



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

Station Information

Station Number: 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

Log Number: 2553	Type of Sample: ROCK BAG	Date Deployed: 7/6/2017
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/2/2017

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 11/6/2017
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 11/6/2017	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.16	Class A, B, or C	1.00
Class B	0.56	Non-Attainment	0.00
		Class C	0.28
		NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.99	Class A	0.75
Class C or Non-Attainment	0.01	Class B or C or Non-Attainment	0.25

Model Variables

01 Total Mean Abundance	315.67	18 Relative Abundance Ephemeroptera	0.64
02 Generic Richness	54.00	19 EPT Generic Richness	21.00
03 Plecoptera Mean Abundance	0.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	1.01
04 Ephemeroptera Mean Abundance	202.33	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	3.55	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	7.05
06 Hilsenhoff Biotic Index	5.78	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	27.67
07 Relative Abundance - Chironomidae	0.16	28 EP Generic Richness/14	0.71
08 Relative Generic Richness Diptera	0.35	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	0.33		
11 <i>Cheumatopsyche</i> Abundance	0.33		
12 EPT Generic Richness/ Diptera Generic Richness	1.11		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	9.40		
17 Chironomini Abundance (Family Functional Group)	26.85		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Stenacron</i>	42.66
2	<i>Dubiraphia</i>	8.98
3	<i>Maccaffertium</i>	8.76
4	<i>Microtendipes</i>	4.78
5	<i>Tricorythodes</i>	4.01



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Log Number: 2553 Waterbody: Martin Stream (dixmont) - Station 755 Date Retrieved: 8/2/2017

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 22.9 deg C
Dissolved Oxygen: 10.68 mg/l
Dissolved Oxygen Saturation: 123.5 %
Specific Conductance: 123.8 uS/cm
Velocity: 6.1 cm/s
pH: 7.96
Wetted Width: 5.75 m
Bankfull Width: 10.45 m
Depth: 46 cm

Waterbody Information - Retrieval

Temperature: 24.7 deg C
Dissolved Oxygen: 10.76 mg/l
Dissolved Oxygen Saturation: 128.7 %
Specific Conductance: 148.6 uS/cm
Velocity: 7.73
Wetted Width: 4.6 m
Bankfull Width: 10.45 m
Depth: 40 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Open	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Agricultural Runoff	Below Agriculture NPS	Boulder	35 %
		Gravel	10 %
		Rubble/Cobble	50 %
		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

7/6/17: DAIRY FARM IN OPERATION, FISH PRESENT, SILTY.
8/2/17: FROGS AND FISH PRESENT. SILTY. FLOW VISIBLE.



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Aquatic Life Taxonomic Inventory Report**

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Waterbody: Martin Stream (dixmont) - Station 755

Town: Dixmont

Log Number: 2553

Subsample Factor: X1

Replicates: 3

Calculated: 11/6/2017

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	0.67		CG	0.2	0.2
<i>Paracapnia</i>	09020203018	0.33	0.33	1	SH	0.1	0.1
<i>Aeshna</i>	09020301001	0.33	0.33	5	PR	0.1	0.1
<i>Boyeria</i>	09020301004	0.67	1.00	2	PR	0.2	0.3
<i>Boyeria vinosa</i>	09020301004012	0.33			--	0.1	
<i>Calopteryx</i>	09020307043	0.33	0.33	5	PR	0.1	0.1
<i>Argia</i>	09020309048	0.33	0.33	7	PR	0.1	0.1
<i>Procloeon</i>	09020401010		5.33		CG		1.7
<i>Procloeon rufostrigatum</i>	09020401010003	5.33			--	1.7	
<i>Leucrocuta</i>	09020402011	0.33	0.33	1	SC	0.1	0.1
<i>Stenacron</i>	09020402014		134.67	7	SC		42.7
<i>Stenacron interpunctatum</i>	09020402014045	134.67			--	42.7	
<i>Maccaffertium</i>	09020402015	13.00	27.67	4	SC	4.1	8.8
<i>Maccaffertium vicarium</i>	09020402015055	14.67			--	4.6	
Leptophlebiidae	09020406	5.33	5.33		--	1.7	1.7
<i>Paraleptophlebia</i>	09020406026		9.67	1	CG		3.1
<i>Paraleptophlebia debilis</i>	09020406026079	9.67		1	CG	3.1	
<i>Serratella</i>	09020410037		0.33	2	CG		0.1
<i>Serratella serratoides</i>	09020410037124	0.33			--	0.1	
<i>Tricorythodes</i>	09020411038	12.67	12.67	4	CG	4.0	4.0
<i>Caenis</i>	09020412040	6.33	6.33	7	CG	2.0	2.0
<i>Nyctiophylax</i>	09020603009	0.33	0.33	5	PR	0.1	0.1
<i>Polycentropus</i>	09020603010	1.67	1.67	6	PR	0.5	0.5
<i>Cheumatopsyche</i>	09020604015	0.33	0.33	5	CF	0.1	0.1
<i>Hydropsyche</i>	09020604016		0.33	4	CF		0.1
<i>Hydropsyche bronta</i>	09020604016029	0.33			--	0.1	
<i>Brachycentrus</i>	09020609043		0.33	0	CF		0.1
<i>Brachycentrus appalachia</i>	09020609043096	0.33			--	0.1	
<i>Pycnopsyche</i>	09020610049	9.00	9.00	4	SH	2.9	2.9
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.1	0.1
<i>Psilotreta</i>	09020614068		1.33	0	SC		0.4
<i>Psilotreta labida</i>	09020614068133	1.33			--	0.4	
<i>Helicopsyche</i>	09020616070	1.00	1.00	3	SC	0.3	0.3
<i>Mystacides</i>	09020618075		2.00	4	CG		0.6
<i>Mystacides sepulchralis</i>	09020618075147	2.00			--	0.6	
<i>Apatania</i>	09020619061	6.33	6.33		SC	2.0	2.0
<i>Nigronia</i>	09020701003		1.33	0	PR		0.4



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		Actual	Adjusted			Actual	Adjusted
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.4	
Chironomidae	09021011	0.33			--	0.1	
<i>Ablabesmyia</i>	09021011001	2.00	2.01	8	PR	0.6	0.6
<i>Labrundinia</i>	09021011008		0.34	7	PR		0.1
<i>Labrundinia pilosella</i>	09021011008022	0.33			--	0.1	
<i>Procladius</i>	09021011015	0.67	0.67	9	PR	0.2	0.2
<i>Thienemannimyia</i>	09021011020		6.38	3	PR		2.0
<i>Thienemannimyia group</i>	09021011020041	6.33			--	2.0	
<i>Cricotopus</i>	09021011037		1.01	7	SH		0.3
<i>Cricotopus bicinctus</i>	09021011037057	1.00			--	0.3	
<i>Orthocladius</i>	09021011050		0.67	6	CG		0.2
<i>Orthocladius annectens</i>	09021011050092	0.67			--	0.2	
<i>Thienemanniella</i>	09021011062	0.33	0.34	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		0.34	5	CG		0.1
<i>Tvetenia vitracies</i>	09021011065113	0.33			--	0.1	
<i>Paratanytarsus</i>	09021011071	2.67	2.68	6	--	0.8	0.9
<i>Rheotanytarsus</i>	09021011072		2.68	6	CF		0.9
<i>Rheotanytarsus exiguus group</i>	09021011072127	2.67			CF	0.8	
<i>Stempellinella</i>	09021011074	1.33	1.34	2	--	0.4	0.4
<i>Sublettea</i>	09021011075		0.34		--		0.1
<i>Sublettea coffmani</i>	09021011075131	0.33			--	0.1	
<i>Tanytarsus</i>	09021011076	3.67	3.69	6	CF	1.2	1.2
<i>Dicrotendipes</i>	09021011085	1.00	1.01	8	CG	0.3	0.3
<i>Microtendipes</i>	09021011094		15.10	6	CF		4.8
<i>Microtendipes pedellus group</i>	09021011094166	15.00			--	4.8	
<i>Paratendipes</i>	09021011100	1.67	1.68	8	CG	0.5	0.5
<i>Polypedilum</i>	09021011102		4.70	6	SH		1.5
<i>Polypedilum aviceps</i>	09021011102181	0.67			--	0.2	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.1	
<i>Polypedilum scalaenum group</i>	09021011102189	3.67			--	1.2	
<i>Tribelos</i>	09021011107	4.33	4.36	5	CG	1.4	1.4
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Ectopria</i>	09021109059		0.67	5	SC		0.2
<i>Ectopria nervosa</i>	09021109059029	0.67			--	0.2	
<i>Dubiraphia</i>	09021113064	28.33	28.33	6	--	9.0	9.0
<i>Microcyloepus</i>	09021113066		0.33	3	--		0.1
<i>Microcyloepus pusillus</i>	09021113066041	0.33			--	0.1	
<i>Promoesia</i>	09021113069		0.67		--		0.2



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<i>Promoresia elegans</i>	09021113069051	0.33			--	0.1	
<i>Promoresia tardella</i>	09021113069052	0.33			--	0.1	
<i>Stenelmis</i>	09021113070	1.33	1.33	5	SC	0.4	0.4
<i>Helisoma</i>	10010203030	1.67	1.67		SC	0.5	0.5
<i>Ferrissia</i>	10010204035	3.00	3.00		SC	1.0	1.0
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.1	0.1