

Clause No. 32 in Report No. 12 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on June 26, 2014.

32

ENVIRONMENTAL SERVICES' 2013 INTEGRATED MANAGEMENT SYSTEM UPDATE FOR WATER, WASTEWATER AND WASTE MANAGEMENT

Committee of the Whole recommends:

- 1. Receipt of the presentation by David Szeptycki, Head of Strategy, Liaison and Policy Implementation, Environmental Services.**
- 2. Committee of the Whole recommends adoption of the following recommendation contained in the report dated June 3, 2014 from the Commissioner of Environmental Services:**

1. RECOMMENDATION

It is recommended that this report be received for information.

2. PURPOSE

This report updates Council on the status of Environmental Services' Integrated Management System as required in Environmental Services' Operational Plan. 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 has evolved to include ISO 14001, ISO 9001 and 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 and formally received ISO registration. This standard helps organizations minimize their operational impact on the environment, comply with applicable laws, regulations and

other environmentally orientated requirements, while continually improving environmental management. In 2001, water operations received ISO 9001 registration after Council endorsed implementation of a Quality Management System. This standard is designed to help organizations ensure they meet the needs of customers and other stakeholders while continually monitoring and improving quality.

Council authorized implementation of a single Integrated Management System in 2009 to prepare for inclusion of waste management services and the Ministry of the Environment's Drinking Water Quality Management Standard. The existing ISO 14001 registration was expanded in 2010 to include waste management operations. The Drinking Water Quality Management Standard, created by the Province in response to the Walkerton water quality tragedy in 2000, is a legal requirement under the *Safe Drinking Water Act, 2002* and the Municipal Drinking Water Licensing Program. This tool helps ensure that consistent processes and procedures are in place to manage risks associated with production and delivery of high quality drinking water.

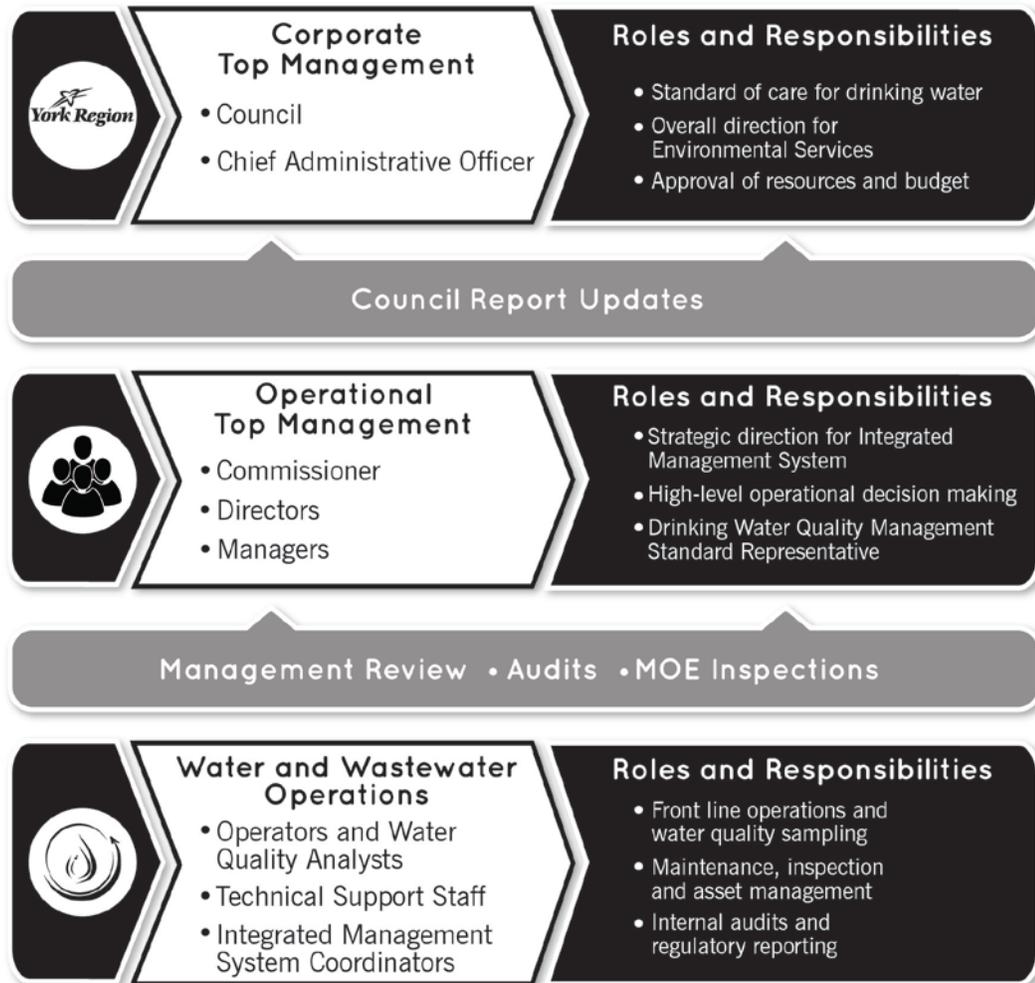
Council members exercise a Standard of Care to protect safety of drinking water system

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. It specifically 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 in a similar situation and that this due diligence be used honestly, competently and with integrity.

Integrated Management System provides a system of oversight and control over the drinking water system to support Council's Standard of Care obligations

An Integrated Management System helps Council meet Standard of Care and due diligence requirements by providing confidence that appropriate management controls over drinking water systems have been established, as outlined in Figure 1. 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 the continuing suitability, adequacy and effectiveness of the management system. This report is one way that this information is provided. The 2013 Annual Drinking Water System Summary Report from March 2014 is another supporting document.

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



Updated Integrated Management System Policy is the strong foundation for management system commitments

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 obligations for delivering a meaningful management system. In May 2014, the Policy was updated to better align with the Corporate Strategic Plan and included revisions to the four principle objectives of the Integrated Management System as required by ISO and outlined in Figure 2.

Figure 2
Integrated Management System Policy



4. ANALYSIS AND OPTIONS

Auditing verifies effectiveness of Environmental Services' Integrated Management System by evaluating conformance with each management system standard

ISO 9001, 14001, and the Drinking Water Quality Management Standard emphasize the importance of audits as a tool for monitoring and verifying effective implementation quality and environmental management policies. An effective auditing program is a critical component of the Integrated Management System to monitor compliance with regulations and enhance system performance.

York Region's Integrated Management System uses three types of audits:

1. Internal audits conducted by staff to proactively confirm conformance with management system requirements
2. Compliance audits conducted by staff to evaluate operational activities against applicable regulatory requirements to ensure compliance with regulations
3. External audits completed by a third-party registration body to confirm registration/accreditation

In 2013, 55 internal, 37 compliance, and 15 external audits were completed at York Region's water, wastewater and waste management facilities. Findings from internal and external audits identified opportunities for continuous improvement to further strengthen decision-making processes and management system success. A summary of the Region's water, wastewater and waste management audits completed in the 2013 calendar year are listed in Table 1.

Table 1
2013 Facilities Audited: Water, Wastewater and Waste Management Systems

System Type	Internal Audits	Internal Compliance Audits	External Audits
Water	38	31	8
Wastewater	10	5	7*
Waste Management	7	1	
2013 Total	55	37	15

* ISO 14001 external audits include both wastewater and waste management facilities

York Region achieved a 100 per cent compliance score on recent Ministry of the Environment water inspection reports

The Ministry of the Environment has a rigorous and comprehensive inspection program for municipal drinking water systems. On December 5, 2013, the MOE published the 2011-2012 Ontario Chief Drinking Water Inspector's Annual Report. This report is published approximately one year after the reporting period and covers the fiscal year starting April 1, 2011 to March 31, 2012. As reported earlier this year, York Region achieved 100 per cent compliance score on Ministry of the Environment water facility inspection reports for the 2011-2012 reporting period. Wastewater and waste management facilities undergo Ministry of the Environment inspections less frequently and compliance scores are not provided. In 2013, the Ministry of the Environment completed fifteen York Region drinking water system inspections, one wastewater facility inspection and one waste management facility inspection.

York Region successfully completed a third-party documentation audit for its Quality Management System under the Drinking Water Quality Management Standard in 2013

Accreditation under the Drinking Water Quality Management Standard involves on-going assessment and evaluation of a Quality Management System by a third-party Registrar. In December 2013, a third-party Registrar performed a documentation audit on York Region's Drinking Water Quality Management Standard, which found the system effective. One non-conformity report and three opportunities for improvement were identified through the audit. All findings were related to documentation within the Operational Plan, which posed no risk to the Region's drinking water quality. A corrective action plan was implemented and accepted by the third-party Registrar.

Opportunities to evaluate and improve system performances 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. The review focuses on operational performance, management system performance, audit results, regulatory requirements and resources. These reviews help identify opportunities for continuous improvement of business practices to improve efficiency and drive results.

System accomplishments are highlighted during the annual management review meeting with Operational Top Management. A summary of Accomplishments in 2013 that support the four main objectives of the Integrated Management System Policy are summarized in *Attachment 1*.

Continuous improvement initiatives demonstrate success in Integrated Management System performance

As part of ongoing continuous improvement initiatives, Environmental Services Department completed a number of improvements to the Integrated Management System in 2013. Completed initiatives include development of standardized procedure documents, upgraded functionality for corrective actions within the electronic document and task management system and enhanced internal reporting of performance measures that align with corporate and departmental strategic goals. These improvements support enhanced system performance, which helps position the Integrated Management System for future refinement and continuous improvement.

Plans underway to integrate additional business units and processes into Integrated Management System to further mitigate risks

Initiatives in 2014 include incorporating the Environmental Monitoring and Enforcement unit, responsible for the enforcement of York Region's Sewer Use Bylaw, into the Integrated Management System with ISO 14001 registration. Staff are developing multi-year implementation recommendations for inclusion of the Capital Planning and Delivery Branch. Incorporating additional business units into the Integrated Management System will bring robust auditing and controls through various stages of program delivery.

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 2011 to 2015 Strategic Plan objective of continuing to apply continuous improvement initiatives to core business services and processes. This work supports our growing communities by identifying and leveraging performance, and continuous improvement initiatives.

5. FINANCIAL IMPLICATIONS

Investment in Integrated Management System provides checks and balances to mitigate risk, comply with regulations, monitor regulatory compliance and continuously improve

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

Fully burdened program costs to operate the Integrated Management System and Regulatory Compliance program are budgeted at \$1.35 million for 2014. All activities for the program are funded from user rates.

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. Following regulatory requirements assists the Region in delivering a safe, 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 demonstrates leadership and supports Council in Standard of Care requirements

Providing information on the performance and enhancements to the Environmental Services' Integrated Management System supports Council in meeting Standard of Care requirements. Rigorous and comprehensive evaluation features, such as the audit program and management review process, which are built into the management system demonstrates leadership and commitment to ongoing improvement of the Department's 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.

Attachment (1)



2013 Integrated Management System Accomplishments

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

- Implemented monthly review of Integrated Management System operational performance at Continuous Improvement team meetings, such as environmental incidents, using new key performance indicator report
- Continued to use root cause analysis exercises to mitigate future occurrences and identify opportunities for system-wide continuous improvement

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 100 per cent compliance score on Ministry of the Environment water facility inspection reports for 2011-2012 reporting period
- Conducted 55 internal audits, 37 internal compliance audits and 15 external audits
- Facility walk-throughs at wastewater facilities confirmed conformance with regulatory requirements and identified continuous improvement opportunities

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

- Developed an improved data quality and validation process for water and wastewater compliance reporting processes
- Initiated development of capital infrastructure commissioning review process during construction

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

- Developed document control process for water and wastewater facility operations manuals
- Compliance audit program review resulted in process efficiency improvements
- Planned upgrade to document and task management software (Intalex) to improve tracking and reporting functions



2013 Integrated Management System Council Update

Presentation to Committee of the Whole

David Szeptycki

Head Strategy, Liaison and Policy Implementation

June 19, 2014

Environmental Services Integrated Management System



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





Corporate Top Management

- Council
- Chief Administrative Officer

Roles and Responsibilities

- Standard of care for drinking water
- Overall direction for Environmental Services
- Approval of resources and budget

Council Report Updates



Operational Top Management

- Commissioner
- Directors
- Managers

Roles and Responsibilities

- Strategic direction for Integrated Management System
- High-level operational decision making
- Drinking Water Quality Management Standard Representative

Management Review • Audits • MOE Inspections



Water and Wastewater Operations

- Operators and Water Quality Analysts
- Technical Support Staff
- Integrated Management System Coordinators

Roles and Responsibilities

- Front line operations and water quality sampling
- Maintenance, inspection and asset management
- Internal audits and regulatory reporting

Benefits of the IMIS to Corporate Top Management

- Proactive risk management
- Cost efficient regulatory compliance
- Transparency through communication
- Resolving customer concerns

Benefits of the IMS to Corporate Top Management

- Proactive risk management
- Due diligence and regulatory compliance
- Transparency through communication
- Knowledge and awareness



IMS provides robust system of checks and balances to support statutory Standard of Care obligations ~ *Safe Drinking Water Act, 2002*

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



OBJ



MITIGATE

Mitigate our impact relating to day-to-day activities through protection and preservation of the environment and our communities



COMPLY

Comply with legislation and requirements, report to Council and IMC.

Objective 1: Mitigate

Key 2013 Accomplishments

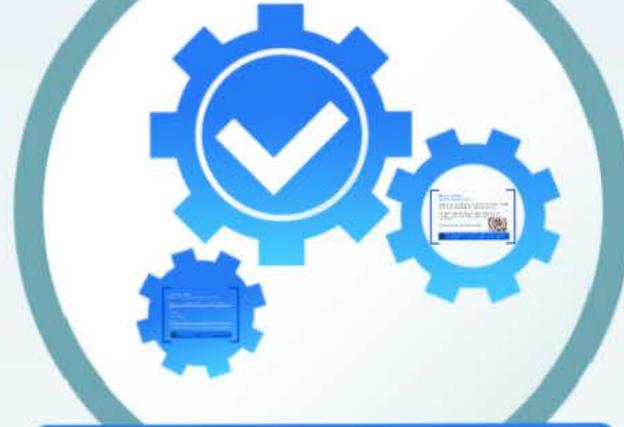
- Completed Regulatory Excellence training for all staff in the quality management system
- Implemented root cause analysis workshops
- Increased visibility of key program metrics



Operational performance of the Integrated Management System is reviewed at monthly Continuous Improvement meetings

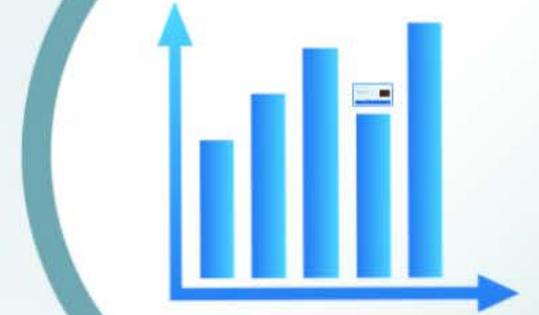
MITIGATE

Mitigate our impact relating to day-to-day activities through protection and preservation of the environment and our communities



COMPLY

Comply with legislation and requirements, report to Council and IMS top management related to our services, including provision of safe drinking water



MONITOR

Monitor and maintain infrastructure to continue to provide quality services to our communities

Objective 2: Comply

Key 2013 Accomplishments

- Achieved 100 % compliance score on Ministry of the Environment water facility inspection reports for 2011-2012 reporting period
- Wastewater facility walk-throughs confirmed conformance with regulatory requirements and identified continuous improvement opportunities
- Robust internal and external audit program



IMS reduces operational risks and supports Council's standard of care obligations by reducing variation, increasing awareness and promoting continuous improvement

A close-up photograph of a person's mouth drinking from a red cup. The background is blurred, showing what appears to be a hospital room with medical equipment. The text is overlaid on the cup.

***37,332 tests were
performed in 2013
to ensure safety of
our drinking water***

2013 Audited Facilities: Water, Wastewater and Waste Management Systems

System Type	Internal Audits	Internal Compliance Audits	External Audits
Water	38	31	8
Wastewater	10	5	7*
Waste Management	7	1	
2013 Total	55	37	15

** ISO 14001 external audits include both wastewater and water management facilities*



Comprehensive audit program identifies proactive opportunities for improvement and strengthens our approach to regulatory excellence



COMPLY

Comply with
regulation and
requirements, report
to Council and IMS top
management related
to our services,
ensuring provision of
high quality water



MONITOR

Monitor and
maintain
infrastructure to
continue to
provide quality
services to our
communities



IMPROVE

Maintain and
continually improve
the effectiveness of
our management
systems

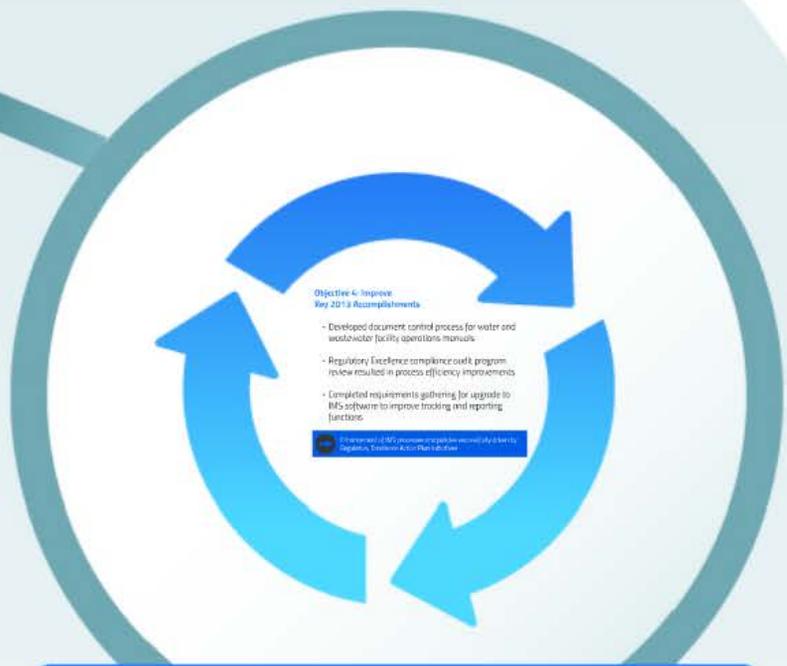
Objective 3: Monitor Key 2013 Accomplishments

- Improved data quality and validation process for water and wastewater compliance reporting
- Initiated capital infrastructure commissioning review process
- Continuing to refine monthly summary of program performance metrics
- Increasing quality of program service delivery through review of regulatory changes and increased communication



Relocation of Compliance functions to Commissioner's Office strengthens cross departmental communication and collaboration

S



IMPROVE

Maintain and continually improve the effectiveness of our management systems



MONITOR

Monitor and

Objective 4: Improve Key 2013 Accomplishments

- Developed document control process for water and wastewater facility operations manuals
- Regulatory Excellence compliance audit program review resulted in process efficiency improvements
- Completed requirements gathering for upgrade to IMS software to improve tracking and reporting functions



Enhancement of IMS processes and policies successfully driven by Regulatory Excellence Action Plan initiatives

Next Steps :

- Integrate sewer use monitoring program into the IMS (Q4 2014)
- Prioritize other key departmental processes to bring into the IMS (Q4 2014)
- Apply IMS audit framework to capital commissioning process (2015)



IMS delivers value for Council in highly regulated service areas