



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

Station Information

Station Number: S-425	DEP Drainage: Kennebec
Waterbody: Mill Stream - Station 425	HUC8: 01030003
Town: Embden	HUC8 Name: Lower Kennebec
Directions: 150M UPSTREAM OF HATCHERY DISCHARGE	Latitude: 44 54 40.17 N
	Longitude: 69 56 20.49 W
	Stream Order: 3

Sample Information

Log Number: 1558	Type of Sample: ROCK BASKET	Date Deployed: 7/14/2006
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/11/2006

Classification Attainment

Statutory Class: B	Final Determination: B	Date:
Model Result with P>.6: B	Reason for Determination: Model	
Date Last Calculated: 5/3/2007	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.06	Class A, B, or C	1.00
Class B	0.71	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.65	Class A	0.01
Class C or Non-Attainment	0.35	Class B or C or Non-Attainment	0.99

Model Variables

01 Total Mean Abundance	2236.00	18 Relative Abundance Ephemeroptera	0.02
02 Generic Richness	30.00	19 EPT Generic Richness	13.00
03 Plecoptera Mean Abundance	69.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	38.67	23 Relative Generic Richness- Plecoptera	0.10
05 Shannon-Wiener Generic Diversity	2.71	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	210.97
06 Hilsenhoff Biotic Index	4.61	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	30.46
07 Relative Abundance - Chironomidae	0.04	28 EP Generic Richness/14	0.43
08 Relative Generic Richness Diptera	0.40	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	827.13		
11 <i>Cheumatopsyche</i> Abundance	205.64		
12 EPT Generic Richness/ Diptera Generic Richness	1.08		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	68.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	4.00		
17 Chironomini Abundance (Family Functional Group)	20.00		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	36.99
2	<i>Neureclipsis</i>	20.87
3	<i>Simulium</i>	18.90
4	<i>Cheumatopsyche</i>	9.20
5	<i>Chimarra</i>	2.50



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Station Number: S-425
Log Number: 1558

Town: Embden
Waterbody: Mill Stream - Station 425

Date Deployed: 7/14/2006
Date Retrieved: 8/11/2006

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
Taxonomist: LOTIC INC.

Waterbody Information - Deployment

Temperature: 26.3 deg C
Dissolved Oxygen: 8.3 mg/l
Specific Conductance: 20 uS/cm
Velocity: 77 cm/s
pH:
Wetted Width: 7.1 m
Bankfull Width:
Depth: 45 cm

Waterbody Information - Retrieval

Temperature: 23.4 deg C
Dissolved Oxygen: 8.1 mg/l
Specific Conductance: 24 uS/cm
Velocity: 95 cm/s
pH: 7.02
Wetted Width: 7.1 m
Bankfull Width:
Depth: 47 cm

Water Chemistry - Retrieval

Summary of Habitat Characteristics

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

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>	
	Above Fish Hatchery	Boulder	25 %
		Gravel	5 %
		Rubble/Cobble	70 %

Landcover Summary - 2004 Data

Sample Comments



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

Station Number: S-425
Log Number: 1558

Waterbody: Mill Stream - Station 425
Subsample Factor: X4

Town: Embden
Calculated: 5/3/2007

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hyalella</i>	09010203006	1.33	1.33	8	CG	0.1	0.1
Perlodidae	09020207	1.33	1.33		--	0.1	0.1
Perlidae	09020209	6.67			--	0.3	
<i>Acroneuria</i>	09020209042	22.67	25.13	0	PR	1.0	1.1
<i>Paragnetina</i>	09020209049	38.67	42.87	1	PR	1.7	1.9
<i>Boyeria</i>	09020301004	2.67	2.67	2	PR	0.1	0.1
<i>Baetis</i>	09020401001	20.00	21.33	4	CG	0.9	1.0
<i>Baetis flavistriga</i>	09020401001004	1.33			--	0.1	
<i>Epeorus</i>	09020402009	12.00	12.00	0	CG	0.5	0.5
<i>Maccaffertium</i>	09020402015	5.33	5.33	4	SC	0.2	0.2
<i>Chimarra</i>	09020601003	56.00	56.00	2	CF	2.5	2.5
<i>Neureclipsis</i>	09020603008	466.67	466.67	7	CF	20.9	20.9
Hydropsychidae	09020604	133.33			--	6.0	
<i>Cheumatopsyche</i>	09020604015	180.00	205.64	5	CF	8.1	9.2
<i>Hydropsyche</i>	09020604016	724.00	827.13	4	CF	32.4	37.0
<i>Macrostemum</i>	09020604018	32.00	36.56	3	CF	1.4	1.6
<i>Rhyacophila</i>	09020605019	1.33	1.33	2	PR	0.1	0.1
<i>Oecetis</i>	09020618078	9.33	9.33	8	PR	0.4	0.4
<i>Pentaneura</i>	09021011014	4.00	4.00	6	PR	0.2	0.2
<i>Cardiocladius</i>	09021011034		24.00	5	PR		1.1
<i>Cardiocladius obscurus</i>	09021011034053	24.00			--	1.1	
<i>Cricotopus</i>	09021011037		5.33	7	SH		0.2
<i>Cricotopus bicinctus</i>	09021011037057	5.33			--	0.2	
<i>Eukiefferiella</i>	09021011041	1.33	1.33	8	CG	0.1	0.1
<i>Nanocladius</i>	09021011049	1.33	1.33	3	CG	0.1	0.1
<i>Orthocladius</i>	09021011050	1.33	1.33	6	CG	0.1	0.1
<i>Tvetenia</i>	09021011065		21.33	5	CG		1.0
<i>Tvetenia vitracies</i>	09021011065113	21.33			--	1.0	
<i>Paratanytarsus</i>	09021011071	5.33	5.33	6	--	0.2	0.2
<i>Polypedilum</i>	09021011102		20.00	6	SH		0.9
<i>Polypedilum flavum</i>	09021011102182	20.00			--	0.9	
<i>Cnephia</i>	09021012046	1.33	1.33	0	CF	0.1	0.1
<i>Simulium</i>	09021012047	422.67	422.67	4	CF	18.9	18.9
Empididae	09021016	8.00	8.00	6	--	0.4	0.4
<i>Coptotomus</i>	09021103023	2.67	2.67		PR	0.1	0.1
<i>Psephenus</i>	09021108058	1.33	1.33	4	SC	0.1	0.1
Sphaeriidae	10020201	1.33	1.33		CF	0.1	0.1