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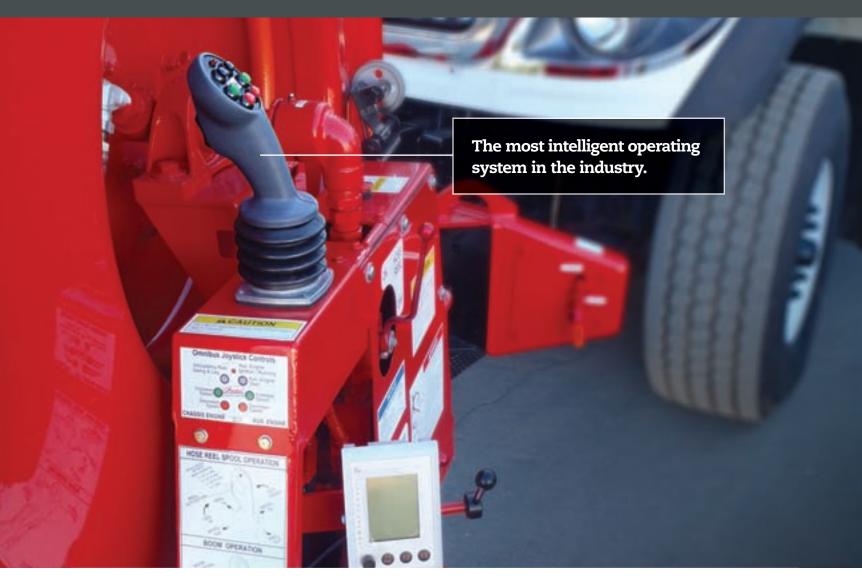
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April 2011

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On the cover: Paul Simons and wife Neatha opened Hurricane Drain in Corpus Christi, Texas, offering basic repairs and drain cleaning, but they have branched out into locating, leak detection, pipe lining and pipe bursting. Here, pipe bursting expert Justin Portier, left, and lining expert Dan Wildenhaus repair a pipe with a bursting system from TRIC Tools. (Photography by Bryan Tumlinson)

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It Only Takes a Second



Ted. I. Rulseh

THE SLIGHTEST BIT OF INATTENTION WHILE DRIVING CAN CAUSE A TRUE CALAMITY.

IT'S TIME TO RESOLVE TO AVOID DISTRACTIONS AND STAY FOCUSED ON THE JOB AT HAND.

BY TED J. RULSEH, EDITOR

bout 20 years ago I almost killed my whole family. We were driving the four-lane back home from a vacation in fairly heavy traffic on a Saturday morning. Behind our station wagon I was towing a small boat, filled with suitcases and other gear we couldn't fit into the car.

It all happened in an instant. I diverted my eyes from the road to check the traffic in the rear-view and see how the boat was tracking. It couldn't have been more than two or three seconds. When I looked ahead again, the brake lights of the car in front were on and I was closing in fast.

Thinking my stopping distance would be long with the boat in back, I jerked the wheel left instead of braking and swerved into the left lane. That would have been a safe move – if not for the boat, which didn't want to stop swerving. When it pulled us toward the shoulder, I swung the wheel right. In no time we were fishtailing between the left lane and the ditch while I fought for control.

I regained it. At the next exit I pulled off, took a good look at my wife and young son and daughter, and got out to make sure the boat was still secure on

Cleaner tells how yet another major player – OSHA – has joined the campaign against distracted driving in general and texting in particular.

We've covered this topic in *Cleaner* once or twice before. And here I am writing about it again. The thing is, we read about serious accidents caused by people paying more attention to their smart phones than to the road, and yet many of us obliviously chatter and text and browse away.

Am I immune? No. I've made phone calls while under way. I've read incoming text messages. A few times while going down a wide-open freeway I have opened a Web page on my smart phone, to check sports scores and such. I have never texted – but still. After my experience, you would think I'd know better than to let my attention drift.

ALL IT TAKES ...

You see, experience has taught me that a lot can happen in that second or two when we're not looking where we should be. But surely, we might tell ourselves, driving the open freeway is different from being on an urban highway.

The thing is, we read about serious accidents caused by people paying more attention to their smart phones than to the road, and yet many of us obliviously chatter and text and browse away.

the trailer. I'm not sure how close my family thought we had come to oblivion; I only know I had to take a break and let the nerves settle before getting back on the road. Never before or since has it been more clear what a little inattention at the wheel can do.

TOO MUCH NAGGING?

It seems these days we get nagged a lot about inattentive driving – specifically related to cell phones and texting. The Safety First column in this issue of



And it is, but still. Any number of things could cause a crash on what seems like a wide-open road. A deep bump. A deer darting out of the woods. Just plain drifting over toward the shoulder.

The statistics on distracted driving are sobering. A study from the Virginia Tech Transportation Institute (VTTI) says texting is the most dangerous of cell-phone-related tasks done behind the wheel. It says a truck driver texting is 23.2 times more likely to have a crash than a trucker fully focused on driving.

The VTTI study also says that for every six seconds a driver spends sending or receiving a text message, his or her eyes are off the road for 4.6 seconds. In the case of my near-accident, 4.6 seconds would have put me into the rear bumper of the car ahead, and who knows if I would even have a family or be here to write this?

IT'S NOT THAT HARD

In these days of cell phones, people in service businesses face huge temptation to "stay connected" and "be productive" while driving. Are your people taking or making phone calls when they shouldn't? Or, heaven forbid, dealing with text messages while in work trucks?

What I tell myself repeatedly is this: If it's important enough to make that call or answer that text or check that website, it's important enough to find a safe place and pull over for a bit.

Does that sound like a good policy to live by? I'm willing to try it if you are. ${\bf c}$

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HURRICANE DRAIN MAKES ITS MARK WITH A SPECIAL EMPHASIS ON LOCATING, LEAK DETECTION AND TESTING IN THE CORPUS CHRISTI AREA

BY MARIAN BOND

Paul Simons, with his master plumber license and his wife Neatha, opened Hurricane Drain in Corpus Christi in 2000. The plan was to offer basic repairs and drain cleaning.

It wasn't until 2004 that Simons found the service that would define the company and drive the bottom line. Simons visited the booth of the Underground Utilities and Leak Locators Association (UULLA) at the 2004 Pumper & Cleaner Environmental Expo and joined that organization. He checked out the required equipment and the process and decided that adding that capability to drain cleaning would help him grow.

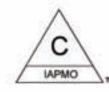
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By the end of 2010, line locating, leak detection and testing had grown 20 percent of total revenue. It was also the signature offering that brought a large share of other work for Hurricane Drain. The core business focuses on contracting with other plumbers and working directly with real estate agents.

The crew swelled to nine as son Derek Simons, also a master plumber, came on board. He oversees all repair work and acts as liaison between customers and crews. Son-in-law Daniel Wildenhaus manages the recently added curedin-place pipe (CIPP) service line, and daughter Katrina Newsom is a licensed backflow tester.

Pipe bursting is directed by employee Justin Portier, and Aaron Simons, Paul's brother, handles general office duties. Neatha Simons takes care of financials. Locating and leak detection remain under Paul Simons' purview because he enjoys the work and has the relationships with clients for that service.

RIGHT FOR THE TIMES

In Corpus Christi and surroundings, Hurricane Drain deals with failed residential water and sewer with broken pipes, often caused by expansive soil. The firm sees 2- to 4-inch cast-iron and clay pipe and, in newer construction PVC.

"You have to have plumbing design experience to know what you are testing and recording in order to understand how the plumbing is run."

Paul Simons

"When there is drought, the soil will shrink rapidly, and when there is moisture, the soil expands," says Simons. "All this causes cracks and breaks. Crews also have to contend with the effects of hurricanes, and in 2010, rainfall totaled 42 inches.

"There is a lot of root intrusion," Simons says. "Every tree in the neighborhood takes a drink off the sewer pipes. When there is a problem with a water line, it is evident. There is water coming out where it should not be. The water bill is too high. Sewer lines have to be tested to be sure they are intact. In every real estate transaction, lenders in the area demand a hydrostatic test, and it is pass or fail. If the pipe doesn't get a passing report, we go to an isolation test to find the problem. You can't have broken sewer pipe in the state of Texas."

Hydrostatic testing involves introducing water to the required pressure to ensure that the pipe will not leak or be damaged. Isolation testing involves inserting plugs into the system, then checking with a camera to discover exactly where the problem is located.

profile HURRICANE DRAIN, **CORPUS CHRISTI, TEXAS**



Master plumber Derek Simons uses the Goldak noise eliminator microphone to check for leaks in underground pipes.

Simons does the testing and prepares the reports, which must be accurate. Lenders usually require three repair bids based on his design. Hurricane often bids for the work, but the lowest figure gets the job. "We probably get 80 percent of the jobs with our bid, following our inspection," Simons says.

"When we do a report, for the most part contractors can bid right off the drawing. I have notes to describe the closest area if there has to be a tunnel from one point to another. If there are obstacles in the way to the lines, there might be suggestions to use the opposite side of the house, or other options."

When tunneling is required, any soil removed must be hauled away. It is replaced with an engineered building mix of sand and clay that will bind and retain its volume. Hurricane Drain engages an engineer when required on tunneling jobs.

TOOLS OF THE TRADE

The company uses equipment from RIDGID including five SeeSnake Compact cameras, a Mini-SeeSnake Plus, and a SeeSnake microDrain inspection system. Locating equipment includes three NaviTrack units from RIDGID and one Goldak Triad Digital 2310.

For jetting there is one trailer mounted (4,000 psi/20 gpm) jetter with a camera and recording equipment along with two Spartan jetters (one gasoline, one electric). For the isolation tests, Simons uses test plugs from Cherne Industries. For water supply testing, he uses the Pulsar 2000 system, and for smoke testing he has a Power Smoker from Hurco Technologies. (continued)









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Fleet vehicles include Simons' 2006 Dodge Sprinter 2500 diesel truck, a 2008 Chevrolet 1500 pickup, a 2008 Chevrolet three-quarter-ton van, and a 2005 half-ton Ford Ranger.

Backflow testing is an essential part of the menu. "Anytime you are using city water, there is the possibility of backflow into the water line, and the line must be certified in all real estate transactions," says Simons. "This requires a backflow prevention device." His daughter Katrina Newsom takes care of those requirements.

"With a camera, you see what you are blocking off and what is being tested. You have to know there is not another leak. You have to report everything and commit to your findings in writing on the drawing."

Paul Simons

About half of the leak detection and locating work is for real estate agents. Work for other plumbers is on a subcontract basis, and Hurricane Drain never competes for those plumbers' customers. For testing and reports, Simons provides the drawings to the other company and will perform other services if asked. The majority of work is in residential.

PRECISE REPORTING

Hurricane Drain does not solicit or advertise the service but will respond to customers who pick up a phone number from a truck and call.

Sometimes engineers request locating and leak detection when there are foundation problems in a building and bad plumbing is known to be the cause.

This calls for hydrostatic and possibly isolation testing. Another issue is mold in the walls fed by moisture from a broken sewer pipe.

Where people are experiencing sewer odors, the company uses smoke testing to find the cause. Simons has the homeowner stand in the room where the problem seems to be and watch for a waft from the floor or through a sliding

Again, precision reports and drawings are essential. "You have to have plumbing design experience to know what you are testing and recording in order to understand how the plumbing is run," Simons says. "With a camera, you see what you are blocking off and what is being tested. You have to know there is not another leak. You have to report everything and commit to your findings in writing on the drawing."

WHEN THE TIME IS RIGHT

Last year, Simons again saw a need to expand the services while maintaining the same customer base. In mid-2010 Hurricane Drain added CIPP lining technology from Nu Flow Technologies and pipe bursting equipment from TRIC Tools.

CIPP saw significant growth from the start, but Simons believes pipe bursting generated the greatest interest. "We're expecting this line of repair to go crazy in the future," he says. "We will be buying more equipment and expect to be doing larger lines."

When subcontracting these services to other plumbers, the plumbing company does the preliminary work of trenching and access pits. Hurricane Drain then does its work, and

the plumbing company finishes up. Where Hurricane Drain is the prime contractor, the company subs out any engineering, tunneling and related tasks.

(continued)

SETTING BOUNDARIES

Soon after establishing Hurricane Drain, owner Paul Simons chose a market area radius of 30 miles from his Corpus Christi headquarters. "From that time I have kept my market tight right there, and it has worked out very well for us," he says. "It has to do with both the cost and time involved, and time is more important. You can better serve your customers because you can get to them faster, and you don't have the added travel expense."

The company has a strict policy of working five days a week from 9 a.m. to 5 p.m., out of respect for employees who have young families. "Our customers know our policy, and they will leave a message after hours," says Simons.

While the company operates out of his home, the firm's warehouse is in a guarded and secured industrial complex. All vehicles and equipment are stored inside.

Since he opened the business in 2000, Simons has seen an improvement in the quality of cameras and monitoring equipment. He still uses most of the locating, leak detection and testing equipment he bought in 2004 and finds it well suited for current demands.

Simons likes getting input from everyone involved in the company, and he networks with others in the industry. "We also believe in new technology and in education," he says.



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The Hurricane Drain team includes, from left, backflow technician Katrina Newsom, pipe bursting expert Justin Portier, field support Torrie Wildenhaus, Nu Flow expert Dan Wildenhaus, CFO Neatha Simons, owner/master plumber Paul Simons, director of marketing Lucretia Hart, office manager Aaron Simons, and bookkeeper Kathleen Davidson.

Hurricane Drain always strives to work better and smarter. "We look for ways to help the customer understand the impact of having trucks in the driveway," says Simons. "When we are the contractor, we want to be able to walk away with everything looking nice and the homeowner happy."

POISED FOR PERFORMANCE

As the company approached 2011, Simons was considering retiring its vehicles and standardizing on 12- to 14-foot vans in a heavier-duty configuration. The trucks would carry more equipment and provide more advertising space on the sides. The firm was also looking at a policy of retiring service trucks at 100,000 miles.

Getting involved with the UULLA gave Hurricane Drain the encouragement to carve out a new niche in the market. Locating, leak detection and testing became vital to the business. "It is so important in our total operation," Simons says. "It brings in other business and thus keeps us busy all the time." c

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Driven to Distraction

OSHA JOINS A GROWING CAMPAIGN TO ENCOURAGE WORKERS TO FOCUS ON THE ROAD WHEN BEHIND THE WHEEL

BY TED J. RULSEH

istracted driving is becoming an epidemic, especially as more people use cell phones and smart phones that create a constant temptation to text message, or check e-mail, or look at a website while behind the wheel.

OSHA is now getting into the fray with a program to encourage drivers to stay focused. "While we experience fewer fatalities in the workplace today," the OSHA announcement says, "the leading cause of worker fatalities year after year is motor vehicle crashes. Distracted driving dramatically increases the risk of such crashes."

The U.S. Department of Labor, through OSHA, is partnering with the Department of Transportation to combat distracted driving. OSHA will first focus on texting while driving and says employers should prohibit any work policy or practice that requires or encourages workers to use that dangerous practice.

Texting while driving greatly increases the risk of being injured or killed in a

motor vehicle crash. Prohibiting such texting is the subject of an Executive Order signed by President Obama last year for federal employees, and it is the subject of rulemaking by the DOT.

"The OSH Act of 1970 is clear: Employers must provide a workplace free of serious recognized hazards," OSHA states. "It is imperative that employers eliminate financial or other incentives that encourage workers to text while driving. Employers who require their employees to text while driving, or who organize work so that doing so is a practical necessity even if not a formal requirement, violate the OSH Act."

Texting while driving greatly increases the risk of being injured or killed in a motor vehicle crash.

To help cut down on distracted driving, OSHA is launching a multi-pronged initiative that will include:

- An education campaign, launched during Drive Safely Work Week, calling on employers to prevent occupationally related distracted driving, with a special focus on prohibiting texting.
- A website with a video message and an open letter to employers from an OSHA assistant secretary. The agency will showcase model employer policies and team with employer and labor associations to communicate its message.
- Alliances with the National Safety Council and other key organizations to help in reaching out to employers, especially small employers.
- Special emphasis on reaching young workers.
- Investigating credible complaints against employers and where necessary issuing citations and penalties.

"By prohibiting texting while driving, we are working to ensure that workers are safe on the road and that they return home safely at the end of their shift," OSHA says.

You may already have a policy against texting and other distracting behaviors while driving. Perhaps now is a good time to revisit it – because temptations to multi-task while behind the wheel are strong and pervasive. ©



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FORWARDLATERALS

A WISCONSIN COMPANY DIVERSIFIES INTO LATERAL LINING AND TAPS INTO A GROWING MARKET FOR INFLOW AND INFILTRATION CONTROL TECHNOLOGIES

BY ERIK GUNN



Pouring concrete and excavating building sites may seem like a far cry from lining sewer laterals, but for Musson Bros. Inc., the connection is more natural than it might appear.

The company made its name in Wisconsin as a grading and utility contractor and in a wide range of excavating jobs: clearing out new development sites and installing new sewer lines, to name just a couple.

But diversification has always been a prime value for the family-owned heavy-equipment company, based in Rhinelander, in the state's Northwoods lake country. So when the opportunity arose to get into the trenchless industry, Musson decided to go for it – but with a specialty, niche-market focus.

Musson's lining work focuses strictly on laterals. It was a lot to learn, but in the four years since the decision to enter the market, the company's MBI Pipelining operation is going full-tilt. "This is just another aspect of being more diversified," says Pipelining Division manager Pat Wunsch. "In these economic times it's something else to have in your toolbox. And that's really been the key to our success. It always seems when one aspect of your business is down, there's another one that's on the upside."

"In these economic times it's something else to have in your toolbox. And that's really been the key to our success. It always seems when one aspect of your business is down, there's another one that's on the upside."

Pat Wunsch

Count the lining business as one of the upside specialties. Demand for the service is increasing, and the company is cautiously planning expansion in the coming years.

DIVERSIFICATION PUSH

Wunsch credits Musson Bros. CEO and owner Tim Musson with moving the company into pipe lining. It was part of a big push to diversify after he succeeded his father in the mid-1980s. Tim Musson's grandfather founded the business in 1947.

The lining business itself grew out of Musson's work excavating and installing sewer lines. But like a beginning runner whose first race is a marathon, MBI took a more challenging route than some to enter the business. Instead of going the safe way - learning on mainlines and then graduating to trickier lateral

profile

MUSSON BROS. INC., PIPELINING DIVISION, BROOKFIELD, WIS.

1947 (parent company) SPECIALTY: CIPP lining of sewer laterals

EMPLOYEES:

SERVICE AREA: Wisconsin, Northern Illinois, and surrounding region

ANNUAL REVENUE: \$5 million (Pipelining Division)



Lucas Bignell operates the winch pulling the liner down the mainline to the lateral where it will be installed.

repairs - Musson bypassed mainline work. "We went headfirst into a totally new industry that, frankly, I had very little knowledge of," Wunsch says.

The company already knew the key contractors in Wisconsin that were performing mainline rehabilitation. It seemed to make more sense to find a proven lateral process that would complement the work of those contractors.

Wunsch was doing project management and estimation for Musson's sewer and water main installation business when he learned about one curedin-place pipe (CIPP) lining technology from LMK Technologies, manufacturer of the T-Liner and other lateral lining systems.

The technology's benefits were obvious. Digging up and replacing a lateral can cost as much as \$8,000, Wunsch notes; lining can bring the cost down to about \$3,000. So with support from top management, Wunsch entered the business by hiring Jim Burnett, a project superintendent with pipe lining experience.

"It was pretty much a learning curve for him also," Wunsch says. "He came from mainline lining. Laterals are a whole different animal." One difference is the difficulty of getting access to most lateral lines. Another is the wide range of smaller pipe sizes used for laterals. And a third is the number of bends in laterals.

"With laterals you have very limited access for cleaning and inspection," Wunsch says. "And to actually do the lining, you have to create an access



Nick Zillman (left) and Lucas Bignell prepare a liner for a pull.

educating people," Wunsch says.

the start it was going where the work was," Wunsch says. More recently, the company has had jobs as far away as St. Louis and Lower Michigan. It was a case of the right technology at the right time. But despite its advantages, lining doesn't completely sell itself. "It's been a lot of sales, marketing and

A big part of that effort has been seminars for wastewater system operators to show them how the lining systems work, complete with full-day hands-on training. MBI has conducted one a year for three years in a row. The last two years, the company collaborated with two other firms - distributor Envirotech Equipment Co., of Pewaukee, Wis., and a sewer inspection business called The Expediters based in Oconomo-

point." Working with LMK, MBI started as a subcontractor to an Illinois lining company on its first few jobs, working out of MBI's offices in Brookfield, a suburb of Milwaukee

woc, Wis. – to put them on. "It's been very well received," Wunsch says. Topics covered include manhole lining and lateral TV inspection, and there's a live demonstration of lateral lining techniques. The sessions have drawn as many as 150 people, most of them municipal engineers.

IN THE REAL WORLD

Becoming proficient took time. "It was a totally new technology," Wunsch says. "On paper and in controlled environments, it looked very simple. In the field it was totally different. We went into our first job in Downers Grove, Ill., and hit it in a time of the year when we had a lot of inflow and infiltration from spring runoff. It was very challenging. There were a lot of learning situations on that first job."

As MBI has gained experience, its territory has grown. The work began in Wisconsin and northern Illinois. "Pretty much at

"The key to lateral lining is to give them a good end product. And part of that is preparation. That's why we require a camera port and cleaning access upstream, toward the house, to get in there and properly prep the lateral."

Pat Wunsch

TRAINING THE TROOPS

Because lateral lining is a painstaking process, well-trained employees are essential. The Musson Bros. Inc. Pipelining Division has relied mainly on its own resources, bringing workers up to speed on the technique.

"Because it's so specialized, we can't call the union and ask for somebody in pipe lining," says Pat Wunsch, division manager. "It's a fairly new trade. There are no schools that directly address lateral lining. So when we hire someone, it's pretty much hands-on, in-the-field training."

MBI has managed to hire and train 14 people for two lining crews, one of which can do regular lateral lining from the cleanout outward as well as T-Liner installations. "We use four- to five-man crews," Wunsch says. "If someone is sick a day, you just don't pick up someone off the street to replace them. You have a three-week learning curve before they actually fall into place and totally know what they're doing."

Wunsch says some union training programs in the Midwest are starting to include the pipe lining technologies. The MBI lining supplier, LMK Technologies, offers inhouse training and certification for installers as well as education programs for design engineers and inspectors.

"It's free. We provide a light breakfast and a brown bag lunch," Wunsch says. The state Department of Natural Resources has qualified the programs for required continuing education credits for system operators. Direct mail and e-mails to public works directors and city engineers help promote the programs.

Thanks to efforts like that, municipal engineers in Wisconsin and elsewhere are more aware of lateral lining. But because laterals are typically the financial responsibility of property owners, says Wunsch, "The biggest hurdle is, who's going to pay for it?"

TACKLING BIG JOBS

MBI has put its name out to plumbing contractors, and some call with leads on jobs for property owners. Advertising fliers have been less effective than networking with plumbers.

Most work comes through large contracts with municipalities. In summer 2010, the City of Racine in southeastern Wisconsin hired MBI to line some

(continued)





The MBI Pipelining Division is shown with some of the company's equipment. (Photo courtesy of Musson Bros/MBI Pipelining Division) Below: A dedicated trailer for pipe lining boldly advertises the company's lateral repair services.

INVESTING IN EQUIPMENT

In building up its lateral lining business, MBI made a series of investments in new equipment. The biggest is a Vactor 2110 combination truck, originally bought for mainline cleaning and hydroexcavation, but now used for other purposes. For example, Musson grading crews use it to help with utility locating.

"We've actually taken on some storm sewer cleaning and televising jobs for other communities around here," Wunsch says. "It was one of those pieces of equipment where I asked myself, 'Do I make this quarter-million-

dollar investment? How am I going to keep it busy?' There's no problem keeping it busy."

MBI has two full LMK T-Liner installation rigs for laterals as well as a Launch Tank rig to line laterals going from the cleanout outward. In addition

"With laterals you have very limited access for cleaning and inspection. And to actually do the lining, you have to create an access point."

Pat Wunsch

to the Aries camera truck, crews use a Mongoose trailer jetter and a truckmounted jetter from Sewer Equipment Co. of America. An older SeeSnake push camera from RIDGID still gets plenty of use.

LINING UP BUSINESS

Wunsch sees a bright future for the operation. The current workload is

"just the tip of the iceberg," he says. As continued inflow and infiltration problems put pressure on sewer systems and lead to overflows, whether in Musson's backyard market or across the country, demand for private property owners as well as municipal agencies to resolve the problems is likely to grow.

"Whether that involves a lining project, a grading project to get the water away from the house, or a sump pump installation program, it's definitely a market that's ready to take off," says Wunsch. "And you're seeing that all over the United States."

And when it does, the MBI Pipelining Division plans to be on top of it. C

more info Aries Industries, Inc. 800/234-7205 www.ariesindustries.com

(See ad page 11) **LMK Technologies**

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RIDGID 800/769-7743 www.ridgid.com (See ad page 7)

Vactor Manufacturing 800/627-3171 www.vactor.com (See ad page 71)



70 laterals. The city had agreed to cover the cost in return for a \$50-a-year assessment on property owners' sewer bills.

Jason Herzog, a civil engineer for the city, says Racine learned of MBI's capability from an engineering consultant hired by the city. The consultant had recommended the LMK product line, and LMK in turn put the city in touch with MBI, whose employees demonstrated the system. The project was put out for competitive bids, and MBI was the winner.

At the work site, step one was to locate, inspect and clean the lateral lines. If there was no existing outside cleanout, workers hydroexcavated and installed a lateral access. Once the laterals were cleaned and measured, the work crew prepared and installed the lateral liner, pulling it into place through the main sewer line.

The liner is installed in an inversion process and uses a polyester resin. Once in place, the adhesive is cured with steam or ambient temperature. "We prefer to use steam curing, but we can do ambient," Wunsch says.

A relatively new tool – both for inspecting the lateral and for giving work crews eyes to see the lateral liner as it is maneuvered into place from the mainline – is the Seeker pan-and-tilt push camera from Aries Industries. Wunsch says the unit gives multiple views inside the lateral. The lens can be self-cleaned because the camera can rotate 360 degrees inside its housing. "Another camera, if you get dirt on it, you have to bring it back to clean it," he says.

"The key to lateral lining is to give them a good end product. And part of that is preparation. That's why we require a camera inspection and cleaning access upstream, toward the house, to get in there and properly prep the lateral: cut the roots, if there are any, and if there are offset joints, address them. You don't want to line over roots or mineral deposits."

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RIDGID

The Latest on Display

LAST PUMPER & CLEANER EXPO IN LOUISVILLE FEATURES

A WIDE RANGE OF NEW PRODUCTS FOR CLEANING CONTRACTORS

BY TED J. RULSEH



he 31st Annual Pumper & Cleaner Environmental Expo International closed a four-year run in Louisville with 3,644 companies, cities and utilities represented and 8,286 total attendees. The Expo moves to Indianapolis for 2012, running Feb. 27 to March 1 at the Indiana Convention Center.

The 2011 Expo offered a full slate of educational seminars spread over three days and included 477 exhibits of new and familiar products and technologies. Here is a sampling of the new offerings on display for pipe cleaning, maintenance and repair and industrial high-pressure cleaning contractors:



AR CORP.

ONE-TOUCH RECORDINGS

The CS-10 digital monitor from RIDGID offers simple, full feature digital recording with a one-touch feature that lets users record both still images and video. The unit provides video and image playback and auto-log recording, which compresses files to help save memory on the USB thumb drive where inspections are stored.

The monitor comes with SeeSnake HQ software, a PC-based program that allows images and video of an inspection to be imported and stored on a computer for easy media sharing through PDF reports, DVD burning, or uploading to the RIDGIDConnect online business tool. The 12.1-inch monitor with enhanced daylight readability lets contractors clearly view and diagnose line blockages with SeeSnake cameras. The unit comes with a USB thumb drive and an 18-volt lithium ion battery. 800/769-7743; www.ridgid.com.



FLEXIBLE CUTTER

The Cnt-r-KUT stainless steel waterjet tools from Arthur Products have flexible vanes that keep the tool centered in the pipe for effective cleaning. The Basic series has three jet nozzle configurations and three trimmable vanes for custom fit. The Elite series (shown) uses chain or cable flails attached to a single rotor and a body with six trimmable guide vanes. 800/322-0510; www.arthurproducts.com.

CONVERTIBLE BLASTING SYSTEM

The 225 Series high-pressure waterjetting systems from NLB Corp. are built around the company's Model 225 convertible pump with quick-change, inline fluid end design and fewer parts for increased efficiency and simpler maintenance. A simple conversion kit allows it to operate at pressures between 8,000 to 40,000 psi.

Internal gearing eliminates pulleys and belts, substantially reducing the pump's overall footprint. The forged steel crankshaft is mounted in heavy-duty bearings. Drive pinion output shafts on both sides allow for opposite-hand drive. The trailered unit comes with four-wheel electronic brakes, full DOT lighting package, and heavy-duty axles. All operating controls, including the pressure compensating bypass valve and pressure gauge with snubber, are mounted on a separate accessory manifold for additional protection. Power rating range from 200 to 300 hp. 248/624-5555; www.nlbcorp.com.



COMPACT PRESS TOOL

The ROPRESS compact battery-powered press tool from Rothenberger USA is designed for pressing copper fittings, enabling contractors to reduce installation and repair time. The tool is designed to be light and fast, and its linear design allows it to access hard-to-reach places. The tool is powered by an 18-volt lithium-ion battery and weighs 8 pounds. It offers an estimated 100 cycles per charge with a 3-amp battery and 50 cycles with a 1.3-amp battery. 815/387-9777; www.rothenberger-usa.com.

FLEXIBLE RECORDING

The Optimum HDD push camera system from Hathorn Corp. lets users record inspections directly to a built-in hard drive or a USB memory stick. The system makes it easy to transfer media between multiple drives or computers. The unit includes a 320 GB hard drive, 8.4-inch industrial monitor, weatherproof plastic case, multiple USB ports, removable mounting post, click-touch buttons, and spill-proof keyboard. It also has an onscreen footage counter, 512 Hz sonde, removable control box, two-hour battery, and self-leveling camera. 905/886-2835; www.hathorncorp.com.

VARIABLE-SPEED WINCH

Grundowinch hydrostatic constant-tension winches from TT Technologies are designed for variable conditions in below-grade work. All models have protective cable storage and are available with an air-cooled diesel or gasoline engine and an adjustable boom system. These portable units are suited for applications including pipe bursting, sliplining, pipe pulling, underground cable pulling and swage lining.

Constant tension means any cable slack is immediately sensed and quickly taken up automatically. Permanent documentation of the pull is available in an optional chart recorder that prints out a copy of the job's tensions. Firm anchoring is achieved with prop legs in front and extended angled legs with cutting feet in the rear. Stow-away wheel chocks are included. 630/851-8200; www.tttechnologies.com.

DRAIN CLEANER FORMULATION

Maximizer DT Pro from Statewide Supply is an environmentally friendly drain cleaner used to remove organic material from drains, septic tanks and grease traps. Its blend of natural bacteria and enzymes biodegrades organic buildup without soap or chemicals in residential, commercial and industrial applications. The product requires no pre-mixing. Stabilizers keep it from becoming active until it is put into the waste stream, where the bacteria and enzymes breakdown the waste and convert it into carbon dioxide, water and mineral ash. 800/553-5573; www.statewidesupply.com.

MID-SIZED CAMERA

The MS11 mid-sized video inspection system from MyTana Mfg. Co. is a lightweight (46-pound) one-piece system with built-in 6.4-inch LCD monitor and optional digital recording. It is designed for 3- and 4-inch lines and carries 150 feet of flexible mid-sized pushrod. The locatable camera head includes a 512 Hz transmitter. The 1.5-inch-diameter stainless steel camera head has sapphire windows for high strength. Variable light control allows inspection of different pipe materials and conditions. 800/328-8170; www.mytana.com.

HOT-WATER CURING

The Maverick hot-water cure system for CIPP lining from Perma-Liner Industries lets users cure newly installed liners in less than one hour. It extends working time significantly when using 100 percent epoxy resin and enables crews to work year-round. The compact, easily transportable system includes a cart-mounted control system, inversion head, cap, air hose, heating hose, heat tube and reel, and relief control. 866/336-2568; www.perma-liner.com.

EXTENDED-RANGE CRAWLER

The Rovver X steerable 6-wheel-drive camera crawler from Envirosight provides extended crawl range (up to 1,650 feet) in a simplified three-piece system with a touchscreen control pendant. The pendant captures days' worth of MPEG video and JPEG still images and lets users upload observations directly to WinCan software.

Twin multifunction joysticks simplify operation and macros automate everyday inspection routines. The crawler and pendant connect directly to the video cable reel without a control unit, making the system highly portable and simplifying setup. The system also includes a detachable remote-operated camera lift, three onboard cameras, an integrated sensor package (sonde, dual lasers, inclination and roll) and concurrent control for all camera, reel and crawler functions. 973/252-6700; www.envirosight.com.

HIGH-PRESSURE TANK CLEANERS

Aquamat automatic tank cleaners from Hammelmann remove deposits including hardened materials from inner tank walls at pressures up to 21,750 psi. A wide range of nozzle arms in various lengths and shapes enable the tools to suit numerous applications and tank sizes. Units can be fitted with one or two arms.

The nozzle arms rotate from the reaction force of the waterjets at each end. This rotational motion is transferred through a built-in drive and reduction gear that rotates the cleaner around its vertical axis. By rotating on two axes, the waterjets can reach all parts of the tank interior. 937/859-8777; www. hammelmann.com.











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MULTIFUNCTION CUTTERS

ClogChopper cutting blades from General Pipe Cleaners are multifunction tools with six self-sharpening blades that break through encrusted debris, root masses, scale, crystallized urine, and other stoppages without damaging the pipe. The spherical design lets the tools maneuver around tight ends and traps to clean metal, plastic and clay pipes thoroughly. The tools can be used to clean stacks, down-spouts and mainlines as well as drainpipes. The tools come in a variety of sizes and connector options for General and other major brands of cable machines. 800/245-6200; www.drainbrain.com.

TOUCHSCREEN CAMERA

The PROvision Touch camera from Spartan Tool has a viewable resolution the company says is four times higher than for conventional cameras and includes a full touchscreen keyboard. Users can clearly see information on the 15-inch ATM-style screen even in bright sunlight.

The 1.375-inch-diameter self-leveling color camera head can inspect pipes up to 6 inches. The system comes fully self-contained with 100 feet of reel-mounted pushrod in a wheeled case with extendable handle. Inspections are recorded directly to a standard thumb drive. 800/435-3866; www.spartantool.com.

BURSTING PULLER

The V24 pipe bursting pulling unit from TRIC Tools is designed to deliver high pulling power in a cost-effective package for trenchless sewer lateral replacement. The inline puller has no wheels, and runs on 2,000 to 3,000 psi hydraulics to replace pipes 6 inches and under. It can run as an auxiliary attachment to a backhoe or similar machine. An optional 3,000 psi high-flow power pack is available. 888/883-8742; www.trictools.com.

CUTTING TOOL

Tulip Cutter tools from ENZ USA are designed for cleaning vent pipes, drains and other smaller-diameter piping. The self-sharpening tools have a short length dimension that lets them handle tight bends. Outside diameters range from 7/8 inch to 3 1/2 inches. They can be adapted to the cable of the user's choice. 630/692-7880; www.enzusainc.com.

DIGITAL PUSH CAMERA

The P340 flexiprobe system from Pearpoint includes zoom and pan to focus on problem areas. Users can rotate images for easier interpretation. Pictures and video are stored in portable USB or Compact Flash memory. The high-resolution compact stainless steel camera has ultrabright LEDs for clear viewing even when submerged in water. The controller displays color footage in digital quality on an ultrabright 8-inch TFT screen.

A single key press starts recording of video that is automatically time- and date-stamped and logged against the current job. Still pictures can be captured, inspected and filed at any point during the inspection at the touch of one key. Audio can be tied to the recordings with an optional microphone headset. Each system comes with a universal brush skid set that allows the 1-inch camera to be used in pipes up to 4 inches and the 2-inch camera to be used in pipes up to 6 inches. 800/688-8094; www.radiodetection.com.

FIRE FLOW TESTER

The FireFlowPro system from Hurco Technologies lets communities use wireless technology to evaluate the condition of water distribution systems, collecting pressure data to determine fire flow capability and water main C-factors. It uses GPS coordinates to identify hydrants and valves used in testing and maintenance procedures. A built-in camera captures images of fire hydrants to make reports more meaningful. Meshing technology allows transmitters to pass pressure data from one sensor to another and finally to a data-collection handheld computer. 800/888-1436; www.gethurco.com. ©





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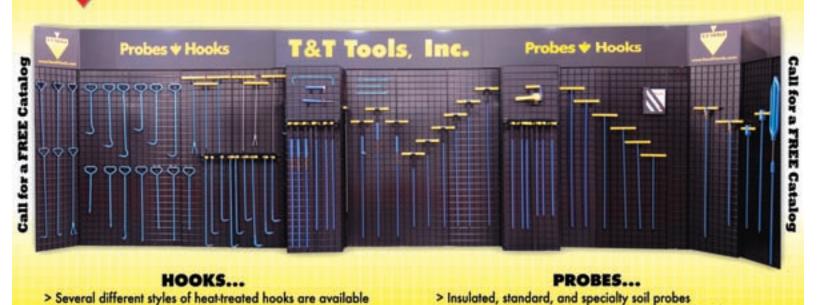
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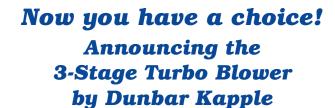
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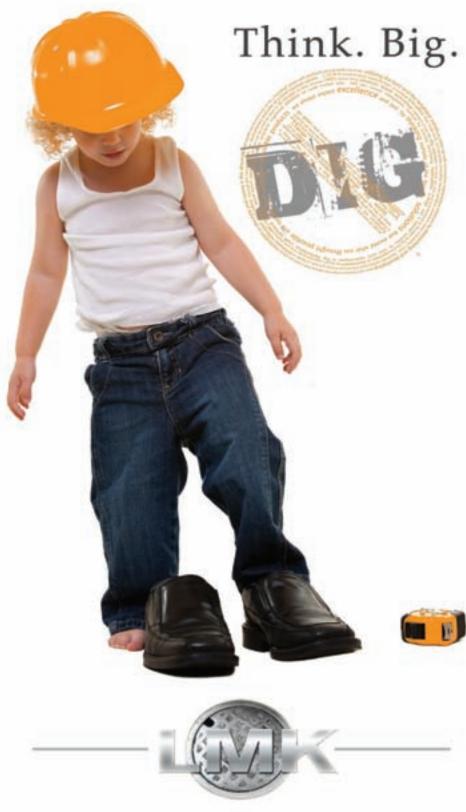
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Tech Perspective looks at technology-related issues and provides information and advice that cleaning professionals can apply to equipment selection and to their daily work in the field. Industry members are welcome to offer ideas for this column. Please direct them to editor Ted J. Rulseh, editor@cleaner.com.

Gas Detectives

PORTABLE GAS DETECTORS ARE ESSENTIAL EQUIPMENT FOR SEWER CONTRACTORS. CHOOSING THE RIGHT MODEL CAN SAVE MONEY AND MAKE SURE WORKERS ARE ALERTED TO DANGERS.

BY PETER KENTER

ewer contractors understand the need to protect themselves with sensitive portable monitors that detect hazardous gases.

But the wealth of options on the market can make selection compli-

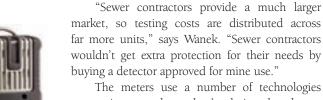
But the wealth of options on the market can make selection complicated. Should you buy meters that detect the one gas your people are most likely to encounter? Or multi-gas meters that can detect several gases at once?

When outfitting an entire crew with similar protection, cost becomes an important factor. "In most cases, sewer contractors know what gases they're likely to encounter," says Rick Wanek, industry market manager, portable instruments, with Dräger Safety Inc. (Draeger). "If they're likely to run into anything unusual, like chlorine used to treat wastewater, they're usually informed of that type of gas hazard before they get to the site."

While there's no hard-and-fast rule, most jurisdictions require workers to use meters approved by Underwriters Laboratories or the Canadian Standards Association. Although Wanek says counterfeit equipment occasionally reaches the market, the guilty parties are quickly eliminated. "In order to sell, they have to advertise, and organizations like UL are quick to defend their trademark," he says.

RIGOROUS APPROVALS

Detectors approved by the Mine Safety and Health Administration (MSHA) are more costly than those approved for sewers – not because they necessarily provide more protection, but because the mine sector represents a smaller market with a much more elaborate and costly testing regimen.



The meters use a number of technologies appropriate to each gas they're designed to detect. A multi-gas meter may use multiple methods to detect a range of gases. For example, infrared sensors detect gas concentrations by shining infrared light through the sample. Electrochemical sensors read the electric currents generated by the interaction of specific chemicals and a target gas. More complex catalytic sensors ignite small samples of gases such

as methane and measure the resistance between two filaments coated with precious metals.



STANDARD GASES

"Sewer contractors generally favor meters that read the four standard gases," says Wanek. "In a sewer setting, you would at least want to detect methane, oxygen, hydrogen sulfide and carbon monoxide."

Why oxygen? Because meters that detect methane do so through electronic combustion of microscopic methane samples, and combustion requires oxygen.

Occasionally, contractors may work in confined spaces containing other gases, such as chlorine or hydrogen peroxide used in a water treatment plant. "Sometimes an accidental industrial spill will see an additional chemical accidentally released into the sewer," Wanek says.

Compact gas detection meters are convenient to carry and send either a vibration or audible alarm of varying intensity depending on whether approaching or passing a safe level of exposure.

"Typically, the contractor will be warned about this beforehand. At that point, it may be more economical to buy additional single-gas meters to deal with the specific problems in the situation in which they're working. Generally, workers are reluctant to carry two meters, but that may be the least expensive way to go on a case-by-case basis."

Gas detectors are also rated according to Ingress Protection (IP), a twodigit number. The first digit represents dust protection, on a scale of 0 (or X) to 6, while the second represents water protection, on a scale of 0 (or X) to 8. A unit rated IP 67 would be dustproof and highly water resistant, submersible for brief periods at shallow depths.

GETTING SMALLER

Wanek notes portable monitors are getting smaller. His company's smallest portable meter measures 3 inches long by 2.5 inches wide and a half-inch thick. The larger ones measure about 2 by 6 inches and weigh 6 or 7 ounces.

"The meters could actually be much smaller, but we need to keep some real estate open for the display and the necessary labels that accompany the meters," Wanek says.

Meters alert users to threshold levels of gas by sounding an alarm - either a vibration or a sound. Some provide a two-alarm system: a low-level alarm

choice of 55 different gas-specific chips. This system also provides a snapshot of gas concentrations.

SOPHISTICATED OPERATION

While meter technology continues to advance, the basic measurement techniques remain largely the same. "The most dramatic change is in the microprocessors used to analyze the reading," says Wanek. "For example, if you can be exposed to 50 ppm of a certain gas each day, and 60 ppm for a very short time, the microprocessor can calculate what is considered an acceptable exposure for the day through time-weighted averages."

Contractors want value for their money and prefer to hang onto their meters for as long as they can. Typically, a portable meter is good for at least five years, Wanek says. Proper maintenance can make sure the units function effectively for as long as possible.

Units should be cleaned every few months to keep the display clear, and permanent filters should be cleaned as the manufacturer recommends to ensure free flow of sample atmospheres. Removable filters should be replaced if dirty. "If you drop the meter into the muck or into a pool of wastewater, clean it immediately," says Wanek.

The meters should also be "bump-tested" each day by exposing them to a

"You don't want anyone to hit a snooze button in a critical situation. If the threshold is set low, you may occasionally get a false alarm, but better to have some false alarms and know the meter is working."

Rick Wanek

that indicates the gas levels are creeping toward the threshold, and a secondary alarm that warns the user that the threshold is being passed. "At that point, you simply evacuate," says Wanek.

Acceptable thresholds for various gases can change from country to country and can be programmed into the instruments by the manufacturer or the user. In the U.S., meters are programmed to defaults set by OSHA Confined Space Entry regulations, CFR 1910.146. In Canada, they're set under regulations determined by each province.

"The user can change those presets or change the type of alarms with a software interface," says Wanek. "That software is necessarily password protected, because you don't want the average worker to change those settings. A beeping unit is annoying because it's meant to annoy you and alert you to a problem. You don't want anyone to hit a snooze button in a critical situation. If the threshold is set low, you may occasionally get a false alarm, but better to have some false alarms and know the meter is working."

TUBE TESTERS

For contractors who only occasionally work where gases beyond the traditional four are present, alternative devices can be used. Dräger-tubes, for example, are glass ampoules containing reagents that can detect specific gases in various environments.

"You pump the surrounding atmosphere through the tubes to determine peak concentrations," says Wanek. "However, they're best used in limited areas. Carrying a portable gas meter is essentially like carrying a movie camera running continuously, while using the tubes is more like taking a snapshot of a particular limited environment, such as in sewers, shafts, tanks or other confined spaces.

"We often find tubes used to measure concentrations of specific toxic or carcinogenic gases, such as benzene, that are associated with a specific work site. We've had some sewer contractors using tubes to detect benzene that had leached into the surrounding soil."

Another solution for occasional gas encounters is a chip system – a more advanced version of tubes in which a portable unit can be outfitted with a set sample of gas at a pre-determined concentration. The bump-testing kits act as mini-calibration tests to ensure the unit is reading properly.

"If you're getting low response, or no response, you should check the filters," says Wanek. "If the problem persists, the unit shouldn't be used in the

Portable units are powered by batteries. While they can run on alkaline batteries, Wanek says it's often simpler to use rechargeable batteries, which can be gang-charged each night to maximum power. Alkalines need to be swapped out often to make sure they cover the entire workday.

Batteries should never be changed in a confined space, since there is a slight chance battery removal could cause a spark and ignite flammable gases.

FINAL WORD

A good portable gas detector is no substitute for safe work practices. "If you're entering a confined space, it's not something you should ever do alone," Wanek says. "The detector will alert you to the hazard, but regulations dictate that you need a spotter to help get you out of there if there's any communication indicating trouble." c

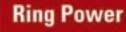


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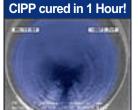
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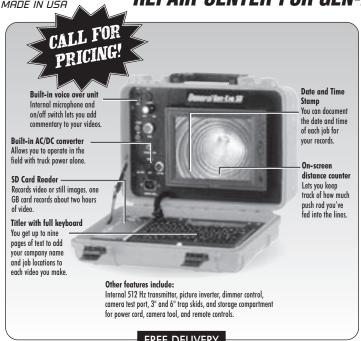
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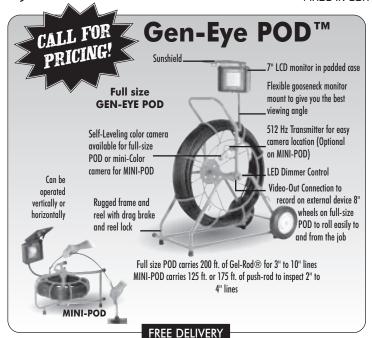


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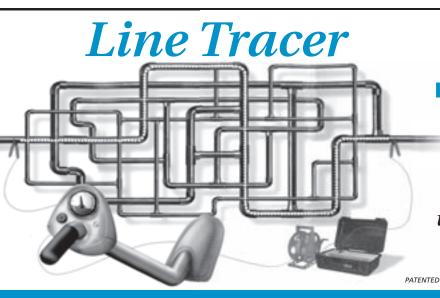








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BORROWING FROM A RELATIVE OR FRIEND TO START A BUSINESS CAN BE REWARDING TO BOTH PARTIES - OR SET OFF FAMILY FEUDS. IT IS NOT SOMETHING TO APPROACH LIGHTLY.

BY JUDY KNEISZEL

anks, credit unions and other lenders have tightened business credit in recent years, and they don't seem ready to loosen anytime soon. So small businesses in position to expand are having trouble finding the money they need, and are looking at alternatives.

One of those may be borrowing from a family member or friend. According to SCORE, a nonprofit association of retired executives and business owners who assist small businesses, investments by family and friends account for more than half of all investment dollars for startup businesses.

Of course, loyal family members and true friends might loan you money just because they want to see you succeed. But with the low interest rates being paid on bank CDs and money market funds, they might also be hoping your company will pay them a higher return on their money.

If you're looking for capital, don't just blurt out a loan request in the middle of Thanksgiving dinner or at your class reunion. Politely ask the potential lender if you can meet privately. Then prepare what you will say. The first step in successfully borrowing money from friends or family is to assure them:

- Their investment is smart financially.
- Their investment won't harm your personal relationship.

IT'S ALL IN THE DETAILS

If you ask for a loan from a friend or family member and get a positive response, plan to meet again to discuss it further. This time, take a list of details, including how much you want to borrow, any other sources you are using, the interest rate you'll pay, your proposed repayment schedule, the legal and financial protections you'll offer, and the down payment you'll make for what you're buying.

According to SCORE, a nonprofit association of retired executives and business owners who assist small businesses, investments by family and friends account for more than half of all investment dollars for startup businesses.

Don't pressure, but be reassuring. Be realistic about how much money you want to borrow. Base your request not just on what you need, but on how much the person can afford. Don't ask for more money than a person can afford to lose; ask more than one person for loans if necessary.

Treat your prospective lender the way you would a bank. Be willing to show a detailed business plan and put up some collateral. Show your credit report and any other personal financial statements they might be interested in.

Once you secure a loan, proper documentation is essential. Formalizing

the transaction makes it clear that this is a loan, not a favor, and the person's role does not go beyond that of lender. Setting up a repayment plan lets the lender know you are serious about repaying.

There's another argument for proper documentation, and it relates to taxes. Suppose the uncle who grants you a loan slaps you on the back and says, "Aw, shucks, just pay me back when you can," and refuses to charge you interest. You should still draw up a contract or promissory note, because otherwise the IRS can actually attach an interest rate to the loan for you. The IRS may also mistake the loan for a gift or an inheritance. Any of those events will have tax consequences.

HELP IS AVAILABLE

If all the red tape seems overwhelming, you may be relieved to know there are services that will prepare documents, create repayment schedules, process payments, provide year-end tax statements, and do whatever else is needed to facilitate loans between private parties.

A loan service can go a long way toward reassuring family members or friends that borrowing money will not harm your relationship. If an outside company manages the repayment processing and recordkeeping, for example, your lender won't have to start an uncomfortable conversation in the event that, say, a payment is late.

Several online loan service companies match people wanting to lend money with people wanting to borrow. Sites to check out if you want someone to handle the details of a loan from or to a friend or relative include www. zimplemoney.com, www.loanback.com, www.one2onelending.com, and www. wikiloan.com. These sites all focus specifically on facilitating and managing peer-to-peer loans between family and friends.

And if you want an example of a family-and-friends loan success story, just look at British industrialist Richard Branson, who, thanks to a loan from his aunt, founded Virgin Atlantic Airlines, Virgin Records, and more than 300 other businesses. He then started Virgin Money, a European peer-to-peer lending service.

IF YOU ARE TURNED DOWN

The key to successfully borrowing money from a friend or family member – no matter what business you are in – is to be as honest and professional as possible. If a bank turned you down, the mature, professional thing to do would be to accept the reasons, revamp your presentation and take your request to another bank.

So if a friend or relative refuses you, assume they have their reasons and move on to Plan B. Maybe they've been burned in the past and have sworn off loaning money to friends. Maybe their spouse isn't comfortable with the idea. Or maybe they just don't have the resources you think they do.

Whatever the reason, it's not worth spoiling a relationship, so let it go and drink a toast to your business with them next Thanksgiving. C

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A Return to Civility

LEADERS MUST SET THE EXAMPLE TO ENCOURAGE CIVIL BEHAVIOR AND CREATE THE POSITIVE ENVIRONMENT IN WHICH BUSINESS CAN THRIVE Danita Johnson Hughes, Ph.D., is a health care industry executive, public speaker and author of the book, Turnaround. In her first book, Power from Within, she shared the "Power Principles for Success" that helped her overcome meager beginnings and achieve professional, community and personal success. Visit www.danitajohnsonhughes.com.

BY DANITA JOHNSON HUGHES, PH.D.

ometimes you might wonder if we truly live in a civilized society. It seems rude and discourteous behavior is on the rise. The modern workplace can be an incubator for incivility if left unchecked.

Inside and outside the workplace, we see a rash of disrespectful, discourteous and rude behavior. Angry commuters use their vehicles to take out their aggressions and cut others off in traffic. Customer service has diminished to the point where most would rather use an impersonal ATM than face an unhappy bank teller.

Malicious political campaigns and tactics draw out the worst in even the most respected people. Children face tremendous fear and stress from bullies at school. The examples of an uncivilized society are too numerous to recount, and the workplace is a microcosm of society.

The impact of such behavior can be more psychologically damaging than open forms of abuse, such as harassment and violence. Negative behavior happening outside the workplace is trickling in, affecting employee loyalty, organizational commitment and overall productivity.

The pressures of everyday life can take their toll on employees who are already working under a great deal of stress. Tempers get frayed and patience and tolerance are thrown out the window.

CHANGING THE CLIMATE

It's time for a change, but understanding precedes change. What typically leads to uncivil behavior is disagreement. Someone wants to be right, better or stronger. Someone wants to be heard. Sadly, that attitude often leads to a win-lose outcome.

As a leader, your first step is to realize that conflict is a vital part of organizational success. Properly facilitated, disagreements lead to healthy, constructive conversations that translate into creativity, innovation and a shared sense of accomplishment.

Encouraging civility in the workplace promotes a low-stress work environment and improved employee morale. It also helps mitigate employee dissatisfaction that often results in such things as civil rights complaints and lawsuits.

The economic impact of litigation, turnover, lost productivity and customer dissatisfaction can be devastating. Signs of a company infected with incivility include:

- Higher than normal turnover.
- A large number of employee grievances and complaints.
- Lost work time by employees calling in
- Increased consumer complaints.
- Diminished productivity in quality and quantity of work.
- Cultural and communication barriers.
- Lack of confidence in leadership.
- Inability to adapt effectively to change.
- Lack of individual accountability.

MANAGING RELATIONSHIPS

Civility is essential to defining the culture and establishing a foundation of proper business behavior. To reach its full potential, an organization must be able to manage interpersonal relationships in a manner that promotes civil and respectful interac-

This is not easy considering the myriad personalities and individual circumstances that affect the workplace. But it can be accomplished. Creating a civil workplace boils down to three basic principles: respect, restraint and refinement.

Respect simply acknowledges that although another person's beliefs may be different, you should honor that person's viewpoint and give it due consideration. Considering someone's feelings, ideas, and preferences indicates that you take that person seriously and that their position has worth and value. Respect is the most important step in building a relationship and reducing the potential for conflict. In an atmosphere of mutual respect, goals and concessions become easier to

Restraint is simply a matter of exercising selfcontrol at all times. You should know your triggers and be aware of how your words and actions affect others. Knowing what makes you angry or upset helps you to monitor and manage your reaction. You may not be able to control what others say or do, but you can control your response.

Refinement is the quest for continual cultivation and improvement of relationships. Just as continuous quality improvement is a means to better performance and higher efficiency, refinement of thought, ways of expression and decorum can go a long way to enhance workplace civility.

MAKING IT A PRIORITY

Improving and strengthening relationships requires effort and commitment. Achieving civility requires the involvement of every employee, from the top down. Everyone prefers to work in an environment free from backbiting, rudeness and constant complaining. A commitment to achieving and sustaining civility can be the key to a successful and thriving organization with high morale.

Leaders can and should make workplace civility a priority, insisting that all employees exercise these practical ideas:

- Pursue understanding first.
- Listen to and respect others' opinions.
- Seek common ground, even if it's to agree to disagree.
- Tune into what's happening around you; observe the climate.
- Accept responsibility for your actions and their consequences.
- Offer and willingly accept constructive feedback.

Leaders are called to promote a safe and respectful workplace. That means insisting on civility and common courtesy. It starts with you. Take time to assess your own behaviors.

Do you gossip or spread rumors? Have you ever raised your voice to make a point? Are you communicating important information to your team, or withholding information they need? Set an expectation of workplace civility by walking the talk and being the change you want to see. c





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Tie-Dye Sewer Guy

RHINO ROOTER WRAPS HIGH-POWERED PIPE CLEANING EQUIPMENT IN AN EYE-CATCHING PACKAGE THAT HELPS GENERATE CUSTOMER CALLS

BY KEN WYSOCKY

esidential drain cleaner John Larsen never planned to be a one-man show, but years ago he saw that's what he would remain without equipment upgrades.

These days, Larsen, owner of Rhino Rooter in Brigham City, Utah, tows a trailer-mounted tandem-axle CJ85-3600TU waterjetter from Hot Jet USA with a smart-looking 2008 Ford F-350 pickup with a KUV truck body from Knapheide Manufacturing Co. and exterior-accessible cabinets. Both carry the company's tie-dyed rhinoceros logo.

The rhino came when Larsen bought a drain-cleaning company in 2002 from Ron Rhinehart, whose nickname was Rhino. Larsen came up with the tie-dye element (he and his wife are Jimmy Buffet fans). Then the only missing pieces were a better truck and a new jetter.

Larsen saved for a couple years to buy the jetter in August 2009. He had been using a cart jetter that produced 3,200 psi/4 gpm - not powerful enough to cut roots out of laterals or quickly remove grease from lines.

After research that included attending the Pumper & Cleaner Environmental Expo, Larsen chose the Hot Jet cold-water jetter, which produces 3,600 psi/8.5 gpm and carries a 330-gallon water tank and a 35 hp gasoline engine. He was attracted by the price and the size - "not too big and not too small," in his words.

"It cost me about \$17,000," Larsen notes. "That's a lot of money for a one-man show. But I saw the work I was giving away. I'd unclog someone's pipe, then camera it and still see roots down there. The customers would want them removed completely, so I was continually referring work to my competitors. When you see those dollars going into competitors' pockets, you start thinking you should do something different."

With the jetter and a Warthog nozzle from StoneAge, monthly sales now average six to seven times more than during his first year in business. That's partly because the business wasn't full-time when he bought it, but the jetter is a major revenue generator, letting Larsen do more jobs because it unclogs lines much faster.

"A jetter brings in more money because it does a better job than a cable machine, which kind of skips past the grease," he says. "A jetter takes out the

money machines

OWNER: Rhino Rooter, Brigham City, Utah

MACHINE: CJ85-3600TU tandem-axle, cold-water jetter,

Hot Jet USA

VEHICLE: Ford F-350 with KUV truck body from

Knapheide Manufacturing Co.

PRIMARY FEATURES: 3,600 psi/8.5 gpm; 330-gallon water tank;

35 hp engine \$17,000



grease. And you make more money off it because you can charge more. That jetter paid for itself in the first year of business. Jetters are moneymakers if you know how to use them. Mine sends me on a few vacations a year."

Larsen bought the truck, a repossessed vehicle, about the same time as the jetter. Before that, he hauled equipment in a small utility trailer, which he towed with his personal pickup. "I was really racking up miles on my pickup and wanted something that looked more professional and would help me stay more organized," he says.

Far roomier, the truck lets Larsen carry equipment that includes two Seeker cameras from Aries Industries, a RIDGID SeeSnake micro-Drain camera, a RIDGID NaviTrack Scout locator. a DM175 drum machine from Duracable Manufacturing Co. for 4- to 6-inch lines, a lightweight Duracable DM125 drum machine for 1 1/2- to



The truck and jetter going down the road make an attractive matched set, and prospective customers notice the sharp graphics.

2-inch lines, a RIDGID K-60 compact sectional cable machine for 4- to 6-inch lines, and a Torque Master TM38 drum machine from Coast Manufacturing for 1 1/2- to 2-inch lines

"That jetter paid for itself in the first year of business. Jetters are moneymakers if you know how to use them. Mine sends me on a few vacations a year."

JOHN LARSEN

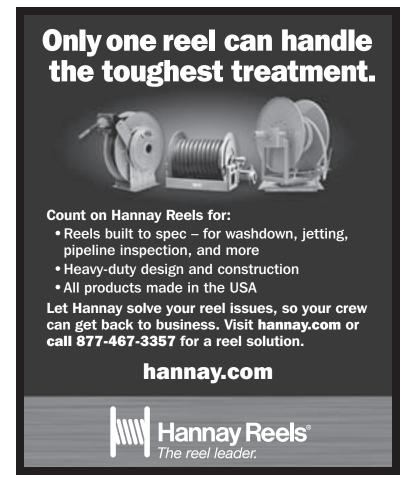
"To be a full-service drain cleaner, you've got to have a camera, too," Larsen says. "I run the camera down there to show customers the difference. before and after. They like to see what they're paying for. It takes more time, but you can charge more money, too."

The tie-dyed rhino helps brand his company and generates service calls. "It's so bright that people can't help but notice it," Larsen says. "I get comments on it all the time. People

call in and say they noticed the logo and the phone number on the side of the truck. I guess you could call me the tie-dye sewer guy." C

SHOW US THE MONEY (MACHINE)

Money Machines, a feature in Cleaner, reports on innovative work vehicles that help contractors operate more efficiently, satisfy customers and earn more profit. We'd like to know about your Money Machine — be it a service van, camera truck, jetting rig, vacuum unit or any vehicle that really helps drive your business. To nominate your vehicle for a feature in this column, send an e-mail to editor@cleaner.com. Tell us briefly but specifically what features make it a great producer. And send a picture - because appearance counts. We look forward to seeing your Money Machine.













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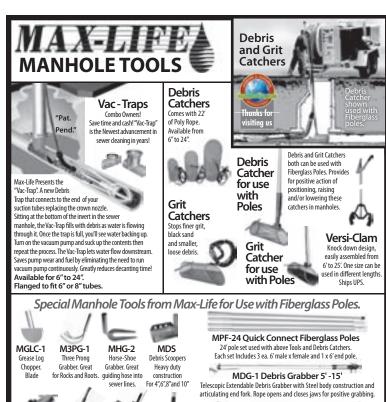
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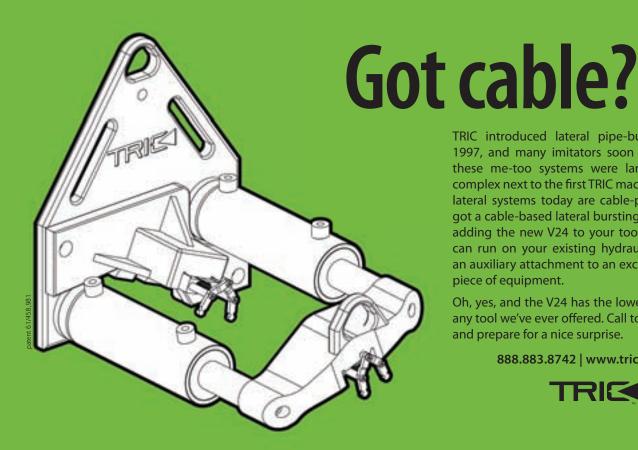
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Comments may be directed to Ken Wysocky in care of Cleaner.

BY KEN WYSOCKY

n the business world, being just like everyone else is a formula for failure. That's why differentiation - setting your business apart from competitors – is so critical.

There are a number of ways to separate your company from the pack. Some contractors do it with eye-catching vinyl wraps on service vehicles and other equipment. Others rely on technologically advanced equipment that makes their service faster and more efficient.

Some create a professional image that stands out in customers' minds and helps generate word-of-mouth referrals. Still others do it with comprehensive marketing campaigns. No matter how you do it, there are clear advantages to being mint-chocolate chip instead of plain vanilla. Here are some strategies that three contractors use to differentiate their businesses.

"Top-of-mind awareness is the key to differentiation," says Derrick Jackson, owner of Precision



DERRICK JACKSON OWNER Precision Plus Plumbing, Philadelphia, Pa. Employees: 2 Years in business: 12

Plus Plumbing in Philadelphia, Pa. "You want customers to think of you and know about you before they have a particular problem.

"I do that by writing an article every week in a local weekly newspaper to educate customers. When they have a problem, they're going to think about the guy that's been giving them free advice.

"We advertise in the paper, and they allow us to write an article for free. It's a benefit to their readers. I found out about it by asking. I ran some paid advertising first, then came up with the idea and presented it to them. They loved it because it's one less article they have to come up with on

"Customers see my face and know my name before they even call me. So basically, I've become the expert, and that helps out quite a bit. I also operate with clean vehicles, and require technicians to wear uniforms with an ID badge and to put a red

"Customers see my face and know my name before they even call me. So basically, I've become the expert, and that helps out quite a bit. I also operate with clean vehicles, and require technicians to wear uniforms with an ID badge and to put a red mat down when they work in customers' houses."

Derrick Jackson **Precision Plus Plumbing**

mat down when they work in customers' houses.

"All those little things separate you from the competition. White shirts tell customers we're clean and professional. We also have a vinyl wrap on our trucks with a picture of a family.

"Our phone number is 215/748-PLUS, to coincide with the name of the company. I want it on the minds of all my customers. I developed a jingle for a radio ad, too. I knew how I wanted it to sound, but I'm not a musician or a singer, so the radio station handled that part. I'm not running the radio commercials now, but when things turn around, it's something I plan to use as a tool to get our name and number out there.

"Everything about your company should be different. If it's not, in your customers' eyes, you're just like everyone else."

"Our specialty is maintaining and servicing septic systems and cleaning out lines in those systems," says Ben Hatcher, owner of B & H



BEN HATCHER OWNER B & H Services. Owensville, Mo. Employees: 1 Years in business: 21

Services in Owensville, Mo. "Our main selling point to differentiate ourselves is that we take care of the whole system from the house to the end, not just the septic tank itself. A lot of guys don't worry too much about the lateral lines and what's behind the septic system.

"I also jet out the line from the lateral turnup back toward the tank, and flush it all back to the tank. I've rigged up an adapter that allows me to use a pressure washer on the turnup. It reduces the connection down to make a watertight connection. On the turnups, there's a 1 1/4-inch female thread, and I use a quick-connect valve on the pressure washer that adapts to the female thread to make

"Then I can use the portable jetter to pressurewash the line. It's just a simple thing I came up with by thinking outside of the box - using my experience to my advantage.

"I also speak to homeowners and try to educate them about their systems. I convey to them that they don't have only a septic tank, but a dispersal system as well. That has to be maintained as well as the septic tank. No matter what you have out there, you have to maintain the whole system, not just specific components."

"We differentiate our business with service and getting to a problem and solving it honestly,"



RICK STOWE WORKING MANAGER Lang's On-Site Services, Southfield, Mich. Employees: 3 Years in business: 47

says Rick Stowe, working manager of Lang's On-Site Services in Southfield, Mich. "We explain to customers that they're not dealing with a third

"I was at a job recently and spent two hours on a one-hour call, but I spent that time showing the customer things he never understood before, and now he understands why I did what I did. I guarantee we'll be back there. There's no doubt in my mind."

> **Rick Stowe** Lang's On-Site Services

party or a commission-driven employee trying to sell, sell and sell something they don't need.







"We also differentiate by keeping our equipment updated and well maintained so it doesn't break while on the job. That's paramount. We operate with a clean, modern and nicely lettered truck. We work in a very wealthy community, so our equipment and employees have to be clean.

"We also take extra time to educate homeowners. I was at a job recently and spent two hours on a one-hour call, but I spent that time showing the customer things he never understood before, and now he understands why I did what I did. I guarantee we'll be back there. There's no doubt in my mind. A little time spent now is like planting a

seed for the future.

"You have to talk to customers in simple terms that they can understand. Remember, you're supposed to be the professional. This is your forte – the expertise you've accumulated from years of experience." c





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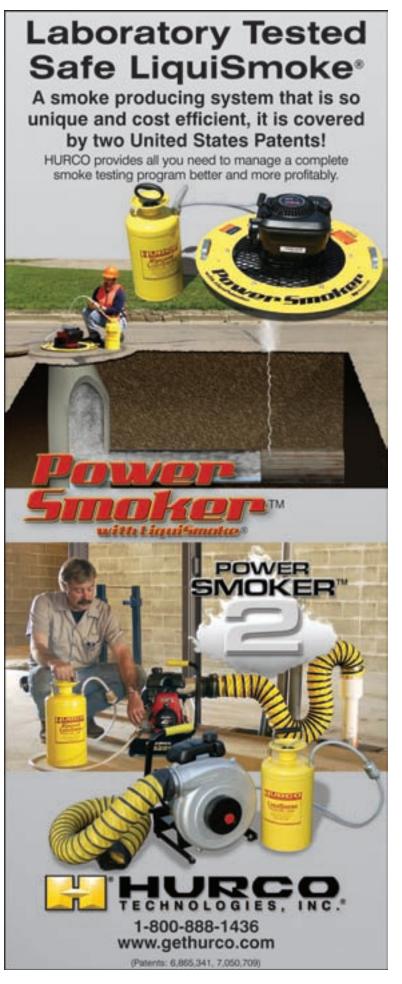
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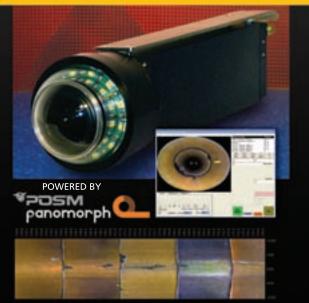
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A PORTABLE WATERJETTER PROVES TO BE AN IDEAL TOOL FOR CLEARING A CRITICAL DRAINLINE BENEATH A LARGE HYDROELECTRIC DAM IN BULGARIA

BY MARTY SILVERMAN

imiter Dimitrov remembers his toughest cleaning job ever. The tool that saved the day was a waterjetter.

Dimitrov heads Double D Engineering Ltd. in Bulgaria, part of Russia-based Zevs Technology. He and his crew have been in the industrial drain-cleaning business since 1998, but they had never received a call like this.

The job involved blockage of a critical drainline beneath a large artificial lake at Dospat Dam in Bulgaria. The clogged conduit posed extreme danger to the dam wall's integrity – and to local residents.

A crew from Double D used a portable waterjetter in a slow, methodical process to clear the drainline in a project that spanned three days.

A MAJOR INSTALLATION

With 143 billion gallons of water behind it, Dospat ranks as Bulgaria's third-largest dam. Officially managed by the country's Dams and Cascades state company, it is also part of the National Electrical Company and a key link in the nation's power grid.

"Everything worked very well. We could not have achieved those positive results without the right tools for the job."

Dimiter Dimitrov





The J-3080 Jet-Set waterjetter from General Pipe Cleaners provided both power and portability needed for the dam drainline job.

tough job

PROJECT: Clear a critical drainline beneath

a hydroelectric dam

CUSTOMER: Bulgaria Dams and Cascades state company
CONTRACTOR: Double D Engineering Ltd., Sofia, Bulgaria
EQUIPMENT: J-3080 Jet-Set waterjetter, General Pipe Cleaners

RESULTS: Line cleaned successfully in three days

Buried in the aging earthen dam lay 460 feet of 5-inch steel pipe that had not been cleaned since the dam was built 50 years ago. Adding to the problem's complexity, the drainage pipe took four turns of 150 to 174 degrees, while descending only 11.5 feet from beginning to end. This shallow 2.5 percent grade, combined with the four bends, had allowed slow sediment buildup as the pipe drained lake water overflow.

By the time the Double D crew arrived, the line had nearly choked shut. That risked shutdown of the hydroelectric power plant, and possible catastrophic dam failure.

"The overflow was working, though very poorly, when we got there, and they vitally needed the pipe to work," Dimitrov recalls. "If the pipe could not be cleared, it would be mortally dangerous to the dam wall."

Access to the blocked pipe was 130 feet away from the nearest water source.





Left, the waterjetter slowly but surely attacked the blockage in the drainline, ultimately opening what had been a badly clogged pipe. Above, the crew extracted numerous chunks of hardened sediment from the pipe.

GEARING UP

This was the company's first experience with a new 3,000 psi/8 gpm waterjetter from General Pipe Cleaners.

Bringing a large trailer-mounted jetter to the remote site would have been exceptionally difficult; the dam seemed like the perfect application for the new jet machine. The Double D crew also knew they would need lots of water to clear a line of that size and length. All 8 gpm would be needed, but they didn't know if they could get enough water for the pump.

They brought all the garden hose they could find, and two lengths of 3/8inch jetting hose – 250 and 300 feet. The also brought a set of three high-performance nozzles and two standard nozzles.

They considered their possibilities and decided to attack the problem first from the downstream side. But the crew had considerable difficulty positioning the jetter close enough to the outflow through the dense forest and brush below the dam wall, yet also within range of a water supply. So they placed the machine under a tree midway between the water source and the outflow.

The water source was at least 130 feet away, and with a pressure of about 70 psi, the 1/2-inch garden hose proved insufficient to feed the pump. So they set up a second parallel hose directly feeding the jetter's 12-gallon buffer tank. Although water from the second hose wasn't clean, the machine's inlet filter protected the pump from impurities.

ATTACKING THE BLOCKAGE

With the jet ready and supplied with water, the crew began work. It was tough going: after nearly 5 1/2 hours of grinding labor, they had cleared 295 feet of pipe. Dimitrov described the sediment as "very hard at the pipe wall and softer at the center." In fact, his crew extracted slabs of sediment that resembled bricks.

Debris piled up next to the outflow as they toiled. It was hard going, and they were exhausted. At the end of day one, the job was barely half done. On day two, they returned to the same downstream outflow location and tried to get farther up the line. But the pipe length and multiple bends made progress slow and frustrating.

They worked another 5 1/2-hour day, yet only cleaned another 75 feet. At that distance, even with the high-performance nozzles, they couldn't muster the pulling power to go farther. The last 90 feet proved the toughest, and the most dangerous.

"The only way to access the upstream end of the drainage pipe was through a tunnel," Dimitrov says. "It was more like a cave." The tunnel lay in the middle of the dam wall, the core of which was built of clay rather than concrete. Atop the clay was a pyramid of stones and earth.

Workers descended the steep steps of the access tunnel to a gallery 157 feet below the lake surface, and to the drainage conduit's still-blocked upstream segment. "We worked carefully, using the less powerful nozzles to slowly break the debris into smaller pieces, and let them flush safely down the line," Dimitrov says. "With 143 billion gallons of water over our heads, we obviously risked serious injury, at best!"

At any time, large chunks of sediment could unexpectedly loosen and block the previously cleared downstream pipe. The gallery could then quickly flood with the full force of billions of gallons of water, and endanger workers' lives.

SAVING THE COUNTRY

But the Double D crew gradually and methodically eroded the hardened sediment. Using the waterjetter, they slowly and cautiously increased the inside diameter of the drainage pipe, eliminating the risk of catastrophic flooding from dislodged debris.

"The overflow was working, though very poorly, when we got there, and they vitally needed the pipe to work. If the pipe could not be cleared, it would be mortally dangerous to the dam wall."

Dimiter Dimitrov

They cleared the last 90 feet and continued out to 164 feet, re-cleaning the section of pipe that had been so difficult to reach the day before. Even with their slow progress, they finished the last day in less than 1 1/2 hours.

Thousands of dam, waterway and waste treatment pipelines potentially suffer from silt and debris blockages, but not all are accessible to larger trailer-mounted waterjetters, nor is larger wheeled equipment always economical to employ.

Double D blended perseverance, bravery, and a smaller waterjetter to solve a big problem – in the process perhaps saving their country from a catastrophic dam failure. "Everything worked very well," Dimitrov concludes. "We could not have achieved those positive results without the right tools for the job." c

Marty Silverman is vice president of marketing with General Pipe Cleaners.



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To address this need, Sanitation Insurance Services specializes in offering a comprehensive insurance program specifically for septic contractors and portable restroom operators. While some policies provide coverage for

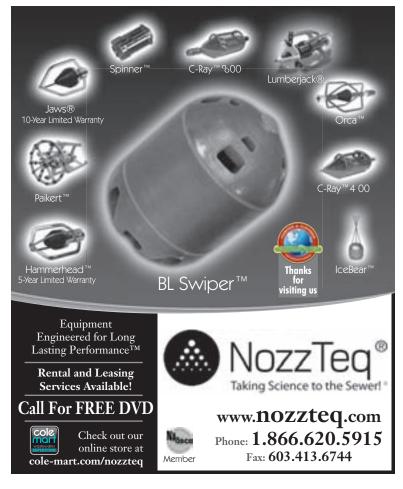
pumping or portable toilet rental, our program addresses design, installation, inspection, service and repair, vandalism as well as pumping and portable toilet rental.

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LISTINGS

Established portable restroom and septic service business located in central Virginia.

Excellent gross each of the past 3 years with no decline in revenue makes this business recession-proof.

Steady work including many contracts and repeat customers. Extensive equipment inventory, good revenue, and owner willing to train. Great opportunity for expansion or a new career. **Asking price \$775,000.**

Successful business with a large amount of equipment and inventory. Profitable sewer and septic business in central Pennsylvania. Increasing revenue over the past 3 years and a large amount of equipment and inventory. Equipment is a mix of old and new, but all is working and making money.

Selling price \$349,000.

Well-Established and Profitable Texas Septic, Sewer & Installation Business For Sale.

Price reduced. Grossing in excess of \$600,000 annually, customer list of nearly 2,000 accounts and 430 contracted customers. Includes nice late model equipment, most are 2007, 2008 model years. Owner retiring after nearly 40 years in business. Real estate available upon request. **Reduced to \$450,000.**

New Jersey VIP Restroom/ Portable Toilet Business. Servicing Metro Philadelphia and Southwest New Jersey with VIP restroom trailers and portables. Many late model assets including 2 nice service trucks, 1 back-up service truck, pick-up truck, 4 VIP restroom trailers, nearly 300 restrooms, sinks, holding tanks, slide-in unit, 2 forklifts, and more. Assets worth over \$300,000 - priced to sell at \$399,000.

Chicago-Area Biosolids, Land Application, Dredging and Industrial Services Business.

Established in 1985, owner is retiring. Reputable business includes real estate servicing the entire Chicagoland area with sludge and biosolids disposal and treatment services. Real estate and shop included with sale valued at \$750,000, business grosses in excess of \$3 million annually, \$6.3 million in equipment and assets including several TerraGators, Vac Trailers, dump trailers, loaders and much more. **\$4,900,000**. Huge potential, good profit and priced right. Non-disclosure Agreement required, all P&L statements, list of assets, and financials available to qualified buyers.

New Jersey/Pennsylvania drain cleaning and pipe service business has all the elements for an ample start to a new foundation or an addition to your existing business. Established in 1994, well-rounded client base, customer contracts, and owner is willing to train. Modern equipment and inventory. Real estate optional. Reasonably priced at \$425,000.

Amarillo, Texas sewer, drain & plumbing business established in 1976. Owner wants to retire, so take the keys to a 2004 Sprinter outfitted with all of the equipment you'll need to run this business. Price includes real estate with 80x100 shop/office on two city lots. Good gross, good profit, financials available with signed non-disclosure. Offered at \$495,000.

WANTED. Very serious and well qualified buyer looking for sewer, septic or industrial business in Dallas, Texas area. Must be grossing between \$500,000-\$1,000,000. All inquiries are kept confidential.

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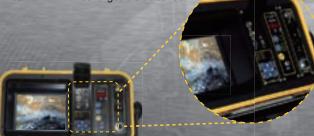
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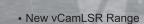
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US JETTING LAUNCHES ONLINE STORE

US Jetting has launched an online store at www.cole-mart.com/usjetting. The store offers 24-hour shopping, a simple order process and the ability to research and compare products.

VACUUM TRUCK RENTALS NAMES GAFF VP OF SALES AND MARKETING

Vacuum Truck Rentals and Vacuum Truck Sales and Service named Bill Gaff vice president of sales and marketing. Gaff brings 30 years experience in the industrial and municipal markets to his position. He also serves as chairman of the board for WJTA/IMCA and is a graduate of Illinois State with degrees in business administration and finance.



Bill Gaff

NU FLOW RECEIVES PATENT, EUROPEAN, PMG APPROVALS

The U.S. Patent Office granted Nu Flow a patent for its cured-in-place pipe liner, capable of lining around multiple 90-degree bends. The patent covers the company's pull-in-place method of installing the liner as well as a liner assembly for installing liner at a junction between a main and lateral pipe. Nu Flow also received CE approval for its potable pipe lining equipment in Europe, BelgAqua acceptance for its potable epoxy in Belgium and PMG listing from ICC Evaluation Service LLC.

BIG'S EASY LIFT LAUNCHES ONLINE STORE

Big's Easy Lift's online store, www.cole-mart.com/bigseasylift, features products, equipment and 24-hour shopping, as well as the ability to research and compare products.

RAPIDVIEW NAMES KERANKO DIRECTOR OF SALES

RapidView LLC named Steve Keranko director of sales for both domestic markets and abroad. He has 15 years experience in technology sales and marketing. Keranko earned a Bachelor of Science degree from Indiana University with an emphasis in marketing and management.



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GAMAJET NAMES WOLFF VP OF DISTRIBUTOR RELATIONS

Tadd Wolf has been promoted from sanitary division manager to vice president of distributor relations for Gamajet Cleaning Systems. He will be responsible for growing distribution within the United States and internationally. Wolf brings 15 years of experience to his position and holds a Bachelor of Arts degree in interpersonal communications from West Virginia University.

JAMKO NAMES SCHLIFKE BUSINESS DEVELOPMENT MANAGER

Jamko Technical Solutions Inc. named Karl Schlifke business development director. He has 20 years of operations, engineering, product and sales management experience. Schlifke has a bachelor's degree in manufacturing engineering technology from Texas A&M University.



MR. ROOTER NAMES SWEEPSTAKES WINNERS

Pat McKelley was the winning name drawn from among 64,736 entries in the Mr. Rooter Water-Wise Sweepstakes. She received a tankless water heater for her home. Winner of water filtration and treatment systems from 3M Purification were Ralph Batten, Saint Marys, Ga.; Michael Doty, Escondido, Calif.; David Mike, Glencoe, Ala.; Danny Koch-Thomas, Buffalo, N.Y.; and Jason Carroll, Dubuque, Iowa. Diana Wortman, Charlotte, N.C., won a year's supply of BioChoiceES.

VAC-CON CELEBRATES 25TH ANNIVERSARY

Vac-Con, manufacturer of combination sewer cleaning vacuum trucks, celebrates its 25th anniversary in 2011. Beginning with five employees in 1986, the Green Cove Springs, Fla., company today employs hundreds of workers and has a worldwide network of dealers.

WOODBINE EXPANDS TOMMY GATE PLANT

Woodbine Manufacturing Co., manufacturer of the Tommy Gate hydraulic lift, has completed the first phase of a three-phase expansion of its Woodbine, Iowa, manufacturing facility. The 74,250-square-foot addition nearly doubled the size of the plant. The next phase will add 20,000 square feet of floor square.

POSEY HYDRO CHANGES NAME TO SATTLER PUMP SOLUTIONS

Sattler Companies Inc. has changed the name of Posey Hydro Solutions to Sattler Pump Solutions. Sattler acquired Posey Hydro four years ago and has continued providing after market pump parts to the fluid transfer and hydroblasting industries. Sattler Pump Solutions also named David E. Chandler director to manage business growth strategies. He brings 43 years experience to the high-pressure pump industry, serving the municipal and oil-gas markets. C

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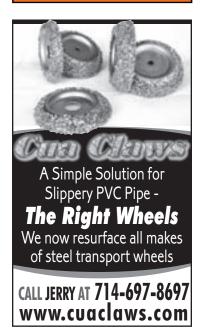
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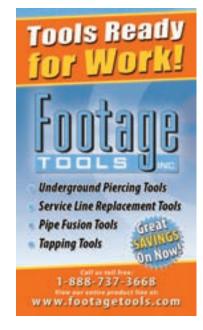




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BUSINESSES

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Well-Established and Profitable Texas Septic, Sewer & Installation Business For Sale. PRICE RECENTLY REDUCED. Grossing in excess of \$600,000 annually, customer list of nearly 2,000 accounts and 430 contracted customers. Includes nice late model equipment, most are 2007, 2008 model years. Owner retiring after nearly 40 years in business. Real estate available upon request. Reduced to \$450,000. E-mail jeffb@colepub lishing.com or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing - www.BTwo.biz.

Successful business with a large amount of equipment and inventory. Profitable sewer and septic business in central Pennsylvania. Increasing revenue over the past 3 years and a large amount of equipment and inventory. Equipment is a mix of old and new, but all is working and making money. Selling price \$349.000. E-mail ieffb@colepublishing. com or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing - www.BTwo.biz. (CBM)

BUSINESSES

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Looking to sell your portable restroom business? We have buyers looking in the following areas; Florida, California, Virginia, Iowa, Kentucky, New York, Pennsylvania and more! Must have gross revenue in excess of \$250,000 in most cases. E-mail jeffb@cole publishing.com or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing.

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704-791-4673 NC

C04

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Aquatech C2000, 1,000 gal. water, 1,000 debris, 60 gpm. On 1980 International diesel w/auto trans. Positive vacuum pump, 500' 1" hose on front reel. \$10,000 OBO. 916-399-9595 CA. (C06)

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North Star Commercial Credit: Commercial Loans for Trucks or Equipment. Flexible purchase programs to fit your budget. 21 yrs. in the industry. Contact Tom Myers - 877-804-2274.

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SAPPHIRE NOZZLES for UHP. laser-etched. heat treated, excellent quality, fantastic savings! 772-286-1218. info@alljetting.com; www.alljetting.com.

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PARTS & COMPONENTS

US Jetting provides aftermarket rebuilding services and replacement parts for Harben® pumps. Low prices, fast response. Why pay more? Call today. 1-800-538-8464, ext 25 or 18. (CBM)

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Winch truck with 3-spd. hyd. 15k# Braden constant speed 6 capstan head with 1200' 1/2" cable. Articulating hyd. arm. No need for top or down hole rollers and bracing. Can be used for pulling poly liner, large diameter balling, bucketing or pipe bursting, 2 part the cable and get 22,500 of pull with a 500' run. Mounted on 1974 International diesel with a 13-speed, \$18,000 OBO, 916-399-9595 CA.

One trade-in model of Pipe Genie heavy duty pipe bursting equipment. Excellent condition, looks new. 30-ton, 100 feet cable, full 2 year warranty. 877-411-7473. (CBM)

Telespector TV and grouting unit, 500' Eastman color-coded quad hose, reels, Cat pump, 20+ packers from 6" to 36", air compressor, Onan 5kw, b&w cameras, skids, 1982 Chevy van, SS chem. tanks. Plus a ton of spare parts. \$10,000 OBO. 916-399-9595 CA.

(C06)

POSITIONS AVAILABLE

SALES/BUSINESS DEVELOPMENT SET: Industrial Services, Inc. is seeking qualified candidates for a Sales/Business Development position. Responsibilities include, but are not limited to; identifying and actively pursuing new opportunities and acquiring new business that aligns with the company's business goals; maintain and develop accounts and business relationships; attend trade shows; prepare and present technical proposals; and maintain a high level of product and service knowledge. Qualified candidates must possess strong communications skills, and a proven ability to prospect, qualify and develop new business. Five years experience in sales and marketing of industrial services with experience/knowledge of industrial cleaning, tank cleaning and environmental contracting. Extensive travel required. We offer an excellent base salary plus commission, company vehicle and benefits. For consideration, please e-mail resume to david@ enviroset.com. (C05)

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

New water end barrel for Vactor water pump, \$1,250,00, 714-381-4141. (CPBM)

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

RODDING MACHINES

1985 Champion .049 machine. V4 Wisconsin, 1000' continuous rod, hose, cutters, saws, and spare parts on 1975 Ford 1-ton. \$10,000 OBO. 916-399-9595 CA.

ROOT CONTROL

1992 hose thruster machine used to apply Vaporooter Sanafoam to sewer lines. Single axle trailer can be connected to jetter truck. \$9,000 OBO. 916-399-9595 CA. (C06)

SEPTIC TRUCKS

1998 Mack RD6885 with a 3200 US gallon stainless steel vacuum tank unit. (Stock www.VacuumSalesInc.com, #6653V) (888) VAC-UNIT (822-8648).

One (1) 2006 3200 US gallon stainless steel vacuum tank. www.VacuumSalesInc. com, (888) VAC-UNIT (822-8648). (C04)

2010 Peterbilt 348 with new Presvac 3600 US gal. aluminum vacuum pressure tank with Masport HXL400WV vacuum pressure pump. (Stock #8808) www.VacuumSalesInc. com, (888) VAC-UNIT (822-8648). (C04)

SERVICE/REPAIR

www.servicewithasmile.com Sewer Cam Reel and Camera Repair: **Authorized for General Wire, Ratech &** Ridgid. Quality service on all brands. Need more info? Give Chuck a call. Electronic Repair Co., Birmingham, AL 35206. 205-836-0454; email: part@ servicewithasmile.com. (CBM)

SERVICE/REPAIR

Dynamic Repairs - Inspection Camera Repairs: 48-hr. turn-around time. General Wire, Ratech, Ridgid, Pearpoint, Electric Eel, Gator Cams, Insight Vision, Vision Intruders. Quality service on all brands. Rental equipment available. For more info. call Jack at 973-478-0893, Lodi, New Jersey.

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One (1) 2006 3200 US gallon stainless steel vacuum tanks. www.VacuumSalesInc. com, (888) VAC-UNIT (822-8648). (C04)

TOOLS

T&T Tools: Probes, Hooks. Probes feature steel shafts with threaded and hardened tips. The insulated Mighty Probe™ tested to 50,000 volts. **Top Poppers™** open manhole covers easily. Free catalog. www.TandT tools.com. Phone 800-521-6893.

(CPBM)

TV INSPECTION

1995 Vantura GMC Van, 190,000 miles. Equipped with Ques system. Consisting of Inspector General System and tractor camera. \$9,000. Call 601-373-3736 MS.

RST pipe inspection systems, mainline controller, data display plus, tractor transporter w/reverse, pan/tilt OEII camera, push button controller. Approx. 1000 ft. cable, misc. parts. Two systems to choose from. \$4,900 for one, \$8,000 for both. Pics available. Call 317-773-7996 IN.



2002 Aries Sewer Inspection Camera Mounted in a 1995 Isuzu NPR **Box Truck:** 104,000 miles, new engine. \$22,000 Eric 570-336-1088 CBM

Used and rebuilt color and black & white camera kits. Ridgid SeeSnakes, General, Gen-Eye, Pearpoint. The Cable Center. 1-800-257-7209. (CBM)

2002 Aries Sewer Inspection Camera Mounted in a 1995 Isuzu NPR Box Truck: 104.000 miles, new engine. \$22,000. Call Eric @ 570-336-1088 PA. (CBM)

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TV INSPECTION

Spartan cameras, used. 1 full size color reel; 1 monitor with VCR; 3 mini camera kits. The Cable Center, 1-800-257-7209.

2008 Ford E-150 HD with 2005 Cyclops equipment (VN-004), color, pan, tilt, zoom over 700 ft. cable. Nice van 73k, 5.4 gas. automatic, AC, with rear heat and AC. Just sent unit to Cyclops factory in Texas for updates and service. Ready to make money for you. Nice compact unit. See more at: www. letsrollautoandequipment.net (stock #08-01). \$39,500. 719-338-3767 (more cctv vans from \$24,950)

Cues TV/grout truck. Rebuilt engine and trans., diesel generator, air compressor, vacuum pump, Penta hose and Logiball lateral packer control panel. All systems are functional and ready to grout. 419-243-5108.



2005 RST video truck. 1996 RST video truck. 1996 Vac-Con On Ford body. All equipment associated. Call Ken Ring 904-993-5211 FL.

1998 Cues Mainline TV System: 1998 GMC Savanna 3500. Cues w/Pro-Data on-screen titler, Honda generator, Sony combo DVD/ VHS, 1700' of multi-conductor cable, pan & tilt camera w/shorty transporter. \$39,500. 608-835-7767 WI (CBM)

CUES/Cutter truck on well maintained 1996 Ford F-450. Includes shorty tractor 6"-24" two Panther cameras. Cutter reel has 500 ft. hose, does not include cutter. \$55,000. Call for pictures, any more info. 216-536-3652 OH. (Billy)

Mytana cameras, used. 3 full size reels, 6 color camera heads, 2 mini reels, 3 monitor packages. The Cable Center, 1-800-257-7209 (CBM)

1996 RST pan/tilt video overlay televising camera trailer w/18' enclosed trailer. Has heat/AC. Two crawler bodies. View from 8"-60". Reel has approx. 1,400'. Comes w/ 11,000 watt Honda generator. Pictures available via e-mail. \$11,000 OBO. Phone 507-340-0389 MN. (C04)

TV INSPECTION

TV Ferret: Complete used, pan & tilt system, 600 ft. cable, 6" crawler. More turn-key systems. Starting at \$20,000. www.tvferret.com. 518-399-2211. (CBM)

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1999 International with a Guzzler Ace 27" HG wet/dry industrial vacuum tank loader. Demo/ Rental unit. (Stock #7390) www.Vacuum Salesinc.com, (888) VAC-UNIT (822-8648). (C04)

VACUUM TRAILER



2007 Ring-O-Matic 750 High CFM Vac Trailer: Cat 3024 @ 50 HP, 696 hours, liquid-cooled, 750 gallon cap.,. 850 CFM lobe style blower, 20,860# GVW... .\$29,500

715-546-2680 WI

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WANTED: We buy sewer trucks. Any year, any condition. Results immediately. 915-239-2266 or mmachinerymexico@gmail.com.

WANTED TO BUY: Any make/model GapVax equipment. 888-442-7829. (C04)

Very serious and well qualified buyer looking for sewer, septic or industrial business in Dallas, Texas area. Must be grossing between \$500,000-\$1,000,000. All inquiries are kept confidential. Call Jeff at 800-257-7222.(CBM)

Wanted to Buy: Vactor 2100's and late model Guzzlers. Cash. 800-336-4369. (CPBM)

WATERBLASTING

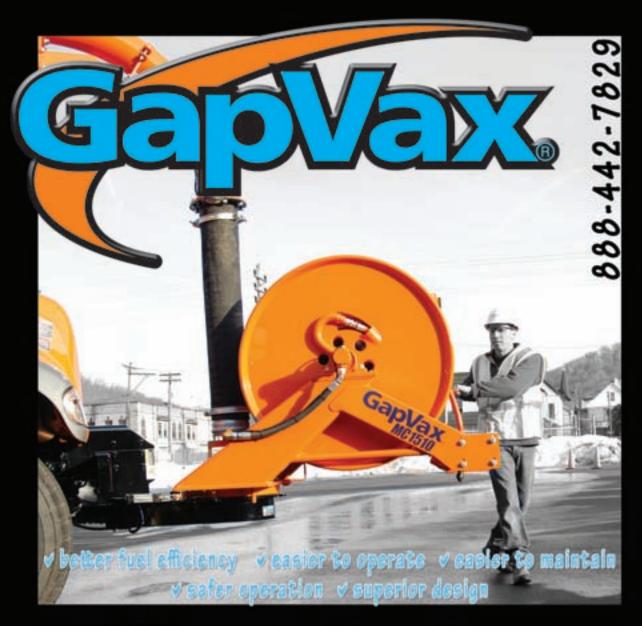
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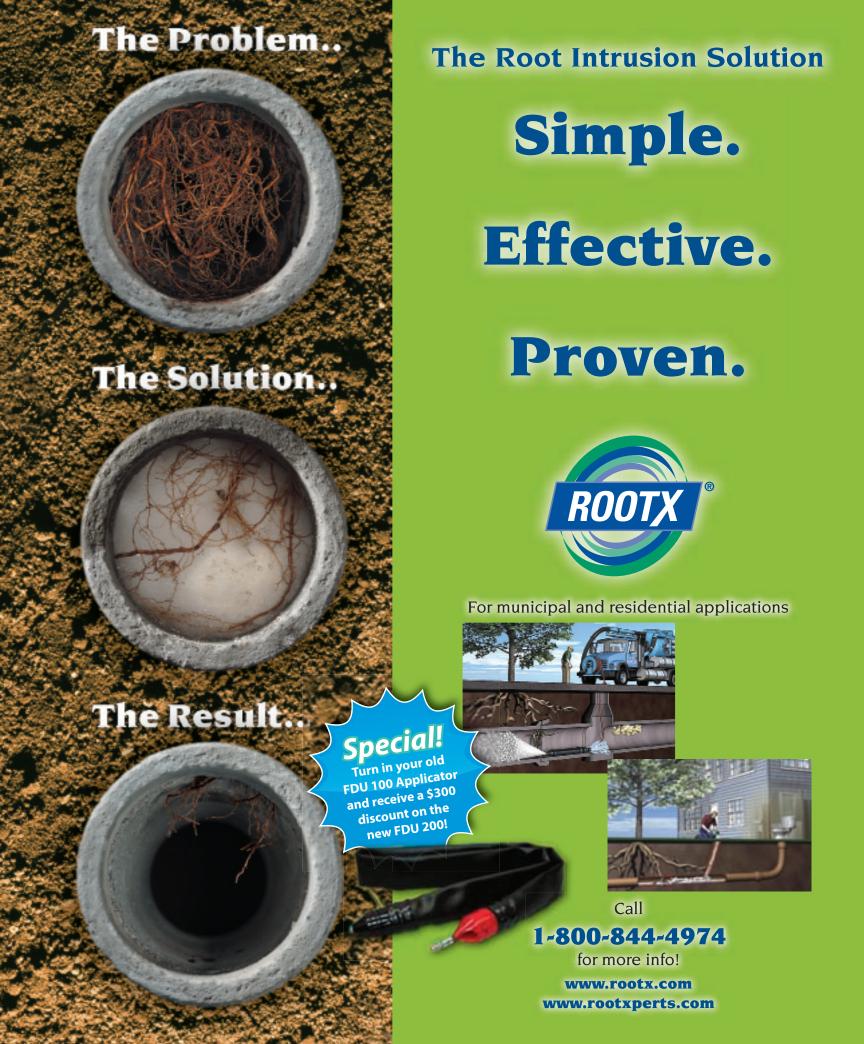


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