



2020

Water Quality Report

For

The City of Stratford

Water Distribution and Supply

Infrastructure and Development Services

February 4, 2021



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

February 4, 2021

Dear Water Consumer,

The Water Division is pleased to provide the 2020 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,

A handwritten signature in blue ink, appearing to read "J. Bowes". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

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, 2020

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 184.28 km of cast iron, ductile, steel and PVC water main, varying in size from 100mm to 400mm. It includes 1834 main valves, 899 fire hydrants and 12,403 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 assist in developing a UDF pilot program.
 - b. **Total Cost: \$8,400**

2. Water Model Re-calibration
 - a. Calibration and updating of existing water model. C3 water has been retained for this work.
 - b. **Total Cost: \$7,800**

3. e.RIS Software Improvements
 - a. Westin (formally Eramosa) is working on continuous improvements to the existing water e.RIS program
 - b. **Total Cost: \$5,000**

4. SCADA Integration
 - a. PLC and SCADA updates and initiatives ongoing work by contracted integration company Brock Solutions
 - b. **Total Cost: \$18,290**

5. Hydrant Monitoring
 - a. Ongoing leak detection using hydrant monitoring equipment. Support from Digital Water Solutions
 - b. **Total Cost: \$30,000**

6. Hydrant Painting
 - a. As part of a 3 year contract, beginning in 2018, municipal fire hydrants were rehabilitated and painted yellow in colour. Flow ports were painted one of four possible colours to indicate the flow value (amount of water) that could be expected from the hydrant as per the Ontario Fire Code. The hydrant painting will be completed in 2020.
 - b. **Total Cost: \$13,000**

7. The City of Stratford Distribution System
 - a. **Project Name:** Redford Crescent
 - i. Replacement/Removed/Abandoned of approximately 830.30 meters of 150mm watermain pipe, valves, service connections and hydrants with 665.90 meters of 150mm, PVC DR-18 watermain, including all water services, valves, and hydrants.
 - ii. Total Cost to Date (Water Related): \$377,000

- b. **Project Name:** Romeo Street North Watermain Lining
 - i. Cleaned, inspected, and relined approximately 113 meters of 300mm cast iron (CI) watermain pipe across the Avon River on Romeo Street North
 - ii. Total Cost to Date (Water Related): \$140,000

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)
N/A	N/A	N/A	N/A	N/A	N/A

No adverse events occurred in 2020.

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	532	0	0-2	532	0 – 90
Treated	279	0	0	297	0 – 1060
Distribution	564	0	0	564	0 – 130

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)	1406	0.02 – 0.75 NTU
Chlorine	>8760	0.20 – 5.11 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	03/09/20	ND	ug/L	NO
Arsenic	03/09/20	0.5	ug/L	NO
Barium	03/09/20	185	ug/L	NO
Boron	03/09/20	99	ug/L	NO
Cadmium	03/09/20	ND	ug/L	NO
Chromium	03/09/20	0.18	ug/L	NO
Mercury	03/09/20	ND	ug/L	NO
Selenium	03/09/20	ND	ug/L	NO
Sodium	03/09/20	24.9	mg/L	YES >20mg/L*
Uranium	03/09/20	0.072	ug/L	NO
Fluoride	03/09/20	2.25	mg/L	YES >1.5mg/L
Nitrite	18/02/20	ND	mg/L	No
	09/06/20	0.005	mg/L	NO
	03/09/20	ND	mg/L	NO
	15/12/20	ND	mg/L	NO
Nitrate	18/02/20	ND	mg/L	NO
	09/06/20	ND	mg/L	NO
	03/09/20	ND	mg/L	NO
	15/12/20	ND	mg/L	NO

Mornington Street Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	03/09/20	ND	ug/L	NO
Arsenic	03/09/20	0.3	ug/L	NO
Barium	03/09/20	115	ug/L	NO
Boron	03/09/20	99	ug/L	NO
Cadmium	03/09/20	ND	ug/L	NO
Chromium	03/09/20	0.17	ug/L	NO
Mercury	03/09/20	ND	ug/L	NO
Selenium	03/09/20	ND	ug/L	NO
Sodium	03/09/20	24.4	mg/L	YES >20mg/L*
Uranium	03/09/20	0.075	ug/L	NO
Fluoride	03/09/20	2.03	mg/L	YES >1.5mg/L
Nitrite	18/02/20	ND	mg/L	NO
	09/06/20	ND	mg/L	NO
	03/09/20	ND	mg/L	NO
	15/12/20	ND	mg/L	NO
Nitrate	18/02/20	0.006	mg/L	NO
	09/06/20	0.008	mg/L	NO
	03/09/20	ND	mg/L	NO
	15/12/20	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	03/09/20	°	°	°
Arsenic	03/09/20	°	°	°
Barium	03/09/20	°	°	°
Boron	03/09/20	°	°	°
Cadmium	03/09/20	°	°	°
Chromium	03/09/20	°	°	°
Mercury	03/09/20	°	°	°
Selenium	03/09/20	°	°	°
Sodium	03/09/20	°	°	°
Uranium	03/09/20	°	°	°
Fluoride	18/02/20	2.22	mg/L	YES >1.5mg/L
Nitrite	18/02/20	ND	mg/L	NO
	09/06/20	°	°	°
	03/09/20	°	°	°
	15/12/20	°	°	°
Nitrate	18/02/20	ND	mg/L	NO
	09/06/20	°	°	°
	03/09/20	°	°	°
	15/12/20	°	°	°

° Well out of service during sampling period.

Dunn Road Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	03/09/20	ND	ug/L	NO
Arsenic	03/09/20	1.3	ug/L	NO
Barium	03/09/20	194	ug/L	NO
Boron	03/09/20	79	ug/L	NO
Cadmium	03/09/20	ND	ug/L	NO
Chromium	03/09/20	0.13	ug/L	NO
Mercury	03/09/20	ND	ug/L	NO
Selenium	03/09/20	ND	ug/L	NO
Sodium	03/09/20	19.1	mg/L	NO*
Uranium	03/09/20	0.072	ug/L	NO
Fluoride	03/09/20	1.75	mg/L	YES >1.5mg/L
Nitrite	18/02/20	ND	mg/L	NO
	09/06/20	ND	mg/L	NO
	03/09/20	ND	mg/L	NO
	15/12/20	ND	mg/L	NO
Nitrate	18/02/20	ND	mg/L	NO
	09/06/20	ND	mg/L	NO
	03/09/20	ND	mg/L	NO
	15/12/20	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	03/09/20	ND	ug/L	NO
Arsenic	03/09/20	ND	ug/L	NO
Barium	03/09/20	230	ug/L	NO
Boron	03/09/20	60	ug/L	NO
Cadmium	03/09/20	ND	ug/L	NO
Chromium	03/09/20	0.13	ug/L	NO
Mercury	03/09/20	ND	ug/L	NO
Selenium	03/09/20	ND	ug/L	NO
Sodium	03/09/20	19.1	mg/L	NO*
Uranium	03/09/20	0.072	ug/L	NO
Fluoride	03/09/20	2.25	mg/L	YES >1.5mg/L
Nitrite	18/02/20	ND	mg/L	NO
	09/06/20	ND	mg/L	NO
	03/09/20	ND	mg/L	NO
	15/12/20	ND	mg/L	NO
Nitrate	18/02/20	ND	mg/L	NO
	09/06/20	0.006	mg/L	NO
	03/09/20	ND	mg/L	NO
	15/12/20	ND	mg/L	NO

Romeo Street Pumping Station

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	03/09/20	ND	ug/L	NO
Arsenic	03/09/20	0.4	ug/L	NO
Barium	03/09/20	86.0	ug/L	NO
Boron	03/09/20	93	ug/L	NO
Cadmium	03/09/20	ND	ug/L	NO
Chromium	03/09/20	0.13	ug/L	NO
Mercury	03/09/20	ND	ug/L	NO
Selenium	03/09/20	ND	ug/L	NO
Sodium	03/09/20	18.2	mg/L	NO*
Uranium	03/09/20	0.084	ug/L	NO
Fluoride	03/09/20	1.63	mg/L	YES >1.5mg/L
Nitrite	18/02/20	ND	mg/L	NO
	09/06/20	ND	mg/L	NO
	03/09/20	ND	mg/L	NO
	15/12/20	ND	mg/L	NO
Nitrate	18/02/20	ND	mg/L	NO
	09/06/20	ND	mg/L	NO
	03/09/20	ND	mg/L	NO
	15/12/20	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)	15/12/2020	0.02	ug/L	NO
Lead (Dufferin Tower)	15/12/2020	0.07	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)	N/A	N/A	N/A
Distribution (Summer)	N/A	N/A	N/A

**The City of Stratford qualifies for reduced sampling/plumbing exempt. Next lead testing will be conducted in 2021.*

**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	03/09/20	ND	ug/L	NO
Atrazine + N-dealkylated metabolites	03/09/20	ND	ug/L	NO
Azinphos-methyl	03/09/20	ND	ug/L	NO
Benzene	03/09/20	ND	ug/L	NO
Benzo(a)pyrene	03/09/20	ND	ug/L	NO
Bromoxynil	03/09/20	ND	ug/L	NO
Carbaryl	03/09/20	ND	ug/L	NO
Carbofuran	03/09/20	ND	ug/L	NO
Carbon Tetrachloride	03/09/20	ND	ug/L	NO
Chlorpyrifos	03/09/20	ND	ug/L	NO
Diazinon	03/09/20	ND	ug/L	NO
Dicamba	03/09/20	ND	ug/L	NO
1,2-Dichlorobenzene	03/09/20	ND	ug/L	NO
1,4-Dichlorobenzene	03/09/20	ND	ug/L	NO
1,2-Dichloroethane	03/09/20	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	03/09/20	ND	ug/L	NO
Dichloromethane	03/09/20	ND	ug/L	NO
2-4 Dichlorophenol	03/09/20	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	03/09/20	ND	ug/L	NO
Diclofop-methyl	03/09/20	ND	ug/L	NO
Dimethoate	03/09/20	ND	ug/L	NO
Diquat	03/09/20	ND	ug/L	NO
Diuron	03/09/20	ND	ug/L	NO
Glyphosate	03/09/20	ND	ug/L	NO
Malathion	03/09/20	ND	ug/L	NO
MCPA	03/09/20	ND	mg/L	NO
Metolachlor	03/09/20	ND	ug/L	NO
Metribuzin	03/09/20	ND	ug/L	NO
Monochlorobenzene	03/09/20	ND	ug/L	NO
Paraquat	03/09/20	ND	ug/L	NO
Pentachlorophenol	03/09/20	ND	ug/L	NO
Phorate	03/09/20	ND	ug/L	NO
Picloram	03/09/20	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	03/09/20	ND	ug/L	NO
Prometryne	03/09/20	ND	ug/L	NO
Simazine	03/09/20	ND	ug/L	NO
Terbufos	03/09/20	ND	ug/L	NO
Tetrachloroethylene	03/09/20	ND	ug/L	NO
2,3,4,6-Tetrachlorophenol	03/09/20	ND	ug/L	NO
Triallate	03/09/20	ND	ug/L	NO
Trichloroethylene	03/09/20	ND	ug/L	NO
2,4,6-Trichlorophenol	03/09/20	ND	ug/L	NO
Trifluralin	03/09/20	ND	ug/L	NO
Vinyl Chloride	03/09/20	ND	ug/L	NO

Mornington Street Well and Pumpouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	03/09/20	ND	ug/L	NO
Atrazine + N-dealkylated metabolites	03/09/20	ND	ug/L	NO
Azinphos-methyl	03/09/20	ND	ug/L	NO
Benzene	03/09/20	ND	ug/L	NO
Benzo(a)pyrene	03/09/20	ND	ug/L	NO
Bromoxynil	03/09/20	ND	ug/L	NO
Carbaryl	03/09/20	ND	ug/L	NO
Carbofuran	03/09/20	ND	ug/L	NO
Carbon Tetrachloride	03/09/20	ND	ug/L	NO
Chlorpyrifos	03/09/20	ND	ug/L	NO
Diazinon	03/09/20	ND	ug/L	NO
Dicamba	03/09/20	ND	ug/L	NO
1,2-Dichlorobenzene	03/09/20	ND	ug/L	NO
1,4-Dichlorobenzene	03/09/20	ND	ug/L	NO
1,2-Dichloroethane	03/09/20	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	03/09/20	ND	ug/L	NO
Dichloromethane	03/09/20	ND	ug/L	NO
2-4 Dichlorophenol	03/09/20	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	03/09/20	ND	ug/L	NO
Diclofop-methyl	03/09/20	ND	ug/L	NO
Dimethoate	03/09/20	ND	ug/L	NO
Diquat	03/09/20	ND	ug/L	NO
Diuron	03/09/20	ND	ug/L	NO
Glyphosate	03/09/20	ND	ug/L	NO
Malathion	03/09/20	ND	ug/L	NO
MCPA	03/09/20	ND	mg/L	NO
Metolachlor	03/09/20	ND	ug/L	NO
Metribuzin	03/09/20	ND	ug/L	NO
Monochlorobenzene	03/09/20	ND	ug/L	NO
Paraquat	03/09/20	ND	ug/L	NO
Pentachlorophenol	03/09/20	ND	ug/L	NO
Phorate	03/09/20	ND	ug/L	NO
Picloram	03/09/20	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	03/09/20	ND	ug/L	NO
Prometryne	03/09/20	ND	ug/L	NO
Simazine	03/09/20	ND	ug/L	NO
Terbufos	03/09/20	ND	ug/L	NO
Tetrachloroethylene	03/09/20	ND	ug/L	NO
2,3,4,6-Tetrachlorophenol	03/09/20	ND	ug/L	NO
Triallate	03/09/20	ND	ug/L	NO
Trichloroethylene	03/09/20	ND	ug/L	NO
2,4,6-Trichlorophenol	03/09/20	ND	ug/L	NO
Trifluralin	03/09/20	ND	ug/L	NO
Vinyl Chloride	03/09/20	ND	ug/L	NO

Lorne Avenue Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	03/09/20	°	°	°
Atrazine + N-dealkylated metabolites	03/09/20	°	°	°
Azinphos-methyl	03/09/20	°	°	°
Benzene	03/09/20	°	°	°
Benzo(a)pyrene	03/09/20	°	°	°
Bromoxynil	03/09/20	°	°	°
Carbaryl	03/09/20	°	°	°
Carbofuran	03/09/20	°	°	°
Carbon Tetrachloride	03/09/20	°	°	°
Chlorpyrifos	03/09/20	°	°	°
Diazinon	03/09/20	°	°	°
Dicamba	03/09/20	°	°	°
1,2-Dichlorobenzene	03/09/20	°	°	°
1,4-Dichlorobenzene	03/09/20	°	°	°
1,2-Dichloroethane	03/09/20	°	°	°
1,1-Dichloroethylene (vinylidene chloride)	03/09/20	°	°	°
Dichloromethane	03/09/20	°	°	°
2-4 Dichlorophenol	03/09/20	°	°	°
2,4-Dichlorophenoxy acetic acid (2,4-D)	03/09/20	°	°	°
Diclofop-methyl	03/09/20	°	°	°
Dimethoate	03/09/20	°	°	°
Diquat	03/09/20	°	°	°
Diuron	03/09/20	°	°	°
Glyphosate	03/09/20	°	°	°
Malathion	03/09/20	°	°	°
MCPA	03/09/20	°	°	°
Metolachlor	03/09/20	°	°	°
Metribuzin	03/09/20	°	°	°
Monochlorobenzene	03/09/20	°	°	°
Paraquat	03/09/20	°	°	°
Pentachlorophenol	03/09/20	°	°	°
Phorate	03/09/20	°	°	°
Picloram	03/09/20	°	°	°
Polychlorinated Biphenyls(PCB)	03/09/20	°	°	°
Prometryne	03/09/20	°	°	°
Simazine	03/09/20	°	°	°
Terbufos	03/09/20	°	°	°
Tetrachloroethylene	03/09/20	°	°	°
2,3,4,6-Tetrachlorophenol	03/09/20	°	°	°
Triallate	03/09/20	°	°	°
Trichloroethylene	03/09/20	°	°	°
2,4,6-Trichlorophenol	03/09/20	°	°	°
Trifluralin	03/09/20	°	°	°
Vinyl Chloride	03/09/20	°	°	°

° Well out of service during sampling period.

Dunn Road Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	03/09/20	ND	ug/L	NO
Atrazine + N-dealkylated metabolites	03/09/20	ND	ug/L	NO
Azinphos-methyl	03/09/20	ND	ug/L	NO
Benzene	03/09/20	ND	ug/L	NO
Benzo(a)pyrene	03/09/20	ND	ug/L	NO
Bromoxynil	03/09/20	ND	ug/L	NO
Carbaryl	03/09/20	ND	ug/L	NO
Carbofuran	03/09/20	ND	ug/L	NO
Carbon Tetrachloride	03/09/20	ND	ug/L	NO
Chlorpyrifos	03/09/20	ND	ug/L	NO
Diazinon	03/09/20	ND	ug/L	NO
Dicamba	03/09/20	ND	ug/L	NO
1,2-Dichlorobenzene	03/09/20	ND	ug/L	NO
1,4-Dichlorobenzene	03/09/20	ND	ug/L	NO
1,2-Dichloroethane	03/09/20	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	03/09/20	ND	ug/L	NO
Dichloromethane	03/09/20	ND	ug/L	NO
2-4 Dichlorophenol	03/09/20	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	03/09/20	ND	ug/L	NO
Diclofop-methyl	03/09/20	ND	ug/L	NO
Dimethoate	03/09/20	ND	ug/L	NO
Diquat	03/09/20	ND	ug/L	NO
Diuron	03/09/20	ND	ug/L	NO
Glyphosate	03/09/20	ND	ug/L	NO
Malathion	03/09/20	ND	ug/L	NO
MCPA	03/09/20	ND	mg/L	NO
Metolachlor	03/09/20	ND	ug/L	NO
Metribuzin	03/09/20	ND	ug/L	NO
Monochlorobenzene	03/09/20	ND	ug/L	NO
Paraquat	03/09/20	ND	ug/L	NO
Pentachlorophenol	03/09/20	ND	ug/L	NO
Phorate	03/09/20	ND	ug/L	NO
Picloram	03/09/20	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	03/09/20	ND	ug/L	NO
Prometryne	03/09/20	ND	ug/L	NO
Simazine	03/09/20	ND	ug/L	NO
Terbufos	03/09/20	ND	ug/L	NO
Tetrachloroethylene	03/09/20	ND	ug/L	NO
2,3,4,6-Tetrachlorophenol	03/09/20	ND	ug/L	NO
Triallate	03/09/20	ND	ug/L	NO
Trichloroethylene	03/09/20	ND	ug/L	NO
2,4,6-Trichlorophenol	03/09/20	ND	ug/L	NO
Trifluralin	03/09/20	ND	ug/L	NO
Vinyl Chloride	03/09/20	ND	ug/L	NO

O'Loane Avenue Well and Pumphouse

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	03/09/20	ND	ug/L	NO
Atrazine + N-dealkylated metabolites	03/09/20	ND	ug/L	NO
Azinphos-methyl	03/09/20	ND	ug/L	NO
Benzene	03/09/20	ND	ug/L	NO
Benzo(a)pyrene	03/09/20	ND	ug/L	NO
Bromoxynil	03/09/20	ND	ug/L	NO
Carbaryl	03/09/20	ND	ug/L	NO
Carbofuran	03/09/20	ND	ug/L	NO
Carbon Tetrachloride	03/09/20	ND	ug/L	NO
Chlorpyrifos	03/09/20	ND	ug/L	NO
Diazinon	03/09/20	ND	ug/L	NO
Dicamba	03/09/20	ND	ug/L	NO
1,2-Dichlorobenzene	03/09/20	ND	ug/L	NO
1,4-Dichlorobenzene	03/09/20	ND	ug/L	NO
1,2-Dichloroethane	03/09/20	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	03/09/20	ND	ug/L	NO
Dichloromethane	03/09/20	ND	ug/L	NO
2-4 Dichlorophenol	03/09/20	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	03/09/20	ND	ug/L	NO
Diclofop-methyl	03/09/20	ND	ug/L	NO
Dimethoate	03/09/20	ND	ug/L	NO
Diquat	03/09/20	ND	ug/L	NO
Diuron	03/09/20	ND	ug/L	NO
Glyphosate	03/09/20	ND	ug/L	NO
Malathion	03/09/20	ND	ug/L	NO
MCPA	03/09/20	ND	mg/L	NO
Metolachlor	03/09/20	ND	ug/L	NO
Metribuzin	03/09/20	ND	ug/L	NO
Monochlorobenzene	03/09/20	ND	ug/L	NO
Paraquat	03/09/20	ND	ug/L	NO
Pentachlorophenol	03/09/20	ND	ug/L	NO
Phorate	03/09/20	ND	ug/L	NO
Picloram	03/09/20	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	03/09/20	ND	ug/L	NO
Prometryne	03/09/20	ND	ug/L	NO
Simazine	03/09/20	ND	ug/L	NO
Terbufos	03/09/20	ND	ug/L	NO
Tetrachloroethylene	03/09/20	ND	ug/L	NO
2,3,4,6-Tetrachlorophenol	03/09/20	ND	ug/L	NO
Triallate	03/09/20	ND	ug/L	NO
Trichloroethylene	03/09/20	ND	ug/L	NO
2,4,6-Trichlorophenol	03/09/20	ND	ug/L	NO
Trifluralin	03/09/20	ND	ug/L	NO
Vinyl Chloride	03/09/20	ND	ug/L	NO

Romeo Street Pumping Station

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	03/09/20	ND	ug/L	NO
Atrazine + N-dealkylated metabolites	03/09/20	ND	ug/L	NO
Azinphos-methyl	03/09/20	ND	ug/L	NO
Benzene	03/09/20	ND	ug/L	NO
Benzo(a)pyrene	03/09/20	ND	ug/L	NO
Bromoxynil	03/09/20	ND	ug/L	NO
Carbaryl	03/09/20	ND	ug/L	NO
Carbofuran	03/09/20	ND	ug/L	NO
Carbon Tetrachloride	03/09/20	ND	ug/L	NO
Chlorpyrifos	03/09/20	ND	ug/L	NO
Diazinon	03/09/20	ND	ug/L	NO
Dicamba	03/09/20	ND	ug/L	NO
1,2-Dichlorobenzene	03/09/20	ND	ug/L	NO
1,4-Dichlorobenzene	03/09/20	ND	ug/L	NO
1,2-Dichloroethane	03/09/20	ND	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	03/09/20	ND	ug/L	NO
Dichloromethane	03/09/20	ND	ug/L	NO
2-4 Dichlorophenol	03/09/20	ND	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	03/09/20	ND	ug/L	NO
Diclofop-methyl	03/09/20	ND	ug/L	NO
Dimethoate	03/09/20	ND	ug/L	NO
Diquat	03/09/20	ND	ug/L	NO
Diuron	03/09/20	ND	ug/L	NO
Glyphosate	03/09/20	ND	ug/L	NO
Total Haloacetic Acid (HAA)	18/02/20	13.1	ug/L	NO
	09/06/20	10.2	ug/L	NO
	03/09/20	12.8	ug/L	NO
	15/12/20	14.2	ug/L	NO
Malathion	03/09/20	ND	ug/L	NO
MCPA	03/09/20	ND	mg/L	NO
Metolachlor	03/09/20	ND	ug/L	NO
Metribuzin	03/09/20	ND	ug/L	NO
Monochlorobenzene	03/09/20	ND	ug/L	NO
Paraquat	03/09/20	ND	ug/L	NO
Pentachlorophenol	03/09/20	ND	ug/L	NO
Phorate	03/09/20	ND	ug/L	NO
Picloram	03/09/20	ND	ug/L	NO
Polychlorinated Biphenyls(PCB)	03/09/20	ND	ug/L	NO
Prometryne	03/09/20	ND	ug/L	NO
Simazine	03/09/20	ND	ug/L	NO
THM (Total)	18/02/20	20.0	ug/L	NO
	09/06/20	20.0	ug/L	NO
	03/09/20	19.0	ug/L	NO
	15/12/20	20.0	ug/L	NO
Terbufos	03/09/20	ND	ug/L	NO
Tetrachloroethylene	03/09/20	ND	ug/L	NO

2,3,4,6-Tetrachlorophenol	03/09/20	ND	ug/L	NO
Triallate	03/09/20	ND	ug/L	NO
Trichloroethylene	03/09/20	ND	ug/L	NO
2,4,6-Trichlorophenol	03/09/20	ND	ug/L	NO
Trifluralin	03/09/20	ND	ug/L	NO
Vinyl Chloride	03/09/20	ND	ug/L	NO

Distribution System

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
HAA (Forman and Dufferin Towers)	18/02/20	18.33	ug/L	NO
	09/06/20	(Running		
	03/09/20	Annual		
	15/12/20	Average)		
THM (Forman & Dufferin Towers)	18/02/20	28.65	ug/L	NO
	09/06/20	(Running		
	03/09/20	Annual		
	15/12/20	Average)		

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	2.25	mg/L	03/09/20

Mornington Street Well and Pumphouse

Parameter	Result Value	Unit of Measure	Date of Sample
Fluoride	2.03	mg/L	03/09/20

Lorne Avenue Well and Pumphouse

Parameter	Result Value	Unit of Measure	Date of Sample
Fluoride	2.22	mg/L	18/02/20

Dunn Road Well and Pumphouse

Parameter	Result Value	Unit of Measure	Date of Sample
Fluoride	1.75	mg/L	03/09/20

O'Loane Avenue Well and Pumphouse

Parameter	Result Value	Unit of Measure	Date of Sample
Fluoride	2.25	mg/L	03/09/20

Romeo Street Pumping Station

Parameter	Result Value	Unit of Measure	Date of Sample
Fluoride	1.63	mg/L	03/09/20

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.