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Jim Kneiszel, Editor

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

Wipe Out

What does "flushable" mean when it comes to bathroom wipe products? They'll go down the toilet, sure, but will they break up like toilet paper? By Jim Kneiszel, Editor

hat does the term, "flushable wipes" conjure in your mind? If you're like me, the phrase on product packaging indicates the wipes will flush down the toilet and break down in your sewer lines or septic system, thus working just like toilet paper. But it appears that's reading too much into the performance capabilities of these popular consumer products. And I have the plumbing bill to prove it.

About a year ago, we were using a lot of wipes in our house due to a medical condition. So we bought a wipe product that specifically promised to be flushable. They were indeed flushable; that is, they technically swirled down the toilet with ease. But exiting the house through the plumbing and into the sewer system? That's another story.

One morning, I went into the basement and was surprised by 3 inches of dirty water backed up on the floor and it was rising as a family member was taking a long shower upstairs. A call to the plumber and a lighter wallet later, I'd learned the hard way that flushable wipes are not what most consumers think they are.

The plumber snaked out the pipe leading under the basement and out to the road, and quickly brought up the source of our stoppage: A clog of wipes that were hung up in the system before they could fall into the sewer pipe and float away from our house.

"I don't care what the box says, these wipes are not flushable. And this happens all the time," the plumber told me. A weekend of hard labor and several gallons of bleach cleaned up my basement. And used wipes started going into a plastic bag for disposal in the trash.

SEPTIC SAFE?

Granted, my house is connected to the Big Pipe, but that doesn't mean this isn't a concern for contractors who pump septic tanks. In fact, wipes may be a bigger problem – particularly financially – for homeowners using decentralized wastewater systems. While my liability for using flushable wipes ends as soon as they drop into the sewer line in front of my house, homeowners with septic systems may incur costs due to potential clogging throughout the treatment system.

The marketing for these products say they're 'flushable,' and now we're noticing the term 'safe for septic systems.' We're scratching our heads a little bit. Are we sure? Who's checking for that? 33

Nick Arhontes



A California wastewater official – teaming with several national clean-water agencies – is starting to compile information on the problems caused by so-called flushable wipes, and hopes

The user of a new system in Oregon used flushable wipes, causing a big mess for pumping company Goodman Sanitation, of Troutdale, Ore. This photo shows wipes clogging the distribution box after working through the septic tank. (Photo courtesy of Goodman Sanitation)

to learn how these issues are translating to septic systems. Nick Arhontes, director of facilities support services for the Orange County Sanitation District, says the wipes are starting to cause bigger problems for municipal sewer systems and wants to know what you're seeing when you inspect your customers' systems.

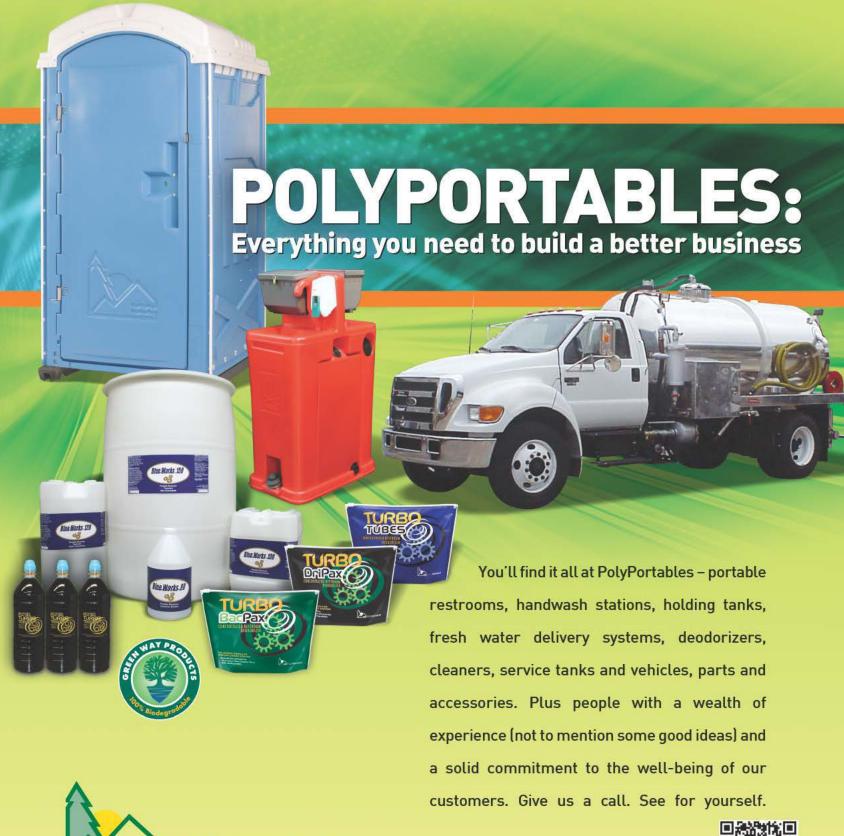
"The marketing for these products say they're 'flushable,' and now we're noticing the term 'safe for septic systems,' " Arhontes says. "We're scratching our heads a little bit. Are we sure? Who's checking for that?"

In Orange County, which operates one of the biggest sewer systems on the West Coast, there is greater evidence of consumer use of wipes, and Arhontes says users believe these products are OK to flush based on a marketing message. With a growth in the problem – showing up in added debris on treatment plant bar screens – he is collaborating with the Water Environment Federation, the National Association of Clean Water Agencies and the American Public Works Association to document issues related to wipes.

And he wants to hear from pumpers.

"We're trying to make a connection with the onsite industry, to hear about what they're seeing in the field," Arhontes says. "Are they seeing these products break down quickly in the septic tanks, or when the tanks are being cleaned, are they seeing the wipes and towels people are flushing and they're not breaking down?"

(continued)





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TRUTH IN ADVERTISING

Arhontes thinks a key is truth and clarity in product labeling. He said pumpers should be as concerned as treatment plant operators when it comes to wipes. The thought is that consumers assume these products aren't causing problems, only to find out down the road that wipes do not break down like toilet paper. The message I've heard from pumping contractors – that human waste and toilet paper are the only things that should be flushed – rings true with Arhontes.

"We wholeheartedly agree they are flushable," he says of the wipes. "But what we're starting to focus on more now is rapid dispersability ... They just don't break down and what we're concerned about is advertising and labeling."

Orange County has done bench testing with flushable wipes, using magnetic stirrers to agitate them for more than 24 hours. The result is no degradation of the wipes. Arhontes doesn't have a problem with the durability of products as long as consumers don't feel misled to believe they will break down like toilet paper.

According to a recent study released by the New England Water Environment Association, flushability assessment guidelines were developed in 2009 by the Association of the Nonwoven Fabrics Industry, which represents manufacturers of products like wipes. To be marketed as flushable under the guidelines, a product must be able to clear residential plumbing systems; be compatible with wastewater conveyance, treatment, reuse and disposal systems; and be unrecognizable in a reasonable period of time.

Wastewater officials would like any product like wipes to carry either a "safe to flush" or "do not flush" logo so consumers know what they can send



This photo shows how wipes reached the first 5 feet of drainfield, which had to be excavated and replaced. It took Goodman Sanitation more than a day to repair the clogged system. Technicians removed a half-dozen 50-gallon bags of wipes from the septic system. (Photo courtesy of Goodman Sanitation)

down the toilet. Further, these groups would like manufacturers to continue to work on making these products

dispersible to head off more problems as the products gain popularity.

Arhontes would appreciate your observations about the use of wipes in septic systems and if these products are causing problems for your customers. Learn more about the work being done by Arhontes and the agencies at www.nacwa.org/flushables or send him an email at narhontes@ocsd.com.

Based on my own unfortunate experience and the failed dispersability testing by Orange County, I would say wipes manufacturers have a lot of work to do to make their products truly safe to flush. It's been all too clear that the products I've seen do not meet the standards set out to be marketed as flushable.



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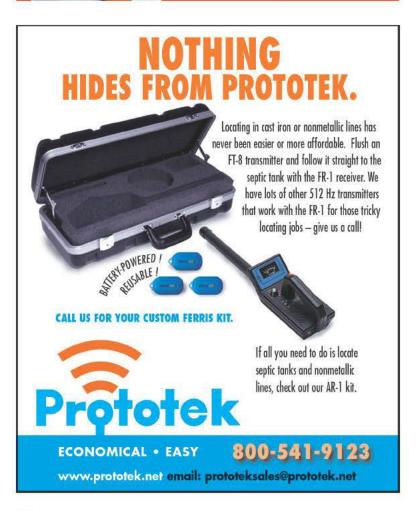
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By Jim Kneiszel

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PODCAST: FORMER POLICE OFFICER TURNED SEPTIC PUMPER -SEVEN MINUTES WITH SULLIVAN SEPTIC'S RYAN MURPHY

Former Chicago-area police officer Ryan Murphy left his chosen profession for another passion - the family septic business. The company has been around since 1945, and Murphy has updated its technology to help serve the base of around 10,000 customers. He talks about using technology and social networking to serve customers, along with how he went from the squad car to a vacuum truck.

7 TIPS FOR STARTUP BUSINESS OWNERS

If you're starting a pumping business from scratch, take a moment to learn a few things from someone who's been there and done that. Kim K. Lewis, chairman and CEO of LiquiForce Services in Kingsville, Ontario, Canada, shares tips from 25 years spent in the sewer rehabilitation industry. Among the important reminders about small business success are: Everyone in our business is a salesperson; spend ample time planning for the future; your word is your promise; and business is not about technology ... it's about people.

LARGEST FLEET IN TEXAS: T-REX TAKES DELIVERY OF ITS 35th HYDROEXCAVATION TRUCK

Houston-based T-Rex Services announced the addition of another GapVax HV-55 Hydroexcavator to its fleet, bringing the total to 35 highpowered rigs to the company offering non-destructive hydro and air excavation services to clients in oil exploration and pipeline infrastructure, among other services. The company was first featured in Pumper in 2010 in an issue highlighting industrial vacuum loading contractors. T-Rex is owned by former NASCAR race driver Bobby Hillen.

EDITOR'S BLOG: NO PUMPER WANTS TO BE CALLED TO THIS UNTHINKABLE JOB

Manassas, Va., based pumping company AITS Septic Service must not have been eager to get the call to pump out a septic tank as part of an ongoing criminal case. Police investigating the disappearance of a young man in 2010 asked the pumping company to empty the tank at the home where the man was last known to live. It's tragic that situations like these ever occur, but we're sure the crew acted professionally in helping with the investigation.

> Check out all these stories at www.pumper.com/ec/2013/June







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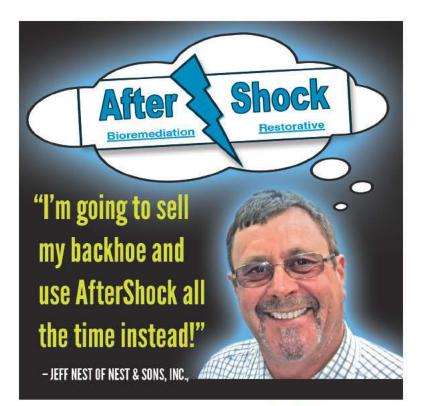
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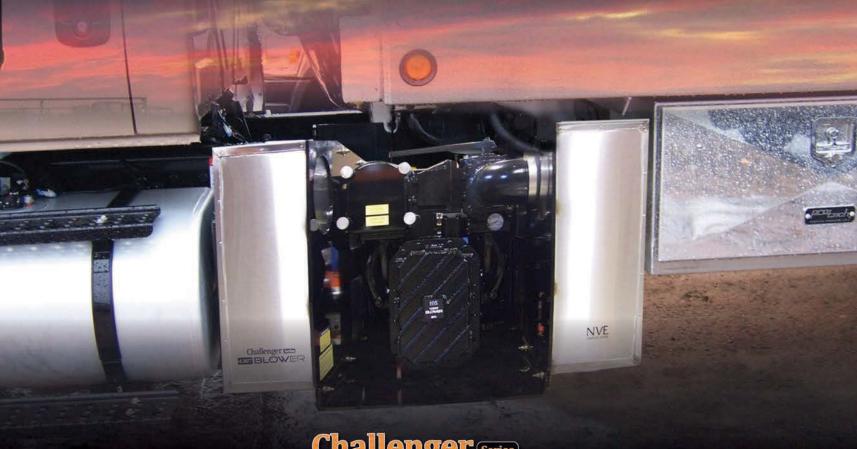




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Thomas E. Houck is a CPA, speaker, consultant and author of The Top 10 Mistakes Business Owners Make (and how to fix them). Visit his website, www.heritagebusiness solutions.com.

The Great Escape

Developing a comprehensive exit strategy allows business owners to retire with peace of mind and their company intact By Thomas E. Houck

here's a common question on the minds of business owners when they think about retirement: "How can I eventually get out of my business and not lose my shirt?" The answer is simple: Develop an exit strategy a few years before you retire, and simply execute it.

Take the case of Chuck, a 65-year-old, life-of-the-party type of guy. Although he joked with everyone, he was plagued by a gnawing problem: "In 10 years, I want to exit my business, take care of my employees, have enough money to live out my retirement dreams, and guarantee that my daughter inherits everything if something happens to me. How do I pull this off?"

IDENTIFY GOALS

Chuck started his business from scratch 20 years ago. He felt a great deal of loyalty to his employees and wanted to develop a plan to sell the business to his general manager, Carlos. Since Carlos was a young guy with a family, he didn't have many financial assets. So Chuck needed to develop a plan that would make the buyout process affordable for Carlos, while assuring that his daughter would get a fair value if anything happened to Chuck.

To develop a quality "exit strategy," business owners like Chuck need to follow some important steps:

Step one: Create a financial plan. In Chuck's case, the plan helped identify how much income he would need after retirement to fulfill his dreams. This number determined how much money Chuck would need in his retirement savings and from the sale of the business.

Step two: Maximize retirement savings now. Over the next several months, Chuck consulted with his financial advisors and developed a comprehensive financial plan. A thorough analysis revealed that Chuck needed to put \$5,000 per month into a retirement savings plan for his employees. Since IRAs and 401(k)s allow limited funding, a defined benefit pension plan was a good choice for the company. These plans work best with an older owner who has younger employees— in Chuck's case, a perfect match. This plan allowed Chuck to put \$60,000 a year into savings, all of which was tax deductible. The tax savings alone helped fund a portion of the plan.



Step three: Determine the company's worth. Instead of hiring a valuation analyst to compute his company's worth, Chuck and his financial advisors came up with an approximate value by determining the amount of net cash from the business to Chuck in the previous year. A good rule of thumb to use: three to five times the amount of net cash equals the value.

Step four: Establish a transfer strategy for the business to the buyer. Because Carlos didn't have much money or assets, he wasn't going to be able to get a loan to buy the business. To solve this challenge, annual performance incentives were created for the company. If the business met those performance incentives, Carlos, as general manager, would receive 5 percent of the company's stock at the end of each year until he reached 49 percent ownership in the 10th year. At that point, a bank would likely be willing to loan him half of the business's value to complete the buyout of Chuck's interest.

The greater the amount of time a business owner plans for exiting his business, the greater his chance of success.

Step five: Get it in writing. Now Chuck needed to sit down with an attorney and get all this in writing. Since his advisors had done most of the legwork already, they were able to specifically tell the attorney what was needed, which saved a considerable sum in legal fees. The attorney drafted a stock purchase agreement for Chuck and Carlos. The agreement laid out the particulars, including performance incentives, and the requirement that Carlos would buy out Chuck at the end of the 10-year period. The attorney also created a trust, laying out the transfer of Chuck's assets to his daughter, in case he died.

PLAN AHEAD

This type of buyout strategy is useful when the owner wants to sell to an employee or family member. The key element that allows these plans to succeed is time. The greater the amount of time a business owner plans for exiting his business, the greater his chance of success. Everyone knows a business owner who's had health problems or unexpectedly passed away, causing the business and all its value to go down the tubes. This could have been avoided in almost every case by creating an exit plan.

Another key element in making an exit strategy succeed is to work with advisors who have extensive experience with this type of planning. Many quality certified public accountants and attorneys don't fall into this category, yet they're smart enough to bring in an outside advisor who does.

Chuck's plan was enacted five years ago, and all has gone exactly as planned. He's still the life of the party and loves seeing his vision turned into reality. And now he can enjoy retirement because he has financial peace of mind. \blacksquare

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Sullivan Septic employees (from left) are Jacob Stout, Debbie Steuben, Carissa Murphy, Joseph Threm, and Ryan Murphy. In failing health in 2004, Mike Hinsberger asked Murphy to take over the business founded in 1945 by Ray Sullivan, and later owned by Gene Mulcrone and then turned over to

Hinsberger — all of them uncles and nephews to each other. Though police work provided many rewards, Murphy has discovered deeper satisfaction and a source of great pride in carrying on a family tradition and serving so many friends and neighbors.

GETTING THE JOB DONE

Sullivan is a well-established company, maintaining a base of 8,000 to 10,000 customers. Along with pumping, the company offers design, installation and repair of septic and sewer lines, and general excavation.

Septic system installation and repair accounts for about 70 percent of annual revenue, with a typical year including 70 to 100 installation projects. Most utilize conventional Infiltrator Systems or Advanced Drainage Systems chambers with Infiltrator tanks. Murphy also installs a lot of AdvanTex AX20 advanced systems by Orenco Systems. Most installations have large drainfields due to poor soils and high groundwater. "For a three-bedroom home, we'll put in a 1,000-gallon tank and 800 to 1,000 feet of trench," he says. "I did a church last year that was 8,000 feet of trench."

Septic inspections are performed on request. "My inspections are a little more detailed than most," he says, adding that what often passes for an inspection in his area is a simple dye test.

"That's not an inspection; that's just taking someone's money. An inspection is uncovering the tank, digging up a section of the drainfield or a distribution box, and putting a camera down the line."

With his Spartan PROvision digital camera, Murphy has found situations in which a home may have modern PVC plumbing inside, but is connected to old clay pipes.

He uses a small, 3-foot Milwaukee telescoping camera for tank inspections. "You can look at the tank walls and seams," Murphy says. "The tank is full of water, but you can see a little more detail."

His fleet of equipment includes, a 1998 Ford Sterling vacuum truck with a 3,300-gallon aluminum tank and an NVE (National Vacuum Equipment) 367 Challenger vacuum pump added by Advance Pump & Equipment. He is looking for a new vacuum truck, and plans to add a jetter and heated valves. The company's service truck is a 1998 Chevrolet van with a fiberglass Spartan service body. The rest of the fleet includes a 2000 Sterling tandem

He'll Never Regret Putting Family First

"This has been in my family forever," says Ryan Murphy of Sullivan Septic and Sewer Inc. That was one reason he left law enforcement in 2004 to take over the business founded by Ray Sullivan, a relative through marriage.

Murphy's father, Tim, operates a plumbing business next door and the two businesses have always run hand-in-hand, meaning Murphy spent a lot of his childhood there. "I would usually end up at Sullivan since they had tractors and trucks and that's more fun than plumbing. I worked here all through high school and college."

He also worked at Sullivan full time for about a year after graduating with a degree in criminal justice in 2000 from Loyola University until he was hired by the Downers Grove Police Department.

It wasn't much later that his uncle was diagnosed with Lou Gehrig's disease (Amyotrophic lateral sclerosis, or ALS) and given about 18 months to live. "He was sick and couldn't work, and was trying to figure out what to do with the business after he passed," recalls Murphy. "He called me to feel me out about taking over and I told him no. He called again about a month later and we started talking. So I sat down and started thinking about it and talked to my dad, my mom, my uncle."

And he talked with his fiancée at the time, Carissa, and asked himself what he wanted for the kids they were planning to have. "She said she'd support me no matter what I wanted to do. I wanted to be able to come home at night. Being a police officer, you never know."

So he made the leap of faith; taking over the business, getting married, and moving into a new house all within six months. "It was probably the most tense time in my life," he says. "My mom was so scared about me being a police officer, but when I decided to leave, she was the one who questioned it the most, and she still wonders if I should have stayed."

But Murphy knows he did the right thing, especially with three young daughters

My mom was so scared about me being a police officer, but when I decided to leave, she was the one who questioned it the most, and she still wonders if I should have stayed.

- Ryan Murphy

at home now (7-year-old Olivia and 4-year-old twins Sophia and Claire). "Priorities change as you get older. In this business, the harder I work the more I make and the better the company does. I like that."

Plus, he was able to keep the company running so that Mike and his wife Corinne still had an income while Mike was ill. Murphy bought the company from his aunt when Mike died in 2005, helping to provide for her until her death from melanoma in August 2012. "It was my uncle's life work. Everybody loved him and his company."

Having his uncle around for a few months to ease the transition

was a big help. "I knew everything about the job; I had done it for so many years," Murphy says. "I didn't fully know the business end of it. He was in a wheelchair, so I'd pick him up every day and put him in my truck. I tried to squeeze every ounce of information out of him."

Spending that much time together was special, and helped Murphy understand the business, and his uncle, that much more. "People still talk about him. It's amazing how much impact he had on people. There were 5,500 people at his wake. I still have that weight on my shoulder. I still want to please him. We're going in the direction he wanted."

A lot of customers don't understand septic systems. They have no idea what it is, how it works, or what it can or cannot do ... I meet every customer face-to-face and go out on every job. I do all the bidding and layout. I like being directly involved.

- Ryan Murphy







axle dump truck; 2007 Caterpillar 420E backhoe loader; 2004 Bobcat T300; 2000 New Holland L185 skid-steer; and a 2007 Chevrolet Silverado 2500 pickup.

Joseph Threm is rodding out the sewer line from the house to the tank with a Spartan Model 300 cable machine.

TOUTING TECHNOLOGY

Wife Carissa, a certified public accountant, handles the books. With her husband's career change, she was able to quit her outside job and be home with the children and serve a critical role in the family business.

Most of the staff is like family, too. Joe Threm has been there for 28 years and handles installations, inspection and service. "He knows more than me," says Murphy. The vacuum truck is driven by Jake Stout, with the company for only two years, but whom Murphy has known since Stout was a baby. A plumber by trade, Stout also helps out on some installations.

Customer records have been computerized in TAC (Total Activity Control) from Clear Computing, Inc. to help in both scheduling and customer service. The system generates reminder notices for customers who

need pumping and allows drivers to schedule appointments. Through new technology, secretary Debbie Steuben, with the company for 20 years, can access records instantly, even from home, and can more easily communicate with Murphy through texting.

"I keep a laptop or iPad in my truck and carry a smartphone," he notes. A mobile hotspot in his truck allows Internet access over a cellphone connection. He plans to add such technology to all his trucks to improve efficiency.

His customer base includes many seasonal homes and rental properties owned by out-of-state customers, so the digital tools come in handy. "We have them on an automated schedule and we have their credit card information. We just pump them out, send the bill, and it's already been paid," he says.

Email is also very helpful for absent customers. When a rental property had a problem, the work was approved and scheduled by email. "We pulled a huge 3-foot root out of the pipe," Murphy says. "I could have told him it was tree roots. Instead, I sent him the pictures and video."

EDUCATING CUSTOMERS

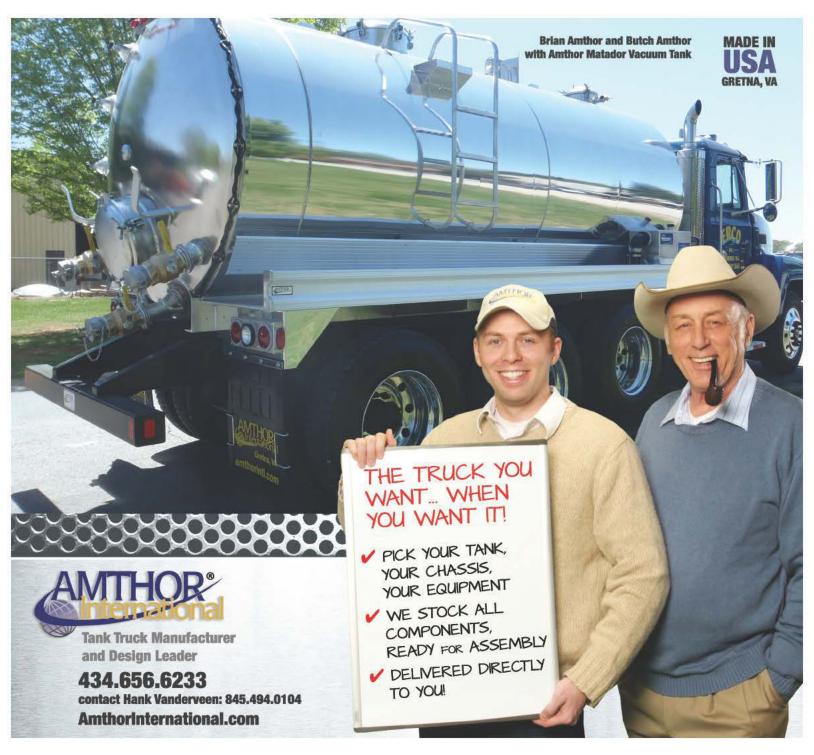
Murphy posted the tree root photos and video on his Facebook page, along with pictures of a sludge-filled distribution box caused by not pumping a septic tank, hints on septic care, installation pictures, and a few videos.

Murphy says such technologies can help educate people. "A lot of customers don't understand septic systems. They have no idea what it is, how it works, or what it can or cannot do."

Such tools also supplement marketing efforts, such as signs around town and his trucks. "I've done a few local parades and we do a local event called Touch a Truck," he says. "We let the kids jump around on the trucks and tractor and beep the horn." But word-of-mouth and personal relationships are still king.

"I meet every customer face-to-face and go out on every job," Murphy says. "I do all the bidding and layout. I like being directly involved with customers."

(continued)









Ryan Murphy, owner of Sullivan Septic & Sewer Inc., is interviewed by Doug Day in a Pumper Podcast found at www.pumper.com. Murphy sees a further greening of the onsite wastewater industry in the future. "Systems will be getting much more efficient," he says. Even with increasing regulation, Murphy says there is still no reason that septic systems shouldn't be a viable solution to wastewater challenges. Health departments can help by making sure they require good technology.

FACING DISPOSAL CHALLENGES

Currently about 70 percent of his septage is disposed of through land application, and 30 percent goes to wastewater plants, but Murphy anticipates land spreading will shrink through both regulation and dwindling farmland. That means more disposal at sewage plants will be needed. "The sanitary districts have to make it more accessible," he says. He says it costs, on average, \$200 to dispose of a 3,000-gallon tank at the plants in his area.

Traveling to a disposal plant also chews up a lot of time, especially since they have to drive in Chicago traffic. The closest receiving station is a 30-minute drive; another plant is the same distance away, but is a 90-minute trip. "In rush hour, forget it. You'd be there for three or four hours," says Murphy.

As for his company, growth may be in the cards sometime in the future, but he's happy with where the company is right now. And he thinks Uncle Mike would be happy too. ■

MORE INFO

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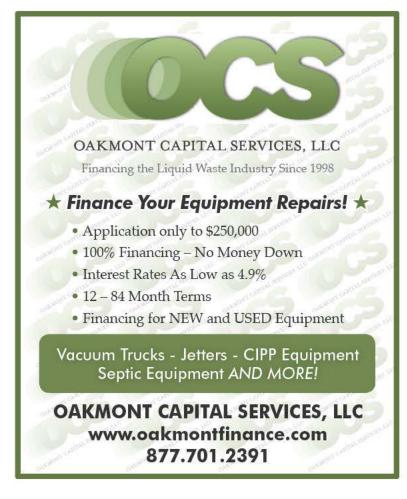
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Load sensor technology from Super Products excites Expo visitors

By Ed Wodalski

xpo visitors looking for an accurate way to measure industrial vacuum and hydroexcavating waste found it in the Acculevel load sensor system from Super Products.

"A lot of visitors came in excited about the technology," says Mike Vanden Heuvel, president and chief executive officer for Super Products. "We have several subsequent followups with customers who want to utilize the system, not necessarily to go with our truck but as a standalone system that they could incorporate in their own design. And we had some conversations with other companies that want to investigate if it is appropriate for them."

Vanden Heuvel says Expo interest came from industrial cleaning and hauling contractors as well as tanker owners.

"We have to go through a state of discovery and find out exactly how the system can interface with their electronics and controls," he says. "It's a direction we didn't anticipate, but the level of interest in the device – overflows, shutdowns, those kinds of things – was high."

The sensor system continuously monitors and displays debris levels of both liquid and solids on Mud Dog hydroexcavators and the Supersucker HDX, performing in vacuum pressures up to 28 inches Hg and temperatures from -40 to 176 degrees F.

"One of the industry's largest problems is carryover, whether it's dry vacuuming or slurry; it's difficult to tell," Vanden Heuvel says. "Most trucks have visual indicators when the debris body is full, and that works to a degree. But lesser-experienced operators can fill the truck too much and have carryover into your bags and ultimately into your blower, which you certainly want to protect."

We have several subsequent followups with customers who want to utilize the system, not necessarily to go with our truck but as a stand-alone system that they could incorporate in their own design.

- Mike Vanden Heuvel

Vanden Heuvel says while there are many visual indicators available – float balls and such – if the operator is 200 feet away from the truck, it's difficult to see the arrow or indicator that's attached to the debris body.

"People are more often vacuuming a distance away from the truck," he says. "When you're vacuuming, your attention is on your work. You don't want your attention divided where you have to be checking the truck for too many things too often because there's safety involved. This way you can continue to focus on your work and not have to worry about overfilling the debris tank."



The radar-sensing system, in development for two years, tells the operator when the truck is one-quarter full, half full and three-quarters full. Unaffected by airflow, noises, vibration, dust and humidity, a warning light flashes when the truck is 90 percent full to allow time to finish working and clear the hose prior to automatic vacuum shut-off at full capacity. This alert helps with preventing whatever debris is in the hose from falling back out.

"The vent doors open and the vacuum is broken," Vanden Heuvel says. "You cannot vacuum any more material into the debris body; therefore you cannot have carryover."

The sensor can be wired into the truck's electronic control system during manufacture or retrofitted later. 800/837-9711; www.superproductsllc.com. ■

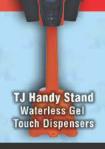








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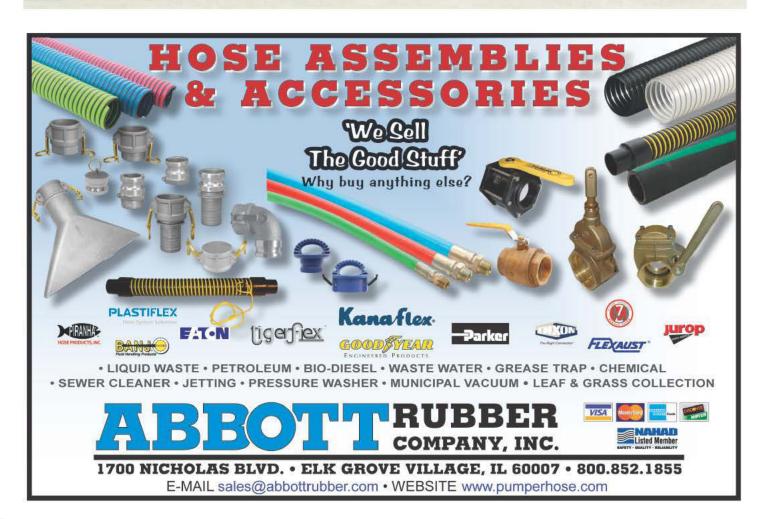


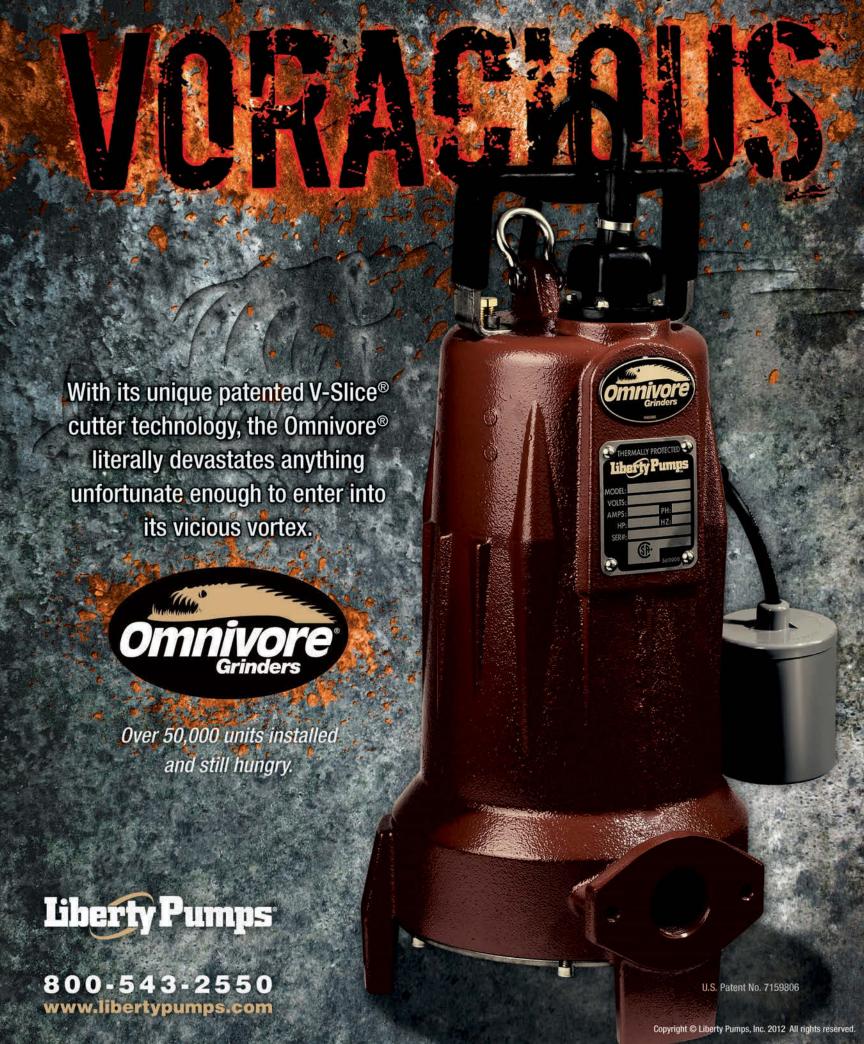


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Court finds EPA went too far in Clean Water Act enforcement in Virginia

By Doug Day and Scottie Dayton

ederal District Court in Alexandria, Va., found the U.S. Environmental Protection Agency guilty of exceeding its authority to enforce the Clean Water Act by trying to regulate water as a pollutant. In 2011, the EPA's Region III assigned a total maximum daily load for Fairfax County, Va.'s Accotink Creek, reducing the amount of stormwater allowed into the stream by nearly half. The Fairfax County Board of Supervisors and state Department of Transportation sued the agency on the grounds that water is not a pollutant, and that the Clean Water Act does not count surrogates of pollutants as pollutants. Since stormwater is ubiquitous, every homeowner, business and decentralized wastewater system with a National Pollutant Discharge Elimination System discharge permit would have been regulated on how to deal with it.

Alabama

Residents in Cherokee County, Ala., have been ignoring a new county ordinance covering sewage holding tanks, so authorities began issuing fines. As of July 2012, residents around Weiss Lake have been required to hook up to a sewage system if available, or to have their holding tanks permitted. Only 100 permits have been issued, and about 1,000 violation notices have been sent. After a final warning to violators, officials began issuing citations on March 1. The fine is \$150 per day, up to a total of \$5,000.

After a trial period, the Hawaii Department of Health is rolling out its new online permitting system this year. Its e-Permitting Portal is intended to make it easer to apply for permits, pay fees and stay updated on the status of permit applications. "The e-Permitting Portal benefits both DOH staff and the regulated community," Gary Gill, deputy director for environmental

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health, said in a news release. "We hope to reduce the average permit processing time by about 30 percent. Making wise use of technology will keep our work efficient and transparent to the industry and the public. It helps us do our job better."

Last year, the system received more than 700 online permit applications during the trial period. Nearly 30 permit applications are now available electronically, including septic system permits. The rest of the paper-based permits will be converted by the end of 2013.

The information is also available to the public through the Environmental Health Warehouse, including maps of all permitted septic systems in the state. Go to http://hawaii.gov/health/about/pr/2013/13-008.pdf.

Idaho

The Idaho Department of Environmental Quality is revising guidance on designing, building and operating subsurface sewage systems. The changes will address the use of holding tanks, seepage pits and beds; design of pressure distribution systems and recreational vehicle dump stations; and other disposal system procedures. For more information, see http:// www.deq.idaho.gov/news-archives/water-technical-guidance-manualrevisions-comment-021413.aspx.

Ohio

A survey of the state's 130 county and city health departments by the state Department of Health found 194,000 onsite systems experiencing some degree of failure. The failure rate in 2012 was 31 percent, up from 23 percent in 2008. The report is compiled every four years. Newly proposed changes in the septic code would require evaluations of the property and available soil, establish minimum soil depths needed to treat sewage, and specify alternative technology to treat sewage when soils are insufficient.

Oregon

Last November, Oregon voters passed Ballot Measure 79 prohibiting the Department of Environmental Quality from charging a tax, fee or other assessment for filing time-of-transfer inspection reports. The agency planned to use the revenue to fund a staff position to implement the inspection program.

Pennsylvania

The Pennsylvania Department of Environmental Protection proposed best management practices with denitrification for onsite systems and large setbacks from streams and rivers. In most cases, ditches would be considered streams, forcing lot sizes up to 11 acres to establish permanent riparian buffers.









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Just starting out in the pumping industry, Pennsylvania's Brandon Martin has many aspirations for his growing one-truck operation By Ken Wysocky Photos by Robert Wood

ike many young operators in the septic service industry, Brandon Martin is a one-man band with big ambitions. And after two years as the owner of B. Martin Wastewater Services LLC in Garnet Valley,

Pa., he's off to a good start, courtesy of some shrewd marketing techniques, a savvy approach to service vehicles and customer service that generates word-of-mouth referrals.

Since he took the business from part time to full time in 2012, Martin, 28, estimates he's increased his customer base by almost 20 percent, to around 625 accounts from about 525. That's no small feat working in an area with stiff competition from about a dozen established operators, including two large companies with dozens of trucks on the road.

"I think it helps that it's just me, myself and I," says Martin, a former dump truck driver who bought an existing septic pumping company in August 2011. "I'm the sole owner, the sole driver, the sole secretary — whatever needs to be done.

(continued)









Every company should have a website. I didn't spend more than \$600 on mine ... I just wanted something simple to tell a little bit about my company. It's paid for itself many times over.

- Brandon Martin

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When It Comes to Trucks, Martin Says Beefy is Better

Years of driving dump trucks gives Brandon Martin a different perspective when it comes to buying a vacuum truck for his pumping business, B. Martin Wastewater Services, LLC in Garnet Valley, Pa.

"I want a heavy-duty truck," he says. "I see a lot of guys buy semi tractors, rip off the sleepers, and bolt on tanks. That makes it cheaper, but it's a light-duty truck. I want something that I can depend on for the long haul."

After two months of searching, he found what he was looking for: a 2002 Mack RD688 truck, outfitted by Transport Truck Sales in Kansas City, Kan., with a 3,400-gallon steel tank and a Masport HXL400WV pump.

"It's an all-around good truck. Having been in the trucking industry, I knew what to look for and what to avoid," he says.

Martin's Mack features many heavy-duty components, such as a double-frame chassis; a 350 hp E7350 diesel engine; 44,000-pound-capacity rear axles on camelback suspension; and an 18,000-pound-capacity front axle.

"I know it's more than I need, but I believe you can never over-spec a truck," he explains. "With this heavy suspension, it's never going to wear out because you're never working it to its limits. Sure, you pay more for the heavier components, but if you plan on keeping a truck for 10 to 15 years, you pay back your original investment through less downtime and maintenance and less parts replacement — things like bushings, kingpins and suspensions."

SMALL BUSINESS EDGE

"It seems like people enjoy supporting small business owners, and I think they feel that because I'm the owner and the route driver, they're going to get a higher level of service because I'm more accountable," he adds. "It's my name on

Martin unloads hose at a residential pumping job. His work vehicle is a 2002 Mack from Transport Truck Sales and has a 3,400-gallon steel tank and a Masport vacuum pump.

the line, as opposed to a driver who hands them a bill and drives on down the road to the next job."

Driving trucks is second nature for Martin, whose father also was an independent dump truck operator. After high school, Martin drove a dump truck for a road paving company, and planned to be a full-time, independent dump truck operator. Those plans began to shift one winter when, while on a seasonal layoff, he saw an employment ad for a vacuum truck driver at a local pumping company.

Tired of winter layoffs, Martin gave the pumping job a spin. And although he ping-ponged between driving dump trucks and pumping septic tanks for the next several years — and even bought his own dump truck — he remained intrigued by the latter career. So in 2011, when he heard that a local, part-time septic pumper wanted to sell his business, Martin was all ears.

"I really wanted to do septic pumping, but never went out on my own because I thought it would be too hard to start from scratch," he says. "The guy I bought the company from was doing it only part time, but he had a good customer base — enough to give me a nice head start. So I bought him out." Martin drove the dump truck days and the vacuum rig during late afternoons, early evenings and on Saturdays.

(continued)



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By March of 2012, Martin reached a point where pumping calls increasingly conflicted with his dump truck driving. So he decided to focus entirely on septic pumping and sold the dump truck.

"It was the best thing I ever did — no regrets at all," he says. Today, residential septic tank pumping accounts for about 65 percent of his company's gross revenue; pumping commercial holding tanks generates another 30 percent; and the balance come from pumping grease traps.

MARKETING 101

After buying the business, Martin focused on a very simple but effective and inexpensive form of marketing: Sending a letter to all the company's existing customers explaining the ownership change, along with a business card and a refrigerator magnet that provided essential contact information. He estimates that about 90 percent of the customers were residential homeowners with septic systems.

"First of all, I had repainted the company's green truck white and re-lettered it, and I didn't want existing customers wondering why a white truck was turning into their driveway instead of a green one," he explains, noting that he felt his blue-and-green logo looks best on a white background.

"Some customers hadn't had their tank pumped in a while, so the letter generated a lot of calls," he says. "My phone was ringing off the hook ... that letter definitely helped out a lot in the beginning. People tend to throw away letters, but they keep the refrigerator magnet."

Martin also aggressively pursued word-of-mouth referrals. After each job, he asks customers if they were pleased with his service, and if so, to please tell neighbors and friends about B. Martin Wastewater. The approach has worked; Martin estimates that 70 percent of his business comes from word-of-mouth referrals.

Martin paid a company to develop a simple business website, and also created a Facebook page for his company to drive a larger digital presence. While those two pieces of his marketing strategy don't generate the bulk of his service

calls, he says an Internet presence helps establish the perception that his company is progressive and modern. Moreover, both efforts were relatively inexpensive.

DIRECT MAIL PAYS

"The website primarily generates emergency calls," notes Martin, who does not spend money on telephone book advertising. "Every company should have a website. I didn't spend more than \$600 on mine ... I just

Same Time Next Year

Since he's new to the business, we'll keep tabs on pumper Brandon Martin's progress in the coming year and bring back a Pumper Interview report for readers in 2014. We'll ask him about his equipment, how he's competing with other pumpers in his area, and if his many marketing efforts are paying off. Stay tuned.



I always thought that if
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- Brandon Martin

wanted something simple to tell a little bit about my company. It's paid for itself many times over."

Martin says he spends between \$1,500 and \$2,000 a year on advertising, which includes sending postcards and sales letters to commercial accounts. That doesn't yield anywhere near the amount of service calls the referrals do, but he says direct mail efforts generate enough work to pay for the mailings.

But one of his most effective marketing techniques takes a page from the home contractor, politician and real estate agent advertising

playbooks: yard signs. He had about 20 of them made for \$25 apiece; they feature the company's name, logo, website address, phone number and its main residential services.

"I keep a couple signs on the truck," he says. "When I finish a job, I ask people if they'd mind

if I put up a sign up in their yard for two weeks in exchange for a \$5 or \$10 discount on their pumping charge.

"Now, the signs can be a pain, because sometimes they get stolen, and after two weeks, I've got to drive around and pick them up," he points out. "Because of that, I only put them in yards that are within five or 10 miles of my yard. But I've received a fair number of service calls from them, so they've more than paid for themselves. Some customers even let me do it without the pumping discount."

GOOD SERVICE IS ESSENTIAL

Of course, word-of-mouth referrals don't occur unless Martin provides great customer service. He does that by following a basic philosophy: Do a good job, be fair and treat customers well. He also educates customers whenever possible, explaining how septic systems work, how often tanks should be cleaned and so forth.

"One of the main things I do differently is to try to hit customers on the same day they call, if at all possible," he explains. "If someone calls me at 10 a.m., I tell them I can get to them that day ... even if it means working until 7

p.m. Now, some days it's just too busy to do that, and I have to do it the next day. But whenever possible, I don't put off jobs because it leaves time open for when the next customer calls or an emergency job pops up."

To provide better service, Martin also strives to keep his service area reasonably small. The treatment plant he uses is close to his yard, so keeping customers within a 25-mile radius helps him, as he puts it, "turn and burn" more loads. "It's a term I learned in the trucking business," he says.

"With so many competitors in the area, I'm very sensitive to providing good service," Martin says. "If a customer is unhappy with your work, all they have to do is Google 'septic tank pumpers' and come up with six guys right off the hat."

NO PRICE-MATCHING

Despite the competition, Martin says price low-balling is not a problem. There are times when he'll consider matching a price on a commercial job if he can still turn a profit. But for residential jobs, he declines to match prices, noting that customers who price-shop aren't as loyal as those willing to pay his standing rate.

To generate additional small revenue streams, Martin also performs minor septic system repairs — things like installing risers and replacing baffles and tank floats.

"I always push installation of risers because it pays off in the long run, knowing right where the lid is going to be, rather than spending an extra half hour digging it up," he says. "I make money on them, but it's not crazy money."

To improve efficiency, Martin uses QuickBooks software, made by Intuit, Inc. Among other things, the software allows him to compile a customer list where he can record information like customers' tank location, capacity, whether lids are at grade or below grade, and so on.

"That way, if I eventually hire someone, I can give that driver the best information possible to boost productivity," he says. "For example, if I know the capacity of a tank beforehand, I know whether I can handle one more pumping or if I need to make a trip to the treatment plant first."

LOOKING AHEAD

Martin would like to grow his business to three or four trucks and several employees, and branch out into more commercial work, including hauling treatment plant sludge in a tractor tanker. He's also considering ways to further diversify his business, citing portable restroom rentals as a possibility.

"But that's pretty far down the road," he says. "I want to get three trucks on the road before branching off into other things.

"One thing I underestimated at the start was how hard it would be to get work," he continues. "I always thought that if I built a website and sent out some postcards, customers would come to me like there's no tomorrow. It hasn't quite worked out like that. But I keep telling myself that Rome wasn't built in a day, either. It all takes time."

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Erik is a business writer in Racine, Wis. Readers may direct inquiries to him by contacting this publication at 800/257-7222 or emailing editor@pumper.com.

Pain at the Pump

Fluctuating fuel prices can put a dent in your profitability. Try these tips to control your costs.

By Erik Gunn

he price of gasoline and diesel fuel continues to bounce around, driven by everything from volatile weather to volatile world politics. Considering septic service contractors rely on their vehicle fleet to do business, keeping your fuel costs low – and, equally important, keeping them stable and predictable – will likely rank right up near the top of any list of business concerns.

It's no easy job. But it's also a lot less complicated than you might fear.

Track your usage. It's an old maxim that you can't fix what you can't measure, and there isn't much that's easier to measure than how many miles you drive and how much gas you burn. So if you aren't keeping track of those, start now.

The simplest way is to give each vehicle a record book. Have drivers record daily odometer readings and miles driven, and also log every fill-up. That information alone will determine which vehicles in your fleet are the most efficient, and which ones are guzzlers you might want to replace.

If you like technology, there are fancier ways to do this, like smartphone apps and various Web-based services to help you keep data and measure your fleet's fuel economy. Many of these services charge a fee, so you'll want to calculate the cost against the potential benefit. One free service is fuelly.com (http://www.fuelly.com/about/), which has a simple, easy-to-use interface.

These services can make it much easier to track your vehicle fuel use and related data. On the other hand, if you simply want to use a pencil and paper, you can do that, too.

Maintain your fleet. A well-tuned engine burns fuel more efficiently, and properly inflated tires give you better mileage, too. The U.S. Department of Energy says proper maintenance alone can boost your gas mileage by as much as 4 percent – and if you fix a serious problem, such as a faulty oxygen sensor, your mileage could improve by as much as 40 percent.

Making sure your tires are inflated properly can give you another 3.3 percent mileage boost. The Department of Energy says you can lose gas mileage at a rate of 0.3 percent for every drop in tire pressure of 1 pound per square inch (psi) in all four tires.

Finally, making sure you use the recommended grade of motor oil in your vehicle can result in an improvement of another 1 to 2 percent in your mileage. Some mechanics recommend synthetic oils for improving fuel economy. Because synthetic oils are more expensive, you may wish to give them a trial and monitor the results closely before deciding if they're right for your fleet.

Plan your work. When you get an emergency call, of course, you can't do this. But for the routine day's driving, consider how you can sort the visits in the most fuel-efficient manner – driving from stop to stop in a loop, for instance, and minimizing repeated back-and-forth trips.

And look at other aspects of your operation to see if you can extract more efficiency. Take supplies – do you have a systematic way of monitoring and reordering supplies so you're making, say, one trip to the supplier each week instead of several? And are there other ways you can make a trip do double-duty?

Train your team. It's important that you and your employees understand the role a driver's habits can play in how you use fuel. Stop-and-go driving may be impossible to avoid in city traffic. But jackrabbit starts, speeding, and frequent or extreme changes in your speed that could otherwise be avoided with just a little care all contribute to worsening gas mileage.

In addition, unnecessary idling wastes fuel. Many municipal Public Works departments are instituting "no-idle" policies for their drivers. You should too.

A well-tuned engine burns fuel more efficiently, and properly inflated tires give you better mileage, too. The U.S. Department of Energy says proper maintenance alone can boost your gas mileage by as much as 4 percent.

Change your buying practices. This is the most complicated solution – or really, group of solutions.

Some businesses buy fuel in bulk quantities for a price set in advance under a contract. That can help you lock in a favorable price.

But there are also some risks in that approach. First, you're gambling that the price will only be going up, when – as has happened with fuel a lot – it could go back down. Second, the contract terms typically set a limited term for the contracted price, and require you to purchase the entire amount you've contracted for in that period. You'll be bound by that even if an unexpected circumstance reduces your need for fuel.

Another option is a "maximum price contract." The buyer locks in a price at the higher end of a range, putting a ceiling on what the business will have to pay for fuel. But if the price goes down, the buyer's cost can go down, too.

Don't be afraid to start small and work up from there. But also, remember one other important point:

Don't get crazy about it. As with any other money-saving challenge, there are limits to how much you can do. So be realistic – don't go overboard. Spending 20 hours a week calculating how you can shave a tenth of a mile off your weekly rounds is worthless. So is driving all over town to find the gas station that this week is undercutting everyone else by 2 cents a gallon.

It's one thing to get rid of your oldest, most fuel-hungry truck. But buying an all-new fleet just to get better mileage is spending a lot up front for a long, slow payback. So would be a hasty conversion of all your trucks to compressed natural gas, for example.

Fuel costs are an inevitable part of your business. But with a little thought and common sense, you can make it a bit less of a burden. ■



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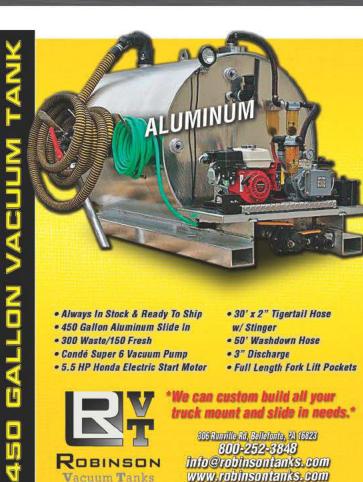
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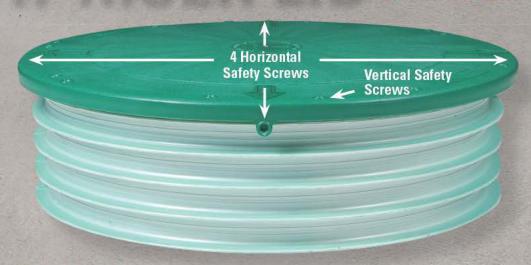


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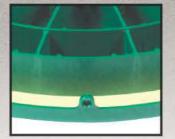
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Protecting Wakulla Springs ... and Why Pumpers Should Help

For the good of their businesses and the environment, a Florida biologist says pumpers need to lobby their state legislators for laws that require septic system maintenance. By Ken Wysocky

he repeal of a law in Florida requiring septic tank inspections every five years has implications for groundwater quality in the Sunshine State. But it also illustrates how such issues offer liquid waste hauling professionals a chance to brand themselves as environmental stewards as well as lobby for laws that can benefit the industry.

At issue is a law Florida legislators initially passed in 2010, mandating the septic tank inspections, says Jim Stevenson, a retired senior biologist for the Florida Department of Environmental Protection. Stevenson currently is a volunteer for the Wakulla Springs Alliance (WSA), whose mission is to protect famous Wakulla Springs, one of the state's largest natural springs, about 15 miles south of Tallahassee.

Prompted by citizens upset at the prospect of spending \$150 to \$225 every five years to get their septic tank pumped and inspected, Florida legislators repealed the law in 2012. As Stevenson notes, every septic tank is worth one or



Jim Stevenson

two votes, so the homeowner furor was enough to make legislators rethink the law (there are roughly 2.6 million septic tanks in Florida).

"I think it's very selfish and irresponsible for homeowners to take that position – to fight against regulations that improve public health," Stevenson says.

The WSA and other groups are still fighting to gain support for more rigid septic tank inspection laws. "It's too important to give up," he says. "We have to protect our public health and save our swimming areas and springs from contamination."

Stevenson has more to say about the fragile Wakulla Springs, and how pumpers can help the environment – and themselves.

Pumper: Tell us a little more about Wakulla Springs and why it's endangered. **Stevenson:** The spring is important for natural, recreational and economic reasons. Every year, about 200,000 people visit Wakulla Springs State Park, which generates \$22 million for the local economy, including \$1.8 million in park employees' annual salaries. It's also one of Florida's finest wildlife observation locations.

They've been running glass-bottom boat tours since 1875, but they can rarely operate them now. In fact, in 2010, they didn't operate the entire

year because the water wasn't clear enough. Wildlife is declining, too. We're talking about one of the largest springs in Florida and one of the largest in the United States, so big it creates an entire river (the Wakulla River).

Pumper: What is the WSA's mission?

Stevenson: It's two-fold. One part involves protecting the water quantity. If we pump too much water in the springshed, it will reduce or stop the spring flow. The city of Tallahassee owns 27 municipal wells that draw 29 million gallons a day, some of which is returned through wastewater treatment.

The other part of the equation is water quality. Our primary concern is nitrate from wastewater treatment plants, fertilizer, septic tanks and livestock. So our objective is to reduce nitrate because it feeds algae and invasive aquatic plants that are dominating the spring, such as hydrilla. Nitrate is fertilizing these nuisance plants and changing the ecology of the spring.

Pumper: How do septic tanks affect Wakulla Spring?

Stevenson: At present, they contribute 21 percent of the nitrates in the spring, while Tallahassee's treatment plant, located about 10 miles away, contributes 50 percent, according to research, including a dye-trace study. When a \$227 million upgrade at the treatment plant goes fully online in 2014, then the septic tanks will contribute 33 percent of the nitrate. In a dye-trace study conducted by Florida State University, dye was put in about five or six septic system drainfields. It took the effluent 70 days to travel 5 1/2 miles to the spring.

Your typical homeowner doesn't maintain a septic tank until sewage flows onto their lawn or backs up into their bathtub. The tanks are out of sight and out of mind – many homeowners don't have a clue where their septic tank even is located. A standard septic tank does not remove nitrates. Its purpose is to kill pathogens harmful to human health. So the one thing we're trying to do is raise awareness with homeowners that they need to maintain their septic tanks just as they maintain the roof on their home. A homeowner would never think about not repairing a leaky roof in order to protect their home, yet they'll ignore repairing a septic tank, even though it might be polluting their neighbor's drinking water.

Pumper: Is passing a new law requiring septic tank inspections now a dead issue?

Stevenson: Not yet, though we don't anticipate change in the near future because our Republican (majority) legislature is not sympathetic to environmental regulations.

At this point, we can't do anything at the state level, so we're instead



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trying to influence local governments - trying to educate and persuade county commissioners to pass ordinances that will require inspections of septic tanks.

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Pumper: Why do you think people were so upset about the law mandating septic tank inspections?

Stevenson: There's a complete disconnect (between the cost and benefits of regular inspections). It cost me about \$225 to have my tank pumped. Over the course of five years, that's \$3.75 a month - about the price of a Starbucks coffee. Yet we had people screaming bloody murder because they don't want to pay to have their septic tank pumped. It's unbelievable ... they don't realize that there's no such thing as free (toilet) flushes.

I think it's just like food ... the average person doesn't have a clue where a cabbage comes from. We're a different society today - we just don't make these connections any more. We don't understand our water here comes from an aquifer. As a society, we've lost touch with our connection to the earth. Back when your granddaddy had an outhouse, you knew it was there

It cost me about \$225 to have my tank pumped. Over the course of five years, that's \$3.75 a month about the price of a Starbucks coffee. Yet we had people screaming bloody murder because they don't want to pay to have their septic tank pumped.

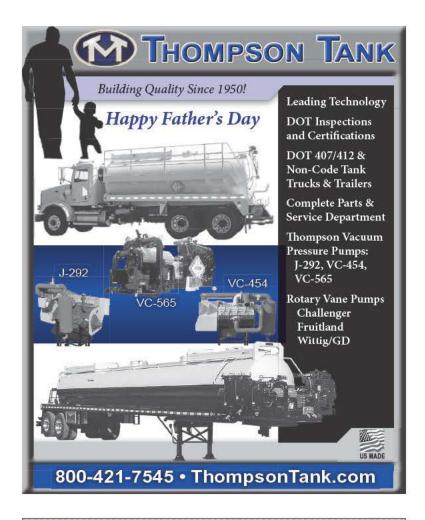
- Jim Stevenson

every day. But with a septic system, you don't see it. You just flush and everything goes away.

Pumper: What role can professional liquid waste haulers play in Florida and in other states where this debate may occur?

Stevenson: Nowadays, small businesses are a big deal. Politicians like to do good things for small businesses. So in the name of small businesses, pumpers need to support regulations that would include septic tank inspections. They should be talking to their customers and their legislators. Legislators listen to businessmen.

Pumper: Do you think legislators might view that as too self-serving? **Stevenson:** That's possible, but businessmen do it all the time. Farmers lobby their legislators, and so do realtors, builders and so on. So why not pumpers?



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2002 Mack CH613 with Marsh 2,300 Gal. Hazmat Tank \$59,500

Mack E-7 @ 400 hp., 9 spd., air ride, jake, cruise, AC, susp. dump, power divider, heated mirrors, elec. windows and doors, hub piloted steel rims, 22.5 tires 2001 Marsh Dot 407-412 coded tank, pop off, grounding cable, air controls to rear, 20" manway, catwalk, 12k/38k axles



Alco 12 Inch Dewatering Pump \$14,500

Model 12NHTA-PF6m, VT-WT Series, dsl. power, skid mount, 12"line, SN:97026110, hours showing 7,157



2000 Sterling VacCon Vacuum Unit \$59,500

Cat 3126 @ 275 hp., Allison auto, Hendrickson spring/beam susp., 20k/40k axle rating, power divider, ac, cruise, JD aux. motor, VacCon Model V316LHA, SN:12992305, 3 vane fan vacuum, 80 gpm/2000 psi VacCon 3 piston pump, telescoping boom, remote, 3/4 opening rear, dumping body, jetter reel with 500' of 1" hose with hyd. foot, arrow board, beacons, back up camera



2002 International 2574 Jet/Vac Truck \$99,500

Cat C-10 @ 350hp., Allison auto, Hendrickson spring/beam susp., power divider, cruise, Vac Con Model:PD4211LHAN, 8,658 hrs., telescoping boom, strobes, full opening dumping tank, Roots blower, high pressure wand, central grease system, water tanks, direct drive hyd. pump, remote, hyd. leg reel support



2007 International 94001 Sleeper with Vac Unit \$49,500

Cat C-13, 10 spd., front and rear air ride, jake, 244" WB, 60" sleeper, alum. front rims, Challenger 607 pres/vac unit with 4" fittings, 326K miles showing, unit has a ProHeat system on it



2000 International Vactor 2100 Series Combo Unit \$95,500

Cat dsl., automatic, Hendrickson susp., 20k/46k rating, 238" WB, AC, cruise, power divider, 4 freshwater tanks, Vactor model 2115-36, SN:00-01-7131, full opening/dumping tank, NEW Roots 824 RCS rotary blower, jetter reel, remote, tele boom, dbl. frame, 22.5 rubber on steel



1996 International with Hazardous 3,200 Gal. Keith Huber Vac Truck \$79,500

Detroit 60 Series @ 330 hp., 10 spd., International air ride, 12K/40K axles, power divider, cruise, ac, 2000 Keith Huber Dominator, full opening/ dumping tank, DOT 412 with pop offs and grounding cable, emergency shut off, hose tray, hyd. driven Wittig pump, 22.5 on steel rims, battery monitoring system, block heater, tool box, 217"WB, 3,292 hours showing



2000 Sterling Tri Axle with Hazardous PresVac Vacuum System \$89,500

Cat C-12 @ 317 hp., Hendrickson beam susp., 20k/20k/46k axles, 274" WB, 8LL, cruise, full lockers, 1999 4,000 gal. tank, full opening/dumping rear, SA-36, "NEW" hyd. driven Hibon SIAV VTB-820 spark resistant blower, hyd. cooler, pop offs, cat walk, 4" air operated gate valve, 6" main, block heater, 11R22.5 rubber on steel rims

Efficient RV Clean-Outs

Problem-solving pumpers share the challenges they face working at campgrounds

This feature in Pumper reports noteworthy conversations that take place at the Pumper Discussion Forum, an online forum for industry professionals found at www.pumper.com. Pumper Discussion enables exchange of information and ideas on septic and drainfield installation and maintenance, trucks and equipment, portable sanitation, chemical and additives and much more. Information and advice in "Overheard Online" is offered in good faith by industry professionals. However, readers should consult in depth with appropriate industry sources before applying such advice to a specific business situation.

QUESTION:

I bought a product with an adapter for pumping RV holding tanks and I thought it would work pretty well, but it didn't. I liked that it had the shut-off right there so you don't have to run back and forth to the truck if you're working alone. I have also

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tried putting a 2-inch hose into the standard 3-inch RV drain hose supplied by the customer. Are there other methods and easier ways to risk not sucking in the tank? By the way, I have the customer hold the toilet open so it can pull air.

ANSWERS:

I built my own device using a 2-inch tee and glued the PVC flex RV hose over it with the RV adapter on the other end. Then I bought an inside house vent, which opens by vacuum when you flush a stool, and a 2-foot cam lock for the vacuum hose. I hook it up to the RV, turn on the vacuum, and open the black water valve a little at a time until it's completely open. If the vacuum gets too great, the inside house vent opens and pulls air so you don't crush the tank.

*** * ***

I will not hook up to an RV. Too much liability. I've used a bucket and it can be messy. A larger vessel is much better. A plastic kid's pool is just about perfect, especially if you are working alone. I usually rent the customer a holding tank if they are going to be camping at one location for a long time.

*** * ***

The biggest problem I have with RVs is with the cheap cost of dump stations - free or almost free around here. The folks about lose it when I quote a price. After I give them a price, they run into town and pay \$10 to dump at the city RV park. So for the most part I don't pump them. For the few I have done, I like to use the bottom 1/3 of a 55-gallon barrel. We have a county RV park about 20 miles from town without a dump station that I will get a call from once or twice a year. Not too bad if I can get three or more customers.

*** * ***

Too many people are doing them for next to nothing just because "I can dump for free just down the road." I don't play that game either. I usually do them with a toilet truck if I'm in the area for \$50. If I have to make a special trip, it's at least another \$50.

The upside to RVs, if you happen to have a jetter, is "the mound of doom." I have an old 250-gallon holding tank I cut in half and slide under the dump valve. I stick my suction hose in the tank, so I don't have to worry about it filling up. Then I jet back up the dump pipe until it's clean. I had a tip drilled out so it provides more flow and less pressure. This helps flush the tank, plus I don't have to worry about the jets cutting the plastic tank. I don't know that they actually would, but I don't want to take the chance.

By the time that they have messed with the clogged RV tank for a while, they will pay to have you fix their mess. I usually charge around \$200, sometimes more if it takes longer or is a bigger tank with more liquid to pump. I've had RV repair places call me to do this for them. ■

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Jim is an emeritus professor at the University of Minnesota Department of Soil Water and Climate, education coordinator for the National Association of Wastewater Technicians, 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.

A Spill? Now What?

Having a plan in place for handling an emergency can ensure the safety of your crew and the public, as well as ease concerns of government pollution regulators

By Jim Anderson

ast month I dealt with questions about a pre-trip technician checklist for vacuum trucks. The discussion brought up another important topic: the spill response plan. While no one wants to deal with an accident or a spill, these mishaps are likely at some point in a pumping operation. As with any other type of accident or incident, they are best handled when the technician or driver has prepared ahead of time. So whether you have one service truck or a large fleet, it's important to have a spill response plan and make sure everybody knows the details.

Technicians must recognize a spill and emergency conditions and know how to respond. If you are the business owner, you have a responsibility to prepare your crews for an emergency. When they are calling you on their mobile phone after an accident is not the time to be educating them on how to handle a spill situation.

SECURE THE SITE

Business owners are required to provide written spill and emergency plans covering the types of materials being transported. The plans do not need to be exhaustively detailed, but they should spell out the sequence of the spill response and provide the appropriate emergency phone numbers for the type of incident.

Emergency phone numbers should include 911 for injuries on site, an accident involving another vehicle or a fire. The home office number should be readily available because it is the owner's responsibility to notify regulatory authorities about the incident. It should not be left to the technician in the field to make the calls.

If the incident involves a septage, sewage effluent or sludge spill, the plan should detail how the technician should secure the site. Any discharge of these materials is considered an infectious risk for human health and if it involves surface water, it may create problems for fish and other aquatic wildlife. The area should be physically blocked off, isolating people and animals from the site. If necessary to contain the spill, absorbent mats should be used or temporary dams constructed. In the case of the vacuum truck technician, the truck itself may be the best weapon. The material can be vacuumed into the tank.

REMEMBER THE REGULATORS

Where the spill happens will dictate which regulatory authorities must be contacted. More agencies and entities are involved when the incident occurs on public property over private property. This is one of the main reasons not to leave emergency contacts up to the technician in the field. Significant fines and penalties may come into play if the incidents are not reported in a timely fashion. Lack of reporting usually also creates increased liability for damage caused by the spill.

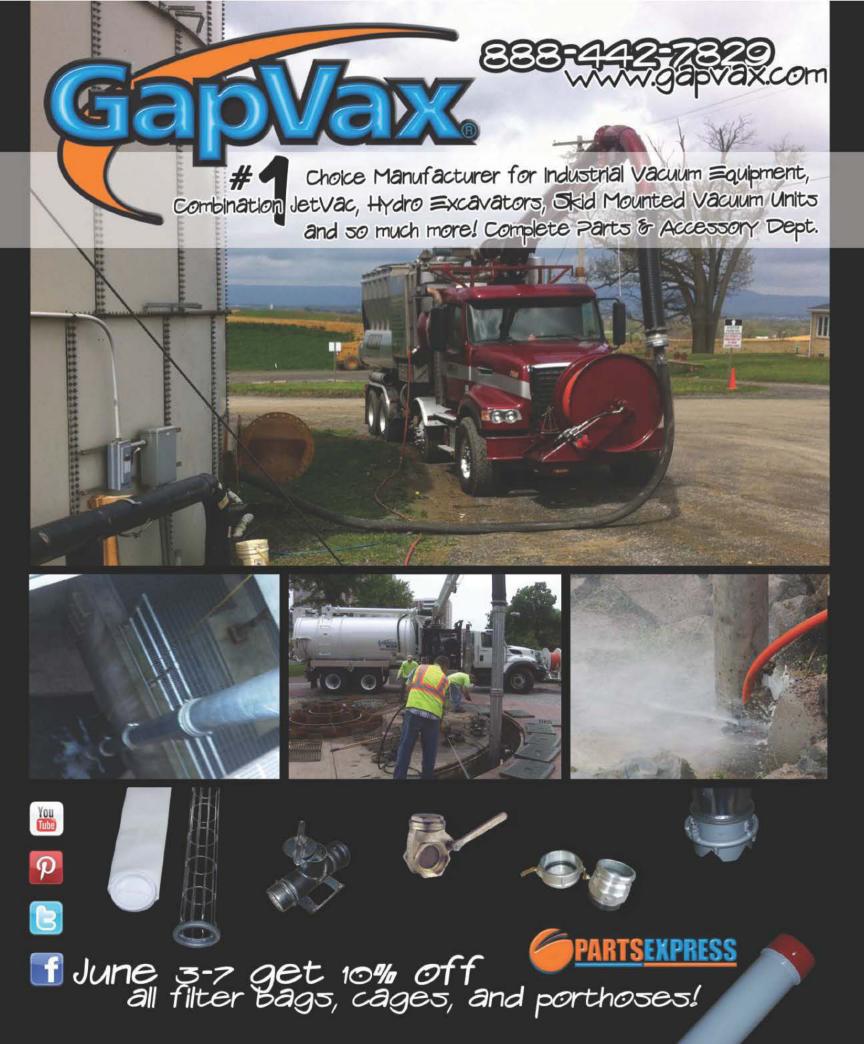
If the spill is in or directly impacts surface water – whether the spill started on private property or not – the incident is pushed into the public realm. While definitions of public waters may vary from state to state, in general if the spill enters a lake, stream or wetland, it is considered to impact public water. This will immediately involve the agency charged with overseeing water quality in the state. There may also be specific requirements of how the spill is dealt with. And again, I'll stress that non-reporting is a serious offense. What needs to be made clear to all technicians is they need to report to the office immediately even if only a small amount of the spill has entered surface water or any catchment (storm sewer) where it will empty to surface water.

While definitions of public waters may vary from state to state, in general if the spill enters a lake, stream or wetland it is considered to impact public water. This will immediately involve the agency charged with overseeing water quality in the state.

The plan and discussions with your crews should focus on which authorities technicians are authorized to talk to and the scope of that communication. For instance, technicians should discuss only what happened in the spill incident and refrain from offering theories about what they think "might" have happened. They need to know an "I do not know" answer is permissible. Larger companies will have someone designated to talk with the media. The spill response plan and the technician should be clear about who responds to media inquiries.

IT'S YOUR TURN

This is a big topic, and I'm certain there are other aspects of spill response planning I haven't covered. I hope this provides a basis for the discussion of these plans within your companies. I would also enjoy hearing from pumpers who have had direct involvement with spills. We can make some of those experiences part of future articles.













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Septage Disposal Management

By Craig Mandli

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ROTARY PRESS

The Fournier Industries rotary press introduces sludge to the system under constant pressure. It is first dosed with a polymer and passed through a variable speed flocculator to improve settleability. The sludge then enters a circular dewatering channel that slowly rotates and uses back pressure to dewater the sludge through fine mesh screens on either side of the channel. Dry cake exits and drops down to a collection bin or is conveyed away for disposal. The press then goes through a wash cycle once per day for five minutes to maintain cleanliness. An enclosed design eliminates the need for odor containment and can be expanded from one channel to six to accommodate increased flow. The system requires little operator attention. It can achieve a volume reduction up to 90 percent on grease trap sludge. 418/423-6912; www.rotary-press.com.

(continued)



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The 30-yard open-top roll-off dewatering unit from AQUA-Zyme Disposal Systems can be filled with 22,000 to 25,000 gallons of wastewater sludge, septic or grease trap waste at 1- to 2-percent solids in about two hours. After draining 24



hours, the unit can be hauled to a landfill or composting facility for disposal. Sludge volume is reduced by up to 80 percent, with reductions to 98 percent in BOD, COD, FOG and TSS. The unit has almost no moving parts, and filter media has a five-year warranty under normal wear and tear. Standard equipment includes a roll-over tarp system; sliding aluminum splash guard; side, floor and center screens; 1/4-inch floor plate; 7-gauge side plates; four door-binder ratchets; eight drain ports with camlock fittings; two inlet ports; and a long-handle scraper. 979/245-5656; www.aqua-zyme.com.

ROLL-TOP ROLL-OFF SLUDGE CONTAINER

Roll-top roll-off sludge containers from Custom Manufacturing store and transport a wide variety of waste. They feature continuously welded seams, a fully gasketed rear door, a knife-edge seal, adjustable hinges, ratchet

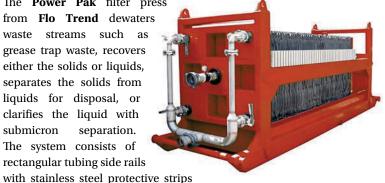
binders, secondary release grab handles located on bottom side of door, and 3/16inch walls and floor. Each lid measures 5 feet by 7 feet, with a 1- by 2-inch closed cell gasket. One lid rolls to the bulkhead end and one rolls to



rear door end, leaving access to the center of the container. Units can be customized with either a top- or side-hinge rear door. 405/692-6311; www. custommanufacturing.us.

FILTER PRESS

The Power Pak filter press from Flo Trend dewaters waste streams such grease trap waste, recovers either the solids or liquids, separates the solids from liquids for disposal, or clarifies the liquid with separation. submicron The system consists of rectangular tubing side rails



welded on top, stainless steel inlet and outlet manifolds with valves, and a weatherproof cabinet with an air over hydraulic control system for opening, closing and pressuring the unit. It can be skid- or trailer-mounted. Additional options include slurry tanks, duplex cartridge filter units, equipment stands, and air compressors and drag conveyors for trailer-mounted models. 713/699-0152; www.flotrend.com.



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Portable containment folding-frame tanks from Husky Portable Containment are available in steel or aluminum (single- or double-fold) with several size and material options. They can be used for oil spill cleanup, chemical or fuel storage, potable or wastewater storage, and firefighting. The frames are pinch-free and have Easy Lift Handles for quick folding and convenient removal of liquids. 800/260-9950; www.huskyportable.com.

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The S4T-2 4-inch trash pump from Hydra-Tech Pumps features integral stainless steel wear plates above and below the impeller. It fits into tight spaces and can be used as a submersible pump or a tank truck flange mount for direct loading or offloading using onboard hydraulics. Requiring only 8-10 gpm of hydraulic flow at pressures to 2,500 psi, it is suited for operating with smaller hydraulic power units. It features a cast and machined hardened aluminum volute, two-vane open-channel impeller, and 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. 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.



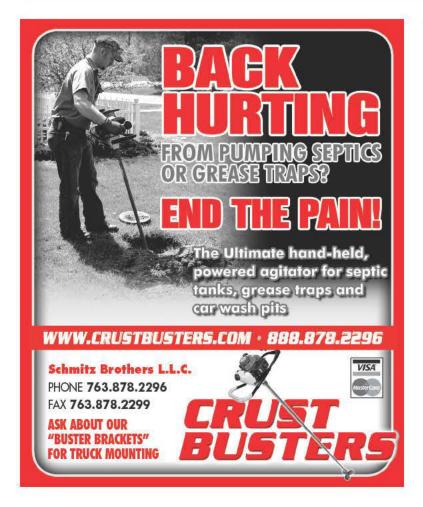
SLUDGE DEWATERING DEVICE

The horizontal sludge dewatering device from In The Round Dewatering features a stainless steel drum with perforated plastic tile lining mounted on a roll-off frame for easy transport and unloading. A typical batch of sludge of 18,000 to 25,000 gallons is mixed with polymer before being filtered in the drum during rotation. The drum is driven by a 1/4 hp variable-speed electric motor with heavy-duty chain and sprocket. Turning action eliminates crusting and wet pockets, producing uniform results. The material dumps easily, and the drum is self-cleaning. The sludge is ready for disposal in one night. 317/539-7304; www.itrdewatering.com.

(continued)

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CASE STUDIES

LARGE DEWATERING SOLUTION NEEDED FOR NORTH CAROLINA SEPTIC AND GREASE TRAP PUMPER

Problem: Stanley Environmental Solutions offers septic and grease trap services in North Carolina, and has been doing onsite dewatering of the septic and grease sludge for many years. The company needed dewatering

containers capable of processing 70,000 gallons per day.



Solution: The company installed several dewatering containers from Bakers Waste Equipment in its on-site dewatering system includes a number of Bakers Waste Equipment dewatering containers. "We have been able

to keep our total suspended solids below 50 ppm with this dewatering solution," said Jim Lanier of Stanley Environmental.

Result: "Our limits with the city are 250 ppm; then a surcharge is implemented. So these dewatering containers have proven to be very cost-effective for our onsite processing of septic and grease, meeting the paint filter test," said Lanier. **800/221-4153**; www.bwe-nc.com.

SCREW PRESS REPLACES DEWATERING SYSTEM DESTROYED IN FIRE

Problem: Tim Frank Septic Tank Cleaning Co. in northern Ohio began a dewatering operation in 1994. However, a fire in 2007 destroyed the company's dewatering building and press.

Solution: Having hosted a National Association of Wastewater Technicians waste treatment symposium at their facility before the fire, Tim and Tom Frank saw various dewatering technologies in operation at their site. They decided to



install a screw press from FKC Co. in the new dewatering facility.

Result: Currently the screw press dewaters a mixture of septage and sludge from small commercial treatment plants to a consistency of approximately 30 percent solids. The solids are disposed of in a landfill and/or land-applied. Filtrate from the screw press is treated in lagoons and man-made wetlands before being spray-irrigated onto farmland currently growing giant miscanthus, which will be used as a renewable fuel. 360/452-9472; www.fkcscrewpress.com.

ROTARY FAN PRESS

The Prime Rotary Fan Press from Prime Solution simplifies dewatering for sludges/slurries by using continuous-pressure differential technology to meet the needs of municipalities, industries, government performance demands, biosolids handling requirements, and restricted budgets. The unit offers slow rotation (up to 1 rpm), semi-automated operation, a self-cleaning feature,

low maintenance, long service life, energy efficiency, portability, a minimal footprint, and it is expandable. Few mechanical parts combined with the slow revolution of the RFP reduces noise and vibration, increases functionality, minimizes maintenance, and improves life cycle costs. 269/694-6666; www.psirotary.com.





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Dewatering containers from **Wastequip** come with easy-to-remove shells that feature a perforated floor. These shells can be removed by taking out a few bolts, allowing the unit to be used as a sludge container. Available liners aid in cleanup and disposal. Containers can be configured for specific applications, including the number and location of drains and valves. They are manufactured with a 1/4-inch floor and 7-gauge sides. Additional features include an outside rail understructure and continuous welds. Lid options include side-to-side roll tarps or single-piece, side-to-side plastic or aluminum. They are available round-bottom or rectangular in 20- or 25-cubic-yard sizes. **877/468-9278**; www.wastequip.com. ■





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Pilot course covering system design principles was held before the Pumper & Cleaner Expo

By Jim Anderson

new two-day National Association of Wastewater Technicians course covering the principles of onsite system design was conducted at Indiana's Camp Camby before the start of the Pumper & Cleaner Environmental Expo International in February.

The unique site, located 15 miles from the Expo host city of Indianapolis, provides first-class classroom space and the ability to view at a variety of onsite systems serving the camp dining and athletic facilities, as well as cluster and individual systems serving cabins owned by the camp and private individuals. In addition, the camp has excellent dining facilities, not to mention the food is good too!

The course was taken by 16 people. Dave Gustafson of the University of Minnesota, and Bob Wright from Church Onsite Wastewater Consultants in Golden, Colo., were the primary instructors. Denise Wright, chief training officer for the Indiana Department of Health, and Julie Haan from the Hendricks County Health Department assisted with the arrangements and provided technical assistance. Dennis Metcalf, from the Camp Camby staff, located sites for the hands-on parts of the course.

The course included a field and hands-on soil evaluation component. It was not regulation-driven; the goal was to provide principles that can be used in the context of the state or local regulations and it is the designer's responsibility to know and apply design principles in accordance with their state rule. The principles remain the same regardless of how the regulations change or do not change. The course provides a philosophy of how to approach design. Designing for the long term is important because this means the opportunity for system management is built-in and corners are not cut.

The first part of the course reviewed the importance of the relationship between designer, installer and client as being a key to a "good" system that will last for years. Necessary preliminary information and the introduction to a site evaluation were discussed. Land survey methods and the necessary documentation were also discussed.

The following additional topics rounded out the first day of the course:

- Matching the system to the site: Identifying key soil and site conditions, which dictate the type of system selected. Setbacks and soils; the most common mistakes are soils-related; how to avoid the mistakes. Installation principles and the need to keep the systems shallow and the soil dry and natural.
- The system user: Hydraulic and organic loading in the context of the impact the user has on system choices and design parameters.

- Soil treatment systems: The class was provided an explanation of soil sizing factors. Examples of system sizing and layout; conventional trench layouts and the different gravity distribution mechanisms were provided. Mound design and layout, how much needed area, slope issues, and how to distribute the effluent were discussed.
- **Using pumps:** Pumps should be viewed as conventional technologies and one of the first decisions is whether a pump is needed somewhere in the system. Pump sizing; system considerations; elevation differences; friction loss issues; how to make the right pump choice.
- **Pressure distribution:** Laying out pressure distribution; level or unlevel; what the designer needs to know.

On the second day, classroom discussion was followed by field activities, including:

- Applying technology to systems: A review of what system works best to solve the problem. There was discussion of single-pass and re-circulating media filters, ATUs, and impacts different users can have on performance.
- **System loading:** Waste characteristics for different users. Camp Camby systems were used as examples. The exercise included estimating flows and use patterns, and exploring the implications they have for pretreatment technology selections.
- **Field work:** Site evaluation. Take a look at the soils and the landscape characteristics of the site. Go through the site evaluation process, soil borings, perc tests, and elevation differences. Soil samples were provided and the class practiced determining soil texture.

A set of initial exercises that included determining distance and elevation differences was conducted. Surveying and locating important aspects of the site were conducted in the field and a system was laid out on the land in the field. Soil borings were conducted and evaluated at the site.

The day finished with a final classroom design exercise. This initial pilot provided much-needed information on conducting a design course. Attendees all thought this was a necessary course although, as expected, there were suggestions for improvement. The NAWT Education Committee continues to work on the subject matter for the course. If you have an interest in conducting the course in your state, contact me through the NAWT website or by phone.

Jim Anderson is education coordinator for NAWT.

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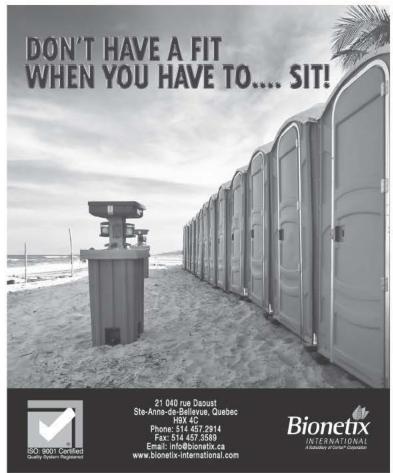
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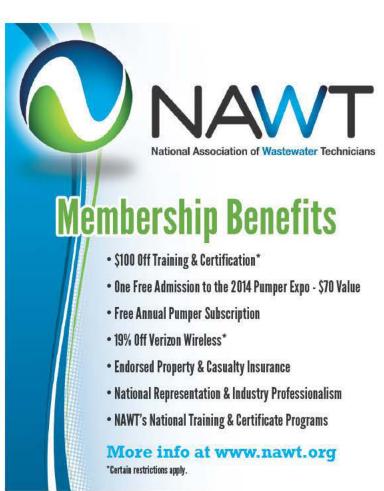


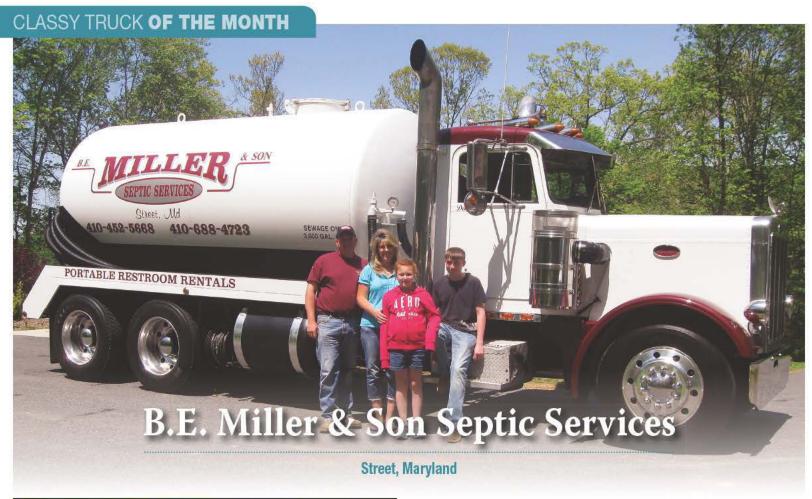


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rad Miller added this white refurbished 1984 Peterbilt 359 with a 3,000-gallon steel tank. They first bought an over-the-road chassis, powered by a 400 Cummins engine tied to a 13-speed Eaton Fuller transmission, and stripped off the 64-inch sleeper. Then they bought a 1080 U Model Mack septic truck, built out by Lely Manufacturing, and salvaged the tank and Jurop R260 pump. With the help of Brittain Inc., the tank was installed on the Peterbilt, and new hose trays, a rear step, a 100-gallon water tank and the pump were added. Miller rebuilt the engine, rewired the truck, and installed new carpeting and interior panels. The truck was painted by Charlie Fleet Services and lettering was done by Allsigns. Shown in the photo (left to right) are Brad, Dawn, Emily and Matthew Miller.

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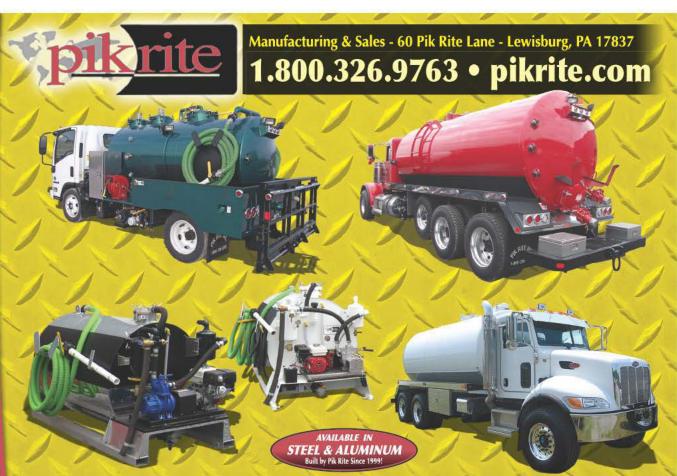
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The new 1005 Series water-jetting system from NLB Corp. gives contractors increased power and the ability to easily change pressure and flow as required for different applications.

"This is the first 1,000-horsepower pump we've ever made," says Jim Van Dam, marketing communications manager. "It's aimed at customers who've been hooking together two of our 600-horsepower pumps to combine the flow for applications that require very high flows and high pressures."

The skid-mounted 1005 Series comes with a conversion kit enabling contractors to quickly optimize pressure/flow combinations at five levels: 4,000 psi at 33 gpm, 8,000 psi at 179 gpm, 10,000 psi at 143 gpm, 15,000 psi at 95 gpm, and 20,000 psi at 72 gpm. The unit weighs 25,000 pounds and measures 228 inches long, 90 inches wide, and 90 inches tall. It requires a tractor cab and a lowboy flatbed trailer for transport, Van Dam says.

The unit features a 27-liter, six-cylinder, heavy-duty diesel engine; a slow-running reciprocating pump, which minimizes wear and maintenance and maximizes uptime; five-plunger mechanical lubrication; a 400-gallon internal fuel tank; a 24-volt, heavy-duty electrical system; an inlet water filter; a 30,000-pound, oil-filled pressure gauge with snubber; a forged-steel crankshaft mounted in heavy-duty bearings; and an accessory manifold with a relief valve.

Other highlights include a mechanical means to raise and lower the fluid end of the pump for pressure/flow conversions; internal gearing in the power end, which eliminates the need for belts and pulleys, paving the way for a lighter machine with a smaller footprint; a user-friendly fluid end that makes it easier to service and maintain; and remote-control operation, enabling an operator to start and stop the machine and adjust pressure and flow, without requiring someone to stand at the back of the unit, Van Dam says.

"It's a handy feature if you're cleaning something three stories off the ground," he explains. "You can instantly do what you need to do without stopping to communicate with someone who might be some distance away."

248/624-5555; www.nlbcorp.com.

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The System Syzer software program from Bell & Gossett, a xylem brand, is available as a mobile application for Android operating systems and can be downloaded from the Google Play store. The app calculates friction loss and velocity through various pipe types and sizes, as well as the relationship between fluid temperatures, system flow and heating/cooling load. 847/966-3700; completewatersystems.com/brands/bell-gossett.



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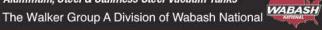
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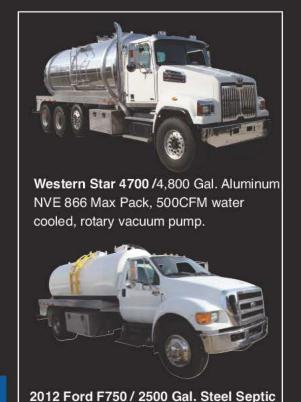
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believe it will also reduce our energy costs substantially by allowing us to monitor total energy consumption in real time and reduce peak demand costs."

WesTech names municipal water unit leader

WesTech Engineering named Les Uhlmeyer leader of its Municipal Water Treatment Unit overseeing the Microfloc and General Filter product lines.



Les Uhlmeyer

Rhino Linings celebrates 25 years

Rhino Linings Corp., manufacturer and distributor of industrial protective coatings, specialty epoxies and spray foams, celebrates 25 years of equipment protection in 2013.

Xylem's Dallas facility receives ISO certification

Xylem's Dallas facility received ISO 9001:2008 certification. The plant designs and manufactures packaged pumping systems, controls and RO

treatment systems for municipal, residential, commercial and industrial applications.

Gorman-Rupp names district managers

Gorman-Rupp **Pumps** named Joe Price western district manager and Mike Retter southeast district manager. Price will cover Washington, Oregon, Idaho, Montana, Wyoming, California, Nevada, Utah, Colorado, Arizona, New Mexico, Texas, Alaska and Hawaii. Retter will be responsible for North Carolina, South Carolina,





Joe Price

Mike Retter

Georgia, Florida, Tennessee, Kentucky, southern Ohio, Alabama, Mississippi, Arkansas and Louisiana.

Expo guests win show passes, hotel lodging

Ryan Welander, representing the City of Tacoma, Wash.; John Straub of EAP Industrial Service; and John Thomson of Muskoka Septic Service won two complimentary passes to next year's Pumper & Cleaner Environmental Expo International, Feb. 24-27, 2014, in Indianapolis and a two-night stay at the Westin hotel as part of the COLE Publishing editors' booth drawing.



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Pumper invites your state association to post notices and news items in this column. Send contributions to editor@pumper.com.

IDAHO

Committee approves technology

Members of Idaho's Individual and Subsurface Sewage Disposal Technical Guidance Committee keep the state's Technical Guidance Manual current by providing oversight for alternative technologies. The committee approved adding the extra-depth sand mound to the manual and updated the list of piping materials to meet current standards. "The extra-depth sand mound, with at least 2 feet of sand below the drain-rock bed, has the potential to be a game changer," says committee member Joe Canning, P.E., and president of B & A Engineers in Boise. "If nutrient reduction is not a significant issue, this becomes an excellent option for developing more marginal sites without using more aggressive and expensive tools."

IOWA

Course for homeowners

Muscatine County Environmental Health officials held a free training session for residents interested in becoming qualified effluent samplers. Homeowners with sand filters, peat filters, aerobic treatment units, constructed wetlands and other biomedia filters are required to have effluent tested twice annually. According to the state Department of Natural Resources, only qualified samplers may collect effluent samples.

MICHIGAN

Serious about training

During the 2013 Michigan Septic Tank Association conference, more than 200 participants earned a total of 2,100 continuing education hours, equaling more than 1,400 certifications.

MISSOURI

Health officer honored



Janet Murray

The Missouri Smallflows Organization honored Janet Murray, Randolph County Health Department Environmental Health Supervisor, for her service over 10 years. She has been the president of the board of directors for six years, and prior to that served as secretary. Murray wrote the group's mission statement and implemented statewide traveling education programs for installers, engineers, service providers, soil evaluators and regulators. She implemented the Daryel Brock Scholarship for children of MSO members, and testified before the legislature on wastewater matters.

NATION

NOWRA Nuggets

The National Onsite Wastewater Recycling Association annual conference is Nov. 17-20 at the Millennium Maxwell House Hotel in Nashville, Tenn. A planning committee is developing the program and related activities. Topics under consideration are large commercial decentralized systems, high-strength wastewater, and innovations in treatment technologies. Sara Heger, MS, onsite sewage treatment program extension specialist at the University of Minnesota, is education chair, and Craig Gilbertson is conference chair.

Association members also met with the National Environmental Health Association to discuss updating the 2004 memorandum of understanding. "The revisions will better reflect our beneficial relationship concerning training, and NOWRA's support of NEHA's efforts to expand its Certified Installer of Onsite Wastewater Treatment Systems credentialing program," says executive director Eric Casey.

NOWRA members are working with the U.S. Environmental Protection Agency MOU group to develop a paper demonstrating the positive effects the onsite industry has on community and economic development. The document will provide reasons why cutting onsite budgets or passing regulations that obstruct system installations will increase hardships for low-income communities. "Installing and maintaining residential or commercial decentralized systems create jobs that benefit the economy," says Casey. "Once communities manage their wastewater, economic development follows."

As NOWRA continues to redesign its website, Septic Locator will become a separate website linked to www.nowra.org. "It will focus exclusively on educating consumers and helping them find qualified service providers," says Casey. The move enables Septic Locator to appear higher on Google searches and gives NOWRA the ability to accept practitioners who are not members.

NEW BRUNSWICK, CANADA

Provincial association formed

The New Brunswick Association of Onsite Wastewater Professionals held its first annual meeting and election of officers last November. President Mike Stairs, of Fredericton, says the industry and government recognized the need for an association due to the lack of proper installations and inspections, leading to liability for the province, the contractors, and sometimes the product manufacturers. "While the province licenses installers and sets minimum installation standards, cut-rate contractors leave homeowners with huge financial expenses and enormous headaches," he says. "We hope the association will become self-policing and ostracize those who fail to deliver quality services." More stringent regulations are due this year. Contact Stairs at mike.stairs@nbaowp.ca.

TRAINING & EDUCATION

Alabama

Licensing classes are the joint effort of the Alabama Onsite Wastewater Association and University of West Alabama. Courses are at UWA Livingston campus unless stated otherwise:

Aug. 8-9 - Continuing Education, Guntersville

Aug. 21-23 - Basic Installer

The first day of continuing education classes is for installers and the second day is for pumpers and portable restroom operators. Call the training center at 205/652-3803 or visit http://aowatc.uwa.edu.

lowa

The Iowa Onsite Waste Water Association has a Site Evaluations and Soils course July 24 in Toledo. Contact Alice Vinsand at 515/225-1051, execdir@iowwa.com, or visit www.iowwa.com.

Minnesota

The University of Minnesota Onsite Sewage Treatment Program has these classes:

July 9-11 - Soils, Brainerd

Aug. 7 - Soils Continuing Education, Two Harbors

Aug. 14 – Soils Continuing Education, Winona Aug. 20-23 – Service Provider, St. Cloud Call Nick Haig at 800/322-8642 or visit http://septic.umn.edu.

New England

The New England Onsite Wastewater Training Center at the University of Rhode Island in Kingston has these courses:

July 11 - Microbiology for Wastewater Professionals

July 18 - Surveying Techniques for the Wastewater Professional

Call 401/874-5950 or visit www.uri.edu/ce/wq. For soil courses, call Mark Stolt at 401/874-2915 or email mstolt@uri.edu.

North Carolina

The North Carolina Pumper Group and Portable Toilet Group will hold an educational seminar on septage management and land application Sept. 21 in Asheville. Call Joe McClees at 252/249-1097 or visit www.ncpumpergroup.org or www.ncportabletoiletgroup.org.

Oregon

The Chemeketa Community College in Salem has these classes on:

Aug. 5-6 - Maintenance Operator

Aug. 6 - Installer

Call 503/399-5181 or visit www.chemeketa.edu/busprofession/ccbi/customizedtraining/deq/classes.html.

Pennsylvania

The Pennsylvania Septage Management Association is offering these courses:

July 16-17 – Basic Onlot Wastewater Treatment System Inspection, Bridgewater, N.J.

July 23-24 - Advanced Onlot Wastewater Treatment System Inspection, Exton, Pa.

Call 717/763-7762 or visit www.psma.net.

Ontario, Canada

The Canadian Onsite Wastewater Institute develops onsite curriculum and training materials for colleges and provincial associations. Courses include an introduction to onsite systems, inspection, pumps and controls, soil analysis, system design, operations and maintenance, grease interceptors, residential and advanced installations, and building code updates. The courses can be tailored for U.S. colleges or associations interested in beginning or expanding training programs. Contact Denis Orendt at 905/372-2722; info-cowi@bell.net. ■

Pumper invites your state association to post notices and news items in this column. Send contributions to editor@pumper.com.

CALENDAR OF EVENTS

June 7-8 Georgia Onsite Wastewater Association Conference, Sea Palms Resort, St. Simons. Call Bruce Widener at 678/646-0369 or visit www.onsitewastewater.org.

– SAVE THE DATE –



September 25-26, 2013

AA Septic Service Indianapolis (Clayton), IN

6th Waste Treatment Symposium

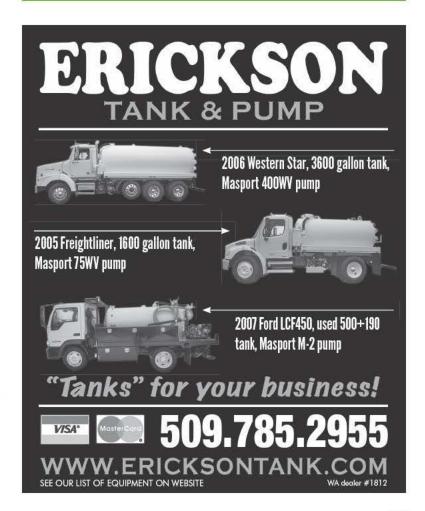


If you spend more than \$300,000 per year in disposal costs ... you need to be here.

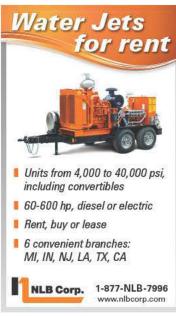
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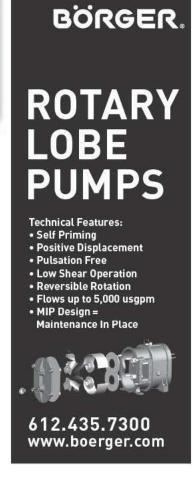
For more information visit:

WWW.NAWT.ORG

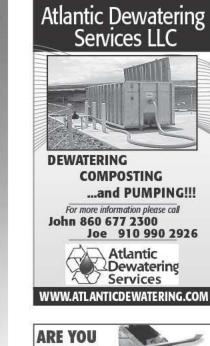


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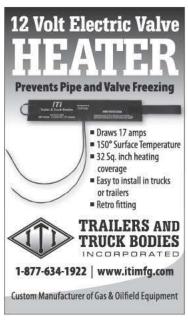
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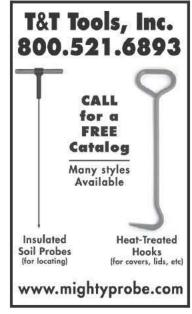
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P06



Multi-Flo alternative new replacement Aerator Roland's Turbo B: \$295 + \$25 shipping. Multi-Flo alternative replacement, NEW FILTER SOCKS, 30: per case \$245 + \$25 shipping. SPRING CLIPS to hold filter socks in place, \$2.86 per clip. If light can be seen through your filter sock (filtration is under performing) replacement is required.

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Roland turbo septic:
www.youtube.com/fabulousfungi,
Multi-flo.org

2012 Robox 250 HP low pressure screw compressor units in sound enclosure. NEVER INSTALLED. WEG brand motors. 2 available at a fraction of original cost. www.Surplus-TechParts.com or call Kevin 269-655-5506 MI. (P06)

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Roland's Fungi: 12 to a case. Your name in print.\$14.00/box

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P06

BUSINESSES

Tired of working for someone else? Here's your opportunity to own a well-established, highly profitable sewer & drain cleaning service in Central Wisconsin. Recommended and referred by local plumbing companies. Includes 3 service vans. Itemized inventory available for serious inquiries. Owner with over 28 years experience will train. 715-570-3507

Everything you need to start a portable restroom business or expand your existing operation. This includes an inventory of portable restrooms, hand wash stations, 8-unit trailer, Best Enterprises stainless 400/200 service tank (slide-in). Also mobile office restroom equipment including fresh water tanks, low-flow toilets, waste tanks and the parts to hook them up. 989-695-2325 between 6 and 9 pm ET. (P06)

Southeastern CT portable restroom company for sale. Serious inquiries only. 860-887-6542. 3 trucks, 400+ restrooms. Owner retiring from portable restroom business. (P07)

Septi-Marker: Operate from anywhere. Unique niche business. Buy injection molds, all excess inventory and customer list. \$10,000. Call Bob 513-383-6336 (P06)

Portapotty routes In LUCRATIVE San Francisco area. Sale includes route & toilets on site, no trucks/business. Email:christophers707@ gmail.com for details. (P06)

BUSINESS FOR SALE: Eastern Long Island, in business 35 years. Accounts, customer list, business telephone number, equipment and/ or industrial property. 252-331-3172 (P08)

Florida state septic license available to qualify your company. Reasonable terms. Contact Jake 352-200-1522 . (PBM)

ARE YOU MOVING TO FLORIDA? Would you like to start a septic and sewer cleaning business? I have license - will sponsor. For more information call Larry at 931-287-5413 or 931-248-1284. (PBM)

SUNNY SOUTH FLORIDA business for sale: Full service septic tank contractor; retiring. Established over 20 years. POTENTIAL FOR GROWTH. Call Chris 305-297-2171. (PIO7)

Family-owned portable toilet business for sale due to health issues. Located 30 minutes from Louisville. Established business with loyal customers, and special events. Call 270-945-4122 or 270-319-9158. Leave message, will return your call. (P06)

Septic pumping business for sale. South Central New Hampshire. Owner seeking to retire after 27 years. Good mix of residential and commercial accounts. Asking \$250K. Email to hudsonr53@yahoo.com. (P07)

FOR SALE: Septic Pumping Business in central Wisconsin. Includes 2,500-gallon septic truck, over 3,000 loyal customer base and growing. Lots of potential. Owner wants to retire but will provide consulting and training for a reasonable transition period. Cell: 608-547-3267. (P09)

Family-owned and operated portable toilet business, septic tank service and on-site stabilization system FOR SALE in Northeast Florida. Turnkey, well established, impeccable reputation, 19 years in business. Owner wishes to retire. 904-879-4701. Ask for Kenny. (P07)

Family owned portable toilet business:

Owner with health issues forces sale, 500 + units, 4 service trucks, located in beautiful Sacramento, Calif. area, 16 years established business, loyal customers. Serious inquiries only. Leave message; will return calls. 916-343-3326. (PBM)

WWW.ROOTERMAN.COM. Franchises available with low flat fee. New concept. Visit website or call 1-800-700-8062 x26.(CPBM)

National Grease Recycling Inc. Let us teach you how to recycle restaurant's waste, fryer grease and oil (yellow grease) only. No trap grease. Big \$. Over 30 years experience, will guide 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. Dewey Walker, 813-752-9535 or 813-758-2552. (PBM)

COMPUTER SOFTWARE

FreeServiceReminderSoftware.com, FreeServiceDispatchSoftware.com, FreeRouteManagementSoftware.com. (CPT06)

Pumper Plus Billing Software: Regularly \$795. Mention this ad in Pumper.com and purchase for only \$595. Pumper Plus is a billing software package from Galaxy Systems, www.galsys.com/pumperdemo.asp, that handles billing for septic pumping and portable toilet service-type companies. Inquire at solutions@galsys.com or call 800-985-3029. (PBM)

DEWATERING

Green Mountain 25-yard stainless steel roll off cable dewatering box, retractable roof, does not include polymer injection system. BEST 0FFER. 262-677-4817, WI. (P09)

Aqua-Zyme dewatering package, used 7 times, 30cy filterbox, 4" transfer pump, polymer mix unit, all instructions. Call Chuck 970-249-1816 (P07)

FULL DEWATERING PLANT AVAILABLE: 3 dewatering boxes, polymer equipment, rotary screener, flow meter, spill control, mixer, pumps, pipes, hoses, etc. Any reasonable offer considered. Call Bill @ 603-269-3441 NH. (P06)

Seriously!! Are you still trying to dewater using a "box, bed or belt"? I have a better way. Check out ITRDewatering.com then call or better yet, come watch it work!! Also works great on straight grease! 317-539-7304. (P07)

DRAIN/SEWER CLEANING EQUIPMENT

1987 International w/Detroit diesel. 40gpm 1,000-gallon tank. Great, reliable truck. \$8,000 OBO. Email for pics -> drainwizard@ hotmail.com (P06)

DRAINFIELD RESTORATION

Soil Shaker 2000. Universal skid steer attachment for drainfield restoration. Buy factory direct. \$6,250. www.soilshaker.com or call 320-293-6644. (PBM)

Terralift for sale: new motor, paint, extra parts. Call for details. Paul 253-651-8722 (P06)

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1996 Terralift machine. Excellent condition, low hours. \$12,000. Indiana. Call 317-627-7033 or 317-462-1948

Terralift for sale, new motor, paint, extra parts. Call for details. \$7,750. Paul 253-651-8722

HAZARDOUS WASTE UNITS

Pre-owned Thompson Tank, 2-compartment 2,200 U.S. gallon, 1,000/12,000 carbon steel vacuum tank mounted on a 1993 Freightliner FL70 cab and chassis and a Thompson Tank pump package. (Stock #7918C) www. VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

2001 Freightliner with Cusco 3,200-gallon stainless steel dump door, DOT certified tank, Demag pump, CAT engine. KLM Companies, 617-909-9044.

1995 International 4900 with a 2,300 U.S. gallon Presvac, carbon steel, DOT certified 412, vacuum pressure tank. (Stock #6004C) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

1993 Chevy Kodiak with a 2,300 U.S. gal-Ion Presvac, carbon steel, DOT certified, vacuum tank unit. (Stock #6615V) www. VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

2000 Gap Vax HG57 WET/DRY on Volvo WG64, 5,500 cfm, 27" Hibon blower, Cummins engine, chassis tank and bag house, in good condition, ready for work. KLM Companies, 617-909-9044. (PBM)

2012 Western Star cab and chassis with a Power Vac 5300, 3,250 U.S. gallon, carbon steel, DOT 407/412 regulations, vacuum tanker with a Hibon PD blower, 5300 SCFM w/ vacuum to 28" mercury, dump type with full open rear door and a Presvac PVB 750 vacuum-pressure pump. (Stock #13518V) 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 vacuumpressure pump installed on a 2014 Peterbilt 348 cab and chassis. (Stock #13563 A-B) www. VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

1997 Freightliner with Presvac 2.300-gallon DOT certified vacuum tank, Presvac PV750 vacuum pump with new paint and tank inspections. KLM Companies, 617-909-9044. (PBM)

JETTERS-TRAILER

1999 O'Brien Trailer Jet with 165 original hrs. 4-cylinder diesel engine, 800-gallon plastic water tanks, Myers 65gpm 2000psi pump, 500 feet of new jet hose, new white paint. Pictures at www.empireequip.com \$23,500.714-639-8352 (CPBM)



Xtreme Flow Hot/Cold Jetter! Model #HJ2TA8536, tandem axle trailer, 35 hp Vanguard 8.5 gpm @ 3,600 psi, 325-gallon water tank, 300' hose, General pump. Fully loaded! List \$34,995. On sale for

> 800-213-3272. www.hotjetusa.com

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JETTERS-TRUCK

2006 GMC TC6500 cab and chassis trunk mounted jetting unit, with JET EYE camera system, 3,000 psi @ 50 gpm, 1,000-gallon water, 600' of hose, 500 cfm blower and 1/2-yard debris tank and attachments. \$89,000/purchase price. (Stock #13234) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (PBM)

JET VACS



1997 International 2654 2110-36 combination unit on an International 2654 with DT530 engine and Allison transmission. Unit in good work condition with 12,850 hours, 10yard debris tank, 1,200-gallon water\$34,500

Call Tom at 800-876-8478 PO6

2007 Aquatech B5 on a Sterling LT7500; CatC9 engine with 40,300 miles. 60,000 GVW. Roots 824PD blower, 80gpm 2,000psi pump. 500 ft. new jet hose. Was a cityowned unit in excellent condition. Pictures at www.empireeguip.com \$134,500. Call 714-639-8352

Vac-Con industrial machine mounted on a pre-owned 1999 International cab and chassis. (Stock #3918C) www.VacuumSalesInc. com, (888) VAC-UNIT (822-8648). (PBM)

1994 Vac-Con: 16-yard debris tank, 1,250gallon water tanks, telescoping boom with articulating hose reel, 3-stage vacuum, L8000 Ford chassis, 127,545 miles, \$35,000. Call 601-373-3736.

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

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Western Equipment Finance, a subsidiary of Western State Bank, is committed to continuing to help you prosper. We have helped thousands of companies, large and small, with the most advanced finance options that makes sense for YOUR individual needs. New & Used Equipment. Application Only \$150,000. Call the team you can TRUST, Jim Stekl at Western Equipment Finance 701-665-1647. iim.stekl@westernequipmentfinance.com, www.westernequipmentfinance.com. (P08)

Capital Connection is the leader in sanitation equipment financing. From Jetters to toilets. cameras to sewer trucks; we've been helping companies grow for over 23 years. Call today and let us help you acquire the equipment you need to grow your business. Jeff, can help you please call 808-214-4456. (P06)

North Star Commercial Credit: Commercial loans for trucks or equipment, flexible purchase programs to fit your budget, 21 years in the industry. Contact Tom Myers, 877-804-2274. (CPBM)

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Three (3) 3208 Cat Engines: Good Condition \$650 ea. Call 910-844-5855 or 910-734-

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PADLOCKS for portables and plenty other places. Fast. Good prices. Best service. Lock-Masters USA, Inc. www.lockmastersusa.com; 800-461-0620.

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Pow-r Mole Model 33, 4" expander w/blades/ Acme Honda power 20 hp (portable). Duck rod/fusion. Machine used only 6 times. New \$21,800. \$15,000 OBO. 1-970-874-7920 CO. (P07)

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2 - 24" Repipe Trailer Mounted Shooters: Coversion kits from 24" to 6" Assorted lips and gauges, funnels and steam caps. Ready to go. (Canada)

Adam Russell 613-227-8671 arussell@cwwcanada.com PO6

PORTABLE RESTROOMS

300 Construction-grade Portable Restrooms for sale (PolyJohn), \$150 per toilet, Minimum purchase of 20 toilets. Please call 608-835-3459.

500 white Olympic fiberglass toilets, construction grade, \$50/each, handicaps, \$250. Located in Albuquerque, NM. Call 505-345-3965 or email aaapumping@hotmail.com.

25 Satellite portable restrooms, 10-unit haul trailer. 2-unit event trailer. Trailer mounted service rig. all or part! 580-471-4995 (P06)

FOR SALE: Blue Polyportables; Green Polyjohns; Grey Polyjohns; Brown Fleet; Handicaps, sinks; Green Satellites; Halfs. Email proequip1@yahoo.com or call Manny 305-970-9837

Up to 400 used teal Satellite units, in excellent condition, in Central Florida, \$200/each. Minimum purchase 50 units. 352-860-0195. (PBM)

300 used PolyJohn PJN3 flush portables. \$300 Canadian each. Light gray. Good shape. Call Mark at 519-520-5060.

Used fiberglass Olympia toilets \$100-\$200. 8-10 years old. Pensacola, FL 850-944-0580 or email: ClaudiaTaylor65@yahoo.com (P06)

PORTABLE RESTROOM **TANKS**

2004 Workmate 1350 aluminum tank, 900 waste, 450 fresh. Excellent condition. With Masport pump. \$6,000. 800-241-0941 PA. (P06)

PORTABLE RESTROOM TANKS



Portable Toilet Slide-In Tank: I have a portable toilet slide in unit that holds approximately 300 waste, 150 fresh. I sold the company and it has been sitting for awhile. Electric start Honda motor and pump.\$2895 OBO

801-856-7039 UT

P06

PORTABLE RESTROOM TRAILERS

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

Denali Forest River- 4WS, 2S/3MS, 3U, 2S. ACSI- 5WS 2S/2MS, 2S, 1TU; Comfort Elite 2 - 1 male/1 female. Email proequip1@yahoo. com or call Manny 305-970-9837 (P06)

2006 Buckey's (Wisconsin) 6 Station: 8' x 18' used restroom trailer, (6 stations). Men's room: 1 stall and 2 urinals, sink. Women's room: 3 stalls, 2 sinks, marble counter. Hot water, A/C. Stereo. \$17,000. 252-202-1656. More info and pictures Email wkevincherry@hotmail.com (P06)

PORTABLE RESTROOM TRUCKS

2000 Freightliner route truck, 1200/350 Indiana tank, standard transmission, \$17,000. 1999 F550 Ford 7.3L delivery truck, 300/150 Pik Rite tank, hauls 8 units, liftgate, \$9,000. John 610-587-8879; les@pottyqueen.com.

For Sale 2006 GMC 5500 portable toilet service truck. 1000 Waste / 300 fresh water, 300k miles. \$18,000. Call 317-440-1206 for more information, pictures & any questions.

1999 Ford F450 Diesel, auto., 115,000 miles, 500 waste/50 water. \$12,500. Also Dodge Cummins, auto., \$10,500. 937-674-7288

1997 Ford F700: Cummins motor, auto. transmission, runs great. Very clean. 1,500 gallon tank—1000 waste/500 fresh. \$17,000. Email Ray at battle3377@yahoo.com for any details. (P06)

2006 Ford LCF with 90,558 miles. Used mostly for special events. Truck is in great shape and pumps great. Brian 563-381-1643. (P08)



2008 F550: 130k miles, new engine at 85k, BRAND NEW automatic transmission, 2008 1,500-gallon (400/1100) Progress, aluminum tank, Jurop pump, dual service, toilet carrier. \$42,500/0B0

800-550-0132, ask for Mark PO6



2006 Freightliner M2: Motor - Mercedes Benz 6.4-liter 250 H.P.; Transmission - Allison 3000 (Rebuilt 50,000 miles ago); Dyna-Vac tank 1200 waste, 500 fresh water; Service stations on both sides. 258,000 Miles. Asking \$32,000. Call Ivan:

330-763-3706, OH



217-332-6310, IL

2002 Ford F550, 4x4 truck, Imperial unit, 600 waste, 250 water, 7.3 engine, stick transmission, Masport pump, portable toilet rack. www.pumpertrucksales.com. Call JR. @ 720-253-8014, CO. (PBM)

2005 Ford F350, diesel, Satellite unit, 400 waste, 200 water, M2 Masport. www. pumpertrucksales.com. Call JR. @ 720-253-8014, CO. \$14,000 (PBM)

2004 Ford F450, diesel, 600 waste, 130 water, Condé HD 6 pump. www.pumper-trucksales.com. Call JR. @ 720-253-8014, CO. \$25,000 (PBM)

Pre-owned Coleman 600 waste, 250 fresh, 100 chemical 3-compartment, stainless steel vacuum tank with a Masport vacuum pressure pump package (TANK ONLY) (Stock #2282V) VacuumSalesInc.com, (888) VAC-UNIT (822-8648)



2007 GMC C-5500: Duramax, automatic, 186,000 miles, 500/200 aluminum tank, 4 unit hauler/lift gate. Excellent condition.\$36,500

800-241-0041 PA

2004 Kenworth with a Keith Huber 1,100 waste—400 water, carbon steel unit with Masport pump. (Stock #TBD04ken) VacuumSalesInc.com (888) VAC-UNIT (822-8648)

1999 International with a Coleman 600 waste—250 water—100 chemical stainless steel unit with a Utile pump. (Stock #TB-D99In) VacuumSalesInc.com (888) VAC-UNIT (822-8648) (PBM)

2002 International with a Coleman 600 waste—250 water—100 chemical, stainless steel unit with a Utile pump. (Stock #TBD02In) VacuumSalesInc.com (888) VAC-UNIT (822-8648) (PBM)

POSITIONS AVAILABLE

Nevada Johns Portable Toilets & Site Services is hiring an operations manager. Retirement plan, medical insurance and more. Call Vince at 775-721-8484. (P07)

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 Lthomas@ gapvax.com or 575 Central Avenue, John-(CPMGBM) stown, PA 15902.

Waterblasting Technicians - Tampa, FL. Mechanically inclined, OT/Out Town Travel/Pass Drug/Background Screens. EOE. Resumes to Dennis Braswell: dbraswell@blasters.net or call 813-985-4500. www.blasters.net (P07)

POSITIVE DISPLACEMENT BLOWERS

(2) New Sutorbilt PD blower, model GAFMBPA catalog no., 6 mp. \$2,500/each or \$4,500 for both. 714-639-8352. Pictures at www.empire equip.com. (CPBM)

PUMPS-VACUUM

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).

(PBM)

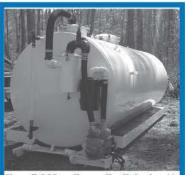
Two (2) Presvac 750 Pumps, one with 3-way valve, right-hand gearbox and extra 24 vanes. \$6,000 for both, 0B0. Call Terry 734-365-4035 or 231-325-0052 (P06)

Want to buy non-working Fruitland RCF-500 and Masport HXL20WV pumps. Price depends on condition and quantity of re-usable parts. Contact Bob at 402-429-5294. (P07)

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. vsirentalslic.com. (PBM)

ROLL-OFF TANKS



New 5,000-gallon roll-off tank with new Moro pump with hyd. drive. Use with any roll-off truck ready for work.

KLM Companies 617-909-9044

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ROLL-OFF TRAILERS

2002 Int.: \$27,500. 2000 Int.: \$19,500. 1996 Int.: \$4,100. 1995 Int.: \$16,500. 2000 Int.: \$19,500. 2001 Int.: \$21,500. 256-757-9900 or www.pbsos.com. Equipment for sale.(PBM)

SEPTIC TRUCKS

Many other low mileage used trucks available., Under CDL. www.pumpertrucksales. com. Call JR. @ 720-253-8014, CO. (PBM)

2004 Mack E7, 330 hp engine, 10-speed, 54,000 lbs. GVW, NEW 3,365 back tank, NEW Masport HXL 400 pump. www.pumper trucksales.com. Call JR. @ 720-253-8014, CO. (PBM)

VARIOUS PUMPER TRUCKS FOR SALE!!! 94 GMC 5-speed w/3200-gallon tank (147430 miles) \$10,000; 99 FREIGHTLINER PT0 driven 5-speed R260 vac pump w/2200-gallon tank \$30,000; 2003 F350 5-speed (needs work) 350 waste/180 fresh. Fully equipped (209201 miles) \$14,000; 2007 F650 automatic transmission (rebuilt motor!) 800 waste/450 fresh, fully equipped \$48,000. GREAT STARTER TRUCKS!! For pictures please email us: info@brunsonpump.com. Brumson Pump Service, El Paso, TX 79928 915-858-5511 (PBM)



1994 White/GMC triple-axle septic truck; mechanically sound & in great condition. 3,500-Gallon/R-260 pump. Solid truck-- Ready to work!\$45,000

703-361-4517, VA



1984 International DT 466: 300,000 miles, new paint, tires, alternator and hydraulic brakes, non-CDL. 1500 gal. tank. Gets great mileage. Just DOT inspected and ready to work. Truck is in excellent condition. \$20,000

906-492-3758 or 906-293-6110 MI Email: winterseptic@jamadots.com



1999 Freightliner FL80: 3,600-gallon Transway tank, 300 hp CAT engine, new paint job, 154,018 miles, 9-speed Eaton Fuller transmission. Pictures upon request......\$40,000

716-679-8013 NY Email: lakeshoreseptic@gmail.com

1998 Mack tri-axle 5,000-gallon septic pump truck with Masport pump. 8LL Fuller transmission. Mack 350hp engine. Pictures available. \$39,500. Call Frank 978-970-5800 PBM

2005 International, 330 hp Cummins, 10spd, new 3,600 aluminum tank, Masport 400 pump. www.pumpertrucksales.com. Call JR. @ 720-253-8014, CO. (PBM)

1985 Ford F700; 1,530-gallon septic truck, gas motor, 9 CDL, 5-spd, 2-spd rear end, Battioni pump, very clean and reliable. This is a great started truck or back-up. www. pumpertrucksales.com. Call JR. @ 720-253-8014, CO. \$15,000 (PBM)

1997 International 4900, 210 hp, 5-spd, newer 1,500-gallon vac tank, Morrow M10 pump. www.pumpertrucksales.com. Call JR. @ 720-253-8014, C0. \$15,000. (PBM)

1997 Ford L9000, 4000 gallon hoisted tank, full opening rear door, new Moro PM200 pump, 10-speed, N-14 350 hp. Great unit for cleaning car wash pits. New paint 2007. \$27,000.913-631-5201, KS. (P06)

1994 International 8100 septic truck: 2,000-gallon M-11, Cummins 310 hp, new pump, lots new parts, lost interest, 10-speed, spicer. \$20,000/0B0. Call 518-543-6092 for more information, NY. (P06)

2005 International 4300: DT466, 245 hp, 6-spd, 2,500-gallon Transway back tank, TSI 500 back pump, PT0 driven Giant jetter pump, 2,500 psi. www.pumpertruck-sales.com. Call JR. @ 720-253-8014, CO. \$46,000 (PBM)

2003 International 4300: Allison auto.,136k miles, new 1,850 gallon steel vac tank, under CDL; work in progress - you choose pump. www.pumpertrucksales.com. Call JR. @ 720-253-8014, CO. (PBM)

2004 International 4300 DT-466, 147,606 miles, Allison automatic transmission with 2012 Imperial 2,500-gallon tank. Heated, stainless-steel jackets, Masport HXL-400 pump, rear axle lock (Detroit locker), setup to pull trailers with electric trailer brake, aluminum rims, back-up camera, 35-gallon freshwater tank. Asking \$59,900. 715-339-2180. (P06)

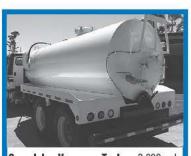


1991 International 466: Diesel, manual. 2003 Fruitland pump. New tires. Asking \$20,000

218-689-0274 MN



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Complete Vacuum Tanks: 3,000-gallon, unit mounted on your truck or ours; \$19,000. 2,000-gallon truck units; \$16,500. 1,500-gallon truck units; \$15,000. Selfcontained vacuum skids, 1,000-gallon; \$10,500, and 1,500-gallon; \$12,500, PortaPotty trucks and any custom options or sizes available!

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P06

1999 Mack: 1999 Mack: 350 hp., 9-speed transmission, A/C, cruise, Camelback suspension. New: 3,600-gallon tank, Jurop R260 vacuum pump, paint and all accessories.\$44,500

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2002 International 4900 pump truck. 182,000 miles. Spicer 9-speed transmission. 3,300-gallon Heil aluminum tank. 300-gallon freshwater tank. \$44,500. Call 815-693-0502. (P08)

Pre-owned Presvac, 5,000 U.S. gallon, carbon steel, vacuum-pressure tank. Mounted on 2004 Western Star cab and chassis with a Masport 20W vacuum pressure pump package. (Stock #3363V) www.Vacuum SalesInc.com, (888) VAC-UNIT (822-8648). (PBM)

2004 Freightliner FL70: 225 H.P. CAT, 6-speed, Air Ride Suspension, 189k miles. NEW 2500 gallon vacuum unit Nicely equipped. \$39,500. Call Dave for complete specs and pictures 734-731-5256 (P06)

SEPTIC TRUCKS



(2) 2011 Dodge 5500 trucks: 1,000 waste/300 fresh tanks, mileage in the 50,000's on all 2 trucks, (4x2 @ \$54,000, 4x4 @ \$58,000)

Contact Rodney Lane

270-832-3793 PBM



1999 Sterling: 3,100-gallon tank, new paint! Septic truck with locking rears, Asking \$53,000

Contact John at 724-785-5892 PBM



2007 Freightliner M2: CAT C-7, 245 hp, 6-speed, new 2,500-gallon U.S. tank with 5 year warranty, new Jurop R260 (363 cfm) pump with 1 year warranty, all new equipment with sight glasses, aluminum hose trays and aluminum tool box. Also includes a 1-year/100,000 mile engine warranty......\$55,000

Call Mike: 786-554-0892 or George: 954-558-0816, www.Nationaltruckcenter.com PO6



2006 Volvo VNL: ISX Cummins, 525 hp. 10 speed, 505,793 miles, 226" WB, air ride, AC, 56,000# GVW, rear work lights, quarter fenders, lift axle, fresh DOT. CDL. Used 3,100 gallon tank and Masport pump. DLR #1812.....\$74,600

509-785-2955. WA

Pre-owned Coleman 3,500 U.S. gallon carbon steel vacuum tank, mounted on a 1989 Peterbilt 377 cab and chassis and a Thompson Tank pump package. (Stock #9643C) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).



2007 Mack CX Vision: 10-speed, E-7 330 hp. jake brake, 384k miles, new 4,000-gallon U.S. tank with 5 year warranty, Jurop LC420 (425 cfm) liquidcooled pump with 1 year warranty, all new equipment with sight glasses, aluminum hose trays and aluminum tool box, aluminum wheels, heavy duty rear bumper.\$89,000

Call Mike: 786-554-0892 or George: 954-558-0816, www.Nationaltruckcenter.com P06



2012 Peterbilt Model 388: Cummins 500hp ISX, 18 spd, 20,46, full locking axles with 20 steerable lift, 75,000 mostly hwy miles, loaded. PW and heated mirrors etc. New tires, lots of warranty left, 4,600 gallon Pik Rite tank, Jurop LC 420 pump, heated valves, worklights, see level load gauge, aluminum hose trays, 3 storage boxes, heavy duty rear bumper, hoses included. Lost contract \$140,000 O.B.R.O. Similar spec'd 06 W Star also avail.

814-203-3137, PA



2007 Freightliner M2 Business Class: C-7 CAT 225 h.p. 6 speed, 185k miles, complete service records, D.O.T certified. NEW 2500 gallon vacuum unit with 5 year warranty, large 400 cfm liquid cooled vacuum pump, large aluminum tool box, L.E.D. light package. Well equipped and ready to pump. \$47,000. Call or text:

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2006 Freightliner Columbia: 10spd, Detroit 12.7L, 500 hp, new heavy duty 5,000-gallon built by U.S tanks with a 5-year warranty, Jurop LC-420 liquid-cooled pump (425 cfm) with a 1-year warranty, rear work lights, all new valves, aluminum wheels and full float tires (optional), aluminum hose trays, aluminum toolbox, double framed chassis, sight tube, new 13,250 lbs tag axle, new custom paint, large 12-gallon cyclone secondary, 1-year/100,000 mile engine warranty nationwide, see dealer for more details. ... \$92.000

Call Mike: 786-554-0892 or George: 954-558-0816. www.Nationaltruckcenter.com P06

New 4,600 U.S. gallon, carbon steel vacuum tank and a RCF 500 vacuum-pressure pump installed on a (1) 2012 & (4) 2013 International 7600s cab and chassis. (Stock #13509 A-E) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

(4) 2012 and (4) 2013 Peterbilt 388's cab and chassis with a new 4,600 U.S. gallon, carbon steel vacuum tanks and RCF 500 vacuum-pressure pumps. (Stock #13511 A-J) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).



2014 Mack GU713 Granite: FOR DO-MESTIC AND EXPORT!! New heavy duty 5,000-gallon U.S tank with a 5-year warranty, Jurop LC-420 liquid-cooled pump (425 cfm) with a 1 year warranty, factory double-framed, rear work lights, new butterfly valves, ORIGINAL HEAVY SPEC, dual rear aluminum toolbox, all aluminum wheels, aluminum hose trays, full length sight tubes, heated collars, large 12-gallong cyclone secondary, full float tires, 13,000 lb steerable tag axle, 46,000 lb full locking rear camelback suspension, heavy duty rear bumper with tow hooks and drip tray, chrome front bumper.

\$172,000 Call Mike: **786-554-0892** or George: 954-558-0816. www.Nationaltruckcenter.com P06

1989 Ford L 8000 cab and chassis. Preowned 2,000 U.S. gallon, carbon steel vacuum tank with a Masport H75W vacuum-pressure pump (Stock #3315V) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (PBM)

Pre-owned Progress 3,600 U.S. gallon, aluminum vacuum-pressure tank. Mounted on 2001 International 4900 cab and chassis with a Demag Wittig RFL100 vacuum pressure pump package. (Stock #1587V) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).



2006 Freightliner M2: 450hp. 10-speed. 16K front, 40K rear. 3,600-gallon stainless steel tank, 500CFM pump. (Pump & tank never been used.) Call for price:

888-201-9166

P06



2001 Sterling A9500: 7-speed, 12.7L Detroit 425 hp, new 4,000-gallon U.S. tank with 5 year warranty, Jurop LC420 (425 cfm) liquid-cooled pump with 1 year warranty, all new equipment with sight glasses, aluminum hose travs and aluminum tool box, heavy duty rear bumper. \$64,000

Call Mike: 786-554-0892 or George: 954-558-0816, www.Nationaltruckcenter.com PO6

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steel vacuum tank with a Masport vacuum pressure pump package, tank only. (Stock www.VacuumSalesInc.com, #2282V) (888) VAC-UNIT (822-8648).

Pre-owned Coleman 3-compartment: 600

waste, 250 fresh, 100 chemical, stainless

Pre-owned Presvac 4,300 U.S. gallon, carbon steel, vacuum-pressure tank. (Stock www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

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2013 Brenner, 6.000-gallon, stainless DOT 412. double conicle vacuum trailer, air-ride suspension, radar level indicator, full length hose trays with full length catwalk with OSHA railing, under belly pump package mounting platform. KLM Companies, 617-909-9044.

Cusco 5,500 U.S. gallon, carbon steel trailer, no pump package. (Stock #5352V) www. VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (PBM)



Imperial Vacuum Trailers: In stock, 6000- and 6300-gallon aluminum singlecompartment Imperial vacuum trailers.

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2005 Freightliner: Cab & chassis, auto., 210 hp, 6-spd, 133k miles, under CDL. \$25,000 2005 GMC: Cab & chassis, TV 500, 7.8 L, 200 hp, Duramax, auto, under CDL. We have in stock both new aluminum and steel tanks from 850 to 4,200 gallons, www. pumpertrucksales.com. Call JR. @ 720-253-8014, CO. (PBM)



1985 Ford Vactor Sewer Truck: Ford FT8 MHV truck with a Vactor 810-E hydro-excavator. Vehicle VIN: 1FDYL80UQFVA28002. Engine Serial #: 02712660. Engine Model: 3208. Listed Miles: 48,867. Listed Hours: 8,944.

Taylor White 435-979-0313. UT taylor@whitessanitation.com PBM

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2006 RST Mainline TV Inspection: Complete 2006 RST mainline camera system with lateral launcher. Equipment was removed from old truck for a retrofit. Everything in working order. Go to www.BrownEquipment.net and click on Inventory for complete listing and pictures. \$35,000

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P06

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2013 Western Star cab and chassis with a Power Vac 5300, 3.250 U.S. gallon, carbon steel, DOT 407/412 regulations, vacuum tanker with a Hibon PD blower, 5300 SCFM w/ vacuum to 28" mercury, dump type with full open rear door and a Presvac PVB 750 vacuum-pressure pump. (Stock #13518V) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (PBM)



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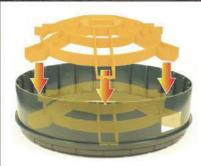
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