



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

Station Information

Station Number: S-920	River Basin: Kennebec
Waterbody: Weston Brook - Station 920	HUC8 Name: Lower Kennebec
Town: Manchester	Latitude: 44 19 22.11 N
Directions: UPSTREAM OF POND ROAD (2009 SAMPLES WERE JUST UPSTREAM OF POND ROAD, 2012 SAMPLES WERE COLLECTED NEAR THE MULLIGANS GAS	Longitude: 69 51 47.22 W
	Stream Order: 2

Sample Information

Log Number: 1874	Type of Sample: ROCK BAG	Date Deployed: 7/28/2009
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/26/2009

Classification Attainment

Statutory Class: B	Final Determination: B	Date: 4/16/2010
Model Result with $P \geq 0.6$: B	Reason for Determination: Model	
Date Last Calculated: 4/16/2010	Comments: Indeterminate for Class A (.52).	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.56	Class C	0.02
Class B	0.42	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.52
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.48

Model Variables

01 Total Mean Abundance	639.00	18 Relative Abundance Ephemeroptera	0.25
02 Generic Richness	53.00	19 EPT Generic Richness	17.00
03 Plecoptera Mean Abundance	3.33	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	2.00
04 Ephemeroptera Mean Abundance	162.33	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	4.19	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	54.27
06 Hilsenhoff Biotic Index	4.21	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	38.00
07 Relative Abundance - Chironomidae	0.40	28 EP Generic Richness/14	0.64
08 Relative Generic Richness Diptera	0.45	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	116.39		
11 <i>Cheumatopsyche</i> Abundance	2.27		
12 EPT Generic Richness/ Diptera Generic Richness	0.71		
13 Relative Abundance - Oligochaeta	0.01		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	12.67		
17 Chironomini Abundance (Family Functional Group)	44.67		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	18.21
2	<i>Paraleptophlebia</i>	13.15
3	<i>Rheotanytarsus</i>	9.81
4	<i>Cricotopus</i>	7.20
5	<i>Antocha</i>	7.15



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Station Number: S-920 Town: Manchester Date Deployed: 7/28/2009
Log Number: 1874 Waterbody: Weston Brook - Station 920 Date Retrieved: 8/26/2009

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
 Taxonomist: LOTIC INC.

Waterbody Information - Deployment

Temperature:
 Dissolved Oxygen: 8.18 mg/l
 Specific Conductance:
 Velocity: 29 cm/s
 pH:
 Wetted Width: 1.8 m
 Bankfull Width: 1.8 m
 Depth: 47 cm

Waterbody Information - Retrieval

Temperature: 20.1 deg C
 Dissolved Oxygen: 7.6 mg/l
 Specific Conductance: 165 uS/cm
 Velocity: 26 cm/s
 pH: 7.23
 Wetted Width: 1.8 m
 Bankfull Width: 1.8 m
 Depth: 27 cm

Water Chemistry - 7/28/2009

Nitrate+nitrite As N	0.04 mg/l	Total Phosphorus	0.019 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Dissolved Organic Carbon	6 mg/l
Orthophosphate As Phosphorus	4 ug/l	Total Alkalinity	38 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Open	Rolling	
Swamp Hardwood			
Upland Hardwood			
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Urban Runoff	Below Urban NPS	Boulder	20 %
		Gravel	30 %
		Rubble/Cobble	20 %
		Sand	30 %

Landcover Summary - 2004 Data

Sample Comments

METER 3 FOR SPC/TEMP/PH DIDN'T WORK.



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

Station Number: S-920

Waterbody: Weston Brook - Station 920

Town: Manchester

Log Number: 1874

Subsample Factor: X1

Replicates: 3

Calculated: 4/16/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Lumbriculus</i>	08020101002	6.33	6.33		CG	1.0	1.0
Enchytraeidae	08020201	0.67	0.67		--	0.1	0.1
Naididae	08020202	0.67	0.67		--	0.1	0.1
<i>Placobdella</i>	08030101006	0.33	0.33		--	0.1	0.1
Perlodidae	09020207	1.67	1.67		--	0.3	0.3
Chloroperlidae	09020208	1.67	1.67		--	0.3	0.3
<i>Boyeria</i>	09020301004		1.00	2	PR		0.2
<i>Boyeria vinosa</i>	09020301004012	1.00			--	0.2	
Coenagrionidae	09020309	0.67	0.67		--	0.1	0.1
Baetidae	09020401	3.33			--	0.5	
<i>Baetis</i>	09020401001		18.24	4	CG		2.9
<i>Baetis flavistriga</i>	09020401001004	2.00			--	0.3	
<i>Baetis tricaudatus</i>	09020401001012	14.67			--	2.3	
<i>Acerpenna</i>	09020401007		17.51	5	CG		2.7
<i>Acerpenna macdunnoughi</i>	09020401007001	16.00			--	2.5	
<i>Dipheter</i>	09020401013		2.92		--		0.5
<i>Dipheter hageni</i>	09020401013001	2.67			--	0.4	
<i>Maccaffertium</i>	09020402015	38.00	38.00	4	SC	5.9	5.9
Leptophlebiidae	09020406	0.33	0.33		--	0.1	0.1
<i>Paraleptophlebia</i>	09020406026	84.00	84.00	1	CG	13.1	13.1
<i>Eurylophella</i>	09020410036	1.33	1.33	3	CG	0.2	0.2
<i>Chimarra</i>	09020601003		0.33	2	CF		0.1
<i>Chimarra obscura</i>	09020601003003	0.33			--	0.1	
<i>Lype</i>	09020602004		1.67	2	SC		0.3
<i>Lype diversa</i>	09020602004005	1.67			--	0.3	
Polycentropodidae	09020603	0.67	0.67		--	0.1	0.1
Hydropsychidae	09020604	33.00			--	5.2	
<i>Diplectrona</i>	09020604014	3.67	5.00	0	CF	0.6	0.8
<i>Cheumatopsyche</i>	09020604015	1.67	2.27	5	CF	0.3	0.4
<i>Hydropsyche</i>	09020604016	85.33	116.39	4	CF	13.4	18.2
<i>Rhyacophila</i>	09020605019	1.67	1.67	2	PR	0.3	0.3
<i>Neophylax</i>	09020610062	0.33	0.33	3	SC	0.1	0.1
<i>Nigronia</i>	09020701003	1.33	1.33	0	PR	0.2	0.2
<i>Petrophila</i>	09020901004	0.33	0.33	5	SC	0.1	0.1
<i>Tipula</i>	09021001002	1.00	1.00	4	SH	0.2	0.2
<i>Antocha</i>	09021001004	45.67	45.67	3	CG	7.1	7.1
<i>Dicranota</i>	09021001005	5.67	5.67	3	PR	0.9	0.9
<i>Stilobezzia</i>	09021010040	1.00	1.00		PR	0.2	0.2



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Chironomidae	09021011				--		
<i>Larsia</i>	09021011009	3.33	3.33	6	PR	0.5	0.5
<i>Natarsia</i>	09021011011	0.67	0.67	8	PR	0.1	0.1
<i>Thienemannimyia</i>	09021011020		8.67	3	PR		1.4
<i>Thienemannimyia group</i>	09021011020041	8.67			--	1.4	
<i>Pagastia</i>	09021011025	2.67	2.67	1	--	0.4	0.4
<i>Brillia</i>	09021011033		2.00	5	SH		0.3
<i>Brillia flavifrons</i>	09021011033049	1.33			--	0.2	
<i>Brillia parva</i>	09021011033050	0.67			--	0.1	
<i>Corynoneura</i>	09021011036	1.33	1.33	7	CG	0.2	0.2
<i>Cricotopus</i>	09021011037	2.00	46.00	7	SH	0.3	7.2
<i>Cricotopus bicinctus</i>	09021011037057	44.00			--	6.9	
<i>Orthocladius</i>	09021011050	1.33	1.33	6	CG	0.2	0.2
<i>Parametriocnemus</i>	09021011053	10.67	10.67	5	CG	1.7	1.7
<i>Synorthocladius</i>	09021011061		8.00	2	CG		1.3
<i>Synorthocladius semivirens</i>	09021011061108	8.00			--	1.3	
<i>Thienemanniella</i>	09021011062	6.67	6.67	6	CG	1.0	1.0
<i>Tvetenia</i>	09021011065		42.00	5	CG		6.6
<i>Tvetenia paucunca</i>	09021011065114	42.00			--	6.6	
<i>Micropsectra</i>	09021011070	2.00	2.00	7	CG	0.3	0.3
<i>Paratanytarsus</i>	09021011071	9.33	9.33	6	--	1.5	1.5
<i>Rheotanytarsus</i>	09021011072	62.67	62.67	6	CF	9.8	9.8
<i>Tanytarsus</i>	09021011076	6.00	6.00	6	CF	0.9	0.9
<i>Microtendipes</i>	09021011094		28.00	6	CF		4.4
<i>Microtendipes pedellus group</i>	09021011094166	28.00			--	4.4	
<i>Polypedilum</i>	09021011102	2.00	16.67	6	SH	0.3	2.6
<i>Polypedilum aviceps</i>	09021011102181	14.67			--	2.3	
<i>Simulium</i>	09021012047	14.00	14.00	4	CF	2.2	2.2
Empididae	09021016	4.67	4.67	6	--	0.7	0.7
Elmidae	09021113	0.33	0.33		--	0.1	0.1
<i>Promoresia</i>	09021113069	2.67	2.67		--	0.4	0.4
Hydrobiidae	10010104	0.33	0.33		--	0.1	0.1
Sphaeriidae	10020201	0.33	0.33		CF	0.1	0.1