
Subject: RE: Regional Council Decision - 2019 Integrated Management System Update Report for Water, Wastewater and Waste Management

From: Switzer, Barbara **On Behalf Of** Regional Clerk

Sent: Friday, April 3, 2020 3:24 PM

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On April 2, 2020 Regional Council made the following decision:

1. The Regional Clerk circulate this report to the Clerks of the local municipalities and the Ontario Chief Drinking Water Inspector (Ministry of the Environment, Conservation and Parks) for information.

The original staff report is attached for your information.

Please contact David Szeptycki, Director, Strategy and Innovation at 1-877-464-9675 ext. 75723 if you have any questions with respect to this matter.

Regards,

Christopher Raynor | Regional Clerk, Regional Clerk's Office, Corporate Services

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Our Mission: **Working together to serve our thriving communities – today and tomorrow**

The Regional Municipality of York

Committee of the Whole
Environmental Services
March 12, 2020

Report of the Commissioner of Environmental Services

2019 Integrated Management System Update Report for Water, Wastewater and Waste Management

1. Recommendation

The Regional Clerk circulate this report to the Clerks of the local municipalities and the Ontario Chief Drinking Water Inspector (Ministry of the Environment, Conservation and Parks) for information.

2. Summary

Providing information on the efficacy of Environmental Services' Integrated Management System supports Council in meeting statutory standard of care requirements under the *Safe Drinking Water Act, 2002* demonstrating operational due diligence.

Key points:

- Environmental Services' Integrated Management System is mature, well-established and provides a structured approach to risk mitigation and continual improvement
- Audits performed at water, wastewater and waste management facilities provide continued insight into delivery of our services and result in improved operational performance and regulatory due diligence
- Accomplishments achieved in 2019 through the Integrated Management System include successful third party audits resulting in zero non-conformities and successful transition to version two of the Provincial government's Drinking Water Quality Management Standard

3. Background

Council has significant responsibilities to ensure safe drinking water under the *Safe Drinking Water Act, 2002*

Councillors have an important role to play in ensuring that York Region's drinking water systems provide safe, high-quality drinking water. Section 19 of the *Safe Drinking Water*

Act, 2002 clarifies the legal responsibility held by people with decision-making authority over municipal drinking water systems by imposing a statutory standard of care. It requires Councillors to exercise a level of care, diligence and skill with regard to a municipal drinking water system that a reasonably prudent person would be expected to exercise. York Region Council fulfills this duty through an ongoing commitment to financial support for water systems and continual improvement. This requirement is further defined in the 2019 Drinking Water Summary Report (also on this agenda), which includes the Ministry of the Environment, Conservation and Parks inspection results.

Table 1 summarizes roles and responsibilities, as defined in the Integrated Management System. Council and the Chief Administrative Officer, identified as Corporate Top Management, are required to provide oversight to ensure suitability and effectiveness of the Integrated Management System.

Table 1
Roles and Responsibilities for Environmental Services’
Integrated Management System (IMS)

Who	Roles and Responsibilities for IMS
<p>Corporate Top Management</p> <ul style="list-style-type: none"> - Council - Chief Administrative Officer 	<ul style="list-style-type: none"> - Exercise standard of care - Overall direction for Environmental Services’ IMS - Approval of resources and budget
<p>Operational Top Management</p> <ul style="list-style-type: none"> - Commissioner - Directors - Managers 	<ul style="list-style-type: none"> - Strategic direction for Integrated Management System - High-level operational decision-making - Drinking Water Quality Management Standard representative
<p>Water, Wastewater and Waste Management Operations</p> <ul style="list-style-type: none"> - Water and Wastewater Operators - Waste Management Coordinators - Technical Support Staff - Integrated Management System Coordinators 	<ul style="list-style-type: none"> - Front line operations - Water and wastewater quality sampling - Maintenance, inspections and asset management - Internal audits and regulatory reporting

Mature Integrated Management System assists Council with meeting standard of care

Environmental Services' Integrated Management System provides a consistent framework for minimizing operational impacts on the environment and protecting residents by complying with applicable legal requirements. The Integrated Management System also provides a structured approach to continually improve program and service delivery.

Table 2 summarizes what standards are applied to service delivery in Environmental Services. York Region's adherence to International Organization for Standardization (ISO) standards is voluntary, while compliance with the Drinking Water Quality Management Standard is a legal requirement under the *Safe Drinking Water Act, 2002* and the Municipal Drinking Water Licensing Program.

Table 2
Integrated Management System Framework

Operations	Management Standard	Registered Since
Wastewater	ISO 14001 Environmental Management Standard	2000
Water	ISO 9001 Quality Management Standard	2001
	Drinking Water Quality Management Standard	2009
Waste Management	ISO 14001 Environmental Management Standard	2010
	ISO 9001 Quality Management Standard	2018

The Integrated Management System assists Council by providing confidence that water, wastewater and waste management services are delivered in accordance with planned policies and procedures. Service delivery is confirmed through on-site audits, which mitigate operational risks, provide feedback for continual improvement and gauge operational resilience.

Integrated Management System is a framework to manage risk, protect public health and the environment

The Integrated Management System Policy (Figure 1) is a requirement of our registration and provides the foundation for management system commitments. It sets the framework for water, wastewater and waste management quality and environmental objectives. It is displayed at all registered water, wastewater and waste management facilities.

Figure 1

Integrated Management System Policy

Our innovative people provide water, wastewater and waste management services that protect public health and the environment to meet the needs of our thriving communities.

We are committed to the following objectives:



Auditing confirms system effectiveness by evaluating conformance with each management system standard

An effective audit program is a critical component of the Integrated Management System. Audit programs monitor compliance with regulatory requirements, conformance with internal requirements and strengthens system performance by identifying continual improvement opportunities.

Facilities and programs are audited via three main types of audits:

- Internal proactive audits
 - Conducted annually by trained auditors within Environmental Services to confirm conformance to management system requirements, and to evaluate compliance with regulatory requirements
- International Organization for Standardization (ISO) external audits
 - Completed annually by a third party registration body to confirm conformance to ISO 9001 and ISO 14001

- Regulatory Drinking Water Quality Management Standard (DWQMS) audit
 - Completed annually by a third party registration body to confirm conformance to the Drinking Water Quality Management Standard, on behalf of Ministry of the Environment, Conservation and Parks

4. Analysis

Comprehensive audit program continues to evolve and confirms high level of compliance

Environmental Services' audit program drives regulatory compliance and continual improvement in the Integrated Management System. Audits demonstrate system health and due diligence by ensuring that staff are continually challenging the status quo and looking for opportunities to strengthen delivery of programs and services. In 2019, Environmental Services conducted 71 internal proactive audits. Each year, audit findings identify internal business process improvements and system enhancements. Table 3 summarizes the number of audit findings by audit type, from 2017 to 2019.

Table 3
Number of Audit Findings for Water, Wastewater and Waste Management

Audit Type	2017	2018	2019
Internal Proactive Audit	91	74	60
ISO External Audit	3	8	0
Regulatory DWQMS Audit	0	0	0

A decrease in number of audit findings demonstrates system maturity and successful implementation of continual improvement initiatives. Audit processes and data management practices continue to evolve, which allow us to refine how audits are conducted and what information is audited. This evolution has allowed us to leverage data and analytics to provide deeper insight into system-wide performance and mitigate system risks.

Audit findings highlight key priorities and continual improvement initiatives for 2020

Our audits identified several continual improvement opportunities. A few opportunities include continuing to monitor and implement safety improvements at operating facilities, monitoring and verifying staff training requirements and improving timely documentation updates to reflect process improvements.

Findings also highlight key areas of focus for 2020, including verification of physical and cyber system security and confirmation of electronic access to documentation for field staff.

Environmental Services' Integrated Management System has provided a systematic approach to addressing audit findings for the past 20 years. This practice minimizes risk to the Region and ensures public safety.

Third party audits result in zero non-conformities and successful accreditation to new version of Drinking Water Quality Management Standard

Third party audits are intended to confirm that the Integrated Management System is in line with requirements of the standards and has demonstrated an ability to sustain services compliant with applicable regulations, and Regional service level targets. In 2019, three external audits were conducted, which resulted in zero non-conformities. Results achieved and auditor feedback received during these audits indicates that the Integrated Management System is mature, systematically achieves requirements, and demonstrates strong leadership and engagement.

Integrated Management System changes were implemented to meet Ministry of the Environment, Conservation and Parks Drinking Water Quality Management Standard version two requirements, including risk assessment updates that include an assessment of climate change implications. In July 2019, an external review was conducted to verify conformance of water operations and program administration to the updated Drinking Water Quality Management Standard. This audit resulted in successful accreditation to the updated standard, with zero non-conformities identified. This outcome supports legal requirements under the *Safe Drinking Water Act, 2002* and the Municipal Drinking Water Licensing Program.

Operational Top Management confirms adequacy, suitability and effectiveness of the Integrated Management System

Annual management review meetings are required by all three management standards. Operational Top Management uses this opportunity to assess efficacy of the Integrated Management System. The review focuses on system and regulatory performance, audit results, resources, operational risks and opportunities. A collaborative review is critical, and helps identify opportunities for continual improvement to improve efficiency and drive results. Through discussion at management review, priorities for the upcoming year are established. Operational Top Management met in Q1 2020 to review system performance for 2019 and confirm the adequacy, suitability and effectiveness of the Integrated Management System.

Continual improvement initiatives drive efficiencies in performance

Environmental Services made several enhancements to systems and processes in 2019 to drive efficiencies in water, wastewater and waste management services and mitigate environmental risk. Some of these include:

- Delivered customized online training for operating staff to ensure awareness and understanding of emergency response procedures

- Conducted ongoing identification and review of service delivery risks and opportunities through monthly discussions to identify potential mitigation measures
- Improved analysis and trending of quarterly customer communications reporting and developed plan to track via Customer Relationship Management (CRM) system to streamline information gathering and provide spatial mapping opportunities
- Finalized Integrated Management System Policy Manual to address new requirements of updated Drinking Water Quality Management Standard

Together, these initiatives support efficiency, cost savings, risk mitigation and enhanced system performance, which help strengthen service delivery.

5. Financial

Integrated Management System helps mitigate risk, comply with regulatory requirements and support continual improvement

Total annual program costs to operate the Integrated Management System are \$1.38 million, including staffing and external audit services, and were approved by Council through the 2020 budget process. 80% of program costs are funded from water and wastewater user rates, representing 0.2% of Environmental Services' rate budget. 20% of program costs are funded from the tax levy designated for waste management activities, representing 0.3% of Environmental Services' tax levy budget.

Investing in the Integrated Management System achieves risk management benefits, which assist in meeting obligations prescribed in the *Safe Drinking Water Act*. The management system provides a framework for staff to identify and mitigate risk, monitor and comply with regulatory requirements and continually improve processes used to deliver water, wastewater and waste management services.

6. Local Impact

Lessons learned are shared with provincial and municipal partners

The Integrated Management System for Environmental Services provides benefits to local municipalities as it supports a systematic approach to mitigating risk and environmental impacts. It also helps improve service delivery by documenting customer and regulatory requirements in a shared service delivery model for water, wastewater and waste management operations. All local municipalities have a quality management system to meet requirements of the Drinking Water Quality Management Standard. Environmental Services staff meets regularly with municipal and provincial partners to address challenges, share best practices, evaluate operating procedures and develop common approaches for effective service delivery.

7. Conclusion

Providing information on performance and enhancements to the Integrated Management System supports Council in meeting standard of care requirements under the *Safe Drinking Water Act, 2002*. Rigorous and comprehensive evaluation performed through the management system, including internal and external audits demonstrates York Region's commitment to ongoing improvement of its programs and services. Successful external audits in 2019, resulting in zero non-conformities, confirm the Integrated Management System is well-established, mature and systematically reduces operational risk. Continual improvement initiatives support system efficiencies and accomplish improved risk mitigation. On an ongoing basis, management reviews and confirms adequacy and effectiveness of the Integrated Management System to strengthen the delivery of programs and services.

For more information on this report, please contact David Szeptycki, Director, Strategy and Innovation at 1-877-464-9675 ext. 75723. Accessible formats or communication supports are available upon request.

Recommended by:

Erin Mahoney, M. Eng.
Commissioner of Environmental Services

Approved for Submission:

Bruce Macgregor
Chief Administrative Officer

February 27, 2020
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