

# Utility

## CONTRACTOR™

JULY/AUGUST 2017

# Learning on the Job

NUCA's 2016 Associate of the Year,  
Scott Knoblauch, Exemplifies the  
Association's Commitment to Education



# Everything you need. Plus equipment.

From safety/operator training and equipment management technologies, to custom solutions engineered to meet specialized job requirements, United Rentals offers much more than just the world's largest rental fleet. It takes a lot to get the job done right. **We're here to help.**

**UnitedRentals.com** | 800.UR.RENTS

© 2017 United Rentals, Inc.



# BUILT FOR FUEL ECONOMY.

- ~ 16% INCREASE IN ECONOMY
- 7% INCREASE IN WORK VOLUME
- THREE EFFICIENCY MODES

## MORE POWER. LESS FUEL.

With KOBELCO excavators, you get best-in-class fuel economy every time you fire up the engine – no matter how tough the job. With our latest Generation 10 machines, we're taking that efficiency to a whole new level. These new machines now boast up to a 7% increase in work volume per hour while also providing up to a 10% increase in fuel efficiency in S-mode and an additional 6% in ECO-mode. Put one to work on your next job and add some serious power to your bottom line.



S S-mode	E ECO-mode
 <b>10 %</b> Approximately increase	 <b>16 %</b> Approximately increase



MINI

SHORT RADIUS

CONVENTIONAL

KOBELCO-USA.COM

# KOBELCO

BUILT LIKE NO OTHER

## FEATURES

### 14 Learning on the Job

By Chris Crowell

NUCA's 2016 Associate of the Year exemplifies its commitment to education.



### 18 Safety First

Compiled by UC Staff

Recognizing NUCA's 2016 William H. Feather Safety Award winners.

### 36 Unique Implements

By Giles Lambertson

Attachment experts offer unique tools to diversify skid steer and track loader operations.

### 22 Time to Rent

By Giles Lambertson

What you need to know when renting trench safety equipment.

### 38 Help Wanted

By Bob Dunlevey

Tips for effectively hiring new employees.

### 26 Working in the Sun

By Cheryl Stratos

Raising skin cancer awareness in the construction industry.

## DEPARTMENTS

8 Groundbreaking News

50 The Pipeline

50 Advertisers' Index

### 30 Decisions, Decisions

By Allison McNeal

How to select the right crawler excavator for your needs.

## NUCA DEPARTMENTS

6 Chairwoman's Message

40 Top Jobs

42 Inside Washington

44 Safety Management

46 NUCA News

48 Calendar

### 32 Excavator Showcase

Compiled by UC Staff

Fourteen manufacturers showcase their latest models.

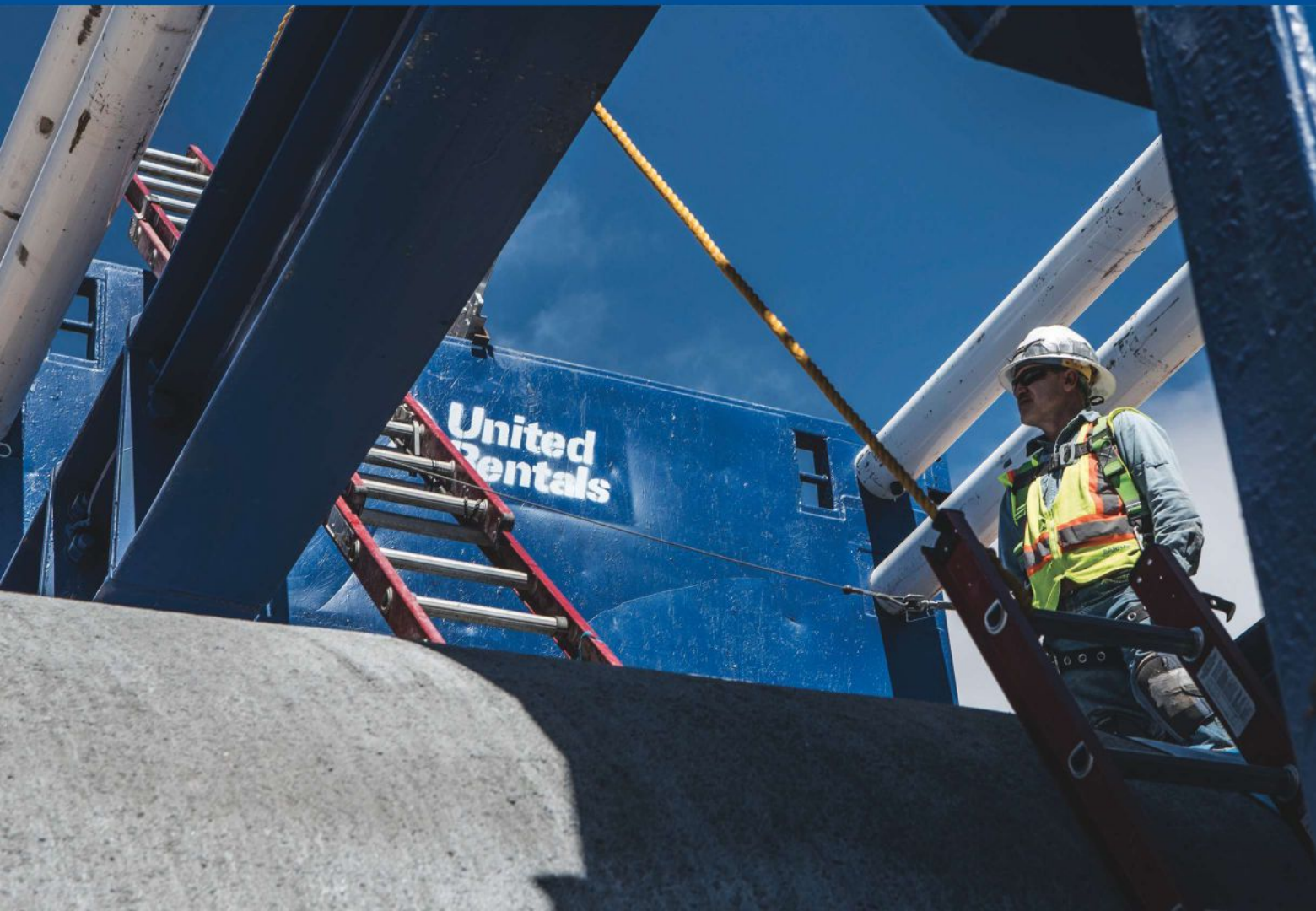


# Everything you need. Plus equipment.

From safety/operator training and equipment management technologies, to custom solutions engineered to meet specialized job requirements, United Rentals offers much more than just the world's largest rental fleet. It takes a lot to get the job done right. **We're here to help.**

**UnitedRentals.com** | 800.UR.RENTS

© 2017 United Rentals, Inc.



# NUCA CHAIRWOMAN'S MESSAGE

## Road Trip!

NUCA is truly a NATIONAL organization. We are all over the map!

First, I want to highlight NUCA's recent (and very successful) Trench Safety Stand Down. It went global! NUCA received a participation form from an Air Force Msgrt/Safety Manager at Bagram Air Field in Afghanistan. The civil engineering airmen teamed up with DOD's contractor personnel to hold a TSSD. Wow! Throughout TSSD week, I really enjoyed seeing the activity on NUCA's Facebook page and Twitter feed (#TSSD2017, #NUCAproud). From Florida to Virginia to Missouri to Colorado to Washington State, we had the nation covered.

Speaking of Washington state — the far-left side of the country (no political pun intended) — Puyallup, Wash., was the site of the wildly successful Dozer Days held in early June. *Utility Contractor* editor Pam Kleineke took her construction-loving son Carter to Dozer Days. Their experience is chronicled in Groundbreaking News starting on page 8. A big pat on the back to NUCA of Washington and NUCA's National Workforce Development Committee Chairman, Mark Scoccolo, key organizers and promoters of Dozer Days. Way to target that pre-K/Kinder-garten demographic! Get 'em while they're young!

If you head east from Puyallup/Seattle on I-90, travel through the Snoqualmie Pass and continue another 250 miles (according to TripAdvisor), you'll arrive in beautiful Coeur d'Alene, Idaho. This will be the site of NUCA's Fall Leadership Conference, Oct. 17-19, 2017. Registration is live, so go to [www.nuca.com/flc2017](http://www.nuca.com/flc2017) to register and book your room at this beautiful resort. Last one around Tubbs Hill Trail is a rotten egg.

Stock up on snacks in Coeur d'Alene because the next leg of the journey is 1,700 miles — to Peoria, Ill. Here's where we shouldn't always trust MapQuest. You'll head east through Big Sky Country, but the map app will tell you to head east through South Dakota. The discerning traveler will hang a right at Billings, Mont., then head south through Wyoming and Colorado, take a left at Denver, and get on Interstate 80. Why? So you can drive across NEBRASKA of course! Double check your calendar because if the Cornhuskers have a home football game, you should expect a traffic jam on I-80. If you need a break, leave I-80 at exit 440, and come for a visit. I'm 12 miles south on Hwy. 50 in Louisville, Neb. (pop. 1,200; zero traffic). Unless it's a football Saturday, in which case, you can find me at the Cornhuskers game. I'll be wearing red.

Stay on I-80 all the way to the Cedar Falls/Waterloo, Iowa, exit. If you're deadheading it, and it's still football Saturday, watch out for Cyclones and Hawkeyes. Hopefully they drive better than they play football (ooooooooohhh!). Take a right onto I-74 and head south to Peoria, the land of Caterpillar and home of NUCA's 2016 Associate Member of the Year Scott Knoblauch. I hope you called ahead because Knobby travels a lot! He may be in Haiti or Panama or some exotic locale. But if you're lucky, you may catch him in the office or at the farm. Check out his story on page 14. Congratulations Knobby!

The next leg of your trip is short by comparison, 169 miles and roughly 2.5 hours. You're headed south on I-55 to St. Louis, Mo., the Show Me state. SHOW ME THE SAFETY! NUCA's annual Safety Directors Forum is scheduled for November 1-2 in St. Louis. Visit [www.nuca.com/sdf2017](http://www.nuca.com/sdf2017) for more details. This is a must-go-to meeting for your safety managers and well worth your company's investment.

If you can't road trip, you can still toot your own horn! No matter where you are on the NUCA map, you can submit an application for NUCA's Top Jobs award. I have talked to enough of you to know that many of you are doing some difficult, innovative work. Take a few minutes to complete the application and get the national and regional recognition you deserve. NUCA will begin accepting applications on September 1 at [www.nuca.com/topjobs](http://www.nuca.com/topjobs). Don't pass up the opportunity to spread the word about the important, interesting and complex work you perform.

Life's a journey, enjoy the ride and always be #NUCAproud.



Kara Habrock  
NUCA Chairwoman of the Board  
L.G. Roloff Construction Co. Inc.  
[karah@rolloffinc.com](mailto:karah@rolloffinc.com) | Twitter: @KaraHabrock | LinkedIn: Kara Habrock



## NUCA OFFICERS

### Chairwoman of the Board

Kara Habrock — L.G. Roloff Construction, NE

### Chairman-Elect of the Board

Mark Fuglevand — Marshbank Construction, WA

### Vice Chairman of the Board

Dan Buckley — Anchor Construction Corp., DC

### Treasurer

Fred Chesney — Centerline Utilities Inc., FL

### Secretary

Kevin Cripps — Gen3 Energy Services LLC, NC

### Immediate Past Chairman of the Board

Jeff Rumer — Underground Infrastructure Technologies, CO

### Asst. Secretary and CEO

Bill Hillman — [bhillman@nuca.com](mailto:bhillman@nuca.com)

## NUCA BOARD OF DIRECTORS

### CONTRACTOR DIRECTORS

Lauren C. Atwell, FL

Shellie Berger, VA

Bill Bocchino, FL

Thomas Butler, FL

Jason Clark, IA

Scott Hattenberg, WA

Patrick Holmes, AZ

Ryan Kinning, NE

Alex Kocher, TX

David Lustig, CO

Tony Privitera, MO

Tom Quinnan, PA

Tony Raposo, RI

Clay Sorey, FL

David E. Stavens, CT

### NON-CONTRACTOR DIRECTORS

Fred Burlbaw, TX

Scott Knoblauch, IL

Gary Lawson, OK

### DIRECTORS-AT-LARGE

Tom Fieweger, PA

Tom Olson, MN

## NUCA STAFF

### Chief Executive Officer

Bill Hillman — [bhillman@nuca.com](mailto:bhillman@nuca.com)

### Chief Operating Officer

Chris Barrett — [chris@nuca.com](mailto:chris@nuca.com)

### Director of Communications

Anne Luzier — [anne@nuca.com](mailto:anne@nuca.com)

### Director of Marketing

Cheryl Stratos — [cheryl@nuca.com](mailto:cheryl@nuca.com)

## BENJAMIN MEDIA PUBLISHING TEAM

### Publisher

Robert D. Krzys — [robk@benjaminmedia.com](mailto:robk@benjaminmedia.com)

### Associate Publisher

Keith Gribbins — [kgribbins@benjaminmedia.com](mailto:kgribbins@benjaminmedia.com)  
Direct: 330.315.2197

### Managing Editor

Pam Kleineke — [pkleineke@benjaminmedia.com](mailto:pkleineke@benjaminmedia.com)  
Direct: 330.315.2198

### Graphic Designer

Sarah Haughawout — [shaughawout@benjaminmedia.com](mailto:shaughawout@benjaminmedia.com)

### Advertising Sales Manager

Ryan Sneltzer — [rsneltzer@benjaminmedia.com](mailto:rsneltzer@benjaminmedia.com)  
Direct: 330.315.2114

### Regional Sales Representative

Todd Miller — [tmiller@benjaminmedia.com](mailto:tmiller@benjaminmedia.com)  
Direct: 330.752.1915

July/August 2017 Volume 41, Number 7, *Utility Contractor* (ISSN 1098-0342) publishes 10 issues per year for the National Utility Contractors Association by Benjamin Media Inc., 10050 Brecksville Rd., Brecksville, OH 44141. Periodicals postage paid at Cleveland, OH and additional office. One year subscription rates: Complimentary in the USA & Canada and \$99 in foreign countries. Single copy rate: \$10.00. ©2017 NUCA. All rights reserved by the National Utility Contractors Association for articles contained herein except where otherwise noted. No part of this publication may be reproduced or transmitted by any means without written permission from the publisher. Printed in the U.S.A.

POSTMASTER: Send address changes to: *Utility Contractor* 10050 Brecksville Rd., Brecksville, OH 44141 U.S.A.

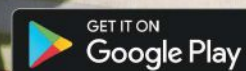
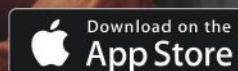
Canadian Subscriptions: Canada Post Agreement Number 40830553. Send change of address information and blocks of undeliverable copies to: KML Logistics Group Inc., 118 Herald Ave., Oakville, ON L6K 1S2 Canada

# SAFETY IS IN YOUR HANDS



## with the NTS Mobile App

- Complete, print, text, email and manage required OSHA daily excavation checklists
- Lookup, print, text and email manufacturer's tabulated data online
- Quick product reference tables with weights, depths and technical data
- OSHA sloping and benching charts
- Digital OSHA Excavation, Confined Space and Fall Protection Standards
- View Branch Locations, Installation Videos, Product Pictures, Open Training Classes and More



**NATIONAL  
TRENCH SAFETY**

"THE TRENCH & TRAFFIC SAFETY SPECIALISTS"

FOR MORE INFORMATION CALL  
**(888) 234-9244**

**WWW.NTSAFETY.COM**

WITH A NATIONWIDE BRANCH NETWORK, WE'RE WHERE YOU NEED US TO BE



There were more than 20 pieces of equipment for kids to test out, including a John Deere wheel loader, Wacker Neuson dumper and Bobcat mini excavator, to name a few.



Meet Carter. He's 5, a recent Pre-K graduate and the newest member of the UC team.



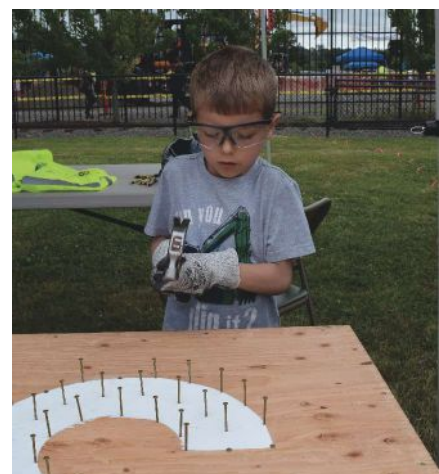
# Editor at Large: Taking the Wheel

We Head to Dozer Day Where Kids Get the Chance to Operate Equipment

By Pam Kleineke

**K**ids and construction. The love affair begins as soon as little ones are just tall enough to peek out the car window and see a mighty excavator along the highway. The machines are so big, dirty and loud — just up a youngster's alley. Aside from toys in the sandbox and dress up with a plastic hardhat and vest, construction seems a bit out of reach for kids. I mean, it's for grownups! Not anymore.





**TOP:** Mark Scoccolo, coordinator of Dozer Day Seattle, showed us around the exciting event that welcomed 10,000 kids over two days.

**RIGHT:** The machines were just half the fun. Dozer Day also featured plenty of engaging activities for little ones, including a playground of pipes, ziplining and a tire crawl (Carter's favorite).

Thanks to events like Touch-a-Truck, kids get to climb into the cabs of stationary machines, explore the controls and pretend to be in charge. Then there's Dozer Day, an event created by the Nutter Family Foundation, that puts children in the driver's seat by allowing them to sit with an experienced operator and operate the machine. Yes, you read that right; they actually get to operate! They get to roll over dirt piles, scoop up gravel and pose for about one million pictures for their parents. The event not only gets kids up close and personal with construction, but its proceeds also benefit local charities. It's a win-win.

So, when we heard NUCA of Washington was planning a Dozer Day event in Seattle, my five-year-old son Carter and I jumped on a plane and headed west. The two-day event held at the Washington State Fairgrounds June 3 and 4 welcomed 10,000 attendees and drew in nearly 100 sponsors. It was the perfect two days for a curious little boy to explore construction and get to drive the machines he's always admired from afar.

# JUST WHAT YOU NEED TO FIX YOUR WEIGHT PROBLEM.

VERMEER MEGA VAC BY McLAUGHLIN  
VXT SERIES

You got yourself the biggest, baddest hydrovac you could find. Then you realized you could barely put anything in the tank before it exceeded legal weight limits. Now you're dumping half-empty loads and your jobs are costing twice as much. We've got a better idea. Introducing the new Vermeer MEGA VAC™ by McLaughlin VXT Series of PTO-driven vacuum excavator trucks.

## ***Yeah, it's very productive.***

The heavy-duty, 6" suction hose (3,200 cfm) and 6-, 8- and 10-yard tanks on these PTO-driven vacs let you put more in the tank, before exceeding legal weight limits.

## ***Our scale hates citations.***

The unique Air-Weigh® scale provides clear visibility into the weight of each load. So your crew can hit the perfect-load sweet spot for maximum productivity with the least risk.

## ***We've got your back.***

Made in the USA; sold and serviced by a network of local Vermeer dealers with the parts, road service trucks and highly trained technicians to keep you running smoothly.

VACUUM EXCAVATORS | LOCATORS | HOLE HAMMERS | AUGER BORING | CORE SAWS



800.435.9340  
[mclaughlinunderground.com](http://mclaughlinunderground.com)



Built by

**McLAUGHLIN**  
Providing Solutions Since 1921

Vermeer and the Vermeer logo are trademarks of Vermeer Manufacturing in the U.S. and/or other countries. Air-Weigh is a registered trademark of Hi-Tech Transport Electronics, Inc. McLaughlin and the McLaughlin logo are trademarks of McLaughlin Group, Inc. © 2017 McLaughlin Group, Inc. All Rights Reserved.

“NUCA of Washington decided to sponsor the Dozer Day event as a way to encourage young children to consider the construction trades as a career path,” said Mark Scoccolo, manager at SCI Infrastructure and Dozer Day Seattle coordinator. “Most of them have never been exposed to anything the construction industry has to offer, and there are so many paths to take in the industry that the opportunities are just endless. I attended the Dozer Day event in Vancouver several years ago with my kids and they really enjoyed it. I witnessed the joy and wonderment in the faces of other kids who aren’t exposed to the construction industry. I said to myself, ‘We need to do this up in the Seattle area, and NUCA of Washington is the right vehicle to do it. What better way to get the industry united and working toward a great cause while benefitting it at the same time?’”

Once we arrived, Carter and I headed straight for the machines. There, Carter knocked out his machinery wish list: wheel loader, dumper, dozer (a crowd favorite), mini excavator, backhoe loader and, of course, the “big” excavator. His favorite? It was a tie between the backhoe loader and larger excavator. Admission included unlimited trips on the machines, so as long as kids were patient enough to wait, they were able to ride as many times as they’d like. Carter tested that out with multiple turns on the larger Komatsu excavator.

### More to Explore

The machines were just half the fun at Dozer Day. There were plenty of exhibitors on hand to explore and discover what roles they played in the industry. Not to mention, most of them passed out goodies and hardhat stickers (See Carter’s hat for proof. There’s 15 and counting). Activities were scattered throughout the grounds including multiple dirt piles and trucks, a playground of pipes, ziplining through a trench box and a giant tire crawl (Carter’s favorite). Case Construction Equipment even sponsored a visit by Blippi, a famous YouTube character whose educational videos focus on everything from construction equipment and animals to letters, numbers and shapes.

Between the machines and all the fun around, Dozer Day was the ultimate event to get kids excited about construction ... and parents a much-needed naptime afterward.

“I hope kids get excited about construction and infrastructure construction in particular,” said Scoccolo. “Computers will be tools in our work, but workers build our country, and a competent workforce is one thing you can’t outsource. Workers have to be at the worksite to perform the work. Many kids that attended this year’s Dozer Day event also attended it last year, and this year they brought their friends and family with them. That’s what we’re looking for, repeat customers that ulti-



Admission included unlimited trips on the machines, so Carter tested out his favorites — a larger Komatsu excavator and John Deere backhoe — more than once.

mately want to volunteer to work at the event. Some of them may even ask one of our sponsors about summer employment opportunities. The kids that show interest in the industry will be easy to spot.”

Carter’s response to the event? “I want to be a worker man.” (a.k.a. construction worker). Looks like Dozer Day’s mission was accomplished.

**Pam Kleineke** is managing editor of *Utility Contractor*.

JUNE 5TH, 11:08 A.M.

# A STAGGERING STATISTIC INSPIRES A LIFE-SAVING RULE

IN AN INSTANT,  
CALVIN BERGER SAW THE  
VALUE OF IN-CAB BEHAVIOR  
TRAINING FROM CNA

When a recent safety webinar revealed that 280,000 drivers are involved in serious accidents every year, Calvin Berger of Calberg Contracting took CNA's recommendation to heart, and posted placards restricting cell phone use in each of his company's vehicles. Now Calberg Contracting is filing fewer claims, and Calvin's enjoying a handsome bonus for worker safety and performance.

When you're looking for risk control programs that keep NUCA members dialed in to relevant industry trends ... we can show you more.®

To learn more about CNA's coverages and programs for utility contractors, contact your independent agent or visit [www.cna.com/nuca](http://www.cna.com/nuca).

**CNA**

**NUCA**  
REPRESENTING UTILITY & EXCAVATION CONTRACTORS

The examples provided in this material are for illustrative purposes only and any similarity to actual individuals, entities, places or situations is unintentional and purely coincidental. Please remember that only the relevant insurance policy can provide the actual terms, coverages, amounts, conditions and exclusions for an insured. All products and services may not be available in all states and may be subject to change without notice. "CNA" is a service mark registered by CNA Financial Corporation with the United States Patent and Trademark Office. Certain CNA Financial Corporation subsidiaries use the "CNA" service mark in connection with insurance underwriting and claims activities. Copyright © 2017 CNA. All rights reserved.



# Learning on the Job

## NUCA's 2016 Associate of the Year Exemplifies Its Commitment to Education

By Chris Crowell

**N**UCA's 2016 Associate of the Year, Scott Knoblauch, is an earth mover. He grew up riding tractors around his family's Illinois farm and moving dirt with several local private contractors. And even after 22 years at Caterpillar, he says "wheel tractor scrapers and track Type tractors" are still his favorite (though it was hard to choose).

"I grew up on these two machines and am still growing up with them today," he says. "A real close follow-up to these machines would have to be the ag tractors and towed scrapers since my job on our family farm is to help maintain all land improvements."

So, yes, Knoblauch is an earth mover, through and through. And about four years ago when his predecessor, Ric Neal, who represented Caterpillar with NUCA, took a position at Cat's Panama Demonstration and Learning Center, leaving the NUCA opportunity for Knoblauch, he welcomed it with open arms.

"I had discussed Ric's involvement with NUCA numerous times, and I knew this would be a huge opportunity for me to gain

valuable knowledge and learn from the best of the best of the nation's utility contractors, and that is exactly what has happened and continues to happen each and every time I attend a NUCA event."

So, joining NUCA would be a perfect fit, right?

"The utility sector has always captured my interest, and I have always been associated with the heavy and bulk earth moving portion of this industry where production and performance are very key items for success. But after joining NUCA, I quickly learned that underground utilities are not as much about production and performance as they are about precision and perfection," he says. "Really, to me, these are two totally different worlds."

### A Life of Learning

OK, so there was a learning curve, but that just made the opportunity even more intriguing as Knoblauch isn't one to turn down an educational experience.



Knoblauch (L) received the Associate of the Year award from Dan Buckley at the 2017 NUCA Convention in Las Vegas.



With a passion for NUCA's Government Relations Committee and the association's advocacy efforts, Knoblauch has been a fixture at the association's annual Washington Summit. Here, he's participating in a mock congressional meeting.

"I always look forward to attending all the various NUCA functions throughout the year just knowing that I will learn something extremely valuable from each and every one. I always take this information with me on my various travels throughout the Americas," Knoblauch says. "Understanding more about underground utilities helps me help others with planning projects not only with existing sites, but future earth-moving sites as well. Being nominated and serving on the NUCA Board of Directors has been near and dear to my heart, and helping serve this fantastic and most professional organization is an overwhelming experience."

While attending Illinois Central College in Peoria Ill., he won a National Ag Mechanics Contest in Spring 1981. Knoblauch then moved on to Illinois State University in Normal, Ill., and earned his bachelor's degree in agribusiness and ag mechanics with sub minors in soils, economics and law. He studied abroad in a post-graduate programs at the College Le Reflessoir in Bléré, France, and Auburn University in Toulouse, France, studying agriculture. Knoblauch then continued his education back in the United States with several classes at the University of Wisconsin Eau Claire and Purdue University in Lafayette, Ind., studying agronomy, plant science and soils.

In his professional career, Knoblauch started at Caterpillar as a test engineer, quickly moving to become a troubleshooting engineer covering a variety of prototype machines. Next came roles as a service training instructor for the Lexion Combines and Challenger Tractors, ag sales and marketing consultant and hauling unit systems. He entered into his current role in 2002 as the load and haul systems market professional and has since added the role of earth moving and compaction consultant to this title, covering North, South and Central America.

"In this position, I have had the luxury of visiting and working with many earth moving contractors to help bid, set up, implement and consult on jobsites throughout the Americas and worldwide. Today, I have the luxury of working with all industries including heavy construction, site prep, quarry and aggregates, road builders, power generation and underground utilities."

Outside of work, he remains passionate about agriculture. Knoblauch, his wife and children own and manage a beef cow/calf operation, and he remains an integral part in the central Illinois farm, partnering with his two older brothers in a LLC corporation raising corn and soybeans.



Knoblauch's always up for fun at NUCA events. Since taking the reins as the Caterpillar rep for NUCA, he's stepped into playing host for the convention's team building activity, sponsored by the company.

## People Business

As a Caterpillar representative on the NUCA Board of Directors, Knoblauch's voice carries a little extra weight beyond the organization's walls, which he has embraced as part of NUCA's lobbying efforts in Washington.

"I support this organization with all my heart because I believe the direction of NUCA's support for this great industry," he says. "We have accomplished a great deal of advocacy and lobbying in these past few years with our government addressing the many concerns this industry faces every day. These are huge wins for the utility sector. Laws are being changed because of the efforts from NUCA, and I am so proud to have been a part of this."

Knoblauch's other passion projects within NUCA are the Safety Committee and Government Relations Committee. Here again, Knoblauch thinks big strides have been made recently — such as NUCA's National Trench Safety Stand Down Initiative, as well as the critical issues with OSHA concerning its new crystalline silica dust proposed regulation. And he applauds NUCA's Damage Prevention and Claims Avoidance Program, which has saved members millions of dollars.

"Anytime I can help a customer prevent a bad situation or improve their efficiency — that's what drives me the most, and the NUCA organization has helped me arm myself with the knowledge, facts and figures needed to do so," he says.

But, as always, there is more to learn and more work to be done.

"Today, there is so much burden and risk on the utility contractor alone in the area of protection of utility locations," Knoblauch says. "Going forward, I do hope there is relief for utility construction contractors especially in this particular area as it really keeps them up at night."

"As far as my own career, I just hope that I can continue to learn and share what I learn with others every day. This in itself is a never-ending task and there is not a day that goes by that I don't try to accomplish this goal. Helping others meet their production goals, whatever they may be, and do this safely is what it's all about for me."

## Final Words of Wisdom

"My advice to anyone is to learn from your past experiences and, most importantly, share what you have learned with others," he says. "Don't ever give up on trying to solve problems or find the answers and prepare yourself every day to learn something new."

**Chris Crowell** is a contributing editor of *Utility Contractor*.

### America's Trench Box Builder™

Efficiency Production, Inc.



#### The Contractor's Choice for Trench Boxes and Slide Rail

- Largest selection of trench shielding and shoring, and PREMIER Slide Rail System
- Custom trench shields built to your specs
- Site-Specific Engineering
- Supported by Efficiency Production's **Special Operations Shoring Division**; the nation's most experienced team of Slide Rail experts and installers



**Steel Trench Box**



**Hydraulic Shores**



**Build-A-Box™**



**Aluminum Shield**



**Stone Mizer®**



**Slide Rail System**

**Toll Free for Factory-Direct Sales & Rentals or your local dealer**

**800-552-8800**



**www.usatrenchboxbuilder.com**





# Recognizing NUCA's 2016 William H. Feather Safety Award Winners

Compiled by UC Staff

**T**o recognize companies that strive for safety and the general well-being of their employees, NUCA awards companies with the William H. Feather Safety Award. Who is William H. Feather, you ask? He was the very first chairman of the Safety Committee and widely regarded as the backbone of NUCA's early safety initiatives. He was honored for his many contributions to the association in 1976 when he was named Ditchdigger of the Year, but his premature passing led NUCA to search for an additional way to commemorate his passion for safety. At NUCA's 1978 convention in New Orleans, a new award was created to recognize those contractors who exemplify Mr. Feather's commitment to a safe workplace.

The awards are given to companies based on incidence rate (OSHA 300 log), company safety statement and company safety program information. Participation in NUCA safety programs and activities is also taken into consideration. The 2016 William H. Feather Safety awards were given out at the NUCA Convention in Las Vegas this past March. Check out the recipients over the next two pages.

## Overall Winner

### Team Fishel

Lithonia, Ga.

Safety and teamwork go hand in hand at Team Fishel, as its No. 1 value is to be accident free. The company works toward its vision by empowering its entire workforce to make safe choices, to hold each other accountable for safe behavior and by recognizing and rewarding safe behavior. All of the teammates at Team Fishel are required to have at least 40 hours of job and safety training per year and communicate safety issues on a weekly basis.

## 500,001-1,000,000 Man Hours

### Brad Cole Construction

Carrollton, Ga.

The Carrollton, Ga.-based contractor places the highest value on the safety of its employees. The company says that it maintains a TARGET ZERO philosophy with a goal of zero accidents, injuries, job-related health issues and zero at-risk behaviors on every job. Brad Cole Construction's safety program involves active participation from everyone, including managers and supervisors, in identifying and eliminating hazards that may develop through the workday.

# it's a SNAP!

## SOIL PIPE CUTTERS

Still the fastest way to cut cast iron soil pipe, clay pipe, and small diameter concrete pipe by hand. Great for gray water applications, Reed SC49-6 has strong jaws and a durable adjusting screw. Its ratchet design makes it perfect for close quarters.

All models come standard with No-Hub® Roller Kit and a 1/2" ratchet wrench. Additional sizes available.

Pipe Capacity  
1½" - 6" (38-160mm)



SC49-6



PIPE TOOLS & VISES  
SINCE 1896

Reed Manufacturing Company  
Erie, PA 16502 USA  
ph: 800-666-3691 • 814-452-3691  
[www.reedmfgco.com](http://www.reedmfgco.com)

ultra  
**LIGHT**



Quick to Install.  
As light as 130 lbs.

ultra  
**VERSATILE**



Roll your own.  
Optional wheel kit.

ultra  
**SAFE**



Stacks easily with  
2' & 4' high panels.

This is What Aluminum Shoring Was Meant to Be!

# 1-800-SHORING

[www.shoring.com](http://www.shoring.com)

## ultraSHORE PRODUCTS

Phone (303) 287-2736  
Fax (303) 287-2950  
Web Site [www.shoring.com](http://www.shoring.com)



## 200,001-500,000 Man-Hours

### Pauley Construction

#### Phoenix

At Pauley Construction, employees automatically accept a moral obligation to see that operations under their care, custody and control are carried out in a safe and efficient manner. According to the company, each employee must not only prevent obvious unsafe acts, but anticipate potential hazards. Employees are also encouraged to demonstrate leadership ability by setting good examples for others. The company further emphasizes the importance of safety through training and retraining its Safety, Health and Environmental Program.

---

## 100,001-200,000 Man-Hours

### Bradshaw Construction Corp.

#### Eldersburg, Md.

For more than 30 years, Bradshaw Construction Corp. has strived for the highest levels of both quality and safety when completing projects. According to the company, its safety program was developed to ensure compliance with federal, state and local regulations with a particular emphasis on the OSHA Act of 1970. The 100,001-200,000 man-hour winner says, "Regard for the safety of the general public and our own employees is a responsibility of all levels of our organization. We intend to prevent any human suffering. Accidents, even minor ones, cause pain, both physical and mental. Prevention of injury and illness is a goal well worth achieving."

---

## 0-100,000 Man-Hours (Tie)

### Iowa Trenchless

#### Panora, Iowa

A multiple William H. Feather Award winner, Iowa Trenchless follows a simple and effective approach to safety: Think first, act second and always be prepared. This method allows the company to achieve its goal of completing the day with zero injuries.

### Midstate Site Development

#### Bloomfield, Conn.

Midstate Site Development upholds a strong culture and promotes safe practices through teamwork, organization and communication. The Bloomfield, Conn.-based company maintains a family-like environment where "Everyone looks out for each other."

## Honorable Mentions

Atlas Construction | West Lafayette, Ind.

Barnard Construction Co. Inc. | Bozeman, Mont.

B. Frank Joy LLC | Hyattsville, Md.

Fehlinger Construction Group | Shavertown, Pa.

MAC Construction & Excavating | New Albany, Ind.

Vogel Brothers Building Co. | Lakeland, Fla.



MARCH 6-9, 2018



## NUCA ANNUAL CONVENTION AND EXHIBIT

The NUCA Exhibits are back! This year's San Antonio Convention will include all the high-octane learning sessions members expect and an exhibit hall featuring the latest utility and excavation products and services contractors need to run their businesses efficiently and profitably.

They **Wyndham San Antonio Riverwalk**, our host hotel, is within steps of the countless restaurants, shops, and bars that line the river as it snakes through the city. Reserve your room at [nuca.com](http://nuca.com).

A tentative line up of this year's convention and exhibit is below:

- ◆ Cutting-Edge Technologies, Products, and Services
- ◆ Contractor Executive Roundtables
- ◆ Outrageous Team Building
- ◆ Economic Outlook with Industry Financial Expert
- ◆ Timely & Relevant Educational Seminars
- ◆ Fun-Filled Auction and Awards Gala
- ◆ Unique and Inspiring Keynote Speakers
- ◆ Many Opportunities to Network and Have Fun with Current and New Industry Colleagues and Friends

Please contact Cheryl Stratos, [cheryl@nuca.com](mailto:cheryl@nuca.com) for exhibitor information. For all other convention related information, please contact Julia Krstevski, [julia@nuca.com](mailto:julia@nuca.com) and watch our website for updates.

Visit [nuca.com](http://nuca.com) for complete details.





# Time to Rent



## What You Need to Know When Renting Trench Safety Equipment

By Giles Lambertson

**P**roductive. Safe. Economical. These are the reasons utility contractors regularly rent trench safety equipment rather than purchase it. While rental companies and manufacturer outlets are more than happy to provide the equipment, it is left to utility contractors to decide when, where and what to rent. Following are some considerations in making those decisions.

### Why Rent?

“There are several strong motivations for renting, but the No. 1 factor for many contractors is avoidance of the capital cost of owning the equipment,” says Rob Correll, northeast district sales manager for United Rentals Trench Safety. Also, stockpiling and moving the heavy, bulky equipment requires more contractor resources than some managers want to dedicate to the task.

Sometimes the decision to rent or buy is pegged to regional attitudes — or the weather. Mike Ross, shoring specialist at Efficiency Production, says in the South and West contractors tend to rent everything. “Whereas in the North, including here in Michigan, contractors have such a short working season, they tend to buy. They don’t want to have to compete for available rental equipment. They don’t want to have to wait on anybody. They own it so they can control it. These are just different ways at looking at the world.”

Plus, projects are getting bigger. “With the increasing complexity and scope of excavations today, large-scale site-specific equipment sometimes is employed that may cost in excess of \$1 million,” says Steve Barnhardt, vice president of corporate development at National Trench Safety. “For these contractors, it may be more cost-effective to rent the equipment to achieve the best fit for a project as opposed to undertaking a significant capital expenditure for equipment used infrequently.”

Frequency of use indeed has a bearing on the decision. “You can only justify owning a tool if it’s used repetitively,” says Ross. “A trench box is a good example. If a contractor doesn’t lay the same kind of pipe all the time or doesn’t have a contract to lay tens of thousands of feet of pipe, he probably should rent a box when he actually needs it.”

And what can a contractor expect to pay? That will vary, of course, from market to market and product to product. A trench shield 8 ft high and 24 ft in length might rent for \$1,500 a month, according to Ross, a small repair box for \$200 a day. This is pretty incidental overhead for a project budget of any appreciable size. “It is a fairly reasonable product,” Ross says.

### Where to Rent

Products and service vary, of course. “As in any industry, product quality varies from one manufacturer to another and expertise levels are not consistent among suppliers,” says United Rentals’ northeast district manager, Jim Courtier. The company’s mid-Atlantic district sales manager, Chris



Mike Ross, shoring specialist at Efficiency Production, recommends that renters take a close look at the equipment prior to signing a rental agreement.

Mautone, adds that with trench specialists in every office and in the field, United Rentals “can add value for the customer at every point of interaction.”

Barnhardt, however, believes brands of equipment don’t vary as much as some think. “Generally speaking, most rental companies carry quality products,” Barnhardt says. “This is one area where the North American Excavation Shoring Association has been working to standardize requirements for the benefit of the contractor.” He adds that little things can make a big difference. “If one trench shield can achieve a couple more feet of depth than a competitor’s, that could be a key differentiator to consider.”

In any event, by the time a rented safety system gets to a customer, it may no longer be top quality even though it looks good — power-washing does wonders. Ross encourages renters to take a close look. “Does it appear to have been maintained, or is it bent? If it looks like it has led a rough life, internal components may be damaged.”

Because life in the trenches indeed can be rough on a safety product, a contractor should know the people on the other side of the rental counter. “How knowledgeable is the guy you are talking to?” Ross asks. “Do you have an acceptable level of comfort with his knowledge and how conversant he is about

the equipment?” The answers to those questions should dictate where a contractor ends up renting.

Delivery? Most distributors offer boom-truck delivery of a rented system. A contractor who isn’t equipped to transport what is being rented should stipulate delivery going into a transaction.

### Who Can Rent

The certified “competent person” on a trench project need not be a contractor’s point man for a rental. However, the onus is on that person if the equipment is subsequently deployed in a manner inconsistent with OSHA utilization standards. Load calculations are clearly spelled out in data accompanying every rented system and it is not the responsibility of the rental house should a system be used unsafely.

Nor are soil analyses or bore hole tests required of a rental customer prior to renting. “It’s not uncommon for us to help plan an excavation without a hole open on site,” Carroll says. Indeed, rental outlets frequently get cold calls from contractors needing equipment and nothing is known about a project.

Besides, says Ross, “bore holes are only good where you dig them.” He notes that utility contractors working in Michigan, where glacial fill shaped much of the landscape, sometimes

come across peat moss and half-rotted trees 20 ft underground where the long-ago moving ice deposited the material. “Contractors never really know what they are in for when they start digging.”

And if a competent person wants a little more help as a project breaks ground, Barnhardt says experts can provide it. “For contractors who decide to buy a site specific plan, National Trench Safety engineers design a custom plan that aggregates the jobsite information supplied by the customer with technical product capabilities. The resulting plan bears the stamp of a professional engineer registered in the state where the project is occurring.”

## What to Rent

When he enters a rental house, a renter should have with him as much project information as possible to match safety equipment to a job. It begins with how deep an excavation is planned. “The first thing is depth,” Ross says. “That is going to confine your choices of system.” He notes that most utility work is in excavations 10 ft deep or shallower, judging from statistics showing that most cave-in fatalities occur in ditches of that depth. Soil condition is the next most salient factor. The takeaway for contractors: Know your project.

Which system is best suited to a job depends on all of the above as well as the type of equipment-moving machinery to be used and the character of the project. Production pipe-laying frequently utilizes trench shields, for example, and road plates. Slide rail systems typically are deployed when lift stations or tanks are being installed. Water main work generally employs a box system of some kind.

Ross estimates that 10 percent of contractors or fewer try to get by without using trench equipment, and that number is shrinking. He attributes the decline to a growing understanding of the overall value of the “safety” equipment. “We look at all of our equipment as a production tool first, with safety as a byproduct.”

Barnhardt calls noncompliant excavation “one of the biggest competitors for any rental company. But as experienced utility contractors know, soil is unpredictable and it’s never a good decision to assume something won’t happen to us.”

**Giles Lambertson** is a freelance writer for *Utility Contractor*.



If a competent person wants a little more help selecting a system as a project breaks ground, NTS’ Barnhardt says the company’s engineers can design a custom plan based on jobsite information.

**JOB ANALYSIS AND  
SAFETY MANAGEMENT  
SOFTWARE FOR  
CONSTRUCTION**



**HeavyJob +  
HCSS Safety**

**KEY BENEFITS**

- Capture accurate time cards, production quantities, meetings and photos in the field and send data to the office electronically.
- Know where you’re making and losing money while the job is still active to catch problems and make immediate, effective management decisions.
- Spot safety issues, trends, and leading indicators to drive strategic training and avoid costly incidents.
- Meet production goals by planning ahead.
- Streamline data entry, employee management, and payroll to improve efficiency and accuracy.
- Reduce paperwork between field and office to improve communication and record-keeping.
- Stay compliant with the latest safety regulations and put safety in the hands of crew leads.



**HCSS.COM | 1-800-683-3196**



# Working in the Sun

## Raising Skin Cancer Awareness in the Construction Industry

By Cheryl Stratos

If you work in construction, chances are you spend a lot of time outside. And if you are doing so without sun protection, melanoma cancer can be a very real consequence of spending all those hours and days under the blazing and dangerous sun.

Let me tell you — from someone who knows firsthand — melanoma cancer is something you want to avoid at all costs.

Did you know 1 in 40 Americans will be diagnosed with melanoma cancer this year? Those numbers increase if you are working in construction. I know in the field we tend to focus on our exposure to more immediate hazards, and we often ignore the risk of skin cancer as a work-related illness. In fact, every hour of every day, someone will die from the disease. Wearing sun protection could save your life. Australia understands this — if you were working in the field

in Australia, it would be mandatory to wear sun protection.

Construction employees, for the most part, are outdoor workers who are exposed to UV radiation both directly from the sun and indirectly as reflected from surrounding surfaces. Your workers are, therefore, potentially exposed to a great deal of UV radiation from the sun, even when working in the shade or under overhead protection. Workers should continue to wear sun protection (protective clothing and sunscreen) in the shade for maximum protection.

Melanoma does not discriminate by age, race or gender, and it is one cancer you can prevent. We see a majority of the people diagnosed with melanoma are white men over the age of 50. When I have given my skin cancer training presentation to contractors, on average, 1 out of 20 will stand up and say they have been affected by melanoma cancer.

UV Index	Description	Recommended Protection	Sunburn Time
0-2	No danger to the average person	Wearing a hat and/or sunglasses is sufficient.	1 hour+
3-5	Little risk of harm from unprotected sun exposure	Wear a hat and sunglasses. Use SPF 15+ sunscreen.	40 minutes
6-7	High risk of harm from unprotected sun exposure	Wear a hat and sunglasses. Use SPF 30+ sunscreen. Cover the body with clothing. Avoid the sun if possible.	30 minutes
8-10	Very high risk of harm from unprotected sun exposure	Wear a hat and sunglasses. Use SPF 30+ sunscreen. Cover the body with clothing. Avoid the sun if possible.	20 minutes
11+	Extreme risk of harm from unprotected sun exposure	Take all precautions possible. It's advised to stay indoors.	Less than 15 minutes

Construction workers are exposed to UV radiation both directly from the sun and indirectly as reflected from surrounding surfaces. It's important they take measures to limit their exposure and protect themselves when outside.

As far back as 1992, the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor wrote an interpretation to their Personal Protective Equipment Standard 1910.132(a) stating that employers have a duty to protect workers who are overexposed to solar radiation on the job and risk serious physical harm or death. State Courts and Workers' Compensation Boards have also become more conscious of work-related skin cancer over the past decade. In many states, compensation has been awarded to employees who have been diagnosed with skin cancer and have been able to prove that it was caused by work-related activities. This opens your companies to a huge risk.

### How Do You Protect Yourself?

The most effective way of reducing UV exposure is to use a combination of protection methods:

- Reorganizing work to avoid the UV peak of the day
- Providing natural or artificial shade
- Providing appropriate protective clothing
- Applying sunscreen

### Reorganizing Work

If it is possible, avoid workers being outside in the middle of the day for long periods. Understandably, when the heat of the day is between 10 a.m. and 4 p.m. and your primary job is working outside, this is not possible. But there is a solution: shade and protective clothing.

### Using Shade

In your case, you may be working near reflective surfaces with no natural shade. You can have a physical barrier to UV radiation by erecting temporary shade structures, such as:

- **Awnings:** generally made from closely woven fabric and that have a rating of UPF 50+.
- **Umbrellas:** provide strong protection due to dense weave and may be plastic coated (plastic is a strong absorber of UV radiation). Most material would be UPF 50+.
- **Structures Using Roofing Materials:** clear plastic or tinted plastic roofing materials that are UPF 50+. Structures using shade cloth likely have UPF ratings that may be low to moderate.

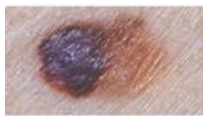
### Protective Clothing

The levels of UV protection provided by clothing increases with the density of the fabric's weave, and darker colors absorb more UV radiation than lighter color of the same fabric. Refer to the UPF rating, which should be on the label, and choose clothing with the highest rating. Close weave fabric with a UPF of 30+ or greater. Ideally sun protection clothing should consist of long sleeve shirts with a collar and long trouser pants.

### Hats

If hardhats are mandatory, various sun protection accessories are available for attaching to helmets, such as broad brims or Legionnaire covers with peak and flap at the back and sides. Otherwise, a hat with a broad brim (8 to 10 cm) made of canvas will help protect the face, ears, neck and eyes. Legionnaire style caps also provide excellent UV protection.

## The ABC's of Melanoma



**Asymmetrical** — The mole is not symmetrical; one half is different in shape from the other.



**Border** — The border is ragged or notched. Most normal moles have regular borders.



**Colors** — While most normal moles have just one color, melanomas often have two or more.



**Diameter** — The diameter of a melanoma is greater than most moles (1/4 in. or 6 mm).



**Elevation** — When touched, the melanoma will feel slightly raised above the skin.

## Sunglasses

Eyes are also susceptible to sun damage and need protection. Choose close-fitting, wraparound style sunglasses or sunglasses with side shields. Refer to the label and select sunglasses offering “UV protection.” For tasks where safety glasses are required, either tinted or clear safety glasses would provide adequate sun protection.

## Sunscreen

Never rely on sunscreen alone to protect against UV exposure. Sunscreen is not a “blockout” and it is still possible for some UV radiation to get through to cause skin damage. Workers should not forget to apply protection to lips using either SPF 30+ lip balm or zinc cream. People with a natural suntan also need to apply sunscreen. A tan does not provide any significant protection from UV exposure. Here’s how it works: If it takes 20 minutes for your unprotected skin to start turning red, using an SPF 15 sunscreen theoretically prevents reddening 15 times longer — about five hours. You need to reapply!

It is important that employers train employees to raise awareness of the risks associated with exposure to UV and the sun protection measures required. It is also important to ensure that employees adopt sun protection measures. Early detection is key to survival and a poster with skin cancer screening guidelines should be in your trailer.

Remember, melanoma is not just skin cancer. It can develop anywhere on the body — in your eyes, on your scalp, nails, feet and mouth. Mine developed in my lungs. You are probably wondering what to look for on your skin. Knowing the ABCs of melanoma is helpful and smart:

- Asymmetrical
- Border
- Color
- Diameter
- Elevation

I know this seems like a lot of information considering all the hazards associated with a jobsite, but this is a real hazard we are exposing ourselves to every day, that can kill any one of us.

There are organizations that have developed skin cancer awareness programs that focus on incidence, causes and risk factors as well as detection, prevention and treatment. Now is a good time to ensure that utility construction workers have the necessary information, knowledge and sun protection control measures needed to prevent them from getting skin cancer.

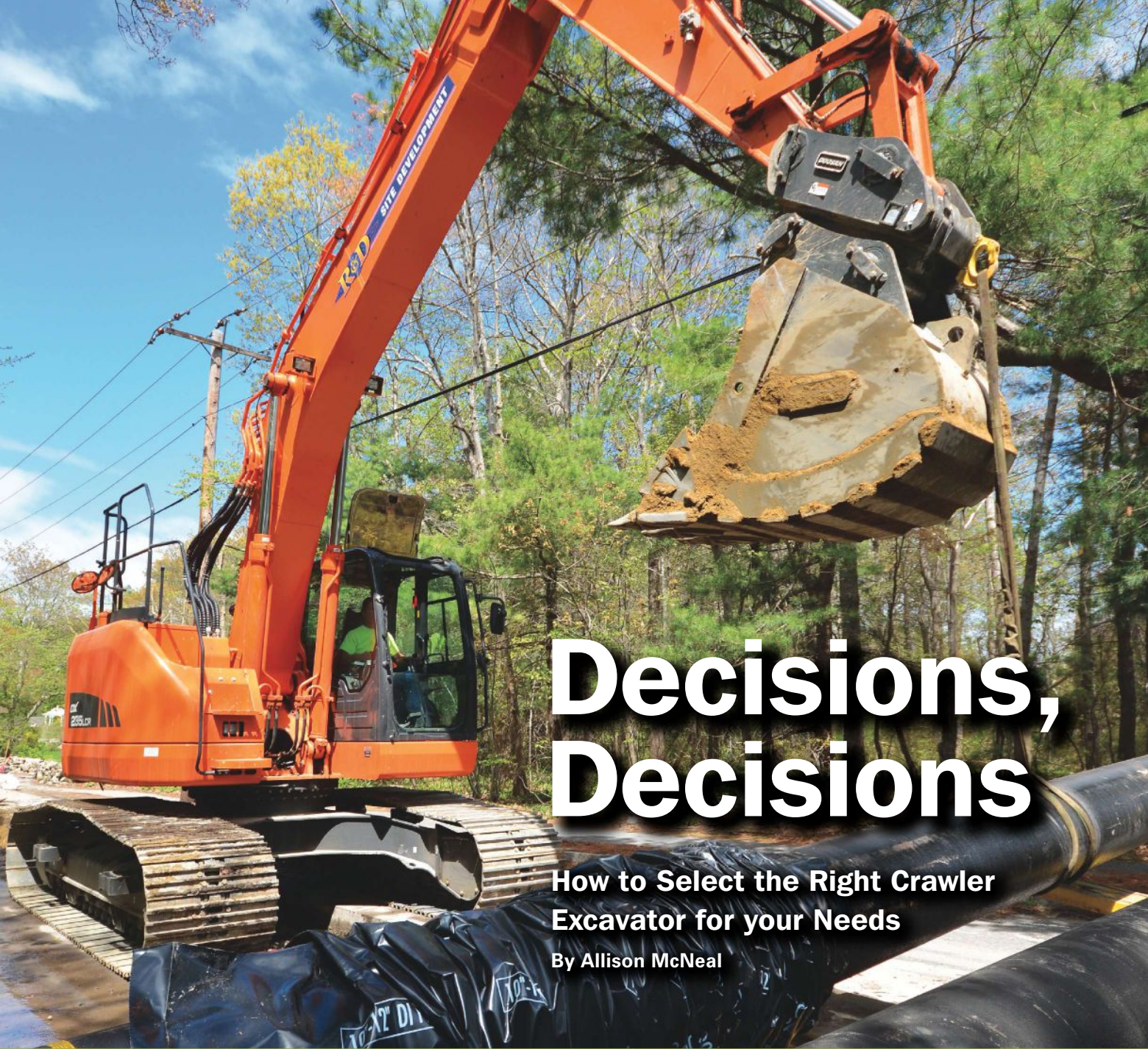
- Melanoma Research Foundation ([www.mrf.org](http://www.mrf.org))
- The Skin Cancer Foundation ([www.skincancer.org](http://www.skincancer.org))
- Center for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov))
- Laborers’ Health and Safety Fund of North America ([www.lhsfna.org](http://www.lhsfna.org))
- My website, Fighting Melanoma ([www.fightingmelanoma.com](http://www.fightingmelanoma.com))
- On Facebook, “Like” Fighting Melanoma
- On Twitter, “Follow” Fighting Melanoma

Melanoma is one of the fastest growing cancers in the United States and worldwide. Remember me when you are trying to run through the facts for your crew on sun protection. Take a few minutes to apply your SPF and wear sun protective clothing when you are out in the field. These things are just as important as wearing a hardhat as part of your daily protection — it, too, could save your life.

**Cheryl Stratos** is marketing and sales director at NUCA. To listen to her webinar, “Skin Cancer Awareness for Construction,” go to [www.nuca.com](http://www.nuca.com).

# Most Common Forms of Skin Cancer

- **Basal cell carcinoma** — the least serious form of skin cancer. Appears as a red lump or scaly area. Usually found on the head, neck and upper body.
- **Squamous cell carcinoma** — appears as a thick, scaly red spot that may bleed, crust or ulcerate. Occurs on most exposed areas of the body. Can spread to other parts of the body.
- **Melanoma** — appears anywhere on the body as a flat spot with a mix of color and an uneven, smudgy outline. Changes color, size or shape. Can spread to other parts of the body.
- **Nodular melanoma** — raised, firm and dome shaped pimple-sized melanoma that is red, pink, brown or black. Develops quickly and spreads to other parts of the body.
- **Ocular melanoma** — also known as uveal melanoma is a rare form of melanoma that occurs in the eye.
- **Acral melanoma** — only accounts for about 5 percent of all diagnosed melanomas, but it makes up about 50 percent of diagnosed melanomas in Asians and individuals with dark skin. These melanomas usually appear on the palms of the hands, the soles of the feet or underneath the fingernails and toenails.



# Decisions, Decisions

## How to Select the Right Crawler Excavator for your Needs

By Allison McNeal

**A**s a contractor, you likely depend on durable crawler excavators, along with attachments, to complete trenching and backfilling for a variety of wet and dry utility applications. Whether you subcontract your services or specialize in a particular segment, you know your work could not be completed without these machines.

There are several factors that can influence your success in wet utilities — sewer, water and storm drainage systems — and dry utility applications; however, the most crucial aspect is selecting the proper excavator for the job at hand. In addition to general machine features — such as size, tail-swing type, lifting abilities and dig depth — you should evaluate attachment capabilities, technologies, maintenance, safety features and ease of transportation before purchasing a new model.

By following these six tips from Shane Reardon, Doosan excavator product specialist, you can better utilize these versatile machines, bid on jobs more accurately and work on a variety of utility projects simultaneously.

### **Tip No. 1 — Match the machine to the jobsite.**

The single most important factor before selecting an excavator is to match the machine to the type of work at hand.

“If contractors are primarily digging and backfilling trenches in a confined area, a reduced-tail swing model would be ideal,” Reardon says. “However, if they are installing water or sewer utilities on a large tract of land, utility contractors would be more likely to use a conventional tail swing excavator.”

In addition to understanding what tail swing configuration is best for the application, you should review a machine's core specifications and determine if it is configured to meet your expectations. Core excavator specifications that should be taken into consideration include:

1. Engine horsepower
2. Operating weight
3. Arm breakout force
4. Hydraulic flow
5. Maximum digging depth
6. Maximum reach at ground level
7. Maximum dump height

Compared to other trenching equipment, such as tractor-loader backhoes, crawler excavators are designed to be effective in a variety of site conditions, can significantly reduce the cost of ownership and increase attachment versatility.

### **Tip No. 2 — Consider jobsite versatility.**

Selecting a crawler excavator that can be versatile in a number of environments is another factor to consider. Many times, a crawler excavator is paired with an articulated dump truck (ADT) or wheel loader on a jobsite to help transport material, so it is important that the machines are a good working match.

A crawler excavator can use multiple ground-engaging attachments to reduce the amount of equipment needed on a jobsite. According to Reardon, investing in a quality attachment connection system, such as a quick coupler, can expand your attachment versatility and produce higher utilization rates.

"Depending on the ground conditions and density of the material, a utility contractor may need a ditching bucket at one location, a trenching bucket at another or an angle tilt bucket at the next," he says. "Quick couplers make it that much easier and faster to change buckets and other attachments while on the jobsite."

Contractors are also more likely to use the right-sized bucket if they can quickly switch between buckets to best match the trench width.

If you think of an excavator only performing heavy digging tasks, you may be missing an opportunity to fit it

with attachments such as a clamp, also known as a thumb, to hold material secure to the bucket. Choosing a crawler excavator that is equipped with one-way or two-way hydraulics can also help expand your excavator's versatility. This includes the use of hydraulic-powered attachments such as hydraulic breakers or plate compactors. In addition, utility contractors may use an excavator to lift, carry and place pipe, using a bucket's lift eye.

Operators should always refer to the excavator's load chart to understand the machine's capability for over-end and over-side lifting needs.

### **Tip No. 3 — Look for smart efficiencies.**

Many manufacturers are improving the optimization between the engine and hydraulic system for greater work group efficiencies and improved fuel economy. Smart Power Control is a selectable feature that consists of two systems — Variable Speed Control and Pump Torque Control — that work together to improve machine efficiency while maintaining productivity and improving fuel efficiency by up to 3 to 7 percent.

Consider fuel-saving features before purchasing a new excavator. Fuel usage varies by engine manufacturer, and some manufacturers offer auto-shutdown and auto-idle features to help save fuel during non-working conditions.

"Sometimes in utility applications, there will be a co-worker outside trying to communicate to the operator in the machine," Reardon says. "Something as simple as the auto-idle feature helps save fuel and reduces sound levels by idling the engine after a brief period of inactivity."

### **Tip No. 4 — Evaluate the machine's ease of routine maintenance.**

Convenient service checkpoints, quality components and extended service intervals help utility contractors keep maintenance costs low and daily production schedules moving as well as budget for ongoing maintenance. Once you purchase an excavator, Reardon recommends to follow a regular maintenance schedule based on the manufacturer's guidelines, which can be found in

the Operation & Maintenance Manual.

Contractors should complete a daily walkaround, checking for obvious machine damage and wear on the tracks. They should also inspect fluids, oils and filters, as listed in their manufacturer's Operation & Maintenance Manual, and as directed on machine decals.

Unplanned maintenance can result in a loss of production, create higher costs for parts and increase service time. By working with a reliable dealership and following a planned maintenance (PM) contract, contractors can make sure their machine gets serviced on time.

### **Tip No. 5 — Assess safety features.**

Crawler excavators used in utility applications typically work in congested jobsites, so the excavator should be equipped with safety features such as rearview and optional side view cameras, and operators should have good visibility outside of the cab. Machine lighting is also important for contractors who work early in the morning and continue late into the evening. Before exiting the machine, operators should lower the bucket or other attachment mounted to the excavator to the ground when they are finished with their task.

In addition to safety features, contractors should also make sure their operators are properly trained on how to safely operate their crawler excavator as listed in the Operation & Maintenance Manual. Also available are excavator safety training manuals, available online through the Association of Equipment Manufacturers (AEM) at [www.aem.org](http://www.aem.org).

### **Tip No. 6 — Determine the machine's ease of transportation.**

In some applications, machines will need to move from site to site fairly frequently. If you anticipate the excavator will need frequent transport, accurate cost estimates should be included in your purchasing evaluation. According to Reardon, contractors need to determine whether a trailer needs to be upsized or downsized to match the machine, or if there are costly travel permits required for heavier excavators.

**Allison McNeal** is a technical writer for Two Rivers Marketing.

# Excavator

## **Bobcat** NUCA MEMBER

With 8,069 ft-lbs of arm force and increased bucket force, the Bobcat E85 compact excavator provides exceptional productivity when excavating or trenching. Additionally, it has an impressive 14,509 ft-lbs of breakout force — an 18 percent increase over its predecessor for class-leading productivity, and has a dig depth of 15 ft, 6 in. For improved uptime protection, the E85 has boom cylinder guards protecting the boom cylinder when the excavator is digging. Integrated into the undercarriage are four convenient tie-down points to simplify trailer loading for transport. For more information, visit [www.bobcat.com](http://www.bobcat.com).



## **Case** NUCA BRONZE PARTNER

The Case CX210D weighs in at 48,973 lbs and is rated at 160 hp. With a bucket digging force of 34,621 lbs, maximum dig depth of 21 ft and a drawbar pull of 42,264 lbs, the CX210D is ideal for utility construction applications. The CX210D provides improved performance and productivity over its predecessors with faster cycle times, higher breakout forces, improved responsiveness and multifunctional control, and greater fuel efficiency. The arm and boom of the CX210D have been built stronger for greater durability and to support the added power of the machine. The CX210D also meets Tier 4 Final emissions standards with minimal maintenance — there is no diesel particulate filter (DPF), no DPF regeneration or associated lifetime service costs. For more information, visit [www.casece.com](http://www.casece.com).



## **Caterpillar** NUCA GOLD PARTNER

The Cat M315F and M317F compact radius wheeled excavators are additions to the recently launched Cat F Series wheeled excavator range, reflecting the same customer focused design concept of their conventional radius counterparts, but providing customers the added choice of compactness. The new models make no compromise in power, performance or stability compared with their non-compact counterparts, and feature large working envelopes, high breakout forces and high lifting capacities. The new compact radius models offer a wide range of configurations, including undercarriage options and stick lengths. Wide steering angles and optimum turning radius facilitate maneuvering and simplify repositioning the machine. Available joystick steering further eases maneuvering, allowing operators to keep both hands on the joysticks and continue working, even when moving the machine. For more information, visit [www.cat.com](http://www.cat.com).



# Showcase



## **Doosan** NUCA SUSTAINING PARTNER

The 312-hp DX350LC-5 crawler excavator features D-ECOPOWER, optimizing hydraulic system output with engine horsepower. D-ECOPOWER improves machine efficiency, productivity and fuel consumption, while refining machine control and enhancing operator comfort. A pressure-controlled pump, closed center main control valve and various sensors in the excavator electronically detect and control the precise amount of hydraulic oil required to perform a task. In addition, DX350LC-5 operators can choose from four power modes for more control to better balance fuel consumption and machine power to the working conditions. For more information, visit [www.doosanequipment.com](http://www.doosanequipment.com).

## **Hitachi**

Hitachi Construction Machinery – Americas recently introduced a key upgrade to its ZX60USB-5 compact excavator model — a new canopy option. This provides a cost-effective alternative to the cab and lets customers take advantage of lower ownership and operating costs. The ZX60USB-5 is Hitachi's largest compact excavator model, bridging the gap between the ZX50U-5 compact and the ZX75US-5 mid-sized excavators. It features a fuel-efficient and reliable engine that meets emission standards and numerous enhancements that make maintenance simpler, such as improved access to coolers. When the new option on the ZX60USB-5 becomes available in October, all of Hitachi's compact excavators will have a canopy option. For more information, visit [www.hitachiconstruction.com](http://www.hitachiconstruction.com).



## **Hyundai**

The R35Z-9A zero tail swing excavator from Hyundai Construction Equipment Americas is one of seven Tier 4 Final-compliant series 9A compact excavator models. As a 3-1/2-ton machine, the R35Z-9A fits into the fastest growing segment of the compact excavator market, and one of the most popular size classes among utility contractors. The Hyundai R35Z-9A excavator is powered by a Yanmar engine delivering 23.7 hp. Its maximum digging depth is 10 ft, 3 in., and its maximum reach at ground level is 17 ft, 1 in. Bucket breakout force is 6,900 lbf. In its standard configuration with a canopy, the R35Z-9A has an operating weight of 7,800 lbs. When specified with an optional cab, the machine's operating weight is 8,470 lbs. For more information, visit [www.hceamericas.com](http://www.hceamericas.com).

## JCB NUCA MEMBER

The JCB Hydradig is designed for ultimate visibility, stability, maneuverability and serviceability. Based on JCB's Loadall telescopic handler concept, the Hydradig's all-wheel drive, four-wheel steer chassis makes it simple to maneuver the machine in congested urban areas. Near 50-50 weight distribution between the axles and a longer wheelbase provides a smoother ride with better handling. A low center of gravity allows for stable lifting and excellent travel speeds of up to 25 mph between jobsites. Powered by a side-mounted, 108-hp, Tier-4-Final JCB EcoMAX diesel engine, the Hydradig can utilize a monoboom or triple-articulating TAB boom with three dipper lengths to suit a wide range of applications. Maintenance is easier thanks to ground-level service points, and all dig-end points are equipped with impregnated bushes. For more information, visit [www.jcb.com](http://www.jcb.com).



## John Deere NUCA GOLD PARTNER

The John Deere excavator lineup continues its transformation with the updating of the 135G and 245G LC reduced tail swing excavators. Built with the same toughness as their larger production-class counterparts, these machines deliver the productivity, uptime and low daily operating costs customers know and trust with the John Deere G-Series. Whether up against a wall or between a rock and a hard place, the 135G and 245G LC excavators can easily maneuver through any project, from urban renewal to street repair to underground utility construction. Equipped with durable EPA Tier 4 Final/EU Stage IV diesel engines, the excavators meet rigid emission regulations, so operators can tackle any project without compromising power, reliability or ease of operation. The 135G boasts 101 hp, while the 245G LC nets out at 159 hp. For more information, visit [www.deere.com](http://www.deere.com).

## Kobelco

The Kobelco SK300LC-10 establishes new standards in value, productivity and durability. This robust 68,100-lb model is powered by a 252-hp Tier 4 Final HINO engine, enabling it to easily tackle heavy-duty applications and remain powerful and fuel-efficient. The Kobelco SK300LC-10 delivers a dynamic bucket digging force of 37,300-lbf to achieve leading-class work volume — even while minimizing fuel consumption. And, a new travel motor increases traction force by ~10 percent, enabling the SK300LC-10 to deliver a powerful drawbar pulling force without sacrificing travel speed. A higher boom foot cross-section, thicker arm-foot base plate and stronger foot bases are provided for added reinforcement. Additionally, a redesigned boss shape and boom foot improve overall stability while evenly distributing digging forces for optimum durability. For more information, visit [www.kobelco-usa.com](http://www.kobelco-usa.com).



## Komatsu NUCA SILVER PARTNER

The versatile Komatsu PC88MR-10 bridges the gap between compact- and construction-sized excavators. Tier-4 Final certified, it requires no diesel particulate filter and uses no diesel exhaust fluid. The engine also features a Komatsu Diesel Oxidation Catalyst (KDOC), for an efficient and clean engine that lowers fuel consumption with no loss of performance. The PC88MR-10's standard swing boom enables operators to work in confined spaces, closer to walls and foundations, while maintaining its high-lift capacity and stability. The excavator also comes standard with proportional joysticks, a bucket thumb-mounting bracket and auxiliary piping for attachments that allow for single and bi-directional flow. Piping return filters protect the hydraulic system from work tool failures. The excavator features a 7-ft, 7-in. standard blade, with power-angle blade and wide-blade options available. For more information, visit [www.komatsuamerica.com](http://www.komatsuamerica.com).

## Kubota

Kubota's flagship 8-ton power utility excavator, the KX080-4S, combines performance with superior digging force. A remarkable bucket breakout force of 14,660 lbs ensures high productivity in even the toughest applications, while an advanced load-sensing hydraulic system provides optimum oil flow to each cylinder, making operation under any load easy and smooth. A modern digital panel provides stored oil-flow settings for quick retrieval from one job to another, plus a roomy cabin features an air conditioner, two-pattern selection system, two-speed travel switch, deluxe suspension seat and retractable seatbelt. The environmentally friendly KX080-4s now has a new ECO E Plus setting. When the new ECO E Plus mode is activated, engine rpm is lowered and operators benefit from 16 percent fuel savings. For more information, visit [www.kubota.com](http://www.kubota.com).



## Sany

The Sany SY265C excavator is in the 24- to 28-metric-ton size class and will be released to the North American market in the fourth quarter of 2017. It's equipped with a powerful Cummins Tier 4 Final engine, which does not require a diesel particulate filter and provides improved fuel economy. The positive flow hydraulic control system is supported by a top-quality Kawasaki main pump and main valve. The main pump provides faster cycle times and greater flow for attachments. Auxiliary hydraulics with flow adjustment on the display and proportional control on joysticks are standard. The machine is outfitted with the SanyLive GPS system to allow fleet managers to monitor machines and proactively react to the needs of the equipment. For more information, visit [www.sanyamerica.com](http://www.sanyamerica.com).

## Takeuchi

The TB2150 is the largest, most capable excavator in the Takeuchi lineup. At 34,480 lbs, the machine delivers greater functionality, performance, comfort and serviceability than the previous TB1140 SERIES 2 model. The TB2150 offers a maximum digging depth of 18 ft, maximum dump height of 20 ft, 4.9 in., maximum reach of 28 ft, 8.9 in. and maximum bucket breakout force of 22,190 lbs. Powered by a Deutz TCD 3.6-liter turbocharged diesel engine that is Tier 4 Final emissions compliant, the TB2150 produces 114 hp. It also delivers 339 ft-lbs of torque. A spacious cabin features a heated, deluxe, high-back air-suspension-seat, and the new color multi-information display keeps the operator informed of machine performance. For more information, visit [www.takeuchi-us.com](http://www.takeuchi-us.com).



## Volvo

The latest in the expanding line of Volvo excavators is the EW60E, a wheeled model designed for operator comfort with surprising power for its compact size. The machine's compact design, long arm, optional fixed boom and offset boom, long dozer blade, auxiliary hydraulic and thumb pipings make it suitable for a wide range of jobs and applications. The EW60E has a 10 percent larger cab than predecessor models, reduced noise and upgraded air conditioning for optimal airflow. Visibility has been improved with thinner pillars, while a rear-view camera and 7-in. color LCD display help eliminate blind spots in confined working areas. Grouped controls are available on the right-hand side, and the control system offers operators the chance to pre-set functions for convenience. For more information, visit [www.volvoce.com](http://www.volvoce.com).



# Unique Implements

Attachment Experts Offer Unique Tools to Diversify Skid Steer and Track Loader Operations

By Giles Lambertson



Bobcat's latest attachment innovation is the fully integrated Trimble 3D system for grading. Precision leveling that once required a full-size grader now can be accomplished by a skid steer or track loader.

**T**he skid steer/track loader revolution has reached its evolution stage. The industry-transforming machine has become a staple in everyone's fleet, with only refinements now separating one generation of skid steer from another. Where the revolution still is playing out is in attachments. A quick aside: Is there a chance the skid steer or track loader will become a specialty machine over time, being called upon for just one or two tasks it handles particularly well? Not even a

small chance, say OEMs.

"You will continue to see what you have seen in the past," says Tyler Zima, attachments product specialist at Bobcat, where the skid steer was born. "It is so versatile. One machine doing many jobs — moving pallets, digging post holes, blowing snow — whatever. One machine."

"What makes them great machines," says Brent Coffey, Wacker Neuson's product manager for loaders, "is that they

can spin on a dime and operate in not a tremendous amount of space.” And the skid steer loader’s capability has been enhanced with the addition of dedicated tracks (as in a compact track loader) that spread the ground pressure in soft soil conditions and add stability, traction and pushing power. More to the point, the now-standard quick-attach system that can turn a skid steer pallet-mover into a skid steer auger machine also works on track loaders.

The ISO-standard attachment system features a flat plate on the front of a skid steer. An operator slips the protruding upper lip of the plate under a corresponding overhang on an attachment. Then the plate is hydraulically rolled back, which brings the bottom part of the attachment into firm contact with the plate. Two pins drop into slots at the bottom of the attachment and — voila! — machine and attachment are joined.

Even better, the pins can be hydraulically pushed into place through separate hoses dedicated to that function, which means an operator need not leave his seat to fasten a tool in place. Reversing the procedure detaches the tool. The non-engineering term for the whole process is pretty slick. No wonder hydraulic attachment systems are becoming de rigueur.

Some decades-old skid steers still trundling around jobsites may not have the universal attachment plates, but those machines are disappearing. And it’s true a few attachments — such as Bobcat’s forestry cutter — fit only one brand of skid steer for proprietary or safety reasons. But generally speaking, attachments today are universal ... and their variety continues to grow.

Commonplace are forks, buckets, blades and augers, but manufacturers also are building a lot of interesting grapples, a variety of long-tonged tools for scooping up or grabbing logs or concrete rubbish or landscaping rocks. Zima says grapples are “very, very popular,” whereas Coffey calls Wacker Neuson grapples “very, very, very popular.” In short, compact equipment operators like these devices.

One new attachment is coming out of southwest Minnesota where HitchDoc, a manufacturer of consumer and industrial products, builds three models of a skid steer snow blower. The company now is launching a skid steer push-off bucket — that is, a bucket with a rear plate that ejects material incrementally. The bucket is offered in three sizes, is self-cleaning and features a cycle time of less than two seconds. The company publicist believes the engineering will “blow people out of the water.”

“We think it will innovate a lot of different industries,” says Chad Mohns, HitchDoc vice president, who credits his grandfather with inventing the device. The original model was sold to the Owatonna Mfg. Co. Years later, after the bucket went out of production and royalties from his invention dried up, his grandfather strolled into the family-owned business place and suggested HitchDoc resurrect the idea. So, the firm built one or two of the buckets for its own use, eventually wearing out the devices.

“It always had been in the back of mind to bring the push-off bucket back to the market,” Mohns says. He and company colleagues built a prototype last year and introduced it at World of Concrete 2017. Mohns says visitors to the HitchDoc booth were “excited” by it. The new-model bucket was launched in March.

Not new but still unusual is the hydraulic boring attachment marketed by McLaughlin, the underground tool specialist. Two models are designed for mounting on skid steers. One utilizes a bracket welded on one side of a loader bucket with the hydraulic boring motor attached to the bracket with a pin connector. On the second model, the boring motor is mounted directly to a skid steer quick-attach plate. The welded-bracket-on-a-bucket configuration is the more popular, according to Philip Heath, a regional sales manager for McLaughlin. Skid steers must have a 9-gpm hydraulic fluid flow rate at 2,000 psi to lift and operate the boring attachments. “None of the skid steers have a problem with it,” says Heath.

In addition, the company makes a small M5000 hydraulic machine that works from a pit like larger boring machines, but it can be powered by the auxiliary hydraulics of most skid steers/track loaders. All of these burrowing devices are popular with municipal gas and water departments and contractors tunneling beneath driveways and roadways.

The fine folks out of Vacuworx (Tulsa, Okla.) offer the uniquely cool CM 3 Compact Modular Vacuum Lifting System. It’s the first vacuum lifting solution attachment of its kind, and the patent-pending CM 3 enables skid steers and track loaders to lift concrete slabs, steel plates and pipe up to 6,600 lbs. Operated hydraulically, the CM 3 can accommodate single or double pad configurations for a variety of material weights and sizes.

Bobcat is not coming out with anything “real crazy,” says Zima. Its latest innovation among its 84 attachments is the fully integrated Trimble 3D system for grading, a tool introduced a year ago. Small site leveling that once required a full-size grader now can be accomplished by a skid steer. “People increasingly are going to 3D, and it’s nice to be the first one to market.”

Some attachments are popular but only in isolated markets, such as sod-layers for landscaping and silt-rollers for worksite erosion control. And not every tool fabricated for market is a hit. Misses include a rebar bender that Bobcat once offered. Production has been canceled. Then there is the backhoe. Industry-wide, backhoe attachment sales have been declining more or less in direct proportion to the rise in sales of mini excavators. “It is a dying attachment,” Zima concedes. “The mini excavator is completely killing the need for a backhoe.”

**Giles Lambertson** is a freelance writer for *Utility Contractor*.



Dig this awesome skid steer push-off bucket — a rear plate ejects material incrementally. The bucket is offered in three sizes, is self-cleaning and features a cycle time of less than two seconds.



# Help Wanted

## Tips for Effectively Hiring New Employees

By Bob Dunlevey

**E**mployers really are struggling for ways to more effectively search for and hire new employees. The challenge is being made more difficult by the ever-increasing legal restrictions placed on what the employer can say and do during the hiring process. For example, Massachusetts, New York City and Philadelphia recently enacted legislation prohibiting inquiries about an applicant's prior wage history — a common question.

Employers want to get as much information about a candidate as possible, but state and federal discrimination agencies are trying to severely limit the information collected. This is why 46 percent of all new employees don't work out — ineffective and inefficient hiring processes coupled with a lack of quality information about the candidate. So, enhance your hiring process by at least doing the following:

- Determine the company's actual needs;
- Create a comprehensive job description;
- Advertise the position broadly;
- Utilize a thorough job application tailored to your company and applicable law;
- Screen applicants;
- Interview selected applicants effectively;
- Perform pre-employment screening/testing;
- Offer the job in writing; and
- Utilize employment agreements with confidentiality and non-competition provisions where appropriate.

**Here are some do's, don'ts and steps to take in the hiring process:**

1. Start with a comprehensive job description which accurately reflects the duties (essential and non-essential), responsibilities and job requirements, and also use it as a benchmark for performance after the candidate is hired.
2. Make sure your job advertising is non-discriminatory and published in many places to reach all classes of individuals. Avoid terms like "salesman wanted," "recent grad desired" or "must have car" — all considered to infer discrimination.
3. Have a completed employment application which has all the appropriate waivers and disclaimers — insist on it being fully completed, signed and dated. It is okay to accept a resume, but resumes are carefully drafted to say positive things and omit the negatives. Review the application and any resume carefully for any gaps in time (was the gap caused by time spent in the penitentiary?). Go over the application in detail with the applicant at the outset of the interview. Make notes, but be careful what you write on the application — it could be "Exhibit A" in a discrimination case. Does your application ask for veteran status, prior arrest activities or workers' comp. claims? These and other questions are prohibited under various circumstances.
4. Check all references — most employers are reluctant to contact references. Consider having the employee sign a release to keep the reference checks immune from liability. If the applicant has acquaintances in your organization, speak with them. Get the name and cell phone number of the applicant's immediate supervisor and call the supervisor directly — bypassing H.R. Remember that the Fair Credit Reporting Act (FCRA) stringently regulates third-party background checks and requires an employer to jump through several procedural hoops. Have your FCRA packet prepared.
5. Consider personality profile, aptitude and psychological testing for important jobs — employers are using these types of testing more frequently than ever before to as-

certain the ability to achieve, dedication, willingness to learn, compatibility, leadership skills, incentives, team spirit and many other factors that can spell success. Remember, the time at which a psychological test is performed can cause a violation of the Americans with Disabilities Act. The job would first have to be conditionally offered. Selective testing can also expose an employer to Title VII discrimination. Most importantly, remember all of these tests must be job related.

---

**“Remember, you invest a lot of time, effort and money in new employees so you want to hire the best applicants to ensure a successful employment relationship.” — Bob Dunlevey**

---

6. Be brutally honest in the interviewing process about the job and your company so that an applicant's expectations are not unrealistic — show the applicant the actual work environment when possible.
7. Interview in a team of two so that you have more than one perspective. Listen first and talk later — don't explain in detail what you are looking for in an applicant until the applicant talks to you about what he or she has to offer.
8. Put the terms and conditions of the job offer in writing so there is no misunderstanding. But, have only one qualified person in charge of issuing these letters. Any wages or benefits mentioned should be qualified as subject to a change. An at-will statement should be included as well.
9. Retain the application information for at least one year from the date it is created or from the date you take action on the application — whichever is longer — this is a legal requirement.

Remember, you invest a lot of time, effort and money in new employees so you want to hire the best applicants to ensure a successful employment relationship. For a complimentary copy of “15 Questions to Ask Job Applicants” and the PowerPoint presentation entitled, “Effectively Hiring New Employees,” contact Bob Dunlevey at [rdunlevey@taft-law.com](mailto:rdunlevey@taft-law.com).

**Bob Dunlevey** is a board-certified specialist in labor and employment law.

# TOP ★ JOBS

The competition recognizes companies that have completed difficult projects with innovation and efficiency with outstanding results.

Compiled by NUCA Staff



## Overall Winner 1: Vogel Bros. Building Company

**T**he project required a complete rehabilitation of the Krause Street Wastewater Pumping Station, located in the middle of downtown Tampa, Fla. — underneath the Cross Town Expressway between the Tampa Convention Center and the Hillsborough River. The rehabilitation revolved around the removal and installation of four new VFD-controlled 400 hp fully immersible vertical centrifugal sewage pumps. The project also required all new electrical and control gear, full rehabilitation of the wetwell and replacement of all piping and valves, including four 24-in. pneumatically controlled plug check valves. To complete the work, the entire station had to be bypassed for five months. The 12-pump bypass system, capable of a peak flow of 65 MGD, was provided by Godwin Pumps. Several manholes the bypass pumps had to draw from were located in the middle of Ashley Drive, which was closed to traffic, but patrons exiting the Convention Center required a single lane for the duration of the project. The bypass system point of connection was a new 54-in. by 36-in. hot tap on a 30-year-old PCCP line. This line was located in an encasement 10 ft from the outer wall of the Tampa Convention Center and 10 ft from the foundation supports for the Tampa Crosstown Expressway. This excavation required two, three-sided guide frame systems provided by Trench Plate Rental Co. to allow for the installation of the tapping saddle, valve and hot tap.



The project's biggest challenge came at its completion. Video logs of the completed wetwell indicated the influent line was deteriorated. This posed an immediate threat to pedestrians using the city's riverwalk. An emergency plan was developed to modify the existing bypass system to go further upstream to allow access to the influent line. The upstream manhole was on the other side of the Hillsborough River, which meant that approximately 18 MGD had to be pumped across the river.

Following a bathymetric survey, it was determined two 24-in. HDPE lines could provide enough flow while still allowing 8 ft of draft down the middle of the channel when sunk in place. Fifteen 900-lb concrete ballast were attached to each pipe to sink them in place. The time required to float the 600 +/- ft of each pipe across the river, connect them and sink them was approximately eight hours. Therefore, the bypass installation had to be completed at night and the river had to be closed to all traffic. The process had to be permitted and approved by the Coast Guard. The emergency repair was designed, permitted and completed within eight weeks of being discovered.

The Krause Master Pump Station collects flows from the southwestern portion of downtown Tampa and Davis Island. Each of those areas includes many commercial establishments that cannot afford to ever lose functionality. This project allowed for the continued use of the pump station that has been in operation in the same location for 70+ years. The new design of the station now allows

for its continued use even during a natural disaster when the river could reach its 100-year-flood level. A specialized metal platform was built inside the station to raise all electrical gear above the 100-year-flood level. All electrical components below the flood level, including the pump motors, were designed to remain fully immersed for up to 72 hours.



## Overall Winner 2:

### L.G. Roloff Construction

**W**ith the Spring Lake Park Project, L.G. Roloff provided sewer separation to the surrounding areas through the installation of new infrastructure and the rehabilitation and repurposing of existing storm and sanitary sewer pipe. The project eliminated combined sewer overflows (CSOs) to the Missouri River. In addition, the neighborhood park was revitalized and the former 'lake' was re-established. The project had two major components: sewer separation of the surrounding neighborhood and storm water detention/park construction.

The first phase of the project required directing the sanitary flows from the neighborhoods on each side of a valley into a new sanitary sewer system, which consisted of 1,235 lf of bored pipe and 17,060 lf of open trenched pipe, including one siphon. The existing infrastructure was repurposed, where possible, for either storm or sanitary flows. Both existing and new sewers directed storm flows into the valley, the planned location for the new park.

The second phase of the project started with tree clearing and debris cleanup, as the planned location for the park had become a dumping area. The green infrastructure construction was extensive, consisting of a series of small ponds and a submerged gravel wetland that serves to clean the water before it flows into the main pond, where it is detained for better downstream flow control. A walking trail and large cast-in-place retaining wall were also major elements constructed in the park. The large number of springs within the confines of the excavation site and surrounding trail required special precautions to protect the integrity and the flow of water from the springs into the main pond, particularly the

areas that needed fill to create flat areas for the trail. The company's solution was to install a system of drainage tile under the northwest corner of the pond and place 1,200 tons of rip-rap on the east side of the valley. This allowed spring water flow into the pond while fill was placed on top to ensure a flat surface for the trail.

L.G. Roloff had to use some improvisational thinking when it encountered the unexpected obstruction of a concrete dam that was part of the outlet of the original pond. While the concrete was removed, the 60-in. casing used for auger boring seized and was left in place. Using a smaller casing, construction made it the rest of the way through the dam. The company installed 48-in. Hobas pipe inside both sections of casing and the annular space was grouted. This replaced the original plan to install 48-in. RCP pipe by jacking out the 60-in. casing.

Spring Lake Park was the first project where the City of Omaha used an existing park to retain storm water, which is an excellent example of coupling existing systems with new and green infrastructure to reduce costs and improve the environment. The project was a wonderful model of public and private collaboration. Completion of this project played a key role in reducing combined sewer overflows into the Missouri River and Papillion Creek, as well as improving the water quality.

# The Next Steps

What You Can Do During Congress' Six-Week Recess

**W**e are now well into the summer and the three major priorities Congress set out at the beginning of the year — healthcare reform, tax reform and an infrastructure package — remain incomplete.

Healthcare Reform remains stuck in the Senate. The Congressional Budget Office (CBO), the organization tasked with measuring the economic impact of legislation, although static, released its finding about a discussion draft of the Senate version of healthcare reform. CBO found that the Senate's draft version would result in 22 million fewer people insured than under Obamacare, and \$321 billion in budget savings.

All along, Republicans have counted on the budgetary savings from repealing and replacing Obamacare tax provisions as the spring board into larger tax reform. Their stated goal is to lower the individual and corporate tax rates to become more competitive globally. In order to do that, nearly the entire tax code will need to be streamlined and nearly the entire bevy of deductions and credits will be eliminated in exchange.

From tax reform, Republicans planned to utilize a wider base of tax payers and greater private capital in

the hands of individuals and businesses, which would result from lower tax rates, to develop the \$1 trillion infrastructure plan President Trump campaigned on.

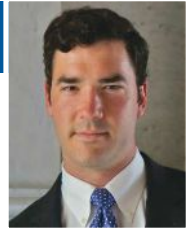
These three pieces build upon one another, each requiring the previous to complete the later. As a result, the entire time table has been pushed back indefinitely. Remember that the healthcare plan that CBO recently scored was introduced as a working draft, meaning the final legislation will likely contain different components and details. Republican leaders in the Senate can only afford to lose two Republican senators and still pass the legislation, with Vice-President Mike Pence casting the tie-breaking vote. As of press time, six GOP senators have said they cannot support the draft legislation. Senators Ted Cruz (Texas), Mike Lee (Utah) and Rand Paul (Ky.) have said the measure doesn't go far enough in gutting Obamacare.

Senator Susan Collins of Maine has voiced her opposition saying the version would not fix the fundamental failings of Obamacare. Senator Ron Johnson (Wisc.) objects to the bill on tactical levels arguing that the rush and private negotiations will likely not allow him to provide due diligence needed for support. Senator Dean Heller of

Nevada opposes the undoing of Medicare expansion that has allowed more than 200,000 individuals in Nevada to gain coverage. These concerns, as well as the concerns of the remainder of GOP senators, who have previously not made their position public, must be addressed and alleviated in order to move the bill forward. These issues will take time to negotiate and whatever results from these negotiations will still need to be approved by the House, which is currently much more fractured and divided.

In practical terms, this makes finalizing healthcare, and therefore moving on to tax reform, much less likely to happen before Congress takes the six-week August recess.

It also means we will have ample to discuss with our representatives and senators during the recess. NUCA's Government Relations Department will again be cultivating the August Recess Challenge: a competition of which, chapter or area, can meet with the most members of Congress during the six-week recess. The winner will be awarded a free registration to the 2018 Washington Summit. Further details will be distributed via the *Political Insiders* newsletter, but the whole point of the challenge is to take advantage



During Congress' six-week recess in August, NUCA members are encouraged to meet with their representatives to continue pushing the industry's message forward.

of the long opportunity to meet with members of Congress while they are in their districts. Chapter meetings, social events and site visits are just some of the examples of opportunities you have to take advantage of while members of Congress are in your districts.

If we are to be successful at inserting NUCA's priorities into tax reform and the infrastructure plan, we must take deliberate steps to ensuring members of Congress understand the needs of our industry, the priorities we have developed to improve our industry and how they can help. We cannot expect them to simply understand our issues just because they make perfect sense, are desperately needed and have more benefits than can be listed because that is not how Congress operates. Congress operates from inertia, and when constituents make priorities apparent and obvious, inertia starts making things like legislation introductions, media coverage and Congressional hearings happen.

So far, this year the entire industry has been waiting on Congress to act as Congressional leaders claimed it could and we say it should. We have prepared our priorities, our educational points and our rationale in anticipation of Congress moving forward. Well the time has come to push Congress forward in order for us to have an opportunity to enact meaningful reforms and legislation to better our industry. Remember that next year is an election year and that substantive or controversial legislation rarely moves after June in an election year.

It's time to grease the skids and start pushing for action.

**Will Brown** is NUCA's director of Government Affairs.

# Confined Space Training — Beyond the Classroom

**S**imilar to other types of safety training, confined space training needs to include more than just information about the new OSHA regulations, hazards, controls and proper procedures for safe entry into a confined space. NUCA's revised Confined Space Entry program includes all of that and then some, however, it does not include hands-on training in how to use the equipment needed to safely enter into confined spaces. This is because construction companies around the nation use a wide variety of brands and types of equipment. Just as they use different makes and models of heavy equipment, they purchase confined space entry equipment from different manufacturers and suppliers. In the classroom, instructors will address the types of equipment that will be needed but it would be impossible for an instructor to teach students how to use all the different types of equipment provided by hundreds of different manufacturers.

There is no doubt that the best place to begin confined space entry training is in the classroom. Beyond classroom training, it is the employer's responsibility to ensure that their workers know how to use the equipment that is provided by the company.

It is also important to remember that most adults learn from hands-on experience, which helps reinforce what they have learned in the classroom. During this additional training, employees will have a chance to learn about the specific equipment the company is providing for their safety and how to use it.

## Where to Begin

Following the classroom training and before employees are actually expected to enter into confined spaces, the company safety director, trainer or consultant should plan for the additional training. Start by gathering all the equipment that workers will be expected to use to perform a safe entry, including things such as gas monitors, ventilation equipment, tripod and retrieval device, harnesses, personal protective equipment (hardhats, eye protection, gloves), etc.

It is important for workers to know how to use all this equipment properly. The following is just some of the equipment they may need to be familiar with when working in confined spaces:

- The **gas monitor** is probably the most important safety device needed to enter into a confined space. Modern gas monitors are very similar and easy to use; however, from manufacturer to manufacturer, they do operate a little differently, which is why employees should be instructed in their use. One of the best ways to accomplish this is to get out the instructions and/or video and show the workers how to use the unit(s).

Obviously, they need to know how to turn it on and off, what the readings on the device mean and how to bump test the monitor. Most gas monitors go through a self-calibration cycle that verifies the sensors are working. The workers should know what they are expected to do if the device fails to turn

on or fails the self-calibration. Bottom line: they should not use it or depend on it until the problem is corrected. According to OSHA, employees involved in confined space entry have a right to observe the atmospheric testing of the space, which is one reason all workers should understand what the readings mean. One safety director told me about a foreman who had reportedly been testing confined spaces before entry until the safety director found out that the gas monitor the foreman was supposedly using had a dead battery and was not turned on in six months. Knowing that he had not been testing confined spaces for months, the foreman was fired immediately.

Not everyone needs to know how to physically calibrate the gas monitoring equipment but they should know how to check that the device has been calibrated within the time period stated by the manufacturer. Formal calibration with known test gas is generally performed by the safety director or the manufacturer.

- Another piece of equipment that is important for safe confined space entry is the **ventilator**, which, as most everyone knows, is used to blow fresh air into the confined space to help ensure the air inside the space is safe to breathe. Also available from many different manufacturers, ventilators are similar in their operation, but, different ventilators often provide different volumes of air. Workers need to know how they are energized and



how to set them up to ensure that fresh air is injected into the work area within the confined space. In order to help workers determine if enough air is provided for the size of the confined space check the label for the volume of air that is provided by the ventilator and how it is affected by the number of bends in the flexible duct. The recommended number of air changes per hour for ventilation is generally considered to be between 6 and 10. Your company should decide on the number of air changes per hour for the type of work being performed.

Workers should be instructed not to set the intake anywhere near a source of contamination such as vehicle exhausts, hazardous materials, sewage or drainage pipe openings, etc. Something that many workers may not know is flexible intake ducts can be installed on many ventilators to aid in the collection of fresh air. Note: ventilators must push air into the confined space creating positive airflow; OSHA does not allow the use of exhaust type ventilation (negative pressure) as the only means of ventilation in confined spaces.

- When a confined space is designated as a permit-required confined space, and entry into the space to perform rescue may be necessary, a rescue team must be designated and evaluated. The preferred method of rescue is non-entry rescue. This is accomplished by simply setting up a **tripod** or similar device with a retrieval device (winching system designed to lift humans) to extract a worker from the confined space. However, employees need to be instructed in how to set up and use the equipment. For example,
- a tripod or davit arm system should be set up at a height that will permit the worker to be attached to the retrieval device without having to stand over or sit in the opening because that creates a fall hazard. Workers need to know how to correctly assemble the tripod or davit arm system and how to attach and secure the retrieval device to the system. The chains at the bottom of the tripod should be set to prevent the legs from spreading when loaded. Workers should also be instructed in how to use the retrieval device because, once again, different systems operate differently.
- When a tripod or davit arm retrieval system is used, the worker should be wearing a properly fitted approved harness that is secured to a retrieval line. Before any worker is permitted to wear a harness, he or she should be instructed in how to inspect the harness to ensure that none of the stitching is pulled or damaged, the straps are not cut, worn, burned or damaged, and all fittings are in good condition. Harnesses should be removed from service and disposed of when any damage to the harness is observed. Workers should also be shown how to properly wear a harness.
- One area that is often overlooked during training is the type and use of **personal protective equipment** (PPE). Workers should be instructed to wear PPE when entering a confined space. At the very least, they should wear eye protection, gloves and a hard hat. Note: standard hard hats or full brim utility hard hats are often problematic when worn inside a confined space because of the brims; approved brimless hard hats are available for confined space entrants.

Requiring workers to wear respirators in a confined space should be required as a last option for preventing exposure to hazardous materials in a confined space. If respirators are necessary because the atmosphere cannot be controlled by ventilation, then employers must also comply with the Respirator Protection standard 1926.103 which refers to the requirements set forth in general industry standard 1910.134.

- Workers should also be instructed in how to use, maintain and care for any other equipment that may be required for performing confined space entry or rescue.

### Demonstration of Knowledge

After showing workers how to use the equipment, instructors should have them demonstrate their knowledge of the confined space requirements and how to use the equipment. In some situations, instructors will require the workers to perform entry into a controlled confined space or to go through all the motions of performing a safe entry. Practice is always better in a controlled environment. In either situation, the instructor should evaluate their knowledge and make corrections where necessary. We all know that the real learning occurs when workers get out into the field where conditions are never perfect. Therefore, classroom learning followed by hands-on demonstrations of equipment can help to ensure that when workers get out into the field, they are prepared to follow the regulations and how to use the equipment they have been provided.

**George Kennedy** is NUCA's vice president of safety.

# NUCA's Fall Leadership Conference Heads to Idaho



NUCA's Fall Leadership Conference (FLC) will be held Oct. 17-19, at Idaho's beautiful Coeur d'Alene Resort. This meeting is the perfect time to get more involved in the association. The FLC is a relatively small NUCA event, giving members the opportunity to network about issues shared among construction business owners. The ever-popular Executive Roundtables are returning and give attendees the chance to spend 90 minutes talking about issues other contractors are confronting, as well as the opportunity to share solutions.

All NUCA committees will meet at the FLC. NUCA's success

relies on the participation of its members, and some NUCA committees are in search of more members to participate in several of its nine committees. Whatever your interest, there is a committee that would benefit from experienced and knowledgeable contractors. You will offer fresh, innovative input to steer the committees toward solutions that will benefit the entire industry. You will find NUCA members at the meeting are not just successful business owners and top-level managers, they're also a lot of fun.

Register and book your room at [www.nuca.com/flc2017](http://www.nuca.com/flc2017).

**“There is no better way to get information than from a NUCA meeting.”**

—Ron Nunes, NUCA 2014 Chairman, R.T. Nunes and Sons, Warwick, R.I.

## NUCA Accepting 2017 National Top Jobs Applications Starting September 1



As successful contractors and, in many cases, industry leaders, many NUCA members willingly take on difficult, challenging projects with confidence and bring them to successful completion. But their exceptional work largely goes unnoticed outside the local area.

NUCA's National Top Jobs Competition is intended to give recognition to companies that thrive on these projects, and find innovative solutions to obstacles and produce the highest quality results. The competition is open to all NUCA contractor members in good standing. Nonmember contractors who join NUCA by Dec. 8, 2017, may enter the competition.

Projects may be entered in one or more of the following categories: Communications, Electrical Power, Gas Distribution, Oil and Gas Pipelines, Shale Gas Play, Water or Treatment Plants, Sanitary Sewer Collection/Storm Drains, Water Distribution, Trenchless Technologies and Excavation/Site Development.

The project must be completed by Dec. 15, 2017. Application deadline: Dec. 18, 2017. Visit [www.nuca.com/topjobs](http://www.nuca.com/topjobs) for details.



## NUCA's 2017 TSSD Met with Enthusiasm, High Participation

NUCA's 2017 Trench Safety Stand Down (TSSD), endorsed this year by DoL and OSHA was an amazing success: As of July 17, more than 8,750 workers participated on more than 750 jobsites — more than doubling last year's results, and these numbers are only preliminary. The final totals are expected to increase significantly as more completion forms come in. Additionally, word of the TSSD has spread internationally this year, as Air Force Safety Manager, [name], held a stand down at Bagram Airforce Air Field in Afghanistan, where civil

engineering airmen teamed up with DOD contractors to hold their own stand down!

Please continue to send in your Participation Forms (even if you held your stand down after June 24). NUCA wants to be sure you are recognized in the next issue of the magazine. You will also receive a TSSD 2017 certificate and hard hat stickers for all participating employees. Email forms to [safety@nuca.com](mailto:safety@nuca.com) or fax them in at 703.358.9307. Stay tuned for the next *Utility Contractor* for complete coverage.



## Mark Your Calendars!

NUCA 2018 Convention

March 6-8, 2018

San Antonio, Texas



## AUGUST

- 4-6** NUCA of Central Florida Friends and Family Weekend, [www.nucacentralflorida.com](http://www.nucacentralflorida.com)
- 19** NUCA of North Florida Fishing Tournament, [www.nucanf.com](http://www.nucanf.com)
- 30** NUCA of DC at the Nationals, [www.nucaofdc.org](http://www.nucaofdc.org)

## SEPTEMBER

- 7** NUCA of Nebraska Clay Shoot Challenge, [www.nucanabraska.com](http://www.nucanabraska.com)
- 9** NUCA of Pennsylvania's 50th Anniversary/Convention, [www.nucapa.org](http://www.nucapa.org)
- 13** NUCA of North Texas Happy Hour, [www.nucanorthtexas.com](http://www.nucanorthtexas.com)

## OCTOBER

- 17-19** NUCA's Fall Leadership Conference, Coeur d'Alene, Idaho, [www.nuca.com](http://www.nuca.com)

## NOVEMBER

- 1-2** NUCA's Safety Directors Forum, St. Louis, [www.nuca.com](http://www.nuca.com)
- 11** UCAC Scholarship Auction, [www.ucac.pro](http://www.ucac.pro)

# COME OUT AND PLAY!



**ICUEE 2017 | Louisville, Kentucky | October 3-5**

There's only one place you can play with all the new toys in the construction and utility industry before you buy them — ICUEE, North America's Premier Utility Demo Expo. Come get your hands dirty on our 2-mile outdoor test track. Or while exploring 25 acres of exhibits. And learn about the newest technology at our indoor demo stage. Every other year we gather over 950 of the leading manufacturers. So you can come play in our sandbox.

**REGISTER AT [ICUEE.COM](http://ICUEE.COM) BY AUGUST 25 TO RECEIVE 50% OFF.**



## THE PIPELINE

**The PIPE MILL with FAST SERVICE**

Producing:  
24"-192" OD  
.312"-2.00" Wall  
Lengths up to 120 FT  
Straight Seam-DSAW  
20ft. Lengths in Stock



**800-821-3475**  
Fax: 815-964-0045  
PipeSales@ArntzenCorp.com



Shipping Nationwide and Canada

**ASHER** LARGE RENTAL FLEET  
100+ Cable Trailers  
SINCE 1914 Pulling • Tensioning • Cable Salvaging

**NATIONWIDE DELIVERY**



#14446-41 Hogg Davis 985 Cable Pulling Trailer  
#13990-41 Standard 3-Reel Trailer

**855-885-2295** CALL US TOLL-FREE!  
Los Angeles, CA [www.alasher.com](http://www.alasher.com) [sales@alasher.com](mailto:sales@alasher.com)

## Advertise in *Utility Contractor!*

Contact Ryan Snelizer:  
[rsnelizer@benjaminmedia.com](mailto:rsnelizer@benjaminmedia.com) 330.467.7588

## ADVERTISERS' INDEX

Al Asher & Sons .....	<a href="http://alasher.com">alasher.com</a> .....	50
Arntzen Corporation .....	<a href="http://arntzenpipe.com">arntzenpipe.com</a> .....	50
CNA Insurance .....	<a href="http://cna.com/nuca">cna.com/nuca</a> .....	12
Efficiency Production .....	<a href="http://usatrenchboxbuilder.com">usatrenchboxbuilder.com</a> .....	17
HCSS .....	<a href="http://hcss.com">hcss.com</a> .....	25
ICUEE.....	<a href="http://ICUEE.com">ICUEE.com</a> .....	49
Kobelco Construction Machinery .....	<a href="http://Kobelco-USA.com">Kobelco-USA.com</a> .....	3
McLaughlin .....	<a href="http://mclaughlinunderground.com">mclaughlinunderground.com</a> .....	11
National Trench Safety .....	<a href="http://ntsafety.com">ntsafety.com</a> .....	7
NUCA .....	<a href="http://nuca.com">nuca.com</a> .....	51
NUCA Convention .....	<a href="http://nuca.com">nuca.com</a> .....	21
Reed.....	<a href="http://reedmfgco.com">reedmfgco.com</a> .....	19
RIDGID.....	<a href="http://ridgid.com/Locate">ridgid.com/Locate</a> .....	52
Trench Shoring Svcs. ....	<a href="http://shoring.com">shoring.com</a> .....	19
United Rentals .....	<a href="http://UnitedRentals.com">UnitedRentals.com</a> .....	2
United Rentals .....	<a href="http://UnitedRentals.com">UnitedRentals.com</a> .....	5

# Essential Skills for Crew Leaders Training Program

*Let NUCA Bring the Training To You*



**NUCA's Institute for Leadership Development is now offering a crew leader training course tailored to utility construction and excavation.**

The two-day professional development program, Essential Skills for Crew Leaders (formerly Crew Leader Training), will train new and experienced jobsite foremen, project managers, and supervisors on how to be better communicators, team builders, problems solvers, and decision makers.

The program covers

- Maintaining a safe work environment
- Managing people to create a strong team culture
- Planning and controlling project costs to get a job done productively, on schedule, and on budget
- Using new technologies critical for field operations and leadership

NUCA's Essential Skills for Crew Leaders Program brings in top-notch training and trainers to your location and will customize the class to meet your needs.

**NUCA**  
*We Dig America*

For more information or  
if you would like to schedule  
this industry-recognized  
training for your company or  
chapter, please email or call

**Jim Stepahin, [Jim@nuca.com](mailto:Jim@nuca.com)  
(703) 358-9300**



# CONFIDENCE BUILDER.

**FINDS IT SO YOU DON'T HIT IT.**

RIDGID® locators give you the industry's only omnidirectional mapping. View real-time data on location, direction and depth. Track and find hard-to-locate underground utilities fast.

**RIDGID**

[RIDGID.COM/Locate](http://RIDGID.COM/Locate)