



DRINKING WATER SYSTEM



Annual
Report
2016



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, 2016 to December 31, 2016

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [<input checked="" type="checkbox"/>] No []</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [<input checked="" type="checkbox"/>] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <table border="1" style="width: 100%;"> <tr> <td>Metro Hall 55 John Street Toronto, Ontario M5V 3C6</td> </tr> </table>	Metro Hall 55 John Street Toronto, Ontario M5V 3C6	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <table border="1" style="width: 100%; height: 20px;"> <tr> <td> </td> </tr> </table> </p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <table border="1" style="width: 100%; height: 20px;"> <tr> <td> </td> </tr> </table> </p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>		
Metro Hall 55 John Street Toronto, Ontario M5V 3C6				

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 Toronto	260001929

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 [] No []

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

[] Public access/notice via the web
 [] Public access/notice via Government Office
 [] Public access/notice via a newspaper
 [] Public access/notice via Public Request
 [] Public access/notice via a Public Library
 [] Public access/notice via other method _____



Describe your Drinking-Water System

Toronto Water Supply System consists of four water treatment plants, 18 pumping stations, 10 major underground storage reservoirs, four elevated storage tanks and approximately 520 kilometers of trunk watermains and 5,525 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 410,000 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
 Sodium bisulphite
 Hydrofluosilicic acid
 Aqueous Ammonia
 Phosphoric Acid

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

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

Capital Projects - The following amounts relate to various projects during 2016 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.	Settling Basin Rehabilitation	Rehabilitation of settling basins and associated equipment. Rehabilitation of cone valves and filter sluice gates.	\$7,662,036

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 MOECC-SAC. "Corrective action date" is the date the location was resampled.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
NONE	NONE	NONE	NONE	NONE	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	365	0 - 7	0 - 30	361	0 - 210
Treated	1462	1462 A (100%A)	1462 A (100%A)	1462	0 - 635

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	0.03-0.10	NTU
Chlorine	8784	1.29-2.24	mg/L
*Fluoride (If the DWS provides fluoridation)	354 (plus continuous monitoring)	0.40 – 0.66	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 01-Dec 19, 2016	8.00	mg/L
	Total Chlorine (Residue Management)	Jan 01-Dec 31, 2016	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 2016	0.0002 – 0.0002	mg/L	No
Arsenic	Jan-Dec 2016	0.0007 – 0.0008	mg/L	No
Barium	Jan-Dec 2016	0.0219 – 0.0224	mg/L	No
Boron	Jan-Dec 2016	0.0233 – 0.0251	mg/L	No
Cadmium	Jan-Dec 2016	0 – 0	mg/L	No
Chromium	Jan-Dec 2016	0.0003 – 0.0005	mg/L	No
Lead	Jan-Dec 2016	0 – 0	mg/L	No
Mercury	Jan-Dec 2016	0 – 0	mg/L	No
Selenium	Jan-Dec 2016	0 – 0	mg/L	No
Sodium	Jan-Dec 2016	12.7 – 16.0	mg/L	No
Uranium	Jan-Dec 2016	0.0003 – 0.0003	mg/L	No
Nitrite	Jan-Dec 2016	0 – 0	mg/L	No
Nitrate	Jan-Dec 2016	0.24 – 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 2016	0 - 0	µg/L	No
Aldicarb			µg/L	
Aldrin + Dieldrin			µg/L	
Atrazine + N-dealkylated metabolites	Jan-Dec 2016	0.1050 - 0.1350	µg/L	No
Azinphos-methyl	Jan-Dec 2016	0 - 0	µg/L	No
Bendiocarb			µg/L	
Benzene	Jan-Dec 2016	0 - 0	µg/L	No
Benzo(a)pyrene	Jan-Dec 2016	0 - 0	µg/L	No
Bromoxynil	Jan-Dec 2016	0 - 0	µg/L	No
Carbaryl	Jan-Dec 2016	0 - 0	µg/L	No
Carbofuran	Jan-Dec 2016	0 - 0	µg/L	No
Carbon Tetrachloride	Jan-Dec 2016	0 - 0	µg/L	No
Chlordane (Total)			µg/L	
Chlorpyrifos	Jan-Dec 2016	0 - 0	µg/L	No
Cyanazine			µg/L	
Diazinon	Jan-Dec 2016	0 - 0	µg/L	No
Dicamba	Jan-Dec 2016	0 - 0	µg/L	No
1,2-Dichlorobenzene	Jan-Dec 2016	0 - 0	µg/L	No
1,4-Dichlorobenzene	Jan-Dec 2016	0 - 0	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites			µg/L	
1,2-Dichloroethane	Jan-Dec 2016	0 - 0	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan-Dec 2016	0 - 0	µg/L	No
Dichloromethane	Jan-Dec 2016	0 - 0	µg/L	No
2,4-Dichlorophenol	Jan-Dec 2016	0 - 0	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan-Dec 2016	0 - 0	µg/L	No
Diclofop-methyl	Jan-Dec 2016	0 - 0	µg/L	No
Dimethoate	Jan-Dec 2016	0 - 0	µg/L	No
Dinoseb			µg/L	
Diquat	Jan-Dec 2016	0 - 0	µg/L	No
Diuron	Jan-Dec 2016	0 - 0.0010	µg/L	No
Glyphosate	Jan-Dec 2016	0 - 0	µg/L	No
Heptachlor + Heptachlor Epoxide			µg/L	
Lindane (Total)			µg/L	
Malathion	Jan-Dec 2016	0 - 0	µg/L	No
Methoxychlor			µg/L	
Metolachlor	Jan-Dec 2016	0.0070 – 0.0076	µg/L	No



Metribuzin	Jan-Dec 2016	0 - 0	µg/L	No
Monochlorobenzene	Jan-Dec 2016	0 - 0	µg/L	No
Paraquat	Jan-Dec 2016	0 - 0	µg/L	No
Parathion			µg/L	
Pentachlorophenol	Jan-Dec 2016	0 - 0	µg/L	No
Phorate	Jan-Dec 2016	0 - 0	µg/L	No
Picloram	Jan-Dec 2016	0 - 0	µg/L	No
Polychlorinated Biphenyls (PCB)	Jan-Dec 2016	0 - 0	µg/L	No
Prometryne	Jan-Dec 2016	0 - 0	µg/L	No
Simazine	Jan-Dec 2016	0.0055 – 0.0067	µg/L	No
THM (NOTE: show latest annual average)	Jan-Dec 2016	12.2	µg/L	No
Temephos			µg/L	
Terbufos	Jan-Dec 2016	0 - 0	µg/L	No
Tetrachloroethylene	Jan-Dec 2016	0 - 0	µg/L	No
2,3,4,6-Tetrachlorophenol	Jan-Dec 2016	0 - 0	µg/L	No
Triallate	Jan-Dec 2016	0 - 0	µg/L	No
Trichloroethylene	Jan-Dec 2016	0 - 0	µg/L	No
2,4,6-Trichlorophenol	Jan-Dec 2016	0 - 0	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)			µg/L	
Trifluralin	Jan-Dec 2016	0 - 0	µg/L	No
Vinyl Chloride	Jan-Dec 2016	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:	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, 2016 to December 31, 2016

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [<input checked="" type="checkbox"/>] No []</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [<input checked="" type="checkbox"/>] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <table border="1" style="width: 100%;"> <tr> <td>Metro Hall 55 John Street Toronto, Ontario M5V 3C6</td> </tr> </table>	Metro Hall 55 John Street Toronto, Ontario M5V 3C6	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <table border="1" style="width: 100%; height: 20px;"> <tr> <td> </td> </tr> </table> </p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <table border="1" style="width: 100%; height: 20px;"> <tr> <td> </td> </tr> </table> </p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>		
Metro Hall 55 John Street Toronto, Ontario M5V 3C6				

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 Toronto	260001929

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 [] No []

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

Public access/notice via the web
 Public access/notice via Government Office
 Public access/notice via a newspaper
 Public access/notice via Public Request
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 Public access/notice via other method _____



Describe your Drinking-Water System

Toronto Water Supply System consists of four water treatment plants, 18 pumping stations, 10 major underground storage reservoirs, four elevated storage tanks and approximately 520 kilometers of trunk watermains and 5,525 kilometers of distribution watermains.

The Island Water Treatment Plant is a direct filtration water treatment plant, has a rated capacity of 410,000 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)
 Phosphoric Acid

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

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

Capital Projects - The following amounts relate to various projects during 2016 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 Residuals Management System	\$ 9,800,000
2.	Design & construction of Cross Connection Upgrades	\$ 715,000
3.	Conceptual design of UV Disinfection	\$ 676,000
4.	Design & construction of Admin Building & Marine Yard Rehabilitation	\$ 293,000
5.	Design & construction of Bumpless Transfer	\$ 218,000



6.	Design of Ammonia & Fluoride System Upgrades	\$ 181,000
7.	Design & construction of Server Relocation and Upgrades	\$157,000
8.	Design & construction of Filter Air Scour System	\$ 156,000
9.	Raw Water Pump # 4 Rehabilitation	\$ 64,000
10.	Design of Flume Relining and Machine Shop Floor Structural Upgrades	\$ 36,000
11.	Design of Plantwide HVAC Upgrades	\$ 14,000
12.	Design & construction of Chemical Systems Electrical Feed Distribution	\$ 11,000

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 MOECC-SAC. "Corrective action date" is the date the location was resampled.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
18-Oct-16	Total Coliform	Presence	Result in 100 mL sample	Resampled. Result acceptable.	18-Oct-16
22-Dec-16	Chlorine Residual	0.11	mg/L	Brief over dechlorination of previously treated water for 4 minutes. Disinfection not compromised.	22-Dec-16

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	315	0 - 130	0 - 130	311	0 - 180
Treated	1270	1270 A (100%A)	1269 A (99.9%A)	1269	0 - 27

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	7595	0.03 – 0.08	NTU
Chlorine	7595	1.30 – 2.36	mg/L
*Fluoride (If the DWS provides fluoridation)	308 (plus continuous monitoring)	0.32 – 0.70	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, 2015 - Dec. 31, 2015	13.9	mg/L
	Total Chlorine (Residue Management)	Jan. 1, 2015 - Dec. 31, 2015	0.001	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 2016	0.0002 – 0.0003	mg/L	No
Arsenic	Jan – Dec 2016	0.0008 – 0.0011	mg/L	No
Barium	Jan – Dec 2016	0.0227 – 0.0239	mg/L	No
Boron	Jan – Dec 2016	0.0229 – 0.0250	mg/L	No
Cadmium	Jan – Dec 2016	0 – 0.000013	mg/L	No
Chromium	Jan – Dec 2016	0.0002 – 0.0004	mg/L	No
Lead	Jan – Dec 2016	0 – 0	mg/L	No
Mercury	Jan – Dec 2016	0 – 0	mg/L	No
Selenium	Jan – Dec 2016	0 – 0	mg/L	No
Sodium	Jan – Dec 2016	12.4 – 16.4	mg/L	No
Uranium	Jan – Dec 2016	0.0003 – 0.0004	mg/L	No
Nitrite	Jan – Dec 2016	0 – 0.0020	mg/L	No
Nitrate	Jan – Dec 2016	0.37 – 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 2016	0 - 0	µg/L	No
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites	Jan – Dec 2016	0.1080 – 0.1390	µg/L	No
Azinphos-methyl	Jan – Dec 2016	0 - 0	µg/L	No
Bendiocarb				
Benzene	Jan – Dec 2016	0 - 0	µg/L	No
Benzo(a)pyrene	Jan – Dec 2016	0 - 0	µg/L	No
Bromoxynil	Jan – Dec 2016	0 - 0	µg/L	No
Carbaryl	Jan – Dec 2016	0 - 0	µg/L	No
Carbofuran	Jan – Dec 2016	0 - 0	µg/L	No
Carbon Tetrachloride	Jan – Dec 2016	0 - 0	µg/L	No
Chlordane (Total)				
Chlorpyrifos	Jan – Dec 2016	0 - 0	µg/L	No
Cyanazine				
Diazinon	Jan – Dec 2016	0 - 0	µg/L	No
Dicamba	Jan – Dec 2016	0 - 0	µg/L	No
1,2-Dichlorobenzene	Jan – Dec 2016	0 - 0	µg/L	No
1,4-Dichlorobenzene	Jan – Dec 2016	0 - 0	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane	Jan – Dec 2016	0 - 0	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan – Dec 2016	0 - 0	µg/L	No
Dichloromethane	Jan – Dec 2016	0 - 0	µg/L	No
2,4 Dichlorophenol	Jan – Dec 2016	0 - 0	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan – Dec 2016	0 - 0	µg/L	No
Diclofop-methyl	Jan – Dec 2016	0 - 0	µg/L	No

Dimethoate	Jan – Dec 2016	0 - 0	µg/L	No
Dinoseb			µg/L	
Diquat	Jan – Dec 2016	0	µg/L	No
Diuron	Jan – Dec 2016	0 - 0	µg/L	No
Glyphosate	Jan – Dec 2016	0	µg/L	No
Heptachlor + Heptachlor Epoxide				
Lindane (Total)				
Malathion	Jan – Dec 2016	0 - 0	µg/L	No
Methoxychlor				
Metolachlor	Jan – Dec 2016	0.0068 – 0.0083	µg/L	No
Metribuzin	Jan – Dec 2016	0 - 0	µg/L	No
Monochlorobenzene	Jan – Dec 2016	0 - 0	µg/L	No
Paraquat	Jan – Dec 2016	0	µg/L	No
Parathion				
Pentachlorophenol	Jan – Dec 2016	0 - 0	µg/L	No
Phorate	Jan – Dec 2016	0 - 0	µg/L	No
Picloram	Jan – Dec 2016	0 - 0	µg/L	No
Polychlorinated Biphenyls (PCB)	Jan – Dec 2016	0 - 0	µg/L	No
Prometryne	Jan – Dec 2016	0 - 0	µg/L	No
Simazine	Jan – Dec 2016	0.0062 – 0.0073	µg/L	No
THM (NOTE: show latest annual average)	Jan – Dec 2016	11.1	µg/L	No
Temephos				
Terbufos	Jan – Dec 2016	0 - 0	µg/L	No
Tetrachloroethylene	Jan – Dec 2016	0 - 0	µg/L	No
2,3,4,6-Tetrachlorophenol	Jan – Dec 2016	0 - 0	µg/L	No
Triallate	Jan – Dec 2016	0 - 0	µg/L	No
Trichloroethylene	Jan – Dec 2016	0 - 0	µg/L	No
2,4,6-Trichlorophenol	Jan – Dec 2016	0 - 0	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin	Jan – Dec 2016	0 - 0	µg/L	No
Vinyl Chloride	Jan – Dec 2016	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, 2016 to December 31, 2016

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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 410,000 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?

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- Repair required equipment
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Please provide a brief description and a breakdown of monetary expenses incurred

Capital Projects - The following amounts relate to various projects during 2016 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.	Voice Communication Upgrade	Telephone and paging system	\$1.4 Million
2.	Filters Upgrade	Filter rehabilitation project	\$13.6 Million

3.	RMF Optimization	Residue management facility upgrades	\$80,000
4.	Miscellaneous Projects	Various plant equipment rehabilitation	\$220,000

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 MOECC-SAC. "Corrective action date" is the date the location was resampled.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
09-Mar-16	Total Coliform	Presence	Result in 100 mL sample	Resampled. Results Acceptable.	09-Mar-16

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	266	0 - 29	0 - 68	261	0 - 667
Treated	1461	1461 A (100%A)	1460 A (99.9%A)	1461	0 - 912

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	0.01 - 0.12	NTU
Chlorine	8784	1.46 - 2.18	mg/L
*Fluoride (If the DWS provides fluoridation)	304	0.40 - 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	Unit of Measure
Not Applicable	N/A	N/A	N/A	N/A

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 2016	0.0002 – 0.0003	mg/L	No
Arsenic	Jan-Dec 2016	0.0007 – 0.0009	mg/L	No
Barium	Jan-Dec 2016	0.0211 – 0.0228	mg/L	No
Boron	Jan-Dec 2016	0.0238 – 0.0252	mg/L	No
Cadmium	Jan-Dec 2016	0 – 0	mg/L	No
Chromium	Jan-Dec 2016	0.0002 – 0.0004	mg/L	No
Lead	Jan-Dec 2016	0 – 0	mg/L	No
Mercury	Jan-Dec 2016	0 – 0	mg/L	No
Selenium	Jan-Dec 2016	0 – 0	mg/L	No
Sodium	Jan-Dec 2016	12.7 – 22.4	mg/L	No
Uranium	Jan-Dec 2016	0.0003 – 0.0003	mg/L	No
Nitrite	Jan-Dec 2016	0 – 0.0020	mg/L	No
Nitrate	Jan-Dec 2016	0.26 – 0.80	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 2016	0 - 0	µg/L	No
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites	Jan-Dec 2016	0.1050 – 0.1390	µg/L	No
Azinphos-methyl	Jan-Dec 2016	0 - 0	µg/L	No
Bendiocarb				



Benzene	Jan-Dec 2016	0 - 0	µg/L	No
Benzo(a)pyrene	Jan-Dec 2016	0 - 0	µg/L	No
Bromoxynil	Jan-Dec 2016	0 - 0	µg/L	No
Carbaryl	Jan-Dec 2016	0 - 0	µg/L	No
Carbofuran	Jan-Dec 2016	0 - 0	µg/L	No
Carbon Tetrachloride	Jan-Dec 2016	0 - 0	µg/L	No
Chlordane (Total)				
Chlorpyrifos	Jan-Dec 2016	0 - 0	µg/L	No
Cyanazine				
Diazinon	Jan-Dec 2016	0 - 0	µg/L	No
Dicamba	Jan-Dec 2016	0 - 0	µg/L	No
1,2-Dichlorobenzene	Jan-Dec 2016	0 - 0	µg/L	No
1,4-Dichlorobenzene	Jan-Dec 2016	0 - 0	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane	Jan-Dec 2016	0 - 0	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan-Dec 2016	0 - 0	µg/L	No
Dichloromethane	Jan-Dec 2016	0 - 0	µg/L	No
2-4 Dichlorophenol	Jan-Dec 2016	0 - 0	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan-Dec 2016	0 - 0	µg/L	No
Diclofop-methyl	Jan-Dec 2016	0 - 0	µg/L	No
Dimethoate	Jan-Dec 2016	0 - 0	µg/L	No
Dinoseb			µg/L	
Diquat	Jan-Dec 2016	0	µg/L	No
Diuron	Jan-Dec 2016	0 - 0	µg/L	No
Glyphosate	Jan-Dec 2016	0	µg/L	No
Heptachlor + Heptachlor Epoxide				
Lindane (Total)				
Malathion	Jan-Dec 2016	0 - 0	µg/L	No
Methoxychlor			µg/L	
Metolachlor	Jan-Dec 2016	0.0070 – 0.0086	µg/L	No
Metribuzin	Jan-Dec 2016	0 - 0	µg/L	No
Monochlorobenzene	Jan-Dec 2016	0 - 0	µg/L	No
Paraquat	Jan-Dec 2016	0	µg/L	No
Parathion				
Pentachlorophenol	Jan-Dec 2016	0 - 0	µg/L	No
Phorate	Jan-Dec 2016	0 - 0	µg/L	No
Picloram	Jan-Dec 2016	0 - 0	µg/L	No
Polychlorinated Biphenyls (PCB)	Jan-Dec 2016	0 - 0	µg/L	No
Prometryne	Jan-Dec 2016	0 - 0	µg/L	No
Simazine	Jan-Dec 2016	0.0054 – 0.0069	µg/L	No



THM (NOTE: show latest annual average)	Jan-Dec 2016	13.0	µg/L	No
Temephos				
Terbufos	Jan-Dec 2016	0 - 0	µg/L	No
Tetrachloroethylene	Jan-Dec 2016	0 - 0	µg/L	No
2,3,4,6-Tetrachlorophenol	Jan-Dec 2016	0 - 0	µg/L	No
Triallate	Jan-Dec 2016	0 - 0	µg/L	No
Trichloroethylene	Jan-Dec 2016	0 - 0	µg/L	No
2,4,6-Trichlorophenol	Jan-Dec 2016	0 - 0	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin	Jan-Dec 2016	0 - 0	µg/L	No
Vinyl Chloride	Jan-Dec 2016	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, 2016 to December 31, 2016

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [X] No []</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <table border="1" style="width: 100%;"> <tr> <td>Metro Hall 55 John Street Toronto, Ontario M5V 3C6</td> </tr> </table>	Metro Hall 55 John Street Toronto, Ontario M5V 3C6	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <table border="1" style="width: 100%;"> <tr> <td> </td> </tr> </table> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to:</p> <table border="1" style="width: 100%;"> <tr> <td> </td> </tr> </table> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>		
Metro Hall 55 John Street Toronto, Ontario M5V 3C6				

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 Toronto	260001929

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, 10 major underground storage reservoirs, four elevated storage tanks and approximately 520 kilometers of trunk watermains and 5,525 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 410,000 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 - SternPAC)
 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 (Magnafloc LT 7996)

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

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

Capital Projects - The following amounts relate to various projects during 2016 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.	Facilities and Process Upgrades	\$ 311,450
2.	Replacement of MCC	\$ 1,018,000

3.	Electrical Grounding System	\$ 5,000
4.	Treated Water Pump Replacement	\$ 422,000
5.	Access Road Paving	\$ 22,000
6.	Building, Fire, Heating and Lighting Upgrades	\$ 16,000

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 MOECC-SAC. "Corrective action date" is the date the location was resampled.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
NONE	NONE	NONE	NONE	NONE	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	363	0 - 4	0 - 9	359	0 - 94
Treated	1450	1449 A (100%A)	1450 A (100%A)	1450	0 - 20

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	0.020 – 0.174	NTU
Chlorine	8784	1.20-2.81	mg/L
*Fluoride (If the DWS provides fluoridation)	331 (plus continuous monitoring)	0.40 -0.77	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, 2016 - Dec. 31, 2016	4.08	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 2016	0.0002 – 0.0003	mg/L	No
Arsenic	Jan – Dec 2016	0.0008 – 0.0010	mg/L	No
Barium	Jan – Dec 2016	0.0183 – 0.0238	mg/L	No
Boron	Jan – Dec 2016	0.0207 – 0.0245	mg/L	No
Cadmium	Jan – Dec 2016	0 – 0	mg/L	No
Chromium	Jan – Dec 2016	0.0003 – 0.0004	mg/L	No
Lead	Jan – Dec 2016	0 – 0	mg/L	No
Mercury	Jan – Dec 2016	0 – 0	mg/L	No
Selenium	Jan – Dec 2016	0 – 0	mg/L	No
Sodium	Jan – Dec 2016	12.8 – 16.5	mg/L	No
Uranium	Jan – Dec 2016	0.0003 – 0.0004	mg/L	No
Nitrite	Jan – Dec 2016	0 – 0.0070	mg/L	No
Nitrate	Jan – Dec 2016	0.29 – 0.50	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 2016	0 - 0	µg/L	No
Aldicarb			µg/L	
Aldrin + Dieldrin			µg/L	
Atrazine + N-dealkylated metabolites	Jan–Dec 2016	0.0510– 0.0610	µg/L	No
Azinphos-methyl	Jan–Dec 2016	0 - 0	µg/L	No
Bendiocarb			µg/L	
Benzene	Jan–Dec 2016	0 - 0	µg/L	No
Benzo(a)pyrene	Jan–Dec 2016	0 - 0	µg/L	No
Bromoxynil	Jan–Dec 2016	0 - 0	µg/L	No
Carbaryl	Jan–Dec 2016	0 - 0	µg/L	No
Carbofuran	Jan–Dec 2016	0 - 0	µg/L	No
Carbon Tetrachloride	Jan–Dec 2016	0 - 0	µg/L	No
Chlordane (Total)			µg/L	
Chlorpyrifos	Jan–Dec 2016	0 - 0	µg/L	No
Cyanazine			µg/L	
Diazinon	Jan–Dec 2016	0 - 0	µg/L	No
Dicamba	Jan–Dec 2016	0 - 0	µg/L	No
1,2-Dichlorobenzene	Jan–Dec 2016	0 - 0	µg/L	No
1,4-Dichlorobenzene	Jan–Dec 2016	0 - 0	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites			µg/L	
1,2-Dichloroethane	Jan–Dec 2016	0 - 0	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan–Dec 2016	0 - 0	µg/L	No
Dichloromethane	Jan–Dec 2016	0 - 0	µg/L	No
2-4 Dichlorophenol	Jan–Dec 2016	0 - 0	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan–Dec 2016	0 - 0	µg/L	No
Diclofop-methyl	Jan–Dec 2016	0 - 0	µg/L	No
Dimethoate	Jan–Dec 2016	0 - 0	µg/L	No
Dinoseb			µg/L	
Diquat	Jan–Dec 2016	0	µg/L	No
Diuron	Jan–Dec 2016	0 - 0	µg/L	No
Glyphosate	Jan–Dec 2016	0	µg/L	No
Heptachlor + Heptachlor Epoxide			µg/L	
Lindane (Total)			µg/L	
Malathion	Jan–Dec 2016	0 - 0	µg/L	No
Methoxychlor			µg/L	
Metolachlor	Jan–Dec 2016	0.0023 – 0.0035	µg/L	No

Metribuzin	Jan–Dec 2016	0 - 0	µg/L	No
Monochlorobenzene	Jan–Dec 2016	0 - 0	µg/L	No
Paraquat	Jan–Dec 2016	0	µg/L	No
Parathion			µg/L	
Pentachlorophenol	Jan–Dec 2016	0 - 0	µg/L	No
Phorate	Jan–Dec 2016	0 - 0	µg/L	No
Picloram	Jan–Dec 2016	0 - 0	µg/L	No
Polychlorinated Biphenyls(PCB)	Jan–Dec 2016	0 - 0	µg/L	No
Prometryne	Jan–Dec 2016	0 - 0	µg/L	No
Simazine	Jan–Dec 2016	0.0013 – 0.0022	µg/L	No
THM (NOTE: show latest annual average)	Jan–Dec 2016	5.1	µg/L	No
Temephos			µg/L	
Terbufos	Jan–Dec 2016	0 - 0	µg/L	No
Tetrachloroethylene	Jan–Dec 2016	0 - 0	µg/L	No
2,3,4,6-Tetrachlorophenol	Jan–Dec 2016	0 - 0	µg/L	No
Triallate	Jan–Dec 2016	0 - 0	µg/L	No
Trichloroethylene	Jan–Dec 2016	0 - 0	µg/L	No
2,4,6-Trichlorophenol	Jan–Dec 2016	0 - 0	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)			µg/L	
Trifluralin	Jan–Dec 2016	0 - 0	µg/L	No
Vinyl Chloride	Jan–Dec 2016	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, 2016 to December 31, 2016

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [X] No []</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <table border="1" style="width: 100%;"> <tr> <td>Metro Hall 55 John Street Toronto, Ontario M5V 3C6</td> </tr> </table>	Metro Hall 55 John Street Toronto, Ontario M5V 3C6	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <table border="1" style="width: 100%; height: 20px;"> <tr> <td></td> </tr> </table> </p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <table border="1" style="width: 100%; height: 20px;"> <tr> <td></td> </tr> </table> </p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>		
Metro Hall 55 John Street Toronto, Ontario M5V 3C6				

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 Toronto	260001929

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, 10 major underground storage reservoirs, four elevated storage tanks and approximately 520 kilometers of trunk watermains and 5,525 kilometers of distribution watermains.

Working from eight facilities across the city, District Operations staff inspects, operate and maintain the existing water distribution and wastewater collection systems as well as stormwater management facilities.

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 410,000 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?

- Install required equipment
- Repair required equipment
- 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 2016 and do not represent the total project costs. These numbers do not include normal operating and maintenance costs.

District Operations (Distribution):

Watermain Replacement	\$ 71 million
Water Service Replacement	\$ 32 million
Watermain Rehabilitation	\$ 61 million

Water Supply:

Cast Iron Trunk Main Replacement	\$ 11 million
Transmission Facility Rehabilitation	\$ 16 million (Pumping Stations, Reservoirs)
Transmission Main Rehabilitation	\$ 0.3 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 MOECC-SAC. "Corrective action date" is the date the location was resampled.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
22-Jan-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	22-Jan-16
27-Jan-16	E. Coli / Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	27-Jan-16
30-Jan-16	E. Coli / Total Coliform	EC=3, TC=4	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	30-Jan-16
2-Feb-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	3-Feb-16
20-Feb-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	20-Feb-16
26-Feb-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	26-Feb-16
2-Mar-16	E. Coli / Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	2-Mar-16
2-Mar-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	3-Mar-16
17-Mar-16	Turbidity	>5.0	NTU	Flushed and Resampled. Results Acceptable	17-Mar-16
5-Apr-16	Total Chlorine – analyzer reading	<0.25	mg/L	Electrical problem fixed and analyzer calibrated. Grab sample results acceptable.	5-Apr-16
15-Apr-16	Total Chlorine – analyzer reading	>3.0	mg/L	Reservoir level restored and analyzer calibrated. Grab sample results acceptable.	15-Apr-16
21-May-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	21-May-16
27-May-16	Total Chlorine – analyzer reading	<0.25	mg/L	Electrical problem fixed and analyzer calibrated. Grab sample results acceptable.	28-May-16
29-May-16	Total Chlorine – analyzer reading	>3.0	mg/L	Reservoir level restored and analyzer calibrated. Grab sample results acceptable.	30-May-16



Ontario Drinking-Water Systems Regulation O. Reg. 170/03

17-Jun-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	17-Jun-16
20-Jun-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	23-Jun-16
20-Jun-16	E. Coli / Total Coliform	EC=1, TC=1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	20-Jun-16
22-Jun-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	23-Jun-16
24-Jun-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	24-Jun-16
25-Jun-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled.	26-Jun-16
28-Jun-16	Total Coliform	40	cfu per 100 mL	Flushed watermain and resampled.	29-Jun-16
28-Jun-16	Total Coliform	60	cfu per 100 mL	Flushed watermain and resampled.	29-Jun-16
29-Jun-16	Total Coliform	100	cfu per 100 mL	Flushed watermain and resampled.	30-Jun-16
30-Jun-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	30-Jun-16
01-Jul-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled	02-Jul-16
02-Jul-16	Total Coliform	48	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	02-Jul-16
03-Jul-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled.	04-Jul-16
03-Jul-16	Total Coliform	200	cfu per 100 mL	Flushed watermain and resampled.	04-Jul-16
06-Jul-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled	06-Jul-16
06-Jul-16	Total Coliform	74	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	06-Jul-16
07-Jul-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	07-Jul-16
08-Jul-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	08-Jul-16
09-Jul-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	11-Jul-16
16-Jul-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	18-Jul-16
28-Jul-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	28-Jul-16
28-Jul-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	28-Jul-16



31-Jul-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	31-Jul-16
04-Aug-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	04-Aug-16
05-Aug-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	05-Aug-16
05-Aug-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	05-Aug-16
06-Aug-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	08-Aug-16
06-Aug-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	06-Aug-16
10-Aug-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	10-Aug-16
19-Aug-16	E. Coli / Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	19-Aug-16
20-Aug-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	21-Aug-16
23-Aug-16	E. Coli / Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	23-Aug-16
26-Aug-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	26-Aug-16
27-Aug-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	28-Aug-16
30-Aug-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	31-Aug-16
2-Sep-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled.	2-Sep-16
4-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled.	3-Sep-16
4-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled.	3-Sep-16
4-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled.	3-Sep-16



5-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled.	5-Sep-16
5-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled.	5-Sep-16
5-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled.	5-Sep-16
7-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled.	7-Sep-16
7-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled.	7-Sep-16
7-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled.	7-Sep-16
7-Sep-16	E. Coli / Total Coliform	NDOGT	Result in 100 mL sample	Flushed watermain and resampled.	8-Sep-16
8-Sep-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	8-Sep-16
8-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	8-Sep-16
8-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	8-Sep-16
8-Sep-16	E. Coli / Total Coliform	NDOGN	Result in 100 mL sample	Flushed watermain and resampled.	9-Sep-16
8-Sep-16	E. Coli / Total Coliform	NDOGT	Result in 100 mL sample	Flushed watermain and resampled.	9-Sep-16
10-Sep-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	10-Sep-16
10-Sep-16	E. Coli / Total Coliform	NDOGT	Result in 100 mL sample	Flushed watermain and resampled.	10-Sep-16
10-Sep-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	10-Sep-16
12-Sep-16	E. Coli / Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled.	12-Sep-16



Ontario Drinking-Water Systems Regulation O. Reg. 170/03

12-Sep-16	E. Coli / Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled.	12-Sep-16
14-Sep-16	E. Coli / Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled.	13-Sep-16
14-Sep-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	14-Sep-16
15-Sep-16	E. Coli / Total Coliform	6	cfu per 100 mL	Flushed watermain and resampled.	20-Sep-16
15-Sep-16	E. Coli / Total Coliform	12	cfu per 100 mL	Location isolated Flushed watermain and resampled. Results Acceptable.	20-Sep-16
16-Sep-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	16-Sep-16
18-Sep-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled.	19-Sep-16
21-Sep-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled.	20-Sep-16
22-Sep-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled.	22-Sep-16
22-Sep-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled.	23-Sep-16
22-Sep-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled.	23-Sep-16
24-Sep-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled.	25-Sep-16
24-Sep-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled.	25-Sep-16
24-Sep-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	25-Sep-16
25-Sep-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled.	25-Sep-16
25-Sep-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled.	25-Sep-16
25-Sep-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	26-Sep-16
27-Sep-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	3-Oct-16
27-Sep-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	3-Oct-16



27-Sep-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	3-Oct-16
27-Sep-16	Total Coliform	4	cfu per 100 mL	Flushed watermain and resampled.	3-Oct-16
1-Oct-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	1-Oct-16
2-Oct-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled	3-Oct-16
3-Oct-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	3-Oct-16
3-Oct-16	E.coli / Total Coliform	EC = 8 TC =24	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	3-Oct-16
4-Oct-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled.	5-Oct-16
4-Oct-16	Total Coliform	18	cfu per 100 mL	Flushed watermain and resampled.	5-Oct-16
6-Oct-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	6-Oct-16
7-Oct-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	7-Oct-16
7-Oct-16	Total Coliform	28	cfu per 100 mL	Flushed watermain and resampled.	6-Oct-16
7-Oct-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled.	7-Oct-16
7-Oct-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled.	7-Oct-16
7-Oct-16	Total Coliform	11	cfu per 100 mL	Flushed watermain and resampled.	7-Oct-16
8-Oct-16	Total Coliform	12	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	9-Oct-16
8-Oct-16	Total Coliform	200	cfu per 100 mL	Flushed watermain and resampled.	7-Oct-16
8-Oct-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled.	7-Oct-16
9-Oct-16	Total Coliform	114	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	9-Oct-16
9-Oct-16	Total Coliform	4	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	9-Oct-16
9-Oct-16	Total Coliform	36	cfu per 100 mL	Flushed watermain and resampled.	9-Oct-16
9-Oct-16	Total Coliform	6	cfu per 100 mL	Flushed watermain and resampled.	9-Oct-16



9-Oct-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	9-Oct-16
11-Oct-16	Total Coliform	44	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	11-Oct-16
11-Oct-16	Total Coliform	23	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	11-Oct-16
12-Oct-16	Total Chlorine	<0.25	mg/L	Flushed watermain and resampled. Results Acceptable.	12-Oct-16
13-Oct-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled.	13-Oct-16
13-Oct-16	Total Coliform	5	cfu per 100 mL	Flushed watermain and resampled.	13-Oct-16
14-Oct-16	Total Chlorine	<0.25	mg/L	Recycle water and Resample	14-Oct-16
15-Oct-16	Total Chlorine	<0.25	mg/L	Reservoir isolated	15-Oct-16
15-Oct-16	Total Coliform	19	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	16-Oct-16
15-Oct-16	E.coli / Total Coliform	NDOGT	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	16-Oct-16
15-Oct-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable.	16-Oct-16
16-Oct-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled.	17-Oct-16
19-Oct-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	19-Oct-16
19-Oct-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	19-Oct-16
19-Oct-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	19-Oct-16
19-Oct-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled.	19-Oct-16
19-Oct-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled.	19-Oct-16
21-Oct-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled	21-Oct-16
22-Oct-16	Total Coliform	5	cfu per 100 mL	Flushed watermain and resampled.	22-Oct-16
24-Oct-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	24-Oct-16
24-Oct-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled.	24-Oct-16
25-Oct-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	26-Oct-16
25-Oct-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	26-Oct-16



26-Oct-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	27-Oct-16
26-Oct-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	26-Oct-16
28-Oct-16	Sodium	>20	mg/L	Resampled. Results Acceptable	28-Oct-16
3-Nov-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	3-Nov-16
4-Nov-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	4-Nov-16
10-Nov-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	10-Nov-16
10-Nov-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	10-Nov-16
14-Nov-16	Total Coliform	5	cfu per 100 mL	Flushed watermain and resampled.	14-Nov-16
14-Nov-16	Total Coliform	6	cfu per 100 mL	Flushed watermain and resampled.	14-Nov-16
16-Nov-16	Total Coliform	3	cfu per 100 mL	Flushed watermain and resampled.	15-Nov-16
16-Nov-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	17-Nov-16
16-Nov-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled.	15-Nov-16
16-Nov-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled.	15-Nov-16
18-Nov-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	18-Nov-16
18-Nov-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	17-Nov-16
18-Nov-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	18-Nov-16
20-Nov-16	Total Coliform	19	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	21-Nov-16
21-Nov-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable	21-Nov-16
23-Nov-16	Total Chlorine	< 0.25	mg/L	Flushed watermain and resampled. Results Acceptable	24-Nov-16
23-Nov-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled.	23-Nov-16
24-Nov-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	24-Nov-16
25-Nov-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled.	25-Nov-16
25-Nov-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled.	25-Nov-16
29-Nov-16	Total Coliform	4	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	29-Nov-16
29-Nov-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	29-Nov-16



Ontario Drinking-Water Systems Regulation O. Reg. 170/03

29-Nov-16	Total Coliform	2	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	29-Nov-16
01-Dec-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	01-Dec-16
03-Dec-16	E.coli / Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	03-Dec-16
04-Dec-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	05-Dec-16
04-Dec-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled.	05-Dec-16
06-Dec-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	06-Dec-16
07-Dec-16	Total Coliform	21	cfu per 100 mL	Flushed watermain and resampled Results Acceptable	07-Dec-16
07-Dec-16	Total Coliform	10	cfu per 100 mL	Flushed watermain and resampled.	07-Dec-16
09-Dec-16	Total Coliform	1	cfu per 100 mL	Flushed watermain and resampled Results Acceptable	09-Dec-16
11-Dec-16	Total Coliform	25	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	11-Dec-16
11-Dec-16	Total Coliform	27	cfu per 100 mL	Flushed watermain and resampled. Results Acceptable	11-Dec-16
22-Dec-16	Total Coliform	Presence	Result in 100 mL sample	Flushed watermain and resampled. Results Acceptable.	22-Dec-16

NOTE: Result of **NDOGT** means "No Data – Overgrown – Target identified"

Result of **NDOGN** means "No Data – Overgrown – No Target identified"

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	4205	4203A (99.95% A)	4194A (99.74% A)	4205	0 - 4200
Transmission	1090	1090A (100% A)	1090A (100% A)	1090	0 - 1900
Main Work	1314	1311A (99.77% A)	1270A (96.65% A)	1314	0 - 3990
Resample and vicinity	634	18A (100% A) 592(96.1% Compliance) (0) – (12) 4 NDOGT 13 NDOGN	18A (100% A) 514 (83.4% Compliance) (0) – (200) 4 NDOGT 13 NDOGN	628	0 - >5700

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

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

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

For Distribution

	Number of Grab Samples	Range of Results (min.) - (max.)
Turbidity	4167	<0.1 – 4.23 NTU
Chlorine	4210	<0.10 – 2.14 mg/L

For Transmission

	Number of Grab Samples	Range of Results (min.) - (max.)
Turbidity	1099	<0.1 – 5.03 NTU
Chlorine	1233	<0.1 – 3.01 mg/L

For Main Work

	Number of Grab Samples	Range of Results (min.) - (max.)
Turbidity	1314	0.10 – 3.46 NTU
Chlorine	1333	0.58 – 2.02 mg/L

For Resample/Vicinity

	Number of Grab Samples	Range of Results (min.) - (max.)
Turbidity	653	<0.1 – 1.71 NTU
Chlorine	658	0.24 – 1.97 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
Antimony				
Arsenic				
Barium				
Boron				
Cadmium				
Chromium				
*Lead				
Mercury				
Selenium				
Sodium	Jan-Dec 2016	12.3 – 20.4	mg/L	Yes – reported to MOECC-SAC Oct 2016
Uranium				
Fluoride				
Nitrite	Jan-Dec 2016	0 – 0.1190	mg/L	No
Nitrate	Jan-Dec 2016	0.190 – 0.580	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	N/A	N/A	N/A	N/A
Distribution	46	<0.00005 – 0.00120	mg/L	None

***NOTE:** The City of Toronto has been granted Lead Regulatory Relief under Schedule D of the Municipal Drinking Water License.

Summary of Organic parameters sampled during this reporting period or the most recent sample results for **DISTRIBUTION** samples

Parameter	Sample Date	Result Value (min.) - (max.)	Unit of Measure	Exceedance
Alachlor				
Aldicarb				



Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				
Bendiocarb				
Benzene	Jan-Dec 2016	0 - 0	mg/L	No
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride	Jan-Dec 2016	0 - 0	mg/L	No
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				
Diazinon				
Dicamba				
1,2-Dichlorobenzene	Jan-Dec 2016	0 - 0	mg/L	No
1,4-Dichlorobenzene	Jan-Dec 2016	0 - 0	mg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane	Jan-Dec 2016	0 - 0	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan-Dec 2016	0 - 0	mg/L	No
Dichloromethane	Jan-Dec 2016	0 - 0	mg/L	No
2,4-Dichlorophenol				
2,4-Dichlorophenoxy acetic acid (2,4-D)				
Diclofop-methyl				
Dimethoate				
Dinoseb				
Diquat				
Diuron				
Glyphosate				
Heptachlor + Heptachlor Epoxide				
Lindane (Total)				
Malathion				
Methoxychlor				
Metolachlor				
Metribuzin				
Monochlorobenzene	Jan-Dec 2016	0 - 0	mg/L	No
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls (PCB)				
Prometryne				
Simazine				

THM (NOTE: show latest annual average)	Jan-Dec 2016	12.1	mg/L	No
Temephos				
Terbufos				
Tetrachloroethylene	Jan-Dec 2016	0 - 0	mg/L	No
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene	Jan-Dec 2016	0 - 0	mg/L	No
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin				
Vinyl Chloride	Jan-Dec 2016	0 - 0	mg/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
Alachlor				
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				
Bendiocarb				
Benzene	Jan-Dec 2016	0 - 0	mg/L	No
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride	Jan-Dec 2016	0 - 0	mg/L	No
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				
Diazinon				
Dicamba				
1,2-Dichlorobenzene	Jan-Dec 2016	0 - 0	mg/L	No
1,4-Dichlorobenzene	Jan-Dec 2016	0 - 0	mg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane	Jan-Dec 2016	0 - 0	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan-Dec 2016	0 - 0	mg/L	No
Dichloromethane	Jan-Dec 2016	0 - 0	mg/L	No
2-4 Dichlorophenol				



2,4-Dichlorophenoxy acetic acid (2,4-D)				
Diclofop-methyl				
Dimethoate				
Dinoseb				
Diquat				
Diuron				
Glyphosate				
Heptachlor + Heptachlor Epoxide				
Lindane (Total)				
Malathion				
Methoxychlor				
Metolachlor				
Metribuzin				
Monochlorobenzene	Jan-Dec 2016	0 - 0	mg/L	No
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls (PCB)				
Prometryne				
Simazine				
THM (NOTE: show latest annual average)	Jan-Dec 2016	12.8	mg/L	No
Temephos				
Terbufos				
Tetrachloroethylene	Jan-Dec 2016	0 - 0	mg/L	No
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene	Jan-Dec 2016	0 - 0	mg/L	No
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin				
Vinyl Chloride	Jan-Dec 2016	0 - 0	mg/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
NONE	NONE	NONE	NONE