



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

Station Information

**Station Number: S-305**  
Waterbody: Babel Brook - Station 305  
Town: Ebeemee Twp  
Directions: ABOVE RT. 11 CROSSING

DEP Drainage: Penobscot  
HUC8: 01020004  
HUC8 Name: Piscataquis  
Latitude: 45 27 16.97 N  
Longitude: 69 1 30.97 W  
Stream Order: 3

Sample Information

**Log Number: 2052** Type of Sample: ROCK BAG Date Deployed: 7/21/2011  
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/23/2011

Classification Attainment

**Statutory Class: A** **Final Determination: A** Date: 10/28/2011  
Model Result with P>.6: A **Reason for Determination: Model**  
Date Last Calculated: 10/25/2011 Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.88	Class A, B, or C	1.00
Class B	0.12	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.99
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.01

Model Variables

01 Total Mean Abundance	75.00	18 Relative Abundance Ephemeroptera	0.33
02 Generic Richness	33.00	19 EPT Generic Richness	17.00
03 Plecoptera Mean Abundance	5.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	3.00
04 Ephemeroptera Mean Abundance	25.00	23 Relative Generic Richness- Plecoptera	0.15
05 Shannon-Wiener Generic Diversity	3.94	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	1.00
06 Hilsenhoff Biotic Index	3.55	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	3.93
07 Relative Abundance - Chironomidae	0.17	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.33	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	19.33		
11 <i>Cheumatopsyche</i> Abundance	0.67		
12 EPT Generic Richness/ Diptera	1.55		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	2.33		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	0.00		
(Family Functional Group)			
17 Chironomini Abundance (Family	1.67		
Functional Group)			

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	25.78
2	<i>Baetis</i>	12.44
3	<i>Ephemerella</i>	11.11
4	<i>Rheotanytarsus</i>	6.67
5	<i>Promoresia</i>	4.44



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

**Station Number: S-305**

**Town:** Ebeemee Twp

**Date Deployed:** 7/21/2011

**Log Number: 2052**

**Waterbody:** Babel Brook - Station 305

**Date Retrieved:** 8/23/2011

**Sample Collection and Processing Information**

**Sampling Organization:** BIOMONITORING UNIT

**Taxonomist:** MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 18.7 deg C  
Dissolved Oxygen: 8.3 mg/l  
Specific Conductance: 21 uS/cm  
Velocity: 15 cm/s  
pH: 6.67  
Wetted Width: 3.7 m  
Bankfull Width: 7.9 m  
Depth: 35 cm

**Waterbody Information - Retrieval**

Temperature: 17.3 deg C  
Dissolved Oxygen: 8.8 mg/l  
Specific Conductance: 12 uS/cm  
Velocity: 62 cm/s  
pH: 6.97  
Wetted Width: 6.9 m  
Bankfull Width: 7.9 m  
Depth: 50 cm

**Water Chemistry - 8/23/2011**

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	3 ug/l
Nitrate+nitrite As N	0.01 mg/l	Total Phosphorus	0.017 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	5.6 mg/l	Total Dissolved Solids	36 mg/l

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Dense	Hilly
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above Road Crossing	Boulder 40 %
	Minimally Disturbed	Gravel 15 %
		Rubble/Cobble 45 %

**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**

SIGNIFICANT RAIN ON 8/21/11. 8/23/11: ELEVATED FLOW.  
CANOPY COVER IS APPROXIMATELY 75% SHADED.



**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: 2052**

Subsample Factor: X1

Replicates: 3

Calculated: 10/25/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Pteronarcys</i>	09020205023		2.67	0	SH		3.6
<i>Pteronarcys biloba</i>	09020205023061	2.67			--	3.5	
<i>Tallaperla</i>	09020206025	0.33	0.33		SH	0.4	0.4
<i>Sweltsa</i>	09020208040	0.33	0.33		PR	0.4	0.4
Perlidae	09020209	0.67			--	0.9	
<i>Acroneuria</i>	09020209042	0.33	0.93	0	PR	0.4	1.2
<i>Acroneuria abnormis</i>	09020209042121	0.33		0	PR	0.4	
<i>Agnetina</i>	09020209050	0.67	1.40	2	PR	0.9	1.9
<i>Agnetina capitata</i>	09020209050152	0.33		2	PR	0.4	
<i>Boyeria</i>	09020301004		1.33	2	PR		1.8
<i>Boyeria vinosa</i>	09020301004012	1.33			--	1.8	
Corduliidae	09020305	0.33	0.33		--	0.4	0.4
<i>Baetis</i>	09020401001		9.33	4	CG		12.4
<i>Baetis flavistriga</i>	09020401001004	4.33			--	5.8	
<i>Baetis tricaudatus</i>	09020401001012	5.00			--	6.6	
<i>Diphetor</i>	09020401013		3.00		--		4.0
<i>Diphetor hageni</i>	09020401013001	3.00			--	4.0	
<i>Maccaffertium</i>	09020402015	0.33	3.00	4	SC	0.4	4.0
<i>Maccaffertium luteum</i>	09020402015049	2.67			--	3.5	
Leptophlebiidae	09020406	0.33	0.33		--	0.4	0.4
<i>Ephemerella</i>	09020410035	8.33	8.33	1	CG	11.1	11.1
<i>Eurylophella</i>	09020410036	1.00	1.00	3	CG	1.3	1.3
<i>Neureclipsis</i>	09020603008	0.33	0.33	7	CF	0.4	0.4
<i>Diplectrona</i>	09020604014		1.33	0	CF		1.8
<i>Diplectrona modesta</i>	09020604014025	1.33			--	1.8	
<i>Cheumatopsyche</i>	09020604015	0.67	0.67	5	CF	0.9	0.9
<i>Hydropsyche</i>	09020604016	13.00	19.33	4	CF	17.3	25.8
<i>Hydropsyche morosa</i>	09020604016030	0.67			--	0.9	
<i>Hydropsyche slossonae</i>	09020604016031	1.67			--	2.2	
<i>Hydropsyche sparna</i>	09020604016032	4.00			--	5.3	
<i>Rhyacophila</i>	09020605019	0.67	2.00	2	PR	0.9	2.7
<i>Rhyacophila fuscula</i>	09020605019060	1.33			PR	1.8	
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.9	0.9
<i>Cricotopus</i>	09021011037		0.33	7	SH		0.4
<i>Cricotopus bicinctus</i>	09021011037057	0.33			--	0.4	
<i>Nanocladius</i>	09021011049		1.00	3	CG		1.3
<i>Nanocladius distinctus</i>	09021011049087	0.33			--	0.4	
<i>Nanocladius branchiculus</i>	09021011049091	0.67			--	0.9	



**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: 2052**

Subsample Factor: X1

Replicates: 3

Calculated: 10/25/2011

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Orthocladius</i>	09021011050		0.33	6	CG		0.4
<i>Symposiocladius lignicola</i>	09021011050100	0.33			--	0.4	
<i>Orthocladius lignicola</i>	09021011050100	0.33			--	0.4	
<i>Parametriocnemus</i>	09021011053	0.33	0.33	5	CG	0.4	0.4
<i>Psectrocladius</i>	09021011056		0.33	8	CG		0.4
<i>Psectrocladius simulans</i>	09021011056110	0.33			--	0.4	
<i>Thienemanniella</i>	09021011062			6	CG		
<i>Tvetenia</i>	09021011065		0.67	5	CG		0.9
<i>Tvetenia paucunca</i>	09021011065114	0.67			--	0.9	
<i>Micropsectra</i>	09021011070	3.00	3.00	7	CG	4.0	4.0
<i>Rheotanytarsus</i>	09021011072	5.00	5.00	6	CF	6.6	6.7
<i>Polypedilum</i>	09021011102		1.67	6	SH		2.2
<i>Polypedilum aviceps</i>	09021011102181	1.67			--	2.2	
<i>Simulium</i>	09021012047	0.33	1.33	4	CF	0.4	1.8
<i>Simulium tuberosum</i>	09021012047067	1.00			--	1.3	
<i>Roederiodes</i>	09021016058	0.33	0.33	3	PR	0.4	0.4
<i>Psephenus</i>	09021108058		0.33	4	SC		0.4
<i>Psephenus herricki</i>	09021108058028	0.33			--	0.4	
<i>Promoresia</i>	09021113069		3.33		--		4.4
<i>Promoresia elegans</i>	09021113069051	0.33			--	0.4	
<i>Promoresia tardella</i>	09021113069052	3.00			--	4.0	
<i>Stenelmis</i>	09021113070	0.33	0.33	5	SC	0.4	0.4