



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

Station Information

Station Number: S-16	River Basin: Kennebec
Waterbody: Carrabassett River - Station 16	HUC8 Name: Lower Kennebec
Town: Kingfield	Latitude: 44 57 9.64 N
Directions: 0.9 KM BELOW RT. 16 BRIDGE CROSSING	Longitude: 70 8 51.08 W
	Stream Order: 4

Sample Information

Log Number: 2563	Type of Sample: ROCK BASKET	Date Deployed: 7/13/2017
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/10/2017

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 1/23/2018
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 1/22/2018	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.85	Class C	0.00
Class B	0.15	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
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	252.00	18 Relative Abundance Ephemeroptera	0.43
02 Generic Richness	46.00	19 EPT Generic Richness	29.00
03 Plecoptera Mean Abundance	3.67	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	108.00	23 Relative Generic Richness- Plecoptera	0.07
05 Shannon-Wiener Generic Diversity	4.07	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	11.67
06 Hilsenhoff Biotic Index	3.53	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	15.00
07 Relative Abundance - Chironomidae	0.12	28 EP Generic Richness/14	1.36
08 Relative Generic Richness Diptera	0.28	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	19.67		
11 <i>Cheumatopsyche</i> Abundance	10.00		
12 EPT Generic Richness/ Diptera Generic Richness	2.23		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Brachycentrus</i>	18.65
2	<i>Tricorythodes</i>	15.34
3	<i>Neureclipsis</i>	10.45
4	<i>Hydropsyche</i>	7.80
5	<i>Acerpenna</i>	6.88



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 17.1 deg C
Dissolved Oxygen: 10.81 mg/l
Dissolved Oxygen Saturation: 112.2 %
Specific Conductance: 50 uS/cm
Velocity: 18.3 cm/s
pH: 7.61
Wetted Width: 44 m
Bankfull Width: 56 m
Depth: 55 cm

Waterbody Information - Retrieval

Temperature: 18.2 deg C
Dissolved Oxygen: 10.94 mg/l
Dissolved Oxygen Saturation: 116.2 %
Specific Conductance: 57.9 uS/cm
Velocity: 15.2 cm/s
pH: 7.75
Wetted Width: 41 m
Bankfull Width: 56 m
Depth: 45 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Open	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nutrients	Below POTW	Boulder	15 %
	Below Town	Gravel	30 %
		Rubble/Cobble	40 %
		Sand	15 %

Landcover Summary - 2004 Data

Total Area (ac)	108109	High Int. Dev. %	0.2	Water %	0.4	Non-vegetated %	0.4
		Med Int. Dev. %	0.2	Wetland %	2.2	Tilled Agriculture %	0.2
		Low Int. Dev. %	0.8	Upland Woody %	93.7	Grassland %	1.7
		Development %	1.1	Natural %	96.7	Human Altered %	2.9
						Impervious %	0.8

Sample Comments

7/13/17: RAINING AT DEPLOYMENT.



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Subsample Factor: X1

Replicates: 3

Calculated: 1/22/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Acroneuria</i>	09020209042	0.67	1.67	0	PR	0.3	0.7
<i>Acroneuria abnormis</i>	09020209042121	0.67		0	PR	0.3	
<i>Acroneuria lycorias</i>	09020209042125	0.33			--	0.1	
<i>Perlesta</i>	09020209046	1.00	1.00	5	PR	0.4	0.4
<i>Neoperla</i>	09020209048	1.00	1.00	1	PR	0.4	0.4
Gomphidae	09020302	0.67	0.67		--	0.3	0.3
<i>Baetis</i>	09020401001		4.33	4	CG		1.7
<i>Baetis flavistriga</i>	09020401001004	0.33			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	4.00			--	1.6	
<i>Acerpenna</i>	09020401007	1.67	17.33	5	CG	0.7	6.9
<i>Acerpenna macdunnoughi</i>	09020401007001	5.67			--	2.2	
<i>Acerpenna pygmaea</i>	09020401007011	10.00			--	4.0	
<i>Plauditus</i>	09020401012	2.00	2.00		CG	0.8	0.8
<i>Dipheter</i>	09020401013		1.67		--		0.7
<i>Dipheter hageni</i>	09020401013001	1.67			--	0.7	
<i>Iswaeon</i>	09020401015		1.00		--		0.4
<i>Iswaeon anoka</i>	09020401015001	1.00			--	0.4	
<i>Epeorus</i>	09020402009		0.33	0	SC		0.1
<i>Epeorus vitreus</i>	09020402009033	0.33			--	0.1	
<i>Leucrocuta</i>	09020402011	7.00	7.00	1	SC	2.8	2.8
<i>Nixe</i>	09020402012	1.00	1.00	2	SC	0.4	0.4
<i>Rhithrogena</i>	09020402013	0.67	0.67	0	SC	0.3	0.3
<i>Maccaffertium</i>	09020402015	11.67	13.33	4	SC	4.6	5.3
<i>Maccaffertium vicarium</i>	09020402015055	1.67			--	0.7	
<i>Isonychia</i>	09020404018	12.67	12.67	2	CF	5.0	5.0
<i>Paraleptophlebia</i>	09020406026	2.33	2.33	1	CG	0.9	0.9
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.1	0.1
<i>Serratella</i>	09020410037		5.00	2	CG		2.0
<i>Serratella serrata</i>	09020410037123	4.33			--	1.7	
<i>Serratella serratoides</i>	09020410037124	0.67			--	0.3	
<i>Tricorythodes</i>	09020411038	38.67	38.67	4	CG	15.3	15.3
<i>Caenis</i>	09020412040	0.33	0.33	7	CG	0.1	0.1
<i>Dolophilodes</i>	09020601001		0.33	0	CF		0.1
<i>Dolophilodes distinctus</i>	09020601001001	0.33			--	0.1	
<i>Neureclipsis</i>	09020603008	26.33	26.33	7	CF	10.4	10.4
<i>Cheumatopsyche</i>	09020604015	10.00	10.00	5	CF	4.0	4.0
<i>Hydropsyche</i>	09020604016	9.33	19.67	4	CF	3.7	7.8



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche bronta</i>	09020604016029	2.67			--	1.1	
<i>Hydropsyche morosa</i>	09020604016030	3.00			--	1.2	
<i>Hydropsyche sparna</i>	09020604016032	4.67			--	1.9	
<i>Rhyacophila</i>	09020605019		0.67	2	PR		0.3
<i>Rhyacophila minor</i>	09020605019063	0.67			PR	0.3	
<i>Oxyethira</i>	09020607028	0.33	0.33	3	P	0.1	0.1
<i>Brachycentrus</i>	09020609043		47.00	0	CF		18.7
<i>Brachycentrus appalachia</i>	09020609043096	47.00			--	18.7	
<i>Lepidostoma</i>	09020611064	1.67	1.67	1	SH	0.7	0.7
<i>Psilotreta</i>	09020614068		0.33	0	SC		0.1
<i>Psilotreta labida</i>	09020614068133	0.33			--	0.1	
<i>Oecetis</i>	09020618078			8	PR		
<i>Apatania</i>	09020619061	0.33	0.33		SC	0.1	0.1
Chironomidae	09021011				--		
<i>Ablabesmyia</i>	09021011001	1.00	1.00	8	PR	0.4	0.4
<i>Larsia</i>	09021011009	0.33	0.33	6	PR	0.1	0.1
<i>Thienemannimyia</i>	09021011020		1.33	3	PR		0.5
<i>Thienemannimyia group</i>	09021011020041	1.33			--	0.5	
<i>Potthastia</i>	09021011026		0.33	2	CG		0.1
<i>Potthastia gaedii</i>	09021011026045	0.33			--	0.1	
<i>Corynoneura</i>	09021011036	0.33	0.33	7	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		1.33	5	CG		0.5
<i>Tvetenia vitracies</i>	09021011065113	1.33			--	0.5	
<i>Rheotanytarsus</i>	09021011072		7.33	6	CF		2.9
<i>Rheotanytarsus exiguus group</i>	09021011072127	1.67			CF	0.7	
<i>Rheotanytarsus pellucidus</i>	09021011072128	5.67			CF	2.2	
<i>Stempellinella</i>	09021011074	0.33	0.33	2	--	0.1	0.1
<i>Tanytarsus</i>	09021011076	0.67	0.67	6	CF	0.3	0.3
<i>Microtendipes</i>	09021011094		6.00	6	CF		2.4
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.1	
<i>Microtendipes rydalensis group</i>	09021011094168	5.67			--	2.2	
<i>Phaenopsectra</i>	09021011101	1.33	1.33	7	SC	0.5	0.5
<i>Polypedilum</i>	09021011102		9.67	6	SH		3.8
<i>Polypedilum aviceps</i>	09021011102181	6.33			--	2.5	
<i>Polypedilum flavum</i>	09021011102182	3.33			--	1.3	
<i>Simulium</i>	09021012047	1.00	1.00	4	CF	0.4	0.4
<i>Dineutus</i>	09021104032	0.67	0.67	2	--	0.3	0.3
<i>Optioservus</i>	09021113067	0.33	0.33	3	SC	0.1	0.1



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<i>Promoresia</i>	09021113069		1.00		--		0.4
<i>Promoresia elegans</i>	09021113069051	1.00			--	0.4	