

GRAFTON DRINKING WATER SYSTEM 2022 ANNUAL REPORT

Drinking Water System Number:	220009058
Drinking Water System Name:	Grafton Drinking Water System
Drinking Water System Owner:	Corporation of the Township of Alnwick/Haldimand
Drinking Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2022 to December 31, 2022

<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 [] No [x]</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>Lakefront Utility Services Inc. Office 207 Division Street, Cobourg, Ontario</p> <p>https://www.lakefrontutilities.com/regulatory-water/</p> </div>	<p><u>Complete for all other Categories</u></p> <p>Number of Designated Facilities served: <input type="text"/></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: <input type="text"/></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 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 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 Hamlet of Grafton Communal Water System supplies water to approximately 1000 residents. Water is taken from 2 wells located at the water plant on Edwardson Road. The water is disinfected with sodium hypochlorite and sodium silicate is added to sequester the iron as the water enters the plant. After the appropriate contact time, water is pumped to the distribution system with variable speed pumps, which modulate to maintain the distribution system pressure.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite
Sodium Silicate

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

PROJECT	ESTIMATED COST
Grafton WTP Electromagnetic Flow Meter	\$4,000.00
Grafton WTP Chlorine Analyzer	\$7,000.00
Grafton WTP- Raw Water Header Replacement Engineering CIMA+ Report	\$13,000.00
Grafton WTP- Raw Water Header Replacement CIMA+ Design & Tendering	\$18,000.00
Grafton WTP- Raw Water Header Replacement, Lakeland Multitrade Inc.	\$44,000.00

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
There were no Adverse Water Quality Incidents during the reporting period					

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 Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw Well 1	52	0-0	0-0	-	-
Raw Well 2	52	0-0	0-0	-	-
Treated	52	0-0	0-0	52	0 – 4
Distribution	156	0-0	0-0	104	0 - 8

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 #)	Unit of Measure
Turbidity Well 1 (Raw)	12	0.12-0.70	NTU
Turbidity Well 2 (Raw)	12	0.06-0.29	NTU
Turbidity (Treated)	12	0.10-0.52	NTU
Chlorine	8760	0.51 – 2.40	mg/L
Fluoride (If the DWS provides fluoridation)		NA	

NOTE: For continuous monitors use 8760 as the number of samples

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
No additional testing or sampling is required				

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	13-Jan-2022	0.6 < MDL	ug/L	No
Arsenic	13-Jan-2022	0.3	ug/L	No
Barium	13-Jan-2022	157	ug/L	No
Boron	13-Jan-2022	29	ug/L	No
Cadmium	13-Jan-2022	0.003 < MDL	ug/L	No
Chromium	13-Jan-2022	0.11	ug/L	No
Mercury	13-Jan-2022	0.01 < MDL	ug/L	No
Selenium	13-Jan-2022	0.04 < MDL	ug/L	No
Sodium	16-Sep-2019	17	mg/L	No

Uranium	13-Jan-2022	0.055	ug/L	No
Fluoride	16-Sep-2019	0.21	mg/L	No
Nitrite	28-Nov-2022	0.003 < MDL	mg/L	No
Nitrate	28-Nov-2022	0.021	mg/L	No

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	Not required, plumbing exemption and only pH and Alkalinity required in distribution samples			
Distribution	4	NA – pH (7.54-7.76), Alkalinity (192-194 mg/L)		

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	13-Jan-2022	0.02<MDL	ug/L	No
Atrazine + N-dealkylated metabolites	13-Jan-2022	0.01<MDL	ug/L	No
Azinphos-methyl	13-Jan-2022	0.05<MDL	ug/L	No
Benzene	13-Jan-2022	0.32<MDL	ug/L	No
Benzo(a)pyrene	13-Jan-2022	0.004<MDL	ug/L	No
Bromoxynil	13-Jan-2022	0.33<MDL	ug/L	No
Carbaryl	13-Jan-2022	0.05<MDL	ug/L	No
Carbofuran	13-Jan-2022	0.01<MDL	ug/L	No
Carbon tetrachloride	13-Jan-2022	0.17<MDL	ug/L	No
Chlorpyrifos	13-Jan-2022	0.02<MDL	ug/L	No
Diazinon	13-Jan-2022	0.02<MDL	ug/L	No
Dicamba	13-Jan-2022	0.2<MDL	ug/L	No
1,2-Dichlorobenzene	13-Jan-2022	0.41<MDL	ug/L	No
1,4-Dichlorobenzene	13-Jan-2022	0.36<MDL	ug/L	No
1,2-Dichloroethane	13-Jan-2022	0.35<MDL	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	13-Jan-2022	0.33<MDL	ug/L	No
Dichloromethane	13-Jan-2022	0.35<MDL	ug/L	No
2,4-dichlorophenol	13-Jan-2022	0.15<MDL	ug/L	No
2,4-dichlorophenoxyacetic acid (2,4-D)	13-Jan-2022	0.19<MDL	ug/L	No
Diclofop-methyl	13-Jan-2022	0.4<MDL	ug/L	No
Dimethoate	13-Jan-2022	0.06<MDL	ug/L	No
Diquat	13-Jan-2022	1<MDL	ug/L	No
Diuron	13-Jan-2022	0.03<MDL	ug/L	No

Glyphosate	13-Jan-2022	1<MDL	ug/L	No
Malathion	13-Jan-2022	0.02<MDL	ug/L	No
MCPA	13-Jan-2022	0.00012<MDL	mg/L	No
Metolachlor	13-Jan-2022	0.01<MDL	ug/L	No
Metribuzin	13-Jan-2022	0.02<MDL	ug/L	No
Monochlorobenzene	13-Jan-2022	0.3<MDL	ug/L	No
Paraquat	13-Jan-2022	1<MDL	ug/L	No
Pentachlorophenol	13-Jan-2022	0.15<MDL	ug/L	No
Phorate	13-Jan-2022	0.01<MDL	ug/L	No
Picloram	13-Jan-2022	1<MDL	ug/L	No
Polychlorinated Biphenyls (PCBs) Total	13-Jan-2022	0.04<MDL	ug/L	No
Prometryne	13-Jan-2022	0.03<MDL	ug/L	No
Simazine	13-Jan-2022	0.01<MDL	ug/L	No
Terbufos	13-Jan-2022	0.01<MDL	ug/L	No
Tetrachloroethylene (perchloroethylene)	13-Jan-2022	0.35<MDL	ug/L	No
2,3,4,6-tetrachlorophenol	13-Jan-2022	0.2<MDL	ug/L	No
Triallate	13-Jan-2022	0.01<MDL	ug/L	No
Trichloroethylene	13-Jan-2022	0.44<MDL	ug/L	No
2,4,6-trichlorophenol	13-Jan-2022	0.25<MDL	ug/L	No
Trifluralin	13-Jan-2022	0.02<MDL	ug/L	No
Vinyl Chloride	13-Jan-2022	0.17<MDL	ug/L	No
HAAs (show latest running annual average)	1-Dec-2022	5.3<MDL	ug/L	No
THMs (show latest running annual average)	1-Dec-2022	24.0	ug/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
No parameters exceeded half the standard			