



**Lorain County
Public Health**

For the Health of Us All

Household Sewage Treatment System Factsheet

Aeration System- Frequently Asked Questions

What is an aeration system? How is it different than a septic system?

An aeration system treats sewage effluent through aerobic digestion of bacteria and consists of a tank that traps solids and a soil absorption component that provides additional filtration and treatment of sewage effluent. The soil absorption component varies by system, but common components are leaching tile fields, evapotranspiration fields, or elevated sand mounds. Some aeration systems discharge off-lot and receive filtration through a sub-surface sand filter bed or manufactured filter component installed on the system. The aerator motor keeps the effluent agitated and helps introduce oxygen into the system.

Does my aeration tank still need pumped like a septic tank?

Yes, the aeration tank still needs pumped. Consult with your registered service provider or pumper to determine frequency. A typical pumping schedule is every 3-5 years, but varies based on usage.

I don't hear my aerator motor running. Is it broken?

Your aerator may operate on a timer (30 mins on, 30 mins off). After you've confirmed your aerator is not operating on a timer and the aerator is still not running, contact a registered service provider.

Is my aerator required to run continuously?

New aeration systems are required to run continuously. However, older aeration systems may be equipped with a timer. If the system is not causing a public health nuisance, it can continue operating as it was originally designed.



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Aeration System- Operation and Maintenance

State and Local Requirements (*Ohio Administrative Code 3701-29*)

- A service contract is required with a registered service provider who meets all training requirements for the specific system components and manufacturers.
- An annual Operation and Maintenance (O&M) permit from Lorain County Public Health is required. **For any questions regarding Lorain County Public Health's O&M program, please visit www.LorainCountyHealth.com**

Routine Homeowner Monitoring

System component	Monitoring
Aeration Treatment Unit	<p>Ensure the aerator motor is running. You should hear it running as you approach the lid of the aeration tank that is vented (small cap). Do not enter the aeration tank, poisonous gasses may be present.</p> <p>Consult your service provider to determine the proper frequency to have your system pumped and cleaned. A typical frequency is 3-5 years, but varies based on usage.</p>
High Water Alarm (system types vary)	<p>On the control panel for the sewage treatment system, locate the toggle switch for the alarm. Move it to "Test" - you should see a flashing light and audibly hear the alarm. Move the toggle back to "On" or "Auto" when done. If the high water alarm is left on "Test" and then silenced, you will not know if a problem with the system is occurring.</p>
Dosing Pump (system types vary)	<p>On the control panel for the sewage treatment system, locate the toggle switch for the pump. Move it to "Hand" or "Manual". In several seconds, the system should begin dosing. Once you've confirmed it is working properly, put the toggle switch back to "Auto" or "On". If the pump is left on "Hand" or "Manual" it may burn it out and not be covered under warranty.</p>

Follow all manufacturer recommendations and guidelines of your service contract.

Do not attempt to service the system



Aeration System

Homeowner Responsibilities and Preventive Care

- Maintain a service agreement with a registered service provider and maintain the annual Operation and Maintenance Program permit from Lorain County Public Health.
- Keep all system components accessible for inspections, pumping, and service.
- Have the aeration tank pumped and system cleaned every 3-5 years, or at a frequency determined by your service provider. Maintain records.
- Contact your registered service provider with any problems with the system. Warning signs for a Spray Irrigation system include, but are not limited to:
 - Activation of the high water alarm light / audible warning
 - Aerator motor not running
 - Damaged risers or lids
 - Plumbing backups in the house
 - Foul sewage odors
- Divert surface water, to the extent possible without damaging or disturbing the sewage treatment system, away from the tank area or soil absorption component.
- Do not access the aeration tank for cleaning, pumping, or servicing. Poisonous gasses may be present and pose a serious health risk. Contact a registered sewage hauler or your service provider.

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- Do not allow anyone to drive or park over any components of the sewage treatment system. Some, but not all, distribution pipes may be suitable to drive over if they are protected by a sleeve. Contact Lorain County Public Health for a diagram of your system if you are unsure.
- Ensure the aeration tank risers and lids are adequately secured to prevent access and promote safety. Aeration tanks can be several feet deep and should always be kept covered with a heavy concrete lid or well-secured plastic lid with screws.
- The use of garbage disposals should be limited or avoided with an aeration tank. If food debris enters the aeration tank it is treated as a solid and your aeration tank may require more frequent pumping.
- Do not plant trees, dig, or construction buildings or barns over the soil absorption component (mounds, leaching tile fields, etc.)
- Avoid flushing the following items:

Coffee Grounds, Disposable Diapers, Sanitary Napkins, Tampons, Cigarette Butts, Condoms, Dental Floss, Cat Litter, Gauze, Fats Greases and Oil, Paper Towels, Paints, Varnishes, Thinners, Waste Oils, Photographic Solutions, Pesticides, and other hazardous or harmful chemicals that require special disposal.



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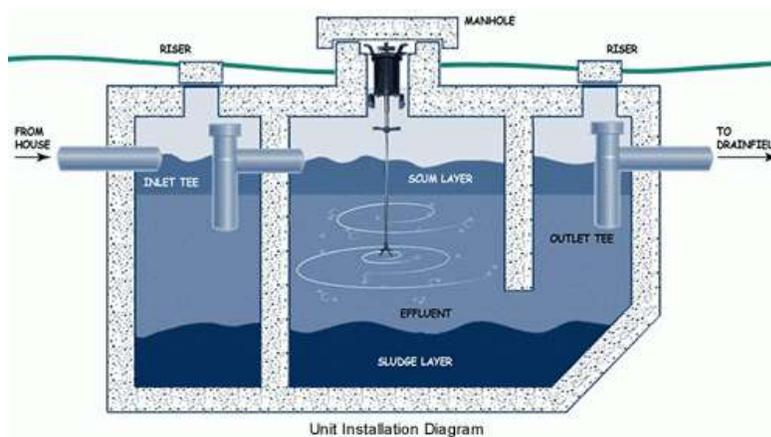
Aeration System Components & Functions

Models, Manufacturers, and Products will vary. Consult your Service Provider. LCPH does not endorse any particular manufacturer of sewage treatment system components.

Aeration Treatment Unit (Consists of Aeration Tank and Aerator)

- Traps scum and solids, provides treatment through retention time and aerobic bacteria digestion, settles solids before effluent enters the dosing chamber.

Tank: (Note the three lids. This is not three tanks. These are access ports for inspection and maintenance for the aeration tank. **DO NOT ENTER THE AERATION TANK.**)



Aerator:





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Ultra-Violet Disinfection (varies by system type)

- Treats sewage effluent with Ultra-Violet disinfection to meet state rules and regulations



Control Panel (varies by system type)

- Electrical wiring, fuses, and toggles and switches for system operation and testing. Traditionally houses controls for the aerator, the pump, and the high water alarm.





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Dosing Chamber (Consists of Tank, Pump, and Activation Floats) (varies by system type)

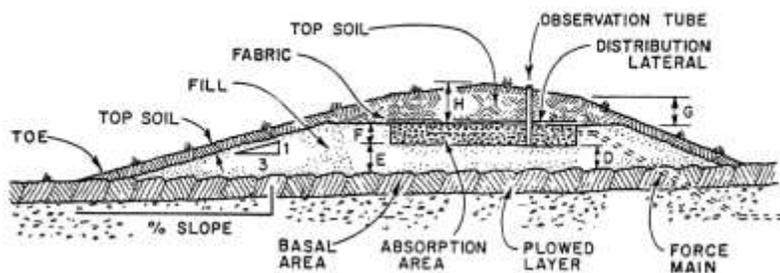
- Provides effluent retention volume, pumps effluent, and provides homeowner notification of improper drainage with high water alarm float.



Soil Absorption Component (varies by system type)

- Provides filtration and absorption of sewage effluent after receiving primary biological treatment from the aeration tank. Some systems discharge off-lot and do not have an absorption component.

Design Sand Mound

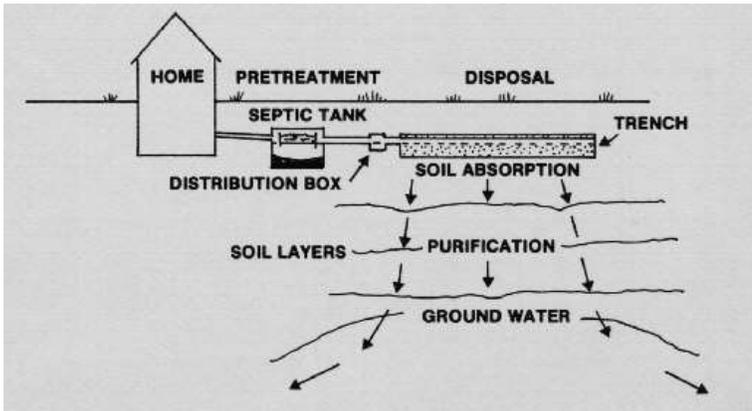




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Leaching Tile Field



Contact your service provider with any questions
regarding your system's components and their
operation.