



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

Station Information

Station Number: S-315	DEP Drainage: Penobscot
Waterbody: Penjajawoc Stream - Station 315	HUC8: 01020005
Town: Bangor	HUC8 Name: Lower Penobscot
Directions: UPSTREAM OF RT. 2 CROSSING	Latitude: 44 49 8.65 N
	Longitude: 68 43 52.45 W
	Stream Order: 3

Sample Information

Log Number: 1713	Type of Sample: ROCK BAG	Date Deployed: 7/8/2008
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/5/2008

Classification Attainment

Statutory Class: B	Final Determination: NA	Date: 3/24/2009
Model Result with P>.6: NA	Reason for Determination: Model	
Date Last Calculated: 3/17/2009	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	0.00
Class B	0.00	Non-Attainment	1.00
<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 Mean Abundance	670.67	18 Relative Abundance Ephemeroptera	0.00
02 Generic Richness	34.00	19 EPT Generic Richness	11.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	1.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	2.64	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	136.82
06 Hilsenhoff Biotic Index	4.30	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.10	28 EP Generic Richness/14	0.07
08 Relative Generic Richness Diptera	0.41	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	360.94		
11 <i>Cheumatopsyche</i> Abundance	125.72		
12 EPT Generic Richness/ Diptera Generic Richness	0.79		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	4.16		
17 Chironomini Abundance (Family Functional Group)	19.43		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	53.82
2	<i>Cheumatopsyche</i>	18.75
3	<i>Helicopsyche</i>	5.17
4	<i>Stenelmis</i>	2.78
5	<i>Microtendipes</i>	2.07



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Town: Bangor

Date Deployed: 7/8/2008

Log Number: 1713

Waterbody: Penjajawoc Stream - Station 315

Date Retrieved: 8/5/2008

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 24.9 deg C
Dissolved Oxygen: 9.6 mg/l
Specific Conductance: 732 uS/cm
Velocity: 21 cm/s
pH:
Wetted Width: 4.1 m
Bankfull Width: 5.9 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 19.7 deg C
Dissolved Oxygen: 9 mg/l
Specific Conductance: 383 uS/cm
Velocity: 60 cm/s
pH: 7.88
Wetted Width: 5.4 m
Bankfull Width: 6 m
Depth: 30 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	5 ug/l
Nitrate+nitrite As N	0.09 mg/l	Total Phosphorus	0.034 mg/l
Total Kjeldahl Nitrogen	0.6 mg/l	Total Suspended Solids	5.1 mg/l
Dissolved Organic Carbon	12 mg/l	Total Dissolved Solids	230 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Swamp Hardwood	Canopy Partly Open	Rolling Terrain
Upland Conifer		
Urban		

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>
Urban Runoff Stressor	Above Road Crossing	Boulder 25 %
	Below Urban NPS	Gravel 15 %
		Rubble/Cobble 50 %
		Sand 10 %

Landcover Summary - 2004 Data

Total Area (ac)	5567	High Int. Dev. %	8.1	Water %	1.3	Non-vegetated %	0.1
Total Land (ac)	5494	Med Int. Dev. %	3.8	Wetland %	7.5	Tilled Agriculture %	6.5
		Low Int. Dev. %	4.5	Upland Woody %	51.4	Human Altered %	40.9
		Development %	16.4	Natural %	59.1	Impervious %	12.8

Sample Comments

8/5/08: HIGH WATER FLOW



Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report

Station Number: S-315

Waterbody: Penjajawoc Stream - Station 315

Town: Bangor

Log Number: 1713

Subsample Factor: X4

Replicates: 3

Calculated: 3/17/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002	2.67	2.67		--	0.4	0.4
<i>Prostoma</i>	04010101001	1.33	1.33		--	0.2	0.2
<i>Nais</i>	08020202009		1.33		CG		0.2
<i>Nais variabilis</i>	08020202009009	1.33			--	0.2	
<i>Boyeria</i>	09020301004		6.67	2	PR		1.0
<i>Boyeria grafiana</i>	09020301004011	4.00			--	0.6	
<i>Boyeria vinosa</i>	09020301004012	2.67			--	0.4	
<i>Baetis</i>	09020401001		1.33	4	CG		0.2
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.2	
<i>Chimarra</i>	09020601003	4.00	4.00	2	CF	0.6	0.6
<i>Nyctiophylax</i>	09020603009		2.67	5	PR		0.4
<i>Nyctiophylax moestus</i>	09020603009013	2.67			--	0.4	
<i>Polycentropus</i>	09020603010	2.67	2.67	6	PR	0.4	0.4
Hydropsychidae	09020604	6.67			--	1.0	
<i>Cheumatopsyche</i>	09020604015	124.00	125.72	5	CF	18.5	18.7
<i>Hydropsyche</i>	09020604016	82.67	360.94	4	CF	12.3	53.8
<i>Hydropsyche bronta</i>	09020604016029	1.33			--	0.2	
<i>Hydropsyche morosa</i>	09020604016030	4.00			--	0.6	
<i>Hydropsyche sparna</i>	09020604016032	81.33			--	12.1	
<i>Hydropsyche depravata-complex</i>	09020604016041	186.67			CF	27.8	
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.2	0.2
<i>Pycnopsyche</i>	09020610049	1.33	1.33	4	SH	0.2	0.2
<i>Lepidostoma</i>	09020611064	1.33	1.33	1	SH	0.2	0.2
<i>Helicopsyche</i>	09020616070		34.67	3	SC		5.2
<i>Helicopsyche borealis</i>	09020616070137	34.67			--	5.2	
<i>Mystacides</i>	09020618075		2.67	4	CG		0.4
<i>Mystacides sepulchralis</i>	09020618075147	2.67			--	0.4	
<i>Nigronia</i>	09020701003		5.33	0	PR		0.8
<i>Nigronia serricornis</i>	09020701003003	5.33			--	0.8	
Chironomidae	09021011	2.67			--	0.4	
<i>Conchapelopia</i>	09021011004	1.33	1.39	6	PR	0.2	0.2
<i>Labrundinia</i>	09021011008	2.67	2.78	7	PR	0.4	0.4
<i>Corynoneura</i>	09021011036	1.33	1.39	7	CG	0.2	0.2
<i>Cricotopus</i>	09021011037	1.33	4.16	7	SH	0.2	0.6
<i>Cricotopus bicinctus</i>	09021011037057	2.67			--	0.4	
<i>Parametriocnemus</i>	09021011053	6.67	6.94	5	CG	1.0	1.0
<i>Tvetenia</i>	09021011065		6.94	5	CG		1.0
<i>Tvetenia paucunca</i>	09021011065114	6.67			--	1.0	



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<i>Rheotanytarsus</i>	09021011072	12.00	12.49	6	CF	1.8	1.9
<i>Stempellinella</i>	09021011074		5.55	2	--		0.8
<i>Stempellinella sp. a epler</i>	09021011074002	5.33			--	0.8	
<i>Tanytarsus</i>	09021011076	6.67	6.94	6	CF	1.0	1.0
<i>Microtendipes</i>	09021011094		13.88	6	CF		2.1
<i>Microtendipes pedellus-grp.</i>	09021011094166	12.00			--	1.8	
<i>Microtendipes rydalensis-grp.</i>	09021011094168	1.33			--	0.2	
<i>Phaenopsectra</i>	09021011101		2.78	7	SC		0.4
<i>Phaenopsectra obediens</i>	09021011101182	2.67			SC	0.4	
<i>Polypedilum</i>	09021011102		2.78	6	SH		0.4
<i>Polypedilum scalaenum-grp.</i>	09021011102189	2.67			--	0.4	
<i>Simulium</i>	09021012047		1.33	4	CF		0.2
<i>Simulium aureum</i>	09021012047052	1.33			--	0.2	
<i>Simulium venustum/verecundum</i> complex	09021012047072				CF		
<i>Hemerodromia</i>	09021016057	2.67	2.67	3	PR	0.4	0.4
<i>Psephenus</i>	09021108058		6.67	4	SC		1.0
<i>Psephenus herricki</i>	09021108058028	6.67			--	1.0	
<i>Dubiraphia</i>	09021113064	12.00	12.00	6	CG	1.8	1.8
<i>Optioservus</i>	09021113067	4.00	5.33	3	SC	0.6	0.8
<i>Optioservus fastiditus</i>	09021113067044	1.33			--	0.2	
<i>Stenelmis</i>	09021113070	12.00	18.67	5	SC	1.8	2.8
<i>Stenelmis crenata</i>	09021113070055	6.67			--	1.0	