



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

**Station Information**

<b>Station Number:</b> S-734	DEP Drainage: St. John
Waterbody: Prestile Stream - Station 734	HUC8: 01010005
Town: Easton	HUC8 Name: Big Presque Isle Stream-Meduxnek
Directions: 18 M DOWNSTREAM OF RICHARDSON ROAD, DOWNSTREAM OF CHRISTINA RESERVOIR	Latitude: 46 39 36.09 N
	Longitude: 67 53 53.96 W
	Stream Order: 2

**Sample Information**

<b>Log Number:</b> 1840	Type of Sample: ROCK BAG	Date Deployed: 7/22/2009
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/17/2009

**Classification Attainment**

<b>Statutory Class:</b> A	<b>Final Determination:</b> B	Date: 4/13/2010
Model Result with P>.6: B	<b>Reason for Determination:</b> Model	
Date Last Calculated: 4/9/2010	Comments:	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.39	Class A, B, or C	1.00
Class B	0.59	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.99	Class A	0.11
Class C or Non-Attainment	0.01	Class B or C or Non-Attainment	0.89

**Model Variables**

01 Total Mean Abundance	479.67	18 Relative Abundance Ephemeroptera	0.06
02 Generic Richness	57.00	19 EPT Generic Richness	20.00
03 Plecoptera Mean Abundance	9.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	21.58
04 Ephemeroptera Mean Abundance	29.33	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	3.18	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	45.44
06 Hilsenhoff Biotic Index	5.15	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	18.93
07 Relative Abundance - Chironomidae	0.54	28 EP Generic Richness/14	0.71
08 Relative Generic Richness Diptera	0.37	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	92.93		
11 <i>Cheumatopsyche</i> Abundance	42.40		
12 EPT Generic Richness/ Diptera Generic Richness	0.95		
13 Relative Abundance - Oligochaeta	0.02		
15 Perlidae Mean Abundance (Family Functional Group)	9.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.01		
17 Chironomini Abundance (Family Functional Group)	16.86		

<b>Five Most Dominant Taxa</b>		
Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	42.68
2	<i>Hydropsyche</i>	19.37
3	<i>Cheumatopsyche</i>	8.84
4	<i>Micropsectra</i>	4.43
5	<i>Maccaffertium</i>	3.95



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Waterbody: Prestile Stream - Station 734

Date Retrieved: 8/17/2009

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 20.3 deg C  
Dissolved Oxygen:  
Specific Conductance: 326 uS/cm  
Velocity: 40 cm/s  
pH: 7.77  
Wetted Width: 6.6 m  
Bankfull Width: 7.95 m  
Depth: 54 cm

**Waterbody Information - Retrieval**

Temperature: 25.4 deg C  
Dissolved Oxygen: 8.8 mg/l  
Specific Conductance: 276 uS/cm  
Velocity: 36 cm/s  
pH: 7.87  
Wetted Width: 7.9 m  
Bankfull Width: 9.5 m  
Depth: 55 cm

**Water Chemistry - 7/22/2009**

Soluble Reactive Phosphorus	48 ug/l	Nitrate+nitrite As N	0.11 mg/l
Total Phosphorus	0.12 mg/l	Total Kjeldahl Nitrogen	0.7 mg/l
Dissolved Organic Carbon	5.8 mg/l	Total Alkalinity	129 mg/l

**Summary of Habitat Characteristics**

Landuse Name

Canopy Cover

Terrain

Cultivated

Partly Open

Rolling

Upland Hardwood

Urban

Potential Stressor

Location

Substrate

Agricultural Runoff

Below Agriculture NPS

Boulder 20 %

Nutrients

Below Road Crossing

Gravel 35 %

Rubble/Cobble 40 %

Sand 5 %

**Landcover Summary - 2004 Data**

Total Area (ac)	6499	High Int. Dev. %	0.2	Water %	8.2	Non-vegetated %	1.6
		Med Int. Dev. %	0.2	Wetland %	22.8	Tilled Agriculture %	53.0
		Low Int. Dev. %	1.7	Upland Woody %	11.9	Grassland %	0.9
		Development %	2.1	Natural %	34.8	Human Altered %	57.0
						Impervious %	1.7

**Sample Comments**

1 LARGE CRAYFISH ESCAPED FROM BAG 2.



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Replicates: 3

Calculated: 4/9/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009		9.33		CG		1.9
<i>Nais behningi</i>	08020202009003	8.67			--	1.8	
<i>Nais communis</i>	08020202009005	0.67			--	0.1	
<i>Ophidonais</i>	08020202010		0.33		CG		0.1
<i>Ophidonais serpentina</i>	08020202010001	0.33			--	0.1	
<i>Orconectes</i>	09010301008		1.33		CG		0.3
<i>Orconectes virilis</i>	09010301008016	1.33			--	0.3	
Nemouridae	09020201	0.33	0.33		--	0.1	0.1
<i>Agnatina</i>	09020209050		9.00	2	PR		1.9
<i>Agnatina capitata</i>	09020209050152	9.00		2	PR	1.9	
<i>Boyeria</i>	09020301004		1.67	2	PR		0.3
<i>Boyeria grafiana</i>	09020301004011	1.67			--	0.3	
Calopterygidae	09020307	1.00	1.00		--	0.2	0.2
<i>Baetis</i>	09020401001	0.33	1.00	4	CG	0.1	0.2
<i>Baetis flavistriga</i>	09020401001004	0.67			--	0.1	
<i>Acerpenna</i>	09020401007	1.67	2.67	5	CG	0.3	0.6
<i>Acerpenna macdunnoughi</i>	09020401007001	1.00			--	0.2	
<i>Plauditus</i>	09020401012	0.33	0.33		CG	0.1	0.1
<i>Diphetor</i>	09020401013		0.67		--		0.1
<i>Diphetor hageni</i>	09020401013001	0.67			--	0.1	
Heptageniidae	09020402	0.67			--	0.1	
<i>Stenacron</i>	09020402014	2.00	2.07	7	SC	0.4	0.4
<i>Maccaffertium</i>	09020402015	12.00	18.93	4	SC	2.5	3.9
<i>Maccaffertium luteum</i>	09020402015049	1.33			--	0.3	
<i>Maccaffertium mediopunctatum</i>	09020402015050	5.00			--	1.0	
Leptophlebiidae	09020406	3.33	3.33		--	0.7	0.7
<i>Ephemerella</i>	09020410035	0.33	0.33	1	CG	0.1	0.1
<i>Chimarra</i>	09020601003	1.00	1.00	2	CF	0.2	0.2
<i>Psychomyia</i>	09020602005		0.33	2	CG		0.1
<i>Psychomyia flavida</i>	09020602005006	0.33			--	0.1	
<i>Nyctiophylax</i>	09020603009		1.00	5	PR		0.2
<i>Nyctiophylax moestus</i>	09020603009013	1.00			--	0.2	
<i>Polycentropus</i>	09020603010	2.00	2.00	6	PR	0.4	0.4
Hydropsychidae	09020604	7.67			--	1.6	
<i>Cheumatopsyche</i>	09020604015	40.00	42.40	5	CF	8.3	8.8
<i>Hydropsyche</i>	09020604016	18.00	92.93	4	CF	3.8	19.4
<i>Hydropsyche slossonae</i>	09020604016031	13.33			--	2.8	
<i>Hydropsyche sparna</i>	09020604016032	15.00			--	3.1	



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche depravata complex</i>	09020604016041	41.33			CF	8.6	
<i>Rhyacophila</i>	09020605019	2.67	2.67	2	PR	0.6	0.6
<i>Pycnopsyche</i>	09020610049	1.00	1.00	4	SH	0.2	0.2
<i>Mystacides</i>	09020618075	0.67	0.67	4	CG	0.1	0.1
<i>Oecetis</i>	09020618078	0.67	2.33	8	PR	0.1	0.5
<i>Oecetis persimilis</i>	09020618078157	1.67			--	0.3	
<i>Nigronia</i>	09020701003		1.67	0	PR		0.3
<i>Nigronia serricornis</i>	09020701003003	1.67			--	0.3	
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.1	0.1
Chironomidae	09021011	3.00			--	0.6	
<i>Nilotanyus</i>	09021011012		0.34	6	PR		0.1
<i>Nilotanyus fimbriatus</i>	09021011012027	0.33			--	0.1	
<i>Procladius</i>	09021011015	0.33	0.34	9	PR	0.1	0.1
<i>Trissopelopia</i>	09021011021		0.34		PR		0.1
<i>Trissopelopia ogemawi</i>	09021011021042	0.33			--	0.1	
<i>Pagastia</i>	09021011025		2.70	1	--		0.6
<i>Pagastia orthogonia</i>	09021011025001	2.67			--	0.6	
<i>Eukiefferiella</i>	09021011041		0.67	8	CG		0.1
<i>Eukiefferiella claripennis group</i>	09021011041075	0.67			--	0.1	
<i>Parametriocnemus</i>	09021011053	0.33	0.34	5	CG	0.1	0.1
<i>Rheocricotopus</i>	09021011057		3.04	6	CG		0.6
<i>Rheocricotopus robacki</i>	09021011057105	3.00			--	0.6	
<i>Thienemanniella</i>	09021011062	0.33	0.34	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		3.37	5	CG		0.7
<i>Tvetenia paucunca</i>	09021011065114	3.33			--	0.7	
<i>Micropsectra</i>	09021011070	21.00	21.25	7	CG	4.4	4.4
<i>Rheotanytarsus</i>	09021011072	202.33	204.72	6	CF	42.2	42.7
<i>Stempellinella</i>	09021011074		0.34	2	--		0.1
<i>Stempellinella fimbriatus</i>	09021011074002	0.33			--	0.1	
<i>Tanytarsus</i>	09021011076	3.00	3.04	6	CF	0.6	0.6
<i>Microtendipes</i>	09021011094		7.76	6	CF		1.6
<i>Microtendipes pedellus group</i>	09021011094166	7.00			--	1.5	
<i>Microtendipes rydalensis group</i>	09021011094168	0.67			--	0.1	
<i>Parachironomus</i>	09021011097		0.34	10	PR		0.1
<i>Parachironomus tenuicaudatus complex</i>	09021011097179	0.33			--	0.1	
<i>Polypedilum</i>	09021011102		7.08	6	SH		1.5
<i>Polypedilum aviceps</i>	09021011102181	5.67			--	1.2	



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<i>Polypedilum flavum</i>	09021011102182	1.33			--	0.3	
<i>Xenochironomus</i>	090210111108		1.69	0	PR		0.4
<i>Xenochironomus xenolabis</i>	090210111108200	1.67			--	0.3	
<i>Simulium</i>	09021012047		1.00	4	CF		0.2
<i>Simulium vittatum</i>	09021012047064	1.00			--	0.2	
<i>Atherix</i>	09021015055	4.33	4.33	2	PR	0.9	0.9
Empididae	09021016			6	--		
<i>Hemerodromia</i>	09021016057	5.33	5.33	3	PR	1.1	1.1
<i>Psephenus</i>	09021108058		2.33	4	SC		0.5
<i>Psephenus herricki</i>	09021108058028	2.33			--	0.5	
<i>Dubiraphia</i>	09021113064	2.33	2.33	6	--	0.5	0.5
<i>Macronychus</i>	09021113065		1.33	4	--		0.3
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.3	
<i>Optioservus</i>	09021113067	0.33	0.67	3	SC	0.1	0.1
<i>Optioservus fastiditus</i>	09021113067044	0.33			--	0.1	
<i>Stenelmis</i>	09021113070		0.67	5	SC		0.1
<i>Stenelmis crenata</i>	09021113070055	0.67			--	0.1	
Gastropoda	1001	0.67	0.67		--	0.1	0.1
<i>Valvata</i>	10010101001	0.33	0.33		SC	0.1	0.1
<i>Amnicola</i>	10010104013		0.67		SC		0.1
<i>Amnicola limosa</i>	10010104013018	0.67			--	0.1	
<i>Physa</i>	10010202026	0.33	0.33		SC	0.1	0.1
<i>Ferrissia</i>	10010204035		1.00		SC		0.2
<i>Ferrissia rivularis</i>	10010204035066	1.00			--	0.2	
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.1	0.1