



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

**Station Information**

<b>Station Number:</b> S-27	River Basin: Kennebec
Waterbody: West Branch Sebasticook River - Station 27	HUC8 Name: Lower Kennebec
Town: Pittsfield	Latitude: 44 46 36.85 N
Directions: 2.1 KM BELOW RT. 100 CROSSING	Longitude: 69 21 54.98 W
	Stream Order: 4

**Sample Information**

<b>Log Number:</b> 2583	Type of Sample: ROCK BAG	Date Deployed: 7/25/2017
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/22/2017

**Classification Attainment**

<b>Statutory Class:</b> C	<b>Final Determination:</b> A	Date: 4/5/2018
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 4/2/2018	Comments: Enriched.	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.29	Class A, B, or C	1.00
Class B	0.69	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.91
Class A or B	1.00	Class B or C or Non-Attainment	0.09
Class C or Non-Attainment	0.00		

**Model Variables**

01 Total Mean Abundance	1629.33	18 Relative Abundance Ephemeroptera	0.14
02 Generic Richness	41.00	19 EPT Generic Richness	24.00
03 Plecoptera Mean Abundance	13.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	226.67	23 Relative Generic Richness- Plecoptera	0.07
05 Shannon-Wiener Generic Diversity	3.26	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	33.14
06 Hilsenhoff Biotic Index	4.16	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	24.35
07 Relative Abundance - Chironomidae	0.36	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.24	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	139.89		
11 <i>Cheumatopsyche</i> Abundance	30.47		
12 EPT Generic Richness/ Diptera Generic Richness	2.40		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	12.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.67		
17 Chironomini Abundance (Family Functional Group)	2.67		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	34.12
2	<i>Chimarra</i>	19.56
3	<i>Simulium</i>	11.70
4	<i>Hydropsyche</i>	8.59
5	<i>Heterocloeon</i>	5.11



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Town: Pittsfield

Date Deployed: 7/25/2017

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Waterbody: West Branch Sebasticook River - Station 27

Date Retrieved: 8/22/2017

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 25.3 deg C  
 Dissolved Oxygen: 9.77 mg/l  
 Dissolved Oxygen Saturation: 117.5 %  
 Specific Conductance: 72.7 uS/cm  
 Velocity: 54.9 cm/s  
 pH: 7.87  
 Wetted Width: 32 m  
 Bankfull Width: 32 m  
 Depth: 50 cm

**Waterbody Information - Retrieval**

Temperature: 26 deg C  
 Dissolved Oxygen: 10.18 mg/l  
 Dissolved Oxygen Saturation: 125.1 %  
 Specific Conductance: 87 uS/cm  
 Velocity: 33.5 cm/s  
 pH: 8.02  
 Wetted Width: 27 m  
 Bankfull Width: 32 m  
 Depth: 38 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Open	Rolling	
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nps Pollution	Below Dam	Boulder	15 %
Urban Runoff	Below Town	Gravel	15 %
	Below Urban NPS	Rubble/Cobble	65 %
		Sand	5 %

**Landcover Summary - 2004 Data**

Total Area (ac)	199849	High Int. Dev. %	0.2	Water %	3.6	Non-vegetated %	0.1
		Med Int. Dev. %	0.2	Wetland %	5.2	Tilled Agriculture %	4.0
		Low Int. Dev. %	4.1	Upland Woody %	79.3	Grassland %	3.2
		Development %	4.5	Natural %	84.5	Human Altered %	12.0
						Impervious %	2.0

**Sample Comments**

7/25/17: MANY FISH PRESENT.

8/22/17: FROGS AND FISH PRESENT.



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**Station Number: S-27**      Waterbody: West Branch Sebasticook River - Station 27    Town: Pittsfield  
**Log Number: 2583**      Subsample Factor: X4      Replicates: 3      Calculated: 4/2/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002		6.67		--		0.4
<i>Girardia tigrina</i>	03010102002001	6.67			--	0.4	
Perlodidae	09020207	1.33	1.33		--	0.1	0.1
Perlidae	09020209	6.67			--	0.4	
<i>Acroneuria</i>	09020209042		6.00	0	PR		0.4
<i>Acroneuria lycorias</i>	09020209042125	2.67			--	0.2	
<i>Paragnetina</i>	09020209049		6.00	1	PR		0.4
<i>Paragnetina media</i>	09020209049151	2.67			--	0.2	
Baetidae	09020401	22.67			--	1.4	
<i>Baetis</i>	09020401001	4.00	53.36	4	CG	0.2	3.3
<i>Baetis flavistriga</i>	09020401001004	5.33			--	0.3	
<i>Baetis intercalaris</i>	09020401001008	36.00			--	2.2	
<i>Heterocloeon</i>	09020401005	53.33	83.18	2	SC	3.3	5.1
<i>Heterocloeon curiosum</i>	09020401005020	17.33			--	1.1	
<i>Acerpenna</i>	09020401007	2.67	3.14	5	CG	0.2	0.2
<i>Plauditus</i>	09020401012	5.33	6.28		CG	0.3	0.4
<i>Iswaeon</i>	09020401015		4.71		--		0.3
<i>Iswaeon anoka</i>	09020401015001	4.00			--	0.2	
Heptageniidae	09020402	2.67			--	0.2	
<i>Epeorus</i>	09020402009	13.33	24.00	0	SC	0.8	1.5
<i>Epeorus vitreus</i>	09020402009033	9.33			--	0.6	
<i>Leucrocuta</i>	09020402011	5.33	5.65	1	SC	0.3	0.3
<i>Maccaffertium</i>	09020402015	12.00	18.35	4	SC	0.7	1.1
<i>Maccaffertium modestum</i>	09020402015051	5.33			--	0.3	
<i>Isonychia</i>	09020404018	2.67	2.67	2	CF	0.2	0.2
Ephemerellidae	09020410	1.33			--	0.1	
<i>Ephemerella</i>	09020410035	9.33	9.85	1	CG	0.6	0.6
<i>Serratella</i>	09020410037		15.48	2	CG		1.0
<i>Serratella deficiens (Teloganopsis deficiens)</i>	09020410037121	8.00			--	0.5	
<i>Serratella serratoides</i>	09020410037124	6.67			--	0.4	
Philopotamidae	09020601	16.00	16.00		--	1.0	1.0
<i>Chimarra</i>	09020601003	50.67	318.67	2	CF	3.1	19.6
<i>Chimarra obscura</i>	09020601003003	188.00			--	11.5	
<i>Chimarra socia</i>	09020601003004	80.00			--	4.9	
<i>Neureclipsis</i>	09020603008	29.33	29.33	7	CF	1.8	1.8
Hydropsychidae	09020604	6.67			--	0.4	
<i>Cheumatopsyche</i>	09020604015	29.33	30.47	5	CF	1.8	1.9



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche</i>	09020604016	62.67	139.89	4	CF	3.8	8.6
<i>Hydropsyche bronta</i>	09020604016029	4.00			--	0.2	
<i>Hydropsyche morosa</i>	09020604016030	24.00			--	1.5	
<i>Hydropsyche slossonae</i>	09020604016031	1.33			--	0.1	
<i>Hydropsyche sparna</i>	09020604016032	1.33			--	0.1	
<i>Hydropsyche phalerata</i>	09020604016047	5.33			--	0.3	
<i>Hydropsyche placoda</i>	09020604016059	36.00			--	2.2	
<i>Macrostemum</i>	09020604018		8.31	3	CF		0.5
<i>Macrostemum zebratum</i>	09020604018054	8.00			--	0.5	
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.1	0.1
<i>Brachycentrus</i>	09020609043	1.33	1.33	0	CF	0.1	0.1
<i>Ceraclea</i>	09020618072	1.33	1.33	3	CG	0.1	0.1
<i>Oecetis</i>	09020618078	1.33	1.33	8	PR	0.1	0.1
Chironomidae	09021011	1.33			--	0.1	
<i>Nilotanytus</i>	09021011012		1.34	6	PR		0.1
<i>Nilotanytus fimbriatus</i>	09021011012027	1.33			--	0.1	
<i>Rheopelopia</i>	09021011017		1.34		PR		0.1
<i>Rheopelopia acra group</i>	09021011017036	1.33			--	0.1	
<i>Cricotopus</i>	09021011037	1.33	2.67	7	SH	0.1	0.2
<i>Cricotopus bicinctus</i>	09021011037057	1.33			--	0.1	
<i>Rheocricotopus</i>	09021011057	1.33	2.67	6	CG	0.1	0.2
<i>Rheocricotopus robacki</i>	09021011057105	1.33			--	0.1	
<i>Synorthocladius</i>	09021011061			2	CG		
<i>Thienemanniella</i>	09021011062	1.33	1.34	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		26.73	5	CG		1.6
<i>Tvetenia vitracies</i>	09021011065113	26.67			--	1.6	
<i>Rheotanytarsus</i>	09021011072		555.91	6	CF		34.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	69.33			CF	4.3	
<i>Rheotanytarsus pellucidus</i>	09021011072128	485.33			CF	29.8	
<i>Polypedilum</i>	09021011102		2.67	6	SH		0.2
<i>Polypedilum flavum</i>	09021011102182	2.67			--	0.2	
<i>Simulium</i>	09021012047	4.00	190.67	4	CF	0.2	11.7
<i>Simulium fibrinflatum</i>	09021012047059	6.67			--	0.4	
<i>Simulium jenningsi</i>	09021012047060	18.67			--	1.1	
<i>Simulium vittatum</i>	09021012047064	2.67			--	0.2	
<i>Simulium jenningsi group</i>	09021012047070	157.33			CF	9.7	
<i>Simulium venustum/verecundum complex</i>	09021012047072	1.33			CF	0.1	



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		Actual	Adjusted			Actual	Adjusted
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.1	0.1
<i>Microcylloepus</i>	09021113066	12.00	12.00	3	--	0.7	0.7
<i>Optioservus</i>	09021113067	1.33	1.33	3	SC	0.1	0.1
<i>Promoesia</i>	09021113069		10.67		--		0.7
<i>Promoesia elegans</i>	09021113069051	10.67			--	0.7	
<i>Stenelmis</i>	09021113070	6.67	20.00	5	SC	0.4	1.2
<i>Stenelmis concinna</i>	09021113070054	13.33			--	0.8	
Trombidiformes	090302	1.33	1.33		PR	0.1	0.1
<i>Amnicola</i>	10010104013		2.67		SC		0.2
<i>Amnicola limosus</i>	10010104013018	2.67			--	0.2	