THE DISTRICT MUNICIPALITY OF MUSKOKA

Aquatic Invertebrate Data Sheet
South Muldrew Lake
Town of Gravenhurst

Common Name	Site 1 [R]														Scientific Name
	2004	2005	2012	2013	2014	2015	2016	2017	2018	2019	2022	2023	2024	2025	
Hydras	1														Coelenterata
Flatworms					1	1					2				Turbellaria
Roundworms	1						1			20	9	9	2	2	Nematoda
Aquatic Earthworms	27	1	19	3	2	38	28	78	34	15	2	9	2	2	Oligochaeta
Leeches	1		5		1	4	4	2	1		5		2		Hirudinaea
Sow Bugs						3				3			3	3	Isopoda
Clams & Mussels		1	1	3	1		2			5		1	3	6	Bivalvia
Scuds	178	248	597	144	309	173	270	105	95	112	30	119	43	24	Amphipoda
Crayfish	1		1												Decapoda
Mites	58		55	64	47	26	34	72	126	50	43	40	52	54	Hydracarina
Mayflies	16	11	6	22	11	10	16	12	6	8	8	4	22	17	Ephemeroptera
Dragonflies	43	15	21	22	6	7	14	3	5	9	6	6	18	5	Anisoptera
Damselflies	25	11	8	12	5	9	7	4	2	11	4	4	17		Zygoptera
Stoneflies	1														Plecoptera
True Bugs			3	3								1			Hemiptera
Fishflies & Alderflies	1		1	2	2										Megaloptera
Caddisflies	1	4	1	1	4	1		2	1		3		1	1	Trichoptera
Aquatic Moths								1							Lepidoptera
Beetles	15		12	3	2	10	10	15	1	6		1	1	3	Coleoptera
Snails & Limpets	2	3	5	16	6		3	1		4	3	8	17	21	Gastropoda
Midges	6	16	79	36	71	39	89	18	41	9	85	7	39	45	Chironomidae
Horse & Deer Flies												1			Tabanidae
Mosquitos								6							Culicidae
No-see-ums	1	1	17	5	2	7	10	15	15	10	16		13	13	Ceratopogonidae
Craneflies										4					Tipulidae
Blackflies															Simuliidae
Misc. True Flies	1			8	5										Misc. Diptera
Total Count	379	311	831	344	475	328	488	334	327	266	216	210	235	196	
Number of Taxa	18	10	16	15	16	13	13	14	11	14	13	13	15	13	
															Muskoka Average *
Richness	18	10	16	15	16	13	13	14	11	14	13	13	15	13	**13**
% EOT	22.4	13.2	4	17	5	8	8	6	4	11	10	7	24.7	11.7	**17**
% Chironimids	1.58	5.14	10	10	15	12	18	5	13	3	39	3	16.6	23	**8**
% Predators	38.5	8.68	15	32	14	20	16	33	46	32	35	25	43.8	38.3	**24**
% Shredders	0.26	1.29	0	0	1	0	0	1	0	2	1	0	0.43	0.51	**2**
% Collectors/Gatherers	60.4	88.7	84	62	84	80	83	66	54	55	58	66	46.4	46.4	**68**
Hilsenhoff Index	5.96	6.00	6.10	6.03	6.76	6.30	6.24	6.43	6.29	6.05	6.34	6.09	6.20	6.17	**6.27**

R = Reference Site

* The Muskoka Average is based on 228 samples collected at 94 reference sites between 2013 and 2023. Data prior to 2021 is based on three subsamples (min. 300 count) per site while data from 2021 on is based on one sample (min. 100 count) per site.

THE DISTRICT MUNICIPALITY OF MUSKOKA

Aquatic Invertebrate Data Sheet

South Muldrew Lake

Town of Gravenhurst

Common Name	Site 4 [R] 2007	Scientific Name
Hydras		Coelenterata
Flatworms	2	Turbellaria
Roundworms		Nematoda
Aquatic Earthworms	4	Oligochaeta
Leeches		Hirudinaea
Sow Bugs		Isopoda
Clams & Mussels		Bivalvia
Scuds	182	Amphipoda
Crayfish	1	Decapoda
Mites	33	Hydracarina
Mayflies	9	Ephemeroptera
Dragonflies	50	Anisoptera
Damselflies	17	Zygoptera
Stoneflies		Plecoptera
True Bugs		Hemiptera
Fishflies & Alderflies		Megaloptera
Caddisflies	2	Trichoptera
Aquatic Moths		Lepidoptera
Beetles	5	Coleoptera
Snails & Limpets	1	Gastropoda
Midges	50	Chironomidae
Horse & Deer Flies		Tabanidae
Mosquitos		Culicidae
No-see-ums	17	Ceratopogonidae
Craneflies		Tipulidae
Blackflies		Simuliidae
Misc. True Flies		Misc. Diptera
Total Count	373	
Number of Taxa	13	
		Muskoka Average *
Richness	13	**14**
% EOT	21	**17**
% Chironimids	13	**12**
% Predators	33	**19**
% Shredders	1	**3**
% Collectors/Gatherers	66	**73**
Hilsenhoff Index	6.00	**6.25**

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THE DISTRICT MUNICIPALITY OF MUSKOKA

Aquatic Invertebrate Data Sheet

South Muldrew Lake - Patterson's Bay

Town of Gravenhurst

Common Name	Site 1[R]					Scientific Name
	2005	2006	2007	2008	2010	
Hydras						Coelenterata
Flatworms				2	1	Turbellaria
Roundworms	13	12	13	7	1	Nematoda
Aquatic Earthworms	3	2	1	15	8	Oligochaeta
Leeches	1	1	37	1		Hirudinaea
Sow Bugs				18	12	Isopoda
Clams & Mussels						Bivalvia
Scuds	122	120	202	119	201	Amphipoda
Crayfish				1		Decapoda
Mites	32	31	39	130	40	Hydracarina
Mayflies	30	44	3	4	28	Ephemeroptera
Dragonflies	58	29	23	14	54	Anisoptera
Damselflies	48	51	13	51	21	Zygoptera
Stoneflies					1	Plecoptera
True Bugs	3	11				Hemiptera
Fishflies & Alderflies	1				4	Megaloptera
Caddisflies	8	9	2	7	12	Trichoptera
Aquatic Moths						Lepidoptera
Beetles	12	8	8	6	17	Coleoptera
Snails & Limpets	7	6	1	1	7	Gastropoda
Midges	25	31	17	27	11	Chironomidae
Horse & Deer Flies	2					Tabanidae
Mosquitos				1		Culicidae
No-see-ums	3	2	2	14	1	Ceratopogonidae
Craneflies						Tipulidae
Blackflies						Simuliidae
Misc. True Flies				4		Misc. Diptera
Total Count	368	357	361	422	419	
Number of Taxa	16	14	13	18	16	
						Muskoka Average *
Richness	16	14	13	19	16	**13**
% EOT	39	37	11	35	27	**17**
% Chironomids	7	9	4.7	7	2.6	**8**
% Predators	44	37	34	29	33	**24**
% Shredders	2	3	0.6	3	2.9	**2**
% Collectors/Gatherers	49	55	62	59	62	**68**
Hilsenhoff Index	5.85	5.90		6.13		**6.27**

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THE DISTRICT MUNICIPALITY OF MUSKOKA

Aquatic Invertebrate Data Sheet

South Muldrew Lake - Patterson's Bay

Town of Gravenhurst

Common Name	Site 2[R]						Scientific Name
	2012	2015	2016	2017	2019	2021	
Hydras							Coelenterata
Flatworms	1		1			3	Turbellaria
Roundworms		3			7	12	Nematoda
Aquatic Earthworms	36	5	16	24	2	1	Oligochaeta
Leeches	3		1	1	1	1	Hirudinaea
Sow Bugs				1	39	1	Isopoda
Clams & Mussels			38	2			Bivalvia
Scuds	274	293	187	203	160	25	Amphipoda
Crayfish	1		1		1		Decapoda
Mites	41	20	18	99	31	40	Hydracarina
Mayflies	111	53	16	11	8	22	Ephemeroptera
Dragonflies	30	16	19	12	13	7	Anisoptera
Damselflies	124	12	25	3	7	9	Zygoptera
Stoneflies							Plecoptera
True Bugs	1					2	Hemiptera
Fishflies & Alderflies	1	2					Megaloptera
Caddisflies	18	11	22	7	1	18	Trichoptera
Aquatic Moths	1			1			Lepidoptera
Beetles	29	18	8	3	10		Coleoptera
Snails & Limpets	92		14	11	15		Gastropoda
Midges	57	12	41	21	30	22	Chironomidae
Horse & Deer Flies					2		Tabanidae
Mosquitos	1			1	1		Culicidae
No-see-ums	5		2	3	3	1	Ceratopogonidae
Craneflies							Tipulidae
Blackflies							Simuliidae
Misc. True Flies	3						Misc. Diptera
Total Count	829	445	409	403	331	164	
Number of Taxa	19	11	15	16	17	14	
							Muskoka Average *
Richness	17	11	16	16	16	14	**13**
% EOT	18	20.7	44	8	9	34.1	**17**
% Chironomids	6	2.7	3	5	9	13.4	**8**
% Predators	52	15.3	42	30	20	38.4	**24**
% Shredders	2	2.47	15	2	0	11	**2**
% Collectors/Gatherers	45	81.6	40	64	73	43.3	**68**
Hilsenhoff Index	6.21		5.38	6.12	6.27		**6.27**

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THE DISTRICT MUNICIPALITY OF MUSKOKA

Aquatic Invertebrate Data Sheet

South Muldrew Lake - Patterson's Bay

Town of Gravenhurst

Common Name	Site 3 2013	Scientific Name
Hydras		Coelenterata
Flatworms		Turbellaria
Roundworms		Nematoda
Aquatic Earthworms	9	Oligochaeta
Leeches	5	Hirudinaea
Sow Bugs		Isopoda
Clams & Mussels	2	Bivalvia
Scuds	71	Amphipoda
Crayfish	0	Decapoda
Mites	88	Hydracarina
Mayflies	81	Ephemeroptera
Dragonflies	43	Anisoptera
Damselflies	2	Zygoptera
Stoneflies	1	Plecoptera
True Bugs		Hemiptera
Fishflies & Alderflies	19	Megaloptera
Caddisflies	65	Trichoptera
Aquatic Moths		Lepidoptera
Beetles	16	Coleoptera
Snails & Limpets	13	Gastropoda
Midges	12	Chironomidae
Horse & Deer Flies		Tabanidae
Mosquitos		Culicidae
No-see-ums	9	Ceratopogonidae
Craneflies		Tipulidae
Blackflies		Simuliidae
Misc. True Flies		Misc. Diptera
Total Count	436	
Number of Taxa	16	
		Muskoka Average *
Richness	16	**13**
% EOT	43.81	**17**
% Chironomids	2.752	**8**
% Predators	41.97	**24**
% Shredders	14.91	**2**
% Collectors/Gatherers	39.68	**68**
Hilsenhoff Index	6.21	**6.27**

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