

# SEPTIC SYSTEMS

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*How they work  
and how to care  
for them*



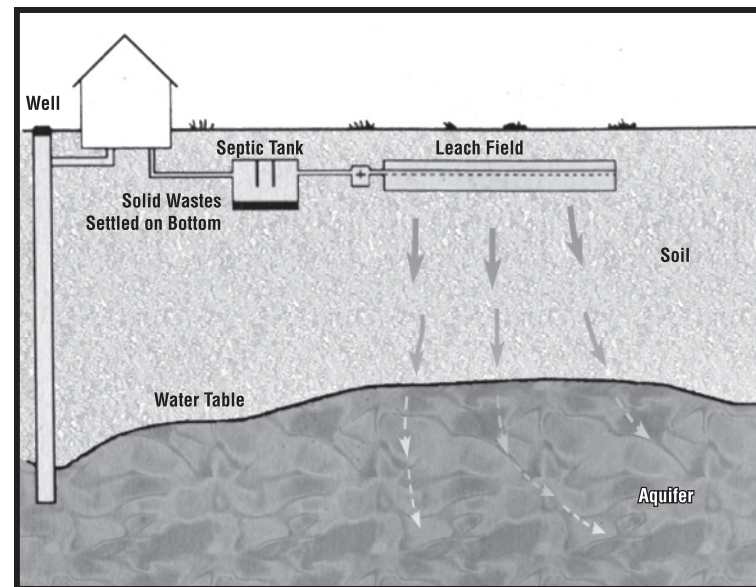
# How Your Septic System Works

*What does a septic system do?  
And why should I know about it?*

A septic system is designed to take what goes down your sink, your bathtub, and your toilet, and remove most pathogens. The process works in stages. First, the sewage goes into a large concrete tank, or septic tank, buried beneath the ground. Here the solid particles settle to the bottom of the tank, and are partly broken down by bacterial action. A layer of scum floats to the top. The liquid portion in between flows out into a series of perforated pipes in the ground, while the scum is restrained by a baffle. The pipes and the soil in which they are buried are known as the *leaching field*.

The liquid effluent (from Latin meaning “what flows out”) passes out through the holes in the pipes and into the soil. There, natural processes further degrade the bacteria in the effluent. The effluent eventually makes its way down to the aquifer and is an important source of groundwater recharge for our water supply.

Because most homes in North Castle depend on septic systems instead of municipal sewage plants, it is important that homeowners know how to take care of them and keep them working safely and efficiently.



*Wetland, stream, pond, and well contamination can occur from improper function of a septic system*

*Leaching fields are usually no more than 18 to 24 inches beneath a lawn surface. No auto parking or heavy equipment should be allowed over the system*

***A typical septic system.** Consists of a septic tank, distribution boxes, and perforated pipes through which wastewater flows into a leaching field. Wastewater then percolates through the soil. Solids will clog the fields.*

# Caring for Your Septic System

One of the most important things you can do to keep your septic system functioning efficiently is to have it pumped out regularly. If pumping is neglected, the layer of solids builds up on the bottom while the layer of scum builds up on the top. Eventually there will be no room

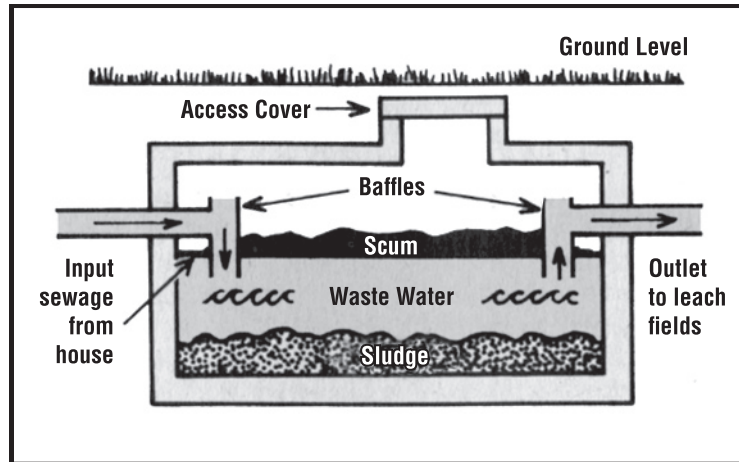
for the liquid effluent. Scum will get into the leaching pipes and block them. One unpleasant and unhealthy result will be backed-up toilets and drains in the house. *Only liquid should enter the pipes!*

**Approximately 80 percent of total area in North Castle utilizes septic systems**

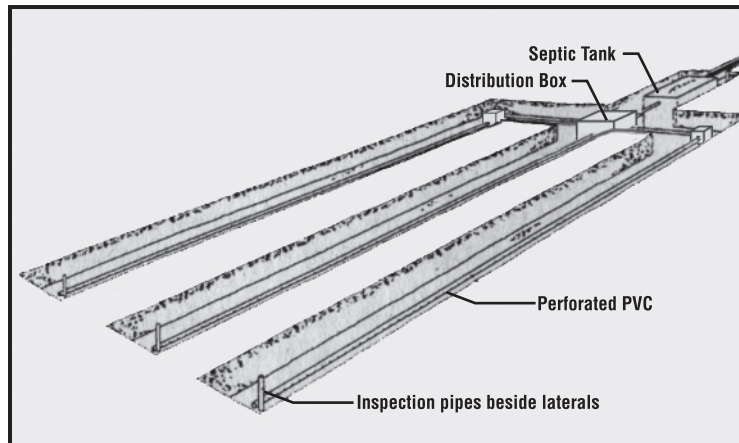
**Avoid the use of phosphorus-containing laundry and dishwasher detergents, anti-bacterial soaps, and large quantities of chlorine (bleach)**

**Properly cared for, a septic system is a highly effective way of handling household wastes**

**Regular pumping of septic tanks helps keep leaching fields in good working order**



*The inside of a conventional septic system. Sewage goes in; wastewater goes out. As sludge and scum layers expand, the need to pump out increases*



*System layout. The design capacity is determined by the number of bedrooms.*

## How often should I have my system pumped out?

The Westchester County Department of Health recommends that tanks be pumped out every two or three years, depending on usage. For example, a household of six persons will require more frequent pumping than one of three persons. Design capacity of a septic system is based on the number of bedrooms in a dwelling. A garbage grinder in the sink increases the load by as much as 50 percent, again depending on usage.

## What not to put into it, and why.

A properly cared-for septic system is very good at getting rid of pathogens (disease germs), but it cannot get rid of the toxic man-made chemicals and heavy metals that are found in so many household products. The most important products to avoid are chlorine (bleach); anti-bacterial products (both of these kill useful bacteria along with the bad ones); phosphate-containing detergents, which do not themselves break down and will promote the growth of algae when they eventually reach a stream or pond; and septic-tank additives. These last substances, intended to speed decomposition of the waste, seldom work in actual use; experts say they may do more harm than good.

Substances such as left-over paint thinner and paintbrush cleaner are poisonous and should not be poured down the drain. These and other chemicals can be disposed of on County-designated Household Chemical Clean-up Days. You can find the dates on the County web site: [www.westchestergov.com](http://www.westchestergov.com), or call (914) 813-5425.

## FAILING SEPTIC SYSTEMS

### What are the signs of a failing septic system?

A septic system fails when the effluent can no longer percolate downward, either because the soil becomes saturated or because the leaching pipes become plugged. The first sign may be puddles forming on the ground, or it may be backed-up toilets and drains. (Backed-up toilets and drains can also be caused by blockage in the trap just outside the house or in the basement, caused by jamming by excessive use of toilet paper, feminine products, congealed cooking grease etc.)

A failed septic system can contaminate the homeowner's well. It can also contaminate neighbors' wells. Replacing a failed septic system or installing a new one requires approval by the County Department of Health.

### What if I have public sewerage instead of a private septic system?

The same substances that poison a private septic system can also wreak havoc with a public sewer system. **DO NOT POUR THEM INTO TOILETS OR DRAINS!**

### How can I find out who services my septic system?

You can find these services listed in the Yellow Pages of your phone directory or in previous owners' records. Neighbors may also be able to recommend a pumping service.

## HELPFUL THINGS TO DO

- Reduce the load on your septic system by using less water. This also conserves water for your well (or community system such as in central Armonk). If you have a garbage-disposal unit in your sink, consider composting leftovers (except for meat and fat).
- Take shorter showers, use full loads in dishwasher and washing machine, and use flow-restricting devices in sinks and showers.
- Don't park automobiles or operate heavy equipment on top of the leaching field. They can crush the pipes and compact the soil.
- Keep a record of when your system is pumped out—and keep the telephone number of a pumping service handy.
- Mark the access to the septic tank. Suggestion: a flagstone or some other flat object won't interfere with mowing.

**As of September 2006, 80% of total area in the Town of North Castle utilizes on-site septic systems. Each one is important!**

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# *SEPTIC SYSTEMS AND YOUR ENVIRONMENT*

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The Conservation Board, consisting of nine volunteer members appointed by the Town Board, functions in an advisory capacity to the Town Board and other Boards, and assists in the development of sound planning policies to help assure protection of our natural resources.

It reviews all development proposals of parcels of 10 or more acres and all wetland permit applications in coordination with the Planning Board and Town Engineer. Present efforts are focused on public education related to protection of our surface and groundwater resources and the preservation of meaningful open space.

Over 95% of North Castle residents rely on drilled wells for their water supply. Regular maintenance of your septic system protects our groundwater, the source of your home water supply.

***Remember: groundwater is the source of water you drink. Protect it!***



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