

# HOMEOWNER'S GUIDE TO SEPTIC SYSTEMS



# TABLE OF CONTENTS

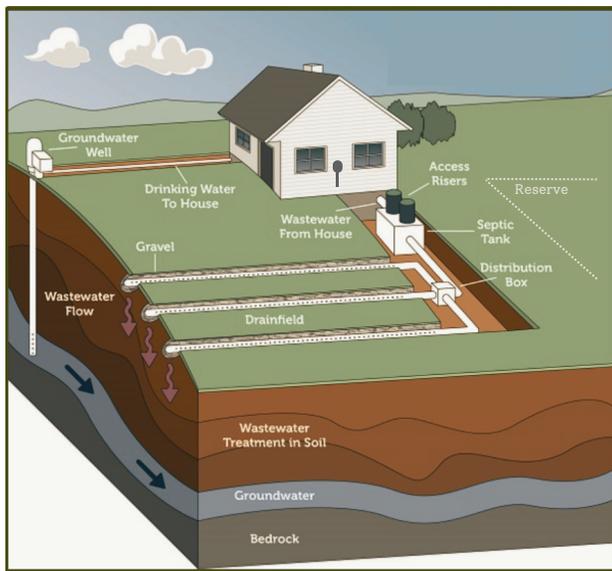
How Septic Systems Work .....	3
How To Care for Your Septic System .....	4
Your Septic System Records .....	5
Different Types of Drainfields .....	6
Inspection Schedules .....	7
Septic System Dos and Don'ts .....	8
Landscaping for Septic Systems .....	9-10
Signs of Septic System Damage and Failure .....	11
How to Find a Septic Contractor .....	12
Questions to Ask a Septic Contractor .....	13
Savvy Septic Program .....	14



# HOW SEPTIC SYSTEMS WORK

## WHAT IS A SEPTIC SYSTEM?

A septic system, also called an on-site sewage system (OSS), is designed to treat wastewater from a home or business. Unlike being connected to sewer where wastewater travels to a treatment facility, the entire process happens on your property. It can be hard to remember everything your septic system is doing because the process takes place underground. Though the exact set up can vary, all systems use the same general process to make sure wastewater is fully treated before reaching groundwater & bodies of water in our community.



## WANT TO LEARN MORE?

For more about how septic systems work, visit:

- Our [Septic Care Workshop](#) - Online, anytime!
- [Interactive Septic System Diagrams](#)
- [Septic System Information](#) from the EPA
- [Septic System Basics Video](#) from the WA State Department of Health

## The First Stop

### The Septic Tank

Initial treatment takes place in the septic tank. Here solids are separated into sludge and scum layers and biological processes start to break down the wastewater.

## Potential Pit Stops

### Pump Tanks

After the septic tank, some systems have a pump tank that pushes doses of wastewater out to the rest of the system if it cannot operate on gravity alone or the wastewater needs to be pumped out at certain times.

### Pre-Treatment Units

Depending on the conditions of your property, some systems have other components to further treat the wastewater before it goes to the drainfield. Pre-treatment units can include aerobic treatment units (ATUs), UV lights, sand filters, and biofilters.

## A Fork in the Road

### Distribution Devices

Once wastewater passes through the septic tank and any pump tank or pre-treatment units if needed, it will go through a distribution device. This device might be a distribution box ("d-box"), or it could also be a manifold or other device. This helps send wastewater out equally to the entire drainfield.

## The Last Stop

### The Drainfield

The drainfield is where wastewater gets dispersed underground in your yard. It provides the final treatment as biological and chemical processes in the soil filter the wastewater. Once it passes through layers of soil, the fully treated water re-enters nearby groundwater or other bodies of water.

# HOW DO I CARE FOR MY SYSTEM?

## PREVENTATIVE MAINTENANCE

### Inspect It

Have your system regularly inspected by a septic professional. See the monitoring & maintenance frequencies on page 5 for more information. Have risers installed for easy access during inspections and pumping.

### Check for Damage

Learn where your system is located and regularly check for leaks, cracks, and damage.

### Take Care of Your Drainfield

Don't park or build structures on your drainfield. Divert sprinklers, irrigation, and other surface water away from your drainfield to avoid oversaturating it.

### Conserve Water

Spread out your loads of laundry and do your best to conserve water whenever possible. Less is more!

### Pay Attention to Signs of Failure

Don't ignore the signs of septic failure, including:

- Surfacing sewage
- Strong sewage odor
- Soggy or unusually lush drainfield
- Sewage backing up into your home

## WHY IT MATTERS

### Human Health

A healthy, functioning system is safe for everyone! However, a failing septic system can lead to sewage backing up into your house or surfacing in your yard. When untreated wastewater is present, it can contaminate your yard, well, and nearby bodies of water, and pose a health risk to you, your family, your neighbors, and pets.

### Financial Health

Major septic system repairs and replacements are expensive and can cost \$30,000 or more. The cost of maintenance is fairly minimal compared to the major cost of repairs. Avoid major expenses by taking care of your system and any smaller repairs before they turn into something bigger.

### Environmental Health

Harmful pathogens can impact people and animals near and far from your home. Failing systems can lead to...

- Sewage seeping into wells near your property
- Unsafe drinking water
- High bacteria levels in nearby water bodies and closed beaches, lakes, and rivers
- Contaminated shellfish beds

**Protect your health and the health of our community  
by maintaining your septic system.**

# YOUR SEPTIC SYSTEM RECORDS

## HOW DO I KNOW WHAT TYPE OF SYSTEM I HAVE?

Even though all septic systems process wastewater from your home, there can be a lot of differences between your system and your neighbor's. All septic systems have a septic tank and a drainfield. However there are many different types of drainfields, and other components may be added to the process depending on what your system needs in order to fully treat wastewater on your property. So how do you know what type of system you have? You'll want to take a look at your septic system records.

### Finding Your Records

You can find your septic system records by looking in the Health Department's database called OnlineRME. Our [septic records webpage](#) has a video tutorial that will walk you through how to search for your records. If a new system was installed, the records for both the new and old system should be viewable. Below are some of the records that you may see listed for your property in OnlineRME.

Record Type	What Can It Tell Me?
As-Built	An as-built is a drawing that shows where your septic system is located on your property. It will also have information about the type and size of drainfield, size of tank, and reserve area (where a new drainfield would be installed if your current one fails). Older as-builts are typically less detailed than new as-builts which are required to show more detail.
Application	Applications are submitted to the health department by septic system designers. This document shows the type of system that was approved for your property.
Service History Reports	Every time your septic system is pumped or inspected, septic contractors must upload a report to OnlineRME. You can view these reports anytime and sign up to receive an email notification when new reports are uploaded for your property.

### What If I Don't See Any Records?

If you don't see any records for your septic system in OnlineRME, it may have been installed before records were required. If this is the case, you can submit a records request with the Health Department to see if there are additional records available for your property. If there are still no records for your system, you can hire a septic designer to help figure out where your system is located and what type it is. They will then submit a new as-built record to the Health Department for your property.

# DIFFERENT TYPES OF DRAINFIELDS

## HOW DOES MY DRAINFIELD WORK?

After wastewater travels through the septic tank and any pre-treatment units your system may have, it goes to the drainfield. The soil takes care of final treatment and plays a very important part in making sure your wastewater is fully treated before returning to ground water or bodies of water. Some factors that determine the type of system and drainfield you have are the type of soil on your property, how deep it goes, how much wastewater will need to be treated, & how close the drainfield will be to a body of water or well.

Type of Drainfield	How Does It Work?
Gravity	Wastewater flows through a distribution box ("d-box") which evenly distributes the wastewater to each drain pipe called laterals. The laterals have many small holes, and the wastewater is released through these holes without any pressure.
Low Pressure Distribution (LPD)	Wastewater is released with pressure into the drainfield, and then it goes out through holes in smaller diameter pipes. If you uncovered this type of system, you would see the water squirt out of the holes. LPD systems always have a pump tank which sends wastewater out to the drainfield in doses.
Subsurface Drip (SSD)	A subsurface drip drainfield is like having an irrigation hose in a garden (except it's underground of course). The wastewater is released from the drip tubing by emitters that push out very small amounts of water. SSD systems always have a pump tank which sends wastewater out to the drainfield in doses.
OSCAR	An OSCAR drainfield is a specific type of drainfield very similar to a subsurface drip drainfield, however it uses sets of coiled drip tubing that are installed in a special sand fill. OSCAR systems always have a pump tank to send wastewater out to the drainfield in doses.
Mound	Just what it sounds like! You'll see a big lump in your yard if you have a mound system. The drainfield is built upon special sand that is put on top of native soil. Mound systems always have a pump tank that sends wastewater out to the drainfield in doses.

There are some other types of drainfields, however the ones above are typically the most common in our county. For more detailed information about how drainfields work, take our [Septic Care Workshop!](#) The Washington State Department of Health also has detailed information describing [different types of systems](#).

# SEPTIC SYSTEM INSPECTION SCHEDULES

Inspections are important to catch issues early! As an owner of a septic system, you are required by Washington State to maintain it. This includes having regular inspections. The type of system you have determines how often it must be routinely inspected. Additionally, some types of systems have other requirements and recommendations during their first couple of years.

Gravity Systems	All Other System Types
Inspections required once every three years.	Inspections required annually.

Newly Installed Systems: Additional Requirements & Recommendations	
<ul style="list-style-type: none"> <li>Gravity system that includes a pump</li> <li>Low Pressure Distribution (LPD)</li> </ul>	An inspection is also recommended 6 months after the system is in use.
<ul style="list-style-type: none"> <li>Low Pressure Distribution (LPD) with an Aerobic Treatment Unit (ATU)</li> <li>Subsurface Drip (SSD) with an Aerobic Treatment Unit (ATU)</li> <li>OSCAR</li> </ul>	Inspections are also <b>required</b> every 6 months over a 2-year period once the system is in use.
<ul style="list-style-type: none"> <li>Subsurface Drip</li> <li>Mound</li> <li>Sand Filter</li> </ul>	An inspection is also <b>required</b> 6 months after the system is in use.

## Manufacturer recommendations

For subsurface drip systems, OSCARs, and any system that includes an aerobic treatment unit, the manufacturer may recommend more frequent inspections. For more info, reach out to the manufacturer or visit Washington State Department of Health for a List of Registered On-site Treatment & Distribution Products ([doh.wa.gov/community-and-environment/wastewater-management/forms-publications](https://doh.wa.gov/community-and-environment/wastewater-management/forms-publications)).

## Who can inspect my system?

Find a list of certified septic professionals on our website at [www.snohd.org/687/Find-a-Septic-Contractor](http://www.snohd.org/687/Find-a-Septic-Contractor). Monitoring & maintenance specialists can inspect almost all system types (some systems require specialized training - check with your service provider). Pumpers can only inspect conventional gravity systems.

# SEPTIC SYSTEM DOS & DON'TS



## DO:



Have your system inspected regularly

Pump your system when recommended

Install risers for easy access to your tanks

Ensure your tank lids are secure

Learn where your system is located

Walk your drainfield often to spot signs of failure

Check your system for cracks, leaks, and damage

Direct sprinklers and drains away from your drainfield

Conserve water when possible

Fix any leaky fixtures

Only put water, human waste, toilet paper, & soap down drains

Use concentrated liquid detergents instead of powders

Use dryer sheets instead of liquid fabric softeners

Spread out loads of laundry and dishes

Use sink strainers to keep food from going down the drain



## DON'T:



Ignore sewage surfacing outside

Ignore sewage backing up into your house

Do all of your laundry and dishes in one day

Use the garbage disposal

Use excessive harsh chemicals and detergents

Flush medications, paint, and hazardous chemicals

Flush diapers, paper towels, wipes, & feminine hygiene products

Flush pet waste or litter

Use septic system additives

Use more soap and toilet paper than necessary

### Drainfield & Reserve Area Don'ts

Plant trees or vegetable gardens

Park cars or heavy equipment

Allow cattle to roam

Build structures or dig

Install a fire pit

# LANDSCAPING FOR SEPTIC SYSTEMS

## PROTECTING YOUR DRAINFIELD

The drainfield is a critical component of your septic system. If your drainfield gets damaged, it won't be able to treat wastewater from your home like it should, and that's why it's important to protect it. Keep your drainfield in good shape with these landscaping dos and don'ts:

### Drainfield Dos

- Learn where your system is located
- Only plant grass or recommended plants
- Walk your drainfield to check for issues
- Direct sources of water away from the drainfield
- Use barriers or markers to prevent unwanted traffic
- Only use landscape fabric that's breathable
- Keep heavy equipment and livestock off
- If you build a fence around your drainfield, make sure it allows light to pass through
- Keep the shape and slope of the surface
- Protect septic system lids while mowing

### Drainfield Don'ts

- Build a patio, shed, driveway, etc. on top
- Pull out tree stumps, rototill or dig (cut trees at ground level or grind instead)
- Plant a vegetable garden
- Plant trees or shrubs within 30 feet, and 50 feet for water-loving trees like willows, maples, etc. Essentially the further, the better!
- Put a rockery on top or nearby
- Terrace within 50 feet on sloping sites
- Install a pond or sprinkler system in or nearby
- Put a firepit on top

### Can I Just Leave My Drainfield Blank?

Sand, bark, wood chips, gravel, or plain dirt over your drainfield may sound easy, but these materials keep oxygen from getting into the ground, and bare soil can start to wash away. Plants help with oxygen exchange, keep soil healthy, and hold dirt in place so your drainfield can do its job.

### What About Near My Septic Tank or Pump Tank?

**Risers** | If you don't already have risers, installing them is a great idea. They allow for easy access to tanks during routine inspections and pumping. Protect septic lids when mowing, but do not cover them with heavy or permanent objects.

**Plants and Ground Covers** | Things like bark, wood chips, and gravel are okay here. Wastewater is not treated in the soil next to tanks so there isn't a need for plants. All the other advice still applies though. Don't put anything heavy over this area. If you do plant something, stick to shallow-rooted plants to avoid damage to tanks and pipes.

### What About Those Other Lids in My Yard?

Some septic systems have lids out in the drainfield. These are access ports that allow for easy inspection of the drainfield. Make sure that your landscaping doesn't bury or hide them, and protect them when mowing.

### What About My Reserve Area?

Protect this the same way as your drainfield. If you do things to damage the soil in your reserve area, it may not be useable in the future for a replacement drainfield if your current one fails.

# LANDSCAPING FOR SEPTIC SYSTEMS

## KNOW WHERE YOUR SYSTEM IS LOCATED

One of the most important things to know is where your septic system is located. It helps you know what to avoid when landscaping or doing other projects. If you don't know where your system is, you can find out using OnlineRME. Visit [Snohd.org/159/As-Built-Records](http://Snohd.org/159/As-Built-Records) to find your records. Don't see them there? Your system might be too old or installed before records were required. If this is the case, you can hire a septic professional to help figure out where your system is or submit a records request with the Health Department to see if there are additional records available for your property.

## PLANTING TIPS

**Grass is the #1 choice!** Why? Because it provides year-round coverage, has shallow roots, and allows oxygen and water to move easily through the soil. If you choose plants other than grass over your drainfield, keep these traits in mind:

**Shallow Rooted** | Roots can clog holes, break pipes, and cause lots of damage. Some systems can be buried as shallow as 6 inches underground, so it's important to pick plants that have shallow roots.

**Year-Round Coverage** | Year-round coverage will prevent runoff of the topsoil above your drainfield, and it will keep the microbes in the soil happy by making sure oxygen gets into the ground all year long.

**Drought Resistance** | Drought-resistant plants can be good for your drainfield because they need little water. However, some drought-tolerant plants can handle dry spells because of long, wide-spread roots that reach way down where water is present (which would be your drainlines!) and could cause damage. If a plant is drought resistant, make sure it still has shallow roots.

**Native Plants** | Native plants are accustomed to our climate and require less maintenance. They'll need less watering which will save your drainfield the added stress from extra water. If your drainfield is in an area where grass doesn't grow well, you can also stick with the native vegetation so long as there's nothing with deep roots.

**NOTE:** Some drainfields are buried a few feet underground, while others are as shallow as 6 inches. If you have a shallow drainfield, not all of the plants listed at right may be suitable. Try to find how deep your drain lines were installed by checking your septic records. Always consult with a nursery professional before choosing plants other than grass to make sure it has shallow enough roots to avoid damage.

*For more suggestions on plant types, contact a nursery professional.*

### Grasses for Sun

- Turf grasses
- Fescue

### Ground Covers for Sun

- Bugleweed
- Carpet heathers
- Kinnikinnick
- Cotoneaster
- Thyme
- Stonecrop
- Soapwort

### Plants for Shade

- Bishop's hat
- Bunchberry
- Shallow-rooted ferns
- Mosses
- Salal
- Sweet woodruff
- Wild ginger
- Wintergreen
- Japanese spurge

### Wildflower Meadows

This is a common suggestion for drainfields but if you do this, make sure your wildflower mix:

- Is a Washington/Northwest mix
- Specifies no noxious weeds
- Has annual & perennial seeds
- Doesn't have plants that require extra water or have long roots

# SIGNS OF SEPTIC SYSTEM DAMAGE & FAILURE



**Roots infiltrating the tank or drainfield**



**Too much waste in the tank**



**Sewage backing up into the house**



**Strong sewage odor**



**Slow-draining fixtures**



**Cracks, leaks, or clogs**



**Sewage surfacing near your tank**



**Soggy or unusually lush vegetation over drainfield**



**Sewage surfacing over the drainfield**

**If you notice any of these signs, contact a septic professional to have them inspect your system and determine the next steps.**

# HOW TO FIND A SEPTIC CONTRACTOR

## WHO TO HIRE?

Septic contractors can provide certain services based on their certification. Some contractors are certified in more than one area.

### Monitoring & Maintenance Specialists can:

- Inspect any system\*
- Perform minor repairs on any system\*

### Pumpers can:

- Pump out tanks when needed
- Inspect conventional gravity systems only
- Perform minor repairs on gravity & pump-to-gravity systems only

### Installers can:

- Install new systems and make alterations\*
- Perform major or minor repairs on any system\*

### Designers can:

- Design new systems, alterations, or repairs
- Designate a reserve area if one doesn't exist

*\*If the system or component is a proprietary product, the contractor must also be authorized by the manufacturer to inspect, install, or repair the product.*

## DO I NEED A PERMIT?

Depending on the work being done, a permit from the Health Department may or may not be needed. If you are not sure if you need a permit, please contact the Health Department.

### Maintenance - No Permit Required

- System inspection
- System pumping
- Riser installation

### Minor Repairs - No Permit Required

- System controls repair
- System pump repair
- Baffle installation/repair
- Effluent filter installation/repair
- Minor tank repair

### Major Repairs - Permit Required

- Tank replacement
- Drainfield replacement
- System replacement
- Drainfield alteration

## TIPS FOR HIRING CONTRACTORS

**Certification** | Any septic professional you hire must be certified. Snohomish County Health Department certifies pumpers, installers, and monitoring & maintenance specialists. Designers are licensed by the Washington State Department of Health. For a list of septic providers, visit [snohd.org](http://snohd.org).

**Ask Questions** | When you contact a contractor it's important to ask questions. Visit the [Washington State Department of Health](http://Washington State Department of Health) for a list of [questions](#) you can ask to get a better idea of cost and services.

**Ask Around** | It's a good idea to contact at least three certified providers to find the one that best suits your needs. It's also recommended that you locate your septic tank before calling a provider.

**Reporting** | Anyone inspecting or pumping a septic system is required to upload reports to a database called OnlineRME. Get records and reports for your property by visiting [OnlineRME](#) through the Health Department website.

# QUESTIONS TO ASK A SEPTIC CONTRACTOR

We recommend contacting at least three certified providers for regular maintenance and pumping when needed. When you contact a contractor, it's important to ask questions. Below is a list of questions to help you find the provider that best suits your needs. We suggest you locate your septic tank before calling the provider. For a list of certified professionals, visit [snohd.org](http://snohd.org).

Questions to Ask	Notes	
Do you conduct inspections of (insert your system type)?	Yes	No
What is included in an inspection?		
What is the cost of an inspection?	\$	
Does this cost include...		
Digging out septic lids?	Yes No	Extra \$ _____
Cleaning the baffle filter (if present)?	Yes No	Extra \$ _____
Dumping fees?	Yes No	Extra \$ _____
Report submittal fee?	Yes No	Extra \$ _____
Pump out of the tank?	Yes No	Extra \$ _____
If the tank has not been maintained or pumped on a routine basis is there an extra charge?*	Yes No	Extra \$ _____
Can you pump from long distances or along slopes? Is there an extra charge?***	Yes No	Extra \$ _____

\*Providers may charge for the extra water and time required to pump a tank that has been neglected.

\*\*\*If your septic tank is located far from where the pumper's truck can access the tank, or if you require pumping up a steep slope, provide the distance and/or elevation between the septic tank and the location where the pumper's truck can obtain access. The pumper will determine if the truck can provide this type of service and estimate an additional charge, if appropriate.

# WHAT IS SAVVY SEPTIC?



The Savvy Septic Program is your one-stop-shop for financing options, incentives, resources, and education to help you maintain a healthy septic system. Rebates, grants, and free homeowner workshops on septic maintenance are available to help keep your system working properly.

 [SavvySeptic.org](http://SavvySeptic.org)

 [savvy.septic@snoco.org](mailto:savvy.septic@snoco.org)

 425-388-3636

## REBATES

Take our free, online septic care workshop and earn up to \$500 in rebates for completing septic maintenance activities! Regular maintenance is important to keep your system healthy.

**Learn more & apply at [SavvySeptic.org](http://SavvySeptic.org).**

### Eligibility for Rebates

- Must have completed our free, online workshop
- Must be the owner of the property
- Property must be located in Snohomish County
- Work must be completed by a certified provider
- Work must have been done in the last 12 months

Rebate	Amount
Inspection	\$100
Pumping	\$100
Risers	\$50 per riser, up to 2 risers
Minor Repairs	Up to \$200

## GRANTS

If your system is failing and needs a major repair, replacement, or connection to sewer, grants up to \$30,000 are available to low-income homeowners. Review the eligibility requirements carefully before applying. **Learn more & apply at [SavvySeptic.org](http://SavvySeptic.org).**

### Eligibility for Grants

- Must have a household income at or below 50% of the county median area income
- Must be the owner of the property
- Property must be located in Snohomish County
- System must be determined to be failing by the Health Department or a certified contractor

### Additional Financial Assistance

If you are not eligible for a Savvy Septic grant but still need assistance, you may be eligible for a low-interest loan through Craft3 or USDA Rural Development. Visit [www.snohd.org/719/Loans](http://www.snohd.org/719/Loans) to learn more about these other assistance options.

## SEPTIC CARE WORKSHOP

The Septic Care Workshop is a free, online course that can be taken anytime. This workshop will help you understand and protect your system, avoid expensive repairs, learn when to contact a septic professional, and learn about financial assistance options for septic maintenance and repairs. This workshop only needs to be taken once and then you are all set to apply for rebates! **Visit [SavvySeptic.org](http://SavvySeptic.org) to take the workshop.**

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