



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

Station Information

Station Number: S-196 River Basin: Kennebec  
Waterbody: Kennebec River - Station 196 HUC8 Name: Lower Kennebec  
Town: Benton Latitude: 44 37 28.69 N  
Directions: 10.3 KM BELOW S.D. WARREN CO. Longitude: 69 34 38.17 W  
Stream Order: 6

Sample Information

Log Number: 2259 Type of Sample: ROCK BASKET Date Deployed: 7/14/2014  
Subsample Factor: X4 Replicates: 3 Date Retrieved: 8/11/2014

Classification Attainment

Statutory Class: B Final Determination: A Date: 11/3/2014  
Model Result with  $P \geq 0.6$ : A Reason for Determination: Model  
Date Last Calculated: 11/3/2014 Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.62	Class A, B, or C	1.00
Class B	0.37	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.93
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.07

Model Variables

01 Total Mean Abundance	1426.67	18 Relative Abundance Ephemeroptera	0.20
02 Generic Richness	49.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	5.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	282.67	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	3.64	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	136.97
06 Hilsenhoff Biotic Index	3.40	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	35.38
07 Relative Abundance - Chironomidae	0.09	28 EP Generic Richness/14	0.64
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	197.50		
11 <i>Cheumatopsyche</i> Abundance	134.18		
12 EPT Generic Richness/ Diptera Generic Richness	1.28		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	5.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	2.79		
17 Chironomini Abundance (Family Functional Group)	45.98		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Macrostemum</i>	22.83
2	<i>Chimarra</i>	15.89
3	<i>Hydropsyche</i>	13.84
4	<i>Cheumatopsyche</i>	9.41
5	<i>Isonychia</i>	9.25



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**Log Number: 2259**

Waterbody: Kennebec River - Station 196

Date Retrieved: 8/11/2014

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 21 deg C  
Dissolved Oxygen: 8.7 mg/l  
Specific Conductance: 55 uS/cm  
Velocity: 66 cm/s  
pH: 7.11  
Wetted Width: 329 m  
Bankfull Width: 330 m  
Depth: 110 cm

**Waterbody Information - Retrieval**

Temperature: 22.5 deg C  
Dissolved Oxygen: 8.1 mg/l  
Specific Conductance: 58 uS/cm  
Velocity: 45 cm/s  
pH: 6.61  
Wetted Width: 330 m  
Bankfull Width: 330 m  
Depth: 135 cm

**Water Chemistry - 8/11/2014**

Ammonia As Nitrogen	0.01 mg/l	Nitrate+nitrite As N	0.08 mg/l
Total Phosphorus	12 ug/l	Total Kjeldahl Nitrogen	0.3 mg/l
Total Suspended Solids	3.2 mg/l	Dissolved Organic Carbon	4.5 mg/l
Total Dissolved Solids	57 mg/l	Orthophosphate As Phosphorus	2 ug/l

**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>
Regulated Flows	Below Dam	Boulder 20 %
Toxic Organics	Below Point Source	Gravel 10 %
	Main Stem	Rubble/Cobble 60 %
		Sand 10 %

**Landcover Summary - 2004 Data**

**Sample Comments**

7/14/14-FISH PRESENT, WATER HIGH.

8/11/14- FISH PRESENT, PH METER ACTING FUNNY.



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Aquatic Life Taxonomic Inventory Report**

**Station Number: S-196**

Waterbody: Kennebec River - Station 196

Town: Benton

**Log Number: 2259**

Subsample Factor: X4

Replicates: 3

Calculated: 11/3/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002		8.00		--		0.6
<i>Girardia tigrina</i>	03010102002001	8.00			--	0.6	
<i>Orconectes</i>	09010301008		1.33		CG		0.1
<i>Orconectes limosus</i>	09010301008013	1.33			--	0.1	
<i>Acroneuria</i>	09020209042	2.67	5.33	0	PR	0.2	0.4
<i>Acroneuria lycorias</i>	09020209042125	1.33			--	0.1	
<i>Acroneuria evoluta</i>	09020209042126	1.33			--	0.1	
<i>Hagenius</i>	09020302008		1.33	1	PR		0.1
<i>Hagenius brevistylus</i>	09020302008015	1.33			PR	0.1	
<i>Argia</i>	09020309048		1.33	7	PR		0.1
<i>Argia apicalis</i>	09020309048103	1.33			--	0.1	
Baetidae	09020401	2.67			--	0.2	
<i>Baetis</i>	09020401001	6.67	67.95	4	CG	0.5	4.8
<i>Baetis intercalaris</i>	09020401001008	58.67			--	4.1	
<i>Acerpenna</i>	09020401007		1.39	5	CG		0.1
<i>Acerpenna pygmaea</i>	09020401007011	1.33			--	0.1	
Heptageniidae	09020402	4.00			--	0.3	
<i>Leucrocuta</i>	09020402011	26.67	28.62	1	SC	1.9	2.0
<i>Maccaffertium</i>	09020402015	12.00	30.05	4	SC	0.8	2.1
<i>Maccaffertium luteum</i>	09020402015049	1.33			--	0.1	
<i>Maccaffertium modestum</i>	09020402015051	14.67			--	1.0	
<i>Isonychia</i>	09020404018	132.00	132.00	2	CF	9.3	9.3
Ephemerellidae	09020410	1.33			--	0.1	
<i>Ephemerella</i>	09020410035	1.33	1.45	1	CG	0.1	0.1
<i>Serratella</i>	09020410037		14.55	2	CG		1.0
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	10.67			--	0.7	
<i>Serratella serratoides</i>	09020410037124	2.67			--	0.2	
<i>Tricorythodes</i>	09020411038	6.67	6.67	4	CG	0.5	0.5
Trichoptera	090206				--		
Philopotamidae	09020601	4.00	4.00		--	0.3	0.3
<i>Chimarra</i>	09020601003	36.00	226.67	2	CF	2.5	15.9
<i>Chimarra obscura</i>	09020601003003	152.00			--	10.7	
<i>Chimarra socia</i>	09020601003004	38.67			--	2.7	
<i>Neureclipsis</i>	09020603008	1.33	1.33	7	CF	0.1	0.1
<i>Polycentropus</i>	09020603010	5.33	5.33	6	PR	0.4	0.4
Hydropsychidae	09020604	76.00			--	5.3	
<i>Cheumatopsyche</i>	09020604015	118.67	134.18	5	CF	8.3	9.4
<i>Hydropsyche</i>	09020604016	45.33	197.50	4	CF	3.2	13.8



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Town: Benton

**Log Number: 2259**

Subsample Factor: X4

Replicates: 3

Calculated: 11/3/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche morosa</i>	09020604016030	29.33			--	2.1	
<i>Hydropsyche phalerata</i>	09020604016047	86.67			--	6.1	
<i>Hydropsyche placoda</i>	09020604016059	13.33			--	0.9	
<i>Macrostemum</i>	09020604018		325.65	3	CF		22.8
<i>Macrostemum zebratum</i>	09020604018054	288.00			--	20.2	
<i>Protoptila</i>	09020606022	4.00	4.00	1	SC	0.3	0.3
<i>Brachycentrus</i>	09020609043		1.33	0	CF		0.1
<i>Brachycentrus numerosus</i>	09020609043098	1.33			--	0.1	
<i>Pycnopsyche</i>	09020610049	1.33	1.33	4	SH	0.1	0.1
<i>Lepidostoma</i>	09020611064	10.67	10.67	1	SH	0.7	0.7
<i>Helicopsyche</i>	09020616070		1.33	3	SC		0.1
<i>Helicopsyche borealis</i>	09020616070137	1.33			--	0.1	
<i>Ceraclea</i>	09020618072	2.67	2.67	3	CG	0.2	0.2
<i>Oecetis</i>	09020618078	2.67	4.00	8	PR	0.2	0.3
<i>Oecetis persimilis</i>	09020618078157	1.33			--	0.1	
<i>Nigronia</i>	09020701003		1.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.1	
Chironomidae	09021011	5.33			--	0.4	
<i>Nilotanyus</i>	09021011012		1.39	6	PR		0.1
<i>Nilotanyus fimbriatus</i>	09021011012027	1.33			--	0.1	
<i>Pentaneura</i>	09021011014		1.39	6	PR		0.1
<i>Pentaneura inconspicua</i>	09021011014028	1.33			--	0.1	
<i>Corynoneura</i>	09021011036	1.33	1.39	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		1.39	7	SH		0.1
<i>Cricotopus bicinctus</i>	09021011037057	1.33			--	0.1	
<i>Nanocladius</i>	09021011049	1.33	1.39	3	CG	0.1	0.1
<i>Orthocladius</i>	09021011050	1.33	1.39	6	CG	0.1	0.1
<i>Rheocricotopus</i>	09021011057		1.39	6	CG		0.1
<i>Rheocricotopus robacki</i>	09021011057105	1.33			--	0.1	
<i>Thienemanniella</i>	09021011062	1.33	1.39	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		19.51	5	CG		1.4
<i>Tvetenia vitracies</i>	09021011065113	18.67			--	1.3	
<i>Rheotanytarsus</i>	09021011072		45.98	6	CF		3.2
<i>Rheotanytarsus exiguus</i>	09021011072127	36.00			CF	2.5	
<i>Rheotanytarsus pellucidus</i>	09021011072128	8.00			CF	0.6	
<i>Tanytarsus</i>	09021011076	1.33	1.39	6	CF	0.1	0.1
<i>Microtendipes</i>	09021011094		9.75	6	CF		0.7
<i>Microtendipes rydalensis group</i>	09021011094168	9.33			--	0.7	



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<i>Phaenopsectra</i>	09021011101		1.39	7	SC		0.1
<i>Phaenopsectra flavipes</i>	09021011101179	1.33			SC	0.1	
<i>Polypedilum</i>	09021011102		33.44	6	SH		2.3
<i>Polypedilum flavum</i>	09021011102182	29.33			--	2.1	
<i>Polypedilum fallax group</i>	09021011102183	1.33			--	0.1	
<i>Polypedilum illinoense group</i>	09021011102185	1.33			--	0.1	
<i>Stenochironomus</i>	09021011105	1.33	1.39	5	CG	0.1	0.1
Simuliidae	09021012	2.67	2.67		--	0.2	0.2
<i>Simulium</i>	09021012047		69.33	4	CF		4.9
<i>Simulium fibrinflatum</i>	09021012047059	10.67			--	0.7	
<i>Simulium jenningsi</i>	09021012047060	2.67			--	0.2	
<i>Simulium jenningsi species group</i>	09021012047070	56.00			CF	3.9	
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.1	0.1
<i>Stenelmis</i>	09021113070	1.33	1.33	5	SC	0.1	0.1
<i>Amnicola</i>	10010104013		2.67		SC		0.2
<i>Amnicola limosa</i>	10010104013018	2.67			--	0.2	
Sphaeriidae	10020201	4.00	4.00		CF	0.3	0.3