



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

Station Information

Station Number:	S-572	River Basin:	Kennebec
Waterbody:	Sandy River - Station 572	HUC8 Name:	Lower Kennebec
Town:	Farmington	Latitude:	44 38 55.79 N
Directions:	DOWNSTREAM OF TREATMENT FACILITY BY POWER LINES	Longitude:	70 7 54.49 W
		Stream Order:	4

Sample Information

Log Number:	2575	Type of Sample:	ROCK BASKET	Date Deployed:	7/19/2017
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/16/2017

Classification Attainment

Statutory Class:	B	Final Determination:	A	Date:	4/26/2018
Model Result with $P \geq 0.6$:	A	Reason for Determination:	Model		
Date Last Calculated:	4/26/2018	Comments:			

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.81	Class A, B, or C	1.00
Class B	0.19	Non-Attainment	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	353.00	18 Relative Abundance Ephemeroptera	0.37
02 Generic Richness	67.00	19 EPT Generic Richness	32.00
03 Plecoptera Mean Abundance	2.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.35
04 Ephemeroptera Mean Abundance	130.67	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	4.15	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	30.61
06 Hilsenhoff Biotic Index	4.32	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	21.86
07 Relative Abundance - Chironomidae	0.26	28 EP Generic Richness/14	1.36
08 Relative Generic Richness Diptera	0.31	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	24.75		
11 <i>Cheumatopsyche</i> Abundance	28.58		
12 EPT Generic Richness/ Diptera Generic Richness	1.52		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	5.07		
17 Chironomini Abundance (Family Functional Group)	7.78		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	19.74
2	<i>Simulium</i>	12.75
3	<i>Baetis</i>	10.76
4	<i>Cheumatopsyche</i>	8.10
5	<i>Leucrocota</i>	7.55



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Date Retrieved: 8/16/2017

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	24.4 deg C
Dissolved Oxygen:	9.58 mg/l
Dissolved Oxygen Saturation:	114.4 %
Specific Conductance:	48.2 uS/cm
Velocity:	33.5 cm/s
pH:	6.47
Wetted Width:	80 m
Bankfull Width:	85 m
Depth:	95 cm

Waterbody Information - Retrieval

Temperature:	22.1 deg C
Dissolved Oxygen:	9.58 mg/l
Dissolved Oxygen Saturation:	112.7 %
Specific Conductance:	50.1 uS/cm
Velocity:	33.5 cm/s
pH:	6.48
Wetted Width:	80 m
Bankfull Width:	85 m
Depth:	120 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Open	Rolling
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Nutrients	Below POTW	Bedrock 5 %
	Main Stem	Gravel 10 %
		Rubble/Cobble 20 %
		Sand 65 %

Landcover Summary - 2004 Data

Total Area (ac)	53157	High Int. Dev. %	0.4	Water %	0.7	Non-vegetated %	0.2
		Med Int. Dev. %	0.4	Wetland %	2.4	Tilled Agriculture %	2.0
		Low Int. Dev. %	1.1	Upland Woody %	88.7	Grassland %	3.5
		Development %	1.9	Natural %	91.3	Human Altered %	8.0
						Impervious %	2.8

Sample Comments

FISH PRESENT AT DEPLOYMENT.

FLOW VERY HIGH AT RETRIEVAL. HAD TO USE RAKE TO REACH BASKETS.



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Subsample Factor: X1

Replicates: 3

Calculated: 4/26/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Prostoma</i>	04010101001	0.33	0.33		--	0.1	0.1
<i>Lumbriculus</i>	08020101002		0.33		CG		0.1
<i>Lumbriculus variegatus</i>	08020101002001	0.33			--	0.1	
Perlidae	09020209	1.00	1.00		--	0.3	0.3
<i>Acroneuria</i>	09020209042	1.00	1.67	0	PR	0.3	0.5
<i>Acroneuria internata</i>	09020209042124	0.33			--	0.1	
<i>Acroneuria lycorias</i>	09020209042125	0.33			--	0.1	
<i>Boyeria</i>	09020301004		0.33	2	PR		0.1
<i>Boyeria grafiana</i>	09020301004011	0.33			--	0.1	
<i>Ophiogomphus</i>	09020302015	0.33	0.33	1	PR	0.1	0.1
<i>Macromia</i>	09020304021		0.67	2	PR		0.2
<i>Macromia illinoiensis</i>	09020304021045	0.67			--	0.2	
<i>Argia</i>	09020309048	0.33	0.33	7	PR	0.1	0.1
Baetidae	09020401	3.00			--	0.8	
<i>Baetis</i>	09020401001	3.00	37.99	4	CG	0.8	10.8
<i>Baetis flavistriga</i>	09020401001004	9.33			--	2.6	
<i>Baetis intercalaris</i>	09020401001008	23.67			--	6.7	
<i>Acerpenna</i>	09020401007	0.67	10.55	5	CG	0.2	3.0
<i>Acerpenna pygmaea</i>	09020401007011	9.33			--	2.6	
<i>Labiobaetis</i>	09020401009		0.35		--		0.1
<i>Labiobaetis propinquus</i>	09020401009010	0.33			--	0.1	
<i>Procloeon</i>	09020401010	0.33	0.35		CG	0.1	0.1
<i>Plauditus</i>	09020401012	0.33	0.35		CG	0.1	0.1
<i>Iswaeon</i>	09020401015		7.74		--		2.2
<i>Iswaeon anoka</i>	09020401015001	7.33			--	2.1	
Heptageniidae	09020402	6.00			--	1.7	
<i>Epeorus</i>	09020402009	0.67	0.76	0	SC	0.2	0.2
<i>Leucrocuta</i>	09020402011	23.33	26.67	1	SC	6.6	7.6
<i>Rhithrogena</i>	09020402013	0.33	0.38	0	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	10.00	20.19	4	SC	2.8	5.7
<i>Maccaffertium luteum</i>	09020402015049	5.67			--	1.6	
<i>Maccaffertium modestum</i>	09020402015051	2.00			--	0.6	
<i>Isonychia</i>	09020404018	9.67	9.67	2	CF	2.7	2.7
Leptophlebiidae	09020406	3.33	3.33		--	0.9	0.9
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	0.1	0.1
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.1	0.1
<i>Serratella</i>	09020410037		0.33	2	CG		0.1



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		Actual	Adjusted			Actual	Adjusted
<i>Serratella serratoides</i>	09020410037124	0.33			--	0.1	
<i>Tricorythodes</i>	09020411038	11.00	11.00	4	CG	3.1	3.1
<i>Caenis</i>	09020412040		0.33	7	CG		0.1
<i>Caenis diminuta</i>	09020412040131	0.33			--	0.1	
<i>Chimarra</i>	09020601003	0.33	4.33	2	CF	0.1	1.2
<i>Chimarra obscura</i>	09020601003003	0.33			--	0.1	
<i>Chimarra socia</i>	09020601003004	3.67			--	1.0	
<i>Neureclipsis</i>	09020603008	0.33	0.33	7	CF	0.1	0.1
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.1	0.1
Hydropsychidae	09020604	2.33			--	0.7	
<i>Cheumatopsyche</i>	09020604015	27.33	28.58	5	CF	7.7	8.1
<i>Hydropsyche</i>	09020604016	13.67	24.75	4	CF	3.9	7.0
<i>Hydropsyche morosa</i>	09020604016030	6.33			--	1.8	
<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.1	
<i>Hydropsyche placoda</i>	09020604016059	3.33			--	0.9	
<i>Glossosoma</i>	09020606020			0	SC		
Hydroptilidae	09020607				--		
<i>Hydroptila</i>	09020607026	2.33	2.33	6	P	0.7	0.7
<i>Oxyethira</i>	09020607028	0.33	0.33	3	P	0.1	0.1
<i>Brachycentrus</i>	09020609043		0.33	0	CF		0.1
<i>Brachycentrus appalachia</i>	09020609043096	0.33			--	0.1	
<i>Micrasema</i>	09020609044		0.33	2	SH		0.1
<i>Micrasema wataga</i>	09020609044101	0.33			--	0.1	
<i>Pycnopsyche</i>	09020610049	0.67	0.67	4	SH	0.2	0.2
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.2	0.2
<i>Psilotreta</i>	09020614068		0.33	0	SC		0.1
<i>Psilotreta indecisa</i>	09020614068132	0.33			--	0.1	
<i>Oecetis</i>	09020618078	0.33	1.33	8	PR	0.1	0.4
<i>Oecetis persimilis</i>	09020618078157	1.00			--	0.3	
Tipulidae	09021001	0.33			--	0.1	
<i>Antocha</i>	09021001004	0.33	0.50	3	CG	0.1	0.1
<i>Hexatoma</i>	09021001008	0.33	0.50	2	PR	0.1	0.1
Chironomidae	09021011	1.33			--	0.4	
<i>Ablabesmyia</i>	09021011001		1.35	8	PR		0.4
<i>Ablabesmyia mallochi</i>	09021011001004	1.33			--	0.4	
<i>Conchapelopia</i>	09021011004	1.67	1.69	6	PR	0.5	0.5
<i>Pentaneura</i>	09021011014		1.01	6	PR		0.3
<i>Pentaneura inconspicua</i>	09021011014028	1.00			--	0.3	



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<i>Rheopelopia</i>	09021011017	1.00	1.01		PR	0.3	0.3
<i>Brillia</i>	09021011033		1.01	5	SH		0.3
<i>Brillia flavifrons</i>	09021011033049	1.00			--	0.3	
<i>Corynoneura</i>	09021011036	1.00	1.01	7	CG	0.3	0.3
<i>Cricotopus</i>	09021011037		0.68	7	SH		0.2
<i>Cricotopus bicinctus</i>	09021011037057	0.67			--	0.2	
<i>Rheocricotopus</i>	09021011057		0.34	6	CG		0.1
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.1	
<i>Synorthocladius</i>	09021011061	0.33	0.34	2	CG	0.1	0.1
<i>Thienemanniella</i>	09021011062		0.68	6	CG		0.2
<i>Thienemanniella xena</i>	09021011062110	0.33			--	0.1	
<i>Thienemanniella similis</i>	09021011062111	0.33			--	0.1	
<i>Tvetenia</i>	09021011065		4.40	5	CG		1.2
<i>Tvetenia vitracies</i>	09021011065113	4.33			--	1.2	
<i>Rheotanytarsus</i>	09021011072	0.33	69.69	6	CF	0.1	19.7
<i>Rheotanytarsus exiguus group</i>	09021011072127	62.00			CF	17.6	
<i>Rheotanytarsus pellucidus</i>	09021011072128	6.33			CF	1.8	
<i>Dicrotendipes</i>	09021011085	0.33	1.35	8	CG	0.1	0.4
<i>Dicrotendipes neomodestus</i>	09021011085152	1.00			--	0.3	
<i>Microtendipes</i>	09021011094		0.68	6	CF		0.2
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.1	
<i>Microtendipes rydalensis group</i>	09021011094168	0.33			--	0.1	
<i>Polypedilum</i>	09021011102		5.07	6	SH		1.4
<i>Polypedilum aviceps</i>	09021011102181	2.00			--	0.6	
<i>Polypedilum flavum</i>	09021011102182	2.33			--	0.7	
<i>Polypedilum illinoense</i>	09021011102204	0.67			--	0.2	
<i>Robackia</i>	09021011103		0.34		CG		0.1
<i>Robackia demeijerei</i>	09021011103002	0.33			--	0.1	
<i>Stenochironomus</i>	09021011105	0.33	0.34	5	CG	0.1	0.1
<i>Simulium</i>	09021012047		45.00	4	CF		12.7
<i>Simulium fibrinflatum</i>	09021012047059	3.33			--	0.9	
<i>Simulium jenningsi</i>	09021012047060	2.00			--	0.6	
<i>Simulium jenningsi group</i>	09021012047070	39.67			CF	11.2	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Psephenus</i>	09021108058		6.33	4	SC		1.8
<i>Psephenus herricki</i>	09021108058028	6.33			--	1.8	
<i>Dubiraphia</i>	09021113064		0.33	6	--		0.1
<i>Dubiraphia vittata</i>	09021113064038	0.33			--	0.1	



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		Calculated: 4/26/2018

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<i>Promoresia</i>	09021113069		0.33		--		0.1
<i>Promoresia elegans</i>	09021113069051	0.33			--	0.1	
<i>Stenelmis</i>	09021113070	4.67	5.33	5	SC	1.3	1.5
<i>Stenelmis crenata</i>	09021113070055	0.67			--	0.2	
<i>Physa</i>	10010202027	1.33	1.33		SC	0.4	0.4
<i>Helisoma</i>	10010203030		1.00		SC		0.3
<i>Helisoma anceps</i>	10010203030058	1.00			--	0.3	
<i>Ferrissia</i>	10010204035		0.33		SC		0.1
<i>Ferrissia rivularis</i>	10010204035066	0.33			--	0.1	
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.1	0.1