

# Better than New Septic from Bio-Microbics!

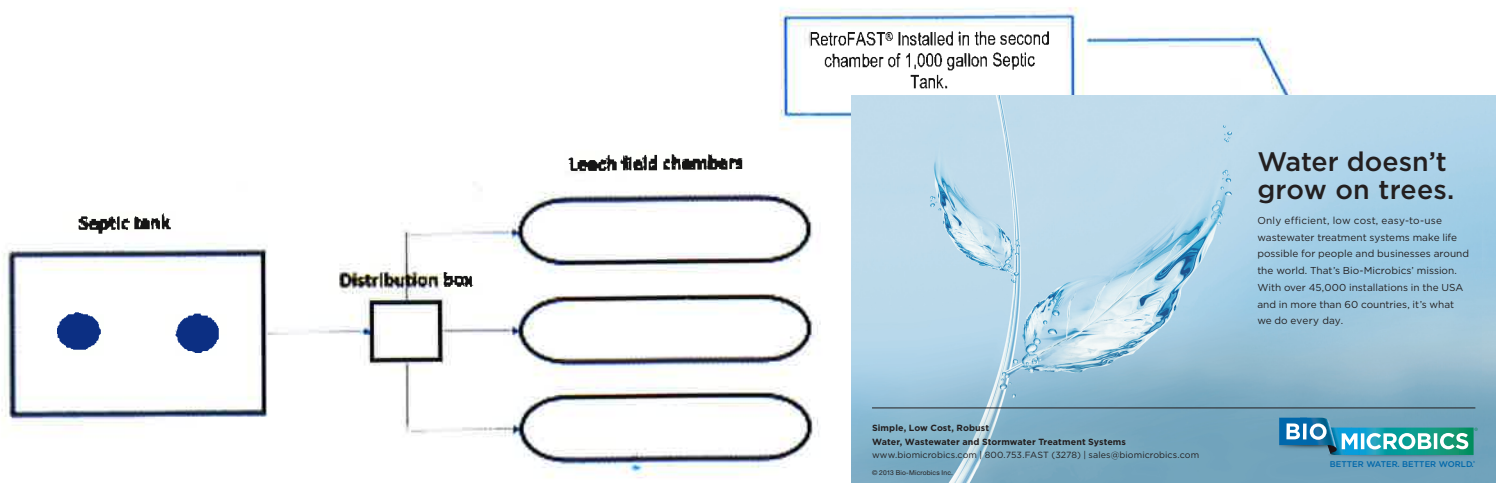
*In Western Kansas, those properties that experience biologically-failed septic systems rarely have options other than to replace the entire system - an expensive endeavor for low-income housing.*

For a family located in Finney County, the local authorities identified the tell tale signs of a biological failure from their 20-year-old septic system. Sewage was ponding in the yard and backing up into the home. This area in western Kansas, which is considered low-income, could not afford the cost of a complete replacement system or many of the other conventional options that were presented. Of the options that were considered by the local authorities, a technology that had never been used in western Kansas before was considered. The EPA-ETV verified technology, RetroFAST® manufactured by Bio-Microbics, Inc., was the system selected.

The Finney County Sanitarian, Scott Selee, evaluated the existing standard (rock, pipe, and drain field) septic system for the home. Since the RetroFAST system was new to the local Regulators and installer, the homeowner agreed to participate in Bio-Microbics' S.O.S.-Save Our Septic® Warranty Program for the upgraded system as a training opportunity. As such, Mr. Selee invited Sheryl Ervin, PG, Director of Regulatory Affairs at Bio-Microbics, and Paul Flynn, Senior Director of Operations at Bio-Microbics, to review the property under the S.O.S.-Save Our Septic® (SOS) guidelines and train those involved how to install a RetroFAST®, which was designed to install in existing septic tanks.

The SOS program consists of a Site Evaluation questionnaire that the homeowner completes, property characteristics and observations noted by the local regulator, installer (Terry Johnson of Johnson Septic) and the Bio-Microbics representatives, and photos documenting the current state of the property. During this evaluation process, the determination was made that the original septic tank did not meet the current regulations and the structural integrity of the concrete was deteriorating. The soils on the property were classified as heavy clay loam, which added to the issues of the failed system. The original system of approximately 50 to 60 feet of rock and pipe and about 80 feet of concrete chambers was severely undersized for a three bedroom home and exhibited all the signs of biological failure. The size of site also contributed to the challenges of the system. The home had only a limited 1 acre corner lot, which was bounded on two sides by a road and a drainage ditch on the third side. This prohibited a properly sized drain field and made installation of a new full traditional replacement system impossible.

Completed in May of 2014, a new two compartment 1,000 gallon tank was installed, with the RetroFAST® in the second compartment of the tank. The original lateral lines were jetted and the new outlet from the septic tank was connected to the existing drain field.



As a demonstration project for RetroFAST®, this was a successful solution for this home installation project. Several comments were made by those in attendance, including Mr. Selee, Doug Schneweis with the Kansas Department of Health & Environment, and even the installer Terry Johnson of Johnson Septic, about the ease of installation and the robust function on the treatment process.

Mr. Flynn, who has been with Bio-Microbics for more than 12 years, mentioned that the FAST® wastewater treatment systems are ideally suited for a multitude of applications. FAST systems are designed to consistently deliver high performance (average of 95% BOD<sub>5</sub> reduction and 70% total nitrogen reduction) and are available for many different applications (see below). By installing the upgraded septic system, the RetroFAST will consistently deliver high levels of treatment (90-95% of treatment in the tank) and provide dissolved oxygen to the drain field. This helps to assure the clogging layer is reduced or never forms in the first place.

Advantages a RetroFAST® System has over the original, conventional septic system:

Produces a cleaner effluent for the environment

Treatment begins in the septic tank, extending the life of the drain field

Prevents or remediates biological failures without costly chemicals or additives

Possibly can reduce the size requirement of the leach field

The unit was checked 3 months after installation. Mr. Selee assured the homeowner that everything was working well, and the drainfield was functioning properly.

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**About Bio-Microbics, Inc.** - With more than 45,000 installations in over 60 countries, Bio-Microbics pre-engineered, pre-packaged, certified, "Fixed Integrated Treatment Technologies" (FITT®) are the result of decades of real world operating history and proven results of decentralized wastewater treatment that offer significant environmental benefits for homes, communities, commercial properties, and marine vessels...FITT® for the Purpose Intended. For more information about Bio-Microbics water, wastewater, and/or storm water treatment products visit [www.biomicrobics.com](http://www.biomicrobics.com); contact us at [sales@biomicrobics.com](mailto:sales@biomicrobics.com) or call toll-free at 1.800.753.3278 (FAST), 1.913.422.0707.

