

Our Water

Keeping it Clean

North Dakota Department of Environmental Quality

On-site Wastewater Treatment Systems

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Public health benefits: Proper installation and use of septic systems reduce the risk of disease transmission and human exposure to pathogens (such as *E. coli*) that are found in wastewater.

Environmental benefits: Septic systems remove pollutants from surface water as well as recharging and replenishing groundwater.

Economic benefits: Onsite treatment systems reduce large infrastructure costs to collect and treat wastewater.

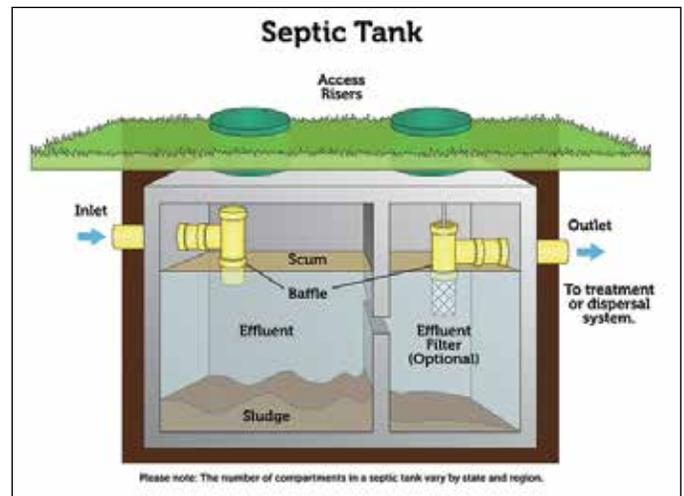
On-site wastewater treatment systems, commonly referred to as septic systems, are used by one in five American households to treat their wastewater (US EPA). These systems are designed to treat small amounts of wastewater in locations not served by a public sewer system.

Septic systems are wastewater treatment structures that use a combination of natural and technological processes to treat wastewater produced in households. In a typical septic system, water and waste material exit the house through a pipe into a septic tank. In the tank, scum (oil and grease) floats to the top of the tank, solid material (sludge) settles to the bottom, the liquid wastewater (effluent) is in the middle layer and exits the tank to the drainfield. The pretreated wastewater is discharged into the drainfield, an area with porous surfaces in an excavated area of unsaturated soil. The water percolates through the soil, naturally removing bacteria, viruses and nutrients before it reaches groundwater.

There are a variety of on-site wastewater treatment systems (a conventional tank and system are shown on this page). If systems are properly installed and maintained, they can have many benefits, including:

Septic System Maintenance Tips

- Inspect regularly (every 3 years) and pump on schedule (every 3-5 years for typical household system)
- Keep records of the tank and drainfield locations, and pumping, inspection and maintenance.
- Do not pour or flush: diapers, wipes (even “flushable” ones), sanitary products, grease, chemicals (paint, pesticides, strong disinfectants).
- Protect the drainfield by not parking or driving on it, avoid planting trees or deep-rooted plants nearby.
- Use only licensed septic pumpers and installers; confirm they follow requirements for disposal and reporting.



Above: A typical septic tank. Image courtesy of US EPA.
Below: A conventional onsite wastewater treatment system, including a septic tank and gravel drainfield. Image courtesy of US EPA.



In North Dakota, both on-site treatment system installers and septic pumpers (the companies that remove built-up sludge and scum from septic tanks) are required to have a license or permit from the North Dakota Department of Environmental Quality (NDDEQ) to operate.

The septic pumpers permit is a requirement for anyone in the business of pumping septic systems in North Dakota. The permit consists of both educational and reporting components. The educational component requires everyone at the company to complete an annual exam, covering regulations, safety and reporting requirements. Additionally, one representative of the company is required to attend an in-person training every five years. The reporting component consists of an annual report submitted to NDDEQ, documenting land application sites of septic waste and other requirements. Septic waste can be taken to a wastewater treatment facility or applied to the land as fertilizer. If it is land applied, there are requirements to treat the waste for pathogens and vectors, and setback requirements from roads, waterbodies, or buildings. Septic pumpers may be subject to inspection and review of land application sites.

The on-site wastewater treatment system installer program is new to NDDEQ, as of August 2025. Prior to that, installers were licensed through the local public health department. The installer license program at NDDEQ was created to have universal statewide code for installers to follow, as the requirements at the local level varied between public health units. NDDEQ is in the process of developing administrative rules for the program, detailing the training and licensing for installers, a permitting process and applicable building codes. Currently, installers are required to complete an application with the department and certain training courses are recommended for completion.

For an interactive, animated model of how septic systems work, visit this page, from the Guadalupe-Blanco River Authority in partnership with US EPA and the Texas Commission on Environment Quality. www.gbra.org/presentations/septic/index.html

Additional information about septic systems, maintenance and safety tips and more can be found at the US EPA's septic system website www.epa.gov/septic. Find additional education materials at the US EPA's SepticSmart website, www.epa.gov/septic/septicmart-education-materials.

For more information about the septic pumper and installer programs at NDDEQ, please call the NDDEQ

Division of Water Quality at 701-328-5210 or visit the following sites:

- https://deq.nd.gov/WQ/2_NDPDES_Permits/7_SepticSystems/Septic.aspx
- https://deq.nd.gov/WQ/2_NDPDES_Permits/6_SepticPumper/sp.aspx

Be Septic Safe

If your property is served by a septic system, it is time to inspect the covers of your septic tank.

Check to make sure that the lid is secure. The lid should cover the opening and be weighted or secured. Ensure there are no missing, broken, or rusted safety equipment. Inspect lids for damage, including weather exposure or being driven on. Replace any broken parts or lids immediately!

If you have questions, contact your septic pumper, or a qualified service provider for an inspection.

Mark the opening of your septic tank so it is not accidentally driven over and teach children to avoid the covers. A child playing around the opening can have deadly results.

Prevent a Needless Death

- Find & mark your septic lid
- Inspect your septic lid at least yearly
- Fix or replace broken or missing parts
- Ensure screws & locks are in place
- Keep lid secure with screws, locks, or weight (lid weighing more than 95 lbs).
- Install a secondary safety device

Find out more at:

<https://ndeha.org/wp/septic-tank-lid-safety>



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