



How will the Source Protection Plan affect municipal decisions?

Municipality

Area: Sydenham Intake Protection Zone 2

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 such 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 Two (IPZ-2)

IPZ-2 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-2 is defined as an area where water and any pollution that may be present can reach the intake pipe (which brings water to the drinking water treatment plant) within two hours.

IPZ-2 has a vulnerability score of 8.1. 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 high vulnerability score like that of IPZ-2 means that certain activities are or could be significant drinking water threats, and therefore these activities require special attention by the municipality and others. In general, vulnerability scores are highest near intake points and lowest at the edge of the IPZ.

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 an intake protection zone. Additional landowners/businesses may become subject to binding source protection policies as a result of an increased vulnerability score in the IPZ. Examples of transport pathways include new or modified storm sewers, roadside ditches, sanitary sewers, and tile drainage.

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-2) 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-2, 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
Risk Management Office – Part IV of the Clean Water Act	Risk management plans
	Restricted land use
Land Use Planning and Related Reporting	<i>Planning Act</i> risk management measures in sensitive groundwater areas*
	Prohibitions
	Risk management measures for development in IPZ
	Enhanced stormwater protection
Municipal Operations	Emergency and spill response
	Emergency and spill response for all IPZs
	Source protection road signs
	Municipal waste management programs
	Road salt management plans
	Management of hauled sewage
	Stormwater management retrofits
On-site Sewage Systems	Maintenance inspection program
	On-site sewage system maintenance
Local Study	Lakeshore capacity study
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.

Risk Management Office – Part IV of the *Clean Water Act*

[7.3.1-CW](#): Risk management plans for agriculture-related activities

Intent	Policy summary
Ensure that a risk management plan is developed to reduce the risk to source water by officially recognizing risk management measures already in place or including others to fill gaps in management.	The following activities are/would be significant drinking water threats: <ol style="list-style-type: none">The storage of agricultural source materialThe application of agricultural source material to landThe use of land for livestock Therefore, a risk management plan is <i>required</i> for these activities.

[7.3.4-CW](#): Restricted land uses

Intent	Policy summary
To flag proposed developments to ensure that any Part IV prohibition or risk management plan requirements are met prior to processing a <i>Planning Act</i> , <i>Condominium Act</i> or building permit application.	Any proposed developments in IPZ-2 that could involve the following activities <i>must</i> be forwarded to the Risk Management Official: <ol style="list-style-type: none">The application of agricultural source materialThe use of land for livestock grazing, pasturing, outdoor confinement area or farm animal yardThe storage of agricultural source material

Land use planning and development

[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.

[7.2.3-CW](#): Prohibited land use

Intent	Policy summary
Ensure that the listed land uses never become established where the associated activities would be a significant drinking water threat.	The following land uses <i>must</i> be prohibited from becoming established in the future in IPZ-2: wastewater treatment facilities that would be a significant drinking water threat. For more details regarding these activities, please refer to the SPP.

[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: <ul style="list-style-type: none"><li data-bbox="841 1266 1507 1371">i. Handling/storage of a dense non-aqueous phase liquid (DNAPL) and/or organic solvent<li data-bbox="841 1377 1479 1444">ii. Handling/storage of commercial fertilizer and/or pesticide<li data-bbox="841 1451 1328 1484">iii. Handling/storage of liquid fuel<li data-bbox="841 1491 1317 1524">iv. Handling/storage of road salt<li data-bbox="841 1530 1175 1564">v. Storage of sewage

[7.2.6-CW](#): Monitoring implementation of 7.2.3-CW

Intent	Policy summary
To monitor the implementation of policy 7.2.3-CW.	The municipality <i>must</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 IPZ-2, when the Notice of Decision is issued related to policy 7.2.3-CW.

[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.

[7.3.5-HR](#): Enhanced stormwater protection

Intent	Policy summary
Encourage municipalities to require enhanced stormwater protection.	Municipalities <i>should</i> require proponents to incorporate stormwater management features (in accordance with best practices and that provide enhanced protection) into building and site plans. These features should reduce the volume of contaminants entering storm sewer systems and roadside ditches, or Sydenham Lake.

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 WHPHA 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: <ul style="list-style-type: none"><li data-bbox="841 1644 1469 1749">i. Managing the treatment of untreated septage at existing wastewater facilities and/or<li data-bbox="841 1755 1421 1822">ii. Upgrading existing/constructing new facilities to handle demand and/or<li data-bbox="841 1829 1393 1892">iii. Encouraging the use of alternative treatments.

[7.2.8-NB](#): Stormwater management retrofits

Intent	Policy summary
To encourage the municipality to develop a strategy to address stormwater management.	The municipality <i>should</i> develop a strategy to address stormwater runoff in IPZ-2.

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> .

[7.2.1-NB](#): On-site sewage system maintenance

Intent	Policy summary
Encourages municipalities to establish an on-site sewage system maintenance inspection program in some IPZs including Sydenham.	Municipalities <i>should</i> establish an on-site sewage system maintenance inspection program consistent with the <u>Ontario Building Code</u> and inspection guidelines under the code, in order to address moderate and low drinking water threats.

Local study

[7.3.7-CW](#): Lakeshore capacity assessment

Intent	Policy summary
Ensure that the Township of South Frontenac considers conducting a lakeshore capacity assessment.	In order to identify the best local risk management measures to address significant drinking water threats related to agricultural runoff, the Township of South Frontenac <i>must</i> consider undertaking a lakeshore capacity assessment for Sydenham Lake. The assessment will determine the impact of on-site sewage systems, and agricultural runoff, on the water quality of Sydenham Lake.

Regional programs

[4.4.2-CW](#): Education and outreach

Intent	Policy summary
Ensure the update of education/outreach materials to include drinking water source protection information.	The Cataraqui Source Protection Authority <i>must</i> consider working with the municipality and with provincial partners to update education and outreach programs to include source protection information for use in IPZ and WHPA where significant drinking water threats could/do exist.

[4.4.3-NB](#): Education and outreach

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



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Made possible through the support of
the Government of Ontario.