

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

**Station Information**

<b>Station Number:</b> S754	DEP Drainage: St. John
Waterbody: Little Machias River	HUC Code: 01010004
Town: NASHVILLE PLT	HUC Name: Aroostook
Directions: 50m downstream of road, near large lumber mill	Latitude: Deg Min Sec
	Longitude: Deg Min Sec
	Stream Order:

**Sample Information**

<b>Log Number:</b> 1390	Type of Sample: Riffle Bags	Date Deployed: 22-JUL-04
Subsample Factor: X1	Replicates: 3	Date Retrieved: 18-AUG-04

**Classification Attainment**

Statutory Class: A	<b>Final Determination:</b> A	
Model Result with P > .6 A	Reason for Determination: Model	
Date Last Calculated:		

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.48	Class A, B, or C	1.00
Class B	0.50	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.98
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.02

**Model Variables**

01 Total Abundance of Individuals	691.33	18 Relative Abundance - Ephemeroptera	0.07
02 Generic Richness	55.00	19 EPT Generic Richness	25.00
03 Plecoptera Abundance	10.33	21 Sum of Abundances: <i>Dicrotendipes</i> ,	0.33
04 Ephemeroptera Abundance	46.33	<i>Micropsectra, Parachironomus, Helobdella</i>	
05 Shannon - Wiener Diversity	3.17	23 Relative Generic Richness- Plecoptera	0.05
06 Hilsenhoff Biotic Index	4.45	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	52.49
07 Relative Abundance - Chironomidae	0.30	<i>Cricotopus, Tanytarsus, Ablabesmyia</i>	
08 Relative Generic Richness - Diptera	0.35	26 Sum of Abundances: <i>Acroneuria, Stenonema</i>	16.14
09 <i>Hydropsyche</i> Abundance	213.85	28 EP Generic Richness/14	1.00
11 <i>Cheumatopsyche</i> Abundance	51.49	30 Presence of Class A Indicator Taxa/7	0.57
12 EPT Generic Richness/ Diptera Generic Richness	1.32		

**Five Most Dominant Taxa**

		Taxa Rank	Taxa Name	Percent
13 Relative Abundance - Oligochaeta	0.00	1	Hydropsyche	30.93
15 Perlidae Abundance (Family Functional Group)	10.00	2	Rheotanytarsus	27.48
16 Tanypodinae Abundance (Family Functional Group)	0.33	3	Simulium	11.33
17 Chironomini Abundance (Family Functional Group)	5.67	4	Cheumatopsyche	7.45
		5	Hemerodromia	4.19

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Log Number:      1390      Waterbody: Little Machias River      Date Retrieved: 18-AUG-04

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**Sample Collection and Processing Information**

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Sampling Organization:  
Taxonomist:      Michael Winnell

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**Waterbody Information**

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Water Temperature: 23.0 °C	Specific Conductance 47.2 uS/cm	Channel Width: 5.5 m
Velocity: 46 cm/s	Dissolved Oxygen: 7.8 ppm	Channel Depth: 70.0 cm

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**Summary of Habitat Characteristics**

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<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Stressor</u>	<u>Location</u>
Upland Conifer	Partly Open		Below Road Crossing

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**Substrate**

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Boulder	Rubble	Gravel	Sand
20%	65%	10%	5%

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**Comments about the Station or Sample**

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8/18/04 Data:  
Flow: 153.5cm/s; Depth: 65cm; Temp: 21.4C; SPC: 39uS/cm; DO: 8.5mg/L; pH:7.51

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**Comments about the Final Determination**

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**Calculated:**

**BioME Aquatic Life Taxonomic Inventory Report**

Taxa	Code	Count (Average of Baskets)		Biotic Index Value	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009	0.00	0.33		CG	0.0	0.0
<i>Nais variabilis</i>	08020202009009	0.33	0.00		--	0.0	0.0
<i>Perlodidae</i>	09020207	0.33	0.33		--	0.0	0.0
<i>Perlidae</i>	09020209	1.33	0.00		--	0.2	0.0
<i>Acroneuria</i>	09020209042	2.33	9.23	0	PR	0.3	1.3
<i>Acroneuria abnormis</i>	09020209042121	2.33	0.00	0	PR	0.3	0.0
<i>Acroneuria lycorias</i>	09020209042125	3.33	0.00		--	0.5	0.0
<i>Attaneuria</i>	09020209043	0.00	0.77	1	--	0.0	0.1
<i>Attaneuria ruralis</i>	09020209043128	0.67	0.00		--	0.1	0.0
<i>Aeshnidae</i>	09020301	0.33	0.33		--	0.0	0.0
<i>Boyeria</i>	09020301004	0.00	4.33	2	PR	0.0	0.6
<i>Boyeria grafiana</i>	09020301004011	4.33	0.00		--	0.6	0.0
<i>Calopterygidae</i>	09020307	2.33	2.33		--	0.3	0.3
<i>Argia</i>	09020309048	0.33	0.33	7	PR	0.0	0.0
<i>Baetidae</i>	09020401	1.67	0.00		--	0.2	0.0
<i>Baetis</i>	09020401001	0.33	5.24	4	CG	0.0	0.8
<i>Baetis flavistriga</i>	09020401001004	0.67	0.00		--	0.1	0.0
<i>Baetis intercalaris</i>	09020401001008	3.67	0.00		--	0.5	0.0
<i>Acerpenna</i>	09020401007	1.33	2.24	5	CG	0.2	0.3
<i>Acerpenna macdunnoughi</i>	09020401007001	0.67	0.00		--	0.1	0.0
<i>Acentrella</i>	09020401008	7.00	7.85	3	CG	1.0	1.1
<i>Heptageniidae</i>	09020402	1.00	0.00		--	0.1	0.0
<i>Epeorus</i>	09020402009	4.00	4.36	0	CG	0.6	0.6
<i>Leucrocuta</i>	09020402011	0.67	0.73	1	SC	0.1	0.1
<i>Stenonema</i>	09020402015	5.00	6.91	4	SC	0.7	1.0
<i>Stenonema luteum</i>	09020402015049	1.33	0.00		--	0.2	0.0
<i>Isonychia</i>	09020404018	1.67	1.67	2	CF	0.2	0.2
<i>Leptophlebiidae</i>	09020406	0.67	0.67		--	0.1	0.1
<i>Ephemerellidae</i>	09020410	14.33	14.33		--	2.1	2.1
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.0	0.0
<i>Tricorythodes</i>	09020411038	2.00	2.00	4	CG	0.3	0.3
<i>Chimarra</i>	09020601003	19.33	19.33	2	CF	2.8	2.8
<i>Neureclipsis</i>	09020603008	3.00	3.00	7	CF	0.4	0.4
<i>Nyctiophylax</i>	09020603009	0.00	1.33	5	PR	0.0	0.2
<i>Nyctiophylax celta</i>	09020603009012	1.33	0.00		--	0.2	0.0
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.0	0.0
<i>Hydropsychidae</i>	09020604	30.00	0.00		--	4.3	0.0

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Taxa	Code	Count (Average of Baskets)		Biotic Index Value	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
		<i>Cheumatopsyche</i>	09020604015			45.67	51.49
<i>Hydropsyche</i>	09020604016	93.00	213.85	4	CF	13.5	30.9
<i>Hydropsyche bronta</i>	09020604016029	1.00	0.00		--	0.1	0.0
<i>Hydropsyche morosa</i>	09020604016030	13.67	0.00		--	2.0	0.0
<i>Hydropsyche slossonae</i>	09020604016031	9.67	0.00		--	1.4	0.0
<i>Hydropsyche sparna</i>	09020604016032	70.33	0.00		--	10.2	0.0
<i>Hydropsyche depravata-complex</i>	09020604016041	2.00	0.00		CF	0.3	0.0
<i>Rhyacophila</i>	09020605019	3.00	3.33	2	PR	0.4	0.5
<i>Rhyacophila fuscula</i>	09020605019060	0.33	0.00		PR	0.0	0.0
<i>Brachycentrus</i>	09020609043	0.00	2.67	0	CF	0.0	0.4
<i>Brachycentrus appalachia</i>	09020609043096	2.67	0.00		--	0.4	0.0
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.0	0.0
<i>Psilotreta</i>	09020614068	0.00	1.00	0	SC	0.0	0.1
<i>Psilotreta indecisa</i>	09020614068132	1.00	0.00		--	0.1	0.0
<i>Oecetis</i>	09020618078	0.33	1.00	8	PR	0.0	0.1
<i>Oecetis avara</i>	09020618078153	0.33	0.00		--	0.0	0.0
<i>Oecetis persimilis</i>	09020618078157	0.33	0.00		--	0.0	0.0
<i>Nigronia</i>	09020701003	0.00	0.33	0	PR	0.0	0.0
<i>Nigronia serricornis</i>	09020701003003	0.33	0.00		--	0.0	0.0
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.0	0.0
<i>Chaoborus</i>	09021007025	0.33	0.33	8	PR	0.0	0.0
<i>Rheopelopia</i>	09021011017	0.00	0.33		PR	0.0	0.0
<i>Rheopelopia acra-grp.</i>	09021011017036	0.33	0.00		--	0.0	0.0
<i>Pagastia</i>	09021011025	0.00	0.33	1	--	0.0	0.0
<i>Pagastia orthogonia</i>	09021011025001	0.33	0.00		--	0.0	0.0
<i>Corynoneura</i>	09021011036	0.33	0.33	7	CG	0.0	0.0
<i>Cricotopus</i>	09021011037	0.00	0.67	7	SH	0.0	0.1
<i>Cricotopus bicinctus</i>	09021011037057	0.67	0.00		--	0.1	0.0
<i>Nanocladius</i>	09021011049	0.00	3.00	3	CG	0.0	0.4
<i>Nanocladius branchicolus</i>	09021011049091	2.00	0.00		--	0.3	0.0
<i>Nanocladius downesi</i>	09021011049092	1.00	0.00		--	0.1	0.0
<i>Parametriocnemus</i>	09021011053	0.67	0.67	5	CG	0.1	0.1
<i>Rheocricotopus</i>	09021011057	0.00	1.00	6	CG	0.0	0.1
<i>Rheocricotopus robacki</i>	09021011057105	1.00	0.00		--	0.1	0.0
<i>Thienemanniella</i>	09021011062	0.33	0.33	6	CG	0.0	0.0
<i>Tvetenia</i>	09021011065	0.00	2.00	5	CG	0.0	0.3

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		<i>Tvetenia vitracies</i>	09021011065113			1.67	0.00
<i>Tvetenia paucunca</i>	09021011065114	0.33	0.00		--	0.0	0.0
<i>Micropsectra</i>	09021011070	0.33	0.33	7	CG	0.0	0.0
<i>Rheotanytarsus</i>	09021011072	190.00	190.00	6	CF	27.5	27.5
<i>Tanytarsus</i>	09021011076	0.33	0.33	6	CF	0.0	0.0
<i>Microtendipes</i>	09021011094	0.00	2.67	6	CF	0.0	0.4
<i>Microtendipes rydalensis-grp.</i>	09021011094168	2.67	0.00		--	0.4	0.0
<i>Polypedilum</i>	09021011102	0.00	3.00	6	SH	0.0	0.4
<i>Polypedilum aviceps</i>	09021011102181	3.00	0.00		--	0.4	0.0
<i>Simulium</i>	09021012047	3.33	78.33	4	CF	0.5	11.3
<i>Simulium jenningsi</i>	09021012047060	0.33	0.00		--	0.0	0.0
<i>Simulium vittatum</i>	09021012047064	0.33	0.00		--	0.0	0.0
<i>Simulium tuberosum</i>	09021012047067	74.33	0.00		--	10.8	0.0
<i>Atherix</i>	09021015055	2.00	2.00	2	PR	0.3	0.3
<i>Hemerodromia</i>	09021016057	29.00	29.00	3	PR	4.2	4.2
<i>Psephenus</i>	09021108058	0.00	0.33	4	SC	0.0	0.0
<i>Psephenus herricki</i>	09021108058028	0.33	0.00		--	0.0	0.0
<i>Optioservus</i>	09021113067	0.33	1.33	3	SC	0.0	0.2
<i>Optioservus fastiditus</i>	09021113067044	1.00	0.00		--	0.1	0.0
<i>Promoresia</i>	09021113069	0.00	0.33		--	0.0	0.0
<i>Promoresia elegans</i>	09021113069051	0.33	0.00		--	0.0	0.0
<i>Stenelmis</i>	09021113070	4.00	10.67	5	SC	0.6	1.5
<i>Stenelmis crenata</i>	09021113070055	6.67	0.00		--	1.0	0.0
<i>Ferrissia</i>	10010204035	1.33	1.33		SC	0.2	0.2