



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

Station Information

Station Number:	S-1016	River Basin:	St. John
Waterbody:	Alder Brook - Station 1016	HUC8 Name:	Aroostook
Town:	Presque Isle	Latitude:	46° 40' 13.479" N
Directions:	30 M DOWNSTREAM OF RTE 1. ACCESS BESIDE RED BUILDING ACROSS FROM UMPI 1ST ENTRANCE.	Longitude:	68° 0' 47.821" W
		Stream Order:	1

Sample Information

Log Number:	2280	Type of Sample:	ROCK BAG	Date Deployed:	7/22/2014
Subsample Factor:	X1	Replicates:	3	Date Retrieved:	8/20/2014

Classification Attainment

Statutory Class:	B	Final Determination:	C	Date:	3/12/2015
Model Result with $P \geq 0.6$:	C	Reason for Determination:	Model		
Date Last Calculated:	3/12/2015	Comments:			

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.03	Class C	0.87	Class A, B, or C	1.00
Class B	0.07	NA	0.03	Non-Attainment	0.00
<u>B or Better Model</u>				<u>A Model</u>	
Class A or B			0.00	Class A	0.00
Class C or Non-Attainment			1.00	Class B or C or Non-Attainment	1.00

Model Variables

01 Total Mean Abundance	192.67	18 Relative Abundance Ephemeroptera	0.03
02 Generic Richness	64.00	19 EPT Generic Richness	13.00
03 Plecoptera Mean Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	23.62
04 Ephemeroptera Mean Abundance	6.00	23 Relative Generic Richness- Plecoptera	0.00
05 Shannon-Wiener Generic Diversity	4.82	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	22.52
06 Hilsenhoff Biotic Index	5.26	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	0.00
07 Relative Abundance - Chironomidae	0.61	28 EP Generic Richness/14	0.14
08 Relative Generic Richness Diptera	0.52	30 Presence of Class A Indicator Taxa/7	0.00
09 <i>Hydropsyche</i> Abundance	1.67		
11 <i>Cheumatopsyche</i> Abundance	1.00		
12 EPT Generic Richness/ Diptera	0.39		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.02		
15 Perlidae Mean Abundance (Family	0.00		
Functional Group)			
16 Tanypodinae Mean Abundance	11.84		
(Family Functional Group)			
17 Chironomini Abundance (Family	4.66		
Functional Group)			

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Parametriocnemus</i>	12.29
2	<i>Micropsectra</i>	11.91
3	<i>Physa</i>	9.34
4	<i>Tanytarsus</i>	6.89
5	<i>Sperchon</i>	6.06



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Waterbody: Alder Brook - Station 1016

Date Retrieved: 8/20/2014

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 18.2 deg C
Dissolved Oxygen: 9.4 mg/l
Specific Conductance: 550 uS/cm
Velocity: 9 cm/s
pH: 7.12
Wetted Width: 1.5 m
Bankfull Width: 4.2 m
Depth: 20 cm

Waterbody Information - Retrieval

Temperature: 14 deg C
Dissolved Oxygen: 9.17 mg/l
Specific Conductance: 600 uS/cm
Velocity: 2 cm/s
pH: 7.78
Wetted Width: 1.44 m
Bankfull Width: 4.2 m
Depth: 18 cm

Water Chemistry - 7/29/2014

Nitrate+nitrite As N 1.5 mg/l
Total Kjeldahl Nitrogen 0.4 mg/l
Total Alkalinity 189 mg/l

Total Phosphorus 91 ug/l
Orthophosphate As Phosphorus 34 ug/l

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Cultivated

Partly Open

Rolling

Upland Conifer

Upland Hardwood

Urban

Potential Stressor

Location

Substrate

Agricultural Runoff

Below Road Crossing

Boulder 5 %

Urban Runoff

Gravel 25 %

Rubble/Cobble 65 %

Silt 5 %

Landcover Summary - 2004 Data

Sample Comments

A

8/20 - NMRO METER USED FOR DO, TEMP AND SPC.



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Subsample Factor: X1

Replicates: 3

Calculated: 3/12/2015

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Turbellaria	0301	3.67	3.67		--	1.9	1.9
Lumbriculidae	08020101	0.33	0.33		--	0.2	0.2
Tubificida	080202	0.67	0.67		--	0.3	0.3
Enchytraeidae	08020201	0.33	0.33		--	0.2	0.2
<i>Nais</i>	08020202009		2.33		CG		1.2
<i>Nais communis</i>	08020202009005	0.33			--	0.2	
<i>Nais variabilis</i>	08020202009009	2.00			--	1.0	
<i>Ophidonais</i>	08020202010		0.33		CG		0.2
<i>Ophidonais serpentina</i>	08020202010001	0.33			--	0.2	
<i>Helobdella</i>	08030101005		0.67		--		0.3
<i>Helobdella modesta</i>	08030101005004	0.67			--	0.3	
Baetidae	09020401	0.67	0.67		--	0.3	0.3
<i>Baetis</i>	09020401001	2.00	5.33	4	CG	1.0	2.8
<i>Baetis flavistriga</i>	09020401001004	1.00			--	0.5	
<i>Baetis tricaudatus</i>	09020401001012	2.33			--	1.2	
<i>Cernotina</i>	09020603006	0.33	0.33		PR	0.2	0.2
<i>Polycentropus</i>	09020603010	0.33	0.33	6	PR	0.2	0.2
<i>Parapsyche</i>	09020604013		0.67	0	CF		0.3
<i>Parapsyche apicalis</i>	09020604013023	0.67			--	0.3	
<i>Cheumatopsyche</i>	09020604015	1.00	1.00	5	CF	0.5	0.5
<i>Hydropsyche</i>	09020604016	1.00	1.67	4	CF	0.5	0.9
<i>Hydropsyche sparna</i>	09020604016032	0.67			--	0.3	
<i>Rhyacophila</i>	09020605019	4.33	4.33	2	PR	2.2	2.2
<i>Hesperophylax</i>	09020610054		0.33	3	SH		0.2
<i>Hesperophylax designatus</i>	09020610054110	0.33			--	0.2	
<i>Limnephilus</i>	09020610055	0.33	0.33	3	SH	0.2	0.2
<i>Frenesia</i>	09020610058		0.33	0	SH		0.2
<i>Frenesia difficilis</i>	09020610058117	0.33			--	0.2	
<i>Psychoglypha</i>	09020610060		0.33	0	SH		0.2
<i>Psychoglypha subborealis</i>	09020610060120	0.33			--	0.2	
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.3	0.3
<i>Sialis</i>	09020702004	0.67	0.67	4	PR	0.3	0.3
Tipulidae	09021001	0.33			--	0.2	
<i>Tipula</i>	09021001002	0.33	0.50	4	SH	0.2	0.3
<i>Dicranota</i>	09021001005	0.33	0.50	3	PR	0.2	0.3
<i>Bezzia/palpomyia</i>	09021010043	0.33	0.33	6	PR	0.2	0.2
Chironomidae	09021011	8.33			--	4.3	
<i>Ablabesmyia</i>	09021011001		0.72	8	PR		0.4



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		Actual	Adjusted			Actual	Adjusted
<i>Ablabesmyia monilis</i>	09021011001009	0.67			--	0.3	
<i>Conchapelopia</i>	09021011004	4.00	4.30	6	PR	2.1	2.2
<i>Larsia</i>	09021011009	0.67	0.72	6	PR	0.3	0.4
<i>Meropelopia</i>	09021011010	0.67	0.72		--	0.3	0.4
<i>Natarsia</i>	09021011011	0.67	0.72	8	PR	0.3	0.4
<i>Paramerina</i>	09021011013	3.33	3.59		--	1.7	1.9
<i>Zavrelimyia</i>	09021011022		1.08	8	PR		0.6
<i>Zavrelimyia thryptica group</i>	09021011022045	0.33			PR	0.2	
<i>Zavrelimyia sinuosa group</i>	09021011022046	0.67			--	0.3	
<i>Diamesa</i>	09021011024	0.33	0.36	5	CG	0.2	0.2
<i>Pagastia</i>	09021011025		1.43	1	--		0.7
<i>Pagastia orthogonia</i>	09021011025001	1.33			--	0.7	
<i>Prodiamesa</i>	09021011031		3.59	3	CG		1.9
<i>Prodiamesa olivacea</i>	09021011031048	3.33			--	1.7	
<i>Brillia</i>	09021011033			5	SH		
<i>Corynoneura</i>	09021011036	0.67	0.72	7	CG	0.3	0.4
<i>Cricotopus</i>	09021011037		7.53	7	SH		3.9
<i>Cricotopus bicinctus</i>	09021011037057	6.33			--	3.3	
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	0.67			SH	0.3	
<i>Diplocladius</i>	09021011038		2.51	8	CG		1.3
<i>Diplocladius cultriger</i>	09021011038001	2.33			--	1.2	
<i>Eukiefferiella</i>	09021011041		1.43	8	CG		0.7
<i>Eukiefferiella claripennis group</i>	09021011041075	1.33			--	0.7	
<i>Heterotrissocladius</i>	09021011044		3.95	0	CG		2.0
<i>Heterotrissocladius marcidus</i>	09021011044083	3.67			--	1.9	
<i>Limnophyes</i>	09021011047	1.00	1.08	8	CG	0.5	0.6
<i>Nanocladius</i>	09021011049		7.17	3	CG		3.7
<i>Nanocladius spiniplenus</i>	09021011049090	6.67			--	3.5	
<i>Parametriocnemus</i>	09021011053	22.00	23.67	5	CG	11.4	12.3
<i>Smittia</i>	09021011058	0.67	0.72	6	CG	0.3	0.4
<i>Synorthocladius</i>	09021011061	0.33	0.36	2	CG	0.2	0.2
<i>Thienemanniella</i>	09021011062	0.33	1.08	6	CG	0.2	0.6
<i>Thienemanniella boltoni</i>	09021011062113	0.67			--	0.3	
<i>Tvetenia</i>	09021011065		1.08	5	CG		0.6
<i>Tvetenia paucunca</i>	09021011065114	1.00			--	0.5	
<i>Micropsectra</i>	09021011070		22.95	7	CG		11.9
<i>Micropsectra polita</i>	09021011070124	21.33		7	--	11.1	
<i>Rheotanytarsus</i>	09021011072	8.00	8.61	6	CF	4.2	4.5



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<i>Tanytarsus</i>	09021011076	12.33	13.27	6	CF	6.4	6.9
<i>Microtendipes</i>	09021011094		2.87	6	CF		1.5
<i>Microtendipes pedellus group</i>	09021011094166	2.67			--	1.4	
<i>Paracladopelma</i>	09021011098	1.33	1.79	7	--	0.7	0.9
<i>Paracladopelma nereis</i>	09021011098178	0.33			--	0.2	
<i>Polypedilum aviceps</i>	09021011102181				--		
<i>Macropelopia decedens</i>	09021011111002				--		
<i>Simulium</i>	09021012047	0.67	1.67	4	CF	0.3	0.9
<i>Simulium vittatum</i>	09021012047064	0.33			--	0.2	
<i>Simulium venustum/verecundum complex</i>	09021012047072	0.67			CF	0.3	
<i>Hemerodromia</i>	09021016057	1.00	1.00	3	PR	0.5	0.5
<i>Roederiodes</i>	09021016058			3	PR		
<i>Limnophora</i>	09021022080	0.33	0.33	2	PR	0.2	0.2
<i>Haliphus</i>	09021101001	0.33	0.33		P	0.2	0.2
<i>Agabus</i>	09021103016	0.33	0.33		PR	0.2	0.2
<i>Neoporus</i>	09021103033	0.33	0.33		--	0.2	0.2
<i>Optioservus</i>	09021113067	0.33	0.33	3	SC	0.2	0.2
<i>Lebertia</i>	09030105001	0.33	0.33		--	0.2	0.2
<i>Sperchon</i>	09030107001	11.67	11.67		--	6.1	6.1
Basommatophora	100102	4.67	4.67		--	2.4	2.4
Lymnaeidae	10010201	0.33	0.33		--	0.2	0.2
<i>Lymnaea</i>	10010201022		5.00		SC		2.6
<i>Lymnaea columella</i>	10010201022038	2.00			--	1.0	
<i>Lymnaea humilis</i>	10010201022040	3.00			--	1.6	
<i>Physa</i>	10010202027	18.00	18.00		SC	9.3	9.3
Sphaeriidae	10020201	0.67	0.67		CF	0.3	0.3
<i>Pisidium</i>	10020201002	2.00	3.00		CF	1.0	1.6
<i>Pisidium casertanum</i>	10020201002006	1.00			CF	0.5	