

How It Works: Aeration Tanks/Aeration Treatment Unit (ATU)

Tanks can be manufactured from precast concrete, polyethylene plastic, or fiberglass. The number of tanks needed, and gallon capacity depends on the number of bedrooms in the house.

Aerobic Bacteria

The main difference between a septic tank and an aeration tank is that the aeration tank uses aerobic bacteria to break down the solids that settle in the tank. The aerobic bacteria are “oxygen loving” bacteria, therefore they need oxygen to survive. To keep the bacteria alive, the aeration tank is equipped with a motor to pump oxygen into the tank. Aerobic bacteria break down solids better and has more of an earthy smell, unlike anaerobic bacteria.

How an Aeration Treatment Unit (ATU)/ Aeration Tank Works

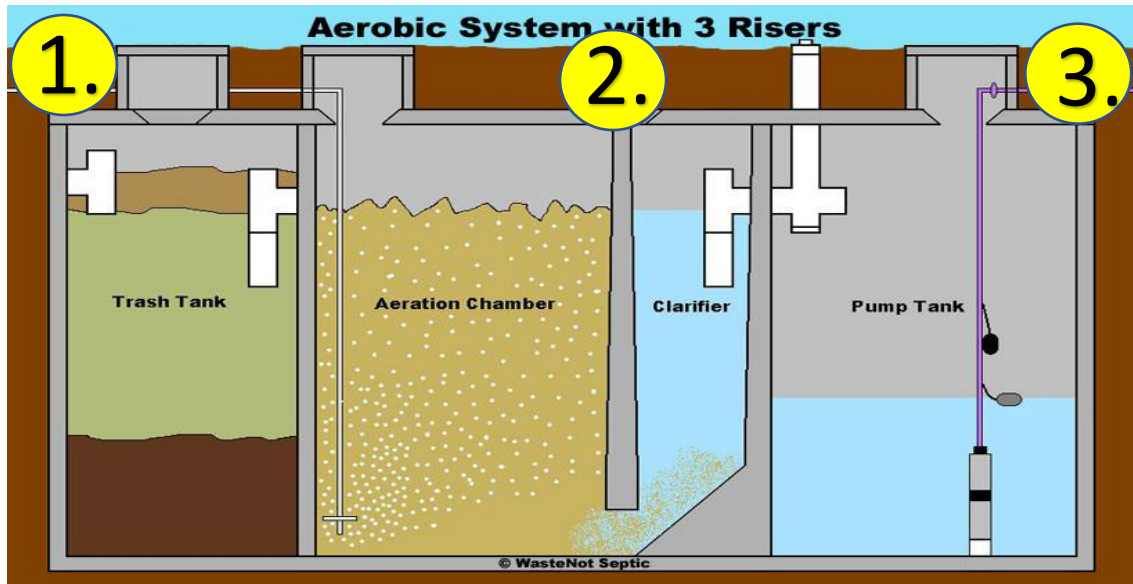
Just like the septic tanks, the ATU is the primary treatment to a home sewage treatment system (STS).

Typically, an ATU is used:

- For off-lot discharging STS when no soil-based options are available; or
- As a pre-treatment component when soil limitations are identified, such as high seasonal water tables.

An ATU is typically designed as two (2) tanks or one tank with three (3) compartments:

1. In the first tank/compartment, separates the waste allowing the solids to settle to the bottom trash trap while the liquid waste, called sewage effluent, flows on to the second tank/compartment.
2. The second tank/compartment is the aeration chamber/clarifier where the aeration process takes place. This is where a specialized motor pumps oxygen into the tank and breaks down the rest sewage effluent.
3. The sewage effluent then enters the pump tank.
Before the effluent goes into the pump station, it will pass through a disinfection unit (typically an ultraviolet light or a chlorine tablet system) to disinfect the sewage effluent.
Once the effluent reaches a pre-set level in the pump tank/compartment, the pump will kick on and discharge to waters-of-the-state or a soil-based component.



Homeowner Operation & Maintenance (O&M) Requirements

Pump The Tank

Tank(s) are simple to maintain. The most important maintenance of the tank(s) is to have it pumped by a registered septage hauler. It is recommended to have tank(s) pumped every 3 to 5 years. Ensure the tank lids are exposed so the hauler can have easy access into the tanks. Keep copies of your septic tank pumping records.

To find a registered septage hauler in Pickaway County, please view our contractor list on our website at www.pickawaycountypublichealth.org.

To help maintain the quality of the sewage effluent and keep bacteria in the tank(s) healthy, use water in the household efficiently and NEVER flush anything down the toilet besides human waste or toilet paper. Flushing anything other than the 3 Ps can require more frequent septage pumping and cause damage to the STS.

Remember the 3 Ps for flushing:

Pee	Poop	(toilet) Paper
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**View the EPA SepticSmart document on our website to learn about items not to flush.*

Maintain a Service Contract

If your STS has an ATU, you must maintain a service contract with an authorized service provider for the lifetime of the HSTS. ATU systems will be equipped with a control panel. If the alarm on the control panel is on (flashing with audible noise), contact a service provider to inspect the STS to determine the problem and solution.

To find a registered service provider in Portage County, please view our contractor list on our website at www.pickawaycountypublichealth.org