



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

Station Information

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

Sample Information

Log Number: 2367	Type of Sample: ROCK BASKET	Date Deployed: 7/16/2015
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/13/2015

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 3/9/2016
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 3/9/2016	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.39	Class A, B, or C	1.00
Class B	0.59	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.91
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.09

Model Variables

01 Total Mean Abundance	984.00	18 Relative Abundance Ephemeroptera	0.13
02 Generic Richness	41.00	19 EPT Generic Richness	24.00
03 Plecoptera Mean Abundance	17.33	21 Sum of Abundances: <i>Dicrotendipes,</i> <i>Micropsectra, Parachironomus, Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	129.33	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.02	25 Sum of Abundances: <i>Cheumatopsyche,</i> <i>Cricotopus, Tanytarsus, Ablabesmyia</i>	144.79
06 Hilsenhoff Biotic Index	4.27	26 Sum of Abundances: <i>Acroneuria,</i> <i>Maccaffertium, Stenonema</i>	22.58
07 Relative Abundance - Chironomidae	0.34	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.27	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	211.06		
11 <i>Cheumatopsyche</i> Abundance	116.79		
12 EPT Generic Richness/ Diptera Generic Richness	2.18		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	17.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	8.00		
17 Chironomini Abundance (Family Functional Group)	120.00		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	21.45
2	<i>Cheumatopsyche</i>	11.87
3	<i>Polypedilum</i>	10.57
4	<i>Tvetenia</i>	8.54
5	<i>Rheotanytarsus</i>	8.40



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 17.8 deg C
Dissolved Oxygen: 9.67 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 65.7 uS/cm
Velocity: 33.5 cm/s
pH: 7.52
Wetted Width: 22 m
Bankfull Width: 24 m
Depth: 43 cm

Waterbody Information - Retrieval

Temperature: 21.2 deg C
Dissolved Oxygen: 9.28 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 65.7 uS/cm
Velocity: 3 cm/s
pH: 7.61
Wetted Width: 22 m
Bankfull Width: 24 m
Depth: 42 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Conifer	Open	Rolling	
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Above Dam	Boulder	50 %
	Main Stem	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

7/16/2015: 102.3% DO.

8/16/2015: 105.4% DO.



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Town: Limerick

Log Number: 2367

Subsample Factor: X4

Replicates: 3

Calculated: 3/9/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Acroneuria</i>	09020209042	4.00	13.33	0	PR	0.4	1.4
<i>Acroneuria abnormis</i>	09020209042121	9.33		0	PR	0.9	
<i>Perlesta</i>	09020209046		4.00	5	PR		0.4
<i>Perlesta decipiens</i>	09020209046141	4.00			--	0.4	
<i>Argia</i>	09020309048	2.67	2.67	7	PR	0.3	0.3
Baetidae	09020401	9.33			--	0.9	
<i>Baetis</i>	09020401001	20.00	43.88	4	CG	2.0	4.5
<i>Baetis intercalaris</i>	09020401001008	16.00			--	1.6	
<i>Proclleon</i>	09020401010	1.33	1.63		CG	0.1	0.2
<i>Plauditus</i>	09020401012	5.33	6.50		CG	0.5	0.7
Heptageniidae	09020402	28.00			--	2.8	
<i>Epeorus</i>	09020402009	1.33	3.08	0	SC	0.1	0.3
<i>Leucrocota</i>	09020402011	16.00	37.00	1	SC	1.6	3.8
<i>Maccaffertium</i>	09020402015	4.00	9.25	4	SC	0.4	0.9
<i>Isonychia</i>	09020404018	1.33	1.33	2	CF	0.1	0.1
<i>Ephemerella</i>	09020410035	14.67	14.67	1	CG	1.5	1.5
<i>Serratella</i>	09020410037		4.00	2	CG		0.4
<i>Serratella deficiens (Teloganopsis deficiens)</i>	09020410037121	2.67			--	0.3	
<i>Serratella serratoides</i>	09020410037124	1.33			--	0.1	
<i>Tricorythodes</i>	09020411038	8.00	8.00	4	CG	0.8	0.8
<i>Chimarra</i>	09020601003	45.33	53.33	2	CF	4.6	5.4
<i>Chimarra socia</i>	09020601003004	8.00			--	0.8	
<i>Neureclipsis</i>	09020603008	18.67	18.67	7	CF	1.9	1.9
Hydropsychidae	09020604	17.33			--	1.8	
<i>Cheumatopsyche</i>	09020604015	110.67	116.79	5	CF	11.2	11.9
<i>Hydropsyche</i>	09020604016	176.00	211.06	4	CF	17.9	21.4
<i>Hydropsyche bronta</i>	09020604016029	5.33			--	0.5	
<i>Hydropsyche morosa</i>	09020604016030	13.33			--	1.4	
<i>Hydropsyche sparna</i>	09020604016032	5.33			--	0.5	
<i>Macrostemum</i>	09020604018		2.81	3	CF		0.3
<i>Macrostemum zebratum</i>	09020604018054	2.67			--	0.3	
<i>Glossosoma</i>	09020606020	2.67	2.67	0	SC	0.3	0.3
<i>Protoptila</i>	09020606022	8.00	8.00	1	SC	0.8	0.8
Hydroptilidae	09020607	9.33			--	0.9	
<i>Hydroptila</i>	09020607026	9.33	15.87	6	P	0.9	1.6
<i>Neotrichia</i>	09020607034	4.00	6.80	2	SC	0.4	0.7
<i>Brachycentrus</i>	09020609043		36.00	0	CF		3.7



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		Actual	Adjusted			Actual	Adjusted
<i>Brachycentrus appalachia</i>	09020609043096	36.00			--	3.7	
<i>Lepidostoma</i>	09020611064	2.67	2.67	1	SH	0.3	0.3
<i>Oecetis</i>	09020618078		1.33	8	PR		0.1
<i>Oecetis persimilis</i>	09020618078157	1.33			--	0.1	
<i>Corydalus</i>	09020701002		1.33	6	PR		0.1
<i>Corydalus cornutus</i>	09020701002002	1.33			--	0.1	
<i>Nilotanytus</i>	09021011012		4.00	6	PR		0.4
<i>Nilotanytus fimbriatus</i>	09021011012027	4.00			--	0.4	
<i>Rheopelopia</i>	09021011017	4.00	4.00		PR	0.4	0.4
<i>Cricotopus</i>	09021011037		28.00	7	SH		2.8
<i>Cricotopus bicinctus</i>	09021011037057	26.67			--	2.7	
<i>Cricotopus vierriensis</i>	09021011037071	1.33			--	0.1	
<i>Nanocladius</i>	09021011049		6.67	3	CG		0.7
<i>Nanocladius branchicolus</i>	09021011049091	2.67			--	0.3	
<i>Nanocladius downesi</i>	09021011049092	4.00			--	0.4	
<i>Orthocladius</i>	09021011050		2.67	6	CG		0.3
<i>Orthocladius dubitatus</i>	09021011050103	2.67			--	0.3	
<i>Thienemanniella</i>	09021011062		1.33	6	CG		0.1
<i>Thienemanniella xena</i>	09021011062110	1.33			--	0.1	
<i>Tvetenia</i>	09021011065		84.00	5	CG		8.5
<i>Tvetenia vitracies</i>	09021011065113	82.67			--	8.4	
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.1	
<i>Rheotanytarsus</i>	09021011072		82.67	6	CF		8.4
<i>Rheotanytarsus exiguus group</i>	09021011072127	70.67			CF	7.2	
<i>Rheotanytarsus pellucidus</i>	09021011072128	12.00			CF	1.2	
<i>Microtendipes</i>	09021011094		16.00	6	CF		1.6
<i>Microtendipes rydalensis group</i>	09021011094168	16.00			--	1.6	
<i>Polypedilum</i>	09021011102		104.00	6	SH		10.6
<i>Polypedilum aviceps</i>	09021011102181	14.67			--	1.5	
<i>Polypedilum flavum</i>	09021011102182	89.33			--	9.1	
<i>Simulium</i>	09021012047	1.33	16.00	4	CF	0.1	1.6
<i>Simulium jenningsi</i>	09021012047060				--		
<i>Simulium jenningsi species group</i>	09021012047070	14.67			CF	1.5	
<i>Dineutus</i>	09021104032	1.33	1.33	2	--	0.1	0.1
Elmidae	09021113	1.33			--	0.1	
<i>Oulimnius</i>	09021113068		1.78		--		0.2
<i>Oulimnius latiusculus</i>	09021113068049	1.33			--	0.1	
<i>Promoresia</i>	09021113069		3.56		--		0.4



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<i>Promoresia elegans</i>	09021113069051	1.33			--	0.1	
<i>Promoresia tardella</i>	09021113069052	1.33			--	0.1	
Trombidiformes	090302	1.33	1.33		PR	0.1	0.1