**Katie Davis Directional Drill Open Davis Underground Solu** 

**ODIFFERENT** 

# DUCS DVERSIFIES Georgia family revives, grows its directional drilling business

DOWN

**TIPS:** 

**BURSTING HEAD HELPS CONTRACTOR UPSIZE SEWER** 12

UITCh WITCh

2 Gal

SAFETY FIRS

**NEW CONFINED SPACE OSHA RULES GO INTO EFFECT** 

# Getthe Job Done On-Time.

#### **Every Minute Counts**

Getting the job done on time is crucial — and that goes beyond controlling costs. Meeting schedules keeps customers and crews happy. To pull this off, you need equipment that is ready to go any time and in any weather. That's why hydroexcavating OEMs and contractors trust Cat Pumps to deliver high-pressure water wherever the job takes them.

#### **Keep Your Equipment Running**

No matter where you are, Cat Pumps is never very far away. With stocking distributors across Canada and the U.S., and our warehouse distribution center in Minnesota, you can get parts and pumps shipped in 24 hours.

#### The Perfect Pump for Your Application

Cat Pumps direct and hydraulic drive models cover a wide range of flow rates and pressure ratings for trailer and truck hydroexcavators. Every pump is built to Cat Pumps industryrecognized high quality standards.



Model 3560 has become a standard in hydroexcavating, with the typical setup as 25 gpm @ 3000 psi.

Contact us at **www.catpumps.com/hydroex** to see how we can help you stay on the job.

www.catpumps.com | (763) 780-5440





SchellVac Equipment Inc. 126 Wheatfield Road Box 108, Group 200, RR2. Winnipeg, MB - R3C 2E6 T: (204) 336 0081 F: (204) 336 0090 Toll Free: 1 877 336 0081 www.schellvacequipment.com

# Industry-Leading Reliability



Hydro-Vac Trucks Built To Your Specifications

Schellvac Equipment is registered with Transport Canada to the new CSA, B620-09 standard.













SCHELLVAC EQUIPMENT INC WHERE QUALITY IS KING

# Contents SEPTEMBER/OCTOBER 2015

#### Think outside the bucket

#### digdifferent

#### FOCUS: Trenching





NEXT ISSUE: November/December 2015

FOCUS: Buyer's Guide / Site Preparation and Remediation

- Profile: River View Construction (Wausau, Wisconsin)
- Machine Shop: Vacuum Excavators (Trailers)

#### **COVER STORY**

#### 16 PROFILE: DIRECTIONAL DRILLING DUGS Diversifies

After their directional drilling business took its licks during the economic downturn, the Davis family revived their business. **By Paul Nicolaus** 

#### ON THE COVER:

Katie Davis, directional drill operator for Davis Underground Solutions, operates the Ditch Witch JT20 directional drill, which is drilling out holes to run fiber optic cable through on a job site near Atlanta. Katie's brother Matt owns the company, while her mom, Pam, serves as president and her dad, Jim, is field operations vice president. (Photography by Kaylinn Gilstrap)

#### **FEATURES**

#### 24 PROFILE: TRENCHING Customized for the Big Jobs

With massive trenchers, Michigan's DeWind One-Pass Trenching goes after the tough work.

By Cory Dellenbach

#### 32 WWETT SPOTLIGHT: Robotic Control

Robotic waterjetting system from Stutes removes operator from dangerous high pressures. **By Craig Mandli** 

#### 34 ICUEE PRODUCT PREVIEW: New Technology to Be Found at ICUEE By Craig Mandli

36 PRODUCT FOCUS: Trenching

**Trenching** By Craig Mandli

#### COLUMNS

#### 8 BELOW THE SURFACE: Unique Is Part of the Business Directional drilling and trenching

Directional drilling and trenching contractors find every job is challenging. **By Cory Dellenbach, Editor** 

#### 12 DOWN & DIRTY: Tight Quarters

A pneumatically assisted bursting head helps an Ontario contractor upsize a concrete sewer without disrupting traffic. **By Scottie Dayton** 

#### 22 MONEY MANAGER: Stop the Revolving Door

Trying to keep workers doesn't have to cost a lot; not caring why they leave will cost you plenty. **By Erik Gunn** 

#### 30 MACHINE SHOP: 10 Tips on Locators

Manufacturers advise about proper care, operation. **By Kyle Rogers** 

#### 33 SAFETY FIRST:

**Rules Go Into Effect** 

New confined space rules for construction industry began in August. By Doug Day

#### 41 TECH PERSPECTIVE: The Right Tracking Choice

Follow these key points to make the best decision for your business when selecting a GPS tracking system. By Ryan Driscoll

#### **IN EVERY ISSUE**

#### 10 @digdifferent.com Visit daily for new and exclusive content.

37 Happenings Calendar

#### **38 The Latest: Products** This Issue's Feature: Low-profile, gasolinepowered, high cfm hydroexcavator

By Ed Wodalski

42 The Latest: News



# The One. The Only. The Original. Often Imitated, Never Duplicated

Tired of High Rental Costs? Our Lease purchase option will cut your monthly payments in HALF! Quit Renting and Build Equity. Tornado Hydrovacs Manufactured By Petrofield Industries, Built in Canada, 12.5-Yard

Debris Body, 2150 Gallon Water Capacity, Tornado Aluminum Fully Insulated & Heated 42", 60" and 70" Wide Van Body, Robuschi 3800/6400 CFM 28"Hg. Blowers with 3-Stage Filtration System, 8" TopGun, Vacuum Boom, Omnex Wireless Remote, CAT Pump, 980,000 BTU Boiler, PowerSweep Mud Sweep Off-Loading System, Extreme Cold Weather Package

With the strength of the US dollar there has never been a better time to buy a Tornado than right now!

Full Details Available at www.UsedVacuumTrucks.com www.TornadoHydrovac.com







Published bimonthly by COLE Publishing, Inc. 1720 Maple Lake Dam Rd., PO Box 220, Three Lakes, WI 54562 Call toll free 800-257-7222

Outside of U.S. or Canada call 715-546-3346 Mon.-Fri., 7:30 a.m.-5 p.m. CST

Website: digdifferent.com / Email: info@digdifferent.com / Fax: 715-546-3786

SUBSCRIPTION INFORMATION: A one year (6 issues) subscription to Dig Different<sup>™</sup> in the United States, Canada and Mexico is FREE to qualified subscribers. A qualified subscriber is any individual or company in the United States or Canada that partakes in excavation, tunneling, boring, trenching, pipeline rehabilitation, relining or bursting — including manufacturers, dealers, and service companies. Non-qualified subscriptions are available at a cost of \$60 per year in the United States and Canada/Mexico and \$80 per year/\$150 for two years to all other foreign countries. To subscribe, visit digdifferent.com or call 800-257-7222.

ADDRESS CHANGES: Submit to Dig Different, P.O. Box 220, Three Lakes, WI, 54562; call 800-257-7222 (715-546-3346); fax to 715-546-3786; or email nicole.labeau@colepublishing. com. Include both old and new addresses.

Our subscriber list is occasionally made available to carefully selected companies whose products or services may be of interest to you. Your privacy is important to us. If you prefer not to be a part of these lists, please contact nicole.labeau@colepublishing.com.

ADVERTISING RATES: Call 800-994-7990 and ask for Ann Richmond, or email ann.richmond@colepublishing.com. Publisher reserves the right to reject advertising which it considers misleading, unfair or incompatible with the character of the publication.



Ann Richmond

EDITORIAL CORRESPONDENCE: Address to Editor, Dig Different, P.O. Box 220, Three Lakes, WI, 54562 or email editor@digdifferent.com.

**REPRINTS AND BACK ISSUES:** Visit digdifferent.com for options and pricing. To order reprints, call Jeff Lane at 800-257-7222 (715-546-3346) or email jeff.lane@colepublishing.com. To order back issues, call Nicole at 800-257-7222 (715-546-3346) or email nicole.labeau@ colepublishing.com.

CIRCULATION: Average circulation is not less than 22,500 copies bimonthly.

© 2015 COLE PUBLISHING INC.

No part may be reproduced without permission of publisher.

#### Advertiser Index September/October 2015

#### September/October

FUMPS	
Cat Pumps	2
Ditch Witch	7
General Machine Products (GMP)	23
GREAT LAKES Great Lakes Equipment Sales, Inc.	5
HammerHead Trenchless Equipment	13
HDD Broker	33
Integrated Chassis Solutions LLC	21
LMT Inc	11
Patrofield Industries	6
	5

# Premier23Premier23R.A. Ross & Associates NE, Inc.29SchellVac Equipment Inc.3Signs and Safety Equipment41Transway Systems Inc.9Ultra Shore21Vac-Con, Inc.15Vactor Manufacturing44WJTA - IMCA19

Classifieds	43
Marketplace	41

## Connect with us!

f facebook.com/DigDifferent

- twitter.com/DigDifferent
- in linkedin.com/company/dig-different-magazine

# IT'S MORE THAN A DRILL. IT'S YOUR NEW WORKHORSE.

## 🗹 Ditch Witch

Added durability and a more efficient rotational drive mean more uptime with less upkeep.

Learn more at ditchwitch.com.

A Charles Machine Works Company









#### IN TALKING TO CONTRACTORS THERE IS ONE THING I'VE LEARNED, NO MATTER WHAT THEIR SPECIALTY IS. IT DOESN'T MATTER HOW BIG OR SMALL, EVERY JOB IS UNIQUE AND DIFFICULT IN ITS OWN WAY.

# Unique Is Part of the Business

#### DIRECTIONAL DRILLING AND TRENCHING CONTRACTORS FIND EVERY JOB IS CHALLENGING

#### BY CORY DELLENBACH, EDITOR

ach underground construction company has its own specialties — it could be pipe bursting, vacuum excavation, directional drilling or one of the other forms of nontraditional excavation.

In talking to contractors there is one thing I've learned, no matter what their specialty is. It doesn't matter how big or small, every job is unique and difficult in its own way.

Both companies featured this month face unique challenges daily. DeWind One-Pass Trenching tackles the big jobs — really big — with its array of custom-made trenchers.

Co-owners Greg DeWind and wife Becky started by doing field irrigation work. They saw an opportunity to expand into civil engineering with dam and levee remediation, but their small irrigation trenchers weren't going to cut it in that line of work.

After looking for a while, Greg found that what they needed wasn't on the market, so he designed his own trencher. Now the company, based in Holland, Michigan, travels the country with monster trenchers tackling jobs other trenching companies can't handle. DeWind just completed its largest trencher to date. It can dig down to 125 feet and can mix in place bentonite, clay and cement while digging.

Our other profile this month features Davis Underground Solutions of Powder Springs, Georgia. Owner Matt Davis gets help from his parents, sister and other relatives in running this company, which is a rebirth of sorts of the company his father owned before the recession hit in 2009.

Davis Underground specializes in installing communication lines and fiber optic lines using directional drills. The company recently completed a job in Texas that lasted longer than anticipated because of several days of rain in June.

Davis Underground has never failed to complete a job and didn't fail on this one. Crews spent nearly a month in Texas until the job was completed.

#### **MORE TOUGH JOBS**

If reading about these two contractors and their tough work isn't enough, head over to our Down & Dirty feature, where you can learn about a contractor in Grant, Michigan, who came to the rescue of the City of Windsor, Ontario, with pipe bursting to install new sewer lines.

Speaking of Down & Dirty and tough jobs, do you have one you'd like to share with our readers? Maybe a difficult trenching job?

Email us at editor@digdifferent.com or call me at 800/257-7222 and share your story!

Enjoy this month's issue!  $\checkmark$ 

Have you **solved** a tough excavation **problem** with a creative solution?

Share your story with 23,000 other professionals.

Send a note to editor@digdifferent.com or call 800-257-7222

# What's trending in alternative excavation?

FIND OUT.

Visit digdifferent.com

#### ALSO:

- FREE Subscriptions Online Exclusives
- E-Newsletters
- Blogs and Videos
- Email Alerts
- Manufacturers/Dealers





# This is the result of working together for over 30 years



# COCODIFFERENT.com



#### AVOID PROBLEMS MID-BORE Keep Drill Pipe in Tip-Top Shape

Equipment maintenance is never a trivial matter, but when it comes to directional drilling, it perhaps carries a bit of extra weight. Equipment breakdown while directional drilling in the field can lead to completely abandoning a hole mid-bore and starting over a job and losing money. Experts tell us how to maintain that directional drilling equipment to make sure that doesn't happen to you. **digdifferent.com/fectured**  **OVERHEARD ONLINE** 

"IF YOU WANT TO UNDO A BOLT, YOU DON'T GO GET A HAMMER. ... TO DRIVE A NAIL, YOU DON'T GO GET A CRESCENT WRENCH. BOTH ARE GOOD TOOLS TO HAVE ... YOU JUST **NEED TO HAVE THE RIGHT TOOL** FOR THE RIGHT APPLICATION."

Complementary Pipe Bursting Rigs Boost Productivity digdifferent.com/featured

#### APPOINTING A NEW PRESIDENT Matt Timberlake Takes Over for Father

Matt Timberlake is following in his father's and grandfather's footsteps as he takes over the company his grandfather founded in 1972. Timberlake has been vice president of Ted Berry Co., located in Livermore, Maine, since 2003 and says he is excited about the opportunity ahead of him as he takes over running day-today operations.



digdifferent.com/featured

# <u>scheduling nightmares</u> Enforce Time-Off Guidelines

It's important as an employer to give your team members time off. They need some extended break periods to charge their batteries, renew their energy and regain their focus. That's why it's a good idea for your company not just to offer vacation time but encourage employees to use it. But how do you do that and keep the business running at the same time? digdifferent.com/featured

Connect with us!

f facebook.com/digdifferent

twitter.com/digdifferent

in linkedin.com/company/dig-different-magazine











# Dig Smarter.





Built to Order. Built to Last. 800-545-0174 309-932-3311 1105 SE 2nd Street Galva, IL 61434 www.smart-dig.com





# **Tight Quarters**

#### A PNEUMATICALLY ASSISTED BURSTING HEAD HELPS AN ONTARIO CONTRACTOR UPSIZE A CONCRETE SEWER WITHOUT DISRUPTING TRAFFIC

#### **BY SCOTTIE DAYTON**

nfiltration through failed joints in a 27-inch concrete gravity sewer in Windsor, Ontario, taxed the capacity of the wastewater treatment plant during heavy rains. Hydrogen sulfide was corroding the crown in many places.

In 2002, the city put out a tender to directional drill the 3,800-foot sewer. No contractors responded. City engineer Fahd Mikhael looked at other solutions, including open-cutting, but no one would touch the job. Fearful of the sewer's imminent failure, the city requested bidding to pipe burst and upsize the line in 2012.

Two firms responded, and local SLR Contracting Group won the bid. Although the company had extensive sewer and water main experience, it had never burst pipe, and crews would have to learn on a site with multiple challenges.

"The water table 24 inches below grade made the soil like liquid sand," says project engineer Rob DiMenna. "Our trench boxes would abut a busy fourlane parkway. Underground utilities were on the other side of our 14-foot-wide work corridor. It was intimidating."

With guidance from Midwest

Trenchless Services in Grant, Michi-

gan, SLR completed the project in

three months despite a strike by oper-

ating engineers and unexpected obsta-

cles. The company believes it also set

a U.S. and Canadian record for the

longest pull of 32-inch pipe — 570 feet.

Joel Kruszynski, president of Mid-

west Trenchless, and three associates

provided on-the-job training for

DiMenna's people. "We expected the

worst," says Kruszynski. "Ground conditions were bad. The sewer was

installed in 1915, so no one knew how

thick the pipe was or how it was rein-

forced. Without knowing that, we

**ROLLING THE DICE** 

"THE WATER TABLE 24 INCHES BELOW GRADE **MADE THE SOIL LIKE LIQUID SAND.** OUR TRENCH BOXES WOULD ABUT A BUSY FOUR-LANE PARKWAY. UNDER-GROUND UTILITIES WERE ON THE OTHER SIDE OF OUR 14-FOOT-WIDE WORK CORRIDOR. IT WAS INTIMIDATING."

#### Rob DiMenna

guessed at how much force it would take to burst it. It was a crapshoot."

To improve their odds, Midwest built a 36-inch bursting head with bullet nose, dorsal and side-slitting blades, and a 12-inch pneumatic hammer powered by a 350 cfm Ingersoll Rand compressor that would add 150 tons of force to assist the 330-ton hydraulic ram. A 36-inch skirt expander screwed to the new pipe would create the annular space for the larger diameter.



CUSTOMER: City of Windsor, Ontario CONTRACTOR: SLR Contracting Group, Windsor EQUIPMENT: Pipe bursting system, Midwest Trenchless Services 231/834-8470 www.notrench.net RESULTS: Sewer upsized in three months without disrupting traffic

DiMenna rented one 6-inch and two 8-inch pumps from Godwin Pumps for the elaborate sewer bypass system. He also rented a wellpoint dewatering system from Double Diamond Dewatering (Strathroy, Ontario) for the nine 10- to 16-foot-deep pits excavated 500 feet apart.

"The city wanted us to sheet pile each hole, but we built four 24- by 12-foot sheet pile boxes that we could move easily to leapfrog over excavations," says DiMenna. By working downstream, the pulling pit would become the entry pit the next day.

#### **SAFETY FIRST**

Vehicles on the major commuting parkway traveled at 50 mph, and the trench boxes butted against the edge of the pavement. "Even when separated by Jersey barriers, it's very difficult for crews to work within a foot of oncoming traffic," says DiMenna. *(continued)* 

# PIPE BURSTING PROS DEPEND ON HAMMERHEAD

No-DigTec specializes in pipe bursting, both water and sewer, and we rely on HammerHead equipment on all our jobs. When I need HammerHead equipment I haven't bought yet, I rent it. Their tools are far easier to work with than others we've tried. Working with them, we've successfully completed some of the toughest pipe bursting projects in the country, on time and on budget."

POLOTEC

0

JOHN L. NEWELL, President No-DigTec, Dallas TX

# EQUIPMENT. EXPERTISE. SUPPORT.

HammerHead equipment and expertise take the guesswork out of pipe bursting. And legendary HammerHead support puts even the toughest pipe bursting jobs within your reach.



Find your local dealer at hammerheadtrenchless.com or call 800-331-6653



MOLING | RAMMING | BURSTING | HDD ASSIST | WINCHES | CIPP

A Charles Machine Works Company



The Caterpillar 336 excavator shovel lowers the bursting head, skirt expander and 32-inch HDPE pipe into the pit as Midwest Trenchless Services employee Jon Snyder assists.

The self-contained, hydraulic static pipe bursting machine used rods linked together to pull the head. As the rods appeared in the machine during pullbacks, SLR's Shayne Renaud and Midwest's Jon Snyder removed them, enabling the Caterpillar shovel to lift the rods from the hole.

Midwest's technical experience had DiMenna's crew comfortable with the job from the first day. "Joel and his guys were great to work with," says DiMenna. "He made certain that we had extra power to overcome what was out there. Consequently, we tried the first pull without slurry, it was successful, and we never used any."

Pulls of 500 feet began around 7 a.m. and finished between 2 and 3 p.m. Removing the expanders and setting up the next day's pull took another three to four hours. "We discovered the sewer pipe was reinforced with rebar because hydrogen sulfide corrosion had exposed it," says DiMenna. Even in sections with much of the crown missing, bursts still averaged 260 to 280 tons of force.

#### SWING AND SWAY

Because of soft ground conditions and constant dewatering, sections of highway began failing 3 or 4 feet into the closed lane. As work neared a row of utility poles, Toronto Hydro-Electric System shut off that portion of the grid for the day.

The pull progressed smoothly until the head passed under the first pole. "The pressure spiked to 300 tons about the same time the pole began moving in response to concrete displacement," says Kruszynski. Upon investigation, workers found the pole seated directly on the pipe. Work stopped until two Hydro-Electric trucks arrived to raise the row of poles 18 inches, allowing the bursting head to



Midwest Trenchless Services employee Jon Snyder inspects the bursting head as it enters the trench box.

Officials closed the nearest lane for safety purposes and to enable workers to install sheet piling that protected the road when the boxes moved against it from the force of the pulls. SLR also held daily toolbox safety talks and a weekly meeting with its full-time safety representative.

Underground utilities on the opposite side of the work corridor included a 30-inch sewer force main, a 24-inch water transmission main and a 16-inch gas main. DiMenna's crew used the area to fuse sticks of 32-inch HDPE IPS (iron pipe size) pipe. After attaching the bursting head, they lowered the assembly into the pits with a John Deere 290 and Caterpillar 336 excavator.

#### "ORIGINAL DRAWINGS INDICATED 12 INCHES OF CLEARANCE BETWEEN THE GAS MAIN AND SEWER. WHEN WE OPEN-CUT TO EXPOSE THE LINE, IT SAT RIGHT ON TOP OF THE SEWER. THAT CAUSED SOME HAVOC." Joel Kruszynski

pass beneath them uneventfully. This section of the pull took four days.

A strike by local operating engineers halted the project for one-and-a-half weeks. "All we could do was sit it out and pay rent on the equipment," says DiMenna.

With issues resolved, work resumed on a pull that would pass under a 20-inch 700 psi natural gas main. "Original drawings indicated 12 inches of clearance between the gas main and sewer," says Kruszynski. "When we opencut to expose the line, it sat right on top of the sewer. That caused some havoc."

With no room for displacement, the bursting head and broken concrete could damage or rupture the main. Workers undercut the sewer, then pushed it into the depression with the excavator bucket. "We crossed our fingers and started the pull," says Kruszynski. He advanced the head as slowly as possible, enabling the concrete pieces to fall safely into the void.

The pressure also spiked to 300 tons when bursting through the sewer's 10 unevenly spaced concrete manholes. DiMenna reduced the number of structures to seven by increasing the distance between them and eliminating the last one. The decision extended the final pull to 570 feet, but it was uneventful. ▼

# LEGENDARY STATUS ACHIEVED.

FANS.

9 YEARS,

39.0

# Because building tough reliable trucks takes tough reliable people.

Terry builds these critical components on a fixture he helped design and build. Terry lives out "more power to you" every day. It's not just our tagline, it's in everything we do: our technology, our culture, and our leadership. Yes, our trucks are engineered to be powerful, but they're also built by smart people who keep the end-users in mind. They give you a machine that gets the job done. **GO OP-LINE** TO be the prove

#### VAC-CON.COM

VAC-CON IS A SUBSIDIARY OF HOLDEN INDUSTRIES. INC., A 100% EMPLOYEE-OWNED COMPANY



A HOLDEN CINDUSTRIES Company



# **DUGS** DIVERSIFIES

#### AFTER THEIR DIRECTIONAL DRILLING BUSINESS TOOK ITS LICKS DURING THE ECONOMIC DOWNTURN, THE DAVIS FAMILY REVIVED THEIR BUSINESS

STORY: PAUL NICOLAUS PHOTOS: KAYLINN GILSTRAP AND ERIC CHRISTIAN SMITH



Davis Underground Solutions' Katie Davis and her dad, Jim, help with the company that Katie's brother Matt operates out of Powder Springs, Georgia. Katie is a directional drill operator for the company, while Jim is field operations vice president.

#### "I DON'T KNOW IF YOU COULD FIND A BETTER LOCATOR THAN MY DAD. **THERE'S NOBODY I TRUST MORE TO DRILL WITH ME.** HE HAS A PRESENCE IN THE DRILLING WORLD." Katie Davis

HARS APPORT

Conduit attached to the Ditch Witch JT20 is pulled through the hole.



When Katie Davis' father, Jim, talks about drilling, he's always said that it gets in your blood. That may not have made much sense to Katie in years past, but after joining the family-run Davis Underground Solutions (DUGS) as the company's directional drill operator, it's an expression that has taken on new meaning. "Since my first day on the job I've loved it," she says. "And I totally get what he means when he says that."

Based out of the Atlanta metro area, DUGS provides utility installation services throughout the state and beyond. They've drilled under a waterway, below the massive Interstate 285 and beneath the Georgia Aquarium. "This job we're doing right now is in Huntsville, Texas, at Sam Houston State University," says Pam Davis, who serves as company president. "It's surrounding the areas of the school so that there can be improved Internet."

Although installing conduit currently makes up a large portion of their business, DUGS also puts in water and sewer lines, and when shopping centers or other facilities are looking to upgrade or fix existing safety lights without tearing up the entire lot, they're able to step in and help out.

#### CHALLENGE ACCEPTED

It's the challenge presented by this line of work that has kept Jim — who oversees field operations — hooked over the years. And their son Matt, who is the owner of DUGS, has come to appreciate that element as well.

At a recent job at a football stadium in Gainesville that was built in the early 1900s, the crew was faced with a 25-foot elevation change over 150 feet. They set up behind the stadium to shoot underneath all the bleachers and hit field level in order to install closed circuit television and a communication line. The ground conditions were hard, and with the larger of their two drills at a job site in Texas, ultimately they weren't able to get the shot in.

The result? It's now become Jim's personal mission to find a way to complete the job. "That's kind of how we've built our name, because most folks know that if you put Jim on a shot he's going to find a way to get it done, come hell or high water," Matt says. "And it's trickled down to me, and I'm sure Katie's getting there, too, where you just don't give up. We've had shots where we've tried five, six, seven times, but off the top of my head I can't think of one that we haven't gotten done." Katie agrees that she's fortunate to work with and learn from one of the best. "I don't know if you could find a better locator than my Dad," she says. "There's nobody I trust more to drill with me. He has a presence in the drilling world. There's a respect for him. This second-generation business was able to succeed based on dad's reputation."

#### **BACK TO BUSINESS**

Jim Davis worked for close to 20 years for Alpharetta, Georgia-based Colonial Pipeline, where he first learned about horizontal directional drilling (HDD). Ready to venture out on his own, he and his wife, Pam, started up their own company, Davis Directional Drilling, in 1998 using retirement savings.

The business did well for several years, but when the economic downturn hit, it fell upon hard times. As a niche field, there weren't many directional drilling companies to begin with, explains Pam, and only the bigger companies had the resources needed to survive a difficult stretch of time.

Davis Underground Solutions president Pam Davis and her son Matt at their home office in Powder Springs, Georgia. Matt owns the company.

"AT THE END OF 2012 AND INTO 2013, THOUGH, IT WAS **ALMOST LIKE A LIGHT SWITCH TURNED ON.** AS THE ECONOMY STARTED TO UPTICK JUST A LITTLE BIT, THE PHONE STARTED RINGING AGAIN." Matt Davis

> In 2010, Jim made the difficult decision to close the business. "When we shut it down, everything we had was paid for and we didn't have any debt," he says. "So at least it was a relatively simple process to pull the plug."

> After enduring a couple of years with little work, Jim eventually decided to venture up to North Dakota to install pipelines. In the meantime, Matt handled a job here and there using the family's Ditch Witch JT1720. During his high school years and even a little bit after college he had worked for the family business, so he was already familiar with the line of work.

> "Matt has never met a stranger, probably never will," explains Pam. "He's just got that personality where he knows a lot of people and a lot of people know him. He's got that personality that you need to get out there and meet and greet." Ultimately, this relationship building laid the groundwork for what was to come.

> "From 2010 to 2012, you couldn't pay somebody to let you go and drill somewhere," Matt says. "People just weren't building infrastructure. At the end of 2012 and into 2013, though, it was almost like a light switch turned on. As the economy started to uptick just a little bit, the phone started ringing again."

> Davis Underground Solutions (DUGS), a reinvention of Davis Directional Drilling, was born. As the jobs started rolling in with greater frequency, Matt convinced Jim to come

#### Davis Underground Solutions Powder Springs, Georgia

OWNER:	Matt Davis	l z
EMPLOYEES:	9	
SERVICES OFFERED	Directional drilling for electric telephone/communications, v sewer lines	al, gas, vater and
SERVICE AREA:	Throughout Georgia and the so	outhern states
WEBSITE:	www.dugs.biz	

NDER

CROUND

SOLUTIONS

(678) 858-660

back home from North Dakota in November 2013 once he secured a monthlong \$20,000 project with good margins. He flew up to meet Jim, they drove back together and went straight to work the very next day.

BY KAYLINN GILSTRAP

"Every penny that we made we poured right back into the business," Matt says. "We kind of took a leap of faith to use some credit and get the drill up and running again." From there, they picked up a couple of larger projects and have kept the momentum going ever since.

#### **BEYOND FAMILY**

In addition to the four core family members now involved, Jim and Pam's son Pope and his wife, Tiffany, also step in to provide occasional help when needed. With an MBA and a CPA between the two of them, their professional *(continued)* 



WATERJET TECHNOLOGY ASSOCIATION AND INDUSTRIAL & MUNICIPAL CLEANING ASSOCIATION

# Plan to Attend the world's premier waterjet and industrial cleaning event









#### November 2-4, 2015 New Orleans Find out more at www.wjtaimca2015.com or contact the WJTA-IMCA office by email: wjta-imca@wjta.org or telephone: (314)241-1445.

**Connect with us on social media:** twitter.com/wjtaimca I facebook.com/wjtaimca I linkedin.com/company/wjta-imca

advice has come in handy along the way, particularly when considering a big project or a large capital expense.

"Pope grew up working in it, too, so he understands how everything works," Matt says. "He's able to bring more of an aerial view to our decision-making process, which at times has proven invaluable."

DUGS also has three non-family employees who help round out the crew. Having a third worker at a job site is critical, Pam explains, and having a fourth is great, too, in order to ensure that the drilling operations run smoothly.

"None of this is rocket science," she adds. "It's just a matter of working together smoothly, because the better we work, the more footage we get in, and the more footage we get in, the more money we make because it doesn't take as long. If everybody's doing what they're supposed to be doing, it's like a well-oiled machine."

At the moment, DUGS has reached a point where it could potentially bring several additional workers aboard. "Right now we could probably hire four more," says Pam. "We have another drill and just can't man it right now. We just can't find enough people to work."

As the business continues to search for and add employees, it does so with the intention of growing right along with those new hires. "If you're going to come to work and be there on time and do a good job, then we want to share with you," Pam says. "You're going to get a good salary, and we're going to do everything we can to include you. As we move up,



#### New equipment, added capabilities

The Davis family knows all too well that every piece of equipment is crucial. "You can't drill without water, and you can't get the water without the pump and motors running," explains Katie Davis. "And you've got to have a mud vac, so if you took one of those away we wouldn't be able to drill."

"It's all about a system," Jim Davis adds. "You've got to have all the pieces and parts to make it work." Even so, he acknowledges that the drill is the biggest piece of equipment and probably the most important. And with the addition of a Ditch Witch JT25 horizontal directional drill, DUGS has added a whole new level of capability to its business within the last year.

"We nicknamed the new drill Lucy because she's always holding the football out there for Charlie Brown and jerking it back at the last minute," he chuckles. The work Lucy can handle is no laughing

The unit — which they named Lucy - has an exclusive rotational drive with 4,000 ft-lbs of torgue and 27,000 pounds of thrust and pullback.

matter, though. It features an exclusive rotational drive with 4,000 ft-lbs of torque, 27,000 pounds of thrust and pullback, and a 130 hp Tier 4i Cummins diesel engine. It can handle the installation of utility pipe and cables up to 12 inches in diameter at lengths up to 500 feet.

And DUGS put it to the test as they installed 12- and 14-inch steel casing pipe — both 450 feet long — underneath railroad tracks. It was a job they just wouldn't have been able to tackle without their new drill.

"One of the things I like about the Ditch Witch is that you can operate it with a single joystick," Jim notes. And the level of service makes a difference, too. "Our Ditch Witch dealer has just been super to us as far as servicing our equipment, and if something breaks down they are right on it to help us get through the crisis. That means a lot."

you'll move up, too. If you're going to come and do your best for us, then we're going to do our best for you."

#### **MERGING GENERATIONS**

It's easy to get caught up in one specific area of the drilling industry, Matt acknowledges. Right now fiber and telecommunications are really picking up, and there are large, long-term projects available, so it's easy to devote time and attention to that alone.

But the tough times experienced by Davis Directional Drilling in years past means that this time around the family is working hard to put safeguards in place, even when the jobs and cash flow are rolling in. Matt's vision for the company's future is to make sure they're better diversified, handling jobs that veer into not only telecommunications but also into the electrical, plumbing and wastewater industries.

Some of these areas could provide consistent work even during an economic slump, Matt explains. For example, many municipalities will invest in their infrastructure during a recession because they can handle it at a better rate than when the economy is booming. In addition, if parking lot lights go

Katie Davis operates the company's Ditch Witch JT20 directional drill while her dad, Jim, looks on.



#### Featured products from:

**Ditch Witch** 800/654-6481 www.ditchwitch.com (See ad page 7)

**Subsite Electronics** 800/846-2713 www.subsite.com



ICS's SKY-VAC<sup>™</sup> Extends the Reach of the Excavation and Extraction Industries The boom can reach 126 feet vertically, downward 84 feet, and 118 feet horizontally with 370 degrees of rotation.



SKY-VAC<sup>™</sup> can excavate over an acre of area without having to reposition!

970-475-6256 www.ics-vac.com





Quick to Install.

As light as 130lbs.





Roll Your Own. **Optional wheel kit.**  Stacks easily with 2' & 4' high panels.

This is What Aluminum Shoring Was Meant to be!



1-800-SHORING www.shoring.com

Jim Davis, field operations vice president, uses the TKQ guidance system (Subsite Electronics) to track the Ditch Witch JT20 directional drill location.

out at a large corporation they have to be fixed because it's a liability - downturn or not.

"I keep telling everyone that we're not just a directional drilling company," Matt says. "In order to move up to that second-tier-sized company, we need to be able to offer a turnkey solution to a lot of these jobs."

The change in business name is one indication of a desire to move into these different areas and meet customer needs in a variety of ways, Katie explains. "Daddy was great at directional drilling and he's still great at it, but bringing this new business in under the name of Davis Underground Solutions shows that we're willing to go the extra mile. We want to meet all of your underground needs.

"We have two generations of drills," she adds. "And we have two generations in the family business, and I think merging them and combining them is part of our future and our vision." **V** 

Read more about Katie Davis and Davis Underground Solutions online at digdifferent.com

HOTO BY KAYLINN GILSTRAP



# Stop the Revolving Door

#### TRYING TO KEEP WORKERS DOESN'T HAVE TO COST A LOT; NOT CARING WHY THEY LEAVE WILL COST YOU PLENTY

#### **BY ERIK GUNN**

abor markets are getting tighter, the headlines tell us, and you probably didn't have to pick up the paper to know that. As the economy inches back to life and jobs start to open up again, you may have already seen some employees head elsewhere.

So, what can you do?

Don't be among those bosses who shrug their shoulders and figure they just have to hire continuously. If you are, you need to know that employee turnover can cost you much more than you think.

There's a bright side, however: You can reduce turnover, even if you operate in a business or a geographic area where good

workers are in high demand.

#### THE COST OF LOSS

Dõv Baron is a leadership business consultant through his firm, Authentic Paragon Alliance. He hosts a radio show and podcast on leadership, and his most recent book, *Fiercely Loyal: How High Performing Companies Develop and Retain Top Talent*, focuses on the topic.

"The average cost of training and development of a new staff member is one-and-a-half to two times the annual salary of that individual," Baron says, citing U.S. Department of Labor statistics. When your business loses a person, there is a diminishing return on the investment in hiring and training that individual.

The cost doesn't just come in training and development expenses. Jan Watson, whose consulting firm, Inflection Point, in McKinney, Texas, helps businesses with hiring and retention, points out that when you lose workers, you'll spend more on every-

thing, from processing the paperwork to recruiting and hiring a replacement. Add to that the cost of lost productivity while the newcomer gets up to speed. And if the departed employee had performance problems, she observes, WHY THEY WALK

We usually think better pay or benefits are the bait that employees follow when they go across town to your competitor. The truth is a lot more complicated.

OK, you're saying, but you're already paying competitive wages and offering good benefits. Does that mean you've got to pay still more for either, or both?

Not necessarily, says Watson: "Some of the most simple, cost-effective incentives range from providing an 'Employee of the Month' parking space, or gift certificates to a restaurant, spa or sporting event, to success perfor-

mance bonuses with incentivized goals, team rewards or trips."

Sometimes money is just a red herring. Watson and Baron agree that money doesn't talk as loudly as it once did.

We're told that the under-35 set, the so-called millennial generation, is especially deaf to the sound of dollars, but it's not just them.

"Baby boomers and millennials alike want more from working," Watson says. "They want to belong to a work culture that provides core values, accountability and shared responsibility, effective communication, and praise."

So, she says, if you're seeing employees flock elsewhere, consider that your work culture might be driving them away — and what it would take to fix that.

Another problem could be a bad match between the worker and the job. Watson notes that an applicant's resume won't actually do much to help you make a good match. Instead, she recommends a pro-

fessionally designed exam closely aligned to the job you're trying to fill that assesses not just the applicant's technical knowledge but other necessary qualities, such as attitudes and personality traits.

Baron considers poor leadership the No. 1 reason that people quit. "Generally speaking, people don't leave jobs, they usually leave bosses," he says. Another problem? "There's nothing to bond to. This means your people have no reason to be there outside of the fact that you pay them. Once someone is disengaged, it's easy to lose them."

#### **"BABY BOOMERS AND MILLENNIALS ALIKE WANT MORE FROM WORKING.** THEY WANT TO BELONG TO A WORK CULTURE THAT PROVIDES CORE VALUES, ACCOUNTABILITY AND SHARED RESPONSIBILITY, EFFECTIVE COMMUNICATION, AND PRAISE."

Jan Watson

you've probably made an additional investment in coaching that person and documenting problems along the way — only to see it all evaporate when the person leaves anyway.

Don't forget another, lesser-known cost, adds Dan Kalish, managing partner of HKM Employment Attorneys in Seattle: "Anytime an employee leaves, there is always the possibility of litigation, even if frivolous, which can cost tens of thousands of dollars to resolve."

#### **MAKING THEM STAY**

One way to engage people is to give them a sense of their future with you. Watson suggests developing stronger professional development programs. Once an employee passes the nine-month mark, "An employer should start to discuss advancement opportunities and create a professional development plan," she says. "This can be as basic as providing continuing education or as extensive as succession management planning and grooming the employee for leadership."

Beyond that, Baron says it's time to get serious about demographics. Mil-



# WE WEAR A

**BUILDERS OF THE CV SERIES HYDROVAC** 

## ELD-TEST MOTHER NATURE'S BOARDROOM

lennials are the new workforce, and they really are different, he contends. "Trying to make them fit the mold will push them out even faster."

WWW.POEQUIPMENT.COM • 970-542-1975 • SALES@POEQUIP.COM

He urges bosses to develop a stronger ability to relate to their employees and to foster cooperation and collaboration all across the business. "Everyone on your team needs to embrace becoming a chief relationship officer," he says.

Strengthening the emotional bonds among employees can help foster loyalty that will lead workers to stick around. Again, that's especially true for this new generation, in Baron's view, and it's why money isn't everything.

#### THE MILLENNIAL MACHINE

"Throwing money at millennials doesn't really work," he declares. "They do care about money; they have to pay bills like the rest of us. However, there is a point where money is no longer the motivator."

What is?

"Millennials want to work for organizations that are purpose-driven, meaning it's about more than the bottom line," Baron says. He likes thinking big - the way Apple did when it claimed the slogan, "We're here to put a dent in the universe."

So the bosses need to adapt.

"With a purpose that is strong and a leader who lives, eats, sleeps and breaths it, your people will go above and beyond what is required," Baron says. Yet very few companies, large or small, have taken the time to do that. They can start, he suggests, with a history lesson: "Sit down with the founder of the company and discover the originating purpose. What was the true driving force that made them keep going when they hit the wall?"

And if you're that founder, maybe you can find the spark that lit your fire all those years ago in the first place and see it catch once again in a new generation. Wouldn't that be something to stick around for?

#### ABOUT THE AUTHOR

Erik Gunn is a magazine writer and editor in Racine, Wisconsin.

See Ramrod at the ICUEE Expo 2015 Booth #L332

For Placing Pulling Lines or Fiber Optic Cables into New, Old or Crowded Conduits RAMROD TRAILER-MOUN POWERED DUCT ROD PUSHER

- For use with GMP's Toneable 1/2 inch (13 mm) duct rod
- Push/pull up to 300 lbs. (136 kg) of load
- Moves at a rate of up to 130 ft./min. (330 cm/min.)
- Override capability allows you to rod occupied ducts
- Pusher is trailer-mounted for maneuverability





# CUSTOMIZED FOR THE BIG JOBS

#### WITH MASSIVE TRENCHERS, DEWIND ONE-PASS TRENCHING GOES AFTER THE TOUGH WORK

When Greg DeWind broke away from the family business to start his own irrigation company, there wasn't much money for buying new equipment. So he took out his drawing board — literally.

"Being pretty poor, we couldn't afford a \$350,000 machine, so that's when my husband decided to build them," says Becky DeWind, co-owner. "He built his first machine probably 20 years ago now. It was successful, it did what it was supposed to do, and then he built another one. He always improved on it."

Soon after starting with irrigation, the DeWinds saw an opportunity to expand into dewatering and trenching. "It was my idea to go into environmental applications where the soils are contaminated and customers don't want to excavate a lot of soil or pump and treat the water," Becky says. "Now we've evolved into civil work where the focus is on the installation of soil, cement and bentonite walls for dam and levee remediation."

STORY: CORY DELLENBACH PHOTOS: AMY VOIGT

Twenty years after they started the business in Holland, Michigan, DeWind One-Pass Trenching has nine trenchers in its fleet — all designed and built by Greg.

#### A NEW IDEA

Going into the irrigation business made sense to the DeWinds. They were already familiar with wells and how water systems worked since Greg worked with his father

Mike Aalderink, DeWind One-Pass Trenching employee, works on building a new MT 3500, 125-foot trencher in the shop in Holland, Michigan.

#### DeWind One-Pass Trenching Holland, Michigan

#### OWNERS: Greg and Becky DeWind

EMPLOYEES: 35

SERVICE AREA: Throughout the U.S., Canada and into Mexico

#### SERVICES OFFERED:

HDPE pipe installation, irrigation system installs, construction dewatering, formless foundations, drilling services, groundwater and product recovery systems, slurry walls, permeable reactive barriers, HDPE barrier walls

WEBSITE:

www.dewindonepasstrenching.com

#### "THEY CAN **PUT IN SOIL-BENTONITE WALLS FOUR TIMES FASTER THAN EXCAVATORS,** SO THEY HAVE A HUGE ADVANTAGE OVER THE

COMPETITION PRICE-WISE."

Becky DeWind

Becky DeWind (left) and Lis Smith work together in the office in their shop in Holland, Michigan.

#### **Going even bigger**

With an 80-foot trencher already in its fleet, DeWind One-Pass Trenching is finding out that there are jobs that need to go deeper. That's why the company is building its largest one-pass trencher.

The new 3,500 hp trencher will go 125 feet deep and will weigh about 500,000 pounds. "This new machine is a game changer," says DeWind co-owner Becky DeWind. "We're hoping to having it done later this year."

Her husband, Greg, designed the machine and is building it along with other employees in the company shop. "Greg's overseeing all of the build," Becky says. "He designs and engineers everything, and then has to translate that from his napkin to the other guys' napkin to make sure everyone is building it the way he wants."

While he doesn't really design on a napkin, Greg still does use a pencil and graph paper for his designs. "He really does genuinely love to build them," Becky says. "Every machine he has completed has gone onto a job site without much testing and has run flawlessly."

Greg learns with each machine and makes improvements on the next build, incorporating more technology such as GPS mapping. All the machines now also include laser guides and have meters for additives, allowing operators to see exactly what they are putting into the ground when building a wall.

Many of the company's machines can trench as wide as 4 feet with a speed that depends on what is being installed. "If we're putting in pipelines, we can do a mile of that a day," Becky says. "If we're in situ mixing a super deep soil-bentonite wall, you can only do like a foot a minute because you have to mix."

The new 125-foot trencher was slated for testing in mid- to late summer and will then go into operation. Becky says, "Whenever you build something like that, you're always putting all your chips on the table."



in the well business. There was also a large nursery farm right near Holland that would provide plenty of irrigation work.

"Greg and I learned how to put in multi-well irrigation systems," Becky says.

The couple discovered dewatering and learned how it was similar to irrigation. "We saw a dewatering system going down the road and didn't know what it was, but it looked exactly like our irrigation systems," Becky says. "So I had to find out what exactly it was."

A conversation with that contractor gave the DeWinds the idea of going into the dewatering business: They hoped it would help them keep busy yearround. "I thought, 'Well, when it's dry out, we'll put in irrigation for the farmers and when it's wet, we'll dewater, and we'll never be out of work," Becky says. "That's how it all started."

The DeWinds developed different installation methods for dewatering systems and discovered they could put other things in the ground, as well. "We could put in walls of mulch or iron for remediating contaminated groundwater and also construct barrier walls," Becky says.

The company expanded into doing more trenching work. Now, half the company's focus remains on dewatering; the other half deals in civil and environmental work.

#### **POWERFUL MACHINES**

The DeWinds learned quickly that there were no trenchers on the market big enough for what they needed. Building them was the next best option. "We couldn't buy machines big enough, so we kept building our own," Greg says. "Out of necessity, my family always built things, so I was familiar with that. We built our first one and then realized the things we were building were bigger than you could buy, so we continued to build them."

The first machines he built were used to install underdrain for dewatering jobs, but now they are being used to install much larger structures, such as collection trenches and slurry walls. "There continues to be a need for deeper and deeper trenches and slurry walls, so we just keep upsizing what we've built in the past," Becky says.





A trencher mixes in place cement for a remediation project. The company has built several trenchers of varying lengths from 25 feet all the way to 125 feet.

The machines include technology to mix soil, bentonite and cement directly into the ground and create perfectly homogenized containment walls. "The cutters are spinning fast," Becky says. "It's a bloody blur and it's homogenizing everything from top to bottom at the same time."

The deepest trencher reaches 80 feet, but the company is building one to be deployed in late 2015 that will reach 125 feet.

The DeWinds have never thought about selling the machines because the company has the market locked up. "They can put in soil-bentonite walls four times faster than excavators, so they have a huge advantage over the competition price-wise,"

#### **"WE COULDN'T BUY MACHINES BIG ENOUGH,** SO WE KEPT BUILDING OUR OWN. OUT OF NECESSITY, MY FAMILY ALWAYS BUILT THINGS, SO I WAS FAMILIAR WITH THAT." Greg DeWind

The team at DeWind One-Pass Trenching includes, front, from left, co-owners Greg and Becky DeWind, and employees Lis Smith and Ryan DeWind.





Becky says. "It's like having the golden goose. You don't really want to start mass producing these."

The machines are attractive to municipalities hiring DeWind because of their small carbon footprint. A wall installation requires only one trencher and one supporting machine to haul materials to the trencher. "If you don't have one of these, you're bringing tons and tons of yellow iron to a work site," Becky says. "The one-pass trenchers are also cheaper, so that means the dollars go further and you can remediate more sites."

Becky says it would take years for other contractors to train on the machines if DeWind were to sell them. "They're complex, they're fussy and they take years of training and understanding the nuances of trenching that deep and putting in these different systems."

#### THE RIGHT CREW

Finding the right crew to operate the trenchers can take time — several years of training on smaller machines and even more training when operators jump up to the one-pass trenchers. The company has a staff of 35, of whom 15 work on one-pass trenching and 20 on dewatering.

Becky is proud that DeWind has a 100 percent success rate with its jobs and credits the employees for that

record. New employees start on the dewatering side of the business. "The employees will set vertical casings and 300 feet of perforated pipe, and they have to do that over and over again for a few years," she says. "They have to learn how to set up the machine, assemble the machine and fix the machines."

After several years of working on the dewatering trenchers that only go 20 to 25 feet deep, qualified employees move to the one-pass trenching side, where they apprentice for a number of years. "They'll be five years in training, plus coming here with skill," Becky says. "We don't get them out of high school. They have to be a mechanic first, or an equipment operator with mechanical abilities."

The company prides itself on having long-term employees; many spend their entire career with DeWind. "Our guys are lifers," Becky says. "These guys on these big machines are getting paid pretty well and aren't going anywhere."

"IT'S LIKE **HAVING THE GOLDEN GOOSE.** YOU DON'T REALLY WANT TO START MASS PRODUCING THESE." Becky DeWind Andy Leach works on building a new MT 3500, 125-foot trencher in the shop.

#### VARIETY OF WORK

Having the large trenchers has brought in some unique jobs for the company. "We do get calls for specialty applications," Becky says. "A big company is asking us to put in 24-inch HDPE SDR11 pipe. It's huge, and Greg will design the installation attachment for that to make it happen."

The company has also been hired to do custom work for the New York Department of Engineering, installing pipelines on sites highly contaminated with nuclear waste. Becky says that job, at the West Valley Nuclear Facility in western New York, was one of the most difficult.

"Greg had to design a conveyor system so no spoil would touch the

ground," she says. The spoil would be conveyed to a platform for drying and would be hauled off on a train to a disposal site. "We couldn't make any mistakes there. If the machine hit nuclear waste, the customer would have to buy the trencher."

The DeWinds had to assess its liabilities before undertaking the project. They concluded that if the machine contacted nuclear waste, they would have to cut the boom off and leave it in the ground. Before the project, DeWind conducted a dry run at its own yard with engineers from the Department of Engineering on site.

"They were real happy with the dry run and we got the OK to proceed on the project," Becky says. "The project took two weeks to complete with no loss of equipment. It was a pretty stressful job."

#### FUTURE IN DAMS AND LEVEES

As for dam remediation, the Association of State Dam Safety Officials (ASDSO) says there are 87,000 dams throughout the U.S. and 4,000 of those are at risk of failure.

From 1998 to 2008, the recorded number of deficient dams — those with structural or hydraulic deficiencies leaving them susceptible to failure — more than dou-

bled from 1,818 to 4,308. The number of dams identified as unsafe is increasing at a faster rate than those being repaired, according to the ASDSO.

"There are so many levees and dams that are in need of repair, and we'll be doing lots of that," Becky says. "Our machines are so compact that they fit right on top of the levee. We only need 15 feet of platform to work."

Becky admits that when her husband began building the machines, they had no idea that dams and levees required remediation. "We were just headed for environmental installations where you couldn't touch the water or the ground, and we developed applications to work underground with very little disturbance to the ground.

"There is plenty of work out there to be had," Becky says. "We'll go anywhere as long as the money is right."  $\checkmark$ 



We offer a full staff to accommodate your needs to include: Sales, Service, Repair, and Installation Shop capable of servicing and repairing a wide variety of different make and model blowers and pumps from all your top manufacturers



TOLL FREE 1-800 678 4581 \* PHONE 440-546 1190 \* FAX 440-546 1188 \* EMAIL- RAROSSNE@RAROSSNE.COM \* WEB SITE WWW.RAROSSNE.COM 10280 BRECKSVILLE RD- BRECKSVILLE, OHIO 44141



# 10 Tips on Locators

#### MANUFACTURERS ADVISE ABOUT PROPER CARE, OPERATION

**BY KYLE ROGERS** 



Clay Barks, owner of Clay's Septic & Jetting in Nipomo, California, uses a RIDGID NaviTrack Scout Locator to accurately locate specific parts of a client's septic system.

ocating equipment is becoming an increasingly important tool in the excavating world. With the underground environment littered with various public and private utilities, it's important to be able to accurately identify the location of underground pipes and cables before getting started on a project. So you need your locator working properly.

While there may not be many wearable components on locating equipment, it doesn't mean maintenance can be neglected. Here are some tips to help keep your locating tools in good working order:

#### PRACTICE PROPER STORAGE

An easy way to keep locating equipment in good

shape is being mindful about how it's stored when not in use. Eric Huber, a senior product manager for RIDGID, says his company's locators come in a durable, blow-molded hard case that can be used for storage.

"I would suggest using whatever case your manufacturer provides," he says.

He also recommends removing the batteries from the unit when it's not being used.

"It's a good practice for anything with alkaline batteries," Huber says. "Recall a time when you've gone back to something you had stored away and noticed that the batteries had leaked. Then it's not the product's fault. It's the batteries that caused the problem. We even provide places to put the batteries in the case."

#### **OTHER BATTERY-RELATED TIPS**

Matt Manning, products manager of electronics for McLaughlin, seconds that recommendation. Damage related to leaking batteries is a common repair order that comes into his office, he says.

While always removing batteries when the equipment is not in use is the safest practice, contractors who use their locating equipment every day may not have to worry as much.

"Dead batteries leak acid. Good batteries don't," Manning says. "Depending on the manufacturer, there may be software in the equipment that shuts it down when it's not in use. But some manufacturers select not to do that, and the equipment doesn't shut down unless you do it. If you forget to turn off the equipment, you'll eventually run the batteries down. If you're using it every day, it may not be a big issue. But if you're using it, say once a week, that battery will start leaking acid, and before you know it your unit's damaged."

#### DON'T BE CARELESS IN THE FIELD



Be aware of situations in which the equipment could be susceptible to accidental damage, Manning says. A problem he sees far too often is equipment getting run over.

"Too many people just lay the equipment down where they're working or they'll lean it up against a truck, or lay it on the tailgate. Then someone hops in the truck and leaves; next thing you know the locator falls off the truck or gets run over."

For the most part, the receiver will stay near the user, so a little common sense can go a long way toward keeping it safe. For the transmitter, Manning recommends placing it in such a way that protects it or making its location clearly visible in some way.

"If it's a direct-connect situation where the transmitter is next to the telephone pole or a utility box, be thinking about if it's positioned in a way that would open it up to possible damage by someone not seeing it. Put it really close to the telephone pole or utility box to protect it, or better yet mark it with an orange traffic cone."

#### KNOW YOUR ENVIRONMENT LIMITATIONS

Locators aren't your everyday electronics. Manufacturers build them to withstand rugged working conditions. Still, it's important to handle the equipment with care and know where to draw the line. Misuse rather than equipment failure is more common, says Huber.

"When something does happen, it usually comes down to some type of misuse — they break the unit or submerge the unit," he says. "Locators are waterresistant but not usually waterproof. You can use them in a light rain, but if you drop them in a puddle or something like that, that could cause an issue."

"Some locators are better than others, but most manufacturers have built their equipment to withstand the elements — snow, rain, mist," Manning says. "Still, there's a point where it's probably raining too hard. If you're comfortable working in it, you're probably fine. If it's a downpour where you don't even want to be out there, it will probably affect the equipment too."

#### ESTABLISH A TEST POINT

Say you're in the middle of a locate and start having problems. How can you be 100 percent sure it's the equipment that is at fault and not, for example, interference on the job site? Manning says it's

important to regularly test your equipment on a known pipe or line, so that if a problem arises in the field you can immediately rule out equipment failure.

"Whether they are based out of an office or a home, most people will have a place where they are centrally located. Find a utility there, do a locate on it, get a depth estimate and expose it. Then confirm that the locate was correct



A McLaughlin locator is used on a job site prior to the start of vacuum excavation.

and the depth was correct. If that's all correct, you know your locator is working properly."

Mark this location and you have a go-to point every time you need to test your equipment. It depends on how often the locator is used, but Manning recommends performing a test at least once a month. For contractors who are more mobile and don't have a good location for setting up a test point, he says multiple locates should be performed before concluding there is an equipment problem.

"There are interferences on job sites that can distort the magnetic field. When that magnetic field is distorted, it will not locate directly over the utility and will that is causing the problem.

"If there's something wrong with the transmitter or the locator, you might see the line there but can't possibly locate it. Or there's no signal on the unit itself and that would indicate a problem with the locator," Huber says.

"Maybe it's not going to the right frequency, skipping frequencies or the transmitter is switching frequencies on its own," Manning says. "If you know the equipment well and can tell it's just not locating a utility at all and the screens aren't acting properly, then it's an equipment problem."

#### **SOFTWARE TIPS**



Software is manufacturer-dependent, Manning says. In some cases, an upgrade may be in order to keep your locator functioning properly. In other cases, you may only have to upgrade if you're looking for some added features.

"It's not like a computer that needs consistent updates," he says.

Software issues aren't something Manning says he encounters often in his work at McLaughlin, but that doesn't mean they couldn't be the root of an issue.

"If you're having an issue with your equipment, before you send it in, it wouldn't be a bad idea to make a phone call to the manufacturer and confirm you have their up-to-date software," he says.

#### **A FEW TIPS FOR DOING THE WORK**



While there will inevitably come a day when something does break and you have to send in your locator for repair, many issues can be worked out at the job site.

"There is not a lot of maintenance with locators, but there are a lot of intricacies to doing the locating work itself," Huber says.

To begin, Huber says be sure that you are locating the signal you're transmitting.

"You could be transmitting 8 kHz, but you're trying to find 33 kHz and you won't find it because you're not transmitting it. Make sure whatever your transmitter is set to your locator is set to."

As far as what frequency to use, Manning says a trial-and-error method is best.

"That is why multiple-frequency equipment is very important on job "WHEN SOMETHING DOES HAPPEN, IT USUALLY COMES DOWN TO sites now, due to the congestion, con-SOME TYPE OF MISUSE - THEY BREAK THE UNIT OR SUBMERGE THE dition and construction of the utili-UNIT. LOCATORS ARE WATER-RESISTANT BUT NOT USUALLY WATERPROOF." ties. All those factors determine the best frequency to use."

Be open to experimentation, but

not give you the correct depth. Of course you're going to think something's wrong with the equipment if you're the guy who travels and doesn't have a constant place to test it. At that point, before you pack it up to send it in for repair, locate another utility. Make sure the problem you're having is consistent."



Eric Huber

#### **READ THE MANUAL**

"When people call me with problems, the best questions are from those who have read the manual," Manning says. "Their questions are usually more specific and I'm better able to help them. Too many

people just grab the equipment, learn the basic functions and start using it."

#### **EDUCATE YOURSELF**

Beyond that, he also advises taking a course about the basics of utility locating.

"Many people out there have been handed down information from the previous guy doing their job. But equipment has progressed, and that person's experience may be related to older pieces of equipment so some things could get missed. If you take a course, they'll teach you about issues that can arise, like interferences and how they affect a locate."



#### SIGNS OF AN EQUIPMENT MALFUNCTION

If you have a better understanding of potential job site issues, you can more easily identify cases where it is clearly the equipment starting with the lowest possible frequency is a good general plan of attack, Manning says.

"Use the lowest one that will produce a traceable signal over the distance you want to cover," Huber says. "Lower frequencies will travel very long distances and not jump to other pipes or cables. So the lower the frequency, the more certain you are to be on that particular line.

"If you have a good circuit and you want to go very long distances, you can use a low frequency. If you don't need to travel as far, maybe go with a medium frequency. When those have failed, you can use a high frequency."

Huber says it all comes down to finding the best way to produce a strong

signal on the line you're trying to locate. That could mean changing the frequency, going from a direct-connect method to inductive, or simply moving the transmitter.

"If you know where the utility is at the building and know where it is at the street, but don't know where it

is in between, you can try moving the transmitter to the other end to see if you can put a stronger signal on the line."

Read more on tips for doing locating work online at digdifferent.com

# SPOTLIGHT

# Robotic Control

#### ROBOTIC WATERJETTING SYSTEM FROM STUTES REMOVES OPERATOR FROM DANGEROUS HIGH PRESSURES

#### **BY CRAIG MANDLI**

perator safety is paramount in the waterjetting and hydroexcavation industry. With more companies — especially those in the refinery and petroleum cleaning industry — wishing to remove their operators from possible harm from high-pressure sources and caustic chemicals, automated systems are becoming more common.

The HydraX Xtream Pad Dragon from Stutes Enterprise Systems, introduced to the water and wastewater industry at the 2015 Water & Wastewater Equipment, Treatment & Transport (WWETT) Show, is just such a product. The innovative robotic waterjetting and hydroexcavation system allows the operator to manipulate the variable-speed rotating nozzles as an extension of his own body.

#### "IT ALLOWS FOR LESS WEAR AND TEAR ON THE OPERATOR, A FASTER CLEAN, LESS DOWNTIME AND LESS COST FOR PROTECTIVE EQUIPMENT." Tryan Stutes

"What we essentially did with this product was took a compact excavator and added a tail whip that swivels back and forth and doesn't pinch or puncture the high-pressure hose," says Tryan Stutes, the president and owner of Stutes Enterprise Systems. "Our blasting head comes in a small package while offering a wide range of motion."

#### **PRODUCT SPECS**

The head rotates 180 degrees left and right, and 180 degrees up and down, allowing the operator to reach small crevices

and cracks far out of arm's reach. It can blast water at pressures up to 20,000 psi at 43 gpm. The Pad Dragon's intelligent hydraulic system controls the speed of the nozzle's spin rotation and other functions from the comfort of its climate-controlled cab. It's also efficient, as there's no need to idle-up the engine to power the hydraulic controls.

"Operator safety is the biggest factor with the design of this unit," says Stutes. "It allows for less wear and tear on the operator, a faster clean, less downtime and less cost for protective equipment, as the operator can stay in the comfort of the cab."

Multiple tools are available with the blasting head, with a quick-change system that allows the operator to make adjustments in minutes. While the target market is service workers and companies that work in refinery and utility pipe cleaning and blasting, Stutes says that several municipalities have also purchased units. The unit can also be hooked to a trailer jetter to give it full hydroexcavation capability.

"We designed this unit to be a fit across multiple industries," Stutes says. "Now it's a matter of getting the name out there and letting municipalities and contractors know that there is a different, safer option out there for what they're trying to do."

#### THE SHOW

The 2015 WWETT Show was Stutes' first as an exhibitor, and overall he was enthused by the excitement surrounding his unit — after first explaining



Tryan Stutes, right, owner and president of Stutes Enterprise Systems, discusses the features of the waterblasting head on his HydraX Xtream Pad Dragon robotic waterjetting system with an attendee at WWETT 2015. The system offers pressures up to 20,000 psi at 43 gpm, while keeping the operator away from potential harm.

what it is and what it's capable of.

"I think a lot of people in the industry have a vision of what a waterjetting system looks like, and this is something that, looks-wise, is completely different," Stutes says. "There was a lot of education on this product at the WWETT Show, and once people learned about it, they wanted to know more. The feedback I've gotten from those who have units in the



Water & Wastewater Equipment, Treatment & Transport Show

www.wwettshow.com Education Day: Feb. 17, 2016 Exhibits: Feb. 18-20, 2016 Indiana Convention Center, Indianapolis

field indicates that they don't want to do anything without it."

Stutes says he's excited to see where the market for the unit goes in the coming year. Based on the feedback he received at WWETT, the unit's hydro-excavation functionality could potentially be an even bigger selling point.

"Just being at the WWETT Show for the week, we gained a ton of knowledge on this industry," he says. "I'm confident that this waterblasting unit is a great fit, and I look forward to working with this industry even more." **866/362-9332; www.aquablasters.com** 

# Rules Go Into Effect

#### NEW CONFINED SPACE RULES FOR CONSTRUCTION INDUSTRY BEGAN IN AUGUST

#### BY DOUG DAY

orkers in the construction industry now have the same confined space protections that those in manufacturing and general industry have had for more than 20 years. The new rule, published May 4 and effective Aug. 3, incorporates most of the general industry rule and includes several provisions specific to construction hazards.

OSHA regulations for the construction industry used to have just a training requirement: Employees working in confined spaces had to be instructed about the hazards, necessary precautions and the use of protective emergency equipment. The new rule has five key new requirements, according to information published by OSHA:

- Detailed provisions on coordinating activities when there are multiple employers at the work site to ensure hazards are not introduced into a confined space by workers performing tasks outside the space (e.g., a generator running near the entrance of a confined space causing a buildup of carbon monoxide).
- A competent person must evaluate the work site and identify confined spaces, including permit spaces (those that may have a hazardous atmosphere, engulfment hazard or other serious hazard that can interfere with a worker's ability to leave the space without assistance).
- Continuous atmospheric monitoring whenever possible.
- Continuous monitoring of engulfment hazards. For example, when workers are performing work in a storm sewer, a storm upstream could

#### "THIS **RULE WILL SAVE LIVES OF CONSTRUCTION WORKERS** ... [IT] EMPHASIZES TRAINING, CONTINUOUS WORK SITE EVALUATION AND COMMUNICATION REQUIREMENTS TO FURTHER PROTECT WORKERS' SAFETY AND HEALTH."

#### Dr. David Michaels

cause flash flooding. An electronic sensor or observer posted upstream could alert workers at the first sign of the hazard.

• Allowance for the suspension of a permit, instead of cancellation, in the event of changes from the entry conditions list on the permit or an unexpected event requiring evacuation of the space. The space must be returned to the entry conditions listed on the permit before re-entry.

Three other provisions of the new construction rule clarify requirements that already exist in the general industry standard:

- Employers who direct workers to enter a space without using a complete permit system must prevent workers' exposure to physical hazards through elimination of the hazard or isolation methods such as lock-out/tagout.
- Employers relying on the aid of local emergency services must arrange for responders to give the employer advance notice if they will be unable to respond for a period of time.
- Employers must provide training in a language and vocabulary that the worker understands.

## TRENCHERS AS LOW AS \$2,800 USD





OSHA's online FAQ says companies that work in both construction and general industry will meet OSHA's requirements by following the new construction rule (Subpart AA of 29 CFR 1926). Employers should review the agency's website (www.osha.gov/confinedspaces/index.html) for more specific information on how the rule may impact them.

"This rule will save lives of construction workers," said Assistant Secretary of Labor for OSHA Dr. David Michaels when announcing the new 621-page construction industry regulation. "Unlike most general industry work sites, construction sites are continually evolving, with the number and characteristics of confined spaces changing as work progresses. This rule emphasizes training, continuous work site evaluation and communication requirements to further protect workers' safety and health."

Work on the new rule began in 1994 when OSHA agreed to establish regulations specific to the construction industry when it settled a lawsuit concerning the general industry rule. Michaels says the rule will prevent an estimated 780 serious injuries and save the lives of five construction workers annually.  $\checkmark$ 



facebook.com/DigDifferent twitter.com/DigDifferent linkedin.com/company/dig-different-magazine

#### How'd you handle that tough excavation problem?

Share your story with 23,000 other professionals.

Send a note to editor@digdifferent.com or call 800-257-7222



# New Technology to Be Found at ICUEE

**BY CRAIG MANDLI** 

he International Construction & Utility Equipment Exposition (ICUEE), also known as The Demo Expo, is the premiere event for utility industry professionals to gain comprehensive insight into the latest technologies, innovations and trends affecting their industry. This year's event, slated

#### **General Machine Products**

The **Ramrod** trailer-mounted, powered-duct rod pusher from General Machine Products (GMP) provides a mechanized method for deploying ½-inch toneable duct rod. It's a safe alternative to rodding trucks, which can cause damage to existing cable due to their immense power. It is hydraulically powered, providing precise control of push-and-pull forces up to 300 pounds. The unit can deploy rod at speeds up to 130 feet per minute. **Booth #L332** 



General Machine Products - 215/357-5500; www.gmptools.com

#### **Foremost**

The **FVS1200** from Foremost is a full-size unit, offering 10.5 cubic yards of debris capacity and 1,200 gallons of freshwater storage. It sits right in between the FVS2000 and FVS1000 in terms of size, which allows versatility in both urban



and energy-related applications. This package is normally mounted on a tandem chassis with a single-drop axle. The unit is shorter and lighter than the company's full size units, but will still perform efficiently when excavating. **Booth #N-1022** 

Foremost - 403/295-5800; www.foremost.ca

#### **Fruitland Manufacturing**

Fruitland Manufacturing runs its products through a continuous **powder coat line**, providing a durable finish available on all steel, cast iron and cast aluminum parts. The process adds another level of quality to all products. The powder coat line has three stages of washing — phosphate, rinse and sealing, drying, electrostatic powder coating, infrared pre heating and curing.



Fruitland - 800/663-9003; www.fruitlandmanufacturing.com

for Sept. 29 to Oct. 1 in Louisville, Kentucky, promises to show off some of the finest new products on the market for utility professionals. Following are products of interest to expo attendees, including booth numbers for products featured at this year's show.

#### Vac-Con

The easy-to-operate **X-Cavator** from Vac-Con comes with a hydrostatic drive that uses the chassis engine to eliminate the need for PTO, clutch and gearbox operation. It offers water systems up to 4,000 psi and a mobile wireless remote control enabling the operator to work the chassis engine



rpm, boom, automatic vacuum breaker, dump controls and hydraulic door locks from up to a half mile away. The boom rotates up to 270 degrees.

Vac-Con - 855/336-2962; www.vac-con.com

#### Signs & Safety Equipment

The **C-801** coil-flex wind-deflectable c-stand for rollup signs from Signs & Safety Equipment comes standard with a wind deflection system for maximum lateral stability in all conditions. It is comprised of lightweight aluminum that offers resistance to rust and corrosion. It has a fast kick-release system that locks legs into place when fully extended, and a leg extension system for quick teardown. Its universal spin-handle roll-up sign holder is for use with all standard 1¼-inch fiberglass ribs. It has open footprint dimensions of 48 by 96 by 32 inches and an above grade clearance of 14 inches. **Booth #3316** 

Signs & Safety Equipment - 607/562-8463; www.signssafety.com

#### **Fabco Power**

The **Hydro Arc 7500** welder/generator from Fabco Power can weld while supplying other equipment with AC power. It is hydraulically driven, and provides 240 amps DC, 120/240 volts AC, and 7.5 kw. It can be used to operate AC tools, air compressors, lights, and pumps. It weighs 165 pounds in a compact 27- by 17- by 10-inch footprint. It comes standard with an 11 or 21 gpm smooth, quiet high-efficiency piston-type motor. **Booth #4641** 



Fabco Power - 845/469-9151; www.fabcopower.com

#### 2015 ICUEE ADVERTISING SECTION

INTERNATIONAL CONSTRUCTION & UTILITY EQUIPMENT EXPOSITION Sept. 29 - Oct. 1, 2015 | Louisville, Ky.

#### GapVax

The **MC Advanced Series Combo JetVac** from GapVax will control hydraulics, blower, and water pump operations with a complete compliment of gauges via display screens. All body, boom and hose reel functions, vacuum break, throttle, area and safety lighting are wireless controlled, while maintaining proportional boom and hose reel control. Specs



include a 5- to 12-cubic-yard debris body and stainless steel water tank up to 2,000 gallons. Vacuum pump options from 3,500 to 5,000 cfm with up to 27 inches Hg are available. The MC series boom is an 8-foot front-mounted, telescopic design reaching 26 feet with a 270-degree rotation. **Booth #N-2043** 

#### GapVax - 888/442-7829; www.gapvax.com

#### StoneAge

**SpinCat** downhole rotary nozzles from

StoneAge are speed controlled thru-tubing wash tools used in a wide range of well intervention applications. They can be used with variety of routine chemicals and



solvents for rapid wellbore cleaning in productive

operating areas. Common applications include jetting out hydrates and ice plugs, de-scaling and acid washes, paraffin and asphaltene cleaning and post-frac proppant and fill clean-outs. They are an effective alternative to motor-mills in post-cement and liner clean up jobs. With proper care and maintenance, they can remain in service for many years.

StoneAge - 866/795-1586; www.downholecleaning.com

#### **Transway Systems**

The **Terra-Vex** all-season hydroexcavator from Transway Systems has a Robuschi RB-DV145 6400 cfm blower, with OMSI transfer case and insulated acoustical enclosure with walk-in storage. Its hydraulically driven Giant LP600 water pump delivers 10 gpm at 6,000 psi. The 2,500-gallon debris tank has a hydraulically operated hoist,



door locks with full-open door. The 1,200-gallon HDPE water tank supplies a 420,000 Btu diesel-fired burner permitting operation in sub-zero temperatures. The water pump and water tank compartments are heated by a dieselfired heater and 12-volt engine coolant heater. The 26-foot hydraulically operated 8-inch suction boom is equipped with joystick control, and wireless remote control. All parts are painted/powder coated off the unit.

Transway Systems - 800/263-4508; www.transwaysystems.com

#### **Integrated Chassis Solutions**

The **SKY-VAC SV-120-2** from Integrated Chassis Solutions contains the hydrovac excavation package (blower, filter housing, silencers, cyclone, boiler, pump, etc.), along with the water tank and boom, all on one chassis. A vacuum box acts as the debris tank that can be emptied and



replaced, all while the unit stays positioned and remains working. The boom can reach 126 feet vertically, downward 84 feet, and 118 feet horizontally with 370 degrees of rotation. It can excavate over an acre of area without having to reposition. It's an extended-reach vacuum extraction system and addresses the issues of accessibility in the excavation and extraction industries.

Integrated Chassis Solutions - 970/475-6256; www.ics-vac.com

#### **HDD** Broker

HDD Broker is a large marketplace for the **purchase and sale of preowned utility installation equipment.** With hundreds of listings in dozens of categories, it offers a nearly unrivaled selection. Combined with



a staff of experienced and knowledgeable sales professionals, HDD Broker ensures that the buying and selling experience is fast, safe and easy. It handles all aspects of the transaction, including negotiations, inspections, shipping, and logistics. **Booth #K-132** 

HDD Broker - 866/960-3331; www.hddbroker.com

### View and learn about alternative excavation \_\_\_\_\_ technology and equipment at: \_\_\_\_\_



Water & Wastewater Equipment, Treatment & Transport Show

#### www.wwettshow.com

Education Day: Feb. 17, 2016 Exhibits: Feb. 18-20, 2016 Indiana Convention Center, Indianapolis, Ind.





#### BY CRAIG MANDLI

Trenching can often be an effective practice to install piping and other utility materials without creating a large footprint. Here are several trenchers, along with backhoes and trenching components, designed to efficiently handle those applications.

#### Backhoes

#### Caterpillar 430F

The 430F backhoe loader from Caterpillar was built for performance and productivity during trenching applications. It is available with a pilot-operated joystick, which provides ease and com-

fort when trenching. A load-sensing hydraulic pump provides all the power and pressure needed for the job application, while the flow sharing valves allow the operator to use multiple functions at once.

It comes standard with an eco mode, which saves up to 20 percent of fuel while maintaining performance. For increased comfort and pro-



ductivity, the E-Stick, which provides approximately 4 feet of additional reach, is operated by a thumb roller. It provides 205 degrees of bucket rotation, which enables the operator to achieve a clean and flat back wall and bottom of the trench. A variety of buckets are available such as standard duty, heavy duty and high capacity. It is best for the operator to select the appropriate bucket and bucket teeth to match the soil condition. **919/550-1155; www.cat.com** 

#### **Innovative Equipment TMX**

The TMX (Towable Mini Excavator) from Innovative Equipment attaches to a 1/2-ton pickup truck, van and other light-duty tow vehicle to travel to multiple jobs in a single day. It can be towed at 55 mph, and the driver does not need a CDL. It is capable of 6,600 pounds of digging force and an 8-foot dig depth, and offers a zero-turn radius and

an unobstructed view of the bucket, which can also function as a loader up to just over 7 feet. It has a 72-inch, fourway blade and



hydrostatic drive with a 21-degree blade tilt that is efficient on uneven grades and finish grading. The 140-degree swing radius enables digging next to walls or other obstructions. It has business-class seating for operator comfort, multifunction joystick controls, steel fuel and oil tanks, and flexible oil-resistant plastic parts. It is available in diesel and gas models.

888/359-3002; www.iequipt.com

#### John Deere 310SL HL

The 310SL HL backhoe from John Deere is designed for loading trucks, placing pipe, digging trenches, moving materials or tearing up asphalt.

It meets today's emission regulations through a Final Tier 4/ EU Stage IV PowerTech Plus diesel engine (110 hp). It has



a five-speed PowerShift transmission with speeds up to 25 mph. The heavy-lift model can deliver up to 25 percent more backhoe lift capacity under normal conditions than comparable K-Series models. Using the sealed-switch module, operators can get an additional 10 to 15 percent boost through the Lift Mode feature. It delivers all the advantages of PCLS hydraulics in the 14- to 15-foot digging-depth category, enabling operator efficiency and productivity through improved multifunction control. **800/503-3373; www.johndeere.com** 

#### Komatsu America PC360LC-11

The PC360LC-11 hydraulic excavator from Komatsu America Corp. is powered by a Tier 4 Final Komatsu SAA6D114E-6 engine producing 257 net hp. The operating weight is between 78,645 and 80,547 pounds. The upgraded cab includes an

enhanced power mode for greater productivity. Komtrax technology relays fuel levels, diesel exhaust fluid (DEF) levels, operating hours,



location, cautions and maintenance alerts. **847/437-5800; www.komatsuamerica.com** 

#### Volvo Construction Equipment EC20D

The EC20D from Volvo Construction Equipment is powered by a D0.9A Tier 4 Final engine, pushing 16.3 hp with increased fuel efficiency with an optional auto engine shutdown feature. An auto-

idling system switches engine speed to idle if the machine's controls are inactive for more than five seconds. It has a breakout force of 4,107 ft-lbs, with a tear-out force of 2,763 ft-lbs. Its max reach is 14 feet, with a max digging depth of 8.4



feet and a max dumping height of 9.2 feet. Maximum lifting capacity is rated at 1,195 pounds at ground level with the blade down. In-cab flow adjustment allows operators to match attachment speed to what the job necessitates. The cab has a wide door, and ample noise and vibration insulation. Visibility is enhanced thanks to the machine's boom design, offset slightly to the left. A fingertip roller gives operators precise boom offset and attachment use.

#### 828/650-2000;

www.volvo.com/constructionequipment

#### Teeth

#### Philippi-Hagenbuch Rolling Wedge Cutter

The Rolling Wedge Cutter from Philippi-Hagenbuch offers a material-cutting approach that could dramatically improve material trenching and min-

ing processes while improving cut size and reducing cutting dust by as much as 50 percent. It is a solution for trenching and mining through challenging environments for general con-



struction, road construction, mining and utility applications. It can be used in above-ground and underground environments, and 60 to 70 percent less energy is required to roll material out in tension. It adapts easily to many makes and models of trenchers and mining equipment, is constructed out of hardened steel and is available in various sizes, from 0.75- to 9-inch diameters. It can be outfitted with a host of optional tips. The width of the trench dictates the total number of cutters required. **800/447-6464; www.philsystems.com** 

#### **Tracked Trenchers**

#### **Ditch Witch RT80 Quad**

The RT80 Quad heavy-duty, ride-on trencher and vibratory plow from Ditch Witch is designed to provide traction on rough and uneven terrain. The 83 hp trencher has a three-speed, shift-on-the-

fly ground drive, 39,000 - pound static load rating a n d 30,742 pounds of breakout capacity. The track frames pivot around the cen-



terline of the axle for stability in muddy conditions or when applying high torque to pull through hard ground. Attachments include a vibratory plow, traversing trencher, saw and backhoe.

800/654-6481; www.ditchwitch.com

#### **Morbark Boxer 120 Trencher**

The Boxer 120 Trencher from Morbark offers

up to 740 ft-lbs of torque output for ample power in tough digging conditions. The 120 Trencher features many class-leading characteristics not found on competitive units. This ride-on unit enables better visibility to the trencher assembly and the job being completed. The ergonomically



designed operator's control station has all controls accessible for two-hand operation. It comes with a planetary trencher drive, a spring-loaded trencher boom and standard crumber assembly, and is offered with a 6-inch-wide combo chain and 24or 36-inch bar options.

800/831-0042; www.morbark.com

#### The Toro Company RT1200

The RT1200 from The Toro Company is built on a tool-carrier chassis, its versatile design allowing contractors to select from tracks or tires and a variety of attachments, including a backhoe, six-way backfill blade, rocksaw, vibratory plow, reel carrier and the heavy-duty (HD) trencher drive. Its Cummins 4.5-liter, 121 hp engine and 48-gallon fuel tank provide high out-

#### put with minimal downtime. A standard tilt frame allows the operator to tilt the machine at variable degrees in order to maintain trench angle, while optional load



control allows the operator to set the percentage of engine output dedicated to the ground drive to ensure the performance of the digging implement is maintained.

800/344-8676; www.toro.com

#### Tracks

#### McLaren Industries NextGen TDF

NextGen TDF Series track loader rubber tracks from McLaren Industries have

SpoolRite belting technology to handle the workload and abuse of powerful track loaders. This jointless belt system increases the tensile strength of the tracks' internal structure.

SpoolRite belting is a prestressed, aligned, non-overlapping continuous belting system, which guarantees equal tension throughout the track belts. The tracks include a Crack and Cut Quarantine System, which uses a multiple-lug profile to contain the growth of cuts and cracks, prevent the spread of track surface damage, and extend the service life of the tracks. They also have a fourstep metal-to-rubber bonding technology, an improved guiding system, and a double-offset tread pattern. A rubber-compound formulation helps increase track life span by as much as 50 percent. **800/836-0040; www.mclarenindustries.com** ▼



# Happenings CALENDAR

#### Sept. 14-17

Short Course on Tunneling, Colorado School of Mines, Golden, Colorado, www.csmspace.com/events/tunneling

#### Sept. 21-23

Fourth Annual Cutting Edge Conference, Urban Tunneling, Grand Hyatt, Denver, www.ucaofsmecuttingedge.com

#### Sept. 29-Oct. 1

International Construction & Utility Equipment Exposition (ICUEE), Kentucky Exposition Center, Louisville, Kentucky, www.icuee.com

#### Nov. 2-4

WJTA-IMCA Conference & Expo, Ernest N. Morial Convention Center, New Orleans, www.wjta.org

#### Nov. 9-11

International Associations of Directional Drilling (IADD) Annual

Dig Different welcomes your contributions to our Happenings column. To recognize members of your team, please send notices of new hires, promotions, service milestones, certifications or achievements. We also invite your national, state or local associations to post notices, news items and learning opportunities. Send contributions to editor@digdifferent.com. ▼

Technology Forum Series, Hyatt Regency Lost Pines Resort and Spa, Austin, Texas, www.iadd-intl.org

#### Feb. 3-4, 2016

Underground Construction Technology (UCT), Georgia World Congress Center, Atlanta, www.uctonline.com

#### Feb. 17-20, 2016

Water & Wastewater Equipment, Treatment & Transport Show (WWETT), Indiana Convention Center, Indianapolis, www.wwettshow.com

#### March 20-24, 2016

NASTT's No-Dig Show, Gaylord Texan Convention Center, Dallas, nodigshow.com

#### April 22-28, 2016

World Tunnel Congress (WTC), The Moscone Center, San Francisco, www.wtc2016.us



facebook.com/DigDifferent twitter.com/DigDifferent linkedin.com/company/dig-different-magazine

## THE LATEST: Products



















#### 1. General Pump high-torque clutch assembly

The electromagnetic mobile clutch assembly from General Pump features a 9 3/4-inch, two-groove pulley that receives both "A" (4L) and "B" (5L) belts. A one-piece, solid-forged rotor eliminates the chance of parts separation and maximizes torque. The pulley is made from zinc-coated steel. **888/474-5487; www.generalpump.com** 

#### 2. PipeHunter automatic lube pot

The Auto Luber automatic lube pot from PipeHunter works with any greaseable swivel union, supplying up to 100 cc of lithium-based grease. Designed for swivel unions and hard-to-reach lubrication points, the luber installs by removing the grease zerk. A visual inspection tells if the supply is running low.

#### 800/373-1318; www.pipehunter.com

#### 3. Ditch Witch truck vacuum excavator

The FXT60 truck vacuum excavator from Ditch Witch is available on a Class 6 or 7 single-axle or Class 8 tandem-axle truck. The vacuum excavator is mounted directly to the frame rails, enabling system components to flex independently of the truck. Equipped with a 74 hp Deutz diesel engine, the FXT60 offers 1,027 cfm and a high-pressure water system with a 5.5 gpm, 3,000 psi water pump. Options include a hydraulic boom that extends to 14 feet and choice of tank configurations: 500-gallon spoils with 200-gallon water, or 800-gallon spoils and two 200-gallon saddlestyle water tanks.

#### 800/654-6481; www.ditchwitch.com

#### 4. Reed dual socket, adjustable wrench

The L2N1ADJ dual socket, adjustable ratchet wrench from Reed Manufacturing enables workers to access nuts in tight locations. The two backto-back socket sizes (1 1/4 and 1 1/16) feature a 12-point design that helps the sockets grip and hold for pipeline and construction work. Loosening the large wing nut swings the socket head from side to side. Flipping the socket head by disassembling the wing nut and bolt makes it possible to use either socket opening. Weighing 2.3 pounds, the wrench has a torque rating of 200 ft-lbs.

#### 800/666-3691; www.reedmfgco.com

#### 5. PIP cut protection gloves

The G-Tek 3GX line of cut protection gloves from Protective Industrial Products, in partnership with DSM Dyneema, feature Diamond Fiber Technology, while the MaxiFlex Ultimate 34-874 from PIP and ATG is available with an EN Cut Level 3.

800/262-5755; www.pipglobal.com

#### 6. Bel-Ray hydraulic fluid, oils

Raylene lubrication from Bel-Ray is formulated for mining haulage and support fleets, as well other heavy applications. The Raylene product line includes hydraulic fluid, multi-viscosity hydraulic fluid (high performance), environmentally friendly ashless hydraulic fluid, TO-4 fluid, extreme pressure oil, Hypoid Gl-5 gear oil, blend 10W-30 engine oil and ultra 15W-40 engine oil.

#### 732/938-2421; www.belray.com

#### 7. RIDGID transportable pipe beveller

The B-500 transportable pipe beveller from RIDGID produces a consistent, high-quality bevel in less than two minutes without flames or sparks, replacing traditional bevelling such as grinding. The unit mounts to the end of pipes 4 inches or greater in diameter with a maximum wall thickness of a 1/2-inch, as well as flat plates up to a 1/2-inch thick. Interchangeable heads allow bevels to be cut accurately at 30 degrees, 37.5 degrees or 45 degrees. Features include speed monitoring with LED indicators that assist the operator in keeping the beveller moving at an optimal pace.

800/769-7743; www.ridgid.com

#### 8. Kenco concrete barrier lifter

The barrier lift from Kenco hooks with a sling and shackle to any type or model of machine with lifting capabilities. Handles on both sides allow personnel to safely guide the lifter into position. The lifter automatically grabs as it's lowered onto the wall and won't release until the wall has been firmly set into place. Pad angles swivel to match the slope of the wall. Lifting capacities range from 1,500 to 40,000 pounds. Options include selfaligning guides.

800/653-6069; www.kenco.com

#### 9. NLB UltraGreen high-pressure water jet pump

UltraGreen high-pressure water jet pump units from NLB Corp. feature Tier 4F engines that comply with the latest EPA emissions regulations. In addition to reducing exhaust emissions, the advanced engine technology improves fuel efficiency and increases torque, enabling pump units with smaller engines to handle bigger jobs. UltraGreen units can be used in all 50 states.

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

#### 10. Vanair rotary screw air compressor

The Reliant RS85 rotary screw air compressor from Vanair Manufacturing delivers up to 85 cfm at 100 psi and replaces the Viking and Viper hydraulic lines. The direct-drive unit eliminates belts and pulleys. **800/526-8817; www.vanair.com** 

#### 11. McLaren solid cushion backhoe tires

Nu-Air solid cushion front and rear backhoe tires from McLaren Industries feature deep tread lugs for solid grip on sand, rocks or deep mud. The zigzag tread pattern provides a smooth ride with less wear on asphalt, concrete and other hard surfaces. Flat-proof technology eliminates the need for tire protection.

**800/836-0040; www.mclarenindustries.com** *(continued)* 

#### This Issue's Feature:

#### Low-profile, gasoline-powered, high cfm hydroexcavator

#### **BY ED WODALSKI**

The low-profile LP 533/833 SGT (super gas trailer) hydroexcavator from Vac-Tron Equipment is powered by a 37 hp Kohler gasoline engine with 1,000 cfm vacuum pump.

Similar to the pre-Tier 4 Final SDT diesel model with 1,000 cfm vacuum pump, the gasoline version features the Series 33 hydraulic rear door that opens to a 90-degree angle and is equipped with an automatic safety lock.

"We design and build our own trailers," says Brian Showley, vice president, sales, Vac-Tron. "It's built with a low center of gravity for safety and towing, as well as ease of operation in the field. Everything is accessible from the ground."

The trailers are built on a heavy I-beam frame with Dexter torsion axles and Goodyear tires. Overbuilt for safety, the trailers are equipped with a 500-or 800-gallon debris tank, up to 400 gallons of water and a highthat sets our equipment apart is the filtration," Showley says. "When you're doing vacuum excavation, your filter system is what protects your vacuum pump. You're sending debris into the debris tank, but then you have airborne particulates, grit and pieces of rock that can come out of the debris tank and pass through your vacuum pump, causing damage to your pump, unless the filter protects it."

Vac-Tron's CVS filtration housing has a 28-inch-diameter cyclone, four-way valve for reverse pressure, silencer for quiet operation and a 0.5-micron washable filter that can be removed and cleaned from ground level. Options include the six-way hydraulic boom with wireless remote and 15-foot strong arm that supports the weight of the hose for one-person operation. **888/822-8766; www.vactron.com** 

pressure pump capable of 3,000 psi at 4 gpm. They are available with a GVWR less than 10,000 pounds to 24,000 pounds.

"It's a smaller version of your large trucks," Showley says. "It'll do many of the same jobs, only on a smaller scale and at a much lower cost."

Applications include utility locating; slurry removal; manhole, lift station, storm drain, meter box, valve box and retention pool cleanout; street sign installation; nonhazardous spill cleanup; micro-tunneling; and resetting tombstones.

"One of the main components



## THE LATEST: Products















#### 12. John Deere L-Series tractor loaders

The L-Series 210L EP and 210L tractor loaders from John Deere have a four-speed PowerShift transmission for no-clutch, fingertip shifting and direction changes. The 210L is powered by a 93 hp Tier 4 Final/EU Stage IV PowerTech Plus diesel engine while the 210L EP is powered by a 70 hp certified Interim Tier 4/Stage III B PowerTech E engine. Depending on use, each model can be equipped with a canopy or optional four-season, air-conditioned/heated cab. **800/503-3373; www.johndeere.com** 

#### 13. Doosan Portable Power airends

The HR350 airend from Doosan Portable Power is designed for insertion in portable air products and available in the XHP1170 air compressor and as a drop-in replacement for the previous HR2.5 airend. **800/633-5206; www.doosanportablepower.com** 

#### 14. McElroy socket fusion tool

The Spider 125 socket fusion tool with universal clamping from McElroy Manufacturing is designed for installations using 63 mm to 125 mm PP pipe in overhead, vertical and tight work spaces. Universal clamping accommodates any size pipe or coupling, eliminating the need for inserts. The 15-pound tool comes with a carrying case and full assortment of heaters and heat adapters.

918/836-8611; www.mcelroy.com/fusion

#### 15. Wachs valve identification system

The Valve ID from E.H. Wachs is designed to identify and delineate valves based on size, function, pressure boundaries or direction of closure. The one-size-fits-all application ensures the correct valves are being cycled and the direction of closure is never in doubt. **866/392-1060; www.turnvalves.com** 

#### 16. Water Cannon hot-water pressure washer

The hot-water diesel pressure washer skid package from Water Cannon features a General or Annovi Reverberi pump that delivers up to 8 gpm and 4,000 psi. Powered by a Kubota Z602B1 or DH902B1 engine, the roll-cage-protected pressure washer is designed to destroy stubborn contaminants in commercial settings. It has a 12 VDC diesel-fired Beckett burner that delivers 118-degree F water temperature (210 maximum), and has a 15-gallon fuel tank, 40-amp charging system and battery box. **800/333-9274; www.watercannon.com** 

#### 17. Advanced Drainage Systems design tool

The StormTech design tool from Advanced Drainage Systems enables engineers, owners and contractors to design customizable underground stormwater management systems. Available free at the company website, the tool can be accessed and used through multiple platforms, including smartphones, tablets and other mobile devices. Designs are produced in PDF and CAD formats with data that enables users to estimate total installed cost.

800/821-6710; www.ads-pipe.com

#### 18. Komatsu Tier 4 Final grader

The GD655-6 motor grader from Komatsu America Corp. is powered by a Komatsu SAA6D107E-3 EPA Tier 4 Final emission certified engine. Features include a Turbo I precleaner, independent blade lift float, frontmounted work lights, toolbox with lock and 10 control valves. 847/437-5800; www.komatsuamerica.com ▼

"There are different ways to excavate soil. Most people think you're just spraying water

on the ground, but it's a science — there's a right way to do it. We're here to stay.

We've got a good **reputation**, and that makes me want to work even harder.

The guys and I all have something to prove."

Mike Morehouse, Owner Davids Hydro Vac, White Bear Lake, Minn.

Read what matters to contractors in every issue of Dig Different.



# TECH DERSDECTIVE

# The Right Tracking Choice

#### FOLLOW THESE KEY POINTS TO MAKE THE BEST DECISION FOR YOUR BUSINESS WHEN SELECTING A GPS TRACKING SYSTEM

#### **BY RYAN DRISCOLL**

electing the correct GPS tracking solution for your business can be a tough decision. Establishing key concepts to consider, what criteria are most important to you and the return on investment you can potentially achieve are all critical in making your decision on the right GPS tracking partner.

#### **KEY CONCEPTS TO CONSIDER**

There are many different GPS tracking options to choose from, so it is smart to identify the most basic components of your fleet that can be affected and would benefit from a GPS application. It is not just important for your business to consider what is needed right now, but also what will be needed down the road. This will help ensure that as your needs change and grow, the solution will be able to adapt and scale with you. It is critical to find a solution that will provide your management team with the most accurate data, a smooth implementation and, most importantly, a significant return on investment.

Every fleet has different goals and challenges that need to be accomplished, so take the time to dive into what those are for your fleet. Commencing the GPS tracking buying process with a general idea of what your criteria are will keep you focused on what you really need and allow you to easily narrow down your list of potential providers.

#### **DESIRABLE CAPABILITIES**

Deciding what capabilities and features you need in a GPS tracking solution is the next phase of the decision-making process. Knowing what you would like to monitor within your fleet will lead you to assessing the right functionality in your GPS tracking software. Many fleets, both large and small, will benefit from customized reporting capabilities, length of historical data retention, comprehensive alerts, and simple scheduling and dispatching as some of the core features in their GPS tracking software. Functionality, ease of use, accuracy of GPS data, quality customer service and overall customizability are also characteristics that your GPS tracking provider should have.

#### ATTAIN THE GREATEST RETURN ON INVESTMENT

If you are only looking to simply see dots on a map within GPS tracking software, the least expensive solution may be the route you want to take. Yet, if you are looking to get the most from your GPS tracking partner, you will want a solution that can help you squeeze the maximum ROI. It should not be the initial cost of the software that you worry about, but the opportunity cost. The advantages of choosing a valuable GPS tracking solution greatly exceed the cost savings from selecting a cheaper version. Quality GPS tracking is something that should be looked at as an investment and not a simple and cheap solution.

Applications that are highly configurable and provide accurate reports, timely data and robust mapping capabilities will allow you to analyze a wide range of metrics to properly manage your fleet operations. Highly customizable alerts, reports and ease of administration will give you all of the tools you need to have a clear insight into the data that will allow you to improve the efficiency and productivity of your fleet.

Apply these general strategies to your GPS tracking buying process and you will be well on your way to making the right decision in order to take full control of your fleet.  $\blacktriangleright$ 





#### **THE LATEST:** lews

#### Hyundai names Pinnacle **Award winners**

Hyundai Construction Equipment Americas named Cisco Equipment, with two of the top 15 salespeople in the United States, winner of the 2014 Pinnacle Award. The award is presented to the company's leading North American dealers. Other recipients were Four Seasons Equipment, May Heavy Equipment, Nueces Power Equipment, Rob's Hydraulics, Team Boone and Woodland Equipment.

#### **GapVax Rental names** operations manager

GapVax Rental Units named Earnest Rankin operations manager. G.R.U. offers daily, weekly or monthly vacuum truck rentals.



Earnest Rankin

#### **Muncie Power Products** releases new website

Muncie Power Products released its new website, www.munciepower. com. The site includes improved menu organization and product filtering.

#### **TNT Crane & Rigging** acquires RMS Crane

TNT Crane & Rigging acquired Rocky Mountain Structures and its subsidiaries. RMS, headquartered in Denver, is one of the largest crane and rigging services companies in the Rocky Mountain Region.

#### **Golder Associates names** president and CEO

Golder Associates, a global consulting and engineering firm, named Dr. Hisham Mahmoud president and CEO. He will be based in Atlanta.



HammerHead names interim president

HammerHead Trenchless Equipment named Rick Johnson, CEO of Charles Machine Works, interim president. He replaces president and CEO Brian Metcalf.

#### **RapidView names director** of customer care

RapidView named Wade Langley director of customer care. He will be responsible for all sales, service, support and logis-



tics throughout Wade Langley North America.

#### **Trelleborg receives** innovation award, restructures business

Trelleborg Pipe Seals' advanced engineering and materials operation received the Innovational Award at the Chemicals Northwest Awards in Manchester, England. The company was recognized for diversifying from its original beginnings as an engineering-based organization to a chemical processor of composite materials. Trelleborg also has restructured its business to consolidate all products under pipe seals and pipe rehabilitation.

#### **Checkers Industrial** partners with AlturnaMATS

Checkers Industrial Products has partnered with Jack Roser, president and owner of AlturnaMATS. The combined product offerings include matting, cribbing, ClearMATS, AlturnaMATS, VersaMATS and Safety Tech outrigger pads under Checkers' ground protection product category. Checkers manufactures and distributes branded safety products, including cable management systems, wheel chocks, safety lights, ground protection and warning whips for the industrial, mining, oil and gas, military, entertainment, construction and aviation markets.

#### **Manitou Americas** celebrates 50 years of Mustang loaders

Manitou Americas celebrates 50 vears of Mustang skid-steer loaders this year. In 1965, Owatonna Manufacturing, today part of Manitou Americas, began designing and manufacturing its own line of skid-steer loaders, starting with the Owatonna Mustang Series 1000. They were the second manufacturer to develop skidsteers, known at the time as self-propelled, four-wheel-drive units.

#### **Ditch Witch launches** interactive website

Ditch Witch, a Charles Machine Works company, launched a new website, www.ditchwitch.com. The site features a myDitchWitch customer portal that provides an access point to Parts Lookup, Quick Tools and HDD Advisor. It also enables customers to set their dealer preference and manage their account.

#### **Ring-O-Matic names CEO**

Ring-O-Matic, an Iowa-based manufacturer of vacuum excavators, named Brian Metcalf CEO. A native of Pella, Iowa, Metcalf will be responsible for developing



Brian Metcalf

a sustainable strategic growth plan for the company as well as its complement of support products.

#### Macquarie Group acquires Advantage Funding

Macquarie Group acquired Advantage Funding Management from Marubeni America. Advantage Funding will become a fully owned subsidiary of Macquarie's Corporate and Asset Finance group. Advantage Funding provides transportation financing and leasing options for commercial vehicle operators in the municipal and industrial markets.

#### Hyundai Construction names service, marketing managers

Hyundai Construction Equipment Americas named Ernesto Lopez service manager, construction equipment, and Corey Rogers marketing manager. Lopez will head the HCEA service, warranty and training teams that support the company's dealers and customers. Rogers will lead all brand, product marketing and communications for Hyundai's construction equipment and forklift product lines.

#### **GPS Insight founder** finalist for EY Entrepreneur of the Year

Rob Donat, founder and CEO of GPS Insight, is a finalist for the 2015 EY (Ernst & Young) Entrepreneur of the Year award in the Mountain Desert Region. The award recognizes individuals who demonstrate excellence and success in innovation, financial performance and personal commitment to their businesses and communities.

#### Stellar names national accounts manager

Stellar Industries named Nelson Carlson national accounts manager. He will focus on growing and nurturing accounts.

#### **SAF-Holland** names president

SAF-Holland named Mike Kamsickas president of the Powered Vehicle Systems Business Unit. He replaces Jack Gisinger, who is retiring at the end of the year. Based in Muskegon, Michigan, Kamsickas will be responsible for global operations, product engineering, OEM sales and strategic planning.

#### Hi-Vac Corp. names Colev president

Hi-Vac Corp. named Daniel J. Coley company president. He will be responsible for



new product and channel development for Hi-Vac's product lines, including Aquatech, X-Vac, UltraVac, Hi-Vac and O'Brien.

#### WJTA-IMCA launches Conference/Expo website

The WaterJet Technology Association-Industrial & Municipal Cleaning Association launched a dedicated website for the 2015 WJTA-IMCA Conference and Expo, Nov. 2-4, in New Orleans. The site is accessible through www.wjtaimca2015.com and www.wjtaimcaexpo.com.

# CLASSIFIEDS

#### **EQUIPMENT & TOOLS**

Jetstream/Hydro Lance - Unit meets/exceeds 10,000 psi. Flow is 12 gallons/min. Built-in bypass to 50-gallon tank. Recirculating water tank w/300-gallon capacity. Unit is hydro lancer/pressure tester and power washer. Call 303-720-4502 for more info. (D09)

#### HYDROEXCAVATING EQUIPMENT



TORNADO "World's Best Hydrovac": New and used trucks in-stock and production for quick delivery. Western Canada heavy-duty spec'd trucks, built for extreme conditions and cold weather. Full details available at www.Used VacuumTrucks.com, or call Great Lakes Equipment Sales for more information

888-432-9070 D11 www.UsedVacuumTrucks.com



2016 Peterbilt 567 Tri-drive: Cummins ISX 15, 485hp, 18-speed. Front axle: 20.000 lb., rear axle 66.000 lb. Debris body: 15.5 cubic yards, fullyopen rear door, hydraulic locks. Pressure washer system: 1,200 US gallon. Aluminum water tank, CAT 3560 pressure pump. 980,000 BTU water boiler, glycol system. Complete water system is installed in an insulated and heated aluminum van body. Robuschi RBDV 145 (6,400cfm, 28hg) blower package, NAMCO transfer case direct drive. Filtration system: Heavy-duty dual cyclone and cartridge filtration system. Boom: Remote-controlled 8" telescopic boom, 27' reach and 320° rotation, 20° down tilt, 55° up tilt ..... \$400,000

204-336-0081, MB D09 alex@schellvacequipment.com

2013 Morooka MST 1500VD: 105 hours, 6.6L CAT engine. 6" Jays vac unit w/4.5L John Deere engine. 200-gallon water capacity, 1,000-gallon debris. All for \$198,000. cmichael@mlchartier.com or call Chad 586-725-0374, MI (P09)



Lease for \$7,400 per month for 60 months - New 2015 Peterbilt 567, automatic transmission, Paccar MX-13 485hp, AirTrac suspension, 20,000# lift axle. Tornado F3Slope Hydrovac, 42" van body, 12.5-yard debris body, 2,150-gallon water tank, Robuschi blower. Loaded truck, IN-STOCK. For more information:

Call 888-432-9070 or D09 email info@usedvacuumtrucks.com www.usedvacuumtrucks.com



Lease for \$7,500 per month for 60 months - New 2015 Kenworth T800 Tri Drive, 18-speed, Cummins ISX15 560hp, air-ride suspension. Tornado F4Slope hydrovac, 72" van body, 12.5-yard debris body, 2,150-gallon water tank, Robuschi blower. Loaded truck, AVAILABLE IN AUGUST. For more information:

Call 888-432-9070 or D09 email info@usedvacuumtrucks.com www.usedvacuumtrucks.com



Lease for \$7,500 per month for 60 months - New 2015 Western Star 4900SB Tri Drive, 18-speed, Detroit 500hp diesel, air-ride suspension, Tornado F4Slope hydrovac, 72" van body, 12.5-yard debris body, 2150-gallon water tank, Robuschi blower. Loaded truck, AVAILABLE IN AUGUST. For more information:

Call 888-432-9070 or DO9 email info@usedvacuumtrucks.com www.usedvacuumtrucks.com

2009 Freightliner M2-112 T/A Hydrovac Truck: 700cfm vacuum pump, 740,000 BTU boiler, CAT 3560 triplex water pump, 12.5-cubic-yard debris tank, 1,627-gallon Imperial water tank. Insulated van body, 8" fully extendable boom, wireless remote control. ID# 13201. \$155,500. CAMEX Equipment 877-955-2770 (P09)

#### **VACUUM LOADERS**



Lease for \$3,500 per month for 60 months - New 2015 Peterbilt 348, automatic transmission, 350hp diesel, air-ride suspension. Brenner DOT 407/412 3,200-gallon carbon-steel tank. Moro PM110W 630cfm liquidcooled pump. Full-opening rear door with hoist. Loaded truck, (4) TRUCKS IN-STOCK.

Call 888-432-9070 or D09 email info@usedvacuumtrucks.com www.usedvacuumtrucks.com



Call 888-432-9070 or D09 email info@usedvacuumtrucks.com www.usedvacuumtrucks.com



Lease for \$3,250 per month for 60 months - New 2016 Peterbilt 348, automatic & 10-speed available. 350hp diesel, air-ride suspension, Imperial Industries DOT 407/412 3,200-gallon carbon-steel tank. Fruitland RCF500 320 fan-cooled pump, full-opening rear door with hoist. Loaded, (2) TRUCKS IN-STOCK.

Call 888-432-9070 or D09 email info@usedvacuumtrucks.com www.usedvacuumtrucks.com

2006 Kenworth T800 quad-axle cab & chassis with a 2001 Somerset 4,500 U.S. gallon, full-opening rear door, vacuum tank and Robushci Series 65 vacuum blower. (Stock# 8893C) www.VacuumSalesInc.com (888) VAC-UNIT (822-8648) (PBM)



**2014 Peterbilt 348:** 46k miles. 350hp Paccar PX9 engine, 10-speed transmission, aluminum wheels. CVS 4000 Liquid Ring Vacuum System: 2,390 cfm, 3,150- gallon, full open/full tilt. MUST MOVE.

> Global Vacuum Systems Call Ryan 936-825-2000 P09

1999 Sterling with a 3,200-gallon Cusco Master Vac high-dump unit. (Stock# 3378V) www.VacuumSalesInc.com (888) VAC-UNIT (822-8648) (PBM)

#### **VACUUM TRAILERS**



Lease for \$4,300 per month for 60 months - New ACRO DOT 412 6,600- gallon stainless steel vacuum tank. Self-contained vacuum system with Hibon VTB820 1,600cfm blower, tank hoist with full-opening rear door. (4) TRAILERS IN-STOCK.

Call 888-432-9070 or D09 email info@usedvacuumtrucks.com www.usedvacuumtrucks.com



Lease for \$1,800 per month for 60 months - New ACR0 2-compartment 9,000-gallon (6,000/3,000) aluminum vacuum tank. (2) TRAILERS IN-STOCK. Call 888-432-9070 or D09 email info@usedvacuumtrucks.com www.usedvacuumtrucks.com

Sell your equipment in DIG DIFFERENT classifieds! www.digdifferent.com/ classifieds/place\_ad

# Now Available with ROBUSCHI BLOWER!

35% air flow performance improvement
 QuietPak<sup>®</sup> Sound System for lower noise levels: less than 90dB(A)

# EARTH-NOOVING DERFORMANCE

avator

VACTOR®

No Hydro-Excavator keeps you moving like a Vactor HXX<sup>®</sup>.

VACUUM EXCANA

When you need earth-moving performance no matter how tough the conditions, try the vacuum excavator that started the trend. Built to keep working in extreme weather and the toughest soils, the Vactor HXX is backed by 24/7 responsiveness, and it doesn't stop until the job's done. Whether you're hydro-excavating or cleaning up drilling mud, the Vactor HXX is ready to move heaven and earth – or at least all the earth you need it to move.



Meet our rugged lineup of equipment for the gas and oil industry at **machinesthatwontquit.com**, or call to request a live demo: **815.672.3171 ×297**