
For Information

REPORT TITLE: 2021 Operational Performance – Water and Wastewater Management Systems

FROM: Kealy Dedman, Commissioner of Public Works

OBJECTIVE

To provide a summary of the 2021 performance review of the Region's Drinking Water Quality Management System that supports Regional Council's duty and responsibilities under the Statutory Standard of Care of the *Safe Drinking Water Act* and to provide an update on the implementation status of the Region's Wastewater Integrated Management System.

REPORT HIGHLIGHTS

- Outcomes of 2021 Management Review confirm the Region's Drinking Water Quality Management System (DWQMS) remains effective and conforms to the Ontario standard by adopting a preventive approach to assuring drinking water quality and water system sustainability.
 - The Region has implemented a Wastewater Integrated Management System (WWIMS) in accordance with ISO standards in anticipation of future regulatory changes. Findings of internal audit demonstrate conformance to the ISO standards and internal practices. Certification is on hold pending future regulatory changes.
 - Staff commenced integration of DWQMS and WWIMS and through effective application of continual improvement, both systems promote protection of public health and the natural environment.
 - The Region maintained compliance with provincial and federal legislated requirements in 2021 for its water and wastewater systems during the second year of COVID-19 pandemic.
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DISCUSSION

1. Background

The Region of Peel (Region) is responsible for supplying safe drinking water to its residents and business owners and collecting wastewater for treatment and release to receiving waters without adversely impacting the natural environment.

The Standard

Following the Walkerton tragedy and inquiry, the province established a robust regulatory framework for municipal drinking water systems, with focus on operational performance and adoption of best practices and continual improvement. This included a made-in Ontario Drinking Water Quality Management Standard (Standard), which supplements the

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regulations to help municipalities operate water systems in compliance with the law and assure quality drinking water.

Management Review

The Region adopted quality management principles by implementing a Drinking Water Quality Management System (DWQMS) in conformance with the provincial Standard in 2008. Conformance is verified annually through internal audits and every three years by a third-party accreditation body. The annual Management Review is a key element of the Standard that evaluates the continuing suitability, adequacy, and effectiveness of the DWQMS and includes consideration of:

- Incidents of regulatory non-compliance
- Internal and external audit results
- Operational performance
- Status of management action plans
- Consumer feedback
- Effectiveness of risk assessments and emergency response testing

The results of the DWQMS Management Review are reported to Council every year for information and supports Regional Council's duty and responsibilities under the Statutory Standard of Care of the *Safe Drinking Water Act*.

Quality Management for Wastewater Systems

To date, the province has not established a mandatory wastewater quality management standard. However, the Region has voluntarily applied quality management principles and environmental management methodologies to the Region-operated wastewater systems through the development and implementation of a Wastewater Integrated Management System (WWIMS) that follows international standards ISO 9001 (Quality Management) and ISO 14001 (Environmental Management). WWIMS also requires an annual Management Review, the results of which have been included in this report.

2. Findings

a) 2021 Drinking Water and Wastewater Operational Performance

Staff reported the 2021 drinking water performance to Regional Council on March 24, 2022 (2021 Annual Drinking Water Systems Summary Report). The annual operational performance reports for 2021 for the Region's water and wastewater systems are available on the Region's website (Drinking Water Quality Reports – Region of Peel¹ and Wastewater Performance Reports – Region²). The positive performance results reflect the value of applying best management practices and the Region's commitment to protection of public health and the natural environment.

¹ <https://peelregion.ca/drinking-water/quality-reports.asp>

² <https://peelregion.ca/wastewater/#reports>

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b) DWQMS and WWIMS Audit Results

The internal and third-party audits conducted in 2021 evaluated the performance of the Region's water and wastewater management systems as per the provincial Standard and voluntarily adopted ISO standards for the water and wastewater systems respectively. Audit results confirmed conformance with management system policies, regulatory legislation and commitment to protection of public health and the environment. Audit findings highlighted examples of good practices that successfully drive continuous improvement and opportunities for further development under the new water and wastewater function-based organizational structure, specifically around internal communication.

The specific outcomes of the 2021 Management Review can be found in Appendix I of this report.

c) WWIMS Certification to International Standards

Management Review recommended continuing the sustainment and improvement of WWIMS and deferring the voluntary certification. Many of the benefits of implementing management system practices have been and will continue to be realized without formal certification. Deferring certification in the short term will provide more time for staff to improve key components of WWIMS and integrate WWIMS with DWQMS.

The Region maintains compliance with wastewater legislation, enforced by the Ministry of the Environment, Conservation and Parks (Ministry), to protect the natural environment and sources of drinking water. Currently, there is no mandatory quality management standard in Ontario for municipal wastewater systems. However, proposed changes to the Ministry's environmental compliance approvals and modernization of environmental compliance practices signal changes to the wastewater regulatory structure which are expected to improve the overall accountability for environmental protection. The implementation and ongoing improvement of WWIMS means Region staff will be well positioned to influence the province's future direction on wastewater quality management standards.

d) Integration of DWQMS and WWIMS

Following the implementation of WWIMS in early 2021, and to gain benefits from more than one management system working together in the future, staff began amalgamating components of DWQMS and WWIMS that were similar in delivery and outcomes to achieve a more efficient and balanced administration and governance of the two programs. Some of the initiatives include:

- Merging common document management practices
- Combined audit process
- Mobile application for directory of emergency and essential supplier/service providers

In 2021, staff also prepared the procurement of a quality management software solution to automate manual processes, manage documents and forms, facilitate risk

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assessments, help turn risks into opportunities for functional emergency preparedness, and manage audit/compliance checks with preventative and corrective actions to drive continuous improvement. This software solution will also be used to manage the Public Works Occupational Health and Safety Management System which is also proposed to align to ISO standards.

3. Next Steps

Further integration of the management systems will benefit the program with lower costs for certification and combined auditing, reduced volume of documentation and data redundancy, streamlined and optimized processes and more consistent goals and practices across the water and wastewater programs. The areas of focus for the work in 2022 will include:

- Water and Wastewater Management System Meetings
- Annual Management Reviews
- Business Planning
- Assessment of Risks and Opportunities
- Emergency Preparedness and Response Testing
- Internal Audits

CONCLUSION

The Region of Peel's water and wastewater systems operational performance has been maintained throughout 2021 and continued commitments to ongoing improvement through Drinking Water Quality Management System and Wastewater Integrated Management System demonstrate the Region's strong focus on protection of public health and the natural environment. The integration of the Region's water and wastewater management systems builds a strong vision of value of quality, adds efficiencies that ensure operational readiness in support of the regulated compliance obligations and that improve the water and wastewater service delivery needs of the community

APPENDICES

Appendix I – Management Review Summary – 2021 Operational Performance, DWQMS and WWIMS

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Kealy Dedman, Commissioner of Public Works