



The Regional Municipality of Durham
To: The Works Committee
From: Commissioner of Works
Report: 2014-W-5
Date: January 8, 2014

SUBJECT:

Source Water Protection Annual Report as Required under the *Clean Water Act, 2006*

RECOMMENDATIONS:

THAT the Works Committee recommends to Regional Council that:

- a) The 2013 Source Water Protection Annual Report be received for information; and
 - b) The 2013 Source Water Protection Annual Report be circulated to the Source Protection Authorities within the Regional Municipality of Durham.
-

REPORT:

Attachment No. 1: Source Water Protection Annual Report 2013

1. PURPOSE

The Regional Municipality of Durham (Region) is required by the *Clean Water Act, 2006* to provide a Source Water Protection Annual Report to the Source Protection Authorities.

2. BACKGROUND

Under the *Clean Water Act, 2006* the requirement for an annual report is initiated following the appointment of the Risk Management Officials and Risk Management Inspectors. The report must be completed and submitted to the corresponding Source Protection Authority by February 1, 2014. The Region is divided into three source protection regions: the Credit Valley, Toronto and Region, Central Lake Ontario Source Protection Region (CTC), the South Georgian Bay Lake Simcoe Source Protection Region (SGBLS) and the Trent Conservation Coalition Source Protection Region (TCC).

If this information is required in an accessible format, please contact 1-800-372-1100 ext. 3540.

3. REPORTING REQUIREMENTS

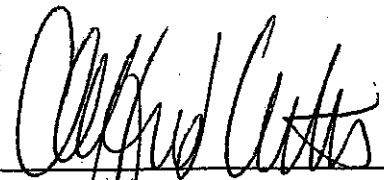
The annual report (Attachment No. 1) summarizes the legislated and proactive activities the Region has undertaken in 2013. These activities include the appointment of Risk Management Officials and Risk Management Inspectors, developing business processes and verification of significant drinking water threats. This report must be submitted to the corresponding Source Protection Authority by February 1 of each year.

Not all of the legislative reporting requirements can be completed at this time as the Source Protection Plans have not been approved by the Ministry of the Environment. Once approved, the annual report will include information on the management of existing drinking water threats, establishment of Risk Management Plans, education and outreach initiatives and planning implications under the Source Protection Plan. In the future, three annual reports will be produced for presentation to Regional Council.

4. CONCLUSION

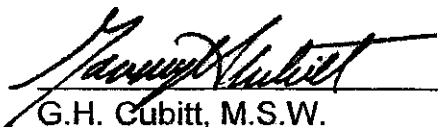
The Source Water Protection Annual Report has been prepared in accordance with requirements under the *Clean Water Act*, 2006. The attached report outlines the implementation efforts and preparatory actions the Regional Municipality of Durham staff have undertaken in advance of Source Protection Plan approval.

This report has been reviewed by the Planning and Economic Development and Health Departments.



Clifford Curtis, P.Eng., MBA
Commissioner of Works

Recommended for Presentation to Committee



G.H. Cubitt, M.S.W.
Chief Administrative Officer

TS1/em/ms

Source Water Protection Annual Report

2013



The Regional Municipality of Durham
Works Department
605 Rossland Road East
Whitby, Ontario L1N 6A3
905-668-7711 or 1-800-372-1102
www.durham.ca



If this report is required in an accessible format,
please contact 1-800-372-1102 ext. 3329.

Introduction

The Regional Municipality of Durham (the Region) Source Water Protection Annual Report 2013 is submitted to satisfy the requirement of s.81 under the *Clean Water Act, 2006* (the Act). This report details the efforts made by the Region to prepare for Source Protection Plan approval and Part IV responsibilities. The Region falls under the jurisdiction of three Source Protection Committees and is required to report to:

- Credit Valley – Toronto Region – Central Lake Ontario Source Protection Region (CTC)
- South Georgian Bay Lake Simcoe Source Protection Region (SGBLS)
- Trent Conservation Coalition Source Protection Region (TCC)

Risk Management Official and Risk Management Inspectors

In June of 2013, Durham Regional Council adopted the recommendation to appoint Greg Lymer and Beata Golas as Risk Management Officials (RMO) and Tavis Nimmo and Colin Hall as Risk Management Inspectors (RMI). The appointment of RMOs and RMIs satisfies the requirement of subsection 47(6) of the Act (Attachment No. 1). Certificates of Appointments were issued by the Regional Clerk to each of the RMOs and RMIs as required by subsection 47(7) of the Act (Attachment No. 2).

Training

RMO's and RMI's have completed the Director approved training from the Ministry of the Environment. Table No. 1 lists the dates and courses completed:

Table No. 1: Course Completion

Durham Region Staff Member	Property Entry Training Course	RMO/RMI Training Course
Greg Lymer	May 2011	May 2011
Beata Golas	November 2008	May 2011
Tavis Nimmo	November 2008	December 2011
Colin Hall	November 2012	November 2012

Threat Verification

In July of 2013, the Region began efforts to verify the significant drinking water threats identified in the Source Water Protection Assessment Reports. Regional staff initiated the process by sending letters to affected property owners and followed up with phone interviews and site visits where applicable. Staff worked with local conservation authorities to contact property owners and conduct site visits. The Region has confirmed a total of 61 threats on 45 properties. In addition, 52 potential threats identified in the Assessment Reports have been removed. Table No. 2 lists the verification work conducted in 2013.

Table No. 2: Significant Drinking Water Threats in Durham Region

TCC Source Protection Region				
City	Assessment Report Threats	Verified # of Significant Drinking Water Threats	Threats Added From Field Verifications	# of Significant Drinking Water Threats Removed
Orono	2	0	0	0
Blackstock	143	9	0	2
Greenbank	47	23	3	22
Port Perry	5	5	1	1
Total Threats	197	37	4	25

SGBLS Source Protection Region				
City	Assessment Report Threats	Verified # of Significant Drinking Water Threats	Threats Added From Field Verifications	# of Significant Drinking Water Threats Removed
Cannington	64	23	3	23
Sunderland	6	1	0	4
Uxbridge	17	0	0	0
Total Threats	87	24	3	27

CTC Source Protection Region				
City	Assessment Report Threats	Verified # of Significant Drinking Water Threats	Threats Added From Field Verifications	# of Significant Drinking Water Threats Removed
Uxville	14	0	0	0
Total Threats	14	0	0	0

Threat verification will be ongoing in all systems in 2014.

Lake Ontario Threats

In 2013, additional modeling was undertaken by the Ganaraska Region Source Protection Authority to determine if a marina gasoline storage tank rupture or wastewater treatment plant disinfection failure would impact the Newcastle drinking water system. The modeling identified both scenarios as significant drinking water threats. The draft updated Assessment Report was posted for municipal and public review and comment on November 18th 2013.

The Region's Lake Ontario based drinking water systems were modelled to examine which activities would meet the requirements of becoming a significant drinking water threat. The results of the modelling demonstrated that significant drinking water threats include: a wastewater treatment plant disinfection failure, petroleum pipeline rupture in a Lake Ontario tributary and a spill of tritium from a nuclear generating station.

Local Municipality Involvement

Business processes at both the upper and lower tier municipalities should include steps to screen development applications and building permits for location within a wellhead protection area. This will be achieved through minor adjustments to existing processes. Adjustments may include amending checklists for development applications, providing detailed wellhead maps/data layers to local municipalities for reference purposes, including routine circulation of applications in wellhead protection areas to the RMO and developing common templates to meet reporting requirements of the *Act*. Regional staff met with the staff of the Township of Uxbridge to discuss Source Protection matters related to development applications in that community and are planning to meet with other local municipalities in 2014.

The Region's Health Department has initiated discussions with local municipalities to provide the maintenance inspection program for private sewage systems. The aim is to ensure that the inspections can be delivered within the legislated time frame.

Regional Official Plan

Once all of the Source Protection Plans are approved by the Province, the Regional Official Plan will be examined to assess the need for revisions to existing source protection policies to provide a consistent policy approach across the Region.

2014 Objectives

Threat Verification

In 2014, Durham will continue to verify the existence of threats listed in the Assessment Reports.

Data Management System

In order to support the risk management function, a data management system is being developed. The Risk Management Office will generate inspections, notices, orders, and potentially fines, all of which need to be tracked and maintained according to records retention requirements outlined in the Act. There is also a mandatory annual reporting requirement to outline activities undertaken to address significant threats and a need to provide updates on the threats inventory data to Source Protection Committees. The data management system will satisfy these requirements, and facilitate information sharing with local municipalities and Source Protection Authorities.

Draft Business Processes

The Region will be working with local municipalities to create a framework for screening building and development applications in Source Water Protection Areas. The framework may incorporate area maps, a screening checklist, contact information, and an outline of responsibilities. A risk management plan template is in development that will allow property owners to provide the required information as it relates to their identified threat.

Blackstock Well Decommissioning

Water quality data from municipal well No. 1 in Blackstock demonstrates an increasing trend for the concentrations of nitrate, sodium and chloride. If this trend continues, nitrate concentrations would exceed the Maximum Acceptable Concentration as per the Ontario Drinking Water Quality Standards. The nitrate concentrations appear to be a result of the use of local residential private sewage

systems and/or agricultural land uses. Decommissioning Well No. 1 would remove nitrates from 66 of 74 properties identified as a drinking water issue. The well will be decommissioned in accordance with the Ministry of the Environment O.Reg 287/07 and O.Reg 903.

Next Steps

Source Protection Plans are anticipated to be approved in 2014. The Risk Management Officials and Inspectors will be responsible for developing, monitoring, and enforcing Risk Management Plans that relate to significant drinking water threats. In addition, the Region will need to act on additional compliance requirements, including possible amendments to the Regional Official Plan, aligning planning approvals processes where necessary and rolling out education and outreach activities. A by-law will also be required to enact some of the policies in the Source Protection Plans. The by-law will include the mandatory requirements listed in each Source Protection Plan.