DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

St. Clair Conservation | Lower Thames Conservation | UPPER THAMES RIVER CONSERVATION AUTHORITY

Thames - Sydenham Region

# DRINKING WATER THREATS FACTSHEET

## On-Site Septic Systems and Holding Tanks


### What is the Threat?

This category of drinking water threat includes systems that store and/or treat human waste on-site, but does not include sewage treatment plants. These systems come in a variety of forms including earth pit privies; privy vaults; grey water systems; cesspools; leaching bed systems and associated treatment units; and holding tanks. Leaching bed systems with septic tanks or holding tanks are the systems most commonly used in the Thames-Sydenham Source Protection Region.

There are two categories of systems: small and large. Small systems (those with a design flow less than or equal to 10,000 L/day) are subject to approval under the Ontario Building Code Act which may be administered by municipalities, conservation authorities or local health units. Small systems most frequently service individual residences in rural areas including hamlets and small villages that do not have municipal or communal sewage services. Large systems (those with a design flow greater than 10,000 L/day) are subject to approval by the Ministry of the Environment and Climate Change (MOECC) under the Ontario Water Resources Act (OWRA).

In addition, any system, no matter its size, that cannot be located within the confines of a single property is subject to approval by the MOECC under the OWRA. Schools, campgrounds, larger businesses and communal systems are examples of facilities that may require a large system.

The following chemicals and pathogens could be introduced into surface water and/or groundwater from on-site sewage storage and treatment systems and could threaten the safety of drinking water systems in certain situations:

- Pathogens
- Acetone
- Chloride
- Dichlorobenzene-1,4 (para)
- Nitrogen
- Total phosphorus
- Sodium

### Where is this Activity a Threat?

Onsite sewage systems, particularly leaching bed systems, are prevalent throughout the Thames-Sydenham Source Protection Region in areas that are not serviced by municipal or communal wastewater treatment systems. They can be found in Intake Protection Zones (IPZ), Wellhead Protection Areas (WHPA), Highly Vulnerable Aquifers (HVAs), and Significant Groundwater Recharge Areas (SGRAs). Generally, septic systems that fall into a zone with a vulnerability score of 10 are significant threats, which limits this activity to WHPA-A and B.

Should it be determined, in the future, that septic systems are contributing to a nitrate issue at an intake or wellhead, then septic systems within the area designated as contributing to this issue would also be a significant threat.

Failing septic system

## Tips for Safe Drinking Water

Make sure your septic system is working properly! Regular pumping and inspections will help to keep it trouble free.

## How are these Threats Being Managed?

**Small Systems (<= 10,000 L)**

Where these activities are a Significant Drinking Water Threat, they are managed through the implementation of an on-site sewage inspection program as required under the Ontario Building Code (policy 2.17). In addition, municipalities shall consider enacting and enforcing by-laws to require mandatory hook-up to municipal sanitary sewer services and decommissioning of septic systems or holding tanks, where municipal sanitary sewer services exist and where permitted by the servicing policies in the Official Plan (policy 2.16).

Future septic systems in areas where they would be a Significant Drinking Water Threat are to be prohibited (policy 2.15).

Low and moderate threats will be addressed through education and outreach (policy 1.01). In addition, the local approval agency of septic systems under the authority of the Ontario Building Code (municipality or health unit), should consider including these septic systems as part of the discretionary maintenance inspection program (policy 3.01)

**Large Systems (> 10,000 L)**

Where these activities are a Significant Drinking Water Threat, they are managed through Environmental Compliance Approval (ECA) by the Province (Ministry of the Environment and Climate Change, or MOECC). The MOECC shall review and, where necessary, amend the ECA to incorporate terms and conditions that, when implemented, shall manage this activity so that it ceases to be a Significant Drinking Water Threat (policy 2.14). In addition, municipalities shall consider enacting and enforcing by-laws to require mandatory hook-up to municipal sanitary sewer services and decommissioning of septic systems or holding tanks, where municipal sanitary sewer services exist and where permitted by the servicing policies in the Official Plan (policy 2.16).

Low and moderate threats will be addressed through education and outreach (policy 1.01). In addition, the Province should consider incorporating terms and conditions into existing Prescribed Instruments. These terms and conditions, when implemented, should manage the activity such that it does not become a Significant Drinking Water Threat. Where appropriate, these terms and conditions should reduce the risk (policy 3.03).

Future septic systems in areas where they would be a Significant Drinking Water Threat are to be prohibited (policy 2.13.1).

For More Information
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