APPENDIX A

Township of Centre Wellington

Annual Water Report

Centre Wellington Drinking Water System - 20000086

Prepared:

January 2025

Annual Water Report

For the period of January 1, 2024 – December 31, 2024

Centre Wellington Drinking Water System – 220000086

Annual Report Introduction:

As prescribed in the Safe Drinking Water Act, 2002 Ontario Regulation 170/03 Section 11, an Annual Report must be prepared for the period from January 1 to December 31 and must be completed not later than February 28 of the following year.

The Annual Report must include:

- a brief description of the drinking water system;
- a list of water treatment chemicals used;
- a summary of the most recent water test results required under Ontario Regulation (OReg) 170/03 or an Approval, Municipal Drinking Water Licence or an Order;
- a summary of adverse test results and other issues reported to the Ministry of Environment, Conservation and Parks (MECP) including corrective actions taken;
- a description of major expenses incurred to install, repair or replace required equipment;
- the locations where this report is available for inspection.

A copy of the report is available for viewing at:

- Infrastructure Services Office, 7444 County Road 21, Elora
- Municipal Civic Centre, 1 MacDonald Square, Elora
- Online at www.centrewellington.ca

Drinking Water System Description

The Centre Wellington Drinking Water System is a large municipal residential system and is supplied by nine groundwater well sources. One source well is offline and does not contribute to the system at this time (Fergus Well 2).

The distribution system covers the village of Elora and the town of Fergus and is connected by a booster station. It serves a population of approximately 24,000 people and it is comprised of the following infrastructure:

- 135 km of buried watermain;
- 4 elevated storage towers; and
- Watermain valves, service valves, fire hydrants, and water meters.

Water Treatment Chemicals

The raw water is treated with chlorine gas at all production well sites. If needed, re-chlorination is achieved using sodium hypochlorite at the booster station and two tower locations, one in Fergus and one in Elora. At Fergus Well #1, carbon dioxide (CO_2) gas is added to the treated water to allow for pH stabilization and to reduce downstream calcification of hardness.

Drinking Water Test Results

From January 1 to December 31, 2024, all regulatory microbiological and chemical quality samples were collected throughout the drinking water system by certified Operators and tests were performed by an accredited, licensed laboratory.

1) **Adverse test results** reported under the Safe Drinking Water Act, 18(1) or OReg 170/03, Schedule 16-4.

    a) Adverse Water Quality Incidents (AWQI) refers to any unusual test result that does not meet a provincial water quality standard or a situation where the disinfection of the drinking water may be compromised.

    There were no Adverse Water Quality Incidents in the period January 1 to December 31, 2024.

2) **Microbiological testing** completed under OReg 170/03, Schedule 10.

    a) The Owner of the drinking water system must ensure water samples are taken at least **once every week** from the **raw water** supply, before any treatment has been applied to the water. Raw water samples are taken at all well sites and are tested for Total Coliforms and Escherichia coli (E. coli).

    b) The Owner of the drinking water system must ensure water samples are taken at least **once every week** from the **treated water** supply. Treated water samples are taken at all well sites and are tested for Total Coliform, Heterotrophic Plate Count (HPC) and E. coli.

    c) The Owner of the drinking water system must ensure water samples are taken **once every week** from the **distribution system**. The number of samples is

based on population served. Distribution water samples are tested for Total Coliform, Heterotrophic Plate Count (HPC) and E. coli.

Table 1: Microbiological Test Results

Type of Sample	Number of Samples	Range (minimum – maximum)	Unit of Measure
Raw – Total Coliform	411	0 - 1	MPN/100 mL
Raw – E. coli	411	0 - 0	MPN/100 mL
Treated – Total Coliform	410	0 - 0	MPN/100 mL
Treated – E. coli	410	0 - 0	MPN/100 mL
Treated – HPC	408	0 – 41*	cfu/mL
Distribution – Total Coliform	575	0 - 0	MPN/100 mL
Distribution – E. coli	575	0 - 0	MPN/100 mL
Distribution – HPC	558	0 - 110	cfu/ mL

MPN = most probable number; cfu = colony forming units

*One well location sampled on August 21, 2024 and December 27, 2024 had lab comment for HPC- No Data, HPC bacteria overgrown. In both instances the HPC result the following week was 0 cfu/mL.

3) **Operational checks** completed under OReg 170/03, Schedule 7.

   a) The Owner of a drinking water system that provides chlorination for primary disinfection must ensure that sampling and testing for **free chlorine residual** is carried out by continuous monitoring equipment. The representative number of samples taken through continuous monitoring is considered to be 8,760.

   b) The Owner of a drinking water system must ensure that a water sample is taken at least **once per month**, from a location before raw water enters the treatment system and is tested for **turbidity**. If the system obtains water from a raw water supply that is groundwater, then a sample must be taken from each well that is supplying water to the system.

Table 2: Chlorine and Turbidity Results

Parameter	Number of Samples	Range (minimum – maximum)	Unit of measure
Chlorine	8,760	0.57 – 2.72	mg/L
Turbidity	411	0.01 – 0.97	NTU

* mg/L = milligrams/Litre; NTU = Nephelometric Turbidity unit

4) **Treated water quality results** under OReg 170/03, Schedule 13-6 and 13-7.

   a) The Owner of a drinking water system that provides chlorination must ensure that at least one **distribution sample** is taken in **each calendar quarter** and tested for **trihalomethanes** (THMs). The sample must be taken at a point in the system that is likely to have an elevated potential for the formation of THMs. The annual report value is based on a running annual average (RAA) of quarterly THMs results.

b) The Owner of a drinking water system that provides chlorination must ensure that at least one **distribution sample** is taken in **each calendar quarter** and tested for **haloacetic acids** (HAAs). The sample must be taken at a point in the system that is likely to have an elevated potential for the formation of HAAs. The annual report value is based on a running annual average (RAA) of quarterly HAAs results.

c) The Owner of a drinking water system must ensure that at least **one water sample** is taken **every three months** and tested for **nitrate and nitrite**. Samples were taken at every well site that is supplying water to the system.

d) The Drinking Water Standard (STND) for the parameters are listed as per OReg 169/03 Schedule 2.

Table 3: Trihalomethanes Running Annual Average (RAA)

Location	Date	THMs RAA	THMs STND	Unit of Measure
Distribution	2024 Sampling	12.8	100	ug/L

* ug/L = micrograms/Litre

Table 4: Haloacetic Acids Running Annual Average (RAA)

Location	Date	HAAs RAA	HAAs STND	Unit of Measure
Distribution	2024 Sampling	< 5.0	80	ug/L

Table 5: Nitrate and Nitrite Results (4th sampling round in 2024)

Location	Date	Nitrate (as Nitrogen)	Nitrate STND	Nitrite (as Nitrogen)	Nitrite STND	Unit of Measure
Fergus Well 1	October 30, 2024	0.956	10	<0.050	1.0	mg/L
Fergus Well 4	October 30, 2024	0.131	10	<0.010	1.0	mg/L
Fergus Well 5	October 30, 2024	0.337	10	<0.010	1.0	mg/L
Fergus Well 6	October 30, 2024	<0.100	10	<0.050	1.0	mg/L
Fergus Well 7	October 30, 2024	<0.020	10	<0.010	1.0	mg/L
Elora Well 1	October 30, 2024	<0.020	10	<0.010	1.0	mg/L
Elora Well 3	October 30, 2024	0.213	10	<0.050	1.0	mg/L
Elora Well 4	October 30, 2024	<0.020	10	<0.010	1.0	mg/L

5) **Treated water quality results** under OReg 170/03, Schedule 13-2.

a) The Owner of a drinking water system must ensure that at least **one water sample** is taken every **36 months** and tested for Schedule 23, **Inorganics**. Samples were taken at every well site that is supplying water to the system.

b) The Drinking Water Standards (STND) for the parameters are listed as per OReg 169/03 Schedule 2.

Table 6: Fergus Well 1 Schedule 23 Inorganic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Antimony	March 18, 2024	<0.60	6	ug/L
Arsenic	March 18, 2024	<1.0	10	ug/L
Barium	March 18, 2024	58	1,000	ug/L
Boron	March 18, 2024	<50	5,000	ug/L
Cadmium	March 18, 2024	<0.10	5	ug/L
Chromium	March 18, 2024	<1.0	50	ug/L
Mercury	March 18, 2024	<0.100	1	ug/L
Selenium	March 18, 2024	<1.0	50	ug/L
Uranium	March 18, 2024	<2.0	20	ug/L

Table 7: Fergus Well 4 Schedule 23 Inorganic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Antimony	March 18, 2024	<0.60	6	ug/L
Arsenic	March 18, 2024	<1.0	10	ug/L
Barium	March 18, 2024	32	1,000	ug/L
Boron	March 18, 2024	70	5,000	ug/L
Cadmium	March 18, 2024	<0.10	5	ug/L
Chromium	March 18, 2024	<1.0	50	ug/L
Mercury	March 18, 2024	<0.100	1	ug/L
Selenium	March 18, 2024	<1.0	50	ug/L
Uranium	March 18, 2024	<2.0	20	ug/L

Table 8: Fergus Well 5 Schedule 23 Inorganic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Antimony	March 18, 2024	<0.60	6	ug/L
Arsenic	March 18, 2024	<1.0	10	ug/L
Barium	March 18, 2024	50	1,000	ug/L
Boron	March 18, 2024	<50	5,000	ug/L
Cadmium	March 18, 2024	<0.10	5	ug/L
Chromium	March 18, 2024	<1.0	50	ug/L
Mercury	March 18, 2024	<0.100	1	ug/L
Selenium	March 18, 2024	<1.0	50	ug/L
Uranium	March 18, 2024	<2.0	20	ug/L

Table 9: Fergus Well 6 Schedule 23 Inorganic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Antimony	March 18, 2024	<0.60	6	ug/L
Arsenic	March 18, 2024	<1.0	10	ug/L
Barium	March 18, 2024	18	1,000	ug/L

Boron	March 18, 2024	100	5,000	ug/L
Cadmium	March 18, 2024	<0.10	5	ug/L
Chromium	March 18, 2024	<1.0	50	ug/L
Mercury	March 18, 2024	<0.100	1	ug/L
Selenium	March 18, 2024	<1.0	50	ug/L
Uranium	March 18, 2024	<2.0	20	ug/L

Table 10: Fergus Well 7 Schedule 23 Inorganic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Antimony	March 18, 2024	<0.60	6	ug/L
Arsenic	March 18, 2024	<1.0	10	ug/L
Barium	March 18, 2024	22	1,000	ug/L
Boron	March 18, 2024	60	5,000	ug/L
Cadmium	March 18, 2024	<0.10	5	ug/L
Chromium	March 18, 2024	<1.0	50	ug/L
Mercury	March 18, 2024	<0.100	1	ug/L
Selenium	March 18, 2024	<1.0	50	ug/L
Uranium	March 18, 2024	<2.0	20	ug/L

Table 11: Elora Well 1 Schedule 23 Inorganic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Antimony	March 19, 2024	<0.60	6	ug/L
Arsenic	March 19, 2024	<1.0	10	ug/L
Barium	March 19, 2024	26	1,000	ug/L
Boron	March 19, 2024	<50	5,000	ug/L
Cadmium	March 19, 2024	<0.10	5	ug/L
Chromium	March 19, 2024	<1.0	50	ug/L
Mercury	March 19, 2024	<0.100	1	ug/L
Selenium	March 19, 2024	<1.0	50	ug/L
Uranium	March 19, 2024	<2.0	20	ug/L

Table 12: Elora Well 3 Schedule 23 Inorganic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Antimony	March 19, 2024	<0.60	6	ug/L
Arsenic	March 19, 2024	<1.0	10	ug/L
Barium	March 19, 2024	24	1,000	ug/L
Boron	March 19, 2024	<50	5,000	ug/L
Cadmium	March 19, 2024	<0.10	5	ug/L
Chromium	March 19, 2024	<1.0	50	ug/L
Mercury	March 19, 2024	<0.100	1	ug/L
Selenium	March 19, 2024	<1.0	50	ug/L
Uranium	March 19, 2024	<2.0	20	ug/L

Table 13: Elora Well 4 Schedule 23 Inorganic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Antimony	March 19, 2024	<0.60	6	ug/L
Arsenic	March 19, 2024	<1.0	10	ug/L
Barium	March 19, 2024	21	1,000	ug/L
Boron	March 19, 2024	<50	5,000	ug/L
Cadmium	March 19, 2024	<0.10	5	ug/L
Chromium	March 19, 2024	<1.0	50	ug/L
Mercury	March 19, 2024	<0.100	1	ug/L
Selenium	March 19, 2024	<1.0	50	ug/L
Uranium	March 19, 2024	<2.0	20	ug/L

6) **Treated water quality results** under OReg 170/03, Schedule 13-8 and 13-9.

   a) The Owner of a drinking water system must ensure that at least **one water sample** is taken **every 60 months** and tested for **sodium**. Samples were taken at every well site that is supplying water to the system.

   b) The Owner of a drinking water system must ensure that at least **one water sample** is taken **every 60 months** and tested for **fluoride**. Samples were taken at every well site that is supplying water to the system.

   c) The Drinking Water Standards (STND) for the parameters are listed as per OReg 169/03 Schedule 2.

   d) The aesthetic objective (AO) for sodium in drinking water is 200 mg/L. The local Medical Officer of Health must be notified when the sodium concentration exceeds 20 mg/L.

Table 14: Sodium and Fluoride Results

Location	Sample Date	Sodium	Sodium AO	Fluoride	Fluoride STND	Unit of Measure
Fergus Well 1	Apr 15, 2021	83.2	200	0.46	1.5	mg/L
Fergus Well 4	Apr 15, 2021	27.4	200	0.86	1.5	mg/L
Fergus Well 5	Apr 15, 2021	10.3	200	0.12	1.5	mg/L
Fergus Well 6	Apr 15, 2021	40.1	200	0.34	1.5	mg/L
Fergus Well 7	Apr 27, 2021	18.9	200	0.36	1.5	mg/L
Elora Well 1	Apr 15, 2021	20.3	200	0.28	1.5	mg/L
Elora Well 3	Apr 15, 2021	12.2	200	0.28	1.5	mg/L
Elora Well 4	Apr 15, 2021	15.6	200	0.24	1.5	mg/L

7) **Treated water quality results** under OReg 170/03, Schedule 13-4.

   a) The Owner of a drinking water system must ensure that at least **one water sample** is taken **every 36 months** and tested for Schedule 24, **Organics**. Samples were taken at every well site that is supplying water to the system.

b) The Drinking Water Standards (STND) for the parameters are listed as per OReg 169/03 Schedule 2.

Table 15: Fergus Well 1 Schedule 24 Organic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Alachlor	Mar 18, 2024	<0.050	5	ug/L
Atrazine + N-dealkylated metabolites	Mar 18, 2024	<0.14	5	ug/L
Azinphos-methyl	Mar 18, 2024	<0.100	20	ug/L
Benzene	Mar 18, 2024	<0.50	1	ug/L
Benzo(a)pyrene	Mar 18, 2024	<0.0050	0.01	ug/L
Bromoxynil	Mar 18, 2024	<0.050	5	ug/L
Carbaryl	Mar 18, 2024	<0.050	90	ug/L
Carbofuran	Mar 18, 2024	<0.0250	90	ug/L
Carbon Tetrachloride	Mar 18, 2024	<0.20	2	ug/L
Chlorpyrifos	Mar 18, 2024	<0.10	90	ug/L
Diazinon	Mar 18, 2024	<0.0250	20	ug/L
Dicamba	Mar 18, 2024	<0.10	120	ug/L
1,2-Dichlorobenzene	Mar 18, 2024	<0.50	200	ug/L
1,4-Dichlorobenzene	Mar 18, 2024	<0.50	5	ug/L
1,2-Dichloroethane	Mar 18, 2024	<0.50	5	ug/L
1,1-Dichloroethylene (vinylidene chloride)	Mar 18, 2024	<0.50	14	ug/L
Dichloromethane	Mar 18, 2024	<1.0	50	ug/L
2,4-Dichlorophenol	Mar 18, 2024	<0.30	900	ug/L
2,4-Dichlorophenoxy acetic acid (2,4-D)	Mar 18, 2024	<0.050	100	ug/L
Diclofop-methyl	Mar 18, 2024	<0.100	9	ug/L
Dimethoate	Mar 18, 2024	<0.050	20	ug/L
Diquat	Mar 18, 2024	<1.0	70	ug/L
Diuron	Mar 18, 2024	<0.050	150	ug/L
Glyphosate	Mar 18, 2024	<0.20	280	ug/L
Malathion	Mar 18, 2024	<0.0250	190	ug/L
2 Methyl-4-chlorophenoxyacetic acid	Mar 18, 2024	<0.050	100	ug/L
Metolachlor	Mar 18, 2024	<0.0250	50	ug/L
Metribuzin	Mar 18, 2024	<0.100	80	ug/L
Monochlorobenzene	Mar 18, 2024	<0.50	80	ug/L
Paraquat	Mar 18, 2024	<1.0	10	ug/L
Pentachlorophenol	Mar 18, 2024	<0.50	60	ug/L
Phorate	Mar 18, 2024	<0.250	2	ug/L
Picloram	Mar 18, 2024	<0.10	190	ug/L
Polychlorinated Biphenyls (PCB)	Mar 18, 2024	<0.030	3	ug/L
Prometryne	Mar 18, 2024	<0.0250	1	ug/L
Simazine	Mar 18, 2024	<0.100	10	ug/L

Terbufos	Mar 18, 2024	<0.50	1	ug/L
Tetrachloroethylene	Mar 18, 2024	<0.50	10	ug/L
2,3,4,6-Tetrachlorophenol	Mar 18, 2024	<0.50	100	ug/L
Triallate	Mar 18, 2024	<0.100	230	ug/L
Trichloroethylene	Mar 18, 2024	<0.50	5	ug/L
2,4,6-Trichlorophenol	Mar 18, 2024	<0.50	5	ug/L
Trifluralin	Mar 18, 2024	<0.10	45	ug/L
Vinyl Chloride	Mar 18, 2024	<0.50	1	ug/L

Table 16: Fergus Well 4 Schedule 24 Organic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Alachlor	Mar 18, 2024	<0.050	5	ug/L
Atrazine + N-dealkylated metabolites	Mar 18, 2024	<0.14	5	ug/L
Azinphos-methyl	Mar 18, 2024	<0.100	20	ug/L
Benzene	Mar 18, 2024	<0.50	1	ug/L
Benzo(a)pyrene	Mar 18, 2024	<0.0050	0.01	ug/L
Bromoxynil	Mar 18, 2024	<0.050	5	ug/L
Carbaryl	Mar 18, 2024	<0.050	90	ug/L
Carbofuran	Mar 18, 2024	<0.0250	90	ug/L
Carbon Tetrachloride	Mar 18, 2024	<0.20	2	ug/L
Chlorpyrifos	Mar 18, 2024	<0.10	90	ug/L
Diazinon	Mar 18, 2024	<0.0250	20	ug/L
Dicamba	Mar 18, 2024	<0.10	120	ug/L
1,2-Dichlorobenzene	Mar 18, 2024	<0.50	200	ug/L
1,4-Dichlorobenzene	Mar 18, 2024	<0.50	5	ug/L
1,2-Dichloroethane	Mar 18, 2024	<0.50	5	ug/L
1,1-Dichloroethylene (vinylidene chloride)	Mar 18, 2024	<0.50	14	ug/L
Dichloromethane	Mar 18, 2024	<1.0	50	ug/L
2,4-Dichlorophenol	Mar 18, 2024	<0.30	900	ug/L
2,4-Dichlorophenoxy acetic acid (2,4-D)	Mar 18, 2024	<0.050	100	ug/L
Diclofop-methyl	Mar 18, 2024	<0.100	9	ug/L
Dimethoate	Mar 18, 2024	<0.050	20	ug/L
Diquat	Mar 18, 2024	<1.0	70	ug/L
Diuron	Mar 18, 2024	<0.050	150	ug/L
Glyphosate	Mar 18, 2024	<0.20	280	ug/L
Malathion	Mar 18, 2024	<0.0250	190	ug/L
2 Methyl-4-chlorophenoxyacetic acid	Mar 18, 2024	<0.050	100	ug/L
Metolachlor	Mar 18, 2024	<0.0250	50	ug/L
Metribuzin	Mar 18, 2024	<0.100	80	ug/L
Monochlorobenzene	Mar 18, 2024	<0.50	80	ug/L
Paraquat	Mar 18, 2024	<1.0	10	ug/L

Pentachlorophenol	Mar 18, 2024	<0.50	60	ug/L
Phorate	Mar 18, 2024	<0.250	2	ug/L
Picloram	Mar 18, 2024	<0.10	190	ug/L
Polychlorinated Biphenyls (PCB)	Mar 18, 2024	<0.030	3	ug/L
Prometryne	Mar 18, 2024	<0.0250	1	ug/L
Simazine	Mar 18, 2024	<0.100	10	ug/L
Terbufos	Mar 18, 2024	<0.50	1	ug/L
Tetrachloroethylene	Mar 18, 2024	<0.50	10	ug/L
2,3,4,6-Tetrachlorophenol	Mar 18, 2024	<0.50	100	ug/L
Triallate	Mar 18, 2024	<0.100	230	ug/L
Trichloroethylene	Mar 18, 2024	<0.50	5	ug/L
2,4,6-Trichlorophenol	Mar 18, 2024	<0.50	5	ug/L
Trifluralin	Mar 18, 2024	<0.10	45	ug/L
Vinyl Chloride	Mar 18, 2024	<0.50	1	ug/L

Table 17: Fergus Well 5 Schedule 24 Organic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Alachlor	Mar 18, 2024	<0.050	5	ug/L
Atrazine + N-dealkylated metabolites	Mar 18, 2024	<0.14	5	ug/L
Azinphos-methyl	Mar 18, 2024	<0.100	20	ug/L
Benzene	Mar 18, 2024	<0.50	1	ug/L
Benzo(a)pyrene	Mar 18, 2024	<0.0050	0.01	ug/L
Bromoxynil	Mar 18, 2024	<0.050	5	ug/L
Carbaryl	Mar 18, 2024	<0.050	90	ug/L
Carbofuran	Mar 18, 2024	<0.0250	90	ug/L
Carbon Tetrachloride	Mar 18, 2024	<0.20	2	ug/L
Chlorpyrifos	Mar 18, 2024	<0.10	90	ug/L
Diazinon	Mar 18, 2024	<0.0250	20	ug/L
Dicamba	Mar 18, 2024	<0.10	120	ug/L
1,2-Dichlorobenzene	Mar 18, 2024	<0.50	200	ug/L
1,4-Dichlorobenzene	Mar 18, 2024	<0.50	5	ug/L
1,2-Dichloroethane	Mar 18, 2024	<0.50	5	ug/L
1,1-Dichloroethylene (vinylidene chloride)	Mar 18, 2024	<0.50	14	ug/L
Dichloromethane	Mar 18, 2024	<1.0	50	ug/L
2,4-Dichlorophenol	Mar 18, 2024	<0.30	900	ug/L
2,4-Dichlorophenoxy acetic acid (2,4-D)	Mar 18, 2024	<0.050	100	ug/L
Diclofop-methyl	Mar 18, 2024	<0.100	9	ug/L
Dimethoate	Mar 18, 2024	<0.050	20	ug/L
Diquat	Mar 18, 2024	<1.0	70	ug/L
Diuron	Mar 18, 2024	<0.050	150	ug/L
Glyphosate	Mar 18, 2024	<0.20	280	ug/L

Malathion	Mar 18, 2024	<0.0250	190	ug/L
2 Methyl-4-chlorophenoxyacetic acid	Mar 18, 2024	<0.050	100	ug/L
Metolachlor	Mar 18, 2024	<0.0250	50	ug/L
Metribuzin	Mar 18, 2024	<0.100	80	ug/L
Monochlorobenzene	Mar 18, 2024	<0.50	80	ug/L
Paraquat	Mar 18, 2024	<1.0	10	ug/L
Pentachlorophenol	Mar 18, 2024	<0.50	60	ug/L
Phorate	Mar 18, 2024	<0.250	2	ug/L
Picloram	Mar 18, 2024	<0.10	190	ug/L
Polychlorinated Biphenyls (PCB)	Mar 18, 2024	<0.030	3	ug/L
Prometryne	Mar 18, 2024	<0.0250	1	ug/L
Simazine	Mar 18, 2024	<0.100	10	ug/L
Terbufos	Mar 18, 2024	<0.50	1	ug/L
Tetrachloroethylene	Mar 18, 2024	<0.50	10	ug/L
2,3,4,6-Tetrachlorophenol	Mar 18, 2024	<0.50	100	ug/L
Triallate	Mar 18, 2024	<0.100	230	ug/L
Trichloroethylene	Mar 18, 2024	<0.50	5	ug/L
2,4,6-Trichlorophenol	Mar 18, 2024	<0.50	5	ug/L
Trifluralin	Mar 18, 2024	<0.10	45	ug/L
Vinyl Chloride	Mar 18, 2024	<0.50	1	ug/L

Table 18: Fergus Well 6 Schedule 24 Organic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Alachlor	Mar 18, 2024	<0.050	5	ug/L
Atrazine + N-dealkylated metabolites	Mar 18, 2024	<0.14	5	ug/L
Azinphos-methyl	Mar 18, 2024	<0.100	20	ug/L
Benzene	Mar 18, 2024	<0.50	1	ug/L
Benzo(a)pyrene	Mar 18, 2024	<0.0050	0.01	ug/L
Bromoxynil	Mar 18, 2024	<0.050	5	ug/L
Carbaryl	Mar 18, 2024	<0.050	90	ug/L
Carbofuran	Mar 18, 2024	<0.0250	90	ug/L
Carbon Tetrachloride	Mar 18, 2024	<0.20	2	ug/L
Chlorpyrifos	Mar 18, 2024	<0.10	90	ug/L
Diazinon	Mar 18, 2024	<0.0250	20	ug/L
Dicamba	Mar 18, 2024	<0.10	120	ug/L
1,2-Dichlorobenzene	Mar 18, 2024	<0.50	200	ug/L
1,4-Dichlorobenzene	Mar 18, 2024	<0.50	5	ug/L
1,2-Dichloroethane	Mar 18, 2024	<0.50	5	ug/L
1,1-Dichloroethylene (vinylidene chloride)	Mar 18, 2024	<0.50	14	ug/L
Dichloromethane	Mar 18, 2024	<1.0	50	ug/L
2,4-Dichlorophenol	Mar 18, 2024	<0.30	900	ug/L

2,4-Dichlorophenoxy acetic acid (2,4-D)	Mar 18, 2024	<0.050	100	ug/L
Diclofop-methyl	Mar 18, 2024	<0.100	9	ug/L
Dimethoate	Mar 18, 2024	<0.050	20	ug/L
Diquat	Mar 18, 2024	<1.0	70	ug/L
Diuron	Mar 18, 2024	<0.050	150	ug/L
Glyphosate	Mar 18, 2024	<0.20	280	ug/L
Malathion	Mar 18, 2024	<0.0250	190	ug/L
2 Methyl-4-chlorophenoxyacetic acid	Mar 18, 2024	<0.050	100	ug/L
Metolachlor	Mar 18, 2024	<0.0250	50	ug/L
Metribuzin	Mar 18, 2024	<0.100	80	ug/L
Monochlorobenzene	Mar 18, 2024	<0.50	80	ug/L
Paraquat	Mar 18, 2024	<1.0	10	ug/L
Pentachlorophenol	Mar 18, 2024	<0.50	60	ug/L
Phorate	Mar 18, 2024	<0.250	2	ug/L
Picloram	Mar 18, 2024	<0.10	190	ug/L
Polychlorinated Biphenyls (PCB)	Mar 18, 2024	<0.030	3	ug/L
Prometryne	Mar 18, 2024	<0.0250	1	ug/L
Simazine	Mar 18, 2024	<0.100	10	ug/L
Terbufos	Mar 18, 2024	<0.50	1	ug/L
Tetrachloroethylene	Mar 18, 2024	<0.50	10	ug/L
2,3,4,6-Tetrachlorophenol	Mar 18, 2024	<0.50	100	ug/L
Triallate	Mar 18, 2024	<0.100	230	ug/L
Trichloroethylene	Mar 18, 2024	<0.50	5	ug/L
2,4,6-Trichlorophenol	Mar 18, 2024	<0.50	5	ug/L
Trifluralin	Mar 18, 2024	<0.10	45	ug/L
Vinyl Chloride	Mar 18, 2024	<0.50	1	ug/L

Table 19: Fergus Well 7 Schedule 24 Organic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Alachlor	Mar 18, 2024	<0.050	5	ug/L
Atrazine + N-dealkylated metabolites	Mar 18, 2024	<0.14	5	ug/L
Azinphos-methyl	Mar 18, 2024	<0.100	20	ug/L
Benzene	Mar 18, 2024	<0.50	1	ug/L
Benzo(a)pyrene	Mar 18, 2024	<0.0050	0.01	ug/L
Bromoxynil	Mar 18, 2024	<0.050	5	ug/L
Carbaryl	Mar 18, 2024	<0.050	90	ug/L
Carbofuran	Mar 18, 2024	<0.0250	90	ug/L
Carbon Tetrachloride	Mar 18, 2024	<0.20	2	ug/L
Chlorpyrifos	Mar 18, 2024	<0.10	90	ug/L
Diazinon	Mar 18, 2024	<0.0250	20	ug/L
Dicamba	Mar 18, 2024	<0.10	120	ug/L

1,2-Dichlorobenzene	Mar 18, 2024	<0.50	200	ug/L
1,4-Dichlorobenzene	Mar 18, 2024	<0.50	5	ug/L
1,2-Dichloroethane	Mar 18, 2024	<0.50	5	ug/L
1,1-Dichloroethylene (vinylidene chloride)	Mar 18, 2024	<0.50	14	ug/L
Dichloromethane	Mar 18, 2024	<1.0	50	ug/L
2,4-Dichlorophenol	Mar 18, 2024	<0.30	900	ug/L
2,4-Dichlorophenoxy acetic acid (2,4-D)	Mar 18, 2024	<0.050	100	ug/L
Diclofop-methyl	Mar 18, 2024	<0.100	9	ug/L
Dimethoate	Mar 18, 2024	<0.050	20	ug/L
Diquat	Mar 18, 2024	<1.0	70	ug/L
Diuron	Mar 18, 2024	<0.050	150	ug/L
Glyphosate	Mar 18, 2024	<0.20	280	ug/L
Malathion	Mar 18, 2024	<0.0250	190	ug/L
2 Methyl-4-chlorophenoxyacetic acid	Mar 18, 2024	<0.050	100	ug/L
Metolachlor	Mar 18, 2024	<0.0250	50	ug/L
Metribuzin	Mar 18, 2024	<0.100	80	ug/L
Monochlorobenzene	Mar 18, 2024	<0.50	80	ug/L
Paraquat	Mar 18, 2024	<1.0	10	ug/L
Pentachlorophenol	Mar 18, 2024	<0.50	60	ug/L
Phorate	Mar 18, 2024	<0.250	2	ug/L
Picloram	Mar 18, 2024	<0.10	190	ug/L
Polychlorinated Biphenyls (PCB)	Mar 18, 2024	<0.030	3	ug/L
Prometryne	Mar 18, 2024	<0.0250	1	ug/L
Simazine	Mar 18, 2024	<0.100	10	ug/L
Terbufos	Mar 18, 2024	<0.50	1	ug/L
Tetrachloroethylene	Mar 18, 2024	<0.50	10	ug/L
2,3,4,6-Tetrachlorophenol	Mar 18, 2024	<0.50	100	ug/L
Triallate	Mar 18, 2024	<0.100	230	ug/L
Trichloroethylene	Mar 18, 2024	<0.50	5	ug/L
2,4,6-Trichlorophenol	Mar 18, 2024	<0.50	5	ug/L
Trifluralin	Mar 18, 2024	<0.10	45	ug/L
Vinyl Chloride	Mar 18, 2024	<0.50	1	ug/L

Table 20: Elora Well 1 Schedule 24 Organic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Alachlor	Mar 19, 2024	<0.050	5	ug/L
Atrazine + N-dealkylated metabolites	Mar 19, 2024	<0.14	5	ug/L
Azinphos-methyl	Mar 19, 2024	<0.100	20	ug/L
Benzene	Mar 19, 2024	<0.50	1	ug/L
Benzo(a)pyrene	Mar 19, 2024	<0.0050	0.01	ug/L

Bromoxynil	Mar 19, 2024	<0.050	5	ug/L
Carbaryl	Mar 19, 2024	<0.050	90	ug/L
Carbofuran	Mar 19, 2024	<0.0250	90	ug/L
Carbon Tetrachloride	Mar 19, 2024	<0.20	2	ug/L
Chlorpyrifos	Mar 19, 2024	<0.10	90	ug/L
Diazinon	Mar 19, 2024	<0.0250	20	ug/L
Dicamba	Mar 19, 2024	<0.10	120	ug/L
1,2-Dichlorobenzene	Mar 19, 2024	<0.50	200	ug/L
1,4-Dichlorobenzene	Mar 19, 2024	<0.50	5	ug/L
1,2-Dichloroethane	Mar 19, 2024	<0.50	5	ug/L
1,1-Dichloroethylene (vinylidene chloride)	Mar 19, 2024	<0.50	14	ug/L
Dichloromethane	Mar 19, 2024	<1.0	50	ug/L
2,4- Dichlorophenol	Mar 19, 2024	<0.30	900	ug/L
2,4-Dichlorophenoxy acetic acid (2,4-D)	Mar 19, 2024	<0.050	100	ug/L
Diclofop-methyl	Mar 19, 2024	<0.100	9	ug/L
Dimethoate	Mar 19, 2024	<0.050	20	ug/L
Diquat	Mar 19, 2024	<1.0	70	ug/L
Diuron	Mar 19, 2024	<0.050	150	ug/L
Glyphosate	Mar 19, 2024	<0.20	280	ug/L
Malathion	Mar 19, 2024	<0.0250	190	ug/L
2 Methyl-4-chlorophenoxyacetic acid	Mar 19, 2024	<0.050	100	ug/L
Metolachlor	Mar 19, 2024	<0.0250	50	ug/L
Metribuzin	Mar 19, 2024	<0.100	80	ug/L
Monochlorobenzene	Mar 19, 2024	<0.50	80	ug/L
Paraquat	Mar 19, 2024	<1.0	10	ug/L
Pentachlorophenol	Mar 19, 2024	<0.50	60	ug/L
Phorate	Mar 19, 2024	<0.250	2	ug/L
Picloram	Mar 19, 2024	<0.10	190	ug/L
Polychlorinated Biphenyls (PCB)	Mar 19, 2024	<0.030	3	ug/L
Prometryne	Mar 19, 2024	<0.0250	1	ug/L
Simazine	Mar 19, 2024	<0.100	10	ug/L
Terbufos	Mar 19, 2024	<0.50	1	ug/L
Tetrachloroethylene	Mar 19, 2024	<0.50	10	ug/L
2,3,4,6-Tetrachlorophenol	Mar 19, 2024	<0.50	100	ug/L
Triallate	Mar 19, 2024	<0.100	230	ug/L
Trichloroethylene	Mar 19, 2024	<0.50	5	ug/L
2,4,6-Trichlorophenol	Mar 19, 2024	<0.50	5	ug/L
Trifluralin	Mar 19, 2024	<0.10	45	ug/L
Vinyl Chloride	Mar 19, 2024	<0.50	1	ug/L

Table 21: Elora Well 3 Schedule 24 Organic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Alachlor	Mar 19, 2024	<0.050	5	ug/L
Atrazine + N-dealkylated metabolites	Mar 19, 2024	<0.14	5	ug/L
Azinphos-methyl	Mar 19, 2024	<0.100	20	ug/L
Benzene	Mar 19, 2024	<0.50	1	ug/L
Benzo(a)pyrene	Mar 19, 2024	<0.0050	0.01	ug/L
Bromoxynil	Mar 19, 2024	<0.050	5	ug/L
Carbaryl	Mar 19, 2024	<0.050	90	ug/L
Carbofuran	Mar 19, 2024	<0.0250	90	ug/L
Carbon Tetrachloride	Mar 19, 2024	<0.20	2	ug/L
Chlorpyrifos	Mar 19, 2024	<0.10	90	ug/L
Diazinon	Mar 19, 2024	<0.0250	20	ug/L
Dicamba	Mar 19, 2024	<0.10	120	ug/L
1,2-Dichlorobenzene	Mar 19, 2024	<0.50	200	ug/L
1,4-Dichlorobenzene	Mar 19, 2024	<0.50	5	ug/L
1,2-Dichloroethane	Mar 19, 2024	<0.50	5	ug/L
1,1-Dichloroethylene (vinylidene chloride)	Mar 19, 2024	<0.50	14	ug/L
Dichloromethane	Mar 19, 2024	<1.0	50	ug/L
2,4-Dichlorophenol	Mar 19, 2024	<0.30	900	ug/L
2,4-Dichlorophenoxy acetic acid (2,4-D)	Mar 19, 2024	<0.050	100	ug/L
Diclofop-methyl	Mar 19, 2024	<0.100	9	ug/L
Dimethoate	Mar 19, 2024	<0.050	20	ug/L
Diquat	Mar 19, 2024	<1.0	70	ug/L
Diuron	Mar 19, 2024	<0.050	150	ug/L
Glyphosate	Mar 19, 2024	<0.20	280	ug/L
Malathion	Mar 19, 2024	<0.0250	190	ug/L
2 Methyl-4-chlorophenoxyacetic acid	Mar 19, 2024	<0.050	100	ug/L
Metolachlor	Mar 19, 2024	<0.0250	50	ug/L
Metribuzin	Mar 19, 2024	<0.100	80	ug/L
Monochlorobenzene	Mar 19, 2024	<0.50	80	ug/L
Paraquat	Mar 19, 2024	<1.0	10	ug/L
Pentachlorophenol	Mar 19, 2024	<0.50	60	ug/L
Phorate	Mar 19, 2024	<0.250	2	ug/L
Picloram	Mar 19, 2024	<0.10	190	ug/L
Polychlorinated Biphenyls (PCB)	Mar 19, 2024	<0.030	3	ug/L
Prometryne	Mar 19, 2024	<0.0250	1	ug/L
Simazine	Mar 19, 2024	<0.100	10	ug/L
Terbufos	Mar 19, 2024	<0.50	1	ug/L
Tetrachloroethylene	Mar 19, 2024	<0.50	10	ug/L

2,3,4,6-Tetrachlorophenol	Mar 19, 2024	<0.50	100	ug/L
Triallate	Mar 19, 2024	<0.100	230	ug/L
Trichloroethylene	Mar 19, 2024	<0.50	5	ug/L
2,4,6-Trichlorophenol	Mar 19, 2024	<0.50	5	ug/L
Trifluralin	Mar 19, 2024	<0.10	45	ug/L
Vinyl Chloride	Mar 19, 2024	<0.50	1	ug/L

Table 22: Elora Well 4 Schedule 24 Organic Results

Parameter	Sample Date	Result	STND	Unit of Measure
Alachlor	Mar 19, 2024	<0.050	5	ug/L
Atrazine + N-dealkylated metabolites	Mar 19, 2024	<0.14	5	ug/L
Azinphos-methyl	Mar 19, 2024	<0.100	20	ug/L
Benzene	Mar 19, 2024	<0.50	1	ug/L
Benzo(a)pyrene	Mar 19, 2024	<0.0050	0.01	ug/L
Bromoxynil	Mar 19, 2024	<0.050	5	ug/L
Carbaryl	Mar 19, 2024	<0.050	90	ug/L
Carbofuran	Mar 19, 2024	<0.0250	90	ug/L
Carbon Tetrachloride	Mar 19, 2024	<0.20	2	ug/L
Chlorpyrifos	Mar 19, 2024	<0.10	90	ug/L
Diazinon	Mar 19, 2024	<0.0250	20	ug/L
Dicamba	Mar 19, 2024	<0.10	120	ug/L
1,2-Dichlorobenzene	Mar 19, 2024	<0.50	200	ug/L
1,4-Dichlorobenzene	Mar 19, 2024	<0.50	5	ug/L
1,2-Dichloroethane	Mar 19, 2024	<0.50	5	ug/L
1,1-Dichloroethylene (vinylidene chloride)	Mar 19, 2024	<0.50	14	ug/L
Dichloromethane	Mar 19, 2024	<1.0	50	ug/L
2,4-Dichlorophenol	Mar 19, 2024	<0.30	900	ug/L
2,4-Dichlorophenoxy acetic acid (2,4-D)	Mar 19, 2024	<0.050	100	ug/L
Diclofop-methyl	Mar 19, 2024	<0.100	9	ug/L
Dimethoate	Mar 19, 2024	<0.050	20	ug/L
Diquat	Mar 19, 2024	<1.0	70	ug/L
Diuron	Mar 19, 2024	<0.050	150	ug/L
Glyphosate	Mar 19, 2024	<0.20	280	ug/L
Malathion	Mar 19, 2024	<0.0250	190	ug/L
2 Methyl-4-chlorophenoxyacetic acid	Mar 19, 2024	<0.050	100	ug/L
Metolachlor	Mar 19, 2024	<0.0250	50	ug/L
Metribuzin	Mar 19, 2024	<0.100	80	ug/L
Monochlorobenzene	Mar 19, 2024	<0.50	80	ug/L
Paraquat	Mar 19, 2024	<1.0	10	ug/L
Pentachlorophenol	Mar 19, 2024	<0.50	60	ug/L
Phorate	Mar 19, 2024	<0.250	2	ug/L

Picloram	Mar 19, 2024	<0.10	190	ug/L
Polychlorinated Biphenyls (PCB)	Mar 19, 2024	<0.030	3	ug/L
Prometryne	Mar 19, 2024	<0.0250	1	ug/L
Simazine	Mar 19, 2024	<0.100	10	ug/L
Terbufos	Mar 19, 2024	<0.50	1	ug/L
Tetrachloroethylene	Mar 19, 2024	<0.50	10	ug/L
2,3,4,6-Tetrachlorophenol	Mar 19, 2024	<0.50	100	ug/L
Triallate	Mar 19, 2024	<0.100	230	ug/L
Trichloroethylene	Mar 19, 2024	<0.50	5	ug/L
2,4,6-Trichlorophenol	Mar 19, 2024	<0.50	5	ug/L
Trifluralin	Mar 19, 2024	<0.10	45	ug/L
Vinyl Chloride	Mar 19, 2024	<0.50	1	ug/L

8) **Lead results** under OReg 170/03, Schedule 15.1-5.

a) The Owner of a drinking water system must ensure that the distribution system is sampled and tested for lead concentrations. For systems that continuously demonstrate good results, the regulation allows for reduced sampling. The Center Wellington DWS **qualifies for reduced sampling**. The samples must be taken during the period of December 15 – April 15 (winter sampling) and during the period of June 15 – October 15 (summer sampling) **every 36 months**.

b) The Drinking Water Standards (STND) for the parameters are listed as per OReg 169/03 Schedule 2.

c) The Owner of a drinking water system must ensure that the distribution system is sampled and tested for **pH and total alkalinity** during each of the sampling periods (summer sampling and winter sampling) in **every 12 month period**.

d) The Operational Guideline for pH is 6.5 - 8.5 and the Operational Guideline for alkalinity (as CaCO3) is 30 - 500 mg/L.

Table 23: Schedule 15.1 Lead Results

Location	Sample Date	Lead Result	Lead STND	Unit of Measure
Distribution Location 1	April 13, 2022	<1.0	10	ug/L
Distribution Location 2	April 13, 2022	<1.0	10	ug/L
Distribution Location 3	April 13, 2022	<1.0	10	ug/L
Distribution Location 4	April 13, 2022	<1.0	10	ug/L
Distribution Location 1	September 21, 2022	<1.0	10	ug/L
Distribution Location 2	September 21, 2022	<1.0	10	ug/L
Distribution Location 3	September 21, 2022	<1.0	10	ug/L
Distribution Location 4	September 21, 2022	<1.0	10	ug/L

Table 24: Schedule 15.1 pH and Alkalinity Results (Sampling Required Only)

Location	Sample Date	pH Result	Alkalinity Result (as CaCO3)	Alkalinity Unit of Measure
Distribution Location 1	January 23, 2024	7.59	210	mg/L
Distribution Location 2	January 23, 2024	7.42	298	mg/L
Distribution Location 3	January 23, 2024	7.50	219	mg/L
Distribution Location 4	January 23, 2024	7.52	218	mg/L
Distribution Location 1	July 18, 2024	7.25	201	mg/L
Distribution Location 2	July 18, 2024	7.15	262	mg/L
Distribution Location 3	July 18, 2024	7.44	206	mg/L
Distribution Location 4	July 18, 2024	7.48	205	mg/L

9) **Summary of Additional Testing and Sampling** as required under the Township Municipal Drinking Water Licence (MDWL), Schedule C, Section 4.1, Table 5.

   a) The Township is required to complete **raw water sampling** every **quarter** and test for **Trichloroethylene** (TCE) at **Fergus Well 1**.

   b) The Drinking Water Standard (STND) for TCE is listed as per OReg 169/03 Schedule 2.

Table 25: MDWL Trichloroethylene Results (Raw Water and Treated Water)

Location	Sample Date	Raw Water Result	Treated Water Result	TCE STND	Unit of Measure
Fergus Well 1	February 14, 2024	9.36	<0.50	5	ug/L
Fergus Well 1	April 16, 2024	1.99	<0.50	5	ug/L
Fergus Well 1	July 18, 2024	9.67	<0.50	5	ug/L
Fergus Well 1	October 30, 2024	0.54	<0.50	5	ug/L

10) **Review of the Data**

   a) The Annual Report must list any i**norganic or organic parameter** that **exceeded half the standard** (½ STND) prescribed in Schedule 2 of the Ontario Drinking Water Standards.

   b) The Drinking Water Standard (STND) was established for parameters which when present above a certain concentration, have known or suspected adverse health effects.

   c) The results of the organic parameter analysis are below the ½ STND for each parameter and the majority were under the laboratory's MDL (minimum detection limit).

   d) The results of the inorganic parameter analysis are below the ½ STND for each parameter with the following exception:

Table 26: Inorganic and Organic Parameters Exceeding ½ STND

Parameter	Location	Result	STND	½ STND	Units
Fluoride	Fergus Well 4	0.86	1.5	0.75	mg/L

11) The Annual Report must describe any **major expenses incurred** during the year to install, **repair or replace required equipment**.

Table 27: 2024 Equipment Major Expenses

Location	Description	Cost
Fergus Well 6	Submersible well pump motor replacement	$23, 800