

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

**Station Information**

<b>Station Number:</b> S682	DEP Drainage: Penobscot
<b>Waterbody:</b> Birch Stream (Bangor)	HUC Code: 01020005
<b>Town:</b> BANGOR	HUC Name: Lower Penobscot
<b>Directions:</b> 50m upstream of confluence with Kenduskeag River	Latitude: Deg Min Sec
	Longitude: Deg Min Sec
	Stream Order: 1

**Sample Information**

<b>Log Number:</b> 1402	Type of Sample: Riffle Bags	Date Deployed: 28-JUL-04
Subsample Factor: X1	Replicates: 3	Date Retrieved: 24-AUG-04

**Classification Attainment**

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

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	1.00
Class B	0.02	Non-Attainment	0.00
Class C	0.95		
Class NA	0.03		
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.00
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	1.00

**Model Variables**

01 Total Abundance of Individuals	173.67	18 Relative Abundance - Ephemeroptera	0.13
02 Generic Richness	33.00	19 EPT Generic Richness	6.00
03 Plecoptera Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> ,	4.23
04 Ephemeroptera Abundance	23.00	<i>Micropsectra, Parachironomus, Helobdella</i>	
05 Shannon - Wiener Diversity	3.79	23 Relative Generic Richness- Plecoptera	0.00
06 Hilsenhoff Biotic Index	5.07	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	33.00
07 Relative Abundance - Chironomidae	0.32	<i>Cricotopus, Tanytarsus, Ablabesmyia</i>	
08 Relative Generic Richness - Diptera	0.52	26 Sum of Abundances: <i>Acroneuria, Stenonema</i>	0.00
09 <i>Hydropsyche</i> Abundance	31.98	28 EP Generic Richness/14	0.14
11 <i>Cheumatopsyche</i> Abundance	2.02	30 Presence of Class A Indicator Taxa/7	0.00
12 EPT Generic Richness/ Diptera Generic Richness	0.35		

**Five Most Dominant Taxa**

		Taxa Rank	Taxa Name	Percent
13 Relative Abundance - Oligochaeta	0.01	1	Hydropsyche	18.41
15 Perlidae Abundance (Family Functional Group)	0.00	2	Simulium	14.01
16 Tanypodinae Abundance (Family Functional Group)	10.21	3	Baetis	13.05
17 Chironomini Abundance (Family Functional Group)	0.70	4	Cricotopus	9.33
		5	Tanytarsus	8.52

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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: 18.3 °C	Specific Conductance 470.0 uS/cm	Channel Width: 4.2 m
Velocity: 62 cm/s	Dissolved Oxygen: 9.6 ppm	Channel Depth: 40.0 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>
Swamp Hardwood	Partly Open		Below Urban NPS
Upland Hardwood			
Urban			

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**Substrate**

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Bedrock	Boulder	Rubble	Gravel
10%	60%	20%	10%

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**Comments about the Station or Sample**

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8/24/04 Data:  
Flow: 21.4 cm/s; Depth: 35cm; Temp:20.7; SPC: 537uS/cm; DO: 9.7mg/L; pH:

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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>Enchytraeidae</i>	08020201	0.33	0.33		--	0.2	0.2
<i>Lumbricidae</i>	08020205	2.00	2.00		--	1.2	1.2
<i>Nephelopsis</i>	08030301004	0.00	9.33		--	0.0	5.4
<i>Nephelopsis obscura</i>	08030301004001	9.33	0.00		--	5.4	0.0
<i>Crangonyx</i>	09010202004	0.00	4.33	8	--	0.0	2.5
<i>Crangonyx pseudogracilis</i>	09010202004007	4.33	0.00		--	2.5	0.0
<i>Hyalella</i>	09010203006	0.00	0.67	8	CG	0.0	0.4
<i>Hyalella azteca</i>	09010203006011	0.67	0.00		--	0.4	0.0
<i>Baetidae</i>	09020401	0.33	0.33		--	0.2	0.2
<i>Baetis</i>	09020401001	0.00	22.67	4	CG	0.0	13.1
<i>Baetis flavistriga</i>	09020401001004	22.67	0.00		--	13.1	0.0
<i>Hydropsychidae</i>	09020604	0.33	0.00		--	0.2	0.0
<i>Cheumatopsyche</i>	09020604015	2.00	2.02	5	CF	1.2	1.2
<i>Hydropsyche</i>	09020604016	2.67	31.98	4	CF	1.5	18.4
<i>Hydropsyche morosa</i>	09020604016030	1.00	0.00		--	0.6	0.0
<i>Hydropsyche depravata-complex</i>	09020604016041	28.00	0.00		CF	16.1	0.0
<i>Rhyacophila</i>	09020605019	0.33	0.33	2	PR	0.2	0.2
<i>Hydroptila</i>	09020607026	3.00	3.00	6	P	1.7	1.7
<i>Lepidoptera</i>	090209	0.67	0.67		--	0.4	0.4
<i>Tipula</i>	09021001002	1.00	1.00	4	SH	0.6	0.6
<i>Antocha</i>	09021001004	0.33	0.33	3	CG	0.2	0.2
<i>Chironomidae</i>	09021011	3.00	0.00		--	1.7	0.0
<i>Conchapelopia</i>	09021011004	9.67	10.21	6	PR	5.6	5.9
<i>Diamesa</i>	09021011024	0.33	0.35	5	CG	0.2	0.2
<i>Cricotopus</i>	09021011037	3.67	16.20	7	SH	2.1	9.3
<i>Cricotopus bicinctus</i>	09021011037057	11.33	0.00		--	6.5	0.0
<i>Cricotopus sylvestris</i>	09021011037067	0.33	0.00		--	0.2	0.0
<i>Eukiefferiella</i>	09021011041	0.33	2.11	8	CG	0.2	1.2
<i>Eukiefferiella claripennis-grp.</i>	09021011041075	1.67	0.00		--	1.0	0.0
<i>Nanocladius</i>	09021011049	0.00	1.41	3	CG	0.0	0.8
<i>Nanocladius spiniplenus</i>	09021011049090	1.33	0.00		--	0.8	0.0
<i>Parametriocnemus</i>	09021011053	3.67	3.87	5	CG	2.1	2.2
<i>Tvetenia</i>	09021011065	0.00	0.35	5	CG	0.0	0.2
<i>Tvetenia paucunca</i>	09021011065114	0.33	0.00		--	0.2	0.0
<i>Micropsectra</i>	09021011070	4.00	4.23	7	CG	2.3	2.4
<i>Paratanytarsus</i>	09021011071	0.33	0.35	6	--	0.2	0.2

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		Actual	Adjusted			Actual	Adjusted
		<i>Rheotanytarsus</i>	09021011072			1.67	1.76
<i>Tanytarsus</i>	09021011076	14.00	14.79	6	CF	8.1	8.5
<i>Cryptochironomus</i>	09021011082	0.33	0.35	8	PR	0.2	0.2
<i>Phaenopsectra</i>	09021011101	0.00	0.35	7	SC	0.0	0.2
<i>Phaenopsectra punctipes-grp.</i>	09021011101181	0.33	0.00		--	0.2	0.0
<i>Simulium</i>	09021012047	1.67	24.33	4	CF	1.0	14.0
<i>Simulium aureum</i>	09021012047052	1.00	0.00		--	0.6	0.0
<i>Simulium vittatum</i>	09021012047064	21.67	0.00		--	12.5	0.0
<i>Empididae</i>	09021016	0.33	0.33	6	--	0.2	0.2
<i>Haliphus</i>	09021101001	0.33	0.33		P	0.2	0.2
<i>Fossaria</i>	10010201021	0.33	0.33		--	0.2	0.2
<i>Physa</i>	10010202026	1.67	1.67		SC	1.0	1.0
<i>Gyraulus</i>	10010203029	0.00	11.33		SC	0.0	6.5
<i>Gyraulus deflectus</i>	10010203029056	11.33	0.00		--	6.5	0.0