



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

**Station Information**

<b>Station Number:</b> S-755	River Basin: Kennebec
Waterbody: Martin Stream (dixmont) - Station 755	HUC8 Name: Lower Kennebec
Town: Dixmont	Latitude: 44 43 24.8 N
Directions: 30 M UPSTREAM OF MANURE OUTFALL	Longitude: 69 10 26.95 W
	Stream Order: 3

**Sample Information**

<b>Log Number:</b> 2467	Type of Sample: ROCK BAG	Date Deployed: 7/7/2016
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/3/2016

**Classification Attainment**

<b>Statutory Class:</b> A	<b>Final Determination:</b> B	Date: 12/14/2016
Model Result with $P \geq 0.6$ : B	<b>Reason for Determination:</b> Model	
Date Last Calculated: 10/13/2016	Comments: Class A (.23).	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.31	Class C	0.08
Class B	0.61	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.23
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.77

**Model Variables**

01 Total Mean Abundance	236.67	18 Relative Abundance Ephemeroptera	0.58
02 Generic Richness	58.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	2.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	14.03
04 Ephemeroptera Mean Abundance	138.00	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	3.81	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	25.15
06 Hilsenhoff Biotic Index	6.00	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	13.72
07 Relative Abundance - Chironomidae	0.26	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.38	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	0.33		
11 <i>Cheumatopsyche</i> Abundance	1.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.05		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	5.45		
17 Chironomini Abundance (Family Functional Group)	20.65		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Stenacron</i>	43.08
2	<i>Tanytarsus</i>	7.08
3	<i>Dicrotendipes</i>	5.93
4	<i>Maccaffertium</i>	4.95
5	<i>Psephenus</i>	3.10



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**Log Number: 2467**      Waterbody: Martin Stream (dixmont) - Station 755      Date Retrieved: 8/3/2016

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 18.6 deg C  
Dissolved Oxygen: 9.94 mg/l  
Dissolved Oxygen Saturation: 107.5 %  
Specific Conductance: 137.5 uS/cm  
Velocity:  
pH: 7.88  
Wetted Width: 5.5 m  
Bankfull Width: 9.5 m  
Depth: 30 cm

**Waterbody Information - Retrieval**

Temperature: 24.5 deg C  
Dissolved Oxygen: 10.13 mg/l  
Dissolved Oxygen Saturation: 122 %  
Specific Conductance: 151.4 uS/cm  
Velocity:  
pH: 7.37  
Wetted Width: 4.9 m  
Bankfull Width: 9.5 m  
Depth: 28 cm

**Water Chemistry - 8/3/2016**

Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	15 ug/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	6.9 mg/l
Dissolved Organic Carbon	2 mg/l	Total Dissolved Solids	81 mg/l
Orthophosphate As Phosphorus	1 ug/l		

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Open	Rolling
Pasture		
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Agricultural Runoff	Below Agriculture NPS	Boulder 30 %
Nutrients		Gravel 10 %
		Rubble/Cobble 55 %
		Sand 5 %

**Landcover Summary - 2004 Data**

Total Area (ac)	12739	High Int. Dev. %	0.0	Water %	0.1	Non-vegetated %	0.1
		Med Int. Dev. %	0.1	Wetland %	5.2	Tilled Agriculture %	4.1
		Low Int. Dev. %	2.1	Upland Woody %	85.4	Grassland %	2.8
		Development %	2.2	Natural %	90.6	Human Altered %	9.3
						Impervious %	1.9

**Sample Comments**

DAIRY FARM IN OPERATION, EROSION. VISIBLE FLOW AT DEPLOYMENT. 7/7/2016: FISH OBSERVED.  
VISIBLE FLOW AT RETRIEVAL. 8/3/2016: LOTS OF ALGAE.



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Waterbody: Martin Stream (dixmont) - Station 755

Town: Dixmont

**Log Number: 2467**

Subsample Factor: X1

Replicates: 3

Calculated: 10/13/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Orconectes</i>	09010301008	0.67	1.00		CG	0.3	0.4
<i>Orconectes virilis</i>	09010301008016	0.33			--	0.1	
Plecoptera	090202	0.33	0.33		--	0.1	0.1
<i>Paracapnia</i>	09020203018	0.33	0.33	1	SH	0.1	0.1
<i>Acroneuria</i>	09020209042		2.00	0	PR		0.8
<i>Acroneuria lycorias</i>	09020209042125	2.00			--	0.8	
<i>Boyeria</i>	09020301004		2.33	2	PR		1.0
<i>Boyeria vinosa</i>	09020301004012	2.33			--	1.0	
Coenagrionidae	09020309	0.33	0.33		--	0.1	0.1
<i>Argia</i>	09020309048		0.33	7	PR		0.1
<i>Argia moesta</i>	09020309048096	0.33			--	0.1	
Baetidae	09020401	0.33			--	0.1	
<i>Procloeon</i>	09020401010		4.89		CG		2.1
<i>Procloeon rubropictum</i>	09020401010002	4.67			--	2.0	
<i>Neocloeon (Centroptilum)</i>	09020401017		2.44	2	CG		1.0
<i>Neocloeon (Centroptilum) triangulifer</i>	09020401017001	2.33			--	1.0	
Heptageniidae	09020402	49.00			--	20.7	
<i>Stenacron</i>	09020402014		101.95	7	SC		43.1
<i>Stenacron interpunctatum</i>	09020402014045	58.00			--	24.5	
<i>Maccaffertium</i>	09020402015	4.33	11.72	4	SC	1.8	5.0
<i>Maccaffertium luteum</i>	09020402015049	2.33			--	1.0	
Leptophlebiidae	09020406	2.33	2.33		--	1.0	1.0
<i>Paraleptophlebia</i>	09020406026	5.33	5.33	1	CG	2.3	2.3
<i>Ephemerella</i>	09020410035	1.67	1.67	1	CG	0.7	0.7
<i>Tricorythodes</i>	09020411038	4.67	4.67	4	CG	2.0	2.0
<i>Caenis</i>	09020412040	2.67	3.00	7	CG	1.1	1.3
<i>Caenis punctata</i>	09020412040134	0.33			--	0.1	
<i>Psychomyia</i>	09020602005		0.33	2	CG		0.1
<i>Psychomyia flavida</i>	09020602005006	0.33			--	0.1	
<i>Cernotina</i>	09020603006	0.67	0.67		PR	0.3	0.3
<i>Nyctiophylax</i>	09020603009		0.33	5	PR		0.1
<i>Nyctiophylax moestus</i>	09020603009013	0.33			--	0.1	
<i>Plectrocnemia</i>	09020603012	1.33	1.33	6	PR	0.6	0.6
<i>Cheumatopsyche</i>	09020604015	1.00	1.00	5	CF	0.4	0.4
<i>Hydropsyche</i>	09020604016		0.33	4	CF		0.1
<i>Hydropsyche placoda</i>	09020604016059	0.33			--	0.1	
Hydroptilidae	09020607				--		



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		Actual	Adjusted			Actual	Adjusted
<i>Hydroptila</i>	09020607026	3.67	3.67	6	P	1.5	1.5
<i>Pycnopsyche</i>	09020610049	3.33	3.33	4	SH	1.4	1.4
<i>Psilotreta</i>	09020614068		0.33	0	SC		0.1
<i>Psilotreta indecisa</i>	09020614068132	0.33			--	0.1	
<i>Helicopsyche</i>	09020616070		0.67	3	SC		0.3
<i>Helicopsyche borealis</i>	09020616070137	0.67			--	0.3	
Leptoceridae	09020618				--		
<i>Ceraclea</i>	09020618072	0.67	0.67	3	CG	0.3	0.3
<i>Apatania</i>	09020619061		2.00		SC		0.8
<i>Apatania incerta</i>	09020619061001	2.00			--	0.8	
<i>Nigronia</i>	09020701003		1.00	0	PR		0.4
<i>Nigronia serricornis</i>	09020701003003	1.00			--	0.4	
Chironomidae	09021011	9.00			--	3.8	
<i>Ablabesmyia</i>	09021011001		2.73	8	PR		1.2
<i>Ablabesmyia mallochi</i>	09021011001004	2.33			--	1.0	
<i>Paramerina</i>	09021011013	1.00	1.17		--	0.4	0.5
<i>Trissopelopia</i>	09021011021		0.39		PR		0.2
<i>Trissopelopia ogemawi</i>	09021011021042	0.33			--	0.1	
<i>Zavrelimyia</i>	09021011022		1.17	8	PR		0.5
<i>Zavrelimyia sinuosa group</i>	09021011022046	1.00			--	0.4	
<i>Corynoneura</i>	09021011036	1.33	1.56	7	CG	0.6	0.7
<i>Cricotopus</i>	09021011037		4.68	7	SH		2.0
<i>Cricotopus bicinctus</i>	09021011037057	0.67			--	0.3	
<i>Cricotopus patens</i>	09021011037075	3.33			--	1.4	
<i>Nanocladius</i>	09021011049	1.33	1.56	3	CG	0.6	0.7
<i>Parametriocnemus</i>	09021011053	0.33	0.39	5	CG	0.1	0.2
<i>Psectrocladius</i>	09021011056	0.67	0.78	8	CG	0.3	0.3
<i>Thienemanniella</i>	09021011062		1.95	6	CG		0.8
<i>Thienemanniella sp. B</i>	09021011062116	1.67			--	0.7	
<i>Cladotanytarsus</i>	09021011068	0.33	0.39	7	CG	0.1	0.2
<i>Paratanytarsus</i>	09021011071	0.33	3.90	6	--	0.1	1.6
<i>Paratanytarsus dissimilis</i>	09021011071125	3.00			--	1.3	
<i>Rheotanytarsus</i>	09021011072		0.78	6	CF		0.3
<i>Rheotanytarsus exiguus group</i>	09021011072127	0.67			CF	0.3	
<i>Stempellinella</i>	09021011074		1.17	2	--		0.5
<i>Stempellinella fimbriata</i>	09021011074002	1.00			--	0.4	
<i>Sublettea</i>	09021011075		2.34		--		1.0
<i>Sublettea coffmani</i>	09021011075131	2.00			--	0.8	



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		Actual	Adjusted			Actual	Adjusted
<i>Tanytarsus</i>	09021011076	9.00	16.75	6	CF	3.8	7.1
<i>Tanytarsus buckleyi</i>	09021011076139	5.33			CF	2.3	
<i>Dicrotendipes</i>	09021011085		14.03	8	CG		5.9
<i>Dicrotendipes neomodestus</i>	09021011085152	12.00			--	5.1	
<i>Microtendipes</i>	09021011094		4.68	6	CF		2.0
<i>Microtendipes pedellus group</i>	09021011094166	3.67			--	1.5	
<i>Microtendipes rydalensis group</i>	09021011094168	0.33			--	0.1	
<i>Paratendipes</i>	09021011100		0.78	8	CG		0.3
<i>Paratendipes albimanus group</i>	09021011100176	0.67			--	0.3	
<i>Phaenopsectra</i>	09021011101		0.78	7	SC		0.3
<i>Phaenopsectra obediens</i>	09021011101182	0.67			SC	0.3	
<i>Polypedilum</i>	09021011102		0.39	6	SH		0.2
<i>Polypedilum scalaenum group</i>	09021011102189	0.33			--	0.1	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Psephenus</i>	09021108058		7.33	4	SC		3.1
<i>Psephenus herricki</i>	09021108058028	7.33			--	3.1	
<i>Ectopria</i>	09021109059	0.67	0.67	5	SC	0.3	0.3
<i>Dubiraphia</i>	09021113064		0.33	6	--		0.1
<i>Dubiraphia minima</i>	09021113064036	0.33			--	0.1	
<i>Optioservus</i>	09021113067	0.67	0.67	3	SC	0.3	0.3
<i>Stenelmis</i>	09021113070	1.00	1.00	5	SC	0.4	0.4
<i>Helisoma</i>	10010203030		0.33		SC		0.1
<i>Helisoma anceps</i>	10010203030058	0.33			--	0.1	
<i>Ferrissia</i>	10010204035		3.00		SC		1.3
<i>Ferrissia rivularis</i>	10010204035066	3.00			--	1.3	
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.1	0.1