

Clause 4 in Report No. 6 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on March 26, 2015.

4

Source Water Protection Update

Committee of the Whole recommends adoption of the following recommendations contained in the report dated February 27, 2015 from the Commissioner of Environmental Services:

1. Recommendations

It is recommended that:

1. The Region enter into an agreement with the Town of Bradford West Gwillimbury to provide Source Water Protection enforcement responsibilities under Part IV of the *Clean Water Act, 2006*, and the Commissioner, Environmental Services, be authorized to execute the agreement.
2. Correspondence be sent from the Chief Administrative Officer to the Deputy Minister of the Environment and Climate Change supporting the City of Toronto request for Provincial implementation of Source Protection policies regarding Lake Ontario.
3. The Regional Clerk circulate this report and attachment to Clerks of local municipalities.

2. Purpose

This report requests Council authority for the Commissioner, Environmental Services, to execute an agreement with the Town of Bradford West Gwillimbury to provide Source Water Protection enforcement responsibilities under Part IV of the *Clean Water Act, 2006*. It also seeks support of the City of Toronto correspondence regarding Provincial implementation of Source Protection policies to address Lake Ontario drinking water sources. Finally, the report updates Council regarding implementation of Source Water Protection in the Region.

### 3. Background

Since 2006, significant work has been completed to assess potential threats to municipal water supplies

*The Clean Water Act, 2006* established a process to safeguard municipal drinking water supplies that was locally driven, science based and consultative. Since 2006, work has been underway across the Province to assess potential threats to municipal water supplies within specific vulnerable areas, and develop policies to protect drinking water quality and quantity, as summarized in prior Council Reports: May 12, 2010, February 9, 2011, November 9, 2011, May 17, 2012, October 10, 2012 and November 21, 2013.

In January 2012, the Province approved the two Assessment Reports affecting York Region that identified:

- Vulnerable areas including wellhead protection areas, intake protection zones, significant recharge areas and highly vulnerable aquifer areas.
- Potential threats to drinking water, ranked as low moderate or significant.

Source Protection Plans were first drafted in 2012, and include policies to either manage or prevent threats to municipal drinking water using a variety of tools including:

- Risk Management Plans implemented by York Region to mitigate identified existing threats within wellhead protection areas.
- Land use planning policies implemented by local municipalities in partnership with the Region to prohibit specific activities within certain vulnerable areas to prevent future threats.
- Prescribed instrument policies implemented by Provincial Ministries to manage existing and/or prevent future threats within certain vulnerable areas.

South Georgian Bay Lake Simcoe Source Protection Plan approved by the Province

In January, 2015, the Province approved the South Georgian Bay Lake Simcoe Source Protection Plan with an effective date of July 1, 2015. Following this effective date, planning decisions in the northern portion of the Region (within the Lake Simcoe watershed) must be consistent with Source Protection Plan policies.

Committee members represent various sectors to ensure collaborative and comprehensive approach to Source Water Protection

Source Protection Committees are local stakeholder groups established under the *Clean Water Act, 2006* to administer the development of Assessment Reports and Source Protection Plans for watershed-based regions. The committees use a collaborative process to identify vulnerable areas around drinking water sources, assess threats to water quality and quantity, and develop policies to reduce or prevent potential threats in vulnerable areas.

Source Protection Committees are comprised of representatives from municipalities, economic interests and the public at large. York Region has representatives on the South Georgian Bay Lake Simcoe committee (Wendy Kemp) and Credit Valley, Toronto and Region, Central Lake Ontario or 'CTC' committee (Don Goodyear). As noted above, the Source Protection Plan for the northern portion of the Region, South Georgian Bay Lake Simcoe, has been approved and will take effect on July 1, 2015.

Credit Valley, Toronto and Region, Central Lake Ontario Source Protection Plan delayed in part due to Provincial concern

The Source Protection Plan for the southern portion of the Region (Credit Valley, Toronto and Region, Central Lake Ontario or 'CTC') was revised to address Provincial feedback and resubmitted in December 2014. Approval is not anticipated for this plan until late 2015. Although not ideal, the difference in approval timelines can be accommodated in the workplan to amend the Regional Official Plan and other implementation efforts.

One of the reasons for the delay in the Credit Valley, Toronto and Region, Central Lake Ontario or 'CTC' plan is Provincial concern over some policies to address threats to Lake Ontario water supply. In their review of draft policies, Ministry of Environment and Climate Change staff recommended substantial revisions including changing the implementing body from the Province to municipalities. The Source Protection Committee did not make those changes, as the Committee concluded the Province is best suited to implement.

The City of Toronto has written the Deputy Minister of Environment and Climate Change to support the Source Protection Committee, and request the Province fulfill their implementation responsibilities. Toronto forwarded that correspondence to the Regional Clerk, and has asked the Region to support their request (Attachment 1).

Annual Report describing Source Protection implementation efforts submitted to each Source Protection Authority

Although Source Protection Plans were not approved in 2014, the Region and local municipalities took steps to implement the intent of the plans using existing authorities under the *Planning Act* and Provincial Policy Statement, which are summarized in the Source Water Implementation 2014 Annual Report (Attachment 2). The Source Water Implementation 2014 Annual Report was submitted to each Source Protection Authority on February 1, 2015, per Section 81 of the *Clean Water Act, 2006*.

Interim Risk Management Plans executed

The Annual Report describes the execution of three Interim Risk Management Plans with small businesses and one for an agricultural property, which are among the first developed in the Province. Attachment 3 shows the proximity of agricultural and commercial operations to some Regional wells. Common risk management measures required are illustrated in Attachment 4, and include adding secondary containment for chemical storage, developing plans and training staff for spill response, and obtaining appropriate spill response equipment. The Council endorsed incentive program funded a significant portion of the necessary risk management measures, which greatly facilitated negotiation of those Interim Risk Management Plans.

Effective partnership with local municipalities helping prevent future threats to drinking water supplies

Local municipalities have been diligent in circulating the Region on development applications within wellhead protection areas. In 2014, the Region provided comments on over 90 development applications, and approval conditions were added to prevent potential threats from being established in vulnerable areas.

The Source Water Implementation 2014 Annual Report also summarizes collaboration efforts of the Region and local municipalities on implementation preparation throughout the year. As a result of working meetings with planning and building department staff to review and refine business processes, the Region and local municipalities are well prepared for the South Georgian Bay Lake Simcoe Source Protection Plan effective date of July 1, 2015.

The Town of Bradford West Gwillimbury has requested assistance with implementing Source Protection policies

The Town of Bradford West Gwillimbury (Bradford) operates two wells located within King Township (Bradford Church Street wells). The wellhead protection area for these wells is also primarily located in King Township, with a small

portion in East Gwillimbury and a small portion in Bradford. As noted in the Council Report of November 21, 2013, the *Clean Water Act, 2006* stipulates that municipalities are responsible for implementation of source protection policies in any vulnerable area within their jurisdiction unless that responsibility is transferred or shared via Council endorsed agreement. As a result, the Region is responsible for implementation for the portion of the Bradford Church Street wellhead protection area that is within York Region.

Subsequent to the November 2013 report, Bradford Council requested the Region provide Source Water Protection enforcement responsibilities under Part IV of the *Clean Water Act, 2006* for the portion of the Bradford Church Street wellhead protection area within Bradford (correspondence received by Council February 13, 2014). Staff have assessed the implications, and recommend providing Risk Management services to Bradford as described in Section 4.

#### 4. Analysis and Options

Ministry of Environment and Climate Change should remain implementing body for Lake Ontario policies in the Credit Valley, Toronto and Region, Central Lake Ontario Source Protection Plan

As documented in the City of Toronto correspondence (Attachment 1), there are two policies aimed at preventing or mitigating spills of fuel and sewage that would be significant threats to Lake Ontario intakes. The Ministry of Environment and Climate Change is identified as the implementing body, and directed to enact legislation/regulation to require facility owners to develop and implement spill prevention and mitigation plans.

Ministry of Environment and Climate Change staff have suggested these policies should be implemented using municipal by-laws. The Credit Valley, Toronto and Region, Central Lake Ontario Source Protection Committee disagreed for a few reasons.

- The policy intent correlates to the Provincial mandate for Lake Ontario. Through the Canada-Ontario agreement regarding Great Lakes water quality, the Province has committed to action to safeguard drinking water sources.
- The strength and enforceability of Provincial legislation was deemed appropriate to address the identified threats.
- There are multiple municipalities across the north shore of Lake Ontario where this policy applies, so the efficiency and consistency of a single implementer (the Province) was preferred to multiple agencies with variable resources to implement.

- The Regions of Peel, Halton and Durham are in receipt of the City of Toronto correspondence and their Councils will also be considering the request to issue letters of support.

Staff recommend a letter to the Deputy Minister of Environment and Climate Change be submitted in support of the City of Toronto request for the Province to remain the implementing body for those Lake Ontario policies.

The Region is positioned to assist Bradford with Source Protection efforts per their request

Bradford Council requested the Region provide Source Water Protection enforcement responsibilities under Part IV of the *Clean Water Act, 2006* for the portion of the Bradford Church Street wellhead protection area within Bradford (correspondence received by Council February 13, 2014). Bradford is decommissioning all other groundwater supplies, and is left with source protection requirements only for their small portion of the Bradford Church Street wellhead protection area (26 properties where a significant threat is possible). Rather than incur the cost of establishing a risk management office for this limited area, Bradford offered to cover the cost for York Region staff to provide this service.

Environmental Services staff have assessed the implications with Legal Services, and recommend entering into an agreement to provide Source Water Protection enforcement responsibilities under Part IV of the *Clean Water Act, 2006* to Bradford. Proposed conditions within the draft agreement will include: Bradford will indemnify the Region from any and all action stemming from providing these services; Bradford will reimburse the Region for costs incurred providing services under the agreement; and Bradford will maintain sole responsibility for the Bradford Church Street wells in all other aspects.

Link to key Council-approved plans

Section 2.3 of the Regional Official Plan includes a commitment to develop and implement Source Protection Plans as required by Provincial legislation.

Implementation of Source Protection Plans supports the sustainable infrastructure priority area within the proposed 2015-2019 Corporate Strategic Plan, as well as the protection of water systems identified in Vision 2051. Managing or prohibiting activities that could impair drinking water quality or quantity is an effective component of infrastructure and water resource management.

The water and wastewater Master Plan indicates a reliance on groundwater to provide drinking water supply and/or emergency back-up for some areas of the

Region. Source water protection helps ensure the long-term viability of local groundwater resources.

## 5. Financial Implications

Source Protection Program funded through water rates

Implementation of Source Water Protection, including the incentive program, is budgeted at approximately \$1.3 million for 2015. This entire program is funded from water rates, and represents less than 1% of annual water rate revenue.

Entering into an Agreement with Bradford to provide Source Protection implementation support is cost neutral

All costs incurred to carry out Source Water Protection enforcement responsibilities under Part IV of the *Clean Water Act, 2006* within Bradford will be reimbursed, and potential liability associated with implementation efforts in Bradford minimized through indemnification in the agreement. Based on the limited number of properties and staff effort (review of planning applications, negotiation of Risk Management Plans as required, conducting inspections, and enforcement as necessary), associated costs are anticipated to be less than \$10,000 annually and recovered from Bradford.

Source Water Protection Incentive Program budget reduced

As staff engaged business owners and farmers in vulnerable areas, it became evident that they are good environmental stewards and have risk management measures in place. Gaps identified in Interim Risk Management Plans are relatively minor and less costly to implement than estimated when the incentive program was developed. The presence of good practices at these properties means the Source Water Protection Incentive Program will require less than the estimated \$500,000 per year. For 2015, that budget was reduced by 50% to \$250,000.

## 6. Local Municipal Impact

Planning decisions must be consistent with Source Protection Plan policies immediately following effective date

*Planning Act* and *Building Code Act* decisions must be consistent with Source Protection Plan policies immediately following the effective date (July 1, 2015 for the northern portion of the Region). Local municipal planning and building

department staff have been collaborating with the Region on implementing business processes, and are among the leaders in the Province in this regard.

Source Protection Plan policy requirements for proposed development are similar to external agency approvals, and form part of a complete application requirement occurring at the front end of the planning and building permit processes. The effort to review applications against Source Protection Plan policies rests with the risk management office at the Region. As a result of this front-ended business process and resources at the Regional risk management office, local municipal workload will not increase substantially and legislated timelines for municipal decisions are not impacted.

Regional and local Official Plans will require amendment

Official Plans will need to be amended within five years of approval of Source Protection Plans, and zoning by-laws will need to be amended within three years of Official Plan updates to conform to Source Protection Plan policies. Planning staff from several local municipalities, the Region and each Conservation Authority have drafted generic policies to achieve conformity that can be adapted to each local planning document.

As noted above, decisions must be consistent with the Source Protection Plans immediately following the July 1, 2015 effective date, which will supersede local Official Plans and zoning by-laws. The period between July 1, 2015 and local Official Plan and zoning conformity amendments requires effective communication with development proponents to ensure clear application of Source Protection Plan policies. Expedited Official Plan and zoning amendments are recommended to minimize the length of time between the Source Protection Plan effective date and Official Plan and zoning by-law conformity. Regional staff are working with local municipal planners, are available to assist and will provide materials to support local municipal staff and explain *Clean Water Act, 2006* requirements to development proponents.

## 7. Conclusion

Formal Source Protection Plan implementation will begin July 1, 2015

Using existing tools and authorities, local municipal and Regional staff worked with development proponents and existing landowners to manage or prevent potential risks to drinking water supplies throughout 2014. As of July 1, 2015, those efforts will be supported by the legal effect of an approved Source Protection Plan for the northern portion of the Region. Extensive preparation for implementation and collaboration between Region and local municipal staff will facilitate the transition.



Council authorization requested to comply with request from Bradford

Environmental Services staff have assessed the implications with Legal Services and recommend entering into an agreement to provide Source Water Protection enforcement responsibilities under Part IV of the *Clean Water Act, 2006* to Bradford, subject to conditions to indemnify the Region, recover all costs incurred, and limit Regional requirements for source protection of designated wells.

York Region supports City of Toronto request for the Province to implement Lake Ontario policies

Staff have also reviewed correspondence from the City of Toronto regarding the position of the Ministry of Environment and Climate Change with respect to the Lake Ontario policies in the Credit Valley, Toronto and Region, Central Lake Ontario Source Protection Plan. In question, is the appropriate implementing body for two policies to prevent or mitigate spills of fuel and sewage that would be significant threats to Lake Ontario intakes.

The City of Toronto and Source Protection Committee have indicated the Province is best suited to implement, while the Province has suggested municipal by-laws are an appropriate implementation mechanism. Staff concur with the City of Toronto and the Source Protection Committee, and recommend that a letter be submitted to the Deputy Minister of Environment and Climate Change requesting the Province remain as the implementing body for those Lake Ontario policies.

For more information on this report, please contact Laura McDowell, Director, Environmental Promotion and Protection at ext. 75077.

Attachments (4)

5963588

Accessible formats or communication supports are available upon request



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December 2, 2014

Denis Kelly  
Regional Clerk, Region of York  
Regional Corporate Services Department  
Administrative Centre  
17250 Yonge Street, 4th Floor  
Newmarket, ON L3Y 6Z1

REGION OF YORK  
CLERK'S OFFICE  
FILE No. - P46

Dear Mr. Kelly,

I am writing to you today on behalf of Toronto City Council to ask that your municipality support Toronto City Council's request that the Ontario Ministry of Environment and Climate Change acknowledge its responsibility as the 'implementing body' for the purpose of the Lake Ontario policies contained in the Credit Valley, Toronto and Region, Central Ontario (CTC) Source Water Protection Plan.

The City is asking for this in support of the Plan's existing Lake Ontario policies and in support of the CTC Source Protection Committee which has noted that the Ontario Government has a duty and is best positioned to protect Lake Ontario from various drinking water threats. These threats and policies are documented in the CTC Source Protection Plan, which need to be adopted and implemented to ensure 6 million Ontarians have continued access to clean and safe drinking water. For your information, I have attached a letter I sent to the Deputy Minister of Environment and Climate Change which outlines our specific concerns, along with the staff report and City Council's decision.

Like you, our municipality operates water treatment facilities that rely on Lake Ontario. It is in our shared interest to see that this vital, safe and abundant source of drinking water is protected as outlined in the CTC Source Protection Plan. If you have any questions, please contact Lou Di Gironimo, General Manager of Toronto Water at [ldigiro@toronto.ca](mailto:ldigiro@toronto.ca) or 416-392-8200. I look forward to your support.

Yours truly,

Joseph P. Pennachetti  
City Manager

cc: Mayor John Tory  
John Livey, Deputy City Manager  
Lou Di Gironimo, General Manager, Toronto Water

Attach. Letter to Paul Evans, Deputy Minister, Ministry of Environment and Climate Change



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December 2, 2014

Mr. Paul Evans  
Deputy Minister  
Ontario Ministry of Environment and Climate Change  
Ferguson Block, 11th Floor  
77 Wellesley Street West  
Toronto, ON M7A 2T5

Dear Deputy Minister Evans,

As detailed below, the City of Toronto does not agree with the recommendations of Ministry of Environment and Climate Change staff to remove or significantly alter the Lake Ontario policies contained in the Credit Valley, Toronto and Region, Central Ontario (CTC) Source Water Protection Plan (the Plan). Council also asked me to write to you to ask that your Ministry acknowledge its responsibility as the "Implementing Body" for the purpose of the Lake Ontario policies contained in the Plan. I have attached a staff report and City Council's decision for your information.

In 2006, in recognition of the importance of protecting the sources of drinking water for all Ontarians, the Ontario government passed the *Clean Water Act (2006)* [S.O. 2006, Chapter 22]. This Act addresses recommendations made by Justice O'Connor in his judicial inquiry into the tainted water tragedy that occurred at Walkerton in 2001.

The Act identified drinking water source protection areas across all of Ontario, including the CTC Source Water Protection Area. The Act also established source water protection committees for each Area with responsibility for developing a plan to address activities and land uses around municipal wells and drinking water treatment plant intakes in order to:

- Safeguard human health;
- Ensure adequate safe clean water is available; and,
- Protect current and future sources of municipal drinking water from significant threats.

On October 22, 2012, the CTC Source Water Protection Committee fulfilled its legislated mandate and filed a Source Protection Plan for the CTC Region with the Minister of the Environment. The Plan represented three years of intensive collaboration among municipalities (including the City of Toronto), conservation authorities, First Nations, representatives from industry and from non-governmental organizations, and benefited from in-depth and wide-ranging public consultation prior to submission.

Toronto City Council considered the CTC Source Water Protection Plan at its meeting of November 27, 28, and 29, 2012, and unanimously endorsed the Plan at that time.



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Since submitting the Plan to the Minister, the CTC Source Protection Committee has conducted additional technical studies to better understand groundwater regimes for well water supplies in the upper sections of the CTC Source Protection Area and incorporated the results as updates to the Plan. During this time, the CTC Source Protection Committee also received comments from staff at the Ministry of Environment and Climate Change. The comments are contained in a letter dated June 18, 2014, and essentially recommend the following Plan policies be either removed or significantly altered:

- Lake Ontario policies in the Plan that identify the Ontario Government as the appropriate "Implementing Body" for all Lake Ontario Source Protection Plan policies, and not the individual municipalities where a given threat may be located (e.g., pipeline, nuclear power plant, fuel storage facility, etc.) (MOE Comments 19, 25, 26, 27);
- The need for the Ontario Ministry of the Environment and Climate Change to provide better spill forecasting (C. T. C. Policies LO-G-3; LO-NGS-1(f); LO-SEW-1(f); LO-SEW-2(f); LO-PIPE-1(b); LO-FUEL-1(j,k)); and,
- The need for the Ontario Ministry of the Environment and Climate Change to regulate spills to storm sewers that eventually discharge to Lake Ontario (MOE Comment 24).

The City of Toronto does not agree with the recommendations of Ministry staff to remove or significantly alter the above policies. At its meeting of August 25, 26, 27 and 28, 2014, Toronto City Council again considered the Credit Valley, Toronto and Region, Central Ontario (CTC) Source Water Protection Plan and again unanimously endorsed the Plan.

The City of Toronto supports the CTC Source Protection Committee's contention that the Ontario Government, through the Ontario Ministry of Environment and Climate Change, has a duty to protect and enhance the near shore water quality of Lake Ontario and is the appropriate authority to do so because:

1. Lake Ontario is an international water subject to treaties between Canada and the United States which are administered via the Canada-Ontario Agreement;
2. Many of the threats identified in the Plan originate with activities and/or operations that are regulated by other levels of governments. Because pollutants entering Lake Ontario do not respect municipal boundaries and without an ability or the authority to take inter-jurisdictional enforcement actions, individual municipalities cannot effectively mitigate threats originating beyond their borders; and,
3. The Ontario Government has powers and responsibilities under several other pieces of legislation, including the *Clean Water Act* (the Act), and already has systems in place, such as the Spills Action Centre, which are aimed at mitigating emergencies related to spills and drinking water hazards.

In closing, Toronto City Council and I look forward to the Minister's approval and implementation of the policies contained in the CTC Source Water Protection Plan, especially those aimed at the safety and security of the 6 million Ontarians that rely on Lake Ontario as their drinking water source. Should you wish to discuss any of the issues highlighted in this letter, please contact Lou Di Gironimo, General Manager of Toronto Water at [ldigiro@toronto.ca](mailto:ldigiro@toronto.ca) or 416-392-8200.

Yours truly,



Joseph P. Pennachetti  
City Manager

cc: John Livey, Deputy City Manager  
Lou Di Gironimo, General Manager, Toronto Water



**Tracking Status**

- City Council adopted this item on August 25, 2014 without amendments and without debate.
- This item was considered by Public Works and Infrastructure Committee on August 13, 2014 and was adopted with amendments. It will be considered by City Council on August 25, 2014.

**City Council consideration on August 25, 2014**

PW33.14	ACTION	Adopted on Consent		Ward:All
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**Source Water Protection Plan for City of Toronto Water Treatment Plants: Update**

**City Council Decision**

City Council on August 25, 26, 27 and 28, 2014, adopted the following:

1. City Council confirm, to the Ontario Minister of the Environment and Climate Change, its endorsement of the Lake Ontario policies, intended to protect the drinking water source for the City of Toronto, Region of Peel, and the Region of Durham, and contained in the Credit Valley, Toronto and Region, Central Ontario (CTC) Source Water Protection Plan submitted to the Ontario Minister of the Environment on October 22, 2012, and updated at the CTC Source Protection Committee meeting of June 24, 2014.
2. City Council request the City Manager to write to the Deputy Minister of Environment and Climate Change, strongly indicating that the Ontario Ministry has a duty to protect and enhance the near shore water quality of Lake Ontario; and to request that the Ontario Ministry acknowledge its responsibility as the “Implementing Body” for the purpose of the Lake Ontario policies contained in the CTC Source Water Protection Plan.
3. City Council forward a copy of this Item to the Councils of municipalities located along the north shore of Lake Ontario and which operate water treatment facilities that rely on Lake Ontario for their source water and encourage them to communicate their support for Toronto City Council's decision on the matter, particularly Part 2, to the Ministry of the Environment and Climate Change.
4. City Council direct the General Manager, Toronto Water, to report to the Public Works and Infrastructure Committee when a formal response on the approval of the CTC Source Water Protection Plan, and the Lake Ontario Policies contained in the Plan, has been received from the Minister of the Environment and Climate Change.

**Background Information (Committee)**

(July 28, 2014) Report from the General Manager, Toronto Water and the Executive Director, Engineering and Construction Services, on Source Water Protection Plan for City of Toronto Water Treatment Plants: Update

<http://www.toronto.ca/legdocs/mmis/2014/pw/bgrd/backgroundfile-72338.pdf>

**Communications (Committee)**

(August 13, 2014) E-mail from Karen Buck (PW.New.PW33.14.1)

**Public Works and Infrastructure Committee consideration on August 13, 2014**

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Source: Toronto City Clerk at [www.toronto.ca/council](http://www.toronto.ca/council)





**STAFF REPORT  
ACTION REQUIRED**

**Source Water Protection Plan for City of Toronto Water Treatment Plants: Update**

<b>Date:</b>	July 28, 2014
<b>To:</b>	Public Works and Infrastructure Committee
<b>From:</b>	General Manager, Toronto Water Executive Director, Engineering and Construction Services
<b>Wards:</b>	All Wards
<b>Reference Number:</b>	P:/2014/Cluster B/TW/pw14012

**SUMMARY**

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The purpose of this report is to provide an update to City Council about the status of the Credit Valley, Toronto and Region, Central Ontario (CTC) Source Water Protection Plan, and to request Council to reiterate its endorsement of the policies in the Plan and Council's contention that the Ministry of the Environment and Climate Change, and not the City or other municipalities, is the appropriate body for implementing the Lake Ontario policies contained in the CTC Source Water Protection Plan.

The CTC Source Water Protection Plan was developed to address drinking water threats to water treatment plant intakes in Lake Ontario. The Plan contains policies that, once adopted, are intended to protect the near shore of Lake Ontario, which is the source of drinking water for approximately 6 million people in the Golden Horseshoe area. The policies were developed, recognizing that pollution inputs once released to Lake Ontario do not respect municipal or Source Protection Region boundaries and that it is appropriate for the Ontario Government to take responsibility for implementation.

While the CTC Source Water Protection Plan was filed for final approval with the Minister of the Environment on October 22, 2012, the CTC Source Protection Committee only recently received a written response from the Ontario Ministry of the Environment and Climate Change seeking removal or significant amendments to the Lake Ontario policies prior to approving the CTC Source Water Protection Plan. The CTC Source Protection Committee concluded that accepting the amendments would diminish the effectiveness of the Plan and, as a result, chose to maintain the Lake Ontario policies as originally submitted as part of the Plan at its meeting of June 24, 2014.

## **RECOMMENDATIONS**

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**The General Manager, Toronto Water, and Executive Director, Engineering and Construction Services recommend that:**

1. City Council confirm, to the Ontario Minister of the Environment and Climate Change, its endorsement of the Lake Ontario policies, intended to protect the drinking water source for the City of Toronto, Region of Peel, and the Region of Durham, and contained in the Credit Valley, Toronto and Region, Central Ontario (CTC) Source Water Protection Plan submitted to the Ontario Minister of the Environment on October 22, 2012, and updated at the CTC Source Protection Committee meeting of June 24, 2014 (found at: <http://www.ctcswp.ca/ctc-source-protection-plan>);
2. City Council request the City Manager to write to the Deputy Minister of Environment and Climate Change, strongly indicating that the Ontario Ministry has a duty to protect and enhance the near shore water quality of Lake Ontario; and to request that the Ontario Ministry acknowledge its responsibility as the “Implementing Body” for the purpose of the Lake Ontario policies contained in the CTC Source Water Protection Plan;
3. City Council forward a copy of this report to municipalities located along the north shore of Lake Ontario and which operate water treatment facilities that rely on Lake Ontario for their source water and encourage them to communicate their support for the Recommendations in this report, particularly Recommendation 2, to the Ministry of the Environment and Climate Change; and
4. City Council direct the General Manager, Toronto Water, to report to the Public Works and Infrastructure Committee when a formal response on the approval of the CTC Source Water Protection Plan, and the Lake Ontario Policies contained in the Plan, has been received from the Minister of the Environment and Climate Change.

### **Financial Impact**

There is no financial impact associated with this report.

The Deputy City Manager and Chief Financial Officer reviewed this report and agrees with the financial impact statement.

### **DECISION HISTORY**

City Council, at its meeting of September 26 and 27, 2007, authorized the Deputy City Manager responsible for Toronto Water, in consultation with the General Manager of Toronto Water, to designate Toronto’s two representatives on the Credit Valley, Toronto and Region, Central Ontario (CTC) Source Protection Committee. A copy of the Council Decision Document can be found at: <http://www.toronto.ca/legdocs/mmis/2007/cc/decisions/2007-09-26-cc12-dd.pdf>



At its meeting of November 27, 28, and 29, 2012, City Council unanimously endorsed the Source Water Protection Plan developed by the Credit Valley, Toronto and Region, Central Ontario (CTC) Source Protection Committee. The Plan presents policies intended to reduce threats to the sources of drinking water, including Lake Ontario, the source of drinking water for the 2.8 million residents of Toronto. A copy of the Council decision can be found at: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PW19.6>

## **ISSUE BACKGROUND**

### **Economic, Environmental, and Social Value of Lake Ontario**

Every day, 6 million Ontario residents representing almost half of the province's population, including those in the City of Toronto, rely on Lake Ontario as a safe and abundant source of drinking water. Further, Lake Ontario provides a wide range of other benefits, from recreational opportunities such as swimming and fishing, to power generation and transportation for people and industries. In order to sustain Ontario's economic, social, and environmental prosperity, it is imperative to protect and improve the water quality of Lake Ontario and its tributaries.

### **Ontario *Clean Water Act* and Source Water Protection**

In 2006, in recognition of the importance of protecting the sources of drinking water for all Ontarians, the Ontario government passed the *Clean Water Act (2006)* [S.O. 2006, Chapter 22]. This Act addresses recommendations made by Justice O'Connor in his judicial inquiry into the tainted water tragedy that occurred at Walkerton in 2001.

The Act established Source Water Protection Regions, including the Credit Valley, Toronto and Region, Central Ontario (CTC) Source Protection Committee, with responsibility for developing a Source Water Protection Plan to address activities and land uses around municipal wells (groundwater sources) and drinking water treatment plant intakes (surface water sources – including Lake Ontario) to protect existing and future sources of drinking water.

In accordance with the 2007 Council Decision, the Associate Medical Officer of Health and the Director, Water Infrastructure Management (currently the Executive Director, Engineering & Construction Services) were officially named as the City of Toronto representatives on the CTC Source Protection Committee.

The CTC Source Protection Committee examined a total of 21 threats to the safety of Lake Ontario drinking water. The threats were evaluated using computer simulation modelling, which showed the following scenarios to be significant threats to one or more City of Toronto drinking water treatment plant intakes:

**Table 1. Significant Threats to City of Toronto Drinking Water Treatment Plant Intakes**

Type of Threat	Scenario	Spill / Pollutant Release Location	Water Treatment Plant Intakes Threatened
Petroleum spill from a fuel storage tank farm	Fuel from a storage facility in Oakville spilling into Bronte Creek and spills from a tank farm located in Toronto flowing into the Upper West Don River.	Bronte creek and Upper West Don River	ALL
Petroleum spill from a pipeline failure	Based on the real-life rupture of a 750 mm diameter pipeline near Kalamazoo, Michigan, in 2010.  For the purpose of modelling the scenario for the City of Toronto, pipeline characteristics and product volumes for facilities located in the Greater Toronto Area were used to assess the impact of potential breaks at a number of river crossings.	Credit River	R.L. Clark WTP
		Don River	R.L. Clark, R.C. Harris and Island WTPs
		Duffin Creek	R.C. Harris and F.J. Horgan WTPs
		Highland Creek	R.C. Harris and F.J. Horgan WTPs
		Humber River	R.L. Clark, R.C. Harris and Island WTPs
		Rouge River	R.C. Harris and F.J. Horgan WTPs
Disinfection failure at a wastewater treatment plant	A two-day total disinfection failure was assumed at each of Toronto's wastewater treatment plants, plus the Duffin Creek Water Pollution Control Plant (WPCP) in the Region of Durham and the Lakeview Wastewater Treatment Plant in the Region of Peel.	Ashbridges Bay WWTP	R.L. Clark, R.C. Harris and F.J. Horgan WTPs
		Duffin Creek WPCP	R.C. Harris and F.J. Horgan WTPs
		Highland Creek WWTP	R.C. Harris and F.J. Horgan WTPs
		Humber WWTP	R.L. Clark, R.C. Harris and F.J. Horgan WTPs
		Lakeview WWTP	R.L. Clark and R. C. Harris WTPs
Streambank erosion leading to the failure of a sanitary trunk sewer	Spills were assessed for sanitary trunk sewers located in the valleys of the Humber and Don Rivers, and Etobicoke and Highland Creeks.	Don River	R.C. Harris WTP
		Etobicoke Creek	R.L. Clark WTP
		Highland Creek	F.J. Horgan WTP
		Humber River	R.L. Clark WTP

The evaluations shown in the above table provided the foundation for the policies contained in the CTC Source Water Protection Plan, which was filed for approval with the Minister of the Environment and Climate Change on October 22, 2012, and can be found at: (<http://www.ctcswp.ca/ctc-source-protection-plan>; see [CTC Amended Proposed Source Protection Plan](#) ). Chapter 10.12 (page 128 of the Plan) presents the policies relevant to Lake Ontario based water treatment plant intakes.

For the most part, the Lake Ontario policies contained in the CTC Source Water Protection Plan identify the Ontario Government as the appropriate “Implementing Body” (i.e., the authority responsible to ensure the policy is implemented) for all Lake Ontario Source Protection Plan policies, and not the individual municipalities where a given threat may be located (e.g., pipeline, nuclear power plant, fuel storage facility, etc.) because:

- 1) Lake Ontario is an international water subject to treaties between Canada and the United States which are administered via the Canada-Ontario Agreement, which outlines how the governments of Canada and Ontario will cooperate and coordinate their efforts in order to meet Canada's obligations under the Canada-United States Great Lakes Water Quality Agreement (GLWQA);
- 2) Many of the threats identified in the Plan originate with activities and/or operations that are regulated by other, more senior levels of governments;
- 3) Pollutants entering Lake Ontario do not respect municipal boundaries. Without an ability to take inter-jurisdictional enforcement actions, individual municipalities



- cannot effectively mitigate threats originating beyond their borders; and,
- 4) The Ontario Government has powers and responsibilities under several other pieces of legislation, including the *Clean Water Act* (the Act), and already has systems in place, such as the Spills Action Centre, which are aimed at mitigating emergencies related to spills and drinking water hazards.

## COMMENTS

Since submitting the CTC Source Water Protection Plan to the Ministry on October 22, 2012, additional technical studies were undertaken by the CTC Source Protection Committee. These studies identified the need to incorporate updates to the Plan to reflect recent understanding of groundwater regimes for well water supplies in the upper part of the Source Protection Area. The CTC Source Protection Committee considered updates to the policies in the Plan at its meeting of June 24, 2014. At the same meeting, the Committee considered comments received from the Ministry of the Environment (MOE) in a letter dated June 18, 2014. The letter presented a complete set of recommendations from the Ministry, which are summarized in Table 2.

**Table 2. Summary of CTC SPP Lake Ontario Policies and MOE's (2014) Response.**

CTC SPP Policy Category	Identifier	SPP Chapter 10 Page Reference	Overview Description	MOE Response June 18 2014
General	LO-G	pp. 129 –131	Applicable to all threats and relating to improved spills notification protocols, the installation of instrumentation to assess real time lake circulation and water chemistry, the further development and application of Lake Ontario circulation and water quality modelling, and public education and outreach, particularly with other agencies including United States government agencies.	MOE disagrees with Policies requiring MOE to undertake modelling and provide in-lake instrumentation to support forecasting direction of currents in event of a future spill
Nuclear Generating Stations	LO-NGS	p. 133	Pertaining to improved spills notification protocols.	None
Sewers	LO-SEW	pp.136 –138	Directed at wastewater treatment plant by-pass flows and potential disinfection failures, the failure of sanitary trunk sewers, spills from properties which could enter the municipal storm sewer system, and the need for pathogen risk assessments at water treatment plants.	Requested that LO-Sewer-3 be deleted and addressed by municipalities through Sewer Use Bylaws
Pipelines	LO-PIPE	pp. 140 –141	In regards to reducing the risk and/or impact of petroleum pipeline breaks.	Suggested clarifying language.
Petroleum Tank Farm Storage	LO-FUEL	pp 142 –143	Dealing with the adequacy of existing spills prevention/contingency plans.	Requested clarifying language for LO-FUEL-1 and removal of LO-FUEL-2

At its meeting of June 24, 2014, the CTC Source Protection Committee considered the comments received from the MOE, and while a few changes were incorporated, the intent of the Lake

Ontario Policies remained essentially unchanged from the original submission made to the Ontario Minister of the Environment on October 22, 2012.

The Public consultation on the policies of the amended proposed source protection plan has been initiated by the CTC Source Protection Committee (<http://www.ctcswp.ca/ctc-source-protection-plan>) pursuant to the Clean Water Act, 2006 and Ontario Regulation 287/07.

#### **Need for the Ontario Ministry of the Environment and Climate Change to provide better spill forecasting**

The General Lake Ontario policy, LO-G, contained in the CTC Source Water Protection Plan, recommends the Ministry enhance its spill forecasting capabilities so that operators of water treatment plants along the north shore of Lake Ontario can be provided with information about: (i) the flow path of the spill; (ii) when the spill is expected to arrive at a particular intake and the expected pollutant concentration, and (iii) how long the threat from the spill is expected to last.

The Ontario Ministry of the Environment and Climate Change already has in place the "Spills Action Centre", which handles reports of spills, adverse drinking water results and other urgent environmental concerns. According to the Ministry, the Spills Action Centre operates 24 hours a day, and Environmental Officers who receive the calls at the Spills Action Centre can provide advice and information related to spills or drinking water events.

Knowledge of whether a spill will be transported to an intake is an essential part of a Municipality's Emergency Planning to protect water treatment plant intakes, and knowledge of a significant spill to the Lake Ontario nearshore, which has the potential to impact water treatment plant intake water quality, is needed by all municipalities operating water treatment plants along the north shore of Lake Ontario, including those of the CTC Source Protection Area (the City of Toronto and the Regions of Peel and Durham). The Ontario Ministry of Environment and Climate Change is recommended as the lead agency to undertake these monitoring, modelling and reporting responsibilities, as it has staff with the necessary technical expertise and knowledge; has access to the required in-lake instrumentation; maintains computer simulation models necessary to make the forecasts; has the resources to track, in real time, the dispersion and flow path of the spill; and has the ability to notify affected municipalities of its monitoring results and forecasted predictions.

#### **Need for the Ontario Ministry of the Environment and Climate Change to control spills to storm sewers that eventually discharge to Lake Ontario**

Of the comments provided by the MOE, of particular concern are the recommendations to delete Policy LO-SEW-3 and Policy LO-FUEL-2.

##### Policy LO-SEW-3

The proposed Policy is as follows:

"Where a spill from a facility could reach an off-site storm sewer such that it would be a moderate or low drinking water threat as identified in the *Tables of Drinking Water Threats* (Ontario Regulation 287/07 under the *Clean Water Act*, 2006 in IPZ-2, IPZ-1), the Ministry of the Environment and Climate Change should enact the necessary legislation/regulation to require such facility owners to be subject to provincial approvals for spill prevention/mitigation plans."



### Policy-LO-FUEL-2

The proposed Policy is as follows:

"Where event based modelling of a spill from a facility has shown that it could reach an of-site storm sewer such that it would be a significant drinking water threat (IPZ-3), the Ministry of the Environment should enact the necessary legislation/regulation to require such facility owners to be subject to provincial approvals for spill prevention/mitigation plans."

The above policies are aimed at situations where a facility with, for example, chemical storage but without an on-site storm sewer connection (i.e., no ability to force the implementation of spills prevention plans/controls via the City of Toronto's Sewers By-law) could have a spill from the facility enter a municipal storm sewer via a catchbasin (abutting the property) within the municipal right-of-way.

Both Policies seek to have the Ministry of the Environment and Climate Change require facility owners to take proper and appropriate spill prevention actions, so that spills that do occur and leave a site and enter a storm sewer that might eventually lead to the transport of the spilled material to Lake Ontario and hence to the City's water treatment plant intakes, are mitigated. In commenting on Policy LO-SEW-3, the Ministry's letter of June 18, 2014, states that "the responsibility for storm sewers rests with municipalities", and that "provincial legislation...which would duplicate municipal authorities is not practical." In commenting on Policy LO-FUEL-2, the Ministry, in its letter of June 18, 2014, asks the CTC Source Protection Committee to "Please consider removing this policy." The effect of the Ministry's response to Policy LO-SEW-3 is to download the responsibility to municipalities, and in the case of LO-FUEL-2, to dismiss the issue outright.

A chemical spill reaching a storm sewer would ultimately impact the Lake Ontario nearshore either through a direct storm sewer discharge to the lake, or from rivers flowing to the Lake, which receive storm sewer flows upstream. The MOE's response envisages each municipality with responsibility for storm sewers (within and outside of the CTC Source Protection Region), implementing and enforcing an equally restrictive storm sewer use by-law to address the issue. This is not an appropriate or practical approach, especially for two tiered municipalities, where storm sewer by-laws are typically within the jurisdiction of the lower tier municipality, and where the need for this type of by-law may not be given equal priority for all municipalities.

In consideration of the above, the CTC Source Protection Committee, at its meeting of June 24 2014, maintained these two Policies (Policy LO-SEW-3 and LO-FUEL-2) as originally drafted.

### **Importance of CTC Source Water Protection Plan policies has already been demonstrated**

The importance of protecting sources of drinking water and the need to be proactive and put measures in place to prevent threats to drinking water sources, including Lake Ontario, was highlighted during the City's participation at the National Energy Board (NEB) hearing into Enbridge's Line 9B application, in Toronto on October 2013. Throughout the NEB process, and at the public hearing on the application, the City requested that the NEB require Enbridge to

have regard for and include applicable CTC policies in developing its own emergency procedures manual, plans and policies.

While Enbridge took the position that it was not bound by the proposed policies for a number of reasons it did commit, both in response to a City Information Request and in its Reply argument to the NEB, to further discussions with the City to determine how the CTC policies might be incorporated into Enbridge's Emergency Response Manual, plans, and policies. This outcome, although still at a preliminary stage, validates the Source Water Protection Plan as a framework for effective drinking water threat mitigation.

This staff report has been prepared in collaboration with staff from Toronto Public Health.

## **CONTACT**

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## **SIGNATURE**

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Lou Di Gironimo  
General Manager, Toronto Water

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Michael D'Andrea, M.E.Sc., P.Eng.  
Executive Director,  
Engineering and Construction Services  
and  
CTC Source Protection Committee Member





# WATER IS SAFE

## Source Water Implementation 2014 Annual Report



[www.york.ca](http://www.york.ca)



Keeping our drinking water safe







## INTRODUCTION

This third annual report complies with s. 81 of the Clean Water Act, 2006 and outlines the activities undertaken by The Regional Municipality of York in 2014.



### Interim Risk Management Plans executed

In 2014, York Region continued its work with a number of businesses and farmers to verify threat activities at their sites. Once threats were verified, establishment of voluntary interim Risk Management Plans were initiated. The process included evaluating existing business practices and potential gaps relative to drinking water protection. To date, all of the individuals engaged in the process had many of the appropriate measures in place to manage chemicals and, in the case of the two farms, nutrients. Small gaps were identified and new risk mitigation measures will be established as part of the interim Risk Management Plans. The Council-endorsed incentive program helped negotiations tremendously, expediting the timelines for implementing the risk management measures. In total, Interim Risk Management Plans were completed for one farm and three businesses, and terms agreed to for several other plans will be executed early in 2015. Common risk management measures required in those plans include the addition of secondary containment for chemical storage areas, developing and providing training on spill response and purchasing appropriate spill response equipment. Information related to the interim Risk Management Plans is managed in the Regional data management system.



### **Pilot Project completed with local farmer to refine agricultural risk management process**

York Region ran a pilot project to develop an agricultural interim Risk Management Plan (iRMP) to test the Region's risk management planning process and to receive expert advice on agricultural risk management measures. The chicken and vegetable farmer who volunteered for the pilot is located in close proximity to highly vulnerable shallow municipal production wells and has several significant drinking water threats. These include pesticide, fertilizer, manure application, and manure storage. York Region hired an agronomist, who is also a certified crop advisor, to assess the farm's drinking water threats, current risk management measures, and to propose new risk management measures in the iRMP to ensure the identified activities cease to be a significant threat. The proposed risk management measures include a Nutrient Management Strategy and Nutrient Management Plan that will be developed as part of the pilot. The farm will also receive incentive funding for the remaining proposed risk management measures, including construction of a manure storage facility, reduction in toxicity of pesticides applied, improvements to pesticide application equipment and best management practices to improve nutrient management (once they are in place). The Region's risk management plan process and knowledge of agricultural risk management measures have improved as a result of the pilot project.



### **Municipal Comprehensive Review of the Regional Official Plan Honouring Source Protection Plan Policies**

Late in 2014, a project was initiated to assess potential impacts on groundwater quantity related to proposed growth in the Region and ensure the future viability of municipal groundwater supplies. Although additional groundwater-taking is not anticipated to serve proposed growth, CTC recharge policy Rec-1 requires municipalities to demonstrate recharge function will be maintained. Results of the water quantity impact assessment will be incorporated into the 2015 Municipal Comprehensive Review.



### **Local Municipalities Ready to Implement**

In 2014, four local municipalities in York received provincial funding for source protection implementation. The working group of Regional, local municipal and conservation authority staff who drafted sample official plan and zoning bylaw amendment text last year was reconvened and expanded to collaborate on additional implementation preparation. The group included representatives from the four municipalities receiving funding as well as two of those three others (Aurora, Vaughan and Markham), that were not eligible. Products developed or refined through that collaboration included business processes for Planning Act and Building Code Act application approval, official plan and zoning bylaw amendments, and outreach material for those directly affected by Source Protection Plan policies.

In addition to the efforts of the working group, on April 30, 2014, Regional staff hosted an implementation workshop for planning and building department staff from across the Region. The event was well attended and included some interactive sessions that demonstrated the willingness and capacity to implement across York Region.



## **Planning Applications in Vulnerable Areas Reviewed**

In 2014, more than 90 planning applications were circulated to York Region's Water Resources department, which contains the Risk Management Office, for review and comment. In partnership with local municipal planning colleagues, conditions were added to approvals to manage or eliminate risks to drinking water supplies. The number of applications in 2014 was nearly double that for 2013, demonstrating the efforts at the local municipal level to engage the Risk Management Office for applications in vulnerable areas.

Source Protection staff offered comments and conditions to mitigate water quality and quantity risks. In some instances, the equivalent of Risk Management Plans were negotiated with proponents based upon York Region Official Plan policies.



## **Risk Management Plan Template Developed**

To assist small business in understanding and complying with Source Protection requirements, a template was developed to address the handling and storage of chemicals (specifically Dense Non Aqueous Phase Liquids). The template is structured to capture existing management measures in place, identify gaps and document necessary additional measures to ensure the activity ceases to be a significant drinking water threat. A document to rationalize the management measures necessary to ensure the handling and storage of these chemicals is effectively managed and 'ceases to be a significant threat' was also drafted as part of the project.

**The Regional Municipality of York  
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Accessible formats or communication  
supports are available upon request.

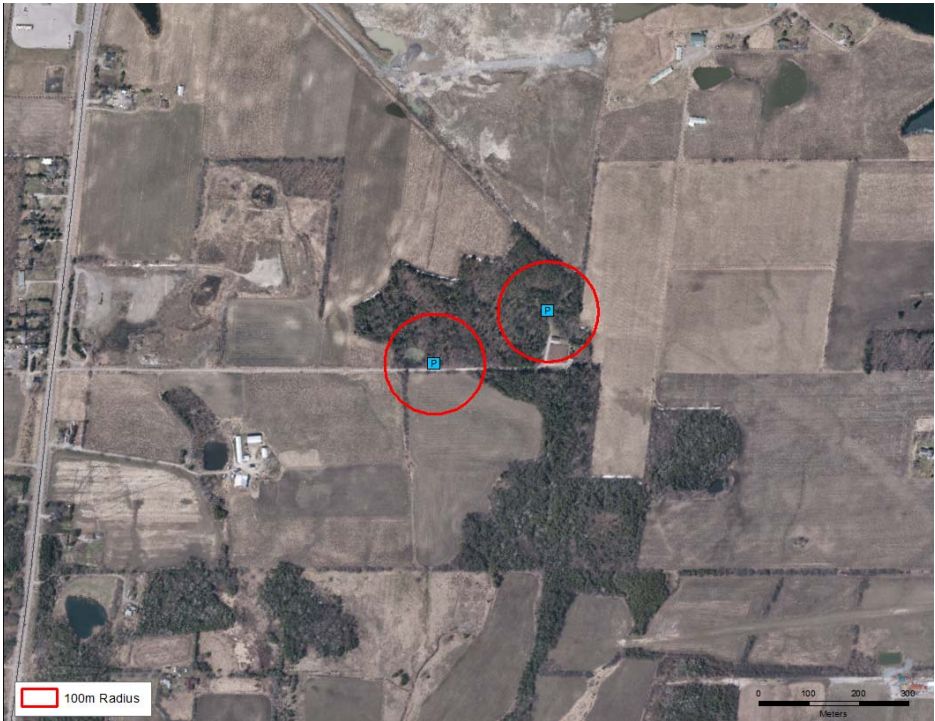


**Keeping our drinking water safe**

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**Attachment 3**



Farms within 100m of York Region Production Wells

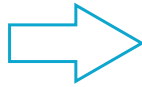


Businesses within 100m of York Region Production Well

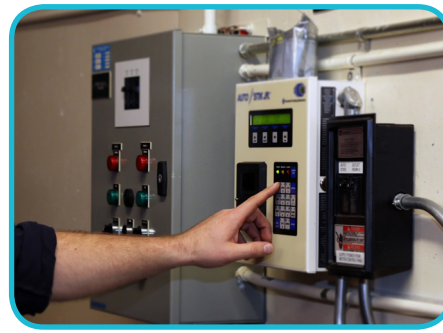




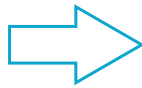
**Threat:**  
Underground  
fuel storage



**Mitigation:**  
Double walled  
tank with alarm



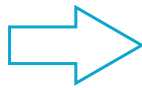
**Threat:**  
Chemical  
storage



**Mitigation:**  
Fireproof cabinet  
with secondary  
containment



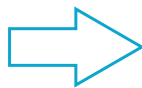
**Threat:**  
Proposed dry  
cleaner



**Mitigation:**  
Planning condition  
prohibiting  
chemical cleaning  
(depot only)



**Threat:**  
Fuel  
storage



**Mitigation:**  
Spill response  
equipment



**Threat:**  
Manure  
spreading



**Mitigation:**  
Establishment  
of Nutrient  
Management  
Plan

