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The Right and Wrong Way to Praise Your Crew

In the midst of your busy season, remember to show sincere appreciation for front-line workers who keep the trucks moving and the vacuum pumps running | By Jim Kneiszel, Editor

our crew has been facing wall-to-wall service runs — with a few emergency calls thrown in just to keep the pumping business interesting. In fact, there may be days when darkness will greet you at the beginning and the end of the workday. Overtime will be the rule rather than the exception for your drivers and technicians.

You have a lot to remember during times like these. Invoices need to go out; trucks need to be washed and maintained; and you have to keep the staff performing at a high level. That means ensuring quality service for the customers and motivating everyone to keep plugging away, even as they may reach a point of fatigue.

For the boss, part of that job is recognizing when an employee goes above and beyond for your company. And the same goes for your lead driver or team leaders working with a new guy or gal. It's important to support each other through busy times to keep everyone happy and pulling in the same direction.

BE SINCERE

Successful employee recognition efforts require genuine appreciation for your hardworking team. You have to mean what you say when it comes to singling out or heaping praise on your workers. From time to time, we all need to hear some positive words about our work, but how that praise is delivered is just as important as understanding that we need to deliver it.

So says Ron Carucci, co-founder of the leadership consulting firm Navalent, who shared advice about best employee recognition practices in the *Harvard Business Review*. Recently I read his column titled "What Not to Do When You're Trying to Motivate Your Team" and felt it would be timely to share a little of his advice with the *Pumper* community.

Carucci says the majority of employees he talks to in seminars say their bosses are obviously not sincere when they try to hand out praise.

"When leaders look like they are just applying some 'motivational technique' they read about, people see right through the superficial, obligatory effort," Carucci writes. "It looks like they are checking off the 'I motivated someone today' box."

Carucci cites at 10-year study of more than 200,000 workers that shows 79% who quit their jobs cite a lack of appreciation as a key reason. And Carucci says a Gallup State of the American Workplace report shows that only 21% of workers felt they were motivated to do outstanding work. That leaves a lot of room for improvement for bosses everywhere.

DRIVE-BY PRAISE

Three aspects of employee recognition fall especially short, according to Carucci.

The first he refers to as drive-by praise. That is just a quick attaboy delivered when passing by in the shop or through a brief text that can feel rushed or inadequate. The second is making stuff up. That's when the boss goes overboard with praise and it's obviously insincere. And the third is

As pumpers often remind me, your people are your reputation — and it's important to remember that the folks on the front lines are your biggest asset.

guilt gratitude. That's when the boss overcompensates after making a mistake or neglecting something that requires the worker to fix the situation.

In all three cases, Carucci asserts the employee recognition actually serves the boss rather than the person on the receiving end. He suggests three ways to praise that avoid these pitfalls:

Ask for the story. Rather than simply a passing compliment, ask the driver, for example, to share the details of how he handled the pumpout of a septic tank that hadn't been opened in 30 years. Listen and learn from the details, and acknowledge how he or she went above and beyond to satisfy the customer by handling the tough job. Recognize the specific problem-solving involved, and this will encourage others to step up and meet the next challenge.

Contextualize gratitude. Explain how a technician's great performance helps the company turn a profit and build a great reputation for septic service in your territory. Carucci cited a survey showing that only 47% of front-line workers make a connection between their daily performance and the success of the company. So when your helper drags 200 feet of hose from the truck to the tank to protect a customer's driveway or landscaping, he or she will understand how that benefits you and the company. When you make the connection between good work and profitability, workers will understand how they can make a meaningful difference on every job.

Acknowledge the cost. Make it known that you understand the sacrifices good workers make for the company. Your drivers sit in classrooms to

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gain wastewater certifications. The drivers perform early morning pretrip inspections and wash their rigs at the end of the day or the end of the week. They sometimes get home too late for dinner with the family because a pumping job took more time than expected, or they miss a family activity on a weekend because they're servicing restrooms at a special event. When you recognize their efforts, be sure they know you appreciate their sacrifices.

WORDS TO REMEMBER

The main takeaway from Carucci that we should always remember is to reward good work with praise and be honest and genuine in our communication with everyone. As the workdays grow longer and the stress mounts to meet all of your customer obligations, it's easy to take the team for granted. But as pumpers often remind me, your people are your reputation — and it's important to remember that the folks on the front lines are your biggest asset.

So recall Carucci's words as you try to meet all the demands of the busy season:

"It's a leader's job to create a recognition-rich environment in which those they lead choose to give their best," Carucci concludes. "That starts by ensuring recognition genuinely serves the needs of those you're offering it to, not your own." **P**

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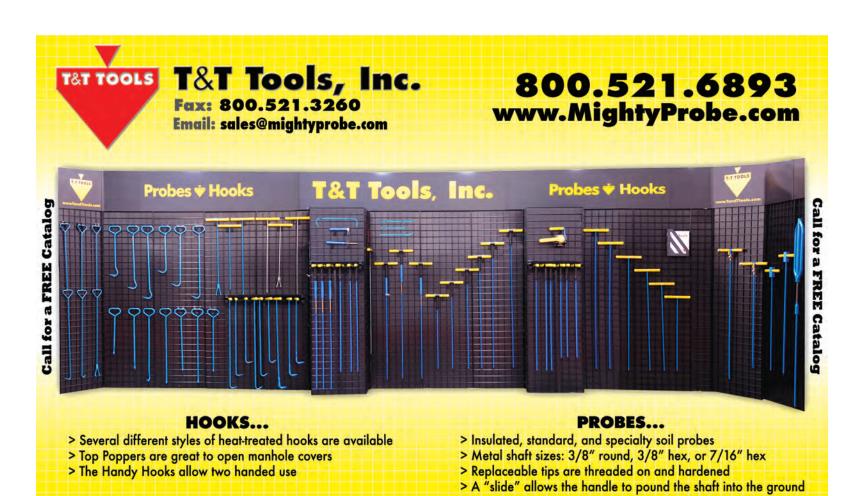
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BOOSTING YOUR BUSINESS

adding septic services

Since adding septic pumping services to its offerings, Timothy A. Giard & Son Plumbing & Heating is seeing about 15% of its business from pumping, and hopes to see it jump to 30% in the next couple years. In this online-exclusive video, co-owner Jeremy Giard explains how the 35-year-old company got its new division off the ground. **pumper.com/featured**



ONGOING PANDEMIC

ensuring employee safety

As we enter the next leg of the COVID-19 pandemic, many business owners are beginning to wrestle with a crucial question: How do you resume some semblance of normal operation while also keeping your employees safe? For pumpers, installers, portable restroom operators and other trade services, these considerations may look a little different. pumper.com/featured

and positive reviews. More consumers are looking at those responses and using them to determine whether or not to do business with a company.

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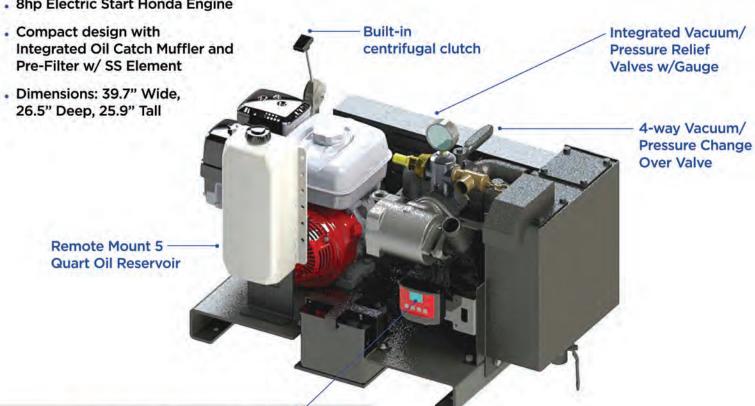




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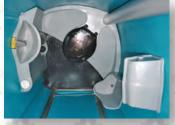


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Interior View of Deluxe TJ-III



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By Steve Lund

ale Miller & Son in Fawn Grove, Pennsylvania, started out small, then grew quite a bit for an independent pumping company. These days, the owners of the family outfit are content to be smaller.

"We're kind of scaling back a little bit," says Mike Miller, son of the founder. Miller turns 65 this year and is thinking of taking more time off in the future. It's a common situation as many pumpers are getting older and finding it difficult to attract good workers to help out.

"I'd like to slow down and get control of how much I work," he says. "I can't see myself retiring. I'm not going to sit around and watch TV. You've got to do something. I'll probably continue to work, but I would like to slow down."

The late Dale Miller was a plumber, in business with his brother, and he bought a vacuum truck as a sideline for the plumbing business in 1971. Mike was in high school at the time, and he and his dad would do the pumping work in the evenings.

The company grew and at one point had seven full-time employees, three part-time employees and an inventory of portable restrooms. But now Dale Miller & Son is down to three full-time drivers, three part-time drivers and an office manager. The office manager and part owner is Mike's wife, Susan Glackin Miller.

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It was unusually easy for Dale Miller & Son to get involved in the portable restroom business: A big customer came knocking on the door.

"We have a nuclear plant near us. Someone there approached us and asked us to provide toilets," Susan says. "That's how we got in it, by request." The Peach Bottom Atomic Power Station in nearby Delta would have regular partial shutdowns for maintenance that would require a lot of temporary help.

"They bring in a ton of people. They would have (about) 40 re-

(continued)



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Left: Mike Miller and son Jared Miller replace body panels on their company-sponsored sprint car. The family has been racing cars for 20 years.

Below: Susan Glackin Miller and Mike Miller meet in the shop to go over the scheduled pumping appointments for the day.

We drive farther to dump than we would to service customers. For us, we have to scramble to find places to dump. It's a huge issue for pumpers.

SUSAN GLACKIN MILLER

strooms down there for however long the shutdown ran," Susan says. "All the different trades would come in. It's a big thing."

That was the beginning of their portable restroom business, and it grew. At its high point, the company was running 200 to 300 portable restrooms.

"We were always at capacity. We had as many as we could handle," Susan says. "Our sons, Jared and Paul, ran it in the summer. The boys were out of school and we had some part-time guys." After Paul went to Penn State and Jared went to York Technical Institute, the company gradually let the portable restroom side of the business get smaller.

"Help is really a big problem around here. We just slowly started not replacing trucks," she says.

One day someone came into the office to ask about a used restroom service truck that Dale Miller & Son was advertising for sale, and Susan asked him if he'd be interested in buying the whole business. He was, and that was the end of the portable restroom side of the company.

CRASH TAKES TOLL

Another factor in downsizing the business was a tragic traffic accident that put a strain on the company, economically and emotionally. On April 30, 2018, a driver hauling a fully loaded 5,500-gallon vacuum truck was hit headon by another truck that crossed the centerline. Four men in the other truck died in the crash. The Dale Miller & Son driver has not been able to return to work since the accident, and the company has not been able to replace the truck, which was its largest.

"You never get the amount of money you had in the truck," Susan says. "We bought another 4,000-gallon truck." The loss of the larger truck and the driver ended up costing the company some commercial business. Not having



the bigger truck made some jobs uneconomical for them to do, and the company was also down a driver.

"That was our only big truck, and that was our driver who drove the big truck. Replacing a driver is very hard to do," she says.

The newest truck in the Dale Miller & Son fleet is a 2019 Freightliner with a 4,000-gallon aluminum tank and National Vacuum Equipment 4307 blower outfitted by Imperial Industries. The company also has a 2013 International 7500 with a 4,000-gallon aluminum tank and NVE Challenger 866 pump, as well as a 2005 Sterling with a 2,500-gallon aluminum tank and Masport pump. The oldest truck in the fleet is a 1998 Sterling with a 4,000-gallon aluminum tank and Fruitland pump. Dale Miller & Son built that truck in-house. The company also uses a Case CX25 mini-excavator.

LIMITED DISPOSAL OPTIONS

Dale Miller & Son still does a lot of municipal and commercial work, some hauling of leachate from landfills and manure spreading for farmers, as well as residential pumping. The company keeps its service area tight, about a 25 mile-radius from Fawn Grove, which is close to the Pennsylvania-Maryland border.

(continued)









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PUMPER HAS A SIDE JOB AS SEWAGE ENFORCEMENT OFFICER

Susan Glackin Miller got started as a Pennsylvania sewage enforcement officer to prove a point.

"I decided to do that on a dare," says the office manager and part owner of Dale Miller & Son. "One day, one of the SEOs mentioned something about only male engineers should be SEOs, and it made me mad. I didn't tell anybody, and I went to class to see if I could get my license, and I did."

She says she knew it wasn't necessary to be a man or an engineer to be a sewage enforcement officer. "He was full of crap," she says bluntly. "You have to go to school, and you have to pass a test."

She says the process wasn't easy, but once she became qualified, she started working as the alternate SEO for Fawn Grove Borough, Peach Bottom Township and Lower Chanceford Township. Now she spends part of her time doing inspections of holding tanks and septic systems, including for the many vacation homes in the area, some of which were converted to year-round residences.

"I do inspections of the holding tanks for the little houses along the river," she says. "A lot of them wouldn't have the ground available for a regular system. They are seasonal houses. Many of them have to be inspected once a year to make sure the alarms are working. It's part of the permitting process to get a holding tank. They need to have a contract to say they have a pumper who will come in and pump it out."

She says the work she does as an alternate SEO for three municipalities is less than a part-time job.

"It would be busy if there was a lot of development going on," she says, "but we're fairly built out around here. Most of the new development is going on public sewers."

The inspections she does as a sewage enforcement officer are different than the inspections of septic systems she and others do for real estate transactions, which are a significant part of Dale Miller & Son's business. Training for those inspections is provided by the Pennsylvania Septage Management Association.

"If I have my SEO hat on, I can tell you if your system works today," she says. "An SEO can only give you a pass-fail. As a PSMA inspector, we're going to tell you how to maintain your system, point out potential problems and take into consideration how many people are moving into the house."

Miller has been active in the Pennsylvania Septage Management Association, in the past serving as vice president and also as head of the ethics committee. She is also a member of the Pennsylvania Association of Sewage Enforcement Officers.



Above: Chuck Wiegands spreads dairy waste for a local farmer using a 1998 Sterling with a 4,000-gallon aluminum tank and Fruitland pump.

Above Left: Wiegands hooks up a suction hose to load waste from a pond on a local dairy farm. The company used to do a lot more agricultural work, but now spreads waste for a few small farms in the area.

"We drive farther to dump than we would to service customers," Susan says. "For us, we have to scramble to find places to dump. It's a huge issue for pumpers."

The dump sites are the Springettsbury Township Wastewater Treatment Facility in Pennsylvania and the Sod Run Wastewater Treatment Plant, a county-run facility in Perryman, Maryland.

Tighter regulations in the Chesapeake Bay watershed prompted many of the smaller wastewater treatment plants in the area to refuse to accept septage.

"When the Chesapeake Bay regulations came in, they all had to do upgrades. They had stricter levels. It's probably been 10 years since we dumped at smaller plants," Susan explains. "Now we don't have a lot of options. A few haulers up here land-apply, but we don't have a big enough farm."

Every load the company takes to the Springettsbury facility is tested. "The charge varies with the test," Susan says. "There is a huge difference in what we pay depending on the test."

A POSITIVE NOTE

Regulations have had a positive effect on the septic hauling business by putting more emphasis on septic system maintenance. "A lot of townships around here are going to mandatory pumping. They have what are called sewage on-lot management programs. Some require pumping every three, every four or every five years," Susan says.

It's good for pumpers, but it also makes them take the brunt of criticism from property owners over government interference. "People call and complain that they don't want the government to come in and inspect their systems. A lot of times we're the front lines," she says.

The Millers usually tell customers it's a lot cheaper to have their tanks pumped every few years than to go on public sewers, which is what might be required if enough older septic systems fail. "I tell them to call one of their neighbors who is on a public sewer and then tell me it's not cheaper to pump your tank every three, four or five years," Susan says. "We're big proponents of on-lot septic here." (continued)



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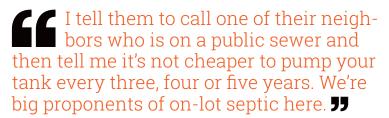
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Left: Jared Miller pulls hose to reach a septic tank. The truck is 2019 Freightliner from Imperial Industries and carrying a National Vacuum Equipment 4307 pump.

Below: Mike Miller pauses to write an invoice for a commercial customer in York, Pennsylvania, on his daily route.



SUSAN GLACKIN MILLER

Dale Miller & Son has been providing septic pumping services since 1971, so it's not surprising that repeat customers provide the bulk of the business for a company that's been pumping tanks for nearly 50 years.

"It's mostly repeat customers and word-of-mouth," Susan says. "I've got a database of all our customers. We send out reminder cards. We have a Facebook page. We have a website. We have a little ad in our tiny local newspaper. We still have an ad in the phone book."

She thinks the reminder cards and the company's reputation are the best marketing tools. They get a lot of calls from real estate agents because houses with septic systems need to be inspected before they are sold. "The real estate market lately has been pretty busy. We do a fair number of real estate inspections," she says.

CHANGE HAPPENS

One part of their business that is in decline is manure spreading for local farmers.

"We did a lot of that, but that's changed over the years," says Mike, who has a state certification for spreading manure. "We used to have farmers who emptied their pits every two months because that's all their pits would hold, so you'd be going back to that same farm every two months.

"On most of these new farms, the pits hold six months. That means everyone wants to be done in the spring and the fall, and it's weather-dependent. You couldn't get to them all in a timely manner. We couldn't do what we used to do, and for a while I couldn't find help," he says.

Scaling back that part of the business is OK with Mike. He thinks the business was probably most rewarding when it was smaller. "I think when it was just my father and myself, we made more money and had more time off," he concludes.



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Growth meant maintaining more equipment, which is mostly done in-house.

"At one point we had seven full-time employees (plus family members), and every night it was a flat tire or something needed to be fixed. It was problematic," he says. "I'm not saying we didn't do well at that point, but we worked a lot more hours. You had to have the truck ready to go for the next day. When someone came in with a flat tire or a busted radiator hose, we tried to get it fixed that night."

Mike expects his son Jared, 40, will eventually take over. He has continued working for the company since high school. His other son, Paul, who also lives in the area, works as a mechanical engineer for the local power utility. Daughter Michelle, who worked in the office during high school, went to Bucknell University and worked as a project engineer before becoming a stay-at-home mom.

Mike looks back on his career with satisfaction.

"We worked hard, but we made money. There's a lot of satisfaction to it," he says. "I'm tired of working 12-hour days, 14-hour days. I'm going to keep working, but hopefully I can schedule a few more days off." **P**

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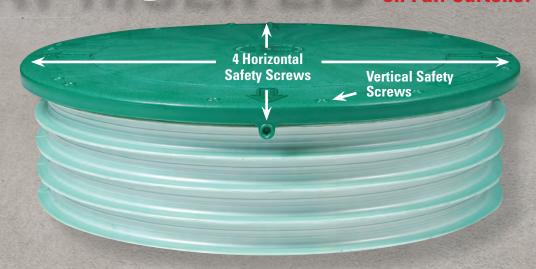
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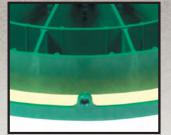
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Kate Zabriskie is president of Business Training Works Inc., a Marylandbased talent development firm. Reach her at www. businesstrainingworks. com.

5 Steps to Battle Burnout for Your Busy Crew

Keeping your team happy and productive at the height of the busy season requires keen observation and effective communication from the boss | By Kate Zabriskie

he team is exhausted. They're burned out, and I am too. I don't know if we can recover. We've been working at 150% for a few months straight—at least most of us have.

More change? Really? We've been through three major transitions in as many months. Everyone is really on edge. I am pretty sure Joe is going to quit.

For septic service and portable restroom providers, it's the time of year when the demands of the job are ramped up to maximum output. You've put a few months of sunup to sundown pumping jobs, wall-to-wall construction site services and weekend events behind you. But there are a few more months of long days and long weeks ahead.

Even in the best of times, creating and maintaining a high-functioning team is work. If you follow these steps, you can provide some relief and keep members of your crew pulling in the same direction all summer long.

STEP ONE

The first step is accepting a list of truths:

Truth One: Employees have different levels of buy-in, a range of work goals and varying home and work demands.

Truth Two: Not everyone experiences burnout in the same way, and work isn't always distributed evenly in most companies. Some people probably are more burned out than others.

Truth Three: Great teamwork will compensate for a lack of resources in the short term. However, teams that are stretched too thin for too long begin to show signs of wear and tear.

Truth Four: If the leader isn't a believer in what the team needs to accomplish or isn't working as hard as he or she can to bring the team over the finish line each day, the crew will know it and react in a range of ways — most of which are neutral at best.

Truth Five: Transparency matters. People don't like being left in the dark or, worse still, lied to.

Truth Six: Too many changes at once usually don't go over well unless there's a logical flow to them, a sense of fairness about what's being changed and the absence of unnecessary chaos or drama.

Truth Seven: Elephants in a room stay there if they're allowed to do so. If a team is not prepared to operate with candor and address unspoken issues, there's only so much that can be done to keep everyone together.

Truth Eight: Team members' perceptions of the team's condition are their truth. You may have plenty of data to argue to the contrary, but until people are ready to listen and believe what you show them, what they currently think is what is.

Your team will have some good days and bad. What's important is making progress in the right direction. After a series of successes, everyone should be feeling a little less burned out and a lot more excited about the work at hand.

STEP TWO

Once you've got a firm understanding of the basic truths, the next step is taking a long and hard look at what's working, what isn't and why. Does everyone understand and buy into the team's mission? Is work distributed fairly? Are some people doing more than they should have to do, while others are doing less than they should? Are people resentful of each other? Is there drama, and do you know the source? Is the team's burnout a recent phenomenon or has its decay been long in the making? Is the burnout caused by internal factors, external factors or a combination of both? Have people been misled or lied to in the past by a boss?

Those questions are just the tip of the iceberg and some ideas to get started. In fixing burnout, asking the right questions is as important as, if not more so than, taking action. A good list of questions will help you reduce the likelihood that you are treating symptoms or curing the wrong disease altogether.

STEP THREE

When you think you have a good grasp of the current situation and have verified your findings with others, it's time to start thinking about what could be. A fast way to imagine a different state is to work through some more questions.

- How do we want to feel about our work?
- What gets us excited about our work or what do we enjoy?
- What changes do we need to make to our work product, our work processes or our people interactions?
- What needs to stay the same?
- What level of performance do we need from each team member?
- What are we going to do if those levels aren't met?
- What additional resources do we need?
- What can we do to encourage transparency and communication?
- How will we celebrate improvements?

STEP FOUR

With a clear view of the present and a possible future, the next step is prioritizing. In most cases, burned-out teams don't burn out overnight. Often the process is long and marked by a series of declines, bad luck and unfortunate circumstances. Consequently, the recovery process is often long. In fact, the team may not realize some of the elements identified in step three for a long time. The trick is to keep the truths discussed in step one in mind as you prioritize a plan of action to get from the reality you uncovered in step two to the future you envisioned in step three.

STEP FIVE

The final step in the recovery planning process is creating a deliberate communication plan. Recognize that you need to overexplain and repeatedly share information. Once is not enough. Also, your team will have some good days and bad. What's important is making progress in the right direction. After a series of successes, everyone should be feeling a little less burned out and a lot more excited about the work at hand.

RELIEF ON THE WAY

With these five steps well in hand, you're positioned to provide some immediate triage to your team members who are battling burnout. Burnout can be pervasive throughout a company, so get your first-aid kit out as soon as you pick up on the problem, and mitigate the issue before it negatively impacts your operation. **P**



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CUMMINS X15 @ 485 HP, 10 SPEED, 13,200LB FA, 40,000LB RA ON AIR RIDE, MULTI-FUNCTIONAL WET KIT... **STARTING @ \$99,500**



(41) 2020 KENWORTH T880 ROLL OFF TRUCK

CUMMINS X15 @ 485 HP, ALLISON AUTOMATIC OR 8LL, 75,000LB GALFAB HOIST, PIONEER RACK 'N PINION TARPER, LOW MILES... **STARTING** @ \$179,500



(2) 2015 INTERNATIONAL 5900iSBA VAC TRUCK

CUMMINS ISX15 @ 500 HP, 18 SPEED, 20/46 ON AIR RIDE, 110 BBL, 4,800 GALLON J&J TANK, FRUITLAND PUMP, 295/75R22.5 STEERABLE LIFT AXLE... \$85,500



(11) 2020 MACK GR64 ROLL OFF

MACK MP8 @ 455 HP, ALLISON AUTOMATIC, 18/46 ON MRIDE, 75,000 LB AMERICAN OR GALFAB HOIST, PIONEER RACK'N PINION TARPER... STARTING @ \$185,500



2015 PETE 367 VAC TRUCK

CUMMINS ISX15 @ 550 HP, 18 SPEED, 20/46 ON HAULMAX, 4,700 GALLON CURRY TANK, NVE PUMP... \$89,500



(2) 2020 PETERBILT 567 QUAD AXLE VAC TRUCK

CUMMINS X15 @ 485 HP, 18 SPEED, 20/46 ON AIR LEAF, CURRY VAC TANK, 4,200 GALLON... STARTING @ \$192,500



2014 MACK GU713 VAC TRUCK

MACK MP8 @ 455 HP, 8LL, 18/44 QUAD, J&J TANK, FRUITLAND PUMP... \$89,500



(3) 2020 PETERBILT 567 ROLL OFFS

CUMMINS X15 @ 500 HP, ALLISON AUTOMATIC, CHALMERS, 75,000LB GALBREATH HOIST, PIONEER RACK'N PINION TARPER, LOW MILES... STARTING @ \$199,500



2015 PETERBILT 367 VAC TRUCK

CUMMINS ISX15 @ 550 HP, 18 SPEED, 20/46 ON HAULMAX, 110 BBL TANK, MASPORT PUMP... \$89,500



2020 PETERBILT 567 VACUUM TRUCK

CUMMINS X15 @ 485 HP, 18 SPEED, 20/46 ON AIR LEAF, TRI AXLE, CURRY TANK... \$189,500



2016 PETE 367 VAC TRUCK

CUMMINS X15 @ 550 HP, 18 SPEED, 20/46 ON HAULMAX, CURRY TANK, NVE PUMP... \$95,500



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2013 MACK VAC TRUCK

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(4) 2015 KENWORTH 367 VAC TRUCKS

PACCAR MX-13 @ 500 HP, 18 SPEED, 20/46 ON AIR RIDE, 110 BBL CROWN TANK, NATIONAL PUMP... \$89,500

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Florida Switches Wastewater Oversight to Environment Department, Supports Grants for Onsite Upgrades

By David Steinkraus

t took a decade, but the Florida Legislature has passed a bill that makes progress on protecting the state's waters and keeps the onsite industry as a viable solution to some of the state's water problems. In the end, Senate Bill 712 sailed through the Senate 39-0 and through the House 118-0.

After some false starts, it turned out this was the year for action, says Roxanne Groover, executive director of the Florida Onsite Wastewater Association. "The cost of not doing anything was going to far outweigh the challenges we're going to get from people for doing something," she says.

For the decentralized wastewater industry, there are two major takeaways from the bill. First, oversight of onsite systems will shift from the Department of Health to the Department of Environmental Protection. Second, the bill requires that when the department is formulating rules about onsite systems, it must consider advanced treatment units in addition to conventional septic systems.

Gov. Ron DeSantis made clean-water legislation one of his major goals. He set up a task force to study algae blooms that have stricken the state for several years, and he is expected to sign the bill into law.

One of the first attempts to protect the state's waters came in 2010 with a bill mandating onsite system inspections every five years. Those were repealed in 2012 after citizens objected.

In 2017, Rep. Randy Fine, R-Palm Bay, introduced a bill that would have required onsite system inspections when a property was sold, but the bill was altered so sellers would only have the responsibility of telling buyers that an onsite system was present. The bill never made it to the floor of the House.

Last summer, as legislators discussed how to address water-quality problems, FOWA members spent time talking to legislators about the industry and how onsite technologies can help protect the environment. Infiltrator Water Technologies hired a lobbyist to work with FOWA's lobbyists and present the manufacturing perspective, Groover says.

Groover also worked with Sen. Debbie Mayfield, R-Vero Beach, last summer. It was Mayfield who wrote the bill that has now passed the Legislature, and Groover gives her great credit for reaching out to interested groups, keeping discussions alive and encouraging people to compromise. "That is the greatest challenge she overcame this year," Groover says.

For pumpers and installers, the bill should not disrupt business because the role of county health departments remains the same, she says. And FOWA is ready to help with the shift of oversight from the Health

Department to the Environmental Protection Department, she says. That means helping ensure permits aren't stuck in the system as the agencies move people or change their duties. "There's a lot of shared people, shared offices, shared equipment," she says.

An advantage of having the Environmental Protection Department handle oversight is that funding for onsite upgrades comes through that department, Groover says. This year, the state allocated \$8 million for grants of up to \$10,000 in nine counties that hold natural springs critical to the state's freshwater supply. Homeowners could use that money to buy advanced treatment units, she says, and the money is available again this year. It may be a fraction of what is allocated for conversion from onsite to municipal sewer, but the money is there, and shifting oversight to the Environmental Protection Department provides an opportunity to expand the program, Groover says.

Florida newspapers report some grumbling by environmental groups who say the bill did not go far enough in regulating agriculture. That industry has been cited as a major contributor of the nutrients fueling algae blooms.

The bill may be fine-tuned in the next legislative session, Groover says, but the onsite industry shouldn't be part of any major struggles. The next Florida Legislature convenes in January 2021.

Ohio

A small community is going to court to avoid a forced connection to municipal sewer service.

In 2012, the state ordered Washington County to provide municipal sewer service to people in Devola, an unincorporated community 115 miles southeast of Columbus near Marietta and the West Virginia border. The county signed an agreement with the city of Marietta, but the two are now in court because the city says the county isn't complying with the agreement. All of this gave impetus to Devola residents who don't want to pay for a sewer conversion.

Costs over 30 years would be \$66,300 to \$78,575 for each property, depending on how much work the county would do versus how much would be up to property owners, reports *The Marietta Times*.

In January, some Devola citizens formed DASH: Devola Against Sewering Homes. DASH's attorney asked a judge to let the group become involved in the suit between the city and county. While the order to provide municipal sewer was based on studies in 2009 and 2010 of nitrate contamination of groundwater, DASH's attorney says more evidence about the contamination has accumulated since then, but the state isn't looking at it.

Wyoming

Teton County has drafted an update to its onsite regulations, but one advocacy group wants the rules to go further. The draft rules build on state rules and existing county ordinances and will now require leak testing and an operations manual for each onsite system that would be passed from one homeowner to the next, reports the *Jackson Hole News & Guide*.

Dan Hellig, of the Wyoming Outdoor Council, says thousands of county onsite systems are sources of nitrate and *E. coli* contamination of groundwater. He says the county should require mandated system maintenance and inspections. Ted VanHolland, the county engineer, says inspections would be a burden on county staff.

Several thousand properties in the county — about one-third of all homes — depend on onsite systems for wastewater treatment. Teton County is in the northwestern corner of Wyoming and includes Grand Teton and Yellowstone national parks.

Tennessee

The state Department of Environment and Conservation imposed a \$20,000 civil penalty and \$3,617 in cleanup costs on Price Septic Service of Rogersville and owner Robert Price. Twice septage from company trucks was intentionally dumped into tributaries of Cherokee Lake, the state says.

In one case, Price had applied lime along the channel where septage had flowed, reports the *Citizen Tribune* of Morristown. The state wrote letters telling Price to clean up the septage but received no reply.

Cherokee Lake is in eastern Tennessee, about 35 miles northeast of Knoxville.

• •

A bill in the Tennessee Legislature is being criticized for removing power from the Department of Environment and Conservation to set standards for community wastewater systems.

Senate Bill 2224 and its companion, House Bill 2206, would restrict permits from requiring land to be set aside for effluent treatment. The bill's sponsor, Sen. Steve Southerland, R-Morristown, was quoted in news reports as saying proposed department rules about community systems would be harmful to building.

The bill is out of committee and was referred to the Senate Calendar Committee. ${\bf P}$



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MANUFACTURER	PUMP	BLOWER	REC. Tank size (gallons)	CFM	MAX. VACUUM (Hg)	MAX. PRESSURE (PSI)	NET WEIGHT (LBS)	VANES	AIR, FAN, LIQUID-COOLED or LIQUID RINGS	RPM Range	LOBES	HORSE- POWER (BHP)	PORT/ PIPING
Gom Vac Systems Inc 3 Peerless Way, Unit L Enfield, CT 06082 800-243-7986 • 860-265-3786 (f) 860-265-3786 comvacsys@aol.com www.comvacsys.com See ad, page 16	Utile		500 - 6,000	80 - 535	28.5"	35	535	6	Air, Fan, Liquid	750 - 1,100			
COME	Wallenstein 30		50 - 1,800	15	28"	35	20	4	Air	500 - 1,750			
Finite Meeting Industries	Wallenstein 151		50 - 1,800	80	28"	35	100	4	Air	500 - 1,750			
Elmira Machine Industries 20 Martins Ln. Elmira DN N20 241	Wallenstein 202		50 - 1,800	115	28"	35	160	3	Fan	500 - 1,200			
Elmira, ON N3B 2A1 800-801-6663 • 519-669-1541 (f) 519-669-8331	Wallenstein 302		50 - 1,800	165	28"	35	185	3	Fan	500 - 1,200			
info@elmiramachine.com www.wallypumps.com	Wallenstein 402		50 - 1,800	200	28"	35	200	3	Fan	500 - 1,200			
See ad, page 25	Wallenstein 403		1,800 - 4,300	220	28"	35	245	3	Fan	500 - 1,200			
	Wallenstein 403LN		1,800 - 4,300	220	28.5"	35	245	3	Liquid	500 - 1,200			
	Wallenstein 553		1,800 - 4,300	275	28"	35	300	3	Fan	500 - 1,200			
	Wallenstein 753		1,800 - 4,300	350	28"	35	340	3	Fan	500 - 1,200			
	Wallenstein 753LN		1,800 - 4,300	350	28.5"	35	340	3	Liquid	500 - 1,200			
	Wallenstein 1054		3,200 - 10,000	500	28"	35	700	5	Fan	500 - 1,100			
	Wallenstein 1054LN		3,200 - 10,000	500	28.5"	35	750	5	Liquid	500 - 1,100			
	Wallenstein 1504LN		3,200 - 10,000	700	28.5"	35	750	3	Liquid	500 - 1,100			
	Wallenstein 1604		3,200 - 10,000	800	28"	35	1,200	5	Fan	500 - 1,100			
	Wallenstein 1604LN		3,200 - 10,000	800	28.5"	35	1,200	5	Liquid	500 - 1,100			
	Wallenstein 2106		3,200 - 10,000	1,000	28"	35	1,700	5	Fan	500 - 1,100			
	Wallenstein 2106LN		3,200 - 10,000	1,000	28.5	35	1,700	5	Liquid	500 - 1,100			

MANUFACTURER	PUMP	BLOWER	REC. TANK SIZE (GALLONS)	CFM	MAX. VACUUM (Hg)	MAX. PRESSURE (PSI)	NET WEIGHT (LBS)	VANES	AIR, FAN, LIQUID-COOLED or LIQUID RINGS	RPM Range	LOBES	HORSE- POWER (BHP)	PORT/ PIPING
SFRUITLAND	RCF 172		As Per Application	127	27"	30	128	4	Air	1,400		8	2"
Manufacturing	RCF 250		As Per Application	166	27"	30	255	4	Fan	1,400		13	2"
Fruitland Manufacturing 324 Leaside Ave. Stoney Creek, ON L8E 2N7	RCF 344		As Per Application	218	27"	30	182	4	Air	1,400		14	2"
800-663-9003 • 905-662-6552 (f) 905-662-5412	RCF 370		As Per Application	272	28.5"	30	385	8	Fan	1,400		27	3"
sales@fruitland-mfg.com www.fruitlandmanufacturing.com	RCF 500		As Per Application	338	28.5"	30	450	8	Fan	1,400		33	3"
See ad, page 35	RCF 870		As Per Application	501	28.5"	30	575	8	Fan/Air	1,400		44	4"
	RCF 1200		As Per Application	716	28.5"	30	1,400	8	Fan	1,000		65	4"
	WR 2500		As Per Application	1,192	26"	22	385		Liquid Ring	1,600		155	6"
	WR 3100		As Per Application	1,506	26"	22	422		Liquid Ring	1,600		178	6"
	WR 4000		As Per Application	2,166	26"	14.5	657		Liquid Ring	1,300		218	6"
	W1600		As Per Application	942	27"	29	747	6	Liquid- Cooled/ Air Injection	1,500		120	4"
	W1300		As Per Application	765	27"	29	615	6	Liquid - Cooled/ Air Injection	1,500		91	4"
	W900		As Per Application	530	27"	29	485	6	Liquid - Cooled/ Air Injection	1,500		65	4"
		FB 2000	As Per Application	1,350	24	12	545		Air, Air Injection	3,300	3	80	6"
Howden Roots 900 West Mount St. Connersville, IN 47331 800-55-R0OTS • 765-827-9200 (f) 765-827-9317 connersville.customercare@howden.com www.howdenroots.com See ad, page 58		827 DVJ		5,775 (free air)	27" HgV		2,100			1,000 - 2,470	2	324.9	Inlet= 12" Jet= 12" Disch= 14"

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MANUFACTURER	РИМР	BLOWER	REC. Tank size (Gallons)	CFM	MAX. VACUUM (Hg)	MAX. PRESSURE (PSI)	NET WEIGHT (LBS)	VANES	AIR, FAN, LIQUID-COOLED or LIQUID RINGS	RPM Range	LOBES	HORSE- POWER (BHP)	PORT/ PIPING
MASPORT	HYDRA		4,000	407	27"	30	467	6	Liquid	1,000 - 1,400			3"
VACUUM PUMP SYSTEMS	TITAN		4,000	407	27"	30	545	6	Fan	1,000 - 1,400			3"
Masport Incorporated 6801 Cornhusker Hwy. Lincoln. NE 68507	SIDEWINDER		4,000	407	27"	30	550	6	Fan	1,000 - 1,400			3"
800-228-4510 • 402-466-8428 cs@masportpump.com	HXL400WV		4,000	400	27"	30	450	6	Liquid	1,000 - 1,250			3"
www.masportpump.com See ad, page 11	VIPER		4,000	350	27"	30	400	4	Fan	1,100 - 1,250			3"
	HXL75WV		2,500	230	27"	30	260	4	Liquid	1,000 - 1,250			3"
	HXL75V		2,500	230	27"	25	230	4	Air	1,000 - 1,250			3"
	HXL4V		1,500	165	27"	15	167	4	Air	1,100 - 1,400			11/2"
	HXL3V		1,000	112	27"	15	110	4	Air	1,225 - 1,750			11/2"
	HXL2V		750	75	27"	15	96	4	Air	1,225 - 1,750			11/2"
NIVE	304 Challenger		Application Specific	210	27"	30	179	4	Air	1,100 - 1,400		12.2	2"
National Vacuum Equipment, Inc. National Vacuum Equipment	607 PRO Challenger Heavy-Duty		Application Specific	380	28"	30	390	7	Fan/Liquid	1,100 - 1,500		28	3"
2707 Aero Park Dr. Traverse City, MI 49686	866 Challenger Heavy-Duty		Application Specific	520	27"	20	507	6	Fan/Liquid	800 - 1,150		38	4"
800-253-5500 • 231-941-0215 (f) 231-941-2354 sales@natvac.com	887 Challenger Heavy- Duty		Application Specific	532	28"	30	620	7	Fan/Ballast Port Cooled	900 - 1,200		42	4"
www.natvac.com See ad, page 3		4307 Tri-Lobe	Application Specific	560	27"	15	421		Ballast Port Cooled	2,400 - 4,000	3	47	4"
see au, page s		4310 Tri-Lobe	Application Specific	940	27"	15	456		Ballast Port Cooled	2,400 - 4,500	3	58	4"
		1600 Tri-Lobe	Application Specific	1,600	27"	15	532		Ballast Port Cooled	1,500 3,600	3	95	6"
		B250 Tri-Lobe	Application Specific	250	15"	15	241		Air Cooled	1,800 - 2,300	3	30	2"
		B500 Tri-Lobe	Application Specific	431	24"	15	370		Ballast Port Cooled	2,400	3	30	3"
PRESTAC SYSTEMS Presvac Systems 4131 Morris Dr. Burlington, ON L7L 5L5 800-387-7763 • 905-637-2353 (f) 905-681-0411 sales@presvac.com www.presvac.com See ad, page 80	PV 750		1,000 - 6,000		27"	35	450	8	Fan/ Ballast Port Cooled	1,500			

2020 VACUUM PUMP & BLOWER Pumper MANUFACTURER DIRECTORY

MANUFACTURER	PUMP	BLOWER	REC. TANK SIZE (GALLONS)	CFM	MAX. VACUUM (Hg)	MAX. PRESSURE (PSI)	NET WEIGHT (LBS)	VANES	AIR, FAN, LIQUID-COOLED or LIQUID RINGS	RPM Range	LOBES	HORSE- POWER (BHP)	PORT/ PIPING
Conde	Conde Super 6		300 - 500		28"	20	80	3	Air	1,200 - 1,750			
	Conde SDS 6		500 - 1,000		28"	20	100	4	Air	1,100 - 1,500			
Westmoor Ltd. 906 W Hamilton Ave.	Conde SDS 12		1,000 - 2,000		28"	20	150	4	Air	1,100 - 1,500			
Sherrill, NY 13461 800-367-0972 • 315-363-1500	Conde SDS Ultra		1,200 - 2,500		28"	20	160	8	Air	1,100 - 1,500			
(f) 315-363-0193 pumps@westmoorltd.com www.westmoorltd.com	Conde ProVac3		50 - 300		28"	20	45	4	Air	1,100 - 1,750			
See ad, page 30													



2020 VACUUM PUMP & BLOWER Pumper DEALER/DISTRIBUTOR DIRECTORY

	DEALERS/DISTRIBUTORS	BLOWERS & VACUUM PUMP LINES
27th TRUCKS INC. See ad, page 4	27th Trucks, Inc. 1175 and 1185 E 25th St., Hialeah, FL 33013 786-908-5436 • (f) 305-835-9040 info@27th-trucks.com • www.27th-trucks.com	Masport
NORTH * AMERICA When Quality Matters See ad, page 8	A.R. North America 140 81st Ave. NE, Fridley, MN 55432 763-398-2008 • (f) 763-398-2009 thomasc@arnorthamerica.com • www.arnorthamerica.com	Battioni
See ad, page 3 Eastern & Midwest Supplement	Advance Pump & Equipment 15418 Old Hwy. Rd., Peosta, IA 52068 563-557-0957 • (f) 563-557-0961 wayne@advancepump.com • www.advancepump.com	Battioni, Conde, Fruitland, Gardner Denver, Jurop, Masport, National Vacuum Equipment, Robuschi, Roots
See ad, page 2 Eastern Supplement	Andert, Inc. 39 Route 244, Eastford, CT 06242 860-974-3893 • (f) 860-974-2145 andertinc@gmail.com	Fruitland, Gardner Denver, Masport, National Vacuum Equipment
A BEST ENTERPRISES See ad, page 67	Best Enterprises, Inc. 3513 W Mountain Springs Rd., Cabot, AR 72023 800-288-2378 • 501-988-1905 • (f) 501-988-2880 info@bestenterprises.net • www.bestenterprises.net	Battioni, Conde, Fruitland, Jurop, Masport, Moro, National Vacuum Equipment, Wallenstein
DAVIDSON TANK See ad, page 58	Davidson Tank 3223 Brittan St., Bakersfield, CA 93308 661-325-2145 • (f) 661-325-2147 rob@davidsontank.com • www.davidsontank.com	Gardner Denver, Masport, National Vacuum Equipment
See ad, page 55	Engine & Accessory, Inc 12201 NW 30th Pl., Miami, FL 33167 800-327-5431 • 305-573-2268 • (f) 305-576-4617 rcs@rampstar.com • www.LiquidTruckSolutions.com	Fruitland, Hibon, Jurop, Masport, National Vacuum Equipment
See ad, page 21	GapVax, Inc. 575 Central Ave., Johnstown, PA 15902 888-442-7829 • 814-535-6766 • (f) 814-539-3617 kdoyka@gapvax.com • www.gapvax.com	Fruitland, Hibon
IMPERIAL INDUSTRIES INC. See ad, page 13	Imperial Industries, Inc. 550 W Industrial Park Ave., Rothschild, WI 54474 800-558-2945 • 715-359-0200 info@imperialind.com • www.imperialind.com	Conde, Fruitland, Gardner Denver, Masport, Moro, National Vacuum Equipment
See ad, page 26	Iron-Vac Truck Sales 2103 E Booth Rd., Searcy, AR 72143 501-284-5505 english@harding.edu • www.iron-vac.com	Masport, National Vacuum Equipment
See ad, page 23	ITI Trailers & Truck Bodies, Inc. 8535 Mason Dixon Hwy., Meyersdale, PA 15552 888-634-0080 • 814-634-0080 • 814-634-5846 llottig@itimfg.com • www.itimfg.com	National Vacuum Equipment
See ad, page 1 Eastern & Midwest Supplement	Marengo Fabricated Steel, Ltd. 1089 Cty. Rd. 26, Marengo, OH 43334 800-919-2652 • (f) 419-253-2120 www.mfsltd.com	Masport, Moro, Wallenstein
See ad, page 49	Marsh Industrial 135 E Mile Rd., Kalkaska, MI 49646 800-952-1537 • 231-258-4870 • (f) 231-258-2019 sales@marshind.com • www.marshind.com	Battioni, Conde, Giant, Jurop, Masport, Moro, National Vacuum Equipment

	DEALERS/DISTRIBUTORS	BLOWERS & VACUUM PUMP LINES
See ad, page 26	Milwaukee Rubber Products, Inc. N52 W13319 Falls Creek Ct., Menomonee Falls, WI 53051 800-325-3730 • 262-781-7888 • (f) 262-781-1742 sales@milwaukeerubber.com • www.milwaukeerubber.com	Battioni, Jurop, Masport, Moro, National Vacuum Equipment
pikrite See ad, page 34	Pik Rite, Inc. 60 Pik Rite Ln., Lewisburg, PA 17837 800-326-9763 • 570-523-8174 • (f) 570-523-8175 sales@pikrite.com • www.pikrite.com	Conde, Fruitland, Jurop, Masport, Moro, National Vacuum Equipment, Wallenstein
See ad, page 30	PortaLogix 6107 Loomis Rd., Farmington, NY 14425 585-484-7009 sales@portalogix.com • www.portalogix.com	Fruitland, Masport, National Vacuum Equipment
See ad, page 65	Pressure Lift Corporation 4130 Buckthorn Ct., Flower Mound, TX 75028 866-504-6596 • 972-355-0550 debi@pressurelift.com • www.pressurelift.com	Masport
See ad, page 4 Eastern & Midwest Supplement	R.A. Ross NE, Inc. 10280 Brecksville Rd., Brecksville, OH 44141 800-678-4581 • 440-546-1190 • (f) 440-546-1188 jeremy@rarossne.com • www.rarossne.com	Battioni, Conde, Dresser Roots, Fruitland, Gardner Denver, Hibon, Jurop, Masport, Moro, National Vacuum Equipment, Robuschi, Tuthill
See ad, page 2 Midwest Supplement	Rider Agri Sales & Service, Inc. 7716 Greenville Celina Rd., Greenville, OH 45331 800-521-1338 • 937-548-2080 • (f) 937-547-0818 jlrider@embarqmail.com • www.rideragrisales.com	Jurop, National Vacuum Equipment
See ad, page 57	Robinson Vacuum Tanks 306 Runville Rd., Bellefonte, PA 16823 844-393-1871 • 814-933-0927 • (f) 844-857-0741 info@robinsontanks.com • www.robinsontanks.com	Conde, Fruitland, Jurop, Masport, Moro, National Vacuum Equipment
See ad, page 61	Specialty B Sales 2100 Booth St., Searcy, AR 72143 800-364-7307 • 501-279-0001 • (f) 501-279-0003 rstevens@cdlworld.net	Battioni, Fruitland, Jurop, Masport, Moro, National Vacuum Equipment
See ad, page 65	Tank World Corp 12001 W Peoria Ave., El Mirage, AZ 85335 623-536-1199 • (f) 623-935-4782 service@tankworldaz.com • www.tankworldaz.com	Conde, Fruitland, Jurop, Masport, Moro, National Vacuum Equipment
See ad, page 79	TankTec 10100 Quinn St. NW, Minneapolis, MN 55433 888-428-6422 • 763-755-8075 • (f) 763-757-9788 snelson@tanktec.biz • www.tanktec.biz	Conde, Masport, National Vacuum Equipment
See ad, page 19	Transport Truck Sales, Inc. 6740 Kaw Dr., Kansas City, KS 66111 888-395-7551 • 913-334-2400 •(f) 913-334-4576 scott@transporttruck.com • www.transporttruck.com	Fruitland, Jurop, Masport, Moro, National Vacuum Equipment, Wallenstein
See ad, page 33	TSI Tank Services, Inc. PO Box 8136, Cranston, RI 02920 866-720-4999 • 401-688-0043 • (f) 401-383-7462 jerry@tankservicesinc.com • www.tankservicesinc.com	Masport, National Vacuum Equipment
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Jim Anderson, Ph.D., is an emeritus professor at the University of Minnesota Department of Soil, Water and Climate. He works with the National Association of Wastewater Technicians and is a recipient of the pumping industry's Ralph Macchio Lifetime Achievement Award. Send Anderson questions about septic system maintenance and operation by email to editor@pumper.com.

Tracing Evidence of Nitrates and Bacteria in Groundwater

Onsite system design and maintenance investigation may yield clues about human fecal contamination of water wells | By Jim Anderson, Ph.D.

s reported previously in *Pumper*, an ongoing study is being conducted in southwestern Wisconsin to test private wells for evidence of contamination. The Southwest Wisconsin Groundwater and Geology study began in 2018 with two objectives: (1) Evaluate private well contamination using indicator bacteria (total coliform and *E. coli*) and nitrate based on randomized synoptic sampling events, and (2) identify the source of contamination in a subset of total coliform- and nitrate-positive wells once per season using microbial tests that distinguish between human, bovine and swine fecal sources.

Two phases of the study have been completed, and the results are concerning. During a first sampling, 42% of the wells showed either bacteria contamination or elevated nitrate levels above the 10 mg/L health standard. A second sampling showed 27% of the wells were contaminated. Higher percentages of wells showed contamination with bacteria as opposed to nitrate, which was surprising to me, as nitrate (nitrogen) moves more easily through soil and is not captured by adsorption and filtering as bacteria are when septic tank effluent moves by unsaturated flow through soil.

In the second study phase, 34 contaminated wells were evaluated for bacteria associated with fecal contamination from either animals or humans. Animal fecal contamination was found in 25 wells and human fecal material in 14 wells.

SEPTIC SYSTEM CHECKS

This led one local sanitarian to make a statement and some recommendations as the researchers move into the next phases of the study. The sanitarian stated, "Seeing the human fecal contamination being the majority of the last two testings, we are looking at our maintenance program and making sure everyone is following the rules. Even though we're waiting for all four of the rounds to be complete, there are some steps that are being taken to look and see if there are things we can do right now."

The sanitarian recommended homeowners have their septic systems checked thoroughly every three years and keep up on cleaning filters, fixing soil compaction issues and addressing any ponding in the drainfield.

None of us should have any problem with these recommendations, and we should be recommending them daily to our customers. Cleaning filters and checking systems is always good practice. By themselves, they will not eliminate the possibility of well contamination by fecal bacteria.

As indicated, the systems should be checked on a regular basis and any problems corrected.

Determining the reason for well contamination requires a close look at individual residences, including the soils and geology at the site, septic system location in relation to the topography, condition of each system component, any evidence of surfacing and runoff, along with condition of the well, the depth where the well is finished and other conditions occurring in the area or region.

The next phase of the research is to carry out geologic studies and analyze well construction practices in the three-county region. The goal is to determine correlations between water quality, geology and well construction. The geology in the area consists of shallow soils over limestone bedrock, and there are three separate aquifers at different depths in the bedrock. The hope is to understand where the water in the wells is being drawn and whether the wells are properly cased and finished to avoid contamination from the surface. Contamination may be coming from sources other than septic systems.

In areas of geology with creviced bedrock, the actual source of contamination can be quite a distance from the site of the well. ... This is important because the system causing the problem may not be the one serving that residence.

In areas of geology with creviced bedrock, the actual source of contamination can be quite a distance from the site of the well. From our perspective in worrying about treatment of septic tank effluent, this is important because the system causing the problem may not be the one serving that residence.

SOURCING CONTAMINATION

There are several ways septic systems could contribute to or be the cause of the fecal contamination. If the drainfield is hydraulically overloaded and surfacing, there is the potential for the effluent at the surface to move as runoff to the well. And if the well is not properly constructed, the effluent can move directly into the well and aquifer. So as the sanitarian





noted, identifying potential ponding and correcting the problem is important to ensure there is not a direct connection.

Condition of the septic tank is key; it needs to be watertight with no leaking into the surrounding soil. If the septic tank is installed at the top of or into the bedrock and it is not watertight, it can be a source of contamination. If the tank is leaking effluent, it may move directly into the creviced bedrock and to the aquifer to contaminate not only the nearest well, but also others finished in the same aquifer. To evaluate whether the tank is structurally sound and watertight, the tank should be opened and pumped to examine the inside. It would not be enough to simply observe whether the tank is operating at the correct level. As the sanitarian indicated, when the tank is pumped, the filter should be cleaned.

In addition to looking for surfacing in the drainfield area, an evaluation should determine that the bottom of the sewage trenches are at least 3 feet above the creviced bedrock. Has biomat developed to slow flow through the soil and ensure the flow is under unsaturated conditions? As I stated earlier, if the system is designed and installed so unsaturated flow is ensured, soil is an excellent media to capture bacteria and virus preventing movement into the aquifer.

In sensitive geologic areas like in southwestern Wisconsin, identifying and fixing problems as soon as possible is important to prevent groundwater contamination and associated health problems. Stay tuned for updates as the next phase of this study is completed. ${\bf P}$





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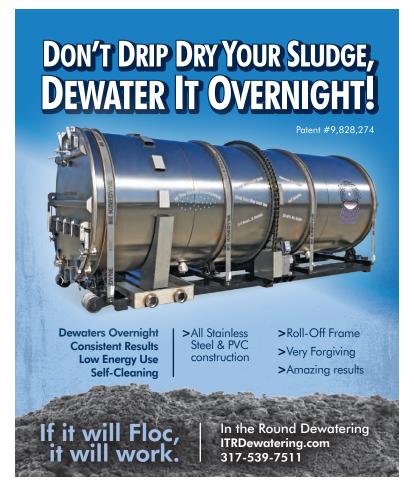


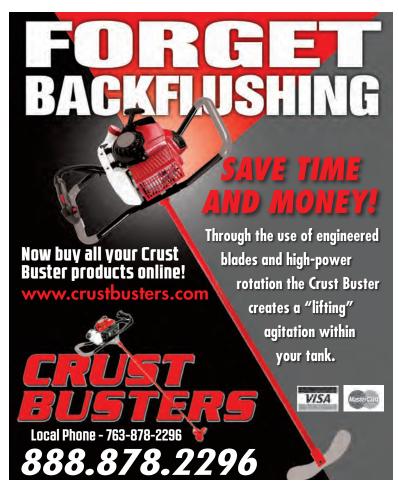


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Emergency Planning May Be the Difference Between Life and Death

In the event of a workplace accident, response time is critical.

Prepare to ensure your crew can take action as swiftly as possible. | By Jared Raney

umpers face dangerous situations every day, working around heavy machinery, infectious waste, and probably one of the most serious risks — potential exposure to lethal hydrogen sulfide gas while working in the confined space of a septic tank.

The crew at Horizontal Boring can face similar risks during an industrial accident. In the case of a crew member being pinned inside a manhole, coworkers knew exactly how to handle the situation. They were prepared for a host of emergency scenarios, and pumpers should be too.

"They had to execute the emergency action plan to remove the injured employee from the manhole, bring him up to safety, get the ambulance and safety manager on site, and assess the injury," says Ernie Romero, owner of Horizontal Boring, based in Phoenix.

As a result, the employee escaped the situation with no more than minor injuries, showing that emergency action plans can be the deciding factor in whether an employee lives or dies on a work site accident.

DRAFTING A PLAN

With all the paperwork and red tape attached to every work site, it can be easy to overlook planning for hypothetical emergency situations. But it's an item that must be crossed off — if not to avoid penalties, then simply for peace of mind.

"That's the last call you ever want to get — an injury on site," Romero says. "At times there are sites that may have some varying circumstances that require we implement an emergency action plan."

Beyond simple best practice, if caught without an emergency action plan, a company will be fined by OSHA. Their safety and health regulations for construction require emergency action plans in writing for each construction site, which "must cover those designated actions employers and employees must take to ensure employee safety from fire and other emergencies."

Penalties can range from \$10,000 to more than \$100,000. There are different standards of violation; for example, initial posting requirement violations are listed as \$12,934 per violation, but a willful or repeated violation jumps to \$129,336 per violation.

OSHA provides information through its website on emergency action plans and requirements, including an eTool to help companies develop their plans.

"It's typically going to consist of the possible emergencies on any given site, what may happen if that does take place, and then we'll address actionable steps to follow, and we'd have the written procedures for that," Romero says. "We're going to have exit routes — we usually like to set two



Ernie Romero, owner of Horizontal Boring in Phoenix

meeting points for everybody if an emergency takes place, a primary and a secondary, to ensure if the emergency takes place at the primary meet point, then we have the secondary to meet at. Those are really the general points we're looking to cover in our action plans."

Emergency action plans can be as in-depth as outlining the specific safety duties of each employee on site, even down to subcontractors involved in the work, as well as safety inspection procedures, accident investigation and reporting. have somebody involved
whoever's dealing with
your safety plans and your
emergency action plans
who understands the OSHA
requirements, to have a
background in safety, and
to really understand the
requirements and the
actions necessary.

Ernie Romero

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TAKING THE LEAD

The supervisor in charge of setting up the emergency plan will look at what reporting agencies are nearest, as well as the closest hospitals, so workers know who to contact and where to go.

"I think it's very important to have somebody involved — whoever's dealing with your safety plans and your emergency action plans — who understands the OSHA requirements, to have a background in safety, and to really understand the requirements and the actions necessary should certain events occur," Romero says.

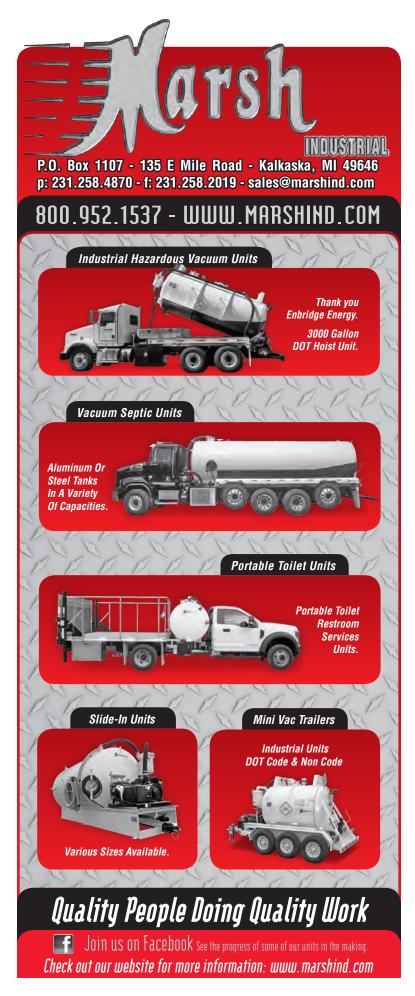
Horizontal Boring has a dedicated, full-time safety manager with 30 years of experience in safety management and a comprehensive safety-first program, ensuring safety requirements like emergency action plans don't fall through the cracks.

That manager runs monthly companywide safety meetings, as well as weekly on-site meetings for each work site. The company's overall safety program is constantly evolving.

IT WORKS

Horizontal Boring's case of its employee who was injured in the blowout is proof that having an emergency plan can save lives.

"They were prepared for it, and it's always good to see," Romero says. "We're all responsible for safety, all of us out on site, and we take it extremely seriously. Accidents do happen and things happen that are outside of our control. But when it does happen, you want to ensure that you have the best plans in place and everyone is best prepared to deal with those situations." P







arry Torti added a Dupont white and gunmetal gray 2018 Kenworth T800 carrying a 4,600-gallon steel Imperial Industries tank, Advance Pump and Equipment toolbox jetter and Fruitland 500 pump. Torti built out the truck himself and painted the tank. The glider truck is powered by a preemission factory remanufactured Series 60 Detroit diesel 500 hp engine tied to a Fuller LL eight-speed transmission (Eaton Vehicle Group). It has a Hendrickson HAULMAAX rubber block suspension, 4-inch inlet and 6-inch dump valve with stainless steel heated jackets, a front sight tube and three rear sight glasses, top and rear manways and rear clean-out door, Alcoa aluminum wheels, stainless steel visor and LED work lights. The interior features air conditioning, GPS and satellite radio. Graphics were provided by Eramian Sign. Torti is the driver, and the truck is used primarily for residential septic service. **P**

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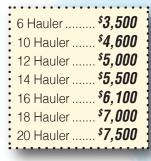
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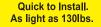






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Better Homeowner Education Is Key for Iowa Wastewater Pros



Kurt Leichtv

As onsite system maintenance becomes more critically important by the day, installers and pumpers focus on their role in teaching end users

In States Snapshot, we talk to a member of a state, provincial or national trade association in the decentralized wastewater industry. This time we visit a member of the Iowa Onsite Waste Water Association.

Name and title or job description: Kurt Leichty, vice president of Leichty & Son Construction and president of Leison Pumping

Business name and location: Leichty & Son Construction/Leison Pumping, Mount Pleasant, Iowa

Services we offer: Septic system installations, pumping, time-of-transfer inspections and maintenance

Age: 5

Years in the industry: 25

Association involvement: A member of the Iowa Onsite Waste Water Association since its inception and currently on the board of directors

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ILINEAR IN

Left to Right: Bryan Westphal, Brittany Davis and Kurt Leichty. They are shown with a Kenworth truck built out by Advance Pump & Equipment and running a National Vacuum Equipment blower.

Benefits of belonging to the association: I get the most value from the training we receive, talking with other members in the association and meeting new suppliers at our annual conference.

Biggest issue facing your association right now: The industry will always be expanding since wastewater will always need to be treated, so keeping up with the changes in the industry is always something we're concerned with.

Our crew includes: Brittany Davis is our office manager. Matt Stalder is a foreman, installer and inspector. Bryan Westphal is a pumper and inspector. Terry Lunsford is an installer and inspector. Walker Lunsford, Jeremy Farley, Jake Sanow, Steve Davis and Micah Johnson are installers. We wouldn't be here today without our great staff of hardworking employees. They're like family to us and are our company's biggest asset.

Typical day on the job: I most like to be out on a job site with the crew running equipment, but plans often change throughout the day depending on emergency calls. I also do inspections, talk to homeowners and bid on projects throughout the week.

The job l'll never forget: A homeowner had a septic tank failure and groundwater infiltration, which in turn backed up into his basement. To solve the problem, we installed a new system. The most difficult part was getting down to the old tank, which was 9 feet in the ground before we reached the top of the tank. The old tank was then removed and replaced with a new Wilkinson Heavy Precast 1,500-gallon, three-compartment tank. The risers were concrete with a centonite wrap. We were able to use an existing footing tile to help dewater the area around the tank. The effluent from the tank was pumped to a sand filter and then gravity-drained to the outlet.

My favorite piece of equipment: Our equipment includes a three-tandem dump truck; Caterpillar 305 and 323 excavators; Komatsu PC200, PC240, PC138 and PC160 excavators; and a 2017 Kenworth vacuum truck built out by Advance Pump & Equipment with a 3,200-gallon steel tank and National Vacuum Equipment 4310 blower. But the most useful timesaving piece of equipment is our RIDGID SeeSnake camera with locator.

Most challenging site I've worked on: Different times of the year can cause different installation issues, whether it's frost in the winter or substantial rains in the spring. We've had to install dewatering pumps to lower the water table to set tanks. We've also had to use the frost tooth on a 54,000-pound excavator to rip frost for emergency septic installations. Getting to some tanks in adverse conditions can be challenging for pumping tanks as well.



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The craziest question I've been asked by a customer: There have been a handful of times a homeowner has asked us to install their septic system in a specific area. Usually it's because they would rather not have to look at their septic lids. But most of the time they have a lack of knowledge about how septic systems work and their request is impractical.

Best piece of small-business advice I've heard: Treat clients with the utmost respect. Treat them as you would want to be treated.

Planning for the future: Our goals are always the same: taking care of our existing clients, adding new ones, being efficient and offering a great service.

Crystal ball time – This is my outlook for the wastewater industry: Training homeowners is getting to be so important. The more information we can get to them about the proper care of their system, and the do's and don'ts of the system, the better off they will be. It will make their investment more worthwhile and give them many years of trouble-free use. **P**

- Compiled by Betty Dageforde





Left: Terry Lunsford and a Wilkinson Heavy Precast 1,500-gallon, three-compartment tank with a pump chamber. **Above:** Terry and Walker Lunsford cover lines with fabric before laying down sand for a sand-bed secondary treatment system. **Below:** The Leichty & Son team includes, from left, Terry Lunsford, Micah Johnson, Matt Stalder, Jeremy Farley, Jake Sanow, Walker Lunsford, Steve Davis, Irvin Leichty and Kurt Leichty.





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

New York

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

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Vacuum Pumps and Blowers

By Craig Mandli

POSITIVE DISPLACEMENT BLOWERS

Gardner Denver Robuschi Tri-Flow 825

The Gardner Denver Robuschi Tri-Flow 825 blower for combination sewer jetter trucks achieves 19 inches Hg vacuum and delivers 4,311 cfm at 18 inches Hg and weighs less than 1,500 pounds, making it suitable for jetting and excavation work. Paired with the



company's product-tuned silencer, the unit is quiet and uses 70% less space than a traditional silencer, according to the maker. For greater work site efficiency, it provides 6% higher flow and 7.2% more fuel efficiency at 18 inches Hg. 866-428-4890; www.gardnerdenver.com/robuschi.



Howden 827 DVJ

The 827 DVJ dry-vacuum blower from Howden is a heavy-duty unit with integral ductile iron impellers. The casing headplates, gear cover and drive-end are gray iron. Carburized and ground spur timing gears are taper-mounted on the shaft and secured with a locknut, cylindrical roller bearings, splash lubrication on both ends, and easy-to-read

sight glasses for maintenance. The blower is capable of handling high inlet temperatures for rough applications. An efficient discharge jet plenum design allows cool atmospheric air to flow into the cylinder, so the blower continues to run under blank-off conditions. It comes in a compact, lightweight package and delivers more than 5,700 cfm in an 8-inch gear diameter frame, as well as 28 inches Hg. 800-557-6687; www.howdenroots.com.

National Vacuum Equipment Challenger 1600

The Challenger 1600 high-vacuum blower from National Vacuum Equipment is a 1,600 cfm tri-lobe blower designed for continuous duty at maximum vacuum. It is available in ready-to-install hydraulic or belt-drive packages using corrosion-resistant stainless steel internal components. Available packages include silencers, check valves, moisture trap, cyclone, four-way vacuum/pressure changeover



valve and a powder-coated skid. 800-253-5500; www.natvac.com.

VACUUM PUMPS



Elmira Machine Industries / Wallenstein Vacuum 753 Series

The 753 Series vacuum pump from Elmira Machine Industries / Wallenstein Vacuum incorporates extra-wide vanes that allow up to an inch of wear, designed for longer service life. It provides 422 cfm airflow at 1,200 rpm and is precision-machined to provide vacuum levels up to 28 inches Hg. Options include air, liquid or dual

cooling systems where air injection is combined with liquid cooling. A pump-flushing port is included on the top valve for convenient maintenance. The quick-access housing end plate allows for easy internal inspection with no bearings to pull. Oil lubrication is via a mechanical piston pump driven by shaft rotation or available with a sight-feed valve oil regulator system using vacuum/pressure to draw oil with no moving parts. 800-801-6663; www.wallenstein.com.

Fruitland RCF870

The RCF870 vacuum pump from Fruitland is available in clockwise and counterclockwise rotation with top- and side-mount, four-way valve locations. The pump is available with hydraulic, angle (gearbox) and belt-drive options. It can be mounted on all Eliminator-style packages. It is a true 4-inch pump with 4-inch pipe connections producing 512 cfm and weighing



575 pounds. It is fan-forced air cooled with an available air injection cooling system for continuous duty at higher vacuum. It includes an integral oil reservoir with low-consumption oil pump, an integral final filter and vane-wear test ports. 800-663-9003; www.fruitlandmanufacturing.com.



Moro USA W Series PM80W

The W Series PM80W liquid-cooled vacuum pump from Moro USA is suitable for a wide variety of applications, including septic, industrial, and oil and gas. It has oiled bearings that don't require additional maintenance, a sealed positive displacement direct-feed oiling system, Kevlar vanes, an integrated check valve and a changeover valve. A jacketed casing provides liquid cooling, allowing a deeper continuous-duty vacuum. A coolant pump is available

for self-contained packages. It includes industrial-duty Viton oil seals for superior pump life and is available in clockwise and counterclockwise rotations. 866-383-6304; www.morousa.com.

Presvac Systems PV750

The Presvac Systems PV750 rotary vane pump is designed for continuous full-vacuum operation in extreme conditions. It offers 400 cfm at free air, 350 cfm at 15 inches Hg, a maximum vacuum of 27 inches Hg and



(continued)





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'11 Freightliner Coronado

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05 Sterling Acterra

Cat C7, 7 Spd Manual, 33,000 GVWR, 342,919 Miles, 2300 Gal. Tank with Jetter



′12 Kenworth T800

Cummins ISX, 450 HP, 13 Spd Manual, Spring Susp., 244,652 Miles, 4200 Gal. Tank, Fruitland Pump, Full Lockers



02 Sterling L7500

Cat C7, Spring Susp., Spicer 7 Spd Manual, 208,867 Miles, 2500 Gal. Steel Tank



'15 Int'l 4300

Cummins ISB, Spring Susp., 6 Spd Auto, 189,555 Miles, 2500 Gal. Steel Tank. NVE 607 Air Cooled Pump

'13 Peterbilt 367

Cummins ISX, 450 HP, Air Ride Susp., 18 Spd Manual, 226,932 Miles, 4250 Gal. Imperial Tank, Jurop LC420 Liquid Cooled Pump

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RETS Inspector Course September 25-26, 2020

Location: Arlington, TX Contact: Lauren Trujillo rets@rets-llc.com

CPOW Inspector Course October 6-7, 2020

Location: Puéblo, CO Contact: Lisa Nicoll cpow@cpow.net

Online Vacuum Truck Training Available!

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University of Arizona Soil & Site Evaluation Course

October 21-23, 2020 Location: AZ Contact: Aaron Tevik, 520-621-3691 atevik@cals.arizona.edu

Installer Training Course

CPOW Installer September 4, 2020

Location: Greenwood Village, CO Contact: Lisa Nicoll cpow@cpow.net

CPOW Installer October 1, 2020

Location: Lake City, CO Contact: Lisa Nicoll cpow@cpow.net



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PRODUCT FOCUS

maximum pressure of 35 psi. Dual fans and twin ballast ports efficiently cool the pump. The solid housing with deep cooling ribs allows for greater heat transfer from the vacuum chamber. Aluminum fans and shrouding work like a heat exchanger to aid in heat reduction. Multiple manifold and drive options are available for truck, trailer or stationary applications. 800-387-7763; www.presvac.com.

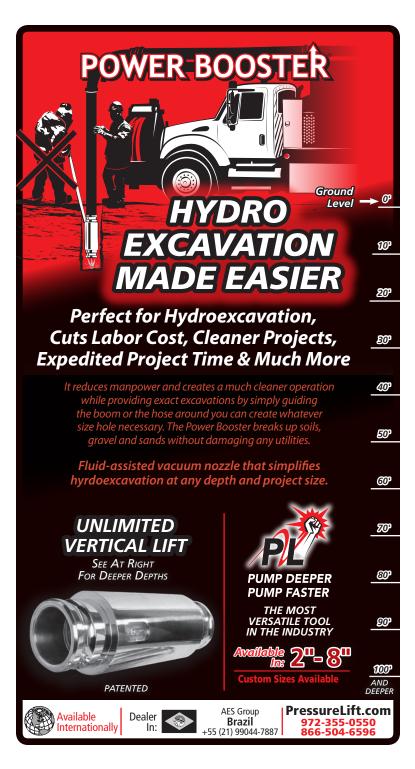
Westmoor Conde **PowerPaks**

Conde PowerPaks preassembled gasoline- or diesel-powered vacuum pump units from Westmoor are easy to install. They include a heavy-duty steel base with aluminum diamond plate trim and belt guard for aesthetics. Rigid assembly is designed for



minimum vibration and maximum power. They are available with either vacuum/pressure or vacuum-only pumps. A wide range of cubic-feet-perminute options ensures matching the right unit to tank size and application. They are powered with optional Honda GX commercial-series gasoline engines or Hatz industrial air-cooled diesel engines. Units are designed for easy transfer to another tank system when needed. 800-367-0972; www.westmoorltd.com. P









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PRODUCT NEWS



BIOMICROBICS SANITEE DESIGNED TO PRESERVE SEPTIC DRAINFIELDS

Excessive discharge of solids can be disastrous for a drainfield. Those solids can cause it to plug and lose efficiency in treatment and dispersal of the normal liquid flow, and if the problem persists, the drainfield may need to be replaced.

"The purpose of an effluent filter is more to exclude larger, troublesome solids than it is to polish effluent by removal of fine suspended solids, which can be the culprit of clogging, along with hair and lint," says Robert Rebori, president of BioMicrobics. "If nuisance clogging occurs, the filter is likely to be removed and no useful purpose will be achieved."

To combat that issue, BioMicrobics offers the SaniTEE, an efficient nonclog screen that deflects solids back into the tank while simultaneously attenuating surge flow. The product's simplicity is perhaps its calling card. If it needs cleaning, the installer merely lifts the handle up and pushes down to dislodge any debris. It does not need to be removed to be cleaned with a hose, nor does the tank need to be fully pumped down.

"It was a clever invention that was developed more than 20 years ago to solve the problem of having to haul out effluent filters and wash them with the owner's garden hose," Rebori says. "The testing was done with every building in an entire town and maintained by the town's three maintenance people, including pumpouts." The maintenance team reported the SaniTEE was easy to install, performed well and there were no sewage backups.

The SaniTEE fits in a standard 4-inch septic tank outlet tee (for new builds or retrofitted). It is easily cleaned with the clean-in-place swab handle with a Buna-N disc fastened to a PVC pole. Move the swab handle up and down to pass the swab through the center several times. No running water is required. Solids touching the vertical surface of the screen tend to slough off, falling back into the septic tank, not held captive within any kind of housing. In this way, the SaniTEE is somewhat self-cleaning.

In general, the 4-inch SaniTEE should be used on conventional and advanced systems producing residential- to commercial-strength wastewater and having flows of 5,000 gpd or less, with sustained peak flows of 30 gpm or less. Larger 8- and 16-inch versions are available for larger flows. **800-753-3278; www.biomicrobics.com.**

SCREENCO SYSTEMS TRASH MASTER 400 AUTO SCREEN

The Trash Master 400 Auto Screen from ScreencO Systems uses gravity to separate the trash from the flow stream



through a 4-inch inlet with a fan spreader to power-offload vacuum trucks to the screen. An aluminum hopper with a 6-inch outlet cam and 3/8-inch gapped 1/4-inch bar screen meets U.S. Environmental Protection Agency 503 regulations. A stainless steel U-channel with plastic-lined titanium UHMW provides for years of wear, with a high-strength alloy steel 8 1/2-inch shaftless screw that moves trash to a waste container. The U-channel has slotted drain holes and a center channel bar screen for cleaner and dryer trash. A custom-built stainless steel bar rake is included. A front spray bar with a 1 gpm nozzle keeps the unit free of buildup. The lower cover contains a cam fitting with two built-in 1 gpm nozzles, which allow for easy removal of the covers to access the U-channel and screw. A 2 hp NORD gear reduction drive with Lenze variable-frequency drive control accomplishes a variable-speed screw from 6 to 30 rpms. **208-790-8770**; www.screencosystems.com.



VACTOR RAMJET TRUCK-MOUNTED WATER JETTER

The new version of Vactor's Ramjet features IntuiTouch technology delivering improved operation, quick accessibility to key information and greater control on jobs.

IntuiTouch in-cab controls provide PTO activation at the touch of a button. Outside, operators can use the IntuiTouch ergonomic control station that features a simple, up/down adjusting control panel for all cleaning system functions. It also offers improved water plumbing, allowing for greater storage options. Other features, including a Jet Rodder water pump and Park-N-Clean technology, come standard. The Ramjet also includes a cold-weather package that separates wet and dry items and a rear hose reel with optional integral aluminum shroud for optimal performance in cooler environments. 800-627-3171; www.vactor.com.

TALBERT 35FG-BVTL FIXED-NECK TRAILER

Talbert's 35FG-BVTL is a fixedneck, drop-deck trailer for small to midsize equipment movers operating in oil fields, agriculture, and construction and demolition. The 35-ton trailer is rated at 70,000 pounds concentrated in 20 feet and fea-



tures hydraulic ramps for safe, efficient loading and unloading in confined spaces. The overall length of the 35FG-BVTL is 48 feet, which includes a 22-foot-long, 8-foot-6-inch-wide deck and an 8-foot-6-inch rear bridge section. The trailer's fixed neck provides an economic alternative compared to removable gooseneck designs if a front unload option is not required. The gooseneck features two-speed landing gear with standard sand shoes. 888-489-1731; www.talbertmfg.com.

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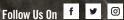














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PRODUCT NEWS

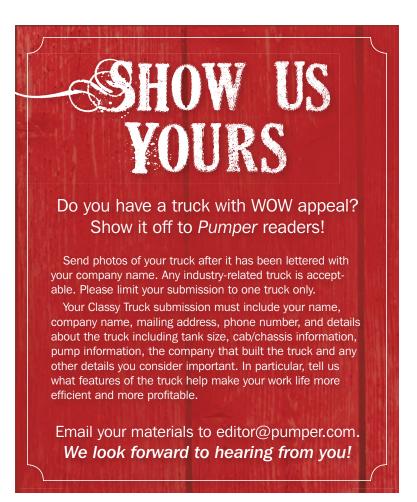
SEWER EQUIPMENT TEMPEST INDUSTRIAL AIR MOVER

The RAMVAC Tempest industrial air mover from Sewer



Equipment has an 18-cubic-yard debris box and a 28-inch Hg cfm positive displacement blower through an 8-inch system. The self-discharging filter system provides automatic interval cleaning of the filter house during operation, reducing downtime. The articulating, extendable Knuckle boom provided 4.5 feet of extension with a total working length of 16 feet and 270-degree range of motion. Standard with a fully-opening rear door, the Tempest requires only one dump to eliminate all debris within the box. Also standard is a 50-degree dump angle and 50-inch clearance from splash plate to the ground, allowing for eay offloading of material into roll-off containers. **800-323-1604**; www.sewerequipment.com. **P**







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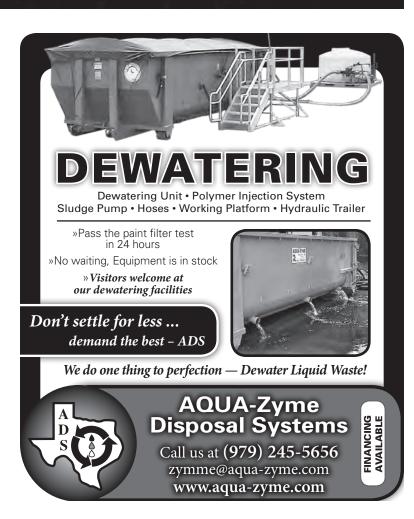


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INDUSTRY NEWS

Felling Trailers announces beneficiary of 2020 Trailer for a Cause

Felling Trailers will be hosting its eighth annual Trailer for a Cause online auction of an FT-3 utility trailer to benefit a nonprofit organization. The company has selected the Lymphoma Research Foundation as the 2020 auction beneficiary. Felling Trailers' goal is to bring awareness to various nonprofits that are making a difference by donating 100% of the winning bid each year. The previous Trailer for a Cause auctions have raised more than \$21,000 for nonprofit organizations including Bright Pink (breast cancer), ACT on Alzheimer's, Special Olympics Minnesota (SOMN) and Children's Cancer Research.



Steve Maszczak

Pipe Lining Supply adds a technical representative

Pipe Lining Supply hired Steve Maszczak for the technical representative position serving the Northeastern U.S. He has more than 10 years' CIPP experience. Maszczak started as a CIPP technician, moved to a CIPP foreman and worked the last seven years in sales and project management. He will support the company's customer base with training, advice and sales for CIPP lateral lining and AIPPR pipe coating projects for drain, waste and vent in Pennsylvania and surrounding states.

Vacuum Truck Rentals welcomes Rose

Vacuum Truck Rentals announced Ty Rose as the manager of its Northeast operations including New Jersey, Massachusetts, Maryland and the surrounding region. He has 21 years' experience in the vacuum truck and heavy-equipment industries, having served in senior leadership positions, sales and technician roles. Rose was a vacuum truck operator and service technician. He then oversaw vacuum truck rental operations for 10 branches before taking a general manager position, and he served as a vice president of fleet and vacuum operations. **P**



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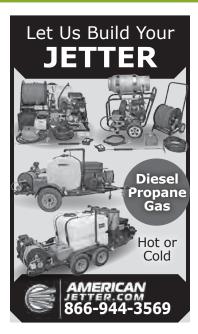
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CATCH BASIN CLEANER



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Basin Cleaner Truck, 50k miles. \$30k of
refurbished work in 2019, new hoses &
lines. Added hydro-excavation pack, additional 4" suction hose. Poly lined tank,
factory new vacuum pressure. Ready to
work and extremely versatile. All work
done by authorized dealer. Asking \$90k
firm. 570-599-1780. PA (P07)

GREASE TRAP UNITS

(2) Conde Pro-Vac Vacuums. (1) electric, (1) gas. Both in good working cond. Gas unit missing air cleaner. Electric unit has extended wiring for power. 5x8 trailer hardly used, good tires. 250-gallon holding tank. Predator generator, not working, unknown issues. Been sitting a while. \$6,500 will provide photos. bayareadrain@gmail.com. 727-422-5229. FL (P07)

HAZARDOUS WASTE UNITS

2007 Kenworth T800 cab & chassis with a Keith Huber Dominator, 2,800-gallon, c/s D0T 412, dump unit with Becker 440. (Stock #8397). www.vacuumsalesinc. com (888)VAC-UNIT (822-8648). (PBM)

Stainless steel DOT Code hazardous waste or septic. Polar 3,600-gallon tank ready to mount on your chassis or sell outright. 20" rear manway, two 4" inch rear valves with full stainless hose trays. KLM Companies 617-909-9044. (PBM)

1997 Ford with Cusco 3,200-gallon DOT certified dump and door liquid vacuum truck. Cat engine with Moro M9 vacuum pump. Runs and pumps excellent. \$37,500. KLM Companies 617-909-9044. (PBM)

New 3,200 U.S. gallon, carbon steel, D.O.T. certified 412 vacuum tank, dump type with full open rear door and a Presvac PVB 750 vacuum-pressure pump installed on a 2021 Freightliner 108SD cab and chassis. (Stock# 13855) www.vacuumsalesinc.com (888)VAC-UNIT (822-8648). (PBM)

JETTERS – TRAILER



The HotJetll® is a best-selling hotand cold-water drainline cleaner

featuring a 35hp Vanguard engine by Toyota and delivering 10gpm @ 4,000psi that cleans drains up to 300' and 12" in diameter. Priced at \$32,995 including freight to the lower 48 states, the HotJet II® is American made using nonpropriety parts for affordability and ease in serviceability making its return on investment truly impressive.

Financing available. 800-624-8186; sales@hotjetusa.com; www.hotjetusa.com (PBM)





Brand new Harben E180 jetter with Kubota diesel, 1/2 X 500' hose, 1/4" X 150' mini hose reel, wireless remote and nozzles. Selling price \$45,000. FOB. 916-294-7693. Sacramento, CA. (P07)

JETTERS - TRUCK



2004 Chevy 3500 Express Van. Dual rear wheels. Utilimaster body, 6.0 gasoline engine. Mileage 223,581. Mounted 2010 Pressure Pro Skid Mount Jetter. JB HDC5550HG, 5.5 GPM @ 5,000 PSI. Honda GX690 24 HP gasoline engine. Jetter HRS 588. 250-gallon tank. 300-feet of 3/8" hose. Price \$9,500.

Contact Joe at 410-745-2323 (leave message) or tylerconco@ aol.com. Jetter can be purchased separately. MD (P06)

LEASE/FINANCING

Western Equipment Finance, a bank-owned direct lender, is committed to continuing to help you prosper. All Equipment Types, New or Used; we have the best rates and terms you deserve. App-Only Financing and credit decisions within an hour. Call the team you can TRUST, Jim Stekl at Western Equipment Finance 701-665-1647. jim.stekl@westernequipmentfinance.com (PBM)

MISCELLANEOUS

Vacant manufacturing facility, 51,000 square feet with high capacity well, with or without pretreatment sewage facility. 2000 Freightliner with 4,100-gallon aluminum tank. 1991 GMC with 2,300-gallon tank. 1979 Articulate John Deere tractor (50 series engine) and 3,300-gallon Balzer tank with injectors. Call 920-290-6452. (PBM)

PORTABLE RESTROOMS

4,000 used portable restrooms for sale. Updating our fleet to the new Zenith portable restrooms from Sansom Industries. Prices range from \$125 - \$325. Call Jim Reisinger @ 314-776-4000. (PBM)

PORTABLE RESTROOM TRAILERS



1988 PENNSTYLE 4-stall restroom trailer, 50-gal fresh/100-gal waste. A/C and heat 10,000 GVWR. \$8,750 OBO. **Call today 812-588-0038. IN (P07)**



2006 International MA025, 7.6L engine, runs, non-CDL, Washington State. 1,000-gallon/waste 400-gallon fresh. Over 300,000 miles. 8 more used trucks available, similar vintage, same location and 4 newer cab and chassis only also available. \$9,500. Ron Inman 253-405-6625 or ron@nwcascade. com. (P07)

2014 Forest River 2 stall silver, 375 waste/120 clean water - \$14,000 0B0. 2014 Rich Trailer 3 stall white, 450 waste/120 clean water \$19,000 0B0. 2017 ford F550 1,100/400 aluminum tank 85k miles. For pictures of any information please call or text to 786-488-4276. FL (P08)

2011 Forest River 2 stall restroom trailer. Trailer is in excellent condition and everything works as it should and ready to be put out for use. Trailer has 370 waste/125 fresh. A/C, heat and new tires. \$14,900. Call Steve for pics more or information at 863-581-5680. (P07)

2001 ACSI Restroom Trailer, 7 stall plus urinals, 1,000-gallon waste tank, A/C up top, dual axle. \$14,500. Call Kynan @ 406-529-6372 or email Kynan@northstarmso.com. TX (P07)

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

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

PORTABLE RESTROOM TRUCKS



2008 Ud 2600, needs engine. 200-gal aluminum tank (500/1500), Masport pump. \$15,000. **Call 615-962-0203. TN Truck. (P07)**



2 trucks are up for sale - keeping one selling one (first one that sells, we are keeping the other as a back up truck). 2017 F550, 900/350, 6.7 power stroke, 108,443 miles, new motor at 64k and new transmission at 82k miles. 55k miles left on engine warranty and 33k on transmission warranty - \$58,500. 2017 Ram 5500, 600/250, Hemi-Gas 80,026 miles - \$38,500. Both trucks are currently running, so miles will go up daily. Call 850-556-7824 or email bill@talquinpr.com. FL (P07)



2011 Ford F750, Satellite MD1250, 800/450, 190k miles, under CDL, Cummins 6.7, auto. \$26,950. **Call Ken 210-260-1702. TX (P07)**



2007 Freightliner M2 with Best stainless tank (1,000w/500f). \$25,000. Aaron 276-620-0533. VA (P07



New 2021 Kenworth T270 (non CDL), 2,000-gallon, (1,500 waste/500 fresh), Masport viper 3" pump, 12V heavy duty washdown pump, 3" LP primary & cyclone secondary, 1/4" hose trays, 4" side disch, 3" suction, 2" side toilet service, HD toolboxes, 300 HP Cummins, auto trans, chrome pkg. Call Seth @ 918-688-5672. \$112,500. (P07)



2015 Dodge 5500, Cummins auto, 93,500 miles, aluminum tank, 800 waste/400 water, DC10 wash down Masport pump. Call JR @ 720-253-8014, CO. (PBM)



2007 Freightliner M2 with Best stainless tank (1,000w/500f). \$25,000. **Aaron 276-620-0533. VA (P07**

1999 GMC T6500 (under CDL), Cabover portable restroom service truck. 267,711 miles, automatic trans, CAT diesel engine, hydraulic brakes. 3 compartment alum tank 1,100-gal, Masport hydraulic drive vac pump. Dual service. \$7,995. 414-736-5939. WI (P08)

2003 F350, great running condition with stainless steel tank (400 waste/150 clean), Conde pump, Honda engines, 7.3 diesel engine. Call Manny 305-970-9837. FL (P08)

1999 International 4400 for sale. 1,100 waste and 400 fresh water. Masport pump with dual side service. Asking \$15,000 or best offer. Call 843-283-3749. (P07)

New 1,600-gallon portable toilet service unit. (Stock# 13762) www.vacuum-salesinc.com (888)VAC-UNIT (822-8648). (PBM)



2014 Dodge 3500, Hemi gas engine, auto, 70,000 miles, 2wd, new aluminum 450-gallon vac tank, 300 waste/250 water, Masport vac pump, Honda engine.

Call JR @ 720-253-8014, CO. (PBM)



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Service Truck Bodies – Standard
turnkey package mounted on your
chassis includes: painted body, lighting,
right angle Jurop, DC10, water hose,
valves & plumbing and PT0. 1,100/400
- \$22,500; 700/300 - \$19,500;
1,700/600 - \$24,500.
Call 936-641-3938.

Check us out on Facebook! (PBM)

2000 International 4700 cab & chassis with a 500 waste/300 freshwater compartment with a Masport HXL4V vacuum pump. (Stock# 0767C) www.VacuumSalesInc. com (888) VAC-UNIT (822-8648). (PBM)

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New custom hand-wash trailers for sale. 11 and 12 station units, top quality, prompt turn around and delivery on all orders. 2 units available immediatly. Call Rick @ 330-716-2004. (P08)

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Team Lead driving position immediately available for local collection routes with our grease recycling company, Greasecycle, LLC, in Raleigh, NC ranked by Inc. Magazine as one of the fastest growing companies in the country 3 years in a row. Responsibilities include: Driving local collection routes, managing 4 FT seasoned drivers, field maintenance of containers, & fleet management, Requirements: Unfazed by foul odor, Class B CDL, mechanically inclined, management experience preferred, ability to move heavy inventory and a scrappy attitude with a willingness to get things done correctly & efficiently. Compensation: \$67,000 - \$72,000/yr. Benefits: 401k w/ 3.5% company match, health insurance reimbursement up to \$250, HSA, PTO, Boot stipend. Email resumes to: dylan@greasecycle.com or call 919-817-6142. www. grease-cycle.com. (P07)

Expanding well established and respected local septic business for over 25 years, seeking individuals with septic system installation experience. Church View Septic Service Inc. (CVSS), is located on the Middle Peninsula of Virginia. Enjoy fishing, boating and the beautiful views of the Rappahannock & Piankatank Rivers as well as the Chesapeake Bay. Applicants should be capable of installing both conventional and alternative septic systems and leading a crew. Competitive pay and benefits including housing and/or moving bonus based on experience. If you would like to be part of an expanding business and join the team within a supportive community please email resumes to kristal.cvss@verizon.net or call 804-758-5836 to discuss.

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 hydro-excavation units in the United States. We provide the most reliable, comprehensive, and efficient mobile vacuum units in the industrial and municipal markets. Specifications of the position are listed on our website, www.gapvax.com. click on the Now Hiring link in the left hand column. Send resumes to or betty@gapvax. com or 575 Central Avenue, Johnstown, PA 15902. (PBM)

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Buy & Sell all makes and models, new & used vacuum pumps, blowers, high-pressure water pumps, new and good used replacement parts. Buy discounted pumps online 24/7. Call us for a current inventory list. www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (PBM)

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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. vsirentalsiic.com. (PBM)

ROLL-OFF TRAILERS

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

SEPTIC TANK FORMS

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SEPTIC TRUCKS

New 4,000 U.S. gallon, aluminum, vacuumpressure tank mounted on a 2021 Peterbilt 348 cab & chassis with NVE Challenger 887 fan cooled vacuum pump. (Stock #13899). www.vacuumsalesinc.com (888)VAC-UNIT (822-8648). (PBM)

1997 Ford LN9000 with Presvac 2,300-gallon DOT-certified tank. Tank in great shape. Cummins with Fuller transmission. Just inspected, runs excellent. \$22,500. KLM Companies 617-909-9044. (PBM)



1997 Kenworth w/ Cummins engine, Eaton transmission, air-ride, 2,500-gal-Ion steel tank, NVE 367 Challenger pump, great shape. \$22,500. 720-253-8014. (PBM)



2010 pre-emission Ford Tanker, 4,000-gallon tank, 10-speed road ranger, Garnet level indicator, jakebrake. \$70,000. Foundation and Septic Solutions, email don@amaenvironmental.com or 860-798-4089. CT (P07)



2002 International 4300 with 1,500-gallon tank and Jurop pump. Great starter or back up truck. Only 212,000 miles. Under CDL. Central Arkansas. Can ship if need be. \$25,500. Isaiah 501-284-5505, Caleb 281-914-1192, Logan 832-928-0985.

(P07)



2012 Peterbilt 386, tri-axle with a 4,700-gallon steel tank and Jurop Pump. Double stacked frame. Chrome rims. 340,000 miles on 485-HP Paccar Mx10 engine. \$59,850. Ready to work. More pics on request. Clean interior. Solid truck. Located in Central Arkansas. Shipping and financing available.

Caleb 281-914-1192, Logan 832-928-0985. (P07)



2002 Mack for sale. Strong running truck. 4,600-gal steel tank, equipped with 866 NVE pump. E7-460 remanned with approx 250,000 miles, 378,000 on truck. New tires, batteries, starter & lift air bags. \$40,000 OBO. Dustin 570-772-4255. PA (P08)



New 2020 Kenworth T270,

1,900-gallon 1/4" steel vacuum tank, 2 baffles, Jurop R-260 (350 CFM) pump, hot shift PTO, 1/4" hose trays, 12-gal cyclone sec., 6" discharge, (2) 4" suction ports, powder coat tank, (2) toolboxes, heavy duty bumper, trailer hookups. Non-CDL, 300 HP, Allison auto trans, chrome bumper, SS sun visor.

July Special = \$97,500. 877-642-8725. (P07)



1990 Kenworth T800 Cummins N88 400. This tractor has been well cared for and maintained with new batteries recently. Masport PTO driven vacuum pump. 13sp Eaton-Fuller, smooth running and comfortable tractor/trailer. 1995 Beall/Luper 5,000-gallon trailer with catwalk and hose tubes. New brakes, hoses and paint all around 3 years ago. This is a dependable vacuum truck with cold A/C, great interior that has been stored indoors until recently. Purchased for a specific project, which it performed brilliantly. Tons of miles with sleeves and in-frame OH 6 years ago. Strong, dependable and lots of life to go. 75GVWR recent DOT inspection and new trailer brakes. \$40,000. 541-969-9452. OR (P07)

SEPTIC PUMPING

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process color call, sid pusses

2002 Sterling, 121,021 miles, 250
HP CAT 3126, 7-speed, 33,000 lb GVW,
11:00/22.5 tires all 50%, VIN J74479
with WEE, engine model 110000 series
112646. 2,200-gallon sewerage plus
300 clean water, steel 2002 vacuum
tank, and many extras. Rear of chassis
and under tank corroded. Located in
Cape Cod. \$19,000 0B0. Call Jerry
Mello 24/7 - 617-799-1461 for
details. (P07)



2012 Kenworth T800, 4,200-gallons, ISX cummins, 466,000 miles, solid truck. \$65,000. **814-277-6227. PA (P08)**



2000 GMC, 7500, 454 CID V8, 78,000 miles, 2,500-gallon tank, 2-speed rear end with limited slip. New brakes and pan cakes. Allison automatic. All tires are new. 2 - 50-gallon fuel tanks. Power locks, windows, heated outside mirrors, cruise control, air conditioning. Boss 10-ft. Super Duty v-plow. Only \$25,000 (cash). 765-618-8185. IN (P07)



2011 Hino 268, 220,000 miles, automatic, 220 HP, brand new tires all around, 25,950 GVW, under CDL, air brake, new 2,000-gallon carbon steel tank, new Masport Viper pump - 350 CFM. \$40,000. 786-908-5436. (P07)



2014 International 4300, DT-466 (245HP), Allison automatic, 159k miles, new 2,500-gallon tank, new Jurop PN84 Razor-Pack vacuum pump. \$57,000. 305-691-8407. (P07)

2012 Freightliner M2112 with new 5,000-gallon carbon steel Dynavac septic tank. Triaxle with 450 HP DD13 with Fuller 10-speed trans, air-ride suspension, Fruitland 500 vacuum pump, excellent condition. KLM Companies 617-909-9044. (PBM) 1994 Ford L9000 tandem 10-speed fuller, N-14 Cummins, 3,800-gallon, tires 70 & 80% rears, 50% fronts, National Vacuum liquid cooled pump, 4-inch intake, 6-inch discharge valves, hoses, splash plate, 30-gallon clean up with 50-foot hose, good runner. Asking \$15,000. Contact Mark at Falls Septic, Jim Falls WI - 715-382-4793. (P07)

2006 International 8600. 350 HP Cummins, 4,000-gallon steel tank with heated valves and NVE 866 pump - 4 yrs old. New OEM engine, turbo, radiator from Cummins. 100k miles on new engine. Additional new parts in the last 6 months, both rear ends and locker, new suspension, front springs, shocks, king pins, drive line, carrier bearing, u-joints, new brakes, rotors, bearings, new clutch, all new air conditioning, compressor, condenser, evaporator, receiver dryer, accumulator, new air lines, air dryer, air tanks, all new tires. Very dependable, strong running truck, works daily. Nothing wrong mechanically with this truck. \$69,900. Call for pictures. Kevin 303-882-1986. CO (P07)



2013 Freightliner M2. Only 107,000 miles on Cummins. Air ride. New 2,500-gallon aluminum tank. New NVE 607 pump. New PTO. Located in central Arkansas but can ship anywhere. Caleb 281-914-1192. Logan 832-928-0985. \$67,250. (P07)



2014 Peterbilt 337, 260 HP, automatic, new 2,000-gallon carbon steel tank, new Masport pump Viper 350 CFM, new tires all around and new aluminum rims, automatic PTO. \$67,500. Call Alan 786-908-5436. (P07)

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1986 T-600 pump truck, newer Fruitland vac pump 3406 B with recent Inframe, 8-speed trans, good drive tires, 386,000 miles. \$25,000. Call Mike 406-861-0779. MT (P07)



2016 Ford F550 Super Duty, diesel, automatic with a 1,350-gal tank, 2,549 original miles, 870 Predator pump. Asking \$50,000. Call 903 277-1883 or e-mail a1nationalseptic@aol.com.

TX (P07)



2012 Freightliner M2, under CDL, Allison automatic, Cummins ISB (285 HP), 240k miles, new 2,000-gallon tank, new Jurop PN-58 Razor Pack vacuum pump. \$60,000. 305-691-8407. (P07)

Vacant manufacturing facility, 51,000 square feet with high capacity well, with or without pretreatment sewage facility. 2000 Freightliner with 4,100-gallon aluminum tank. 1991 GMC with 2,300-gallon tank. 1979 Articulate John Deere tractor (50 series engine) and 3,300-gallon Balzer tank with injectors. Call 920-290-6452. (PBM)



2017 International, 6.7 Cummins, 74k miles, auto transmission, under CDL, A/C, cruise, new aluminum tank 900/400, Jurop PN58 vac-pump and 94GPM washdown pump. This truck has all new equipment, excellent condition \$49,000. Financing and Delivery options available. Call Hulls Truck Bodies at 740-820-5338. OH (P07)

1999 Ford Louisville tri-axle cab & chassis with a 3,300 U.S. gallon, Keith Huber Dominator, two compartment (300 water – 3,000 waste) C/S. Full opening rear door, dump-type unit with a Becker 440 vacuum pump and jetting system. (Stock #9510C). www.VacuumSalesInc.com. (888) VAC-UNIT (822-8648). (PBM)

2009 Sterling Acterra cab & chassis, Progress 4,000 aluminum vacuum tank with a Masport Hydra vacuum pump. (Stock# 7179V) www.vacuumsalesinc.com (888) VAC-UNIT (822-8648). (PBM)



2008 International 7500 Workstar with auto trans and new Maxxforce 10 engine, approx 3,000 miles on motor, 3,500-gallon tank with H400W Masport vacuum pump. This truck is ready to go to work today. Asking price Is \$49,500 0B0. More pictures upon request. Raymond Howard at 386-935-3334 or 386-288-9919. FL (P06)

1999 Sterling L9000 tri-axle cab & chassis with a 4,000 U.S. gallon Keith Huber Dominator, two compartment (500 water – 3,500 waste) C/S. Full-opening rear door, dumptype unit with a Becker 440 vacuum pump and jetting system. (Stock# 3408C) www.VacuumSalesInc.com (888)

(PBM)

VAC-UNIT (822-8648).

2001 International 4700 cab & chassis with a Transway 2,400 U.S. gallon, carbon steel, dump-type vacuum tank with a Fruitland RDF500 vacuum pump. (Stock#7295C) www.VacuumSalesInc.com (888) VAC-UNIT (822-8648). (PBM



2013 International 4300, under CDL. DT466 diesel, auto., 130k miles. NEW 1,800-gallon steel tank with Masport pump.

Call JR @ 720-253-8014, CO. (PBM)

New 4,000 U.S. gallon, aluminum, vacuumpressure tank mounted on a 2020 Peterbilt 348 cab & chassis with NVE Challenger 866 fan-cooled vacuum pump. (Stock# 13875) www.vacuumsalesinc.com (888) (PBM) VAC-UNIT (822-8648).



Texla Services Vacuum Truck Bodies - Turnkey package mounted on your chassis includes: painted body, lighting, valves, PTO and pump. 3,600-gallon - \$25,000; 2,500-gallon -\$22,000; 1,500-gallon - \$18,500. Many custom options are available. Bodies out of paint: 2,500-gallon - \$13,500. Self-contained skids available.

Call 936-641-3938. Check us out on Facebook! (PBM)



2013 Freightliner Cascadia, new 3,500-gallon vacuum tank, new Jurop R260 pump, new power takeoff, new motor: Detroit DD15, 450 HP. New transmission, 10-speed, 355 rear lockers, suspension, air cold A/C, 90% rubber on tires, disc brakes. 513,000 miles. \$60,000. Red and black, excellent find with all the new parts and accessories.

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SLIDE-IN UNITS



2016 KeeVac Slide-In Vac Tank. 350 waste/150 fresh. Everything works and is ready to work. It was lightly used. Never saw gray or black water, only petroleum contaminated water. Will assist with shipping. Call JD @ 954-658-1974. FL (P07)



NEW aluminum slide-in tanks. 2 available, 450-gallon (300/150), Honda motors, Masport pumps. Call JR @ 720-253-8014 or Mike @ 303-478-4796, CO. (PBM)

TANKS



New Aluminum Tanks: Any size tank can be custom built. Slide-in tanks in all sizes. Plug and Play vacuum pumps are also available. All of the listed sizes in stock. Aluminum Pumper Truck Tanks: 950/300-gallon \$14,000; 1,100/400-gallon \$15,000; 1,450/350-gallon \$16,000; 1,500/500-gallon \$20,000. Aluminum All Waste Septic Tanks: 2,000-gallon \$19,000; 2,300-gallon \$20,000; 2,500-gallon \$22,000; 4,000-gallon \$27,000. Call Rodney Lane

270-832-3793 (P07)

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We currently have 3 - 2015 J & J Truck bodies 110bbl. Vacuum tanks available for immediate sale. Tanks are in very good condition. They come complete with a Fruitland pump and truck bumper. Asking \$7,500 each. Please call Mark @ 570-347-5125. Throop, PA 18512. (P08)



2003 Heil aluminum tank, 4,400-gal-Ion from Juggular system with Utile pump. Juggler system available if desired. \$11,000. Please contact Frank at 860-280-6308. CT (P08)

New 4,600-gallon Vac-Tanks complete with full length aluminum hose trays, lighted tube sight gauge, painted & lined. SPECIAL CLOSEOUT PRICE - \$14,975. Please contact Air-Flo Mfg./Crown Tank at 607-733-8284.



U.S. Tanks Industry, new 1,200-5,000-gallon tanks in stock! Options - two compartment, hoist, installation available, quick build time! 305-691-8407. (P06)



50,000-Gallon Septage Storage Tank- FREE to someone who will move it from existing location, Canton, OH. Call 330-494-3000 (PBM)

Vacuum Tanks - New: 800- to 5.000-gallon tanks available. 3,600-gallon tanks \$14,000. 2,500-gallon tanks \$12,000. Delivery available. Contact Jerry: 800-721-2774; JEagleTanks@yahoo.com.



NEW 2.000- to 2.500-gallon aluminum tanks with lights; NEW 1,800- to 2,500-gallon steel tanks with lights. New 450-gallon (300-gallon waste/150-gallon fresh) aluminum slide-ins. In stock, ready to ship. New and used CDL and non-CDL trucks available

Call JR @ 720-253-8014 or Mike @ 303-478-4796. (PBM)



Frac Tanks from Geneva Equipment. Financing available! Delivered to your door! Perfect for: Portable sanitation storage; Dewatering; Wastewater storage and treatment: Hydroexcavation: Stormwater runoff. Geneva has over 1,000+ frac tanks available, epoxy lined and EPA compliant.

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Used Steel Vacuum Tanks - starting at \$8,900, 3,500-gallon, 4,200-gallon & 4,700-gallon. Used Masport HXL400 WV Plug-and-Play - \$2,900, Gasco Triplex 3364-AL - \$750. We ship anywhere.

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2014 Hurricane model 828. Powered by John Deere PowerTech plus 9.0L Tier 3, no after treatment. Roots DVJ Whispair blower, low hours-2,000. \$140,000. Please call for more details. Jason Thornell 734-699-4949 or eisjasonthornell@live.com. MI (P09)



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TRUCKS - BOOM



2004 Peterbilt 378 with a QMC 3630P rear mount crane. Asking \$125,000.
Call 831-444-4178. CA (P07)

2017 Guzzler Classic, Kenworth chassis, 19,000 miles, 4,872 engine hours and 2,325 blower hours. \$225,000. 440-813-0025. OH (P08)

WATERBLASTING

2015 Jetstream 4200, John Deere, 325 HP, 10&20k heads - \$65,000. 2014 Jetstream 3600, John Deere, 175 HP, 700 hrs - \$50,000. 2014 NLB, 10-12, 1,000 hrs - \$40,000. 440-813-0025. OH (P09)



TRUCKS (DUMP, SEPTIC, MISC.)



2013 International, 52,000 GVW, 270 HP, only 77,000 miles, equipped with NEW hydraulic set bed, 12,000 lb capacity. \$64,000. Call Dewayne 256-338-4985. (P07)

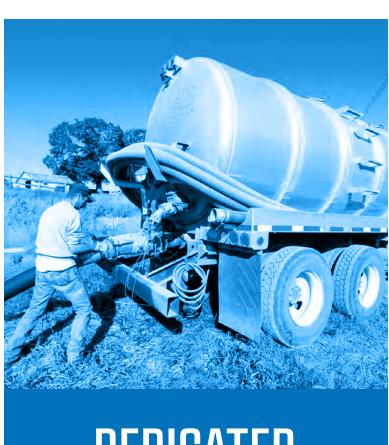
TV INSPECTION

2010 Freightliner Sprinter 3500 diesel sewer inspection truck w/ 192,000 miles. New DPF-exhaust system August 2017 @ 130,000 miles, brand new Onan diesel generator November 2017. Camera equipment is an IBAK Lisy 150 Lateral Launch. \$30,000 OBO. Contact Hayden @ 231-631-4101 or hayden@Kaltzexcavating.com for pictures/videos or to see in person. MI (P07)

VACUUM LOADERS



2005 Sterling Vactor/2115-36PD Unit, 167,911 miles, VIN#2FZMAZCK55AV08964, LT9522 Detroit engine, 515HP Eaton Fuller, 9-speed, new 2017 Roots, 824RCSV 18'PD blower, 3500 CFM, 15-yard tank. Asking \$130,000. Lina 631-903-9292. NY (P07)



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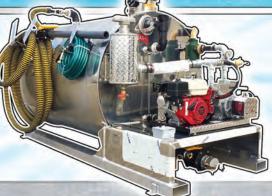
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Liquidvac - Trailer

- > 9600 US Gallons
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 - > Deutz Diesel Drive





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