

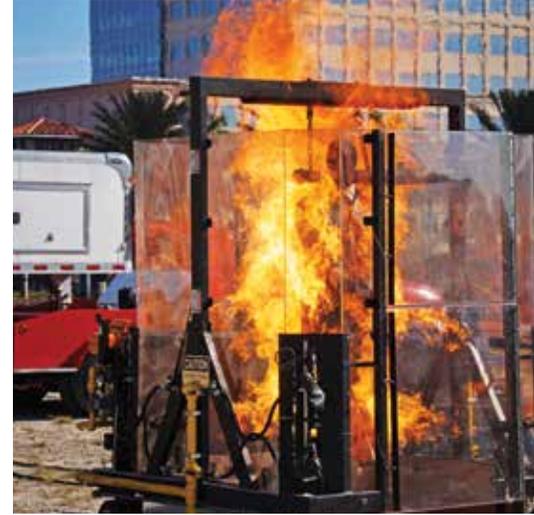
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WINTER 2020 • VOLUME 11 • NUMBER 4

Saving Lives Through Education



SEE PAGE 24!





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WEB

WINTER 2020

EXCLUSIVE

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One Key Question Every LIFE Guard Must Ask

BY LIDIA DILLEY JACOBSON



I never planned to be a safety director. I think my path was chosen for me through a series of circumstances that started when I was 16 years old and landed my first official job. Back then, I was a lifeguard at a public pool in my South Dakota hometown, and I continued to lifeguard during the summers of my college years. At the pool where I worked, the safety orientation always included the tragic story of a little boy who had drowned many years ago when the pool was overcrowded one hot summer day. The story gave me and the other lifeguards I worked with a sense of the importance of our job. Hearing it was an opportunity to remind ourselves that we were LIFE guards.

Today, I still find myself hearing stories about on-the-job tragedies. I'm sure you have, too. No one wants these tragedies to happen, so what can we do to stop them?

I believe stories shape our thinking and instill in us a stronger commitment to do better. This commitment, though, can only arise when stories are treated as learning opportunities. If they are merely told and then promptly forgotten, the point is missed, the opportunity is gone, and we haven't made our world any safer. We didn't do anything with the story.

To improve safety, it is vital to ask this key question every time we hear a story about a job-related accident, "Now that I know, what will I do?" In answering that question, take the following actions:

- 1.** Engage in conversation. When you hear about an on-the-job tragedy, be prepared to have in-depth conversations about the actions that were taken and why certain decisions were made. It's not about placing blame; it's about trying to understand behavior and find a root cause.
- 2.** Ask if this accident could have happened at one of your sites. Answer honestly. This is no time to hold anything back. Secrets don't save lives.
- 3.** If your answer is, "no," justify why the accident could not have happened at one of your sites. This step validates the safe work practices that have been established and guide your work. It gives you a chance to verbally state safe conditions, rules and actions and to have all of your colleagues affirm them. In short, it's an opportunity to acknowledge the strength of your safety culture.
- 4.** If your answer is, "yes," the accident could have happened at one of your sites, what can you do? This step helps you to find further value in sharing accident stories. Take time to determine the actions you need to take or the equipment you need to acquire to mitigate hazards and prevent injury. Making the choice to do these things is a proactive way that ensures "This isn't going to happen here."

Move Safety Forward

When you ask the key question and take the related actions, you are choosing to guard people's lives. You are moving safety forward. However, if you choose not to ask the question and take action, you may find yourself in a place you don't want to be. Consider this story.

A few years ago, an electrical cooperative shared a letter they found in their archives. Although it was written many years ago, it remains timeless. It is one of those letters that at the end, makes your heart hurt. It seems it was written with a purpose greater than the author might have imagined. This letter was meant to be shared.

"Heard through the vine you wanted a copy of our accident report of our fatality. It was our first serious accident we have ever had. It was one of my men and needless to say, it hurts us deeply. It was my first experience with a crisis like this and I hope it will be my last. I went with his wife to the clinic and stayed with her until the end.

All I know is, if somehow all linemen could get that helpless feeling sitting with a man's wife waiting, we wouldn't need as many written safety rules. As in most accidents of this kind, he was not wearing his rubber gloves, and even if he were, if he were thinking at all, he should not have considered even touching anything."

You don't have to be working at a pool with a whistle around your neck to be a LIFE guard. Indeed, you are one every day as you work with your crew. Be willing to always ask the key question every time you hear a story and then act. Through all our actions, hopefully someday we will have no more tragic stories to tell. **DP**

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Industry Appeal Survey

THANK YOU in advance for participating in this survey. The research contributes to the development of our education, live events, magazine content and, ideally, challenges all stakeholders to expand their knowledge base and increase efforts to save lives.

Complete this survey to be entered in a drawing to receive a FREE Yeti mug. Results will be published in a future issue of dp-PRO. Both the survey and results (once available) are available on dp-PRO.com.

Our thanks to PelicanCorp for helping to underwrite the cost of this research. Individual responses are not shared with the underwriter or sold in any way. Infrastructure Resources employees assisting with research will have access to responses as needed.

1. Which statement best describes your involvement in recruiting and hiring new employees?

- I am instrumental in creating recruitment and hiring plans and/or policies
- I am instrumental in executing recruitment and hiring processes
- I am affected by company decisions regarding recruitment and hiring

2. In the past twelve months, has your company had difficulties attracting new recruits? (check all that apply)

- Yes, entry-level
- Yes, experienced, supervisory
- Yes, field personnel
- Yes, office personnel
- No

3. In your experience, which positions are hardest for your company to fill? (check all that apply)

- Field Operations (entry-level)
- Field Operations (experienced, supervisory)
- Field Operations (management)
- Office Personnel (entry-level)
- Office Personnel (experienced, supervisory)
- Office Personnel (management)
- N/A

4. Is your company losing business due to its inability to fill roles?

- Yes
- No

5. Are you carrying a heavier workload due to your company's inability to fill roles?

- Yes
- No

6. Has your company increased pay and/or benefits in an effort to attract qualified candidates to the industry?

- Yes
- No

7. Has your company decreased qualifying criteria in an effort to attract candidates to the industry?

- Yes
- No

8. Which of these factors contribute to the shortage of young recruits to the industry? (check all that apply)

- Associated with the use of fossil fuels
- Industry growth
- Lack of interest/motivation
- Poor salary/benefits
- No opportunities for advancement
- Not seen as a desirable career option

9. Which of these do you believe is most likely to attract young recruits to the industry? (check all that apply)

- Company sponsored training
- Flexible schedules
- Increased benefits
- Increased salary
- Increased focus on renewable energy

10. How do you currently recruit new hires? (check all that apply)

- Referrals
- Company website
- Online jobsites
- Social Media
- Job fairs
- Recruiter
- School career offices

11. What category best describes the type of work your company does?

- Engineering
- Excavating
- Facility Owner
- GIS/Mapping
- Gov't/Regulatory
- Locating
- Notification Center

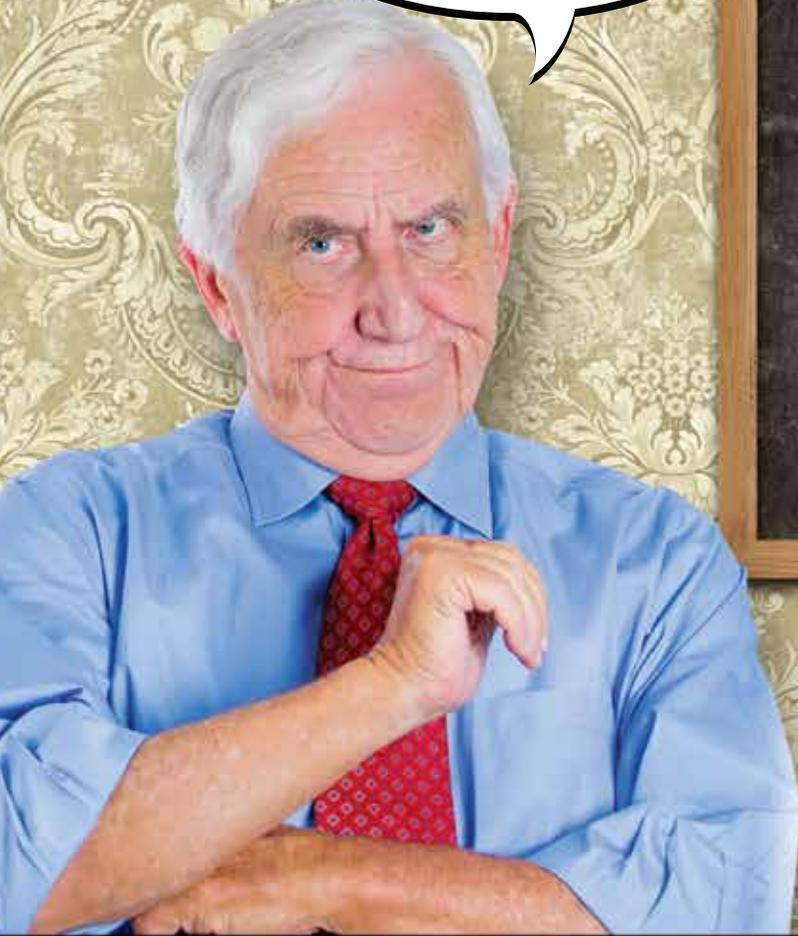
12. Where do you work?

- USA
- Canada
- Other

After completing this survey, **snap a pic and email it to info@emailir.com** or visit dp-PRO.com/surveys to complete it online.

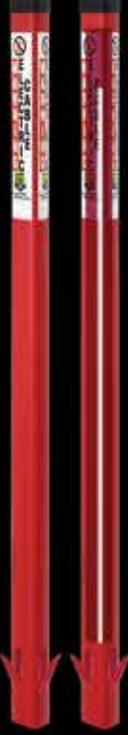


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Join CAMO as they explore the issues and challenges in preventing spills, releases and damage to underwater pipelines and utilities which negatively impact the environment and public safety. No cost to attend.

GlobalExcavationSafetyConference.com/camo

Organizations holding meetings during damage prevention week



te
at
om
2-28

Utility Locating with GPR Course

Meeting NULCA "Competencies for the GPR Technician" curriculum, course objectives require user to demonstrate knowledge, skill, and understanding in applying GPR safely and professionally to locate utilities. Topics include GPR theory, factors affecting target detection, how GPR compliments traditional EM locating, application of Line Scan and Grid Scans, data interpretation, and case studies.

Safe 4 Culture Changer Program: Improve Your Safety Culture through an Effective Safety Campaign

Most companies don't have a lack of desire, dedication, or even funding to keep their employees safe, what they often lack is a plan. This workshop addresses the ineffectiveness of "flavor of the day" safety effort that results in meager results. Learn about an organized, planned, and proven method of improving your company's safety culture.

Utility Locator Skills Enhancement

This skills training workshop is a great introductory session for the novice locator and a valuable career- building tool designed to challenge even seasoned professionals on underground line locating. This workshop begins with classroom training followed by instruction on a variety of conventional and unconventional equipment. (training credits available.)

Damage Investigation & Claims Resolution

This workshop focuses on the required elements of a successful damage investigation. Setting the stage for a valid root cause investigation and following standard investigative procedures are vital to an effective analysis of a damage. Topics covered include asset protection, revenue / loss recovery, ethics and other ingredients needed to perform accurate and timely root cause investigations.

Locating Theory Demystified!

This workshop explores the principles of locating, the role locating plays in safe excavation, and includes hands-on use of equipment. Several locate equipment manufacturers will provide equipment and tips on how to get an accurate locate, including using ground penetrating radar (GPR).

Visit DamagePreventionWeek.com for dates and pricing

Organizations Endorsing Damage Prevention Week

To be recognized as an endorsing organization, visit DamagePreventionWeek.com.



Day of the Dozers Goes Virtual with a \$100,000 Goal for Children's Minnesota

Day of the Dozers is a hands-on event for children, giving them the experience of operating a piece of construction equipment with a trained and experienced operator while helping to raise funding for Children's Hospitals and Clinics of Minnesota.

A special thank you to all past supporters of Day of the Dozers. With your generosity, and that of our community, we have raised over \$270,000 to support a variety of essential programs and services at Children's Minnesota.

Out of an abundance of caution, and with the health and well-being of everyone our top priority, we have decided not to hold a physical Day of the Dozers this year. Instead, we are raising money to support Children's patients and families who need our support now more than ever. The safety of our employees, the kids and their families are important to us all.

Donate the Cost of Your Participation!

Please consider making a financial contribution, equal or greater to what you would have spent to make Day of the Dozers possible. Did you donate equipment? Operators? Gas? Fencing? A culvert? Please put a value on this and donate directly to Children's Minnesota at this web address: <https://www.childrensmn.org/events/day-of-the-dozers/>. 100% of this donation is

tax deductible and goes directly to helping kids in our community.

"Share Your Care" in a Video!

The families and children would love to hear from members of the construction and damage prevention industry through Day of the Dozers! Take a video in your excavator, 'dozer, dump truck or other heavy equipment. Say hello to the kids, share a message about safety around utilities, and tell them you miss them! We will post a variety of content to share our message. We want to use this platform to showcase our industry and the sponsors of Day of the Dozers. Please consider helping us with a short video (or pictures) to highlight your company and ultimately our industry - because YOU make Day of the Dozers so special for these families. Contact Grace Gothers (graceg@ewald.com) if you would like to submit a video or photo.

Visit MUCA Day of the Dozers website or on our social media platforms: Facebook, Twitter, You Tube to see others submissions. 

Thank you for your past participation and thank you in advance for your support this year. Our goal for 2020 is \$100,000! We are counting the minutes until we can gather again on September 25, 2021.



Invest in Safety!

This 60-Page Guide Covers the Essential Topics from Pre-Planning to Job Completion, Including a Comprehensive Resource Directory to Ensure Your Crew's Safety

An essential tool for all ground disturbers. Over 10 million Excavation Safety Guides have been printed since 2005.

**Issue lands January 2021
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866.279.7755*

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The Pipeline Ag Safety Alliance (PASA) is an industry-leading collaborative effort of utility operators and agricultural professionals. PASA has teamed up with the National Association of County Agricultural Agents (NACAA) for the last 6 years to deliver safe digging messages to farmers and ranchers across the nation. This public awareness program enhancement focuses on educating over 3,000 agricultural experts, a trusted resource for farmers and ranchers, on digging safely in rural communities.

Continuous engagement through:

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- Farm & Ranch Excavation Safety Guide distribution
- Presentation and exhibition at annual NACAA Conference
- Targeted outreach to member counties
- Analytics and effectiveness tracking



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Safely Together

For more information contact whitney@emailir.com or 952.428.7990

PipelineAgSafetyAlliance.com

An Infrastructure Resources, LLC Program



Readership Survey

Here at **dp-PRO**, we always strive to provide content that is educational, informational and topical. We would like to know what makes **dp-PRO** your industry resource for damage prevention; and how we can continue to improve.



After completing this survey, snap a pic and email it to info@emailir.com

1. How many of the last four issues have you read?

- Four
- Three
- Two
- This issue only

2. I prefer to read *dp-PRO* in

- Print
- Digital
- Both

3. Including you, how many people typically read your copy of the *dp-PRO*?

- Just me
- 2-3
- 4 or more

4. How would you rate the overall quality of the *dp-PRO* content?

- Excellent
- Very Good
- Average
- Poor

5. Have you ever implemented change at work based on what you learned in the *dp-PRO*?

- Yes
- No

6. How frequently do you visit the *dp-PRO* website?

- 1-3 times per week
- 1-3 times per month
- Less than once per month
- Never

7. Have you ever responded to or researched a company based on their ad in the *dp-PRO*?

- Yes
- No

8. My favorite part(s) of *dp-PRO* is:

9. I would like to see more articles on:

10. Is there anything else you would like to share?

Contact Details

Name: _____

Job Title: _____

Company: _____

Contact me by: _____

Phone _____

Email _____



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NEWS

APGA ANNOUNCES NEW BOARD DIRECTORS

The APGA announced the election of new Board Directors, Ray Keable of LandPartners and Jonathan Spink of Jemena, at their Annual General Meeting. Keable and Spink will join Kevin Lester, Wendy Oldham and Leon Richards, who were all re-elected to the board.

Donna McDowell from Quanta Service Australia was elected as Vice President by the board, while Wendy Oldham from SEA Gas was elected Treasurer.

APGA, based in Canberra, Australia since 1998, promotes the interests of the pipeline industry by providing information through public presentations, social media, feature articles, editorial comment in *The Australian Pipeliner* and other publications, media releases and newsletters. Many members of APGA have a focus on gas transmission, but others are active in all aspects of the industry including transportation of other products, such as oil, water and slurry. APG's active members include constructors, owners, operators, advisers, engineering companies and suppliers of pipeline products and services.



UNIVERSITY OF NEVADA LAUNCHES NEW CONSTRUCTION MANAGEMENT PROGRAM

(Nevada Today) – The University of Nevada has developed a new Construction Management Minor that will be housed in the Department of Civil & Environmental Engineering. For over a decade, the Associated General Contractors (AGC) worked with the College of Engineering to create a minor in construction management.

The Construction Management Minor has been developed in collaboration with regional and state construction agencies, alongside the Department of Civil and Environmental Engineering Advisory Board and department faculty. New courses are in the process of being developed which will give graduates a competitive edge when they seek careers in the construction industry.

Working with the University Foundation, an endowment was created for this effort. The AGC Board approved both the fundraising drive to fund the endowment by its members and the AGC's initial contribution of \$50,000 toward those efforts. Industry support has created nearly \$200,000 in donations toward the endowment.

People's Gas Introduces New "Ambassadog" for Safe Digging

(Lawndale News) – People's Gas announced in August that "Oscar" has been elected the company's "Ambassadog" for safe digging in the utility's "Doggone It!" photo contest. Oscar won a fierce online battle with 10 of Chicago's canine companions. Oscar will help educate community members about the importance of safe digging and to call 811 before you begin any digging projects to protect yourself and prevent damages to natural gas lines and other underground utilities.

People's Gas has approximately 4,000 miles of underground pipelines for distribution and transportation of natural gas in the city of Chicago.

Canadian Locators, Inc. Earns Alberta Construction Safety Association Award

Canadian Locators, Inc. was awarded a renewal of its Certificate of Recognition (COR), based on successful completion of an external audit through certifying partner, the Alberta Construction Safety Association (ACSA). COR is awarded to employers who participate in the voluntary Alberta government program, Partnerships in Injury Reduction. A COR means that an employer's health and safety management system has been evaluated by a certified auditor and meets provincial standards established by Occupational Health and Safety (OHS) Alberta. **DP**



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AWWA.ORG/DEC-SUMMIT

Calendar of Events

Due to the COVID-19 pandemic, many events have rescheduled or transitioned to a virtual event. Be sure to verify the status of all events you are planning to attend.

December 2020

- 7-10 Internal Corrosion for Pipelines – Advanced, in-person session by NACE (New Delhi, India)
- 14-18 In-Inspection by NACE (Houston, TX)
- 14-18 NAPS National Meeting (Point Clear, AL)
- 16,17 Texas Communication Expo (Belton, TX)
- 22-24 Alabama Damage Prevention Summit (Point Clear, AL)
- 23-26 Power & Communications Contractors Association 2020 Mid-Year Meeting (Nashville, TN)
- 27-30 AGC National and Chapter Leadership Conference (Washington DC)

January 2021

- 3-7 SGA / Gas Machinery Conference (Tampa, FL)
- 3-9 National Safety Council (Indianapolis, IN)
- 6,7 CommTech West Show & Seminar (Calgary, AB)
- 13-16 Cable Tech Expo (Denver, CO)
- 19-21 Mid-America Telecom Showcase & Seminar
- 19-21 NASTT No Dig is joining NASTT No Dig North (Vancouver, BC)
- 20 Arkansas Gas Association
- 20-22 New Mexico 811
- 21-23 Alaska Telecom Association Tech Showcase
- 25-28 Telecommunications of the Southeast Fall Event (Point Clear, AL)
- 27-30 Greater Chesapeake Damage Prevention Training Conference (Ocean City, MD)
- 28,29 Sustainability Leadership Conference in Energy (Houston, TX)
- 28-31 ASCE Convention (Anaheim, CA)

February 2021

- 2-7 AWWA Water Infrastructure Conference (Philadelphia, PA)
- 4 Mississippi 811
- 9-12 AWRA 2020 Annual Water Resources Conference (Kissimmee, FL)
- 11-13 2020 Midwest Damage Prevention Training Conference (French Link, IN)
- 13,14 South Carolina Telecommunications and Broadband Association Fall Conference
- 24,25 CommTech East Show & Seminar
<https://www.commtechshow.com/east/>

March 2021

- 6-10 23rd World Petroleum Congress (Houston, TX)
- 8-10 PowerGen International (Orlando, FL)
- 14-16 2020 Fiber Connect (Nashville, TN)

Rescheduled Events

- May 13, 2021 PA Safety Day Conference (Pittsburgh, PA)
- May 20, 2021 PA Safety Day Conference (Drexel Hill, PA)
- June 15, 2021 PA Safety Day Conference (Allentown, PA)
- June 17, 2021 PA Safety Day Conference (Harrisburg, PA)
- Sept 28, 2021 PA Safety Day Conference (Erie, PA)

https://www.pa1call.org/pa811/Public/POCS_Content/Event/PA_Safety_Day/SafetyDays.aspx

To include your event in an upcoming Calendar of Events schedule, email karin@emailir.com.

DIRT FACTS



EXCERPTED FROM THE 2019 DIRT ANNUAL REPORT

Events, Near Misses & Damages in U.S. and Canada

	2017	2018	2019
TOTAL EVENTS	411,867	440,749	534,151
NEAR MISSES	1,588	4,198	2,254
DAMAGES	316,422	341,609	453,766

WANT TO KNOW MORE? THIS INFORMATION WAS EXCERPTED FROM THE 2019 DIRT ANNUAL REPORT. ACCESS THE ENTIRE REPORT AT CGA-DIRT.COM.





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each shirt sold donates to an animal in need

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FROM THE PUBLISHER



BY SCOTT LANDES

Welcome to the 50th Issue of dp-Pro!

When we published our first issue of *dp-PRO* (*Damage Prevention Professional* back then), we didn't know a lot about publishing a magazine, but we definitely knew there was a real need in the underground utility industry. Back then, and still today, many fine publications addressed the industries we serve, but none that spoke specifically to damage prevention, excavation safety, and public awareness.

Our first issue, published in the spring of 2010, was filled with relevant and thought-provoking articles and features written by industry professionals. For fun, we included author updates on several of the articles in this issue. You can read the full first issue, or any of our past issues, at dp-pro.com/article-index.

Over the 10 years of *dp-PRO*, many things have changed, both within the pages of the magazine and within the industry. Some things never change, however. Things like, "Damage Prevention is a shared responsibility," "Know what's below," and "Call before you dig." We have always promoted these important industry concepts, and will continue to do so in the pages of *dp-PRO*.

Infrastructure Resources, publisher of *dp-PRO*, continues to hold true to its guiding passion, "Saving Lives through Education." We are dedicated to transforming the damage prevention industry through knowledge and educational tools that significantly reduce the risk of damages while protecting our workplaces, communities, environment, and lives. We do this through three main focuses:

- **INVOLVEMENT:** We are active in industry associations and events and we connect regularly with advisory boards who help us keep our finger on the pulse of the industries we serve.
- **EXPERTISE:** Drawing on the knowledge and expertise of industry leaders, we help companies improve their damage prevention efforts by sharing innovations, best practices, educational opportunities, and access to industry resources.
- **INNOVATION:** We stay abreast of what is happening in the industry so we can bring you information and education on cutting edge technologies, the latest public awareness initiatives, and new approaches in damage prevention in the format you want – live, print, virtually, or online.

We continue to bring new and innovative initiatives to the industry. We invite you to visit our website, infrastructureresources.net, to learn about these initiatives and how they can help you.

Now, with 50 issues under our belt, we continue to focus on bringing informational and educational articles to the industry. Infrastructure Resources welcomes all points of view within the pages of *dp-PRO* and encourages you to send us your article(s) for consideration for publication in future issues. You can submit your article at InfrastructureResources.net/submissions. 



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HOT #TAGS

Cleveland Water @ClevelandWater · Oct 21
 Today is #ImagineADayWithoutWater! Think about all the ways you use water even before you leave the house this morning.

- Flushing the toilet
- Brushing your teeth
- Shaving
- Showering/bathing
- Making coffee

#ValueWater

Madison Water @MadWaterUtility · Oct 21
 Today is #ImagineADayWithoutWater! Grateful to all the #EssentialWorkers out there who keep the water running. ❤️ #ValueWater @TheValueofWater

We work hard

ASCE Gov't Relations @ASCEGovRel · Oct 20
 That's a lot to chew on... #ValueWater

19 gallons of water are required to grow just one apple.

Imagine a Day Without Water
 October 21, 2020 | #ValueWater

#ValueWater

#ValueWater

WHAT'S TRENDING



Follow these companies on Facebook

Subsite @Subsite · Sep 24
 Happy World Trenchless Day from Subsite Electronics! We're proud to be a global leader in trenchless technology. Let your crews know they are making a difference in our world!
 #Subsite #WTD20 #WorldTrenchlessDay

#WorldTrenchlessDay

QuakeWrap @QuakeWrap · Sep 24
 Let us not forget the importance of keeping our #infrastructure operational with minimal disruption to our communities #worldtrenchlessday #trenchlesstechnology #GotFRP

PipeMedic® by QuakeWrap @PipeMedic1 · Sep 24
 Happy World Trenchless Day from @PipeMedic1 @QuakeWrap @ProfEhsani | twitter.com/DanatTTMag/sta...

Dirka Prout @DirkaProut · Sep 24
 Well #worldtrenchlessday is fast coming to an end. For any followers wondering what the fuss is about, the trenchless tunnelling industry is trying to build awareness of the benefits of going trenchless. This is a yearly event.

#GeotechnicalEngineering

Thread 1/8

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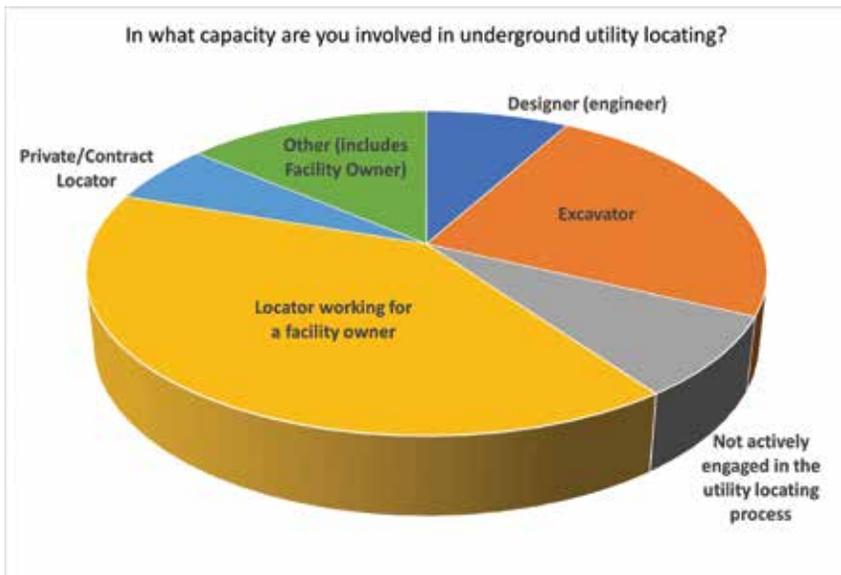
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Locate Research Survey Results

In what capacity are you involved in underground utility locating?

46% of survey respondents identified as Locators with 13% indicating they were private locators. 24% of respondents identified as Excavators. The other 30% were represented by Designers (Engineers) (8%), Facility Owners (6%), Other (8%), and 8% who identified as not being actively involved in the utility locating process.



Engineers were least likely to consider field training sufficient at only 5%, while excavators were least likely to endorse a third-party training company at 9%.

From an industry point of view, Excavators felt most strongly that a broad-based locator certification program including both classroom and field testing is necessary at 74%, followed closely by those identifying as electric industry at 70%. The Communications industry was least likely to find company training programs sufficient at only 8%, followed closely by the Electric industry at 10%. Only 3% of Gas & Oil industry respondents believe field training is sufficient.

How often should a locate technician receive continued training or certification?

Almost half (48%) of respondents believe locate technicians should receive continuing education annually, with 45% believing it should be every 2-5 years. Regardless of industry or job function, few respondents felt continued training is unnecessary.

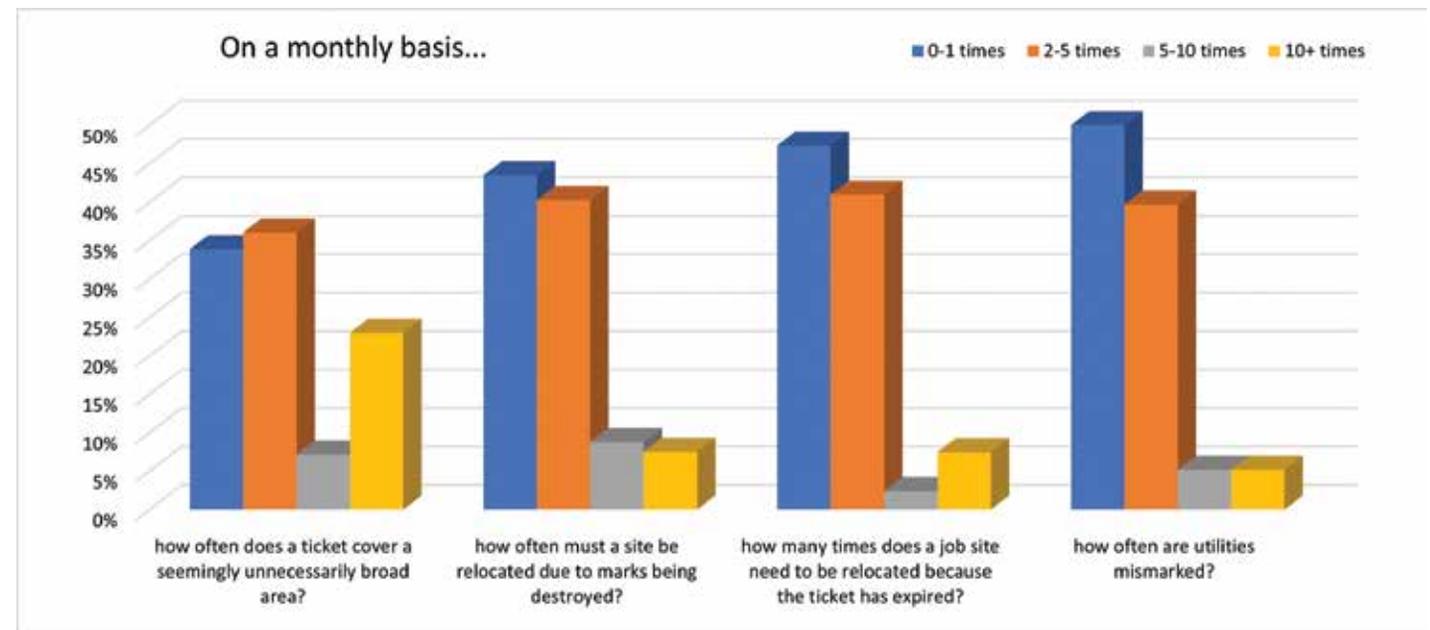
What tools do you use or require for locating buried utilities?

Locators indicate that their primary tool is an electromagnetic locator at 79%, with the second-choice option GPR at only 7%. The Water/Sewer industry was most likely to rely on visual indicators or common sense to locate utilities (38% of those responding with alternative methods).

How much education should a locate technician have?

60% of respondents believe a broad-based locator certification program including both classroom and field testing is necessary, with 14% indicating a third-party training company should be used to ensure no "bad habits." 16% believe company training programs are fine while 11% indicate field training is sufficient.

80% of the Communications industry use the EM locator, while only 48% of Water & Sewer respondents indicated use of the EM locator. Engineers were most likely to utilize GPR at 18%, while those identifying as Govern-



ment/Regulatory (32%) and Public Works (31%) used GIS or A/R to the greatest degree.

On a monthly basis, how often must a site be relocated due to marks being destroyed?

Overall, 43% reported the need for a relocate 1-2 times per month, and 40% 2-5 times per month. 59% of locators report relocating required 2-5 times per month, with 21% reporting 5-10 times, and 8% reporting 10 or more. Those identifying as Communications report the highest percent of 10 or more relocate requests in a month at 22%.

Those identifying as Middle Management (Supervisor, Foremen) or Field Operations (Technician, Locator, Operator) were more likely to report a higher level of relocates (19%) vs Executive (Owner, CEO, COO, CFO, President) and Upper Management (Director, Manager) (11%)

On a monthly basis, how often does a ticket cover a seemingly unnecessarily broad area?

60% of excavators indicate only 0-1 tickets per month are overly broad, whereas locator results are inversely proportional with 61% indicating 10 or more each month. 71% of Executive CEO, COO, CFO, President report 0-1 times per month, while only 28% of Field Operations (Technician, Locator, Operator) agree.

On a monthly basis, how many times does a job site need to be relocated because the ticket has expired?

Logically, 44% of One Call respondents indicate the highest response for 10 or more relocate tickets each month along with 14% of locators and 5% of excavators. 66% of excavators report 0-1 relocates.

Water & Sewer (47%) are the most likely facility owner to see 0-1 relocates each month. The majority of facility owners report 5 or less relocates each month (Communications-71%, Electric-80%, Gas & Oil-72%, Water & Sewer-83%)

On a monthly basis, how often are utilities mismarked?

Regardless of industry or job function, most respondents agree mismarks happen 5 or fewer times per month, with 10% indicating 5 or more times. One Call reported the highest percent of 10+ times at 18%.

Rank the risk these locating issues pose to damage prevention of underground utilities (excluding failure to locate or unreported damage).

Regardless of industry or job function, every demographic ranked "Lack of training" as the #1 locate risk for damage prevention. Regardless of industry or job function, every demographic ranked "Insufficient technology" as the #2 locate risk for damage prevention.

When prioritizing the execution of a locate ticket, which should be the top consideration?

Regardless of industry or job function, Emergency was ranked the top consideration for prioritizing a ticket. Only 9% of all respondents indicated High Consequence facilities first as the top consideration, although 19% of Gas & Oil respondents ranked it first. Less than one

percent ranked Type of facility, Restoration of facilities, or Environmental impact a top consideration.

When hiring a Private/Contract Locator, what is the priority?

Regardless of industry or job function, Quality was ranked as the number one priority when hiring a private/contract locator, although 28% of Engineers felt Risk reduction was the priority and 30% of Excavators prioritized On-time performance. 29% of the communications industry also prioritized On-time performance.

11% of private locators felt price was a priority but only 2% of Executive (Owner, CEO, COO, CFO, President) agreed.



Demographics

14% of respondents identified as Executive (Owner, CEO, COO, CFO, President), 13% Upper Management (Director, Manager), 33% as Middle Management (Supervisor, Foremen), 40% as Field Operations (Technician, Locator, Operator).

5% of respondents identified as Communications, 4% Electrical, 8% Engineering, 16% Excavating, 7% Gas & Oil, 7% Government/Regulatory, 15% Locating, 2% One Call, 4% Other, 11% Public Works, 1% Trenchless Technology and 19% Water & Sewer. (Note that many respondents who identified as a locator in question 1 identified with their industry in question 13.)

99% of respondents were from the USA.

Data from this survey continues to be gathered and analyzed. Visit dp-PRO.com to view the full survey results or participate in other open industry surveys.

AS PART OF OUR CELEBRATION OF THE 50TH ISSUE OF THE DP-PRO, WE THOUGHT WE WOULD REPUBLISH THE VERY FIRST "ASK THE DP PRO" FROM OUR INAUGURAL ISSUE AND RESPOND WITH AN UPDATED ANSWER. THE QUESTION ASKED REMAINS TOPICAL, AND IN THIS CASE, THE ANSWER REMAINS THE SAME.

Q : Is it possible to locate the depth of a facility and, if so, why don't locators provide depth measurements?

A The vast majority of the time, the locator can determine the depth of a facility. In fact, the use of depth along with current reading is one of the steps to determine if the locator has identified the correct facility. A number of factors, including multiple facilities in the area, poor signal and an inability to directly connect to the facility, can cause the reading to be inaccurate. This is one of the reasons that depth is not provided to the excavator. Liability also plays a role in the situation. Who is liable if the depth given is incorrect?

Also, many utility owners will not allow their locators to provide this information. There is a perception that if an excavator is given a depth of 36", for example, that they will dig down 34" with a backhoe before they hand dig. Obviously, this is a horrible mischaracterization of the excavation community, but it only takes one bad apple to ruin the deal for all of us.

According to the author of the original response, published in our inaugural issue, Ron Peterson, Executive Director of Nulca noted, "The more things change, the more they stay the same."

READER RESPONSE

Reducing Underground Utility Damage during Construction (Geoff Zeiss, Fall 2020)

Leo Harry, via dp-PRO.com: Wires when put under the ground surface, in cases of erosion, would be much more dangerous to humans and animals if they came in contact with water, it would tend to electrocute everyone within the immediate area.

- Author Response: Underground electric cables are heavily insulated and often further protected by plastic, zinc, or reinforced concrete conduits and tracer wires to make their location more easily detectable. Electricity is not carried far in water – it depends on the concentration of electrolytes.

Nathan Egginton, via LinkedIn: Developing and maintaining an accurate 3D map of underground infrastructure has potential benefits for other use cases beyond construction such as utility outage management, disaster planning, emergency response, urban digital twins and smart cities.

Ian Olson, Pointerra, via LinkedIn: That's a massive gap in incidents. Is this due to procedural, cultural or technological differences in utility locating?

- Response from Michael A Twobig: You are right, and the numbers speak for themselves. We all have access to similar technologies but the individual states in the U.S. take their own approach. While the state One Call Centers have done a great job in improving the response tracking, asset owner's involvement and underground damage prevention awareness, the ability to fine and penalize flagrant violators is disappointing to say

the least. Just look at the guilty party in the Sun Prairie, Wisconsin fatal event. The violators have not paid the fine, trade under a different name and made a mockery of Best Practices. They are not alone with blame. Fiber buildout continues to build using tier down contract to transfer risk and a quick internet search will highlight many incidents of fiber contractors smashing facilities. It seems no one in the industry sees a pattern. Or maybe they contribute enough dollars to public awareness that it (is) hard to tell the fox from the chicken?

Private Utility Locating and Cross Bore Risks (Staff Report, Fall 2020)

David Heldenbrand, Bison Engineering, dp-PRO.com: Emergency response procedures should be reviewed to determine risks to nearby structures.

Patroller Program Drives Improved Damage Prevention (Daniel FitzPatrick, Fall 2020)

Frank Peverly, PMP, Orange and Rockland Utilities, Inc., via LinkedIn: Great work by Dan and the damage prevention team ensuring public, contractor and system safety.

GPR Consortium (Forrest Sim, Fall 2020)

Andy Kitson, Murphy Surveys, via LinkedIn: Great article. I'm very excited to be attending the Global GPR Congress next year. It's always good to catch up with those in the industry and learn from each other.

- Author Response: I'm super excited to attend the Global GPR Congress, as a GPR professional, as the owner of Enhanced Scanning, and as a member of the board of directors of the GPR Consortium. Read the article on dp-PRO.com to learn more about the Consortium. We will hear talks and participate in panel discussions on GPR-related topics; and take part in the first face-to-face meeting of the GPR Consortium! 



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• STAFF REPORT •

Nick Zembillas

A True Damage Prevention Hero when it comes to the Advancement of Subsurface Utility Engineering

TO SAY THAT SUBSURFACE UTILITY ENGINEERING, LLC CEO NICK ZEMBILLAS HAS BEEN INFLUENTIAL IN THE WORLD OF SUBSURFACE UTILITY ENGINEERING (SUE) WOULD BE A MASSIVE UNDERSTATEMENT.

Nick has spent the last three decades of his professional life shaping SUE standards, educating new markets, and sharing best practices around the globe.

Philip Meis, Owner of Utility Mapping Services Inc, has had the pleasure of knowing Nick for two of those three influential decades, “I first met Nick at a Utah Department of Transportation Engineering Conference around 1997 where he gave a very good presentation on subsurface utility engineering. He was leading Tampa Bay Engineering’s SUE program and was doing a marvelous job explaining and promoting what was becoming a best practice for investigating and depicting utilities for project development.”

Zembillas’s impact in SUE began all the way back at Westmar College in the late 70s, where he was an original member of ASCE 38-02 and Canadian Standard CSA 250A on Subsurface Utility Engineering. He went on to work as a utility engineer at the Florida Department of Transportation, where he helped establish the Joint Project Agreement (JPA) still used by many DOTs today.

Meis believes Zembillas gained rare skills in navigating bureaucratic barriers while working for the DOT, and that those skills have helped spur uncommon action, “Changes within government bureaucracies often occurs at glacial speeds, but Nick

had worked for a DOT and understood how to encourage and implement changes relatively quickly, changes which required altering long established design processes to include SUE practices and standards.”

From the Florida DOT, Zembillas went on to serve as Sr. Vice President of TBE Group, a full-service international civil engineering and consulting firm. At TBE he quickly established a utilities division to introduce clients to SUE. He didn’t limit his influence to the United States, though, as his educational efforts spanned the globe.

Professor Nicole Metje, Professor of Infrastructure Monitoring at the School of Engineering at the University of Birmingham, notes Zembillas’s prodigious influence on the UK’s own SUE guidelines, “Nick brought together the industry in the UK to lobby the Institution



of Civil Engineers and the British Standards Institution to develop utility mapping guidelines in the UK. He was one of the lead authors of PAS128 sharing his experience from ASCE38; Nick has replicated these efforts in Canada and Australia as well as training others worldwide.”

In 2008, TBE Group merged with Australian firm, Cardno, and Zembillas began a role as Sr. Vice President of the Utilities Division, the largest Subsurface Utility Engineering & Utility Consultancy division globally.

In 2013, Zembillas became CEO of Subsurface Utility Engineering, a SUE consultancy with influence in the U.S., Latin

America, Europe, and Australia.

There are a few common threads found in every stage of Zembillas’s impressive career. One, his ability to enact meaningful communication between government agencies and the private sector. He has consistently used his experience in both arenas to accelerate needed changes. Two, his tenacity. Driven by a passion for the advancement of utility mapping, Zembillas has been able to push past barriers and persuade others to join him in the cause.

“It’s not easy to tell career engineers that there’s a better way to do things that is a bit different from their conventional methods,” says Meis, “and for government agencies to spend a bit more money up front to include SUE during design stages in order to alleviate a myriad of headaches and costs during construction.”

Every advancing industry needs people like Nick Zembillas, a force of nature that not only enacts change through sheer force of will, but also by inspiring others in the industry. For many, Zembillas has done just that. He has been generous with his time, consistent with his message, relentless with his action, and the industry stands better for him being a part of it. Thank you, Nick, for your continued work in the advancement of SUE around the world. **DP**

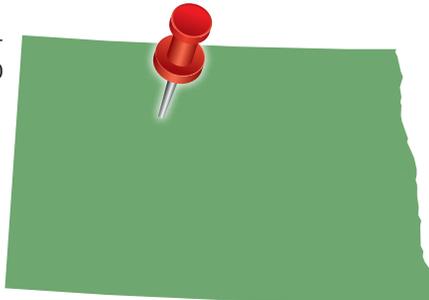
“ Nick brought together the industry in the UK to lobby the Institution of Civil Engineers and the British Standards Institution to develop utility mapping guidelines in the UK.”



NEWS

PSC FINES ELECTRIC COOPERATIVE for One Call Violation

(*Minot Daily News*) – Verendrye Electric Cooperative will pay a \$5,000 penalty for a violation of the North Dakota One Call law that resulted in an injury to a local resident. The North Dakota Public Service Commission agreed to a \$7,500 fine, with \$2,500 suspended for five years based on no further violations.



Verendrye was charged for a violation of the One Call law last December after its contractor failed to properly mark the cooperative's underground line within the legally accepted margin of error. A local resident filed a complaint after hitting a 15-kilovolt power line last July while digging by hand with a post hole digger. The resident had called 811 for line locator assistance and Verendrye's contractor, Summit Utility Services, sent a representative to locate and mark the line. The marking was just outside of the two-foot margin of error, and the resident struck the power line.

Summit has stated its technician acted correctly, using state-of-the-art locator equipment, but the type of line is among the most difficult to detect. The signal on the line didn't show up at the actual location, resulting in the marking falling outside the parameter of two feet on either side of the estimated location. Summit, however, took responsibility for the line repair.

Roanoke's New Combined 811 and 911 Center Opens

(*WDBJ, Roanoke*) – A new combined 811 and 911, 31,000-square-foot facility was opened in August in Roanoke, Virginia. The \$16 million facility will provide a combined space and a partnership the city hasn't seen before: two safety driven services together as one.

The call center floor has police, fire dispatchers, and 811 representatives. "Whenever I would do an orientation for new hires, I would talk about the safety sensitivity of what we do in this organization, how we are no different than a 911 center," said Rick Pevarski, the founding president and CEO of Roanoke's 811 center.

Work inside the facility for 811 employees commenced at the beginning of 2020 but was stopped due to COVID. Features for both 911 and 811 employees will include an open workspace, conference spaces, new technology and a shared gym.

METRONET'S CHUCK MULLER APPOINTED TO OHIO811 BOARD OF DIRECTORS

(*Business Wire*) – MetroNet announced in September that Chuck Muller, MetroNet's Director of Sales and Quality Assurance, was appointed to the Ohio811 Board of Directors. Chuck will represent telecommunications on the Board.

Founded in 1972, Ohio811 is a free statewide system designed to reduce accidental damages to underground utilities by providing a free number, 811, for residents and businesses to call to submit a locate request and have utility lines marked.

MetroNet is a 100% Fiber Optic Company, headquartered in Evansville, Indiana. The company now serves nearly 100 communities across Indiana, Ohio, Illinois, Iowa, Kentucky, Michigan, Minnesota and Florida.

Norfield Development Announces Executive Transition

The Norfield Development Partners, LLC Board of Managers announced in October the departure of former President & CEO Isaac Weathers. Chris Napoletano, having recently joined Norfield as Product Owner, has been appointed interim CEO and will oversee daily operations, as well as focus on Norfield's development of next generation products.

Jennifer Rodriguez was also promoted to Administrative Services Manager and will direct the administrative arm of Norfield during the transition.

"We are excited for the future of Norfield as we begin the process of identifying our next CEO," said Paul Huntsman, Chairman of the Norfield Board of Managers.

The Norfield team works with its partners to develop leading software solutions for 811 Centers, utility operators and excavators. The company was founded in 2013 by Blue Stakes of Utah 811, Colorado 811, DigAlert, Julie (Illinois One Call), Miss Dig 811, North Carolina 811, Ohio 811 and Virginia 811. Shortly after forming, Norfield welcomed USA North 811 in 2016. **DP**

Used appropriately, a trench box, also known as a trench shield, can help protect workers from serious and sometimes fatal injuries if a cave-in occurs. But too often, contractors misunderstand the right way to build and install a trench box, and some take shortcuts that put workers' lives at risk.



Don't count on trench boxes to prevent a cave-in. Trench boxes are designed to protect workers from soil movement, not to prevent soil movement. Always backfill the void between the box and the trench wall to stabilize the shield.

indicators that maybe a trench box may not be the best option. Slide-rail systems or braced sheeting systems may be the better option. Know what your options are.



Follow the manufacturer's tabulated data. The biggest issue we see is not using a box within the limitation of its tabulated data. If the tabulated data says you should use eight spreader pins with eight keepers to hold those pins in place, make sure you have installed all of them before anyone gets in the box.



Critical Trench Box Safety Tips

BY SHANE WAREHAM

If working adjacent to a critical structure (roadway, railroad track, or building) and it is important to eliminate soil movement from under that structure, shoring may be a better option.



Don't assume a trench box is the only way to work underground. There are many options for safely working underground. If the soil is weak, flowing, or has high water content, or if the work will be very deep, these are in-

Another issue is the placement of a box to a depth greater than the maximum allowable depth, based on the soil type.



Watch the bottom and the top. According to OSHA's Technical Manual, OSHA allows a shield to be left a maximum of two feet off of the bottom of the trench, and that is allowed only as long as soil is not flowing around or below the bottom. Also, the box must be rated for the full depth



of the excavation, which would be measured from the deepest part of the trench to the highest side.

OSHA also allows for a vertically sided lower portion of the trench, with a sloped embankment at the top. An 18" minimum roll off protection is required to prevent soil from rolling in over the top.



Replace any damaged spreader pipe or trench box panels.

One of the responsibilities of a competent person is to perform daily inspections on all shoring equipment. If the competent person is unsure of the ability of the equipment to work properly, the equipment should be removed from service.



Understand proper end loading.

A traditional trench shield consists of two steel or aluminum sides, with a minimum of two steel spreaders holding them apart on each end. Manufacturers and their engineers intended for the boxes to be open on each end, with the soil to be sloped out appropriately.

The instructions for the placement, type of material, and other requirements are typically found on Technical Data Sheets.



Stack with care.

Stacking pins must be used to ensure safe usage, preventing the upper boxes from shifting. Also, when stacking boxes, make sure that the boxes are rated for the depths at which they will be used.



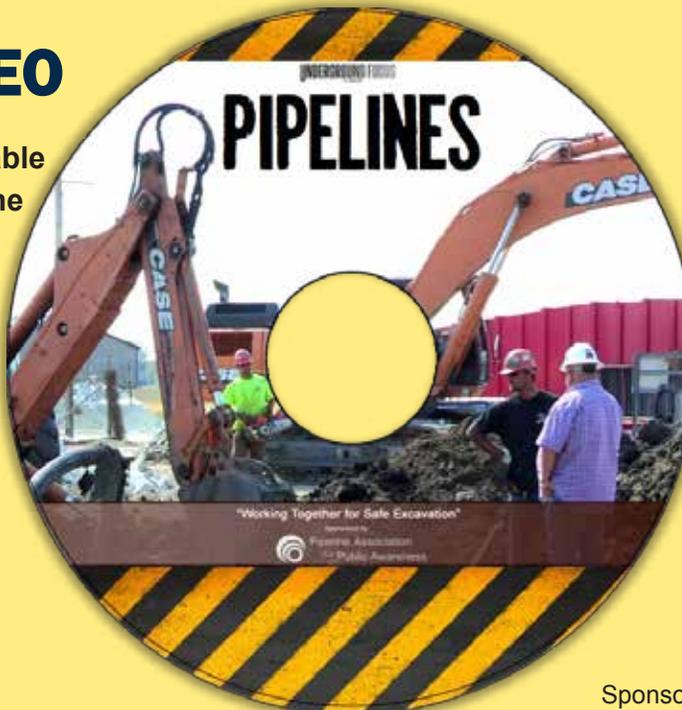
A seemingly small mistake with a trench box could have huge unforeseen consequences. It is always best practice to contact a qualified and knowledgeable expert before starting any excavation project. **UP**

Shane Wareham is a District Sales Manager at United Rentals with over 15 years of experience. Visit unitedrentals.com/solutions for additional guidance to help keep your workers safe.

SAFETY VIDEO

The video contains valuable information about Pipeline Safety:

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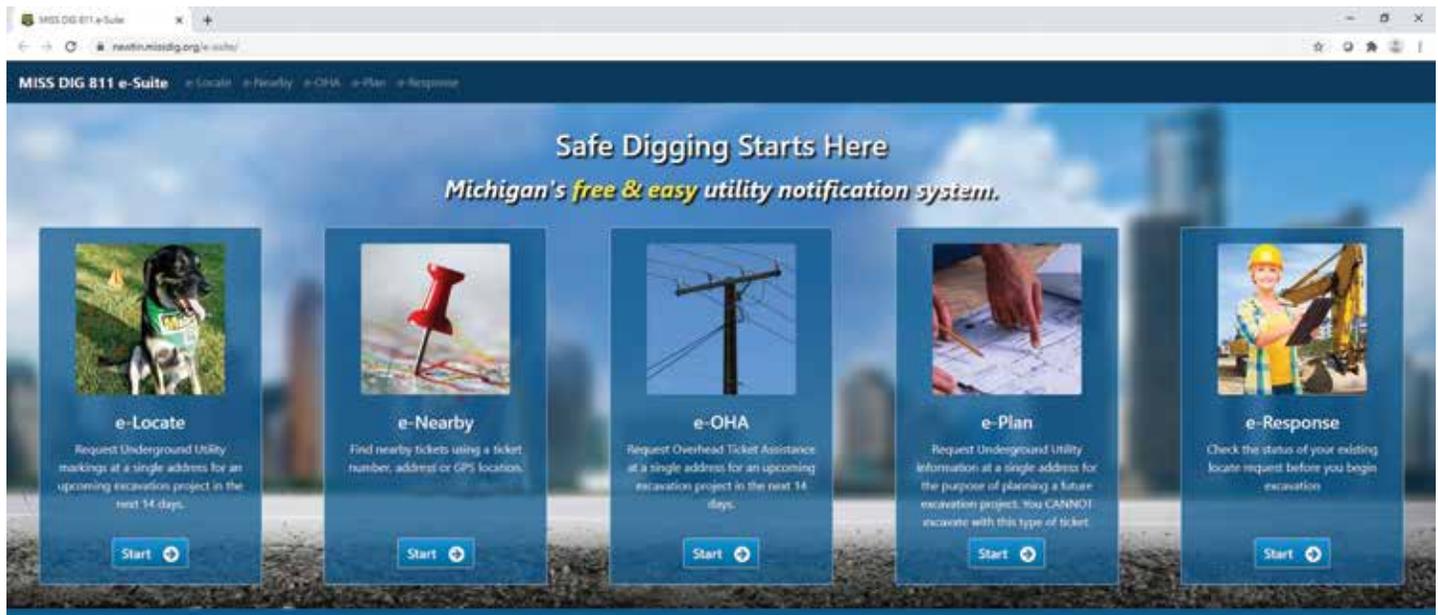
An exceptional video covering the potential dangers and safety precautions related to living and working around buried infrastructure.

The video is accessible at vimeo.com/114175332, on YouTube or at the Pipeline Association's website: www.pipelineawareness.org

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SAVING TIME ONLINE WITH E-SUITE

BY BRIANNA KIRBY

The dig season in Michigan that takes place during the spring and summer months is brief, but hectic. There isn't much time to schedule and complete all excavation projects before winter sets in. This year is even more compressed due to the onset of COVID-19, which has caused delays which could result in the temptation of taking shortcuts. With shortcuts, the utility industry sees an increase in the number of damages to overhead and underground infrastructure, which can result in injury or worse. Surprisingly, large numbers of damages happen with laying sidewalks or staking tents.

One of the ways MISS DIG 811 has assisted during these trying times is through the creation of a collection of online tools called "e-Suite." People may not have the time to wait 30 minutes or more to place a ticket over the phone and thanks to the convenient e-Suite tools, excavators can save time while still following the law.

There are several features of e-Suite available 24/7. These services are available at newtin.missdig.org/e-suite free of charge and do not require an account. Our education team has developed step-by-step instructions for use available on the MISS DIG 811 website at missdig.org/education/e-suite-information.html.

- **e-Locate** is a non-emergency dig notice placed online for single addresses. It can be placed at least three business days, but no more than 14 calendar days, in advance.
- **e-OHA** is an online overhead assistance request when no digging is required. A request is placed when overhead line clearance cannot be maintained at a single address. After placing an e-OHA, the excavator is contacted by a representative from MISS DIG 811 to schedule a meeting with the electric company.
- **e-Plan** is a design ticket for determining the specifics of a project at a single address. Facility owners are required to respond within 10 business days to provide blueprints, records, or drawings for the proposed address. This cannot be used as a dig notice.
- **e-Nearby** displays ticket information for work being done close to your area that can be searched by ticket number, address, intersection, and GPS location. Homeowners and businesses use this tool to find out why flags are located on their property, however, they cannot "piggyback"

off an existing ticket already in place for the work site.

- **e-Response** is a tool to access Positive Response, which shows the status of your dig notice and can be checked by ticket number any time after the date and time the ticket legally clears. The locators' responses are color coded **RED** (DO NOT DIG), **YELLOW** (TALK TO THE FACILITY OWNER/OPERATOR FIRST), and **GREEN** (DIG SAFELY). The GREEN responses are either MARKED or NO CONFLICT.

In Michigan, placing tickets and checking Positive Response before excavating is required by Public Act 174. The e-Suite's 24/7 availability gives people the ability to place tickets, check Positive Response, and more according to their own schedule. These services help people save time with their excavation projects, follow the law, and be safe.

In addition to e-Suite, MISS DIG 811 will be using new technology for education and safety promotions. This includes a weekly podcast with various topics and interviews, as well as a videocast. MISS DIG 811's first "Digging In" podcast was released to the public in October. New episodes are available every Monday after 10:00 a.m. on a variety of platforms. Check in out: <https://digging-in.simplecast.com/>. It's exciting to see MISS DIG 811 make more resources available to the public! **DP**

Brianna Kirby is Education Coordinator with MISS DIG 811. She can be reached at bkirby@missdig811.org.



TWO SIDES OF THE IMPORTANT COIN FOR WATER WORKERS

BY GEN HANDLEY

For a long time, those working in the larger water industry have provided a service that many of us take for granted. We expect to have a shower in the morning. We depend on clean water for cooking and hydration. Particularly with COVID-19 threatening our workplaces, more must be done to protect these workers.

What isn't as well known is that damage prevention goes hand-in-hand with worker safety – two sides of an important coin. For example, if the water plant's infrastructure is compromised, the safety of the workers could be compromised as well with increased risk of fires, slips, trips and falls, chemical and gas poisoning, collapse of trenches, waterborne disease, and even drowning. Here are some steps you can take to prevent injuries and infrastructure damage where your team works.

Risk Assessments

The first step to protecting workers is to conduct risk assessments regularly to identify any existing threats and look at ways of mitigating them. This includes looking at any damage to infrastructure, helping you anticipate any issues down the road. While it might seem daunting to constantly conduct these assessments, you will soon establish a rhythm and discover structured ways of doing them.

Training and Education

It is easy to write a new training manual or policy and email a PDF to your team. But to truly improve safety, you need to provide training and education so that they understand – and believe – that measures are in place for good reasons and they were shown how to perform their job in a safe manner. Part of the training should teach workers how to identify and anticipate structural problems at the plant or wherever they work, such as calling before they dig when out in the community.

Proper Personal Protective Equipment

This might be an obvious one, but you would be surprised how often outdated personal protective equipment (PPE) is still being used. As part of the risk assessments mentioned earlier, any new PPE should be identified and provided. When there's damage to a pipe, workers can be struck by projectiles and high-pressure bursts so they need to have the best protection available. The condition of your infrastructure and facilities should somewhat influence how you equip your team.

Worker Safety Program

While the latest PPE can add up and get expensive, a successful worker safety program doesn't have to be. This includes providing fall detection, a manual or automated check-in system, as well as using existing devices so no more purchasing is necessary. Training is crucial and should be incorporated into the program as a fun and engaging aspect of your safety culture.

Work Safety Culture

Maybe the most important element to protecting your workers is

building a strong work safety culture in your organization. This is a workplace where your team feels comfortable to speak up about any safety and damage prevention-related issues, including unauthorized construction and digging, as well as potentially dangerous practices from co-workers. Your team can recognize safety issues better than anyone and it is in a company's best interests for them to have a loud voice in this area. **DP**

Gen Handley represents SafetyLine, a cloud-based worker safety tool for employees working alone, in isolation or hazardous situations. Learn more at safetylineoneworker.com.



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A joint venture between Infrastructure Resources, LLC & Bigman Geophysical

How we moved our Entire Work Force from the Office to Home Almost Overnight.

• PART I •

BY CHRIS STOVALL
& ALEX MATWAY



When the pandemic hit, many businesses closed down and others rushed to set up a work-from-home infrastructure. We count ourselves fortunate that 811 was considered an essential service so we were able to continue operations alongside the many stakeholders in our industry that continued to go to work every day. We recognize that the business of damage prevention is a big deal. The role we play in the shared responsibility of safety and damage prevention is critical and we were determined to continue service uninterrupted as we moved our work force of over 200 people to work from home. Here are some of the things that have helped us along the way.

We made the move almost overnight, though it was really years in the making. Prior to COVID-19, we already had about 40% of our staff (mainly frontline agents) working from home. It is a part of our business continuity plan and it helps keep overhead cost down. Having done this for some time, it made the transition much easier. The IT infrastructure, software applications, and established management processes allowed for a seamless transition and uninterrupted service.

A few of the items that helped us make this move included an established VPN (virtual private network), IP-based phone system, direct access for managing remote workstations and devices, and web-based contact center software. Having these in place were vital in ensuring our success. Additionally, we have an IT staff that is practiced in providing support in a remote environment.

We also had software that enabled collaboration and connectedness: Microsoft Teams and Yammer (Yammer is a Microsoft product used by companies as a social networking tool to connect and engage across an organization). We are able to provide continuous education opportunities to our employees through LinkedIn Learning and an internal Learning Management System, and we have “office hours” where leadership works with a web cam on and people can “drop in” to chat.

The last key element in being able to pull this off is an established management process. Many of our managers have years of experience managing a work-at-home force. Managers have regular one-on-one meetings with their direct reports using web cams to ensure everyone maintains a personal connection and to avoid miscommunication. We hold regular virtual town hall meetings to communicate to the entire com-

pany. We have clear KPIs and metrics in place so employees and managers know what is expected and can easily measure whether targets are being met. Lastly, well defined functional accountabilities make everyone’s job easier. So far, it seems to be working for us operationally, technologically, and financially. It remains to be seen if we can sustain this over a long period of time.

For about 40% of our staff, working from home has been a way of life for years. They are accustomed to the requirements and discipline needed to be successful. For the other 60% this is new territory. I have seen many reports across the United States in many different industries and different jobs where the mental health of remote workers is on the decline. Losing the connection with fellow co-workers, missing out on in-person collaboration, and not having a clearly designated and separate space to work every day is taking its toll. We will be paying very close attention to the well-being of our staff over the next few months and we are working on providing resources to help them in this new normal. We will report back on this effort in Part 2 of this article. Until then, stay safe. 

Chris Stovall is President & CEO of Texas 811. Alex Matway is his Executive Assistant. They can be reached at alexmatway@texas811.org.



Excavation SAFETY: Mobilize your Pre-Excavation Checklist

BY LONNY OSWALT

Mobile automation of your pre-excavation checklist helps reduce incident rates. Entering data into a pre-excavation checklist app, rather than a paper form, allows for real-time reporting and predictive analysis to identify risks and put mitigating actions in place before an incident happens.

Moving from a paper pre-excavation checklist to an automated checklist ensures your safety protocol is followed step-by-step, with no deviation. Automating the checklist allows you to customize a checklist based on the dig site and any other requirements unique to a particular job.

Mobile automation of your pre-excavation checklist is simple. There are numerous solutions available; you just need to choose the right one for you.

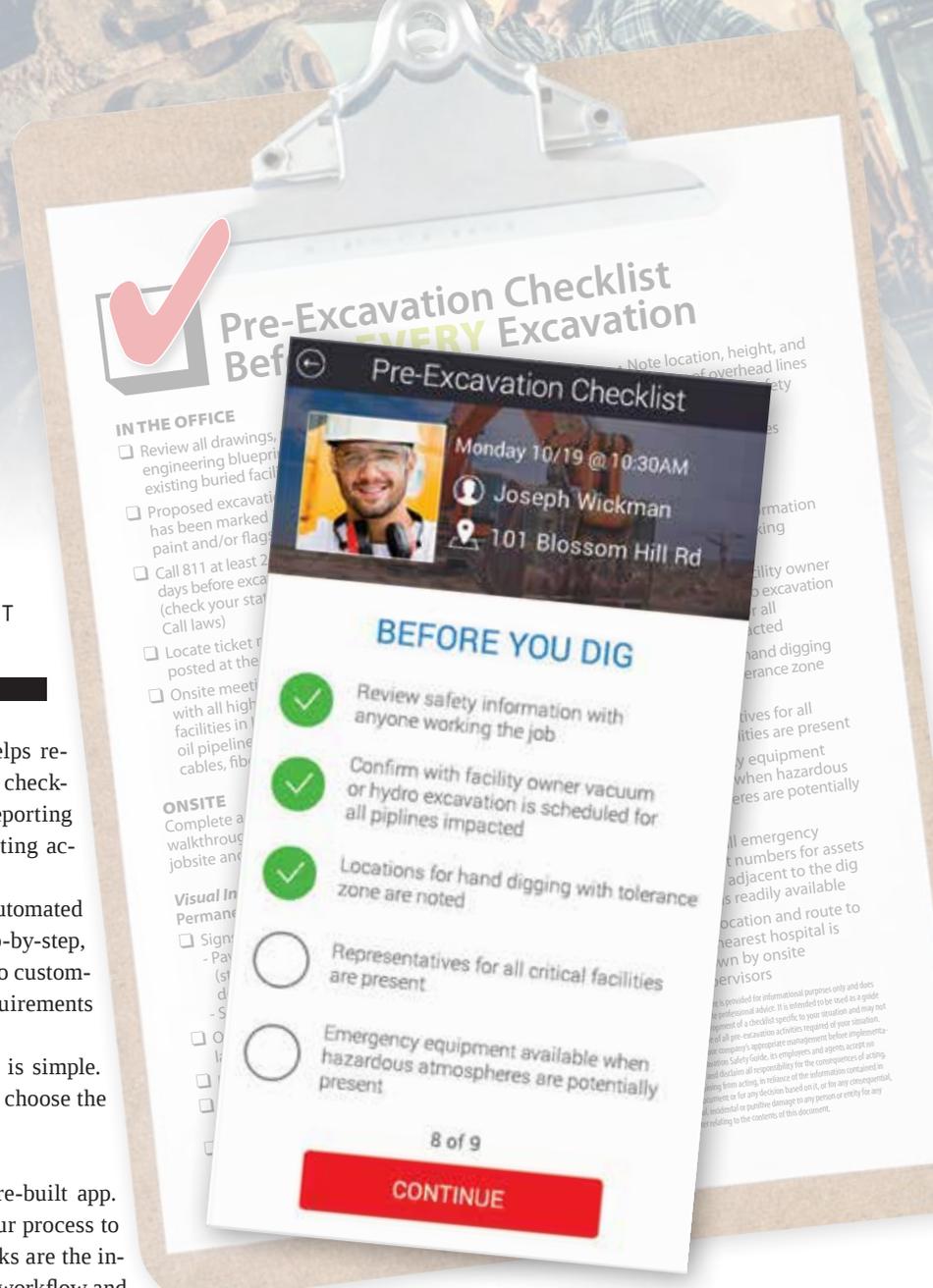
Option 1 is an off-the-shelf solution, meaning a pre-built app. This option can work great if you are able to change your process to work within the app's parameters. The primary drawbacks are the inability to make changes in the app to accommodate your workflow and getting the data you need for reporting.

Option 2 is building a customized app with developers. A customized pre-excavation checklist app will get you everything you want and more, however, depending on what devices you'll be using, this will most likely require more time and money.

Option 3 is a form builder. This option allows you to get your pre-excavation checklist app up and running quickly and easily. There are templates available that allow you to build a multitude of apps to replace checklists and paper forms. The biggest drawback is this option typically does not store data in a database, which means you cannot view trends and metrics. Form builders typically do not support more complex business logic or integration into backend systems.

Option 4 is a no- or low-cost mobile app development platform that allows anyone who knows how to use Excel to build or update apps such as a pre-excavation checklist. This type of platform will allow you to quickly and easily build and integrate any app you want, regardless of how complex your workflow or reporting requirements. With this option, you can automate additional processes such as safety incidents along with your pre-excavation checklist.

Selecting the right solution to automate your pre-excavation checklist is straightforward.



After determining potential solution providers, you will need to do six things:

1. Gather your pre-excavation checklists
2. Document what is and is not working about the checklists
3. Identify the data you need and when you need it to manage your digs
4. Provide the checklists, document of what is and is not working and your data/reporting needs to solution providers
5. Request a demo to see the solution tailored to your specific requirements based on the information you provide
6. Make your selection

It is also important that you choose a solution that will meet your specific needs within your budget. **DP**

Lonny Oswalt is Chief Executive Officer of Mobile-Frame and invites you to visit MobileFrame.com if you are looking for help on automating your excavation safety program.



Call 811 Before You DIG!

BY KEMP GARCIA

Wait a Minute,
they did not Locate
Everything?





Call 811 Before You DIG!

Editor's Note: This article is the author's response and update to the article, When 811 Does Not Cover it All: Preventing Damage to Private Utilities, originally published in the first issue of dp-PRO. Read the original article at dp-pro.com/2010-q1-issue.

I would like to say a lot has changed about communication of existing private utilities in the ground since 2010, but in reality, I still get the calls from people trying to inform me that 811 locate responders do not go past the sidewalk or onto private property at all. This is not just from excavators but even more so from homeowners. With all the positive 811 advertising, many individuals believe that if they contact one call all the lines on their property will be located. Sometimes, they get very upset to find out that they must pay for a service they thought was free. "That is how it is advertised!" After a little conversation, most people tend to understand. Here are some of the value-added services a private locator can bring to its client.

For 10 years, WA811 and the Call Center have had a list of private locators on the different websites. I get a lot of calls from this list. It did not cost anything to get added and it generates a fair amount of business.

At times when we get onsite, we are asked if we have plans of the underground utilities on the site. The quick answer is we do not. Even if we did, they are often less than accurate. When a client provides us with plans, I do not rely on those entirely as, in most cases, they are less than accurate. I was on an active new construction site recently with lots of new underground utilities in the ground. They did not have any plans to account for those lines.

Locate equipment has developed for sure. More companies are making multi-frequency pipe and cable locators. There are also rechargeable batteries for units. Some makers have integrated GPS into units. These are all nice additions. I personally do not use the rechargeable batteries or the GPS for the pipe and cable locator currently, but I do see this advancing and creating value-added results for clients. We have GPS integrated on our ground penetrating radar unit and this is a value-add for sure.

We are also adding more damage prevention pre-construction for our clients. We will, at times, verify 811 locates without putting paint on the ground. I always require 811 contact to be completed prior to us showing up onsite. We have a good working relationship with the different 811 responders. If we see no locates or if we question the markings on the ground, we make a call for our client to the locating company responsible for the utility in question. That is again added value by having us onsite.

We do a lot of work for environmental consultants who are not underground utility savvy but require drilling into the ground to determine if contamination exists. We are there to help them reduce their

risk. I was on a site a couple of months ago and the client said, "I always learn about underground utilities when we are on site together." That was great to hear.

I, too, am always learning, even after 28 years. My three-year-old daughter is a backseat driver, asking me, "Are we going this way?" Underground utilities are a lot like her - as soon as you think it is going in a particular direction, it diverts on you. That is why, with knowledge, you let the equipment do the work. **DP**

Kemp Garcia is Business Development Manager with Linescape of WA, LLC. He can be reached at kemp@linescapellc.com.



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Benefits of a Virtual Event

- Whether at your desk, in your car, at your favorite coffee house, or even curled up on the sofa, you can attend from anywhere you have internet access!
- Live Q&A on a variety of sessions allow for the same interaction with presenters and other delegates you find at live events.
- A selection of on-demand sessions to choose from ensures you can access the sessions you want, when you want.
- With sessions available 60 days post-event, you have the opportunity to participate in more sessions than ever before!
- With chat rooms, scheduled networking events, and live chat features, you can talk with colleagues continually to share insights and observations.
- With no travel costs, company budgets can allow for more coworkers to participate.

**Expo Hall open 8:00 am - 5:00 pm (CST),
Tuesday - Thursday.
Live chat with sponsors during
dedicated expo hours.**

Tips to Get the Most Out of Your Virtual Experience

- Watch the orientation video so you know how to navigate the event platform.
- Log in early and ask questions before the event starts.
- Prioritize the time to be truly present in the experience, engaging with the sessions and presenters.
- Use chat and other networking tools regularly to connect with other delegates and build your network.
- Take advantage of Dedicated Expo time to participate in prize drawings, product demonstrations, or other activities. Outside dedicated expo hours, you can always leave a message with a sponsor.
- Take time to visit with all the sponsors for information on the newest trends and technologies in the industry. Watch videos and download collateral.
- Find a comfortable space and minimize distractions. Take notes and don't "multi-task".
- Study the agenda and create your schedule so it is easier to stay on track.
- Attending networking activities is critical to creating insights and raising your excitement and enthusiasm. Participate fully!

Events and Activities

- **Networking Breakfast:** Bring your breakfast and join one of many networking chat rooms. Each chat room offers a different moderated topic of conversation. Pre-registration is not required, but number of participants may be limited.
- **Concurrent Sessions:** Scheduled sessions including live Q&A with the presenter. Choose from several topics in each time frame.
- **Dedicated Expo:** Time is set aside several times each day to visit our sponsors. During this time, sponsors are available for live chat and many will be offering special prize drawings, product demonstrations, or other activities for you to participate in! Visit booths for individual sponsor schedule of events.
- **Networking Lunch:** Bring your lunch and join one of many networking chat rooms. Each chat room offers a different moderated topic of conversation. Pre-registration is not required, but number of participants may be limited.
- **Networking Chat:** Topics vary from the fun to the fundamental. A casual, fun way to end the day with colleagues. Feel free to bring your favorite happy hour beverage! Pre-registration is not required, but number of participants may be limited based on scheduled activities.
- **On-Demand Sessions:** Pre-recorded sessions you can watch at your convenience. On-demand sessions will be available for 60 days post-event! Many scheduled concurrent sessions will be available for on-demand viewing after the Conference ends.

Agenda (All times CST)

Tuesday, April 6

8:00 am – 8:45 am	Networking Breakfast
9:00 am – 9:45 am	Plenary Session
10:00 am – 10:45 am	Dedicated Expo
11:00 am – 11:45 am	Dedicated Expo
12:00 pm – 12:45 pm	Networking Lunch
1:00 pm – 1:45 pm	Concurrent Sessions
2:00 pm – 2:45 pm	Concurrent Sessions
3:00 pm – 3:45 pm	Dedicated Expo
4:00 pm – 4:45 pm	Networking Chat

Wednesday, April 7

8:00 am – 8:45 am	Networking Breakfast
9:00 am – 9:45 am	Plenary Session
10:00 am – 10:45 am	Dedicated Expo
11:00 am – 11:45 am	Concurrent Sessions
12:00 pm – 12:45 pm	Networking Lunch
1:00 pm – 1:45 pm	Dedicated Expo
2:00 pm – 2:45 pm	Concurrent Sessions
3:00 pm – 3:45 pm	Concurrent Sessions
4:00 pm – 4:45 pm	Networking Chat

Thursday, April 8

8:00 am – 8:45 am	Networking Breakfast
9:00 am – 9:45 am	Plenary Session
10:00 am – 10:45 am	Dedicated Expo
11:00 am – 11:45 am	Concurrent Sessions
12:00 pm – 12:45 pm	Networking Lunch
1:00 pm – 1:45 pm	Concurrent Sessions
2:00 pm – 2:45 pm	Dedicated Expo
3:00 pm – 3:45 pm	Concurrent Sessions
4:00 pm – 4:45 pm	Networking Chat

Using Data and Trends to Make Decisions

• BY SUSAN BOHL •

ADVERTISING IS not my strong suit, but when it comes to using data and trends to make decisions, I am all over it. In 2018, OKIE811 began noticing a trend where private contractors were not submitting the locate request or were having the homeowner submit the locate request on their behalf. Another issue - they were not waiting the required time for all the underground lines to be located and marked. If an underground line were hit or damaged, the liability fell to the homeowner and they would contact us very upset that they were having to pay for the damages.



We decided it was time to put together a targeted awareness campaign focused on private contractors with specific messaging. We created a :15, :30, and :60 second commercial showing the contractor being hired by the homeowner and talking about it being his responsibility to contact 811. The commercial airs on ESPN2 during key sporting events. To see the full video, go to https://www.youtube.com/watch?v=_tCIBefng9E.



In 2018, we also had a change in our One Call law that now requires the homeowner to contact 811 before excavating when the digging on their property is within the public or private easement. As a part of our targeted awareness campaign, we wanted homeowners to know if they did not have underground lines located and marked, and they hit a line, they would be responsible for the damages.

We put together another commercial that focused on the repair cost associated with most underground utility lines. We used a drone to fly over the houses where we were talking with the homeowners about how expensive the repairs could be. It was a great visual that came across well when aired.

Since airing these two commercials, we have gone from processing an average of 6,250 homeowner tickets a month to averaging 8,300 homeowner tickets a month! This is a 33% increase during the peak dig-

ging months in Oklahoma. So, we believe our messaging is being received by the intended audience.

“As a part of our targeted awareness campaign, we wanted homeowners to know if they did not have underground lines located and marked, and they hit a line, they would be responsible for the damages.”

To see this video, go to https://www.youtube.com/watch?v=8_IF9ZSgxiQ.

It is encouraging to see the results of our planned targeted awareness campaign and that our messaging is being received. Looking at trends and realizing the importance of video and targeting the message to the intended receiver helped us achieve the desired results. What trends do you see happening in your area? 

Susan Bohls is Executive Director for OKIE811. She can be reached at sbohl@okie811.org.



CenterPoint Energy gets Tastefully Creative with 8/11 Day Outreach

• BY JOSHUA BEACH •

TO CELEBRATE 8/11 DAY, CenterPoint Energy partnered with Kona Ice trucks in select cities across their eight-state territory to deliver ice cream treats to local community members. Twelve different trucks decorated with 811 messaging were escorted by CenterPoint Energy employees. Before digging into their treats, patrons were reminded to contact 811 before starting any outdoor digging projects.



community members at hardware stores, in areas with heavy construction activities and in densely populated residential neighborhoods. The effort even caught the attention of media outlets in some states.

In addition to the ice cream trucks, CenterPoint Energy promoted 8/11 Day through radio advertising, earned media and delivering pre-packaged, 811-themed cookies to local news outlets, emergency

responders, excavation companies and government officials. This effort led to a blitz of social media posts from these influential stakeholders promoting natural gas safety with their audiences.

“Since we couldn’t gather people together for natural gas safety outreach as we have in previous years, we wanted to bring the fun to our fellow community members on an individual basis,” said Ashley Babcock, CenterPoint Energy’s director of damage prevention and public awareness. “The Kona Ice trucks were an excellent way to create a memorable moment around natural gas safety.”

“I’m blown away by the amount of traffic we saw on social media and through the news related to our efforts. I’m proud of the team for working through some unique challenges to make this year’s 8/11 Day a success, and I’m ecstatic about building on these efforts to make next year even better,” said Babcock. 

The Kona Ice trucks were escorted along pre-planned routes to engage



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Natural Gas Transporter Uses Geofencing to Share Safe Digging Message

• BY CASEY STEMPIEN •

AS A LEADING transporter of natural gas to America's heartland, one of Southern Star Central Gas Pipeline's passions is finding new and creative ways to promote public awareness across the company's footprint, which stretches approximately 5,800 miles across multiple states in the Midwest and Mid-Continent regions. This past year, Southern Star utilized Geofencing to spread the important message of safe digging.

Geofencing is the practice of using GPS and/or RFID to reach audiences within a specific geographic boundary. Once a mobile device enters this boundary, triggers can be set for actions such as sending a text message, social media advertisement, or app notification.

Working closely with Enertech, a Public Awareness liaison, Southern Star implemented its first-ever Geofencing campaign. This campaign was directed at the company's many stakeholders, including the affected public, public officials, emergency responders, excavators, and farmers.

Geofencing campaigns have many benefits:

- **Targeted Deployment**
- **Targeted Schedule**
- **Quick Deployment**
- **Multiple Touches with One Message**
- **Analytics**

Southern Star's Geofencing outreach campaign focused on the importance of "Calling 811 Before You Dig," which is required by law before starting any digging project in the targeted states of Kansas, Oklahoma, and Missouri. High school football stadiums near Southern Star's pipeline were Geofenced and deployment was scheduled for Fall 2019 in the months of September, October, and November – months when the high school football season is at its peak.

"We felt that reaching out to individuals at local high school football stadiums would be a great opportunity to reach our stakeholders," said Jonathan Tabor, Integrity Management & PHMSA Compliance Leader at Southern Star.

The deployment of this Geofencing campaign took approximately two weeks and Southern Star received campaign analytics each month to track performance. A visually appealing advertisement was used to grab the audi-



ence's attention. When clicked, stakeholders were brought to Southern Star's company website. This landing page contained several safety brochures that gave more information to each stakeholder group.

The analytics gathered during the campaign consisted of Impressions and Clicks for each Geofenced area. Impressions can be described as how many times the advertisement was served on a device. A Click is how many times the advertisement was clicked, which brought stakeholders to Southern Star's landing page. Once this data is gathered, a CTR (Click Through Rate) is

established. CTR is total Clicks divided by total Impressions. The national average is 0.07%.

The following analytics were gathered from Southern Star's Geofencing Campaign:

- **SEPTEMBER**
 - 123,000 Impressions
 - 146 Clicks
 - 0.12% CTR
- **OCTOBER**
 - 120,000 Impressions
 - 116 Clicks
 - 0.10% CTR
- **NOVEMBER**
 - 113,000 Impressions
 - 163 Clicks
 - 0.14% CTR

Southern Star had great success with its first-ever Geofencing campaign, which helped educate stakeholders on the importance of "Calling 811 Before You Dig." This campaign, along with other Public Awareness Outreach programs, resulted in a dramatic decrease in near misses and damages across the Southern Star footprint. To continue emphasizing the importance of safe digging through its outreach efforts in the future, Southern Star hopes to implement a Geofencing campaign at home improvement stores near the pipeline's footprint. **DP**

Casey Stempien is Integrity & PHMSA Compliance Analyst with Southern Star. She can be reached at Casey.stempien@southernstar.com or 270-315-0795.



Dear Friends and Colleagues,

Against all expectations, the coronavirus (COVID-19) pandemic continues to seriously affect all areas of life. Most of us had hoped to see a return to live events by 2021, but for the safety and health of all, it continues to be vital to limit our social contact and avoid large gatherings.

Infrastructure Resources' driving passion is *Saving Lives through Education*. For us to continue planning a live event in the midst of the current upheaval would not promote this value. We have, therefore, made the difficult decision to cancel the 2021 Global Excavation Safety Conference LIVE event.

While disappointing, we know you understand how important it is for us all to work together responsibly to keep everyone safe.

We have no doubt we will be back live in 2022 in Phoenix, Arizona, March 1-3, and thank our event hosts, Arizona 811, for welcoming us to the Grand Canyon State.

In the meantime, we invite you to participate in these upcoming events designed to educate and inform everyone engaged in damage prevention, public awareness, and excavation safety:

- **Damage Prevention Week, March 22-28, 2021**
A week-long virtual celebration bringing together industry stakeholders to discuss new ideas and promote ways to prevent damage to our underground and overhead infrastructure and improve safety in the excavation community. Including in-depth courses, industry meetings and interactive vendor outreach opportunities, Damage Prevention Week is a great opportunity to stay connected with the industry.
- **Global Excavation Safety Conference VIRTUAL, April 6-8, 2021**
Global ESC VIRTUAL includes education from our LIVE event, but also offers its own diverse selection of education, access to the important product and service providers you need to connect with, and unique networking opportunities not found anywhere else. Networking is taken to a whole new level with three scheduled networking times each day. Our sponsors host showrooms which offer a robust schedule of fun and interactive activities you can participate in and learn from.

Like you, we are disappointed that we will not be able meet in person this March, but we thank you for your understanding during these unprecedented times. Please contact us at info@emailir.com or 866.279.7755 if you have any questions. We look forward to connecting with you online at these events and rediscovering the in-person connection next March.

Please stay safe,

The team at Infrastructure Resources, LLC

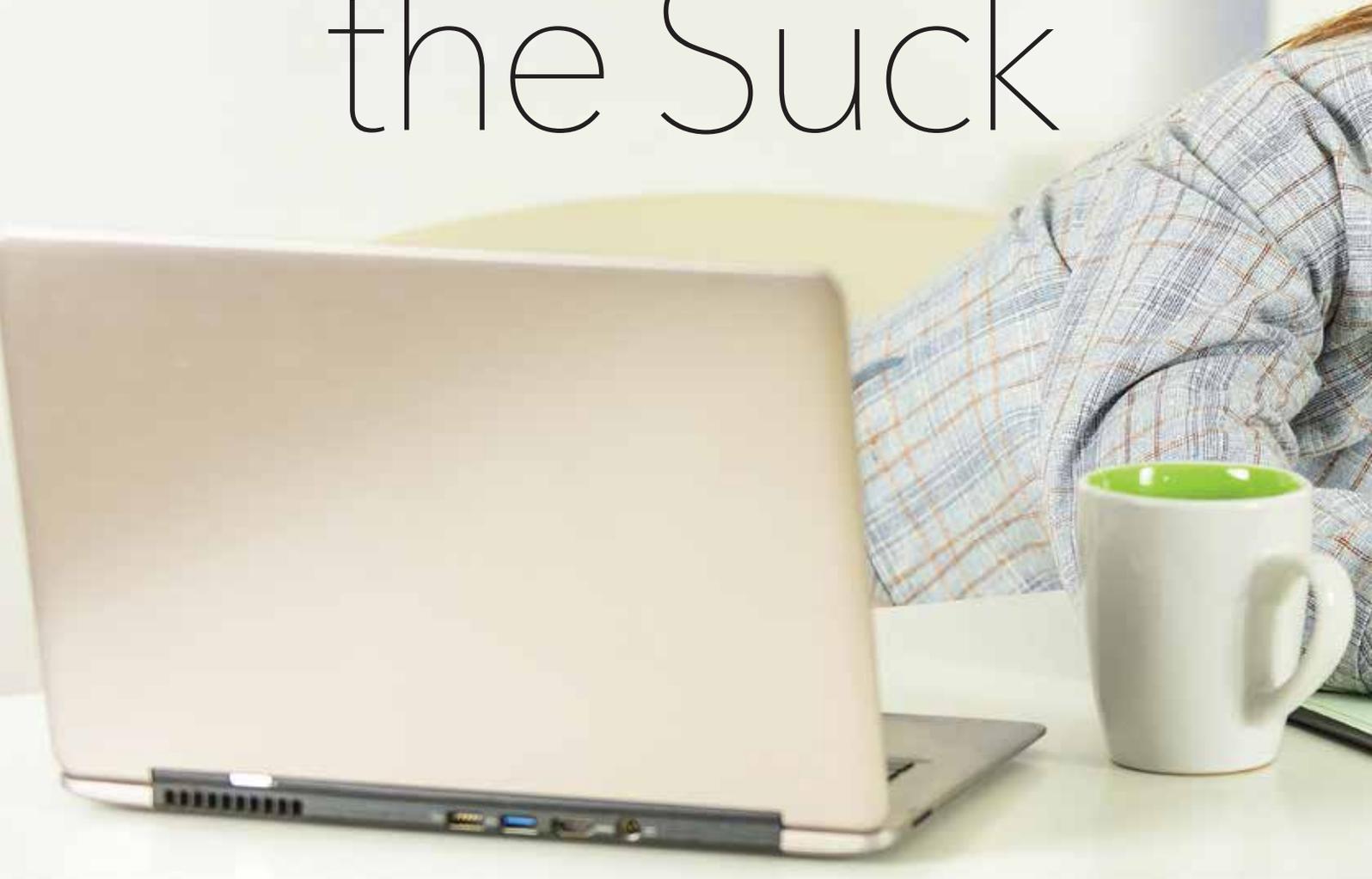
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BY JOHN BRIX

Embracing the Suck



My portfolio is filled with a very diverse set of careers and because of that, I can speak firsthand when I say the most important aspect of fatigue management is cultural management. How tired, how exhausted or on the flip side, how awake and energized your workforce is falls completely on the culture your company has cultivated. I will walk you through my experiences working for different organizations and how those subcultures affected the base of how fatigue was managed.

My first career was in law enforcement, and fatigue management is more of a cultural aspect of “embracing the suck”. Odd shift rotations, continual alteration of shifts to match “the needs of the service” and no real fatigue management program in place are all direct indicators to the culture towards fatigue management in the police service.

We did have “quiet rooms” designed for us to get some sleep if needed but we all knew if you used it, the stigma would be that you were lazy, weak and not part of the team. The rooms were dirty, stuffy and usually stacked with storage items. The rooms were being supplied as a fatigue management tool, but it was more than apparent that using them was not culturally acceptable.

As a cop, functioning with a few hours of sleep on a regular basis and being awake for more than 24 hours at a time was a regular occurrence. It was a culture of bravado and machismo; earning bragging rights on how little sleep we could function. But it was the high-

est risk work I have ever done; fatigue was playing Russian roulette with everyone's life.

When I was working in oil and gas, it had a little bit better culture because if you did not get eight hours off between shifts, you were not allowed to work. The level of risk to the worker was recognized as increasing dramatically with lack of sleep but what wasn't recognized was if someone was feeling fatigued at work, the idea of properly managing that fatigue was not culturally acceptable. There was no way you could get a brief nap in to feel recharged or safer. It was a culture of “you better go to bed early” at the end of the shift but continue to work at full production while you are here. The oil and gas world had a “cowboy up” culture towards fatigue management, even though the work in the oil and gas industry was fraught with risks and various attention-needed processes. Fatigue could be deadly and costly.



“ We did have ‘quiet rooms’ designed for us to get some sleep if needed but we all knew if you used it, the stigma would be that you were lazy, weak and not part of the team.”

Now working in the construction IT industry, building huge mega structures, there is a culture valuing quality of time, not quantity of time. It is a culture based on understanding not about how many hours you work, but what you produce and if you meet your expectations. We have quiet rooms, sleep pods and massage chairs. We have an amazing culture that if you choose to take a 20 minute nap, people commend such self-care. If you are nodding off or looking exhausted, supervisors will tell you to get a recharge in. Fatigue in this industry can be costly because it is a culture of peak performance and it recognizes the loss of efficacy that occurs when fatigued.

Now that I have had the chance to experience the difference in true fatigue management, I found an ironic correlation to how the culture towards dealing with fatigue and the level of risk that the work entails. It seems to follow that psychological phenomenon that if people live in an earthquake prone environment, they focus less on that looming danger. Having such high-risk work seemed to create a culture where we fail to recognize and deal with the increased risk of not being rested enough.

Seeing how fatigue is managed with my new employer, many of the preconceived notions I started with when I entered the IT industry changed. I changed my views when I saw how successful it was because of how different fatigue management and a productivity culture was. I saw firsthand that part of their fatigue management culture was to manage your fatigue, not simply grab another cup of coffee to artificially stimulate you for the next few

hours. Watching this new culture, I saw that no one is abusing the quiet rooms, sleeping countless hours away while at work. No one's performance is lowered and there is a positive gain on production.

I have seen how recharged, how engaged and how energized workers are if they are given the chance to get a moment of rest in if they need it.

We need to pay attention to how people's interpretations of risks are shaped by their own experience, personal feelings and values, company values, cultural beliefs and interpersonal and societal dynamics. Through this we can cultivate a new path forward, increasing productivity, increasing worker engagement, reducing worker burnout, reducing the chance of worker injury and liability. With the change of culture, we can finally embrace the idea of true fatigue management.

We need to follow the motto, “If we talk the talk, we need to walk the walk.” 

Workplace injuries can be a significant burden for safety professionals. Not only can injuries cause considerable pain for the employees involved, they can also reduce worker morale, hinder production and output, hurt recruitment, and cause significant legal and regulatory headaches. In short, nothing is more important for a business's success than worker safety.

As the seasons change, they bring a new set of challenges and potential hazards to the jobsite. As a safety professional, it is essential to stay on top of the latest footwear technologies to ensure workers have adequate protection. In the winter months, frigid temperatures, snow, and ice often make getting work done safely even more difficult, requiring additional considerations from a personal protective equipment (PPE) perspective. In these cases, whether it's to avoid slips, trips and falls on icy surfaces or protect against exposure-related

*** WATERPROOF SYSTEM.** A new season may bring increased rainfall or wet snow that can make workers cold and uncomfortable if their work boots lack a waterproof system. To ensure feet stay dry in wet conditions, go with a work boot that uses a three-layer waterproofing system. A lining helps move moisture away from the foot to keep it dry while an open-cell foam provides additional cushioning and a comfortable fit. Lastly, a waterproof bootie acts as a barrier to keep water out to ensure a complete waterproof system.

NEXT GENERATION COLD-WEATHER FOOTWEAR TO ENSURE WORKER SAFETY

BY KRISTIN HAMILTON



injuries like frostbite, it's crucial to equip workers with footwear designed to keep them safe, comfortable, and warm.

Key considerations for winter safety footwear to ensure job site safety:

*** BEST-IN-CLASS OUTSOLES.** Cold weather means slick surfaces, which may increase a worker's chance of falling. Look for best-in-class outsoles engineered to withstand extreme temperature ranges to keep feet warm. Additionally, tri-directional traction lugs can improve grip, while a defined heel breast enhances downhill braking control to help workers navigate challenging terrain.

*** INNOVATIVE MATERIALS.** Freezing temperatures require insulation, so opt for work boots with traditional lofted insulation or consider footwear made with new warming materials such as aluminum technology. This paper-thin innovative technology surrounds feet and reflects and retains body heat to keep the wearer warm. Additionally, new materials and design advancements have allowed for lighter-weight products to pack the same standardized protections as the heavier boots of the past, which can significantly increase worker mobility and comfort.

*** MOISTURE-WICKING SOCKS.** Even at -10C, feet can sweat, and the sock is a critical component to keep moisture from developing and causing issues. Merino wool or merino wool blends keep feet warm without adding too much heat in colder months.

As seasons change, it's necessary to encourage workers to switch footwear for products designed to tackle changing outdoor elements. A well-thought-out seasonal PPE strategy can help ensure workers are comfortable, productive and, most importantly, safe on the job. **DP**

Kristin Hamilton is senior product merchandising manager at Red Wing Shoe Company



MOST UNDERGROUND UTILITY DAMAGE DURING CONSTRUCTION

is attributable to incomplete, inaccurate and out-of-date records and network documentation. This is the result of an inefficient, error-prone, and paper-based information flow from engineering through construction crews resulting in "as-builts" of uncertain quality, which eventually form the utility's repository of record, typically in a GIS. Several jurisdictions have recognized the problem and have begun to implement measures involving legislation, changes to regulatory rules, advanced technology, and new business practices to address the challenge of ensuring reliable as-builts.

This year, Montana promulgated new rules regarding utility occupancy on state highway rights-of-way. The updated Administrative Rules mandate that as part of a new permitting process, accurate electronic as-builts must be submitted to the Montana Department of Transportation (MDT) upon completion of construction. To ensure the accuracy of the submitted as-builts, they must be certified by a licensed professional or be subject to inspection by the MDT.

In 2019, the Montana Legislature enacted Senate Bill 76 which revised the laws relating to the occupancy of utilities on state highway rights-of-way. The bill allows the department to issue occupancy permits for installation, construction, maintenance, repair, or system upgrade of all utilities on state highways. Under this legislation, the Montana Department of Transportation implemented a new rule governing "Electronic Utility Permitting for Right-of-Way Occupancy".

MDT has implemented an online permitting system to support the new rules. With the new permitting system, MDT is able to track construction starts and completions. This enables MDT to efficiently schedule inspections of new utility installations. Very importantly, network owners/operators can be held liable if, during a future project, the utility location accuracy is not within the certified accuracy, resulting in change orders, delays and other impacts to the project

An as-built survey showing the location (to survey grade accuracy) of newly installed utility facilities must be submitted electronically to the MDT within 90 days of completion of construction. The as-built survey must be certified by a licensed professional engineer (PE) or professional land surveyor (PLS). Alternatively, the as-built survey can be certified by an authorized officer of the utility owner. However, in this case, the MDT reserves the right to conduct an audit and inspection to verify accuracy. In congested areas MDT expects a horizontal location accuracy of ± 0.3 feet. This requirement is relaxed in rural areas to ± 1.0 feet or more depending on the situation.

Since January 2020, the location of all new underground infrastructure in the state highway rights-of-way has been captured in UPAS Utility Permitting Administration System (UPAS) and Utility Location Data Repository Module (ULDR), which were developed by Utility Mapping Services, Inc. (UMS) and GEO.works International. Maps of underground utilities are available to users over the web to any device with a browser, including mobile devices. MDT controls access to the data. The 3-D Utility Location Database Interface provides the ability to query, edit, import, and access utility data included within MDT's UPAS database and supports data flows to any applications which support .SHP and .CSV file formats, including ESRI, Autodesk and Bentley products, for viewing and design.

This is a remarkable initiative that addresses the challenge of ensuring that accurate data about the location of new underground infrastructure is captured. Currently, it only applies to new infrastructure, but with the rapidly evolving technology for capturing the location of underground utilities to survey-grade accuracy, it is to be expected that a similar approach will be applied to determining and reporting accurate locations for utilities exposed during excavation. **DP**



Montana Mandates the Submission of Accurate Electronic As-Builts by Utility Owners

BY GEOFF ZEISS

Geoff Zeiss is principal of *Between the Poles*. Learn more at geospatial.blogs.com.

New York 811 Leaps into the Future

BY ROGER SAMPSON

New York 811 is excited to introduce a leap into the future for utility damage prevention. In partnership with IPEG and UTTO, we are in the final stages of creating the Virtual Reality Excavator Simulator (VR-X SIM), an immersive virtual reality (VR) tool with the potential to revolutionize the way we think about damage prevention education, damage investigation, and how we train excavators. We firmly believe that virtual reality will play a key role in our collective mission to save lives and protect vital infrastructure by predicting and preventing utility strikes and the actions that cause them.

ORIGINS

A little over a decade ago I had the idea of creating a sort of "Safety Town" for excavator training. Think of the miniature city environments set up to teach children the basics of pedestrian and bicycle safety, but larger and specialized for excavation professionals.

I knew this kind of hands-on, repeatable, non-theoretical training would be hugely beneficial in preventing damages long term, but the idea had some serious limitations. For one, the environment would be static, making it difficult to change the physical parameters and endless variables that present themselves on a real worksite. Two, a static environment makes "cheating" almost inevitable. When excavators can watch each other perform a task, they're bound to replicate successful runs. What we needed was a system that allowed for variable, even spontaneous, scenarios to create realistic challenges.

Virtual reality technology recently caught up to the vision of an endlessly customizable learning environment for damage prevention. With the indispensable help and combined vision of UTTO and IPEG, the VR-X SIM came to be. We've been able to create virtual, immersive environ-



ments that realistically replicate real world excavation scenarios.

The aviation industry has used virtual reality and similar flight replicating technologies for years, now. Despite popular perception, flight simulation training is less about teaching a pilot which switches to flip and buttons to press and more about presenting pilots with unforeseen or unique scenarios to see how they react. Similarly, the VR-X SIM does not aspire to teach operators how to operate a backhoe, but to present the kind of real-world complications that have led to real world damages.

THE SIMULATOR

The VR-X SIM is a mobile unit housing a fully immersive replication of the excavation process. To educate on and evaluate the full excavation timeline, the VR-X SIM takes excavators through the entire process of a safe dig, even the steps that happen before the bucket hits ground.

1. Getting the job
2. Putting in the One Call notification,
3. Automated Positive Response (APR)
4. Having a virtual locate done
5. Verifying locate marks based on APR

After the pre-excavation steps are taken, the excavator climbs into a replica backhoe inside

the VR-X SIM and finally puts on a pair of VR goggles. Instantly, the excavator is transported to a virtual worksite that looks and feels like a real worksite in a real location. Each location and scenario is based on a real world equivalent. A virtual spotter joins the excavator in the simulation, also strapping on a pair of VR goggles and acting just as a spotter would onsite.

Inside the VR-X SIM cabin, the excavator finds a slew of sensors working to create a fully immersive and measurable "4D technology" experience. Eye tracking software keeps tabs on where both the spotter and the excavator are looking. The seat below the excavator shifts and rocks as they work. The bucket gives variable feedback based on soil conditions. The smell of gas can



even be introduced to the cab to simulate a gas line leak or strike. In totality, combined with the excavator's VR surroundings, the experience of the virtual cab feels realistic. More importantly, it elicits realistic reactions to excavation situations that can be studied and learned from.

The thoroughness in replicating the entire excavation process, along with the multitude of sensors, leaves us with countless data points to evaluate. To manage and make sense of the data, we worked with UTTO to develop a scorable system to get real quantitative data on damages.

“While there certainly is value in looking at collections of historical damages to find patterns, such reports are limited by the tendency of reports to focus on the party responsible more than the multitude of factors surrounding the accident. Further, such reports are limited to data from incidents that caused damages and are often based on self-reports.”

THE VALUE OF DATA COLLECTION

As we tell people about the VR-X SIM and its capabilities there is a consistent temptation to imagine the machine purely as a training tool for excavators. It certainly does have that ability, but we think the most valuable, impactful results of will come in the form of data.

Data collection is a core factor, alongside training, in the future of damage prevention. It already plays a critical role in how we talk about and plan to prevent damages, through national damage databases like DIRT (Damage Information Reporting Tool). While there certainly is value in looking at collections of historical damages to find patterns, such reports are limited by the tendency of reports to focus on the party responsible more than the multitude of factors surrounding the accident. Further, such reports are limited to data from incidents that caused damages and are often based on self-reports. By introducing a spectrum of objective performance data, like the VR-X SIM can collect, you are able to paint a much more nuanced picture of excavation issues.

A virtual reality environment allows us to isolate single variables within the excavation process, something that just is not possible to pull from a report or to replicate in a physical training space. From the placement of marks to the placement of the facilities themselves, every factor of the process can be tweaked individually to study the effect on the excavators' ability to perform the job safely. It is easy to see how profound this could be for the future of damage prevention strategies. The efficacy of new procedures, training, or equipment could

be objectively measured, at scale, in a safe and controlled environment.

FROM “WHO” TO “HOW” - A SHIFT IN DAMAGE INVESTIGATION

We believe that there is a fundamental flaw in the industry's damage investigation process. All too often the investigation is focused on liability. Who is ultimately at fault? Which stakeholder or stakeholders made a mistake in process of the project? The goal of the process has become to find the party responsible, have them held responsible, then move on with faith that an internal investigation by the responsible party will follow.

Damage investigation should move beyond the question of “Who”, and move towards the more difficult, but vastly more useful, questions of “How” and “Why”. That is where the power of the kind of information the VR-X SIM is capable of collecting comes in. With the ability to change and evaluate the significance of single variables, we will have the chance to identify the root tendencies that cause damages.

Above all, we hope the VR-X SIM leads to a pro-

found and necessary shift in the mindset of damage prevention, from a retrospective view centered on blame and liability, to a prospective view centered on optimization, prevention, and education. **DP**

Roger Sampson is Executive Director of New York 811. He can be reached at rsampson@ny811inc.com.



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Fatal Tragedy Strikes as Online Training Rolls Out

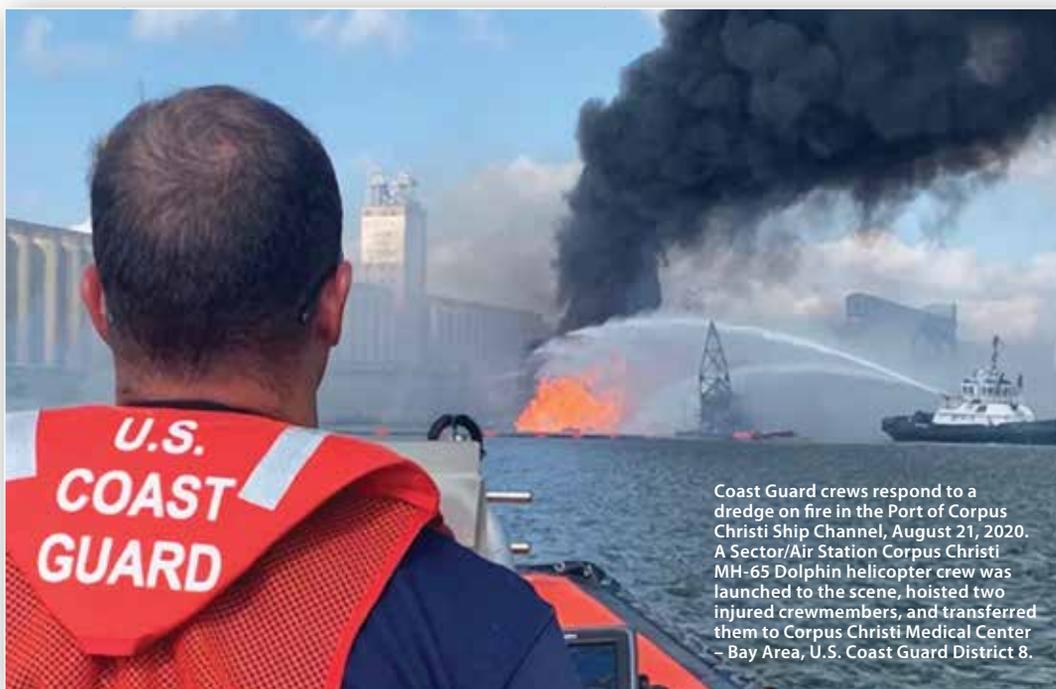
BY ED LANDGRAF – COASTAL AND MARINE OPERATORS

Four crewmen are dead due to a cutter suction dredge that struck a propane pipeline August 21, 2020 in the Corpus Christi Ship Channel's Inner Harbor. The gas ignited, causing an explosion aboard the dredge.

Just two years earlier and approximately 50 miles away, the same type of incident occurred. In April 2018, a dredge struck a natural gas line with an explosion that demolished the dredge. In this incident, the crew was very lucky to escape with their lives, due solely to a very alert worker who saw gas bubbles rising around the dredge's spud and took immediate action before the explosion occurred. Statistics have shown an average of one fatality per year occurs from a vessel and pipeline interaction. These accidents have led to increased focus and efforts in marine damage prevention and collaboration between the pipeline and marine industries.

The National Transportation and Safety Board (NTSB) investigators have released a preliminary report outlining the events that led up to the Port of Corpus Christi dredge explosion. Their report finds the incident was caused by a series of events that began when the dredge vessel reportedly hit an underwater propane pipeline and ended in the death of four crew members and others injured after the dredge originally caught fire. Eighteen employees were working on the dredge the morning of the explosion. Six of 14 crew members were airlifted to burn units in San Antonio.

The report states the fire reignited later that night, precipitating the dredge sinking overnight.



Coast Guard crews respond to a dredge on fire in the Port of Corpus Christi Ship Channel, August 21, 2020. A Sector/Air Station Corpus Christi MH-65 Dolphin helicopter crew was launched to the scene, hoisted two injured crewmembers, and transferred them to Corpus Christi Medical Center – Bay Area, U.S. Coast Guard District 8.

Pieces of the pipeline and the barge have been transported to NTSB labs for further examination.

It is very unfortunate this tragedy occurred less than a month after the first-ever online marine pipeline safety training module was released and one year after a *Marine Vessel and Pipeline Safety Best Practice* was produced. We cannot help but think if these training materials had been implemented, perhaps there is a small chance these crew lives could have been saved.

These topics will be the key focus of the CAMO Lunch & Learn Meeting in Tampa, Florida on March 23, 2021. This annual stakeholder lunch will be held during Damage Prevention Week and in conjunction with the Global Excavation Safety Conference. The CAMO Lunch & Learn is free, sponsored by CAMO and its members. Lunch will be served, but space is limited, and registration is required. Attendees will hear from

industry groups, regulators, agencies, 811 representatives, and first responders focused on pipeline safety, response, and damage prevention. You can register to attend at GlobalExcavation-SafetyConference.com/camo.

A large portion of CAMO's meeting will have a Train-the-Trainer component. We want everyone to take the free resources provided, along with learning and awareness materials, back to their workplace for adoption and integration. The resources gained is additional justification for an organization to send representation. The training materials provided are ideal for personnel in damage prevention, safety, construction, dredging, coastal restoration, pipeline companies, ports, mariners, regulators, agencies and emergency responders. **DP**

Ed Landgraf is Chairman of Coastal and Marine Operators. Learn more at camogroup.org.

New Field Data Collection Technology Simplifies Asset Management

BY MARCUS EDWARDS

Field data collection is an essential component for many field workers across multiple industries. Industries such as utilities, survey companies, airports, local governments, and others must always monitor and maintain the health of their assets. Many of these industries have assets spread across large areas, even cities, and countries. Naturally, the manual process of collecting data about every asset is challenging.

As the world gets smaller and connectivity increases, the number of assets also continues to increase, leading to even more complexities around maintaining the health of these assets. Thanks to the advent of mobile-based applications, it is now possible to quickly locate faulty assets at any corner of the world, update their repair and maintenance status over the cloud, and share the data with supervisors sitting in offices hundreds of miles away.

Modern technology, however, did not come into existence overnight. The revolution started with GPS devices that used Geographic Information Systems (GIS) to keep track of hard-to-reach assets. There were drawbacks to this method though, and the industry players needed an upgraded technology. These are some of the challenges industries face and how new cloud-based field data collection solutions help overcome them.

CHALLENGES WITH EXISTING METHODS

Asset management requires swift action, proper documentation, and commendable taskforces. Even though most companies try to constantly deliver on all three points, there are huge obstructions caused by the existing methods of handling data. Some of these challenges are so overbearing that they have a direct implication on the revenue of the company.

For instance, the first task for any maintenance or



Geolantis 360
Device Integra-
tion LEICA Zeno
20 Image

repair worker is to locate the asset exactly. Random digging to find assets surely is a primitive way of handling it. Enter GPS devices that point to the location of devices so the workers can follow the correct path. However, once the asset is located, there is no way to send the information to colleagues far away or even save the location for the future.

Once the job is carried out, documentation is a whole other story. Existing paper-based documentation methods cause manual errors in collecting data, missing information, and redundancy of work.

Further, there is often no way to find out which worker had worked on which asset and on what date, leading to a lack of customer satisfaction and legal disputes.

Companies have even tried doing away with manual processes in the field and incorporated mapping tools and workforce management software to reduce errors. These solutions may work well individually, but often do not connect well with each other, leading to more mismanagement and loss of information.

CLOUD-BASED FIELD DATA COLLECTION: BENEFITS

The modern era has seen a rapid proliferation of cloud-based applications in almost all spheres of human activities. The Industry 4.0 revolution promises more of this technology to be used in a wide variety of industrial tasks.

Field data collection has also now emerged as an area where cloud applications can be used to their full potential. Cloud-based field data collection software has multiple benefits for the industry and works to address the challenges previously discussed.

One major advantage of using modern field data collection solutions is the "anytime, anywhere" feature. It means that assets can be located using the software's mapping features and the location can be stored for future use, while also with an option to instantly share with colleagues.

Further, when a field worker at a remote location enters information about the condition of a particular asset, it can be immediately viewed by the management team sitting in an office in the heart of the city. This kind of software typically has an offline mode, too, allowing a fieldworker who has no cellular coverage to save the data and upload later when the network is back.

Documentation of maintenance work carried out on any asset can be easily updated using mobile-based forms, which means, no more erroneous paper-

ISSUESPOTLIGHT

WINTER 2020

work. Most importantly, supervisors always have a clear view of which worker worked on which job, thanks to the documentation; and how long the job took, thanks to timestamps and photographic evidence.

The "all-in-one" nature of this type of software ensures that all data, including asset information, worker names and maintenance updates, are available in one centralized database. For anyone logging into the software, it is as easy as pulling a report at the end of the day to view job details.



Geolantis 360
Android Image

The ability of the software to have geographical information, workforce information, and job docket information all in one place eliminates redundancy, reduces labor conflict, provides easier legal negotiations, and significantly cuts down overall operational costs.

INDUSTRY USES: EXAMPLES

The versatility of cloud-based field data collection software solutions makes them easy to implement in several different industries. Although the technology is fairly new, some players have already launched solutions that are ready to be used in many industries.

Because this kind of software is cloud-based, infrastructure requirements are fairly minimal. They support major mobile operating systems and can be flexibly used in all modern mobile devices, although certain industries could benefit more from using such software.

UTILITIES (INCLUDING TELECOMMUNICATIONS)

Utility companies are most prone to handling asset damage complaints and must always be on their toes to locate and repair a faulty electric cable or a malfunctioning optical fiber.

Whether gas pipeline, electric supply, broadband, or water supply, utility companies must have proper means to act swiftly when it comes to maintaining asset health and assigning work-



Geolantis 360
iOS Image

force efficiently to avoid delays.

Using cloud-based field data collection software helps manage assets from centralized locations and maintain operational uptime at all times.

LOCAL GOVERNMENTS

It is a sign of good governance when the people living within the range of a municipality are happy. Local governments understand that residents are satisfied when everything is in working condition, from streetlights, to hydrants, to roads and pavements.

The timely location of faulty assets and proper documentation of the job done are key areas where a mobile-based field data collection solution can help immensely.

AIRPORTS AND RAILWAYS

As essential modes of transportation, airports and railway lines across the world must be consistently available to maintain their strict schedules. Therefore, the timely maintenance of assets in this industry is crucial and has no place for errors.

Even a minor issue in asset maintenance, repair work, or delay can cause accidents and loss of lives. Thus, this industry relies heavily on field data collection software that is foolproof and "always-on".

TAKEAWAY

Manual processes of asset location and docu-

mentation are quickly becoming a thing of the past, owing to the rapid development of cloud-based environments. Across industries, maintaining asset health now needs to move with a fluidity that makes updating field data easy and discernible.

Managing field data, assigning taskforce, and handling job closures can all be carried out simultaneously within a single cloud-based platform. Using the modern-day, cloud-based field data collection solutions, industries can now get asset maintenance jobs done more efficiently and at lower costs. 

Marcus Edwards is Chief Product Officer with PelicanCorp. For more information, visit geolantis.com.

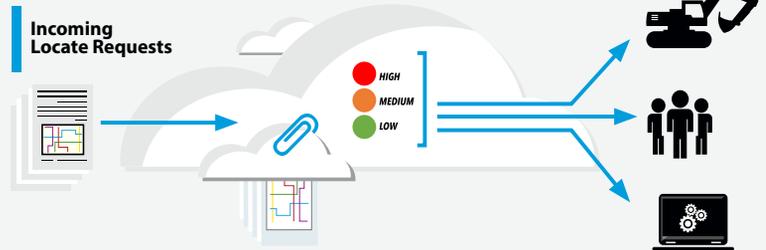


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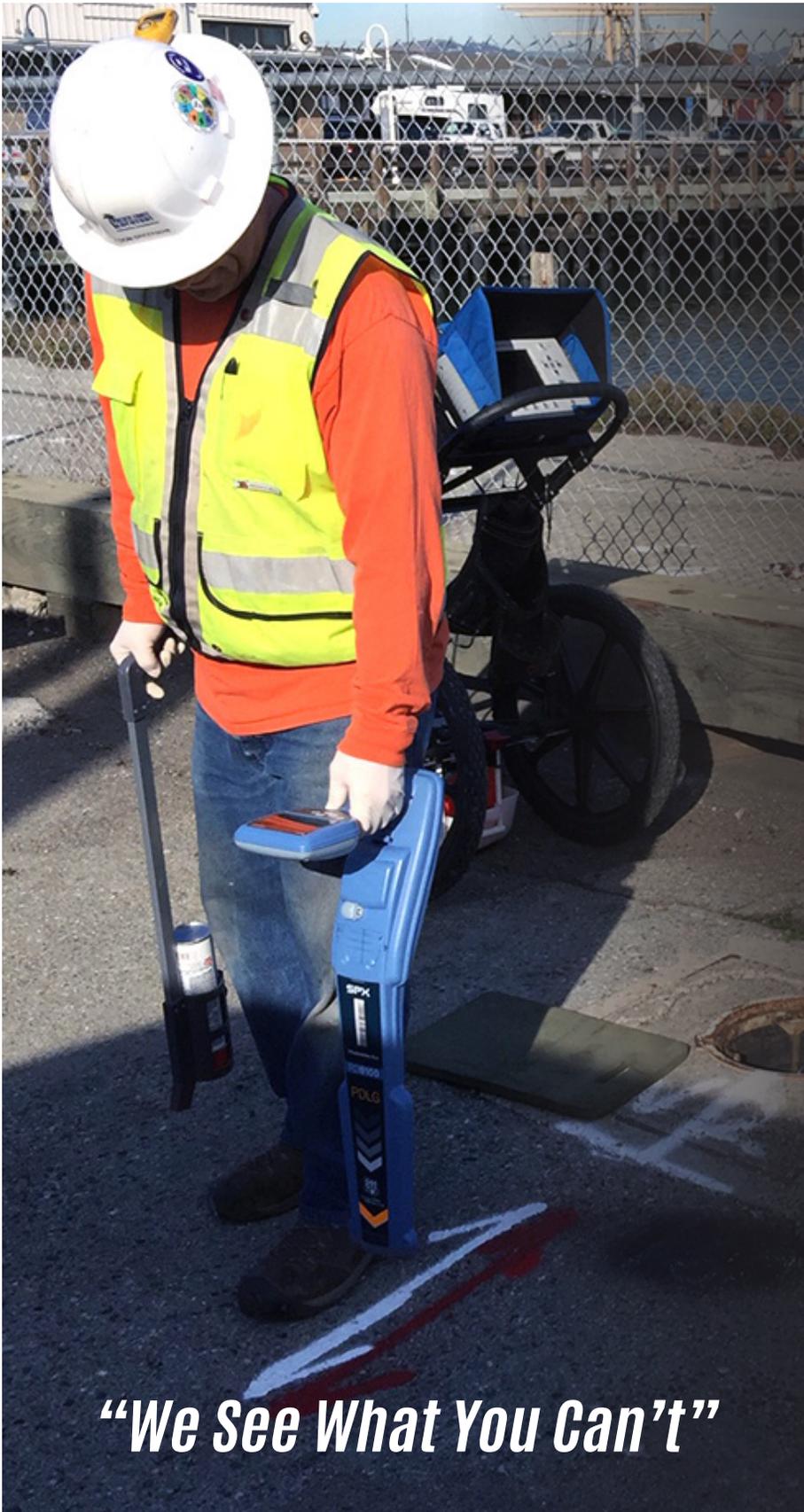
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CGA Releases 2019 DIRT REPORT

The Common Ground Alliance (CGA) published the 2019 edition of the annual DIRT Report at the end of October. This marks the sixteenth publication of the report, which serves as a summary and analysis of data entered into the Damage Information Reporting Tool (DIRT) during the previous year. The report offers accounting and analysis of damages to buried infrastructure in the U.S. and Canada.

The publication of the DIRT Report regularly sparks conversations about the rate of utility damages, the root causes, and the effectiveness of damage prevention education. This year's report is no different, showing an upward trend in U.S. and Canadian utility damages for the fifth straight year with over 500,00 reported events, near misses, and damages.

The leading root cause of damages was once again 'No notification made to One Call center or 811', representing nearly 29.1% of total damage reports. 'Excavator failed to maintain clearance after verifying marks' came in as the second leading cause with 16.7% of total reports.

The percentage of damages caused by the lack of locate request (29.1%) increased for the third straight year, rising from 24% of damages in the 2017 report and 26% in 2018. This is a particularly worrying statistic considering increased promotion of 'Call before you dig' initiatives. The telecommunications industry was hit especially hard as 'No locate request' damages represented 36% of their total facility damages.

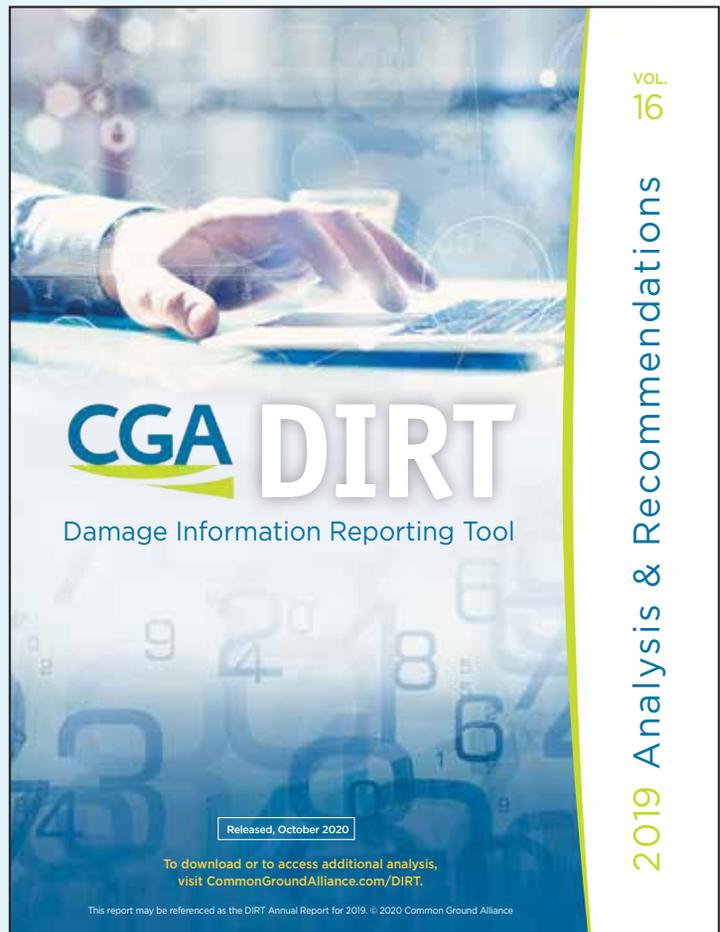
In response to leading damage root causes, CGA also publishes "Update Opportunities" to their industry best practices. These updates aim to improve the established best practices in response to trends. In response to the increase in 'No Locate' damages, the CGA lists this update opportunity to the One Call Facility Locate request best practice:

Update Opportunity: Consider updating to reflect three-digit dialing (811) which was introduced in 2007, and that electronic notifications have become the predominant method of one call center notices.

Examining 'No Locate Request' damages further, the 2019 DIRT Report shows variation in the root cause damage percentages among excavator types. 'No Locate Request' damages represented 61% of occupant excavator damages and only 15% of contractor damages, for example. Excavator type sorting also shows the contractors are once again the leading excavator type in the percentage total damages.

A notable addition to the 2019 edition of the DIRT Report is the measurement of the Societal Impacts of damages. Societal impacts count both direct and indirect costs of damages. From the report:

Direct costs would include repair of the damaged utility and restoration of service to impacted customers. Indirect costs include but are not limited to property damage, medical expenses, loss of commerce while businesses are interrupted or evacuated, time spent in traffic due to road closures or detours, increased insurance premiums, litigation costs and reputational damage.



In theory, measuring the total societal impact widens our perspective by presenting a more comprehensive view of the cascading effects of utility damages. Though an ambitious and valuable addition to the report, there is difficulty in pinning down an accurate estimate with a data set so broad:

Green Analytics reviewed DIRT data, research from Canada and the United Kingdom, and publicly available data from PHMSA for U.S. natural gas and liquid pipeline damages to produce an estimated range of \$400 million to \$1.985 billion for direct repair costs and indirect costs ranging from \$12 to \$60 billion. Taking the medians of the range of direct and indirect costs produces a best overall estimate of \$30 billion in total societal costs from damages to buried facilities.

Regardless of methodology, even the lowest end of the societal impact estimates paints a clear picture that taking actions to prevent utility damages is as important as ever.

The complete 2019 CGA DIRT Report is available at CommonGroundAlliance.com. 



American Trails

“We will be known by the tracks we leave behind” - Dakota proverb

American Trails, a national nonprofit, has launched a new grant program in conjunction with Conservation United, Inc: The Trail Fund. The Trail Fund is a focused program in which the outdoor recreation and conservation-giving communities can invest in the trails infrastructure that supports our country’s natural areas, industries, people, and communities.

Donations to the Trail Fund work to sustain America’s trails by financing trail maintenance, research, and stewardship training programs.

Maintenance

One might imagine that trails appear and sustain naturally, forged and continually packed by hiking boots and tire tread. In reality, trail design, building, and maintenance are artforms that require experience, time, and hard labor. Trails are thoughtfully carved into, over, and through a landscape to highlight its beauty and respect its natural inclinations. Trails are maintained with hand tools; volunteers moving and pounding earth to reform what’s been worn away.

The ultimate effect of this labor is a maintenance backlog on America’s trails. A 2010 General Accounting Office study found that the trail maintenance backlog on U.S. Forest Service lands alone exceeds \$5.2 billion. The Trail Fund will work to chip away at this backlog with 70% of funding going to trail maintenance efforts.

Research

Trail users know the benefits of trails go beyond what can be quantified on paper. That is, unless you consider poetry. But the net benefits of trails and their use can and should be studied. Increased data on the economic impacts of trails can inform public leaders on the future of land development and funding.

Recent data from the Department of Commerce’s Bureau of Economic Analysis (BEA) calculated that outdoor recreation generated \$734 billion in economic activity in 2016, surpassing other sectors such as agriculture, petroleum, and coal. Outdoor recreation makes up 2.2% percent of U.S. GDP, supports 5.2 million jobs and is growing faster than the economy.

Stewardship Training

Citizen volunteers lead the way in the management of our nation’s trails, using government resources and their own time. On the National Trails System alone, since 1995, hundreds of thousands of citizen volunteers have contributed more than 19 million hours to build and maintain National Scenic and Historic Trails.

The goal of training new trail stewards is to preserve skills that have been developed over the course of decades, and to place them in the hands of passionate volunteers who are willing, able, and driven to do quality work




and to teach others. This initiative also allows for training on the newest trail building technology.

In support of the Trail Fund and its mission, Rhino Trail Markers is including a free decal promoting the fund on every trail marker sold. The decal encourages trail users to donate to the Trail Fund cause through a simple text. Collectively, small donations from the nation’s trail users can have a large impact. The program has the potential to reach hundreds of thousands of trail users, increasing funding for the Trail Fund and raising awareness of the immense amount of work that goes into planning, building, and maintaining America’s trails.

The decal is a recognition of the net benefit we all stand to gain in supporting our nation’s trails and the work that American Trails and the Trail Fund do to maintain them. In addition to their economic impact, trails introduce people to the land around them, give solitude to those who seek it, and connect all who use them. Funding the future of trails is funding a core American Experience. 

Learn more about American Trails and the Trail Fund at americantrails.org



BY MONICA WOFFORD, CSP

CONTACT

Brought You into This World

In Southern homes, a momma might say, “I brought you into this world, don’t make me take you out of it!” Even if one is not from the South, you can hear momma’s frustration. What might be less obvious is the correlation to our current situation. Contact with another human brought you into this world and some are starting to wonder if the lack of it will take us out. In this new normal, we receive texts by the dozen and have phones forever buzzing. Sales calls are done through virtual meetings and employee coaching is through a phone call, uncomfortable screen sharing, or just doesn’t happen. Logistically, each option requires a wi-fi connection. Mentally, we can’t dare disconnect or we might miss something. Emotionally, we’re suffering.

Yes, technology has given new ways to share information. But when we’re connected to any of them, are we really connecting to a human? And if we lose that kind of connection, is our literal future threatened? Even before an ending that sounds so dramatic, consider how we are to accomplish what should be simple, such as fostering motivation, drive, progress, or leadership. Each has relied on live human interaction since the words came into existence. The words were even made with the assumption that being in the presence of another human

So, in a world that’s gone virtual, artificial, or robotic, shouldn’t we consider how drive, progress, and leadership might be taken out of the equation?

would always be the situation. So, in a world that’s gone virtual, artificial, or robotic, shouldn’t we consider how drive, progress, and leadership might be taken out of the equation?

Drive

Computers have settings. Humans have ambitions. Drive comes about only in the latter. Until you can encourage your laptop to perform better with a quick pat of the power button or get your sonar machine to read just a bit more deeply by talking softly and asking nicely, finding drive among the digital might be tricky. But even more tricky is reaching, encouraging, or even motivating people through a medium that fools you into thinking you can interact with them like they have specific settings. How do you reach over his shoulder and encourage that employee to do better, through a computer?

Progress

Drive is what fosters progress, and it can be internally or externally motivated, but for most, by people more so than devices. Are you tracking the efforts of field workers through Fitbits? Found anyone who’s attached it to their dog yet? A drive-by can solve this. A person checking on them tends to prevent gaming the system. Fleet management, GPS, and tracking have all become normal in business, but there is a sizable difference between tracking and making progress. Tracking gives you the data. Progress is most often fostered by conversation, follow-up, rewards and/or consequences. How many of those are you having via app, system, or virtual meeting?

Leadership

Similar sizable differences are found in the roles of leader and manager. Go virtual and you need more management. Managing supplies, equipment, and quotas can be done from home. Leadership, and nearly all the aspects of it, requires a genuine connection with the person and that’s tough to create in a virtual environment when using face-to-face methods. It’s as if we believe we can lead while using management tactics. Imagine trying to dig a pipe trench with the long end of a handheld calculator. Could you do it? Sure. But you’d be there forever, get beyond frustrated, and probably utter, “screw this” at some point, wishing you could go rent a trencher. If only there were real people to open a store to serve live customers with specific trench size questions, who would listen and share a moment over how hard that must have been and what were you thinking? Think your team does better with rapport, humor, connections, and live people interaction? Most would say yes.

The way we’ve always achieved these outcomes, in the face of this new normal, isn’t really working and if we don’t make some changes, the reality is that pandemic or no pandemic, our virtual world and lack of human contact may just be what forces drive, progress, and real leadership to face extinction. Maybe instead of sending that next text, put on your mask, hop in the truck and go see that customer. Look them in the eyes and tell him or her how you are going to work out that deal or fix that problem. It’ll be a long while before robots can make that happen. **DP**

Monica Wofford, CSP is a leadership development specialist, keynote speaker, and executive coach. For more information on her books, training firm or coaching services, call 1-866-382-0121, or go to www.ContagiousCompanies.com.

THIS COLUMN EXPLORES TIPS AND TECHNIQUES TO IMPROVE YOUR ABILITY TO COMMUNICATE WITH CO-WORKERS, CUSTOMERS AND INDUSTRY STAKEHOLDERS.



Building an Industry Sub-Sector: Nulca New Zealand

• ELLE ARCHER •

Ngā mihi nui kia koutou (Greetings to you all from New Zealand).

Many of us who have been involved on the ground floor of underground utility location, damage prevention, asset management, and subsurface geospatial survey and mapping anywhere around the world can, hopefully, agree on this one fact:

We need to come together as a national and global industry community to build a world class location sub-sector, to aid anyone working in and around service infrastructure.

Here in New Zealand, we are doing our best to do just that.

A handful of passionate individuals who were working in silos within the wider infrastructure sector came together a few years ago, and out of those humble beginnings Nulca NZ was established in 2019.

Set up to represent the utility location industry in New Zealand, Nulca was formed from a need to standardize practices and develop the skills of contractors, as well as endeavoring to build cross-industry partnerships to ensure a collective approach to common issues. We are big on keeping our people safe, our infrastructure sound, and our data accurate.

The association is modeled on the Australian and American chapters of Nulca, which have been running since 2004 and 1994, respectively. In choosing to adopt Nulca as our name, we join an international group of people dedicated to building a better and stronger utility locating industry.

We realized early on that the mountain we were climbing couldn't be scaled well with only a handful of people, so we set out to engage and educate the wider sector of our existence, purpose, and lofty goals.

We pride ourselves on never being too big for our boots, while never being afraid to think outside the box - communicating and acting in full transparency, humility, and strategic clarity; bringing to light a realistic but innovative vision. All these elements have helped to solidify our value addition to the built environment and beyond.

We have also been vocal about the real challenges and barriers that face any well-meaning group trying to create a better space which ultimately impacts many others within the ecosystem. In short, we've called a spade a spade, and



during our first meetings addressed bureaucracy, conflict of interest, protectionism, commercialism, ego, and all the issues that get in the way of true progress and creating an industry that empowers its people for the betterment of its purpose.

Our candor has seen a success in the uptake of Nulca NZ within the country, and although we have quite a bit of work ahead of us, we are onboarding partners at the right level to ensure we achieve our goals. Currently allied with players from central to local government, NGO's, industry bodies, private businesses, suppliers, and education facilitators, we are doing well in realizing our collaboration and partnership strategic objective, with this being an ongoing initiative.

Nulca NZ has two primary working groups (made up of business, industry, and government volunteers from varying companies and entities around the country) Standards and Skills Development underway, with chairs recently appointed to each group, ensuring strategic leadership and tactical drive in these spaces.

Real change can only come about with collaboration, open conversation, and taking an active approach. Every meeting and workshop is finalized with executable short- and long-term actions, as delivery is a huge part of our ethos. We are walking our talk.

As we move forward, we want to further engage in conversation with industry bodies abroad, including the United Kingdom, United States, Canada, Asia, South Africa, and Australia. International bodies are facing the exact same issues we are, have been working through solutions far longer than us, and we can learn a lot from those experiences. However, us Kiwis have a lot to offer on a global scale - we are smaller so have the space to research, collaborate, integrate, monitor, and innovate. We have the capability to perhaps do the things that larger countries take longer to accomplish.

Although we are all scaling different-size mountains with differing variables, it is essentially the same beast. Working together makes sense and we welcome input into our shared purpose and global community. We are looking forward to hearing from you.

Ma te wa (Until next time). **DP**

Elle Archer is President of Nulca NZ. She can be reached at president@nulca.nz.

LOCATING



BY CHRISTOPHER KOCH

Building A CASE

One of the problems the locating trade faces is the perception that our job is easy. From the outside looking in, an excavator contacts the One Call center and within a day or so, accurate markings appear at their job site. DIRT reporting bears out that in the majority of cases when an excavator contacts the One Call, no damage occurs.

As a private locator, excavators often say things to me like, “I want to make sure there’s nothing here”, or “can you tell me if there’s anything over there?”

This reasoning assumes that simply having locates performed ensures that no damage will occur. Locating instruments are deemed infallible and the technicians who operate them are deemed to have total command of an unseen underground environment.

A few days ago, while remarking a job site at a water treatment plant, I came across one of their employees about to place a post for a new street sign. Although he had no locate of his own, he observed the marks I’d placed for the contractor and selected a spot he believed to be clear - a spot directly between corridor marks placed for both communications and electric structures vital to most of the plant. The spot he had chosen was a strip of grass about 12 inches from the marks for either of those facilities. “I thought we’d be okay if we just went between them,” he explained as I moved in to stop him.

As I regularly explain to my customers, locating technicians can never be 100% sure what is underground until it is exposed. Rather, we are like detectives assembling clues with which to build a case. We ask

“As I regularly explain to my customers, locating technicians can never be 100% sure what is underground until it is exposed.”

questions and assemble facts until we have gathered enough evidence to point to a conclusion, but there are almost always parts of the truth that are obscured.

Sometimes, we feel like we have spotted a killer standing over a victim



holding the murder weapon. They have a good motive, tons of opportunity, and no alibi. The case is a no-brainer. Other times, we look to have a good suspect, but we cannot really explain why he would not have tracked mud back to his car.

When an excavator asks me to “just make sure there’s nothing there”, I always remind them that I cannot do that. What I can do is help them mitigate their risk by checking. “The best I can do is tell you that all the clues add up to your being clear,” I say. “We’re building a case.”

In the end, only excavation will prove it one way or another. 

Christopher Koch is a training consultant and President of ZoneOne Locating. He is past president of Nulca and worked on both the 2009 and 2015 revisions to the Nulca Professional Competency Standard. He can be reached by email at Christopherkoch@live.com or on Twitter @kochauthor.

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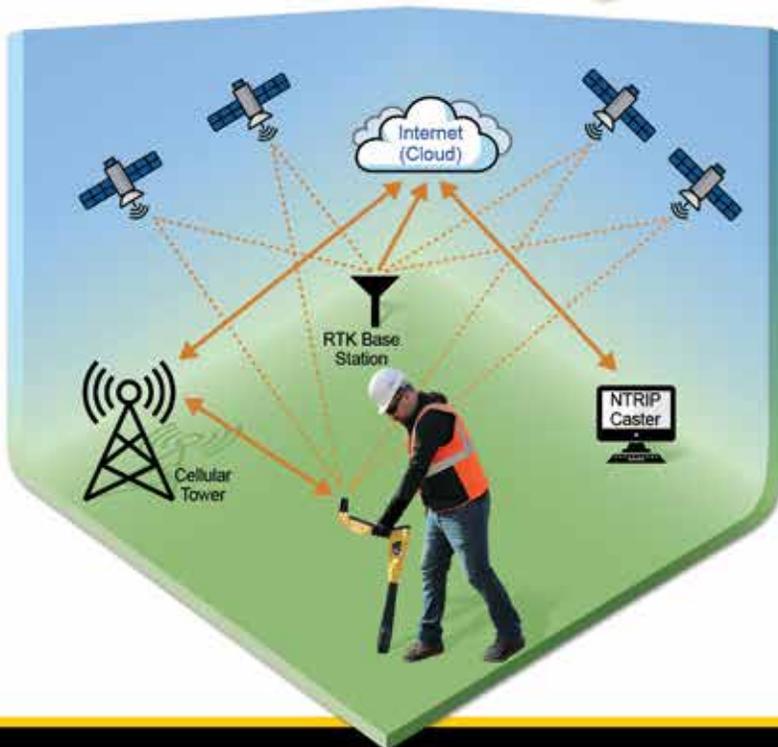
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