



County of Santa Cruz

Health Services Agency ♦ Environmental Health Service

County Service Area #12

Septic System Users Manual

Why is my Septic System so Important?

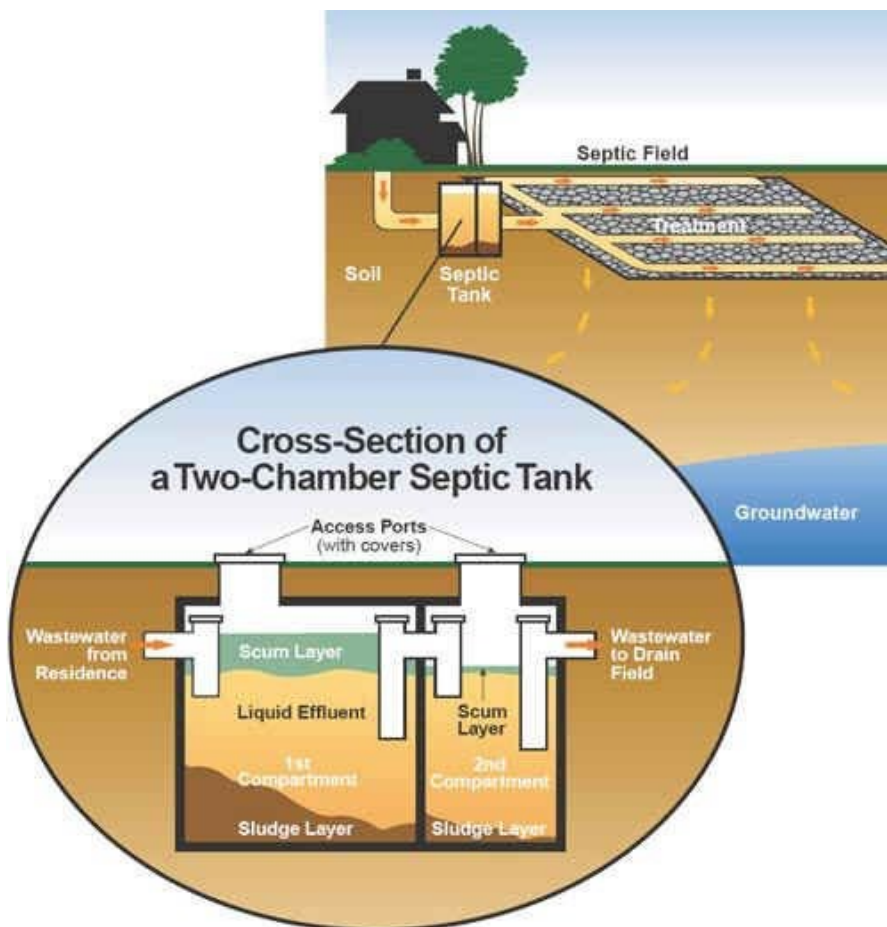
Septic systems allow people in rural areas to dispose of their household sewage in a manner that protects human health and the health of the environment. A system that works properly will deliver wastewater to the surrounding soil where it will be cleaned by natural soil organisms before it is returned to the groundwater table.

How does my Septic System work?

The drains of your sinks, showers, toilets and washing machine all feed into the SEPTIC TANK (generally located just a few feet away from the house). The septic tank has a series of baffles that retain solids and grease but allows the remaining liquid effluent to flow into the LEACHFIELD.

The leachfield is the most important and sensitive part of your septic system. It is also the most expensive to repair. A typical leachfield consists of perforated pipe set into a gravel-filled trench that is usually about two feet wide and two to ten feet deep. Wastewater is distributed throughout the trench and is absorbed by the

soil. As the water percolates downward through the soil it is filtered and cleansed. If your leachfield was installed or repaired within the last fifteen years you may have INSPECTION RISERS at the end of each leaching trench. Inspection risers are three-inch diameter pipes that extend from the bottom of the ground. Inspection risers are very useful because, by looking into the riser you can see the level of the wastewater on your leachfield and how well the leachfield is working. The water level in the riser may rise and fall as water is used in the house, and flows through the septic tank into the leachfield, and percolates through the soil. When your leachfield is full (saturated), the level of wastewater in your inspection riser is at or close to ground level and a failure may be imminent.



Maintaining your Septic Sytem

The best way to take care of your septic tank is to conserve water, pump the tank regularly to remove grease and solids, monitor the inspection risers if you have them, and don't put extra solids or harmful materials (such as paints, solvents, or grease) into the system. The accumulated solids in the bottom of the septic tank should be pumped out usually every **three to five years** to prolong the life of your system. When solids build up in the septic tank the solids can flow out of tank and clog the leachfield. Septic systems must be maintained regularly in order to continue working efficiently. Neglect or abuse of your septic system can cause it to fail.

Failing septic systems can:

- Reduce the value of your property
- Be very expensive to repair
- Degrade the environment, lakes, streams, and groundwater
- Cause a serious health threat to your family and neighbors
- Put water supply users at risk if you live in a public water supply watershed

Signs of a failing septic system

- Sewage surfacing over the tank or leachfield
- Slow draining toilets or drains
- Lush green growth over the leachfield
- Sewage back-ups in the house
- Frequent sewage odors

Septic System Dos and Dont's

Dos

- Have your tank pumped out and system inspected every 3 to 5 years by a licensed septic contractor.
- Keep a record of pumpings, inspections, permits issued, and other system maintenance activities.
- Do practice water conservation. Repair dripping faucets and leaking toilets, run washing machines and dishwashers sparingly throughout the week rather than doing it all in one day, avoid long showers, discontinue use of garbage disposals, put kitchen waste in garbage instead of down sink, use water-saving features in faucets, shower heads and toilets.
- Learn the location of your septic system and leachfield. Keep a sketch of it with your maintenance records for service visits.
- If your system has a flow diversion valve, familiarize yourself of its location and turn it once a year. Flow diverters can add years to the life of your system.
- Divert roof drains and surface water from driveways and hillsides, away from the septic system. Keep sump pumps and house footing drains away from the septic system as well.
- Take leftover hazardous household chemicals to your approved hazardous waste collection center for disposal. Use bleach, disinfectants and drain and toilet bowl cleaners sparingly and in accordance with product labels.
- Monitor leachfield inspection risers before and after a heavy rain.

Dont's

- Don't allow anyone to drive or part over any part of your septic system. The area over the leachfield should be left undisturbed with only a mowed grass cover. Roots from nearby trees or shrubs may clog and damage your drain lines.
- Don't make or allow repairs to your septic system without obtaining the required health department permit and advice. Contact a Qualified Professional.
- Don't use commercial septic tank additives. These products usually do not help and may hurt your system in the long run. Beneficial bacteria naturally inhabit a septic system.
- Don't put dental floss, feminine hygiene products, condoms, disposable diapers, cotton swabs, cigarette butts, coffee grounds, cat litter, paper towels, latex paint, pesticides or other hazardous chemicals into your system.
- Flushable wipes are not biodegradable.
- Don't use caustic drain openers for a clogged drain. Instead, use boiling water or a drain snake to open clogs.

Septic System DON'Ts

- Your septic system is not a trash can. Do not use it to dispose of...

- Dental floss
- Feminine hygiene products
- Diapers
- Cotton swabs
- Condoms
- Coffee grounds
- Cat litter
- Cigarette butts
- Paper towels
- Latex paint
- Pesticides or ANY hazardous chemicals!



- Don't use caustic drain openers

How will I know if there is a problem with my septic system?

On the inside of your house, you may notice drains or toilets operating sluggishly or backing up. You may notice gurgling noises coming from the plumbing vents. On the outside of the house you may find a damp spot on the ground, puddling or ponding of water, and/or a distinct septic smell. Lush plant growth in a leachfield area that is not irrigated may also be a sign of a problem. You may notice a lush green area in your yard. If you have inspection risers, the water level may be at or near the ground surface.

Some of these symptoms may occur intermittently, usually after a heavy rain or heavy water use. Close attention to water use and inspection risers is needed in order to help manage a problem until the problem can be fixed or conditions dry out and improve.

What can I do if I think there is a problem?

Have the septic tank inspected and pumped by a septic tank pumping service. If the septic tank is operating at a high level, covered by effluent, or effluent flows from the leachfield back into the tank when the tank is pumped, the leachfield is either blocked or saturated. A saturated leachfield will need to be abandoned and replaced (repaired) by a new leachfield in a different location on your property.

To reduce loading on the system until it can be repaired, be sure there are no leaky fixtures in the house and keep all water use to an absolute minimum. Check all toilets with dye for leaks and turn them off immediately if one is found. Discontinue use of the washing machine (unless you have a separate greywater sump) and keep showers brief.

What do I do if my septic system needs repairing?

If you think your system needs a repair, contact your Land Use District Inspector at 831-454-2022 between 8:00 am and 9:30 am or leave a message at any time. The district specialist will discuss repair standards such as setbacks, leachfield size, and provide other information that may aid you in evaluating and selecting contractor bids. The specialist will also tell you to get started on the permit process. A permit is needed for ANY septic system repair except for minor plumbing fixes. Obtaining a permit for all repairs done to your system ensures proper documentation and full disclosure for future reference or property transfers.

What is a greywater sump?

A greywater sump is sometimes used in conjunction with a standard septic system to handle laundry waste and/or reduce loading the system. A sump may be useful in households that wash five or more loads of laundry per week.

A greywater sump is a simple leaching pit that receives wastewater from the washing machine, shower, and/or bathroom sink. Toilet waste **MUST** be disposed of in a septic tank and waste from the kitchen sink have too many solids to be processed effectively in a sump.

Greywater sumps must be at least 120 cubic feet in volume (the actual size will vary depending on the amount of wastewater it will be receiving), filled with drain rock, and covered with roofing paper and a layer of soil. A brochure describing greywater sumps and the necessary steps to obtaining a permit can be obtained from the County of Santa Cruz Environmental Health. A permit is required to ensure that the sump is properly sized, located and installed.

What about alternative on-site sewage treatment and disposal systems?

An "alternative" system is defined as a individual sewage disposal system that uses non-conventional technology for enhanced effluent treatment and/or disposal. Alternative on-site sewage and wastewater treatment and disposal systems have been successfully used in Santa Cruz County to address a variety of constraints (i.e., small lot size, high groundwater, clay soils, or very sandy soil) that prevent the use of conventional septic systems.

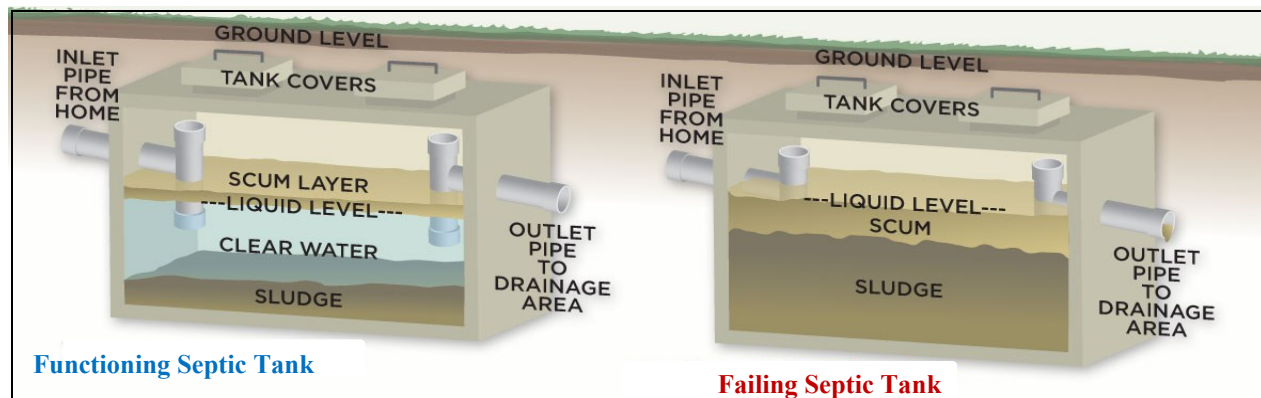
There are various types of alternative systems that are currently approved for installation. These systems include mounds, at-grade, sand and packed bed filters, and aerobic treatment units. Recorded acknowledgement by the property owner of special operating characteristics is mandatory for all enhanced designs. A special operation permit requires annual fees and runs with the property. Regular oversight of these systems to ensure adequate operation and maintenance is required and is crucial to successful long-term use. The availability of this technology has helped to solve chronic treatment and disposal problems on developed parcels with serious site constraints.

What are the environmental impacts of septic systems?

A failing septic system will allow large amounts of viruses and bacteria to contaminate the surface of the ground and any nearby surface waters. People and animals contacting the contaminated area are susceptible to infection from the viruses and bacteria. Children, the elderly, and people with depressed immune systems are much more likely to experience problems than healthy adults.

Allowing greywater to flow onto the surface of the ground is also hazardous even if biodegradable soaps are used. Viruses and bacteria are present, and the absorptive capacity of the soil can be damaged. In dry years the problems can become worse because of the lack of flushing action from rains.

All wastewater, including greywater, must be disposed of under the surface of the ground in an approved disposal system. Discharging any wastewater, including greywater, to the surface of the ground, or to surface waters, creates a public health hazard and is a violation of the California Health and Safety Code.



What should I check if I am buying a house with a septic system?

If you are buying a house with a septic system, it is critical to know if the system is working properly and if it is suitable to your needs. If you wish to add bedrooms or do a major remodel, the septic system will have to meet current standards. An upgrade may be expensive or difficult depending on septic constraints for some properties.

Environmental Health Services has extensive records available for review on most properties within the county that have septic systems. You should review this file for information on the system. Look for information including when it was installed and the specifications of the design (is it sized for your needs), whether repairs have been made, how often the tank has been pumped, the tank condition at the time of pumping, and whether the system is an alternative or nonstandard system which requires special operating permits and fees. Evaluating the history of the septic system can help you understand the design, determine the effectiveness of the system, and whether it can meet your long term needs.

After reviewing the file it is a good idea to physically check out the system. This may involve a visual check for signs of failure and/or pumping the system by a licensed sewage hauler (list available) for a more in-depth evaluation. Be aware that an inspection may not reveal problems if the house is unoccupied, or that occur in the winter due to possible high ground water table. You and your agent should check the file thoroughly during the escrow period.

What should I do when I sell my house?

If you are selling your house, be sure your septic system is in good shape early in the process. You do not want your escrow to get hung up due to septic problems discovered late in the process.

Environmental Health Service is available to assist agents and property owners in interpreting septic and well file history for real estate transactions. Having your septic system pumped and evaluated by a licensed pumper company prior to listing may provide basis for disclosure. Any special requirements of your system (i.e., special operating permit and fees or alternative system inspection) run with the property.

COUNTYWIDE SEPTIC SYSTEM MAINTENANCE, SAN LORENZO VALLEY WASTEWATER MANAGEMENT, AND SPECIAL SYSTEM OVERSIGHT.

There are approximately 25,000 septic systems in the rural areas of Santa Cruz County. Successful use of these systems requires that they be properly maintained to protect public health and prevent water pollution. County Service Area 12 (CSA 12) was established in 1989 by the County Board of Supervisors in order to promote better septic system management in these areas. A small fee is collected with each property tax bill in the CSA 12 area.

The funds raised from CSA 12 are used to pay for permanent facilities for the disposal of septic tank sludge at the Santa Cruz and Watsonville City Sewage Treatment Plants. Regular pumping of accumulated solids in septic tanks is a very important part of maintenance and is dependent upon a suitable location for disposal.

The funds are also used for monitoring water quality impacts of septic systems, public education about septic system maintenance and maintaining a computerized record keeping system of pumping, inspections and repairs.

The San Lorenzo River watershed area has a greater need for the proper septic system management than the rest of the county. The area has the highest density of septic systems in the state. Any pollution from septic failures impacts the San Lorenzo River, which is used for water supply and recreation. Because of these conditions, the State has directed that the County and residents closely manage septic systems in the watershed.

The County has implemented a comprehensive wastewater management program for the San Lorenzo Watershed to address these concerns. This program provides for regular water quality testing, inspection and evaluation of all septic systems approximately once every six years, and special public education efforts. The program is funded through a special zone, CSA 12A. An additional service charge is billed to developed parcels in this zone.

The inspection and public education programs will result in a general upgrading of septic systems in many areas of the San Lorenzo Valley, as well as enhanced management by homeowners. Parcels with non-standard disposal systems have another septic charge on their tax bill (CSA 12N). Alternative systems and systems that don't fully meet standards require annual inspections and testing, which is covered by the fee. These systems also require routine maintenance by qualified service providers.

