

SEPTIC SYSTEM GENERAL INFORMATION

The life expectancy of your septic system will be enhanced with knowledgeable soil testing, site specific design, quality installation, and regular maintenance. Failing septic systems lower property values, cause health risk, and are generally a serious nuisance. The **Wood County Private Sewage System Ordinance #702** requires proper maintenance for your septic system. Protecting your investment with good maintenance will ensure that you as owner can avoid costly repairs in the future. The most important reason to complete septic system maintenance is to keep your family and the environment safe by preventing harmful pathogens and bacteria from entering the water table or ground surface.

Septic Tank: Waste water flows from the house to the septic tank. The tank is designed to retain waste water and allow heavy solids to settle to the bottom. These solids are partially decomposed by beneficial bacteria to form **sludge**. Grease and light particles float, forming a layer of **scum** on top of the waste water. Baffles installed at the inlet and outlet of the tank help prevent scum and solids from escaping. Newer septic tanks have filters installed at the outlet that need periodic cleaning. The manhole over the filter is above ground so the filter can be serviced. Septic systems that were permitted after July 1, 2000, must follow the management plan approved with the permit for proper servicing. Wisconsin State Code requires at minimum the septic tank to be pumped when the combined sludge and scum layer is equal or greater than 1/3 the tanks liquid level. Wood County PSSO #702, requires all septic systems to be inspected at least every 3 years.

Drainfield: The clarified sewage is called effluent. This effluent slowly flows by gravity to one or more perforated pipes that are laid within gravel. Modern drainfields may have polystyrene bundles or leaching chambers used for waste water storage prior to soil absorption. The soil is the secondary portion of the treatment process. The soil below the drainfield filters solid particles and disease causing bacteria. Beneficial soil bacteria destroy many of the toxins and pollutants while other toxins and pollutants become bonded to soil particles. Proper soil testing is crucial to ensure unsaturated conditions beneath a drainfield. It is the **unsaturated conditions** that will allow the soil to remove harmful bacteria and viruses. The purified waste water then is either recycled into the ground water or evaporated back into the hydrologic cycle. This process makes septic systems one of the most efficient and environmentally friendly ways to treat domestic waste water.

Mound and Alternative Methods: These systems are used in areas where the site is not suitable for conventional septic systems. For example, the soil may have too much clay to allow the water to seep through at the proper rate, or the water table may be too close to the ground surface. In these systems, the waste water flows from the septic tank to a pump tank or **dose tank**. The liquid is then pumped from the dose tank to perforated PVC pipes buried within a mound or sand filter blanket built on the original soil surface. This system provides a layer of suitable soil thick enough to ensure adequate time and distance for proper treatment of the waste water. This is particularly important in areas with high water tables. **Aerobic Treatment Units** are available to polish or pre-treat the waste water

before it enters a mound or drainfield. These units are usually positioned after the septic tank and before the dose tank. Some units are being used to rehabilitate failing drainfields that have **bio-mat clogging** which forms in saturated/anaerobic conditions. The aerobic units by code can offer one foot of treatment and cut the size of a mound or drainfield nearly in half. These are particularly valuable on small lots with limited space available. The aerobic units are a mechanical unit that can add expense to a project.

Holding Tank: The most expensive alternative to on-site treatment is a holding tank. A holding tank is a large state approved storage tank which collects all the waste water. Whenever the tank(s) fill the waste water must be pumped out by a licensed Septage hauler and transported away for treatment. There is either an illuminated or audible alarm that alerts the owner when a 10% reserve capacity in the last tank is achieved. The **holding tank agreement** that is recorded with the property deed details the legal obligation of the home owner to maintain service properly. Currently Wood County is using an electronic tracking data base called **Carmody**. Wood County PSSO #702 requires the licensed Septage haulers to report service to the electronic data base within 30 days of pumping. Our office tracks the holding tank sites to make sure accurate and legal maintenance is completed. Holding tanks cost less than a mound system to install, but annual pumping and hauling cost can be substantial.

Signs of System Failure: Septic systems generally give little warning that they are about to fail. However, the following symptoms often indicate that the system is becoming clogged:

- Sewage odor near the septic tank, or drainfield.
- Fixtures and toilets backing up or draining more slowly.
- Sewage on the ground or over the drainfield as indicated by wet spongy ground or ponding of a grayish black liquid.

The **ponding** of sewage on to the ground surface or roadside ditch is considered a human health hazard and is prohibited by both Wisconsin State Statues and Wood County Ordinance. The **Licensed Professionals** completing the septic system inspections are also required by law to report failing systems to the Planning and Zoning Office.

Replacement Orders are issued from our office with a specific deadline for correction. If the deadline is not met then enforcement through Circuit Court may be required. (*See Figure 1 @ Bottom Page*)

Septic System Protection: Following these simple guidelines and procedures can help your septic system to recycle waste water properly and have a long life:

- Practice water conservation, fix leaks and drips, and install “low flow” fixtures when replacing old plumbing.
- Do not overload the system. Early morning and bedtime are peak water use times. Run dishwashers and washing machines at other times of the day. Do not do all of the laundry in one day.

- Do not dispose of the following into a septic system: coarse organic matter-vegetable trimmings, coffee grounds, cigarette butts, tampons, diapers, condoms, baby wipes, etc. These will clog the septic tank with sludge and will require more frequent tank pumping. Use of a garbage disposal may shorten a drainfield life. Home composting is an excellent alternative.
- Fats and grease – cooking oil, bacon grease, etc., will bypass the tank baffles and clog the drainfield.
- Chemicals such as pesticides, disinfectants, motor oil, acids, medicines, paint and paint thinners, etc. will kill the good bacteria that decomposes organic matter in the tank, and cause increased sludge build up. This septic tank will become filled with **high strength waste water** and create anaerobic conditions in the drainfield causing a **Bio-mat**, or clogged soil.
- Avoid compacting the soil over the drainfield area. Compaction may decrease the soil loading rate causing the waste water to pond on the ground surface. Do not drive vehicles or build structures over either the septic tank or drainfield. These activities may cause cracks in the piping or tanks.
- Do not plant deep rooted trees or shrubs over the drainfield. Deep rooted water loving plant species have roots that will plug pipes and fill tarred joints in the septic tank. These roots cause physical damage and plug the drainfield.

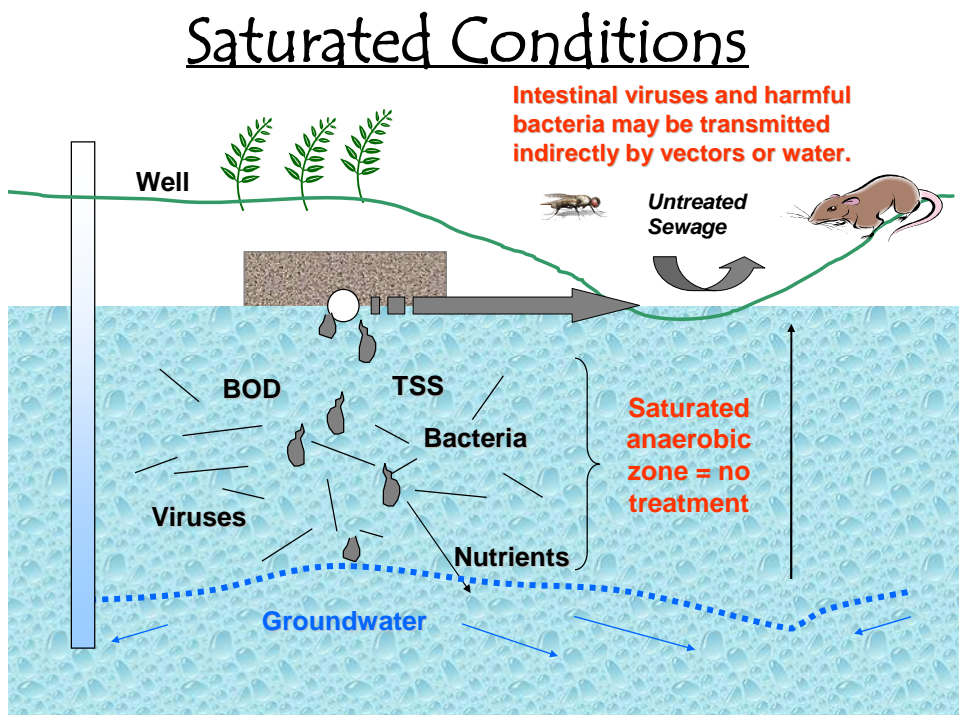


Figure 1.