



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

Station Information

Station Number: S-446	River Basin: Saco
Waterbody: Little Ossipee River - Station 446	HUC8 Name: Saco
Town: Limington	Latitude: 43 41 19.65 N
Directions: 200 YDS UPSTREAM OF MILL TURN RD	Longitude: 70 40 9.03 W
	Stream Order: 4

Sample Information

Log Number: 2365	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: B	Date: 4/20/2016
Model Result with $P \geq 0.6$: C	Reason for Determination: Best Professional Judgement	
Date Last Calculated: 3/9/2016	Comments: Impoundment Effect. Raised finding from Class C to next higher Class.	

Model Probabilities

	<u>First Stage Model</u>			<u>C or Better Model</u>	
Class A	0.01	Class C	0.90	Class A, B, or C	1.00
Class B	0.09	NA	0.00	Non-Attainment	0.00
	<u>B or Better Model</u>			<u>A Model</u>	
Class A or B			0.03	Class A	0.01
Class C or Non-Attainment			0.97	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	1852.00	18 Relative Abundance Ephemeroptera	0.15
02 Generic Richness	43.00	19 EPT Generic Richness	17.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	277.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.00	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	337.96
06 Hilsenhoff Biotic Index	3.89	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	145.11
07 Relative Abundance - Chironomidae	0.10	28 EP Generic Richness/14	0.64
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	120.54		
11 <i>Cheumatopsyche</i> Abundance	324.53		
12 EPT Generic Richness/ Diptera Generic Richness	1.21		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	6.71		
17 Chironomini Abundance (Family Functional Group)	6.71		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Macrostemum</i>	43.86
2	<i>Cheumatopsyche</i>	17.52
3	<i>Maccaffertium</i>	7.84
4	<i>Hydropsyche</i>	6.51
5	<i>Isonychia</i>	4.25



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Station Number: S-446 Town: Limington Date Deployed: 7/16/2015
Log Number: 2365 Waterbody: Little Ossipee River - Station 446 Date Retrieved: 8/13/2015

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 21 deg C
Dissolved Oxygen: 7.22 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 79.2 uS/cm
Velocity: 15.2 cm/s
pH: 6.57
Wetted Width: 35 m
Bankfull Width: 36 m
Depth: 43.5 cm

Waterbody Information - Retrieval

Temperature: 23.2 deg C
Dissolved Oxygen: 6.8 mg/l
Dissolved Oxygen Saturation:
Specific Conductance: 75 uS/cm
Velocity: 48.8 cm/s
pH: 6.7
Wetted Width: 35 m
Bankfull Width: 36 m
Depth: 59 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 Road Crossing	Boulder	50 %
	Below Dam	Gravel	15 %
		Rubble/Cobble	25 %
		Sand	10 %

Landcover Summary - 2004 Data

Total Area (ac)	72192	High Int. Dev. %	0.3	Water %	2.9	Non-vegetated %	0.4
		Med Int. Dev. %	0.2	Wetland %	6.0	Tilled Agriculture %	0.6
		Low Int. Dev. %	2.1	Upland Woody %	81.8	Grassland %	4.2
		Development %	2.6	Natural %	88.1	Human Altered %	9.0
						Impervious %	2.3

Sample Comments

7/16/2015: 81.4% DO.
8/16/2015: 80.2% DO.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-446
Log Number: 2365

Waterbody: Little Ossipee River - Station 446
Subsample Factor: X4

Town: Limington
Calculated: 3/9/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Rhabditophora	0301	10.67	10.67		--	0.6	0.6
<i>Girardia</i>	03010102002		2.67		--		0.1
<i>Girardia tigrina</i>	03010102002001	2.67			--	0.1	
<i>Orconectes</i>	09010301008		1.33		CG		0.1
<i>Orconectes limosus</i>	09010301008013	1.33			--	0.1	
<i>Boyeria</i>	09020301004		5.33	2	PR		0.3
<i>Boyeria vinosa</i>	09020301004012	5.33			--	0.3	
<i>Argia</i>	09020309048		1.33	7	PR		0.1
<i>Argia moesta</i>	09020309048096	1.33			--	0.1	
Baetidae	09020401	1.33			--	0.1	
<i>Baetis</i>	09020401001		4.11	4	CG		0.2
<i>Baetis intercalaris</i>	09020401001008	4.00			--	0.2	
<i>Acerpenna</i>	09020401007	5.33	21.91	5	CG	0.3	1.2
<i>Acerpenna pygmaea</i>	09020401007011	16.00			--	0.9	
<i>Labiobaetis</i>	09020401009		1.37		--		0.1
<i>Labiobaetis propinquus</i>	09020401009010	1.33			--	0.1	
<i>Plauditus</i>	09020401012	2.67	2.74		CG	0.1	0.1
<i>Iswaeon</i>	09020401015	20.00	20.54		--	1.1	1.1
Heptageniidae	09020402	21.33			--	1.2	
<i>Leucrocuta</i>	09020402011	1.33	1.56	1	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	58.67	145.11	4	SC	3.2	7.8
<i>Maccaffertium modestum</i>	09020402015051	65.33			--	3.5	
<i>Isonychia</i>	09020404018	78.67	78.67	2	CF	4.2	4.2
Ephemerellidae	09020410	1.33	1.33		--	0.1	0.1
<i>Chimarra</i>	09020601003	4.00	20.00	2	CF	0.2	1.1
<i>Chimarra aterrima</i>	09020601003002	1.33			--	0.1	
<i>Chimarra obscura</i>	09020601003003	14.67			--	0.8	
<i>Neureclipsis</i>	09020603008	22.67	22.67	7	CF	1.2	1.2
Hydropsychidae	09020604	353.33			--	19.1	
<i>Cheumatopsyche</i>	09020604015	233.33	324.53	5	CF	12.6	17.5
<i>Hydropsyche</i>	09020604016	54.67	120.54	4	CF	3.0	6.5
<i>Hydropsyche morosa</i>	09020604016030	1.33			--	0.1	
<i>Hydropsyche sparna</i>	09020604016032	8.00			--	0.4	
<i>Hydropsyche depravata species group</i>	09020604016041	22.67			CF	1.2	
<i>Macrostemum</i>	09020604018		812.26	3	CF		43.9
<i>Macrostemum zebratum</i>	09020604018054	584.00			--	31.5	
<i>Hydroptila</i>	09020607026	9.33	9.33	6	P	0.5	0.5



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		Actual	Adjusted			Actual	Adjusted
Leptoceridae	09020618				--		
<i>Ceraclea</i>	09020618072		4.00	3	CG		0.2
<i>Ceraclea alces</i>	09020618072144	4.00			--	0.2	
<i>Oecetis</i>	09020618078	6.67	6.67	8	PR	0.4	0.4
<i>Corydalus</i>	09020701002		1.33	6	PR		0.1
<i>Corydalus cornutus</i>	09020701002002	1.33			--	0.1	
<i>Nigronia</i>	09020701003	2.67	2.67	0	PR	0.1	0.1
Chironomidae	09021011	1.33			--	0.1	
<i>Pentaneura</i>	09021011014		5.37	6	PR		0.3
<i>Pentaneura inconspicua</i>	09021011014028	5.33			--	0.3	
<i>Rheopelopia</i>	09021011017	1.33	1.34		PR	0.1	0.1
<i>Corynoneura</i>	09021011036	1.33	1.34	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037	1.33	9.40	7	SH	0.1	0.5
<i>Cricotopus bicinctus</i>	09021011037057	6.67			--	0.4	
<i>Cricotopus vierriensis</i>	09021011037071	1.33			--	0.1	
<i>Orthocladius</i>	09021011050		4.03	6	CG		0.2
<i>Orthocladius annectens</i>	09021011050092	4.00			--	0.2	
<i>Psectrocladius</i>	09021011056		4.03	8	CG		0.2
<i>Psectrocladius elatus</i>	09021011056105	4.00			--	0.2	
<i>Rheocricotopus</i>	09021011057		60.42	6	CG		3.3
<i>Rheocricotopus robacki</i>	09021011057105	60.00			--	3.2	
<i>Thienemanniella</i>	09021011062		1.34	6	CG		0.1
<i>Thienemanniella similis</i>	09021011062111	1.33			--	0.1	
<i>Tvetenia</i>	09021011065		16.11	5	CG		0.9
<i>Tvetenia vitracies</i>	09021011065113	16.00			--	0.9	
<i>Rheotanytarsus</i>	09021011072		76.54	6	CF		4.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	46.67			CF	2.5	
<i>Rheotanytarsus pellucidus</i>	09021011072128	29.33			CF	1.6	
<i>Tanytarsus</i>	09021011076	1.33	4.03	6	CF	0.1	0.2
<i>Tanytarsus buckleyi</i>	09021011076139	2.67			CF	0.1	
<i>Microtendipes</i>	09021011094		1.34	6	CF		0.1
<i>Microtendipes rydalensis group</i>	09021011094168	1.33			--	0.1	
<i>Polypedilum</i>	09021011102		5.37	6	SH		0.3
<i>Polypedilum flavum</i>	09021011102182	5.33			--	0.3	
<i>Simulium</i>	09021012047	1.33	1.33	4	CF	0.1	0.1
<i>Dineutus</i>	09021104032	1.33	1.33	2	--	0.1	0.1
<i>Optioservus</i>	09021113067	1.33	1.33	3	SC	0.1	0.1
<i>Promoresia</i>	09021113069		8.00		--		0.4



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		Actual	Adjusted			Actual	Adjusted
<i>Promoresia tardella</i>	09021113069052	8.00			--	0.4	
<i>Amnicola</i>	10010104013		18.67		SC		1.0
<i>Amnicola limosus</i>	10010104013018	18.67			--	1.0	
Sphaeriidae	10020201	1.33			CF	0.1	
<i>Musculium</i>	10020201001		3.20		CF		0.2
<i>Musculium securis</i>	10020201001003	2.67			CF	0.1	
<i>Pisidium</i>	10020201002	4.00	4.80		CF	0.2	0.3