



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

**Station Information**

<b>Station Number:</b> S-646	River Basin:	St. John	
Waterbody:	Kennedy Brook - Station 646	HUC8 Name:	Aroostook
Town:	Presque Isle	Latitude:	46 40 39.78 N
Directions:	KB 4B - DOWNSTREAM OF RAILROAD TRACKS	Longitude:	68 1 10.23 W
		Stream Order:	2

**Sample Information**

<b>Log Number:</b> 2279	Type of Sample:	ROCK BAG	Date Deployed:	7/22/2014	
Subsample Factor:	X4	Replicates:	3	Date Retrieved:	8/20/2014

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> C	Date:	3/12/2015
Model Result with $P \geq 0.6$ :	C	<b>Reason for Determination:</b>	Model
Date Last Calculated:	3/12/2015	Comments:	

**Model Probabilities**

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

**Model Variables**

01 Total Mean Abundance	1428.00	18 Relative Abundance Ephemeroptera	0.19
02 Generic Richness	36.00	19 EPT Generic Richness	8.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	277.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.01	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	104.74
06 Hilsenhoff Biotic Index	5.20	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.60	28 EP Generic Richness/14	0.21
08 Relative Generic Richness Diptera	0.47	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	96.96		
11 <i>Cheumatopsyche</i> Abundance	45.71		
12 EPT Generic Richness/ Diptera Generic Richness	0.47		
13 Relative Abundance - Oligochaeta	0.03		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	14.76		
17 Chironomini Abundance (Family Functional Group)	21.47		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	43.13
2	<i>Baetis</i>	18.95
3	<i>Hydropsyche</i>	6.79
4	<i>Tvetenia</i>	5.92
5	<i>Cricotopus</i>	4.13



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Waterbody: Kennedy Brook - Station 646

Date Retrieved: 8/20/2014

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 20.3 deg C  
Dissolved Oxygen: 9.3 mg/l  
Specific Conductance: 549 uS/cm  
Velocity: 33 cm/s  
pH: 8.18  
Wetted Width: 1.7 m  
Bankfull Width: 3.7 m  
Depth: 22 cm

**Waterbody Information - Retrieval**

Temperature: 16.4 deg C  
Dissolved Oxygen: 9.81 mg/l  
Specific Conductance: 590 uS/cm  
Velocity: 29 cm/s  
pH: 7.81  
Wetted Width: 1.7 m  
Bankfull Width: 3.7 m  
Depth: 20 cm

**Water Chemistry - 7/29/2014**

Nitrate+nitrite As N	1.4 mg/l	Total Phosphorus	48 ug/l
Total Kjeldahl Nitrogen	0.4 mg/l	Orthophosphate As Phosphorus	9 ug/l
Total Alkalinity	151 mg/l		

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Urban	Open	Rolling	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Agricultural Runoff	Below Town	Boulder	10 %
Urban Runoff	Below Urban NPS	Gravel	20 %
		Rubble/Cobble	60 %
		Sand	10 %

**Landcover Summary - 2004 Data**

Total Area (ac)	1997	High Int. Dev. %	8.9	Water %	0.2	Non-vegetated %	0.0
		Med Int. Dev. %	4.3	Wetland %	5.0	Tilled Agriculture %	56.3
		Low Int. Dev. %	11.2	Upland Woody %	8.7	Grassland %	0.4
		Development %	24.4	Natural %	13.7	Human Altered %	86.1
						Impervious %	14.8

**Sample Comments**

7/22 - GREEN ROCKS.

8/20 - NMRO METER USED FOR DO, TEMP AND SPC.



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Replicates: 3

Calculated: 3/12/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Lumbriculidae	08020101	1.33	1.33		--	0.1	0.1
<i>Nais</i>	08020202009		25.33		CG		1.8
<i>Nais bretscheri</i>	08020202009004	12.00			--	0.8	
<i>Nais communis</i>	08020202009005	1.33			--	0.1	
<i>Nais variabilis</i>	08020202009009	12.00			--	0.8	
<i>Ophidonais</i>	08020202010		9.33		CG		0.7
<i>Ophidonais serpentina</i>	08020202010001	9.33			--	0.7	
Lumbricidae	08020205	4.00	4.00		--	0.3	0.3
<i>Boyeria</i>	09020301004		1.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.1	
<i>Cordulegaster</i>	09020303019		1.33	3	PR		0.1
<i>Cordulegaster maculata</i>	09020303019042	1.33			--	0.1	
Baetidae	09020401	6.67			--	0.5	
<i>Baetis</i>	09020401001	53.33	270.63	4	CG	3.7	19.0
<i>Baetis flavistriga</i>	09020401001004	64.00			--	4.5	
<i>Baetis tricaudatus</i>	09020401001012	146.67			--	10.3	
<i>Acentrella</i>	09020401008		1.37	3	CG		0.1
<i>Acentrella turbida</i>	09020401008021	1.33			--	0.1	
Ephemerellidae	09020410	5.33	5.33		--	0.4	0.4
<i>Dolophilodes</i>	09020601001	1.33	1.33	0	CF	0.1	0.1
Hydropsychidae	09020604	5.33			--	0.4	
<i>Cheumatopsyche</i>	09020604015	44.00	45.71	5	CF	3.1	3.2
<i>Hydropsyche</i>	09020604016	24.00	96.96	4	CF	1.7	6.8
<i>Hydropsyche slossonae</i>	09020604016031	60.00			--	4.2	
<i>Hydropsyche sparna</i>	09020604016032	9.33			--	0.7	
<i>Rhyacophila</i>	09020605019	1.33	9.33	2	PR	0.1	0.7
<i>Rhyacophila fuscula</i>	09020605019060	8.00			PR	0.6	
Hydroptilidae	09020607				--		
<i>Glyphopsyche</i>	09020610059		1.33	1	--		0.1
<i>Glyphopsyche irrorata</i>	09020610059119	1.33			--	0.1	
<i>Tipula</i>	09021001002	1.33	1.33	4	SH	0.1	0.1
Chironomidae	09021011	5.33			--	0.4	
<i>Conchapelopia</i>	09021011004	13.33	13.42	6	PR	0.9	0.9
<i>Nilotanyus</i>	09021011012		1.34	6	PR		0.1
<i>Nilotanyus fimbriatus</i>	09021011012027	1.33			--	0.1	
<i>Corynoneura</i>	09021011036	2.67	2.68	7	CG	0.2	0.2
<i>Cricotopus</i>	09021011037		59.03	7	SH		4.1
<i>Cricotopus bicinctus</i>	09021011037057	25.33			--	1.8	



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		Actual	Adjusted			Actual	Adjusted
<i>Cricotopus tremulus</i>	09021011037068	20.00			--	1.4	
<i>Cricotopus trifascia</i>	09021011037070	2.67			--	0.2	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	10.67			SH	0.7	
<i>Eukiefferiella</i>	09021011041		20.13	8	CG		1.4
<i>Eukiefferiella claripennis group</i>	09021011041075	18.67			--	1.3	
<i>Eukiefferiella devonica group</i>	09021011041083	1.33			CG	0.1	
<i>Orthocladius</i>	09021011050	2.67	2.68	6	CG	0.2	0.2
<i>Parametriocnemus</i>	09021011053	10.67	10.73	5	CG	0.7	0.8
<i>Synorthocladius</i>	09021011061	20.00	20.13	2	CG	1.4	1.4
<i>Thienemanniella</i>	09021011062	1.33	5.37	6	CG	0.1	0.4
<i>Thienemanniella xena</i>	09021011062110	4.00			--	0.3	
<i>Tvetenia</i>	09021011065		84.53	5	CG		5.9
<i>Tvetenia paucunca</i>	09021011065114	84.00			--	5.9	
<i>Rheotanytarsus</i>	09021011072	604.00	615.83	6	CF	42.3	43.1
<i>Rheotanytarsus pellucidus</i>	09021011072128	8.00			CF	0.6	
<i>Cryptochironomus</i>	09021011082	1.33	1.34	8	PR	0.1	0.1
<i>Polypedilum</i>	09021011102		20.13	6	SH		1.4
<i>Polypedilum aviceps</i>	09021011102181	20.00			--	1.4	
<i>Simulium</i>	09021012047	4.00	57.33	4	CF	0.3	4.0
<i>Simulium (Eusimulium)</i>	09021012047052	4.00			--	0.3	
<i>Simulium vittatum</i>	09021012047064	36.00			--	2.5	
<i>Simulium tuberosum</i>	09021012047067	5.33			--	0.4	
<i>Simulium venustum/verecundum</i> <i>complex</i>	09021012047072	8.00			CF	0.6	
<i>Hemerodromia</i>	09021016057	5.33	5.33	3	PR	0.4	0.4
<i>Roederiodes</i>	09021016058	10.67	10.67	3	PR	0.7	0.7
<i>Optioservus</i>	09021113067	1.33	2.67	3	SC	0.1	0.2
<i>Optioservus ovalis</i>	09021113067046	1.33			--	0.1	
<i>Promoresia</i>	09021113069		4.00		--		0.3
<i>Promoresia tardella</i>	09021113069052	4.00			--	0.3	
<i>Basommatophora</i>	100102	1.33	1.33		--	0.1	0.1
<i>Lymnaea</i>	10010201022		4.00		SC		0.3
<i>Lymnaea columella</i>	10010201022038	4.00			--	0.3	
<i>Physa</i>	10010202027	6.67	6.67		SC	0.5	0.5
<i>Gyraulus</i>	10010203029		2.67		SC		0.2
<i>Gyraulus circumstriatus</i>	10010203029054	2.67			--	0.2	