

Clause 10 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 29, 2018.

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2017 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 13, 2018 from the Commissioner of Environmental Services:

1. The Regional Clerk circulate this report to the local municipalities for information.
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Report dated February 13, 2018 from the Commissioner of Environmental Services now follows:

1. Recommendation

It is recommended that:

1. The Regional Clerk circulate this report to the local municipalities for information.

2. Purpose

This report updates Council on the status of Environmental Services' Integrated Management System, including water, wastewater and waste management operations. This report on the performance of the management system is required by the Ministry of the Environment and Climate Change's Drinking Water Quality Management Standard and helps Council to meet its Standard of Care obligations required by the *Safe Drinking Water Act, 2002*.

### 3. Background

Councillors have unique responsibility to ensure safe drinking water under the *Safe Drinking Water Act*

Councillors have a unique and 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. Council fulfills this duty through ongoing commitment to financial sustainability of water systems, asset management strategy implementation and continual improvement actions to proactively managing risks to protect the people in the community. This requirement is further defined in the 2017 Drinking Water Systems Report (also on this agenda), and includes the Ministry of the Environment and Climate Change's inspection findings.

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

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

Environmental Services' Integrated Management System is a framework consolidating three requirements for delivery of water, wastewater and waste management services. The services to which each of these standards apply are summarized in Table 1. York Region's adherence to 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 1  
Integrated Management System Framework**

<b>Services</b>	<b>Management Standard</b>
Water	Drinking Water Quality Management Standard (DWQMS) International Organization for Standardization (ISO) 9001 Quality Management Standard
Wastewater Waste Management Public Drop Off Depots	International Organization for Standardization (ISO) 14001 Environmental Management Standard

Integrated Management System supports Council’s Standard of Care and due diligence obligations

The Integrated Management System aids York Region in meeting the needs of customers and stakeholders, while continually improving quality, monitoring and mitigating risk. It also helps Council fulfill Standard of Care and due diligence requirements by establishing and monitoring appropriate management controls over Regional drinking water systems. Figure 1 summarizes roles and responsibilities, as defined by the System. Council and the Chief Administrative Officer, identified as Corporate Top Management, are required to provide oversight to ensure suitability and effectiveness of the System.

Along with the 2017 Drinking Water Systems Report, this report is one way that information is shared with Council. Council meets its Standard of Care obligations by being informed and asking questions related to the provision of safe drinking water including: the budget process, provision of resources, and approval of Source Water Protection, asset management and capital project plans.

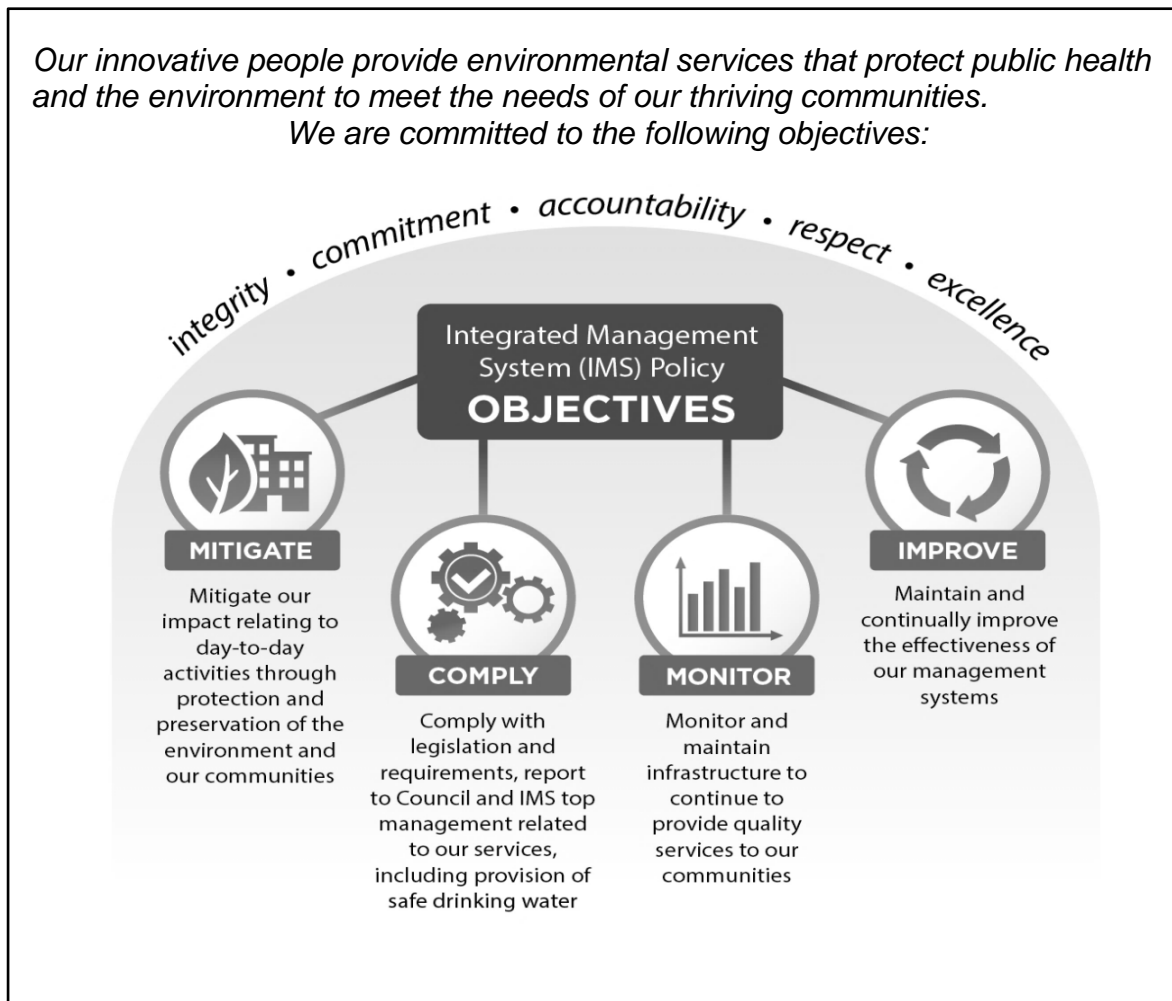
**Figure 1**  
**Roles and Responsibilities for Environmental Services**  
**Integrated Management System**



Policy defines the purpose of the Integrated Management System

The Integrated Management System Policy provides the foundation for management system commitments and is displayed at all registered water, wastewater and waste management facilities. The Policy, which aligns with the Corporate Strategic Plan, provides a framework for setting objectives, as shown in Figure 2.

**Figure 2**  
**Integrated Management System Policy**

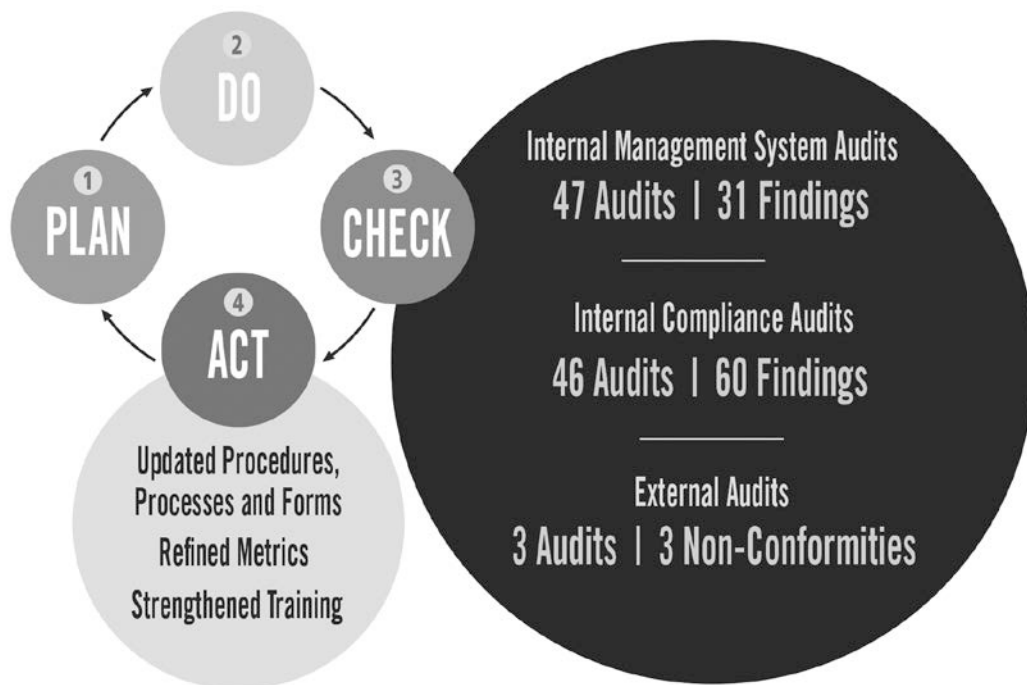


Auditing verifies effectiveness by evaluating conformance with each management system standard

An effective audit program is a critical component of the Integrated Management System. Audit programs monitor compliance with regulatory requirements and strengthen system performance through continual improvement. Both facilities and programs are audited via three types of audits, as shown in Figure 3.

- Internal management system audits - conducted by trained auditors within Environmental Services annually, confirm conformance to internal management system requirements
- Internal compliance audits - conducted by certified auditors within Environmental Services annually, evaluate compliance with regulatory requirements
- External audits - completed by a third party registration body annually, confirm conformance to the Drinking Water Quality Management Standard, ISO 9001, and ISO 14001

**Figure 3**  
**2017 Regional Water, Wastewater and Waste Management Audits**



Audit findings help demonstrate system strength by challenging the status quo

Environmental Services' comprehensive audit program drives continual improvement in the Integrated Management System. Every year, audit findings identify internal business process improvements and system enhancements. Audit findings help demonstrate system health and due diligence by ensuring that staff are continually challenging the status quo and looking for opportunities to strengthen the delivery of services. This practice minimizes risk to the Region, and ensures public safety.

Improvements to existing procedures, clarify requirements and strengthen staff training identified through audits

Environmental Services Integrated Management System has provided a systematic approach to addressing audit findings for the past 18 years. Corrective actions identified today tend to be fewer, but are more complex and require more time to implement. For example, keeping in step with each license renewal for every licensed operator that may involve four different types of licenses with varying expiration dates required to re-examine our process. Through the lens of continual improvement, Environmental Services streamlined the process for better records management. External audits conducted in 2017 identified three non-conformities that were minor in nature and required additional refinements to procedures and staff training.

#### 4. Analysis and Implications

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

Annual management review meetings are a requirement of the three management standards. Operational Top Management use this opportunity to assess the Integrated Management System. The review focuses on system performance, audit results, regulatory requirements and resources. This collaborative review process helps identify opportunities for continual improvement of business practices to improve efficiency and drive results. Operational Top Management met on February 7, 2018 to review system performance for the past year and confirmed the adequacy, suitability and effectiveness of the Integrated Management System.

Continual improvement initiatives drive efficiencies in Integrated Management System performance

As part of ongoing continual improvement, Environmental Services made several enhancements to internal systems and processes in 2017 to drive efficiencies in water, wastewater and waste management and mitigate risks to the environment. Some of these include:

- Migrated paper documentation (e.g. procedure binders) to electronic via use of field tablets, to improve ready access to the most updated versions of policies, procedures, forms, permits, and approvals

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- Consulted with stakeholders to refine emergency response plans including reporting requirements, post incident debrief sessions identifying improvement opportunities and ongoing communication with municipal service partners
- Incident tracking processes were improved to ensure continued capture of regulatory information and support departmental data needs
- Completed customized online Integrated Management System overview training for internal stakeholders within Environmental Services to meet ISO standard requirements
- Automated monthly reporting of Integrated Management System performance metrics
- Improved records management for Operator regulatory licensing

Together, the initiatives above support efficiency, cost savings, and enhanced system performance, which help strengthen the Integrated Management System.

Integrated Management System is expanding to further benefit departmental processes and reduce risk

Throughout 2017, application of Integrated Management System principles expanded, including defining overarching capital delivery processes, improving inter-departmental processes, and developing metrics to monitor performance requirements. Benefits include streamlined project management documentation, improved transparency, efficiency and rigour facilitating regulatory compliance. These enhancements will be monitored through system controls, reporting and regular process auditing.

Waste Management expands scope to strengthen customer focus

The Region's public waste drop-off facilities are currently registered to ISO 14001 and are undergoing scope expansion to include ISO 9001 registration. This work is scheduled and on track for 2018. In 2016, a multi-year implementation plan was initiated, and throughout 2017, project milestones were met. Achieving ISO 9001 registration will strengthen our customer focus and provide additional opportunities to mitigate operational risks, and working closely with end markets regarding product quality.



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Work plan and audit schedule developed to support updates to DWQMS, ISO 9001 and ISO 14001 management standards

The Ministry of the Environment and Climate Change finalized changes to the Drinking Water Quality Management Standard in 2017. As a result, Environmental Services is continuing to implement changes to meet the new requirements including updates to our risk assessment incorporating climate change implications and finalizing updates to the Management System Policy Manual in early 2018. All updates will be implemented before the Region's 2019 deadline, to transition to the new requirements.

ISO 9001 and ISO 14001 management standards were updated by the International Organization for Standardization in September 2015. The revised standards now follow a common framework for system structure and include alignment of terms and definitions. Conformance to 2015 versions of the standards must be achieved by September 2018. A transition audit is scheduled for May 2018 to facilitate continued ISO 9001 and 14001 registration.

### 5. Financial Considerations

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

Investment in the management system assists Council with meeting Standard of Care obligations prescribed in the *Safe Drinking Water Act, 2002*. The management system leverages a framework for staff to mitigate risk, monitor and comply with regulatory requirements and continually improve programs and processes used to deliver water, wastewater, and waste management services.

Total annual program costs to operate the Integrated Management System are \$1.2 million, including external audit services, and were approved by Council through the 2018 budget process. Eighty per cent of program costs are funded from water and wastewater user rates, representing 0.24 per cent of the total rate budget. Twenty per cent of program costs are funded from the tax levy portion designated for waste management activities under the scope of the Integrated Management System.

## 6. Local Municipal Impact

Lessons learned are shared with provincial and municipal partners

An 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 meet regularly with municipal and provincial partners to address challenges, share best practices, develop common approaches and evaluate operating procedures to provide effective service delivery. These meetings include participation in quarterly Municipal Water and Wastewater Regulatory Committee, informal local municipal DWQMS/Compliance meetings also held quarterly, and the annual Drinking Water Quality Management Standard provincial workshop.

## 7. Conclusion

Providing information on enhancements and the performance of the Integrated Management System supports Council in meeting Standard of Care requirements under the *Safe Drinking Water Act, 2002*. Continual improvement projects help make the system more efficient and accomplish greater risk mitigation with the same resources. Rigorous and comprehensive evaluation performed under the management system, including the audit program and management review process, demonstrates York Region's commitment to ongoing improvement of its programs and services.

For more information on this report, please contact Wendy Kemp, Director, Strategy & Innovation at 1-877-464-9675 ext. 75141.

The Senior Management Group has reviewed this report.

February 13, 2018

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Accessible formats or communication supports are available upon request