

-
- Natural Resources
 - Setbacks
 - Water Quality
 - Sanitation



Normal Building – Room 205
104 S. Eyder Avenue
Phillips, WI 54555
Phone: (715) 339-3272
Fax: (715) 339-5295

Your Private On-Site Wastewater Treatment System (POWTS)

The information contained here is being provided by the Price County Zoning Department to help explain Private On-Site Wastewater Treatment Systems (POWTS) which are used as a means to treat, and recycle domestic wastewater into the soil.

General Information

1. Under normal circumstances, the cost of installing a new POWTS for a 3-4 bedroom dwelling will range from \$5,000 to \$9,000 for a conventional POWTS and \$10,000 to \$17,000 for a mound. The cost for a new holding tank installation can range from \$6,000 to \$10,000. Replacement systems add an additional \$2,000 to \$5,000 to the above.
2. If properly sited, designed, installed and maintained, a POWTS should last 20+ years.
3. Price County Sanitary Code requires pumping or inspection of treatment tanks by an individual licensed in the State of Wisconsin as a licensed master plumber, master plumber restricted sewer, certified POWTS inspector, POWTS maintainer, or certified septic servicing operator as follows:
 - a. Mound, in-ground pressure system, conventional system – every 3 years.
 - b. Alternative or experimental designs often require more frequent maintenance.
4. The use of septic tank additives is unnecessary for the proper biological functioning of a POWTS.

How A POWTS Works

As wastewater exits the house through the building sewer, it enters the septic (treatment) tank. Although the primary function of the tank is to settle out solids, it also provides an environment for biological and chemical reactions to take place. In the tank, larger solids settle forming a sludge layer at the bottom of the tank. Grease, oils, and floating particles rise to the top to form a scum layer. An effluent filter, located at the outlet end of the tank prevents large particles such as seeds, cigarettes, towelettes, hair, etc. from entering the absorption cell (dispersion unit). The partially treated waste discharged from the septic tank is referred to as sewage effluent.

Sewage effluent flows by gravity or it is pumped to the absorption cells for treatment within the soils. Within the absorption cells are perforated pipes, which distribute the effluent. Typical absorption fields include conventional cells, in-ground pressure, at-grade, and mound systems. The size of the absorption cell is dependent on soil permeability and the number of bedrooms in the dwelling.

The soil serves as a filter, treating the effluent as it percolates downward. With traditional soil absorption cells, the soil provides most of the treatment and final dispersal into the environment. With the advent of newer technology, pretreatment units such as aerobic treatment units (ATUs) including suspended growth, fixed media, and trickling filter systems provide most of the treatment with the soil providing final polishing and dispersal to the environment.

As the soil absorption system ages, the ability of the soil to absorb effluent diminishes causing it to become saturated. Although a saturated system will continue to filter sewage effluent, eventually the effluent accumulates in the absorption field faster than the soil can absorb it. The soil pores become clogged, resulting in ponding within the soil absorption system, and sewage backing-up into the house, or surface discharge of partially treated effluent near the system.

On sites where unsuitable area and/or soil conditions exist, a holding tank may be the only option available. A holding tank collects all wastewater generated from the dwelling or commercial building. The contents of the holding tank must be removed regularly by a licensed pumper. **Price County allows holding tanks as a system of choice.**

Premature System Failure

Several Conditions that will shorten the life of a POWTS include:

1. Hydraulic overloading – POWTS are designed for a specific quantity and quality of wastewater. The following may cause an absorption system to pond, resulting in sewage backup into the dwelling or surface discharge of partially treated sewage:
 - a. Excessive water use inside the home
 - b. Leaking faucets/toilets
 - c. Groundwater infiltration through manholes, manhole risers, or broken underground sewer pipes.
 - d. Introduction of surface water through manhole covers that are not located above the surrounding ground surface elevation.
 - e. Discharge of water softener backwash into the tank.
2. Disposal of excessive amounts of fats, oils, and greases.
3. Disposal of antibiotics, disinfectants, paint, varnish, stains, gasoline, oil, degreasers, and pesticides – these chemicals will destroy the necessary bacteria that is present in the treatment tanks.

Signs Of A Failing System

1. Backup of sewage into the residence.
2. Grass in the yard is much greener and is growing more rapidly than in other areas (this is a sign of ponding).
3. Toilet or sinks drain slowly.
4. Pump in pump/dosing tank runs continuously.
5. Discharge of partially treated sewage onto the ground surface, into a ditch, or surface water.

IF YOU ARE EXPERIENCING ANY OF THE ABOVE, CONTACT A PROPERLY LICENSED INDIVIDUAL.

DO

- Conserve water
- Use reduced-flow water fixtures.
- Wash clothes using full loads only.
- Operate dishwasher with full load only.
- Spread clothes washing over several days to prevent surging
- Repair/replace leaking faucets/toilets float valves.
- Use garbage disposal sparingly – avoid disposing of vegetable peelings and bones.
- Divert surface water from downspouts and sump pumps away from the treatment tanks and dispersal component.
- Know the location of treatment tanks and dispersal unit; keep manhole covers accessible for inspections and pumping; manholes that are at or above grade must be locked.

