




INFORMATION REPORT

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| TO: | Chair and Members Public Works Committee |
| COMMITTEE DATE: | March 20, 2023 |
| SUBJECT/REPORT NO: | 2022 Annual Drinking Water Report (PW23014) (City Wide) |
| WARD(S) AFFECTED: | City Wide |
| PREPARED BY: | Susan Girt (905) 546-2424 Ext. 2671 |
| SUBMITTED BY: | Nick Winters Director, Hamilton Water Public Works Department |
| SIGNATURE: |  |

COUNCIL DIRECTION

N/A

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 (City) five (5) Drinking Water Systems (DWS) (as identified below).

| Drinking Water System |
|---|
| Hamilton DWS (Woodward and Fifty Road Subsystems) |
| Freelton DWS |
| Greenville 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.

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

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

More detailed information is provided in Appendix “A” to Report PW23014 and Appendix “B” to Report PW23014.

2022 Annual Drinking Water Quality Reports are attached as Appendix “A” to Report PW23014:

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 of each year. The 2022 reports have been prepared in accordance with the requirements as defined in Section 11, for each of the City’s DWSs and form part of Appendix “A” to Report PW23014. The reports are available on the City’s website and upon request, free of charge.

As per the *Safe Drinking Water Act, Ontario Regulation, 170/03, Schedule 22*, Council must receive an annual drinking water summary report by March 31st of each year. This 2022 summary report has been prepared in accordance with the requirements as defined in Schedule 22, for each of the City’s five DWSs.

Highlights:

- There were no Provincial Officer’s Orders issued in relation to any of the City’s DWS’s;
- 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 PW23014;
- All water taking quantities and flow rates were within approved rated capacities and provincial water taking limits; and
- 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 PW23014.

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The MECP Inspection Cycle spans two (2) (calendar) years from April 1 to March 31. Ratings are given upon completion of the Inspection and the issuance of the Inspection Report. Ratings for the two (2) Inspection Cycles that occurred in 2022 are as follows:

Table 1: 2021 - 2022 Inspection Cycle Ratings (Status as of December 31, 2022)

| Drinking Water System | Inspection Status | Report Status | Inspection Rating (2021 - 2022) |
|------------------------------|--------------------------|----------------------|--|
| Hamilton DWS - Woodward | Complete | Complete | 100% |
| Hamilton DWS - Fifty Road | Complete | Complete | 97.83% |
| Freelton | Complete | Complete | 100% |
| Greenville | Complete | Complete | 100% |
| Carlisle | Complete | Complete | 100% |
| Lynden | Complete | Complete | 100% |

Table 2: 2022 - 2023 Inspection Cycle Ratings (Status as of December 31, 2022)

| Drinking Water System | Inspection Status | Report Status | Inspection Rating (2022 - 2023) |
|------------------------------|--------------------------|----------------------|--|
| Hamilton DWS - Woodward | Commenced | Pending | Pending |
| Hamilton DWS - Fifty Road | Complete | Complete | 100% |
| Freelton | Complete | Complete | 100% |
| Greenville | Pending | Pending | Pending |
| Carlisle | Complete | Complete | Pending |
| Lynden | Commenced | Pending | Pending |

2022 Drinking Water Quality Management System (DWQMS) Summary Report attached as Appendix "B" to Report PW23014:

The submission of the DWQMS Summary Report satisfies the requirements of the Provincial DWQMS Standard V2.0.

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 DWQMS audits, infrastructure 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 2022 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.

DWQMS Audits:

The DWQMS accreditation process requires both third Party (external) Accreditation Audits and annual internal audits by the Operating Authority. The cycle of external audits includes an on-site verification audit every three (3) years and an off-site documentation review annually. In May 2021, QMI-SAI Global provided re-accreditation of the City's DWQMS. In June 2022, QMI-SAI Global conducted an off-site documentation review. There were no non-conformances and one (1) opportunity for improvement identified (implemented).

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 results of the annual DWQMS Internal Audits conducted in 2022 demonstrated that the City'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. 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's DWQMS is suitable, the audit process is adequate, and the implementation and maintenance effective.

The Compliance Support Group of the Compliance and Regulations section is developing an Audit Plan for the 2023 DWQMS internal audits. The audit is to take place between March and July 2023. The plan will include a number of process and element audits. The Audit Plan will be reviewed by the Hamilton Water Senior Management Team and approved by the Systems Management Representative prior to implementation.

Management Review:

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

In 2022, the DWQMS Top Management Review (TMR) was held on September 23, 2022. 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 Systems 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 DWSs 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) received Standard of Care training in February 2023.

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 (6)-year timeframe and be approved by City 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 10-year period of time in order to reflect consistency with the current Water, Wastewater and Storm Rate budget process.

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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.

Update and Going Forward:

The outcomes from the internal and external 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 audits and action items from the Management Review will be implemented to ensure continual improvement of the DWQMS.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report PW23014 - 2022 City of Hamilton Drinking Water Systems
Annual Water Quality and Summary Report

Appendix "B" to Report PW23014 - 2022 Drinking Water Quality Management System
(DWQMS) - Summary Report