

## 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, bleach, 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 digestion of organic materials by bacteria. In the septic tank enzymes break the bonds of compounds, resulting in a simple feed that bacteria then metabolize, converting 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 the effluent percolates into the soil. 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.

## inform your household - there is no substitute for education

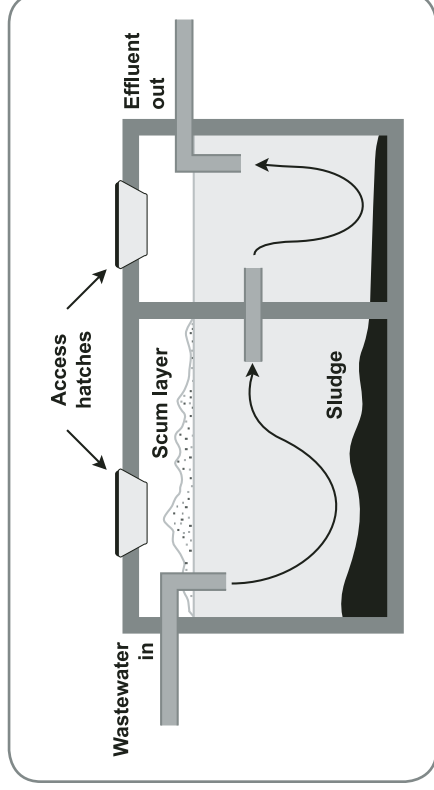
If consideration is given to the household chemicals used, to the amount of water entering the septic tank and a premium quality biological additive is used such as EcoEthic Septic System Treatment, organic material will be digested with approximately one inch of ash accumulation on the bottom of the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

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

At EcoEthic Inc. we know the value of a healthy environment and care about a healthy planet. EcoEthic products are proven ecological solutions for everyday living. Whether it's biodegradable, phosphate & chlorine free cleaning products; leading edge eco-certified non-toxic septic & drain treatments; or the worlds most advanced waterless composting toilets, EcoEthic Inc has quality products that help protect our environment.

## key actions to prevent septic failure

1. Use "Septic Smart" cleaning products, which are biodegradable, phosphate & chlorine free.
2. Use EcoEthic Septic System Treatment to maintain your septic system.
3. Conserve water - use common sense.
4. Divert water softener/iron filter backwash to sump drain.
5. Keep trees and shrubs at least 10 ft. from your tile bed
6. Install an effluent filter in your septic tank to protect your tile bed.
7. Never drive, operate heavy equipment or park on your tile bed area.
8. Educate your family about the proper use of the septic system.
9. Have your tank pumped and/or inspected regularly. ie. every 3 - 5 years.



# "Septic Smart"

septic system care & maintenance guide



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# 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. Too much 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, paper products and soap scum) 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.

## everything has an impact

### Environmental Impacts of Septic System Failure and Malfunction

When septic systems fail or malfunction a series of "natural disasters" occur, i.e. the contamination of groundwater, wells, lakes, streams, etc., the release of dangerous 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, many of these due to groundwater contamination from failed septic systems 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 'EcoEthic'.

Household chemicals can be eliminated or reduced and easily replaced by substitutes, for example:

- Automatic Toilet Bowl Cleaner - do not use
- Hand Soap - Not antibacterial
- Chlorine Bleach - Use Peroxide
- Automatic Dishwashing Products - Use non-chlorinated, biodegradable & phosphate free
- Dishwashing Liquid - Use only biodegradable & not antibacterial
- Laundry Detergent - Use only liquid & completely biodegradable
- Plumbing Anti-freeze - use only non-toxic, alcohol based
- Drain Cleaner - use a biological, caustic/acid free cleaner

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.

Fats, oils, and grease should not be poured down the drain. Intestinal bacteria, a natural source for septic systems, are inefficient in breaking down fats and fiber (toilet paper, lint, and hair). A certified bacteriological additive is necessary and is very effective at breaking down these materials.

Many people believe that adding yeast or "rotten" proteins are the key to an efficient septic system, these suggestions are myths. Yeast will not break down Fats, Oils, Grease, Hair or Fiber and its action may "stir up tank contents causing fine solids to escape into the tile bed.

# septic system care & maintenance - the right biological additive

Often we hear people talking about septic additives as if they are all the same. 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 fiber. 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 fiber, 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 home drains, the bacteria clean the plumbing system and keep it clean, and at the same time add friendly bacteria to the septic system.

Another terrific safeguard for your system is an Effluent Filter.

These filters prevent solids from escaping the tank and entering the tile bed. Effluent is further cleaned as it passes through the filter. Filters are inexpensive and easy to maintain.

Have your septic tank pumped or inspected by a licensed contractor every 3 to 5 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's EcoLogo program - call toll free for a local supplier, 1-888-436-3996.