

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

Station Information

Station Number: S62	DEP Drainage: Penobscot
Waterbody: Penobscot River	HUC Code: 01020005
Town: ORONO	HUC Name: Lower Penobscot
Directions: 1.2 km above confluence with Stillwater R.	Latitude: 44 Deg 53 Min 11 Sec
	Longitude: 68 Deg 39 Min 25 Sec
	Stream Order: 7

Sample Information

Log Number: 1552	Type of Sample: Rock Baskets	Date Deployed: 12-JUL-06
Subsample Factor: X4	Replicates: 3	Date Retrieved: 09-AUG-06

Classification Attainment

Statutory Class: B	Final Determination: 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	0.85	Class A, B, or C	1.00
Class B	0.15	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Abundance of Individuals	573.33	18 Relative Abundance - Ephemeroptera	0.23
02 Generic Richness	44.00	19 EPT Generic Richness	24.00
03 Plecoptera Abundance	10.67	21 Sum of Abundances: <i>Dicrotendipes</i> ,	0.00
04 Ephemeroptera Abundance	134.67	<i>Micropsectra, Parachironomus, Helobdella</i>	
05 Shannon - Wiener Diversity	4.10	23 Relative Generic Richness- Plecoptera	0.07
06 Hilsenhoff Biotic Index	3.24	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	30.85
07 Relative Abundance - Chironomidae	0.07	<i>Cricotopus, Tanytarsus, Ablabesmyia</i>	
08 Relative Generic Richness - Diptera	0.20	26 Sum of Abundances: <i>Acroneuria, Stenonema</i>	28.74
09 <i>Hydropsyche</i> Abundance	19.58	28 EP Generic Richness/14	0.86
11 <i>Cheumatopsyche</i> Abundance	26.57	30 Presence of Class A Indicator Taxa/7	0.43
12 EPT Generic Richness/ Diptera Generic Richness	2.67		

Five Most Dominant Taxa

		Taxa Rank	Taxa Name	Percent
13 Relative Abundance - Oligochaeta	0.00	1	Helicopsyche	22.09
15 Perlidae Abundance (Family Functional Group)	10.67	2	Chimarra	21.16
16 Tanypodinae Abundance (Family Functional Group)	0.00	3	Baetis	4.64
17 Chironomini Abundance (Family Functional Group)	22.86	4	Cheumatopsyche	4.63
		5	Heterocloeon	4.10

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Sample Collection and Processing Information

Sampling Organization: DEP
Taxonomist: Michael Winnell

Waterbody Information

Water Temperature: 25.5 °C	Specific Conductance 36.0 uS/cm	Channel Width: 159.0 m
Velocity: 53 cm/s	Dissolved Oxygen: 8.7 ppm	Channel Depth: 80.0 cm

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Stressor</u>	<u>Location</u>
Upland Hardwood	Open		Below Point Source

Substrate

Boulder	Rubble	Gravel
20%	75%	5%

Comments about the Station or Sample

8/9/06 Data:
Width: 159m; Flow: 44cm/s; Depth: 70cm; Temp: 24.9C; SPC: 49uS/cm; DO: 8.2;

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>Planariidae</i>	03010101	2.67	2.67		--	0.5	0.5
<i>Dugesia</i>	03010101002	0.00	2.67		--	0.0	0.5
<i>Dugesia tigrina</i>	03010101002003	2.67	0.00		--	0.5	0.0
<i>Erpobdellidae</i>	08030301	1.33	1.33		--	0.2	0.2
<i>Acroneuria</i>	09020209042	2.67	8.00	0	PR	0.5	1.4
<i>Acroneuria lycorias</i>	09020209042125	5.33	0.00		--	0.9	0.0
<i>Attaneuria</i>	09020209043	0.00	1.33	1	--	0.0	0.2
<i>Attaneuria ruralis</i>	09020209043128	1.33	0.00		--	0.2	0.0
<i>Paragnetina</i>	09020209049	0.00	1.33	1	PR	0.0	0.2
<i>Paragnetina immarginata</i>	09020209049149	1.33	0.00		--	0.2	0.0
<i>Boyeria</i>	09020301004	0.00	2.67	2	PR	0.0	0.5
<i>Boyeria grafiana</i>	09020301004011	2.67	0.00		--	0.5	0.0
<i>Baetidae</i>	09020401	10.67	0.00		--	1.9	0.0
<i>Baetis</i>	09020401001	0.00	26.61	4	CG	0.0	4.6
<i>Baetis flavistriga</i>	09020401001004	1.33	0.00		--	0.2	0.0
<i>Baetis intercalaris</i>	09020401001008	21.33	0.00		--	3.7	0.0
<i>Heterocloeon</i>	09020401005	0.00	23.48	2	SC	0.0	4.1
<i>Heterocloeon curiosum</i>	09020401005020	20.00	0.00		--	3.5	0.0
<i>Acerpenna</i>	09020401007	4.00	15.65	5	CG	0.7	2.7
<i>Acerpenna pygmaea</i>	09020401007011	9.33	0.00		--	1.6	0.0
<i>Plauditus</i>	09020401012	5.33	6.26		CG	0.9	1.1
<i>Heptageniidae</i>	09020402	1.33	0.00		--	0.2	0.0
<i>Epeorus</i>	09020402009	1.33	1.38	0	CG	0.2	0.2
<i>Leucrocuta</i>	09020402011	14.67	15.21	1	SC	2.6	2.7
<i>Stenonema</i>	09020402015	16.00	20.74	4	SC	2.8	3.6
<i>Stenonema mediopunctatum</i>	09020402015050	1.33	0.00		--	0.2	0.0
<i>Stenonema modestum</i>	09020402015051	2.67	0.00		--	0.5	0.0
<i>Isonychia</i>	09020404018	9.33	9.33	2	CF	1.6	1.6
<i>Serratella</i>	09020410037	0.00	16.00	2	CG	0.0	2.8
<i>Serratella deficiens</i>	09020410037121	6.67	0.00		--	1.2	0.0
<i>Serratella serratoides</i>	09020410037124	9.33	0.00		--	1.6	0.0
<i>Philopotamidae</i>	09020601	4.00	4.00		--	0.7	0.7
<i>Chimarra</i>	09020601003	121.33	121.33	2	CF	21.2	21.2
<i>Cernotina</i>	09020603006	2.67	2.67		PR	0.5	0.5
<i>Neureclipsis</i>	09020603008	18.67	18.67	7	CF	3.3	3.3
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.2	0.2
<i>Hydropsychidae</i>	09020604	2.67	0.00		--	0.5	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	25.33	26.57	5	CF	4.4	4.6
<i>Hydropsyche</i>	09020604016	1.33	19.58	4	CF	0.2	3.4
<i>Hydropsyche morosa</i>	09020604016030	5.33	0.00		--	0.9	0.0
<i>Hydropsyche sparna</i>	09020604016032	6.67	0.00		--	1.2	0.0
<i>Hydropsyche phalerata</i>	09020604016047	2.67	0.00		--	0.5	0.0
<i>Hydropsyche scalaris-group</i>	09020604016048	1.33	0.00		--	0.2	0.0
<i>Hydropsyche simulans</i>	09020604016049	1.33	0.00		--	0.2	0.0
<i>Macrostemum</i>	09020604018	0.00	11.19	3	CF	0.0	2.0
<i>Macrostemum zebratum</i>	09020604018054	10.67	0.00		--	1.9	0.0
<i>Pycnopsyche</i>	09020610049	1.33	1.33	4	SH	0.2	0.2
<i>Helicopsyche</i>	09020616070	0.00	126.67	3	SC	0.0	22.1
<i>Helicopsyche borealis</i>	09020616070137	126.67	0.00		--	22.1	0.0
<i>Ceraclea</i>	09020618072	1.33	1.33	3	CG	0.2	0.2
<i>Oecetis</i>	09020618078	0.00	1.33	8	PR	0.0	0.2
<i>Oecetis persimilis</i>	09020618078157	1.33	0.00		--	0.2	0.0
<i>Antocha</i>	09021001004	1.33	1.33	3	CG	0.2	0.2
<i>Chironomidae</i>	09021011	2.67	0.00		--	0.5	0.0
<i>Cricotopus</i>	09021011037	1.33	4.29	7	SH	0.2	0.7
<i>Cricotopus bicinctus</i>	09021011037057	1.33	0.00		--	0.2	0.0
<i>Cricotopus triannulatus/infuscatus</i>	09021011037069	1.33	0.00		--	0.2	0.0
<i>Rheocricotopus</i>	09021011057	0.00	1.43	6	CG	0.0	0.2
<i>Rheocricotopus robacki</i>	09021011057105	1.33	0.00		--	0.2	0.0
<i>Tvetenia</i>	09021011065	0.00	1.43	5	CG	0.0	0.2
<i>Tvetenia vitracies</i>	09021011065113	1.33	0.00		--	0.2	0.0
<i>Rheotanytarsus</i>	09021011072	9.33	10.00	6	CF	1.6	1.7
<i>Microtendipes</i>	09021011094	0.00	4.29	6	CF	0.0	0.7
<i>Microtendipes rydalensis-grp.</i>	09021011094168	4.00	0.00		--	0.7	0.0
<i>Polypedilum</i>	09021011102	1.33	18.57	6	SH	0.2	3.2
<i>Polypedilum aviceps</i>	09021011102181	2.67	0.00		--	0.5	0.0
<i>Polypedilum flavum</i>	09021011102182	9.33	0.00		--	1.6	0.0
<i>Polypedilum fallax-grp.</i>	09021011102183	1.33	0.00		--	0.2	0.0
<i>Polypedilum illinoense-grp.</i>	09021011102185	2.67	0.00		--	0.5	0.0
<i>Simulium</i>	09021012047	0.00	1.33	4	CF	0.0	0.2
<i>Simulium vittatum</i>	09021012047064	1.33	0.00		--	0.2	0.0
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.2	0.2
<i>Dineutus</i>	09021104032	6.67	6.67	2	--	1.2	1.2

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		<i>Psephenus</i>	09021108058			0.00	1.33
<i>Psephenus herricki</i>	09021108058028	1.33	0.00		--	0.2	0.0
<i>Stenelmis</i>	09021113070	2.67	2.67	5	SC	0.5	0.5
<i>Amnicola</i>	10010104013	0.00	17.33		SC	0.0	3.0
<i>Amnicola limosa</i>	10010104013018	17.33	0.00		--	3.0	0.0
<i>Basommatophora</i>	100102	2.67	2.67		--	0.5	0.5
<i>Stagnicola</i>	10010201025	0.00	4.00		--	0.0	0.7
<i>Stagnicola oronoensis</i>	10010201025044	4.00	0.00		SC	0.7	0.0
<i>Physa</i>	10010202026	2.67	2.67		SC	0.5	0.5
<i>Pisidium</i>	10020201002	0.00	1.33		CF	0.0	0.2
<i>Pisidium walkeri</i>	10020201002017	1.33	0.00		CF	0.2	0.0