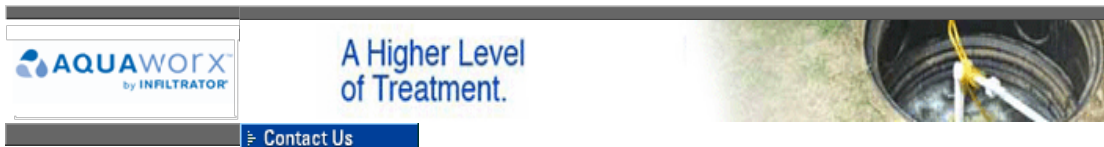




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FAQs

The Aquaworx Remediator Frequently Asked Questions

How do I know if my septic system is failing?

Symptoms of a failed septic system vary from surfacing effluent in the area of the disposal field, surfacing effluent over the septic tank, strong odors, green lush grass over the disposal field, or backed up plumbing and drains.

What is the cost of a Remediator installation?

The cost of a complete Remediator solution generally ranges between \$4,000 and \$6,000. The cost can vary according to any additional work that may have to be performed by your Certified Remediator Installer.

Do I need a permit?

In Virginia, a permit is required to modify or repair an existing onsite wastewater system. However, because this technology is typically considered to be "remediation" or repair of an existing system that has already been permitted the application is much simpler.

How many systems have been installed?

Since the initial Remediator installations in the year 2000, more than 3,000 systems have been successfully installed throughout the U.S. and Canada.

How much does it cost to operate the Remediator system?

The operating cost of the Remediator is pennies per day and is driven by the cost of energy to run the Air Pump. The airlift pump uses 25 watts of power. At 14 cents a kilowatt, the cost would be about 5 to 7 cents per day.

What is the cost of the annual maintenance?

The certified Remediator installer **ESVA** will generally charge a fee of \$200.00 per year for the annual inspection. This may vary depending on location; ask your Certified Remediator Installer. Further, in other areas of the country, this fee can change depending on local regulatory requirements that may increase the frequency of the maintenance. The typical installation requires between one and two inspections per year.

Will I have to have my septic tank pumped or leach lines jetted before or after installation of the Remediator System?

Pumping the septic tank is not required, however if the tank has more than 3" of scum or 6" of sludge then the contractor may want to pump the tank to make installation easier. Once the Remediator is installed, it has demonstrated in the field that the septic tank can be pumped less frequently. Solids that enter the septic tank are digested and leave the septic system as gas. In addition, there could be cases where a physical problem occurs with some construct of the system that would require the septic tank be pumped to make a necessary correction. In most typical systems, the leach lines do not need to be jetted prior to installations. It is important to note that these recommendations do not supercede a local regulation that may require a specified pumping frequency.

How do septic systems fail?

Septic systems are simple in nature but are very complex and robust treatment mechanisms. A properly designed, installed and maintained system can yield decades of service life. However like any system it has a finite life and will eventually need to be replaced just like your car or roof of your home. Septic systems are not immune to abuse or neglect, so the system can prematurely fail if abused. There are several causes for failure (as described below) but in a majority of these cases the system can be overloaded and an overly restrictive biomat formation can occur in the leachfield. When this occurs water enters the system at a greater rate than it can be absorbed causing the system to back up. See the [Drainfield repair](#) page

Why do septic systems fail?

If the liquid effluent cannot soak into the soil surrounding the leachfield, sewage may back up into the system creating two distinct symptoms, effluent surfacing on the ground at a location over the leachfield or septic tank or alternatively sewage backing up in to the house. The possible causes for this problem are:

- Poor Soil Conditions
 - A leaching system placed in unsuitable soil for the flow generated from a house.
- Excessive Water Usage
 - A septic system designed too small for the house it serves or too small for the water generated from the house.
- Soil Clogging and Septic System Failures
 - If sludge or scum is allowed to escape out of the septic tank and enter the leachfield, the soil may become clogged. If this happens the liquid will not be absorbed into the soil. This can be a common problem if there is a failure to have the septic tank pumped. It is also important to note that over the normal operating life of a septic system this sludge will eventually clog the leachfield and cause the system to fail.

system this clogging will naturally occur and can eventually overwhelm a system.

- High Water Table and Septic System Failures
 - During wet or abnormally wet seasons, groundwater may rise into a leachfield and force sewage to the surface. This is normally caused by an error in design or a significant change in the surrounding landscape.
- Roots and Clogging of Septic System Failures
 - The roots of trees and bushes planted too close to the system can sometimes enter and block the pipes of the system. Removal of the plants and clearing the pipes of the roots can sometimes correct the problem.
- Physical Damage to Septic System Components Causing Septic Failures
 - Trucks or heavy equipment passing over any portion of the system can damage pipes or other portions of the septic system causing a malfunction.

How does a Remediator system work?

The Remediator solution helps remediate most septic system failures using three key principles. First, the Remediator is an efficient aerator of septic tank effluent producing high levels of Dissolved Oxygen (DO). The exposure to oxygen promotes the growth of more efficient aerobic bacteria in the septic tank. Second, the Remediator Bacterial Catalyst helps to digest the organic material in the septic tank. Third, the Remediator bacteria then travels within the highly treated effluent into the failed disposal field to aid in digesting the Biomat clogging the soil pores. With the Biomat diminished, the soil pores are more free to accept septic effluent - rejuvenating the disposal field.

How long will it take to rejuvenate my disposal field?

There will be an immediate improvement in septic tank function as the tank moves from an anaerobic tank to an aerobic tank. Most tanks will make this conversion in a few days, and can be identified as the tank loses its harsh "septic" smell. Some systems require more time to improve disposal field performance than others because there are many site specific conditions that could be affecting the performance of the system. Generally, in temperate weather climates, an improvement is apparent in the disposal field within two weeks. Your Certified Remediator Installer will explain the factors affecting your area.

How is the Remediator different than all the other ATUs on the market?

The Remediator is unique in several respects. First, the Remediator is not an Advanced Treatment Unit (ATU). It is an Aerobic Bacteria Generator (ABG) used for remediation of failed septic systems. It functions by efficiently converting organic matter in a septic tank into a rich colony of specific bacteria introduced and grown within the Remediator unit. The species of bacteria in the Remediator Bacterial Catalyst have an aggressive appetite not only for the organic material within the tank, but also for the mucous coating which clogs the biomat that forms in the soil of a standard leach trench. The second major distinction of the Remediator is in its simple design. It is designed to slide into most standard septic tanks without any major construction. Most ATUs require the installation of a separate tank that adds significant cost to the repair.

What is in the Remediator Bacterial Catalyst?

The Remediator Bacterial Catalyst is a proprietary blend of bacteria grown from mushroom compost. The blend is rich in Bacillus bacteria which are a facultative species that is able to thrive in both aerobic and anaerobic conditions. This makes it the perfect solution for the conditions found in septic systems.

How does the Remediator remediate the clogging biomat in the leach line?

The clogging biomat, typical of conventional septic systems, is an anaerobic biomat composed primarily of a mucus slime. The intestinal bacteria that dominate the load to a septic tank need to produce this mucus to protect themselves in the intestinal tract. This mucus fills the pore spaces between the soil particles, retarding the absorption of liquid into the soil. At some point the soil becomes so restricted that the system fails. The Remediator Bacterial Catalyst are facultative bacteria capable of surviving and thriving in both the anaerobic and aerobic environments found in a septic system. The Remediator Bacterial Catalyst when combined with the Dissolved Oxygen (DO) from the air diffuser create an aerobic colony of bacteria that travels to the biomat/soil interface and consumes the mucus producing anaerobic bacteria that restrict absorption of the liquid into the soil.

What is the shelf life of the Remediator Bacterial Catalyst while still in the envelopes?

When properly stored as per the supplier's instruction, Remediator Bacterial Catalyst has a reasonable shelf life of up to 24 months. The Remediator Bacterial Catalyst should be stored in a dark, cool, dry environment.

What is the tank life of the bacteria/ inoculants if food is present?

The first Remediator units were installed in the latter part of 2000 as part of a Research and Development program. To date, it has not been necessary to re-inoculate these early systems (excluding toxic materials chemotherapy by-products, prolonged periods on strong antibiotics). The Bacterial Catalyst should maintain a viable colony within the Remediator unit. It is recommended to replace the Remediator Bacterial Catalyst on an annual basis to ensure that the bacterial community stays healthy and to encourage routine site inspection by a certified installer. This conservative approach is not costly and ensures the system is performing.

Do the enzymes that are marketed to rejuvenate septic tanks work? How is Remediator different?

Enzymes are proteins produced by living cells that catalyze biochemical reactions. A majority of the enzymes that pumpers use are artificially produced and introduced in concentrations that will break down and dissolve (make soluble) the organic material in waste. The organic load is changed in form but not removed from the system by digestion. This includes the solids that are referred to as "scum" in septic tanks. This may clean a tank of some organic material but the problem is passed down stream to the disposal area where it will hasten the failure of the disposal area. Standard septic tanks are designed to store organic material for future removal by pumping. Enzymes defeat this purpose. The Remediator is different because enzymes are being produced by living bacteria. Any food that is hydrolyzed by these enzymes is immediately consumed by the bacteria. In fact, these living bacteria pass with the effluent downstream to digest residual organic material that may have built up in the past.

At what temperature do the bacteria become dormant/less active in the tank?

Temperatures of 40 degrees F and below will significantly reduce the biological activity of all bacteria. A properly functioning septic tank maintains an inside temperature ranging from 48 to 52 degrees in northern climates during the winter. Although the bacterial activity decreases in the winter it does not stop. The temperature of the inflow effluent and the activity of the bacteria in the tank maintain functional temperatures.

What affect will drugs have on the function of the Remediator?

Any ongoing pharmaceutical drug treatment (10 days or more) by any occupant of a residence being served by the Remediator System should be brought to the attention of the local Remediator representative. This includes house guests. Pharmaceuticals create toxic compounds after being utilized in the human body. They are typically excreted in the urine. When allowed to remain

create toxic compounds after being utilized in the human body. They are typically excreted in the urine. When allowed to remain in sufficient concentrations within a septic tank, these compounds can kill the entire bacteria community. These compounds will seriously diminish the capacity of any bacteria community within the septic tank. We have found chemotherapeutic drugs, antibiotics and immune suppression drugs to be the most problematic. Combinations of many different pharmaceuticals can also be toxic. The most important thing to remember is the longer the problem exists without correction, the time and costs to correct the problem typically increase.

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