

How will the Source Protection Plan affect municipal decisions?

Municipalities

Area: Sydenham Intake Protection Zone 3a

Water Source: Sydenham Lake

The Importance of Source Protection

Drinking water source protection is intended to ensure that activities do not pollute our drinking water. Some chemicals are not removed from water, even with a water treatment system. In some cases when the pollution cannot be cleaned up, the resulting contamination can ruin a water source forever. It is much easier to keep water clean than it is to try and clean it up after it has been polluted. Protecting drinking water sources can also benefit tourism and recreation, as well as providing good fish and wildlife habitat. More details about the benefits of source protection can be found [here](#).

For source protection, particular activities that have the potential to pollute drinking water are called “drinking water threats”. This is because they pose a risk of pollution, especially if the activities are improperly managed. The source protection plan accounts for drinking water threats that already exist, and those that must or should be considered if they were to become established. Depending on their scale, the type of activity and their proximity to the source of drinking water, drinking water threats are ranked significant, moderate, or low.

Threats to drinking water exist in the Sydenham Intake Protection Zone (IPZ). The majority relate to the handling and storage of liquid fuel, and septic systems/holding tanks. There are policies within the Cataraqui Source Protection Plan (the Plan) to protect the drinking water source from activities occurring within the IPZ.

Intake Protection Zone Three (IPZ-3a)

IPZ-3a is one of three zones that form a complete IPZ. The IPZ is an area of land and water that contributes source water to a drinking water system (i.e. Sydenham Lake). Actions must or should be taken within the IPZ to protect the drinking water supply. IPZ-3a is defined as the area of nearby lakes and streams that contribute water to the intake pipe that brings water into the drinking water treatment plant.

IPZ-3 is separated into IPZ-3a and IPZ-3b. IPZ-3a has a vulnerability score of 6.3 and IPZ-3b has a vulnerability score of 3.6. Because of its very low vulnerability score, IPZ-3b will not be discussed in the Cataraqui Source Protection Plan. Vulnerability scores refer to how vulnerable a drinking water source is to contamination. It is determined by considering the physical characteristics of the area and of the intake itself, including how easily contaminants could enter the waterbody, how long it would take contaminants to reach the intake, as well as the pathways that contaminants could travel to reach the intake. A lower vulnerability score like that of IPZ-3a means that certain activities could be a moderate or low drinking water threat. In general, vulnerability scores are highest near the well and lowest at the edge of the IPZ.

Specific Requirements for Municipalities under the *Clean Water Act*

Planning decisions and documents

Decisions made under the *Planning Act* and the *Condominium Act* must conform to related significant drinking water threat policies in the Plan and have regard for moderate and low threat policies immediately following the Plan effective date. Planning documents should be updated to reflect Plan policies by at least the next five year review.

Transport pathway notification

The creation of a new transport pathway or the modification of an existing transport pathway has the potential to increase the vulnerability score of a wellhead protection area. Additional landowners or businesses may become subject to binding source protection policies as a result of an increased vulnerability score in the WHPA. Examples of transport pathways include drainage ditches, subsurface infrastructure, and service trenches.

Subsection 27(3) of Ontario Regulation 287/07 (General) under the *Clean Water Act* requires that:

If a person applies to the municipality for approval of a proposal that may create a new transport pathway/modify an existing transport pathway, the municipality *must* notify the source protection authority and the source protection committee of the proposal and *must* include a description of the proposal, identify the person responsible for the proposal, and describe the approvals required for the proposed activity.

On-site sewage systems

The Cataraqui Source Protection Plan as enabled by the *Building Code Act, 1992* and the Building Code encourages municipalities to **establish** an on-site sewage system maintenance inspection program for areas of the IPZ (such as IPZ-3a) where the systems are moderate or low drinking water threats. The inspection confirms that the on-site sewage systems are functioning properly, and requires that failed/poorly functioning on-site sewage systems are remediated to protect source water.

Cataraqui Source Protection Plan

The Township of South Frontenac is responsible for providing safe drinking water to the village of Sydenham. The *Safe Drinking Water Act* includes a standard of care for individuals responsible for overseeing municipal drinking water systems. Responsible individuals include not only the operator of the drinking water treatment facility, but also municipal councillors and staff with decision-making authority over the drinking water system. The intent is to ensure that the appropriate steps are taken

in good faith by the individuals responsible for safeguarding the drinking water system. This responsibility includes the implementation of the Cataraqui Source Protection Plan. [Click here for more information on standard of care.](#)

The Plan has several policies to help the Township protect the source water. The following information is applicable to Sydenham IPZ-3a, and is only a summary of the policies directly applicable to the municipality. It is provided as a scoped and plain language alternative to referencing the full **Plan**. For more detail, please refer to the Plan. Note that the policies relevant to municipalities belong to three different categories of implementation: comply with (CW), have regard to (HR), and non-binding (NB).

Plan Policy Summaries

To go directly to the section you are interested in, select it from the table below. If you want to see the policy as it appears in the Plan, simply click on the policy number and you will be directed to the appropriate chapter within the Plan.

Area of Interest	Included Topics
Land Use Planning and Related Reporting	<i>Planning Act</i> risk management measures in sensitive groundwater areas*
	Risk management measures
Municipal Operations	Emergency and spill response
	Source protection road signs
	Municipal waste management programs
	Road salt management plans
	Management of hauled sewage
On-site Sewage Systems	Maintenance inspection program
Regional Programs	Education and outreach

* Highly vulnerable aquifers and in some cases significant groundwater recharge areas are present within intake protection zones; therefore, it is necessary to account for these policies as well.

Land use planning

[5.5.1-HR](#): *Planning Act* risk management measures in sensitive groundwater areas

Intent	Policy summary
To protect sensitive regional groundwater sources from contamination associated with particular types of development.	Municipalities reviewing proposals for new developments/expansions to an existing development in a highly vulnerable aquifer/significant groundwater recharge area, and involving certain activities, <i>should</i> incorporate risk management measures to protect groundwater quality. If there is evidence of surface karst formation, the municipality should require the developer to have a karst assessment performed to determine if any additional risk management measures may be required. For a list of example activities, please refer to the SPP. This requirement can be waived if the proponent can demonstrate that the property does not exhibit characteristics of a highly vulnerable area and/or significant groundwater recharge area.

[5.5.2-NB](#): Monitoring implementation of 5.5.1-HR

Intent	Policy summary
To monitor the implementation of policy 5.5.1-HR.	Municipalities <i>should</i> provide the Cataraqui Source Protection Authority with copies of any approvals under the <i>Planning Act</i> or <i>Condominium Act</i> for applications in the highly vulnerable aquifers/significant groundwater recharge when the Notice of Decision is issued related to policy 5.5.1-HR.

[7.2.4-HR](#): Risk management measures

Intent	Policy summary
Encourage proposed developments to incorporate risk management measures to protect drinking water sources.	Proposals under the <i>Planning Act</i> or <i>Condominium Act</i> for new development/expansions to existing development <i>should</i> incorporate measures to manage the risk to drinking water associated with the proposed activities. These activities include: <ol style="list-style-type: none"><li data-bbox="836 1717 1502 1822">i. Handling/storage of a dense non-aqueous phase liquid (DNAPL) and/or organic solvent<li data-bbox="836 1829 1477 1896">ii. Handling/storage of commercial fertilizer and/or pesticide<li data-bbox="836 1902 1328 1936">iii. Handling/storage of liquid fuel<li data-bbox="836 1942 1323 1971">iv. Handling/storage of road salt.

[7.2.7-NB](#): Monitoring implementation of 7.2.4-HR

Intent	Policy summary
To monitor the implementation of 7.2.4-HR.	The municipality <i>should</i> provide the Cataraqui Source Protection Authority with copies of approvals under the <i>Planning Act</i> or <i>Condominium Act</i> for applications on properties in the IPZ, when the Notice of Decision is issued related to policy 7.2.4-HR.

Municipal operations

[4.3.2-CW](#): Emergency and spill response

Intent	Policy summary
Ensure that municipalities are prepared for emergencies and spills within the vulnerable areas and have up-to-date procedures and information.	Municipalities <i>must</i> update their Emergency Management Plan and department supplemental plans to identify the location of the IPZ or WHPA and also update procedures to manage the threat to the drinking water source in case an emergency or spill occurs related to a significant local transportation-related drinking water threat.

[4.3.3-NB](#): Emergency and spill response for all IPZs

Intent	Policy summary
Encourage municipalities to be prepared for emergencies and spills within the vulnerable areas and have up-to-date procedures and information.	<i>ALL</i> municipalities that have an IPZ or WHPA <i>should</i> update their Emergency Management Plan and department supplemental plans in order to identify the location of these vulnerable areas, and to protect drinking water sources in case of an emergency, spill or unauthorized discharge along a highway/railway line/shipping lane.

[4.4.1-NB](#): Source protection road signs

Intent	Policy summary
Encourage the municipalities with WHPAs or IPZs to purchase and install source protection road signs.	As part of policy 4.4.1-NB, municipalities are responsible for the purchase, installation and maintenance of road signs (designed by the Province and the Source Protection Authority) which identify the location of the IPZ or WHPA. The signs should be placed where municipal arterial roads are located within the IPZ or WHPA.

[4.4.4-NB](#): Municipal waste management programs

Intent	Policy summary
Reduce the overall impact of waste on drinking water sources through proper waste management.	All municipalities <i>should</i> evaluate their waste management programs and improve them in order to reduce the impacts of waste on drinking water sources.

[4.7.2-NB](#): Road salt management plans

Intent	Policy summary
Encourage municipalities to update/establish salt management plans to account for vulnerable areas.	All municipal road authorities <i>should</i> review/update their salt management plans, taking into consideration the risk that salt operations/snow storage pose to drinking water sources. The Township should establish a salt management plan.

[4.7.3-NB](#): Management of hauled sewage

Intent	Policy summary
Encourage municipalities to protect drinking water sources where certain activities related to hauled sewage would be a moderate or low drinking water threat.	Municipalities <i>should</i> consider taking the following actions to protect drinking water sources where the application of hauled sewage to land, sewage treatment plant effluent discharges, and on-site sewage treatment systems are moderate or low drinking water threats: <ol style="list-style-type: none">i. Managing the treatment of untreated septage at existing wastewater facilities and/orii. Upgrading existing/constructing new facilities to handle demand and/oriii. Encouraging the use of alternative treatments.

On-site sewage systems

[5.4.1-NB](#): Maintenance inspection program

Intent	Policy summary
Encourage municipalities to establish an on-site sewage system maintenance inspection program within sensitive groundwater areas as prioritized to reflect local circumstances.	Municipalities <i>should</i> establish an on-site sewage system (i.e. septic systems and holding tanks) maintenance inspection program to address drinking water threats. The inspection program should be consistent with the <u>Ontario Building Code</u> .

Regional programs

4.4.3-NB: Education and outreach

Intent	Policy summary
Encourage the update of education/outreach materials to include drinking water source protection information.	The Cataraqui Source Protection Authority <i>should</i> consider working with the municipality and provincial partners to update education and outreach programs to include source protection information for use in vulnerable areas where moderate or low drinking water threats could/do exist.



CATARAQUI REGION CONSERVATION AUTHORITY

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