

**London Grove Township On-Lot Sewage Management Program**  
**Public Education Series #3:**  
**How to Maintain Your On-Lot Sewage System**

On-lot sewage systems can be an effective way to treat household wastewater, but also require some maintenance and oversight to avoid costly problems and help avoid polluting our environment. A summary of how typical on-lot sewage systems work and important system maintenance tips are presented below.

**Basic On-lot Sewage System Function**

Wastewater flows from the building to the treatment tank through the sewer pipe. In the tank, heavier solids in the wastewater settle to the bottom forming a layer of sludge, and grease and light solids float to the top forming a layer of scum. The sludge and scum remain in the tank where naturally occurring bacteria continue to break them down. The bacteria cannot completely digest all of the sludge and scum, and this is why septic tanks need to be pumped periodically.

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 septic tank in a short period of time, the wastewater flows out of the tank before it has had time to settle and separate. This can happen when water use is unusually high (laundry activities, for example), if the septic tank is too small for the needs of the household, or if there is too much scum and sludge buildup. 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 wastewater. Solids damage the drainfield by clogging the small holes in the drainfield pipes, the surrounding gravel, and soil matrix. These are the primary reasons that water conservation awareness is important for any on-lot system owner.

**How to Care for Your On-lot System**

On-lot sewage system maintenance is often compared to automobile maintenance, as a little effort on a regular basis can save a lot of money and significantly prolong the life of the system.

Sound on-lot system operation and maintenance practices include conserving water, having an awareness of what is put down the drain, and scheduling regular pump-outs, as described more fully below.

1. Pump Your Tank Regularly

Pumping your treatment tank or septic tank is probably the single most important thing you can do to protect your on-lot system. If not pumped regularly, the buildup of solids in the tank

becomes excessive and they overflow to the drainfield. This will compromise the ability of the drainfield to function properly, and possibly lead to premature (and very expensive) failure. Consistent with guidelines in place throughout Pennsylvania, London Grove requires a standard three year pumping interval.

## 2. Use Water Wisely

Water conservation is very important for septic systems because continual saturation of the soil in the drainfield can affect its quality and ability to naturally remove toxins, bacteria, viruses, and other pollutants from the wastewater. The most effective way to conserve water around the house is to first repair any leaking faucets or running toilets, and use washing machines and dishwashers only when full.

In a typical household, most of the water used indoors is used in the bathroom, and there are a lot of little things that can be done to conserve water there. For example, try to avoid letting water run while washing hands and brushing teeth. Avoid taking long showers and install water-saving features (aerators) on faucets and shower heads. These devices can reduce water use by up to 50 percent. Modern low-flush toilets use one to two gallons per flush compared to the three to five gallons used by older conventional toilets. Even using a toilet dam or putting a container filled with rocks in the toilet tank can reduce water use by 25 percent.

It is also important to avoid overtaxing your system by using a lot of water in a short time period, or by allowing too much outside water to reach the drainfield. Try to space out activities requiring heavy water use (like laundry) over several days.

## 3. Know What Not To Flush

What you put into your septic system greatly affects its ability to do its job. As a general rule of thumb, do not dispose of anything in your sewage system that can just as easily be put in the trash. Remember that your system is not designed to be a garbage disposal, and that solids build up in the septic tank and eventually need to be pumped out.

In the kitchen, avoid washing food scraps, coffee grinds, and other food items down the drain. Grease and cooking oils contribute to the layer of scum in the tank and also should not be put down the drain. Garbage disposals generally increase the amount of solids in the tank, and as a result can require more frequent pump-outs.

The same common-sense approach used in the kitchen should be used in the bathroom. Don't use the toilet to dispose of plastics, paper towels, disposable diapers, kitty litter, or any inorganic materials. The only things that should be flushed down the toilet are wastewater and toilet paper.

## 4. Avoid Hazardous Chemicals

To avoid disrupting or permanently damaging your septic system, do not use it to dispose of hazardous household chemicals. Even small amounts of paints, varnishes, thinners, waste oil, photographic solutions, pesticides, and other organic chemicals can destroy helpful bacteria and the biological digestion taking place within your system. These chemicals also pollute the

groundwater. Some septic system additives that claim to help or clean your system also contain hazardous chemicals and should be avoided.

Household cleaners, such as bleach, disinfectants, and drain and toilet bowl cleaners should be used in moderation and only in accordance with product labels. Overuse of these products can harm your system. It makes sense to try to keep all toxic and hazardous chemicals out of your septic tank system when possible.

To help prevent groundwater pollution, be sure to dispose of leftover hazardous chemicals by taking them to an approved hazardous waste collection center.

## 5. Have Your System Inspected

Regular sewage system inspections by a qualified contractor can help catch many small problems before they become big (and expensive) problems. Although such inspections are not mandatory in London Grove, hiring a qualified firm or individual to periodically inspect all your sewage system components can alert you to simple repairs or maintenance recommendations specific to your property which could prevent serious failures in the future. Many firms that are licensed to pump your treatment tank can also provide inspection services, and scheduling these things at the same time could save both time and money. As always, it's a wise idea to verify any contractor's qualifications through references and applicable licensing or certification. There is no required certification in Pennsylvania for private sewage system inspectors, but a voluntary certification program is in place through an organization called the Pennsylvania Septage Management Association. Information for this organization can be found on their web site at [www.psma.net](http://www.psma.net).

## 6. Protect Your System

Finally, it is important to protect your septic system from potential damage. Don't plant anything but grass on or near your septic system. Roots from large shrubs and trees can cause damage. Grass is the most appropriate groundcover for the drainfield.

Don't allow anyone to drive or operate heavy machinery over any part of the system, and do not build or construct anything over the drainfield – these activities can crush piping, crack tanks, and compact the soil so it won't absorb wastewater as effectively.

One of the most important ways to protect your sewage system is to divert roof drains, surface water, and sump pumps away from the drainfield or treatment tank lid. Your drainfield area is already being asked to absorb more water than the rest of the yard – adding an extra load on top of this will cause it to function poorly, or fail altogether. If water is directed over the tank area, it can sometimes seep into small gaps around the lid opening or inspection port, and will then get into the tank and flow to the drainfield, again promoting system malfunction or failure.