



# Case Study

## Taney County Man Works to Improve Septic Tanks - July 30, 2003

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By Matt Wagner - News-Leader Staff Writer

Taney County — Perched casually atop a ring of unearthed dirt in his back yard, Floyd Gilzow peered into a pit as two mud-covered men tinkered with his septic tank Tuesday morning.

The men — employees of White River Valley Environmental Services — were retrofitting the tank with a second chamber that will incorporate oxygen into the on-site sewage treatment process.

Most of the 60,000 septic tanks in southwest Missouri rely solely on anaerobes, or microorganisms that don't need oxygen, to break down organic matter, explained Gilzow, a crusader for improved water quality in the Ozarks.

But many of those older tanks have slipped into noncompliance and are polluting groundwater, said Bruce Martin with the Missouri Department of Natural Resources.

"A lot of them were installed when Table Rock Lake was being built... and many of those systems are likely still in the ground and have long ago failed," he said.

The addition to Gilzow's tank may provide a less costly solution for those ailing systems, Gilzow said. He hopes by being a guinea pig for the new system, other will follow his lead.

Porous soils and clay throughout the Ozarks demand the heightened vigilance of property owners to protect the region's lakes and streams, noted Gilzow, who is executive director of the Upper White River Basin Foundation.

"People have to make some decisions," he said. "We have the strongest economy in the state. One-third of people coming to Branson said they come for water activities."

Said Mike Cole, an inspector with the Taney County Regional Sewer District: "Tourism is the big picture. It's an economic engine. If we lose our lakes, we're in big trouble."

But before spending thousands of dollars on a new septic system, property owners should know there are more affordable — and innovative — alternatives out there, Gilzow said.

One of those is the RetroFAST™ wastewater treatment system by Bio-Microbics, Inc. of Shawnee, Kan. The upgrade



will enable Gilzow's tank to remove higher levels of nitrogen, phosphorus and suspended solids, said Rick Helms, operations manager for White River Valley Environmental Services.

The end product, Helms said, is clearer, oxygen-rich water being discharged into the surrounding soil.

"It's a very, very simple unit mechanically," he said.

The system's key component is a remote, above-ground fan that blows air into the newly created chamber, causing the wastewater to bubble vigorously.

Inside, aerobic bacteria feed on the organic matter before the treated wastewater is funneled to a nearby absorption field.

Samples of the effluent will tell Helms whether the systems are performing as promised.

So far, White River Valley Environmental Services has only retrofitted three septic tanks with the technology, but Helms expects interest to radiate as word spreads.

"We think there are a lot of applications for these ... because it's so minimally disruptive," he said. "I think we'll find some pretty good acceptance of this."

But no septic system of any sort is maintenance-free, reminded Bryan Vane with the Greene County Resource Management Department.

"There are a lot of great products to pretreat sewage before you dispose of it in the soil, but they all require some sort of routine maintenance," he said. "For most people, if it's out of sight, it's out of mind."

Gilzow encouraged county residents with septic tanks to consider the RetroFAST upgrade, which costs between \$2,000 and \$3,000

Installation rarely takes longer than a day.

"This isn't going to clear up Table Rock Lake," Gilzow conceded. "And at some point, the government will have to step in and at least partially fund this (septic tank overhaul)."

But how to awaken the environmental conscience of those nestled in the secluded nooks of the Ozark Mountains? "That's the \$64,000 question," Gilzow replied. "It's like how do you convince people they need to watch their cholesterol or that they need to exercise. ... What we've got to do is create an ethic."

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