



Home Septic System Care

Keeping Your Waste Treatment System Running Smoothly

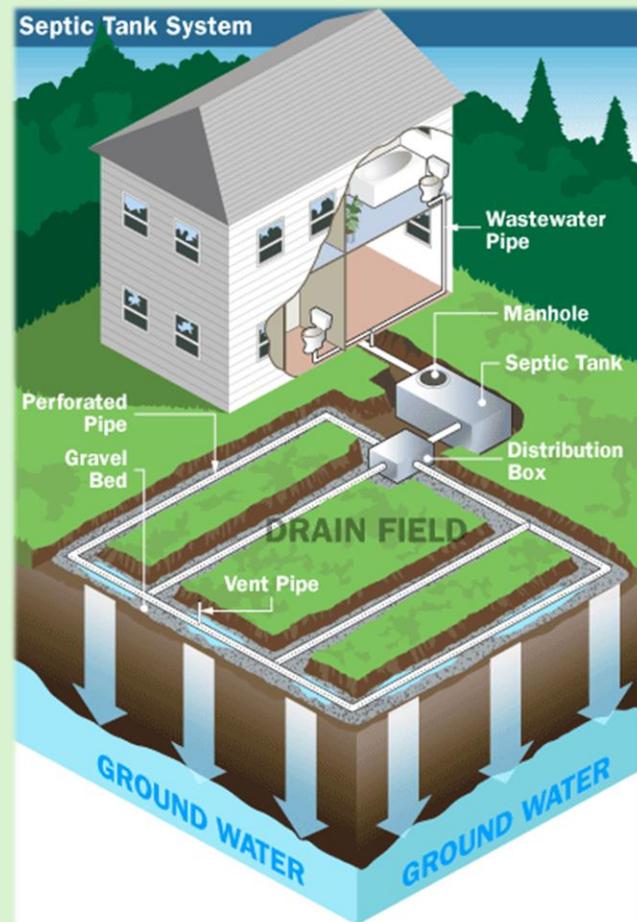
While having your wastewater disposed of by your municipality is more and more common, especially in urban areas, plenty of locations are difficult if not impossible to connect to town or city sewers. In cases like that, there still needs to be a way to get rid of wastewater, and the solution to this is the private septic system. This month's health tips will go over the basics of what a septic system is and how it works, how to properly care for your septic system, and what happens if a septic system fails. By using the information contained in these tips and the references below, you'll learn how to ensure your septic system works as well as possible and prevent your wastewater from backing up and exposing you and your household to dangerous contaminants.

Bare-Bones Basics

A septic system, or an "individual wastewater treatment system," is a method of removing wastewater from a household or business, and treating said wastewater before it can reach (and thus contaminate) sources of groundwater and other natural water bodies. If treated properly, a septic system is just as good at treating wastewater as a sewer system. However, what is a septic system, and how does it work?

Most septic systems are made of three primary components (although some more modern, advanced technology systems may have additional moving parts): the septic tank, the distribution box, and a drain field. These three components are connected by pipes that lead wastewater away from your home. Here's how they work:

- First, wastewater flows along the wastewater pipe to the septic tank, which is basically a large, underground box where wastewater can settle. This is called "primary treatment." As the water settles, larger solids float down to the ground and collect there as a sort of muck. Anything that floats, floats to the top as a layer of scum. The water that collects in between is free to continue moving down the system, now without any solids.
- The water then flows to the distribution box, or D-Box for short. This small box directs water to several pipes, so that the water spreads evenly across the drain field.
- The drain field is a series of buried pipes with tiny holes (perforations) along the bottom or sides. Water seeps out of these holes and into a specially prepared gravel trench, where it will slowly seep into the soil below. As the water trickles through the stone and dirt, the gravel and soil will "capture" bacteria and other tiny contaminants, effectively working like a natural filter for the water. If the system is working properly and was properly designed, by the time the water reaches the ground water, it won't lead to pollution or contamination of any kind.



Caring for Your System

Much like how a septic system is divided into parts, caring for the system involves multiple steps. We'll discuss all of these briefly below, starting with:

Frequent Maintenance

Typically, a septic system should be pumped once every 3 – 5 years, on average. This involves having a licensed professional manually remove the scum and sludge that collects inside the system, since otherwise it will just take up more and more room, until it might even go through the pipes, causing clogs or damage to the system's other components. Remember, the D-Box and the drain field are not designed to handle solids that are supposed to settle out inside the tank. So emptying the tank out often means there's a smaller chance the other parts get damaged.

Remember that the person who cleans your septic system should be a **licensed septage hauler**. Call your local health department for a list of properly licensed professionals that operate in your area before hiring someone. *This is not the sort of thing that anyone can do.* Especially since the waste from a septic system must be disposed of properly to avoid polluting the environment.

Also, remember that these are average estimates. If your system is small, experiences heavy and frequent water flow, or if it's a complex system with pumps and electrical components, or if you use a garbage disposal, then it should be cleaned and maintained as often as once a year.



Do Your Part; Don't Trash the Pipes

A septic system is both delicate and expensive. It relies on bacteria that form in the conditions inside a septic tank, and these bacteria help digest and break down certain solids and other harmful contaminants. If you kill or disrupt the environment of these bacteria, your septic system can become less efficient. And an inefficient septic system is much more likely to fail. In addition, certain items won't settle out and could form clogs inside your pipes. So, to protect your system, avoid flushing the following items down your toilet, or pouring them down your drain:

- Greases or oils
- Feminine hygiene products or condoms
- Dental floss
- Diapers
- Cigarette butts
- Paper towels or wipes (even if the wipes say "flushable," there are no truly flushable wipes!)
- Coffee grounds
- Cat litter
- Medication or pharmaceuticals
- Gasoline, pesticides, antifreeze, paint, paint thinner, or other household chemicals
- Non-septic-safe sanitizers (check with your manufacturer if your sanitizer is septic-safe)



IMPORTANT NOTICE

**Please do not flush
any other product
apart from toilet
tissue down the toilet**

Thank you

Limit Water Waste

As mentioned above, the purpose of the septic tank itself is to allow time for wastewater to have its solids settle out. These solids could clog the pipes or damage the drain field, causing the septic system to fail, so if a septic tank is overwhelmed with too much water-flow, wastewater that hasn't had time to properly settle could move to other parts of the system. So, how should you reduce your water usage to avoid overwhelming your system?

- Don't do all of your laundry on one day, instead doing singular loads throughout the week. Make sure that you either fully load your washing machine before use, or (if your machine has settings like this), adjust the load size setting on your machine accordingly.
- Use shower flow restrictors or aerators on faucets to help control excess water flow.
- Use a high-efficiency toilet, as they can dramatically reduce the amount of water flushed into your system at any one time.

Protect Your Field!

Your drain field is just as crucial of as the tank and the distribution box, if not more-so. To ensure that the drain field isn't damaged, it's a good idea to make sure that no trees are planted near the field. The specific minimum distance trees should be planted from a system changes depending on its design, so consult your installer for more details to best take care of the system. In addition, overwhelming the system with water from outside what is provided by the D-box is a bad idea, since the soil could become saturated and cause wastewater to seep out of the ground. Therefore, make sure to direct sources of water away from your field (such as roof drains or the outlets for sump pumps). Also, remember to avoid driving on or parking on your drain field. Drain fields are not designed to handle the weight of a car and could be severely damaged from the excess weight.



In order to best understand where each component of your system is, it's a good idea to maintain at least a sketch of the layout of the system in your records. Best practice, however, is to retain all records for your own reference of all aspects of your system, including the original design layout, any and all system inspections ("Title V Inspections"), and any subsequent septic pumping records. Many of these records may be available from your local health department, so if you misplace or miss any of this paperwork, you can call them to receive a copy. Finally, ask your installer about adding a riser to make the tank component easier to spot and access, without having to excavate your yard.

Signs the System is Failing

No matter how well cared for or designed, a septic system isn't indestructible, and like all equipment still has the potential to fail. In such a case, it's a good idea to know what to look out for as signs your system is showing signs of failure, ideally before it backs up into your pipes and causes a significant public health hazard by exposing your home to sewage.

- There may be a sewage smell in your yard, or else coming from your pipes.
- Wet patches may appear in your yard, particularly near the drain field.
- Note if there are areas in your yard where the grass is growing particularly well, as this may be a sign of a back-up.
- If a back-up does occur, it'll typically affect the pipes in the lowest parts of the house first, such as 1st floor restrooms.

A failing septic system is a severe problem and should be remedied as soon as possible. Make sure that only a licensed professional handles any repairs on your system, and always remember to request a copy of all documentation.

References

Mass.gov Webpage Providing Home Septic System Care Guidance –
mass.gov/guides/caring-for-your-septic-system

Mass.gov Guidelines for Chemicals Approved for Use on a Septic System -
mass.gov/guides/septic-system-additives-allowed-for-use-under-title-5

EPA Guidance on Home Septic System Care - epa.gov/septic/how-care-your-septic-system

EPA Landscaping Tips Document for Septic Systems –
epa.gov/septic/how-care-your-septic-system

Home Depot Home Septic System Guide –
homedepot.com/c/ah/septic-system-maintenance-and-care-guide/9ba683603be9fa5395fab90118100a63