Shore Stewards News
GUIDELINES AND RESOURCES FOR LIVING NEAR WATER | ESTABLISHED 2003

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Septic System Care and Maintenance

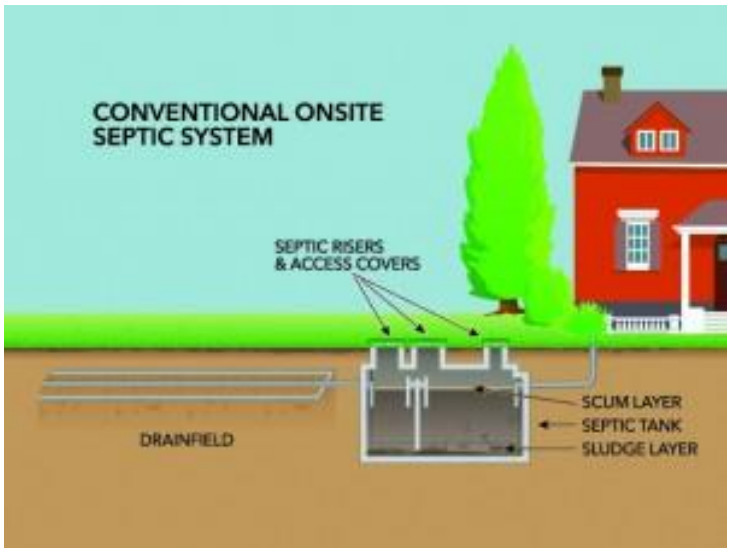
Everyone uses running water and flush toilets in their home or work place. The water running down the drain and toilet goes to either a private or community septic system or a public sewer system. If you have a septic system, you have a personal responsibility to maintain it and protect your investment. If you are on sewer, you pay a monthly bill, and someone else manages a treatment plant for your community. No matter how human waste is handled, there are steps you can take to protect your personal investment or the investment your community has made in a treatment plant.

Harmful pathogens such as bacteria and viruses from failing septic systems can pollute the water in our aquifers and Puget Sound. Other waste such as medicines and household chemicals flushed down the drain may also make its way to groundwater or waterways. In this newsletter you will learn the best ways to keep harmful waste out of our waterways. Doing so can save you money and keep you and your family safe from illness, as well as protecting shellfish and other marine life.

How Your Septic System Works

All septic systems are composed of a septic tank and drainfield. Wastewater from your household flows into the septic tank, where heavy solids settle to the bottom of the tank and form a layer of sludge. Grease, toilet paper, and other light solids float to the top and form a scum layer. In

between the sludge and the scum is a semi-clear layer of wastewater called effluent that does not include solids. As more wastewater enters the septic tank, the clear effluent layer of the tank flows through an outlet in the tank to the drainfield in your yard. The "good" bacteria living in the soil clean the wastewater by consuming harmful bacteria and viruses before this wastewater seeps into groundwater.



The "good" bacteria in the septic system do not completely decompose the sludge or scum layers, so the layers continue to grow, slowly filling up the tank over time. These layers will eventually need to be pumped out by a professional septic pumper. No special additives are necessary or recommended.

There are several types of septic systems, and it is important to understand what kind you have and the requirements for its specific maintenance and inspection. The most common type is the gravity system, which does not require a pump to operate. Others include the pressure distribution system, sand filter system, mound system, and aerobic treatment units such as the Glendon BioFilter system.

What Should Go Down the Drain

Whether you are connected to a large sewer system or your own onsite septic the only things that should go down the drain are human waste, toilet paper, mild soaps and detergents. Many items can clog the screens at your community's sewage treatment plant or compromise your septic tank or drainfield—even those that say they are "flushable." **To avoid damaging your septic system or community sewage treatment plant, you should:**

- Limit use of chlorine bleach to less than ½ cup per laundry load. Bleach kills the "good" bacteria in the tank and drainfield.
- Avoid using a garbage disposal, as the microbes in your septic tank don't do a good job of breaking down undigested fruit, coffee grounds, eggshells, vegetables, and meats.
- Use the trash bin to dispose of used baby wipes, cleaning wipes, facial tissues, sanitary napkins, tampons, condoms, band aids or bandages, cotton balls or swabs, Q-tips, dental floss, disposable diapers, hair, and paper towels.

- Keep kitty litter and pet waste out of the toilet. These do not break down like human waste and should be bagged and placed in the trash.
- Use an ashtray, not the toilet, for cigarette butts and matches. They do not disintegrate and can harm your septic system and clog your drainfield.
- Use drain screens to keep hair, fruit sticker labels, and other small items from going down the drain.
- Scrape cooled grease and other food waste into the compost or trash before washing, so there is less work for your septic to do.
- Use a drain snake for plumbing system clogs, which is readily available at hardware stores, or follow this recipe:
    - Mix ½ cup baking soda, ½ cup vinegar, and ½ cup boiling water.
    - Pour quickly into clogged drain and let stand for 2–3 minutes.
    - Then flush with water.

Maintaining Your Septic System

Maintaining your septic system is a good investment. Here is a checklist of actions you can take to ensure your system has a long life:

- Get a copy of your septic system's "as-built" drawing from your Health Department if you do not have one. This drawing should show the location of your septic tank, drainfield, and all septic parts.
- Ensure that no vehicles or heavy machinery drive over any portion of your system.
- Keep records of any pumping or repairs.
- Inspect your system regularly. Depending on the type of system you have, the recommended inspection frequency may vary from every 6 months to every three years at most. Check with your Health Department to see how often you need to have your type of system inspected. Some counties allow you to complete your own inspection, and offer literature, classes, or videos on how to do so.
- Pump your system when necessary.
- Clean septic tank filters as recommended or at least annually, if you have them.
- Install inspection risers (extension tubes from the top of the tank to the surface that makes it easier to access your system to inspect or pump).

- Spread out the timing of water use around the house. Take showers and baths when the dishwasher or washing machine is not in use. Limit dishwashing or laundry loads to one cycle daily or space out loads to allow the system to process the water.
- Reduce water use. Guideline 8 has some great ideas on how to conserve water.
- Consider renting a port-a-potty for large events to avoid putting stress on your system.

Protecting Your Drainfield

Your drainfield is critical to the health of your septic system and needs to be protected. The pipes and other components in your system may not be buried very deep below ground and could be easily crushed. The soils in your drainfield contain oxygen-loving bacteria that break down and filter the effluent. If the area is compacted by driving or parking on it, the bacteria won't be as effective and will reduce the ability of the water to percolate through the soil. You will also want to avoid doing anything that overwhelms the system with too much water.

To protect the lifespan of your drainfield, *avoid* these activities.

• **Building structures on the drainfield**, including tool or garden sheds, decks, sport courts, patios, swing sets, sand boxes, or compost bins.

• **Parking or driving vehicles** or construction equipment on the drainfield.

• **Planting trees and large shrubs near the drainfield.** They should be planted at least 30 feet away to prevent roots from getting into and breaking or clogging the drainfield pipes.

• **Using a rototiller** which could damage the system parts that are close to the surface.

• **Over irrigating in the drainfield area**, as this could saturate the soil and decrease the ability of the system to function properly.

• **Directing water from your downspouts and surface water runoff** onto your drainfield.

• **Burning piles of leaves or branches over the drainfield**, as the heat could damage the plastic pipes below, if they are buried shallowly.

• **Using plastic sheeting** over these areas in an attempt to block weed growth.

• **Using too much topsoil or compost**. Limit to no more than two to three inches over the drainfield.

A good rule of thumb for landscaping over drain fields is to use shallow rooted plants.

Many grasses have shallow root systems and are the simplest and most frequently recommended plantings over the drainfield. Choose a traditional lawn or perhaps an un-mowed meadow. You may include permeable pathways, garden ornaments, bird baths, sundials, tables and benches. In sunnier locations, perennial gardens can be created with mixes of ornamental grasses of different heights and can be inter-planted with ground covers, small bulbs, and sun loving perennials as well as smaller, shallow rooted shrubs. Avoid larger ornamental grasses and bamboo, which are known to harm septic fields.

TIP: Avoid planting vegetables over your drainfield. Vegetables often need daily watering and excess water in the soil reduces the drainfield's ability to treat wastewater. Roots of some vegetables may grow deep enough to damage, or clog drain pipes. If the drainfield is not working properly, the effluent in the drain field could contaminate the vegetables.

Fortunately, there are many recommended plant species, with a few listed below. When installing plants, limit topsoil additions to only one or two inches. Consider using seeds or small starts.

Deep Shade Plants	Partial Shade/Sun Plants	Sun Plants
Japanese Spurge	Blue Star Creeper	Kinnikinnick
Irish Moss	Vaccinium Well's Delight	Blue Oat Grass
Wintergreen	Creeping Rubus	Vaccinuim Well's Delight
Sword Fern	Sword Fern	Blue-silver fescue

Signs of a Failing Septic System

Septic systems are designed to have a lifespan of 20 to 30 years, although many last longer. The most common cause of early failure is improper maintenance. A well-maintained system is one that is inspected at the recommended frequency and maintained as necessary. A system that is not pumped when needed will result in a build-up of sludge and floating solids, such as greases and

toilet paper, inside the septic tank. If these build up too much they will flow out of the tank into the drain field, causing it to become clogged beyond repair. Other causes of failure can include pipes blocked by roots, crushed pipes, over-saturation of the soils, flushing of inappropriate items (like cigarette butts), poor design, or poor installation.

YOU KNOW YOU HAVE A SERIOUS PROBLEM IF YOU EXPERIENCE ANY OF THE FOLLOWING

- Sewage backing up in your toilets, sinks, or bathtubs.
- Slow flushing toilets, as well as drains that are draining much slower, even after using plungers or "plumbers' snakes."
- Water pooling in your yard or accumulating near your septic tank. This water may or may not be accompanied by a foul or "rotten egg" odor.
- Black or dark grey stains in soil or grasses on the drainfield or surrounding areas.
- Overly moist or mushy areas in your drainfield area.
- Algae growth on subsurface drainage pipe outlets, bulkheads, or visible seeps on the beach or along the stream.

If your septic system appears to be failing:

- Avoid using septic system "miracle cures" that promise to get rid of the sludge and scum in your system. "Miracle cures" may dissolve the sludge and scum, sending dissolved particles into your drainfield, potentially clogging the soils in the drainfield and requiring expensive drainfield repair or replacement.
- Contact your local health department or surface water agency to find out if their staff may be able to assess your situation and give you advice on how to solve the problem. Your local conservation district may also be helpful. These organizations may also be able to connect you with special loan programs for repairing your system.
- Fence off areas if there is liquid waste seeping to the surface of your yard so that pets and people, especially children, are not in contact with the liquid.
- Conserve water as described in Guideline 8. This can extend the life of your system if it turns out it has not failed completely.
- Have your system pumped and filters cleaned, combined with some drastic water conservation around the home, may help solve the problem temporarily, as an empty tank can hold up to several days of waste.

Ways to save money

Maintaining and repairing your septic system can be expensive, which is why you should inspect your system regularly. This can be cheaper than having it pumped when it's not necessary. Because of the importance of maintaining your system to your county's public health department, there are sometimes coupons, classes, incentives, and low-interest loans available. Check with your health department or surface water agency. Septic class information for north Puget Sound counties can be found in the References section that follows.

References and Resources

Washington Sea Grant: Download publications on septic system maintenance and care, landscaping your drainfield, pumping your septic system and more: https://wsg.washington.edu/septic-sense-and-septic-socials-and-septic-system-landscaping-classes/

Clallam County Environmental Health Septic Systems (Onsite Program):
http://www.clallam.net/HHS/EnvironmentalHealth/onsite.html

Island County Public Health Septic Training: http://islandcountyseptictraining.com/Index.cfm

Jefferson County Public Health "Resources for Homeowners":
http://www.jeffersoncountypublichealth.org/665/Resources-for-Homeowners

Kitsap County Public Health District: Homeowners Guide to Onsite Sewage Systems
https://www.kitsappublichealth.org/environment/files/homeownersguide.pdf

Mason County Septic Education (Mason County Public Health and WSU Extension):
http://extension.wsu.edu/mason/water-resources/septic-system-education/

Skagit County Environmental Health Septic Education:
https://www.skagitcounty.net/Departments/HealthEnvironmental/septic101.htm

Snohomish County Health District "Septic Care Workshops and Resources":
https://snohomishcountywa.gov/2813/Septic-Care-Workshops-Resources

Whatcom County Environmental Health "Homeowner Training":
http://www.whatcomcounty.us/1745/Homeowner-Training-OM

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