

Clause 9 in Report No. 4 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on March 24, 2016.

9

2015 Integrated Management System Update Report
for Water, Wastewater and Waste Management

Committee of the Whole recommends adoption of the following recommendation contained in the report dated February 3, 2016 from the Commissioner of Environmental Services:

1. The Regional Clerk circulate this report to the Clerks of the local municipalities and the Ministry of the Environment and Climate Change.
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Report dated February 3, 2016 from the Commissioner of Environmental Services now follows:

1. Recommendation

The Regional Clerk circulate this report to the Clerks of the local municipalities and the Ministry of the Environment and Climate Change.

2. Purpose

This report updates Council on the status of Environmental Services' Integrated Management System as required by the Ministry of the Environment and Climate Change's Drinking Water Quality Management Standard. This report also supports Council in meeting commitments under Standard of Care, as prescribed in the *Safe Drinking Water Act, 2002*.

3. Background

Environmental Services' Integrated Management System includes registration to ISO 14001, ISO 9001 and Ontario's Drinking Water Quality Management Standard

Starting in 2000, Environmental Services began the process of ISO 14001 certification by voluntarily adopting an Environmental Management System for wastewater operations. This standard helps York Region minimize operational impacts on the environment, and comply with applicable laws, regulations and other environmental requirements, while continuously improving environmental management. In 2001, Environmental Services' water operations received ISO 9001 registration after Council endorsed implementation of a quality management system. This standard assists York Region in meeting the needs of customers and other stakeholders, while continuously monitoring and improving quality.

Council authorized implementation of a single Integrated Management System Policy in 2009. In 2010, existing ISO 14001 certification was expanded to include waste management operations. ISO 14001 certification expanded again in 2014 to include the Environmental Monitoring and Enforcement unit.

In response to the Walkerton water quality tragedy in 2000, the Province created the Drinking Water Quality Management Standard, which is a legal requirement under the *Safe Drinking Water Act, 2002* and the Municipal Drinking Water Licensing Program. The Region achieved accreditation to this standard in 2009, which helps ensure that consistent processes and procedures are in place to manage risks associated with producing and delivering high-quality drinking water.

Integrated Management System provides a mechanism for discipline and control of Region's drinking water systems to support Council's Standard of Care obligations

Councillors have an important role to play in ensuring that York Region's drinking water systems provide safe, high-quality drinking water. Effective December 31, 2012, 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. This requirement is further defined in the 2015 Annual Drinking Water System Summary Report (also on this agenda).

An Integrated Management System helps Council meet Standard of Care and due diligence requirements by providing information that appropriate management controls over drinking water systems have been established. Figure 1 summarizes roles and responsibilities for York Region’s drinking water systems, as defined by the Integrated Management System. Under Environmental Services’ Integrated Management System, Corporate Top Management is identified as Council and the Chief Administrative Officer. Corporate Top Management must be provided with details on continuing suitability, adequacy and effectiveness of the management system. This report is one way that information is provided, along with the 2015 Annual Drinking Water System Summary Report.

Figure 1
Standard of Care Roles and Responsibilities
for York Region’s Drinking Water System



Integrated Management System Policy provides foundation for management system commitments and is prominently displayed at all registered facilities

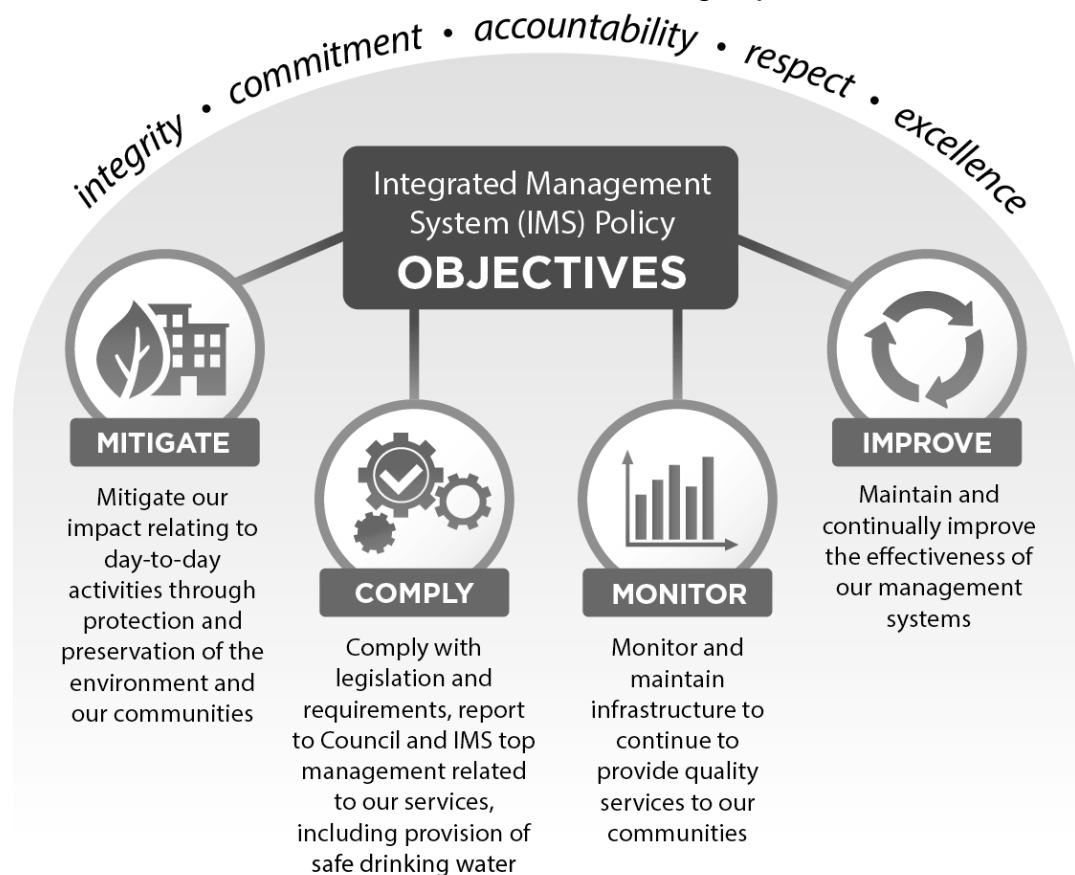
Environmental Services is committed to demonstrating leadership through the Integrated Management System; the department's commitments are summarized in an Integrated Management System Policy, which contains objectives and commitments for delivering an effective management system. The Policy aligns with the Corporate Strategic Plan and includes clear line of sight to the four principle objectives of the Integrated Management System as required by the International Organization for Standardization and the Drinking Water Quality Management Standard, Figure 2.

Figure 2

Integrated Management System Policy

Our innovative people provide environmental services that protect public health and the environment to meet the needs of our thriving communities.

We are committed to the following objectives:



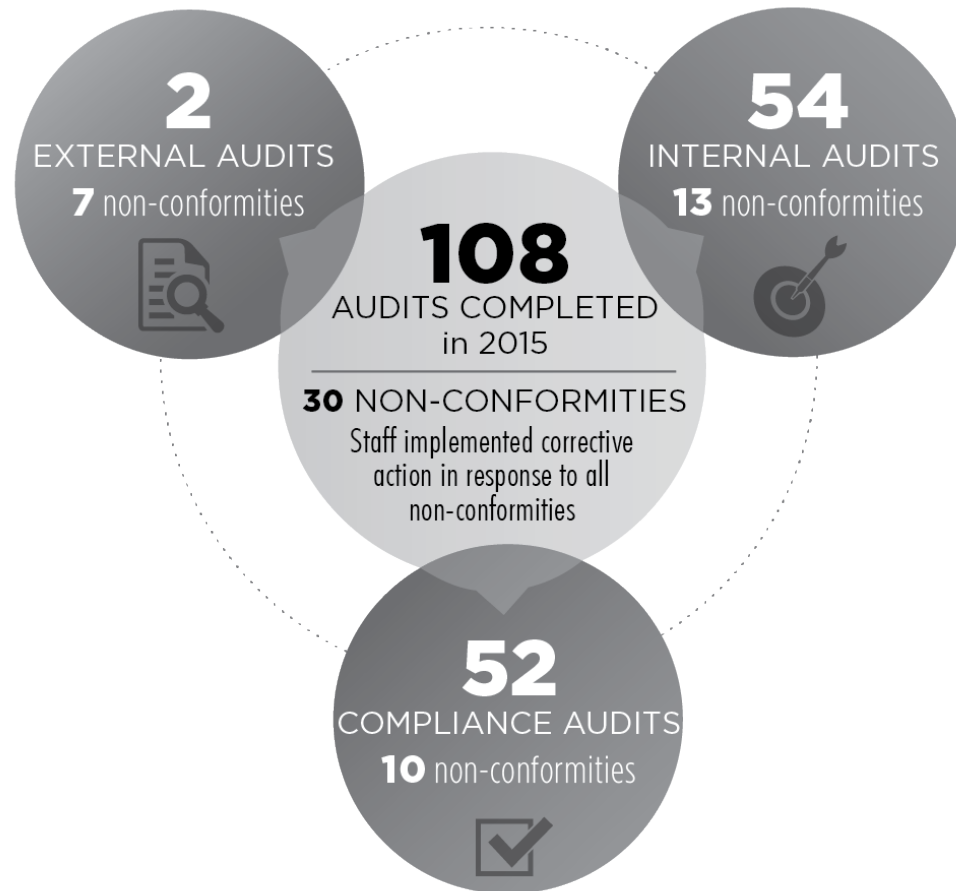
4. Analysis and Options

Auditing verifies effectiveness of the Integrated Management System by evaluating conformance with each management system standard

ISO 9001, ISO 14001, and the Drinking Water Quality Management Standard emphasize the importance of audits as a tool for monitoring and verifying effective implementation of quality and environmental policies and processes. An effective auditing program is a critical component of the Integrated Management System to monitor compliance with regulatory requirements and enhance system performance through continuous improvement. Three types of audits are used, as shown in Figure 3. External audits, completed by a third party registration body, confirm conformance to ISO 9001, ISO 14001 and the DWQMS. Internal audits, conducted by staff, confirm conformance to management system requirements. Compliance audits, also conducted by staff, evaluate compliance with regulatory requirements.

The Region's comprehensive audit program and audit outcomes drive continuous improvement in the Integrated Management System. The system of checks demonstrates a high level of due diligence that proactively identifies operational improvement opportunities and regulatory compliance concerns thereby minimizing risk to the Region.

Figure 3
2015 Regional Water, Wastewater and Waste Management Audits



In 2015, audit findings identified internal business process improvements and system enhancements, ultimately posing no risk to drinking water quality or environmental performance. Findings include opportunities to strengthen document and records management, staff training, and operational planning outputs. Staff acted to implement corrective actions in response to audit findings. No significant impediments are anticipated to complete tasks related to corrective actions that were identified through the audit program.

Opportunities to evaluate and improve system performance include an annual management review with Operational Top Management

Annual management review meetings are a requirement of the Drinking Water Quality Management Standard and ISO management standards. This is an important mechanism used by Operational Top Management to assess the adequacy, suitability and effectiveness of the Integrated Management System.

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The review focuses on operational performance, management system performance, audit results, regulatory requirements and resources. This review process helps identify opportunities for continuous improvement of business practices to improve efficiency and drive results. Operational Top Management met on February 5, 2016 to review system performance for the past year. System accomplishments are highlighted during the annual management review meeting and are summarized in Attachment 1.

Continuous improvement initiatives drive efficiencies in Integrated Management System performance

As part of ongoing continuous improvement initiatives, Environmental Services completed a number of improvements to the Integrated Management System in 2015. Completed initiatives include an audit program review, resulting in program efficiencies such as an improved scheduling and reduced audit time by streamlining requirements. Three staff members received certification from Environmental Careers Organization Canada (ECO Canada) as Environmental Professional – Compliance Auditors, increasing the proficiency of internal audits.

Additional initiatives that have resulted in system efficiencies include the development of data reports on system performance, updated operational documentation to support 24/7 shift coverage in Operations, Maintenance and Monitoring, and an updated schedule of system requirements that outlines annual maintenance activities and timelines. Together these initiatives support efficiency, cost savings, and enhanced system performance, which help strengthen the Integrated Management System while encouraging continued risk mitigation and ongoing improvement.

Action underway to expand scope of Integrated Management System to further enhance performance and align with updated standards

Initiated in 2014 and continuing throughout 2015, staff implemented and enhanced compliance audit processes to review requirements of the commissioning phase of capital projects and formalize the addition of new or replaced infrastructure. In 2015, a multi-year implementation plan was completed to evaluate inclusion of the infrastructure and capital delivery processes into the Integrated Management System. Incorporating additional business processes into the system will bring systematic controls through various stages of Environmental Services' program delivery accompanied by robust auditing.

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In September 2015, ISO 9001 and ISO 14001 management standards were updated by the International Organization for Standardization

The revised standards follow a common framework for system structure and include alignment of terms and definitions. There is a three year implementation timeline to conform to 2015 versions, due September 2018. An implementation plan to address changes is underway and action will be completed within this allotted time.

The Ministry of the Environment and Climate Change proposed changes to the Drinking Water Quality Management Standard in late 2015

York Region's comments on the draft standard included requesting greater alignment to ISO 9001 quality principles and improved communication of best management practices with municipalities throughout the Province. An updated version of the standard is expected in 2016, when staff will work on an implementation plan to adequately address changes. Review of management standard requirements is an ongoing process through policy and procedure development, which strengthens the efficacy of the Integrated Management System.

Link to key Council-approved plans

This report provides Council with an overview of the department's Integrated Management System for water, wastewater and waste management. Following a common framework of systematic continuous improvement and integration of quality and environmental standards in decision-making demonstrates a commitment to protecting public health and the environment.

Maintaining Environmental Services' management system aligns with the Region's 2015 to 2019 Strategic Plan objective of strengthening organizational capacity and effectiveness. This work supports our growing communities by setting clear performance objectives, and maintaining a workplace culture that embraces continuous improvement.

5. Financial Implications

Investment in the Integrated Management System provides a framework to mitigate risk, monitor and comply with regulatory requirements and support continuous improvement

The Integrated Management System provides a structured system of checks and balances for staff to mitigate risk, monitor and comply with regulatory requirements and continuously improve programs and processes used to deliver water, wastewater, and waste management services. Additionally, investment in the management system assists Council with meeting obligations prescribed in the *Safe Drinking Water Act, 2002*.

Total program costs to operate the Integrated Management System are \$1.06 million including external audit services and were approved by Council through the 2016 budget process. Eighty per cent of program costs are funded from user rates, representing 0.23 per cent of the total rate budget. Twenty per cent of program costs are funded from the tax levy for waste management activities under the scope of the Integrated Management System.

6. Local Municipal Impact

An Integrated Management System for Environmental Services provides a benefit to local municipalities as it supports a shared interest in mitigating environmental impacts, improving service delivery and complying with regulatory requirements in a two-tier service delivery model. All local municipalities have a quality management system to meet requirements of the Drinking Water Quality Management Standard. Following regulatory requirements with a high degree of compliance assists the Region in delivering a safe and sustainable supply of drinking water, as well as providing wastewater and waste management services with minimal operational impact on the environment.

7. Conclusion

Environmental Services' Integrated Management System helps York Region limit risk by minimizing operational impacts on the environment, complying with applicable laws, regulations and other environmental requirements. It also provides a structured approach to continuously evaluate and improve program delivery. Providing information on the 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

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comprehensive evaluation features, such as the audit program and management review process, which are built into the management system, demonstrates York Region's commitment to ongoing improvement of its programs and services.

For more information on this report, please contact David Szeptycki, Head of Strategy, Liaison and Policy Implementation at ext. 75723.

The Senior Management Group has reviewed this report.

February 3, 2016

Attachment

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Accessible formats or communication supports are available upon request.



2015 Integrated Management System Accomplishments

Objective 1) Mitigate our environmental impact related to day-to-day activities through protection and preservation of the environment

- Continued review of Integrated Management System operational performance and status of improvement initiatives through monthly Continuous Improvement meetings
- Achieved Environmental Professional – Compliance Auditor certification for three audit team members enhancing proficiency of audit program
- Conducted 15 root cause analysis workshops in 2015 and initiated process review to update techniques and effectiveness of incident investigations

Objective 2) Comply with legislation and requirements, report to Council and Integrated Management System top management related to our services, including provision of safe drinking water

- Achieved 99.09 per cent compliance score on Ministry of the Environment and Climate Change water facility inspection reports for 2014 – 2015 reporting period
- Completed 100 per cent of internal, external and compliance audits as scheduled
- Conducted eight liaison meetings with the regulator to advance opportunities for operational efficiencies in the areas of training, data management and regulatory reporting
- Formalized a schedule of system requirements that outlines annual maintenance activities and timelines to support conformance to ISO 9001, 14001 and DWQMS

Objective 3) Monitor and maintain infrastructure to continue to provide quality services to our communities

- Continued management inspection of facilities promoting greater awareness of audit program deliverables and familiarity with audit requirements
- Developed a tracking process to monitor progress on system objectives and targets that align with corporate and departmental strategic goals
- Strategic improvements to infrastructure locates program resulted in industry leading response time, compliance with the legislation, and a higher degree of damage prevention for the Region's infrastructure
- Created real-time data reports via Intellex to monitor system performance and task status

Objective 4) Maintain and continually improve the effectiveness of our management systems

- Improved audit program scheduling and streamlined requirements
- Established implementation plan to incorporate the Capital Planning and Delivery Branch into the scope of the Integrated Management System
- Supported documentation updates to capture 24/7 operations shift transition, and continued implementation of document management process modifications, resulting in improvements to documentation efficacy (e.g. reduced time to update documents, completed 269 change requests to strengthen procedures and processes)