



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

Station Information

Station Number: S-312
Waterbody: Birch Stream - Station 312
Town: Bangor
Directions: DOWNSTREAM OF OHIO STREET CROSSING

DEP Drainage: Penobscot
HUC8: 01020005
HUC8 Name: Lower Penobscot
Latitude: 44 49 25.43 N
Longitude: 68 48 27.7 W
Stream Order: 1

Sample Information

Log Number: 2033
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 2
Date Deployed: 7/12/2011
Date Retrieved: 8/11/2011

Classification Attainment

Statutory Class: B
Model Result with P>.6: NA
Date Last Calculated: 2/27/2012
Final Determination: NA
Reason for Determination: Model
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.00	Class A, B, or C	0.27
Class B	0.00	Non-Attainment	0.73
Class C			
0.76			
Class B			
0.23			
B or Better Model		A Model	
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 Mean Abundance	52.50	18 Relative Abundance Ephemeroptera	0.10
02 Generic Richness	19.00	19 EPT Generic Richness	3.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	2.51
04 Ephemeroptera Mean Abundance	5.50	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	3.58	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	3.35
06 Hilsenhoff Biotic Index	5.46	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.54	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.58	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	3.00		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	0.27		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	0.84		
(Family Functional Group)			
17 Chironomini Abundance (Family	8.38		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	19.16
2	<i>Polypedilum</i>	14.37
3	<i>Gyraulus</i>	13.33
4	<i>Baetis</i>	10.48
5	<i>Erpobdella</i>	9.52



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Waterbody: Birch Stream - Station 312

Date Retrieved: 8/11/2011

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 22.5 deg C
Dissolved Oxygen: 7.5 mg/l
Specific Conductance: 340 uS/cm
Velocity: 48 cm/s
pH: 7.51
Wetted Width: 6.7 m
Bankfull Width: 8.8 m
Depth: 40 cm

Waterbody Information - Retrieval

Temperature: 19.1 deg C
Dissolved Oxygen: 8.2 mg/l
Specific Conductance: 367 uS/cm
Velocity: 50 cm/s
pH: 8.08
Wetted Width: 6.9 m
Bankfull Width: 8.8 m
Depth: 35 cm

Water Chemistry - 8/11/2011

Ammonia As Nitrogen	0.03 mg/l	Soluble Reactive Phosphorus	5 ug/l
Nitrate+nitrite As N	0.32 mg/l	Total Phosphorus	0.026 mg/l
Total Kjeldahl Nitrogen	0.3 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	2.4 mg/l	Total Dissolved Solids	250 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Partly Open	Rolling
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Altered Habitat	Below Airport	Bedrock 5 %
Altered Hydrology	Below Road Crossing	Boulder 65 %
Urban Runoff	Below Urban NPS	Gravel 5 %
		Rubble/Cobble 25 %

Landcover Summary - 2004 Data

Total Area (ac)	1880	High Int. Dev. %	31.2	Water %	0.0	Non-vegetated %	0.1
		Med Int. Dev. %	10.4	Wetland %	0.1	Tilled Agriculture %	0.1
		Low Int. Dev. %	11.3	Upland Woody %	12.3	Grassland %	0.3
		Development %	52.8	Natural %	12.4	Human Altered %	87.6
						Impervious %	45.9

Sample Comments

RAINED DAY BEFORE RETRIEVAL (8/10/11). 8/11/11: EVIDENCE OF STORM SURGE, ONE BAG LOST, ONE BAG DISTURBED.

7/12/11: AM SHOWERS, STREAM LOOKS BLOWN OUT COMPARED TO LAST YEAR, MILKY WATER, CHEMICAL SMELL, SILTATION.



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

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Subsample Factor: X1

Replicates: 2

Calculated: 2/27/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Erpobdella</i>	08030203002		5.00		--		9.5
<i>Erpobdella obscura</i>	08030203002006	5.00			--	9.5	
<i>Baetis</i>	09020401001		5.50	4	CG		10.5
<i>Baetis flavistriga</i>	09020401001004	5.50			--	10.5	
<i>Hydropsyche</i>	09020604016	0.50	3.00	4	CF	1.0	5.7
<i>Hydropsyche depravata complex</i>	09020604016041	2.50			CF	4.8	
<i>Ptilostomis</i>	09020608041	0.50	0.50	5	SH	1.0	1.0
Chironomidae	09021011	11.50			--	21.9	
<i>Conchapelopia</i>	09021011004	0.50	0.84	6	PR	1.0	1.6
<i>Pagastia</i>	09021011025		0.84	1	--		1.6
<i>Pagastia orthogonia</i>	09021011025001	0.50			--	1.0	
<i>Eukiefferiella</i>	09021011041		0.84	8	CG		1.6
<i>Eukiefferiella claripennis group</i>	09021011041075	0.50			--	1.0	
<i>Parametriocnemus</i>	09021011053	0.50	0.84	5	CG	1.0	1.6
<i>Tvetenia</i>	09021011065		0.84	5	CG		1.6
<i>Tvetenia paucunca</i>	09021011065114	0.50			--	1.0	
<i>Micropsectra</i>	09021011070		2.51	7	CG		4.8
<i>Micropsectra polita</i>	09021011070124	1.50		7	--	2.9	
<i>Rheotanytarsus</i>	09021011072	6.00	10.06	6	CF	11.4	19.2
<i>Tanytarsus</i>	09021011076	2.00	3.35	6	CF	3.8	6.4
<i>Phaenopsectra</i>	09021011101		0.84	7	SC		1.6
<i>Phaenopsectra obediens</i>	09021011101182	0.50			SC	1.0	
<i>Polypedilum</i>	09021011102		7.54	6	SH		14.4
<i>Polypedilum flavum</i>	09021011102182	4.50			--	8.6	
<i>Simulium</i>	09021012047		1.50	4	CF		2.9
<i>Simulium vittatum</i>	09021012047064	1.50			--	2.9	
<i>Hemerodromia</i>	09021016057			3	PR		
<i>Dubiraphia</i>	09021113064	0.50	0.50	6	--	1.0	1.0
<i>Lymnaea</i>	10010201022	0.50	0.50		SC	1.0	1.0
<i>Gyraulus</i>	10010203029		7.00		SC		13.3
<i>Gyraulus parvus</i>	10010203029057	7.00			--	13.3	
<i>Helisoma</i>	10010203030		0.50		SC		1.0
<i>Helisoma anceps</i>	10010203030058	0.50			--	1.0	