



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

Station Information

Station Number: S-972
Waterbody: Sedgeunkedunk Stream - Station 972
Town: Orrington
Directions: ALONG BREWER LAKE ROAD, LARGE TURNOUT
AREA, TOWARD DOWNSTREAM SIDE OF TURNOUT,
WALK DOWNSTREAM PAST RESEARCH AREA
DEP Drainage: Penobscot
HUC8: 01020005
HUC8 Name: Lower Penobscot
Latitude: 44 45 19.02 N
Longitude: 68 46 10.77 W
Stream Order: 2

Sample Information

Log Number: 2031
Subsample Factor: X1
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/12/2011
Date Retrieved: 8/11/2011

Classification Attainment

Statutory Class: B
Model Result with P>.6: B
Date Last Calculated: 2/10/2012
Final Determination: B
Reason for Determination: Model
Date: 2/13/2012
Comments: Indeterminate for Class A (.43).

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.43	Class A, B, or C	1.00
Class B	0.53	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	0.43
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.57

Model Variables

01 Total Mean Abundance	324.67	18 Relative Abundance Ephemeroptera	0.15
02 Generic Richness	47.00	19 EPT Generic Richness	20.00
03 Plecoptera Mean Abundance	5.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	47.33	23 Relative Generic Richness- Plecoptera	0.04
05 Shannon-Wiener Generic Diversity	3.88	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	33.44
06 Hilsenhoff Biotic Index	4.97	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	43.99
07 Relative Abundance - Chironomidae	0.49	28 EP Generic Richness/14	0.86
08 Relative Generic Richness Diptera	0.34	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	43.00		
11 <i>Cheumatopsyche</i> Abundance	21.00		
12 EPT Generic Richness/ Diptera Generic Richness	1.25		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	5.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	11.09		
17 Chironomini Abundance (Family Functional Group)	20.17		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	27.85
2	<i>Hydropsyche</i>	13.24
3	<i>Maccaffertium</i>	11.91
4	<i>Cheumatopsyche</i>	6.47
5	<i>Polypedilum</i>	6.11



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	25.8 deg C
Dissolved Oxygen:	7.8 mg/l
Specific Conductance:	28 uS/cm
Velocity:	68 cm/s
pH:	6.1
Wetted Width:	6.2 m
Bankfull Width:	8.4 m
Depth:	35 cm

Waterbody Information - Retrieval

Temperature:	20.6 deg C
Dissolved Oxygen:	8.2 mg/l
Specific Conductance:	37 uS/cm
Velocity:	34 cm/s
pH:	7.26
Wetted Width:	5.7 m
Bankfull Width:	8.4 m
Depth:	35 cm

Water Chemistry - 8/11/2011

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	2 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.016 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	3.4 mg/l	Total Dissolved Solids	38 mg/l

Summary of Habitat Characteristics

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

Upland Conifer
Upland Hardwood

<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Above Town	Bedrock 30 %
		Boulder 5 %
		Gravel 5 %
		Rubble/Cobble 55 %
		Sand 5 %

Landcover Summary - 2004 Data

Sample Comments

CANOPY COVER: APPROXIMATELY 75% SHADED. 7/12/11: SOME SILTATION OBSERVED.



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Town: Orrington

Log Number: 2031

Subsample Factor: X1

Replicates: 3

Calculated: 2/10/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Erpobdella</i>	08030203002	0.33	0.33		--	0.1	0.1
Perlidae	09020209	0.33	0.33		--	0.1	0.1
<i>Acroneuria</i>	09020209042	1.00	5.33	0	PR	0.3	1.6
<i>Acroneuria abnormis</i>	09020209042121	0.33		0	PR	0.1	
<i>Acroneuria lycorias</i>	09020209042125	4.00			--	1.2	
<i>Boyeria</i>	09020301004		4.00	2	PR		1.2
<i>Boyeria vinosa</i>	09020301004012	4.00			--	1.2	
Gomphidae	09020302	0.33	0.33		--	0.1	0.1
Calopterygidae	09020307	5.33	5.33		--	1.6	1.6
<i>Calopteryx</i>	09020307043		1.33	5	PR		0.4
<i>Calopteryx maculata</i>	09020307043088	1.33			--	0.4	
<i>Baetis</i>	09020401001	0.67	3.00	4	CG	0.2	0.9
<i>Baetis brunneicolor</i>	09020401001003	0.33			--	0.1	
<i>Baetis intercalaris</i>	09020401001008	2.00			--	0.6	
<i>Acerpenna</i>	09020401007	1.00	1.33	5	CG	0.3	0.4
<i>Acerpenna macdunnoughi</i>	09020401007001	0.33			--	0.1	
<i>Procloeon</i>	09020401010	0.33	0.33		CG	0.1	0.1
<i>Iswaeon</i>	09020401015	0.67	0.67		--	0.2	0.2
Heptageniidae	09020402	0.33			--	0.1	
<i>Epeorus</i>	09020402009	1.00	1.01	0	SC	0.3	0.3
<i>Stenacron</i>	09020402014	0.33	0.34	7	SC	0.1	0.1
<i>Maccaffertium</i>	09020402015	33.33	38.66	4	SC	10.3	11.9
<i>Maccaffertium luteum</i>	09020402015049	0.33			--	0.1	
<i>Maccaffertium modestum</i>	09020402015051	4.67			--	1.4	
<i>Ephemerella</i>	09020410035	1.33	1.33	1	CG	0.4	0.4
<i>Serratella</i>	09020410037		0.33	2	CG		0.1
<i>Serratella (Teloganopsis) deficiens</i>	09020410037121	0.33			--	0.1	
<i>Caenis</i>	09020412040	0.33	0.33	7	CG	0.1	0.1
<i>Chimarra</i>	09020601003	2.33	2.67	2	CF	0.7	0.8
<i>Chimarra aterrima</i>	09020601003002	0.33			--	0.1	
<i>Neureclipsis</i>	09020603008	2.67	2.67	7	CF	0.8	0.8
<i>Cheumatopsyche</i>	09020604015	21.00	21.00	5	CF	6.5	6.5
<i>Hydropsyche</i>	09020604016	18.67	43.00	4	CF	5.7	13.2
<i>Hydropsyche morosa</i>	09020604016030	2.33			--	0.7	
<i>Hydropsyche sparna</i>	09020604016032	13.33			--	4.1	
<i>Hydropsyche depravata complex</i>	09020604016041	8.67			CF	2.7	
<i>Rhyacophila</i>	09020605019	1.00	1.67	2	PR	0.3	0.5
<i>Rhyacophila fuscula</i>	09020605019060	0.67			PR	0.2	



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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>Micrasema</i>	09020609044		0.33	2	SH		0.1
<i>Micrasema rusticum group</i>	09020609044100	0.33			--	0.1	
<i>Helicopsyche</i>	09020616070		0.67	3	SC		0.2
<i>Helicopsyche borealis</i>	09020616070137	0.67			--	0.2	
<i>Oecetis</i>	09020618078		13.33	8	PR		4.1
<i>Oecetis avara</i>	09020618078153	0.33			--	0.1	
<i>Oecetis persimilis</i>	09020618078157	13.00			--	4.0	
<i>Nigronia</i>	09020701003		6.00	0	PR		1.8
<i>Nigronia serricornis</i>	09020701003003	6.00			--	1.8	
Lepidoptera	090209	0.33	0.33		--	0.1	0.1
Chironomidae	09021011	1.33			--	0.4	
<i>Nilotanyus</i>	09021011012		1.34	6	PR		0.4
<i>Nilotanyus fimbriatus</i>	09021011012027	1.33			--	0.4	
<i>Pentaneura</i>	09021011014		1.34	6	PR		0.4
<i>Pentaneura inconspicua</i>	09021011014028	1.33			--	0.4	
<i>Rheopelopia</i>	09021011017		8.40		PR		2.6
<i>Rheopelopia acra group</i>	09021011017036	8.33			--	2.6	
<i>Brillia</i>	09021011033		1.01	5	SH		0.3
<i>Brillia flavifrons</i>	09021011033049	1.00			--	0.3	
<i>Corynoneura</i>	09021011036	0.33	0.34	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037	0.67	7.73	7	SH	0.2	2.4
<i>Cricotopus bicinctus</i>	09021011037057	6.33			--	2.0	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	0.67			SH	0.2	
<i>Eukiefferiella</i>	09021011041		0.34	8	CG		0.1
<i>Eukiefferiella devonica group</i>	09021011041083	0.33			CG	0.1	
<i>Nanocladius</i>	09021011049	1.67	4.37	3	CG	0.5	1.3
<i>Nanocladius branchicolus</i>	09021011049091	2.00			--	0.6	
<i>Nanocladius downesi</i>	09021011049092	0.67			--	0.2	
<i>Parametriocnemus</i>	09021011053			5	CG		
<i>Rheocricotopus</i>	09021011057		4.03	6	CG		1.2
<i>Rheocricotopus robacki</i>	09021011057105	4.00			--	1.2	
<i>Synorthocladius</i>	09021011061			2	CG		
<i>Tvetenia</i>	09021011065		12.44	5	CG		3.8
<i>Tvetenia vitracies</i>	09021011065113	8.67			--	2.7	
<i>Tvetenia paucunca</i>	09021011065114	3.67			--	1.1	
<i>Rheotanytarsus</i>	09021011072	89.67	90.43	6	CF	27.6	27.9
<i>Sublettea</i>	09021011075	1.33	1.34		--	0.4	0.4
<i>Tanytarsus</i>	09021011076	4.67	4.71	6	CF	1.4	1.4



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<i>Microtendipes</i>	09021011094		0.34	6	CF		0.1
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.1	
<i>Polypedilum</i>	09021011102		19.83	6	SH		6.1
<i>Polypedilum aviceps</i>	09021011102181	19.00			--	5.9	
<i>Polypedilum flavum</i>	09021011102182	0.67			--	0.2	
<i>Simulium</i>	09021012047	1.00	2.33	4	CF	0.3	0.7
<i>Simulium (Eusimulium)</i>	09021012047052	0.33			--	0.1	
<i>Simulium tuberosum</i>	09021012047067	0.33			--	0.1	
<i>Simulium venustum/verecundum complex</i>	09021012047072	0.67			CF	0.2	
<i>Psephenus</i>	09021108058		0.33	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	0.33			--	0.1	
<i>Macronychus</i>	09021113065		4.00	4	--		1.2
<i>Macronychus glabratus</i>	09021113065040	4.00			--	1.2	
<i>Promoresia</i>	09021113069		3.67		--		1.1
<i>Promoresia tardella</i>	09021113069052	3.67			--	1.1	
<i>Amnicola</i>	10010104013	0.33	0.33		SC	0.1	0.1