United States Environmental Protection Agency

www.epa.gov/septicsmart

Do Your Part – Be SepticSmart!

Geauga County Public Library

Geauga Soil and Water Conservation District

GEAUGA PUBLIC HEALTH SM

Promoting and Protecting Community Health

THE BASICS

What is a Septic System?

Common in rural areas without centralized sewer systems, septic systems are underground wastewater treatment structures that use a combination of nature and time-tested technology to treat wastewater from household plumbing produced by bathrooms, kitchen drains, dishwasher and laundry.

It is the end point of your home's plumbing system like your furnace is for your heat and AC!

Do You Have a Septic System?

You may already know you have a septic system. If you don't know, here are some signs that you probably do have a septic:

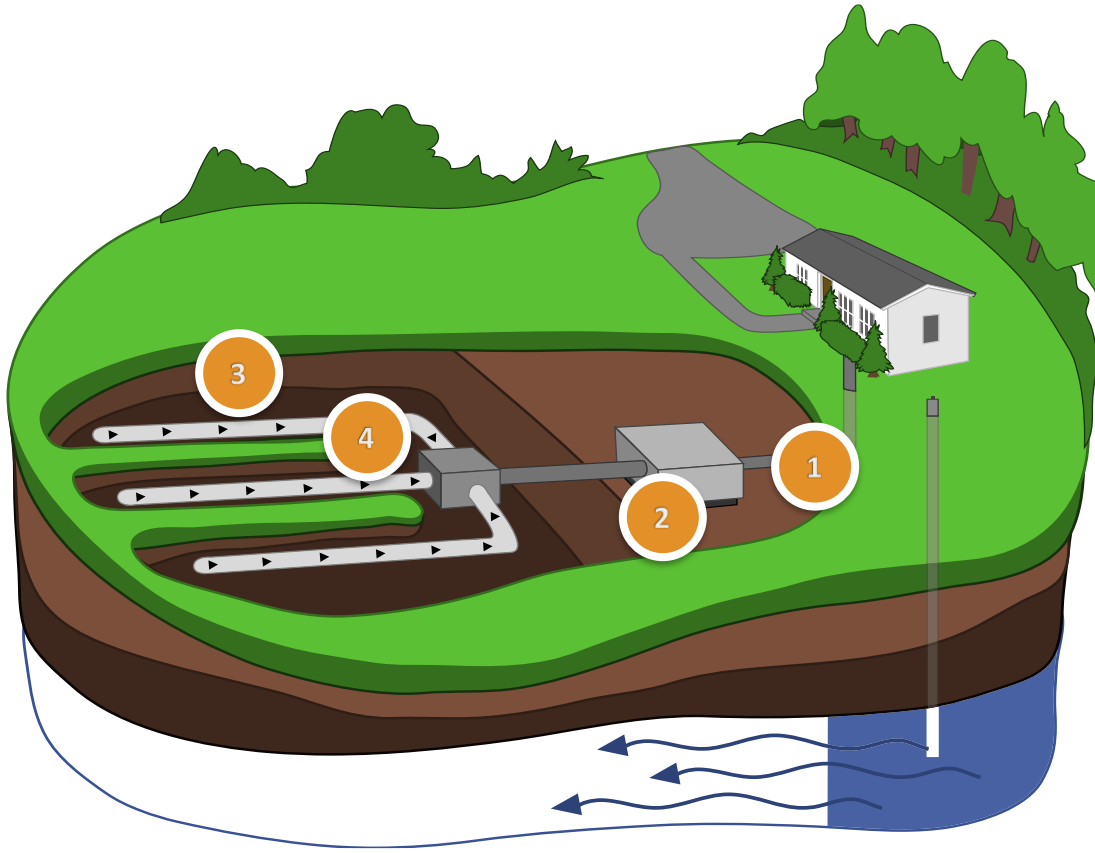
- You use well water (not a 100% guarantee for having septic).
- You do not receive a sewer bill.
- The water line coming into your home doesn't have a meter.
- You show a "$0.00 Sewer Amount Charged" on your water bill.
- Your neighbors have a septic system.

If you have a septic it is YOUR responsibility to maintain it!

How does a septic system work?

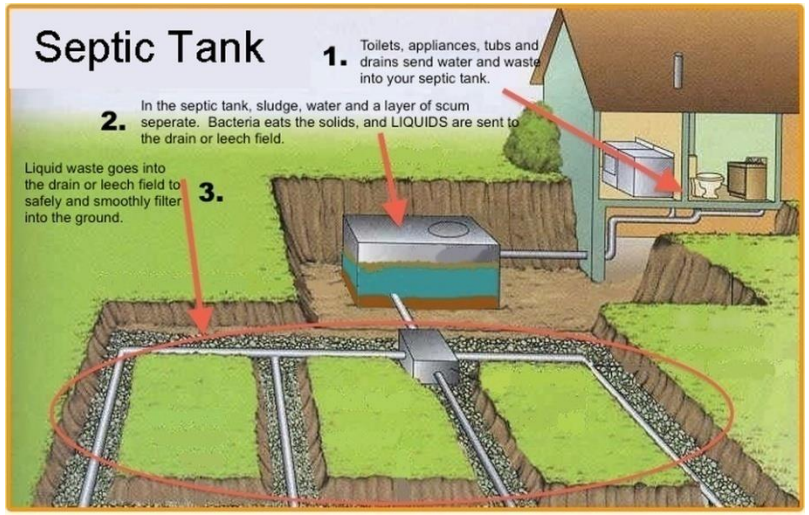
This is a simplified overview of how a septic system works.

1. All wastewater runs out of your house through **drainage pipe(s)** into a septic tank.
2. The **septic tank** is a buried, water-tight container usually made of concrete, fiberglass or polyethylene. Its job is to hold the wastewater long enough to allow solids to settle down to the bottom (forming *sludge*), while the oil and grease floats to the top (as *scum*). Compartments and a T-shaped outlet prevent the sludge and scum from leaving the tank and traveling into the drainfield area.
3. The liquid wastewater then exits the tank into the **drainfield**. If the drainfield is overloaded with too much liquid, it will flood, causing sewage to flow to the ground surface or create backups in toilets and sinks.
4. Finally, the wastewater percolates into the **soil**, naturally removing harmful bacteria, viruses, and nutrients.

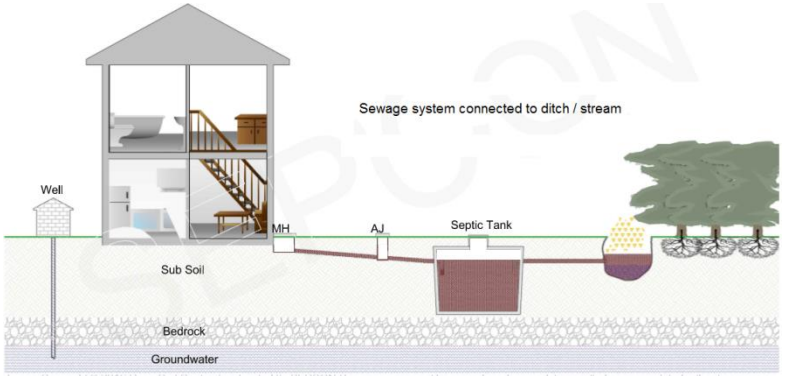


Groundwater = source of your well water

Basic Type of Systems



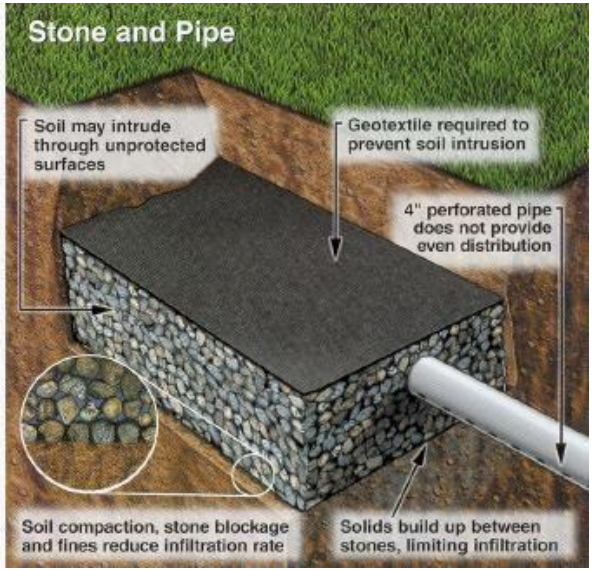
On Site Soil Absorption System



Treatment & Discharge Off Site System

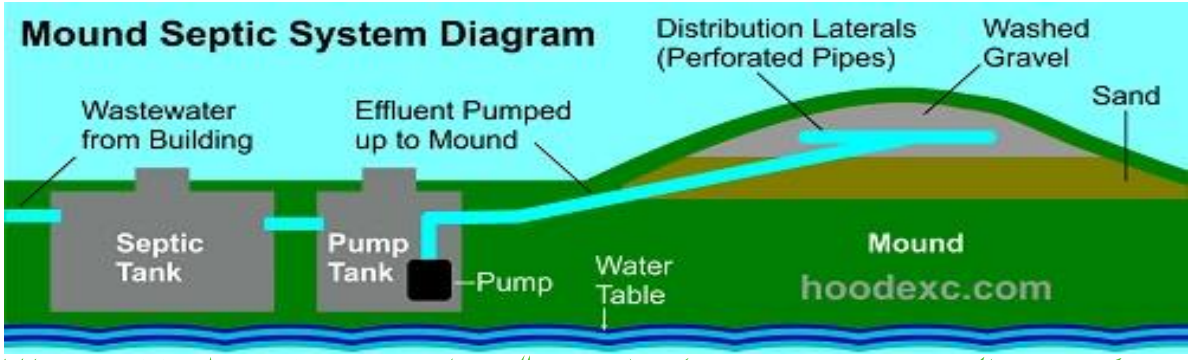
Trench

- Type of on-lot sewage treatment system
- Most common type of septic system that has been installed in Geauga County
- Can be installed in any type of soil, but under new Ohio Administrative Code Regulations, must maintain a VSD of 6” away from the perched seasonal water table*
- *there are exceptions to every rule.



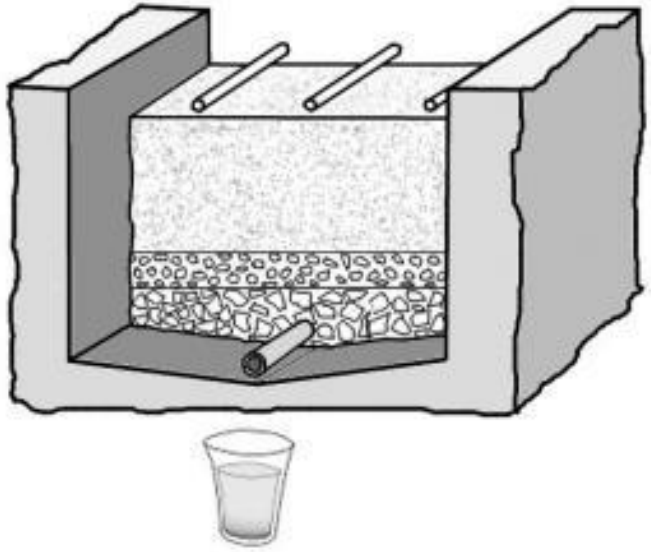
Pressurized Sand Mounds

- A type of on-lot septic system
- Usually installed in severe soils that have a dense clay content
- Mounds raises where septic effluent is introduced into sand, to filter the septic effluent before it passes into the existing grade



Sand or Gravel Filter Bed

- A type of off lot septic system
- Septic effluent will filter through a subsurface filter bed that either contains various layers of gravel or sand
- Once the effluent is filtered through the media, the effluent will discharge into a free flowing stream, road ditch, storm water culvert, etc.
- This type of system is no longer approved to be installed for discharging system.



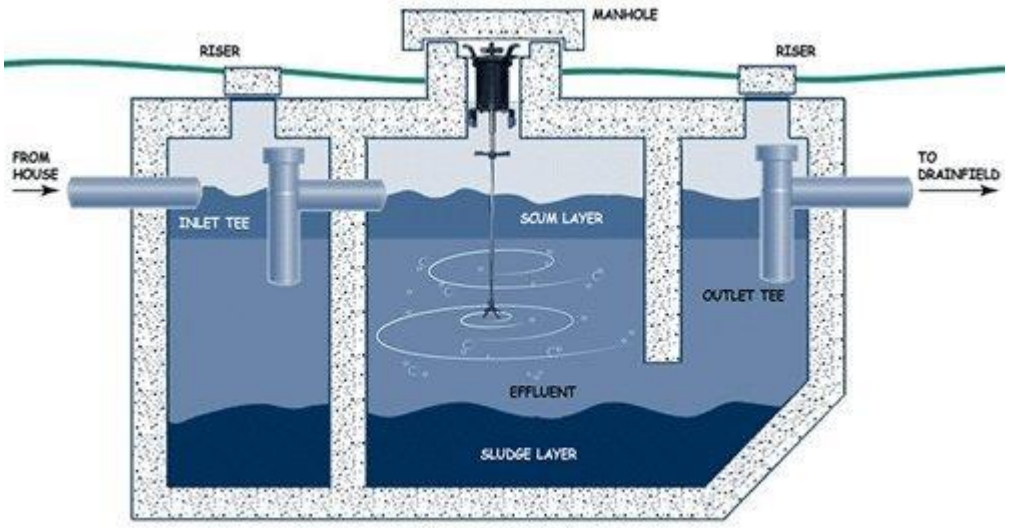
NSF Class 1 Aeration Unit w/ Surface Filters

- Typically aeration unit followed by dual alternating surface sandfilters.

- Disinfection process of either chlorination tablets, contact tank, neutralizing tablets or UV Light.

NPDES

- A type of off-lot septic system
- Currently is the only type of off-lot septic system that can be permitted
- Older style off lot septic systems were not filtering the effluent effectively, which has been polluting water ways with harmful bacteria, solids, and depleting the oxygen from the waterways
- The Clean Water Act- each individual system is not supposed to hurt water quality or people's health



Unit Installation Diagram

WHY MAINTAIN?

- Saves you $

  - A few hundred dollars every 3-5 years for maintenance or ranging ~$8k - ~25k to replace.

- Protects your property value

  - Homes with failing septics could be more difficult to sell.

- Protects your and your neighbors' well water

  - A failing septic can contaminate well water; test your well water quality (*untreated to your tap*)

- Protects your and your neighbors' health

  - A failing septic can bring wastewater above the surface, creating a health hazard for you, your neighbors and animals.

PROPER CARE
Inspection & Pumping

Inspection - Alternative systems with electrical float switches, pumps, or mechanical components need to be inspected more often, generally once a year.

Pumping and Servicing your System - Five major factors influence the frequency of septic pumping:

1. *Household size*
2. *Total wastewater generated*
3. *Volume of solids in wastewater*
4. *Septic tank size*
5. *What is being flushed or put down the drain*

Household septic tanks are typically pumped every three to five years.

Call a qualified professional and/or follow your state/ local health department's recommendations.

Do's and Don'ts…

Play

Don't Strain Your Drain!

Use water efficiently and stagger use of water-based appliances (such as a washing machine) to avoid a back up of your septic system into your house. Learn more at www.epa.gov/septic.

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Play

Don't Overload the Commode!

A toilet is not a trashcan. Disposable diapers and wipes, feminine hygiene products, cigarette butts, cat litter and much more can damage your septic system. Learn more at www.epa.gov/septic.

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Be SepticSmart!

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Shield Your Field!
septicsmart
www.epa.gov/septic
Drain Field
Please
Stay Off
Tree and shrub roots, cars, and livestock can damage your drainfield. Learn more at www.epa.gov/septic.
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Protect It and Inspect It!
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www.epa.gov/septic
Regular septic system maintenance can save homeowners thousands of dollars and protect public health. Learn more at www.epa.gov/septic.
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Pump Your Tank!
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www.epa.gov/septic
Ensure your septic tank is pumped at regular intervals as recommended by a professional and/or local permitting authority. Learn more at www.epa.gov/septic.
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Keep it Clean!
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www.epa.gov/septic
If you have a well, many things can contaminate your drinking water, such as a failing septic system. Test your well water regularly! Learn more at www.epa.gov/septic.
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WHAT TO PLANT OVERTOP OF YOUR SEPTIC SYSTEM

Failure Symptoms – Mind the Signs!

A foul odor isn't always the first sign of a malfunctioning septic system.

Call a qualified professional if you notice any of the following:

- Wastewater backing up into household drains.
- Bright green, spongy grass on the drainfield, even during dry weather.
- Pooling water or muddy soil around your septic system or in your basement.
- A strong odor around the septic tank and drainfield.

One call to a qualified professional could save you thousands of dollars!

Contact your local or state health department for more information.

SepticSmart Resources

Environmental Protection Agency

epa.gov/septic/septicsmart-week#ssw2023

Toolkit Materials

epa.gov/septic/septic-systems-outreach-toolkit

- *Homeowners' Guide*
- *Do's and Don'ts (for conventional and advanced systems)*
- *Proper Landscaping*
- *Top 10 List*
- *Suggested Activities for Homeowners*

Geauga Public Health

http://gphohio.org/Environmental-Health/Sewage

Ohio Department of Health

https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/sewage-treatment-systems/INFORMATION-FOR-HOMEOWNERS/

Annual SepticSmart Week

Third week of September each year

SepticSmart Week is nationally recognized & showcases the importance of proper care and maintenance of our home sewage treatment systems.

MARK YOUR CALENDARS
and make this your annual time of year to **GET PUMPED!!**

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Questions?

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