



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

**Station Information**

<b>Station Number:</b> S-636	River Basin: Kennebec
Waterbody: Kennebec River - Station 636	HUC8 Name: Lower Kennebec
Town: Bingham	Latitude: 45 1 59.8 N
Directions: DOWNSTREAM OF STP AND 50 M DOWNSTREAM OF JACKSON BROOK	Longitude: 69 51 52.48 W
	Stream Order: 5

**Sample Information**

<b>Log Number:</b> 2556	Type of Sample: ROCK BASKET	Date Deployed: 7/10/2017
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/7/2017

**Classification Attainment**

<b>Statutory Class:</b> A	<b>Final Determination:</b> A	Date: 12/11/2017
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 12/8/2017	Comments: Low A (.64).	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.17	Class A, B, or C	1.00
Class B	0.75	Non-Attainment	0.00
		<u>A Model</u>	
<u>B or Better Model</u>		Class A	0.64
Class A or B	0.99	Class B or C or Non-Attainment	0.36
Class C or Non-Attainment	0.01		

**Model Variables**

01 Total Mean Abundance	1052.00	18 Relative Abundance Ephemeroptera	0.15
02 Generic Richness	44.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	6.67	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	9.33
04 Ephemeroptera Mean Abundance	153.33	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	3.20	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	37.33
06 Hilsenhoff Biotic Index	4.90	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	12.00
07 Relative Abundance - Chironomidae	0.46	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.27	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	185.33		
11 <i>Cheumatopsyche</i> Abundance	32.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.83		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	6.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.33		
17 Chironomini Abundance (Family Functional Group)	26.67		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	41.06
2	<i>Hydropsyche</i>	17.62
3	<i>Neureclipsis</i>	7.10
4	<i>Rhyacophila</i>	6.21
5	<i>Serratella</i>	5.96



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**Station Number: S-636**      Town:      Bingham      Date Deployed: 7/10/2017  
**Log Number: 2556**      Waterbody: Kennebec River - Station 636      Date Retrieved: 8/7/2017

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature:                      18.7 deg C  
Dissolved Oxygen:              9.81 mg/l  
Dissolved Oxygen Saturation:    104.9 %  
Specific Conductance:          33.9 uS/cm  
Velocity:                          85.3 cm/s  
pH:                                  7.1  
Wetted Width:                    19 m  
Bankfull Width:                 19 m  
Depth:                              90 cm

**Waterbody Information - Retrieval**

Temperature:                      21.3 deg C  
Dissolved Oxygen:              10.4 mg/l  
Dissolved Oxygen Saturation:    120 %  
Specific Conductance:          34.3 uS/cm  
Velocity:                          33.53 cm/s  
pH:                                  7.59  
Wetted Width:                    18 m  
Bankfull Width:                 19 m  
Depth:                              40 cm

**Water Chemistry**

**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>	
Nutrients	Below Dam	Boulder	5 %
Regulated Flows	Below Point Source	Gravel	20 %
		Rubble/Cobble	75 %

**Landcover Summary - 2004 Data**

**Sample Comments**

7/10/17: FLOW VERY HIGH AND FAST, FISH PRESENT.  
8/7/17: FLOW IS LOWER THAN AT DEPLOYMENT, BASKETS STILL IN FLOW. FISH PRESENT.



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Aquatic Life Taxonomic Inventory Report**

**Station Number: S-636**  
**Log Number: 2556**

Waterbody: Kennebec River - Station 636  
Subsample Factor: X4

Town: Bingham  
Calculated: 12/8/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002	5.33	5.33		--	0.5	0.5
<i>Nais</i>	08020202009	1.33	1.33		CG	0.1	0.1
<i>Slavina</i>	08020202012		1.33		--		0.1
<i>Slavina appendiculata</i>	08020202012001	1.33			--	0.1	
<i>Stylaria</i>	08020202014	1.33	1.33		CG	0.1	0.1
Perlidae	09020209	4.00	4.00		--	0.4	0.4
<i>Perlesta</i>	09020209046		2.67	5	PR		0.3
<i>Perlesta placida</i>	09020209046140	2.67			--	0.3	
<i>Baetis</i>	09020401001		30.67	4	CG		2.9
<i>Baetis flavistriga</i>	09020401001004	25.33			--	2.4	
<i>Baetis intercalaris</i>	09020401001008	5.33			--	0.5	
<i>Acerpenna</i>	09020401007	1.33	1.33	5	CG	0.1	0.1
<i>Labiobaetis</i>	09020401009	1.33	1.33		--	0.1	0.1
<i>Proclleon</i>	09020401010	1.33	1.33		CG	0.1	0.1
<i>Plauditus</i>	09020401012	6.67	6.67		CG	0.6	0.6
<i>Dipheter</i>	09020401013		1.33		--		0.1
<i>Dipheter hageni</i>	09020401013001	1.33			--	0.1	
<i>Iswaeon</i>	09020401015		10.67		--		1.0
<i>Iswaeon anoka</i>	09020401015001	10.67			--	1.0	
<i>Epeorus</i>	09020402009		4.00	0	SC		0.4
<i>Epeorus vitreus</i>	09020402009033	4.00			--	0.4	
<i>Leucrocuta</i>	09020402011	1.33	1.33	1	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	6.67	12.00	4	SC	0.6	1.1
<i>Maccaffertium mediopunctatum</i>	09020402015050	4.00			--	0.4	
<i>Maccaffertium modestum</i>	09020402015051	1.33			--	0.1	
<i>Isonychia</i>	09020404018	2.67	2.67	2	CF	0.3	0.3
<i>Serratella</i>	09020410037		62.67	2	CG		6.0
<i>Serratella serrata</i>	09020410037123	10.67			--	1.0	
<i>Serratella serratoides</i>	09020410037124	52.00			--	4.9	
<i>Tricorythodes</i>	09020411038	17.33	17.33	4	CG	1.6	1.6
<i>Psychomyia</i>	09020602005		1.33	2	CG		0.1
<i>Psychomyia flavida</i>	09020602005006	1.33			--	0.1	
<i>Neureclipsis</i>	09020603008	74.67	74.67	7	CF	7.1	7.1
<i>Cheumatopsyche</i>	09020604015	32.00	32.00	5	CF	3.0	3.0
<i>Hydropsyche</i>	09020604016	52.00	185.33	4	CF	4.9	17.6
<i>Hydropsyche bronta</i>	09020604016029	54.67			--	5.2	
<i>Hydropsyche morosa</i>	09020604016030	40.00			--	3.8	



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche sparna</i>	09020604016032	2.67			--	0.3	
<i>Hydropsyche scalaris species group</i>	09020604016048	36.00			--	3.4	
<i>Rhyacophila</i>	09020605019		65.33	2	PR		6.2
<i>Rhyacophila minor</i>	09020605019063	65.33			PR	6.2	
<i>Brachycentrus</i>	09020609043		9.33	0	CF		0.9
<i>Brachycentrus appalachia</i>	09020609043096	9.33			--	0.9	
<i>Oecetis</i>	09020618078	1.33	1.33	8	PR	0.1	0.1
Chironomidae	09021011				--		
<i>Thienemannimyia</i>	09021011020		1.33	3	PR		0.1
<i>Thienemannimyia group</i>	09021011020041	1.33			--	0.1	
<i>Brillia</i>	09021011033	2.67	2.67	5	SH	0.3	0.3
<i>Cricotopus</i>	09021011037		5.33	7	SH		0.5
<i>Cricotopus bicinctus</i>	09021011037057	5.33			--	0.5	
<i>Parametriocnemus</i>	09021011053	2.67	2.67	5	CG	0.3	0.3
<i>Tvetenia</i>	09021011065		16.00	5	CG		1.5
<i>Tvetenia vitracies</i>	09021011065113	16.00			--	1.5	
<i>Micropsectra</i>	09021011070	1.33	1.33	7	CG	0.1	0.1
<i>Rheotanytarsus</i>	09021011072		432.00	6	CF		41.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	69.33			CF	6.6	
<i>Rheotanytarsus pellucidus</i>	09021011072128	362.67			CF	34.5	
<i>Dicrotendipes</i>	09021011085	8.00	8.00	8	CG	0.8	0.8
<i>Microtendipes</i>	09021011094		2.67	6	CF		0.3
<i>Microtendipes rydalensis group</i>	09021011094168	2.67			--	0.3	
<i>Polypedilum</i>	09021011102		16.00	6	SH		1.5
<i>Polypedilum aviceps</i>	09021011102181	6.67			--	0.6	
<i>Polypedilum flavum</i>	09021011102182	5.33			--	0.5	
<i>Polypedilum illinoense group</i>	09021011102185	1.33			--	0.1	
<i>Polypedilum tritum</i>	09021011102191	2.67			--	0.3	
<i>Simulium</i>	09021012047	1.33	1.33	4	CF	0.1	0.1
<i>Atherix</i>	09021015055	1.33	1.33	2	PR	0.1	0.1
Dytiscidae	09021103	1.33	1.33		--	0.1	0.1
<i>Dineutus</i>	09021104032	6.67	6.67	2	--	0.6	0.6
Lymnaeidae	10010201	1.33	1.33		--	0.1	0.1
Physidae	10010202	4.00	4.00		SC	0.4	0.4
<i>Gyraulus</i>	10010203029	5.33	5.33		SC	0.5	0.5
<i>Ferrissia</i>	10010204035	4.00	4.00		SC	0.4	0.4