



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

**Station Information**

<b>Station Number: S-602</b>	River Basin: Kennebec
Waterbody: Fifteenmile Stream - Station 602	HUC8 Name: Lower Kennebec
Town: Benton	Latitude: 44 36 10.19 N
Directions: DOWNSTREAM OF RT 139	Longitude: 69 28 11.65 W
	Stream Order: 3

**Sample Information**

<b>Log Number: 2569</b>	Type of Sample: ROCK BAG	Date Deployed: 7/17/2017
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/14/2017

**Classification Attainment**

<b>Statutory Class: B</b>	<b>Final Determination: B</b>	Date: 3/16/2018
Model Result with $P \geq 0.6$ : B	<b>Reason for Determination: Model</b>	
Date Last Calculated: 3/15/2018	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.40	Class A, B, or C	1.00
Class B	0.52	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.98	Class A	0.26
Class C or Non-Attainment	0.02	Class B or C or Non-Attainment	0.74

**Model Variables**

01 Total Mean Abundance	248.33	18 Relative Abundance Ephemeroptera	0.30
02 Generic Richness	49.00	19 EPT Generic Richness	16.00
03 Plecoptera Mean Abundance	2.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.67
04 Ephemeroptera Mean Abundance	74.67	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.34	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	13.00
06 Hilsenhoff Biotic Index	5.56	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	2.00
07 Relative Abundance - Chironomidae	0.09	28 EP Generic Richness/14	0.50
08 Relative Generic Richness Diptera	0.22	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.45		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	11.00		
17 Chironomini Abundance (Family Functional Group)	5.33		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Stenacron</i>	17.45
2	<i>Ceraclea</i>	13.69
3	<i>Acerpenna</i>	8.72
4	<i>Dubiraphia</i>	8.05
5	<i>Stagnicola</i>	5.23



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Waterbody: Fifteenmile Stream - Station 602

Date Retrieved: 8/14/2017

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature: 24 deg C  
 Dissolved Oxygen: 8.22 mg/l  
 Dissolved Oxygen Saturation: 96.4 %  
 Specific Conductance: 120.9 uS/cm  
 Velocity: 3 cm/s  
 pH: 7.36  
 Wetted Width: 15 m  
 Bankfull Width: 16 m  
 Depth: 45 cm

**Waterbody Information - Retrieval**

Temperature: 25 deg C  
 Dissolved Oxygen: 8.8 mg/l  
 Dissolved Oxygen Saturation: 105.4 %  
 Specific Conductance: 130.6 uS/cm  
 Velocity:  
 pH: 7.65  
 Wetted Width: 11.4 m  
 Bankfull Width: 16 m  
 Depth: 36 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Open	Flat	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Below Road Crossing	Boulder	50 %
		Clay	5 %
		Gravel	5 %
		Muck	5 %
		Rubble/Cobble	25 %
		Sand	5 %
		Silt	5 %

**Landcover Summary - 2004 Data**

Total Area (ac)	42612	High Int. Dev. %	0.2	Water %	1.3	Non-vegetated %	0.1
		Med Int. Dev. %	0.4	Wetland %	11.5	Tilled Agriculture %	3.9
		Low Int. Dev. %	2.9	Upland Woody %	69.5	Grassland %	10.2
		Development %	3.5	Natural %	81.0	Human Altered %	17.7
						Impervious %	3.1

**Sample Comments**

7/17/17: BIG FROGS, SNAILS, AND MUSSELS OBSERVED.

8/14/17: FISH, FROGS, MUSSELS, CRAYFISH, AND SPONGES OBSERVED. WATER VERY LOW, FLOW VISIBLE.



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Waterbody: Fifteenmile Stream - Station 602

Town: Benton

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Subsample Factor: X1

Replicates: 3

Calculated: 3/15/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	0.67	0.67		PR	0.3	0.3
<i>Girardia</i>	03010102002	0.67	0.67		--	0.3	0.3
<i>Chaetogaster</i>	08020202002		0.33		--		0.1
<i>Chaetogaster limnaei</i>	08020202002004	0.33			--	0.1	
<i>Caecidotea</i>	09010101001	0.33	0.33	8	SH	0.1	0.1
<i>Hyalella</i>	09010203006	12.00	12.00	8	CG	4.8	4.8
<i>Acroncuria</i>	09020209042	2.00	2.00	0	PR	0.8	0.8
<i>Boyeria</i>	09020301004		2.00	2	PR		0.8
<i>Boyeria grafiana</i>	09020301004011	1.67			--	0.7	
<i>Boyeria vinosa</i>	09020301004012	0.33			--	0.1	
Coenagrionidae	09020309	8.00	8.00		--	3.2	3.2
<i>Argia</i>	09020309048	3.67	3.67	7	PR	1.5	1.5
<i>Acerpenna</i>	09020401007		21.67	5	CG		8.7
<i>Acerpenna pygmaea</i>	09020401007011	21.67			--	8.7	
<i>Procladius</i>	09020401010	3.67	3.67		CG	1.5	1.5
<i>Stenacron</i>	09020402014	32.00	43.33	7	SC	12.9	17.4
<i>Stenacron interpunctatum</i>	09020402014045	11.33			--	4.6	
<i>Eurylophella</i>	09020410036	1.67	1.67	3	CG	0.7	0.7
<i>Tricorythodes</i>	09020411038	0.67	0.67	4	CG	0.3	0.3
<i>Caenis</i>	09020412040	3.67	3.67	7	CG	1.5	1.5
<i>Hydrometra</i>	09020508023	0.33	0.33		PR	0.1	0.1
<i>Polycentropus</i>	09020603010	4.00	4.00	6	PR	1.6	1.6
<i>Cheumatopsyche</i>	09020604015	0.67	0.67	5	CF	0.3	0.3
Hydroptilidae	09020607				--		
<i>Oxyethira</i>	09020607028	1.00	1.00	3	P	0.4	0.4
<i>Orthotrichia</i>	09020607031	0.67	0.67		P	0.3	0.3
<i>Micrasema</i>	09020609044	1.00	1.00	2	SH	0.4	0.4
<i>Pycnopsyche</i>	09020610049		0.33	4	SH		0.1
<i>Pycnopsyche gentilis</i>	09020610049108	0.33			--	0.1	
<i>Ceraclea</i>	09020618072	34.00	34.00	3	CG	13.7	13.7
<i>Triaenodes</i>	09020618077	1.33	1.33	6	SH	0.5	0.5
<i>Oecetis</i>	09020618078	4.67	4.67	8	PR	1.9	1.9
Chironomidae	09021011				--		
<i>Ablabesmyia</i>	09021011001	8.33	8.33	8	PR	3.4	3.4
<i>Labrundinia</i>	09021011008	0.67	0.67	7	PR	0.3	0.3
<i>Pentaneura</i>	09021011014	1.33	1.33	6	PR	0.5	0.5
<i>Thienemannimyia</i>	09021011020		0.67	3	PR		0.3



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		Actual	Adjusted			Actual	Adjusted
<i>Thienemannimyia group</i>	09021011020041	0.67			--	0.3	
<i>Synorthocladius</i>	09021011061	0.67	0.67	2	CG	0.3	0.3
<i>Paratanytarsus</i>	09021011071	0.33	0.33	6	--	0.1	0.1
<i>Tanytarsus</i>	09021011076	4.00	4.00	6	CF	1.6	1.6
<i>Dicrotendipes</i>	09021011085	1.67	1.67	8	CG	0.7	0.7
<i>Lauterborniella</i>	09021011092	0.33	0.33		CG	0.1	0.1
<i>Microtendipes</i>	09021011094		3.00	6	CF		1.2
<i>Microtendipes rydalensis group</i>	09021011094168	3.00			--	1.2	
<i>Polypedilum</i>	09021011102	0.33	0.33	6	SH	0.1	0.1
<i>Psephenus</i>	09021108058		1.33	4	SC		0.5
<i>Psephenus herricki</i>	09021108058028	1.33			--	0.5	
<i>Ectopria</i>	09021109059		0.67	5	SC		0.3
<i>Ectopria nervosa</i>	09021109059029	0.67			--	0.3	
<i>Ancyronyx</i>	09021113063		0.33	6	--		0.1
<i>Ancyronyx variegatus</i>	09021113063034	0.33			CG	0.1	
<i>Dubiraphia</i>	09021113064	20.00	20.00	6	--	8.1	8.1
<i>Macronychus</i>	09021113065		1.33	4	--		0.5
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.5	
<i>Microcyloepus</i>	09021113066		4.33	3	--		1.7
<i>Microcyloepus pusillus</i>	09021113066041	4.33			--	1.7	
<i>Promoresia</i>	09021113069		5.33		--		2.1
<i>Promoresia elegans</i>	09021113069051	5.33			--	2.1	
<i>Stenelmis</i>	09021113070	11.67	11.67	5	SC	4.7	4.7
<i>Lebertia</i>	09030105001	0.67	0.67		--	0.3	0.3
<i>Sperchonopsis</i>	09030107002	0.33	0.33		--	0.1	0.1
<i>Amnicola</i>	10010104013	12.67	12.67		SC	5.1	5.1
<i>Stagnicola</i>	10010201025	13.00	13.00		--	5.2	5.2
<i>Ferrissia</i>	10010204035	3.00	3.00		SC	1.2	1.2