



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

Station Information

Station Number: S-769
Waterbody: Hardy Brook - Station 769
Town: Madrid Twp
Directions: RT 142 - E. MADRID RD, GO 6.2 MILES, LEFT ON TO B W GISCOM TRUST CROSSING, 1.3 MILES ON LEFT
DEP Drainage: Kennebec
HUC8: 01030003
HUC8 Name: Lower Kennebec
Latitude: 44 55 25.14 N
Longitude: 70 24 58.32 W
Stream Order: 3

Sample Information

Log Number: 2120
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/23/2012
Date Retrieved: 8/21/2012

Classification Attainment

Statutory Class: A
Model Result with P>.6: A
Date Last Calculated: 4/17/2013
Final Determination: A
Reason for Determination: Model
Date: 4/18/2013
Comments:

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.96	Class C	0.00	Class A, B, or C	1.00
Class B	0.04	NA	0.00	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	136.00	18 Relative Abundance Ephemeroptera	0.60
02 Generic Richness	37.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	14.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	3.67
04 Ephemeroptera Mean Abundance	81.00	23 Relative Generic Richness- Plecoptera	0.22
05 Shannon-Wiener Generic Diversity	3.78	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	0.00
06 Hilsenhoff Biotic Index	2.43	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	4.40
07 Relative Abundance - Chironomidae	0.12	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.32	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	13.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.83		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.67		
17 Chironomini Abundance (Family Functional Group)	3.33		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Rhithrogena</i>	28.14
2	<i>Baetis</i>	14.69
3	<i>Hydropsyche</i>	9.56
4	<i>Ephemerella</i>	8.09
5	<i>Leptophlebiidae</i>	4.66



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 20.3 deg C
Dissolved Oxygen: 8.6 mg/l
Specific Conductance: 55 uS/cm
Velocity: 33.1 cm/s
pH: 7.47
Wetted Width: 3.3 m
Bankfull Width: 9 m
Depth: 25 cm

Waterbody Information - Retrieval

Temperature: 16.6 deg C
Dissolved Oxygen: 8.7 mg/l
Specific Conductance: 57 uS/cm
Velocity: 41 cm/s
pH: 7.38
Wetted Width: 4.7 m
Bankfull Width: 9 m
Depth: 30 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Upland Conifer

Partly Open

Hilly

Upland Hardwood

Potential Stressor

Location

Substrate

Logging

Minimally Disturbed

Boulder 40 %
Gravel 20 %
Rubble/Cobble 35 %
Sand 5 %

Landcover Summary - 2004 Data

Total Area (ac)	14777	High Int. Dev. %	0.0	Water %	0.2	Non-vegetated %	0.2
		Med Int. Dev. %	0.0	Wetland %	0.5	Tilled Agriculture %	0.1
		Low Int. Dev. %	0.4	Upland Woody %	98.5	Grassland %	0.0
		Development %	0.4	Natural %	99.0	Human Altered %	0.7
						Impervious %	0.0

Sample Comments

7/23/12: ERODED BANK.



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

Station Number: S-769

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Town: Madrid Twp

Log Number: 2120

Subsample Factor: X1

Replicates: 3

Calculated: 4/17/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Lumbriculus</i>	08020101002		0.33		CG		0.2
<i>Lumbriculus variegatus</i>	08020101002001	0.33			--	0.2	
Isotomidae	09020102	0.33	0.33		--	0.2	0.2
<i>Paracapnia</i>	09020203018	1.00	1.00	1	SH	0.7	0.7
<i>Pteronarcys</i>	09020205023		0.67	0	SH		0.5
<i>Pteronarcys biloba</i>	09020205023061	0.67			--	0.5	
<i>Tallaperla</i>	09020206025	1.33	1.33		SH	1.0	1.0
Perlodidae	09020207	1.67			--	1.2	
<i>Isoperla</i>	09020207026	3.67	5.19	2	PR	2.7	3.8
<i>Malirekus</i>	09020207034		0.47		PR		0.3
<i>Malirekus iroquois</i>	09020207034101	0.33			--	0.2	
<i>Sweltsa</i>	09020208040	2.67	2.67		PR	2.0	2.0
Perlidae	09020209	1.67	1.67		--	1.2	1.2
<i>Agnatina</i>	09020209050	1.00	1.00	2	PR	0.7	0.7
Baetidae	09020401	0.67			--	0.5	
<i>Baetis</i>	09020401001	5.33	19.98	4	CG	3.9	14.7
<i>Baetis flavistriga</i>	09020401001004	3.67			--	2.7	
<i>Baetis pluto</i>	09020401001009	3.67			--	2.7	
<i>Baetis tricaudatus</i>	09020401001012	6.67			--	4.9	
<i>Acerpenna</i>	09020401007	0.67	0.69	5	CG	0.5	0.5
Heptageniidae	09020402	0.67			--	0.5	
<i>Rhithrogena</i>	09020402013	37.67	38.26	0	SC	27.7	28.1
<i>Maccaffertium</i>	09020402015	1.00	4.40	4	SC	0.7	3.2
<i>Maccaffertium luteum</i>	09020402015049	3.33			--	2.5	
Leptophlebiidae	09020406	6.33	6.33		--	4.7	4.7
<i>Ephemerella</i>	09020410035	5.00	11.00	1	CG	3.7	8.1
<i>Ephemerella invaria</i>	09020410035107	6.00			--	4.4	
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.2	0.2
<i>Dolophilodes</i>	09020601001	0.33	0.33	0	CF	0.2	0.2
<i>Hydropsyche</i>	09020604016	3.33	13.00	4	CF	2.5	9.6
<i>Hydropsyche slossonae</i>	09020604016031	5.67			--	4.2	
<i>Hydropsyche sparna</i>	09020604016032	4.00			--	2.9	
<i>Rhyacophila</i>	09020605019	1.67	3.67	2	PR	1.2	2.7
<i>Rhyacophila fuscula</i>	09020605019060	2.00			PR	1.5	
<i>Glossosoma</i>	09020606020	0.67	0.67	0	SC	0.5	0.5
<i>Brachycentrus</i>	09020609043		0.33	0	CF		0.2
<i>Brachycentrus americanus</i>	09020609043095	0.33			--	0.2	
<i>Neophylax</i>	09020610062	0.33	0.33	3	SC	0.2	0.2



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<i>Lepidostoma</i>	09020611064	1.00	1.00	1	SH	0.7	0.7
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.2	0.2
<i>Natarsia</i>	09021011011		0.33	8	PR		0.2
<i>Natarsia baltimorea</i>	09021011011026	0.33			--	0.2	
<i>Trissopelopia</i>	09021011021		0.33		PR		0.2
<i>Trissopelopia ogemawi</i>	09021011021042	0.33			--	0.2	
<i>Brillia</i>	09021011033		0.67	5	SH		0.5
<i>Brillia flavifrons</i>	09021011033049	0.67			--	0.5	
<i>Eukiefferiella</i>	09021011041		0.33	8	CG		0.2
<i>Eukiefferiella claripennis group</i>	09021011041075	0.33			--	0.2	
<i>Parametriocnemus</i>	09021011053	6.00	6.00	5	CG	4.4	4.4
<i>Rheocricotopus</i>	09021011057		0.33	6	CG		0.2
<i>Rheocricotopus eminellobus</i>	09021011057109	0.33			--	0.2	
<i>Tvetenia</i>	09021011065		1.67	5	CG		1.2
<i>Tvetenia paucunca</i>	09021011065114	1.67			--	1.2	
<i>Micropsectra</i>	09021011070	3.67	3.67	7	CG	2.7	2.7
<i>Polypedilum</i>	09021011102		3.33	6	SH		2.5
<i>Polypedilum aviceps</i>	09021011102181	2.00			--	1.5	
<i>Polypedilum angulum</i>	09021011102198	1.33			--	1.0	
<i>Simulium</i>	09021012047		3.00	4	CF		2.2
<i>Simulium tuberosum</i>	09021012047067	3.00			--	2.2	
<i>Atherix</i>	09021015055	0.67	0.67	2	PR	0.5	0.5
<i>Promoresia</i>	09021113069		0.33		--		0.2
<i>Promoresia tardella</i>	09021113069052	0.33			--	0.2	