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It's a Great Career

- Betty Dageforde

The pumping business has been rewarding for Ohio's Gene Morris. He's still adapting to new technologies, but at the same time looking for a winning retirement plan.

ON THE COVER: Gene Morris, of Jarvis Septic & Drain, has thoroughly enjoyed his 25 years working in the wastewater industry, but is now starting to look at a plan for retirement. Jarvis is shown getting out of the cab of his 2016 Western Star 4900 SF built out by Ohio-based Tiger General with a National Vacuum Equipment blower. (Photo by Amy Voiat)

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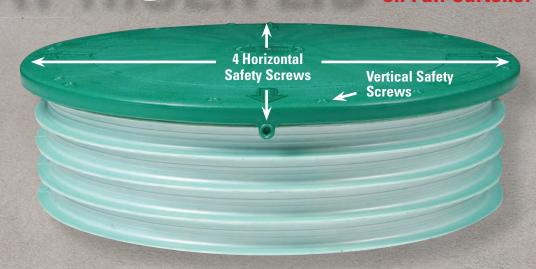
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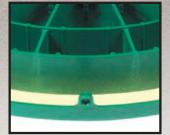
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Pumpers should drive home the point to customers, neighbors and local government that we're all responsible for disposal of human waste By Jim Kneiszel

t's a common refrain pumpers hear from the public when it comes to land application of septage — not in my backyard!

As metropolitan areas grow past established suburban boundaries, the big pipe of municipal sewer usually stops well short of the creep of people who want to build dream-home estates in the countryside.

When it comes time to build and the only feasible way to deal with wastewater is an onsite septic system, these homesteaders are happy to have a private treatment alternative. But then, right after the picket fence goes up and they invite their new neighbors over for a cookout, their interest in dealing with wastewater comes to an end.

The new rural residents don't want to see, smell or hear any evidence that septic tanks are being pumped and their contents are being disposed of. They help create the waste stream, but they'd be happy if pumpers could wave a magic suction hose and make it all disappear from their new neighborhood

But you and I know it's not that simple.

THREATS TO LAND SPREADING

The wastewater industry needs to find practical ways to dispose of the septic sludges, both from a cost and environmental standpoint. Many times land application turns out to be the most economical and viable way to dispose of the waste. It saves on fuel costs, reduces the carbon footprint, puts nutrients on the farm fields and returns water to the local aquifer.

But no matter how much good, common sense it makes to spread septage close to its source, you won't find many folks willing to accept that the waste is their problem and they need to cooperate for a local disposal solution. It happens all the time: A recent example is in Ravalli County, Montana, where residents were up in arms over a pumper applying for a legal land application permit.

As reported in the *Bitterroot Star* newspaper, Eckert's Patriot Pumping in Stevensville, Montana, wanted to spread on a 160-acre farm. When the permit was discussed by the county Board of Health, applicant Conrad Eckert explained he was pursuing land application to remain competitive



Contact Jim with your comments, questions and opinions at editor@ pumper.com.

with other pumpers in the area rather than paying triple the cost of taking all his loads to a treatment plant. A Health Board member explained maximum dumping on the site would be 100 loads and 300,000 gallons over a six-month period.

Neighboring landowners predictably opposed a land-application permit, citing concerns over impacts on groundwater, pets and wildlife, as well as odors and wear and tear on the roads surrounding the application site. They brought forward a myriad of arguments in hopes that one might stick.

The Montana Department of Environmental Quality, however, was clear in its support of land spreading in an environmental assessment published in the paper.

A GOOD IDEA

"When properly managed, septage is a resource. When used as a soil conditioner, septage contains nutrients that can reduce reliance on chemical fertilizers for agriculture. A properly managed land-application program recognizes the benefits of septage and employs practices to maximize the value of the material. Land application of septage benefits agricultural land by the addition of moisture, organic matter and nutrients to the soil, and does not adversely affect public health."

(continued)

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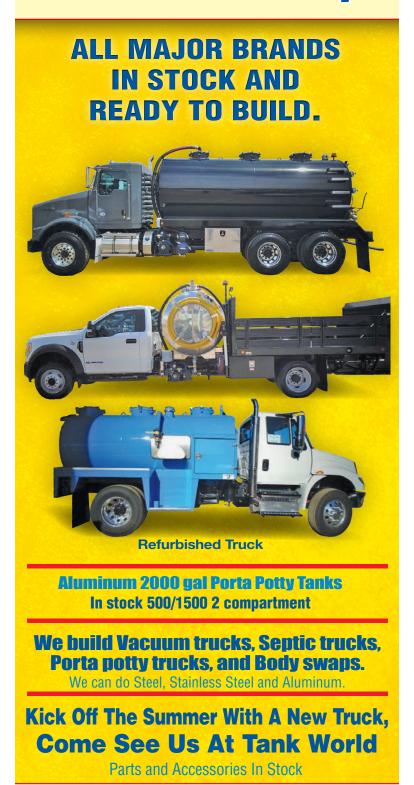


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Despite the DEQ findings, the discussion was ongoing earlier this year. Like the Montana DEQ stands, some states encourage and support the use of land application of septage, while others restrict, discourage or ban the practice. It appears that spreading will be a tool in the disposal arsenal of pumpers in many areas for years to come, but it also seems likely that as suburban and rural dwellers continue to clash over the issue, there will remain a constant threat to the future of the practice.

How should pumpers react to this ongoing debate? If land spreading is a viable option for your business, promote the message shared in the Montana DEQ environmental assessment. If your state allows land application, support the pumpers who can take advantage of such a program. Encourage your state wastewater association to speak out in favor of reasonable use of land application. If done responsibly, spreading can help serve the environment and free up treatment plant capacity for those pumpers who are not in a position to spread on land.

Furthermore, make sure consumers and your customers know that any economical way to dispose of waste keeps their pumping costs down. And explain to them that everyone contributes to the waste stream, and so everyone is responsible to find safe and efficient ways to recycle those wastes. We're all in this together.

MEET THE CHALLENGE

Whether you spread waste, dump at a treatment plant or are looking for new, creative solutions to disposal challenges, this issue of *Pumper* is devoted to you. Our Product Focus feature covers the topic of septage disposal management and highlights a wide range of equipment, including dewatering technologies, storage tanks and roll-off containers, that could help pumpers meet their disposal demands.

Encourage your state wastewater association to speak out in favor of reasonable use of land application. If done responsibly, spreading can help serve the environment and free up treatment plant capacity for those pumpers who are not in a position to spread on land.

The challenges facing today's decentralized wastewater industry are many. Millions of septic systems are woefully in need of pumping and maintenance. Millions more are outdated and in need of replacement. A burgeoning housing market is creating demand to add many more onsite systems as cities flex and grow. At the same time, treatment plants across the country are reaching capacity and local governments are often unwilling to expand or take on more septage.

This may seem like a big problem, but rather it is an exciting opportunity for the pumping profession. Our industry must answer the call and find solutions to all of these growing issues. That means pursuing land application where it makes economic and environmental sense. It means looking into private plants — either serving individual pumpers or groups of haulers who come together as partners — to relieve some of the pressure at municipal plants.

In short, pumpers have a chance to better control their own destiny in business and serve the public good. After all, we all create the waste, so we all have a responsibility to take care of it. \blacksquare

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— Sometimes the Simplest Tools Are the Most Effective pumper.com/featured

tank access

Pumpers often deal with septic tank access issues, and in a business where regulatory agencies require periodic inspections or regular solids removal, gaining access is a must. That's why University of Minnesota

onsite wastewater treatment instructor Jim Anderson recommends that septic installers provide manholes, allow access to tank baffles and make sure to bring entry points to the surface by using risers and secure lids.

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expanding service

Expanding your pumping services sometimes means modifying how you spec out your pump truck. Just ask Eric Zuech about how his company started cleaning catch basins and car wash pits in addition to septic tanks. He took a different approach to speccing out his 2012 Kenworth T800, and it netted him some unique business.

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When David Knight got back into the pumping business in 2011, he brought a customer service philosophy that had been instilled into him many years prior while working for his father's pumping and install company. The basic idea is that you spend the extra time — and sometimes the extra money — on the job to make sure your customers are happy. Returning customers turned Knight's

one-man operation into a full-service company.

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TURNING HEADS

hot-looking trucks

First impressions are important in the septic pumping business, which is why Henry Damm insists on going all out with his trucks. When the neighbors start staring, it translates to more work for his company, Big Bore Drilling Certified Septic and Hydroflushing. In this article, Damm explains why he loves vehicle wraps.

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By Betty Dageforde

s Gene Morris celebrates both his 55th birthday and the 25th anniversary of his company, Jarvis Septic & Drain, he's beginning to think about a future for the business that doesn't include him or his wife, Kathy, his co-owner. "I'm thinking about an exit strategy," he says. "I personally don't think 10 or 12 years is too early to start thinking about it."

Morris is actually in the identical position his predecessor, Noble Jarvis, was in 25 years ago. Jarvis started the company in 1961, ran it on his own for 31 years, then got out of it by selling to Morris.

The Morrises also run the business on their own, operating out of their 25-acre property in Seville, Ohio. Kathy handles the office work while Gene works in the field. In an emergency he can call on a nephew, brother-in-law or friend for backup help. Morris likes to stay within a 20-mile radius but says the profit is in that first 10 miles.

THE COMPANY'S FIRST TRANSITION

Morris got started in the septic industry right out of high school when he went to work for a pumper in 1981. He stayed about five years, tried another pumper for a few years, then returned to the first company. He experienced some frustrations along the way and started to

(continued)

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Left: Morris works a valve before hooking up his hose and pumping a septic tank.

Below: Morris is used to rolling a lot of hose, serving septic customers for 25 years in and around Seville, Ohio.

get the idea that maybe he could do things a little better.

"There were too many years of shaking your head and thinking why did the boss do it that way," he says. "If I was the boss I'd do it this way. The time came to put up or shut up." Morris had a good relationship with Jarvis, as they were both in the industry and went to the same church. Morris knew Jarvis was getting to a retirement age, and told him to get in touch when he was ready to sell. "In 1992 he called me up and that's where it started," he says.

Morris says the transition was seamless for the customers, as he and Jarvis not only had the same "treat the customer right" philosophy, but even had similar mannerisms. Other than Jarvis introducing Morris to the major commercial accounts and smoothing things over with a couple of elderly women who were afraid to let Morris in the house, the hand-off was quick and painless for everyone involved.

Morris pretty much ran the business the same way Jarvis had, always keeping Jarvis's high standards in mind. But he did eventually branch out from just doing septic pumping and today, when he's not running his vacuum truck you'll find him operating out of a van full of drain cleaning and pipe repair equipment.

THE VACUUM TRUCK

About 65 percent of the company's work is pumping of one kind or another, whether it's residential septic tanks, restaurant grease traps, commercial plants, municipal catch

To the right person who's willing to learn the business and work hard it's a very good income, a good living. But it takes the right person.

GENE MORRIS

basins and treatment plants, lift stations, or light industrial projects. Morris is licensed to dispose of septage at several wastewater treatment facilities, including one that takes grease.

In December 2015, for only the second time in his career, Morris sold his vacuum truck and bought a new one, a 2016 Western Star 4900 SF built out by Ohio-based Tiger General. It has a 4,000-gallon steel tank, a three-stage hydraulic hoist assembly, a full-opening rear door and a National Vacuum



Equipment 4310 blower. He wanted a blower because he thought it would work better for some of his tougher jobs such as catch basin clean-outs. He also noticed the blowers at some of the sewage treatment plants, which run 24/7, were still going strong after 20 years — "So, I'm hoping the durability and reliability is going to be there," he says.

Customers are encouraged to sign up for a service reminder, but even if they don't, Kathy contacts them every couple years if she hasn't heard from them. Jarvis was an early adopter of technology and started automating customer records in 1985. The Morrises used his system until March 2016 when they purchased Smart Service from My Service Depot, a dispatching software program that links with their QuickBooks program.

After an initial painstaking effort of importing job and client data into the new program, and a lot of work by Kathy to create custom PDF files, the system has been a tremendous timesaver. With a few clicks on his iPad, Morris can send an invoice to a client while he's standing with them in their driveway. It also automatically fills out parts of the forms he's required to send to the state and counties on every pumping job, then he easily fills out the rest using drop-down boxes.

They also use the system for scheduling. Kathy enters the job information, which then shows up on Morris' iPad along with the customer's history. Last-minute jobs are automatically added as the system refreshes.

Regulations affecting homeowner septic systems are always being discussed by governmental agencies. An adjacent county is establishing a required maintenance program. Morris is in favor of regulations but does not like this approach. "I think the state and environment and everything would benefit more on a mandatory pumping program than a forced maintenance

(continued)



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Fun with drones

When Gene Morris, owner, along with his wife, Kathy, of Jarvis Septic & Drain, wanted to show off his new vacuum truck, he posted a video of it on his personal YouTube page. But the most remarkable thing about the video was the device it was taken with — a DJI Phantom 3 four-propeller drone. "It took a 360-degree overhead view circling the truck," Morris says. The Morrises bought the drone as a Christmas present to themselves last year.

The unit is roughly 18 inches across and 8 inches high. It has a built-in GPS, and the operating instructions recommend flying it in GPS mode, although Morris says it does have advanced modes for more skilled pilots. He says it's very user-friendly to operate, somewhat like flying a fancy model airplane.

But the main difference, besides having a camera, is it comes with some pretty hefty Federal Aviation Administration regulations, which are constantly evolving as the units become more popular. He registered the drone with the FAA and uses it strictly for fun. He cautions that using it for commercial purposes puts it in a whole other category of regulations.

"The FAA has all kinds of regulations if you're using them commercially," he says. "As long as you're using it for personal use and not for commercial or for-profit, you don't have to have a license to fly it. It's very similar to a pilot's license, from what I understand, to use it commercially."

The Morrises live on a 25-acre property, so they have plenty of room to enjoy the drone recreationally. But weather conditions have to be just right, Morris says. "It's not good in the cold or if it's too windy. There's just a few ideal days out of the year — and it seems when there's days there's no time, and when there's time the weather's not conducive."

To view the drone video of the Jarvis Septic truck, go to www.youtube.com/watch?v=5ARM0hBhXec.

program," he says. The difference is who ends up being the bad guy, he says. In other words, is it going to be the county or the pumper who has to tell the homeowner their system needs pumping or replacing?

THE SERVICE VAN

Nonpumping work is done out of the company's 2012 Ford Econoline E350 one-ton van. Services include sewer drain cleaning for residential,

commercial and light industrial customers, video camera work, electronic locating, and installation of aerators and sump pumps. Morris is also trained and licensed to make up to 4-foot repairs on 3-inch, 4-inch and 6-inch sewer lines using curedin-place PipePatch from Source One Environmental.

Morris says a tremendous amount of his work comes from contractor referrals

Kathy Morris works in the home office, educating a customer about proper septic system care.

Morris returns the hose to his Western Star service truck, built out by Tiger General and carrying an NVE blower unit. He likes the powerful blower to get his pumping jobs done efficiently.

— plumbers who can't or don't want to handle drain problems, and excavators and installers who need locating services.

Equipment includes a RIDGID SeeSnake Plus 325-foot self-leveling color video camera unit, a RIDGID SeeSnake nanoReel camera for smaller lines, and a RIDGID Scout locator. Morris uses a Landa 4,000 psi hot-water pressure washer and a 300-foot 1/4-inch hose wrapped on a General Pipe Cleaners reel for thawing frozen lines. Larger sewer lines are cleared using an Electric Eel Model C with 300 feet of 1 1/4-inch cable. He also has a RIDGID K60 that runs 7/8-inch and 5/8-inch cable, and a hand-held Electric Eel Model S with 1/4-inch cable for bathroom sinks and tubs.

CUSTOMER SERVICE

Morris has a strong opinion about how to get and keep customers, and it doesn't involve trying to be the cheapest guy in town. Instead he talks about perceived value — the customer feeling they received good value for their dollar. "And it's treating the customers like you wish to be treated in your own home," he says. He shows up to jobs on time, looks clean and acts professional.

"No matter how bad of a day I'm having I never let the customer see that," he says. "I always smile and put my best foot forward." He always tries to do the best job possible, cleans up his messes, makes a point of not overbooking, and calls if he's going to be late. "People are a lot less unhappy if you tell them you can't get there than promising them something and not showing up."

In the beginning he tried to be available 24/7, but that was not sustainable. However, he does check his voice messages and will respond to true emergencies.

Jarvis Septic doesn't advertise much. They have a small ad in the phone book, but mostly rely on word-of-mouth and contractor referrals. "If you treat the customers with respect and do the best job possible you're going to get the referrals and you're going to stay busy," he says.

No matter how bad of a day I'm having I never let the customer see that. I always smile and put my best foot forward.

GENE MORRIS







THE NEXT TRANSITION

As they think about retirement, the couple is taking a look at all angles and options.

"We're trying to decide where

Wearing a sharp uniform and greeting customers build a positive image for Jarvis Septic. Here, Gene Morris uses an iPad to generate an invoice for customer Ken Hemburg.

we need to go, how we need to position the business, and what it's going to take to get out of it and on with the retirement years," Morris says. "It's just a matter of trying to determine if it's going to be a viable business to sell or if it's just going to be a matter of liquidating the equipment and closing the door. I hope that's not the case."

No ideas are off the table, but some scenarios might be more complicated than others. For example, Morris believes that to attract an investor rather than an owner-operator they'd probably have to have employees, which they don't necessarily want to do. On the other hand, having employees would present another possibility — "At that point we may be able to just keep going beyond our target retirement age and just cut our hours back." He also says they have a couple of customers in the trucking industry who might consider taking it on.

Perhaps the ideal scenario would be the same one he was presented with when he had the chance to buy the business — someone with a similar work ethic and customer service philosophy who's interested in operating it themselves.

"To the right person who's willing to learn the business and work hard it's a very good income, a good living," he says. "But it takes the right person."

IT WAS FUN

Overall, Morris has enjoyed being his own boss and working in an industry where he can get out, meet people and provide a good service. "I don't think I could do something like work on an assembly line," he says. "I enjoy the job being complete at the end of the day and the customer being happy with the work you've done. That's the most rewarding part."

The question now is how to pass the baton while ensuring his customers continue to get the great service they're used to. "That's the biggest thing on our minds, is how do we get out," he says.

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Erik Gunn is a magazine business writer in Racine, Wisconsin. Direct inquiries to him at editor@pumper.com.

Top Tips to Get the Best Insurance Coverage

Coverage experts lay out a plan for pumpers to protect themselves against any legal claims that come along By Erik Gunn

here's a paradox at the heart of insurance: You have to buy it, but you hope you'll never need to use it.

If you're a business owner, you might feel slightly annoyed by that. Who wants to buy something and not use it? But knowing the types of insurance you need — and how much of each you need to be adequately protected — is critical for all small-business owners, because it can be a

The information below is a good primer if you're questioning your own policies.

What kind of insurance do I need?

business-saver if you do need to use it.

General liability insurance: Michael M. Senderovich, president and founder of Zeyger Insurance, which operates in California, Texas and Ohio, calls this "The insurance to have." It protects your business and your customers from injury — but make sure it covers the various kinds of work you do.

Property insurance: Coverage for your office and other real estate used in your business.

Contractor's tools insurance or "inland marine" insurance: When work requires you to move around to different job sites, it's a must-have. Property insurance will only cover equipment at the home office, "which doesn't help plumbers much when they're driving across town to fix a collapsed lateral line," points out Marivel Alvarez, a licensed insurance agent for Insureon, an online small-business insurance provider based in Chicago. "Contractor's tools insurance can cover property even while it's at various locations"

Don't count on your vehicle insurance for that purpose, Senderovich adds: If someone steals your tools from your truck, the vehicle policy probably won't cover the theft.

Workers' compensation insurance: This is required in most states and covers your workers for on-the-job injuries.

Commercial auto insurance: You need this whether you've got an entire fleet of service trucks or are starting out and using a personal vehicle for work. "Personal insurance policies do not cover vehicle usage for work, regardless of the vehicle type," Senderovich says. Not only that, but the commercial policy may provide better coverage for less money.

Pollution liability insurance: If your work exposes asbestos, mold, pollutants and bacteria, this coverage could be important, Alvarez says.

Builder's risk insurance: If you buy materials and store them at a job site, says Senderovich, "builder's risk helps protect you from physical loss or damage during the course of the project."

Excess liability insurance or an umbrella policy: It provides additional coverage on top of your regular liability policy. It's especially important if your business is growing and you're doing bigger projects, among other things.

There's also one more that you might not think of as insurance at first:

A contractor bond: Required to get licensed in many states, "bonds function much like a credit card," Senderovich explains. "If there's a claim against a bond, the indemnitor (bond holder) will have to pay the bond company back."

How much coverage do I need?

"States will set minimum requirements for these coverages," Alvarez notes. But those minimums aren't guaranteed to be sufficient. And buying larger policies can turn out to be more cost-effective.

Alvarez had one client who "wanted just the bare minimum for work-

Talk to your broker/ agent. Really talk to them. Knowledge is power. The better they understand your company, the better they will be able to provide proper coverage. 37

Michael M. Senderovich

ers' comp, but I was able to get them \$400,000 worth of extra coverage for about \$25 more per year." Even another \$100 a year is worth it if it doubles your coverage, she points out.

For general liability, Senderovich recommends no less than \$1 million per occurrence and \$2 million aggregate. With vehicle coverage, settling for only the state minimum is "outright dangerous," he adds.

For the excess/umbrella policy, talk to your agent about your risks and needs. Coverage usually starts at

\$1 million but can go much higher. Your agent will advise you on other categories as well. Keep good records; claims are that much easier to settle if you can show on paper when you bought those tools that were stolen from your truck, for instance.

How can I tell how much I need?

Every business situation is different and depends on the size of the operation, how many employees you have, your state licensing requirements, the kind of work you do and the risk it entails to your customers, your gross receipts, and the number as well as the size and type of jobs you undertake.

(continued)



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"Talk to your broker/agent," says Senderovich. "Really talk to them. Knowledge is power. The better they understand your company, the better they will be able to provide proper coverage."

How can I lower the cost?

As with any insurance, if you want lower premiums, raise your deductibles, Alvarez says.

But don't just cut coverage to save money. "Insurance is all about gaps," says Senderovich — and reducing coverage makes gaps bigger: "What's the purpose of paying for insurance if it doesn't cover you for anything anyway?"

Are you offered coverage at bargain rates? Read the fine print. "A cutrate price usually means a cut-rate policy," says Senderovich — one that limits coverage in ways you'll regret. (Imagine you're a plumber with a liability policy that excludes water damage.) "If the price is too good to be true, you're probably not covered."

Think long-term instead: Keep your records clean and up to date. Focus on preventing losses. For workers' comp, that means making sure employees have protective equipment and safety training, and use them. Keep vehicles properly maintained and serviced, and when it comes time to buy a new truck, consider the long-term cost of insuring and operating it, Senderovich says.

Look for a carrier that will give you a discount if you bundle several lines under one provider. And never, ever let your coverage lapse: "Auto-pay is your friend."

You can save money by shopping around, and as Senderovich says, your broker should compare prices for you at renewal time.

At the same time, says Alvarez, see if your current carrier rewards customer loyalty with discounts after three or more years of continuous coverage. Business owners who switch carriers chasing cheaper premiums "may miss out on long-term savings," she says.

What mistakes should I avoid?

Don't assume general liability will cover everything, says Alvarez. And don't get confused about "medical pay" in your general liability policy. That doesn't cover your employees' injuries, just the medical bills of customers or others who aren't affiliated with your business, if they sue you for a problem.

Shop on quality, not price, Senderovich advises: "Cheap is usually dangerous." And go with an agent who knows your kind of business. However good the agent who has your homeowners' or personal auto policy is, "if they don't specialize in your trade, they may not know all the risks associated with your business."

Is there such a thing as too much insurance?

That's pretty uncommon, says Senderovich. If you think you're paying too much, talk to your agent.

The real risk, Alvarez says, is to have too much in one policy and not enough in others. It's the "not enough" you need to pay attention to. A \$1 million liability policy might seem like a lot, but it won't cover car accidents or worker injuries, she says. "No matter how much general liability coverage you buy, it won't cover that."

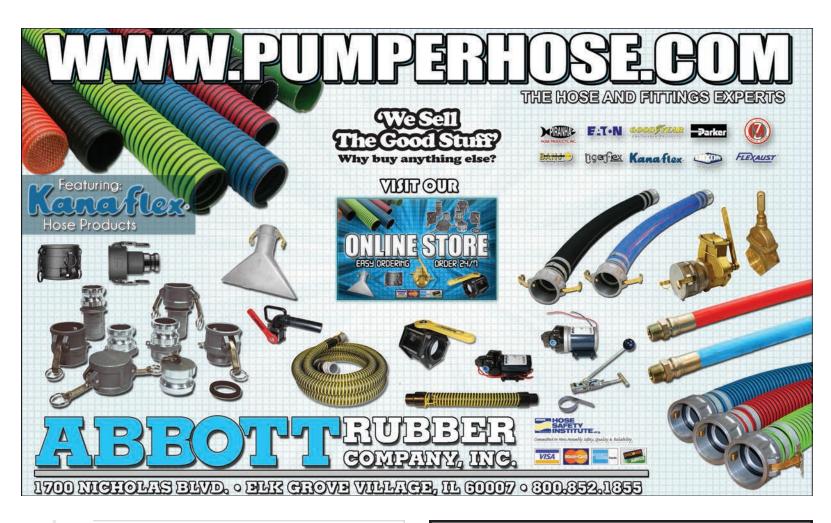
Your best bet, both Alvarez and Senderovich say: Find an agent who knows your business, then sit down and work through what coverage you need.

In the end, insurance may seem like a gamble, but compared to the alternative, it's the safest bet you can make. \blacksquare



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ADDITION BY SUBTRACTION

Wisconsin's Schulteis Pumping finds success by focusing on one profitable specialty and letting go of related wastewater services

By Ken Wysocky



OWNERS: Nate Hill and Tim Schulteis

FOUNDED: 1966 EMPLOYEES: 6

SERVICE AREA: 20-mile radius around Slinger

SERVICES: Pumping residential and commercial septic and holding

tanks, septic system repairs

WEBSITE: www.schulteispumping.com

ervice diversification benefits many companies by generating multiple revenue streams and minimizing exposure to market downturns. But as Schulteis Pumping grew and evolved, the family-run business elected to jettison several services and instead focus on doing one thing really well: Pumping and repairing residential septic tanks.

"We've downsized over the years," says Nate Hill, 38, who now owns the Slinger, Wisconsin-based business with his cousin, Tim Schulteis, 43. "We've also become more efficient, especially by running bigger trucks. Bigger payloads equal more money."

Diversification made sense for many years, explains Jim Schulteis, whose father, Robert, founded the business in 1966. "Our generation was different," says Jim, 67, who went on to own the company with his brother, Ron. Both he and Ron are now retired. "My dad's emphasis al-





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ways was on diversification, so that if one thing faltered, something else was there to take its place. We even dug graves — whatever it took.

"But things have really changed," he continues. "Nowadays, things are more specialized. But there's nothing wrong with that, because the customers get better service. If you specialize in one thing and do it well, you don't always need so many businesses."

EARLY GROWTH

Schulteis Pumping was established when Robert bought a trenching company in 1966. Jim and Ron eventually worked with him. To capitalize on a residential construction boom, the business expanded into septic system installation in 1971, after Robert earned a plumber's license. Later, the company added septic pumping to its roster of services, for two reasons: It

made sense to offer customers a complementary service, plus it would provide a job for Jim, who had come home after a stint in the U.S. Army. By 1975, there was enough pumping business to make it a full-time job.

In search of further growth, the company widened its service scope once again, this time branching into portable restroom rentals and service in 1980. "It was a natural extension of our services and we could make money on the weekends," Jim explains. "It all went hand in hand (trenching, septic services and portable restrooms)."

"We never had any kind of master plan," he continues, referring to the company's growth. "We flew by the seat of our pants. ... As our children grew up, we expanded the work so they could have jobs."

Nate and Tim learned the business from the ground up. Nate started working with his stepfather in 1993 at age 15, pulling hoses and the like. When he turned 16, he handled portable restroom runs. At age 18, he got a commercial driver's license and started driving septic vacuum trucks. Later he operated the company's portable restroom

The trend is toward either very big or very small (restroom operators)," adds Nate. "We didn't want to make the investment required to go to that next level. Instead, we decided to focus on septic

NATE HILL

pumping. ""

division. Tim joined the business in 1992 as a septic system installer and licensed perc tester. The two cousins bought the business in April 2016; Nate is the company president and Tim is the vice president.

The company's growth peaked in recent years, as reflected by its stable of equipment. The company owns a 2005 Peterbilt 378 outfitted by T-Line Equipment with a 5,800-gallon stainless steel tank and Masport pump, a 2008 International 7600 built out by Imperial Industries with a 4,400-gallon aluminum tank and Masport pump, and a 2016 Mack Granite with a 4,400-gallon aluminum tank and National Vacuum Equipment blower (540 cfm) outfitted by Imperial.

MORE CAPACITY

The three trucks are equipped with large tanks because big septic tanks are common in the area. In addition, the local water table is fairly high and many homes are located on narrow lakefront lots that aren't big enough to hold a septic system. As such, many homeowners rely on large holding tanks that require frequent pumping.

On average, the holding tanks hold 5,000 or 6,000 gallons, and some commercial septic tanks hold more than 10,000 gallons. So to minimize disposal runs to treatment plants — as well as minimize wasted time and wear and tear on trucks — it made sense to invest in larger tanks.

As luck would have it, Schulteis Pumping has no issues with waste disposal. In fact, it has permits to unload waste at eight different disposal facili-

(continued)

Left: Nate Hill readies his service truck for dumping. The rig is a 2005 Peterbilt 378 from T-Line Equipment with a 5,800-gallon tank and Masport pump.

Below: The biggest vacuum truck in the fleet, with a 5,800-gallon tank, is capable of taking on loads from several septic tanks, and can handle large holding tanks and jobs from commercial customers. Here, Hill unloads at the local treatment plant.





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Anyone who works with family in a business knows some conflict is inevitable, no matter how well everyone usually gets along. Just ask Jim Schulteis, the former owner of Schulteis Pumping.

The firm is a family-run company in every sense. For many years, Jim Schulteis owned the business with his brother, Ron. Before that, he and Ron worked for their father, Robert. And Jim's stepsons, Nate and Gus Hill, and Ron's son, Tim, also worked for years with Jim and Ron. Cindy Schulteis (Jim's wife) still serves as the company's office manager. (Nate Hill and Tim Schulteis now own the company, and Jim and Ron are retired.)

While the family tree is complicated, Jim Schulteis' advice for keeping peace within a family-run business is simple: Be patient and don't speak rashly, which he concedes can be easier said than done. "Family businesses are very nice and also very unique," he says. "The challenges arise because you're always dealing with family. ... The person you yell at in the morning you still have to sit with at the supper table at night.

"As such, you have to weigh words carefully and be more considerate," he continues. "You have to be patient and be more careful about how you phrase things."

On the other end of the spectrum, Nate Hill says it's important to always listen and learn from those who are more experienced. "There's a lot of knowledge there," he says. "Over the years, we've learned a lot from my stepfather and step-uncle, like how to deal with customers and how to collect money, too. He taught me to treat everyone with respect and like you'd want to be treated."

Nate and Tim also point out they picked up a family trait they both admire: The gift of gab — making small talk that puts customers at ease. "Not everyone is born with that. ... We acquired it by observing," Nate says.

ties, all within the company's general service area. "We're pretty fortunate," Nate says. "In most cases, we can pump and unload just a half-hour later. And the village of Slinger treatment plant is less than half a mile from our shop. That definitely adds up on the bottom line."

GETTING LEANER

The company at one time ran as many as four portable sanitation service trucks and 350 restrooms. But in 2015, the family sold the portable re-

"We were just too small to make an impact on the local market," Jim says. "And the profit margins weren't high enough to justify all the labor and machinery. Plus we were tired after 34 years of working on weekends. In the end, we just decided we could use our resources and expertise more effectively in other areas."

Family businesses are very nice and also very unique. The challenges arise because you're always dealing with family. ... The person you yell at in the morning you still have to sit with at the supper table at night. ""

JIM SCHULTEIS

"The trend is toward either very big or very small (restroom operators)," adds Nate. "We didn't want to make the investment required to go to that next level. Instead, we decided to focus on septic pumping because that was growing and required more manpower."

The company also stopped installing septic systems in 2015 because Ron wanted to retire. Moreover, to stay in the market would've required further investments in expensive equipment, and it was becoming harder and harder to com-



pete with larger excavating companies, Jim notes.

In the mid-1990s, the company went through another dramatic change when it stopped land-applying waste in favor of taking it to waste treatment plants. Primary factors driving the switch included the emergence of large residential subdivisions, which made it tougher to find enough farmland suitable for land application, and increasing difficulty in obtaining pollution insurance, Jim explains.

"Without insurance, you're vulnerable to lawsuits," he says. "All it takes is one complaint. And when you take waste to a treatment plant, everything is documented and the waste is disposed of in a very professional manner. With all those factors in play, we felt land-applying just wasn't the way to go anymore.

"It was hard at first because land application is much more cost-ef-

fective and a lot of our competitors were still land-applying," he continues. "So our profit margins suffered, but not enough to put us out of business. Land application was also very time-consuming, which kept us from doing other work and earning more revenue."

Our experience and knowledge is a big advantage. ...
You only go as far as the people you have, and we have really

good people. ""

KEYS TO SUCCESS

Nate says the company's employees have been critical to its success. Many have been with the company for decades, and some are plumbers who are adept at diagnos-

NATE HILL

ing and fixing onsite problems. "Our experience and knowledge is a big advantage," he points out. "We all grew up in the business, including my mom, Cindy Schulteis, who's played a gigantic role in our success (as the company's office manager). She's the face and voice of the company — the first person customers come in contact with. Not all customers are happy when they call us (because they're having septage problems), but she handles it very well.

"You only go as far as the people you have, and we have really good people," Nate says. Aside from Nate, Tim and Cindy, the staff includes John Bera, a septic technician; Nate's brother, Gus Hill, who's a shop laborer; and Pat Wondolkowski, a septic technician.

Looking ahead, Jim says he believes the company will continue to grow with Nate and Tim at the helm. He has no regrets about retiring.

"It's their turn," he says. "I did it for 40 years and that's a long time. ...

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I'm actually kind of relieved that they're taking over. It's time for some new blood and new ideas. And I'm always here to help if they need it."

Nate says he doesn't anticipate going back to adding more services. Nor does he expect — or want, for that matter — explosive, exponential growth, favoring sustainable growth instead.

"We almost can't help but grow because the county where we're based is growing so fast," he says. "I eventually would like to add another truck. But we don't want to outgrow our capabilities. We want to focus on one thing and do it well."

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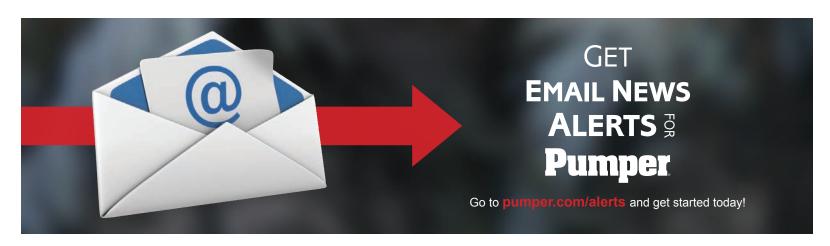




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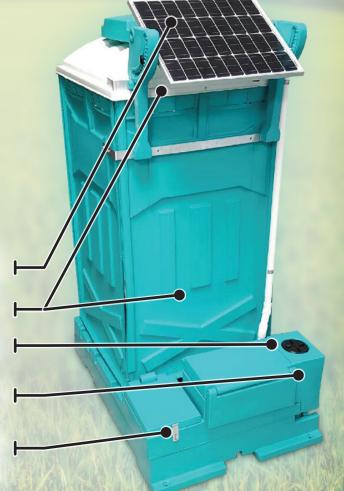
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Maryland considers return of best-technology rule for onsite systems

By David Steinkraus

he state that surrounds most of Chesapeake Bay, where struggles over water quality have occupied public attention for several years, may revive a rule to require the best available onsite wastewater technology everywhere.

A regulation created by the administration of former Gov. Martin O'Malley in 2012 required best-available technology for all new construction across the state. Current Gov. Larry Hogan reversed the O'Malley regulation last summer. That means best-available systems are required only in environmentally critical areas, defined as coastal lands or lands within 1,000 feet of the bay.

State Sen. Joan Carter Conway introduced a bill to write the O'Malley regulation into law, but the bill is struggling in the Maryland Senate. The bill failed to pass a committee by one vote, but then one legislator asked the committee to reconsider its vote.

Opponents of the idea question the need to have homeowners pay for best-available technology on land that may be 25 miles from coastal areas. For example, in voicing its opposition, the Worcester County Commission said requiring best-available technology could add as much as \$15,000 to the cost of a home. The county lies along the Atlantic Ocean shore on the eastern side of the Delmarva Peninsula, which contains most of Delaware and forms the Chesapeake Bay on its western side. Supporters of the rule say the nitrogen removed by best-available systems is one of the major pollutants in the bay and say Hogan's action was a concession to developers and rural landowners.

In the meantime, the Harford County Council is preparing legislation that would remove the need for best-available systems on any land outside the environmentally critical areas. The county sits on the northwestern end of Chesapeake Bay not too far from Baltimore.

If the Senate bill becomes law, money from a special fund would subsidize the approximately \$7,500 cost difference between a conventional wastewater system and a best-available system. The bill also proposes an \$8,000 fine for any home not using a best-available system where one is required.

Oregon

Vagueness in the law stopped one wastewater operator's plans, but the issue may now be clarified for everyone by the state Legislature.

Wayne Buma, who operates AAA Septic Cleaning in southern Oregon, wanted to process septage and spread the resulting product on farmland as fertilizer. The Jackson County government objected — not on the grounds of public health, but because the state's land-use law is unclear. The county said it is not certain whether treatment is allowed on land zoned exclusively for farm use. Generally state law allows processing only in urban areas, which would increase Buma's hauling cost.

HB 2179 would clarify the law and allow treatment of biosolids on farms, provided the processing is done with mobile equipment. Without the clarification, Buma would have to process wastewater at the location of each tank he pumps. His process involves screening septage to remove debris, then adding lime to change the pH and kill pathogens.

Florida

Algae blooms were a problem in Florida last summer, and now are the target of special funding in the state budget.

Republican Gov. Rick Scott included \$40 million in his proposed budget for a matching grant program to help people in communities affected by algae blooms. The money will aid people in converting from septic tanks to municipal sewer. At the peak of the problem last summer, Scott promised to seek money to help remedy it.

Meanwhile, state Rep. Charlie Stone, R-Ocala, sponsored a bill calling for \$20 million from the state's conservation fund to help property owners improve onsite wastewater systems or connect to sewers. That bill is presently going through the committee process.

New York

A supervisor in the town of Southampton on Long Island said he expects his community to follow the lead of East Hampton and require nitrogen-reducing wastewater systems for new construction. Supervisor Jay Schneiderman said revised codes will require such systems only where pollution could reach bays and ponds.

The town will also work on rebate programs to encourage homeowners to replace older systems with the latest technology. Money would come from the town's Community Preservation Fund, which is supported by a fee on real estate transactions.

Homeowners in East Hampton are eligible for payments of \$5,000 to \$15,000 depending on household income and what system is in place now.

Commissioners in Brown County are working through a complete overhaul of the county septic system ordinance. The county is about 30 miles south of Indianapolis.

The rules have not been revised since 1997. A revision was passed in 2013, but that was challenged with a lawsuit, and a court negated the rules after finding the county's work had not been properly advertised to the public.

Most areas of the county depend on onsite systems, and under the draft most homeowners would not see any effect from the law unless they add to their home, sell the property, or have a failing onsite system. A draft of the new ordinance requires an inspection of the system when a property is sold.

John Kennard, a county environmental health specialist, said a random sample of 10 local real estate listings found that six had systems too small for the number of bedrooms detailed in the listing.

Among other changes, the draft ordinance contains rules specific to guest rentals such as bed-and-breakfast establishments, lays out a proce-

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dure for evaluating drainfield sites, and sets rules for holding tanks.

Canada

Two governments at opposite ends of Canada are grappling with the maintenance of septic systems.

In Central Frontenac Township, Ontario, located about 60 miles southwest of Ottawa, the nation's capital, the town council approved a septic inspection program. The township is located on Sharbot Lake, a large body of water in eastern Ontario.

Property owners will be required to have a licensed pumper inspect onsite systems and report the results to the township. The inspection can take place during a regular pumpout. Property owners must have an inspection on file every five years.

Township Councillor Victor Heese said research by a council committee found only 2 to 4 percent of onsite systems required a major repair or replacement. The council also formed a committee to investigate financial assistance for homeowners unable to pay for system repairs or replacement.

On the other end of the country, the Comox Valley Regional District is considering a mandate to maintain septic systems. The district, which incorporates several local governments, is located on Vancouver Island about 100 miles northwest of the city of Vancouver.

Engineering staff will first work on a public education program to be approved by elected officials this spring. The staff will also investigate a mandatory maintenance program. According to a member of the staff, only the government district around the provincial capital of Victoria has a mandatory maintenance program. That program includes fees to recover costs and a requirement for regular reporting.





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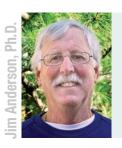
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Jim Anderson, Ph.D., is an emeritus professor at the University of Minnesota Department of Soil, Water and Climate and recipient of the pumping industry's Ralph Macchio Lifetime Achievement Award. Email Jim questions about septic system maintenance and operation at editor@pumper.com.

Pumpers Play an Important Role in Disease Prevention

Talk to your customers about how neglecting septic systems can lead to infections and insect-borne viruses By Jim Anderson, Ph.D.

e are moving into the height of the flying and biting insect season in my part of the world. So I thought it would be a good time to bring up a topic I had questions about last fall: that is the role septic systems might play in the spread of the Zika virus. This is part of a larger question about what impacts failing or less-than-adequate systems have on human health.

During classes on septic system inspections, my colleagues and I talk in general terms about the importance of good systems that protect the environment and human health. There is always some discussion about the potential threat of a failing or poorly maintained septic system. And someone always points out that homeowners and others know enough to stay away from surfacing effluent and around sewage tanks. Our response, though lighthearted and hopefully somewhat humorous, is to point out the homeowner's black Lab likes to find stinky things and roll in them. Afterward, Fido comes into the house to show his love and affection!

This generally leads to a more serious discussion about the fact that children can get into these areas and come in direct contact with the effluent. And since service providers wear the proper protective clothing while working on systems, shouldn't they then consider any direct contact with wastewater a big problem?

VIRUS RISKS

Outside of direct contact though, there are other ways disease can be spread, the most concerning of which is through insects, primarily mosquitoes. It is not so much that the mosquitoes pick up disease from the effluent, but more that having wet areas and standing water create good breeding areas for mosquitoes. And then they subsequently pick up viruses like Zika or West Nile during their life cycle and transmit those viruses to humans when they bite us.

Where I live in the upper Midwest, we don't have the Zika virus, but we do have West Nile virus, and while the incidence of West Nile disease are relatively low — a few cases a year — it is something to be aware of. Typically, West Nile virus spreads to humans and animals via infected mosquitoes. Mosquitoes become infected when they feed on infected birds. You can't get infected from casual contact with an infected person or animal.

Most West Nile virus infections occur during warm weather when mosquitoes are active. The incubation period — the period between the bite by an infected mosquito and the appearance of signs and symptoms of the illness — ranges from two to $14~\mathrm{days}$.

West Nile virus has occurred in Africa, Asia, Europe and the Middle

East. It appeared in the U.S. in 1999, and since then has been reported in every state except Hawaii and Alaska, as well as in Canada.

Information supplied from Mayo Clinic shows West Nile virus might have spread in other ways, including organ transplantation and blood transfusion. However, blood donors are screened for the virus, substantially reducing the risk of infection from blood transfusions. There have also been reports of possible transmission of the virus from mother to child during pregnancy or breast-feeding, or exposure to the virus in a lab, but these are rare and not conclusively confirmed.

The good news is that only about 1 percent of people infected become seriously ill beyond flu-like symptoms. The elderly and people with a condition like cancer that suppresses the immune system are most susceptible.

TIME TO REPAIR

The question posed was, can pesticides be used to control the mosquitoes around the failing septic systems? The easy answer to this is yes, but the ultimate solution is to repair or replace the system or parts of the system that are causing the condition.

Products on the market can be used to temporarily reduce mosquito breeding potential. Oils can be applied to the surface that suffocate the adult mosquitoes, and the pesticide methoprene — at very low concentrations — can be sprayed. Contact your local health department, agriculture department or mosquito control districts for the list of allowable pesticides in your area and to learn about required permits for their use.

The real solution is to fix or prevent the problem. Just like everything else we do as professionals, this involves educating the homeowners and the general public about the potential problem and how to fix it. Contractors and service providers are always in contact with the public, so this should be a part of our conversations to ensure system problems are determined and fixed.

As mosquito season approaches, homeowners should be encouraged to have a professional check seals on septic tanks and make sure risers are sound and watertight. If there is evidence of surfacing effluent, the system should be inspected, the causes determined and repairs or replacement scheduled. As a public service, you can suggest the homeowner walk their property once a week and check tarps or old tires for standing water, clean clogged gutters; basically address any identifiable areas where mosquitoes can breed.

As industry professionals, it is important that we highlight the many ways neglected septic systems can affect public health. \blacksquare

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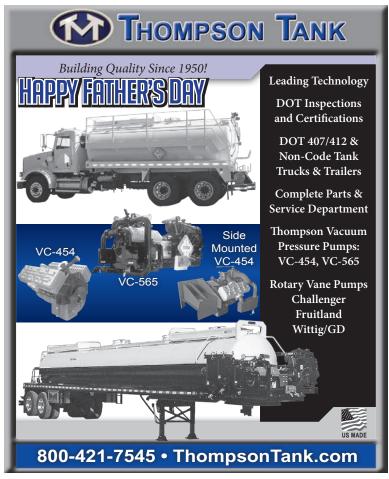
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Educating Wastewater Professionals and Septic System Users

Oklahoma State University's Onsite Wastewater Treatment Training Facility features a variety of demonstration systems placed in a public garden setting By David Steinkraus

ne of the nation's most rural states has a new resource to teach septic system users and wastewater professionals about onsite technology.

With only 25 to 75 people per square mile, Oklahoma is among the least densely populated states in the nation, and as a result has a large number of onsite wastewater systems. Pumpers know how important it is to teach customers about proper care and usage of their septic systems, and that's where Sergio Abit comes in.

When Abit came to Oklahoma State University as an assistant professor of soil science, he saw a need for better education about wastewater technologies, and established the Onsite Wastewater Treatment Training Facility. In

2016, the university opened a demonstration center where people can see what onsite systems look like. *Pumper* asked Abit about the programs he's running and what he hopes to accomplish.

Pumper: How widespread are onsite systems in Oklahoma?

Abit: There is an estimate that 40 percent of homes in Oklahoma have onsite systems, which is a significant number because the national average is 20 percent. And that is understandable because apart from Oklahoma City and Tulsa, we have a lot of rural areas that do not have their own central wastewater treatment facilities.



Reach Sergio Abit at 405/744-9586 or sergio.abit@okstate.edu

That is not the only estimate. If we look at the number of homes built and the number of septic system applications from the last four years, we could have as many as 52 percent of homes with onsite systems. And this is because during the past few years, many people moved into areas outside of a centralized sewer system.

Pumper: How did the training facility start?

Abit: I came here in the summer of 2012, and I was required to do some sort of program on sustainable agriculture. When I asked our Extension administrator who was doing education on onsite systems, I was told nobody was. It was kind of interesting that in a state like Oklahoma nobody was doing any septic system education.

I came from North Carolina State — where I earned my master's and doctoral degrees — and they had an extensive education program. The professor who was my adviser was connected to that effort.

So I said, "Can I make a proposal for an onsite wastewater extension program?" and they said, "Put it in writing," and it was approved.

Pumper: What is the facility intended to do?

Abit: We have a three-part mission. One is to write statewide training materials for installers, inspectors, homeowners and so on. The second is to organize an annual statewide wastewater conference. And the third is to establish an onsite wastewater training and demonstration facility.

For the training, we surveyed people about what they needed most, and we prepared materials to match their needs. In November 2016, we had our second annual wastewater conference, and 167 people attended, up from 152 in 2015. And in 2016, we opened the training facility.

All this has been accomplished with collaboration from the Oklahoma Certified Installers Association, the state Department of Environmental Quality, and members of Oklahoma's Native American nations and Indian Health Services. We also had support from industry, primarily from Infiltrator Water Technologies and Clearstream Wastewater Systems.

Pumper: Would you describe the demonstration center?

Abit: We were given a prime piece of land that is part of the university's botanical garden. Thousands of people already come there every year to look at the plant exhibits or receive other training, so it gives us an entirely different group of people, non-industry people, who can walk around and look at our displays.

Everything we have is built above ground so people can see it, and we have signs telling people what they're looking at and for what conditions systems are appropriate. We have a gravity-fed drainfield, stone-filled trenches, low-pressure dosing and an aerobic treatment system. The systems are mockups to illustrate how the components work, but none are functional.

We have it arranged so we can tell people a story. We say if soils are perfect you can rely on gravity, but poorer soils require pressure dosing, and so on.

The back part of our site isn't filled yet, and we're reserving that for displays of advanced systems such as a membrane bioreactor.

Pumper: What training do you provide?

Abit: We have our courses designed for several groups — for regulators from the DEQ, sanitarians, for installers, and for end users, meaning homeowners, Realtors, builders and inspectors.

For the installers we cover the basics of system installations, safety, operations and maintenance. For the regulators we talk about the basics of soils, how to profile soils, how systems work, and we cover ethics because these are the people who are regulating the industry.

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Above: Displays at the Onsite Wastewater Treatment Training Facility include cross-sections (at rear) so visitors have an idea of what the systems look like in the ground. (*Photos courtesy Oklahoma State University*)

Right: When no one is on hand to talk to visitors at the Oklahoma Onsite Wastewater Treatment Training Facility, signs like this one explain the systems people look at.

Before we established this program, people were getting continuing education courses on their own, but the training didn't always line up with what people needed to learn. Now we have that, and we hope wastewater professionals will take advantage of it. At our most recent conference we had almost 100 percent attendance by the state regulators from DEQ, but we have to do a better job of encouraging more installers to attend the conference. The sanitarians are just beginning to be involved with our program.

Pumper: Where do you see the demonstration center heading?

Abit: We want to expand the demonstration portion. As I said, we have room for more advanced systems, and we'd like to have more of those. At the moment we lump all of them together under the label of advanced systems, but they should be separate because they are all different. At the moment, Oklahoma permits only a few types of basic systems, and we need to educate Oklahomans about other available technologies.

We want to reach out to as many stakeholder groups as possible — even those who are not directly involved in the onsite wastewater industry. That was the reason behind putting the demonstration center in the botanical

garden. For example, if the master gardeners are at the garden for training, I can come in for an hour, talk to them about wastewater systems, and invite them to look at our displays.

Of course we also want to use the demonstration center for our students in the university. We have a lot of courses covering water treatment and environmental protection, and the ability to show students what professors are talking about will be very valuable.

And we want to use this for people not connected to the industry. That also means kids in FFA and 4-H programs. If you can educate the children, they will grow to become responsible adults with a good understanding of wastewater treatment technologies. \blacksquare



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Business is a Mad Dash for Scott Kellogg

'It's like they open the gates at 6 a.m. every morning and it's a full-out sprint like the Kentucky Derby

all day long until I climb back into bed'

In States Snapshot, we visit with a member of a state, provincial or national trade association in the decentralized wastewater industry. This time we learn about a leader in the Colorado Professionals in Onsite Wastewater.

Scott Kellogg

Business: Douglas County Septic **Location:** Franktown, Colorado

Age: 49

Years in the industry: 17

Association involvement:

Member of Colorado Professionals in Onsite Wastewater, served on the CPOW board as state installer representative 2015-'16, member of National Association of Wastewater Technicians, NAWT inspector certified, NAWT installer certified.

Benefits of belonging to the association:

Belonging to CPOW and NAWT allows us to stay current with state regulations, industry changes, and provides opportunity for feedback and communication with other industry professionals as well as regulatory agencies on both state and county levels.

Biggest issue facing our association right now:

Trending environmental issues are causing designers and local governmental agencies to "raise the bar," thus increasing construction costs to homeowners for new and replacement systems. Space is limited for new and replacement systems, thus creating costly challenges for installations. Developers and building departments are not allowing enough space on properties for construction of onsite wastewater systems and need to be educated on regulation requirements encompassing the sizing, setbacks, topography and feasibility of construction of future onsite wastewater systems.

Our crew includes:

Four two-man crews and two office staff.

Colton Mathews is a NAWT-certified inspector. He is our lead maintenance technician, title transfer inspector/vacuum truck foreman. Jason Policarpo is the vacuum truck technician.

Efrain Jimenez is a NAWT-certified installer and is our lead installation foreman, Adrian Hernandez is our installation technician.



Reynaldo Santos is a NAWT-certified inspector and is our lead troubleshooting and repair foreman. Manual Santos is our repair technician

Zach Wilson is our excavation foreman, and Isidro Bocanegra is our primary equipment operator.

Sheri Trehal is coordinator of scheduling, work orders, payroll and accounts receivable.

The Douglas County Septic crew includes (top row, from left) Adrian Lopez, Zach Wilson, Colton Mathews, Sheri Trehal, Reynaldo Santos and Efrain Jimenez. Kneeling (from left) are Scott Kellogg and Manual Santos. (Photo courtesy of Douglas County Septic)

Kay Kuhl is coordinator of customer service, invoicing and accounts payable.

Typical day on the job:

We have come to the conclusion that there is never a "typical day" in our world. Most days will consist of a well-thought-out and planned schedule that quickly changes in the first hour of the following day when emergencies start rolling in, or equipment breaks down or other issues arise. Phone calls and text messages begin between 6 and 6:30 a.m. communicating with employees, builders and suppliers. Generally, I will try to be on-site meeting with our foreman, reviewing jobs and laying out repairs or system installations between 7-10 a.m. Additionally, by 8 a.m. our office staff will be communicating with me, generally dealing with emergencies that came in overnight and adjusting schedules to prioritize and accommodate customers that need to be addressed before day's end.

(continued)



Running our basement excavation division also takes up a fair bit of time every day as well. I typically try for a minimum of two days per week in the office working on invoicing, estimates and project coordination. As much as many people dislike text messaging and would prefer to talk over the phone, I heavily rely on it and would be lost if it ever went away. I can be communicating with three to four employees and our office staff by a group message letting them know of a change in plans, while at the same time be texting suppliers directions or builders I'm meeting with my ETA. We rely heavily on our field technicians to text pictures of repairs they've completed, site conditions, and other issues that need documentation, which helps keep me from having to step foot on every single job we have going, so I can focus my energy elsewhere.

I generally spend at least an hour or two in the evenings after dinner working on bids and answering emails. I explained to someone recently: It's like they open the gates at 6 a.m. every morning and it's a full-out sprint like the Kentucky Derby all day long until I climb back into bed. It's exhausting at times, but always very rewarding.

The job I'll never forget:

A few years back we received a phone call from a health department official asking if we could assist in cleanup and removal of human waste in a backyard of a high-density residential neighborhood. An elderly lady who had mental impairments had been defecating in her backyard for an extended period of time. The health department had been getting complaints from neighbors and in turn contacted the sheriff department. After carefully planning and coordination with the sheriff and health departments, a search warrant was issued. It was almost like a sting operation, trying to elude local news channels and move our equipment onto the property and get out quickly without causing too much of a ruckus. It's definitely a project that will not be forgotten, especially by the technicians, who are no longer with us.

My favorite piece of equipment:

I think everyone would agree our favorite equipment is our mini-excavators. We have four (three Bobcat, one John Deere) ranging in size from a small 4,000-pound-class machine used primarily for exposing lids and small repairs, to our larger 19,000-pound-class machine used for deep city sewer installs and large chambered systems. Everyone can run them proficiently, they are compact enough to get in tight places, easy to mobilize, and still have the power of a rubber-tired backhoe to get the job done. Sometimes we'll even double up on a project with two excavators to speed up the installation process.

Most challenging site I've worked on:

Our common niche is typically residential onsite; however, we ventured out and were awarded a replacement system for a large 120-year-old Catholic church campus. It was probably one of the most challenging installations we've ever completed, taking into consideration the coordination of all phases of the project, the time of year, and not being able to take the church out of service during construction.

Highlights of the project included directional boring of new mainline sewer to proper grade, demolition of existing tanks, and installation of two new large-capacity treatment tanks — one 2,000-gallon three-compartment and one 3,250-gallon three-compartment — while coping with groundwater and dewatering open holes for several days. We imported more than 3,000 cubic yards of filter sand and backfill material, installed 650 Infiltrator chambers in four separate beds as well as an irrigation ditch crossing involving pipe encasement.

This happened over six weeks during Colorado's notorious hard freeze in January/February and required many hours of planning and coordination. Frost protection, gluing pipe, dewatering and trying to expose existing utilities in a foot or two of frozen ground are hard items to cover in a bid. The project turned out a success and met required deadlines. Taking the church off a state-permitted system and getting approval through the county level saved over \$100,000 in capital cost and around \$20,000 per year in O & M cost the church was incurring.

The craziest question I've been asked by a customer:

On several occasions we have been asked by homeowners if we can locate and retrieve diamond rings, earrings and other valuables from their septic tank. Our vacuum truck is like most of those out there, and we have not found a unique or feasible way to accomplish "finding a needle in the haystack."

Best piece of small-business advice I've heard:

My belief in keeping our business successful boils down to ethics, making the right decisions and always doing the right thing no matter how difficult it is or how bad it may hurt. Like I explain to new hires with our team: "It's taken a long time and a lot of hard work to earn a good reputation; it only takes one mishap or oversight to ruin that reputation in a matter of minutes." Like I was taught at a very young age by my father, I believe strongly in standing behind my word and following through with promises I've made. If customers know you are honest and can own up to a mistake, they will no doubt be calling you back for their next project. Additionally, keeping a clean image certainly helps internally, as well as to our customers. Our technicians know they are held to a certain standard in keeping trucks and equipment clean, wearing uniforms and always performing on a professional level. This keeps morale high internally and reflects the professional image we want to portray to our customers.

If I wasn't working in the wastewater industry, I would:

Probably be ranching or involved in the agriculture industry in some shape or form. I really enjoy working with my hands, the outdoors and the feeling of accomplishment after a hard day's work. Oftentimes when I find myself knee deep in you-know-what — the Toby Keith song "Should've Been A Cowboy" starts playing in my head!

Crystal ball time — this is my outlook for the wastewater industry:

I strongly believe it's going to be very important for everyone in our industry to keep up with technology and be willing to look and work "outside the box." With all the growth we have seen in our region, we are finding more and more sites that are difficult to build on, and even more challenging to construct an onsite wastewater system on. I see challenges in our future with limited space in expanding existing systems and constructing new systems. The overall footprint of future systems will need to be smaller, and therefore filtering and advanced treatment will be key in my opinion. Designers will need to take more time to design systems that will fit the topography of the site, same as what an architect does with designing a custom home.

I also believe that O & M should be enforced harder by the regulatory agencies, with more stringent guidelines. If a property owner is not required to maintain their system, they more than likely won't until there is a problem. By that time, it's too late. Like I explain to many of our customers, pumping your septic tank is no different than changing the oil and filter on your car engine. If you neglect it for too long, you'll be faced with a rebuild and it won't be cheap. This goes hand in hand with educating the owners of onsite wastewater systems, possibly creating mandatory maintenance on their systems. If they miss a tank cleaning, maybe the "septic police" would place a padlock on a valve to prevent them from using the system until they get it serviced, similar to what happens when you don't pay your gas or electric bill. ■

- Compiled by Sarah Umhoefer



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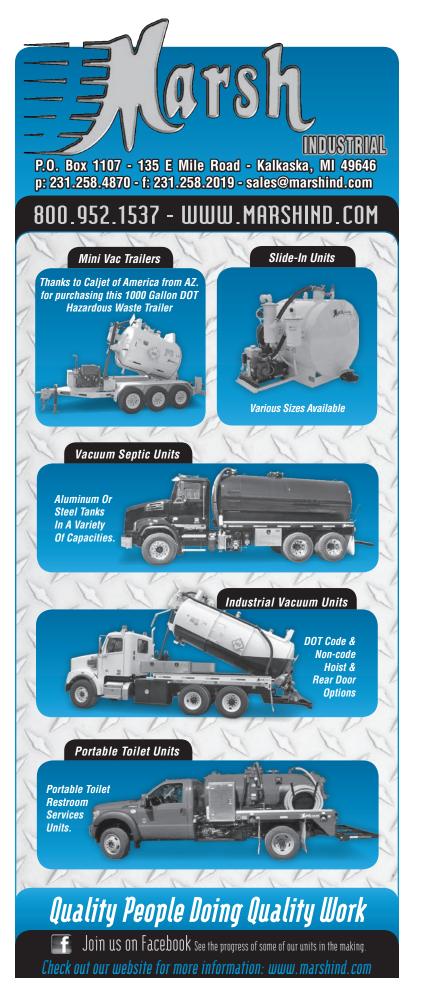
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Saying 'Thank You' is Good for Business

Show your gratitude to employees and customers, and reap the benefits of more revenue and a happier crew By Kate Zabriskie

f you're grateful but don't take the time tell anyone, does it count? Maybe, but it's a bit like clapping with one hand. You know you're doing it, but does anyone else? Probably not. When shown appropriately, gratitude has tremendous power in the world of small business. At a minimum, it will keep you from appearing like an ungrateful and uncouth toad. On the other end of the spectrum, well-expressed thanks can open doors, solidify working relationships and help build your business. The key to giving and getting with gratitude is knowing who to thank, when to thank them, and how to do it.

WHO TO THANK

Thank your crew, your suppliers and your customers.

Thank your hardworking employees. Maybe your team worked long hours providing clean portable sanitation service at a special event over the weekend. Maybe an individual worker put in extra effort this week. Perhaps an employee who has had a hard time meeting expectations finally does so. If you want those types of activities to continue to occur on any kind of regular basis, you need to recognize them.

Thank the folks who help you pay the bills. Customers, colleagues and suppliers will support you if they feel you acknowledge their efforts. If you want to grow and build your network and workplace support system, those are the people you must cultivate. Doesn't it make sense to nurture the relationships you have with them?

WHEN TO THANK

The world would be kinder and gentler place if people displayed more grace. Can you imagine how your workplace would function if everyone expressed sincere gratitude at least once an hour? Motivated, appreciated and valued are some possibilities that come to mind. When you think about it, once an hour may be a bit much at first, but it is not a bad goal to work toward.

And as with most activities, the more you do it, the easier it will become. But be warned: You must choose well. Recognizing people inappropriately is worse than not recognizing them at all.

For example, ask any kid how much a certificate, award or trophy received for some trivial activity meant to him. If you don't already know, the answer is a whole lot of "zero." Kids are not stupid, and neither are the big people they turn into.

Gratitude should feel real and be relevant. If either one of those elements is missing, your "thank you" will most likely seem hollow.

HOW TO THANK

The words "thank you" are an adequate choice for acknowledging com-

mon courtesies shown to you. However, when people go beyond the basics, your recognition should as well. By following a few simple guidelines, you can quickly and easily step up your gratitude game.

Get specific. Focus on a detail, and your "thank you" will mean more. For instance, "The lemon muffins you made and brought into the office today were some of the best I've ever had. The glaze was amazing. You were so thoughtful to share them with us." That's a whole lot better than "Thanks for the muffins."

Get personal. Share with others how what they've done meant something to you, and your thanks will both seem and be more sincere. With a little thought, you can connect feelings to the most mundane topics. For example, "John, I wanted to tell you how much I appreciated your effort to get that work truck back on the road this afternoon. Your ability to diagnose and fix a mechanical problem saved us time and money today."

Get creative. Ironically, the phrase "thank you" hinders most people's ability to express gratitude effectively. Avoid using the phrase at the start of your sentences, and you'll find you are more imaginative. For instance, "Thank you for coming in early for the safety meeting and asking questions. The entire crew benefitted from your active participation." That's OK, but consider the following: "I think everyone learned some valuable safety lessons at this morning's meeting. Your contributions helped all of us stress the importance of being careful on the job. I appreciate your help promoting safety." The second choice is stronger and it doesn't use the words "thank you."

Get to your keyboard. Email is appropriate when a verbal "thank you" seems a bit inadequate or is not possible when workers are out on a route all day and your customers and suppliers are hard to reach by phone. Although you don't want to fill people's inboxes with unnecessary messages, recognize that for most folks, it is a pleasure to receive an occasional note of appreciation among the usual dreck. Start typing.

Get out your stationery. If you really want to show your thanks, think old school. These days, handwritten notes are few and far between, so when you take the time to craft one, it won't go unnoticed. Write at least three sentences using your best penmanship, focus on a detail, and tell your recipients how what they've done for you has made a difference.

THE BOTTOM LINE

So there you have it: the who, what and how of a good "thank you." And at this point, if you are still reading, I sincerely appreciate your taking the time to consider these ideas. As you might imagine, it's great to feel as if what you have to say might be useful to someone. You've made my day. Thank you!



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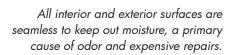


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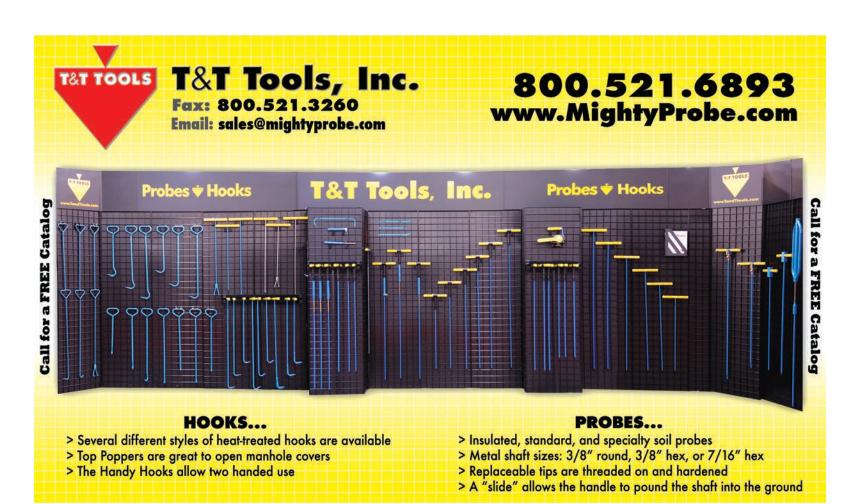
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Onsite Wastewater Association of Idaho www.owaidaho.org; 208/664-2133

Illinois

Onsite Wastewater Professionals of Illinois www.owpi.org

Indiana

Indiana Onsite Waste Water Professionals Association www.iowpa.org; 317/889-2382

lowa

Iowa Onsite Waste Water Association www.iowwa.com; 515/225-1051

Kansas

Kansas Small Flows Association www.ksfa.org; 913/594-1472

Kentucky

Kentucky Onsite Wastewater Association www.kentuckyonsite.org; 855/818-5692

Maine

Maine Association Of Site Evaluators www.mainese.com.

Maine Association of Professional Soil Scientists www.mapss.org.

Maryland

Maryland Onsite Wastewater Professionals Association www.mowpa.org; 443/570-2029

Massachusetts

Massachusetts Association of Onsite Wastewater Professionals www.maowp.org; 781/939-5710

Michigan

Michigan Onsite Wastewater Recycling Association www.mowra.org

Michigan Septic Tank Association www.msta.biz; 989/808-8648

Minnesota

Minnesota Onsite Wastewater Association www.mowa-mn.com; 888/810-4178

Missouri

Missouri Smallflows Organization www.mosmallflows.org; 417/631-4027

Nebraska

Nebraska On-site Waste Water Association www.nowwa.org: 402/476-0162

New Hampshire

New Hampshire Association of Septage Haulers www.nhash.com; 603/831-8670

Granite State Designers and Installers Association www.gsdia.org; 603/228-1231

New Mexico

Professional Onsite Wastewater Reuse Association of New Mexico www.powranm.org; 505/989-7676

New York

Long Island Liquid Waste Association, Inc. www.lilwa.org; 631/585-0448

North Carolina

North Carolina Septic Tank Association www.ncsta.net; 336/416-3564

North Carolina Portable Toilet Group www.ncportabletoiletgroup.org; 252/249-1097

North Carolina Pumper Group www.ncpumpergroup.org; 252/249-1097

Ohio

Ohio Onsite Wastewater Association www.ohioonsite.org; 866/843-4429

Uregon

Oregon Onsite Wastewater Association www.o2wa.org; 541/389-6692

Pennsylvania

Pennsylvania Association of Sewage Enforcement Officers www.pa-seo.org; 717/761-8648

Pennsylvania Onsite Wastewater Recycling Association www.powra.org

Pennsylvania Septage Management Association www.psma.net; 717/763-7762



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Tennessee

Tennessee Onsite Wastewater Association www.tnonsite.org.

Texas

Texas On-Site Wastewater Association www.txowa.org; 888/398-7188

Education 4 Onsite Wastewater Management www.e4owm.com; 713/774-6694

Virginia

Virginia Onsite Wastewater Recycling Association www.vowra.org; 540/377-9830

Washington

Washington On-Site Sewage Association www.wossa.org; 253/770-6594

Wisconsin

Wisconsin Onsite Water Recycling Association www.wowra.com; 608/441-1436

Wisconsin Liquid Waste Carriers Association www.wlwca.com; 608/441-1436

NATIONAL

Water Environment Federation www.wef.org; 800/666-0206

National Onsite Wastewater Recycling Association www.nowra.org; 800/966-2942

National Association of Wastewater Technicians www.nawt.org; 800/236-6298

CANADA

Alberta

Alberta Onsite Wastewater Management Association www.aowma.com; 877/489-7471

British Columbia

WCOWMA Onsite Wastewater Management of B.C. www.wcowma-bc.com; 877/489-7471

British Columbia Onsite Sewage Association www.bcossa.org; 778/432-2120

Manitoba

Manitoba Onsite Wastewater Management Association www.mowma.org; 877/489-7471

Onsite Wastewater Systems Installers of Manitoba, Inc. www.owsim.com; 204/771-0455

New Brunswick

New Brunswick Association of Onsite Wastewater Professionals www.nbaowp.ca; 506/455-5477

Nova Scotia

Waste Water Nova Scotia www.wwns.ca; 902/246-2131

Ontario

Ontario Onsite Wastewater Association www.oowa.org; 855/905-6692 Ontario Association of Sewage Industry Services www.oasisontario.on.ca; 877/202-0082

Saskatchewan

Saskatchewan Onsite Wastewater Management Association www.sowma.ca; 877/489-7471

Canadian Regional

Western Canada Onsite Wastewater Management Association www.wcowma.com; 877/489-7471







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wner Jimmy Norwood refurbished a 2006 black, orange and silver Kenworth 335 with a 4,000-gallon aluminum tank and Jurop/Chandler 398 cfm pump. The truck is powered by a Cummins 350 hp engine tied to an Eaton eight-speed transmission. The rig was painted in-house by Scottie Griffin, and features a digital tank readout, heated collars, top and rear 20-inch manways, passenger side toolbox, 50-gallon water tank, LED rear work and marker lights all around, and polished aluminum wheels, visor and steps. The tank was epoxy coated by Copia Specialty Contractors. Hand lettering was done by Art by Bart. The interior features air-ride leather seats, new AC and stereo. Mark Wark drives the truck, which is used for residential and commercial septic service.

SHOW US YOURS!

Got a truck with real WOW appeal? Show it off to *Pumper* readers! Send photos of your truck after it has been lettered with your

company name. Any industry-related truck is acceptable. Please limit your submission to one truck only.

Your Classy Truck submission must include your name, company name, mailing address, phone number, and details about the truck, including tank size, cab/chassis information, pump information, the company that built the truck, and any other details you consider important. In particular, tell us what features of the truck help make your work life more efficient and more profitable. Email your materials to editor@pumper.com or mail to Editor, *Pumper*, P.O. Box 220, Three Lakes, WI 54562. We look forward to hearing from you!



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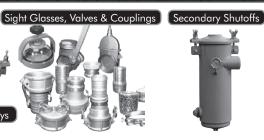
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Septage Disposal Management

By Craig Mandli

DEWATERING EQUIPMENT

BRIGHT TECHNOLOGIES 0.6-METER SKID-MOUNTED BELT FILTER PRESS



The 0.6-meter skid-mounted belt filter press from **Bright Technologies** has a stainless steel frame and roller construction, and radius wedge zone and wing roller. Integrated components include a sludge pump, polymer system and wash-water booster pump. Options include a sludge flowmeter, air compressor and discharge conveyors. The compact walk-around skid design can be used in as little as a 20- by 10-foot floor area. Its Boerger rotary lobe sludge pump has a maintain-in-place design. Its Goulds Water Technology belt wash booster pump can handle small solids and operate with recycled water from the process. Allen Bradley controls and touch screen integrate the components. Cake of up to 35 percent solids can be achieved with septage and grease trap slurries. It offers production rates of 25 to 50 gpm, depending on sludge type. **800/253-0532**; www.brightbeltpress.com.



FOURNIER INDUSTRIES ROTARY PRESS

The **Rotary Press** from **Fournier Industries** uses two slowly rotating screens to create a 2-inch-wide channel that the sludge passes through as it de-

waters. A pressure restrictor on the outlet of the press allows the operator to vary the degree of cake dryness in the final product. The unit has very few components and is designed for ease of maintenance and unattended operation. The totally enclosed design mitigates odors and allows the operator to avoid direct contact with the sludge. It can be equipped with a single dewatering channel, or can be expanded up to eight channels on a single machine. Septage can be treated to a cake dryness in the more than 40 percent range. 418/423-4241; www.rotary-press.com.

IN THE ROUND DEWATERING HORIZONTAL DRUM

The horizontal biosolids dewatering system from **In The**



Round Dewatering has a stainless steel drum with perforated plastic tile lining. The drum is mounted on a roll-off frame for easy transport and unloading. Water trays allow containment of discharge water. An 18,000- to 25,000-gallon batch is mixed with polymer before being filtered in the rotating drum, driven by a 1/2 hp variable-speed electric motor with a heavyduty chain and sprocket. The turning eliminates crusting and wet pockets to produce uniform, consistent results. The dewatered material dumps easily and the drum is self-cleaning. **317/539-7304**; www.itrdewatering.com.



SIMON MOOS MASKINFABRIK A/S KSA COMPACT

The KSA Compact from Simon Moos Maskinfabrik A/S is mounted on a two-axle chassis. This small, versatile mobile unit is designed to

dewater sludge at a high volume. It is ideal to carry out dewatering projects with limited access in rural and urban situations, such as inner-city restaurant grease traps. The unit can be built on a frame, tested, and shipped to the customer. It can then be mounted onto a chosen chassis. It can be used in conjunction with a trailer-mounted AVC dewatering container, allowing the user to perform larger dewatering jobs. www.simonmoos.com.

(continued)

CASE STUDY

PRESS USED TO FURTHER DEWATER OILY SLUDGE

Problem: Action Environmental of Fort Wayne, Indiana, specializes in the treatment of wastewater from industrial cleaning, machinery maintenance and remediation. Ed Black,

president of Action Environmental, was looking for a solution that would allow further dewatering of the oily sludge produced during their main treatment process. For years, the company has been hauling the sludge to a landfill.

Solution: The MD Press 202 from Trident Processes receives the material directly from the plant's sludge holding tank. For thin, diluted sludge, a polymer can be applied with the unit's optional floc tank and mixer. The system



only requires 1 hp. Black reported that the Trident press "allowed us to seamlessly treat variable, mixed media sludge types."

Result: The MD Press proved to be the right choice for Black's plant operation. For every drum of solids, his team separates one to two drums of liquid for an estimated 50 to 65 percent weekly reduction in landfill loads hauled. The tested samples also passed the landfill's paint filter test, which is an indication of more savings to come. **800/799-3740**; www.tridentprocesses.com.

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LAND APPLICATION

IMPERIAL INDUSTRIES ULTIMATE DEBRIS COLLECTOR

The **Ultimate Debris Collector** from **Imperial Industries** combs debris from septic waste so it can be land-applied according to state regulations or pretreated for off-



loading at a disposal plant. The 85-pound unit attaches to the rear valve of the vacuum truck. Two options on filter combs are available for septic and holding tank service. The septic filter, with 22 teeth, spaced 3/4 inch apart, is designed for removing larger debris, while the holding tank filter has 45 teeth spread 3/8 inch apart. A hinged end cap makes it easy to slide the filters out for cleaning. Debris on the filter can be brushed into a disposal container. 800/558-2945; www.imperialind.com.

ROLL-OFF CONTAINERS

AQUA-ZYME DISPOSAL SYSTEMS ADS

The **ADS** 30-yard open-top rolloff dewatering unit from **AQUA-Zyme Disposal Systems** can be



filled with 22,000 to 25,000 gallons of biosolids at 1 to 2 percent solids in about two hours. After draining 24 hours, the unit can be picked up using a standard-capacity roll-off truck and transported for solids disposal. Sludge volume can be reduced by 80 percent with reductions to 98 percent in BOD, COD, FOG and TSS. Effluent is clear, the unit has few moving parts, and the size of filter media can be selected according to job requirements. Standard equipment includes a roll-over tarp system; side, floor and center screens; 1/4-inch floor plate; 7-gauge side plates; four door binder ratchets; eight drain ports; two inlet ports; and a long-handle scraper. Units are also available in a 15-yard size. **979/245-5656; www.aqua-zyme.com.**

PARK PROCESS SLUDGE KING

The **Sludge King** dewatering container from **Park Process** includes radiused, edged filter screens providing extra filter area and eliminating 90-degree angles that can trap cake when dumping. Between the bottom ends of the wall

filters and middle wall filters are installed Cake Away thick plastic panels that fill the void in the container bottom where water could collect. They facilitate the dumping of cake from the container by providing a nonstick surface. Two center-wall filter panels offer additional filter area, translating into dryer cakes and faster dewatering times. The inlet manifold has individually controlled inlet ports for distributing the incoming flow equally to each side of the center wall filters. Units are offered in five capacities. 855/511-7275; www.parkprocess.com.

SCREENS/STRAINERS/SCREENING SYSTEMS

JWC ENVIRONMENTAL HONEY MONSTER

The **Honey Monster** receiving system from **JWC Environmental** screens and processes septage,



grease or sludge from vacuum trucks. The automated system reduces and separates unwanted solids, such as rocks, rags, clothing, plastic and debris to allow for cleaner waste handling. The combination of grinding, solids removal, washing and dewatering allows a typical septage truck to unload in five to 15 minutes. The system is completely enclosed to ensure safety, vector control and capture foul odors. It has a Muffin Monster grinder, a dualhelix compaction zone for additional dewatering, and a triple-spray wash manifold to wash away soft organics. It provides optimal throughput while minimizing odors, and protects plants from debris bypass with perforated plate screening. 800/331-2277; www.jwce.com.

SCREENCO SYSTEMS MEGA SCREEN

The **Mega Screen** septic receiving station from **ScreenCo Systems** has 40.5 square feet of screening area and is fed through a 6-inch inlet with dual fan spreaders. The front screens are self-cleaning, processing up to 1,000 gpm. The dual

screen design is nonmechanical and uses gravity to separate trash from the waste stream. The unit is constructed from aluminum and utilizes stainless steel 3/8-inch gapped bar screens at opposing angles, meeting the 503 regulations for septic screening. It can be set up with a single 6-inch inlet hose or two 4-inch inlet hoses capable of off-loading two trucks simultaneously. It will not plug with rags or hair, and simple raking to the trash drain tray with provided custom tools makes clean-out simple. Built-in forklift skids make it portable. An OSHA-compliant catwalk is included. **208/790-8770; www.screencosystems.com.**

STORAGE TANKS

HUSKY PORTABLE CONTAINMENT BLADDER TANK

Husky Portable Containment Bladder Tanks are available in custom bladders or pillow tanks to meet requirements and specifications. They can be manufactured taller, shorter, wider or longer with any fitting and valve configuration. They



are available in sizes from 25 to 50,000 gallons, and manufactured to meet military or commercial specifications. Construction materials include XRs, PVCs and urethanes (MIL Spec), with PVC (NSF 61), aluminum, stainless steel and brass fittings from 3/4-inch to 6-inch. They include access panels, maneuvering straps near the corners and every 5 feet down the sides, flame arrestors, double T-style and mushroom vents. Storage bags are included. Ground covers and sunscreens in various weights are available, as are field repair kits. 800/260-9950; www.huskyportable.com.

SLUDGE TREATMENT

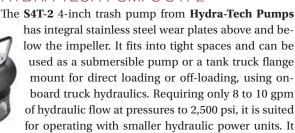
BIONETIX INTERNATIONAL FIZZY-TAB

Fizzy-Tab from **Bionetix International** is a multipurpose natural cleaner that controls odor and helps maintain healthy grease traps and



septic systems. It contains diverse microbiological organisms designed to activate digestion of solid waste and reduce sludge buildup in the bottom of tanks. Naturally occurring bacteria and enzymes (cellulase, lipase, protease and amylase) in the tablets speed up the biodegradation of paper, oils, grease and other inert solid materials that settle on tank bottoms. They can be applied to toilets or directly to septic tanks to reduce sludge buildup, extend drain life, prevent drain blockage, reduce pumping frequency and lower the risk of a leachfield failure, while simultaneously improving drainfield percolation. They come as blue 22-gram tablets containing 5 billion CFU/gram. They replace chemical products and do not attack plastic or metal pipes. They should be added monthly to keep the septic or grease trap system healthy and functioning. 514/457-2914; www.bionetix-international.com.

HYDRA-TECH PUMPS S4T-2



has a cast and machined hardened aluminum volute, stainless steel wear plates for durability in a lighter package, and a two-vane open-channel impeller. It includes a stainless steel intermediate shaft with pressed-in-place upper and lower bearings attached to a heavy-duty gear motor with high-pressure lip seal, which combine to drive the impeller. It delivers output flows to 700 gpm, heads to 100 feet and pressure up to 2,000 psi. 570/645-3779; www.hydra-tech.com.

NEWTECH NT4000-TR

The NT4000-TR thickening reactor from New-Tech is used for dewatering liquid waste such as sludge, septage, grease and food-processing waste, which is mixed with polymer before entering the thickening reactor. Inner screens allow water to pass through and drain out while retaining thickened solids inside. The thickened solids are then vacuumed for disposal or beneficial reuse. A clean-in-place cycle is activated and the screens are automatically cleaned by the fixed wash head. It reduces waste volume



by up to 90 percent, is easy to use and clean, relies on gravity with no moving mechanical parts, and is constructed of stainless steel for long-lasting use.

800/210-2361; www.newtechenviro.com. ■

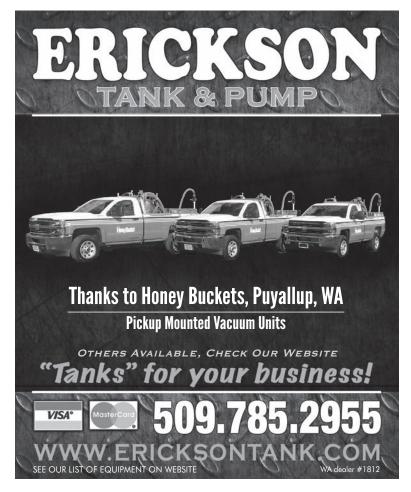
CASE STUDY

GREASE DIGESTER SOLVES ODOR ISSUES AT GOLF COURSE

Problem: Foul odors were emitting from three combined sewer manhole units 25 feet away from the 18th green and 75 feet from the outside dining facility of a Detroit-area country club. The combined sewers had grease, food waste, sludge and human waste multiple feet thick. The area downstream had to be pumped regularly by the municipality. Offensive odors were also present inside the clubhouse.

Solution: The Eco-Drain System Company stepped in with a protocol designed to eliminate the problem using a **BioForce Heavy Duty Grease Digester** from **Chempace Corporation.** The sewers were dosed daily in addition to treatment inside the building.

Result: After 10 days, less water and less sludge was reported in the sewers. The odor was also dissipating. A visit 45 days later confirmed the solution was working. **800/423-5350**; www.chempace.com.



DEWATERING BELT PRESSES CENTRIFUGES



PRODUCT **NEWS**



POWERSEWER OFFERS ALTERNATIVES FOR CONVEYING WASTEWATER

It's difficult developing wastewater treatment plans for small- to medium-sized communities, where gravity sewers can be prohibitively expensive and traditional septic systems aren't always possible.

Franklin Electric offers FPS PowerSewer as an

This low-pressure system can eliminate the need for costly lift stations and the deep trenching of gravity systems. The FPS PowerSewer collects wastewater and can pump long distances to treatment, including to community or cluster onsite systems, as well as public sewers, according to Jessie Hinther, the company's market development manager. "With the addition of three-phase pumps, we're now capable of servicing both residential and commercial applications.'

The FPS PowerSewer can be installed to serve almost any building site, regardless of topography or soil type, according to Hinther. The system is compatible with any of Franklin Electric's FPS 2 hp grinder pumps, which feature grinding at 414,000 cuts per minute, up to a 200-foot high-head shutoff, and easy serviceability.

With its rotomolded HDPE large-capacity tank, the PowerSewer supplies reserve storage space during power outages. A shallow dry well houses the electrical junction box and isolation valve handle, while a sealed wet well opening prevents exposure to sewage.

A drop inlet allows for straightforward pipe adjustments and feeds solids directly to the grinding plane. A NEMA 4X enclosure holds the pump and alarm power circuit breakers, manual pump control and an alarm system that can be equipped with leak-detection circuitry.

The original PowerSewer designs have been on the market for more than 15 years. The company consulted with installers and service providers in developing the enhanced design, adding new 2 hp grinder models to broaden service applications.

The PowerSewer offers numerous grinder pump electrical configurations and isolated pump support, an anti-shear discharge to protect service lines from forces generated by backfill and tank settling, a float-tree assembly with spring release for easy maintenance, and an anti-siphon check valve.

"That keeps backflow from entering back into the system, as well as eliminates clogged pumps resulting from pumping downhill," says Hinther. 866/271-2859; www.franklinengineered.com.

WHISPER WASH FROM WATER CANNON

Whisper Wash Professional Rotary Spray Systems from Water Cannon can be used with conventional hot or cold pressure washers from 2,000 to 5,000 psi. The Classic comes with oversized self-lubricating twin-thrust bearings, balanced spray bar and portable breakaway handles for easy transport and storage. The Big Guy model has an oversized 28-inch housing that covers large surfaces and is crafted with Xenov,

stainless steel and aircraft-grade aluminum for

long life. The Platinum Series offers a one-piece unitized swivel cartridge, 5,000 psi maximum working pressure and 212 degrees F maximum working temperature. 800/333-9274; www.watercannon.com.

COXREELS THREE-WAY PIN LOCK

The three-way pin lock from COXREELS locks reels for transport in heavy-duty applications. It can be installed on either side of the reel and, with the use of the universal bracket, can be installed in 0-, 30-, 60- or 90-degree rotation in respect to the base mount surface of the reel. The lock safely secures the reel and eases the activation of the rewind

while ensuring the two actions are mutually exclusive. The pin lock engages into a separate ring or the chain sprocket rather than into the side of the drum-side disc for extra strength and reliable activation. 800/269-7335; www.coxreels.com.

WESTECH WOLF **HYDROEXCAVATOR**

The Westech Wolf noncode certified hydroexcavator uses a Hibon 8702 tri-lobe blower rated at 5,300 cfm and 27 inches



中

Hg. Side-mounted water tanks on the truck are designed to reduce weight by more than 40 percent and are joined from left to right with a crossover equipped with glycol heat tracing. The debris body is lifted using a telescoping, dual-acting hydraulic cylinder capable of 36,000 pounds of force. The water system uses a CAT 3560 triplex water pump rated at 20 gpm and 3,000 psig. The boom is a 10-inch turret design with 26-foot overall reach and 320 degrees of motion. 780/955-3030; www.westechvac.com. ■



Do you have a truck with WOW appeal? Show it off to Pumper readers!

Send photos of your truck after it has been lettered with your company name. Any industry-related truck is acceptable. Please limit your submission to one truck only.

Your Classy Truck submission must include your name, company name, mailing address, phone number, and details about the truck including tank size, cab/chassis information, pump information, the company that built the truck and any other details you consider important. In particular, tell us what features of the truck help make your work life more efficient and more profitable.

Email your materials to editor@pumper.com. We look forward to hearing from you!

INDUSTRY NEWS

Portable sanitation pioneer Barry Gump passes away

Barry Gump, 74, former president of Andy Gump Temporary Site Services, died April 17 at his home in Valencia, California. Barry was responsible for growing the company founded by his father, Massena "Andy" Gump, in 1956, to one of the largest portable restroom companies in the California. The Gump family also is involved with the ownership of the portable restroom manufacturing company NuConcepts.

The Gump family has been active in the Portable Sanitation Association International for many years, and the PSAI's major award is named for Andy Gump. The company has been led by Barry's daughter, Nancy Gump-Melancon since his retirement. Gump is survived by his wife, Pati; daughter, Nancy; and three grandchildren, Andy, Josh and Cole. His second daughter, Cherilyn, died at age 3.

Enerpac Integrated Solutions now Heavy Lifting Technology

Enerpac Integrated Solutions is now Heavy Lifting Technology. A manufacturer of high-pressure hydraulic products, the company has 28 offices in 22 countries and more than 1,000 employees.

Armstrong Equipment announces new brands

Armstrong Equipment, based in Santa Fe Springs, California, announced it now stocks Samson Corporation, Reelmaster Reels and Air Operated Pumps. \blacksquare

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Greenwood Village, CO Lisa Nicoll - 720-626-8989 CPOW@CPOW.NET

OREGON

NAWT/O2WA Inspector Training Course

June 22-23, 2017

Salem, OR

Contact: Belinda Rasmussen 541-389-6692 info@o2wa.org

PENNSYLVANIA

8th Waste Treatment Symposium August 23-24, 2017

Apollo, PA

TEXAS

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Brian Murphy - 817-467-0213 Rets@rets-llc.com



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BUSINESSES

Well-established SW Florida business for sale. 900+ units on the street, 15 ADA, 30+ sinks, 20+ holding tanks, 7 trucks, 2 trailers. Many long-term construction customers, year-round event customers. Documented yearly growth. Only serious buyers need to inquire. Email office@ronsjons.com or portapottyrentals@yahoo.com

Septic Tank Cleaning & Inspection Service Business for Sale in Central Maine. Owner is retiring and is motivated to sell. Profitable (Average 3-yr Gross \$205K), turnkey business with 5,200 loval customer base. Two pump truck operation - (1) 2000 GMC - 2,500-gallon capacity. (1) 2004 Peterbilt - 4,500-gallon capacity. Serious inquiries only! Email septicbizsale@gmail.com or call 207-782-1620

Septic Business for sale in central Florida, truck and equipment, 40+ yrs., same phone # 352-429-2426. \$250,000. For more info, email tcraigseptic@gmail.com

Septic business for sale in the Central San Joaquin Valley, California, Well known, established name. 2002 Sterling pumper truck, 3.200 gallons, CARB compliant, Also a 1994 International pumper, 2,200 gallons, low annual mileage compliant, and a great backup truck. A jetter is included as well as a WeeVac. Serious inquiries only, please email cindy.alvarado1@verizon.net (P07)

West Texas portable restroom business for sale. Odessa and Midland area. Small business has over 200 toilets and 3 new service trucks. We also carry trash trailers. I have 2 other businesses also and don't have the time to oversee this one. On pace to do close to a \$1,000,000 in sales for the year, Will sell with or without the yard. For guestions please email: joe@gincocorp.com

Portable Toilet Rental & Waste Disposal Business available for acquisition. In business over 30 years, excellent reputation, growing trade area. Approximately 850 portables, plus 75 roll-off units, handwashing stations, 7 pumper trucks, 2 roll-off trucks. Revenue over \$2M, EBITDA \$800,000+ and growing. Well-trained and stable employees. Contact Phillip Wilhite, at Corporate Investment. pwilhite@corpinvest.com for more informa-

Septic tank business for sale. Owner is retiring. Two (2) Freightliner pump trucks in excellent condition. Excellent income. Will train new owners. Price \$235,000 firm. Also house for sale with acreage to expand business. arlnjss@yahoo.com (P06)

Portable toilet & trash removal company for sale in Hawaii. Service trucks, delivery trucks, and toilets. Standard, ADAs, sinks. Front load trucks, container delivery trucks, roll-off trucks, front-load dumpsters and roll-off containers. Serious inquiries only. Email hawaiianpumper@mail.com

For Sale: 8 pumper trucks, 2013 and 2014 models. F-550 1,100w/300f and (1) 2014 with 300w/150f slide-in tank, call for pricing. We have 243 blue PJ3 portable toilets for sale, \$250 each. (22) 250-gallon holding tanks, \$175 each. (111) 300-gallon holding tanks, \$187.50 each. There are also inside wash sinks, outside free-standing wash sinks, single portable trailers, 10-unit portable trailers, etc. Call for details 956-842-3603 or 956-330-5476. Selling due to retirement. Located in Edinburg, Texas.

Roto-Rooter Franchise in NE AZ. In business since 1989. With significant down payment, owner might carry paper. Call 928-537-3123 text rotorootershowlow@gmail.com. (P06)

WIND RIVER ENVIRONMENTAL is actively seeking opportunities to acquire companies in the septic, grease, waste hauling, drain cleaning and commercial plumbing service lines on the East Coast. Join a winning team! Check us out at www.wrenvironmental.com. Email Dave@Klinesservices.com or call my cell at 717-587-1909. (PBM)

Portable restroom business for sale. Located in Midcoast Maine for 20 years. Loyal customer base, contractors and events. Fully equipped. \$125,000. Call 207-449-8741 or email portabizsale@gmail.com

If you're interested in selling your grease trap service, used cooking oil or other non-haz wastewater disposal business, we'd like to hear from you! Liquid Environmental Solutions is the nation's largest liquid waste management company - providing service across the USA. Sell your business and enjoy retirement or join us - we can always use great team members. Contact Dana King: dana.king@liquidenviro.com or call 858-481-8106 ext 10. (P10)

Septic business for sale, New York watershed. Includes trucks and equipment. 20+ years with same phone number. \$150,000. hacksaw12481@gmail.com

Septic company for sale in Jacksonville, FL area. Owner will qualify if not licensed until you are. pumpr@comcast.net

www.RooterMan.com. Franchises available with low flat fee. New concept. Visit website or call **1-800-700-8062.** (PBM)

Looking to start your own septic tank business in Florida? I can help. Have license, will sponsor, Call 931-277-5541 or 931-248-1284.

Florida septic business for sale with two trucks and all equipment. Established 36 years. Specializing in drainfields, tank installations and repairs. \$289,000 negotiable. Commercially-zoned house & office available for an additional \$130,000. Serious inquiries only. Call for more info. 727-326-5044. (P06)

Connecticut-based restroom trailer business for sale. Successful, stable business in its 11th year with many repeat customers and events. Consistent revenues in \$600-800K with operating income of \$130-180K. Incredible upside potential in a very lucrative market! Units are currently kept in Southern CT, with business coming from throughout the New England market. Included in the transaction: 25 assorted trailers (10 stalls, shower trailers, ADA accessible, two/three stalls), 3 delivery trucks, training, dependable work force, website domain and management team open for transition period. No existing port-o-potties or sanitation. A great add-on addition to your business or a turnkey business for someone looking to enter the industry. Please contact seller at 203-520-4397. Serious inquiries only. (P06)

Fully-equipped Long Island, NY cesspool cleaning company for sale. Established 50+ years serving Nassau & Suffolk Counties with excellent reputation and high-repeat customer base. High volume of drain cleaning calls every week. Best offer. 516-993-0446 (P07)

National Grease Recycling Inc. Let us teach you how to recycle restaurant's waste, fryer grease and oil (yellow grease) only. Big \$. Over 30 years experience, will quide you through complete process from collection to processing to marketing to end users. Don't lose your trap business to competitors that offer both services. We also buy cooking oil, unprocessed, anywhere in the country. Call for information. References available - many success stories. Dewey Walker, 813-704-6599 or 813-758-2552.

CATCH BASIN CLEANERS

1991 International dump, DT466 motor, low miles. Everything works. 950 Stetco Crain dump body is in good condition. No rust. \$25,000 negotiable. Email for more info: dma1371@aol.com (P06)

COMPUTER SOFTWARE

FreeServiceReminderSoftware.com, FreeServiceDispatchSoftware.com, FreeRouteManagementSoftware.com.

DEWATERING

Portable septic and grease receiving stations, dual-screen design. Screens that really work - simple, non-mechanical. Set it up anywhere. 208-790-8770 screencosystems.com sales@screencosystems.com (PBM)

DeWatering Solids Units. 1. Hycor Roto Strainer Screen for removal of core solids. It is stainless steel, 4 ft. long and comes with 20,000 wedge wire screen plus a Hydroscreen. Asking \$10,000. 2. Roto Strainer Screen. It is stainless steel, 8 ft. long and comes with Hydroscreen. Asking \$25,000. Please contact 734-722-8922

2003 1.2-meter mobile Ashbrook Klampress belt press. Ready to work! Comes with polymer makedown system, 4" sludge pump, and water booster pump. Refurbished in 2015. \$65,000, Call Tom at 423-240-9737 (P06)

DRAINFIELD RESTORATION

New and used terralifts for sale starting at \$20,000 used and \$38,000 new. Financing available. Call John at AerraTech 413-298-4272.

Terralifts - New and Used. Financing available for qualified buyers. For more information call Dick Crane 800-223-2256 or aalco@tds.net for electronic brochure. www. voutube.com/watch?v=t8ApRU0asnY (PBM)

HAZARDOUS WASTE UNITS



2005 Sterling/Presvac PowerVac, stainless steel, DOT certified, 3,500-gallon wet/dry. Dump door with high rail gear and boom, Hibon 27" blower with PV750 vacuum loading offloading pump. Tri-axle truck with CAT 435hp engine with Fuller 8-speed transmission. Runs excellent.

> **KLM Companies** 617-909-9044



Pre-owned 2016 Presvac 5,500 U.S. gallon, carbon steel, D.O.T. 412 (A.S.M.E.) vacuum tanker with a hydraulic-driven Fruitland RCF500 pump. (Stock# 5002C)

> www.VacuumSalesInc.com (888) VAC-UNIT (822-8648) PBM

Submit your classified ad online!

www.pumper.com/classifieds/place_ad



Pre-owned 2,300 U.S. gallon, carbon steel, D.O.T. certified, vacuum pressure tank. Mounted on 2002 International cab and chassis with a Presvac PV750 vacuum pressure pump. (Stock# 0529V)

www.VacuumSalesInc.com (888) VAC-UNIT (822-8648) PBM



New 3,200 U.S. gallon, carbon steel, DOT certified, 407/412 vacuum tank, dump type with full open rear, door and a Presvac PVB 750 vacuum-pressure pump installed on a 2017 Peterbilt 348 cab and chassis. Four (4) units available.

www.VacuumSalesInc.com (888) VAC-UNIT (822-8648)



2007 International 9200i with a Progress aluminum 3,180-gallon 2-compartment – 2,950 waste (DOT 412) & 230 freshwater. Full-open rear door dump unit with a NVE vacuum pump, 3" transfer pump and high-pressure washdown pump. (Stock# 2757C)

www.VacuumSalesInc.com (888) VAC-UNIT (822-8648) PBM



1998 King Vac, 1998 Ford L8T, 8.3-liter Cummins, 3,000-gallon tank replaced 4/2012. \$49,900

Call 800-535-8606, OH PC

Submit your classified ad online! www.pumper.com/classifieds/place_ad

JET VACS



www.VacuumSalesInc.com (888) VAC-UNIT (822-8648) PBM



Vac-Con industrial machine mounted on a pre-owned 2006 Sterling cab and chassis. \$68,000. (Stock #8593C)

www.VacuumSalesInc.com (888) VAC-UNIT (822-8648) PBM



2007 Aquatech B10/1500: CAT 335hp (EPA 04) with Allison auto. transmission. 88,000 miles. 1,400 hours. New Roots 624 blower, 8" x 19' extendable boom, pump-off option, internal tank flush, 6-function joystick. Excellent condition.

KLM Companies 617-909-9044 PBM

1999 Sterling L9501 Vac-Con 2100: 19,700 miles. Automatic Allison transmission. Roots 824 PD blower. 80gpm 2,000psi jetter pump. 10-yd. debris body. Hydraulic hose, dump, and locks. \$65,000. 706-798-8080 (P06)

Jack Doheny Supplies Inc. offers a full range of late model combo units and DOT industrial vacuum loaders. Call us @1-800-3DOHENY. (PBM)

JETTERS-TRAILER

2004 US Jet 4018-300 trailer: Hatz 3-cylinder silent pack diesel engine, 1,560 hours. 500 ft. 1/2" hose. Very good condition. Newer control panel, new tires with spare, 2 new aluminum tool boxes and fenders. New steel antifreeze tank and new muffler. Good running machine. \$22,500 negotiable. 866-889-3738, PA. mike@birosseptic.com (P06)



2010 PipeHunter jetter trailer: 25gpm, 4,000psi. Over \$5,000 in tips. 500 hours. \$28,000

Mike 443-235-5979, DE PO



The Industry's Most Versatile Trailer Jetter! Model# HJ2TA1030HW, tandem axle trailer, 35 hp Vanguard 10 gpm @ 3,850 psi, 325-gallon water tank, 300' hose, General pump. Fully loaded! List \$36,995. On sale for \$32,995.

800-213-3272, www.hotjetusa.com

PRM

JETTERS-TRUCK



608-835-7767, WI

835-7767, WI P

1974 Ford F-600 jet truck 23,000 GVW, 1,650 psi, 65 gpm. 300 Cl industrial engine for pump with 500 ft. of hose on truck, reel plunger, Myers pump. Works well. Great truck for sewer and drain company. \$8,000. 801-807-8335 (P06)

LEASE/FINANCING

Western Equipment Finance, a bankowned direct lender, is committed to continuing to help you prosper. All equipment types, new or used; we have the best rates and terms you deserve. App-Only Financing and credit decisions within an hour. Call the team you can trust, Jim Stekl at Western Equipment Finance 701-665-1647. jim.stekl@westernequipmentfinance.com (PBM) **Quick and easy financing** for new or used equipment — without all the headaches. **Credit is not an issue.** We have working capital available for commercial equipment purchases \$20,000 to \$2,000,000. **BSG Services** - Call 866-259-5370 or email bsgfin@earthlink.net (PBM)

MISCELLANEOUS

2012 Nissan Pathfinder, 4x4, 4.0L V6 gas, 73k miles, auto. Clean title, 1 owner, navigation, full options. \$9,500. Call 313-636-4303. (P06)

PORTABLE RESTROOMS

100 dark blue Synergy/Taurus units. Park/construction grade. \$300 each. Call 608-835-3459. (P06)

30 used PolyJohn portable restrooms. Blue w/white tops. None older than 2006 - all in good condition, 219-928-8962 (P06)

Blue TSF portable toilets. From \$75 to \$250.. Construction to good grade. Salisbury, NC. 30 miles NE of Charlotte. You pick up - no delivery. Email: myersseptictank@att.net; 704-633-3962 (P06)

Portable toilets, rough, but usable, PolyJohns, 15 yrs+, \$90 each. (minimum 10 units). Kentucky. Contact eric@a1portables.com (P06)

150 Olympic fiberglass units, white in color, construction grade, \$150 each. Please call or text 712-433-1662, terrysseptic@gmail.com (P06)

100 construction-grade PolyPortables/Poly-Johns. Miscellaneous green, tan, & brown. \$275 each. Please call or text 712-433-1662. terrysseptic@gmail.com (P07)

All the equipment and service truck for portable toilet business for sale in Colorado. 149 units. \$69,900. Call for more details. 970-725-0126 (PBM)

200 PolyJohn porta potties - used for one event, great condition. \$300 per pot or best offer. Email Desdoucet3d@hotmail.com or call 325-653-4975. (P06)

28 Tan PolyPortable Restrooms with wood skids for sale \$300 each. Green, blue and tank Integras mixed plastic and wood skids \$300 each. In quantities of 10 or more. 920-322-3342 (P06)

130 used PolyJohn restrooms for sale, construction grade. Best units (minimum 10 units) @ \$125 each, down to \$90 each. Lexington, KY. 859-255-6605 (P06)

PORTABLE RESTROOM TRAILERS

2 Decons, 28' Tonto, 18' Royal, 2001 ASCI, 16' Presidential, 26' Presidential, portable toilet hauler trailers. 315-437-1291, NY. (PBM)

PORTABLE RESTROOM TRAILERS



NuConcepts upscale event restroom trailers for sale. Two (2) 4-units & two (2) 2-units. Excellent condition. \$50,000 cash. Rental income over \$200k/yr. POB

Call/text Richard 770-807-2446, GA

28' Industrial Restroom Trailer - manufactured by JAG. 5 stalls on women's with double sink. 3 stalls, 4 urinals on men's side with double sink. Very little usage - bought for a specific yearly project. \$35,000. carrie@outdooreventservices.com (P06)

PORTABLE RESTROOM TRUCKS



Complete Portable Toilet service truck mount units (turn-key), mounted on your truck or ours. Tool boxes, dual work stations, dc10 washdown pump, reversible vacuum pump, hose reel, set up complete, toilet racks available. 1100 waste/400 fresh: \$21,000, 1700 waste/600 fresh: \$23,500. Any custom options or sizes available!

TexLa Services
936-641-3938
www.texlaservices.com



Call or text 785-477-2254 P06



231-690-2964, MI



2007 International 4200 VT365, Non-CDL, 126K, 6.0 diesel motor, needs work. Body/cab/tank in good condition. New auto. transmission, Progress 1,100w/400f tank, Masport pump.\$15,000 0B0

Chris 609-234-4110, NJ PC



870-238-9481, AR



For info & pics contact pflynn@superiorportables.com or 330-733-9000, OH



> eric@a1portables.com or 859-255-6605, KY

P06



2006 International DuraStar 4300: DT466, 6-speed, non-CDL with 300 waste/150 water and a MEC4000 pump. Hauls 8 units. Truck has 117,000 miles on it. Asking \$17,000 0B0

> Call Joe for details 716-823-3606, NY

2006 Ford F550, Satellite-built truck, 6.0 diesel, automatic, 600 waste, 300 fresh. 2-unit carrier, Conde Super 6 pump. Excellent running truck, good shape. \$23,495 0B0. Call or text 712-433-1662 terrysseptic@gmail.com

Selling International septic trucks and a International stake truck with 16-unit carry capacity - \$12,000. 300-gallon slide-in septic tank for a pickup - \$1,500. 3,000-gallon septic International truck - \$16,000. GMC TopKick with 700-gallon capacity tank - \$5,000. 1,100-gallon capacity septic truck - \$16,000. Location: Brighton, Michigan. Call Bart at 810-217-4639. (P06)

2012 Ford F550: 89,000 miles, stainless steel 400 waste/250 water, electric-start Honda PT0 provisions. 2-unit carrier. \$50,000. 715-425-1025 (P06)

1999 International 4700: 1,100 waste, 400 fresh. Dual side service with Masport. 223,610 miles. Call 843-283-3749 or email powellst@sccoast.net (P06)

2006 Freightliner M2, C7 CAT, 6-speed manual, air brake, 26k GVW. 500/300 split aluminum Kee-Vac tank, 500-gallon plastic chemical tank, AMT washdown pumper. Carries 8 toilets, liftgate, Masport pump hydraulic drive, tool boxes. Low miles. \$37,500 OBO. Text or call for info. Richard 620-629-7212 (P07)



2005 International DuraStar 4300: DT466, 6-speed manual transmission with new 402 Wally pump. 1,500 waste/400 chemical. GVW is 32,000 and truck has approx. 85,000 miles. Asking \$27,000 OBO. Call for details.

Joe 716-823-3606, NY

P06

2007 Isuzu NPR, 108,000 miles. 600-gallon waste compartment, 350-gallon freshwater compartment. 60 cubic feet of dry storage space. Place to handle 4 portable bathrooms, lift gate. For more information please contact rauny@thenet.com. (P06)

2007 International 4300 1,350-gallon \$39,500; 2006 International 4300 1,350-gallon \$37,500; 2002 International 4300 1,350-gallon \$21,000. 256-757-9900 or www.pbsos.com (PBM)

2006 Ford F550 4x4: New 11' flatbed, new 950-gallon portable toilet slide-in tank -650/300. Conde SDS6, 9hp electric start Honda. Bucket fill, 30' Tiger Tail. Ready to work. \$29,995. Denver, CO. 303-789-9440 Ask for Matt. (PBM)

2008 Isuzu NPRHD: Crescent flat tank, 550w/ 250f, 6-unit carrier, 120,000 miles. Diesel, automatic, exhaust brake. Masport pump, Thieman liftgate. Dual side service, worklights. \$37,000. Call 203-748-6906 (P06)

1999 Ford F450, 7.3 diesel, 124,000 miles. 315-gallon freshwater and 400-gallon waste tanks. Porta-pot carrier on back. \$14,995 0B0. Call/text 712-433-1662. (P06)

2007 Ford F550 4x4: New 11' flatbed, new 800-gallon portable toilet slide-in tank - 540/260. Conde Super 6, 70cfm, 5.5hp electric start Honda. Bucket fill, 30' Tiger Tail. Ready to work. \$27,995. Denver CO. 303-789-9440 Ask for Matt. (PBM)

2009 Dodge 5500: 6.7 Cummins diesel, auto., 4x4, new aluminum vacuum tank, 700w/260f, Masport pump. Honda engine. www.pumpertrucksales.com. Call JR. @ 720-253-8014, CO. (PBM)

2005 Chevy Kodiak 4500: Duramax diesel, auto., 4x4, 13-ft flatbed, 52,000 miles. Likenew. Vacuum tank & pump can be added for additional cost. www.pumpertrucksales. com. Call JR. @ 720-253-8014, CO. (PBM)

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PORTABLE SINKS



4 types of portable handwash stations. 46 units available. Some need minor repair. \$75 per unit.

brandenj@waltersservicesinc.com

For Sale: Portable handwash stations, different makes and models. Some need repair. 1,500-gallon holding tanks. Call for pricing. 423-745-4863 (P06)

PORTABLE SHOWER TRAILERS

Attention large outdoor events promoters and seasonal campgrounds requiring showers, sinks and hot water availability: **FOR SALE**: Two (2) 40-ft. shower containers. 14 shower heads per container, handicap accessible. Trailer and accessories included. For pictures go to www.candsshowers.com. 712-428-6143 or cell 712-880-1250. (PBM)

POSITIONS AVAILABLE

Industrial/Environmental Vacuum Truck Contractor looking for Sales/Operations person. Must be highly motivated with 3 years experience. Opportunity is in the NY Tri-State Area. High compensation package with benefits. Please email resume to guzzler195@gmail.com (P06)

GapVax, Inc., a nationally recognized manufacturing business, is seeking a talented, highly motivated individual to fill a full-time Sales Position in the Midwest (lowa based preferred) region. GapVax is the leading manufacturer of industrial and municipal vacuum units and hydroexcavation units in the United States. We provide the most reliable, comprehensive, and efficient mobile vacuum units in the industrial and municipal markets. Specifications of the position are listed on our website, www. gapvax.com, click on the Now Hiring link in the left hand column. Send resumes to or betty@gapvax.com or 575 Central Avenue, Johnstown, PA 15902.

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POSITIONS WANTED

Portable Restroom/Temp Fence experienced, hands-on Director of Operations/Operations Manager looking for new adventure. Proven track record and excellent references. Willing to relocate. 775-291-0340 (P06)

PRESSURE WASHERS

Industrial Pressure Washer - New w/warranty \$9,500. 2,000psi, 18gpm. 999cc Kohler & AR pump. Will deliver. 321-800-5763 (PBM)

Honda horizontal GX engines, new in-the-box w/warranty. GX200QX - \$399; GX270QAG -\$579; GX390QA - \$599 delivered price. 800-363-9855 or GXParts.com (PBM)

PUMPS

Buy & Sell all makes and models, new & used vacuum pumps & high pressure water pumps, and good used replacement parts. Call for an inventory sheet and save. www.Vacuum Salesinc.com, (888) VAC-UNIT (822-8648)

2011 Fruitland Vacuum Pump - Model 500 LUF; Ser: 517549; Location: 4008 Main St., Dallas, TX. \$2,200. Phone 214-824-7276 (P06)

RENTAL EQUIPMENT

Liquid vacs, wet/dry industrial vacs, combination jetter/vacs, vacuum street sweeper & catch basin cleaner, truck & trailer mounted jetters. All available for daily, weekly, monthly, and yearly rentals. VSI Rentals, LLC, (888) VAC-UNIT (822-8648) www.vsirentalsllc.com (PBM)

2016 Acro Vacuum Trailer: Stainless steel 6,000 gallon, DOT certified double conical with air-ride suspension. Aluminum wheels all positions, full hose trays, OSHA walkways and railings. Vacuum pump option either hydraulic or self-contained. KLM Rentals, Inc. 617-909-9044 (PBM)

ROLL-OFF TRAILERS

2001 ESP Roll-off trailer: Two (2) container roll-off trailer good brakes, tires, frame. etc. KLM Companies 617-909-9044 (PBM)

SAFETY EQUIPMENT

Save on super-strong Black Mamba nitrile disposable gloves at www.OrderMyGloves.com. Also, latex and vinyl gloves from \$3.99/box of 100. (P07)

SEPTIC TRUCKS

2004 Freightliner M2 with 2,500 gallon tank/100-gallon water tank. 367 Challenger. Automatic transmission. ~150,000 miles. \$43,000. Call 615-477-4741 (P06)



2001 Sterling: ISM 330hp Cummins engine, 263,114 miles, 20,000 lb. front axle, 46,000 lb. rear axle, 4,500-gallon tank, Jurop LC420 pump. \$53,000

715-889-1544. WI



Call 716-417-5962, NY



678-898-2928, GA

PRM



2005 Sterling: 2,500-gallon Presvac vacuum tank, Challenger pump. 136,200 miles. \$45,000 OBO

231-250-1483, MI

1999 International 8100, M-11 Cummins, Twin-screw, air-bag suspension. 2,683-gallon Imperial tank, Masport HXL400 pump. 3-stage hydro-hoist, 3 ft. hydro-manhole on back. Excellent condition. \$37,500. Call or text 712-433-1662. (P06)



Martin Ratte 514-794-4631 P06



Dave 612-221-6355, MN



2012 Peterbilt 388: 4,200-gallon carbon-steel tank, full-dump unit with 36-inch rear manhole. NVE 866 pump. New tires. 485hp Paccar engine. Abernethy body. 214,678 miles.

706-252-4743, GA



218-259-1542, MN

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P07

P06

SEPTIC TRUCKS



2009 International WorkStar: International engine, 225,000 miles, 4,200-gal-Ion Curry vac tank, Masport pump.\$62,500

> 248-431-5899, MI davidjanette@comcast.net P06



1999 Kenworth T300 with 1999 Lely tank. 1,000 waste, 300 fresh. 396k miles, 33k GVW. Everything works. Truck located in Oregon. \$19,500 OBO

Randy 408-455-2900



2005 Mack CV713: 10-speed transmission, 5,000-gallon Transway tank with new RFC 500 pump. Truck has many new parts and approx. 440,000 miles. Asking \$53,000 OBO

> **Call Joe for details** 716-823-3606, NY

P06



2005 Kenworth T800: C-13, 385hp. 184k miles, 13,600 hours. 4,000-gallon waste tank, 75 gallon water tank with jetter. Full hoist, full rear door. Good tires, ready to work. \$85,000

802-658-6243. VT



2011 Kenworth, 5,000-gallon Pik Rite, Masport 400, 264k miles, new tires. Extra Jurop pump (new) included.\$102,000

Mike 443-235-5979



1996 Kenworth T800, Cummins M11. 370hp, 10-speed RoadRanger, air-ride suspension. 3,500-gallon tank, 367 Challenger pump, 3" and 4" valve, 6" dump, heated valves, \$35,000

Squires, Pierson and Sons, Inc. 631-283-1403, NY



For Sale: 1998 IH, 3,250-gallon T-Line tank, liquid-cooled Wallenstein pump. heated valves, 210 ft. of hose included. \$39,000

Call 715-853-5447, WI



2010 International 5900i PavStar: 525hp Cummins ISX engine, 188,000 miles, J&J 4,600-gallon lined tank, Fruitland pump. New red paint, loaded inside cab, like-new condition. Located in Michigan. Asking \$109,000

> Call 810-614-9141 or 586-996-5552 P06

New 2016 Freightliner M2, 33K, 300hp Cummins ISL, 3500 RDS auto., 2,500-gal-Ion septic. Larry Towner 770-241-0989, Itowner@peachstatetrucks.com

1991 Ford F700, 1,700-gallon, \$6,900. 1988 Ford F600, 1,600-gallon, \$5,900. NY. 845-382-2112



2000 Volvo septic truck, approx. 482,000 miles. New 4,000-gallon tank installed in 2013. \$30,000

> Call 810-614-9141 or 586-996-5552

P06



1991 International, 221k miles, 3,600gallon tank, rebuilt Jurop pump. All new valves, LED lights, hoses, brand-new front springs. N14 Cummins, new paint. Tank has a non-corrosive chemical liner in it. \$41,000

918-342-9072, OK



2014 Kenworth T-270: Cummins 325hp, EF 8-speed,127k miles, Jurop RV360. New tires all around, new paint tank & frame. Great truck. \$68,500

804-895-6355. VA



1999 International 8100: Cummins M11 plus 3,500 gallons, Jurop 260 pump, water jetting. .. Asking \$27,0000

Call/text 239-272-8238. FL P06

2000 Mack 600R: Mack motor 350hp, 4.000-gallon Transway tank and pump -\$27,000 or best offer. 1995 Freightliner Cab Over: Cummins motor 390hp, 3.500-gal-Ion tank with pump - \$18,000 or best offer. Contact Dave at 484-274-1356 or email dotterssepticservices@yahoo.com (P06)



Turn-Key Vacuum Tank Units: 3.600gallon, unit mounted on your truck or ours; \$23,500. 2,500-gallon truck units; \$20,000. 1,500-gallon truck units; \$17,000. Self-contained vacuum skids, 1,000-gallon; \$11,000. 2,500-gallon painted tanks ready to mount; \$13,000. PortaPotty trucks and any custom options or sizes available!

> **TexLa Services** 936-641-3938

www.texlaservices.com P06



1990 Ford LTL 9000 2-axle, doubleframe Hendrickson suspension, Cummins 400 Big Cam, Eaton 13-speed, 628,000 miles. Runs good. Newer 3.600-gallon aluminum tank, Masport pump. One owner (non-smoker) \$20,000

805-226-8170, CA



2007 Freightliner: 2,650-gallon tank, Jurop pump, toolbox jetter. 70k miles. Brand-new, extra Jurop pump included w/truck. \$40,000

Mike 443-235-5979

P06



1997 Ford L9000, 2004 Imperial 4,800-gallon, Fruitland pump. Good old truck working daily. \$25,000

Dave 612-221-6355

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1993 Ford L8000: Cummins, 10-speed, 2,300-gallon steel tank & Moro vac pump. Used daily. \$11,000

Call Brian 618-973-9165, IL P06



Kyle 715-359-0200



802-658-6243, VT P06



1995 Chevrolet Kodiak 454, 2,000-gallon steel tank, Jurop pump. 126k miles, new tires and upholstery. Monroe, GA.\$25,000 will negotiate

770-314-0501, GA P06

2002 Kenworth T800: 357k miles, 5,000-gallon Progress tank, Wittig 150 water-cooled pump, heated valves. Tri-axle, 10-speed, jake brake, pre-emission, air ride, loaded. All new under carriage. One owner. \$65,000 OBO. 302-841-0323 (P07)



> For more info call or text 912-383-7507, GA

P06



2012 Peterbilt 388: 550 Cummins, 18-speed transmission, 110 bbl. Pik Rite tank, 248,000 miles. \$85,000

Dave 724-747-3229, PA

Five (5) older pump trucks with full-opening rear doors for sale. All are in good shape and work daily. 3,000 to 3,600 gallons with large Jurop pumps. Contact Joe Waters @ 775-691-1403. (P08)

1999 International 8100 with a 3,500-gallon steel tank. 10-speed transmission, M11 Cummins 330 hp, Jurop pump. Everything still works, \$5,500. Call 989-450-9826. Michigan (P06)

2007 Freightliner M2, C7 CAT, 6-speed manual, air shift, PTO shaft-drive Masport 75. 1,800-gallon tank. 22.5 tires. 110k miles. Send message for pictures. \$29,500 OBO. 620-629-7212 (P07)

2000 Ford F750: CAT 6-speed engine, 180,000 miles. 2,350-gallon tank with Challenger pump that is about 2 yeas old. 336-870-1144 (P06)

1995 Ford F800: 8.3 Cummins, 6-speed, 254k miles. NVE pump, 2,200-gallon tank. \$16,500 0B0. 951-830-4840 (P06)

2004 Freightliner FL70: 1,200-gallon unit, low-entry cab with a van body and liftgate. (Stock#4101V) www.VacuumSalesInc.com (888) VAC-UNIT (822-8648) (PBM)

2004 Sterling Acterra with a Progress 2,500-gallon aluminum vacuum tank and Masport pump. (Stock# 8460C) www. VacuumSalesInc.com (888) VAC-UNIT (822-8648) (PBM)

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2012 International 4300: 230hp, diesel, auto. New 1,850-gallon steel vacuum tank, new Masport pump. www.pumpertrucksales. com. Call JR. @ 720-253-8014, CO. (PBM)

2012 International 4300: 260hp diesel, auto., 95,000 miles. New 1,850-gallon steel vacuum tank, new Masport pump. www.pumpertrucksales.com. Call JR. @ 720-253-8014. CO. (PBM)

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TRUCKS - MISCELLANEOUS

1982 Ford vacuum truck, 2,500 gallons, vane pump w/dump. 92,000 miles, 8.2L Detroit diesel, 4+2-speed, single-axle. Original owner. \$5,500 OBO. 616-307-8226 (P06)

1989 Freightliner FL-112: C-12 CAT, 4,300-gallon aluminum dump tank. 139,605 odometer. Witting RFW150DVR pump. Call Jerry 865-617-9041. (P06)

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Call Rob 386-527-0998, FL P06

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617-212-0162, MA

2006 International 7600 Guzzler NX Technology Air Mover with boom. CAT C13, 227k miles. Guzzler vac pump. \$150,000. oilfieldtruckworld.com 832-914-2855 (P06)

2009 Sterling LT9500 with a Vacall AVRB-18 industrial vacuum loader. (Stock# 4792C) www.VacuumSalesInc.com (888) VAC-UNIT (822-8648) (PBM)



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VacuumSalesInc.com (888) VAC-UNIT (822-8648) (PBM)

2014 Freightliner 114SD with a Vacall AVRB-18 industial vacuum loader. (Stock# 9116C) www.VacuumSalesInc.com (888) VAC-UNIT (822-8648) (PBM)

1991 Western Star Model 4864F with a Cusco Turbo Vac 2127, carbon steel 3,000-gallon unit. (Stock# 8905) www.VacuumSalesInc. com (888) VAC-UNIT (822-8648) (PBM)

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