

## Why Systems Fail?

There are several reasons why wastewater systems fail. The most popular is the lack of proper maintenance by the homeowner. Generally, homeowners do not know or fully understand the type of system that they utilize, therefore, they are not completely knowledgeable on the proper care and maintenance required. In most instances no maintenance is performed, or attention given to the system, until a problem occurs

Normally the trouble manifests as a back up into the house or a breakout in the yard. At this point the homeowners first reaction is to, "PUMP THE SEPTIC TANK". If the septic tank has not been properly pumped within a three to five year period, depending upon usage, a pumping should be performed. In most cases pumping is not always the solution to alleviating the problem at hand. To discover the root of the problem, a diagnosis of the entire wastewater system should be performed by a trained septic system technician or the local health department

Depending upon the current problem, the issue could be a clogged house line from house to septic tank or a clogged or broken tank line from septic tank to lateral field which is not allowing water to enter the lateral lines. If a filter or sanitary tee has not been installed in the septic tank the laterals and distribution boxes could be full of solids that have been passed from the septic tank. These are some of the many problems that can occur from lack of proper maintenance.

Wastewater systems also fail due to an overload of water being disbursed into them. This is generally due to the current system being under designed for the amount of gallons per day being utilized at the site. At times, as in older systems, the original design and installation is inadequate for today's family. This under sizing can be evident in the size of the septic tank. Without proper sizing of the tank, solids are not given the appropriate amount of time for breakdown, by the bacteria, and can be passed into the lateral field causing system failure and costly repairs. Lateral field sizing or other components that are undersized may not be able to handle the amount of water disbursed to them, especially with the higher usage of today's modern appliances. Should the problem be excessive water usage; then perhaps a washer line / bed to handle the laundry (gray water) will alleviate the situation. The gray water, (washer water only in Kentucky ) would be removed from the system and placed on a separate line, thus removing unnecessary water from entering the system. A washer line / bed additionally allows for the removal of salt, dyes, detergents, bleaches and other chemicals from entering the septic tank where they can hamper the growth of the necessary bacteria for the breakdown of solids.

Should a washer line already be installed and utilized, additional laterals or additions to the existing wastewater system will be required. Additions to the system can come in many forms depending upon certain features, such as suitable soil, area of property, grade of property, or current and future water usage. It is important that the local health department be contacted to confirm compliance for the proposed repair. Any repair or alterations should be on a written permit and inspected by the local health department.

Ground water or surface water can also cause the system to become overloaded and thus causing system failure. This ground water can sometimes be averted from the drainfield or components of the system by installing a curtain drain. The curtain drain will capture the ground water, before it enters the septic system, and carry the water to a more suitable location for disbursement on site. Remember, the system was designed for a given volume of household wastewater, surface water was not included in this calculation.

Unfortunately, in some cases, the system failure is due to incorrect design and installation. If the soil evaluation was not conducted properly, the system was installed incorrectly or in the wrong location on the site a system failure will most likely occur. It is important to get a thorough soil evaluation performed as some soils are an excellent drainage media for wastewater and others are not. For this reason it is very important that the system designed, per the results of the site evaluation, be correct. Installation of the septic system in the correct location and per the soil evaluation should be insured for proper function.

Damage due to construction on the property is another common cause to a wastewater system failure. Construction of driveways, patios, garages, sheds, in-ground pools, decorative ponds, gazebos or decks can affect the function of the wastewater system if they encroach upon the system installation area or any component of the system. In addition avoid items such as above ground swimming pools, flower or vegetable gardens in the lateral field area. No landscaping of trees, shrubs or deep rooted plants should be placed on the lateral field area or near piping. Roots from these type plants will clog the piping necessary for your system to function as designed.

As you can see there are many reasons why a septic system can fail. Therefore, one solution does not fit every situation. Each problem should be diagnosed by a licensed and trained technician and permitted in accordance with state and local regulation. Remember to get several opinions with cost estimates, as all technicians may not approach the problem in the same manner. Always contact your local health agency for their professional advice on the recommendations proposed for alleviating the existing problem. It is important to the health of the property owner, their family and neighbors that septic system failures be dealt with in a most expedient, efficient and cost effective manner. [Health Departments - Friends not Foes](#) | [Sewage Protection Program](#) | [Engineering & Design for Difficult Sites](#) | [Common Onsite Regulations](#) | [Septic Systems - How Do They Work?](#)

