

On-Lot Sewage System Maintenance

Many homes in West Bradford Township are served by an on-lot sewage system. While particular designs may vary, all systems require regular maintenance so to protect the environment and to avoid unnecessary expenses. The most effective maintenance activity for on-lot sewage systems is the regular pumping of the primary treatment (septic) tank. Pumping removes accumulated solids, prevents solids from traveling to the drainfield, and allows natural treatment processes to work as intended.

What is a Septic System?

Septic systems treat and dispose of domestic household sewage through natural processes. In its most basic form, a septic system possesses a treatment tank (i.e., septic tank) and a disposal area (i.e. drainfield). Both play important roles in cleaning wastewater for discharge in an environmentally-friendly manner.

The treatment tank is a large watertight box, usually made of concrete, with an inlet and outlet pipe. A septic tank is the most common type of treatment tank. Wastewater flows from the home to the treatment tank through the sewer pipe. The tank treats the wastewater naturally by holding it long enough for solids and liquids to separate. The wastewater forms three layers inside the tank. Solids lighter than water (such as fats, oils, and greases) float to the top forming a layer of scum. Solids heavier than water settle at the bottom of the tank, forming a layer of sludge. This leaves a middle layer of partially clarified wastewater. The layers of sludge and scum remain in the septic tank where bacteria found naturally in the wastewater continue to break the solids down. The sludge and scum that cannot be broken down are retained in the tank until the tank is pumped.

Tank baffles prevent accumulated solids from leaving the tank. Any solids that escape the tank can clog the drainfield, causing premature (and expensive) failure.

The layer of clarified liquid, also known as effluent, flows from the septic tank to the disposal area. A drainfield represents the most common variety of disposal area. It is in the drainfield that effluent from the septic tank trickles through the soil for final treatment and disposal.

How does regular tank pumping help?

The sludge and scum that cannot be broken down by biological activity are retained in the tank until it is pumped. It is very important to remove these solids before they build up and prevent the adequate storage of clarified wastewater. Once this point is reached, suspended solids will pass through the tank to the drainfield, and the wastewater will not stay in the tank long enough for bacterial activity to break down the solids. Both consequences result in greater risk for groundwater contamination and premature failure of the drainfield. Since

repairing or replacing a failing drainfield costs significantly more than regular pumping, having your tank pumped on a regular basis is a wise investment.

How often should I have my tank pumped?

The rate at which solids accumulate varies, and is based upon such factors as the number of people live in the house, if a garbage disposal is used, and the size of the tank. But a good rule of thumb is to pump the tank at least one time every 36 months.

What else should I consider when having my system pumped?

All sewage pumpers in Chester County are required to be licensed by the Chester County Health Department; the Department ensures all septage (the material pumped from a sewage system) is transported safely and disposed of in an environmentally sound manner. You should always ensure that your pumper is properly licensed to haul and dispose waste. A list of licensed pumpers can be viewed at the Chester County Health Department website, and a list can be obtained by contacting the Department at (610) 344-6488.

There are also several things a pumper can check while he's servicing your system to help prevent future problems. Tank baffles should be inspected and, if necessary, repaired or replaced. And ask your pumper to note the depth of your tank lid; tank lids located no more than twelve inches below the ground surface facilitate location and pumping. If your tank lid is deeper add a riser to save extra digging.