



How will the Source Protection Plan affect municipal decisions?

Municipality

Area: Cataraqui Source Protection Area (CSPA)

Water Source: Groundwater

The Importance of Source Protection

Drinking water source protection is intended to ensure that activities do not pollute our sources of drinking water. Some chemicals such as liquid fuels and other 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. 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 a municipal source of drinking water, drinking water threats are ranked moderate or low.

Threats to drinking water exist in the highly vulnerable aquifers (HVAs) and significant groundwater recharge areas (SGRAs). The majority of drinking water threats in HVAs and SGRAs are ranked low, and relate to 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 HVAs and SGRAs.

Highly Vulnerable Aquifers (HVAs) and Significant Groundwater Recharge Areas (SGRAs)

The landscape of the Cataraqui Source Protection Area (CSPA) is highly variable with a wide range of bedrock and soil types across the region. Two of the region's unifying characteristics are its thin (and sometimes absent) soil layers in many locations, as well as the numerous fractures in the underlying bedrock.

Highly vulnerable aquifers and significant groundwater recharge areas are the two types of sensitive regional groundwater areas identified in the CSPA under the *Clean Water Act, 2006*. In the CSPA, the groundwater generally lacks the natural protection of overlying materials like soil, so the quality of groundwater is easily impacted by sources of contamination such as fuels spills, leaks, or inadequate on-site sewage systems. The relatively unprotected groundwater is known as an HVA. Significant groundwater recharge areas exist in the CSPA where water on the ground surface can more easily soak into the ground to recharge a groundwater aquifer. Groundwater recharge is expected to occur at a low rate in the CSPA, and to be diffused across large sections of land.

HVAs and SGRAs occupy a large proportion of the landscape in the Cataraqui Source Protection Area. The Assessment Report identified that more than 90 percent of the Cataraqui Source Protection Area is a highly vulnerable area; most of the landscape is also a significant groundwater recharge area. The Source Protection Plan therefore has a focus on regional groundwater.

Groundwater is not static: it moves under the ground, and if it is contaminated the groundwater could end up affecting a municipal or private source of drinking water. Therefore, policies related to HVAs and SGRAs are generally applicable to areas where municipal water and sanitary servicing are present. Many of the HVA and SGRA policies in the plan relate to research or best practices for drinking water wells and on-site sewage systems.

HVAs and SGRAs have an assigned vulnerability score of 6. Vulnerability scores refer to how vulnerable a drinking water source is to contamination. It is determined by considering the physical characteristics of the area, including how easily contaminants could soak into the ground, how long it would take contaminants to reach a drinking water source, as well as the pathways that contaminants could travel along to reach drinking water sources. A low vulnerability score like that of HVAs and SGRAs means that there are or could be moderate or low drinking water threats.

Requirements for Municipalities under the *Clean Water Act*

Planning decisions and documents

Decisions made under the *Planning Act* and the *Condominium Act* must 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.

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 such as HVAs and SGRAs 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 or poorly functioning on-site sewage systems are remediated to protect source water.

Cataraqui Source Protection Plan

The Plan has several policies to help municipalities protect the source water. The following information is only a summary of the policies directly applicable to HVAs and SGRAs in the CSPA. It is provided as a scoped and plain language alternative to referencing the full **Plan**. Exceptions exist where these HVAs and SGRAs overlap a wellhead protection area or an intake protection zone. In those situations, the more restrictive policies that address the drinking water threat will apply. For more detail, please refer to the Plan. Note that the policies relevant to municipalities for HVAs and SGRAs belong to two different categories of implementation: 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 for development in sensitive groundwater areas |
| Municipal Operations | Municipal waste management programs |
| | Road salt management plans |
| | Management of hauled sewage |
| On-site Sewage Systems | Maintenance inspection program |
| Regional Programs | Education and outreach |
| Incentive Programs | Financial incentives |

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. |

Municipal operations

[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. |

[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">Managing the treatment of untreated septage at existing wastewater facilities and/orUpgrading existing/constructing new facilities to handle demand and/orEncouraging 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. | 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 |

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|--|---|
| | and outreach programs to include source protection information for use in vulnerable areas where moderate or low drinking water threats could/do exist. |
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Incentive programs

4.5.2-NB: Financial incentives

| Intent | Policy summary |
|--|---|
| Encourage the Cataraqui Source Protection Authority, in cooperation with the municipality, to consider establishing a local financial incentive program. | <p>The Cataraqui Source Protection Authority <i>should</i> cooperate with the municipality to consider establishing a local financial incentive program that would off-set the costs to protect HVAs and SGRAs where the following activities would be a moderate or low drinking water threat:</p> <ul style="list-style-type: none"> i. Improving liquid fuel storage tanks ii. Replacement/repair of on-site sewage systems suggested after an on-site sewage system maintenance inspection iii. Properly decommissioning unused wells or upgrading sub-standard wells. |



CATARAQUI REGION CONSERVATION AUTHORITY

1641 Perth Road • P.O. Box 160 • Glenburnie, ON • K0H 1S0
 Telephone: (613) 546-4228 Fax: (613) 547-6474
 E-mail: info@crca.ca Website: cleanwatercataraqui.ca & crca.ca



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