

**St. Clair County Health Department
Homeowners Reference Guide
Buried Sand Filters**

Septic Systems:

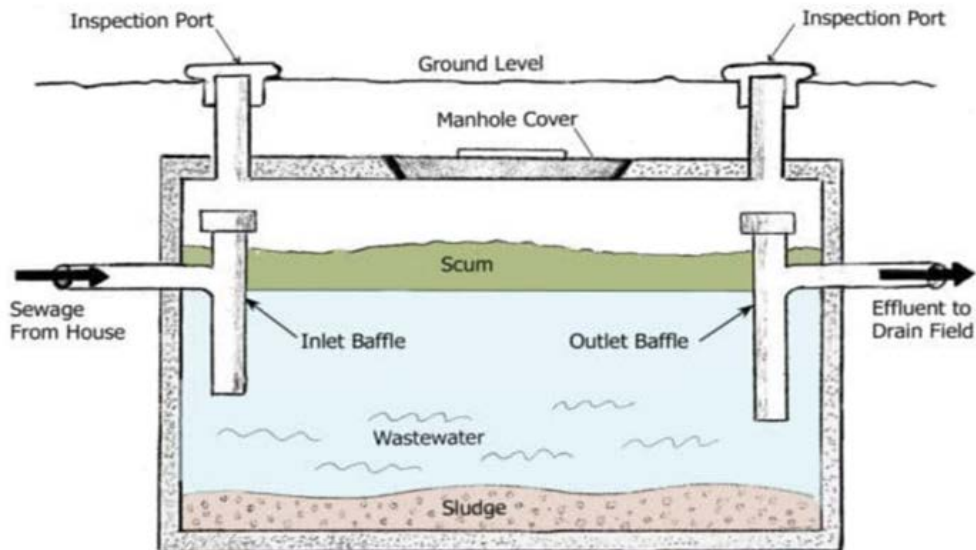
Septic systems are wastewater treatment systems designed to treat wastewater flows from individual homes.

How it Works:

Your septic system consists of a septic system, a buried sand filter, and a chlorinator followed by a discharge pipe that is directed to the ground surface or an optional receiving trench or evaporation bed.

1) The Septic Tank:

The main purpose of the septic tank is to separate the solids from the liquids. The solids, in the form of sludge, collect on the bottom of the septic tank and the scum, the lighter solids that float on the top of the water, remain in the tank. Every 3 – 5 years the solids and scum should be pumped out to ensure proper operation of your septic system. Failure to routinely pump the septic tank will contribute to premature failure of the septic system! Pump more frequently, if you have a garbage disposal.

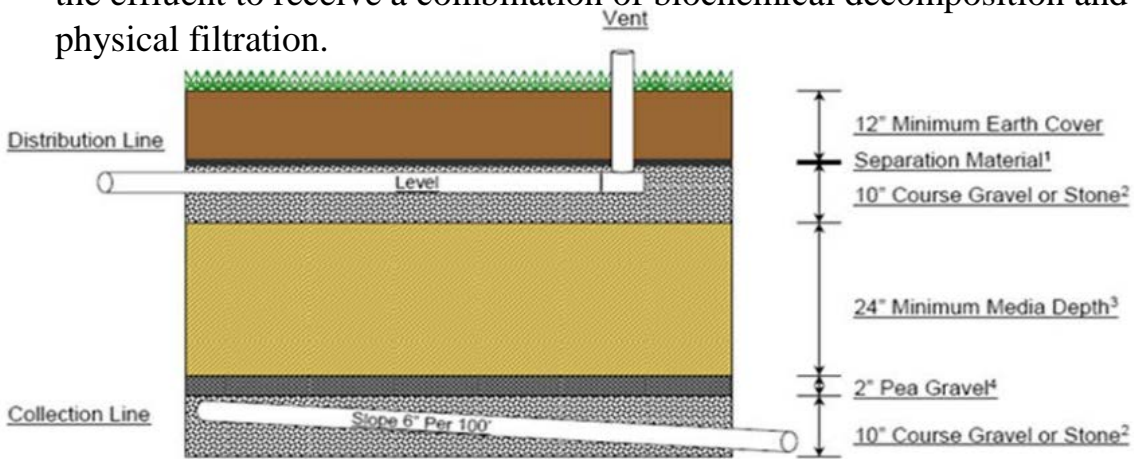


Septic Tank Cross-Section

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2) The Buried Sand Filter:

The wastewater is then directed to the second component of your septic system, the buried sand filter. This type of septic system is utilized where topography or slowly draining soils will not allow the use of a typical seepage field. The sand filter is a buried (single pass) sand bed with layers of gravel on top and bottom of the (wastewater) through the sand filter enables the effluent to receive a combination of biochemical decomposition and physical filtration.

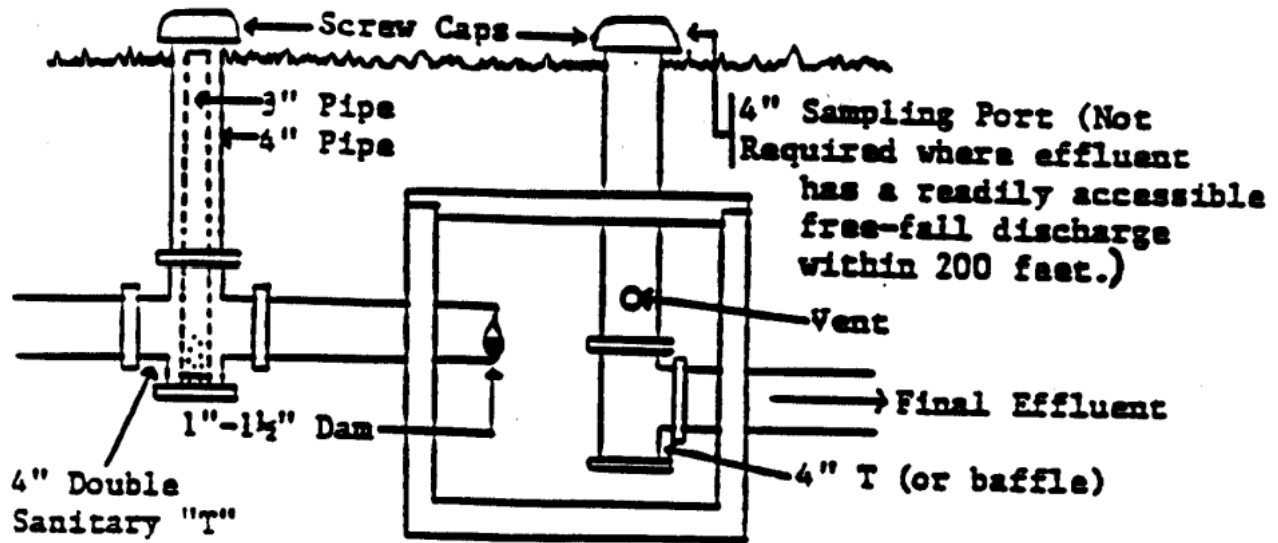


¹ Separation materials to support the backfill: straw, newspaper, untreated building paper, geotextile fabric or other permeable or biodegradable material.
² Course Gravel or Stone: 3/4" to 2 1/2" diameter.
³ Sand Filter Media: The sand shall have an effective size of 0.5 to 2.0 millimeters and a uniformity coefficient of less than 3.5.
⁴ Pea Gravel: 1/8" to 3/8" diameter.

3) The Chlorinator:

The filtered effluent is then directed to a chlorine feeding unit and a chlorinator. Pathogenic bacteria are present in the sand filter effluent, therefore, it is important that chlorine disinfectant (chlorine tablets) be continually provided to ensure adequate disinfection of the discharged effluent. This wastewater may then be discharged to the ground surface, provided it maintains the required wastewater parameters and does not cause a ponding or nuisance problem. Otherwise, the effluent may be directed to an evaporation bed, receiving trenches or another type of approved effluent reduction.

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Chlorine Feeder, Contact Tank, and Sampling Port

Septic System Failure:

A septic system fails over time because suspended solids are carried out of the septic tank with the effluent. These small particles plug up the spaces between the filtering media (soil) and cause eruption to the ground surface. Failure to routinely pump the septic tank will contribute to this! Therefore, it is very important to properly maintain and pump the septic system to ensure the septic system lasts the usual 15 to 20 years.

Tips to Avoid Trouble:

- Pump the septic tank every 3-5 years to prevent problems. Note: Pump tank annually if system has a garbage disposal.
- Avoid additives, unless recommended by a licensed pumper or contractor.
- Learn about the type of system you have and the location of the septic system.
- Divert roof drains and surface water away from the septic system. Keep sump pumps and foot drains away from the septic system as well.
- DO NOT use excessive quantities of bleach, disinfectants, drain, or toilet bowl cleaners.
- DO NOT make repairs or allow repairs to your septic system without obtaining the required permit from the Monroe County Health Department. Contact the Monroe County Health Department for a list of licensed septic system contractors and pumpers.

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- DO NOT dispose of hazardous chemicals, grease, disposable diapers, plastics, latex, paints, pesticides, solvents, oven cleans, degreasers, tobacco products, coffee grounds, wet strength, paper towels, or sanitary item into your system.
- DO NOT build, drive, plant trees, or locate a swimming pool over components of the septic system.
- DO NOT direct clearwater discharges (i.e., any footing tile drainage, air conditioner condensate, etc.) to the septic system. In addition, the Monroe County Health Department strongly recommends that water softener backwash not be discharged into a private sewage disposal system.
- DO NOT install a garbage disposal or grinder to an existing septic system.
- Practice water conservation. Repair leaking water fixtures, operate washing machines and dishwashers only when full, avoid taking long showers, and install water saving fixtures designed for toilets, faucets, and shower heads.

DO NOT DO ALL LAUNDRY AT ONCE (THIS WILL OVERLOAD THE SYSTEM). SPACE THE LOADS EVENLY THROUGHOUT THE WEEK.

Signs of Problems with your Septic System:

- 1) Slow drainage toilets, showers, and sinks.
- 2) Sewage back-ups in the house.
- 3) Sewage surfacing over the septic system.
- 4) Sewage odors.