance	48.00	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	14.00	19 EPT Generic Richness	1.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	0.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.29	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	7.73
06 Hilsenhoff Biotic Index	5.72	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.88	28 EP Generic Richness/14	0.00
08 Relative Generic Richness Diptera	0.50	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.33		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.14		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Microtendipes</i>	46.20
2	<i>Rheotanytarsus</i>	22.40
3	<i>Tanytarsus</i>	15.40
4	<i>Boyeria</i>	6.94
5	<i>Nilotanypus</i>	1.40
6	<i>Polypedilum</i>	1.40



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Station Number: S-977	Town: Waterville	Date Deployed: 7/9/2014
Log Number: 2253	Waterbody: Perkins Stream - Station 977	Date Retrieved: 8/5/2014

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	21.3 deg C
Dissolved Oxygen:	8 mg/l
Specific Conductance:	818 uS/cm
Velocity:	
pH:	7.67
Wetted Width:	3 m
Bankfull Width:	5.6 m
Depth:	42 cm

Waterbody Information - Retrieval

Temperature:	23.5 deg C
Dissolved Oxygen:	7.6 mg/l
Specific Conductance:	862 uS/cm
Velocity:	2 cm/s
pH:	7.17
Wetted Width:	2 m
Bankfull Width:	5.6 m
Depth:	35 cm

Water Chemistry - 8/5/2014

Ammonia As Nitrogen	0.01 mg/l	Nitrate+nitrite As N	0.09 mg/l
Total Phosphorus	30 ug/l	Total Kjeldahl Nitrogen	0.3 mg/l
Total Suspended Solids	5.1 mg/l	Dissolved Organic Carbon	3.9 mg/l
Total Dissolved Solids	510 mg/l	Orthophosphate As Phosphorus	4 ug/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Dense	Rolling
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Nps Pollution	Below Urban NPS	Boulder 20 %
		Rubble/Cobble 60 %
		Sand 5 %
		Silt 15 %

Landcover Summary - 2004 Data

Sample Comments

8/5/14 - FISH PRESENT.

7/9/14- WETTED WIDTH DONE AT FLAG AND STOPPED AT BOULDER, FISH PRESENT, SILT COVERED, ERODED BANKS. QUESTIONABLE VELOCITY METER READING.



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

Station Number: S-977	Waterbody: Perkins Stream - Station 977	Town: Waterville
Log Number: 2253	Subsample Factor: X1	Replicates: 3
		Calculated: 11/3/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		0.33		CG		0.7
<i>Nais variabilis</i>	08020202009009	0.33			--	0.7	
<i>Boyeria</i>	09020301004		3.33	2	PR		6.9
<i>Boyeria vinosa</i>	09020301004012	3.33			--	6.9	
Calopterygidae	09020307	0.33	0.33		--	0.7	0.7
<i>Calopteryx</i>	09020307043		0.33	5	PR		0.7
<i>Calopteryx maculata</i>	09020307043088	0.33			--	0.7	
<i>Hydropsyche</i>	09020604016	0.33	0.33	4	CF	0.7	0.7
Lepidoptera	090209	0.67	0.67		--	1.4	1.4
Chironomidae	09021011	0.33			--	0.7	
<i>Conchapelopia</i>	09021011004			6	PR		
<i>Nilotanytus</i>	09021011012		0.67	6	PR		1.4
<i>Nilotanytus fimbriatus</i>	09021011012027	0.67			--	1.4	
<i>Cricotopus</i>	09021011037		0.34	7	SH		0.7
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.7	
<i>Parametriocnemus</i>	09021011053			5	CG		
<i>Rheotanytarsus</i>	09021011072		10.75	6	CF		22.4
<i>Rheotanytarsus exiguus</i>	09021011072127	10.67			CF	22.2	
<i>Tanytarsus</i>	09021011076	6.67	7.39	6	CF	13.9	15.4
<i>Tanytarsus buckleyi</i>	09021011076139	0.67			CF	1.4	
<i>Microtendipes</i>	09021011094		22.17	6	CF		46.2
<i>Microtendipes pedellus group</i>	09021011094166	22.00			--	45.8	
<i>Polypedilum</i>	09021011102		0.67	6	SH		1.4
<i>Polypedilum flavum</i>	09021011102182	0.67			--	1.4	
<i>Stictochironomus</i>	09021011106	0.33	0.34	9	CG	0.7	0.7
<i>Dubiraphia</i>	09021113064		0.33	6	--		0.7
<i>Dubiraphia quadrinotata</i>	09021113064037	0.33			--	0.7	