VOLUME 14
ISSUE 3
2023

Excavation SAFETY MAGAZINE™

GLOBAL Excavation SAFETY CONFERENCE ~ Est. 2004 ~

2024 GLOBAL ESC
SEE PAGE 22

DIVERSITY AND INCLUSION

PLUS:

// Effective Field Audits
// Utilizing Predictive Analytics
// Cutting Excavation Damages in Half
// Leveraging Digital Mapping and Data

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The nation relies on the communication, gas and electric power, water and sewer services transmitted across more than 20 million miles of underground infrastructure. At USIC, it is our mission to protect this critical infrastructure in service to our valued customers and the communities in which we work and live. It is a mission we carry out every day with an unmatched commitment to safety, quality, and efficiency.

SCAN TO LEARN MORE

USIC

THE LEADER IN UNDERGROUND UTILITY DAMAGE PREVENTION

THE LIFECYCLE OF A ROUTINE TICKET

There are several types of tickets that can be placed by Pennsylvania 811 users. The most common ticket would be the routine ticket. Let's take a walk through who, what, when, where and whys of a routine ticket.

What is Routine?

Three business days in advance of digging is required for routine.

Three business days allows underground facility operators ample time to manage their underground line locator's workload and properly respond. Keeping the outer limit to 10 business days ensures the markings remain visible and accurate throughout the excavation.

Routine tickets are for planned and predictable excavation or demolition work, or for one-time small homeowner projects. Routine tickets are limited to 1000 feet or working between two intersections on the same road. The predicable timeframe enables all involved to smoothly do their part to protect underground lines from damage.

Starting Out

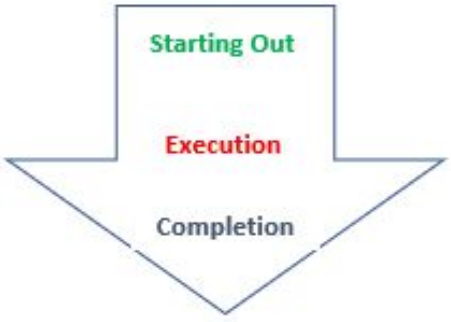
Diane's landscaping company is hired to grade, level, and till a yard to place a garden. Diane logs in to www.pa1call.org three business days before the work is to start and enters her **Routine** worksite information into **Web Ticket Entry**. Diane has dialed **8-1-1** in the past, yet prefers using the tools within Web Ticket Entry to draw the precise worksite in the satellite map. After Diane submits her Web Ticket, she receives an email with her ticket serial number confirmation. She reviews the underground facility owners (utilities) notified and files as documentation to keep her project on track.

Nick at Main Street Water Company receives the ticket from Diane's landscaping company and checks the address against his company records.
Finding a conflict, Nick dispatches a locator to mark the water lines on the property.

Execution

Diane had **marked the exact site in white** prior to placing her ticket; when the locator arrives at the property, the worksite is easy to identify and mark correctly within the white area. This ensures Nick's blue markings for Main Street's water line are complete and only painted where needed on the client's property.

I have a project that requires excavation.
I placed a dig ticket by calling 8-1-1 or by using Web Ticket Entry.
I marked my area of excavation in white by using paint, flags or stakes.
I waited until my lawful start date, viewed my responses and confirmed markings at the site are visible.
I am ready to begin excavation!



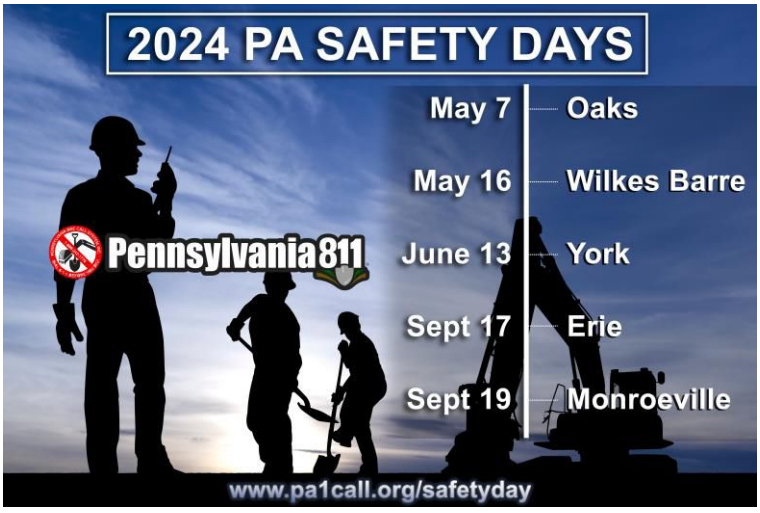
Completion

Diane receives the **KARL Automated Response** email with all utility responses early in the day of their planned excavation. She confirms all utilities have responded "Field Marked" or "Clear – No Facilities of Facilities Not Involved Based on Ticket Information" and lets her crew know there is a green light to perform the excavation.

When the excavation work is complete, the crew is reminded to **remove the utility markings**, as they are no longer needed.

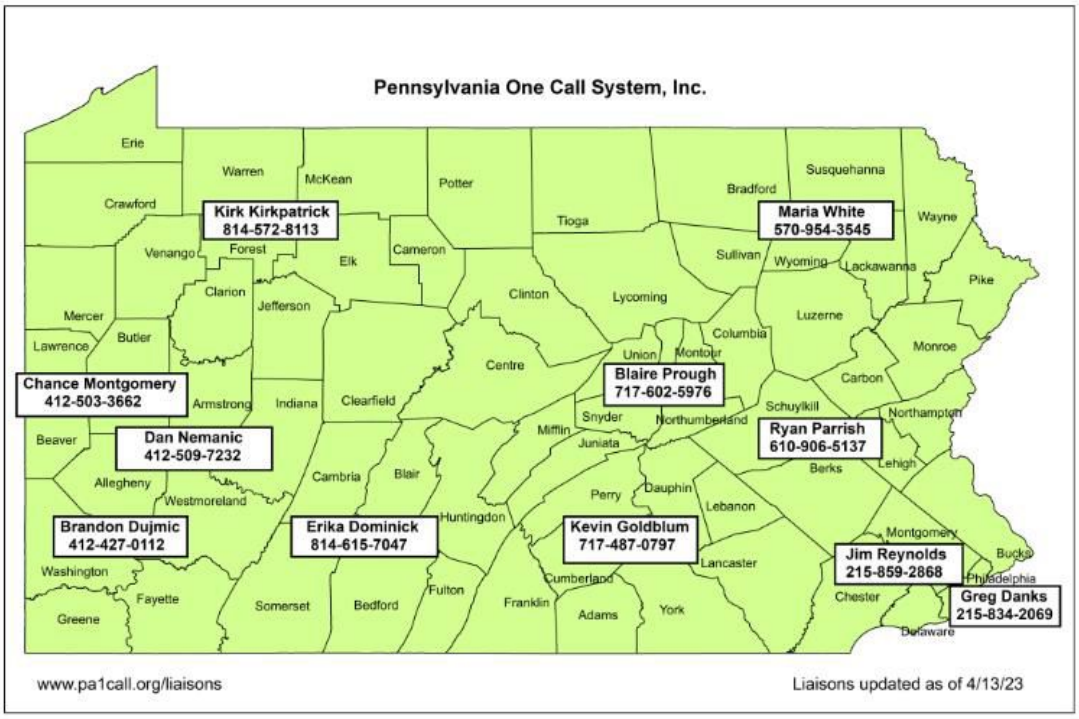
CLICK BELOW TO ENTER YOUR ROUTINE WORKSITE INFORMATION VIA WEB TICKET ENTRY!

Mark your calendars! Dates for our 2024 Safety Days are here!



Looking for a presentation? Need assistance? Contact your local damage prevention liaison! For more information visit www.pa1call.org/liaisons

Damage Prevention Liaison Regions



Don't forget to check out our schedule of upcoming events! Visit www.pa1call.org/events

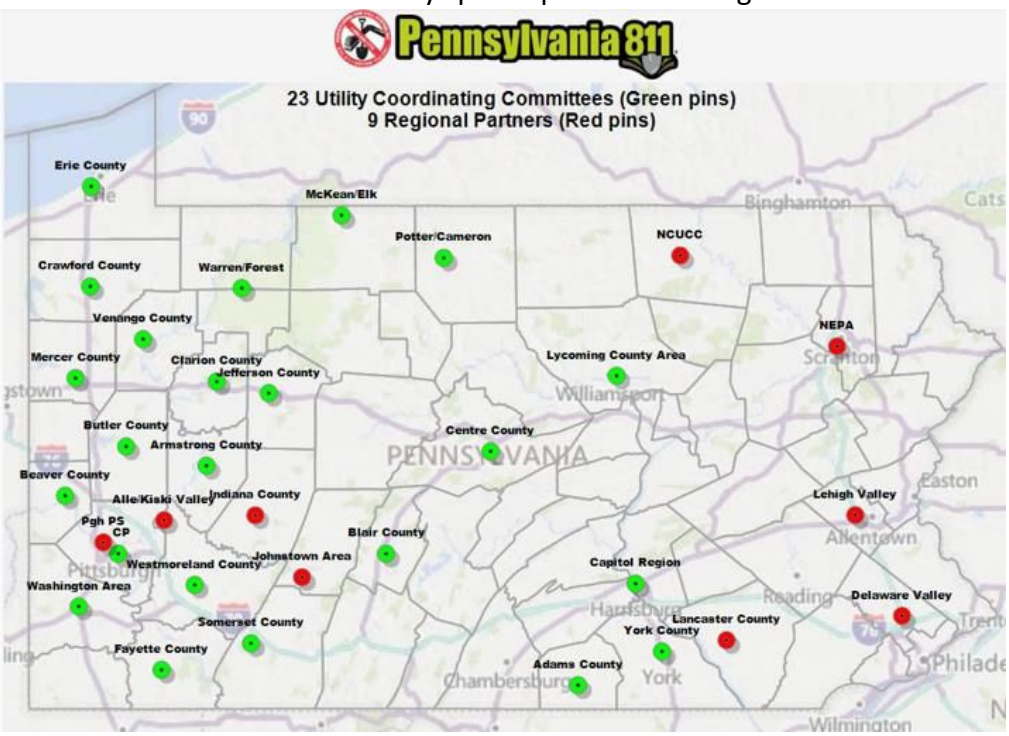
**Graphic taken from Minnesota Local Technical Assistance Program*

The Four Cs of Utility Coordination

Have you heard of a Utility Coordinating Committee (UCC)? A Utility Coordinating Committee is a meeting for underground stakeholders to foster an open exchange regarding excavation and underground infrastructure. A UCC's function is to impact damage prevention and reduce overall project costs and length. All of this is possible when you cooperate, communicate, collaborate, and coordinate with the other stakeholders involved with the project.

Pennsylvania One Call System, Inc. cooperates in 32 UCCs across Pennsylvania with other damage prevention stakeholders; designers, facility owners, project owners, excavators, public works officials, PennDOT, emergency responders, and other underground facility professionals. UCCs meet monthly, bi-monthly, or quarterly to share projects and project plans to find overlap in construction work. Each UCC can nominate officers to run the meetings, develop an agenda and ensure meeting notes are documented or be a more informal committee, dependent upon the group.

At these meetings, stakeholders review upcoming projects, which include facility upgrades, moratoriums, paving projects, etc. Effective communication and collaboration are essential in the planning phase of any project. Proper planning assists in minimizing the need for utility relocation during construction and to prevent unnecessary damage to underground facilities. Surprises in the field and final budgets are kept to a minimum when parties communicate with the affected stakeholders in the early stages of the planning process. Stakeholders will also discuss any special permits needing to be obtained before a project can begin, which could impact a project's construction timeline.



Collaborating on projects also promotes better use of public resources and funds. Dollars in restoration and paving costs can be saved for all parties when multiple projects can be completed simultaneously. Collaboration can also save on the length of a project in terms of time and reduces traffic disruptions causing less frustration for the public. To collaborate, stakeholders should share their

maps, plans, and upcoming jobs to review with other members. However instead of hauling all that paperwork to the meetings, stakeholders can utilize Pennsylvania One Call's Coordinate PA (CPA). CPA is a secure online repository that is free for stakeholders to use from project conception to construction. CPA will assist in planning the project and aid in the coordination and collaboration of projects with other stakeholders. It enables users to add and/or import existing projects and share project documentation and communication with designated contacts. CPA allows users to find project overlap on a map within a geographic area and a specific timeframe. It also integrates with PA One Call's Web Ticket Entry process to create Design and Excavation notifications as required by Pennsylvania's Underground Utility Protection Law. Uploading upcoming projects into CPA, maximizes the potential to collaborate with other facility owners while being compliant with the Law.

Pennsylvania One Call can provide more information about UCCs, joining a UCC, getting a UCC started, or assistance with CPA. Please reach out to the local Damage Prevention Liaison with any questions by visiting www.pa1call.org/liaisons.

[Utility Coordination Committees]

811Day

August 11th (8/11) serves as a convenient reminder for Pennsylvania residents to always contact 811 before digging to alert the underground facility owners to mark their utility lines.

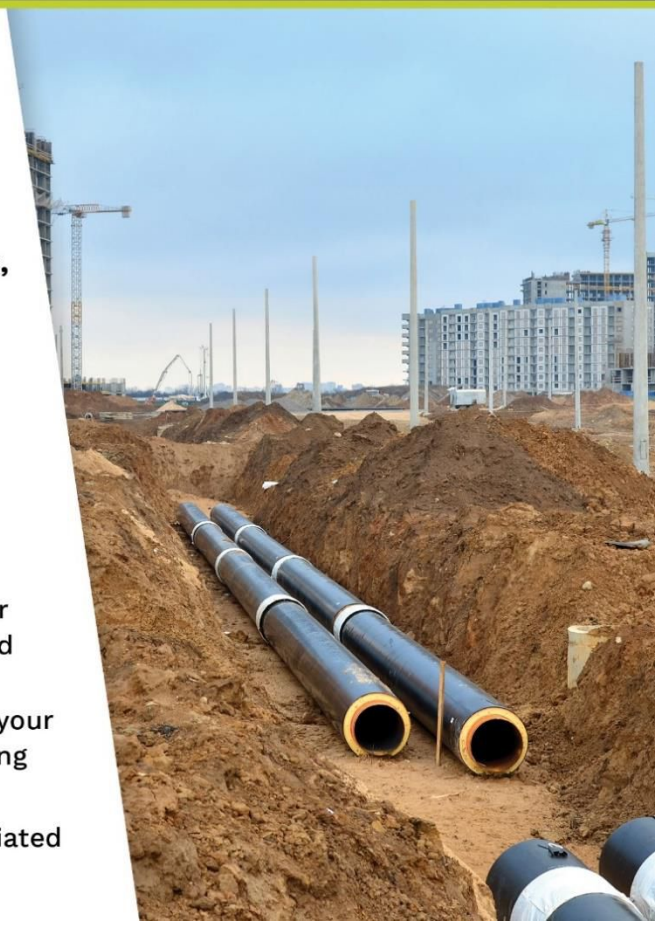
This year the Lehigh Valley IronPigs, Scranton/Wilkes-Barre Railriders, Williamsport Crosscutters, Altoona Curve and the Washington Wild Things helped us promote safe digging practices during their baseball games, radio broadcasts and electronic billboard messages. Remember safety is in your hands. Every dig. Every time.

Pennsylvania 811

A Privately funded non-profit Pennsylvania Corporation

COORDINATE PA IS THE NEXT GENERATION OF UTILITY COORDINATION

Coordinate PA is a web application developed by Pennsylvania One Call System to support public works, utility project planning and utility coordination within the Commonwealth of Pennsylvania. Users utilize a spatial, map-based system to view underground utility and public works projects, identifying opportunities for coordination and collaboration when projects overlap in space and time.



Coordinate PA Benefits:

- Define projects using a web application (No special software required!) Store project data and records in a secure repository
- Gather and disseminate information to a broader range of stakeholders beyond project planners and public works officials
- Coordinate and collaborate on projects outside your scope of responsibility, saving money and improving service for all parties
- Request meetings and upload documents associated with a complex project

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Excavation Safety Alliance (ESA) is where Stakeholder Specific Associations can share Ideas and Work Together to Improve Excavation Safety and Damage Prevention for their Members. Join the Movement and Support Excavation Safety and Damage Prevention by becoming an ESA Member!

/// SPOTLIGHT / GAS & OIL / GIS

12 Just Imagine the Possibilities

The Evolution of Technology has advanced more in the Last Six Months than it has in the Last 30 years and will Open the Door to Limitless Possibilities to improve Damage Prevention, Stakeholder Engagement and Nearly any other Opportunity that can Improve Safety.

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DEPARTMENTS

COLUMNS

Supporting Global Excavation Safety

Excavation SAFETY MAGAZINE

Volume 14, Number 3
FALL 2023

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ExcavationSafetyMagazine.com

FROM THE
PUBLISHER

BY SCOTT LANDES

What's in a Name

Since 2003 when we first started, we have been dedicated to damage prevention and excavation safety. We believe when we focus on safe excavation, it will also help prevent damage to buried facilities through education. Focusing on safe excavation spotlights the importance of safety for the people doing the digging. And keeping people safe is the top priority of both damage prevention and safe excavation efforts.

Providing a tool to keep excavators safe is why we created our annual Excavation Safety Guide in 2005, and with over 8,000,000 in print we believe it is making a difference. When our outdoor demo expo (Underground Focus Live & Underground Focus Academy) morphed into a full-scale conference in 2006, it became the Excavation Safety Conference & Expo. Following along with this strategy, our *Damage Prevention Professional/dp-PRO magazine* became the Excavation Safety Magazine in 2023. When we created our membership program and virtual Town Halls, we chose the name Excavation Safety Alliance because of our continued focus on excavation safety. Our Pipeline Ag Safety Alliance (PASA) is the only segment of our business that does not incorporate the term excavation safety because most farmers and ranchers do not consider much of the soil disturbance they do to be "excavation".

ESA
EXCAVATION SAFETY ALLIANCE
SAFETY IN COLLABORATION

Our company name, Infrastructure Resources, has been behind the scenes because our marketing always focuses on the specific initiative/event, like the Global Excavation Safety Conference. Our Excavation Safety Alliance Town Halls and membership program really describe what we do as a company. We bring people, companies, and associations together to provide education and to focus on discussing solutions to excavation safety problems, including avoiding contact with aerial cables during construction projects. We are a safety nexus and keeping excavators safe is our goal.

So back to the question…what's in a name? Words are important and Excavation Safety Alliance describes our overarching mission, so our company name is changing from Infrastructure Resources to Excavation Safety Alliance.

Our new name and logo will be on our websites, brochures, and products. The idea behind the design of our new logo came from the creative mind of Levi Mills, Marketing Manager. We also have a tag line for the new logo to explain our brand and what we do. The tag line is "Safety in Collaboration". And after lots of discussion, we picked these words to reflect our mission to bring people, companies, and associations together to provide education and to focus on discussing solutions to excavation safety problems.

Our new company website is ExcavationSafetyAlliance.com, so the domain in all our emails has changed to reflect this. We also created a YouTube station (@ExcavationSafetyAlliance) where all our Town Hall recordings, webinar recordings, conference videos, etc. can be seen. If you would like to get involved with the Excavation Safety Alliance, take a look at our membership options on page 11 in this issue of the magazine. ESM

CHAMPION

NTDPC
North American Telecommunications Damage Prevention Council

The NTDPC is a non-competitive forum dedicated to promoting the awareness and protection of tele-communications facilities and the use of One Call notification systems. Our goal is to prevent damage to the aerial & buried facilities that form the tele-communications infrastructure.

KorTerra

KorTerra is the leading provider of damage prevention software, protecting billions of dollars in underground infrastructure. For over 30 years, KorTerra has helped mitigate risk and ensured personnel safety by providing secure platforms for processing 811 locate tickets, tracking damages, and more.

UTILITY SAFETY PARTNERS

Alberta One-Call, Alberta Common Ground Alliance & the Joint Utility Safety Team have united under one name: Utility Safety Partners; Alberta's trusted resource for utility safety, education & awareness to prevent contact with overhead and underground energy & utility assets. #ClickBeforeYouDig.

Pennsylvania 811

Pennsylvania One Call System Inc. is a non-profit service company dedicated to minimizing utility service interruptions, reducing on-the-job injuries and deaths, promoting a higher level of public safety and protecting the environment, available 24 hours per day, every day of the year.

MISS DIG 811

As the country's first state-wide notification center, MISS DIG 811 has helped keep Michigan safe for over 50 years. Looking forward, we will continue to reach our communities by utilizing advancing technologies, grassroots efforts, and consistent engagement to decrease damages across the state.

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MetroNet is the nation's largest, independently-owned, 100 percent fiber-optic provider of internet, television, and telephone services. MetroNet started in 2005 with one fiber-optic network in Greencastle, Indiana, and has since grown to serving and constructing networks in more than 120 communities across Indiana, Illinois, Iowa, Kentucky, Michigan, Minnesota, Ohio, Florida, North Carolina, Virginia, Texas, Wisconsin, and Missouri.

Indiana 811
Know what's below. Call before you dig.

Our mission is to lead Indiana in promoting safety and preventing damage to underground facilities by providing excellent coordination and notification services at a reasonable cost.

LEADER

bp

NC 811.ORG

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FNCA Facility Notification Centers Association

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Oregon811 UTILITY NOTIFICATION CENTER

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Call Before You Dig JULIE ILLINOIS ONE-CALL SYSTEM

811

CMR Claims Management Resources

Tennessee811

STAKE CENTER LOCATING

Tina Beach

Leading Advocate for Pipeline Safety

TINA BEACH HAS SPENT 17 YEARS IN THE ENERGY INDUSTRY, DIRECTING PUBLIC AWARENESS, COMPLIANCE AND DAMAGE PREVENTION INITIATIVES. SHE HAS DECREASED LIAISON COSTS FOR OPERATORS ACROSS 14 STATES AND FOUNDED STATE PIPELINE ASSOCIATIONS IN SEVEN STATES.

Since 2015, Tina has worked in Government Relations for CHS, a global agribusiness owned by farmers, ranchers and cooperatives across the U.S. Prior to this, she worked in Risk Management and as a Compliance Consultant for Sander Resources, and spent over eight years as Manager of Standards and Compliance for Cascade Natural Gas Corporation.

People within the industry who have worked with Tina characterize her as passionate, dedicated, inspiring, energetic, driven, creative and professional.

Tina has been involved in state, regional and national damage prevention organizations. She is a key contributor to the Pipeline Ag Safety Alliance (PASA) and the Pipeline Association for Public Awareness (PAPA). "Tina has been involved behind the scenes and in leadership roles on damage prevention from small town initiatives to worldwide campaigns," said JJ Harrison, Rodeo Clown/811 Ambasador.

"The fact that damage prevention is always fresh in her mind makes her an incredible advocate. She never misses an opportunity to educate and does it in a way that's not imposing on others."

"You can see Tina's influence in many groups or organizations she participates in," added PAPA's Jeff Farrells. "She is active in several state organizations including the Montana Liquids and Gas Pipeline Association, the Pipeline Association for Public Awareness, as well as being the chair of the Liquid Energy Pipeline Association Damage Prevention Committee."

Her contributions to damage prevention and 811 are endless. "She recently hosted the API Public Awareness Committee in Billings, Montana. Everyone who attended benefited from not only the discussion, but hands-on learning regarding all kinds of topics beneficial to their job and industry," Farrells said.

"Tina is very engaged in PAPA and will work on any project," added Scott Landes, CEO of Excavation Safety Alliance. "She did a great job co-moderating our Notification Board Member Forum at the Global Excavation Safety Conference."

She has made it her mission to promote damage prevention and safe excavation. According to Whitney Price, Vice President of Operations at Excavation Safety Alliance, Tina has "been great at securing volunteers and participation in various public awareness initiatives across the country."

"Tina always has fantastic ideas on how we can improve our outreach and communication within the industry and to stakeholder groups," added Kesley Tweed, Executive Director of PAPA.

Tina is credited with helping to promote Rodeo Clown/811 Ambassador JJ Harrison to stakeholders within the damage prevention industry. She got the idea when she worked for Cascade Natural Gas. She met JJ at a local rodeo and the rest is history. "One of her passions has been introducing JJ Harrison to damage prevention. JJ is one of the nicest guys you will meet and incredibly dedicated to the cause of damage prevention. Tina has helped shepherd that relationship from the beginning," said Jeff Farrells.

Tina Beach definitely has the credentials to become a Damage Prevention Hero. According to Price, "she has conviction and passion for safety and the industry at large. She always has a smile and brings value and insight to any conversation."

JJ Harrison agrees, "The fact that damage prevention is always fresh in her mind makes her an incredible advocate. She never misses an opportunity to educate and does it in a way that's not imposing on others."

This comment from Kesley Tweed says it all, "Tina, thank you for your continuous support, engagement and enthusiasm. PAPA, and the industry, are better because of you. Your passion for safety and care for people and communities is unmatched. Congratulations on being named a Damage Prevention Hero." ESM


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Conversations That Move the Industry Forward

The Excavation Safety Alliance (ESA) is the place in the industry where solutions to industry problems are developed, with no bias towards any stakeholder group. ESA Town Halls are a virtual, open forum for all stakeholders to discuss concerns and present potential solutions. ESA Town Halls have featured panelists from the following organizations representing a wide variety of industry stakeholder groups committed to damage prevention and excavation safety.

- *3M*
- *4M Analytics*
- *4Sight Utility Engineers*
- *acretivPartners Consulting*
- *American Petroleum Institute (API)*
- *ATCO Gas*
- *AXA XL*
- *Badger Daylighting*
- *Benchmark – Subsurface Utility Services*
- *Bigman Geophysical*
- *Blood Hound, LLC*
- *Coastal and Marine Operators (CAMO)*
- *Canada Energy Regulator*
- *CenterPoint Energy*
- *CenturyLink*
- *Chevron*
- *Citizen's Energy Group*
- *Cliff Meidl Enterprises, LLC*
- *Colorado 811*
- *Columbia Gas of Maryland*
- *Columbia Gas of Pennsylvania*
- *ComEd*
- *Corby Energy Services*
- *Cottrell Contracting Corporation*
- *Council for Dredging and Marine Construction Safety (CDMCS)*
- *Dig Prevention Consulting*
- *ELM Utility Services*
- *Energy Queensland*
- *Energy Worldnet, Inc.*
- *Enhanced Scanning*
- *FirstEnergy*
- *Georgia 811*
- *Gopher State One Call*
- *GPRS*
- *Greiner Construction*
- *Hall Estill*
- *Hydromax USA*
- *INSET*
- *Iowa State University*
- *J.H. Anspach Consulting*
- *JNR Adjustment Company Inc.*
- *Jorgenson PLLC*
- *JULIE, Inc.*
- *KorTerra*
- *LineQuest, LLC*
- *Lumen*
- *MetroNet, Inc.*
- *Minger Construction Co., Inc.*
- *MISS DIG 811*
- *Mitchell Engineering*
- *National Grid*
- *North Carolina 811*
- *NUCA of Pennsylvania*
- *NULCA*
- *OEC*
- *Oklahoma One-Call System, Inc. / OKIE811*
- *Pacific Gas and Electric Company (PG&E)*
- *PelicanCorp*
- *Petticoat-Schmitt Civil Contractors, Inc.*
- *Pipeline Association for Public Awareness (PAPA)*
- *Ritter Communications*
- *Ron Peterson Consulting*
- *Sander Resources*
- *Screening Eagle Technologies*
- *Stahl & Associates Insurance*
- *Subsurface Utility Engineering, LLC*
- *Team Fishel*
- *TELUS*
- *Texas811*
- *Utility Safety Partners*
- *Vannguard Utility Partners, Inc.*
- *Vivax-Metrotech Corp*
- *WGI, Inc.*
- *Xcel Energy*
- *Youngs Excavating Inc*

ESA Town Halls are changing the way the damage prevention industry shares ideas and collaborates on solutions. Bring your unique perspective to the conversation and help shape the future. ESA Town Halls occur on the second Thursday of every month at 10:30 AM CST.

ESA EXCAVATION SAFETY ALLIANCE

SAFETY IN COLLABORATION

> **"Are any of you guys willing to talk to me about damage prevention until I go to sleep tonight...LOVE this conversation! I really enjoyed listening to you guys!"**
>
> *- Raymond Sonnier, Atmos Energy*

94.3%

OF ATTENDEES FIND VALUE IN ATTENDING ESA TOWN HALLS

Join the Conversation!

Become Part of the Excavation Safety Movement

BY SCOTT LANDES

We believe a focus on safe excavation education and initiatives helps prevent damage to buried facilities. Focusing on safe excavation spotlights the importance of safety for the people doing the digging and is the top priority of both damage prevention and safe excavation efforts. The Excavation Safety Alliance (ESA) was created to give a voice to all stakeholders, provide education, and be a place where solutions to industry problems can be shared.

You can join the movement and support excavation safety and damage prevention by becoming an ESA member. Individuals can join for FREE because we believe every stakeholder can make a difference. Organizations can also become members and support the ESA mission of safety through collaboration.

FREE Individual Membership: As an individual member you will be joining over 1,000 stakeholders who are committed to making excavation safe for everyone. You will also receive:

- Monthly member e-newsletter
- Social media badge you can use on your LinkedIn, Facebook, or Instagram page to show your support for excavation safety and damage prevention
- The ability to have a voice in all ESA Town Halls
- Free access to special "members only" events
- Access to safety checklists and solutions downloads
- Annual *Excavation Safety Magazine* subscription

Company Membership: Your annual $2000 membership will help make all the individual membership benefits possible, and make it clear to the industry that you support damage prevention and excavation safety. In addition, your company will receive:

- A 10% discount on all Global Excavation Safety Conference fees, excluding the early bird $811 offer (unlimited use)
- Company logo and link on the ESA website member page
- Company logo on the ESA member section in the annual *Excavation Safety Guide*
- Company logo on the ESA member section in the annual *Excavation Safety Magazine*

Become an individual or company member by checking out the previous page!

These are the ESA guiding principles:

- ESA is the place where every stakeholder will have a platform to have their voice and ideas heard.
- ESA is the place where solutions and ideas to solve industry problems are available to all stakeholders.
- Every ESA member and member company has an equal voice.

ESA is where stakeholder specific associations can share ideas and work together to improve excavation safety and damage prevention for their members. ESM

Who is ESA?

We have been providing damage prevention and excavation safety education since 2003.

You may know us by our previous name, Infrastructure Resources, or by some of our other initiatives:

- **Global Excavation Safety Conference (started in 2004)**
- ***Excavation Safety Guide* (started in 2006)**
- ***Excavation Safety Magazine* (started in 2010 as the *Damage Prevention Professional* and then *DP-Pro*)**
- **Pipeline Ag Safety Alliance (PASA – started in 2015)**
- **Locator Safety & Appreciation Week (LSAW – started in 2015)**
- **Virtual Town Halls (started April 2022)**

Just Imagine the Possibilities

BY LINDSAY SANDER

"It's just an evolution of taking all that data, putting it into the system, getting it to all the utilities who then get it to their subcontractors, trusted partners, and the gas, power, and water companies, and then maybe in five years, to the homeowner who can see where the lines are. We've got to get the utilities to start installing this now." It was a simple statement made at the Global Safety Excavation Conference in Tampa earlier this year from a respected member of our industry who is also a "recovering locator" responsible for a large local distribution company's damage prevention program.

His comments were made during a panel discussion of industry leaders who were discussing whether a reduction in damages is possible and what it will take by all stakeholders to begin moving the needle. The panel was in unanimous agreement that technology will advance aspects of locating and mapping for the damage prevention community in ways that will ultimately assist with reducing damages.

During the question and answer portion of the Town Hall, a respected industry representative shared his version of the potential evolution of mapping and data availability. He offered that as easily as data can be shared by the gas company with its subcontractors, it can just as easily be shared with other trusted partners. Then comes another short jump in maybe five years to the ability to provide homeowners with a picture of their home and where the lines are so they can be more aware.

The response to him, and those attending was simple: Everything he discussed was indeed possible – now. No one has to wait until tomorrow, much less for five years for the ability to customize data and provide it to any stakeholder, even at the homeowner level. The technology is already here and being used today by operators throughout the country.

This general concept is not new. Nearly a decade ago, operators pined for the ability to provide maps to landowners and public stakeholders as part of their public awareness efforts. And while it was possible, it came at a tremendous cost, and with numerous obstacles related to planning and implementation. Because of these hurdles, few ever attempted it, until the fall of 2021 when Buxus™ launched.

The concept for the mobile app is simple: Provide specific, targeted information to key

stakeholders using a device that more than 85 percent of Americans don't leave home without – their mobile phones. Initially, the app was to deploy integrated industry and operator-specific mapping and information to the response community. However, since it launched, the scope and purpose have evolved in ways never dreamed of because of the advancement of technology.

Historically, pipeline and utility operators depended on sending out a minimum of four brochures – one for each stakeholder group – to meet basic requirements. Some pipeline and utility operators expand their outreach by sending stakeholders a plethora of customized brochures delineated by product or pipeline. At the extreme end of this strategy, some operators deploy nearly 100 brochure variations to provide

more specific information to stakeholders. Just imagine the time, cost, and environmental impact of this type of outreach that can be avoided due to technology. What once consumed hundreds of hours of preparation and precious resources can now be done via technology with the touch of a button.

People are hungry for information on their terms through their accepted channel(s) of communication. Using a single app that doesn't require Wi-Fi or cellular service, an operator can easily and quickly provide useful and up-to-date stakeholder-specific information.

Giving people what they want and need in our technological world is not hard. Unfortunately some folks are adverse to change and/or don't like to think outside of the box. Albert Einstein said that "the definition of insanity is doing the same thing over and over again, but expecting different results." There is currently no reason to keep repeating the same methodologies because technology now allows for providing customized information, mapping, documents, and other resources to easily and efficiently reach targeted stakeholders.

Just think about the amount of information and the ability to deploy vital safety information, all at the touch of a button and also having the ability to update that information in seconds.

> "Technology is creating opportunities to advance safety, communicate more effectively, and seamlessly integrate compliance activities."

Operators can now offer a unique user experience to their stakeholders in a way that fits their needs via an integrated and flexible solution that can be changed or updated in seconds. And to take it one step further, Buxus™ provides for an established two-way communication system which is the pinnacle of any stakeholder engagement program.

Now, homeowners, emergency responders, or public officials (to name just a few stakeholder groups) can log in and find out instantly about the various utilities and underground infrastructure that subscribe to the system. Because the operator controls the data each stakeholder sees, information may look different from one utility to the other; however, it is all available and can be shared today.

This is progress. This is a game-changer. It is also a more cost effective, more modern method of communication, and a direct way for stakeholders to engage with operators more effectively.

Like the evolution of any technology, Buxus™ is now constantly advancing at a speed that is staggering. Just imagine the possibilities given what we have been able to do in the emergency response, public awareness, and stakeholder engagement space.

Those in the computer sciences will likely tell you that the evolution of technology has advanced more in the last six months than it has in the last 30 years and will open the door to limitless possibilities to improve damage prevention, stakeholder engagement, and nearly any other activity that can improve safety. ESM

Long T. Nguyen and Khanh Nguyen

Diversity & Inclusion in the Damage Prevention Industry

Cristal Garcia

BY
LISA CLARK MCKNIGHT

IN 2002, the Georgia Public Service Commission (GPSC) was just beginning to enforce the state's Dig Law in what was increasingly becoming a very diverse workforce in the construction industry. From the beginning, one of the Georgia Public Service Commission's most important goals was to reach the Hispanic community as the language barrier was a very big obstacle in keeping them safe while working on construction sites. The GPSC succeeded by partnering with the Hispanic Contractor's Association of Georgia (HCAG), participating in bilingual construction safety fairs, reaching out to workers at jobsites across the state, and through Georgia's Dig Law training in Spanish.

Fast forward 20-plus years to 2023 and what you will find is an even more diverse population in the damage prevention industry. The main difference is that the language barrier is not the issue that it once was. Many of today's workers are the sons and daughters of immigrants and they grew up bilingual as citizens of the United States and many have become leaders in the damage prevention industry, including three outstanding employees currently working and excelling as Locate Technicians in Georgia.

Cristal Garcia began her career as a locate technician with the City of Lawrenceville Damage Prevention Department in April of 2022. She comes from several generations of migrant farm workers who settled in California and her goal has always been to break that cycle with her generation. Her father came to Georgia when he heard about opportunities in the construction industry and the rest of the family soon followed.

Cristal graduated from Central Gwinnett High School in 2009 and is very thankful for her education, something that her parents were never able to have. Cristal's biggest motivation is her children, a son who is ten and a daughter who is five. She likes working with the City of Lawrenceville where she can learn and grow professionally and be financially secure. Through her work in the Damage Prevention Department, Cristal joined the Leading Women of Damage Prevention, a national organization that celebrates women in the construction and utility industries. While she doesn't see very many women out on the jobsite, she finds the other workers to be very supportive and respectful. One of Cristal's goals is to eventually learn the business from the inside and to support other women working in the industry.

Khanh Nguyen has been a locate technician since 2006. He was born in South Vietnam. One month after Khanh's birth, his father was taken away by the Viet Cong and never seen again. His mother eventually remarried a United States serviceman and followed him to Germany. Once back in the United States, she sponsored Khanh who came to Florida in 1989. Six months later, Khanh moved to Georgia and learned English in a second language class at Gwinnett Technical College. In 1990, his soon to be wife also traveled from Vietnam to Georgia. They are parents to David, who attended Georgia Gwinnett College and currently works for the City of Snellville Police Department, and has served in the roles of uniformed officer, detective and was recently promoted to Sergeant. Khanh is one of the longest-serving locate technicians in the department.

Long T. Nguyen came to the United States from South Vietnam in 1990 as a refugee. He graduated from high school in Vietnam and wanted to attend college when he came to the United States, but he had no money and didn't speak English. Long began working during the day and learned English at a second language class at night. In 1995, he became a United States citizen. In 2019, he became a locate technician. Long married at 25 and has three children. His son graduated from Georgia State University in Atlanta with a degree in computer science. His oldest daughter graduated from Emory with a degree in business. Long's youngest daughter began her studies at the Savannah College of Art and Design and is currently studying animation. Long says that he is extremely happy to work for the City of Lawrenceville as a locate technician and to live in the United States.

Today, much of the City's outreach to potential new locate technicians is done by our employees who speak English as a second language. They are often approached on the jobsite by others who look like them and have the desire to learn, contribute and succeed in our industry. In early 2000, the unmet need was overcoming the language barrier. Today, the unmet need is staffing in the locating industry. There, at the intersection, lies the opportunity. ESM

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BY
BOBBY PURVIS,
SAFETY CONSULTING SERVICES MANAGER, ACRT

Recommendations for an Effective Field Audit

By talking to customers and industry analysts over the years, I've come to find value in an effective field audit. Prevention is always better, accessible, cheaper, and safer than remediation.

I believe that a well-designed field audit program must support and achieve the following at a minimum.

- **Data access.** Provide immediate access to all field audit data at any level, across the extended enterprise (corporate, franchisees, suppliers, etc.).
- **Audit database.** Establish an audit database across all field locations to enable real-time and historical data analysis, trend analysis, and root cause analysis on inventory losses, as well as safety and quality incidents. Everyone needs to be able to view this.
- **Data automation.** Automate and streamline field audit data management processes to minimize errors. Everything you can automate, the better. Anything you leave to your memory will be forgotten at times.
- **Effective distribution.** Enable field auditors to distribute their findings to managers and executives in a swift and easy manner. Too many times, I've seen field auditors conduct their audits, but then where do they go? They generally go to the safety director or personnel at corporate and that's where it stops – there's no corrective action put in place.
- **Interactive review processes.** Allow field auditors to review audit scores interactively with personnel and help raise these scores through training and continuous improvement programs. As you're out conducting an audit, you should share that information with the crew or whatever entity you're auditing. Share that information with them so they have real-time visibility of how they're performing. You, as an auditor, are the first line of defense.
- **Next-generation mobile auditing.** Laptop or desktop systems can be cumbersome tools for field auditors who often must move around in places with intermittent or no network connectivity. As a result, organizations are increasingly adopting offline and mobile auditing solutions that enable auditors to conduct fieldwork on the go, without having to re-enter their data when they return to the office.

Four Recommendations for your Field Audit

A well-designed field audit can provide a wealth of insights to strengthen business performance in organizations. However, each audit is only as good as the processes, people, and technology involved.

1. **Automation and integration.** Save time and costs by finding a way to automate your field audit workflows. Auditors should ideally be free to focus on important processes such as analyses of findings and issues, rather than tiresome data entry and formatting tasks. Integration of field audits with other processes in the audit lifecycle is also important.

2. **Mobility.** Mobile audits simplify and expedite audit processes and fieldwork by doing away with papers and spreadsheets. Field auditors have the flexibility to enter data anytime and anywhere, while also capturing images and videos via camera-enabled tablets.
3. **Real-time visibility.** Maintaining all audit work papers in a single point of reference makes it easy and convenient for field auditors to manage, store, access, download, and assign these documents.
4. **Agility, adaptability, and auditability.** A well-designed audit program must be auditable to ensure that the program is running as you expect. Agility and adaptability are other critical factors. Implement audit methodologies and systems that can adapt to, evolve, and scale up with your business processes and objectives.

At a time when businesses are rapidly expanding and new risks and compliance requirements are constantly emerging, it is critical to get real-time, on-the-ground insights into your operations. ESM

Bobby Purvis is the manager of safety consulting services at ACRT. He is a highly trained and seasoned environment, health, and safety (EHS) professional with over 25 years of experience in industrial, civil, manufacturing, general industry, construction, and research and development industries. Purvis has a proven track record with worldwide recognition for his efforts in the creation and implementation and sustainability of EHS programs. He can be reached at bpurvis@acrtinc.com.

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Utilizing Predictive Analytics to Manage Limited Resources

BY
KYLE VANLANDINGHAM, DIRECTOR BUSINESS DEVELOPMENT - TEXAS811

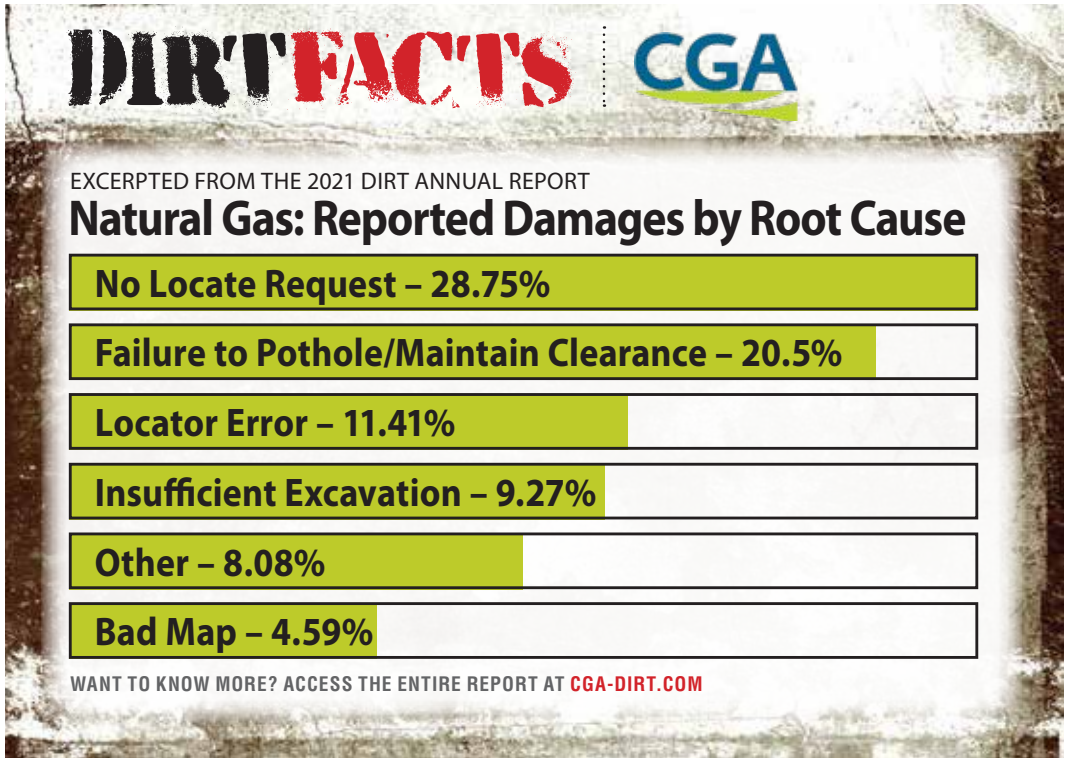
With the job market being highly competitive, and wages going up almost 24% in the past five years, companies are trying to figure out ways they can do more with less. One Call ticket volume is at an all-time high with many struggling to keep up with the abundance of work across the state of Texas, and locator response times and damage rates are a prime indicator of that. Something that I've heard a lot over the past few years is, "we treat every ticket as high risk!". This way of thinking is good in theory, but it's not realistic, nor is it the best approach when facing staffing and resource shortages.

It's objectively true that some tickets pose a higher risk of damage to underground infrastructure, and developing a process and implementing technology to help mitigate that risk is much simpler than you'd think. By utilizing a risk score that analyzes multiple data points from historic One Call tickets and other real-world factors like weather patterns and soil data, you can easily define where your finite resources can best make an impact to prevent damages before they happen. If you know you have enough resources to adequately respond to 80 One Call tickets daily, and you have 100 tickets sitting in queue that are due that day, wouldn't it make sense to make absolutely sure you're getting to the ones that pose the highest risk of damage to your facilities? Applying a risk score to all One Call tickets allows members to immediately sort their tickets for the day which accomplishes two things: identifies the tickets they MUST get to that day, and identifies the tickets that are worthy of additional mitigative actions.

We mitigate risk in our daily lives through wearing seatbelts, following speed limits, avoiding walking alone in the dark, and clearing steps and walkways of debris. The fact is, humans tend to be risk averse in life, so why would we practice it regularly in our everyday lives but not when it comes to protecting other people's lives and billions of dollars of underground infrastructure? "Damage prevention is a shared responsibility" – a phrase I've heard consistently over the past decade and a half and have seen it in action so many times throughout my time in this industry. It's critical that we continue to take that a step further and help limit the negative effects on others that are facing similar challenges with staff shortages and inflation. Having the necessary tools on hand to identify risk and making a strong commitment to communication across stakeholder groups can ensure that we're helping each other in times when we all need it most.

Over the past four years, we've helped our member operators reduce damages by as much as 50% by providing them with additional insight into the risk associated with their One Call tickets, and even by taking mitigating actions on their behalf. Prior to starting excavation identified as "high risk", we reach out to the excavator to have a discussion with them about the elevated risk at their job site, and even request they take some additional mitigating actions to keep themselves, and the facilities in the area, safe. Sometimes, just alerting a person to elevated risk at the excavation site is enough to trigger behavior changes, and many times, these excavators are thankful for the heads up. Facility operators and excavators both seem to have a decent grasp on the level of risk associated with a particular project, but rarely can they see the whole picture at the same level of an A.I.-generated, machine-learning platform that evaluates millions of pieces of historical data in real time. Humans are fairly good at identifying risk by looking at the consumable information around them, but unless you peel back the curtain and evaluate every tiny piece of data involved in a project, you'll never fully understand the true level of risk.

Because we're all busier than ever, there's simply no time to manually evaluate every pertinent data point for every single job to determine the actual risk. Having a system to do all that dirty work for you means that more time can be spent on ensuring that work crews go home to their families at night, the environment stays clean, and our power, internet and water stay connected. ESM



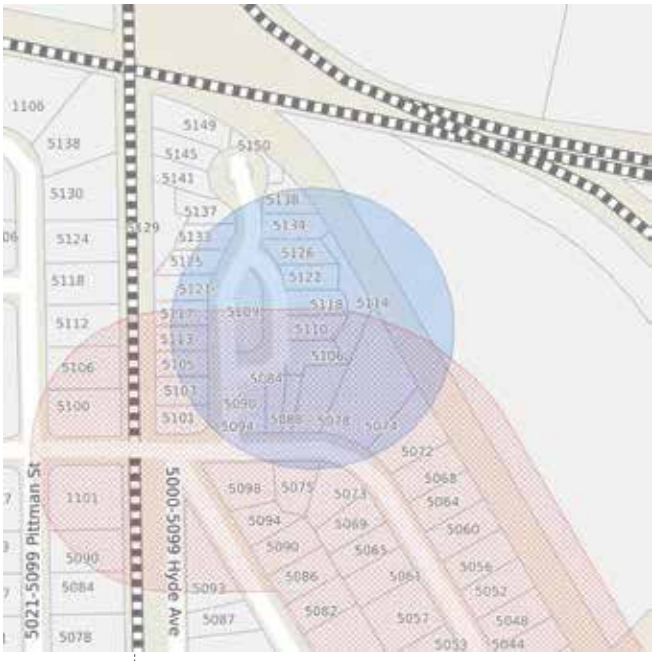
The Reforms Needed to Cut Excavation DAMAGES In Half.

BY BENJAMIN DIERKER

We often do not fully appreciate things until we have lost them. We have come to expect and rely upon power, water, internet access, and other services without even thinking about them. Yet, these are constantly at risk, and many lose their access on a daily basis through no fault of their own. As professionals in the utility and damage prevention sectors know all too well, protecting infrastructure directly implicates both public safety and the access to services that communities rely upon.

The United States is at a record high for excavation incidents damaging buried infrastructure. The risk is so significant that the Common Ground Alliance (CGA) has expressed the need for "systemic" reforms since 2020 – well before the passage of over $1 trillion in federal infrastructure spending. Given the strong correlation between construction spending and excavation damage, this is all but certain to increase excavation damage over the next decade.

On the precipice of a new wave of damages, CGA recently issued an industry challenge to cut damages by half over the next five years. This inspiring call to action is also an implicit recognition of how dire the situation truly is. But damage numbers have risen for a decade even as new technology and best practices arose, so how can we simply reverse course and prevent a quarter million damages when we haven't done so before?



Leveraging the System and Elevating the System

The stated goal of "damage prevention" is self-evident: to prevent damage. This has always been a collaborative process, and its multi-party nature signals that the solution cannot be individualistic. We won't cut damages in half by adherence to best practices by single stakeholders alone. The solutions must be systemic.

This will necessarily mean embracing the systems already in place to ensure all parties are using them to their full potential, but also improving how they work.

According to the Infrastructure Protection Coalition, $61 billion in annual waste and loss occurs before any tools go into the ground. Inefficiency in the system is its own problem and likely contributes to eventual damage events, which cause over $30 billion in annual economic harm.

The ecosystem must be streamlined on the front end to improve communication between all parties before any digging takes place. That is where damage prevention happens.

Four Reforms

Certain reforms can be adopted almost overnight that individually will significantly reduce costs and prevent damage. Taken together, they are all but certain to cut damage numbers in half – if done systemically. These needed reforms include:

- Broad shift to web-entry tickets
- Improved ticket scheduling and prioritization options
- Systemic use of electronic white-lining
- Systemic use of enhanced positive response

These reforms happen at the One Call center and are systemic by definition, because they impact all parties using the platform.

Web-Entry Tickets

To maximize benefits and minimize costs, centers should continue directing excavators to click rather than call 811. Excavators directly entering information can lead to more accurate site and

proposed excavation descriptions (depending on who submits the requests) and may reduce no-notification damages by incentivizing excavators to request locates in a more streamlined process.

In Canada, repeated analysis demonstrates that relative to notice made by calling, direct online notice led to half the total damages. (Said differently, evaluating known damages when notice was given, call-ins resulted in twice the damage number as web-entry.) This is attributable to clearer and more precise delineations. While this difference is between a population entirely made up of excavators who did give notice, it is nevertheless a critical finding to explore and reform to implement. If cutting damage in half is the goal, this moves the industry in the right direction.

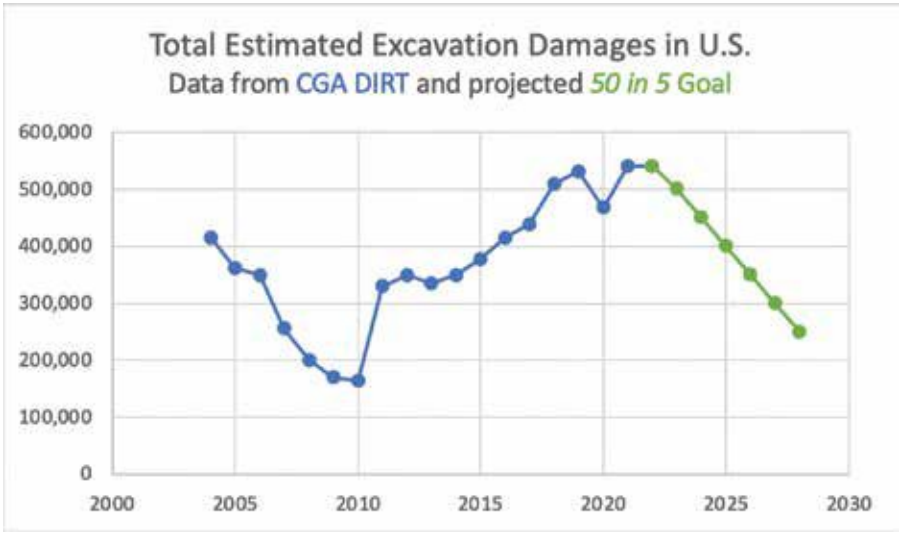
Ticket Scheduling and Prioritization

Combining this with a reform to allow ticket scheduling and prioritization must also be explored across the country as a systemic reform implemented at the One Call level. Scheduling and prioritization – which can be more easily communicated through web-entry – will go a long way in improving efficiency and reducing burdens on locators, which affect the timeliness and accuracy of locates. It can also reduce the potential for repeat locate requests if an excavator calls in tickets for a largescale project but will only complete work on a portion within the ticket window.

This small give and take between excavators and locators that One Calls can help facilitate can improve overall communication and collaboration among stakeholders. Allowing possible paid priority tickets may also be worth exploring for excavators on tight schedules.

Electronic White-Lining

Piloted, studied, and promoted by PHMSA since 2007, electronic white-lining is a pre-dig process that has benefits for every stakeholder. It has been shown to significantly improve cost savings and has direct benefit for preventing excavation damage. This is why CGA calls for this as the first step in the ideal dig of the future. But it must be available and promoted for every dig through One Call centers today. Without electronic white-lining, web-entry tickets are less effective, but together, they help narrow the dig site, improve clarity, reduced repeated/unnecessary site visits, and limit over-notification.



Enhanced Positive Response

In 2014, a pilot program demonstrated a 67 percent reduction in excavation damage when an enhanced positive response was supplied. Three years later, PHMSA completed a study and reported to Congress that its number one recommendation for improving the damage prevention ecosystem was to implement enhanced positive response. This CGA best practice was proclaimed as the second step in the ideal dig of the future. As a modest evolution to electronic positive response and ticket check systems, enhanced positive response offers the ability to send digital photos, ticket information, virtual manifests, and even facility maps to excavators through the One Call center as attachments or hyperlinks. Enabling excavators to cross-reference their site markings with high-quality enhanced digital information on their mobile devices is common sense and should become standard practice facilitated through every One Call center in the country.

While electronic white-lining and enhanced positive response will help reduce damage, they also provide unique post-damage benefits by preserving a digital record of the proposed excavation site and markings. Because excavation work disrupts the site, investigators and lawyers may leverage these records to understand root causes or liability. Fortunately, the use of these practices should eliminate the need for most such investigations, but this key backstop to the process can help improve data quality, streamline investigations, and better align stakeholder incentives.

All four of these reforms take place before the dig. These are all components of the system that ensure robust and clear communication between and among stakeholders so that maximum clarity about the presence and location of buried facilities is known by all relevant stakeholders before any tool breaks ground. By front-loading communication with technological best practices, the eventual excavation will be safe and efficient.

These four reforms – if adopted systemically – will begin a shift that will affect other behaviors and streamline inefficiencies with a certain damage reduction impact. Without these components, there is no clear path to substantial reduction in damage, including the admirable goal to see 50 percent reduction in only five years. ESM

Benjamin Dierker, Executive Director of the Alliance for Innovation and Infrastructure, explores the intersection of economics, law, and public policy in the areas of climate, damage prevention, energy, infrastructure, innovation, technology, and transportation. He has studied public policy through work in nonprofit organizations, think tanks, and government offices. He can be reached at bdierker@aii.org.

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UNEARTHING VALUE

BY
CORY MAKER AND
PATRICK IYONSI

Leveraging Digital Mapping and Jobsite Data for Compliance and Profitability

In the ever-changing landscape of underground construction, digital documentation has become an indispensable tool for underground professionals. From pre-drill planning to comprehensive post-drill reporting, the advantages are abundant. It enables contractors to navigate congested easements, sidestepping the dangerous and costly pitfalls of cross bores. By closely monitoring equipment usage, operators can gain valuable insights into performance and identify areas for improvement. And leveraging digital documentation can help operators bid for jobs by taking into account the unique risks and challenges of each project.

However, the compelling reasons to adopt digital documentation continue. A new imperative is emerging that adds a sense of urgency to this practice – compliance and regulation. As regulations tighten, operators will soon find themselves compelled to document their jobs as a matter of legal necessity.

For example, California's Senate Bill (SB) 865 will require that all new subsurface installations in the state be "mapped using a geographic information system and maintained as permanent records of the operator." The bill's activation has been delayed, but when it does take effect, the bill will make California the first state to legally require the creation and preservation of maps for subsurface installations.

Other states are likely to follow suit and enact similar laws. And cities across the U.S. are also creating their own requirements at the local level to protect people and underground utilities.

At the same time, more bid specs are also requiring that contractors provide electronic drilling records (EDRs) as part of a job. This involves logging specific data about your drills' operating parameters during a job.

Collecting bore and equipment data may seem like added work. And for fiber installation, operators may worry that work will eat into tight profit margins that are common in the industry. But the truth is, contractors likely already have much of what they need to record the data. And that data can do more than help them comply with new requirements; it can also boost jobsite and operator efficiency and profitability.

Uncovering the Power of Data

Forward-thinking contractors have gone all in on collecting and using data because they know it can help them work more efficiently. For example, Steve Sellenriek, president of Sellenriek Construction, is finding the collection of data critical to the current and future success of the jobsite.

"Not only can this information be used for planning, efficiency and compliance now, it can also be used to ensure future builds will be safer and more efficient as well," said Sellenriek. "Our industry has the technology available and a workforce that understands how to use this technology in a way that does not impede production when trained properly."

Additionally, contractors are finding that data can help them track the productivity of each machine to better plan workloads and monitor machine hours to help plan maintenance in advance. And they can record machine duty cycles, fuel consumption and machine utilization to track costs and understand if operators are properly operating machines.

To gain a similar holistic view of their fleet and their jobsites, three key data sets are needed:

#1: Data for the plan

A clear plan can help contractors create records for compliance purposes. It can also help contractors reduce risks and improve your productivity on the job.

Widely used utility-locating devices use automatic, real-time data capture and integrated GPS to help locator crews accurately and reliably locate underground utilities. The latest versions of the devices with enhanced receivers even allow crews to locate utilities with centimeter-grade accuracy.

As the device locates utilities, it can map and label them as power, water or telecom. The device records that information locally. Locator crews can then access the information from their smartphones and upload it to their mapping service, whether it's a CAD system or cloud-based mapping service. Crews can also send the information to their supervisors, owners or other parties for approval or further action. Eventually, as more cities and states require mapping of underground utilities, crews will also be able to upload this information to an external cloud-based system for statewide or even nationwide utility mapping.

What's more, all this can be done using one device and one software, making the planning process simple and efficient. And because all data is recorded and managed digitally, rather than manually, it helps reduce the risk of errors.

#2: Data for the bore

Using an HDD guidance system, a drill operator can download a bore plan and see it overlayed on their guidance display. This can help them stay on plan by monitoring critical waypoints as they drill.

The system also logs bore data in real time. While in the field, the drill operator can download this data to their smartphone, tablet or computer to review a profile of their drill and compare it against the plan.

At the same time, on-board equipment telematics can record equipment operating data to help contractors meet EDR requirements and stay productive. The data can show, for example, how a drill is being utilized, how long its engine has been idling, and if it is being misused or overused.

Telematics data can also include valuable equipment diagnostics to help minimize machine downtime. Operators on site can monitor fuel and DEF levels, battery performance, and other systems. And fleet managers back in the office can track wearable and service parts to understand how quickly operators are going through drilling bits or digging chains.

#3: Data for the report

After a job is done, the HDD guidance system can generate an as-built report. Contractors can store the report along with the plan for compliance purposes and to resolve any potential disputes in the future about the bore.

Again, because data logging in the as-built report is digitally automated, it can reduce errors compared to handwritten bore logs. Automated documentation can also help contractors expedite the payment process. Instead of waiting weeks or even months for a paper-based payment to process, contractors can possibly get paid the same week a job is completed.

Contractors can also store equipment telematics data and use it both for EDR reporting and to help them better plan for jobs. They can monitor, for example, how each machine in their fleet is performing. They can look for patterns in idle hours to help schedule preventative maintenance. And they can use historical jobsite data to better plan for future workloads and more accurately estimate hours for new jobs.

In one case, a company used equipment fuel-consumption data to realize that its machines were running idle for too long, costing the company upwards of $800,000 per year. Such discoveries can help contractors improve how operators run machines and realize big savings.

The collection of this data is critical to the current and future success of the contractor. Not only can this information be used for planning, efficiency and compliance now; it can also be used to ensure future builds will be safer and more efficient as well. Our industry has the technology available and a workforce that understands how to use this technology in a way that does not impede production when trained properly.

Synergy in Action

Harnessing the power of technology that likely already exists within a contractor's fleet can revolutionize their effectiveness at every stage of a project. It empowers them to swiftly identify and map existing buried infrastructure, plan and execute new installations with unwavering confidence and effortlessly generate accurate as-builts and EDRs.

However, bore and equipment data alone is not sufficient; contractors must also possess the capability to integrate this data seamlessly. Without synergies between the technologies generating the data, valuable information can become trapped within isolated silos or restricted to its original source. The key lies in leveraging technologies designed to work harmoniously, enabling operators to streamline data sharing and access any desired information quickly.

By embracing a comprehensive and unified approach to data integration, contractors can unlock the true potential of their operations, experiencing unparalleled efficiency and unlocking a wealth of actionable insights. ESM

Cory Maker is the Product Marketing Manager for Subsite. Patrick Iyonsi is the Utility Inspection Product Manager for Subsite.

Update: Minnesota's Utilities Mapping Project

BY
BARBARA CEDERBERG

The Minnesota Utilities Mapping Project (UMP), a collaboration between Gopher State One Call (GSOC) and the Minnesota Geospatial Advisory Council Emergency Preparedness Committee (EPC), was formed in August 2020. The UMP works to increase locate efficiencies and accuracy, reduce damage to the state's underground infrastructure, and improve operational and construction safety. This is achieved by leveraging current and emerging GIS technologies through cross-community collaboration to develop best practices and promote technology solutions.

The Beginning

In the fall issue of *dp-PRO* (now *Excavation Safety Magazine*), we reported that Gopher State One Call (GSOC) was creating a state-wide pilot program to introduce several leading GIS utility locating technologies to communities across Minnesota. The introduction of these technologies helps communities more accurately map utilities in a timely manner, creating a blueprint for others to follow in the future.

GSOC worked directly with equipment dealers to connect the pilot program with state-of-the-art technology. The concept of the pilot program was simple: a dozen Minnesotac cities were given the opportunity to trial a cutting-edge GPS utility locating system to see if and how it transformed their locating process.

For the pilot program to be practically scalable across the state, the new technology must be seamlessly integrated into existing systems, save time, and produce accurate utility maps. The results of the pilot program were outstanding! Communities across Minnesota began using new, cutting-edge GPS locating technology to improve accuracy and efficiency.

Nearly all of the pilot program communities touted the ease-of-use of the technology, and many highlighted the potential time savings. The response was promising, indicating that other communities could be introduced to, and capitalize on, these new locating technologies.

"I like how our maps rolled over with all the data (previously) collected. That saved a lot of time," said Pete Wyffels, Operational Superintendent of Glencoe MN Light and Power. "It is handy to be able to drop down to street view and actually be able to view lines from there when mapping. It saves a lot of driving back out in the field."

"This is probably the easiest, cleanest, and cheapest solution I've seen so far," added Brandon Fitzpatrick, GIS Tech for Hutchinson MN Utilities. "I don't know of anything else that connects everything (GIS, Online Maps, Locator) like this."

UMP Update

Chaired by Barbara Cederberg, COO of Gopher State One Call, and Steve Swazee, Chair of EPC, the UMP in October of 2022, completed a prototype

"THIS IS PROBABLY THE EASIEST, CLEANEST, AND CHEAPEST SOLUTION I'VE SEEN SO FAR," ADDED BRANDON FITZPATRICK, GIS TECH FOR HUTCHINSON MN UTILITIES.

of a software platform called FuzionView that provides real-time viewing of underground utilities to accredited design engineers, locators and excavators based on the excavation area described in a Gopher State One Call ticket only during the active life of a ticket.

The next phase of the UMP is underway with the goal to develop the prototype FuzionView software into an open-source, robust system. FuzionView is being developed as an open source software system in order that any One Call center could efficiently add this capability into their offerings. Funding has been obtained for the first half of this development effort. Funding to complete the project is being solicited.

Next steps for the program include improving map visualizations, developing capability to capture information and GPS data in the field, sending updated GPS information to facility operators, and adding more production level capabilities.

In recognition of the innovative nature of this endeavor, Common Ground Alliance (CGA) awarded this project a Groundbreaker Award at the CGA 2023 Annual Conference. CGA also published a case study which can be found at: https://commongroundalliance.com/Portals/0/Library/Next-Practices/case%20studies/NEXT%20Practices%20minnesota%20GSOC-final.pdf ESM

Those interested in learning more or working with UMP should contact Barbara Cederberg at Barbara.cederberg@gopherstateonecall.org

Court Ruling:

Utility can be held Liable for Damage Caused by Watermain Break

(Reprinted courtesy of Iowa Capital Dispatch)

The Iowa Supreme Court has affirmed a lower-court ruling that suggests a municipal utility can be held liable for damages to private property that result from a watermain break.

Jim and Angela Sutton had sued the Council Bluffs Water Works, alleging their home was seriously damaged when a watermain near an intersection close to their home broke, causing water to flow to the surface. The Suttons alerted Water Works to the problem and, over the next eight weeks, crews inspected and repaired breaks to the pipe on five separate occasions.

Eventually, the break led to a pool of standing water that the Suttons said caused their house to settle, resulting in damage to the foundation, interior walls, garage floors and doors. The couple sued Water Works under two legal theories including strict liability, which doesn't require proof of actual negligence or an intent to do harm.

Water Works argued that the Iowa Municipal Tort Claims Act doesn't allow for strict liability claims against utilities of its kind, but the district court ruled otherwise, which led to an appeal and put the matter before the Iowa Supreme Court.

In a previous case dating back to the mid-1960s, the court determined that a municipality could be held liable under a theory of strict liability for damages resulting from an underground watermain break. The reasoning in that case was that it wasn't reasonable that a city engaged in a proprietary activity could deliberately and intentionally plan to leave a watermain underground, beyond the reach of inspection and maintenance, until a break occurs, and then escape all liability for damage that a break would cause.

The city, the court reasoned, "knows that eventually a break will occur, water will escape and in all probability flow onto the premises of another with resulting damage… When the expected and inevitable occurs, they should bear the loss and not the unfortunate individual whose property is damaged without fault of his own."

Three years after that ruling, the Iowa Legislature enacted the Iowa Municipal Tort Claims Act.

The Council Bluffs Water Works argued the act eliminated the right to pursue claims against municipalities that the act itself doesn't explicitly authorize, and that the law prohibits claims based on strict liability. In their ruling, the justices rejected that argument, reinforcing the court's previous findings.

"Water Works' argument can't overcome the plain meaning of the text," the court said. "Applying the plain language of the statute, strict liability claims are torts for which parties can pursue claims under the act." ESM

Utility Safety Partners:

LOOKING BACK ON 40 YEARS OF PROGRESS

BY
MIKE SULLIVAN,
PRESIDENT, UTILITY SAFETY PARTNERS

Fairmont Banff Springs, a historic hotel located in Banff, Alberta, Canada

AS WE GEAR UP FOR THE 40TH Anniversary & Safety Conference of Utility Safety Partners, previously known as Albert One-Call Corporation, it is an opportune moment to glance back at the pivotal events and milestones that paved our journey. Our story began in the late 1970s, when the concept of One-Call Systems was gathering steam in the United States. Alberta, a province teeming with energy resources and economic growth, felt the need for a robust mechanism to protect the transmission of its precious assets and to ensure the safety of its communities, workers, and public.

The genesis of our organization traces back to a key moment in June 1977. John Fildes of the Canadian Western Natural Gas Company Limited (now ATCO), in a memo to his colleagues, voiced the urgency of setting up a "one call" notification system in Alberta. This call for action reverberated across the industry when the Alberta Energy Resources and Conservation Board expressed concerns about the mounting third-party damages to pipelines. Consequently, a dedicated committee was formed to assess the necessity and feasibility of a One-Call System.

Reality underscored the importance of this system in March 1979 when an unfortunate propane pipeline rupture led to a fire and the evacuation of over 18,000 people in an Edmonton suburb. This tragic event served as a grim reminder of the potential hazards of unreported damages and the importance of preventative measures.

Mike Sullivan and Ryan Hansen, son of Kent Hansen and current owner of Hansen Plumbing – Heating – Cooling

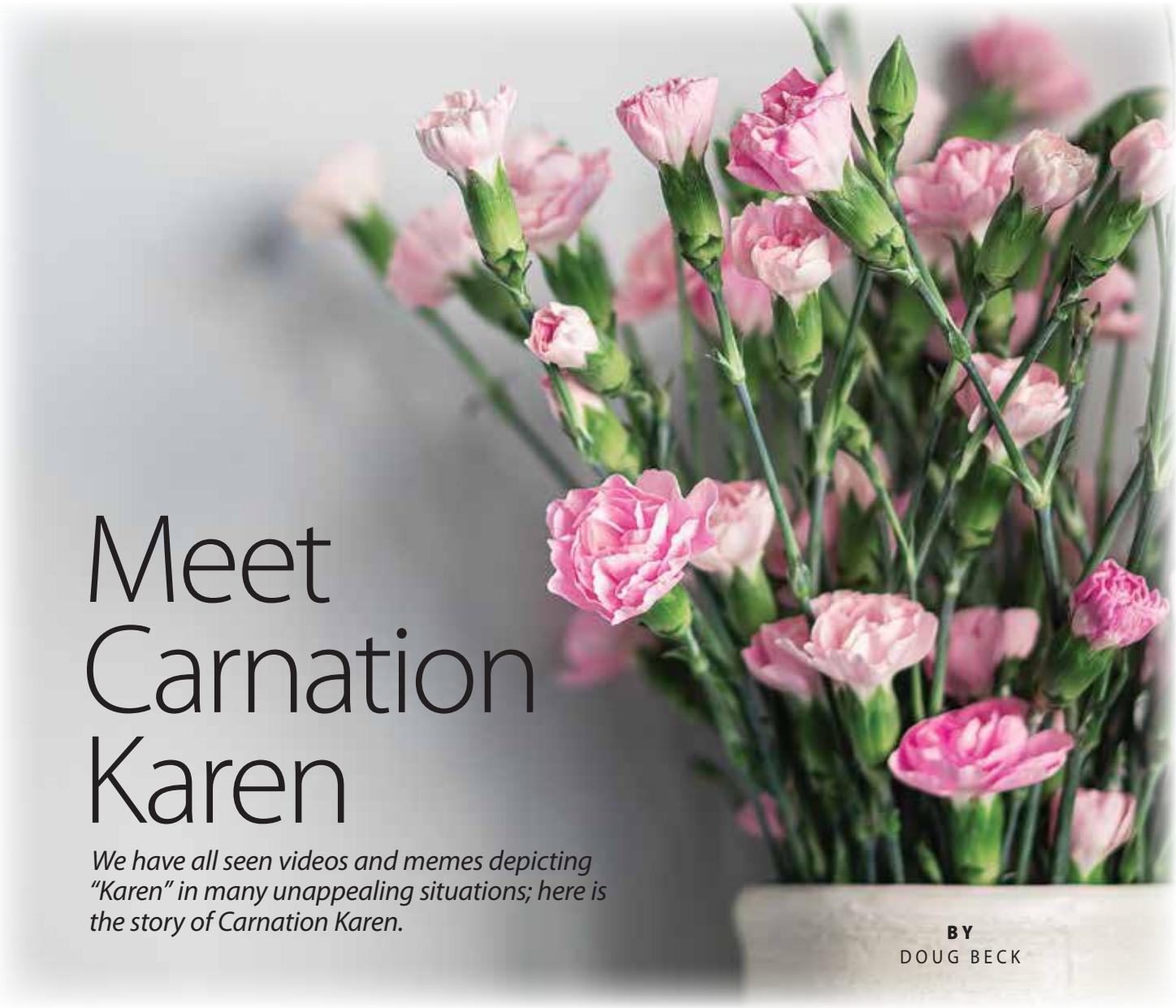
June 1977 inter-office memo from Mr. John Fildes to his Canadian Western Natural Gas Company Limited (now ATCO) colleagues urging the establishment of a "one call" notification system in the province of Alberta.

In response to this call for safety, the Alberta One-Call Location Corporation processed its first locate request in October 1984. The request was made by a Calgary plumbing contractor, Mr. Kent Hansen. From that first request, Utility Safety Partners, as we are known today, has processed over 10 million locate requests and expanded its reach to neighboring Saskatchewan and Manitoba.

Reflecting on our legacy, we are excited about the path that lies ahead. We invite you to be a part of our continuing journey at our 40th Anniversary & Safety Conference, held at the breathtaking Fairmont Banff Springs from February 26-28, 2024. This momentous event will offer insightful educational sessions, diving deep into the realms of innovation, best practices, technology, legislation, public awareness, and training standards.

We will honor the visionary leaders who sculpted our organization and cast an eye towards the future of energy and utility asset protection services. This event is an opportunity for us to celebrate our collective achievements, and to forge stronger connections as we move forward into the next phase of our journey.

As Utility Safety Partners, we continue to evolve, driven by our commitment to delivering unparalleled damage prevention services. We look forward to you joining us as we celebrate four decades of safety, service, and innovation, and to our collective strides towards a safer future. For more information, visit UtilitySafety.ca. ESM



Meet Carnation Karen

We have all seen videos and memes depicting "Karen" in many unappealing situations; here is the story of Carnation Karen.

BY
DOUG BECK

Carnation Karen is a landscape enthusiast who prides herself on the sculptured property that she lives on. Carnation Karen has always been troubled by the big green box in her yard and the unsightly blight it displayed. Carnation Karen set out one day to plant shrubbery and flowers, and to spread mulch around the box to cover up the unpleasing view that detracted from her yard.

She planned, gathered materials, tools, and plants that she could use to cover the box and return her perception of her yard to its majesty.

Her project for day one was to remover the grass and add suitable soil to meet the needs of the plants. This encompassed renting tilling and auger equipment from the local rental shop. Making sure she had adequate protection from the sun and plenty of water to drink, out she set to begin work.

First item was to shovel the grass out and save for some other repairs in the yard. Once completed, she began to prepare the areas to mix the soil and nutrients; she had to make sure the plants could grow expeditiously. Finally, she set out with the auger to dig the deep holes she would need to plant the large shrubbery she planned to use.

Once the auger hit the dirt everything was going so well, but that was about to change. Not being familiar with what the box was for and unaware of what the warning labels told her, the dig was on. Deeper and deeper the auger went to help ensure the root system could take hold and the success of her plan could be achieved.

With a huge flash and bang, Carnation Karen's project and life came to an end. Carnation Karen had failed to follow her state's 811 dig laws and she failed to heed the warnings on the box that it contained 7200 Volts 400 amps that transformed to 240 volts 200 amps that supplied her home. Neighbors heard the noise, saw the flash, and ran to see what had happened. The grisly discovery of Carnation Karen having been electrocuted and burned beyond recognition was traumatic for all. The auger had melted into a molten mess of plastic, and metal and sparks were seen from the wiring that was underground.

The lesson to be learned is that big green boxes and pedestals on your property serve a distinct purpose for the comforts of your home. Being familiar with the underground utilities that are on your property can make the difference between comforts of your home working correctly or someone's life. All this knowledge is as simple as calling 811 or your local utility provider for assistance on the proper location of utilities and safe excavations around those underground services that we all use. ESM

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Virginia 811 Supports Stakeholders During Changes to Underground Utility Damage Prevention Act

• KIMBERLY SWOPE •

VIRGINIA 811, the designated one-call notification center for the state of Virginia, is actively assisting stakeholders as they navigate and adapt to the recent changes in the Underground Utility Damage Prevention Act. These changes, which took effect on July 1, 2023, mark a significant milestone as the Act undergoes substantial modifications for the first time in nearly a quarter of a century.

Initially passed by the Virginia General Assembly in 1979, the Underground Utility Damage Prevention Act outlines the responsibilities of stakeholders in preventing damage to underground utility lines during excavation and demolition activities. Over the years, the Act has been amended to provide further clarity on these responsibilities. However, the latest changes significantly modify the excavation process and place greater emphasis on safety and compliance.

B. Scott Crawford, President & CEO of Virginia 811, emphasizes the organization's commitment to supporting stakeholders throughout this transitional period. "Our goal is to provide comprehensive resources, foster open communication, and ensure a seamless and successful transition for all parties involved," he states.

One of the more notable amendments to be introduced is the revision of §56-265.17 F, which will lower the scope of locate requests from one mile

to one-third mile. Additionally, the revised §56-265.17 and §56-265-24 introduce stricter conduct guidelines before commencing excavation after 48 hours. Excavators will be required to review the Positive Response System before commencing any excavation activities.

To offer greater flexibility in scheduling work dates for marking, §56-265.19 now permits the scheduling of excavations up to 12 working days in advance. This provision aims to facilitate better coordination between excavators and utility operators, reducing potential conflicts and enhancing safety. Virginia 811 will implement programming adjustments to support the ability to schedule excavation up to 12 working days, effective January 1, 2024.

Furthermore, the newly established §56-265.24:1 introduces penalties for continuing excavation when deemed a threat to life, health, and property by the Commission Staff. These penalties emphasize the importance of compliance with the Act and promoting safety. Additionally, fines for Act violations have been increased, ranging from $2,500 to $5,000. Non-compliance with the requirement to contact Virginia 811 and submit a Locate Request prior to excavation, as stated in §56-265.32, may result in fines up to $10,000.

Virginia 811 recognizes the significance of these changes and remains dedicated to educating and assisting excavators, utility operators, and the public throughout the transition. Through collaboration with stakeholders, Virginia 811 strives to foster a culture of safety, prevent damages, and safeguard the state's vital underground infrastructure. ESM

For further information and to stay updated on these changes, stakeholders are encouraged to visit VA811.com.

Kimberly Swope is the Communications & Brand Supervisor for Virginia 811. She can be reached at KSwope@VA811.com.

Tennessee Gas Association Honors Bill Turner

THE TENNESSEE Gas Association (TGA) recently presented their annual Silver Flame Award to Bill Turner, President and CEO of Tennessee 811. The award is the Association's highest honor, and has been presented to 31 distinguished individuals since 1990 in recognition of outstanding service to the TGA and to the state's natural gas industry.

Turner was chosen for his leadership and his initiative in damage prevention. His non-stop effort to work with the Tennessee legislation on the state's One Call Law and his invested interest in the success of the state's gas industry were instrumental in Turner being nominated and selected as the 2022 Silver Flame Award recipient.


Virgil Deanes (TGA President) and Bill Turner

Turner has also been very involved in the Tennessee Gas Association's Scholarship Foundation, working on the Scholarship Committee to ensure continued growth and prosperity.

The Award was presented at the Tennessee Gas Associations Annual Meeting, June 12, in Orlando, Florida. ESM

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Learn More:

2023 AGA Operations Conference & Biennial Exhibition

THE 2023 AGA Operations Conference & Biennial Exhibition was extremely well attended with great conference sessions and a fantastic exhibit floor. The event, which was held in early May in Grapevine, Texas, also had a feeling of a "reunion" as this was the first post-COVID experience where all travel restrictions, company and personal, had been lifted. Damage prevention and excavation safety are always important topics for the AGA and AGA members. Some of the highlights related to these topics included:

- **811 Emergency: Who Really Pays for the $61B in Waste?** The 811 Emergency Study, sponsored by the Infrastructure Protection Coalition, calculated $61B in invisible waste imbedded in the damage prevention process. This session explored how these costs migrate to LDCs, what they can do to drive this waste out of the system, and how enforcement at the state level can place costs(s) with whom they originate.
  – Presented by Wayne Gould, Senior Consultant with Continuum Capital and Jay Rendos, Director at Continuum Capital.
- **Emergency Drills.** This presentation discussed how gas teams partnered with local first responders to develop real life emergency scenarios to train and build capabilities.
  – Presented by Aaron Coates, Senior Director – System Ops & Maintenance with PG&E and Brandon Cole, Construction Manager with PG&E.
- **Establishment and Implementation of a Legacy Cross Bore Program.** Delegates learned insights into how Peoples Gas and North Shore Gas began investigating and resolving cross bore damages to underground facilities after horizontal directional drilling (HDD) operations.
  – Presented by Edwin King, Manager System Integrity with Peoples Gas and North Shore Gas.
- **Leveraging Partnerships with Company Contractors to Enhance Performance in Safety and Quality.** Over the past five years, Southwest Gas has enhanced and strengthened partnerships with all contractors to ensure alignment with safety and quality goals. An overview of how Southwest Gas established and maintained partnerships were discussed along with training / qualifications, PSMS, quality control, and performance measures.
  – Presented by Carrie Heglund, Manager – Construction Operations Support / Operations Planning & Analysis with Southwest Gas, Justin Naylor, CEO with VW Connect and Kristine Brobst, Senior Director with SHEQ Centuri.
  Next Practices in Damage Prevention: The Influential Role of Gas Distribution in Reducing Dig-Ins. New research from the Common Ground Alliance detailed how innovators in the gas industry can leverage mapping improvements, technological innovations and third-party contracts to reduce damages and positively influence the entire American damage prevention system.
  – Presented by Erika Lee, Vice President – Programs & Strategic Initiatives with Common Ground Alliance.
- **Pipeline Safety Regulatory Update**
  – Presented by Christina Sames, Senior Vice President, Safety, Operations and Security with American Gas Association, John Gale, Director – Office of Pipeline Safety – Standards and Rulemaking Division with U.S. DOT / PHMSA

The annual AGA Operations Conference is the natural gas industry's premier gathering of natural gas utility and transmission company operations management from across North America and the world for the sharing of technical knowledge, ideas and practices to promote the safe, reliable, and cost-effective delivery of natural gas to the end-user. The Operations Conference is AGA's largest forum with more than 900 operations management in attendance, including 100 speakers, and over 120 technical presentations that run the gamut of topics, such as gas measurement, operations advocacy, safety, environment, storage, engineering, construction and maintenance, gas control, supplemental gas, corrosion control and piping materials.

THE ANNUAL AGA OPERATIONS CONFERENCE IS THE NATURAL GAS INDUSTRY'S PREMIER GATHERING OF NATURAL GAS UTILITY AND TRANSMISSION COMPANY OPERATIONS MANAGEMENT FROM ACROSS NORTH AMERICA AND THE WORLD FOR THE SHARING OF TECHNICAL KNOWLEDGE, IDEAS AND PRACTICES TO PROMOTE THE SAFE, RELIABLE, AND COST-EFFECTIVE DELIVERY OF NATURAL GAS TO THE END-USER.

The 2023 exhibition was held in conjunction with the conference. The exhibition attracted approximately 250 domestic/international vendors occupying 50,000+ square feet of Exhibit Space. For future exhibit inquiries, please contact AGA Exhibit Management at aga@epponline.com. ESM

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Calendar of Events

September 2023

6-9	JJ Harrison at Lewiston Roundup (Lewiston, ID)
12-14	SUE Association Annual Conference (Washington, DC)
15-16	JJ Harrison at Othello Rodeo (Othello, WA)
21-24	JJ Harrison at Sheriff's Rodeo (San Bernadino, CA)
22	11th Annual Scholarship Golf Tournament at Jacaranda Golf Club (Plantation, FL)
26-28	The Utility Expo (Lexington, KY)
27	CAMO Monthly Call

October 2023

4-6	Texas811 Summit (Austin, TX)
6-8	JJ Harrison at Industry Hills Charity Pro Rodeo (Industry, CA)
11-14	Lineman Rodeo (Overland Park, KS)
21	NUCA Backhoe Rodeo (Las Vegas, NV)
24-28	JJ Harrison at Indian National Finals (Las Vegas, NV)
25	CAMO Monthly Call

November 2023

1-3	Mississippi 811 Summit (Biloxi, MS)
14-16	Midwest Damage Prevention Training Convention (French Lick, IN)
22	CAMO Monthly Call
21-23	CCGA Damage Prevention Symposium (Quebec City, Quebec)

December 2023

6-7	Missouri CGA (Springfield, MO)
27	CAMO Monthly Call

March 2023

19-21 Global Excavation Safety Conference (New Orleans, LA) ESM

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Unique Program Allows Students to Explore Career Opportunities in the Construction Industry

• ROGER L. HARRISON AND AHMED AL-BAYATI •

Students from several of Detroit's Middle and High Schools were given an opportunity to attend the Construction Science Expo along with students, faculty and staff from the Department of Civil and Architectural Engineering (CAE) and Lawrence Technological University (LTU). The Middle and High School students were required to commit to a drug-free pledge. Those who made that pledge were brought to the Expo to interact and explore many career possibilities within the construction industry.

Hundreds of students attended the event, held at the Durfee Innovation Center in Detroit, participating in hands-on construction and engineering practices. The topic of "Construction Safety" was addressed by LTU Professor Dr. Ahmed Al-Bayati, PhD, PE and Founding Director of the LTU Construction Safety Research Center. Students were able to put on a virtual reality headset and explore the world of construction safety. The virtual reality program offered students a variety of different perspectives to explore and participate in, such as climbing on a roof and being fully compliant as directed by OSHA. Students were also asked multiple choice safety questions during the virtual reality experience that would reward them with correct responses.

LTU CAE Project Engineer/Lab Coordinator Roger Harrison brought several items from the water resources laboratory, such as sediment flume, permeable pavers, a green roof cross-section, and environmental water quality poster boards. Students learned how to set a foundation within flowing water and how to pour concrete into a riverbed.

"It's always such a worthwhile investment letting our young students know that the world needs engineers," Harrison said. "I was once a young man growing up in Detroit, and if not for caring individuals that reached out to me to let me know that I am needed in the future, I would not be where I am today. It is truly an honor to pay it forward to the next generation." ESM

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