

Residential Aerobic Treatment Systems

Residential aerobic treatment systems treat sewage by using oxygen to break down organic matter and other pollutants. Aerobic systems work on the same principle as municipal sewage treatment plants, but on a much smaller scale. Aerobic treatment is achieved through biological processes by forcing air into the treatment tank to increase available oxygen, allowing naturally occurring microbes to digest organic material and pollutants in the wastewater, cleaning it up to acceptable levels.

Aerobic treatment systems consist of a trash tank, meant to separate solids and liquid components; an aerobic treatment tank where oxygen is added and microbes treat the waste; a disinfection component, if using spray application; and a pump tank for holding the treated wastewater until its dispersal, the final step in the process where the treated wastewater is pumped to a spray irrigation field or to a subsurface field using a pressurized drip line. Disinfection is required for spray irrigation systems. The disinfectant is typically chlorine, in either liquid or tablet form.

If you have a new aerobic system, DEQ rules require the contractor that installed your system to maintain your system for the first two years. This maintenance cost is included in the cost of the system installation. The initial maintenance requirement ensures the system is working correctly and is free of manufacturer defects.

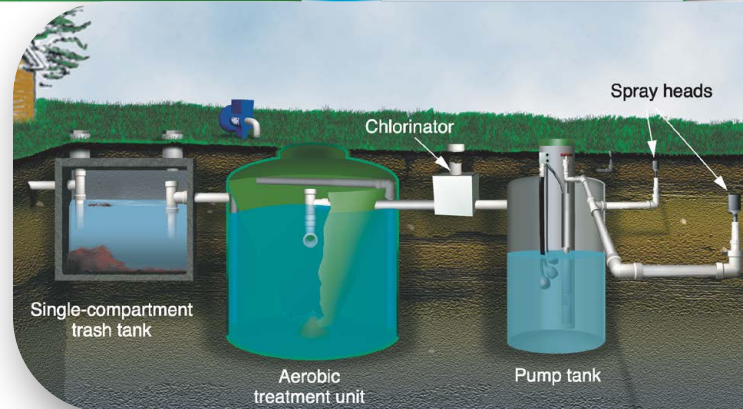
If there are any problems with the aerobic treatment system during the first two years, you should contact your system installer. If your installer fails to provide the required maintenance, please call DEQ at [1-800-522-0206](tel:1-800-522-0206).

After the initial two years, you must either perform the required maintenance yourself or contract with a maintenance provider. Below is the section of DEQ's rules outlining the maintenance requirements for aerobic systems.

252:641-10-3. Responsibility for Maintenance

A. Mandatory two-year maintenance period. The installer of any aerobic treatment system, including those providing nitrogen reduction, shall maintain the aerobic treatment system for a period of two years, following the date the system was installed, at no additional cost to the owner. During the two-year mandatory maintenance period, the installer shall be responsible for the following:

1. Repairing, adjusting or replacing any broken or malfunctioning parts;
2. When spray dispersal is used, testing and recording the free chlorine residual of the effluent in the pump tank at least once every six months;
3. Measuring and recording the depth of the sludge in the trash tank at least once every six months;



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4. Measuring and recording the volume of the sludge in forced-air aerobic treatment units at least once every six months;
 5. When pump tanks are used, conducting a clarity test and recording the results as passing or failing once every six months. A passing clarity test is one where an eight-inch disk with alternating black and white quadrants is visible when placed on the bottom of the pump tank when the tank is at least one-third full;
 6. Notifying the owner of the system in writing of:
 - a. The type and date of any repairs, adjustments or replacements performed on the system;
 - b. The results of the free chlorine residual test if required and, when applicable, the need to add chlorine and how to do it;
 - c. The depth of the accumulation of sludge in the trash tank and the need to have it pumped so that the depth of the sludge is never more than 40 percent of the overall depth;
 - d. The volume of the sludge in the aerobic treatment unit and the need to have it pumped so that the volume of the sludge in the aerobic treatment unit is never more than 40 percent; and
 - e. The results of the clarity test and, if it fails the test, what the installer did or the homeowner needs to do to correct it; and,
 7. Documenting all maintenance and testing performed on the system and maintaining those records at the business for a period of three years following the date of service.
- B. Exclusions from maintenance.** The installer shall not be responsible for repairing aerobic treatment systems when the owner/operator is the sole cause of the damage to the system or the system's malfunction (e.g., sprinkler heads that properly retract into the ground but are nevertheless damaged by careless actions of the homeowner, excessive water usage, introduction of harmful items into septic system, etc.).
- C. Owner responsible after two-year period ends.** After the expiration of the two-year mandatory maintenance period, the owner of the aerobic treatment system shall be solely responsible for maintaining or hiring someone to maintain the system so that it operates as designed.

For more information about aerobic treatment systems go to DEQ's website at:
<https://tinyurl.com/2fjmu8jx>