



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

Station Information

Station Number: S-482 DEP Drainage: Penobscot
Waterbody: Cold Stream - Station 482 HUC8: 01020005
Town: Enfield HUC8 Name: Lower Penobscot
Directions: ABOVE HATCHERY PENS Latitude: 45 14 53.08 N
Longitude: 68 34 4.29 W
Stream Order: 2

Sample Information

Log Number: 2043 Type of Sample: ROCK BAG Date Deployed: 7/18/2011
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/17/2011

Classification Attainment

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

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.79	Class A, B, or C	1.00
Class B	0.21	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.99
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.01

Model Variables

01 Total Mean Abundance	158.33	18 Relative Abundance Ephemeroptera	0.25
02 Generic Richness	33.00	19 EPT Generic Richness	17.00
03 Plecoptera Mean Abundance	9.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	40.33	23 Relative Generic Richness- Plecoptera	0.09
05 Shannon-Wiener Generic Diversity	3.56	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	9.94
06 Hilsenhoff Biotic Index	3.60	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	5.00
07 Relative Abundance - Chironomidae	0.16	28 EP Generic Richness/14	0.57
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	50.39		
11 <i>Cheumatopsyche</i> Abundance	6.94		
12 EPT Generic Richness/ Diptera Generic Richness	1.55		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	8.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.00		
17 Chironomini Abundance (Family Functional Group)	11.67		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	31.83
2	<i>Serratella</i>	12.21
3	<i>Baetis</i>	9.64
4	<i>Simulium</i>	7.58
5	<i>Polypedilum</i>	6.95



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: LOTIC INC.

Waterbody Information - Deployment

Temperature:	21.7 deg C
Dissolved Oxygen:	8.5 mg/l
Specific Conductance:	16 uS/cm
Velocity:	88 cm/s
pH:	6.35
Wetted Width:	10 m
Bankfull Width:	11 m
Depth:	23 cm

Waterbody Information - Retrieval

Temperature:	22.2 deg C
Dissolved Oxygen:	8.1 mg/l
Specific Conductance:	18 uS/cm
Velocity:	78 cm/s
pH:	7.08
Wetted Width:	10 m
Bankfull Width:	11 m
Depth:	20 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Swamp Conifer

Upland Hardwood

Canopy Cover

Partly Open

Terrain

Rolling

Potential Stressor

Lake Outlet

Location

Above Fish Hatchery

Lake Outlet

Substrate

Boulder	15 %
Gravel	10 %
Rubble/Cobble	70 %
Sand	5 %

Landcover Summary - 2004 Data

Total Area (ac)	17976	High Int. Dev. %	0.1	Water %	24.6	Non-vegetated %	0.0
		Med Int. Dev. %	0.1	Wetland %	1.6	Tilled Agriculture %	0.3
		Low Int. Dev. %	1.7	Upland Woody %	71.4	Grassland %	0.2
		Development %	1.9	Natural %	73.0	Human Altered %	2.4
						Impervious %	1.1

Sample Comments

BLOW DOWN ACROSS STREAM. 7/18/11: IRON BACTERIA OBSERVED.
8/17/11: IRON BACTERIA OBSERVED.



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

Station Number: S-482

Waterbody: Cold Stream - Station 482

Town: Enfield

Log Number: 2043

Subsample Factor: X1

Replicates: 3

Calculated: 2/1/2013

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	0.33	0	SH	0.2	0.2
Perlidae	09020209	4.00			--	2.5	
<i>Acroneuria</i>	09020209042		4.33	0	PR		2.7
<i>Acroneuria abnormis</i>	09020209042121	2.33		0	PR	1.5	
<i>Paragnetina</i>	09020209049		4.33	1	PR		2.7
<i>Paragnetina media</i>	09020209049151	2.33			--	1.5	
Baetidae	09020401	2.67			--	1.7	
<i>Baetis</i>	09020401001		15.26	4	CG		9.6
<i>Baetis flavistriga</i>	09020401001004	0.67			--	0.4	
<i>Baetis intercalaris</i>	09020401001008	0.33			--	0.2	
<i>Baetis pluto</i>	09020401001009	9.33			--	5.9	
<i>Baetis tricaudatus</i>	09020401001012	2.33			--	1.5	
<i>Acerpenna</i>	09020401007		0.40	5	CG		0.3
<i>Acerpenna macdunnoughi</i>	09020401007001	0.33			--	0.2	
<i>Epeorus</i>	09020402009	4.67	4.67	0	SC	2.9	2.9
<i>Maccaffertium</i>	09020402015	0.67	0.67	4	SC	0.4	0.4
<i>Serratella</i>	09020410037	19.33	19.33	2	CG	12.2	12.2
<i>Chimarra</i>	09020601003		2.67	2	CF		1.7
<i>Chimarra aterrima</i>	09020601003002	2.67			--	1.7	
<i>Neureclipsis</i>	09020603008	0.33	0.33	7	CF	0.2	0.2
Hydropsychidae	09020604	5.00			--	3.2	
<i>Cheumatopsyche</i>	09020604015	6.33	6.94	5	CF	4.0	4.4
<i>Hydropsyche</i>	09020604016	8.67	50.39	4	CF	5.5	31.8
<i>Hydropsyche morosa</i>	09020604016030	27.33			--	17.3	
<i>Hydropsyche sparna</i>	09020604016032	10.00			--	6.3	
<i>Rhyacophila</i>	09020605019	0.33	2.33	2	PR	0.2	1.5
<i>Rhyacophila fuscua</i>	09020605019060	2.00			PR	1.3	
<i>Glossosoma</i>	09020606020	2.33	2.33	0	SC	1.5	1.5
<i>Ochrotrichia</i>	09020607027	0.33	0.33	4	P	0.2	0.2
<i>Hydatophylax</i>	09020610048	0.33	0.33	2	SH	0.2	0.2
<i>Oecetis</i>	09020618078	0.33	0.33	8	PR	0.2	0.2
<i>Nigronia</i>	09020701003		1.00	0	PR		0.6
<i>Nigronia serricornis</i>	09020701003003	1.00			--	0.6	
<i>Thienemannimyia</i>	09021011020		1.00	3	PR		0.6
<i>Thienemannimyia/arctopolopia</i> group	09021011020041	1.00			--	0.6	
<i>Corynoneura</i>	09021011036	0.67	0.67	7	CG	0.4	0.4
<i>Cricotopus</i>	09021011037	3.00	3.00	7	SH	1.9	1.9



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<i>Eukiefferiella</i>	09021011041	0.33	0.33	8	CG	0.2	0.2
<i>Nanocladius</i>	09021011049	0.33	0.33	3	CG	0.2	0.2
<i>Tvetenia</i>	09021011065		8.00	5	CG		5.1
<i>Tvetenia vitracies</i>	09021011065113	2.00			--	1.3	
<i>Tvetenia paucunca</i>	09021011065114	6.00			--	3.8	
<i>Stempellinella</i>	09021011074	0.33	0.33	2	--	0.2	0.2
<i>Microtendipes</i>	09021011094		0.33	6	CF		0.2
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.2	
<i>Polypedilum</i>	09021011102		11.00	6	SH		6.9
<i>Polypedilum aviceps</i>	09021011102181	10.33			--	6.5	
<i>Polypedilum flavum</i>	09021011102182	0.67			--	0.4	
<i>Stenochironomus</i>	09021011105	0.33	0.33	5	CG	0.2	0.2
<i>Simulium</i>	09021012047	12.00	12.00	4	CF	7.6	7.6
<i>Psephenus</i>	09021108058		0.33	4	SC		0.2
<i>Psephenus herricki</i>	09021108058028	0.33			--	0.2	
Physidae	10010202	0.67	0.67		SC	0.4	0.4
<i>Ferrissia</i>	10010204035	3.33	3.33		SC	2.1	2.1
Sphaeriidae	10020201	0.33	0.33		CF	0.2	0.2