

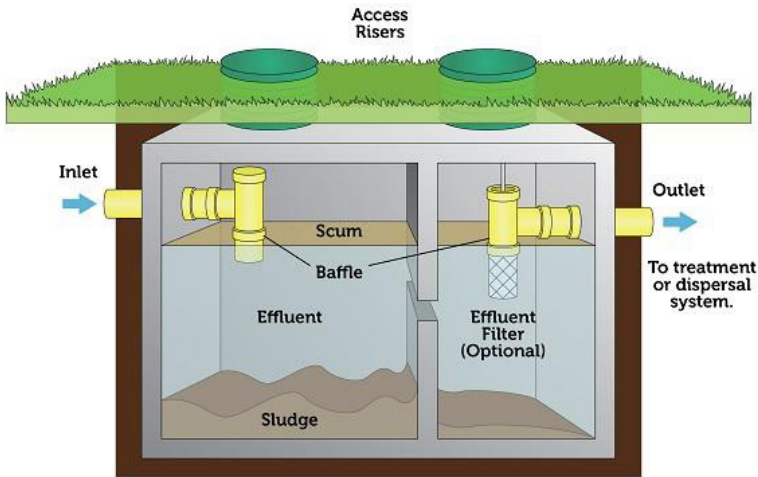


Septic Systems

Septic systems are underground wastewater treatment structures most commonly used in rural areas. These systems use a combination of natural processes and technology to treat wastewater from household activities.

Ensuring your septic system is operating correctly is important to prevent problems that can cause sewage backup either in your house or above the ground. As a property owner, understanding how to care for your septic system can save you money, protect your health, and protect water resources.

Look inside to learn more about properly maintaining a personal septic system.



Please note: The number of compartments in a septic tank vary by state and region.



GRDA'S WATERSHED CONSERVATION PROGRAM

GRDA's Watershed Conservation Program
Guard the Grand

How household sewage treatment systems work

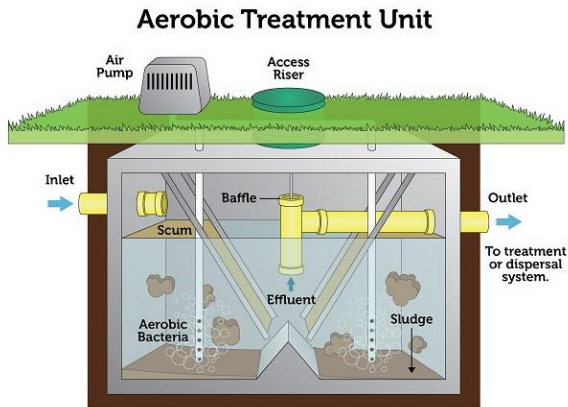
Home sewage treatment systems use complex processes to safely treat wastewater. The following covers the basics of these commonly-used systems.

Conventional septic system

A household septic system typically consists of two primary parts: a septic tank and a drain field. In anaerobic septic systems, home wastewater runs from the main drainage pipe into the septic tank where living microbes digest organic matter. Simultaneously, floatable matter such as oils, grease and solids are separated in the septic tank. The liquid, or effluent is then discharged from the septic tank into a series of perforated pipes into a drain field or soil absorption field. These buried chambers or special units are designed to then slowly release the effluent into the soil.

Aerobic treatment system

An alternative to anaerobic septic systems is an aerobic treatment system. This system is similar to a conventional septic system but aerobic treatment process requires oxygen. The treatment process results in a higher quality effluent, which can be sterilized and used for surface irrigation.



Please note: The Aerobic Treatment Unit can vary in components and design.

For more information on septic systems visit



<https://www.epa.gov/septic/learn-about-septic-systems>

For a list of approved septic system installation contractors or installers:



<https://www.deq.ok.gov/environmental-complaints-division/on-site-sewage/certified-installers/>

Maintaining a septic system

The following steps can help you avoid septic system problems.

Regularly inspect and maintain your septic system

To prevent damaging buildup, sludge and scum need to be removed through pumping the septic tank every 3 - 5 years. This is the best and most cost effective way to keep your septic system working properly and efficiently. Check your drain field for leaking lines or clogs, which could cause back up in your home. Never drive heavy equipment over your drain field as this can crush your pipes causing the system to backup or not drain properly.

Use water efficiently

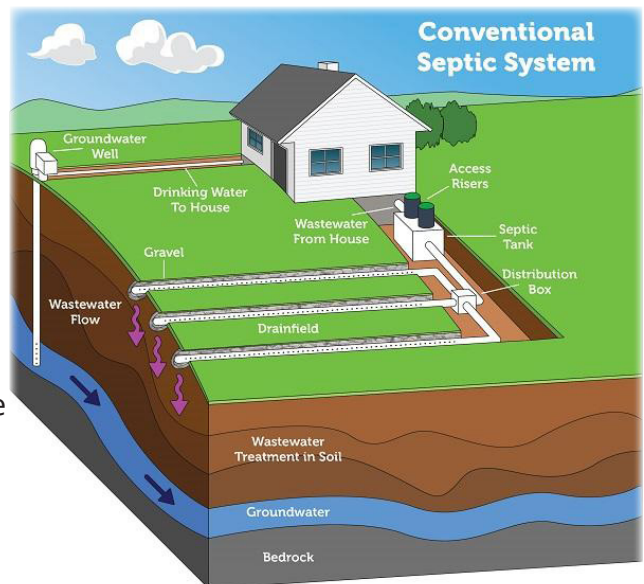
Efficient use of water is an easy way to keep your septic system functioning optimally by minimizing the amount of water flowing through your septic system. The average person uses between 50 - 100 gallons of water per person per day, so reducing water use can increase the life of your system since all the water you use in your house goes to your septic tank.

Properly dispose of water

Everything you pour down your sink or flush down your toilet ends up in your septic tank, which is full of living organisms that help treat your waste. If you dump toxins down the drain, it can kill these organisms and cause problems down the line. Some things to not pour down the drain or put in your garbage disposal are chemical drain openers, cooking oil or grease, oil-based paints and solvents, and reduce the use of garbage disposals as this reduces the amount of fats and greases that can clog up the system.

Look out for signs of septic system failure

Signs of a failing septic system include pooling water, muddy soil, plumbing backups, leaks, lush plant growth, or foul odors. Causes of failure include household toxins and cleaners, high volumes of water, garbage, and improper installation. Talk to a licensed professional to discuss solutions and how to avoid future problems.



Please note: Septic systems vary. Diagram is not to scale.

Frequently Asked Questions

Q: How do I know if I have a septic system?

A: Generally, when you purchase your or build your home you should know that you have a septic system. However, if you are unsure some things to look for are: 1) if you use well water; 2) your neighbors use a septic system; 3) your water line does not have a meter; 4) you don't see a sewer charge on your bill. You can always ask a professional if you are unsure.

Q: Can my septic system contaminate my well and nearby streams and water bodies?

A: Yes, particularly if your system is not working properly. Generally, filtering the wastewater through soil will remove most of the bacteria and some of the nutrients before the wastewater reaches the groundwater table, but the soil will not remove all of them. If your drain field is not working properly, and the sewage surfaces, it can runoff into a nearby river or lake. Also, most of the microbes in the soil won't take care of things like medications, you should not put them down the drain or flush them down the toilet.

Guard the Grand is an educational program with the goal of fostering an ethic of environmental stewardship in Oklahomans residing in watersheds that flow into Grand Lake O' the Cherokees.

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Photos courtesy of pixabay.com and <https://www.epa.gov/septic/types-septic-systems>