

Septic System Care & Maintenance

**A User's Guide for
Home/Cottage Owners**



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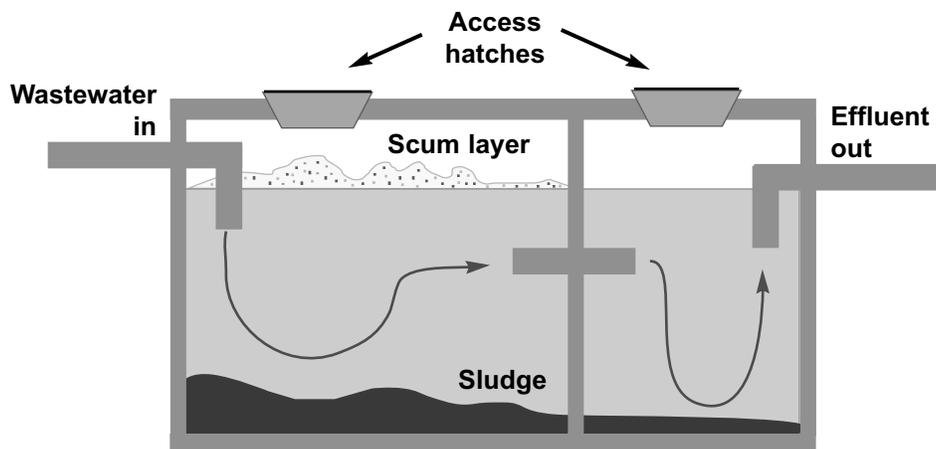
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Preventing Septic Failure & Malfunction

How many of us know how our septic system works, or think we know? We expect our septic systems to handle whatever we put into them, a never ending deluge of waste, cleaners, soap, grease, papers and water, water, water.

As water use has changed over the years septic systems have been expected to process much greater volume. The increased use of antibacterial cleaners and the huge array of shampoos, laundry detergent, bleaches, paper products, etc. gives homeowners an amazing opportunity to overburden and 'mess up' their septic systems! It's not unrealistic for new systems to cost over \$15,000.

A septic system functions on the principal of natural digestion of organic materials by bacteria. In the septic tank enzymes break the bonds of compounds, resulting in a more simple and soluble feed that the bacteria then metabolize, converting the waste into mostly water, carbon dioxide, and mineral ash. Clean, clear effluent then flows out of the tank and into the tile bed (leaching field) where final treatment is completed. The more efficient the system operates the less pollution goes into the environment. The more bacteriological activity in the septic tank the better the treatment of the waste in the tank and longer life of your tile bed.



Main Causes of Septic System Problems

Causes of Septic System Failure and Malfunctions

1. Improper Septic System Installation & missing baffles.

2. Chemicals

Sanitizers and chlorine kill and/or inhibit bacteria in the septic tank preventing digestion of waste. Many household cleaning and laundry chemicals inhibit or kill bacteria in the septic tank.

3. Hydraulic Overload

(too much water flowing into the septic tank)
Hydraulic overload creates a situation where the waste does not get a chance to be broken down and metabolized by the bacteria. This volume of water pushes solids out of the tank and into the leach field causing many problems.

4. Build up of hard to degrade materials

(Fats, Oils, Grease and Other Organic Materials)

Fats, Oils and Grease are very slow & difficult for bacteria to break down. Often combining with soaps and detergents, Fats & soap scum clog up tanks, lines and leach fields as do other organic materials such as hair and toilet paper.

How Do I Know?

Indications of Septic System Problems Include:

- Odours
- Bleed out or seepage
- Back up
- Ponding
- Freeze up
- Green "stripes" of grass or patchy lawn over tile field
- Slow fixture drains
- Frequent pump-outs

Everything Has An Impact

Environmental Impacts of Septic System Failure and Malfunction

When septic systems fail or malfunction a series of "natural disasters" occur, such as: the contamination of groundwater, wells, lakes, streams, etc., the release of Pathogenic organisms: e.g. viruses and E. Coli bacteria, the release of foul odours making areas unpleasant for you and neighbors. A healthy septic system is absolutely critical for the health of your family. A growing number of wells are contaminated, a large amount of these due to groundwater contamination from failed septic fields.

What Can Be Done?

The Solution To Pollution Is Education

First, stop using harsh cleaners and strong laundry products, use EcoLogo certified and Septic Safe cleaning products such as 'Down East', 'Green Knight' & 'EcoEthic'.

All organic waste is broken down by a natural biological process. Enzymes "break" down waste so that bacteria can then digest it. Many chemicals stop or inhibit this natural process from occurring. When this process has been stopped or slowed odours and problems occur. The time has come for us to stop using toxic, harmful chemicals & cleaners.

Some household chemicals can be eliminated or reduced and some can easily be replaced by suitable substitutes, for example:

- **Automatic Bowl Cleaners** - do not use.
- **Deodorant Soap** - Use regular soap - Not antibacterial
- **Hand Soap** - Use regular soap - Not antibacterial
- **Chlorine Bleach** - Use Peroxide Bleach (non-chlorine)
- **Automatic Dishwashing Products** - Use non-chlorinated, biodegradable & phosphate free.
- **Dishwashing Liquid** - Use only completely biodegradable & Not antibacterial
- **Laundry Detergent** - Use only Liquid & completely biodegradable.

If you are unsure whether a household product should be used, look to see if the product has any warning symbols or hazardous ingredient warnings... these should be avoided.

Hydraulic Overload is easily combated by using common sense and water conservation. Every drop of water you wash down the drain or flush down toilet results in an equal amount of water going out into the tile bed. Using conservation hardware and a little common sense, will go a long way to reducing the amount of water the system has to treat. For example, when doing laundry, wash a load or two each day instead of ten loads on Saturday!

Fats, oils, and grease should not be poured down the drain. Intestinal bacteria, a natural source for septic systems, are inefficient in breaking down both Fats and Fibre (toilet paper, lint, and hair). There are not sufficient bacteria and enzymes naturally occurring in waste to fully digest solids such as greases, paper and soap scum. An effective bacteriological additive is necessary and are very effective at breaking down these materials and reducing solids build-up in the tank.

Many people believe that yeast is the key to an efficient septic system. The fact is yeast breaks down only carbohydrates and starches. Yeast will not break down Fats, Oils, Grease, Hair or Fibre and its action may stir up tank contents causing fine solids to escape into the tile bed.

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The Right Biological Additive

Often we hear people talking about additives as if they are all the same. In fact there are dozens of products being sold for septic systems. Some biological products contain only enzymes, some only bacteria, and others have both. The quality of the enzyme and bacteria strains can vary greatly and is reflected in their effectiveness.

The best, fastest-working formulas contain both enzymes and bacteria. Many formulas break down proteins, starches and carbohydrates, but have little activity on Fats, Oils, Grease and Fibre. Premium products such as EcoEthic Septic System Treatment have the highest quality strains of bacteria and enzymes available plus a huge digestive capacity for Fats, Oils and Grease as well as Fibre, which includes toilet paper and hair.

EcoEthic Septic System Treatment will substantially improve the speed, quality and the amount of solids digested. When applied to the home drains, the bacteria clean the plumbing system and keep it clean, and at the same time add beneficial enzymes and friendly bacteria to the septic system. This eliminates the need for 'nasty' chemical drain openers.

Another terrific safeguard for your system is an Effluent Filter. These filters prevent fine solids from escaping the tank and entering the tile bed. The filter extends beneath the scum layer, above the sludge layer, and withdraws effluent from the clear zone in the tank. Effluent is further cleaned as it passes through the filter. Filters are inexpensive and easy to maintain.

Have your septic tank pumped by a licensed contractor (Waste Hauler/Septic Pumper) every 2 to 3 years to ensure it is functioning properly and is clear of any inorganic materials. This is also an excellent time for them to check to see if the tank baffles are intact, make repairs and install an effluent filter.

EcoEthic Septic System Treatment is certified by Environment Canada and available through Septic Haulers and Installers. Call toll free for a local supplier, 1-888-436-3996.

Key Actions To Prevent Septic Failure

1. Use Septic Safe cleaning products. Stop using harsh chemicals, nonbiodegradable cleaners and traditional laundry chemicals.
2. Use EcoEthic Septic System Treatment to maintain your septic system (an EcoLogo certified biological additive).
3. Conserve water - use common sense.
4. Keep trees and shrubs at least 10 ft. from your tile bed
5. Install an effluent filter in your septic tank to protect your tile bed.
6. Never drive, operate heavy equipment or park on your tile bed area.
7. Educate your family and or staff about the proper use of the septic system.
8. Have your tank pumped and/or inspected regularly. i.e. every 2 - 3 years.

Inform Your Household

There Is No Substitute For Education

Even as you are reading this, people are flushing into septic tanks plastic wrappers, Band-Aids, antibiotics and chlorinated cleaners. These are just a few of the household products that are either totally indigestible or actually kill the biological activity in the septic tank.

If consideration is given to the household chemicals used, to the amount of water entering the septic tank and a premium quality biological additive is used such as EcoEthic Septic System Treatment, all organic material will be digested with approximately one inch of ash accumulation on the bottom of the tank per year.

A septic system can be virtually trouble free. Only clean clear effluent comes from a properly operating septic tank. With no undigested solids to clog the soil pores, the clean clear effluent readily soaks into the soil and the result is a leach field that will be trouble free for years.

You should have your septic tank pumped out or at least checked by a licensed contractor every 2 to 3 years to ensure it is functioning properly and is clear of any inorganic materials. Install an effluent filter. Eliminating the cause of leach field problems is much less expensive than adding or replacing one, and at the same time eliminates ground water pollution.

For further information on how you can prevent septic malfunctions and begin cleaning up your own septic system contact us.

We are dedicated to helping home & facility owners protect their investment and environment through responsible wastewater management practices and education. Our team can show you how to restore the biological activity in your septic tank, prevent future problems, and even rejuvenate failed, smelly, weeping fields!

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