



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

Station Information

Station Number: S-430 DEP Drainage: Maine Coastal
Waterbody: Passagassawakeag River - Station 430 HUC8: 01050002
Town: Belfast HUC8 Name: Maine Coastal
Directions: POORS MILL RD ABOVE KEENE FARM Latitude: 44 25 44.08 N
Longitude: 69 5 35.8 W
Stream Order: 3

Sample Information

Log Number: 2097 Type of Sample: ROCK BAG Date Deployed: 7/10/2012
Subsample Factor: X4 Replicates: 3 Date Retrieved: 8/8/2012

Classification Attainment

Statutory Class: B Final Determination: B Date: 2/5/2013
Model Result with P>.6: B Reason for Determination: Model
Date Last Calculated: 1/31/2013 Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.18	Class A, B, or C	1.00
Class B	0.78	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.35
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.65

Model Variables

01 Total Mean Abundance	2225.33	18 Relative Abundance Ephemeroptera	0.07
02 Generic Richness	51.00	19 EPT Generic Richness	24.00
03 Plecoptera Mean Abundance	22.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	164.00	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	3.30	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	32.28
06 Hilsenhoff Biotic Index	4.85	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	70.60
07 Relative Abundance - Chironomidae	0.55	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.27	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	226.36		
11 <i>Cheumatopsyche</i> Abundance	26.95		
12 EPT Generic Richness/ Diptera Generic Richness	1.71		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	22.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	61.33		
17 Chironomini Abundance (Family Functional Group)	65.33		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	43.92
2	<i>Helicopsyche</i>	10.84
3	<i>Hydropsyche</i>	10.17
4	<i>Tvetenia</i>	4.79
5	<i>Chimarra</i>	4.31



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Date Retrieved: 8/8/2012

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 22.1 deg C
Dissolved Oxygen: 8.4 mg/l
Specific Conductance: 52 uS/cm
Velocity: 65 cm/s
pH: 7.54
Wetted Width: 12 m
Bankfull Width: 15 m
Depth: 40 cm

Waterbody Information - Retrieval

Temperature: 23.8 deg C
Dissolved Oxygen: 8.3 mg/l
Specific Conductance: 90 uS/cm
Velocity: 35.2 cm/s
pH: 7.26
Wetted Width: 11 m
Bankfull Width: 15 m
Depth: 30 cm

Water Chemistry - 8/8/2012

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	5 ug/l
Nitrate+nitrite As N	0.07 mg/l	Total Phosphorus	0.024 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	4.6 mg/l	Total Dissolved Solids	50 mg/l

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Pasture

Partly Open

Rolling

Upland Conifer

Upland Hardwood

Potential Stressor

Location

Substrate

Agricultural Runoff

Above Town

Below Agriculture NPS

Boulder 50 %

Gravel 5 %

Rubble/Cobble 40 %

Sand 5 %

Landcover Summary - 2004 Data

Total Area (ac)	20138	High Int. Dev. %	0.1	Water %	2.9	Non-vegetated %	0.4
		Med Int. Dev. %	0.3	Wetland %	8.5	Tilled Agriculture %	2.9
		Low Int. Dev. %	3.0	Upland Woody %	75.1	Grassland %	7.0
		Development %	3.4	Natural %	83.6	Human Altered %	13.6
						Impervious %	2.7

Sample Comments



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-430

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Town: Belfast

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Subsample Factor: X4

Replicates: 3

Calculated: 1/31/2013

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Cura</i>	03010102001	1.33	1.33		--	0.1	0.1
<i>Lumbriculus</i>	08020101002		1.33		CG		0.1
<i>Lumbriculus variegatus</i>	08020101002001	1.33			--	0.1	
Perlidae	09020209	2.67	2.67		--	0.1	0.1
<i>Acroneuria</i>	09020209042	9.33	20.00	0	PR	0.4	0.9
<i>Acroneuria abnormis</i>	09020209042121	10.67		0	PR	0.5	
<i>Boyeria</i>	09020301004		1.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.1	
<i>Hagenius</i>	09020302008		2.67	1	PR		0.1
<i>Hagenius brevistylus</i>	09020302008015	2.67			PR	0.1	
<i>Argia</i>	09020309048	1.33	1.33	7	PR	0.1	0.1
Baetidae	09020401	1.33			--	0.1	
<i>Baetis</i>	09020401001	1.33	21.05	4	CG	0.1	0.9
<i>Baetis pluto</i>	09020401001009	18.67			--	0.8	
<i>Acerpenna</i>	09020401007	1.33	2.81	5	CG	0.1	0.1
<i>Acerpenna pygmaea</i>	09020401007011	1.33			--	0.1	
<i>Plauditus</i>	09020401012	2.67	2.81		CG	0.1	0.1
Heptageniidae	09020402	6.67			--	0.3	
<i>Epeorus</i>	09020402009	4.00	4.47	0	SC	0.2	0.2
<i>Leucrocuta</i>	09020402011	5.33	5.95	1	SC	0.2	0.3
<i>Stenacron</i>	09020402014	2.67	2.98	7	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	10.67	50.60	4	SC	0.5	2.3
<i>Maccaffertium luteum</i>	09020402015049	26.67			--	1.2	
<i>Maccaffertium modestum</i>	09020402015051	8.00			--	0.4	
<i>Isonychia</i>	09020404018	4.00	4.00	2	CF	0.2	0.2
Leptophlebiidae	09020406	2.67	2.67		--	0.1	0.1
Ephemerellidae	09020410	1.33			--	0.1	
<i>Ephemerella</i>	09020410035	32.00	33.23	1	CG	1.4	1.5
<i>Serratella</i>	09020410037		2.77	2	CG		0.1
<i>Serratella serratoidea</i>	09020410037124	2.67			--	0.1	
<i>Tricorythodes</i>	09020411038	30.67	30.67	4	CG	1.4	1.4
<i>Chimarra</i>	09020601003	93.33	96.00	2	CF	4.2	4.3
<i>Chimarra socia</i>	09020601003004	2.67			--	0.1	
<i>Neureclipsis</i>	09020603008	38.67	38.67	7	CF	1.7	1.7
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.1	0.1
Hydropsychidae	09020604	2.67			--	0.1	
<i>Cheumatopsyche</i>	09020604015	26.67	26.95	5	CF	1.2	1.2
<i>Hydropsyche</i>	09020604016	149.33	226.36	4	CF	6.7	10.2



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Replicates: 3

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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche morosa</i>	09020604016030	28.00			--	1.3	
<i>Hydropsyche sparna</i>	09020604016032	46.67			--	2.1	
<i>Macrostemum</i>	09020604018		2.69	3	CF		0.1
<i>Macrostemum zebratum</i>	09020604018054	2.67			--	0.1	
<i>Rhyacophila</i>	09020605019	1.33	1.33	2	PR	0.1	0.1
<i>Lepidostoma</i>	09020611064	2.67	2.67	1	SH	0.1	0.1
<i>Helicopsyche</i>	09020616070		241.33	3	SC		10.8
<i>Helicopsyche borealis</i>	09020616070137	241.33			--	10.8	
<i>Oecetis</i>	09020618078	10.67	30.67	8	PR	0.5	1.4
<i>Oecetis avara</i>	09020618078153	5.33			--	0.2	
<i>Oecetis persimilis</i>	09020618078157	14.67			--	0.7	
<i>Nigronia</i>	09020701003		9.33	0	PR		0.4
<i>Nigronia serricornis</i>	09020701003003	9.33			--	0.4	
<i>Tipula</i>	09021001002	1.33	1.33	4	SH	0.1	0.1
<i>Nilotanyus</i>	09021011012		2.67	6	PR		0.1
<i>Nilotanyus fimbriatus</i>	09021011012027	2.67			--	0.1	
<i>Pentaneura</i>	09021011014		6.67	6	PR		0.3
<i>Pentaneura inconspicua</i>	09021011014028	6.67			--	0.3	
<i>Rheopelopia</i>	09021011017	17.33	52.00		PR	0.8	2.3
<i>Rheopelopia acra group</i>	09021011017036	34.67			--	1.6	
<i>Pagastia</i>	09021011025		1.33	1	--		0.1
<i>Pagastia orthogonia</i>	09021011025001	1.33			--	0.1	
<i>Nanocladius</i>	09021011049		4.00	3	CG		0.2
<i>Nanocladius branchicolus</i>	09021011049091	1.33			--	0.1	
<i>Nanocladius downesi</i>	09021011049092	2.67			--	0.1	
<i>Tvetenia</i>	09021011065		106.67	5	CG		4.8
<i>Tvetenia vitracies</i>	09021011065113	106.67			--	4.8	
<i>Rheotanytarsus</i>	09021011072	977.33	977.33	6	CF	43.9	43.9
<i>Sublettea coffmani</i>	09021011075131				--		
<i>Tanytarsus</i>	09021011076	5.33	5.33	6	CF	0.2	0.2
<i>Microtendipes</i>	09021011094		37.33	6	CF		1.7
<i>Microtendipes rydalensis group</i>	09021011094168	37.33			--	1.7	
<i>Polypedilum</i>	09021011102		28.00	6	SH		1.3
<i>Polypedilum aviceps</i>	09021011102181	16.00			--	0.7	
<i>Polypedilum flavum</i>	09021011102182	12.00			--	0.5	
<i>Simulium</i>	09021012047	2.67	18.67	4	CF	0.1	0.8
<i>Simulium jenningsi</i>	09021012047060	1.33			--	0.1	
<i>Simulium jenningsi complex</i>	09021012047070	14.67			CF	0.7	



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<i>Atherix</i>	09021015055	4.00	4.00	2	PR	0.2	0.2
<i>Hemerodromia</i>	09021016057	4.00	4.00	3	PR	0.2	0.2
<i>Dineutus</i>	09021104032	1.33	1.33	2	--	0.1	0.1
<i>Psephenus</i>	09021108058		6.67	4	SC		0.3
<i>Psephenus herricki</i>	09021108058028	6.67			--	0.3	
<i>Dubiraphia</i>	09021113064		16.00	6	--		0.7
<i>Dubiraphia minima</i>	09021113064036	16.00			--	0.7	
<i>Microcylloepus</i>	09021113066	1.33	1.33	3	--	0.1	0.1
<i>Optioservus</i>	09021113067	6.67	6.67	3	SC	0.3	0.3
<i>Promoresia</i>	09021113069		66.67		--		3.0
<i>Promoresia elegans</i>	09021113069051	33.33			--	1.5	
<i>Promoresia tardella</i>	09021113069052	33.33			--	1.5	
<i>Stenelmis</i>	09021113070	4.00	5.33	5	SC	0.2	0.2
<i>Stenelmis musgravei</i>	09021113070060	1.33			--	0.1	