



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

Station Information

Station Number: S-391 River Basin: Saco
Waterbody: Mousam River - Station 391 HUC8 Name: Piscataqua-Salmon Falls
Town: Sanford Latitude: 43 24 22.57 N
Directions: BELOW STP1 - JUST BELOW DISCHARGE Longitude: 70 42 58.27 W
Stream Order: 3

Sample Information

Log Number: 2378 Type of Sample: ROCK BASKET Date Deployed: 7/21/2015
Subsample Factor: X4 Replicates: 3 Date Retrieved: 8/18/2015

Classification Attainment

Statutory Class: C Final Determination: A Date: 4/28/2016
Model Result with $P \geq 0.6$: A Reason for Determination: Model
Date Last Calculated: 4/26/2016 Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.79	Class A, B, or C	1.00
Class B	0.20	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.88
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.12

Model Variables

01 Total Mean Abundance	705.33	18 Relative Abundance Ephemeroptera	0.02
02 Generic Richness	40.00	19 EPT Generic Richness	16.00
03 Plecoptera Mean Abundance	9.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	2.71
04 Ephemeroptera Mean Abundance	17.33	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	2.63	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	21.59
06 Hilsenhoff Biotic Index	2.77	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	18.67
07 Relative Abundance - Chironomidae	0.12	28 EP Generic Richness/14	0.43
08 Relative Generic Richness Diptera	0.35	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	34.38		
11 <i>Cheumatopsyche</i> Abundance	13.45		
12 EPT Generic Richness/ Diptera Generic Richness	1.14		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	9.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	9.49		
17 Chironomini Abundance (Family Functional Group)	8.13		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Chimarra</i>	62.38
2	<i>Brachycentrus</i>	5.29
3	<i>Rheocricotopus</i>	5.00
4	<i>Hydropsyche</i>	4.87
5	<i>Neureclipsis</i>	2.27



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Station Number: S-391	Town: Sanford	Date Deployed: 7/21/2015
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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	25.4 deg C
Dissolved Oxygen:	8.72 mg/l
Dissolved Oxygen Saturation:	
Specific Conductance:	201.1 uS/cm
Velocity:	36.6 cm/s
pH:	7.48
Wetted Width:	10.65 m
Bankfull Width:	10.65 m
Depth:	47 cm

Waterbody Information - Retrieval

Temperature:	26.7 deg C
Dissolved Oxygen:	8.2 mg/l
Dissolved Oxygen Saturation:	
Specific Conductance:	191.5 uS/cm
Velocity:	45.7 cm/s
pH:	7.26
Wetted Width:	9.9 m
Bankfull Width:	11 m
Depth:	45 cm

Water Chemistry

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Swamp Hardwood

Partly Open

Rolling

Upland Hardwood

Potential Stressor

Location

Substrate

Below POTW

Gravel	10 %
Rubble/Cobble	70 %
Sand	20 %

Landcover Summary - 2004 Data

Total Area (ac)	29468	High Int. Dev. %	2.0	Water %	6.9	Non-vegetated %	0.1
		Med Int. Dev. %	2.1	Wetland %	4.3	Tilled Agriculture %	0.5
		Low Int. Dev. %	3.6	Upland Woody %	73.2	Grassland %	5.3
		Development %	7.7	Natural %	77.5	Human Altered %	15.6
						Impervious %	6.1

Sample Comments

7/21/2015: 108% DO.
8/18/2015: 102.9% DO.



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

Station Number: S-391

Waterbody: Mousam River - Station 391

Town: Sanford

Log Number: 2378

Subsample Factor: X4

Replicates: 3

Calculated: 4/26/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
Rhabditophora	0301	1.33	1.33		--	0.2	0.2
<i>Prostoma</i>	04010101001	2.67	2.67		--	0.4	0.4
<i>Nais</i>	08020202009		1.33		CG		0.2
<i>Nais behningi</i>	08020202009003	1.33			--	0.2	
<i>Gammarus</i>	09010201003		6.67	4	--		0.9
<i>Gammarus fasciatus</i>	09010201003003	6.67			--	0.9	
<i>Acroneuria</i>	09020209042	1.33	9.33	0	PR	0.2	1.3
<i>Acroneuria abnormis</i>	09020209042121	5.33		0	PR	0.8	
<i>Acroneuria lycorias</i>	09020209042125	2.67			--	0.4	
<i>Boyeria</i>	09020301004		5.33	2	PR		0.8
<i>Boyeria vinosa</i>	09020301004012	5.33			--	0.8	
<i>Hagenius</i>	09020302008		1.33	1	PR		0.2
<i>Hagenius brevistylus</i>	09020302008015	1.33			PR	0.2	
<i>Baetis</i>	09020401001	1.33	1.33	4	CG	0.2	0.2
Heptageniidae	09020402	2.67	2.67		--	0.4	0.4
<i>Maccaffertium</i>	09020402015	2.67	9.33	4	SC	0.4	1.3
<i>Maccaffertium modestum</i>	09020402015051	6.67			--	0.9	
<i>Isonychia</i>	09020404018	1.33	1.33	2	CF	0.2	0.2
<i>Tricorythodes</i>	09020411038	2.67	2.67	4	CG	0.4	0.4
Philopotamidae	09020601	4.00	4.00		--	0.6	0.6
<i>Chimarra</i>	09020601003	25.33	440.00	2	CF	3.6	62.4
<i>Chimarra aterrima</i>	09020601003002	389.33			--	55.2	
<i>Chimarra obscura</i>	09020601003003	25.33			--	3.6	
<i>Cernotina</i>	09020603006	1.33	1.33		PR	0.2	0.2
<i>Neureclipsis</i>	09020603008	16.00	16.00	7	CF	2.3	2.3
Hydropsychidae	09020604	5.33			--	0.8	
<i>Cheumatopsyche</i>	09020604015	12.00	13.45	5	CF	1.7	1.9
<i>Hydropsyche</i>	09020604016	9.33	34.38	4	CF	1.3	4.9
<i>Hydropsyche sparna</i>	09020604016032	14.67			--	2.1	
<i>Hydropsyche depravata species group</i>	09020604016041	6.67			CF	0.9	
<i>Macrostemum</i>	09020604018		1.49	3	CF		0.2
<i>Macrostemum zebratum</i>	09020604018054	1.33			--	0.2	
<i>Brachycentrus</i>	09020609043		37.33	0	CF		5.3
<i>Brachycentrus numerosus</i>	09020609043098	37.33			--	5.3	
<i>Lepidostoma</i>	09020611064	2.67	2.67	1	SH	0.4	0.4
<i>Oecetis</i>	09020618078		8.00	8	PR		1.1
<i>Oecetis persimilis</i>	09020618078157	8.00			--	1.1	



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Chironomidae	09021011	1.33			--	0.2	
<i>Labrundinia</i>	09021011008		1.36	7	PR		0.2
<i>Labrundinia pilosella</i>	09021011008022	1.33			--	0.2	
<i>Nilotanyus</i>	09021011012		5.42	6	PR		0.8
<i>Nilotanyus fimbriatus</i>	09021011012027	5.33			--	0.8	
<i>Pentaneura</i>	09021011014		2.71	6	PR		0.4
<i>Pentaneura inconspicua</i>	09021011014028	2.67			--	0.4	
<i>Cricotopus</i>	09021011037		5.42	7	SH		0.8
<i>Cricotopus bicinctus</i>	09021011037057	5.33			--	0.8	
<i>Rheocricotopus</i>	09021011057	1.33	35.23	6	CG	0.2	5.0
<i>Rheocricotopus robacki</i>	09021011057105	33.33			--	4.7	
<i>Tvetenia</i>	09021011065		10.84	5	CG		1.5
<i>Tvetenia vitracies</i>	09021011065113	10.67			--	1.5	
<i>Micropsectra</i>	09021011070	1.33	2.71	7	CG	0.2	0.4
<i>Micropsectra polita</i>	09021011070124	1.33		7	--	0.2	
<i>Rheotanytarsus</i>	09021011072		8.13	6	CF		1.2
<i>Rheotanytarsus exiguus group</i>	09021011072127	8.00			CF	1.1	
<i>Tanytarsus</i>	09021011076	2.67	2.71	6	CF	0.4	0.4
<i>Microtendipes</i>	09021011094		2.71	6	CF		0.4
<i>Microtendipes rydalensis group</i>	09021011094168	2.67			--	0.4	
<i>Polypedilum</i>	09021011102		4.07	6	SH		0.6
<i>Polypedilum aviceps</i>	09021011102181	4.00			--	0.6	
<i>Stenochironomus</i>	09021011105	1.33	1.36	5	CG	0.2	0.2
<i>Simulium</i>	09021012047	1.33	5.33	4	CF	0.2	0.8
<i>Simulium jenningsi species group</i>	09021012047070	1.33			CF	0.2	
<i>Simulium venustum/verecundum complex</i>	09021012047072	2.67			CF	0.4	
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.2	0.2
<i>Macronychus</i>	09021113065		1.33	4	--		0.2
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.2	
Acariformes	090301	1.33	1.33		--	0.2	0.2
<i>Amnicola</i>	10010104013		2.67		SC		0.4
<i>Amnicola limosus</i>	10010104013018	2.67			--	0.4	
<i>Physa</i>	10010202027	6.67	6.67		SC	0.9	0.9