



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

Station Information

Station Number: S-305	River Basin: Penobscot
Waterbody: Babel Brook - Station 305	HUC8 Name: Piscataquis
Town: Ebeemee Twp	Latitude: 45 27 16.97 N
Directions: ABOVE RT. 11 CROSSING	Longitude: 69 1 30.97 W
	Stream Order: 3

Sample Information

Log Number: 2491	Type of Sample: ROCK BAG	Date Deployed: 7/20/2016
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/17/2016

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 5/12/2017
Model Result with $P \geq 0.6$ : A	Reason for Determination: Model	
Date Last Calculated: 5/11/2017	Comments:	

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.92	Class A, B, or C	1.00
Class B	0.08	Non-Attainment	0.00
B or Better Model		A Model	
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 Mean Abundance	90.33	18 Relative Abundance Ephemeroptera	0.38
02 Generic Richness	38.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	7.00	21 Sum of Abundances: <i>Dicrotendipes</i> ,	5.33
04 Ephemeroptera Mean Abundance	34.67	<i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	
05 Shannon-Wiener Generic Diversity	3.80	23 Relative Generic Richness- Plecoptera	0.13
06 Hilsenhoff Biotic Index	3.36	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	1.06
07 Relative Abundance - Chironomidae	0.10	<i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	
08 Relative Generic Richness Diptera	0.18	26 Sum of Abundances: <i>Acroneuria</i> ,	2.67
09 <i>Hydropsyche</i> Abundance	26.94	<i>Maccaffertium</i> , <i>Stenonema</i>	
11 <i>Cheumatopsyche</i> Abundance	0.73	28 EP Generic Richness/14	1.14
12 EPT Generic Richness/ Diptera	3.29	30 Presence of Class A Indicator Taxa/7	0.43
Generic Richness			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	29.82
2	<i>Ephemerella</i>	15.87
3	<i>Baetis</i>	8.86
4	<i>Micropsectra</i>	5.90
5	<i>Diphetor</i>	4.43
6	<i>Promoresia</i>	4.43

13 Relative Abundance - Oligochaeta	0.00
15 Perlidae Mean Abundance (Family Functional Group)	4.33
16 Tanypodinae Mean Abundance (Family Functional Group)	0.00
17 Chironomini Abundance (Family Functional Group)	1.33



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**Station Number: S-305**

Town: Ebeemee Twp

Date Deployed: 7/20/2016

**Log Number: 2491**

Waterbody: Babel Brook - Station 305

Date Retrieved: 8/17/2016

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature:	17.1 deg C
Dissolved Oxygen:	10.27 mg/l
Dissolved Oxygen Saturation:	107.9 %
Specific Conductance:	31.9 uS/cm
Velocity:	18.3 cm/s
pH:	7.15
Wetted Width:	5.2 m
Bankfull Width:	8.1 m
Depth:	36 cm

**Waterbody Information - Retrieval**

Temperature:	17.5 deg C
Dissolved Oxygen:	10.48 mg/l
Dissolved Oxygen Saturation:	111.5 %
Specific Conductance:	26 uS/cm
Velocity:	51.8 cm/s
pH:	7.19
Wetted Width:	6.2 m
Bankfull Width:	8.1 m
Depth:	44 cm

**Water Chemistry - 8/17/2016**

Nitrate+nitrite As N	0.03 mg/l	Total Phosphorus	14 ug/l
Total Kjeldahl Nitrogen	0.2 mg/l	Total Suspended Solids	0.8 mg/l
Dissolved Organic Carbon	4.5 mg/l	Dissolved Organic Carbon	4.5 mg/l
Total Dissolved Solids	18 mg/l	Orthophosphate As Phosphorus	3 ug/l

**Summary of Habitat Characteristics**

Landuse Name

Canopy Cover

Terrain

Upland Conifer

Dense

Hilly

Upland Hardwood

Potential Stressor

Location

Substrate

Above Road Crossing

Boulder	60 %
Gravel	15 %
Rubble/Cobble	25 %

**Landcover Summary - 2004 Data**

Total Area (ac)	4497	High Int. Dev. %	0.0	Water %	0.1	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	3.3	Tilled Agriculture %	0.0
		Low Int. Dev. %	1.8	Upland Woody %	94.7	Grassland %	0.1
		Development %	1.8	Natural %	98.1	Human Altered %	1.8
						Impervious %	0.0

**Sample Comments**



**Maine Department of Environmental Protection**  
**Biological Monitoring Program**  
**Aquatic Life Taxonomic Inventory Report**

**Station Number: S-305**

Waterbody: Babel Brook - Station 305

Town: Ebeemee Twp

**Log Number: 2491**

Subsample Factor: X1

Replicates: 3

Calculated: 5/11/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	0.33	0.33		PR	0.4	0.4
Isotomidae	09020102	1.00	1.00		--	1.1	1.1
<i>Pteronarcys</i>	09020205023		0.33	0	SH		0.4
<i>Pteronarcys biloba</i>	09020205023061	0.33			--	0.4	
<i>Tallaperla</i>	09020206025	0.33	0.33		SH	0.4	0.4
Perlodidae	09020207	2.00	2.00		--	2.2	2.2
<i>Acroneuria</i>	09020209042		2.67	0	PR		3.0
<i>Acroneuria carolinensis</i>	09020209042123	2.33			--	2.6	
<i>Acroneuria lycorias</i>	09020209042125	0.33			--	0.4	
<i>Agnetina</i>	09020209050		1.67	2	PR		1.8
<i>Agnetina capitata</i>	09020209050152	1.67		2	PR	1.8	
<i>Boyeria</i>	09020301004		0.33	2	PR		0.4
<i>Boyeria vinosa</i>	09020301004012	0.33			--	0.4	
Corduliidae	09020305	0.33	0.33		--	0.4	0.4
Calopterygidae	09020307	0.33	0.33		--	0.4	0.4
<i>Baetis</i>	09020401001	3.33	8.00	4	CG	3.7	8.9
<i>Baetis flavistriga</i>	09020401001004	3.33			--	3.7	
<i>Baetis tricaudatus</i>	09020401001012	1.33			--	1.5	
<i>Acerpenna</i>	09020401007	1.00	3.00	5	CG	1.1	3.3
<i>Acerpenna macdunnoughi</i>	09020401007001	2.00			--	2.2	
<i>Diphetor</i>	09020401013		4.00		--		4.4
<i>Diphetor hageni</i>	09020401013001	4.00			--	4.4	
Heptageniidae	09020402	0.67			--	0.7	
<i>Heptagenia</i>	09020402010		1.11	2	SC		1.2
<i>Heptagenia flavescens</i>	09020402010038	0.67			--	0.7	
<i>Leucrocuta</i>	09020402011	0.33	0.56	1	SC	0.4	0.6
<i>Isonychia</i>	09020404018	0.33	0.33	2	CF	0.4	0.4
Leptophlebiidae	09020406	0.33	0.33		--	0.4	0.4
<i>Paraleptophlebia</i>	09020406026	0.33	0.33	1	CG	0.4	0.4
<i>Ephemerella</i>	09020410035	14.33	14.33	1	CG	15.9	15.9
<i>Eurylophella</i>	09020410036	2.33	2.33	3	CG	2.6	2.6
<i>Serratella</i>	09020410037		0.33	2	CG		0.4
<i>Serratella serratoides</i>	09020410037124	0.33			--	0.4	
Hydropsychidae	09020604	2.33			--	2.6	
<i>Cheumatopsyche</i>	09020604015	0.67	0.73	5	CF	0.7	0.8
<i>Hydropsyche</i>	09020604016	22.67	26.94	4	CF	25.1	29.8
<i>Hydropsyche slossonae</i>	09020604016031	0.67			--	0.7	



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Calculated: 5/11/2017

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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche sparna</i>	09020604016032	1.33			--	1.5	
<i>Rhyacophila</i>	09020605019	1.33	1.33	2	PR	1.5	1.5
<i>Hydroptila</i>	09020607026	0.33	0.33	6	P	0.4	0.4
<i>Oxyethira</i>	09020607028	0.33	0.33	3	P	0.4	0.4
<i>Lepidostoma</i>	09020611064	1.67	1.67	1	SH	1.8	1.8
<i>Apatania</i>	09020619061	0.33	0.33		SC	0.4	0.4
<i>Nigronia</i>	09020701003		0.33	0	PR		0.4
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.4	
<i>Cricotopus</i>	09021011037		0.33	7	SH		0.4
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.4	
<i>Synorthocladius</i>	09021011061			2	CG		
<i>Micropsectra</i>	09021011070	5.33	5.33	7	CG	5.9	5.9
<i>Paratanytarsus</i>	09021011071			6	--		
<i>Rheotanytarsus</i>	09021011072		1.67	6	CF		1.8
<i>Rheotanytarsus exiguus group</i>	09021011072127	0.33			CF	0.4	
<i>Rheotanytarsus pellucidus</i>	09021011072128	1.33			CF	1.5	
<i>Microtendipes rydalensis group</i>	09021011094168				--		
<i>Polypedilum</i>	09021011102		1.33	6	SH		1.5
<i>Polypedilum aviceps</i>	09021011102181	1.00			--	1.1	
<i>Polypedilum flavum</i>	09021011102182	0.33			--	0.4	
<i>Simulium</i>	09021012047	0.33	0.33	4	CF	0.4	0.4
<i>Simulium tuberosum</i>	09021012047067				--		
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.4	0.4
<i>Clinocera</i>	09021016056	0.33	0.33	3	PR	0.4	0.4
<i>Ectopria</i>	09021109059	0.67	0.67	5	SC	0.7	0.7
<i>Promoresia</i>	09021113069		4.00		--		4.4
<i>Promoresia elegans</i>	09021113069051	1.00			--	1.1	
<i>Promoresia tardella</i>	09021113069052	3.00			--	3.3	