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Keeping It Conventional

A West Texas installer adapts to changing times with constant training in a growing range of drainfield configurations

By Doug Day

The desert of West Texas is perfect for conventional onsite wastewater systems. That doesn't mean employees of San Angelo Backhoe and Septic Services Inc. (DBA JR Construction) in San Angelo don't have to stay educated about new methods and technology in the industry.



With a semi-arid climate and clay loam soil over igneous rock, the area experiences high rates of surface water evaporation, and groundwater runs from 60 to 400 feet beneath the surface.

Ray Stubblefield, owner of SABSS, says most of the septic systems in his service area — 15 counties within a 100-mile radius of San Angelo — are conventional systems. Ninety-ninepercent of his own installations are conventional systems with drainfields using chambers from Infiltrator systems.

In Texas, the code for a three-bedroom home calls for a 750-gpd flow with 180 feet of drain line. "In West Texas," Stubblefield says, "conventional systems work well and last a long time."

Always learning

While groundwater is naturally protected, SABSS crews focus more on protecting drinking water wells, which generally require a 100-foot separation. There are some springs in the area, but mainly near existing creeks and rivers that regulations say must be avoided anyway.

Still, Stubblefield's five employees, including two sons, get about eight hours of annual continuing education from the Texas Research Council. They also attend the Texas Onsite Waste-water Association (TOWA) educational session every

year. Stubblefield, who is on the board of TOWA, also keeps the employees informed about the association's activities.

As in many areas of the country, the pace of change is beginning to pick up with regulatory pressure and population growth. Texas has new regulations dealing with aerobic treatment systems, and builders are putting homes on land unsuitable for conventional septic systems. Advanced systems are becoming more common.

"Some of the new systems in rocky ground will be a concern in the future," Stubblefield says. SABSS installed two systems last year in such conditions — and none the year before. Even those were fairly simple.



“We can excavate the rock and put suitable soil in its place with a low-pressure dosing system, so we get the evaporation off of it,” Stubblefield says. However, since rocky land usually has some slope, he often brings soil in to create a mound system. “It needs more drainfield but it’s less expensive than excavating rock,” he says.

Site evaluations

Stubblefield expects to have an average year in 2006, installing 60 to 80 systems. He has installed as many as 200 in a year. Designs are left to licensed engineers.

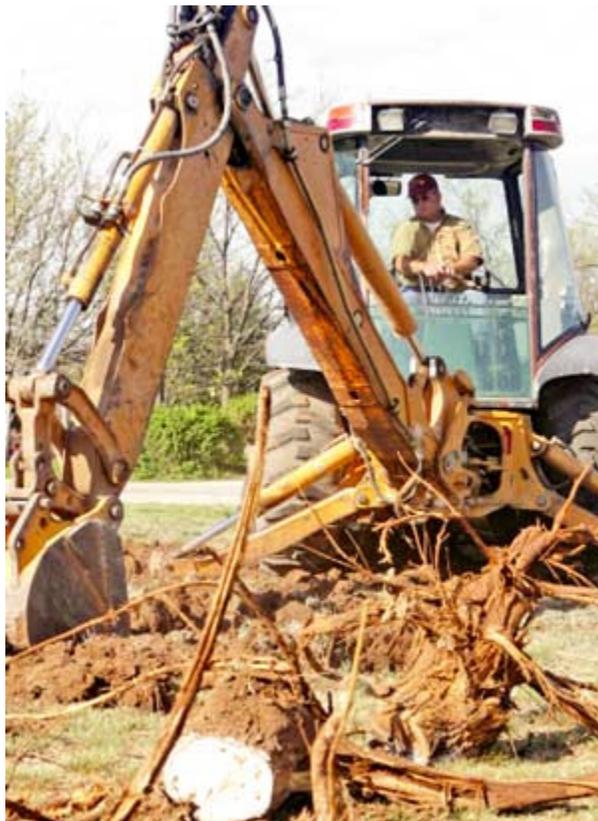
Since 2002, all permits for onsite systems have required a site evaluation by a licensed site evaluator or a licensed professional engineer. The evaluation includes a soil analysis, a survey of the entire lot, and identification of any other factors that affect the site’s suitability for a standard onsite system.

Installers are broken into two classes. Those in the Installer 1 class are allowed to install conventional systems with absorptive drainfields, unlined evapotranspiration drainfields, leaching chambers, gravelless pipe and pumped effluent drainfields.

Those in the Installer 2 class can put in all types of systems, including alternatives like aerobic treatment units, mounds and low-pressure dosing systems. Both designations require training. The Installer 2 license also requires installation experience. All systems are inspected by a licensed site evaluator before installation.

Cluster systems are not common in Texas — they are not considered onsite systems and are covered by different regulations, Stubblefield says. “I think it’s because in the past they had some bad engineering with some of them and had a lot of trouble getting them back online so they weren’t polluting,” he says.

However, he would not be surprised to see them become more prevalent in the future as new subdivisions proliferate in the area.



Digging in

Besides septic system installation, the family-run business does general excavation that includes plumbing rough-ins, footings, house pads, and roadwork for commercial contractors. “We do anything you can do with a backhoe and a dump truck,” Stubblefield says.

The fleet includes four Case 580L backhoes and two dump trucks. SABSS also owns a Tilt-Lock 570 load leveler and four Ford one-ton pickups. The company fabricates its own concrete septic tanks, as do most local competitors. That helps keep the team busy during slower times. “When we’re not doing anything else, we fabricate tanks,” Stubblefield says.

So far, SABSS has avoided working with aerobic treatment systems, which are now common in Eastern and Southern Texas with its rocky terrain or high groundwater. “We don’t have high groundwater, so we don’t have to use aerobics,” says Stubblefield.

In the future, though, Stubblefield expects aerobics to become part of his business, because of new building patterns and stricter regulations from the Texas Environmental Quality Commission (TEQC).

The area isn’t seeing a building boom, but according to TEQC, one in three new homes use onsite systems — about 50,000 new permits are issued each year. Stubblefield observes that people are looking for larger home sites.

“Everybody wants to have 10 acres,” he says. “They go out and buy 10 acres of rock because it’s cheap. Then they find out it wasn’t so cheap because they can’t put in a conventional septic system.” Advanced systems run about three times the cost of a conventional system, Stubblefield says.

“The reason I avoid aerobics is the maintenance,” he adds. “When people begin to understand that they need to do maintenance weekly — if they ever get that into their heads — the aerobic systems are really a great thing.”

Educating customers

Being a member of the TOWA board, Stubblefield prefers education to regulation. “If you educate the people that they’re contaminating their waters by failing to maintain their systems, they will change their ways,” he says.

He disagrees, however, with people who think the state should keep out of it. “People can be ignorant and really mess something up,” he says. “If you pollute your water, it’s polluted for a long time. It takes quite a bit to straighten out the water system once it’s been polluted.”

The state’s approach, he says, has become one of education through regulation. New laws in Texas require the owner of a home with an onsite system using aerobic treatment to have a maintenance contract or to be trained by the manufacturer or installer to do their own maintenance.

Up to six hours of instruction is required for a homeowner. For registered maintenance companies, employees need 16 to 32 hours of training from the manufacturer. Manufacturers must track the training of maintenance firm personnel and homeowners.

System testing, and the filing of a report, is required three times a year. A full inspection is required every five years. When a home with an aerobic system is sold, the buyer must sign a maintenance contract or get the appropriate training within 30 days. Violations of those and other provisions included in the new regulations are subject to penalties of up to \$2,500 per day for each violation

Repair business

The need for education is evident in the company’s onsite system repair business. Most systems that SABSS repairs are 15 to 30 years old and appear to be victims of an “out-of-sight, out-of-mind” attitude. “The systems have been in the ground a long time, they haven’t been maintained, and people never pump them,” Stubblefield says.

The result can be worse than just a big bill for repair work. “The solids fill the tank and go out and clog up the drain lines,” he says. That means new drain lines, which in turn require a new system design and new permits.



“Texas is one of the few states that regulates the way they do and as heavily as they do,” says Stubblefield. “Texas is so big and conditions vary across the state. They want to be as stringent as they can, but yet not be so bad that people can’t handle it.”

Things are far different today than when he and his father, Joe, “jumped with both feet” into the business in October 1984. Before that, the elder Stubblefield was a roughneck working on oil rigs and derricks, while his son worked in the office of a petroleum company. “Dad was getting too old for that type of work, and I wanted out from behind the desk,” Stubblefield recalls.

So they bought an existing construction company and quickly realized that it wasn’t going to be easy. “We were hoping to get into the construction business in the oil fields,” Stubblefield says. “But that business went flat, so we made it with septic tanks and dirt work. I thought I knew a little bit about it until I started doing it and figured out there’s more to it than running a backhoe and throwing a tank in the ground.”

Ironically, now that the company is a success, he finds himself back behind the desk he was trying to escape. “As the company grows, I find myself doing more and more paperwork,” he says “For every system you put in, there are five or six pieces of paper to fill out.”

The elder Stubblefield still does some septic pumping and works at SABSS a couple of days a week. “He watches and laughs sometimes,” says the younger Stubblefield, who thinks it would be more difficult to get started in the business today. While the job is harder now, Stubblefield says there is more work for installers. “Texas is a growing state,” he says, “and onsite is getting to be a bigger and bigger thing.”

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