

# CTC SPR Explanatory Document

## NOTICE OF AMENDMENTS

Currently proposed amendments to this document, made under Ontario Regulation 287/07, Section 34, are summarized in the table below. Page references are to those of the pdf. The proposed amendments to the document are highlighted in yellow.

**DATE PROPOSED AMENDMENTS POSTED: Monday June 5, 2023**

Table: Summary of Anticipated Section 34 Amendments to the Explanatory Document for the CTC Source Protection Plan

No.	Section or Figure	Brief Description of Anticipated Amendment	Estimated Timing to Submit Proposed Amendment to Ministry of the Environment, Conservation, and Parks
1.	Cover page (p.2-3), footers (all pages)	Update to version number; date of approval and effective dates	September 2023
2.	Transition Provision (p.4-5)	Rationale for revised transition provision	September 2023
3.	DNAPL policies (p.7)	Rationale for revised DNAP-1 policy	September 2023
4.	Organic solvent policies (p.9)	Rationale for revised OS-1 policy	September 2023



CTC Source Protection Region

DRINKING WATER  
**SOURCE PROTECTION**  
Our Actions Matter

CTC Source  
Protection  
Region

# Explanatory Document: CTC Source Protection Region

Prepared by: CTC Source Protection Committee  
Approved: July 28, 2015

Amendment (Version 56.0 - Proposed June 5, 2023)  
Approved: February 23, 2022 TBD

## Explanatory Document: CTC Source Protection Region



This project has received funding support from the Government of Ontario

**POLICY RATIONALE**

**TRANSITION PROVISION**

<p>Transition Provision</p>	<p>The Transition Provision policy outlines the circumstances under which a future significant drinking water threat activity may be considered an existing significant drinking water threat activity.</p> <p>The <i>Clean Water Act, 2006</i> requires source protection plans to contain policies to address both existing and future threat activities. The <i>Clean Water Act, 2006</i> further specifies that all policies will come into effect upon the plan approval date, or an effective date specified by the Minister of the Environment and Climate Change. Transition provisions have been developed to recognize those situations where an applicant has either obtained an approval-in-principle to proceed with a development application, or where a complete application has already been made to a planning approval authority that are “in process” on the date the Source Protection Plan comes into effect <b>(December 31, 2015)</b>. They are not designed to allow proponents to ignore or circumvent the provision contained in this Plan. They will allow the applications to proceed subject to existing significant drinking water threat policies.</p> <p>The CTC Source Protection Committee concluded a transition provision should be included in the Source Protection Plan to be fair to those with applications in progress or that have received an approval-in-principle to proceed with works. The policy will allow those with complete applications made under the <i>Planning Act</i> or <i>Condominium Act</i>, building permits submitted in compliance with Division C.1.3.1.1 of the <i>Ontario Building Code Act, 1992</i> as amended, development permits under the <i>Niagara Escarpment Planning and Development Act</i>, or an application for the issuance or amendment of a Prescribed Instrument prior to the day the Source Protection Plan comes into effect to be treated as existing threat activities.</p> <p><b>TRANSITION PROVISION AND POLICY REC-1</b></p> <hr/> <p>Policy REC-1 is intended to apply to “future threats” in a WHPA-Q2 with a significant or moderate risk level. However, if an application subject to REC-1 Parts 2a) and 2b) is submitted after the date the source protection plan came into effect (December 31, 2015) but is required to implement a development proposal in progress (as per the Transition Provision), the threat (reducing aquifer recharge) is to be managed as “existing”.</p> <p>Through the plan review process, the Planning Approval Authority will decide what is required to ensure the “existing” threat does not become significant. This is generally to be determined through water balance assessments, or their equivalent (e.g., addendums or amendments to previous stormwater management reports undertaken on site). The Planning Approval Authority may, however, determine that an application submitted after the Transition Provision deadline to implement an application in progress would not increase impervious cover and a water balance assessment (or equivalent) is not required.</p>
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The CTC Source Protection Committee intended to allow the Planning Approval Authority the flexibility to require the appropriate level of detail in a specific water balance assessment (or equivalent) that is commensurate with the scale and location of the proposed development. Some areas of the WHPA-Q2 are particularly important for recharge (i.e. Significant Groundwater Recharge Areas) and should be given specific protection, while others may not be as important and/or cannot provide the required level of infiltration. Therefore, the water balance assessment (or equivalent) should include a site-specific assessment, acknowledgement of previous planning approvals obtained or in progress that could impact infiltration, and an identification of recharge characteristics.

Ultimately, the intent of the water balance assessment is to demonstrate, to the satisfaction of the Planning Approval Authority, that pre-development recharge will be maintained to the greatest extent feasible through best management practices such as low impact development (LID), minimizing impervious surfaces, and lot level infiltration.

**TRANSITION PROVISION AND RELATIONSHIP TO AMENDED WELLHEAD PROTECTION AREAS**

For vulnerable areas newly identified through an amendment to an Assessment Report, “Existing Threat” policies apply to prescribed drinking water threat activities that are part of a complete applications made under the *Planning Act* or *Condominium Act*, building permits submitted in compliance with Division C.1.3.1.1 of the *Ontario Building Code Act, 1992* as amended, development permits under the *Niagara Escarpment Planning and Development Act*, or an application for the issuance or amendment of a Prescribed Instrument, prior to the effective date of the corresponding amendment. See report from SPC Meeting #1/22 on February 15, 2022 for further details.

The first amendment to the CTC Source Protection Plan (March 2019) incorporated new vulnerable areas (wellhead protection areas) at the Inglewood and Caledon East Drinking Water Systems. The second amendment to the CTC Source Protection Plan (December 2019) included new wellhead protection areas at the Alton Wellfield, part of the Caledon Village – Alton Drinking Water System. For both of these amendments the following description applies to the interpretation of the transition provision as it relates to differentiating between an existing and future drinking water threat.

All applications, permits, and development proposals that were received prior to the original effective date of the CTC Source Protection Plan (December 31, 2015) would be considered an existing drinking water threat. In the event that an application, permit, or development proposal were received after December 31, 2015 for an activity taking place in a vulnerable area where the activity would be a significant drinking water threat, the activity would be classified as a future threat. The label of future drinking water threat would apply regardless of the effective date of the amendment.

**TIMELINE FOR COMPLETION OF RISK MANAGEMENT PLANS**

T-6	During development of the Source Protection Plan (2011-2015), the CTC Source Protection Committee developed a policy that that all Risk Managements Plans (RMPs) addressing existing significant drinking water threats must be completed by 5 years from the date the Source
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	<p>Protection Plan comes into effect. The approval in 2015 of the CTC SPP set the effective date of the original Source Protection Plan to December 31, 2015; meaning these RMPs would need to be complete by Dec. 31, 2020.</p> <p>In May 2020, recognizing that this deadline would not be met, the CTC Source Protection Committee requested a 3-year extension to this policy be made. On July 29, 2020, the Ministry of Environment, Conservation and Parks approved extending the deadline to December 31, 2023</p>
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DENSE NON-AQUEOUS PHASE LIQUID (DNAPL) POLICIES

<p>DNAP-1</p>	<p>Policy DNAP-1 provides volume-based thresholds to determine when DNAPLs threats will be managed through prohibition or Risk Management Plans. Policy DNAP-1 prohibits the future handling and storage of a dense non-aqueous phase liquid (DNAPL) where it would be a significant drinking water threat. The existing handling and storage of a DNAPL is otherwise managed by requiring a Risk Management Plan. This policy excludes incidental quantities for personal use and is not intended to apply to the handling and storage of small quantities of DNAPLs at single family dwellings, which is covered by policy DNAP-2. The total volume threshold of incidental quantities for personal use was set at 25L.</p> <p>Handling and storage of DNAPLs of a total quantity greater than 25L is prohibited in WHPA A for future threats. Total quantity greater than 25L but less than 250L is managed by requiring a Risk Management Plan, where the threat would be significant. The risk management approach for future threats is intended to mitigate the potential for missing the introduction of new threats when there is changeover in businesses. The CTC Source Protection Committee concluded that a risk management approach allows for greater engagement of businesses by municipal Risk Management Officials. Handling and storage of DNAPLs of a total quantity greater than 250L are prohibited where the threat would be significant. See report from SPC Meeting #1/22 on February 15, 2022 for further details.</p> <p>DNAPLs are a group of organic substances that, because of their density, sink vertically, below the water table. These liquids dissolve sparingly into the groundwater, creating a contaminant plume. The improper handling and storage of DNAPLs can result in the release of these chemicals into the environment which are very difficult to remediate. DNAPLs include dioxane-1, 4, polycyclic aromatic hydrocarbons, tetrachloroethylene (also known as perchloroethylene), trichloroethylene and vinyl chloride. The volume thresholds refer to total volume of pure-phase DNAPLs, or total volume of a product containing or potentially containing DNAPL mixtures.</p> <p>The CTC Source Protection Committee concluded that prohibiting future new handling and storage is a precautionary approach and that existing threats could be managed through Risk Management Plans.</p>
<p>DNAP-2</p>	<p>Policy DNAP-2 manages the existing and future handling and storage of a dense non-aqueous phase liquids (DNAPL) through the use of education and outreach targeted towards individuals as well as industrial and commercial users.</p> <p>This policy is the only one to deal with the threat posed by the storage of small quantities of DNAPLs by individuals for their personal use. This threat is comprised of a short list of chemicals as set out in the provincial <i>Tables of Drinking Water Threats</i> which are generally used in industrial or commercial applications (dioxane-1,4, polycyclic aromatic hydrocarbons, tetrachloroethylene also known as perchloroethylene, trichloroethylene and vinyl chloride). The CTC Source Protection Committee concluded that an education and outreach policy is sufficient to manage the threat under these circumstances for the following reasons:</p> <ol style="list-style-type: none"> <li>1) There is no minimum threshold below which DNAPLs are not a significant threat;</li> <li>2) The vulnerable area where the handling and storage of DNAPLs is significant comprises the entire WHPA-A, B and C. This includes thousands of properties in the CTC;</li> <li>3) DNAPLs in their pure and bulk form are highly regulated and generally not available for public purchase; and</li> </ol>

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	<p>4) It would be impractical and create a large burden on Risk Management Officials and costs to individuals to require Risk Management Plans at residences for incidental use of DNAPLs especially given that most DNAPLs available to households comprise a minute quantity of the product within which they are contained.</p> <p>Therefore, the Source Protection Committee concluded that this policy is an appropriate balance between protecting the municipal source of drinking water and avoiding the workload burden on the Risk Management Official and costs to landowners that would result from requiring a Risk Management Plan.</p> <p>An education and outreach strategy should be developed by the municipality that includes a suite of actions to ensure that affected property owners understand and take actions to protect municipal supplies. This should include ongoing efforts and follow-up analysis to assess effectiveness as this is a standalone policy, not a companion to other policies directed at the same threat activity. Education and outreach materials should clearly set out actions that property owners should take to reduce the threat in the vulnerable areas. Where education and outreach materials have been prepared by the Ministry of the Environment and Climate Change the municipality shall deliver those materials, otherwise the municipality shall develop their own materials for delivery.</p> <p>Municipalities are also encouraged to distribute these materials to property owners in areas where the threat to municipal drinking water is low or moderate where action can also help to protect sources of other drinking water supplies (see GEN-8). Voluntary actions undertaken by individuals and businesses to protect a drinking water source can be very effective as part of the protection approach.</p>
<p>DNAP-3</p>	<p>Policy DNAP-3 is a low/moderate threat policy to manage existing and future handling and storage of a dense non-aqueous phase liquids (DNAPL) by encouraging the municipality to promote best management practices for industrial, commercial, and institutional land uses.</p> <p>The CTC Source Protection Committee concluded that it is important to extend this policy to low and moderate threats; it is non-legally binding. Each specific implementer must have regard for the policy in making decisions but has the flexibility of determining what action(s) will be taken. While an implementer is not required to provide a report on their actions on implementing low or moderate threat policies, the CTC Source Protection Committee encourages them to provide information that will help in future review and revision of policies.</p>



ORGANIC SOLVENT POLICIES

OS-1	<p>Policy OS-1 prohibits the future handling and storage of an organic solvent where it would be a significant drinking water threat. The existing handling and storage of an organic solvent is otherwise managed by requiring a Risk Management Plan.</p> <p>Organic solvents that are a significant threat comprise of four specific chemicals (carbon tetrachloride, chloroform, dichloromethane, and pentachlorophenol) that are stored in quantities greater than 25 litres as set out in the provincial <i>Tables of Drinking Water Threats</i>. They are generally used in industrial or commercial applications.</p> <p>Policy OS-1 prohibits the future handling and storage of an organic solvent where it would be a significant drinking water threat. The existing and future handling and storage of an organic solvent in volumes between 25L and 250L is managed by requiring a Risk Management Plan, while volumes greater than 250 have been prohibited. The explicit mention of the volume thresholds ensures consistency between OS-1 and DNAP-1 policies. The volume thresholds mentioned above refer to total volume of a product containing or potentially containing Organic Solvents in mixtures.</p> <p>The CTC Source Protection Committee concluded that prohibiting future new handling and storage is a precautionary approach and that existing threats could be managed through Risk Management Plans.</p>
OS-2	<p>Policy OS-2 manages the existing and future handling and storage of an organic solvent through the use of education and outreach targeted towards individuals as well as industrial and commercial users.</p> <p>Education and outreach policies have been developed by the CTC Source Protection Committee as part of the suite of tools to address this activity. Education and outreach materials should clearly set out actions that property owners should take to reduce the threat in the vulnerable areas. Where education and outreach materials have been prepared by the Ministry of the Environment and Climate Change the municipality shall deliver those materials, otherwise the municipality shall develop their own materials for delivery.</p> <p>Municipalities are also encouraged to distribute these materials to property owners in areas where the threat to municipal drinking water is low or moderate where action can also help to protect sources of other drinking water supplies (see GEN-8). Voluntary actions undertaken by individuals and businesses to protect a drinking water source can be very effective as part of the protection approach.</p>
OS-3	<p>Policy OS-3 is a low/moderate threat policy to manage existing and future handling and storage of an organic solvent by encouraging the municipality to promote best management practices for industrial, commercial, and institutional land uses.</p> <p>The CTC Source Protection Committee concluded that it is important to extend this policy to low and moderate threats; it is non-legally binding. Each specific implementer must have regard for the policy in making decisions but has the flexibility of determining what action(s) will be taken. While an implementer is not required to provide a report on their actions on implementing low or moderate threat policies, the CTC Source Protection Committee encourages them to provide information that will help in future review and revision of policies.</p>

AIRCRAFT DE-ICING POLICIES

DI-1 DI-2	<p>Policy DI-1 manages the existing and future run-off that contains chemicals used in the de-icing of aircraft where it is or would be a significant drinking water threat by requiring a Risk Management Plan.</p> <p>Policy DI-2 encourages the siting of future facilities for the de-icing of aircraft to be located outside of areas where the activity would be a significant drinking water threat.</p> <p>The CTC Source Protection Committee has chosen in this case to propose two policies to address this significant threat. This is intended to ensure that all responsible authorities are working together in making decisions. The CTC Source Protection Committee recognizes that reducing or avoiding significant drinking water threats is facilitated when each decision-maker is working under the same policy direction.</p> <p>There have been no existing threats from de-icing aircraft identified within vulnerable areas in the CTC Source Protection Region, however the CTC Source Protection Committee has included policy DI-1 should new municipal wells be located where an existing activity would be a threat or in the case an existing threat has not been identified.</p>
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