



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

Station Information

**Station Number: S-620**  
Waterbody: Kennedy Brook - Station 620  
Town: Augusta  
Directions: DOWNSTREAM OF RT 11/27 AND UPSTREAM OF TREATMENT PLANT

DEP Drainage: Kennebec  
HUC8: 01030003  
HUC8 Name: Lower Kennebec  
Latitude: 44 18 9.07 N  
Longitude: 69 46 50.94 W  
Stream Order: 1

Sample Information

**Log Number: 2100**  
Subsample Factor: X1  
Type of Sample: ROCK BAG  
Replicates: 2  
Date Deployed: 7/11/2012  
Date Retrieved: 8/9/2012

Classification Attainment

**Statutory Class: B**  
Model Result with  $P > .6$ : C  
Date Last Calculated: 4/17/2013  
**Final Determination: C**  
**Reason for Determination: Model**  
Comments: Two replicates recovered with one partial buried. Resample.

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.01	Class A, B, or C	0.98
Class B	0.03	Non-Attainment	0.02
B or Better Model		A Model	
Class A or B	0.00	Class A	0.01
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	63.50	18 Relative Abundance Ephemeroptera	0.30
02 Generic Richness	28.00	19 EPT Generic Richness	3.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	5.50
04 Ephemeroptera Mean Abundance	19.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.73	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	3.30
06 Hilsenhoff Biotic Index	4.53	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.43	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.50	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	0.21		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.04		
15 Perlidae Mean Abundance (Family	0.00		
Functional Group)			
16 Tanypodinae Mean Abundance	1.65		
(Family Functional Group)			
17 Chironomini Abundance (Family	3.30		
Functional Group)			

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Baetis</i>	29.92
2	<i>Parametriocnemus</i>	14.72
3	<i>Boyeria</i>	8.66
4	<i>Micropsectra</i>	8.66
5	<i>Polypedilum</i>	4.33



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**Log Number: 2100**

Waterbody: Kennedy Brook - Station 620

Date Retrieved: 8/9/2012

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 16.9 deg C  
Dissolved Oxygen: 8.6 mg/l  
Specific Conductance: 636 uS/cm  
Velocity: 24 cm/s  
pH: 7.84  
Wetted Width: 2.4 m  
Bankfull Width: 3.5 m  
Depth: 30 cm

**Waterbody Information - Retrieval**

Temperature: 17.8 deg C  
Dissolved Oxygen: 8.9 mg/l  
Specific Conductance: 713 uS/cm  
Velocity: 24.1 cm/s  
pH: 8.92  
Wetted Width: 1.8 m  
Bankfull Width: 3.5 m  
Depth: 30 cm

**Water Chemistry - 8/9/2012**

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	10 ug/l
Nitrate+nitrite As N	0.51 mg/l	Total Phosphorus	0.012 mg/l
Total Kjeldahl Nitrogen	0.1 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	1.7 mg/l	Total Dissolved Solids	450 mg/l

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Dense	Rolling
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Altered Habitat	Below Road Crossing	Boulder 30 %
Urban Runoff	Below Urban NPS	Gravel 20 %
		Rubble/Cobble 20 %
		Sand 20 %
		Silt 10 %

**Landcover Summary - 2004 Data**

Total Area (ac)	770	High Int. Dev. %	20.2	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	7.7	Wetland %	0.8	Tilled Agriculture %	2.1
		Low Int. Dev. %	12.2	Upland Woody %	35.5	Grassland %	0.9
		Development %	40.1	Natural %	36.7	Human Altered %	63.3
						Impervious %	29.8

**Sample Comments**

ERODED BANKS.

8/9/12: APPARENT STORMWATER SURGE; 1 BURIED BAG, 1 BAG MOVED TO EDGE OF BANK AND WAS DRY.



**Maine Department of Environmental Protection  
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Aquatic Life Taxonomic Inventory Report**

**Station Number: S-620**

Waterbody: Kennedy Brook - Station 620

Town: Augusta

**Log Number: 2100**

Subsample Factor: X1

Replicates: 2

Calculated: 4/17/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Enchytraeidae	08020201	0.50	0.50		--	0.8	0.8
<i>Nais</i>	08020202009		0.50		CG		0.8
<i>Nais variabilis</i>	08020202009009	0.50			--	0.8	
<i>Aulodrilus</i>	08020202018		0.50		--		0.8
<i>Aulodrilus pluriset</i>	08020202018004	0.50			--	0.8	
Lumbricidae	08020205	1.00	1.00		--	1.6	1.6
<i>Erpobdella</i>	08030203002		1.00		--		1.6
<i>Erpobdella fervida</i>	08030203002002	1.00			--	1.6	
<i>Caecidotea</i>	09010101001	0.50	1.00	8	SH	0.8	1.6
<i>Caecidotea communis</i>	09010101001001	0.50			--	0.8	
<i>Boyeria</i>	09020301004		5.50	2	PR		8.7
<i>Boyeria vinosa</i>	09020301004012	5.50			--	8.7	
<i>Calopteryx</i>	09020307043		0.50	5	PR		0.8
<i>Calopteryx maculata</i>	09020307043088	0.50			--	0.8	
<i>Baetis</i>	09020401001	0.50	19.00	4	CG	0.8	29.9
<i>Baetis flavistriga</i>	09020401001004	18.50			--	29.1	
<i>Diplectrona</i>	09020604014		1.50	0	CF		2.4
<i>Diplectrona modesta</i>	09020604014025	1.50			--	2.4	
<i>Hydroptila</i>	09020607026	0.50	0.50	6	P	0.8	0.8
<i>Tipula</i>	09021001002	0.50	0.50	4	SH	0.8	0.8
<i>Antocha</i>	09021001004	2.00	2.00	3	CG	3.1	3.1
Chironomidae	09021011	2.50			--	3.9	
<i>Paramerina</i>	09021011013	0.50	0.55		--	0.8	0.9
<i>Zavrelimyia</i>	09021011022		1.10	8	PR		1.7
<i>Zavrelimyia sinuosa group</i>	09021011022046	1.00			--	1.6	
<i>Pagastia</i>	09021011025		1.10	1	--		1.7
<i>Pagastia orthogonia</i>	09021011025001	1.00			--	1.6	
<i>Prodiamesa</i>	09021011031		1.65	3	CG		2.6
<i>Prodiamesa olivacea</i>	09021011031048	1.50			--	2.4	
<i>Brillia</i>	09021011033		0.55	5	SH		0.9
<i>Brillia flavifrons</i>	09021011033049	0.50			--	0.8	
<i>Cricotopus</i>	09021011037		2.20	7	SH		3.5
<i>Cricotopus bicinctus</i>	09021011037057	1.50			--	2.4	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	0.50			SH	0.8	
<i>Orthocladius</i>	09021011050		1.10	6	CG		1.7
<i>Orthocladius carlatus</i>	09021011050093	1.00			--	1.6	
<i>Parametriocnemus</i>	09021011053	8.50	9.35	5	CG	13.4	14.7
<i>Micropsectra</i>	09021011070	1.00	5.50	7	CG	1.6	8.7



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		Calculated: 4/17/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Micropsectra polita</i>	09021011070124	4.00		7	--	6.3	
<i>Tanytarsus</i>	09021011076	1.00	1.10	6	CF	1.6	1.7
<i>Phaenopsectra</i>	09021011101		0.55	7	SC		0.9
<i>Phaenopsectra obediens</i>	09021011101182	0.50			SC	0.8	
<i>Polypedilum</i>	09021011102		2.75	6	SH		4.3
<i>Polypedilum scalaenum group</i>	09021011102189	2.00			--	3.1	
<i>Polypedilum tritum</i>	09021011102191	0.50			--	0.8	
<i>Haliphus</i>	09021101001	0.50	0.50		P	0.8	0.8
Curculionidae	09021115	0.50	0.50		--	0.8	0.8
<i>Physa</i>	10010202026	1.00	1.00		SC	1.6	1.6