THE DISTRICT MUNICIPALITY OF MUSKOKA

Aquatic Invertebrate Data Sheet

Ril Lake

Township of Lake of Bays

Common Name	Site 1[R]						Scientific Name
	2007	2008	2015	2018	2022	2024	
Hydras							Coelenterata
Flatworms							Turbellaria
Roundworms		25			2	2	Nematoda
Aquatic Earthworms	2	4	7	22		1	Oligochaeta
Leeches	1			1			Hirudinaea
Sow Bugs							Isopoda
Clams & Mussels					1		Bivalvia
Scuds	98	73	188	158	70	48	Amphipoda
Crayfish			1				Decapoda
Mites	26	61	24	127	32	25	Hydracarina
Mayflies	31	29	81	20	12	39	Ephemeroptera
Dragonflies	113	7	17	8	8	11	Anisoptera
Damselflies	15	54	7	10	25	12	Zygoptera
Stoneflies				15			Plecoptera
True Bugs							Hemiptera
Fishflies & Alderflies		1		2			Megaloptera
Caddisflies	2	12	3		7	2	Trichoptera
Aquatic Moths							Lepidoptera
Beetles				9			Coleoptera
Snails & Limpets	3			5			Gastropoda
Midges	33	37	24	41	4	1	Chironomidae
Horse & Deer Flies		4	2				Tabanidae
Mosquitos		6					Culicidae
No-see-ums	3	12	2	25	1	1	Ceratopogonidae
Craneflies		8					Tipulidae
Blackflies							Simuliidae
Misc. True Flies		2					Misc. Diptera
Total Count	327	335	356	443	162	142	
Number of Taxa	11	15	11	13	10	10	
							Muskoka Average *
Richness	11	15	11	13	10	10	**13**
% EOT	49	30	30	8	20	45	**17**
% Chironomids	10	11	7	9	2	1	**8**
% Predators	48	41	15	43	25	35	**24**
% Shredders	1	6	1	0	3	1	**2**
% Collectors/Gatherers	50	45	85	56	71	63	**68**
Hilsenhoff Index	5.72	6.02	5.85	5.95	5.98	5.71	**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.

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Ril Lake

Township of Lake of Bays

Common Name	Site 2		Scientific Name
	2008	2009	
Hydras			Coelenterata
Flatworms			Turbellaria
Roundworms			Nematoda
Aquatic Earthworms	1		Oligochaeta
Leeches			Hirudinaea
Sow Bugs			Isopoda
Clams & Mussels	8		Bivalvia
Scuds	72	60	Amphipoda
Crayfish			Decapoda
Mites	57	5	Hydracarina
Mayflies	48	29	Ephemeroptera
Dragonflies	22	15	Anisoptera
Damselflies	25	16	Zygoptera
Stoneflies			Plecoptera
True Bugs			Hemiptera
Fishflies & Alderflies	2		Megaloptera
Caddisflies	17	3	Trichoptera
Aquatic Moths	1		Lepidoptera
Beetles	2		Coleoptera
Snails & Limpets	28	1	Gastropoda
Midges	91	64	Chironomidae
Horse & Deer Flies		1	Tabanidae
Mosquitos			Culicidae
No-see-ums	4		Ceratopogonidae
Craneflies			Tipulidae
Blackflies			Simuliidae
Misc. True Flies	1		Misc. Diptera
Total Count	379	194	
Number of Taxa	15	9	
			Muskoka Average *
Richness	15	9	**13**
% EOT	30	33	**17**
% Chironimids	24	33	**8**
% Predators	30	19	**24**
% Shredders	4.7	2	**2**
% Collectors/Gatherers	56	79	**68**
Hilsenhoff Index	6.13	6.17	**6.27**

1 - Did not reach minumum count

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Aquatic Invertebrate Data Sheet

Ril Lake

Township of Lake of Bays

Common Name	Site 3 [R]						Scientific Name
	2009	2010	2016	2019	2023	2025	
Hydras							Coelenterata
Flatworms		2	3	1		1	Turbellaria
Roundworms				14	2	2	Nematoda
Aquatic Earthworms	1	4	37	3	1		Oligochaeta
Leeches	2		2	2			Hirudinaea
Sow Bugs							Isopoda
Clams & Mussels			8				Bivalvia
Scuds	364	301	154	185	60	56	Amphipoda
Crayfish							Decapoda
Mites	103	39	13	31	8	27	Hydracarina
Mayflies	37	42	29	27	12		Ephemeroptera
Dragonflies	15	22	9	32	23	4	Anisoptera
Damselflies	10		13	10	2	1	Zygoptera
Stoneflies							Plecoptera
True Bugs							Hemiptera
Fishflies & Alderflies	1		1	1			Megaloptera
Caddisflies	25	3		3			Trichoptera
Aquatic Moths						1	Lepidoptera
Beetles	6		8	5			Coleoptera
Snails & Limpets	2	6	19	2	2		Gastropoda
Midges	70	34	52	22	14	9	Chironomidae
Horse & Deer Flies							Tabanidae
Mosquitos						1	Culicidae
No-see-ums	2	2	3	6		9	Ceratopogonidae
Craneflies							Tipulidae
Blackflies							Simuliidae
Misc. True Flies							Misc. Diptera
Total Count	638	455	351	344	124	111	
Number of Taxa	13	10	14	15	9	10	
							Muskoka Average *
Richness	13	10	14	15	9	10	**13**
% EOT	14	15	15	21	30	5	**17**
% Chironomids	11	8	15	6	11	8	**8**
% Predators	22	14	15	26	27	38	**24**
% Shredders	4	1	0	0	0	1	**2**
% Collectors/Gatherers	74	84	77	69	70	59	**68**
Hilsenhoff Index	5.96	5.94	6.33	5.85	5.86	6.13	**6.27**

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on 228 samples collected at 94 reference sites between 2013 and 2023. Data prior to 2021 is

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Common Name	Site 4 [R]						Scientific Name
	2011	2012	2017	2021	2023	2025	
Hydras							Coelenterata
Flatworms	1	2	8	1		2	Turbellaria
Roundworms	4			4	5	3	Nematoda
Aquatic Earthworms	9	21	49	2	6		Oligochaeta
Leeches	3	2		1			Hirudinaea
Sow Bugs			1				Isopoda
Clams & Mussels		2			1		Bivalvia
Scuds	202	286	32	130	79	123	Amphipoda
Crayfish	2					2	Decapoda
Mites	48	40	82	34	15	22	Hydracarina
Mayflies	42	39	30	18	12	15	Ephemeroptera
Dragonflies	19	23	14	1	19	9	Anisoptera
Damselflies	5	7	11	13	9	17	Zygoptera
Stoneflies							Plecoptera
True Bugs		1				3	Hemiptera
Fishflies & Alderflies	1	11	3		2	1	Megaloptera
Caddisflies	36	8	5	6	2	4	Trichoptera
Aquatic Moths							Lepidoptera
Beetles	17	15	2		1	1	Coleoptera
Snails & Limpets	8	12	35			1	Gastropoda
Midges	96	100	45	2	7	2	Chironomidae
Horse & Deer Flies							Tabanidae
Mosquitos	2		1			1	Culicidae
No-see-ums	9	9	10	6	1	3	Ceratopogonidae
Craneflies							Tipulidae
Blackflies							Simuliidae
Misc. True Flies							Misc. Diptera
Total Count	504	578	328	218	159	209	
Number of Taxa	17	16	15	12	13	16	
							Muskoka Average *
Richness	17	16	15	12	13	16	**13**
% EOT	20	13	18	17	26	22	**17**
% Chironomids	19	17	14	1	4	1	**8**
% Predators	20	19	39	26	30	28	**24**
% Shredders	7	1	1	3	1	2	**2**
% Collectors/Gatherers	70	77	48	70	65	68	**68**
Hilsenhoff Index	5.92	6.06	6.34	5.93	5.90	6.77	**6.27**

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Township of Lake of Bays

Common Name	Site 5		Scientific Name
	2013	2014	
Hydras			Coelenterata
Flatworms			Turbellaria
Roundworms	1		Nematoda
Aquatic Earthworms		3	Oligochaeta
Leeches	1		Hirudinaea
Sow Bugs			Isopoda
Clams & Mussels	1		Bivalvia
Scuds	134	237	Amphipoda
Crayfish		1	Decapoda
Mites	29	35	Hydracarina
Mayflies	4	26	Ephemeroptera
Dragonflies	5	19	Anisoptera
Damselflies		7	Zygoptera
Stoneflies		1	Plecoptera
True Bugs			Hemiptera
Fishflies & Alderflies		5	Megaloptera
Caddisflies		3	Trichoptera
Aquatic Moths			Lepidoptera
Beetles		8	Coleoptera
Snails & Limpets		4	Gastropoda
Midges	39	51	Chironomidae
Horse & Deer Flies			Tabanidae
Mosquitos			Culicidae
No-see-ums	12	5	Ceratopogonidae
Craneflies			Tipulidae
Blackflies			Simuliidae
Misc. True Flies		2	Misc. Diptera
Total Count	226	407	
Number of Taxa	9	15	
			Muskoka Average *
Richness	8	15	**13**
% EOT	4	14	**17**
% Chironomids	17	13	**8**
% Predators	20	20	**24**
% Shredders	0	1	**2**
% Collectors/Gatherers	78	79	**68**
Hilsenhoff Index	6.14	5.96	**6.27**

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Aquatic Invertebrate Data Sheet

Ril Lake

Township of Lake of Bays

Common Name	Site 6[R]		Scientific Name
	2022	2024	
Hydras			Coelenterata
Flatworms		1	Turbellaria
Roundworms	2	5	Nematoda
Aquatic Earthworms		6	Oligochaeta
Leeches	1		Hirudinaea
Sow Bugs			Isopoda
Clams & Mussels		1	Bivalvia
Scuds	139	87	Amphipoda
Crayfish			Decapoda
Mites	28	16	Hydracarina
Mayflies	21	18	Ephemeroptera
Dragonflies	3	18	Anisoptera
Damselflies	3	8	Zygoptera
Stoneflies			Plecoptera
True Bugs			Hemiptera
Fishflies & Alderflies			Megaloptera
Caddisflies	2	1	Trichoptera
Aquatic Moths			Lepidoptera
Beetles			Coleoptera
Snails & Limpets	1	4	Gastropoda
Midges	3	18	Chironomidae
Horse & Deer Flies			Tabanidae
Mosquitos			Culicidae
No-see-ums		5	Ceratopogonidae
Craneflies			Tipulidae
Blackflies			Simuliidae
Misc. True Flies			Misc. Diptera
Total Count	203	188	
Number of Taxa	10	13	
			Muskoka Average *
Richness	10	13	**13**
% EOT	14	24	**17**
% Chironomids	1	10	**8**
% Predators	17	26	**24**
% Shredders	1	1	**2**
% Collectors/Gatherers	80	69	**68**
Hilsenhoff Index	5.90	5.99	**6.27**

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