



TOWN OF WAREHAM

Water Pollution Control Facility

6 Tony's Lane Wareham, MA 02571

The Difference Between Septic and Sewer

Septic and Sewer are confused quite often, but they do two different things and go to two different places. Septic is contained to your household, whereas sewer contains many homes and transports the waste.

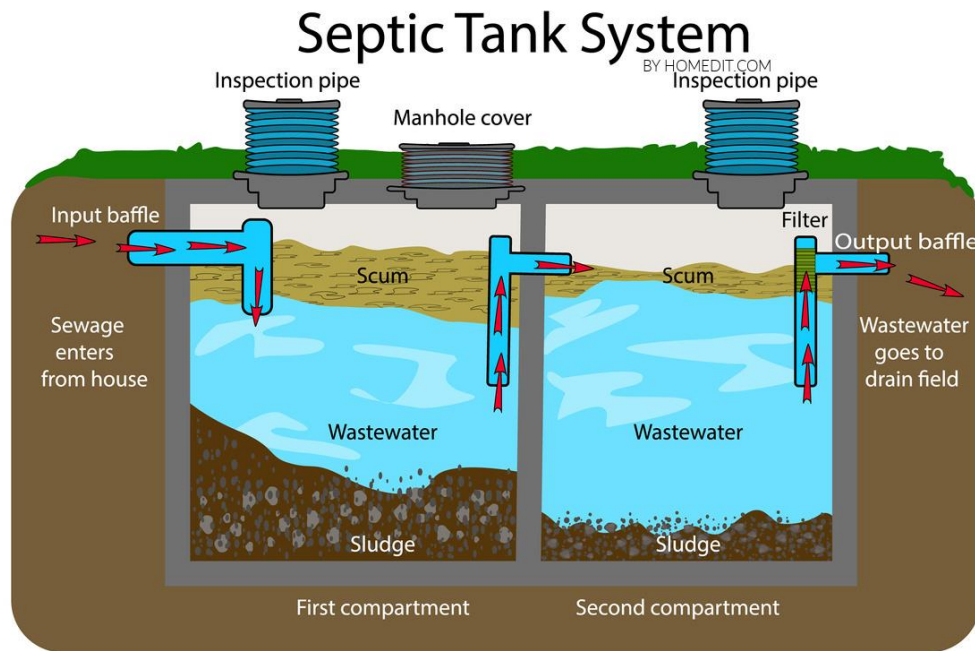


Figure 1: A diagram of a septic tank.

A typical septic system consists of a septic tank and a drain field (or soil absorption field).

The septic tank digests organic matter and separates floatable matter (e.g., oils and grease) and solids from the wastewater. In conventional, or soil-based systems, the liquid (known as effluent) is discharged from the septic tank into a series of perforated pipes buried in a leach field, chambers, or other special units designed to slowly release the effluent into the soil. This area is known as the drain field (EPA, 2022).

[Septic System Fact Sheet](#)



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How A Typical Conventional Septic System Works:

1. All water runs out of your house from one main drainage pipe into a septic tank.
2. The septic tank is a buried, water-tight container usually made of concrete, fiberglass, or polyethylene. Its job is to hold the wastewater long enough to allow solids to settle down to the bottom forming sludge, while the oil and grease floats to the top as scum. Compartments and a T-shaped outlet prevent the sludge and scum from leaving the tank and traveling into the drain field area.
3. The liquid wastewater (effluent) then exits the tank into the drain field.
4. The drain field is a shallow, covered, excavation made in unsaturated soil. Pretreated wastewater is discharged through piping onto porous surfaces that allow wastewater to filter through the soil. The soil accepts, treats, and disperses wastewater as it percolates through the soil, ultimately discharging to groundwater. If the drain field is overloaded with too much liquid, it can flood, causing sewage to flow to the ground surface or create backups in toilets and sinks.
5. Finally, the wastewater percolates into the soil, naturally removing harmful coliform bacteria, viruses and nutrients. Coliform bacteria predominantly inhabits the intestines of humans or other warm-blooded animals. It is an indicator of human fecal contamination.

Sewer System

Combined Sewers

Combined sewers are designed to collect both sanitary sewage and storm water runoff in a single-pipe system. These systems were designed to convey sewage and wastewater to a treatment plant during dry



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weather. Under wet weather conditions, these combined sewer systems would overflow during wet weather conditions when large amounts of storm water would enter the system. State and local authorities generally have not allowed the construction of new combined sewers since the first half of the 20th century.

Separate Sanitary Sewers

The other major type of domestic sewer design is sanitary sewers (also known as separate sanitary sewers). Sanitary sewers are installed to collect wastewater only and do not provide widespread drainage for the large amounts of runoff from precipitation events. Sanitary sewers are typically built with some allowance for higher flows that occur when excess water enters the collection system during storm events.

Sanitary sewers that are not watertight due to cracks, faulty seals, and/or improper connections can receive large amounts of infiltration and inflow (I/I) during wet weather. Large volumes of I/I can cause sanitary sewer overflows (SSOs) and/or operational problems at the wastewater treatment facility serving the collection system. In addition, sewage overflows can be caused by other problems such as blockages, equipment failures, broken pipes, or vandalism.

[Wastewater Technology Fact Sheet](#)

More Links:

1. [Interactive Septic System Diagram](#)
2. [EPA Effluent Guidelines](#)
3. [Peak Flows at Sewage Treatment Plants- EPA](#)
4. [How to Care for Your Septic System- EPA](#)



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Medlock, E. (2022, 7 5). *How Does a Septic Tank Work And Other Vital Questions*. Retrieved from homedit: <https://cdn.homedit.com/wp-content/uploads/2021/06/Septic-tank-parts-DIAGRAM.jpg>

Please do not hesitate to call the office for any questions or for a tour of the Wareham Water Pollution Control Facility. We are open Monday – Friday 7am to 3:30pm. (508) 295- 6144.

