

This is meant to be a basic overview of on-site septic systems for residential properties. Specific questions can be directed to Building Department staff.

There are two main parts to the basic septic system: the septic tank and the drainfield.

Household wastewater first flows into the septic tank where it should stay for at least a day. In the tank, heavy solids in the wastewater settle to the bottom forming a layer of sludge, and the grease and light solids float to the top forming a layer referred to as scum.

The sludge and scum remain in the tank where naturally occurring bacteria work to break them down. The bacteria cannot completely break down all of the sludge and scum, however, and that is why septic tanks need to be pumped or assessed regularly.

The separated wastewater in the middle layer of the tank is pushed out into the drainfield as more wastewater enters the septic tank from the house. If too much water is flushed into the tank in a short period of time, the wastewater flows out of the tank before it has had time to separate. This can happen on days when water use is unusually high, or more often if the septic tank is too small for the needs of the household. Homeowners should stagger their laundry throughout the week and try to do no more than two wash loads per day.

When wastewater leaves a septic tank too soon, solids can be carried with it to the drainfield. Drainfields provide additional treatment for the wastewater by allowing it to trickle from a series of perforated pipes, through a layer of gravel, and down through the soil. The soil acts as a natural filter and contains organisms that help treat the waste. Solids damage the drainfield by clogging the small holes in the drainfield pipes and excess water strains the system unnecessarily.

Conventional septic systems are a very simple way to treat household wastewater. They contain little, if any, moving parts and are easy to operate and maintain. Although homeowners must take a more active role in maintaining septic systems. Once they learn how the systems work, it is easy for them to appreciate the importance of a few sound operation and maintenance practices.

The State of Minnesota requires on-site septic systems to be evaluated or assessed at least every 3 years. Quite often this will require the pumping of the septic tank by a licensed company and a visual inspection of some of the critical components. This activity requires documentation through the city and needs to be completed by the person performing the work.

Please direct questions about your system to the City Building official or a licensed company to protect your investment and the water resources of your community.