



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

Station Information

Station Number: S-690 DEP Drainage: St. John
Waterbody: Prestile Stream - Station 690 HUC8: 01010005
Town: Westfield HUC8 Name: Big Presque Isle Stream-Meduxnek
Directions: UPSTREAM OF ELLIOT ROAD NEAR TOWN SALT SHED Latitude: 46 34 19.01 N
Longitude: 67 55 11.45 W
Stream Order: 4

Sample Information

Log Number: 1841 Type of Sample: ROCK BAG Date Deployed: 7/20/2009
Subsample Factor: X4 Replicates: 3 Date Retrieved: 8/17/2009

Classification Attainment

Statutory Class: A **Final Determination: A** Date: 4/1/2010
Model Result with P>.6: A **Reason for Determination: Model**
Date Last Calculated: 3/31/2010 Comments: Low A (.70). Shows some enrichment.

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.35	Class A, B, or C	1.00
Class B	0.63	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.70
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.30

Model Variables

01 Total Mean Abundance	1318.67	18 Relative Abundance Ephemeroptera	0.29	
02 Generic Richness	46.00	19 EPT Generic Richness	23.00	
03 Plecoptera Mean Abundance	40.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00	
04 Ephemeroptera Mean Abundance	377.33	23 Relative Generic Richness- Plecoptera	0.11	
05 Shannon-Wiener Generic Diversity	3.06	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	57.49	
06 Hilsenhoff Biotic Index	3.89	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	7.11	
07 Relative Abundance - Chironomidae	0.10	28 EP Generic Richness/14	1.14	
08 Relative Generic Richness Diptera	0.35	30 Presence of Class A Indicator Taxa/7	0.29	
09 <i>Hydropsyche</i> Abundance	660.65	Five Most Dominant Taxa		
11 <i>Cheumatopsyche</i> Abundance	26.02	Rank	Taxon Name	Percent
12 EPT Generic Richness/ Diptera	1.44	1	<i>Hydropsyche</i>	50.10
Generic Richness		2	<i>Baetis</i>	13.87
13 Relative Abundance - Oligochaeta	0.00	3	<i>Ephemerella</i>	6.25
15 Perlidae Mean Abundance	33.33	4	<i>Plauditus</i>	4.01
(Family Functional Group)		5	<i>Agnetina</i>	2.53
16 Tanypodinae Mean Abundance	12.88			
(Family Functional Group)				
17 Chironomini Abundance (Family	20.03			
Functional Group)				



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Waterbody: Prestile Stream - Station 690

Date Retrieved: 8/17/2009

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 19.7 deg C
Dissolved Oxygen: 9.6 mg/l
Specific Conductance: 320 uS/cm
Velocity:
pH: 8.36
Wetted Width: 12.4 m
Bankfull Width: 14.3 m
Depth: 49 cm

Waterbody Information - Retrieval

Temperature: 21.6 deg C
Dissolved Oxygen: 11 mg/l
Specific Conductance: 349 uS/cm
Velocity: 33 cm/s
pH: 8.5
Wetted Width: 11 m
Bankfull Width: 13.4 m
Depth: 58 cm

Water Chemistry - 7/20/2009

Soluble Reactive Phosphorus	18 ug/l	Nitrate+nitrite As N	0.44 mg/l
Total Phosphorus	0.041 mg/l	Total Kjeldahl Nitrogen	<0.1 mg/l
Dissolved Organic Carbon	4.5 mg/l	Total Alkalinity	163 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Cultivated	Open	Rolling
Marsh		
Swamp Conifer		
Upland Conifer		

<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Agricultural Runoff	Below Agriculture NPS	Bedrock	10 %
Nutrients	Below Road Crossing	Boulder	35 %
		Clay	5 %
		Rubble/Cobble	30 %
		Sand	15 %
		Silt	5 %

Landcover Summary - 2004 Data

Total Area (ac)	32413	High Int. Dev. %	0.1	Water %	1.8	Non-vegetated %	0.4
		Med Int. Dev. %	0.3	Wetland %	15.4	Tilled Agriculture %	46.5
		Low Int. Dev. %	2.0	Upland Woody %	28.9	Grassland %	4.3
		Development %	2.4	Natural %	44.4	Human Altered %	53.8
						Impervious %	1.9

Sample Comments

THICK COATING OF BROWN FILAMENTOUS ALGAE; ALSO LOTS OF FILAMENTOUS GREEN ALGAE.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-690

Waterbody: Prestile Stream - Station 690

Town: Westfield

Log Number: 1841

Subsample Factor: X4

Replicates: 3

Calculated: 3/31/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Paracapnia</i>	09020203018	1.33	1.33	1	SH	0.1	0.1
Leuctridae	09020204	1.33	1.33		--	0.1	0.1
<i>Pteronarcys</i>	09020205023		2.67	0	SH		0.2
<i>Pteronarcys biloba</i>	09020205023061	1.33			--	0.1	
<i>Pteronarcys comstocki</i>	09020205023062	1.33			--	0.1	
Perlodidae	09020207	1.33	1.33		--	0.1	0.1
<i>Agnetina</i>	09020209050		33.33	2	PR		2.5
<i>Agnetina capitata</i>	09020209050152	33.33		2	PR	2.5	
Baetidae	09020401	4.00			--	0.3	
<i>Baetis</i>	09020401001	13.33	182.86	4	CG	1.0	13.9
<i>Baetis flavistriga</i>	09020401001004	162.67			--	12.3	
<i>Baetis intercalaris</i>	09020401001008	1.33			--	0.1	
<i>Baetis tricaudatus</i>	09020401001012	2.67			--	0.2	
<i>Acerpenna</i>	09020401007	1.33	4.06	5	CG	0.1	0.3
<i>Acerpenna macdunnoughi</i>	09020401007001	2.67			--	0.2	
<i>Plauditus</i>	09020401012	52.00	52.83		CG	3.9	4.0
<i>Diphetor</i>	09020401013		16.25		--		1.2
<i>Diphetor hageni</i>	09020401013001	16.00			--	1.2	
Heptageniidae	09020402	2.67			--	0.2	
<i>Epeorus</i>	09020402009	1.33	1.78	0	SC	0.1	0.1
<i>Leucrocota</i>	09020402011	1.33	1.78	1	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	4.00	7.11	4	SC	0.3	0.5
<i>Maccaffertium luteum</i>	09020402015049	1.33			--	0.1	
Ephemerellidae	09020410	1.33			--	0.1	
<i>Ephemerella</i>	09020410035	81.33	82.42	1	CG	6.2	6.3
<i>Serratella</i>	09020410037		18.92	2	CG		1.4
<i>Serratella serratoides</i>	09020410037124	18.67			--	1.4	
<i>Tricorythodes</i>	09020411038	5.33	5.33	4	CG	0.4	0.4
<i>Caenis</i>	09020412040	4.00	4.00	7	CG	0.3	0.3
Corixidae	09020501	1.33	1.33		--	0.1	0.1
<i>Dolophilodes</i>	09020601001	4.00	4.00	0	CF	0.3	0.3
<i>Polycentropus</i>	09020603010	6.67	6.67	6	PR	0.5	0.5
Hydropsychidae	09020604	53.33			--	4.0	
<i>Cheumatopsyche</i>	09020604015	24.00	26.02	5	CF	1.8	2.0
<i>Hydropsyche</i>	09020604016	332.00	660.65	4	CF	25.2	50.1
<i>Hydropsyche bronta</i>	09020604016029	8.00			--	0.6	
<i>Hydropsyche morosa</i>	09020604016030	46.67			--	3.5	
<i>Hydropsyche slossonae</i>	09020604016031	177.33			--	13.4	



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		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche sparna</i>	09020604016032	33.33			--	2.5	
<i>Hydropsyche scalaris group</i>	09020604016048	12.00			--	0.9	
<i>Rhyacophila</i>	09020605019	10.67	10.67	2	PR	0.8	0.8
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.1	0.1
<i>Apatania</i>	09020610061	4.00	4.00		SC	0.3	0.3
<i>Antocha</i>	09021001004	1.33	1.33	3	CG	0.1	0.1
Chironomidae	09021011	9.33			--	0.7	
<i>Nilotanyus</i>	09021011012		2.86	6	PR		0.2
<i>Nilotanyus fimbriatus</i>	09021011012027	2.67			--	0.2	
<i>Rheopelopia</i>	09021011017	2.67	10.01		PR	0.2	0.8
<i>Rheopelopia acra group</i>	09021011017036	6.67			--	0.5	
<i>Cricotopus</i>	09021011037		25.75	7	SH		2.0
<i>Cricotopus bicinctus</i>	09021011037057	8.00			--	0.6	
<i>Cricotopus trifascia</i>	09021011037070	12.00			--	0.9	
<i>Cricotopus luciae</i>	09021011037073	1.33			--	0.1	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	2.67			SH	0.2	
<i>Eukiefferiella</i>	09021011041	4.00	5.72	8	CG	0.3	0.4
<i>Eukiefferiella devonica group</i>	09021011041083	1.33			CG	0.1	
<i>Nanocladius</i>	09021011049		1.43	3	CG		0.1
<i>Nanocladius spiniplenus</i>	09021011049090	1.33			--	0.1	
<i>Parametriocnemus</i>	09021011053	8.00	8.58	5	CG	0.6	0.7
<i>Thienemanniella</i>	09021011062		10.01	6	CG		0.8
<i>Thienemanniella taurocapita</i>	09021011062115	9.33			--	0.7	
<i>Tvetenia</i>	09021011065		25.75	5	CG		2.0
<i>Tvetenia paucunca</i>	09021011065114	24.00			--	1.8	
<i>Rheotanytarsus</i>	09021011072	18.67	20.03	6	CF	1.4	1.5
<i>Sublettea</i>	09021011075	1.33	1.43		--	0.1	0.1
<i>Tanytarsus</i>	09021011076	5.33	5.72	6	CF	0.4	0.4
<i>Microtendipes</i>	09021011094		2.86	6	CF		0.2
<i>Microtendipes rydalensis group</i>	09021011094168	2.67			--	0.2	
<i>Polypedilum</i>	09021011102		17.17	6	SH		1.3
<i>Polypedilum aviceps</i>	09021011102181	6.67			--	0.5	
<i>Polypedilum flavum</i>	09021011102182	9.33			--	0.7	
<i>Atherix</i>	09021015055	6.67	6.67	2	PR	0.5	0.5
<i>Hemerodromia</i>	09021016057	5.33	5.33	3	PR	0.4	0.4
<i>Psephenus</i>	09021108058		4.00	4	SC		0.3
<i>Psephenus herricki</i>	09021108058028	4.00			--	0.3	
<i>Dubiraphia</i>	09021113064	1.33	1.33	6	--	0.1	0.1



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<i>Optioservus</i>	09021113067		1.33	3	SC		0.1
<i>Optioservus fastiditus</i>	09021113067044	1.33			--	0.1	
<i>Promoresia</i>	09021113069		21.33		--		1.6
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.1	
<i>Promoresia tardella</i>	09021113069052	20.00			--	1.5	
Basommatophora	100102	2.67	2.67		--	0.2	0.2
<i>Physa</i>	10010202026	4.00	4.00		SC	0.3	0.3
<i>Helisoma</i>	10010203030		1.33		SC		0.1
<i>Helisoma trivolvis</i>	10010203030061	1.33			--	0.1	