2021

Water Quality Report

For

The City of Stratford

Water Distribution and Supply

Infrastructure and Development Services

February 4, 2022

Infrastructure and Development
Services Department
82 Erie Street, 3rd Floor
Stratford ON N5A 2M4
(519) 271-0250 Ext. 222
www.stratford.ca

February 4, 2022

Dear Water Consumer,

The Water Division is pleased to provide the 2021 Annual Water Quality Report for the City of Stratford Distribution and Supply water system.

The report, as required by Regulation 170/03 of the Safe Drinking Water Act, contains information related to water quality in the City of Stratford.

The report must be made available annually by February 28 and can be found on the City of Stratford website at:

https://www.stratford.ca/en/live-here/waterannualreports.aspx

If you have any questions or would like copies of the report, please call 519-271-0250 ext. 222 or the report can be viewed at Infrastructure and Developmental Services, City Annex, 82 Erie Street, 3rd Floor, Stratford.

Yours truly,

Johnny Bowes
Manager of Environmental Services

Annual Report

Drinking-Water System Number: 220000530
Drinking-Water System Name: Stratford Well Supply
Drinking-Water System Owner: Corporation of the City of Stratford
Drinking-Water System Category: Large Municipal Residential
Period Being Reported: January 1 to December 31, 2021

Does your Drinking-Water System serve more than 10,000 people?

Yes

Is your annual report available to the public at no charge on a website?

Yes

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

On-line at: https://www.stratford.ca/en/live-here/waterannualreports.aspx, or contact the City of Stratford Water Division at 519-271-0250, extension 222.

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?

N/A

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

- Public access/notice via the web: Yes
- Public access/notice via Government Website: Yes
- Public access/notice via a newspaper: Yes
- Public access/notice via Public Request: Yes
- Public access/notice via a Public Library: No
- Public access/notice via other method: No

Describe Your Drinking-Water System:

- **The Chestnut Street Well and Pumphouse** consists of one well that pumps directly into a raw water reservoir. Primary disinfection is achieved through a gas chlorination system that injects chlorine into the water as it enters this reservoir. Contact time is achieved through a combination of the 59 cubic meter high lift pump well and the 131.5 cubic meter raw water reservoir. Water is discharged to the City of Stratford distribution system by a single highlift pump. An analyzer continuously monitors the level of chlorine prior to the water being discharged and is connected with the SCADA system, which is monitored by operators, during regular working hours, and remotely through an emergency after-hours alarming system. This site has no emergency standby power available.

- **The Mornington Street Well and Pumphouse** consists of one well that pumps directly into a raw water reservoir. Primary disinfection is achieved through a gas chlorination system that injects chlorine into the water as it enters this reservoir. Contact time is achieved through a combination of the 118 cubic meter clearwell and the 50 cubic meter raw water reservoir. Water is discharged to the City of Stratford distribution system by a single highlift pump. An analyzer continuously monitors the level of chlorine prior to the water being discharged and is connected with the SCADA system, which is monitored by operators, during regular working hours, and remotely through an emergency after-hours alarming system. This site has no emergency standby power on-site but has a main power electrical transfer switch and connection for use of a portable generator in emergency conditions.

- **The Lorne Avenue Well and Pumphouse** consists of one well that pumps directly into the City of Stratford Distribution system via a 30 cubic meter concrete pressure chamber. Primary disinfection is achieved through a gas chlorination system that injects chlorine into the water as it enters this chamber for contact time. An analyzer continuously monitors the level of chlorine prior to the water being discharged and is connected with the SCADA system, which is monitored by operators, during regular working hours, and remotely through an emergency after-hours alarming system. This site has no emergency standby power available.

- **The Dunn Road Well and Pumphouse** consists of one well that pumps directly into the City of Stratford Distribution system via an 89.5 cubic meter concrete pressure chamber. Primary disinfection is achieved through a gas chlorination system that injects chlorine into the water as it enters this chamber for contact time. An analyzer continuously monitors the level of chlorine prior to the water being discharged and is connected with the SCADA system, which is monitored by operators, during regular working hours, and remotely through an emergency after-hours alarming system. This site has no emergency standby power on-site but has a main power electrical transfer switch and connection for use of a portable generator in emergency conditions.

- **The O'Loane Avenue Well and Pumphouse** consists of one well that pumps directly into the City of Stratford Distribution system via a 54.2 cubic meter concrete pressure chamber. Primary disinfection is achieved through a gas chlorination system that injects chlorine into the water as it enters this chamber for contact time. An analyzer continuously monitors the level of chlorine prior to the water being discharged and is connected with the SCADA system, which is monitored by operators, during regular working hours, and remotely through an emergency after-hours alarming system. This site has no emergency standby power on-site but has a main power electrical transfer switch and connection for use of a portable generator in emergency conditions.

- **The Romeo Street Pumping Station** consists of six wells that pump directly into an in-ground storage reservoir. Primary disinfection is achieved through a gas chlorination system that injects chlorine into the water as it enters this reservoir. Contact time is met through a combination of the 1261 cubic meter clearwell and the 7500 cubic meter storage reservoir. Iron sequestering is accomplished through a sodium silicate feed system that is injected into the water as it enters the reservoir. Water is pumped to the City of Stratford Distribution system by a combination of four highlift pumps that discharge through a common header to a 400mm watermain on Romeo Street. An analyzer continuously monitors the level of chlorine prior to the water being discharged and is connected with the SCADA system, which is monitored by operators, during regular working hours, and remotely through an emergency after-hours alarming system. This site has one diesel generator, rated at 600 kW capable of supplying emergency power to the Romeo Street Pumping Station and its wells.

- **The City of Stratford Distribution System** consists of 184.91 km of cast iron, ductile, steel and PVC water main, varying in size from 100mm to 400mm. It includes 1834 main valves, 912 public fire hydrants and 12,537 service connections. There are two water towers located in the distribution system that provide both storage and pressure stability. The Dufferin Water Tower has a capacity of 3,790 cubic meters and is equipped with an analyzer for continuous monitoring of the level of chlorine. The Forman Water Tower has a capacity of 5,680 cubic meters.

List all water treatment chemicals used over this reporting period:

Chlorine Gas & Sodium Silicate (Sodium Silicate only used at Romeo Street Pumping Station).

Were any significant expenses incurred to:

- Install required equipment? Yes
- Repair required equipment? Yes

- Replace required equipment? Yes

Please provide a brief description and a breakdown of monetary expenses incurred in 2020:

1. Unidirectional Flushing (UDF) Program
    a. Jacobs Consulting has been hired to continue to assist in developing a UDF pilot program.
    b. **Total Cost: $18,000**

2. Romeo Control Centre Upgrades
    a. Water quality and facility maintenance; resolving insulation issues in the aeration chamber, high-lift pump valve replacement, and SCADA improvements.
    b. **Total Cost: $55,000**

3. e.RIS Software Improvements
    a. Westin (formally Eramosa) is working on continuous improvements to the existing water e.RIS program (data collection and reporting).
    b. **Total Cost: $17,500**

4. SCADA Integration
    a. PLC and SCADA updates and initiatives ongoing work by contracted integration company Brock Solutions.
    b. **Total Cost: $42,000**

5. Hydrant Monitoring
    a. Ongoing leak detection and pressure monitoring using hydrant equipment. Support from Digital Water Solutions.
    b. **Total Cost: $22,000**

6. Variable Frequency Drives (VFD's)
    a. Installed VFD's at Lorne Well, Chestnut Well and Romeo Control Centre.
    b. **Total Cost: $20,000**

7. Automatic Flusher Units
    a. Purchased automatic flusher units to help with water age and water quality within the distribution system.
    b. **Total Cost $11,800**

8. The City of Stratford Distribution System
        i. **No projects were completed in 2021.**

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 (Y/M/D)	Parameter	Result	Units	Corrective Action	Corrective Action Date (Y/M/D)
Nov. 22, 2021	Total Coliform	1	cfu/100mL	Resamples the adverse location at 303 Frederick Street, plus one additional sample upstream at fire hydrant 302 (Trinity and Regent Street) and another sample downstream at fire hydrant 299 (Frederick and King Street). All water samples came back negative on all bacteriological samples.	Nov. 24, 2021

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

Water Source	Number of Samples	Range of E.Coli Or Fecal Results (cfu/100mL)	Range of Total Coliform Results (cfu/100mL)	Number of HPC Samples	Range of HPC Results (cfu/100mL)
Raw	514	0	0-23	514	0 – 420
Treated	284	0	0	284	0 – 110
Distribution	521	0	0-1	564	0 – 1150

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

Operational Testing	Number of Grab Samples	Range of Results
Turbidity (Raw)	2228	0.05 – 0.89 NTU
Chlorine	>8760	0.20 – 5.10 mg/L
Fluoride (If the DWS provides fluoridation)	DWS does not provide fluoridation.	DWS does not provide fluoridation.

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
N/A	N/A	N/A	N/A	N/A

Not applicable; no additional testing or sampling required.

Summary of Inorganic parameters tested during this reporting period or the most recent sample results *(Note: ND=Below Method Detection Limit)*

Chestnut Street Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	13/09/21	ND	ug/L	NO
Arsenic	13/09/21	0.5	ug/L	NO
Barium	13/09/21	183	ug/L	NO
Boron	13/09/21	79	ug/L	NO
Cadmium	13/09/21	ND	ug/L	NO
Chromium	13/09/21	0.17	ug/L	NO
Mercury	13/09/21	ND	ug/L	NO
Selenium	13/09/21	ND	ug/L	NO
Sodium	13/09/21	25.6	mg/L	YES >20mg/L*
Uranium	13/09/21	0.077	ug/L	NO
Fluoride	13/09/21	2.07	mg/L	YES >1.5mg/L
Nitrite	09/03/21	0.004	mg/L	No
Nitrite	22/06/21	ND	mg/L	NO
Nitrite	13/09/21	ND	mg/L	NO
Nitrite	15/12/21	0.003	mg/L	NO
Nitrate	09/03/21	ND	mg/L	NO
Nitrate	22/06/21	ND	mg/L	NO
Nitrate	13/09/21	ND	mg/L	NO
Nitrate	15/12/21	ND	mg/L	NO

Mornington Street Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	13/09/21	ND	ug/L	NO
Arsenic	13/09/21	0.4	ug/L	NO
Barium	13/09/21	113	ug/L	NO
Boron	13/09/21	75	ug/L	NO
Cadmium	13/09/21	0.003	ug/L	NO
Chromium	13/09/21	0.29	ug/L	NO
Mercury	13/09/21	ND	ug/L	NO
Selenium	13/09/21	ND	ug/L	NO
Sodium	13/09/21	25.0	mg/L	YES >20mg/L*
Uranium	13/09/21	0.086	ug/L	NO
Fluoride	13/09/21	1.90	mg/L	YES >1.5mg/L
Nitrite	09/03/21	0.006	mg/L	NO
Nitrite	22/06/21	ND	mg/L	NO
Nitrite	13/09/21	ND	mg/L	NO
Nitrite	15/12/21	ND	mg/L	NO
Nitrate	09/03/21	0.006	mg/L	NO
Nitrate	22/06/21	ND	mg/L	NO
Nitrate	13/09/21	ND	mg/L	NO
Nitrate	15/12/21	ND	mg/L	NO

**There is no health related limit set for sodium, however, levels of greater than 20 mg/L are reported to the Public Health Department and Ministry of the Environment and Climate Change every five years.*

Lorne Avenue Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	13/09/21	ND	ug/L	NO
Arsenic	13/09/21	1.1	ug/L	NO
Barium	13/09/21	204	ug/L	NO
Boron	13/09/21	59	ug/L	NO
Cadmium	13/09/21	ND	ug/L	NO
Chromium	13/09/21	0.13	ug/L	NO
Mercury	13/09/21	ND	ug/L	NO
Selenium	13/09/21	ND	ug/L	NO
Sodium	13/09/21	23.5	mg/L	YES >20mg/L*
Uranium	13/09/21	0.099	ug/L	NO
Fluoride	13/09/21	2.11	mg/L	YES >1.5mg/L
Nitrite	09/03/21	ND	mg/L	NO
Nitrite	22/06/21	ND	mg/L	NO
Nitrite	13/09/21	ND	mg/L	NO
Nitrite	15/12/21	ND	mg/L	NO
Nitrate	09/03/21	ND	mg/L	NO
Nitrate	22/06/21	ND	mg/L	NO
Nitrate	13/09/21	ND	mg/L	NO
Nitrate	15/12/21	ND	mg/L	NO

Dunn Road Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	13/09/21	ND	ug/L	NO
Arsenic	13/09/21	1.4	ug/L	NO
Barium	13/09/21	201	ug/L	NO
Boron	13/09/21	65	ug/L	NO
Cadmium	13/09/21	ND	ug/L	NO
Chromium	13/09/21	0.13	ug/L	NO
Mercury	13/09/21	ND	ug/L	NO
Selenium	13/09/21	ND	ug/L	NO
Sodium	13/09/21	19.0	mg/L	NO*
Uranium	13/09/21	0.076	ug/L	NO
Fluoride	13/09/21	1.59	mg/L	YES >1.5mg/L
Nitrite	09/03/21	ND	mg/L	NO
Nitrite	22/06/21	ND	mg/L	NO
Nitrite	13/09/21	ND	mg/L	NO
Nitrite	15/12/21	ND	mg/L	NO
Nitrate	09/03/21	0.006	mg/L	NO
Nitrate	22/06/21	ND	mg/L	NO
Nitrate	13/09/21	ND	mg/L	NO
Nitrate	15/12/21	ND	mg/L	NO

**There is no health related limit set for sodium, however, levels of greater than 20 mg/L are reported to the Public Health Department and Ministry of the Environment and Climate Change every five years.*

O'Loane Avenue Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	13/09/21	ND	ug/L	NO
Arsenic	13/09/21	ND	ug/L	NO
Barium	13/09/21	239	ug/L	NO
Boron	13/09/21	56	ug/L	NO
Cadmium	13/09/21	ND	ug/L	NO
Chromium	13/09/21	0.14	ug/L	NO
Mercury	13/09/21	ND	ug/L	NO
Selenium	13/09/21	ND	ug/L	NO
Sodium	13/09/21	18.1	mg/L	NO*
Uranium	13/09/21	0.070	ug/L	NO
Fluoride	13/09/21	1.93	mg/L	YES >1.5mg/L
Nitrite	09/03/21	ND	mg/L	NO
Nitrite	22/06/21	ND	mg/L	NO
Nitrite	13/09/21	ND	mg/L	NO
Nitrite	15/12/21	ND	mg/L	NO
Nitrate	09/03/21	ND	mg/L	NO
Nitrate	22/06/21	ND	mg/L	NO
Nitrate	13/09/21	ND	mg/L	NO
Nitrate	15/12/21	ND	mg/L	NO

Romeo Street Pumping Station

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	13/09/21	ND	ug/L	NO
Arsenic	13/09/21	0.5	ug/L	NO
Barium	13/09/21	85.4	ug/L	NO
Boron	13/09/21	69	ug/L	NO
Cadmium	13/09/21	ND	ug/L	NO
Chromium	13/09/21	0.22	ug/L	NO
Mercury	13/09/21	ND	ug/L	NO
Selenium	13/09/21	ND	ug/L	NO
Sodium	13/09/21	19.7	mg/L	NO*
Uranium	13/09/21	0.105	ug/L	NO
Fluoride	13/09/21	1.49	mg/L	YES >1.5mg/L
Nitrite	09/03/21	0.004	mg/L	NO
Nitrite	22/06/21	ND	mg/L	NO
Nitrite	13/09/21	ND	mg/L	NO
Nitrite	15/12/21	ND	mg/L	NO
Nitrate	09/03/21	0.022	mg/L	NO
Nitrate	22/06/21	ND	mg/L	NO
Nitrate	13/09/21	ND	mg/L	NO
Nitrate	15/12/21	ND	mg/L	NO

**There is no health related limit set for sodium, however, levels of greater than 20 mg/L are reported to the Public Health Department and Ministry of the Environment and Climate Change every five years.*

Distribution System

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Lead (Forman Tower)	15/12/2021	ND	ug/L	NO
Lead (Dufferin Tower)	15/12/2021	0.02	ug/L	NO

Summary of lead testing under Schedule 15.1 during this reporting period

Location Type*	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Distribution (Winter)	4	0.06-0.63 ug/L	N/A
Distribution (Summer)	4	0.04-0.88 ug/L	N/A

The City of Stratford qualifies for reduced sampling/plumbing exempt. Next lead testing will be conducted in 2024.

Summary of Organic parameters sampled during this reporting period or the most recent sample results *(Note: ND=Below Method Detection Limit)*

Chestnut Street Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	13/09/21	ND	ug/L	NO
Atrazine + N-dealkylated metobolites	13/09/21	ND	ug/L	NO
Atrazine	13/09/21	ND	ug/L	NO
Desenthyl atrazine	13/09/21	ND	ug/L	NO
Azinphos-methyl	13/09/21	ND	ug/L	NO
Benzene	13/09/21	ND	ug/L	NO
Benzo(a)pyrene	13/09/21	ND	ug/L	NO
Bromoxynil	13/09/21	ND	ug/L	NO
Carbaryl	13/09/21	ND	ug/L	NO
Carbofuran	13/09/21	ND	ug/L	NO
Carbon Tetrachloride	13/09/21	ND	ug/L	NO
Chlorpyrifos	13/09/21	ND	ug/L	NO
Diazinon	13/09/21	ND	ug/L	NO
Dicamba	13/09/21	ND	ug/L	NO
1,2-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,4-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,2-Dichloroethane	13/09/21	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	13/09/21	ND	ug/L	NO
Dichloromethane	13/09/21	ND	ug/L	NO
2-4 Dichlorophenol	13/09/21	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	13/09/21	ND	ug/L	NO
Diclofop-methyl	13/09/21	ND	ug/L	NO
Dimethoate	13/09/21	ND	ug/L	NO
Diquat	13/09/21	ND	ug/L	NO
Diuron	13/09/21	ND	ug/L	NO
Glyphosate	13/09/21	ND	ug/L	NO
Malathion	13/09/21	ND	ug/L	NO
MCPA	13/09/21	ND	mg/L	NO
Metolachlor	13/09/21	ND	ug/L	NO
Metribuzin	13/09/21	ND	ug/L	NO
Monochlorobenzene	13/09/21	ND	ug/L	NO
Paraquat	13/09/21	ND	ug/L	NO
Pentachlorophenol	13/09/21	ND	ug/L	NO
Phorate	13/09/21	ND	ug/L	NO
Picloram	13/09/21	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	13/09/21	ND	ug/L	NO
Prometryne	13/09/21	ND	ug/L	NO
Simazine	13/09/21	ND	ug/L	NO
Terbufos	13/09/21	ND	ug/L	NO
Tetrachloroethylene	13/09/21	ND	ug/L	NO
2,3,4,6-Tetrachlorophenol	13/09/21	ND	ug/L	NO
Triallate	13/09/21	ND	ug/L	NO
Trichloroethylene	13/09/21	ND	ug/L	NO
2,4,6-Trichlorophenol	13/09/21	ND	ug/L	NO

Trifluralin	13/09/21	ND	ug/L	NO
Vinyl Chloride	13/09/21	ND	ug/L	NO

Mornington Street Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	13/09/21	ND	ug/L	NO
Atrazine + N-dealkylated metobolites	13/09/21	ND	ug/L	NO
Atrazine	13/09/21	ND	ug/L	NO
Desenthyl atrazine	13/09/21	ND	ug/L	NO
Azinphos-methyl	13/09/21	ND	ug/L	NO
Benzene	13/09/21	ND	ug/L	NO
Benzo(a)pyrene	13/09/21	ND	ug/L	NO
Bromoxynil	13/09/21	ND	ug/L	NO
Carbaryl	13/09/21	ND	ug/L	NO
Carbofuran	13/09/21	ND	ug/L	NO
Carbon Tetrachloride	13/09/21	ND	ug/L	NO
Chlorpyrifos	13/09/21	ND	ug/L	NO
Diazinon	13/09/21	ND	ug/L	NO
Dicamba	13/09/21	ND	ug/L	NO
1,2-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,4-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,2-Dichloroethane	13/09/21	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	13/09/21	ND	ug/L	NO
Dichloromethane	13/09/21	ND	ug/L	NO
2-4 Dichlorophenol	13/09/21	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	13/09/21	ND	ug/L	NO
Diclofop-methyl	13/09/21	ND	ug/L	NO
Dimethoate	13/09/21	ND	ug/L	NO
Diquat	13/09/21	ND	ug/L	NO
Diuron	13/09/21	ND	ug/L	NO
Glyphosate	13/09/21	ND	ug/L	NO
Malathion	13/09/21	ND	ug/L	NO
MCPA	13/09/21	ND	mg/L	NO
Metolachlor	13/09/21	ND	ug/L	NO
Metribuzin	13/09/21	ND	ug/L	NO
Monochlorobenzene	13/09/21	ND	ug/L	NO
Paraquat	13/09/21	ND	ug/L	NO
Pentachlorophenol	13/09/21	ND	ug/L	NO
Phorate	13/09/21	ND	ug/L	NO
Picloram	13/09/21	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	13/09/21	ND	ug/L	NO
Prometryne	13/09/21	ND	ug/L	NO
Simazine	13/09/21	ND	ug/L	NO
Terbufos	13/09/21	ND	ug/L	NO
Tetrachloroethylene	13/09/21	ND	ug/L	NO
2,3,4,6-Tetrachlorophenol	13/09/21	ND	ug/L	NO
Triallate	13/09/21	ND	ug/L	NO
Trichloroethylene	13/09/21	ND	ug/L	NO

2,4,6-Trichlorophenol	13/09/21	ND	ug/L	NO
Trifluralin	13/09/21	ND	ug/L	NO
Vinyl Chloride	13/09/21	ND	ug/L	NO

Lorne Avenue Well and Pumphouse

Parameter	Sample Date	**Result Value**	Unit of Measure	Exceedance
Alachlor	13/09/21	ND	ug/L	NO
Atrazine + N-dealkylated metobolites	13/09/21	ND	ug/L	NO
Atrazine	13/09/21	**ND**	**ug/L**	NO
Desenthyl atrazine	13/09/21	**ND**	**ug/L**	NO
Azinphos-methyl	13/09/21	ND	ug/L	NO
Benzene	13/09/21	ND	ug/L	NO
Benzo(a)pyrene	13/09/21	ND	ug/L	NO
Bromoxynil	13/09/21	ND	ug/L	NO
Carbaryl	13/09/21	ND	ug/L	NO
Carbofuran	13/09/21	ND	ug/L	NO
Carbon Tetrachloride	13/09/21	ND	ug/L	NO
Chlorpyrifos	13/09/21	ND	ug/L	NO
Diazinon	13/09/21	ND	ug/L	NO
Dicamba	13/09/21	ND	ug/L	NO
1,2-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,4-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,2-Dichloroethane	13/09/21	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	13/09/21	ND	ug/L	NO
Dichloromethane	13/09/21	ND	ug/L	NO
2-4 Dichlorophenol	13/09/21	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	13/09/21	ND	ug/L	NO
Diclofop-methyl	13/09/21	ND	ug/L	NO
Dimethoate	13/09/21	ND	ug/L	NO
Diquat	13/09/21	ND	ug/L	NO
Diuron	13/09/21	ND	ug/L	NO
Glyphosate	13/09/21	ND	ug/L	NO
Malathion	13/09/21	ND	ug/L	NO
MCPA	13/09/21	ND	mg/L	NO
Metolachlor	13/09/21	ND	ug/L	NO
Metribuzin	13/09/21	ND	ug/L	NO
Monochlorobenzene	13/09/21	ND	ug/L	NO
Paraquat	13/09/21	ND	ug/L	NO
Pentachlorophenol	13/09/21	ND	ug/L	NO
Phorate	13/09/21	ND	ug/L	NO
Picloram	13/09/21	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	13/09/21	ND	ug/L	NO
Prometryne	13/09/21	ND	ug/L	NO
Simazine	13/09/21	ND	ug/L	NO
Terbufos	13/09/21	ND	ug/L	NO
Tetrachloroethylene	13/09/21	ND	ug/L	NO
2,3,4,6-Tetrachlorophenol	13/09/21	ND	ug/L	NO
Triallate	13/09/21	ND	ug/L	NO

Trichloroethylene	13/09/21	ND	ug/L	NO
2,4,6-Trichlorophenol	13/09/21	ND	ug/L	NO
Trifluralin	13/09/21	ND	ug/L	NO
Vinyl Chloride	13/09/21	ND	ug/L	NO

Dunn Road Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	13/09/21	ND	ug/L	NO
Atrazine + N-dealkylated metobolites	13/09/21	ND	ug/L	NO
Atrazine	13/09/21	ND	ug/L	NO
Desenthyl atrazine	13/09/21	ND	ug/L	NO
Azinphos-methyl	13/09/21	ND	ug/L	NO
Benzene	13/09/21	ND	ug/L	NO
Benzo(a)pyrene	13/09/21	ND	ug/L	NO
Bromoxynil	13/09/21	ND	ug/L	NO
Carbaryl	13/09/21	ND	ug/L	NO
Carbofuran	13/09/21	ND	ug/L	NO
Carbon Tetrachloride	13/09/21	ND	ug/L	NO
Chlorpyrifos	13/09/21	ND	ug/L	NO
Diazinon	13/09/21	ND	ug/L	NO
Dicamba	13/09/21	ND	ug/L	NO
1,2-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,4-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,2-Dichloroethane	13/09/21	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	13/09/21	ND	ug/L	NO
Dichloromethane	13/09/21	ND	ug/L	NO
2-4 Dichlorophenol	13/09/21	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	13/09/21	ND	ug/L	NO
Diclofop-methyl	13/09/21	ND	ug/L	NO
Dimethoate	13/09/21	ND	ug/L	NO
Diquat	13/09/21	ND	ug/L	NO
Diuron	13/09/21	ND	ug/L	NO
Glyphosate	13/09/21	ND	ug/L	NO
Malathion	13/09/21	ND	ug/L	NO
MCPA	13/09/21	ND	mg/L	NO
Metolachlor	13/09/21	ND	ug/L	NO
Metribuzin	13/09/21	ND	ug/L	NO
Monochlorobenzene	13/09/21	ND	ug/L	NO
Paraquat	13/09/21	ND	ug/L	NO
Pentachlorophenol	13/09/21	ND	ug/L	NO
Phorate	13/09/21	ND	ug/L	NO
Picloram	13/09/21	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	13/09/21	ND	ug/L	NO
Prometryne	13/09/21	ND	ug/L	NO
Simazine	13/09/21	ND	ug/L	NO
Terbufos	13/09/21	ND	ug/L	NO
Tetrachloroethylene	13/09/21	ND	ug/L	NO
2,3,4,6-Tetrachlorophenol	13/09/21	ND	ug/L	NO

Triallate	13/09/21	ND	ug/L	NO
Trichloroethylene	13/09/21	ND	ug/L	NO
2,4,6-Trichlorophenol	13/09/21	ND	ug/L	NO
Trifluralin	13/09/21	ND	ug/L	NO
Vinyl Chloride	13/09/21	ND	ug/L	NO

O'Loane Avenue Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	13/09/21	ND	ug/L	NO
Atrazine + N-dealkylated metobolites	13/09/21	ND	ug/L	NO
Atrazine	13/09/21	ND	ug/L	NO
Desenthyl atrazine	13/09/21	ND	ug/L	NO
Azinphos-methyl	13/09/21	ND	ug/L	NO
Benzene	13/09/21	ND	ug/L	NO
Benzo(a)pyrene	13/09/21	ND	ug/L	NO
Bromoxynil	13/09/21	ND	ug/L	NO
Carbaryl	13/09/21	ND	ug/L	NO
Carbofuran	13/09/21	ND	ug/L	NO
Carbon Tetrachloride	13/09/21	ND	ug/L	NO
Chlorpyrifos	13/09/21	ND	ug/L	NO
Diazinon	13/09/21	ND	ug/L	NO
Dicamba	13/09/21	ND	ug/L	NO
1,2-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,4-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,2-Dichloroethane	13/09/21	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	13/09/21	ND	ug/L	NO
Dichloromethane	13/09/21	ND	ug/L	NO
2-4 Dichlorophenol	13/09/21	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	13/09/21	ND	ug/L	NO
Diclofop-methyl	13/09/21	ND	ug/L	NO
Dimethoate	13/09/21	ND	ug/L	NO
Diquat	13/09/21	ND	ug/L	NO
Diuron	13/09/21	ND	ug/L	NO
Glyphosate	13/09/21	ND	ug/L	NO
Malathion	13/09/21	ND	ug/L	NO
MCPA	13/09/21	ND	mg/L	NO
Metolachlor	13/09/21	ND	ug/L	NO
Metribuzin	13/09/21	ND	ug/L	NO
Monochlorobenzene	13/09/21	ND	ug/L	NO
Paraquat	13/09/21	ND	ug/L	NO
Pentachlorophenol	13/09/21	ND	ug/L	NO
Phorate	13/09/21	ND	ug/L	NO
Picloram	13/09/21	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	13/09/21	ND	ug/L	NO
Prometryne	13/09/21	ND	ug/L	NO
Simazine	13/09/21	ND	ug/L	NO
Terbufos	13/09/21	ND	ug/L	NO
Tetrachloroethylene	13/09/21	ND	ug/L	NO

2,3,4,6-Tetrachlorophenol	13/09/21	ND	ug/L	NO
Triallate	13/09/21	ND	ug/L	NO
Trichloroethylene	13/09/21	ND	ug/L	NO
2,4,6-Trichlorophenol	13/09/21	ND	ug/L	NO
Trifluralin	13/09/21	ND	ug/L	NO
Vinyl Chloride	13/09/21	ND	ug/L	NO

Romeo Street Pumping Station

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	13/09/21	ND	ug/L	NO
Atrazine + N-dealkylated metobolites	13/09/21	ND	ug/L	NO
Atrazine	13/09/21	ND	ug/L	NO
Desenthyl atrazine	13/09/21	ND	ug/L	NO
Azinphos-methyl	13/09/21	ND	ug/L	NO
Benzene	13/09/21	ND	ug/L	NO
Benzo(a)pyrene	13/09/21	ND	ug/L	NO
Bromoacetic Acid	13/09/21	ND	ug/L	NO
Bromdichloromethane	13/09/21	3.8	ug/L	NO
Bromoform	13/09/21	ND	ug/L	NO
Bromoxynil	13/09/21	ND	ug/L	NO
Carbaryl	13/09/21	ND	ug/L	NO
Carbofuran	13/09/21	ND	ug/L	NO
Carbon Tetrachloride	13/09/21	ND	ug/L	NO
Chloroacetic Acid	13/09/21	ND	ug/L	NO
Chloroform	13/09/21	18	ug/L	NO
Chlorpyrifos	13/09/21	ND	ug/L	NO
Diazinon	13/09/21	ND	ug/L	NO
Dibromoacetic Acid	13/09/21	ND	ug/L	NO
Dibromodichloromethane	13/09/21	0.53	ug/L	NO
Dicamba	13/09/21	ND	ug/L	NO
Dichloroacetic Acid	13/09/21	6.8	ug/L	NO
1,2-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,4-Dichlorobenzene	13/09/21	ND	ug/L	NO
1,2-Dichloroethane	13/09/21	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	13/09/21	ND	ug/L	NO
Dichloromethane	13/09/21	ND	ug/L	NO
2-4 Dichlorophenol	13/09/21	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	13/09/21	ND	ug/L	NO
Diclofop-methyl	13/09/21	ND	ug/L	NO
Dimethoate	13/09/21	ND	ug/L	NO
Diquat	13/09/21	ND	ug/L	NO
Diuron	13/09/21	ND	ug/L	NO
Glyphosate	13/09/21	ND	ug/L	NO
Total Haloacetic Acid (HAA)	09/03/21	13.3	ug/L	NO
Total Haloacetic Acid (HAA)	22/06/21	11.0	ug/L	NO
Total Haloacetic Acid (HAA)	13/09/21	15.7	ug/L	NO
Total Haloacetic Acid (HAA)	15/12/21	11.7	ug/L	NO
Malathion	13/09/21	ND	ug/L	NO

MCPA	13/09/21	ND	mg/L	NO
Metolachlor	13/09/21	ND	ug/L	NO
Metribuzin	13/09/21	ND	ug/L	NO
Monochlorobenzene	13/09/21	ND	ug/L	NO
Paraquat	13/09/21	ND	ug/L	NO
Pentachlorophenol	13/09/21	ND	ug/L	NO
Phorate	13/09/21	ND	ug/L	NO
Picloram	13/09/21	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	13/09/21	ND	ug/L	NO
Prometryne	13/09/21	ND	ug/L	NO
Simazine	13/09/21	ND	ug/L	NO
THM (Total)	09/03/21	21.0	ug/L	NO
THM (Total)	22/06/21	20.0	ug/L	NO
THM (Total)	13/09/21	22.0	ug/L	NO
THM (Total)	15/12/21	19.0	ug/L	NO
Terbufos	13/09/21	ND	ug/L	NO
Tetrachloroethylene	13/09/21	ND	ug/L	NO
2,3,4,6-Tetrachlorophenol	13/09/21	ND	ug/L	NO
Triallate	13/09/21	ND	ug/L	NO
Trichloroacetic Acid	13/09/21	8.8	ug/L	NO
Trichloroethylene	13/09/21	ND	ug/L	NO
2,4,6-Trichlorophenol	13/09/21	ND	ug/L	NO
Trifluralin	13/09/21	ND	ug/L	NO
Vinyl Chloride	13/09/21	ND	ug/L	NO

Distribution System

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
HAA (Forman and Dufferin Towers)	09/03/21 22/06/21 13/09/21 15/12/21	21.48 (Running Annual Average)	ug/L	NO
THM (Forman & Dufferin Towers)	09/03/21 22/06/21 13/09/21 15/12/21	34.13 (Running Annual Average)	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

Chestnut Street Well and Pumphouse

Parameter	Result Value	Unit of Measure	Date of Sample
Fluoride	2.07	mg/L	13/09/21

Mornington Street Well and Pumphouse

Parameter	Result Value	Unit of Measure	Date of Sample
Fluoride	1.90	mg/L	13/09/21

Lorne Avenue Well and Pumphouse

Parameter	Result Value	Unit of Measure	Date of Sample
Fluoride	2.11	mg/L	13/09/21

Dunn Road Well and Pumphouse

Parameter	Result Value	Unit of Measure	Date of Sample
Fluoride	1.59	mg/L	13/09/21

O'Loane Avenue Well and Pumphouse

Parameter	Result Value	Unit of Measure	Date of Sample
Fluoride	1.93	mg/L	13/09/21

Note: Fluoride is naturally occurring in Stratford's drinking water supply source. For more information visit the Perth District Health Unit website at: http://www.pdhu.on.ca/health-topics/environment/water/fluoride-and-drinking-water/ Fluoride exceedances are reportable every 57 months. Next reportable exceedances will be in 2023.