



Supported by Toronto and Region Conservation Authority

Toronto and Region Source Protection Authority Meeting Agenda

#1/20

May 22, 2020

9:30 A.M.

The meeting will be conducted via a video conference
Members of the public may view the livestream at the following link:

<https://video.isilive.ca/trca/live.html>

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9. NEW BUSINESS

NEXT MEETING OF THE TORONTO AND REGION SOURCE PROTECTION
AUTHORITY TO BE CONFIRMED.

John MacKenzie, Chief Executive Officer

/am

Ministry of the Environment,
Conservation and Parks

Ministère de l'Environnement,
de la Protection de la nature et des
Parcs

Office of the Minister

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DEC 3 2019

357-2019-2606

Ms. Karen Ras
Chair, Credit Valley Conservation Authority
1255 Old Derry Road
Mississauga, Ontario L5N 6R4

Mr. Douglas Wright
Chair, CTC Source Protection Committee
C/O Toronto and Region Source Protection
Authority
5 Shoreham Drive,
Toronto, Ontario M3N 1S4

Ms. Jennifer Innis
Chair, Toronto and Region Source
Protection Authority
5 Shoreham Drive
Downsview, Ontario M3N 1S4

Dear Ms. Ras, Ms. Innis, and Mr. Wright:

It is a pleasure to inform you that the Ministry has completed the review of the amended assessment report for the Credit Valley Source Protection Area and source protection plan for the CTC Source Protection Region, developed under the *Clean Water Act, 2006*. Pursuant to section 34 of the *Clean Water Act*, I approve the amendments. These amendments will take effect on the day a notice of this decision is posted on the Environmental Registry.

The approval of these amendments does not make any changes to the recently amended order under section 36 of the *Clean Water Act* that governs the future review of the plan.

We appreciate the dedication of the CTC Source Protection Committee, the three Source Protection Authorities and all stakeholders to the protection of sources of drinking water. Your commitment to building on the significant work completed to date is inspiring, and the Province looks forward to continuing to work with you.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Yurek".

Jeff Yurek
Minister

Ministry of the Environment,
Conservation and Parks

Source Protection Programs
Branch

14th Floor
40 St. Clair Ave. West
Toronto ON M4V 1M2

Ministère de l'Environnement, de la
Protection de la nature et des Parcs

Direction des programmes de protection
des sources

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40, avenue St. Clair Ouest
Toronto (Ontario) M4V 1M2

November 22, 2019

Dear Ms. Innis, Ms. Ras, Mr. Chapman, and Mr. Wright,

Thank you again for the submission of the annual progress reports on implementation of the CTC Source Protection Plan in April.

I am writing in response to comments about Lake Ontario from the CTC Source Protection Committee that were included with the submission of your annual progress report. As the committee noted, the Ministry reported that we have implemented these policies and our commitment to review and consider their requirements, and that the Ministry's spill response and notification procedures have been updated. The comments also referred to recommendations in several "Lake Ontario" policies, notably LO-NGS-1, LO-SEW-1 & 2, LO-FUEL-1 & 2, LO-G-1 and LO-PIPE-1.

As you may know, the Ministry established a cross-divisional working group to consider all non-binding policies directed at the Ministry and to identify: 1) where existing programs already achieve the policy outcomes, and 2) where we should further consider program and regulatory improvements. MECP has completed its review of the policy outcomes and annual reporting has included some information where policy outcomes have already been achieved through new or existing programs or regulatory amendments. I would like to take this opportunity to provide additional information on the Ministry's review and actions undertaken.

The above-noted Lake Ontario policies include requests for the Province to work with relevant authorities to **evaluate existing Risk Mitigation or Contingency Plans** for a range of facilities. This work is most appropriately led by the operators and regulators of the facilities in question, whether they are bulk fuel storage, oil pipelines, nuclear generation stations, or sewage treatment plants.

Under the *Emergency Management and Civil Protection Act (EMCPA)*, all Ontario municipalities are required to appoint a Community Emergency Management Coordinator (CEMC) who evaluates risks and hazards within the municipality and creates an emergency plan to address those risks. Those plans are reviewed by the Office of the Fire Marshal and Emergency Management on an annual basis. Industry-specific plans are developed in accordance with applicable regulatory bodies for those industries. Industry-specific plans should be linked to municipal plans to ensure appropriate coordination under the Provincial Emergency Response Plan (PERP). Provincial resources are coordinated at the Provincial Emergency Operations Centre (PEOC) to support municipal response efforts. Federal supports may also be requested through the PEOC.

For the **nuclear generation industry (policy LO-NGS-1)** the explanatory document for the CTC Source Protection Plan noted that the Provincial Nuclear Emergency Response Plan (PNERP) might not be triggered by a release of tritiated water. However, there is a stand-alone provincial

procedure in place, held by the Office of the Fire Marshal and Emergency Management, called the Provincial Liquid Emergency Response Procedure (PLERP). The purpose of the PLERP is to provide a coordinated response for events where the discharge of radioactivity from Ontario's nuclear power plants may result in radioactive concentrations at nearby water intakes that may exceed Ontario's Drinking Water Quality Standards (per O. Reg. 169/03 made under the Safe Drinking Water Act). The PLERP focuses on sampling arrangements for discharges of cooling waters or other discharge waters with elevated tritium levels.

The initial response to elevated waterborne radiological discharges depends on the amount of radioactivity in the discharge waters, its projected or potential effect on local drinking water supplies, and the ability of community and local health authorities to deal with the situation. A response to elevated radiation discharges is similar to other events that involve an unusual or unanticipated release of contaminants into the environment, and escalates when necessary from the discharger to the community, and finally to the Province. A response to elevated waterborne radiological discharges will involve the nuclear facility, the affected community, and may escalate to involve the Ministries of the Solicitor General, the Ministry of Labor, the Ministry of the Environment, Conservation and Parks, and the Ministry of Health and Long-Term Care who are members of the Provincial Liquid Emergency Response Team. Decisions for action in these situations would be based on the circumstances at the time of the event and depend on the season, as well as the nature, scope and length of the release.

In 2016, the Office of the Fire Marshal and Emergency Management conducted a discussion-based exercise related to the updated PLERP. The exercise focused on testing decision making processes and validating communication procedures related to notification, reporting and situational awareness.

The Lake Ontario policies also recommend **testing of contingency plans through emergency exercises**. At the request of industry, the Ministry participates in various levels of exercises. These exercises may range from low level participation, such as notifications to the Spills Action Centre (SAC) as required in their plans to higher levels and a wider range of participation by regional staff and the Ministry's Emergency Management Program Office. The Ministry has participated in exercises for specific scenarios, including:

- Imperial Oil (Toronto 2018): based on a pipeline spill to the Humber River
- Shell Oil (Sarnia 2017): based on a large-scale incident at the Sarnia Manufacturing Center with tank fire and marine oil spill
- Trans-Northern Pipeline (Mississauga 2016) - "Exercise Elaion Response East" hosted by the Canadian Safety and Security Program. This exercise was led by Defence Research and Development Canada's Centre for Security Science, in partnership with Public Safety Canada. Exercise focused on a terrorist threat targeting the petroleum industry in North America (Provincial participation from the PEOC)

In addition to physical participation in exercises, the Ministry supports testing of plans at the local level with industry and municipalities as it relates to local emergency plans. For the period of 2016 to present, the Ministry has participated in over 50 exercises.

Nuclear generating stations are required, as a condition of licensing, to conduct exercises of different types on an annual basis. There is also a requirement for those facilities to conduct full scale exercises on a rotational basis. During full scale exercises, provincial ministries with

responsibilities under the PNERP participate as they would in an actual event along with the various levels of government and industry who have responsibilities under the plan. Recent exercises include:

- Huron Resilience 2019 – seismic event scenario impacting Bruce B
- OPG Pickering Nuclear Generating Station “Exercise Unified Control 2017” - involving contaminated worker and leading up to the point of release of radioactive material into the environment
- Huron Resolve 2016 – nuclear release involving both Bruce A and B modelled after Fukushima
- Amherstburg 2016 – nuclear exercise in support of FERMI II Nuclear Generating Station (Michigan)
- OPG Pickering Nuclear Generating Station 2016 - Provincial Liquid Emergency Response Plan exercise.

With regard to **contingency and notification plans for wastewater treatment plants (LO-SEW-1)**, the Ministry reported in February 2019 that we have completed our review of previously issued Environmental Compliance Approvals (ECAs) for sewage works that are significant drinking water threats, to ensure these instruments conform with source protection plan policies. All wastewater treatment plant ECAs for significant threat facilities include a requirement for the operator to create and maintain a spill prevention and contingency plan, in accordance with O. Reg 224/07. Recent ECAs for wastewater treatment plants includes a condition requiring the owner to develop a notification procedure, in consultation with the Ministry, to ensure downstream water users (including drinking water systems) are appropriately notified in the event of a bypass or overflow. SAC and MECP District Office staff review the plans shared with the Ministry and provide feedback to the operators. Part of this feedback includes reminding operators to consider source protection vulnerable areas.

Policy **LO-G-1** also refers to **contingency plans for municipal drinking water systems**. Operating authorities for municipal drinking water systems are accredited by a third party to meet the requirements of the Drinking Water Quality Management Standard. As part of this accreditation, operating authorities are required to document, implement and conform to a procedure for emergency preparedness. This includes preparing a list of potential emergency situations and processes for emergency response and recovery. Operating authorities are also required to undertake a risk assessment for their system at least once every 36 months. The Safe Drinking Water Act (s.13) requires municipal drinking water system owners to have an accredited operating authority in charge of the system at all times – and having an accredited operating authority is a requirement for the municipal drinking water licence.

The Drinking Water Quality Management Standard was updated in April 2017. This update included mandatory risks that must be considered within the risk assessment – including a “chemical spill impacting source water”. All risk assessments conducted by operating authorities since April 2017 are required to consider the mandatory risks. As operating authorities are required to undertake a risk assessment once every 36 months, all operating authorities will have evaluated this risk by April 2020.

As you know, the MECP is also participating on the **Lake Ontario Collaborative Group (LOCG – LO-G-2)** along with the municipalities of Durham, Toronto and Peel and the Toronto & Region Source Protection Authority. The LOCG’s Communications Working Group is currently working

on a collaborative spill response protocol for each of the major spill scenarios identified in the CTC Lake Ontario policies. Ontario Power Generation has done a presentation for the group on their spill response procedures, tritium notification thresholds and emergency response preparedness exercises. Meetings with pipeline companies regarding their communication protocols to SAC and municipal contact information are being planned for early 2020. In addition to the communications work, the LOCG is also in the process of developing modelling solutions to support enhanced spills response.

I hope this additional information on implementation of the Lake Ontario policies is helpful, and I thank you for your ongoing efforts to protect drinking water sources.

Sincerely,



Debbie Scanlon,
Manager, Approvals, Source Protection Programs Branch
Land and Water Division
Ministry of the Environment, Conservation and Parks

C: Jennifer Stephens, Manager – Source Water Protection, Toronto & Region Source Protection Authority
Wendy Lavender, Manager, Source Protection Planning, SPPB
Elizabeth Forrest, Liaison Officer, SPPB
Neil Gervais, Senior Drinking Water Program Advisor, SPPB
Michael Halder, Research and Planning Analyst, SPPB

Section I – Items for the Toronto and Region Source Protection Authority Action

TO: Chair and Members of the Toronto and Region Source Protection Authority
Meeting #1/20, Friday, May 22, 2020

FROM: Laurie Nelson, Director, Policy Planning

RE: **ANNUAL REPORTING - DRINKING WATER SOURCE PROTECTION PROGRAM**

KEY ISSUE

Endorsement of the Toronto and Region Source Protection Authority (TRSPA) to report to the Ministry of the Environment, Conservation and Parks that implementation progress of the Credit Valley – Toronto and Region – Central Lake Ontario (CTC) Source Protection Plan is progressing well, but short of target between January 1 and December 31, 2019.

RECOMMENDATION

THAT the Toronto and Region Source Protection Authority (TRSPA) endorses the recommendation of the Credit Valley–Toronto and Region –Central Lake Ontario (CTC) Source Protection Committee (SPC) to report to the Ministry of the Environment, Conservation and Parks that implementation progress of the CTC Source Protection Plan is progressing well, but short of target;

AND FURTHER THAT the comments from the CTC SPC be incorporated into correspondence from the Chair of the TRSPA to the Ministry of Environment, Conservation and Parks by the June 1st reporting deadline and that staff be directed to submit the Annual Progress Report and accompanying documents.

BACKGROUND

The Credit Valley – Toronto and Region – Central Lake Ontario (CTC) Source Protection Plan (SPP) was approved by the Minister of the Environment and Climate Change in July 2015 and became effective on December 31, 2015. Municipalities, source protection authorities (SPAs), and various provincial ministries have been implementing policies within the plan since it became effective.

The CTC Source Protection Committee (CTC SPC) had access to a variety of policy tools in developing Source Protection Plan policies, inclusive of specific prescribed instruments and land use planning powers under the *Clean Water Act, 2006*. The legislation also introduced new powers (Part IV powers) which allow for specific activities to be regulated (prohibited or managed) in areas where these activities are, or could be, a significant drinking water threat. Lastly, the committee also had access to ‘softer’ tools, such as education and outreach or incentive programs, which could be applied to address existing or future significant drinking water threats, in combination with other tools or alone.

The *Clean Water Act (CWA), 2006* establishes a requirement for annual progress reporting by the SPA to the Ministry of the Environment, Conservation and Parks (MECP) by May 1st for the previous calendar year. Under the present circumstances related to the Novel Coronavirus (COVID-19) pandemic, the Toronto and Region Source Protection Authority, along with Credit Valley and Central Lake Ontario Source Protection Authorities were approved for a one-month extension to June 1st, 2020 to submit the 2019 Annual Reports.

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Those responsible for the implementation of policies in the CTC Source Protection Plan (CTC SPP) were required to submit a report of their activities between January 1st and December 31, 2019 by February 1, 2020. Staff summarized the content of these reports and presented this information to the CTC SPC for their review on April 29, 2020. The CTC SPC is required to comment on the extent to which, in their opinion, the objectives set out in the source protection plan are being achieved. Comments received from the CTC SPC are being presented to the Credit Valley, Central Lake Ontario, and Toronto and Region Source Protection Authorities for endorsement in May 2020, prior to submission to the Province by June 1st.

RATIONALE

Of the 10,198 existing significant drinking water threats that were found in the CTC Source Protection Region (SPR) at the time the CTC SPP became effective, only 424 remain at the end of the fourth year of implementation (January 1 – December 31, 2019). All municipalities have implemented most significant drinking water threat policies in the CTC SPP. Most municipalities are in the process of implementing policies to address moderate and low threat policies.

The remaining 424 existing drinking water threats will be managed through 251 Risk Management Plans (RMPs), so they cease to be a significant threat to municipal sources of drinking water. Ten (10) of these RMPs fall within the Region of Peel and are needed to address 13 existing drinking water threats. These threats were recently added to the list of enumerated threats as a result of a new drinking water well at the Alton wellfield becoming operational in 2019. The CTC SPP does not address timelines for the completion of RMPs as a result of amendments, such as having a new municipal drinking water wells becoming operational. This issue will be addressed by the CTC SPC at their June 23, 2020 meeting. It is possible that the CTC SPC, with approval from the MECP, will amend the timelines in the CTC SPP so that all RMPs required to address existing threats as a result of a new drinking water well or intake be completed within three years.

Excluding the RMPs still to be negotiated in Peel Region as a result of the Alton wellfield amendment, there are still 241 RMPs necessary to address 411 significant drinking water threats. The distribution of RMPs and existing threats across the CTC SPR are as follows:

- Town of Mono - 8 threats, 7 RMPs;
- Township of Amaranth – 4 threats, 3 RMPs;
- Region of Peel – 1 threat, 1 RMP;
- Region of Halton – 229 threats, 165 RMPs;
- York Region – 2 threats, 2 RMPs;
- Town of Orangeville – 99 threats, 40 RMPs;
- Town of Erin – 68 threats, 23 RMPs; and
- Township of East Garafraxa – No threats.

The current timeline in the approved CTC SPP (2015) states that all RMPs to address existing significant drinking water threats must be completed by December 31, 2020. On an annual basis, there is great variation across municipalities in the length of time needed to create a RMP based on its complexity, the number of threats being addressed through the Plan, and the willingness of the parties carrying out the activity(ies) to negotiate the parameters of the plan. Discussions with source protection staff at these municipalities have concluded that for these reasons, as well as the restrictions currently in place as a result of the COVID-19 pandemic, it will be impossible for the Town of Erin, Halton Region, and the Town of Orangeville to meet the 2020 deadline for the completion of RMPs. The CTC Source Protection Committee rendered a

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decision to submit correspondence to the MECP requesting a 3-year extension to the December 2020 deadline to complete the remaining RMPs at Meeting #2/20 held on May 13, 2020.

The MECP has provided three different categories (progressing well/on target; satisfactory/limited progress; no progress) for source protection committees to select from in commenting on the extent to which the objectives set out in the source protection plan are being achieved. At Meeting #1/20 held on April 29, 2020, the CTC SPC communicated that implementation of the CTC SPP is progressing well, but short of target (Attachment 1). The Committee felt that since 96% of the existing significant drinking water threats have been addressed, this shows tremendous progress. However, given that 241 RMPs will not meet the timeline outlined in the CTC SPP and the Committee is contemplating an extension to this deadline, progress falls just short of target. A summary of CTC SPP implementation follows below. This information is also presented in a public-friendly document attached (Attachment 2) to this report.

Prescribed Instruments (Timeline for Implementation: December 2018 for existing threats; ongoing for potential future threats)

Implementation Status: Progressing Well/On Target

Prescribed instruments (PIs) are regulatory tools under specific pieces of provincial legislation. These prescribed instruments allow the regulatory authority to impose conditions on existing and/or future activities that can be used to protect drinking water. Using existing regulatory tools such as environmental compliance approvals under the Environmental Protection Act, 1990, avoids regulatory duplication. This means that, rather than creating a new tool, a policy in a SPP would point to an already-existing tool that fulfills the objective of the policy.

- All ministries responsible for issuing prescribed instruments to conform with policies in the CTC SPP have integrated source protection practices into their business processes.
- Between January 1 and December 31, 2019, 19 applications submitted to provincial ministries underwent a detailed review to ensure conformity with the CTC SPP across the CTC Source Protection Region. These reviews include:
 - One (1) permit for fuel handling and storage at a municipal residential drinking water system;
 - Sixteen (16) environmental compliance approvals for wastewater or sewage works; and
 - Two (2) aggregate licenses.

Part IV Tools (Timeline for Implementation: December 2020)

Implementation Status: Satisfactory/Limited Progress

A risk management plan (RMP) (Section 58 of the *Clean Water Act, 2006*) is a plan formulated to manage a threat activity in an area where it is, or could be, a significant drinking water threat, and may include responsibilities and protocols of the person engaged in the threat activity. Risk management plans are intended to be negotiated between a Risk Management Official (RMO) and a person engaging in the threat activity. There are eight RMOs operating in the CTC SPR.

- 41 RMPs were agreed to or established within the CTC SPR (for existing and future significant drinking water threats) between January 1 and December 31, 2019

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- 52 properties (parcels) had RMPs agreed to or established between January 1 and December 31, 2019
- 84 existing significant drinking water threats have been managed through established RMPs between January 1 and December 31, 2019
- 29 RMPs were in-progress at the end of December 31, 2019

Prohibition of certain activities was employed by the CTC SPC for both existing and future activities (Section 57 of the *Clean Water Act, 2006*). The prohibition of existing activities was exercised only when the committee was convinced there was no other method to reduce risk to the drinking water source, or the degree/level of risk that the activity posed was unacceptably high or severe that it may not be permitted to continue.

- Since the CTC SPP took effect in December 2015, seven existing significant drinking water threats in the CVSPA have been prohibited. These threats were related to the application of agricultural source material (i.e., manure) and non-agricultural source material (i.e., biosolids), as well as livestock grazing. These seven threats were primarily located in the Wellhead Protection Area (WHPA-A) within 100 metres of the municipal well. The CTC SPP required all existing significant drinking water threats subject to prohibition to cease to exist within six months of the CTC SPP becoming effective. In 2019, no existing significant drinking water threats were prohibited.

Section 59 notices ensure that activities in designated areas are assessed by the RMO to ensure compliance with either RMP or prohibition policies before the municipality issues a building permit or planning approvals. These notices, when implemented prevent the unintentional approval of activities that are a significant threat to municipal drinking water.

- 31 Section 59 notices were issued in the CTC SPR for activities which upon review, neither a prohibition, nor a RMP applied during this reporting period. Of these Notices, one (1) was issued in York Region.
- 11 Section 59 Notices were issued in the CTC SPR for activities to which a RMP policy applied during this reporting period.

Land Use Planning

Implementation Status: Progressing Well/On Target

The *Clean Water Act, 2006* allows the use of land use planning policies under the *Planning Act, 1990* or the *Condominium Act, 1998* to address future significant drinking water threats. These policies manage or eliminate a future threat activity. Municipalities are required to incorporate these policies into their official Plans, zoning by-laws, and site plan controls.

Under Section 40 of the *Clean Water Act, 2006*, the Council of a municipality or a municipal planning authority that has jurisdiction in an area to which the source protection plan applies is required to amend its official plan to conform with the significant threat policies and designated Great Lakes policies set out in the source protection plan.

- All municipalities are implementing the land use planning policies to address significant drinking water threats in the CTC SPP.
- The majority of municipalities in the CTC SPR are in the process of completing the exercise to ensure that their Official Plan conforms with the CTC SPP.

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- The Regions of Peel, Halton, York and Durham are currently moving through the municipal comprehensive review process to incorporate CTC Source Protection Plan policies into the next iteration of their regional official plans, as part of the conformity exercise with the Growth Plan for the Greater Golden Horseshoe (i.e., July 2022 for the Regional municipalities, July 2023 for lower tier municipalities).

Education and Outreach (Timeline for Implementation: December 2017)

Implementation Status: Progressing Well/On Target

A number of approaches are being used to inform stakeholders about the actions they can and should take to protect municipal drinking water without compelling compliance through approvals, permits, or enforcement. All municipalities with existing significant drinking water threats were required to implement education and outreach programs by December 2017 and activities continue annually to advance the stakeholder knowledge of the Drinking Water Source Protection Program. These activities include the development and distribution of educational materials, in-person workshops, content for websites, educational videos, presentations at schools, and / or water treatment plant tours.

Incentive Programs (Timeline for Implementation: December 2017)

Implementation Status: Progressing Well/On Target

Such programs provide the positive motivation for a voluntary change in behaviour. Such approaches are not solely monetary in nature but could include discounted fees or recognition.

A number of municipalities have provided financial support in favour of incentive programs including:

- A well decommissioning grant program to eliminate transport pathways (Peel);
- Financial assistance to rural landowners (Wellington, Peel, York);
- Subsidized sale of rain barrels (Orangeville, Halton);
- Risk Management Measures required for risk management plans and
- Toilet rebate program (Halton).

Specify Action (Timeline for Implementation: December 2017)

Implementation Status: Progressing Well/On Target

These policies specify an action to be taken to achieve the SPP objectives.

- The Province, Durham Region, Peel Region and the City of Toronto participate in a Lake Ontario Collaborative Group, whose role is to undertake action to protect Lake Ontario as a source of drinking water. Participation in this group, along with other actions taken by the municipalities and the Province address 32 locations in CTC SPR's jurisdiction where significant drinking water quality threats to intakes on Lake Ontario were identified.
- The Town of Orangeville has completed a research program to determine the impact, if any, of the town's water pollution control plan (WPCP) outfall on increasing chloride levels at well 10, one of its municipal wells. The monitoring results indicate that there is minimal impact of the WPCP effluent on well 10.

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- The Town of Orangeville and the Region of Halton are undertaking monthly water quality monitoring at municipal wells with increased sodium, chloride, and nitrate concentrations. Credit Valley Source Protection Authority staff have been providing technical support to both municipalities.
- Over 99% of the required sewage system inspections have been completed in accordance with the timeline outlined in the Mandatory Septic System Inspection Protocol. These mandatory inspections are required to be completed every five years. With the first round of inspections completed as mandated by January 2017, most municipalities are beginning to initiate their second round of inspections, which are required to be complete by January 2022.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategy set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 2 – Manage our regional water resources for current and future generations

Strategy 4 – Create complete communities that integrate nature and the built environment

Strategy 7 – Build partnerships and new business models

FINANCIAL DETAILS

Funding has been provided to Toronto and Region Conservation Authority (as the lead Source Protection Authority in the CTC SPR) through a transfer payment agreement with the MECP. The financial resources to support staff time and the CTC SPC to advance and maintain the Drinking Water Source Protection Program are provided through this agreement. Provincial funding is continuing through the April 2020-March 2021 fiscal year.

DETAILS OF WORK TO BE DONE

To comply with the annual reporting requirements under the *Clean Water Act, 2006*, through the TRSPA, the CTC SPR will submit the annual progress reporting results received by the CTC SPC, to the MECP by June 1, 2020 (Attachment 2). This submission is accompanied by comments provided on the CTC SPC to the TRSPA (Attachment 1). The TRSPA may, at their discretion, submit their own supplementary comments. In addition, the CTC SPR will post the Source Protection Annual Progress Report, the ten-page summary report from the CTC SPC, on the CTC SPR website (www.ctcswp.ca) by June 1, 2020.

Report prepared by: Jennifer Stephens, 416-892-9634

Email: jennifer.stephens@trca.ca

For Information contact: Jennifer Stephens, 416-892-9634

Email: jennifer.stephens@trca.ca

Date: May 13, 2020

Attachments: 1

Attachment 1: Correspondence from D. Wright, Chair of CTC SPC to J. Innis, Chair, Toronto and Region Source Protection Authority, Dated April 30, 2020

Attachment 2: 2019 Annual Progress Report



5 Shoreham Drive, Downsview, ON M3N 1S4
T. 416-661-6600 ext. 5633 | sourcewater@trca.on.ca

CTC Source Protection Region
Source Protection Committee

April 30, 2020

Ms. Jennifer Innis
Chair, Toronto and Region Conservation Authority
101 Exchange Avenue
Vaughan, Ontario
L4K 5R6

Dear Ms. Innis:

In accordance with Ontario Regulation 287/07, Toronto and Region Source Protection Authority (TRSPA) is required to submit its third Annual Progress Report to the Ministry of the Environment, Conservation and Parks on the implementation of the CTC Source Protection Plan by June 1, 2020. This report documents the status of policy implementation, as well as the progress in achieving the source protection plan objectives during the reporting period. This third Annual Progress Report reflects implementation efforts between January 1, 2019 and December 31, 2019 (see attached).

On April 29, 2020, the CTC Source Protection Committee passed the following resolution:

IT IS RECOMMENDED THAT a summary of implementation activities in 2019 obtained through Annual Reports submitted by February 1, 2020 be received by the CTC SPC for input on progress achieved in accomplishing source protection plan objectives;

AND THAT in the opinion of the CTC SPC, implementation of the CTC Source Protection Plan in 2019 is progressing well, although short of target;

AND THAT CTC SPR staff be directed to take the necessary action to communicate the Committee's assessment of implementation progress, as well as any feedback from the CTC SPC to the Credit Valley, Toronto & Region, and Central Lake Ontario Source Protection Authorities at meetings scheduled for May 8th, May 12th, and May 22nd, 2020.

AND FURTHER THAT the CTC SPR staff be directed to take the necessary action to submit the 2019 Annual Progress Report and 2019 Annual Report – Supplemental Form to the Ministry of the Environment, Conservation and Parks, along with any Source Protection Committee comments, in accordance with Section 46 of the *Clean Water Act, 2006* and any Director's instructions established under O. Reg. 287/07 S.52.

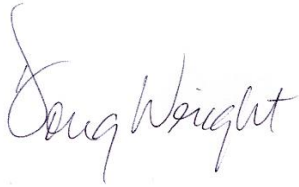
At the time the CTC Source Protection Plan was made effective, 10,198 existing significant drinking water threats were identified in the Credit Valley – Toronto and Region – Central Lake Ontario (CTC) Source Protection Region (SPR). At the end of the current reporting period, only 424 (4%) significant drinking water threats remain to be addressed. Additionally, the majority of applicable plan policies that address significant drinking water threats are implemented or in progress. Therefore, the CTC Source Protection Committee determined that implementation of the CTC Source Protection Plan (SPP) is progressing well.

However, some policies in the CTC SPP require the establishment of a risk management plan (RMP) to address significant drinking water threats. Some municipalities in the CTC Source Protection Region will not meet the December 31, 2020 deadline to complete these legally-binding documents, as there are 241 which remain to be negotiated. The CTC Source Protection Committee is currently considering an extension to this timeline by 2 or 3 years. For this reason, the Committee concluded that, based on the original timeline set out when the CTC Source Protection Plan was approved, progress falls just short of target.

On behalf of the CTC Source Protection Committee, the Toronto and Region Source Protection Authority is now tasked with considering this Annual Progress Report and submitting it to the Ministry of Environment, Conservation and Parks along with any comments the source protection authority wishes to make. Similarly, both Credit Valley and Central Lake Ontario Source Protection Authorities are reviewing the comments received from the CTC Source Protection Committee and will report their assessment of implementation status to the Ministry within the same timeframe.

If you have any questions regarding this letter, or the CTC Source Protection Plan 2019 Annual Progress Report, please contact Jennifer Stephens at 416-892-9634 or jennifer.stephens@trca.ca.

Sincerely,

A handwritten signature in cursive script, reading "Douglas Wright".

Douglas Wright
Chair, CTC Source Protection Committee

Copy to:

John MacKenzie, Chief Executive Officer, TRSPA
Laurie Nelson, Director - Policy Planning, TRSPA
Don Ford, Senior Manager - Hydrogeology and Source Water Protection, TRSPA
Jennifer Stephens, Manager - Source Water Protection, TRSPA

Source Protection Annual Progress Report




I. Introduction

This annual progress report outlines the progress made in implementing our source protection plan for the Credit Valley, Toronto and Region, and the Central Lake Ontario (CTC) Source Protection Areas, as required by the Clean Water Act and regulations for the 2019 calendar year. Together, these source protection areas comprise the CTC Source Protection Region.

Protecting the sources of our drinking water is the first step in a multi-barrier approach to safeguard the quality and quantity of our water supplies. The source protection plan is the culmination of extensive science-based assessment, research, consultation with the community, and collaboration with local stakeholders and the Province. When policies in the plan are implemented it ensures that activities carried out in the vicinity of municipal wells and lake-based intakes will not pose significant risk to those drinking water supplies.



II. A message from your local Source Protection Committee

-  P : Progressing Well/Short of Target – The majority of the source protection plan policies have been implemented and/or are progressing; some fall short of target.
-  S : Satisfactory – Some of the source protection plan policies have been implemented and/or are progressing.
-  L : Limited progress – A few of source protection plan policies have been implemented and/or are progressing.

This is the third Annual Report on implementation progress of the Drinking Water Source Protection Program in the CTC Source Protection Region since the CTC Source Protection Plan took effect on December 31, 2015.

In the fourth year of implementation, 100% of the legally-binding policies to address significant drinking water threats have been implemented or are in progress. At the end of the 2019 calendar year, 96% of the significant drinking water threats that existed at the time of source protection plan approval had been addressed through policy implementation or removed through threats verification. Further, the majority of applicable plan policies that address significant drinking water threats are implemented or in progress. Therefore, the CTC Source Protection Committee determined that implementation of the CTC Source Protection Plan (SPP) is progressing well.

Some policies in the CTC SPP require the establishment of a risk management plan (RMP) to address significant drinking water threats. Three municipalities in the CTC Source Protection Region will not meet the December 31, 2020 deadline to complete these legally-binding documents, as there are 240 which remain to be negotiated. The CTC Source Protection Committee is currently considering an extension to this timeline by 2 or 3 years. For this reason, the Committee concluded that, based on the original timeline set out when the CTC Source Protection Plan was approved, progress falls just short of target.

III. Our Watershed

The CTC Source Protection Region contains 25 large and small watersheds and spans over 6,400 km², from the Oak Ridges Moraine in the north to Lake Ontario in the south. The region contains portions of the Niagara Escarpment, Oak Ridges Moraine, Greenbelt, Lake Ontario, and the most densely populated area of Canada. The CTC Source Protection Region includes 25 local municipalities and eight single tier, regional or county municipalities, 66 municipal supply wells, and 16 municipal surface water intakes on Lake Ontario. The region is complex and diverse in terms of geology, physiography, population, and development pressures. There are many, often conflicting, water uses including, drinking water supply, recreation, irrigation, agriculture, commercial and industrial uses, and ecosystem needs.

The Credit Valley Source Protection Area covers an area of 1,000 km². The Credit River Watershed contains 22 subwatersheds, each representing a major drainage area of the Credit River. Nearly 1500 km of streams and creeks empty into the Credit River including Black Creek, Silver Creek, West Credit River, Shaw's Creek, East Credit River, Fletchers Creek, Caledon Creek, and several others. There are thirteen municipal water systems operating in the source protection area, two are surface water based – accessing Lake Ontario as the source; the remainder are groundwater-based. There are no municipal water sources on the Credit River.

The Toronto and Region Source Protection Area comprises nine watersheds, plus their collective Lake Ontario waterfront shorelines, to incorporate portions of six upper-tier and 15 lower-tier municipalities. These nine watersheds include Carruthers, Duffins, Etobicoke, Highland, Mimico, and Petticoat Creeks, as well the Don, Humber and Rouge Rivers. More than 4.7 million people live within the source protection area with the population expected to grow significantly in the years to come. There are ten municipal water systems operating in the source protection area, five are surface water based – accessing Lake Ontario as the source; the remainder are groundwater-based.

The Central Lake Ontario Source Protection Area covers an area of 638.6 km² that is fully contained within the Regional Municipality of Durham. There are 15 watersheds within its boundaries, with the five major watersheds originating at the Oak Ridges Moraine. There are no municipal wells within source protection area; municipal drinking water comes from Lake Ontario. There are there are municipal drinking water systems: Whitby, Oshawa, and Bowmanville.

IV. At a Glance: Progress on Source Protection Plan Implementation

1. Source Protection Plan Policies

The CTC Source Protection Committee included 165 policies in the CTC Source Protection Plan to address 21 prescribed threats and two local threats, actions considered necessary to protect sources of drinking water, and policies for monitoring implementation. Some policies are required to be implemented by one stakeholder, while others are to be implemented by several.

At the end of the fourth year of implementation, 92% of legally binding policies addressing significant drinking water threats have been implemented, and 4% of these policies are in the process of being implemented.

P: Progressing Well/On Target

2. Municipal Progress: Addressing Risks on the Ground

All municipalities in the CTC Source Protection Region are subject to the policies in the CTC Source Protection Plan. However, only 21 municipalities have vulnerable areas where significant drinking water threat policies apply. All municipalities where a future significant drinking water threat to sources of drinking water is possible, have processes in place to ensure that their day-to-day planning decisions conform with the CTC Source Protection Plan. Since the CTC Source Protection Plan has one land use planning policy that applies to the application of road salt (SAL-10), all 33 municipalities will need to review and update their Official Plan to ensure that it conforms to the CTC Source Protection Plan.

Municipalities in the CTC Source Protection Region are amending their Official Plans as required to conform with the Growth Plan for the Greater Golden Horseshoe, 2017. The Growth Plan requires that all upper tier municipalities complete their review by summer 2022 and lower tier municipalities by summer 2023. As of December 2019, 28 of the 33 municipalities have completed or are in the process of completing their conformity exercise.

P: Progressing Well/On Target

3. Septic Inspections

There are 371 septic system inspections that are required to be complete every five years to satisfy the requirements of the Mandatory Septic System Inspection Protocol. The first round of septic systems was required to be complete in January 2017. Municipalities in the CTC Source Protection Region are now in the midst of the second round of inspections, which are to be completed by January 2022. In 2019, two septic system inspections were completed to conform with the Ontario Building Code. Inspections at these systems confirmed that both are functioning as designed or carrying out required pump-outs.

P: Progressing Well/On Target

4. Risk Management Plans

In 2019, 41 risk management plans were established in the CTC Source Protection Plans. This number reflects the most risk management plans generated in any one calendar year. At the end of 2019, 72 risk management plans are in place within the CTC Source Protection Region.

Municipalities have reported that 27 risk management plans are in the process of being completed. There were 45 inspections carried out by a risk management inspector for prohibited or regulated activities. In 2018, there was a 100% compliance rate with risk management plans and prohibited activities that were inspected.

Although municipalities across the CTC Source Protection Region have made significant progress in establishing risk management plans, it is unlikely that the estimated remaining 236 plans will be complete by the December 2020 deadline. On an annual basis, there is great variation across municipalities, in the number of risk management plans that can be developed based on the complexity of these documents, the number of threats being addressed through the Plan, and the willingness of the parties carrying out the activity(ies) to negotiate the parameters of the Plan. For those municipalities with a large number of risk management plans yet to negotiate, the Risk Management Officials will need to increase the rate at which the Plans are established.

S: Satisfactory

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The Province has established Standard Operating Policies to ensure that all applications submitted for provincial approvals take into account the science generated through the Drinking Water Source Protection Program and policies in the relevant source protection plan. Where necessary, conditions are added to the approval to ensure that the activity does not pose a significant threat to sources of drinking water.

The province completed a review of all previously approvals (100%) issued in the CTC Source Protection Plan where the activity could have resulted in a significant threat, at the end of December 2018. Through 2019, provincial ministries continued to review applications for new or amended approvals for conformity with the CTC Source Protection Plan.

P: Progressing Well/On Target

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7. Source Protection Plan Policies: Summary of Delays

As with the CTC Source Protection Plan, all such documents prepared in the Province were required to have a policy or policies to address significant drinking water threats. The CTC Source Protection Committee chose to also include policies to address three moderate and low drinking water threats. These drinking water threats include the application of road salt and the handling and storage of certain chemicals. Since the implementation of these four moderate and low threat policies (SAL-10, SAL-12, DNAP-3, OS -1) is non-legally binding, their execution varies greatly across the source protection region with several municipalities indicating some progress, while others indicating no progress made.

The establishment of incentive programs to encourage and support property owners and businesses with best management practices is one policy tool used by the CTC Source Protection Committee to address significant drinking water threats. The majority of municipalities with significant threat policies have not been able to establish such programs, therefore, the implementation of Policy GEN-5 has made very limited progress across the source protection region. The Committee was aware that this policy would be difficult to implement, hence it was established as a non-legally binding commitment.

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8. Source Water Quality: Monitoring and Actions

Fourteen (14) drinking water issues have been identified at four (4) drinking water systems in our source protection region.

For these drinking water systems, the source protection plan requires that the municipality establish more frequent raw water quality monitoring to further characterize this data and determine the impact of policies established to manage potential threats contributing to these increased values. This information can be accessed by contacting the local municipality.

Since these monitoring initiatives have only recently been established, there is insufficient data to be able to discern the impact of source protection plan policies on activities which may contribute to these concentrations.

Orangeville Drinking Water System (5 municipal wells)

Sodium: Wells 6, 9A, 9B - An increasing trend/concentration has been observed.

Chloride: Wells 6 and 10 - An increasing trend/concentration has been observed.

Chloride: Wells 9A, 9B - A decreasing trend/concentration has been observed.

Chloride: Well 10 - No change in trend/concentration.

Inglewood Drinking Water System (1 municipal well)

Pathogens: Well 2 - A decreasing trend/concentration has been observed.

Acton Drinking Water System (2 municipal wells)

Nitrates: Davidson Wells 1 and 2 - No change in trend/concentration.

Georgetown Drinking Water System (3 municipal wells)

Chloride: Cedarvale Wells 1, 4, and 4A - No change in trend/concentration.

9. Science-based Assessment Reports: Work Plans

No work plans were required to be implemented for our assessment reports.

10. More from the Watershed

For more information about source protection implementation in the CTC Source Protection Region, please see our story map, which is available on our website: <https://ctcswp.ca/>