



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	220007276
Drinking-Water System Name:	Kirby's Beach Water Treatment Plant
Drinking-Water System Owner:	District Municipality of Muskoka
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 01 to December 31, 2023

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [X] No []</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> <p>District Municipality of Muskoka 70 Pine Street Bracebridge, Ontario P1L 1N3 (705) 645-6764 www.muskoka.on.ca</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <div style="border: 1px solid black; padding: 2px; display: inline-block;">N.A.</div> </p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <div style="border: 1px solid black; width: 100px; height: 20px; display: inline-block;"></div></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
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Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
N.A.	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?
Yes [] No []



Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method _____

Describe your Drinking-Water System

The Water Treatment Plant serving the community of Bracebridge was constructed in 1995. The system features pre-treatment consisting of chemically assisted coagulation-flocculation, sedimentation and filtration using dual media filters with a combination of sand and anthracite coal. Disinfection in a post treatment chlorine contact chamber is followed by fluoridation and final pH adjustment before the treated water is pumped to our customers. The water system currently serves a population of approximately 10,800. The rated water production capacity of the plant is 10,000 cubic meters per day. Our raw water source is Lake Muskoka where the intake is located two meters above the lakebed at a depth of 18 meters and about 500 meters from shore. The intake structure and intake pipeline were video inspected spring 2022 with no issues noted.

List all water treatment chemicals used over this reporting period

Carbon Dioxide, Aluminum Sulphate, Hydrated Lime, Sodium Hypochlorite, Hydrofluosilicic Acid, and Sodium Hydroxide.

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
November 14, 2023	EC / TC	1 EC 15 TC	cfu/100ml cfu/100ml	2 sets resamples	November 17 & 18, 2023

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	52	0 – 16	0 – 52	n/a	~
Treated	52	0 - 0	0 – 0	52	0 - 22
Distribution	307	0 – 1 (AWQI#164042)	0 – 15	143	0 - NDOG

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)	Geomean	NOTE: For continuous monitors use 8760 as the number of samples.
Turbidity	8760	0.06 – 0.11 NTU	0.08 NTU	
Chlorine	8760	1.42 – 1.90 mg/L	1.64 mg/L	
Fluoride (If the DWS provides fluoridation)	8760	0.57 – 0.85 mg/L	0.70 mg/L	

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	May 9 2023	0.6<MDL	µg/L	No
Arsenic	May 9 2023	0.2<MDL	µg/L	No
Barium	May 9 2023	11.8	µg/L	No
Boron	May 9 2023	5	µg/L	No
Cadmium	May 9 2023	0.013	µg/L	No
Chromium	May 9 2023	0.12	µg/L	No
*Lead				
Mercury	May 9 2023	0.01<MDL	µg/L	No
Selenium	May 9 2023	0.11	µg/L	No
Sodium	May 9 2023	17.9	mg/L	No
Uranium	May 9 2023	0.002	µg/L	No
Fluoride	May 9 2023	0.52	mg/L	No
Nitrite	Feb 6, 2023	0.003<MDL	mg/L	No



Nitrate	Feb 6, 2023	0.203	mg/L	No
Nitrite	May 9, 2023	0.003<MDL	mg/L	No
Nitrate	May 9, 2023	0.219	mg/L	No
Nitrite	Aug 15, 2023	0.003<MDL	mg/L	No
Nitrate	Aug 15, 2023	0.225	mg/L	No
Nitrite	Nov 14, 2023	0.003<MDL	mg/L	No
Nitrate	Nov 14, 2023	0.156	mg/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing				
Distribution	8	0.01-0.52	µg/L	0

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	May 9, 2023	0.02<MDL	µg/L	No
Atrazine + N-dealkylated metabolites	May 9, 2023	0.01<MDL	µg/L	No
Azinphos-methyl	May 9, 2023	0.05<MDL	µg/L	No
Benzene	May 9, 2023	0.32<MDL	µg/L	No
Benzo(a)pyrene	May 9, 2023	0.004<MDL	µg/L	No
Bromoxynil	May 9, 2023	0.33<MDL	µg/L	No
Carbaryl	May 9, 2023	0.05<MDL	µg/L	No
Carbofuran	May 9, 2023	0.01<MDL	µg/L	No
Carbon Tetrachloride	May 9, 2023	0.17<MDL	µg/L	No
Chlorpyrifos	May 9, 2023	0.02<MDL	µg/L	No
Diazinon	May 9, 2023	0.02<MDL	µg/L	No
Dicamba	May 9, 2023	0.20<MDL	µg/L	No
1,2-Dichlorobenzene	May 9, 2023	0.41<MDL	µg/L	No
1,4-Dichlorobenzene	May 9, 2023	0.36<MDL	µg/L	No
1,2-Dichloroethane	May 9, 2023	0.35<MDL	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	May 9, 2023	0.33<MDL	µg/L	No
Dichloromethane	May 9, 2023	0.35<MDL	µg/L	No
2-4 Dichlorophenol	May 9, 2023	0.15<MDL	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	May 9, 2023	0.19<MDL	µg/L	No
Diclofop-methyl	May 9, 2023	0.40<MDL	µg/L	No
Dimethoate	May 9, 2023	0.06<MDL	µg/L	No
Diquat	May 9, 2023	1<MDL	µg/L	No

Diuron	May 9, 2023	0.03<MDL	µg/L	No
Glyphosate	May 9, 2023	1<MDL	µg/L	No
Malathion	May 9, 2023	0.02<MDL	µg/L	No
MCPA	May 9, 2023	0.00012<MDL	µg/L	No
Metolachlor	May 9, 2023	0.01<MDL	µg/L	No
Metribuzin	May 9, 2023	0.02<MDL	µg/L	No
Monochlorobenzene	May 9, 2023	0.30<MDL	µg/L	No
Paraquat	May 9, 2023	1<MDL	µg/L	No
Pentachlorophenol	May 9, 2023	0.15<MDL	µg/L	No
Phorate	May 9, 2023	0.01<MDL	µg/L	No
Picloram	May 9, 2023	1<MDL	µg/L	No
Polychlorinated Biphenyls(PCB)	May 9, 2023	0.04<MDL	µg/L	No
Prometryne	May 9, 2023	0.03<MDL	µg/L	No
Simazine	May 9, 2023	0.01<MDL	µg/L	No
THM (NOTE: annual average from Distribution – 16 samples)	Samples Taken: Feb 6, 2023 May 9, 2023 Aug. 15, 2023 Nov, 14, 2023	53.31	µg/L	No
Terbufos	May 9, 2023	0.01<MDL	µg/L	No
Tetrachloroethylene	May 9, 2023	0.35<MDL	µg/L	No
2,3,4,6-Tetrachlorophenol	May 9, 2023	0.20<MDL	µg/L	No
Triallate	May 9, 2023	0.01<MDL	µg/L	No
Trichloroethylene	May 9, 2023	0.44<MDL	µg/L	No
2,4,6-Trichlorophenol	May 9, 2023	0.25<MDL	µg/L	No
Trifluralin	May 9, 2023	0.02<MDL	µg/L	No
Vinyl Chloride	May 9, 2023	0.17<MDL	µg/L	No
HAA5	Samples Taken: Feb 6, 2023 May 9, 2023 Aug. 15, 2023 Nov, 14, 2023	47.26	µg/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
Distribution HAA5	47.26	µg/L	RAA of quarterly results
Distribution THM	53.31	µg/L	RAA of quarterly results