




Hamilton

## INFORMATION REPORT

<b>TO:</b>	Chair and Members Public Works Committee
<b>COMMITTEE DATE:</b>	March 23, 2020
<b>SUBJECT/REPORT NO:</b>	2019 Annual Drinking Water Report (PW20020) (City Wide)
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Cari Vanderperk (905) 546-2424 Ext. 3250
<b>SUBMITTED BY:</b>	Andrew Grice Director, Hamilton Water Public Works Department
<b>SIGNATURE:</b>	

### COUNCIL DIRECTION

Not Applicable

### INFORMATION

Under the *Safe Drinking Water Act*, there are several annual reporting requirements related to the operation and management of the City of Hamilton's five (5) Drinking Water Systems (DWS) (as identified below).

Drinking Water System
Hamilton DWS (Woodward and Fifty Road Subsystems)
Freelton DWS
Greensville DWS
Carlisle DWS
Lynden DWS

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

**SUBJECT: 2019 Annual Drinking Water Report (PW20020) (City Wide) - Page 2 of 6**

This Information Report provides a summary of annual reporting requirements and highlights key information for the:

- *Safe Drinking Water Act, Ontario Regulation 170/03, Schedule 22, Summary Report for Municipalities;*
- *Safe Drinking Water Act, Ontario Regulation 170/03, Section 11, Drinking Water Reports, and*
- *Drinking Water Quality Management System (DWQMS) - Summary Report.*

More detailed information is provided in Appendices "A" and "B" to Report PW20020.

Summary Report for Municipalities (Appendix "A" to Report PW20020):

As per the *Safe Drinking Water Act, Ontario Regulation, 170/03, Schedule 22*, Council must receive an annual drinking water summary report by March 31<sup>st</sup> of each year. This 2019 summary report has been prepared in accordance with the requirements as defined in Schedule 22, for each of the City of Hamilton's five (5) DWSs.

There were no Provincial Officer's Orders issued in relation to any of the City's drinking water systems. All Adverse Test Results and Reportable Incidents were reported to the Ontario Ministry of Environment, Conservation and Parks (MECP) Spills Action Centre (SAC) and Public Health Services (PHS) and are summarized in Appendix "A" to Report PW20020. All water taking quantities and flow rates were within approved rated capacities and provincial water taking limits. Data related to the water quantities, flow rates and monthly average and maximum daily flows (in comparison to approved flow rates) for the five (5) DWSs is also provided in the attached Appendix "A" to Report PW20020.

The Drinking Water and Environmental Compliance Division of the MECP conducts regular and rigorous inspections of our Drinking Water Systems. The 2017 to 2019 inspection ratings are as follows:

Drinking Water System	April 1, 2017 to March 31, 2018 Inspection Rating	April 1, 2018 to March 31, 2019 Inspection Rating	April 1, 2019 to March 31, 2020 Inspection Rating
Hamilton DWS - Woodward	96.32%	94.85%	Pending in 2020
Hamilton DWS - Fifty Road	100%	100%	99.10%

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**SUBJECT: 2019 Annual Drinking Water Report (PW20020) (City Wide) - Page 3 of 6**

Drinking Water System	April 1, 2017 to March 31, 2018 Inspection Rating	April 1, 2018 to March 31, 2019 Inspection Rating	April 1, 2019 to March 31, 2020 Inspection Rating
Freelton	100%	96.74%	100%
Greensville	100%	99.36%	100%
Carlisle	100%	94.40%	100%
Lynden	100%	100%	99.40%

**2019 Annual Drinking Water Quality Reports (Appendix "A" to Report PW20020):**

As per the *Safe Drinking Water Act, Ontario Regulation, 170/03, Section 11*, the Owner of a DWS shall ensure that an annual report is prepared and made available to the public no later than February 28<sup>th</sup> of each year. The 2019 reports have been prepared in accordance with the requirements as defined in Section 11, for each of the City of Hamilton's DWSs and form part of Appendix "A" to Report PW20020. The reports are available on the City of Hamilton website and upon request, free of charge.

**Drinking Water Quality Management System (DWQMS) - Summary Report (Appendix "B" to Report PW20020):**

The submission of the DWQMS Summary Report satisfies the requirements of the Provincial DWQMS Standard.

The purpose of the DWQMS Summary Report is to inform the Owner (Mayor and Council) of the performance and major milestones achieved in the City's DWQMS. Specifically, the Operating Authority (Hamilton Water Division) is required to inform Top Management (General Manager of Public Works and Director of Hamilton Water Division) and the Owner of the outcomes of the infrastructure, DWQMS audits and management reviews. The DWQMS Summary Report exceeds these requirements and includes additional information relating to other milestones of the DWQMS.

**Risk Assessment and Review and Provision of Infrastructure:**

On an annual basis, Hamilton Water (HW) undertakes formal risk assessment and infrastructure review processes. While these processes satisfy the requirements of the DWQMS Standard, more importantly they ensure that any potential hazards are identified, required control measures are in place and that risks to our drinking water system are considered as part of an overall determination of infrastructure adequacy.

The 2019 Risk Assessment and Review and Provision of Infrastructure processes concluded that although vertical and horizontal infrastructure is generally found to be adequate and available when needed, we are not keeping up with required renewals and replacements of our aging infrastructure. This results in an increased demand on maintenance staff and resources as assets remain in operation beyond their intended life cycle. It was also found that there are appropriate control measures and action plans in place for the significant risks identified.

#### DWQMS Audits:

The DWQMS accreditation process requires both 3rd Party Accreditation Audits and annual internal audits by the Operating Authority.

In 2019, QMI-SAI Global conducted an off-site systems audit. There were no non-conformances or opportunities for improvement found.

The internal DWQMS audits conducted in 2019 focused on the following:

- Corrosion Control Process – July 5, 2019
- Customer Service & Community Outreach and Essential Supplier, The City of Hamilton Customer Contact Centre – August 19, 2019
- Planning & Economic Development Watermain Break Process/Transfer of As-Built Drawings Process – October 23 and 25, 2019
- Audit of Remaining DWQMS Elements – November 8 and 25, 2019

The highest risk finding of all the audits in 2019 is related to the transferring of As-Built Drawings from Planning & Economic Development to Customer Service & Community Outreach. This process is receiving attention from both Hamilton Water and Planning & Economic Development.

With the timely completion of the corrective actions issued as a result of this audit, the overall conformance to V2.0 of the DWQMS Standard and the City of Hamilton's DWQMS is suitable, the audit process is adequate, and the implementation and maintenance effective.

In 2020, the plan is to conduct a number of process audits throughout the year. The 2020 Audit Plan will be reviewed and approved by the HW Senior Management Team prior to implementation.

#### Management Review:

The DWQMS Standard requires that Top Management participate in a management review of the DWQMS at least once per year. The Management Review is a formal presentation of compliance, operational, water quality, communication and infrastructure data.

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**SUBJECT: 2019 Annual Drinking Water Report (PW20020) (City Wide) - Page 5 of 6**

In 2019, the DWQMS Top Management Review (TMR) was held on September 23. Attendees included Top Management (General Manager of Public Works and Director of Hamilton Water), Directors, Section Managers, Overall Responsible Operators (OROs) for treatment and distribution, the System Management Representative and staff from the Compliance Support Group.

Overall, Top Management, Directors and Section Managers concluded that the DWQMS is suitable, adequate and effective.

**Standard of Care Training:**

Standard of Care requirements for Owners and Managers of municipal DWS's came into effect as of January 1, 2013. Standard of Care is a statutory due diligence requirement identified in Section 19 of the *Safe Drinking Water Act*. All Owners (Mayor and Council) returning on the new Council had previously received Standard of Care training.

Standard of Care training was provided for the new members of Council in February to April 2019.

**Financial Plan:**

The need to prepare a Water Infrastructure Financial Plan is, in part, a regulatory compliance issue specific to the water licensing requirements defined within the DWQMS and more specifically detailed under Regulation 453/07 - Financial Plans made under the *Safe Drinking Water Act, 2002*. The required Financial Plan for water systems must address a minimum six-year time-frame and be approved by council prior to submission to the Province of Ontario. The resulting plans must also be made freely available to the general public. Water Infrastructure Financial Plans for Hamilton have typically been developed to cover a ten-year period of time in order to reflect consistency with the current rate budget process. The first Financial Plan was created in 2010 and revised in 2014. The latest revision was approved by Council on July 12, 2018. This most current plan was also sent to the Ministry of Municipal Affairs and Housing on November 22, 2018. The next revision of the Financial Plan is not due until 2023.

**Update and Going Forward:**

The outcomes from the Management Review and internal and external DWQMS audits concluded that the DWQMS is adequate, suitable and effective and conforms to the requirements of the DWQMS Standard. Corrective action plans from audits and action items from the Management Review will be implemented to ensure continual improvement of the DWQMS.

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**APPENDICES AND SCHEDULES ATTACHED**

Appendix "A" - 2019 City of Hamilton Drinking Water Annual Summary and Water Quality Report

Appendix "B" - Drinking Water Quality Management System (DWQMS) - Summary Report

**Due to bulk, Appendix "A" to Report  
PW20020 is not printed in the agenda  
but is available for viewing in the City  
Clerk's Office and on-line  
at [www.hamilton.ca](http://www.hamilton.ca).**

CITY OF HAMILTON'S DRINKING WATER SYSTEMS  
**DWQMS SUMMARY REPORT**

2019



Safe Drinking Water Act  
DWQMS v2.0



# DRINKING WATER QUALITY MANAGEMENT SYSTEM POLICY

*The City of Hamilton owns, maintains and operates various drinking water systems. The City is committed to:*

**S**

*Safe, high quality, consistent supply of drinking water*

**A**

*Always improving the Drinking Water Quality Management System*

**F**

*Following and complying with applicable legislation*

**E**

*Effective and open communication with the community concerning matters of drinking water quality*





<b>1 INTRODUCTION</b>	
1.1 Purpose	4
1.2 Scope	5
1.3 Overview of Key Milestones	5
1.4 DWQMS Operational Summary	6
<hr/>	
<b>2 RISK ASSESSMENT</b>	
2.1 Overview	7
2.2 Key Updates	7
<hr/>	
<b>3 REVIEW AND PROVISION OF INFRASTRUCTURE</b>	
3.1 Purpose	8
3.2 Process	8
3.3 Overview of Results	9
<hr/>	
<b>4 DWQMS AUDITS</b>	
4.1 External DWQMS Audits	9
4.2 Internal DWQMS Audit	9
<hr/>	
<b>5 MANAGEMENT REVIEW</b>	
	10
<hr/>	
<b>6 CONCLUSIONS</b>	
	11
<hr/>	
<b>7 NEXT STEPS – TIMELINE</b>	
	11
<hr/>	
<b>LIST OF FIGURES</b>	
Figure 7-1: Project Pipeline - 2019	5
Figure 7-2: DWQMS Standard Elements	6
<hr/>	
<b>LIST OF TABLES</b>	
Table 7-1: Infrastructure Review Data	8
Table 7-2: Management Review Action Items	10



# 1 INTRODUCTION

## 1.1 Purpose

This Drinking Water Quality Management System (DWQMS) Summary Report is being submitted to the Owner, (Mayor and Council) on behalf of Top Management (General Manager, Public Works and Director of Hamilton Water) of the City's five drinking water systems (DWS), as shown below.

Drinking Water System
Hamilton DWS (Woodward and Fifty Road Subsystems)
Freelton DWS
Greenville DWS
Carlisle DWS
Lynden DWS

The purpose of this DWQMS Summary Report is to keep the Owner of the City's DWSs informed about the ongoing performance of the DWQMS, including major milestones achieved in 2019. This report also assists the Owner in meeting their Standard of Care responsibilities under the Safe Drinking Water Act (SDWA).

This DWQMS Summary Report is a key communication tool from Top Management to the Owner as referenced in Element 12 Communications of the DWQMS Standard. This Report also meets the communication requirements of Element 14 Review and Provision of Infrastructure and Element 20 Management Review of the DWQMS Standard as identified in Sections 3 and 5 of this report, respectively.

### 1.2 Scope

The DWQMS Standard requires that the Operating Authority report on certain aspects of the DWQMS to the Owner, specifically the outcomes of Element 14 Review and Provision of Infrastructure and Element 20 Management Review. This report fulfills the communication requirements of these elements and exceeds the Standard's requirements by providing information on external and internal DWQMS Audits, Risk Assessment and other major milestones of the DWQMS for 2019.

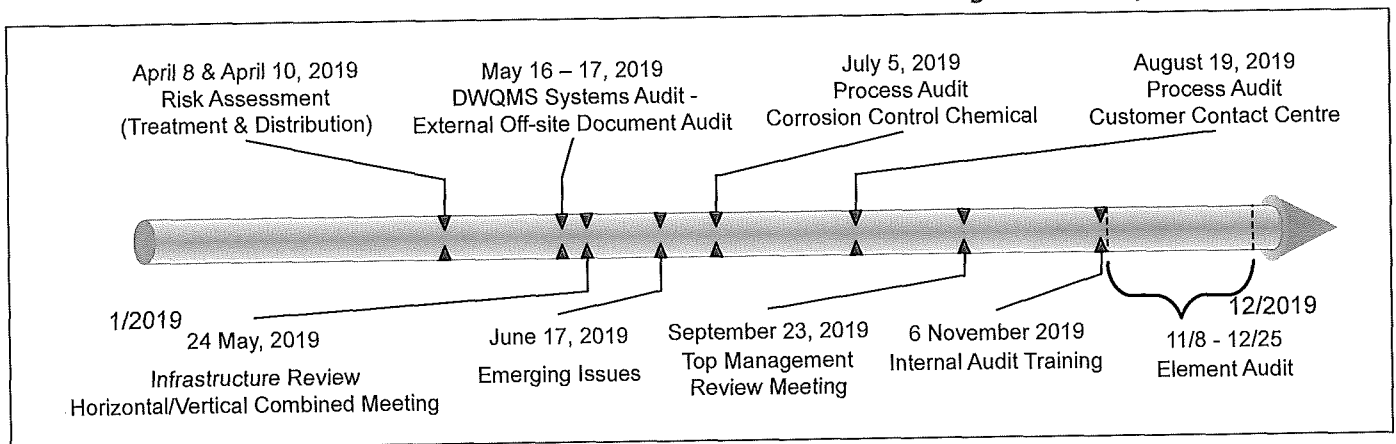
### 1.3 Overview of Key Milestones

DWQMS milestones related to the accreditation of Hamilton Water, the City's Operating Authority are:

- November 2008 – DWQMS Operational Plan endorsed by Owners,
- April 2009 – Operating Authority achieves Partial Scope; Entire DWQMS accreditation,
- June 2009 – Operating Authority receives Municipal Drinking Water Licences and Drinking Water Works Permits for all five City DWSs,
- February 2011 – On-site Verification Audit by Canadian General Standards Board (CGSB),
- July 2011 – Operating Authority achieves Full Scope; Entire DWQMS accreditation,
- 2012 – Identified QMI - SAI Global as the new Accreditation Body,
- 2012 – Standard of Care Training for Mayor and Council,
- May 2013 – External Systems Audit (off-site document review),
- June 2013 – Operating Authority receives reaccreditation,
- May 2014 – External Systems Audit (off-site document review),
- June 2014 – Received renewed Municipal Drinking Water System Licences for each of the City's five DWSs,
- First quarter 2015 – re-endorsement of the DWQMS Operational Plan by Owners,
- March (off-site document review) and April (on-site audit) 2015 – re-accreditation of the DWQMS by external registrar, SAI-Global,
- May 2016 – External Systems Audit (off-site document review),
- May 2016 – Standard of Care Training for Acting General Manager and new Councillor,
- May 2017 – External Systems Audit (off-site document review),
- April (off-site document review) and May (on-site audit) 2018 – re-accreditation of the DWQMS by external registrar, SAI-Global,
- February to April 2019 - Standard of Care Training for new Councillors and Legal Counsel,
- May 2019 – Received renewed Municipal Drinking Water System Licences and Permits for each of the City's five DWSs,
- May 2019 – re-endorsement of the DWQMS Operational Plan by Owners,
- May 2019 – External Systems Audit (off-site document review).

Figure 7-1 illustrates key DWQMS milestones which occurred in 2019:

Figure 7-1: Project Pipeline - 2019



**1.4 DWQMS Operational Summary**

Figure 7-2 illustrates the Plan, Do, Check and Act elements of the DWQMS Standard. In 2018, the Ministry of the Environment and Climate Change revised the Standard and issued V 2.0.

The following sections of this report include an overview of milestones related to the following elements of the DWQMS:

- Section 2 - Element 8 Risk Assessment Outcomes
- Section 3 - Element 14 Review and Provision of

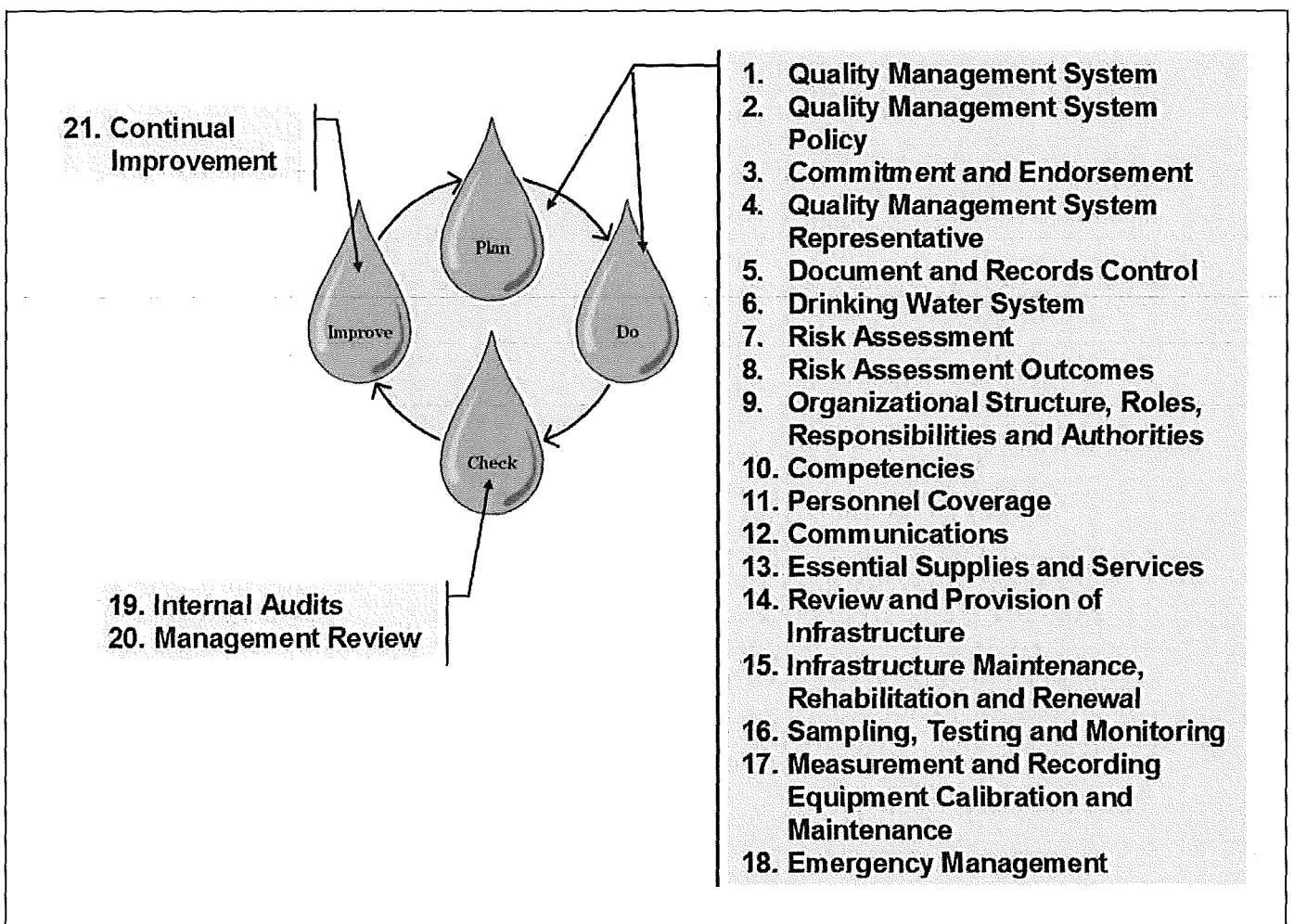
Infrastructure

- Section 4 - Element 19 Internal Audits
- Section 5 - Element 20 Management Review

**DWS Licences & Permits Approvals**

In 2019, the Municipal Drinking Water Licences and Permits for each of our Drinking Water Systems were renewed. In addition, there were 13 approvals for extensions to the distribution system and 5 approvals for like for like infrastructure replacements (e.g. pumps).

**Figure 7-2: DWQMS Standard Elements**



## 2 RISK ASSESSMENT

### 2.1 Overview

The DWQMS Standard requires that a Risk Assessment be conducted in its entirety every three years and reviewed on an annual basis, to verify the currency and validity of the information. An interim review of the Risk Assessment scope, criteria, data fields and update of Risk Assessment Outcomes was conducted in 2019.

Staff from across Hamilton Water collaborated on updating the existing information considering the following key questions:

- Are identified control measures still valid and if so, are they still in place?
- Have additional controls been implemented?
- How has equipment condition, raw water quality, operational controls etc. changed?
- Are any modified "Risk Factors" now considered to be Critical Control Risks?

Similar to previous years, there were no significant risks identified through the 2019 process, which were not already captured through an existing Hamilton Water initiative or project.

### 2.2 Key Updates

As part of the Risk Assessment, process changes, including capital upgrades in the DWSs, are considered and the associated risk scores (i.e. likelihood of occurrence) are updated as needed. The following includes a list of materials that were considered in the 2019 Risk Assessment:

- Capital Delivery - Water Projects Recently completed and upcoming
- 2019 DWQMS Infrastructure Review outcomes
- Critical Control Point Summary Chart PW-WW-R-032-009 (Outcomes updated from previous DWQMS Risk Assessment)
- DWQMS Risk Assessment - Water Distribution Report PW-WW-R-032-012 (Outcomes updated from previous DWQMS RA)
- Review of Adverse Water Quality Incident Notifications
- BCOS Database Quality Non-conformance Module (audits and inspections)

- 2019 Emerging Issues Meeting outcomes
- Critical Control Point Summary - Woodward DWS PW-WW-L-032-005
- DWQMS Risk Assessment - Water Treatment Plant Report PW-WW-R-032-010 (Outcomes updated from previous DWQMS Risk Assessment)
- Critical Control Point Summary - Wells & Fifty Road DWS PW-WW-L-032-005
- DWQMS Risk Assessment - Wells Systems Report PW-WW-R-032-011 (Outcomes updated from previous DWQMS RA)
- Items from recent DWQMS Top Management Review Meeting
- Review and consideration of the MECP's "Potential Hazardous Events for Municipal Residential Drinking Water Systems"

In 2020, a full review of the Risk Assessment process and outcomes will be completed in accordance with the Standard. Hamilton Water staff continue to work to integrate the DWQMS Risk Assessment with the City's Asset Management risk assessment in accordance with Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure that came into effect on January 1, 2018. Full integration and replacement of the DWQMS Risk Assessment and Infrastructure Review process will not be completed for a number of years.



### 3 REVIEW AND PROVISION OF INFRASTRUCTURE

#### 3.1 Purpose

The Operating Authority must ensure and verify, on an annual basis, the adequacy of water infrastructure. In order to satisfy the requirements of the DWQMS Standard, the Operating Authority conducted a formal review of its vertical (water treatment, storage and pumping) and horizontal (watermains) infrastructure. The scope of the review also considered the operation, maintenance and replacement of existing infrastructure assets as well as new infrastructure planned for the immediate and long-term future. A Coordination Meeting was held with the Management Team of Hamilton Water

to discuss the outcomes of both the horizontal and vertical infrastructure reviews. This DWQMS Summary Report (2019) includes a brief summary of the results of the DWQMS Infrastructure Review.

#### 3.2 Process

Teams were assembled from across relevant sections of Hamilton Water, Engineering Services and Planning and Economic Development (P&ED) to conduct the review of water infrastructure. A Coordination Meeting was held in May 2019 to discuss vertical and horizontal infrastructure and the results were presented to management in June 2019. The teams collected and examined input data related to various asset management, maintenance and capital programs. A summary of the type of "indicator" data examined is provided below:

Table 7-1: Infrastructure Review Data

Infrastructure Type	Input Data
Horizontal Infrastructure – Maintenance	<ul style="list-style-type: none"> <li>→ Watermain Repairs</li> <li>Hydrant and Valve Inspections</li> <li>Valve and Meter Replacement</li> <li>Substandard Service Replacement</li> <li>Preventative Maintenance</li> <li>Emergency Repairs</li> <li>Customer Complaints</li> </ul>
Horizontal Infrastructure - Large Capital	<ul style="list-style-type: none"> <li>→ Replaced, Rehabilitated and New Watermains</li> <li>Condition Assessments</li> <li>Capital Upgrades</li> <li>Master Plan Schedule</li> <li>Corrosion Control Program and Corrosion Control Building</li> <li>Asset Management – Critical Watermain Age Profiles and Inspections</li> </ul>
Vertical Infrastructure – Maintenance	<ul style="list-style-type: none"> <li>→ Preventative Maintenance Program Status</li> <li>Breakdowns and Emergency Repairs</li> <li>Capital Upgrades - Coordination and Scheduling</li> <li>Life Cycle Best Practices</li> <li>Critical Projects</li> </ul>
Vertical Infrastructure – Large Capital	<ul style="list-style-type: none"> <li>→ Condition Assessments</li> <li>Master Plan Update</li> <li>Source Water Protection Projects, Well Studies and Investigations</li> <li>Water Capital Projects Lists</li> </ul>

### 3.3 Overview of Results

The outcomes and recommendations from the Infrastructure Review Meeting were documented in meeting minutes for the 2019 review. Attendees at the Infrastructure Review meeting utilized the outcomes from the meeting as input to capital planning and budget preparation. Hamilton Water discussed the 2019 Infrastructure Review at the Top Management Review meeting on September 23, 2019.

The 2019 Infrastructure Review process concluded that our vertical and horizontal infrastructure is generally found to be adequate and available when needed. It was also found, however, that we are not keeping up with required renewals and replacements of our aging infrastructure. This results in an increased demand on maintenance staff and resources as assets remain in operation beyond their intended life cycle.

## 4 DWQMS AUDITS

The DWQMS accreditation process requires both 3rd party accreditation audits and annual internal audits by the Operating Authority. The cycle of external audits includes an on-site verification audit every 3 years and systems audit or documentation review annually.

### 4.1 External DWQMS Audits

Hamilton Water utilizes the services of QMI-SAI Global as the accreditation body for the DWQMS. In 2019, QMI-SAI Global conducted an off-site systems audit. There were no non-conformances or opportunities for improvement found.

### 4.2 Internal DWQMS Audit

The Operating Authority must conduct internal audits to evaluate the conformity of the DWQMS with the requirements of the DWQMS Standard and its procedures, at least annually.

The internal DWQMS audits conducted in 2019 focused on the following:

- Corrosion Control Process – July 5, 2019
- CS&CO and Essential Supplier, The City of

Hamilton Customer Contact Centre – August 19, 2019

- P&ED Watermain Break Process/Transfer of As-Built Drawings Process – October 23 and 25, 2019
- Audit of Remaining DWQMS Elements – November 8 and 25, 2019

The results of the annual DWQMS Internal Audits conducted throughout 2019 demonstrated that the City of Hamilton's DWQMS is a mature system and that opportunities to improve the DWQMS continue to be identified to ensure that the system is relevant and appropriate for HW. The HW DWQMS contains the required procedures and records to illustrate the establishment and continual improvement of the management system.

The highest risk finding of all audits in 2019 is related to the transferring of As-Built Drawings from P&ED to Customer Service & Community Outreach (CS&CO). This process is receiving attention from both HW and P&ED.

With the timely completion of the corrective actions issued as a result of this audit, the overall conformance to V2.0 of the DWQMS Standard and the City of Hamilton's DWQMS is suitable, the audit process is adequate, and the implementation and maintenance effective.

### 2020 DWQMS Audit Plan

The Compliance Support Group of the Compliance & Regulations Section will be developing an Audit Plan for the 2020 DWQMS internal audits. It is proposed that the plan will include a number of process audits throughout 2020. The Audit Plan will be reviewed and approved by the Hamilton Water Senior Management Team prior to implementation.





## 5 MANAGEMENT REVIEW

The PLAN component of Element 20 Management Review of the DWQMS Standard requires a documented procedure to describe how the Operating Authority reviews the suitability, adequacy and effectiveness of the DWQMS. The 'CHECK' component of the element requires that Top Management participate in a management review at least once per year to review the DWQMS and consider recommendations for continual improvement. Required outputs of the meeting are:

- Consideration of the results of the management review and identifying deficiencies and action items to address deficiencies,

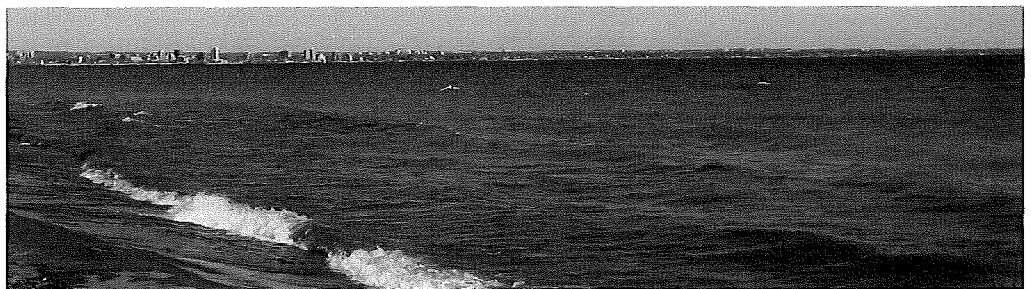
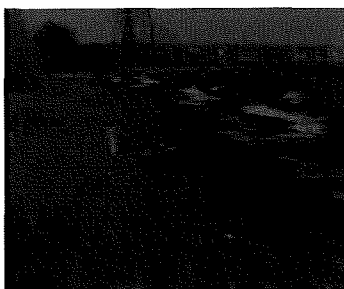
- Provide a record of decisions and actions items including responsibilities and timelines,
- Report the results of the management review to the Owner.

In 2019, the DWQMS Top Management Review (TMR) was held on September 23<sup>rd</sup>. Attendees included Top Management (General Manager of Public Works and Director of Hamilton Water), Directors, Section Managers, Overall Responsible Operators (OROs) for treatment and distribution, the System Management Representative and staff from the Compliance Support Group.

Overall, Top Management, Directors and Section Managers concluded that the DWQMS is suitable, adequate and effective.

**Table 7-2: Management Review Action Items**

No.	Summary of Action Items	Status
1	It was confirmed at the Fall 2019 Municipal Water and Wastewater Regulatory Committee (MWWRC) meeting that other municipalities do not distinguish between confirmed and unconfirmed AWQIs.	Closed
2	Sent the Public Works General Manager the link to the public website that was setup in protest to the Ancaster Water Tower.	Closed
3	The Public Works General Manager suggested that other options be explored to provide redundancy for the Greenville DWS.	Open
4	The Public Works General Manager met with the local MECP Director in November to discuss enhancements to the working relationship between HW and the MECP.	Closed
5	Meeting held with other Ontario municipalities to discuss contracted utility locate programs.	Closed



### Financial Plan

The need to prepare a Water Infrastructure Financial Plan is, in part, a regulatory compliance issue specific to the water licensing requirements defined within the DWQMS and more specifically detailed under Regulation 453/07 - Financial Plans made under the Safe Drinking Water Act, 2002. The required Financial Plan for water systems must address a minimum six-year time-frame and be approved by council prior to submission to the Province of Ontario. The resulting plans must also be made freely available to the general public. Water Infrastructure Financial Plans for Hamilton have typically been developed to cover a ten-year period of time in order to reflect consistency with the current rate budget process.

The first Financial Plan was created in 2010 and revised in 2014. The latest revision was approved by Council on July 12, 2018. This most current plan was sent to the Ministry of Municipal Affairs and Housing on November 22, 2018. The next revision of the Financial Plan will be due in 2023.

## 6 CONCLUSIONS

The outcomes from the internal DWQMS audit and the Management Review concluded that the DWQMS is adequate, suitable and effective and conforms to the requirements of the DWQMS Standard. Corrective action plans from the audit and action items from the Management Review will be implemented to ensure continual improvement of the DWQMS.

## 7 NEXT STEPS – TIMELINE

The management system requires ongoing commitment by staff and management. Maintenance and improvement of the system continues to be a high priority of the Operating Authority. Major next steps related to the maintenance of the DWQMS in 2020 include the following:

Month of 2020	Scheduled DWQMS Milestones
January to July	→ Investigate and correct internal audit findings from DWQMS Internal Audits
February/March	→ Annual O.Reg. 170 Schedule 22 Report and DWQMS Summary Report to Council
Throughout 2020	→ DWQMS Internal Audits
March	→ Hamilton Water - SMT Meeting #1
April	→ DWQMS Risk Assessment Meetings
April/May	→ DWQMS 3rd Party Surveillance off-site Documentation Audit
May	→ Infrastructure Review Meetings
June	→ Hamilton Water - SMT Meeting # 2
September	→ DWQMS Top Management Review
December	→ Hamilton Water - SMT Meeting # 3