

February

ONSITE installer™

PROMOTING WASTEWATER TREATMENT QUALITY AND PROFESSIONAL EXCELLENCE www.onsiteinstaller.com

Does effluent ponding
mean system failure?

Page 16

A perfect system
in a tight spot

Page 20

Watertight and
workin' right

Page 28



SHOW ISSUE

MIRACLE WORKER

Georgia's Gravelator Systems has built a reputation on creating systems for lots previously considered unusable

PAGE 8

MIRACLE WORKER

A Georgia installation company has built its solution-driven reputation on creating systems for problem lots previously deemed unusable

By *Scottie Dayton*

Harold Kilgore dislikes the word “can’t,” and has spent the last 12 years proving it through his solution-driven company, Gravelator Systems. The small family-run business in Talmo, Ga., opened in 1997 and specializes in designing and installing systems for sites classified as unbuildable.

Kilgore’s list of pilot systems includes Hall County’s first aerobic treatment unit (model AK600596 from AquaKlear) in 2001 and the county’s peat biofilter (PuraFlo from Anua) in 2002. In early 2007, he added the county’s first Eljen In-Drain sand filter to the list.

He did it by earning the respect of state and county regulatory officials and building solid working relationships with them. Kilgore spends months studying new technologies before presenting his case for them with clarity and facts.

Gravelator, with its “git-er-done” reputation, is often the last hope clients have for developing their properties. From working on 60-degree slopes and hand-excavating sites to lowering a mini-excavator down the face of a cliff, there is nothing Kilgore won’t do to solve the problem. “If clients want the system installed and money is not an issue, we will make it happen,” he says.

Following destiny

Kilgore, 50, and wife, Sharon, built the business by seeking out tract builders such as KB Home, Colony Home Builders, and Bonner Custom Homes. “Our goal was to find developers building 100 to 200 houses and install the onsite systems,” Kilgore says. “We wanted volume, and the cookie-cutter systems — chamber drainfields with a single septic tank — enabled my three crews to install one, sometimes two, per day.”

(continued)

Gravelator Systems Inc., Talmo, Ga.



OWNER:	Harold Kilgore
YEARS IN BUSINESS:	15
EMPLOYEES:	3
MARKET AREA:	100-mile radius
ANNUAL REVENUE:	\$657,000
SPECIALTY:	Designing and installing systems for challenging sites
AFFILIATIONS:	Georgia Onsite Wastewater Association
WEBSITE:	www.gravelator.com

Installing onsite systems is pure play for Kilgore, who grew up with heavy equipment for toys, job sites for sandboxes, and a father who taught him how to install systems safely and successfully. He joined his dad full time after graduating from high school in 1980. After a brief partnership with another company in 1990, he struck out on his own, and he has never looked back.



Heath Kilgore (left) and Justin Kilgore fill in with sand around a new Liberty Retro grinding station in Blue Ridge, Ga.

"Equipment has always fascinated me and I love being outdoors doodling in the dirt," he says. "Tract building filled the bill." The company had its best year

"Doing something everybody says can't be done is my greatest professional reward. Personally, the gratification from helping people achieve their dreams is immense."

Harold Kilgore

in 2000, installing more than 400 systems. But production work never broadened Kilgore's horizons, and when the opportunity came to install advanced treatment units, he snatched it. Today, Kilgore, son Heath and nephew Justin Kilgore, both licensed practitioners, install 90 mostly residential advanced systems per year, accounting for 80 percent of annual revenue. The rest is repair work.

"When I compare our profit margin then and now, the money is still about the same, but the work is more satisfying," says Kilgore. "I enjoy learning about new technologies." The state requires eight continuing education hours every two years to renew installer licenses. Kilgore amasses up to 40 hours a year attending courses or manufacturers' product demonstrations.

He taught himself a computer-aided design program to design the systems his company installs. "The software enhanced our ability to produce plans similar to what professional engineers submit," says Kilgore. "The state recognized that and works well with us." Kilgore partners with SCE



In the process of installing a Liberty pump in a new system, Justin Kilgore drills air release holes, while Heath Kilgore steadies the pump.

Engineering in Gainesville for systems larger than 2,000 gpd, which require an engineer's stamp.

Dream chaser

In early 2000, the world changed for Gravelator. Chris Cooley of Cooley Custom Homes in Gainesville told Kilgore he had a 2-acre lot with slow percolation rates and a high water table. The county said it was unbuildable.

"Scott Uhlich, program director for the Land Use Unit of the state Department of Public Health, pushed me in the direction of aerobic treatment units," says Kilgore. "I researched them and was amazed at the options they provided." Within three months, he had enough information to convince the Hall County Health Department to issue the onsite permit.

Cooley returned to Kilgore with another problem lot and met with equal success. He told other builders, the domino effect took over, and Gravelator became the company with answers no one else had. "Doing something everybody says can't be done is my greatest professional reward," says Kilgore. "Personally, the gratification from helping people achieve their dreams is immense."

Georgia has 159 counties and five main regions. Often, advanced systems installed in other counties haven't yet made their way to Jackson County and the six others in Gravelator's 100-mile service radius. "Once we open the door for new technologies, they spread through a county," says Kilgore. Between 30 and 40 percent of Gravelator's business comes from referrals based on Kilgore's ability to work with state and county regulators to resolve issues.

Changing tactics

Gravelator's reputation is based on its groundbreaking accomplishments. For example, state code requires a primary system and a full-size recovery area, but it doesn't specify the type of recovery area. The omission enabled Gravelator to become one of the first companies to change the media. It took Kilgore nine months to get a permit for a system on a lake lot with 50 percent slope and drinking water wells on three neighboring properties.

"Accounting for setbacks eliminated any room for the second 1,200-square-foot gravel drainfield,"

says Kilgore. "The county and district evaluated four designs before they approved changing the media to a sand filter, laying out the drainfield in zones, and sizing it based on Eljen's effluent application rate."

"The county health official said it couldn't be done, but if there is a legal way to do it, we'll figure it out."

Harold Kilgore

Another first involved a fishing cabin on a notch carved into a cliff above Lake Lanier. When the property changed hands, a barrel with some gravel around it that had served as the onsite system predictably failed an inspection. *(continued)*

Whatever it Takes

Harold Kilgore, owner of Gravelator Systems, doesn't do many repairs, but the ones he accepts other contractors call impossible. For example, when the drainfield failed on a 68-acre estate in Suwanee, Ga., two contractors told the caretaker that replacing it would mean tearing up the landscaping and removing ornamental trees.

The caretaker called Gravelator. Kilgore, son Heath, and nephew Justin derusted the decorative ground cover, protected it under plastic, hand-excavated four 34-inch-wide trenches 100 feet long for chambers, replaced the soil, and reinstalled the plants. The project took five days. "When we left, the area looked like it did before we arrived," says Kilgore.

A golf club community with fancy landscaping and a falling system also tested Kilgore's ingenuity. A high rock wall made it impossible to bring in a pump tank, and the homeowner association wanted minimal destruction of the property. Kilgore removed a gate just wide enough for the mini-excavator and dug the tank hole.

Instead of using the machine to carry spoil to the stockpile, workers transported it in wheelbarrows, preserving the lawn. "It took a day to dig the hole and another for the hired 80-ton crane to lift the tank over the wall and set it," Kilgore says. Both projects came from referrals.

▶ HONEST ◀

To some professionals in the pump industry, honesty could mean fairness and reliability. To others it might mean providing the best products at a competitive price. No matter how you see it, the new Ashland Pump Company will meet all of your professional-grade pump needs—honest.



Ashland

P U M P

Honest, Professional, Dependable

Look us up at Pumpers Show, Feb. 26-28, at Booth 2268 and find out for yourself.



Owner Sharon Kilgore keeps everything in order back at the office in Talmo, Ga.

A referral sent the new owner to Kilgore, who designed a Puraflo system.

The driveway from the cabin to a small parking pad was too narrow for the 2009 Bobcat 331 mini-excavator, so Kilgore rented a wrecker to lower himself and the machine over the cliff and down to the 5-foot-square area between the back of the house and a dirt bank.

Heath Kilgore and a laborer laid plastic on the parking pad, then disassembled the two biofilter modules and hauled the peat and gravel up the hill in 5-gallon buckets, stockpiling it beside the house. They dragged the fiberglass tubs up next, set them on blocks behind the house, and reassembled the media.

“As I age, I want to remain involved in the industry and the Georgia Onsite Wastewater Association, and to keep learning about new technologies.”

Harold Kilgore

Instead of a gravel drainfield, Kilgore installed EZflow geosynthetic aggregate (Infiltrator Systems), becoming the first in the state to use it. When the system was finished, the wrecker returned to haul the excavator and Kilgore back up the cliff.

Staying focused

Many contractors won't work on lots steeper than 35 percent, but Gravelator installs drainfields on terrain with up to 60 percent grades. They use a RotoMatic digging tool to cut steps down the side of the hill. If soils are good, they bench (terrace) the trench areas with the mini-excavator, enabling the equipment to sit level. “We do one ditch at a time and slide the chambers down the hill to it,” says Kilgore. “If we can't use the excavator, we dig by hand.”

On one Eljen system, the excavator dug the trench, but the slope was too steep for the John Deere 3005 four-wheel drive landscape tractor to transport the sand. “We formed a bucket brigade and passed sand down from the top



With Justin Kilgore keeping electrical lines under control, Heath (left) and Harold Kilgore lower a Liberty Pump into a grinding station in Blue Ridge, Ga.

of the hill in 5-gallon pails,” says Kilgore. “The county health official said it couldn't be done, but if there is a legal way to do it, we'll figure it out.” It took five days to move the sand.

Kilgore's father taught him to forget his girlfriends and personal problems when climbing on equipment: “You have to be in charge of the machine and in control of yourself. I tell whoever is working with me that we will not hurry. We will stay focused to avoid mistakes and prevent accidents.” No one has been injured on any of the company's jobs.

All in the family

Home to Gravelator is a 2,100-square-foot shop with 600-square-foot office addition on 12 acres. The fleet includes a 2006 John Deere 120-C excavator, 2009 Takeuchi TL130 rubber-track loader, 2011 Bobcat E45 excavator, 1998 Mack 600 dump truck, 2003 Chevrolet C5500 flatbed truck, 2011 Ford F-450 Super Duty pickup truck, 2010 Chevrolet C-150 pickup truck, and six equipment trailers.

In 1995, Kilgore's wife left a full-time position to become Gravelator's office manager, a job she had been doing on evenings and weekends. “Sharon is the most integral part of the company,” says Kilgore. “She puts the



Jet®
Wastewater Treatment Solutions
Founded on Innovation. Anchored by Service.

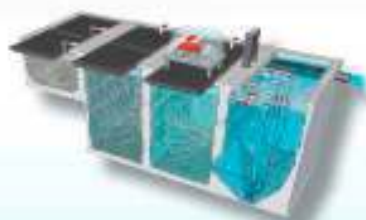


Residential Treatment Plant

- 500-1500 GPD
- A single moving part
- Innovative design for easy system servicing
- No filters to clog
- Lifetime exchange program



2012 Presidential E Award Recipient



Commercial Treatment Plant

- Modular design expandable up to 300,000 GPD (1135 M³/Day)
- Site specific custom design
- Global support by Jet distributors, technicians and engineers



www.jetincorp.com • 800.321.6960 • email@jetincorp.com

grease on the gears to keep us rolling. I couldn't begin to replace her." She isn't afraid to move equipment around or jump in the trenches with a shovel to help.

When the Kilgore family members take some days off, they attend biker rallies such as Daytona Beach Bike Week and the Panama City Beach Motorcycle Rally. Kilgore saddles a 2006 Ultra Classic Harley-Davidson with Sharon behind him. "I'm not as apt on a bike as I am on a tractor, so we go for the food and vendors, to watch events, and see old friends," he says. They also enjoy NASCAR races.

As Heath takes over fieldwork responsibilities, Kilgore plans to spend more time consulting and problem-solving. "As I age, I want to remain involved in the industry and the Georgia Onsite Wastewater Association, and to keep learning about new technologies," he says.

Kilgore is serving his first term on the association's board of directors and would like to sit on the Technical Review Committee. "I want time with my senator and house representatives to explain what changes are necessary to our regulations and why," he says. "I know how to work with regulators and how to increase the association's ability to achieve its objectives." □

MORE INFO:

Anua
336/547-9338
www.anua-us.com

AquaKlear, Inc.
877/936-7711
www.aquaklear.com

Eljen Corporation
800/444-1359
www.eljen.com
(See ad page 15)

Infiltrator Systems, Inc.
800/221-4436
www.infiltratorsystems.com
(See ad page 21)



T&T Tools, Inc.
800.521.6893



Hooks...

- Heat treat for long life
- Manhole Cover Hooks
- Septic Tank Lid Hooks
- Many styles available
- "T" handles for two hands or compact "D" handles

Probes...

- Insulated, Standard and Specialty
- Metal shafts: 3/8 round or hex
- Replaceable hardened tips
- Optional "slide" available to make your probe a mini-slide hammer



Call for a FREE Catalog

www.MightyProbe.com
Email: sales@tandttools.com Fax: 800.521.3260