



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

Station Information

Station Number: S-308
Waterbody: Allen Stream - Station 308
Town: Exeter
Directions: ABOVE RT. 11/43 CROSSING; 0.35 KM BELOW DOWNING RD.
DEP Drainage: Penobscot
HUC8: 01020005
HUC8 Name: Lower Penobscot
Latitude: 44 59 7.5 N
Longitude: 69 5 16.64 W
Stream Order: 3

Sample Information

Log Number: 2040
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/14/2011
Date Retrieved: 8/16/2011

Classification Attainment

Statutory Class: B
Model Result with P>.6: B
Date Last Calculated: 6/29/2012
Final Determination: B
Reason for Determination: Model
Date: 9/5/2012
Comments:

Model Probabilities

First Stage Model				C or Better Model	
Class A	0.39	Class C	0.18	Class A, B, or C	1.00
Class B	0.43	NA	0.00	Non-Attainment	0.00
B or Better Model				A Model	
Class A or B			0.99	Class A	0.14
Class C or Non-Attainment			0.01	Class B or C or Non-Attainment	0.86

Model Variables

01 Total Mean Abundance	65.33	18 Relative Abundance Ephemeroptera	0.46
02 Generic Richness	31.00	19 EPT Generic Richness	12.00
03 Plecoptera Mean Abundance	0.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	30.33	23 Relative Generic Richness- Plecoptera	0.06
05 Shannon-Wiener Generic Diversity	3.66	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	1.00
06 Hilsenhoff Biotic Index	5.09	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	17.44
07 Relative Abundance - Chironomidae	0.11	28 EP Generic Richness/14	0.43
08 Relative Generic Richness Diptera	0.23	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	0.33		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.71		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.00		
17 Chironomini Abundance (Family Functional Group)	4.33		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Maccaffertium</i>	26.18
2	<i>Polycentropus</i>	16.33
3	<i>Stenacron</i>	13.61
4	<i>Microtendipes</i>	6.63
5	<i>Dubiraphia</i>	6.63



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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:	7.3 mg/l
Specific Conductance:	167 uS/cm
Velocity:	19 cm/s
pH:	7.36
Wetted Width:	5.3 m
Bankfull Width:	6.3 m
Depth:	35 cm

Waterbody Information - Retrieval

Temperature:	18.9 deg C
Dissolved Oxygen:	7.3 mg/l
Specific Conductance:	171 uS/cm
Velocity:	
pH:	7.03
Wetted Width:	5.3 m
Bankfull Width:	6.3 m
Depth:	32 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Cultivated

Pasture

Upland Conifer

Upland Hardwood

Canopy Cover

Dense

Terrain

Rolling

Potential Stressor

Agricultural Runoff

Nutrients

Pesticides

Location

Above Road Crossing

Below Agriculture NPS

Substrate

Bedrock 5 %

Boulder 5 %

Gravel 30 %

Rubble/Cobble 60 %

Landcover Summary - 2004 Data

Total Area (ac)	6853	High Int. Dev. %	0.1	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.4	Wetland %	4.5	Tilled Agriculture %	10.7
		Low Int. Dev. %	4.1	Upland Woody %	76.8	Grassland %	3.4
		Development %	4.5	Natural %	81.6	Human Altered %	18.4
						Impervious %	2.6

Sample Comments

SITE IS UPSTREAM OF LARGE POTATO FIELDS. 7/14/11: FISH AND SILTATION OBSERVED.

8/16/11: FISH OBSERVED. FLOW METER WOULD NOT WORK DURING RETRIEVAL.



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

Station Number: S-308

Waterbody: Allen Stream - Station 308

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Log Number: 2040

Subsample Factor: X1

Replicates: 3

Calculated: 6/29/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hyalella</i>	09010203006		0.33	8	CG		0.5
<i>Hyalella azteca</i>	09010203006011	0.33			--	0.5	
<i>Orconectes</i>	09010301008	1.00	1.00		CG	1.5	1.5
<i>Pteronarcys</i>	09020205023		0.33	0	SH		0.5
<i>Pteronarcys biloba</i>	09020205023061	0.33			--	0.5	
<i>Acroneuria</i>	09020209042	0.33	0.33	0	PR	0.5	0.5
Aeshnidae	09020301	0.33			--	0.5	
<i>Aeshna</i>	09020301001	0.67	0.78	5	PR	1.0	1.2
<i>Boyeria</i>	09020301004		1.56	2	PR		2.4
<i>Boyeria vinosa</i>	09020301004012	1.33			--	2.0	
<i>Proclleon</i>	09020401010	0.33	0.33		CG	0.5	0.5
Heptageniidae	09020402	0.67			--	1.0	
<i>Stenacron</i>	09020402014	8.67	8.89	7	SC	13.3	13.6
<i>Maccaffertium</i>	09020402015	3.00	17.11	4	SC	4.6	26.2
<i>Maccaffertium luteum</i>	09020402015049	13.67			--	20.9	
Leptophlebiidae	09020406	4.00	4.00		--	6.1	6.1
<i>Chimarra</i>	09020601003	0.33	0.33	2	CF	0.5	0.5
<i>Nyctiophylax</i>	09020603009		0.33	5	PR		0.5
<i>Nyctiophylax moestus</i>	09020603009013	0.33			--	0.5	
<i>Polycentropus</i>	09020603010	10.67	10.67	6	PR	16.3	16.3
Hydropsychidae	09020604	0.33	0.33		--	0.5	0.5
<i>Hydropsyche</i>	09020604016		0.33	4	CF		0.5
<i>Hydropsyche depravata complex</i>	09020604016041	0.33			CF	0.5	
<i>Pycnopsyche</i>	09020610049	1.33	1.33	4	SH	2.0	2.0
<i>Nigronia</i>	09020701003		1.00	0	PR		1.5
<i>Nigronia serricornis</i>	09020701003003	1.00			--	1.5	
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.5	0.5
<i>Parametriocnemus</i>	09021011053	1.00	1.00	5	CG	1.5	1.5
<i>Rheocricotopus</i>	09021011057		0.33	6	CG		0.5
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.5	
<i>Tvetenia</i>	09021011065		0.33	5	CG		0.5
<i>Tvetenia paucunca</i>	09021011065114	0.33			--	0.5	
<i>Tanytarsus</i>	09021011076	1.00	1.00	6	CF	1.5	1.5
<i>Microtendipes</i>	09021011094		4.33	6	CF		6.6
<i>Microtendipes pedellus group</i>	09021011094166	4.33			--	6.6	
<i>Polypedilum</i>	09021011102			6	SH		
<i>Simulium</i>	09021012047		0.33	4	CF		0.5
<i>Simulium (Eusimulium)</i>	09021012047052	0.33			--	0.5	



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<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.5	0.5
<i>Psephenus</i>	09021108058		0.33	4	SC		0.5
<i>Psephenus herricki</i>	09021108058028	0.33			--	0.5	
<i>Ectopria</i>	09021109059	0.67	0.67	5	SC	1.0	1.0
<i>Dubiraphia</i>	09021113064	4.33	4.33	6	--	6.6	6.6
<i>Stenelmis</i>	09021113070	0.33	0.67	5	SC	0.5	1.0
<i>Stenelmis crenata</i>	09021113070055	0.33			--	0.5	
<i>Ferrissia</i>	10010204035		0.67		SC		1.0
<i>Ferrissia rivularis</i>	10010204035066	0.67			--	1.0	
<i>Pisidium</i>	10020201002	1.67	1.67		CF	2.6	2.6