



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

Station Information

Station Number: S-727 DEP Drainage: St. John
Waterbody: Perley Brook - Station 727 HUC8: 01010003
Town: Fort Kent HUC8 Name: Fish River
Directions: DOWNSTREAM OF RT 161 AND UPSTREAM OF CONFLUENCE WITH FISH RIVER Latitude: 47 14 27.4 N
Longitude: 68 34 47.01 W
Stream Order: 4

Sample Information

Log Number: 1851 Type of Sample: ROCK BAG Date Deployed: 7/21/2009
Subsample Factor: X1 Replicates: 3 Date Retrieved: 8/18/2009

Classification Attainment

Statutory Class: B **Final Determination:** A Date: 4/27/2010
Model Result with P>.6: A **Reason for Determination:** Model
Date Last Calculated: 4/27/2010 **Comments:**

Model Probabilities

First Stage Model		C or Better Model	
Class A	0.85	Class A, B, or C	1.00
Class B	0.15	Non-Attainment	0.00
B or Better Model		A Model	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	659.33	18 Relative Abundance Ephemeroptera	0.23
02 Generic Richness	76.00	19 EPT Generic Richness	32.00
03 Plecoptera Mean Abundance	32.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	49.39
04 Ephemeroptera Mean Abundance	150.33	23 Relative Generic Richness- Plecoptera	0.13
05 Shannon-Wiener Generic Diversity	4.79	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	55.40
06 Hilsenhoff Biotic Index	4.50	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	1.53
07 Relative Abundance - Chironomidae	0.42	28 EP Generic Richness/14	1.36
08 Relative Generic Richness Diptera	0.43	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	55.33		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera	0.97		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.02		
15 Perlidae Mean Abundance	6.00		
(Family Functional Group)			
16 Tanypodinae Mean Abundance	0.67		
(Family Functional Group)			
17 Chironomini Abundance (Family	32.04		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Acentrella</i>	9.28
2	<i>Baetis</i>	8.52
3	<i>Hydropsyche</i>	8.39
4	<i>Micropsectra</i>	7.49
5	<i>Cricotopus</i>	7.04



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Waterbody: Perley Brook - Station 727

Date Retrieved: 8/18/2009

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 20.6 deg C
Dissolved Oxygen: 8.3 mg/l
Specific Conductance: 118 uS/cm
Velocity:
pH: 7.29
Wetted Width: 8.9 m
Bankfull Width: 13.5 m
Depth:

Waterbody Information - Retrieval

Temperature: 22.1 deg C
Dissolved Oxygen: 9.7 mg/l
Specific Conductance: 151 uS/cm
Velocity: 120 cm/s
pH: 8.48
Wetted Width: 10.5 m
Bankfull Width: 13 m
Depth: 26 cm

Water Chemistry - 7/21/2009

Soluble Reactive Phosphorus	6 ug/l	Nitrate+nitrite As N	0.35 mg/l
Total Phosphorus	0.021 mg/l	Total Kjeldahl Nitrogen	0.3 mg/l
Dissolved Organic Carbon	4 mg/l	Total Alkalinity	55 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Open	Rolling
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
	Below Road Crossing	Rubble/Cobble 90 %
		Sand 10 %

Landcover Summary - 2004 Data

Total Area (ac)	12379	High Int. Dev. %	0.1	Water %	0.4	Non-vegetated %	0.1
		Med Int. Dev. %	0.6	Wetland %	4.0	Tilled Agriculture %	33.6
		Low Int. Dev. %	2.3	Upland Woody %	53.1	Grassland %	5.6
		Development %	3.0	Natural %	57.2	Human Altered %	42.3
						Impervious %	2.0

Sample Comments



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Replicates: 3

Calculated: 4/27/2010

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Lumbriculus</i>	08020101002		0.33		CG		0.1
<i>Lumbriculus variegatus</i>	08020101002001	0.33			--	0.1	
<i>Stylodrilus</i>	08020101004		11.33		--		1.7
<i>Stylodrilus heringianus</i>	08020101004001	11.33			--	1.7	
Enchytraeidae	08020201	1.67	1.67		--	0.3	0.3
<i>Nais</i>	08020202009		2.33		CG		0.4
<i>Nais bretscheri</i>	08020202009004	0.33			--	0.1	
<i>Nais communis</i>	08020202009005	2.00			--	0.3	
Lumbricidae	08020205	0.67	0.67		--	0.1	0.1
Nemouridae	09020201	0.33	0.33		--	0.1	0.1
Capniidae	09020203	0.33	0.33		--	0.1	0.1
<i>Paracapnia</i>	09020203018	1.00	1.00	1	SH	0.2	0.2
<i>Leuctra</i>	09020204020	5.67	5.67	0	SH	0.9	0.9
Perlodidae	09020207	3.00	3.00		--	0.5	0.5
<i>Isoperla</i>	09020207026	1.00	1.00	2	PR	0.2	0.2
<i>Haploperla</i>	09020208037	10.33	10.33	1	PR	1.6	1.6
<i>Sweltsa</i>	09020208040	4.33	4.33		PR	0.7	0.7
Perlidae	09020209	4.33			--	0.7	
<i>Acroneuria</i>	09020209042	0.33	1.20	0	PR	0.1	0.2
<i>Agnetina</i>	09020209050		4.80	2	PR		0.7
<i>Agnetina capitata</i>	09020209050152	1.33		2	PR	0.2	
Baetidae	09020401	18.67			--	2.8	
<i>Baetis</i>	09020401001	10.33	56.18	4	CG	1.6	8.5
<i>Baetis flavistriga</i>	09020401001004	2.00			--	0.3	
<i>Baetis intercalaris</i>	09020401001008	2.33			--	0.4	
<i>Baetis tricaudatus</i>	09020401001012	33.67			--	5.1	
<i>Acentrella</i>	09020401008		61.22	3	CG		9.3
<i>Acentrella turbida</i>	09020401008021	52.67			--	8.0	
<i>Plauditus</i>	09020401012	14.00	16.27		CG	2.1	2.5
Heptageniidae	09020402	3.67	3.67		--	0.6	0.6
<i>Maccaffertium</i>	09020402015	0.33	0.33	4	SC	0.1	0.1
<i>Isonychia</i>	09020404018	0.33	0.33	2	CF	0.1	0.1
Leptophlebiidae	09020406	6.67	6.67		--	1.0	1.0
<i>Ephemerella</i>	09020410035	5.33	5.33	1	CG	0.8	0.8
<i>Serratella</i>	09020410037		0.33	2	CG		0.1
<i>Serratella serratoides</i>	09020410037124	0.33			--	0.1	
<i>Dolophilodes</i>	09020601001	0.67	0.67	0	CF	0.1	0.1
<i>Chimarra</i>	09020601003	3.67	3.67	2	CF	0.6	0.6



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		Actual	Adjusted			Actual	Adjusted
Polycentropodidae	09020603	0.33	0.33		--	0.1	0.1
<i>Cernotina</i>	09020603006	0.33	0.33		PR	0.1	0.1
Hydropsychidae	09020604	1.33	1.33		--	0.2	0.2
<i>Hydropsyche</i>	09020604016	17.33	55.33	4	CF	2.6	8.4
<i>Hydropsyche morosa</i>	09020604016030	6.33			--	1.0	
<i>Hydropsyche slossonae</i>	09020604016031	10.33			--	1.6	
<i>Hydropsyche sparna</i>	09020604016032	21.33			--	3.2	
<i>Rhyacophila</i>	09020605019	0.67	1.67	2	PR	0.1	0.3
<i>Rhyacophila acutiloba</i>	09020605019056	0.33			PR	0.1	
<i>Rhyacophila fuscula</i>	09020605019060	0.67			PR	0.1	
<i>Protoptila</i>	09020606022	0.33	0.33	1	SC	0.1	0.1
<i>Hydroptila</i>	09020607026	1.00	1.00	6	P	0.2	0.2
<i>Micrasema</i>	09020609044		15.33	2	SH		2.3
<i>Micrasema wataga</i>	09020609044101	15.33			--	2.3	
Limnephilidae	09020610				--		
<i>Apatania</i>	09020610061	0.33	0.33		SC	0.1	0.1
<i>Lepidostoma</i>	09020611064	7.67	7.67	1	SH	1.2	1.2
<i>Psilotreta</i>	09020614068	0.67	0.67	0	SC	0.1	0.1
<i>Nigronia</i>	09020701003		1.00	0	PR		0.2
<i>Nigronia serricornis</i>	09020701003003	1.00			--	0.2	
<i>Tipula</i>	09021001002	0.67	0.67	4	SH	0.1	0.1
<i>Antocha</i>	09021001004	2.00	2.00	3	CG	0.3	0.3
<i>Dicranota</i>	09021001005	12.67	12.67	3	PR	1.9	1.9
<i>Hexatoma</i>	09021001008	3.67	3.67	2	PR	0.6	0.6
<i>Limnophila</i>	09021001009	0.33	0.33	3	PR	0.1	0.1
<i>Bezzia/palpomyia</i>	09021010043	1.00	1.00	6	PR	0.2	0.2
Chironomidae	09021011	0.33			--	0.1	
<i>Ablabesmyia</i>	09021011001		0.33	8	PR		0.1
<i>Ablabesmyia mallochii</i>	09021011001004	0.33			--	0.1	
<i>Rheopelopia</i>	09021011017		0.33		PR		0.1
<i>Rheopelopia acra group</i>	09021011017036	0.33			--	0.1	
<i>Pagastia</i>	09021011025		0.33	1	--		0.1
<i>Pagastia orthogonia</i>	09021011025001	0.33			--	0.1	
<i>Potthastia</i>	09021011026		0.67	2	CG		0.1
<i>Potthastia gaedii</i>	09021011026045	0.67			--	0.1	
<i>Brillia</i>	09021011033	2.00	2.00	5	SH	0.3	0.3
<i>Cardiocladius</i>	09021011034		6.01	5	PR		0.9
<i>Cardiocladius obscurus</i>	09021011034053	6.00			--	0.9	



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<i>Corynoneura</i>	09021011036	4.33	4.34	7	CG	0.7	0.7
<i>Cricotopus</i>	09021011037	2.33	46.39	7	SH	0.4	7.0
<i>Cricotopus bicinctus</i>	09021011037057	9.00			--	1.4	
<i>Cricotopus luciae</i>	09021011037073	28.00			--	4.2	
<i>Cricotopus annulator complex</i>	09021011037074	7.00			--	1.1	
<i>Eukiefferiella</i>	09021011041		11.01	8	CG		1.7
<i>Eukiefferiella brehmi group</i>	09021011041073	8.67			--	1.3	
<i>Eukiefferiella pseudomontana group</i>	09021011041080	2.33			--	0.4	
<i>Orthocladius</i>	09021011050	7.33	9.34	6	CG	1.1	1.4
<i>Orthocladius rivicola</i>	09021011050101	2.00			--	0.3	
<i>Parakiefferiella</i>	09021011052		0.33		CG		0.1
<i>Parakiefferiella sp. E</i>	09021011052001	0.33			--	0.1	
<i>Parametriocnemus</i>	09021011053	29.67	29.70	5	CG	4.5	4.5
<i>Rheocricotopus</i>	09021011057		0.33	6	CG		0.1
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.1	
<i>Thienemanniella</i>	09021011062	0.33	0.67	6	CG	0.1	0.1
<i>Thienemanniella xena</i>	09021011062110	0.33			--	0.1	
<i>Tvetenia</i>	09021011065		37.71	5	CG		5.7
<i>Tvetenia paucunca</i>	09021011065114	37.67			--	5.7	
<i>Cladotanytarsus</i>	09021011068		0.67	7	CG		0.1
<i>Cladotanytarsus sp. A Epler</i>	09021011068121	0.67			--	0.1	
<i>Micropsectra</i>	09021011070	49.33	49.39	7	CG	7.5	7.5
<i>Rheotanytarsus</i>	09021011072	29.67	29.70	6	CF	4.5	4.5
<i>Stempellina</i>	09021011073			2	CG		
<i>Stempellinella</i>	09021011074		4.34	2	--		0.7
<i>Stempellinella leptocelloides</i>	09021011074001	2.00			--	0.3	
<i>Stempellinella fimbriata</i>	09021011074002	2.33			--	0.4	
<i>Tanytarsus</i>	09021011076	8.67	8.68	6	CF	1.3	1.3
<i>Microtendipes</i>	09021011094		0.67	6	CF		0.1
<i>Microtendipes pedellus group</i>	09021011094166	0.67			--	0.1	
<i>Polypedilum</i>	09021011102		30.04	6	SH		4.6
<i>Polypedilum aviceps</i>	09021011102181	27.33			--	4.1	
<i>Polypedilum scalaenum group</i>	09021011102189	0.33			--	0.1	
<i>Polypedilum angulum</i>	09021011102198	2.33			--	0.4	
<i>Tribelos</i>	09021011107		1.33	5	CG		0.2
<i>Tribelos fuscicorne</i>	09021011107200	1.33			CG	0.2	
<i>Heleniella</i>	09021011126	1.33	1.33		--	0.2	0.2
<i>Simulium</i>	09021012047	1.33	35.33	4	CF	0.2	5.4



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<i>Simulium jenningsi</i>	09021012047060				--		
<i>Simulium tuberosum</i>	09021012047067	32.67			--	5.0	
<i>Simulium jenningsi complex</i>	09021012047070	0.67			CF	0.1	
<i>Simulium venustum/verecundum complex</i>	09021012047072	0.67			CF	0.1	
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1
<i>Neoplasta</i>	09021016064	1.00	1.00		PR	0.2	0.2
<i>Optioservus</i>	09021113067	29.33	31.67	3	SC	4.4	4.8
<i>Optioservus fastiditus</i>	09021113067044	2.33			--	0.4	
<i>Oulimnius</i>	09021113068		0.67		--		0.1
<i>Oulimnius latiusculus</i>	09021113068049	0.67			--	0.1	
<i>Promoresia</i>	09021113069		1.67		--		0.3
<i>Promoresia tardella</i>	09021113069052	1.67			--	0.3	
<i>Ferrissia</i>	10010204035		4.00		SC		0.6
<i>Ferrissia rivularis</i>	10010204035066	4.00			--	0.6	
<i>Pisidium</i>	10020201002	0.33	0.33		CF	0.1	0.1