



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

Station Information

<b>Station Number:</b> S-729	DEP Drainage: St. John
Waterbody: Violette Stream - Station 729	HUC8: 01010001
Town: Van Buren	HUC8 Name: St. John River at Bay of Fundy
Directions: ~40 M DOWNSTREAM OF RT 1	Latitude: 47 9 33.12 N
	Longitude: 67 56 18.58 W
	Stream Order: 3

Sample Information

<b>Log Number:</b> 1854	Type of Sample: ROCK BAG	Date Deployed: 7/21/2009
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/18/2009

Classification Attainment

<b>Statutory Class:</b> B	<b>Final Determination:</b> A	Date: 4/13/2010
Model Result with P>.6: A	<b>Reason for Determination:</b> Model	
Date Last Calculated: 4/9/2010	Comments: Low A (.74).	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.38	Class A, B, or C	1.00
Class B	0.59	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.74
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.26

Model Variables

01 Total Mean Abundance	594.67	18 Relative Abundance Ephemeroptera	0.08
02 Generic Richness	44.00	19 EPT Generic Richness	22.00
03 Plecoptera Mean Abundance	16.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	7.05
04 Ephemeroptera Mean Abundance	48.00	23 Relative Generic Richness- Plecoptera	0.07
05 Shannon-Wiener Generic Diversity	3.46	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	49.15
06 Hilsenhoff Biotic Index	4.50	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	15.41
07 Relative Abundance - Chironomidae	0.37	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.39	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	263.92		
11 <i>Cheumatopsyche</i> Abundance	5.41		
12 EPT Generic Richness/ Diptera	1.29		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance	8.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	2.82		
(Family Functional Group)			
17 Chironomini Abundance (Family	70.54		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	44.38
2	<i>Polypedilum</i>	10.91
3	<i>Rheotanytarsus</i>	5.46
4	<i>Cricotopus</i>	4.98
5	<i>Tvetenia</i>	4.98



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

**Station Number: S-729**

Town: Van Buren

Date Deployed: 7/21/2009

**Log Number: 1854**

Waterbody: Violette Stream - Station 729

Date Retrieved: 8/18/2009

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

**Waterbody Information - Deployment**

Temperature: 20.5 deg C  
Dissolved Oxygen: 9.3 mg/l  
Specific Conductance: 7 uS/cm  
Velocity: 51 cm/s  
pH: 7  
Wetted Width: 15.8 m  
Bankfull Width: 15.8 m  
Depth: 63 cm

**Waterbody Information - Retrieval**

Temperature: 25.5 deg C  
Dissolved Oxygen: 10.1 mg/l  
Specific Conductance: 312 uS/cm  
Velocity: 21 cm/s  
pH: 8.18  
Wetted Width: 16 m  
Bankfull Width: 16 m  
Depth: 51 cm

**Water Chemistry - 7/21/2009**

Soluble Reactive Phosphorus	1 ug/l	Nitrate+nitrite As N	0.05 mg/l
Total Phosphorus	0.017 mg/l	Total Kjeldahl Nitrogen	0.3 mg/l
Dissolved Organic Carbon	8.5 mg/l	Total Alkalinity	49 mg/l

**Summary of Habitat Characteristics**

Landuse Name

Canopy Cover

Terrain

Cultivated

Partly Open

Rolling

Upland Hardwood

Urban

Potential Stressor

Location

Substrate

Agricultural Runoff

Below Agriculture NPS

Boulder 40 %

Urban Runoff

Below Road Crossing

Gravel 15 %

Below Urban NPS

Rubble/Cobble 20 %

Sand 5 %

**Landcover Summary - 2004 Data**

Total Area (ac)	14404	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.3
		Med Int. Dev. %	0.3	Wetland %	9.4	Tilled Agriculture %	13.5
		Low Int. Dev. %	2.3	Upland Woody %	71.0	Grassland %	2.5
		Development %	2.6	Natural %	81.6	Human Altered %	18.4
						Impervious %	0.6

**Sample Comments**



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

**Station Number: S-729**

Waterbody: Violette Stream - Station 729

Town: Van Buren

**Log Number: 1854**

Subsample Factor: X4

Replicates: 3

Calculated: 4/9/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Chaetogaster</i>	08020202002		1.33		--		0.2
<i>Chaetogaster diastrophus</i>	08020202002002	1.33			--	0.2	
<i>Isoperla</i>	09020207026	5.33	5.33	2	PR	0.9	0.9
<i>Sweltsa</i>	09020208040	2.67	2.67		PR	0.4	0.4
<i>Acroneuria</i>	09020209042	8.00	8.00	0	PR	1.3	1.3
Baetidae	09020401	4.00			--	0.7	
<i>Baetis</i>	09020401001		15.69	4	CG		2.6
<i>Baetis flavistriga</i>	09020401001004	12.00			--	2.0	
<i>Baetis intercalaris</i>	09020401001008	1.33			--	0.2	
<i>Acerpenna</i>	09020401007	2.67	3.14	5	CG	0.4	0.5
<i>Plautidius</i>	09020401012	5.33	6.27		CG	0.9	1.1
<i>Dipheter</i>	09020401013		1.57		--		0.3
<i>Dipheter hageni</i>	09020401013001	1.33			--	0.2	
Heptageniidae	09020402	1.33			--	0.2	
<i>Epeorus</i>	09020402009	1.33	1.48	0	SC	0.2	0.2
<i>Leucrocota</i>	09020402011	2.67	2.96	1	SC	0.4	0.5
<i>Stenacron</i>	09020402014	1.33	1.48	7	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	4.00	7.41	4	SC	0.7	1.2
<i>Maccaffertium luteum</i>	09020402015049	1.33			--	0.2	
<i>Maccaffertium mediopunctatum</i>	09020402015050	1.33			--	0.2	
<i>Isonychia</i>	09020404018	1.33	1.33	2	CF	0.2	0.2
Leptophlebiidae	09020406	2.67	2.67		--	0.4	0.4
<i>Ephemerella</i>	09020410035		1.33	1	CG		0.2
<i>Ephemerella invaria</i>	09020410035107	1.33			--	0.2	
<i>Serratella</i>	09020410037		1.33	2	CG		0.2
<i>Serratella serratoidea</i>	09020410037124	1.33			--	0.2	
<i>Caenis</i>	09020412040	1.33	1.33	7	CG	0.2	0.2
Philopotamidae	09020601	1.33			--	0.2	
<i>Dolophilodes</i>	09020601001	10.67	11.85	0	CF	1.8	2.0
<i>Chimarra</i>	09020601003	1.33	1.48	2	CF	0.2	0.2
<i>Polycentropus</i>	09020603010	1.33	1.33	6	PR	0.2	0.2
Hydropsychidae	09020604	4.00			--	0.7	
<i>Cheumatopsyche</i>	09020604015	5.33	5.41	5	CF	0.9	0.9
<i>Hydropsyche</i>	09020604016	93.33	263.92	4	CF	15.7	44.4
<i>Hydropsyche morosa</i>	09020604016030	6.67			--	1.1	
<i>Hydropsyche slossonae</i>	09020604016031	150.67			--	25.3	
<i>Hydropsyche sparna</i>	09020604016032	9.33			--	1.6	
<i>Rhyacophila</i>	09020605019		5.33	2	PR		0.9



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

**Station Number: S-729**

Waterbody: Violette Stream - Station 729

Town: Van Buren

**Log Number: 1854**

Subsample Factor: X4

Replicates: 3

Calculated: 4/9/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Rhyacophila fuscula</i>	09020605019060	5.33			PR	0.9	
<i>Nigronia</i>	09020701003		1.33	0	PR		0.2
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.2	
<i>Hexatoma</i>	09021001008	1.33	1.33	2	PR	0.2	0.2
Chironomidae	09021011	12.00			--	2.0	
<i>Conchapelopia</i>	09021011004	1.33	1.41	6	PR	0.2	0.2
<i>Rheopelopia</i>	09021011017		1.41		PR		0.2
<i>Rheopelopia acra group</i>	09021011017036	1.33			--	0.2	
<i>Potthastia</i>	09021011026		8.46	2	CG		1.4
<i>Potthastia gaedii</i>	09021011026045	8.00			--	1.3	
<i>Cricotopus</i>	09021011037		29.63	7	SH		5.0
<i>Cricotopus bicinctus</i>	09021011037057	25.33			--	4.3	
<i>Cricotopus vierriensis</i>	09021011037071	1.33			--	0.2	
<i>Cricotopus luciae</i>	09021011037073	1.33			--	0.2	
<i>Orthocladius</i>	09021011050		1.41	6	CG		0.2
<i>Orthocladius annectens</i>	09021011050092	1.33			--	0.2	
<i>Parakiefferiella</i>	09021011052		2.82		CG		0.5
<i>Parakiefferiella sp. E</i>	09021011052001	2.67			--	0.4	
<i>Parametriocnemus</i>	09021011053	9.33	9.88	5	CG	1.6	1.7
<i>Tvetenia</i>	09021011065		29.63	5	CG		5.0
<i>Tvetenia vitracies</i>	09021011065113	2.67			--	0.4	
<i>Tvetenia paucunca</i>	09021011065114	25.33			--	4.3	
<i>Micropsectra</i>	09021011070	6.67	7.05	7	CG	1.1	1.2
<i>Paratanytarsus</i>	09021011071	5.33	5.64	6	--	0.9	0.9
<i>Rheotanytarsus</i>	09021011072	30.67	32.45	6	CF	5.2	5.5
<i>Stempellinella</i>	09021011074		1.41	2	--		0.2
<i>Stempellinella leptocelloides</i>	09021011074001	1.33			--	0.2	
<i>Tanytarsus</i>	09021011076	13.33	14.11	6	CF	2.2	2.4
<i>Microtendipes</i>	09021011094		5.64	6	CF		0.9
<i>Microtendipes pedellus group</i>	09021011094166	2.67			--	0.4	
<i>Microtendipes rydalensis group</i>	09021011094168	2.67			--	0.4	
<i>Polypedilum</i>	09021011102		64.89	6	SH		10.9
<i>Polypedilum aviceps</i>	09021011102181	56.00			--	9.4	
<i>Polypedilum flavum</i>	09021011102182	5.33			--	0.9	
<i>Helopelopia</i>	09021011114	2.67	2.82	6	PR	0.4	0.5
<i>Simulium tuberosum</i>	09021012047067				--		
<i>Dubiraphia</i>	09021113064	4.00	4.00	6	--	0.7	0.7
<i>Promoresia</i>	09021113069		9.33		--		1.6



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

**Station Number: S-729**

Waterbody: Violette Stream - Station 729

Town: Van Buren

**Log Number: 1854**

Subsample Factor: X4

Replicates: 3

Calculated: 4/9/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Promoresia elegans</i>	09021113069051	1.33			--	0.2	
<i>Promoresia tardella</i>	09021113069052	8.00			--	1.3	
<i>Stenelmis</i>	09021113070	5.33	5.33	5	SC	0.9	0.9