



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

Station Information

Station Number: S-829
Waterbody: Kenduskeag Stream - Station 829
Town: Bangor
Directions: AT PARK AT CORNER OF HARLOW AND VALLEY AVE.
DEP Drainage: Penobscot
HUC8: 01020005
HUC8 Name: Lower Penobscot
Latitude: 44 48 36.53 N
Longitude: 68 46 42.87 W
Stream Order: 4

Sample Information

Log Number: 2027
Subsample Factor: X4
Type of Sample: ROCK BAG
Replicates: 3
Date Deployed: 7/8/2011
Date Retrieved: 8/9/2011

Classification Attainment

Statutory Class: C
Model Result with P>.6: B
Date Last Calculated: 6/29/2012
Final Determination: B
Reason for Determination: Model
Comments:

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.13	Class A, B, or C	1.00
Class B	0.74	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	0.89	Class A	0.02
Class C or Non-Attainment	0.11	Class B or C or Non-Attainment	0.98

Model Variables

01 Total Mean Abundance	1753.33	18 Relative Abundance Ephemeroptera	0.05
02 Generic Richness	57.00	19 EPT Generic Richness	19.00
03 Plecoptera Mean Abundance	5.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	12.79
04 Ephemeroptera Mean Abundance	86.67	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	4.21	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	506.53
06 Hilsenhoff Biotic Index	5.77	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	5.33
07 Relative Abundance - Chironomidae	0.52	28 EP Generic Richness/14	0.50
08 Relative Generic Richness Diptera	0.39	30 Presence of Class A Indicator Taxa/7	0.14
09 <i>Hydropsyche</i> Abundance	28.00		
11 <i>Cheumatopsyche</i> Abundance	56.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.86		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	5.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	88.12		
17 Chironomini Abundance (Family Functional Group)	306.99		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tanytarsus</i>	22.13
2	<i>Amnicola</i>	12.93
3	<i>Polypedilum</i>	10.70
4	<i>Stenelmis</i>	7.76
5	<i>Tricorythodes</i>	4.41



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

Station Number: S-829	Town: Bangor	Date Deployed: 7/8/2011
Log Number: 2027	Waterbody: Kenduskeag Stream - Station 829	Date Retrieved: 8/9/2011

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature:	22.8 deg C
Dissolved Oxygen:	8.5 mg/l
Specific Conductance:	138 uS/cm
Velocity:	29 cm/s
pH:	7.88
Wetted Width:	38 m
Bankfull Width:	58 m
Depth:	50 cm

Waterbody Information - Retrieval

Temperature:	25.2 deg C
Dissolved Oxygen:	9.9 mg/l
Specific Conductance:	192 uS/cm
Velocity:	20 cm/s
pH:	
Wetted Width:	29 m
Bankfull Width:	58 m
Depth:	33 cm

Water Chemistry - 8/9/2011

Ammonia As Nitrogen	0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.013 mg/l
Total Kjeldahl Nitrogen	0.4 mg/l	Total Suspended Solids	<2 mg/l
Dissolved Organic Carbon	3.8 mg/l	Total Dissolved Solids	140 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Open	Rolling
Urban		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Urban Runoff	Below Urban NPS	Boulder 10 %
		Gravel 30 %
		Rubble/Cobble 40 %
		Sand 20 %

Landcover Summary - 2004 Data

Total Area (ac)	121748	High Int. Dev. %	1.0	Water %	0.4	Non-vegetated %	0.2
		Med Int. Dev. %	1.1	Wetland %	8.2	Tilled Agriculture %	9.6
		Low Int. Dev. %	4.5	Upland Woody %	66.2	Grassland %	7.2
		Development %	6.6	Natural %	74.5	Human Altered %	25.0
						Impervious %	4.3

Sample Comments

7/8/11: POTAMOGETON ON STREAM BOTTOM, FISH OBSERVED.
MULTI-METER WOULD NOT MEASURE PH AT RETRIEVAL. 8/9/11: FISH, LARGE PATCHES OF ALGAE, AND MACROPHYTES OBSERVED.



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

Station Number: S-829

Waterbody: Kenduskeag Stream - Station 829

Town: Bangor

Log Number: 2027

Subsample Factor: X4

Replicates: 3

Calculated: 6/29/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Dugesidae	03010102	2.67	2.67		--	0.2	0.2
<i>Girardia</i>	03010102002		58.67		--		3.3
<i>Girardia tigrina</i>	03010102002001	58.67			--	3.3	
<i>Hyaella</i>	09010203006		17.33	8	CG		1.0
<i>Hyaella azteca</i>	09010203006011	17.33			--	1.0	
<i>Acroneuria</i>	09020209042		5.33	0	PR		0.3
<i>Acroneuria lycorias</i>	09020209042125	5.33			--	0.3	
Coenagrionidae	09020309	16.00	16.00		--	0.9	0.9
<i>Argia</i>	09020309048	12.00	12.00	7	PR	0.7	0.7
<i>Baetis</i>	09020401001		1.33	4	CG		0.1
<i>Baetis intercalaris</i>	09020401001008	1.33			--	0.1	
<i>Acerpenna</i>	09020401007	2.67	2.67	5	CG	0.2	0.2
<i>Procladius</i>	09020401010	1.33	1.33		CG	0.1	0.1
<i>Stenacron</i>	09020402014	1.33	1.33	7	SC	0.1	0.1
<i>Tricorythodes</i>	09020411038	77.33	77.33	4	CG	4.4	4.4
<i>Caenis</i>	09020412040	2.67	2.67	7	CG	0.2	0.2
Trichoptera	090206				--		
Polycentropodidae	09020603				--		
<i>Neureclipsis</i>	09020603008	12.00	12.00	7	CF	0.7	0.7
<i>Polycentropus</i>	09020603010	2.67	2.67	6	PR	0.2	0.2
<i>Cheumatopsyche</i>	09020604015	56.00	56.00	5	CF	3.2	3.2
<i>Hydropsyche</i>	09020604016		28.00	4	CF		1.6
<i>Hydropsyche bronta</i>	09020604016029	17.33			--	1.0	
<i>Hydropsyche placoda</i>	09020604016059	10.67			--	0.6	
<i>Hydroptila</i>	09020607026	10.67	10.67	6	P	0.6	0.6
<i>Apatania</i>	09020610061	1.33	1.33		SC	0.1	0.1
<i>Lepidostoma</i>	09020611064	5.33	5.33	1	SH	0.3	0.3
<i>Psilotreta</i>	09020614068		4.00	0	SC		0.2
<i>Psilotreta indecisa</i>	09020614068132	4.00			--	0.2	
<i>Helicopsyche</i>	09020616070		4.00	3	SC		0.2
<i>Helicopsyche borealis</i>	09020616070137	4.00			--	0.2	
Leptoceridae	09020618				--		
<i>Ceraclea</i>	09020618072	6.67	6.67	3	CG	0.4	0.4
<i>Triaenodes</i>	09020618077	1.33	1.33	6	SH	0.1	0.1
<i>Oecetis</i>	09020618078	16.00	56.00	8	PR	0.9	3.2
<i>Oecetis avara</i>	09020618078153	21.33			--	1.2	
<i>Oecetis inconspicua complex</i>	09020618078156	5.33			--	0.3	
<i>Oecetis persimilis</i>	09020618078157	13.33			--	0.8	



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

Station Number: S-829

Waterbody: Kenduskeag Stream - Station 829

Town: Bangor

Log Number: 2027

Subsample Factor: X4

Replicates: 3

Calculated: 6/29/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Bezzia/palpomyia</i>	09021010043	1.33	1.33	6	PR	0.1	0.1
Chironomidae	09021011	56.00			--	3.2	
<i>Ablabesmyia</i>	09021011001	2.67	34.11	8	PR	0.2	1.9
<i>Ablabesmyia mallochi</i>	09021011001004	29.33			--	1.7	
<i>Conchapelopia</i>	09021011004	5.33	5.68	6	PR	0.3	0.3
<i>Labrundinia</i>	09021011008		2.84	7	PR		0.2
<i>Labrundinia pilosella</i>	09021011008022	2.67			--	0.2	
<i>Meropelopia</i>	09021011010	2.67	2.84		--	0.2	0.2
<i>Nilotanyus</i>	09021011012		4.26	6	PR		0.2
<i>Nilotanyus fimbriatus</i>	09021011012027	4.00			--	0.2	
<i>Paramerina</i>	09021011013	4.00	4.26		--	0.2	0.2
<i>Pentaneura</i>	09021011014		34.11	6	PR		1.9
<i>Pentaneura inconspicua</i>	09021011014028	32.00			--	1.8	
<i>Cricotopus</i>	09021011037		28.42	7	SH		1.6
<i>Cricotopus bicinctus</i>	09021011037057	8.00			--	0.5	
<i>Cricotopus vierriensis</i>	09021011037071	12.00			--	0.7	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	6.67			SH	0.4	
<i>Orthocladus</i>	09021011050		68.22	6	CG		3.9
<i>Orthocladus carlatus</i>	09021011050093	64.00			--	3.7	
<i>Parakiefferiella</i>	09021011052	2.67	2.84		CG	0.2	0.2
<i>Tvetenia</i>	09021011065		1.42	5	CG		0.1
<i>Tvetenia paucunca</i>	09021011065114	1.33			--	0.1	
<i>Rheotanytarsus</i>	09021011072	6.67	7.11	6	CF	0.4	0.4
<i>Stempellinella</i>	09021011074			2	--		
<i>Tanytarsus</i>	09021011076	364.00	388.00	6	CF	20.8	22.1
<i>Dicrotendipes</i>	09021011085	12.00	12.79	8	CG	0.7	0.7
<i>Microtendipes</i>	09021011094		71.06	6	CF		4.1
<i>Microtendipes pedellus group</i>	09021011094166	18.67			--	1.1	
<i>Microtendipes rydalensis group</i>	09021011094168	48.00			--	2.7	
<i>Paratendipes</i>	09021011100		27.00	8	CG		1.5
<i>Paratendipes albimanus group</i>	09021011100176	25.33			--	1.4	
<i>Phaenopsectra</i>	09021011101		8.53	7	SC		0.5
<i>Phaenopsectra obediens</i>	09021011101182	8.00			SC	0.5	
<i>Polypedilum</i>	09021011102		187.60	6	SH		10.7
<i>Polypedilum flavum</i>	09021011102182	8.00			--	0.5	
<i>Polypedilum scalaenum group</i>	09021011102189	168.00			--	9.6	
<i>Hayesomyia</i>	09021011112		14.21		--		0.8
<i>Hayesomyia senata</i>	09021011112001	13.33			--	0.8	



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

Station Number: S-829

Waterbody: Kenduskeag Stream - Station 829

Town: Bangor

Log Number: 2027

Subsample Factor: X4

Replicates: 3

Calculated: 6/29/2012

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Helopelopia</i>	09021011114			6	PR		
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.1	0.1
<i>Hydrellia</i>	09021021076	1.33	1.33	3	SH	0.1	0.1
<i>Dubiraphia</i>	09021113064	21.33	21.33	6	--	1.2	1.2
<i>Microcylloepus</i>	09021113066	46.67	46.67	3	--	2.7	2.7
<i>Optioservus</i>	09021113067	1.33	2.67	3	SC	0.1	0.2
<i>Optioservus trivittatus</i>	09021113067048	1.33			--	0.1	
<i>Promoresia</i>	09021113069		4.00		--		0.2
<i>Promoresia elegans</i>	09021113069051	4.00			--	0.2	
<i>Stenelmis</i>	09021113070	88.00	136.00	5	SC	5.0	7.8
<i>Stenelmis crenata</i>	09021113070055	45.33			--	2.6	
<i>Stenelmis musgravei</i>	09021113070060	2.67			--	0.2	
<i>Lebertia</i>	09030105001	1.33	1.33		--	0.1	0.1
Hydrobiidae	10010104	12.00	12.00		--	0.7	0.7
<i>Amnicola</i>	10010104013		226.67		SC		12.9
<i>Amnicola limosa</i>	10010104013018	226.67			--	12.9	
Basommatophora	100102	1.33	1.33		--	0.1	0.1
<i>Physa</i>	10010202026	1.33	1.33		SC	0.1	0.1
<i>Helisoma</i>	10010203030		2.67		SC		0.2
<i>Helisoma anceps</i>	10010203030058	2.67			--	0.2	
<i>Pisidium</i>	10020201002	1.33	1.33		CF	0.1	0.1