

Quality Management System for Drinking Water 2022 Annual Report

The Ministry of Environment, Conservation and Parks (MECP) Drinking Water Quality Management Standard (DWQMS) requires the City of Richmond Hill to establish and maintain a Quality Management System (QMS) that conforms to the Standard.

The City owns a stand-alone drinking water distribution system, QMS policies and procedures govern the activities and services performed by the City. The DWQMS also requires that Members of Council are made aware to the following areas within the QMS, as they are:

- Review and Provision of Infrastructure
- Infrastructure Maintenance, Rehabilitation and Renewal Summary
- Management Review Outcomes
- Third-Party Audit Outcomes and Accreditation Renewal
- Organizational Structure, Roles, Responsibilities and Authorities

1. Review and Provision of Infrastructure

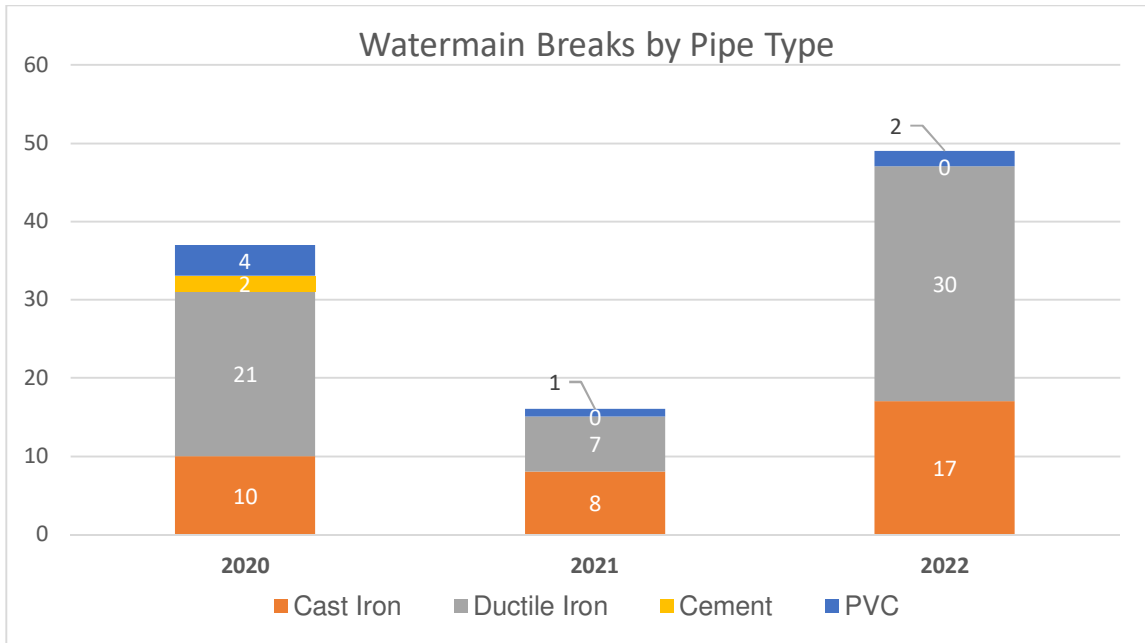
Council is being communicated on the status of the programs in place to maintain, rehabilitate and renew the infrastructure of the drinking water system through the 10 Year Capital Forecast for Roads, Water and Wastewater.

2. Infrastructure Maintenance, Rehabilitation and Renewal Summary

Programs are in place to maintain, rehabilitate and renew the infrastructure of the drinking water system.

Watermain Maintenance Program:

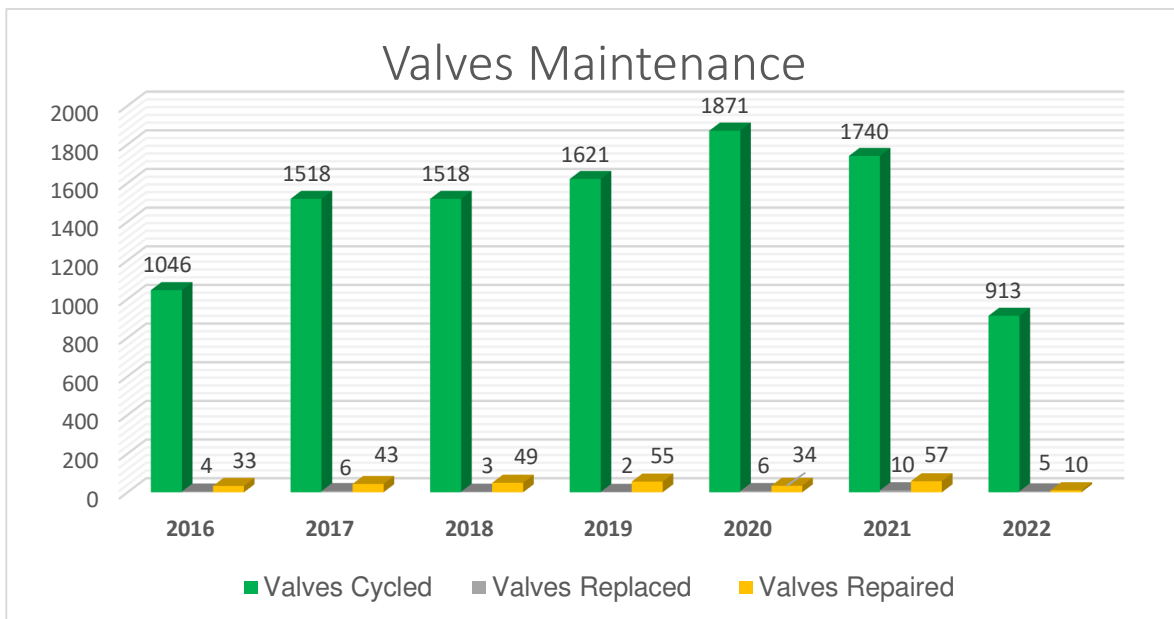
Watermain Repairs - Repair of watermains following pipe breakage. For the 2022 year we had a total of 49 watermain breaks. The majority of the breaks were from ductile iron and cast iron watermains.



Valve Maintenance and Inspection Programs:

Valve Cycling and Inspection - A preventative program that exercises all valves in the system to locate and identify inoperable, defective or broken valves as well as to help ensure operability and prolong lifespan of infrastructure. In 2022, only one valve cycler was utilize as the second one was out of service for several months.

Valve Repair and Replaced – Repair/replacement of inoperable, defective or broken valves.

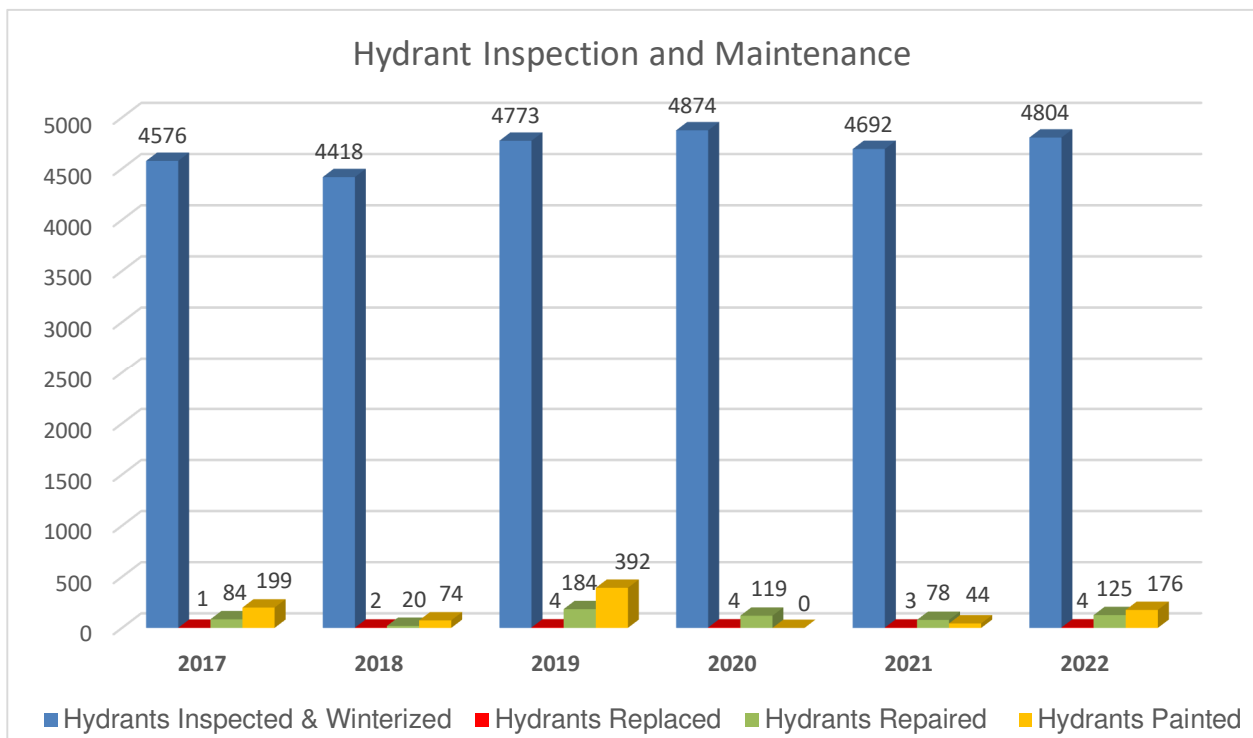


Hydrant Maintenance and Inspection Programs:

Hydrant Inspection and Winterizing - A preventative program to locate and identify inoperable, defective or broken hydrants and maintain operability during winter months (annual).

Hydrant Painting - A preventative program to protect hydrants from corrosion, maintain visibility and flow parameter (annual).

Hydrant Repair and Replacement - Repair/replacement of inoperable, defective or broken hydrants.

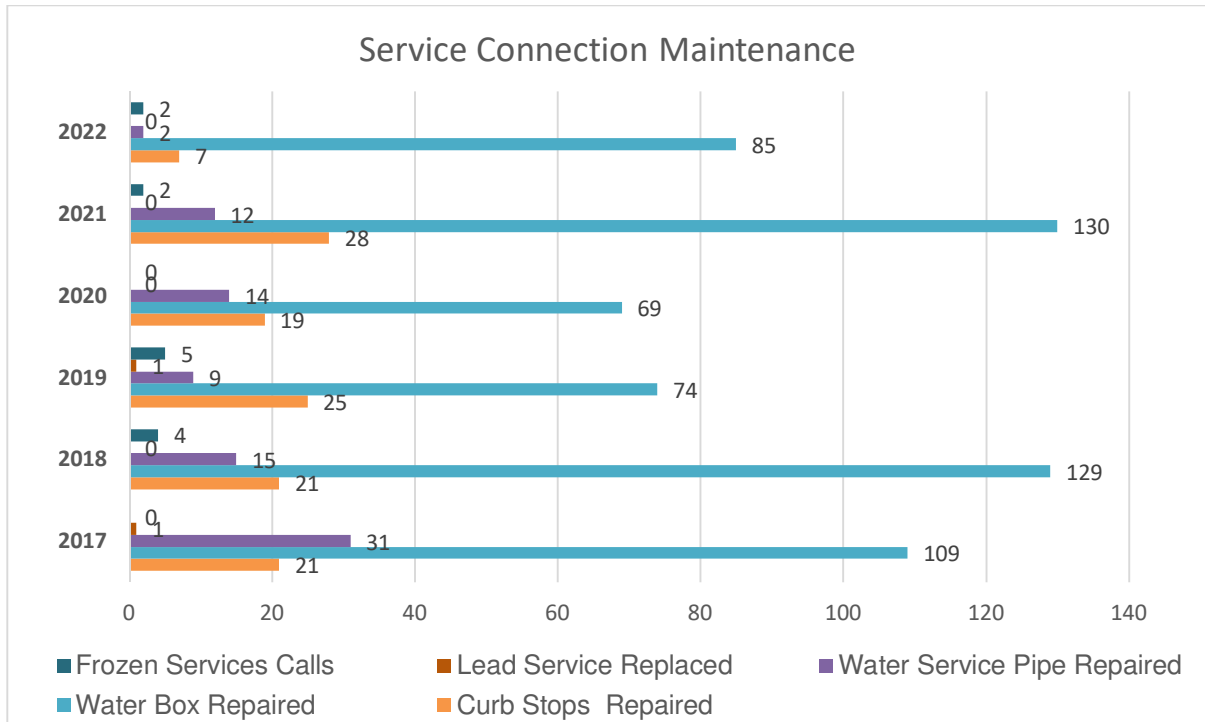


Service Connection Maintenance Programs:

Curb stop Repairs - Repairs of inoperable, defective or broken curb stops.

Water Service Pipe Repairs - Repairs and/or replacement of broken water service pipes. If the water service pipe is lead pipe this is then replaced up to the property line.

Frozen Services - Thawing of frozen water service piping.



3. Management Review Outcomes

Management Review meeting took place on December 8, 2022. The following table presents the outcomes of the management review:

Summary of Deficiencies	No deficiencies were identified for 2022	
Summary of Decisions	<p><u>Effectiveness of the risk assessment process</u> – Consider watermain leakage and cybersecurity as potential risk to water quality at the next Risk Assessment.</p> <p><u>Resources needed to maintain QMS</u> – In addition to drinking water’s QMS and Environmental Management System, Stormwater and Wastewater may require a management system; thus, the QMS software tool could be utilized by all the business units in the City. Potential exist for the different business units to fund the software tool and discussions to take place towards the creation of an Integrated Quality Management System for the City.</p>	
	<p><u>Operational Performance</u></p> <p>Managers (from Top Management) to discuss program creation to utilize hydraulic model for chlorine dissipation and water age within distribution system.</p>	<p>In progress</p> <ul style="list-style-type: none"> • Currently modeler working with Water and Wastewater Section, focusing on the wastewater as it relates to the ECA (Environmental Compliance Approvals). • Model for chlorine dissipation and water age within distribution system will be prioritized next.

Update on Previous Action Items	<u>Operational Performance</u> Unidirectional flushing (UDF) will continue to take hiatus and instead Water Staff will continue to assess data and benchmark other municipalities to determine best management practices regarding UDF going forward.	Completed - Water Division will not continue to perform UDF as a watermain preventative program. Through the Capital Replacement Program, the City has less than 20% metallic pipes; therefore, UDF is not viable and in its place staff and resources will be relocated to other preventative maintenance such as Pressure Reducing and Air valves maintenance and inspection program.
	<u>Resources needed to maintain the Quality Management System</u> IT Dept. currently piloting Share Point for Wastewater Operations. Will work with IT Dept. to determine if, Share Point could also be used for DWQMS	In progress – Held various meetings with IT Dept. and SharePoint was determined not suitable for all the functions needed by the Quality Management System. PNF submitted as part of the 2023 Capital Budget Request.

4. Third-Party Audit Outcomes and Accreditation Renewal

The Surveillance Audit took place on October 25 to 26, 2022. No non-conformances were identified and 6 opportunities for improvement. Current certification is valid until November 30, 2024.

Certificate of Registration

This certifies that the Quality Management System of

The Corporation Of The City Of Richmond Hill

1200 Elgin Mills Road East
 Richmond Hill, Ontario, L4S 1M4, Canada

has been assessed by NSF-ISR and found to be in conformance to the following standard(s):

Ontario's Drinking Water Quality Management Standard Version 2

Scope of Registration:

Richmond Hill Distribution System, Q22-QA1, Entire Full Scope Accreditation



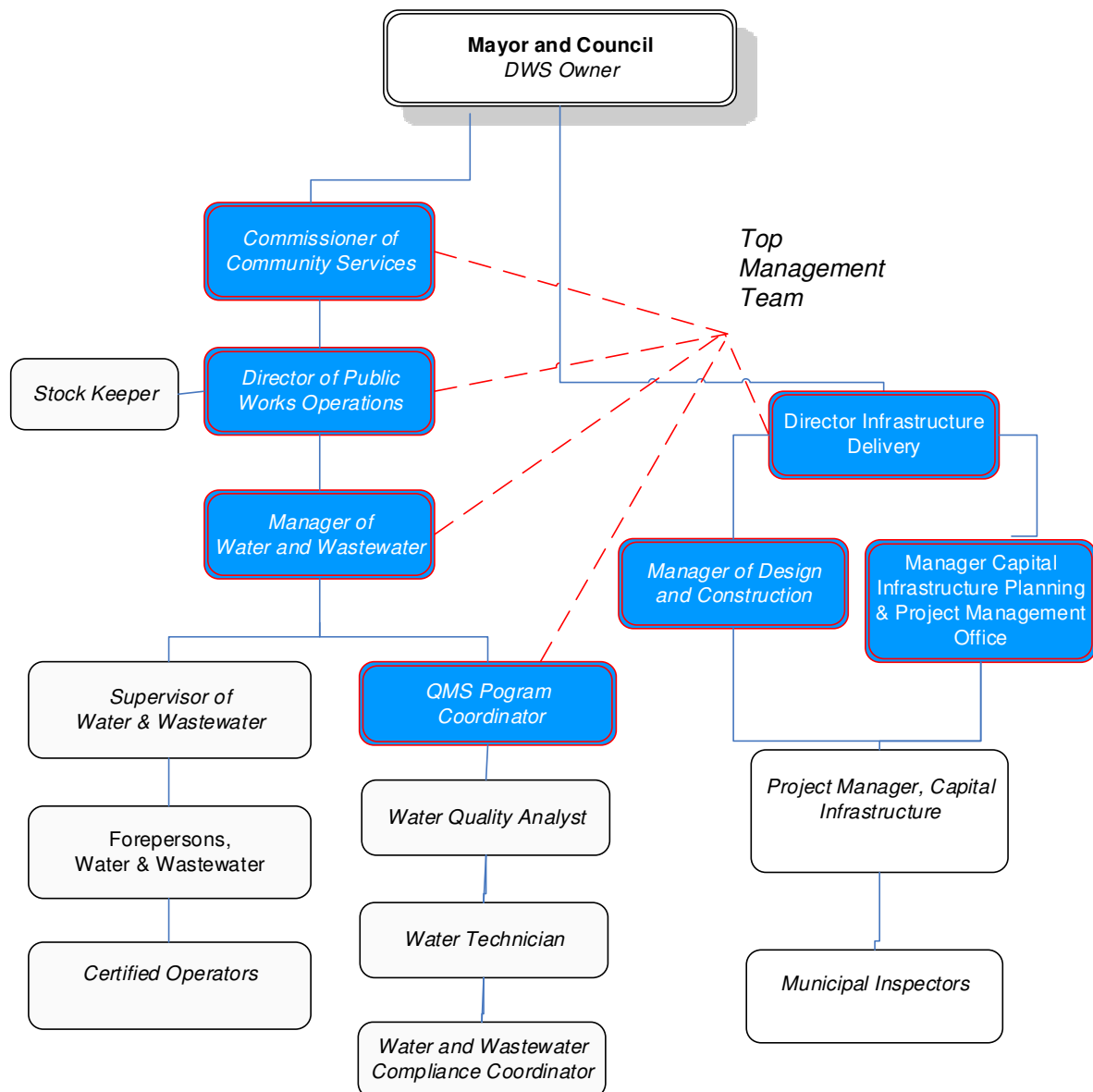
Certificate Number: C0123074-DWQ9
 Certificate Issue Date: 03-DEC-2021
 Registration Date: 01-DEC-2021
 Expiration Date *: 30-NOV-2024

**Tom Chestnut,
 Sr Vice President - ISR,
 NSF-ISR, Ltd.**

5. Organizational Structure, Roles, Responsibilities and Authorities

Members of Council as the “Owner” of the drinking water distribution system are responsible for ensuring their drinking water system meets all prescribed drinking water quality standards, operate in accordance with the *Safe Drinking Water Act* and its regulations, keep a fit state of repair, comply with all sampling, testing and monitoring requirements and meet all reporting requirements.

QMS Top Management consist of: Commissioner of Community Services, Director Public Works Operations, Director Infrastructure Delivery, Manager of Water and Wastewater, Manager of Design and Construction, Manager Capital Infrastructure Planning & Project Management Office and QMS Program Coordinator.



Roles and Responsibilities during an Emergency Response:

<p>Level 1</p>	<p>Minor Operational Impact or Interruption of Service/System</p>	<p>Certified Operator Supervisor Overall Responsible Operator (ORO) /Manager</p>	<p>Verbal notification of Level 1 emergency Escalation</p>
<p>Level 2</p>	<p>Water Quality and/or Large Volume Consumer Affected</p>	<p>Certified Operator Supervisor Overall Responsible Operator (ORO) /Manager</p>	<p>Verbal notification of Level 2 emergency Escalation Public Health and MECF Notification</p>
<p>Level 3</p>	<p>Immediate Danger to Health or Property</p>	<p>Certified Operator Supervisor Overall Responsible Operator (ORO) /Manager Director Public Works Top Management Communication Services</p>	<p>Verbal notification of Level 3 emergency Escalation Public Health and MECF Notification Top Management in consultation with the Communication Services shall decide upon the public communication process.</p>
<p>Level 4</p>	<p>City-wide Emergency</p>	<p>Certified Operator Supervisor Overall Responsible Operator (ORO) /Manager Director Public Works Top Management Communication Services Fire Chief Mayor and Council</p>	<p>Verbal notification of Level 4 emergency Escalation Public Health and MECF Notification City-wide emergency communication coordinated by the Communications Services Department</p>