



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

Station Information	
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<b>Station Number: S-390</b> Waterbody: Mousam River - Station 390 Town: Sanford Directions: ABOVE STP	River Basin: Saco HUC8 Name: Piscataqua-Salmon Falls Latitude: 43 24 37.21 N Longitude: 70 43 35.54 W Stream Order: 3
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Sample Information		
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<b>Log Number: 2379</b>	Type of Sample: ROCK BASKET	Date Deployed: 7/21/2015
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/18/2015

Classification Attainment		
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<b>Statutory Class: C</b>	<b>Final Determination: A</b>	Date: 9/7/2016
Model Result with $P \geq 0.6$ : A	<b>Reason for Determination: Model</b>	
Date Last Calculated: 9/6/2016	Comments: Low Class A (.70).	

Model Probabilities					
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<u>First Stage Model</u>			<u>C or Better Model</u>		
Class A	0.53	Class C	0.00	Class A, B, or C	1.00
Class B	0.46	NA	0.00	Non-Attainment	0.00
<u>B or Better Model</u>			<u>A Model</u>		
Class A or B		1.00	Class A		0.70
Class C or Non-Attainment		0.00	Class B or C or Non-Attainment		0.30

Model Variables			
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01 Total Mean Abundance	2560.00	18 Relative Abundance Ephemeroptera	0.02
02 Generic Richness	42.00	19 EPT Generic Richness	16.00
03 Plecoptera Mean Abundance	42.67	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	46.67	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	2.37	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	16.12
06 Hilsenhoff Biotic Index	3.06	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	56.53
07 Relative Abundance - Chironomidae	0.23	28 EP Generic Richness/14	0.50
08 Relative Generic Richness Diptera	0.38	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	144.53		
11 <i>Cheumatopsyche</i> Abundance	13.44		
12 EPT Generic Richness/ Diptera Generic Richness	1.00		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	42.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	16.07		
17 Chironomini Abundance (Family Functional Group)	54.92		

Five Most Dominant Taxa		
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Rank	Taxon Name	Percent
1	<i>Chimarra</i>	61.77
2	<i>Rheocricotopus</i>	10.99
3	<i>Hydropsyche</i>	5.65
4	<i>Rheotanytarsus</i>	5.60
5	<i>Tvetenia</i>	2.72



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**Log Number: 2379**      Waterbody: Mousam River - Station 390      Date Retrieved: 8/18/2015

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 25.6 deg C  
Dissolved Oxygen: 9.18 mg/l  
Dissolved Oxygen Saturation:  
Specific Conductance: 157.4 uS/cm  
Velocity: 45.7 cm/s  
pH: 7.55  
Wetted Width: 10.5 m  
Bankfull Width: 11.2 m  
Depth: 34.5 cm

**Waterbody Information - Retrieval**

Temperature: 27.3 deg C  
Dissolved Oxygen: 9.07 mg/l  
Dissolved Oxygen Saturation:  
Specific Conductance: 137 uS/cm  
Velocity: 67.1 cm/s  
pH: 7.7  
Wetted Width: 10 m  
Bankfull Width: 10.52 m  
Depth: 31 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Dense	Rolling	
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Above POTW	Gravel	10 %
		Rubble/Cobble	80 %
		Sand	10 %

**Landcover Summary - 2004 Data**

Total Area (ac)	29077	High Int. Dev. %	1.9	Water %	6.8	Non-vegetated %	0.0
		Med Int. Dev. %	2.0	Wetland %	3.9	Tilled Agriculture %	0.5
		Low Int. Dev. %	3.5	Upland Woody %	74.0	Grassland %	5.4
		Development %	7.5	Natural %	77.9	Human Altered %	15.2
						Impervious %	6.0

**Sample Comments**

7/21/2015: 114.4% DO.  
8/18/2015: 115% DO.



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Aquatic Life Taxonomic Inventory Report**

**Station Number: S-390**  
**Log Number: 2379**

Waterbody: Mousam River - Station 390  
Subsample Factor: X4

Town: Sanford  
Calculated: 9/6/2016

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		1.33		CG		0.1
<i>Nais behningi</i>	08020202009003	1.33			--	0.1	
<i>Stylaria</i>	08020202014		1.33		CG		0.1
<i>Stylaria lacustris</i>	08020202014002	1.33			--	0.1	
<i>Gammarus</i>	09010201003		8.00	4	--		0.3
<i>Gammarus fasciatus</i>	09010201003003	8.00			--	0.3	
Perlidae	09020209	16.00			--	0.6	
<i>Acroneuria</i>	09020209042		29.87	0	PR		1.2
<i>Acroneuria abnormis</i>	09020209042121	18.67		0	PR	0.7	
<i>Paragnetina</i>	09020209049		12.80	1	PR		0.5
<i>Paragnetina media</i>	09020209049151	8.00			--	0.3	
<i>Boyeria</i>	09020301004		2.67	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.1	
<i>Calopteryx</i>	09020307043		1.33	5	PR		0.1
<i>Calopteryx maculata</i>	09020307043088	1.33			--	0.1	
<i>Baetis</i>	09020401001	1.33	5.33	4	CG	0.1	0.2
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	2.67			--	0.1	
<i>Iswaeon</i>	09020401015		1.33		--		0.1
<i>Iswaeon anoka</i>	09020401015001	1.33			--	0.1	
Heptageniidae	09020402	9.33	9.33		--	0.4	0.4
<i>Maccaffertium</i>	09020402015	22.67	26.67	4	SC	0.9	1.0
<i>Maccaffertium modestum</i>	09020402015051	4.00			--	0.2	
<i>Isonychia</i>	09020404018	4.00	4.00	2	CF	0.2	0.2
Trichoptera	090206				--		
Philopotamidae	09020601	34.67	34.67		--	1.4	1.4
<i>Chimarra</i>	09020601003	106.67	1581.33	2	CF	4.2	61.8
<i>Chimarra aterrima</i>	09020601003002	1104.00			--	43.1	
<i>Chimarra obscura</i>	09020601003003	370.67			--	14.5	
<i>Neureclipsis</i>	09020603008	5.33	5.33	7	CF	0.2	0.2
Hydropsychidae	09020604	33.33			--	1.3	
<i>Cheumatopsyche</i>	09020604015	10.67	13.44	5	CF	0.4	0.5
<i>Hydropsyche</i>	09020604016	68.00	144.53	4	CF	2.7	5.6
<i>Hydropsyche sparna</i>	09020604016032	30.67			--	1.2	
<i>Hydropsyche depravata species group</i>	09020604016041	16.00			CF	0.6	
<i>Macrostemum</i>	09020604018		3.36	3	CF		0.1
<i>Macrostemum zebratum</i>	09020604018054	2.67			--	0.1	



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Replicates: 3

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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Brachycentrus</i>	09020609043		16.00	0	CF		0.6
<i>Brachycentrus numerosus</i>	09020609043098	16.00			--	0.6	
<i>Lepidostoma</i>	09020611064	13.33	13.33	1	SH	0.5	0.5
<i>Oecetis</i>	09020618078		1.33	8	PR		0.1
<i>Oecetis persimilis</i>	09020618078157	1.33			--	0.1	
<i>Nigronia</i>	09020701003		1.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.1	
Chironomidae	09021011	2.67			--	0.1	
<i>Nilotanytus</i>	09021011012		9.38	6	PR		0.4
<i>Nilotanytus fimbriatus</i>	09021011012027	9.33			--	0.4	
<i>Pentaneura</i>	09021011014		5.36	6	PR		0.2
<i>Pentaneura inconspicua</i>	09021011014028	5.33			--	0.2	
<i>Rheopelopia</i>	09021011017	1.33	1.34		PR	0.1	0.1
<i>Corynoneura</i>	09021011036	2.67	2.68	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		2.68	7	SH		0.1
<i>Cricotopus bicinctus</i>	09021011037057	2.67			--	0.1	
<i>Nanocladius</i>	09021011049		1.34	3	CG		0.1
<i>Nanocladius spiniplenus</i>	09021011049090	1.33			--	0.1	
<i>Parametriocnemus</i>	09021011053	8.00	8.04	5	CG	0.3	0.3
<i>Rheocricotopus</i>	09021011057		281.29	6	CG		11.0
<i>Rheocricotopus robacki</i>	09021011057105	280.00			--	10.9	
<i>Tvetenia</i>	09021011065		69.65	5	CG		2.7
<i>Tvetenia vitracies</i>	09021011065113	69.33			--	2.7	
<i>Rheotanytarsus</i>	09021011072		143.32	6	CF		5.6
<i>Rheotanytarsus exiguus group</i>	09021011072127	132.00			CF	5.2	
<i>Rheotanytarsus pellucidus</i>	09021011072128	10.67			CF	0.4	
<i>Microtendipes</i>	09021011094		12.06	6	CF		0.5
<i>Microtendipes rydalensis group</i>	09021011094168	12.00			--	0.5	
<i>Polypedilum</i>	09021011102		41.52	6	SH		1.6
<i>Polypedilum aviceps</i>	09021011102181	8.00			--	0.3	
<i>Polypedilum flavum</i>	09021011102182	32.00			--	1.3	
<i>Polypedilum ontario</i>	09021011102194	1.33			--	0.1	
<i>Stenochironomus</i>	09021011105	1.33	1.34	5	CG	0.1	0.1
<i>Rheosmittia</i>	09021011122		1.34		--		0.1
<i>Rheosmittia arcuata</i>	09021011122001	1.33			--	0.1	
<i>Simulium</i>	09021012047	1.33	17.33	4	CF	0.1	0.7
<i>Simulium fibrinflatum</i>	09021012047059	1.33			--	0.1	
<i>Simulium jenningsi</i>	09021012047060	1.33			--	0.1	



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		Actual	Adjusted			Actual	Adjusted
<i>Simulium tuberosum</i>	09021012047067				--		
<i>Simulium jenningsi species group</i>	09021012047070	9.33			CF	0.4	
<i>Simulium venustum/verecundum complex</i>	09021012047072	4.00			CF	0.2	
<i>Hemerodromia</i>	09021016057	6.67	6.67	3	PR	0.3	0.3
<i>Macronychus</i>	09021113065		5.33	4	--		0.2
<i>Macronychus glabratus</i>	09021113065040	5.33			--	0.2	
<i>Hygrobates</i>	09030102001	1.33	1.33		--	0.1	0.1
<i>Amnicola</i>	10010104013		28.00		SC		1.1
<i>Amnicola limosus</i>	10010104013018	28.00			--	1.1	
Planorbidae	10010203	1.33	1.33		--	0.1	0.1