



GEORGIAN BAY ASSOCIATION

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Septic System Guide Executive Summary July 2023

Purpose and goals

The purpose of the Septic System Guide is to provide GBA members and other Georgian Bay communities with practical information on septic systems in the Georgian Bay area and to help you make informed decisions with respect to your septic system.

The guide covers:

- Different types of septic systems in Ontario
- Pros and cons of each type of septic system
- Septic systems permitted in Georgian Bay
- Information you need when choosing a septic system for your cottage
- How to inspect and maintain your septic system

For more information and documents visit the [GBA septic system webpage](http://georgianbay.ca/septic-system-guide).

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Septic System Types

There are five classes of septic system in Ontario that are permitted under the OBC:



The two primary options for most properties in cottage country (and the only options for new systems) are:

1. Class 4 systems, either conventional or advanced treatment units (ATU)
2. Composting toilets with a greywater pit – Class 1 & 2

However, residents who have a Class 5 holding tank in place are permitted to replace it with a new holding tank when necessary

When evaluating your septic system needs, it is important to consider the:

- Ontario Building Code (OBC)
- Financial investment
- Site conditions
- Policies and by-laws of your municipality
- Maintenance and upkeep
- Annual use and capacity

Key Maintenance & Inspection Issues for All Classes

- Understand the signs of failure for each system type
- Monitor systems for leakage and saturation

Class 1 & 2 – Composting Toilet with Greywater System

Advantages	Disadvantages
Does not require an annual pump out	Does not accommodate a traditional flushing toilet
Can be maintained easily at minimal cost	Risk that nutrients and pathogens will not be captured by the greywater system in low soil areas
Extended lifetime due to the low annual usage for cottagers	Systems that require off-site waste removal are not ideal for properties without road access
In most situations, low environmental impact	
Low installation or replacement costs	
Key Maintenance & Inspection Issues	
<ul style="list-style-type: none"> • Remove waste material when required • Clean screen in greywater system 	<ul style="list-style-type: none"> • Remove vegetation with deep roots on and around the greywater pit

Class 4 – Leaching Bed system (usually referred to as a septic system)

Advantages	Disadvantages
Accommodates a traditional flush toilet	Requires regular inspection and maintenance, often by a professional
Requires a pump-out less frequently than a holding tank system, approximately every 3-5 years depending on usage, instead of at least annually	Particularly in low soil areas, it is possible that nutrients will not be captured by the system and will flow into the water around your cottage
Is relatively easy to maintain	If there is a system failure, the environmental consequences can be severe and the solution expensive
Extended lifetime due to the low annual usage for cottagers	The installation or replacement can be expensive
A wide range of information and resources are available to ensure that you can keep inspection and maintenance current and your system in good shape	Costly pump-out required approximately every 3-5 years depending on usage
Requires greater soil depth than Class 2 systems and therefore may remove pathogens more effectively	
Key Maintenance & Inspection Issues	
<ul style="list-style-type: none"> Inspect sludge level in tank and pump out when 2/3 full Clean filter 	<ul style="list-style-type: none"> Remove vegetation with deep roots on and around the leaching bed Avoid food waste and chemicals in the system

Class 4 with an Advanced Treatment Unit (ATU)

Advantages	Disadvantages
Now that ATUs are approved under the OBC, there is more flexibility on installing this type of system in challenging locations due to the smaller ATU footprint	An ATU requires an annual maintenance contract and consequent annual cost
ATUs provide an increased level of nutrient and pathogen removal within the pre-treatment tank and advanced treatment unit, which means that the septic field can be smaller than with a conventional system.	ATUs require more energy input to operate than a conventional septic system
The fact that ATU contracts require an annual maintenance contract means that your system will be inspected and maintained annually, rather than having to do it yourself	
Key Maintenance & Inspection Issues	
<ul style="list-style-type: none"> ATU's require a mandatory annual inspection which will cover maintenance requirements 	

Class 5 – Holding Tank

Advantages	Disadvantages
Accommodates a traditional flush toilet	Requires an expensive ongoing pump-out, usually at least annually
Easy to maintain and manage, but you need to monitor the level in the tank to guard against overflows	The local municipal sewage system needs sufficient capacity to accommodate all holding tank pump-outs
Should last a long time for most Georgian Bay cottagers, particularly plastic tanks (steel tanks have a limited life span)	Most steel tanks still in place in Georgian Bay are likely to be near or past the date at which they must be replaced to avoid leakage from rusting out
Avoids the potential environmental impacts of a leaching bed septic system	If you also have a greywater system, the potential environmental issues associated with a greywater system apply
Installation or replacement cost is low	The OBC limits the acceptable use of holding tanks, so they can only be approved for new systems in exceptional circumstances
Key Maintenance & Inspection Issues	
<ul style="list-style-type: none"> • Monitor tank level 	<ul style="list-style-type: none"> • Inspect steel tanks for rust

Inspection and Maintenance

Inspection and maintenance requirements vary significantly between the different classes of septic system and the differences in time and cost are summarized in the pros and cons above. Whichever system you have, it is important to carry out all recommended inspections and maintenance, either doing it yourself, or employing a professional(s). There are two important issues to consider:

Financial – Your septic system usually represents a significant investment at your cottage, and the cost of replacing or repairing one that has malfunctioned can be very high. Therefore it makes sense to ensure that it is kept in good condition to reduce the risk of incurring such costs.

Water Quality – All septic systems pose a potential risk to the water quality around your cottage and therefore to your water supply and recreation, such as swimming. Keeping your system well inspected and maintained will reduce or eliminate these risks.

Summary

We believe that it is important for property owners in the Georgian Bay area to be informed about how their septic system works, what options they have, the pros and cons of each option, and the importance of having a properly functioning system. The Septic System Guide is intended as a useful resource for GBA members and other Georgian Bay residents, but should not replace the provisions of the Ontario Building Code, advice from professionals, and/or municipal policies and by-laws.

The reason that Georgian Bay property owners should pay particularly close attention to their septic systems is because most locations have low, or very low, soil coverage, and the risk of water quality contamination is therefore much greater than for areas with higher soil coverage. This factor increases the importance of proper maintenance and upkeep, and makes it essential to properly assess your soil conditions before determining the best option for a new or replacement system.