



2010

DRINKING
WATER
SYSTEMS
ANNUAL REPORT



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	R. C. Harris WTP - 220002262
Drinking-Water System Name:	City of Toronto Drinking Water System
Drinking-Water System Owner:	City of Toronto
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2010 to December 31, 2010

<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> <div style="border: 1px solid black; padding: 5px;"> <p>Metro Hall, 18th Floor 55 John Street Toronto, ON M5V 3C6</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <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> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
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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.

- 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 filtration plants, 18 pumping stations, 10 major underground storage reservoirs, four elevated storage tanks and approximately 510 kilometers of trunk watermains and 5,015 kilometers of distribution watermains.

The R.C. Harris Water Treatment Plant is a conventional water treatment, has a capacity of 950 ML/d and is located at 2701 Queens Street East, Toronto.

The other three Toronto Water Treatment plants are as follows:

- R.L. Clark Water Treatment Plant (capacity 615 ML/d) and is located at 45 Twenty Third Street, Toronto
- F.J. Horgan Water Treatment Plant (capacity 570 ML/d) located at 201 Copperfield Road, Toronto
- Island Water Treatment Plant (capacity 410 ML/d) located on Centre Island, Toronto

List all water treatment chemicals used over this reporting period

Alum, Chlorine, Sulphur Dioxide, Sodium Bisulphite, Hydrofluosilicic acid and aqua ammonia. Cationic polymer was used for wastewater treatment.

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 the following amounts relate to various projects during 2010 and do not represent the total project cost. These numbers do not include normal operating and maintenance cost.

- Rehabilitation of buildings \$4.5 Million
- Filter rehabilitation \$250,000



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 for the R.C. Harris Water Treatment Plant.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
13-Aug-10	Total Coliform (TC)	Present	P/A	Re sampled	13-Aug-10

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 for the Transmission System (which is included under the R.C. Harris Drinking Water System Name and Number).

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
30-Jan-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	30-Jan-10
11-Feb-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	11-Feb-10
17-Feb-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	18-Feb-10
12-Mar-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	12-Mar-10
14-Mar-10	Analyzer Failure	<0.25	mg/L	Analyzer repaired and chlorine residual checked	15-Mar-10
26-Mar-10	Analyzer Failure	<0.25	mg/L	Analyzer repaired and chlorine residual checked	26-Mar-10
05-May-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	05-May-10
06-May-10	Analyzer Failure	<0.25	mg/L	Analyzer repaired and chlorine residual checked	06-May-10
19-May-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	19-May-10
21-May-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	21-May-10



Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
27-May-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	27-May-10
02-Jun-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	02-Jun-10
03-Jun-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	07-Jun-10
04-Jul-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine	04-Jul-10
05-Jul-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	06-Jul-10
06-Jul-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	06-Jul-10
27-Jul-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	27-July-10
09-Aug-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	09-Aug-10
15-Aug-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	15-Aug-10
15-Aug-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	15-Aug-10
25-Aug-10	Loss of Communication	No Signal	Not Applicable	Communication restored, chlorine residual checked	26-Aug-10
13-Sep-10	Loss of Communication	No Signal	Not Applicable	Communication Restored. Residual checked	13-Sep-10
22-Sep-10	Loss of Communication	No Signal	Not Applicable	Communication Restored. Residual checked	23-Sep-10
11-Oct-10	Loss of Communication	No Signal	Not Applicable	Communication Restored. Residual checked	11-Oct-10



Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
	on				
24-Dec-10	Loss of Communication	No Signal	Not Applicable	Communication Restored. Residual checked	24-Dec-10
27-Dec-10	Loss of Communication	No Signal	Not Applicable	Communication Restored. Residual checked	27-Dec-10

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 - 86	365	0-362
Treated	1460	1460 A (100 % A)	1459 A (99.9 % A)	1456	0-43

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

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	8760	0.05-0.13 NTU
Chlorine	8760	0.69-1.32 mg/L
Fluoride (If the DWS provides fluoridation)	355 (plus continuous monitoring)	0.18-0.73 mg/L

NOTE: For continuous monitors use 8760 as the number of samples.

NOTE: Record the unit of measure if it is not milligrams per litre.

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
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17-Feb-2010 – Municipal Drinking Water Licence 22-Aug-2007 – Amended Certificate of Approval	Suspended Solids	1-1-10 – 31- 12-10	14.25	mg/l
17-Feb-2010 – Municipal Drinking Water Licence 22-Aug-2007 – Amended Certificate of Approval	Chlorine residual	1-1-10 – 31- 12-10	0.003	mg/l

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	1/06 - 10/19	0	mg/L	No
Arsenic	1/06 - 10/19	0	mg/L	No
Barium	1/06 - 10/19	0.021 – 0.022	mg/L	No
Boron	1/06 - 10/19	0.021 – 0.024	mg/L	No
Cadmium	1/06 - 10/19	0	mg/L	No
Chromium	1/06 - 10/19	0	mg/L	No
*Lead	1/06 - 10/19	0	mg/L	No
Mercury	1/06 - 10/19	0	mg/L	No
Selenium	1/06 - 10/19	0	mg/L	No
Sodium	1/05 - 12/28	12.6 – 15.5	mg/L	No
Uranium	1/06 - 10/19	0.0003– 0.0003	mg/L	No
Nitrite	3/23 - 12/15	0.000 – 0.002	mg/L	No
Nitrate	3/23 - 12/15	0.250 – 0.490	mg/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing			
Distribution			

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	3/09 - 11/01	0 - 0	µg/L	No
Aldicarb	3/09 - 8/09	0 - 0	µg/L	No
Aldrin + Dieldrin	3/09 - 11/01	0 - 0	µg/L	No
Atrazine + N-dealkylated metabolites	3/09 - 8/09	0 - 0	µg/L	No
Azinphos-methyl	3/09 - 8/09	0 - 0	µg/L	No
Bendiocarb	3/09 - 8/09	0 - 0	µg/L	No
Benzene	1/28 - 12/06	0 - 0	µg/L	No
Benzo(a)pyrene	3/09 - 11/01	0 - 0	µg/L	No
Bromoxynil	3/09 - 11/01	0 - 0	µg/L	No
Carbaryl	3/09 - 8/09	0 - 0	µg/L	No
Carbofuran	3/09 - 8/09	0 - 0	µg/L	No
Carbon Tetrachloride	1/28 - 12/06	0 - 0.5	µg/L	No
Chlordane (Total)	3/09 - 11/01	0 - 0	µg/L	No
Chlorpyrifos	3/09 - 8/09	0 - 0	µg/L	No
Cyanazine	3/09 - 8/09	0 - 0	µg/L	No
Diazinon	3/09 - 8/09	0 - 0	µg/L	No
Dicamba	3/09 - 11/01	0 - 0	µg/L	No
1,2-Dichlorobenzene	1/28 - 12/06	0 - 0	µg/L	No
1,4-Dichlorobenzene	1/28 - 12/06	0 - 0	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	3/09 - 11/01	0 - 0	µg/L	No

1,2-Dichloroethane	1/28 - 12/06	0 - 0	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	1/28 - 12/06	0 - 0	µg/L	No
Dichloromethane	1/28 - 12/06	0 - 0	µg/L	No
2-4 Dichlorophenol	3/09 - 11/01	0 - 0	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	3/09 - 11/01	0 - 0	µg/L	No
Diclofop-methyl	3/09 - 11/01	0 - 0	µg/L	No
Dimethoate	3/09 - 8/09	0 - 0	µg/L	No
Dinoseb	3/09 - 11/01	0 - 0	µg/L	No
Diquat	3/09	0	µg/L	No
Diuron	3/09 - 8/09	0 - 0	µg/L	No
Glyphosate	3/09	0	µg/L	No
Heptachlor + Heptachlor Epoxide	3/09 - 11/01	0 - 0	µg/L	No
Lindane (Total)	3/09 - 11/01	0 - 0	µg/L	No
Malathion	3/09 - 8/09	0 - 0	µg/L	No
Methoxychlor	3/09 - 11/01	0 - 0	µg/L	No
Metolachlor	3/09 - 8/09	0 - 0	µg/L	No
Metribuzin	3/09 - 8/09	0 - 0	µg/L	No
Monochlorobenzene	1/28 - 12/06	0 - 0	µg/L	No
Paraquat	3/09	0	µg/L	No
Parathion	3/09 - 11/01	0 - 0	µg/L	No
Pentachlorophenol	3/09 - 11/01	0 - 0	µg/L	No
Phorate	3/09 - 11/01	0 - 0	µg/L	No
Picloram	3/09 - 11/01	0 - 0	µg/L	No
Polychlorinated Biphenyls(PCB)	3/09 - 11/01	0 - 0	µg/L	No
Prometryne	3/09 - 8/09	0 - 0	µg/L	No
Simazine	3/09 - 8/09	0 - 0	µg/L	No
THM (NOTE: show latest annual average)	1/28 - 12/06	16.9	µg/L	No
Temphos	3/09 - 8/09	0 - 0	µg/L	No



Terbufos	3/09 - 11/01	0 - 0	µg/L	No
Tetrachloroethylene	1/28 - 12/06	0 - 0	µg/L	No
2,3,4,6-Tetrachlorophenol	3/09 - 11/01	0 - 0	µg/L	No
Triallate	3/09 - 8/09	0 - 0	µg/L	No
Trichloroethylene	1/28 - 12/06	0 - 0	µg/L	No
2,4,6-Trichlorophenol	3/09 - 11/01	0 - 0	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	3/09 - 11/01	0 - 0	µg/L	No
Trifluralin	3/09 - 8/09	0 - 0	µg/L	No
Vinyl Chloride	1/28 - 12/06	0 - 0	µg/L	No

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

Availability of Report

This report along with a copy of the Summary Report (to be available after March 31, 2011) prepared under Schedule 22 of O. Reg. 170/03 will be posted on the City’s website at www.toronto.ca/water.

These reports will also be available for inspection at Toronto Water offices in Metro Hall, 18th floor, 55 John Street, Toronto, Ontario M5V 3C6 or by calling 311.



ANNUAL REPORT

Drinking-Water System Number:	Island WTP - 220002244
Drinking-Water System Name:	City of Toronto Drinking Water System
Drinking-Water System Owner:	City of Toronto
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2010 to December 31, 2010

<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> <div style="border: 1px solid black; padding: 5px;"> <p>Metro Hall, 18th Floor 55 John Street Toronto, ON M5V 3C6</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input type="text"/></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: <input type="text"/></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>
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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.

- 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 filtration plants, 18 pumping stations, 10 major underground storage reservoirs, four elevated storage tanks and approximately 510 kilometers of trunk water mains and 5,015 kilometers of distribution water mains.

The Island Water Treatment Plant is a direct water treatment plant, has a capacity of 410 ML/d and is located on Centre Island, Toronto.

The other three Toronto Water Treatment plants are as follows:

- R.L. Clark Water Treatment Plant (capacity 615 ML/d) and is located at 45 Twenty Third Street, Toronto;
- R.C. Harris Water Treatment Plant (capacity of 950 ML/d) and is located at 2701 Queens Street East, Toronto; and
- F.J. Horgan Water Treatment Plant (capacity of 570 ML/d) and is located at 201 Copperfield Road, Toronto.

List all water treatment chemicals used over this reporting period

Alum, Chlorine, Sulphur Dioxide, Sodium Bisulphite, Hydrofluosilicic acid and aqua ammonia, Poly Aluminum chloride

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 the following amounts relate to various projects during 2010 and do not represent the total project cost. These numbers do not include normal operating and maintenance cost.

- | | |
|---------------------------------------|---------------|
| - HVAC and Building Envelope upgrades | \$3.0 Million |
| - Filter rehabilitation | \$200,000 |

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
21-May-10	PACL (coagulation)	0.00	mg/L	Restart PACL feed in 2 minutes	May 21, 2010
26-Jun-10	PACL (coagulation)	0.00	mg/L	Restart PACL feed in 6 minutes	June 26, 2010
7-Aug-10	PACL (coagulation)	0.00	mg/L	Restart PACL feed in 4 minutes	August 7, 2010
11-Aug-10	PACL (coagulation)	0.00	mg/L	Restart PACL feed in 3 minutes	August 11, 2010
18-Aug-10	PACL (coagulation)	0.00	mg/L	Restart PACL feed in 7 minutes	August 18, 2010

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	295	0 - 5	0 - 20	295	0 - 150
Treated	1177	1177 A (100 % A)	1177 A (100 % A)	1173	0 - 19

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

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	7095	0.05 - 0.13 NTU
Chlorine	7095	0.28 - 2.00 mg/L
Fluoride (If the DWS provides fluoridation)	287 (plus continuous monitoring)	0.12 - 0.78 mg/L

NOTE: For continuous monitors use 8760 as the number of samples.

*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

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
17-Feb-2010 – Municipal Drinking Water Licence 28-Aug-2007 – Amended Certificate of Approval	Suspended Solids	1-1-10 / 31-12-10	12.1	mg/l
17-Feb-2010 – Municipal Drinking Water Licence	Chlorine residual	20-6-10 / 31-12-10	0.11	mg/l

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	1/06 - 10/19	0	mg/L	No
Arsenic	1/06 - 10/19	0	mg/L	No
Barium	1/06 - 10/19	0.021 – 0.023	mg/L	No
Boron	1/06 - 10/19	0.022 – 0.022	mg/L	No
Cadmium	1/06 - 10/19	0	mg/L	No
Chromium	1/06 - 10/19	0	mg/L	No
*Lead	1/06 - 10/19	0	mg/L	No
Mercury	1/06 - 10/19	0	mg/L	No
Selenium	1/06 - 10/19	0	mg/L	No
Sodium	1/05 - 12/28	12.6 – 14.0	mg/L	No
Uranium	1/06 - 10/19	0.0003 – 0.0004	mg/L	No
Nitrite	1/06 - 12/15	0.000 – 0.002	mg/L	No
Nitrate	1/06 - 12/15	0.400 – 0.470	mg/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems



Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing			
Distribution			

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	5/03 - 11/01	0 - 0	µg/L	No
Aldicarb	5/03 - 8/09	0 - 0	µg/L	No
Aldrin + Dieldrin	5/03 - 11/01	0 - 0	µg/L	No
Atrazine + N-dealkylated metabolites	5/03 - 8/09	0 - 0	µg/L	No
Azinphos-methyl	5/03 - 8/09	0 - 0	µg/L	No
Bendiocarb	5/03 - 8/09	0 - 0	µg/L	No
Benzene	1/06 - 12/06	0 - 0	µg/L	No
Benzo(a)pyrene	5/03 - 11/01	0 - 0	µg/L	No
Bromoxynil	5/03 - 11/01	0 - 0	µg/L	No
Carbaryl	5/03 - 8/09	0 - 0	µg/L	No
Carbofuran	5/03 - 8/09	0 - 0	µg/L	No
Carbon Tetrachloride	1/06 - 12/06	0 - 0	µg/L	No
Chlordane (Total)	5/03 - 11/01	0 - 0	µg/L	No
Chlorpyrifos	5/03 - 8/09	0 - 0	µg/L	No
Cyanazine	5/03 - 8/09	0 - 0	µg/L	No
Diazinon	5/03 - 8/09	0 - 0	µg/L	No

Dicamba	5/03 - 11/01	0 - 0	µg/L	No
1,2-Dichlorobenzene	1/06 - 12/06	0 - 0	µg/L	No
1,4-Dichlorobenzene	1/06 - 12/06	0 - 0	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	5/03 - 11/01	0 - 0	µg/L	No
1,2-Dichloroethane	1/06 - 12/06	0 - 0	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	1/06 - 12/06	0 - 0	µg/L	No
Dichloromethane	1/06 - 12/06	0 - 0	µg/L	No
2-4 Dichlorophenol	5/03 - 11/01	0 - 0	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	5/03 - 11/01	0 - 0	µg/L	No
Diclofop-methyl	5/03 - 11/01	0 - 0	µg/L	No
Dimethoate	5/03 - 8/09	0 - 0	µg/L	No
Dinoseb	5/03 - 11/01	0 - 0	µg/L	No
Diquat	11/01	0	µg/L	No
Diuron	5/03 - 8/09	0 - 0	µg/L	No
Glyphosate	11/01	0	µg/L	No
Heptachlor + Heptachlor Epoxide	5/03 - 11/01	0 - 0	µg/L	No
Lindane (Total)	5/03 - 11/01	0 - 0	µg/L	No
Malathion	5/03 - 8/09	0 - 0	µg/L	No
Methoxychlor	5/03 - 11/01	0 - 0	µg/L	No
Metolachlor	5/03 - 8/09	0 - 0	µg/L	No
Metribuzin	5/03 - 8/09	0 - 0	µg/L	No
Monochlorobenzene	1/06 - 12/06	0 - 0	µg/L	No



Paraquat	11/01	0	µg/L	No
Parathion	5/03 - 11/01	0 - 0	µg/L	No
Pentachlorophenol	5/03 - 11/01	0 - 0	µg/L	No
Phorate	5/03- 11/01	0 - 0	µg/L	No
Picloram	5/03 - 11/01	0 - 0	µg/L	No
Polychlorinated Biphenyls (PCB)	11/01	0 - 0	µg/L	No
Prometryne	5/03 - 8/09	0 - 0	µg/L	No
Simazine	5/03 - 8/09	0 - 0	µg/L	No
THM (NOTE: show latest annual average)	1/06 - 12/06	14.2	µg/L	No
Temephos	5/03 - 8/09	0 - 0	µg/L	No
Terbufos	5/03 - 11/01	0 - 0	µg/L	No
Tetrachloroethylene	1/06 - 12/06	0 - 0	µg/L	No
2,3,4,6-Tetrachlorophenol	5/03 - 11/01	0 - 0	µg/L	No
Triallate	5/03 - 8/09	0 - 0	µg/L	No
Trichloroethylene	1/06 - 12/06	0 - 0	µg/L	No
2,4,6-Trichlorophenol	5/03 - 11/01	0 - 0	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	5/03 - 11/01	0 - 0	µg/L	No
Trifluralin	5/03 - 8/09	0 - 0	µg/L	No
Vinyl Chloride	1/06 - 12/06	0 - 0	µg/L	No

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



Availability of Report

This report along with a copy of the Summary Report (to be available after March 31, 2011) prepared under Schedule 22 of O. Reg. 170/03 will be posted on the City's website at www.toronto.ca/water. These reports will also be available for inspection at Toronto Water offices in Metro Hall, 18th floor, 55 John Street, Toronto, Ontario M5V 3C6 or by calling 311.



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	R. L. Clark WTP - 220002253
Drinking-Water System Name:	City of Toronto Drinking Water System
Drinking-Water System Owner:	City of Toronto
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2010 to December 31, 2010

<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> <div style="border: 1px solid black; padding: 5px;"> <p>Metro Hall, 18th Floor 55 John Street Toronto, ON M5V 3C6</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <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> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
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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.

- 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 filtration plants, 18 pumping stations, 10 major underground storage reservoirs, four elevated storage tanks and approximately 510 kilometers of trunk water mains and 5,015 kilometers of distribution water mains.

The R.L. Clark Water Treatment Plant is a conventional water treatment plant, has a rated capacity 615 ML/d and is located at 45 Twenty Third Street, Toronto.

The other three Toronto Water Treatment plants are as follows:

- R.C. Harris Water Treatment Plant (capacity of 950 ML/d) and is located at 2701 Queens Street East
- F.J. Horgan Water Treatment Plant (capacity 570 ML/d) located at 201 Copperfield Road, Toronto
- Island Water Treatment Plant (capacity 410 ML/d) located on Centre Island, Toronto

List all water treatment chemicals used over this reporting period

Alum, chlorine, sulphur dioxide, hydrofluosilicic acid, aqua ammonia and powdered activated carbon. Cationic polymer was used for wastewater treatment.

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 the following amounts relate to various projects during 2010 and do not represent the total Project cost. These numbers do not include normal operating and maintenance cost.

- | | |
|---|----------------|
| - Electrical-HVAC Rehabilitation | \$ 7.6 Million |
| - Process Equipment Upgrades (Chemical Systems) | \$ 4.9 Million |
| - Treated Water Pump Refurbishment | \$ 308,000 |



Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
14-Apr-10	Sodium	21.387	mg/L	None required – External lab automatically reported sodium results however the 57 month time period for reporting has not been reached (March 2009)	14-April-10
14-Sept-10	NDMA	0.0096	mg/L	Resampled – results acceptable	22-Sept-10
08-Sept-10	Total Coliform	Present	mg/L	Resampled – results acceptable	29-Oct-10

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	0-50	0-500	362	0-1800
Treated	1436	1436 A (100 % A)	1435 A (99.9 % A)	1434	0-196

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

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	8760	0.02 – 0.08 NTU
Chlorine	8760	0.70 – 1.71 mg/L
Fluoride (If the DWS provides fluoridation)	353 (plus continuous monitoring)	0.10 – 0.73 mg/L

NOTE: For continuous monitors use 8760 as the number of samples.

NOTE: Record the unit of measure if it is not milligrams per litre.

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



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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	1/06 - 10/19	0	mg/L	No
Arsenic	1/06 - 10/19	0	mg/L	No
Barium	1/06 - 10/19	0.021 – 0.024	mg/L	No
Boron	1/06 - 10/19	0.022 – 0.023	mg/L	No
Cadmium	1/06 - 10/19	0	mg/L	No
Chromium	1/06 - 10/19	0	mg/L	No
*Lead	1/06 - 10/19	0.0 – 0.0019	mg/L	No
Mercury	1/06 - 10/19	0	mg/L	No
Selenium	1/06 - 10/19	0	mg/L	No
Sodium	1/05 - 12/28	12.8 – 21.4	mg/L	Yes
Uranium	1/06 - 10/19	0.0003–0.0003	mg/L	No
Nitrite	3/23 - 12/15	0.000 – 0.003	mg/L	No
Nitrate	3/23 - 12/15	0.250 – 0.550	mg/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing			
Distribution			

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	3/09 - 11/01	0 - 0	µg/L	No
Aldicarb	3/09 - 8/09	0 - 0	µg/L	No
Aldrin + Dieldrin	3/09 - 11/01	0 - 0	µg/L	No
Atrazine + N-dealkylated metabolites	3/09 - 8/09	0 - 0	µg/L	No
Azinphos-methyl	3/09 - 8/09	0 - 0	µg/L	No
Bendiocarb	3/09 - 8/09	0 - 0	µg/L	No
Benzene	1/06 - 12/06	0 - 0	µg/L	No

Benzo(a)pyrene	3/09 – 11/01	0 - 0	µg/L	No
Bromoxynil	3/09 - 11/01	0 - 0	µg/L	No
Carbaryl	3/09 - 8/09	0 - 0	µg/L	No
Carbofuran	3/09 - 8/09	0 - 0	µg/L	No
Carbon Tetrachloride	1/06 - 12/06	0 - 0	µg/L	No
Chlordane (Total)	3/09 - 11/01	0 - 0	µg/L	No
Chlorpyrifos	3/09 - 8/09	0 - 0	µg/L	No
Cyanazine	3/09 - 8/09	0 - 0	µg/L	No
Diazinon	3/09 - 8/09	0 - 0	µg/L	No
Dicamba	3/09 - 11/01	0 - 0	µg/L	No
1,2-Dichlorobenzene	1/06 - 12/06	0 - 0	µg/L	No
1,4-Dichlorobenzene	1/06 - 12/06	0 - 0	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	3/09 - 11/01	0 - 0	µg/L	No
1,2-Dichloroethane	1/06 - 12/06	0 - 0	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	1/06 - 12/06	0 - 0	µg/L	No
Dichloromethane	1/06 - 12/06	0 - 0	µg/L	No
2-4 Dichlorophenol	3/09 - 11/01	0 - 0	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	3/09 - 11/01	0 - 0	µg/L	No
Diclofop-methyl	3/09 - 11/01	0 - 0	µg/L	No
Dimethoate	3/09 - 8/09	0 - 0	µg/L	No
Dinoseb	3/09 – 11/01	0 - 0	µg/L	No
Diquat	3/09	0	µg/L	No

Diuron	3/09 - 8/09	0 - 0	µg/L	No
Glyphosate	3/09	0	µg/L	No
Heptachlor + Heptachlor Epoxide	3/09 - 11/01	0 - 0	µg/L	No
Lindane (Total)	3/09 - 11/01	0 - 0	µg/L	No
Malathion	3/09 - 8/09	0 - 0	µg/L	No
Methoxychlor	3/09 - 11/01	0 - 0	µg/L	No
Metolachlor	3/09 - 8/09	0 - 0	µg/L	No
Metribuzin	3/09 - 8/09	0 - 0	µg/L	No
Monochlorobenzene	1/06 - 12/06	0 - 0	µg/L	No
Paraquat	3/09	0	µg/L	No
Parathion	3/09 - 11/01	0 - 0	µg/L	No
Pentachlorophenol	3/09 - 11/01	0 - 0	µg/L	No
Phorate	3/09 - 11/01	0 - 0	µg/L	No
Picloram	3/09 - 11/01	0 - 0	µg/L	No
Polychlorinated Biphenyls(PCB)	3/09 - 11/01	0 - 0	µg/L	No
Prometryne	3/09 - 8/09	0 - 0	µg/L	No
Simazine	3/09 - 8/09	0 - 0	µg/L	No
THM (NOTE: show latest annual average)	1/06 - 12/06	17.3	µg/L	No
Temephos	3/09 - 8/09	0 - 0	µg/L	No
Terbufos	3/09 - 11/01	0 - 0	µg/L	No
Tetrachloroethylene	1/06 - 12/06	0 - 0	µg/L	No
2,3,4,6-Tetrachlorophenol	3/09 - 11/01	0 - 0	µg/L	No



Triallate	3/09 - 8/09	0 - 0	µg/L	No
Trichloroethylene	1/06 - 12/06	0 - 0	µg/L	No
2,4,6-Trichlorophenol	3/09 - 11/01	0 - 0	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	3/09 - 11/01	0 - 0	µg/L	No
Trifluralin	3/09 - 8/09	0 - 0	µg/L	No
Vinyl Chloride	1/06 - 12/06	0 - 0	µg/L	No

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	0.0096	ug/L	Sept. 14, 2010

Availability of Report

This report along with a copy of the Summary Report (to be available after March 31, 2011) prepared under Schedule 22 of O. Reg. 170/03 will be posted on the City’s website at www.toronto.ca/water.

These reports will also be available for inspection at Toronto Water offices in Metro Hall, 18th floor, 55 John Street, Toronto, Ontario M5V 3C6 or by calling 311.



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	F. J. Horgan WTP - 220004536
Drinking-Water System Name:	City of Toronto Drinking Water System
Drinking-Water System Owner:	City of Toronto
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2010 to December 31, 2010

<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> <div style="border: 1px solid black; padding: 5px;"> <p>Metro Hall, 18th Floor 55 John Street Toronto, ON M5V 3C6</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> </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: <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div></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>
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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.

- 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 filtration plants, 18 pumping stations, 10 major underground storage reservoirs, four elevated storage tanks and approximately 510 kilometers of trunk watermains and 5,015 kilometers of distribution watermains.

The F.J. Horgan Water Treatment Plant in a conventional water treatment plant and has a rated capacity of 570 ML/d and is located at 201 Copperfield Road, Toronto.

The other three Toronto Water Treatment plants are as follows:

- R.L. Clark Water Treatment Plant (capacity 615 ML/d) and is located at 45 Twenty Third Street, Toronto;
- R.C. Harris Water Treatment Plant (capacity of 950 ML/d) and is located at 2701 Queens Street East, Toronto; and
- Island Water Treatment Plant (capacity 410 ML/d) located on Centre Island, Toronto

List all water treatment chemicals used over this reporting period

Alum, poly aluminum chloride, MagnaFloc LT7996, chlorine, sulphur dioxide, hydrofluosilicic acid and aqua ammonia. Anionic polymer was used for wastewater treatment.

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 related to various projects during 2010 and do not represent the total project costs.

- Plant Expansion – Construction	\$ 71.8 Million
- Plant Expansion - Design and Construction Services	\$ 1 Million
- Facility HVAC Replacement	\$ 129,000
- Facility Fire Protection	\$ 120,900
- Facility Roof Rehabilitation and Skylight Project	\$ 92,300



- Facility Electrical Upgrades	\$ 35,100
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Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
21-Nov-10	Loss of Coagulation	0	mg/L	System deficiency found and corrected. Operational practices improved.	Resolved - Nov 25/10
23-Nov-10	Loss of Coagulation	0	mg/L	Uncoagulated water removed from process. Operational practices improved.	Resolved - Nov 24/10

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 - 4	0 - 38	365	0 - 285
Treated	1456	1456 A (100 % A)	1456 A (100 % A)	1452	0 - 50

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

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	8760	0.02 – 0.07 NTU
Chlorine	8760	0.80 – 1.49
Fluoride (If the DWS provides fluoridation)	356 (plus continuous monitoring)	0.13 – 0.68

NOTE: For continuous monitors use 8760 as the number of samples.



*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

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
17-Feb-10 - Municipal Drinking Water Licence 19-Dec-08 - Amended Certificate of Approval	Total Suspended Solids	Jan 02 – Dec 03	7	mg/L

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	1/06 - 10/19	0	mg/L	No
Arsenic	1/06 - 10/19	0	mg/L	No
Barium	1/06 - 10/19	0.021 – 0.022	mg/L	No
Boron	1/06 - 10/19	0.021 – 0.022	mg/L	No
Cadmium	1/06 - 10/19	0	mg/L	No
Chromium	1/06 - 10/19	0	mg/L	No
*Lead	1/06 - 10/19	0	mg/L	No
Mercury	1/06 - 10/19	0	mg/L	No
Selenium	1/06 - 10/19	0	mg/L	No
Sodium	1/05 - 12/28	12.5 – 15.6	mg/L	No
Uranium	1/06 - 10/19	0.0003– 0.0004	mg/L	No
Nitrite	3/23 - 12/15	0.000 – 0.002	mg/L	No
Nitrate	3/23 - 12/15	0.260 – 0.590	mg/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems



Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing			
Distribution			

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	3/09 – 11/01	0 - 0	µg/L	No
Aldicarb	3/09 - 8/09	0 - 0	µg/L	No
Aldrin + Dieldrin	3/09 - 11/01	0 - 0	µg/L	No
Atrazine + N-dealkylated metabolites	3/09 - 8/09	0 - 0	µg/L	No
Azinphos-methyl	3/09 - 8/09	0 - 0	µg/L	No
Bendiocarb	3/09 - 8/09	0 - 0	µg/L	No
Benzene	1/06 - 12/06	0 - 0	µg/L	No
Benzo(a)pyrene	3/09 - 11/01	0 - 0	µg/L	No
Bromoxynil	3/09 - 11/01	0 - 0	µg/L	No
Carbaryl	3/09 - 8/09	0 - 0	µg/L	No
Carbofuran	3/09 - 8/09	0 - 0	µg/L	No
Carbon Tetrachloride	1/28 - 12/06	0 - 0	µg/L	No
Chlordane (Total)	3/09 - 11/01	0 - 0	µg/L	No
Chlorpyrifos	3/09 - 8/09	0 - 0	µg/L	No
Cyanazine	3/09 - 8/09	0 - 0	µg/L	No
Diazinon	3/09 - 8/09	0 - 0	µg/L	No

Dicamba	3/09 - 11/01	0 - 0	µg/L	No
1,2-Dichlorobenzene	1/06 - 12/06	0 - 0	µg/L	No
1,4-Dichlorobenzene	1/06 - 12/06	0 - 0	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	3/09 - 11/01	0 - 0	µg/L	No
1,2-Dichloroethane	1/06 - 12/06	0 - 0	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	1/06 - 12/06	0 - 0	µg/L	No
Dichloromethane	1/06 - 12/06	0 - 0	µg/L	No
2-4 Dichlorophenol	3/09 - 11/01	0 - 0	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	3/09 - 11/01	0 - 0	µg/L	No
Diclofop-methyl	3/09 - 11/01	0 - 0	µg/L	No
Dimethoate	3/09 - 8/09	0 - 0	µg/L	No
Dinoseb	3/09- 11/01	0 - 0	µg/L	No
Diquat	3/09	0	µg/L	No
Diuron	3/09 - 8/09	0 - 0	µg/L	No
Glyphosate	3/09	0	µg/L	No
Heptachlor + Heptachlor Epoxide	3/09 - 11/01	0 - 0	µg/L	No
Lindane (Total)	3/09 - 11/01	0 - 0	µg/L	No
Malathion	3/09 - 8/09	0 - 0	µg/L	No
Methoxychlor	3/09 - 11/01	0 - 0	µg/L	No
Metolachlor	3/09 - 8/09	0 - 0	µg/L	No
Metribuzin	3/09 - 8/09	0 - 0	µg/L	No
Monochlorobenzene	1/06 - 12/06	0 - 0	µg/L	No

Paraquat	3/09	0	µg/L	No
Parathion	3/09 - 11/01	0 - 0	µg/L	No
Pentachlorophenol	3/09 - 11/01	0 - 0	µg/L	No
Phorate	3/09 - 11/01	0 - 0	µg/L	No
Picloram	3/09 - 11/01	0 - 0	µg/L	No
Polychlorinated Biphenyls(PCB)	3/09 - 11/01	0 - 0	µg/L	No
Prometryne	3/09 - 8/09	0 - 0	µg/L	No
Simazine	3/09 - 8/09	0 - 0	µg/L	No
THM (NOTE: show latest annual average)	1/06 - 12/06	13.9	µg/L	No
Temephos	3/09 - 8/09	0 - 0	µg/L	No
Terbufos	3/09 - 11/01	0 - 0	µg/L	No
Tetrachloroethylene	1/06 - 12/06	0 - 0	µg/L	No
2,3,4,6-Tetrachlorophenol	3/09 - 11/01	0 - 0	µg/L	No
Triallate	3/09 - 8/09	0 - 0	µg/L	No
Trichloroethylene	1/06 - 12/06	0 - 0	µg/L	No
2,4,6-Trichlorophenol	3/09 - 11/01	0 - 0	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	3/09 - 11/01	0 - 0	µg/L	No
Trifluralin	3/09 - 8/09	0 - 0	µg/L	No
Vinyl Chloride	1/06 - 12/06	0 - 0	µg/L	No

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	0.0077	ug/L	9-Aug-10

Availability of Report

This report along with a copy of the Summary Report (to be available after March 31, 2011) prepared under Schedule 22 of O. Reg. 170/03 will be posted on the City's website at www.toronto.ca/water.

These reports will also be available for inspection at Toronto Water offices in Metro Hall, 18th floor, 55 John Street, Toronto, Ontario M5V 3C6 or by calling 311.



OPTIONAL ANNUAL REPORT TEMPLATE

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, 2010 to December 31, 2010

<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 [<input type="checkbox"/>]</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 [<input type="checkbox"/>]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Metro Hall, 18th Floor 55 John Street Toronto, ON M5V 3C6</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 50px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [<input type="checkbox"/>] No [<input type="checkbox"/>]</p> <p>Number of Interested Authorities you report to: <input style="width: 50px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [<input type="checkbox"/>] No [<input type="checkbox"/>]</p>
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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 filtration plants, 18 pumping stations, 10 major underground storage reservoirs, four elevated storage tanks and approximately 510 kilometers of trunk water mains. The City of Toronto Drinking Water System – Toronto DS consists 5,015 kilometers of distribution water mains.

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

There are four Toronto Water Treatment plants:

- R.L. Clark Water Treatment Plant (capacity 615 ML/d) and is located at 45 Twenty Third Street, Toronto
- R.C. Harris Water Treatment Plant (capacity of 950 ML/d) and is located at 2701 Queens Street East, Toronto
- F.J. Horgan Water Treatment Plant (capacity of 570 ML/d) and is located at 201 Copperfield Road, Toronto
- Island Water Treatment Plant (capacity of 410 ML/d) and is located on Centre Island, Toronto

List all water treatment chemicals used over this reporting period

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 the following amounts relate to various projects during 2010 and do not represent the total project cost. These numbers do not include normal operating and maintenance cost.



- Watermain Replacement	63.6 million
- Water Service Repair	33.1 million
- Watermain Structural Lining	11.7 million
- Hydrant and Valve Repair	0.75 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 - Distribution and Main Work samples

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
29-Jan-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	02-Feb-10
16-Feb-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	17-Feb-10
04-Mar-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	05-Mar-10
28-Apr-10	Total Chlorine	<0.25	mg/L	Watermain flushed - Resampled	28-Apr-10
26-May-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	27-May-10
01-Jun-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	02-Jun-10
01-Jun-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	03-Jun-10
03-Jun-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	05-Jun-10
07-Jun-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	08-Jun-10
16-Jun-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	18-Jun-10
23-Jun-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	25-Jun-10
30-Jun-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	02-Jul-10
06-Jul-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	07-Jul-10
07-Jul-10	Total	Presence	Result in 100 mL	Watermain flushed -	08-Jul-10



Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
	Coliform		sample	Resampled plus 2 vicinity samples	
12-Jul-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	14-Jul-10
14-Jul-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	16-Jul-10
16-Jul-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	17-Jul-10
18-Jul-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	19-Jul-10
20-Jul-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	22-Jul-10
29-Jul-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	30-Jul-10
29-Jul-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	1-Aug-10
30-Jul-10	Total Coliform	4	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	31-Jul-10
31-Jul-10	Total Coliform	16	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	1-Aug-10
1-Aug-10	Total Coliform	30	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	3-Aug-10
1-Aug-10	Total Coliform	5	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	2-Aug-10
3-Aug-10	Total Coliform	2	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	4-Aug-10
4-Aug-10	Total Coliform	3	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	5-Aug-10
4-Aug-10	Total Coliform	4	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	6-Aug-10
7-Aug-10	Total Coliform	2	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	8-Aug-10
10-Aug-10	Total Coliform	17	Result in 100 mL sample	Watermain Replaced - Resampled plus 2 vicinity samples	11-Aug-10

08-Aug-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	09-Aug-10
23-Aug-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	25-Aug-10
24-Aug-10	Total Chlorine	<0.25	mg/L	Watermain flushed - Resampled	25-Aug-10
30-Aug-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	1-Sep-10
30-Aug-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	1-Sep-10
02-Sep-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	4-Sep-10
13-Sep-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	15-Sep-10
16-Sep-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	18-Sep-10
22-Sep-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	25-Sep-10
27-Sep-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	28-Sep-10
01-Oct-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	04-Oct-10
01-Oct-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	02-Oct-10
04-Oct-10	Total Coliform	4	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	05-Oct-10
07-Oct-10	Total Coliform	2	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	08-Oct-10
06-Oct-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	08-Oct-10
07-Oct-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	09-Oct-10
10-Oct-10	Total Coliform	1	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	12-Oct-10
12-Oct-10	Total Chlorine	<0.25	mg/L	Watermain flushed - Resampled	14-Oct-10

16-Oct-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	19-Oct-10
19-Oct-10	Total Chlorine	<0.25	mg/L	Watermain flushed - Resampled	20-Oct-10
21-Oct-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	23-Oct-10
10-Nov-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	12-Nov-10
19-Nov-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	22-Nov-10
22-Nov-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	24-Nov-10
24-Nov-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	26-Nov-10
24-Nov-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	26-Nov-10
03-Dec-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	06-Dec-10
03-Dec-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	06-Dec-10
17-Dec-10	Total Coliform	Presence	Result in 100 mL sample	Watermain flushed - Resampled plus 2 vicinity samples	18-Dec-10

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 #)
Distribution	4033	4033 A (100 % A)	4027 A (99.8 % A)	4014	0-750
Transmission	1019	1019 A (100 % A)	1019 A (100 % A)	1011	0-500
Main Work	1011	1011 A (100 % A)	974 A (96.3 % A)	1007	0-840

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	3981	0.05 – 1.95 NTU
Chlorine	4048	<0.04 – 1.38 mg/L

NOTE: For continuous monitors use 8760 as the number of samples.



For Transmission

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	1019	0.06 – 1.28 NTU
Chlorine	1024	0.51 – 1.45 mg/L

For Main Work

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	1015	0.01 – 8.5NTU
Chlorine	1018	0.36 – 2.60 mg/L

Operational testing for Lead and THMs for End of the Line Distribution System done under Schedule 13 of Regulation 170/03 during the period covered by this Annual Report.

For Distribution

	Number of Grab Samples	Range of Results (min #)-(max #)
THMs	13	13.4 – 22.3 µg/L

For Transmission

	Number of Grab Samples	Range of Results (min #)-(max #)
THMs	12	14.9 – 20.6 µg/L

*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

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

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony				
Arsenic				
Barium				
Boron				



Cadmium				
Chromium				
*Lead				
Mercury				
Selenium				
Sodium	5/18 - 12/15	12.6 – 14.4	mg/L	No
Uranium				
Fluoride				
Nitrite	1/06 - 12/15	0.000 – 0.003	mg/L	No
Nitrate	1/06 - 12/15	0.260 – 0.520	mg/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing			
Distribution	40	0 – 5 ug/L	0

Summary of Organic parameters sampled during this reporting period or the most recent sample results – Distribution and Transmission

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor				
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				
Bendiocarb				
Benzene	1/06 - 12/06	0 - 0	µg/L	No
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride	1/06 - 12/06	0 - 0	µg/L	No
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				
Diazinon				
Dicamba				
1,2-Dichlorobenzene	1/06 - 12/06	0 - 0	µg/L	No
1,4-Dichlorobenzene	1/06 - 12/06	0 - 0	µg/L	No



Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane	1/06 - 12/06	0 - 0	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	1/06 - 12/06	0 - 0	µg/L	No
Dichloromethane	1/06 - 12/06	0 - 0	µg/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	1/06 - 12/06	0 - 0	µg/L	No
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				
THM (NOTE: show latest annual average)	1/06 - 12/06	20.7	µg/L	No
Temephos				
Terbufos				
Tetrachloroethylene	1/06 - 12/06	0 - 0	µg/L	No
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene	1/06 - 12/06	0 - 0	µg/L	No
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin				
Vinyl Chloride	1/06 - 12/06	0 - 0	µg/L	No

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



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Availability of Report

This report along with a copy of the Summary Report (to be available after March 31, 2011) prepared under Schedule 22 of O. Reg. 170/03 will be posted on the City's website at www.toronto.ca/water.

These reports will also be available for inspection at Toronto Water offices in Metro Hall, 18th floor, 55 John Street, Toronto, Ontario M5V 3C6 or by calling 416-392-8222.

