



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

Station Information

**Station Number: S-447**  
Waterbody: Little Ossipee River - Station 447  
Town: Limerick  
Directions: ABOVE ARROWHEAD IMP. - FOSS RD. BETWEEN POLE 16 AND TURNOFF ON RIGHT  
DEP Drainage: Piscataqua - Presumpscot - Saco  
HUC8: 01060002  
HUC8 Name: Saco  
Latitude: 43 39 13.97 N  
Longitude: 70 47 26.1 W  
Stream Order: 3

Sample Information

**Log Number: 1963**  
Subsample Factor: X4  
Type of Sample: ROCK BASKET  
Replicates: 3  
Date Deployed: 7/26/2010  
Date Retrieved: 8/25/2010

Classification Attainment

**Statutory Class: B**  
Model Result with P>.6: A  
Date Last Calculated: 1/25/2011  
**Final Determination: A**  
**Reason for Determination: Model**  
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.32	Class A, B, or C	1.00
Class B	0.63	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.71
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.29

Model Variables

01 Total Mean Abundance	673.33	18 Relative Abundance Ephemeroptera	0.20
02 Generic Richness	36.00	19 EPT Generic Richness	21.00
03 Plecoptera Mean Abundance	12.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	134.67	23 Relative Generic Richness- Plecoptera	0.06
05 Shannon-Wiener Generic Diversity	4.08	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	64.12
06 Hilsenhoff Biotic Index	4.57	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	39.60
07 Relative Abundance - Chironomidae	0.37	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	115.25		
11 <i>Cheumatopsyche</i> Abundance	10.08		
12 EPT Generic Richness/ Diptera Generic Richness	1.75		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	12.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	4.16		
17 Chironomini Abundance (Family Functional Group)	110.84		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	17.12
2	<i>Polypedilum</i>	13.58
3	<i>Neureclipsis</i>	9.90
4	<i>Cricotopus</i>	7.61
5	<i>Rheotanytarsus</i>	7.61



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Date Retrieved: 8/25/2010

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 22.1 deg C  
Dissolved Oxygen: 9.3 mg/l  
Specific Conductance: 63 uS/cm  
Velocity: 67 cm/s  
pH:  
Wetted Width: 22 m  
Bankfull Width: 27 m  
Depth: 48 cm

**Waterbody Information - Retrieval**

Temperature: 17.1 deg C  
Dissolved Oxygen: 8.6 mg/l  
Specific Conductance: 51 uS/cm  
Velocity: 47 cm/s  
pH: 7.25  
Wetted Width: 22 m  
Bankfull Width: 27 m  
Depth: 40 cm

**Water Chemistry - 8/25/2010**

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.009 mg/l
Total Kjeldahl Nitrogen	0.1 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	2 mg/l	Total Dissolved Solids	42 mg/l

**Summary of Habitat Characteristics**

Landuse Name

Upland Conifer

Upland Hardwood

Potential Stressor

Canopy Cover

Open

Location

Above Dam

Main Stem

Terrain

Rolling

Substrate

Boulder 50 %

Gravel 10 %

Rubble/Cobble 35 %

Sand 5 %

**Landcover Summary - 2004 Data**

Total Area (ac)	10422	High Int. Dev. %	0.1	Water %	0.3	Non-vegetated %	0.0
		Med Int. Dev. %	0.1	Wetland %	6.3	Tilled Agriculture %	1.0
		Low Int. Dev. %	1.3	Upland Woody %	84.1	Grassland %	6.6
		Development %	1.6	Natural %	90.5	Human Altered %	9.2
						Impervious %	1.6

**Sample Comments**

8/25/2010 HEAVY RAIN.

7/26/2010 FISH, ALGAE.



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Replicates: 3

Calculated: 1/25/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Perlidae	09020209	2.67			--	0.4	
<i>Acroneuria</i>	09020209042		8.57	0	PR		1.3
<i>Acroneuria abnormis</i>	09020209042121	2.67		0	PR	0.4	
<i>Acroneuria lycorias</i>	09020209042125	4.00			--	0.6	
<i>Paragnetina</i>	09020209049		3.43	1	PR		0.5
<i>Paragnetina immarginata</i>	09020209049149	2.67			--	0.4	
<i>Calopteryx</i>	09020307043		2.67	5	PR		0.4
<i>Calopteryx aequabilis</i>	09020307043085	1.33			--	0.2	
<i>Calopteryx maculata</i>	09020307043088	1.33			--	0.2	
<i>Baetis</i>	09020401001	17.33	17.33	4	CG	2.6	2.6
<i>Acerpenna</i>	09020401007		2.67	5	CG		0.4
<i>Acerpenna pygmaea</i>	09020401007011	2.67			--	0.4	
<i>Plauditus</i>	09020401012	2.67	2.67		CG	0.4	0.4
<i>Iswaeon</i>	09020401015		1.33		--		0.2
<i>Iswaeon anoka</i>	09020401015001	1.33			--	0.2	
Heptageniidae	09020402	20.00			--	3.0	
<i>Epeorus</i>	09020402009	6.67	9.70	0	SC	1.0	1.4
<i>Leucrocuta</i>	09020402011	10.67	15.52	1	SC	1.6	2.3
<i>Rhithrogena</i>	09020402013	5.33	7.76	0	SC	0.8	1.2
<i>Maccaffertium</i>	09020402015	14.67	31.03	4	SC	2.2	4.6
<i>Maccaffertium luteum</i>	09020402015049	1.33			--	0.2	
<i>Maccaffertium mediopunctatum</i>	09020402015050	1.33			--	0.2	
<i>Maccaffertium modestum</i>	09020402015051	4.00			--	0.6	
<i>Isonychia</i>	09020404018	44.00	44.00	2	CF	6.5	6.5
<i>Ephemerella</i>	09020410035	2.67	2.67	1	CG	0.4	0.4
Philopotamidae	09020601	2.67			--	0.4	
<i>Dolophilodes</i>	09020601001	1.33	1.43	0	CF	0.2	0.2
<i>Chimarra</i>	09020601003	37.33	39.91	2	CF	5.5	5.9
Polycentropodidae	09020603	1.33	1.33		--	0.2	0.2
<i>Neureclipsis</i>	09020603008	66.67	66.67	7	CF	9.9	9.9
Hydropsychidae	09020604	9.33			--	1.4	
<i>Cheumatopsyche</i>	09020604015	9.33	10.08	5	CF	1.4	1.5
<i>Hydropsyche</i>	09020604016	80.00	115.25	4	CF	11.9	17.1
<i>Hydropsyche bronta</i>	09020604016029	10.67			--	1.6	
<i>Hydropsyche sparna</i>	09020604016032	16.00			--	2.4	
<i>Hydroptila</i>	09020607026	13.33	13.33	6	P	2.0	2.0
<i>Brachycentrus</i>	09020609043		9.33	0	CF		1.4
<i>Brachycentrus appalachia</i>	09020609043096	9.33			--	1.4	



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		Actual	Adjusted			Actual	Adjusted
<i>Oecetis</i>	09020618078	1.33	1.33	8	PR	0.2	0.2
<i>Corydalus</i>	09020701002		1.33	6	PR		0.2
<i>Corydalus cornutus</i>	09020701002002	1.33			--	0.2	
Chironomidae	09021011	9.33			--	1.4	
<i>Conchapelopia</i>	09021011004	1.33	1.39	6	PR	0.2	0.2
<i>Pentaneura</i>	09021011014		1.39	6	PR		0.2
<i>Pentaneura inconspicua</i>	09021011014028	1.33			--	0.2	
<i>Rheopelopia</i>	09021011017	1.33	1.39		PR	0.2	0.2
<i>Corynoneura</i>	09021011036	1.33	1.39	7	CG	0.2	0.2
<i>Cricotopus</i>	09021011037		51.26	7	SH		7.6
<i>Cricotopus bicinctus</i>	09021011037057	49.33			--	7.3	
<i>Nanocladius</i>	09021011049	1.33	5.54	3	CG	0.2	0.8
<i>Nanocladius branchiculus</i>	09021011049091	2.67			--	0.4	
<i>Nanocladius downesi</i>	09021011049092	1.33			--	0.2	
<i>Tvetenia</i>	09021011065		20.78	5	CG		3.1
<i>Tvetenia vitracies</i>	09021011065113	20.00			--	3.0	
<i>Rheotanytarsus</i>	09021011072	49.33	51.26	6	CF	7.3	7.6
<i>Tanytarsus</i>	09021011076	2.67	2.77	6	CF	0.4	0.4
<i>Microtendipes</i>	09021011094		19.40	6	CF		2.9
<i>Microtendipes rydalensis group</i>	09021011094168	18.67			--	2.8	
<i>Polypedilum</i>	09021011102		91.44	6	SH		13.6
<i>Polypedilum aviceps</i>	09021011102181	56.00			--	8.3	
<i>Polypedilum flavum</i>	09021011102182	29.33			--	4.4	
<i>Polypedilum illinoense group</i>	09021011102185	2.67			--	0.4	
<i>Simulium</i>	09021012047	1.33	13.33	4	CF	0.2	2.0
<i>Simulium jenningsi complex</i>	09021012047070	12.00			CF	1.8	
<i>Promoresia</i>	09021113069		2.67		--		0.4
<i>Promoresia tardella</i>	09021113069052	2.67			--	0.4	