



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

Station Information

Station Number: S-767	DEP Drainage: Kennebec
Waterbody: Higgins Brook - Station 767	HUC8: 01030003
Town: Wellington	HUC8 Name: Lower Kennebec
Directions: RT 16 TO CARLE ROAD, DOWN 1.7 MILES	Latitude: 45 1 13.63 N
	Longitude: 69 35 2.43 W
	Stream Order: 3

Sample Information

Log Number: 2114	Type of Sample: ROCK BAG	Date Deployed: 7/18/2012
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/16/2012

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 3/7/2013
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 3/7/2013	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.69	Class A, B, or C	1.00
Class B	0.30	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	179.00	18 Relative Abundance Ephemeroptera	0.06
02 Generic Richness	42.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	3.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	11.00	23 Relative Generic Richness- Plecoptera	0.12
05 Shannon-Wiener Generic Diversity	2.11	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.67
06 Hilsenhoff Biotic Index	3.85	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	4.33
07 Relative Abundance - Chironomidae	0.08	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.29	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	130.99		
11 <i>Cheumatopsyche</i> Abundance	0.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.83		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	1.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.34		
17 Chironomini Abundance (Family Functional Group)	4.10		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	73.18
2	<i>Rheotanytarsus</i>	3.05
3	<i>Brachycentrus</i>	2.79
4	<i>Maccaffertium</i>	2.05
5	<i>Simulium</i>	2.05



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	22.6 deg C
Dissolved Oxygen:	8.9 mg/l
Specific Conductance:	79 uS/cm
Velocity:	64 cm/s
pH:	7.77
Wetted Width:	9.8 m
Bankfull Width:	16 m
Depth:	34 cm

Waterbody Information - Retrieval

Temperature:	18.3 deg C
Dissolved Oxygen:	8.3 mg/l
Specific Conductance:	78 uS/cm
Velocity:	199.3 cm/s
pH:	7.08
Wetted Width:	16 m
Bankfull Width:	16 m
Depth:	60 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Upland Conifer

Upland Hardwood

Potential Stressor

Canopy Cover

Open

Location

Below Town

Main Stem

Terrain

Rolling

Substrate

Bedrock	60 %
Boulder	25 %
Gravel	10 %
Rubble/Cobble	5 %

Landcover Summary - 2004 Data

Total Area (ac)	12337	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	3.5	Tilled Agriculture %	1.9
		Low Int. Dev. %	3.5	Upland Woody %	89.9	Grassland %	1.1
		Development %	3.5	Natural %	93.4	Human Altered %	6.5
						Impervious %	1.4

Sample Comments

7/18/12: FISH OBSERVED.

HEAVY RAIN DURING RETRIEVAL; WATER LEVELS VERY HIGH (STORM FLOW).

7/18/12: Fish observed.



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Waterbody: Higgins Brook - Station 767

Town: Wellington

Log Number: 2114

Subsample Factor: X1

Replicates: 3

Calculated: 3/7/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Leuctra</i>	09020204020		0.33	0	SH		0.2
<i>Leuctra truncata</i>	09020204020058	0.33			--	0.2	
<i>Pteronarcys</i>	09020205023		1.33	0	SH		0.7
<i>Pteronarcys biloba</i>	09020205023061	1.33			--	0.7	
Perlodidae	09020207	0.33	0.33		--	0.2	0.2
<i>Acroneuria</i>	09020209042	0.67	0.67	0	PR	0.4	0.4
<i>Paragnetina</i>	09020209049	0.67	0.67	1	PR	0.4	0.4
<i>Boyeria</i>	09020301004		1.00	2	PR		0.6
<i>Boyeria grafiana</i>	09020301004011	1.00			--	0.6	
Gomphidae	09020302	0.33	0.33		--	0.2	0.2
<i>Baetis</i>	09020401001	0.33	1.00	4	CG	0.2	0.6
<i>Baetis flavistriga</i>	09020401001004	0.33			--	0.2	
<i>Baetis intercalaris</i>	09020401001008	0.33			--	0.2	
<i>Acerpenna</i>	09020401007	0.33	1.00	5	CG	0.2	0.6
<i>Acerpenna pygmaea</i>	09020401007011	0.67			--	0.4	
<i>Procloeon</i>	09020401010	0.33	0.33		CG	0.2	0.2
<i>Epeorus</i>	09020402009	1.33	1.33	0	SC	0.7	0.7
<i>Maccaffertium</i>	09020402015	1.67	3.67	4	SC	0.9	2.0
<i>Maccaffertium luteum</i>	09020402015049	1.67			--	0.9	
<i>Maccaffertium modestum</i>	09020402015051	0.33			--	0.2	
<i>Ephemerella</i>	09020410035	2.67	2.67	1	CG	1.5	1.5
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.2	0.2
<i>Serratella</i>	09020410037		0.33	2	CG		0.2
<i>Serratella serratoidea</i>	09020410037124	0.33			--	0.2	
<i>Caenis</i>	09020412040	0.33	0.33	7	CG	0.2	0.2
<i>Dolophilodes</i>	09020601001	0.33	0.33	0	CF	0.2	0.2
<i>Neureclipsis</i>	09020603008	0.33	0.33	7	CF	0.2	0.2
Hydropsychidae	09020604	1.33			--	0.7	
<i>Cheumatopsyche</i>	09020604015	0.67	0.67	5	CF	0.4	0.4
<i>Hydropsyche</i>	09020604016	97.67	130.99	4	CF	54.6	73.2
<i>Hydropsyche bronta</i>	09020604016029	5.33			--	3.0	
<i>Hydropsyche morosa</i>	09020604016030	5.67			--	3.2	
<i>Hydropsyche slossonae</i>	09020604016031	4.33			--	2.4	
<i>Hydropsyche sparna</i>	09020604016032	16.67			--	9.3	
<i>Rhyacophila</i>	09020605019		0.33	2	PR		0.2
<i>Rhyacophila fuscula</i>	09020605019060	0.33			PR	0.2	
Phryganeidae	09020608	1.00	1.00		--	0.6	0.6
<i>Brachycentrus</i>	09020609043		5.00	0	CF		2.8



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		Actual	Adjusted			Actual	Adjusted
<i>Brachycentrus appalachia</i>	09020609043096	5.00			--	2.8	
<i>Helicopsyche</i>	09020616070		1.33	3	SC		0.7
<i>Helicopsyche borealis</i>	09020616070137	1.33			--	0.7	
Lepidoptera	090209	0.33	0.33		--	0.2	0.2
Crambidae	09020905	0.33	0.33		SH	0.2	0.2
Chironomidae	09021011	0.33			--	0.2	
<i>Conchapelopia</i>	09021011004			6	PR		
<i>Rheopelopia</i>	09021011017		0.34		PR		0.2
<i>Rheopelopia acra group</i>	09021011017036	0.33			--	0.2	
<i>Nanocladius</i>	09021011049		0.34	3	CG		0.2
<i>Nanocladius downesi</i>	09021011049092	0.33			--	0.2	
<i>Tvetenia</i>	09021011065		3.08	5	CG		1.7
<i>Tvetenia vitracies</i>	09021011065113	3.00			--	1.7	
<i>Rheotanytarsus</i>	09021011072	5.33	5.47	6	CF	3.0	3.1
<i>Stempellinella</i>	09021011074		0.34	2	--		0.2
<i>Stempellinella fimbriata</i>	09021011074002	0.33			--	0.2	
<i>Lauterborniella</i>	09021011092		0.34		CG		0.2
<i>Lauterborniella agrayloides</i>	09021011092001	0.33			--	0.2	
<i>Phaenopsectra</i>	09021011101		1.71	7	SC		1.0
<i>Phaenopsectra obediens</i>	09021011101182	1.67			SC	0.9	
<i>Polypedilum</i>	09021011102		2.05	6	SH		1.1
<i>Polypedilum aviceps</i>	09021011102181	1.67			--	0.9	
<i>Polypedilum flavum</i>	09021011102182	0.33			--	0.2	
<i>Paracricotopus</i>	09021011110				CG		
<i>Helopelopia</i>	09021011114			6	PR		
<i>Simulium</i>	09021012047		3.67	4	CF		2.0
<i>Simulium tuberosum</i>	09021012047067	3.67			--	2.0	
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.2	0.2
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.7	0.7
<i>Roederiodes</i>	09021016058	0.33	0.33	3	PR	0.2	0.2
<i>Psephenus</i>	09021108058		0.67	4	SC		0.4
<i>Psephenus herricki</i>	09021108058028	0.67			--	0.4	
<i>Dubiraphia</i>	09021113064		0.33	6	--		0.2
<i>Dubiraphia minima</i>	09021113064036	0.33			--	0.2	
<i>Promoresia</i>	09021113069		1.33		--		0.7
<i>Promoresia tardella</i>	09021113069052	1.33			--	0.7	
<i>Stenelmis</i>	09021113070	0.33	0.67	5	SC	0.2	0.4
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.2	



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<i>Ferrissia</i>	10010204035		0.33		SC		0.2
<i>Ferrissia rivularis</i>	10010204035066	0.33			--	0.2	