

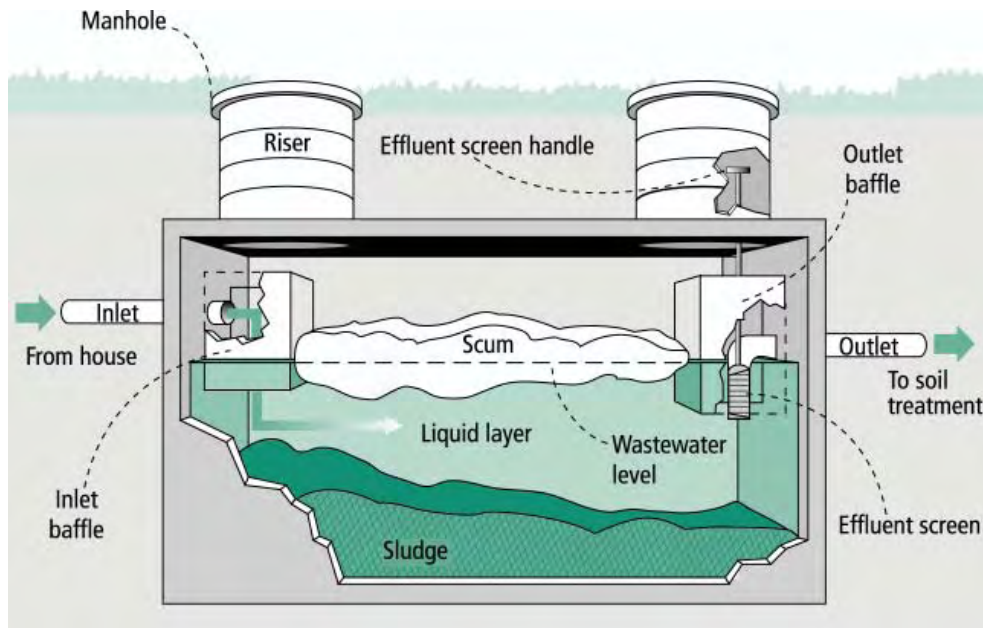


Septic Tank Effluent Screens

An inexpensive tool that can prevent or limit serious damage to a septic system's soil treatment area

The Septic Tank

Septic tanks are designed to collect wastewater from your home, separate liquids from solids, hold the solids in place and allow only liquids to leave the tank. If solids exit the tank and move into the soil treatment area, they could plug the distribution pipes and/or the soil. When plugging occurs, wastewater is not dispersed or treated effectively, which can lead to expensive repair or replacement of the soil treatment area.



Note: Septic tanks vary in size and configuration, your system may have more than one tank. There may be a separate pump tank if you have a mound system or use pressure distribution.

Figure 1- Single compartment septic tank with effluent screen before tank outlet.

Do I Need an Effluent Screen?

Having an effluent screen as part of your overall septic system will allow you to be confident that, with maintenance, your system will perform properly. Effluent screens are a good investment and can be retrofitted into existing septic tanks or following the tank in a separate basin, designed specifically for the screen. For information on retrofitting, contact a licensed septic system installer or your county planning and zoning/environmental department.

BEWARE: AN IGNORED EFFLUENT SCREEN BECOMES A PLUGGED EFFLUENT SCREEN.

A plugged effluent screen can cause a sewage back-up in the septic tank, which can then overflow into your yard or basement. Alarms should be installed with an effluent screen so you know if it has plugged. Odors and slow draining sinks and tubs are signs that the screen may be in the process of plugging.

Septic Tank Effluent Screens

How Effluent Screens Work

Effluent screens are installed at the outlet of the final septic tank. All wastewater leaving the tank must first pass through the screen before going to a pump tank, pretreatment unit or soil treatment area. Screens come in a variety of shapes and sizes. All are designed to capture and hold solids, preventing them from leaving the tank. In addition to the effluent screen, a high water alarm should be installed to alert the homeowner if the screen becomes plugged and wastewater rises above the outlet pipe. It is important to have access to septic tank manhole covers and effluent screens in order to make regular maintenance easy.

Effluent Screen Maintenance for the Homeowner

All screens require regular cleaning in order to work effectively. *Effluent screens need to be checked more often than your septic tank.*

If your septic system is new, talk to the installer about the manufacturer's recommended maintenance schedule. If there are no records for your system, ask the previous owner how they used water and how frequently they cleaned their effluent screen. If the previous owner is not available, begin checking the screen quarterly and note the condition of the screen. Extend the time between cleanings as appropriate. Get in the habit of thoroughly cleaning the screen each fall before the ground freezes and snow cover makes access difficult.

Homeowners can clean the effluent screen themselves, or hire a licensed Maintainer (pumper) or Service Provider to do the job. Keep in mind that effluent screens may need to be maintained more often than the septic tank. Cleaning the screen only when you have your tank pumped may result in a plugged screen.

Note: If you have a pump tank you may have a pump vault or basket-type screen located around the pump itself. This will be located at the bottom of the pump tank and should be cleaned and maintained by a licensed professional only, not the homeowner.

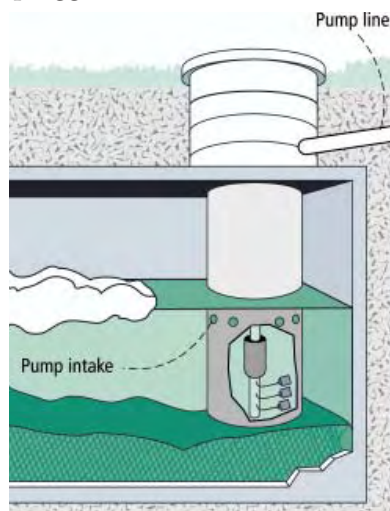


Figure 3 - Pump vault or basket screen located in the pump tank.

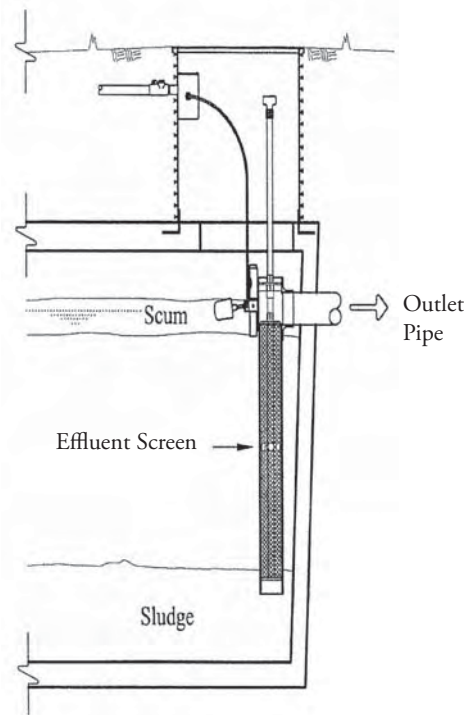


Figure 2 - Example of an effluent screen located at the tank outlet. These screens can be maintained by the homeowner.

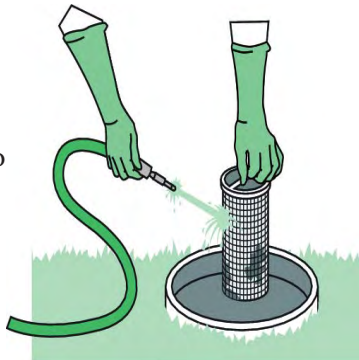
Homeowner Instructions: Cleaning an Effluent Screen

1. **DO NOT ENTER** the septic tank for any reason! Noxious gasses exist in septic tanks and can result in serious injury or death. You do not need to enter the tank in order to clean the screen.
2. Put on waterproof, disposable gloves and safety glasses. Remove the septic tank manhole cover where the screen is located and note the liquid level in the tank. The liquid level should be at the bottom of the outlet pipe. If it is below the outlet pipe this is a sign that the tank is not water tight and you should call a septic professional to help troubleshoot the problem. If the liquid level is above the outlet pipe or the effluent screen **do not remove the screen**. This is a sign of problems somewhere in the system; a plugged screen, pump failure, plugged soil treatment area, etc. Call a professional Maintainer and get the tank pumped before removing the screen. This will prevent a surge of excess effluent, containing unwanted solids, from moving into the next component of the treatment system.

Septic Tank Effluent Screens

Homeowner Instructions: Cleaning an Effluent Screen (*continued*)

3. If the liquid level is at the bottom of the outlet pipe, remove the screen from its casing. Note the condition of the screen and the extent of build-up. Using a garden hose, spray off the screen over the first manhole (closest to inlet pipe) or place the screen in a 5-gallon bucket and spray off all material into the bucket. Be careful to prevent splashing onto your body or clothes or into the yard. Do not clean the effluent screen in the grass next to the septic tank; raw sewage in your yard is a public health hazard.



4. Return the screen to its casing once it has been cleaned. Dump the contents of the bucket into the septic tank. Add a small amount of bleach (less than $\frac{1}{4}$ cup) to the bucket and rinse several times, emptying the rinse water into the septic tank each time. Secure the manhole cover once you are finished. The solids from the screen cleaning will settle and get removed the next time the tank is pumped during routine maintenance. Make sure the screen is reinstalled correctly to ensure proper operation.

5. Once the job is complete, dispose of the gloves and wash your hands thoroughly with soap and hot water. If your clothes were contaminated, remove them immediately and launder in hot water.

How often an effluent screen needs to be cleaned depends on a number of factors:

- Type and size of screen installed
- Size of the holes in the effluent screen
- Number of people living in the home
- Amount of laundry washed
- Number and size of the septic tank(s)
- Use of a garbage disposal
- Use of a dishwasher with a food grinder
- Sewage pumped from the home to the septic tank

Best Practices for Homeowners

To reduce the solids, chemicals and water going down your drains and to the septic system, follow these tips:

- Large volumes of wastewater generated in a short period of time can result in turbulence in your septic tank and reduced retention time, which can lead to solids plugging the effluent screen. To avoid this situation:
 - * Do not do all of your laundry in one day. Spread wash loads throughout the week and wash at times when there is not a lot of water being used in the home.
 - * Do not run more than one water-using device at a time. For example, don't run the dishwasher while washing laundry.
 - * Disconnect water treatment devices such as iron removers and water conditioners from your septic system. The discharge water from these devices is considered clean and does not need further treatment.
- Garbage disposals and dishwashers with food grinders are notorious for adding solids to a septic tank. Minimize your use of the garbage disposal by placing food scraps into a compost bin or trash can. Most new dishwashers are equipped with food grinders which act as garbage disposals. To keep solids out of your system, scrape all dishes well (and place scraps in the compost or garbage, NOT the sink) before placing them in the dishwasher.
- Washing machines can add a significant amount of lint to your septic tank. To avoid this, place a simple lint filter on the end of the outlet hose and change it often. Front loading washers produce less lint.
- Do not use your toilet as a trash can. Only human waste and toilet paper should be flushed. Do not flush tissues, hygiene products, cigarette butts, etc.
- Reduce the amount of strong cleaning chemicals and antibacterial soaps used in the home. Bleach and other antibacterials can kill the beneficial bacterial in the septic tank, reducing the rate of solids decomposition.
- Do not flush unused or expired medications, throw them in the garbage. These products can kill the beneficial bacteria in your septic tank.
- Do not use products advertised as septic additives or septic cleaners. These products are not necessary and may kill the beneficial bacteria in your septic tank.

Septic Tank Effluent Screens

IF YOUR SEPTIC ALARM SIGNALS, STOP USING WATER!!

There are multiple reasons why your alarm may go off.

*Call a licensed Septic Maintainer or Service Provider immediately
to determine the nature of the problem.*

New Minnesota Rules Regarding Effluent Screens:

All septic systems installed in Minnesota after February 2011 will be required to have an effluent screen with an alarm if there is a garbage disposal or dishwasher in the kitchen or if sewage is pumped from the home to the septic tank. Effluent screens may be required prior to 2011 depending on your local ordinance. Effluent screens are often required in many pretreatment and cluster systems.

Remember: Having an effluent screen in your septic system will allow you to be confident that, with proper maintenance, your system will perform properly and expensive repairs can be avoided.

For More Information

For more information about septic systems see: <http://septic.umn.edu>.

For more information about homeowner septic system management see the Septic System Owner's Guide, a 32 page book from UM Extension for \$5.00. Item #06583. <http://shop.extension.umn.edu> or 1-800-876-8636.

For more information about your septic system, contact your local permitting authority. You can find the list of those who locally regulate onsite septic systems at <http://pca.state.mn.us/programs/ists/localgovernment/> or contact your local planning and zoning office.

For more information about Minnesota state rules and regulations regarding onsite septic systems, contact the Minnesota Pollution Control Agency (MPCA) at <http://www.pca.state.mn.us/programs/ists/> or call 800-657-3864.

Acknowledgements

Consortium of Institutes for Decentralized Wastewater Treatment, Residential Onsite Wastewater Treatment Systems: An Operation and Maintenance Service Provider Program. 2005.

11/08 by Laurie Brown, Extension Educator

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