

# A Guide to Your Septic System



## Homeowner's Onsite System Guide and Record Keeping Folder

**Read and follow the Dos and Don'ts list provided herein:**

**DO**

- Conserve water to reduce the amount of wastewater that must be treated and disposed.
- Repair leaking faucets and toilets promptly.
- Only discharge biodegradable wastes into system.
- Divert down spouts and other surface water away from your soil treatment area
- Keep your septic tank cover accessible for tank inspections and pumping.
- Have your effluent screen inspected and cleaned once a year.
- Have your septic tank pumped regularly inspected for leaks and cracks.
- Call a professional when you have problems.
- Compost your garbage or put it in the trash instead of putting it down the sink.
- Make sure any water conditioning or softening equipment is approved for use with your system and that it is properly set for your water conditioning/softening needs and operating correctly.

**DON'T**

- Flush sanitary napkins, tampons, disposable diapers, condoms, wipes, cat litter and such products into your system.
- Dump solvents, oils, paints, thinners, disinfectants, pesticides or poisons down the drain; these can disrupt the treatment process and contaminate groundwater.
- Dig in your soil treatment area or build anything over it.
- Plant anything over your soil treatment area except grass.
- Drive over your soil treatment area or compact the soil in any way.
- Use a garbage disposal unless your septic tank was sized to handle the required sludge storage volume.

### SAFETY FIRST!

- NEVER physically enter a septic tank or other parts of the treatment system. Call your service provider!
- Keep access areas locked at all times to prevent unauthorized entry

### Your Local Service Provider is:

This folder provides you with essential information about your onsite wastewater treatment system and guidelines for operation and maintenance to keep your system working effectively and trouble-free while protecting water quality and the environment. It also provides a place to keep all documents, records and other information about your onsite wastewater treatment system including your permit, site drawings, records of maintenance and repairs performed, and other information.

#### System Permit:

Issued to: \_\_\_\_\_ Date Issued: \_\_\_\_\_

Address: \_\_\_\_\_

Legal Description: \_\_\_\_\_

#### System Description:

Design Flow (gpd) or Number of Bedrooms: \_\_\_\_\_

Septic Tank volume (gallons): \_\_\_\_\_ Number of Compartments: \_\_\_\_\_

Dosing Tank or Pump Compartment capacity (gallons): \_\_\_\_\_

Tank(s) Manufacturer(s): \_\_\_\_\_

Advanced pretreatment Device:  Yes  No Brand: \_\_\_\_\_

#### System Accessories:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Effluent screen | <input type="checkbox"/> Diversion or Alternating Valve | <input type="checkbox"/> Control Panel with audible/visible alarm |
| <input type="checkbox"/> Pump or siphon  | <input type="checkbox"/> Distribution box or Drop box   |   |
| <input type="checkbox"/> Other _____     |   |   |

#### Dispersal Method:

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Trenches or bed (and number): _____ | Type of dispersal media (e.g., rock/gravel, fabric wrapped pipe, chambers, polystyrene socks, etc.): _____ |  |
| <input type="checkbox"/> Drip Dispersal                      | <input type="checkbox"/> At-Grade  | <input type="checkbox"/> Lagoon                  |
| <input type="checkbox"/> Spray Irrigation                    | <input type="checkbox"/> Mound   | <input type="checkbox"/> Discharge to lake/river |
| <input type="checkbox"/> Other _____                         |  |  |

#### Dispersal Field Dimensions:

**Installation Contractor:** \_\_\_\_\_  
Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

**Service Provider:** \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Service Contract:  Yes  No

**Pumper:** \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Service Contract:  Yes  No

# YOUR ONSITE WASTEWATER TREATMENT SYSTEM

**You are the owner (and operator!) of an onsite wastewater treatment system that is designed to be environmentally safe and to protect public health. A properly installed and operated system treats wastewater from your home and returns it to the groundwater. Successfully used for over 100 years, nearly one-fourth of the United States population uses this method of wastewater treatment.**

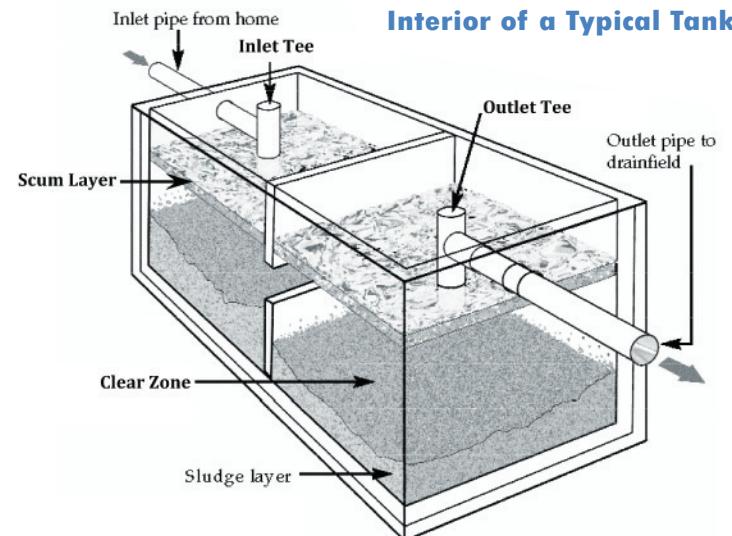
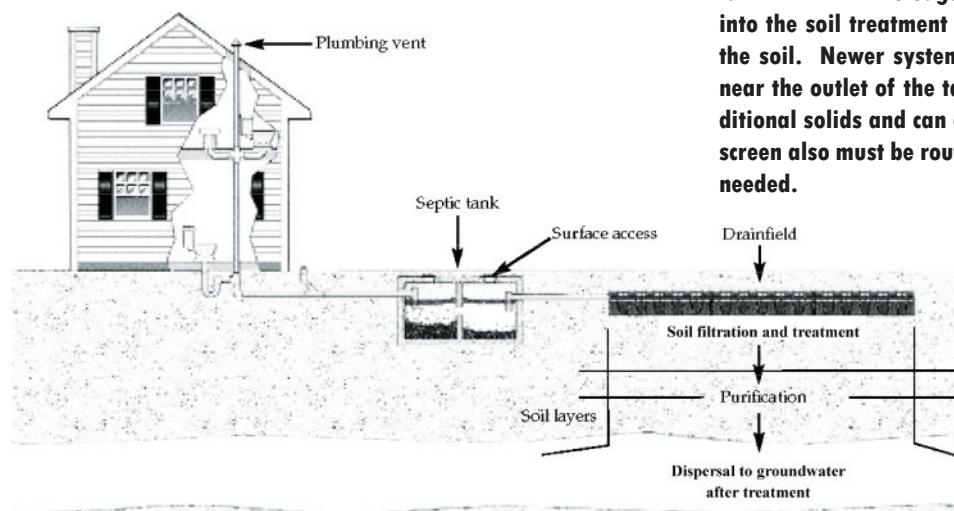
## **SYSTEM DESCRIPTION**

The first component in the system is a septic tank that uses natural processes to treat the wastewater generated in your home. The second component is a soil treatment area (also called a drainfield) where the wastewater is dispersed back into the groundwater after it is treated. The system accepts both "blackwater" (toilet wastes) and "graywater" (wastes from the kitchen sink, bath and showers, laundry, etc.).

**Note that wastes from food preparation and laundry do contain harmful bacteria and other pollutants that still require treatment. Water from foundation or footing drains, roof gutters, and condensate from air conditioners or ice machines (so-called "clear" water should never be discharged to the system.**

## THE SEPTIC TANK

The septic tank provides the first step in treatment by removing solids. Its primary purpose is to protect the soil treatment area or other system components from becoming clogged by solids that are suspended in the wastewater. The wastewater discharged from the home goes into



the tank where it is retained for a day or more. During the time it is in the tank, the heavier solids settle to the bottom to form a sludge layer. The lighter solids, greases and oils float to the top to form a scum layer.

In addition to acting as a sedimentation chamber and providing storage for the sludge and scum, bacteria in the septic tank also digests or breaks down the waste solids. Micro-organisms that thrive without oxygen feed on the solids to reduce the volume of sludge and scum. In the process, carbon dioxide, hydrogen sulfide and other gases are produced which are vented from the tank through the plumbing vent on the roof of the building that the tank services. Only about 40% of the sludge and scum volume can be reduced in this manner, so the tank must be pumped regularly to remove the accumulated solids. If not inspected periodically and pumped when needed, the tank will fill with sludge and the solids will be washed out into the soil treatment area where they will quickly clog the soil. Newer systems may include an effluent screen near the outlet of the tank. The screen helps remove additional solids and can extend the life of the system. The screen also must be routinely inspected and cleaned when needed.

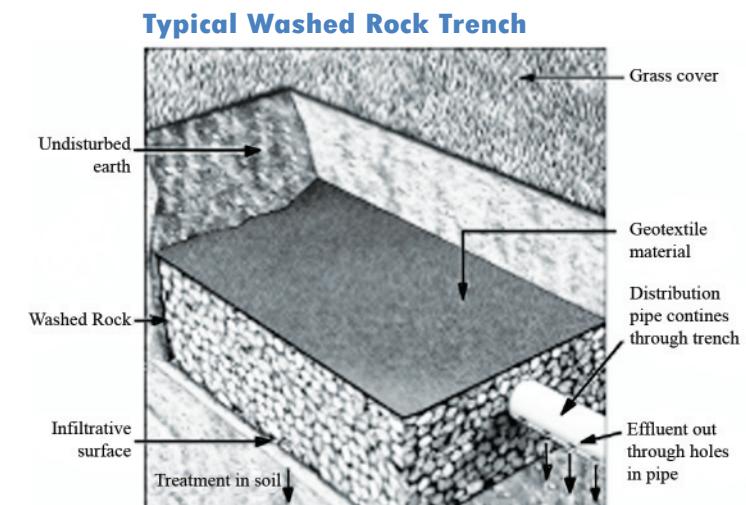
## **THE SOIL TREATMENT AREA**

The soil treatment area, often called a drainfield, provides final treatment of the wastewater and returns the treated water to the groundwater. The total area required for adequate soil treatment is determined by the expected peak flow of wastewater from the home and the characteristics of the soil in the treatment area. The soil treatment area is typically built as a series of trenches or as one larger bed, and is typically kept at a shallow depth. The soil treatment area must be constructed in permeable soils and be two or more feet above the seasonal high groundwater table. While there are many types of soil treatment area systems the following describes a typical washed rock trench system.

The treatment area is excavated to a depth that maintains the required distance above the seasonal high water table or a restrictive zone of soil. The excavated trench or bed is filled with six to twelve inches of washed rock. A perforated pipe is installed within the gravel to distribute the partially treated liquid (effluent) from the septic tank. The washed rock and pipe is covered with synthetic fabric or other permeable barrier material to help keep soil particles out of the system. The area is backfilled with soil that will support a vegetative cover. The vegetation helps to stabilize the surface and also takes up some of the moisture and nutrients from the effluent.

The septic tank effluent either flows to the soil treatment area by gravity or is dosed by pump or siphon. The effluent enters the soil and is treated as it percolates to the groundwater. The soil acts as biological filter to remove any remaining harmful substances including disease-causing bacteria and other undesirable wastewater constituents in the septic tank effluent.

**Soil treatment areas other than those described above, can be used. This includes at-grades, mounds or drip distribution. There are also other trench media that can be used in place of the washed rock. If you have any of these alternatives contact your local service provider or NOWRA for more information.**



## **TAKING CARE OF YOUR ONSITE SYSTEM**

Your onsite treatment system represents a significant investment which you will want to protect. "An ounce of prevention is worth a pound of cure" was never truer than it is with onsite system care. With proper operation and regular maintenance, your system will function better and last longer.

**Have your septic tank inspected every 3 to 4 years and pump it if the sludge fills the bottom third of your tank or if you see the scum layer near the top of the outlet baffle. The frequency of pumping depends on a number of factors and can vary substantially between homes from once or more a year to 10 years or more.**

**Use this folder to keep records of each tank pumping including the date and estimated sludge depth and scum thickness. Over time, these records will help you anticipate when tank pumping might be necessary. Committing a little attention to the care of your system is the best way to avoid the problem of a failing system.**