

SEPTIC SYSTEMS

FAQs & MAINTENANCE FACTS

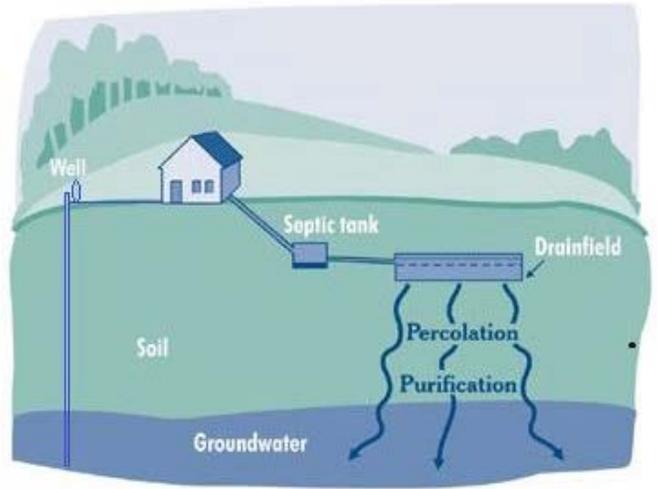
Yolo County

Dept. of Community Services ~ Environmental Health Division

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This is a brief overview of septic systems and what is needed for them to work for a long time. For more information, please contact our office or our website.

What is a Septic System?

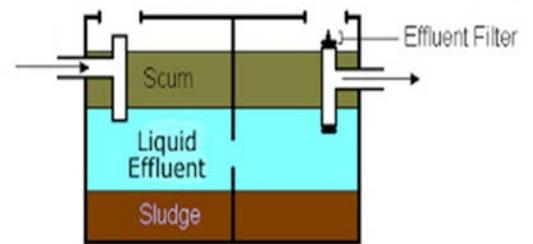
Also known as an Onsite Wastewater Treatment System, a septic system is a plumbing system that treats wastewater (sewage) on site with the help of tanks, pipes and soil. It usually consists of a septic tank and a leach field.

What does a Septic Tank do?

Septic tanks are watertight tanks that collect solids and separate your wastewater into layers of floating scum, sinking sludge, and a middle layer of “clear” liquid effluent that goes to the soil for further treatment.

Sanitary T’s are important to separate out the layers, and collect from the “clear” middle layer. Anaerobic bacterial activity happens in the tank to treat the sewage and reduce some of the solid volume. However, tanks need to be pumped periodically to keep the solids and larger particles out of the leach field and the soils, usually every 3-5 years; but the use of the system will determine how often the tank should be pumped.

Washing machines, dishwashers, and garbage disposals will increase the amount of sludge, and the tank will require more frequent pumping.



Effluent filters, inserted into the outlet sanitary T, also help to keep solids out of the leach fields and the soils. They need to be cleaned once or twice a year: open both septic tank lids, remove/slide out the filter, hose the filter off over the inlet side of the tank, re-insert the filter into the outlet/effluent sanitary T, and secure both septic tank lids.



Beware: entering into a septic tank (purposefully or accidentally) is likely to be fatal because of dangerous gases and/or risk from drowning. Watch out for unsecured or damaged septic tanks and/or septic tank lids. Repair or replace using a licensed septic contractor under an approved permit.

What does a Leach Field do?

Effluent from the septic tank flows by gravity or is pumped to a leach field for further treatment. Leach field operation is affected by the soil percolation rates, which includes aerobic bacterial activity and physical filtration through the soils. The wastewater generally percolates downward through soil and eventually enters a groundwater aquifer. A standard leach field consists of a series of perforated distribution pipes placed in two-to-three foot wide trenches. The perforated pipe is placed on top of gravel which is also used to backfill around the pipe. The gravel promotes drainage and provides a surface area for necessary bacterial activity. The trenches are covered with soil to prevent contact with the wastewater and reduce infiltration from rain, and to promote additional aerobic activity and/or possible transpiration.

What is a Failing Septic System?

Septic systems are failing when your plumbing backs up, there is pooling untreated effluent on the ground, or when the system no longer protects the groundwater from ineffective onsite treatment.

SEPTIC SYSTEM MAINTENANCE:

Septic tanks and leach fields are a viable wastewater (sewage) treatment system if properly designed, constructed, and maintained. Maintenance of the septic system primarily consists of removing the accumulated sludge on a periodic basis.

In addition, users of a septic system must observe the following basic rules in order to ensure satisfactory operation:



DO....

- ✓ Have your septic tank pumped periodically by a Yolo County registered septage hauler.
- ✓ Minimize or eliminate the use of garbage disposals/grinders. This appliance adds extra solids to the system.
- ✓ Design your septic system properly based on the site evaluation report proposed by a qualified septic professional.



DO NOT....

- Flush semi- or non-biodegradable items into the tank, including paper towels, sanitary napkins, tampons, newspapers, writing paper, rags, disposable diapers, or cat litter. Do not put grease into your septic system.
- Wash down sides of the tank when it is pumped. The remaining slime contains bacteria which can "seed" the empty tank.
- Flush large amounts of chlorine bleach or lye products into the tank; however, normal use may not harm the bacteria.
- Pour oil or grease into the tank.
- Connect roof drains or other landscaping drains to your septic system. Extra water will flood the tank and leach field. Divert drainage away from the leach field area.
- Add sodium hydroxide or potassium hydroxide to the tank. These chemicals will affect the settling of solids and cause the sludge to flow into the leach field.
- Plant trees or plants known to have invasive roots near a septic system. Roots will clog the pipelines or damage tanks.
- Drive vehicles or place heavy objects such as portable swimming pools over septic tanks and leach fields or over the required leach field replacement/repair area.



FAILING SEPTIC SYSTEMS: *Possible Symptoms/Causes/Remedies:*

1. Water will not drain in showers & toilets / Ponding of wastewater over leach fields.

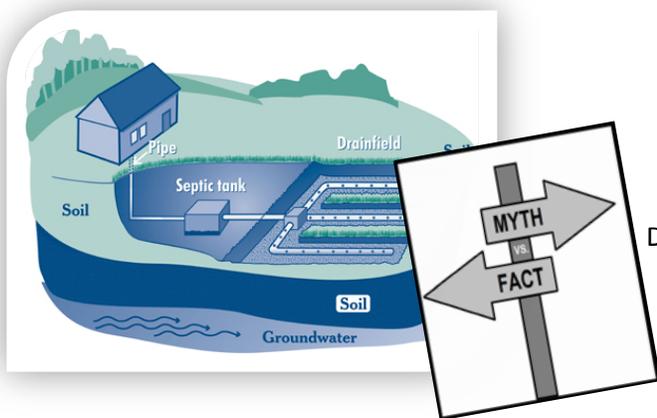
- Solids or scum could be blocking septic tank inlet and outlet:
 - Pump septic tank periodically, and have the tank inspected by a licensed septic contractor.
 - Clean effluent filter, if one exists (see first page).
 - Do not remove the effluent filter – this tool protects your leach field.
- Roots blocking pipelines: Contact a licensed septic contractor to remove roots and repair any damage.
- Reduce landscape irrigation of soils near leach field – monitor to see if this eliminates the problem.
- High groundwater
 - Construct new leach field under permit in area without high groundwater; soil analysis is necessary.
 - Construct an alternative septic system to allow for less vertical separation to groundwater.
- Gravel clogged with fine soils; soil pores plugged due to biomat formation or solids
 - Replace leach field. This requires a site evaluation/soil analysis and a major repair permit.



2. Well water analysis is positive for fecal coliform.

- Soils may not be filtering the effluent completely prior to it entering into the water supply aquifer. The horizontal setback to the water well is less than the required 100 feet.
 - It may be necessary to construct a new septic system under permit meeting all horizontal and vertical setbacks.

Common Myths about SEPTIC SYSTEMS



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This is a brief look at common myths or rumors regarding septic systems, and a review of some important septic system facts. For more information, please contact our office or our website.

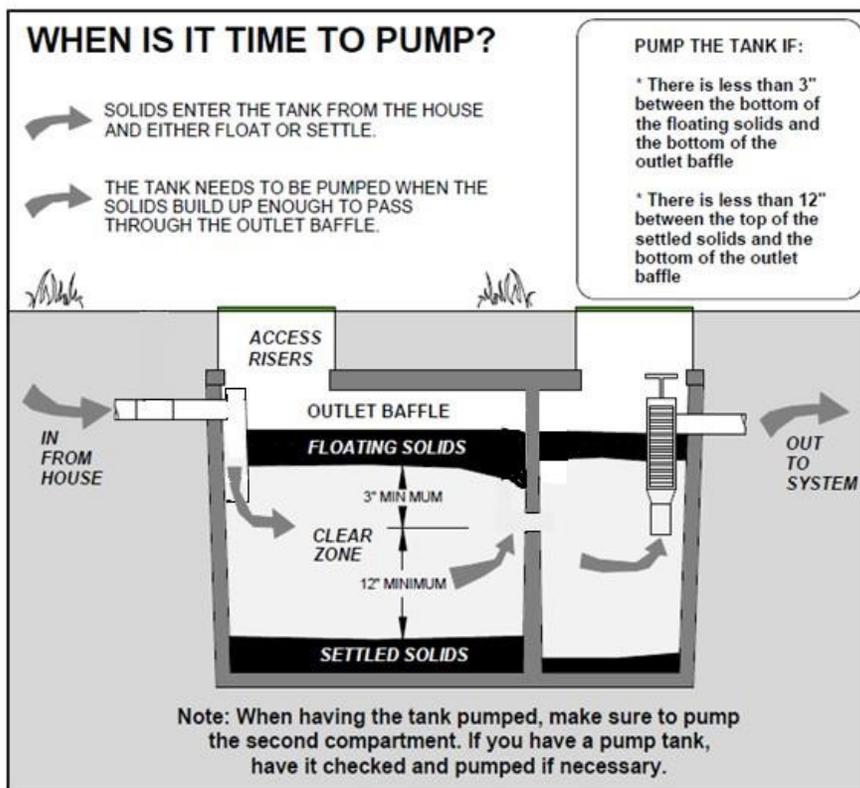
Myth: Septic Systems are designed to last forever. My system will never need replacement.

Fact: Many septic systems have operated well for 50 years or more, while some have failed in less than a year. The average lifetime for existing systems has been 20-30 years. With an increasing awareness of system sizing, siting, and installation, today's installations should be able to last even longer. Whether they do or do not is dependent on each person who uses the septic system; how it is used and maintained. Eventually, a septic system will require replacement. A septic system's lifespan depends on the following: appropriate design, correct installation, proper use, and frequent monitoring and maintenance.

Myth: The best way to maintain a septic system is to leave it alone. The Septic Tank should never be opened as long as it is working.

Fact: Septic tanks need to be pumped periodically, usually every 3-5 years, to keep the solids and larger particles out of the leach field and the soils, but the actual use of the system determines how long between pumpings is best. After about 3 pumpings, your licensed septic pumper should be able to estimate how long you can go before your next pumping based on your use. Garbage disposals, washing machines, and dishwashers will increase the amount of solids, requiring more frequent pumping.

REMEMBER to CLEAN the FILTER: Newer systems may have an effluent filter, inserted into the effluent sanitary T – this filter is a tool that is important by helping to keep solids out of the leach field thus protecting the soils. The filter needs to be cleaned once or twice a year: open both septic tank lids, remove/slide out the filter, hose the filter off over the inlet side of the tank, re-insert the filter into the outlet/effluent sanitary T, and secure both septic tank lids.



Safety Fact:



**A SEPTIC
TANK!**

BEWARE: All septic tank lids should be secure at all times, and tanks should be maintained in good condition.

Entering into a septic tank (purposefully or accidentally) is likely to be fatal because of dangerous gases and/or risk from drowning.

Watch out for unsecured or damaged septic tanks and/or septic tank lids – Immediately repair or replace when necessary using a licensed septic contractor under an approved permit if necessary.

Myth: I should be more concerned about my tank than my leach field.

Fact: All septic system components are important for the proper function of a system. A standard system is usually comprised of a tank and a leach field. A septic system can be equated to a car, with the tank as the car body and the leach field as the engine. While important to its overall use, the role of the body is to support the operation of the engine. It is the engine that is the primary working part of the vehicle, and which is dependent on the careful operation and maintenance by the user. A concerned owner can keep an older engine operational while the careless owner can ruin a perfectly good one through abuse and neglect. So it is with the leach field. As the most critical part of the system as well as the largest and most expensive component, proper care of the leach field should be of primary importance to all septic system users.

Myth: Flushing yeast, buttermilk, enzymes, or other commercial septic additives into the septic tank will eliminate the need for pumping the tank.

Fact: Because the human body uses enzymes in most of its metabolic processes, they are already plentiful in domestic sewage. A septic system is a balanced system using naturally-occurring bacteria in wastewater to treat sewage and protect our environment. As a result, additives are not necessary for the adequate decomposition of waste materials. In some cases, additives can be harmful to the system by breaking down solid waste in the tank; these smaller particles then move into the leach field where they clog the soil and can irreversibly damage the system.

The addition of yeast, buttermilk, or other additives does not cause degradation of non-biodegradable material which accumulates in the sludge and scum. Therefore, the septic tank must still be pumped periodically to prevent solids from clogging the tank outlets or the leach field.

Myth: Garbage disposals, leaky faucets, and high water consumption do not impact my septic system.

Fact: Like almost anything else, septic systems can be damaged through improper use. The use of a garbage disposal subjects the system to a greatly increased accumulation of solid material in the tank and will necessitate more frequent pumping. Excessive water use, leaking appliances, or high peaks in water consumption such as that caused by multiple loads of laundry, dramatically increase the amount of effluent that must move through the tank and out to the leach field area. Household practices can determine whether the system will continue to operate properly for a number of years.

Myth: Pumping the tank will take care of existing problems. If the septic system appears to be failing, flush the septic tank with large amounts of water.

Fact: Some problems, like clogging of the tank by soap crystals or grease, can be corrected by pumping and cleaning. Likewise, broken tank baffles, crushed pipes, or pump failures can be identified during pumping. However, if failure is caused by saturation or plugging of the soil in the leach field, however, simple pumping will not fix the problem. An evaluation of the system is necessary to determine the reason for failure, and should be done by a licensed septic contractor. The true value of pumping is in preventing future damage to the leach field.