

A GUIDE TO OPERATING & MAINTAINING YOUR SEPTIC SYSTEM

WHAT YOU NEED TO KNOW...

The way you treat your septic system will influence how long the system lasts and how well it functions. If you own or rent a property served by an on-site sewage system, you need to think about how your actions affect the system. You need to be careful about what substances you flush down the drain and how often your septic tank is cleaned out and inspected.

These decisions will impact on the effectiveness of your septic system and making the wrong one can lead to expensive and time consuming problems. Sometimes, they can also result in harm to the natural environment or public health by polluting lakes or contaminating drinking water supplies.

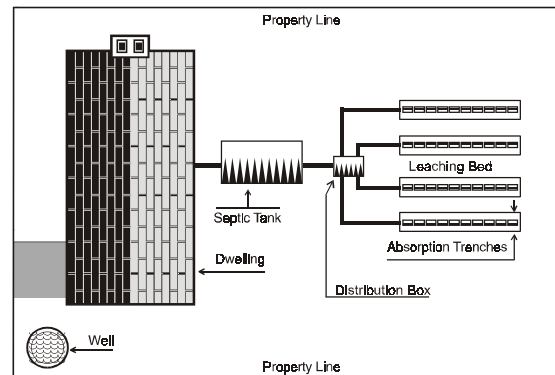
In order to avoid the inconvenience and cost associated with the repair or replacement of a failed septic system, you should know how to properly operate and maintain your septic system. This brochure provides some helpful advice for property owners about the steps they can and should take to help their septic system perform well for years to come.

HOW YOUR SEPTIC SYSTEM WORKS...

A typical on-site sewage system consists of two major parts: a septic tank and a leaching bed area. Septic tanks should have two chambers and are generally constructed of concrete, steel, fibreglass or polyethylene, are

watertight and are buried underground. The purpose of the septic tank is to separate solids from liquids in the wastewater stream and begin the process of breaking down contaminants. Solids settle at the bottom of the tank and scum floats to the top of the tank. This process occurs without oxygen, so the tank needs to be sealed.

Typical leaching Bed System



Wastewater from the septic tank then flows to the leaching bed area through a distribution box or header line. Leaching beds (sometimes called tile beds, disposal areas or absorption areas) consist of underground perforated pipes or clay tiles which evenly distribute wastewater over natural soil or imported fill. The purpose of the leaching bed is to further treat the wastewater through a process where bacteria requiring oxygen digest and remove impurities such as suspended solids, organic chemicals, viruses and/or bacteria. The leaching bed disposes of the filtered wastewater into the natural soil and, ultimately, into the groundwater.

DO YOU HAVE A SEPTIC SYSTEM ?

Most owners of rural (and some suburban) properties and people who live in small communities are probably living with a septic system. Almost all cottages or recreational properties also rely upon on-site sewage disposal. Sometimes, all that can be seen of a septic system is a large grassed area with no trees, patios or paved areas. In other cases, the leaching bed area may be a raised mound on the property.

When buying a rural or cottage property, it is important that you or your lawyer determine whether a septic system exists and that it is working properly (a professional inspection may be appropriate). If the previous owner does not have a record showing the location of the septic tank or leaching bed area, you may be able to get it from the local municipal building department, board of health or conservation authority. If there is a record of the company which installed the system, the firm may have drawings or site plans showing the location of the system. Firms which pump septic tanks can also locate access ports.

Once you have a copy of a site plan showing the location of the septic system, make sure you keep the records up to date and in a safe place for future reference.

COMMON SEPTIC SYSTEM PROBLEMS...

There are a number of common signs of trouble with septic systems. These include:

- ‡ toilets or drains which are backed up or run more slowly than usual
- ‡ foul odours in the house or drinking water
- ‡ sogginess in the ground around the septic tank or leaching bed area
- ‡ surface flooding of sewage or septic tank effluent around the septic system
- ‡ activated alarm signals (lights or bells) on sepcial treatment units
- ‡ dosing pumps which run constantly or not at all (Note: not all systems have pumps)
- ‡ unusually green or thick grass growing in or around the leaching bed area
- ‡ significant algae growth in or around nearby lakes or water bodies
- ‡ high levels of nitrates, bacteria or other contaminants in wellwater

Toilets and Drains are NOT Garbage Cans !

Some items you flush down a toilet or pour down a drain can significantly reduce the ability of the beneficial bacteria in a septic system to break down and treat domestic sewage. Harmful chemicals and substances will kill bacteria and render a septic system useless. Bulky or hard-to-break down products can clog pipes, quickly fill septic tanks and decrease the effectiveness of the system. Septic tank additives/starters may be harmful to septic systems and are not necessary to begin or continue septic tank operation.

NEVER put the following items or substances into a septic system:

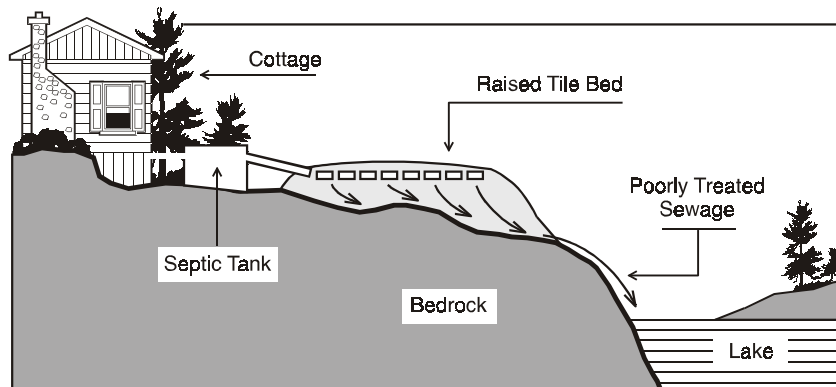
- M fats, oils and grease,
- M gasoline, antifreeze,
- M varnishes, paints and solvents,
- M caustic drain and toilet bowl cleaners,
- M photographic solutions, bleach, pesticides,
- M nail polish remover,
- M cat box litter,
- M tampons, sanitary napkins, diapers, paper towels, facial tissues, condoms,
- M plastics,
- M coffee grounds, egg shells and other kitchen waste or
- M cigarette filters.

TIPS ON MAINTAINING YOUR SEPTIC SYSTEM ...

There are a number of steps property owners can take to improve the functioning of their septic system and extend its life:

- H conserve water and reduce wasteflow into the system by installing water saving features in plumbing fixtures, using dishwashers and laundry machines only with full loads, taking shorter showers rather than full baths, fixing leaky faucets and avoiding the use of garbage disposal units — too much water will overload a septic system
- H ensure septic tanks are inspected at least every two years by a qualified person and pump tanks out at least every 3 - 5 yrs (or sooner since frequency depends on tank/household size). These actions can be combined
- H do not impair access to the septic tank so that proper maintenance and servicing can occur
- H reduce the use of phosphate-based detergents, soaps and cleaners to minimize algae growth in nearby lakes and rivers. Phosphates can impair water quality and fish habitat
- H avoid the construction of parking areas, patios, tennis courts or decks in the area of or over the leaching bed. The extra traffic or weight can crush pipes or compact the soil or fill material. Construction can also limit oxygen from getting into the soil or fill
- H have an effluent filter installed in the septic tank to reduce the amount of solids entering the leaching bed and prevent clogs
- H do not use snowmobiles over the leaching bed area in winter since this reduces the natural insulation of the bed provided by the snow cover

CONTAMINATION OF LAKE



- H avoid planting trees or shrubs on the leaching bed area since roots can clog the perforated pipes and shade the leaching bed area, thereby limiting evapotranspiration
- H minimize grass watering around the leaching bed area. Extra water can reduce the bed's ability to absorb and treat wastewater from the house
- H exercise caution about wasteflows from water treatment units, furnace condensate discharges and water softener back washes. These substances can harm the septic system, especially in large quantities
- H direct rainwater runoff from roofs, patios and driveways away from the leaching bed area and septic tank access ports to avoid system overload.

WHO DO YOU CALL ABOUT SEPTIC PROBLEMS ?

If you suspect your septic system is not working, a firm which pumps septic tanks may be able to identify the nature of the problem and recommend further action. Alternatively, you can call a licensed company which installs or repairs septic systems. In Ontario, septic installers must be licensed by the Province. These companies must have qualified people working for them who have passed an examination administered by the Ministry of Municipal Affairs and Housing. Before you hire someone to do work, make sure they have the right license. Most septic installers will be listed in the yellow pages section of your telephone book under "septics".

If you suspect a problem with your system, you may also want to contact the local agency which enforces the Ontario Building Code requirements for septic systems. This may be either your municipal building department, board of health or conservation authority. If a septic system needs a significant repair or replacement, it will be one of these agencies which will have to issue a building permit and inspect the work once it is completed. You can find these agencies listed in the "blue pages" of the telephone book.

SEPTICS AND THE ONTARIO BUILDING CODE

As of April 6, 1998, the rules for smaller on-site septic systems are covered by the Ontario Building Code (OBC). While these rules are put in place by the Province of Ontario, local agencies such as municipal building departments, boards of health or conservation authorities are responsible for issuing permits and doing inspections.

The OBC includes regulations related to the operation and maintenance of septic systems — requirements for servicing by qualified people, wastewater monitoring and sampling, septic tank pump outs, etc. If you have questions about the OBC requirements for a new or existing septic system, you should contact the septic enforcement agency in your area. If you have general questions about how the Ontario Building Code works, you can contact:

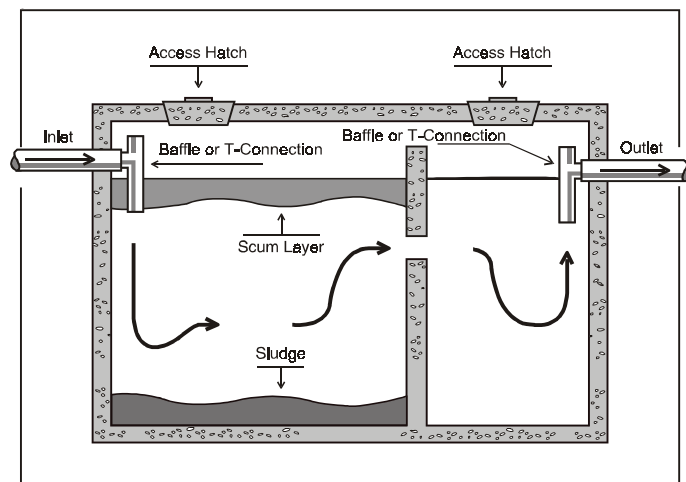
**Ministry of Municipal Affairs and Housing
Housing Development and Buildings
Branch,
777 Bay Street, 2nd Floor,
Toronto, ON M5G 2E5
telephone: (416) 585 - 6666 or
fax: (416) 585 - 7531
or visit the Ministry's web site at:
<http://obc.mah.gov.on.ca>**

TANK INSPECTION AND CLEANING ...

Having your septic tank inspected regularly is one of the least costly ways to avoid the inconvenience and expense of doing a major septic system repair. Inspections can determine if the outflow to the leaching bed is clogged because of a back-up in the tank, if too much solid or scum material is in the tank or whether the tank needs to be pumped more frequently. **Because they contain deadly gases, septic tanks should only be inspected by firms specializing in this work.**

How often you need to pump the tank depends on the size or capacity of the tank, the flow of wastewater entering the tank and the volume of solids in the wastewater stream. Generally, this should occur every 3 - 5 years, but factors can change during the life of the septic tank. More people living in the house or the addition of a high water use appliance can exceed the capacity of the existing tank, requiring more frequent pump outs.

Summer and early fall are the best times to pump out a septic tank. Pumping at this time of the year leaves sufficient time before winter for the tank to refill and bacterial activity to become re-established. As well, the ground around the tank will not be frozen (allowing easier access) and higher water tables which typically occur in the spring will have receded.



Typical Septic Tank

NEW SEPTICS TECHNOLOGIES ...

More and more companies are developing innovative ways to improve the effectiveness of on-site sewage disposal technology. Some of these systems add other parts to the traditional septic system, such as pump chambers to provide more regular or controlled flow of wastewater to the leaching bed area and oxygen-enrichment treatment units (sometimes called aerobic treatment units) which add oxygen to the wastewater to assist bacterial activity.

Other types of pre-treatment units use different materials such as special sands, peat or other filter materials. These systems are becoming increasingly popular because of the quality of the wastewater they produce and because they can reduce the overall size of the septic system, especially the leaching bed area.

The effectiveness of these systems is only as good as the degree to which they are properly maintained and operated by the property owner. Many have parts which require regular lubrication, uninterrupted electrical connections, servicing and regular check-ups. Some systems require a maintenance agreement between the property owner and the manufacturer.