



Please note: Septic systems vary. Diagram is not to scale.

"Conventional Septic Systems," *Types of Septic Systems*, August 7, 2023, <https://www.epa.gov/septic/types-septic-systems>

How your Septic System Works

The water from your sinks, toilets, showers, and baths join into one pipe that connects to your septic tank. The septic tank holds wastewater and separates the waste. Solid waste settles to the bottom of the tank. Any oil that enters the tank will float to the top.

Liquid wastewater leaves the tank and goes into the drain field. In the drain field, the wastewater is treated by percolating through the soil. The soil acts as a natural filter which removes the bacteria, viruses, phosphorus, nitrogen, etc. from the water. This process is similar to how we filter water in municipality wastewater treatment plants and smaller water filtration systems.

The treated wastewater re-enters the groundwater after flowing through the soil. The groundwater is picked up by your well to use as drinking water for your home and enters nearby bodies of water such as streams, rivers, and lakes.

Help and Resources

If you believe your septic system is failing, contact the Mid-Michigan District Health Department for assistance.

Clinton | **Montcalm** | **Gratiot**
 989-224-2195 | 989-831-5237 | 989-875-3681
www.mmdhd.org/contact



Local Septic Companies

Scan the QR code to view Registered Sewage System Installers in Clinton, Gratiot, and Montcalm Counties.



www.mmdhd.org/wp-content/uploads/2023/11/2022-24-Reg-Installers-CITY-11.14.23.pdf

Financial Assistance

Organizations you can contact for financial assistance:

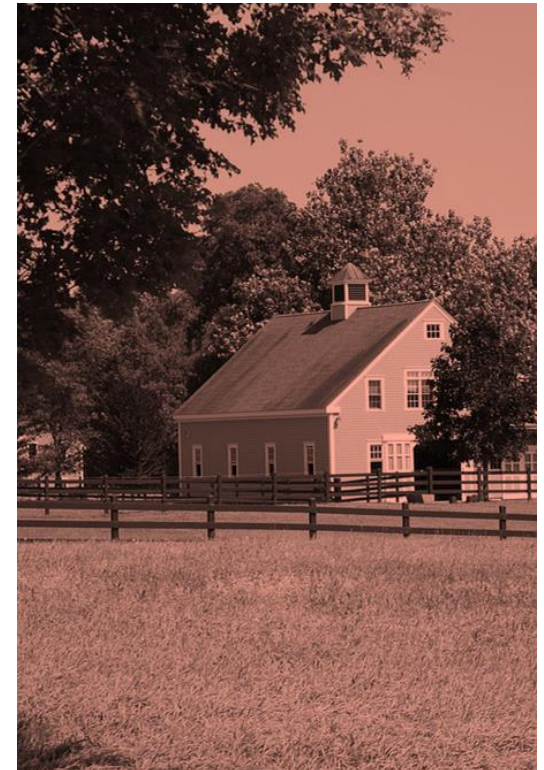
MI State Housing Development (MSHDA)
(517) 335-9885

Habitat for Humanity - Michigan
(517) 485-1006

USDA Rural Development - State of Michigan
Office | (517) 324-5210

EightCAP, INC | (866) 754-9315 |
<https://8cap.org/community-service/>

Links to these organizations are also available online at healthypineriver.org



Safe Septic Practices

Homeowner's Guide to conventional septic system maintenance and Central Michigan septic resources.

How to Maintain Septic Systems

Regular Inspections

Have your septic system inspected every 3-5 years by a professional. The inspector will check for leaks and sludge layers. They will tell you when your septic tank needs to be pumped.

Avoiding Hazards

Parking and driving over the septic tank can cause the tank to collapse. Parking and driving over the drain field compacts the soil, restricting the filtering process.

Do not plant trees near the septic system to avoid roots in the system.

Keep other drainage systems away from the drain field such as sump pumps or roof drains.

Do not flush anything other than water, waste, and septic-safe toilet paper.



Controlling Water Usage

Too much water in the drain field slows/stops the wastewater treatment process.

Be aware of leaking faucets and running toilets. A leaking faucet that drips once every 5 seconds will cause 1.7 gallons of excess water to enter your septic system over the course of one day. A toilet running for one day can add up to 2,800 gallons of excess water entering your septic system.

Causes and Warnings of a Failing Septic System

Common causes of septic system failure are physical damage to the system, lack of maintenance, and generating more wastewater than your system was designed to handle.

The most common signs of a failing septic system are:

- Sinks, showers, and bathtubs drain slowly.
- Sinks and toilets back up with wastewater.
- Drains and pipes make a gurgling sound.
- There is standing water near the septic tank or drain field.
- The grass over your drain field or septic system is growing faster, lusher, and greener than other sections of your yard.
- You smell sewage around the septic tank or drain field.
- High levels of nitrates and coliform bacteria appear after testing your well-water.
- You notice algae blooms in bodies of water around your property.
- You can see a pipe discharging untreated wastewater on your property.

Additional Information

For more information about Safe Septic Practices, visit www.epa.gov/septic.

The information provided was prepared and distributed by Healthy Pine River, a not-for-profit organization dedicated to improving the conditions of the Pine River. For sources and additional information visit healthypineriver.org

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Why Maintain Septic Systems?

Financial Reasons

It costs less to maintain a septic system than it does to repair or replace a broken septic system. Cost of maintenance is \$250-\$500 every 3 to 5 years, while septic repairs can cost \$5,000-\$15,000+.

A septic system in need of repair or replacement lowers your property value.

Selling a home with undisclosed septic issues is a legal liability.

Health and Safety

Contaminated groundwater from faulty septic systems can find its way into your well. This contaminated wastewater contains bacteria, viruses, and pharmaceuticals.

A well contaminated by untreated wastewater poses health hazards to your household.

Contamination isn't restricted to your property line; untreated wastewater can also infiltrate the wells of your neighbors and leach into nearby bodies of water.

Environmental Considerations

Faulty septic systems are one of the largest contributing factors to algae blooms in the Pine River (and other rivers, lakes, ponds, and streams). Excess nutrients from untreated septic wastewater leads to a process called eutrophication: excess plant and algae growth reducing oxygen levels for fish and other animals to dangerous levels. Approx. 40-100% of water for rivers, lakes, ponds, etc. comes from groundwater (dependent on drought conditions). This is why contaminated groundwater from septic sources makes such a substantial impact on the health of our waterbodies.