DRINKING WATER SYSTEM





toronto.ca/water

CITY OF TORONTO DRINKING WATER SYSTEM ANNUAL REPORT

Drinking-Water System Number:	220002262
Drinking-Water System Name:	City of Toronto Drinking Water System (R. C. Harris)
Drinking-Water System Owner:	City of Toronto
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2020 to December 31, 2020

<u>Complete if your Category is Large Municipal</u> <u>Residential or Small Municipal Residential</u>	<u>Complete for all other Categories.</u>
Does your Drinking-Water System serve more than 10,000 people? Yes [X] No []Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []Location where Summary Report required	Number of Designated Facilities served:
under O. Reg. 170/03 Schedule 22 will be	
available for inspection.Metro Hall55 John StreetToronto, OntarioM5V 3C6	Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []

NOTE: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Region of York - receives some of their water from	260001929
Toronto	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water? Yes [X] No []

Indicate how you notified system users that your annual report is available, and is free of charge. [X] Public access/notice via the web

[X] Public access/notice via Government Office

[] Public access/notice via a newspaper

- [] Public access/notice via Public Request
- [] Public access/notice via a Public Library
- [] Public access/notice via other method _____

Describe your Drinking-Water System

Toronto Drinking Water Supply System consists of four water treatment plants, 18 pumping stations, 11 major underground storage reservoirs, four elevated storage tanks and approximately 532 kilometers of trunk watermains and 5,569 kilometers of distribution watermains.

The R.C. Harris Water Treatment Plant is a conventional water treatment plant, has a rated capacity of 950,000 m³/day and is located at 2701 Queen Street East, Toronto.

The other three (3) Toronto Water Treatment plants are as follows:

- R.L. Clark Water Treatment Plant (Rated Capacity of 615,000 m³/day) and is located at 45 Twenty Third Street, Toronto

- F.J. Horgan Water Treatment Plant (Rated Capacity of 800,000 m³/day) and is located at 201 Copperfield Road, Toronto

- Island Water Treatment Plant (Rated Capacity of 440,000 m³/day) and is located on Centre Island, Toronto

List all water treatment chemicals used over this reporting period

Alum (Aluminum sulphate) Chlorine Sodium bisulphite Hydrofluosilicic acid Aqueous Ammonia Phosphoric Acid

Were any significant expenses incurred to?

[X] Install required equipment

[X] Repair required equipment

[X] Replace required equipment

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

Capital Projects - The following amounts relate to various projects during 2020 and do not represent the total project costs. These numbers do not include the normal operating and maintenance costs.

No.	Project Name	Description	Monetary Expense
1.	HVAC Rehabilitation	Rehabilitation of plant heating, ventilation and cooling equipment, and installation of a Building Automation System	\$2,384,000
2.	Control Room Relocation	Relocation and modernization of the plant control room	\$705,000
3.	Filter and Reservoir Rehabilitation	Rehabilitation of four filters, backwash tanks and plant reservoir	\$6,444,000
4.	Water Treatment Plant WaterproofingRepairs of water leaks into underground structures, reconstruction of plant roadway		\$1,652,000
5.	Raw Water Piping Rehabilitation	Blasting and coating of Raw Water piping and pumps and replacement of mechanical fasteners	\$674,400

Drinking Water Systems Regulations

(PIBS 4435e01)

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

NOTE: "Incident date" is the date adverse result was reported to MECP-SAC. "Corrective action date" is the date the location was resampled.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
January 29, 2020	NDMA	0.0000257*	mg/L	Resample. Results acceptable.	February 2, 2020

*Results were revised from the initial AWQI report as advised by ALS Laboratory on October 15, 2020, no further actions required, MECP was notified

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

	Number of Samples	Range of E.Coli Or Fecal Results (min.) - (max.)	Range of Total Coliform Results (min.) - (max.)	Number of HPC Samples	Range of HPC Results (min.) - (max.)
Raw	366	0 - 12	0 - 95	366	0 - 1500
Treated	1464	1464 A (100%A)	1464 A (100%A)	1464	0 - 7

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

Parameter	Number of Grab Samples	Range of Results (min.) - (max.)	Unit of Measure		
Turbidity	8784	0 - 0.19	NTU		
Chlorine	8784	1.72 - 2.32	mg/L		
*Fluoride (If the DWS provides fluoridation)	346	0.34 - 0.69	mg/L		
NOTE: For Continuous Monitoring (zero days offline):					

Number of Grab Samples = 24 samples/day x 365 days/year (or 366 days/leap year) = 8760 (or 8784)

*Fluoride Grab Sample numbers and range of results are reported using data from days when fluoridation was in service

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 (Annual Average)	Unit of Measure
Nov 09, 2020 Municipal Drinking	Total Suspended Solids (Residue Management)	Jan 01-Dec 31, 2020	7.70	mg/L
Water Licence	Total Chlorine (Residue Management)	Jan 01-Dec 31, 2020	0	mg/L

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Antimony	Jan – Dec 2020	0 - 0.0003	mg/L	No
Arsenic	Jan – Dec 2020	0.0005 - 0.0007	mg/L	No
Barium	Jan – Dec 2020	0.0209 - 0.0234	mg/L	No
Boron	Jan – Dec 2020	0.0223-0.0238	mg/L	No
Cadmium	Jan – Dec 2020	0-0	mg/L	No
Chromium	Jan – Dec 2020	0.0002 - 0.0003	mg/L	No
Lead	Jan – Dec 2020	0-0	mg/L	No
Mercury	Jan – Dec 2020	0 - 0	mg/L	No
Selenium	Jan – Dec 2020	0 - 0	mg/L	No
Sodium	Jan – Dec 2020	12.3 - 17.4	mg/L	No
Uranium	Jan – Dec 2020	0.0003 - 0.0004	mg/L	No
Nitrite	Jan – Dec 2020	0 - 0.0040	mg/L	No
Nitrate	Jan – Dec 2020	0.15-0.44	mg/L	No

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

Summary of Lead (Pb) testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Lead Results (min.) - (max.)	Unit of Measure	Number of Exceedances
*Plumbing	*	*	*	*
*Distribution	*	*	*	*

*NOTE: Refer to Toronto DS (Distribution System) Annual Report for Lead (Pb) testing data

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Alachlor	Jan – Dec 2020	0-0	μg/L	No
Atrazine + N-dealkylated metobolites	Jan – Dec 2020	0.0860 - 0.1010	μg/L	No
Azinphos-methyl	Jan – Dec 2020	0 - 0	μg/L	No
Benzene	Jan – Dec 2020	0 - 0	μg/L	No
Benzo(a)pyrene	Jan – Dec 2020	0-0	µg/L	No
Bromoxynil	Jan – Dec 2020	0-0	μg/L	No
Carbaryl	Jan – Dec 2020	0-0	μg/L	No
Carbofuran	Jan – Dec 2020	0-0	μg/L	No
Carbon Tetrachloride	Jan – Dec 2020	0-0	μg/L	No
Chlorpyrifos	Jan – Dec 2020	0-0	μg/L	No
Diazinon	Jan – Dec 2020	0 - 0	μg/L	No
Dicamba	Jan – Dec 2020	0-0	μg/L	No
1,2-Dichlorobenzene	Jan – Dec 2020	0 - 0	μg/L	No
1,4-Dichlorobenzene	Jan – Dec 2020	0-0	μg/L	No
1,2-Dichloroethane	Jan – Dec 2020	0-0	μg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan – Dec 2020	0-0	μg/L	No
Dichloromethane	Jan – Dec 2020	0-0	μg/L	No
2-4 Dichlorophenol	Jan – Dec 2020	0-0	μg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan – Dec 2020	0-0	μg/L	No
Diclofop-methyl	Jan – Dec 2020	0-0	μg/L	No
Dimethoate	Jan – Dec 2020	0 - 0	μg/L	No
Diquat	Jan – Dec 2020	0	μg/L	No
Diuron	Jan – Dec 2020	0-0	μg/L	No
Glyphosate	Jan – Dec 2020	0	μg/L	No
Malathion	Jan – Dec 2020	0-0	μg/L	No
Metolachlor	Jan – Dec 2020	0.0068 - 0.0075	μg/L	No
Metribuzin	Jan – Dec 2020	0-0	μg/L	No
Monochlorobenzene	Jan – Dec 2020	0-0	μg/L	No
Paraquat	Jan – Dec 2020	0	μg/L	No
Pentachlorophenol	Jan – Dec 2020	0-0	μg/L	No
Phorate	Jan – Dec 2020	0-0	μg/L	No
Picloram	Jan – Dec 2020	0-0	μg/L	No
Polychlorinated Biphenyls(PCB)	Jan – Dec 2020	0-0	μg/L	No
Prometryne	Jan – Dec 2020	0-0	μg/L	No
Simazine	Jan – Dec 2020	0.0038 - 0.0047	μg/L	No
THM (Note: Show latest annual average)	Jan – Dec 2020	10.6	μg/L	No

Terbufos	Jan – Dec 2020	0 - 0	μg/L	No
Tetrachloroethylene	Jan – Dec 2020	0-0	µg/L	No
2,3,4,6-Tetrachlorophenol	Jan – Dec 2020	0-0	µg/L	No
Triallate	Jan – Dec 2020	0 - 0	μg/L	No
Trichloroethylene	Jan – Dec 2020	0 - 0	μg/L	No
2,4,6-Trichlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
Trifluralin	Jan – Dec 2020	0 - 0	μg/L	No
Vinyl Chloride	Jan – Dec 2020	0 - 0	μg/L	No

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

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
NDMA	0.0000257	mg/L	06-Jan-20

CITY OF TORONTO DRINKING WATER SYSTEM ANNUAL REPORT

Drinking-Water System Number:	220002244
Drinking-Water System Name:	City of Toronto Drinking Water System (Island)
Drinking-Water System Owner:	City of Toronto
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2020 to December 31, 2020

<u>Complete if your Category is Large Municipal</u> <u>Residential or Small Municipal Residential</u>	Complete for all other Categories.
Does your Drinking-Water System serve more than 10,000 people? Yes [X] No [] Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No [] Location where Summary Report required	Number of Designated Facilities served: Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No [] Number of Interested Authorities you report to:
under O. Reg. 170/03 Schedule 22 will be available for inspection.	
Metro Hall 55 John Street Toronto, Ontario M5V 3C6	Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []

NOTE: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Region of York - receives some of their water from	260001929
Toronto	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water? Yes [X] No []

Indicate how you notified system users that your annual report is available, and is free of charge. [X] Public access/notice via the web

[X] Public access/notice via Government Office

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- [] Public access/notice via other method ______

Describe your Drinking-Water System

Toronto Drinking Water Supply System consists of four water treatment plants, 18 pumping stations, 11 major underground storage reservoirs, four elevated storage tanks and approximately 532 kilometers of trunk watermains and 5,569 kilometers of distribution watermains.

The Island Water Treatment Plant is a direct filtration water treatment plant, has a rated capacity of 440,000 m³/day and is located at Toronto Centre Island, Toronto.

The other three (3) Toronto Water Treatment plants are as follows:

- R.L. Clark Water Treatment Plant (Rated Capacity of 615,000 m³/day) and is located at 45 Twenty Third Street, Toronto

- R.C. Harris Water Treatment Plant (Rated Capacity of 950,000 m³/day) and is located at 2701 Queen Street East, Toronto

- F.J. Horgan Water Treatment Plant (Rated Capacity of 800,000 m³/day) and is located at 201 Copperfield Road, Toronto

List all water treatment chemicals used over this reporting period

Chlorine Sulphur dioxide Sodium bisulphite Hydrofluosilicic acid Aqua ammonia Polyaluminum Chloride (PACL) PAX-XL52 (PACL Coagulant) Phosphoric Acid

Were any significant expenses incurred to?

[X] Install required equipment

[X] Repair required equipment

[X] Replace required equipment

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

Capital Projects - The following amounts relate to various projects during 2020 and do not represent the total project costs. These numbers do not include the normal operating and maintenance costs.

No.	Project Description	Monetary Expense
1.	Design & Construction of Ammonia & Fluoride System Upgrades	\$ 5,020,000
5.	Design & Construction of Treated Water Tunnel Rehabilitation	\$ 4,186,000
9.	Design & Construction of Plantwide HVAC Upgrades	\$ 1,030,000
4.	Design of UV Treatment, Residuals Dewatering, & Electrical Upgrades	\$ 554,000
2.	Design & Construction of Marine Yard Rehabilitation	\$ 166,000

3.	Design-Build Intake Cleaning	\$ 125,000
6.	Design & Construction of Residuals Management System	\$ 51,000
11.	Design & Construction of Flood Mitigation Upgrades	\$ 28,000
7.	Design of Scrubber Upgrades	\$ 25,000
8.	Engineering Study of WTP Re-rating	\$ 2,000
10.	Design & Construction of Flume/WW & Machine Shop Rehab	\$ 1,000

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

NOTE: "Incident date" is the date adverse result was reported to MECP-SAC. "Corrective action date" is the date the location was resampled.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
October 9, 2020	chlorinated water	2.16	mg/L	15 minute reservoir overflow of 968 m ³ to lagoon due to Provincial power outage	October 9, 2020

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

	Number of Samples	Range of E.Coli Or Fecal Results (min.) - (max.)	Range of Total Coliform Results (min.) - (max.)	Number of HPC Samples	Range of HPC Results (min.) - (max.)
Raw	287	0 - 16	0 - 93	287	0 - 2500
Treated	1142	1142 A (100%A)	1142 A (100%A)	1142	0 - 51

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

Parameter	Number of Grab Samples	Range of Results (min.) - (max.)	Unit of Measure
Turbidity	6862*	0.03 - 0.08	NTU
Chlorine	6862*	1.65 - 2.23	mg/L
**Fluoride (If the DWS provides fluoridation)	271	0.23 - 0.73	mg/L

NOTE: For Continuous Monitoring (zero days offline):

Number of Grab Samples = 24 samples/day x 365 days/year (or 366 days/leap year) = 8760 (or 8784)

*Number of Grab Samples for Turbidity and Chlorine reflects the fact that the Plant was not in service the full calendar year

**Fluoride Grab Sample numbers and range of results are reported using data from days when fluoridation was in service

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date Of Legal	Parameter	Date	Result	Unit of
Instrument Issued		Sampled	(Monthly Average)	Measure
3-May 2019, 30-January 2020, & 9-November 2020 Municipal Drinking Water Licence	Total Suspended Solids (Residue Management) *	Jan. 1, 2020 - Dec. 31, 2020	January = 7.3 February = 5.1 March = 5.8 April = 4.1 May = 5.1 June = 3.2 July = 1.9 August = 2.8 September = 3.2 October = 3.8 November = 3.5 December = 3.9	mg/L

Parameter	Date Sampled	Concentration Limit <u>Condition A</u> : single samples < 0.2 mg/L	Unit of Measure
Total Chlorine (Residue Management) **	Jan. 1, 2020 - Dec. 31, 2020	< 0.2 mg/L at all times	date & mg/L
Parameter	Date Sampled	Concentration Limit <u>Condition B</u> : 120-min average of all 5-min averaged samples < 0.02 mg/L	Unit of Measure
Total Chlorine (Residue Management) **	Jan. 1, 2020 - Dec. 31, 2020	October 16, 2020 0.0236 mg/L ⁺	date & mg/L
	Total Chlorine (Residue Management) ** Parameter Total Chlorine (Residue Management)	Total Chlorine (Residue Management) **Jan. 1, 2020 - Dec. 31, 2020ParameterDate SampledTotal Chlorine (Residue Management)Jan. 1, 2020 - Dec. 31, 2020	ParameterDate SampledCondition A: single samples < 0.2 mg/LTotal Chlorine (Residue Management) **Jan. 1, 2020 - Dec. 31, 2020< 0.2 mg/L at all timesParameterDate SampledConcentration Limit Condition B: 120-min average of all 5-min averaged samples < 0.02 mg/LTotal Chlorine (Residue Management)Jan. 1, 2020 - Dec. 31, 2020October 16, 2020 0.0236 mg/L+

* For RMF effluent, the Total Suspended Solids limit is a monthly average concentration.

** For RMF effluent, the Total Chlorine Residual limit is a maximum concentration of: i) Condition A, 0.2 mg/L (single 5-min averaged sample) or ii) Condition B, 0.02 mg/L (120-min average concentration of all 5-min averaged samples), as applicable.

⁺ Condition B sample exceeded 0.02 mg/L for 2 hours 10 minutes, however upon further investigation, Operator grab sample result (in lab) yielded 0.00 mg/L indicating an issue with the automated analyzer sensor; subsequent analyzer maintenance performed October 16, 2020.

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Antimony	Jan – Dec 2020	0-0.0003	mg/L	No
Arsenic	Jan – Dec 2020	0.0008 - 0.0009	mg/L	No
Barium	Jan – Dec 2020	0.0222 - 0.0242	mg/L	No
Boron	Jan – Dec 2020	0.0220-0.0240	mg/L	No
Cadmium	Jan – Dec 2020	0-0	mg/L	No
Chromium	Jan – Dec 2020	0-0.0017	mg/L	No
Lead	Jan – Dec 2020	0-0	mg/L	No
Mercury	Jan – Dec 2020	0-0	mg/L	No
Selenium	Jan – Dec 2020	0 - 0	mg/L	No
Sodium	Jan – Dec 2020	11.9 - 16.4	mg/L	No
Uranium	Jan – Dec 2020	0.0004 - 0.0004	mg/L	No
Nitrite	Jan – Dec 2020	0-0.0030	mg/L	No
Nitrate	Jan – Dec 2020	0.34-0.49	mg/L	No

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

Summary of Lead (Pb) testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Lead Results (min.) - (max.)	Unit of Measure	Number of Exceedances
*Plumbing	*	*	*	*
*Distribution	*	*	*	*

*NOTE: Refer to Toronto DS (Distribution System) Annual Report for Lead (Pb) testing data

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Alachlor	Jan – Dec 2020	0-0	μg/L	No
Atrazine + N-dealkylated metobolites	Jan – Dec 2020	0.0880 - 0.0960	μg/L	No
Azinphos-methyl	Jan – Dec 2020	0 - 0	μg/L	No
Benzene	Jan – Dec 2020	0 - 0	μg/L	No
Benzo(a)pyrene	Jan – Dec 2020	0 - 0	μg/L	No
Bromoxynil	Jan – Dec 2020	0 - 0	μg/L	No
Carbaryl	Jan – Dec 2020	0 - 0	μg/L	No
Carbofuran	Jan – Dec 2020	0 - 0	μg/L	No
Carbon Tetrachloride	Jan – Dec 2020	0 - 0	μg/L	No
Chlorpyrifos	Jan – Dec 2020	0 - 0	μg/L	No
Diazinon	Jan – Dec 2020	0 - 0	μg/L	No
Dicamba	Jan – Dec 2020	0 - 0	μg/L	No
1,2-Dichlorobenzene	Jan – Dec 2020	0 - 0	μg/L	No
1,4-Dichlorobenzene	Jan – Dec 2020	0 - 0	μg/L	No
1,2-Dichloroethane	Jan – Dec 2020	0 - 0	μg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan – Dec 2020	0-0	μg/L	No
Dichloromethane	Jan – Dec 2020	0 - 0	μg/L	No
2-4 Dichlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan – Dec 2020	0-0	µg/L	No
Diclofop-methyl	Jan – Dec 2020	0 - 0	μg/L	No
Dimethoate	Jan – Dec 2020	0 - 0	μg/L	No
Diquat	Jan – Dec 2020	0	μg/L	No
Diuron	Jan – Dec 2020	0 - 0	μg/L	No
Glyphosate	Jan – Dec 2020	0	μg/L	No
Malathion	Jan – Dec 2020	0 - 0	μg/L	No
Metolachlor	Jan – Dec 2020	0.0066 - 0.0082	μg/L	No
Metribuzin	Jan – Dec 2020	0 - 0	μg/L	No
Monochlorobenzene	Jan – Dec 2020	0 - 0	μg/L	No
Paraquat	Jan – Dec 2020	0	μg/L	No
Pentachlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
Phorate	Jan – Dec 2020	0 - 0	μg/L	No
Picloram	Jan – Dec 2020	0-0	μg/L	No
Polychlorinated Biphenyls (PCB)	Jan – Dec 2020	0 - 0	μg/L	No
Prometryne	Jan – Dec 2020	0-0	μg/L	No
Simazine	Jan – Dec 2020	0.0040 - 0.0047	μg/L	No
THM (Note: Show latest annual average)	Jan – Dec 2020	9.4	μg/L	No

Terbufos	Jan – Dec 2020	0 - 0	μg/L	No
Tetrachloroethylene	Jan – Dec 2020	0 - 0	μg/L	No
2,3,4,6-Tetrachlorophenol	Jan – Dec 2020	0-0	µg/L	No
Triallate	Jan – Dec 2020	0 - 0	μg/L	No
Trichloroethylene	Jan – Dec 2020	0 - 0	μg/L	No
2,4,6-Trichlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
Trifluralin	Jan – Dec 2020	0 - 0	μg/L	No
Vinyl Chloride	Jan – Dec 2020	0 - 0	μg/L	No

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

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 (min.) - (max.)	Unit of Measure	Date of Sample
NONE	NONE	NONE	NONE

CITY OF TORONTO DRINKING WATER SYSTEM ANNUAL REPORT

Drinking-Water System Number:	220002253
Drinking-Water System Name:	City of Toronto Drinking Water System (R. L. Clark)
Drinking-Water System Owner:	City of Toronto
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2020 to December 31, 2020

<u>Complete if your Category is Large Municipal</u> <u>Residential or Small Municipal Residential</u>	<u>Complete for all other Categories.</u>
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under O. Reg. 170/03 Schedule 22 will be available for inspection. Metro Hall 55 John Street Toronto, Ontario M5V 3C6	Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []

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Region of York - receives some of their water from	260001929
Toronto	

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Describe your Drinking-Water System

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The R.L. Clark Water Treatment Plant is a conventional water treatment plant, has a rated capacity of $615,000 \text{ m}^3/\text{day}$ and is located at 45 Twenty Third Street, Toronto.

The other three (3) Toronto Water Treatment plants are as follows:

- R.C. Harris Water Treatment Plant (Rated Capacity of 950,000 m³/day) and is located at 2701 Queen Street East, Toronto

- F.J. Horgan Water Treatment Plant (Rated Capacity of 800,000 m³/day) and is located at 201 Copperfield Road, Toronto

- Island Water Treatment Plant (Rated Capacity of 440,000 m³/day) and is located on Centre Island, Toronto

List all water treatment chemicals used over this reporting period

Alum (Aluminum Sulphate) Chlorine Sulphur Dioxide Hydrofluosilic Acid Aqua Ammonia Phosphoric Acid

Cationic polymer was used for residuals treatment.

Were any significant expenses incurred to?

[X] Install required equipment

[X] Repair required equipment

[X] Replace required equipment

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

Capital Projects - The following amounts relate to various projects during 2020 and do not represent the total project costs. These numbers do not include the normal operating and maintenance costs.

No.	Project Name	Description	Monetary Expense
1.	Architectural and Security Upgrades	Building Envelope Rehabilitation	\$550,000
2.	Zebra Mussel Control System Replacement	System Engineering Design	\$25,000

3.	Gaseous Systems Upgrade	System Engineering Design	\$25,000
4.	Standby Power	System Engineering Design	\$550,000
5.	Misc. Plant Projects	Various plant equipment rehabilitation	\$400,00

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

NOTE: "Incident date" is the date adverse result was reported to MECP-SAC. "Corrective action date" is the date the location was resampled.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
NONE					

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

	Number of Samples	Range of E.Coli Or Fecal Results (min.) - (max.)	Range of Total Coliform Results (min.) - (max.)	Number of HPC Samples	Range of HPC Results (min.) - (max.)
Raw	155	0 - 139	0 - 286	155	0 - 3500
Treated	1455	1455 A (100%A)	1455 A (100%A)	1455	0 - 87

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

Parameter	Number of Grab Samples	Range of Results (min.) - (max.)	Unit of Measure
Turbidity	8743*	0.03 - 0.16	NTU
Chlorine	8743*	1.71 - 2.29	mg/L
**Fluoride (If the DWS provides fluoridation)	346	0.26 - 0.80	mg/L

NOTE: For Continuous Monitoring (zero days offline):

Number of Grab Samples = 24 samples/day x 365 days/year (or 366 days/leap year) = 8760 (or 8784)

*There were a couple of days where the plant was not in service

**Fluoride Grab Sample numbers and range of results are reported using data from days when fluoridation was in service.

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
November 9, 2020 Municipal Drinking	Total Suspended Solids (Residue Management)	Jan 01-Dec 31, 2020	3.75	mg/L
Water Licence	Total Chlorine (Residue Management)	Jan 01-Dec 31, 2020	0	mg/L

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Antimony	Jan – Dec 2020	0 - 0.0003	mg/L	No
Arsenic	Jan – Dec 2020	0.0006 - 0.0007	mg/L	No
Barium	Jan – Dec 2020	0.0222 - 0.0239	mg/L	No
Boron	Jan – Dec 2020	0.0232-0.0255	mg/L	No
Cadmium	Jan – Dec 2020	0 - 0	mg/L	No
Chromium	Jan – Dec 2020	0.0002 - 0.0003	mg/L	No
Lead	Jan – Dec 2020	0 - 0	mg/L	No
Mercury	Jan – Dec 2020	0 - 0	mg/L	No
Selenium	Jan – Dec 2020	0 - 0	mg/L	No
Sodium	Jan – Dec 2020	12.5 - 29.5	mg/L	Yes but within 57 months of last reporting
Uranium	Jan – Dec 2020	0.0003 - 0.0004	mg/L	No
Nitrite	Jan – Dec 2020	0 - 0.0030	mg/L	No
Nitrate	Jan – Dec 2020	0.18-0.59	mg/L	No

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

Summary of Lead (Pb) testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Lead Results (min.) - (max.)	Unit of Measure	Number of Exceedances
*Plumbing	*	*	*	*
*Distribution	*	*	*	*

*NOTE: Refer to Toronto DS (Distribution System) Annual Report for Lead (Pb) testing data

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Alachlor	Jan – Dec 2020	0-0	μg/L	No
Atrazine + N-dealkylated metobolites	Jan – Dec 2020	0.0870 - 0.0980	μg/L	No
Azinphos-methyl	Jan – Dec 2020	0-0	μg/L	No
Benzene	Jan – Dec 2020	0-0	μg/L	No
Benzo(a)pyrene	Jan – Dec 2020	0 - 0	μg/L	No
Bromoxynil	Jan – Dec 2020	0-0	μg/L	No
Carbaryl	Jan – Dec 2020	0 - 0	μg/L	No
Carbofuran	Jan – Dec 2020	0 - 0	μg/L	No
Carbon Tetrachloride	Jan – Dec 2020	0 - 0	μg/L	No
Chlorpyrifos	Jan – Dec 2020	0-0	μg/L	No
Diazinon	Jan – Dec 2020	0 - 0	μg/L	No
Dicamba	Jan – Dec 2020	0-0	μg/L	No
1,2-Dichlorobenzene	Jan – Dec 2020	0-0	μg/L	No
1,4-Dichlorobenzene	Jan – Dec 2020	0-0	μg/L	No
1,2-Dichloroethane	Jan – Dec 2020	0-0	μg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan – Dec 2020	0-0	µg/L	No
Dichloromethane	Jan – Dec 2020	0-0	μg/L	No
2-4 Dichlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
2,4-Dichlorophenoxy acetic acid (2,4- D)	Jan – Dec 2020	0-0	µg/L	No
Diclofop-methyl	Jan – Dec 2020	0 - 0	μg/L	No
Dimethoate	Jan – Dec 2020	0 - 0	μg/L	No
Diquat	Jan – Dec 2020	0	μg/L	No
Diuron	Jan – Dec 2020	0 - 0	μg/L	No
Glyphosate	Jan – Dec 2020	0	μg/L	No
Malathion	Jan – Dec 2020	0-0	μg/L	No
Metolachlor	Jan – Dec 2020	0.0069 - 0.0078	μg/L	No
Metribuzin	Jan – Dec 2020	0 - 0	μg/L	No
Monochlorobenzene	Jan – Dec 2020	0 - 0	μg/L	No
Paraquat	Jan – Dec 2020	0	μg/L	No
Pentachlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
Phorate	Jan – Dec 2020	0 - 0	μg/L	No
Picloram	Jan – Dec 2020	0-0	µg/L	No
Polychlorinated Biphenyls (PCB)	Jan – Dec 2020	0-0	µg/L	No
Prometryne	Jan – Dec 2020	0 - 0	µg/L	No
Simazine	Jan – Dec 2020	0.0040 - 0.0047	µg/L	No
THM (Note: showing latest annual average)	Jan – Dec 2020	11.2	µg/L	No
Terbufos	Jan – Dec 2020	0 - 0	μg/L	No
Tetrachloroethylene	Jan – Dec 2020	0 - 0	μg/L	No
2,3,4,6-Tetrachlorophenol	Jan – Dec 2020	0-0	μg/L	No

Triallate	Jan – Dec 2020	0 - 0	μg/L	No
Trichloroethylene	Jan – Dec 2020	0 - 0	μg/L	No
2,4,6-Trichlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
Trifluralin	Jan – Dec 2020	0 - 0	µg/L	No
Vinyl Chloride	Jan – Dec 2020	0 - 0	μg/L	No

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

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 (min.) - (max.)	Unit of Measure	Date of Sample
NONE	NONE	NONE	NONE

CITY OF TORONTO DRINKING WATER SYSTEM ANNUAL REPORT

Drinking-Water System Number:	220004536
Drinking-Water System Name:	City of Toronto Drinking Water System (F. J. Horgan)
Drinking-Water System Owner:	City of Toronto
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2020 to December 31, 2020

<u>Complete if your Category is Large Municipal</u> <u>Residential or Small Municipal Residential</u>	<u>Complete for all other Categories.</u>
Does your Drinking-Water System serve more than 10,000 people? Yes [X] No []Is your annual report available to the public at no charge on a web site on the Internet? Yes [X]Yes [X]No []	Number of Designated Facilities served:
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.	to:
Metro Hall 55 John Street Toronto, Ontario M5V 3C6	Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []

NOTE: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Region of York - receives some of their water from	260001929
Toronto	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water? Yes [X] No []

Indicate how you notified system users that your annual report is available, and is free of charge. [X] Public access/notice via the web

[X] Public access/notice via Government Office

[] Public access/notice via a newspaper

- [] Public access/notice via Public Request
- [] Public access/notice via a Public Library
- [] Public access/notice via other method _____

Describe your Drinking-Water System

Toronto Water Supply System consists of four water treatment plants, 18 pumping stations, 11 major underground storage reservoirs, four elevated storage tanks and approximately 532 kilometers of trunk watermains and 5,569 kilometers of distribution watermains.

The F.J. Horgan Water Treatment Plant is a direct water treatment plant, has a rated capacity of 800,000 m³/day and is located at 201 Copperfield Road, Toronto.

The other three (3) Toronto Water Treatment plants are as follows:

- R.L. Clark Water Treatment Plant (Rated Capacity of 615,000 m³/day) and is located at 45 Twenty Third Street, Toronto

- R.C. Harris Water Treatment Plant (Rated Capacity of 950,000 m³/day) and is located at 2701 Queen Street East, Toronto

- Island Water Treatment Plant (Rated Capacity of 440,000 m³/day) and is located on Centre Island, Toronto

List all water treatment chemicals used over this reporting period

Alum (Aluminum sulphate) Polyaluminum Chloride (PACL – XL52) Chlorine Sulphur dioxide Hydrofluosilicic acid Aqua ammonia Liquid Oxygen Ozone Sodium bisulphite (SBS) Phosphoric acid Polymer - Anionic (FLO AF340) for waste residuals treatment Polymer - Cationic (Floquat MG FL 4620)

Were any significant expenses incurred to?

[X] Install required equipment[X] Repair required equipment

[X] Replace required equipment

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

Capital Projects - The following amounts relate to various projects during 2020 and do not represent the total project costs. These numbers do not include the normal operating and maintenance costs.

No.	Project Description	Monetary Expense
1.	Facility and Process Upgrades	\$134,000
2.	Replacement of MCCs	\$4,000
3.	Standby Power Optimization	\$123,000
4.	. Zebra Mussel Control System Replacement	\$25,000
5.	Gaseous System Upgrades	\$25,000
6.	Raw Water Valves Replacement	\$52,000
7.	Ozone System Rehabilitation	\$308,000
8.	Server Room Upgrade	\$80,000
9.	Baffle Installation	\$44,000

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

NOTE: "Incident date" is the date adverse result was reported to MECP-SAC. "Corrective action date" is the date the location was resampled.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
2020/03/10	Sodium	20.1	mg/L	Resample taken, result was 17.6 mg/L	2020/03/09

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

	Number of Samples	Range of E.Coli Or Fecal Results (min.) - (max.)	Range of Total Coliform Results (min.) - (max.)	Number of HPC Samples	Range of HPC Results (min.) - (max.)
Raw	362	0 - 3	0 - 71	362	0 - 900
Treated	1448	1448 A (100%A)	1448 A (100%A)	1448	0 - 5

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

Turbidity 8784 0.03 - 0.09 NTU Chlorine 8784 1.17 - 2.33 mg/L *Fluoride (If the DWS provides 346 0.39 - 0.80 mg/L	Parameter	Number of Grab Samples	Range of Results (min.) - (max.)	Unit of Measure
*Fluoride (If the DWS provides 346 0.39 – 0.80	Turbidity	8784	0.03 - 0.09	NTU
(If the DWS provides 346 $0.39 - 0.80$	Chlorine	8784	1.17 - 2.33	mg/L
fluoridation)	(If the DWS provides	346	0.39 - 0.80	mg/L

NOTE: For Continuous Monitoring (zero days offline):

Number of Grab Samples = 24 samples/day x 365 days/year (or 366 days/leap year) = 8760 (or 8784)

*Fluoride Grab Sample numbers and range of results are reported using data from days when fluoridation was in service.

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 (Annual Average)	Unit of Measure
11-Feb-2015 & 7-June 2016 Municipal Drinking Water Licence	Total Suspended Solids (Residue Management)	Jan. 1, 2020 - Dec. 31, 2020	16.75	mg/L

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Antimony	Jan – Dec 2020	0 - 0.0003	mg/L	No
Arsenic	Jan – Dec 2020	0.0008 - 0.0009	mg/L	No
Barium	Jan – Dec 2020	0.0202 - 0.0242	mg/L	No
Boron	Jan – Dec 2020	0.0212-0.0235	mg/L	No
Cadmium	Jan – Dec 2020	0-0	mg/L	No
Chromium	Jan – Dec 2020	0.0002 - 0.0003	mg/L	No
Lead	Jan – Dec 2020	0 - 0.00009	mg/L	No
Mercury	Jan – Dec 2020	0 - 0	mg/L	No
Selenium	Jan – Dec 2020	0 - 0	mg/L	No
Sodium	Jan – Dec 2020	12.2 - 20.1	mg/L	Yes
Uranium	Jan – Dec 2020	0.0004 - 0.0004	mg/L	No
Nitrite	Jan – Dec 2020	0 - 0.0040	mg/L	No
Nitrate	Jan – Dec 2020	0.24-0.50	mg/L	No

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

Location Type	Number of Samples	Range of Lead Results (min.) - (max.)	Unit of Measure	Number of Exceedances
*Plumbing	*	*	*	*
*Distribution	*	*	*	*

Summary of Lead (Pb) testing under Schedule 15.1 during this reporting period

*NOTE: Refer to Toronto DS (Distribution System) Annual Report for Lead (Pb) testing data

Summary of Organic parameters sampled during this reporting period or the most recent sample
results

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Alachlor	Jan – Dec 2020	0-0	μg/L	No
Atrazine + N-dealkylated metobolites	Jan – Dec 2020	0.0700 - 0.0800	μg/L	No
Azinphos-methyl	Jan – Dec 2020	0 - 0	μg/L	No
Benzene	Jan – Dec 2020	0 - 0	μg/L	No
Benzo(a)pyrene	Jan – Dec 2020	0 - 0	μg/L	No
Bromoxynil	Jan – Dec 2020	0 - 0	μg/L	No
Carbaryl	Jan – Dec 2020	0 - 0	μg/L	No
Carbofuran	Jan – Dec 2020	0-0	μg/L	No
Carbon Tetrachloride	Jan – Dec 2020	0 - 0	μg/L	No
Chlorpyrifos	Jan – Dec 2020	0-0	μg/L	No
Diazinon	Jan – Dec 2020	0 - 0	μg/L	No
Dicamba	Jan – Dec 2020	0 - 0	μg/L	No
1,2-Dichlorobenzene	Jan – Dec 2020	0 - 0	μg/L	No
1,4-Dichlorobenzene	Jan – Dec 2020	0 - 0	μg/L	No
1,2-Dichloroethane	Jan – Dec 2020	0-0	μg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan – Dec 2020	0-0	μg/L	No
Dichloromethane	Jan – Dec 2020	0 - 0	μg/L	No
2-4 Dichlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan – Dec 2020	0-0	µg/L	No
Diclofop-methyl	Jan – Dec 2020	0 - 0	μg/L	No
Dimethoate	Jan – Dec 2020	0 - 0	μg/L	No
Diquat	Jan – Dec 2020	0	μg/L	No
Diuron	Jan – Dec 2020	0 - 0	μg/L	No
Glyphosate	Jan – Dec 2020	0	μg/L	No
Malathion	Jan – Dec 2020	0 - 0	μg/L	No
Metolachlor	Jan – Dec 2020	0.0030 - 0.0057	μg/L	No
Metribuzin	Jan – Dec 2020	0 - 0	μg/L	No
Monochlorobenzene	Jan – Dec 2020	0 - 0	μg/L	No

Paraquat	Jan – Dec 2020	0	μg/L	No
Pentachlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
Phorate	Jan – Dec 2020	0 - 0	μg/L	No
Picloram	Jan – Dec 2020	0 - 0	μg/L	No
Polychlorinated Biphenyls(PCB)	Jan – Dec 2020	0 - 0	μg/L	No
Prometryne	Jan – Dec 2020	0 - 0	μg/L	No
Simazine	Jan – Dec 2020	0.0022 - 0.0026	μg/L	No
THM (Note: Show latest annual average)	Jan – Dec 2020	7.7	μg/L	No
Terbufos	Jan – Dec 2020	0 - 0	μg/L	No
Tetrachloroethylene	Jan – Dec 2020	0 - 0	μg/L	No
2,3,4,6-Tetrachlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
Triallate	Jan – Dec 2020	0 - 0	μg/L	No
Trichloroethylene	Jan – Dec 2020	0 - 0	μg/L	No
2,4,6-Trichlorophenol	Jan – Dec 2020	0 - 0	μg/L	No
Trifluralin	Jan – Dec 2020	0 - 0	μg/L	No
Vinyl Chloride	Jan – Dec 2020	0 - 0	μg/L	No

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

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 (min.) - (max.)	Unit of Measure	Date of Sample
NONE	NONE	NONE	NONE

CITY OF TORONTO DRINKING WATER SYSTEM ANNUAL REPORT

Drinking-Water System Number:	260090363
Drinking-Water System Name:	City of Toronto Drinking Water System – Toronto DS
Drinking-Water System Owner:	City of Toronto
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2020 to December 31, 2020

<u>Complete if your Category is Large Municipal</u> <u>Residential or Small Municipal Residential</u>	Complete for all other Categories.
Does your Drinking-Water System serve more than 10,000 people? Yes [X] No []	Number of Designated Facilities served:
Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []	to all Designated Facilities you serve? Yes [] No []
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be	Number of Interested Authorities you report to:
available for inspection. Metro Hall 55 John Street Toronto, Ontario M5V 3C6	Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []

NOTE: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Region of York – receives some of their water from	260001929
Toronto	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water? Yes [X] No []

Indicate how you notified system users that your annual report is available, and is free of charge. [X] Public access/notice via the web

[X] Public access/notice via Government Office

[] Public access/notice via a newspaper

- [] Public access/notice via Public Request
- [] Public access/notice via a Public Library
- [] Public access/notice via other method _____

Describe your Drinking-Water System

Toronto Drinking Water Supply System consists of four water treatment plants, 18 pumping stations, 11 major underground storage reservoirs, four elevated storage tanks and approximately 532 kilometers of trunk watermains and 5,569 kilometers of distribution watermains.

Working from multiple facilities across the city, Distribution & Supply staff inspect, operate and maintain the existing water distribution and supply systems.

There are four (4) Toronto Water Treatment plants:

- R.L. Clark Water Treatment Plant (Rated Capacity of 615,000 m³/day) and is located at 45 Twenty Third Street, Toronto

- R.C. Harris Water Treatment Plant (Rated Capacity of 950,000 m³/day) and is located at 2701 Queen Street East, Toronto

- F.J. Horgan Water Treatment Plant (Rated Capacity of 800,000 m³/day) and is located at 201 Copperfield Road, Toronto

- Island Water Treatment Plant (Rated Capacity of 440,000 m³/day) and is located on Centre Island, Toronto

List all water treatment chemicals used over this reporting period

N/A

Were any significant expenses incurred to?

[X] Install required equipment

[X] Repair required equipment

[X] Replace required equipment

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

Please note that the following amounts relate to various projects during 2020 and do not represent the total project costs. These numbers do not include normal operating and maintenance costs.

Distribution System:

Watermain Replacement	\$91 million
Water Service Replacement	\$45 million
Watermain Rehabilitation	\$ 63 million

Water Supply:

Facility Rehab and Standby Power	\$31.8 million
Transmission Main Rehabilitation	\$ 4.8 million
New Transmission Main Construction	\$21.4 million

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

NOTE: "Incident date" is the date adverse result was reported to MECP-SAC. "Corrective action date" is the date the location was resampled.

AWQI Number	Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Resample Date
149515	1-Feb-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled. Results acceptable.	3-Feb-20
149544	16-Feb-20	Sodium	>20	mg/L	Resampled. Results acceptable.	11-Feb-20
149545	16-Feb-20	Sodium	>20	mg/L	Resampled. Results acceptable	11-Feb-20
149668	29-Feb-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled. Results acceptable.	02-Mar-20
149797	26-Mar-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled.	26-Mar-20
149803	28-Mar-20	Total Coliform	1	per 100 mL sample	Flushed watermain. Resampled. Results acceptable.	30-Mar-20
150018	21-May- 20	Total Chlorine	<0.25	mg/L	Flushed watermain. Resampled. Results acceptable	21-May-20
150084	30-May- 20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled	30-May-20
150095	01-Jun-20	Total Coliform	7	per 100 mL sample	Flushed watermain. Resampled.	01-Jun-20
150136	04-Jun-20	Total Coliform	20	per 100 mL sample	Flushed watermain. Resampled.	04-Jun-20
150154	05-Jun-20	No back flow preventer	-	-	Back flow preventer installed and tested	05-Jun-20

150165		Total		100 1	Flushed	
	06-Jun-20	Coliform	1	per 100 mL sample	watermain.	05-Jun-20
				sample	Resampled.	
150175		Total			Flushed	
		Coliform			watermain.	
	08-Jun-20		6	per 100 mL	Resampled.	07-Jun-20
				sample	Results	
					acceptable.	
150176		Total			Flushed	
		Coliform			watermain.	
	08-Jun-20		2	per 100 mL	Resampled.	07-Jun-20
	00 U an 20		-	sample	Results	0, bull 20
					acceptable.	
150233					Flushed	
150255		E.coli and	Presenc	Result in 100	watermain.	
	12-Jun-20	Total	e	mL sample	Resampled.	12-Jun-20
		Coliform	C	IIIL sample	-	
150234					Results acceptable Flushed	
130234		T = 4 = 1	Desarro			
	12-Jun-20	Total	Presenc	Result in 100	watermain.	12-Jun-20
		Coliform	e	mL sample	Resampled.	
1.50.11.5					Results acceptable	
150412			-		Flushed	
	27-Jun-20	Total	Presenc	Result in 100	watermain.	29-Jun-20
	_,	Coliform	e	mL sample	Resampled.	
					Results acceptable	
150567					Flushed	
	08-Jul-20	Arsenic	>0.01	mg/L	watermain.	07-Jul-20
	00-Jul-20	Arsenie	> 0.01	mg/L	Resampled.	07-341-20
					Results acceptable	
150568					Flushed	
	08-Jul-20	Arsenic	>0.01	ma/I	watermain.	07-Jul-20
	08-Jui-20	Arsenic	/0.01	mg/L	Resampled.	07-Jui-20
					Results acceptable	
150805					Flushed	
	19-Jul-20	Total	Presenc	Result in 100	watermain.	20-Jul-20
	19-Jul-20	Coliform	e	mL sample	Resampled.	20 - Jul-20
					Results acceptable	
					Flushed	
150933	05 T 1 00	Total	Presenc	Result in 100	watermain.	07.1.1.00
	25-Jul-20	Coliform	e	mL sample	Resampled.	27-Jul-20
			-	#***P**3	Results acceptable	
					Flushed	
151015		Total	Presenc	Result in 100	watermain.	
101010	30-Jul-20	Coliform	e	mL sample	Resampled.	31-Jul-20
		Comonn	Ĩ	in sumple	Results acceptable	
					Flushed	
151038		Total	Presenc	Result in 100	watermain.	
131030	31-Jul-20	Coliform				31-Jul-20
		Comorm	e	mL sample	Resampled.	
					Results acceptable	

151203	05-Aug-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled. Results acceptable	08-Aug-20
151245	09-Aug-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled. Results acceptable	10-Aug-20
151339	12-Aug-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled. Results acceptable	12-Aug-20
151351	13-Aug-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled.	14-Aug-20
151385	15-Aug-20	Total Coliform	5	cfu/100 mL	Flushed watermain. Resampled. Results acceptable	16-Aug-20
151386	15-Aug-20	Total Coliform	2	cfu/100 mL	Flushed watermain. Resampled. Results acceptable	16-Aug-20
151410	17-Aug-20	Total Coliform	24	cfu/100 mL	Flushed watermain. Resampled.	19-Aug-20
151444	19-Aug-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled. Results acceptable	19-Aug-20
151468	20-Aug-20	Total Coliform	5	cfu/100 mL	Flushed watermain. Resampled.	20-Aug-20
151469	20-Aug-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled. Results acceptable	20-Aug-20
151505	21-Aug-20	Total Coliform	13	cfu/100 mL	Flushed watermain. Resampled.	24-Aug-20
151506	21-Aug-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled. Results acceptable	21-Aug-20
151507	21-Aug-20	Total Coliform	Presenc e	Result in 100 mL sample	Flushed watermain. Resampled.	22-Aug-20
151525	23-Aug-20	Total Coliform	1	cfu/100 mL	Flushed watermain.	23-Aug-20

					Resampled.	
					Results acceptable	
151534		Tatal	Danasana	Desult in 100	Flushed	
	23-Aug-20	Total	Presenc	Result in 100	watermain.	23-Aug-20
	C	Coliform	e	mL sample	Resampled.	e
151536					Flushed	
101000		Total	Presenc	Result in 100	watermain.	
	23-Aug-20	Coliform	e	mL sample	Resampled.	23-Aug-20
		Comoni	C	mil sample	Results acceptable	
151545				cfu/100 mL	Flushed	
131343		Total				
	24-Aug-20		29		watermain.	25-Aug-20
	C	Coliform			Resampled.	C
					Results acceptable	
151553				cfu/100 mL	Flushed	
	25-Aug-20	Total	38		watermain.	26-Aug-20
	25-Aug-20	Coliform	50		Resampled.	20-Aug-20
					Results acceptable	
151588		T = 4 - 1		cfu/100 mL	Flushed	
	26-Aug-20	Total	18		watermain.	26-Aug-20
	C	Coliform			Resampled.	e
151589				cfu/100 mL	Flushed	
	26-Aug-20	Total	1		watermain.	25-Aug-20
	20 1145 20	Coliform	-		Resampled.	25-Aug-20
151590				cfu/100 mL	Flushed	
151590	26-Aug-20	Total	22		watermain.	28-Aug-20
	20-Aug-20	Coliform	22			20-Aug-20
151501					Resampled.	
151591		T (1		cfu/100 mL	Flushed	
	26-Aug-20	Total	1		watermain.	28-Aug-20
	0	Coliform			Resampled.	8
					Results acceptable	
151604		Total	Presenc	Result in 100	Flushed	
	27-Aug-20	Coliform	e	mL sample	watermain.	28-Aug-20
				in sample	Resampled.	
151607					Flushed	
	27 411 20	Total	Presenc	Result in 100	watermain.	28 1 20
	27-Aug-20	Coliform	e	mL sample	Resampled.	28-Aug-20
					Results acceptable	
151608					Flushed	
	27.4 20	Total	Presenc	Result in 100	watermain.	20 4 20
	27-Aug-20	Coliform	e	mL sample	Resampled.	28-Aug-20
			_	<i>m</i>	Results acceptable	
151609					Flushed	
121007		Total	Presenc	Result in 100	watermain.	
	27-Aug-20	Coliform	e	mL sample	Resampled.	29-Aug-20
		Comonii	C	in sample	Results acceptable	
151610				ofu/100I	*	
151610		T (1		cfu/100 mL	Flushed	
	27-Aug-20	Total	1		watermain.	27-Aug-20
		Coliform	_		Resampled.	
					Results acceptable	

151611				cfu/100 mL	Flushed	
151011		Total			watermain.	
	27-Aug-20	Coliform	1		Resampled.	29-Aug-20
		Comorni				
151641				C /100 I	Results acceptable	
151641				cfu/100 mL	Flushed	
	28-Aug-20	Total	1		watermain.	28-Aug-20
	20 Hug 20	Coliform	-		Resampled.	201148 20
					Results acceptable	
151676		Total		cfu/100 mL	Flushed	
	30-Aug-20	Coliform	4		watermain.	29-Aug-20
	-	Colliorm			Resampled.	-
151677		E .		cfu/100 mL	Flushed	
	30-Aug-20	Total	58		watermain.	31-Aug-20
	50 Hug 20	Coliform	20		Resampled.	511148 20
151678				cfu/100 mL	Flushed	
151078	30-Aug-20	Total	34		watermain.	31-Aug-20
	50-Aug-20	Coliform	54			JI-Aug-20
151704				C /100 I	Resampled.	
151724		Total		cfu/100 mL	Flushed	
	31-Aug-20	Coliform	4		watermain.	01-Sep-20
					Resampled.	
151746		Total		cfu/100 mL	Flushed	
	01-Sep-20	Coliform	4		watermain.	02-Sep-20
		Comorni			Resampled.	
151747		E.coli		cfu/100 mL	Flushed	
	01 G 0 0	Total	2		watermain.	0 0 0 00
	01-Sep-20	Coliform	5		Resampled.	02-Sep-20
		0011101111	Ū.		Tressingream	
151798				cfu/100 mL	Flushed	
191790					watermain.	
		T - 4 - 1			Resampled. Filler	
	03-Sep-20	Total	3		Piece isolated Sep	03-Sep-20
	1	Coliform			3/20.	1
					Rechlorinated and	
					resampled. Results	
					Acceptable	
151821		Total		cfu/100 mL	Flushed	
	04-Sep-20	Coliform	6		watermain.	03-Sep-20
	_				Resampled.	-
151822		T 1		cfu/100 mL	Flushed	
	04-Sep-20	Total	2		watermain.	03-Sep-20
		Coliform	_		Resampled.	
151847		Total		cfu/100 mL	Flushed	
1,2107/	05-Sep-20	Coliform	1		watermain.	05-Sep-20
	05-5cp-20	Comonii	1			05-5cp-20
151040					Resampled.	
151848	05 0 00	Total	D .	Result in 100	Flushed	05.0 00
	05-Sep-20	Coliform	Present	mL sample	watermain.	05-Sep-20
				-	Resampled.	
151849	05-Sep-20	Total	Present	Result in 100	Flushed	05-Sep-20
	00-0 0 p-20	Coliform	1105011	mL sample	watermain.	03-50p-20

					Resampled.Result s Acceptable	
151865				cfu/100 mL	Flushed	
		E.coli			watermain. Resampled. Blow	
		Total	11		off isolated Sep	
	06-Sep-20	Coliform	11		6/20.	06-Sep-20
					Rechlorinated and	
					resampled. Results	
					Acceptable	
151866				cfu/100 mL	Flushed	
					watermain.	
		E.coli			Resampled.	
	06-Sep-20	Total	4		Hydrant isolated	06-Sep-20
	00 Dep 20	Coliform	4		Sep 6/20.	00 Sep 20
					Rechlorinated and	
					resampled. Results	
151054				C /100 T	Acceptable	
151874	07.0 20	Total	20	cfu/100 mL	Flushed	00 0 00
	07-Sep-20	Coliform	29		watermain.	08-Sep-20
151075				cfu/100 mL	Resampled.	
151875		Total		cfu/100 mL	Flushed	
	07-Sep-20	Total Coliform	13		watermain. Resampled.Result	08-Sep-20
		Comoni			s Acceptable	
151873				cfu/100 mL	Flushed	
151075	07-Sep-20	Total	38		watermain.	08-Sep-20
	07 Bep 20	Coliform	50		Resampled.	00 Sep 20
151951				Result in 100	Flushed	
	10-Sep-20	Total	Present	mL sample	watermain.	11-Sep-20
	1	Coliform		1	Resampled.	1
151937		Tatal		cfu/100 mL	Flushed	
	10-Sep-20	Total Coliform	5		watermain.	10-Sep-20
		Comoni			Resampled.	
151939		Total		cfu/100 mL	Flushed	
	10-Sep-20	Coliform	9		watermain.	10-Sep-20
					Resampled.	
151949				Result in 100	Flushed	
	10-Sep-20	Total	Present	mL sample	watermain.	11-Sep-20
		Coliform			Resampled.Result	F
1510(7				D	s Acceptable	
151967	11 5 20	Total	Descent	Result in 100	Flushed	11 Sec. 20
	11-Sep-20	Coliform	Present	mL sample	watermain.	11-Sep-20
151962				cfu/100 mL	Resampled. Flushed	
131902	11-Sep-20	Total	2		watermain.	14-Sep-20
	11-3ep-20	Coliform	۷		Resampled.	14-5cp-20
151963		Total		cfu/100 mL	Flushed	
151705	11-Sep-20	Coliform	1		watermain.	14-Sep-20
L		Comoni	1	1	watermann.	

					Resampled.Result s Acceptable	
151992	12-Sep-20	Total Coliform	5	cfu/100 mL	Flushed watermain. Resampled.	14-Sep-20
151993	12-Sep-20	Total Coliform	Present and 2*	Result in 100 mL sample cfu/100 mL	Flushed watermain. Resampled.	14-Sep-20
152010	13-Sep-20	Total Coliform	28	cfu/100 mL	Flushed watermain. Resampled.	14-Sep-20
152011	13-Sep-20	Total Coliform	30	cfu/100 mL	Flushed watermain. Resampled.	14-Sep-20
152023	15-Sep-20	Total Coliform	33	cfu/100 mL	Flushed watermain. Resampled.	15-Sep-20
152024	15-Sep-20	Total Coliform	29	cfu/100 mL	Flushed watermain. Resampled.	15-Sep-20
152025	15-Sep-20	Total Coliform	5	cfu/100 mL	Flushed watermain. Resampled.	15-Sep-20
152053	16-Sep-20	Total Coliform	2	cfu/100 mL	Flushed watermain. Resampled.	16-Sep-20
152054	16-Sep-20	Total Coliform	2	cfu/100 mL	Flushed watermain. Resampled.	15-Sep-20
152052	16-Sep-20	Total Coliform	2	cfu/100 mL	Flushed watermain. Resampled.	15-Sep-20
152081	17-Sep-20	Total Coliform	1	cfu/100 mL	Flushed watermain. Resampled.	17-Sep-20
152072	17-Sep-20	Total Coliform	11	cfu/100 mL	Flushed watermain. Resampled.	18-Sep-20
152073	17-Sep-20	Total Coliform	9	cfu/100 mL	Flushed watermain. Resampled.	18-Sep-20
152075	17-Sep-20	Total Coliform	9	cfu/100 mL	Flushed watermain. Resampled.	18-Sep-20
152076	17-Sep-20	Total Coliform	161	cfu/100 mL	Flushed watermain. Resampled.	18-Sep-20

152002				-f-/100 T	Γ_{1}	
152083	17.0 20	Total	2	cfu/100 mL	Flushed	10.0 20
	17-Sep-20	Coliform	3		watermain.	18-Sep-20
					Resampled.	
152068				cfu/100 mL	Flushed	
	17-Sep-20	Total	4		watermain.	17-Sep-20
	17 Sep 20	Coliform			Resampled.Result	17 Sep 20
					s Acceptable	
152070		Total		cfu/100 mL	Flushed	
	17-Sep-20	Coliform	1		watermain.	17-Sep-20
		Comoni			Resampled.	
152071		Total		cfu/100 mL	Flushed	
	17-Sep-20	Coliform	1		watermain.	17-Sep-20
	_	Comorin			Resampled.	_
152098		F (1		Result in 100	Flushed	
	18-Sep-20	Total	Present	mL sample	watermain.	20-Sep-20
	1	Coliform		1	Resampled.	1
152117				cfu/100 mL	Flushed	
	10.0 20	Total	1		watermain.	10.0 20
	19-Sep-20	Coliform	1		Resampled.Result	18-Sep-20
					s Acceptable	
152118				Result in 100	Flushed	
				mL sample	watermain.	
	19-Sep-20	Total	Present		Resampled.	18-Sep-20
	19 Sep 20	Coliform	1 resent		Results	10 Sep 20
					Acceptable	
152119				Result in 100	Flushed	
102119				mL sample	watermain.	
	19-Sep-20	Total	Present		Resampled.	18-Sep-20
	1) Sep 20	Coliform	Tresent		Results	10 Sep 20
					Acceptable	
152115				cfu/100 mL	Flushed	
102110	19-Sep-20	Total	1		watermain.	18-Sep-20
	17 Sep 20	Coliform	1		Resampled.	10 Sep 20
152116				Results in	Flushed	
152110	19-Sep-20	Total	Present	100 mL	watermain.	18-Sep-20
	17-50p-20	Coliform	1 resent	sample	Resampled.	10-5 cp- 20
152121				Results in	Flushed	
132121	19-Sep-20	Total	Present	100 mL	watermain.	20-Sep-20
	19-3ep-20	Coliform	11050111	sample		20-3ep-20
152122				Results in	Resampled.	
132122					Flushed	
	10 Sec. 20	Total	Descent	100 mL	watermain.	20 5 20
	19-Sep-20	Coliform	Present	sample	Resampled.	20-Sep-20
					Results	
150107				C /100 T	Acceptable	
152127				cfu/100 mL	Flushed	
		Total	0.5		watermain.	
	20-Sep-20	Coliform	26		Resampled.	22-Sep-20
					Results	
					Acceptable	

152129				cfu/100 mL	Flushed	
132129				ciu/100 mL	watermain.	
	20-Sep-20	Total	1			21 San 20
	20-Sep-20	Coliform	1		Resampled. Results	21-Sep-20
152124					Acceptable	
152124	20 5 20	Total	14	cfu/100 mL	Flushed	22 G 20
	20-Sep-20	Coliform	14		watermain.	22-Sep-20
152125				C /100 I	Resampled.	
152125	20 5 20	Total	4	cfu/100 mL	Flushed	22 G 20
	20-Sep-20	Coliform	4		watermain.	22-Sep-20
152126					Resampled.	
152126		Total	7	cfu/100 mL	Flushed	
	20-Sep-20	Coliform	7		watermain.	22-Sep-20
152120				C /100 T	Resampled.	
152128		Total	2	cfu/100 mL	Flushed	
	20-Sep-20	Coliform	3		watermain.	22-Sep-20
152150				C /100 T	Resampled.	
152159				cfu/100 mL	Flushed	
		Total	10		watermain.	
	22-Sep-20	Coliform	10		Resampled.	23-Sep-20
					Results	
1.501.61				0. /1.0.0 T	Acceptable	
152161				cfu/100 mL	Flushed	
		Total	1		watermain.	
	22-Sep-20	Coliform	1		Resampled.	23-Sep-20
					Results	
150164				C /100 T	Acceptable	
152164				cfu/100 mL	Flushed	
		Total	1		watermain.	
	22-Sep-20	Coliform	1		Resampled.	23-Sep-20
					Results	
150165				C /100 T	Acceptable	
152165		Total	-	cfu/100 mL	Flushed	
	22-Sep-20	Coliform	5		watermain.	23-Sep-20
150177				C /100 T	Resampled.	
152177				cfu/100 mL	Flushed	
					watermain.	
		T + 1			Resampled. Main	
	23-Sep-20	Total	8		taken out of	23-Sep-20
	1	Coliform	-		service and re-	1
					chlorinated.	
					Resample Results	
1.501.50				C /1 C C T	Acceptable	
152178				cfu/100 mL	Flushed	
		T 1			watermain.	
	23-Sep-20	Total	7		Resampled.	23-Sep-20
	L = .	Coliform	,		Hydrant taken out	- ·r -·
					of service and re-	
					chlorinated.	

					Decomple Decolt	
					Resample Results	
152170				C /100 I	Acceptable	
152179				cfu/100 mL	Flushed	
					watermain.	
					Resampled.	
	23-Sep-20	Total	36		Hydrant taken out	18-Sep-20
	25 Sep 20	Coliform	50		of service and re-	10 Sep 20
					chlorinated.	
					Resample Results	
					Acceptable	
152211				Result in 100	Flushed	
		T (1		mL sample	watermain.	
	24-Sep-20	Total	Present	•	Resampled.	25-Sep-20
	1	Coliform			Results	1
					Acceptable	
152210				cfu/100 mL	Flushed	
102210	24-Sep-20	Total	9		watermain.	25-Sep-20
	27-50p-20	Coliform	7		Resampled.	20-60p-20
152209				cfu/100 mL	Flushed	
132209	21 5 - 20	Total	5	ciu/100 mL	watermain.	24 5 20
	24-Sep-20	Coliform	3			24-Sep-20
1.500.00				0. /1.0.0 T	Resampled.	
152208				cfu/100 mL	Flushed	
		Total			watermain.	
	24-Sep-20	Coliform	198		Resampled.	24-Sep-20
		comorni			Results	
					Acceptable	
152226				cfu/100 mL	Flushed	
	25 San 20	Total	3		watermain.	26-Sep-20
	25-Sep-20	Coliform	3		Resampled.Result	20-Sep-20
					s Acceptable	
152240				cfu/100 mL	Flushed	
		Total			watermain.	
	26-Sep-20	Coliform	1		Resampled.Result	26-Sep-20
					s Acceptable	
152349				Result in 100	Flushed	
10-019		_		mL sample	watermain.	
	30-Sep-20	Total	Present	in sumple	Resampled.	01-Oct-20
	50-50p-20	Coliform	1 resent		Results	01-001-20
					Acceptable	
152277				Result in 100		
152377					Flushed	
	01 0 + 20	Total	Duest	mL sample	watermain.	
	01-Oct-20	Coliform	Present		Resampled.	02-Oct-20
					Results	
1 500 50				D 1.1 for	Acceptable	
152378		Total	-	Result in 100	Flushed	
	01-Oct-20	Coliform	Present	mL sample	watermain.	03-Oct-20
		Comonin			Resampled.	
152379		Total		Result in 100	Flushed	
	01-Oct-20	Coliform	Present	mL sample	watermain.	02-Oct-20
		COMOLI	1	-	Resampled.	

					Results	
1.50000				T	Acceptable	
152380		Total	-	Result in 100	Flushed	
	01-Oct-20	Coliform	Present	mL sample	watermain.	02-Oct-20
					Resampled.	
152392				Result in 100	Flushed	
		Total		mL sample	watermain.	
	02-Oct-20	Coliform	Present		Resampled.	03-Oct-20
		Comoni			Results	
					Acceptable	
152393				Result in 100	Flushed	
		T (1		mL sample	watermain.	
	02-Oct-20	Total	Present	•	Resampled.	03-Oct-20
		Coliform			Results	
					Acceptable	
152403				cfu/100 mL	Flushed	
		T 1			watermain.	
	03-Oct-20	Total	23		Resampled.	04-Oct-20
	00 000 20	Coliform			Results	0.00020
					Acceptable	
152404				cfu/100 mL	Flushed	
102101	03-Oct-20	Total	3		watermain.	05-Oct-20
	05 000 20	Coliform	5		Resampled.	05 000 20
152411				cfu/100 mL	Flushed	
152411					watermain.	
	04-Oct-20	Total	1		Resampled.	05-Oct-20
	04-001-20	Coliform	1		Results	05-001-20
152412				Result in 100	Acceptable Flushed	
132412						
	04 0 + 20	Total	Durant	mL sample	watermain.	05 0 + 20
	04-Oct-20	Coliform	Present		Resampled.	05-Oct-20
					Results	
152421				C /100 T	Acceptable	
152421	05.0 / 20	Total	A	cfu/100 mL	Flushed	
	05-Oct-20	Coliform	4		watermain.	06-Oct-20
1.50.400				C /100 T	Resampled.	
152422		Total	C C	cfu/100 mL	Flushed	
	05-Oct-20	Coliform	8		watermain.	06-Oct-20
1				0./100	Resampled.	
152438				cfu/100 mL	Flushed	
		Total			watermain.	
	06-Oct-20	Coliform	1		Resampled.	05-Oct-20
		2 5			Results	
					Acceptable	
152458				cfu/100 mL	Flushed	
	07-Oct-20	Total	1		watermain.	06-Oct-20
	07-001-20	Coliform	1		Resampled.Result	00-001-20
					s Acceptable	

152494				cfu/100 mL	Flushed	
152191	08-Oct-20	Total	2		watermain.	07-Oct-20
	00 000 20	Coliform	2		Resampled.	07 000 20
152495				cfu/100 mL	Flushed	
152495					watermain.	
	08-Oct-20	Total	1		Resampled.	07-Oct-20
	08-001-20	Coliform	1		Results	07-001-20
152497				Result in 100	Acceptable Flushed	
132497						
	08 0 -+ 20	Total	Dusant	mL sample	watermain.	10 Oct 20
	08-Oct-20	Coliform	Present		Resampled.	10-Oct-20
					Results	
152400			-	D 1/: 100	Acceptable	
152498				Result in 100	Flushed	
		Total	D	mL sample	watermain.	10.0 20
	08-Oct-20	Coliform	Present		Resampled.	10-Oct-20
					Results	
1.50.400				D 1.1 100	Acceptable	
152499		Total		Result in 100	Flushed	10.0.0
	08-Oct-20	Coliform	Present	mL sample	watermain.	10-Oct-20
				2 4 4 4	Resampled.	
152513		_		cfu/100 mL	Flushed	
	09-Oct-20	Total	5		watermain.	09-Oct-20
	0)-001-20	Coliform	5		Resampled.Result	07-001-20
					s Acceptable	
152516		Total		cfu/100 mL	Flushed	
	09-Oct-20	Coliform	2		watermain.	09-Oct-20
		Comoni			Resampled.	
152521				Result in 100	Flushed	
	09-Oct-20	Total	Present	mL sample	watermain.	10-Oct-20
	09-001-20	Coliform	riesent		Resampled.Result	10-001-20
					s Acceptable	
152522				Result in 100	Flushed	
	09-Oct-20	Total	Present	mL sample	watermain.	10-Oct-20
	09-001-20	Coliform	Present	-	Resampled.Result	10-001-20
					s Acceptable	
152532				Result in 100	Flushed	
	10.0-+ 20	Total	Duggant	mL sample	watermain.	11 0 -+ 20
	10-Oct-20	Coliform	Present		Resampled.Result	11-Oct-20
					s Acceptable	
152534		T - 4 - 1		cfu/100 mL	Flushed	
	10-Oct-20	Total Californi	2		watermain.	10-Oct-20
		Coliform			Resampled.	
152535				cfu/100 mL	Flushed	
		$T \rightarrow 1$			watermain.	
	10-Oct-20	Total	1		Resampled.	10-Oct-20
		Coliform			Results	
					Acceptable	
152546	12.0.0.20	Total		cfu/100 mL	Flushed	11.0.00
	12-Oct-20	Coliform	1		watermain.	11-Oct-20
L	l		1	1		

					Resampled.	
					Results	
					Acceptable	
152547				cfu/100 mL	Flushed	
132347		Total			watermain.	
	12-Oct-20	Coliform	1		Resampled.Result	13-Oct-20
		Comoni			s Acceptable	
152579				Result in 100	Flushed	
132379				mL sample	watermain.	
	15-Oct-20	Total	Present	mil sample	Resampled.	15-Oct-20
	15-001-20	Coliform	1 Tesent		Results	15-001-20
					Acceptable	
152744				Result in 100	Flushed	
132744				mL sample	watermain.	
	29-Oct-20	Total	Present	mil sample	Resampled.	15-Oct-20
	27-001-20	Coliform	1 Tesent		Results	15-001-20
					Acceptable	
152781				cfu/100 mL	Flushed	
152701		Total			watermain.	
	01-Nov-20	Coliform	1		Resampled.Result	03-Nov-20
		Comonin			s Acceptable	
152782				cfu/100 mL	Flushed	
102/02		Total			watermain.	
	01-Nov-20	Coliform	1		Resampled.Result	03-Nov-20
		comoni			s Acceptable	
152948				Result in 100	Flushed	
	1 4 3 7 9 9	Total		mL sample	watermain.	
	14-Nov-20	Coliform	Present	1	Resampled.Result	16-Nov-20
					s Acceptable	
153279				Result in 100	Flushed	
	17 D 20	Total	Dur	mL sample	watermain.	10 D 20
	17-Dec-20	Coliform	Present	*	Resampled.Result	18-Dec-20
					s Acceptable	
153294				Result in 100	Flushed	
	10 Dec 20	Total	Dueneut	mL sample	watermain.	10 Dec 20
	19-Dec-20	Coliform	Present		Resampled.Result	19-Dec-20
					s Acceptable	
153089		Chlorine		mg/L	Analyzer	
		analyzer			inspected and	
	27-Nov-20	Total	> 3.0		calibrated.	27-Nov-20
		chlorine			Resampled.Result	
		residual			s Acceptable	

*NOTE: Sample analyzed by Membrane filtration and P/A.

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

	Number of Samples	Range of E.Coli Or Fecal Results (min.) - (max.) or P/A	Range of Total Coliform Results (min.) - (max.) or P/A	Number of HPC Samples	Range of HPC Results (min.) - (max.)
*Distribution	2942	2942A (100% A)	2942A (100% A)	2942	0 - 4831
Transmission	2230	2230A (100% A)	2230A (100% A)	2230	0 - 812
Main Work	1595	1594A (99.94% A)	1525A (95.61% A)	1595	0 - 7909
Resample and vicinity	432	429A (99.31% compliance) (0 - 11)	352A (81.48% compliance) (0 – 198)	416	0 - 1211

***NOTE**: "Distribution" includes samples submitted for Water Quality Inquiry as well as distribution samples.

Resample and vicinity bacti samples are processed by Membrane filtration technique. The rest of the bacti samples are processed using the Presence/Absence technique.

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

For Distribution

	Number of Grab Samples	Range of Results (min.) - (max.)
Turbidity	2905	<0.1 – 7.44 NTU
Chlorine	2955	<0.1 – 2.34 mg/L

For Transmission

	Number of Grab Samples	Range of Results (min.) - (max.)
Turbidity	2233	<0.1-2.07 NTU
Chlorine	2234	0.37 – 3.01 mg/L

For Main Work

	Number of Grab Samples	Range of Results (min.) - (max.)	
Turbidity	1596	0.09 – 3.63 NTU	
Chlorine	1596	0.76-2.20 mg/L	

For Resample/Vicinity

	Number of Grab Samples	Range of Results (min.) - (max.)	
Turbidity	420	0.09 - 0.96 NTU	
Chlorine	422	1.11-2.20 mg/L	

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
NONE	NONE	NONE	NONE	NONE

Summary of Inorganic parameters tested during this reporting period or the most recent sample results for Transmission samples.

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Sodium	Jan-Dec 2020	12.1 - 23.8	mg/L	Yes
Nitrite	Jan-Dec 2020	< 0.002 - 0.003	mg/L	No
Nitrate	Jan-Dec 2020	0.21 - 0.52	mg/L	No

Summary of Inorganic parameters tested during this reporting period or the most recent sample results for Distribution samples.

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Antimony	Jan – Dec 2020	0 - 0.0003	mg/L	No
Arsenic	Jan – Dec 2020	0.0006 - 0.0689	mg/L	Yes
Barium	Jan – Dec 2020	0.0224 - 0.134	mg/L	No
Boron	Jan – Dec 2020	0.0227 - 0.0283	mg/L	No
Cadmium	Jan – Dec 2020	0 - 0.0002	mg/L	No
Chromium	Jan – Dec 2020	0.0002 - 0.0032	mg/L	No
Nitrate	Jan-Dec 2020	0.40 - 0.41	mg/L	No
Nitrite	Jan-Dec 2020	< 0.002 - < 0.002	mg/L	No
Selenium	Jan – Dec 2020	0 - 0.0007	mg/L	No
Sodium	Jan-Dec 2020	13.5 - 13.9	mg/L	No
Uranium	Jan – Dec 2020	0.0004 - 0.0086	mg/L	No

Summary of Lead (Pb) testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Lead Results (min.) - (max.)	Unit of Measure	Number of Exceedances
*Plumbing	26	< 0.00005 - 0.00523	mg/L	None
Distribution	11	< 0.00005 - 0.000346	mg/L	None

*NOTE: Regulatory Relief was granted to eliminate sampling from May 2020 to December 2020 due to access limitations imposed by COVID-related health and safety concerns for residential and non-residential sampling locations

Summary of Organic parameters sampled during this reporting period or the most recent sample results for <u>DISTRIBUTION</u> samples

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Benzene	Jan-Dec 2020	0 - 0	μg/L	No

Carbon Tetrachloride	Jan-Dec 2020	0 - 0	μg/L	No
1,2-Dichlorobenzene	Jan-Dec 2020	0 - 0	μg/L	No
1,4-Dichlorobenzene	Jan-Dec 2020	0 - 0	μg/L	No
1,2-Dichloroethane	Jan-Dec 2020	0 - 0	μg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan-Dec 2020	0 - 0	μg/L	No
Dichloromethane	Jan-Dec 2020	0 - 0	μg/L	No
Monochlorobenzene	Jan-Dec 2020	0 - 0	μg/L	No
THM (NOTE: show latest annual	Jan-Dec 2020	12.5	µg/L	No
average)			/-	
Tetrachloroethylene	Jan-Dec 2020	0 - 0	μg/L	No
Trichloroethylene	Jan-Dec 2020	0 - 0	μg/L	No
Vinyl Chloride	Jan-Dec 2020	0 - 0	μg/L	No

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

Summary of Organic parameters sampled during this reporting period or the most recent sample results for TRANSMISSION (SUPPLY) samples.

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Benzene	Jan-Dec 2020	0 - 0	μg/L	No
Carbon Tetrachloride	Jan-Dec 2020	0 - 0	μg/L	No
1,2-Dichlorobenzene	Jan-Dec 2020	0 - 0	μg/L	No
1,4-Dichlorobenzene	Jan-Dec 2020	0 - 0	μg/L	No
1,2-Dichloroethane	Jan-Dec 2020	0 - 0	μg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan-Dec 2020	0 - 0	μg/L	No
Dichloromethane	Jan-Dec 2020	0 - 0	μg/L	No
Monochlorobenzene	Jan-Dec 2020	0 - 0	μg/L	No
THM (NOTE: show latest annual average)	Jan-Dec 2020	13.0	μg/L	No
Tetrachloroethylene	Jan-Dec 2020	0 - 0	μg/L	No
Trichloroethylene	Jan-Dec 2020	0 - 0	μg/L	No
Vinyl Chloride	Jan-Dec 2020	0 - 0	μg/L	No

NOTE: A result of zero indicates that the result obtained was below the method detection/reporting limit.

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
Arsenic	0.0689	mg/L	06-Jul-20
Arsenic	0.0476	mg/L	06-Jul-20

NOTE: The exceeding Arsenic values were attributed to a localized hydraulic disturbance in the system due to an unplanned Water Treatment Plant shutdown and is not reflective of normal distribution system water quality.

Drinking Water Systems Regulations

(PIBS 4435e01)