

Septic Systems and the Environment



Septic systems rarely give warning that they are about to fail. The following are symptoms that the leach field might be clogged and these need to be addressed immediately:

- sewage odor or soggy soil near the septic tank or leach field
- slowly draining fixtures or backed-up wastewater in toilets or sinks
- sewage discharge on the ground or in nearby streams
- water test indicating the presence of bacterial contamination in nearby streams or well water

If your system fails, hire a professional septic system contractor to design and install a system appropriate for your land and household. Most municipalities have health codes and require construction permits and inspections.

Resources and more information

- Granite State Designers and Installers Association (www.gsdia.org)
- Subsurface Systems Bureau at the NH Department of Environmental Services (<http://des.nh.gov/organization/divisions/water/ssb/>).

Septic Systems

How do they work?

How should they be maintained?



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Anatomy of a Septic System

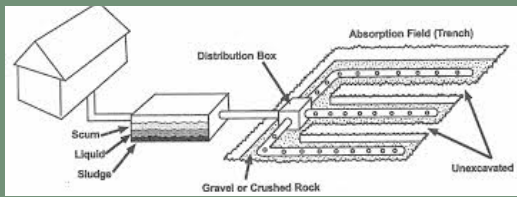


Image from NH Dept. of Environmental Services

Septic Tank

All wastewater leaving your house goes out an underground pipe and dumps into the septic tank. This is a large cement or plastic chamber. Heavier solids settle to the bottom and form sludge. A layer of scum made of soaps and grease forms at the top. Bacteria slowly break down sludge and scum, but not completely. Between these layers is dirty water, referred to as effluent or gray water.

Distribution or Diversion Box

The effluent leaves the septic tank through one pipe and it is directed to the distribution box. This box has several pipes connected to it and the water is distributed among them.

Leach or Absorption Field

This area is composed of several long pipes with many holes built in. These pipes lie on gravel or sand that receive the effluent. The pipes as well as the gravel must lie well above the water table. As the water percolates down, bacteria in the soil filter the water, removing pathogens and nutrients to a small degree. The water becomes part of the groundwater.

Septic System Maintenance

The most important piece of active maintenance is to have the septic tank inspected and pumped out regularly (every 2-3 years) to remove accumulated scum and sludge. If these materials go out into the leach field, they quickly clog the pipes, a situation that is not easily remedied.

Preventative Care Inside the House

Less material going into the septic system means less work for the septic system.

- **Don't** waste water and don't send large amounts of water into the system at once. (Spread laundry out during the week, don't drain spas all at once.)
- **Don't** put extra stuff into the system (Instead of putting waste food into the garbage disposal, compost it. Collect grease and put it in the trash.)
- **Don't** put anything down the drain that won't break down easily. Even if a product says "flushable" or biodegradable, toilet paper only.
- **Don't** use harsh chemicals. Dispose of medications at the local police dept. or pharmacy.

Preventative Care Outside the House

The leach field is a living system. Keep it grassy. Let it breathe and have space.

- Never drive or park vehicles on the leach field.
- Keep the leach field free of trees and shrubs—the roots can clog the pipes.
- Direct rain gutters or other drainage away from the leach field.

Septic System Failure

A well-maintained system should last many years, but it won't last forever. Catching a problem early through regular inspections might save you lots of time, expense, and frustration.

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