



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

**Station Information**

<b>Station Number:</b> S-3	DEP Drainage: St. John
Waterbody: Prestile Stream - Station 3	HUC8: 01010005
Town: Blaine	HUC8 Name: Big Presque Isle Stream-Meduxnek
Directions: BELOW MARS HILL POTW - PIERCE RD BRIDGE	Latitude: 46 29 46.14 N
	Longitude: 67 50 44.09 W
	Stream Order: 4

**Sample Information**

<b>Log Number:</b> 1842	Type of Sample: ROCK BASKET	Date Deployed: 7/20/2009
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/17/2009

**Classification Attainment**

<b>Statutory Class:</b> B	<b>Final Determination:</b> C	Date: 4/1/2010
Model Result with P>.6: C	<b>Reason for Determination:</b> Model	
Date Last Calculated: 3/31/2010	Comments: Indeterminate B (.38). Very enriched.	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.02	Class A, B, or C	1.00
Class B	0.49	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.38	Class A	0.24
Class C or Non-Attainment	0.62	Class B or C or Non-Attainment	0.76

**Model Variables**

01 Total Mean Abundance	3241.33	18 Relative Abundance Ephemeroptera	0.15
02 Generic Richness	44.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	49.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	2.95
04 Ephemeroptera Mean Abundance	484.00	23 Relative Generic Richness- Plecoptera	0.09
05 Shannon-Wiener Generic Diversity	2.61	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	194.04
06 Hilsenhoff Biotic Index	4.15	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	37.51
07 Relative Abundance - Chironomidae	0.16	28 EP Generic Richness/14	1.00
08 Relative Generic Richness Diptera	0.39	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	1885.88		
11 <i>Cheumatopsyche</i> Abundance	112.78		
12 EPT Generic Richness/ Diptera Generic Richness	1.29		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	46.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.48		
17 Chironomini Abundance (Family Functional Group)	230.47		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	58.18
2	<i>Baetis</i>	10.06
3	<i>Polypedilum</i>	7.06
4	<i>Cheumatopsyche</i>	3.48
5	<i>Ephemerella</i>	2.95



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**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature:	20.4 deg C
Dissolved Oxygen:	9 mg/l
Specific Conductance:	319 uS/cm
Velocity:	60 cm/s
pH:	8.45
Wetted Width:	32.9 m
Bankfull Width:	33.1 m
Depth:	46 cm

**Waterbody Information - Retrieval**

Temperature:	25 deg C
Dissolved Oxygen:	12.2 mg/l
Specific Conductance:	325 uS/cm
Velocity:	52 cm/s
pH:	8.55
Wetted Width:	33.2 m
Bankfull Width:	33.2 m
Depth:	35 cm

**Water Chemistry - 7/20/2009**

Soluble Reactive Phosphorus	5 ug/l	Nitrate+nitrite As N	0.25 mg/l
Total Phosphorus	0.026 mg/l	Total Kjeldahl Nitrogen	<0.1 mg/l
Dissolved Organic Carbon	4.4 mg/l	Total Alkalinity	157 mg/l

**Summary of Habitat Characteristics**

Landuse Name

Cultivated

Pasture

Upland Hardwood

Canopy Cover

Open

Terrain

Flat

Potential Stressor

Agricultural Runoff

Nutrients

Location

Below Agriculture NPS

Substrate

Boulder	20 %
Gravel	40 %
Rubble/Cobble	30 %
Sand	10 %

**Landcover Summary - 2004 Data**

Total Area (ac)	5366	High Int. Dev. %	0.0	Water %	0.9	Non-vegetated %	0.1
		Med Int. Dev. %	0.2	Wetland %	9.8	Tilled Agriculture %	24.4
		Low Int. Dev. %	1.3	Upland Woody %	61.6	Grassland %	1.2
		Development %	1.5	Natural %	71.4	Human Altered %	27.7
						Impervious %	1.1

**Sample Comments**

LOTS OF LIME CRUST ON ROCKS; BLUEGREEN ALGAL CRUST. ABUNDANCE OF PONDWEED.



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**Aquatic Life Taxonomic Inventory Report**

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		Calculated: 3/31/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Turbellaria	0301	1.33	1.33		--	0.0	0.0
<i>Chaetogaster</i>	08020202002		2.67		--		0.1
<i>Chaetogaster diastrophus</i>	08020202002002	1.33			--	0.0	
<i>Chaetogaster limnaei</i>	08020202002004	1.33			--	0.0	
<i>Pteronarcys</i>	09020205023		2.67	0	SH		0.1
<i>Pteronarcys comstocki</i>	09020205023062	2.67			--	0.1	
Perlidae	09020209	4.00			--	0.1	
<i>Acroneuria</i>	09020209042	4.00	11.67	0	PR	0.1	0.4
<i>Acroneuria abnormis</i>	09020209042121	6.67		0	PR	0.2	
<i>Paragnetina</i>	09020209049		7.29	1	PR		0.2
<i>Paragnetina media</i>	09020209049151	6.67			--	0.2	
<i>Agnatina</i>	09020209050		27.71	2	PR		0.9
<i>Agnatina capitata</i>	09020209050152	25.33		2	PR	0.8	
Baetidae	09020401	52.00			--	1.6	
<i>Baetis</i>	09020401001	120.00	326.07	4	CG	3.7	10.1
<i>Baetis flavistriga</i>	09020401001004	44.00			--	1.4	
<i>Baetis intercalaris</i>	09020401001008	53.33			--	1.6	
<i>Baetis tricaudatus</i>	09020401001012	58.67			--	1.8	
<i>Plauditus</i>	09020401012	8.00	9.45		CG	0.2	0.3
<i>Diphetor</i>	09020401013		3.15		--		0.1
<i>Diphetor hageni</i>	09020401013001	2.67			--	0.1	
Heptageniidae	09020402	10.67			--	0.3	
<i>Epeorus</i>	09020402009	1.33	2.15	0	SC	0.0	0.1
<i>Maccaffertium</i>	09020402015	14.67	25.85	4	SC	0.5	0.8
<i>Maccaffertium luteum</i>	09020402015049	1.33			--	0.0	
<i>Isonychia</i>	09020404018	4.00	4.00	2	CF	0.1	0.1
Ephemerellidae	09020410	5.33			--	0.2	
<i>Ephemerella</i>	09020410035	90.67	95.63	1	CG	2.8	3.0
<i>Serratella</i>	09020410037		7.03	2	CG		0.2
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	5.33			--	0.2	
<i>Serratella serratoides</i>	09020410037124	1.33			--	0.0	
<i>Tricorythodes</i>	09020411038	5.33	5.33	4	CG	0.2	0.2
<i>Caenis</i>	09020412040	5.33	5.33	7	CG	0.2	0.2
Trichoptera	090206				--		
<i>Dolophilodes</i>	09020601001	16.00	16.00	0	CF	0.5	0.5
Hydropsychidae	09020604	557.33			--	17.2	
<i>Cheumatopsyche</i>	09020604015	81.33	112.78	5	CF	2.5	3.5
<i>Hydropsyche</i>	09020604016	900.00	1885.88	4	CF	27.8	58.2



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Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche bronta</i>	09020604016029	8.00			--	0.2	
<i>Hydropsyche morosa</i>	09020604016030	277.33			--	8.6	
<i>Hydropsyche slossonae</i>	09020604016031	65.33			--	2.0	
<i>Hydropsyche sparna</i>	09020604016032	53.33			--	1.6	
<i>Hydropsyche leonardi</i>	09020604016044	5.33			--	0.2	
<i>Hydropsyche scalaris group</i>	09020604016048	50.67			--	1.6	
<i>Rhyacophila</i>	09020605019	4.00	4.00	2	PR	0.1	0.1
<i>Glossosoma</i>	09020606020	4.00	4.00	0	SC	0.1	0.1
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.0	0.0
<i>Lepidostoma</i>	09020611064	12.00	12.00	1	SH	0.4	0.4
<i>Helicopsyche</i>	09020616070		16.00	3	SC		0.5
<i>Helicopsyche borealis</i>	09020616070137	16.00			--	0.5	
<i>Antocha</i>	09021001004	6.67	6.67	3	CG	0.2	0.2
Chironomidae	09021011	52.00			--	1.6	
<i>Rheopelopia</i>	09021011017		1.48		PR		0.0
<i>Rheopelopia acra group</i>	09021011017036	1.33			--	0.0	
<i>Potthastia</i>	09021011026		32.50	2	CG		1.0
<i>Potthastia gaedii</i>	09021011026045	29.33			--	0.9	
<i>Corynoneura</i>	09021011036	2.67	2.95	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037	2.67	73.87	7	SH	0.1	2.3
<i>Cricotopus bicinctus</i>	09021011037057	14.67			--	0.5	
<i>Cricotopus trifascia</i>	09021011037070	17.33			--	0.5	
<i>Cricotopus vierriensis</i>	09021011037071	5.33			--	0.2	
<i>Cricotopus politus</i>	09021011037077	6.67			--	0.2	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	20.00			SH	0.6	
<i>Eukiefferiella</i>	09021011041		5.91	8	CG		0.2
<i>Eukiefferiella devonica group</i>	09021011041083	5.33			CG	0.2	
<i>Nanocladius</i>	09021011049	2.67	2.95	3	CG	0.1	0.1
<i>Parametriocnemus</i>	09021011053	2.67	2.95	5	CG	0.1	0.1
<i>Thienemanniella</i>	09021011062	5.33	36.93	6	CG	0.2	1.1
<i>Thienemanniella xena</i>	09021011062110	16.00			--	0.5	
<i>Thienemanniella similis</i>	09021011062111	1.33			--	0.0	
<i>Thienemanniella lobapodema</i>	09021011062114	1.33			--	0.0	
<i>Thienemanniella taurocapita</i>	09021011062115	9.33			--	0.3	
<i>Tvetenia</i>	09021011065		67.96	5	CG		2.1
<i>Tvetenia vitracies</i>	09021011065113	32.00			--	1.0	
<i>Tvetenia paucunca</i>	09021011065114	29.33			--	0.9	
<i>Micropsectra</i>	09021011070	2.67	2.95	7	CG	0.1	0.1



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<i>Rheotanytarsus</i>	09021011072	58.67	65.00	6	CF	1.8	2.0
<i>Tanytarsus</i>	09021011076	6.67	7.39	6	CF	0.2	0.2
<i>Microtendipes</i>	09021011094		1.48	6	CF		0.0
<i>Microtendipes rydalensis group</i>	09021011094168	1.33			--	0.0	
<i>Polypedilum</i>	09021011102		228.99	6	SH		7.1
<i>Polypedilum aviceps</i>	09021011102181	124.00			--	3.8	
<i>Polypedilum flavum</i>	09021011102182	82.67			--	2.6	
<i>Simulium</i>	09021012047	6.67	80.00	4	CF	0.2	2.5
<i>Simulium jenningsi</i>	09021012047060	5.33			--	0.2	
<i>Simulium vittatum</i>	09021012047064	24.00			--	0.7	
<i>Simulium tuberosum</i>	09021012047067	10.67			--	0.3	
<i>Simulium jenningsi complex</i>	09021012047070	33.33			CF	1.0	
<i>Hemerodromia</i>	09021016057	10.67	10.67	3	PR	0.3	0.3
<i>Psephenus</i>	09021108058		16.00	4	SC		0.5
<i>Psephenus herricki</i>	09021108058028	16.00			--	0.5	
<i>Dubiraphia</i>	09021113064	1.33	1.33	6	--	0.0	0.0
Basommatophora	100102	1.33	1.33		--	0.0	0.0
<i>Physa</i>	10010202026	2.67	2.67		SC	0.1	0.1