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, 2024

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [X] No [ ]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No [ ]

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

District Municipality of Muskoka
70 Pine Street
Bracebridge, Ontario
P1L 1N3
(705) 645-6764
www.muskoka.on.ca

Complete for all other Categories.

Number of Designated Facilities served:

N.A.

Did you provide a copy of your annual report to all Designated Facilities you serve?
Yes [ ] No [x]

Number of Interested Authorities you report to: N.A.

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?
Yes [ ] No [x]

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	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 [x]

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

[X] Public access/notice via the web
[X] Public access/notice via Government Office
[ ] Public access/notice via a newspaper
[X] 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 commissioned 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 11,000. 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.

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
[X] Repair required equipment
[X] Replace required equipment

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

Improvements were completed to enhance building security. Remote monitoring/alarming systems were upgraded at remote reservoirs and booster pump station to improve continuity of monitoring. Chemical feed pump system replacement occurred at the Hamblin reservoir to replace aged required equipment.

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
N/A					

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	53	0 - 10	0 - 63	0	NA
Treated	53	0 - 0	0 - 0	53	0 - 1
Distribution	305	0 - 0	0 - 0	146	0 - 5

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 – 0.18	0.10	
Chlorine	8760	1.42 – 2.23	1.78	
Fluoride (If the DWS provides fluoridation)	8760	0.52 – 0.85	0.66	

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
N/A				

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 07	0.6<MDL	µg/L	No
Arsenic	May 07	0.2<MDL	µg/L	No
Barium	May 07	10.7	µg/L	No
Boron	May 07	5	µg/L	No
Cadmium	May 07	0.008	µg/L	No
Chromium	May 07	0.15	µg/L	No
***Lead**	See below			
Mercury	May 07	0.01<MDL	µg/L	No
Selenium	May 07	0.04<MDL	µg/L	No
Sodium	May 07	16.9	mg/L	No
Uranium	May 07	0.002	µg/L	No
Fluoride	May 07	0.59	mg/L	No
Nitrite	Feb 06	0.003<MDL	mg/L	No
Nitrate	Feb 06	0.183	mg/L	No

Nitrite	May 07	0.003<MDL	mg/L	No
Nitrate	May 07	0.189	mg/L	No
Nitrite	Aug 13	0.003<MDL	mg/L	No
Nitrate	Aug 13	0.232	mg/L	No
Nitrite	Nov 19	0.003<MDL	mg/L	No
Nitrate	Nov 19	0.149	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	N/A	N/A	N/A	N/A
Distribution	3	0.01 – 0.12	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 07	0.02<MDL	µg/L	No
Atrazine + N-dealkylated metabolites	May 07	0.01<MDL	µg/L	No
Azinphos-methyl	May 07	0.05<MDL	µg/L	No
Benzene	May 07	0.32<MDL	µg/L	No
Benzo(a)pyrene	May 07	0.004<MDL	µg/L	No
Bromoxynil	May 07	0.33<MDL	µg/L	No
Carbaryl	May 07	0.05<MDL	µg/L	No
Carbofuran	May 07	0.01<MDL	µg/L	No
Carbon Tetrachloride	May 07	0.17<MDL	µg/L	No
Chlorpyrifos	May 07	0.02<MDL	µg/L	No
Diazinon	May 07	0.02<MDL	µg/L	No
Dicamba	May 07	0.20<MDL	µg/L	No
1,2-Dichlorobenzene	May 07	0.41<MDL	µg/L	No
1,4-Dichlorobenzene	May 07	0.36<MDL	µg/L	No
1,2-Dichloroethane	May 07	0.35<MDL	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	May 07	0.33<MDL	µg/L	No
Dichloromethane	May 07	0.35<MDL	µg/L	No
2-4 Dichlorophenol	May 07	0.15<MDL	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	May 07	0.19<MDL	µg/L	No
Diclofop-methyl	May 07	0.40<MDL	µg/L	No
Dimethoate	May 07	0.06<MDL	µg/L	No
Diquat	May 07	1<MDL	µg/L	No
Diuron	May 07	0.03<MDL	µg/L	No

Glyphosate	May 07	1<MDL	µg/L	No
Malathion	May 07	0.02<MDL	µg/L	No
MCPA	May 07	0.00012<MDL	µg/L	No
Metolachlor	May 07	0.01<MDL	µg/L	No
Metribuzin	May 07	0.02<MDL	µg/L	No
Monochlorobenzene	May 07	0.30<MDL	µg/L	No
Paraquat	May 07	1<MDL	µg/L	No
Pentachlorophenol	May 07	0.15<MDL	µg/L	No
Phorate	May 07	0.01<MDL	µg/L	No
Picloram	May 07	1<MDL	µg/L	No
Polychlorinated Biphenyls(PCB)	May 07	0.04<MDL	µg/L	No
Prometryne	May 07	0.03<MDL	µg/L	No
Simazine	May 07	0.01<MDL	µg/L	No
THM (NOTE: annual average from Distribution – 16 samples)	May 07	54	µg/L	No
Terbufos	May 07	0.01<MDL	µg/L	No
Tetrachloroethylene	May 07	0.35<MDL	µg/L	No
2,3,4,6-Tetrachlorophenol	May 07	0.20<MDL	µg/L	No
Triallate	May 07	0.01<MDL	µg/L	No
Trichloroethylene	May 07	0.44<MDL	µg/L	No
2,4,6-Trichlorophenol	May 07	0.25<MDL	µg/L	No
Trifluralin	May 07	0.02<MDL	µg/L	No
Vinyl Chloride	May 07	0.17<MDL	µg/L	No
HAA5	RAA of 16 samples	42.1	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	54.9	ug/L	Aug 13
Distribution THM	77.0	ug/L	Aug 13