2017 Summary Report
Toronto (R.C. Harris) Water Treatment Plant

Contents:

1.0  General Overview
2.0  System Approval
3.0  Site Inspections
4.0  Compliance with Terms and Conditions of System Approval and Any Other Orders
5.0  Non-Compliance with Terms and Conditions of System Approval
6.0  Summary – Water Production
7.0  Summary of Flows Exceeding the Municipal Drinking Water Licence Requirements
8.0  City of Toronto Endorsement of Summary Report
9.0  Contacts

February 9, 2018
1.0 General Overview

Toronto Water treats, transmits, stores and distributes potable (drinkable) water to all industrial, commercial and household water users in the City of Toronto. The division also delivers water to the southern portion of the Region of York.

Staff in this area are highly trained and specialized, operating four water treatment plants, two laboratories, 18 pumping stations, 10 major ground level storage reservoirs and four elevated storage tanks. Staff maintains about 520 kilometres of trunk watermains that supply the water reservoirs and over 5,525 kilometres of local distribution mains. Policies and practices adopted by the section help the unit to manage significant issues and challenges, including meeting water demands throughout the year, complying with provincial regulations and working responsibly to protect the environment and local water bodies.

This Summary Report is issued by Toronto Water under Schedule 22-2, O. Reg. 170/03 for the R.C. Harris Water Treatment Plant. The report covers the period from January 1, 2017 to December 31, 2017 except where stated otherwise.

2.0 System Approval

The City of Toronto is the operating authority of the Toronto Drinking Water System and has demonstrated through accreditation (renewed on December 19, 2014) by an independent third party, that the Toronto Water Quality Management System meets the requirements of the Drinking Water Quality Management Standard and the Safe Drinking Water Act, 2002, and is managed in a planned and systematic manner.

The latest version of the City of Toronto Municipal Drinking Water Licence was issued on August 28th, 2017 by the Ontario Ministry of Environment and Climate Change. Licence Number: 010-101, Issue Number: 8

The latest version of the City of Toronto Municipal Drinking Water Permit was issued on January 31st, 2017 by the Ontario Ministry of Environment and Climate Change. Permit Number: 010-201, Issue Number: 5

The R.C. Harris Water Treatment Plant is designated a Class 4 Water Treatment Facility (Certificate No. 445) and is referenced as Drinking Water System Number 220002262.

The newest Permit to Take Water is designated by MOECC Reference Number 0726-A6QJTA issued on March 23rd, 2016.
3.0 Site Inspections

The Ministry of the Environment (MOECC) has implemented a rigorous and comprehensive Province-wide approach for the inspection of water systems that focuses on the source, treatment and distribution components as well as water system management practices.

The primary focus of such inspections has been to confirm compliance with provincial legislation and control documents, as well as conformance with MOECC drinking-water related policies for the inspection period.

The Ministry of Environment conducted one (1) plant inspection of the R. C. Harris Water Treatment Plant during 2017. The site inspection was carried out at the R. C. Harris on July 26, 2017.

Specifically, the inspection included a review and assessment of operating practices in relation to the following documents:

- Safe Drinking Water Act, 2002
- Drinking Water Systems Regulation (O. Reg. 170/03)
- Ontario Drinking Water Quality Standards (O. Reg. 169/03)
- Operator Certification Regulation (O. Reg. 128/04)
- Municipal Drinking Water Licence (#010-101)
- Drinking Water Works Permit (#010-201)
- Permit to Take Water
- Director’s Orders and/or Provincial Officer’s Orders (if any)
- A Review of previous Ministry Inspection Reports

In all cases, there were no exceedances of health-related parameters for the Ministry of Environment and Climate Change inspection samples of the treated water.

4.0 Compliance with Terms and Conditions of System Approval and Any Other Orders

Plant production was fully compliant with the Permit to Take Water and at no time during the year 2017 did Raw Water flows exceed the maximum values stipulated in the Permit to Take Water.

Water production rates at the R.C. Harris Water Treatment Plant in 2017 were fully compliant with the Municipal Drinking Water Licence.

Residue Management operated on a continuous basis. The quality of the process residuals was in compliance with requirements cited in the Municipal Drinking Water Licence. The annual average concentration of total suspended solids (TSS) in the effluent discharged from the plant thickeners was 8.25 mg/L and average Total Chlorine was 0 mg/L.

All plant production fully conformed to the “Procedure for Disinfection of Drinking Water in Ontario” as referenced by O. Reg. 170/03. Routine operation and maintenance on all critical process equipment was carried out and flow meter calibrations were completed as per
manufacturer's recommendations.

5.0 Non-Compliance with Terms and Conditions of System Approval

There were no incidences of non-compliance with the Terms and Conditions of the Municipal Drinking Water Licence or Drinking Water Works Permit for the R.C. Harris Water Treatment Plant in 2017.

6.0 Summary – Water Production

Monthly Average Output Water Flows for 2017
(As Conveyed to the Distribution System)

<table>
<thead>
<tr>
<th>Month</th>
<th>Average Daily Volume (m³/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>434,000</td>
</tr>
<tr>
<td>February</td>
<td>491,000</td>
</tr>
<tr>
<td>March</td>
<td>485,000</td>
</tr>
<tr>
<td>April</td>
<td>300,000</td>
</tr>
<tr>
<td>May</td>
<td>293,000</td>
</tr>
<tr>
<td>June</td>
<td>298,000</td>
</tr>
<tr>
<td>July</td>
<td>289,000</td>
</tr>
<tr>
<td>August</td>
<td>301,000</td>
</tr>
<tr>
<td>September</td>
<td>282,000</td>
</tr>
<tr>
<td>October</td>
<td>285,000</td>
</tr>
<tr>
<td>November</td>
<td>280,000</td>
</tr>
<tr>
<td>December</td>
<td>277,000</td>
</tr>
</tbody>
</table>

NOTE: Non-production days not included in monthly average daily volume.

Annual Daily Volume and Capacity Assessment for 2017

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Flow</td>
<td>334,000 m³/day</td>
</tr>
<tr>
<td>Maximum Day Flow (and Date Occurred)</td>
<td>552,000 m³ March 1, 2017</td>
</tr>
<tr>
<td>Rated Capacity</td>
<td>950,000 m³/day</td>
</tr>
<tr>
<td>Highest Capacity Used</td>
<td>58.1 %</td>
</tr>
</tbody>
</table>

7.0 Summary of Flows Exceeding the Municipal Drinking Water Licence Requirements

There were no instances of treated water flows exceeding the rated capacity stated in the Municipal Drinking Water Licence for the R.C. Harris Water Treatment Plant in 2017.
8.0 City of Toronto Endorsement of Summary Report

This Summary Report has been signed off by Lou Di Gironimo, General Manager of Toronto Water, on behalf of the City of Toronto Council.

A copy of this report has been forwarded to the members of the City Council in 2018 as per regulatory requirements.

9.0 Contacts

While all efforts have been made to provide the required information in the proper format and degree of detail, it is acknowledged that additional information and/or detail may be required.

For additional information or inquiries, please contact customer service by phone at 311 or by email (311@toronto.ca).
2017 Summary Report
Toronto (Island) Water Treatment Plant

Contents:

1.0 General Overview
2.0 System Approval
3.0 Site Inspections
4.0 Compliance with Terms and Conditions of System Approval and Any Other Orders
5.0 Non-Compliance with Terms and Conditions of System Approval
6.0 Summary – Water Production
7.0 Summary of Flows Exceeding the Municipal Drinking Water Licence Requirements
8.0 City of Toronto Endorsement of Summary Report
9.0 Contacts

February 9, 2018
1.0 General Overview

Toronto Water treats, transmits, stores and distributes potable (drinkable) water to all industrial, commercial and household water users in the City of Toronto. The division also delivers water to the southern portion of the Region of York.

Staff in this area are highly trained and specialized, operating four water treatment plants, two laboratories, 18 pumping stations, 10 major ground level storage reservoirs and four elevated storage tanks. Staff maintains about 520 kilometres of trunk watermains that supply the water reservoirs and over 5,525 kilometres of local distribution mains. Policies and practices adopted by the section help the unit to manage significant issues and challenges, including meeting water demands throughout the year, complying with provincial regulations and working responsibly to protect the environment and local water bodies.

This Summary Report is issued by Toronto Water under Schedule 22-2, O. Reg. 170/03 for the Island Water Treatment Plant. The report covers the period from January 1, 2017 to December 31, 2017 except where stated otherwise.

2.0 System Approval

The City of Toronto is the operating authority of the Toronto Drinking Water System and has demonstrated through accreditation (renewed on December 19, 2014) by an independent third party, that the Toronto Water Quality Management System meets the requirements of the Drinking Water Quality Management Standard and the Safe Drinking Water Act, 2002, and is managed in a planned and systematic manner.

The latest version of the City of Toronto Municipal Drinking Water Licence was issued on August 28th, 2017 by the Ontario Ministry of Environment and Climate Change. Licence Number: 010-101, Issue Number: 8

The latest version of the City of Toronto Municipal Drinking Water Permit was issued on January 31st, 2017 by the Ontario Ministry of Environment and Climate Change. Permit Number: 010-201, Issue Number: 5

The Island Water Treatment Plant is designated a Class 4 Water Treatment Facility (Certificate No. 443) and is referenced as Drinking Water System Number 220002244.

The newest Permit to Take Water is designated by MOECC Reference Number 1866-A6QHRP issued on March 23rd, 2016.
3.0 Site Inspections

The Ministry of the Environment (MOECC) has implemented a rigorous and comprehensive Province-wide approach for the inspection of water systems that focuses on the source, treatment and distribution components as well as water system management practices.

The primary focus of such inspections has been to confirm compliance with provincial legislation and control documents, as well as conformance with MOECC drinking-water related policies for the inspection period.

The Ministry of Environment conducted one (1) plant inspection of the Island Water Treatment Plant during 2015. The announced site inspection was carried out on September 12, 2017.

Specifically, the inspection included a review and assessment of operating practices in relation to the following documents:

- Safe Drinking Water Act, 2002
- Drinking Water Systems Regulation (O. Reg. 170/03)
- Ontario Drinking Water Quality Standards (O. Reg. 169/03)
- Operator Certification Regulation (O. Reg. 128/04)
- Municipal Drinking Water Licence (#010-101)
- Drinking Water Works Permit (#010-201)
- Permit to Take Water
- Director’s Orders and/or Provincial Officer’s Orders (if any)
- A Review of previous Ministry Inspection Reports

In all cases, there were no exceedances of health-related parameters for the Ministry of Environment and Climate Change inspection samples of the treated water.

4.0 Compliance with Terms and Conditions of System Approval and Any Other Orders

Plant production was fully compliant with the Permit to Take Water and at no time during the year 2017 did Raw Water flows exceed the maximum values stipulated in the Permit to Take Water.

Water production rates at the Island Water Treatment Plant in 2017 were fully compliant with the Municipal Drinking Water Licence.

All plant production fully conformed to the “Procedure for Disinfection of Drinking Water in Ontario” as referenced by O. Reg. 170/03. Routine operation and maintenance on all critical process equipment was carried out and flow meter calibrations were completed as per manufacturer’s recommendations.

The Residue Management settling tanks operated on a continuous basis. The quality of the process residuals was in compliance with the requirements cited in the Drinking Water Licence. The annual average concentration of total suspended solids in the effluent discharged from the Plant's slow sand filters was 5.9 mg/L and Total Chlorine was 0.0002 mg/L.
5.0 Non-Compliance with Terms and Conditions of System Approval

There were no incidences of non-compliance with the Terms and Conditions of the Municipal Drinking Water Licence or Drinking Water Works Permit for the Island Water Treatment Plant in 2017.

6.0 Summary – Water Production

**Monthly Average Output Water Flows for 2017**
*(As Conveyed to the Distribution System)*

<table>
<thead>
<tr>
<th>Month</th>
<th>Average Daily Volume (m$^3$/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>239,000 *</td>
</tr>
<tr>
<td>February</td>
<td>0 *</td>
</tr>
<tr>
<td>March</td>
<td>0 *</td>
</tr>
<tr>
<td>April</td>
<td>268,000 *</td>
</tr>
<tr>
<td>May</td>
<td>302,000</td>
</tr>
<tr>
<td>June</td>
<td>328,000</td>
</tr>
<tr>
<td>July</td>
<td>350,000</td>
</tr>
<tr>
<td>August</td>
<td>344,000</td>
</tr>
<tr>
<td>September</td>
<td>340,000</td>
</tr>
<tr>
<td>October</td>
<td>321,000</td>
</tr>
<tr>
<td>November</td>
<td>299,000</td>
</tr>
<tr>
<td>December</td>
<td>266,000</td>
</tr>
</tbody>
</table>

*Island Water Treatment Plant shut-down for maintenance for at least part of the period.

**NOTE:** Non-production days not included in monthly average daily volume.

**Annual Daily Volume and Capacity Assessment for 2017**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Flow</td>
<td>311,000 m$^3$/day</td>
</tr>
<tr>
<td>Maximum Day Flow (and Date Occurred)</td>
<td>377,000 m$^3$ (July 6, 2017)</td>
</tr>
<tr>
<td>Rated Capacity</td>
<td>410,000 m$^3$/day</td>
</tr>
<tr>
<td>Highest Capacity Used</td>
<td>92 %</td>
</tr>
</tbody>
</table>

7.0 Summary of Flows Exceeding the Municipal Drinking Water Licence Requirements

There were no instances of treated water flows exceeding the rated capacity stated in the Municipal Drinking Water Licence for the Island Water Treatment Plant in 2017.
8.0 City of Toronto Endorsement of Summary Report

This Summary Report has been signed off by Lou Di Gironimo, General Manager of Toronto Water on behalf of the City of Toronto Council.

A copy of this report has been forwarded to the members of the City Council in 2018 as per regulatory requirements.

9.0 Contacts

While all efforts have been made to provide the required information in the proper format and degree of detail, it is acknowledged that additional information and/or detail may be required.

For additional information or inquiries, please contact customer service by phone at 311 or by email (311@toronto.ca).
2017 Summary Report
Toronto (R. L. Clark) Water Treatment Plant

Contents:

1.0 General Overview
2.0 System Approval
3.0 Site Inspections
4.0 Compliance with Terms and Conditions of System Approval and Any Other Orders
5.0 Non-Compliance with Terms and Conditions of System Approval
6.0 Summary – Water Production
7.0 Summary of Flows Exceeding the Municipal Drinking Water Licence Requirements
8.0 City of Toronto Endorsement of Summary Report
9.0 Contacts

February 9, 2018
1.0 General Overview

Toronto Water treats, transmits, stores and distributes potable (drinkable) water to all industrial, commercial and household water users in the City of Toronto. The division also delivers water to the southern portion of the Region of York.

Staff in this area are highly trained and specialized, operating four water treatment plants, two laboratories, 18 pumping stations, 10 major ground level storage reservoirs and four elevated storage tanks. Staff maintains about 520 kilometres of trunk watermains that supply the water reservoirs and over 5,525 kilometres of local distribution mains. Policies and practices adopted by the section help the unit to manage significant issues and challenges, including meeting water demands throughout the year, complying with provincial regulations and working responsibly to protect the environment and local water bodies.

This Summary Report is issued by Toronto Water under Schedule 22-2, O. Reg. 170/03 for the R.L. Clark Water Treatment Plant. The report covers the period from January 1, 2017 to December 31, 2017 except where stated otherwise.

2.0 System Approval

The City of Toronto is the operating authority of the Toronto Drinking Water System and has demonstrated through accreditation (renewed on December 19, 2014) by an independent third party, that the Toronto Water Quality Management System meets the requirements of the Drinking Water Quality Management Standard and the Safe Drinking Water Act, 2002, and is managed in a planned and systematic manner.

The latest version of the City of Toronto Municipal Drinking Water Licence was issued on August 28th, 2017 by the Ontario Ministry of Environment and Climate Change. Licence Number: 010-101, Issue Number: 8

The latest version of the City of Toronto Municipal Drinking Water Permit was issued on January 31st, 2017 by the Ontario Ministry of Environment and Climate Change. Permit Number: 010-201, Issue Number: 5

The R.L. Clark Water Treatment Plant is designated a Class 4 Water Treatment Facility (Certificate No. 444) and is referenced as Drinking Water System Number 22000 2253 (MOECC).

The newest Permit to Take Water is designated by MOECC Reference Number 0016-A6QKN2 issued on March 23rd, 2016.
3.0 Site Inspections

The Ministry of the Environment (MOECC) has implemented a rigorous and comprehensive Province-wide approach for the inspection of water systems that focuses on the source, treatment and distribution components as well as water system management practices.

The primary focus of such inspections has been to confirm compliance with provincial legislation and control documents, as well as conformance with MOECC drinking water-related policies for the inspection period.

The Ministry of Environment and Climate Change (MOECC) initiated an unannounced site inspection of the R. L. Clark Water Treatment Plant on November 14, 2017.

Specifically, the inspection included a review and assessment of operating practices in relation to the following documents:

- Safe Drinking Water Act, 2002
- Drinking Water Systems Regulation (O. Reg. 170/03)
- Ontario Drinking Water Quality Standards (O. Reg. 169/03)
- Operator Certification Regulation (O. Reg. 128/04)
- Municipal Drinking Water Licence (#010-101)
- Drinking Water Works Permit (#010-201)
- Permit to Take Water
- Director’s Orders and/or Provincial Officer’s Orders (if any)
- A Review of previous Ministry Inspection Reports

In all cases, there were no exceedances of health-related parameters for the Ministry of Environment and Climate Change inspection samples of the treated water.

4.0 Compliance with Terms and Conditions of System Approval and Any Other Orders

Plant production was fully compliant with the Permit to Take Water and at no time during the year 2017 did Raw Water flows exceed the maximum values stipulated in the Permit to Take Water.

All plant production fully conformed to the “Procedure for Disinfection of Drinking Water in Ontario” as referenced by O. Reg. 170/03. Routine operation and maintenance on all critical process equipment was carried out and flow meter calibrations were completed as per manufacturer's recommendations.

5.0 Non-Compliance with Terms and Conditions of System Approval

There was no known incidence of non-compliance with the Terms and Conditions of the Municipal Drinking Water Licence or Drinking Water Works Permit for the R.L. Clark WTP in 2017.

There was one incidence of non-compliance identified during the 2017 MOECC annual Drinking Water inspection, however, no further action was required.
Ontario Regulation 170/03 requires the continuous monitoring of turbidity on each individual filter effluent line. On one occasion in 2017, the operation of filter monitoring equipment on one filter was inadvertently disrupted due to construction activities in the nearby vicinity resulting in the loss of continuous turbidity monitoring on one filter for a period of 8 hours. Upon detection of the problem, the equipment operation was restored and operations returned to normal. Subsequent to this event, automation and monitoring system enhancements were implemented to mitigate a recurrence, and, staff were made aware of the cause and impact of this incident.

6.0 Summary – Water Production

Monthly Average Output Water Flows for 2017
(As Conveyed to the Distribution System)

<table>
<thead>
<tr>
<th>Month</th>
<th>Average Daily Volume (m$^3$/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>345,000</td>
</tr>
<tr>
<td>February</td>
<td>332,000</td>
</tr>
<tr>
<td>March</td>
<td>348,000</td>
</tr>
<tr>
<td>April</td>
<td>348,000</td>
</tr>
<tr>
<td>May</td>
<td>347,000</td>
</tr>
<tr>
<td>June</td>
<td>368,000</td>
</tr>
<tr>
<td>July</td>
<td>376,000</td>
</tr>
<tr>
<td>August</td>
<td>402,000</td>
</tr>
<tr>
<td>September</td>
<td>418,000</td>
</tr>
<tr>
<td>October</td>
<td>386,000</td>
</tr>
<tr>
<td>November</td>
<td>364,000</td>
</tr>
<tr>
<td>December</td>
<td>378,000</td>
</tr>
</tbody>
</table>

NOTE: Non-production days not included in monthly average daily volume.

Annual Daily Volume and Capacity Assessment for 2017

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Flow</td>
<td>368,000 m$^3$/day</td>
</tr>
<tr>
<td>Maximum Day Flow (and Date Occurred)</td>
<td>462,000 m$^3$ (April 12, 2017)</td>
</tr>
<tr>
<td>Rated Capacity</td>
<td>615,000 m$^3$/day</td>
</tr>
<tr>
<td>Highest Capacity Used</td>
<td>75.1 %</td>
</tr>
</tbody>
</table>
7.0 Summary of Flows Exceeding the Municipal Drinking Water Licence Requirements

There were no instances of treated water flows exceeding the rated capacity stated in the Municipal Drinking Water Licence for the R.L. Clark Water Treatment Plant in 2017.

8.0 City of Toronto Endorsement of Summary Report

This Summary Report has been signed off by Lou Di Gironimo, General Manager of Toronto Water, on behalf of the City of Toronto Council.

A copy of this report has been forwarded to the members of the City Council in 2018 as per regulatory requirements.

9.0 Contacts

While all efforts have been made to provide the required information in the proper format and degree of detail, it is acknowledged that additional information and/or detail may be required.

For additional information or inquiries, please contact customer service by phone at 311 or by email (311@toronto.ca).
2017 Summary Report
Toronto (F.J. Horgan) Water Treatment Plant

Contents:

1.0 General Overview
2.0 System Approval
3.0 Site Inspections
4.0 Compliance with Terms and Conditions of System Approval and Any Other Orders
5.0 Non-Compliance with Terms and Conditions of System Approval
6.0 Summary – Water Production
7.0 Summary of Flows Exceeding the Municipal Drinking Water Licence Requirements
8.0 City of Toronto Endorsement of Summary Report
9.0 Contacts

February 9, 2018
1.0 General Overview

Toronto Water treats, transmits, stores and distributes potable (drinkable) water to all industrial, commercial and household water users in the City of Toronto. The division also delivers water to the southern portion of the Region of York.

Staff in this area are highly trained and specialized, operating four water treatment plants, two laboratories, 18 pumping stations, 10 major ground level storage reservoirs and four elevated storage tanks. Staff maintains about 520 kilometres of trunk watermains that supply the water reservoirs and over 5,525 kilometres of local distribution mains. Policies and practices adopted by the section help the unit to manage significant issues and challenges, including meeting water demands throughout the year, complying with provincial regulations and working responsibly to protect the environment and local water bodies.

This Summary Report is issued by Toronto Water under Schedule 22-2, O. Reg. 170/03 for the F.J. Horgan Water Treatment Plant. The report covers the period from January 1, 2017 to December 31, 2017 except where stated otherwise.

2.0 System Approval

The City of Toronto is the operating authority of the Toronto Drinking Water System and has demonstrated through accreditation (renewed on December 19, 2014) by an independent third party, that the Toronto Water Quality Management System meets the requirements of the Drinking Water Quality Management Standard and the Safe Drinking Water Act, 2002, and is managed in a planned and systematic manner.

The latest version of the City of Toronto Municipal Drinking Water Licence was issued on August 28th, 2017 by the Ontario Ministry of Environment and Climate Change. Licence Number: 010-101, Issue Number: 8

The latest version of the City of Toronto Municipal Drinking Water Permit was issued on January 31st, 2017 by the Ontario Ministry of Environment and Climate Change. Permit Number: 010-201, Issue Number: 5

The F.J. Horgan Water Treatment Plant is designated a Class 4 Water Treatment Facility (Certificate No. 446) and is referenced as Drinking Water System Number 220004536 (MOECC).

The newest Permit to Take Water is designated by MOECC Reference Number 6604-A6QKEB issued on March 23rd, 2016.
3.0 Site Inspections

The Ministry of the Environment (MOECC) has implemented a rigorous and comprehensive Province-wide approach for the inspection of water systems that focuses on the source, treatment and distribution components as well as water system management practices.

The primary focus of such inspections has been to confirm compliance with provincial legislation and control documents, as well as conformance with MOECC drinking-water related policies for the inspection period.

An MOECC inspection begun on September 26, 2017 was completed in 2017.

4.0 Compliance with Terms and Conditions of System Approval and Any Other Orders

Plant production was fully compliant with the Permit to Take Water and at no time during the year 2017 did Raw Water flows exceed the maximum values stipulated in the Permit to Take Water.

Water production rates at the FJ Horgan Treatment Plant in 2017 were fully compliant with the Municipal Drinking Water Licence.

All plant production fully conformed to the “Procedure for Disinfection of Drinking Water in Ontario” as referenced by O. Reg. 170/03. Routine operation and maintenance on all critical process equipment was carried out and flow meter calibrations were completed as per manufacturer's recommendations.

5.0 Non-Compliance with Terms and Conditions of System Approval

The results of the 2017 MOECC Inspection for the FJ Horgan WTP indicated that there were no incidents of non-compliance.

6.0 Summary – Water Production

Monthly Average Output Water Flows for 2017
(As Conveyed to the Distribution System)

<table>
<thead>
<tr>
<th>Month</th>
<th>Average Daily Volume (m³/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>241,000</td>
</tr>
<tr>
<td>February</td>
<td>287,000</td>
</tr>
<tr>
<td>March</td>
<td>302,000</td>
</tr>
<tr>
<td>April</td>
<td>231,000</td>
</tr>
<tr>
<td>May</td>
<td>237,000</td>
</tr>
<tr>
<td>June</td>
<td>280,000</td>
</tr>
<tr>
<td>July</td>
<td>269,000</td>
</tr>
<tr>
<td>August</td>
<td>274,000</td>
</tr>
</tbody>
</table>
Annual Daily Volume and Capacity Assessment for 2017

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Flow</td>
<td>252,000 m³/day</td>
</tr>
<tr>
<td>Maximum Day Flow (and Date Occurred)</td>
<td>404,000 m³ (March 27, 2017)</td>
</tr>
<tr>
<td>Rated Capacity</td>
<td>800,000 m³/day</td>
</tr>
<tr>
<td>Highest Capacity Used</td>
<td>50.6 %</td>
</tr>
</tbody>
</table>

7.0 Summary of Flows Exceeding the Municipal Drinking Water Licence Requirements

There were no instances of treated water flows exceeding the rated capacity stated in the Municipal Drinking Water Licence for the F.J. Horgan Water Treatment Plant in 2017.

8.0 City of Toronto Endorsement of Summary Report

This Summary Report has been signed off by Lou Di Gironimo, General Manager of Toronto Water on behalf of the City of Toronto Council.

A copy of this report has been forwarded to the members of the City Council in 2018 as per regulatory requirements.

9.0 Contacts

While all efforts have been made to provide the required information in the proper format and degree of detail, it is acknowledged that additional information and/or detail may be required.

For additional information or inquiries, please contact customer service by phone at 311 or by email (311@toronto.ca).
2017 Summary Report
City of Toronto Distribution System

Contents:

1.0 General Overview
2.0 System Approval
3.0 Site Inspections
4.0 Compliance with Terms and Conditions of the System Approval and Any Other Orders
5.0 Non-Compliance with the Terms and Conditions of the System Approval
6.0 City of Toronto Endorsement of Summary Report
7.0 Contacts

February 9, 2018
1.0 General Overview

Toronto Water treats, transmits, stores and distributes potable (drinkable) water to all industrial, commercial and household water users in the City of Toronto. The division also delivers water to the southern portion of the Region of York.

Staff in this area are highly trained and specialized, operating four water treatment plants, two laboratories, 18 pumping stations, 10 major ground level storage reservoirs and four elevated storage tanks. Policies and practices adopted by the section help the unit to manage significant issues and challenges, including meeting water demands throughout the year, complying with provincial regulations and working responsibly to protect the environment and local water bodies.

Toronto Water Distribution and Supply provides water distribution services to 515,345 residential and industrial/commercial accounts. Maintenance and operation of the distribution system is carried out by district staff in four Water Distribution Districts: North, West, East, and South. Distribution & Collection is responsible for regular hydrant and valve inspections, watermain flushing, investigation of water pressure and water quality complaints, repair or replacement of watermains, water services, valves and hydrants. Distribution staff inspect, operate, and maintain the existing water distribution system which include, but is not limited to:

- 5,016 km of watermains
- 44,000 water hydrants
- 52,900 valves
- 12 pressure districts

This Summary Report is issued by Toronto Water under Schedule 22-2, O. Reg. 170/03 for the City of Toronto Distribution System (managed by Water Supply and Distribution & Collection). The report covers the period from January 1, 2017 to December 31, 2017 except where stated otherwise.

2.0 System Approval

The City of Toronto Distribution System is categorized as a Large Municipal Residential System and is referenced as Drinking Water System Number 260090363 (MOECC). The name of the system is City of Toronto Drinking Water System – Toronto DS.

The City of Toronto is the operating authority of the Toronto Drinking Water System and has demonstrated through accreditation (renewed on December 19, 2014) by an independent third party, that the Toronto Water Quality Management System meets the requirements of the Drinking Water Quality Management Standard and the Safe Drinking Water Act, 2002, and is managed in a planned and systematic manner.

The latest version of the City of Toronto Municipal Drinking Water Licence was issued on August 28th, 2017 by the Ontario Ministry of Environment and Climate Change. Licence Number: 010-101, Issue Number: 8
The latest version of the City of Toronto Municipal Drinking Water Permit was issued on January 31st, 2017 by the Ontario Ministry of Environment and Climate Change. Permit Number: 010-201, Issue Number: 5

3.0 Site Inspections

The Ministry of the Environment (MOECC) has implemented a rigorous and comprehensive Province-wide approach for the inspection of water systems that focuses on the source, treatment and distribution components as well as water system management practices.

The primary focus of such inspections has been to confirm compliance with the provincial legislation and control documents, as well as conformance with Ministry of Environment drinking water-related policies and guidelines for the inspection period.

The inspection is based on a “stand alone connected distribution system”. The elements are reviewed to assess key compliance and conformance to issues associated with a receiver system as defined under O. Reg. 172/03. The inspection includes a review and assessment of operating practices in relation to the following documentation:

- Treatment Processes
- Distribution System
- Operational Manuals
- Logbooks (O. Reg. 170/03)
- Security
- Certification and Training
- Water Quality Monitoring (O. Reg. 170/03)
- Water Quality Assessment (O. Reg. 169/03)
- Reporting and Corrective actions (O. Reg. 170/03)

The Ministry of Environment and Climate Change (MOECC) initiated an annual site inspection of Toronto's Distribution and Supply System on December 5, 2016. The site inspections were carried out at various Distribution & Collection locations, Water Supply, and Engineering & Construction Services in the following weeks.

4.0 Compliance with Terms and Conditions of the System Approval and Any Other Orders

The 2016-2017 Distribution System Drinking Water Inspection was performed during this period and seven non-compliances in total were identified in the report, of which three were from Toronto Water activities: One for unclear identification of person performing Chlorine Residual testing, and two for late submissions of Adverse Water Quality Incident (AWQI) documentation after notification.

The remaining four non-compliances were related to new watermain construction activities performed by the Engineering & Construction Services (ECS) Division on behalf of Toronto Water, and these resulted in a Provincial Order being issued to the City of Toronto for further actions. The Order's Action Items targeted issues ranging from supervision of wet taps by
certified operators to contractor's inconsistent performance of testing for chlorine residuals in accordance to regulations.

5.0 Non-Compliance with the Terms and Conditions of the System Approval

The three non-compliances within the control of Toronto Water were corrected immediately. The Action Items cited in the Provincial Order to the City of Toronto (Engineering & Construction Services Division) were resolved by the prescribed deadlines with the latest being July 1, 2017.

6.0 City of Toronto Endorsement of Summary Report

This Summary Report has been signed off by Lou Di Gironimo, General Manager of Toronto Water on behalf of the City of Toronto Council.

A copy of this report has been forwarded to the members of the City Council in 2018 as per regulatory requirements.

7.0 Contacts

While all efforts have been made to provide the required information in the proper format and degree of detail, it is acknowledged that additional information and/or detail may be required.

For additional information or inquiries, please contact customer service by phone at 311 or by email (311@toronto.ca).