



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

Station Information

<b>Station Number:</b> 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

<b>Log Number:</b> 2025	Type of Sample: ROCK BAG	Date Deployed: 7/8/2011
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/9/2011

Classification Attainment

<b>Statutory Class:</b> B	<b>Final Determination:</b> C	Date: 1/25/2012
Model Result with P>.6: C	<b>Reason for Determination:</b> Model	
Date Last Calculated: 1/17/2012	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.01	Class A, B, or C	1.00
Class B	0.04	Non-Attainment	0.00
<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	409.67	18 Relative Abundance Ephemeroptera	0.01
02 Generic Richness	54.00	19 EPT Generic Richness	14.00
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	4.33	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	4.47	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	90.49
06 Hilsenhoff Biotic Index	5.13	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.50	28 EP Generic Richness/14	0.29
08 Relative Generic Richness Diptera	0.39	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	45.38		
11 <i>Cheumatopsyche</i> Abundance	38.95		
12 EPT Generic Richness/ Diptera	0.67		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	0.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	13.32		
(Family Functional Group)			
17 Chironomini Abundance (Family	46.28		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	11.08
2	<i>Rheotanytarsus</i>	10.95
3	<i>Cheumatopsyche</i>	9.51
4	<i>Tanytarsus</i>	8.90
5	<i>Microtendipes</i>	7.87



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<b>Log Number: 2025</b>	Waterbody: Penjajawoc Stream - Station 315	Date Retrieved: 8/9/2011

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature:	19 deg C
Dissolved Oxygen:	9 mg/l
Specific Conductance:	487 uS/cm
Velocity:	8 cm/s
pH:	7.59
Wetted Width:	6 m
Bankfull Width:	6 m
Depth:	25 cm

**Waterbody Information - Retrieval**

Temperature:	21.5 deg C
Dissolved Oxygen:	9.2 mg/l
Specific Conductance:	674 uS/cm
Velocity:	12 cm/s
pH:	8.18
Wetted Width:	5.7 m
Bankfull Width:	6 m
Depth:	23 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

Landuse Name

Swamp Hardwood  
Upland Hardwood  
Urban

Canopy Cover

Partly Open

Terrain

Rolling

Potential Stressor

Urban Runoff

Location

Below Urban NPS

Substrate

Boulder	25 %
Gravel	10 %
Rubble/Cobble	50 %
Sand	15 %

**Landcover Summary - 2004 Data**

Total Area (ac)	5567	High Int. Dev. %	8.0	Water %	1.3	Non-vegetated %	0.1
		Med Int. Dev. %	3.8	Wetland %	7.4	Tilled Agriculture %	6.4
		Low Int. Dev. %	4.4	Upland Woody %	50.8	Grassland %	8.3
		Development %	16.2	Natural %	58.3	Human Altered %	40.4
						Impervious %	12.8

**Sample Comments**

SOME SILTATION, SOME ALGAE.



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**Station Number: S-315**

Waterbody: Penjajawoc Stream - Station 315

Town: Bangor

**Log Number: 2025**

Subsample Factor: X1

Replicates: 3

Calculated: 1/17/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Girardia</i>	03010102002		5.00		--		1.2
<i>Girardia tigrina</i>	03010102002001	5.00			--	1.2	
<i>Pristina</i>	08020202004	0.33	0.33		--	0.1	0.1
Erpobdellidae	08030203	1.00	1.00		--	0.2	0.2
<i>Boyeria</i>	09020301004		2.33	2	PR		0.6
<i>Boyeria vinosa</i>	09020301004012	2.33			--	0.6	
Calopterygidae	09020307	0.33	0.33		--	0.1	0.1
<i>Calopteryx</i>	09020307043		0.67	5	PR		0.2
<i>Calopteryx maculata</i>	09020307043088	0.67			--	0.2	
<i>Baetis</i>	09020401001		0.33	4	CG		0.1
<i>Baetis flavistriga</i>	09020401001004	0.33			--	0.1	
<i>Acerpenna</i>	09020401007	1.67	3.33	5	CG	0.4	0.8
<i>Acerpenna macdunnoughi</i>	09020401007001	1.67			--	0.4	
<i>Procloeon</i>	09020401010	0.33	0.33		CG	0.1	0.1
Leptophlebiidae	09020406	0.33	0.33		--	0.1	0.1
Trichoptera	090206				--		
<i>Chimarra</i>	09020601003	0.67	0.67	2	CF	0.2	0.2
<i>Nyctiophylax</i>	09020603009		2.33	5	PR		0.6
<i>Nyctiophylax moestus</i>	09020603009013	2.33			--	0.6	
<i>Polycentropus</i>	09020603010	22.67	22.67	6	PR	5.5	5.5
Hydropsychidae	09020604	14.33			--	3.5	
<i>Cheumatopsyche</i>	09020604015	32.33	38.95	5	CF	7.9	9.5
<i>Hydropsyche</i>	09020604016	15.67	45.38	4	CF	3.8	11.1
<i>Hydropsyche sparna</i>	09020604016032	6.67			--	1.6	
<i>Hydropsyche depravata complex</i>	09020604016041	15.33			CF	3.7	
<i>Hydroptila</i>	09020607026	5.00	5.00	6	P	1.2	1.2
<i>Pycnopsyche</i>	09020610049	0.67	0.67	4	SH	0.2	0.2
<i>Helicopsyche</i>	09020616070		23.33	3	SC		5.7
<i>Helicopsyche borealis</i>	09020616070137	23.33			--	5.7	
Leptoceridae	09020618				--		
<i>Mystacides</i>	09020618075		0.67	4	CG		0.2
<i>Mystacides sepulchralis</i>	09020618075147	0.67			--	0.2	
<i>Oecetis</i>	09020618078		1.00	8	PR		0.2
<i>Oecetis persimilis</i>	09020618078157	1.00			--	0.2	
<i>Nigronia</i>	09020701003		7.67	0	PR		1.9
<i>Nigronia serricornis</i>	09020701003003	7.67			--	1.9	
<i>Tipula</i>	09021001002	0.67	0.67	4	SH	0.2	0.2
<i>Antocha</i>	09021001004	1.00	1.00	3	CG	0.2	0.2



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		Actual	Adjusted			Actual	Adjusted
Chironomidae	09021011	10.00			--	2.4	
<i>Conchapelopia</i>	09021011004	2.00	2.10	6	PR	0.5	0.5
<i>Nilotanyus</i>	09021011012		9.12	6	PR		2.2
<i>Nilotanyus fimbriatus</i>	09021011012027	8.67			--	2.1	
<i>Pentaneura</i>	09021011014		2.10	6	PR		0.5
<i>Pentaneura inconspicua</i>	09021011014028	2.00			--	0.5	
<i>Pagastia</i>	09021011025		3.16	1	--		0.8
<i>Pagastia orthogonia</i>	09021011025001	3.00			--	0.7	
<i>Cricotopus</i>	09021011037		15.08	7	SH		3.7
<i>Cricotopus bicinctus</i>	09021011037057	13.00			--	3.2	
<i>Cricotopus trifascia</i>	09021011037070	1.33			--	0.3	
<i>Orthocladius</i>	09021011050	0.67	0.70	6	CG	0.2	0.2
<i>Parametriocnemus</i>	09021011053	20.67	21.74	5	CG	5.0	5.3
<i>Synorthocladius</i>	09021011061	0.33	0.35	2	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		14.02	5	CG		3.4
<i>Tvetenia paucunca</i>	09021011065114	13.33			--	3.3	
<i>Paratanytarsus</i>	09021011071	2.67	2.80	6	--	0.7	0.7
<i>Rheotanytarsus</i>	09021011072	42.67	44.88	6	CF	10.4	11.0
<i>Stempellinella</i>	09021011074		0.70	2	--		0.2
<i>Stempellinella fimbriata</i>	09021011074002	0.67			--	0.2	
<i>Tanytarsus</i>	09021011076	34.67	36.46	6	CF	8.5	8.9
<i>Microtendipes</i>	09021011094		32.26	6	CF		7.9
<i>Microtendipes pedellus group</i>	09021011094166	24.67			--	6.0	
<i>Microtendipes rydalensis group</i>	09021011094168	6.00			--	1.5	
<i>Phaenopsectra</i>	09021011101		11.92	7	SC		2.9
<i>Phaenopsectra obediens</i>	09021011101182	11.33			SC	2.8	
<i>Polypedilum</i>	09021011102	0.67	2.10	6	SH	0.2	0.5
<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.3	
<i>Helopelopia</i>	09021011114	3.33	3.51	6	PR	0.8	0.9
Empididae	09021016	0.33	0.33	6	--	0.1	0.1
<i>Hemerodromia</i>	09021016057	2.33	2.33	3	PR	0.6	0.6
<i>Psephenus</i>	09021108058		7.00	4	SC		1.7
<i>Psephenus herricki</i>	09021108058028	7.00			--	1.7	
<i>Dubiraphia</i>	09021113064	14.00	14.00	6	--	3.4	3.4
<i>Macronychus</i>	09021113065		2.67	4	--		0.7
<i>Macronychus glabratus</i>	09021113065040	2.67			--	0.7	
<i>Optioservus</i>	09021113067	3.33	4.33	3	SC	0.8	1.1
<i>Optioservus fastiditus</i>	09021113067044	1.00			--	0.2	



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<i>Stenelmis</i>	09021113070	5.00	6.33	5	SC	1.2	1.5
<i>Stenelmis crenata</i>	09021113070055	1.33			--	0.3	
Curculionidae	09021115	0.33	0.33		--	0.1	0.1
<i>Hydrozetes</i>	09030115001	0.33	0.33		--	0.1	0.1
<i>Amnicola</i>	10010104013		3.33		SC		0.8
<i>Amnicola limosa</i>	10010104013018	3.33			--	0.8	
<i>Lymnaea</i>	10010201022	0.33	0.33		SC	0.1	0.1
<i>Physa</i>	10010202026	0.33	0.33		SC	0.1	0.1
<i>Gyraulus</i>	10010203029		0.67		SC		0.2
<i>Gyraulus parvus</i>	10010203029057	0.67			--	0.2	
<i>Pisidium</i>	10020201002		0.33		CF		0.1
<i>Pisidium walkeri</i>	10020201002017	0.33			CF	0.1	