

Bio-Microbics  
ProudGreenHome article - DRAFT  
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## Biologically-failed septic systems: an underlying concern for your environment

Twenty-five percent of homes in the United States have septic systems. Ninety percent of these are in rural environments. On average, every home discharges 250 gallons of waste water every day. While conservation efforts and knowing what not to put down drains reduces stress on septic systems, they can still fail for a number of reasons, potentially releasing everything that a domestic home discharges from its' plumbing fixtures, appliances, toilets, bath, laundry, and dishwashers in to the environment.

It is easy for homeowners to have an "out-of-sight, out-of-mind" mentality with regard to their septic system; especially homeowners new to the septic system lifestyle. It is not visible, and it is easy to assume that things flushed simply "go away". But that is far from reality.

Some of the more common pollutants found in residential wastewater include:

- Organic and Inorganic Compounds
- ~~Inorganic~~
- Solids
- Pathogenic Organisms
- Nutrients
- Metals
- Persistent Organic Compounds
- Fats, Oils, and Grease (FOG)
- Endocrine ~~Disrupters~~Disrupters

Septic systems require periodic maintenance by a qualified service company in order to perform efficiently. Biosolids (sludge) levels should be measured on a regular basis by a maintenance provider to determine when a pump out is required.

There are a number of other things every homeowner can do themselves that help the functionality of their septic system. ~~Keeping the blower on at all times, for example. The vents and blower housing must be clear of leaves, snow.~~—Make sure water from downspouts, pavement runoff and sump pump/house footing drains is diverted away from the septic system drain field. Trees should not be planted within 30 feet of a system.

Vehicles should never drive over the system (except for lawn maintenance equipment such as lawn mowers). This can be aesthetically safeguarded by strategically planting shallow-rooted plants or placing fencing. Never build patios or other structures over the system. A good rule of thumb is to never have anything heavier than sod over your system.

Neglecting these safeguards will-could eventually cause a system failure.

Bio-Microbics, a world leading manufacturer of decentralized wastewater, septic system enhancements and storm water systems products, has developed a system to fit in existing residential septic systems designed to enhance or repair ones that have biologically failed.

RetroFAST® systems are designed for residential strength wastewater in 3 specific sizes designed to fix or prevent soggy lawns, foul odors and plumbing backups. The RetroFAST system inserts into an existing ~~16"~~ manhole (16" – 18") without the need for heavy equipment. The installation can be accomplished in about half a day, without disrupting landscaping with expensive digging.

USEPA ETV-tested, it provides a simple upgrade to a conventional system. The proven Fixed Integrated Treatment Technology (FITT®) is one of the ~~most widely used and popular~~ best methods of treatment for advanced wastewater treatment systems.

It can also be installed in new installations where sites and regulations allow. It is designed to deliver high levels of treatment (from day one) to help ensure the clogging layers never form. The RetroFAST system constantly provides dissolved oxygen (DO) rich effluent into the drain/leach field.

~~Effluent, the layer of liquid in the septic chambers between the bottom sludge and the floating scum, eventually goes to the drain field. The dissolved oxygen greatly enhances the necessary bacteria needed to have the system function.~~

RetroFAST systems come with Bio-Microbics' exclusive S.O.S. – Save Our Septic – warranty program. If after one year from time of the startup date the RetroFAST system does not eliminate the symptoms, the property owner is entitled to a full refund for the ~~system~~ equipment.

It is a very cost effective solution that meets environmental standards with long term results. Cost varies, depending upon individual septic systems. But for many homeowners, the cost of the equipment system is under \$~~1~~2,000. It may qualify for certain green certifications in your area.

Bio-Microbics' RetroFAST system is an effective and environmentally sound alternative to replacing an entire septic system at a fraction of the cost.

For more information and testimonial application videos visit [www.biomicrobics.com](http://www.biomicrobics.com)

For over 35 years Bio-Microbics, located in Shawnee, Kansas, has a real world operating history with more than 42,000 installations in over 60 countries. Through a worldwide distributor network, Bio-Microbics has been recognized as a leader in exporting decentralized equipment with receiving the 2011 KS Exporter of the Year Award and the 2012 President's "E" Award for Excellence in Exports.

~~One reference on Bio-Microbics' website refers to a 16" manhole size while another references an 18" size. Please clarify.~~