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FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

www.cleaner.com SEPTEMBER 2014

CLEANING UP IN CALIFORNIA

SEWER AND DRAIN CONTRACTOR BRANCHES OUT AND TAKES A TWO-PRONGED APPROACH TO BUSINESS GROWTH **PAGE 18**

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A portrait of Grady Adams, an older man with white hair, wearing a dark suit, white shirt, and patterned tie. He is looking slightly to the right of the camera with a gentle expression.

In June, we lost another one of that first group, Grady Adams. Aside from bringing a lot of business to the table over the years, along with his wife Dolores, Grady built many enduring relationships wherever he went. But more than that he was part of the Vac-Con family, and his warmth, his sense of humor, his friendship, and his partnership will be missed not just by everyone here at Vac-Con, but by the many customers he helped.

Farewell old friend.
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COMING IN DECEMBER

ISSUE FOCUS:

Business Diversification – Septic Pumping, Plumbing

- **BETTER BUSINESS:** Franchise systems benefit new businesses
- **MONEY MACHINES:** A cost-effective CCTV van
- **PROFILE:** Action Drain & Rooter Service, Spokane, Wash.



ON THE COVER:

Affordable Drain and Pipeline Vice President Duane Johnson at the company shop in San Diego County, Calif. The company's two divisions serve different clientele but complement each other very well. (Photography by Collin Chappelle)

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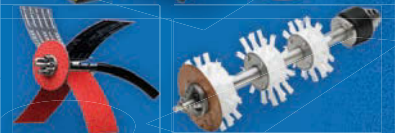
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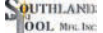











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Luke Laggis
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Protect Yourself

There's never a good reason to ignore proper safety protocols

By Luke Laggis

Back in August, as I was wrapping up the editorial for this issue of *Cleaner*, I received an email from an industry contact with a link to a story about two sewer workers who died on the job.

I spoke briefly about it with our online editor, who was reluctant to write a story about the incident because it's the same story we've told countless times: Workers enter a sewer without proper safety gear and die when they're overcome by hydrogen sulfide gas. I didn't disagree with the decision not to write a story, but it got me thinking.

It was easy for us to say, "We've done that story enough times already." I'm sure for some of you, it's also easy to assume you'll be fine without a gas detector or confined-space gear because you've climbed into a pipe without those things and come out unscathed hundreds of times before. But that's the thing with safety protocols, nine times out of 10 – maybe 999 out of 1,000 – you can side-step them and be fine.

Others will take the lesson to heart, because it's one you don't want to learn on your own. I hope you're among the latter.

The two young men who died, Jarrod Camp, 41, and Jeremy Johnson, 36, undoubtedly realized the consequences of their mistake as they gasped for their last breaths in a dark, dirty sewer pipe below a mall in Phoenix. Tragically, it was too late.

Safety measures need to be top of mind at all times for anyone who enters a sewer pipe or tackles any other job that poses a potential threat. Skipping a step here or there might get you off a job site a little faster, but it could mean leaving a life behind and no payday justifies that.

It's the same on the job as in real life. It may not seem risky to drive two blocks to the corner market for a gallon of milk without wearing your seatbelt: You're familiar with the route, you could drive it with your eyes closed, but familiarity breeds complacency, and you're more likely to get into an accident on that short trip than on a cross-country adventure.

It is the responsibility of all company owners and managers to make sure confidence never outweighs caution, so that preventable accidents never cause an injury, or worse yet, death. You must instill a culture of safety, where everyone is expected to address any potential issue before it has a chance to cause problems, where everyone is encouraged to take the time to do things the right way and look out for their co-workers.

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These machines aren't going to prevent every accident, but they provide another avenue to make safety a part of your company culture, and that's a good start.

Stay safe, and enjoy this month's issue. **C**

Some of you will read this and think it can't happen to you.
Others will take the lesson to heart, because it's
one you don't want to learn on your own.
I hope you're among the latter.

Unfortunately, the one time you really need to take those precautions to make sure you get out alive, you don't, and there's no second chance to learn that lesson. Some of you will read this and think it can't happen to you.

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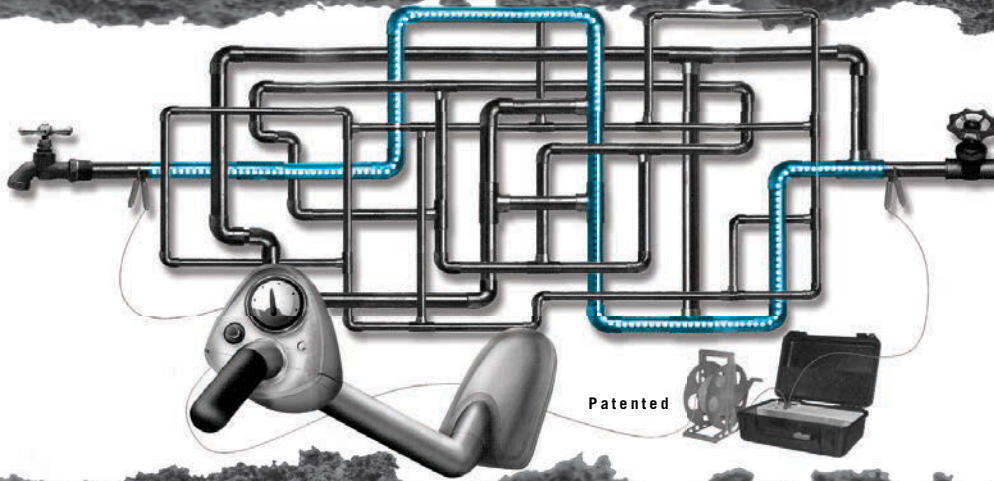
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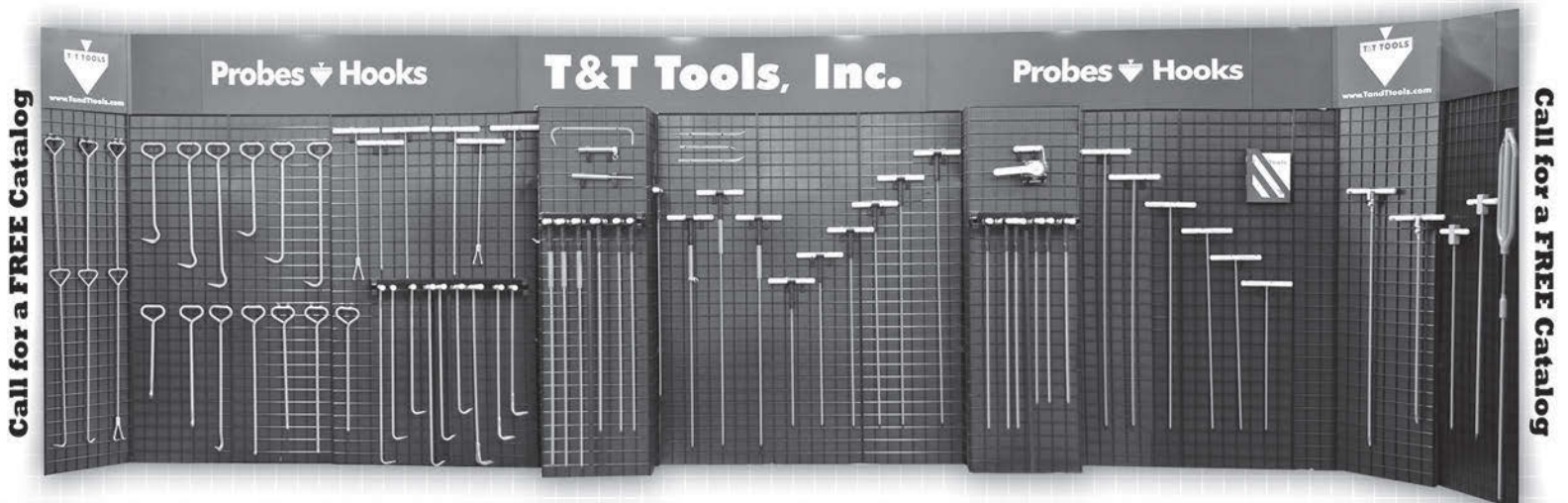


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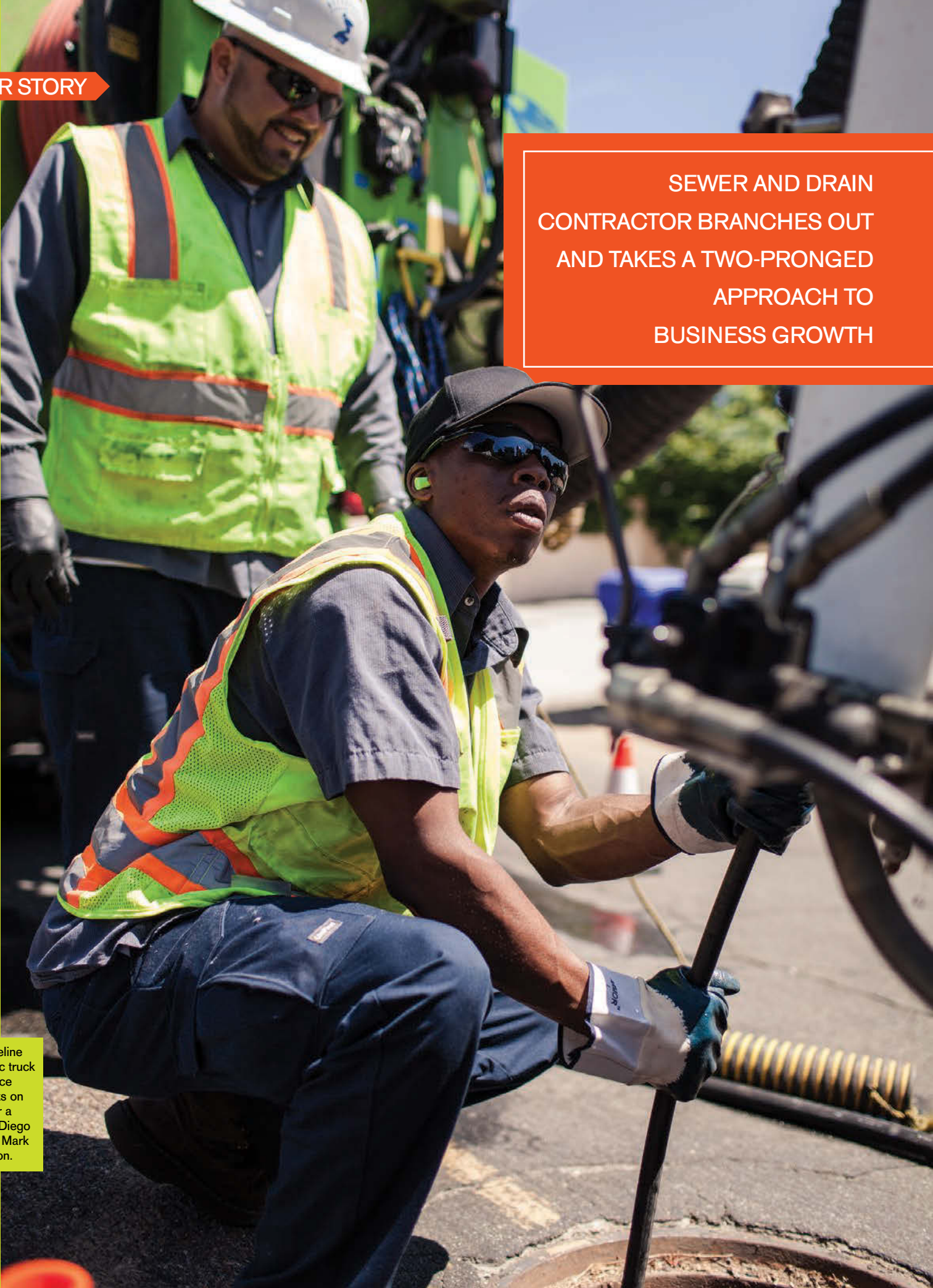
Small Diameter Lining Equipment & Materials



COVER STORY

SEWER AND DRAIN
CONTRACTOR BRANCHES OUT
AND TAKES A TWO-PRONGED
APPROACH TO
BUSINESS GROWTH

Affordable Pipeline Services jet/vac truck operator Maurice Meadows works on jetting a line for a suburban San Diego municipality as Mark Enrique looks on.



CLEANING UP IN CALIFORNIA

Duane Johnson joined Affordable Drain Service Inc. in 2000. He and owner Craig Post saw the opportunity to grow the business by adding CCTV to the menu of services, so they created Affordable Pipeline Services as a separate entity to build on the emerging opportunities in the municipal market.

Post had been in business for a number of years, and Johnson had a background in CCTV as well as connections with engineering firms looking for this technology.

“I knew there was a tremendous amount of work available,” Johnson says. “There was business going out in the City of San Diego – huge contracts – and I had good relationships with key engineering firms at the time with tremendous support. That helped us in the beginning.”

“Craig mortgaged his house to buy that first TV van. Having the camera allowed us to inspect and clean the larger-diameter pipes.”

The vision was to sustain the residential drain cleaning side as a means to develop the more sophisticated new division, which required a substantial investment in equipment. The partners determined it would be best to specialize in cleaning and inspection and focus on their home market in the San Diego area.

“He had been doing a very steady business with the residential drain cleaning, but as we made these decisions together we saw that we fit together and had the same goals – heading in the same direction,” Johnson says. “We did not want to be the biggest company, traveling all over the place.”

A GOOD BALANCE

After 14 years, the company’s staff has grown from three employees to a substantial 29, with 12 technicians and 10 service vans on the residential/commercial side, and nine



Bryan Sledzinski prepares support equipment for the CUES Ultra Shorty 21 mainline tractor at the start of a 6-inch sewer main inspection.

technicians and four CCTV vans on the pipeline side, plus two combination trucks and five trailer jetties.

The two divisions have a very different clientele, but they complement each other in many ways.

BY MARIAN BOND | PHOTOGRAPHY BY COLLIN CHAPPELLE



The crew and management of Affordable Drain and Pipeline of San Diego in their shop before heading out for the day. Affordable specializes in drain cleaning, jetting, CCTV inspection and pipeline services.

“The drain side is a much more steady, constant flow of rather common work,” he says. “You are going to X amount of jobs a day, and as you get better and the name gets out there it increases in almost a planned manner. You start growing and you add a guy and a truck. You continue growing and it is a steady income and steady growth.”

“Craig mortgaged his house to buy that first TV van. Having the camera allowed us to inspect and clean the larger-diameter pipes.”

Duane Johnson

“With pipeline you have an opportunity to bring in the bigger clients, bigger customers. It is much more of a roller coaster. It’s like any other contracting situation, where you get a big contract, but when the contract is over you fight to get the next one. The stability of the drain

side helped the pipeline side weather through some of the beginning storms. Larger projects and larger income helped facilitate growth on the drain side, allowing us to buy more equipment, enhance services and add technicians.”

The two divisions have dedicated staff and operate on a different pay schedule, with residential/commercial technicians working on commission, while the pipeline people are paid hourly.

“Technicians are trained and are skilled for the specific division,” Johnson says. “They handle different equipment. The only time there would be a crossover is with a large city contract where the pipeline division is working on major pipelines, but also dealing with office buildings, fire stations, things of that nature, and we bring in the residential side and add a

profile

AFFORDABLE PIPELINE SERVICES,

A DIVISION OF AFFORDABLE DRAIN SERVICE INC.,
SERVING SAN DIEGO COUNTY, CALIF.

OWNERS: President Craig Post,
Vice President Duane Johnson


ESTABLISHED: 1992

SERVICES: Pipeline cleaning, CCTV

EMPLOYEES: 29

CUSTOMER BASE: Municipalities, engineering firms, contractors,
plumbing companies, residential

ASSOCIATIONS: SSCSM (Southern Section Collection Systems
Committee), a subcommittee of CWEA
(California Water Environment Association)



small piece to the contract. That is fairly rare, but it is best if we don’t have to bring in another subcontractor.”

A FERTILE FIELD

San Diego County has a population of approximately 1,307,000 across 18 incorporated cities and 65 small towns, so sewer and drain cleaning opportunities abound. There are also several military bases in San Diego, including Camp Pendleton. These bases have residential housing as well, and Affordable has been involved in both the residential side and large pipeline inspections. They are equipped to handle everything from 2 1/2-inch household drains up to 114-inch municipal lines.

“With the larger pipes we’re not looking so much for roots, as we would in residential lines, but for debris, major breaks and corrosion of the pipe.”

Return on investment

Duane Johnson first got involved with industry associations because he believed it would help grow his business, Affordable Pipeline Services. "I believe that most people have this expectation, but in about six months I realized that was the wrong way to approach the experience," he says. "I talked it over with [business partner Craig Post] and we both came to the conclusion that participating was a good way to give back to the industry. That is how we have looked at it since then."

As a committee member, Johnson has had to be well-informed regarding all the advances in technology, and to share in this way as he continues to make his own contribution.

"With the Southern Section Collection Systems Committee, a subcommittee of California Water Environment Association, we handle quite a bit of training with municipalities throughout Southern California. I've done talks on all advanced technology. I'm teaching other people about many procedures so they and I will be better informed. The benefits are huge and it is a long-term service. It shows you are there for the long haul. Serving on committees is a benefit in more ways than one."

Johnson says their focus on working with engineering firms rather than direct- and low-bid contracts has helped build relationships. Affordable has been included by these firms in bids, so whoever wins, they are part of the team.

"With one of these contracts, we inspected residential lines for the entire City of El Cajon for an engineering company that had the contract for the master plan and all projects for the city," Johnson says.

Affordable Pipeline Services does a tremendous amount of preventive maintenance for the City of Solana Beach, essentially serving as the maintenance staff for the small city, which has no TV equipment or cleaning capability. In the City of Carlsbad, Affordable Pipeline is often brought in on capital improvement projects that do not fit into the city cleaning crew's work schedule. They also support the cleaning operation for San Diego County.

NETWORKING

While there are a large number of customers on the drain side who have been with the company since 1992, Affordable Pipeline had to build a strong base, which it now has.

"Our reputation is so important," Johnson says. "In pipeline it is word of mouth. Every city manager talks to other city managers. It is a much smaller environment than it appears to be."

Johnson says they bought the first combination truck because as the inspection market evolved, more contracts included cleaning work. Now they have two Aquatech B10 jet/vac trucks (Hi-Vac Corporation) on International chassis. They also have five trailer jettors, including a 1998 Harben (12 gpm/4,000 psi) and four units from US Jetting, each producing 18 gpm/4,000 psi.

"We needed to make sure we had the ability to continue the TV inspection projects that also require cleaning," he says. "We see more projects where we go out to do cleaning support and less of the TV work at times. It is fluid in certain time periods."

The four CCTV inspection trucks are outfitted with cameras and equipment from CUES and Pearpoint, and PipeLogix software. Technicians

CONTINUED >>



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also use RIDGID SeeSnake cameras — seven full-size and four minis — on residential and commercial jobs.

When it comes to support from manufacturers, Johnson pulls no punches. The bottom line is he's looking for great service.

"To us, downtime is the only huge expense," he says. "Repair costs do not compare to downtimes. I'm losing \$1,500 to \$2,000 a day if a truck is not out in the field. I have manufacturers trying to save \$300 on a part, but I say the phone call is costing me \$300. I need my truck, my equipment, out in the field working. I'm not worrying about saving \$300 on a part."

"I can teach a guy how to use a TV truck in a couple weeks. But to teach the knowledge necessary to do top-notch inspection takes a tremendous amount of time as so much is involved in making the million-dollar decisions they make in the field."

Duane Johnson

CHALLENGES TO FACE

"One of the nightmares we deal with in San Diego involves disposal," Johnson says. "We outsource all disposal. While some cities we work for will allow us to take debris to their treatment plant, quite a few, particularly the smaller ones, don't have a means of disposal, so we have to hire an outside

company to bring in roll-off bins. All debris goes in the bins, and they are then hauled to Los Angeles for disposal — about a 100-mile drive. I will not take my cleaning truck through the scales when I need it here."

Regulations are another matter in California, but this works both ways for a pipeline inspection company. California has the Waste Water Discharge Requirement, which calls for inspections for every privately or municipally owned sewer system that exceeds 1 mile in length.

"All the cities and jurisdictions have to submit a plan to clean their entire system. Then they have to meet the plan," Johnson says. "If they fail to meet the goal they have set, their potential fines will be higher if they have a spill. The people who get hurt by regulations are the clients, the end payer. Fifteen years ago you could dispose of stuff — bring a cleaning truck in, clean a storm drain, pull mud out and take it to the dump and be done with it. Now that same situation where you have a small contract at maybe a \$500 to \$1,000 disposal cost in the past — that same project can be a \$10,000 disposal cost today."

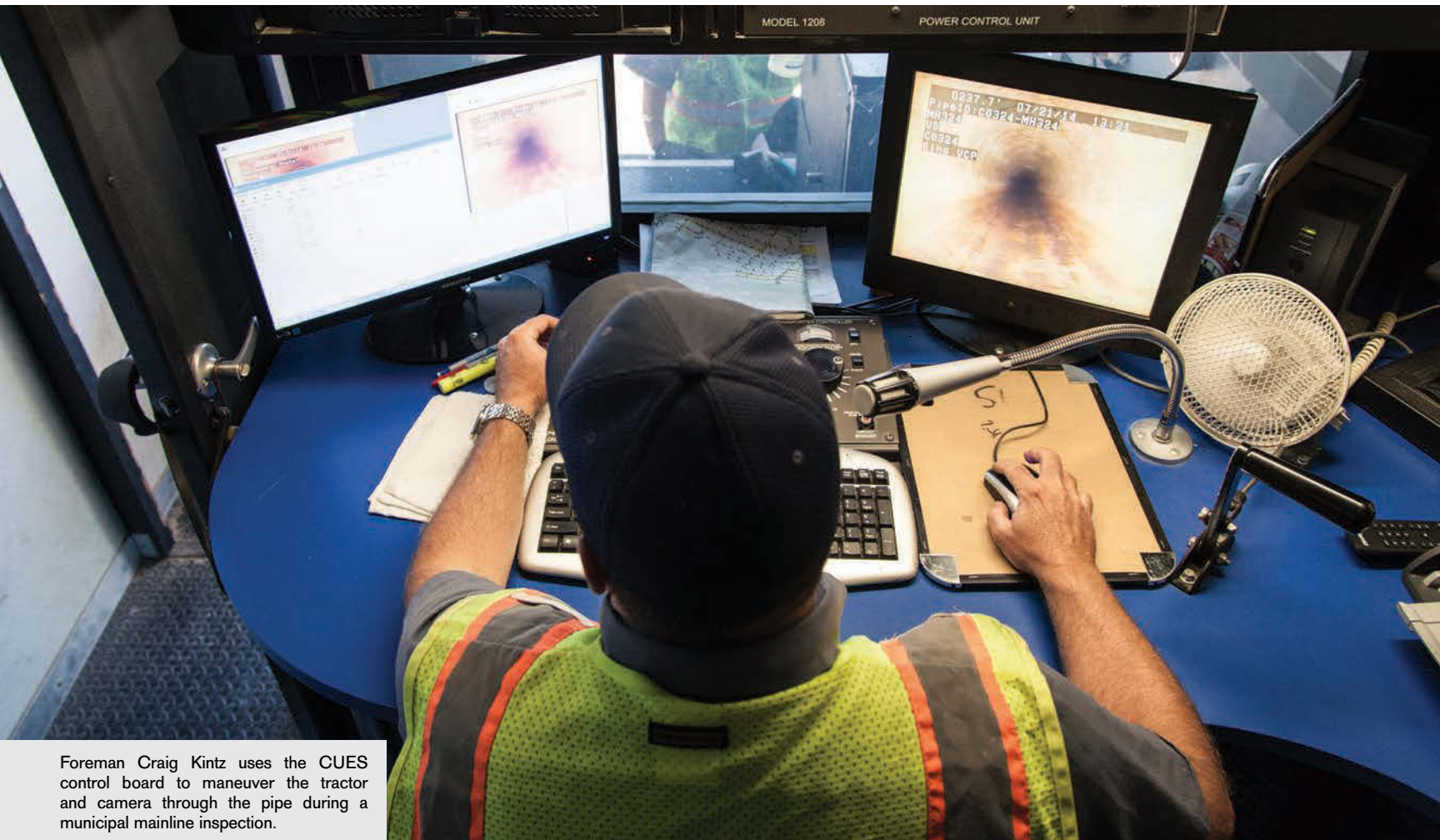
AIM HIGHER

Both divisions of Affordable set the bar very high when it comes to their technicians' training and performance.

"On the pipeline side there is a stringent training program," Johnson says. "I won't put a guy into a CCTV chair until he has been with us over a year. Our training is extensive.

"I can teach a guy how to use a TV truck in a couple weeks. But to teach the knowledge necessary to do top-notch inspection takes a tremendous amount of time as so much is involved in making the million-dollar decisions they make in the field. And our reputation is based on those decisions being right every time. This is an environment where every decision made

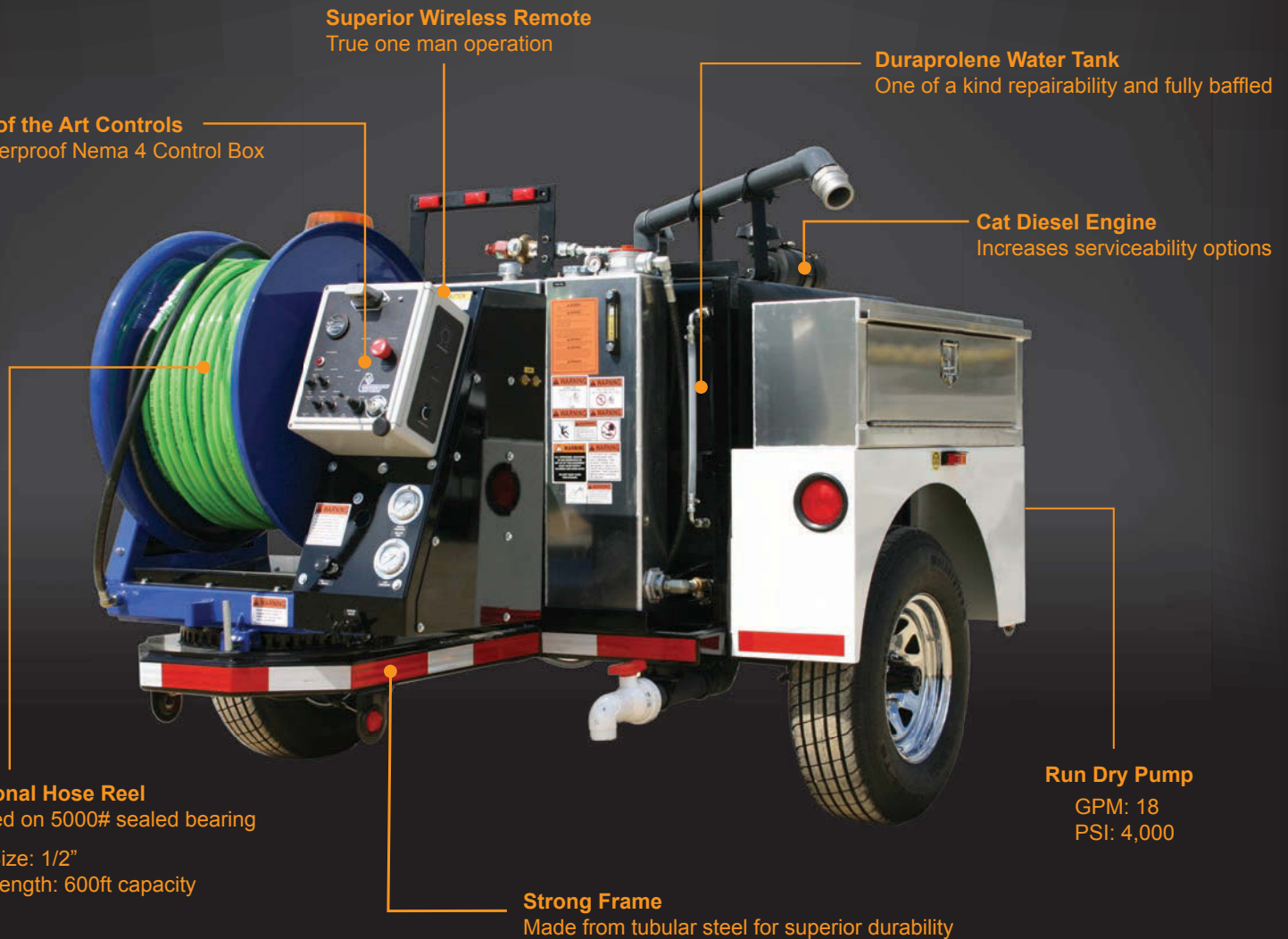
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Foreman Craig Kintz uses the CUES control board to maneuver the tractor and camera through the pipe during a municipal mainline inspection.



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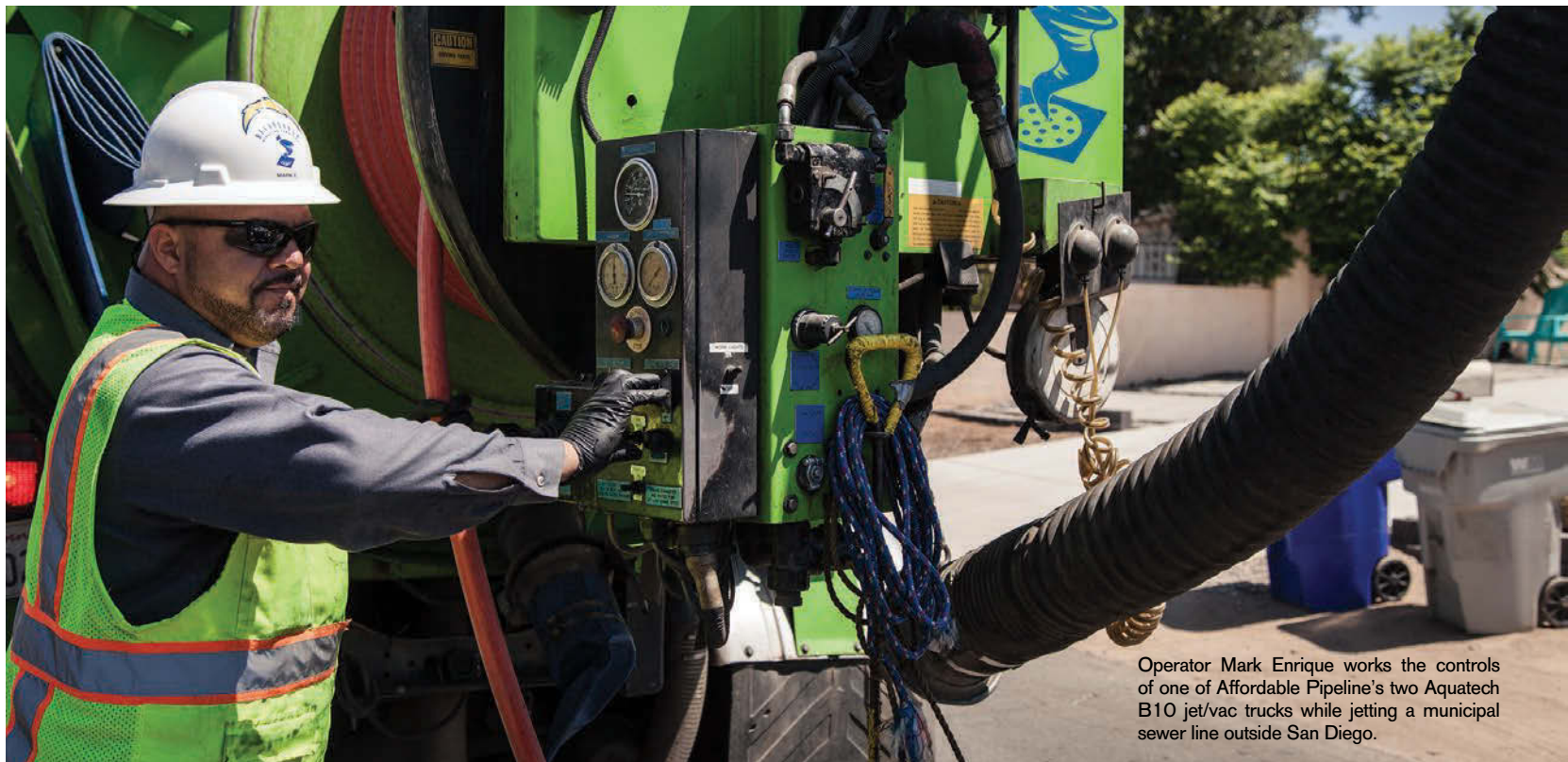
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Operator Mark Enrique works the controls of one of Affordable Pipeline's two Aquatech B10 jet/vac trucks while jetting a municipal sewer line outside San Diego.

is recorded for all time. Those decisions have to be right. TV inspection and cleaning truck errors can have drastic consequences. Miss a defect in a pipe when you fall asleep, and a pipe collapses. There is a record that you missed it. Lawsuits are coming.

"This is why we put a newly hired guy in the back of the CCTV van as a helper for a period of time," Johnson says. "We want that person to advance. We prefer to train ourselves, and often with experienced TV operators they do things differently, have habits I would not accept. It is easier to train from the base up. We give our guys the opportunity to rise up if they so choose. If someone does not advance from the back of the TV van, we might as well cut him loose."

"Over the years I've seen it all. A guy gets a nozzle stuck out in the field and the first thing he does is slide down the jetter hose to the bottom of the manhole to try to work on it. I will not allow it."

Duane Johnson

On the residential/commercial drain cleaning side, they have technicians at different levels or stages. One technician will have only cable machines. Another will have cables and push cameras, and a trailer jetter. The more senior people will have more advanced equipment. They work on commission, so the extra equipment gives them an opportunity to earn more money. "They can earn our trust by taking care of that equipment," Johnson says.

Safety is another important matter. There are always emergency calls to be answered, but all staff members attend a safety meeting every Monday morning.

"We briefly cover everything, including confined-space entry," Johnson says. "Over the years I've seen it all. A guy gets a nozzle stuck out in the field and the first thing he does is slide down the jetter hose to the bottom of the manhole to try to work on it. I will not allow it. We will send a confined-space truck out there no matter what. We don't cross any of those bridges."

Everyone in the company is made aware of regulations and procedures, particularly in management, where everyone plays a role in making sure everything is done properly.

"Our operations manager on the residential side is Dan Wooten, and for pipeline, Corey Charfauros. Our office manager, Sheree Henson, oversees both divisions and is another key employee. The company would not function without these people."

Johnson's main responsibilities are with the pipeline division, handling human resources, employment and employee relations, bidding and client searches. Post oversees primarily the residential side and financials for both sides.

"I can speak for both of us as far as what we most enjoy with Affordable on a regular basis, and that is when we have an opportunity to be out in the field," Johnson says. "Craig carries push camera equipment in his vehicle and he occasionally has a chance to use it.

We both came from the field. Grew into this – both our hearts are in it. We like being part of the activity." **C**

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Vend for Yourself

Machines bring technology to your PPE and equipment distribution system

By Doug Day

How many safety glasses do you have in stock right now? Do you know how many you go through in a month or how much of your PPE and other equipment just walks out the door?

Industrial vending of such items is growing in popularity as companies try to save money and cut the amount of work that goes into the distribution and stocking of equipment, according to Russ Rubie, vice president of Fastenal Company. “People want to make sure those items are available and want to understand who is using them.”

With only an electrical outlet and an Internet connection, a vending machine is always available and automatically tracks and reports usage and inventory. Rubie says Fastenal has 40,000 machines across the U.S. and users typically report a 30 percent reduction in consumption and spending. “You can put these machines at the point of use and all the equipment needed to do the task is right there.”

“You can put these machines at the point of use and all the equipment needed to do the task is right there.”

Russ Rubie

Fastenal provides the vending machines and keeps them stocked through the machines’ automated ordering capabilities. “That takes away a lot of steps in procurement, which eliminates cost,” says Rubie.

Management also receives that information in daily, weekly and monthly reports. “PPE likes to walk away,” says Rubie. “Most of the time it’s unintentional; it could be a pair of gloves in your back pocket or the safety glasses on top of your head and then you discover you have five pairs in your car.”

By tracking use by department or even individuals, those people can be reminded of how much they are using to help them be more accountable for the equipment. Some companies set controls so that items can only be dispensed by certain groups or in limited amounts. But most find that the system’s ability to track usage by individuals is enough to curb wasteful consumption. Vending also eliminates the incentive to hoard supplies, because employees know that more is readily available.

The vending machines can also send automatic email alerts when items such as first-aid supplies are dispensed to help a company follow up on safety incidents. There are also beverage machines that track how much employees are drinking to make sure they are staying hydrated.

FROM OFFICE SUPPLIES TO TOOLS

Nearly anything can be included in a vending program. Popular items that Fastenal machines are used for include:

- Eye, hearing and hand protection
- Hardhats
- Batteries
- Respirators
- Tape
- Hand tools
- Drill bits
- Taps
- Lubricants, penetrants and corrosion inhibitors
- Paints and accessories
- Cable ties
- Knives, razors and multi-tools
- Tape measures
- Coveralls
- Flashlights

There are also vended locker systems for larger items that can record how long equipment is checked out and track calibration and certifications:

- Hand and power tools
- Laptops
- Gauges
- Radios

Vending can be monitored in a number of ways, including a keypad for entering a pin number, magnetic-strip cards or employee badges. Rubie says Fastenal has machines placed in a wide variety of industries including oil and natural gas, mining and drilling, aerospace, automotive, construction, power plants, machine and tool fabrication, shipping, railroads and many others. “They immediately notice the reduction in consumption and eliminating inventory,” he says of feedback he receives from customers. “The 24/7 service without an attendant and automated reordering is very important to them.”

Rubie says it is important to do your homework before entering into a vending agreement. “When evaluating vending providers, be sure to ask the right questions. Do they have the safety products you need in vend-ready packaging? Who will be responsible for managing the inventory, restocking the machines and making adjustments based on your changing product needs? And what can they bring to the table in terms of safety services like facility inspections, PPE fittings and product selection support? **C**



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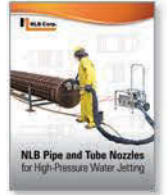
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LEFT: Fuquay, Inc. General Manager David Kallfelz, CEO John Fuquay and CFO Dauphen Jackson (from left) look over jobsite plans while Kaye Fuquay works in the background at the company office in New Braunfels, Texas.

OPPOSITE PAGE: Fuquay Inc. General Manager David Kallfelz, CEO John Fuquay and CFO Dauphen Jackson (from left) outside the New Braunfels office.

No Place LIKE HOME

FAITH, FAMILY AND FRIENDSHIP CREATE AN ENVIRONMENT FOR
CONSISTENT GROWTH AND SUCCESS IN THE TEXAS HILL COUNTRY

BY SUZAN MARIE CHIN
PHOTOGRAPHY BY JULIE JOSEPH

John Fuquay will tell you that a family-first philosophy has been key to his company's amazing growth and success. The road has not always been smooth, but faith, family and friendship have provided the tools to thrive even through the toughest situations.

Fuquay is the CEO of Fuquay Inc., based in Austin and New Braunfels, Texas. The company is one of the state's largest manhole rehabilitation and trenchless technology contracting firms.

A UNIQUE STARTING POINT

Fuquay's father, J. Darryl Fuquay, had an extensive background in construction as a concrete salesman. Unfortunately, in 1972, long hours and stressful work contributed to a heart attack at the very young age of 32. Four short years later, Darryl suffered a second heart attack that led to triple bypass surgery. Soon after his recovery, he became

the vice president of an Austin-based heavy highway construction company. In late 1984, he realized he needed to seriously consider a career change.

John remembers the day. "One evening my dad came home from work and pulled up in the driveway with a hydromulch trailer in tow, telling us that since the doctor told him he needed to slow down, we were going to start our own company."

At the time, John was finishing his senior year in high school and preparing for his college football career. His older brother, Steve, was attending college at the University of Texas, and a friend, Jerry Schmid, was living with the family. The three boys worked it out so they would take turns operating the hydromulch machine between class schedules and football practice, while Mom and Dad secured the contracts, ran the office and performed the estimating.

Business grew slowly and steadily, providing a good income for the family and their one employee, but in February 1987, this calm



profile

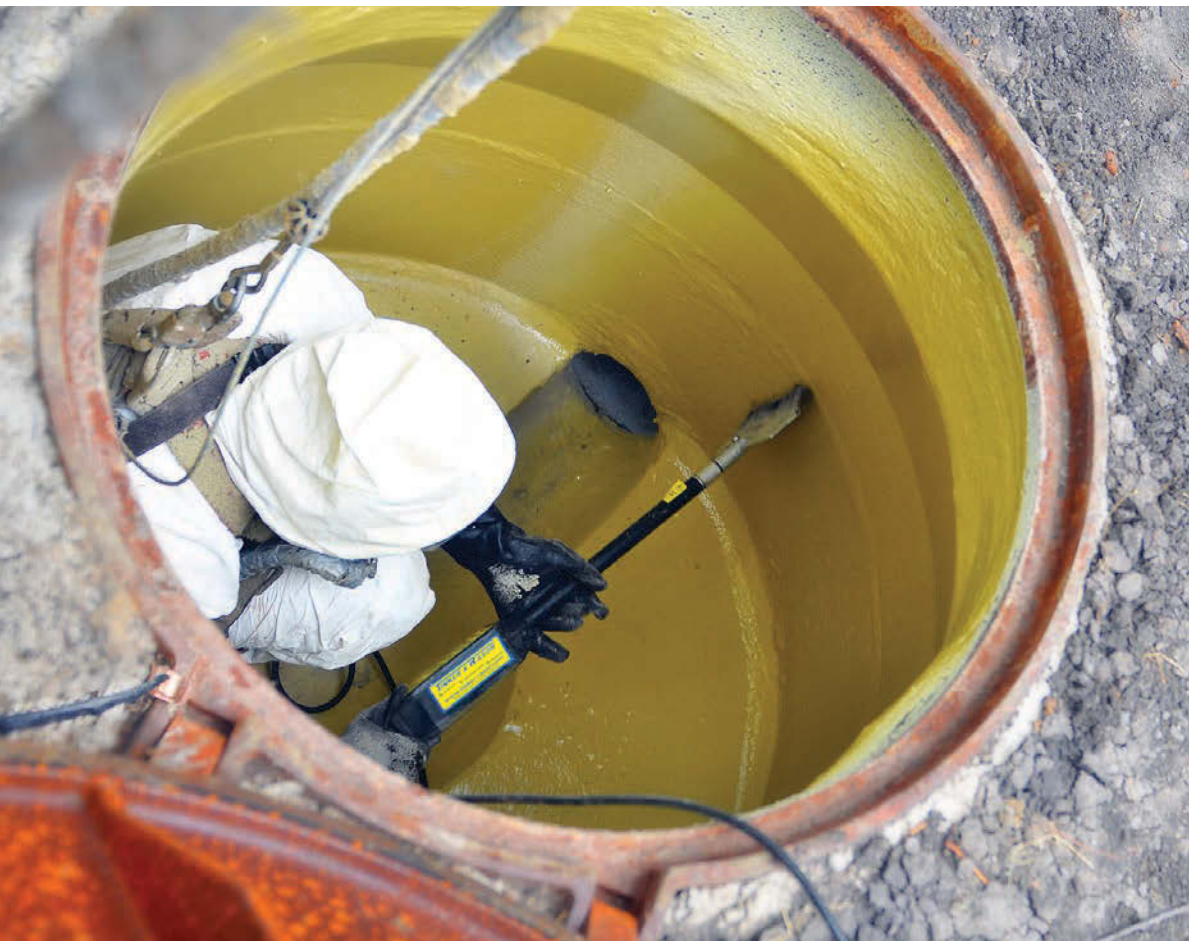
**FUQUAY, INC.,
AUSTIN AND
NEW BRAUNFELS, TEXAS**



- OWNERS:** President Corrie Fuquay, CEO John Fuquay
- ESTABLISHED:** 1985
- SERVICES:** Manhole, lift station and wet well rehabilitation, pipe lining, sewer cleaning and inspection, utility construction, erosion control, hydromulching
- EMPLOYEES:** Approximately 200
- CUSTOMER BASE:** Municipal, commercial

“My mom, president and co-founder of Fuquay Inc., one of the strongest people I know, fought through this great loss, an economic downturn and dwindling savings to make what we have today.”

John Fuquay



SprayWall technician Hugo Hernandez tests coating uniformity in a manhole using a Tinker & Raser high-voltage holiday detector.

was sadly interrupted when Darryl passed away after a third heart attack. His wife, Corrie, gathered her sons together after the funeral service and asked candidly what direction they wanted to take now. The consensus was that their father would have wanted them to continue what he started, so in true Texas style they pulled up their bootstraps and got to work.

“My mom, president and co-founder of Fuquay Inc., one of the strongest people I know, fought through this great loss, an economic downturn and dwindling savings to make what we have today,” Fuquay relates. “Her never-wavering faith in God and the help of friends in the Austin area that both she and my father had known for years helped us get through the tough times.”

It was this culmination of faith, friendship and family that formed the culture of the Fuquay organization and guides it in all of its business dealings to this day.

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Although the hydromulch business was quite strong, the family knew that if they were to grow they would need to offer other services. In the late '80s, the father of one of Steve's friends approached the firm to introduce them to silt fence technology. Since they had experience and contacts with erosion control from their hydromulching work, it was thought they might be a perfect fit for providing this new service.

Before jumping in, the Fuquays wanted to test to make sure that adding this service would be a profitable business decision, so they developed a plan for doing a series of dry runs. Utilizing an area on the family "ranchito" in Dripping Springs, Texas, they did a mock timing and setup of an actual silt fence installation project approximately 50 feet in length. They enacted exactly what a typical installation would involve. They started the stopwatch and timed the equipment setup, site prep, installation, tear down and pull away. Once the timing calculations were made they were able to develop an accurate price structure so the new service could be billed profitably.

As time went on and new services were added, each service was tested in the same way – performing a dry run to make sure that it could be performed in a cost-effective and profitable manner, and determining a fair market price before adding it to their service portfolio.

"This testing wasn't always perfect. There were some things that we tried that looked good on paper and

SHARING THE WEALTH

Fuquay Inc., the Sprayroq certified partner for the State of Texas, attributes some of its successful installations of polyurethane linings and rehabilitation projects to its ability to network with other similar installer contractors through annual and seasonal manufacturer installer meetings. When selecting technologies to add to its service portfolio, the firm is particularly attracted to products and/or manufacturers that offer a protected territory.

Fuquay Inc. General Manager David Kallfelz explains, "When you are not competing against other installers using the same product, it leads to fair market pricing and quality workmanship. By not putting contractors in a position of competing for the same project using the same product, the necessity to cut corners in order to win low-bid-based projects is eliminated. It ensures fair pricing for providing viable solutions for the customer."

When Fuquay Inc. became part of the Sprayroq certified partner network, there were only a handful of installers. The ability to share knowledge at the annual meetings and subsequent conference calls helped not only Fuquay but also their fellow installers.

The group is much bigger now with installers from all over the country actively collaborating and sharing information on how to handle projects, overcome challenges, increase technical proficiency and identify new applications for the technology to open up more business growth opportunities.

"Because you know you're not in competition against one another you are free to discuss ideas, challenges and solutions to common problems, and this benefits everyone in the network."

Kallfelz advises other contractors to look for opportunities to meet with other contractors they are not competing with in order to share their collective wealth of knowledge. "Sharing findings about new technologies or comparing notes about something you are considering trying helps everyone make solid business decisions. When this type of communication occurs, our entire industry benefits."

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ABOVE: Manhole rehabilitation technician Sergio Alvarez mixes grout for a manhole rehabilitation job in San Antonio.

RIGHT: SprayWall technician Juan Maltos helps Hugo Hernandez descend into a manhole to begin a rehabilitation project.



ultimately flopped, and we found some that were more successful than we anticipated. The bottom line is that in order to grow you have to be willing to try new things,” Fuquay says. “Without trying new things your

“Without trying new things your company will plateau. That’s OK, but you won’t be able to keep good employees if you have no way to let them grow, expand their horizons and realize their dreams while you’re experiencing yours. They’ll just move on.”

John Fuquay

company will plateau. That’s OK, but you won’t be able to keep good employees if you have no way to let them grow, expand their horizons and realize their dreams while you’re experiencing yours. They’ll just move on.”

At Fuquay Inc., keeping good employees is tantamount to success. Fuquay considers his employees family members, always working to create and sustain an environment of friendship and family inside and outside company hours. When looking for new team members, Fuquay’s motto is look to and hire friends. He knows this approach is unpopular with most business owners, but it has served him and his company exceedingly well over the years.

A prime example was David Springfield. Springfield was introduced to Fuquay through a mutual friend. His background was not connected to construction or trenchless technology in the least. Regardless of this, Fuquay spotted a strong work ethic and eagerness to learn and felt he should give Springfield a shot to prove himself. Taking this chance led to the development

CONTINUED >>

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Members of the Fuquay team at the company yard in New Braunfels, Texas.

of one of Fuquay's strongest team leaders and the explosive growth of one of its most profitable divisions. Springfield took on any challenge placed in front of him, one of which was learning and leading the firm's Sprayroq spray-applied polyurethane trenchless technology and UV-cured CIPP rehabilitation divisions.

NEW DIRECTION

In the late '90s, prior to Springfield coming on board, the firm was heavily involved in erosion control, dry and wet utility construction and was a subcontractor for many prime contractors in the Austin and San Antonio municipal arenas. This connection led to an opportunity to become involved in a unique project in Austin involving a retail furniture establishment that needed its sewer line realigned due to a building expansion. The project involved installing two manholes, and a City of Austin ordinance requires all new manholes installed within the city to be coated with a protective lining.

Fuquay performed some due diligence and located a contractor who could perform the lining utilizing SprayWall, a structural spray-applied polyurethane lining from Sprayroq, to meet the city requirement. As he watched the installation of the lining he recognized a great opportunity and began researching how Fuquay could become an installer of this trenchless technology.

Fuquay contacted Sprayroq immediately to learn what was involved.

"They told me they were interested in speaking to me but that there were other candidates seeking the same territory and if I really was serious, I would need to come immediately and meet with them at the Pumper and Cleaner show in Nashville the next day. This was my first real business trip so it was exciting, but I had no idea what I was getting into. 'What's a pumper and cleaner anyway?' I thought. The show was an eye-opener and I hit it off right away with the Sprayroq folks and left with a strong feeling that this was going

"The show was an eye-opener and I hit it off right away with the Sprayroq folks and left with a strong feeling that this was going to be a great fit for us."

John Fuquay

to be a great fit for us."

They quickly struck an agreement. Over the next several years, Fuquay's SprayWall division entrenched itself in the market. However, not until Springfield's arrival in 2004 did Fuquay see the division explode. Fuquay recalls, "My mother-in-law, Beverly Katzmark, had been diagnosed with lung cancer; my wife, Kaye, and I had to take her to MD Anderson in Houston for treatment and I needed help with the SprayWall division. I approached Springfield to see if he would be interested in leading the division. He readily agreed to take it on. Little did I know what a difference one person could make in the success of a division."

This series of events would be the start of record-breaking sales and installations by a Sprayroq certified partner.

Following its usual model, Fuquay wasn't content to just focus on manholes with its Sprayroq license and expanded the product's use in projects involving storm drainage system rehabilitation and protection, DOT applications, wastewater treatment plant installations and rehabilitation, among others.

Because of the proactive business development approach, Sprayroq has recognized Fuquay Inc. with its coveted President's Award, "The Roq," along with its Volume Leader and Project of the Year awards numerous times since Fuquay joined its network. In 2012, Sprayroq recognized Springfield

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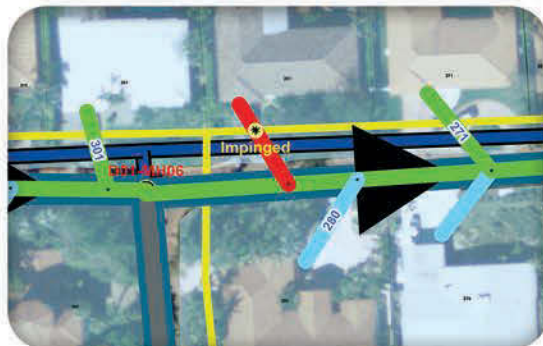
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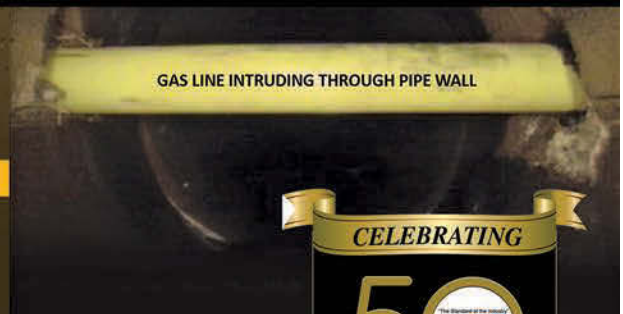
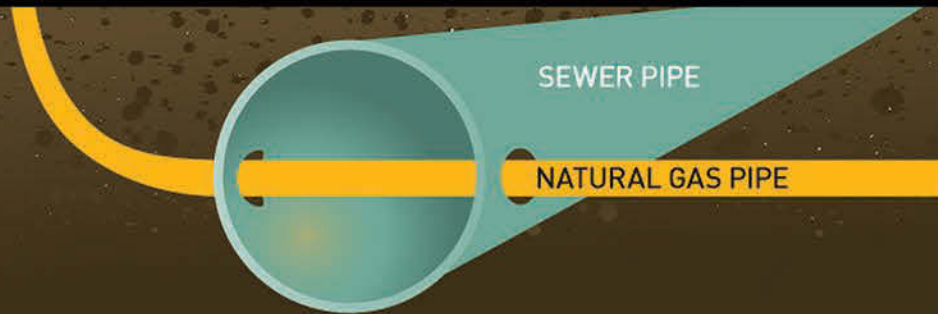
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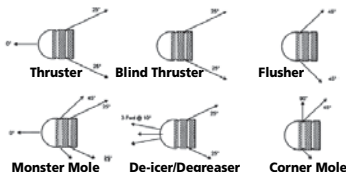
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as its Person of the Year, an accolade recognizing those in the industry for their contributions to the betterment of trenchless technology, leadership, work ethic and contractor standards. The well-deserved recognition unfortunately was bittersweet for the entire Fuquay company family as Springfield lost an incredibly brave battle against cancer about a year later. The loss was deep for Fuquay, as he and Springfield had developed a close friendship over their years working together, fishing and enjoying time with each other's families.

Again, as in years past, the Fuquay organization's deep faith helped them overcome this great loss and find a way to fill this tremendous gap in the business family.

"Hindsight has given me divine glasses to see that God had already placed the people in our company to carry the load when Springfield got sick," Fuquay emotionally recalls. The "family" rallied and in the short year and a half since his passing, they have done Springfield proud, working together to grow the business to approximately 200 employees, adding new technologies, territories and continuing active recruitment of new "Fuquay Family" members to tackle upcoming projects.

"Like any family, we have our ups and downs, our joys and sadness, victories and failures, but at the end of the day, we've all got a sense of place and belonging and that's what I believe has led us to where we are because whether it's your work or where you live, there's no place like home." c

more info

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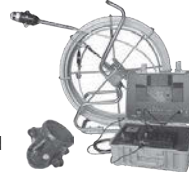
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- Recording with USB Flash Drive & SD Card
- Crawler for easier push



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- 65FT/100FT/130FT Cable & Reel
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- 7" LCD Monitor w/w/o DVR & MIC
- Heavy Duty Waterproof Case
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- Color Camera Head w/Built-in 512HZ Sonde Transmitter
- 10" LCD Monitor w/DVR & MIC
- Recording with USB Flash Drive & SD Card
- Heavy Duty Waterproof Case

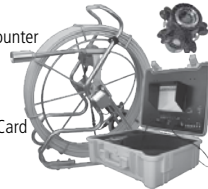


Long Range Pipe Inspection Camera

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- Self Leveling Camera Head w/ Built-in 512HZ Sonde Transmitter
- 10" LCD Monitor w/DVR & MIC
- Recording with USB Flash Drive or SD Card
- Heavy Duty Waterproof Case
- Crawler for easier push



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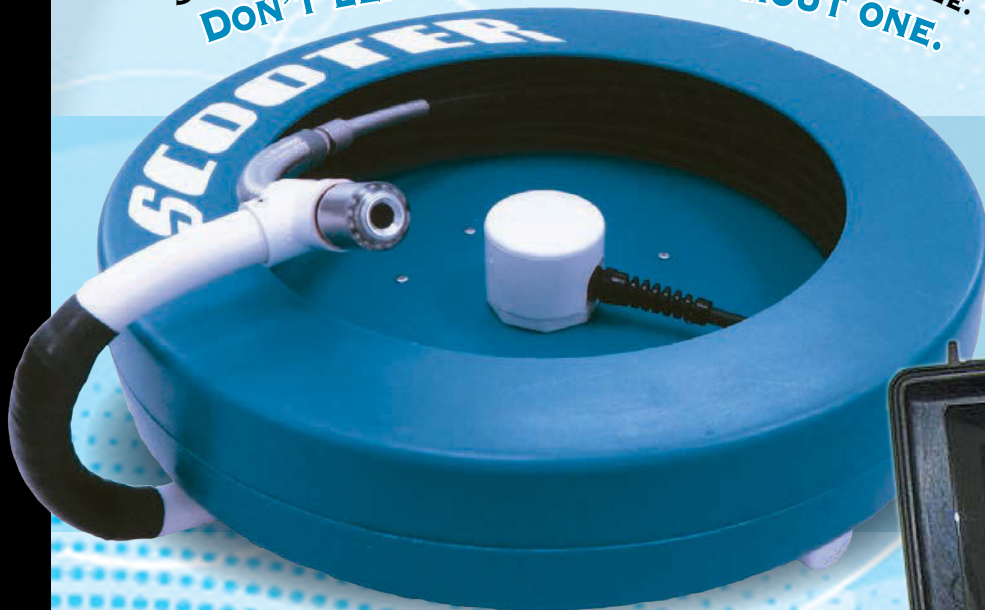
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Read Their Minds

Engage your staff and help them be their best with five easy conversations

By Kim Seeling Smith

Did you know that only a fraction of your staff bring their “A Game” to work every day? According to companies like Aon Hewitt and the Gallup Organization, this number is about one in five. The rest? At best they are bringing their B or C games to work – at worst, their main goal is to keep from getting fired.

This is the employee engagement crisis we now find ourselves in.

Countless companies dedicate a sizeable chunk of their annual budgets to solving their employee engagement issues, when in reality most engagement issues (as well as performance and behavioral problems) can be solved through conversation – five conversations to be precise.

But most managers don’t talk to their staff frequently enough, don’t know how to talk to them or what to talk about. Managers are unaware as to how to plug into their employees’ minds and figure out what they really want, and what they need to be fully engaged and productive.

There are no psychic forces at work: Getting into the minds of your employees to glean the information needed to increase not only engagement but also productivity in your workforce can be as simple as conducting the following five *FOCUS*ed conversations.

Your employees need to know what they must do to be successful in their jobs and how that success will be measured. And you need to have a clearly defined yardstick by which to objectively measure performance.

Conversation 1: Feedback

There are two types of feedback that fall under this conversation. First, give praise where praise is due. Studies have shown that a vast majority of employees do not feel appreciated enough for the job they do. Praise, it seems, is a scarce commodity in the workplace. So if your staff is doing a good job, be sure to let them know.

Conversely, one of the key factors in employee engagement is the ability to have your say. Be receptive to your staff’s feedback. Who knows, they may just come up with a brilliant idea that makes a huge difference for the team or company.

Conversation 2: Objectives

Most performance issues stem from a disconnect between what the manager and staff members perceive as meeting objectives. To drastically reduce performance issues, managers must both clearly define and articulate expectations. Yet few do.

Your employees need to know what they must do to be successful in their jobs and how that success will be measured. And you need to have a clearly defined yardstick by which to objectively measure performance. Aligning their expectations with yours will result in less frustration and anxiety on both your parts.

Conversation 3: Career development

Many studies list career development within the top three factors that employees gauge to determine whether to stay with their current employer or look for another job. Yet many managers avoid this topic like the plague for one of three reasons:

- They don’t understand how to manage their own careers.
- They are afraid that if they help their staff manage their careers better they will surpass them on the corporate ladder.
- They are afraid to talk about career development because they don’t feel they can meet the employee’s expectations. This is especially true in smaller companies or niche functions where there is not a lot of vertical career opportunity available.

Helping staff manage their careers makes good business sense. Ensuring that they understand what opportunities exist within your company (something they may not recognize without your help) will inhibit them looking outside of it.

Find out what your employees’ priorities are and have open, honest conversations around how your company can help them achieve them, even with any constraints you may have. Suggest and recommend internal opportunities to learn, grow and develop and they will at least delay – if not avoid – looking for external ones.

Conversation 4: Underlying motivators

The underlying motivators conversation helps to uncover those intrinsic factors – currencies of choice – that science has shown to be much more highly motivating than extrinsic ones such as pay and benefits. By tapping into each individual’s currencies of choice you will help uncover what they need to go the extra mile. Conversely, once they do, they need to be recognized appropriately for it. The old adage, “Praise in public, correct in private” is only half true. Many people don’t respond well to public recognition.

Identify the drivers of each individual staff member to unlock productivity and unleash potential. Then recognize them appropriately when they do go that extra mile.

Conversation 5: Strengths

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Strengths can be defined as the innate abilities or behavioral patterns that are neurologically hard-wired into our brains between the ages of 3 and 15. The context of the behavior will change over time, but the patterns remain the same. So those children who share their toys in the sand box at the age of 5 may very well become 15-year-olds who volunteer for a local charity. And 20 years later they may become the 35-year-olds who are the most collaborative in the workplace.

Strength identification also requires a very minor time commitment: As little as two hours per week can make a world of difference.

If you can help your staff determine behaviors that come naturally to them you will find that their stress is decreased, they become more engaged — and of course more productive.

There is no reason to spend mass amounts of time and money on “engagement” programs when all it takes is tapping into the minds of your personnel. By first hiring the right staff and then employing the five FOCUSed conversations, managers will significantly increase overall employee engagement.

Communicate with your staff frequently, effectively and about the things that really matter to them. **C**

ABOUT THE AUTHOR

Kim Seeling Smith is an international human resources expert and author of the newly released book *Mind Reading for Managers: 5 FOCUSed Conversations for Greater Employee Engagement and Productivity*.



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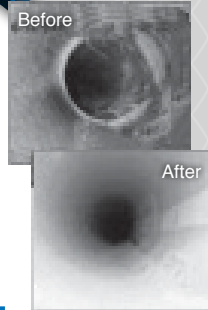


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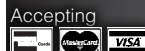
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Easy Operator

Wireless functionality of the GapVax industrial HV-56 hydroexcavator puts control at your fingertips

By Craig Mandli

GapVax introduced its latest advancement with the tech-savvy hydroexcavation operator in mind. The company rolled out the HV-56 Advanced Series hydroexcavator at the 2014 Pumper & Cleaner Environmental Expo International in Indianapolis, complete with all the technological “bells and whistles” designed to provide both accuracy and efficiency.

“Our MC Advanced Series was such a big hit at the 2013 show, we knew we wanted to add this capability to all of our equipment,” says Mike Blair, GapVax’s lead electrical design technician. “Since our hydroexcavators are our most popular units, it only made sense to add the Advanced system to them.”

The unit’s boom, vacuum break, throttle and water pressure functions are wirelessly controlled with full-color displays that offer the operator visual monitoring of all operating functions. There is a control inside the cab, as well as one inside a weather-tight control box located on the outside of the unit.

“This system was made to appeal to companies with newer, younger, tech-savvy operators on their staff. It eliminates a lot of the busy work functions of a typical hydroexcavator. It was something our customers wanted. Higher-tech equipment is the wave of the future.”

Mike Blair

These display screens are designed around the operator and are unaffected by sunlight. Both wireless control units are 12-button CANbus switches.

“The system allows the operator to monitor all unit controls at all times,” says Blair. “It saves the operator time and efficiency, as they don’t have to walk around the truck to control the various systems any longer.”

The Advanced system has alarms and interlocks that allow for safe and efficient operation. Data logging and system diagnostics also provide access to system faults and hours of operation, giving the operator the ability to troubleshoot system failures.

“This system was made to appeal to companies with newer, younger, tech-savvy operators on their staff,” says Blair. “It eliminates a lot of the busy work functions of a typical hydroexcavator. It was something our customers wanted. Higher-tech equipment is the wave of the future.”

The system comes fitted for the popular HV-56 hydroexcavator, which features 5,000 cfm with vacuum of 28 inches Hg. It can handle a payload of 13.5 cubic yards with its heavy-duty 1/4-inch EXTEN Steel collector body.



Mike Blair, right, an electrical design technician for GapVax, explains the features of the company’s HV-56 Advanced Series hydroexcavator to an attendee at the 2014 Expo. The new unit features control units in both the cab and on the body for most critical functions. (Photo by Craig Mandli)

Single-mode filtration eliminates wet or dry changeover, and its full-opening door with field-adjustable hinge and dual cyclinders adds to the safety and convenience of the unit. Four fail-safe, individually adjustable locks ensure a tight tailgate seal. Its body and components are durably blasted to near white SP-10 specs. It has a positive displacement pump with ductile iron, closed-end impellers and an ultra-efficient air injection cooling system.

Standard features include field-adjustable baghouse doors, a stainless steel “sure seal” sealing surface on tailgate and dump chutes, full bearing body pivot pin, blower hour-meter and temperature gauge, a custom-engineered stainless steel micro safety screen, full-length aluminum fenders, heavy-duty rear splash plate, electric vibrator, two adjustable sealed-beam work lights on the tailgate, a debris-backed collector body inlet, heavy-duty isolator mounts for the transfer case and blower, porthouse rotation flange, adjustable clean-outs, full-width rear debris guard, heavy-duty porthouse, body and tailgate safety prop, and a stainless steel tube sheet that resists corrosion and simplifies bag replacement.

Options include an auger unloading system, sludge pump, body pressurization system, pneumatic vacuum relief system, remote pendant or radio-controlled vacuum relief valve and throttle, liquid load indicator, toolbox, 20-inch manway, hydraulic vibrator, washdown system, stainless steel body, grounding cable, additional work lights, check valve at the blower, high-rail system and manual-rotating telescopic boom.

“The HV-56 is a very popular model, and we’re optimistic that adding the Advanced control system to it will make it even more so,” says Blair. “We still get customers that prefer the ‘old school’ control systems, but more of them are changing over every year.”

Blair says GapVax tries to roll out one of its new products every year at the show. For the 2015 version, newly rebranded the Water & Wastewater Equipment, Treatment & Transport (WWETT) Show, that won’t change.

“This show is really the perfect crowd for us,” he says. “It’s the chance for everyone in the wastewater industry to gather in one place. Our biggest goal is to just keep improving our products and listening to our customers.”
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A Drive for Efficiency

Cloud-based, fleet-tracking service maps out productivity and financial gains for Washington contractor

By Ken Wysocky

Running a fleet of nearly 50 vehicles efficiently and cost-effectively poses a challenge for many companies. But officials at FloHawks Plumbing & Septic eliminated many of the hassles associated with that task by subscribing to a cloud-based fleet management system from US Fleet Tracking.

Along the way, the Puyallup, Wash.-based FloHawks (a division of Northwest Cascade Inc.) also increased profitability, employee accountability and customer service. In addition, the Global Positioning Satellite (GPS) fleet management system helped the company develop a flat-rate pricing structure; it now enables the firm to assess and adjust its pricing to accurately reflect actual costs, says J.R. Inman, vice president.

FloHawks provides sewer cleaning, septic tank pumping and residential plumbing and drain cleaning services in a five-county area in northwestern Washington. It runs 48 vehicles, including four combination vacuum trucks (made by Vactor Manufacturing and Vac-Con Inc.); 16 septic trucks (manufactured by Satellite Industries and Erickson Tank & Pump); and 28 Ford service trucks and vans equipped with Spartan Tool LLC drain cleaning machines and RIDGID SeeSnake pipeline inspection cameras.

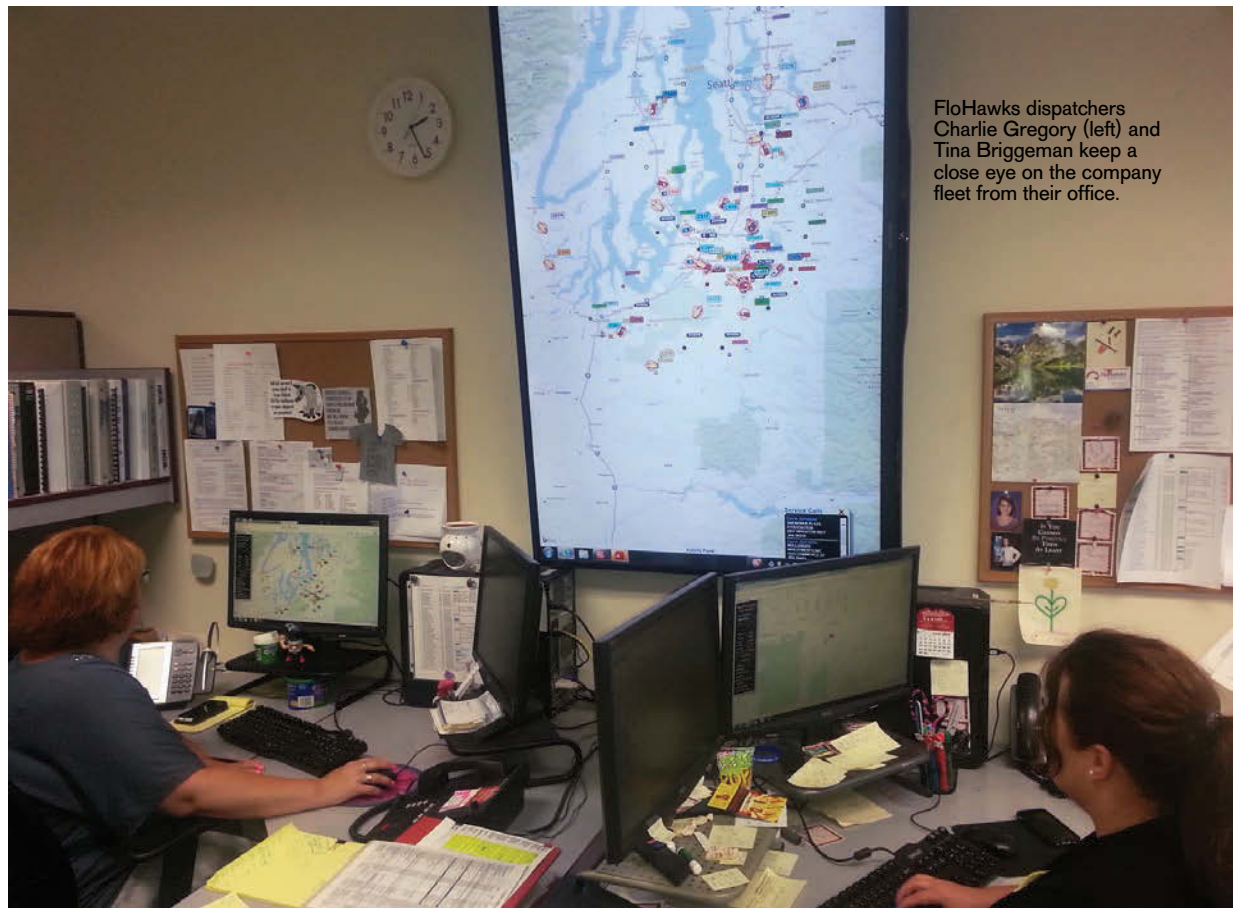
More than a decade ago, FloHawks started using another GPS tracking system, for several reasons. First of all, the company wanted to know where service trucks were on weekends; on-call drivers would often take their vehicles home, and when service calls came in, dispatchers didn't know the trucks' locations.

"We owned a small number of vehicles at the time, so there wasn't much equipment available on call," Inman notes. "And if equipment wasn't where it was supposed to be, we couldn't service customers."

Moreover, the company was developing a flat-rate pricing structure, and knowing exactly how much time employees were spending on jobs was integral to doing so.

money machines

- OWNER:** FloHawks Plumbing & Septic
- TECHNOLOGY:** GPS fleet management system from US Fleet Tracking
- FUNCTION:** Tracks location of service vehicles
- FEATURES:** Hands-off, under-dash GPS unit; real-time, Internet-based vehicle tracking; monitoring of key operational data, such as engine-idling time and time employees spend on jobs
- COST:** \$150 per under-dash unit plus \$29.50 per vehicle per month



FloHawks dispatchers Charlie Gregory (left) and Tina Briggeman keep a close eye on the company fleet from their office.



A FloHawks crew sets up to clean a wastewater treatment plant in Lakota, Wash.

Employee resistance to GPS tracking was minimal, Inman says, noting that only a few people quit after the company announced its plans to adopt a system. “For 98 percent of our employees, it wasn’t an issue,” he says.

Eventually, the company wanted more GPS features, so it switched to the cloud-based US Fleet system in June 2012 after scrutinizing various options at the Pumper & Cleaner Environmental Expo International.

“We wanted a service that could push our [dispatch] data onto a map on their website in real time ... show where each truck is so we could dispatch more efficiently,” Inman says. “US Fleet said they could do it. Now we have

“It might be just 4 or 5 percent more than before, but that amounts to a lot of money over the course of a year. Even if you start saving just 1 percent at a time, it becomes a big number, and that all goes to the bottom line.”

J.R. Inman

a 70-inch monitor that everyone [in the dispatch center] can see at all times. When a dispatch is created, it pops up on the board in a minute or so – it’s pushed right onto the cloud. It even color codes the various types of service vehicles [vacuum trucks, service vans, etc.] for easier visual recognition.”

The GPS system yields benefits above and beyond more efficient dispatching. For example, it can quickly resolve any questions concerning the hours worked on a particular job. “If a customer wasn’t on site during the job and wants confirmation as to the hours invoiced, we can easily provide this data using the GPS,” Inman says.

The system also saves the company hundreds of dollars a day in fuel costs because the system can tell when a truck is idling – and wasting fuel. “Our bigger trucks can burn 1 1/4 to 2 1/2 gallons of fuel an hour while idling,” he notes. “Getting guys to shut down their trucks is huge.”

In addition, the system helps the company operate more cost-effectively by analyzing hours worked (which includes driving time) versus actual billable hours. In other words, more effective dispatching and employee monitoring has resulted in increased billable hours, Inman says.

“It might be just 4 or 5 percent more than before, but that amounts to a lot of money over the course of a year,” he says. “Even if you start saving just 1 percent at a time, it becomes a big number, and that all goes to the bottom line.”

Within a year after FloHawks switched to the US Fleet system, all divisions of Northwest Cascade did the same; that covers about 225 vehicles. Each under-dash GPS unit costs \$150, and FloHawks pays \$29.50 per vehicle per month for the Internet-based tracking, which is accessible via any Internet-capable device and updates automatically every 10 seconds. Moreover, there’s no long-term contract required, Inman adds.

“If you take it on a per truck or per guy basis, if we can get everyone to be one hour more efficient per month, the system pays for itself just in terms of reduced fuel and labor costs,” Inman points out. “And an hour isn’t a lot – it used to take guys half an hour to load their trucks. Needless to say, employees now get out of the yard faster [when they know they’re being tracked] because they don’t get paid until they leave the yard. The GPS units pay for themselves just about every morning.

“After 12 years of using GPS, I wouldn’t own a business like we’re in without it,” he concludes. “It keeps us honest and our drivers honest and helps give our customers the service they deserve.” **C**

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

The Bonus Trap

Design and communication are critical to making employee bonus plans work for your business

By Erik Gunn

The holidays are coming. Can year-end bonuses be far behind? Some businesses choose to give their employees something extra either at the end of the year or just after the new year. Whether that's a good idea depends on what you're trying to accomplish.

Some bonuses are really nothing more than an extra check the employer hands out annually. It's probably not very big, and it's not tied to the performance of the business. If anything, it might be tied to how long the employee has worked there – going up in increments for, say, every five years a person has been at the company.

That kind of bonus might be a nice little perk – emphasis on the little. It builds goodwill in a season of gift giving (maybe) but not much else.

The other kind of bonus is supposed to be tied in some way to company performance. But if programs like that aren't handled properly they won't be effective, says Bruce Elliott, manager of compensation and benefits at the Society for Human Resource Management in Alexandria, Va.

HALO EFFECT

For one thing, bonuses don't change the minds of employees unsatisfied with their regular pay. "We find the 'halo effect' on these year-end bonuses probably isn't long," says Elliott. "If you already feel like you're underpaid, the bonus isn't going to help that much."

Another big problem: The incentive is often too disconnected in time from the behaviors it's supposed to reward. "If an organization sets up a plan, communicates the metrics, and says, 'OK, we're done, we'll wait till the end of the year' [to pay out], the effectiveness erodes," he says.

It's also a bad idea for small-business owners to simply add up their year-end profits and then carve off some fixed amount or percentage as the employees' bonus.

"They run the risk of turning their 'incentive systems' into entitlements," Elliott says. And when business hits the doldrums and you don't pay a bonus one year, watch out. "If you haven't done a good job in conveying what your plan metrics are, then you have a bad year, your employees get very angry."

FEEDBACK LOOP

Smart bonus plans give participants ongoing information about how well they're achieving the goals that the bonus is supposed to reward. Without that kind of "feedback loop," he says, "it may not end up accomplishing what the organization intends to accomplish."

Some approaches seem to fall in and out of fashion. One example is gainsharing plans, which reward workers for improving productivity. Popular in the 1980s, gainsharing lost support in the 1990s but now is coming back in some forms, Elliott says.

But the key to making any such program work effectively is to target

specific, measurable goals and communicate clearly and regularly about what it takes to reach them.

"It's not just a matter of saying, 'Here's my incentive system,'" Elliott says. "If you're communicating clearly to the employees as to what the metrics are to that plan and what the progress is against those metrics, you're going to get a lot more bang for the buck."

That way "at the end of the year the employee knows exactly what they're going to make and how they made that money."

"We find the 'halo effect' on these year-end bonuses probably isn't long. If you already feel like you're underpaid, the bonus isn't going to help that much."

Bruce Elliott

HOW IT WORKS

For instance, you could say that for every 5 percent increase in profitability you'll reward each employee \$1,000. You also need to clearly explain what factors and forces under the employees' control will help accomplish that.

Then throughout the year you report regularly how well the business is progressing toward that goal, and reinforce the link between that progress and the incentive reward. Quarterly reports are typical and can help employees encourage each other to keep on the ball to hit the target for that period.

You also need to pick goals that are legitimately within the control of employees. To pick an absurd example: If your work requires good weather, you're not going to reward people for productivity gains that can be tied *only* to the fact that you've had a month of warm, sunny days.

CASH IS KING

Some companies offer smaller-bore, focused incentive and recognition rewards – merchant gift cards, a company-bought family dinner to reward high performers and the like. But when it comes to formal reward and recognition systems, cash is pretty much king, Elliott says.

And he views some incentive programs – such as attendance awards and no-lost-time safety rewards – with skepticism.

With perfect attendance awards, "I question the efficacy because the money just isn't that big," he says. "Unless you've got a big problem with turnover and the cost to replace people is really high, and if you don't have an attendance problem to begin with, why would you put something like that in place?"



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Safety incentives have another potential downside – leading some employees to cover up accidents so that they get the quarterly reward for not losing time. One way to counteract that, he suggests, might be to empower an employee to function as a sort of in-house safety inspector, with a bounty for every hazardous situation he or she uncovers.

“When you look at incentives what you want to look at are the kind of behaviors you want to drive,” Elliott says.

KEEPING IT MEMORABLE

Still, he says, whatever form it takes, “a bonus is always found money” – and once it’s spent, it’s gone and forgotten.


Considered that way, he finds no downside to simply paying a solid market, or slightly above-market, wage along with reasonable benefits.

But don’t just leave it at that. Along the way, fully communicate the value of all forms of compensation employees receive, Elliott says.

Larger and mid-sized companies increasingly provide their employees a “total reward statement” that lays out not just the individual’s wages or salary but also the dollar value of the company-paid portion of their benefits. And if there is a bonus program, that’s included too.

Small shops can follow that example. And don’t just rely on a dense document that looks and reads like an insurance policy. It needs to be simple and clear to follow. And it’s also a good idea to walk everyone through the statement to ensure they really understand it.

Then with every paycheck – weekly, biweekly or monthly – employees will be reminded exactly what they’re getting.

“They’ll be much more engaged,” Elliott says. “That goes a longer way than a bonus.” 

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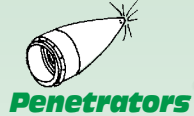
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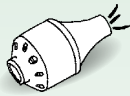


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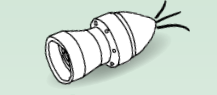
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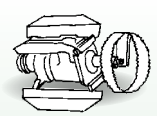
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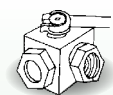
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WWETT Your Appetite

Rebranded 2015 Water & Wastewater Equipment, Treatment & Transport Show promises great value for your business

By Craig Mandli

The rebranded 2015 Water & Wastewater Equipment, Treatment & Transport (WWETT) show promises all the excitement the annual Pumper & Cleaner Environmental Expo International has delivered for 35 years — the best new tools, technology and equipment, valuable educational courses and endless peer networking opportunities all under one roof.

The WWETT show will encompass all 560,000-plus square feet of exhibit space at the Indiana Convention Center Feb. 23-26, 2015, showing off the latest products and technologies in the environmental services industry, as well as providing educational seminars led by skilled industry professionals. While he's extremely proud of what the show has become over the last 35 years, COLE Publishing founder Bob Kendall says the time is right to update the name and what it means.

"Over the last several years, we realized that the former name no longer

covered the entirety of the industry we're reaching," he says. "Last year in Indianapolis, I called 30 wastewater service companies within a short drive of our trade show, and many said they weren't planning to attend because they weren't pumpers. They thought the show wasn't for them. We want them to know that it is."

The WWETT name was chosen because it hits all segments of the industry reached by COLE Publishing's titles. "We've reached out into the municipal water and wastewater industry with *Treatment Plant Operator* and *Municipal Sewer & Water* magazines, and want those markets to know that the show is theirs too," says COLE Publishing President Jeff Bruss. "There are so many facets of the industry that are part of the show now, it's important to open and promote it to all we serve."

Education opportunities kick off Day 1 of the 2015 WWETT show, with presenters from the industry's top manufacturers and associations. New to this

CONTINUED >>



The first day of exhibits at the 2014 Pumper & Cleaner Environmental Expo drew a huge crowd. This year marks the 35th anniversary of the show, now known as the Water & Wastewater Equipment, Treatment & Transport Show.



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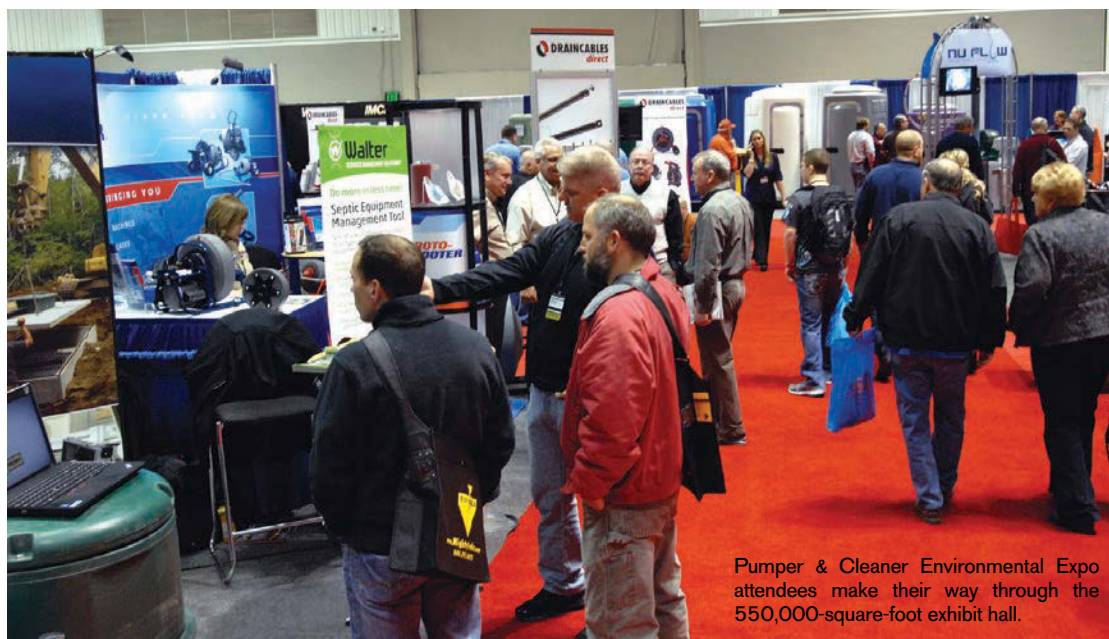
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year's lineup is a presentation by speaker John Conley on trucking safety topics, including compliance with Part 180 and preparing for a tank truck CT shop audit and cargo tank safety and regulatory report.

There are educational opportunities for everyone, though, as sponsoring associations are offering over 50 sessions on Education Day. Trade organizations taking part include the National Association of Wastewater Technicians (NAWT), National Environmental Health Association (NEHA), Southern Section Collection Systems Committee (SSCSC), National Association of Sewer Service Companies (NASSCO), National Onsite Wastewater Recycling Association (NOWRA), Waterjet Technology Association/Industrial & Municipal Cleaning Association (WJTA-IMCA) and the Sump and Sewage Pump Manufacturers



Pumper & Cleaner Environmental Expo attendees make their way through the 550,000-square-foot exhibit hall.

“Over the last several years, we realized that the former name no longer covered the entirety of the industry we’re reaching. Last year in Indianapolis, I called 30 wastewater service companies within a short drive of our trade show, and many said they weren’t planning to attend because they weren’t pumpers. They thought the show wasn’t for them. We want them to know that it is.”

Bob Kendall

Association (SSPMA). The last hour of the day is dedicated to an “Ask the Expert” session featuring experts from NAWT, NEHA, NOWRA, SSCSC and NASSCO. There will also be a Women in Wastewater Roundtable discussion Monday afternoon.

Learning opportunities extend throughout the week, with educational seminars from WWETT exhibitors also slated for Tuesday and Wednesday. Not only can attendees gain valuable industry-specific knowledge, WWETT education courses also count toward continuing education credits in many states. Visit the WWETT website (www.wwettshow.com) for specific information on your state.

While the educational opportunities are immensely valuable and popular, it’s the new technology and equipment on display that makes the biggest impression on attendees. Every year, products introduced at the show become important components in many industry professionals’ toolboxes and equipment fleets. More than 8,700 people representing 3,800 companies attended the 2014 show, with 529 exhibitors nearly spilling out of the exhibit hall. Kendall is optimistic that the 2015 WWETT show will be even bigger and better.

“We’re excited about the show, especially with the name change,” he says. “It broadens the scope of the trade show and amplifies the professionalism of the industry. It really enhances the change in how those in the water and wastewater trades are viewed from the outside. They are environmental services that are essential to the health and safety of the public.”

While many attendees will spend their time roaming the exhibit hall, attending education sessions and networking, the City of Indianapolis is also an inviting destination for both water and wastewater professionals and their families, with dozens of museums, entertainment venues and shopping opportunities, along with hundreds of restaurants within walking distance of the Convention Center. And with 4,700 guestrooms connected to the Indiana Convention Center via covered and heated skyways, weather won’t be an issue.

Of course, no show week is complete without the annual Industry Appreciation Party on Wednesday evening, Feb. 25, at 5 p.m., in the Sagamore Ballroom above the exhibit hall. In addition to 25-cent tap beer and a fun, laid-back atmosphere, popular country singer/songwriter Cole Swindell will perform an exclusive concert for WWETT attendees. Swindell is storming the music charts, reaching the top spot with his 2013 breakout hit, “Chillin’ It”, while 2014’s “Hope You Get Lonely Tonight” scored him Top 10 status.

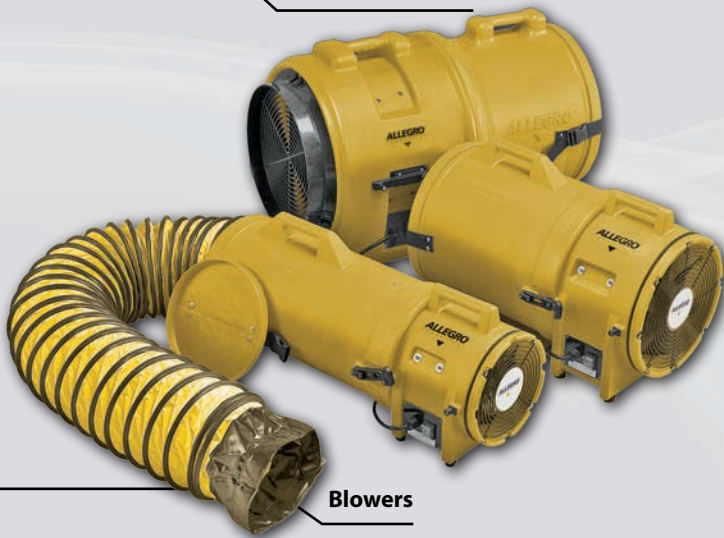
Of course, to many, especially those industry professionals who have made the show a must-attend event year after year, it will always be the Pumper Show. Kendall says that he’s not discarding that moniker, but instead adopting a new handle that he hopes opens the door to an even larger, more inclusive trade event.

“It’s been the Pumper Show for a long time, which definitely isn’t a negative connotation,” he says. “To many of us, including me, it will always be the Pumper Show at heart. But now it’s so much more too.”

The 2015 WWETT show is shaping up to be a great four days encompassing all the water and wastewater industry has to offer. To stay updated, visit www.wwettshow.com and check out the constantly evolving schedule of events. **C**



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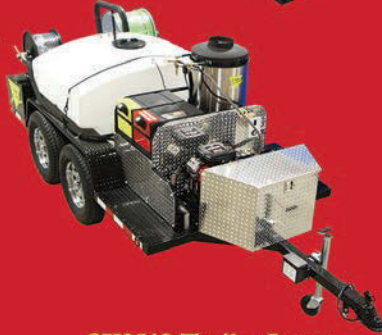
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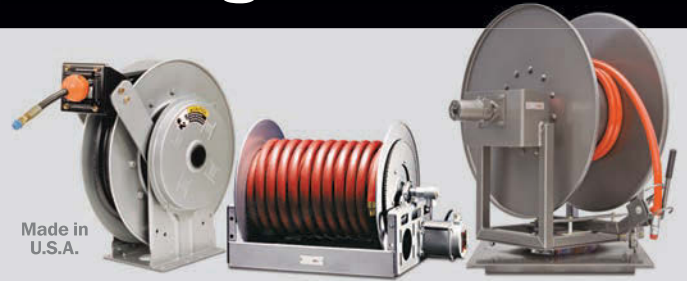
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Hydroexcavation and Industrial Jet/Vac Services

By Craig Mandli

Jet/vac combo units, high-powered and high-capacity vacuum trucks, hydroexcavation systems, portable jetters and cleaning nozzles do the heavy lifting for most drain cleaning businesses. Consider these products, along with root-control and safety equipment, if you're looking to expand your hydroexcavation or industrial vacuum services.

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COMBINATION JET/VAC

The **Aquatech F-10** combination jet/vac from **Hi-Vac Corporation** has a 180-degree rotating front-mounted reel that facilitates easy unit placement. The reel can hold up to 800 feet of 1-inch hose. The top-loading boom powers up and down, and extends to 26 feet from the pivot point. The single-engine drive decreases fuel consumption, maintenance expense, weight on the chassis and the initial chassis price. The water pump consists of a continuous flow, triplex reciprocating design and is rated up to 80 gpm at 2,000 psi. An optional unloader valve allows for complete control of water flow and pressure independent of the vacuum power. Tanks are high-strength, UV stabilized polyethylene, with optional fixed internal baffled aluminum tanks. **800/752-2400; www.aquatechinc.com.**



Hi-Vac Corporation

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The **RECycler** combination unit from **J. Hvidtved Larsen US** can be used to jet water mains regardless of whether you need to remove blockages, carry out preventive cleaning, clear new sewers of construction gravel or clean prior to guided camera inspection and relining. The jetting water is cleaned and reused, and requires nothing more of the operator than traditional combination units. **312/705-3813; www.hvidtved.com.**



J. Hvidtved Larsen US

LIQUID-RING PUMP LOADER

The **Berringer** from **Keith Huber Corporation** has a liquid-ring pump that provides 1,180 cfm of deep vacuum power and high-velocity air induction with pressurized tank discharge at the push of a button. Its



Keith Huber Corporation

3,300-gallon carbon steel tank has a 5/16-inch shell, 20-inch top manway, full-opening hydraulically operated rear door and a hydraulic tank lift. It has a PTO-driven, hydraulically operated vacuum/pressure system, full-length body trays for hose storage, a 6-inch discharge valve for direct pressurized or gravity unloading, 4-inch intake valve for loading with an internal standpipe, rear work lights, LED running lights, backup alarm, grounding reel and operator-friendly push-button controls. Options include multiple tank capacities and configurations, ASME/DOT 412, a Huber Lock rear door, stainless steel tank with wetted stainless parts, high-pressure jetting systems with integral water compartments, auxiliary transfer pump and a top-mounted hydraulically operated 6-inch boom with 4-inch hose. **800/334-8237; www.keithhuber.com.**

MULTIPURPOSE CLEANING TRUCK

The **PAT 949** combination truck from **Polston Applied Technologies** removes sand and grit from wastewater treatment plants, large-diameter lines, digesters and lift stations without shutting down the plant service. It combines vacuum, jetter and a down-hole pump system that cleans systems in submerged conditions while they remain in operation. It has a 49-foot hydraulic knuckleboom crane that moves across a 22-foot radius and can pump water up to 2,500 gpm. The end result is material that is paint-filter dry and can be taken straight to the landfill. **844/765-7866; www.polstonprocess.com.**



Polston Applied Tech.

LARGE HYDROEXCAVATION SYSTEM

The **HX-12/27** hydroexcavator from **Ramvac by Sewer Equipment** has a 12-yard debris tank, a temperature-controlled environmental chamber and a directional discharge system to off-load debris back into the excavation site when finished. It has a long-range wireless remote, NEMA 4 electrical system, a 400,000 Btu water boiler, a three-stage filtration system and standard 5,400 cfm blower with 27 inches Hg. It is available with a RamAir air excavation system. **800/323-1604; www.ram-vac.com.**



Ramvac

COMBINATION TRUCK

Camel 900 and **1200** combination trucks from **Super Products** include cartridge filters, dig tubes and water lances on both 9-yard debris capacity units, as well as 12-yard units. Coupled with powerful water jetting and vacuum capability, utilizing these tools allows operators to safely and effectively expose utility lines, remove debris and clean out a variety of structures, dig in congested spaces and perform many other hydroexcavating applications. **800/837-9711; www.superproductsllc.com.**



Super Products

LARGE-CAPACITY HYDROVAC

The **F4 Slope** hydrovac from **Tornado Hydrovacs** holds 13 cubic yards of mud and more than 2,100 gallons of freshwater. It has a boiler for heating water, and a 3,600 to 6,300 cfm positive displacement vacuum blower to pull spoils to the tank via a boom. The boom has a 342-degree rotation and a 26-foot reach. All critical components are housed in an insulated and heated aluminum van body. Its mud sweep empties the tank



Tornado Hydrovacs

without hoisting, which eliminates the dangers of dumping on uneven ground and around overhead power lines. 877/340-8141; www.tornadotrucks.com.

HYDROEXCAVATOR WITH BOOM OPTIONS

Two new vacuum boom tube and hose design options for AllExcavate hydroexcavation models from Vacall – Gradall Industries allow customers to select between three different boom and intake hose or tube options that best fit their needs and preferences. Options include a new boom design using a heavy-duty, full-length rubber hose which is durable yet flexible with a gum rubber lining that runs from the turret mounted on the debris tank out to the pickup point. Also available is a steel tube-in-tube boom and intake that connects to an identical rubber hose elbow that leads to the pickup point. Those are in addition to the original steel tube-in-tube with steel elbow boom and intake tube. The unit's vacuum forces generate up to 27 inches Hg and up to 5,800 cfm. Used in combination with the machine's waterjetting forces, it can effectively loosen and then remove dirt, rocks and other material from around water, sewer, gas and other utility lines, as well as around foundations where mass excavation is not possible or practical. 800/382-8302; www.vacallindustries.com.



Vacall-Gradall Industries

INDUSTRIAL VACUUM TRUCKS

TRUCK VACUUM EXCAVATOR

The FXT50 truck vacuum excavator from Ditch Witch mounts directly to a truck's frame rails, allowing the system to flex independently of the truck. Dealers can mount the unit to the single-axle truck of customers' choosing, and can customize the truck with toolboxes and other support equipment, such as a 1,020 cfm blower and a 3,000 psi water system flowing 5 gpm. 800/654-6481; www.ditchwitch.com.



Ditch Witch

HIGH-DUMP VACUUM LOADER

The High Dump vacuum loader from GapVax allows customers to stay on site longer, with the capability to off-load into a standard roll-off container. The debris body high-dump system has a 72-inch dump height in the fully raised position with the body down; a 61-inch dump height in the fully raised position with the body dumped; and 22 inches of rearward travel, so there's no need to move the truck with the body elevated. The package is available on GapVax industrial vacuum loaders, as well as hydrovax models that come standard with a 5,300 cfm 28-inch Hg vacuum pump and filtration system design, and a 15- to 17-cubic-yard debris body. 888/442-7829; www.gapvax.com.



GapVax

INDUSTRIAL VACUUM LOADER

The Guzzler Classic industrial vacuum loader from Guzzler Manufacturing has enhanced operator ergonomics and improved air routing, filtration and maintenance. A longer body provides improved material separation. The standard ladder, catwalk and railing provide the operator with easier and



Guzzler Manufacturing

safer access to the top of the truck. An enlarged bag house and cyclone clean-out access doors provide easier access. 800/627-3171; www.guzzler.com.

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The Industrial Vacuum Loader from Vac-Con was designed with a filtration system to handle lightweight dry material. It has high airflow efficiency and is available with options like Hi-Dump and Automatic Material Return System. The single mode machines can recover wet or dry material with up to 28 inches Hg. Positive displacement blowers are capable of pulling material as much as 700 feet. It is available with a hydroexcavation package that adds a powerful, high-pressure water system that works together with the vacuum system to excavate around sensitive underground utilities, locate underground systems and excavate in areas with limited access. 888/491-5762; www.vac-con.com.



Vac-Con

VACUUM EXCAVATOR

The HXX Prodigy vacuum excavator from Vector Manufacturing is mounted on a 33,000-pound gross vehicle weight Class 7 truck chassis, and has a user-friendly control system identical to the controls used on the full-sized HXX HydroExcavator, and the addition of a standard extendable boom with 320-degree rotation that provides full coverage of the working area. An optional telescopic boom is also available. The mid-sized unit blasts away soil with jets of up to 10 gpm, at rates from 1,500 to 2,500 psi. It has a powerful 16-inch Hg, 3,200 cfm positive displacement blower with a custom-designed and optimized filtration system that can handle both digging mediums – air at 185 cfm and 150 psi, and water at 10 gpm and 2,500 psi, without a bag house. The variable-pressure triplex pump allows the operator to adjust water pressure with the push of a button. It comes with an optional air excavation system. 800/627-3171; www.vector.com.



Vector Manufacturing

HYDROEXCAVATION EQUIPMENT

MAINTENANCE PUMP

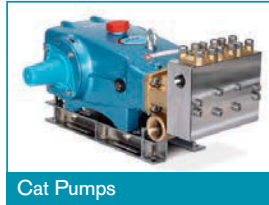
The RTX 100 120 maintenance pump from A.R. North America has stainless steel convexed intake and discharge valves for high fluid dynamic efficiency along with a high-strength, one-piece, nonporous forged nickel-plated brass head and forged heat-treated steel crankshaft. It has a dual high-pressure sealing system with anti-extrusion ring support lubricated with low-pressure recirculating lubrication chambers for the low-pressure seals, plus tapered roller crankshaft bearings. It can be connected directly or through an elastic coupling to different engines. The pump body and lids are constructed of diecast aluminum. It has a closed side with oil level indicator and rear cover with drain plugs. Movement of the pistons is via the connecting rod and crank. The pump shaft is made of high-resistance pressed steel. The connecting rods are a zinc alloy or diecast aluminum with antifriction properties. It has ceramic pistons and a double-gasket sealing system and valve caps in both the intake and exhaust sides for better maintenance. 800/893-4235; www.arnorthamerica.com.



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HYDROEXCAVATION WATER PUMP

The **Model 3560** high-pressure water pump from **Cat Pumps** offers up to 20 gpm at 1,200 to 4,000 psi. This triplex pump has preset low-pressure seals that provide secondary protection against external leaks and require no packing adjustment. Special high-density, polished, concentric plungers provide a wear surface that extends seal life. The pump manifold wet-end is easily serviced without entering the pump crankcase. It can be driven by a direct-coupled hydraulic motor. Its oversized crankshaft bearings are designed for high loading capacity. **763/780-5440; www.catpumps.com.**



Cat Pumps

HYDROEXCAVATING BOOM ELBOWS

Custom Boom Elbows manufactures both 70- and 90-degree boom elbows available for a range of hydroexcavating and municipal sewer work vehicles. Both feature a 25.1-inch circumference and 8-inch diameter with flanged ends. All models are built with a 1/2-inch wall thickness for longevity and endurance. **604/835-0199; www.customboomelbowsbc.com.**



Custom Boom Elbows

HYDROEXCAVATION TURBO NOZZLE

The **Ripsaw** rotating hydroexcavation nozzle from **Hydra-Flex** blasts a zero-degree straight water stream at up to 3,200 psi while rotating at a high speed to provide an 18-degree cone of coverage. Its optimized stream quality results in greater impingement, allowing the operator to use a smaller nozzle size while getting the same impact as nozzles with higher flow rates. It is constructed with stainless steel housings and tungsten carbide wear surfaces to withstand harsh environments and provide long life. Nonconductive urethane coating on the nozzle body also protects the user and sensitive underground assets. Repair kits are available for extended life and lower overall operating costs. **952/808-3640; www.hydrflexinc.com.**



Hydra-Flex

HIGH-TEMPERATURE HOSE

High-Temperature Hose from **Piranha Hose Products** withstands temperatures up to 190 degrees F for cold, difficult jobs encountered in residential and industrial sewer cleaning applications. Hoses are currently available in Series LLGR green-covered 4,000 psi hoses, ID sizes 1/4-, 3/8- and 1/2-inch and Series LLBU blue-covered 3,000 psi hoses, in 1/2-inch ID size. **800/250-5132; www.piranhahose.com.**



Piranha Hose Products

HYDROEXCAVATING TOOL

The **Soil Surgeon** hydroexcavating tool is designed to fit any sewer combination truck equipped with a telescopic 6- or 8-inch boom. The tool has a 1-inch water connection. The operator controls water pressure and power with truck controls. It has a 6-foot Tuff Tube with handles to guide the unit down for potholing or side to side for trenching. Six jets boring inward cut the soil, while six boring outward bring the tube down. **949/363-1401; www.soilsurgeoninc.com.**



Soil Surgeon

HYDROEXCAVATION ATTACHMENT

The **DIG-IT** hydroexcavation attachment from **Southland Tool Mfg.** is for use on the end of suction tubes, and comes in connections for Vactor, Vac-Con and Camel-style tubes. The side connection for the pressure hose is either 3/4- or 1-inch. The wet ring includes stainless steel jets that are slightly angled and set at zero degrees for cutting. It is available in different pressures and flows. A bottom rubber cuff provides protection. **714/632-8198; www.southlandtool.com.**



Southland Tool

HYDROEXCAVATION JETTING TOOLS

HX Series hydroexcavation jetting tools from **StoneAge** allow precise and accurate soil removal while saving both labor hours and heavy equipment costs. The HX-101 has a single, replaceable OC1H 1/4-inch NPT carbide nozzle at zero degrees to deliver a hard-hitting concentrated stream for breaking tough ground. The HX-102 utilizes two CNP2 carbide attack tips, which are 1/8-inch NPT. This jetting option divides pump power into two jets for a wider jet pattern with less impact power than the HX-101. The HX-103S utilizes three in-line AP2 attack tips with a wider pattern for clearing large areas and working around utilities while minimizing risk of damage to existing facilities. Each includes a high-visibility and easily replaceable urethane guard to protect the nozzles, and can be jetted to match a pump's pressure and flow. **866/795-1586; www.sewernozzles.com.**



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Amazing Machinery

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The **51T Series** by **American Jetter** offers a wide range of power to 80 hp and flows from 8 to 18 gpm up to 5,000 psi. Consistent power is provided by a 40 hp Kohler gas motor, with 80 hp available in the dual engine option. Low water shut-off prevents pump damage if the optional 600-gallon tanks run low. A standard hose reel speed control allows for precise cleaning in both directions. The wireless remote option allows for water on/off, engine shutdown and hose reel control. The heavy-duty square tubing trailer offers standard electric brakes on both axles. **866/944-3569; www.americanjetter.com.**



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Easy Kleen

WATER JET DRAIN CLEANER

The **JM-3080 Jet-Set** water jet cart drain cleaning machine from **General Pipe Cleaners** clears grease stoppages, sand, sludge and ice clogs. It generates 3,000 psi at 8 gpm to break up tough stoppages and flush them away. Vibration on demand helps the hose slide easily down long runs and around tight bends. A 20 hp Honda engine with electric start and 2-to-1 gear reducer drives the pump, while a 12-gallon buffer tank protects the jet if the water supply can't match the pump demand. 800/245-6200; www.drainbrain.com.



General Pipe Cleaners

PNEUMATIC VACUUM UNIT

The pneumatic high-efficiency **MV2000 Machine Vac** from **Guardair Corporation** is designed for wet/dry cleaning applications. It quickly and effectively sucks up debris, metal chips, dirt, sawdust and fine materials, including powders and talc. It has a liquid shut-off and drum drain that allows it to vacuum liquids such as machine oils, lubricants and other fluids. The portable 5.5-gallon unit is powerful, lightweight and virtually maintenance-free with no moving parts to wear out. It has no electric motor to spark or burn out and no electrical cords. It includes a steel wall bracket for easy mounting, as well as 10 feet of standard vacuum hose with a 1 1/2-inch inlet. It runs at a quiet 86 dBA. 800/482-7324; www.guardaircorp.com.



Guardair Corp.

PORTABLE CART JETTER

The **MV80 Jet Pro Cart** from **MyTana Mfg. Company** delivers 8 gpm at 3,000 psi, and is powered by a 24 hp Honda engine. It has a compact steel cart and easy-to-use controls for the pressure unloader and pulseable valves. The 12-gallon water tank is set up for continuous resupply from a garden hose. The unit comes with 250 feet of 3/8-inch thermoplastic jetter hose and a set of nozzles for penetrating, cornering and blind thrust. The hose cart has two reels, one for the 3/8-inch hose and one for a 50-foot jumper hose useful for remote jetting. 800/328-8170; www.mytana.com.



MyTana Mfg. Company

PORTABLE WATER JETTER

The **Model KJ-3100** portable water jetter from **RIDGID** provides 3,000 psi of working pressure, propelling a highly flexible and lightweight hose through 2- to 10-inch lines while blasting through sludge, soap, grease and sediment blockages. As the hose is pulled back, it power scrubs the line, flushing debris away



RIDGID

and restoring drainlines to full, free-flowing capacity without the use of chemicals. The hose reel can be completely removed for ease of loading and unloading. It is also maneuverable on a two-wheeled cart, making it easy to fit through standard-size doors and negotiate tight turns. 800/769-7743; www.ridgid.com.

HIGH-FLOW HYDROJETTER

The **High Flow Ultimate Warrior** hydrojetter from **Spartan Tool** has 3,000 psi of sewer cleaning pressure to clear debris in pipes up to 24 inches in diameter, coupled with 35 gpm of water flow to quickly flush loose debris down the line. Its 600-gallon water tanks carry enough water to the job site to clean almost any blockage. Fully compliant with all National Association of Trailer Manufacturers standards, it meets or exceeds trailer standards throughout the U.S. and Canada. It has a full body enclosure for improved appearance while providing quiet operation and keeping all key components warm, dry and out of the elements. It has an 84 hp turbo-charged Kubota engine and Giant pump. 800/435-3866; www.spartantool.com.



Spartan Tool

CLEANING NOZZLES

CENTERING DEVICE

Manufactured from an aerospace elastomer, the flexible **Cnt-r-Kut** centering device from **Arthur Products** conforms to damaged or deformed lines, and can be easily trimmed in the field to fit virtually any line from 2 to 8 inches in diameter. Simply attach a 3/8- or 1/2-inch NPT hose to one end, and a 3/8- or 1/2-inch NPT nozzle to the other end. 800/322-0510; www.arthurproducts.com.



Arthur Products

HD VIDEO NOZZLE

Deployed on any 3/4- or 1 1/2-inch jetter hose, the **JetScan HD** video nozzle from **Envirosight** allows cleaning crews to determine what tools and setup to use, identify blockages during emergency call-outs and document the outcome of cleaning operations. As it advances down pipe 8 to 24 inches in diameter, it records 720p HD video in MPEG format to an onboard SD memory card. Immediately afterward, the card can be removed and the video viewed on an iPad or other SD-compatible device. Twin high-output LED lamps ensure bright, vivid footage. It lasts four hours on rechargeable lithium-ion batteries and stores up to eight hours of video. 866/936-8476; www.envirosight.com.



Envirosight

ROTATING CUTTING NOZZLE

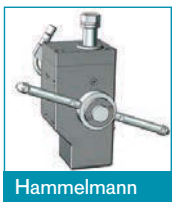
The **Rotodrill** nozzle from **Enz USA** has a rotating front jet for improved cutting performance. It is effective at clearing blocked and frozen pipes, and moving heavy debris. It has ideal propulsion, and can also be used in hydroexcavation by plugging off the thrust jets. It is available in 1/2-, 3/4- and 1-inch systems. 877/369-8721; www.enzusainc.com.



Enz USA

AUTOMATIC TANK CLEANER

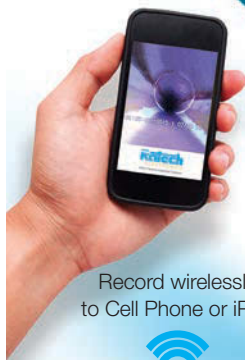
The **2.5D** automatic tank cleaner from **Hammelmann Corp.** removes deposits including hardened materials from internal tank walls at pressures up to 23,150 psi and flows exceeding 200 gpm. It is ideal for efficient cleaning in long vessels and towers when the rotary motion of the standard



Hammelmann

CONTINUED >>

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3-D tank cleaning unit is not useful. The swing angle of the nozzle holder has optional adjustments to 35 or 83 degrees. The swing angle of the unit around its axis is optionally set at 36 or 81 degrees. It operates using high-pressure water, with the nozzle arms rotating due to the reaction force of the water jets emitting from the nozzles. This rotational motion is transferred via a built-in drive and reduction gear, which in turn rotates the cleaner around its vertical axis. By rotating on two axes, the jets can reach all parts of the tank interior. The rotation speed is controlled by an adjustable induction brake magnet. 800/783-4935; www.hammelmann.com.

REPLACEABLE-ORIFICE NOZZLE

Multi-Global sewer nozzles from **NozzTeq** have a crisscrossing front jet pattern for clearing grease, debris and ice blockages. They have replaceable orifices and can be configured with up to four different front jets for general sewer cleaning or particular types of sewer obstructions. They can also be used for hydroexcavation, as the rear orifices can be blocked to only have penetrating orifices in the front. Nozzle life can be extended by replacing orifices as needed. Laminar flow is preserved from truck to nozzle end for more powerful jet streams produced at lower pressure. 866/620-5915; www.nozzteq.com.



NozzTeq

ROOT CONTROL EQUIPMENT

LOW-MAINTENANCE CUTTING NOZZLE

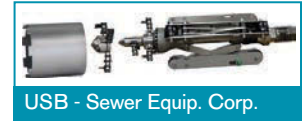
Root Rat cutting nozzles from **Chempure Products** are used with jetters from 11 hp to large truck-mounted models. Manufactured of hardened stainless steel, they come with a toolbox with two interchangeable rotors — one with cables and the other with chains. The combination kit includes extra chain, cable and bearings. They need no repair or rebuilding other than bearing replacement, which can be completed in less than two minutes with minimal parts. 800/288-7873; www.chempure.com.



Chempure Products

TURBO CHAIN CUTTERS

Turbo chain cutters from **USB - Sewer Equipment Corporation** are made of tempered stainless steel and offer continuously adjustable guide skids. The chain retainer is driven by a high-performance turbine to remove roots, grease and mineral deposits from 4- to 48-inch sewer lines. With an optimized 3-D hydromechanics design, in conjunction with ceramic nozzle inserts, the cutters use recycled or clean water. They can also be used as barrel cutters with diamond bits for smooth removal of protruding laterals. Heavy mineral deposits can also be removed with carbide bits attached to the specialized chain. 866/408-2814; www.usbsec.com.



USB - Sewer Equip. Corp.

SAFETY EQUIPMENT

HEAVY-DUTY INDUSTRIAL GLOVES

HM Barrier heavy-duty industrial gloves from **Cestusline** have a dexterous dual-layer and a one-piece Kevlar thread double-stitched palm for grip, durability and cut resistance. Direct-injected thermoplastic rubber on the back of fingers adds impact protection, as does the covered urethane-rubber padding on the knuckles and back of hand. A Hipora barrier makes them waterproof yet breathable. A 3M reflective stripe enhances hand visibility. 503/894-8549; www.cestusline.com.



Cestusline

SAFETY SEWER DRAIN

The **Safety Sewer Drain** eliminates the mess and threat of contamination when removing the clean-out on a plugged drain. Made of clear polypropylene, the device fits over a 4-inch clean-out. Sewage drains through a valve-controlled hose into a bucket for disposal. It also can be adapted to work on a 3-inch clean-out. 906/753-4002; www.safetysewerdrain.com.



Safety Sewer Drain

REMOTE-OPERATED CLEANING ROBOT

The **Jetty** from **Woma Corporation** increases operator safety in applications where hand-held pressure tools have reached their limits, or a safe distance must be kept from the area being cleaned. The operator controls the system via remote control from a safe working distance, with no need to enter a hazardous zone. The unit has a long lance support for difficult-to-access areas, or when close access is unavailable, and a shorter lance support when the work area is limited. The tooling setup includes single nozzles, rotary turbo nozzles, short and long spray-bars and a dual lance system for operating pressures of up to 43,000 psi. 800/258-5530; www.womacorp.com.



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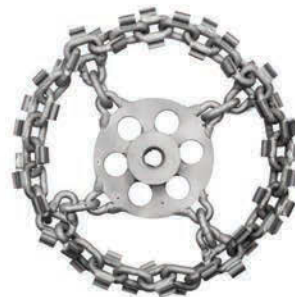
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CASE STUDIES

Hydroexcavation and Industrial Jet/Vac Services

By Craig Mandli

3-D HIGH-PRESSURE CLEANING TOOL USED ON REACTOR

PROBLEM

An industrial facility in Delaware faced production problems due to severe fouling of a horizontal reactor, with buildup predominantly on the agitator shaft, blades and reactor ends. The company attempted two different manual cleaning methods – a sharp metal rod and a high-pressure lance. Both methods were only able to remove chunks of residue in the line of sight of the operator, leaving a large amount of residue on the vessel's walls and blades. A safer, faster, more efficient solution was required.



Before



After

SOLUTION

Chemac Inc. was invited to conduct a demonstration using a **URACA 3-D TWK 175/800** high-pressure cleaning tool. The tool had an operational pressure of approximately 10,000 psi and a flow rate of 40 gpm. It was fitted on a high-pressure pipe and positioned inside the vessel with a special flange adapter. The operator only needed to position the tool, lock the agitator and turn on the pump.

RESULT

The tool successfully removed all buildup from the reactor in minutes. All residues were removed to the complete satisfaction of plant management. All cleaning was done with minimal labor, mitigating previous safety concerns. **800/217-8677; www.chemacinc.com.**

PNEUMATIC CUTTER RENEWS PIPE SYSTEM

PROBLEM

The high-volume drainage line, which takes in all other drain-lines for the aqua-theatre inside Hersheypark in Hershey, Pa., was experiencing inadequate flow, backups and corrosion.



SOLUTION

Jet Tec Inc. mechanically cleaned the 4-inch-diameter cast iron pipe system, located 15 to 28 feet underground, with the **Pneumatic Micro-Cutter** from **Nu Flow Technologies**. It is used for reinstating and to clean and remove pipe debris, calcite and roots from the inside of a variety of pipes, including steel, cast iron and Orangeburg. The system rotates at 1,500 rpm in 1 1/4- to 6-inch pipes in lengths up to 100 feet, and will negotiate turns of 90 degrees in pipes down to 2 inches in diameter.

RESULT

The cutter allowed Jet Tec. Inc. to remove corrosion and bring the interior of the pipe back to the original diameter, without causing any failure or breach to the already-damaged pipes. After cleaning the line, a Nu Drain structural liner was installed. **905/433-5510; www.nuflowtech.com. c**

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Education Day Sessions

Monday, February 23, 2015

NAWT

National Association of Wastewater Technicians
Room 234-236

- 8 a.m. Pre-Trip Inspections
- 9:30 a.m. Hours of Service (HOS) Overview
- 11 a.m. Roadside Inspections
- 1:30 p.m. Environmental Impact Study: Effects of Water Softener on Septic Tank Performance
- 3 p.m. A Study of Microbiological Induced Corrosion
- 4 p.m. Ask the Expert Q & A

WJTA-IMCA

Water Jet Technology Association
Industrial Municipal Cleaning Association
Room 140-142

- 8 a.m. Hydroexcavation — Tools to Stay Current in a Changing Marketplace
- 9:30 a.m. Maximizing Productivity on Vacuum/Air Mover Projects
- 11 a.m. Waterblast Safety Can Enhance Productivity, Quality and Profits!

SSCSC

Southern Section Collection Systems Committee
Room 231-233

- 8 a.m. Combination Vacuum Unit Operation Overview
- 9:30 a.m. Been There, Done That, Got The T-Shirt (Small Business From a Hands-on Perspective)
- 11 a.m. So You Think You Are the Best? CCTV Inspection In Its Highest Form
- 1:30 p.m. Avoid the Pitfalls — Trenchless Pipeline Repair and Renewal
- 3 p.m. NOZZLES, NOZZLES, NOZZLES!
- 4:30 p.m. Ask the Experts Q & A

SSPMA

Sump and Sewage Pump Manufacturers Association
Room 243-245

- 1:30 p.m. Sizing Guidelines for New or Replacement Sewage Pumps
- 3 p.m. Backup Battery and Combination Pump Systems Evaluation and Installation
- 4 p.m. Specifying Pumps: Why Do Pumps Fail?

NASSCO

National Association of Sewer Service Companies
Room 130-132

- 8 a.m. Overview of Manhole Rehabilitation Technologies
- 9:30 a.m. When, Why and How to Defeat Infiltration Cost Effectively
- 11 a.m. New Opportunities in Small-Pipe Relining and Reinstatement
- 1:30 p.m. Pipeline cleaning Best Practices
- 3 p.m. Large-Diameter Pipe and Drain Rehabilitation Technologies
- 4:30 p.m. Ask the Experts Q & A

NEHA

National Environmental Health Association
Room 237-239

- 8 a.m. New Technologies for Non-Potable Water Use
- 9:30 a.m. Rules & Regulations with New Technologies and Working with Regulators
- 11 a.m. New Technologies for Non-Potable Water Use Part 2
- 1:30 p.m. OSHA Regulations and Smart Business
- 3 p.m. Sales & Marketing with New Technologies
- 4 p.m. Ask the Experts Q & A

NOWRA

National Onsite Wastewater Recycling Association
Room 240-242

- 8 a.m. Lobbying
- 9:30 a.m. Field Inspections Part One
- 11 a.m. Field Inspections Part Two
- 1:30 p.m. Septic Tank Safety — Lethal Lids
- 3 p.m. Time Dosing
- 4:30 p.m. Ask the Experts Q & A

Portable Restroom Track

Beverly Lewis
Room 243-245

- 8 a.m. Mastering the Busy Season
- 9:30 a.m. A Great Customer Experience
- 11 a.m. Employee Retention and Recruitment

Business Track

Kelly Newcomb, Ellen Rohr, Women's Roundtable
Room 136-138

- 8 a.m. Grow or Go! Why Most Companies Fail to Grow Effectively and What You Can Do to Keep Your Company From Failing
- 9:30 a.m. Target Marketing: How to Effectively and Efficiently Grow Your Sales
- 11 a.m. Effective Branding and How it Can Help Your Business
- 1:30 p.m. Business Basics 101
- 3 p.m. Build the Business You REALLY Want
- 4:30 p.m. Women in Wastewater Roundtable Discussion

Gil Longwell
Room 140-142

- 1:30 p.m. Protecting Private Enterprise

Marketing Track

Susan Chin
Room 133-135

- 8 a.m. Ladies and Gentleman: Create Your Personal Brand and Strategic Network for Success in 5 Easy Steps
- 9:30 a.m. Effective Website Design and Engaging Customers in the Digital Age
- 11 a.m. Tapping into the Power of Social Media and Content Marketing

Road Rules & Safety Track

John Conley
Room 133-135

- 1:30 p.m. A Trucker's Guide to Washington Speak
- 3 p.m. Cargo Tank Safety and Regulatory Report
- 4:30 p.m. Compliance with Part 180 and Preparing for a Tank Truck CT Shop Audit



Tuesday Sessions

Detailed session information available at: wwett.com

February 24, 2015

NAWT Track

Room 234-236

- 8 a.m. | Septage Processing Introduction:
Working with an Engineer
- 9:30 a.m. | Analyzing Your Resources:
What Goes on Around You is Important!
- 11 a.m. | Introduction to Odor Control

Installer Track

Room 231-233

- 8 a.m. | Soils, Design, O&M: What Every Installer
Should Know
- 9:30 a.m. | Best Installation Practices for
Trouble-Free Pump Controls
- 11 a.m. | Introduction to Effluent Filters

MSW Track

Room 237-239

- 8 a.m. | Mapping Solutions for Repair and
Maintenance of Water Distribution Systems
- 9:30 a.m. | The Shift from Reactive to Proactive
Wastewater Management Best Practices
- 11 a.m. | Why Hasn't Your Sewer System Evaluation
Survey Testing Worked?

Treatment Plant Operator Track

Room 240-242

- 8 a.m. | An Emerging Technology for Lagoon-Based
Nutrient Removal
- 9:30 a.m. | The New Wastewater: Collection System
Challenges Caused by Today's Modern Trash
- 11 a.m. | Wastewater Microbiology

Industry Safety Track

Room 243-245

- 8 a.m. | New Trends and Technology in Equipment
for Excavation Safety
- 9:30 a.m. | Best Practices: Use, Care and Repair of
High-Pressure Sewer Cleaning Hose
- 11 a.m. | Development and Execution of a Cross-Bore
Prevention Program

Business Track

Room 130-132

- 8 a.m. | How to Position Your Company in the Market Today
- 9:30 a.m. | Six Proven Tactics to Generate Leads and
Turn Them Into Revenue
- 11 a.m. | Growth by Acquisition or Exiting Gracefully:
Buying or Selling a Septic or Sewer Business

Cleaner Track

Room 133-135

- 8 a.m. | Drain Cleaning Methods - Then and Now
- 9:30 a.m. | The Physics of Pipe Cleaning Tools and
How I Make it Work for Me
- 11 a.m. | Lateral Lining - Are You Using the Right Tool?

Industry Technology Track

Room 136-138

- 8 a.m. | How to Manage Septic Systems
using Remote Monitoring
- 9:30 a.m. | GPS Tracking: Hype Vs. Reality
- 11 a.m. | Wireless Controls in the Waterjet Industry:
Sacrificing Safety for Convenience

Pumper Track

Room 140-142

- 8 a.m. | True Crime Scene Stories: How to Inspect
and Troubleshoot Suspect Onsite Systems
- 9:30 a.m. | One Man's Waste is Another Man's Treasure
- 11 a.m. | Dewatering Options for Roll-Off Containers



*Complete contest rules and details at: wwett.com/rules



Wednesday Sessions

Detailed session information available at: wwett.com

February 25, 2015

Pumper Track

Room 140-142

- 8 a.m. Considerations in Building Your Next Vacuum Truck
- 9:30 a.m. Grease Collection and Treatment:
Raising the Bar Via Resource Recovery
- 11 a.m. Analyzing Common Onsite Septic System
Malfunctions and Options for Prevention & Correction

MSW Case Study Track

Room 231-233

- 8 a.m. Retrofit of the Lansdowne Sanitary P/S
- 9:30 a.m. Huntington Beach Successfully Navigates
Emergency Repair of Fragile Storm Drain
Collection System Rehabilitation –
Alternative Technology
- 11 a.m. Collection System Rehabilitation –
Alternative Technology

MSW Technology Track

Room 237-239

- 8 a.m. Implementation of Acoustic Inspection Technology
at the City of Augusta
- 9:30 a.m. Highlights from the 7th Edition of Operation
and Maintenance of Wastewater Collection
Systems Manual
- 11 a.m. Technological Advancements Fulfill the
Promise of Zoom Survey Paradigm

Portable Sanitation Track

Room 136-138

- 8 a.m. Portable Sanitation - Special Events
- 9:30 a.m. Making Your Portable Restroom Business Lean
and Mean – How to Boost Productivity and
Increase Your Bottom Line
- 11 a.m. Building and Coaching Your Portable Sanitation Team

Treatment Plant Operator Track

Room 240-242

- 8 a.m. Utility Regulation Basics for Grease Haulers
- 9:30 a.m. The Waste in Our Wastewater
- 11 a.m. Security Issues and Best Practices for Water/
Wastewater Facilities

Pipe Rehab Track

Room 243-245

- 8 a.m. Integrating Temperature Sensor Technology
within Lateral Pipeline CIPP Installations
- 9:30 a.m. CIPP Calibration and Vacuuming
- 11 a.m. Extending Life Expectancies with Corrosion-
Resistant Coatings and Linings

Business Track

Room 133-135

- 8 a.m. Team Building for Profit
- 9:30 a.m. Ten Commonsense Ways to Grow and
Improve Your Business
- 11 a.m. Setting Expectations – The Key to Sales
and Customer Satisfaction

Advanced Installer Course

Room 234-236

8 a.m. - 5 p.m.

- Introduction and Site Evaluation
- System Sizing and Basic Design Principles
- Pumping to Systems
- Installations of ATUs
- Installing for Management
- Troubleshooting Systems

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PRODUCT SPOTLIGHT

Portable, foot-activated cleaning machine prepares pipes for relining

By Ed Wodalski

Originally developed for the U.S. Army to clean tank barrels, the portable TCM-3000 pipe cleaning machine from GI Industries removes debris prior to relining.

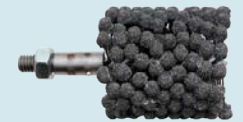
The cleaning machine, which is powered by a 3/4 hp motor and weighs only 45 pounds, can be carried from job to job, including rooftops and aboard airplanes.

The system includes a steel, flexible shaft cable (3/4-inch O.D.) encased in protective nylon for cleaning 100 feet of pipe. A three-way switch controls machine rotation: forward for drilling, neutral for air/water flushing and reverse for deburring.

“What’s unique about the machine is it runs on standard 110 current, so power is not an issue,” says Brian Good, general manager of GI Industries. “Technicians also like the variable-speed drive. They’re able to drill from 0 to 1,750 rpm.”

The machine’s slower speeds are best for drilling and removing debris while higher speeds are best for polishing and deburring surfaces in preparation for relining. Air and water fittings enable the machine to be connected to a compressor or waterline.

“When you turn the machine on and step on the foot pedal, the brush or drilling head begins spinning and up to 100 psi of air or water



is released at the drill or brush head,” he says. “The flushing action removes blocked debris from the pipe, while also cooling the drill head, prolonging the life of the cutting tool.”

The field-repairable system has a welded steel cabinet and weight-saving aluminum cover. It can be used in harsh environments, including extreme heat and cold, and requires minimal maintenance: An occasional spray of lightweight oil down the throat of the driveshaft helps keep seals moist.

The cleaning machine, made with 90 percent American components, comes with a pneumatic foot switch and 24-foot GFI power cord. **800/724-1944; www.giind.com.**



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4

1 JENNY PRODUCTS K PUMP

The cast iron air compressor K pump from Jenny Products features an enlarged crankcase for greater oil capacity. The pump also has a large flywheel for extra cooling and easy startup. **814/445-3400; www.steamjenny.com.**

2 REELCRAFT NONCORROSIVE FLUID PATCH OPTION

The noncorrosive fluid patch option from Reelcraft Industries is available on the Series RT, 5000, 7000 and 9000. Structural reinforcements reduce weight while maintaining structural integrity. **800/444-3134; www.reelcraft.com.**

3 KLEIN TOOLS PROTECTIVE GLOVES

Journeyman gloves from Klein Tools are designed for trade professionals who might encounter cuts, scrapes, impact and vibration injuries on a regular basis. The gloves are available in six machine-washable models. Extreme gloves feature impact-absorbing thermo plastic rubber and EVA foam to protect fingers,

knuckles and the back of the hand. Utility and camouflage gloves feature a breathable, moisture-wicking stretch material. Cold-weather Pro gloves have Thinsulate-lined palms and fingers. Grip gloves have rubberized fingertips and reinforced synthetic leather palms. Leather gloves feature professional-grade leather and impact-absorbing thermoplastic rubber. **800/553-4876; www.kleintools.com.**

4 COBRA TECHNOLOGIES SONAR/VIDEO SYSTEMS

Single Cable sonar/video systems from Cobra Technologies are designed for large-diameter pipeline inspections using a single cable up to 6,000 feet in length. Systems can be mounted on floats or large crawler-based platforms for use in 12- to 200-inch-diameter pipes. A sonar sediment report provides a graph indicating the volume of sediment, highest level of sediment and the percentage of sediment blockage for all pipeline segments observed (captured) during inspection. **800/443-3761; www.cobratec.com.**

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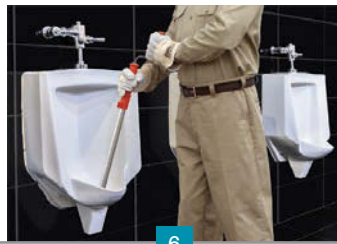
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5 CAT PUMPS MOBILE PHONE PRODUCT APP

The mobile app for iOS/Apple and Android smartphones from the Cat Pumps website enables users to find product and technical information, as well as size and select pumps and accessories, and convert flow, pressure, volume, temperature, torque, length and area to the needed units. The app can also be used to calculate flow rate, horsepower, rpm and pump and motor pulley diameters. **763/780-5440; www.catpumps.com.**

6 GENERAL PIPE CLEANERS TELETUBE URINAL AUGER

The Teletube Urinal Auger from General Pipe Cleaners features a 48-inch spring for cleaning stoppages beyond the urinal, a crush-resistant hexagonal aluminum inner tube, galvanized steel pushrod, rubber bumper to protect urinal bowls and grip-clip for attaching the spring after use. The auger weighs less than 2 pounds and has a 1 1/8-inch outer steel tube. **800/245-6200; www.drainbrain.com.**

7 GLOBAL GLOVE DISPOSABLE HAND PROTECTION

The PantherGuard line of high-tech disposable hand protection from Global Glove & Safety Manufacturing is available in three styles. The 675PF is a 6 mil orange nitrile disposable with long cuff. The 775PF is a 6 mil orange nitrile disposable in regular length. Both styles have freeze-dried aloe that activates during use to moisturize cracked and chapped hands. The 800F is an 8 mil, black flock-lined long cuff disposable. The lining keeps hands warm in cold conditions and absorbs perspiration in warm conditions. **763/450-0110; www.globalglove.com.**

8 CULTEC RECHARGER V8 PLASTIC CHAMBER

The Recharger V8 plastic chamber from CULTEC holds about 100 cubic feet of water and is IAPMO R&T certified. Applications include subsurface retention, detention, recharging or controlling the flow of stormwater. The chamber is 32 inches high and 60 inches wide with a capacity of 8.68 cubic feet per linear foot. The internal manifold allows for design flexibility and decreased installation footprint. **800/428-5832; www.cultec.com.**

9 VOLVO TIER 4 FINAL CRAWLER EXCAVATORS

Tier 4 Final/Stage IV compliant EC250E and EC300E crawler excavators from Volvo Construction Equipment deliver 5 percent increased fuel efficiency over previous models and feature the Volvo ECO mode that automatically reduces fuel consumption without performance loss in most conditions. The integrated work mode system enables the operator to manually control flow to the hydraulics. E-Series options include automatic idling and auto-engine shutdown that reduce engine speed to idle if the machine remains idle for a preset amount of time. **828/650-2000; www.volvo.com/constructionequipment.**

10 TOMMY GATE TUCKUNDER LIFTGATE

The Tommy Gate Tuckunder liftgate from Woodbine Manufacturing Co. has a self-leveling, wedge-style platform (extruded aluminum or steel treadplate) with 2,500- or 3,000-pound lifting capacity and bed extensions fitting either 96- or 102-inch wide bodies. Features include hydraulic power-down, underride impact guard, 24-inch rubber dock bumpers, snubber kit, low-profile, fixed toggle control and two-gauge, full-length power cable and ground. **800/543-8428; www.tommygate.com.**

11 COXREELS HOSE REEL IDLER SPROCKETS

Add-on idler sprockets for 1600 Series motorized hose reels from Coxreels help reduce rewind speed and increase motor torque. The all-steel sprockets are available in three ratios (1:2, 1:3 and 1:4) with or without the optional extended shaft for three-way or electromagnetic brakes. The sprockets are mounted on a zinc-plated steel axle and rotate on two self-lubricated bronze bearings. **800/269-7335; www.coxreels.com.**

12 BBA ELECTRICALLY DRIVEN PUMPS

Electrically driven, auto-prime, solids-handling pumps from BBA Pumps deliver from 100 to 6,500 cubic meters per hour (26,000 to 171,000 gph). Available in 3- to 24-inch sizes, the pumps can be used in sewage or dewatering applications. **843/849-3676; www.bbapumps.com/us.** **c**



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RS Technical Services founder, CEO passes away

Rod Sutliff, founder and chief executive officer for RS Technical Services, passed away in August while taking his daily walk around the RST campus. The 80-year-old Sutliff, who had a recent history of heart problems, was a guiding force in the closed-circuit TV inspection industry. He helped pioneer the mainline pan-and-tilt camera and the single-conductor panomorphic camera system. A resident of Petaluma, Calif., Sutliff is survived by his wife of 60 years, Kathleen, and their children Thomas Sutliff, Michael Sutliff, Patricia McCarten, Paul Sutliff, Mark Sutliff, James Sutliff and Kathleen Colsen.



Rod Sutliff

Almanza receives Ditch Witch Harold Chestnut Award

Ditch Witch presented the Harold Chestnut Award to Jerry Almanza, Ditch Witch of Central Texas. The annual award is presented to the marketing manager who best exemplifies the superior service, enthusiasm and dedication of Harold Chestnut, who served as Ditch Witch parts manager for 30 years.



Pictured (from left) are Elvira Almanza, Jerry Almanza, Tiffany Sewell-Howard and Wayne Orender of Ditch Witch of Central Texas.

Georg Fischer opens California location

Georg Fischer, part of Switzerland-based Georg Fischer Ltd.'s North American Piping Systems business unit, expanded from its Tustin, Calif., location to a new facility in Irvine, Calif. The 115,000-square-foot center can accommodate previously out-sized work areas as well as future growth.

Wastequip provides truck to D.C. ministry

Wastequip provided God's Connection Transition of Washington, D.C., with a box truck for collecting goods from partnered grocers and retailers. The non-profit organization provides food and clothing to individuals in need, serving more than 5,000 families. The ministry had begun a campaign to raise funds for a new truck, only to fall short of its goal. Learning of the campaign, Wastequip partnered with one of its dealers, Rush Truck Centers, and donated the vehicle to the ministry and its founder, Arnold Harvey.



Federal Signal opens North Dakota store

Federal Signal Corp.'s Environmental Solutions Group opened an FS Solutions service center in Williston, N.D. The company's 11th service center will stock parts and accessories for Federal Signal's Guzzler brand of industrial vacuum trucks and Vactor vacuum excavators.



LMK names vice president, business development

LMK Technologies named Mike Czipar vice president, business development. He will be responsible for working with the sales team to recruit, train and mentor new municipal contractors and crews. He will also assist with identification and integration of new products and processes into LMK's product line.



Mike Czipar

HammerHead launches CIPP online store

HammerHead Trenchless Equipment launched www.hydraliner.com, an online store for its HydraLiner cured-in-place lateral lining system. Products include liner, epoxy and resin, composite inversion drums, wet-out tables and accessories.

Martin Engineering raises funds for orphanage

Martin Engineering co-sponsored the fourth annual fundraiser to support the children of Casa Hogar de Cabo San Lucas, an orphanage dedicated to providing active care and personal well-being for boys in need in Baja California Sur, Mexico. The Illinois-based company and its shareholders helped raise \$500,000.



Inliner Technologies launches website

Inliner Technologies launched www.inliner.com, an information and product website for the wastewater rehabilitation industry.

McLaughlin names regional sales manager

McLaughlin Boring Systems named Cody Mecham regional sales manager. He will be responsible for Colorado, Indiana, Iowa, Minnesota, North Dakota, Wisconsin and the Greater Chicago area.

Perma-Liner receives WSSC approval for lateral lining

Perma-Liner received approval for its Perma-Lateral system from the Washington Suburban Sanitary Commission. The Washington Suburban Sanitary Commission provides drinking water and wastewater treatment for Montgomery and Prince George's counties in Maryland. Established in 1818, it is the eighth largest water and wastewater utility in the United States, serving about 1.8 million people.

Trans Lease opens Ohio office

Trans Lease, a commercial transportation finance company, opened an office in Dayton, Ohio, to serve the eastern United States and Canada.

Armchem names senior vice president

Armchem International named Gregory Langston senior vice president of sales. He will be responsible for all global sales of Armchem and its sister company Handi-Clean, including inside, outside, Internet, wholesale and retail.

Vac-Con dealer passes away

Grady Adams, founder of Adams Equipment Co., White Plains, Ga., passed away in June. Adams and his wife, Delores, established Adams Equipment on Sept. 1, 1984, and had been a part of the Vac-Con family since its start in 1986. **C**

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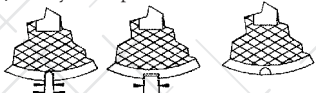
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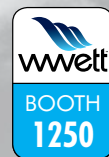
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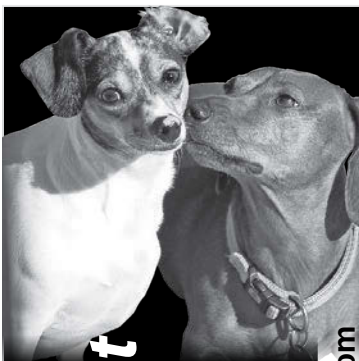
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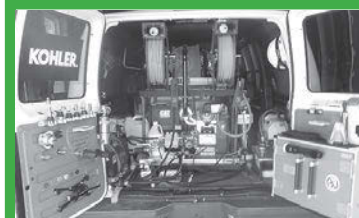


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1980 Ford 8000 truck w/newer cab. Cummins engine, newer jet pump & hose. Truck & vac need some TLC. \$10,000 OBO. 216-398-4000 (C11)



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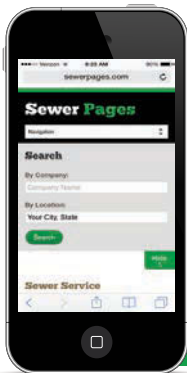
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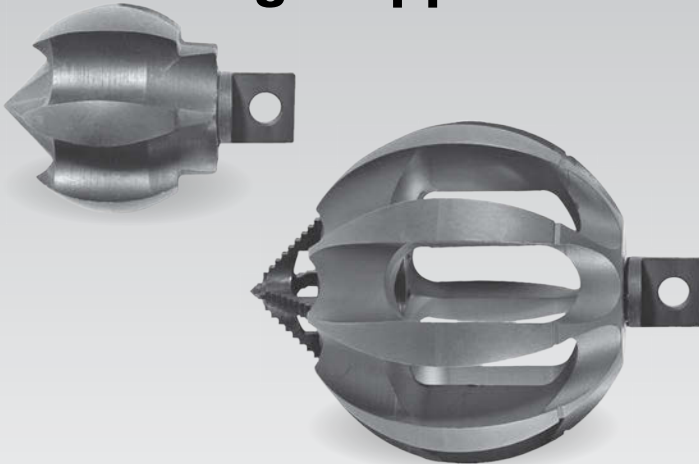
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