



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

Station Information

Station Number: S-299	DEP Drainage: Kennebec
Waterbody: Sebasticook River - Station 299	HUC8: 01030003
Town: Benton	HUC8 Name: Lower Kennebec
Directions: 0.18 KM BELOW DAM	Latitude: 44 34 40.76 N
	Longitude: 69 33 24.59 W
	Stream Order: 4

Sample Information

Log Number: 1654	Type of Sample: ROCK BASKET	Date Deployed: 7/17/2007
Subsample Factor: X8	Replicates: 3	Date Retrieved: 8/14/2007

Classification Attainment

Statutory Class: C	Final Determination: B	Date: 6/12/2008
Model Result with P>.6: B	Reason for Determination: Model	
Date Last Calculated: 6/6/2008	Comments: Indeterminant for Class A (.41).	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.46	Class A, B, or C	1.00
Class B	0.53	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.41
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.59

Model Variables

01 Total Mean Abundance	2446.67	18 Relative Abundance Ephemeroptera	0.07
02 Generic Richness	51.00	19 EPT Generic Richness	21.00
03 Plecoptera Mean Abundance	41.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	37.99
04 Ephemeroptera Mean Abundance	161.33	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.49	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	577.06
06 Hilsenhoff Biotic Index	4.29	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	57.33
07 Relative Abundance - Chironomidae	0.16	28 EP Generic Richness/14	0.57
08 Relative Generic Richness Diptera	0.27	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	196.54		
11 <i>Cheumatopsyche</i> Abundance	495.44		
12 EPT Generic Richness/ Diptera Generic Richness	1.50		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	41.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	56.29		
17 Chironomini Abundance (Family Functional Group)	147.75		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Cheumatopsyche</i>	20.25
2	<i>Chimarra</i>	13.41
3	<i>Macrostemum</i>	8.28
4	<i>Hydropsyche</i>	8.03
5	<i>Amnicola</i>	4.80



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

Station Number: S-299
Log Number: 1654

Town: Benton
Waterbody: Sebasticook River - Station 299

Date Deployed: 7/17/2007
Date Retrieved: 8/14/2007

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 24.6 deg C
Dissolved Oxygen: 10.5 mg/l
Specific Conductance: 94 uS/cm
Velocity: 61 cm/s
pH: 8.05
Wetted Width: 50 m
Bankfull Width: 87 m
Depth: 65 cm

Waterbody Information - Retrieval

Temperature: 24.5 deg C
Dissolved Oxygen: 8.2 mg/l
Specific Conductance: 80 uS/cm
Velocity: 25 cm/s
pH: 8.37
Wetted Width: 50 m
Bankfull Width: 87 m
Depth: 70 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.027 mg/l
Total Kjeldahl Nitrogen	0.9 mg/l	Total Suspended Solids	4.2 mg/l
Dissolved Organic Carbon	5.6 mg/l	Total Dissolved Solids	54 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Hardwood	Canopy Open	Rolling Terrain	
<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Regulated Flows Stressor	Below Dam	Boulder	30 %
		Gravel	20 %
		Rubble/Cobble	50 %

Landcover Summary - 2004 Data

Sample Comments

WATER VERY GREEN - POSSIBLE BLOOM OF SOME KIND



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-299 Waterbody: Sebasticook River - Station 299 Town: Benton
Log Number: 1654 Subsample Factor: X8 Replicates: 3 Calculated: 6/6/2008

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	16.00	16.00		PR	0.7	0.7
<i>Girardia</i>	03010102002	12.00	12.00		--	0.5	0.5
<i>Desserobdella</i>	08030101003		8.00		--		0.3
<i>Desserobdella phalera</i>	08030101003001	8.00			--	0.3	
<i>Hyalella</i>	09010203006		8.00	8	CG		0.3
<i>Hyalella azteca</i>	09010203006011	8.00			--	0.3	
<i>Acroneuria</i>	09020209042		41.33	0	PR		1.7
<i>Acroneuria abnormis</i>	09020209042121	12.00		0	PR	0.5	
<i>Acroneuria lycorias</i>	09020209042125	8.00			--	0.3	
<i>Acroneuria mela</i>	09020209042126	21.33			--	0.9	
<i>Boyeria</i>	09020301004		8.00	2	PR		0.3
<i>Boyeria vinosa</i>	09020301004012	8.00			--	0.3	
<i>Neurocordulia</i>	09020305026		8.00	2	PR		0.3
<i>Neurocordulia michaeli</i>	09020305026054	8.00			--	0.3	
<i>Acerpenna</i>	09020401007		8.00	5	CG		0.3
<i>Acerpenna pygmaea</i>	09020401007011	8.00			--	0.3	
<i>Leucrocuta</i>	09020402011	10.67	10.67	1	SC	0.4	0.4
<i>Maccaffertium</i>	09020402015	8.00	16.00	4	SC	0.3	0.7
<i>Maccaffertium modestum</i>	09020402015051	8.00			--	0.3	
<i>Isonychia</i>	09020404018	16.00	16.00	2	CF	0.7	0.7
Ephemerellidae	09020410	8.00			--	0.3	
<i>Ephemerella</i>	09020410035	8.00	9.07	1	CG	0.3	0.4
<i>Serratella</i>	09020410037		58.93	2	CG		2.4
<i>Serratella deficiens</i>	09020410037121	52.00			--	2.1	
<i>Tricorythodes</i>	09020411038	42.67	42.67	4	CG	1.7	1.7
<i>Chimarra</i>	09020601003	328.00	328.00	2	CF	13.4	13.4
Polycentropodidae	09020603	8.00			--	0.3	
<i>Cernotina</i>	09020603006	8.00	8.84		PR	0.3	0.4
<i>Neureclipsis</i>	09020603008	56.00	61.89	7	CF	2.3	2.5
<i>Polycentropus</i>	09020603010	12.00	13.26	6	PR	0.5	0.5
Hydropsychidae	09020604	312.00			--	12.8	
<i>Cheumatopsyche</i>	09020604015	322.67	495.44	5	CF	13.2	20.2
<i>Hydropsyche</i>	09020604016	24.00	196.54	4	CF	1.0	8.0
<i>Hydropsyche morosa</i>	09020604016030	29.33			--	1.2	
<i>Hydropsyche leonardi</i>	09020604016044	8.00			--	0.3	
<i>Hydropsyche phalerata</i>	09020604016047	26.67			--	1.1	
<i>Hydropsyche scalaris-group</i>	09020604016048	8.00			--	0.3	
<i>Hydropsyche simulans</i>	09020604016049	32.00			--	1.3	
<i>Macrostemum</i>	09020604018		202.68	3	CF		8.3
<i>Macrostemum zebratum</i>	09020604018054	132.00			--	5.4	
<i>Hydroptila</i>	09020607026	74.67	74.67	6	P	3.1	3.1
<i>Micrasema</i>	09020609044		20.00	2	SH		0.8



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-299 Waterbody: Sebasticook River - Station 299 Town: Benton
Log Number: 1654 Subsample Factor: X8 Replicates: 3 Calculated: 6/6/2008

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Micrasema rusticum-grp.</i>	09020609044100	8.00			--	0.3	
<i>Micrasema wataga</i>	09020609044101	12.00			--	0.5	
<i>Lepidostoma</i>	09020611064	32.00	32.00	1	SH	1.3	1.3
<i>Nectopsyche</i>	09020618074		16.00	3	SH		0.7
<i>Nectopsyche exquisita</i>	09020618074147	16.00			--	0.7	
<i>Triaenodes</i>	09020618077	8.00	8.00	6	SH	0.3	0.3
<i>Oecetis</i>	09020618078	24.00	52.00	8	PR	1.0	2.1
<i>Oecetis persimilis</i>	09020618078157	28.00			--	1.1	
Chironomidae	09021011	20.00			--	0.8	
<i>Ablabesmyia</i>	09021011001		16.89	8	PR		0.7
<i>Ablabesmyia mallochi</i>	09021011001004	16.00			--	0.7	
<i>Nilotanytus</i>	09021011012		8.44	6	PR		0.3
<i>Nilotanytus fimbriatus</i>	09021011012027	8.00			--	0.3	
<i>Pentaneura</i>	09021011014		30.96	6	PR		1.3
<i>Pentaneura inconspicua</i>	09021011014028	29.33			--	1.2	
<i>Corynoneura</i>	09021011036	8.00	8.44	7	CG	0.3	0.3
<i>Cricotopus</i>	09021011037		30.96	7	SH		1.3
<i>Cricotopus bicinctus</i>	09021011037057	8.00			--	0.3	
<i>Cricotopus vierriensis</i>	09021011037071	21.33			--	0.9	
<i>Orthocladius</i>	09021011050		16.89	6	CG		0.7
<i>Orthocladius carlatus</i>	09021011050093	16.00			--	0.7	
<i>Tvetenia</i>	09021011065		8.44	5	CG		0.3
<i>Tvetenia vitracies</i>	09021011065113	8.00			--	0.3	
<i>Rheotanytarsus</i>	09021011072	74.67	78.80	6	CF	3.1	3.2
<i>Tanytarsus</i>	09021011076	8.00	33.77	6	CF	0.3	1.4
<i>Tanytarsus glabrescens group sp. 1</i>	09021011076137	24.00			CF	1.0	
<i>Dicrotendipes</i>	09021011085		8.44	8	CG		0.3
<i>Dicrotendipes neomodestus</i>	09021011085152	8.00			--	0.3	
<i>Microtendipes</i>	09021011094		67.54	6	CF		2.8
<i>Microtendipes rydalensis-grp.</i>	09021011094168	64.00			--	2.6	
<i>Parachironomus</i>	09021011097		29.55	10	PR		1.2
<i>Parachironomus frequens</i>	09021011097172	12.00			--	0.5	
<i>Parachironomus tenuicaudatus-com</i>	09021011097179	16.00			--	0.7	
<i>Polypedilum</i>	09021011102		42.21	6	SH		1.7
<i>Polypedilum flavum</i>	09021011102182	40.00			--	1.6	
<i>Hemerodromia</i>	09021016057	16.00	16.00	3	PR	0.7	0.7
<i>Dineutus</i>	09021104032	8.00	8.00	2	--	0.3	0.3
<i>Microcyloopus</i>	09021113066	18.67	18.67	3	--	0.8	0.8
<i>Optioservus</i>	09021113067	8.00	8.00	3	SC	0.3	0.3
<i>Promoresia</i>	09021113069		16.00		--		0.7
<i>Promoresia elegans</i>	09021113069051	8.00			--	0.3	
<i>Promoresia tardella</i>	09021113069052	8.00			--	0.3	



**Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Taxonomic Inventory Report**

Station Number: S-299

Waterbody: Sebasticook River - Station 299

Town: Benton

Log Number: 1654

Subsample Factor: X8

Replicates: 3

Calculated: 6/6/2008

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Stenelmis</i>	09021113070		16.00	5	SC		0.7
<i>Stenelmis concinna</i>	09021113070054	8.00			--	0.3	
<i>Stenelmis crenata</i>	09021113070055	8.00			--	0.3	
<i>Hydrodroma</i>	09030113001	8.00	8.00		--	0.3	0.3
<i>Amnicola</i>	10010104013		117.33		SC		4.8
<i>Amnicola limosa</i>	10010104013018	117.33			--	4.8	
Basommatophora	100102	16.00	16.00		--	0.7	0.7
<i>Physa</i>	10010202026	53.33	53.33		SC	2.2	2.2
<i>Planorbella</i>	10010203032		8.00		SC		0.3
<i>Planorbella campanulata</i>	10010203032060	8.00			--	0.3	
<i>Musculium</i>	10020201001		8.00		CF		0.3
<i>Musculium securis</i>	10020201001003	8.00			CF	0.3	